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## **CONTRACT DOCUMENTS**

### **DIVISION 00 – PROCUREMENT AND CONTRACTING REQUIREMENTS**

As per Housing Authority of the City of Pittsburgh document index.

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## PART 1 - GENERAL

### 1.1 SUMMARY

- A. This Section includes the following:
1. Work covered by the Contract Documents.
  2. Type of the Contracts.
  3. Work under other contracts.
  4. Use of premises.
  5. Owner's occupancy requirements.
  6. Work restrictions.

### 1.2 WORK COVERED BY CONTRACT DOCUMENTS

- A. Project Identification: HACP Glen Hazel Family Community, Management No. 7065 – Siding and Trim, Gutter and Downspouts/Painting All Exterior Doors at Glen Hazel Family Community
1. Project Location: 2-985 Roselle Court, 621-909 Johnson Avenue, Pittsburgh, PA 15207
- B. Owner: Housing Authority of the City of Pittsburgh (HACP).
- C. Architect: Tusick & Associates Architects, Inc.; 21 Windsor Road, Pittsburgh, PA 15215
1. Architect's Contact: Susan Tusick [stusick@tusickarchitects.com](mailto:stusick@tusickarchitects.com)
  2. Voice 412-781-8896
- D. The Contract Documents that define the work are the architectural drawings and the specifications. The Scope of Work generally consists of the removal of existing vinyl siding and its components, removal of all rigid and batt insulation and replacing it with new fiber cement siding, new sheathing, new flashing, new rigid insulation and new batt insulation with moisture control membrane. All existing gutters, all existing downspouts with their existing cleanouts shall be replaced with new gutters, downspouts, new cleanouts. All existing hose bibs shall be replace with new frost resistant hose bibs. A exterior doors including garage doors and not including existing sliding doors shall be painted. Repair/renovations of the existing entrance canopies shall occur and repair/renovations of the two story rear porches shall occur. Existing exterior lighting mounted on the vinyl siding shall be removed, stored and reinstalled. Existing wood and metal fencing shall be temporarily removed, stored and reinstalled Buildings will remain occupied during the entire construction project. Provide temporary barricades and other protection required to prevent injury to people and/or damage to adjacent surfaces, adjacent structures remaining.

### 1.3 TYPE OF CONTRACTS

- A. Project will be constructed under a single General Construction Contract.

### 1.4 WORK UNDER OTHER CONTRACTS

- A. General: Cooperate fully with separate contractors so work on those contracts may be carried out smoothly, without interfering with or delaying work under this Contract. Coordinate the Work of this Contract with work performed under separate contracts.

Division 1- General Requirements  
Section Summary

- B. Concurrent Work: Owner may awarded separate contract(s) for construction operations at the premises. Those operations will be conducted simultaneously with work under this Contract and should not interfere with the construction operations at the Project site.

1.5 USE OF PREMISES

- A. General: Contractor shall have limited use of premises for construction operations as indicated on Drawings by the Contract limits.
- B. Use of Site: Limit use of premises to the Project site only, within the Contract limits indicated. Do not disturb portions of premises beyond the Project site.
  - 1. Owner Occupancy: Owner will occupy the premises during the entire construction period.
  - 2. Use by the public of Owner's facilities will be ongoing.
  - 3. Driveways and Entrances: Keep driveways, roadways and entrances serving premises clear and available to Owner, Owner's employees, and the public at all times. Do not use these areas outside the Project site limits for parking or storage of materials.
- C. Use of Existing Facilities: Use of existing buildings, parking area and ground outside the Project Site will not be permitted. Maintain existing building entrances, parking lots, driveways and roadways in good condition throughout construction period. Repair damage caused by construction operations. Protect adjacent buildings and their occupants during construction period.

1.6 OWNER'S OCCUPANCY REQUIREMENTS

- A. Full Owner Occupancy: Owner will occupy premises during entire construction period. Cooperate with Owner during construction operations to minimize conflicts and facilitate Owner usage. Perform the Work so as not to interfere with Owner's day-to-day operations. Maintain existing exits, unless otherwise indicated.
  - 1. Maintain access to existing walkways, corridors, and other adjacent occupied or used portions of the facility. Do not close or obstruct walkways, corridors, or other occupied or used facilities without written permission from Owner and authorities having jurisdiction.
  - 2. Provide not less than 72 hours' notice to Owner of activities that will affect Owner's operations.

1.7 WORK RESTRICTIONS

- A. On-Site Work Hours: Work shall be generally performed outside and if necessary inside the existing building during normal business working hours of 8 a.m. to 5 p.m., Monday through Friday, except otherwise indicated.
  - 1. Weekend Hours: 8 a.m. to 5 p.m.
  - 2. Hours for Utility Shutdowns on Premises: Not permitted.
    - a. Utilities on Project site may incur momentary shutdowns based on Contractors requirements.
- B. Existing Utility Interruptions: Do not interrupt utilities serving portions of facility occupied by Owner or others unless permitted under the following conditions and then only after arranging to provide temporary utility services according to requirements indicated:
  - 1. Notify Architect, Owner's Representative, and Owner not less than five days in advance of proposed utility interruptions.
  - 2. Do not proceed with utility interruptions without Owner's Representative's or Owner's written permission.

Division 1- General Requirements  
Section Summary

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 011000

**SECTION 013100**  
**PROJECT MEETINGS AND COORDINATION**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes administrative provisions for coordinating construction operations on Project including, but not limited to, the following:
  - 1. Administrative and supervisory personnel.
  - 2. Preconstruction project meeting.
  - 3. Requests for Interpretation (RFIs).

**1.2 DEFINITIONS**

- A. RFI: Request from Contractor seeking interpretation or clarification of the Contract Documents.

**1.3 COORDINATION**

- A. Coordination: Coordinate construction operations included in different Sections of the Specifications to ensure efficient and orderly installation of each part of the Work. Coordinate construction operations, included in different Sections that depend on each other for proper installation, connection, and operation.

**1.4 PROJECT MEETINGS**

- A. Preconstruction Conference: Architect will schedule a preconstruction conference before starting construction, at a time convenient to Owner, and Contractor, but no later than 15 days after execution of the Agreement. Hold the conference at Project site or another convenient location. Conduct the meeting to review responsibilities and personnel assignments.
  - 1. Attendees: Authorized representatives of Owner, Architect, and their consultants; Contractor and its superintendent; major subcontractors; suppliers; and other concerned parties shall attend the conference. All participants at the conference shall be familiar with Project and authorized to conclude matters relating to the Work.
  - 2. Agenda: Discuss items of significance that could affect progress, including the following:
    - a. Tentative construction schedule.
    - b. Critical work sequencing and long-lead items including pre-installation meeting
    - c. Designation of key personnel and their duties.
    - d. Procedures for processing field decisions and Change Orders.
    - e. Procedures for RFIs.
    - f. Procedures for testing and inspecting.
    - g. Procedures for processing Applications for Payment.
    - h. Submittal procedures.
    - i. Use of the premises.
    - j. Work restrictions.
    - k. Owner's occupancy requirements.
    - l. Responsibility for temporary facilities and controls.
    - m. Construction waste management and recycling.

- n. Parking availability.
  - o. Office, work, and storage areas.
  - p. Equipment deliveries and priorities.
  - q. Security.
  - r. Progress cleaning.
  - s. Working hours.
  - t. Identify exactly which trees require trimming.
3. Minutes: Architect will record and distribute meeting minutes.

## 1.5 REQUESTS FOR INTERPRETATION (RFIs)

- A. Procedure: Immediately on discovery of the need for interpretation of the Contract Documents, and if not possible to request interpretation at Project meeting, prepare and submit an RFI in the form specified.
- 1. RFIs shall originate with Contractor. RFIs submitted by entities other than Contractor will be returned with no response.
  - 2. Coordinate and submit RFIs in a prompt manner so as to avoid delays in Contractor's work or work of subcontractors.
- B. Required Content of the RFI: Include a detailed, legible description of item needing interpretation and the following:
- 1. Project name.
  - 2. Date.
  - 3. Name of Contractor.
  - 4. Name of Architect.
  - 5. RFI number, numbered sequentially.
  - 6. Specification Section number and title and related paragraphs, as appropriate.
  - 7. Drawing number and detail references, as appropriate.
  - 8. Field dimensions and conditions, as appropriate.
  - 9. Contractor's suggested solution(s). If Contractor's solution(s) impact the Contract Time or the Contract Sum, Contractor shall state impact in the RFI.
  - 10. Contractor's signature.
  - 11. Attachments: Include drawings, descriptions, measurements, photos, Product Data, Shop Drawings, and other information necessary to fully describe items needing interpretation.
    - a. Supplementary drawings prepared by Contractor shall include dimensions, thicknesses, structural grid references, and details of affected materials, assemblies, and attachments.
- C. Hard-Copy RFIs: Identify each page of attachments with the RFI number and sequential page number.
- D. Architect's Action: Architect will review each RFI, determine action required, and return it. Allow seven working days for Architect's response for each RFI. RFIs received after 1:00 p.m. will be considered as received the following working day.
- 1. The following RFIs will be returned without action:
    - a. Requests for approval of submittals.
    - b. Requests for approval of substitutions.
    - c. Requests for coordination information already indicated in the Contract Documents.

