

| Request for Proposal Timeline      |  |                                    |  |
|------------------------------------|--|------------------------------------|--|
| 6/25/23                            | Publication of Invitation for Bids (IFB) printed in The Boston Globe   |                                    |  |
| 6/26/23                            | IFB and instructions available online at <a href="http://www.bphc.org">www.bphc.org</a> at 10:00 AM  |                                    |  |
| 7/11/23                            | <p>Bidder's conference and walkthrough will be held as an opportunity to raise concerns regarding specifications, requirements, and terms of this solicitation.</p> <p style="text-align: center;"><u>Conference will be held at:</u><br/>           Boston Public Health Commission 112 Southampton St.<br/>           Boston, MA. 02118 <u>9:00 AM – 10:00 AM</u></p> <p>Failure to raise concerns over any issues at this opportunity will not be considered in any protest filed regarding such items that were known as of the walkthrough.</p>   |                                    |  |
| 7/17/23                            | Questions are due in writing by 2:00 PM to <a href="mailto:sbarry@bphc.org">sbarry@bphc.org</a><br>Subject: 112 Southampton Entryway Interior Renovation   |                                    |  |
| 7/20/23                            | Responses to questions will be emailed to all interested parties. -  |                                    |  |
| 7/27/23                            | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; vertical-align: top;"><b>File Sub Bid</b><br/>Due 2:30 PM</td> <td style="padding: 5px;">           Submit (2) original bids (do not bind) and PDF file of bid on a USB flash drive. Bid documents must be submitted in separate sealed envelope or box addressed to:<br/><br/>           Boston Public Health Commission Property Office<br/>           205 River St.<br/>           Mattapan MA 02126<br/><br/>           Attention: Steven Barry, Project Manager         </td> </tr> </table>   | <b>File Sub Bid</b><br>Due 2:30 PM | Submit (2) original bids (do not bind) and PDF file of bid on a USB flash drive. Bid documents must be submitted in separate sealed envelope or box addressed to:<br><br>Boston Public Health Commission Property Office<br>205 River St.<br>Mattapan MA 02126<br><br>Attention: Steven Barry, Project Manager |
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| 8/07/23                            | <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 25%; vertical-align: top;"><b>General Bid</b><br/>Due 2:30 PM</td> <td style="padding: 5px;">           Clearly mark each envelope or box:<br/>           1. Organization Name and Address<br/>           2. 112 Southampton St. Entryway Interior Renovation         </td> </tr> </table>   | <b>General Bid</b><br>Due 2:30 PM  | Clearly mark each envelope or box:<br>1. Organization Name and Address<br>2. 112 Southampton St. Entryway Interior Renovation  |
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| 8/11/23                            | <p>Notification of Decision</p> <p>Note: This is the desired date for notification of award to bidder(s) however, BPHC has the discretion to extend this date without notice. BPHC reserves the right to accept or reject any or all bids. BPHC anticipates submitting a Notice of Award to the selected bidder(s) by email or address provided in the IFB responses. The contract(s) will be awarded to the lowest responsible and responsive bidder(s) meeting all requirements. The lowest responsible and responsive bidder shall mean the bidder that best meets the requirements set forth in this solicitation, and offers the lowest cost. The contract(s) resulting from this IFB shall be in effect when all necessary contract documentation is fully executed by BPHC and awarded vendor(s).</p> |                                    |  |



1010 Massachusetts Avenue  
Boston, Massachusetts 02118

**Owner: Boston Public Health Commission**  
Phone # 617-534-2390

Property Office: 205 River Street,  
Mattapan, MA 02126

Phone # 617-534-3073

Contact: Gerry Thomas, Director – Homeless  
Services Bureau

Steven Barry, Project Manager – BPHC Property  
Management

# INTERIOR RENOVATION

112 Southampton Street

Boston, Massachusetts 02118

## PROJECT MANUAL

23 June 2023

Issued for Contract Documents

LAA Project No.: 2113



**Leonardi Aray Architects**

1035 Cambridge Street | Suite #1  
Cambridge MA 02141  
617.270.3912  
[www.larayarchitects.com](http://www.larayarchitects.com)

# **Boston Public Health Commission**

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## **ENTRYWAY INTERIOR RENOVATION**

112 Southamptn Street  
Boston, MA 02118

Leonardi Aray Architects LLC

Architect No.: 2113

### **TABLE OF CONTENTS - DOCUMENT 00 00 30 – FILED SUB-BID PROJECT**

Contract Documents Submission [CD] 23 June 2023

| <i>Document/<br/>Section<br/>Number</i>                           | <i>Title of Document / Section</i>   | <i>Latest<br/>Date</i> |
|---|--|------------------------|
| <b><u>DIV 00 - PROCUREMENT &amp; CONTRACTING REQUIREMENTS</u></b> |  |                        |
| <b><u>INTRODUCTORY INFORMATION</u></b>                            |  |                        |
| 00 00 10  | Title Page   | 23 June 2023           |
| 00 00 30  | Table Of Contents  | 23 June 2023           |
|   | Drawings Architecture  | 23 June 2023           |
|   | Drawings Electrical  | 26 May 2023            |
| <b><u>PART 1 - BIDDING REQUIREMENTS</u></b>                       |  |                        |
| 00 11 00  | Advertisement  |                        |
| 00 40 00  | Bid / Proposal Form  |                        |
| 00 41 00  | Form SubBid  |                        |
| <b><u>PART 2 – OWNER/CONTRACTOR AGREEMENT</u></b>                 |  |                        |
| 00 50 00  | Form Of Agreement Form Between Owner & Contractor                            |                        |
| <b><u>PART 3 – GENERAL CONDITIONS OF THE CONTRACT</u></b>         |  |                        |
| 00 70 00  | General Conditions Of The Contract [AIA A201-2007 Incorporated By Reference] |                        |
| 00 73 43  | Prevailing Wages   |                        |
| <b><u>INFORMATION AVAILABLE TO BIDDERS</u></b>                    |  |                        |
| 00 80 00  | Geotechnical Report  |                        |
| 00 80 30  | Soil Borings   |                        |
| <b><u>PREVIOUSLY ISSUED BULLETINS &amp; ADDENDA</u></b>           |  |                        |
|   | None To Date   |                        |
| <b><u>SPECIFICATIONS</u></b>                                      |  |                        |
| <b>Division 01 - General Requirements</b>                         |  |                        |
| 01 00 00  | Consolidated General Requirements  | 26 MAY 2023            |
| 01 11 00  | Summary of Work  |                        |
| 01 25 10  | Substitutions Request Form   | 26 MAY 2023            |
| 01 26 00  | Contract Modification Procedures   | 26 MAY 2023            |
| 01 35 32  | Covid-19 Procedures  | 26 MAY 2023            |
| 01 35 44  | Unknown Existing Materials Procedures  | 26 MAY 2023            |
| 01 51 50  | Construction Indoor Air Quality  | 26 MAY 2023            |
| 01 53 50  | Occupied Facilities Requirements   | 26 MAY 2023            |
| 01 57 10  | Construction Waste Management  | 26 MAY 2023            |
| 01 64 05  | Owner Equipment Relocation Requirements                                      | 26 MAY 2023            |
| 01 70 00  | Execution Requirements   | 26 MAY 2023            |
| 01 70 53  | Tax Exemption Usage Requirements   | 26 MAY 2023            |
| 01 89 20  | Renovation Requirements  | 26 MAY 2023            |
| <b>Division 02 - Existing Conditions</b>                          |  |                        |
| 02 22 00  | Existing Conditions Assessment   | 26 MAY 2023            |
| 02 41 10  | Selective Demolition   | 26 MAY 2023            |

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\*FSB = Filed Sub-bid Required

**00 00 30 - 1 OF 2**

• = Part of Filed Sub-bid

| <i>Document/<br/>Section<br/>Number</i>                | <i>Title of Document / Section</i>                | <i>Latest<br/>Date</i> |
|--|---|------------------------|
| <b>Division 03 – Concrete – Not Used</b>               |   |                        |
| <b>Division 04 - Masonry</b>                           |   |                        |
| 04 01 04   | Minor Masonry Renovations                         | 26 MAY 2023            |
| <b>Division 05 - Metals</b>                            |   |                        |
| 05 51 20   | Modular Aluminum Ramps                            | 26 MAY 2023            |
| 05 52 10   | Steel Railings                                    | 26 MAY 2023            |
| <b>Division 06 - Wood, Plastics &amp; Composites</b>   |   |                        |
| 06 08 00   | Wood Preservative & Fire-Retardant Treatments     | 26 MAY 2023            |
| 06 10 50.1   | Wood Blocking & Furring                           | 26 MAY 2023            |
| 06 40 21   | Interior Custom Casework & Architectural Millwork | 26 MAY 2023            |
| <b>Division 07 - Thermal &amp; Moisture Protection</b> |   |                        |
| 07 92 00   | Joint Sealants                                    | 26 MAY 2023            |
| <b>Division 08 - Openings</b>                          |   |                        |
| 08 11 10   | Steel Doors & Frames                              | 26 MAY 2023            |
| 08 80 20   | Interior Glass                                    | 26 MAY 2023            |
| <b>Division 09 - Finishes</b>                          |   |                        |
| 09 01 27   | Gypsum Board Repair                               | 26 MAY 2023            |
| 09 10 00   | Non-Structural Light Gage Framing                 | 26 MAY 2023            |
| 09 10 50   | Metal Blocking                                    | 26 MAY 2023            |
| 09 26 13   | Gypsum Veneer Plastering                          | 26 MAY 2023            |
| 09 65 05   | Resilient Flooring & Base                         | 26 MAY 2023            |
| 09 84 11   | Composite Sound Control Panels [Tectum]           | 26 MAY 2023            |
| 09 91 12   | Exterior Painting                                 | 26 MAY 2023            |
| 09 91 22   | Interior Painting                                 | 26 MAY 2023            |
| <b>Division 10 - Specialties</b>                       |   |                        |
| 10 14 44   | Interior Signage                                  | 26 MAY 2023            |
| 10 19 45   | Interior Environmental Graphics                   | 26 MAY 2023            |
| 10 51 10   | HDPE Lockers                                      | 26 MAY 2023            |
| <b>Divisions 11 – 25 Not used</b>                      |   |                        |
| <b>Division 26 - Electrical</b>                        |   |                        |
| **26 00 00   | Electrical  |                        |

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## ADVERTISEMENT

The Boston Public Health Commission (BPHC) is the local public health department for the City of Boston. BPHC's mission is to protect, preserve, and promote the health and well-being of all Boston residents, particularly the most vulnerable. BPHC acting by its Division of Property Management, hereinafter referred to as the awarding authority, invites bidders to submit proposal for the entitled IFB listed below. Bids shall be sealed, clearly identify as a bid, and signed by the vendor. All bids shall be titled: **112 Southamptton Street Entryway Interior Project**.

The Project consists of: **Entryway Interior Renovations and limited exterior improvements**, in accordance with the documents prepared by **Leonardi Aray Architects LLC**.

The work is estimated to cost \$ **350,000.00**

Bids are subject to M.G.L. c.149 §44A-J & to minimum wage rates as required by M.G.L. c.149 §§26 to 27H inclusive.

General bidders must be certified by the Division of Capital Asset Management and Maintenance (DCAMM) in the category of **General Construction**.

General Bids will be received until **2:30PM on August 7th 2023** and publicly opened, forthwith.

Filed sub-bids for the trades listed below will be received until **2:30PM on July 27<sup>th</sup> 2023** and opened forthwith.

Filed sub-bidders must be DCAMM certified for the trades listed below and bidders must include a current DCAMM Sub-Bidder Certificate of Eligibility and a signed DCAMM Sub-Bidder's Update Statement.

### **SUBTRADES:**

### **Section 26 00 00 ELECTRICAL**

All Bids should be delivered to: **Boston Public Health Commission**  
**205 River Street, Mattapan, Massachusetts**

Bid Forms and Contract Documents will be available electronically or for purchase at cost:

**205 River Street, Mattapan, Massachusetts**

**<https://www.boston.gov/government/cabinets/boston-public-health-commission/working-health-commission/bphc-rfps-and-bids>**

As part of BPHC's efforts to have an equitable procurement process, BPHC will consider and encourage unrepresented businesses that includes Minority-owned Business Enterprises (MBE), Women-owned Business Enterprises (WBE), Veteran-owned Business Enterprises (VBE), Service-disabled Veteran-owned Business Enterprises (SDVOBE), Disability-owned Business Enterprise (DOBE), Lesbian Gay Bisexual Transgender Business Enterprises (LGBTBE), and local businesses to apply to this RFP.

General bids and sub-bids shall be accompanied by a bid deposit that is not less than five (5%) of the greatest possible bid amount (considering all alternates), and made payable to **Boston Public Health Commission**.

PRE-BID CONFERENCE / SITE VISIT:

Date and Time: between **9:00 A.M.** and **10:00 P.M.** on **7/11/23**.

Address: **112 Southamptton St. Boston, MA 02118**

Instructions: **Please park in 112 Southamptton parking lot that you access via Atkinson St. We will muster in parking lot prior to walk through.**

# FORM FOR GENERAL BID

**TO THE AWARDING AUTHORITY**

A. The undersigned proposes to furnish all labor and materials required for 112 Southamton Entryway Interior Renovations for the

Boston Public Health Commission Boston, Massachusetts

in accordance with Contract Documents prepared by Leonardi Aray Architects LLC

For the contract price specified below, subject additions and deductions according to the terms of the specifications and shall be complete within **75** consecutive calendar days

B. This bid includes addenda numbered \_\_\_\_\_

C. The proposed contract price is:

|                     |         |                       |
|---------------------|---------|-----------------------|
|                     | Dollars |                       |
|                     | \$      | _____                 |
| Bid Amount in Words |         | Bid Amount in Numbers |

|                  |          |              |                   |
|------------------|----------|--------------|-------------------|
| For Alternate(s) | No. ____ | Add \$ _____ | Subtract \$ _____ |
|                  | No. ____ | Add \$ _____ | Subtract \$ _____ |
|                  | No. ____ | Add \$ _____ | Subtract \$ _____ |

**Each Alternate shall be listed separately**

D. The subdivision of the proposed contract price is as follows:

**ITEM 1.** The work of the general contractor, being all work other than that covered by **ITEM 2.**

**TOTAL OF ITEM 1** ..... \$ \_\_\_\_\_

**ITEM 2.** Sub-bids as follows:

| Sub-trade | Name of Filed Sub-bidder | Sub-bid Amount | Bond Required |       |
|-----------|--------------------------|----------------|---------------|-------|
|           |                          |                | Yes           | No    |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |
| _____     | _____                    | _____          | _____         | _____ |

**TOTAL OF ITEM 2**..... \$ \_\_\_\_\_

The undersigned agrees that each of the above named sub-bidders will be used for the work indicated at the amount stated, unless a substitution is made. The undersigned further agrees to pay the premiums for the performance and payment bonds furnished by sub-bidders as requested herein and that all of the cost of all such premiums is included in the amount set forth in Item I of this bid.

The undersigned agrees that if selected as general contractor, they will promptly confer with the awarding authority on the question of sub-bidders; and that the awarding authority may substitute for any sub-bid listed above a sub-bid filed with the awarding authority by another sub-bidder for the sub-trade against whose standing and ability the undersigned makes no objection; and that the undersigned will use all such finally selected sub-bidders at the amounts named in their respective sub-bids and be in every way as responsible for them and their work as if they had been originally named in this general bid, the total contract price being adjusted to conform thereto.

- E. The undersigned agrees that, if selected as general contractor, he will within five days, Saturdays, Sundays, and legal holidays excluded, after presentation thereof by the awarding authority, execute a contract in accordance with the terms of this bid and furnish a performance bond and also a labor and materials or payment bond, each of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the awarding authority and each in the sum of the contract price, the premiums for which are to be paid by the general contractor and are included in the contract price, provided, however, that if there is more than 1 surety company, the surety companies shall be jointly and severally liable.

The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards made subject to section 44A.

The undersigned further certifies under the penalties of perjury that this bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated thereunder.

**Signature** 

**Date:** \_\_\_\_\_

---

**Name of General Bidder**

**BY:** \_\_\_\_\_  
**Signature & Title of person signing bid**

\_\_\_\_\_  
**Business Address**

\_\_\_\_\_  
**(Email & Phone Number)**

Note: If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of partners if different from business addresses.

# FORM FOR SUB-BID

**TO ALL GENERAL BIDDERS EXCEPT THOSE EXCLUDED:**

**A.** The undersigned proposes to furnish all labor and materials required for completing, in accordance with the hereinafter described plans, specifications and addenda, all the work specified in

Section No. 26 00 00 of the specifications and in any plans specified in such section

prepared by Leonardi Aray Architects LLC for ENTRYWAY INTERIOR RENOVATIONS  
Name of Architect/Engineer Project

for the Boston Public Health Commission Boston Massachusetts,

for the contract sum of :

|                            |  |   |
|----------------------------|--|---|
|                            | Dollars \$   |   |
| <b>Bid Amount in Words</b> |  | <b>Bid Amount in Numbers</b>            |
| For Alternate(s)           | No. <u>    </u> Add \$ <u>                    </u> | Subtract \$ <u>                    </u> |
|                            | No. <u>    </u> Add \$ <u>                    </u> | Subtract \$ <u>                    </u> |
|                            | No. <u>    </u> Add \$ <u>                    </u> | Subtract \$ <u>                    </u> |
|                            | <b>Each Alternate shall be listed separately</b>   |   |

**B.** This Sub-bid includes addenda numbered                     

**C.** This Sub-bid

May be used by any General Bidder **Except:**

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

May **only be used** by the following General Bidders:

\_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

To exclude general bidders, insert "X" in one box only and fill in blank following that box.  
Do not answer C if no general bidders are excluded

**D.** The undersigned agrees that, if selected as a sub-bidder, they will, within five days, Saturdays, Sundays and legal holidays excluded, after presentation of a subcontract by the general bidder selected as the general contractor, execute with such general bidder a subcontract in accordance with the terms of this sub-bid, and contingent upon the execution of the general contract, and, if requested to do so in the general bid by such general bidder, who shall pay the premiums therefor, furnish a performance and payment bond of a surety company qualified to do business under the laws of the Commonwealth and satisfactory to the awarding authority, in the full sum of the subcontract price.

**E.** The names of all persons, firms and corporations furnishing to the undersigned labor or labor and materials for the class or classes or part thereof of work for which the provisions of the section of the specifications for this sub-trade require a listing in this paragraph, including the undersigned if customarily furnished by persons on his own payroll and in the absence of a contrary provision in the specification the name of each such class of work or part thereto and the bid price for such class of work or part thereof are:

| NAME | CLASS OF WORK | BID PRICE |
|------|---------------|-----------|
|      |               |           |
|      |               |           |



(Do not give bid price for any class or part thereof furnished by the undersigned).

- F. The undersigned agrees that the above list of bids of the undersigned represents bona fide bids based on hereinbefore described plans, specifications and addenda, and that, if the undersigned is awarded the contract, they will be used for the work indicated at the amounts stated, if satisfactory to the awarding authority.
- G. The undersigned further agrees to be bound to the general contractor by the terms of the hereinbefore described plans, specifications (including all general conditions stated therein) and addenda, and to assume toward him all the obligations and responsibilities that the contractor, by those documents, assumes toward the owner.
- H. The undersigned offers the following information as evidence of the contractor's qualifications to perform the work as bid upon according to all the requirements of the plans and specifications:

1. Have been in business under present business name for \_\_\_\_\_ years
2. Ever failed to complete any work awarded? \_\_\_\_\_
3. List one or more recent buildings with names of general contractor and architect on which you served as subcontractor for work of similar character as required for the above-named building

| Building Type | Architect | General Contractor | Contract Amount |
|---------------|-----------|--------------------|-----------------|
| _____         | _____     | _____              | \$ _____        |
| _____         | _____     | _____              | \$ _____        |
| _____         | _____     | _____              | \$ _____        |

4. Bank Reference: \_\_\_\_\_

- I. The undersigned hereby certifies that he is able to furnish labor that can work in harmony with all other elements of labor employed or to be employed on the work; that all employees to be employed at the worksite will have successfully completed a course in construction safety and health approved by the United States Occupational Safety and Health Administration that is at least 10 hours in duration at the time the employee begins work and who shall furnish documentation of successful completion of said course with the first certified payroll report for each employee; and that he will comply fully with all laws and regulations applicable to awards of subcontracts subject to section 44F.

The undersigned further certifies under penalty of perjury that this sub-bid is in all respects bona fide, fair and made without collusion or fraud with any other person. As used in this subsection the word "person" shall mean any natural person, joint venture, partnership, corporation or other business or legal entity. The undersigned further certifies under penalty of perjury that the said undersigned is not presently debarred from doing public construction work in the Commonwealth under the provisions of section twenty-nine F of chapter twenty-nine, or any other applicable debarment provisions of any other chapter of the General Laws or any rule or regulation promulgated there under.

Signature 

Date: \_\_\_\_\_

\_\_\_\_\_  
NAME OF SUB-BIDDER

BY: \_\_\_\_\_  
Signature & Title of person signing bid

\_\_\_\_\_  
Business Address

\_\_\_\_\_  
(Email & Phone Number)

Note: If the bidder is a corporation, indicate state of incorporation under signature, and affix corporate seal; if a partnership, give full names and residential addresses of partners if different from business addresses.



# BOSTON PUBLIC HEALTH COMMISSION STANDARD CONTRACT FOR THE PROVISION OF GOODS OR SERVICES

This contractual agreement ("Contract") is hereby made on \_\_\_\_\_ by and between the **Public Health Commission (BPHC)**, a body politic and corporate and political subdivision of the Commonwealth of Massachusetts with a principal place of business located at **1010 Massachusetts Avenue, Boston, Massachusetts 02118** and \_\_\_\_\_ (hereinafter Contractor). *This document is subject to the terms and conditions and may include additional supporting required documents.*

All fields in Part 1 and Part 2 must be completed. For nonapplicable fields, enter N/A.

### Part 1 – IDENTIFICATION OF BPHC

### Part 2 – IDENTIFICATION OF CONTRACTOR

**Bureau Name:**

**Contractor Name:**

\_\_\_\_\_

\_\_\_\_\_

**Program Name:**

**Payee Name if different from Contractor Name:**

\_\_\_\_\_

\_\_\_\_\_

**Requestor:**

**Contact Name:**

\_\_\_\_\_

\_\_\_\_\_

**Phone:**

**Street Address:**

\_\_\_\_\_

\_\_\_\_\_

**Email:**

**City:** \_\_\_\_\_ **State:** \_\_\_\_\_ **Zip Code:** \_\_\_\_\_

\_\_\_\_\_

**Email:** \_\_\_\_\_

**Good/Services (s) Requested:**

**Phone Number:** \_\_\_\_\_

\_\_\_\_\_

**TIN (SSN or EIN):** \_\_\_\_\_

**Service Location:**

**DUNS:** \_\_\_\_\_

\_\_\_\_\_

**UEI:** \_\_\_\_\_

### CONTRACT TERM:

This contract shall be in effect from (start date) \_\_\_\_\_ through (end date) \_\_\_\_\_

*Review Terms and Conditions for earlier termination as provided herein.*

### CONTRACT AMOUNT:

This contract shall not exceed \_\_\_\_\_ dollars

(\$ \_\_\_\_\_) and is subject to the availability and appropriation of funds.

### GRANT FUNDING SOURCE, if applicable:

Grant Number \_\_\_\_\_ Grant Expiration Date \_\_\_\_\_ CFDA Number \_\_\_\_\_

*For Sub-Recipient Contract, the Notice of Grant Award must be sent to the Sub-Recipient as an attachment along with this Contract*

### ADDITIONAL TERMS:

\_\_\_\_\_

-----

For Procure to Pay Office Use

**BPHC Contract Number:** \_\_\_\_\_

**BPHC Vendor ID:** \_\_\_\_\_

**ARTICLE I – PERFORMANCE**

- a) The Contractor shall conduct all activities, provide all goods, and/or perform all services as may be required by the provisions of this Contract. No variations from specifications hereunder shall be allowed without the written approval of an authorized representative of BPHC.
- b) Where applicable and unless otherwise indicated herein, all shipments shall be assumed F.O.B., destination inside delivery. Such inside delivery shall be performed through the shipper and charged back to the shipper. Appropriate notation must be specific and so noted on the bill of lading. Deliveries are to be made between the hours of 9:00 AM and 5:00 PM, Monday through Friday and exclusive of Holidays, unless otherwise specified. All articles, equipment, or materials shall be forwarded by route or method of lowest transportation charges unless specific shipping instructions are stated herein for those orders which are F.O.B. shipping point.
- c) Upon written request of BPHC, Contractor shall remove from BPHC premises and/or replace all individuals in Contractor's employ or control whom BPHC determines to be disorderly, careless, or incompetent or to be employed, providing services, or conducting activities in violation of the terms of this Contract.
- d) Contractor shall maintain books, records, and other compilations of data relative to the services to be performed hereunder sufficient to substantiate its claims for payment or meet any regulatory requirements, including any and all applicable federal, state, or local requirements. All such records shall be retained for at least seven years. BPHC or its designee shall examine and copy such records upon reasonable notice to Contractor and at such times and expense as may be reasonable.

**ARTICLE II – ACCEPTANCE OF GOODS AND SERVICES**

BPHC shall have a reasonable opportunity to inspect all goods and services. If the goods or services are not acceptable, Contractor may be allowed to cure the work and/or products within a reasonable time at no additional cost to BPHC. Unless otherwise provided hereunder, liability for payment shall be subject to acceptance by BPHC.

**ARTICLE III – TIME**

It is understood and agreed that all specified times or period of performance are of the essence.

**ARTICLE IV – COMPENSATION**

- a) Contractor may be compensated only for those costs and expenses and at the prices as may be allowed hereunder and as may be described in any Budget attached hereto except that such cost and expense shall not exceed the not-to-exceed amount described.
- b) The BPHC shall not be liable for any interest or penalty for late payments.
- c) Invoices with back-up documentation shall reference a BPHC purchase order number and shall be submitted to BPHCs, Procure to Pay (P2P) Department at [Accountspayable@bphc.org](mailto:Accountspayable@bphc.org) and may include the program contact email.
- d) Bureau Programs/Departments shall provide to Contractor, P2P's Vendor Invoice Requirement and Submission Letter along with this contract.
- e) Unless agreed, invoices shall be payable thirty (30) days after receipt of invoice date. BPHC requires invoice payment of Electronic Transfer Funds.
- f) Final invoices for fulfilled goods and services must be submitted to BPHC within thirty (30) days of the expiration or termination of this Contract. BPHC retains the right to deny payment for any invoices received after the 30-day invoice period.

**ARTICLE V – RELATIONSHIP WITH BPHC**

Contractor is retained solely for the purposes of and to the extent set forth in this Contract. Contractor's relationship to BPHC during the term of this Contract shall be that of an independent contractor. The Contractor shall be fully responsible for completion of its obligations under this Contract without supervision from BPHC. The Contractor has full discretion to employ the proper means and methods to complete the work and shall determine its own working hours. Contractor shall have no capacity to bind BPHC in any contract or to incur any liability on the part of BPHC. Contractor, its agents or employees shall not have the status or pension rights of an employee. The BPHC shall not be liable for any personal injury to or death of Contractor, its Agents, or employees.

**ARTICLE VI – ASSUMPTION OF LOSS AND LIABILITY**

- a) Contractor shall pay and be exclusively responsible for all debts for labor and material incurred by Contractor for the rental of any appliance or equipment hired by Contractor and/or for any expense incurred on account of the delivery of goods or services to be performed under this Contract.
- b) Contractor shall bear all loss resulting from any cause before the delivery of goods or services is completed and after performance of service if the goods or services fail to conform to specifications.
- c) Contractor or any of its agents, employees, or subcontractors entering on the premises of BPHC shall take all precautions necessary to prevent injury to persons or property.
- d) Contractor shall indemnify, assume the defense of, and hold BPHC its officers, agents, assigns, or employees, harmless from all suits and claims against them or any of them arising from any act or omission of Contractor, its agents, or employees in any way connected with performance under this Contract.
- e) Contractor shall maintain at a minimum General Liability, Property Damage, Employers' Liability, Worker's Compensation, and Motor Vehicle Liability (personal Injury and Property Damage) and such other liability insurance coverage as may be required hereunder sufficient to protect Contractor and BPHC from any risks or claims which may be associated with this Contract and as are customary in Contractor's business and shall provide BPHC with evidence of such coverage. In the event any changes occur in such liability coverage during the period of performance, Contractor shall notify BPHC of such changes and shall provide BPHC with new evidence of coverage. At BPHC's discretion, BPHC shall have the right to require that BPHC be named as an Additional Insured on any applicable policies.
- f) Contractor acknowledges that BPHC, its officers, agents, assigns, and employees, are subject to all of the provisions in M.G.L.c. 258, including but not limited to, the liability limitations for governmental entities.

**ARTICLE VII – REMEDIES OF THE BPHC**

- a) If Contractor provides goods or services which do not meet the specifications provided or are otherwise not merchantable or fit for their intended purposes, BPHC shall have all remedies as are provided by law.
- b) BPHC shall have the right to inspect goods or services for forty-five days and if the goods or services fail to meet the terms of the Contract or are otherwise not merchantable or fit for their intended purpose, BPHC shall have all remedies as are provided by law.
- c) BPHC may deduct the cost of any substitute contract or non-performance of services together with incidental and consequential damages from the Contract amount and shall withhold such damages from the sums due or to become due to the Contractor.
- d) BPHC retains all rights to warranty as supplied by Contractor.
- e) If this Contract is funded in whole or in part by a grant to BPHC from a third party, BPHC has the right to reduce the amount of this contract or terminate this contract if the grant from the third party is reduced or eliminated.
- f) In addition to all other remedies available to BPHC under applicable state and federal laws, in the event Contractor or its subcontractor(s) fails to comply with the contract terms or with applicable federal, state, or local requirements governing the use of any grant funding supplied by a third party that supports this contract, BPHC may withhold or suspend awards, in whole or in part, or recover from the Contractor or subcontractor(s) any funds improperly paid to the Contractor or subcontractor(s) following an audit by BPHC.

**ARTICLE VIII – REMEDIES OF CONTRACTOR**

If damages, other than loss on nonconforming goods or services, are actually sustained by Contractor due to any act or material omission for which BPHC is legally responsible, BPHC may allow a sum equal to the amount of such damages sustained by Contractor as determined BPHC in writing, provided Contractor shall have delivered to BPHC a detailed written statement of such damages and cause thereof within thirty (30) days after the act or material omission by BPHC. Contractor shall not have the option to accelerate at will.

**ARTICLE IX – ASSIGNMENT**

Contractor shall not assign, delegate, subcontract, or in any way transfer any interest in this Contract without prior written consent of BPHC. BPHC

reserves the right to delegate, assign, or otherwise transfer any interest in this Contract to another entity for purposes of contract administration without further notice to Contractor.

#### **ARTICLE X – COMPLIANCE WITH LAWS, BPHC POLICIES, GRANT REQUIREMENTS, AND PUBLIC POLICY**

- a) This Contract is subject to all laws of the Commonwealth of Massachusetts and, where applicable for most goods contracts, is governed by M.G.L. c. 106 §2-101, et seq. (the Uniform Commercial Code, Article 2).
- b) Contractor shall provide, at its sole expense, all necessary licenses, permits, or other authorizations required by the City of Boston, the Commonwealth of Massachusetts, or any state or federal governmental agency with proper jurisdiction and shall insure that all specifications, goods or services acquired or performed hereunder adhere to all applicable regulations. Contractor agrees and certifies that it is authorized and/or licensed to perform the services required by this Contract and that it will secure such authorization and/or licensure for so long as it is bound to perform under the terms of this Contract
- c) Contractor shall not discriminate against any individual because of gender, race, religious creed, national origin, age, disability, gender identity, or sexual orientation in connection with the performance of services under this Contract. Contractor shall post in conspicuous places notices to be provided by the Massachusetts Commission Against Discrimination, setting forth provisions of the Fair Employment Practice Law of the Commonwealth.
- d) Contractor shall not act in collusion with any BPHC officer, agent, assign, employee, or any other party, nor shall the Contractor make gifts regarding this Contract or any other matter in which BPHC has a direct and substantial interest in violation of M.G.L. c. 268A (the Conflict of Interest Law).
- e) Pursuant to M.G.L. c. 62C, Section 49A, Contractor certifies under the penalties of perjury that Contractor has complied with laws of the Commonwealth relating to taxes, reporting of employees and contractors, withholding and remitting of child support.
- f) Contractor shall comply with all City of Boston Ordinances, BPHC Regulations or policies, and any state and federal laws or grant requirements that in any manner affect the services herein specified. Contractor shall at all times observe and comply with said ordinances, regulations/policies or laws, and shall protect and indemnify the BPHC its officers, agents, assigns, and employees against any claim or liability arising from or based on any violation of such ordinances, regulations or laws.
- g) In addition to its obligations, the Contractor, where applicable, shall specifically comply with the City of Boston's Healthy Options Beverage Standards, which is incorporated into the contract by reference. The Contractor understands and agrees that compliance with those standards is required by the City of Boston's April 7, 2011 Executive Order Relative to Healthy Beverage Options. In pertinent part, the Order Relative to Healthy Beverage Options is applicable to all vending machine services, City-managed food or beverage services programs, contracted food or beverage services, food or beverage procurement, leases and other agreements for food or beverage concessions in or around City- owned buildings.
- h) This contract is also subject to BPHC's Food Service and Catering Policy, which is incorporated herein by reference. This Policy applies to the purchase and service of food and/or beverages at all BPHC funded events and programs, regardless of the internal source of funding that supports the event. A copy of the policy can be made available upon request.
- i) In addition to its obligations to comply with any applicable federal or state laws under section (f) above, the Contractor shall also comply with the requirements of any federal, state, or city grant that supports this contract. In particular, the Contractor must comply with all applicable grant reporting requirements and must provide appropriate supporting backup for any invoices submitted to BPHC for payment. Any waiver of these grant requirements by BPHC shall not prejudice BPHC's right to strictly require compliance with this section at any time during the life of the contract. BPHC shall supply a copy of the applicable Notice of the "Grant" Award with any provisions applicable to the Contractor upon request.
- j) BPHC will not purchase goods or allow services from a Contractor who is currently either barred or suspended from doing business with the United States government. The Contractor hereby certifies that they are not on the Systems for Award Management (SAM.gov)'s Exclusion List, and they are not barred or suspended from federal contracting. If the Contractor is barred or suspended from federal contracting during the period of this contract, the Contractor must notify BPHC in writing within fifteen (15) days

of such occurrence. In the event the Contractor is barred or suspended from federal contracting, BPHC shall have the right to modify or terminate this agreement at its discretion.

- k) Contractors who are federally funded sub-recipients must provide: 1) a Data Universal Numbering System (DUNS) number or a System for Award Management (SAM.gov) Unique Entity Identifier (UEI), and 2), Contractors subject to Uniform Guidance 2 C.F.R. 200 Subpart F – Audit Requirements, annually, a copy of the Contractor's latest Federal Single Audit report.
- l) Contractor certifies compliance of the prohibition of the use of telecommunications equipment and services produced or provided by Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of those entities) and certain video surveillance products or telecommunications equipment and services produced or provided by Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of those entities) as per 2 C.F.R. §200.216 and NDAA Section 889.
- m) BPHC and the Contractor commit to making a good-faith effort to contract/subcontract with a diverse group of Certified Underrepresented Business Enterprises (CUBEs) in accordance with BPHC's Equitable Procurement Policy. CUBEs include the following: Minority, Women, Veteran, Disabled, LGBT and Small Local Business Owners.
- n) If this contract is in response to an infectious disease outbreak, including but not limited to COVID-19, the vendor acknowledges that this contract may be supported by funds from the United States Federal Government. Accordingly, the required federal provisions at the following link are hereby incorporated into this agreement: [Electronic Code of Federal Regulations \(eCFR\)](#)

#### **ARTICLE XI – MISCELLANEOUS**

- a) All alterations or additions, material or otherwise, to the terms and conditions of this Contract must be in writing and signed by BPHC and Contractor.
- b) Any waiver expressed or implied, by BPHC of any rights, terms or conditions of the Contract shall not operate to waive such rights, terms or conditions or any other rights, terms, or conditions beyond the specific instance of waiver.
- c) Contractor acknowledges that any and all products created pursuant to this contract shall be the exclusive property of BPHC. Contractor shall not use or publish or cause to be used or published any reports or any other printed material in relation to the services performed hereunder without written authorization from BPHC. Where such authorization is given, Contractor shall appropriately acknowledge the collaboration and support of the BPHC. In addition, Contractor has an affirmative obligation to request whether BPHC would like to collaborate on the creation of any research paper, tool, or other product that is the result of the performance of this contract.
- d) For those contracts involving data collection, BPHC shall have the right to terminate this contract in accordance with Article XIV below if the Contractor fails to demonstrate within the first three (3) months of the contract period that it has the ability to comply with its obligations as stated in this Contract and the attached Scope of Services.
- e) Unless separately agreed upon by the parties in the attached Scope of Services, BPHC shall be the owner of any and all data collected by the Contractor pursuant to this Contract.
- f) In the event of any dispute concerning the meaning or application of this contract, any such dispute shall be resolved pursuant to the laws of the Commonwealth of Massachusetts and, if necessary, by a Court of the Commonwealth of Massachusetts in Suffolk County or the United States Federal Court sitting in Boston, MA.
- g) Neither party shall be liable to the other or be deemed to be in breach of the Contract for any failure or delay in rendering performance arising out of causes beyond its reasonable control and without its fault or negligence. Such causes may include, but are not limited to, acts of God or the public enemy (including terrorist acts), fires, floods, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather, or compliance with governmental orders that prohibits the performance of this contract.
- h) If any provision of this Contract is declared or found to be illegal,

unenforceable, or void, both parties shall be relieved of all obligations under such provision. The remainder of the Contract shall fully be enforced permissible by law.

i) BPHC is a tax-exempt entity and shall not be responsible for the payment of any type of tax that may arise as a result of the performance of this contract. The Boston Public Health Commission, having federal tax identification number 043316655, is a tax-exempt entity because it is a political subdivision of the Commonwealth of Massachusetts and performs essential governmental functions such as protecting, promoting, and preserving the health and well-being of all Boston residents. The Boston Public Health Commission was created as of July 1, 1996 by the Boston Public Health Act of 1995 (the "Act"). See Mass. Gen. Laws 111 App. §2-1 et seq. The Act specifically created the Boston Public Health Commission as a political subdivision of the Commonwealth of Massachusetts and imbued upon its exemption from taxation and other assessments. See Mass. Gen. Laws III App. §§2-3, 2-9. According to the Internal Revenue Code, gross income does not include income derived from the exercise of any essential governmental function or that accruing to a State or political subdivision thereof. See 26 USC §115(1). For these reasons, the Boston Public Health Commission enjoys tax exempt status under both state and federal law. This Paragraph XI (i) shall serve as the Commission's certificate of tax exemption.

