SECTION 08 34 83

ELEVATOR DOOR SMOKE CONTAINMENT SYSTEM

PART 1 GENERAL

1.01 SUMMARY

A. Section Includes:
   1. Smoke detector activated elevator door smoke containment curtain and control system designed to provide a tight-fitting, smoke- and draft-control assembly.

B. Related Sections
   1. Section 09 22 00 - Supports for Plaster and Gypsum Board: Metal backing in housing mounting area.
   2. Section 09 91 00 - Painting: Field painting of specified components.

1.02 REFERENCE STANDARDS

A. ASTM International:
   1. ASTM A240/A240M - - Standard Specification for Heat-Resisting Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels.

B. CBC - California Building Code.

C. ICC Evaluation Service, Inc.:
   1. ICC ES AC77 - Acceptance Criteria for Smoke-Containment Systems Used with Fire-Resistive Elevator Hoistway Doors and Frames.

D. National Fire Protection Association:
   1. NFPA 70 - National Electrical Code.

E. OSHPD Pre-Approval (No. R-0318) of Anchorage for Fixed Hospital Equipment.

F. Underwriters Laboratories Inc.:
   1. UL - Fire Resistance Directory.
   2. UL 508 - Industrial Control Equipment.
   3. UL 864 - Control Units for Fire Protective Signaling Systems.

1.03 SYSTEM DESCRIPTION

A. Elevator door smoke containment system shall consists of smoke detector activated hoistway elevator smoke containment curtain and control system designed to provide a tight-fitting, smoke- and draft-control assembly. Complete system shall comply with the following:
   1. When activated the smoke containment system shall deploy in less than 10 seconds and comply with UL 508.
   2. Compete system shall be acceptable to authority having jurisdiction.
   3. Complete system shall be labeled by UL.
   4. A wall switch shall permit curtain to be rewound into housing.
   5. Manufacture shall maintain a quality control program in accordance with ICC ES AC77.

B. Elevator Door Smoke Containment System Performance Requirements:

1. Air Leakage: Less than 3 cfm per square feet of door opening at 0.1 in water pressure differential at ambient temperature and 400 degrees Fahrenheit tested per CBC Section 710.

1.04 ADMINISTRATIVE REQUIREMENTS

A. Coordination:
   1. Coordinate elevator door smoke containment system details with work supporting or adjoining elevator hoistway frames.
   2. Coordinate elevator door smoke containment system work with opening construction and adjacent details.
   3. Coordinate installation of electrical service.
   4. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.

B. Preinstallation Meeting:
   1. Schedule and convene a preinstallation meeting prior to commencement of field operations with representatives of University's Representative, Contractor, smoke containment system contractor, painting contractor, and electrical 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.

C. [Sequencing:]

D. Scheduling:
   1. Deliver items only after proper facilities are available.

1.05 [SUSTAINABLE CHARACTERISTICS]

A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design compliance.

B. Materials and Resources Characteristics:
   1. [Recycled Content Materials: Furnish materials with maximum available recycled content including:

SPEC NOTE ***List materials specified in this section required to have recycled content.***

      a. [_____.]
   2. [Regional Materials: Furnish materials extracted, processed, and manufactured within 500 miles of Project site.]

SPEC NOTE ***List materials specified in this section required to be regional materials.***

      a. [_____.]

1.06 SUBMITTALS

A. See Section 01 33 00 - Submittal Procedures.

B. Product Data.

C. Certifications: Submit the following certifications indicating that:
   1. Manufacturer meets qualifications specified in this Section.
   2. Installer meets qualifications specified in this Section.

D. Shop Drawings: Indicate complete installation showing door width and height, jamb width, jamb

and head projection, curtain width, mounting height, and housing width, and motor location. Show and identify related work performed under other sections of the specifications.

E. Samples: Only as requested.

F. Manufacturer's installation instructions and testing procedures.

G. Closeout Submittals: Reference Section 01 78 00 - Closeout Submittals; submit following items:
   1. Operation and Maintenance Manual.
   2. Manufacturer's Warranties.