- d. Requests for adjustments in the Contract Time or the Contract Sum.
  - e. Requests for interpretation of Architect's actions on submittals.
  - f. Incomplete RFIs or RFIs with numerous errors.
- 2. Architect's action may include a request for additional information, in which case Architect's time for response will start again.
  - 3. Architect's action on RFIs that may result in a change to the Contract Time or the Contract Sum may be eligible for Contractor to submit Change Proposal according to Division 01 Section "Contract Modification Procedures."

PART 2 - PRODUCTS (Not Used)

PART 3 - EXECUTION (Not Used)

END OF SECTION 013100

**SECTION 014500  
PROJECT QUALITY CONTROL**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

- A. The Contractor's attention is specifically directed, but not limited, to the Uniform General and Supplementary General Conditions for the Housing Authority of the City of Pittsburgh for other requirements.

**1.2 SUMMARY**

- A. This Section provides administrative and procedural requirements for Contractor quality control on the Project.
- B. Specific quality-control requirements for individual construction activities are specified in the Sections that govern those activities. Requirements in those Sections may also cover production of manufactured products.
- C. Specified tests, inspections, and related actions do not limit Contractor's quality-control procedures to fully comply with the Contract Document requirements in all regards.
- D. Provisions of this Section do not limit the requirements for the Contractor to provide quality-control services required by the Contract Documents or the Housing Authority of the City of Pittsburgh.
- E. The following quality issues are addressed in detail in this Section:
  - 1. (1.3) Quality Control
  - 2. (1.4) Quality Assurance
  - 3. (1.5) Contractor Employed Testing Authority
  - 4. (1.6) Testing
  - 5. (1.7) Inspections
  - 6. (1.8) Pre-installation Meetings
  - 7. (1.9) Mock-ups

**1.3 QUALITY CONTROL**

- A. Quality Control shall be the sole responsibility of the Contractor, unless specifically noted otherwise. The Contractor shall be responsible for all testing, coordination, start-up, operational checkout, and commissioning of all items of Work included in the Project, unless specifically noted otherwise. All costs for these services shall be included in the Contractor's cost of work.
- B. The Contractor shall assign one employee to be responsible for Quality Control. This individual may have other responsibilities, but may not be the Contractor's Project superintendent or the Contractor's Project manager.

**1.4 QUALITY ASSURANCE**

- A. The Owner or Owner's designated representative(s) will perform quality assurance. Owner's quality assurance procedures may include observations, inspections, testing, verification,



monitoring, and any other procedures deemed necessary by the Owner to verify compliance with the Contract Documents.

- B. The Contractor shall cooperate with and provide assistance to the Owner related to the Owner's quality assurance procedures. Contractor shall provide to Owner ladders, lifts, scaffolds, lighting, protection, safety equipment and any other devices and/or equipment (including operators if required) deemed necessary by the Owner to access the Work for observation/inspection.
- C. Owner may employ independent testing agencies to perform certain specified testing, as Owner deems necessary. The Contractor shall integrate Owner's independent testing services within the Baseline Schedule and with other Project activities.
- D. Owner's employment of an independent testing agency does not relieve the Contractor of the Contractor's obligation to perform the Work in strict accordance with requirements of the Contract Documents.

#### 1.5 TESTING AGENCY

- A. The Contractor shall employ and pay for services of an independent testing agency to perform all specified testing requiring an independent agency, unless specifically noted otherwise.
- B. Contractor's employment of an independent testing agency does not relieve the Contractor of the Contractor's obligation to perform the Work in strict accordance with requirements of the Contract Documents.
- C. The Contractor Employed Testing Agency:
  - 1. The testing agency must have the experience and capability to conduct testing and inspecting indicated by ASTM standards and that specializes in the types of tests and inspections to be performed.
  - 2. The testing agency shall comply with requirements of ASTM E 329, ASTM E 543, ASTM E 548, ASTM C 1021, ASTM C 1077, ASTM C 1093, and other relevant ASTM standards.
  - 3. The testing agency's laboratory must maintain a fulltime engineer on staff to oversee and review the services. The engineer must be licensed in the State of Pennsylvania.
  - 4. The testing agency must calibrate all testing equipment at reasonable intervals (minimum yearly) with accuracy traceable to either National Bureau of Standards or accepted values of natural physical constants.
- D. The Contractor shall not employ the same testing entity engaged by the Owner for the Project, without the Owner's written approval.

#### 1.6 TESTING

- A. Where specific testing is specified in a technical section of the Specifications or indicated in the Contract Documents, the Contractor shall bear all costs of such tests unless the Owner has expressly agreed in writing to pay for the tests.
- B. Testing specifically identified to be conducted by Owner, will be performed by an independent entity and will be arranged and paid for by the Owner unless otherwise indicated in the Contract Documents. Should the test return unacceptable results, the Contractor shall bear all costs of retesting and re-inspection as well as the cost of all material consumed by testing, and replacement of unsatisfactory material and/or workmanship.

- C. The Contractor in cooperation with the Owner's Construction Inspector shall schedule the Owner's testing services.
- D. The Owner may engage additional consultants for testing, commissioning, or other special services. The activities of any such Owner consultants are in addition to Contractor testing of materials or systems necessary to prove that performance is in compliance with Contract requirements. The Contractor must cooperate with persons and firms engaged in these activities.
  - 1. The Contractor shall self-perform various tests to verify performance and/or operation of various systems. Test reports that document the tests shall be consecutively numbered and defined by scope and extent of the test.

## 1.7 INSPECTIONS

- A. All of the Work is subject to inspection and verification of correct operation prior to 100% payment of the line item(s) pertaining to that aspect of the Work.
- B. The Contractor shall incorporate adequate time for performance of all inspections and correction of noted deficiencies into the Work Progress Schedule for the Project.
- C. During the course of construction, the Owner, Architect/Engineer, and/or other Owner representatives may visit the Site for observation of the Work in place. The Contractor shall provide all necessary personnel and/or equipment for safe access to the Work to be inspected or observed, regardless of frequency. This requirement shall extend to all Owner personnel and their representatives. Some of these inspections will be informal and some will require formal notification by the Contractor.
- D. For any requested inspection, the Contractor shall complete prior inspections to ensure that items are ready for inspection and acceptance by the Owner and/or Architect/Engineer. The Contractor shall be responsible for any and all costs incurred by Owner and/or Owner representatives, including consultants, resulting from a review or inspection that was scheduled prematurely.
- E. The Contractor shall submit written notification to the Owner and Architect/Engineer a minimum of three (3) days and a maximum of eleven (11) days in advance of all requested inspections. Confirm advance notification time period with Owner for scheduling inspections.
- F. The Contractor shall provide a system of tracking all field reports, describing items noted, and resolution of each item. The Owner will review reports on a monthly basis, or as necessary. Owner may require Contractor to track all inspection field reports within Owner's internet-based project management system.
- G. The following are typical Project inspections:
  - 1. Informal Daily Reviews of Project conditions by the Owner's Construction Inspector and/or members of the Project Team. When considered appropriate, results of these reviews will be documented via Observation Reports or Memorandum.
  - 2. Concealed Space Inspections for subject areas that include partitions, structural walls, chases, crawl spaces, ceiling spaces, and any other Work, which will be difficult or impossible to examine once concealed in the final construction.
    - a. Contractor shall not enclose partitions, structural walls, chases, crawl spaces, ceiling spaces, and any other Work which will be difficult or impossible to examine once concealed in the final construction until Contractor has received written approval from Owner's Construction Inspector.

