

**SECTION 00 01 01  
PROJECT TITLE PAGE**

**PROJECT MANUAL**

**FOR**

**GRAND RAPIDS LIBRARY FACADE REPAIR PROJECT**

**CITY OF GRAND RAPIDS**

**140 NE 2ND STREET  
GRAND RAPIDS, MINNESOTA 55744**

**DATE: FEBRUARY 8, 2023**

**PREPARED BY:**

**ENCOMPASS, INC.  
5435 FELTL ROAD  
MINNETONKA, MN 55343**

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ADVERTISEMENT FOR BIDS**

**FROM:**

**1.01 THE OWNER (HEREINAFTER REFERRED TO AS OWNER):**

- A. City of Grand Rapids
- B. Address:  
140 NE 2nd Street  
Grand Rapids, Minnesota 55744

**1.02 AND THE ENGINEER (HEREINAFTER REFERRED TO AS ENGINEER):**

- A. Encompass, Inc.
- B. Address:  
5435 Feltl Rd, Minnetonka, MN 55343

**1.03 TO: POTENTIAL BIDDERS**

- A. Your firm is invited to submit an offer under seal to Owner for construction/repairs of a building located at:  
140 NE 2nd Street  
Grand Rapids, Minnesota 55744
- B. Project: Grand Rapids Library Facade Repair Project
- C. Project Description: Exterior repair project.
- D. Submit your offer on the Bid Form provided. Bidders may supplement this form as appropriate.
- E. Your offer will be required to be submitted under a condition of irrevocability for a period of 30 days after submission.
- F. The Owner reserves the right to accept or reject any or all offers.

**END OF SECTION**

**SECTION 00 21 13  
INSTRUCTIONS TO BIDDERS**

**SUMMARY**

**1.01 DOCUMENT INCLUDES**

- A. Invitation
  - 1. Bid Submission
  - 2. Intent
  - 3. Work Identified in Contract Documents
  - 4. Contract Time
- B. Bid Documents and Contract Documents
  - 1. Availability
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- E. Bid Submission
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- F. Bid Enclosures/Requirements

**1.02 RELATED DOCUMENTS**

- A. Document 01 10 00 - Summary.
- B. Document 00 41 00 - Bid Form.
- C. Document 00 73 00 - Supplementary Conditions:
  - 1. Bond types and values.

**INVITATION**

**2.01 BID SUBMISSION**

- A. Bids signed, executed, and dated will be received at the office of the Engineer at a date to be named later.
- B. Amendments to the submitted offer will be permitted if received in writing prior to bid closing and if endorsed by the same party or parties who signed and sealed the offer.

**2.02 INTENT**

- A. The intent of this Bid request is to obtain an offer to perform work to complete a repair project located at the Grand Rapids Library for a Stipulated Sum contract with provisions for unit price adjustments based on actual quantity of work performed, in accordance with the Contract Documents.

**2.03 WORK IDENTIFIED IN THE CONTRACT DOCUMENTS**

- A. Work of this proposed Contract comprises demolition and repair, including general construction Work.

**2.04 CONTRACT TIME**

- A. Perform the Work within the time stated in Section 00 41 00 - Bid Form.

## **BID DOCUMENTS AND CONTRACT DOCUMENTS**

### **3.01 AVAILABILITY**

- A. Bid Documents may be obtained at the office of Engineer.
- B. Bid Documents are made available only for the purpose of obtaining offers for this project. Their use does not grant a license for other purposes.

### **3.02 EXAMINATION**

- A. Upon receipt of Bid Documents, verify that documents are complete. Notify Engineer should the documents be incomplete.
- B. Immediately notify Engineer upon finding discrepancies or omissions in the Bid Documents.

### **3.03 INQUIRIES/ADDENDA**

- A. Direct questions to the Engineer, email; ben@encompassinc.com.
- B. Addenda may be issued during the bidding period. All Addenda become part of Contract Documents. Include resultant costs in the Bid Amount.
- C. Verbal answers are not binding on any party.

### **3.04 PRODUCT/ASSEMBLY/SYSTEM SUBSTITUTIONS**

- A. General Requirements for Substitution Requests:
- B. Substitution Request Form:
- C. Review and Acceptance of Request:
- D. When a request to substitute a product is made, Engineer may approve the substitution and will issue an Addendum to known bidders.
- E. In submission of substitutions to products specified, bidders shall include in their bid all changes required in the work and changes to Contract Time and Contract Sum to accommodate such substitutions. A later claim by the bidder for an addition to the Contract Time or Contract Sum because of changes in work necessitated by use of substitutions shall not be considered.
- F. The submission shall provide sufficient information to determine acceptability of such products.
- G. Provide complete information on required revisions to other work to accommodate each proposed substitution.
- H. Provide products as specified unless substitutions are submitted in this manner and accepted.
- I. See Section 01 25 00 - Substitution Procedures for additional requirements.

## **SITE ASSESSMENT**

### **4.01 SITE EXAMINATION**

- A. Examine the project site before submitting a bid.

### **4.02 PREBID CONFERENCE**

- A. A pre-bid meeting will be held on site and established at a later date.
- B. All general contract bidders and suppliers are invited. All prime bidders are encouraged to attend the prebid meeting.
- C. Representatives of Engineer will be in attendance.
- D. Information relevant to the Bid Documents will be recorded in an Addendum, issued to Bid Document recipients.

## **QUALIFICATIONS**

### **5.01 EVIDENCE OF QUALIFICATIONS**

- A. To demonstrate qualification for performing the Work of this Contract, bidders may be requested to submit written evidence of financial position and previous experience, license to perform work in the State.

**5.02 SUBCONTRACTORS/SUPPLIERS/OTHERS**

- A. Owner reserves the right to reject a proposed subcontractor for reasonable cause.
- B. Refer to General Conditions.

**BID SUBMISSION**

**6.01 SUBMISSION PROCEDURE**

- A. Bidders shall be solely responsible for the delivery of their bids in the manner and time prescribed.

**6.02 BID INELIGIBILITY**

- A. Bids that are unsigned, improperly signed or sealed, conditional, illegible, obscure, contain arithmetical errors, erasures, alterations, or irregularities of any kind, may at the discretion of the Owner, be declared unacceptable.
- B. Bids are by invitation, only from selected bidders. Bids from unsolicited bidders may be returned.

**BID ENCLOSURES/REQUIREMENTS**

**7.01 PERFORMANCE ASSURANCE**

- A. Accepted Bidder: Provide a Performance bond as described in 00 73 00 - Supplementary Conditions if requested by Owner.
- B. Include the cost of performance assurance bonds in the Bid Amount.

**7.02 BID FORM REQUIREMENTS**

- A. Complete all requested information in the Bid Form.

**7.03 BID FORM SIGNATURE**

- A. The Bid Form shall be signed by the bidder, as follows:
  - 1. Sole Proprietorship: Signature of sole proprietor in the presence of a witness who will also sign. Insert the words "Sole Proprietor" under the signature. Affix seal.
  - 2. Partnership: Signature of all partners in the presence of a witness who will also sign. Insert the word "Partner" under each signature. Affix seal to each signature.
  - 3. Corporation: Signature of a duly authorized signing officer(s) in their normal signatures. Insert the officer's capacity in which the signing officer acts, under each signature. Affix the corporate seal. If the bid is signed by officials other than the president and secretary of the company, or the president/secretary/treasurer of the company, a copy of the by-law resolution of their board of directors authorizing them to do so, must also be submitted with the Bid Form in the bid envelope.

**OFFER ACCEPTANCE/REJECTION**

**8.01 DURATION OF OFFER**

- A. Bids shall remain open to acceptance and shall be irrevocable for a period of thirty (30) days after the bid closing date.

**8.02 ACCEPTANCE OF OFFER**

- A. Owner reserves the right to accept or reject any or all offers.

**END OF SECTION**

**SECTION 00 41 00  
BID FORM**

**THE PROJECT AND THE PARTIES**

**1.01 TO:**

- A. City of Grand Rapids (Owner) c/o First Service Residential  
140 NE 2nd Street  
Grand Rapids, Minnesota 55744

**1.02 FOR:**

- A. Project: Grand Rapids Library Facade Repair Project
- B. Engineer's Project Number: 22-8040-001  
140 NE 2nd Street  
Grand Rapids, Minnesota 55744

**1.03 DATE: \_\_\_\_\_ (BIDDER TO ENTER DATE)**

**1.04 SUBMITTED BY: (BIDDER TO ENTER NAME AND ADDRESS)**

- A. Bidder's Full Name \_\_\_\_\_
  - 1. Address \_\_\_\_\_
  - 2. City, State, Zip \_\_\_\_\_

**1.05 OFFER**

- A. Having examined the Place of The Work and all matters referred to in the Instructions to Bidders and the Bid Documents prepared by the Engineer for the above mentioned project, we, the undersigned, hereby offer to enter into a Contract to perform the Work for the Price below:

- B. We provide the following prices for the Work Items as itemized below:

C.

- 1. REPLACE BUILDING SEALANT: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.
- 2. REPAIR FLASHING AT BAY WINDOWS: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.
- 3. REPAIR CAPSTONES: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.
- 4. RESET OPERABLE WINDOW UNITS: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.
- 5. CLEAN MASONRY AND APPLY REPELLENT: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.
- 6. REPLACE SEALANTS AND GASKETS AT SKYLIGHTS: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.
- 7. SPOT BRICK REPLACEMENT: \_\_\_\_\_ dollars  
(\$ \_\_\_\_\_), in lawful money of the United States of America.

8. SPOT TUCKPOINTING: \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.
9. PAINT LINTELS: \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.
10. MISCELLANEOUS LABOR: \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.
11. RIGGING: \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.
12. MOBILIZATION/DEMOBILIZATION: \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.
13. The price for all base bid work shall be:  
**BASE BID TOTAL:** \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.

D. ALTERNATE BID ITEMS. The following is the add/deduct pricing for the following alternate bid items, to be accepted or rejected by the owner:

1. ALTERNATE #1: INSTALL THROUGH WALL FLASHING ABOVE SKYLIGHTS: \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.
- \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.

E. We have provided the cost of the required performance assurance bonds below as required by the Instructions to Bidders. The cost shall not be included in the base bid total.

1. The cost of the required performance assurance bonds is \_\_\_\_\_ dollars  
 (\$ \_\_\_\_\_), in lawful money of the United States of America.

F. All applicable federal taxes are included and State of Minnesota taxes are included in the Bid Sum.

#### 1.06 ACCEPTANCE

- A. This offer shall be open to acceptance and is irrevocable for thirty days from the bid closing date.
- B. If this bid is accepted by Owner within the time period stated above, we will:
1. Execute the Agreement within seven days of receipt of Notice of Award.
  2. Furnish the required bonds within seven days of receipt of Notice of Award.
  3. Commence work within seven days after written Notice to Proceed of this bid.

#### 1.07 CONTRACT TIME

- A. If this Bid is accepted, we will:
- B. Complete the Work by SEPTMEBER 31, 2023.



**1.08 UNIT PRICES**

- A. The following are Unit Prices for specific scope items of the Work as listed. The following is the list of Unit Prices:
- B. ITEM DESCRIPTION - UNIT - UNIT PRICE
- C. Remove and replace joint sealant - Linear Feet - \$ \_\_\_\_\_
- D. Spot Brick Replacement - Each - \$ \_\_\_\_\_
- E. Tuckpointing - Square Feet - \$ \_\_\_\_\_

**1.09 BID FORM SUPPLEMENTS**

- A. The following information is included with Bid submission:
  - 1. Subcontractors: [ \_\_\_\_\_ ], [ \_\_\_\_\_ ], [ \_\_\_\_\_ ].

**1.10 BID FORM SIGNATURE(S)**

- A. The Corporate Seal of
- B. \_\_\_\_\_
- C. (Bidder - print the full name of your firm)
- D. was hereunto affixed in the presence of:
- E. \_\_\_\_\_
- F. (Authorized signing officer, Title)
- G. (Seal)
- H. \_\_\_\_\_
- I. (Authorized signing officer, Title)

**END OF SECTION**

**SECTION 00 50 00  
CONTRACTING FORMS AND SUPPLEMENTS**

**PART 1 GENERAL**

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

**1.02 AGREEMENT AND CONDITIONS OF THE CONTRACT**

- A. See Section 00 73 14 - Supplementary Conditions for the Supplementary Conditions
- B. The Agreement is based on EJCDC C-520.
- C. The General Conditions are based on EJCDC C-700, 2018.

**1.03 FORMS**

- A. Use the following forms for the specified purposes unless otherwise indicated elsewhere in Contract Documents.
- B. Bond Forms:
  - 1. Performance Bond Form: EJCDC C-610.
  - 2. Payment Bond Form: EJCDC C-615.
- C. Post-Award Certificates and Other Forms:
  - 1. Schedule of Values Form: EJCDC C-620.
- D. Clarification and Modification Forms:
  - 1. Field Order Form: EJCDC C-942.
  - 2. Work Change Directive Form: EJCDC C-940.
  - 3. Change Order Form: EJCDC C-941.
- E. Closeout Forms:
  - 1. Certificate of Substantial Completion Form: EJCDC C-625.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 00 73 14  
SUPPLEMENTARY CONDITIONS**

**PROPERTY NAME**

**1.01 PROJECT NAME**

**1.02 GENERAL**

**1.03 SUMMARY**

- A. These Supplementary Conditions amend and supplement the General Conditions defined in Document 00 72 00 - General Conditions and other provisions of the Contract Documents as indicated below. Provisions that are not so amended or supplemented remain in full force and effect.
- B. The terms used in these Supplementary Conditions that are defined in the General Conditions have the meanings assigned to them in the General Conditions.

**1.04 MODIFICATIONS TO GENERAL CONDITIONS**

**1.05 SC 4.01.A DELETE ORIGINAL PARAGRAPH AND SUBSTITUTE THE FOLLOWING**

- A. The Contract Time will commence once Notice to Proceed instructions are received by the Contractor.

**1.06 SC 5.02.A.1 ADD TO THE ORIGINAL PARAGRAPH**

- A. Damage to trees/shrubs and landscaping materials, such as retaining walls, fences, and sprinkler system materials, shall be repaired by Contractor by the installation of like shrubs or vegetation, of similar size and quality, as approved by Owner.
- B. Damaged grass will be replaced by Contractor.
- C. Contractor will not be responsible for replacing damaged annual plants.
- D. The trimming and/or removal of trees to facilitate project will be coordinated directly with the owner. Repair or replacement of trees will not be the responsibility of the Contractor.
- E. Damage to paving and sidewalks shall be repaired by Contractor by the removal and replacement of the section of paving and sidewalk as directed by the Engineer. Sidewalk replacement shall extend the full panel dimension between control or expansion joints.

**1.07 SC 5.03 ADD THE FOLLOWING NEW PARAGRAPHS IMMEDIATELY AFTER PARAGRAPH 5.03.D:**

- A. The following table lists the reports of explorations and tests of subsurface conditions at or adjacent to the Site that contain Technical Data, and specifically identifies the Technical Data in the report upon which Contractor may rely: [If there are no such reports, so indicate in the table.]

Report Title	Date of Report	Technical Data
NONE		[Identify Technical Data]

- B. The following table lists the drawings of existing physical conditions at or adjacent to the Site, including those drawings depicting existing surface or subsurface structures at or adjacent to the Site (except Underground Facilities), that contain Technical Data, and specifically identifies the Technical Data upon which Contractor may rely: [If there are no such drawings, so indicate in the table.]

Drawings Title	Date of Drawings	Technical Data
NONE		[Identify Technical Data]

- C. Contractor may examine copies of reports and drawings identified in SC-5.03.E and SC-5.03.F, if applicable, that were not included with the Bidding Documents at [owner's location] during

regular business hours, or may request copies from Engineer.

**1.08 SC 5.06 ADD THE FOLLOWING NEW PARAGRAPHS IMMEDIATELY AFTER PARAGRAPH 5.06.A.3:**

- A. The following table lists the reports known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and the Technical Data (if any) upon which Contractor may rely: [If there are no such reports, so indicate in the table]

Report Title	Date of Report	Technical Data
NONE		[Identify Technical Data]

- B. The following table lists the drawings known to Owner relating to Hazardous Environmental Conditions at or adjacent to the Site, and Technical Data (if any) contained in such Drawings upon which Contractor may rely: [If there are no such drawings, so indicate in the table]

Drawings Title	Date of Drawings	Technical Data
NONE		[Identify Technical Data]

**1.09 SC 6.01 DELETE PARAGRAPH 6.01.A AND SUBSTITUTE THE FOLLOWING**

- A. If requested by Owner and included in Contractor's bid, Contractor shall provide and pay for a Bond covering faithful performance of the Contract and the payment of all obligations arising there under, by a corporate surety acceptable to the Owner and authorized to do business in the State of Minnesota; as approved by the Owner; in accordance with Minnesota Statutory Requirements, on forms known as Bond of Public Contractor; in the amount of 100% of the contract price. These bonds shall remain in effect until one year after the date when final payment becomes due or until completion of the correction period specified in Paragraph 15.08, whichever is later, except as provided otherwise by the laws and regulations of the contract documents.
- B. Bond shall: guarantee Contractor will satisfactorily perform each and every part of the Contract, including completion time and guarantees required; guarantee payment to subcontractors and suppliers; allow for any additions or deductions to Contract price and completion time; provide that no notice of aforesaid alterations, additions or omissions need be given to Surety Company.

