

# Project Manual for Twin Falls Honor Wall at Twin Falls, Idaho

Issue Date:

**03/17/2023**



Architect: **Pivot North architecture**

Seal:

Architect's Project No.:

1101 W. Grove St.  
Boise, Idaho 83702  
(208) 690-3108

**21-029**

Contact: Clint Sievers, AIA, NCARB  
clint@pivotnorthdesign.com

Owner: **City of Twin Falls**

503 Main Avenue South  
Twin Falls, Idaho 83301  
(208) 735-7271

Contact: Travis Rothweiler  
trothweiler@tfid.org

Set No.:

**XXX**

**CD SPECIFICATIONS**

**DIVISION 01 — GENERAL REQUIREMENTS**

- 01 1000 - SUMMARY
- 01 2000 - PRICE AND PAYMENT PROCEDURES
- 01 2500 - SUBSTITUTION PROCEDURES
- 01 2500 - SUBSTITUTION REQUEST FORM - 13-1A
- 01 2500 - SUBSTITUTION REQUEST FORM - 1-5C
- 01 3000 - ADMINISTRATIVE REQUIREMENTS
- 01 3216 - CONSTRUCTION PROGRESS SCHEDULE
- 01 4000 - QUALITY REQUIREMENTS
- 01 5000 - TEMPORARY FACILITIES AND CONTROLS
- 01 6000 - PRODUCT REQUIREMENTS
- 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS
- 01 7800 - CLOSEOUT SUBMITTALS

**DIVISION 02 — EXISTING CONDITIONS**

- 02 4119 - SELECTIVE DEMOLITION

**DIVISION 10 — SPECIALTIES**

- 10 1400 - SIGNAGE

**DIVISION 26 — ELECTRICAL**

- 26 5600 - EXTERIOR LIGHTING

**SECTION 01 1000 - SUMMARY**

**PART 1 - GENERAL**

**1.01 PROJECT**

- A. Project Name: Twin Falls Honor Wall.
- B. Owner's Name: City of Twin Falls.
  - 1. Address: 203 Main Ave. E.
  - 2. Twin Falls, ID 83301
  - 3. Owner's Contact: Travis Rothweiler, trothweiler@tfid.org
- C. Architect's Name: Pivot North Architecture.
  - 1. Address: 116 S. 6<sup>th</sup> Street
  - 2. Boise, Idaho 83702
  - 3. Architect's Representative: Clint Sievers, clint@pivotnorthdesign.com
- D. Additional Project contact information is indicated on the Drawing Title Sheet.
- E. The Project consists of the construction of a memorial to honor those who have served and died in specific wars and those who have passed who were involved in the fire and police department from the Twin Falls, Idaho area.

**1.02 DESCRIPTION OF WORK**

- A. Scope of work is as shown on Drawings and as specified in the Project Manual.
- B. Contractor shall request, schedule, and coordinate all utility installation and extensions.
- C. The contractor shall obtain and pay for permits, fees, or bonds required by the City of Twin Falls, County, Districts, or State, except those that are stated to be paid by the Owner.
- D. All City Plan review fees will be paid by the Owner.
- E. The Owner will pay for the plan check fee and building permit fee at the time when the Contractor picks up the building permit.

**1.03 DESCRIPTION OF DEMOLITION WORK**

- A. Scope of demolition and removal work is shown on Drawings and specified in Section 02 4100 - Demolition.

**1.04 OWNER OCCUPANCY**

- A. Owner intends to occupy the Project upon Substantial Completion.

- B. Cooperate with Owner to minimize conflict and to facilitate Owner's operations.
- C. Schedule the Work to accommodate Owner and tenant 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.
- B. Arrange use of site and premises to allow:
  - 1. Owner's right to retain other contractors on portions of the site.
  - 2. Work by Owner and storage, protection and installing Owner-Furnished products.
  - 3. Use of site and premises by each contractor for construction operations during the construction period.
- C. Provide access to and from site as required by law and by Owner:
  - 1. Do not obstruct roadways, sidewalks, or other public ways without permit.
- D. Time Restrictions:
  - 1. Limit conduct of especially noisy exterior work to hours approved by Owner.
- E. Utility Outages and Shutdown:
  - 1. Limit disruption of utility services to hours the adjacent buildings are unoccupied.
  - 2. 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.
  - 3. Prevent accidental disruption of utility services to other facilities.
- F. Controlled Substances: Use of alcohol, and other controlled substances on project site is not permitted.
- G. Firearms: Firearms on project site are not permitted.
- H. Contractors performing work are subject to federal and state laws regarding affirmative action, equal employment opportunity, sexual harassment, and sexual offenders.

**1.06 WORK SEQUENCE**

- A. Coordinate construction schedule and operations with Owner and Architect.

**PART 2 - PRODUCTS - NOT USED**

**PART 3 - EXECUTION - NOT USED**

**END OF SECTION 01 1000**



**SECTION 01 2000 - PRICE AND PAYMENT PROCEDURES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

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

**1.02 RELATED REQUIREMENTS**

- A. Agreement Between Owner and Construction Manager/General Contractor: Contract Sum, retainages, percentage allowances for overhead and profit, and payment period.
- B. General Conditions and Supplementary Conditions: Additional requirements for progress payments, final payment, changes in the Work.
- C. Section 01 6000 - Product Requirements: Administrative procedures for handling requests for substitutions made before and after the Contract award.

**1.03 SCHEDULE OF VALUES**

- A. Coordinate preparation of schedule of values with preparation of Contractor's construction schedule.
  - 1. Coordinate line items in the schedule of values with other required administrative forms and schedules, including the following:
    - a. Application for Payment forms with Continuation Sheets.
    - b. Submittal Schedule.
    - c. Contractor's Construction Schedule.
  - 2. Submit the Schedule of Values to the Architect and Construction Manager at earliest possible date, but no later than 2 days before the first submittal of Application for Payment.
  - 3. When the Schedule of Values is approved by the Architect and Construction Manager it will be the basis for future Contractor Applications for Payments. The Contractor will not be entitled to payment until receipt and acceptance of the Schedule of Values.
- B. Format and Content: The Schedule of Values to be submitted on the form acceptable to Owner and Architect. Include project, Architect and Contractor identification.
  - 1. Use Project Manual Table of Contents as a guide to establish line items. Provide at least one line item for each Specification Section.

2. Provide a breakdown of the Contract Sum in enough detail to facilitate continued evaluation of Applications for Payment and progress reports. Provide multiple line items for principal subcontract amounts in excess of five percent of the Contract Sum.
  - a. Include separate line items under Contractor and principal subcontractors for Project closeout requirements in an amount totaling five percent of the Contract sum and subcontract amount.
3. Round amounts to nearest whole dollar; total shall equal the Contract Sum.
4. Provide a separate line item in the schedule of values for each part of the Work where Applications for Payment may include materials or equipment purchased or fabricated and stored, but not yet installed.
  - a. Differentiate between items stored on-site and items stored off-site. If required include evidence of insurance.
5. Provide separate line items in the schedule of values for initial cost of materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
6. Purchase Contracts: Provide a separate line item in the schedule of values for each purchase contract. Show line-item value of purchase contract. Indicated Owner payments or deposits, if any, and balance to be paid by Contractor.
7. Each item in the schedule of values and Applications for Payment to be complete. Include total cost and proportionate share of general overhead and profit for each item.
  - a. Temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown either as separate line items in the schedule of values or distributed as general overhead expense, at Contractor's option.
8. Schedule Updating: Update and resubmit the Schedule of Values before the next Applications for Payment when Change Orders or Construction Change Directives result in a change in the Contract Sum.

#### **1.04 APPLICATIONS FOR PROGRESS PAYMENTS**

- A. Payment Period: The date for each progress payment is indicated in the Agreement Between Owner and CM/GC. The period of construction work covered by each Application for Payment is the period indicated in the Agreement.
- B. Forms to be used: Use AIA Documents G702 and G703 as for for application of payment.
- C. Application Preparation: Complete every entry on form. Notarize and execute by a person authorized to sign legal documents on behalf of Contractor. Architect will return incomplete applications without notice.
  1. Entries to match data on the approved Schedule of Values and Contractor's Construction Schedule. Use updated schedules if revisions were made.
  2. Include amounts of work completed following previous Application for Payment, whether or not payment has been received. Include only amounts for work completed at time of Application for Payment.
  3. Include amounts of Change Orders and Construction Change Directives issued before last day of construction period covered by application.
  4. Indicated separate amounts for work being carried out under Owner-request project acceleration.

- D. Stored Materials: Include in Application for Payment amounts applied for materials or equipment purchased or fabricated and stored, but not yet installed. Differentiate between items stored on-site and items stored off-site.
  - 1. Provide certificate of insurance, evidence of transfer of title to Owner, and consent of surety to payment, for stored materials.
  - 2. Provide supporting documentation that verifies amount requested, such as paid invoices. Match amount requested with amounts indicated on documentation; do not include overhead and profit on stored materials.
  - 3. Provide summary documentation for stored materials indicating the following:
    - a. Value of materials previously stored and remaining stored as of date of previous Applications for Payment.
    - b. Value of previously stored materials put in place after date of previous Application for Payment and on or before date of current Application for Payment.
    - c. Value of materials stored since date of previous Application for Payment and remaining stored as of date of current Application for Payment.
  
- E. Submit number as required by City of Twin Falls, signed and notarized original copies of each Application for Payment to the Architect. One copy shall include waivers of lien and similar attachments as required.
  - 1. Include the following with the application:
    - a. Transmittal letter as specified for Submittals in Section 01 3000.
    - b. Construction progress schedule, revised and current as specified in Section 01 3216.
    - c. Current construction photographs specified in Section 01 3000.
    - d. Partial release of liens from major Subcontractors and vendors.
    - e. Subcontractor payment waivers.
    - f. Project record documents as specified in Section 01 7800, for review by Owner which will be returned to the Contractor.
    - g. Affidavits attesting to off-site stored products.
  
- F. Construction Progress Schedules: Provide schedule with each Application for Payment. Applications for Payment without schedule will not be processed. The Contractor will deliver this application and schedule to the Architect who will verify accuracy and amount completed. The Architect will then transmit application and schedule to the Owner for approval and payment.
  
- G. Initial Application for Payment: Administrative actions and submittals that must precede or coincide with submittal of first Application for Payment include the following:
  - 1. List of subcontractors and Contractors staff assignments for project.
  - 2. Schedule of values.
  - 3. Contractor's construction schedule (preliminary if not final).
  - 4. Submittal schedule (preliminary if not final).
  - 5. Report of preconstruction conference.
  - 6. Copies of building permits, authorizations and licenses from authorities having jurisdiction for performance of the Work.
  - 7. Certificates of Insurance.
  - 8. Performance and payment bonds.



- H. Application for Payment at Substantial Completion: After Architect issues the Certificate of Substantial Completion, submit an Application for Payment showing 100 percent completion for portion of the Work claimed as substantially complete.
  - 1. Include documentation supporting claim that the Work is substantially complete and a statement showing an accounting of changes to the Contract Sum.
  - 2. This application shall reflect Certificate(s) of Substantial Completion issued previously for Owner occupancy of designated portions of the Work.

**1.05 MINOR CHANGES IN THE WORK**

- A. Minor Changes in the Work: Architect will issue supplemental instructions authorizing minor changes in the Work, not involving adjustment to the Contract Sum or Contract Time, on Architect's Supplemental Instructions form.

**1.06 MODIFICATION PROCEDURES**

- A. Construction Change Directive: For other required changes, Architect will issue a document signed by Owner instructing Contractor to proceed with the change, for subsequent inclusion in a Change Order.
  - 1. The document will describe the required changes and will designate method of determining any change in Contract Sum or Contract Time.
  - 2. Promptly execute the change.
  - 3. Maintain detailed records on a time and material basis of work required. After completion of change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.
  - 4. Form: AIA G714 Construction Change Directive.
- B. Owner-Initiated Proposal Requests: For changes for which advance pricing is desired, Architect will issue a document that includes a detailed description of a proposed change with supplementary or revised drawings and specifications, a change in Contract Time for executing the change. Contractor shall prepare and submit an estimated price quotation within 20 days.
  - 1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
  - 2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
  - 3. Include costs of labor and supervision directly attributable to the change.
  - 4. Include an updated Contractor's construction schedule or information that indicates the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.
  - 5. Form: Architects Work Changes Proposal Request.
- C. Contractor-Initiated Proposals: Contractor may propose a change by submitting a request for change to Architect, describing the proposed change and its full effect on the Work, with a statement describing the reason for the change, and the effect on the Contract Sum and Contract Time with full documentation and a statement describing the effect on Work by

separate or other contractors. Document any requested substitutions in accordance with Section 01 6000.

1. Include a list of quantities of products required or eliminated and unit costs, with total amount of purchases and credits to be made. If requested, furnish survey data to substantiate quantities.
2. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
3. Include costs of labor and supervision directly attributable to the change.
4. Include an updated Contractor's construction schedule that indicated the effect of the change, including, but not limited to, changes in activity duration, start and finish times, and activity relationship. Use available total float before requesting an extension of the Contract Time.

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

E. Execution of Change Orders: On Owner's approval of a work change proposal request, Architect will issue Change Orders for signatures of parties as provided in the Conditions of the Contract, on AIA G701 Change Order or form acceptable to the Owner and Architect.

1. Form: AIA G701 Change Order or use form acceptable to the Owner and Architect.

F. 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.

G. 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.

H. Promptly enter changes in Project Record Documents.

#### **1.07 APPLICATION FOR FINAL PAYMENT**

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

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

1. All closeout procedures specified in Section 01 7000.
2. Requirements from General Conditions have been met.
3. Evidence has been provided that all claims have been settled.
4. Including but not limited to, AIA Document C706 – Contractor's Affidavit of Payment of Debts and Claims, AIA G706A – Contractor's Affidavit of Release of Liens, and AIA G707 – Consent of Surety to Final Payment.
5. Provide evidence that claims have been settled.
6. Final meter readings for utilities and similar data as of date of Substantial completion or when Owner took possession of and assumed responsibility for corresponding utilities or elements of work.

