SECTION 08 33 43

Overhead coiling smoke curtains

1. GENERAL
   1. Section Includes
      1. Deployable Draft-Protective Curtain Assemblies.
   2. Related Sections

[Specifier Notes]: Remove sections not required under project scope of work.

* + 1. Section 08 33 44 – Overhead Coiling Fire Curtains.
    2. Section 28 30 00 – Detection and Alarms.
  1. Coordination
     1. Coordinate smoke curtain assemblies with power, signal, fire-alarm, and smoke-detection systems specified in Division 26 and Division 28.
     2. Coordinate smoke-protective curtain assemblies with ceilings for operational clearances and maintenance access requirements.
     3. Coordinate smoke-protective curtain assemblies with walls for support requirements, rating continuity above ceilings, and recessed wall switches.
     4. Coordinate requirements for metal supports required for smoke-protective curtain assemblies.
  2. Informational Submittals
     1. Submit under provisions of Section 01 30 00.
     2. Product Data: Manufacturer's product information and data sheets for each product specified in this section, including:
        1. Substrate preparation instructions and recommendations
        2. Installation means and methods.
        3. Recommendations and requirements for proper storage and handling.
     3. Shop Drawings:
        1. Submit Manufacturer’s approved shop drawings detailing the section and elevation views of each product to be installed.
        2. Coordinate with locations listed on Contract Drawings.
     4. Warranty Information:
        1. Submit confirmation and details of manufacturer’s warranty, extended warranty, and replacement policies.
  3. Closeout SUBMITTALS
     1. Operation and Maintenance Data: For smoke- and draft-protective curtain assemblies to include in emergency, operation, and maintenance manuals.
     2. Field quality-control reports for required testing.
  4. QUALITY ASSURANCE
     1. Qualifications:
        1. Manufacturer: Minimum of seven (7) years experience in manufacturing draft-control curtain assemblies at a facility in the United States that have been successfully installed in compliance with requirements of authorities having jurisdiction.
        2. Installers: An entity that employs installers and supervisors who are trained and approved by manufacturer for both installation and maintenance of units required for this Project.
  5. Delivery, Storage and Handling
     1. Deliver, store and handle materials and products in accordance with the manufacturer's instructions and recommendations and industry standards.
     2. Store all materials in the manufacturer’s original packaging until ready for installation. Protect all products from damage or exposure to adverse weather conditions.
  6. Project Conditions
     1. Prior to fabrication, verify that dimensions are consistent with those found in the construction drawings. Where discrepancies exist, confirm the proper dimensions with the Architect before proceeding with work.
  7. WARRANTY
     1. Manufacturer Warranty: Provide manufacturer’s warranty covering parts and labor costs to repair or replace part that fail to perform.
        1. Warranty Period: Parts and labor warranty for 12 months from date of Substantial Completion or date of purchase, whichever comes first.

1. Products
   1. MANUFACTURERS

[Specifier Notes] – Retain the following Paragraph if this document is a PROPRIETARY Specification, with Avigilon’s products listed as the Basis of Design. Delete if not required.

* + 1. Basis of Design Manufacturer: Smoke Guard, A CSW Industrials Company.
       1. Address: 287 N. Maple Grove, Boise, ID 83704.
       2. Phone: (800) 574-0330.
       3. Website: https://smokeguard.com

[Specifier Notes] – Retain the following Paragraph if this document is written as a PERFORMANCE specification, without listing a manufacturer as a basis of design. Insert manufacturers that sell products comparable to those specified in this section. Delete if not required.

* + 1. Manufacturer List:
       1. Manufacturer:
    2. Substitution Limitations:
       1. Submit substitution requests in accordance with provisions of Section 01 60 00.
       2. Single manufacturer will provide, from a single source, a fully integrated smoke-and-draft containment system consisting of smoke-and-draft-protective curtains and the following components:

[Specifier Notes] – From the following paragraphs, retain only those defined under the scope of work for this project.

* + - * 1. Smoke-and-Draft-Protective Curtain Operators.
        2. Smoke-and-Draft-Protective Curtain Controls.
  1. SMOKE-PROTECTIVE CURTAIN ASSEMBLIES
     1. Alarm-activated fabric smoke curtain assembly complying with NFPA 92.

[Specifier Notes] – Retain the following Paragraph if the specification is meant to be proprietary to Smoke Guard products. Delete if a performance-based specification is required.

* + - 1. Basis of Design Product: Model 2100 Smoke, by Smoke Guard, a CSW Industrials Company.
    1. Alarm-activated fabric smoke curtain assembly complying with NFPA 92.

[Specifier Notes] – Retain the following Paragraph if the specification is meant to be proprietary to Smoke Guard products. Delete if a performance-based specification is required.

* + - 1. Basis of Design Product: Model 2100 Draft, by Smoke Guard, a CSW Industrials Company.