3. Overhead and Above Ceiling/Soffit Inspections are similar in nature and requirements to the Concealed Space Inspections. Soffits that are fixed in place, such as gypsum board or fiber cement board, constitute a Concealed Space Inspection. Soffits that are of "lay-in" type or where no finish soffit is scheduled are considered an "overhead" inspection. Contractor shall include Overhead and Above Ceiling/Soffit Inspections on the Work Progress Schedule.
  - a. No finish ceiling/soffit material shall be installed until all overhead Punch List items have been resolved to the satisfaction of the Owner.
  - b. Completed Work in place necessary for an Overhead Inspection shall include all required infrastructure and appurtenances, inclusive of, but not limited to the following.
    - 1) Installation and operation of all above ceiling/soffit electrical Work, including light fixtures.
    - 2) Completion and Owner approval of all required tests for above ceiling Work.
- H. The Contractor is responsible for requesting that the Owner's Construction Inspector and Architect/Engineer arrange for the inspection of materials, equipment, and Work prior to assembly or enclosure that would make the materials, equipment, or Work inaccessible for inspection and at other times as may be required.
- I. The Contractor shall coordinate the Work and schedule all inspections in advance so as not to delay the Work. All major inspections shall be indicated on the Work Progress Schedule for advance planning. Contractor shall allow a minimum of five (5) calendar days to confirm schedule of requested inspections with Owner's representatives.

#### 1.8 PREINSTALLATION MEETINGS

- A. The Contractor shall coordinate and conduct meetings to review the installation of fiber cement siding systems on the Project. As a minimum, Contractor shall schedule and conduct the Pre-installation Meeting(s) for the Work of each major building system. The Pre-installation Meeting(s) shall be convened following approval of system submittals and prior to commencement of system installation Work.
- B. The purpose of the Pre-installation Meeting(s) is for the Contractor and all applicable subcontractors and/or suppliers and/or factory representatives to discuss all aspects of the installation of the particular system. Contractor shall direct special attention to the scheduled order of Work and any impact on or by any other building systems. Contractor shall develop a strategy acceptable to the Owner for start-up, inspection and acceptance, based on Contractor's Pre-functional Checklists, so that all parties are aware of what is expected and/or acceptable.
- C. The Contractor shall ensure attendance of the installing subcontractor, manufacturer and/or supplier (if appropriate), supporting subcontractors involved in the installation, and any other parties involved in the phase of Work to be reviewed. Contractor shall notify the Owner and Architect/Engineer in writing at least five (5) days in advance of the Pre-installation Meeting(s).
- D. Each party shall be prepared to discuss in detail the staging, installation procedure, quality control, testing/inspection, safety and any other pertinent items relating to the Work being reviewed. Submittal approval shall be a prerequisite of the Pre-installation Meeting(s). At this meeting(s), Contractor shall review and discuss the scheduling, and logistics. Contractor shall bring the following to the Pre-installation Meeting(s), as a minimum, for review and discussion:
  1. Draft of the Pre-functional Checklists.
  2. Current work schedule data pertaining to the beginning, start-up, inspection, and turnover phases anticipated for the particular system.
  3. Copy of all approved submittals for the system.

E. The Contractor shall take minutes of the Pre-installation Meeting(s) and distribute to all attending parties.

F. Whether required in the Technical Specifications or not, a Pre-installation Meeting(s) shall be conducted for the following Work, if included in the Project:

1. Siding/Wall assembly

PART 2 - PRODUCTS (NOT USED)

PART 3 - EXECUTION (NOT USED)

END OF SECTION 014500

**SECTION 015000  
TEMPORARY FACILITIES AND CONTROLS**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes requirements for temporary utilities, support facilities, and security and protection facilities.
- B. Conservation: Coordinate construction activities to ensure that operations are carried out with consideration given to conservation of energy, water, utilities, and materials.

**1.2 USE CHARGES**

- A. General: Cost or use charges for temporary facilities shall be included in the Contract Sum. Allow other entities to use temporary services and facilities without cost, including, but not limited to, Owner's construction forces, Architect, occupants of Project, testing agencies, and authorities having jurisdiction.
- B. Sewer Service: Owner's existing sewer service is available for use without metering and without payment of use charges.
- C. Water Service: Water from Owner's existing water system is available for use without metering and without payment of use charges. Provide connections and extensions of services as required for construction operations.
- D. Electric Power Service: Electricity from Owner's existing electrical power service is available for use without metering and without payment of use charges.
- E. Heating and Cooling: Is not available from Owner. Product installations with special temperature requirements will be Contractor's responsibility to provide heating and/or cooling and maintain as required.

**1.3 SUBMITTALS**

- A. Site Plan: Show temporary facilities, utility hookups, staging areas, and parking areas for construction personnel.

**1.4 QUALITY ASSURANCE**

- A. Electric Service: Comply with NECA, NEMA, and UL standards and regulations for temporary electric service. Install service to comply with NFPA 70.
- B. Tests and Inspections: Arrange for authorities having jurisdiction to test and inspect each temporary utility before use. Obtain required certifications and permits.

**1.5 PROJECT CONDITIONS**

- A. Temporary Use of Permanent Facilities: Installer of each permanent service shall assume responsibility for operation, maintenance, and protection of each permanent service during its

use as a construction facility before Owner's acceptance, regardless of previously assigned responsibilities.

## PART 2 - PRODUCTS

### 2.1 MATERIALS

- A. Portable Chain-Link Fencing: Minimum 2-inch, 9-gage, galvanized steel, chain-link fabric fencing; minimum 6 feet high with galvanized steel pipe posts; minimum 2-3/8-inch-OD line posts and 2-7/8-inch-OD corner and pull posts, with 1-5/8-inch-OD top and bottom rails. Provide concrete bases for supporting posts, if required.

### 2.2 EQUIPMENT

- A. Fire Extinguishers: Portable, UL rated; with class and extinguishing agent as required by locations and classes of fire exposures.
- B. Heating Equipment: Unless Owner authorizes use of permanent HVAC system, provide vented, self-contained, liquid-propane-gas or fuel-oil heaters with individual space thermostatic control.
  - 1. Use of gasoline-burning space heaters, open-flame heaters, or salamander-type heating units is prohibited.

## PART 3 - EXECUTION

### 3.1 INSTALLATION, GENERAL

- A. Provide each material ready for use when needed to avoid delay. Do not remove until materials are no longer needed or are replaced by authorized use of completed permanent facilities.

### 3.2 TEMPORARY UTILITY INSTALLATION

- A. General: Install temporary service or connect to existing service.
  - 1. Arrange with utility company, Owner, and existing users for time when service can be interrupted, if necessary, to make connections for temporary services.
- B. Sewers and Drainage: Provide temporary utilities to remove effluent lawfully.
  - 1. Connect temporary sewers to municipal system as directed by authorities having jurisdiction.
- C. Water Service: Use of Owner's existing water service facilities will be permitted, as long as facilities are cleaned and maintained in a condition acceptable to Owner. At Substantial Completion, restore these facilities to condition existing before initial use.
  - 1. Where installations below outlet might be damaged by spillage or leakage, provide drip pan of suitable size to minimize water damage. Drain accumulated water promptly from pans.

- D. Sanitary Facilities: Provide temporary toilets, wash facilities, and drinking water for use of construction personnel. Comply with authorities having jurisdiction for type, number, location, operation, and maintenance of fixtures and facilities.
- E. Heating and Cooling: Provide temporary heating and cooling required by construction activities for curing or drying of completed installations or for protecting installed construction from adverse effects of low temperatures or high humidity. Select equipment that will not have a harmful effect on completed installations or elements being installed.
- F. Electric Power Service: Use of Owner's existing electric power service will be permitted. Provide power distribution equipment / system of sufficient size, capacity, and power characteristics required for construction operations.
  - 1. Connect temporary service to Owner's existing power source, as directed by Owner's Representative.
- G. Lighting: Provide temporary lighting with local switching that provides adequate illumination for construction operations, observations, inspections, and traffic conditions.
  - 1. Install and operate temporary lighting that fulfills security and protection requirements without operating entire system.
- H. Telephone Service: Each Contractor and subcontractor shall be equipped with a cell phone. Provide list of cell phone numbers for Contractor and Subcontractors at the site.

### 3.3 SUPPORT FACILITIES INSTALLATION

- A. Traffic Controls: Comply with requirements of authorities having jurisdiction.
  - 1. Protect existing site improvements to remain including curbs, pavement, and utilities.
  - 2. Maintain access for fire-fighting equipment and access to fire hydrants.
- B. Parking: Use designated areas of Owner's existing parking areas for construction personnel. Discuss location of designated parking at Pre-Construction Meeting.
- C. Dewatering Facilities and Drains: Comply with requirements of authorities having jurisdiction. Maintain Project site, excavations, and construction free of water.
  - 1. Dispose of rainwater in a lawful manner that will not result in flooding Project or adjoining properties nor endanger permanent Work or temporary facilities.
  - 2. Remove snow and ice as required to minimize accumulations.
- D. Temporary Signs: Provide temporary, directional signs as required to inform construction personnel and visitors seeking entrance to Project. Unauthorized signs are not permitted.
  - 1. Maintain and touchup signs so they are legible at all times.
- E. Waste Disposal Facilities: Provide waste-collection containers in sizes adequate to handle waste from construction operations. Comply with requirements of authorities having jurisdiction. Comply with Division 01 Section "Execution" for progress cleaning requirements.

