

SECTION 01 41 00

THE AIR BARRIER SYSTEM

PART 1 - GENERAL

1.1 SECTION INCLUDES

- A. This section includes administrative and procedural requirements for accomplishing an airtight building enclosure that controls infiltration or exfiltration of air.
1. The airtight components of the building enclosure and the joints, junctures and transitions between materials, products, and assemblies forming the airtightness of the building enclosure are called “the air barrier system”. Services include coordination between the trades, the proper scheduling and sequencing of the work, preconstruction meetings, inspections, tests, and related actions, including reports performed by Prime Contractor, by independent agencies, and by governing authorities. They do not include contract enforcement activities performed by Architect.
 2. The Prime Contractor shall ensure that the intent of constructing the building enclosure with a continuous air barrier system to control air leakage into, or out of the conditioned space is achieved. The air barrier system shall have the following characteristics:
 - a. It must be continuous, with all joints sealed.
 - b. It must be structurally supported to withstand positive and negative air pressures applied to the building enclosure.
 - c. Connection shall be made between:
 - 1) Foundation and walls.
 - 2) Walls and windows or doors.
 - 3) Different wall systems.
 - 4) Wall and roof.
 - 5) Wall and roof over unconditioned space.
 - 6) Walls, floor and roof across construction, control and expansion joints.
 - 7) Walls, floors and roof to utility, pipe and duct penetrations.
 3. Air Barrier Penetrations: All penetrations of the air barrier and paths of air infiltration / exfiltration shall be sealed.

SPEC NOTE: Retain paragraph below to clarify the applicability of provisions in this section. Modify to suit project and coordinate modifications with general conditions and other Division 1 sections. See AIA Document A210, Paragraphs 3.3.3, 13.5.1 and 13.5.2.

- B. Requirements of this section relate to the coordination between subcontractors required to provide an airtight building enclosure, customized fabrication and installation procedures, not production of standard products.

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1. Continuity of the air barrier materials and products with joints. Continuity of all the enclosure assemblies with joints and transition materials to provide a whole building air barrier system.
2. Specific quality-control requirements for individual construction activities are specified in the sections of the specifications. Requirements in those sections may also cover production of standard products. It is the Contractor's responsibility to ensure that each subcontractor is adequately and satisfactorily performing the quality assurance documentation, tests and procedures required by each section.
3. Specified inspections, tests, and related actions do not limit Contractor's quality-control procedures that facilitate compliance with Contract Document requirements.
4. Requirements for Contractor to provide an airtight building enclosure is not limited by quality-control services required by Architect, Owner, or authorities having jurisdiction and are not limited by provisions of this section.

1.2 RELATED SECTIONS

- A. Division 1 Section Quality Control
- B. Division 1 Section Schedule
- C. Division 1 Section Meetings
- D. Division 3 Section Concrete
- E. Division 3 Section Precast Concrete
- F. Division 5 Section Light Gauge Metal Framing
- G. Division 6 Section Wood Sheathing
- H. Division 7 Section Roofing
- I. Division 7 Section Air Barrier
- J. Division 7 Section Sealants
- K. Division 8 Section Windows
- L. Division 8 Section Exterior Doors
- M. Division 8 Section Curtain Walls
- N. Division 8 Section Revolving Doors
- O. Division 8 Section Skylights

- P. Division 8 Section Storefronts and Entrances.
- Q. Division 8 Section Loading Dock Rollup-up Doors

1.3 RESPONSIBILITIES

- A. Prime Contractor Responsibilities: Unless otherwise indicated as the responsibility of another identified entity, the Prime Contractor shall provide coordination of the trades, and the sequence of construction to ensure continuity of the air barrier system joints, junctures and transitions between materials and assemblies of materials and products, from substructure to walls to roof. Provide quality assurance procedures, testing and verification as specified herein. Facilitate inspections, tests, and other quality-control services specified elsewhere in the Contract Documents and required by authorities having jurisdiction or by the Owner. Costs for these services are included in the Contract Sum.
 - 1. Organize preconstruction meetings between the trades involved in the whole building's air barrier system to discuss where each trade begins and ends and the responsibility and sequence of installation of all the air-tight joints, junctures, and transitions between materials, products and assemblies of products specified in the different sections, to be installed by the different trades.
- B. Inspection Services: Cooperate with agencies performing required inspections, tests, and similar services, and provide reasonable auxiliary services as requested. Notify the agency sufficiently in advance of operations to permit assignment of personnel.
- C. Coordination: Coordinate the sequence of activities to accommodate required services with a minimum of delay. Coordinate activities to avoid the necessity of removing and replacing construction to accommodate inspections and tests.

1.4 PERFORMANCE REQUIREMENTS

- A. Compliance Alternatives:

SPEC NOTE: Revise or expand subparagraph below as required to suit project

- a. Refer to Section 072800 for Foamed-In-Place Air Barrier products to verify additional testing and performance criteria that must be met and certified for proper documentation and installation.

PART 2 - PRODUCTS

(not used)

PART 3 - EXECUTION

3.1 REPAIR AND PROTECTION

- A. Upon completion of inspection, testing, sample taking and similar services, repair damaged construction and restore substrates and finishes. Comply with Contract Document requirements for Division 1 Section "Cutting and Patching."
- B. Protect construction exposed by or for quality-control service activities, and protect repaired construction.
- C. Repair and protection is Contractor's responsibility, regardless of the assignment of responsibility for inspection, testing, or similar services.

3.2 TESTING AND INSPECTION

- A. If not required by the contract the Owner will, at his discretion, hire a testing and inspection agency to provide [Continuous] [Occasional] observation and inspection during installation of the air barrier system.

END OF SECTION

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