**1.10 SC 6.03. SUPPLEMENT PARAGRAPH 6.03 WITH THE FOLLOWING PROVISIONS AFTER PARAGRAPH 6.03.C:**

- A. Other Additional Insureds: As a supplement to the provisions of Paragraph 6.03.C of the General Conditions, the commercial general liability, automobile liability, umbrella or excess, pollution liability, and unmanned aerial vehicle liability policies must include as additional insureds (in addition to Owner and Engineer) the following: [TBD]
- B. Workers' Compensation and Employer's Liability: Contractor shall purchase and maintain workers' compensation and employer's liability insurance, including, as applicable, United States Longshoreman and Harbor Workers' Compensation Act, Jones Act, stop-gap employer's liability coverage for monopolistic states, and foreign voluntary workers' compensation (from available sources, notwithstanding the jurisdictional requirement of Paragraph 6.02.B of the General Conditions).

For work performed in monopolistic states, stop-gap liability coverage must be endorsed to either the worker's compensation or commercial general liability policy with a minimum limit of:	\$
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- C. Commercial General Liability—Claims Covered: Contractor shall purchase and maintain commercial general liability insurance, covering all operations by or on behalf of Contractor, on an occurrence basis, against claims for:
1. damages because of bodily injury, sickness or disease, or death of any person other than Contractor’s employees,
  2. damages insured by reasonably available personal injury liability coverage, and
  3. damages because of injury to or destruction of tangible property wherever located, including loss of use resulting therefrom.
  4. Commercial General Liability—Form and Content: Contractor’s commercial liability policy must be written on a 1996 (or later) Insurance Services Organization, Inc. (ISO) commercial general liability form (occurrence form) and include the following coverages and endorsements:
    - a. Products and completed operations coverage.
      - 1) Such insurance must be maintained for three years after final payment.
      - 2) Contractor shall furnish Owner and each other additional insured (as identified in the Supplementary Conditions or elsewhere in the Contract) evidence of continuation of such insurance at final payment and three years thereafter.
    - b. Blanket contractual liability coverage, including but not limited to coverage of Contractor’s contractual indemnity obligations in Paragraph 7.18.
    - c. Severability of interests and no insured-versus-insured or cross-liability exclusions.
    - d. Underground, explosion, and collapse coverage.
    - e. Personal injury coverage.
    - f. Additional insured endorsements that include both ongoing operations and products and completed operations coverage through ISO Endorsements CG 20 10 10 01 and CG 20 37 10 01 (together). If Contractor demonstrates to Owner that the specified ISO endorsements are not commercially available, then Contractor may satisfy this requirement by providing equivalent endorsements.
    - g. For design professional additional insureds, ISO Endorsement CG 20 32 07 04 “Additional Insured—Engineers, Architects or Surveyors Not Engaged by the Named Insured” or its equivalent.
  5. Commercial General Liability—Excluded Content: The commercial general liability insurance policy, including its coverages, endorsements, and incorporated provisions, must not include any of the following:
    - a. Any modification of the standard definition of “insured contract” (except to delete the railroad protective liability exclusion if Contractor is required to indemnify a railroad or others with respect to Work within 50 feet of railroad property).
    - b. Any exclusion for water intrusion or water damage.
    - c. Any provisions resulting in the erosion of insurance limits by defense costs other than those already incorporated in ISO form CG 00 01.
    - d. Any exclusion of coverage relating to earth subsidence or movement.
    - e. Any exclusion for the insured’s vicarious liability, strict liability, or statutory liability (other than worker’s compensation).
    - f. Any limitation or exclusion based on the nature of Contractor’s work.
    - g. Any professional liability exclusion broader in effect than the most recent edition of ISO form CG 22 79.
  6. Commercial General Liability—Minimum Policy Limits
 

<b>Commercial General Liability</b>	<b>Policy limits of not less than:</b>
General Aggregate	\$2,000,000
Products—Completed Operations Aggregate	\$2,000,000
Personal and Advertising Injury	\$1,000,000
Bodily Injury and Property Damage—Each Occurrence	\$1,000,000
  7. Automobile Liability: Contractor shall purchase and maintain automobile liability insurance for damages because of bodily injury or death of any person or property damage arising

out of the ownership, maintenance, or use of any motor vehicle. The automobile liability policy must be written on an occurrence basis.

Combined Single Limit (Bodily Injury and Property Damage)	\$1,000,000
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8. Umbrella or Excess Liability: Contractor shall purchase and maintain umbrella or excess liability insurance written over the underlying employer’s liability, commercial general liability, and automobile liability insurance described in the Paragraphs above. The coverage afforded must be at least as broad as that of each and every one of the underlying policies.

<b>Excess or Umbrella Liability</b>	<b>Policy limits of not less than:</b>
Each Occurrence	\$5,000,000
General Aggregate	\$5,000,000

9. Using Umbrella or Excess Liability Insurance to Meet CGL and Other Policy Limit Requirements: Contractor may meet the policy limits specified for employer’s liability, commercial general liability, and automobile liability through the primary policies alone, or through combinations of the primary insurance policy’s policy limits and partial attribution of the policy limits of an umbrella or excess liability policy that is at least as broad in coverage as that of the underlying policy, as specified herein. If such umbrella or excess liability policy was required under this Contract, at a specified minimum policy limit, such umbrella or excess policy must retain a minimum limit of \$[specify amount] after accounting for partial attribution of its limits to underlying policies, as allowed above.

10. Contractor’s Pollution Liability Insurance: Contractor shall purchase and maintain a policy covering third-party injury and property damage, including cleanup costs, as a result of pollution conditions arising from Contractor’s operations and completed operations. This insurance must be maintained for no less than three years after final completion.

<b>Contractor’s Pollution Liability</b>	<b>Policy limits of not less than:</b>
Each Occurrence/Claim	\$
General Aggregate	\$

11. Contractor’s Professional Liability Insurance: If Contractor will provide or furnish professional services under this Contract, through a delegation of professional design services or otherwise, then Contractor shall be responsible for purchasing and maintaining applicable professional liability insurance. This insurance must cover negligent acts, errors, or omissions in the performance of professional design or related services by the insured or others for whom the insured is legally liable. The insurance must be maintained throughout the duration of the Contract and for a minimum of two years after Substantial Completion. The retroactive date on the policy must pre-date the commencement of furnishing services on the Project.

<b>Contractor’s Professional Liability</b>	<b>Policy limits of not less than:</b>
Each Claim	\$
Annual Aggregate	\$

- 1.11 SC 6.03.B.3 DELETE PARAGRAPH 6.03.B.3 AND SUBSTITUTE THE FOLLOWING**  
**1.12 SUCH INSURANCE SHALL REMAIN IN EFFECT FOR FIVE YEARS AFTER FINAL PAYMENT.**  
**1.13 SC 6.04.A. ADD THE FOLLOWING NEW PARAGRAPH TO THE BEGINNING OF THE SECTION**

- A. Builder’s Risk: Builder’s risk policy not included in contract. Potential implementation of policy pending owner coordination.

**1.14 SC 6.04.D REVISE ORIGINAL PARAGRAPH 6.04.D**

- A. Partial Occupancy or Use by Owner. Unit owners, occupants, guests and invitees will occupy a portion or portions of the Work prior to Substantial Completion of all of the Work as provided in Paragraph 15.04. Contractor will ensure that the builder's risk insurance is not canceled or permitted to lapse on account of any such partial use or occupancy.

**1.15 SC-7.03 ADD THE FOLLOWING NEW SUBPARAGRAPHS IMMEDIATELY AFTER PARAGRAPH 7.03.C:**

- A. Regular working hours will be [8:00 AM TO 5:00 PM FOR NOISE-CAUSING WORK].
- B. Owner's legal holidays are [TBD].

**1.16 SC 7.07.D ADD TO THE BEGINNING OF THE ORIGINAL PARAGRAPH**

- A. No later than 21 days after the execution of the agreement by the Contractor and Owner, the Contractor shall furnish the Owner and the Engineer, in writing, with (1) the name, trade, and subcontract amount for each Subcontractor and (2) the names of all persons or entities proposed to be suppliers of materials to be supplied to the Project. The Contractor will promptly advise the Owner and Engineer in writing of changes or additions to this list, updating it no less often than at the time of each progress payment application.

**1.17 SC 7.07.D REVISE ORIGINAL PARAGRAPH 7.07.D**

- A. Change time period in final sentence from "five days" to "ten days".

**1.18 SC 7.07.N ADDED AS SUBPARAGRAPH N TO SECTION 7.07**

- A. Each subcontract agreement for a portion of the Work is assigned by the Contractor to the Owner, provided that:
  - 1. assignment is effective only after termination of the Contract by the Owner for cause and only for those subcontract agreements that the Owner accepts by notifying the Subcontractor and Contractor in writing; and
  - 2. assignment is subject to the prior rights of the surety, if any, obligated under bond relating to the Contract.
  - 3. When the Owner accepts the assignment of a subcontract agreement, the Owner assumes the Contractor's rights and obligations under the subcontract.
  - 4. Upon such assignment, if the Work has been suspended for more than 30 days, the Subcontractor's compensation shall be equitably adjusted for increases in cost resulting from the suspension.
  - 5. Upon such assignment to the Owner under this Section, the Owner may further assign the subcontract to a successor contractor or other entity. If the Owner assigns the subcontract to a successor contractor or other entity, the Owner shall nevertheless remain legally responsible for all of the successor contractor's obligations under the subcontract.

**1.19 SC 7.07.O ADDED AS SUBPARAGRAPH O TO SECTION 7.07**

- A. All subcontracts shall be in writing and specifically provide that the Owner is an intended third-party beneficiary of said subcontract, and that the subcontractor will obtain and maintain insurance of the same types and limits as required of the Contractor in section 6.03, except that the subcontractor's General liability limits may be \$1,000,000 for General Aggregate and Products-completed operations Aggregate, and \$1,000,000 per occurrence.

**1.20 SC 7.18.A ADD TO THE ORIGINAL PARAGRAPH**

- A. This indemnification and hold harmless obligation shall include the duty to pay for any attorney fees, costs and disbursements incurred in the Owner's defense against any such claims made against it, or incurred by it in the enforcement of the Contractor's duties under this paragraph and its corresponding obligation to procure insurance covering this obligation. This duty shall be triggered by any such claim being made against the Owner, and will not await final determination of fault against the Contractor to be enforceable for purposes of this obligation to pay attorney fees for the Owner's defense and the enforcement of the Contractor's obligations under this section. This indemnification obligation shall not be negated as a result of the claim, damage, loss or expense being caused in part by the Owner, though the ultimate

indemnification obligation of the Contractor shall be limited to that attributable to the negligent or otherwise wrongful act or omission, including breach of a specific contractual duty, of the Contractor or its independent contractors, agents, employees, or delegates.

**1.21 SC 7.20 ADD THE FOLLOWING SECTION 7.20 AND SUBPARTS**

- A. Mold Abatement/Remediation
1. Contractor is to self-perform mold remediation, i.e. is the mold remediation contractor.
  2. Visual identification of areas that are potentially affected by mold is the responsibility of the Contractor. Testing of materials identified as potentially affected by mold is the responsibility of the mold abatement contractor.
  3. Mold abatement contractor and Contractor are to generate a mold abatement plan based on actual observed conditions, including abatement scope, methods, personnel, and schedule for review.
  4. The plane defining the boundary of work between the work area and the unmodified interior area is the exterior exposed surface of the exterior wall. Where cladding is removed, the boundary is the exposed surface of the exterior sheathing or weather barrier. Where water damage is present that requires the removal of sheathing, the boundary of work is the exterior face of the interior vapor barrier.
  5. The mold remediation scope of work applies to mold within the building envelope on the exterior side of the work area boundaries. Contractor has no obligation to identify mold or perform mold remediation to the interior of the work area boundaries.
  6. The Contractor and Engineer will develop a list of areas inside of the work area boundaries where visual evidence of mold was noted during remediation activities. The list will be provided to Owner during construction and at the conclusion of the project. The list is to be used for general reference only, and will not constitute an accurate survey of the full extent of mold. Mold testing or assessment will not be conducted inside of the work area boundaries, and no additional effort will be made to locate mold beyond simple observations from the exterior side of the wall cavity during the repair process.
  7. SC 8.02 ADD THE FOLLOWING NEW PARAGRAPH 8.02.C IMMEDIATELY AFTER PARAGRAPH 8.02.B:
  8. Owner intends to contract with others for the performance of other work at or adjacent to the Site.
    - a. [Here identify individual or entirety] shall have authority and responsibility for coordination of the various contractors and work forces at the Site;
    - b. The following specific matters are to be covered by such authority and responsibility: [Here itemize such matters];
    - c. The extent of such authority and responsibilities is: [Here provide the extent].

**1.22 SC 10.03.A REVISE ORIGINAL PARAGRAPH 10.03.A**

- A. The Engineer will act as the Owner's Representative on the Project, and limitations on the responsibilities thereof will be as provided in the Supplementary Conditions and in Paragraph 10.07.

**1.23 SC 12.01.D.3 REVISE ORIGINAL PARAGRAPH 12.01.D.3**

- A. Owner and Contractor shall each pay one-half of the mediator's fees and costs, unless additional parties are involved, in which case the fees and costs will be equally divided among the parties to the mediation, unless the parties to the mediation mutually agree otherwise.

**1.24 SC 14.02.F ADD TO THE ORIGINAL PARAGRAPH**

- A. Timely notice and reasonable promptness shall each be defined as a minimum of 24 hours; if Saturday, Sunday, and/or a legal holiday occurs during either of those periods, those days will be added to the 24 hours as a minimum time.

**1.25 SC 14.03.F ADD TO THE ORIGINAL PARAGRAPH**

- A. Costs arising out of the defective Work also include all of Owner's fees and charges of engineers, architects, attorneys, and other professionals, and all court or other dispute resolution costs.



**1.26 SC 15.01.A.4      ADDED AS SUBPARAGRAPH 4 TO SECTION 15.01.A**

- A. Each application for payment shall be accompanied by the following, all in form and substance satisfactory to the Owner:
  - 1. A current Contractor's lien waiver and duly executed and acknowledged sworn statement showing all subcontractors and material suppliers with whom the Contractor has entered into subcontracts, the amount of each such subcontract, the amount requested for any subcontractor and material supplier in the requested progress payment, and the amount to be paid to the subcontractor from such progress payment, together with similar sworn statements from all such subcontractors and material suppliers;
  - 2. Duly executed waivers of mechanics' and material suppliers' liens from all subcontractors and, when appropriate, from material suppliers with lien rights and lower-tier subcontractors, establishing payment or satisfaction of payment of all amounts requested by the Contractor on behalf of such entities or persons in any previous application. Contractor consents to the Owner or Engineer periodically contacting any or all subcontractors and material suppliers to verify the amounts of their subcontracts or purchase orders, payments made to them by the Contractor, and amounts remaining to be paid to them.
  - 3. All information and materials required to comply with the requirements of the contract documents or reasonably requested by the Owner or the Engineer.

**1.27 SC 15.01 F      ADDED AS SUBPARAGRAPH F TO SECTION 15.01**

- A. (1) The Contractor further expressly undertakes to defend the Owner and Engineer, at the Contractor's sole expense, against any actions, lawsuits, or proceedings brought against the Owner, Engineer, or any third party as a result of liens filed against the Work, the site of any of the Work, the project site and any improvements thereon, payments due the Contractor, or any portion of the property of the Owner, Engineer, or third party. The Contractor hereby agrees to indemnify and hold the Owner, Engineer, and third parties harmless against any such liens or claims of lien and agrees to pay any judgment or lien resulting from any such action, lawsuit, or proceeding.
  - 1. The Owner shall release any payments withheld due to a lien or claim of lien if the Contractor obtains security acceptable to the Owner or a lien bond that is: 1) issued by a surety acceptable to the Owner; 2) in form and substance satisfactory to the Owner; and 3) in an amount not less than two hundred percent (200%) of such lien claim. By posting a lien bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under this paragraph, including, without limitation, the duty to defend and indemnify the Owner and Engineer. The cost of any premiums incurred in connection with such bonds and securities shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Price.
  - 2. Notwithstanding the foregoing, the Owner reserves the right to settle any disputed mechanic's or material supplier's lien claim by payment to the lien claimant or by such other means as the Owner, in the Owner's sole discretion, determines is the most economical or advantageous method of settling the dispute. The Contractor shall promptly reimburse the Owner, upon demand, for any payment so made, to the extent such lien claim was meritorious.

**1.28 SC 15.02.A      ADD TO THE ORIGINAL PARAGRAPH**

- A. The Contractor further expressly undertakes to defend the Owner and Engineer, at the Contractor's sole expense, against any actions, lawsuits, or proceedings brought against the Owner, Engineer, or any third party as a result of liens filed against the Work, the site of any of the Work, the project site and any improvements thereon, payments due the Contractor, or any portion of the property of the Owner, Engineer, or third party. The Contractor hereby agrees to indemnify and hold the Owner, Engineer, and third parties harmless against any such liens or claims of lien and agrees to pay any judgment or lien resulting from any such action, lawsuit, or proceeding.
- B. The Owner shall release any payments withheld due to a lien or claim of lien if the Contractor obtains security acceptable to the Owner or a lien bond that is: (1) issued by a surety

acceptable to the Owner; (2) in form and substance satisfactory to the Owner; and (3) in an amount not less than two hundred percent (200%) of such lien claim. By posting a lien bond or other acceptable security, however, the Contractor shall not be relieved of any responsibilities or obligations under this paragraph, including, without limitation, the duty to defend and indemnify the Owner and Engineer. The cost of any premiums incurred in connection with such bonds and securities shall be the responsibility of the Contractor and shall not be part of, or cause any adjustment to, the Contract Price.

