

\*\*\*\*\*

**IFB NO. Y18-706-TA**

**ISSUED: September 20, 2017**

**INVITATION FOR BIDS**

**FOR**

**ORANGE COUNTY CONVENTION CENTER WEST BUILDING CURTAIN WALL  
REPLACEMENT**

\*\*\*\*\*

**PART H  
TECHNICAL SPECIFICATIONS**

\*\*\*\*\*

**PART H  
VOLUME II**



# PROJECT MANUAL

**OCCC WEST BUILDING CURTIAN WALL REPLACEMENT**

**AT THE**

**ORANGE COUNTY CONVENTION CENTER: WEST BUILDING  
9800 INTERNATIONAL DRIVE, ORLANDO, FL 32819**

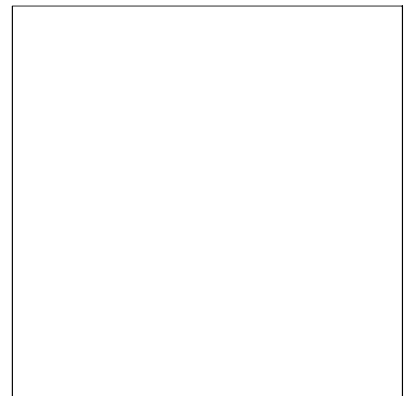
**For**

**ORANGE COUNTY CONVENTION CENTER  
9800 International Drive  
Orlando, FL 32819**

**PREPARED BY:**

**A/R/C ASSOCIATES, INCORPORATED**  
601 North Fern Creek Avenue - Suite 100  
Orlando, Florida 32803  
(407) 896-7875 FAX # (407) 898-6043

**Date: September 1, 2017**



# TABLE OF CONTENTS

## OCCC West Building Curtain Wall Replacement

AT THE

**ORANGE COUNTY CONVENTION CENTER: WEST BUILDING  
9800 INTERNATIONAL DRIVE, ORLANDO, FL 32819**

For

**ORANGE COUNTY CONVENTION CENTER  
9800 International Drive  
Orlando, Florida 32819**

PREPARED BY:

**A/R/C ASSOCIATES, INCORPORATED**  
601 North Fern Creek Avenue - Suite 100  
Orlando, Florida 32803  
(407) 896-7875 FAX # (407) 898-6043

Date: September 1, 2017

Section 00001	Title Page	1 (only)
Section 00003	Table of Contents	1 thru 2
Section 00004	Project Drawing Index	1 thru 2
Section 00850	Special Conditions	1 thru 5

## **Bidding Requirements, Contract Forms, Conditions of the Contract, and General Requirements**

### **Divisions 1 - General Requirements**

Section 01005	Administrative Provisions	1 thru 2
Section 01010	Summary of Work	1 thru 6
	Project Rain Day Form	1 (only)
	Interior Inspection Form	1 (only)
	Exterior Inspection Form	1 (only)
Section 01027	Payment Application Procedures	1 thru 4
Section 01035	Contract Modification Procedures/Change Orders	1 thru 3
Section 01040	Administrative Requirements & Project Coordination	1 thru 8
Section 01045	Cutting and Patching	1 thru 5
Section 01095	Reference Standards and Definitions	1 thru 9

Section 01300	Submittal Procedures	1 thru 8
Section 01301	Submittal Cover	1 (only)
Section 01500	Temporary Facilities and Controls	1 thru 5
Section 01600	Materials and Equipment	1 thru 5
Section 01631	Substitutions	1 thru 4
	Product Substitution Request Forms	1 thru 2
Section 01700	Project Closeout Requirements	1 thru 7
Section 01740	Project Warranties and Bonds	1 thru 3

### **Divisions 2 – Existing Conditions**

Section 02010	Existing Condition Assessment	1 thru 2
Section 02070	Selective Demolition	1 thru 2

### **Divisions 3 – Concrete – Not Used**

### **Divisions 4 – Masonry – Not Used**

### **Divisions 5 – Metals – Not Used**

### **Divisions 6 – Woods, Plastics, and Composites**

Section 06100	Miscellaneous Rough Carpentry	1 thru 4
---------------	-------------------------------	----------

### **Divisions 7 - Thermal and Moisture Protection**

Section 07620	Sheet Metal Flashing and Trim	1 thru 7
Section 07900	Joint Sealers	1 thru 5

### **Divisions 8 – Openings**

Section 08800	Glazing	1 thru 7
Section 08911	Glazed Aluminum Curtain Walls	1 thru 10

### **Division 9 – Finishes**

Section 09900	Minor Painting	1 thru 7
---------------	----------------	----------

The Contractor shall check the pages with the index completeness; if any pages are missing or illegible, request replacements.

# **DRAWING INDEX**

## **OCCC WEST BUILDING CURTAIN WALL REPLACEMENT**

### **AT THE**

**ORANGE COUNTY CONVENTION CENTER: WEST BUILDING  
9800 INTERNATIONAL DRIVE, ORLANDO, FL 32819**

### **For**

**ORANGE COUNTY CONVENTION CENTER  
9800 International Drive  
Orlando, FL 32819**

### **PREPARED BY:**

**A/R/C ASSOCIATES, INCORPORATED**  
601 North Fern Creek Avenue - Suite 100  
Orlando, Florida 32803  
(407) 896-7875 FAX # (407) 898-6043

Date: September 1, 2017

### **Plans (40 x 32 format)**

CS - Cover Sheet, Site Vicinity Map, Sector and Staging Map, and Drawing Index  
G01 - Overall Roof Plans, Glazing Schedule and General Notes  
D01 - Glazing Demolition at Roofs 3/G, 5/I and 5/K  
D02 - Glazing Demolition at Roofs 4/C, 5/I and 5/T  
D03 - Glazing Demolition at Roofs 5/F and 5/G  
D04 - Existing Glazing Systems 3.1, 3.2 and 4.1  
D05 - Existing Glazing Systems 5.1, 5.2 and 5.3  
A01 - Glazing Replacement at Roofs 3/G, 5/I and 5/K  
A02 - Glazing Replacement at Roofs 4/C, 5/I and 5/T  
A03 - Glazing Replacement at Roofs 5/F and 5/G  
A04 - New Curtain Wall Glazing Systems 3.1, 3.2 and 4.1  
A05 - New Curtain Wall Glazing Systems 5.1, 5.2 and 5.3  
A06 - Details 2.04 Thru 2.093  
A07 - Details 2.094 Thru 2.131  
A08 - Details 2.132 Thru 2.321  
A09 - Details 2.322 Thru 2.42  
A010 - Details 2.43 Thru 2.48  
A011 - Details 2.49 Thru 2.54  
A012 - Details 2.55 Thru 2.60  
A013 - Details 3.13 Thru 3.43  
S00 - Overall Roof Plan Wind Pressures and General Notes  
S01 - Glazing Replacement at Roofs 3/G, 5/I and 5/K  
S02 - Glazing Replacement at Roofs 4/C, 5/I and 5/T  
S03 - Glazing Replacement at Roofs 5/F and 5/G

S04 – Details I  
S05 – Details II

The Contractor shall check the pages with the index completeness; if any pages are missing or illegible, request replacements.

PART I        GENERAL

1.1        RELATED SECTIONS

- A.        Section 01010 – Summary of Work.
- B.        Section 01040 – Project Management and Coordination

1.2        SUMMARY

- A.        This section defines additional Owner requirements for the performance of the Work of this Contract for the **OCCC West Building Curtain Wall Replacement, at 9800 International Drive, Orlando, Florida 32819** as defined elsewhere in these documents and includes the following:
  - 1.        Contractor use of the site.
  - 2.        Coordination of work schedule.
  - 3.        On-site traffic patterns.
  - 4.        Building emergency egress.
  - 5.        Protection of existing building.
  - 6.        Protection of existing roof systems.
  - 7.        Loading of the existing structure.
  - 8.        Hurricane and storm preparedness.
- B.        The Owner will full occupy the site and building during the entire Repair / Replacement period and normal operations of the facility will continue. Cooperate with the Owner during Repair / Replacement operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations.

1.3        CONTRACTOR USE OF SITE

- A.        General: Contractor shall have limited use of facility and grounds for construction operations as indicated on Drawings and/or Specifications by contract limits.
- B.        Contractor is to confine all activities associated with this contract to the work areas defined within the documents and/or coordinated with the Owner.
- C.        Contractor is to provide an adequate barrier to enclose and confine personnel, equipment and materials to the staging areas defined by these documents and agreed upon with the Owner. If the staging area is visible to the public, provide both a physical and visual barrier to enclose this area.
- D.        The Prime Contractor is ultimately responsible for adherence to these requirements by all trades and subcontractors involved with the project, this responsibility shall not be delegated to individual trades or subcontractors.

1.4        COORDINATION OF WORK SCHEDULE

- A. The primary purpose of this facility is to host shows and conventions on a leased basis, any disturbance of these shows and/or conventions can have a significant financial impact for the Owner, therefore coordination of all work with the show and convention schedule as defined by the Owner is required.
- B. The Owner will provide a schedule of the shows / conventions, the specific areas within the building involved, and the activities for each day; the contractor will coordinate with the Owner what construction activities will be permitted each day, and in which locations on a weekly basis. The Owner may update the schedule and re-coordinate work as necessary to accommodate the shows and/or conventions.
- C. Disruptions to the shows and/or conventions would include noise, dust, debris, and any hindrance to their presentation and/or operations.
- D. The Prime Contractor is ultimately responsible for adherence to these scheduling requirements by all trades and subcontractors involved with the project, this responsibility shall not be delegated to individual trades or subcontractors.

#### 1.5 ON-SITE TRAFFIC PATTERNS

- A. The facility and site is to be considered open to the public at all times, unless otherwise directed by and coordinated with the Owner.
- B. All traffic lanes intended for public or commercial use are to be maintained open to traffic at all times, this includes the traffic lanes dedicated to personally operated vehicles (POV), bus lanes, and truck delivery lanes.

#### 1.6 BUILDING EMERGENCY EGRESS

- A. The facility and site is to be considered open to the public at all times, unless otherwise directed by and coordinated with the Owner, therefore all paths of emergency egress shall be maintained open and protected in compliance with all safety codes and regulations.
- B. If a path of egress falls within or under an area of work, adequate overhead protection of that path of egress to comply with all safety regulations is to be provided by the Contractor, unless already adequately protected by an existing overhead structure.
- C. Means and methods for maintenance of emergency paths of egress solely the responsibility of the Contractor, and is to be addressed and defined within the Contractor's Safety Plan for this project.



1.7 PROTECTION OF EXISTING BUILDING

- A. The facility and site is to be considered open to the public at all times, therefore the building interior and exterior are to be maintained in a “show-ready” condition at all times unless otherwise directed by and coordinated with the Owner.
- B. The Contractor is responsible to control all dust and debris within the interior of the building to the satisfaction of the Owner using whatever means and methods the Contractor deems appropriate.
- C. The Contractor is responsible to protect the interior of the building against damage from the materials and/or work methods being used to perform the repair work. Where curtain walls are to be replaced, temporary stud walls with 5/8” plywood sheathing facing the area of work, and ½” drywall facing the interior spaces will need to be erected. Walls shall be installed on the interior sills and provide enough room to install the new curtain walls as detailed. Temporary walls may be removed after new curtain walls are installed so that interior finishes can be repaired and finished.
- D. All landscaping and/or exterior surfaces of the site and building are to be protected from damage or defacement due to the work of this contract to the satisfaction of the Owner using whatever means and methods the Contractor deems appropriate. Any damaged landscape materials are to be replaced with the same species of plant, of equal size or larger, as reviewed and accepted by the Owner.
- E. The Prime Contractor is ultimately responsible for adherence to these requirements by all trades and subcontractors involved with the project, this responsibility shall not be delegated to individual trades or subcontractors. The Prime Contractor will be responsible for any damage to the existing landscaping, site and/or building.

1.8 PROTECTION OF EXISTING ROOF SYSTEMS

- A. The Contractor shall have limited use of roof areas of the facility for construction operations, all existing roof areas not included within the area of work are to be adequately protected from damage and/or traffic.
- B. Contractor is to define roof areas needed to access the areas of work, storage of equipment and/or materials, and staging of work for the Owners review and acceptance at or prior to the Pre-construction meeting.
- C. All areas of the roof to be used by the Contractor are to be protected from damage due to traffic by a continuous layer of rigid foam insulation, (1½” minimum thickness) laid over the existing roof membrane system, followed by two layers of 5/8” (minimum thickness) CDX plywood. The plywood is to be laid in a staggered pattern to offset all joints, then mechanically fastened together to adequately resist the loads and stresses anticipated at that location.

No anchorage to the existing roof system or structure is permitted, provide adequate ballast to resist movement and wind uplift. Design and location of the traffic protection is to be reviewed and accepted by the Owner prior to construction.

- D. All areas of the roof not need for use by the Contractor are to be protected from traffic by a continuous physical barrier with a minimum height of 42 inches. This barrier is to no openings with a minimum opening dimension larger than 12 inches, and shall be properly braced to resist lateral wind loads. Design and location of the barriers are to be reviewed and accepted by the Owner prior to construction.
- E. The Prime Contractor is ultimately responsible for adherence to these protection requirements by all trades and subcontractors involved with the project, this responsibility shall not be delegated to individual trades or subcontractors. The Prime Contractor will be responsible for any damage to the existing roof system.

#### 1.9 LOADING OF THE EXISTING STRUCTURE

- A. Loading materials on the roof deck will require analysis by a structural engineer retained by the Contractor.
- B. Contractor is to confine all activities associated with this contract to the work areas defined within the documents and/or coordinated with the Owner.
- C. The Prime Contractor is ultimately responsible for adherence to these requirements by all trades and subcontractors involved with the project, this responsibility shall not be delegated to individual trades or subcontractors.

#### 1.10 HURRICANES AND WEATHER RELATED CONCERNS

- A. Because of the buildings' locations and their exposure during the Florida Hurricane season, the Contractor shall be responsible for the tracking, charting and following all information relating to storms.
- B. The Contractor shall make all preparations in anticipation of hurricanes, tropical storms and other types of storms.
- C. The Contractor shall make personnel available to discuss and coordinate all necessary activities affecting preparations for hurricanes and other weather related issues.
- D. The Contractor shall be responsible for providing all necessary means and methods for securing materials, equipment, temporary facilities, tools and all other associated items being used for the construction of this project. Any and all preparations must begin immediately after issuance of a hurricane watch by the National Hurricane Center.
- E. County will not reimburse the Contractor for costs associated with hurricane

**SPECIAL CONDITIONS**  
**SECTION 00850**

---

preparations and other weather related events.

PART 2      PRODUCTS      Not Used

PART 3      EXECUTION      Not Used

END OF SECTION 00850

PART I        GENERAL

1.1        WORK COVERED BY CONTRACT DOCUMENTS

- A.        Work of this Contract comprises the glazing replacement and designated repairs for the **Orange County Convention Center West Building Roof Replacement, Orlando, Florida 32819**

1.2        CONTRACT METHOD

- A.        Construct the work under a single lump sum contract (or as otherwise defined in bid documents).

1.3        COORDINATION

- A.        Coordinate work of the various Sections of Specifications to assure efficient and orderly sequence of installation of construction elements, with provisions for accommodating items installed later.
- B.        Verify characteristics of elements of interrelated operating equipment are compatible; coordinate work of various Sections having interdependent responsibilities for installing, connecting to and placing in service, such equipment. Differences shall be brought to the Owner's attention during bid process or remain the responsibility of the Contractor.
- C.        Coordinate space requirements and installation of items, such as, but not limited to, mechanical and electrical work, which are indicated diagrammatically or otherwise on drawings. Follow routing shown for pipes, ducts and conduits, as closely as practicable; make runs parallel with lines of building. Utilize spaces efficiently to maximize accessibility for other installations, for maintenance and for repairs.
- D.        In finished areas (except as otherwise shown), conceal pipes, ducts, and wiring in the construction. Coordinate locations of fixtures and outlets with finish elements.
- E.        Execute cutting and patching to integrate elements of work, uncover ill timed, defective and nonconforming work, provide openings for penetrations of existing surfaces and provide samples as specified in individual sections for testing. Seal penetrations of existing surfaces and provide samples as specified in individual sections for testing. Seal penetrations through floors, walls and ceilings, and fire safe where necessary as part of the lump sum price.

1.4        REFERENCE STANDARDS

- A.        For products specified by association or trade standards, comply with requirements of the standard, except when more rigid requirements are specified or are required by applicable codes.

**ADMINISTRATIVE PROVISIONS**  
**SECTION 01005**

---

- B. The date of the standard is that in effect when a specified date is specified.
- C. Obtain copies of referenced standards listed in individual specification sections. Maintain copy at job site during progress of the specific work.

END OF SECTION

**SUMMARY OF WORK  
SECTION 01010**

---

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Project Description and Location
- B. Contractor Use of Premises
- C. Distribution of Related Documents
- D. Protection of Existing Building, Finishes, Furnishings and Equipment.
- E. Owner Occupancy and Access.
- F. Schedule
- G. Project Rain Day Form
- H. Interior Inspection Form
- I. Exterior Inspection Form
- J. Asbestos Free Material

1.2 RELATED DOCUMENTS

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

1.3 PROJECT DESCRIPTION AND LOCATION

- A. The Work of this Contract consists of curtain wall replacement and designated repairs for the Orange County Convention Center West Building, Orlando, 9800 International Drive, FL 32819. The work will be constructed under a single lump sum contract.
- B. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 specification sections, apply to work on this contract. The Owner intends to award a single prime base bid contract, titled "General Construction Contract," for Work to be performed for this Project. The Contractor shall comply with the requirements of the General Conditions and the Supplementary Conditions in accomplishing his Work on this Project.
- C. Base Bid General Construction Contract: Includes all general trades, roofing, flashing, unit price allowances and related mechanical and electrical items specified in the Project Specifications and Work shown on the Drawings

**SUMMARY OF WORK  
SECTION 01010**

---

1. The Contractor's Duties include:
  - a. Provide and pay for all labor, materials, equipment, and installation costs of items described within these documents. Provide and pay for all costs associated for all necessary tools, construction equipment, and protection of Existing Work.
  - b. The Contractor shall be responsible for the demolition and proper disposal of existing items and materials relative to this Contract
  - c. Comply with all listed and applicable Codes, Standards and Specifications.
  
- D. The Contractor shall be responsible for the Work as specified herein and as indicated on the Drawings. Although the majority of the Drawings are "to scale," the Contractor is directed to field verify all dimensions and assumptions used for determining material quantities and requirements. No additional monies will be allowed to the Contractor for use of "scaling instruments" to determine material quantities, lack of adequate field investigation, or for other reasons.
  
- E. The scope of work for this contract and the related construction is perceived to include the following:

**DESCRIPTION OF WORK – OCCC West Building Curtain Wall Replacement:** The scope of work has been previously divided into seven sectors as a part of a previous project that this work will be performed in conjunction with. Where indicated on the plans, the existing curtain wall systems are to be removed and replaced as specified in the plans and details provided.

1. **Sector 3: Glazing Systems 3.1 and 3.2** (See the Glazing Schedule on Sheet G01 in the project plans form more specific information).
  - a. *Demolition:* Remove existing glazing systems where indicated
    - 1) Remove existing glazing
    - 2) Remove existing aluminum framing
    - 3) Remove existing pans and pan flashings
    - 4) Remove existing sealants and all fasteners
  
  - b. *New Installation:* Install new curtain wall system as shown in the details and specifications.
    - 1) For all new glazing, new knee wall will be installed as shown in the structural drawings provided to facilitate a more desirable flashing height.
    - 2) After new knee wall construction is complete, coordinate with N.I.C. reroofing project already underway to flash the new knee wall into the new roofing system.
    - 3) Install new pan flashings, transitional flashings, and counterflashings as detailed.

**SUMMARY OF WORK  
SECTION 01010**

---

- 4) Install new anodized aluminum framing and glazing elements as detailed and specified.
2. **Sector 4: Glazing System 4.1** (See the Glazing Schedule on Sheet G01 in the project plans form more specific information).
- a. *Demolition:* Remove existing glazing systems where indicated
    - 1) Remove existing glazing
    - 2) Remove existing aluminum framing
    - 3) Remove existing pans and pan flashings
    - 4) Remove existing sealants and all fasteners
    - 5) Treat existing steel framing on barrel vault ends for any observed rust or deterioration.
  - b. *New Installation:* Install new curtain wall system as shown in the details and specifications.
    - 1) For all new glazing, new knee wall will be installed as shown in the structural drawings provided to facilitate a more desirable flashing height.
    - 2) After new knee wall construction is complete, coordinate with N.I.C. reroofing project already underway to flash the new knee wall into the new roofing system.
    - 3) Install new pan flashings, transitional flashings, and counterflashings as detailed.
    - 4) Install new anodized aluminum framing and glazing elements as detailed and specified.
3. **Sector 5: Glazing Systems 5.1, 5.2, and 5.3** (See the Glazing Schedule on Sheet G01 in the project plans form more specific information).
- a. *Demolition:* Remove existing glazing systems where indicated
    - 1) Remove existing glazing
    - 2) Remove existing aluminum framing
    - 3) Remove existing pans and pan flashings
    - 4) Remove existing sealants and all fasteners
  - b. *New Installation:* Install new curtain wall system as shown in the details and specifications.
    - 1) For all new glazing, new knee wall will be installed as shown in the structural drawings provided to facilitate a more desirable flashing height.
    - 2) After new knee wall construction is complete, coordinate with N.I.C. reroofing project already underway to flash the new knee wall into the new roofing system.



**SUMMARY OF WORK  
SECTION 01010**

---

- 3) Install new pan flashings, transitional flashings, and counterflashings as detailed.
- 4) Install new anodized aluminum framing and glazing elements as detailed and specified.

1.4 CONTRACTOR USE OF SITE AND PREMISES

- A. General: During the construction period, the Contractor shall have use of the premises as allowed by the owner for construction operations, including use of the site. The Contractor's use of the premises is limited to the hours between 10:00PM and 6:00AM seven days per week or as modified by the Owner because of show operations and/or by the Owner's right to perform construction operations with its own forces or to employ separate contractors on portions of the project.
- B. General: Limited use of the premises to construction activities in areas indicated within the limit of the premises. The Contractor may use areas as indicated on the plans for storage or work areas or any legal purpose.
  1. Confine operations to areas within Contract limits indicated on the Drawings. Portions of the site beyond areas in which construction operations are indicated are not to be disturbed.
  2. Keep driveways and entrances serving the premises clear and available to the Owner and the Owners' employees at all times. Do not use these areas for parking or storage of materials. Schedule deliveries to minimize space and time requirements for storage of materials and equipment on site
  3. Burial of Waste Materials: Do not dispose of organic and hazardous material on site, either by burial or by burning.
- C. Access to Site: Limited to agreed-upon staging areas and access routes.
- D. Emergency Building Exits During Construction: Maintain at all times.
- E. Time Restrictions for Performing Interior Work: To be coordinated with Owner as required.
- F. Utility Outages and Shutdown: Allowed only upon coordination with and notification of the Owner.
- G. Be responsible for items of work and material stored on premise.

1.5 DISTRIBUTION OF RELATED DOCUMENTS

- A. The Contractor is solely responsible for the distribution of ALL related

**SUMMARY OF WORK  
SECTION 01010**

---

documents/drawings to ALL appropriate vendors/subcontractors to ensure proper coordination of all aspects of the project and its related parts during bidding and construction.

1.6 PROTECTION OF EXISTING BUILDING, FINISHES, FURNISHINGS AND EQUIPMENT

- A. Comply with all requirements of Division 1 of these specifications in regards to protection and cleaning of the existing site, building, finishes, furnishings and equipment.
- B. Prior to construction beginning at any interior location, the contractor shall coordinate with the owner regarding sensitive areas that will require security clearance due to the nature of the buildings function.
- C. It is the contractor's responsibility to protect the existing construction and finishes from water intrusion during the course of this project.
- D. The contractor shall police and clean the interior and exterior areas of work of this project and discard all debris in the appropriate contractor provided waste receptacle / "dumpster" at the end of each work day. Comply with Division 1 of these specifications fully.

1.7 OWNER OCCUPANCY AND ACCESS

- A. The Owner will occupy the premises during the entire period of construction. Allow for the conduct of normal operations.
- B. Cooperate with Owner to minimize conflict, and to facilitate Owner's operations.
- C. Schedule the Work to accommodate this requirement.
- D. Comply with established Owner Policies.
- E. Maintain "Good Housekeeping" on site as directed by Owner and Architect.
- F. Access for ongoing inspections to the premises and work underway by the Owner and Architect shall not be restricted.