7. Final liquidated damages settlement statement.
8. Insurance and warranty certificates for products have been provided where required and proof of taxes, fees, and similar obligations have been paid.

**PART 2 - PRODUCTS**

**2.01 NOT USED**

**PART 3 - EXECUTION**

**3.01 NOT USED**

**END OF SECTION 01 2000**

**SECTION 01 2500 – SUBSTITUTION PROCEDURES**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Procedural requirements for proposed substitutions.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 3000 – Administrative Requirements: Submittal procedures, coordination.
- B. Section 01 6000 – Product Requirements: Fundamental product requirements, product options, delivery, storage, and handling.

**PART 2 - PRODUCTS**

**2.01 NOT USED**

**PART 3 - EXECUTION**

**3.01 GENERAL REQUIREMENTS**

- A. Substitution Request for products, assemblies, materials, and equipment 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 provide same or equivalent maintenance service and source of replacement parts, as applicable.
  - 4. 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.
  - 5. Waives claims for additional costs or time extension that may subsequently become apparent.
- B. 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. Forms indicated in the Project Manual are adequate for this purpose, and must be used.
- E. Limit each request to a single proposed substitution item.
1. Submit and electronic document, combining the request form with supporting data into single document.

### **3.02 SUBSTITUTION PROCEDURES DURING PROCUREMENT**

- A. Instructions to Bidders specified time restrictions for submitting requests for substitutions during the bidding period, but no later than 15 days prior to bid date for adequate preparation and review of related submittal and the documents required.
- B. Submittal Form (before award of contract):
1. Submit substitution requests by completing CSI/CSC Form 1.5C – Substitution Request (During the Bidding/Negotiating Stage). See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.

### **3.03 SUBSTITUTION PROCEDURES DURING CONSTRUCTION**

- A. Submittal Form (after award of contract):
1. Submit substitution requests by completing CSI/CSC Form 13.1A – Substitution Request. See this form for additional information and instructions. Use only this form; other forms of submission are unacceptable.
- B. Submit requests 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 Architect, in order to stay on approved project schedule.
- C. 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 Architect, 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 Architect for any required redesign, time spent processing and evaluating the request.
- D. 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.

### **3.04 RESOLUTION**

- A. Architect may request additional information and documentation prior to rendering a decision. Provide this data in an expeditious manner.

- B. Architect will notify Contractor in writing of decision to accept or reject request.
  - 1. Architect's decision following review of proposed substitution will be noted on the submitted form.

**3.05 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 or in the Conditions of the Contract.

**3.06 CLOSEOUT ACTIVITIES**

- A. See Section 01 7800 – Closeout Submittals, for closeout submittals.
- B. Include completed Substitution Request Forms as part of the Project record.

**END OF SECTION 01 2500**



# SUBSTITUTION REQUEST (After the Bidding Phase)

Project: \_\_\_\_\_ Substitution Request Number: \_\_\_\_\_  
 \_\_\_\_\_  
 From: \_\_\_\_\_  
 To: \_\_\_\_\_ Date: \_\_\_\_\_  
 Re: \_\_\_\_\_ A/E Project Number: \_\_\_\_\_  
 Contract For: \_\_\_\_\_

Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_  
 Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_  
 Manufacturer Address: \_\_\_\_\_ Phone: \_\_\_\_\_  
 Trade Name: \_\_\_\_\_ Model No.: \_\_\_\_\_  
 Installer: \_\_\_\_\_ Address: \_\_\_\_\_ Phone \_\_\_\_\_  
 History:  New product  2-5 years old  5-10 years old  More than 10 years old

Differences between proposed substitution and specified product: \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Point-by-point comparative data attached

Reason for not providing specified item: \_\_\_\_\_  
 \_\_\_\_\_

Similar Installation:  
 Project: \_\_\_\_\_ Architect: \_\_\_\_\_  
 Address: \_\_\_\_\_ Owner: \_\_\_\_\_  
 Date Installed: \_\_\_\_\_

Proposed substitution affects other parts of Work:  No  Yes; explain \_\_\_\_\_  
 \_\_\_\_\_

Savings to Owner for accepting substitution: \_\_\_\_\_ (\$ \_\_\_\_\_).  
 Proposed substitution changes Contract Time:  No  Yes [Add] [Deduct] \_\_\_\_\_ days.

Supporting Data Attached:  Drawings  Product Data  Samples  Tests  Reports  \_\_\_\_\_

# SUBSTITUTION REQUEST (Continued)

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
- Same warranty will be furnished for proposed substitution as for specified product.
- Same maintenance service and source of replacement parts, as applicable, is available.
- Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
- Cost data as stated above is complete. Claims for additional costs related to accepted substitution which may subsequently become apparent are to be waived.
- Proposed substitution does not affect dimensions and functional clearances.
- Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.
- Coordination, installation, and changes in the Work as necessary for accepted substitution will be complete in all respects.

Submitted by: \_\_\_\_\_

Signed by: \_\_\_\_\_

Firm: \_\_\_\_\_

Address: \_\_\_\_\_

Telephone: \_\_\_\_\_

Attachments: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

### A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01330.
- Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
- Substitution rejected - Use specified materials.
- Substitution Request received too late - Use specified materials.

Signed by:

Date:

Additional Comments:     Contractor     Subcontractor     Supplier     Manufacturer     A/E     \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_





SUBSTITUTION REQUEST (During the Bidding Phase)

Project: \_\_\_\_\_ Substitution Request Number: \_\_\_\_\_
From: \_\_\_\_\_
To: \_\_\_\_\_ Date: \_\_\_\_\_
A/E Project Number: \_\_\_\_\_
Re: \_\_\_\_\_ Contract For: \_\_\_\_\_

Specification Title: \_\_\_\_\_ Description: \_\_\_\_\_
Section: \_\_\_\_\_ Page: \_\_\_\_\_ Article/Paragraph: \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_
Manufacturer: \_\_\_\_\_ Address: \_\_\_\_\_ Phone: \_\_\_\_\_
Trade Name: \_\_\_\_\_ Model No.: \_\_\_\_\_

Attached data includes product description, specifications, drawings, photographs, and performance and test data adequate for evaluation of the request; applicable portions of the data are clearly identified.

Attached data also includes a description of changes to the Contract Documents that the proposed substitution will require for its proper installation.

The Undersigned certifies:

- Proposed substitution has been fully investigated and determined to be equal or superior in all respects to specified product.
Same warranty will be furnished for proposed substitution as for specified product.
Same maintenance service and source of replacement parts, as applicable, is available.
Proposed substitution will have no adverse effect on other trades and will not affect or delay progress schedule.
Proposed substitution does not affect dimensions and functional clearances.
Payment will be made for changes to building design, including A/E design, detailing, and construction costs caused by the substitution.

Submitted by: \_\_\_\_\_
Signed by: \_\_\_\_\_
Firm: \_\_\_\_\_
Address: \_\_\_\_\_
Telephone: \_\_\_\_\_

A/E's REVIEW AND ACTION

- Substitution approved - Make submittals in accordance with Specification Section 01330.
Substitution approved as noted - Make submittals in accordance with Specification Section 01330.
Substitution rejected - Use specified materials.
Substitution Request received too late - Use specified materials.

Signed by: \_\_\_\_\_ Date: \_\_\_\_\_

Supporting Data Attached: [ ] Drawings X [ ] Product Data [ ] Samples [ ] Tests [ ] Reports [ ] \_\_\_\_\_

**SECTION 01 3000 - ADMINISTRATIVE REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. General coordination procedures.
- B. Electronic document submittals.
- C. Preconstruction meeting.
- D. Preinstallation meetings.
- E. Progress meetings.
- F. Project closeout meeting.
- G. Progress photographs.
- H. Coordination drawings.
- I. Requests for Information (RFIs).
- J. Submittals for review, information, and project closeout.
  - 1. General information only, refer to sections below for detailed submittal requirements.
    - a. Section 01 4000 - Quality Requirements.
    - b. Section 01 6000 - Product Requirements.
    - c. Section 01 7800 - Closeout Submittals.
    - d. Individual Project Sections.
- K. Number of copies of submittals.
- L. Submittal procedures.

**1.02 RELATED REQUIREMENTS**

- A. General Conditions and Supplementary Conditions: Dates for applications for payment and duties of the Construction Manager/General Contractor.
- B. Section 01 3216 - Construction Progress Schedule: Form, content, and administration of schedules.
- C. Section 01 7000 - Execution and Closeout Requirements: Additional coordination requirements.
- D. Section 01 7800 - Closeout Submittals: Project record documents.

### **1.03 GENERAL COORDINATION PROCEDURES**

- A. Coordination: Coordinate construction operations included in different Sections of the Project Manual to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, with each contractor, included in different Sections that depend on each other for proper installation, connection, and operation.
  - 1. Schedule construction operations in sequence required to obtain the best results where installation of one part of the Work depends on installation of other components, before or after its own installation.
  - 2. Coordinate installation of different components to ensure maximum performance and accessibility for required maintenance, service, and repair.
  - 3. Make adequate provisions to accommodate items scheduled for later installation.
  
- B. Prepare memoranda for distribution to each party involved, outlining special procedures required for coordination. Include such items as required notices, reports, and list of attendees at meetings.
  - 1. Prepare similar memoranda for Owner and separate contractors if coordination of their Work is required.
  
- C. Administrative Procedures: Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of the Work. Such administrative activities include, but are not limited to, the following:
  - 1. Preparation of Contractor's construction schedule.
  - 2. Preparation of the schedule of values.
  - 3. Installation and removal of temporary facilities and controls.
  - 4. Delivery and processing of submittals.
  - 5. Progress meetings.
  - 6. Preinstallation conferences.
  - 7. Project closeout activities.
  - 8. Startup and adjustment of systems.
  
- D. General Contractor:
  - 1. Cooperate with the General Contractor in allocation of mobilization areas of site; for field offices and sheds, for traffic access, traffic, and parking facilities.
  - 2. During construction, coordinate use of site and facilities through the General Contractor.
  - 3. Comply with General Contractor's procedures for intra-project communications; submittals, reports and records, schedules, coordination drawings, and recommendations; and resolution of ambiguities and conflicts.
  - 4. Comply with instructions of the General Contractor for use of temporary utilities and construction facilities.
  - 5. Coordinate field engineering and layout work under instructions of the General Contractor.
  - 6. Make the following types of submittals to Architect through the General Contractor:
    - a. Requests for interpretation.
    - b. Requests for substitution.
    - c. Shop drawings, product data, and samples.
    - d. Test and inspection reports.

- e. Design data.
  - f. Manufacturer's instructions and field reports.
  - g. Applications for payment and change order requests.
  - h. Progress schedules.
  - i. Coordination drawings.
  - j. Correction Punch List and Final Correction Punch List for Substantial Completion.
  - k. Closeout submittals.
- E. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, and materials. Coordinate use of temporary utilities to minimize waste.

## **PART 2 - PRODUCTS**

**NOT USED**

## **PART 3 - EXECUTION**

### **3.01 ELECTRONIC DOCUMENT SUBMITTALS**

- A. All documents transmitted for purposes of administration of the contract are to be in electronic (PDF) format and posted General Contractor provided Submittal Exchange, Procore, or Sharefile Site specifically established for Project.
- 1. Besides submittals for review, information, and closeout, this procedure applies to requests for information (RFIs), progress documentation, contract modification documents (e.g. supplementary instructions, change proposals, change orders), applications for payment, field reports and meeting minutes, Contractor's correction punchlist, and any other document any participant wishes to make part of the project record.
  - 2. It is Contractor's responsibility to submit documents in PDF format.
  - 3. Subcontractors, suppliers, and Architect and Architect's consultants will be permitted to use the service at no extra charge.
  - 4. Users need an email address, Internet access, and PDF review software that includes ability to mark up and apply electronic stamps (such as Adobe Acrobat, [www.adobe.com](http://www.adobe.com), or Bluebeam PDF Revu, [www.bluebeam.com](http://www.bluebeam.com)).
  - 5. Paper document transmittals will not be reviewed.
  - 6. All other specified submittal and document transmission procedures apply, except that electronic document requirements do not apply to samples or color selection charts.

### **3.02 PRECONSTRUCTION MEETING**

- A. General Contractor will schedule a meeting before starting construction, at a time convenient to Owner and Architect, but no later than 15 days after Notice to Proceed.
- B. Attendees:
- 1. Authorized representatives of the Owner.

2. Architect and their consultants.
  3. Construction Manager.
  4. General Contractor and it's superintendent.
  5. Major subcontractors and suppliers.
  6. Other concerned parties.
  7. Participants at the meeting to be familiar with Project and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect progress, including the following:
1. Tentative construction schedule.
  2. Phasing.
  3. Critical work sequencing and long-lead items.
  4. Designation of key personnel and their duties.
  5. Lines of communications.
  6. Procedures for processing field decisions and Change Orders.
  7. Procedures for RFIs.
  8. Procedures for testing and inspecting.
  9. Procedures for processing Applications for Payment.
  10. Distribution of the Contract Documents.
  11. Submittal procedures
  12. Preparation of record documents.
  13. Use of the premises and construction parking.
  14. Work restrictions.
  15. Working hours.
  16. Responsibility for temporary facilities and controls.
  17. Construction waste management and recycling.
  18. Office, work, and storage areas.
  19. First aid.
  20. Security.
  21. Progress cleaning
- D. Record minutes and distribute copies with three days after meeting to Architect, Owner, Construction Manager, participants, and those affected by decisions made.

### **3.03 PREINSTALLATION MEETINGS**

- A. Conduct a preinstallation meeting at Project Site before each construction activity that requires coordination with other construction.
1. Attendees:
    - a. Authorized representatives of the Owner.
    - b. Architect.
    - c. Special Consultants.
    - d. Construction Manager.
    - e. General Contractor's Superintendent.
    - f. Installers.
    - g. Manufacturers and/or fabricators.
    - h. Others involved in or affected by the installation and its coordination or integration with other materials that preceded or will follow.