**ARTICLE XII – AVAILABLE APPROPRIATION**

This Contract is subject to the availability of an appropriation therefore BPHC retains the right to reduce the amount of this Contract or terminate it if funding for the Contract is reduced or eliminated. This expressly includes any contracts that are funded in whole or in part by any grant funding received by BPHC.

**ARTICLE XIII – RELEASE OF BPHC ON FINAL PAYMENT**

Acceptance by Contractor of final payment from BPHC under this Contract shall be deemed to release forever BPHC from all claims and liabilities, except those which Contractor notifies BPHC in writing within three (3) months after such payment.

**ARTICLE XIV – TERMINATION OR CANCELLATION**

This Contract may be terminated by the BPHC for any breach of its terms by the Contractor, for convenience, or for any other ground stated elsewhere in this contract. All obligations which are executory on both sides shall be discharged upon termination. Any rights based on prior breach of performance shall survive. The terms of the Contract shall survive its termination for the purposes of (1) resolving any claims and (2) warranties. This Contract may be cancelled by the BPHC and will have the same effect as termination except that the BPHC shall retain any remedy for breach of the whole contract or any unperformed balance. Notice of termination or cancellation shall be given to the Contractor at the address supplied on the Request for Contract/Standard Contract Cover Page by email or mail and shall be effective on upon received. Contractor shall have no right to recover other amounts, including but not limited to amounts for lost profits, indirect, incidental, or consequential damages.

**ARTICLE XV – WARRANTIES**

Contractor makes all warranties as are applicable under M.G.L. c. 106 §2-313, the Warranty of Title, M.G.L. c. 106 §2-313, Express Warranties as by affirmation, promise, description and/or sample, M.G.L. c. 106 §2-314, the implied warranties of merchantability or by usage of trade, and MG.L. c. 106 §2-315, implied warranty of fitness for a particular purpose.

**ARTICLE XVI – CONFIDENTIALITY**

Contractor shall comply with all applicable federal, state, and local laws and regulations relating to confidentiality and privacy of any data collected or received by the Contractor. Contractor shall inform each of its employees or agents having any involvement with personal data or other confidential data of the laws and regulations relating to confidentiality and shall ensure their compliance.

**ARTICLE XVII – CRIMINAL OFFENDER RECORD INFORMATION (CORI)**

In order to ensure that independent contractors and their employees who have unsupervised contact with client(s) are appropriate for serving in their position in any program or facility of BPHC or any vendor agency programs funded by BPHC, a Criminal Offender Record Information ("CORI") check must be performed on the independent contractor(s) or its employees as provided in 101 CMR 15.00. It is the policy of BPHC that convictions of certain crimes pose an unacceptable risk to the vulnerable populations served by BPHC and its vendor agencies. Contractor and any subcontractors/employees who may have unsupervised contact with

client(s) shall consent to a CORI check conducted by Human Resources or provide BPHC with an Affidavit stating that the vendor has conducted its own CORI check on the employees or individuals.

The General Counsel's Office has the discretion to require CORI check, SORI check, or CORI Affidavit for any other contracts where it deems necessary, including but not limited to, any contracts where BPHC's finances or financial information are a subject of the contract.

**ARTICLE XVIII – ENTIRE AGREEMENT, COUNTERPARTS, COPIES**

This Contract constitutes the entire agreement of the BPHC and Contractor and supersedes any and all oral agreements and negotiations. If necessary, this Agreement may be executed in counterparts, each of which shall be deemed to be an original, but all of which, taken together, shall constitute one and the same agreement. In addition, a copy of this contract will be just as enforceable as an original, unless one party demands creation and receipt of a contract with original signatures.

----- **END OF TERMS AND CONDITIONS** -----

BPHC and Contractor hereby cause this instrument to be executed by the duly authorized representatives as of the day first written above.

**CONTRACTOR**

Approved by:

Signature:

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

**BOSTON PUBLIC HEALTH COMMISSION**

**Approved as to Form – General Counsel**

Signature:

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

**Approved - Administration and Finance / Executive Office**

Signature:

Printed Name: \_\_\_\_\_

Date: \_\_\_\_\_

**SECTION 00.73.43**  
**PREVAILING WAGES and LABOR REGULATIONS**

**1. PREVAILING WAGE RATES**

- A. The rate per hour to be paid to mechanics, apprentices, teamsters, chauffeurs, and laborers employed on the Work shall not be less than the rate of wages in the attached "Minimum Wage Rates" as determined by the Commissioner of the Massachusetts Department of Labor Division of Occupational Safety. This schedule shall continue to be the minimum rate of wages for said employees during the life of this Contract. Any questions relative to the applicability of any wage rate shall be directed to the Division of Occupational Safety.
- B. Keep a legible copy of said schedule posted on the site at all times. Provide the Owner, on a weekly basis, and keep an on-site file of the wage rates and classifications of labor employed on this Work in order that they may be available for inspection by the Owner, Department, Architect, or any agency having jurisdiction.
- C. Pay reserve police officers employed on the Work the prevailing rate of wages paid to regular police officers as required by MGL c149 § 34B, as amended. Such police officers shall be covered by Worker's Compensation Insurance and Employers Liability Insurance provided by the Contractor.

**2. WAGE RATE REPORTING**

- A. The Contractor and all subcontractors shall provide certified payroll affidavits verifying compliance with MGL c.149 §§26 - 27H.
- B. The Contractor and all subcontractors shall provide a Statement of Compliance within 15 days of the completion of its portion of the work. This statement shall be submitted to the Owner on the form found elsewhere in this section.
- C. [Weekly Payroll Form](http://www.mass.gov/lwd/docs/dos/prevaling-wage/pw-payroll.pdf) www.mass.gov/lwd/docs/dos/prevaling-wage/pw-payroll.pdf
- D. [Statement of Compliance](http://www.mass.gov/lwd/docs/dos/prevaling-wage/pw-compliance.pdf) www.mass.gov/lwd/docs/dos/prevaling-wage/pw-compliance.pdf

**3. APPRENTICE REQUIREMENTS**

Apprentices employed pursuant to this determination of wage rates must be registered and approved by the State Apprenticeship Council wherever rates for journeymen or apprentices are not listed.

**4. EMPLOYEE OSHA SAFETY TRAINING**

- A. All employees who work on this construction site must have no less than 10 hours of OSHA-approved safety and health training. See Chapter 306 of the Acts of 2004.
- B. The Contractor and all Subcontractors shall furnish to the Owner, with the certified payroll reports, documentation indicating that each employee has successfully completed 10 hours of a course in construction safety and health. This course must be approved by the United States Occupational Health and Safety Administration (OSHA).

**INSERT WAGE RATES OBTAINED FROM**  
**Department of Labor, Division of Occupational Safety**

**END OF PREVAILING WAGE AND LABOR REGULATIONS**  
**00.73.43**

## SECTION 01 00 00 - CONSOLIDATED GENERAL REQUIREMENTS

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### PART 1 - GENERAL

#### 1.1. RELATED DOCUMENTS

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. This Section applies to all Work performed under the Contract.
- C. Comply with the special requirements of Owner and attached or referenced documents.

#### 1.2. SUMMARY OF WORK & PROJECT REQUIREMENTS

- A. Project Identification: As listed on cover page and in header.
- B. The work consists of: New construction.
  - 1. All MEP trades; indicated site, civil and landscape work.
  - 2. A separate FF&E contract entered into by the Owner to provide furniture and/or equipment.
  - 3. Coordination with the vendors, suppliers and installers of this Contract.
  - 4. Alterations, additions and tenant improvements.
  - 5. Demolition
- C. Pricing & Contracting Requirements: Refer to Owner and Article 1.9 below.
- D. Comply with the Owner Standards. Specific attention is directed to:
  - 1. Written reports to be provided detailing subcontractors at the site, workers per sub, Contractor's workers and, weather conditions, description of work done, deliveries, Owner/Architect instructions and decisions. Deliver report to Owner PM office the next following working day.
  - 2. Requirements for regular project meetings, at intervals required by Owner or Architect.
  - 3. Construction Scheduling.
  - 4. Work hours, which are typically 7:00 to 5:00 unless otherwise arranged and approved in writing.

5. Comply with requirements for permits, details, fire watch and shut downs. Note that addition fees for accelerated construction and off hours work and scheduling of work during on holidays or other times will not be permitted regardless of the fact that authorities having jurisdiction may prohibit work at certain hours or on certain days.
  6. Management of fire detectors and coordination with Fire Marshalls in locality having jurisdiction.
  7. Parking arrangements.
  8. The requirement for progress photos.
  9. Punch list staffing and requirements
  10. Compliance with Factory Mutual Standards, if requested by Owner or specified in other sections.
  11. The Owner's right to occupy and place equipment in completed areas of the building prior to Substantial Completion which does not interfere with the completion of the Work.
  12. Construction Management software: Where required by Owner or Architect, it is a contract requirement that software compatible with Architect/Owner systems be used during all construction phases. This included management and scheduling software.
  13. Owner Tax Exempt Status: Comply with the requirements of state statutes for payment of state taxes in connection with construction projects performed for tax exempt entities. Verify Owner status.
- E. Sustainable Design Intent: The following requirements are made a part of the Contract Requirements for this Project:
1. Compliance with Institution/Local/State/Agency sustainability requirements and regulations and applicable building code standards.
  2. Take notice of Section 01 51 50, Construction Indoor Air Quality (IAQ) Management and Section 01 57 10, Construction Waste Management. See other sections and specific requirements throughout the contract.
  3. At interior locations, provide low-emitting (low VOC) adhesives, sealants, paints, coatings, carpet systems, systems furniture, and seating
  4. At interior locations, provide composite woods, agrifiber products, and laminate adhesives with no added urea-formaldehydes.
  5. Provide green housekeeping methods at final closeout.
  6. Comply with Owner recycling goal for demolition and construction waste removed from the site.
- F. Project Requirements for Temporary Utilities and Facilities:
1. Utility Costs: The Contractor shall meter and pay for cost of utility services consumed, including electricity, water, gas and temporary heat.
  2. Temporary Offices: Provide field offices.
  3. Toilet Facilities: Provide toilet facilities for construction personnel.
- G. Permits and Fees: Apply for, obtain, and pay for permits, fees, and utility company backcharges required to perform the work. Submit copies to Architect and Owner immediately upon receipt.
- H. Dimensions: Verify dimensions indicated on drawings with field dimensions before fabrication or ordering of materials. Do not scale drawings.
- I. Existing Conditions: Notify Architect of existing conditions differing from those indicated on the drawings. Do not proceed with work that requires deviation from the design with Architect's written approval.
- J. Contractor's Conduct on Premises: The Contractor and his employees shall behave in a respectful, courteous and safe manner. Abusive, harassing, and lewd behavior is prohibited. Music playing is prohibited. Alcohol, tobacco and drug use is prohibited.
- K. Hazardous Waste: Refer to Owner. Hazardous waste is outside the scope of responsibility of the Architect and his consultants.



- L. Contractor's Management Staff Requirements: Provide staff necessary to manage project and acceptable to Owner.
  - 1. Experience, Qualifications: Minimum 10 years experience with projects similar to this Contract.
  - 2. Reassignment or Replacement: If requested by the Owner or Architect at any time during the Contract, replace Contractor's management staff with personnel acceptable to the Owner and Architect. Do not reassign or replace management staff, unless preapproved by the Owner.
  - 3. On Site: Contractor's Management Staff shall be on site whenever work is in progress.
  - 4. Work Restrictions: Contractor's Management Staff shall manage, supervise, coordinate, plan, and direct the work. Contractor's Management Staff shall not work with tools and provide production work.
  - 5. Installation/MEP Coordinator: Provide the services of an experienced installation coordinator to direct, manage and supervise the Coordination Drawing process and the installation of all building systems including interface with structure and architecture.
- M. Restrictions on Noise: Comply with requirements of authorities having jurisdiction.
  - 1. Use equipment with well maintained mufflers.
  - 2. Use the least noisy techniques practical.
  - 3. Schedule noisy activities when ambient background noise level is highest.
  - 4. Turn off all unneeded and idling equipment and engines.
  - 5. Locate noise sources as far as practical from noise sensitive locations.
  - 6. Orient noise sources away from noise sensitive locations

### 1.3. SPECIFICATION INFORMATION

- A. These specifications are a specialized form of technical writing edited from master specifications and contain deviations from traditional writing formats. Capitalization, underlining and bold print are only used to assist readers in finding information and no other meaning is implied.
- B. Except where specifically indicated otherwise, the subject of all imperative statements is the Contractor.
- C. Sections are generally numbered in conformance with Construction Specifications Institute Masterformat System. Numbering sequence is not consecutive. Refer to the table of contents for names and numbers of sections included in this Project.
- D. Pages are numbered separately for each section. Each section is noted with "End of Section" to indicate the last page of a section.
- E. Specification sections are only a portion of the Contract Documents. All Contract Documents including Conditions of the Contract, Division 1 General Requirements apply to each section. Each section applies to all specification section and work of the Contract.

### 1.4. DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. "Accepted": When used to convey Architect's action on Contractor's submittals, applications, and requests, "Accepted" is limited to Architect's duties and responsibilities as stated in the Conditions of the Contract.
- C. "Directed": A command or instruction by Architect. Other terms including "requested," "authorized," "selected," "approved," "accepted," "required," and "permitted" have the same meaning as "directed."
- D. "Indicated": Requirements expressed by graphic representations or in written form on Drawings, in Specifications, and in other Contract Documents. Other terms including "shown," "noted," "scheduled," and "specified" have the same meaning as "indicated."
- E. "Regulations": Laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, and rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. "Furnish": Supply and deliver to Project site, ready for unloading, unpacking, assembly, installation, and similar operations.

- G. "Install": Operations at Project site including unloading, temporarily storing, unpacking, disposing of packaging, assembling, erecting, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
  - H. "Provide": Furnish and install, complete, in place, and ready for the intended use.
  - I. "Project Site": Space available for performing construction activities. The extent of Project site is shown on Drawings and may or may not be identical with the description of the land on which Project is to be built.
  - J. "As shown, if not": As shown or indicated in the Contract Documents and if not so shown, then provide the item(s) following "if not,".
  - K. "Section includes": unless otherwise noted, shall mean, "Section includes, without limitation, providing".
  - L. "As indicated" or "As shown" or "As scheduled" shall mean as indicated on the drawings or finish schedule or finish legend.
- 1.5. INDUSTRY STANDARDS
- A. Referenced standards are part of the Contract Documents and have the same force and effect as if bound with these specifications.
  - B. Except where specifically indicated otherwise, comply with the current standard in effect as of the date of the Owner/Contractor Agreement. Obtain copies of industry standards directly from publisher.
  - C. The titles of industry standard organizations are commonly abbreviated; full titles may be found in Encyclopedia of Associations or consult Architect.
- 1.6. CODES AND REGULATIONS
- A. Comply with all applicable codes, ordinances, regulations and requirements of authorities having jurisdiction:
  - B. Submit copies of all permits, licenses, certifications, inspection reports, releases, notices, judgments, and communications from authorities having jurisdiction to the Architect.
- 1.7. PROGRESS SCHEDULE
- A. Provide comprehensive bar chart schedule showing all major and critical minor portions of the work, sequence of work and duration of each activity. Update and reissue regularly, but not less than monthly. Comply with the following:
  - B. Contract Progress Schedules and Reports: Provide Critical Path Method [CPM] progress schedules and reports.
    - 1. Software Program: Subject to approval by Owner and Architect.
    - 2. First Submittal: Within 30 days after executed Owner Contractor Agreement.
    - 3. Updated Submittals: Required at least once per month.
    - 4. Subcontractors: Shall provide information requested by the General Contractor.
    - 5. Contract Progress Schedule and Schedule of Values: Make the Contract Progress Schedule work items with the Schedule of Value work items the same.
    - 6. All submittals of the schedules shall also be furnished in their native software format
  - C. Contract Progress Schedule Content: Include at least the following information.
    - 1. All major and critical minor Contract activities.
    - 2. Sequence and duration of each activity.
    - 3. Project milestones.
    - 4. Early start and early finish for each activity.
    - 5. Late start and late finish for each activity.
    - 6. Total float time for each activity.
    - 7. Submittals related to each activity including dates of first submittal and last date for approval.
    - 8. Fabrication and delivery time for each item requiring off site fabrication.
    - 9. Start and completion dates for each mock up and sample including in place samples.

10. The critical path of work.
- D. Contract Progress Schedule Reports: Submit reports including at least the following information:
  1. The critical path of work and all work items on the critical path.
  2. Bar chart plot.
  3. Plot showing the content specified above.
  4. Monthly activity plots for each month.
  5. Two week "look ahead" plots.
  6. "Executive Summary" indicating if on schedule or, if not on schedule, problem areas.
- E. Contract Progress Schedule Updates: Update at least once per month, and as follows:
  1. Unless otherwise agreed, submit with Application for Payment.
  2. Incorporate actual start and complete dates.
  3. Update whenever the Contract Time is revised by Change Order.
- F. Recovery Plan: Prepare and submit a "Recovery Plan" whenever the work is 10 calendar days or more behind schedule. Show how the project will be managed back to "on schedule" condition.

#### 1.8. SCHEDULE OF VALUES

- A. Comply with Architect and Owner requirements and provide a Standard Schedule of Values in formats and minimum line items unless waived by the Owner. Prepare Schedule of Values to coordinate with application for payment breakdown. Submit at least 10 days before first payment application. Update and reissue regularly, but not less than monthly.
- B. Schedule of Values (SOV) shall be submitted to the Owner for approval. Line items on the SOV shall be no more than \$25,000 value unless specifically accepted by the Owner. No billing can take place without an approved SOV. SOV is not subject to change except by change orders indicated sequentially below the subtotal line of the base contract.

#### 1.9. PAYMENT REQUESTS

- A. Format: Unless hard copy is requested by Architect, provide PDF formatted electronic documents.

Provide [4 if hardcopy] copies of each request on completely filled out copies of AIA G702 and continuation sheet G703. Substantiate requests with complete documentation; include change orders to date. Provide partial [interim] lien waivers for work in progress and full lien waivers for completed work. Waiver of liens shall sum to the total of the applicable line items on the G702 AIA form

- B. Record Drawing Certification: Certify as a part of each application for payment that the project record documents are current at the time of application is submitted. The Contractor shall require such drawings to be current as a condition of approving any payment to the Trade Contractors and Subcontractors.
- C. Before first payment application, provide the following:
  1. List of subcontractors, suppliers and fabricators.
  2. Schedule of values.
  3. Progress schedule.
  4. Submittal schedule keyed to project schedule.
  5. List of Contractor's key project personnel.
  6. Copies of permits and other communications from authorities.
  7. Contractor's certificate of insurance.
  8. Performance and payment bonds if required.
  9. Unit price schedule.
  10. Construction Waste Management Plan, other specified sustainable construction management plans.
- D. For typical payment application, provide the following:
  1. Approved SOV with change orders shown below the approved base contract values.

2. Progress schedule.
  3. Submittal schedule keyed to project schedule.
  4. Release of liens.
  5. Other documents required by Owner or municipalities.
  6. Certificate of title and insurance for goods stored off-site.
  7. Construction Waste Management Plan reports.
  8. Materials cost data as required to document recycled content, certified wood, location of manufacturing, and other sustainable requirements.
- E. Before final payment application, provide and complete the following:
1. Complete close out requirements.
  2. Complete punch list items.
  3. Settle all claims.
  4. Transmit record documents to Architect.
  5. Prove that all taxes, fees and similar obligations have been paid.
  6. Remove temporary facilities and surplus materials.
  7. Change lock cylinders or cores.
  8. Clean the work.
  9. Submit consent of surety, if any, for final payment.
- 1.10. PROCEDURES AND CONTROLS
- A. Project Meetings: Arrange for and attend project meetings with the Architect and such other persons as the Architect requests to have present. The Contractor shall be represented by a principal, project manager, general superintendent or other authorized main office representative, as well as by the Contractor's field superintendent. An authorized representative of any subcontractor or sub-subcontractor shall attend such meetings if the representative's presence is requested by the Architect. Such representatives shall be empowered to make binding commitments on all matters to be discussed at such meetings, including costs, payments, change orders, time schedules and manpower. Any notices required under the Contract may be served on such representatives. Written reports of meeting minutes shall be prepared and distributed to attendees, the Architect, Contractor(s), and Owner in advance of the next meeting. Minutes shall be prepared by Contractor, except where Owner or agencies mandate minutes to be prepared by Architect.
1. Pre-Construction Conference: Attendance by Architect, Contractor, major subcontractors. Agenda shall include: Quality of workmanship, coordination, interpretations, job schedule, submittals, approvals, requisition procedures, testing, protection of construction, indoor air quality, and construction waste management.
  2. Interior Finishes Meeting: Attendance by Architect, Contractor, major subcontractors. Agenda shall include as applicable: Quality of workmanship, environmental conditions for application of finishes, drywall detail, millwork details, condition of surfaces to receive finishes, tile work, painting work, samples and test areas and approvals, coordination with mechanical and electrical interfaces and penetrations, indoor air quality.
  3. Progress Meetings: Hold regularly before preparation of payment requests and additional meetings as requested by the Architect. Attendance by Architect, Contractor, and others as determined by Contractor. Agenda shall include work in progress and payment requests.
- B. Emergency Addresses: Furnish the Owner and Architect, in writing, the names addresses and telephone numbers of individuals to be contacted in the event of an out-of-hours emergency at the building site. Post a similar list readily visible from the outside of the field office or a location acceptable to the Architect.
- C. Layout: Layout work and be responsible for all lines, elevations, and measurements of the work executed under the contract. Where required to complete the work properly, the Contractor shall engage and pay for a professional land surveyor.
- D. Field Measurements: Verify measurements at the building prior to ordering materials or commencing work. No extra charge or compensation will be allowed because of differences between actual dimensions and measurements indicated on the Drawings. Differences which may be found shall be submitted to the Architect for decision before proceeding with the work.

- E. Field Measurements for Fixed Equipment: Dimensions for fixed equipment to be supplied under this Contract or separate contracts shall be determined by field measurements taken jointly by the Contractor and the equipment supplier involved. A record of the field measurements shall be kept until time of substantial completion of the project, or until the equipment has been fully installed and accepted by the Owner, whichever is later. Responsibility for fixed equipment fabricated accurately to field measurements for proper fit and operation shall be that of the Contractor. Contractor shall pay all costs involved in correcting any mis-fitting fixed equipment as fabricated.
- F. Project Limit Line: The boundaries of the site do not limit the responsibility of the Contractor to perform the work in its entirety. Make utility connections as indicated.
- G. Matching: Where matching is indicated, the Architect shall be the sole and final judge of what is an acceptable match. Mockups and sample submissions are required.
- H. Observation: Notify the Architect and authorities having jurisdiction at least thirty-six hours in advance of concealing any work.
- I. Utilities: Prior to interrupting utilities, services or facilities, notify the utility owner and the Owner and obtain their written approval a minimum 48 hours in advance, but 72 hours is preferred.
- J. Furnishings, Fixtures, and Equipment: Cooperate and permit the Owner to install his furnished items. Installation of such furnishings or equipment does not signify Owner's acceptance of any portion of the work.
- K. Clean-Up: Frequently clean-up all waste, remove from site regularly, and legally dispose of off-site.
- L. Installer's Acceptance of Conditions: All installers shall inspect substrates and conditions under which work is to be executed and shall report in writing to the Contractor all conditions detrimental to the proper execution and completion of the work. Do not proceed with work until unsatisfactory conditions are corrected. Beginning work means installer accepts previous work and conditions.
- M. Coordination: The Contractor shall be fully responsible for coordinating all trades, coordinating construction sequences and schedules, and coordinating the actual installed location and interface of all work.
  - 1. Prior to beginning mechanical, electrical and fire protection work, the Contractor shall prepare coordination drawings electronically showing the exact alignment, physical location and configuration of the mechanical, electrical and fire protection installations and demonstrating to the Contractor's satisfaction that the installations will clear all obstructions, permit proper clearances for the Work of other trades, and present an orderly appearance where exposed. The Contractor shall be solely liable and responsible for any costs and delays resulting from the Contractor's failure to prepare any such coordination drawings or from the negligent preparation of such coordination drawings. At the completion of the work turn over all coordination drawings to the Architect and Owner. Provide drawings as follows:
    - a. Scale:  $\frac{1}{4}$  inch = 1'-0" or larger scale.
    - b. Color: Color code each trade in a clearly different color.
    - c. Conflicts: Indicate all conflicts by means of a clear symbol and note.
  - 2. Exact locations and groupings of mechanical, electrical and fire protection fixtures, switches, heads, devices and outlets shall be obtained from the Architect before the Work is roughed in, if not already indicated. Work installed without such information from the Architect shall be relocated at the Contractor's expense if the Architect so requests.
- N. Request For Interpretation (RFIs):
  - 1. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and prepare and submit an RFI in the form specified.
    - a. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
    - b. Submit RFI electronically unless otherwise agreed.
  - 2. Content of the RFI: Include a detailed, legible description of item needing interpretation.
  - 3. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow 7 working days for Architect's response for each RFI and 10 where Architect's consultants are involved. RFIs received after 1:00 p.m. will be considered as received the following working day.

4. The following RFIs will be returned without action:
  - a. Requests for approval of submittals.
  - b. Requests for approval of substitutions.
  - c. Requests for coordination information already indicated in the Contract Documents.
  - d. Requests for adjustments in the Contract Time or the Contract Sum.
  - e. Requests for interpretation of Architect's actions on submittals.
  - f. Incomplete RFIs or RFIs with numerous errors.
- O. Existing Articles of Unusual Value: If during demolition, excavation, or disposal work articles of unusual value or of historical or archaeological significance are encountered, the ownership of such articles is retained by the Owner, and information regarding their discovery shall be immediately furnished to the Architect. If the nature of the article is such that work cannot proceed without danger of damage, work in the area shall be immediately discontinued until the Architect has determined the proper procedure to be followed. Delays in time thereby shall be a condition for which the time of the Contract may be extended. Costs incurred after discovery in the salvaging of such articles shall be borne by the Owner.
- P. Quality Control & Testing Services: Coordinate with the Owner and Architect in the event testing is required. Provide services necessary to enable inspectors, testing laboratory representatives and the like to perform their work.
- Q. Progress Photos: Comply with the following:
  1. Photographer: Any competent person approved by the Owner and Architect.
  2. Digital Photographs: Minimum 20MB digital sensor, maximum quality, clearly legible, "jpeg" file images.
  3. Digital Submission: Submit compact disc and thumb drive with digital photograph files each month.
  4. Prints: Not required.
  5. Lighting: Provide supplemental lighting as needed to provide clear, detailed images.
  6. Construction Photographs:
    - a. Purpose: To document the progress of the work.
    - b. Quantity: At least 20 images per week.
    - c. Photo Identity: Give each photo a unique identity number.
    - d. Record: Date and time photo taken, included in filename.
  7. Preconstruction Photographs - New Construction: Record existing conditions with emphasis on nearby existing improvements indicated to remain. Clearly record existing damage, if any.
- R. Daily Reports: Provide daily reports and submit to Owner and Architect once per week.
- S. Long Lead Time Items: Time is of the essence in the Contract. Expedite and provide special management for "long lead time" items.
- T. Contractor's Responsibilities Related To The Owner's Management Staff:
  1. Cooperate with the Owner's management staff.
  2. Provide "Weekly Work Plan" each Monday morning by 8:00 am.
  3. Provide immediate notification of all unusual conditions and occurrences at the site.
  4. Identify all persons at the site, both workers and visitors.
  5. Meet with the Owner's representative to review work and execution of time and materials work prior to, and at the conclusion of any work approved for Time and Material. Time and Material slips must be signed by the owner's representative less than 24 hours after slip is generated to obtain payment.
- U. Documents On Site: Maintain the following documents on site and up-to-date:
  1. Contract Documents.
  2. Modifications and changes to Contract Documents.
  3. Coordination drawings.
  4. Meeting notes for all types of meetings: progress, safety, preinstallation, special, and others.
  5. Progress schedules and related information.
  6. Project photographs.
  7. Daily reports.
  8. Submittal log and all submittals.

## 1.11. SUBMITTALS

- A. Form of Submittal: Use Architect's electronic system unless otherwise directed in writing. Comply with Architect's formatting and tel/data requirements. Where the Architect does not use a dedicated ftp site or server, submit documentation via scanned documents and email. Comply with required transmittal and data formats using numbering system approved by Architect.

Required Submittals: Submit shop drawings, product data, initial selection samples, verification samples, calculations, coordination drawings, schedules, and all other submittals as specified in individual specification sections.

1. Provide submittals for cleaning and maintenance products to be used during construction and final cleaning.
- B. Submittal Schedule: Within 30 days after award of contract and before first application for payment, prepare list of submittals in chronological sequence showing all submittals and proposed date first due at Architects office and proposed date due to be returned to Contractor. Note relevant specification section number.
- C. Contractor's Preparation of Submittals: Modify and customize all submittals to show interface with adjacent work and attachment to building. Identify each submittal with name of project, date, Contractor's name, subcontractor's name, manufacturer's name, submittal name, relevant specification section numbers, and Submittal Schedule reference number. Stamp and sign each submittal to show the Contractor's review and approval of each submittal before delivery to Architect's office; unstamped and unsigned submittals will be returned without action by the Architect. Leave 4" x 6" open space for Architect's "action" stamp.
- D. Product Data: Provide manufacturer's preprinted literature including, without limitation, manufacturer's standard printed description of product, materials and construction, recommendations for application and use, certification of compliance with standards, instructions for installation, and special coordination requirements. Collect data into one submittal for each unit of work or system; mark each copy to show which choices and options are applicable to project
1. Options: All required or available options shall be indicated and noted by the Contractor.
  2. Submittal Quantities: Unless otherwise requested, provide only electronic format. If hardcopy is requested, submit at least 1 reproducible copy and three additional copies.
  3. Installer Copy: Verify that the Installer has a current copy of the relevant product data, including installation instructions, before permitting installation to begin.
- E. Shop Drawings: Provide accurately prepared, large scale and detailed shop drawings prepared specifically for this project on scannable or reproducible sheets or via online. Show adjacent conditions and related work. Show accurate field dimensions and clearly note field conditions. identify materials and products in the work shown. Note special coordination required.
1. PDF files: Contractor shall submit copies of portable document format files for review. At his discretion, the Architect may request hardcopy as per paragraph 2 below.
  2. Submittal Quantities: Submit at least 1 scannable copy and digital copy and, if requested, three blackline prints of Shop Drawing submittals.
  3. After Architect's action, follow specified distribution procedure.
- F. Samples: Provide units identical with final materials and products to be installed in the work. Where indicated, prepare samples to match Architect's sample. Label each sample with description, source, generic name or manufacturer's name and model number. Architect will review samples for confirmation of visual design intent, color, pattern, texture and type only; Architect will not test samples for compliance with quality and other Contract requirements which shall remain the exclusive responsibility of the Contractor.
1. Initial Selection Samples Submittal Quantities: Unless a specific, unique product is specified, for initial selection purposes, submit a set of samples showing the complete range of colors and finishes available, as follows:  
For exterior assemblies: One for Owner, one for architect, and required quantity for contractor.

- For interior assemblies: One for Owner, one for architect, one for interior designer, if any, and required quantity for contractor.
2. Verification Samples Submittal Quantities: For verification of an initial selection, submit 3 sets of samples; one set will be returned to Contractor to be maintained at project site for quality control comparisons.
- G. Timing of Submittals: Submit submittals in a timely fashion to allow at least 10 business days for each office's review and handling. The Architect and their consultants make no commitments as to the duration of review of submittals. This is a condition of the work and Contractors agree that delay claims are exempt from shop drawing review time. This means that submittals which have to be reviewed by the Architect and one of his consultants require at least 20 business days for review and handling. Add ten business days for each additional consultant who must review a submission.
- H. Architect's Action on Submittals: Architect will review submittals, stamp with "action stamp", mark action, and return to Contractor. Architect will review submittals only for conformance with the design concept of the project. The Contractor is responsible for confirming compliance with other Contract requirements, including without limitation, performance requirements, field dimensions, fabrication methods, means, methods, techniques, sequences and procedures of construction, coordination with other work. The Architect's review and approval of submittals shall be held to the limitations stated in the Owner/Architect Agreement and the Conditions of the Contract. In no case shall approval or acceptance by the Architect be interpreted as a release of Contractor of his responsibilities to fulfill all of the requirements of the Contract Documents.
1. Required Re-submittal: Comply with indications on Transmittal and Stamp.
  2. Distribution: When submittal is reviewed and resubmittal is not required, make prints or copies and distribute to Owner, Subcontractors involved, and to all other parties requiring information from the submittal for performance or coordination of related work. Print shop drawings for distribution only from the final reviewed drawings showing all notations and comments.
  3. Submittals which deviate from the Contract Documents will not be allowed.
  4. Submittals which deviate from the Contract Documents and have not been submitted by the standard substitution process and have not been highlighted as a deviation, shall be considered unacceptable for incorporation into the work whether or not they have been approved by the Architect. In other words, undocumented deviations are not approved regardless of any other action by the Architect.
- I. Mock-ups – General: Provide mock-ups where specified in individual sections or shown on drawings.
- J. Mock-ups – Type 1: Shall be disposable and not considered “In-Place Sample Mock-ups” are required unless otherwise indicated. All mock-ups shall be type 2 below, unless otherwise noted. Purpose and requirements are as follows:
1. To permit Owner and Architect to review and approve assemblies prior to ordering and to be used as sample of acceptable work.
  2. Construct mock-ups as early as possible and before ordering products.
  3. Provide actual materials indicated.
  4. Locate mock-ups as directed by architect.
  5. Develop and prepare mock-up construction drawings.
  6. Protect mock-ups until no longer needed by Owner and Architect.
  7. Demolish, remove and dispose of mock-ups as directed.
  8. Provide indicated mock-ups including the following:  
Typical exterior wall assembly not less than 6x8 feet showing each exterior skin assembly, window, window frames, each glass type, flashings, weeps, roof edges, visible joints sealants  
Concealed assemblies including concealed exterior wall construction, skin support, framing, concealed flashing, air barriers, dampproofing, waterproofing, concealed joint sealants and other elements concealed in typical assemblies.
- K. Mock-ups – Type 2 : Provide mock-ups indicated in specifications sections which unless otherwise indicated may be left in place if approved after review. Applicable requirements of Type 1 apply to this type of mock-up. All mock-ups shall be type 2 unless otherwise noted.



- I. Sustainable Construction Submittals : Comply with Sustainable Design specifications and requirements, including local municipality regulations and provisions.
- J. Maintain all necessary records in current form throughout the execution of the Work.
- M. The Architect's general approval of a submittal is not intended to modify or waive any requirements of the drawings and specifications. If a submittal proposes to modify materials, size, assembly, quality or appearance as required by the drawings and specifications, said proposed modification will be clearly and boldly marked upon the submittal. Absent Architect's explicit approval of this boldly marked modification, said proposed modification shall not be deemed approved.

#### 1.12. WARRANTIES

- A. Warranties Required: Refer to individual trade sections for specific product warranty requirements.
- B. Procurement: Where a warranty is required, do not purchase or subcontract for materials or work until it has been determined that parties required to countersign warranties are willing to do so.
- C. Warranty Forms: Submit written warranty to Owner through Architect for approval prior to execution. Furnish two copies of executed warranty to Owner for his records; furnish two additional conformed copies where required for maintenance manual
- D. Work Covered: Contractor shall remove and replace other work of project which has been damaged as a result of failure of warranted work or equipment, or which must be removed and replaced to provide access to work under warranty. Unless otherwise specified, warranty shall cover full cost of replacement or repair, and shall not be pro-rated on basis of useful service life.
- E. Warranty Extensions: Work repaired or replaced under warranty shall be warranted until the original warranty expiration date or for ninety days whichever is later in time.
- F. Warranty Effective Starting Date: Guarantee period for all work, material and equipment shall begin on the date of substantial completion, not when subcontractor has completed his work nor when equipment is turned on. In addition to the one year guarantees for the entire work covered by these Contract Documents, refer to the various sections of the specifications for extended guarantee or maintenance requirements for various material and equipment.

#### 1.13. CUTTING AND PATCHING

- A. Limitations: Do not cut and patch any work in a manner that would result in a failure of the work to perform as intended, decreased energy performance, increased maintenance, decreased operational life, or decreased safety.
  - 1. Structural Work: Do not cut structural work or bearing walls without written approval from Architect. Where cutting and patching of structural work is necessary and approved by Architect, perform work in a manner which will not diminish structural capacity nor increase deflection of member. Provide temporary shoring and bracing as necessary. Ensure the safety of people and property at all times.
- B. Cutting and Patching Materials: Use materials identical to materials to be cut and patched. If identical materials are not available or cannot be used, use materials that match existing materials to the greatest extent possible. Provide finished work that will result in equal to or better than existing performance characteristics.
- C. Inspection: Before cutting and patching, examine surfaces and conditions under which work is to be performed and correct unsafe and unsatisfactory conditions prior to proceeding.
- D. Protection: Protect adjacent work from damage. Protect the work from adverse conditions.

- E. Cutting: Cut work using methods least likely to damage adjoining work. Use tools designed for sawing or grinding, not hammering or chopping. Use saws or drills to ensure neat, accurately formed holes to sizes required with minimum disturbance to adjacent work. Temporarily cover openings ; maintain weather-tightness and safety.
    - 1. Utilities: Locate utilities before cutting. Provide temporary utilities as needed. Cap, valve, or plug and seal ends of abandoned utilities to prevent entrance of moisture or other foreign matter.
  - F. Patching: Patch with seams and joints which are durable and not visible. Comply with specified tolerances for similar new work; create true even planes with uniform continuous appearance. Restore finishes of patched areas and, if necessary, extend finish restoration onto adjoining unpatched area to eliminate evidence of patching and refinishing. Repaint entire assemblies, not just patched area. Remove and replace work which has been cut and patched in a visually unsatisfactory manner as determined by the Architect.
  - E. Qualifications: Retain experienced and specialized firms, original installers if possible, to perform cutting and patching. Workmen shall be skilled in type of cutting and patching required.
  - F. Cutting and patching includes coring and core drilling. Cutting and patching not performed by trades shall be performed by the (General) Contractor.
- 1.14. FIELD ENGINEERING
- A. Provide required field engineering including property metes, bounds and elevation surveying of both land and structures, civil engineering services and structural engineering services.
  - B. Field engineering submittals include:
    - 1. Certificates signed by the Land Surveyor or Professional Engineer certifying that the location, layout and elevation of improvements comply with the Contract Documents.
    - 2. Final Property Survey: Where the contract documents or the regulation of the municipality have jurisdiction require survey drawings, submit one copy for the Owner, one for the Architect and however many are required by the municipality..
    - 3. Project Record Documents: Submit a record of Work performed and record survey data as required under provisions of Sections "Submittals" and "Project Closeout".
  - C. Quality Assurance: Engage a Registered Land Surveyor registered or where required, a professional engineer in the State where the project is located, to perform land surveying services required.
  - D. Surveys & Control Points: Upon request, the Owner will identify existing control points and property line of which he is aware, and when available, will provide copies of site surveys. Where property surveys are not included in the contract documents, generate the needed property survey information as part of the work of this contract.
  - E. Verify layout information shown on the Drawings, in relation to the property survey and existing benchmarks before proceeding to layout the Work. Locate and protect existing benchmarks and control points. Preserve permanent reference points during construction.
    - 1. Do not change or relocate benchmarks or control points without prior written approval. Promptly report lost or destroyed reference points, or requirements to relocate reference points because of necessary changes in grades or locations.
    - 2. Promptly replace lost or destroyed project control points. Base replacements on the original survey control points.
  - F. Establish and maintain a minimum of two permanent benchmarks on the site, referenced to data established by survey control points.
  - G. Record benchmark locations, with horizontal and vertical data, on Project Record Documents.