1.8 SCHEDULE

- A. A progress schedule shall be made to include:
  - 1. A start date.
  - 2. A reasonable progression of work by Sector, Roof Area, and Task
  - 3. A start and finish date for construction materials and components listed in Divisions 2 thru 16 as defined by Division 1 of these specifications.

**SUMMARY OF WORK  
SECTION 01010**

---

1.9 PROJECT RAIN DAY FORM

- A. Maintain on a daily basis and submit with each Application for Payment, the Project Rain Day Form attached at the end of this section. Project Rain Day Form shall be signed by the Owner's Representative or Architect daily. See article 8.3 of the General Conditions for additional information regarding how delays due to weather are addressed.

1.10 INTERIOR INSPECTION FORM

- A. Prior to commencing work, the Contractor will schedule a meeting with the Owner's Representative or Architect, to inspect and document the condition of the building interior(s) in both written and digital video or photographic form. Log conditions of ceiling tiles, lights, walls and flooring materials using the Interior Inspection Form attached at the end of this Section. Submit two copies of the digital files and the form signed by the Contractor and Owner's Representative to the Architect prior to the start of construction.

1.11 EXTERIOR INSPECTION FORM

- A. Prior to commencing work, the Contractor will schedule a meeting with the Owner's Representative or Architect, to inspect and document the condition of the building exterior conditions in both written and digital video or photographic form. Log conditions of exterior walls, building attachments, sidewalks, miscellaneous paving and landscaping using the Exterior Inspection Form attached at the end of this Section. Submit two copies of the digital files and the form signed by the Contractor and Owner's Representative to the Architect prior to the start of construction.

PART 2 PRODUCTS

2.01 ASBESTOS FREE MATERIAL

- A. Contractor shall provide a written and notarized statement on company letterhead(s) to certify and warrant that **ONLY ASBESTOS FREE MATERIALS AND PRODUCTS** were provided as required by the Architect in Section 01400, QUALITY CONTROL. Such statement shall be submitted with the final payment request. Final payment shall not be made until such statement is submitted. Contractor agrees that if materials containing asbestos are subsequently discovered at any future time to have been included in the construction, the Contractor shall be liable for all costs related to the redesign or modification of the construction of the project so that materials containing asbestos are removed from the facility. If construction has begun or has been completed pursuant to a design that includes asbestos containing materials, the Contractor shall also be liable for all costs related to the abatement of such asbestos.

**SUMMARY OF WORK  
SECTION 01010**

---

PART 3 PRODUCTS (Not Used)

END OF SECTION

**PROJECT RAIN DAY FORM**

Month: \_\_\_\_\_

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

Project No: \_\_\_\_\_

Contractor: \_\_\_\_\_

Owner's Authorized Rep.: \_\_\_\_\_

DAY	MORNING COND./TIME	AFTERNOON COND./TIME	SUPERINTENDENT SIGNATURE	AUTH. OWNER'S REP. SIGNATURE
1				
2				
3				
4				
5				
6				
7				
8				
9				
10				
11				
12				
13				
14				
15				
16				
17				
18				
19				
20				
21				
22				
23				
24				
25				
26				
27				
28				
29				
30				
31				





**PAYMENT APPLICATION PROCEDURES  
SECTION 01027**

---

**PART I      GENERAL**

**1.1      RELATED DOCUMENTS**

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

**1.2      SUMMARY**

- A.      This Section specifies administrative and procedural requirements governing the Contractor's Applications for Payment.
- B.      The Contractor's Construction Schedule and Submittal Schedule are included in Section 01300 – SUBMITTALS

**1.3      SCHEDULE OF VALUES**

- A.      Coordinate preparation of the Schedule of Values with preparation of Contractor's Construction Schedule.
  - 1.      Submit a draft Schedule of Values to the Owner at the earliest feasible date, but in no case later than Preconstruction Meeting. Refer to the suggested Schedule of Values format attached to this section.
  - 2.      Sub-Schedules:      Where the Work is separated into Sectors that require separately phased payments, provide sub-schedules showing values correlated with each phase of payment.
- B.      Format and Content: Use the Project Manual Table of Contents as a guide to establish the format for the Schedule of Values.
  - 1.      Identification:      Include the following project identification on the Schedule of Values:
    - a.      Project name and location.
    - b.      Name of the Architect
    - c.      Project Number
    - d.      Contractor's name and address
    - e.      Date of submittal
  - 2.      Arrange the Schedule of Values in a tabular form with separate columns to indicate the following for each item listed (see Schedule of Values format attached this section):
    - a.      Generic name
    - b.      Related Specification Section



**PAYMENT APPLICATION PROCEDURES**  
**SECTION 01027**

---

- c. Change Orders (numbers) that have affected value
  - d. Dollar Value
  - e. Percentage of Contract Sum to the nearest one-hundredth percent, adjusted to total 100 percent
3. Provide a breakdown of the Contract Sum in sufficient detail to facilitate continued evaluation of Applications for Payment and progress reports. Break principal subcontract amounts down into several line items:
  - a. A value will be given for at least every major specification section (subsections can logically be grouped together).
  - b. A single material subcontractor (i.e. sod, window blinds) will not be required to be broken down into labor and material unless it is anticipated the materials will be stored and invoiced prior to installation.
  - c. All multiple item subcontracts or work items (i.e. concrete, roofing, painting, mechanical, electrical items, etc.) will be shown broken down at least in labor and material (all taxes, burden and overhead and profit included).
  - d. Mobilization (move-on, bond, insurance, temporary office and sanitary service installation).
  - e. For multi-story work all items broken down per floor.
  - f. Concrete broken down at least into foundation slab on grade, columns, beams and suspended slabs.
  - g. Masonry divided into C.M.U. brick, stem walls, exterior walls, interior walls and elevator shaft.
  - h. Plumbing broken down at least into underslab rough-in, vents and stacks supply piping, equipment items (each listed separately), fixtures and trim.
  - i. HVAC: Typically shown per specification section, labor and material, per floor.
  - j. Electrical: same as HVAC.
  - k. Fire protection broken down at least into underground, rough-in and trim. All per building and labor and material.
  - l. Logical grouping of specification subsections is permitted.
4. Round amounts off the nearest whole dollar, the total shall equal the Contract Sum.
5. For each part of the Work where an Application for Payment may include materials or equipment, purchased or fabricated and stored, but not yet installed, provide separate line items on the Schedule of Values for initial cost of the materials, for each subsequent stage of completion, and for total installed value of that part of the Work.
6. Margins of Cost: Show line items for indirect costs, and margins on actual costs, only to the extent that such items will be listed individually in Applications for Payment. Each item in the Schedule of Values and Applications for Payment shall be complete including its total cost and proportionate share of general overhead

**PAYMENT APPLICATION PROCEDURES**  
**SECTION 01027**

---

and profit margin.

a. At the Contractors' option, temporary facilities and other major cost items that are not direct cost of actual work-in-place may be shown as separate line items in the Schedule of Values or distributed as general overhead expense.

7. Schedule Updating: Update and resubmit the Schedule of Values when Change Orders or Construction Change Directives result in a change in the contract sum.

#### 1.4 APPLICATIONS FOR PAYMENT

- A. Each Application for Payment shall be consistent with previous applications and payments as reviewed by the Owner representative and paid for by the Owner.
1. The initial Application for Payment, the Application for Payment at time of Substantial Completion, and the Final Application for Payment involve additional requirements. See items G, I, J and K of this section.
- B. Payment Application Times: The period of construction work covered by each Application of Payment is the period indicated in the Agreement.
- C. Payment Application Forms: Use the County's most updated form as the form for Application for Payment. Form given at the Preconstruction Conference.
- D. Application Preparation: Complete every entry on the form, including notarization and execution by person authorized to sign legal documents on behalf of the Owner. Incomplete applications will be returned without action.
1. Entries shall match data on the Schedule of Values and Contractors' Construction Schedule. Use updated schedules if revisions have been made.
2. Include amounts of Change Orders and Construction Change Directives issued prior to the last day of the construction period covered by the application.
- E. Transmittal: Submit **five (5) original executed copies** of each Application for Payment to the Project Manager by means ensuring receipt within 24 hours; one copy shall be complete, including waivers of lien and similar attachments, when required.
1. Transmit each copy with a transmittal form listing attachments, and recording appropriate information related to the application in a manner acceptable to the Project Manager.
- F. Payment will be processed once a month. Payment for item will be based on percentage completed as determined and approved by the County Project Manager or invoice for stored materials. Retainage of 10% will be held for all applications until 50% completion

**PAYMENT APPLICATION PROCEDURES**  
**SECTION 01027**

---

has been reached, at which point of time retainage will be reduced to 5% in accordance with Florida Prompt Payment Act.

- G. Application for Payment at Substantial Completion: Following issuance of the Certificate of Substantial Completion, submit an Application for Payment; this application shall reflect any Certificates of Partial Substantial Completion issued previously for Owner occupancy of designated portions of the Work. Application shall also include all items listed in Part H. below.
  
- H. Final Payment Application: Administrative actions and submittals, which must precede or coincide with submittal of the final payment. Application for Payment includes the following:
  - 1. Completion of Project Close-Out requirements
  - 2. Completion of items specified for completion after Substantial Completion (Punch List)
  - 3. Notarized Contractor's release of lien (on Owner's form)
  - 4. Notarized Consent of Surety
  - 5. Notarized Power of attorney
  - 6. Notarized Asbestos-free letter

PART 2      PRODUCTS            (Not Applicable)

PART 3      EXECUTION                (Not Applicable)

END OF SECTION

# CONTRACT MODIFICATION PROCEDURES / CHANGE ORDERS

## SECTION 01035

---

### PART 1 GENERAL

#### 1.1 RELATED DOCUMENTS

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

#### 1.2 SUMMARY

- A. This section specifies administrative and procedural requirements for handling and processing Contract modifications.

#### 1.3 MINOR CHANGES IN THE WORK

- A. Supplemental instructions authorizing minor changes in the work, not involving an adjustment to the Contract Sum or Contract Time, will be issued by the Design Professional and the Owner's Project Manager.

#### 1.4 CHANGE ORDER PROPOSAL REQUESTS

- A. Owner-Initiated Proposal Requests: Proposed changes in the work that will require adjustment to the Contract Sum or Contract Time will be issued by the Design Professional's Project Manager, with a detailed description of the proposed change and supplemental or revised Drawings and Specifications, if necessary.
  - 1. Proposal requests issued by the Design Professional's Project Manager are for information only. Do not consider them instruction either to stop work in progress, or to execute the proposed change.
  - 2. Unless otherwise indicated in the proposal request, within 7 days of receipt of the proposal request, submit to the Project Manager for the Owner's review, an estimate of cost necessary to execute the proposed change.
    - a. Include a list of quantities of products to be purchased and unit costs, along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
    - b. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
    - c. Include a statement indicating the effect the proposed change in the work will have on the Contract Time.
    - d. Contractor and subcontractors will provide a complete detailed labor and material breakdown to justify change order request amount.
- B. Contractor-Initiated Change Order Proposal Requests: When latent or other unforeseen conditions in mutual accord with the Owner Representative's findings require modifications to the Contract, the Contractor may propose changes by submitting a

## CONTRACT MODIFICATION PROCEDURES / CHANGE ORDERS

### SECTION 01035

---

request for a change to the Architect.

1. Include a statement outlining the reasons for the change and the effect of the change on the Work. Provide a complete description of the proposed change. Indicate the effect of the proposed change on the Contract Sum and Contract Time.
2. Include a list of quantities of products to be purchased and unit costs along with the total amount of purchases to be made. Where requested, furnish survey data to substantiate quantities.
3. Indicate applicable taxes, delivery charges, equipment rental, and amounts of trade discounts.
4. Comply with requirements in Section 01631 Product Substitutions- if the proposed change in the work requires that substitution of one product or system for a product or system not specified.
5. Contractor and subcontractors will provide a complete detailed labor and material breakdown to justify change order request amounts.

#### 1.5 CONSTRUCTION CHANGE DIRECTIVE

- A. Construction Change Directive: When the Owner and Contractor are not in total agreement on the terms of a Change Order Proposal Request, the Design Professional's Project Manager may issue a Construction Change Directive (on behalf of the Owner) instructing the Contractor to proceed with a change in the Work, for subsequent inclusion in a Change Order.
  1. The Construction Change Directive will contain a complete description of the change in the Work and designate the method to be followed to determine change in the Contract Sum or Contract Time.
- B. Documentation: Maintain detailed records on a time and material basis of work required by the Construction Change Directive.
  1. After completion of the change, submit an itemized account and supporting data necessary to substantiate cost and time adjustments to the Contract.

#### 1.6 CHANGE ORDER PROCEDURES

- A. Upon the Owner's approval of a Change Order Proposal Request, the Design Professional's Project Manager will issue a Change Order for signatures of the Owner and Contractor on County's Change Order form, as provided in the Conditions of the Contract.

**CONTRACT MODIFICATION PROCEDURES / CHANGE ORDERS**  
**SECTION 01035**

---

PART 2 PRODUCTS (Not Applicable)

PART 3 EXECUTION (Not Applicable)

END OF SECTION

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section Includes
  - 1. Coordination and project conditions.
  - 2. Coordination with Owner Requirements
  - 3. Preconstruction meeting.
  - 4. Site mobilization meeting.
  - 5. Progress meetings.
  - 6. Pre-installation meetings.
  - 7. General Installation provisions
  - 8. Cutting and patching.
  - 9. Special procedures.
  - 10. Cleaning and protection
  
- B. Related Documents
  - 1. Drawings and general provisions of Contract, including General and Supplementary Conditions and other Division 1 Specification Sections, apply to this Section.

**1.2 COORDINATION AND PROJECT CONDITIONS**

- A. Coordinate scheduling, submittals, and Work of various sections of Project Manual to ensure efficient and orderly sequence of installation of interdependent construction elements, with provisions for accommodating items installed later.
  
- B. Verify utility requirements and characteristics of operating equipment are compatible with building utilities. Coordinate work of various sections having interdependent responsibilities for installing, connecting to, and placing in service, operating equipment.
  
- C. Coordinate space requirements, supports, and installation of mechanical and electrical Work 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.
  
- D. In finished areas except as otherwise indicated, conceal pipes, ducts, and wiring within construction. Coordinate locations of fixtures and outlets with finish elements.
  
- E. Coordinate completion and clean-up of Work of separate sections in preparation for Substantial Completion and for portions of Work designated for Owner's occupancy.

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

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

1.3 COORDINATION WITH OWNER REQUIREMENTS

- A. The Owner will be occupying the building during the work. All existing exits and any existing fire protection/life safety systems shall be continuously maintained and operational unless other measures are taken which provide equivalent safety per the Florida Building Code requirements. The contractor is to submit a "Construction Safety Plan" depicting how they will keep exit ways protected and in a safe condition while the buildings are occupied. Stipulate how the fresh air and exhaust fans will be kept in continued use while the buildings are occupied.
- B. Stipulate in the "Construction Safety Plan" how the contractor will keep the building(s) occupied during the roof replacement operations.
- C. Roof loading and overhead crane operations shall be scheduled as much as practicable during times the facilities are unoccupied.
- D. HVAC exhaust and fresh air equipment are not to be shut down while the buildings are occupied without Owner's prior knowledge and permission.
- E. Contractor shall consult with local governing authorities having jurisdiction regarding noise abatement requirements and construction operations, if applicable.
- F. A copy of all required city, county and state licenses that are applicable to this project shall be supplied to the Owner's representative shall be submitted with the bid proposal prior to the appropriate work commencing.
- G. The Contractor shall perform any trimming, pruning or relocation of trees or significant landscape materials as needed to fulfill the requirements of work on this project. Failure to adequately protect the existing landscaping material will require replacement of these materials at no additional cost to the Owner.
- H. The Contractor and contractor personnel shall observe the following rules of conduct prescribed by the owner in regard to work on this project. They include but are not limited to:
  - 1. Workmen are not to traverse any walkway between buildings or buildings that are not included in this contract as well as new work that has been completed.
  - 2. All contractor and subcontractor vehicles are to be parked in designated areas only. This will be determined during the pre-construction meeting.
  - 3. Smoking is not permitted on the entire property. The Owner has a non smoking policy which will be furnished to the Contractor with the expectation that the policy will be strictly enforced for the entire duration of the project.
  - 4. Radios, tape or CD players ("boom boxes") are not to be utilized at the site.
  - 5. No firearms or other weapons are to be brought to the site



**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

- 6. Contractor shall coordinate project access, parking and egress of all personnel and tradesmen with the Owner and the Owner's administrative personnel.
- I. Lack of coordination as specified in this and other sections of the contract documents are grounds for assessment of back charges and/or termination in order to remediate the situation

**1.4 PRECONSTRUCTION MEETING**

- A. Owner will schedule meeting after contract is executed.
- B. Attendance Required: Owner, Architect/Engineer, Contractor and any subcontractors and suppliers the contractor may wish to include.
- C. At the Preconstruction meeting submit a list of the Contractor's principal staff assignments, including the Superintendent and other personnel in attendance at the site; identify individuals, their duties and responsibilities; list their addresses and telephone numbers
- D. Agenda:
  - 1. Distribution of Contract Documents.
  - 2. Submission of list of Subcontractors, list of products, schedule of values, and progress schedule.
  - 3. Designation of personnel representing parties in Contract, and Architect/Engineer.
  - 4. Procedures and processing of field decisions, submittals, substitutions, applications for payments, proposal requests, Change Orders, and Contract closeout.
  - 5. Scheduling.
- E. Contractor shall record minutes and distribute copies within three days after meeting to participants, with two copies to Architect/Engineer, Owner, and those affected by decisions made.

**1.5 SITE MOBILIZATION MEETING**

- A. Owner will schedule meeting at Project site prior to Contractor occupancy.
- B. Attendance Required: Owner, Architect/Engineer, Special Consultants, Contractor, Contractor's Superintendent, and major Subcontractors.
- C. Agenda:
  - 1. Use of premises by Owner and Contractor.
  - 2. Owner's requirements and occupancy.
  - 3. Construction facilities and controls provided by Owner.
  - 4. Temporary utilities provided by Owner.
  - 5. Security and housekeeping procedures.
  - 6. Schedules.

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

- 7. Application for payment procedures.
  - 8. Procedures for testing.
  - 9. Procedures for maintaining record documents.
- D. Contractor shall record minutes and distribute copies within three days after meeting to participants, with two copies to Architect/Engineer, Owner, and those affected by decisions made.

**1.6 PROGRESS MEETINGS**

- A. Schedule and administer meetings throughout progress of the Work at maximum bi-weekly intervals.
- B. Contractor shall make arrangements for meetings, prepare agenda with copies for participants, preside at meetings.
- C. Attendance Required: Job superintendent, major subcontractors and suppliers, Owner, Architect/Engineer, as appropriate to agenda topics for each meeting.
- D. Agenda:
  - 1. Review minutes of previous meetings.
  - 2. Review of Work progress.
  - 3. Field observations, problems, and decisions.
  - 4. Identification of problems impeding planned progress.
  - 5. Review of submittals schedule and status of submittals.
  - 6. Review of off-site fabrication and delivery schedules.
  - 7. Maintenance of progress schedule.
  - 8. Corrective measures to regain projected schedules.
  - 9. Planned progress during succeeding work period.
  - 10. Coordination of projected progress.
  - 11. Maintenance of quality and work standards.
  - 12. Effect of proposed changes on progress schedule and coordination.
  - 13. Other business relating to Work.
- E. Contractor shall record minutes and distribute copies within three days after meeting to participants, with two copies to Architect/Engineer, Owner, and those affected by decisions made.

**1.7 PRE-INSTALLATION MEETINGS**

- A. When required in individual specification sections, convene pre-installation meetings at Project site prior to commencing work of specific section.
- B. Require attendance of parties directly affecting, or affected by, Work of specific section.
- C. Notify Architect/Engineer four days in advance of meeting date.
- D. Prepare agenda and preside at meeting:

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

1. Review conditions of installation, preparation and installation procedures.
  2. Review coordination with related work.
- E. Record minutes and distribute copies within three days after meeting to participants, with two copies to Architect/Engineer, Owner, and those affected by decisions made.

PART 2 PRODUCTS – (Not Used)

PART 3 EXECUTION

3.1 GENERAL INSTALLATION PROVISIONS

- A. Inspection of Conditions: Require the Installer of each major component to inspect both the substrate and conditions under which work is to be performed. Do not proceed until unsatisfactory conditions have been corrected in an acceptable manner.
- B. Manufacturer's Instructions: Comply with manufacturer's installation instructions and recommendations, to the extent that those instructions and recommendations are more explicit or stringent than requirements contained in Contract Documents.
- C. Inspect materials or equipment immediately upon delivery and again prior to installation. Reject damaged and defective items.
- D. Provide attachment and connection devices and methods necessary for securing work. Secure work true to line and level. Allow for expansion and building movement.
- E. Visual Effects: Provide uniform joint widths in exposed work. Arrange joints in exposed work to obtain the best visual effect. Refer questionable choices to Architect/Project Manager for final decision.
- F. Recheck measurements and dimensions, before starting each installation.
- G. Install each component during weather conditions and Project status that will ensure the best possible results. Isolate each part of the completed construction from incompatible material as necessary to prevent deterioration.
- H. Coordinate temporary enclosures with required inspections and tests, to minimize the necessity of uncovering completed construction for that purpose.
- I. Mounting Heights: Where mounting heights are not indicated, install individual components at standard mounting heights recognized within the industry for the particular application indicated. Refer questionable mounting height decisions to the Architect/Project Manager for final decision.

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

**3.2 CUTTING AND PATCHING**

- A. Employ skilled and experienced personnel to perform cutting and patching.
- B. Submit written request in advance of cutting or altering elements affecting:
  - 1. Structural integrity of element.
  - 2. Integrity of weather-exposed or moisture-resistant elements.
  - 3. Efficiency, maintenance, or safety of element.
  - 4. Visual qualities of sight exposed elements.
  - 5. Work of Owner or separate contractor.
- C. Execute cutting, fitting, and patching to complete Work, and to:
  - 1. Fit the several parts together, to integrate with other Work.
  - 2. Uncover Work to install or correct ill-timed Work.
  - 3. Remove and replace defective and non-conforming Work.
  - 4. Remove samples of installed Work for testing.
  - 5. Provide openings in elements of Work for penetrations of mechanical and electrical Work.
- D. Execute work by methods to avoid damage to other Work, and to provide proper surfaces to receive patching and finishing.
- E. Cut masonry and concrete materials using masonry saw or core drill.
- F. Restore Work with new products in accordance with requirements of Contract Documents.
- G. Fit Work tight to pipes, sleeves, ducts, conduit, and other penetrations through surfaces.
- H. Maintain integrity of wall, ceiling, or floor construction; completely seal voids.
- I. At penetrations of fire rated walls, partitions, ceiling, or floor construction, completely seal voids with fire rated material to full thickness of penetrated element.
- J. Refinish surfaces to match adjacent finishes. For continuous surfaces, refinish to nearest intersection; for assembly, refinish entire unit.
- K. Identify hazardous substances or conditions exposed during the Work to Architect/Engineer for decision or remedy.

**3.3 SPECIAL PROCEDURES**

- A. Materials: As specified in product sections; match existing with new products for patching and extending work.
- B. Employ skilled and experienced personnel to perform alteration work.

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

- C. Cut, move, or remove items as necessary for access to alterations and renovation Work. Replace and restore at completion.
- D. Remove unsuitable material not marked for salvage, including rotted wood, corroded metals, and deteriorated masonry and concrete. Replace materials as specified for finished Work.
- E. Remove debris and abandoned items from area and from concealed spaces.
- F. Prepare surface and remove surface finishes to permit installation of new work and finishes.
- G. Close openings in exterior surfaces to protect existing work from weather and extremes of temperature and humidity.
- H. Remove, cut, and patch Work in manner to minimize damage and to permit restoring products and finishes to original or specified condition.
- I. Where new Work abuts or aligns with existing, provide smooth and even transition. Patch Work to match existing adjacent Work in texture and appearance.
- J. When finished surfaces are cut so that smooth transition with new Work is not possible, terminate existing surface along straight line at natural line of division and submit recommendation to Architect/Engineer for review.
- K. Where change of plane of 1/4 inch or more occurs, submit recommendation for providing smooth transition to Architect/Engineer for review. Request instructions from Architect/Engineer.
- L. Trim existing doors to clear new floor finish. Refinish trim to original or specified condition.
- M. Patch or replace portions of existing surfaces which are damaged, lifted, discolored, or showing other imperfections.
- N. Finish surfaces as specified in individual product sections.