2. Agenda: Review progress of other construction activities and preparations for the particular activity under consideration, including requirements for the following:
  - a. Contract Documents.
  - b. Options.
  - c. Related RFIs.
  - d. Related Change Orders.
  - e. Submittals.
  - f. Review of mockups.
  - g. Possible conflicts.
  - h. Compatibility requirements.
  - i. Time schedules.
  - j. Weather limitations.
  - k. Manufacturer's written instructions.
  - l. Warranty requirements.
  - m. Compatibility of materials.
  - n. Acceptability of substrates.
  - o. Temporary facilities and controls.
  - p. Space and access limitations.
  - q. Regulations of authorities having jurisdiction.
  - r. Testing and inspecting requirements.
  - s. Installation procedures.
  - t. Coordination with other work.
  - u. Required performance results.
  - v. Protection of adjacent work.
  - w. Protection of construction and personnel.
- B. Record minutes and distribute copies with three days after meeting to Architect, Owner, Construction Manager, participants, and those affected by decisions made.
  1. Record significant conference discussions, agreements, and disagreements, including required corrective measures and actions.
  2. Do not proceed with installation if the meeting cannot be successfully concluded. Initiate whatever actions are necessary to resolve impediments to performance of the Work and reconvene the conference at earliest feasible date.

### **3.04 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the Work at maximum weekly intervals. Coordinate dates of meetings with preparation of payment requests.
  1. General Contractor will make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
    - a. Distribute copies of the agenda and minutes to the Architect and Owner prior to each meeting.
- B. Attendees:
  1. Authorized representatives of the Owner.
  2. Architect.
  3. Special Consultants.
  4. Construction Manager.

5. Contractor's Superintendent.
6. Installers.
7. Manufacturers and/or fabricators.
8. Entities concerned with current progress or involved in planning, coordination, or performance of future activities.
9. Participants at the meeting to be familiar with Project and authorized to conclude matters relating to the Work.

C. Agenda:

1. Review and correct or approve minutes of previous meetings.
2. Review of Work progress since last meeting. Determine whether each activity is on time, ahead of schedule, or behind schedule, in relation to Contractor's construction schedule. Determine how construction behind schedule will be expedited; secure commitments from parties involved to do so. Discuss whether schedule revisions are required to ensure that current and subsequent activities will be completed within the Contract Time.
3. Field observations, problems, and decisions.
4. Identification of problems that impede, or will impede, planned progress.
5. Review of submittals schedule and status of submittals.
6. Review of RFIs and proposal requests.
7. Review of off-site fabrication and delivery schedules.
8. Maintenance of progress schedule.
9. Corrective measures to regain projected schedules.
10. Planned progress during succeeding work period.
11. Coordination of projected progress.
12. Maintenance of quality and work standards.
13. Effect of proposed changes on progress schedule and coordination.
14. Other business relating to Work.

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

1. Schedule Updating: Revise Contractor's construction schedule after each progress meeting where revisions to the schedule have been made or recognized. Issue revised schedule concurrently with the report of each meeting.

**3.05 PROJECT CLOSEOUT MEETING**

A. Schedule and conduct a project closeout meeting, at a time convenient to Owner and Architect, but no later than 90 days prior to the scheduled date of Substantial Completion.

1. Conduct the conference to review requirements and responsibilities related to Project closeout.

B. Attendees:

1. Authorized representatives of the Owner.
2. Architect and their consultants.
3. Construction Manager.
4. General Contractor and it's superintendent.
5. Major subcontractors and suppliers.

6. Other concerned parties.
  7. Participants at the meeting to be familiar with Project and authorized to conclude matters relating to the Work.
- C. Agenda: Discuss items of significance that could affect or delay Project closeout, including the following:
1. Preparation of record documents.
  2. Procedures required prior to inspection for Substantial Completion and for final inspection for acceptance.
  3. Submittal of written warranties.
  4. Requirements for completing sustainable design documentation.
  5. Requirements for preparing operations and maintenance data.
  6. Requirements for delivery of material samples, attic stock, and spare parts.
  7. Requirements for demonstration and training.
  8. Preparation of Contractor's punch list.
  9. Procedures for processing Applications for Payment at Substantial Completion and for final payment.
  10. Submittal procedures.
  11. Owner's partial occupancy requirements.
  12. Installation of Owner's furniture, fixtures, and equipment.
  13. Responsibility for removing temporary facilities and controls.
- D. Record minutes and distribute copies with two days after meeting to Architect, Owner, Construction Manager, participants, and those affected by decisions made.

**3.06 CONSTRUCTION PROGRESS SCHEDULE – SEE SECTION 01 3216.**

**3.07 PROGRESS PHOTOGRAPHS**

- A. Submit photographs with each application for payment, taken not more than 3 days prior to submission of application for payment.
- B. Photography Type: Digital; electronic files.
- C. Provide photographs of site and construction throughout progress of Work produced by an experienced photographer, acceptable to Architect.
- D. In addition to periodic, recurring views, take photographs of each of the following events:
1. Completion of site clearing.
  2. Excavations in progress.
  3. Foundations in progress and upon completion.
  4. Structural framing in progress and upon completion.
  5. Enclosure of building, upon completion.
  6. Final completion, minimum of ten (10) photos.
- E. Views:
1. Provide non-aerial photographs from four cardinal views at each specified time, until Date of Substantial Completion.



2. Consult with Architect for instructions on views required.
  3. Provide factual presentation.
  4. Provide correct exposure and focus, high resolution and sharpness, maximum depth of field, and minimum distortion.
  5. Point of View Sketch: Provide sketch identifying point of view of each photograph.
- F. Digital Photographs: 24 bit color, minimum resolution of 1024 by 768, in JPG format; provide files unaltered by photo editing software.
1. Delivery Medium: Via email.
  2. File Naming: Include project identification, date and time of view, and view identification.
  3. Point of View Sketch: Include digital copy of point of view sketch with each electronic submittal; include point of view identification in each photo file name.
  4. PDF File: Assemble all photos into printable pages in PDF format, with 2 to 3 photos per page, each photo labeled with file name; one PDF file per submittal.

### **3.08 REPORTS**

- A. Daily Construction Reports: Prepare a daily construction report recording the following information concerning events at Project site:
1. List of subcontractors at Project site.
  2. List of separate contractors at Project site.
  3. Approximate count of personnel at Project site.
  4. Equipment at Project site.
  5. Material deliveries.
  6. High and low temperatures and general weather conditions, including presence of rain or snow.
  7. Accidents.
  8. Meetings and significant decisions.
  9. Unusual events (see special reports).
  10. Stoppages, delays, shortages, and losses.
  11. Meter readings and similar recordings.
  12. Emergency procedures.
  13. Orders and requests of authorities having jurisdiction.
  14. Change Orders received and implemented.
  15. Services connected and disconnected.
  16. Equipment or system tests and startups.
  17. Partial completions and occupancies.
  18. Substantial Completions authorized.

### **3.09 COORDINATION DRAWINGS**

- A. Coordination Drawings, General: Prepare coordination drawings according to requirements in individual Sections, and additionally where installation is not completely shown on Shop Drawings, where limited space availability necessitates coordination, or if coordination is required to facilitate integration of products and materials fabricated or installed by more than one entity.

1. Content: Project-specific information, drawn accurately to a scale large enough to indicate and resolve conflicts. Do not base coordination drawings on standard printed data. Include the following information, as applicable.
  - a. Use applicable Drawings as a basis for preparation of coordination drawings. Prepare sections, elevations, and details as needed to describe relationship of various systems and components.
  - b. Coordinate the addition of trade-specific information to the coordination drawings by multiple contractors in a sequence that best provides for coordination of the information and resolution of conflicts between installed components before submitting for review.
  - c. Indicate functional and spatial relationships of components of architectural, structural, civil, mechanical, and electrical systems.
  - d. Indicate space requirements for routine maintenance and for anticipated replacement of components during the life of the installation.
  - e. Show location and size of access doors required for access to concealed dampers, valves, and other controls.
  - f. Indicate required installation sequences.
  - g. Indicate dimensions shown on the Drawings. Specifically note dimensions that appear to be in conflict with submitted equipment and minimum clearance requirements. Provide alternate sketches to Architect indicating proposed resolution of such conflicts. Minor dimension changes and difficult installations will not be considered changes to the Contract.
  
- B. Coordination Drawing Organization: Organize coordination drawings as follows:
  1. Floor Plans and Reflected Ceiling Plans: Show architectural and structural elements, and mechanical, plumbing, fire-protection, fire-alarm, and electrical Work. Show locations of visible ceiling-mounted devices relative to acoustical ceiling grid. Supplement plan drawings with section drawings where required to adequately represent the Work.
  2. Plenum Space: Indicate subframing for support of ceiling and wall systems, mechanical and electrical equipment, and related Work. Locate components within ceiling plenum to accommodate layout of light fixtures indicated on Drawings. Indicate areas of conflict between light fixtures and other components.
  3. Mechanical Rooms: Provide coordination drawings for mechanical rooms showing plans and elevations of mechanical, plumbing, fire-protection, fire-alarm, and electrical equipment.
  4. Structural Penetrations: Indicate penetrations and openings required for all disciplines.
  5. Slab Edge and Embedded Items: Indicate slab edge locations and sizes and locations of embedded items for metal fabrications, sleeves, anchor bolts, bearing plates, angles, door floor closers, slab depressions for floor finishes, curbs and housekeeping pads, and similar items.
  6. Mechanical and Plumbing Work: Show the following:
    - a. Sizes and bottom elevations of ductwork, piping, and conduit runs, including insulation, bracing, flanges, and support systems.
    - b. Dimensions of major components, such as dampers, valves, diffusers, access doors, cleanouts and electrical distribution equipment.
    - c. Fire-rated enclosures around ductwork.
  7. Electrical Work: Show the following:

- a. Runs of vertical and horizontal conduit 1-1/4 inches (32 mm) in diameter and larger.
  - b. Light fixture, exit light, emergency battery pack, smoke detector, and other fire-alarm locations.
  - c. Panel board, switch board, switchgear, transformer, busway, generator, and motor control center locations.
  - d. Location of pull boxes and junction boxes, dimensioned from column center lines.
8. Fire-Protection System: Show the following:
- a. Locations of standpipes, mains piping, branch lines, pipe drops, and sprinkler heads.
9. Review: Architect will review coordination drawings to confirm that the Work is being coordinated, but not for the details of the coordination, which are Contractor's responsibility. If Architect determines that coordination drawings are not being prepared in sufficient scope or detail, or are otherwise deficient, Architect will inform Contractor, who shall make changes as directed and resubmit.
- C. Coordination Digital Data Files: Prepare coordination digital data files according to the following requirements:
1. File Preparation Format: Same digital data software program, version, and operating system as original Drawings.
  2. File Submittal Format: Submit or post coordination drawing files using Portable Data File (PDF) format.
  3. Architect will furnish contractor one set of digital data files of Drawings for use in preparing coordination digital data files.
    - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
    - b. Contractor will execute a data licensing agreement in the form of AIA G201 or form provided by Architect.

### **3.10 REQUESTS FOR INFORMATION**

- A. General: Immediately on discovery of the need for additional information or interpretation of the Contract Documents, Contractor shall prepare and submit an RFI in the form specified.
1. Architect will return RFIs submitted to Architect by other entities controlled by Contractor with no response.
  2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Content of the RFI: Include a detailed, legible description of item needing information or interpretation and the following:
1. RFI number, numbered sequentially.
  2. RFI subject.
  3. Specification Section number and title and related paragraphs, as appropriate.
  4. Drawing number and detail references, as appropriate.
  5. Field dimensions and conditions, as appropriate.
  6. Contractor's suggested resolution. If Contractor's suggested resolution impacts the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.

7. Attachments: Include sketches, descriptions, measurements, photos, Product Data, Shop Drawings, coordination drawings, and other information necessary to fully describe items needing interpretation.
- C. RFI Form: Form approved by Architect in PDF format.
- D. Architect's Action: Architect will review each RFI, determine action required, and respond. Allow seven working days for Architect's response for each RFI. RFIs received by Architect after 1:00 p.m. will be considered as received the following working day.
  1. The following Contractor-generated RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for approval of Contractor's means and methods.
    - d. Requests for coordination information already indicated in the Contract Documents.
    - e. Requests for adjustments in the Contract Time or the Contract Sum.
    - f. Requests for interpretation of Architect's actions on submittals.
    - g. Incomplete RFIs or inaccurately prepared RFIs.
  2. Architect's action may include a request for additional information, in which case Architect's time for response will date from time of receipt of additional information.
  3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Section 01 2000 - Price and Payment Procedures.
    - a. If Contractor believes the RFI response warrants change in the Contract Time or the Contract Sum, notify Architect in writing within 10 days of receipt of RFI response.
- E. RFI Log: Prepare, maintain, and submit a tabular log of RFIs organized by the RFI number. Submit log weekly.
  1. Form: Use CSI RFI Log Form 13.2B or form approved by Architect.
- F. On receipt of Architect's action, update the RFI log and immediately distribute the RFI response to affected parties. Review response and notify Architect with 7 days if Contractor disagrees with response.
  1. Identification of related Minor Change in the Work, Construction Change Directive, and Proposal Request, as appropriate.

### **3.11 GENERAL INFORMATIONAL SUBMITTALS**

- A. Subcontract List: Prepare a written summary identifying individuals or firms proposed for each portion of the Work, including those who are to furnish products or equipment fabricated to a special design.
  1. Form: Use CSI Subcontractors and Major Material Suppliers Form 1.5A or form approved by Architect.
- B. Key Personnel Names: Within 15 days of starting construction operations, submit a list of key personnel assignments, including superintendent and other personnel in attendance at Project site. Identify individuals and their duties and responsibilities; list addresses and telephone

numbers, including home, office, and cellular telephone numbers and e-mail addresses. Provide names, addresses, and telephone numbers of individuals assigned as alternates in the absence of individuals assigned to Project.

1. Post copies of list in project meeting room, in temporary field office, and by each temporary telephone. Keep list current at all times.