- H. Existing utilities and equipment: The existence and location of underground and other utilities and construction indicated as existing are not guaranteed. Before beginning sitework, investigate and verify the existence and location of underground utilities and other construction.
  - I. Prior to construction, verify the location and invert elevation at points of connection of sanitary sewer, storm sewer, water service piping, and other underground utilities affected by the work.
  - J. Performance: Working from lines and levels established by the property survey, establish benchmarks and markers to set lines and levels at each story of construction and elsewhere as needed to properly locate each element of the Project. Calculate and measure required dimensions within indicated or recognized tolerances. Do not scale Drawings to determine dimensions.
  - K. Advise entities engaged in construction activities, of marked lines and levels provided for their use.
  - L. As construction proceeds, check every major element for line, level and plumb.
  - M. Surveyor's Log: Maintain a surveyor's log of control and other survey Work. Make this log available for reference.
  - N. Record deviations from required lines and levels, and advise the Architect when deviations that exceed indicated or recognized tolerances are detected. On Project Record Drawings, record deviations that are accepted and not corrected.
  - O. On completion of foundation walls, major site improvements, and other Work requiring field engineering services, prepare a certified survey showing dimensions, locations, angles and elevations of construction and sitework.
  - P. Site Improvements: Locate and lay out site improvements, including pavements, stakes for grading, fill and topsoil placement, utility slopes and invert elevations by instrumentation and similar appropriate means.
  - Q. Building Lines and Levels: Locate and lay out batter boards for structures, building foundations, column grids and locations, floor levels and control lines and levels required for mechanical and electrical Work.
  - R. Existing Utilities: Furnish information necessary to adjust, move or relocate existing structures, utility poles, lines, services or other appurtenances located in, or affected by construction. Coordinate with local authorities having jurisdiction.
  - S. Final Property Survey: Before Substantial Completion, prepare a final property survey showing significant features (real property) for the Project. Include on the survey a certification, signed by the Surveyor, to the effect that principal metes, bounds, lines and levels of the Project are accurately positioned as shown on the survey.
  - T. Recording: At Substantial Completion, have the final property survey recorded by or with local governing authorities as the official "property survey".
- 1.15. TEMPORARY FACILITIES AND UTILITIES
- A. Scope of Temporary Work: This article is not intended to limit the scope of temporary work required under the Contract. Provide all temporary facilities and utilities needed and to maintain on-going building operations in the case of existing facilities.
  - B. Permits and Fees: Obtain and pay for all permits, fees and charges related to temporary work.
  - C. Codes and Authorities Having Jurisdiction for Temporary Facilities and Utilities: Comply with all requirements of authorities having jurisdiction, codes, utility companies, OSHA, and industry standards including, but not limited to the following:
    - 1. NFPA Code 241, Building Construction and Demolition Operations.
    - 2. ANSI-A10 Series, Safety Requirements for Construction and Demolition.
    - 3. NECA National Joint Guideline NJG-6, Temporary Job Utilities and Services.
    - 4. Electrical Service: NEMA, NECA, and UL.

- D. Field Offices: Provide Contractor's field offices as needed. Keep current copies of all Contract Documents and project paperwork neatly on file at jobsite. Permit Architect's unrestricted use of Contractor's field office facilities including copiers, telephones, plan tables, and other equipment. Furnish, maintain, and pay for light, power, phone, fax, and other field office services. Make office available to the Owner and their representatives.
- E. Equipment and Tools: Provide all equipment including, but not limited to, hoists, lifts, scaffolding, machines, tools and the like, as needed for execution of the work. Provide safe access to all parts of the work.
- F. Temporary Enclosures: Provide temporary enclosures to maintain proper temperatures and in no case less than 50 degrees F once temperature or humidity sensitive components are in place and to prevent weather damage, pollutions, dust or excessive noise. Always maintain legal means of egress. Comply with the provisions of "Weather Protection" given below.
- G. For cold weather climates only, Snow and Ice: Remove all snow and ice which interferes with work or safety.
- H. Streets, Walks and Grounds: Maintain public and private roads and walks clear of debris caused by construction operations. Repair all damage caused to streets, drives, curbs, sidewalks, fences, poles and similar items where disturbed or damaged by building construction and leave them in as good condition after completion of the work as before operations started.
- I. Protection: Protect nearby property and the public from construction activities. provide and maintain barricades, warning signs and lights, railings, walkways and similar items. Immediately repair damaged property to its condition before being damaged.
- J. Security: Secure site against unauthorized entry at all times. Provide secure, locked temporary enclosures. Protect the work at all times. Provide watchman service, if necessary, to protect the work.
- K. Signs: Erect project identification signs in compliance with details to be provided by Architect. Signs shall be minimum 4' x 8' exterior grade plywood and shall contain the names of the project, Owner, Architect, major Consultants, Contractor, and major financing institution. Except for safety and warning signs, no other signs are permitted. Location as acceptable to the Architect.
- L. Fire Prevention: Take every precaution to prevent fire. Provide and maintain in good operating condition suitable and adequate fire protection equipment and services, and comply with recommendations regarding fire protection made by the representative of the fire insurance company carrying insurance on the Work or by the local fire chief or fire marshal. The area within the site limits shall be kept orderly and clean, and all combustible rubbish shall be promptly removed from the site.
- M. Egress: Maintain safe and legal means of egress at all times. At all times, provide at least two separate means of egress.
- N. Temporary Elevators, Hoists & Cranes: Provide equipment required to complete the Work as required and to comply with approved schedules. Do not use project elevators for project or construction purposes without express written permission from the elevator manufacturer, the elevator installer and the Owner.

Provide design and engineering services of professional engineers registered in the locality to evaluated temporary elevators, hoists and crane. Systems used shall be based upon engineered documents stamped the Engineer of Record. Such Engineers shall have professional liability insurance covering the value of the Work.

**Hoisting equipment and machinery required for the proper and expeditious prosecution and progress of the work shall be furnished, installed, operated and maintained in safe condition by the individual subcontractors as applicable to their trade. Costs for hoisting operating services shall be borne by the subcontractors unless specifically excepted in the Contract Documents.**

**1. Hoisting equipment and machinery erection and dismantling shall be performed only by trained, certified, and experienced riggers qualified to perform such work.**

- O. Temporary Roads, Parking and Staging: Provide facilities necessary to accomplish the Work. Build temporary roads of adequate grade, substrate, and layout to provide safe, effective, efficient site work and access. Maintain roads and provide adequate temporary drainage. Provide parking required, whether on or off site. Pay all costs in connection with providing parking and ensure local traffic in, on, and around site is not adversely affected by workers or construction parking.

Provide staging or ensure staging is provided by subcontractors. Ensure staging is properly designed and where required, employ professional engineers in the locality to design or evaluate structural integrity of systems.

Where required provide or ensure subcontractors provide adequate closures of staging to ensure proper work temperatures and environmental safety.

- P. Protecting Installed Construction: Comply with the requirements of Section 01 70 00 Execution and protect work until acceptance and Substantial Completion. Protect work not accepted at Substantial Completion or not yet installed and approved until Final Acceptance.

Q. Weather protection:

- a. Provide temporary enclosures and heat to permit construction work to be carried out continuously including during the months of November through March in compliance with M.G.L. Chapter 149, Section 44D(G).
- b. Enclosures or heat for operations that are not feasible, practical or appropriate in the judgment of the Designer will not be required, and such as site work, steel erection, non-temperature sensitive exterior façade components, roofing and the like.
- c. Weather protection definition: Temporary protection for work adversely affected by moisture, wind, and cold, by means of covering, enclosing and/or heating.
- d. The General Contractor shall furnish and install all weather protection material and be responsible for all costs, including heating required to maintain a minimum temperature of 50 degrees F. at the working surface.
- e. Comply with safety regulations, and provide proper ventilation and fire protection systems. Prevent damage to surfaces, finishes and components.
- f. Monitoring: Provide thermometers throughout work areas spaced at not less than one for every 2000 sf. Submit documentation weekly of temperature recordings at intervals acceptable to the Architect, but taken not less than daily.

R. Heating during construction:

- a. Submit for approval temporary heating methods within 30 days of contract award or within 14 days of need for same, whichever is sooner.
- b. The General Contractor shall provide and pay for temporary heating.
- c. Provide temporary heat continuously as required to provide proper temperatures around, in, and on the Work, its surfaces or components and to prevent the build up of improper amounts of moisture, humidity or other damaging conditions.
- d. Provide the temperature ranges necessary for the proper condition of the work, but within the range of 50 to 75 degrees F.
- e. Use of permanent heating system: Subject to review and approval of the Architect and their consultants, the system may be used. The system shall be turned over once the project is complete in like-new condition, completely clean and with warranties unaffected by this use. The General contractor shall pay costs of this use including fuel, power, and labor necessary for the maintaining, operating, monitoring and cleaning of systems to both for utility usage and to subcontractors responsible for providing systems used.

S. Staging:

- a. **Staging, planking and scaffolding, exterior and interior, required for the proper execution of the work and over eight feet in height, shall be furnished, installed, and maintained by the Contractor. Individual subcontractors shall be responsible for notifying the Contractor for moving staging, planking and scaffolding with sufficient notice to allow the Contractor's timely response. The Contractor will be responsible for all potential costs from subcontractors if timely response is not provided.**
- b. **All staging up to eight feet in height shall be provided by the individual subcontractors as applicable to their work.**
- c. **Erection and dismantling of staging shall be performed only by trained, certified, and experienced staging personnel qualified to perform such work.**

1.16. PRODUCTS AND SUBSTITUTIONS

- A. **Specified Products:** In all cases in which a manufacturer's name, trade name or other proprietary designation is used in connection with materials or articles to be furnished under this Contract, whether or not the phrase "or equal" is used after such name, the Contractor shall provide the product of the named manufacturers without substitution, unless a written request for a substitution has been submitted by the Contractor and approved in writing by the Architect as follows.
- B. **Deviations from Detailed Requirements:** If the Contractor proposes to use material which, while suitable for the intended use, deviates in any way from the detailed requirements of the Contract Documents, the Contractor shall inform the Architect in writing of the nature of such deviations at the time the material is submitted for approval, and shall request written approval of the deviation from the requirements of the Contract Documents.
- C. **Approval of Substitutions:** In requesting approval of deviations or substitutions, the Contractor shall provide evidence, including, but not limited to manufacturer's data, leading to a reasonable certainty that the proposed substitution or deviation will provide a quality of result at least equal to that attainable if the detailed requirements of the Contract Documents were strictly followed. If, in the opinion of the Architect, the evidence presented by the Contractor does not provide a sufficient basis for such reasonable certainty, the Architect may reject such substitution or deviation without further investigation.
- D. **Intent of Contract Documents:** The Contract Documents are intended to produce a building of consistent character and quality of design. All components of the building including visible items of mechanical and electrical equipment have been selected to coordinate with the Design in relation to the overall appearance of the building. The Architect shall judge the design and appearance of proposed substitutes on the basis of the suitability in relation to the overall design of the Project, as well as for their intrinsic merits. The Architect will not approve, as equal to materials specified proposed, substitutes which in the Architect's opinion, would be out of character, obtrusive, or otherwise inconsistent with the character or quality of design of the Project. In order to permit coordinated design of color and finishes the Contractor shall furnish the substituted material in any color, finish texture, or pattern which would have been available from the manufacturer originally specified, at no additional cost to the owner.
- E. **Additional Costs or Impact:** Any additional cost, or any loss or damage arising from the substitution of any material or any method for those originally specified shall be borne by the contractor, notwithstanding approval or acceptance of such substitution by the Owner or the Architect, unless such substitution was made at the written request or direction of the Owner and the Architect. Any decrease in the cost of the substitution shall be returned to the Owner.
- F. **Manufacturers:** To the greatest degree possible, provide primary materials and products from one manufacturer for each type or kind. Provide secondary materials as recommended by manufacturers of primary materials.
- G. **Substitution Requests:** Refer to relevant section and Substitution Request Form. Submit electronic copies. Identify product to be replaced by substitute by reference to specification sections and drawing numbers.

Provide Contractor's certification and evidence to prove compliance with Contract. Document requirements as acceptable to Architect.

- H. Substitution Conditions: Substitution requests will be returned without action unless one of the following conditions is satisfied. The Contractor shall state which of the following conditions applies to the requested substitution:
1. Request is due to an "or equal" clause.
  2. Specified material or product cannot be coordinated with other work.
  3. Specified material or product is not acceptable to authorities having jurisdiction.
  4. Substantial advantage is offered Owner in terms of cost, time, or other valuable consideration.
  5. Specified material or product is not available.
  6. Invalid Substitutions: Contractor's submittal and Architect's acceptance of shop drawings, samples, product data or other submittal is not a valid request for, nor an approval of a substitution unless the Contractor presents the information when first submitted as a Request for Substitution.
  7. Requests do not meet or exceed Sustainable Design Goals and Requirements.

#### 1.17. DELIVERY, STORAGE AND HANDLING

- A. Coordinate delivery to avoid delay in the Work. Strictly comply with manufacturer's or fabricators instructions and recommendations and prevent damage, deterioration and loss, including theft. Minimize long-term storage at the site. Maintain environmental conditions, temperature, ventilation, and humidity within range permitted by fabricator or manufacturers of materials and products used. Provide temporary supports and assemblies to maintain conditions and ensure work is stored to prevent distortion, warp or other deformation, degradation or damage. Determination satisfactory visual condition of stored work rests solely with the Architect.

#### 1.18. MANUFACTURER RECOMMENDATIONS

- A. Handle, store work as above. Install work according to manufacturer's recommendations, instructions, literature and product limitations. Where conflicts existing between these specifications and manufacturer recommendations, advise Architect in writing and obtain written recommendations to resolve conflict. Failure to install work according to standards, instructions and recommendations shall be the responsibility of the contractor. Replace work at no cost to Owner where not installed according to written requirements, instructions or recommendations.

#### 1.19. LABELS

- A. Labels, Trademarks, & Trade names: Locate required labels on inconspicuous surfaces. Do not provide labels, nameplates, or trademarks, which are not required. Provide permanent data plate on each item of equipment stating manufacturer, model, serial number, capacity, ratings and all other essential data.

#### 1.20. RECORD DOCUMENTS

- A. General: Keep record documents neatly and accurately. Record information as the work progresses and deliver to Architect at time of final acceptance. include in record documents all field changes made, all relevant dimensions, and all relevant details of the work. Keep record documents up to date with all field orders and change orders clearly indicated.

Form of Record Documents: As directed by Architect, using flash drives or upload to a file transfer site (Sync, DropBox, WeTransfer, or similar FTP site ), notify Architect that documents are available for download, and maintain files online until Architect notifies Contractor in writing that Architect has downloaded files, and only if requested as hard copy on approved media.

- B. Drawings: Keep four separate sets of prints at the site, one set each for mechanical, electrical, plumbing, and architectural/structural disciplines. Neatly and accurately note all deviations from the Contract Documents and the exact actual location of the work as installed. Marked-up and colored prints will be used as a guide to

determine the progress of the work installed. Requisitions for payment will not be approved until the record documents are accurate and up-to-date

1. Work Outside Building: Record data outside of building to an accuracy of plus or minus 1 inch and determine and record the invert elevation of all drain lines.
  2. At completion of the work, submit one complete set of marked-up prints for review. After acceptance these marked-up prints shall be used in the preparation of the record drawings.
  3. Architect shall furnish Contractor with their standard computer-aided design files [hereafter "CAD"] for originals of the Contract Drawings. Make modifications to these files as shown on the marked-up prints. Remove superseded data to show the completed installation.
  4. Deliver the completed CAD record drawings on reproducible sheets and on an acceptable type of media [such as Flash drive] of the computer files, in the same version as Contract Drawings [unless otherwise directed by the Owner to provide a different CAD version], properly titled and dated to the Architect. Indicate preparer of record drawings. These record drawings shall become the property of the Owner. Provide a complete set of PDF drawings prepared from the final record drawing files.
- C. Specifications: Maintain one clean copy of complete specifications [including addenda, modifications, and bulletins with changes, substitutions, and selected options clearly noted. Circle or otherwise clearly indicate which manufacturer and products are actually used.
- D. Operating and Maintenance Manuals: Manuals shall be submitted which contain the following:
1. Description of the system provided.
  2. Handling, storage, and installation instructions.
  3. Detailed description of the function of each principal component of the systems or equipment.
  4. Operating procedures, including pre-startup, startup, normal operation, emergency shutdown, normal shutdown and troubleshooting.
  5. Maintenance procedures including lubrication requirements, intervals between lubrication, preventative and repair procedures, and complete spare parts list with cross reference to original equipment manufacturer's part numbers.
  6. Control and alarm features including schematic of control systems, control loop electric ladder diagrams, controller operating set points, settings for alarms and shutdown systems, pump curves and fan curves.
  7. Safety and environmental considerations.
- E. Copies of Operating and Maintenance Manuals: Three copies of the manuals shall be provided within sufficient time to allow for training of Owner's personnel. Submit one copy of the manuals to the Architect for review no later than 90 calendar days prior to substantial completion, or building turn over, whichever comes first. Submit the remaining five copies within 15 days after first review set is returned to contractor. Progress payment may be withheld if this requirement is not met.
- F. Additional Requirements for Operating and Maintenance Manuals: The requirements for manuals applies to each packaged and field-fabricated operating system. The manuals shall be provided in three-ring side binders with durable plastic covers. The manuals shall contain a detailed table of contents and have tab dividers for major sections and special equipment.
- G. Framed Data: Provide charts and lists of all valves, circuits, switches, controls and equipment. Install on walls under glass at locations directed by Architect
- 1.21. EXTRA STOCK MATERIALS [aka "ATTIC" or "MAINTENANCE "STOCK"]
- A. Provide extra stock materials specified throughout Project Manual. Provide quantities indicated, where extra stock is specified but quantities not indicated carry 1% of surface area of material installed; include at one of every color provided. Provide work in unopened boxes or containers of same lot or run of installed products. Identify, label and store products where directed.



## 1.22. SYSTEM DEMONSTRATION & TRAINING

- A. Provide system demonstration and training as specified throughout the Project Manual and as follows, whether or not specified elsewhere:
1. Demonstrate project equipment and systems to ensure Owner personnel understand operation, functioning and long-term and short term maintenance of equipment and systems.
  2. Explain and demonstrate systems restrictions, safety procedures and operational limitations.
  3. Provide trained personnel which previous experience training and demonstrating systems. Devote sufficient time to each piece of equipment or system to ensure personnel have an effective understanding of requirements to operate and maintain work being demonstrated.
  4. Provide follow-up and additional training where Owner advises that personnel need additional time to fully understand systems or equipment.
  5. In general demonstration and training shall be conducted for all systems containing microprocessors, are programmable, convey people or goods, are affected by or part of safety or fire suppression systems, are part of environmental controls or require training in order to use or operate properly.
  6. Make a video of demonstration session(s) and provide electronic files of same to the Owner.

## 1.23. PROJECT CLOSE OUT

- A. Complete the following prior to Substantial Completion:
1. Provide Contractor's Punch List of incomplete items stating reason for incompleteness and value of incompleteness.
  2. Advise Owner of insurance change over requirements.
  3. Submit all warranties, maintenance contracts, final certificates and similar documents.
  4. Obtain Certificate of Occupancy and similar releases which permit the Owner's full and unrestricted use of the areas claimed "Substantially Complete".
  5. Submit record documents.
  6. Deliver maintenance stocks of materials where specified.
  7. Make final change over of lock cylinders or cores and advise Owner of change of security responsibility.
  8. Complete startup of all systems and instruct Owner's personnel in proper operation and routine maintenance of systems and equipment.
  9. Complete clean up and restoration of damaged finishes
  10. Satisfy all commissioning requirements.
  11. Remove all temporary facilities and utilities that are no longer needed.
  12. Request Architect's inspection for Substantial Completion.
- B. Architect will either issue a Certificate of Substantial Completion or notify Contractor of work which must be performed prior to issue of certificate
- C. Complete the following prior to Final Acceptance and payment:
1. Obtain Certificate of Substantial Completion.
  2. Submit final application for payment, showing final accounting of changes in the work.
  3. Provide final releases and lien waivers not previously submitted.
  4. Submit certified copy of final punch list stating that Contractor has completed or corrected each item.
  5. Submit final meter readings, record of stored fuel and similar information.
  6. Submit Consent of Surety for final payment.
  7. Submit evidence of Contractor's continuing insurance coverage (if required by Contract Documents).
- D. Form of Record Documents: Upload to a file transfer site (Sync, DropBox, WeTransfer, or similar FTP site ), notify Architect that documents are available for download, and maintain files online until Architect notifies Contractor in writing that Architect has downloaded files, and only if requested as hard copy on approved media.

#### 1.24. REMEDIAL WORK

- A. Extent/Applicability: Remedial work includes cutting and patching associated with:
  - 1. Defective, non-conforming, ill timed, and improperly fitting work.
  - 2. Removing samples of installed work for testing, inspection, and verification.
  - 3. Patching of sample removal locations.
- B. Comply with the following:
  - 1. Patching Materials: Identical in quality and appearance to materials to be cut and patched.
  - 2. Craft: Employ highly skilled trade workers for all patching work.
  - 3. Subcontractors: Coordinate their work with the General Contractor to minimize remedial work.
  - 4. Make durable, permanent patches.
  - 5. Comply with specified tolerances for similar new work.
  - 6. Match the visual quality and character of adjacent unpatched work in good condition.
  - 7. Create true, even surfaces with uniform, continuous appearance.
  - 8. Extend patched area onto adjoining unpatched areas to eliminate visible evidence of patching.
  - 9. Repaint entire assemblies, not only the patched area, to nearest major change of plane.
  - 10. Obtain Architect's approval of each patch.
  - 11. Visible evidence of patching is sufficient cause for rejection and replacement.

#### 1.25. FINAL CLEANING AND REPAIR

- A. The following is a resume of requirements. Refer to section 01 77 00. Note that sequencing and other operations may be superseded by Section 01 49 00 Build Clean Requirements for projects involving cleanrooms and cleanroom-like environments.
- B. Clean Up: immediately prior to the Architect's inspection for Substantial Completion, the Contractor shall completely clean the premises and clean and prepare the completed work in order for it to be used for its intended purpose in accordance with the Contract Documents. Such work shall include, but not be limited to the following:
  - 1. Concrete and ceramic surfaces shall be cleaned and washed.
  - 2. Resilient coverings shall be cleaned, waxed and buffed as applicable.
  - 3. Woodwork shall be dusted and cleaned.
  - 4. Sash, fixtures and equipment shall be thoroughly cleaned.
  - 5. Stains, spots, dust, marks and smears shall be removed from all surfaces.
  - 6. Hardware and metal surfaces shall be cleaned and polished.
  - 7. Glass and plastic surfaces shall be thoroughly cleaned by professional window cleaners. Clean windows inside and outside.
  - 8. Damaged, broken or scratched glass or plastic shall be replaced by the Contractor at the Contractor's expense.
  - 9. Vacuum carpeted and soft surfaces with high efficiency particulate arrestor (HEPA) vacuum.
  - 10. Use low-emitting, environmentally friendly cleaning agents and procedures.
  - 11. Comply with Owner's requirements for Green Housekeeping.
- C. Repairs: Repair and touch-up all damaged and deteriorated products and surfaces.

#### 1.26. E-DOC & CAD TRANSMITTAL REQUIREMENTS

- A. Provide Electronic exchange of information and acceptable formats and file types; Where practical, all project documents.
- B. Intent / purpose:
  - 1. Purpose: Expediting exchange of information and approvals, and minimize time, cost and paper use, handling and storage.
  - 2. Intent: To extent possible, provide required documentation in form of computer-readable files - hereafter: "e-docs".
  - 3. Signing & sealing: As necessary, sign digitally and version-protect project documents so they are legally binding.

4. Contractor shall furnish paper copies of any electronic documents for the Owner's use when requested. One set of closeout documents shall printed and furnished on paper.
- C. Scope & Exceptions: Unless determined to be impractical for an acceptable reason, provide each of the following as an e-doc:
1. General purpose communications, contact information, meeting scheduling.
  2. RFI inquiries and responses.
  3. Sketches and sketch revisions.
  4. Most submittals, including shop drawings, product information, MSDS representations, manufacturer's catalogs (complete or partial), and other customary submittals, along with Architect disposition of same.
  5. Contractor's progress schedules.
  6. Field orders.
  7. Change order requests and proposals.
  8. Photo documentation.
  9. Punch lists.
  10. Draft versions and review copies of documents requiring original signatures and/or notarization, including payment applications and executed change orders.
- D. Produce and distribute hard copy paper records in quantities required in addition to the e-doc record for at least the following, subject to confirmation with the Architect:
1. Documents requiring multiple original signatures and/or notarization.
  2. Applications for Payment.
  3. Changer Orders.
  4. Warranties.
  5. Equipment operation & maintenance manuals.
- E. File formats & Information Exchange: Comply with the following:
1. Preferred file format: Portable document format, PDF, Adobe Acrobat V.8 or later.
  2. Combined pages: Submit related documents incorporated into single PDF files [aka a "binder"], as though stapled together. Include transmittal as part of file.
  3. Acceptability: Properly identified, digitally signed/countersigned, pdf documents shall be binding upon the Project and its parties as if issued in paper form.
- F. Email: Electronic email shall be an acceptable e-docs, binding upon the Project and its parties and equal in force to hardcopy or PDFs.
1. Use email applications having interoperability with all parties of the Project.
  2. Use project name in subject line of each and every email issued; and include writer's name, address, telephone number and position in each email.
- G. Acceptable picture / graphic file formats: "TIF", "GIF", and "JPEG".
1. Color in files: Acceptable, but not required.
  2. Do not use other formats without approval of all parties.
- H. Proprietary file formats: Do not use for e-docs unless all parties agree. These include:
1. MS Word.
  2. PowerPoint.
  3. MS Excel.
  4. Photoshop.
  5. Contractor shall furnish electronic documents in native software if requested.
- I. File sizes, formats and naming conventions:
1. Use only agreed to, Project-accepted naming conventions for e-docs.
  2. File sizes: Acceptable to internet service providers and parties servers.
  3. Large files: Use FTP file transfer protocol up/down loads to pre-agreed servers.
  4. Large files: DVD / CD ROMs disks may be used, only if FTP or DropBox sites are not available.
  5. Maximum file size: Do not exceed 25 MGs without prior agreement of parties.
  6. Files compression: Do not use Stuff-It, PK-ZIP or the like without prior agreement.

7. Unacceptable files: Unopenable, illegible, damaged, unintelligible files will be discarded without action. Originator shall correct and re-issue.
- J. Cost of E-Doc Management: Cost of E-Doc management is by contractor.
- K. Paper documents not also issued electronically and received by the Architect from the Contractor will be sent out for scanning to e-doc file and charged to Contractor or deducted from the Contract Sum.
- L. If requested, Contractor, vendors, suppliers and subcontractors shall create their submittals in BIM file formats per Owner requirements with appropriate tags for facility management applications.
- M. Terms, Conditions and requirements for transmittal of CAD files:
  1. Unless otherwise indicated, computer-aided-design files will be furnished as “shells” only of architect/engineer drawings.
  2. As a condition of receipt of files of this kind, sign a release in the form provided by the Architect – who, upon receipt of same, will issue the indicated drawings.
  3. Comply with the following:
    - a. The Contractor may use information for preparation of base sheets for “Coordination Drawings” and “Record Drawings”, but not for “Shop Drawings”.
    - b. The Architect and the Architect’s consultants retain all copyrights to their documents.
    - c. The Architect and the Architect’s consultants give the Contractor a limited and nontransferable license to use their documents for the sole purpose of preparing “Coordination Drawings” and “Record Drawings” for this project only. No other use or purpose is authorized or permitted.
    - d. The Contractor shall not copy, distribute, or disseminate the documents furnished to him for any use or purpose other than the purposes authorized by this Agreement.
    - e. The Architect and the Architect’s consultants do not warrant that the documents furnished to the Contractor are complete or accurate. All addenda and modifications may not have been incorporated into the documents furnished to the Contractor.
    - f. The documents will be furnished in their existing layering, filing, and directories. No special layering, file organization, directory organization, or compilation will be created for the Contractor.
    - g. The Architect and the Architect’s consultants do not warrant that the electronic documents furnished to the Contractor are usable with any computer hardware or software other than the computer hardware and software used by the Architect and the Architect’s consultants. The Architect and the Architect’s consultants may have used multiple different and non compatible computer hardware and software systems and products.
    - h. The Contractor shall check the information contained in the documents furnished by the Architect and the Architect’s consultants. The Contractor shall be solely responsible for the completeness and accuracy of the “Coordination Drawings” and “Record Drawings” prepared using the documents furnished by the Architect and the Architect’s consultants.
    - i. The Contractor shall remove the Architect’s and the Architect’s consultants! professional seals from “Coordination Drawings” and “Record Drawings” prepared using the documents furnished to him.
    - j. The Contractor shall indemnify and hold harmless the Architect and the Architect’s consultants and the officers, employees, and assigns of the Architect and the Architect’s consultants from all damages and claims resulting from the use of documents furnished to him.
    - k. Documents will be made available to the Contractor on an internet FTP [File Transfer Protocol] site.
      - 1) A user ID and password may be required to access information.
    - l. These terms and conditions constitute the complete Agreement between the Contractor and the Architect and the Architect’s consultants.
    - m. These terms and conditions may only be modified in writing by mutual agreement of all parties to this Agreement.
    - n. This Agreement is governed by the laws of the state where the Architect has their principal place of business.

**PART 2 -PRODUCTS [Not Used]**

**PART 3 -EXECUTION [Not Used]**

**END OF SECTION**

## **SUMMARY OF WORK**

### **11.1 GENERAL SCOPE OF WORK**

#### **A. The work under the Contract consists of:**

- 1. Interior renovations of the entryway and limited exterior improvements.**
2. All Work either shown on the drawings or included in the specifications unless specifically indicated as not to be done.
3. Contractor should carry an allowance of \$20,000 for furniture.

#### **B. In addition, the Work under the Contract includes:**

1. Work outside the project site as called for in the Contract Documents and as required for the performance of the Work.
2. The restoration of any items damaged or destroyed by encroaching upon areas outside of the project site.
3. Providing and restoring, where appropriate, all temporary facilities.

#### **C. Additional Selection Criteria:**

1. The Awarding Authority (Owner) reserves the right to start work on the project via a notice proceed to expedite mobilization.
2. If the Awarding Authority (Owner) cannot verify compliance with the additional selection criteria from the apparent low bidder's Update Statement, the Awarding Authority (Owner) or its Architect may request the bidder provide additional documentation demonstrating compliance with the Contract requirement. This may occur after the general bid opening, but prior to the Contract Award.

### **11.2 TIME OF COMPLETION**

The Work shall start as stated in the Notice to Proceed and shall be complete within **75** consecutive calendar days.

### **11.3 NOTICE TO PROCEED**

#### **A. Upon the BPHC's Validation of the Owner Contractor Agreement the Owner shall Issue the Notice to Proceed for Construction. The Notice to Proceed shall include:**

1. The starting date and Construction Completion date for construction.
2. The names of the Owner's contract Officer and Alternate Contract Officer.

#### **B. The Owner shall send three copies of the Notice to Proceed to the Contractor.**

#### **C. The Contractor shall sign two originals and then;**

1. return one to the Owner, and
2. keep one copy for its own records.

**11.4 WORK UNDER SEPARATE CONTRACT**

N/A

**11.5 ITEMS FURNISHED BY THE OWNER**

- A. The following items will be furnished and delivered f.o.b. to the Project Site by others at no expense to the Contractor: **(1) New Metal Detector.**
- B. The Contractor shall include in the Contract Sum the Cost of Unloading, uncrating and permanently installing the above listed items and remove and properly recycle or dispose off the Project Site all crating and packing materials.

**11.6 SAMPLE OF WORK**

- A. None

**11.7 COORDINATION WITH PROJECT OCCUPANTS**

- A. Building will be occupied during construction. The Contractor shall take all necessary precautions to ensure the public safety and convenience of the occupants during construction.
- B. The Owner shall assist the Contractor to perform the Work in accordance with the approved operational plan by removing obstructions that may be in the Contractor's way, upon proper notice from the Contractor.
- C. The Owner may provide a Coordinator to act as liaison with BPHC and to assist the Contractor in fulfilling access to and rearranging the work area.

**11.8 RETAINED ITEMS**

- A. The following items which are to be removed and are in good condition shall be retained by the Owner (at the discretion of the Owner) and shall be stored at a location or reused as directed by the Owner.

Reuse existing X-Ray machines and metal detector.

**END OF SECTION 01 11 00  
SUMMARY OF WORK**

**SUBSTITUTION REQUEST FORM**

No substitutions will be considered without this completed substitution request form and supporting documentation.

Substitutions made without completion of this form will be considered defective work as defined by the General Conditions of the Contract.

Date: \_\_\_\_\_ No.: \_\_\_\_\_

Project Name: \_\_\_\_\_

Project address: \_\_\_\_\_

To: Architect of Record

Re: \_\_\_\_\_

The Contractor proposes the following substitution in accordance with the Contract Documents.

Scope of Substitution \_\_\_\_\_

Spec. Section Reference \_\_\_\_\_

Drawing Reference \_\_\_\_\_

Drawing Reference \_\_\_\_\_

Reason for proposed Substitution \_\_\_\_\_

Impact on project cost \_\_\_\_\_

Impact on sustainable design characteristics \_\_\_\_\_

Impact on project Schedule \_\_\_\_\_

Impact on project \_\_\_\_\_

Guarantees & Warranties \_\_\_\_\_



Coordination  
required  
with adjacent  
materials  
and systems \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

List deviations  
from specified  
requirements \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Coordination  
required  
with adjacent  
materials  
and systems \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Attachments: Attach supporting documentation sufficient for Architect to evaluate substitution.  
[Substitution forms lacking adequate documentation will be returned without review.]

Attachments \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Response date: List date by which response by Architect is requested to maintain project schedule and allow sufficient time for inclusion of proposed substitution.

Response Date \_\_\_\_\_  
Submitted by \_\_\_\_\_  
Firm \_\_\_\_\_  
Address \_\_\_\_\_  
\_\_\_\_\_

Signature below signifies acceptance of responsibility for accuracy and completeness of information included in this Substitution Request Form.

Authorized  
signature \_\_\_\_\_



## **SECTION 01 26 00 - CONTRACT MODIFICATION PROCEDURES**

### **PART 1 - GENERAL**

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling and processing contract modifications.
  - 1. Multiple Prime Contracts: Provisions of this Section apply to the work of each prime contractor.
- B. Related Sections: The following Sections contain requirements that relate to this Section:
  - 1. Division 1 Section "Allowances" for procedural requirements governing the handling and processing of allowances.
  - 2. Division 1 Section "Submittals" for requirements for the Contractor's Construction Schedule.
  - 3. Division 1 Section "Applications for Payment" for administrative procedures governing Applications for Payment.
  - 4. Division 1 Section "Product Substitutions" for administrative procedures for handling requests for substitutions made after award of the Contract.

#### 1.3 MINOR CHANGES IN THE WORK

- A. The Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on AIA Form G710, Architect's Supplemental Instructions.

#### 1.4 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: The Architect will issue a detailed description of proposed changes in the Work that will require adjustment to the Contract Sum or Contract Time. If necessary, the description will include supplemental or revised Drawings and Specifications.
  - 1. Proposal requests issued by the Architect are for information only. Do not consider them as an instruction either to stop work in progress or to execute the proposed change.
  - 2. Within 20 days of receipt of a proposal request, submit an estimate of cost necessary to execute the change to the Architect for the Owner's review.
    - a. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include a statement indicating the effect the proposed change in the Work will have on the Contract Time.
- B. Contractor-Initiated Proposals: When latent or unforeseen conditions require modifications to the Contract, the Contractor may propose changes by submitting a request for a change to the Architect.
  - 1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
  - 2. Include a list of quantities of products required and unit costs, with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
  - 3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 4. Comply with requirements in Section "Product Substitutions" if the proposed change requires substitution of one product or system for a product or system specified.
- C. Proposal Request Form: Use AIA Document G709 for Change Order Proposal Requests.
- D. Proposal Request Form: Use forms provided by the Owner for Change Order Proposals.

## 1.5 ALLOWANCES

- A. Allowance Adjustment: For allowance-cost adjustment, base each Change Order Proposal on the difference between the actual purchase amount and the allowance, multiplied by the final measurement of work-in-place. Where applicable, include reasonable allowances for cutting losses, tolerances, mixing wastes, normal product imperfections, and similar margins.
1. Include installation costs in the purchase amount only where indicated as part of the allowance.
  2. When requested, prepare explanations and documentation to substantiate the margins claimed.
  3. Submit substantiation of a change in scope of work claimed in the Change Orders related to unit-cost allowances.
  4. The Owner reserves the right to establish the actual quantity of work-in-place by independent quantity survey, measure, or count.
- B. Submit claims for increased costs because of a change in scope or nature of the allowance described in the Contract Documents, whether for the purchase order amount or the Contractor's handling, labor, installation, overhead, and profit. Submit claims within 21 days of receipt of the Change Order or Construction Change Directive authorizing work to proceed. The Owner will reject claims submitted later than 21 days.
1. Do not include the Contractor's or subcontractor's indirect expense in the Change Order cost amount unless it is clearly shown that the nature or extent of work has changed from what could have been foreseen from information in Contract Documents.
  2. No change to the Contractor's indirect expense is permitted for selection of higher or lower-priced materials or systems of the same scope and nature as originally indicated.

## 1.6 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and the Contractor disagree on the terms of a Proposal Request, the Architect may issue a Construction Change Directive on AIA Form G714. The Construction Change Directive instructs the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
1. The Construction Change Directive contains a complete description of the change in the Work. It also designates the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

## 1.7 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Proposal Request, the Architect will issue a Change Order for signatures of the Owner and the Contractor on AIA Form G701.

### **PART 2 - PRODUCTS (Not Applicable)**

### **PART 3 - EXECUTION (Not Applicable)**

### **END OF SECTION**

## **SECTION 01 35 32 – COVID-19 PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. Work place health safety.
  - 2. Public health safety.
  - 3. Compliance with applicable health safety provisions in force.
  - 4. Emergency response.
  - 5. Health Safety and infection reporting.
- C. Extent: The Contractor is solely responsible for providing for job site, work place and public safety and for complying with:
  - 1. Applicable codes, laws, rules, regulations, and requirements of authorities having jurisdiction including, without limitation, Building Codes and applicable health and safety regulations and requirements.