**3.4 CLEANING AND PROTECTION**

- A. During handling and installation, clean and protect construction in progress and adjoining materials in place. Apply protective covering where required to ensure protection from damage or deterioration at Substantial Completion.
- B. Clean and maintain completed construction as directed by the Owner or Architect/Project Manager and as frequently as necessary to ensure its integrity and safety through the remainder of the construction period. Adjust and lubricate operable components to ensure operability without damaging effects.

**ADMINISTRATIVE REQUIREMENTS & PROJECT COORDINATION**  
**SECTION 01040**

---

- C. Limiting Exposures: Supervise construction activities to ensure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period. Where the applicable, such exposures include, but are not limited to, the following:
1. Excessive static or dynamic loading.
  2. Excessively high or low temperatures
  3. Excessively high or low humidity
  4. Air contamination or pollution
  5. Water
  6. Solvents
  7. Chemicals
  8. Soiling, staining and corrosion
  9. Rodent and insect infestation
  10. Combustion
  11. Destructive testing
  12. Misalignment
  13. Excessive weathering
  14. Unprotected storage
  15. Improper shipping or handling
  16. Theft
  17. Vandalism

END OF SECTION

## CUTTING AND PATCHING

### SECTION 01045

---

#### PART 1 GENERAL

##### 1.1 RELATED DOCUMENTS

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

##### 1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for cutting and patching.
- B. Refer to other Sections for specific requirements and limitations applicable to cutting and patching individual parts of the Work.

##### 1.3 SUBMITTALS

- A. Cutting and Patching Proposal: Where approval of procedures for cutting and patching is required before proceeding, submit a proposal describing procedures well in advance of the time cutting and patching will be performed and request approval to proceed. Include the following information, as applicable, in the proposal:
  - 1. Describe the extent of cutting and patching required and how it is to be performed; indicate why it cannot be avoided.
  - 2. Describe anticipated results in terms of changes to existing construction; include changes to structural elements and operating components as well as changes in the building's appearance and other significant visual elements.
  - 3. List products to be used and firms or entities that will perform Work.
  - 4. Indicate dates when cutting and patching is to be performed.
  - 5. List utilities that will be disturbed or affected, including those that will be relocated and those that will be temporarily out-of-service. Indicate how long service will be disrupted.
  - 6. Where cutting and patching involves addition of reinforcement to structural elements, submit details and engineering calculations to show how reinforcement is integrated with the original structure.
  - 7. Approval by the Architect to proceed with cutting and patching does not waive the Architect's right to later require complete removal and replacement of a part of the Work found to be unsatisfactory.

##### 1.4 QUALITY ASSURANCE

## CUTTING AND PATCHING SECTION 01045

---

- A. Requirements for Structural Work: Do not cut and patch structural elements in a manner that would reduce their load carrying capacity or load-deflection ratio.
1. Obtain approval of the cutting and patching proposal before cutting and patching the following structural elements.
    - a. Foundation construction
    - b. Bearing and retaining walls
    - c. Structural concrete
    - d. Structural steel
    - e. Lintels
    - f. Timber and primary wood framing
    - g. Structural decking
    - h. Miscellaneous structural metals
    - i. Stair systems
    - j. Exterior curtain wall construction
    - k. Equipment supports
    - l. Piping, ductwork, vessels and equipment
    - m. Structural systems of special construction.
- B. Operational and Safety Limitations: Do not cut and patch operating elements or safety related components in a manner that would result in reducing their capacity to perform as intended, or result in increased maintenance, or decreased operational life or safety.
1. Obtain approval of the cutting and patching proposal before cutting and patching the following operating elements or safety related systems.
    - a. Shoring, bracing and sheeting
    - b. Primary operational systems and equipment
    - c. Air or smoke barriers
    - d. Water, moisture, or vapor barriers
    - e. Membranes and flashings
    - f. Fire protection systems
    - g. Noise and vibration control elements and systems
    - h. Control systems
    - i. Communication systems
    - j. Conveying systems
    - k. Electrical wiring systems
- C. Visual Requirements: Do not cut and patch construction exposed on the exterior or in occupied spaces, in a manner that would, in the Architect's opinion, reduce the building's aesthetic qualities, or result in visual evidence of cutting and patching. Remove and replace work cut and patched in a visually unsatisfactory manner.
1. If possible retain the original installer or fabricator to cut and patch the following



## CUTTING AND PATCHING

### SECTION 01045

---

categories of exposed work, or if it is not possible to engage the original installer or fabricator, engage another recognized experienced and specialized firm:

- a. Processed concrete finishes
- b. Preformed metal panels
- c. Window wall system
- d. Stucco and ornamental plaster
- e. Acoustical ceilings
- f. Carpeting
- g. Wall covering
- h. HVAC enclosures, cabinets or covers
- i. Roofing systems

## PART 2 PRODUCTS

### 2.1 MATERIALS

- A. Use materials that are identical to existing materials. If identical materials are not available or cannot be used where exposed surfaces are involved, use materials that match existing adjacent surfaces to the fullest extent possible with regard to visual effect unless otherwise indicated by Architect/Owner. Use materials whose installed performance will equal or surpass that of existing materials.

## PART 3 EXECUTION

### 3.1 INSPECTION

- A. Before cutting existing surfaces, examine surfaces to be cut and patched and conditions under which cutting and patching is to be performed. Take corrective action before proceeding, if unsafe or unsatisfactory conditions are encountered.
  1. Before proceeding, meet at the site with all parties involved in cutting and patching, including mechanical and electrical trades. Review areas of potential interference and conflict. Coordinate procedures and resolve potential conflicts before proceeding.

### 3.2 PREPARATION

- A. Temporary Support: Provide temporary support of work to be cut.
- B. Protection: Protect existing construction during cutting and patching to prevent damage. Provide protection from adverse weather conditions for portions of the Project that might be exposed during cutting and patching operations.
- C. Avoid interference with use of adjoining areas and interruption of free passage to adjoining

## CUTTING AND PATCHING

### SECTION 01045

---

areas.

- D. Take all precautions necessary to avoid cutting existing pipe, conduit or ductwork serving the building, but scheduled to be removed or relocated until provisions have been made to bypass them.

### 3.3 PERFORMANCE

- A. General: Employ skilled workmen to perform cutting and patching. Proceed with cutting and patching at the earliest feasible time and complete without delay.
  - 1. Cut existing construction to provide for installation of other components or performance of other construction activities and the subsequent fitting and patching required to restore surfaces to their original condition.
- B. Cutting: Cut existing construction using methods least likely to damage elements to be retained or adjoining construction. Where possible review proposed procedures with the original installer; comply with the original installer's recommendations.
  - 1. In general, where cutting is required use hand or small power tools designed for sawing or grinding, not hammering and chopping. Cut holes and slots neatly to size required with minimum disturbance of adjacent surfaces. Temporarily cover openings when not in use.
  - 2. To avoid marring existing finished surfaces, cut or drill from the exposed or finished side into concealed surfaces.
  - 3. Cut through concrete and masonry using a cutting machine such as carborundum saw or diamond core drill.
  - 4. Comply with requirements of applicable Sections of Division-2 where cutting and patching required excavating and backfilling.
  - 5. By-pass utility services such as pipe or conduit, before cutting, where services are shown or required to be removed. Cap, valve or plug and seal the remaining portion of pipe or conduit to prevent entrance of moisture or other foreign matter after by-passing and cutting.
- C. Patching: Patch with durable seams that are as invisible as possible. Comply with specified tolerances.
  - 1. Where feasible, inspect and test patched areas to demonstrate integrity of the installation.
  - 2. Restore exposed finishes of patched areas and extend finish restoration into retained adjoining construction in a manner that will eliminate evidence of patching

## CUTTING AND PATCHING

### SECTION 01045

---

and refinishing.

3. Where removal of walls or partitions extends one finished area into another, patch and repair floor and wall surfaces in the new space to provide an even surface of uniform color and appearance. Remove existing floor and wall coverings and replace with new materials if necessary to achieve uniform color and appearance.
  - a. Where patching occurs in smooth painted surfaces, extend final coat over entire unbroken surfaces containing the patch, after the patched area has received primer and second coat.

#### 3.4 CLEANING

- A. Thoroughly clean areas and spaces where cutting and patching is performed or used as access. Remove completely paint, mortar, oils, putty and items of similar nature. Thoroughly clean piping, conduit and similar features before painting or other finishing is applied. Restore damaged materials to their original condition.

END OF SECTION

## REFERENCE STANDARDS AND DEFINITIONS

### SECTION 01095

---

#### PART 1 GENERAL

##### 1.1 RELATED DOCUMENTS

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

##### 1.2 DEFINITIONS

- A. General: Basic Contract definitions are included in the Conditions of the Contract.
- B. Indicated: The term *indicated* refers to graphic representations, notes or schedules on the Drawings, or other Paragraphs or Schedules in the Specifications, and similar requirements in the Contract Documents. Where terms such as shown, noted, scheduled and specified are used, it is to help the reader locate the reference; no limitation on location is intended.
- C. Directed: Terms such as directed, requested, authorized, selected, accepted, required, and permitted mean directed by the Project Manager, requested by the Architect/Project Manager and similar phrases.
- D. Approved: This term approved means accepted, where used in conjunction with the Architect's action on the Contractor's submittals, applications, and requests, is limited to the Architect's duties and responsibilities as stated in the Conditions of the Contract.
- E. Regulations: The term Regulations includes laws, ordinances, statutes, and lawful orders issued by authorities having jurisdiction, as well as rules, conventions, and agreements within the construction industry that control performance of the Work.
- F. Furnish: The term furnish is used to mean supply and deliver to the Project site, ready for unloading, unpacking, assembly, installation, and similar operations.
- G. Install: The term install is used to describe operations at project site including the actual unloading, unpacking, assembly, erection, placing, anchoring, applying, working to dimension, finishing, curing, protecting, cleaning, and similar operations.
- H. Provide: The term provide means to furnish and install, complete and ready for the intended use.
- I. Installer: An Installer is the Contractor or an entity engaged by the Contractor, either as an employee, subcontractor, or contractor of lower tier for performance of a particular construction activity, including installation, erection, application, and similar operations. Installers are required to be experienced in the operations they are engaged to perform.
  - 1. The term experienced, when used with the term Installer, means having a minimum of five previous projects similar in size and scope to this Project, being familiar with the special requirements indicated, and having complied with

## REFERENCE STANDARDS AND DEFINITIONS

### SECTION 01095

---

requirements of the authority having jurisdiction.

2. Trades: Use of titles such as carpentry is not intended to imply that certain construction activities must be performed by accredited or unionized individuals of a corresponding generic name, such as carpenter. It also does not imply that requirements specified apply exclusively to trades persons of the corresponding generic name.
  
- J. Project Site is the space available to the Contractor for performance of construction activities, either exclusively or in conjunction with others performing other work as part of the Project. The extent of the Project Site is shown on the Drawings and may or may not be identical with the description of the land on which the Project is to be built.
  
- K. Testing Laboratories: A testing laboratory is an independent entity engaged to perform specific inspections or tests, either at the Project site or elsewhere, and to report on and, if required, to interpret results of those inspections or tests.

#### 1.3 SPECIFICATION FORMAT AND CONTENT EXPLANATION

- A. Specification Format: These Specifications are organized into Divisions and Sections based on the Construction Specifications Institute's 16 Division format and MASTER FORMAT numbering system.
  
- B. Specification Content: This Specification uses certain conventions in the use of language and the intended meaning of certain terms, words, and phrases when used in particular situations or circumstances. These conventions are explained as follows:
  1. Abbreviated Language: Language used in Specifications and other Contract Documents is the abbreviated type. Words and meaning shall be interpreted as appropriate. Words that are implied, but not stated shall be interpolated as the sense required. Singular words will be interpreted as plural and plural words interpreted as singular where applicable and the context of the Contract Documents so indicates.
  
  2. Imperative and streamlined language is used generally in the Specifications. Requirements expressed in the imperative mood are to be performed by the Contractor. At certain locations in the text, for clarity, subjective language is used to describe responsibilities that must be fulfilled indirectly by the Contractor, or by others when so noted.
    - a. The words "shall be" shall be included by inference wherever a colon (:) is used within a sentence or phrase.

#### 1.4 INDUSTRY STANDARDS

- A. Applicability of Standards: Except where the Contract Documents include more stringent requirements, applicable construction industry standards have the same force and effect

## REFERENCE STANDARDS AND DEFINITIONS

### SECTION 01095

---

as if bound or copied directly into the Contract Documents to the extend reference. Such standards are made part of the Contract Documents by reference.

- B. Publication Dates: Comply with the standard in effect as of the date of the Contract Documents.
- C. Conflicting Requirements: Where compliances with two or more standards are specified, and the standards may establish different or conflicting requirements for minimum quantities or quality levels. Refer requirements that are different, but apparently equal, and uncertainties to the Architect for a decision before proceeding.
  - 1. Minimum Quantity of Quality Levels: The quantity of quality level shown or specified shall be the minimum provided or performed. The actual installation may comply exactly with the minimum quantity or quality specified, or it may exceed the minimum within reasonable limits. In complying with these requirements, indicated numeric values are minimum or maximum, as appropriate for the context of the requirements. Refer uncertainties to the Architect/Owner for a decision before proceeding.
- D. Copies of Standards: Each entity engaged in construction on the Project is required to be familiar with industry standards applicable to that entity's construction activity. Copies of applicable standards are not bound with the Contract Documents.
  - 1. Where copies of standards are needed for performance of a required construction activity. The Contractor shall obtain copies directly from the publication source or any other authorized source.
- E. Abbreviations and Names: Trade association names and titles of general standards are frequently abbreviated. Where such acronyms or abbreviations are used in the Specifications or other Contract Documents, they mean the recognized name of the trade association, standards generating organization, authority having jurisdiction, or other entity applicable to the context of the text provision. See Trade Reference List at the end of this Section refer to the Encyclopedia of Associations, published by Gale Research Co., available in most libraries.

#### 1.5 GOVERNING REGULATIONS/AUTHORITIES

- A. The Architect has contacted authorities having jurisdiction where necessary to obtain information necessary the preparation of Contract Documents. Contact authorities having jurisdiction directly for information and decisions having a bearing on the work.

#### 1.6 SUBMITTALS

- A. Permits, Licenses, and Certificates: For the Owner's records, submit copies of permits, licenses, certifications, inspection reports, releases, jurisdictional settlements, notices, receipts for fee payments, judgments, and similar documents, correspondence, and records established in conjunction with compliance with standards and regulation bearing

## REFERENCE STANDARDS AND DEFINITIONS

### SECTION 01095

---

upon performance of the Work.

#### 1.7 TRADE REFERENCES

Acronyms for abbreviations used in the Specifications or other Contract Documents mean the recognized name of the trade association, standards generating organization, authority that have jurisdiction or other entity applicable to the context of the text provision.

AA	Aluminum Association
AABC	Associated Air Balance Council
AAMA	American Architectural Manufacturer's Association
AAN	American Association of Nurserymen
AASHTO	American Association of State Highway and Transportation Officials
ACI	American Concrete Institute
ACIL	American Council of Independent Laboratories
ACPA	American Concrete Pipe Association
ADC	Air Diffusion Council
AGA	American Gas Association
AHA	American Hardboard Association
AI	Asphalt Institute
AIHA	American Industrial Hygiene Association
AISC	American Institute of Steel Construction
AISI	American Iron and Steel Institute
AMCA	Air Movement and Control Association
ANSI	American National Standards Institute
APA	American Plywood Association
ARI	Air Conditioning and Refrigeration Institute
ASA	Acoustical Society of America

## REFERENCE STANDARDS AND DEFINITIONS

### SECTION 01095

---

ASC	Adhesive and Sealant Council
ASHRAE	American Society of Heating, Refrigerating, and Air Conditioning Engineers
ASME	American Society of Mechanical Engineers
ASPE	American Society of Plumbing Engineers
ASSE	American Society of Sanitary Engineers
ASTM	American Society of Testing of Materials
AWI	Architectural Woodwork Institute
AWPB	American Wood Preservers Bureau
AWS	American Welding Society
AWWA	American Water Works Association
BHMA	Builders □ Hardware Manufacturers Association
CISPI	Cast Iron Soil Pipe Institute
CRSI	Concrete Reinforcing Steel Institute
DHI	Door and Hardware Institute
DLPA	Decorative Laminate Products Association
EIMA	Exterior Insulation Manufacturers Association
FGMA	Flat Glass Marketing Association
FM	Factory Mutual Engineering and Research
GA	Gypsum Association
ICBO	International Conference of Building Officials
IEEE	Institute of Electrical and Electronic Engineers
IESNA	Illuminating Engineering Society of North America
MBMA	Metal Building Manufacturer's Association



## REFERENCE STANDARDS AND DEFINITIONS

### SECTION 01095

---

ML/SFA	Metal Lath/Steel Framing Association
MSS	Manufacturers Standardization Society of the Valve and Fittings Industry
NAAMM	National Association of Architectural Metal Manufacturers
NAPA	National Asphalt Pavement Association
NAPF	National Association of Plastic Fabricators (Now DLPA)
NBHA	National Builder's Hardware Association (Now DHI)
NCMA	National Concrete Masonry Association
NEC	National Electric Code
NECA	National Electric Contractors Association
NEII	National Elevator Industry, Inc.
NFPA	National Fire Protection Association
NHLA	National Hardwood Lumber Association
NPA	National Particle board Association
NPCA	National Paint and Coatings Association
NRCA	National Roofing Contractors Association
NSF	National Sanitation Foundation
NWMA	National Woodwork Manufacturers Association (Now NWWDA)
NWWDA	National Wood Window and Door Association (Formerly NWMA)
PDI	Plumbing and Drainage Institute
RFCI	Resilient Floor Covering Institute
RMA	Rubber Manufacturers Association
SDI	Steel Deck Institute
S.D.I.	Steel Door Institute
SGCC	Safety Glazing Certification Council

**REFERENCE STANDARDS AND DEFINITIONS**  
**SECTION 01095**

---

SHLMA	Southern Hardwood Lumber Manufacturers Association (Now HMA)
SIGMA	Sealed Insulating Glass Manufacturers Association
SMACNA	Sheet Metal and Air Conditioning Contractor's National Association
SJI	Steel Joist Institute
SPRI	Single Ply Roofing Institute
SSPC	Steel Structures Painting Council
SWI	Steel Window Institute
TCA	Tile Council of America
UL	Underwriters Laboratories
WCMA	Wall Covering Manufacturers Association
WRI	Wire Reinforcement Institute
WSFI	Wood and Synthetic Flooring Institute

**1.8 FEDERAL GOVERNMENT AGENCIES**

- A. Names and titles of federal government standard or Specification producing agencies are frequently abbreviated. The following acronyms or abbreviations referenced in the Contract Documents indicate names of standard of Specification producing agencies of the federal government. Names and addresses are subject to change but are believed to be, but are not assured to be, accurate and up-to-date as of the date of the Contract Documents.

CE	Corps of Engineers (US Department of the Army) Chief of Engineers - Referral Washington, DC 20314	(202) 272-0660
CFR	Code of Federal Regulations Available from the Government Printing Office North Capitol St. Between G and H Street, NW Washington, DC 20402	(202) 783-3238

(MATERIAL IS USUALLY FIRST PUBLISHED IN THE FEDERAL REGISTER)

CPSC	Consumer Product Safety Commission
------	------------------------------------

**REFERENCE STANDARDS AND DEFINITIONS**  
**SECTION 01095**

---

	5401 Westbard Avenue Washington, DC 20816	(800) 638-2772
CS	Commercial Standard (US Department of Commerce) Government Printing Office Washington, DC 20402	(202) 377-2000
DOC	Department of Commerce 14th Street and Constitution Ave., NW Washington, DC 20230	(202) 377-2000
DOT	Department of Transportation 400 Seventh St., SW Washington, DC 20590	(202) 426-4000
EPA	Environmental Protection Agency 401 M. St., SW Washington, DC 20460	(202) 382-2090
FAA	Federal Aviation Administration (U.S. Department of Transportation) 800 Independence Avenue SW Washington, DC 20590	(202) 366-4000
FCC	Federal Communications Commission 1919 M. Street NW Washington, DC 20554	(202) 632-7000
NBS	National Bureau of Standards (U.S. Department of Commerce) Gaithersburg, MD 20899	(301) 921-1000
OSHA	Occupational Safety and Health Administration (U.S. Department of Labor) Government Printing Office Washington, DC 20402	(202) 523-7001
PS	Product Standard of NBS (U.S. Department of Commerce) Government Printing Office Washington, DC 20402	(202) 783-3238
USDA	U.S. Department of Agriculture Independence Avenue Between 12th and 14 Street, SW Washington, DC 20250	(202) 447-8732

**REFERENCE STANDARDS AND DEFINITIONS**  
**SECTION 01095**

---

PART 2      PRODUCTS  
(Not Applicable)

PART 3      EXECUTION  
(Not Applicable)

END OF SECTION

**SUBMITTAL PROCEDURES**  
**SECTION 01300**

---

PART 1      GENERAL

1.1      RELATED DOCUMENTS

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

1.2      SUMMARY

- A.      This Section specifies administrative and procedural requirements for submittals required for performance of the Work, including:

- 1.      Contractor's Construction Schedule
- 2.      Submittal Schedule
- 3.      Daily Construction Reports
- 4.      Shop Drawings
- 5.      Product Data
- 6.      Samples

- B.      Administrative Submittals:    Refer to other Division-1 Sections and other Contract Documents for requirements for administrative submittals. Such submittals include, but are not limited to:

- 1.      Permits
- 2.      Applications for Payment
- 3.      Performance and Payment Bonds
- 4.      Insurance Certificates
- 5.      List of Subcontractors with start and finish dates (update as necessary)
- 6.      Schedule of Values
- 7.      Construction Schedule

- C.      The Schedule of Values submittal is included in Section 01027 - Applications for Payment.

- D.      Inspection and test reports are included in Division 1 - Quality Control Services.

1.3      SUBMITTAL PROCEDURES

- A.      Coordination:    Coordinate preparation and processing of submittals with performance of construction activities. Transmit each submittal sufficiently in advance of performance of related construction activities to avoid delay.

- 1.      Coordinate each submittal with fabrication, purchasing, testing, delivery, other submittals and related activities that require sequential activity.
- 2.      Coordinate transmittal of different types of submittals for related elements of the Work so processing will not be delayed by the need to review submittals

## SUBMITTAL PROCEDURES SECTION 01300

---

concurrently for coordination.

a. The Architect/Project Manager reserves the right to withhold action on a submittal requiring coordination with other submittals until related submittals are received.

3. Processing: Allow sufficient review time so that installation will not be delayed as a result of the time required to process submittals, including time for resubmittals.

a. Allow two weeks for initial review. Allow additional time if processing must be delayed to permit coordination with subsequent submittals. The Architect/Project Manager will promptly advise the Contractor when a submittal being processed must be delayed for coordination.

b. If an intermediate submittal is necessary, process the same as the initial submittal.

c. Allow two weeks for reprocessing each submittal.

d. No extension of Contract Time will be authorized because of failure to transmit submittals to the Architect sufficiently in advance of the Work to permit processing.

B. Submittal Preparation: Place a permanent label or title block on each submittal for identification. Indicate the name of the entity that prepared each submittal on the label or title block.

1. Provide a space approximately 4" x 5" on the label or beside the title block on Shop Drawings to record the Contractor's review and approval markings and the action taken.

2. Include the following information on the label for processing and recording action taken.

a. Project name

b. Date

c. Name and address of Architect

d. Name and address of Contractor

e. Name and address of subcontractor

f. Name and address of supplier

g. Name of manufacturer

h. Number and title of appropriate Specification Section

i. Drawing number and detail references, as appropriate.

C. Submittal Transmittal: Package each submittal appropriately for transmittal and handling. Transmit each submittal from Contractor to the Owner's Project Manager using transmittal form as provided by the Architect/Project Manager. Submittals received from sources other than the Contractor will be returned without action.

## SUBMITTAL PROCEDURES SECTION 01300

---

1. On the transmittal record relevant information and requests for data. On the form, or separate sheet, record deviations from Contract Document requirements, including minor variations and limitation. Include Contractor's certification that information complies with Contract Document requirements.
  2. Transmittal Form: As provided by the Project Manager
- D. Contractor shall be responsible for cost of re-review of rejected submittals, shop drawing, etc.
- E. Substitution request to specified products will be made within 30 days after contract award. After the 30 day period, no requests for substitutions from the Contractor will be considered.
1. Substitution submitted within the first 30 days will have product data from specified and requested substitute submitted together and demonstrate better quality, cost savings if of equal quality, or show benefit to the County for accepting the substitute.
- F. Once submittals are approved or approved as noted, they will be scanned and converted to PDF documents with OCR (optical character recognition) and given to the owner.
- 1.4 CONTRACTOR'S CONSTRUCTION SCHEDULE
- A. See General Conditions
- .
- 1.5 SUBMITTAL LOG
- A. After development and acceptance of the Contractor's construction schedule, prepare a complete log of submittals.
1. Coordinate submittals log with the list of subcontracts, schedule of values and the list of products as well as the Contractor's construction schedule.
  2. Prepare the log in chronological order; include all submittals required. Provide the following information:
    - a. Scheduled date for the first submittal
    - b. Related Section number
    - c. Submittal category
    - d. Name of subcontractor
    - e. Description of the part of the work covered
    - f. Scheduled date for resubmittal
    - g. Scheduled date the Architect's final release or approval.
  3. All submittals must be received within the first 25% of contract time.