### **3.12 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. Contactor to review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. **Mark with approval stamp before submitting to Architect.**
- C. Submit to Architect for review for the limited purpose of checking for general conformance with the design concept and the information given in the Construction Documents. Corrections or comments made on the submittal during this review do not relieve the Contractor from compliance with the requirements of the drawings and specifications. Review of a specific item shall not include review of an assembly of which the item is a component. The Contractor is responsible for quantities; dimensions to be confirmed and correlated at the jobsite; information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; coordination of the Work with that of all other trades and performing all Work in a safe and satisfactory manner. Architect will stamp each submittal with an action stamp and will mark stamp appropriately to indicated action.
- D. Samples will be reviewed only for aesthetic, color, or finish selection.
- E. After review, provide copies and distribute in accordance with SUBMITTAL PROCEDURES article below and for record documents purposes described in Section 01 7800 - Closeout Submittals.

### **3.13 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. Contactor to review each submittal and check for coordination with other Work of the Contract and for compliance with the Contract Documents. Note corrections and field dimensions. **Mark with approval stamp before submitting to Architect.**
- C. Submit for Architect's knowledge as contract administrator or for Owner. No action will be taken.

### **3.14 SUBMITTALS FOR PROJECT CLOSEOUT**

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

### **3.15 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.
  - 1. Post PDF files directly to Architect's FTP site specifically established for Project.
  - 2. Assemble complete submittal package into a single indexed file incorporating submittal requirements of a single Specification Section and transmittal form with links enabling navigation to each item.
  - 3. File name to use project identifier and Specification Section number followed by a decimal point and then a sequential number (e.g., LNHS-061000.01). Resubmittals shall include an alphabetic suffix after another decimal point (e.g., LNHS-061000.01.A).
- B. Samples: Submit the number specified in individual specification sections; one of which will be retained by Architect.
  - 1. Transmit samples that contain multiple, related components such as accessories together in one submittal package.
  - 2. Provide corresponding electronic submittal of Sample transmittal, digital image file illustrating Sample characteristics, and identification information for record.
  - 3. Retained samples will not be returned to Contractor unless specifically so stated.

### **3.16 SUBMITTAL PROCEDURES**

- A. Submittal Schedule: Submit a schedule of submittals, arranged in chronological order by dates required by construction schedule. Include time required for review, ordering, manufacturing, fabrication, and delivery when establishing dates. Include additional time required for making

corrections or revisions to submittals noted by Architect and additional time for handling and reviewing submittals required by those corrections.

1. Coordinate submittal schedule with list of subcontracts, the schedule of values, and Contractor's construction schedule.
  2. Initial Submittal: Submit concurrently with startup construction schedule. Include submittals required during the first 60 days of construction. List those submittals required to maintain orderly progress of the Work and those required early because of long lead time for manufacture or fabrication.
  3. Final Submittal: Submit concurrently with the first complete submittal of Contractor's construction schedule.
    - a. Submit revised submittal schedule to reflect changes in current status and timing for submittals.
- B. Schedule submittals to expedite the Project, and coordinate submission of related items. Coordinate with Owner for items to be reviewed concurrently by Owner's Facility Team.
- C. Shop Drawing Procedures:
1. Prepare accurate, drawn-to-scale, original shop drawing documentation by interpreting the Contract Documents and coordinating related Work.
  2. Do not reproduce the Contract Documents to create shop drawings.
  3. Generic, non-project specific information submitted as shop drawings do not meet the requirements for shop drawings.
  4. Architect will furnish Contractor one set of digital data drawing files of the Contract Drawings for use in preparing shop drawings.
    - a. Architect makes no representations as to the accuracy or completeness of digital data files as they relate to Drawings.
    - b. Contractor will execute a data licensing agreement in the form of AIA G201 or form provided by Architect.
- D. Transmittals:
1. Transmittal Form: Form provided or approved by Architect.
  2. Transmit each submittal with a copy of approved submittal form.
  3. Sequentially number the transmittal form. Revise submittals with original number and a sequential alphabetic suffix.
  4. Identify Project, Contractor, Subcontractor or supplier; pertinent drawing and detail number, and specification section number, 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.
- E. Review Time: Allow time for submittal review, including time for resubmittals, as follows. No extension of the Contract Time will be authorized because of failure to transmit submittals enough in advance of the Work to permit processing, including resubmittals.
1. Initial Review: allow 15 working days excluding delivery time to and from the Contractor. Allow additional time if coordination with subsequent submittals is required. Architect will advise Contractor when a submittal being processed must be delayed for coordination.

2. Intermediate Review: If intermediate submittal is necessary, process in same manner as initial submittal.
3. Resubmittal Review: Allow 15 working days for review of each resubmittal.
4. Concurrent Consultant and Owner Review: Where the Contract Documents indicate that submittals may be transmitted simultaneously to Architect, Architect's consultants, and Owner's Representatives, allow 21 working days for review of each submittal. Submittal will be returned to Architect before being returned to Contractor.

### **3.17 DELEGATED-DESIGN SERVICES**

- A. Performance and Design Criteria: Where professional design services or certification by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
  2. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  3. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

END OF SECTION **01 3000**



**SECTION 01 3216 - CONSTRUCTION PROGRESS SCHEDULE**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Preliminary schedule.
- B. Construction progress schedule, with network analysis diagram and reports.

**1.02 RELATED SECTIONS**

- A. Section 01 1000 - Summary: Work sequence, occupancy, and owner-furnished items.

**1.03 SUBMITTALS**

- A. Within 10 days after date established in Notice to Proceed, submit preliminary schedule defining planned operations for the first 90 days of Work, with a general outline for remainder of Work.
- B. If preliminary schedule requires revision after review, submit revised schedule within 10 days.
- C. Within 20 days after review of preliminary schedule, submit draft of proposed complete schedule for review.
  - 1. Include written certification that major contractors have reviewed and accepted proposed schedule.
  - 2. Include written letter clearly indicating the dates that the Owner is to furnish any materials, equipment, or the like, to be incorporated into the Work by the Contractor.
- D. Within 10 days after joint review, submit complete schedule.
- E. Submit updated schedule with each Application for Payment to Architect. Applications for Payment without schedule will not be processed.
- F. Submit under transmittal letter form specified in Section 01 3000 - Administrative Requirements.
- G. Format for Submittals:
  - 1. PDF electronic file and one paper copy.

**1.04 QUALITY ASSURANCE**

- A. Scheduler: Contractor's personnel or specialist Consultant specializing in CPM scheduling with two years minimum experience in scheduling construction work of a complexity comparable to this Project, and having use of computer facilities capable of delivering a detailed graphic printout within 48 hours of request.

**1.05 SCHEDULE FORMAT**

- A. Listings: In chronological order according to the start date for each activity. Identify each activity with the applicable specification section number.
- B. Diagram Sheet Size: Maximum 22 x 17 inches (560 x 432 mm) or width required.
- C. Scale and Spacing: To allow for notations and revisions.

**PART 2 - PRODUCTS**

**2.01 NOT USED**

**PART 3 - EXECUTION**

**3.01 PRELIMINARY SCHEDULE**

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

**3.02 CONTENT**

- A. The schedule shall include contractually specified interim completion dates and milestones.
- B. Show complete sequence of construction by activity, with dates for beginning and completion of each element of construction.
- C. Identify each item by specification section number.
- D. Identify work of separate stages and other logically grouped activities.
- E. Provide sub-schedules for each phase of Work identified in Section 01 1000.
- F. Provide sub-schedules to define critical portions of the entire schedule.
- G. Include conferences and meetings in schedule.
- H. Show accumulated percentage of completion of each item, and total percentage of Work completed, as of the first day of each month.
- I. Provide separate schedule of submittal dates for shop drawings, product data, and samples, owner-furnished products, and dates reviewed submittals will be required from Architect. Indicate decision dates for selection of finishes.
- J. Indicate delivery dates for owner-furnished products.
- K. Coordinate content with schedule of values specified in Section 01 2000 - Price and Payment Procedures.

- L. Provide legend for symbols and abbreviations used.

### **3.03 NETWORK ANALYSIS**

- A. Prepare network analysis diagrams and supporting mathematical analyses using the Critical Path Method. The CPM schedule shall be developed using Primavera, MS Project, or Suretrack unless otherwise authorized by the Owner.
- B. Illustrate order and interdependence of activities and sequence of work; how start of a given activity depends on completion of preceding activities, and how completion of the activity may restrain start of subsequent activities.
- C. Mathematical Analysis: Tabulate each activity of detailed network diagrams, using calendar dates, and identify for each activity:
  - 1. Preceding and following event numbers.
  - 2. Activity description.
  - 3. Estimated duration of activity, in maximum 14 day intervals.
  - 4. Earliest start date.
  - 5. Earliest finish date.
  - 6. Actual start date.
  - 7. Actual finish date.
  - 8. Latest start date.
  - 9. Latest finish date.
  - 10. Total and free float; float time shall accrue to Owner and to Owner's benefit.
  - 11. Monetary value of activity, keyed to Schedule of Values.
  - 12. Percentage of activity completed.
  - 13. Responsibility.
- D. Unless otherwise authorized by the Owner's Representative, no more than 40 percent of all activities may be identified as critical path items. The relationship between non-critical activities and activities on the critical path shall be clearly shown on the network diagram.
- E. Required Reports: List activities in sorts or groups:
  - 1. By preceding work item or event number from lowest to highest.
  - 2. By amount of float, then in order of early start.
  - 3. By responsibility in order of earliest possible start date.
  - 4. In order of latest allowable start dates.
  - 5. In order of latest allowable finish dates.
  - 6. Contractor's periodic payment request sorted by Schedule of Values listings.
  - 7. Listing of basic input data that generates the report.
  - 8. Listing of activities on the critical path.

### **3.04 REVIEW AND EVALUATION OF SCHEDULE**

- A. Participate in joint review and evaluation of schedule with Architect at each submittal.
- B. Evaluate project status to determine work behind schedule and work ahead of schedule.

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

**3.05 UPDATING SCHEDULE**

- A. Schedule shall be updated at least once a month and submitted with each pay request.
- B. Maintain schedules to record actual start and finish dates of completed activities.
- C. Indicate progress of each activity to date of revision, with projected completion date of each activity.
- D. Update diagrams to graphically depict current status of Work.
- E. Identify activities modified since previous submittal, major changes in Work, and other identifiable changes.
- F. Indicate changes required to maintain Date of Substantial Completion.
- G. Submit reports required to support recommended changes.
- H. Provide narrative report to define problem areas, anticipated delays, and impact on the schedule. Report corrective action taken or proposed and its effect including the effects of changes on schedules of separate contractors.

**3.06 SCHEDULE RECOVERY**

- A. If the Work represented by the critical path falls behind more than 7 days, the project schedule shall be redone within 14 days showing how the Contractor shall recover the time. A narrative that addresses the changes in the schedule from the previously submitted schedule shall be submitted along with the schedule in both hard copy and electronic copy. The Contractor shall comply with the most recent schedules.

**3.07 DISTRIBUTION OF SCHEDULE**

- A. Distribute copies of updated schedules to Contractor's project site file, to subcontractors, suppliers, Architect, Owner, and other concerned parties.
- B. Instruct recipients to promptly report, in writing, problems anticipated by projections shown in schedules.

**END OF SECTION 01 3216**

**SECTION 01 4000 - QUALITY REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Submittals.
- B. Delegated Design.
- C. Quality assurance.
- D. References and standards.
- E. Testing and inspection agencies and services.
- F. Control of installation.
- G. Mock-ups.
- H. Tolerances.
- I. Manufacturers' field services.
- J. Defect Assessment.

**1.02 RELATED REQUIREMENTS**

- A. Section 02 3200 - Geotechnical Investigation: Soil investigation report.
- B. General Conditions and Supplementary Conditions: Inspections and approvals required by public authorities.
- C. Section 01 3000 - Administrative Requirements: Submittal procedures.
- D. Section 01 6000 - Product Requirements: Requirements for material and product quality.

**1.03 SUBMITTALS**

- A. See Section 01 3000 - Administrative Requirements, for submittal procedures.
- B. Designer's Qualification Statement: Submit for Architect's knowledge as contract administrator, or for Owner's information.
  - 1. Include information for each individual professional responsible for producing, or supervising production of, design-related professional services provided by Contractor.
    - a. Full name.
    - b. Professional licensure information.

- c. Statement addressing extent and depth of experience specifically relevant to design of items assigned to Contractor.
- C. Design Data: Submit for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
  1. Include calculations that have been used to demonstrate compliance to performance and regulatory criteria provided, or for Owner's information.
  2. Include required product data and shop drawings.
  3. Include a statement or certification attesting that design data complies with criteria indicated, such as building codes, loads, functional, and similar engineering requirements.
  4. Include signature and seal of design professional responsible for allocated design services on calculations and drawings.
- D. Test Reports: After each test/inspection, promptly submit two copies of report to Architect, Contractor, and Construction Manager.
  1. Include:
    - a. Date issued.
    - b. Project title and number.
    - c. Name of inspector.
    - d. Date and time of sampling or inspection.
    - e. Identification of product and specifications section.
    - f. Location in the Project.
    - g. Type of test/inspection.
    - h. Date of test/inspection.
    - i. Results of test/inspection.
    - j. Conformance with Contract Documents.
    - k. When requested by Architect, provide interpretation of results.
  2. Test report submittals are for Architect's knowledge as contract administrator for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents, or for Owner's information.
- E. Certificates: When specified in individual specification sections, submit certification by the manufacturer and Contractor or installation/application subcontractor to Architect, in quantities specified for Product Data.
  1. Indicate material or product conforms to or exceeds specified requirements. Submit supporting reference data, affidavits, and certifications as appropriate.
  2. Certificates may be recent or previous test results on material or product, but must be acceptable to Architect.
- F. Manufacturer's Instructions: When specified in individual specification sections, submit printed instructions for delivery, storage, assembly, installation, start-up, adjusting, and finishing, for the Owner's information. Indicate special procedures, perimeter conditions requiring special attention, and special environmental criteria required for application or installation.