#### **1.2 REFERENCES**

- A. Review safety provisions requirements. Confer with authorities having jurisdiction including:
  - 1. Building officials.
  - 2. Fire Department.
  - 3. Police Department.
  - 4. Public Health Department.

#### **1.3 HEALTH SAFETY OFFICERS**

- A. Designate a Primary Health Safety Officer and Deputy Officer. Each Health Safety Officer shall:
  - 1. Be responsible for health safety at the Project site.
  - 2. Be aware of current Federal, State, and Local applicable health safety provisions, rules and regulations.
  - 3. Be on site whenever any Contract activity is in progress.
  - 4. Have the authority to direct all workers and subcontractors to prevent unsafe conditions.
  - 5. Have the authority to penalize subcontractors and workers for health safety violations.
  - 6. Be subject to approval of the Owner and Architect. Replace unacceptable persons.
- B. The Health Safety Officer may be the Project Superintendent or other employees.
- C. The Deputy Safety Officer may cover the Primary Health Safety Officer's reasonable absences.

#### **1.4 HEALTH SAFETY PLAN**

- A. The Contractor shall submit a written plan for jobsite COVID-19 Procedures in compliance with applicable governmental regulations and as supplemented by the Contractor's own requirements, if any. Scope shall include that people and materials entering the site shall be required to comply with the written plan.
- B. Documentation: At least 10 days prior to beginning any work on site, prepare and submit a written Safety Plan.
  - 1. The Owner and Architect may review the safety plan and may make suggestions.
  - 2. The Owner's and Architect's option to review and suggest does not transfer any safety responsibility to the Owner or Architect. The Contractor remains solely responsible for health safety.
- C. Enforcement: The General Contractor shall enforce the Health Safety Plan and require all on-site workers to comply with the Safety Plan.
- D. Plan Content: Address at least the following:
  - 1. Identify the Contractor's personnel responsible for implementing such procedures. For the record, submit a monthly statement certifying that the Contractor has enforced the provisions in its written plan. The Contractor acknowledges that its written plan and monthly statements are submitted for the record only and not for approval by neither the Owner nor the Architect nor their agents.

1.5 EMERGENCY RESPONSE

- A. Plans: As part of the Safety Plan, prepare “Emergency Response Plans” which identify actions to be taken, persons responsible for each action, contact telephone numbers of all authorities having jurisdiction, governmental emergency telephone numbers, and other information.

**PART 2 - PRODUCTS Not used.**

**PART 3 - EXECUTION Not used.**

**END OF SECTION**

## **SECTION 01 35 44 – UNKNOWN EXISTING MATERIALS PROCEDURES**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. General requirements relative to unknown existing materials.
- C. Extent of Contractor responsibilities, if any existing material is suspected of being hazardous, without limitation, in connection with these materials include:
  - 1. Confer with Owner about available project information, available reports and the like.
  - 2. Notifying Owner.
  - 3. Protecting workers and public from exposure.
  - 4. Preventing disturbance of these materials.
  - 5. Redirect work to other locations to maintain project progress and avoid delays.
  - 6. Allowing 15 business days for Owner's investigation, and possible remediation.
- D. Owner responsibilities include:
  - 1. Employing an independent agency to investigate the unknown condition.
  - 2. Providing certified report to the Contractor stating results of the investigation.
  - 3. Taking action to remove, abate, encapsulate, or remediate hazardous conditions, if any.
  - 4. Completing investigation and remediation within 15 business days after Contractor's notification.
- E. Comply with applicable provisions of the General Conditions in connection with hazardous materials.

### **END OF SECTION**

## **PART 1 - GENERAL**

### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing, maintaining and managing:
  - 1. Minimum indoor air quality (IAQ) performance during the construction period and before occupancy.
  - 2. Compliance with performance standards.
  - 3. Construction Indoor air quality management plan.
- C. limitation:
  - 1. Section 01 57 10 - Construction waste management.
  - 2. Division 23 - HVAC.
  - 3. Divisions 2 through 33 Specification Sections:  
Specific requirements relating to indoor air quality for each Section.

### 1.2 PERFORMANCE REQUIREMENTS

- A. Comply with minimum requirements of Sections 4 through 7 of ASHRAE 62.1-2010, Ventilation for Acceptable Indoor Air Quality and approved Addenda.
  - 1. Coordinate with requirements of other Divisions 2.
- B. Prevent exposure of building systems to environmental tobacco products during construction. At a minimum, take the following measures:
  - 1. Do not allow tobacco products in enclosed portions of the project site.
  - 2. Do not allow tobacco products adjacent to fresh air intakes for the building and operable windows, nor within 25 feet of building.
- C. During construction meet or exceed the minimum requirements of the recommended Control Measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, Chapter 3.
- D. Protect occupied portions of the building from transfer of dust and particulate matter, noise and odor emissions generated during construction in compliance with the minimum requirements of the recommended Control Measures of the Sheet Metal and Air Conditioning National Contractors Association (SMACNA) IAQ Guidelines for Occupied Buildings under Construction, Chapter 3.
- E. Protect absorptive materials from moisture damage when stored on-site and after installation.
- F. During construction, comply with the following requirements:
  - 1. Develop and implement a moisture control plan to ensure dry conditions will be maintained to protect absorptive materials stored on site. Include criteria for protecting the building from moisture intrusion and occupant exposure to mold spores.
  - 2. If permanently installed air handlers are used during construction, filtration media with a Minimum Efficiency Reporting Value (MERV) of 8 shall be used at each return air grille, as determined by ASHRAE 52.2-2007. Protect active outdoor air intakes and return air grilles with applicable filtration media. Periodically inspect temporary media and replace as necessary. Replace filtration media immediately prior to occupancy.
  - 3. Develop and implement a plan to reduce noise and emissions on the construction site; address the following:
    - a. Surrounding community noise and vibration impacts. Determine which areas on and adjacent to the site will require special protection from noise.
    - b. Construction Worker training and protective equipment. Determine construction activities that may require the use of protective gear or specialty equipment and properly train workers in their use and/or operation.
    - c. Source Reduction. Develop and implement policies to limit truck and equipment idling on site and to limit vibration and noise from demolition and construction activities.
    - d. Compliance with tobacco smoking performance requirements.



- G. After construction ends but before occupancy, comply with one of the following requirements: ,
  1. Perform a building flush-out with outside air.
  2. Conduct IAQ testing for air contaminant levels in the building.

### 1.3 SUBMITTALS

- A. Construction Indoor Air Quality Management Plan: With the completed Form of Bidder's Proposal, the Contractor shall submit a preliminary Construction IAQ Management Plan.
  1. Within 21 calendar days after receipt of Notice to Proceed, the Contractor shall submit to the Owner a finalized Construction IAQ Management Plan.
- B. Indoor Air Quality (IAQ) Data: If requested, submit:
  1. Emission test data as required, with testing laboratory and date clearly identified.
  2. Test results for final building flush out or final IAQ test procedure.
- C. Material Safety Data Sheets (MSDS):
  1. Submit MSDS for materials as required, with date clearly identified.
  2. MSDS must contain specific chemical content data identifying the percent of the total product mass represented by each listed chemical.
- D. Product data: Submit documentation from manufacturer indicating requirements for materials and products of this Section and include:
  1. Each type of filtration media used during construction and installed immediately prior to occupancy, include and highlight MERV values the documentation provided.

### 1.4 PRODUCT REQUIREMENTS

- A. Comply with product requirements, delivery storage and handling provisions of Division 1 and the following:
  1. Do not deliver materials until job is ready for installation.
  2. Store products in ventilated dry area; protect from dampness, freezing, and direct sun light.
  3. Take special care to prevent accumulation of moisture on materials and within packaging prevent development of mold and mildew in packaging and on products.
  4. When not in use, store products in original sealed containers, in a designated location.
  5. Immediately remove from site and properly dispose of materials showing signs of mold and mildew, including materials with moisture stains.

## **PART 2 - PRODUCTS**

### 2.1 FILTRATION MEDIA

- A. Filtration Media: Comply with ASHRAE 52.2-2007 and provide filtration media with compliant MERV ratings as required.

## **PART 3 - EXECUTION**

### 3.1 CONSTRUCTION IAQ MANAGEMENT PLAN IMPLEMENTATION

- A. IAQ Manager: The Contractor shall designate an on-site person responsible for instructing workers and overseeing and documenting results of the Construction IAQ Management Plan for the Project.
- B. Distribution: The Contractor shall distribute copies of the Construction IAQ Management Plan to the Job Site Foreman, each subcontractor, the Owner, and the Architect.
- C. Preconditioning: allow products, which have odors and significant VOG emissions, to off-gas in a dry, well ventilated space for sufficient period to dissipate odors and emissions prior to delivery to Project.
  1. Remove containers and packaging from materials prior to conditioning to maximize off-gassing of VOCs.
  2. Condition products in ventilated warehouse or other building.

## **END OF SECTION**

## **SECTION 01 53 50 - OCCUPIED FACILITIES REQUIREMENTS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and other Division 01 Specification Sections, apply to this Section.
- B. Section includes complying with :
  - 1. Requirements for occupied facilities.
- C. Related Requirements:
  - 1. Section 01 00 00 – Consolidated general requirements.

#### 1.2 INFORMATIONAL SUBMITTALS

- A. Dust- and HVAC-Control Plan: Submit coordination drawing and narrative that indicates the dust- and HVAC-control measures proposed for use, proposed locations, and proposed time frame for their operation.
  - 1. Locations of dust-control partitions at each phase of work.
  - 2. Waste handling procedures.
  - 3. Other dust-control measures.

#### 1.3 QUALITY ASSURANCE

- A. Accessible Temporary Egress: Comply with applicable provisions in the U.S. Architectural & Transportation Barriers Compliance Board's ADA-ABA Accessibility Guidelines and ICC/ANSI A117.1.

#### 1.4 PROJECT CONDITIONS

- A. Maintain occupancy during construction.
- B. Basic requirements:
  - 1. Confine work, storage, traffic, and personnel to areas preapproved by the Owner.
  - 2. Do not:
    - a. Disturb building occupants.
    - b. Disrupt normal operations of building occupants.
    - c. Create any nuisance condition.
    - d. Damage property outside work areas.
- C. Occupant interactions, communications and conflicts:
  - 1. Conflicts: Avoid conflicts. In cases of conflict, yield to building occupants' normal operations.
  - 2. Except for emergencies: Do not communicate directly with building occupants.
    - a. Building occupants will be directed to communicate only through the Owner's Representative.
    - b. Building occupants will be directed to not communicate directly with the Contractor.
    - c. Notify Owner's Representative of all communications received directly from building occupants.
  - 3. During emergencies, communicate directly with building occupants to prevent injury and damage.
- D. Special Accommodation: Do not disturb occupants, nor disrupt normal operations and without cost to the Owner, restrict work hours or implement additional measures required.
- E. Contract Activities Adjacent To Occupied Areas:
  - 1. Confine Contract activities within the approved work limits.
  - 2. Provide "Temporary Interior Partitions" to separate Contract areas from occupied areas.
  - 3. Provide "Temporary Exterior Assemblies" to separate occupied areas from the exterior.
- F. Dust and Odor Control:
  - 1. Occupied Areas: Maintain positive air pressure with high quality, conditioned, fresh outdoor air.
  - 2. Contractor Areas: Maintain negative air pressure. Exhaust to the exterior.

- a. Filtration: Do not exhaust particulates greater than two times the limit specified in Section 01 51 50 Construction Indoor Air Quality. Filter exhaust air to achieve this requirement.
  3. Cross Contamination: Do not allow Contractor area exhaust air to enter occupied areas.
  4. Owner Approval Required: Do not use any interior or exterior materials including cleaners which produce odors until the material has been submitted to the Owner for approval. Special accommodation work hour restrictions may be required.
- G. Egress: Maintain legal, Code complying egress from occupied areas at all times.
- H. Intentional Utility Service Interruptions: Maintenance of building occupancy requires maintenance of all utility services to occupied areas including, without limitation, electric power, water, sewer, utility fuels, and all communications systems. When service interruption to occupied areas is unavoidable:
1. Work Plan: Provide at least five days written advance work plan of service interruption.
  2. Dates, Times: Define the dates and times of proposed service interruptions.
  3. Low Occupancy: Schedule service interruptions during days and times of lowest occupancy.
  4. Costs: Include all costs, "premium time", and "over time" in the Contract Amount. No additional payments will be made for scheduling service interruptions and work during periods of lowest occupancy.
  5. Approval: Obtain written approval from Owner prior to interrupting services.
- I. Unintentional Utility Service Interruptions:
1. Switches, Breakers: Never turn off switches or breakers without first confirming the result.
  2. Valves: Never close valves without first confirming the result.
  3. Concealed Utilities, Accidental Breakage: Thoroughly investigate existing conditions and check for concealed utilities prior to cutting, drilling, demolition, and other activities which could damage utilities. Check concealed conditions with metal detectors, density change detectors, and other instruments.
  4. Contract Document Limitations: All existing utilities are not shown. Existing utilities which are shown are only shown in approximate locations.
  5. Accidental Damage and Service Interruptions: Notify the Owner and Architect immediately.
  6. Take effective action to minimize damage and disruption to occupied areas. Provide equivalent temporary utilities. Restore permanent utilities as quickly as possible.
  7. Costs: All costs including, without limitation, investigation of existing conditions, temporary utilities, repairs, "premium time", and "over time" shall be paid by the Contractor. No additional payments will be made related to unintentional service interruptions.
- J. Owner's Equipment: Do not use any Owner's equipment including ladders with or without permission of the Owner's personnel. Indemnify and hold the Owner harmless from all losses related to use of Owner's equipment.
- K. Special Restrictions on Vibration: Occupied areas include vibration sensitive equipment.
1. Cooperate with the Owner's vibration monitoring program, if any.
  2. Comply with vibration limits specified by Owner. Ambient is background vibration without Contract activity.
  3. Use means, methods, and techniques to minimize vibrations.
  4. Schedule Contract activities which produce objectionable vibrations at times directed by Owner.
  5. Provide Special Accommodation, specified in this section, to accommodate vibration limitations.
- L. Worker Conduct and Appearance "Work Rules": Professional appearance and conduct is required.
- M. Worker Badges and Identification: Require worker and visitor identification in form acceptable to Owner.

## **PART 2 - PRODUCTS**

### **2.1 MATERIALS - GENERAL**

- A. Polyethylene Sheet: Reinforced, fire-resistive sheet, 10-mil (0.25-mm) minimum thickness, with flame-spread rating of 15 or less per ASTM E 84 and passing NFPA 701 Test Method 2.
- B. Insulation: Unfaced mineral-fiber blanket, manufactured from glass, slag wool, or rock wool; with maximum flame-spread and smoke-developed indexes of 25 and 50, respectively.

## 2.2 FLOOR DUST & DEBRIS CONTROL

### A. Tacky Mats:

1. Provide and maintain tacky mats on floors at every door and passage between Contract work areas and non work areas including stair doors.
2. Product: Equal to "Trim Tack Adhesive Mat", Markel Industries, Inc., [www.markelind.com](http://www.markelind.com).
3. Width: Full width of door way or passage way.
4. Length: At least 45 inches from demarcation line between Contract and non Contract areas.
5. Maintenance: Remove layers and provide fresh tacky surface at least every day and more frequently as needed to control particulates, dust, and soil.

### B. Walk-off Mats

1. Provide and maintain mats on floors to reduce soiling of tacky mats.
2. Product: "Heavy Duty Astro Turf Mat", North American Mat Company, [www.northamericanmat.com](http://www.northamericanmat.com).
3. Location: On the Contract work area side of every tacky mat.
4. Width: Full width of door way or passage way.
5. Length: At least five feet from tacky mat extending into Contract work area.

C. Maintenance: Vacuum turf mat at least weekly and more frequently as needed to control dirt.

D. Signs: Provide signs facing the work area: "Wipe your feet before leaving work area".

## 2.3 EQUIPMENT

A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.

B. Air-Filtration Units: Primary and secondary HEPA-filter-equipped portable units with four-stage filtration. Provide single switch for emergency shutoff. Configure to run continuously.

## **PART 3 - EXECUTION**

### 3.1 INSTALLATION, GENERAL

A. Comply with applicable Division 01, related applicable sections and the following:

B. Locate facilities where they will serve Project adequately and result in minimum interference with performance of the Work. Relocate and modify facilities as required by progress of the Work.

### 3.2 TEMPORARY UTILITIES INSTALLATION

A. General: Maintain existing or install new temporary service or connect to existing service to maintain services required by occupants..

B. Isolation of Work Areas in Occupied Facilities: Prevent dust, fumes, and odors from entering occupied areas.

C. Ventilation and Humidity Control: Provide temporary ventilation required for occupants.

1. Provide dehumidification systems when required to reduce substrate moisture levels to level required to allow installation or application of finishes.

### 3.3 SUPPORT FACILITIES INSTALLATION

A. Traffic Controls: Comply with requirements of authorities having jurisdiction.

1. Protect existing site improvements to remain including curbs, pavement, and utilities.

B. Egress – General:

1. Maintain access for fire-fighting equipment and access to fire hydrants.
2. Egress includes access to egress and egress discharge.
3. Provide Code complying EXIT signs.
4. Provide Code complying lighting.
5. When egress is required through "Temporary Interior Partitions", provide:
  - a. Provide self-closing, 45 minute fire rated door assemblies.

- b. Provide panic exit devices.
  - C. Temporary Stairs: Until permanent stairs are available, provide temporary stairs for occupants. Stairs shall comply with applicable egress codes and requirements. Do not use ladders for occupants.
  - D. Existing Stair Usage: Use of Owner's existing stairs will be permitted, provided stairs are cleaned and maintained in a condition acceptable to Owner.
    - 1. Provide protective coverings, barriers, devices, signs, or other procedures to protect stairs and to maintain means of egress. If stairs become damaged, restore damaged areas so no evidence remains of correction work.
  - E. Do not permit scaffolding, stages, and incidental support facilities from impeding use or unreasonably degrading appearance of occupied facilities.
- 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION
- A. Protection of Existing Facilities: Protect existing vegetation, equipment, structures, utilities, and other improvements at Project site and on adjacent properties, except those indicated to be removed or altered. Repair damage to existing facilities.
- 3.5 OPERATION, TERMINATION, AND REMOVAL
- A. Comply with applicable requirements of Division 01.

**END OF SECTION**

## SECTION 01 57 10 - CONSTRUCTION WASTE MANAGEMENT

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Implementation of waste management controls and systems for the duration of the Work.
- C. Specific responsibilities:
  - 1. Masonry subcontractor is responsible for waste management of masonry work.
  - 2. Roofing and flashing subcontractor is responsible for waste management of roofing and flashing work.

#### 1.2 INTENT

- A. The intent of this Section is to develop and implement a waste management plan, quantifying material diversion by either weight or volume to recycle and/or salvage to the extent practical of non-hazardous construction and demolition debris indicated.
- B. The Owner and Architect have established that this Project shall generate the least amount of waste practical and that processes that ensure the generation of as little waste as possible due to error, poor planning, breakage, mishandling, contamination, or other factors shall be employed.
- C. Of the waste that is generated, as many of the waste materials as economically feasible shall be reused, salvaged, or recycled. Waste disposal in landfills shall be minimized to the greatest extent practical.
- D. With regard to these goals the Contractor shall develop, for the Architect's review, a Waste Management Plan for this Project.
- E. Each Subcontractor shall be responsible for segregating his own waste into different dumpsters as directed by the Contractor. In particular:
- F. Contractor shall be responsible for ensuring that debris will be disposed of at appropriately designated licensed solid waste disposal facilities.

#### 1.3 SUBMITTALS

- A. Waste Management Plan: Within 21 calendar days after receipt of Notice to Proceed, the Contractor shall provide a plan containing the following:
  - 2. Alternatives to Land filling: A list of each material proposed to be salvaged or recycled during the course of the Project. Include the following and any additional items proposed:
    - a. Cardboard.
    - b. Clean dimensional wood.
    - c. Beverage containers.
    - d. Land clearing debris.
    - e. Concrete.
    - f. Metals from framing, banding, stud trim, ductwork, piping, rebar, roofing, other trim, steel, iron, galvanized sheet steel, stainless steel, aluminum, copper, zinc, lead, brass, and bronze.
    - g. Mechanical and electrical equipment.
    - h. Packaging materials.
    - i. Glass.
    - j. Carpet and pad.
    - k. Plastic bags, sheeting, and wrapping.
  - 5. Meetings: A description of the regular meetings to be held to address waste management.

6. **Materials Handling Procedures:** A description of the means by which any waste materials identified above will be protected from contamination, and a description of the means to be employed in recycling the above materials consistent with requirements for acceptance by designated facilities.
  7. **Transportation:** A description of the means of transportation of the recyclable materials (whether materials will be site-separated and self-hauled to designated centers, or whether mixed materials will be collected by a waste hauler and removed from the site) and destination of materials.
- B. **Waste Management Progress Report:** Concurrent with every third Application for Payment, submit a written Waste Management Progress Report in the same format as required for Final Report.
- C. **Waste Management Final Report:** Prior to Substantial Completion, submit a written Waste Management Final Report summarizing the types and quantities of materials recycled and disposed of under the Waste Management Plan. . Quantity may be measured by either weight or volume; be consistent in calculations. Include the following:
1. Material category.
  2. Generation point of waste.
  3. Total quantity of waste, by weight.
  4. Total quantity of waste recovered (salvaged plus recycled).

**PART 2 PRODUCTS** Not Used.

**PART 3 EXECUTION**

3.1 RECYCLING

- A. Metal, including but not limited to aluminum stairs, structural beams and sections, and reinforcing steel shall be recycled.
- B. Wood that is not painted and does not contain preservatives (i.e. creosote, arsenic, and chromium-containing preservatives) shall be segregated and recycled.

3.2 WASTE MANAGEMENT PLAN IMPLEMENTATION

- A. **Manager:** The Contractor shall designate an on-site person responsible for instructing workers and overseeing and documenting results of the Waste Management Plan for the Project.
- B. **Distribution:** The Contractor shall distribute copies of the Waste Management Plan to the Job Site Foreman, each Subcontractor, the Owner and the Architect.
- C. **Instruction:** The Contractor shall provide on-site instruction of appropriate separation, handling, and recycling, salvage, reuse, and return methods to be used by all parties at the appropriate stages of the Project.
- D. **Separation Facilities:** The Contractor shall lay out and label a specific area to facilitate separation of materials for recycling, salvage, reuse, and return. Recycling and waste bin areas are to be kept neat and clean and clearly marked in order to avoid contamination of materials. Location shall be acceptable to the Architect.
- E. **Hazardous Wastes:** Any unforeseen hazardous wastes shall be separated, stored, and disposed of according to local regulations and as directed by the Owner.

**END OF SECTION**

## **SECTION 01 64 05 – OWNER EQUIPMENT RELOCATION REQUIREMENTS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. Relocation of existing Owner equipment and components.
- C. Extent of Contractor responsibilities for items, without limitation, includes:
  - 1. Progress Schedule: Schedule all Owner items to be relocated.
  - 2. Notify Owner: In writing of dates when when equipment needs to be ready to be moved.
  - 3. Advance Notice Requirement: Notify Owner at the earliest possible time.
  - 4. Minimum Notice To Owner: At least 30 days prior to date Owner items due.
  - 5. Rough In Information: Obtain directly from vendors to Owner.
  - 6. Coordination: Coordinate all rough in, blocking, and related work for Owner furnished items.
  - 7. Processing: Handle, store on site, and move to required locations.
  - 8. Assembly: Fully assemble. relocated Comply with manufacturer' s recommendations.
  - 9. Installation: Comply with manufacturer's recommendations and Owner requirements.
  - 10. Anchorage: Securely anchor items, but not items intended to be free standing and loose.
    - a. Install one fastener for each factory provided fastener hole.
    - b. Conceal fasteners to the greatest extent practical.
    - c. Match original installation.
  - 11. Fasteners: Match, re-use or reproduce any original fasteners required.
  - 12. Accessories: Fully install all accessories.
  - 13. Utility Connections: Fully connect and make operational.
  - 14. Testing: Test and confirm proper operation and function.
  - 15. Adjusting: Adjust for optimum operation.
  - 16. Touch Up: Touch up and repair minor damage to eliminate evidence of repair.
- D. Extent of Owner responsibilities for OFCI items to be relocated, without limitation, includes:
  - 1. Verifying status and condition of equipment before location begins.
- E. Contractor's Responsibilities for Reused, Relocated Existing Items:
  - 1. Coordinate rough in and blocking for items at new installation locations.
  - 2. Disassemble items as needed for relocation.
  - 3. Record existing assembly details and conditions to facilitate reassembly.
  - 4. Provide non-marking, temporary labels to facilitate reassembly.
  - 5. Salvage, package, and label existing parts, components, and fasteners.
  - 6. Reinstall in compliance with manufacturer' s original installation instructions.
  - 7. Provide complete, fully functional, relocated, and reassembled items.
  - 8. Fully connect and make operational.
  - 9. Test and confirm proper operation and function.
  - 10. Adjust for optimum operation.
  - 11. Touch up and repair minor damage to eliminate evidence of repair.

### **PART 2 - PRODUCTS - NOT USED**

### **PART 3 - EXECUTION - NOT USED**

### **END OF SECTION**



## **SECTION 01 70 00 - EXECUTION REQUIREMENTS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: All of the Contract Documents, including the Drawings, the General and Supplementary Conditions and Division 1 General Requirements apply to the work of this Section.
- B. Section includes: General execution requirements.

#### 1.2 INSPECTION & EXAMINATION

- A. Examine and inspect work daily to ensure compliance with Contract Documents and comply with the following:
  - 1. Inspection by Contractor, subcontractors or installers:
    - a. Inspect work of other trades to ensure areas are ready to receive next phase of work.
    - b. Verify required work of other sections or trades is properly and fully installed before proceeding.
    - c. Examine previous work, related work and conditions.
    - d. Take action to ensure defects are corrected.
  - 2. Notify in writing Contractor, Architect and where applicable, Owner, of deficiencies or conditions detrimental to proper completion of the Work.
- B. Acceptance: Beginning installation or execution of work constitutes acceptance and approval of previous work, related work and conditions.

#### 1.3 TOLERANCES & MEASUREMENT

- A. Confirm measurements and dimensions and comply with the following:
  - 1. Do not deviate from measurements and dimensions of Contract documents without written authorization to do so from the Architect.
  - 2. Field check measurements and tolerances periodically and regularly.
  - 3. Notify Architect in writing of differences between field and Contract Documents. Submit drawings showing differences.
  - 4. Confirm tolerances and do not allow them to grow or accumulate.
- B. Tolerances: Unless otherwise shown, indicated, specified or approved in writing, install work plumb, aligned, and straight as follows:
  - 1. 48 inches or less: within 0.06 inch.
  - 2. 10 feet or less: within 0.125 inch.
  - 3. 20 feet or less: within 0.18 inch.
  - 4. Over 20 feet: Within 0.25 inch.

#### 1.4 APPROVALS, INSPECTIONS, FIELD QUALITY CONTROL

- A. Obtain required inspections and approvals of authorities having jurisdiction before concealing applicable work.
- B. Field Quality Control: Perform or coordinate with those performing, required field quality control, field tests and the like.

#### 1.5 LAYOUT

- A. Employ skilled, experienced person to establish lines, elevations and layout of the work and comply with the following:
  - 1. Provide and maintain layout lines, benchmarks, and necessary working points.

2. Do not change, deviate or alter indicated lines and elevations without prior written approval from the Architect.
- B. Architect's review of interior layout:
1. Layout interior partitions and doorways on floor.
  2. Do not continue to work without Architect's approval.
  3. Do not alter layout without written approval from Architect.
- C. Floor finishes: Unless otherwise specifically indicated:
1. Extend floor finishes under open bottom items, movable items, furnishings, equipment and casework.
  2. Extend into closets, recesses, alcoves and toe spaces.
  3. Extend tight to walls, columns, permanent work.
- 1.6 ADJUSTING
- A. Adjust operable items to operate freely and properly.
- 1.7 AIR INFILTRATION & FREEZE PROTECTION
- A. General: Ensure the building envelope provides a continuous barrier to air infiltration and to freeze damage. Upon completion the building envelope shall:
1. Separate all occupied and mechanical spaces from exterior temperatures with weather tight construction as necessary to protect against freezing or excessive heat loss.
  2. Provide solid blocking, sheathing and/or framing to support construction to accomplish this requirement.
- B. Extent of Contractor obligation: As part of this Contract, be responsible for any and all damages which occur due to lack of weather tight construction.
- C. Air Infiltration: Comply with provisions of other sections. Ensure different components forming the air infiltration barrier system are interconnected and sealed together without discontinuities or open penetrations.
- D. Freeze protection: Construct assemblies to ensure the typical thermal and air barrier systems are on the cold-in-winter side of work subject to freezing. In particular, soffits, ceilings and chases subject to freezing shall only be constructed after typical assemblies are insulated and finished off.
- 1.8 CLEANING
- A. Clean work areas daily. Do not permit debris to accumulate.
- B. Clean completed work using appropriate materials complying with Contract Documents and manufacturer recommendations, instructions and limitations. Remove labels and visible markings. Do not use cleaning materials which adversely affect work or surfaces.
- C. Comply with application sustainability requirements, if any, including:
1. Cleaning materials.
  2. Indoor air quality.
  3. Construction waste disposal.
- 1.9 PROTECTION / ISOLATION
- A. Protect installed work until substantial completion from damage or deterioration and as follows:
1. Restrict traffic from completed protected work or areas.
  2. Prohibit traffic, storage or other work from waterproofing and roofing.
  3. Protect doors, frames, and hardware.
  4. Protect glass from damage, scratches, or stains.

5. Maintain proper humidity levels and protect work from dampness, moisture, stains, marks or abrasions.
  6. Replace work with evidence of growths, mold or mildew.
  7. Replace damaged or deteriorated work with new acceptable work complying with Contract Documents.
- B. Isolate dissimilar metals from galvanic action or corrosion with non-absorptive dielectric material, tape or coatings of type recommended by manufacturer or approved by Architect.

**PART 2 - PRODUCTS**                      Not used

**PART 3 - EXECUTION**                      Not used

**END OF SECTION**

## **DOCUMENT 01 70 53 – TAX EXEMPTION USAGE REQUIREMENTS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Document Includes, without limitation, requirements for usage of:
  - 1. Owner's tax exemption.
- C. Tax exemption: The Owner is exempt for the payment of sales taxes on materials and products permanently incorporated into the work.
- D. Extent of Contractor responsibilities for tax exemption usage, without limitation, includes:
  - 1. Notices & verification:
    - a. Obtain from Owner their tax exempt documentation.
    - b. Complete forms required by the state Department of Revenue.
    - c. Comply with state filing and regulatory requirements.
  - 2. Records: Providing Owner with one copy of each purchase order, invoice, and receipt which used the Owner's tax exemption certificate number.
  - 3. Certification: Upon Contract completion, provide a notarized certification to the Owner stating that all purchases made under the Owner's tax exemption certificate number were legitimate, for this Contract, and entitled to the exemption.
- E. Penalties: Pay all penalties assessed by authorities having jurisdiction for the Contractor's improper or illegal use of the Owner's tax exemption certificate number.

### **END OF DOCUMENT**

## SECTION 01 89 20 – RENOVATION REQUIREMENTS

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. Compliance with renovation requirements.
  - 2. Pest control.
- C. Extent of renovation work: Renovate, reconstruct, rebuild, and repairing existing construction and surfaces to eliminate damaged and deteriorated materials and construction, and to create a continuous “like new” appearance and condition where required and as follows:
  - 1. At each interface between new and existing work.
  - 2. Where damage or holes are caused by installation of new work.
  - 3. At each location of demolition and removal of existing work.
  - 4. Wherever the Contract Documents indicate work on existing surfaces.
  - 5. At all existing construction and surfaces to remain except those specifically noted as “No Work Required”

#### 1.2 QUALITY ASSURANCE

- A. Comply with Division 01 requirements and governing codes and regulations.
- B. Preconstruction Photographs for Renovation Work:
  - 1. Prior to beginning work at the site, provide a complete and detailed record of existing conditions with emphasis on existing items and surfaces indicated to remain and existing damage and deterioration.
  - 2. Basic Photography Requirements: Comply with applicable requirements of Division 01.
  - 3. Identify each photo by room number or similar exterior description.
- C. Project/environmental conditions: Protect work according to best practices and as specified below:
  - 1. Because the Project Cost is based on existing conditions, the Contractor shall maintain existing conditions.
  - 2. If the scope or cost of renovation work increases because of worsening conditions or degradation of conditions, the Contractor shall be solely responsible for the increased scope and costs since the Contractor had responsibility to maintain the existing condition and to prevent the degradation and worsening condition.
  - 3. At no increase cost to the Owner, expand and extend the renovation work to correct degraded and worsened existing conditions. Eliminate all loose, deteriorated, and damaged conditions, finishes, surfaces, and substrates, which are not maintained to the condition existing at the beginning of the contract.
- D. Study Existing Field Conditions: Thoroughly study, examine, and investigate existing field conditions including, without limitation, conditions in all crawl spaces, plenums, attics, accessible chases, and above accessible ceilings
  - 1. Compare the Contract Documents with existing field conditions prior to beginning any work on site. Fully understand the full extent of the renovation work.
  - 2. Field Measurements: Measure existing conditions and coordinate new work with existing conditions. Review details of construction with the Architect prior to beginning work.

#### 1.3 GENERAL RENOVATION REQUIREMENTS

- A. Contract drawing limitations: The Contract Documents do not show
  - 1. Every existing conditions.
  - 2. Nor all new work to existing condition interfaces.
  - 3. Nor complete and precise extent of patching, repair and renovation required.
  - 4. The above are not indicated everywhere since the Contractor has control over means methods, and techniques of selective demolition and integrating new and existing construction.
- B. Cutting requirements: Comply with applicable requirements of Division 01 including documents relating to cutting and patching, selective demolition and remedial work.

- C. Existing to Remain” and “Existing to be Relocated” Requirements: Throughout the Contract, effectively protect and maintain existing conditions, finishes, surfaces, and substrates indicated to remain “as is”, indicated to remain “with specific cleaning”, or indicated to remain “ with new finishes”.

## **PART 2 - PRODUCTS**

### 2.1 RE-USED & REPLACED MATERIALS

- A. Existing re-used or new replaced materials and surfaces shall meet the following criteria:
1. Sound solid materials, free of cracks, chips or other damage.
  2. Functional for intended use.
  3. Free of stains or abrasions or other degraded materials.
  4. Consistent shape and size matching typical adjacent components.

## **PART 3 - EXECUTION**

### 3.1 RENOVATION

- A. Pipes, Chases, and Enclosures for Renovation Work: Not all chases and enclosures required in renovated areas are shown on Drawings.
1. Provide metal framed, gypsum drywall chases and enclosures to enclose and completely conceal all new piping, ducts, cables and conduits located in renovated finished spaces other than dedicated mechanical rooms, electrical rooms or Tele/Data rooms.
  2. Provide fire-rated chases and enclosures to meet Building Code requirements.
- B. Floor Elevations: Make new floors level and align with existing floors. Where existing floors are not level and leveling of existing floors is not required by the Contract, build new work to meet and be flush with the existing out of level condition. Survey, record, and submit existing condition and level information.
- C. Newly Exposed To View Concrete: Renovate all newly exposed to view existing concrete surfaces.
1. Patch and fill voids, honeycombs, cracks, pits, “bug holes”, and other defects.
  2. Grind rough areas and protrusions down to flush and smooth.
  3. Eliminate visible reinforcing steel including cut ends.
  4. Cut reinforcing back at least 0.75 inch below surface, then paint steel for rust resistance.
- D. Lead Paint: If the Contract Documents do not include a complete existing lead paint survey, assume all surfaces which may have been painted prior to 1978 are coated with lead paint.
1. Comply with OSHA, Lead in Construction Industry Standard, 29 CFR1926.62.
  2. Deleading and removal of lead coatings is not intended.
- E. Holes in Floors, Walls, Roof, and Existing Construction: Patch, repair, rebuild, and rework to eliminate all holes including, without limitation, holes resulting from removal of partitions, pipes, ducts, conduits, equipment, and other work. Make patches and repairs match the material, quality, fire rating, and load capacity of the adjacent existing condition. Frame, reinforce, and support patches and repairs so they cannot fall out or fall through the opening.
- F. Transition of New to Existing Work:
1. Unless specifically indicated or specified otherwise, provide a smooth, continuous, monolithic and uniform appearance with no visible evidence of patching, rebuilding, or repair and no visually discernible difference between new work and existing work.
  2. Control Joints: Where this requirement is not possible, and after obtaining Architect’s prior written approval, provide a controlled, defined straight line break and a control joint between new work and existing work.
  3. Painting and Finishing: Unless specifically indicated or specified otherwise, uniformly extend painting and finishing of rebuilt and repaired work over adjacent existing unprepared surfaces to the nearest significant change of plane.
  4. Create and Maintain Planes: Where the removal of existing construction (example: existing partition removal) creates new spaces and new planes, rework and rebuild adjacent planar surfaces (examples: walls, ceilings, and floors) to create new smooth planes free from holes, valleys, depressions, bumps, offsets, breaks, and other defects. Conceal and eliminate all visible evidence of construction removed.

3.2 PEST CONTROL:

- A. Engage a licensed exterminator, who practices integrated pest management (IPM), to inspect the project and eliminate rodents, termites and all other insects and pests. Coordinate pest control plan with Owner. Owner's written approval is required prior to application. Submit proposed program to Owner and Architect. Program shall clearly indicate the following:
1. Area or areas to be treated.
  2. Manufacturer's printed instructions and MSDS for each chemical to be used.
  3. Pollution preventive measures to be employed.

3.3 CLEANING

- A. Immediately before Owner occupancy:
1. Thoroughly and completely strip, scrub and clean all vinyl floor tile and vinyl base, cabinetry and equipment, window treatments, and interior sidelights, glass and exterior window glazing and all other interior finishes in the work area.
  2. Remove all dirt, soil, stains and marks from all surfaces whether existing, new, re-built or replaced.

**END OF SECTION**

## **SECTION 02 22 00 – EXISTING CONDITIONS ASSESSMENT**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. Assessing existing conditions.
  - 2. Reviewing available existing conditions documentation.
- C. Existing conditions information:
  - 1. Was collected by Owner and Architect for use in designing the project.
  - 2. Is not part of Contract Documents.
  - 3. Is not guaranteed by Owner nor Architect as complete or accurate.
  - 4. Made available to Contractor solely as a courtesy.
  - 5. Used by the Contractor at their sole risk, liability and judgment.
- D. Additional Existing Conditions Information Obtained By Contractor: The Contractor may obtain additional existing condition information and may perform selective exploratory demolition by making a specific written request to the Owner and obtaining his pre-approval.
- E. Concealed and Unknown Conditions: Comply with the Conditions of the Contract for Construction. The following conditions are not “concealed” or “unknown” for the purposes of claims:
  - 1. Conditions above lay-in ceilings.
  - 2. Conditions shown on existing building drawings or record drawings.
- F. Existing Building Drawings: Where existing buildings are part of the project, existing building drawings may be available for Contractor’s review. Refer to Architect.