**SUBMITTAL PROCEDURES**  
**SECTION 01300**

---

- B. Distribution: Following response to initial submittal, print and distribute copies to the Owner's Project Manager, subcontractors, and other parties required to comply with submittal dates indicated. Post copies in the project meeting room and field office.
  - 1. When revisions are made, distribute to the same parties and post in the same locations. Delete parties from distribution when they have completed their assigned portion of the Work and are no longer involved in construction activities.
- C. Log Updating: Revise the log after each meeting or activity, where revisions have been recognized or made. Issue the updated schedule concurrently with report of each meeting.

1.6 DAILY CONSTRUCTION REPORTS

- A. Prepare a daily construction report, recording the following information concerning events at the site; and submit duplicate copies to the Owner's Project Manager at weekly intervals:
  - 1. List of subcontractors at the site
  - 2. Approximate count of personnel at the site
  - 3. High and low temperatures, general weather conditions
  - 4. Accidents and unusual events
  - 5. Meetings and significant decisions
  - 6. Stoppages, delays, shortages, losses
  - 7. Meter readings and similar recordings
  - 8. Emergency procedures
  - 9. Orders and requests of governing authorities
  - 10. Change Orders received, implemented
  - 11. Services connected, disconnected
  - 12. Equipment or system tests and start-ups
  - 13. Partial completions, occupancies
  - 14. Substantial Completions authorized

1.7 SHOP DRAWINGS

- A. Submit newly prepared information, drawn to accurate scale. Highlight, encircle, or otherwise indicate deviations from the Contract Documents. Do not reproduce Contract Documents or copy standard information as the basis of Shop Drawings. Standard information prepared without specific reference to the Project is not considered a Shop Drawings and will be rejected.
- B. Shop Drawings include fabrication and installation drawings, setting diagrams, schedules, patterns, templates and similar drawings. Include the following information:
  - 1. All required dimensions



## SUBMITTAL PROCEDURES SECTION 01300

---

2. Identification of products and materials included
  3. Compliance with specified standards
  4. Notation of coordination requirements
  5. Notation of dimensions established by field measurement
  6. Sheet Size: Except for templates, patterns and similar full-size Drawings on sheets at least 8 1/2" x 11" but no larger than 24" x 36".
  7. Initial Submittal: Submit one correctable translucent reproducible print and one blue-or black-line print for the Project Manager's review; the reproducible print will be returned.
  8. Initial Submittal: Submit 2 blue-or black-line prints for the Architect's review; one will be returned.
  9. Final Submittal: Submit 3 blue-or black-line prints; submit 5 prints where required for maintenance manuals. 2 prints will be retained; the remainder will be returned. One of the prints returned shall be marked-up and maintained as a Record Documents.
  10. Do not use Shop Drawings without an appropriate final stamp indicating action taken in connections with construction.
- C. Coordination drawings are a special type of Shop Drawing that show the relationship and integration of different construction elements that require careful coordination during fabrication or installation to fit in the space provided or function as intended.
1. Preparation of coordination Drawings is specified in section Project Coordination and may include components previously shown in detail on Shop Drawings or Product Data.
  2. Submit coordination Drawings for integration of different construction elements. Show sequence and relationships of separate components to avoid any conflict including conflicts in use of space.
  3. Contractor is not entitled to additional payments due to lack of compliance with this Section.

### 1.8 PRODUCT DATA

- A. Collect Product Data into a single submittal for each element of construction or system. Product Data includes printed information such as manufacturer's installation instructions, catalog cuts, standard color charts, roughing-in diagrams and templates, standard wiring diagrams and performance curves. Where Product Data must be specially prepared because standard printed data is not suitable for use, submit as "Shop Drawing".
1. Mark each copy to show applicable choices and options. When printed Product Data includes information on several products, some of which are not required, mark copies to indicate the applicable information. Include the following information:

**SUBMITTAL PROCEDURES**  
**SECTION 01300**

---

- a. Manufacturer's printed recommendations
  - b. Compliance with recognized trade association standards
  - c. Compliance with recognized testing agency standards
  - d. Application of testing agency labels and seals
  - e. Notation of dimensions verified by field measurement
  - f. Notation of coordination requirements
  - g. Manufacturers local representative and phone number.
2. Do not submit Product Data until compliance with requirements of the Contract Documents has been confirmed.
  3. Preliminary Submittal: Submit a preliminary single-copy of Product Data where selection of options is required.
  4. Submittals: **Submit six (6) copies** of each required submittal. The Architect/Project Manager will return two (2) sets to the Contractor marked with action taken and corrections or modifications required.
    - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
  5. Distribution: Furnish copies of final submittal to installers, subcontractors, suppliers, manufacturers, fabricators, and others required for performance of construction activities. Show distribution on transmittal forms.
    - a. Do not proceed with installation until an applicable copy of Product Data applicable is in the Installer's possession.
    - b. Do not permit use of unmarked copies of Product Data in connection with construction.

1.9 SAMPLES

- A. Submit full-size, fully fabricated Samples cured and finished as specified and physically identical with the material or product proposed. Samples include partial sections of materials, color range sets, and swatches showing color, texture and pattern.
  1. Mount, display, or package Samples in the manner specified to facilitate review of qualities indicated. Prepare Samples to match the Architect's/Owner's Sample. Include the following:
    - a. Generic description of the Sample
    - b. Sample source
    - c. Product name or name of manufacturer
    - d. Compliance with recognized standards
    - e. Availability and delivery time

**SUBMITTAL PROCEDURES**  
**SECTION 01300**

---

2. Submit Samples for review of kind, color, pattern, and texture, for a final check of these characteristics with other elements, and for a comparison of these characteristics between the final submittal and the actual component as delivered and installed.
    - a. Where variation in color, pattern, texture or other characteristics are inherent in the material or product represented, submit multiple units (not less than 3), that show approximate limits of the variations.
    - b. Refer to other Specification Sections for requirements for Samples that illustrate workmanship, fabrication techniques, details of assembly, connections, operation and similar construction characteristics.
  3. Preliminary submittals: Where Samples are for selection of color, pattern, texture or similar characteristics from a range of standard choices, submit a full set of choices for the material or product.
    - a. Preliminary submittals will be reviewed and returned with the Architect's/Owner's mark indicating selection and other action.
  4. Submittals: Except for Samples illustrating assembly details, workmanship, fabrication techniques, connections, operation and similar characteristics, submit 3 sets; one will be returned marked with the action taken.
  5. Maintain sets of Samples, as returned, at the project site, for quality comparisons throughout the course of construction.
    - a. Unless noncompliance with Contract Document provisions is observed, the submittal may serve as the final submittal.
    - b. Sample sets may be used to obtain final acceptance of the construction associated with each set.
- B. Distribution of Samples: Prepare and distribute additional sets to subcontractors, manufacturers, fabricators, suppliers, installers, and others as required for performance of the Work. Show distribution on transmittal forms.
1. Field Samples specified in individual sections are special types of Samples. Field Samples are full-size examples erected on site to illustrate finishes, coatings, or finish materials and to establish the standard by which the work will be judged.
    - a. Comply with submittal requirements. Process transmittal forms to provide a record of activity.

1.10 ARCHITECT'S ACTION

- A. Except for submittals for record, information or similar purposes, where action and return

**SUBMITTAL PROCEDURES**  
**SECTION 01300**

---

is required or requested, the Architect/Project Manager will review each submittal, mark to indicate action taken, and return promptly.

1. Compliance with specified characteristics is the Contractor's responsibility.
- B. Action Stamp: The Architect/Project Manager will stamp each submittal with a uniform, self-explanatory action stamp. The stamp will be appropriately marked, similarly as follows, to indicate the action taken:
1. Final Unrestricted Release: Where submittals are marked "**No Exceptions Taken**" - **APP**, that part of the work covered by the submittal may proceed provided it complies with requirements of the Contract Documents; final acceptance will depend upon that compliance.
  2. Final-But-Restricted Release: When submittals are marked "**Make Corrections As Noted**" - **A/C**, that part of the Work covered by the submittal may proceed provided it complies with notations or corrections on the submittal and requirements of the Contract Documents; final acceptance will depend on that compliance.
  3. Returned for Resubmittal: When submittal is marked "**Revise and Resubmit**" - **R/R**, do not proceed with that part of the Work covered by the submittal, including purchasing, fabrication, delivery, or other activity. Revise or prepare a new submittal in accordance with the notations; resubmit without delay. Repeat if necessary to obtain a different action mark.
    - a. Do not permit submittals marked "**Revise and Resubmit**" to be used at the Project site, or elsewhere where work is in progress.
  4. Rejected: When submittal is marked "**Rejected**" - **REJ** it does not comply with requirements of the Contract Documents. Submittal must be discarded and entirely new submittal shall be forwarded to the Project Manager without delay.

PART 2 PRODUCTS  
(Not Applicable)

PART 3 Execution  
(Not Applicable)

END OF SECTION

**SUBMITTAL PROCEDURES  
SECTION 01300**

---

# SUBMITTAL COVER FORM



**A/R/C**  
Associates  
Incorporated

SUBMITTAL NO. _____	A/R/C PROJECT NO: <b>16032.00</b>
---------------------	-----------------------------------

PROJECT: <b>OCCC West Building Curtain Wall Replacement</b>	OWNER'S PROJECT NO. <b>Y16-807-MM</b>
---	--

ITEM: _____ *	DATE: _____
---------------	-------------

SPEC. SECTION: \_\_\_\_\_ PARAGRAPH NO: \_\_\_\_\_

<u>PRIME CONTRACTOR</u> _____	CHECKED AND APPROVED FOR SUBMISSION BY: _____ DATE _____
----------------------------------	---

SUBCONTRACTOR: \_\_\_\_\_ MANUFACTURER: \_\_\_\_\_

**(RESERVE THE SPACE BELOW FOR COMMENTS OR DATE & SHOP DRAWING REVIEW STAMPS)**

<u>COMMENTS / REVIEW STAMPS</u>	<u>SUBMITTAL REVIEW BY</u> <u>A/R/C ASSOCIATES, INCORPORATED</u>
	Date: _____ By: _____ Approved - <b>APP</b> ( ) Approved as Corrected - <b>A/C</b> ( )  If checked above, fabrication MAY be undertaken. Approval does not authorize changes in contract Sum unless stated in separate letter or Change Order.  If checked below, fabrication MAY NOT be undertaken. Resubmit corrected copies for final approval. Correction shall be limited to items marked. Revise and resubmit - <b>R/R</b> ( ) Not Approved - <b>REJ</b> ( )  Reviewing is only for conformance with the design concept of the Project and compliance with the information given in the Contract Documents. The contractor is responsible for dimensions to be confirmed and correlated at the site; for information that pertains solely to the fabrication processes or to the means, methods, techniques, sequences and procedures of construction; and for coordination of the Work of all trades.

**THIS PAGE SHALL BE ATTACHED TO EACH COPY OF EACH SUBMITTAL**

**If Substitution, submittal shall include information required by the General Conditions and Section 012500.**

**TEMPORARY FACILITIES AND CONTROLS**  
**SECTION 01500**

---

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Temporary Utilities:
  - 1. Temporary electricity.
  - 2. Temporary water service.
  - 3. Temporary sanitary facilities.
  
- B. Construction Facilities:
  - 1. Field offices and sheds.
  - 2. Vehicular and pedestrian access.
  - 3. Parking.
  - 4. Progress cleaning and waste removal.
  - 5. Fire prevention facilities.
  
- C. Temporary Controls:
  - 1. Barriers.
  - 2. Security.
  - 3. Water control.
  - 4. Noise control.
  
- D. Removal of utilities, facilities, and controls.

1.2 TEMPORARY ELECTRICITY

- A. Owner will pay cost of energy used. Exercise measures to conserve energy. Utilize Owner's existing power service.
  
- B. Provide temporary electric feeder from existing building or electrical service at location as directed by Owner. Do not disrupt Owner's use of service.
  
- C. Complement existing power service capacity and characteristics as required for construction operations.
  
- D. Provide power outlets, with branch wiring and distribution boxes located as required for construction operations. Provide GFI protected flexible power cords as required for portable construction tools and equipment.
  
- E. Provide main service disconnect and over-current protection at convenient location.
  
- F. Permanent convenience receptacles may be utilized during construction.
  
- G. Provide distribution equipment, wiring, and outlets to provide single phase branch circuits for power and lighting.
  - 1. Provide 20 ampere duplex outlets, single phase circuits for power tools for every active work area.

## TEMPORARY FACILITIES AND CONTROLS

### SECTION 01500

---

2. Provide 20 ampere, single phase branch circuits for lighting.

#### 1.3 TEMPORARY WATER SERVICE

- A. Owner will pay cost of temporary water used except for water required for use in mixing of construction materials or flushing of equipment and systems. Exercise measures to conserve water.
- B. Extend branch piping with outlets located so water is available by hoses with threaded connections.

#### 1.4 TEMPORARY SANITARY FACILITIES

- A. Provide and maintain required facilities and enclosures. Existing facility use is not permitted. Provide facilities at time of project mobilization.

#### 1.5 FIELD OFFICES AND SHEDS

- A. The sheet drawings have indicated a region available for staging and mobilization.
- B. Storage Areas and Sheds (when required): Size to storage requirements for products of individual Sections, allowing for access and orderly provision for maintenance and for inspection of products to requirements of Division 01.
- C. Removal: At completion of Work remove temporary buildings, utility services, and debris. Restore areas.

#### 1.6 VEHICULAR AND PEDESTRIAN ACCESS

- A. Have a Maintenance of Traffic plan ready to discuss at the pre-construction meeting.
- B. Extend and relocate vehicular access as Work progress requires, provide detours as necessary for unimpeded traffic flow.
- C. Ensure access to guests remains unobstructed. Coordinate with the owner to establish acceptable maintenance of transportation for all phases of construction.
- D. Provide a non-working supervisor during all times of construction to direct traffic around all scaffolding, staging areas, and any obstructions caused by construction and ensure traffic is not impeded at any time.
- E. Provide unimpeded access for emergency vehicles.
- F. Provide and maintain access to fire hydrants and control valves free of obstructions.

#### 1.7 PARKING

- A. Arrange with Owner for temporary parking areas to accommodate construction personnel.



**TEMPORARY FACILITIES AND CONTROLS  
SECTION 01500**

---

- B. Locate as approved by Owner.
- C. When site space is not adequate, provide additional off-site parking.

**1.8 PROGRESS CLEANING AND WASTE REMOVAL**

- A. Maintain areas free of waste materials, debris, and rubbish. Maintain site and roof areas in clean and orderly condition.
- B. Collect and remove waste materials, debris, and rubbish from site periodically and dispose off-site.
- C. Open free-fall chutes are not permitted. Terminate closed chutes into appropriate containers with lids.
- D. Contractor shall provide portable trash containers for construction debris. Use of Owner's on-site containers is prohibited.

**1.9 FIRE PREVENTION FACILITIES**

- A. Prohibit smoking within construction areas.
- B. If allowed by Owner, a designated smoking area on site where smoking is permitted may be established. Provide approved ashtrays in designated smoking areas.
- C. Establish fire watch for cutting and welding and other hazardous operations capable of starting fires. Maintain fire watch before, during, and after hazardous operations until threat of fire does not exist.
- D. Portable Fire Extinguishers: NFPA 10; 10 pound capacity, 4A-60B: C UL rating.
  - 1. Provide one fire extinguisher for each active construction area.
  - 2. Provide minimum one fire extinguisher in every construction trailer and storage shed.
  - 3. Provide minimum one fire extinguisher on roof during roofing operations using heat producing equipment.

**1.10 BARRIERS**

- A. Provide barriers to prevent unauthorized entry to construction areas and to protect existing facilities and adjacent properties from damage from construction operations and demolition.
- B. Provide protection for trees and landscaping designated to remain. Replace damaged trees and landscaping.
- C. Protect non-owned vehicular traffic, stored materials, site, and structures from damage.

**TEMPORARY FACILITIES AND CONTROLS**  
**SECTION 01500**

---

1.11 SECURITY

- A. Security Program:
  - 1. Protect Work premises and Owner's operations from theft, vandalism, and unauthorized entry.
  - 2. Initiate program in coordination with Owner's existing security system at project mobilization.
  - 3. Maintain program throughout construction period until Owner acceptance precludes need for Contractor security.
  
- B. Entry Control:
  - 1. Restrict entrance of persons and vehicles into Project site.
  - 2. Allow entrance only to authorized persons with proper identification.
  - 3. Maintain daily log of workers and visitors, make available to Owner on request.
  - 4. Coordinate access of Owner's personnel to site in coordination with Owner's security forces.
  
- C. Personnel Identification:
  - 1. Provide identification badge to each person authorized to enter premises.
  - 2. Badge to Include: Personal photograph, name expiration date and employer.
  - 3. Maintain list of accredited persons, submit copy to Owner on request.
  - 4. Require return of badges at expiration of their employment on the Work.

1.12 WATER CONTROL

- A. Maintain site drainage affected by construction operations. Grade site to drain as required.
  
- B. Protect site from puddling or running water. Provide water barriers as required to protect site from soil erosion.

1.13 NOISE CONTROL

- A. Provide methods, means, and facilities to minimize noise produced by construction operations.

1.14 REMOVAL OF UTILITIES, FACILITIES, AND CONTROLS

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

**TEMPORARY FACILITIES AND CONTROLS  
SECTION 01500**

---

PART 2 PRODUCTS - Not Used

PART 3 EXECUTION - Not Used

END OF SECTION

PART 1      GENERAL

1.1      RELATED DOCUMENTS

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

1.2      SUMMARY

- A.      This Section specifies administrative and procedural requirements governing the Contractor's selection of products for use in the Project.
- B.      The Contractor's Construction Schedule and the Schedule of Submittals are included under Section 01300 -Submittals.
- C.      Standards: Refer to Section 01095 - Reference Standards and Definitions for applicability of industry standards to products specified.
- D.      Administrative procedures for handling requests for substitutions made after award of the Contract are included under Section 01300 - Product Substitutions.

1.3      DEFINITIONS

- A.      Definitions used in this Article are not intended to change the meaning of other terms used in the Contract Documents such as "specialties", "systems", "structure", "finishes", "accessories", and similar terms. Such terms are self-explanatory and have well recognized meanings in the construction industry.
  - 1.      "Products" are items purchased for incorporation in the Work, whether purchased for the Project or taken from previously purchased stock. The term "product" includes the term "material", "equipment", "system" and terms of similar intent.
    - a.      "Named Products" are items identified by manufacturer's product name, including make or model designation, indicated in the manufacturer's published product literature that is current as of the date of the Contract Documents.
    - b.      "Foreign Products", as distinguished from "domestic products", are items substantially manufactured (50 percent or more of value) outside of the United States and its possessions; or produced or supplied by entities substantially owned (more than 50 percent) by persons who are not citizens nor living within the United States and its possessions.
  - 2.      "Materials" are products that are substantially shaped, cut, worked, mixed, finished, refined or otherwise fabricated, processed, or installed to form a part of the work.

## MATERIALS AND EQUIPMENT SECTION 01600

---

3. "Equipment" is a product with operational parts, whether motorized or manually operated, that requires service connections such as wiring or piping.

### 1.4 SUBMITTALS

- A. Product List Schedule: Prepare a schedule showing products specified in a tabular form acceptable to the Project Manager. Include generic names of products required. Include the manufacturer's name and proprietary product names for each item listed.
  1. Coordinate the product list schedule with the Contractor's Construction Schedule and the Schedule of Submittals.
    - a. Related Specification Section Number
    - b. Generic name used in Contract Documents
    - c. Proprietary name, model number and similar designations.
    - d. Manufacturer's name and address
    - e. Supplier's name and address
    - f. Installer's name and address
    - g. Projected delivery date, or time span of delivery period.
  2. Initial Submittal: Within 30 days after date of commencement of the work, submit 3 copies of an initial product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.
    - a. At the Contractor's option, the initial submittal may be limited to product selections and designations that must be established early in the Contract period.
  3. Complete Scheduled: Within 45 days after date of commencement of the Work, submit 3 copies of the completed product list schedule. Provide a written explanation for omissions of data, and for known variations from Contract requirements.
  4. Architect's Action: The Architect will respond in writing to the Contractor within 2 weeks of receipt of the completed product list schedule. No response within this time period constitutes no objection to listed manufacturers on products, but does not constitute a waiver of the requirement that products comply with Contract Documents. The Architect's response will include the following:
    - a. A list of unacceptable product selections, containing a brief explanation of reasons for this action.

### 1.5 QUALITY ASSURANCE

- A. Source Limitations: To the fullest extent possible, provide products of the same kind, from a single source.
- B. Compatibility of Options: When the Contractor is given the option of selecting between

two or more products for use on the Project, the product selected shall be compatible with products previously selected, even if previously selected products were also options.

- C. Nameplates: Except for required labels and operating data, do not attach or imprint manufacturer's or producer's nameplates or trademarks on exposed surfaces of products which will be exposed to view in occupied spaces or on the exterior.
1. Labels: Locate required product labels and stamps on a concealed surface or, where required for observation after installation, on accessible surface that is not conspicuous.
  2. Equipment Nameplates: Provide a permanent nameplate on each item of service-connected or power-operated equipment. Locate on an easily accessible surface which is inconspicuous in occupied spaces. The nameplate shall contain the following information and other essential operating data.
    - a. Name of product and manufacturer
    - b. Model and serial number
    - c. Capacity
    - d. Speed
    - e. Ratings
    - f. Additional pertinent information

#### 1.6 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Deliver, store and handle products in accordance with the manufacturer's recommendations, using means and methods that will prevent damage, deteriorating and loss, including theft.
1. Schedule delivery to minimize long-term storage at the site and to prevent overcrowding of construction spaces.
  2. Coordinate delivery with installation time to ensure minimum holding time for items that are flammable, hazardous, easily damaged, or sensitive to deterioration, theft and other losses.
  3. Deliver products to the site in the manufacturer's original sealed container or other packaging system, complete with labels and instructions for handling, storing, unpacking, protecting and installing.
  4. Inspect products upon delivery to ensure compliance with the Contract Documents and to ensure that products are undamaged and properly protected.
  5. Store products at the site in a manner that will facilitate inspection and measurement of quantity or counting of units.
  6. Store heavy materials away from the Project structure in a manner that will not

endanger the supporting construction.

7. Store products subject to damage by the elements above ground, under cover in a weather tight enclosure, with ventilation adequate in prevent condensation. Maintain temperature and humidity within range required by manufacturer's instructions.

## PART 2 PRODUCTS

### 2.1 PRODUCT SELECTION

- A. General Product Requirements: Provide products that comply with the Contract Documents, that are undamaged and, unless otherwise indicated, unused at the time of installation.
  1. Provide products complete with all accessories, trim, finish, safety guards and other devices and details needed for a complete installation and for the intended use and effect.
  2. Standard Products: Where available, provide standard products of types that have been produced and used successfully in similar situation on other projects.
- B. Product Selection Procedures: Product selection is governed by the Contract Documents and governing regulations, not by previous project experience. Procedures governing product selection include the following:
  1. Proprietary Specification Requirements: Where only a single product or manufacturer is named, provide the product indicated. No substitutions will be permitted.
    - a. Where products or manufacturers are specified by name, accompanied by the term "or equal" or "or approved equal" comply with the Contract Document provisions concerning 'substitutions to obtain approval for use of an unnamed product.
  2. Non-Proprietary Specifications: When the Specifications list products or manufacturers that are available and may be incorporated in the Work, but do not restrict the Contractor to use of those products only, the Contractor may propose any available product that complies with Contract requirements. Comply with Contract Document provisions concerning "substitutions" to obtain approval for use of an unnamed product.
  3. Descriptive Specification Requirements: Where Specifications describe products or assemblies, listing exact characteristics required, with or without use of a brand or trade names, provide a product or assembly that provides the characteristics and otherwise complies with Contract requirements.