- C. Notwithstanding the foregoing, the Owner reserves the right to settle any disputed mechanic's or material supplier's lien claim by payment to the lien claimant or by such other means as the Owner, in the Owner's sole discretion, determines is the most economical or advantageous method of settling the dispute. The Contractor shall promptly reimburse the Owner, upon demand, for any payment so made.

**1.29 SC 15.06.A.3      MODIFY THE ORIGINAL PARAGRAPH**

- A. In lieu of the releases or waivers of Liens specified in Paragraph 15.06.A.2 and as approved by Owner in writing, Contractor may furnish receipts or releases in full and an affidavit of Contractor that: (a) the releases and receipts include all labor, services, material, and equipment for which a Lien could be filed; and (b) all payrolls, material and equipment bills, and other indebtedness connected with the Work for which Owner might in any way be responsible, or which might in any way result in liens or other burdens on Owner's property, have been paid or otherwise satisfied. If any Subcontractor or Supplier fails to furnish such a release or receipt in full, Contractor may furnish a bond or other collateral satisfactory to Owner to indemnify Owner against any Lien, or Owner at its option may issue joint checks payable to Contractor and specified Subcontractors and Suppliers.

**1.30 SC 15.08.A      ADD TO THE ORIGINAL PARAGRAPH**

- A. All claims, costs, losses, and damages (including but not limited to all fees and charges of engineers, architects, attorneys, and other professionals and all court or arbitration or other dispute resolution costs) arising out of or relating to correction or repair or removal and replacement of defective work for which Contractor is found to be legally responsible (including but not limited to all costs of repair or replacement of work of others) will be paid by Contractor.

**END OF SECTION**

**SECTION 01 10 00  
SUMMARY**

**PART 1 GENERAL**

**1.01 PROJECT**

- A. Project Name: Grand Rapids Library Facade Repair Project
- B. Owner's Name: City of Grand Rapids.
- C. Engineer's Name: Encompass, Inc.
- D. The Project consists of the repair of the exterior facade.

**1.02 CONTRACT DESCRIPTION**

- A. Contract Type: A single prime contract based on a Stipulated Price as described in Document 00 52 00 - Agreement Form.

**1.03 DESCRIPTION OF ALTERATIONS WORK**

- A. Scope of alterations work is as follows and as indicated on drawings:

**BASE BID WORK SCOPE**

1. REPLACE EXTEIOR SEALANT
  - a. Scope of Work: Remove and replace all exterior joint sealants where existing at the facade including at pavement joints, windows, glass, doors, wall penetrations, masonry joints, siding, sheet metal, and any joints of dissimilar materials. Clean and prepare joints by removing all existing sealant and debris. Install new sealant and backer rod. Skylights are excluded from this item, see work item 6. See project drawings for additional details.
  - b. Location of Work: All Elevations
  - c. Quantity of Work: 1 Lump Sum, Est Work Qty 3,000 Linear Feet
2. REPAIR FLASHING AT FRONT BAY WINDOWS
  - a. Scope of Work: Install new flashings and metal at the bay window heads. See project drawings for additional requirements.
  - b. Location of Work: East Elevation Bay Windows
  - c. Quantity of Work: 3 Windows
3. RESET CONCRETE CAP STONES
  - a. Scope of Work: Remove, salvage, and reinstall the existing concrete cap stones with new anchorage and new flashings. See project drawings for additional requirements.
  - b. Location of Work: Wall caps at brick stem walls.
  - c. Quantity of Work: 1 Lump Sum
4. RESET OPERABLE WINDOWS UNITS
  - a. Scope of Work: Reset 2 operable windows units within the storefront window frame opening with new sealants and gaskets. See project drawings for additional requirements.
  - b. Location of Work: East Elevation
  - c. Quantity of Work: 2 Operable Window Units
5. CLEAN MASONRY AND INSTALL WATER REPELLENT
  - a. Scope of Work: Clean masonry and install a water repellent to masonry.
  - b. Location of Work: All Elevations
  - c. Quantity of Work: 1 Lump Sum
6. REPLACE EXTERIOR SEALANTS AND GASKETS AT THE SKYLIGHTS

- a. Scope of Work: Remove and replace all exterior joint sealants and gaskets at the skylights. Remove and reset all covers and pressure plates at head/mullions to access sealants and gaskets. Clean and prepare joints by removing all existing sealant and debris. Install new sealant and backer rod. See project drawings for additional details.
  - b. Location of Work: Skylights at rear/main roof.
  - c. Quantity of Work: 1 Lump Sum
7. SPOT BRICK REPLACEMENT
- a. Scope of Work: Sawcut and remove individual damaged brick. New brick shall match existing size, colors, and texture and meet requirements of ASTM C216, type FBS, Grade SW.
  - b. Location of Work: All Elevations, as noted on the project drawings.
  - c. Quantity of Work: 75 Each
8. TUCKPOINTING
- a. Scope of Work: Perform tuckpointing repairs at brick masonry at areas of damaged or deteriorated joints, as noted on the drawings, or as directed by the Engineer. Saw cut or grind existing mortar joints min. 3/4" depth to reveal sound mortar and reinstall mortar in 1/4" lifts to match the existing colors and profile. Clean repaired masonry upon completion of pointing work. Perform work in accordance with Brick Institute of America Standards.
  - b. Location of Work: All Elevations, as noted on the project drawings and as directed by the Engineer.
  - c. Quantity of Work: 1,800 Square Feet
9. PAINT LINTELS
- a. Scope of Work: Clean and refinish exposed surfaces of steel lintels with new coating, to match existing, per the manufacturer's requirements. Grind off and clean any existing corrosion.
  - b. Location of Work: Windows in brick, see project drawings.
  - c. Quantity of Work: 1 Lump Sum
10. MISCELLANEOUS LABOR
- a. Scope of Work: Provide man-hours for unspecified work activity as directed by the Owner/Engineer on the buildings. This work item is to provide for any contingent activity unanticipated in the scope of the project. Price shall be the total charge assessed for actual labor hours required and shall include the total cost of labor, tools, scaffolding, plant, equipment and all else required to perform the labor, including overhead and profit. Any material required to be installed by this labor shall be provided by the owner, or per executed change order by the contractor. Bid price shall be provided on a lump sum basis with an add and deduct unit price to adjust the contract sum for variance in the final quantity from the base bid quantity.  
Miscellaneous hours shall be submitted and approved by the Engineer prior to execution of any of the work under this work item.
  - b. Location of Work: Any location within the work area.
  - c. Quantity of Work: 40 Hours
11. RIGGING
- a. Scope of Work: Provide all labor, material, plant, equipment, rental and all else necessary for the complete installation of a temporary system of swing stage scaffolding, and/or other suitable means, necessary to access the building façade and to execute the work activities required in the scope of the project on the building. Sufficient scaffolding shall be provided to access the entire façade in the areas designated for work. Contractor shall have the full responsibility for the design,

safety, installation, operation, relocation, final removal and all else required for the complete execution of the project. Certified roof anchorages are installed at the building roof. Bid Price shall be provided on a lump sum basis for the base bid and shall be all-inclusive for the complete project.

- b. Location of Work: N/A
- c. Quantity of Work: 1 Lump Sum

12. MOBILIZATION/DEMobilIZATION

- a. Scope of Work: Provide all labor, material, plant, equipment, permits, temporary utilities and facilities, health and safety devices and procedures, waste storage and disposal facilities and all else required and necessary to complete the work contemplated herein. When the project is completed, remove all temporary equipment, facilities and devices from the structure and site and restore the structure and site to its original condition and to the satisfaction of the Owner and Engineer.
- b. Location of Work: N/A
- c. Quantity of Work: 1 Lump Sum

**B. ALTERNATE BID ITEMS**

- 1. ALTERNATE #1: INSTALL THROUGH WALL FLASHING ABOVE SKYLIGHTS
  - a. Scope of Work: Remove and replace masonry to replace the through wall flashing at the existing location above skylights. See project details for additional requirements.
  - b. Location of Work: Skylights at the South Elevation
  - c. Quantity of Work: 1 Lump Sum

**1.04 OWNER OCCUPANCY**

- A. Owner intends to continue to occupy the existing building during the entire construction period.
- B. Owner intends to occupy the Project upon Substantial Completion.
- C. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- D. Schedule the Work to accommodate Owner occupancy.

**1.05 CONTRACTOR USE OF SITE AND PREMISES**

- A. Construction Operations: Limited to areas noted on Drawings.
  - 1. Locate and conduct construction activities in ways that will limit disturbance to site.
  - 2. Any damage to the site as result of the contractor's activities shall be restored by the contractor.
- B. Arrange use of site and premises to allow:
  - 1. Owner occupancy.
  - 2. Work by Others.
  - 3. Work by Owner.
  - 4. Use of site and premises by the public.
- C. Provide access to and from site as required by law and by Owner:
  - 1. Emergency Building Exits During Construction: Keep all exits required by code open during construction period; provide temporary exit signs if exit routes are temporarily altered.
  - 2. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Time Restrictions:
  - 1. Limit conduct of especially noisy exterior work to the hours of 8:00am to 5:00pm.
- E. Utility Outages and Shutdown:
  - 1. Do not disrupt or shut down life safety systems, including but not limited to fire sprinklers and fire alarm system, without 7 days notice to Owner and authorities having jurisdiction.
  - 2. Prevent accidental disruption of utility services to other facilities.

**1.06 WORK SEQUENCE**

- A. Coordinate construction schedule and operations with Owner.

**PART 2 PRODUCTS - NOT USED**  
**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 20 00  
PRICE AND PAYMENT PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedures for preparation and submittal of applications for progress payments.
- B. Documentation of changes in Contract Sum and Contract Time.
- C. Change procedures.
- D. Procedures for preparation and submittal of application for final payment.

**1.02 RELATED REQUIREMENTS**

- A. Section 00 50 00 - Contracting Forms and Supplements: Forms to be used.
- B. Section 01 22 00 - Unit Prices: Monetary values of unit prices; Payment and modification procedures relating to unit prices.

**1.03 SCHEDULE OF VALUES**

- A. Use Schedule of Values Form: EJCDC C-620, edition stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit draft to Engineer for approval.
- C. Forms filled out by hand will not be accepted.

**1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: Submit at intervals stipulated in the Agreement.
- B. Electronic media printout including equivalent information will be considered in lieu of standard form specified; submit sample to Engineer for approval.
- C. Forms filled out by hand will not be accepted.
- D. For each item, provide a column for listing each of the following:
  - 1. Item Number.
  - 2. Description of work.
  - 3. Scheduled Values.
  - 4. Previous Applications.
  - 5. Work in Place under this Application.
  - 6. Authorized Change Orders.
  - 7. Total Completed to Date of Application.
  - 8. Percentage of Completion.
  - 9. Balance to Finish.
  - 10. Retainage.
- E. Execute certification by signature of authorized officer.
- F. Use data from approved Schedule of Values. Provide dollar value in each column for each line item for portion of work performed.
- G. List each authorized Change Order as a separate line item, listing Change Order number and dollar amount as for an original item of work.
- H. Submit one electronic and three hard-copies of each Application for Payment.
- I. Include the following with the application:
  - 1. Transmittal letter as specified for submittals in Section 01 30 00.
  - 2. Partial release of liens from major subcontractors and vendors.
  - 3. Affidavits attesting to off-site stored products.

**1.05 MODIFICATION PROCEDURES**

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

- B. For other required changes, Engineer will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
- C. For changes for which advance pricing is desired, Engineer will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change with a stipulation of any overtime work required and the period of time during which the requested price will be considered valid. Contractor shall prepare and submit a fixed price quotation within 7 days.
- D. Contractor may propose a change by submitting a request for change to Engineer, describing the proposed change and its full effect on the work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation. Document any requested substitutions in accordance with Section 01 6000.
- E. Computation of Change in Contract Amount: As specified in the Agreement and Conditions of the Contract.
  - 1. For change requested by Engineer for work falling under a fixed price contract, the amount will be based on Contractor's price quotation.
  - 2. For change requested by Contractor, the amount will be based on the Contractor's request for a Change Order as approved by Engineer.
  - 3. For pre-determined unit prices and quantities, the amount will be based on the fixed unit prices.
  - 4. For change ordered by Engineer without a quotation from Contractor, the amount will be determined by Engineer based on the Contractor's substantiation of costs as specified for Time and Material work.
- F. Substantiation of Costs: Provide full information required for evaluation.
  - 1. On request, provide the following data:
    - a. Quantities of products, labor, and equipment.
    - b. Taxes, insurance, and bonds.
    - c. Overhead and profit.
    - d. Justification for any change in Contract Time.
    - e. Credit for deletions from Contract, similarly documented.
  - 2. Support each claim for additional costs with additional information:
    - a. Origin and date of claim.
    - b. Dates and times work was performed, and by whom.
    - c. Time records and wage rates paid.
    - d. Invoices and receipts for products, equipment, and subcontracts, similarly documented.
  - 3. For Time and Material work, submit itemized account and supporting data after completion of change, within time limits indicated in the Conditions of the Contract.
- G. Execution of Change Orders: Engineer will issue Change Orders for signatures of parties as provided in the Conditions of the Contract.
- H. After execution of Change Order, promptly revise Schedule of Values and Application for Payment forms to record each authorized Change Order as a separate line item and adjust the Contract Sum.
- I. Promptly revise progress schedules to reflect any change in Contract Time, revise sub-schedules to adjust times for other items of work affected by the change, and resubmit.
- J. Promptly enter changes in Project Record Documents.

#### **1.06 APPLICATION FOR FINAL PAYMENT**

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



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

1. All closeout procedures specified in Section 01 70 00.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 22 00  
UNIT PRICES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Measurement and payment criteria applicable to Work performed under a unit price payment method.
- B. Defect assessment and non-payment for rejected work.

**1.02 RELATED REQUIREMENTS**

- A. Document 00 21 13 - Instructions to Bidders: Instructions for preparation of pricing for Unit Prices.
- B. Document 00 41 00 - Bid Form - List of Unit Prices
- C. Section 01 20 00 - Price and Payment Procedures: Additional payment and modification procedures.

**1.03 COSTS INCLUDED**

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

**1.04 UNIT QUANTITIES SPECIFIED**

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

**1.05 MEASUREMENT OF QUANTITIES**

- A. Measurement methods delineated in the individual specification sections complement the criteria of this section. In the event of conflict, the requirements of the individual specification section govern.
- B. Take all measurements and compute quantities. Measurements and quantities will be verified by Engineer.
- C. Assist by providing necessary equipment, workers, and survey personnel as required.

**1.06 PAYMENT**

- A. Payment for Work governed by unit prices will be made on the basis of the actual measurements and quantities of Work that is incorporated in or made necessary by the Work and accepted by the Engineer, multiplied by the unit price.
- B. Payment will not be made for any of the following:
  - 1. Products wasted or disposed of in a manner that is not acceptable.

**1.07 DEFECT ASSESSMENT**

- A. Replace Work, or portions of the Work, not complying with specified requirements.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION - NOT USED**

**END OF SECTION**

**SECTION 01 25 00  
SUBSTITUTION PROCEDURES**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures, coordination.
- B. Section 01 60 00 - Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

**1.03 DEFINITIONS**

- A. Substitutions: Changes from Contract Documents requirements proposed by Contractor to materials and products.
  - 1. Substitutions for Cause: Proposed due to changed Project circumstances beyond Contractor's control.
    - a. Unavailability.
    - b. Regulatory changes.
  - 2. Substitutions for Convenience: Proposed due to possibility of offering substantial advantage to the Project.
    - a. Substitution requests offering advantages solely to the Contractor will not be considered.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 GENERAL REQUIREMENTS**

- A. A Substitution Request for products and materials constitutes a representation that the submitter:
  - 1. Has investigated proposed product and determined that it meets or exceeds the quality level of the specified product, equipment, assembly, or system.
  - 2. Agrees to provide the same warranty for the substitution as for the specified product.
  - 3. Agrees to coordinate installation and make changes to other work that may be required for the work to be complete, with no additional cost to Owner.
  - 4. Waives claims for additional costs or time extension that may subsequently become apparent.
  - 5. Agrees to reimburse Owner and Engineer for review or redesign services associated with re-approval by authorities.
- B. A Substitution Request for specified installer constitutes a representation that the submitter:
  - 1. Has acted in good faith to obtain services of specified installer, but was unable to come to commercial, or other terms.
- C. Document each request with complete data substantiating compliance of proposed substitution with Contract Documents. Burden of proof is on proposer.
  - 1. Note explicitly any non-compliant characteristics.
- D. Content: Include information necessary for tracking the status of each Substitution Request, and information necessary to provide an actionable response.
  - 1. No specific form is required. Contractor's Substitution Request documentation must include the following:
    - a. Project Information:
    - b. Substitution Request Information:
      - 1) Indication of whether the substitution is for cause or convenience.
      - 2) Reference to particular Contract Document(s) specification section number, title, and article/paragraph(s).
      - 3) Description of Substitution.

- 4) Reason why the specified item cannot be provided.
- 5) Differences between proposed substitution and specified item.
- 6) Description of how proposed substitution affects other parts of work.
- c. Attached Comparative Data: Provide point-by-point, side-by-side comparison addressing essential attributes specified, as appropriate and relevant for the item:
  - 1) Physical characteristics.
  - 2) In-service performance.
  - 3) Expected durability.
  - 4) Warranties.
  - 5) Other salient features and requirements.
- d. Impact of Substitution:
  - 1) Savings to Owner for accepting substitution.
  - 2) Change to Contract Time due to accepting substitution.
- E. Limit each request to a single proposed substitution item.
  - 1. Submit an electronic document, combining the request form with supporting data into single document.