#### 1.2 SUBMITTALS

- A. Comply with Division 01 General Requirements and submit for approval:
  - 1. Existing conditions drawings: Show location and elevation of each measurement required or indicated below.
    - a. Field Measurements: Take accurate field measurements and indicate same on drawings.

### **PART 2 - PRODUCTS**

#### 2.1 NEW MATERIALS USED IN CONNECTION WITH ASSESSEMENT

- A. Match existing, as applicable.

### **PART 3 - EXECUTION**

#### 3.1 GENERAL

- A. Comply with the provisions of Section 01 70 00 - especially requirements related to:
  - 1. Inspection and examination. Tolerances and measurement.
  - 2. Approvals, inspections and filed quality control.
  - 3. Layout. Adjusting.
  - 4. Cleaning. Protection.
- B. Install materials and systems in accordance with manufacturer's instructions, limitations and restrictions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

### **END OF SECTION**



## **SECTION 02 41 10 – SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. Selective demolition activities.
  - 2. Confer with Owner to verify extent to which demolition waste is to be re-cycled. Meet Owner recycling percentage targets if any are established.
  - 3. Removal of demolished materials from the site and legal disposal.
  - 4. Extent of work:
    - a. Provide demolition work necessary for execution and completion of the Work whether shown on the drawings or not.

#### 1.2 SUBMITTALS

- A. Schedule: Submit for approval selective demolition schedule, including schedule and methods for capping utilities to be abandoned and maintaining existing utility service. Comply with requirements of Section 01 57 00, Construction Waste Management.

#### 1.3 QUALITY ASSURANCE

- A. Codes and Regulations: Comply with governing codes and regulations, and obtain required permits. Use experienced workers.
  - 1. Occupational Safety and Health Standards (29 CFR 1910).
  - 2. State Department of Public Health regulations.
  - 3. State and local Waste Specific Restrictions.
  - 4. ANSI/NFPA 241 – Building Construction and Demolition Operations.

### **PART 2 - PRODUCTS**

#### 2.1 DEMOLITION APPLICATIONS

- A. Selective building demolition and removal of designated components include:
  - 1. Selective demolition of interior partitions, systems, and building components designated to be removed.
  - 2. Exterior facade, structures, and components.
  - 3. Protection of portions of building adjacent to or affected by selective demolition.
  - 4. Removal of abandoned utilities and wiring systems.
  - 5. Notification to Owner of schedule of shut-off of utilities which serve occupied spaces.
  - 6. Pollution control during selective demolition, including noise control.
  - 7. Removal and legal disposal of materials.
  - 8. Protection: Designated site improvements and adjacent construction.
  - 9. Salvage: Designated items, if shown.
  - 10. Utilities: Interruption, capping or removal as applicable.
  - 11. Hazardous Materials, if any: Removed under separate prior contract.

### **PART 3 - EXECUTION**

#### 3.1 GENERAL

- A. Comply with the provisions of Division 01.

#### 3.2 INSTALLATION

- A. Install components plumb and level, accurately fitted, free from distortion or defects, and as follows:
  - 1. Anchor assemblies securely to structure.

2. Separate dissimilar materials with bushings, gaskets, grommets, washers or coatings where required to prevent electrolytic corrosion.
  3. Use manufacturer's supplied components and hardware unless otherwise shown.
- B. Demolition Operations: Do not damage building elements and improvements indicated to remain. Items of salvage value, not included on schedule of salvage items to be returned to Owner, shall be removed from structure. Storage or sale of items at project site is prohibited.
  - C. Utilities: Locate, identify, disconnect, and seal or cap off utilities in buildings to be demolished.
  - D. Shoring and Bracing: Provide and maintain interior and exterior shoring and bracing. Use specialized, experienced personnel.
  - E. Occupied Spaces: Do not close or obstruct streets, walks, drives or other occupied or used spaces or facilities without the written permission of the Owner and the authorities having jurisdiction. Do not interrupt utilities serving occupied or used facilities without the written permission of the Owner and authorities having jurisdiction. If necessary, provide temporary utilities.
  - F. Operations: Cease operations if public safety or remaining structures are endangered. Perform temporary corrective measures until operations can be continued properly.
  - G. Security: Provide adequate protection against accidental trespassing. Secure project after work hours.
  - H. Public protection: Take protective measures as required to prevent spread of dirt and debris, damage to adjacent properties, and injury to occupants and passers-by. Control noise, vibration, and spread of dust; keep all life-safety hazards enclosed, and take measures as required to prevent and suppress fire. Make provisions for medical first-aid as required.
  - I. Barriers: Within the area of the work, provide safety barriers, rails and closures as required at all hazardous areas including floor and roof edges and openings. Take all measures as required by O.S.H.A. and by other Government Authorities and as prudent to protect workers against, hazards to health and safety. Do not allow dust or odors to migrate into adjacent occupied areas.
  - J. Restoration: Restore finishes of patched areas.
  - K. Cutting new openings to remain visible: Do not over-cut openings. Make cuts clean, true, plumb and square.
  - L. Cleaning: Remove debris daily. Clean soil and dust from surfaces to remain.

### 3.3 SCHEDULE

- A. Refer to drawings.

**END OF SECTION**

## **SECTION 04 01 04 – MINOR MASONRY RENOVATION**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: All Contract Documents, including Drawings, General and Supplementary Conditions and Division 1 General Requirements apply to this Section.
- B. Section includes, without limitation, providing
  - 1. Miscellaneous interior masonry repairs and renovations.
- C. Extent: Work on interior masonry, including
  - 1. Cutting, patching, toothing-in, infill and miscellaneous work with existing masonry walls.
  - 2. Repointing.
  - 3. Replacement of unsound, damaged or missing mortar joints and masonry units.
  - 4. In the event of conflict between drawings and this section, carry the greater quantity.
- D. Related work includes, without limitation:
  - 1. Section 04 01 30 – Cleaning Existing Masonry
  - 2. Section 04 05 00 - Masonry mortars & grout
  - 3. Section 04 20 09 - Salvaged Brick
  - 4. Section 04 21 10 - Brick

#### 1.2 QUALITY ASSURANCE

- A. Comply with the following:
  - 1. Employ mechanics and subs with extensive masonry renovation background and not less than 5 years experience in comparable work.
  - 2. Masonry re-pointing: Brick Institute Technical Notes 7F.

#### 1.3 SUBMITTALS

- A. Product Data: Submit manufacturers' technical data for each product indicated including recommendations for their application and use. Include test reports and certifications substantiating that products comply with requirements of these specifications.
- B. If alternative methods and materials to those indicated are proposed for any phase of work, provide a written description and evidence of successful use on other, comparable projects, and description of proposed testing to demonstrate quality for use on this project.

#### 1.4 DELIVERY, STORAGE AND HANDLING

- A. Carefully pack, handle, and ship new masonry units and accessories strapped together in suitable packs or pallets or in heavy cartons. Unload and handle to prevent chipping and breakage.
- B. Deliver other materials to site in manufacturer's original and unopened containers and packaging, bearing labels as to type and names of products and manufacturers.
- C. Protect masonry materials during storage and construction from wetting by rain, snow or ground water, and from staining or intermixture with earth or other types of materials.
- D. Protect grout, mortar, and other materials from deterioration by moisture and temperature. Store in a dry location or in waterproof containers. Keep containers tightly closed and away from open flames. Protect liquid components from freezing. Comply with manufacturer's recommendations for minimum and maximum temperature requirements for storage.

#### 1.5 PROJECT CONDITIONS

- A. Protect persons, motor vehicles, surrounding surfaces of building whose masonry surfaces are being restored, building site, and surrounding buildings from injury resulting from masonry restoration work.
- B. Do not repoint mortar joints or repair masonry unless air temperatures are between 40° F (4° C) and 80° F (27° C) and will remain so for at least 48 hours after completion of work. Cold weather work may be performed in accordance with requirements as specified in Section 04200 ?- Unit Masonry.

- C. Prevent grout or mortar used in repointing and repair work from staining face of surrounding masonry and other surfaces. Remove immediately grout and mortar in contact with exposed masonry and other surfaces.
- D. Protect sills, ledges and projections from mortar droppings.
- E. Repair, restore, and repoint joints before performing wet or chemical cleaning.

## **PART 2 - PRODUCTS**

### 2.1 UNIT MASONRY MATERIALS

- A. Re-use existing sound materials or match existing with new materials.
- B. Concrete Masonry Units:
  - 1. Match existing or comply with the following:
  - 2. Manufacturers: Basalite Concrete Products; BASF Construction Chemicals; Clayton Block; or approved equal.
  - 3. Application: Concrete masonry non-bearing partitions, shafts and miscellaneous walls.
  - 4. Concrete Masonry Units: ASTM C 90, 1500 f'm compressive strength, Normal weight, unless otherwise shown.
  - 5. Prefaced Concrete Block: ASTM C 90, 1500 f'm compressive strength: Normal weight
  - 6. Size: Face dimension of 7-5/8 inches high by 15-5/8 inches long by width required for application.
  - 7. Concrete Building Brick: ASTM C 55.
  - 8. Special Finish: As shown, if not: Match existing.
  - 9. Special Shapes: As required by building configuration.
  - 10. Bond Pattern: As shown, if not, running Bond.
- C. Brick: Refer to Section 04 20 09 - Salvaged Brick

### 2.2 MORTAR MATERIALS

- A. Binders: Provide American Portland Cement, ASTM C 150, Type I, and plastic hydrated lime conforming to ASTM C207 Type S only; do not use type SA.
- B. Sand: Clean washed, uniformly well graded masonry sand conforming to ASTM C 144. Sand shall also match color, size, texture and gradation of existing aggregate in surrounding mortar as closely as possible.
- C. Sand for pointing mortar: Conforming to above and having rounded edges.
- D. Colored Mortar Pigment: Natural and synthetic iron oxides and chromium oxides, compounded for use in mortar mixes. Use only pigments with record of satisfactory performance in masonry mortars.
- E. Water: Clean, free of oils, acids, alkalis and organic matter.

### 2.3 RESTORATION PATCHING MORTARS & INJECTION GROUTS

- A. Provide products by Jahn Restoration Mortars as manufactured by Cathedrale Stone Products Inc. of Washington DC and using mechanics or firms complying with their qualification requirements.
- B. Use products recommended by manufacturer for application. Provide materials in colors to match adjacent masonry. Where required for exact match, provide custom mixed colors. In general products shall consist of the following:
  - 1. Injection grouts M30, M40, M50 for micro-cracks from 0.2 to 10.00 mm. [1/16 to 3/8 inch approximately].
  - 2. Stone repair mortars M70 for limestone.
  - 3. Anchor setting mortar M80
  - 4. Brick repair mortar M100
- C. Patching mortar: Equal to Jahn Restoration Mortars by Cathedrale Stone Products Inc, type recommended by manufacturer for application.
- D. Crack filler: Sikadur by Sika Corp, one of the following as recommended for application by manufacturer:
  - 1. Crack Fix.
  - 2. 31 Hi Mod Gel.
  - 3. 35 Hi Mod LV LPL
  - 4. 52.

### **PART 3 - EXECUTION**

#### **3.1 PREPARATION**

- A. General: Comply with recommendations of manufacturers of chemical cleaners for preparation of building surfaces and protection against damage.
- B. Protect unpainted metal from contact with alkali chemical cleaners by covering them either with liquid strippable masking agent or poly ethylene film and waterproof masking tape.

#### **3.2 EXAMINATION OF EXISTING MASONRY**

- A. Prior to starting the work, examine existing areas of masonry units to determine scope of work and quantities of materials required to perform the repointing work.

#### **3.3 MORTAR MIXING AND PROPORTIONS**

- A. Mortars required for replacing masonry units under the restoration operation, shall be mixed in which the quantity of water can be accurately and uniformly controlled. Where hydrated limes are used for mortars requiring a lime content, use the dry mix method. Where the dry mix method is employed, the materials for each batch shall be well raked and turned over together before the water is added until the even color of the mixed materials indicates that the cementitious materials have been thoroughly distributed throughout the mass, after which the water shall be gradually added until a thoroughly mixed mortar of the required plasticity is obtained. Same mortar mixture shall be used throughout.
- B. Method of measuring materials shall be such that the specified proportions of the materials can be controlled and accurately maintained.
- C. All cementitious materials and aggregate shall be mixed with the minimum amount of water to produce a workable consistency.
- D. Mortar which has begun to set or is not used within 2-1/2 hours after initial mixing shall be discarded. Mortar which has stiffened due to evaporation within the 2-1/2 hour period shall be retempered to restore its workability. Retempering mortar which has partially hardened, without additional cement aggregate or water, will not be permitted.
- E. Mortars proportions shall be as follows:  
Face Pointing: Mixed in accordance with manufacturer's specification to match existing.

#### **3.4 WORKMANSHIP FOR REPLACEMENT OF MASONRY**

- A. All masonry work to be replaced shall be laid by skilled workmen under adequate supervision, shall be laid plumb, true to lines and levels with joints of uniform thickness, all surfaces true, and corners straight and plumb.
- B. Bond shall be kept plumb throughout to match existing bonding.
- C. Unfinished work shall be stepped back for joining with new work. Before new work is started, all loose mortar shall be removed and the exposed joint thoroughly wetted not less than twelve hours before laying new work.
- D. Where adjustments must be made after the mortar has started to set, the masonry unit shall be removed and the mortar in the joint replaced with fresh mortar.
- E. All work shall be kept as clean as possible so that cleaning down may be accomplished easily; protect all masonry from stain at all times to guard from discoloration. Splashing at staging levels shall be avoided, either by covering the courses at these levels, or by cleaning the brick and units so splattered while the mortar is still fresh.
- F. All exposed edges of masonry shall produce a true, smooth, even plane. Irregular cutting of masonry units shall not be permitted and will be rejected.

#### **3.10 FINAL CLEANING**

- A. All work shall be kept as clean as possible so that cleaning down may be accomplished easily; protect all masonry from stain at all times to guard from discoloration. Splashing at staging levels shall be avoided, either by covering the courses at these levels, or by cleaning the masonry so splattered while the mortar is still fresh.

- B. At concrete block units, joints and units shall be lightly stoned down to remove excess mortar and aggregate projections.

3.11 CLEAN-UP

- A. Remove from the site and legally dispose of at the end of each day, all cartons, broken masonry, rubbish and debris resulting from the work of this section.

**END OF SECTION**

## **SECTION 05 51 20 - MODULAR ALUMINUM RAMPS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related documents: All of the Contract Documents, including the Drawings, the General and Supplementary Conditions and Division 1 General Requirements apply to the work of this Section.
- B. Section includes, without limitation, providing:
  - 1. Modular Aluminum Ramps.

#### 1.2 REFERENCES

- A. ASTM B 209 - Standard Specification for Aluminum and Aluminum Alloy Sheet and Plate.
- B. ASTM B 221 - Standard Specification for Aluminum and Aluminum Alloy Extruded Bars, Rods, Wire, Shapes and Tubes.
- C. ASTM B 429 - Standard Specification for Aluminum-Alloy Extruded Structural Pipe and Tube; 2002.
- D. AAMA 611 - Voluntary Specification for Anodized Architectural Aluminum.
- E. AAMA 2603 - Voluntary Specification, Performance Requirements and Test Procedures for Pigmented Organic Coatings on Aluminum Extrusions and Panels.
- F. ADA - ADA Standards for Accessibility Design.

#### 1.3 DESIGN / PERFORMANCE REQUIREMENTS

- A. Design shall conform to ADA Standards for Accessibility Design and applicable local codes and standards.
- B. Design landings and ramps for a minimum uniform live load of 100 lbs/sf and a concentrated vertical load of 400 lbs distributed uniformly over an area of 1 sf.
- C. Handrails and Guardrails: Provide handrails and railings capable of withstanding the following structural loads without exceeding allowable design working stress of materials for handrails, railings, anchors and connections:
  - 1. Handrails and guardrails shall be designed and constructed to resist a single concentrated load of 200 lbs applied at any point and in any direction at the top of the handrail or guardrail.
  - 2. Handrails and guardrails shall be designed and constructed for a load of 50 lbs/lf applied horizontally at the required guardrail height and a simultaneous load of 100 lbs/lf applied vertically downward at the top of the guardrail.
- D. Corrosion Resistance: Separate incompatible materials to prevent galvanic corrosion.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Division 01.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  - 1. Preparation instructions and recommendations.
  - 2. Storage and handling requirements and recommendations.
  - 3. Installation methods.
- C. Shop Drawings: Drawings showing plans, elevations, sections and details of components. Show member sizes and part identification, fasteners, anchor requirements, fittings and evidence of compliance with structural

performance requirements.

- D. Design under direct supervision of Professional Engineer experienced in design of this Work and licensed at Project location.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) square, representing actual product, color, and patterns.
- G. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- H. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking and adjustment of all components.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in manufacturing products specified in this section with minimum ten years documented experience.
- B. Installer Qualifications: All products listed in this section shall be installed by a single installer with demonstrated experience in installing products of the same type and scope as specified.

#### 1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to the job site in good condition and adequately protected against damage as handrails are a finished product.
- B. Inspect ramp and rail sections for damage before signing the receipt from the trucking company. Truck driver must note damaged goods on the bill of lading if damaged product is found
- C. Store products in manufacturer's unopened packaging until ready for installation.

#### 1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.

#### 1.8 PROJECT CONDITIONS

- A. Field Measurements: Where ramps and railings are indicated to fit to other construction, check actual dimensions of other construction by accurate field measurements before fabrication.

#### 1.9 WARRANTY

- A. Provide with manufacturer's three-year limited warranty on the modular ramp system against manufacturers defects.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Subject to compliance with specifications provide products from:
  1. American Access, Inc. [www.aaramps.com](http://www.aaramps.com)
  2. Wenger Corp;
  3. O'Keefe's Inc.
  4. Approved equal.



## 2.2 MATERIALS

- A. Extruded aluminum Bars, Rods, Wire, Shapes and Tubes shall be 6063-T6 alloy and temper with a minimum ultimate tensile strength of 22,000 psi. Comply with ASTM B 221.
- B. Sheet and Plate Aluminum: ASTM B 209; 5005 alloy.
- C. Extruded Aluminum-Alloy Structural Pipe and Tube. Comply with ASTM B 429.
- D. Mechanical Fasteners: Aluminum, stainless steel or other non-corrosive materials compatible with aluminum members, trim, hardware, anchors and other components of the modular system.

## 2.3 MODULAR RAMP SYSTEM

- A. All components shall be universal so that system can be easily relocated and assembled into many different configurations.
- B. Ramp Sections: Ramp sections are prefabricated aluminum shapes.
  - 1. Length: As shown.
  - 2. Width: As shown.
  - 3. Height: Variable as indicated.
  - 4. Walking surface shall be continuous, without gaps and aluminum deck with extruded slip resistant surface.
  - 5. Ramp sections have a wheelchair guard 3 inches plus or minus 1 inch from decking surface.
- C. Landings: Fabricated of aluminum shapes and deck.
  - 1. Prefabricated in typical 63 inch by 63 inch or 63 inch by 78 inch sections. Larger sizes will be fabricated as required by local codes and for specific applications as indicated on the Drawings.
  - 2. Landings shall be designed for variable heights
  - 3. Walking surface of the landing shall be continuous, without gaps, knurled or cross-hatched, aluminum deck with extruded slip resistant surface.
- D. Legs: Fabricated of aluminum shapes and plate.
  - 1. Lengths as required to fit site conditions.
  - 2. Provide with 4 inch by 4 inch foot pads.
  - 3. Legs telescope into the ramps and landings and shall allow for height and slope adjustments.
  - 4. Design to be independent each side, perpendicular to the ground and allow for adjustment without additional foundation systems.
  - 5. Legs shall not protrude outside the footprint of the walking surface, eliminating tripping hazards.
- E. Handrail and Guardrail: Fabricated of aluminum tubing and fittings.
  - 1. Handrail shall have outside diameter of 1.5 inches.
  - 2. Handrail gripping surface shall be smooth and continuous throughout ramp sections, steps and landings.
  - 3. Guardrails shall form a protective barrier of a minimum of 42 inches high and designed such that a 4 inch sphere can not pass through any opening.
  - 4. Pickets, balusters will be minimum aluminum 3/4 inch by 3/4 inch, 4 inches o.c.
  - 5. Inside handrail to be attached to guardrail 34 inches to 38 inches above walking surface.
- F. Steps: Fabricated of aluminum shapes and deck.
  - 1. Step threads 12 inches deep typical
  - 2. Step riser heights 7 inches typical.
  - 3. Walking surface of the step fabricated of extruded aluminum decking with a slip resistant surface and provided with riser closures

## 2.4 FINISHES

- A. Shop finish ramp components as follows"
  - 1. Preparation: Brush Off Blast SSPC-SP10.
    - a. Remove all oil, grease, dirt, mill scale, corrosion products, oxides or other foreign from the surface by abrasive blasting, except for very light shadows, very slight streaks or slight discolorations caused by mill scale oxides.
    - b. At least 95 percent of each square inch of surface area shall be free of all visible residues, and the remainder shall be limited to the light discolorations. Final blast profile should not exceed 0.7mils.
  - 2. Powder Coat:
    - a. Electrostatically applied Thermosetting Powder Coating, Polyester Powder Coating, meeting performance requirements of AAMA 2603.
    - b. Color: Architect selected from available options.

## 2.5 FABRICATION

- A. Fit and shop assemble components in largest practical sizes for delivery to site.
- B. Fabricate components with joints tightly fitted and secured. Furnish spigots and sleeves to accommodate site assembly and installation.
- C. Exposed Mechanical Fastenings: Screws or bolts; unobtrusively located; consistent with design of component, except where specifically noted otherwise.
- D. Grind exposed joints flush and smooth with adjacent finish surface. Make exposed joints butt tight, and flush. Ease exposed edges to small uniform radius.
- E. Accurately form components to suit stairs and landings, to each other and to building structure as applicable.

## **PART 3 - EXECUTION**

### 3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Verify field conditions are acceptable and are ready to receive work
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

### 3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

### 3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install components plumb and level, accurately fitted, free from distortion or defects.
- C. Conceal bolts and screws whenever possible.
- D. All legs should land on a solid surface or a concrete paver. Minimum dimensions of paver must be equal to or greater than 2 inches H by 6 inches W by 9 inches.

- E. Anchor assembly using anchors provided as specified in Section 05 50 00 - Metal Fabrications.

#### 3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

#### **END OF SECTION**

## **SECTION 05 52 10 - STEEL RAILINGS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related documents: All of the Contract Documents, including the Drawings, the General and Supplementary Conditions and Division 1 General Requirements apply to the work of this Section.
- B. Section includes, without limitation, providing
  1. New steel hand & guard rail assemblies.
  2. Modifying and coating existing hand and guard rail assemblies.
  3. Interior work.
  4. Exterior work.
  5. Prime coating finishes.
  6. Finish coating finishes.
  7. Engineering.

#### 1.2 SUBMITTALS

- A. Submit under provisions of Division 1 and as follows:
  1. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
  2. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
  3. Engineering Calculations: Provide calculations stamped by a professional engineer registered in the project jurisdiction work of this section. Comply with section 01 45 50 Engineering by Contractor.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers, which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Handrail and Railing Structural Performance:
  1. Comply with requirements of State Code for railing assembly, wall rails, and attachments to resist concentrated and uniform loading of components without permanent deformation and with structural performance per ASTM E985.
  2. Comply with applicable requirements of ADA and ANSI-117.1.
- C. Reference Standards include the latest editions of:
  - Standard Code for Welding in Building Construction of the American Welding Society.
  - NAAMM Pipe Railing Manual
  - Steel Structure Painting Manual, Volumes 1 and 2

#### 1.4 PERFORMANCE REQUIREMENTS

- A. Provide railing assemblies complying with building code and the following, using the more stringent requirements and leaving railings free of permanent deformation:
  1. Railings uniform load: 50 lbf/ft.
  2. Railing concentrated load: 250 lbf applied to hand/guard rails in any direction.
  3. Railing infill concentrated load: 50 lbf applied horizontally to area of 1 sq. ft. sq. m).
  4. Uniform, infill and concentrated loads: Not assumed to act concurrently.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Carbon Steel Pipe, Bar and Tube Railing Systems:
1. Steel Pipe, Galvanized Finish: ASTM A 53.
  2. Steel Pipe, Black Finish: ASTM A 53.
  3. Steel Tubing: ASTM A 500 or A 501.
  4. Steel Plates, Shapes and Bars: ASTM A 36.
  5. Gray Iron Castings: ASTM A 48, Class 30.
  6. Malleable Iron Castings: ASTM A 47, Grade 32510.
  7. Interior Finish: Primed.
  8. Exterior Finish: Galvanized and shop primed.
- B. Auxiliary Materials:
1. Nonshrink Nonmetallic Grout: CE CRD-C621.
  2. Interior Anchoring Cement: Hydraulic expansion cement.
  3. Exterior/Interior Anchoring Cement: Erosion-resistant hydraulic expansion cement.
  4. Shop Primer: Fast-curing, lead- and chromate-free, universal modified-alkyd primer complying with MPI#79, compatible with topcoats. Apply within 12 hours of hot dip galvanizing.
  5. Zinc-Rich Primer: Complying with SSPC-Paint 20 or SSPC-Paint 29 and compatible with topcoat.
  6. Galvanizing Repair Paint: SSPC - Paint 20.
  7. Bituminous Paint: Asphalt mastic, SSPC - Paint 12.

### 2.2 HOT DIP GALVANIZING & PRIME COATS FOR HOT DIP WORK

- A. Refer to sections 05 08 50 and 05 08 60.

### 2.3 EXISTING PRODUCTS

- A. Re-use existing sound products that are clearly of sufficient strength.

### 2.4 STAIR RAILINGS, GUARDRAILS AND HANDRAIL FABRICATION

- A. Comply with the following:
1. Provide steel pipe railings as shown, consisting of handrails at open side (including intermediate rails or infill) and handrails at walls. Fabricate standard size pipe and bar stock as shown.
  2. Use welding for joining pieces together, unless otherwise shown or specified. Fabricate units so that bolts and other fastenings do not appear on finish surfaces. Make joints true and tight, and make connections between parts light- proof tight. Provide continuous welds, ground smooth where exposed.
  3. Construct handrail units to conform to sizes, geometries and arrangements as shown by the Contract Documents and approved shop drawings. Construct entire assembly to support live loads as required by governing codes unless higher loading is specified or shown. Provide metal framing, hangers, brackets, and other components
  4. Provide stair and/or hand railings as shown, consisting of handrails at open side (including intermediate rails or infill) and handrails at walls. Fabricate standard size pipe and bar stock as shown.
  5. Adjust railings prior to securing in place to insure proper matching at butting joints and correct alignment throughout their length. Plumb posts in each direction. Secure posts and rail ends to building construction by coring, or through- bolting of flange as indicated. Railings against walls shall have brackets mounted with toggle bolts at unit masonry walls, secured into blocking at gypsum board walls. At hollow masonry walls use specified epoxy anchoring system. At solid masonry use 1/2" or heavier expansion bolts. Provide solid, continuously welded and/or embedded plates where required or shown.
  6. Exterior Finish: Galvanized and shop primed for field painting by others.
  7. Interior Finish: Shop primed for field finish painting by others.

8. Handrails and supports shall be provided in special sizes and shapes where required to complete this installation.
9. Expansion Joints: At straight runs of pipe railing and handrails, provide expansion joints at locations indicated, or if not indicated, at intervals not to exceed 40 feet. Provide slip joint with internal sleeve extending 2" beyond joint on either side; fasten internal sleeve securely to one side; locate joint within 6" of posts.

## 2.5 REMOVABLE HANDRAIL HARDWARE

- A. Provide removable assemblies which, when in fixed position, are rigid, free of rattles or movement and comply with required handrail loads. Provide products to match assemblies shown on drawings; where not indicated provide components equal to:
  1. Safety Rail Company; [www.safetyrailcompany.com/](http://www.safetyrailcompany.com/), to match assemblies required including:
    - a. "Flush mount Guardrail System – Removable."
    - b. "Floor mount Guardrail System – Removable."
    - c. "Face mount Guardrail System – Removable."

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Comply with the provisions of Section 01 70 00 - including requirements related to:
  1. Inspection and examination. Tolerances and measurement.
  2. Approvals, inspections and filed quality control.
  3. Layout. Adjusting.
  4. Cleaning. Protection.

### 3.2 PREPARATION

- A. Take field measurements prior to fabrication, where possible. Form to required shapes and sizes with true, straight edges, lines and angles. Provide light-tight, hairline joints.
- B. Ensure exterior work has been hot dipped galvanized and prime painted.

### 3.3 REPAIRING & RE-WORKING EXISTING CONSTRUCTION

- A. Install materials and systems in accordance with approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
  1. Remove, cut, replace or re-work existing materials.
  2. Join new and existing work seamlessly. Weld assemblies together and grind work smooth so that new joint between new and existing work is apparent. Remove all traces of welding, grinding and cutting and leave work ready for painting.
  3. Where work has been ground to bare metal apply zinc rich primers within 1 hour of exposing raw metal, ensuring that no rust has developed before coating surfaces.

### 3.4 INSTALLATION

- A. Install materials and systems in accordance with approved submittals. Install materials and systems in proper relation with adjacent construction. Coordinate with work of other sections.
- B. Railings: Provide sizes, profiles and dimensions indicated. Provide mitered joints at 90 degree turns and smooth sweeps at bends. Provide wall returns, end caps, brackets, fittings, and toe boards.
- C. Coordinate with work of other sections; provide inserts and templates as needed. Install work plumb and level with uniform appearance.
- D. Restore damaged finishes and protect work.

BPHC INTERIOR RENOVATION | 112 Southampton St. | Boston, MA  
Leonardi Aray Architects LLC | Project No. 2113  
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**END OF SECTION**

## **SECTION 06 08 00 - WOOD PRESERVATIVE & FIRE RETARDANT TREATMENTS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation:
  - 1. Preservative wood treatments.
  - 2. Fire retardant wood treatments.
- C. Related sections, without limitation, include:
  - 1. Section 06 10 50 - Wood blocking.
  - 2. Section 06 45 00 - Interior Wood Trim.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of process and factory-fabricated product. Indicate component materials and dimensions and include construction and application details.
  - 1. Include data for wood-preservative treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Indicate type of preservative used and net amount of preservative retained.
  - 2. Include data for fire-retardant treatment from chemical treatment manufacturer and certification by treating plant that treated materials comply with requirements. Include physical properties of treated materials based on testing by a qualified independent testing agency.
  - 3. For fire-retardant treatments, include physical properties of treated lumber both before and after exposure to elevated temperatures, based on testing by a qualified independent testing agency according to ASTM D 5664.
  - 4. For products receiving a waterborne treatment, include statement that moisture content of treated materials was reduced to levels specified before shipment to Project site.
  - 5. Include copies of warranties from chemical treatment manufacturers for each type of treatment.

#### 1.3 INFORMATIONAL SUBMITTALS

- A. Evaluation Reports: For the following, from ICC-ES:
  - 1. Wood-preservative-treated wood.
  - 2. Fire-retardant-treated wood.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber flat with spacers beneath and between each bundle to provide air circulation. Protect lumber from weather by covering with waterproof sheeting, securely anchored. Provide for air circulation around stacks and under coverings.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Subject to compliance with specifications, provide Fire retardant treatment products equal or superior to
  - 1. Arch Chemicals Inc. "Dricon"
  - 2. Hoover "Pyro-guard 3<sup>rd</sup> Generation Fire Retardent Treatment" - for dry interiors
  - 3. Hoover "ExteriorFireX" for plywood only for damp interior and exterior applications.
  - 4. Products shall be certified paintable or stainable.

#### 2.2 PRESERVATIVE & FIRE RETARDANT TREATMENTS

- A. Pressure Applied Preservative Treatment [PT]:



1. Material: ACQ – Alkaline Copper Quat, AWPA Standards P26, 27, 28, & 29.
2. Treatment Standard: AWPA C2 for lumber and C22 for panels.
3. Retention level: 0.25 lbs. per cubic foot; or
4. Moisture content: Kiln dried to 19% before delivery to job site.
5. Treated products shall conform to American Wood Preservers Bureau Standard LP-2 and be so stamped on each piece delivered.
6. Coordinate preservative treatment with roofing materials to ensure compatibility.
7. Fasteners used with PT: Hot dipped galvanized or stainless steel.
8. Use of electroplated fasteners: Not permitted.
9. Usage: Where shown and all plywood and lumber, exterior and interior, having direct contact with concrete or masonry and all blocking, nailing strips, curbs, wood battens and other wood embedded in or in contact with roofing.
10. Coatings: Coat concealed blocking to intended to abut sheet metal other than stainless steel with application of bituminous paint.

B. Fire Retardant Treatment [FRT]:

1. Standard: AWPA P17, formulations FR-1.
2. UL listed treatment adequate to achieve Class I rating with flame spread equal to 0-25 when tested in accordance with ASTM E84 and show no evidence of significant progressive combustion when test is continued for an additional 20 minutes. Provide treatments compatible with locations - interior or exterior.
3. Provide fire retardant treated wood products as shown or required by code.
4. I-2 Occupancies: Fire retardant treat all wood products.

C. Fire Retardant Plywood:

1. Class A material conforming to ASTM E-84, NFPA 255, UL 723.
2. Provide certification by manufacturer of conformity to standards.
3. Provide fasteners meeting manufacturers approval and requirements.
4. Acceptable manufacturer: Arch Chemicals Inc., "Dricon FRT"

D. Water-Repellent Preservative: NWWDA tested and accepted formulation containing 3-iodo-2-propynyl butyl carbamate, combined with an insecticide containing chloropyrifos as its active ingredient.

## 2.3 APPLICATIONS

A. Pressure preservative treatments; provide as shown and including:

1. Treat above-ground wood exposed to deterioration by moisture
2. Wood in contact with the ground or fresh water.
3. Wood in contact with concrete or masonry.

B. Fire retardant treatments; provide as shown and including:

1. Where shown.
2. Where required by code.

C. High temperature fire retardant treatments; provide as shown and including:

1. Where shown.
2. Where required by code.
3. Enclosed roof framing.
4. Framing in attic spaces.

## 2.4 FIRE-RETARDANT-TREATED MATERIAL GENERAL REQUIREMENTS

A. Comply with the following:

1. Use treatment that does not promote corrosion of metal fasteners.
2. Exterior Type: Comply with requirements specified for fire-retardant-treated lumber and plywood by pressure process after being subjected to accelerated weathering according to ASTM D 2898. Use for exterior locations and where indicated.
3. Interior Type A: Treated materials shall have a moisture content of 28 percent or less when tested according to ASTM D 3201 at 92 percent relative humidity. Use where exterior type is not indicated.

4. For enclosed roof framing, framing in attic spaces, and where high temperature fire-retardant treatment is indicated, provide material with adjustment factors of not less than 0.85 modulus of elasticity and 0.75 for extreme fiber in bending for Project's climatological zone.]
5. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
6. Identify fire-retardant-treated wood with appropriate classification marking of qualified testing agency.
7. For exposed lumber indicated to receive a stained or natural finish, mark end or back of each piece or omit marking and provide certificates of treatment compliance issued by testing agency].
8. For exposed items indicated to receive a stained or natural finish, use chemical formulations that do not bleed through, contain colorants, or otherwise adversely affect finishes.

### **PART 3 - EXECUTION**

#### **3.1 GENERAL**

- A. Comply with the provisions of Section 01 70 00 - especially requirements related to:
  1. Inspection and examination.
  2. Tolerances and measurement.
  3. Approvals, inspections and filed quality control.
  4. Protection.
- B. Apply two coats of same preservative used in original treatment to all sawed or cut surfaces of treated lumber, in accordance with AWPA M4.

#### **3.2 PROTECTION**

- A. Protect wood that has been treated with inorganic boron (SBX) from weather. If, despite protection, inorganic boron-treated wood becomes wet, apply EPA-registered borate treatment. Apply borate solution by spraying to comply with EPA-registered label.

### **END OF SECTION**

## **SECTION 06 10 50.1 - WOOD BLOCKING & FURRING**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. All of Contract Documents, including Drawings, the General and Supplementary Conditions and Division 1 General Requirements apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Dimension lumber wood blocking.
  - 2. Wood nailers, sleepers and cants.
  - 3. Furring.
  - 4. Strapping
  - 5. Priming, back-painting, and treating of field cuts.
  - 6. Rough hardware.
  - 7. Backerboards for electrical and telephone equipment.
- C. Scope/extent includes, without limitation:
  - 1. MEP, telephone, cable, and low voltage backer panels.
  - 2. Wood fire stopping not provided by wood framing.
  - 3. Wood curbs/timbers for roof-top components
- D. Related Work includes, without limitation:
  - 1. Section 06 08 00 - Wood preservative & fire retardant treatments.

#### 1.2 SUBMITTALS

- A. Product Data: Submit treatment manufacturers' and suppliers information on at least the following items and giving species, grades, actual sizes and moisture contents, finishes, and treatments as applicable
  - 1. List of project wood and blocking products provided under this section.
  - 2. List of fasteners and rough hardware by type, size, finish and typical applications for same

#### 1.3 QUALITY STANDARDS

- A. Comply with the following:
  - 1. Lumber Standards and Grade Stamps: PS 2/16, American Softwood Lumber Standard and inspection agency grade stamps.
  - 2. Construction Panel Standards: PS 1, U.S. Product Standard for Construction and Industrial Plywood; APA PRP-108.
  - 3. Fasteners and Nailing: Comply with Appendix C requirements of Massachusetts State Building Code, and as specified.
  - 4. APA Design/Construction Guidelines.
- B. Provide the following:
  - 1. Official grade mark on lumber.
  - 2. Mark of treating company certifying type of treatment applied on fire retardant treated and pressure preservative treated lumber and plywood.
  - 3. American Plywood Association trade mark indicating type, grade and class of plywood panel.

#### 1.4 PRODUCT DELIVERY AND STORAGE

- A. Keep materials dry at all times. Protect against exposure to weather and contact with damp or wet surfaces. Stack lumber and plywood, and provide air circulation within stacks.

### **PART 2 - PRODUCTS**

#### 2.1 LUMBER & PLYWOOD

- A. Moisture content: 15% max. for 2" or less nominal thickness, except as noted .
- B. Surfacing: Use S4S material (surfaced four sides) free of warp, waness and defects, unless specified otherwise.

- C. Blocking species: No. 2 or better Douglas or Hem-Fir, or #2 Spruce Pine Fir, or, where plywood is indicated, use CDX waterproof glue APA exterior plywood.
- D. 12 gage electrogalvanized sheet metal may be substituted for blocking at metal stud walls if sufficient strength is developed to support actual and code-mandated loads. Refer to other sections for requirements.
- E. Blocking layout and size: Continuous and solid, fire retardant 3/4 inch plywood or fire retardant 2x4 or larger where additional support is required.
- F. Provide blocking in addition to any indications on the drawings as follows:
  - 1. Millwork attached to walls or ceilings.
  - 2. Equipment attached to walls or ceilings.
  - 3. At shelving and drapery track.
  - 4. Mid points of wood stud walls.
  - 5. Between wood joists at all points requiring support.
- G. Wood fire stopping: Equal or better than blocking material. Do not use sheet metal for firestopping.
- H. Provide firestopping as follows:
  - 1. At ceiling lines and at 8'-0" height if ceiling is higher.
  - 2. To close of all framing spaces connecting floors.
  - 3. As required by code.
- I. Provide fire retardant treated lumber where indicated, meeting the requirements for such plywood as given below. Provide fire retardant treated wood products as shown or required by code .
- J. Furring: Solid wood sized to match the condition.
- K. Strapping shall be 1" x 3.00" nom. solid wood stock, not less than 0.75 inch thick.
- L. Bridging shall be 1" x 3" or approved galvanized steel cross bridging at intervals not to exceed 8'-0". Do not nail bottoms of bridging until subflooring is installed.