**MATERIALS AND EQUIPMENT  
SECTION 01600**

---

4. Performance Specification Requirements: Where Specifications require compliance with performance requirements, provide products that comply with these requirements, and are recommended by the manufacturer for the application indicated.
  - a. Manufacturer's recommendations may be contained in published product literature, or by the manufacturer's certification of performance.
5. Compliance with Standards, Codes and Regulations: Where the Specifications only require compliance with an imposed code, standard or regulation, select a product that complies with the standards, codes or regulations specified.
6. Visual Matching: Where Specifications require matching an established Sample, the Architect's decision will be final on whether a proposed product matches satisfactorily.
  - a. Where no product available within the specified category matches satisfactorily and also complies with other specified requirements, comply with provisions of the Contract Documents concerning 'substitutions' for selection of a matching product in another product category, or for noncompliance with specified requirements.
7. Visual Selection: Where specified product requirements include the phrase "... as selected from manufacturer's standard colors, pattern, textures..." or a similar phrase, select a product and manufacturer that complies with other specified requirements. The Architect will select the color, pattern and texture from the product line selected.
8. Asbestos free materials: No products containing asbestos shall be used for any part of the work for this project. Provide verification.

**PART 3 EXECUTION**

**3.1 INSTALLATION OF PRODUCTS**

- A. Comply with manufacturer's instructions and recommendations for installation of products in the applications indicated. Anchor each product securely in place, accurately located and aligned with other work.
  1. Clean exposed surfaces and protect as necessary to ensure freedom from damage and deterioration at time of Substantial Completion.

END OF SECTION



**MATERIALS AND EQUIPMENT  
SECTION 01600**

---

PART 1 GENERAL

1.1 RELATED DOCUMENTS

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

1.2 SUMMARY

- A. This Section specifies administrative and procedural requirements for handling request for substitutions made during bidding and after award of the Contract.
- B. The Contractor's Installation Schedule and the Schedule of Submittals are included under Section 01300 - Submittals.
- C. Standards: Refer to Section 01095 – Reference Standards and Definitions for applicability of industry standards to products specified.

1.3 DEFINITIONS

- A. Definitions used in this Article are not intended to change or modify the meaning of other terms used in the Contract Documents.
- B. Substitutions: Requests for changes in products, materials, equipment, and methods of installation required by Contract Documents proposed by the Contractor during bidding and after award of the Contract are considered requests for "substitutions". The following are not considered substitutions:
  - 1. Revisions to Contract Documents requested by the Owner or Architect.
  - 2. Specified options of products and installation methods included in Contract Documents.
  - 3. The Contractor's determination of and compliance with governing regulations and orders issued by governing authorities.

1.4 SUBMITTALS

- A. Substitution Request Submittal: After the bid is awarded, a request for substitution will be considered if received within thirty (30) days after contract award, as long as this time allowance will not impact the construction schedule.
  - 1. Submit **three (3) copies** of each request for substitution for consideration. Submit requests in the form and in accordance with procedures required for Change Order proposals.
  - 2. Identify the product, or the fabrication or installation method to be replaced in each request. Include related Specification Section and Drawing numbers. Provide

complete documentation showing compliance with the requirements for substitution, and the following information, as appropriate:

- a. Product Data, including Drawings, and descriptions of products, fabrication and installation procedures.
  - b. Samples, where applicable or requested.
  - c. A detailed comparison of significant qualities of the proposed substitution with those of the Work specified. Significant qualities may include elements such as size, weight, durability, performance and visual effect.
  - d. Coordination information, including a list of changes or modifications needed to other parts of the Work and to construction performed by the Owner and separate Contractors that will become necessary to accommodate the proposed substitution.
  - e. A statement indicating the substitution's effect on the Contractor's construction schedule compared to the schedule without approval of the substitution. Indicate the effect of the proposed substitution on overall Contract Time.
  - f. Cost information, including a proposal of the net change, if any in the Contract Sum.
  - g. Certification by the Contractor that the Substitution proposed is equal-to or better in every significant respect to that required by the Contract Documents, and that it will perform adequately in the application indicated. Include the contractor's waiver of rights to additional payment or time that may subsequently become necessary because of the failure of the substitution to perform adequately.
3. Architect's Action: Within two weeks of receipt of the request for substitution, the Architect will request additional information or documentation necessary for evaluation of the request if needed. Within two (2) weeks of receipt of the request, or one week of receipt of the additional information or documentation, whichever is later, the Architect will notify the Contractor of acceptance or rejection of the proposed substitution. If a decision on use of a substitute cannot be made or obtained within the time allocated, use the product specified by name. Decisions on a product substitution or its rejection by the Architect is considered final. Acceptance will be in the form of a Change Order.

## PART 2 PRODUCTS

### 2.1 SUBSTITUTIONS

- A. Conditions: The Contractor's substitution request will be received and considered by the Architect when one or more of the following conditions are satisfied, as determined by the Architect; otherwise request will be returned without action except to record noncompliance with these requirements.
1. Extensive revisions to Contract Documents are not required.
  2. Proposed changes are in keeping with the general intent of Contract Documents.

3. The request is timely, fully documented and properly submitted.
  4. The specified product or method of construction cannot be provided within the Contract Time. The request will not be considered if the product or method cannot be provided as a result of failure to pursue the work promptly or coordinate activities properly.
  5. The specified product or method of construction cannot receive necessary approval by a governing authority, and the requested substitution can be approved.
  6. A substantial advantage is offered to the Owner, in terms of cost, time, energy conservation or other considerations of merit, after deducting offsetting responsibilities the Owner may be required to bear. Additional responsibilities for the Owner may include additional compensation to the Architect for redesign and evaluation services, increased cost of other construction by the Owner or separate Contractors, and similar consideration.
  7. The specified product or method of construction cannot be provided in a manner that is compatible with other materials, and where the Contractor certifies that the substitution will overcome the incompatibility.
  8. The specified product or method of construction cannot be coordinated with other materials, and where the Contractor certifies that the proposed substitution can be coordinated.
  9. The specified product or method of construction cannot provide a warranty required by the Contract Documents and where the Contractor certifies that the proposed substitution provide the required warranty.
- B. The Contractor's submittal and Project Manager's acceptance of Shop Drawings, Product Data or Samples that relate to construction activities not complying with the Contract Documents does not constitute an acceptable or valid request for substitution, nor does it constitute approval.
- C. Substitution request constitutes a representation that the Contractor:
1. Has investigated proposed product and determined that it meets or exceeds, in all respects, specified product.
  2. Will provide the same warranty for substitution as for specified product.
  3. Will coordinate installation and make other changes which may be required for work to be complete in all respects.
  4. Waives claims for additional costs which may subsequently become apparent. All costs associated with the substitution will be paid by the Contractor regardless of

**SUBSTITUTIONS  
SECTION 01631**

---

approvals given, and regardless of subsequent difficulties experienced as a result of substitutions.

END OF SECTION

## Product Substitution Request

To: \_\_\_\_\_  
\_\_\_\_\_

We hereby submit for your consideration the following product in lieu of that specified for this project:

DRAWING NO. \_\_\_\_\_ DRAWING NAME \_\_\_\_\_

SPEC. SECTION \_\_\_\_\_ SPEC NAME \_\_\_\_\_ PARAGRAPH \_\_\_\_\_ SPECIFIED ITEM \_\_\_\_\_

Proposed Substitution: \_\_\_\_\_

Why Substitution Requested: \_\_\_\_\_

Attach complete information on changes to Drawings or Specifications which proposed substitution will require for its proper installation.

Submit with request necessary samples and substantiating data to prove equal quality and performance to that which is specified. Clearly mark manufacturer's literature to indicate equality in performance.

The undersigned certifies that the function, appearance and quality are of equal performance and assumes liability for equal performance, equal design and compatibility with adjacent materials.

Submitted by: \_\_\_\_\_  
Signature (Contractor) Title Date

\_\_\_\_\_ Firm Telephone

\_\_\_\_\_ Address Fax Number

Signature shall be by person having authority to legally bind the Contractor to the above terms, failure to provide legally binding signature will result in retraction of approval.

<p>For use by the Architect:</p> <p><input type="checkbox"/> Recommended      <input type="checkbox"/> Recommended as Noted</p> <p><input type="checkbox"/> Not Recommended      <input type="checkbox"/> Received too late</p> <p><input type="checkbox"/> Insufficient data received</p> <p>By _____</p> <p>Date _____</p>	<p>For use by the Owner:</p> <p><input type="checkbox"/> Approved</p> <p><input type="checkbox"/> Not Approved</p> <p><input type="checkbox"/> Approved as noted</p> <p>By _____</p> <p>Date _____</p>
--	--

**Product Substitution Information**

Fill in blanks below:

A. Does the substitution affect dimensions shown on Drawings?

Yes \_\_\_\_\_ No \_\_\_\_\_ If yes, clearly indicate changes.

\_\_\_\_\_

B. Will the undersigned pay for changes to the building design, including engineering and detailing costs caused by the requested substitutions?

Yes \_\_\_\_\_ No \_\_\_\_\_ If no, fully explain:

\_\_\_\_\_

C. What effect does substitution have on other Contracts or other trades?

\_\_\_\_\_

D. What effect does substitution have on construction schedule?

\_\_\_\_\_

E. Manufacturer's warranties of the proposed and specified items are:

\_\_\_\_\_ Same \_\_\_\_\_ Different. If different, fully explain:

\_\_\_\_\_

F. Reason for Request:

\_\_\_\_\_

G. Itemized comparison of specified item(s) with the proposed substitution; list significant variations:

\_\_\_\_\_

\_\_\_\_\_

H. This substitution will amount to a credit to the Owner of:

\_\_\_\_\_ dollars (\$ \_\_\_\_\_)

I. Designation of maintenance services and sources:

\_\_\_\_\_

J. Attachments: (Attach additional sheets if required.)

**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

PART 1      GENERAL

1.1      RELATED DOCUMENTS

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

1.2      SUMMARY

- A.      This Section specifies administrative and procedural requirements for project close-out, including but not limited to:
  - 1.      Inspection procedures
  - 2.      Project record document submittal. (substantial completion requirements)
  - 3.      Operating and Maintenance Manual Submittal (substantial completion requirements).
  - 4.      Submittal of warranties (substantial completion requirement).
  - 5.      Final cleaning
- B.      Close-out requirements for specific construction activities are included in the appropriate Sections in Divisions 2 through 16.
- C.      Final Payment to be made when the County has received all required close-out documents.

1.3      SUBSTANTIAL COMPLETION

- A.      Preliminary Procedures: Before requesting inspection for Certification of Substantial Completion, complete the following: List exceptions in the request.
  - 1.      In the Application for Payment that coincided with, or first follows, the date Substantial Completion is claimed, show 100 percent completion for the portion of the Work claimed as substantially complete. Include supporting documentation for completion as indicated in these Contract Documents and a statement showing an accounting of changes to the Contract Sum.
    - a.      If 100 percent completion cannot be shown, include a list of incomplete items, the value of incomplete construction, and reasons the work is not complete.
  - 2.      Advise Owner of pending insurance change-over requirements.
  - 3.      Submit specific warranties, workmanship bonds, maintenance agreements, final certifications and similar documents.
  - 4.      Obtain and submit releases enabling the Owner unrestricted use of the work and



**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

access to services and utilities; include occupancy permits, operating certificates and similar releases.

5. Complete final clean up requirements, including touch-up painting. Touch-up and otherwise repair and restore marred exposed finishes.

B. Inspection Procedures: On receipt of a request for inspection, the Architect/Project Manager will either proceed with inspection or advise the Contractor of unfilled requirements. The Architect/Project Manager will prepare the Certificate of Substantial Completion following inspection, or advise the Contractor of construction that must be completed or corrected before the certificate will be issued.

1. Results of the completed inspection will form the basis of requirements for final acceptance.
2. Should the project fail to meet the standards required for Substantial Completion as defined in the documents, the Contractor will pay the expense of a second inspection by the Architect/Consultants and the Owner. Cost will be deducted from the Contractor's retainage.

#### 1.4 FINAL ACCEPTANCE

A. Preliminary Procedures: Before requesting final inspection for certification of final acceptance and final payment, complete the following list exceptions in the request:

1. Submit the final payment request with releases and supporting documentation not previously submitted and accepted. Include certificates of insurance for products and complete operations where required.
2. Submit an updated final statement, accounting for final additional changes to the Contract Sum.
3. Submit a certified copy of the Architect or Owner's final inspection list of items to be completed or corrected, stating that each item has been completed or otherwise resolved for acceptance, and the list has been endorsed and dated by the Architect/Project Manager.
4. Submit final meter readings for utilities, a measured record of stored fuel and similar data as of the date of Substantial Completion, or when the Owner took possession of the responsibility for corresponding elements of the Work.
5. Submit consent of surety to final payment.
6. Submit a final liquidated damages settlement statement
7. Submit evidence of final, continuing insurance coverage complying with insurance

**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

requirements.

- B. Reinspection Procedure: The Architect will reinspect the work upon receipt of notice that the work, including inspection list items from earlier inspections, has been completed, except items whose completion has been delayed because of circumstances acceptable to the Architect.
  - 1. Upon completion of reinspection, the Architect will prepare a certification of final acceptance, or advise the contractor of work that is incomplete or of obligations that have not been fulfilled but are required for final acceptance.

1.5 RECORD DOCUMENT SUBMITTALS

- A. General: Do not use record documents for construction purposes; protect from deterioration and loss in a secure, fire-resistive location; provide access to record documents for the Architect's reference during normal working hours.
- B. Record Drawings: Maintain a clean, undamaged set of blue or black line white-prints of Contract Drawings and Shop Drawings. Mark the set to show the actual installation; where the installation varies substantially from the work as originally shown. Mark whichever drawing is most capable of showing conditions fully and accurately; where Shop Drawings are used, record a cross-reference at the corresponding location on the Contract Drawings. Give particular attention to concealed elements that would be difficult to measure and record at a later date. Provide for project photographs if deemed necessary by Owner's representative.
  - 1. Mark record sets with red erasable pencil; use other colors to distinguish between variations in separate categories of the work.
  - 2. Mark new information that is important to the Owner, but was not shown on Contract Drawings or Shop Drawings.
  - 3. Note related Change Order numbers where applicable.
  - 4. Organize record drawing sheets, and print, suitable titles, dates and other identification on the cover of each set.
  - 5. Provide **three (3)** additional sets of black line drawing sets of As-Builts Drawings. (color copies)
- C. Record Specifications: Maintain one complete copy of the Project Manual, including addenda, and one copy of other written construction documents such as Change Orders and modifications issued in printed form during construction. Mark these documents to show substantial variations in actual work performed in comparison with the text of the specifications and modifications. Give particular attention to substitutions, selection of options and similar information on elements that are concealed or cannot otherwise be

## PROJECT CLOSEOUT REQUIREMENTS

### SECTION 01700

---

readily discerned later by direct observation. Note related record drawing information and Project Data.

1. Upon completion of the Work, submit **two (2)** copies of Record Specifications to the Architect for the Owner's records.
- D. Record Project Data: Maintain one copy of each Product Data submittal. Mark these documents to show significant variation in actual work performed in comparison with information submitted. Include variations in products delivered to the site, and from the manufacturer's installation instructions and recommendations. Give particular attention to concealed products and portions of the Work which cannot otherwise be readily discerned later by direct observation. Note related Change Orders and mark-up of record drawings and Specifications.
1. Upon completion of mark-up, submit **one (1) complete set** of Record Product Data in the three ring binder (indexed) to the Architect for the Owner's records.
- E. Record Sample Submitted: Immediately prior to the date or dates of substantial completion, the Contractor will meet at the site with the Architect and the Owner's personnel to determine which of the submitted Samples that have been maintained during progress of the work are to be transmitted to the Owner for record purposes. Comply with delivery to the Owner's Sample storage area.
- F. Miscellaneous Record Submittals: Refer to other Specification Sections for requirements of miscellaneous record-keeping and submittals in connection with actual performance of the work. Immediately prior to the date or dates of substantial completion, complete miscellaneous record and place in good order, properly identified and bound or filed, ready for continued use and reference. Submit to the Architect/Project Manager for the Owner's records.
- G. Maintenance Manuals: Organize operating and maintenance data into **five (5) suitable sets** of manageable size. Bind properly indexed data in individual heavy-duty 2-inch, 3-ring vinyl covered binders, with pocket folders for folded sheet information. Mark appropriate identification on front and spine of each binder. Include the following types of information:
1. Emergency instructions
  2. Spare parts list
  3. Copies of warranties
  4. Wiring diagrams
  5. Recommended turn-around cycles
  6. Inspection procedures
  7. Shop Drawings and Product Data
  8. Fixture lamping schedule

PART 2 PRODUCTS (Not Applicable)

**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

PART 3 EXECUTION

3.1 CLOSE-OUT PROCEDURES

A. Operating and Maintenance Instructions: Arrange for each installer of equipment that required regular maintenance. If installers are not experienced in procedures, provide instruction by manufacturer's representatives. All items shall be provided or completed prior to Certificate of Substantial Completion being issued by the Owner. Include a detailed review of the following items:

1. Maintenance manuals
2. Record documents
3. Spare parts and materials
4. Tools
5. Lubricants
6. Fuels
7. Identification systems
8. Control sequences
9. Hazards
10. Cleaning
11. Warranties and bonds
12. Maintenance agreements and similar continuing commitments
13. On-site instructions to County maintenance personnel on major systems operations such as HVAC as per technical specifications.

B. As part of instruction for operating equipment, demonstrate the following procedures, prior to the Owner issuing Certificate of Substantial Completion:

1. Start-up
2. Shutdown
3. Emergency operations
4. Noise and vibration adjustments
5. Safety procedures
6. Economy and efficiency adjustments

3.2 PROJECT CLOSE-OUT MANUALS AT SUBSTANTIAL COMPLETION

- A. Submit Project Close-out Manuals prior to issuance of final application for payment. Provide **three (3) copies**.
- B. Bind in commercial quality 8 ½" x 11" three ring binder, indexed with hardback, cleanable, plastic covers.
- C. Label cover of each binder with typed title PROJECT CLOSE-OUT MANUAL, with title of project; name, address, and telephone number of Contractor and name of responsible

**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

Principal.

- D. Provide table of contents: Neatly typed, in the following sequence:
1. Final Certificate of Occupancy
  2. Warranty Service Subcontractors Identification List
  3. Final Lien Waivers and Releases
  4. Warranties and Guarantees
  5. Systems Operations and Maintenance Instruction
  6. Manufacturer's Certificates and Certifications
  7. Maintenance Service Contracts
  8. Spare Parts Inventory List
  9. Special Systems Operating Permits or Approvals
  10. Asbestos free materials notarized statement
- E. Provide all documents required by each specification section listed in the Project Manual. List the individual documents by section in sequence indicated in the Table of Contents of the Project Manual.
- F. Identify each document listed in the Table of Contents with the number and title of the specification section in which specified, and the name of the product or work item.
- G. Separate each section with index to sheets that are keyed to the Table of Contents listing.
- H. Warranty Service Subcontractors List shall identify subcontractor supplier, and manufacturer for each warranty with name, address and emergency telephone number.
- I. Electronic Close-out DVD: At the completion of the project, submit one copy of a DVD with entire project close out information below in PDF format. All letter, legal and brochure size sheets shall be portrait and the As-built drawings will be landscape. All fonts will be Arial. All items will be in PDF with OCR (Optical Character Recognition). This will enable a search engine to identify words on the scanned documents.
1. Contacts: Set up a separate PDF for the contacts. No bookmarks are needed for this section.
  2. As-Builts: All as-built drawings will be landscape.
  3. Submittals: All technical submittal items (approved and approved as noted) will be provided and sorted by the 16 standard divisions. Bookmarks will be needed for the appropriate divisions.
  4. Operations and Maintenance Manual: Specify the division name only in the bookmarks (1-16). Please note that all items will be in PDF with OCR (Optical Character Recognition). This will enable a search engine to identify works on the scanned documents.
  5. Permitting: This should include the Certificate of Occupancy and any other document that the Architect/Project Manager may include pertaining to the permitting for the project.

**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

3.3 FINAL CLEANING

- A. General: General cleaning during construction is required by the General Conditions and included in Section - Temporary Facilities.
- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to the condition expected in a normal, commercial building cleaning and maintenance program. Comply with manufacturer's instructions.
  - 1. Complete the following cleaning operations before requesting inspection for Certification of Substantial Completion.
    - a. Remove labels that are not permanent labels.
    - b. Clean transparent materials, including mirrors and glass in doors and windows. Remove glazing compound and other substances that are noticeable vision-obscuring materials. Replace chipped or broken glass and other damaged transparent materials.
    - c. Clean exposed exterior and interior hard-surfaced finished to a dust-free condition, free of stains, films and similar foreign substances. Restore reflective surfaces to their original reflective condition. Leave concrete floors broom clean. Vacuum carpeted surfaces.
    - d. Wipe surfaces of mechanical and electrical equipment. Remove excess lubrication and other substances. Clean plumbing fixtures to a sanitary condition. Clean light fixtures and lamps.
    - e. Clean the site, including landscape development areas, of rubbish, litter and other foreign substances. Sweep paved areas broom clean; remove stains, spills and other foreign deposits. Rake grounds that are neither paved nor planted, to a smooth even-textured surface. Remove waste and surplus materials from the site in an appropriate manner.
- C. Pest Control: Engage an experienced exterminator to make a final inspection, and rid the Project of rodents, insects and other pests.
- D. Removal of Protection: Remove temporary protection and facilities installed for protection of the work during construction.
- E. Compliance: Comply with regulations of authorities having jurisdiction and safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on the Owner's property. Do not discharge volatile, harmful or dangerous materials into drainage systems. Remove waste materials from the site and dispose of in a lawful manner.
  - 1. Where extra materials of value remaining after completion of associated work have become the Owner's property, arrange for disposition of these materials as directed.

**PROJECT CLOSEOUT REQUIREMENTS**  
**SECTION 01700**

---

END OF SECTION

**PROJECT WARRANTIES AND BONDS**  
**SECTION 01740**

---

PART 1      GENERAL

1.1      RELATED DOCUMENTS

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

1.2      SUMMARY

- A.      This Section specifies general administrative and procedural requirements for warranties and bonds required by the Contractor Documents, including manufacturer's standard warranties on products and special warranties.
  - 1.      Refer to the General Conditions for terms of the Contractor's special warranty of workmanship and materials.
  - 2.      General close-out requirements are included in Section 01700 - Project Close-Out Requirements.
  - 3.      Specific requirements for warranties for the work and products and installations that are specified to be warranted are included in the individual Sections of Division 2 through 9.
  - 4.      Certifications and other commitments and agreements for continuing services to Owner are specified elsewhere in the Contract Documents.
- B.      Disclaimers and Limitations:    Manufacturer's disclaimers and limitations on product warranties do not relieve the Contractor of the warranty on the work that incorporates the products, nor does it relieve suppliers, manufacturers, and subcontractors required to countersign special warranties with the Contractor.

1.3      WARRANTY REQUIREMENTS

- A.      Related Damages and Losses:    When correcting warranted work that has failed, remove and replace other work that has been damaged as a result of such failure or that must be removed and replaced to provide access for correction of warranted work.
- B.      Reinstatement of Warranty.    When work covered by a warranty has failed and been corrected by replacement or rebuilding, reinstate the warranty by written endorsement. The reinstated warranty shall be equal to the original warranty with an equitable adjustment for depreciation.
- C.      Replacement Cost:            Upon determination that work covered by a warranty has failed, replace or rebuild the work to an acceptable condition complying with requirements of Contract Documents.
- D.      Owner's Recourse:            Written warranties made to the Owner are in addition to implied



**PROJECT WARRANTIES AND BONDS**  
**SECTION 01740**

---

warranties, and shall not limit the duties, obligation, rights and remedies otherwise available under the law, nor shall warranty periods be interpreted as limitations on time in which the Owner can enforce such other duties, obligation, rights, or remedies.

1. Rejection of Warranties: The Owner reserves the right to reject warranties and to limit selections to products with warranties not in conflict with requirements of the Contract Documents.
- E. The Owner reserves the right to refuse to accept work for the Project where a special warranty, certification, or similar commitment is required on such work or part of the Work, until evidence is presented that entities required to countersign such commitments are willing to do so.

1.4 WARRANTY PERIOD

- A. The Contractor shall participate with the County and the Architect's representative, at the beginning of the tenth month of the warranty period, in conducting an on-site review and evaluation of all items of equipment, materials and workmanship covered by the warranties and guarantees. Contractor shall act promptly and without cost to the County to correct all defects, problems, or deficiencies determined as such by the Architect/Owner during on the site review.
- B. All warranties and guarantees shall commence on the date of Substantial Completion except for items which are determined by the County to be incomplete or a non-comply status at the time of Substantial Completion. The coverage commencement date for warranties and guarantees of such work shall be the date of the County's acceptance of that work.
- C. Warranty period shall be manufacturer's standard for product specified except where specific warranty periods are specified in individual sections. But in no case less than one year.