1.07 [SUSTAINABLE DESIGN SUBMITTALS]

A. Section 01 35 63 - Sustainability Project Requirements: Requirements for sustainable design submittals.

B. Manufacturer's Certificate: Certify products meet or exceed specified sustainable design requirements.
   1. Materials Resources Certificates:
      a. Certify source and origin for [salvaged] [and] [reused] products.
      b. Certify recycled material content for recycled content products.
      c. Certify source for regional materials and distance from Project site.

C. Product Cost Data: Submit cost of products to verify compliance with Project sustainable design requirements. Exclude cost of labor and equipment to install products.
   1. Provide cost data for the following products:
      a. Salvage products.
      b. Reused products.
      c. Products with recycled material content.
      d. Regional products.

1.08 QUALITY ASSURANCE

A. Qualifications:
   1. Manufacturer Qualifications: Minimum seven years experience in producing smoke containment systems of the type specified.
   2. Installer Qualifications: Factory trained by manufacturer.

B. Certifications:
   1. Manufacturer's Evaluation Report.
   2. California Department of Forestry and Fire Protection and Office of the State Fire Marshal Listing.
   3. Testing Laboratory Label.
   4. OSHPD Anchorage Pre-Approval No. OPA-0318.

1.09 DELIVERY, STORAGE, AND PROTECTION

A. Reference Section 01 60 00 - Product Requirements.

B. Follow manufacturer's instructions.

C. Deliver, store, and handle items to prevent damage or deformation.

D. Store delivered products in clean, safe, dry area.

1.10 WARRANTY

A. Reference Section 01 78 00 - Closeout Submittals.

B. Time Period: One year from Date of Substantial Completion.

C. Conditions: Manufacturer's standard warranty form.

PART 2 PRODUCTS

2.01 SMOKE CONTAINMENT SYSTEM

A. [Product: Smoke Guard Corp.'s "Smoke Guard System Model 400"; or equal.]

B. [Product: Smoke Guard Corp.'s "Smoke Guard System Model 600"; or equal.] ***Requires Control Station***

2.02 COMPONENTS

A. Curtain:

1. Film: Minimum 1 mil (0.025 mm) thick transparent polyimide film reinforced with minimum 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 galvanealed steel container with dust cover and door with concealed hinges, and latch. Paint must be heat resistant to 400 degrees Fahrenheit (204 degrees Centigrade) and be spray applied maximum 5 mils (.13 mm) thick including factory primer.

C. Mandatory Auxiliary Rails:
1. Material: 16 gauge ASTM A 240/240M, Type 430, ferretic stainless steel.
2. Size: 2 inches (51 mm) wide by depth as required 1 inch (25 mm), 3/4 inch (19 mm) or 1/2 inches (13 mm) deep, to project beyond face of elevator door frame.

D. Rewind Motor: NFPA 70, 90v DC.

E. Release Mechanism: Comply with UL 864.

F. ***Use with Model 600*** [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.]

G. Screen Rewind Switch: Included switch to rewind curtain into housing.

H. Wiring, Wall Switch, Connections, Auxiliary Rails (where required), or Components: As required for a complete system and as standard with manufacturer.

2.03 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.

PART 3 EXECUTION

3.01 EXAMINATION

A. Examine substrates upon which work will be installed.
   1. Verify related work performed under other sections is complete and in accordance with Shop Drawings.
   2. Verify wall surfaces and elevator door frames are acceptable for installation of smoke containment system components.
   3. Verify existing field painted elevator door frames to be used for curtain adherence have been repainted in accordance with smoke containment system manufacturer's instructions or they have the original factory paint.

B. Commencement of work is acceptance of substrate.

3.02 INSTALLATION

A. Install smoke containment system components in accordance with manufacturer's installation instructions and reviewed Shop Drawings.

B. Use anchorage devices to securely fasten components to wall construction and elevator hoistway frames without distortion or stress.

3.03 FIELD QUALITY CONTROL

A. Field Test: Follow manufacturer's cycle test procedures.
   1. Notify University's Representative, Designated Campus Fire Marshal, alarm sub-contractor, and [elevator sub-contractor] [elevator service company] minimum one week in advance of scheduled testing.

3.04 CLEANING

A. Thoroughly clean surfaces in accordance with Section 01 74 00 - Cleaning.

3.05 DEMONSTRATION

A. Demonstrate required testing and maintenance procedures to University's designated personnel in accordance with Section 01 79 00 - Demonstration and Training.

END OF SECTION