- G. Manufacturer's Field Reports: Submit reports for Architect's benefit as contract administrator or for Owner.
  - 1. Submit report in duplicate within 30 days of observation to Architect for information.
  - 2. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
  
- H. Erection Drawings: Submit drawings for Architect's benefit as contract administrator or for Owner.
  - 1. Submit for information for the limited purpose of assessing conformance with information given and the design concept expressed in the contract documents.
  - 2. Data indicating inappropriate or unacceptable Work may be subject to action by Architect or Owner.

#### **1.04 DELEGATED-DESIGN SERVICES**

- A. Performance and Design Criteria: Where professional design services or certifications by a design professional are specifically required of Contractor by the Contract Documents, provide products and systems complying with specific performance and design criteria indicated.
  - 1. If criteria indicated are not sufficient to perform services or certification required, submit a written request for additional information to Architect.
  
- B. Delegated-Design Services Certification: In addition to Shop Drawings, Product Data, and other required submittals, submit digitally signed PDF electronic file copies of certificate, signed and sealed by the responsible design professional, for each product and system specifically assigned to Contractor to be designed or certified by a design professional.
  - 1. Indicate that products and systems comply with performance and design criteria in the Contract Documents. Include list of codes, loads, and other factors used in performing these services.

#### **1.05 QUALITY ASSURANCE**

- A. Testing Agency Qualifications:
  - 1. Prior to start of Work, submit agency name, address, and telephone number, and names of full time registered Engineer and responsible officer.
  - 2. Submit copy of report of laboratory facilities inspection made by NIST Construction Materials Reference Laboratory during most recent inspection, with memorandum of remedies of any deficiencies reported by the inspection.
  - 3. Qualification Statement: Provide documentation showing testing laboratory is accredited under IAS AC89.
  
- B. Designer Qualifications: Where professional engineering design services and design data submittals are specifically required of Contractor by Contract Documents, provide services of a Professional Engineer experienced in design of this type of work and licensed in the State in which the Project is located.

**1.06 REFERENCES AND STANDARDS**

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

**1.07 TESTING AND INSPECTION AGENCIES AND SERVICES**

- A. Owner will employ and pay for services of an independent testing agency to perform specified testing and inspection.
- B. Employment of agency in no way relieves Contractor of obligation to perform Work in accordance with requirements of Contract Documents.

**PART 2 - PRODUCTS**

**2.01 NOT USED**

**PART 3 - EXECUTION**

**3.01 CONTROL OF INSTALLATION**

- A. Monitor quality control over suppliers, manufacturers, products, services, site conditions, and workmanship, to produce Work of specified quality.
- B. Comply with manufacturers' instructions, including each step in sequence.
- C. Should manufacturers' instructions conflict with Contract Documents, request clarification from Architect before proceeding.



- D. Comply with specified standards as minimum quality for the Work except where more stringent tolerances, codes, or specified requirements indicate higher standards or more precise workmanship.
- E. Have Work performed by persons qualified to produce required and specified quality.
- F. Verify that field measurements are as indicated on shop drawings or as instructed by the manufacturer.
- G. Secure products in place with positive anchorage devices designed and sized to withstand stresses, vibration, physical distortion, and disfigurement.

### **3.02 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 Architect will use to judge the Work.
- C. Notify Owner, Architect and Construction Manager fifteen (15) working days in advance of dates and times when mock-ups will be constructed.
- D. Provide supervisory personnel who will oversee mock-up construction. Provide workers that will be employed during the construction at Project.
- E. Tests shall be performed under provisions identified in this section and identified in the respective product specification sections.
- F. Assemble and erect specified items with specified attachment and anchorage devices, flashings, seals, and finishes.
- G. Obtain Architect's approval of mock-ups before starting work, fabrication, or construction.
  - 1. Architect 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 Architect's approval is issued.
- H. Accepted mock-ups shall be a comparison standard for the remaining Work.
- I. Where mock-up has been accepted by Architect 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 Architect.
- J. Where possible salvage and recycle the demolished mock-up materials.

**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 Architect before proceeding.
- C. Adjust products to appropriate dimensions; position before securing products in place.

**3.04 TESTING AND INSPECTION**

- A. See individual specification sections for testing and inspection required.
- B. Test and Inspection Log: Prepare a record of tests and inspections. Include the following:
  - 1. Date test or inspection was conducted.
  - 2. Description of Work tested or inspected.
  - 3. Date tests or inspection results were transmitted to Architect.
  - 4. Identification of testing agency or special inspector conducting test or inspection.
  - 5. Maintain log at Project Site. Post changes and revisions as they occur. Provide access to test and inspection log for Architect's and Commissioning Authority's, reference during normal working hours.
- C. Testing Agency Duties:
  - 1. Provide qualified personnel at site. Cooperate with Architect, Contractor, and Construction Manager in performance of services.
  - 2. Perform specified sampling and testing of products in accordance with specified standards.
  - 3. Ascertain compliance of materials and mixes with requirements of Contract Documents.
  - 4. Promptly notify Architect, Contractor, Construction Manager of observed irregularities or non-conformance of Work or products.
  - 5. Perform additional tests and inspections required by Architect.
  - 6. Attend preconstruction meetings and progress meetings if required by Owner.
  - 7. Submit reports of all tests/inspections specified.
- D. Limits on Testing/Inspection Agency Authority:
  - 1. Agency may not release, revoke, alter, or enlarge on requirements of Contract Documents.
  - 2. Agency may not approve or accept any portion of the Work.
  - 3. Agency may not assume any duties of Contractor.
  - 4. Agency has no authority to stop the Work.
- E. Contractor Responsibilities:
  - 1. Deliver to agency at designated location, adequate samples of materials proposed to be used that require testing, along with proposed mix designs.
  - 2. Cooperate with laboratory personnel, and provide access to the Work and to manufacturers' facilities.
  - 3. Provide incidental labor and facilities:

- a. To provide access to Work to be tested/inspected.
  - b. To obtain and handle samples at the site or at source of Products to be tested/inspected.
  - c. To facilitate tests/inspections.
  - d. To provide storage and curing of test samples.
  4. Notify Architect, Construction Manager and laboratory 24 hours prior to expected time for operations requiring testing/inspection services.
  5. Employ services of an independent qualified testing laboratory and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
  6. Arrange with Owner's agency and pay for additional samples, tests, and inspections required by Contractor beyond specified requirements.
- F. Re-testing required because of non-conformance to specified requirements shall be performed by the same agency on instructions by Architect.
- G. Re-testing required because of non-conformance to specified requirements shall be paid for by Contractor.
- H. Repair and Protection: On completion of testing, inspecting, sample taking, and similar services, repair damaged construction and restore substrates and finishes.
1. Provide materials and comply with installation requirements specified in other Specification Sections or matching existing substrates and finishes. Restore patched areas and extend restoration into adjoining areas with durable seams that are as invisible as possible. Comply with the Contract Document requirements for cutting and patching in Section 01 7000 - Execution and Closeout Requirements.
  2. Protect construction exposed by or for quality-control service activities.
  3. Repair and protection are Contractor's responsibility, regardless of the assignment of responsibility for quality-control services.

### **3.05 MANUFACTURERS' FIELD SERVICES**

- A. When specified in individual specification sections, require material or product suppliers or manufacturers to provide qualified staff personnel to observe site conditions, conditions of surfaces and installation, quality of workmanship, start-up of equipment, test, adjust and balance of equipment as applicable, and to initiate instructions when necessary.
- B. Submit qualifications of observer to Architect 30 days in advance of required observations.
1. Observer subject to approval of Architect and Owner.
- C. Report observations and site decisions or instructions given to applicators or installers that are supplemental or contrary to manufacturers' written instructions.

### **3.06 DEFECT ASSESSMENT**

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

END OF SECTION **01 4000**

**SECTION 01 5000 - TEMPORARY FACILITIES AND CONTROLS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Temporary telecommunications services.
- 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. Project identification sign.
- H. Field offices.

**1.02 REFERENCE STANDARDS**

- A. ASTM E84 – Standard Test Method for Surface Burning Characteristics of Building Materials; 2021a.

**1.03 TELECOMMUNICATIONS SERVICES**

- A. Provide, maintain, and pay for telecommunications services to field office at time of project mobilization.
- B. Telecommunications services shall include:
  - 1. Windows-based personal computer dedicated to project telecommunications, with necessary software and laser printer.
  - 2. Telephone Service: Provide temporary telephone service in common-use facilities for use by all construction personnel. Provide cellular service for project manager and site superintendents.
  - 3. Internet Connections: Minimum of one; DSL modem or faster.
  - 4. Email: Account/address reserved for project use.
  - 5. Facsimile Service: Fax-to-email software on personal computer.

**1.04 TEMPORARY SANITARY FACILITIES**

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

- B. Maintain daily in clean and sanitary condition.
- C. At end of construction, return site to same or better condition as originally found.

**1.05 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 .
- B. Provide barricades and covered walkways required by governing authorities for public rights-of-way .
- C. When pedestrians are routed around construction areas additional barricades will be required to prevent damage to adjacent landscaped areas. Barricades shall be placed to route pedestrians around affected areas using existing paved surfaces when possible.
- D. Provide protection for plants designated to remain. Replace damaged plants.
- E. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

**1.06 FENCING**

- A. Construction: Commercial grade chain link fence.
- B. Provide 6 foot high fence around construction building area and material storage area on site; equip with vehicular and pedestrian gates with locks. Coordinate location with Architect and Owner.

**1.07 SECURITY**

- A. Provide security and facilities to protect Work, and Owner's operations from unauthorized entry, vandalism, or theft. Install and operate temporary lighting that fulfills security requirements without operating entire system.
- B. Coordinate with Owner's security program.

**1.08 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.
- D. Provide means of removing mud from vehicle wheels before entering streets.
- E. Designated existing on-site roads may be used for construction traffic.

- F. Provide temporary parking areas to accommodate construction personnel. When site space is not adequate, provide additional off-site parking.

**1.09 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 weekly.
- 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.
- E. No on-site burning allowed.

**1.10 PROJECT IDENTIFICATION**

- A. Provide project identification sign of design and construction approved by Architect.
- B. Sign Materials:
  - 1. Structure and Framing: New, wood or metal, structurally adequate.
  - 2. Sign Surfaces: Exterior grade plywood with medium density overlay, minimum 3/4 inch (19 mm) thick, standard large sizes to minimize joints, painted white.
  - 3. Rough Hardware: Galvanized.
  - 4. Lettering: Exterior quality paint, contrasting colors.
- C. Project Identification Sign:
  - 1. One printed sign, size shall be 72 inches x 48 inches maximum.
  - 2. Content:
    - a. Project title, logo and name of Owner as indicated on Contract Documents.
    - b. Names and titles of Architect and Consultants.
    - c. Name of Prime Contractor and Major Subcontractors.
    - d. Color project rendering.
  - 3. Graphic design, colors, style of lettering: Designated by Contractor for layout and design and coordinated with Architect.
- D. Installation:
  - 1. Install project identification sign within 30 days after date fixed by Notice to Proceed.
  - 2. Erect at location of high public visibility, adjacent to main entrance to site.
  - 3. Erect supports and framing on secure foundation, rigidly braced and framed to resist wind loadings.
  - 4. Install sign surface plumb and level, with butt joints. Anchor securely.
- E. No other signs are allowed without Owner permission except those required by law.

**1.11 FIELD OFFICES**

- A. Construction office for the use of the Owner, Architect, and Architect's Consultants shall be provided by Contractor. Construction office shall include a table with 12 chairs, a plan rack, a plan table, and a two-drawer file. This office shall be maintained by the Contractor and shall have data, heat and air conditioning. It shall be maintained in clean condition.
- B. Office: Weathertight, with lighting, electrical outlets, heating, cooling equipment, and equipped with sturdy furniture, drawing rack and drawing display table.
- C. Provide space for Project meetings, with table and chairs to accommodate 12 persons minimum.
- D. Locate offices a minimum distance of 30 feet (10 m) from existing and new structures.

**1.12 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS**

- A. Remove temporary utilities, equipment, facilities, materials, roadways and construction parking areas prior to Date of Substantial Completion inspection. Maintain temporary security measures until permanent security provisions are in place.
- B. Remove underground installations to a minimum depth of 2 feet (600 mm). Grade site as indicated.
- C. Clean and repair damage caused by installation or use of temporary work.
- D. Restore new permanent facilities used during construction to specified condition.

**PART 2 - PRODUCTS**

NOT USED

**PART 3 - EXECUTION**

NOT USED

END OF SECTION **01 5000**



**SECTION 01 6000 - PRODUCT REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. General product requirements.
- B. Re-use of existing products.
- C. Transportation, handling, storage and protection.
- D. Product option requirements.
- E. Substitution limitations and procedures.
- F. Procedures for Owner-supplied products.
- G. Maintenance materials, including extra materials, spare parts, tools, and software.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 2500 – Substitution Procedures: Substitutions made during procurement and/or construction phases.
- B. Section 01 4000 - Quality Requirements: Product quality monitoring.

**1.03 SUBMITTALS**

- A. Proposed Products List: Submit list of major products proposed for use, with name of manufacturer, trade name, and model number of each product.
  - 1. Submit within 15 days after date of Agreement.
  - 2. For products specified only by reference standards, list applicable reference standards.
- B. 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.
- C. 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.
- D. 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 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.

### **2.02 NEW PRODUCTS**

- A. Provide new products unless specifically required or permitted by the Contract Documents.
- B. See Section 01 4000 – Quality Requirements, for additional source quality control requirements.
- C. Use of products having any of the following characteristics is not permitted:
  - 1. Made using or containing CFC's or HCFC's.
  - 2. Made of wood from newly cut old growth timber.
  - 3. Containing lead, cadmium, asbestos.
- D. Where other criteria are met, Contractor shall give preference to products that:
  - 1. Are extracted, harvested, and/or manufactured closer to the location of the project.
  - 2. Have longer documented life span under normal use.
  - 3. Result in less construction waste. See Section 01 7419.
- E. Provide all Finish Material Products used in any individual system from the same manufacturer; no exceptions.