1.5 SUBMITTALS

- A. Submit written warranties to the Owner prior to the date certified for Substantial Completion. If the Architect's Certificate of substantial Completion designates a commencement date for warranties other than the date of Substantial Completion for the Work, or a designated portion of the work, submit written warranties upon request of the Project Manager.
  1. When a designated portion of the work is completed and occupied or used by the Owner, by separate agreement with the Contractor during the construction period, submit properly executed warranties to the Project Manager within fifteen days of completion of that designated portion of the work.
- B. Special Warranties: When a special warranty is required to be executed by the Contractor, or the Contractor and a subcontractor, supplier or manufacturer, prepared a

**PROJECT WARRANTIES AND BONDS**  
**SECTION 01740**

---

written document that contains appropriate terms and identification, ready for executing by the required parties. Submit a draft to the Architect for approval prior to final execution.

1. Refer to individual Sections of Division 2 through 9 for specific content requirements, and particular requirements for submittal of special warranties.
- C. Form of Submittal: At Final Completion compile **two (2) copies** of each required warranty and bond properly executed by the Contractor, or by the Contractor, subcontractor, supplier, or manufacturer. Organize the warranty documents into an orderly sequence based on the table of contents of the Project Manual.
- D. Submittal Binders: Bind **three (3) sets** of warranties and bonds in heavy-duty, commercial quality, durable 3-ring vinyl covered loose-leaf binders, thickness as necessary to accommodate contents, and sized to receive 8 1/2" by 11" paper.
1. Provide heavy paper dividers with Celluloid covered tabs for each separate warranty. Mark the tab to identify the product or installation. Provide a typed description of the product or installation, including the name of the product, and the name, address and telephone number of the installer.
  2. Identify each binder on the front and the spine with the typed or printed title "WARRANTIES AND BONDS", the Project title or name, and the name of the Contractor.
  3. When operating and maintenance manuals are required for warranted construction, provide additional copies of each required warranty, as necessary, for inclusion in each required manual.

PART 2	PRODUCTS	(Not Applicable)
PART 3	EXECUTION	(Not Applicable)

END OF SECTION

**EXISTING CONDITION ASSESMENT (INFORMATION TO BIDDERS)**  
**SECTION 02010**

---

PART 1 GENERAL

1.1 SUMMARY

- A. Section Includes:
  - 1. As-Build Drawings (Dropbox link)
  - 2. Photographs (Dropbox link)
- B. Related Sections:
  - 1. Section 01010 – Summary of Work

1.2 EXISTING PROJECT / SITE CONDITIONS

- A. Field Investigation: Multiple field investigations were conducted by A/R/C Associates, Incorporated from May 11<sup>th</sup> through June 5<sup>th</sup>, 2017, at which time the exposed conditions of the proposed glazing replacement areas were observed and the under-roof and sill conditions were determined to the best extent observable without destructive methods. Limited existing construction record drawings and specifications were available for A/R/C to verify. The details of the project indicated and existing conditions are based of typical construction practice. A/R/C offers no assurance that all varying conditions have been discovered, or that any Owner-furnished information is completely accurate. It shall be the responsibility of each bidder to make additional inspections as they may judge to be a necessity.
- B. Verification of Dimensions: The approximate dimensions shown for each roof area and glazing system are the result of reconstruction of the building design from field measurements taken by A/R/C Associates. This information is given to assist prospective Bidders in establishing the approximate scope of the project.
- C. Condition of Structure:
  - 1. The Owner assumes no responsibility for actual condition of the structure.
  - 2. Conditions existing at time of inspection for bidding purposes will be maintained by Owner in so far as practicable. However, variations may occur by Owner's operations.
  - 3. Prior to bidding, inspect and verify existing conditions of Project, including elements subject to damage or to movement during project scope.
    - a. Conflicts and problems shall be reported to the Purchasing and Contracts Division for resolution prior to bidding.
    - b. Failure to report these conflicts places the responsibility on the Prime Contractor to complete the work in accordance with the Documents at no additional cost to the Owner.
  - 4. During construction, inspect conditions affecting installation of Products, or performance of work.

**EXISTING CONDITION ASSESMENT (INFORMATION TO BIDDERS)**  
**SECTION 02010**

---

- a. Report unsatisfactory or questionable conditions to Architect in writing; do not proceed with work until Architect has provided further instructions.
  
- D. As-Build Drawings: The owner has furnished us with the as-build drawings for the original Phase 2, 3 and 4 portions of the building. This information is only included for informational purposes. These are made accessible through a website link:  
  
<https://www.dropbox.com/sh/6tt9wdg8sgvbe35/AAAHuXBiuDgGXTHP7wjonuEga?dl=0>
  
- E. Photographs: A/R/C took numerous photographs of the various conditions for reference during the design process. The photographs are being made accessible through a website link:  
  
<https://www.dropbox.com/sh/l390xedyafci3tz/AACqOpAaVqlqH8RyFxdnqq2na?dl=0>

PART 2 PRODUCTS

(Not Applicable)

PART 3 EXECUTION

(Not Applicable)

END OF SECTION

**PART 1 GENERAL**

**1.1 SECTION INCLUDES**

- A. Demolition of existing glazing systems where indicated and removal of material from the site as described in the summary of work.

**1.2 RELATED SECTIONS**

- A. Division 1 – General Requirements

**1.3 QUALIFICATIONS**

- A. Demolition Firm: Company specializing in performing the Work of this Section with a minimum of five (5) years experience.

**1.4 REGULATORY REQUIREMENTS**

- A. Conform to applicable code for demolition of roofing, safety of adjacent structures, dust control and disposal.
- B. Notify affected utility companies before starting work and comply with their requirements.
- C. Do not close or obstruct roadways, sidewalks, and hydrants without permits.
- D. Conform to applicable regulatory procedures when hazardous or contaminated materials are present.

**1.5 SCHEDULING**

- A. Schedule work under the provisions of Division 1
- B. Schedule work to coincide with new reroofing work.
- C. Describe demolition removal procedures and schedule

**1.6 PROJECT CONDITIONS**

- A. Existing Conditions:
  - 1. Report conflicts or problems to the Purchasing and Contracts Division for resolution prior to Bidding. Failure to report these conflicts and problems places the responsibility on the Contractor to complete the work in accordance with the Documents at no additional cost to the Owner.

**SELECTIVE DEMOLITION  
SECTION 02070**

---

PART 2 PRODUCTS (Not Used)

PART 3 EXECUTION

3.1 PREPARATION

- A. Provide, erect, and maintain temporary barriers and security devices.
- B. Protect existing landscaping materials, appurtenances, structures and adjacent roofs which are not scheduled to be demolished.

3.2 DEMOLITION REUIREMENTS

- A. Conduct demolition to minimize interference with adjacent structures and occupants.
- B. Cease operations immediately if adjacent structures appear to be in danger. Notify the Owner's Project Manager. Do not resume operations until directed.
- C. Conduct operations with minimum interference to public or private accesses. Maintain egress and access at all times.

3.3 DEMOLITION

- A. Remove demolished materials from site.
- B. Do not burn or bury materials on site. Leave site in clean condition.
- C. Remove temporary work.
- D. Remove materials to be re-installed or retained in manner to prevent damage. Store and protect in accordance with requirements of Division 1.
- E. Any materials damaged by the demolition process that are out of the scope of work, as specified by the contract documents, must be replaced at no additional cost to the owner. Any areas that are suspected to be damaged during demolition should be reported to the Purchasing and Contracts Division for resolution prior to bidding.

END OF SECTION

**MISCELLANEOUS ROUGH CARPENTRY  
SECTION 06100**

---

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section includes:
  - 1. Miscellaneous framing and sheathing;
  - 2. Nailers and blocking,
  - 3. Field fabricated expansion joint curbs and curb extensions,
  - 4. Preservative treatment of wood where indicated.
  
- B. Related Sections:
  - 1. Section 07620 – Sheet Metal Flashing and Trim

**1.2 REFERENCES**

- A. American National Standards Institute:
  - 1. ANSI A208.1 - Mat-Formed Wood Particleboard.
  
- B. American Wood-Preservers' Association:
  - 1. AWPA Standard U1, UC 1-4 - All Timber Products - Preservative Treatment by Pressure Process.
  - 2. AWPA Standard U1, UCF A and B - Structural Lumber - Fire-Retardant Treatment by Pressure Processes.
  
- C. ASTM International:
  - 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
  
- D. National Fire Protection Association:
  - 1. NFPA 255 - Standard Method of Test of Surface Burning Characteristics of Building Materials.
  
- E. Southern Pine Inspection Bureau:
  - 1. SPIB - Standard Grading Rules for Southern Pine Lumber.
  
- F. Underwriters Laboratories Inc.:
  - 1. UL 723 - Tests for Surface Burning Characteristics of Building Materials.
  
- G. U. S Department of Commerce National Institute of Standards and Technology:
  - 1. DOC PS 1 - Construction and Industrial Plywood.
  - 2. DOC PS 2 - Performance Standard for Wood-Based Structural-Use Panels.
  - 3. DOC PS 20 - American Softwood Lumber Standard.

**MISCELLANEOUS ROUGH CARPENTRY  
SECTION 06100**

---

1.3 SUBMITTALS

- A. Division 1 - Submittal Procedures
- B. Product Data: Submit technical data on
  - 1. Wood /Plywood
  - 2. Fasteners and Anchors
  - 3. Wood preservative and fire retardant treatment materials and application instructions.
  - 4. MSDS of treatment materials.
- C. Samples:
  - 1. Fastener types : Two (2) of each type
  - 2. Material Samples, if requested by the Architect.

1.4 QUALITY ASSURANCE

- A. Perform Work in accordance with the following:
  - 1. Lumber Grading Agency: Certified by DOC PS 20.
  - 2. Lumber: DOC PS 20.
- B. Surface Burning Characteristics:
  - 1. Fire Retardant Treated Materials: Maximum 25/450 flame spread/smoke developed index when tested in accordance with ASTM E84.
- C. Apply label from agency approved by authority having jurisdiction to identify each preservative treated and fire retardant treated material.
- D. Perform Work in accordance with current Florida Building Code requirements.

PART 2 PRODUCTS

2.1 MATERIALS

- A. Lumber Grading Rules: SPIB.
- B. Miscellaneous Framing/Blocking: Stress Group D 1x and 2x No. 2 Grade Southern Yellow Pine species, 19 percent maximum moisture content, pressure preservative treated where indicated.
- C. Plywood Sheathing/Decking: APA/EWA Structural I, 5/8" thickness (unless otherwise noted), Grade: CDX; pressure treated with preservative and fire retardant treated. Exposure Durability: Exposure 1.



## MISCELLANEOUS ROUGH CARPENTRY SECTION 06100

---

### 2.2 ACCESSORIES

- A. Fasteners and Anchors:
  - 1. All fasteners: Stainless steel for high humidity and treated wood locations, hot dipped galvanized steel elsewhere.
  - 2. Nails: ASTM F1667; ring-shanked, except as otherwise directed.
  - 3. Anchors: Toggle bolt type for anchorage to hollow masonry. Expansion shield and lag bolt type for anchorage to solid masonry or concrete. Bolt or ballistic fastener for anchorages to steel.

### 2.3 FACTORY WOOD TREATMENT

- A. Wood Preservative (Pressure Treatment) for wood (exterior, above ground): AWPA U1, use category 3 (UC3) using water borne preservative with 0.25 pounds per cubic foot of wood product.
- B. Wood preservatives shall not contain arsenic or arsenate.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Division 1 - Administrative Requirements: Verification of existing conditions before starting work.
- B. Verify substrate conditions are ready to receive blocking, curbing and framing.

### 3.2 PREPARATION

- A. Coordinate placement of blocking, curbing and framing items.

### 3.3 INSTALLATION

- A. General:
  - 1. Discard material with defects which might impair quality of work and units which are too small to fabricate work with minimum joints or optimum joint arrangement.
  - 2. Set carpentry work accurately to required levels and lines, with members plumb and true and accurately cut and fitted.
  - 3. Securely attach carpentry work to substrate by anchoring and fastening as shown or as required by recognized standards. Countersink fastener heads on exposed carpentry work.
  - 4. Use fasteners and anchorages as indicated. Make tight connections between members. Install fasteners without splitting of wood; pre-drill as required. Holes drilled oversized or wallered out, shall be re-drilled.
  - 5. Place horizontal members, crown side up.

## MISCELLANEOUS ROUGH CARPENTRY SECTION 06100

---

6. Construct curb members of solid wood sections.
  7. Do not install wood nailers or sheathing more than one day in advance from installation of roofing. Install dry-in felt over any wood nailers and sheathing.
- B. Nailers, Blocking and Curb Extensions:
1. Coordinate curb extensions and installation of wood nailers with roof construction work.
  2. Provide blocking and edging wherever shown and where required for screeding or attachment of other work.
  3. Set members level and plumb, in correct position.
  4. Construct curb members of single pieces.
  5. Curb roof openings [except where prefabricated curbs are provided]. Form corners by alternating lapping side members.
  6. Attach to substrates as required to support applied loading. Countersink bolts and nuts with washers flush with surfaces, unless otherwise shown.
  7. Where new members are doubled, ends shall be lapped and thoroughly spiked to each other and to bearing members.
  8. Where new members bear on concrete, securely fasten to same by bolts or lag screws on centers as called for on drawings, staggered. Provide heads of all bolts or lag screws with large-head washers.
  9. Round edges and corners of wood plates where flashing occurs.
- C. Plywood Sheathing (wall sheathing replacement) (see Details):
1. Install sheathing properly framed to required lines, level and rigidly secured in place.
  2. Cut sheathing sections to fit. Leave 1/8" clearance between panels at side laps. Cover sheathing with dry-in felt and seal top horizontal edge.

### 3.4 SCHEDULES

- A. Roof Perimeter Nailers, Curbs and Curb Extensions: See project manual details and plans for sizes and locations.
- B. Plywood Sheathing (as applicable): See project manual details and plans for locations.

END OF SECTION

PART 1 GENERAL

1.1 SUMMARY

- A. Section includes:
  - 1. Flashings and Counterflashings
  - 2. Miscellaneous Sheet Metal at all Roof Areas
  - 3. Accessories
  
- B. Related Sections:
  - 1. Section 06100 – Miscellaneous Rough Carpentry
  - 2. Section 07900 – Joint Protection
  - 3. Section 08911 – Glazed Aluminum Curtain Wall
  
- C. References:
  - 1. ASTM International:
    - a. ASTM A 167 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet and Strip
    - b. ASTM A 480/A480M – Standard Specification for General Requirements for Flat-Rolled Stainless and Heat-Resisting Steel Plate, Sheet and Strip
    - c. ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.
    - d. ASTM A 755/A 755M - Standard Specification for Steel Sheet, Metallic Coated by the Hot-Dip Process and Prepainted by the Coil-Coating Process for Exterior Exposed Building Products
    - e. ASTM A 792/A 792M – Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process
    - f. ASTM A 924/A 924M – Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.
    - g. ASTM B 29 – Standard Specification for Refined Lead.
    - h. ASTM B 32 - Standard Specification for Solder Metal.
    - i. ASTM B 209 – Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
    - j. ASTM B 306 – Standard Specification for Copper Drainage Tube (DWV).
    - k. ASTM B 370 – Standard Specification for Copper Sheet and Strip for Building Construction.
    - l. ASTM B 749 - Standard Specification for Lead and Lead Alloy Strip, Sheet, and Plate Products.
    - m. ASTM D 226 - Standard Specification for Asphalt-Saturated Organic Felt Used in Roofing and Waterproofing.
    - n. ASTM D 1187 – Standard Specification for Asphalt-Base Emulsions for Use as Protective Coatings for Metal.
    - o. ASTM D 4397 - Standard Specification for Polyethylene Sheeting for Construction, Industrial, and Agricultural Applications

## SHEET METAL FLASHING AND TRIM SECTION 07620

---

- p. ASTM D4586 - Standard Specification for Asphalt Roof Cement, Asbestos-Free.
- 2. National Roofing Contractors' Association:
  - a. NRCA – National Roofing Contractors' Association Manual.
- 3. Sheet Metal and Air Conditioning Contractors National Association (SMACNA):
  - a. SMACNA - Architectural Sheet Metal Manual.

### 1.2 SUBMITTALS

- A. Section 01300 - Submittal Procedures: Submittal procedures.
- B. Shop Drawings: Submit shop drawings for any condition not shown on plans and details.
- C. Product Data: Submit data on manufactured components metal types, finishes, and characteristics.
- D. Samples:
  - 1. Submit two samples 12 x 12 inch in size illustrating a typical external corner, internal corner, material and finish.
  - 2. Submit two samples 12 x 12 inch in size illustrating metal finish color.

### 1.3 QUALITY ASSURANCE

- A. Perform work in accordance with SMACNA and standard details and requirements.
- B. Failure to install work in strict accordance with provisions of this Section is subject to total rejection of the work specified herein.
- C. Maintain copy of documents on site.

### 1.4 MOCK-UPS

- A. Construct "in-place" sheet metal mock-ups demonstrating the following conditions as applicable and detailed in the project documents:
  - 1. Perimeter flashing metal, splice and termination conditions.
  - 2. Sill Pan, splice and termination conditions
  - 3. Typical interior wall counterflashing conditions.
  - 4. Additional conditions as may be determined by the Architect.
- B. Mock-ups are to be constructed and located where designated. Upon approval mock-ups may remain as part of the work.

### 1.5 QUALIFICATIONS

- A. Fabricator and Installer: Company specializing in sheet metal work with minimum three years documented experience.

## SHEET METAL FLASHING AND TRIM SECTION 07620

---

### 1.6 PRE-INSTALLATION MEETINGS

- A. Section 01040 - Administrative Requirements: Pre-installation meeting.
- B. Convene minimum one week prior to commencing work of this section.

### 1.7 DELIVERY, STORAGE, AND HANDLING

- A. Section 01600 - Product Requirements: Product storage and handling requirements.
- B. Stack material to prevent twisting, bending, and abrasion, and to provide ventilation. Slope metal sheets to ensure drainage.
- C. Prevent contact with materials causing discoloration or staining.

### 1.8 COORDINATION

- A. Section 01040 - Administrative Requirements: Coordination and project conditions.
- B. Coordinate application of flashings with application of roofing, protruding material, and roof accessories to provide a complete weathertight installation according to the specified warranty requirements.

## PART 2 PRODUCTS

### 2.1 SHEET MATERIALS

- A. Stainless Steel: ASTM A 240, ASTM A 480 and ASTM A 666; Type 304, soft temper (annealed), 22 ga. or 24 ga. thickness unless otherwise specified; smooth 2B finish.
- B. Coated Aluminum Sheet Metal for Thermoplastic Roofs: Twenty (20) mil UV resistant PVC (polyvinyl chloride with Elvaloy®\* KEE (ketone ethylene ester) membrane laminated to 0.040 thick 3003-H14 aluminum.
- C. Coated Stainless Steel Sheet Metal for Thermoplastic Roofs: Twenty (20) mil UV resistant PVC (polyvinyl chloride with Elvaloy®\* KEE (ketone ethylene ester) membrane laminated to 22 ga. or 24 ga. thick stainless steel,
- D. Aluminum: ASTM B 209, alloy 3003, temper H14, AA-C22A41 mill finish; 0.040" thick; Cleats 0.050" thick.
- E. Zinc-Coated Steel: (Galvanized) Commercial quality with 0.20% copper, ASTM A 525 except ASTM A 527 for lock-forming, G90 hot-dip galvanized, 24 gage except as otherwise indicated.

**SHEET METAL FLASHING AND TRIM  
SECTION 07620**

---

2.2 ACCESSORIES

- A. Termination Bar: Aluminum ASTM B-209, Alloy 6061, Temper T-6, mill finish; sizes 1/8" thick by 1-1/2" with rounded edges.
- B. Sheet Metal Fasteners:
1. Fasteners: Stainless steel
  2. Exposed fasteners are prohibited, and may only be used where specifically permitted by the project details or the Architect.
  3. Fasteners being on weather side of metal are to be a minimum #10 size "Scots" type screw with metal-backed neoprene washer integral with the head of the screw, or 3/16" diameter minimum steel rivet.
    - a. Locate and space fastenings for true vertical and horizontal alignment. Use proper type fastening tools to obtain controlled uniform compression for positive seal without rupture of neoprene washer.
  4. Use stainless steel fasteners for exterior application and cadmium plated fasteners for interior applications. Use painted fasteners where fastening into painted panel or trim.
- C. Fasteners: Stainless steel: Fastener size and penetrations into various substrates should be as follows:
1. Wood: ¼ inch screw x 2 inch penetration or 1 ½ inch annular ring stainless steel roofing nail.
  2. Concrete: ¼ inch "zamac" nail-in x 1 ½ inch penetration.
  3. Concrete Block: ¼ inch "zamac" nail-in x 1 ½ inch penetration.
- D. Fastener Schedule: Anchorage for below assumed to be into wood blocking, see details for other specifics.
1. Continuous Cleats: 1 ½ inch annular ring stainless steel roofing nails at 6 inches on center maximum.
  2. See Fastener Schedule sheets included as part of the project documents.
  3. For all conditions not covered, refer to fastener specifications above or consult with Architect.
- E. Sealant: Sealant specified in Section 07900.
- F. Plastic Cement: ASTM D 4586, Type I.
- G. Flashing Tape (concealed application): Double sided, gray extruded or preformed, 99% solids, cross linked polyisobutylene compound, non-sag, non-toxic, non-staining, permanently elastic self adhesive tape. One eighth (1/8) inch minimum thickness, 3/4" minimum width unless otherwise noted on the drawings.
1. Pecora Corporation Extru-Seal Glazing Tape
  2. Tremco Construction Products 440 II Tape
  3. Equivalent products as approved by the Architect.
- H. Solder/Flux/Cleaner: ASTM B 32;
1. Solder: type suitable for application and material being soldered. ASTM B-32; 50/50 lead/tin type or ASTM B-32: 90/10 tin/silver type

## SHEET METAL FLASHING AND TRIM SECTION 07620

---

2. Flux: Acid - Chloride type
  3. Flux Cleaner: Washing Soda Solution - 5% to 10%
- I. Sheet Metal Adhesive: Aluminum adhesive, two component system:
1. IPS WELD-ON SS300, Contact: Rudolph Bros. & Co., 6550 Oley Speaks Way, P.O. Box 425, Canal Winchester, Ohio 43110-0425, (614) 833-0707
  2. SciGrip SG5000 Series, manufactured by SCIGRIP Americas, 600 Ellis Road, Durham, NC 27703. Contact: (887) 477-4583, (www.scigrip.com)
  3. Partite Methacrylate Adhesive 7300 Series, manufactured by Parson Adhesives, Inc., 3345 Auburn Road, Suite 107, Rochester Hills, MI 48309. Contact: (248) 299-5585, (www.parsonadhesives.com)
  4. Equivalent products as approved by the Architect.

### 2.3 FABRICATION

- A. Form sections shape indicated on Drawings, accurate in size, square, and free from distortion or defects.
- B. Fabricate cleats of same material as sheet metal, interlocking with sheet.
- C. Form pieces in longest possible lengths.
- D. At all metal roofing termination and transition assemblies / flashing which are to be fabricated using pre-finished metal per the project details; utilize the specified sheet metal adhesive in lieu of soldering or welding, unless noted otherwise by the details
- E. Hem exposed edges on underside 1/2 inch; miter and seam corners.
- F. Form material with flat lock seams, except where otherwise indicated. At moving joints, use sealed lapped, bayonet-type or interlocking hooked seams.
- G. Fabricate corners from one piece with minimum 18 inch long legs; solder for rigidity, seal with sealant.
- H. Pretin edges of stainless steel sheet. Solder shop formed metal joints. After soldering, remove flux. Wipe and wash solder joints clean. Weather seal joints. (Heliarc shop formed aluminum joints).
- I. Perform soldering work slowly, with properly heated irons to thoroughly heat seam material and sweat solder through full width of seam that shall show not less than 1 inch of evenly flowed solder.
  1. Start soldering immediately after application of flux.
  2. Solder flat locked seams.
- J. Fabricate vertical faces with bottom edge formed outward 1 inch and hemmed to form drip.
- K. Fabricate flashings to allow toe to extend 1 1/2" over any wood nailers where applicable. Return and brake edges.