### **3.02 SUBSTITUTION PROCEDURES DURING CONSTRUCTION**

- A. Submit request for Substitution for Cause within 14 days of discovery of need for substitution, but not later than 14 days prior to time required for review and approval by Engineer, in order to stay on approved project schedule.
- B. Submit request for Substitution for Convenience immediately upon discovery of its potential advantage to the project, but not later than 14 days prior to time required for review and approval by Engineer, in order to stay on approved project schedule.
  - 1. In addition to meeting general documentation requirements, document how the requested substitution benefits the Owner through cost savings, time savings, greater energy conservation, or in other specific ways.
  - 2. Document means of coordinating of substitution item with other portions of the work, including work by affected subcontractors.
  - 3. Bear the costs engendered by proposed substitution of:
    - a. Owner's compensation to the Engineer for any required redesign, time spent processing and evaluating the request.
- C. Substitutions will not be considered under one or more of the following circumstances:
  - 1. When they are indicated or implied on shop drawing or product data submittals, without having received prior approval.
  - 2. Without a separate written request.

### **3.03 RESOLUTION**

- A. Engineer may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.
- B. Engineer will notify Contractor in writing of decision to accept or reject request.
  - 1. Engineer's decision following review of proposed substitution will be noted on the submitted form.

### **3.04 ACCEPTANCE**

- A. Accepted substitutions change the work of the Project. They will be documented and incorporated into work of the project by Change Order, Construction Change Directive, Architectural Supplementary Instructions, or similar instruments provided for in the Conditions of the Contract.

### **3.05 CLOSEOUT ACTIVITIES**

- A. See Section 01 78 00 - Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record.

**END OF SECTION**

**SECTION 01 30 00  
ADMINISTRATIVE REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General administrative requirements.
- B. Preconstruction meeting.
- C. Progress meetings.
- D. Construction progress schedule.
- E. Submittals for review, information, and project closeout.
- F. Number of copies of submittals.
- G. Requests for Information (RFI) procedures.
- H. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 60 00 - Product Requirements: General product requirements.
- B. Section 01 70 00 - Execution and Closeout Requirements: Additional coordination requirements.
- C. Section 01 78 00 - Closeout Submittals: Project record documents; operation and maintenance data; warranties and bonds.

**1.03 GENERAL ADMINISTRATIVE REQUIREMENTS**

- A. Comply with requirements of Section 01 70 00 - Execution and Closeout Requirements for coordination of execution of administrative tasks with timing of construction activities.
- B. Make the following types of submittals to Engineer:
  - 1. Requests for Information (RFI).
  - 2. Requests for substitution.
  - 3. Shop drawings, product data, and samples.
  - 4. Test and inspection reports.
  - 5. Design data.
  - 6. Manufacturer's instructions and field reports.
  - 7. Applications for payment and change order requests.
  - 8. Progress schedules.
  - 9. Coordination drawings.
  - 10. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - 11. Closeout submittals.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PRECONSTRUCTION MEETING**

- A. Engineer will schedule a meeting after Notice of Award.
- B. Attendance Required:
  - 1. Engineer.
  - 2. Contractor.
  - 3. Management and/or Board Member(s).
- C. Agenda:
  - 1. Execution of Owner-Contractor Agreement.
  - 2. Submission of executed bonds and insurance certificates.
  - 3. Distribution of Contract Documents.
  - 4. Submission of list of subcontractors, list of products, schedule of values, and progress schedule.

5. Designation of personnel representing the parties to Contract, Management and/or Board Member(s) and <1|A/E|>.
  6. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal request, Change Orders, and Contract closeout procedures.
  7. Scheduling.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Engineer, Owner, participants, and those affected by decisions made.

### **3.02 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the Work on a weekly basis.
- B. Attendance Required:
1. Contractor.
  2. Owner.
  3. Engineer.
  4. Contractor's superintendent.
  5. Major subcontractors.
- C. Agenda:
1. Review minutes of previous meetings.
  2. Review of work progress.
  3. Field observations, problems, and decisions.
  4. Identification of problems that impede, or will impede, planned progress.
  5. Review of submittals schedule and status of submittals.
  6. Maintenance of progress schedule.
  7. Corrective measures to regain projected schedules.
  8. Planned progress during succeeding work period.
  9. Maintenance of quality and work standards.
  10. Effect of proposed changes on progress schedule and coordination.
  11. Other business relating to work.
- D. Record minutes and distribute copies within two days after meeting to participants, with two copies to Engineer, Owner, participants, and those affected by decisions made.

### **3.03 CONSTRUCTION PROGRESS SCHEDULE - SEE SECTION 01 32 16**

- A. Within 5 days after date established in Notice to Proceed, submit preliminary schedule.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
1. Include written certification that major contractors have reviewed and accepted proposed schedule.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment.

### **3.04 REQUESTS FOR INFORMATION (RFI)**

- A. Definition: A request seeking one of the following:
1. An interpretation, amplification, or clarification of some requirement of Contract Documents arising from inability to determine from them the exact material, process, or system to be installed; or when the elements of construction are required to occupy the same space (interference); or when an item of work is described differently at more than one place in Contract Documents.
  2. A resolution to an issue which has arisen due to field conditions and affects design intent.
- B. Whenever possible, request clarifications at the next appropriate project progress meeting, with response entered into meeting minutes, rendering unnecessary the issuance of a formal RFI.
- C. Preparation: Prepare an RFI immediately upon discovery of a need for interpretation of Contract Documents. Failure to submit a RFI in a timely manner is not a legitimate cause for

claiming additional costs or delays in execution of the work.

1. Prepare a separate RFI for each specific item.
  - a. Review, coordinate, and comment on requests originating with subcontractors and/or materials suppliers.
  - b. Do not forward requests which solely require internal coordination between subcontractors.
- D. Reason for the RFI: Prior to initiation of an RFI, carefully study all Contract Documents to confirm that information sufficient for their interpretation is definitely not included.
  1. Unacceptable Uses for RFIs: Do not use RFIs to request the following:
    - a. Approval of submittals (use procedures specified elsewhere in this section).
    - b. Approval of substitutions (see Section - 01 60 00 - Product Requirements)
    - c. Changes that entail change in Contract Time and Contract Sum (comply with provisions of the Conditions of the Contract).
    - d. Different methods of performing work than those indicated in the Contract Drawings and Specifications (comply with provisions of the Conditions of the Contract).
- E. Content: Include identifiers necessary for tracking the status of each RFI, and information necessary to provide an actionable response.
  1. Discrete and consecutive RFI number, and descriptive subject/title.
  2. Issue date, and requested reply date.
  3. Reference to particular Contract Document(s) requiring additional information/interpretation. Identify pertinent drawing and detail number and/or specification section number, title, and paragraph(s).
  4. Annotations: Field dimensions and/or description of conditions which have engendered the request.
- F. Attachments: Include sketches, coordination drawings, descriptions, photos, submittals, and other information necessary to substantiate the reason for the request.
- G. Review Time: Engineer will respond and return RFIs to Contractor within seven calendar days of receipt. For the purpose of establishing the start of the mandated response period, RFIs received after 12:00 noon will be considered as having been received on the following regular working day.
  1. Response period may be shortened or lengthened for specific items, subject to mutual agreement, and recorded in a timely manner in progress meeting minutes.
- H. Responses: Content of answered RFIs will not constitute in any manner a directive or authorization to perform extra work or delay the project. If in Contractor's belief it is likely to lead to a change to Contract Sum or Contract Time, promptly issue a notice to this effect, and follow up with an appropriate Change Order request to Owner.
  1. Response may include a request for additional information, in which case the original RFI will be deemed as having been answered, and an amended one is to be issued forthwith. Identify the amended RFI with an R suffix to the original number.
  2. Do not extend applicability of a response to specific item to encompass other similar conditions, unless specifically so noted in the response.
  3. Notify Engineer within seven calendar days if an additional or corrected response is required by submitting an amended version of the original RFI, identified as specified above.

### **3.05 SUBMITTALS FOR REVIEW**

- A. When the following are specified in individual sections, submit them for review:
  1. Product data.
  2. Shop drawings.
  3. Samples for selection.
  4. Samples for verification.
- B. Submit to Engineer for review for the limited purpose of checking for compliance with information given and the design concept expressed in Contract Documents.
- C. Samples will be reviewed for aesthetic, color, or finish selection.

- D. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 78 00 - Closeout Submittals.

### **3.06 SUBMITTALS FOR INFORMATION**

- A. When the following are specified in individual sections, submit them for information:
  - 1. Design data.
  - 2. Certificates.
  - 3. Test reports.
  - 4. Inspection reports.
  - 5. Manufacturer's instructions.
  - 6. Manufacturer's field reports.
  - 7. Other types indicated.
- B. Submit for Engineer's knowledge as contract administrator or for Owner.

### **3.07 SUBMITTALS FOR PROJECT CLOSEOUT**

- A. Submit Correction Punch List for Substantial Completion.
- B. Submit Final Correction Punch List for Substantial Completion.
- C. When the following are specified in individual sections, submit them at project closeout in compliance with requirements of Section 01 78 00 - Closeout Submittals:
  - 1. Project record documents.
  - 2. Operation and maintenance data.
  - 3. Warranties.
  - 4. Bonds.
  - 5. Other types as indicated.
- D. Submit for Owner's benefit during and after project completion.

### **3.08 NUMBER OF COPIES OF SUBMITTALS**

- A. Electronic Documents: Submit one electronic copy in PDF format; an electronically-marked up file will be returned. Create PDFs at native size and right-side up; illegible files will be rejected.
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Engineer.
  - 1. After review, produce duplicates.
  - 2. Retained samples will not be returned to Contractor unless specifically so stated.

### **3.09 SUBMITTAL PROCEDURES**

- A. General Requirements:
  - 1. Use a separate transmittal for each item.
  - 2. Submit separate packages of submittals for review and submittals for information, when included in the same specification section.
  - 3. Sequentially identify each item. For revised submittals use original number and a sequential numerical suffix.
  - 4. Identify: Project; Contractor; subcontractor or supplier; pertinent drawing and detail number; and specification section number and article/paragraph, as appropriate on each copy.
  - 5. Apply Contractor's stamp, signed or initialed certifying that review, approval, verification of products required, field dimensions, adjacent construction work, and coordination of information is in accordance with the requirements of the work and Contract Documents.
  - 6. Schedule submittals to expedite the Project, and coordinate submission of related items.
    - a. For each submittal for review, allow 5 days excluding delivery time to and from the Contractor.
  - 7. Identify variations from Contract Documents and product or system limitations that may be detrimental to successful performance of the completed work.
  - 8. Provide space for Contractor and Engineer review stamps.
  - 9. When revised for resubmission, identify all changes made since previous submission.



10. Distribute reviewed submittals. Instruct parties to promptly report inability to comply with requirements.
  11. Incomplete submittals will not be reviewed, unless they are partial submittals for distinct portion(s) of the work, and have received prior approval for their use.
  12. Submittals not requested will not be recognized or processed.
- B. Samples Procedures:
1. Transmit related items together as single package.
  2. Identify each item to allow review for applicability in relation to shop drawings showing installation locations.

### **3.10 SUBMITTAL REVIEW**

- A. Submittals for Review: Engineer will review each submittal, and approve, or take other appropriate action.
- B. Submittals for Information: Engineer will acknowledge receipt and review. See below for actions to be taken.
- C. Engineer's actions will be reflected by marking each returned submittal using virtual stamp on electronic submittals.
- D. Engineer's and consultants' actions on items submitted for review:
1. Authorizing purchasing, fabrication, delivery, and installation:
    - a. "Approved", or language with same legal meaning.
    - b. "Approved as Noted, Resubmission not required", or language with same legal meaning.
      - 1) At Contractor's option, submit corrected item, with review notations acknowledged and incorporated.
    - c. "Approved as Noted, Resubmit for Record", or language with same legal meaning.
      - 1) Resubmit corrected item, with review notations acknowledged and incorporated. Resubmit separately, or as part of project record documents.
      - 2) Non-responsive resubmittals may be rejected.
  2. Not Authorizing fabrication, delivery, and installation:
    - a. "Revise and Resubmit".
      - 1) Resubmit revised item, with review notations acknowledged and incorporated.
      - 2) Non-responsive resubmittals may be rejected.
    - b. "Rejected".
      - 1) Submit item complying with requirements of Contract Documents.
- E. Engineer's and consultants' actions on items submitted for information:
1. Items for which no action was taken:
    - a. "Received" - to notify the Contractor that the submittal has been received for record only.
  2. Items for which action was taken:
    - a. "Reviewed" - no further action is required from Contractor.

**END OF SECTION**

**SECTION 01 40 00  
QUALITY REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. References and standards.
- B. Control of installation.
- C. Mock-ups.
- D. Tolerances.
- E. Defect Assessment.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.
- B. Section 01 60 00 - Product Requirements: Requirements for material and product quality.

**1.03 DEFINITIONS**

- A. Design Data: Design-related, signed and sealed drawings, calculations, specifications, certifications, shop drawings and other submittals provided by Contractor, and prepared directly by, or under direct supervision of, appropriately licensed design professional.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.

**1.05 REFERENCES AND STANDARDS**

- A. For products and workmanship specified by reference to a document or documents not included in the Project Manual, also referred to as reference standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.
- B. Comply with reference standard of date of issue current on date of Agreement, except where a specific date is established by applicable code.
- C. Obtain copies of standards where required by product specification sections.
- D. Maintain copy at project site during submittals, planning, and progress of the specific work, until Substantial Completion.
- E. Should specified reference standards conflict with Contract Documents, request clarification from Engineer before proceeding.
- F. Neither the contractual relationships, duties, or responsibilities of the parties in Contract nor those of Engineer shall be altered from Contract Documents by mention or inference otherwise in any reference document.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Engineer before proceeding.
- D. Comply with specified standards as minimum quality for the work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have work performed by persons qualified to produce required and specified quality.

- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

### **3.02 MOCK-UPS**

- A. Before installing portions of the Work where mock-ups are required, construct mock-ups in location and size indicated for each form of construction and finish required to comply with the following requirements, using materials indicated for the completed Work. The purpose of mock-up is to demonstrate the proposed range of aesthetic effects and workmanship.
- B. Accepted mock-ups establish the standard of quality the Engineer will use to judge the Work.
- C. Integrated Exterior Mock-ups: Construct integrated exterior mock-up as indicated on drawings. Coordinate installation of exterior envelope materials and products as required in individual Specification Sections. Provide adequate supporting structure for mock-up materials as necessary.
- D. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- E. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- F. Obtain Engineer's approval of mock-ups before starting work, fabrication, or construction.
  - 1. Engineer will issue written comments within seven (7) working days of initial review and each subsequent follow up review of each mock-up.
  - 2. Make corrections as necessary until Engineer's approval is issued.
- G. Engineer will use accepted mock-ups as a comparison standard for the remaining Work.
- H. Where mock-up has been accepted by Engineer and is specified in product specification sections to be removed, protect mock-up throughout construction, remove mock-up and clear area when directed to do so by Engineer.

### **3.03 TOLERANCES**

- A. Monitor fabrication and installation tolerance control of products to produce acceptable Work. Do not permit tolerances to accumulate.
- B. Comply with manufacturers' tolerances. Should manufacturers' tolerances conflict with Contract Documents, request clarification from Engineer before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

### **3.04 DEFECT ASSESSMENT**

- A. Replace Work or portions of the Work not complying with specified requirements.
- B. If, in the opinion of Engineer, it is not practical to remove and replace the work, Engineer will direct an appropriate remedy or adjust payment.

**END OF SECTION**

**SECTION 01 50 00  
TEMPORARY FACILITIES AND CONTROLS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary utilities.
- B. Temporary sanitary facilities.
- C. Temporary Controls: Barriers, enclosures, and fencing.
- D. Security requirements.
- E. Vehicular access and parking.
- F. Waste removal facilities and services.
- G. Field offices.

**1.02 TEMPORARY UTILITIES**

- A. Owner will provide the following:
  - 1. Electrical power and metering, consisting of connection to existing facilities.
  - 2. Water supply, consisting of connection to existing facilities.
- B. Use trigger-operated nozzles for water hoses, to avoid waste of water.

**1.03 TEMPORARY SANITARY FACILITIES**

- A. Provide and maintain required facilities and enclosures. Provide at time of project mobilization.
- B. Use of existing facilities is not permitted.
- C. Maintain daily in clean and sanitary condition.
- D. Location of sanitary facilities shall be coordinated with Owner.

**1.04 BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas, to prevent access to areas that could be hazardous to workers or the public, to allow for owner's use of site and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way and for public access to existing building.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

**1.05 EXTERIOR ENCLOSURES**

- A. Provide temporary insulated weather tight closure of exterior openings to accommodate acceptable working conditions and protection for Products, to allow for temporary heating and maintenance of required ambient temperatures identified in individual specification sections, and to prevent entry of unauthorized persons. Provide access doors with self-closing hardware and locks.

**1.06 SECURITY**

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

**1.07 VEHICULAR ACCESS AND PARKING**

- A. Comply with regulations relating to use of streets and sidewalks, access to emergency facilities, and access for emergency vehicles.
- B. Coordinate access and haul routes with governing authorities and Owner.
- C. Provide and maintain access to fire hydrants, free of obstructions.

### **1.08 WASTE REMOVAL**

- A. Provide waste removal facilities and services as required to maintain the site in clean and orderly condition.
- B. Provide containers with lids. Remove trash from site periodically.
- C. If materials to be recycled or re-used on the project must be stored on-site, provide suitable non-combustible containers; locate containers holding flammable material outside the structure unless otherwise approved by the authorities having jurisdiction.
- D. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.