### **2.03 PRODUCT OPTIONS**

- A. Products Specified by Reference Standards or by Description Only: Use any product meeting those standards or description.
  - 1. Basis-of-Design Product Definition: A specification in which a specific manufacturer's product is named accompanied by the words "basis-of-design product," including make or model number or other designation, to establish the significant qualities related to type, function, dimension, in-service performance, physical properties, appearance, and other characteristics for purposes of evaluating comparable products of additional manufacturers named in the specification.
- 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.
  - 1. Manufacturer/Source: Where Specifications name a single manufacturer or source, provide a product by the named manufacturer or source that complies with requirements. Comparable products or substitutions for Contractor's convenience will not be considered.

- C. Products Specified by Naming One or More Manufacturers with a Provision for Substitutions: Submit a request for substitution for any manufacturer not named.
- D. Manufacturer's other than Basis of Design Manufacturers shall provide products or systems that meet or exceed Basis of Design products or systems. No change order shall be issued solely based on bid product or system not meeting Basis of Design and being rejected through submittal process.

**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 2500 – 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. Provide protection of stored materials and products against theft, casualty, or deterioration.

- B. 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.
- C. Store and protect products in accordance with manufacturers' instructions.
- D. Store with seals and labels intact and legible.
- E. Store sensitive products in weather tight, climate controlled, enclosures in an environment favorable to product.
- F. For exterior storage of fabricated products, place on sloped supports above ground.
- G. Provide off-site storage and protection when site does not permit on-site storage or protection.
- H. Protect products from damage or deterioration due to construction operations, weather, precipitation, humidity, temperature, sunlight and ultraviolet light, dirt, dust, and other contaminants.
- I. Comply with manufacturer's warranty conditions, if any.
- J. Do not store products directly on the ground.
- K. Cover products subject to deterioration with impervious sheet covering. Provide ventilation to prevent condensation and degradation of products.
- L. Store loose granular materials on solid flat surfaces in a well-drained area. Prevent mixing with foreign matter.
- M. Prevent contact with material that may cause corrosion, discoloration, or staining.
- N. Provide equipment and personnel to store products by methods to prevent soiling, disfigurement, or damage.
- O. Arrange storage of products to permit access for inspection. Periodically inspect to verify products are undamaged and are maintained in acceptable condition.
- P. 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 01 6000**

**SECTION 01 7000 - EXECUTION AND CLOSEOUT REQUIREMENTS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Examination, preparation, and general installation procedures.
- B. Requirements for selective demolition, except removal, disposal, and/or remediation of hazardous materials and toxic substances.
- C. Pre-installation meetings.
- D. Cutting and patching.
- E. Surveying for laying out the work.
- F. Cleaning and protection.
- G. Demonstration and instruction of Owner personnel.
- H. Closeout procedures, including Contractor's Correction Punch List, except payment procedures.
- I. General requirements for maintenance service.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 1000 – Summary: Limitations on working the project site and premises in buildings; continued occupancy; and work sequence.
- B. Section 01 3000 - Administrative Requirements: Submittals procedures.
- C. Section 01 4000 - Quality Requirements: Testing and inspection procedures.
- D. Section 01 5000 - Temporary Facilities and Controls:
  - 1. Temporary exterior enclosures.
- E. Section 01 7800 - Closeout Submittals: Project record documents, operation and maintenance data, warranties and bonds.
- F. Individual Product Specification Sections:
  - 1. Advance notification to other sections of openings required in work of those sections.
  - 2. Limitations on cutting structural members.

**1.03 SUBMITTALS**

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

- B. Survey work: Submit name, address, and telephone number of Surveyor before starting survey work.
  - 1. On request, submit documentation verifying accuracy of survey work.
  - 2. Submit a copy of site drawing signed by the Land Surveyor, that the elevations and locations of the work are in conformance with Contract Documents.
  - 3. Submit surveys and survey logs for the project record.
  
- C. 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.
  - 6. Include in request:
    - a. Identification of Project.
    - b. Location and description of affected work.
    - c. Necessity for cutting or alteration.
    - d. Description of proposed work and products to be used.
    - e. Effect on work of Owner or separate Contractor.
    - f. Written permission of affected separate Contractor.
    - g. Date and time work will be executed.
  
- D. Project Record Documents: Accurately record actual locations of capped and active utilities.

**1.04 QUALIFICATIONS**

- A. For demolition work, employ a firm specializing in the type of work required.
  - 1. Minimum of five years of documented experience.
  
- B. For survey work, employ a land surveyor registered in the State in which the Project is located and acceptable to Architect. Submit evidence of Surveyor's Errors and Omissions insurance coverage in the form of an Insurance Certificate. Employ only individual(s) trained and experienced in collecting and recording accurate data relevant to ongoing construction activities.
  
- C. For field engineering, employ a professional engineer of the discipline required for specific service on Project, licensed in the State in which the Project is located. Employ only individual(s) trained and experienced in establishing and maintaining horizontal and vertical control points necessary for laying out construction work on project of similar size, scope and/or complexity.

**1.05 PROJECT CONDITIONS**

- A. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion and control sediment.

- 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.
  - 2. Provide dust-proof barriers between construction areas and areas continuing to be occupied by Owner.
- C. Noise Control: Provide methods, means, and facilities to minimize noise produced by construction operations.
- 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.

**1.06 COORDINATION**

- A. See Section 01 1000 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 shown 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.
- C. Product Substitution: For any proposed change in materials, submit request for substitution described in Section 01 6000 - Product Requirements.

## **PART 3 - EXECUTION**

### **3.01 EXAMINATION**

- A. Verify that existing site conditions and substrate surfaces are acceptable for subsequent work. Start of work means acceptance of existing conditions.
- B. 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, in the correct locations before beginning sitework and other construction affecting the work.
- 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.
- D. Field Measurements: Take field measurements as required to fit the Work properly. Recheck measurements before installing each product. Where portions of the Work are indicated to fit to other construction, verify dimensions of other construction by field measurements before



fabrication. Coordinate fabrication schedule with construction progress to avoid delaying the Work.

### **3.03 PREINSTALLATION MEETINGS**

- A. When required in individual specification sections, convene a preinstallation meeting at the site prior to commencing work of the section.
- B. Require attendance of parties directly affecting, or affected by, work of the specific section.
- C. Notify Architect four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:
  - 1. Review conditions of examination, preparation and installation procedures.
  - 2. Review coordination with related work.
- E. Record minutes and distribute copies within two days after meeting to participants, with two copies to Architect, Owner, participants, and those affected by decisions made.

### **3.04 LAYING OUT THE WORK**

- A. Verify locations of survey control points prior to starting work.
- B. Promptly notify Architect of any discrepancies discovered.
- C. Contractor shall locate and protect survey control and reference points.
- D. Control datum for survey is that established by Owner provided survey.
- E. Protect survey control points prior to starting site work; preserve permanent reference points during construction.
- F. Promptly report to Architect the loss or destruction of any reference point or relocation required because of changes in grades or other reasons.
- G. Replace dislocated survey control points based on original survey control. Make no changes without prior written notice to Architect.
- H. Utilize recognized engineering survey practices.
- I. Establish a minimum of two permanent bench marks on site, referenced to established control points. Record locations, with horizontal and vertical data, on project record documents.
- J. Establish elevations, lines and levels. Locate and lay out by instrumentation and similar appropriate means:
  - 1. Site improvements including pavements; stakes for grading, fill and topsoil placement; utility locations, slopes, and invert elevations.
  - 2. Grid for structures, building foundation, column locations, floor elevations, door and window elevations, etc.

- 3. Assist subcontractors relative to layout and coordination of their work to successfully complete the project.
- K. Periodically verify layouts by same means.
- L. Maintain a complete and accurate log of control and survey work as it progresses.

### **3.05 GENERAL INSTALLATION REQUIREMENTS**

- A. In addition to compliance with regulatory requirements, conduct construction operations in compliance with NFPA 241, including applicable recommendations in Appendix A.
- B. 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.
- C. Make vertical elements plumb and horizontal elements level, unless otherwise indicated.
- D. Install equipment and fittings plumb and level, neatly aligned with adjacent vertical and horizontal lines, unless otherwise indicated.
- E. Make consistent texture on surfaces, with seamless transitions, unless otherwise indicated.
- F. Make neat transitions between different surfaces, maintaining texture and appearance.

### **3.06 ALTERATIONS**

- A. Drawings showing existing 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 Architect before disturbing existing installation.
  - 3. Beginning of alterations work constitutes acceptance of existing conditions.
- B. Keep areas in which alterations are being conducted separated from other areas that are still occupied.
  - 1. Provide, erect, and maintain temporary dustproof partitions of construction specified in Section 01 5000.
- 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.
  - 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.
- 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 a recommendation to Architect.
  2. Where removal of partitions or walls results in adjacent spaces becoming one, rework floors, walls, and ceilings to a smooth plane without breaks, steps, or bulkheads.
  3. Where a change of plane of 1/4 inch or more occurs in existing work, submit recommendation for providing a smooth transition for Architect review and request instructions.
- 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. Refinish existing surfaces as indicated:
1. Where rooms or spaces are indicated to be refinished, refinish all visible existing surfaces to remain to the specified condition for each material, with a neat transition to adjacent finishes.
  2. If mechanical or electrical work is exposed accidentally during the work, re-cover and refinish to match.
- 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.

### **3.07 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-conforming 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. 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.

### **3.08 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 weekly and dispose off-site; do not burn or bury.

### **3.09 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. Protect work from spilled liquids. If work is exposed to spilled liquids, immediately remove protective coverings, dry out work, and replace protective coverings.
- G. Prohibit traffic or storage upon waterproofed or roofed surfaces. If traffic or activity is necessary, obtain recommendations and provide means for protection from waterproofing or roofing material manufacturer.
- H. Prohibit traffic from landscaped areas.
- I. Remove protective coverings when no longer needed; reuse or recycle coverings if possible.

### **3.10 FINAL CLEANING**

- A. Execute final cleaning prior to final project assessment.
- B. Use cleaning materials that are nonhazardous.
- 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 site; sweep paved areas, rake clean landscaped surfaces.
- F. Remove waste, surplus materials, trash/rubbish, and construction facilities from the site; dispose of in legal manner; do not burn or bury.

### **3.11 CLOSEOUT PROCEDURES**

- A. Make submittals that are required by governing or other authorities.
  - 1. Provide copies to Architect and Owner.
- 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 Architect when work is considered ready for Architect'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 Architect's Substantial Completion inspection.

- E. Conduct Substantial Completion inspection and create Final Correction Punch List containing Architect's and Contractor's comprehensive list of items identified to be completed or corrected and submit to Architect.
- F. Correct items of work listed in Final Correction Punch List and comply with requirements for access to Owner-occupied areas.
- G. Accompany Project Coordinator on Contractor's preliminary final inspection.
- H. Notify Architect when work is considered finally complete and ready for Architect's Substantial Completion final inspection.
- I. Complete items of work determined by Architect listed in executed Certificate of Substantial Completion.

END OF SECTION **01 7000**

**SECTION 01 7800 - CLOSEOUT SUBMITTALS**

**PART 1 - GENERAL**

**1.01 SECTION INCLUDES**

- A. Project Record Documents.
- B. Operation and Maintenance Data.
- C. Warranties and bonds.

**1.02 RELATED REQUIREMENTS**

- A. Section 01 3000 - Administrative Requirements: Submittals procedures, shop drawings, product data, and samples.
- B. Section 01 7000 - Execution and Closeout Requirements: Contract closeout procedures.
- C. Individual Product Sections: Specific requirements for operation and maintenance data.
- D. Individual Product Sections: Warranties required for specific products or Work.

**1.03 SUBMITTALS**

- A. Project Record Documents: Submit documents to Architect with claim for final Application for Payment.
- B. Operation and Maintenance Data:
  - 1. Submit two copies of preliminary draft or proposed formats and outlines of contents before start of Work. Architect will review draft and return one copy with comments.
  - 2. For equipment, or component parts of equipment put into service during construction and operated by Owner, submit completed documents within ten days after acceptance.
  - 3. Submit one copy of completed documents 15 days prior to final inspection. This copy will be reviewed and returned after final inspection, with Architect comments. Revise content of all document sets as required prior to final submission.
  - 4. Submit two sets of revised final documents in final form within 10 days after final inspection.
- C. 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.

D. Digital Submittal Requirements:

1. Provide two copies of Project Record Documents, Operation and Maintenance Manuals, and Warranties and Bonds in PDF Format.
  - a. All CD-ROM's shall be authored with Adobe Acrobat. The authoring shall, but not be limited to include the following:
    - 1) All information on the shall be printable on 8.5 x 11 inch or 11 x 17 inch plain paper.

**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.
  6. Manufacturer's instruction for assembly, installation, and adjusting.
- 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. Manufacturer's name and product model and number.
  2. Product substitutions or alternates utilized.
  3. Changes made by Addenda and modifications.
- F. Record Drawings and Shop Drawings: Legibly mark each item to record actual construction including:
  1. Measured depths of foundations in relation to finish first floor datum.
  2. Measured horizontal and vertical locations of underground utilities and appurtenances, referenced to permanent surface improvements.



3. Measured locations of internal utilities and appurtenances concealed in construction, referenced to visible and accessible features of the Work.
4. Field changes of dimension and detail.
5. Details not on original Contract drawings.

### **3.02 OPERATION AND MAINTENANCE DATA**

- A. Source Data: For each product or system, list names, addresses and telephone numbers of Subcontractors and suppliers, including local source of supplies and replacement parts.
- B. Product Data: Mark each sheet to clearly identify specific products and component parts, and data applicable to installation. Delete inapplicable information.
- C. Drawings: Supplement product data to illustrate relations of component parts of equipment and systems, to show control and flow diagrams. Do not use Project Record Documents as maintenance drawings.
- D. Typed Text: As required to supplement product data. Provide logical sequence of instructions for each procedure, incorporating manufacturer's instructions.

### **3.03 OPERATION AND MAINTENANCE DATA FOR MATERIALS AND FINISHES**

- A. For Each Product, Applied Material, and Finish:
  1. Product data, with catalog number, size, composition, and color and texture designations.
  2. Information for re-ordering custom manufactured products.
- B. Instructions for Care and Maintenance: Manufacturer's recommendations for cleaning agents and methods, precautions against detrimental cleaning agents and methods, and recommended schedule for cleaning and maintenance.
- C. Moisture protection and weather-exposed products: Include product data listing applicable reference standards, chemical composition, and details of installation. Provide recommendations for inspections, maintenance, and repair.
- D. Additional information as specified in individual product specification sections.
- E. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.