### 3.4 SECURITY AND PROTECTION FACILITIES INSTALLATION

- A. Environmental Protection: Provide protection, operate temporary facilities, and conduct construction in ways and by methods that comply with environmental regulations and that minimize possible air, waterway, and subsoil contamination or pollution or other undesirable effects.
- B. Stormwater Control: Comply with authorities having jurisdiction. Provide barriers in and around excavations and subgrade construction to prevent flooding by runoff of stormwater from heavy rains.
- C. Site Enclosure Fence: Before construction operations begin, furnish and install site enclosure fence in a manner that will prevent people and animals from easily entering site except by entrance gates.
- D. Barricades, Warning Signs, and Lights: Comply with requirements of authorities having jurisdiction for erecting structurally adequate barricades, including warning signs and lighting.
- E. Temporary Fire Protection: Install and maintain temporary fire-protection facilities of types needed to protect against reasonably predictable and controllable fire losses. Comply with NFPA 241.
  - 1. Prohibit smoking in hazardous fire-exposure and construction areas.
  - 2. Supervise welding operations, combustion-type temporary heating units, and similar sources of fire ignition according to requirements of authorities having jurisdiction.
  - 3. Develop and supervise an overall fire-prevention and -protection program for personnel at Project site. Review needs with local fire department and establish procedures to be followed. Instruct personnel in methods and procedures. Post warnings and information.
  - 4. Provide temporary standpipes and hoses for fire protection. Hang hoses with a warning sign stating that hoses are for fire-protection purposes only and are not to be removed. Match hose size with outlet size and equip with suitable nozzles.

### 3.5 OPERATION, TERMINATION, AND REMOVAL

- A. Supervision: Enforce strict discipline in use of temporary facilities. To minimize waste and abuse, limit availability of temporary facilities to essential and intended uses.
- B. Maintenance: Maintain facilities in good operating condition until removal.
- C. Termination and Removal: Remove each temporary facility when need for its service has ended, when it has been replaced by authorized use of a permanent facility, or no later than Substantial Completion. Complete or, if necessary, restore permanent construction that may have been delayed because of interference with temporary facility. Repair damaged Work, clean exposed surfaces, and replace construction that cannot be satisfactorily repaired.
  - 1. Materials and facilities that constitute temporary facilities are property of Contractor. Owner reserves right to take possession of Project identification signs.
  - 2. Remove materials contaminated with road oil, asphalt and other petrochemical compounds, and other substances that might impair growth of plant materials or lawns.
  - 3. At Substantial Completion, clean and renovate permanent facilities used during construction period. Comply with final cleaning requirements specified in Division 01 Section "Closeout Procedures."

END OF SECTION 015000



## **SECTION 017300 EXECUTION**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. This Section includes general procedural requirements governing execution of the Work including, but not limited to, the following:
  - 1. General installation of products.
  - 2. Progress cleaning.
  - 3. Protection of installed construction.
  - 4. Correction of the Work.

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

### **PART 3 - EXECUTION**

#### **3.1 EXAMINATION**

- A. Existing Conditions: The existence and location of site improvements, utilities, and other construction indicated as existing are not guaranteed.
  - 1. Before beginning work, investigate and verify the existence and location of utilities and other construction affecting the Work.
  - 2. Before construction, verify the location and points of connection of utility services.
- B. Acceptance of Conditions: Examine substrates, areas, and conditions, with Installer or Applicator present where indicated, for compliance with requirements for installation tolerances and other conditions affecting performance.
  - 1. Record observations.
  - 2. Proceeding with the Work indicates acceptance of surfaces and conditions.

#### **3.2 INSTALLATION**

- A. General: Locate the Work and components of the Work accurately, in correct alignment and elevation, as indicated.
  - 1. Make vertical work plumb and make horizontal work level.
  - 2. Where space is limited, install components to maximize space available for maintenance and ease of removal for replacement.
  - 3. Conceal pipes, ducts, and wiring in finished areas, unless otherwise indicated.
- B. Comply with manufacturer's written instructions and recommendations for installing products in applications indicated.
- C. Install products at the time and under conditions that will ensure the best possible results. Maintain conditions required for product performance until Substantial Completion.

- D. Tools and Equipment: Do not use tools or equipment that produce harmful noise levels.
- E. Anchors and Fasteners: Provide anchors and fasteners as required to anchor each component securely in place, accurately located and aligned with other portions of the Work.
  - 1. Allow for building movement, including thermal expansion and contraction.
  - 2. Coordinate installation of anchorages. Furnish setting drawings, templates, and directions for installing anchorages, including sleeves, concrete inserts, anchor bolts, and items with integral anchors, that are to be embedded in concrete or masonry. Deliver such items to Project site in time for installation.
- F. Joints: Make joints of uniform width. Where joint locations in exposed work are not indicated, arrange joints for the best visual effect. Fit exposed connections together to form hairline joints.
- G. Hazardous Materials: Use products, cleaners, and installation materials that are not considered hazardous.

### 3.3 PROGRESS CLEANING

- A. General: Clean Project site and work areas daily, including common areas. Coordinate progress cleaning for joint-use areas where more than one installer has worked. Enforce requirements strictly. Dispose of materials lawfully.
  - 1. Comply with requirements in NFPA 241 for removal of combustible waste materials and debris.
  - 2. Do not hold materials more than 7 days during normal weather or 3 days if the temperature is expected to rise above 80 deg F (27 deg C).
  - 3. Containerize hazardous and unsanitary waste materials separately from other waste. Mark containers appropriately and dispose of legally, according to regulations.
- B. Site: Maintain Project site free of waste materials and debris.
- C. Roof Area: Remove debris from roof around drains and in corners. Remove roof drain covers, clean drains thoroughly and reinstall drain covers.
- D. Work Areas: Clean areas where work is in progress to the level of cleanliness necessary for proper execution of the Work. Work area debris to be removed daily.
- E. Installed Work: Keep installed work clean. Clean installed adjacent surfaces according to written instructions of installed product manufacturer using only cleaning materials specifically recommended. If specific cleaning materials are not recommended, use cleaning materials that are not hazardous to health or property and that will not damage exposed surfaces.
- F. Waste Disposal: Burying or burning waste materials on-site will not be permitted. Washing waste materials down sewers or into waterways will not be permitted.
- G. Limiting Exposures: Supervise construction operations to assure that no part of the construction, completed or in progress, is subject to harmful, dangerous, damaging, or otherwise deleterious exposure during the construction period.

### 3.4 PROTECTION OF INSTALLED CONSTRUCTION

- A. Provide final protection and maintain conditions that ensure installed Work is without damage or deterioration at time of Substantial Completion.

- B. Comply with manufacturer's written instructions for temperature and relative humidity.

### 3.5 CORRECTION OF THE WORK

- A. Repair or remove and replace defective construction. Restore damaged substrates and finishes.
  - 1. Repairing includes replacing defective workmanship, cleaning and refinishing damaged surfaces, and touching up with matching materials.
- B. Restore permanent facilities used during construction to their specified condition.

END OF SECTION 017300

## **SECTION 017700 CLOSEOUT PROCEDURES**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. This Section includes administrative and procedural requirements for contract closeout, including, but not limited to, the following:
  - 1. Inspection procedures.
  - 2. Existing roof Warranty.
  - 3. Final cleaning.

#### **1.2 SUBSTANTIAL COMPLETION**

- A. Preliminary Procedures: Before requesting inspection for determining date of Substantial Completion, complete the following. List items below that are incomplete in request.
  - 1. Prepare a list of items to be completed and corrected (punch list), the value of items on the list, and reasons why the Work is not complete.
  - 2. Obtain and submit releases permitting Owner unrestricted use of the Work and access to services and utilities. Include occupancy permits, operating certificates, and similar releases.
  - 3. Complete final cleaning requirements, including touchup painting.
  - 4. Touch up and otherwise repair and restore marred exposed finishes to eliminate visual defects.
- B. Inspection: Submit a written request for inspection for Substantial Completion. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare the Certificate of Substantial Completion after inspection or will notify Contractor of items, either on Contractor's list or additional items identified by Architect, that must be completed or corrected before certificate will be issued.
  - 1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. More than one reinspection after punch list shall be paid by contractor for the architects and the architectural staff's time at the hourly rate in the records of the Housing Authority of the City of Pittsburgh.
  - 2. Results of completed inspection will form the basis of requirements for Final Completion.