### **1.09 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, prior to Date of Substantial Completion inspection.
- B. Clean and repair damage caused by installation or use of temporary work.
- C. Restore existing facilities used during construction to original condition.

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

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

**END OF SECTION**

**SECTION 01 60 00  
PRODUCT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. General product requirements.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Maintenance materials, including extra materials, spare parts, tools, and software.

**1.02 SUBMITTALS**

- A. Product Data Submittals: Submit manufacturer's standard published data. Mark each copy to identify applicable products, models, options, and other data. Supplement manufacturers' standard data to provide information specific to this Project.
- B. Shop Drawing Submittals: Prepared specifically for this Project; indicate utility and electrical characteristics, utility connection requirements, and location of utility outlets for service for functional equipment and appliances.
- C. Sample Submittals: Illustrate functional and aesthetic characteristics of the product, with integral parts and attachment devices. Coordinate sample submittals for interfacing work.
  - 1. For selection from standard finishes, submit samples of the full range of the manufacturer's standard colors, textures, and patterns.

**PART 2 PRODUCTS**

**2.01 EXISTING PRODUCTS**

- A. Do not use materials and equipment removed from existing premises unless specifically required or permitted by the Contract Documents.
- B. Unforeseen historic items encountered remain the property of the Owner; notify Owner promptly upon discovery; protect, remove, handle, and store as directed by Owner.
- C. Existing materials and equipment indicated to be removed, but not to be re-used, relocated, reinstalled, delivered to the Owner, or otherwise indicated as to remain the property of the Owner, become the property of the Contractor; remove from site.

**2.02 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. Use of products having any of the following characteristics is not permitted:
  - 1. Containing lead, cadmium, or asbestos.
- C. Where other criteria are met, Contractor shall give preference to products that:
  - 1. If used on interior, have lower emissions.
  - 2. If used on interior, have lower emissions, as defined in Section 01 61 16.
  - 3. If wet-applied, have lower VOC content, as defined in Section 01 61 16.
  - 4. Have longer documented life span under normal use.

**2.03 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
- B. Products Specified by Naming One or More Manufacturers: Use a product of one of the manufacturers named and meeting specifications, no options or substitutions allowed.
- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.

## **2.04 MAINTENANCE MATERIALS**

- A. Furnish extra materials, spare parts, tools, and software of types and in quantities specified in individual specification sections.
- B. Deliver to Project site; obtain receipt prior to final payment.

## **PART 3 EXECUTION**

### **3.01 SUBSTITUTION LIMITATIONS**

- A. See Section 01 25 00 - Substitution Procedures.

### **3.02 TRANSPORTATION AND HANDLING**

- A. Package products for shipment in manner to prevent damage; for equipment, package to avoid loss of factory calibration.
- B. If special precautions are required, attach instructions prominently and legibly on outside of packaging.
- C. Coordinate schedule of product delivery to designated prepared areas in order to minimize site storage time and potential damage to stored materials.
- D. Transport and handle products in accordance with manufacturer's instructions.
- E. Transport materials in covered trucks to prevent contamination of product and littering of surrounding areas.
- F. Promptly inspect shipments to ensure that products comply with requirements, quantities are correct, and products are undamaged.
- G. Provide equipment and personnel to handle products by methods to prevent soiling, disfigurement, or damage, and to minimize handling.
- H. Arrange for the return of packing materials, such as wood pallets, where economically feasible.

### **3.03 STORAGE AND PROTECTION**

- A. Designate receiving/storage areas for incoming products so that they are delivered according to installation schedule and placed convenient to work area in order to minimize waste due to excessive materials handling and misapplication.
- B. Store and protect products in accordance with manufacturers' instructions.
- C. Store with seals and labels intact and legible.
- D. Arrange storage of materials and products to allow for visual inspection for the purpose of determination of quantities, amounts, and unit counts.
- E. Store sensitive products in weathertight, climate-controlled enclosures in an environment favorable to product.
- F. For exterior storage of fabricated products, place on sloped supports above ground.
- G. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- H. Comply with manufacturer's warranty conditions, if any.
- I. Do not store products directly on the ground.
- J. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- K. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- L. Prevent contact with material that may cause corrosion, discoloration, or staining.
- M. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.

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

**END OF SECTION**



**SECTION 01 61 16**  
**VOLATILE ORGANIC COMPOUND (VOC) CONTENT RESTRICTIONS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Requirements for VOC-Content-Restricted products.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 30 00 - Administrative Requirements: Submittal procedures.

**1.03 DEFINITIONS**

- A. VOC-Content-Restricted Products: All products in the following product categories, whether specified or not:
  - 1. Interior paints and coatings.
  - 2. Interior adhesives and sealants, including flooring adhesives.
  - 3. Wet-applied roofing and waterproofing.
- B. Interior of Building: Anywhere inside the exterior weather barrier.
- C. Adhesives: All gunnable, trowelable, liquid-applied, and aerosol adhesives, whether specified or not; including flooring adhesives, resilient base adhesives, and pipe jointing adhesives.
- D. Sealants: All gunnable, trowelable, and liquid-applied joint sealants and sealant primers, whether specified or not; including firestopping sealants and duct joint sealers.

**1.04 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency current edition.
- B. ASTM D3960 - Standard Practice for Determining Volatile Organic Compound (VOC) Content of Paints and Related Coatings 2005 (Reapproved 2018).
- C. CARB (SCM) - Suggested Control Measure for Architectural Coatings; California Air Resources Board 2020.
- D. SCAQMD 1113 - Architectural Coatings 1977, with Amendment (2016).
- E. SCAQMD 1168 - Adhesive and Sealant Applications 1989, with Amendment (2022).

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: For each VOC-restricted product used in the project, submit evidence of compliance.

**1.06 QUALITY ASSURANCE**

- A. VOC Content Test Method: 40 CFR 59, Subpart D (EPA Method 24), or ASTM D3960, unless otherwise indicated.
  - 1. Evidence of Compliance: Acceptable types of evidence are:
    - a. Report of laboratory testing performed in accordance with requirements.
- B. Testing Agency Qualifications: Independent firm specializing in performing testing and inspections of the type specified in this section.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. All Products: Comply with the most stringent of federal, State, and local requirements, or these specifications.
- B. VOC-Content-Restricted Products: VOC content not greater than required by the following:
  - 1. Adhesives, Including Flooring Adhesives: SCAQMD 1168 Rule.
  - 2. Joint Sealants: SCAQMD 1168 Rule.
  - 3. Paints and Coatings: Each color; most stringent of the following:

- a. 40 CFR 59, Subpart D.
  - b. SCAQMD 1113 Rule.
  - c. CARB (SCM).
4. Wet-Applied Roofing and Waterproofing: Comply with requirements for paints and coatings.

### **PART 3 EXECUTION**

#### **3.01 FIELD QUALITY CONTROL**

- A. Owner reserves the right to reject non-compliant products, whether installed or not, and require their removal and replacement with compliant products at no extra cost to Owner.
- B. Additional costs to restore indoor air quality due to installation of non-compliant products will be borne by Contractor.

**END OF SECTION**

**SECTION 01 70 00  
EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for alterations work, including selective demolition.
- C. Cutting and patching.
- D. Cleaning and protection.
- E. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on working in existing building; continued occupancy; work sequence; identification of salvaged and relocated materials.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures.
- C. Section 01 40 00 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 50 00 - Temporary Facilities and Controls: Temporary exterior enclosures.
- E. Section 01 78 00 - Closeout Submittals: Project record documents, operation and maintenance data, warranties, and bonds.
- F. Section 02 41 00 - Demolition: Demolition of whole structures and parts thereof; site utility demolition.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Cutting and Patching: Submit written request in advance of cutting or alteration that affects:
  - 1. Structural integrity of any element of Project.
  - 2. Integrity of weather exposed or moisture resistant element.
  - 3. Efficiency, maintenance, or safety of any operational element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate Contractor.

**1.04 PROJECT CONDITIONS**

- A. Ventilate enclosed areas to assist cure of materials, to dissipate humidity, and to prevent accumulation of dust, fumes, vapors, or gases.
- B. Dust Control: Execute work by methods to minimize raising dust from construction operations. Provide positive means to prevent air-borne dust from dispersing into atmosphere and over adjacent property.
  - 1. Provide dust-proof enclosures to prevent entry of dust generated outdoors.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
  - 1. Outdoors: Limit conduct of especially noisy exterior work to the hours of 8 am to 5 pm.
- D. Pest and Rodent Control: Provide methods, means, and facilities to prevent pests and insects from damaging the work.
- E. Rodent Control: Provide methods, means, and facilities to prevent rodents from accessing or invading premises.
- F. Pollution Control: Provide methods, means, and facilities to prevent contamination of soil, water, and atmosphere from discharge of noxious, toxic substances, and pollutants produced by construction operations. Comply with federal, state, and local regulations.

**1.05 COORDINATION**

- A. See Section 01 10 00 for occupancy-related requirements.

- B. Coordinate scheduling, submittals, and work of the various sections of the Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
- C. Notify affected utility companies and comply with their requirements.
- D. Verify that utility requirements and characteristics of new operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, such equipment.
- E. Coordinate space requirements, supports, and installation of mechanical and electrical work that are indicated diagrammatically on drawings. Follow routing indicated for pipes, ducts, and conduit, as closely as practicable; place runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance, and for repairs.
- F. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within the construction. Coordinate locations of fixtures and outlets with finish elements.
- G. Coordinate completion and clean-up of work of separate sections.
- H. After Owner occupancy of premises, coordinate access to site for correction of defective work and work not in accordance with Contract Documents, to minimize disruption of Owner's activities.

## **PART 2 PRODUCTS**

### **2.01 PATCHING MATERIALS**

- A. New Materials: As specified in product sections; match existing products and work for patching and extending work.
- B. Type and Quality of Existing Products: Determine by inspecting and testing products where necessary, referring to existing work as a standard.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. Verify that existing substrate is capable of structural support or attachment of new work being applied or attached.
- C. Examine and verify specific conditions described in individual specification sections.
- D. Take field measurements before confirming product orders or beginning fabrication, to minimize waste due to over-ordering or misfabrication.
- E. Verify that utility services are available, of the correct characteristics, and in the correct locations.
- F. Prior to Cutting: Examine existing conditions prior to commencing work, including elements subject to damage or movement during cutting and patching. After uncovering existing work, assess conditions affecting performance of work. Beginning of cutting or patching means acceptance of existing conditions.

### **3.02 PREPARATION**

- A. Clean substrate surfaces prior to applying next material or substance.
- B. Seal cracks or openings of substrate prior to applying next material or substance.
- C. Apply manufacturer required or recommended substrate primer, sealer, or conditioner prior to applying any new material or substance in contact or bond.

### **3.03 GENERAL INSTALLATION REQUIREMENTS**

- A. Install products as specified in individual sections, in accordance with manufacturer's instructions and recommendations, and so as to avoid waste due to necessity for replacement.
- B. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.

- C. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- D. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- E. Make neat transitions between different surfaces, maintaining texture and appearance.

### 3.04 ALTERATIONS

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  - 1. Verify that construction and utility arrangements are as indicated.
  - 2. Report discrepancies to Engineer before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Remove existing work as indicated and as required to accomplish new work.
  - 1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.
  - 2. Remove items indicated on drawings.
  - 3. Relocate items indicated on drawings.
  - 4. Where new surface finishes are to be applied to existing work, perform removals, patch, and prepare existing surfaces as required to receive new finish; remove existing finish if necessary for successful application of new finish.
  - 5. Where new surface finishes are not specified or indicated, patch holes and damaged surfaces to match adjacent finished surfaces as closely as possible.
- C. Services (Including but not limited to HVAC, Plumbing, Fire Protection, Electrical, and Telecommunications): Remove, relocate, and extend existing systems to accommodate new construction.
  - 1. Maintain existing active systems that are to remain in operation; maintain access to equipment and operational components; if necessary, modify installation to allow access or provide access panel.
  - 2. Where existing systems or equipment are not active and Contract Documents require reactivation, put back into operational condition; repair supply, distribution, and equipment as required.
  - 3. Where existing active systems serve occupied facilities but are to be replaced with new services, maintain existing systems in service until new systems are complete and ready for service.
    - a. Disable existing systems only to make switchovers and connections; minimize duration of outages.
    - b. Provide temporary connections as required to maintain existing systems in service.
  - 4. Verify that abandoned services serve only abandoned facilities.
  - 5. Remove abandoned pipe, ducts, conduits, and equipment, including those above accessible ceilings; remove back to source of supply where possible, otherwise cap stub and tag with identification; patch holes left by removal using materials specified for new construction.
- D. Protect existing work to remain.
  - 1. Prevent movement of structure; provide shoring and bracing if necessary.
  - 2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  - 3. Repair adjacent construction and finishes damaged during removal work.
- E. Adapt existing work to fit new work: Make as neat and smooth transition as possible.
  - 1. When existing finished surfaces are cut so that a smooth transition with new work is not possible, terminate existing surface along a straight line at a natural line of division and make recommendation to Engineer.
- F. Patching: Where the existing surface is not indicated to be refinished, patch to match the surface finish that existed prior to cutting. Where the surface is indicated to be refinished, patch so that the substrate is ready for the new finish.
- G. Clean existing systems and equipment.

- H. Remove demolition debris and abandoned items from alterations areas and dispose of off-site; do not burn or bury.
- I. Do not begin new construction in alterations areas before demolition is complete.
- J. Comply with all other applicable requirements of this section.

### **3.05 CUTTING AND PATCHING**

- A. Whenever possible, execute the work by methods that avoid cutting or patching.
- B. See Alterations article above for additional requirements.
- C. Perform whatever cutting and patching is necessary to:
  - 1. Complete the work.
  - 2. Fit products together to integrate with other work.
  - 3. Provide openings for penetration of mechanical, electrical, and other services.
  - 4. Match work that has been cut to adjacent work.
  - 5. Repair areas adjacent to cuts to required condition.
  - 6. Repair new work damaged by subsequent work.
  - 7. Remove samples of installed work for testing when requested.
  - 8. Remove and replace defective and non-complying work.
- D. Execute work by methods that avoid damage to other work and that will provide appropriate surfaces to receive patching and finishing. In existing work, minimize damage and restore to original condition.
- E. Employ skilled and experienced installer to perform cutting for weather exposed and moisture resistant elements, and sight exposed surfaces.
- F. Cut rigid materials using masonry saw or core drill. Pneumatic tools not allowed without prior approval.
- G. Restore work with new products in accordance with requirements of Contract Documents.
- H. Fit work air tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material , to full thickness of the penetrated element.
- J. Patching:
  - 1. Finish patched surfaces to match finish that existed prior to patching. On continuous surfaces, refinish to nearest intersection or natural break. For an assembly, refinish entire unit.
  - 2. Match color, texture, and appearance.
  - 3. Repair patched surfaces that are damaged, lifted, discolored, or showing other imperfections due to patching work. If defects are due to condition of substrate, repair substrate prior to repairing finish.

### **3.06 PROGRESS CLEANING**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site in a clean and orderly condition.
- B. Remove debris and rubbish from pipe chases, plenums, attics, crawl spaces, and other closed or remote spaces, prior to enclosing the space.
- C. Broom and vacuum clean interior areas prior to start of surface finishing, and continue cleaning to eliminate dust.
- D. Collect and remove waste materials, debris, and trash/rubbish from site periodically and dispose off-site; do not burn or bury.

### **3.07 PROTECTION OF INSTALLED WORK**

- A. Protect installed work from damage by construction operations.
- B. Provide special protection where specified in individual specification sections.

- C. Provide temporary and removable protection for installed products. Control activity in immediate work area to prevent damage.
- D. Provide protective coverings at walls, projections, jambs, sills, and soffits of openings.
- E. Protect finished floors, stairs, and other surfaces from traffic, dirt, wear, damage, or movement of heavy objects, by protecting with durable sheet materials.
- F. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations for protection from waterproofing or roofing material manufacturer.
- G. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

### **3.08 FINAL CLEANING**

- A. Use cleaning materials that are nonhazardous.
- B. Clean interior and exterior glass, surfaces exposed to view; remove temporary labels, stains and foreign substances, polish transparent and glossy surfaces,
- C. Remove all labels that are not permanent. Do not paint or otherwise cover fire test labels or nameplates on mechanical and electrical equipment.
- D. Clean equipment and fixtures to a sanitary condition with cleaning materials appropriate to the surface and material being cleaned.
- E. Clean filters of operating equipment.
- F. Clean debris from roofs, overflow drains, area drains, and drainage systems.
- G. Clean site; sweep paved areas, rake clean landscaped surfaces.
- H. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.09 CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
- B. Accompany Project Coordinator on preliminary inspection to determine items to be listed for completion or correction in the Contractor's Correction Punch List for Contractor's Notice of Substantial Completion.
- C. Notify Engineer when work is considered ready for Engineer's Substantial Completion inspection.
- D. Submit written certification containing Contractor's Correction Punch List, that Contract Documents have been reviewed, work has been inspected, and that work is complete in accordance with Contract Documents and ready for Engineer's Substantial Completion inspection.
- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Engineer's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Engineer.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- G. Notify Engineer when work is considered finally complete and ready for Engineer's Substantial Completion final inspection.
- H. Complete items of work determined by Engineer listed in executed Certificate of Substantial Completion.

**END OF SECTION**

**SECTION 01 78 00  
CLOSEOUT SUBMITTALS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Record Documents.
- B. Warranties and bonds.

**1.02 RELATED REQUIREMENTS**

- A. Section 00 73 00 - Supplementary Conditions: Performance bond and labor and material payment bonds, warranty, and correction of work.
- B. Section 01 30 00 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- C. Section 01 70 00 - Execution and Closeout Requirements: Contract closeout procedures.
- D. Individual Product Sections: Warranties required for specific products or Work.