### **3.04 OPERATION AND MAINTENANCE DATA FOR EQUIPMENT AND SYSTEMS**

- A. For Each Item of Equipment and Each System:
  1. Description of unit or system, and component parts.
  2. Identify function, normal operating characteristics, and limiting conditions.
  3. Include performance curves, with engineering data and tests.
  4. Complete nomenclature and model number of replaceable parts.

- B. Where additional instructions are required, beyond the manufacturer's standard printed instructions, have instructions prepared by personnel experienced in the operation and maintenance of the specific products.
- C. Panelboard Circuit Directories: Provide electrical service characteristics, controls, and communications; typed.
- D. Include color coded wiring diagrams as installed.
- E. Operating Procedures: Include start-up, break-in, and routine normal operating instructions and sequences. Include regulation, control, stopping, shut-down, and emergency instructions. Include summer, winter, and any special operating instructions.
- F. Maintenance Requirements: Include routine procedures and guide for preventative maintenance and trouble shooting; disassembly, repair, and reassembly instructions; and alignment, adjusting, balancing, and checking instructions.
- G. Provide servicing and lubrication schedule, and list of lubricants required.
- H. Include manufacturer's printed operation and maintenance instructions.
- I. Include sequence of operation by controls manufacturer.
- J. Provide original manufacturer's parts list, illustrations, assembly drawings, and diagrams required for maintenance.
- K. Provide control diagrams by controls manufacturer as installed.
- L. Provide Contractor's coordination drawings, with color coded piping diagrams as installed.
- M. Provide charts of valve tag numbers, with location and function of each valve, keyed to flow and control diagrams.
- N. Provide list of original manufacturer's spare parts, current prices, and recommended quantities to be maintained in storage.
- O. Include test and balancing reports.
- P. Additional Requirements: As specified in individual product specification sections.

**3.05 ASSEMBLY OF OPERATION AND MAINTENANCE MANUALS**

- A. Assemble operation and maintenance data into durable manuals for Owner's personnel use, with data arranged in the same sequence as, and identified by, the specification sections.
- B. Where systems involve more than one specification section, provide separate tabbed divider for each system.

- C. Binders: Commercial quality, 8-1/2 by 11 inch (216 by 280 mm) three D side ring binders with durable plastic covers; 2 inch (50 mm) maximum ring size. When multiple binders are used, correlate data into related consistent groupings. Provide two paper copies.
  - 1. PDF Electronic file: In addition to paper copies, assemble each manual in composite electronically indexed file. Submit on digital media acceptable to Architect.
    - a. Name each indexed document file in composite electronic index with applicable item name. Include a complete electronically linked operation and maintenance directory.
- D. Cover: Identify each binder with typed or printed title OPERATION AND MAINTENANCE INSTRUCTIONS; identify title of Project; identify subject matter of contents.
- E. Project Directory: Title and address of Project; names, addresses, and telephone numbers of Architect, Consultants, Contractor and subcontractors, with names of responsible parties.
- F. Tables of Contents: List every item separated by a divider, using the same identification as on the divider tab; where multiple volumes are required, include all volumes Tables of Contents in each volume, with the current volume clearly identified.
- G. Dividers: Provide tabbed dividers for each separate product and system; identify the contents on the divider tab; immediately following the divider tab include a description of product and major component parts of equipment.
- H. Text: Manufacturer's printed data.
- I. Drawings: Provide with reinforced punched binder tab. Bind in with text; fold larger drawings to size of text pages.
- J. Arrangement of Contents: Organize each volume in parts as follows:
  - 1. Project Directory.
  - 2. Table of Contents, of all volumes, and of this volume.
  - 3. Operation and Maintenance Data: Arranged by system, then by product category.
    - a. Source data.
    - b. Product data, shop drawings, and other submittals.
    - c. Operation and maintenance data.
    - d. Field quality control data.
    - e. Photocopies of warranties and bonds.
  - 4. Design Data: To allow for addition of design data furnished by Architect or others, provide a tab labeled "Design Data" and provide a binder large enough to allow for insertion of at least 20 pages of typed text.

### **3.06 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.
- E. Manual: Bind in commercial quality 8-1/2 by 11 inch (216 by 279 mm) three D side ring binders with durable plastic covers.
  - 1. PDF Electronic file: In addition to paper copies, assemble each manual in composite electronically indexed file. Submit on digital media acceptable to Architect.
- F. Cover: Identify each binder with typed or printed title WARRANTIES AND BONDS, with title of Project; name, address and telephone number of Contractor and equipment supplier; and name of responsible company principal.
- G. Table of Contents: Neatly typed, in the sequence of the Table of Contents of the Project Manual, with each item identified with the number and title of the specification section in which specified, and the name of product or work item.
- H. Separate each warranty or bond with index tab sheets keyed to the Table of Contents listing. Provide full information, using separate typed sheets as necessary. List Subcontractor, supplier, and manufacturer, with name, address, and telephone number of responsible principal.

### **3.07 EMERGENCY MANUALS**

- A. Content: Organize manual into a separate section for each of the following:
  - 1. Type of emergency.
  - 2. Emergency instructions.
  - 3. Emergency procedures.
- B. Type of Emergency: Where applicable for each type of emergency indicated below, include instructions and procedures for each system, subsystem, piece of equipment, and component:
  - 1. Flood.
  - 2. Gas leak.
  - 3. Water leak.
  - 4. Power failure.
  - 5. Water outage.
  - 6. System, subsystem, or equipment failure.
  - 7. Chemical release or spill.
- C. Emergency Instructions: Describe and explain warnings, trouble indications error messages, and similar codes and signals. Include responsibilities of Owner's operating personal for notification of Installer, supplier, and manufacturer to maintain warranties.
- D. Emergency Procedures: Include the following, as applicable:
  - 1. Instructions on stopping.
  - 2. Shutdown instructions for each type of emergency.

3. Operating instructions for conditions outside normal operating limits.
  4. Required sequences for electric or electronic systems.
  5. Special operating instructions and procedures.
- E. Emergency Manual: Assemble the manual of emergency information indicating the listed procedures for use by emergency personnel and Owner's operating personnel for types of emergencies listed.

END OF SECTION **01 7800**

**SECTION 02 4119 - SELECTIVE DEMOLITION**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Demolition and removal of selected site elements.
  - 2. Salvage of existing items to be reused or recycled.

**1.02 DEFINITIONS**

- A. Remove: Detach items from existing construction and dispose of them off-site unless indicated to be salvaged or reinstalled.
- B. Remove and Salvage: Detach items from existing construction, in a manner to prevent damage, and deliver to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, in a manner to prevent damage, prepare for reuse, and reinstall where indicated.
- D. Existing to Remain: Leave existing items that are not to be removed and that are not otherwise indicated to be salvaged or reinstalled.
- E. Dismantle: To remove by disassembling or detaching an item from a surface, using gentle methods and equipment to prevent damage to the item and surfaces; disposing of items unless indicated to be salvaged or reinstalled.

**1.03 MATERIALS OWNERSHIP**

- A. Unless otherwise indicated, demolition waste becomes property of Contractor.

**1.04 PREINSTALLATION MEETINGS**

- A. Predemolition Conference: Conduct conference at Project site.
  - 1. Inspect and discuss condition of construction to be selectively demolished.
  - 2. Review and finalize selective demolition schedule and verify availability of materials, demolition personnel, equipment, and facilities needed to make progress and avoid delays.
  - 3. Review requirements of work performed by other trades that rely on substrates exposed by selective demolition operations.
  - 4. Review areas where existing construction is to remain and requires protection.

**1.05 INFORMATIONAL SUBMITTALS**

- A. Proposed Protection Measures: Submit report, including Drawings, that indicates the measures proposed for protecting individuals and property , for dust control and , for noise control. Indicate proposed locations and construction of barriers, if required.
- B. Schedule of Selective Demolition Activities: Indicate the following:
  - 1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity.
- C. Predemolition Photographs or Video: Show existing conditions of adjoining construction, including finish surfaces, that might be misconstrued as damage caused by salvage and demolition operations.
- D. Inventory: Submit a list of items that have been removed and salvaged.

**1.06 FIELD CONDITIONS**

- A. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- B. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- C. Storage or sale of removed items or materials on-site is not permitted.

**PART 2 - PRODUCTS**

**2.01 PERFORMANCE REQUIREMENTS**

- A. Standards: Comply with ANSI/ASSP A10.6 and NFPA 241.

**PART 3 - EXECUTION**

**3.01 EXAMINATION**

- A. Review Project Record Documents of existing construction or other existing condition provided by Owner. Owner does not guarantee that existing conditions are same as those indicated in Project Record Documents.
- B. Survey of Existing Conditions: Record existing conditions by use of measured drawings preconstruction photographs or video and templates.
  - 1. Inventory and record the condition of items to be removed and salvaged.

2. Before selective demolition or removal of existing building elements that will be reproduced or duplicated in final Work, make permanent record of measurements, materials, and construction details required to make exact reproduction.

### **3.02 PROTECTION**

- A. Temporary Protection: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent facilities to remain.
  1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of site.
  2. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
- B. Remove temporary barricades and protections where hazards no longer exist.

### **3.03 SELECTIVE DEMOLITION, GENERAL**

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  1. Proceed with selective demolition systematically, from higher to lower level.
  2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping.
  3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.
  4. Dispose of demolished items and materials promptly.
- B. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- C. Removed and Salvaged Items:
  1. Clean salvaged items.
  2. Pack or crate items after cleaning. Identify contents of containers.
  3. Store items in a secure area until delivery to Owner.
  4. Transport items to Owner's storage area designated by Owner.
  5. Protect items from damage during transport and storage.
- D. Removed and Reinstalled Items:
  1. Clean and repair items to functional condition adequate for intended reuse.
  2. Pack or crate items after cleaning and repairing. Identify contents of containers.
  3. Protect items from damage during transport and storage.



4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.
- E. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### **3.04 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS**

- A. Masonry: Demolish in small sections. Cut masonry at junctures with construction to remain, using power-driven saw, and then remove masonry between saw cuts.
  1. Split face tiles to be ground smooth for tile to be mounted flush to wall face, as shown on Drawings.

### **3.05 DISPOSAL OF DEMOLISHED MATERIALS**

- A. Remove demolition waste materials from Project site.
  1. Do not allow demolished materials to accumulate on-site.
  2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.
- B. Burning: Do not burn demolished materials.

### **3.06 CLEANING**

- A. Clean adjacent structures and improvements of dust, dirt, and debris caused by selective demolition operations. Return adjacent areas to condition existing before selective demolition operations began.

**END OF SECTION**

**SECTION 10 1400 - SIGNAGE**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Dimensional characters (Steel Angles).
    - a. Cutout dimensional characters.
  - 2. Text Plaques.
  - 3. Event/Group Plaques.

**1.02 SUBMITTALS**

- A. Product Data: For each type of product.
- B. Shop Drawings: For signs.
  - 1. Include fabrication and installation details and attachments to other work.
  - 2. Show sign mounting heights, locations of supplementary supports to be provided by other installers, and accessories.
  - 3. Show message list, typestyles, graphic elements, and layout for each sign at least half size.
- C. Samples for Verification: For each type of sign assembly showing all components and with the required finish(es), in manufacturer's standard size unless otherwise indicated and as follows:
  - 1. Dimensional Characters (Steel Angles): Full-size Sample of each type of dimensional character.
  - 2. Plaques:
    - a. Event/Group Plaque: One full-size sample.
    - b. Side Plate Plaque: 6 inches square including border.
  - 3. Exposed Accessories: Full-size Sample of each accessory type.
  - 4. Full-size Samples, if approved, will be returned to Contractor for use in the Project.
- D. Product Schedule: For letter signs. Use same designations indicated on Drawings or specified.
- E. Qualification Data: For Installer and manufacturer.
- F. Sample Warranty: For special warranty.
- G. Maintenance Data: For signs to include in maintenance manuals.

**1.03 QUALITY ASSURANCE**

- A. Installer Qualifications:

1. An entity that employs installers and supervisors who are trained and approved by manufacturer.
2. An entity with a proven track record of successfully installing signage of similar characteristics, and can show examples through bidding process.

#### **1.04 WARRANTY**

- A. Special Warranty: Manufacturer agrees to repair or replace components of signs that fail in materials or workmanship within specified warranty period.
  1. Failures include, but are not limited to, the following:
    - a. Deterioration of finishes beyond normal weathering.
    - b. Separation or delamination of sheet materials and components.
  2. Warranty Period: Five years from date of Substantial Completion.

### **PART 2 - PRODUCTS**

#### **2.01 DIMENSIONAL CHARACTERS (STEEL ANGLES)**

- A. Cutout Characters: Characters with uniform faces; square-cut, smooth rounded edges; precisely formed lines and profiles; and as follows:
  1. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
    - a. ACE Sign Systems, Inc.
    - b. Gemini Incorporated.
    - c. Lytle Signs Incorporated.
    - d. Mills Manufacturing Company.
    - e. Mohawk Sign Systems.
    - f. Nelson-Harkins Industries.
    - g. Signature Signs, Incorporated.
  2. Character Material: Steel angle iron. .
  3. Character Height: As indicated on Drawings.
  4. Thickness: 3/16 inch, unless otherwise indicated on Drawings.
  5. Finishes:
    - a. Baked-Enamel or Powder-Coat Finish: Manufacturer's standard, in color matte dark grey. Verify finish coat will prevent rusting and endure UV exposure.
  6. Mounting: Tamper resistant Tri-groove rounded head screws through angle iron and flush with block wall. Conceal fasteners as shown on Drawings. Tamper resistant attachment on back of dimensional characters (steel angels) not visible after installation.

