

| Suggested Specifications | Section 07 95 00  
Expansion Control – Fire Barrier

**PART 1 - General**

**1.01 Related Documents**

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

**1.02 Summary**

- A. This Section includes the following:
  - 1. Architectural joint systems for building interiors. *(delete if not required)*
  - 2. Architectural joint systems for building exteriors. *(delete if not required)*
  - 3. Architectural joint systems for open-air structures. *(delete if not required)*
- B. Related Sections include the following:
  - 1. Division 03 Section "Cast-in-Place Concrete" for cast-in architectural-joint-system frames furnished, but not installed, in this Section.
  - 2. Division 04 Section "Unit Masonry" for masonry wall joint systems.
  - 3. Division 07 Section "Sheet Metal Roofing" for sheet metal roof joint systems.
  - 4. Division 07 Section "Sheet Metal Flashing and Trim" for sheet metal wall joint systems.
  - 5. Division 07 Section "Fire-Resistive Joint Systems" for liquid-applied joint sealants in fire-resistive building joints.
  - 6. Division 07 Section "Joint Sealants" for liquid-applied joint sealants.

**1.03 Definitions**

- A. Maximum Joint Width: Widest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.
- B. Minimum Joint Width: Narrowest linear gap a joint system tolerates and in which it performs its designed function without damaging its functional capabilities.
- C. Movement Capability: Value obtained from the difference between widest and narrowest widths of a joint.
- D. Nominal Joint Width: The width of the linear opening specified in practice and in which the joint system is installed.

**1.04 Submittals**

- A. Shop Drawings: Provide the following for each joint system specified and obtain approval prior to fabrication and shipment of materials to the job site:
  - 1. Placement Drawings: Include line diagrams showing plans, elevations, sections, details, splices, blockout requirement, entire route of each joint system, and attachments to other work. Where joint systems change planes, provide isometric or clearly detailed drawing depicting how components interconnect.
- B. Product Data: Submit copies of manufacturer's latest published literature for materials specified herein for approval, and obtain approval before materials are fabricated and delivered to the site. Data to clearly indicate movement capability of cover assemblies and suitability of material used in exterior seal for UV exposure.
- C. Samples for Initial Selection: For each type of joint system indicated.
  - 1. Include manufacturer's color charts showing the standard range of colors and finishes available for each exposed metal and elastomeric seal material.

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- D. Certificates – Material test reports from qualified independent testing laboratory indicating and interpreting test results relative to compliance of fire-rated expansion joint assemblies with requirements indicated.

#### 1.05 Quality Assurance

- A. Installer Qualifications: Approved by manufacturer and having experience installing joint systems that are similar in design complexity.
- B. Source Limitations: Obtain all architectural joint systems through one source from a single manufacturer.
- C. Product Options: Drawings indicate size, profiles, and dimensional requirements of architectural joint systems and are based on the specific systems indicated. Refer to Division 01 Section "Product Requirements."
  - 1. Do not modify intended aesthetic effects, as judged solely by Architect, except with Architect's approval. If modifications are proposed, submit comprehensive explanatory data to Architect for review.
- D. Fire-Test-Response Characteristics: Where indicated, provide architectural joint system and fire-barrier assemblies identical to those of assemblies tested for fire resistance per UL 2079 and/or ASTM E 1966 by a testing and inspecting agency acceptable to authorities having jurisdiction. Fire rating not less than the rating of adjacent construction.
- E. Manufacturer to provide 5 year warranty for all joint covers.

#### 1.06 Coordination

- A. Coordinate installation of exterior horizontal joint systems with vertical expansion assemblies to ensure that transitions are watertight.

### PART 2 - Products

#### 2.01 Manufacturers

- A. Basis of Design – manufactured by Construction Specialties subject to compliance with requirements listed. The Expansion Joint Covers and related materials herein specified and indicated on the drawings shall be manufactured by: Construction Specialties, 3 Werner Way, Lebanon, NJ 08833. Tel. 800.233.8493. Email: [cet@csgroup.com](mailto:cet@csgroup.com). No substitutions.
- B. Drawings and specifications are based on manufacturer's literature from Construction Specialties, Inc. drawings and specifications unless otherwise indicated. Other manufacturers must be approved equal by Architect/Owner.

#### 2.02 Materials

- A. Compression Seals: ASTM D2000; preformed rectangular elastomeric extrusions having internal baffle system and designed to function under compression.
- B. Fire Barriers: Any material or material combination, when fire tested to UL 2079 standards after cycling, designated to resist the passage of flame and hot gases through a movement joint and to meet performance criteria for required rating period.
- C. Vapor Barrier: 7-ply laminate reinforced Polyethylene. ASTM F-1745-97. 3" tensile strength – 275 lbs., ASTM-882, Puncture Strength – 72 lbs., ASTM-4833, PPT Resistance – 45 lbs., ASTM -2582.
- D. Accessories: Manufacturer's standard anchors, clips, fasteners, set screws, spacers, and other accessories compatible with material in contact, as indicated or required for complete installations. Manufacturer supplied color matched wet silicone for field installation at slices and terminations and edge void.