## 2.2 PLYWOOD

- A. General: Provide only APA grade stamped softwood plywood meeting requirements of U.S. Dept. of Commerce PS-1 in thickness shown and in grades and strengths recommended by APA for specific locations and uses. Where indicated, provide preservative or fire retardant treatment.
- B. Exposure: Exposure 1 or better.
- C. Plywood backer panels:
  - 1. Material: APA C-D Plugged Exposure 1 with exterior glue
  - 2. Pressure treatment: Fire retardant.
  - 3. Coatings: Fire retardant paint, 6 sides, applied before installation.
  - 4. Coating color: As shown or directed, if not, black.
  - 5. Thickness: As indicated, if not, 0.75 inches.

## 2.3 ROUGH HARDWARE

- A. Furnish and install all bolts, nuts, expansion shields, lag screws, toggle bolts, wood screws, nails, flat cap metal nailing discs, staples, power driven anchors and other rough hardware as required.
- B. Rough hardware items shall be of appropriate type and proper capacity and size as required for each specific application.

- C. Concrete and masonry anchors: Where anchors are not included in concrete or masonry construction, anchors shall be galvanized machine screws or bolts with standard expansion-shield type concrete anchors, Phillips "Red Head" Masonry Anchors as manufactured by Weg-It Expansion Products, Inc., or approved equal, of sizes and types noted on Drawings or as required. Do not use expansion bolts or anchors where other type anchors are shown or noted on Drawings.
- D. Power-driven fasteners: "Drive-It" system of Powder Power Tool Corporation, "Ramset" system of Ramset Fasteners, Inc., or equivalent system of Remington-DuPont may be used where approved by construction manager and Architect. Use washers with all inserts.
- E. Fasteners used at treated wood:
  - 1. Fasteners meeting manufacturers approval and requirements.
  - 2. Where manufacturer specific recommendations are not available: Use stainless steel.

## 2.4 FIRE & PRESERVATIVE TREATMENT OF LUMBER & PLYWOOD

- A. Wood treatment: Comply with requirements of Section 06 08 00.
- B. Extent for wood to be preservative treated: As shown and as follows:
  - 1. Treat above-ground wood exposed to deterioration by moisture
  - 2. Wood in contact with the ground or fresh water.
  - 3. Wood in contact with concrete or masonry
- C. Extent for wood to be fire retardant treated: As shown and as follows.
  - 1. Exposed or semi-exposed wood in fire rated assemblies and in spaces having limited flame spreads for exposed combustibles.
  - 2. Blocking concealed in fire rated assemblies
  - 3. Where required by code.

## PART 3 - EXECUTION

### 3.1 GENERAL

- A. Comply with the provisions of Section 01 70 00 - especially requirements related to:
  - 1. Inspection and examination.
  - 2. Tolerances and measurement.
  - 3. Approvals, inspections and filed quality control.

### 3.2 MISCELLANEOUS CARPENTRY INSTALLATION - GENERAL REQUIREMENTS

- A. Construct work plumb, level, and true, with tight, close fitting joints, securely attached and braced to surrounding construction all in a first-class workmanlike manner. Counter-bore for bolt heads, nuts, and washers where required to avoid interference with other materials.
- B. Unless otherwise indicated, wood nailers, furring, strapping, etc., less than 2 in. nominal thickness shall be secured to back-up material by use of appropriate fasteners located 4 in. from ends and spaced not greater than 16 in. o.c. along lengths of members. Type and length of fastening devices shall develop sufficient anchorage to back-up material.
- C. Where nailing or power-driving into concrete or masonry, avoid puncturing conduits, pipes, ducts, etc. embedded in such work.
- D. Where anchorage to steel structural members is indicated, steel members will be prepared to receive anchor bolts, etc., as indicated, by structural steel trade.
- E. Apply two coats of same preservative used in original treatment to all sawed or cut surfaces of treated lumber, in accordance with AWP4 M4.
- F. Power-driven fasteners used on concrete surfaces or at rough window and door openings shall be used in accordance with manufacturer's recommendations, especially in regard to edge distance, curbs or at rough window and door openings.

- G. Do not space fasteners more than recommended or approved distances apart spacing and comply with applicable building codes, APA guide lines and best practices of the trade.

### 3.3 INSTALLATION OF BLOCKING AND NAILERS

- A. Blocking: Locate blocking to facilitate installations of finish materials, fixtures and specialty items.
- B. Attach Blocking as follows:
  1. In metal stud partitions: Screw attach through stud flanges.
  2. At masonry: With oval head toggle bolts and washers or with epoxy tube and sleeve systems.
  3. At concrete: With expansion shield bolts.
  4. At steel: With flat head bolts/nuts or approved power actuated fasteners.
- C. Blocking shall be approved material capable of supporting items such as grab bars with a load of 250 lbs. for 5 minutes or more if so required by code. Provide fire retardant treated materials where indicated.
- D. Blocking members shall be of the sizes indicated on the drawings not less than 3/4" plywood or lumber 3-1/2" wide unless otherwise noted on the drawings. Blocking members shall be secured with minimum of 5/16" galvanized steel bolts of sufficient length to provide a minimum of 3" of embedment in concrete or as required when bolting into steel members and as shown.
- E. Bolts shall be located not over 2'-0" on centers and within 4" of end joints. End joints and intermediate joints shall be in alignment. Intermediate joints shall be spliced. Counterbore wood so that washer and nut, and end of bolt are recessed below the top surface of curbs and blocking. In no case shall there be less than two bolts per length in any member.
- F. Nailers for wood trim and finish shall be provided and secured to the masonry, concrete, wood framing or other receiving surfaces as the work progresses. Nailers shall be not less than 1" nominal thickness and of such other dimensions and profiles as are required or shown.

### 3.4 INSTALLATION OF FURRING AND STRAPPING

- A. Furring and strapping at masonry walls to receive drywall shall be 16" o.c. unless otherwise shown. All furring and strapping shall be double nailed, secured to masonry or concrete with masonry nails.
- B. All furring and strapping shall be shimmed and blocked to assure plumb and level furred wall surfaces.

### 3.5 INSTALLATION OF BACKER / UTILITY PANEL MOUNTS

- A. Provide and install fire retardant plywood backings for surface mounted electric panel boards, meter mounts, protection cabinets, motor control panels and the like. Boards shall be rigidly built and securely fastened to wood-furred strapping at walls in approved manner. See Electrical Drawings for locations of devices which require mounting on backerboards. Provide plywood backings for Telephone and Protection (Security) panels.

### 3.6 CLEAN UP & PROTECTION

- A. Clean up work areas daily, remove packaging, debris, sawdust and scraps, and dispose of properly.
- B. Repair or replace work of other trades damaged or soiled as a result of work of this Section.
- C. Protect substrates, underlayments, finishes and other work subject to damage until installation of work by the next trade.

**END OF SECTION**

## **SECTION 06 40 21 - INTERIOR CUSTOM CASEWORK & ARCHITECTURAL MILLWORK**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Custom millwork assemblies not provided under other sections.

#### 1.2 SUBMITTALS

- A. Comply with provisions of Division 1 and submit:
- B. Shop Drawings: Submit shop drawings on all items of finish carpentry and architectural woodwork. Show all significant details of materials, construction, and installation.
- C. Office Samples: Submit samples of all woodwork and millwork materials and sample portions of fabricated items to Architect for approval. Samples shall be approximately 12 inches square, and shall include each wood species which is to receive transparent finish at job site, and each finish to be applied at factory. Sample finish applied on one side and one edge.
- D. Product Data: Submit manufacturer's specifications and installation instructions for each item of factory- fabricated woodwork.
- E. Fire-Retardant Materials: Include manufacturer's instructions for handling, storing and installation of fire-retardant treated material.
- F. Quality Certification: Submit manufacturer's (Fabricator's) certification, stating that the fabricated work complies with quality grades and other requirements indicated.
- G. Certification: Include certification that fire-retardant treated materials comply with requirements indicated.

#### 1.3 QUALITY ASSURANCE

- A. All material provided shall be graded in accordance with the following standards:
  - 1. Softwood lumber: U.S. Dept. of Commerce PS20.
  - 2. Softwood plywood: U.S. Dept. of Commerce PS1.
  - 3. Hardwood lumber: Comply with National Hardwood Lumber Association (NHLA) rules.
  - 4. Hardwood plywood: Comply with PS-51, and ANSI/HPVA HP-1-2004 American National Standard for Hardwood and Decorative Plywood
  - 5. Forest Stewardship Council: FSC 1.2 - Principles and Criteria.
- B. All lumber provided shall bear an official grade mark specifying the species or species grouping, grade, grading agency, mill number or name and condition of seasoning at time of manufacture. However, omit grade marks from surfaces which will be exposed and which will receive a transparent or opaque finish.
- C. Softwood plywood panels shall bear the appropriate American Plywood Association grade mark indicating type, grade and class of the panel.
- D. Finish Carpentry Standards:
  - 1. The "Quality Standards" of the Architectural Woodwork Institute shall apply and by reference are hereby made a part of this specification. Any reference to Premium or Custom in this specification shall be as defined in the latest edition of the AWI "Quality Standards."
  - 2. AWI Quality Marking: Mark each assembled unit of architectural woodwork with manufacturer's identification and grade mark evidencing compliance with indicated AWI quality grade. Locate grade mark on surfaces

which will not be exposed after installation. For other items requiring field assembly, a certification of compliance may be substituted for marking of individual pieces.

- E. Field Dimensions:
  - 1. Verify actual dimensions of areas to receive shop fabricated woodwork by taking field dimensions.
  - 2. Show field dimensions on final shop drawings.
  - 3. Build shop fabricated work to fit field conditions.

- F. Fire-Retardant Marking and Treatments: Comply with wood treatment section.

#### 1.4 PRODUCT DELIVERY AND STORAGE

- A. Protect finish carpentry materials during transit, delivery, storage and handling to prevent damage, soiling and deterioration.
- B. Do not deliver finish carpentry materials, until painting, wet work, grinding and similar operations which could damage, soil or deteriorate woodwork have been completed in installation areas. If, due to unforeseen circumstances, finish carpentry materials must be stored in other than installation areas, store only in areas meeting requirements specified for installation areas.
- C. Store all materials off the floor, fully protected from damage of all types.

#### 1.5 JOB CONDITIONS

- A. Conditioning: Installer shall advise persons or companies having responsibility for temporary facilities of temperature and humidity requirements in areas to receive finish carpentry. Do not install finish carpentry until required temperature and relative humidity have been stabilized and will be maintained in installation areas.
- B. Maintain temperature and humidity in installation area as required to maintain moisture content of installed finish carpentry within acceptable industry standard tolerance of optimum moisture content, from date of installation through remainder of construction period. The fabricator of woodwork shall determine optimum moisture content and required temperature and humidity condition.

### **PART 2 - PRODUCTS**

#### 2.1 FIRE RETARDANT TREATMENTS

- A. Where required by code, provide fire retardant treated materials meeting Class A conforming to ASTM E84.

#### 2.2 MATERIALS – GENERAL

- A. Provide materials complying with the following:
  - 1. Solid lumber: AWI Section 100, and per specified grades, if not indicated, Premium.
  - 2. Hardboard: AHA A135.4.
  - 3. Medium-Density Fiberboard: ANSI A208.2, Grade 130, made with binder containing no urea formaldehyde.
  - 4. Particleboard: [ANSI A208.1, Grade M-2] [Straw-based particleboard complying with requirements of ANSI A208.1, Grade M-2, except for density].
  - 5. Softwood Plywood: DOC PS 1.
  - 6. Hardwood Plywood and Face Veneers: HPVA HP-1, made with adhesive containing no urea formaldehyde].
  - 7. Thermoset Decorative Panels: Comply with LMA SAT - 1.

#### 2.3 TRANSPARENT FINISH LUMBER & VENEER PANELS

- A. Quality Standard: AWI Premium grade materials and workmanship.
- B. For hardwood veneer panels, provide:
  - 1. Core: Lumber core or MDF core.
  - 2. Plywood panel Construction: 5 ply



3. Face veneer Species: As shown. r.
4. Face veneer cut: Quarter sawn or Rift sawn for open cell wood types. [
5. Face veneer Grade AWI Premium Grade
6. Matching: subject to Architect's review prior to laminating panels.

C. Solid Lumber: At corners, edges and elsewhere as detailed provide solid lumber to match adjacent veneer. Tape is acceptable at reveals when shown on drawings.

## 2.4 MISCELLANEOUS MATERIALS

- A. Furring: Fire-retardant treated wood strapping to support wood paneling where required by code or shown.
- B. Firestopping & retardant treatments: Firestop between furring with USG "Thermafiber" mineral fiber fire safing insulation. Provide fire retardant treatments where required by code, authorities having jurisdiction and to prevent concealed spaces in excess of 96 inches horizontally or vertically allowing spread of concealed flame or fire.

## 2.5 MDF CORE MATERIALS

- A. Medium-density fiberboard: Substrates required to be medium density fiberboard shall comply with ANSI a208.2, grade MD-exterior glue and contain no added formaldehyde and not exceed required formaldehyde out-gassing limits.

## 2.6 PLASTIC LAMINATE MATERIALS

- A. Plastic Laminates: Provide high pressure plastic laminates meeting NEMA LD-3, as manufactured by Formica Corporation, by Wilsonart, by Nevamar or equal. Provide plastic laminate in general purpose grade or forming grade for special shapes. Solid color to be selected by Architect from manufacturer's standard range of color.

- B. Laminates grades: General Purpose H-5 [.050"] for horizontal surfaces; VF-3 [.030"] for vertical surfaces; HF-4 [.042"] for post-forming surfaces; and .020" for backing surfaces.

1. Metal faced laminates: Provide where shown, using grade, and weight recommended by manufacturer.

- a. Acceptable manufacturer: As scheduled, if not, Chemetal Co. of Eastonhampton MA

[www.chemetalco.com](http://www.chemetalco.com) .

- b. Finish: As indicated, if not, Chemetal HPL 710 Brushed stainless steel.

- C. Adhesives: as recommended by laminate manufacturer. Use waterproof type at utility, food preparation, sink area, vanity and where ever laminate may come in contact with water vapor or liquid.

- D. All exposed surfaces shall be covered with "face" laminate.

## 2.7 MISCELLANEOUS HARDWARE

- A. Closet Pole: 1-1/16 inch O.D., 0.120 inch thick wall, plated brass tubing equal to Knappe & Vogt Mfg. Co. #770. Finish: US26 Bright Chrome.

## 2.8 ROUGH HARDWARE AND NAILS

- A. Provide all rough hardware required to complete the work using concealed fastenings wherever possible. In general, concealed fastenings shall be bright steel, except that at exterior areas they shall be galvanized steel, non-ferrous, or stainless steel. All exposed fastenings in all locations shall be non-ferrous or stainless steel as selected or approved in each case by the Architect.

## 2.9 SHELVING & SHELVING HARDWARE

- A. Office and utility closet shelving: As shown on drawings; where not shown, provide plastic laminate faced shelves with laminate on 6 sides.

- B. Unless otherwise indicated, multiple shelving shall be supported with wall mounted, decorative, heavy duty double-track standards and brackets fabricated by Knape & Vogt as follows:
  - 1. Standards: Series 82, pre-finished in Architect standard selected color, if not selected, white.
  - 2. Brackets: Series 182 and where required by the load, Series 186/187.
- C. Remove adhesive applied manufacturer's advertising labels. Let standards into cabinet sides. Where available, provide screw cover stickers.

## 2.10 BACKPRIMING & SEALING MATERIALS

- A. Work that is shop fabricated and not accessible for field priming or sealing shall be primed and/or sealed under this section.

## 2.11 PLASTIC LAMINATE COVERED CASEWORK

- A. Comply with the following:
  - 1. Grade: Provide casework conforming to AWI "Premium Grade" requirements, Section 400.
  - 2. Construction: Provide casework conforming to AWI "Full Flush Overlay" details as shown in AWI publication Architectural Casework Details. Cases shall be frameless type.
  - 3. Plastic Laminates: As specified.
  - 4. Finish all exposed, semi-exposed and interior surfaces with laminate. Provide backing sheets on opposite faces.
  - 5. Provide loose splashes with six sides covered with laminate.
  - 6. Drawer construction:
    - a. Multiple hardwood dovetail construction with applied drawer front.
    - b. Bottom: hardwood plywood.
  - 7. Casework joinery: Fabricate countertops and casework to have fewest possible seams. Locate seams where shown on shop drawings and approved by Architect. Do not use exposed fasteners or connectors. Use concealed bolts to hold seams and joints hairline, lightproof tight.
  - 8. Exposed surfaces: Covered with "face" laminate.
  - 9. Dust panels: Provide plywood dust panels in work.
  - 10. Blocking and Brackets: Loading capacity shall be as follows:
    - a. Shelves: 50 lbs. per linear foot.
    - b. Countertops: 50 lbs. per linear foot plus a 250 lb. concentrated load at center span.

## 2.12 CABINETS AND CASEWORK FOR TRANSPARENT FINISH

- A. Cabinets:
  - 1. AWI 400A quality grade: Premium AWI grade selection includes quality of workmanship and materials.
  - 2. Construction. Details shall conform to flush overlay design.
  - 3. Frame: Frameless, European style box construction.
  - 4. Exposed parts wood species: Carry the more expensive of one of the following in rift sawn:
    - a. Cherry
    - b. Ash
    - c. Oak
    - d. Mahogany
  - 5. Semi-exposed parts: As governed by selected AWI quality grade.
  - 6. Grain directions: As selected by Architect, including:
    - a. Vertically for drawer fronts, doors, and fixed panels
    - b. Horizontally for drawer fronts, doors, and fixed panels
    - c. As indicated.
  - 7. Matching of veneer leaves: As selected by Architect, including:
    - a. Book.
    - b. Slip.
    - c. Random.
  - 8. Veneer Matching within Panel Face: Match as selected including:

- a. Running.
  - b. Balance.
  - c. Center-balance.
- B. Casework:
1. Match cabinet quality standards, wood species, cuts and grades.
  2. Support shelving off let-in solid brass tab supports securely mounted to end wall panel holes spaced 2 inches on center.

## 2.13 SHOP FINISHES

- A. Finishing Schedule
1. Transparent finishes - Intent: To match Architect's office sample, and including the following:
  2. Grade: Premium.
  3. Finish: System 5, a conversion varnish.
  4. Wash coat for closed grain woods: Apply wash coat sealer before staining and finishing.
  5. Stain: Match Architect's sample.
  6. Open grain woods: Architect will select among the following:
  7. Open finish without filler.
  8. Filled finish: After staining, apply wash coat and allow to dry; apply paste wood filler and wipe off excess, tinted to match stained wood.
  9. Sheen: Satin, 31-45 gloss units measured on 60 degree gloss meter per ASTM D523.
- B. Opaque finishes - Intent: To match Architect's office sample, and including the following:
1. Grade: AWS Premium.
  2. Finish: System 7, a catalyzed vinyl.
  3. Color: As selected by Architect from a complete range of colors including a custom mixed color.
  4. Sheen: Satin, 31-45 gloss units measured on 60 degree gloss meter per ASTM D523.
  5. Provide shop finishes for all work of this section complying with the requirements for opaque and transparent finishes specified in section 09 90 00. Work for opaque finishes is to primed. Work for transparent finishes is to be sealed only when no practical alternative to complete shop finishing is available; all other work for transparent finish is to fully finished in the shop. Touch up defects in final shop finishes under the work of this section.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Examine the surfaces to receive the work of this Section before proceeding with installation. Do not proceed with installation until all unsatisfactory conditions which would impair the work have been corrected. Notify the construction manager in writing of the conditions which would impair the proper and timely completion of the work. Starting work constitutes acceptance of conditions.

### 3.2 PREPARATION

- A. Condition work to average prevailing humidity conditions in installation areas prior to installing.
- B. Deliver concrete inserts and similar anchoring devices to be built into substrates, well in advance of time substrates are to be built.
- C. Prior to installation, examine shop fabricated work for completion, and complete work as required, including back priming and removal of packing.

### 3.3 FABRICATION

- A. Finished woodwork shall be dressed and sanded until free from machine and tool marks, abrasions, raised grain, or other defects on surfaces exposed to view. Construction and workmanship shall conform to, or exceed, the requirements of "Premium Grade" as defined in the latest edition of the AWI "Quality Standards."
- B. Joints shall be tight and so formed as to conceal shrinkage. Mortise and tenon joints shall be set in glue under pressure. Shop miters four inches or greater shall be glued and doweled or locked with metal splice. Miters less than four inches shall be glued and splined with the spline concealed.
- C. All exposed sides and ends of plywood shall be edged with solid strip of matching hardwood, at least 1/2 inch thick, and the full width of the plywood edge. Miter edge strips at corner.
- D. All nails in finished work shall be blind nailed wherever possible and surface nails shall be set and filled with matching plastic wood.
- E. Woodwork shall be properly framed, closely fitted and accurately set to the required lines and levels and shall be rigidly secured in place.
- F. All finish work shall be sandpapered at field joints and where required by installation and shall be left in perfect condition for finishing.

### 3.4 PRIMING & SEALING

- A. Do not install materials on the exterior until coated on six sides. Priming shall be provided in accordance with the requirements of Section 09900. Seal backs and concealed portions of shop coated work.

### 3.5 INSTALLATION -- GENERAL

- A. Install work plumb, level, true and straight with no distortions. Shim as required using concealed shims.
- B. Install fabricated work to AWI 1700, meeting the requirements for the specified grade.
- C. Scribe and cut work to fit adjoining work, and refinish cut surfaces or repair damaged finish at cuts.
- D. Secure work to anchors or blocking built-in or directly attached to substrates. Secure to grounds, strapping and blocking with countersunk, concealed fasteners and blind nailing as required for a complete installation. Except where prefinished matching fasteners heads are required, use fine finishing nails for exposed nailing, countersunk and filled flush with woodwork, and matching final finish where transparent finish is indicated.
- E. Shelving: Complete assembly of units and install in areas indicated, including hardware and accessories as indicated.

### 3.6 ADJUSTMENT, CLEANING, FINISHING AND PROTECTION

- A. Repair damaged and defective work wherever possible to eliminate defects functionally and visually; where not possible to repair properly, replace cabinets.
- B. Clean hardware, lubricate and make final adjustments for proper operation.
- C. Clean exposed and semi-exposed surfaces. Touch- up shop-applied finishes to restore damaged or soiled areas.
- D. Repair or replace work other trades damaged or soiled by the work of this Section.
- E. Complete finishing work specified as work of this section, to whatever extent not completed at shop or prior to installation. Refer to Section 09900 for finish systems to be used.

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- F. Protect work during remainder of construction period to ensure that work will be without damage or deterioration at time of acceptance.
- G. Keep work areas clean by daily sweeping and disposal of scrap ,sawdust and debris.

**END OF SECTION**

## **SECTION 07 92 00 - JOINT SEALANTS**

### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation providing:
  - 1. Joint sealers.
  - 2. Joint fillers.
  - 3. Confirmation of adhesion.
- C. Extent:
  - 1. Where shown.
  - 2. Exterior surfaces of basement foundation walls exposed during construction and to be backfilled.
  - 3. Exterior steel embedded in concrete.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
  - 1. Include manufacturer's full range of color and finish options if additional selection is required.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Field-Constructed Mock-Ups: Each joint type.

### **PART 2 PRODUCTS**

#### 2.1 MATERIALS

- A. Exterior Joints in Vertical Surfaces, Silicone:
  - 1. Manufacturers: Dow Corning; GE Silicones; Tremco; or approved equal.
  - 2. Materials: Two component silicone sealant.
- B. Exterior Joints in Vertical Surfaces, Urethane:
  - 1. Manufacturers: Pecora Corp.; Sika Corp.; Sonneborn; Tremco; or approved equal.
  - 2. Materials: Two-component urethane sealant.
- C. Exterior Joints in Vertical Surfaces, Preformed Compression Seals:
  - 1. Manufacturers: Watson-Bowman Acme Corp.; or approved equal.
  - 2. Materials: Preformed precompressed foam sealant.
- D. Exterior Joints in Horizontal Surfaces, Urethane:
  - 1. Manufacturers: Pecora Corp.; Sandell Construction Solutions; Sika Corp.; Sonneborn; Tremco; or approved equal.
  - 2. Materials: Self-leveling urethane sealant, ASTM C 920.
- E. Exterior Joints Immersed in Water, Polysulfide:
  - 1. Manufacturers: W. R. Meadows; Pecora Corp.; Sonneborn Building Products; or approved equal.

2. Materials: Two-part polysulfide, for water immersion, ASTM C 920.
- F. Exterior Paving Joint Fillers, Bituminous:
1. Manufacturers:
  2. Materials: Bituminous fiber.
- G. Interior Joints, Limited Movement, Acrylic:
1. Manufacturers: Bostik; Pecora Corporation; Polymeric Systems, Inc.; Sonneborn Building Products; Tremco; or approved equal.
  2. Materials: Acrylic-emulsion, ASTM C 834.
  3. VOC Content: Less than 50 g/L.
- H. Metal Panel Sealants:
1. Sealant Tape: Pressure-sensitive, 100 percent solids, gray polyisobutylene-compound sealant tape with release-paper backing. Provide permanently elastic, nonsag, nontoxic, nonstaining tape of manufacturer's standard size.
  2. Joint Sealant: ASTM C 920; one part elastomeric polyurethane or polysulfide; of type, grade, class, and use classifications required to seal joints in metal panels and remain weathertight; and as recommended by system manufacturer.
  3. Concealed lap and hook joints in sheet metal flashing and trim. Single Component Non-Curing Sealants: Tremco Butyl Sealant.
- I. Interior Joints, Sanitary Silicone:
1. Manufacturers: Dow Corning; GE Advanced Materials; Tremco; or approved equal.
  2. Materials: One-part mildew-resistant silicone sealant, ASTM C 920.
  3. VOC Content: Less than 50 g/L.
- J. High temperature sealant: one-component room-temperature-vulcanizing RTV acetoxycure high temperature silicone sealant
1. Manufacturers: DAP, #M, Carlisle, Alvin Products, or approved equal.
  2. Basis of design: Carlisle High-Temp 100% Silicone Sealant
- K. Colors:
1. Closely match at least of one of adjacent surfaces.
- L. Colors:
1. Closely match at least of one of adjacent surfaces; colors shall be selected by Architect.
- M. Joint Backing Materials
1. Acceptable manufacturers include:
    - a. Backer Rod Manufacturing & Supply Co. ["Mile High Foam"]
    - b. Dow Chemical Co.
    - c. Williams Products Co.
    - d. Woodmont Products Co.
  2. Joint backer: Compressible polyethylene foam rod or other compatible non-waxing, non-extruding, non-staining resilient material in dimension 25 percent to 50 percent wider than joint width as recommended by sealant manufacturer for conditions and exposures indicated. Unless otherwise noted, provide closed cell non-absorptive material.
  3. Joint backing for general use at joints in horizontal surfaces shall be 2 rows of butyl rubber or neoprene foam rods in contact with one another and compressed to approximately 2/3 original width when in place.
  4. Provide miscellaneous materials of type that will not bleed through sealant, discolor surface, or produce deleterious effects. Select size to provide profile concave to the rear of the sealant, and equipped with a bond-breaking film.

### **PART 3 EXECUTION**

#### **3.1 INSTALLATION**

- A. Examine substrate; report unsatisfactory conditions in writing. Beginning work means acceptance of substrates.
- B. Provide sealants in colors as selected from manufacturer's standards.
- C. Install materials and systems in accordance with manufacturer's instructions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections. Clean and prime joints, and install bond breakers, backer rods and sealant as recommended by manufacturers.
- D. Depth shall equal width up to 1/2 inch wide; depth shall equal 1/2 width for joints more than 1/2 inch wide.
- E. At exterior and interior assemblies, provide backer rod and sealants to allow vertical movement at deflection track heads. Coordinate work with other trades such as sheathing assemblies and air barrier assemblies installation.
- F. Cure and protect sealants as directed by manufacturers. Replace or restore damaged sealants. Clean adjacent surfaces to remove spillage.

#### **END OF SECTION**



## **SECTION 08 11 10 - STEEL DOORS AND FRAMES**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section includes:
  - 1. Steel doors and frames.
- C. Steel doors and frames shall refer to doors or frames conventionally called "hollow metal". Steel and hollow metal are used interchangeably in this section.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- A. Product Schedule: For hollow-metal doors and frames, prepared by or under the supervision of supplier, using same reference numbers for details and openings as those on Drawings. Coordinate with final door hardware schedule.
- B. Shop Drawings: Include the following:
  - 1. Elevations of each door type.
  - 2. Details of doors, including vertical- and horizontal-edge details and metal thicknesses.
  - 3. Frame details for each frame type, including dimensioned profiles and metal thicknesses.
- C. Product test reports.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Standards: ANSI/SDI-100, Recommended Specifications for Standard Steel Doors and Frames.
- C. Performance Standards:
  - 1. Fire-Rated Assemblies: NFPA 80, and acceptable testing agency listing.
  - 2. Thermal-Rated Assemblies at Exterior: ASTM C1363 and C518.
  - 3. Sound-Rated Assemblies at Mechanical Rooms: ASTM E 1408, and ASTM E 413.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. Ceco Door; ASSA ABLOY.
  - 2. Mesker Door Inc.
  - 3. Pioneer Industries.
  - 4. Republic Doors and Frames.
  - 5. Steelcraft; an Allegion brand.
  - 6. Approved equal.

#### 2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Rated Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction for fire-protection ratings and temperature-rise limits [as applicable] indicated, based on testing at positive pressure according to NFPA 252 or UL 10C.

1. Smoke- and Draft-Control Assemblies: Provide assemblies with gaskets listed and labeled for smoke and draft control by a qualified testing agency acceptable to authorities having jurisdiction, based on testing according to UL 1784 and installed in compliance with NFPA 105.
  2. Temperature-Rise Limit: Where indicated and At vertical exit enclosures and exit passageways], provide doors that have a maximum transmitted temperature end point of not more than 450 deg F (250 deg C) above ambient after 30 minutes of standard fire-test exposure.
    - a.
- B. Fire-Rated, Borrowed-Lite Assemblies: Complying with NFPA 80 and listed and labeled by a qualified testing agency acceptable to authorities having jurisdiction, for fire-protection ratings indicated, based on testing according to NFPA 257 or UL 9.
- C. Thermally Rated Door Assemblies: When tested according to ASTM C 518, provide door assemblies with U-factor of not more than: 0.29 deg Btu/F x h x sq. ft.
3. 0.38 deg Btu/F x h x sq. ft. (2.16 W/K x sq. m)]
- ## 2.3 STEEL DOORS & FRAMES
- A. Interior Steel Doors:
1. Manufacturers: Amweld Building Products; Ceco Door Products; Curries Co.; Mesker Door; Steelcraft Manufacturing; or approved equal.
  2. Material: Minimum 18-gauge steel sheet.
  3. Thickness: 1-3/4 inches.
  4. Finish: Factory primed and field painted. Indicated doors and doors associated with water or pump or mechanical equipment shall also be hot dipped galvanized.
- B. Accessories:
1. Sightproof stationary louvers.
  2. Glazing stops.
  3. Silencers.
- C. Interior Steel Frames:
1. Manufacturers: Amweld Building Products; Ceco Door Products; Curries Co.; Mesker Door; Steelcraft Manufacturing; or approved equal.
  2. Material: Minimum 16-gauge steel sheet.
  3. Corners at framing: Mitered or coped.
  4. Corners at masonry: Weld and grind smooth so joint is invisible.
  5. Height: As shown.
  6. Masonry coursing: Provide 4 inch heads where shown or used in conjunction with masonry.
  7. Type at dry wall: All welded.
  8. Type: For doors 42 wide and wider, provide fully welded frames.
  9. Glass stops: As shown, square type, flush or concealed fasteners.
  10. Borrowed light frames: Match door frames, provide 4 inch high base sill unless otherwise shown.
  11. Finish: Factory primed, baked-on and field painted. Indicated doors and doors associated with water or pump or mechanical equipment shall also be hot dipped galvanized.
- B. Exterior Steel Doors:
1. Manufacturers: Amweld Building Products; Presray Critical Containment Solutions, a Division of Pawling Corp.; Steel Door Institute; Steelcraft Manufacturing; Windsor Republic Doors; or approved equal.
  2. Material: Minimum 16-gauge galvanized steel sheet.
  3. Door Thickness: 1-3/4 inches, thermally insulated.
  4. Finish: Factory primed and field painted.
  5. Finish: Factory finished.
  6. Accessories:
    - a. Sightproof stationary louvers, if shown.
    - b. Glazing stops.
    - c. Silencers.
  7. Provide thermally improved doors with maximum U-value of BTU/hr./square foot degree F (ASTM C1363) for all

exterior doors and elsewhere as noted, as follows:

- a. Unglazed: 0.29.
- b. Insulating core material: Polyurethane.

C. Exterior Steel Frames:

1. Manufacturers: Amweld Building Products; Steel Door Institute; Steelcraft, Div. of IR Security Technologies; Windsor Republic Doors; or approved equal.
2. Material: Minimum 16-gauge galvanized steel sheet.
3. Corners: Mitered or coped.
4. Type: Welded.
5. Finish: Factory primed [after galvanizing] and field painted.

### PART 3 - EXECUTION

#### 3.1 PREPARATION

- A. Remove welded-in shipping spreaders installed at factory. Restore exposed finish by grinding, filling, and dressing, as required to make repaired area smooth, flush, and invisible on exposed faces. Touch up factory-applied finishes where spreaders are removed.
- B. Drill and tap doors and frames to receive nontemplated, mortised, and surface-mounted door hardware.

#### 3.2 INSTALLATION

- A. Hollow-Metal Frames: Comply with SDI A250.11 or NAAMM-HMMA 84.
  1. Set frames accurately in position; plumbed, aligned, and braced securely until permanent anchors are set. After wall construction is complete, remove temporary braces without damage to completed Work.
    - a. Where frames are fabricated in sections, field splice at approved locations by welding face joint continuously; grind, fill, dress, and make splice smooth, flush, and invisible on exposed faces. Touch-up finishes.
    - b. Install frames with removable stops located on secure side of opening.
  2. Fire-Rated Openings: Install frames according to NFPA 80.
  3. Floor Anchors: Secure with postinstalled expansion anchors.
    - a. Floor anchors may be set with power-actuated fasteners instead of postinstalled expansion anchors if so indicated and approved on Shop Drawings.
  4. Solidly pack mineral-fiber insulation inside frames.
  5. Masonry Walls: Coordinate installation of frames to allow for solidly filling space between frames and masonry with grout or mortar.
  6. In-Place Concrete or Masonry Construction: Secure frames in place with postinstalled expansion anchors. Countersink anchors, and fill and make smooth, flush, and invisible on exposed faces.
  7. Installation Tolerances: Adjust hollow-metal frames to the following tolerances:
    - a. Squareness: Plus or minus 1/16 inch (1.6 mm), measured at door rabbet on a line 90 degrees from jamb perpendicular to frame head.
    - b. Alignment: Plus or minus 1/16 inch (1.6 mm), measured at jambs on a horizontal line parallel to plane of wall.
    - c. Twist: Plus or minus 1/16 inch (1.6 mm), measured at opposite face corners of jambs on parallel lines, and perpendicular to plane of wall.
    - d. Plumbness: Plus or minus 1/16 inch (1.6 mm), measured at jambs at floor.
- B. Hollow-Metal Doors: Fit and adjust hollow-metal doors accurately in frames, within clearances specified below.
  1. Non-Fire-Rated Steel Doors: Comply with [SDI A250.8] [NAAMM-HMMA 841 and NAAMM-HMMA guide specification indicated].
  2. Fire-Rated Doors: Install doors with clearances according to NFPA 80.
  3. Smoke-Control Doors: Install doors according to NFPA 105.
- C. Glazing: Comply with installation requirements in Section 088000 "Glazing" and with hollow-metal manufacturer's written instructions.

3.3 CLEANING AND TOUCHUP

- A. Prime-Coat Touchup: Immediately after erection, sand smooth rusted or damaged areas of prime coat and apply touchup of compatible air-drying, rust-inhibitive primer.
- B. Metallic-Coated Surface Touchup: Clean abraded areas and repair with galvanizing repair paint according to manufacturer's written instructions.
- C. Touchup Painting: Cleaning and touchup painting of abraded areas of paint are specified in painting Sections.

**END OF SECTION**

## **SECTION 08 80 20 INTERIOR GLASS**

### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Interior glass and glazing.
- C. Extent:
  - 1. Borrowed lights, sidelights, decorative glass and transoms not connected to exterior.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- D. Warranty: Submit manufacturer's standard warranty. Include labor and materials to repair or replace defective materials.
  - 1. Laminated Glass: Manufacturer's 5-year warranty.
  - 2. Coated Glass: Manufacturer's 10-year warranty.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Glazing for Fire-Rated Assemblies: Glazing for assemblies that comply with NFPA 80.
- C. Safety Glazing Products: Comply with testing requirements in 16 CFR 1201 and, for wired glass, ANSI Z97.1.
- D. Glazing Publications:
  - 1. GANA Publications: GANA's "Glazing Manual." and "Laminated Glass Design Guide."
  - 2. IGMA Publication for Sloped Glazing: IGMA TB-3001, "Sloped Glazing Guidelines."

### **PART 2 PRODUCTS**

#### 2.1 MATERIALS

- A. Glass and Glazing:
  - 1. Manufacturers: AFG Industries; ACH Glass Operations (formerly Visteon); Cardinal IG; Libby Owens Ford; Pilkington; Viracon; or approved equal.
  - 2. Type: Single glass units, tempered at all interior locations.
  - 3. Thickness: As shown, if not, 0.25 inch.
  - 4. Tint: As shown or scheduled, if not, clear.
  - 5. Type: Laminated glass units. Provide frosted interlayers for privacy where field applied films are not used. Acoustic privacy interlay shall be 60 mil or more.

6. Auxiliary Materials:
  - a. Compression gaskets.
  - b. Elastomeric glazing sealants.
  - c. Preformed glazing tapes.
  - d. Glazing gaskets.
  - e. Setting blocks, spacers, and compressible filler rods.

### **PART 3 EXECUTION**

#### **3.1 INSTALLATION**

- A. Inspect framing and report unsatisfactory conditions in writing and comply with the following:
  1. Comply with GANA "Glazing Manual" and manufacturer's instructions and recommendations. Use manufacturer's recommended spacers, blocks, primers, sealers, gaskets and accessories.
  2. Install glass with uniformity of pattern, draw, bow and roller marks.
  3. Install sealants to provide complete wetting and bond and to create a substantial wash away from glass.
  4. Remove and replace damaged glass and glazing. Wash, polish and protect all glass supplied under this section.