## SHEET METAL FLASHING AND TRIM SECTION 07620

---

- L. At all fabrication of thermoplastic coated aluminum, remove coating from metal surfaces to be joined, bond metal surfaces and all joints using the specified epoxy adhesive per the manufacturer's recommendations.
- M. Heat weld the manufacturer approved thermoplastic flashing membrane over all joints in PVC coated metal flashing fabrications once epoxy adhesive has set.

### 2.4 FINISH

- A. Dissimilar Metal Isolation: Where applicable, back paint concealed metal surfaces with protective backing paint to a minimum dry film thickness of 15 mils when dissimilar metals are in contact.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Section 01040 - Administrative Requirements: Coordination and project conditions.
- B. Verify roofing termination and base flashings are in place, sealed, and secure.
- C. Do not proceed with work of this section until conditions detrimental to the proper and timely completion of the work have been corrected in an acceptable manner.

### 3.2 PREPARATION

- A. Install starter and edge strips, and cleats before starting installation.
- B. Install surface mounted counterflashing and skirt metals to lines and levels indicated on Drawings. Seal top of counterflashing with sealant.
- C. Paint concealed metal surfaces with protective backing paint to minimum dry film thickness of 15 mils where applicable.

### 3.3 INSTALLATION

- A. Where applicable, insert flashings into receivers to form tight fit.
- B. Secure flashing in place using concealed fasteners. Use exposed fasteners only where permitted.
- C. Fit flashings tight in place. Make corners square, surfaces true and straight in planes, and lines accurate to profiles.
- D. Solder / weld per metal type metal joints for full metal surface contact. After soldering, wash metal clean with neutralizing solution and rinse with water.
- E. Seal metal joints watertight.



**SHEET METAL FLASHING AND TRIM  
SECTION 07620**

---

3.4 FIELD QUALITY CONTROL

- A. Division 1 - Quality Requirements: Field inspecting, testing, adjusting, and balancing.
- B. Inspection will involve surveillance of Work during installation to ascertain compliance with specified requirements.

3.5 SCHEDULE (Thermoplastic Roofing)

	<u>Location</u>	<u>Metal Type</u>	<u>Thickness</u>	<u>Finish</u>
A.	Counterflashings	Stainless	24 gage	Mill Finish
B.	C.F. Receivers	Stainless	24 gage	Mill Finish
C.	Skirt Metal	Stainless	24 gage	Mill Finish
D.	Sill Pan Flashing	Stainless	24 gage	Mill Finish
E.	Cleats	Stainless	22 gage	Mill Finish
F.	Curtain Wall Trim	Aluminum	0.040"	Anodized Color
G.	Miscellaneous metal flashing and transitions: Stainless steel, mill finish, 24 gage, or Aluminum, PVC coated, 0.040" thickness as required by Architect. All aluminum exposed and part of the curtain wall system is to be anodized bronze to match curtain wall framing as specified.			

END OF SECTION

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section includes sealants, joint backing and accessories.
- B. Related Sections:
  - 1. Section 07620 – Sheet Metal Flashing and Trim
  - 2. Section 08800 – Glazing
  - 3. Section 08911 – Glazed Aluminum Curtain Wall

**1.2 REFERENCES**

- A. ASTM C 920 - Elastomeric Joint Sealants.
- B. ASTM C 1083 - Water Absorption of Cellular Elastomeric Gaskets and Sealants.
- C. ASTM D 1622 - Standard Test Method Apparent Density of Rigid Cellular Plastic.
- D. ASTM D 1623 - Standard Test Method for Apparent Tensile Adhesion Properties of Rigid Cellular Plastic.
- E. ASTM E 96 - Standard Test for Water Vapor Permeance.
- F. SWRI (Sealant, Waterproofing and Restoration Institute) - Sealant and Caulking Guide Specification.

**1.3 SUBMITTALS**

- A. Division 1: Submittal procedures.
- B. Products Data: Submit data indicating sealant chemical characteristics, performance criteria, substrate preparation, limitations, and color availability.
- C. Samples: Submit two samples, 1/4 x 6 inch in size illustrating sealant colors for selection.
- D. Manufacturer's Installation Instructions: Submit special procedures, surface preparation, and perimeter conditions requiring special attention.
- E. Warranty: Include coverage for installed sealants and accessories failing to achieve watertight seal, exhibit loss of adhesion or cohesion, and sealants which do not cure.

**1.4 QUALITY ASSURANCE**

- A. Perform work in strict accordance with sealant manufacturer's requirements for preparation of surfaces and material installations instructions.
- B. Maintain one copy of each document covering installation requirements on site.

1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing products specified in this section with minimum three years documented experience.
- B. Applicator: Company specializing in performing Work of this section with minimum three years documented experience, and approved by manufacturer.

1.6 ENVIRONMENTAL REQUIREMENTS

- A. Maintain temperature and humidity recommended by the sealant manufacturer during and after installation.
- B. Existing Conditions
  - 1. Verify existing conditions, such as soundness of perimeter conditions, and varying deck and wall thickness for length of anchoring services required and other visible conditions prior to Bidding.
  - 2. Report conflicts and problems to the Purchasing and Contracts Division for resolution prior to Bidding. Failure to report these conflicts and problems places the responsibility on the Contractor to complete the work in accordance with the Documents at no additional cost to the Owner.
  - 3. Replace or restore to original condition any materials or work damaged during construction.
  - 4. Surfaces not designated to receive the system shall be properly masked or otherwise protected against accidental spillage or application of the material to those areas.
  - 5. Failure to install the work in strict accordance with provisions of this Section, is subject to total rejection of work specified herein.

1.7 COORDINATION

- A. Coordination and project conditions provisions under Division 1.
- B. Coordinate Work with sections referencing this section.

1.8 WARRANTY

- A. Provide a **five (5) year** warranty under provisions of Section Division 1.

PART 2 PRODUCTS

2.1 JOINT SEALERS

- A. Manufacturers:
  - 1. Dow Corning Corp.
  - 2. GE Silicones
  - 3. Pecora Corp.

4. Sika Corp.
5. Tremco
6. Sonneborn
7. Substitutions: See Division 1 - Substitutions

**B. Products Description:**

1. Silicone Sealant (Type S): ASTM C 920, Grade NS, Class 25. Use single component, chemical curing, non-staining, non-bleeding, capable of continuous water immersion, non sagging type; color as selected or match adjacent finish materials. Acceptable Manufacturers:
  - a. Dow Corning                      Product: 795
  - b. GE                                      Product: Silpruf
  - c. Pecora Corporation              Product: 860 / 863 / 864
  - d. Tremco                                Product: Spectrem II
  - e. Architect approved equal.
2. Polyurethane Sealant (Type S): ASTM C 920, Grade NS, Class 25. Use single component, chemical curing, non-staining, non-bleeding, capable of continuous water immersion, non sagging type; color as selected or match adjacent finish materials. Acceptable Manufacturers:
  - a. Sika                                      Product: 1A
  - b. Sonneborn                            Product: NP-1
  - c. Architect approved equal.
3. Ethicone Sealant (Type S): ASTM C 920, Grade NS, Class 25. Use single component, moisture curing, solvent free, non-staining, non-non bleeding, capable of continuous water immersion, non sagging type; color as selected or match adjacent finish materials. Acceptable Manufacturers:
  - a. ChemLink                              Product: M-1
  - b. Architect approved equal.

**2.2 ACCESSORIES**

- A. Primer: Non-staining type, recommended by sealant manufacturer to suit application.
- B. Joint Cleaner: Non-corrosive and non-staining type, recommended by sealant manufacturer; compatible with joint forming materials.
- C. Joint Backing: Backer Rod of extruded polyolefin foam made of non-absorbing outer skin and a highly resilient interior network of open and closed cells which will not out-gas when ruptured. Oversize backer rod 30 to 50 percent larger than joint width.
- D. Bond Breaker: Pressure sensitive tape recommended by sealant manufacturer to suit application.

**PART 3 EXECUTION**

**3.1 EXAMINATION**

- A. Coordination and project conditions provisions see Division 1.
- B. Verify substrate surfaces and joint openings are ready to receive work.
- C. Verify joint backing and release tapes are compatible with sealant.

**3.2 PREPARATION**

- A. Remove loose materials and foreign matter impairing adhesion of sealant.
- B. Clean and prime joints.
- C. Perform preparation in accordance with ASTM C1193.
- D. Protect elements surrounding Work of this section from damage or disfiguration.

**3.3 INSTALLATION**

- A. Perform installation in accordance with ASTM C1193 and manufacturer's instructions.
- B. Measure joint dimensions and size joint backers to achieve the following, unless otherwise indicated:
  - 1. Width/depth ratio of 2: 1.
  - 2. Neck dimension no greater than 1/2 of joint width.
  - 3. Surface bond area on each side not less than 75 percent of joint width.
- C. Install bond breaker where joint backing is not used.
- D. Install sealant free of air pockets, foreign embedded matter, ridges, and sags.
- E. Apply sealant within recommended application temperature ranges. Consult manufacturer when sealant cannot be applied within these temperature ranges.
- F. Tool joints concave. channel shaped as detailed.

**3.4 CLEANING**

- A. Section 01700 - Closeout Requirements: Final cleaning.
- B. Clean adjacent soiled surfaces.

**3.5 PROTECTION OF INSTALLED CONSTRUCTION**

- A. Section 01700 - Closeout Requirements: Protecting installed construction.

B. Protect sealants until cured.

3.6 SCHEDULE (JOINT TYPES)

A.	Metal to Metal	Type: Silicone	Color to match metal
B.	Metal to PVC Roof Membrane	Type: Urethane	Color to match membrane
C.	Metal to Bitumen Materials	Type: Ethicone	Color to match membrane
D.	CMU / Stucco Joints	Type: Polyurethane	Color to match Paint
E.	Bitumen membrane to CMU	Type: Ethicone	Color to match membrane
F.	PVC membrane to CMU	Type: Polyurethane	Color to match membrane

END OF SECTION

**PART 1 GENERAL**

**1.1 SUMMARY**

- A. Section Includes:
  - 1. Laminated glass and glazing accessories where shown on drawings, as specified herein and as needed for a complete and proper installation.
  
- B. Related Sections:
  - 1. Section 00850 – Special Conditions
  - 2. Section 01010 – Summary of Work
  - 3. Section 07900 – Joint Sealers
  - 4. Section 08911 – Glazed Aluminum Curtain Walls

**1.2 REFERENCES**

- A. ASTM - ASTM International
  - 1. C 794 - Standard Test Method for Adhesion-In-Peel of Elastomeric Joint Sealants.
  - 2. C 864 - Standard Specification for Dense Elastomeric Compression Seal Gaskets, Setting Blocks, and Spacers.
  - 3. C 920 - Standard Specification for Elastomeric Joint Sealants.
  - 4. C 1036 - Standard Specification for Flat Glass.
  - 5. C 1048 - Standard Specification for Heat-Treated Flat Glass-Kind HS, Kind FT, Coated and Uncoated Glass.
  - 6. C 1115 - Standard Specification for Dense Elastomeric Silicone Rubber Gaskets and Accessories.
  - 7. C 1172 - Standard Specification for Laminated Architectural Flat Glass.
  - 8. C 1184 - Standard Specification for Structural Silicone Sealants.
  - 9. C 1281 - Standard Specification for Preformed Tape Sealants for Glazing Applications.
  - 10. C 1330 - Standard Specification for Cylindrical Sealant Backing for Use with Cold Liquid Applied Sealants.
  - 11. E 119 - Standard Test Method for Fire Tests of Building Construction and Materials.
  - 12. E 330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors By Uniform Static Air Pressure Difference.
  - 13. E 1300 - Standard Practice for Determining Load Resistance of Glass in Buildings.
  - 14. F 1233 - Standard Specification for Security Glazing Materials and Systems.
  
- B. Consumer Product Safety Commission (CPSC)
  - 1. 16 CFR 1201 - Safety Standard for Architectural Glazing Materials.
  
- C. Glass Association of North America (GANA):
  - 1. Engineering Standards Manual.
  - 2. Glazing Manual.
  - 3. Laminated Glass Design Guide.

- D. National Fenestration Rating Council (NFRC):
  - 1. 100 - Procedure for Determining Fenestration Product Thermal Properties.
  - 2. 200 - Procedure for Determining Fenestration Product Solar Heat Gain Coefficients at Normal Incidence.
  - 3. 300 - Procedures for Determining Solar Optical Properties of Simple Fenestration Products.

### 1.3 SYSTEM DESCRIPTION:

- A. Glass:
  - 1. Indicated thicknesses are minimums (see schedule, Article 3.8); select actual glass thicknesses by analyzing loads and conditions.
  - 2. Size glass to withstand positive and negative wind pressure acting normal to plane in accordance with ASCE 7 and the current Florida Building Code as measured in accordance with ASTM E 330. Design glazing system to withstand Large and Small Missile Impact Testing per ASTM E 1886.
  - 3. Provide glass in thicknesses and strengths to meet or exceed following criteria:
    - a. Comply with ASTM E 1300.
    - b. Probability of breakage for vertical glazing: 8 lites per 1000 for lites set within 15 degrees of vertical and under wind load for load duration of 3 seconds.
    - c. Probability of breakage for sloped glazing: 1 lite per 1000 for lites set more than 15 degrees off vertical and under wind load for duration of 30 days.
- B. Thermal and Optical Performance Properties: Provide glass meeting specified performance properties, based on manufacturer's published test data for units of thickness indicated:
  - 1. U-factor: Per NFRC 100 expressed as Btu/square foot x hour x degree F.
  - 2. Solar heat gain coefficient: Per NFRC 200.
  - 3. Solar optical properties: Per NFRC 300.

### 1.4 SUBMITTALS

- A. Submittals for Review:
  - 1. Product Data: Descriptive data and performance attributes for insulated glass.
  - 2. Shop Drawings: manufacturer's or fabricator's shop drawings, including plans, elevations, sections, and details, indicating glass dimensions, tolerances, types, thicknesses, and coatings.
  - 3. Samples: Submit manufacturer's samples of each type, thickness, and coating.
    - a. 12 x 12 inch glass samples.
    - b. 1/4 x 1/4 x 3 inch long sealant samples showing available colors.
  - 4. Manufacturer's Installation Instructions.
  - 5. Warranty: Sample warranty form for standard warranty for laminated glass units.
- B. Quality Control Submittals:



1. Test Report: Preconstruction adhesion and compatibility test report from glazing sealant manufacturer, based on submitted samples or acceptable data from previous testing of current formulations with similar products.
  2. Manufacturer's written certification of fabricator/installer.
- C. Design Data: Signed and sealed by professional engineer licensed in the state of Florida.

#### 1.5 QUALITY ASSURANCE

- A. Manufacturer's Qualifications: Minimum of three (3) years' experience manufacturing solar control coated glass.
- B. Installer Qualifications:
1. Minimum three (3) years documented experience in work of this Section.
  2. Written certification by glass manufacturer
- C. Perform Work in accordance with GANA Glazing Manual, GANA Laminated Glass Design Guide.

#### 1.6 PROJECT CONDITIONS

- A. Perform glazing when ambient temperature is above 40 degrees F.
- B. Perform glazing on dry surfaces.

#### 1.7 WARRANTY

- A. Glass Coatings: Provide manufacturer's 10 year warranty against peeling, cracking, or deterioration of coating under normal conditions.

### PART 2 PRODUCTS

#### 2.1 MANUFACTURERS

- A. Acceptable Manufacturers - Glass:
1. **Design Basis**: Contract Documents are based on products by PPG Industries ([www.ppg.com](http://www.ppg.com)).
  2. Equivalent products by following manufacturers are acceptable:
    - a. Oldcastle Building Envelope. ([www.oldcastlebe.com](http://www.oldcastlebe.com))
    - b. Pilkington Architectural. ([www.pilkington.com](http://www.pilkington.com))
    - c. Viracon, Inc. ([www.viracon.com](http://www.viracon.com))
  3. Substitutions under the provisions of Division 1 are permitted.

#### 2.2 MATERIALS – GLASS

- A. Clear Heat Strengthened Glass:

1. ASTM C 1048, Type 1 transparent flat, Class 1 clear, Quality q3 glazing select, Kind: HS heat strengthened.

## 2.3 ACCESSORIES

- A. Setting Blocks:
1. ASTM C 864, neoprene or EPDM, or ASTM C 1115, silicone; 80 to 90 Shore A durometer hardness. As per manufacturer's instructions.
- B. Spacers:
1. ASTM C 864, neoprene or EPDM, or ASTM C 1115, silicone; 50 to 60 Shore A durometer hardness. As per manufacturer's instructions.
- C. Glazing Gaskets:
1. Dense compression gaskets: ASTM C 864, neoprene or EPDM, or ASTM C 1115, silicone or thermoplastic polyolefin rubber, molded or extruded shape to fit glazing channel retaining slot; black color. As per manufacturer's instructions.
  2. Soft compression gaskets: ASTM C 509, Type II, black, molded or extruded, neoprene, EPDM, silicone or thermoplastic polyolefin rubber, of profile and hardness required to maintain watertight seal; black color. As per manufacturer's instructions.
- D. Contact Sealant: (for shop glazed, "unitized" structural glazing system)
1. Type: ASTM C 1184, multi component, high modulus, neutral chemical curing silicone glazing and curtain wall sealant.
  2. Movement capability: 12 percent in extension and compression.
  3. Compatible with glass unit edge seals; tested to ASTM C 1294.
  4. Color: To be selected from manufacturer's full color range.
- E. Contact Sealant:
1. Type: Single component, medium modulus, neutral moisture curing silicone sealant; ASTM C 1184 and ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, G and A.
  2. Movement capability: 50 percent in extension and compression.
  3. Compatible with glass unit edge seals; tested to ASTM C 1294.
  4. Color: To be selected from manufacturer's full color range.
- F. Weatherseal Sealant:
1. Type: Single component, low modulus, neutral moisture curing silicone sealant; ASTM C 920, Type S, Grade NS, Class 25, Use NT, M, G and A.
  2. Movement capability: 50 percent in extension and compression.
  3. Compatible with glass unit edge seals; tested to ASTM C 1294.
  4. Color: To be selected from manufacturer's full color range.
- G. Sealant Backing:
1. ASTM C 1330, Type O, size and density to control glazing sealant depth and produce optimum glazing sealant performance.

- H. Primer: As recommended by glazing sealant manufacturer.
- I. Glazing Tape:
  - 1. ASTM C 1281 and AAMA 800; butyl based elastomeric tape with integral resilient tube spacer, 10 to 15 Shore A durometer hardness, black color, coiled on release paper; widths required for installation.
- J. Laminating Film:
  - 1. Polyvinyl butyral (pvb) sheet, minimum .090 inches thick, clear.

## 2.4 FABRICATION

- A. Annealed Glass: Comply with ASTM C 1036.
- B. Heat Strengthened Glass:
  - 1. Comply with ASTM C 1048.
  - 2. Process in horizontal position so that inherent roller distortion will run parallel to building floor lines after installation.
- C. Fabrication Tolerances: ASTM C 1036 and ASTM C 1048.
- D. Glass Identification:
  - 1. Apply manufacturer's label indicating type and thickness to each light of glass. Show position of exterior face when installed, where applicable.
- E. Source Quality Control:
  - 1. Preconstruction adhesion and compatibility testing:
    - a. Perform adhesion test including ultraviolet exposure through glass on production samples of metals and glass in accordance with ASTM C 794.
    - b. Test glass units, glazing materials and glass framing members with specified finish for sealant compatibility, priming, and preparation requirements for optimum adhesion and performance.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Site Verification and Conditions:
  - 1. Verify that site conditions are acceptable for installation of the glass.
  - 2. Verify openings for glazing are correctly sized and within tolerance.
  - 3. Verify that a functioning weep system is present.
  - 4. Verify that the minimum required face and edge clearances are being followed.
  - 5. Do not proceed with glazing until unsatisfactory conditions have been corrected.

### 3.2 PREPARATION

- A. Protection:
  - 1. Handle and store product according to manufacturers' recommendations.
- B. Surface Preparation:
  - 1. Clean and prepare glazing channels and other framing members to receive glass.
- C. Clean glazing rabbets; remove loose and foreign matter.
- D. Remove protective coatings on metal surfaces.
- E. Clean glass just prior to installation.

### 3.3 INSTALLATION – GENERAL

- A. Install glass in accordance with glass manufacturer's instructions.
- B. Maintain manufacturer's recommended edge and face clearances between glass and frame members.

### 3.4 INSTALLATION - PRESSURE GLAZING METHOD

- A. Set glass unit in opening as recommended by system manufacturer.
- B. Tighten fasteners simultaneously at rate recommended by manufacturer to avoid unequal point pressures on glass.
- C. Torque fasteners to achieve required pressure against glass. Do not over tighten.

### 3.5 PROTECTION

- A. Protect glass from breakage after installation by promptly installing streamers or ribbons, suitably attached to the framing and held free from glass. Do not apply warning markings, streamers, ribbons or other items directly to the glass except as specifically directed by the Architect.

### 3.6 CLEANING

- A. Clean excess sealant or compound from glass and framing members immediately after application using solvents or cleaners recommended by manufacturers.
- B. Wash and polish all glass on all faces, installed in all wall systems, exterior and interior, as glazing is completed, and on substantial completion of the work.

3.7 CLEAN-UP

- A. Remove accumulation of waste materials rubbish, excess containers and packaging as work progresses. Dispose of waste off-site.

3.8 SCHEDULE

- A. Insulated Glass Units:
  - 1. Conformance: ASTM C 1172 and complying with testing requirements in CPSC 16CFR-1201 for Category III materials and with "Windborne-Debris-Impact Resistance" Paragraph in "Quality Assurance" Article.
  - 2. Glass:
    - a. Exterior lite 1/4" thick, clear color, tempered glass with a surface coating of PPG Solarban 70 on the number 2 surface.
    - b. Air space of 1/2" inch.
    - c. Interior lite 1/4" thick, clear color, tempered glass.
  - 3. Sealant: As recommended and approved by glass manufacturer.
  - 4. Locations: Aluminum-framed curtain wall.

END OF SECTION

# GLAZED ALUMINUM CURTAIN WALLS

## SECTION 08911

---

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section Includes:
1. Furnish and install architectural aluminum curtain wall complete with related components as shown on drawings and specified in this section.
- B. Related Sections:
1. Section 00850 – Special Conditions
  2. Section 01010 – Summary of Work
  3. Section 02070 – Selective Demolition
  4. Section 07620 – Sheet Metal Flashing & Trim
  5. Section 07900 – Joint Sealers
  6. Section 08800 – Glazing

#### 1.2 REFERENCES

- A. AAMA – American Architectural Manufacturers Association
1. 611 - Voluntary Specification for Anodized Architectural Aluminum.
  2. 1503 - Voluntary Test Method for Thermal Transmittance and Condensation Resistance of Windows, Doors and Glazed Wall Sections.
  3. 2604 - Voluntary Specification, Performance Requirements and Test Procedures for High Performance Organic Coatings on Architectural Extrusions and Panels.
  4. 2605 - Voluntary Specification, Performance Requirements and Test Procedures for Superior Performing Organic Coatings on Architectural Extrusions and Panels.
- B. ASCE - American Society of Civil Engineers 7 - Minimum Design Loads for Buildings and Other Structures.
- C. AWS – American Welding Society
1. D1.1 - Structural Welding Code - Steel.
  2. D1.2 - Structural Welding Code - Aluminum.
- D. ASTM - ASTM International :
1. A36/A36M - Standard Specification for Carbon Structural Steel
  2. B85 - Standard Specification for Aluminum-Alloy Die Casting
  3. B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
  4. B221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes
  5. C920 - Standard Specification for Elastomeric Joint Sealants
  6. E283 - Standard Test Method for Rate of Air Leakage through Exterior Windows, Curtain Walls, and Doors
  7. E330 - Standard Test Method for Structural Performance of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference

## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

8. E331 - Standard Test Method for Water Penetration of Exterior Windows, Curtain Walls, and Doors by Uniform Static Air Pressure Difference.
9. E783 - Standard Test Method for Field Measurement of Air Leakage Through Installed Exterior Windows and Doors
10. E1105 - Standard Test Method for Field Determination of Water Penetration of Installed Exterior Windows, Skylights, Doors, and Curtain Walls by Uniform or Cyclic Static Air Pressure Difference

### 1.3 SYSTEM DESCRIPTION

- A. Nominal 2 ½" x 8 ½" and 2 ½" x 6" frames sizes (See Schedule on Sheet G01 in the plans for more specific information by location) hurricane resistant aluminum curtain wall window systems which includes tubular aluminum sections, shop fabricated, factory finished, vision glass, related flashings and with anchorage and attachment devices.
  1. A separate stainless steel sill pan flashing system is to be provided and installed in compliance with the project details by the roof flashing installer under specification section 07620.

