

## SECTION 01 8316

### ENVELOPE PERFORMANCE REQUIREMENTS

#### PART 1 GENERAL

##### 1.1 SUMMARY

- A. Section includes performance requirements for exterior and roof enclosure systems forming the building envelope as defined in the Scope of Work, which includes, but is not limited to, work of the following Sections:

1. Section 034500 - PRECAST ARCHITECTURAL CONCRETE
2. Section 061643 - GYPSUM SHEATHING
3. Section 071326 - SELF-ADHERING SHEET WATERPROOFING
4. Section 071416 - COLD FLUID-APPLIED WATERPROOFING
5. Section 072100 - THERMAL INSULATION
6. Section 072119 - FOAMED-IN-PLACE INSULATION
7. Section 072700 - AIR BARRIER MEMBRANES
8. Section 074113 - FORMED METAL ROOF PANELS
9. Section 074210.11 - COMPOSITE FRAMING SUPPORT SYSTEM
10. Section 074213 - FORMED METAL WALL PANELS
11. Section 074213.16 - METAL PLATE WALL PANELS
12. Section 074243 - COMPOSITE METAL WALL PANELS
13. Section 074247 - HIGH PERFORMANCE GFRC WALL PANELS
14. Section 075556 - FLUID-APPLIED MEMBRANE ROOFING
15. Section 075557 - INTENSIVE GARDEN ROOF ASSEMBLY
16. Section 076200 - SHEET METAL FLASHING AND TRIM
17. Section 076526 - SELF-ADHERING FLASHING
18. Section 079200 - JOINT SEALANTS
19. Section 081113 - HOLLOW METAL DOORS AND FRAMES
20. Section 083613 - SectionAL DOORS
21. Section 084000 - ALUMINUM-FRAMED FACADE SYSTEMS
22. Section 084113 - ALUMINUM-FRAMED ENTRANCES AND STOREFRONTS
23. Section 088000 - GLAZING
24. Section 089000 - LOUVERS AND VENTS

##### 1.2 SUBMITTALS

- A. Coordination Drawings: Prepare and submit Project-specific coordination drawings, drawn to scale, demonstrating coordination of exterior envelope components. Use input from Installers of the items involved. Include the following information, as applicable:
1. Refer to individual Sections for specific shop drawing requirements for building enclosure products and equipment. Show relationship of components show on separate shop drawings.
  2. Show dimensions and clearances of interrelated building enclosure work.
  3. Indicate required installation sequences of interrelated building enclosure work.
  4. Include all information necessary for interference with other trades and building components.
- B. Reports: Submit the following:
1. Examination reports documenting inspections of substrates, areas, and conditions.
  2. Field quality-control reports.
  3. Photographic documentation complying with Section 01 3223 - PHOTOGRAPHIC

DOCUMENTATION, which demonstrate measures taken to create a complete, tight building envelope. Photographs shall be keyed into plans and other locations as directed by Architect.

- C. Exterior envelope work subschedule.

### 1.3 QUALITY ASSURANCE

- A. Quality Control: At minimum, provide the following quality control activities Refer to individual specification sections for additional requirements.
  - 1. Ongoing inspection:
    - a. Substrate examination.
    - b. Verification of environmental conditions.
    - c. Verification of manufacturer installation recommendations.
    - d. Photo documentation of concealed work.
  - 2. Component testing:
    - a. Waterproofing: Flood testing.
    - b. Wall openings and flashings: Water spray testing.
    - c. Joint sealant testing.

### 1.4 WORK COORDINATION

- A. Coordinate exterior envelope work to ensure efficient and orderly installation and proper operation of each part of exterior envelope work. Coordinate exterior envelope work that depends on separate entities for proper installation, connection, and operation.
  - 1. Develop special procedures required for coordination of exterior envelope work.
  - 2. Coordinate installation of different exterior envelope components to ensure maximum accessibility for required maintenance, service, and repair.
- B. Coordinate selection of exterior envelope products and equipment and ensure compatibility.
- C. Verify qualifications of subcontractors for exterior envelope work.
- D. Assemble and coordinate Shop Drawings, work submittals, and applicable coordination drawings for exterior envelope work provided by separate entities responsible for exterior envelope work. Submit all submittal items required for each Specification Section concurrently, unless partial submittals for portions of the Work are indicated on approved submittal schedule.
- E. Exterior Envelope Work Subschedule: Coordinate sequencing and scheduling of exterior envelope work. Prepare a subschedule to Project's construction schedule for exterior envelope work. Base subschedule on preliminary construction schedule. Secure time commitments for performing critical construction activities from separate entities responsible for exterior envelope work.
  - 1. Schedule construction operations in sequence required to obtain best results where installation of one part of exterior envelope work depends on installation of other components, before or after its own installation.
  - 2. Coordinate sequence of exterior envelope work activities to accommodate tests and inspections.

### 1.5 ADMINISTRATIVE PROCEDURES

- A. Coordinate scheduling and timing of required administrative procedures with other construction activities to avoid conflicts and to ensure orderly progress of exterior envelope work. Such administrative activities include, but are not limited to, the following:

1. Preparation of exterior envelope work subschedule of the Project construction schedule.
  2. Installation and removal of temporary facilities and controls for exterior envelope work.
  3. Delivery and processing of exterior envelope work submittals.
  4. Preinstallation conferences for exterior envelope work.
  5. Project closeout activities for exterior envelope work.
- B. Notifications: Prepare memoranda for distribution to each party involved with exterior envelope work, outlining special procedures required for coordination of exterior envelope work. Include such items as required notices, reports, and attendance at meetings.
- C. Coordination Meetings: Conduct coordination meetings specifically for exterior envelope work at regular intervals. Coordination meetings are in addition to specific meetings held for other purposes, such as progress meetings and preinstallation conferences.
1. Attendees: In addition to representatives of Owner, Architect each subcontractor, supplier, installer, and other entity concerned with progress or involved in planning, coordination, or performance of future exterior envelope work activities shall be represented at these meetings. All participants at meetings shall be familiar with Project and authorized to conclude matters relating to exterior envelope work.
  2. Agenda: Review and correct or approve minutes of previous exterior envelope work coordination meeting. Review other items of significance that could affect progress of exterior envelope work. Include topics for discussion as appropriate to status of Project.
  3. Reporting: Record meeting results and distribute copies to everyone in attendance and to others affected by decisions or actions resulting from each meeting.

## **PART 2 PRODUCTS (NOT USED)**

## **PART 3 EXECUTION**

### **3.1 EXAMINATION**

- A. Examine substrates, areas, and conditions, with Installer present, for compliance with specification requirements for installation tolerances and other conditions affecting performance of exterior envelope work.
1. For the record, prepare written report, endorsed by Installer, listing conditions detrimental to performance of exterior envelope.

### **3.2 FIELD QUALITY CONTROL**

- A. Inspect installed exterior envelope work to verify compliance with requirements and that work is installed and connected according to the Contract Documents.
- B. Inspection Reports: Prepare inspection reports and indicate compliance with and deviations from the Contract Documents.
1. Perform additional inspections to determine compliance of replaced or additional work.
- C. Field Quality-Control Certification: Prepare field quality-control certification endorsed by Contractor that states installed exterior envelope work complies with requirements in the Contract Documents.

**END OF SECTION**

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