**1.03 SUBMITTALS**

- A. Project Record Documents: Submit documents to Engineer with claim for final Application for Payment.
- B. Warranties and Bonds:
  - 1. For equipment or component parts of equipment put into service during construction with Owner's permission, submit documents within 10 days after acceptance.
  - 2. Make other submittals within 10 days after Date of Substantial Completion, prior to final Application for Payment.
  - 3. For items of Work for which acceptance is delayed beyond Date of Substantial Completion, submit within 10 days after acceptance, listing the date of acceptance as the beginning of the warranty period.

**PART 2 PRODUCTS - NOT USED**

**PART 3 EXECUTION**

**3.01 PROJECT RECORD DOCUMENTS**

- A. Maintain on site one set of the following record documents; record actual revisions to the Work:
  - 1. Drawings.
  - 2. Specifications.
  - 3. Addenda.
  - 4. Change Orders and other modifications to the Contract.
  - 5. Reviewed shop drawings, product data, and samples.
- B. Ensure entries are complete and accurate, enabling future reference by Owner.
- C. Store record documents separate from documents used for construction.
- D. Record information concurrent with construction progress.
- E. Specifications: Legibly mark and record at each product section description of actual products installed, including the following:
  - 1. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  - 1. Field changes of dimension and detail.
  - 2. Details not on original Contract drawings.

**3.02 WARRANTIES AND BONDS**

- A. Obtain warranties and bonds, executed in duplicate by responsible Subcontractors, suppliers, and manufacturers, within 10 days after completion of the applicable item of work. Except for items put into use with Owner's permission, leave date of beginning of time of warranty until Date of Substantial completion is determined.



- B. Verify that documents are in proper form, contain full information, and are notarized.
- C. Co-execute submittals when required.
- D. Retain warranties and bonds until time specified for submittal.

**END OF SECTION**

**SECTION 02 41 00  
DEMOLITION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Building demolition excluding removal of hazardous materials and toxic substances.
- B. Selective demolition of building elements for alteration purposes and as indicated on the drawings.
- C. Removal and protection of existing features and materials indicated as "salvage."

**1.02 RELATED REQUIREMENTS**

- A. Section 01 10 00 - Summary: Limitations on Contractor's use of site and premises.
- B. Section 01 50 00 - Temporary Facilities and Controls: Site fences, security, protective barriers, and waste removal.
- C. Section 01 70 00 - Execution and Closeout Requirements: Project conditions; protection of bench marks, survey control points, and existing construction to remain; reinstallation of removed products; temporary bracing and shoring.

**1.03 REFERENCE STANDARDS**

- A. 29 CFR 1926 - Safety and Health Regulations for Construction Current Edition.
- B. NFPA 241 - Standard for Safeguarding Construction, Alteration, and Demolition Operations 2022, with Errata (2021).

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Demolition Plan: Submit demolition plan as specified by OSHA and local authorities.
  - 1. Indicate extent of demolition, removal sequence, bracing and shoring, and location and construction of barricades and fences.
  - 2. Identify demolition firm and submit qualifications.
  - 3. Include a summary of safety procedures.
- C. Project Record Documents: Accurately record actual locations of capped and active utilities and subsurface construction.

**1.05 QUALITY ASSURANCE**

- A. Demolition Firm Qualifications: Company specializing in the type of work required.
  - 1. Minimum of five years of documented experience.

**PART 2 PRODUCTS**

**2.01 MATERIALS**

- A. When chemicals or hazardous materials are used for demolition purposes provide detailed product information, safety data sheet, schedule of usage, and protection plan for existing materials.

**PART 3 EXECUTION**

**3.01 SCOPE**

- A. See Section 01 10 00 - Summary of Work for work scope.

**3.02 GENERAL PROCEDURES AND PROJECT CONDITIONS**

- A. Comply with applicable codes and regulations for demolition operations and safety of adjacent structures and the public.
  - 1. Obtain required permits.
  - 2. Use of explosives is not permitted.
  - 3. Take precautions to prevent catastrophic or uncontrolled collapse of structures to be removed; do not allow worker or public access within range of potential collapse of unstable structures.

4. Provide, erect, and maintain temporary barriers and security devices.
  5. Use physical barriers to prevent access to areas that could be hazardous to workers or the public.
  6. Conduct operations to minimize effects on and interference with adjacent structures and occupants.
  7. Do not close or obstruct roadways or sidewalks without permit.
  8. Conduct operations to minimize obstruction of public and private entrances and exits; do not obstruct required exits at any time; protect persons using entrances and exits from removal operations.
  9. Obtain written permission from owners of adjacent properties when demolition equipment will traverse, infringe upon or limit access to their property.
- B. Do not begin removal until receipt of notification to proceed from Owner.
  - C. Do not begin removal until built elements to be salvaged or relocated have been removed.
  - D. Do not begin removal until vegetation to be relocated has been removed and specified measures have been taken to protect vegetation to remain.
  - E. Protect existing structures and other elements that are not to be removed.
    1. Provide bracing and shoring.
    2. Prevent movement or settlement of adjacent structures.
    3. Stop work immediately if adjacent structures appear to be in danger.
  - F. Minimize production of dust due to demolition operations; do not use water if that will result in ice, flooding, sedimentation of public waterways or storm sewers, or other pollution.
  - G. If hazardous materials are discovered during removal operations, stop work and notify Engineer and Owner; hazardous materials include regulated asbestos containing materials, lead, PCB's, and mercury.

### **3.03 EXISTING UTILITIES**

- A. Coordinate work with utility companies; notify before starting work and comply with their requirements; obtain required permits.
- B. Protect existing utilities to remain from damage.
- C. Do not disrupt public utilities without permit from authority having jurisdiction.
- D. Do not close, shut off, or disrupt existing life safety systems that are in use without at least 7 days prior written notification to Owner.
- E. Do not close, shut off, or disrupt existing utility branches or take-offs that are in use without at least 3 days prior written notification to Owner.
- F. Locate and mark utilities to remain; mark using highly visible tags or flags, with identification of utility type; protect from damage due to subsequent construction, using substantial barricades if necessary.
- G. Remove exposed piping, valves, meters, equipment, supports, and foundations of disconnected and abandoned utilities.

### **3.04 SELECTIVE DEMOLITION FOR ALTERATIONS**

- A. Drawings showing existing construction and utilities are based on casual field observation and existing record documents only.
  1. Verify that construction and utility arrangements are as indicated.
  2. Report discrepancies to Engineer/Engineer before disturbing existing installation.
  3. Beginning of demolition work constitutes acceptance of existing conditions that would be apparent upon examination prior to starting demolition.
- B. Maintain weatherproof exterior building enclosure except for interruptions required for replacement or modifications; take care to prevent water and humidity damage.
- C. Remove existing work as indicated and as required to accomplish new work.
  1. Remove rotted wood, corroded metals, and deteriorated masonry and concrete; replace with new construction specified.

2. Remove items indicated on drawings.
- D. Protect existing work to remain.
1. Prevent movement of structure; provide shoring and bracing if necessary.
  2. Perform cutting to accomplish removals neatly and as specified for cutting new work.
  3. Repair adjacent construction and finishes damaged during removal work.
  4. Patch as specified for patching new work.

### **3.05 DEBRIS AND WASTE REMOVAL**

- A. Remove debris, junk, and trash from site.
- B. Leave site in clean condition, ready for subsequent work.
- C. Clean up spillage and wind-blown debris from public and private lands.

**END OF SECTION**

**SECTION 04 01 00  
MASONRY RESTORATION**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Replacement of brick units.
- B. Repointing mortar joints.
- C. Repair of damaged masonry.

**1.02 RELATED REQUIREMENTS**

- A. Section 04 05 11 - Masonry Mortaring and Grouting.
- B. Section 04 20 00 - Unit Masonry: Brick masonry units.

**1.03 REFERENCE STANDARDS**

- A. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures 2022.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data on cleaning compounds.
- C. Samples: Submit four samples of face brick and stone units to illustrate matching color, texture and extremes of color range.

**1.05 QUALITY ASSURANCE**

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of the contract documents.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver masonry neatly stacked and tied on pallets. Store clear of ground with adequate waterproof covering.

**1.07 FIELD CONDITIONS**

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

**PART 2 PRODUCTS**

**2.01 MANUFACTURERS**

- A. Restoration and Cleaning Chemicals:
  - 1. PROSOCO; Product Sure Klean 600: [www.prosoco.com](http://www.prosoco.com).
  - 2. Substitutions: See Section 01 60 00 - Product Requirements.

**2.02 CLEANING MATERIALS**

- A. Cleaning Agent: Detergent type.

**2.03 MORTAR MATERIALS**

- A. Comply with requirements of Section 04 05 11.

**2.04 MASONRY MATERIALS**

- A. Brick: Section 04 20 00.
- B. Accessories:
  - 1. Water Repellent - Protectosil Chem-trete 40 VOC or approved equivalent.

**PART 3 EXECUTION**

**3.01 EXAMINATION**

- A. Verify that surfaces to be cleaned are ready for work of this section.

### **3.02 PREPARATION**

- A. Protect surrounding elements from damage due to restoration procedures.
- B. Carefully remove and store removable items located in areas to be restored, including fixtures, fittings, finish hardware, and accessories; reinstall upon completion.
- C. Separate areas to be protected from restoration areas using means adequate to prevent damage.
- D. Cover existing landscaping with tarpaulins or similar covers.
- E. Mask immediately adjacent surfaces with material that will withstand cleaning and restoration procedures.
- F. Close off adjacent occupied areas with dust proof and weatherproof partitions.
- G. Protect roof membrane and flashings from damage with 1/2 inch (13 mm) plywood laid on roof surfaces over full extent of work area and traffic route.
- H. When using cleaning methods that involve water or other liquids, install drainage devices to prevent runoff over adjacent surfaces unless those surfaces are impervious to damage from runoff.
- I. Do not allow cleaning runoff to drain into sanitary or storm sewers.

### **3.03 REBUILDING**

- A. Cut out damaged and deteriorated masonry with care in a manner to prevent damage to any adjacent remaining materials.
- B. Support structure as necessary in advance of cutting out units.
- C. Cut away loose or unsound adjoining masonry as directed.
- D. Build in new units following procedures for new work specified in other section(s).
- E. Mortar Mix: Colored and proportioned to match existing work.
- F. Ensure that anchors are correctly located and built in.
- G. Install built in masonry work to match and align with existing, with joints and coursing true and level, faces plumb and in line. Build in all openings, accessories and fittings.

### **3.04 REPOINTING**

- A. Perform repointing prior to cleaning masonry surfaces.
- B. Cut out loose or disintegrated mortar in joints to minimum 3/4 inch (19 mm) depth or until sound mortar is reached.
- C. Use power tools only after test cuts determine no damage to masonry units will result.
- D. Saws used for cutting shall have integral vacuums to minimize dust, debris, and particulates.
- E. Do not damage masonry units.
- F. When cutting is complete, remove dust and loose material by brushing.
- G. Premoisten joint and apply mortar. Pack tightly in maximum 1/4 inch (6 mm) layers. Form a smooth, compact concave joint to match existing.
- H. Moist cure for 72 hours.

### **3.05 CLEANING NEW MASONRY**

- A. Verify mortar is fully set and cured.
- B. Clean surfaces and remove large particles with wood scrapers, brass or nylon wire brushes.
- C. Scrub walls with cleaning agent solution using stiff brush. Thoroughly rinse and wash off cleaning solution, dirt and mortar crumbs using clean, pressurized water.

### **3.06 STONE REPAIR**

- A. Stone crack repair - Sawcut, grind, clean, and prepare cracks within stone panels in accordance with manufacturer installations instructions. Use saws with integral dust collection

vacuums to minimize dust and particulates. Use repair epoxy with viscosity appropriate for width of crack in order to fully fill crack. Use low pressure injection for narrow cracks in order to achieve full penetration. Install products in accordance with manufacturer instructions.

- B. Stone patching - prepare stone surfaces by square cutting stone to a minimum depth of 1/2", avoiding irregular shapes. Clean surface of all contaminants and laitance. Add 1/4" diameter stainless steel threaded rod reinforcement as required/directed by Engineer. reinforcement shall be epoxy-grouted into sound stone substrate. Apply patching material in lifts and in accordance with manufacturer installation instructions. Patching material shall be color matched to surrounding stone. Texture finished surface to match existing.
- C. Provide one mock-up of each type of stone repair for review by Engineer and Owner prior to commencing with stone repair work.

### **3.07 CLEANING**

- A. Immediately remove stains, efflorescence, or other excess resulting from the work of this section.
- B. Remove excess mortar, smears, and droppings as work proceeds and upon completion.
- C. Clean surrounding surfaces.

**END OF SECTION**

**SECTION 04 05 11  
MASONRY MORTARING AND GROUTING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Mortar for masonry.

**1.02 RELATED REQUIREMENTS**

- A. Section 04 01 00 - Masonry Restoration: Bedding and pointing mortar for masonry restoration work.
- B. Section 04 20 00 - Unit Masonry: Installation of mortar.

**1.03 REFERENCE STANDARDS**

- A. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures 2022.
- B. ASTM C5 - Standard Specification for Quicklime for Structural Purposes 2018.
- C. ASTM C144 - Standard Specification for Aggregate for Masonry Mortar 2018.
- D. ASTM C150/C150M - Standard Specification for Portland Cement 2022.
- E. ASTM C207 - Standard Specification for Hydrated Lime for Masonry Purposes 2018.
- F. ASTM C270 - Standard Specification for Mortar for Unit Masonry 2019a, with Editorial Revision.
- G. ASTM C979/C979M - Standard Specification for Pigments for Integrally Colored Concrete 2016.

**1.04 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Include design mix and indicate whether the Proportion or Property specification of ASTM C270 is to be used. Also include required environmental conditions and admixture limitations.
- C. Samples: Submit two samples of mortar, illustrating mortar color and color range.

**1.05 QUALITY ASSURANCE**

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of the contract documents.

**1.06 DELIVERY, STORAGE, AND HANDLING**

- A. Maintain packaged materials clean, dry, and protected against dampness, freezing, and foreign matter.

**1.07 FIELD CONDITIONS**

- A. Cold and Hot Weather Requirements: Comply with requirements of TMS 402/602 or applicable building code, whichever is more stringent.

**PART 2 PRODUCTS**

**2.01 MORTAR AND GROUT APPLICATIONS**

- A. At Contractor's option, mortar and grout may be field-mixed from packaged dry materials, made from factory premixed dry materials with addition of water only, or ready-mixed.
- B. Mortar Mix Designs: ASTM C270, Property Specification.
  - 1. Exterior, Non-loadbearing Masonry: Type N.

**2.02 MATERIALS**

- A. Packaged Dry Material for Mortar for Repointing: Premixed Portland cement, graded sand, and chemical admixtures complying with ASTM C91/C91M with the addition of water only.
  - 1. Color: To match adjacent mortar color.
- B. Portland Cement: ASTM C150/C150M.
  - 1. Type: Type I - Normal; ASTM C150/C150M.



- 2. Color: Color as required to produce approved color sample.
- C. Masonry Cement: ASTM C91/C91M.
  - 1. Type: Type N; ASTM C91/C91M.
- D. Hydrated Lime: ASTM C207, Type S.
- E. Quicklime: ASTM C5, non-hydraulic type.
- F. Mortar Aggregate: ASTM C144.
- G. Pigments for Colored Mortar: Pure, concentrated mineral pigments specifically intended for mixing into mortar and complying with ASTM C979/C979M.
  - 1. Color(s): As selected by Engineer from manufacturer's full range.
- H. Water: Clean and potable.

### **2.03 MORTAR MIXING**

- A. Thoroughly mix mortar ingredients using mechanical batch mixer, in accordance with ASTM C270 and in quantities needed for immediate use.
- B. Maintain sand uniformly damp immediately before the mixing process.
- C. Do not use anti-freeze compounds to lower the freezing point of mortar.
- D. If water is lost by evaporation, re-temper only within two hours of mixing.

## **PART 3 EXECUTION**

### **3.01 INSTALLATION**

- A. Install mortar to requirements of section(s) in which masonry is specified.

**END OF SECTION**

**SECTION 04 20 00  
UNIT MASONRY**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Clay facing brick.
- B. Common brick.
- C. Reinforcement and anchorage.
- D. Flashings.
- E. Accessories.

**1.02 RELATED REQUIREMENTS**

- A. Section 04 01 00 - Masonry Restoration.
- B. Section 04 05 11 - Masonry Mortaring and Grouting.
- C. Section 07 92 00 - Joint Sealants: Sealing control and expansion joints.

**1.03 REFERENCE STANDARDS**

- A. ASTM A153/A153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware 2016a.
- B. ASTM A666 - Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar 2015.
- C. ASTM A951/A951M - Standard Specification for Steel Wire for Masonry Joint Reinforcement 2022.
- D. ASTM C62 - Standard Specification for Building Brick (Solid Masonry Units Made From Clay or Shale) 2017.
- E. ASTM C90 - Standard Specification for Loadbearing Concrete Masonry Units 2022.
- F. ASTM C216 - Standard Specification for Facing Brick (Solid Masonry Units Made from Clay or Shale) 2022.
- G. ASTM C270 - Standard Specification for Mortar for Unit Masonry 2019a, with Editorial Revision.
- H. ASTM D226/D226M - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing 2017.
- I. BIA Technical Notes No. 7 - Water Penetration Resistance – Design and Detailing 2017.
- J. BIA Technical Notes No. 13 - Ceramic Glazed Brick Exterior Walls 2017.
- K. BIA Technical Notes No. 28B - Brick Veneer/Steel Stud Walls 2005.
- L. BIA Technical Notes No. 46 - Maintenance of Brick Masonry 2017.
- M. TMS 402/602 - Building Code Requirements and Specification for Masonry Structures 2022.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene a preinstallation meeting one week before starting work of this section; require attendance by all relevant installers.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide data for masonry units, fabricated wire reinforcement, mortar, and masonry accessories.
- C. Samples: Submit four samples of decorative block and/or brick units to illustrate color, texture, and extremes of color range.
- D. Manufacturer's Certificate: Certify that masonry units meet or exceed specified requirements.