### 1.4 LABORATORY TESTING AND PERFORMANCE REQUIREMENTS

- A. Test Units
  1. Air, water, and structural test unit size shall be a minimum of two stories high and two lites wide, and consist of minimum 4 units.
  2. Thermal test unit sizes shall be 78 ¾" (2000 mm) wide x 78 ¾" (2000 mm) high with one intermediate vertical mullion and two lites of glass.
- B. Test Procedures and Performance
  1. Air Infiltration Test
    - a. Test unit in accordance with ASTM E 283 at a static air pressure difference of 6.24 psf (300 Pa).
    - b. Air infiltration shall not exceed .06 cfm/SF (.31 l/s•m<sup>2</sup>) of unit.
  2. Water Resistance Test
    - a. Test unit in accordance with ASTM E 331.
    - b. The test for static water penetration (ASTM E 331) shall be conducted at an air pressure difference of 15.0 psf (720 Pa). There shall be no water leakage as defined by AAMA 501.1, paragraph 5.5.
  3. Uniform Load Deflection Test
    - a. Test in accordance with ASTM E 330.
    - b. Deflection under design load shall not exceed L/175 for spans less than 162" (4114 mm).
    - c. Deflection under design load shall not exceed L/240 +1/4"(6 mm) for spans greater than 162" (4114 mm).
  4. Uniform Load Structural Test
    - a. Test in accordance with ASTM E 330 at a pressure 1.5 times the design wind pressure in 1.05.B.3.b.

## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

- b. At conclusion of the test there shall be no glass breakage, permanent damage to fasteners, curtain wall parts, or any other damage that would cause the curtain wall to be defective.
- 5. Condensation Resistance (CR)
  - a. Test unit in accordance with NFRC 500-2010.
- 6. Thermal Transmittance Test (Conductive U-Factor)
  - a. Test unit in accordance with NFRC 100-2010.
  - b. Follow current Florida Building Code prescriptive requirements.

### 1.5 FIELD TESTING AND PERFORMANCE REQUIREMENTS

#### A. Test Units

- 1. Air, water, and structural test unit size shall be a representative sample of typical construction and shall have no outstanding punch list or other visible defects. If no test area and/or location have been identified, the accepted test lab doing the test shall select an area. This area shall be selected to provide representative performance data, usually a minimum of 100 ft<sup>2</sup>. The area to be tested shall include perimeter caulking, typical splices, frame intersections, and, if applicable, at least 2 entire vision lites and 2 entire spandrel lites containing an intermediate horizontal member. All operable components within the test area shall be isolated and exempt from the test procedure.
- 2. Accepted test unit may remain a part of the final construction.

#### B. Test Procedures and Performance

- 1. Air Infiltration Test
  - a. Test unit in accordance with AAMA 503-03 for field testing. The unit test shall be conducted at a minimum uniform static test pressure differential of at least 1.57 psf (75 Pa), but at a pressure differential not to exceed 6.24 psf (300 Pa).
  - b. The maximum allowable rates of air leakage for field testing shall not exceed 1.5 times the project specification rate or .09 cfm/SF (.45 l/s•m<sup>2</sup>), whichever is greater.
- 2. Water Resistance Test
  - a. Test unit in accordance with AAMA 503-03.
  - b. The field water penetration resistance tests shall be conducted at a static test pressure of two-thirds of the specified project water penetration test pressure, but not less than 6.24 psf (300 Pa).

### 1.6 SUBMITTALS

#### A. Shop Drawings (include the following information):

- 1. System dimensions, framed opening requirements and tolerances, affected related Work and locations of expansion and contraction joints with details.
- 2. Joining techniques, provision for expansion and contraction, anchorage details, and framing member profiles, elevations, and details.
- 3. Materials and finishes.
- 4. Relative layout of adjacent and supporting construction.
- 5. Glass, setting blocks, jamb blocking, and glazing seals.



## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

6. Weep drainage network.
  7. Joint sealants, backer rods, bond breakers, and primers.
  8. Design Data: Loads applied to structure: Location, direction, and magnitude certified (signed and sealed) by Professional Structural Engineer licensed in the State of Florida.
- B. Product Data:
1. Manufacturer's printed product information.
  2. Product information which provides component dimensions, description of components within assembly, anchorage and fasteners, glass and infill and internal drainage details.
- C. Samples:
1. 3 x 3 inch coating samples showing available colors.
  2. 12 inch long aluminum framing system samples for each profile, showing cross section and finish.
- D. Quality Control Submittals:
1. Test Reports: Certified results of previous tests [by a recognized independent laboratory] substantiating compliance with specified design and performance criteria, current within past 5 years.
  2. Welder Qualifications/Certifications: As required by AWS D1.1 and D1.2.
- E. Manufacturer's Installation Instructions.
- F. Manufacturer's Field Reports: Submit observation and compliance reports as work progresses.

### 1.7 CLOSEOUT SUBMITTALS

- A. Submit in accordance with Section 01700 – Closeout Submittals:
1. Design Data
  2. Test Reports: Submit certified test reports showing compliance with specified performance characteristics and physical properties.
  3. Manufacturer's Certificate: Product certificates signed by manufacturer, certifying materials comply with specified performance characteristics and physical requirements.
  4. Manufacturer's Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.

### 1.8 QUALITY ASSURANCE

- A. Perform Work in accordance with AAMA SFM-1 and AAMA - Metal Curtain Wall, Window, Store Front and Entrance - Guide Specifications Manual.
- B. Manufacturer and Installer: Company specializing in manufacturing aluminum glazing systems with minimum five (5) years documented experience.

## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

- C. Design structural support framing components under direct supervision of a Professional Structural Engineer experienced in design of this Work and licensed in the State of Florida.

### 1.9 PRE-INSTALLATION MEETING

- A. Comply with applicable provisions of Section 01040 – Administrative Requirements.
- B. Conduct Pre-installation meeting to verify project requirements, substrate conditions, manufacturer's installation instructions and manufacturer's warranty requirements.

### 1.10 PRODUCT DELIVERY, STORAGE AND HANDLING

- A. Store and handle windows, mullions, panels, hardware and all appurtenant items in strict compliance with the manufacturer's instructions.
- B. Protect units adequately against damage from the elements, construction activities and other hazards before, during and after installation.

### 1.11 PROJECT CONDITIONS

- A. Comply with applicable provisions of Section 01040 – Administrative Requirements.
- B. Field Measurements: Verify actual measurements/openings by field measurements before fabrication; show recorded measurements on shop drawings. Coordinate field measurements and fabrication schedule with construction progress to avoid construction delays

### 1.12 WARRANTY

- A. Total Curtain Wall Installation
  - 1. The responsible contractor shall assume full responsibility and warrant for 3 (three) years the satisfactory performance of the total curtain wall installation. This includes the glass (including insulated units), glazing, anchorage and setting system, sealing, flashing, etc. as it relates to air, water, and structural adequacy and the specifications and approved shop drawings.
  - 2. Any deficiencies due to such elements not meeting the specifications shall be corrected by the responsible contractor at their expense during the warranty period.
- B. Curtian Wall Material and Workmanship
  - 1. Provide written guarantee against defects in material and workmanship for 10 (ten) years from the date of substantial completion.
- C. Glass
  - 1. Provide written warranty for insulated glass units, that they will be free from obstruction of vision as a result of dust or film formation on the internal glass

## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

- surfaces caused by failure of the hermetic seal due to defects in material and workmanship.
- 2. Warranty period shall be for 10 (ten) years.
- D. Finish
  - 1. Warranty period shall be for 10 (ten) years from the date of final shipment.

### PART 2 PRODUCTS

#### 2.1 ACCEPTABLE PRODUCTS:

- A. Manufacturers:
  - 1. CT Windows, LLC – Series T-850A Aluminum Unitized Curtain Wall (Basis of Design)
  - 2. Wausau Materials Corporation – Superwall
  - 3. Oldcastle Building Envelope – Reliance
  - 4. YKK – YCW 750 XT
  - 5. Kawneer – 1600 Wall System 1
  - 6. Architect approved equal.
- B. Product options and substitutions are permitted. Refer to Section 01631 – Product Substitution Procedures.

#### 2.2 MATERIALS

- A. Aluminum Components: Alloy and temper best suited to application.
  - 1. Extrusions: ASTM B 221; AA-6063-T5
  - 2. Sheet: ASTM B 209
  - 3. Castings: ASTM B 85
- B. Glass:
  - 1. Exterior lite ¼" thick, clear color, tempered glass with a surface coating of PPG Solarban 70 on the number 2 surface.
  - 2. Air space of ½" inch.
  - 3. Interior lite ¼" thick, clear color, tempered glass.

#### 2.3 ACCESSORIES

- A. Fasteners:
  - 1. Perimeter and floor line anchors shall be aluminum or steel. All steel anchors shall be properly insulated from the aluminum.
- B. Joint Sealants:
  - 1. Perimeter Sealant: As specified in Section 07900 and approved by the curtain wall system manufacturer.
  - 2. Internal Sealant: Used Within System (Not Used for Glazing): ASTM C 920, Type S, Grade NS, Class 25, Uses NT, M, A, and O; single component silicone,

## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

non-sag, plus or minus 25 percent movement capability. As approved by the curtain wall system manufacturer.

### 2.4 FABRICATION

- A. Aluminum Extrusions:
  - 1. Shapes and thicknesses as shown and as required to fulfill performance requirements and meet ASTM B 221.
- B. Frame:
  - 1. Frame components shall use screw spline type construction.
  - 2. Curtain wall system is able to accommodate separate interior and exterior finishes and colors.
- C. Glazing:
  - 1. Outside glazed curtain wall system shall be capture glazed by means of structural silicone with an interior silicone spacer and sealant with external dense EPDM drive-in wedge gasket.
- D. Finish:
  - 1. Anodic
    - a. Finish all exposed areas of aluminum windows and components with electrolytically deposited color in accordance with Aluminum Association Designation AA-M10-C22-A44 Color shall be bronze anodized.
- E. General:
  - 1. Fabricate components with minimum clearances and shim spacing around perimeter of assembly, yet enabling installation and dynamic movement of perimeter seal.
  - 2. Accurately fit and secure joints and intersections. Make joints flush, hairline, and weathertight.
  - 3. Fabricate in largest practical units.
  - 4. Conceal fasteners and attachments from view.
  - 5. Reinforce framing members with internal steel when required to support imposed loads.
  - 6. Fabricate so that components will not be excessively strained under normal conditions of use.
  - 7. Provide slotted holes for erection adjustment.
  - 8. Furnish fascias, covers, closures, and trim members that are attached to curtain wall.
  - 9. Fabricate aluminum components with integral low conductance thermal barrier located between exterior and interior exposed components that eliminates metal-to-metal contact.
  - 10. Vent glazing cavity to exterior so that pressure differentials during driving rain conditions will not drive rain past outer glazing cap.

**GLAZED ALUMINUM CURTAIN WALLS  
SECTION 08911**

---

**PART 3 EXECUTION**

**3.1 GENERAL**

- A. Comply with applicable provisions of Section 01040 – Administrative Requirements.

**3.2 EXAMINATION**

- A. Verify dimensions, tolerances, and method of attachment with other work
- B. Verify wall openings and adjoining air and vapor seal materials are ready to receive work of this Section.
- C. Verify that installation of stainless steel sill pan flashing and any necessary stucco opening repair have been completed in an acceptable manner and is ready to receive the work of this Section.

**3.3 INSTALLATION**

- A. Install in accordance with manufacturer's instructions and approved Shop Drawings.
- B. Install components plumb and level, in proper plane, free from warp and twist. Maintain assembly dimensional tolerances, aligning with adjacent work
  - 1. Attach to structure to permit sufficient adjustment to accommodate construction tolerances and other irregularities.
  - 2. Provide alignment attachments and shims to permanently fasten system to building structure.
  - 3. Provide thermal isolation where components penetrate or disrupt building insulation.
  - 4. Coordinate attachment and seal of perimeter air and vapor barrier materials.
  - 5. Pack fibrous insulation in shim spaces at perimeter of assembly to maintain continuity of thermal barrier.
- C. Weld adjustable anchorage connections after curtain wall is properly positioned. Perform welding in accordance with AWS D1.1 and D1.2.
- D. Compensate for predictable conditions that could cause system to exceed allowable tolerances.
- E. Employ reinforcing members if required. If temporary braces or erection clips are used, prevent damage to exposed surfaces.
- F. Install glass and accessories in accordance with Section 08800 – Glazing.

**3.4 ERECTION TOLERANCES**

- A. Comply with applicable provisions of Section 01600 – Materials and Equipment.

## GLAZED ALUMINUM CURTAIN WALLS SECTION 08911

---

- B. Installation tolerances:
  - 1. Variation from plane or locations shown on Shop Drawings: Maximum 0.06 inches every 3 ft, non-cumulative or 1/16 inch per 10 ft, whichever is less.
  - 2. Maximum Misalignment of Two Adjoining Members Abutting in Plane: 1/32 inch.
  - 3. Joint sealer space between curtain wall and adjacent construction: 1/4 inch plus or minus 1/16 inch.

### 3.5 FIELD QUALITY CONTROL

- A. Comply with applicable provisions of Section 01600 – Materials and Requirements.
- B. Testing and Inspection Services:
  - 1. At beginning of installation, Architect will select one location for testing.
  - 2. Testing will be done as described in 1.5 “Field testing and Performance Requirements” in this section.
  - 3. When installation is 50 percent complete, Architect will select one additional location for field testing.
  - 4. For each area with failing test results, Architect will select one additional location for field testing.

### 3.6 ADJUSTING

- A. Provide product adjustments to ensure compliance with specification requirements.
- B. Touch up minor scratches and abrasions on finished surfaces to match original finish.

### 3.7 CLEANING

- A. Comply with applicable provisions of Section 01700 – Closeout Requirements, final cleaning.
- B. Remove protective material from pre-finished aluminum surfaces.
- C. Wash down surfaces with a solution of mild detergent in warm water, applied with soft, clean wiping cloths. Take care to remove dirt from corners. Wipe surfaces clean.
- D. Remove excess sealant by method acceptable to sealant manufacturer.

### 3.8 PROTECTION OF FINISHED WORK

- A. Comply with applicable provisions of Section 01700 – Closeout Requirements, Protecting Installed Construction.
- B. Protect finished Work from damage.

**GLAZED ALUMINUM CURTAIN WALLS  
SECTION 08911**

---

3.9 SCHEDULES

- A. A schedule describing the physical characteristics, locations of, and sizes of the framing for the new curtain wall systems is included on Sheet G01 in the Plans for reference

END OF SECTION

## PART 1 GENERAL

### 1.1 SUMMARY

- A. Section Includes:
  - 1. Surface preparation and field application of paints for use in touching up exposed existing steel structures being modified.
  - 2. Surface preparation and field application of new paint to newly replaced drywall at knee-wall interiors near the new curtain walls.
  - 3. Surface preparation and field application of paints for use in touching up existing surfaces.
- B. Related Sections:
  - 1. Section 07620 – Sheet Metal Flashing and Trim
  - 3. Section 07900 – Joint Sealers

### 1.2 REFERENCES

- A. ASTM D 16 - Definitions of Terms Relating to Paint, Varnish, Lacquer, and Related Products
- B. PDCA (Painting and Decorating Contractors of America) - Painting - Architectural Specifications Manual
- C. SSPC (Steel Structures Painting Council) - Steel Structures Painting Manual

### 1.3 DEFINITIONS

- A. Conform to ASTM D 16 for interpretation of terms used in this Section.

### 1.4 SUBMITTALS

- A. Submit under provisions of Division 1
- B. Product Data: Provide data on all finishing products
- C. Samples: Submit manufacturer's color chart illustrating range of colors available for each surface finishing product scheduled
- D. Manufacturer's Installation Instructions: Manufacturer's Instructions: Indicate special surface preparation procedures and substrate conditions requiring special attention.

### 1.5 QUALIFICATIONS

- A. Manufacturer: Company specializing in manufacturing the Products specified in this section with minimum five years experience.



- B. Applicator: Company specializing in performing the work of this section with minimum 3 years documented experience.

1.6 REGULATORY REQUIREMENTS

- A. Conform to code for flame and smoke rating requirements for finishes.

1.7 MOCK-UP (FIELD SAMPLES)

- A. Provide field sample of paint under provisions of Division 1.
- B. If required, provide field sample panel, fascia edge metal, illustrating special coating color, texture, and finish. Locate where directed.
- C. Accepted samples may remain as part of the Work.

1.8 DELIVERY, STORAGE AND HANDLING

- A. Deliver to site, store, protect and handle products under provisions of Division 1.
- B. Deliver products to site in sealed and labeled containers; inspect to verify acceptability.
- C. Container label to include manufacturer's name, type of paint, brand name, lot number, brand code, coverage, surface preparation, drying time, cleanup requirements, color designation, and instructions for mixing and reducing.
- D. Store paint materials at minimum ambient temperature of 45 degrees F and a maximum of 90 degrees F, in ventilated area, and as required by manufacturer's instructions.

1.9 PROJECT CONDITIONS

- A. Existing Conditions
  1. The Bidder shall verify existing conditions prior to Bidding.
  2. Conflicts and problems shall be reported to the Procurement and Contracts Division for resolution prior to Bidding. Failure to report these conflicts and problems places the responsibility on the Prime Contractor to complete the work in accordance with the Documents at no additional cost to the Owner.
  3. Replace or restore to original condition any materials or work damaged during construction.
  4. Surfaces not designated to receive the system shall be properly masked or otherwise protected against accidental spillage or application of the material to those areas.
  5. Failure to install the work in strict accordance with provisions of this Section, is subject to total rejection of work specified herein.

1.10 ENVIRONMENTAL REQUIREMENTS

- A. Do not apply materials when surface and ambient temperatures are outside the temperature ranges required by the paint product manufacturer.
- B. Do not apply exterior coatings during rain or when relative humidity is outside the humidity ranges required by the paint product manufacturer.
- C. Minimum Application Temperatures for paints and coatings: 45 degrees F for interiors; 50 degrees F for exterior; unless required otherwise by manufacturer's instructions.

1.11 EXTRA MATERIALS

- A. Provide 1 gallon of each color and type to Owner.
- B. Label each container with color, type, texture, locations, in addition to the manufacturer's label.

PART 2 PRODUCTS

2.1 PAINTING PRODUCTS

- A. Manufacturers: Paints
  - 1. Benjamin Moore
  - 2. Devoe and Reynolds
  - 3. Duron Inc.
  - 4. The Glidden Co.
  - 5. MAB Paints
  - 6. PPG Industries
  - 7. Porter Paint
  - 8. Pratt & Lambert
  - 9. Sherwin-Williams
- B. Manufacturers: Primers
  - 1. Manufacturer's specified primer for use with metals, stucco, wood and other building materials.
- C. Manufacturers: Rust Treatment Products:
  - 1. Skybrite Company – "Ospho" Rust Inhibitive Coating
  - 2. Orison Marketing, L.L.C – "Evapo-Rust" Rust Remover
  - 3. Substitutions are permitted upon approval
- D. Substitutions: Under provisions of Section Division 1

## 2.2 MATERIAL REQUIREMENTS

- A. Paint and Coatings: Ready mixed, lead free, except field catalyzed coatings. Process pigments to a soft paste consistency, capable of being readily and uniformly dispersed to a homogeneous coating; good flow and brushing properties; capable of drying or curing free of streaks or sags.
- B. Accessory Materials: Linseed oil, shellac, turpentine, paint thinners and other materials not specifically indicated but required to achieve the finishes specified, of commercial quality.

## 2.3 FINISHES

- A. Refer to schedule at end of section for surface finish schedule.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Verify site conditions under provisions of Division 1
- B. Verify that surfaces are ready to receive work as instructed by the product manufacturer.
- C. Examine surfaces scheduled to be finished prior to commencement of work. Report any condition that may potentially affect proper application.
- D. Test shop applied primer for compatibility with subsequent cover materials.

### 3.2 PREPARATION

- A. Surface Appurtenances: Remove or mask electrical plates, hardware, light fixture trim, escutcheons, and fittings prior to preparing surfaces or finishing.
- B. Correct defects and clean surfaces which affect work of this section.
- C. Seal marks or stains with shellac which may bleed through surface finishes.
- D. Impervious Surfaces: Remove mildew by scrubbing with solution of tri-sodium phosphate and bleach. Rinse with clean water and allow surface to dry.
- E. Stainless Steel Surfaces: Remove foreign matter. Brush with stiff fiber brushes using appropriate cleaning solutions followed by rinsing with fresh water. Remove dirt, dust and other contaminants from the surface prior to paint application by means of brushing, blow off with clean, dry air, or vacuum cleaning.

**MINOR PAINTING  
SECTION 09900**

---

- F. Uncoated Steel and Iron Surfaces: Remove grease, mill scale, weld splatter, dirt, and rust. Where heavy coatings of scale are evident, remove by hand wire brushing or sandblasting; clean by washing with solvent. Apply a treatment of phosphoric acid solution, ensuring weld joints are cleaned. Prime and paint after repairs.
- G. Shop Primed Steel Surfaces: Sand and scrape to remove loose primer and rust. Feather edges to make touch-up patches inconspicuous. Clean surfaces with solvent. Prime bare steel surfaces. Prime metal items including shop primed items.
- H. Rust Treatment of Sheet Steel Surfaces (Metal Decking): Sand and scrape to remove grease, scale, dirt and rust. Prepare surface as required by rust treatment manufacturer. Apply treatment to surfaces. Let stand overnight. Apply paint system.
- I. Plaster/Stucco Surfaces: Fill hairline cracks, small holes, and imperfections with latex patching plaster. Make smooth and flush with adjacent surfaces. Wash and neutralize high alkali surfaces.
- J. Gypsum Board Surfaces: Fill minor defects with filler compound. Spot prime defected areas after repair.
- K. Galvanized Surfaces: Remove surface contamination and oils and wash with solvent. Apply coat of etching primer.
- L. Aluminum Surfaces Scheduled for Paint Finish: Remove surface contamination by steam or high pressure water. Remove oxidation with acid etch and solvent washing. Apply etching primer immediately following cleaning.
- M. Exterior Wood Scheduled to Receive Paint Finish: Remove dust, grit, and foreign matter. Seal knots, pitch streaks, and sappy sections. Fill nail holes with tinted exterior paintable caulking compound after prime coat has been applied.
- N. Wood Doors Scheduled for Painting: Seal wood door top and bottom edge surfaces with clear or tinted sealer.
- O. Metal Doors Scheduled for Painting: Prime metal door top and bottom edge surfaces.

3.3 EXTENT OF WORK

- A. Small areas requiring paint and coating application shall extend over entire plane of adjacent surface areas. Verify extent with Architect and Owner prior to bidding.

3.4 APPLICATION

- A. Apply products in accordance with manufacturer's instructions.
- B. Do not apply finishes to surfaces that are not dry.

- C. Apply each coat to uniform finish. Apply each coat slightly darker than preceding coat unless otherwise approved.
- D. Allow each coat to dry before applying next coat. Vacuum clean surfaces free of loose particles. Use tack cloth just prior to applying next coat.

### 3.5 FIELD QUALITY CONTROL

- A. Field inspection will be performed under provisions of Division 1.

### 3.6 CLEANING

- A. Clean work under provisions of Division 1.
- B. Collect waste material which may constitute a fire hazard, place in closed metal containers and remove daily from site.

### 3.7 SCHEDULES

- A. Steel – Stainless: (Water Based – Acrylic System)
  - 1. One coat primer
  - 2. Two coats high performance acrylic , semi-gloss
- B. Exterior Masonry Scupper In-Fill
  - 1. One Coat of masonry primer.
  - 2. Two coats of acrylic masonry paint. Color to match existing wall
- C. Exterior Plaster (Stucco):
  - 1. One Coat of masonry primer.
  - 2. Two coats of acrylic masonry paint. Color to match existing wall.
- D. Interior Drywall (New knee-wall interior):
  - 1. One coat primer
  - 2. One coat of acrylic paint, match interior colors and finish to blend.
- E. Exterior Metal finishes:
  - 1. One coat of metal primer.
  - 2. Two coats of a acrylic metal paint. Color to match existing parapet wall counterflashing.
- F. Steel – Unprimed:
  - 1. One coat of alkyd primer
  - 2. Two coats of alkyd enamel, [gloss.] [semigloss.]
- G. Steel - Shop Primed
  - 1. Touch-up with zinc chromate primer.
  - 2. Two coats of alkyd enamel, [gloss.] [semi gloss.]

- H. Rust Treatment to Metal Surfaces
  - 1. Apply 1-2 coats of treatment (according to severity of rust)
  - 2. Let stand overnight. Apply paint system

END OF SECTION