SECTION 08 3480

SMOKE CONTAINMENT CURTAINS

PART 1 GENERAL

1.1 SUMMARY

A. Work Included: Provide labor, materials and equipment necessary to complete the work of this Section, including but not limited to the following:

1. Smoke containment system at elevator hoistway entrances.

B. Related Work: The following items are not included in this Section and are specified under the designated Sections:

1. Section 05 5000 - METAL FABRICATIONS.
2. Division 26 - ELECTRICAL.

1.2 SUBMITTALS

A. Product Data: For each type and size of smoke containment curtain and accessory. Include the following:

1. Summary of forces and loads on walls and jambs.
2. Include description of fire-release system including testing and resetting instructions.

B. Shop Drawings: For special components and installations not dimensioned or detailed in manufacturer's product data.

C. Qualification Data: For Installer.

1.3 QUALITY ASSURANCE

A. Manufacturer Qualifications: Minimum five years experience in producing smoke containment systems of the type specified. Manufacturer shall maintain a quality control program in accordance with ICBO-ES Acceptance Criteria AC 77.

B. Installer Qualifications: Manufacturer's authorized representative who is trained and approved for both installation and maintenance of units required for this Project.

C. Source Limitations: Obtain overhead coiling doors through one source from a single manufacturer.

1. Obtain operators and controls from overhead coiling door manufacturer.

D. Fire-Test-Response Characteristics: Provide assemblies complying with NFPA 80 that are identical to door and frame assemblies tested for fire-test-response characteristics per UL 10b and NFPA 252, and that are listed and labeled for fire ratings indicated by UL, FMG, ITS, or another testing and inspecting agency acceptable to authorities having jurisdiction.

E. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, Article 100.

F. Testing Laboratory Label:

1. UL Listing.

2. OSHPD Anchorage Pre-Approval No. R-0318.

G. Pre-Installation Meeting:

1. Schedule and convene a pre-installation meeting prior to commencement of field operations with representatives of the following in attendance: Authority, Design Professional, Construction Manager, smoke containment system sub-contractor, painting sub-contractor, and electrical sub-contractor.
2. Review substrate conditions, requirements of related work, installation instructions, storage and handling procedures, and protection measures.
3. Keep minutes of meeting including responsibilities of various parties and deviations from specifications and installation instructions.

PART 2 PRODUCTS

2.1 PERFORMANCE REQUIREMENTS

A. Fire-Resistance: Where fire-resistance ratings are indicated or required by authorities having jurisdiction, provide curtains which are identical to curtains whose fire-resistance rating has been tested in compliance with ASTM E152 by independent agencies acceptable to the Design Professional and authorities having jurisdiction.

B. Air Leakage: Less than 3 cfm per sq. ft. of door opening at 0.1 in water pressure differential at ambient temperature and 400 degrees F tested per IBC 714.2.3 or per 1997 UBC Vol. 3, Standard 7-2, Part II.

2.2 MANUFACTURERS

A. Manufacturers: Subject to compliance with requirements, provide products by one of the following:

1. Bilco (Colt Corporation).
2. Door Systems Inc.
3. Smoke Guard Corporation.

B. Basis-of-Design: Provide DSI 600 as manufactured by Door Systems Inc.

1. Headbox Finish – Shadow Gap Option #3
2. Side Guide Mounting – Inset in Wall Flush Option #4b

2.3 CURTAIN MATERIALS AND CONSTRUCTION

A. Curtain:

1. Film: Minimum 1 mil (0.025 mm) thick transparent polyimide film reinforced with 100 denier nomex yarn at.25 in (6.35 mm) each way.
2. Magnetic Strips: Flexible multi-pole strips attached to longitudinal edges of film with low modulus silicone adhesive.

B. Housing: 20 gauge, powder coated, cold rolled or stainless steel container and door with concealed hinges, and latch.

C. Auxiliary Rails:

1. Material: 16 gauge ASTM A 240/240M, Type 430, ferretic stainless steel.
2. Size: As shown on Drawings.

D. Cove Bases (required for hoistway openings wider than 48"): 16 gauge ASTM A 240/240M, Type 430, ferretic stainless steel.

E. Rewind Motor: NFPA 70, 12v DC.

F. Release Mechanism: Comply with UL Standard No. 508 or 864.

G. Control Station: Metal box with battery backup, power disconnect with integral circuit breaker, step down power transformer (120v AC to 12v DC), and controller circuit board.

1. Emergency Power Supply: 12v DC battery with charger.

H. Wall Switch: Include switch to rewind curtain into housing, system status indicators, keyed curtain deployment switch, and keyed to silence function.

2.4 IDENTIFICATION

A. Label each smoke containment system with following information:

1. Manufacturer’s name.
2. Maximum leakage rating at specified pressure and temperature conditions.
3. Label of quality control agency.

2.5 ACCESSORIES

A. Provide automatic-closing device that is inoperative during normal door operations, with governor unit complying with requirements of NFPA 80 and with an easily tested and reset release mechanism, and designed to be activated by building fire alarm and detection system and door-holder-release devices.

PART 3 EXECUTION

3.1 INSTALLATION

A. General: Install coiling doors and operating equipment complete with necessary hardware, jamb and head molding strips, anchors, inserts, hangers, and equipment supports.

1. Install fire-rated curtain to comply with NFPA 80.

3.2 ADJUSTING

A. Lubricate bearings and sliding parts; adjust doors to operate easily, free of warp, twist, or distortion and with weathertight fit around entire perimeter.

3.3 STARTUP SERVICES

A. Engage a factory-authorized service representative to perform startup service.

1. Complete installation and startup checks according to manufacturer's written instructions.
2. Test and adjust controls and safeties. Replace damaged and malfunctioning controls and equipment.
    a. Test door closing when activated by detector or alarm-connected fire-release system. Reset door-closing mechanism after successful test.

END OF SECTION

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