#### **1.3 FINAL COMPLETION**

- A. Preliminary Procedures: Before requesting final inspection for determining date of Final Completion, complete the following:
  - 1. Submit a final Application for Payment according to Division 01 Section "Payment Procedures."
  - 2. Submit certified copy of Architect's Substantial Completion inspection list of items to be completed or corrected (punch list), endorsed and dated by Architect. The certified copy of the list shall state that each item has been completed or otherwise resolved for acceptance.

3. Submit evidence of final, continuing insurance coverage complying with insurance requirements.
- B. Inspection: Submit a written request for final inspection for acceptance. On receipt of request, Architect will either proceed with inspection or notify Contractor of unfulfilled requirements. Architect will prepare a final Certificate for Payment after inspection or will notify Contractor of construction that must be completed or corrected before certificate will be issued.
  1. Reinspection: Request reinspection when the Work identified in previous inspections as incomplete is completed or corrected. More than one reinspection after punch list shall be paid by contractor for the architects and the architectural staff's time at the hourly rate in the records of the Housing Authority of the City of Pittsburgh.
- C. Existing Roof Manufacturer's Warranty: Roof manufacturer's representative to visit project site and verify that work performed has not altered the conditions of the existing Roof Warranty.

#### 1.4 LIST OF INCOMPLETE ITEMS (PUNCH LIST)

- A. Preparation: Submit three copies of list. Include name and identification of each space and area affected by construction operations for incomplete items and items needing correction including, if necessary, areas disturbed by Contractor that are outside the limits of construction.
  1. Organize list of spaces in sequential order, starting with exterior areas first and proceeding from lowest floor to highest floor.
  2. Organize items applying to each space by major element, including categories for ceiling, individual walls, floors, equipment, and building systems.
  3. Include the following information at the top of each page:
    - a. Project name.
    - b. Date.
    - c. Name of Architect.
    - d. Name of Contractor.
    - e. Page number.

### PART 2 - PRODUCTS

#### 2.1 MATERIALS

- A. Cleaning Agents: Use cleaning materials and agents recommended by manufacturer or fabricator of the surface to be cleaned. Do not use cleaning agents that are potentially hazardous to health or property or that might damage finished surfaces.

### PART 3 - EXECUTION

#### 3.1 FINAL CLEANING

- A. General: Provide final cleaning. Conduct cleaning and waste-removal operations to comply with local laws and ordinances and Federal and local environmental and antipollution regulations.

- B. Cleaning: Employ experienced workers or professional cleaners for final cleaning. Clean each surface or unit to condition expected in an average commercial building cleaning and maintenance program. Comply with manufacturer's written instructions.
  - 1. Complete the following cleaning operations before requesting inspection for certification of Substantial Completion for entire Project or for a portion of Project:
    - a. Clean Project site, yard, and grounds, in areas disturbed by construction activities, including landscape development areas, of rubbish, waste material, litter, and other foreign substances.
    - b. Sweep paved areas broom clean. Remove petrochemical spills, stains, and other foreign deposits.
    - c. Rake grounds that are neither planted nor paved to a smooth, even-textured surface.
    - d. Remove tools, construction equipment, machinery, and surplus material from Project site.
    - e. Clean exposed exterior surfaces to a dirt-free condition, free of stains, films, and similar foreign substances.
    - f. Touch up and otherwise repair and restore marred, exposed finishes and surfaces. Replace finishes and surfaces that cannot be satisfactorily repaired or restored or that already show evidence of repair or restoration.
      - 1) Do not paint over "UL" and similar labels, including mechanical and electrical nameplates.
    - g. Leave Project clean and ready for occupancy.
- C. Comply with safety standards for cleaning. Do not burn waste materials. Do not bury debris or excess materials on Owner's property. Do not discharge volatile, harmful, or dangerous materials into drainage systems. Remove waste materials from Project site and dispose of lawfully.

END OF SECTION 017700

## **SECTION 024119 SELECTIVE DEMOLITION**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

A. This Section includes the following:

1. Demolition and removal of selected portions of building elements and site fencing
2. Identification of demolition as indicated on the Drawings.

B. Related Sections include the following:

1. Division 01 Section "Summary" for use of premises and Owner-occupancy requirements.
2. Division 01 Section "Temporary Facilities and Controls" for temporary construction and environmental-protection measures for selective demolition operations.
3. Division 01 Section "Execution" for cutting and patching procedures.

#### **1.2 DEFINITIONS**

- A. Remove: Detach items from existing construction and legally dispose of them off-site, unless indicated to be removed and salvaged or removed and reinstalled.
- B. Remove and Salvage: Detach items from existing construction and deliver them to Owner ready for reuse.
- C. Remove and Reinstall: Detach items from existing construction, store items, prepare them for reuse, and reinstall them where indicated.
- D. Existing to Remain: Existing items of construction that are not to be removed and that are not otherwise indicated to be removed, removed and salvaged, or removed and reinstalled.

#### **1.3 SUBMITTALS**

A. Qualification Data: For demolition firm.

B. Schedule of Selective Demolition Activities: Indicate the following:

1. Detailed sequence of selective demolition and removal work, with starting and ending dates for each activity. Ensure Owner's on-site operations are uninterrupted.
2. Interruption of utility services. Indicate how long utility services will be interrupted.
3. Coordination for shutoff, capping, and continuation of utility services.
4. Means of protection for items to remain and items in path of waste removal from building.

#### **1.4 QUALITY ASSURANCE**

A. Demolition Firm Qualifications: An experienced firm that has specialized in demolition work similar in material and extent to that indicated for this Project.

- B. Regulatory Requirements: Comply with governing EPA notification regulations before beginning selective demolition. Comply with hauling and disposal regulations of authorities having jurisdiction.
- C. Standards: Comply with ANSI A10.6 and NFPA 241.

#### 1.5 PROJECT CONDITIONS

- A. Owner will occupy portions of building immediately adjacent to selective demolition area. Conduct selective demolition so Owner's operations will not be disrupted.
  - 1. Comply with requirements specified in Division 01 Section "Summary."
- B. Conditions existing at time of inspection for bidding purpose will be maintained by Owner as far as practical.
- C. Notify Architect of discrepancies between existing conditions and Drawings before proceeding with selective demolition.
- D. Hazardous Materials: It is not expected that hazardous materials will be encountered in the Work.
  - 1. If materials suspected of containing hazardous materials are encountered, do not disturb; immediately notify Architect and Contractor.
- E. Storage or sale of removed items or materials on-site is not permitted.
- F. Utility Service: Maintain existing utilities indicated to remain in service and protect them against damage during selective demolition operations.
  - 1. Maintain fire-protection facilities in service during selective demolition operations.

#### 1.6 WARRANTY

- A. Existing Warranties: Remove, replace, patch, and repair materials and surfaces cut or damaged during selective demolition, by methods and with materials so as not to void existing warranties.

### PART 2 - PRODUCTS (Not Used)

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verify that utilities have been disconnected and capped.
- B. Survey existing conditions and correlate with requirements indicated to determine extent of selective demolition required.
- C. Inventory and record the condition of items to be removed and reinstalled and items to be removed and salvaged.



- D. When unanticipated mechanical, electrical, or structural elements that conflict with intended function or design are encountered, investigate and measure the nature and extent of conflict. Promptly submit a written report to Architect.
- E. Survey of Existing Conditions: Record existing conditions by use of preconstruction photographs or preconstruction videotapes and view provided existing condition photographs.
- F. Perform surveys as the Work progresses to detect hazards resulting from selective demolition activities.

### 3.2 UTILITY SERVICES AND MECHANICAL/ELECTRICAL SYSTEMS

- A. Existing Services/Systems: Maintain services/systems indicated to remain and protect them against damage during selective demolition operations.
  - 1. Comply with requirements for existing services/systems interruptions specified in Division 01 Section "Summary."

### 3.3 PREPARATION

- A. Site Access and Temporary Controls: Conduct selective demolition and debris-removal operations to ensure minimum interference with roads, streets, walks, walkways, and other adjacent occupied and used facilities.
- B. Temporary Facilities: Provide temporary barricades and other protection required to prevent injury to people and damage to adjacent buildings and facilities to remain.
  - 1. Provide protection to ensure safe passage of people around selective demolition area and to and from occupied portions of building.
  - 2. Provide temporary weather protection, during interval between selective demolition of existing construction on exterior surfaces and new construction, to prevent water leakage and damage to structure and interior areas.
  - 3. Protect walls, ceilings, floors, and other existing finish work that are to remain or that are exposed during selective demolition operations.
  - 4. Cover and protect furniture, furnishings, and equipment that have not been removed.
  - 5. Comply with requirements for temporary enclosures, dust control, heating, and cooling specified in Division 01 Section "Temporary Facilities and Controls."