#### 2.03 Architectural Joint Systems, General

- A. General: Provide architectural joint systems of design, basic profile, materials, and operation indicated. While specified joint systems establish the function and aesthetic intent, it may be necessary for the manufacturer to modify the joint systems to accommodate the movement requirements as scheduled in the contract

documents. Such modifications should be made without significant changes to the aesthetic or functional intent of the joint systems. Provide units with capability to accommodate variations in adjacent surfaces.

- B. Design architectural joint systems for the following size and movement characteristics:
1. Nominal Joint Width: *[As indicated on Drawings] [As scheduled] <Insert width>*.
  2. Maximum Joint Width: *[As indicated on Drawings] [As scheduled] <Insert width>*.
  3. Minimum Joint Width: *[As indicated on Drawings] [As scheduled] <Insert width>*.
  4. Lateral Shear Movement Capability: *[As indicated on Drawings] [As scheduled] <Insert movement capability>*.

**2.04 Architectural Joint Systems for Building Interiors**

- A. Construction Specialties, Inc., shall manufacture expansion joint cover assemblies specified herein and indicated on the drawings. Other manufacturers may be accepted as substitutions only if the manufacturer can demonstrate product compliance with the requirements of the contract documents. Substitution requests must be reviewed prior to bid and must include the following information:
1. Details
  2. ASTM- E1399 test reports
  3. Mock-ups
  4. Reference list of projects with similar products as those specified herein.
  5. Sample of written 5 year warranty

**2.05 Architectural Joint Systems for Open-Air Structures**

- A. Construction Specialties, Inc., shall manufacture expansion joint cover assemblies specified herein and indicated on the drawings. Other manufacturers may be accepted as substitutions only if the manufacturer can demonstrate product compliance with the requirements of the contract documents. Substitution requests must be reviewed prior to bid and must include the following information:
1. Details
  2. ASTM- E1399 test reports
  3. Mock-ups
  4. Reference list of projects with similar products as those specified herein.
  5. Sample of written 5 year warranty
- B. Joint Systems for Parking Structures: *(delete if not required)*
1. Basis-of-Design Product: Construction Specialties, Inc. model *2HFR*
  2. Type: Pre-compressed fire rated joint filler.
    - a. Seal Material: Silicone.
      - 1) Color: Gray.
  3. All miters and changes in direction to be field fabricated.
  4. Sound Attenuation::
    - a. 1 ½" gap in STC 68/OITC 51 assembly are at STC of 64 and an OITC of 52
- C. Fire-Resistance Rating: 2 Hour rating: 2HFR, 3 hour rating: 3HFR, non-rated: HF.

**2.06 Finishes**

- A. Appearance of Finished Work: Noticeable variations in same piece are not acceptable.

**PART 3 - Execution**

**3.01 Examination**

- A. Examine surfaces and blockouts where architectural joint systems will be installed for installation tolerances and other conditions affecting performance of work.
1. Proceed with installation only after unsatisfactory conditions have been corrected.

**3.02** Preparation

- A. Prepare substrates according to architectural joint system manufacturer's written instructions.
- B. Repair concrete slabs and blockouts using manufacturer's recommended repair grout of compressive strength adequate for anticipated structural loadings.
- C. Coordinate and furnish anchorages, setting drawings, and instructions for installing joint systems. Provide fasteners of metal, type, and size to suit type of construction indicated and to provide for secure attachment of joint systems.
- D. Storage and handling shall comply with manufacturers installation instructions.

**3.03** Installation

- A. Comply with manufacturer's written instructions for storing, handling, and installing architectural joint assemblies and materials unless more stringent requirements are indicated.
- B. Compression Seals: Pre-Compressed Foam Seals: Apply 2 part epoxy adhesive as recommended by manufacturer before installation of compression seals. Splice conditions as recommended by manufacturers installation instructions..
- C. Terminate exposed ends of joint assemblies with field termination devices.
- D. Fire-Resistance-Rated Assemblies: Coordinate installation of architectural joint assembly materials and associated work so complete assemblies comply with assembly performance requirements.
  - 1. Fire Barriers: Install fire barriers to provide continuous, uninterrupted fire resistance throughout length of joint, including transitions and field splices.

**3.04** Protection

- A. Do not remove protective covering until finish work in adjacent areas is complete. When protective covering is removed, clean exposed metal surfaces to comply with manufacturer's written instructions.
- B. Protect the installation from damage by work of other Sections. Where necessary due to heavy construction traffic, remove and properly store cover plates or seals and install temporary protection over joints. Reinstall cover plates or seals prior to Substantial Completion of the Work.

END OF SECTION 07 95 00