#### **END OF SECTION**

## **SECTION 09 01 27 - GYPSUM BOARD REPAIR**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: All the Contract Documents, including the Drawings, General and Supplementary Conditions and Division 1 General Requirements apply to the work of this Section.
- B. Section includes, without limitation, providing:
  - 1. Gypsum board repair.
  - 2. Miscellaneous gypsum board infill.
- C. Extent: As shown, if not, existing walls and ceilings disturbed by renovations or indicated to be repaired. Confer with Owner and Architect to identify other repair work before final pricing. Carry allowances if so indicated.
- D. Related work, without limitation includes:  
Section 09 10 00 - Non-structural light gage framing: Metal furring, studs and framing required for alterations.

#### 1.2 SUBMITTALS

- A. In accordance with Division 1, submit for approval:
  - 1. Product data of each type to be used.
  - 2. Manufacturers installation instructions and guidelines.
  - 3. Documentation for any required fire rated assemblies.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Deliver, handle, and store materials in accordance with manufacturers' instructions.
- B. Where fire rated assemblies are required, provide evidence of assemblies meeting required ratings in tests performed by nationally recognized organizations such as Underwriters' Laboratories.
- C. Repair performance requirements:
  - 1. Repair work shall be plane and true with adjacent surfaces to a tolerance matching existing plaster or gypsum.
  - 2. Repair textures shall match adjacent existing textures.
  - 3. Unacceptable surfaces shall be re-worked until acceptable.
  - 4. No cracks, joints, ridges, depressions, separations or other defects shall be visible in repair work or immediately abutting work after completion of repair work nor at 365 days after the date of substantial completion
  - 5. The finished surfaces shall appear to be continuous sound gypsum board free of visible repairs after paint or wall coatings are applied when viewed in strong light from a distance of 6 feet.

#### 1.4 PROJECT CONDITIONS

- A. Perform work only when ambient temperature is between 40 degrees F and 85 degrees F.
- B. Warm Weather Requirements: Protect plaster against uneven and excessive evaporation and from excessive ventilation. Apply and cure plaster to prevent dryout during cure period.

### **PART 2 - PRODUCTS**

#### 2.1 GYPSUM BOARD MATERIALS FOR REPAIR

- A. Match existing; where this requirement cannot be met or if existing types cannot be determined or if new types are required, comply with requirements given below.
- B. General: Where shown or scheduled, provide gypsum wall board of each type as specified. Provide in longest lengths available to minimize end-to-end joints.

1. Provide thickness as shown or as required by laboratory test designs to achieve the fire and acoustical ratings shown.
2. Where indicated UL or FM or NFPA fire rated assemblies require the use of so-called "Type C" firecode color, use that board in place of generic Type X.
3. At ceilings or horizontal applications use board rated for ceiling use.

C. Gypsum Wallboard

1. Use: Interior locations, base and exposed layers.
2. Type: Regular or Fire Resistant (Type X), as shown, if not shown, use Type X or Type C.
3. Backing: Paper-backed.
4. Thickness: 5/8" unless otherwise shown.
5. Edges: Tapered and rounded edge (Type SW).
6. ASTM Specification: C-1396

D. Moisture & Mold Resistant [Formerly Water-Resistant gypsum panel]:

1. Use: Painted wallboard at toilet rooms, showers, janitors closets, and all other moist but not wet areas.
2. ASTM C1396 (Section 5), regular type except where Type X fire-resistant type is indicated or required to meet UL assembly types.
3. Edges: Tapered.
4. Thickness: As shown, if not shown 5/8 inch.
5. Acceptable products: Sheetrock® brand Mold Tough™ Firecode (Type X), Firecode® C Core or ULTRACODE® Core gypsum panels by USG.

- E. Accessories: Provide additional materials of approved types as recommended by manufacturer. to accomplish the work.

## 2.2 JOINT TREATMENT AND FINISH MATERIALS

- A. General: Provide materials recommended by the manufacturer for the use intended, complying with ASTM C-475, except as noted below.

1. Joint Tape: Fibered paper reinforcing tape.
2. Joint Compounds:
3. At moist interior areas provide chemical-hardening type for bedding and filling and ready-mixed all purpose vinyl-type or vinyl-type powder for topping. U.S.G. Durabond, or equal topped with a sandable all purpose final coat is acceptable.
4. At interior applications provide standard ready mix vinyl-based taping plus topping compound or vinyl-based powder taping plus topping compound.
5. At moisture resistant gypsum backing board, for joints, cut edges and fastener heads provide special moisture - resistant compound equal to U.S. Gypsum w/r compound (1 coat under tiles, 3 coats other areas).

- B. At exterior, wet or damp locations and conditions use products water resistant exterior grade products.

## PART 3 - EXECUTION

### 3.1 INSPECTION

- A. Inspect substrates, previous related work, and conditions under which work is to be installed and identify defects and deficiencies. Ensure substrates are dry, dust free and compatible with the new work. Starting work constitutes acceptance of conditions.

### 3.2 GYPSUM REPAIRS

- A. Replace unsound gypsum with new matching system.
- B. Examine existing substrate. Provide miscellaneous new framing and blocking components required to support finish and to replace unsound substrates or framing. Remove loose gypsum to framing reinstall new assemblies with sound work.
- C. Prepare joints at new and existing work to conceal repairs permanently.



- D. Where new partitions meet existing construction, remove existing corner beads to provide a smooth transition.
- E. Adhesive apply gypsum board where required to solid substrate such as masonry or concrete.
- F. Fill holes, cracks and voids while ensuring new work has strong mechanical keys and fully adhered bond to existing surface. Sand and finish surface smooth to existing.
- G. Install gypsum board assemblies true, plumb, level and in proper relation to adjacent surfaces. Install boards vertically. Do not allow butt-to-butt joints and joints that do not fall over framing members.
- H. Tape and Joint Compound: Install gypsum board for tape and 3-coat joint compound finish in compliance with ASTM C 840 and GA 216. Provide finish levels as follows:
  - 1. Concealed from view: Level 3 or better but in compliance with fire ratings.
  - 2. Typical: Level 4.

### 3.3 COMPLETION

- A. At completion of finish work, clean all beads, screeds, metal trim and edging and leave work ready for following phases. Remove rubbish, debris, excess materials, scaffolding, tools, and equipment from building.
- B. Rough construction to receive mechanically applied work may be left broom clean; all other areas shall be vacuumed free of dust.

### END OF SECTION

## **SECTION 09 10 00 – NON-STRUCTURAL LIGHT GAGE STEEL FRAMING**

### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Related documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation providing:
  - 1. Light gage interior steel framing.
- C. Related Work includes, without limitation:
  - 1. Section 06 10 60 - Wood blocking wood treatments.
  - 2. Section 09 10 50 - Metal blocking.
- D. Extent/Scope, without limitation, includes:
  - 1. Where shown.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Provide shop drawings for all structural elements of the work

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Tolerances: Not more than 1/16-inch difference in true plane at joints between adjacent boards before finishing. After finishing, joints shall be not be visible. Not more than 1/8 inch in 10 feet deviation from true plane, plumb, level and proper relation to adjacent surfaces in finished work.
- C. Fire Resistance for Fire-Rated Assemblies: ASTM E 119.
- D. Mock-Ups: Provide mock-up as required to demonstrate quality of workmanship and level of finish.
- E. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities. Size metal framing according to manufacturers recommendations. Sizes and gauges given here are minimums.

### **PART 2 PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Subject to compliance with specifications, provide one of the following:
  - 1. Clarke Dietrich Building Systems
  - 2. USG.
  - 3. EB Metals, Inc.
  - 4. Approved equal.

#### 2.2 MATERIALS

- A. Framing Members, General: Comply with ASTM C 754 for conditions indicated.
  - 1. Steel Sheet Components: Comply with ASTM C 645 requirements for metal unless otherwise indicated.
  - 2. Protective Coating: Hot dipped galvanized
    - a. Standard: ASTM A 653/A 653M,
    - b. Thickness: G60 interiors.
    - c. Thickness: G90 exteriors.
- B. Steel Framing for Walls and Partitions:

1. Material Standard: ASTM C645.
  2. Stud Thickness: Minimum 25 gauge, as required to comply with manufacturer stud gage recommendations for wall heights, required stud spacing and L/360 deflection; minimum loading design: 7.5 pounds per square foot.
  3. Stud Depth, Typical: As shown, if not, 3-5/8 inches.
  4. Furring Channel Thickness: 20 gauge (.0329 inch), as required.
  5. Auxiliary Framing Components: Furring brackets, Z-furring members, and non-corrosive fasteners.
  6. Resilient Furring: Comply with Section 09 81 10 – Acoustic insulation & accessories; if none, use one of the following ClarkDietrich resilient channel products as selected by the Architect:
    - a. RC Deluxe [RCSD], a 22 gage single leg channel.
    - b. RC-1 Pro [RCUR], a 25 gage single leg channel.
    - c. RC-1 ProPlus [RCUR] a 22 gage heavy duty single leg channel.
  7. Resilient Hangers: Comply with Section 09 81 10 – Acoustic insulation & accessories
- C. Steel Framing for Suspended and Furred Ceilings:
1. Attachment: As shown, if not, standard.
  2. Stud Thickness: As shown, if not, minimum of 20 gauge (.0329 inch).
  3. Accessories: Furring channels, hangers and inserts.
  4. Bulb T ceiling system: Equal to USG Drywall Suspension System or equal by National Gypsum or CertainTeed or Rockfon/Chicago Metallic.
  5. Soffit framing system: Equal to USG Quikstix System or equal by National Gypsum or CertainTeed or Rockfon/Chicago Metallic.
- D. Slip-Type Head Joints: As shown, if not, where required to prevent cracking of finishes applied to interior partition framing resulting from deflection of structure above; provide:
1. Deflection Track: Steel sheet top runner manufactured to specifically for anticipated movements in thickness not less than indicated for studs and in width to accommodate depth of studs.
  2. Products: Subject to compliance with requirements, provide one of the following:
    - a. Brady Innovations, Sliptrack Systems; SLP-TRK Slotted Deflection Track.
    - b. ClarkDietrich, MaxTrak Slotted Deflection Track.
    - c. Steel Network Inc. (The); [VertiClip SLD] [VertiTrack VTD] Series.
    - d. Superior Metal Trim; Superior Flex Track System (SFT).
    - e. Telling Industries; [Vertical Slip Track] [Vertical Slip Track II].
    - f. Approved equal.
- E. Double-Runner System: ASTM C 645 top runners, inside runner with 2-inch- (51-mm-) deep flanges in thickness not less than indicated for studs and fastened to studs, and outer runner sized to friction fit inside runner.

### **PART 3 EXECUTION**

#### **3.1 INSTALLATION**

- A. Steel Framing: Install steel framing in compliance with ASTM C 754. Install with tolerances necessary to produce substrate for gypsum board assemblies with tolerances specified. Include blocking for items such as railings, grab bars, casework, toilet accessories, window treatment and similar items.
- B. Provide acoustical sealant at both faces at top and bottom runner tracks, wall perimeters, openings, expansion and control joints.
- C. Install trim in strict compliance with manufacturer's instructions and recommendations.

### **END OF SECTION**

## SECTION 09 10 50 - METAL BLOCKING

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation providing:
  - 1. Concealed metal blocking.
  - 2. At contractor's option, use specified metal blocking in place of wood at building interiors.
- B. Related Work includes, without limitation:
  - 1. Section 06 10 60 - Wood blocking.
- C. Extent: As required, but **do not for use as firestopping**.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Performance: Fire, structural, and seismic performance meeting requirements of building code and local authorities.

### PART 2 PRODUCTS

#### 2.1 MATERIALS

- A. Steel Studs, Channels & Plates:
  - 1. Material Standard: ASTM C645.
  - 2. Stud Thickness: 25, 22, or 20 gauge (.0329 inch), as required by application, galvanized.
  - 3. Stud Depth, Minimum: 2.5 inches.
  - 4. Cold-rolled Channel: 16 gauge, minimum black corrosion resistant coating.
  - 5. Flat Plates: 16 gage minimum, galvanized; spanning at least 3 supports.
  - 6. Auxiliary Framing Components: non-corrosive fasteners.

### PART 3 EXECUTION

#### 3.1 INSTALLATION -GENERAL

- A. Steel Blocking: Connect to framing in compliance with ASTM C 754. Include blocking for items such as railings, grab bars, casework, toilet accessories, window treatment and similar items. Comply with the following:
  - 1. Determine loads and select blocking to support loads and meet safety factor of 3. When in doubt field test assemblies with actual loads.
  - 2. Conceal blocking completely.
  - 3. Do not permit telegraphing or visual bleed-through of blocking through final finish surfaces.
  - 4. Do not interfere with or obstruct other work.
  - 5. Use manufacturer recommended fasteners where they exceed strength of specified fasteners.
  - 6. Alternative methods have equal structural capacity may be used other than specified. Gages and weights specified are minimums and shall not be reduced.

### 3.2 MINIMUM PERFORMANCE & INSTALLATION REQUIREMENTS

- A. Type 1 - Heavy Loads: Without limitation, grab bars, handrails, wall supported casework and shelving, other heavy loads. Comply with the following:
  - 1. Withdrawal resistance: 200 pounds.
  - 2. Shear resistance: 250 pounds.
  - 3. Support: Maximum 8 inch long segments of specified steel channel run horizontally and attached to each side open throat of metal wall studs; overlap channel across entire face of stud flange.
  - 4. Fastener: 0.25 inch minimum diameter attached through center of channel.
  
- B. Type 2 - Moderate Heavy Loads. Comply with the following:
  - 1. Withdrawal resistance: 155 pounds.
  - 2. Shear resistance: 175 pounds.
  - 3. Support: Toggle bolt through 0.50 inch minimum gypsum board and attached to center of 25 gage minimum metal stud.
  - 4. Fastener: 0.25 inch minimum diameter toggle bolt.
  
- C. Type 3 - Moderate Loads. Comply with the following:
  - 1. Withdrawal resistance: 85 pounds.
  - 2. Shear resistance: 135 pounds.
  - 3. Support: Toggle bolt through 0.50 inch minimum gypsum board and attached to center of 20 gage minimum metal stud.
  - 4. Fastener: Type S-12 bugle head \ screw.
  
- D. Type 4 - Light Loads. Comply with the following:
  - 1. Withdrawal resistance: 85 pounds.
  - 2. Shear resistance: 135 pounds.
  - 3. Support: Toggle bolt through 0.50 inch minimum gypsum board and attached to center of 25 gage minimum metal stud.
  - 4. Fastener: Type S-12 bugle head \ screw.
  
- E. Type 5 - Very Light Loads. Comply with the following:
  - 1. Withdrawal resistance: 40 pounds.
  - 2. Shear resistance: 60 pounds.
  - 3. Support: Toggle bolt through 0.50 inch minimum gypsum board only.
  - 4. Fastener: 0.25 inch minimum diameter toggle bolt.

**END OF SECTION**

## **SECTION 09 26 13 - GYPSUM VENEER PLASTERING**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Gypsum veneer plaster and gypsum base for veneer plaster.

#### 1.2 ACTION SUBMITTALS

- A. Product Data: For each type of product.
- B. Samples: For each exposed product and for each color and texture specified.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Source Limitations: Obtain gypsum veneer plaster products, including gypsum base for veneer plaster, joint reinforcing tape, and embedding material, from single manufacturer.

#### 2.2 PERFORMANCE REQUIREMENTS

- A. Fire-Resistance-Rated Assemblies: For fire-resistance-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 119 by an independent testing agency.
- B. STC-Rated Assemblies: For STC-rated assemblies, provide materials and construction identical to those tested in assembly indicated according to ASTM E 90 and classified according to ASTM E 413 by an independent testing agency.
- C. Low-Emitting Materials: For ceiling and wall assemblies, provide materials and construction identical to those tested in assembly and complying with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

#### 2.3 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
  - 1. United States Gypsum Company.
  - 2. Gold Bond.
  - 3. Georgia Pacific.
  - 4. Approved equal.
- B. Basis of design: As specified below.

#### 2.4 GYPSUM VENEER PLASTER

- A. High-Strength, Two-Component Gypsum Veneer Plaster: ASTM C 587, ready-mixed, base-coat plaster and smooth finish-coat veneer plaster containing mill-mixed, fine silica sand; with a compressive strength of 3000 psi (20 MPa) when tested according to ASTM C 472.
  - 1. Base Coat: Hand trowel or machine apply base coat over substrate to a uniform thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm). Fill all voids and imperfections.
  - 2. Finish Coat: Trowel apply finish-coat plaster over base-coat plaster to a uniform thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm).
    - a. Texture: Smooth.

## 2.5 PANEL PRODUCTS

- A. Recycled Content: Postconsumer recycled content plus one-half of preconsumer recycled content not less than 20% percent.
- B. Regional Materials: Gypsum panel products shall be manufactured within 500 miles (800 km) of Project site from materials that have been extracted, harvested, or recovered, as well as manufactured, within 500 miles (800 km) of Project site.
- C. Abuse-Resistant Gypsum Base for Veneer Plaster: With specially reinforced core for greater resistance to surface abrasion, indentation, soft-body impact, and hard-body impact.
  - 1. Basis of Design: Gold Bond® BRAND Hi-Abuse Kal-Kore Fire-Shield Plaster Base
  - 2. Standard: ASTM C 1396.
  - 3. Core:
    - a. Thickness: 5/8 inch (15.9 mm),
    - b. Type: X or C, fire rated.
  - 4. Long Edges: Tapered.
  - 5. Mold Resistance: ASTM D 3273, score of 10 as rated according to ASTM D 3274.
  - 6. Abuse Resistance: ASTM C 1629/C 1629M, Level 2 average.
- D. Backing Panels for Multilayer Applications: ASTM C 1396/C 1396M gypsum base or gypsum board, as recommended by gypsum veneer plaster manufacturer, for application method and thicknesses indicated.
  - 1. Core: Matching face layer unless otherwise indicated.
  - 2. Thickness: Matching face layer unless otherwise indicated.

## 2.6 TRIM ACCESSORIES

- A. Standard Trim: ASTM C 1047, provided or approved by manufacturer for use in gypsum veneer plaster applications indicated.
  - 1. Material: Galvanized-steel sheet or aluminum-coated steel sheet

## 2.7 JOINT REINFORCING MATERIALS

- A. General: Comply with joint strength requirements in ASTM C 587 and with gypsum veneer plaster manufacturer's written recommendations for each application indicated.
- B. Joint Tape: As recommended by gypsum veneer plaster manufacturer for applications indicated
- C. Embedding Material for Joint Tape: As recommended by gypsum veneer plaster manufacturer for use with joint-tape material and gypsum veneer plaster applications indicated.

## 2.8 AUXILIARY MATERIALS

- A. Bonding Agent: ASTM C 631, polyvinyl acetate.
- B. Laminating Adhesive: Adhesive or joint compound recommended by manufacturer for directly adhering gypsum-base, face-layer panels to backing-layer panels in multilayer construction.
  - 1. Adhesives shall have a VOC content of 50 g/L or less when calculated according to 40 CFR 59, Subpart D (EPA Method 24).
  - 2. Adhesives shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."
- C. Steel Drill Screws: ASTM C 1002 unless otherwise indicated.
  - 1. Use screws complying with ASTM C 954 for fastening panels to steel members from 0.033 to 0.112 inch (0.84 to 2.84 mm) thick.
- D. Sound Attenuation Blankets: Section 09 81 10 - ACOUSTICAL INSULATION & ACCESSORIES.
- E. Acoustical Joint Sealant: Section 09 81 10 - ACOUSTICAL INSULATION & ACCESSORIES.

- F. Patching Mortar: Dry-pack patching mortar, consisting of 1 part portland cement to 2-1/2 parts fine aggregate passing a No. 16 (1.18-mm) sieve, using only enough water for handling and placing.

### **PART 3 - EXECUTION**

#### **3.1 INSTALLING PANELS**

- A. Gypsum Base for Veneer Plaster: Apply according to ASTM C 844 unless manufacturer's written recommendations are more stringent.
  - 1. Erection Tolerance: No more than 1/16-inch (1.6-mm) offsets between planes of gypsum base panels, and 1/8 inch in 8 feet (3 mm in 2.4 m) noncumulative, for level, plumb, warp, and bow.
- B. Examine panels before installation. Reject panels that are wet, moisture damaged, or mold damaged.
- C. Install trim with back flanges intended for fasteners, and attach to framing with same fasteners used for panels. Otherwise, attach trim according to manufacturer's written instructions.
- D. Control Joints: Install according to ASTM C 844 and in specific locations approved by Architect].
- E. Abuse-Resistant Base: Reinforce joints between abuse-resistant panels with joint tape and embedding material according to panel manufacturer's written recommendations.

#### **3.2 GYPSUM VENEER PLASTERING**

- A. Bonding Agent: According to gypsum veneer plaster manufacturer's written recommendations, apply bonding agent on dry substrate, type indicated, if not, abuse resistant panels.
- B. Gypsum Veneer Plaster Mixing: Mechanically mix gypsum veneer plaster materials to comply with ASTM C 843 and with gypsum veneer plaster manufacturer's written recommendations.
- C. Gypsum Veneer Plaster Application: Comply with ASTM C 843 and with veneer plaster manufacturer's written recommendations.
  - 1. Two-Component Gypsum Veneer Plaster:
    - a. Base Coat: Hand trowel or machine apply base coat over substrate to a uniform thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm). Fill all voids and imperfections.
    - b. Finish Coat: Trowel apply finish-coat plaster over base-coat plaster to a uniform thickness of 1/16 to 3/32 inch (1.6 to 2.4 mm).
  - 2. Where gypsum veneer plaster abuts only metal door frames, windows, and other units, groove finish coat to eliminate spalling.
  - 3. Do not apply veneer plaster to gypsum base if paper facing has degraded from exposure to sunlight. Before applying veneer plaster, use remedial methods to restore bonding capability to degraded paper facing according to manufacturer's written recommendations.
- D. Concealed Surfaces: Do not omit gypsum veneer plaster behind cabinets, furniture, furnishings, and similar removable items. Omit veneer plaster in the following areas where it will be concealed from view in the completed Work unless otherwise indicated or required to maintain fire-resistance and STC ratings:
  - 1. Above suspended ceilings.
  - 2. Behind wood paneling.
- E. Gypsum Veneer Plaster Finish:
  - 1. Smooth-troweled finish unless otherwise indicated]
  - 2. Textured finish matching Architect's sample and approved mockups.

### **END OF SECTION**



## **SECTION 09 65 05 - RESILIENT FLOORING & BASE**

### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Related documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation providing:
  - 1. Resilient flooring, base and floor preparation.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.
- C. Extra Stock: Submit extra stock equal to 2 percent of total used, but not less than one unopened box of each type of materials used.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.
- B. Comply with manufacturer job, temperature and humidity requirements for each product being installed.
- C. Verify substrate conditions and suitability by carrying out adhesion tests of resilient flooring bond to substrate equal to "Bond and Moisture Test" and "Calcium Chloride Test" recommended by Armstrong in their installation system manual F-5061. Follow tile and adhesive manufacturer recommendations for performing test patches.
- D. Fire-Test-Response Characteristics: As determined by testing identical products according to ASTM E 648 or NFPA 253 by a qualified testing agency.
  - 1. Critical Radiant Flux Classification: Class I, not less than 0.45 W/sq. cm.
  - 2. Smoke density: Compliance with code but less than 450 per NFPA 258 / ASTM E 662.
- E. Warranties: Provide manufacturers standard product warranties.

### **PART 2 PRODUCTS**

#### 2.1 RUBBER SHEET FLOORING MANUFACTURES

- A. Manufacturers, subject to compliance with specifications, provide products from:
  - 1. Kiefer USA.
  - 2. Ecore.
  - 3. Munson
  - 4. Johnson.
  - 5. Mannington
  - 6. Approved equal.
- B. Basis of Design: Kefer USA Color Flex.
- C. Product: Recycled Rubber Flooring with the following characteristics:
  - 1. Construction: Non-laminated, single-ply, rubber surface

2. Material: 100% recycled SBR (Styrene-Butadiene Rubber) tire rubber, with bright reprocessed EPDM color flecks.
3. Construction: Non-laminated, single ply rubber surfaces made from a formulation of high quality post-consumer recycled rubber granules encapsulated in a wear and water-resistant elastomeric network with multiple colored reprocessed EPDM rubber. Material surface shall contain or an equal to, water based protective clear coat.
4. Product type: Rolled sheet.
5. Thickness: As, shown, if not, manufacturer standard, but not less than 3.30mm
6. Sheet size/dimension: 4 by 50 feet minimum.
7. Color: As selected from full published range.

## 2.5 ACCESSORIES

- A. Edge strips, guards, and reducers: Provide molded or extruded hard rubber finishing components to match conditions as manufactured by Roppe Corp, Johnsonite Inc., Mercer Plastic or approved equal. Material shall be 1/8 inch or thicker, tapered or bullnose edge, color as selected by Architect, not less than 1" wide; at perimeter of resilient flooring where it abuts concrete floors. Special sizes and shapes as required to meet other adjacent floor materials such as carpet. Provide 1st quality rubber free of imperfections.
- B. Adhesives (Cements): Waterproof, stabilized type as recommended by flooring manufacturer. Asphalt emulsions and other non-waterproof types not acceptable. Where manufacturer insists on use of their adhesives for warranties to be effective, use only their products.
- C. Concrete Slab Primer and Crack Filler: Non-staining type as recommended by flooring manufacturer.
- D. Floor cleaner: Commercial floor cleaner as recommended by flooring manufacturer such as "C-410" by Armstrong, Flintkote "Floor Cleaner" or Hillyard "Super Shine-All".
- E. Floor sealer: Commercial floor cleaner as recommended by flooring manufacturer such as "C-410" by Armstrong, Flintkote "Floor Cleaner" or Hillyard "Super Shine-All".

## 2.6 UNDERLAYMENT & LEVELING COMPOUNDS

- A. Latex Underlayment: As recommended for use on concrete floors by resilient flooring manufacturers and equal to Armstrong "S-105", Silpro "Pro-Finish" or "Lev-L-Astic" by Allied.
- B. Cementitious leveling materials: Provide materials suitable for application depending upon conditions such as existing unacceptable slabs, or wood flooring or cut-back mastics. Appropriate products include: "Masco Latex Cement" latex admix", "Mascrete Latex Flooring Cement", "Silflo 200 Self-Leveler" mixed with C-21 Acrylic, all by Silpro Masonry Systems of Ayer MA or comparable products by Ardex Inc. or approved equals. Provide products which can be feathered to zero and either trowel applied or self-leveling.

## PART 3 EXECUTION

### 3.1 INSPECTION & TESTING

- A. Examine the areas and conditions under which resilient flooring and accessories are to be installed. Ensure slabs are sufficiently cured. Notify construction manager in writing of any unsatisfactory conditions with are not covered as part of the work of this section.
- B. Verify that subfloors/underlayments are dry, clean and smooth, and are free of paint, varnish, excessive adhesive residues, solvents, wax, oil and other foreign matter. Do not proceed with installation of resilient flooring if conditions exist which would impair the timely completion or satisfactory performance of the completed installation.
- C. Use manufacture recommend moisture meters or carry out specified bond tests.
- D. Perform tests to ensure slabs and cementitious underlayments are free of any moisture which could adversely affect bonding of resilient materials to substrate. And the following:
  1. Test substrates and submit results in writing along with manufacturer maximum recommended moisture recommendations for finishes being applied
  2. Moisture Testing/ chloride testing: Perform anhydrous calcium chloride test, ASTM F 1869. Proceed with

- installation only after substrates do not exceed a maximum moisture-vapor-emission rate of 3 lb of water/1000 sq. ft. in 24 hours.
3. Moisture meter testing: Comply with ASTM F2170-02 Probe Test for determining relative humidity. Use Wagner Rapid RH probes, unless otherwise approved.
  4. Radio Frequency testing: Where requested, or required, test floor slabs in compliance with ASTM F2170-02 Radio Frequency Method.
- E. Alkalinity: Test pH and comply with manufacturer recommendations and requirements. Perform pH tests on concrete floors regardless of the age or grade level. If pH is greater than manufacture requirements, neutralize slab before beginning installation. In general pH requirements included:
1. Enhanced vinyl tile: pH range of 7 and 9.
  2. Flocked resilient floors: pH less than 10.
  3. Other floors: As per manufacturer.
- F. For rigid long span resilient plank units: Measure floor and slab flatness and levelness according to ASTM E 1155 and submit results in writing.
- G. Beginning work **shall constitute acceptance** of substrate surfaces as satisfactory for proper installation of resilient materials.

### 3.2 PREPARATION

- A. Prepare substrates according to ASTM F710, and the provisions below.
- B. New construction: Verify that floors are constructed to specified tolerances with no variation greater than 1/8 inch in 10 feet; ensure concrete slabs are 21 days old or older and up to required strengths.
- C. Verify existing floor conditions to receive resilient flooring. As part of the work of this Section correct imperfections, dips and rises with suitable underlayment of approved type.
- D. Floors to receive resilient flooring shall be finished even and level. Plane and flatness of floor shall be free of perceptible changes of level or line which in the opinion of the Architect adversely affect the appearance or function of the work.
- E. Fill all cracks in subsurfaces with specified crack filler.
- F. Apply latex underlayment at intersections of resilient flooring with carpet and where required to comply with specified requirements. Taper for a minimum length of 3 feet from the intersection joint. Finished application shall permit a smooth, level intersection of carpet and resilient surfaces.
- G. Prior to laying flooring, broom clean **and vacuum** surfaces to be covered. Remove dirt, oil, grease, sand, particles, bumps, ridges and surface imperfections or other foreign matter from surfaces to be covered.

### 3.3 RESILIENT FLOORING INSTALLATION PROCEDURES - GENERAL

- A. Install materials in accordance with Armstrong's "Guaranteed Installation Systems Guide Product F-5061" current edition, and these specifications and applicable manufacturers' instructions, and as follows:
  2. Install flooring after finishing operations, including painting have been completed and permanent heating system is operating. Moisture content of concrete slabs, building air temperature and relative humidity must be within limits recommended by flooring manufacturer.
  3. Place flooring with adhesive cement in strict compliance with manufacturer's recommendations. Butt tightly to vertical surfaces, thresholds, nosings and edgings. Scribe as necessary around obstructions and to produce neat joints, laid tight, even, and straight. Extend flooring into toe spaces, door reveals, and into closets and similar openings.
  4. Maintain reference marks, holes or openings that are in place or plainly marked for future cutting by repeating on finish flooring as marked on subfloor. Use chalk or other non-permanent marking device.
  5. Install flooring on covers for telephone and electrical ducts, and other such items as occur within finished floor areas. Maintain overall continuity of color and pattern with pieces of flooring installed in these covers. Tightly cement edges to perimeter of floor around covers and to covers.
  6. Tightly cement flooring to subbase without open cracks, voids, raising and puckering at joints, telegraphing of adhesive spreader marks, or other surface imperfections.

### 3.4 LAYING SHEET GOODS

- A. Allow product to relax before starting installation.
- B. Lay sheet goods using method to produce best results for the application such as direct, straight, or pattern scribing. Match patterns and shapes indicated, if any. Provide feature strips and borders where required. Check squareness of space. Do not layout more adhesive than necessary for the time available to lay work. Verify seaming method appropriate to material being used; check edge thicknesses to ensure good match. Ensure full adhesion across entire face. Conduct work to prevent unnecessary traffic over floor during and after installation.

### 3.5 INSTALLATION OF RESILIENT BASE AND ACCESSORIES

- A. Comply with the following:
  - 1. Apply resilient base to walls, columns, pilasters, casework and other permanent fixtures in rooms or areas where base is required. Install base behind back and sides of equipment not build into place. Install base in as long lengths as practicable, using rolls. Tightly bond base to backing throughout the length of each piece, with continuous contact at horizontal and vertical surfaces. Install with tight butt joints with no joint widths greater than 1/64 in.
  - 2. On masonry surfaces, or other similar irregular surfaces, fill voids along top edge of resilient wall base with manufacturer's recommended adhesive filler material.
  - 3. Top-set base: Apply adhesive and firmly adhere to wall surfaces. Press down so that bottom cove edge follows floor profile. Form corners by heat bending. Scribe base accurately to abutting materials.
  - 4. Place resilient edge strips tightly butted to flooring and secure with adhesives. Install edging strips at all unprotected edges of flooring unless otherwise shown.
  - 5. Immediately clean excess adhesive from all and floor surfaces.

### 3.6 INSTALLATION OF RUBBER TILE

- A. Comply with manufacturer's instructions and recommendations. Note that floor must be dry laid before installation of adhesive. Comply with the following:
  - 1. Dry lay tile prior to installing with adhesive. After entire floor has been dry laid, view the room under normal lighting conditions and inspect for color acceptance and any defects that might occur. It is the installers' responsibility to bring any discrepancy to the appropriate person before adhesive installation begins.
  - 2. Spread adhesive according to directions on adhesive pail, paying close attention to spread rate, open time and working time. Comply with manufacturer's environmental conditions such as temperature, humidity, direct sunlight).
  - 3. Place tiles in adhesive tightly together but do not push or slide together in order prevent seepage through seams.
  - 4. Periodically pick up a tile during installation to make sure proper adhesive transfer is being made. Use a kneeling boards if working directly on top of tile.
  - 5. Roll the floor after 30 minutes with a 100 lb roller. Repeat rolling again after 60 minutes. Roll the floor in two directions. Hand roll all areas which cannot be reached with the large roller. Correct uneven joints by sand bagged overnight; unacceptable joints shall be removed and work replaced with new, acceptable installation.
  - 6. Remove adhesive on tiles or seams while still wet, leaving no residue. Remove tiles with dry adhesive and replace with new work.
  - 7. Restrict foot traffic on floor for at least 12 hours. Do not allow heavy foot traffic or rolling loads on floor for a minimum of 72 hours after completion of installation.

### 3.7 CLEANING, AND PROTECTION

- A. Comply with manufacturer recommendations. Do not clean, polish or wax tiles where manufacturer does not recommend same. In general, comply with the following:
  - 1. Setting Period: Allow resilient flooring to set for at least five days without traffic before beginning cleaning operations.
  - 2. Cleaning: At end of setting period, wash resilient floors with diluted commercial floor cleaner and rinse thoroughly. Clean off all product labels, footprints and other dirt or marks.
  - 3. Initial Waxing: Apply two coats of buffable commercial floor wax, of a kind recommended by flooring manufacturer for VCT and applicable products, and buff to a high shine.
  - 4. Initial Sealing for rubber/cork tile: Apply coats as recommended by manufacturer.

- B. Protection: Protect resilient flooring until acceptance.
- C. Maintenance: Instruct Owner personnel of proper maintenance procedures for all installed products.
- D. Protection: Protect resilient flooring until acceptance.
- E. Maintenance: Instruct Owner personnel of proper maintenance procedures for all installed products.

**END OF SECTION**

## **SECTION 09 84 11 – COMPOSITE SOUND CONTROL PANELS [TECTUM]**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related Documents: All Contract Documents, including Drawings, General and Supplementary Conditions and Division 1 General Requirements apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Sound absorptive panels, cementitious wood fiber plank type [aka Tectum].
  - 2. Fabrication.
  - 3. Installation.
  - 4. Ceiling panels.
- C. Extent: Direct applied ceiling system.

#### 1.2 SUBMITTALS

- A. Comply with Division 01 and submit:
  - 1. Product Data: For each type of panel, edge, core material and mounting indicated.
  - 2. Shop Drawings: For acoustical wall panels. Include mounting devices and details; details at head, jamb and sill conditions and connections at all abutting surfaces and intersections. Include elevations and pattern matching. Shop drawings shall be based on and include field measurements.
  - 3. Samples: For initial selection, submit each type of material available from full manufacture's range. For verification submit actual products to be used in the work from initial selections.:
    - a. Panel edge: 12 inch long sample showing profile, corner and finish.
    - b. Core material: 12 inch square sample showing corner.
    - c. Mounting device[s]: Full size sample.
    - d. Sample panel: 18 inch square panel max. showing joints and mounting methods.
  - 4. Maintenance Information: Where applicable, submit two copies of maintenance and service information for incorporation into Project Maintenance Manual specified in Division 1 - General Requirements.

#### 1.3 QUALITY ASSURANCE

- A. Fabricator qualifications: Fabricator / supplier with not less than 3 years experience.
- B. Fire Test Response characteristics: Provide acoustical panels having surface burning test results determined per ASTM E 84 by UL or another testing laboratory acceptable to authorities having jurisdiction as follows:
  - 1. Class: A or 1.
  - 2. Flame spread index: 25 or less.
  - 3. Smoke developed index: 450 or less.
- C. Warranty: Manufacture standard 30 year warranty against sagging and warping.

### **PART 2 - PRODUCTS**

#### 2.1 SOUND ABSORPTIVE PANELS – CEMENT/ WOOD FIBER COMPOSITE

- A. Acceptable manufacturer: Armstrong World Industries, Inc. Tectum product.
- B. Wall/ceiling Panel: Provide flat wall or ceiling, direct-mount, removable acoustic panels with, acoustically rated, with a Class A fire rating.
  - 1. Type: As shown, if not, Standard Tectum interior panels.

- C. Panel Configuration:
  - 2. Material: Aspen wood fibers bonded with inorganic hydraulic cement.
  - 3. Thickness: As shown, but not less than 1.5 inches.
  - 4. Edge: As shown, if not, Beveled (long side) / Square (short side).
  - 5. Width: As shown, if not, nominal 48 inches square.
  - 6. Length: 48 inches.
  - 7. Finish:
    - a. Factory finished,
    - b. Color: As selected from available range including custom color.
    - c. Product type: Suitable for indicated use, interior use. .
  - 8. Mounting Style: As shown, if not as recommended by manufacturer for application, to achieve indicated NCR rating.
    - a. Acoustical performance: As shown, if not, NRC number of 0.85 or better.
  - 9. Provide manufacture recommended type of fasteners with painted heads and of non-corrosive coated metal.
  - 10. Dimensional stability: Dimensional Stability: HumiGuard Plus.

## 2.2 METAL SUSPENSION SYSTEMS

- A. Where system is suspended, provide manufactures recommended suspension system as given below.
- B. Armstrong Drywall Suspension Systems all main beams and cross tees shall be commercial quality hot-dipped galvanized steel
  - 1. Main Beams: manufactured main beam- 1-1/2" knurled face with ScrewStop™ reverse hem by 1-11/16 inches high by 144 inches long with factory punched cross tee routs and hanger wire holes and SuperLock™ main beam clip for a strong secure connection and fast accurate alignment. Heavy-duty performance per ASTM C635.
  - 2. Cross Tee: manufactured cross tee - 1-1/2" knurled face with ScrewStop™ reverse hem by 1-1/2 inches high by (50), (48), (36), (26), (24), (14) inches long with factory punched cross tee routs and hanger wire holes and XL stake on clip for a strong secure connection.
- C. Wall Molding: manufactured knurled face angle molding. Locking Angle molding pre-engineered locking tabs punched 8 " on center - 1-1/4 inch by 1-1/4 inch by 144 inches in length.
- D. Mounting System & Devices: Concealed metal "Z" clips to lock panels in place but provide step by step removal where required.
  - 1. At concealed locations provide slotted pan head cadmium plated steel sheet metal screws in appropriate size.