### 3.4 SELECTIVE DEMOLITION, GENERAL

- A. General: Demolish and remove existing construction only to the extent required by new construction and as indicated. Use methods required to complete the Work within limitations of governing regulations and as follows:
  - 1. Proceed with selective demolition systematically, from higher to lower level. Complete selective demolition operations above each floor or tier before disturbing supporting members on the next lower level.
  - 2. Neatly cut openings and holes plumb, square, and true to dimensions required. Use cutting methods least likely to damage construction to remain or adjoining construction. Use hand tools or small power tools designed for sawing or grinding, not hammering and chopping, to minimize disturbance of adjacent surfaces. Temporarily cover openings to remain.
  - 3. Cut or drill from the exposed or finished side into concealed surfaces to avoid marring existing finished surfaces.

4. Do not use cutting torches until work area is cleared of flammable materials. At concealed spaces, such as duct and pipe interiors, verify condition and contents of hidden space before starting flame-cutting operations. Maintain portable fire-suppression devices during flame-cutting operations.
5. Maintain adequate ventilation when using cutting torches.
6. Remove decayed, vermin-infested, or otherwise dangerous or unsuitable materials and promptly dispose of off-site.
7. Remove structural framing members and lower to ground by method suitable to avoid free fall and to prevent ground impact or dust generation.
8. Locate selective demolition equipment and remove debris and materials so as not to impose excessive loads on supporting walls, floors, or framing.
9. Dispose of demolished items and materials promptly.

B. Removed and Salvaged Items:

1. Clean salvaged items.
2. Pack or crate items after cleaning. Identify contents of containers.
3. Store items in a secure area until delivery to Owner.
4. Transport items to Owner's storage area designated by Owner.
5. Protect items from damage during transport and storage.

C. Removed and Reinstalled Items:

1. Clean and repair items to functional condition adequate for intended reuse. Paint equipment to match new equipment.
2. Pack or crate items after cleaning and repairing. Identify contents of containers.
3. Protect items from damage during transport and storage.
4. Reinstall items in locations indicated. Comply with installation requirements for new materials and equipment. Provide connections, supports, and miscellaneous materials necessary to make item functional for use indicated.

- D. Existing Items to Remain: Protect construction indicated to remain against damage and soiling during selective demolition. When permitted by Architect, items may be removed to a suitable, protected storage location during selective demolition and cleaned and reinstalled in their original locations after selective demolition operations are complete.

### 3.5 SELECTIVE DEMOLITION PROCEDURES FOR SPECIFIC MATERIALS

- A. Concrete: Demolish in small sections. Cut concrete to a depth of at least 3/4 inch at junctures with construction to remain, using power-driven saw. Dislodge concrete from reinforcement at perimeter of areas being demolished, cut reinforcement, and then remove remainder of concrete indicated for selective demolition. Neatly trim openings to dimensions indicated.
- B. Roofing: Remove no more existing roofing than can be covered in one day by new roofing and so that building interior remains watertight and weathertight.
1. Remove indicated existing roofing system down to substrate.

### 3.6 DISPOSAL OF DEMOLISHED MATERIALS

- A. General: Except for items or materials indicated to be recycled, reused, salvaged, reinstalled, or otherwise indicated to remain Owner's property, remove demolished materials from Project site and legally dispose of them in an EPA-approved landfill.

1. Do not allow demolished materials to accumulate on-site.
2. Remove and transport debris in a manner that will prevent spillage on adjacent surfaces and areas.

B. Burning: Do not burn demolished materials.

C. Disposal: Transport demolished materials off Owner's property and legally dispose of them.

### 3.7 CLEANING

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

### 3.8 SELECTIVE DEMOLITION SCHEDULE

- A. As indicated on the Drawings.

END OF SECTION 024119

## **SECTION 028205 WOOD FENCING**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Section applies to replacement of damaged existing fencing. Fencing to be replace in-kind.
- B. Fence framework, fencing material components, and accessories.
- C. Excavation for post bases, concrete foundation for posts.
- D. Related Specifications:
  - 1. Section 055000 – Metal Fabrications for fasteners and hardware.
  - 2. Section 060042 – Miscellaneous Carpentry for technical wood standard required by wood materials used in this Section.
- E. Definitions:
  - 1. American Society of Testing and Materials (ASTM).
  - 2. American Association of State Highway and Transportation Officials (AASHTO).

#### **1.2 SUBMITTALS**

- A. Shop Drawings: Indicate plan layout, spacing of components, post foundation dimensions, hardware anchorage, and specific description of material components.
- B. Product Data: Provide data on material components including posts, rails, bracing, accessories, fittings, and hardware.

#### **1.3 SYSTEM DESCRIPTION**

- A. Fence height to match existing adjacent fencing where indicated. If not indicated on Drawings, verify with Architect exact location requiring site privacy fencing to be repaired.
- B. Match height of existing. Line post spacing shall not exceed 10 feet, or same as existing if existing spacing is less than 10 feet.
- C. Provide bracing as appropriate for structural integrity.

#### **1.4 QUALIFICATIONS**

- A. Company specializing in installation of the products specified in this Section with minimum of three years of experience.

#### **1.5 FIELD MEASUREMENTS**

- A. Verify that field measurements are as indicated on Shop Drawings.

## PART 2 - PRODUCTS

### 2.2 MATERIALS

- A. Provide new and replacement materials of fence structures that match or exceed the quality of existing and meet requirements of Division 06 Section on Miscellaneous Carpentry.
- B. Nuts and bolts to conform with ASTM - A307 and galvanized in accordance with AASHTO M232.

## PART 3 - EXECUTION

### 3.1 INSTALLATION

- A. Install fence in accordance with the directions of the manufacturer and these Specifications.
- B. Use specified concrete per Division 03 Section Miscellaneous Cast-In-Place Concrete to set posts into the ground. Allow concrete to cure for at least 7 days before attaching remainder of fence.
- C. Set Concrete posts in the ground at a depth of, at least, 1/2 the height of the fence.
- D. Secure fencing to posts, adjust, and leave in perfect working order. Accommodate contour of ground.

END OF SECTION 028205

**SECTION – 061053  
MISCELLANEOUS CARPENTRY**

**PART 1 - GENERAL**

**1.1 SUMMARY**

- A. This Section includes the following:
  - 1. Wood blocking, cants, and nailers.
  - 2. Wood furring and grounds.
  - 3. Plywood backing panels.
  - 4. Exterior wood handrail.

**1.2 DEFINITIONS**

- A. Rough Carpentry: Carpentry work not specified in other Sections and not exposed, unless otherwise indicated.
- B. Exposed Framing: Dimension lumber not concealed by other construction.
- C. Lumber grading agencies, and the abbreviations used to reference them, include the following:
  - 1. AITC: American Institute of Timber Construction
  - 2. NELMA: Northeastern Lumber Manufacturers Association.
  - 3. NLGA: National Lumber Grades Authority.
  - 4. SPIB: Southern Pine Inspection Bureau.

**1.3 SUBMITTALS**

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

**1.4 QUALITY ASSURANCE**

- A. Source Limitations for Treated Wood: Obtain each type of treated wood product through one source from a single producer.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Stack lumber, plywood, and other panels; place spacers between each bundle to provide air circulation. Provide for air circulation around stacks and under coverings.
  - 1. Glued-laminated timber: Individually wrap members using plastic-coated paper covering with water-resistant seams.

## PART 2 - PRODUCTS

### 2.1 WOOD PRODUCTS, GENERAL

- A. Lumber: DOC PS 20 and applicable rules of lumber grading agencies certified by the American Lumber Standards Committee Board of Review and the Forest Stewardship Council's (FSC) Principles and Criteria.
  - 1. Factory mark each piece of lumber with grade stamp of grading agency.
  - 2. Where nominal sizes are indicated, provide actual sizes required by DOC PS 20 for moisture content specified. Where actual sizes are indicated, they are minimum dressed sizes for dry lumber.
  - 3. Provide dressed lumber, S4S, unless otherwise indicated.
  - 4. Provide dry lumber with 19 percent maximum moisture content at time of dressing for 2-inch nominal (38-mm actual) thickness or less, unless otherwise indicated.
- B. Wood Structural Panels:
  - 1. Plywood: Either DOC PS 1 or DOC PS 2, unless otherwise indicated.
  - 2. Thickness: As needed to comply with requirements
  - 3. Factory mark panels according to indicated standard.
  - 4. Products shall not contain added urea - formaldehyde resins.
- C. Penetrating Waterproofing: Non-wax based waterproofing with dual-action UV protection and a mold, mildew and algae resistant coating. Clear finish that penetrates deeply into wood fibers for long-lasting protection and recommend in writing by manufacturer for exterior use.
  - 1. Properties:
    - a. Meets VOC (Volatile Organic Compounds) requirements for Specialty Architectural Coatings; contains less than 50 g/L VOC.
    - b. Percent of Solids (weight): 8.6 Typical.
    - c. Percent of Solids (volume): 8.4 Typical.
    - d. Percent of Pigment (weight): 0.3 Typical.
    - e. Viscosity: 8-13 seconds # 4 Ford Cup.
    - f. Pigment Type: Trans-oxide pigments.
    - g. Vehicle Type: Silicone.
    - h. Coverage: Approximately 100-250 sq. ft. (9.3-23.2 m<sup>2</sup>) per gallon.

