1. GENERAL

1.01 SECTION INCLUDES

.1 Firestopping through penetrations in fire rated assemblies.

1.02 RELATED REQUIREMENTS

.1 Section 07 84 00 – Firestopping.

1.03 REFERENCES

.1 ASTM E 84, "Surface Burning Characteristics of Building Materials".

.2 ASTM E 119, "Fire Tests of Building Construction and Materials".

.3 ASTM E 814, "Fire Tests of Penetration Firestop Systems".

.4 ANSI/UL263, "Fire Tests of Building Construction and Materials".

.5 ANSI/UL723, "Surface Burning Characteristics of Building Materials".

.6 ANSI/UL1479, "Fire Tests of Through Penetration Firestops".

.7 Underwriters Laboratories Inc. (UL) – Fire Resistance Directory

1.04 PERFORMANCE REQUIREMENTS

.1 Fire rated pathway devices shall be the preferred product and shall be installed in all locations where frequent cable moves, add-ons and changes will occur, such devices shall:

.1 Meet the hourly rating of the floor or wall penetrated.

.2 Permit the allowable cable load to range from 0% to 100% visual fill thereby eliminating the need to calculate allowable fill ratios.

.3 Not require any additional action on the part of the installer to open or close the pathway device or activate the internal smoke and fire seal, such as, but not limited to:

.1 Opening or closing of doors.

.2 Twisting an inner liner.

.3 Removal or replacement of any material such as, but not limited to, sealant, caulk, putty, pillows, bags, foam plugs, foam blocks, or any other material.

.4 Permit multiple devices to be ganged together to increase overall cable capacity.

.5 Allow for retrofit to install around existing cables.

.6 Include an optional means to lengthen the device to facilitate installation in thicker barriers without degrading fire or smoke sealing properties or inhibiting ability of device to permit cable moves, add-ons, or changes.

.2 Where single cables (up to 7 mm (0.27 in) diameter) penetrate gypsum board/stud wall assemblies, a fire-rated cable grommet may be substituted. Acceptable products shall be molded from plenum-grade polymer and conform to the outer diameter of the cable forming a tight seal for fire and smoke. Additionally, acceptable products shall lock into the barrier to secure cable penetration.

.3 Where non- mechanical products are utilized, provide products that upon curing do no re-emulsify, dissolve, leach, breakdown or otherwise deteriorate over time from exposure to atmospheric moisture, sweating pipes, ponding water, or other forms of moisture characteristic during or after construction.

.4 Where it is not practical to use a mechanical device, openings within floors and walls designed to accommodate telecommunications and data cabling shall be provided with re-enterable products that do not cure or dry.

.5 Cable trays shall terminate at each barrier and resume on the opposite side such that cables pass independently through fire-rated pathway devices. Cable tray shall be rigidly supported independent from fire-rated pathway devices on each side of barrier.

1.05 SUBMITTALS

.1 Submit under provisions of Section 01 33 00.

.2 Product Data: Provide manufacturer's standard catalog data for specified products demonstrating compliance with referenced standards and listing numbers of systems in which each product is to be used.

.3 Shop Drawings: Submit schedule of opening locations and sizes, penetrating items, and required listed design numbers to seal openings to maintain fire resistance ratings.

.4 Certificates: Product certificates signed by firestop system manufacturer certifying material compliance with applicable code and specified performance characteristics.

.5 Installation Instructions: Submit manufacturer's printed installation instructions.

1.06 QUALITY ASSURANCE

.1 Products/Systems: Provide firestopping systems that comply with the following requirements:

.1 Firestopping tests are performed by a qualified, testing and inspection agency. A qualified testing and inspection agency is UL, or another agency performing testing and follow-up inspection services for firestop system acceptable to authorities having jurisdiction.

.2 Firestopping products bear the classification marking of qualified testing and inspection agency.

.2 Installer Qualifications: Experience in performing work of this section who is qualified by the firestopping manufacturer as having been provided the necessary training to install firestop products in accordance with specified requirements.

1.07 DELIVERY, STORAGE, AND HANDLING

.1 Delivery:

.1 Manufacturer's original, unopened, undamaged containers, identification labels intact identifying product and manufacturer, date of manufacture; lot number; shelf life, if applicable; qualified testing and inspection agency's classification marking; and mixing instruction for multicomponent products.

.2 Handle and store products according to manufacturer's recommendations published in technical materials. Leave products wrapped or otherwise protected and under clean and dry storage conditions until required for installation.

.2 Storage and Protection:

.1 Store materials protected from exposure to harmful weather conditions and at temperature and humidity conditions recommended by manufacturer.

1.08 PROJECT CONDITIONS

.1 Do not install firestopping products when ambient or substrate temperatures are outside limitations recommended by manufacturer.

.2 Do not install firestopping products when substrates are wet due to rain, frost, condensation, or other causes.

.3 Maintain minimum temperature before, during, and for a minimum 3 days after installation of materials.

.4 Do not use materials that contain flammable solvents.

.5 Coordinate construction of openings and penetrating items to ensure that through-penetration firestop systems are installed according to specified requirements.

.6 Coordinate sizing of sleeves, openings, core-drilled holes, or cut openings to accommodate through-penetration firestop systems.

.7 Schedule installation of firestopping after completion of penetrating item installation but prior to covering or concealing of openings.

2. PRODUCTS

2.01 MANUFACTURERS

.1 Specified Technologies Inc.
200 Evans Way, Somerville, NJ 08876. Tel: (800) 992-1180, Fax: (908) 526-9623, Email: specseal@stifirestop.com, Website: www.stifirestop.com.

.2 Substitutions: as approved by the Consultant prior to tender closing.

.3 Single Source: Obtain firestop systems for each type of penetration and construction condition indicated only from a single manufacturer.

2.02 MATERIALS

.1 General: Use only firestopping products that have been tested for specific fire resistance rated construction conditions conforming to construction assembly type, penetrating item type, annular space requirements, and fire rating involved for each separate instance.

2.03 FIRE RATED CABLE PATHWAYS

.1 Steel raceway with intumescent foam pads allowing 0 to 100 percent cable fill, the following products are acceptable:

.1 Specified Technologies Inc. (STI) EZ-PATH Fire Rated Pathway.

3. EXECUTION

3.01 EXAMINATION

.1 Before beginning installation, verify that substrate conditions previously installed under other sections are acceptable for installation of firestopping in accordance with manufacturer's installation instructions and technical information.

.2 Surfaces shall be free of dirt, grease, oil, scale, laitance, rust, release agents, water repellants, and any other substances that may inhibit optimum adhesion.

.3 Provide masking and temporary covering to protect adjacent surfaces.

.4 Do not proceed until unsatisfactory conditions have been corrected.

3.02 INSTALLATION

.1 General: Install through-penetration firestop systems in accordance with Performance Criteria and in accordance with the conditions of testing and classification as specified in the published design.

.2 Manufacturer's Instructions: Comply with manufacturer's instructions for installation of firestopping products.

3.03 FIELD QUALITY CONTROL

.1 Inspections: Engage qualified independent inspection agency to inspect through-penetration firestop systems.

.2 Keep areas of work accessible until inspection by authorities having jurisdiction.

.3 Where deficiencies are found, repair firestopping products so they comply with requirements.

3.04 ADJUSTING AND CLEANING

.1 Remove equipment, materials, and debris, leaving area in undamaged, clean condition.

.2 Clean all surfaces adjacent to sealed openings to be free of excess firestopping materials and soiling as work progresses.

End of Section