## 1.06 QUALITY ASSURANCE

- A. Comply with provisions of TMS 402/602, except where exceeded by requirements of the contract documents.
- B. Installer Qualifications: Company specializing in performing work of the type specified and with at least three years of documented experience.

## 1.07 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, handle, and store masonry units by means that will prevent mechanical damage and contamination by other materials.

## PART 2 PRODUCTS

### 2.01 BRICK UNITS

- A. Facing Brick: ASTM C216, Type FBS Smooth, Grade SW.
  - 1. Color and texture: Match Existing.
  - 2. Nominal size: Match Existing.
  - 3. Special shapes: Molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.
- B. Building (Common) Brick: ASTM C62, Grade SW; solid units.
  - 1. Color and texture: [Match Existing].
  - 2. Nominal size: Match existing.
  - 3. Special shapes: Molded units as required by conditions indicated, unless standard units can be sawn to produce equivalent effect.

### 2.02 MORTAR MATERIALS

- A. Mortar: As specified in Section 04 05 11.

### 2.03 REINFORCEMENT AND ANCHORAGE

- A. Manufacturers:
  - 1. Hohmann & Barnard, Inc: [www.h-b.com/sle](http://www.h-b.com/sle).
  - 2. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Strap Anchors: Bent steel shapes configured as required for specific situations, 1-1/4 in (32 mm) width, 0.105 in (2.7 mm) thick, lengths as required to provide not more than 1 inch (25 mm) and not less than 1/2 inch (13 mm) of mortar coverage from masonry face, corrugated for embedment in masonry joint, stainless steel.
- C. Residential Wall Ties: Corrugated formed sheet metal, 7/8 inch (22 mm) wide by 0.05 inch (1.22 mm) thick, hot dip galvanized to ASTM A 153/A 153M, Class B, sized to extend at least 1-1/2 inches (38 mm) into the veneer with at least 5/8 inch (16 mm) of mortar coverage from masonry face.
- D. Masonry Veneer Anchors: 2-piece anchors that permit differential movement between masonry veneer and structural backup, hot dip galvanized to ASTM A 153/A 153M, Class B.
  - 1. Anchor plates: Not less than 0.075 inch (1.91 mm) thick, designed for fastening to structural backup through sheathing by two fasteners; provide design with legs that penetrate sheathing and insulation to provide positive anchorage.
  - 2. Wire ties: Manufacturer's standard shape, 0.1875 inch (4.75 mm) thick.
  - 3. Vertical adjustment: Not less than 3-1/2 inches (89 mm).

### 2.04 FLASHINGS

- A. Metal Flashing Materials:
  - 1. Stainless Steel Flashing: ASTM A666, Type 304, soft temper; 24 gage, 24 inch (0.5969 mm) thick; finish 2B to 2D.
- B. Membrane Asphaltic Flashing Materials:
  - 1. Rubberized Asphalt Flashing: Self-adhering polymer modified asphalt sheet; 40 mils (0.040 inch) (1.0 mm) minimum total thickness; 8 mil (0.20 mm) cross-laminated polyethylene bonded to adhesive rubberized asphalt, with a removable release liner.

- a. Manufacturers:
  - 1) Carlisle Coatings and Waterproofing.
  - 2) GCP Applied Technologies.
  - 3) Substitutions: See Section 01 60 00 - Product Requirements.
- C. Flashing Sealant: Rubberized bitumen mastic or other type required or recommended by flashing manufacturer; type capable of adhering to type of flashing used.
- D. Primers/Adhesives: All surfaces to receive flashing membrane shall be primed with manufacturer's recommended primer. Apply in accordance with manufacturer's recommendations.
- E. Termination Bars: Stainless steel; compatible with membrane and adhesives.
- F. Drip Edge: Stainless steel; angled drip with hemmed edge; compatible with membrane and adhesives.
- G. Lap Sealants and Tapes: As recommended by flashing manufacturer; compatible with membrane and adhesives.

## **2.05 ACCESSORIES**

- A. Joint Filler: Closed cell polyvinyl chloride; oversized 50 percent to joint width; self expanding; in maximum lengths available.
- B. Cavity Mortar Control: Semi-rigid polyethylene or polyester mesh panels, sized to thickness of wall cavity, and designed to prevent mortar droppings from clogging weeps and cavity vents and allow proper cavity drainage.
- C. Building Paper: ASTM D226/D226M, Type I ("No.15") asphalt felt.
- D. Weeps:
  - 1. Type: Cotton rope.
- E. Cleaning Solution: Non-acidic, not harmful to masonry work or adjacent materials.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that field conditions are acceptable and are ready to receive masonry.
- B. Verify that related items provided under other sections are properly sized and located.

### **3.02 PREPARATION**

- A. Provide temporary bracing during installation of masonry work. Maintain in place until building structure provides permanent bracing.

### **3.03 COLD AND HOT WEATHER REQUIREMENTS**

- A. Maintain materials and surrounding air temperature to minimum 40 degrees F (5 degrees C) prior to, during, and 48 hours after completion of masonry work.
- B. Maintain materials and surrounding air temperature to maximum 90 degrees F (32 degrees C) prior to, during, and 48 hours after completion of masonry work.

### **3.04 COURSING**

- A. Establish lines, levels, and coursing indicated. Protect from displacement.
- B. Maintain masonry courses to uniform dimension. Form vertical and horizontal joints of uniform thickness.
- C. Brick Units:
  - 1. Bond: Match Existing.
  - 2. Mortar Joints: Concave.

### **3.05 PLACING AND BONDING**

- A. Lay solid masonry units in full bed of mortar, with full head joints, uniformly jointed with other work.
- B. Buttering corners of joints or excessive furrowing of mortar joints is not permitted.

- C. Remove excess mortar and mortar smears as work progresses.
- D. Interlock intersections and external corners, except for units laid in stack bond.
- E. Do not shift or tap masonry units after mortar has achieved initial set. Where adjustment must be made, remove mortar and replace.
- F. Perform job site cutting of masonry units with proper tools to provide straight, clean, unchipped edges. Prevent broken masonry unit corners or edges.
- G. Isolate top joint of masonry partitions from horizontal structural framing members and slabs or decks with compressible joint filler.

### **3.06 WEEPS/CAVITY VENTS**

- A. Install weeps in cavity walls at 16 inches (406 mm) on center horizontally above shelf angles and lintels.

### **3.07 CAVITY MORTAR CONTROL**

- A. Do not permit mortar to drop or accumulate into cavity air space or to plug weep/cavity vents.

### **3.08 REINFORCEMENT AND ANCHORAGE - MASONRY VENEER**

- A. Masonry Back-Up: Embed anchors to bond veneer at maximum 16 inches (400 mm) on center vertically and 36 inches (900 mm) on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches (200 mm) on center.
- B. Stud Back-Up: Secure veneer anchors to stud framed back-up and embed into masonry veneer at maximum 16 inches (400 mm) on center vertically and 24 inches (600 mm) on center horizontally. Place additional anchors at perimeter of openings and ends of panels, so maximum spacing of anchors is 8 inches (200 mm) on center.

### **3.09 MASONRY FLASHINGS**

- A. Whether or not specifically indicated, install masonry flashing to divert water to exterior at all locations where downward flow of water will be interrupted.
  - 1. Extend flashings full width at such interruptions and at least 6 inches (152 mm), minimum, into adjacent masonry or turn up flashing ends at least 1 inch (25.4 mm), minimum, to form watertight pan at non-masonry construction.
  - 2. Remove or cover protrusions or sharp edges that could puncture flashings.
  - 3. Seal lapped ends and penetrations of flashing before covering with mortar.
- B. Terminate flashing up 8 inches (203 mm) minimum on vertical surface of backing:
  - 1. Install vertical leg of flashing behind water-resistive barrier sheet over backing.
  - 2. Terminate vertical leg of flashing into bed joint in masonry or reglet in concrete.
  - 3. Anchor vertical leg of flashing into backing with a termination bar and sealant.
  - 4. Apply cap bead of sealant on top edge of self-adhered flashing.
- C. Install flashing in accordance with manufacturer's instructions and BIA Technical Notes No. 7.
- D. Extend metal flashings through exterior face of masonry and terminate in an angled drip with hemmed edge. Install joint sealer below drip edge to prevent moisture migration under flashing.
- E. Support flexible flashings across gaps and openings.
- F. Lap end joints of flashings at least 6 inches (152 mm), minimum, and seal watertight with flashing sealant/adhesive.

### **3.10 CONTROL AND EXPANSION JOINTS**

- A. Do not continue horizontal joint reinforcement through control or expansion joints.

### **3.11 TOLERANCES**

- A. Install masonry within the site tolerances found in TMS 402/602.

### **3.12 CLEANING**

- A. Remove excess mortar and mortar droppings.

- B. Replace defective mortar. Match adjacent work.
- C. Clean soiled surfaces with cleaning solution.
- D. Use non-metallic tools in cleaning operations.

**3.13 PROTECTION**

- A. Without damaging completed work, provide protective boards at exposed external corners that are subject to damage by construction activities.
- B. Protect installation under provision of General Conditions and other specification sections.
- C. At day's end, cover unfinished areas to prevent moisture intrusion.

**END OF SECTION**

**SECTION 07 62 00  
SHEET METAL FLASHING AND TRIM**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Fabricated prefinished sheet metal items, including flashings and other items indicated in Schedule.

**1.02 RELATED REQUIREMENTS**

**1.03 REFERENCE STANDARDS**

- A. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process 2022.
- B. SMACNA (ASMM) - Architectural Sheet Metal Manual 2012.

**1.04 ADMINISTRATIVE REQUIREMENTS**

- A. Preinstallation Meeting: Convene one week before starting work of this section.

**1.05 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Shop Drawings: Indicate material profile, jointing pattern, jointing details, fastening methods, flashings, terminations, and installation details.
- C. Samples: Submit two samples 6 by 6 inch (152 by 152 mm) in size illustrating metal finish color.

**1.06 QUALITY ASSURANCE**

- A. Perform work in accordance with SMACNA (ASMM) requirements and standard details, except as otherwise indicated.
- B. Maintain one copy of document on site.
- C. Fabricator and Installer Qualifications: Company specializing in sheet metal work with 5 years of documented experience.

**1.07 DELIVERY, STORAGE, AND HANDLING**

- A. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- B. Prevent contact with materials that could cause discoloration or staining.

**PART 2 PRODUCTS**

**2.01 SHEET MATERIALS**

- A. Pre-Finished Galvanized Steel (COLORKLAD or approved equal): ASTM A653/A653M, with G90/Z275 zinc coating; minimum 24 gage, (0.0239) inch (0.61 mm) thick base metal, shop pre-coated with PVDF coating.
  - 1. PVDF (Polyvinylidene Fluoride) Coating: Superior Performance Organic Finish, AAMA 2605; multiple coat, thermally cured fluoropolymer finish system.
  - 2. Color to match existing sheet metals.
  - 3. Use 18 gage keeper strips.

**2.02 FABRICATION**

- A. Form sections true to shape, accurate in size, square, and free from distortion or defects.
- B. Form pieces in longest possible lengths.
- C. Hem exposed edges on underside 1/2 inch (13 mm); miter and seam corners.
- D. Fabricate corners from one piece with minimum 18 inch (450 mm) long legs; seam for rigidity, seal with sealant.
- E. Fabricate vertical faces with bottom edge formed outward 1/4 inch (6 mm) and hemmed to form drip.

### **2.03 ACCESSORIES**

- A. Fasteners: Stainless steel, with soft neoprene washers, interior exposed fasteners color matched to metal.
- B. Concealed Sealants: Non-curing butyl sealant.
- C. Exterior Splice Covers - Matching metal color, 6" wide, Min.

### **PART 3 EXECUTION**

#### **3.01 EXAMINATION**

- A. Verify existing configurations and dimensions.

#### **3.02 INSTALLATION**

- A. Fit metal tight in place; make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- B. Seal metal joints watertight.

#### **3.03 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for field observation requirements.
- B. Observation will involve surveillance of work during installation to ascertain compliance with specified requirements.

#### **3.04 SCHEDULE**

**END OF SECTION**



**SECTION 07 92 00  
JOINT SEALANTS**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Nonsag gunnable joint sealants.
- B. Joint backings and accessories.

**1.02 REFERENCE STANDARDS**

- A. ASTM C794 - Standard Test Method for Adhesion-in-Peel of Elastomeric Joint Sealants 2018 (Reapproved 2022).
- B. ASTM C920 - Standard Specification for Elastomeric Joint Sealants 2018.
- C. ASTM C1087 - Standard Test Method for Determining Compatibility of Liquid-Applied Sealants with Accessories Used in Structural Glazing Systems 2016.
- D. ASTM C1193 - Standard Guide for Use of Joint Sealants 2016.
- E. ASTM C1248 - Standard Test Method for Staining of Porous Substrate by Joint Sealants 2022.
- F. ASTM C1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid-Applied Sealants 2018.
- G. ASTM C1521 - Standard Practice for Evaluating Adhesion of Installed Weatherproofing Sealant Joints 2019 (Reapproved 2020).

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data for Sealants: Submit manufacturer's technical data sheets for each product to be used, that includes the following.
  - 1. Physical characteristics, including movement capability, VOC content, hardness, cure time, and color availability.
  - 2. List of backing materials approved for use with the specific product.
  - 3. Substrates that product is known to satisfactorily adhere to and with which it is compatible.
  - 4. Substrates the product should not be used on.
  - 5. Substrates for which use of primer is required.
  - 6. Substrates for which laboratory adhesion and/or compatibility testing is required.
  - 7. Installation instructions, including precautions, limitations, and recommended backing materials and tools.
- C. Product Data for Accessory Products: Submit manufacturer's technical data sheet for each product to be used, including physical characteristics, installation instructions, and recommended tools.
- D. Color Cards for Selection: Where sealant color is not specified, submit manufacturer's color cards showing standard colors available for selection.
- E. Preconstruction Laboratory Test Reports: Submit at least four weeks prior to start of installation.
- F. Preinstallation Field Adhesion Test Plan: Submit at least two weeks prior to start of installation.
- G. Field Quality Control Plan: Submit at least two weeks prior to start of installation.
- H. Preinstallation Field Adhesion Test Reports: Submit filled out Preinstallation Field Adhesion Test Reports log within 10 days after completion of tests; include bagged test samples and photographic records.
- I. Field Quality Control Log: Submit filled out log for each length or instance of sealant installed, within 10 days after completion of inspections/tests; include bagged test samples and photographic records, if any.

#### 1.04 QUALITY ASSURANCE

- A. Maintain one copy of each referenced document covering installation requirements on site.
- B. Manufacturer Qualifications: Company specializing in manufacturing the products specified in this section with minimum three years documented experience.
- C. Installer Qualifications: Company specializing in performing the work of this section and with at least three years of documented experience.
- D. Preconstruction Laboratory Testing: Arrange for sealant manufacturer(s) to test each combination of sealant, substrate, backing, and accessories.
  - 1. Adhesion Testing: In accordance with ASTM C794.
  - 2. Compatibility Testing: In accordance with ASTM C1087.
  - 3. Stain Testing: In accordance with ASTM C1248; required only for stone substrates.
  - 4. Allow sufficient time for testing to avoid delaying the work.
  - 5. Deliver to manufacturer sufficient samples for testing.
  - 6. Report manufacturer's recommended corrective measures, if any, including primers or techniques not indicated in product data submittals.
  - 7. Testing is not required if sealant manufacturer provides data showing previous testing, not older than 24 months, that shows satisfactory adhesion, lack of staining, and compatibility.
- E. Preinstallation Field Adhesion Test Plan: Include destructive field adhesion testing of one sample of each combination of sealant type and substrate, except interior acrylic latex sealants, and include the following for each tested sample.
  - 1. Identification of testing agency or testing representative.
  - 2. Preinstallation Field Adhesion Test Log Form: Include the following data fields, with known information filled out.
    - a. Test date.
    - b. Location on project.
    - c. Copy of test method documents.
    - d. Age of sealant upon date of testing.
    - e. Test results, modeled after the sample form in the test method document.
    - f. Indicate use of photographic record of test.
- F. Field Quality Control Plan:
  - 1. Visual inspection of entire length of sealant joints.
  - 2. Non-destructive field adhesion testing of sealant joints, except interior acrylic latex sealants.
  - 3. Destructive field adhesion testing of sealant joints, except interior acrylic latex sealant.
    - a. For each different sealant and substrate combination, allow for one test every 100 feet (30 m) in the first 500 linear feet (152 linear m), and one test per 1000 linear feet (305 linear m) thereafter, or once per floor on each elevation.
    - b. If any failures occur in the first 1000 linear feet (305 linear m), continue testing at frequency of one test per 500 linear feet (152 linear m) at no extra cost to Owner.
  - 4. Field testing agency's qualifications.
  - 5. Field Quality Control Log Form: Show same data fields as on Preinstallation Field Adhesion Test Log, with known information filled out and lines for multiple tests per sealant/substrate combinations; include visual inspection and specified field testing; allow for possibility that more tests than minimum specified may be necessary.
- G. Field Adhesion Test Procedures:
  - 1. Allow sealants to fully cure as recommended by manufacturer before testing.
  - 2. Have a copy of the test method document available during tests.
  - 3. Record the type of failure that occurred, other information required by test method, and the information required on the Field Quality Control Log.
  - 4. When performing destructive tests, also inspect the opened joint for proper installation characteristics recommended by manufacturer, and report any deficiencies.
  - 5. Deliver the samples removed during destructive tests in separate sealed plastic bags, identified with project, location, test date, and test results, to Owner.