## 2.2 WOOD-PRESERVATIVE-TREATED LUMBER

- A. Preservative Treatment by Pressure Process: AWWA U1; Use Category UC2, use Category UC3b for exterior construction not in contact with the ground, and Use Category UC4a for items in contact with the ground.
  - 1. Preservative Chemicals: Acceptable to authorities having jurisdiction and containing no arsenic or chromium.
- B. Kiln-dry lumber after treatment to a maximum moisture content of 19 percent.
- C. Do not use material that is warped or that does not comply with requirements for untreated material. Fabricate handrails straight and true in shape and size indicated on the Drawings.

## 2.3 MISCELLANEOUS LUMBER

- A. General: Provide lumber for support or attachment of other construction, including blocking, furring, cants or nailers.
- B. For items of dimension lumber size, provide Construction, Stud, or No.2 grade lumber with 19 percent maximum moisture content.

## 2.4 FASTENERS

- A. General: Provide fasteners of size and type indicated that comply with requirements specified in this Article for material and manufacture.
  - 1. Where rough carpentry is exposed to weather, in ground contact, or in area of high relative humidity, provide Type 304 stainless steel fasteners or fasteners with hot-dip zinc coating complying with ASTM A 153.
  - 2. Fasteners to be selected as to not corrode when in contact with wood preservatives or additives.
- B. Nails, Brads, and Staples: ASTM F 1667.
- C. Power-Driven Fasteners: NES NER-272.
- D. Wood Screws: ASME B18.6.1.
- E. Screws for Fastening to Cold-Formed Metal Framing: ASTM C 954, except with wafer heads and reamer wings, length as recommended by screw manufacturer for material being fastened.
- F. Lag Bolts: ASME B18.2.L
- G. Bolts: Steel bolts complying with ASTM A307, Grade A; with ASTM A 563 hex nuts and, where indicated, flat washers.
- H. Expansion Anchors: Anchor bolt and sleeve assembly of material indicated below with capability to sustain, without failure, a load equal to 6 times the load imposed when installed in unit masonry assemblies and equal to 4 times the load imposed when installed in concrete as determined by testing per ASTM E 488 conducted by a qualified independent testing and inspecting agency.



1. Material: Carbon-steel components, zinc plated to comply with ASTM B 633, Class Fe/Zn 5.

### PART 3 - EXECUTION

#### 3.1 INSTALLATION, GENERAL

- A. Set rough carpentry to required levels and lines, with members plumb, true to line, cut, and fitted. Fit rough carpentry to other construction; scribe and cope as needed for accurate fit. Locate furring, nailers, blocking, grounds, and similar supports to comply with requirements for attaching other construction.
- B. Do not use materials with defects that impair quality of rough carpentry or pieces that are too small to use with minimum number of joints or optimum joint arrangement.
- C. Apply field treatment complying with A WP A M4 to cut surfaces of preservative-treated lumber and plywood to remain in place longer than 2 months.
- D. Securely attach rough carpentry work to substrate by anchoring and fastening as indicated, complying with the following:
  1. CABO NER-272 for power-driven fasteners.
  2. Published requirements of metal framing anchor manufacturer.
- E. Use common wire nails, unless otherwise indicated. Select fasteners of size that will not fully penetrate members where opposite side will be exposed to view or will receive finish materials. Make tight connections between members. Install fasteners without splitting wood; pre-drill as required.
- F. Use finishing nails for exposed work, unless otherwise indicated. Countersink nail heads and fill holes with wood filler.
- G. Use fire-retardant treated wood at concealed locations and concealed cavities.

#### 3.2 WOOD GROUND, SLEEPER, BLOCKING, AND NAILER INSTALLATION

- A. Install where indicated and where required for attaching other work. Cut as required for true line and level of attached work. Coordinate locations with other work involved.
- B. Attach items to substrates to support applied loading. Recess bolts and nuts flush with surfaces, unless otherwise indicated. Build anchor bolts into masonry during installation of masonry work. Where possible, secure anchor bolts to formwork before concrete placement.

#### 3.3 WOOD STRUCTURAL PANEL INSTALLATION

- A. General: Comply with applicable recommendations contained in APA Form No. E30K, "APA Design/Construction Guide: Residential & Commercial," for types of structural-use panels and applications indicated.
  1. Comply with "Code Plus" provisions in above-referenced guide.

- B. Fastening Methods: Fasten panels by screws to supports.

### 3.4 INSTALLATION OF WATERPROOFING

- A. Comply with manufacturer's recommended environmental requirements. Do apply when air or surface temperature is below 40 degree F (4 degree C) or may fall below 40 degree F (4 degree C) for 24 hours after application.
- B. Surface must be free of dirt, mildew stains, loose wood fibers and other foreign matter. Surfaces must be sound, dry and untreated.
- C. Clean with stiff bristle brush or sanding as required to completely remove all loose wood fibers.
- D. Apply with nylon or polyester brushes, stain pads, low-pressure garden sprayer or professional spray equipment.

END OF SECTION 061000

**SECTION 099113  
EXTERIOR PAINTING**

**PART 1 - GENERAL**

**1.1 RELATED DOCUMENTS**

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

**1.2 SUMMARY**

- A. This Section includes surface preparation and the application of paint systems on the following exterior substrates:
  - 1. Steel.
  - 2. Galvanized metal.
  - 3. Architectural PVC, plastic, and fiberglass.
  - 4. Wood
- B. Surface preparation, priming, and finish coats specified in this Section are in addition to shop priming and surface treatment specified in other Sections.
- C. Paint exposed surfaces, except where these Specifications indicate that the surface or material is not to be painted or is to remain natural. If an item or a surface is not specifically mentioned, paint the item or surface the same as similar adjacent materials or surfaces. If a color of finish is not indicated, The Authority will select from standard colors and finishes available.
  - 1. Wood component of the canopies
  - 2. Exterior entrance doors and frame, exterior rear doors and frame, storage doors and frames, garage door and frames and not including sliding doors.
  - 3. Metal railing system on balcony/porches
- D. Do not paint prefinished items, concealed surfaces, finished metal surfaces, operating parts, and labels.
  - 1. Prefinished items include the following factory-finished components:
    - a. Finished mechanical, electrical, plumbing equipment and utility equipment
    - b. Light fixtures, cable boxes, dishes
  - 2. Finished metal surfaces include the following:
    - a. Anodized aluminum.
    - b. Stainless steel.
    - c. Chromium plate.
    - d. Copper and copper alloys.
    - e. Bronze and brass.
  - 3. Operating parts include moving parts of operating equipment

E. Related Sections include the following:

1. Division 5 Sections for shop priming of metal substrates with primers specified in this Section.

1.3 DEFINITIONS

A. Agencies, and the abbreviations used to reference them, include the following:

1. ASTM - American Standards for Testing Materials.
2. FM - Factory Mutual.

B. Standard coating terms defined in ASTM D 16 apply to this Section.

1. Semigloss: Medium-sheen finish, gloss range between 30 and 65 when measured at a 60-degree meter.

1.4 SUBMITTALS RELATED DOCUMENTS

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

B. Product Data: For each type of product indicated.

1. Material List: Indicate each material and cross-reference specific coating, finish system, and application. Identify each material by highlighting the manufacturer's catalog number and general classification.
2. Manufacturer's Information: Manufacturer's technical information, including MSDS label analysis and instructions for handling, storing, and applying each coating material.
3. Color chart with manufacturer's full range of standard colors

QUALITY ASSURANCE

C. Applicator Qualifications: A firm or individual experienced in applying paints and coatings similar in material, design, and extent to those indicated for this Project, whose work has resulted in applications with a record of successful in-service performance

D. MPI Standards:

1. Products: Complying with MPI standards indicated and listed in "MPI Approved Products List."
2. Preparation and Workmanship: Comply with requirements in "MPI Architectural Painting Specification Manual" for products and paint systems indicated.