[Specifier Notes] – In the following paragraph, the values are code minimums, Smoke Guard curtains have been tested at 0.10 wg, 0.20 wg, and 0.30 wg without exceeding the maximum air-leakage rate of 3.0 cfm/sq. ft. of opening.

* + 1. Smoke Control: Provide smoke- and fire-protective curtain assemblies that are listed and labeled with the letter "S" on the rating label by a qualified testing agency for smoke- and draft-control based on testing in accordance with UL 1784 without an artificial bottom seal; with maximum air-leakage rate of 3.0 cfm/sq. ft. (0.01524 cu. m/s x sq. m) of opening at 0.10 inch wg (24.9 Pa) for both ambient and elevated temperature tests.
    2. Curtain Materials: Provide manufacturer’s standard multi-layer glass fiber fabric coated on one or both sides complying with each of the following:
       1. Fire-Test-Response Characteristics: Provide products that pass NFPA 701, as determined by testing of fabrics that were treated using treatment-application method intended for use for this Project by a testing and inspecting agency acceptable to authorities having jurisdiction.

[Specifier Notes] – In the paragraph below, the code required minimum is a smoke developed index of 450. Smoke Guard’s standard curtain has been tested to Smoke-Developed Index of 50 or less. The values below exceed code minimums.

* + - 1. Flame-Spread and Smoke-Developed Indexes: 25 and 50, respectively, when tested in accordance with ASTM E84.
      2. 3. Screen Reinforcement: Provide film with reinforcement to limit deflection or tearing.
    1. Curtain Attachment: Curtain shall form a pressure-resisting seal with
       1. Side Guides: Formed from galvanized-steel sheet conforming to ASTM A653/A653M with integral pressure-retaining tabs.
       2. Weighted Bottom Bar: Provide weighted bottom bar to ensure smooth operation and hold curtain taut.
    2. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
    3. Housing Type: Sheet metal housings containing support rollers and associated electronics.
       1. Coordinate operator wiring requirements and electrical characteristics with building electrical system.
    4. Operation: Controlled descent automatically by fail-safe gravity deployment and motorized rewind. Curtain deploys on activation of one of the following:

[Specifier Notes] – Retain subparagraphs one and three. Retain subparagraph two to suit Project.

* + - 1. Local Smoke Detector.
      2. Building Fire Alarm.
      3. Testing Key Switch.
    1. Release Mechanism: Labelled as defined by UL864.
    2. Optional Egress: Provide a means of egress in accordance with AC77 Section 3.1.6.2 including both of the following:
       1. Manual Egress by lifting the curtain, requiring force no greater than 15 pounds to initiate egress operation.
       2. Powered egress initiated by screen mounted rewind switches mounted on each side of the curtain.
  1. Accessories
     + 1. End of Line Diode: Provide manufacturer’s standard diode device installed at smoke detector to monitor the circuit.
          1. Power Requirements: 3.3 Volts, 2 Watts.
       2. Firefighter’s Smoke Control Station (FSCS): Provide manufacturer’s standard integration with FSCS with the following functionality:
          1. Open/Retract Curtain.
          2. Open Confirm.
          3. Open Fault Alert.
          4. Close/Deploy Curtain.
          5. Close Confirm.
          6. Closed Fault Alert.

1. EXECUTION
   1. EXAMINATION
      1. 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.
      2. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
      3. Proceed with installation only after unsatisfactory conditions have been corrected.
      4. Verify that locations of concealed reinforcements have been clearly marked for the installer.
      5. Locate reinforcement points and clearly mark their locations if not already done.
   2. PREPARATION
      1. Clean surfaces prior to installation.
      2. Prepare surfaces as recommended by the manufacturer for achieving optimal results.
   3. INSTALLATION
      1. Install in accordance with manufacturer’s current installation instructions and industry recognized best practices.
      2. Install in accordance with all code bodies having jurisdiction.
   4. Cleaning and Protection
      1. Clean and remove all stains, grime, or other soils using soap and water. Only use detergents approved by the manufacturer for use on the finishes specified. Do not use acid solutions, steel wool, and other harsh abrasives.
      2. Damaged products must be repaired or replaced prior to substantial completion.
      3. Protect installed products until completion of work specified in this section.
   5. FIELD QUALITY CONTROL
      1. Field Test: Follow manufacturer’s cycle test procedures.
         1. Notify Owner’s Representative, local Fire Marshal, alarm sub-contractor and elevator sub-contractor or service company minimum one week in advance of scheduled testing.
         2. Complete maintenance service record.
   6. DEMONSTRATION
      1. Demonstrate required testing and maintenance procedures to Owner’s Representative.
   7. Maintenance and Testing:
      1. Perform minimum semi-annual maintenance and testing on each smoke containment system as required by the manufacturer’s warranty, code agency evaluation reports, and as required by local authority having jurisdiction.
         1. Retain permanent record of tests.
      2. Fire Event: Owner shall engage a qualified inspector to assess unit(s) after exposure to a fire event.

END OF SECTION