6. If any combination of sealant type and substrate does not show evidence of minimum adhesion or shows cohesion failure before minimum adhesion, report results to Engineer.
- H. Non-Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Nondestructive Spot Method.
- I. Destructive Field Adhesion Test: Test for adhesion in accordance with ASTM C1521, using Destructive Tail Procedure.
  1. Sample: At least 18 inches (457 mm) long.
  2. Minimum Elongation Without Adhesive Failure: Consider the tail at rest, not under any elongation stress; multiply the stated movement capability of the sealant in percent by two; then multiply 1 inch (25.4 mm) by that percentage; if adhesion failure occurs before the "1 inch mark" is that distance from the substrate, the test has failed.
  3. If either adhesive or cohesive failure occurs prior to minimum elongation, take necessary measures to correct conditions and re-test; record each modification to products or installation procedures.

### **1.05 WARRANTY**

- A. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
- B. Correct defective work within a five year period after Date of Substantial Completion.
- C. Warranty: Include coverage for installed sealants and accessories that fail to achieve watertight seal, exhibit loss of adhesion or cohesion, or do not cure.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Non-Sag Sealants: Permits application in joints on vertical surfaces without sagging or slumping.
  1. Master Builders Solutions by BASF: [www.master-builders-solutions.basf.us/en-us/#sle](http://www.master-builders-solutions.basf.us/en-us/#sle).
  2. Sika Corporation: [www.usa-sika.com/#sle](http://www.usa-sika.com/#sle).
  3. Tremco Commercial Sealants & Waterproofing: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
  4. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 JOINT SEALANT APPLICATIONS**

- A. Scope:
  1. Exterior Joints: Seal open joints, whether or not the joint is indicated on drawings, unless specifically indicated not to be sealed. Exterior joints to be sealed include, but are not limited to, the following items.
    - a. Wall expansion and control joints.
    - b. Joints between door, window, and other frames and adjacent construction.
    - c. Joints at wall penetrations.
    - d. Joints between different exposed materials or components.
    - e. Joints between window components and glass units.
    - f. Joints between siding and trim components.
  2. Do not seal the following types of joints.
    - a. Joints indicated to be treated with manufactured expansion joint cover or some other type of sealing device.
    - b. Joints where sealant is specified to be provided by manufacturer of product to be sealed.
- B. Exterior Facade Joints: Use non-sag silyl-terminated polyether/polyurethane hybrid sealant, unless otherwise indicated.
- C. Window Glass Joints: Use non-staining silicone sealant.

### **2.03 JOINT SEALANTS - GENERAL**

- A. Colors: Match adjacent facade materials.

## 2.04 NONSAG JOINT SEALANTS

- A. Type S - Non-Staining Silicone Sealant: ASTM C920, Grade NS, Uses NT, G, and A; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: Plus and minus 50 percent, minimum.
  - 2. Dirt Pick-Up: Reduced dirt pick-up compared to other silicone sealants.
  - 3. Color: Match adjacent finished surfaces.
  - 4. Manufacturers:
    - a. Dow; DOWSIL 795 Silicone Building Sealant: [www.dow.com/#sle](http://www.dow.com/#sle).
    - b. Tremco Commercial Sealants & Waterproofing; Spectrem 2: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
- B. Type S - Hybrid Urethane Sealant: ASTM C920, Grade NS, Uses M and A; single component; not expected to withstand continuous water immersion or traffic.
  - 1. Movement Capability: Plus and minus 35 percent, minimum.
  - 2. Color: To be selected by Engineer from manufacturer's standard range.
  - 3. Manufacturers:
    - a. Master Builders Solutions; MasterSeal NP100: [www.master-builders-solutions.com/en-us/#sle](http://www.master-builders-solutions.com/en-us/#sle).
    - b. Tremco Commercial Sealants and Waterproofing; Dymonic FC: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - c. Substitutions: See Section 01 60 00 - Product Requirements.

## 2.05 ACCESSORIES

- A. Backer Rod: Cylindrical cellular foam rod with surface that sealant will not adhere to, compatible with specific sealant used, and recommended by backing and sealant manufacturers for specific application.
  - 1. Type for Joints Not Subject to Pedestrian or Vehicular Traffic: ASTM C1330; Type B - Bi-Cellular Polyethylene.
  - 2. Closed Cell and Bi-Cellular: 25 to 33 percent larger in diameter than joint width.
  - 3. Manufacturers:
    - a. Nomaco, Inc: [www.nomaco.com/#sle](http://www.nomaco.com/#sle).
    - b. Substitutions: See Section 01 60 00 - Product Requirements.
- B. Preformed Extruded Silicone Joint Seal: Pre-cured low-modulus silicone extrusion, in sizes to fit applications indicated on drawings, combined with a neutral-curing liquid silicone sealant for bonding joint seal to substrates.
  - 1. Size: 3 inch (76 mm) wide, in rolls 100 feet (30.5 m) long.
  - 2. Thickness: 0.78 inch (19.8 mm), with ridges along outside bottom edges for bonding area.
  - 3. Color: As selected by Architect..
  - 4. Manufacturers:
    - a. Tremco Commercial Sealants & Waterproofing; Spectrem Simple Seal: [www.tremcosealants.com/#sle](http://www.tremcosealants.com/#sle).
    - b. DOWSIL 123 Silicone Tape.
    - c. Substitutions: See Section 01 60 00 - Product Requirements.
- C. Backing Tape: Self-adhesive polyethylene tape with surface that sealant will not adhere to and recommended by tape and sealant manufacturers for specific application.
- D. Masking Tape: Self-adhesive, nonabsorbent, non-staining, removable without adhesive residue, and compatible with surfaces adjacent to joints and sealants.
- E. Joint Cleaner: Non-corrosive and non-staining type, type recommended by sealant manufacturer; compatible with joint forming materials.
- F. Primers: Type recommended by sealant manufacturer to suit application; non-staining.
- G. Gaskets: EPDM rubber gaskets.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that joints are ready to receive work.
- B. Verify that backing materials are compatible with sealants.
- C. Verify that backer rods are of the correct size.
- D. Preinstallation Adhesion Testing: Install a sample for each test location indicated in the test plan.
  - 1. Test each sample as specified in PART 1 under QUALITY ASSURANCE article.
  - 2. Notify Engineer of date and time that tests will be performed, at least seven days in advance.
  - 3. Record each test on Preinstallation Adhesion Test Log as indicated.
  - 4. If any sample fails, review products and installation procedures, consult manufacturer, or take whatever other measures are necessary to ensure adhesion; re-test in a different location; if unable to obtain satisfactory adhesion, report to Engineer.
  - 5. After completion of tests, remove remaining sample material and prepare joint for new sealant installation.

### **3.02 PREPARATION**

- A. Remove loose materials and foreign matter that could impair adhesion of sealant.
- B. Clean joints, and prime as necessary, in accordance with manufacturer's instructions.
- C. Perform preparation in accordance with manufacturer's instructions and ASTM C1193.
- D. Mask elements and surfaces adjacent to joints from damage and disfigurement due to sealant work; be aware that sealant drips and smears may not be completely removable.

### **3.03 INSTALLATION**

- A. Perform work in accordance with sealant manufacturer's requirements for preparation of surfaces and material installation instructions.
- B. Perform installation in accordance with ASTM C1193.
- C. Measure joint dimensions and size joint backers to achieve width-to-depth ratio, neck dimension, and surface bond area as recommended by manufacturer.
- D. Install bond breaker backing tape where backer rod cannot be used if approved by Engineer.
- E. Install sealant free of air pockets, foreign embedded matter, ridges, and sags, and without getting sealant on adjacent surfaces.
- F. Do not install sealant when ambient temperature is outside manufacturer's recommended temperature range, or will be outside that range during the entire curing period, unless manufacturer's approval is obtained and instructions are followed.
- G. Nonsag Sealants: Tool surface concave, unless otherwise indicated; remove masking tape immediately after tooling sealant surface.

### **3.04 FIELD QUALITY CONTROL**

- A. Perform field quality control inspection/testing as specified in PART 1 under QUALITY ASSURANCE article.
- B. Non-Destructive Adhesion Testing: If there are any failures in first 100 linear feet (30 linear m), notify Engineer immediately.
- C. Destructive Adhesion Testing: If there are any failures in first 1000 linear feet (300 linear m), notify Engineer immediately.
- D. Remove and replace failed portions of sealants using same materials and procedures as indicated for original installation.
- E. Repair destructive test location damage immediately after evaluation and recording of results.

**END OF SECTION**

**SECTION 09 91 13  
EXTERIOR PAINTING**

**PART 1 GENERAL**

**1.01 SECTION INCLUDES**

- A. Surface preparation.
- B. Field application of paints.
- C. Scope: Finish exterior surfaces exposed to view, unless fully factory-finished and unless otherwise indicated, including the following:
  - 1. Exposed surfaces of steel.

**1.02 REFERENCE STANDARDS**

- A. 40 CFR 59, Subpart D - National Volatile Organic Compound Emission Standards for Architectural Coatings; U.S. Environmental Protection Agency current edition.
- B. ASTM D16 - Standard Terminology for Paint, Related Coatings, Materials, and Applications 2019.
- C. MPI (APSM) - Master Painters Institute Architectural Painting Specification Manual Current Edition.
- D. SSPC V1 (PM1) - Good Painting Practice: Painting Manual Volume 1 2016.
- E. SSPC V2 (PM2) - Systems and Specifications: Steel Structures Painting Manual Volume 2 2021.
- F. SSPC-SP 1 - Solvent Cleaning 2015, with Editorial Revision (2016).
- G. SSPC-SP 2 - Hand Tool Cleaning 2018.

**1.03 SUBMITTALS**

- A. See Section 01 30 00 - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide complete list of products to be used, with the following information for each:
  - 1. Manufacturer's name, product name and/or catalog number, and general product category (e.g. "alkyd enamel").
  - 2. MPI product number (e.g. MPI #47).
  - 3. Cross-reference to specified paint system(s) product is to be used in; include description of each system.
  - 4. Manufacturer's installation instructions.
  - 5. If proposal of substitutions is allowed under submittal procedures, explanation of substitutions proposed.
- C. Samples: Submit three paper "draw down" samples, 8-1/2 by 11 inches (216 by 279 mm) in size, illustrating range of colors available for each finishing product specified.
  - 1. Where sheen is specified, submit samples in only that sheen.
  - 2. Where sheen is not specified, discuss sheen options with Engineer before preparing samples, to eliminate sheens definitely not required.
- D. Manufacturer's Instructions: Indicate special surface preparation procedures.
- E. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.
  - 1. See Section 01 60 00 - Product Requirements, for additional provisions.
  - 2. Extra Paint and Finish Materials: 1 gallon (4 L) of each color; from the same product run, store where directed.
  - 3. Label each container with color in addition to the manufacturer's label.

**1.04 QUALITY ASSURANCE**

- A. Manufacturer Qualifications: Company specializing in manufacturing the products specified, with minimum ten years documented experience.

- B. Applicator Qualifications: Company specializing in performing the type of work specified with minimum five years experience.

### **1.05 DELIVERY, STORAGE, AND HANDLING**

- A. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- B. Container Label: Include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- C. Paint Materials: Store at minimum ambient temperature of 45 degrees F (7 degrees C) and a maximum of 90 degrees F (32 degrees C), in ventilated area, and as required by manufacturer's instructions.

### **1.06 FIELD CONDITIONS**

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Follow manufacturer's recommended procedures for producing best results, including testing of substrates, moisture in substrates, and humidity and temperature limitations.
- C. Do not apply exterior paint and finishes during rain or snow, or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- D. Minimum Application Temperatures for Latex Paints: 50 degrees F (10 degrees C) for exterior; unless required otherwise by manufacturer's instructions.
- E. Provide lighting level of 80 ft candles (860 lx) measured mid-height at substrate surface.

### **1.07 WARRANTY**

- A. Provide a 3-year warranty against peeling, blistering, chalking, or corrosion bleed-through.

## **PART 2 PRODUCTS**

### **2.01 MANUFACTURERS**

- A. Provide paints and finishes used in any individual system from the same manufacturer; no exceptions.
- B. Paints:
  - 1. Dow Chemical Company; [\_\_\_\_]: [consumer.dow.com/en-us/industry/ind-building-construction.html/#sle](http://consumer.dow.com/en-us/industry/ind-building-construction.html/#sle).
  - 2. PPG Paints; [\_\_\_\_]: [www.ppgpaints.com/#sle](http://www.ppgpaints.com/#sle).
  - 3. Sherwin-Williams Company: [www.sherwin-williams.com/#sle](http://www.sherwin-williams.com/#sle).
- C. Primer Sealers: Same manufacturer as top coats.
- D. Substitutions: See Section 01 60 00 - Product Requirements.

### **2.02 PAINTS AND FINISHES - GENERAL**

- A. Paints and Finishes: Ready mixed, unless required to be a field-catalyzed paint.
  - 1. Provide paints and finishes of a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating, with good flow and brushing properties, and capable of drying or curing free of streaks or sags.
  - 2. Provide materials that are compatible with one another and the substrates indicated under conditions of service and application, as demonstrated by manufacturer based on testing and field experience.
  - 3. For opaque finishes, tint each coat including primer coat and intermediate coats, one-half shade lighter than succeeding coat, with final finish coat as base color.
  - 4. Supply each paint material in quantity required to complete entire project's work from a single production run.
  - 5. Do not reduce, thin, or dilute paint or finishes or add materials unless such procedure is specifically described in manufacturer's product instructions.
- B. Volatile Organic Compound (VOC) Content:

1. Provide paints and finishes that comply with the most stringent requirements specified in the following:
    - a. 40 CFR 59, Subpart D--National Volatile Organic Compound Emission Standards for Architectural Coatings.
    - b. Architectural coatings VOC limits of the State in which the Project is located.
  2. Determination of VOC Content: Testing and calculation in accordance with 40 CFR 59, Subpart D (EPA Method 24), exclusive of colorants added to a tint base and water added at project site; or other method acceptable to authorities having jurisdiction.
- C. Flammability: Comply with applicable code for surface burning characteristics.
- D. Sheens: Provide the sheens specified; where sheen is not specified, sheen will be selected later by Engineer from the manufacturer's full line.
- E. Colors: As indicated in Color Schedule.

### **2.03 PAINT SYSTEMS - EXTERIOR**

- A. Exterior Surfaces to be Painted, Metal.
1. Two top coats and one coat primer.
  2. Primer: Sherwin Williams Pro Industrial Pro-Cryl Primer.
  3. Substitutions: Section 01 60 00 - Product Requirements.
  4. Top Coat(s): Exterior Latex; MPI #10, 11, 15, 119, or 214.
    - a. Products:
      - 1) Sherwin-Williams Pro Industrial DTM.
      - 2) Approved Equivalents.
      - 3) Substitutions: Section 01 60 00 - Product Requirements.

### **2.04 ACCESSORY MATERIALS**

- A. Accessory Materials: Provide primers, sealers, cleaning agents, cleaning cloths, sanding materials, and clean-up materials as required for final completion of painted surfaces.
- B. Patching Material: Latex filler.
- C. Fastener Head Cover Material: Latex filler.

## **PART 3 EXECUTION**

### **3.01 EXAMINATION**

- A. Do not begin application of paints and finishes until substrates have been properly prepared.
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially effect proper application.
- D. If substrate preparation is the responsibility of another installer, notify Engineer of unsatisfactory preparation before proceeding.
- E. Test shop-applied primer for compatibility with subsequent cover materials.

### **3.02 PREPARATION**

- A. Clean surfaces thoroughly and correct defects prior to application.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. Remove or repair existing paints or finishes that exhibit surface defects.
- D. Remove or mask surface appurtenances, including electrical plates, hardware, light fixture trim, escutcheons, and fittings, prior to preparing surfaces for finishing.
- E. Seal surfaces that might cause bleed through or staining of topcoat.
- F. Remove mildew from impervious surfaces by scrubbing with solution of tetra-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- G. Galvanized Surfaces:



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

### **3.03 APPLICATION**

- A. Apply products in accordance with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual".
- B. Where adjacent sealant is to be painted, do not apply finish coats until sealant is applied.
- C. Do not apply finishes to surfaces that are not dry. Allow applied coats to dry before next coat is applied.
- D. Protect adjacent surfaces that are not to be painted
- E. Apply each coat to uniform appearance.
- F. Vacuum clean surfaces of loose particles. Use tack cloth to remove dust and particles just prior to applying next coat.
- G. Reinstall electrical cover plates, hardware, light fixture trim, escutcheons, and fittings removed prior to finishing.

### **3.04 FIELD QUALITY CONTROL**

- A. See Section 01 40 00 - Quality Requirements, for general requirements for field inspection.

### **3.05 CLEANING**

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

### **3.06 PROTECTION**

- A. Protect finishes until completion of project.
- B. Touch-up damaged finishes after Substantial Completion.

### **3.07 COLOR SCHEDULE**

- A. Painted surfaces to match existing colors, to be confirmed by Owner/Engineer.

**END OF SECTION**