E. Source Limitations: Obtain block fillers, primers, and undercoat materials for each coating system from the same manufacturer as the finish coats.

## 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label and the following information:
  - 1. Product name or title of material.
  - 2. Product description (generic classification or binder type).
  - 3. Manufacturer's stock number and date of manufacture.
  - 4. Contents by volume, for pigment and vehicle constituents.
  - 5. Thinning instructions.
  - 6. Application instructions.
  - 7. Color name and number.
  - 8. VOC content.
- B. Store materials not in use in tightly covered containers in a well-ventilated area at a minimum ambient temperature of 45 degrees F. Maintain storage containers in a clean condition, free of foreign materials and residue. The Authority requires additional safety controls and health rules for on-site service for flammable material storage.
  - 1. Protect from freezing. Keep storage area neat and orderly. Remove oily rags and waste daily.

## 1.6 PROJECT CONDITIONS

- A. Deliver materials to the Project Site in manufacturer's original, unopened packages and containers bearing manufacturer's name and label.
- B. Store materials not in use in tightly covered containers in well-ventilated areas with ambient temperatures continuously maintained at not less than 45 deg F (7 deg C).
  - 1. Maintain containers in clean condition, free of foreign materials and residue.
  - 2. Remove rags and waste from storage areas daily.
- C. Apply waterborne paints only when temperatures of surfaces to be painted and surrounding air are between 50 and 90 degrees F.
- D. Do not apply paint in snow, rain, fog, or mist; or when relative humidity exceeds 85 percent; or at temperatures less than 5 degrees F above the dew point; or to damp or wet surfaces.
  - 1. Painting may continue during inclement weather if surfaces and areas to be painted are enclosed and heated within temperature limits specified by manufacturer during application and drying periods.
- E. Apply paints only when temperature of surfaces to be painted and ambient air temperatures are between 50 and 95 deg F (10 and 35 deg C).
- F. Do not apply paints when relative humidity exceeds 85 percent; at temperatures less than 5 deg F (3 deg C) above the dew point; or to damp or wet surfaces.

## 1.7 EXTRA MATERIALS

- A. Furnish extra materials described below that are from same production run (batch mix) as materials applied and that are packaged for storage and identified with labels describing contents.
  - 1. Quantity: Furnish an additional 5 percent, but not less than 1 gal. (3.8 L) of each material and color applied.

## PART 2 - PRODUCTS

### 2.1 PAINT, GENERAL

- A. Material Compatibility:
  - 1. Provide materials for use within each paint system that are compatible with one another and substrates indicated, under conditions of service and application as demonstrated by manufacturer, based on testing and field experience.
  - 2. For each coat in a paint system, provide products recommended in writing by manufacturers of topcoat for use in paint system and on substrate indicated.
- B. Material Quality:
  - 1. Provide manufacturer's best-quality paint material of the various coating types specified that are factory formulated and recommended by manufacturer for application indicated. Paint-material containers not displaying manufacturer's product identification will not be acceptable.
  - 2. Proprietary Names: Use of manufacturer's proprietary product names to designate colors or materials is intended to imply that products named are required to be used to the exclusion of equivalent products of other manufacturers unless an approval request is submitted and approved by The Authority. Furnish manufacturer's material data MSDS and certificates of performance for proposed substitutions.
- C. Colors: As indicated in a color schedule; if not indicated as selected by Architect from manufacturer's full range.

### 2.2 METAL SYSTEMS

- A. Alkyd Anticorrosive Metal Primer: MPI #79.
- B. Rust-Inhibitive Primer (Water Based): MPI #107.
- C. Waterborne Galvanized-Metal Primer: MPI #134.
- D. Galvanized Metal – One coat of primer and 2 coats of semi-gloss finish:
  - 1. Primer: Factory primed or if prepared properly, the topcoat is self-priming on galvanized surfaces.
  - 2. Finish: High Performance Acrylic; provide minimum of 2 coats at 4 mils wet, 1.4 mils dry for each coat.

## 2.3 PLASTICS SYSTEMS

- A. Due to the variety of substrate compositions, check for compatibility with paint manufacturer.
- B. Latex primer / sealer applied at minimum 4 mils wet, 1.4 mils dry.
- C. Exterior 100 percent acrylic semi-gloss coating applied over latex primer. Provide minimum of 2 coats at 4 mils wet, 1.4 mils dry for each coat.

## PART 3 - EXECUTION

### 3.1 EXAMINATION

- A. Examine substrates and conditions, with Applicator present, for compliance with requirements for maximum moisture content and other conditions affecting performance of work.
- B. Verify suitability of substrates, including surface conditions and compatibility with existing finishes and primers.
- C. Begin coating application only after unsatisfactory conditions have been corrected and surfaces are dry.
  - 1. Beginning coating application constitutes Contractor's acceptance of substrates and conditions.
- D. Coordination of Work: Review other Sections in which primers are provided to ensure compatibility of the total system for various substrates. On request, furnish information on characteristics of finish materials to ensure use of compatible primers.
  - 1. Notify the Authority about anticipated problems when using the materials specified over substrates primed by others.

### 3.2 PREPARATION

- A. Comply with manufacturer's written instructions and recommendations in "MPI Architectural Painting Specification Manual" applicable to substrates indicated.
- B. Remove plates, machined surfaces, and similar items already in place that are not to be painted. If removal is impractical or impossible because of size or weight of item, provide surface-applied protection before surface preparation and painting.
  - 1. After completing painting operations, use workers skilled in the trades involved to reinstall items that were removed. Remove surface-applied protection if any.
  - 2. Do not paint over labels of independent testing agencies or equipment name, identification, performance rating, or nomenclature plates.
- C. Clean substrates of substances that could impair bond of paints, including dirt, oil, grease, and incompatible paints and encapsulants.
  - 1. Remove incompatible primers and reprime substrate with compatible primers as required to produce paint systems indicated.

2. Schedule cleaning and painting so dust and other contaminants from the cleaning process will not fall on wet, newly painted surfaces.
  3. Steel Substrates: Remove rust and loose mill scale. Clean using methods recommended in writing by paint manufacturer.
- D. Galvanized-Metal Substrates: Remove grease and oil residue from galvanized sheet metal fabricated from coil stock by mechanical methods to produce clean, lightly etched surfaces that promote adhesion of subsequently applied paints.

### 3.3 APPLICATION

- A. Apply paints according to manufacturer's written instructions.
1. Use applicators and techniques suited for paint and substrate indicated.
  2. Paint surfaces behind movable equipment and furniture same as similar exposed surfaces. Before final installation, paint surfaces behind permanently fixed equipment or furniture with prime coat only.
  3. Paint front and backsides of access panels, removable or hinged covers, and similar hinged items to match exposed surfaces.
- B. Tint each undercoat a lighter shade to facilitate identification of each coat if multiple coats of same material are to be applied. Tint undercoats to match color of topcoat, but provide sufficient difference in shade of undercoats to distinguish each separate coat.
- C. If undercoats or other conditions show through topcoat, apply additional coats until cured film has a uniform paint finish, color, and appearance.
- D. Apply paints to produce surface films without cloudiness, spotting, holidays, laps, brush marks, roller tracking, runs, sags, ropiness, or other surface imperfections. Cut in sharp lines and color breaks.

### 3.4 FIELD QUALITY CONTROL

- A. The Authority reserves the right to invoke the following test procedure at any time and as often as The Authority deems necessary during the period when paint is being applied:
1. The Authority will engage a qualified independent testing agency to sample paint material being used. Samples of material delivered to Project will be taken, identified, sealed, and certified in the presence of the Contractor.
  2. Testing agency will perform appropriate tests as required by The Authority.
  3. The Authority may direct Contractor to stop painting if test results show material being used does not comply with specified requirements. Contractor shall remove non-complying paint from Project site, pay for testing, and repaint surfaces previously coated with the non-complying paint. If necessary, Contractor may be required to remove non-complying paint from previously painted surfaces if, on repainting with specified paint, the two coatings are incompatible.



### 3.5 CLEANING AND PROTECTION

- A. At end of each workday, remove rubbish, empty cans, rags, and other discarded materials from Project site.
- B. After completing paint application, clean spattered surfaces. Remove spattered paints by washing, scraping, or other methods. Do not scratch or damage adjacent finished surfaces.
- C. Protect work of other trades against damage from paint application. Correct damage to work of other trades by cleaning, repairing, replacing, and refinishing, as approved by Architect, and leave in an undamaged condition.
- D. At completion of construction activities of other trades, touch up and restore damaged or defaced painted surfaces.

END OF SECTION 099113