## 2.02 PLAQUES

- A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:
  - 1. ACE Sign Systems, Inc.
  - 2. Gemini Incorporated.
  - 3. Lytle Signs Incorporated.
  - 4. Mills Manufacturing Company.
  - 5. Mohawk Sign Systems.
  - 6. Nelson-Harkins Industries.
  - 7. Signature Signs, Incorporated.
  
- B. Etched Plaques: Provide castings free of pits, scale, sand holes, and other defects, as follows:
  - 1. Text Plaque: Cast-metal plaque with background texture, border and characters having uniform faces, sharp corners and precisely formed lines and profiles; and as follows:
    - a. Plaque Material: Aluminum plate with text, as shown on Drawings.
      - 1) Finish: Manufacturer's standard mill finish.
    - b. Background Material: Steel plate with powder coated finish.
      - 1) Color: Matte Dark Grey. Verify finish coat will prevent rusting and endure UV exposure.
      - 2) Background Texture: Manufacturer's standard matte texture.
    - c. Thickness: 0.125 inch.
    - d. Border Style: Square, polished.
    - e. Mounting: Through bolt fastened, flush with masonry block.
  - 2. Cut-out Plaque: Cast-metal plaque with characters, as shown on Drawings.
    - a. Plaque Material: Steel plate with powder coated finish.
      - 1) Color: Matte Dark Grey. Verify finish coat will prevent rusting and endure UV exposure.
    - b. Thickness: 0.125 inch.
    - c. Border Style: Square.
    - d. Mounting: Through bolt fastened, flush with masonry block.

## 2.03 MATERIALS

- A. Aluminum Sheet and Plate: ASTM B209 (ASTM B209M), alloy and temper recommended by aluminum producer and finisher for type of use and finish indicated.
  
- B. Steel Plates, Shapes, and Bars: ASTM A36/A36M.
  
- C. Zinc Castings: ASTM B240, alloy and temper recommended by sign manufacturer for type of use and finish indicated.

## 2.04 ACCESSORIES

- A. Fasteners and Anchors: Manufacturer's standard as required for secure anchorage of signs, noncorrosive and compatible with each material joined, and complying with the following:
  - 1. Exposed Metal-Fastener Components, General:

- a. Fabricated from same basic metal and finish of fastened metal unless otherwise indicated.
- b. Fastener Heads: For nonstructural connections, use flathead screws and bolts with tamper-resistant one-way-head slots unless otherwise indicated.
- 2. Sign Mounting Fasteners:
  - a. Concealed Studs: Concealed (blind), threaded studs welded or brazed to back of sign material, and then epoxied into wall; unless otherwise indicated.
  - b. Through Fasteners: Exposed metal fasteners matching sign finish, with type of head indicated, installed in predrilled holes.
- B. Epoxy/Adhesive: As recommended by sign manufacturer.

## **2.05 FABRICATION**

- A. General: Provide manufacturer's standard sign assemblies according to requirements indicated.
  - 1. Provide rabbets, lugs, and tabs necessary to assemble components and to attach to existing work. Drill and tap for required fasteners. Use concealed fasteners where possible; use exposed fasteners that match sign finish.
  - 2. Castings: Fabricate castings free of warp, cracks, blowholes, pits, scale, sand holes, and other defects that impair appearance or strength. Grind, wire brush, sandblast, and buff castings to remove seams, gate marks, casting flash, and other casting marks before finishing.

## **2.06 GENERAL FINISH REQUIREMENTS**

- A. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.
- B. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.
- C. Directional Finishes: Run grain with long dimension of each piece and perpendicular to long dimension of finished trim or border surface unless otherwise indicated.
- D. Organic, Anodic, and Chemically Produced Finishes: Apply to formed metal after fabrication but before applying contrasting polished finishes on raised features unless otherwise indicated.

## **2.07 ALUMINUM FINISHES**

- A. Clear Anodic Finish: AAMA 611, Class I, 0.018 mm or thicker.
- B. Baked-Enamel or Powder-Coat Finish: AAMA 2603 except with a minimum dry film thickness of 1.5 mils (0.04 mm). Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.
  - 1. Color: As selected by Architect and Owner from manufacturer's full range of colors.

### **PART 3 - EXECUTION**

#### **3.01 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with requirements for installation tolerances and other conditions affecting performance.
- B. Verify that sign-support surfaces are within tolerances to accommodate signs without gaps or irregularities between backs of signs and support surfaces unless otherwise indicated.
- C. Proceed with installation only after unsatisfactory conditions have been corrected.

#### **3.02 INSTALLATION**

- A. General: Install signs using mounting methods indicated and according to manufacturer's written instructions.
  - 1. Install signs level, plumb, true to line, and at locations and heights indicated, with sign surfaces free of distortion and other defects in appearance.
  - 2. Before installation, verify that sign surfaces are clean and free of materials or debris that would impair installation.
  - 3. Corrosion Protection: Coat concealed surfaces of exterior aluminum in contact with grout, concrete, masonry, wood, or dissimilar metals, with a heavy coat of bituminous paint.
- B. Mounting Methods:
  - 1. Concealed Studs: Using a template, drill holes in substrate aligning with studs on back of sign. Remove loose debris from hole and substrate surface.
    - a. Masonry Substrates: Fill holes with adhesive. Leave recess space in hole for displaced adhesive. Place sign in position and push until flush to surface, embedding studs in holes. Temporarily support sign in position until adhesive fully sets.
  - 2. Through Fasteners: Drill holes in substrate using predrilled holes in sign as template. Countersink holes in sign if required. Place sign in position and flush to surface. Install through fasteners and tighten.

#### **3.03 ADJUSTING AND CLEANING**

- A. Remove and replace damaged or deformed characters and signs that do not comply with specified requirements. Replace characters with damaged or deteriorated finishes or components that cannot be successfully repaired by finish touchup or similar minor repair procedures.
- B. Remove temporary protective coverings and strippable films as signs are installed.

- C. On completion of installation, clean exposed surfaces of signs according to manufacturer's written instructions, and touch up minor nicks and abrasions in finish. Maintain signs in a clean condition during construction and protect from damage until acceptance by Owner.

**END OF SECTION**

**SECTION 26 5600 - EXTERIOR LIGHTING**

**PART 1 - GENERAL**

**1.01 SUMMARY**

- A. Section Includes:
  - 1. Exterior lighting.

**1.02 DEFINITIONS**

- A. CCT: Correlated color temperature.
- B. CRI: Color-rendering index.
- C. HID: High-intensity discharge.
- D. LER: Luminaire efficacy rating.
- E. Luminaire: Complete lighting fixture, including ballast housing if provided.

**1.03 SUBMITTALS**

- A. Product Data: For each component, arranged in order of lighting unit designation. Include data on features, accessories, finishes, and the following:
  - 1. Physical description of luminaire, including materials, dimensions, effective projected area, and verification of indicated parameters.
  - 2. Details of attaching luminaires and accessories.
  - 3. Details of installation and construction.
  - 4. Luminaire materials.
  - 5. Photometric data based on laboratory tests of each luminaire type, complete with indicated lamps, ballasts, and accessories.
    - a. Testing Agency Certified Data: For indicated luminaires, photometric data shall be certified by a qualified independent testing agency. Photometric data for remaining luminaires shall be certified by manufacturer.
    - b. Manufacturer Certified Data: Photometric data shall be certified by manufacturer's laboratory with a current accreditation under the National Voluntary Laboratory Accreditation Program for Energy Efficient Lighting Products.
  - 6. Lamps, including life, output, CCT, CRI, lumens, and energy-efficiency data.
  - 7. Means of attaching luminaires to supports, and indication that attachment is suitable for components involved.
- B. Shop Drawings: Include plans, elevations, sections, details, and attachments to other work.



1. Detail equipment assemblies and indicate dimensions, weights, loads, required clearances, method of field assembly, components, and location and size of each field connection.
  2. Design calculations, certified by a qualified professional engineer, indicating strength of screw foundations on which they are based.
  3. Wiring Diagrams: For power, signal, and control wiring.
- C. Qualification Data: For qualified agencies providing photometric data for lighting fixtures.
- D. Field quality-control reports.
- E. Operation and Maintenance Data: For luminaires to include in emergency, operation, and maintenance manuals.
- F. Warranty: Sample of special warranty.

#### **1.04 QUALITY ASSURANCE**

- A. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- B. Comply with IEEE C2, "National Electrical Safety Code."
- C. Comply with NFPA 70.
- D. Mockup: Provide installation mockup to determine placement as specified in Installation.

#### **1.05 WARRANTY**

- A. Special Warranty: Manufacturer's standard form in which manufacturer agrees to repair or replace products that fail in materials or workmanship; that corrode; or that fade, stain, perforate, erode, or chalk due to effects of weather or solar radiation within specified warranty period. Manufacturer may exclude lightning damage, hail damage, vandalism, abuse, or unauthorized repairs or alterations from special warranty coverage.
1. Warranty Period for Luminaires: Five years from date of Substantial Completion.
  2. Warranty Period for Metal Corrosion: Five years from date of Substantial Completion.
  3. Warranty Period for Color Retention: Five years from date of Substantial Completion.

### **PART 2 - PRODUCTS**

#### **2.01 GENERAL REQUIREMENTS FOR LUMINAIRES**

- A. Luminaires shall comply with UL 1598 and be listed and labeled for installation in wet locations by an NRTL acceptable to authorities having jurisdiction.
- B. Lateral Light Distribution Patterns: Comply with IESNA RP-8 for parameters of lateral light distribution patterns indicated for luminaires.

- C. Metal Parts: Free of burrs and sharp corners and edges.
- D. Sheet Metal Components: Corrosion-resistant aluminum unless otherwise indicated. Form and support to prevent warping and sagging.
- E. Housings: Rigidly formed, weather- and light-tight enclosures that will not warp, sag, or deform in use. Provide filter/breather for enclosed luminaires.
- F. Doors, Frames, and Other Internal Access: Smooth operating, free of light leakage under operating conditions, and designed to permit relamping without use of tools. Designed to prevent doors, frames, lenses, diffusers, and other components from falling accidentally during relamping and when secured in operating position. Doors shall be removable for cleaning or replacing lenses. Designed to disconnect ballast when door opens.
- G. Exposed Hardware Material: Stainless steel.
- H. Plastic Parts: High resistance to yellowing and other changes due to aging, exposure to heat, and UV radiation.
- I. Reflecting surfaces shall have minimum reflectance as follows unless otherwise indicated:
  - 1. White Surfaces: 85 percent.
  - 2. Specular Surfaces: 83 percent.
  - 3. Diffusing Specular Surfaces: 75 percent.
- J. Lenses and Refractors Gaskets: Use heat- and aging-resistant resilient gaskets to seal and cushion lenses and refractors in luminaire doors.
- K. Luminaire Finish: Manufacturer's standard paint applied to factory-assembled and -tested luminaire before shipping. Where indicated, match finish process and color of pole or support materials.
- L. Factory-Applied Finish for Aluminum Luminaires: Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.
  - 1. Finish designations prefixed by AA comply with the system established by the Aluminum Association for designating aluminum finishes.
  - 2. Class I, Color Anodic Finish: AA-M32C22A42/A44 (Mechanical Finish: medium satin; Chemical Finish: etched, medium matte; Anodic Coating: Architectural Class I, integrally colored or electrolytically deposited color coating 0.018 mm or thicker) complying with AAMA 611.
    - a. Color: White. See Editing Instruction No. 7 in the Evaluations for discussion of luminaire labeling.
- M. Factory-Applied Labels: Comply with UL 1598. Include recommended lamps and ballasts. Labels shall be located where they will be readily visible to service personnel, but not seen from normal viewing angles when lamps are in place.

1. Label shall include the following lamp and ballast characteristics:
  - a. "USES ONLY" and include specific lamp type.
  - b. CCT and CRI for all luminaires.

## **2.02 EXTERIOR LIGHTING**

- A. Basis of Design: EDGE 4" Recessed Linear (EV4D-WHE-840HO-48-XX-U-EE1-1-0-W) by Pinnacle Architectural Lighting; or approved equal.
  1. EDGE 4" Recessed Linear.
  2. WHE – Asymmetric Lens.
  3. 840HO – 80 CRI, 4000K, High Output.
  4. XX – 48 ft; as selected by Architect. Verify in field the length required prior to purchasing.
  5. U – Universal voltage.
  6. EE1 – 1% dimming driver.
  7. Single Circuit.
  8. No Battery or emergency options.
  9. Finish: White.
- B. Controls: Intercept and extend existing lighting circuit and "on/off" controls serving wall packs being demolished.
  1. Wall Box Dimmer: Provide 010V wall box dimmer for light output control to provide a light output setpoint.
  2. Location: Locate dimmer in locked location, coordinate location with Owner.
  3. The intent of the dimmer is to set the light output once, and then have it turn on and off with the adjacent wall packs.

## **PART 3 - EXECUTION**

### **3.01 LUMINAIRE INSTALLATION**

- A. Install luminaire in accordance with manufacturer's written instructions.
- B. Fasten luminaire to indicated structural supports. Install at 2 ft. from face of wall to front edge of luminaire. Provide mockup of single luminaire to confirm luminaire distribution and placement prior to installation of entire length of luminaires. Luminaire may be installed closer to or further from wall, pending mockup results and input.
  1. Use fastening methods and materials selected to resist seismic forces defined for the application and approved by manufacturer.
- C. Adjust luminaires that require field adjustment or aiming.

### **3.02 CORROSION PREVENTION**

- A. Aluminum: Do not use in contact with earth or concrete. When in direct contact with a dissimilar metal, protect aluminum by insulating fittings or treatment.

**3.03 FIELD QUALITY CONTROL**

- A. Inspect each installed fixture for damage. Replace damaged fixtures and components.
- B. Illumination Observations: Verify normal operation of lighting units after installing luminaires and energizing circuits with normal power source.
  - 1. Verify operation of photoelectric controls.
- C. Prepare a written report of tests, inspections, observations, and verifications indicating and interpreting results. If adjustments are made to lighting system, retest to demonstrate compliance with standards.

**3.04 DEMONSTRATION**

- A. Train Owner's maintenance personnel to adjust, operate, and maintain luminaire lowering devices.

**END OF SECTION 26 5600**