SECTION 07800C -- FIRE AND SMOKE PROTECTION

PART 1 - GENERAL

1.01 This section includes General criteria for selection of fire and smoke protection including applied fireproofing and firestopping at penetrations occurring in fire resistive-rated walls, partitions and elevated floor slabs.

1.02 Reference standards include American Society for Testing and Materials (ASTM) and Underwriter’s Laboratory (UL) Fire Resistant Directory, Uniform Building Code (UBC) and Uniform Mechanical Code (UMC).

1.03 Data shall be provided on product characteristics, performance criteria, limitations and manufacturer’s installation instructions indicating preparation, requirements and techniques.

1.04 Prior to installation, shop drawings and a schedule shall be provided indicating material to be used, building elements to be protected with spray-applied fireproofing, hourly rating and material thickness provided and appropriate references.

1.05 Test Data: Independent laboratory test results for fireproofing shall be submitted for the following performance criteria:

1. Bond Strength per ASTM E 736.
2. Compressive Strength per ASTM E 761.
3. Deflection per ASTM E 759.
4. Bond Impact per ASTM E 760.
5. Air Erosion per ASTM E 859.
8. Surface Burning Characteristics per ASTM E 84.
9. Combustibility per ASTM E 1354 Cone Calorimeter.
11. Abrasion Resistance (Test Method developed by City of San Francisco, Bureau of Building Inspection).
12. Impact Penetration (Test Method developed by City of San Francisco, Bureau of Building Inspection).

1.06 A representative surface of not less than 100 square feet shall be sprayed by the applicator and approved by the Architect prior to proceeding. This mock-up shall be the standard of acceptability for the balance of the project.

1.07 Products, execution, and fireproofing thicknesses shall conform to the applicable code requirements for the required fire resistance ratings.
1.08 Contractor, fireproofing subcontractor and independent testing laboratory shall attend a pre-installation conference to review the substrates for acceptability, method of application, applied thicknesses, inspection procedures, and other issues.

1.09 Submit evidence that the fireproofing has been tested per ASTM E 119 by Underwriters Laboratories Inc. Include evidence that the fire testing was sponsored by the manufacturer and that the material tested was produced at the manufacturer’s facility under the supervision of Underwriters Laboratories Inc. Personnel. Letters documenting classification status are not acceptable evidence of compliance with this section.

1.10 Design shall consider proper clearances for required thicknesses of material and proper installation of adjacent building materials and systems.

1.11 RELATED WORK

A. Section 06410 Custom Casework
B. Section 13850CPPRS Brown University Fire Safety Office Fire Alarm & Sprinkler Installation Requirements

PART 2 - PRODUCTS

2.01 Cementitious fireproofing shall be Grace Construction Products Monokote type System or approved equal.

2.02 Gypsum-based spray-on applied products shall be prohibited.

2.03 Intumescent paint shall be permitted by Brown for exposed structural steel or where it is not possible to achieve required clearances and shall be A/D Firefilm System as manufactured by A/D Fire Protection Systems of Scarborough, Ontario or approved equal.

2.04 Intumescent firestop sealant to be Tremstop-WBM by Tremco, Inc. or approved equal.

2.05 Silicone firestop sealant to be Fire Sil Sealant by Tremco, Inc. or approved equal.

2.06 Firestop collars to be SpecSeal by STI or approved equal.

2.07 Wrap strips to be Tremstop-WS by Tremco, Inc. or approved equal.

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1 Listing of related sections is for convenience and is not all-inclusive. Affected sections or drawings where specific design requirements are to be specified, or related sections where applicable Brown Guidelines may appear, are indicated. 00100 sections means all related 00100 sections including any sections from 00100 through 00199.
2.08 Forming / Damming material to be mineral fiberboard as recommended and approved by the firestop materials manufacturer.

PART 3 - EXECUTION

3.01 All installation of fireproofing and firestopping materials shall be per manufacturer’s recommendations and specifications.