## PART 3 - EXECUTION

### 3.2 GENERAL

- A. Comply with the provisions of Section 01 70 00 - including:
  - 2. Inspection and examination. Tolerances and measurement.
  - 3. Approvals, inspections and filed quality control.
  - 4. Layout. Adjusting.
  - 5. Cleaning. Protection.
- B. Do not proceed with installation until all wet work such as concrete, terrazzo, plastering and painting has been completed and thoroughly dried out, unless expressly permitted by manufacturer's printed recommendations.

### 3.3 PREPARATION

- A. Comply with manufacture recommendations and the following:
  - 1. Measure each wall area and establish layout of wall units.
  - 2. Coordinate panel layout with mechanical and electrical fixtures.
  - 3. Coordination: Furnish layouts for preset inserts, clips, and other ceiling anchors whose installation is specified in other sections.
  - 4. Furnish concrete inserts and similar devices to other trades for installation well in advance of time needed for coordination of other work.

### 3.4 INSTALLATION

- A. Ensure that all necessary blocking and supports are installed to provide adequate anchorage. Install work plumb, level, square and securely fastened to backings and supports with recommended fasteners. Framing of recessed items shall be coordinated with drywall subcontractor. Protect items from scratches and mars. Touch up minor scratches. Adjust to be true and level and tight to wall surfaces. Scribe wooden components to surfaces and edges.
- B. Tolerances: Acoustical panels shall be plumb, plane, level and butted together within 1/16 inch or less of tolerance.
- C. Clean exposed surfaces of acoustical ceilings, including trim, edge moldings, and suspension members. Comply with manufacturer's instructions for cleaning and touch up of minor finish damage. Remove any Tectum panels that cannot be successfully cleaned and or repaired. Replace with new product to eliminate evidence of damage.

**END OF SECTION**



## **SECTION 09 91 12 - EXTERIOR PAINTING**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Related documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing for exterior substrates:
  - 1. Surface preparation.
  - 2. Application of prime and finish paint systems.
- C. Extent: Priming and finishing, without limitation include:
  - 1. Touch up of shop coats provided under other Sections unless specifically included in that Section.
  - 2. Finish painting of exposed piping, conduit, exposed raceways, metal hardware, exposed equipment including rooftop equipment supplied under mechanical and electrical trades, when such items have not been factory pre-painted.
  - 3. Touch up of factory finished items where permitted.
- D. Painting not included:
  - 1. Pre-finished items, only when such items are chrome plated, stainless steel, or a finish which has been specifically called for herein.
  - 2. Finish metal surfaces such as chrome, bronze, and stainless steel.

#### **1.2 SUBMITTALS**

- A. Product Data: Literature for each type of product, including:
  - 1. Preparation requirements.
  - 2. Application instructions.
  - 3. Manufacturer's specifications, with paint label analysis.
- B. Color charts/packs: 2 copies of full range of colors with each type of coating submitted. Use compact pack of color chips when available
- C. Samples for Initial Selection: For each type of topcoat product.
- D. Samples for Verification: For each type of paint system and each color and gloss of topcoat.
  - 1. Submit Samples on rigid backing, 8 inches (200 mm) square.
  - 2. Step coats on Samples to show each coat required for system.
  - 3. Label each coat of each Sample.
  - 4. Label each Sample for location and application area.

#### **1.3 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.

#### **1.4 QUALITY ASSURANCE**

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

#### **1.5 DELIVERY, STORAGE, AND HANDLING**

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.

## 1.6 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
  - 1. Benjamin Moore [MOR]
  - 2. Sherwin Williams Co. [S-W] [includes Pratt & Lambert]
  - 3. Duron, Inc. [DUR]
  - 4. Pittsburgh Paints PPG] (includes Porter.)
  - 5. Tnemec Company, Inc. [TNE]
  - 6. DuPont Nemours Co. [DuP]
  - 8. Approved equal.

### 2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
  - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- D. Colors: Provide colors indicated or scheduled, if not, as follows:
  - 1. As selected by Architect from manufacturer's full range
  - 2. Match Architect's samples.
  - 3. Percent of surface area may be painted with deep tones: **20%**
    - a. 10%
    - b. 20%
    - c. 30%

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
  - 1. Concrete: 12 percent.
  - 2. Masonry (Clay and CMU): 12 percent.
  - 3. Wood: 15 percent.
  - 4. Portland Cement Plaster: 12 percent.
  - 5. Gypsum Board: 12 percent.
- C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.
- D. Exterior Gypsum Board Substrates: Verify that finishing compound is sanded smooth.

- E. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- F. Proceed with coating application only after unsatisfactory conditions have been corrected.
  - 1. Application of coating indicates acceptance of surfaces and conditions.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."

### 3.4 BACK PRIMING

- A. Unless specifically required to be provided by another section, prime all 6 of exterior wood before erection. Seal the backs of panels that might cup due to being finished only on one face.
- B. At the contractor's option, but strongly recommended by the Architect, perform as much backpriming as possible in the shop or manufacturing facility.

### 3.5 EXTERIOR PAINTING SCHEDULE – NEW CONSTRUCTION / METAL

- A. All Ferrous Metal Surfaces; Galvanized and Non-Galvanized (Unprimed):
  - Coat 1: Tnemec "Hydro-Zinc" Series 94H20 (min. 2.5 mils DFT).
  - Coat 2: Tnemec "Typoxy" Series 27WB (min. 3.0 mils DFT).
  - Coat 3: Tnemec "UVX" Series 740/750 (min. 3.0 mils DFT).
- B. All Ferrous Metal Surfaces (Shop Primed):
  - Coat 1: Tnemec "Typoxy" Series 27WB (min. 3.0 mils DFT).
  - Coat 2: Tnemec "UVX" Series 740 /750 (min. 3.0 mils DFT).
  - Coat 3: Tnemec "UVX" Series 740 /750 (min. 3.0 mils DFT).
- C. All Galvanized Metals Surfaces: Unprimed.
  - Zinc Touch-Up: Tnemec "Hydro-Zinc" Series 94H20 (min. 2.5 mils DFT) after SSPC-SP11 Field Prep
  - Coat 2: Tnemec "Typoxy" Series 27WB (min. 3.0 mils DFT).
  - Coat 3: Tnemec "UVX" Series 740/750 (min. 3.0 mils DFT).

### 3.6 EXTERIOR PAINTING SCHEDULE – NEW & EXISTING CONSTRUCTION / MASONRY & CONCRETE

- A. Concrete and Masonry Unit Surfaces to Paint (Smooth):
  - Coat 1: Tnemec "Tneme-Crete" Series 52 Flat (min. 8-10 mils DFT).
  - Coat 2: Tnemec "Tneme-Crete" Series 52 Flat (min. 8-10 mils DFT).
- B. Ground Face CMU Surfaces to Seal (RTV Silicone rubber repellent/anti-graffiti): only if shown on dwgs.
  - Coat 1: Tnemec/Chemprobe "Dur-A-Pel GS" Series V626 (65-85 sf/gal).
  - Coat 2: Tnemec/Chemprobe "Dur-A-Pel GS" Series V626 (65-85 sf/gal).Masonry: 28 day cure or more, washed, rinsed, dried and tested.

**END OF SECTION**

## SECTION 09 91 22 - INTERIOR PAINTING

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Related documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing for interior substrates:
  - 1. Surface preparation.
  - 2. Application of prime and finish paint systems.
- C. Extent: Priming and finishing, without limitation include:
  - 1. Touch up of shop coats provided under other Sections unless specifically included in that Section.
  - 2. Finish painting of exposed piping, conduit, electrical panels, exposed raceways, metal hardware, radiator covers, hangers, exposed ductwork and equipment supplied under mechanical and electrical trades, when such items have not been factory pre-painted.
  - 3. Touch up of factory finished items where permitted.
  - 4. Painting plywood backboards for electrical and telephone equipment.
  - 5. Re-painting indicated existing surfaces.
  - 6. Paint removal and re-painting indicated existing painted metal surfaces.
- D. Painting not included:
  - 1. Pre-finished items, only when such items are chrome plated, stainless steel, acoustical tile, or a finish which has been specifically called for herein.
  - 2. Concealed surfaces. "Concealed" here means the insides of shafts, crawl spaces, furred areas, utility tunnels, above hung ceilings and the utilities running in them unless specifically required to be painted.
  - 3. Finish metal surfaces such as chrome, bronze, and stainless steel.
  - 4. Utility piping in Mechanical Rooms.

#### 1.2 DEFINITIONS

- A. Gloss Level: According to ASTM D 523.

#### 1.3 ACTION SUBMITTALS

- A. Product Data: Literature for each type of product, including:
  - 1. Preparation requirements.
  - 2. Application instructions.
  - 3. Manufacturer's specifications, with paint label analysis.
- B. Color charts/packs: 2 copies of full range of colors with each type of coating submitted. Use compact pack of color chips when available.
  - 1. Not required where paint colors are schedule by architect on drawings.
- C. Product List: For each product indicated, include the following:
  - 1. Cross-reference to paint system and locations of application areas. Use same designations indicated on Drawings and in schedules.
  - 2. Printout of current "MPI Approved Products List" for each product category specified, with the proposed product highlighted.
  - 3. VOC content.

#### 1.4 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.
  - 1. Paint: 5 percent, but not less than 1 gal. of each material and color applied.

1.5 QUALITY ASSURANCE

- A. Mockups: Apply mockups of each paint system indicated and each color and finish selected to verify preliminary selections made under Sample submittals and to demonstrate aesthetic effects and set quality standards for materials and execution.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
1. Maintain containers in clean condition, free of foreign materials and residue.
  2. Remove rags and waste from storage areas daily.

1.7 FIELD CONDITIONS

- A. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- B. Do not apply paints in snow, rain, fog, or mist; when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

**PART 2 - PRODUCTS**

2.1 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, provide products by the following:
1. Benjamin Moore [MOR]
  2. Sherwin Williams Co. [S-W] [includes Pratt & Lambert]
  3. Duron, Inc. [DUR]
  4. Pittsburgh Paints PPG] (includes Porter.)
  5. Tnemec Company, Inc. [TNE]
  6. DuPont Nemours Co. [DuP]
  7. Approved equal.

2.2 PAINT, GENERAL

- A. MPI Standards: Provide products that comply with MPI standards indicated and that are listed in its "MPI Approved Products List."
- B. Material Compatibility:
1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- C. VOC Content: Provide materials that comply with VOC limits of authorities having jurisdiction.
- D. Colors: Provide colors indicated or scheduled, if not, as follows:
1. As selected by Architect from manufacturer's full range
  2. Match Architect's samples.
  3. Percent of surface area may be painted with deep tones: **20%**
- E. VOC Content: Products shall comply with VOC limits of Division 01, of authorities having jurisdiction and, for interior paints and coatings applied at Project site, the following VOC limits, exclusive of colorants added to a tint base, when calculated according to 40 CFR 59, Subpart D (EPA Method 24)].
1. Flat Paints and Coatings: 50 g/L.
  2. Nonflat Paints and Coatings: 150 g/L.
  3. Dry-Fog Coatings: 400 g/L.
  4. Primers, Sealers, and Undercoaters: 200 g/L.

5. Anticorrosive and Antirust Paints Applied to Ferrous Metals: 250 g/L.
6. Zinc-Rich Industrial Maintenance Primers: 340 g/L.
7. Pretreatment Wash Primers: 420 g/L.
8. Floor Coatings: 100 g/L.
9. Shellacs, Clear: 730 g/L.
10. Shellacs, Pigmented: 550 g/L.

- F. Low-Emitting Materials: Interior paints and coatings shall comply with the testing and product requirements of the California Department of Health Services' "Standard Practice for the Testing of Volatile Organic Emissions from Various Sources Using Small-Scale Environmental Chambers."

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of the Work.
- B. Maximum Moisture Content of Substrates: When measured with an electronic moisture meter as follows:
1. Concrete: 12 percent.
  2. Masonry (Clay and CMU): 12 percent.
  3. Wood: 15 percent.
  4. Portland Cement Plaster: 12 percent.
  5. Gypsum Board: 12 percent.
- C. Portland Cement Plaster Substrates: Verify that plaster is fully cured.

#### **3.2 PREPARATION**

- A. Comply with manufacturer's written instructions and recommendations in "MPI Manual" applicable to substrates and paint systems indicated.
- B. Remove hardware, covers, plates, and similar items already in place that are removable and are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection.
- C. Clean substrates of substances that could impair bond of paints, including dust, dirt, oil, grease, and incompatible paints and encapsulants.
1. Remove incompatible primers and reprime substrate with compatible primers or apply tie coat as required to produce paint systems indicated.
- D. Concrete and masonry surfaces preparation scheduled for painting: Provide work under Section 03 01 06.2
- E. Concrete Substrates: Remove release agents, curing compounds, efflorescence, and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces to be painted exceeds that permitted in manufacturer's written instructions.
- F. Masonry Substrates: Remove efflorescence and chalk. Do not paint surfaces if moisture content or alkalinity of surfaces or mortar joints exceeds that permitted in manufacturer's written instructions.
- G. Steel Substrates: Remove rust, loose mill scale, and shop primer if any. Clean using methods recommended in writing by paint manufacturer but not less than the following:
1. SSPC-SP 2, "Hand Tool Cleaning."
  2. SSPC-SP 3, "Power Tool Cleaning."
  3. SSPC-SP 7/NACE No. 4, "Brush-off Blast Cleaning."
  4. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."

- H. Shop-Primed Steel Substrates: Clean field welds, bolted connections, and abraded areas of shop paint, and paint exposed areas with the same material as used for shop priming to comply with SSPC-PA 1 for touching up shop-primed surfaces.
  - I. Existing Steel Field Finishes Substrates with topcoats: For existing painted steel surfaces to be repainted, remove paint to bare metal using mechanical and chemical means to achieve results equal to:
    - 1. SSPC-SP 11, "Power Tool Cleaning to Bare Metal."
    - 2. Prime bare metal immediately.
  - J. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.
  - K. Aluminum Substrates: Remove loose surface oxidation.
  - L. Wood Substrates:
    - 1. Scrape and clean knots. Before applying primer, apply coat of knot sealer recommended in writing by topcoat manufacturer for exterior use in paint system indicated.
    - 2. Sand surfaces that will be exposed to view, and dust off.
    - 3. Prime edges, ends, faces, undersides, and backsides of wood.
    - 4. After priming, fill holes and imperfections in the finish surfaces with putty or plastic wood filler. Sand smooth when dried.
    - 5. To prevent rust showing from nail heads, nails shall be counter-sunk, except at siding. Nail holes and other openings should then be spot-primed with primer before puttying or caulking is done. After putty is set, prime complete surface.
  - M. Cotton or Canvas Insulation Covering Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.
  - N. Plastic Trim Fabrication Substrates: Remove dust, dirt, and other foreign material that might impair bond of paints to substrates.
  - O. Existing Concrete & Masonry: Prepare and correct minor defects, cracks, ridges, holes, and the like under the work of this section. Make minor repairs where required to produce a smooth, flat even surface.
  - P. Existing Paint: Prepare and correct minor defects, cracks, ridges, holes, and the like under the work of this section. Make minor repairs where required to produce a smooth, flat even surface. Before paint application, wash surfaces with TSP [tri-sodium phosphate] and allow to dry. Remove dust or other defects prior to paint application. Feather edges and prime areas as required, including multiple times, to ensure no defects, edges, ridges or removed paint areas are evident in the final application.
- 3.3 APPLICATION
- A. Apply paints according to manufacturer's written instructions and recommendations in "MPI Manual."
- 3.4 BACK PRIMING
- A. Unless specifically required to be provided by another section, prime all 6 of exterior wood before erection. Seal the backs of panels that might cup due to being finished only on one face.
  - B. At the contractor's option, but strongly recommended by the Architect, perform as much backpriming as possible in the shop or manufacturing facility.
- 3.5 CLEANING AND PROTECTION
- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
  - B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
  - C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
  - D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

3.6 SHEENS

- A. Paint sheens given below are provisional. Obtain written approval from Architect for each surface sheen required.

3.7 PAINTS SCHEDULED ON DRAWINGS

- A. Where drawings list or schedule particular products, use those products or approved equals with exact color matches. Intent of paint schedule below is to establish qualities levels, not to identify particular paint manufactures.

3.8 INTERIOR PAINTING SCHEDULE – NEW CONSTRUCTION / METAL

- A. All Ferrous Metal Surfaces, Galvanized and Non-Galvanized (Unprimed):

Coat 1: Tnemec "Tneme-Zinc" Series 90-97 (min. 3.0 mils DFT).

Coat 2: Tnemec "Enduratone" Series 23 (min. 2.0 mils DFT).

Coat 3: Tnemec "Enduratone" Series 23 (min. 2.0 mils DFT).

- B. Hollow Metal Doors, Latex waterbased system x semi-gloss:

Coat 1: S-W Pro Industrial Pro-Cryl® Primer, B66-310 Series (2-4 mils dry)

Coat 2: S-W ProMar® 200 Latex Semi-Gloss, B31W12200 Series

Coat 3: S-W ProMar® 200 Latex Semi-Gloss, B31W12200 Series

3.9 INTERIOR PAINTING SCHEDULE – NEW CONSTRUCTION / DRYWALL

- A. Gypsum board ceilings - Latex / flat sheen

Coat 1: S-W ProMar 200 Zero VOC Latex Primer, B28W2600 L.

Coat 2: S-W ProMar 200 Zero VOC Latex Flat, B30-2600 Series, 1.6 mils dry

Coat 3: S-W ProMar 200 Zero VOC Latex Flat, B30-2600 Series, 1.6 mils dry

- B. Gypsum board walls - Latex / Egg-shell sheen:

Coat 1: SW " ProMar 200" Zero VOC Vinyl Acrylic Primer Sealer, 1.5 DFT, B28W2600.

Coat 2: SW " ProMar 200 HP" Zero VOC Interior Latex Eggshell, 1.6 DFT, B20-1900 Series.

Coat 3: SW " ProMar 200 HP" Zero VOC Interior Latex Eggshell, 1.6 DFT, B20-1900 Series.

- C. Gypsum board walls - Latex / Egg-shell sheen / Dark accent colors:

Coat 1: SW "Premium Wall & Wood Interior Latex Primer", B28W08111 1.8 DFT. Tint primer to shade gray.

Coat 2: SW "Emerald Interior Latex Satin", 1.7 DFT, K37 Series

Coat 3: SW "Emerald Interior Latex Satin", 1.7 DFT, K37 Series

- D. Gypsum board walls - Latex / Semi-gloss sheen:

Coat 1: SW " ProMar 200" Zero VOC Vinyl Acrylic Primer Sealer, 1.5 DFT, B28W2600.

Coat 2: S-W "ProMar 200" Zero VOC Latex Semi-Gloss, 1.6 mils DFT., B31-2600 Series.

Coat 3: S-W "ProMar 200" Zero VOC Latex Semi-Gloss, 1.6 mils DFT., B31-2600 Series.

3.10 PAINTING SCHEDULE: EXISTING SURFACES

- A. In addition to the new surfaces specified to be painted, paint all existing surfaces to remain or which are affected by alteration work. In general, such surfaces are indicated on the finish schedule. Such surfaces shall be given at least one finish coat; where one coat will not cover, provide 2 finish coats. Match quality of materials specified for new work. Touch-up work shall match the existing colors (except as otherwise directed) and shall be applied so that proper blending is assured as approved by the Architect.

- B. Refer to paragraph "PREPARATION " for preparing and spot priming existing surfaces. Such priming is not considered a coat of paint.

- C. In general, where surfaces are exposed to base material, use systems specified for new work.

**END OF SECTION**



## SECTION 10 14 44 – INTERIOR SIGNAGE

### PART 1 - GENERAL

#### 1.1 SUMMARY

- A. Related Documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section Includes, without limitation, providing:
  - 1. Interior signage.
  - 2. Design/build fabrication.
  - 3. Signage accessories.
- C. Intent:
  - 1. Intent of this section is for the Contractor to provide all required space signage, room capacity signage, and accessibility signage per Owner's standard layout and designs and as required by Building and Accessibility codes.
  - 2. The Owners design standards and required layouts are attached to this section.
  - 3. Unless part of the FF&E budget, and where requested or otherwise indicated and if not, signage is shown on drawings, carry an allowance with separate line items to provide design/build:
    - a. Code mandated signage.
    - b. Occupied and/or office space name identification signage.
    - c. Service space signage.
    - d. Elevator stair access signage.
- D. Extent, without limitation, includes: As shown, if not per intent and as follows:
  - 1. Fire evacuation signs, including at elevator lobbies.
  - 2. Stair and stair door signs.
  - 3. Service & Utility rooms required to be signed by code.
  - 4. Parking clearance signs.
  - 5. Fire extinguisher signs.
  - 6. International handicap access logo and signage
  - 7. Other signage mandated by code
  - 8. Other signage shown on the drawings
  - 9. Toilet room panels signs.
  - 10. Directory locator panel signs.
- E. Signage not mandated by code [and/or provided under FF&E Contract].
  - 1. Confer with Architect and Owner about extent of work under this contract, and where requested, provide work and pricing for:
  - 2. Residence unit entry panel signs.
  - 3. Office and administrative area signs.
  - 4. Commons area signage.
  - 5. Site signage, not building-mounted.
- F. Related Sections, without limitation, include:
  - 1. Division 26 – Electrical: Power for signs.
  - 2. Section 10 44 20 - Exterior Building Signage.
  - 3. Section 10 44 30 - Field Applied Glass Films.

#### 1.2 SUBMITTALS

- A. Comply with Division 01 General Requirements and submit for approval:
  - 1. Product Data: Manufacturer's literature including installation instructions, use restrictions and limitations
  - 2. Shop Drawings – Provide drawings showing all sign characteristics, locations and conditions.

### 1.3 QUALITY ASSURANCE

- A. Required ADA-compliant signs shall comply with ADA and have Grade 2 Braille duplicating signage text. Text shall be in raised tactile lettering. Height of characters shall comply with applicable requirements.

## **PART 2 - PRODUCTS**

### 2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with specifications and where no other manufacturers are listed below provide products from one of the following:
1. ACE Sign Systems, Inc.
  2. Advance Corporation; Braille-Tac Division.
  3. ASI Sign Systems, Inc.
  4. Best Sign Systems Inc
  5. Approved design/builder fabricator.

### 2.2 SIGN TYPES

- A. Prove interior panel signs with the following features: As shown on drawings, if not, as follows:
1. Type: As shown. Unframed type.
  2. Size: As shown. Unless otherwise shown, 6 inches square.
  3. Typeface: As selected by Architect and Owner.
  4. Braille: in compliance with ADA.
  5. Fastening: Concealed foam tape and silicone adhesive, designed for signage, with consistent thickness.
  6. Up date panels: Removable name plate units. Provide system to permit Owner to create new name plates of consistent visual character and to match type, background color, lettering color and the like of original installation.
- B. Signage criteria for stairs
1. Sign at every floor level landing to identify the stair, floor level, exit level of discharge, and terminus level, and if roof access is available.
  2. Approximately 5' above finish floor
  3. Visible with door open and door closed.
  4. Direction arrows at every landing where exit level is above landing; visible whether door is open or closed.

## **PART 3 - EXECUTION**

### 3.1 GENERAL

- A. Comply with the provisions of Division 01 and in particular, Section 01 70 00, and as follows:
1. Install materials and systems in accordance with manufacturer's instructions, limitations and restrictions and approved submittals. Install materials and systems in proper relation with adjacent construction and with uniform appearance. Coordinate with work of other sections.

### 3.2 INSTALLATION

- A. General: Install signs using mounting methods indicated, according to manufacturer's written instructions, and with the code provisions as adopted by authorities having jurisdiction.
- B. Install sign units level, plumb and at the height indicated, with sign surfaces free from distortion or other defects in appearance. Repair or replace damaged units as directed by the Architect. Cooperate with other trade contractors for installation of sign units to finish surfaces.
- C. Adjust, clean and protect signage until acceptance.

## **END OF SECTION**

## **SECTION 10 19 45 - INTERIOR ENVIRONMENTAL GRAPHICS**

### **PART 1 GENERAL**

#### 1.1 SUMMARY

- A. Provide interior environmental graphics including:
  - 1. Printed graphic sheet panels, or rolls.
  - 2. Fabrication and installation.

#### 1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data and installation instructions for each material and product used.
- B. Shop Drawings: Submit shop drawings indicating material characteristics, details of construction, connections, and relationship with adjacent construction.
- C. Samples: Submit two representative samples of each material specified indicating visual characteristics and finish. Include range samples if variation of finish is anticipated.

#### 1.3 QUALITY ASSURANCE

- A. Comply with governing codes and regulations. Provide products of acceptable manufacturers which have been in satisfactory use in similar service for three years. Use experienced installers. Deliver, handle, and store materials in accordance with manufacturer's instructions.

### **PART 2 PRODUCTS**

#### 2.1 FABRICATOR

- A. Acceptable fabricators include:
  - 1. FastSigns of Waltham; [www.fastsigns.com/](http://www.fastsigns.com/).
  - 2. Boston Banner Printing; [www.bostonbannerprinting.com/](http://www.bostonbannerprinting.com/).
  - 3. Moss, Inc.; [www.mossinc.com/](http://www.mossinc.com/).
  - 4. Approved equal.

#### 2.2 SHEET INTERIOR ENVIRONMENTAL GRAPHICS

- A. Provide self-adhering vinyl sheet in size and layout indicated by Architect, and matching "camera ready" layout. Provide product indicated, if not, as follows:
  - 1. Adhesive vinyl x 4 mil PVC film with UV resistant PVC and dyes or pigments, with removable backing to allow for installation.

### **PART 3 EXECUTION**

#### 3.1 EXAMINATION OF SURFACES

- A. Examine surfaces to receive work. Verify with Contractor that any necessary blocking has been installed in the correct positions. Unsuitable conditions shall be corrected prior to installation of work of this section. Starting work constitutes acceptance of conditions.

#### 3.2 INSTALLATION

- A. Install hangers and the like on wall surface level, plumb, plane and true.
- B. Install panels plumb, plane, true and dead level with joints only in approved locations. Final image shall match artwork color, tonality and layout and be free of without any mis-alignments such as skips, offsets, or repeats. Remove misaligned work and replace with new.
- C. Joints shall be tight, straight and of consistent width.

### 3.3 CLEANUP & PROTECTION

- A. Comply with Division 1.

**END OF SECTION**

## **SECTION 10 51 10 – HDPE LOCKERS**

### **PART 1 - GENERAL**

#### 1.1 SUMMARY

- A. Related documents: Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this Section.
- B. Section includes, without limitation, providing:
  - 1. Multi-tier lockers.
  - 2. High density polyethylene [HDPE] body.
  - 3. Accessories, tops, bases, hardware.

#### 1.2 SUBMITTALS

- A. Product Data: Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for each type of locker and bench.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other Work.
  - 1. Show locker fillers, trim, base, sloping tops, and accessories. Include locker-numbering sequence.
- C. Samples for Initial Selection: Manufacturer's color charts showing the full range of colors available for units with factory-applied color finishes.
- D. Samples for Verification: For the following products, in manufacturer's standard sizes, showing the full range of color, texture, and pattern variations expected. Prepare Samples from the same material to be used for the Work.

#### 1.3 QUALITY ASSURANCE

- A. Source Limitations: Obtain locker units and accessories through one source from a single manufacturer.
- B. Parts and hardware shall be WIC compliant. Box and frame shall be warranted to be structurally sound and free of defects for not less than 3 years. Locks shall be warranted as above for a period of 1 year or more.
- C. Warranty: Manufacturer's 25 year warranty against breakage, corrosion and delamination under normal conditions.

#### 1.4 DELIVERY, STORAGE, AND HANDLING

- A. Do not deliver lockers until spaces to receive them are clean, dry, and ready for locker installation.
- B. Protect lockers from damage during delivery, handling, storage, and installation.

### **PART 2 - PRODUCTS**

#### 2.1 MANUFACTURERS

- A. Manufacturer: Subject to compliance with requirements, provide products by one of the following:
  - 1. Scranton Products.
  - 2. Bradley Group
  - 3. Ideal Products Inc.
  - 4. List Industries.
  - 5. Young Group Ltd.
  - 6. Approved equal.
- B. Locker: basis of design: Scranton Products "Tufftec Lockers".
  - 1. Locker: As shown, if not, as follows:
    - a. Tier: As shown.
    - b. Size: As shown.
    - c. Cubbies: Provide if HDPE cubbies shown.
  - 2. Style: Locker with door and keyed cam lock.

## 2.2 SOLID PLASTIC LOCKER CASE WORK

- A. Grade: Provide casework conforming to applicable provisions of AWI "Custom Grade" requirements, Section 400.
- B. Material: Solid core, molded high density polyethylene (HDPE) with homogeneous color and matte finish texture.
  - 1. Color: As selected by Architect from full range.
- C. Doors and frames:
  - 1. Thickness: As shown, but 1/2" minimum.
  - 2. Cleanability: Dirt or graffiti readily removed with standard industrial cleaners.
  - 3. Frames: Welded to locker box to provide a secure, rigid assembly.
  - 4. Ventilation slots: In doors, manufacturer's standard.
- D. Sides, Tops, Bottoms:
  - 1. Thickness: 3/8 " minimum.
  - 2. Material: white HDPE with a smooth finish.
  - 3. Sides and back of box: Formed from single sheet with fused corners.
  - 4. Top, bottom and dividers: Welded to frame without metal fasteners or dovetail joints.
- E. Top: Provide solid top, type as shown, if not, 10 degree slope.
- F. End panels: Provide finished end panels where required.
- G. Base: Provide custom 4 inch base if shown, if not, 1/2 x 4 inch face HDPE with required blocking and locker support. Support elements to be completely concealed. Recess unit at least 2 inches unless otherwise shown.
- H. Louvers: Provide manufacturer's standing venting.
- I. Filler Panels: Where required, provide straight, corner, spacer and end and double end filler panels to match door faces.
- J. Blocking and Brackets: Loading capacity shall be as follows:
  - 1. Shelves: 35 lbs. per linear foot capacity minimum.
  - 2. Tops: Where accessible for use as storage or not built directly into drywall recess, provide 35 lbs. per linear foot plus a 250 lb. concentrated load at center span.

## 2.3 HARDWARE

- A. Hinges:
  - 1. Type: Heavy-duty, full-length piano hinge.
  - 2. Material: 18 gauge, type 304 stainless steel or clear anodized extruded aluminum.
  - 3. Configuration: wraps around edges of door and frame.
  - 4. Attachment: Screws.
  - 5. Finish: Powder coated to match locker color.
  - 6. Field replaceable: Yes.
- B. Latch Bar
  - 1. Material: 1/2" thick HDPE with smooth finish.
  - 2. Configuration: Runs entire length of door.
  - 3. Attachment: Screws.
- C. Handle:
  - 1. Material: Injection molded plastic.
  - 2. Design: Ergonomic, ADA compliant —
  - 3. Operation force: Less than 5 lbs. of force.
  - 4. Attachment: Through latch bar to door with screws.
- D. Locking: Cam lock with key operation. Provide 2 keys each lock and master key all locks. Provide to labeled master keys. Lock base metal and finish to match typical hardware.

- E. Fasteners: Concealed where practical, where not, stainless steel, slotless-type, security or vandal-resistant exposed screw heads, and self-locking nuts or lock washers for nuts on moving parts. Provide torx head where they are manufacturer standard.

## 2.4 LOCKER ACCESSORIES

- A. Provide accessories shown, if not, as follows:
- B. Hooks: Not required a multi-tier units.
  - 1. Double hook constructed of black polycarbonate. Furnished in 36", 48", 60" and 72" one-tier and 60" and 72" two-tier lockers only. Hook hangs centered under shelves in one-tier and under locker top in two-tier lockers. Secured to shelves and tops with stainless steel screws.
- C. Number Plates: Manufacturer's standard etched, embossed, or stamped, number plates with numerals at least 3/8 inch high. Number lockers in sequence approved. Attach plates to each locker door, near top, centered, with at least two aluminum rivets.

## 2.5 FABRICATION

- A. Comply with AWI standards.
- B. Knocked-Down Construction: Fabricate lockers for minimal, nominal assembly at Project site.
- C. Fabricate lockers square, rigid, and without warp, with faces flat and free of defects or distortion. Make exposed edges free of sharp edges and burrs, and smooth to touch. Connect frame members together to form a rigid, one-piece assembly.

## **PART 3 - EXECUTION**

### 3.1 INSTALLATION

- A. Install lockers and accessories level, plumb, rigid, and flush according to manufacturer's written instructions.
- B. Assemble lockers with standard fasteners, with no exposed fasteners on door faces and face frames.
- C. Anchor lockers to floors and walls at intervals recommended by manufacturer, but not more than 36 inches o.c. Install anchors through backup reinforcing plates where necessary to avoid sheet distortion, using concealed fasteners.
- D. Fit exposed connections of trim, fillers, and closures accurately together to form tight, hairline joints, with concealed fasteners and splice plates.
  - 1. For Recess applications: Attach recess trim to recessed lockers with concealed clips.
  - 2. At Sloped applications: Attach sloping top units to lockers, with closures at exposed ends.
- E. Attach finished end panels with fasteners only at perimeter to conceal exposed ends of non-recessed lockers.

### 3.2 ADJUSTING, CLEANING, AND PROTECTION

- A. Adjust doors and latches to operate easily without binding. Verify that integral locking devices operate properly.
- B. Clean interior and exposed exterior surfaces and polish metal surfaces.
- C. Protect lockers from damage, abuse, dust, dirt, stain, or paint. Do not permit locker use during construction.
- D. Touch up marred finishes, or replace locker units that cannot be restored to factory-finished appearance. Use only materials and procedures recommended or furnished by locker manufacturer.

## **END OF SECTION**

**Section 26 00 00**  
**ELECTRICAL**  
**(FILED SUB-BID REQUIRED)**

**Part 1 GENERAL**

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**1.01 General**

- A. Conditions of the Contract** and all sections of **Division 01**, General Requirements shall be part of this section unless otherwise specifically excluded.
- B.** Examine all conditions as they exist at the project prior to submitting a bid for the work of this SECTION
- C.** Refer to plans and specifications for work affecting this SECTION.

**1.02 Filed Sub-bids**

- A.** Sub-bids shall be submitted for the Work of this Section in accordance with the provisions of M.G.L. c.149 §§44A-J. The time and place for submission of sub-bids are set forth in the **Advertisement**.
- B.** Sub-bidders must be DCAMM Certified in the listed trade and shall include a Current DCAMM sub-bidder Certificate of Eligibility and a signed DCAMM Sub-bidder's Update Statement with the bid
- C.** The Work of this section is shown on Drawings: **E001, E100, E101, E600 in coordination with Architectural Drawings.**

**D. SUB-SUB LISTINGS**

- 1.** Sub sub trades are categories of work within a filed sub bid trade and are indicated in paragraph E on the Form for Sub Bid. If sub-sub trades are requested and identified follow the instructions below. The proposed contract price submitted by the filed sub bidder on the Form for Sub Bid includes the cost of any sub-sub trades.
- 2.** Sub-bidders shall include the appropriate information for any sub-categories in Paragraph E of the Form for Sub-bid.
- 3.** If the filed sub bidder customarily performs the above work with its own workforce the sub-bidder should list its own name and trade, and leave the dollar amount blank.
- 4.** If the filed sub bidder does not customarily perform the above work with its own workforce the sub bidder should list the name of the contractor performing the work, the trade and insert a dollar amount.

**D. SUB-SUB TRADES**

- 1.** Sub-sub bid trades are not required.

**1.03 SCOPE OF WORK**

- A.** The scope of work consists of the installation of all materials to be furnished as shown on drawings 2/A101, E001, E100, E101, E600, and without limiting the generality thereof, consists of furnishing all labor, materials, equipment, plant, transportation, rigging, staging up to 8 feet, appurtenances, and services necessary and/or incidental to properly complete all work as shown on the **ELECTRICAL** drawings, as described in the Specifications, or as reasonably inferred from either, in the opinion of the Architect.



#### **1.04 RELATED WORK SPECIFIED ELSEWHERE**

A. The following related work or materials shall be provided under the designated Sections and coordinated by the Contractor:

1. Division 01                      General Requirements.
2. Division 02                      Existing Conditions
3. Reworking existing assemblies as required to complete new installation.

#### **1.05 ALTERNATES**

**None**

#### **1.06 SUBMITTALS**

A. Attention is directed to Specification Section 01 00 00 Consolidated General Requirements, 1.11.

#### **1.07 RECORD DRAWINGS**

- A. Refer to Specification Section 01 00 00, 1.20 Record Documents.
- B. The marked up As Built Drawings required to be maintained under this section are of Drawings **E101**.
- C. Availability of marked up As Built drawings shall be a prerequisite to scheduling final inspection of this contract and said drawings and original contract documents will be used in checking completion of the work.
- D. Non-availability of marked up As Built drawings or inaccuracies therein may be grounds for cancellation and postponement of any scheduled final inspection by the Architect until the discrepancy has been corrected.

#### **1.08 TEMPORARY HEAT**

- A. Refer to Section 01 00 00, 1.15 Temporary Facilities.
- B. The Contractor shall pay the costs of all fuel and electricity required for temporary heating until substantial completion

#### **1.09 OPERATING AND MAINTENANCE MANUALS**

- A. Refer to Section 01 00 00, 1.23 Project Close Out.
- B. The **ELECTRICAL** subcontractor shall provide the Contractor two (2) sets of operating and maintenance instructions of all electrical equipment furnished and installed under this section.
- C. The Contractor shall collect the operating instructions, bind them into two complete sets and deliver them to the Architect who will check for completeness and deliver them to the Owner.
- D. Delivery of the operating and maintenance manuals shall be a condition precedent to final payment.

#### **1.10 INSTRUCTION OF OWNER'S PERSONNEL**

- A. The **ELECTRICAL** subcontractor shall instruct the Owner's personnel, at the site, in the use and maintenance of equipment installed under this section.
- B. Submission to the Architect of a certificate of compliance to this requirement, signed by the Contractor and the Owner's Representative shall be a condition precedent to final payment.

**1.11 GUARANTEE AND SERVICE**

- A. Notwithstanding any other requirements of this contract, the **ELECTRICAL** Subcontractor shall guarantee the performance of the installation and equipment included in this Section for one year from the date of Substantial Completion as defined in the General Conditions. Should any defects in materials or workmanship appear during this period, they shall be corrected or replaced by the **ELECTRICAL** Subcontractor to the satisfaction of the Architect, and at no expense to the Owner.

**1.12 PERMITS**

- A. The subcontractor's attention is directed to the General Conditions, Fees and Permits.

**1.13 OTHER SECTIONS**

**Part 2 MATERIALS**

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**Part 3 EXECUTION**

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