



SECTION 08330 [08 33 00]

ROLLING STEEL DOORS

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Rolling steel doors.
- B. Rolling steel springless high cycle doors.
- C. Rolling steel advanced performance service doors.
- D. Rolling steel fire doors.
- E. Overhead Coiling Security Shutters.

1.2 RELATED SECTIONS

- A. Section 05500 - Metal Fabrications: Support framing and framed opening.
- B. Section 06200 - Finish Carpentry: Wood jamb and head trim.
- C. Section 08710 - Door Hardware: Product Requirements for cylinder core and keys.
- D. Section 09900 - Painting: Field applied finish.
- E. Section 16130 - Raceway and Boxes: Conduit from electric circuit to door operator and from door operator to control station.
- F. Section 16150 - Wiring Connections: Power to disconnect.

1.3 REFERENCES

- A. ANSI/DASMA 108 - American National Standards Institute Standard Method For Testing Sectional Garage Doors And Rolling Doors: Determination Of Structural Performance Under Uniform Static Air Pressure Difference.

- B. ANSI/DASMA 203 - American National Standards Institute Specifications for non-rated fire rolling doors published by Door & Access Systems Manufacturers Association International.
- C. ASTM A 123 - Zinc hot-dipped galvanized] coatings on iron and steel products.
- D. ASTM A 229 - Steel wire, oil-tempered for mechanical springs.
- E. ASTM A 653 - Steel sheet, zinc-coated galvanized by the hot-dipped process, commercial quality.
- F. ASTM E 330 - Structural performance of exterior windows, curtain walls, and doors by uniform static air pressure difference.
- G. ASTM E 413 - Classification for Rating Sound Insulation

1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations.
 - 2. Storage and handling requirements and recommendations.
 - 3. Installation methods.
- C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.
- D. LEED Submittals: Provide documentation of how the requirements of Credit will be met:
 - 1. List of proposed materials with recycled content. Indicate post-consumer recycled content and pre-consumer recycled content for each product having recycled content.
 - 2. Product data and certification letter indicating percentages by weight of post-consumer and pre-consumer recycled content for products having recycled content.
- E. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.
- F. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and patterns.
- G. Manufacturer's Certificates: Certify products meet or exceed specified requirements.
- H. Closeout Submittals: Provide manufacturer's maintenance instructions that include recommendations for periodic checking, adjustment and lubrication of components.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Company specializing in performing Work of this section with a minimum of five years experience in the fabrication and installation of security closures.

- B. Installer Qualifications: Installer Qualifications: Company specializing in performing Work of this section with minimum three years and an authorized Wayne Dalton installer.
- C. Mock-Up: Provide a mock-up for evaluation of surface preparation techniques and application workmanship.
 - 1. Finish areas designated by Architect.
 - 2. Do not proceed with remaining work until workmanship, color, and sheen are approved by Architect.
 - 3. Refinish mock-up area as required to produce acceptable work.

1.6 DELIVERY, STORAGE AND HANDLING

- A. Store products in manufacturer's unopened packaging with seals and labels intact until ready for installation.
- B. Store materials off the ground in a dry, warm, ventilated weathertight location.

1.7 SEQUENCING

- A. Ensure that locating templates and other information required for installation of products of this section are furnished to affected trades in time to prevent interruption of construction progress.
- B. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

1.8 PROJECT CONDITIONS

- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's absolute limits.

1.9 WARRANTY

- A. Provide Rolling Steel Service doors and Rolling Steel Fire doors with limited 2 Year Warranty on defects in materials and workmanship on the door; excludes the counterbalance spring and finish.
- B. Provide rolling steel springless high cycle doors with limited 3 Year, 500,000 cycle Warranty on all door systems materials and workmanship.
- C. Provide rolling steel Advanced Performance service doors with limited 5 Year Warranty on all doors system materials and workmanship.
- D. Provide Aluminum Security Shutters, Model 523 with limited 2 Year Warranty on defects in materials and workmanship on the door and components. Provide Powder Coat Finish with a 2 years warranty against excessive fading, cracking, blistering, flaking or peeling.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Wayne Dalton; 2501 S. State Highway 121 Business, Suite 200, Lewisville, TX 75067. ASD. Phone: (800) 827-3667; Web Site: www.wayne-dalton.com. Email: info@wayne-dalton.com.
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ROLLING STEEL ADVANCED PERFORMANCE DOORS

- A. Wayne Dalton Model 800 with Advanced Rolling Door System Option:
 - 1. Description:
 - a. Maximum Width: 20 feet
 - b. Maximum Height: 20 feet
 - 2. Curtain: composed of interlocking roll-formed slats.
 - a. Slat Profiles/Material:
 - 1) No. 14 Flat-faced slat.
 - (a) 22-gauge steel.
 - (b) 20-gauge steel.
 - (c) 18-gauge steel.
 - (d) 22-gauge stainless steel.
 - (e) 20-gauge stainless steel.
 - (f) 16-gauge (.050 inch) B&S aluminum.
 - 2) For fenestrated service doors, provide slats with 5 inch by 3/4 inch uniformly spaced openings.
 - 3) Vision Lite: Provide with 5 inch by 3/4 inch uniformly spaced openings, with 1/16 inch clear plastic.
 - 4) Ends of alternate slats fitted with malleable iron endlocks/windlocks.
 - b. Curtain Finish:
 - 1) Galvanized steel with polyester top coat in choice of:
 - (a) Gray.
 - (b) Beige.
 - (c) White.
 - (d) Powder coat with hardening additive, color as selected by the Architect.
 - 2) Aluminum:
 - (a) Clear anodized.
 - (b) Bronze anodized.
 - 3. Bottom Bar: Consists of two equal angles, 0.12 inch minimum thickness, to stiffen curtain, incorporating a 2-wire, self-monitoring, fail safe, electric sensing edge. Angle shall be:
 - a. Steel factory painted black.
 - b. Steel with standard powder coat, color as selected by Architect.
 - c. Stainless steel.
 - 4. Guides: Three piece structural angle guide assembly forming a slot to retain curtains in guides.
 - a. Structural grade, three angle assembly fabricated of:
 - 1) Steel factory painted black.

- 2) Steel with standard powder coat, to match curtain.
 - 3) Steel with powder coat, to match curtain.
- b. Provide with high usage guide wear strips.
- c. Provide with integral windlock bars when size or wind loading requires.
- d. Removable bottom bar stops.
5. Brackets: Design to enclose ends of coil and provide support for counterbalance pipe at each end. Fabricate of steel plates, with permanently sealed ball bearings. Brackets shall be black painted steel. Thickness shall be:
 - a. 3/16 inch minimum.
 - b. 1/4 inch minimum.
6. Door Roll: Directly driven, springless roll shall be steel tube with integral shafts, keyed on the Drive End and supported by self-aligning sealed bearings. Door shall not require any counterbalance device.
7. Hood: Hood to enclose curtain coil and counterbalance mechanism. Hood fabricated of sheet metal, flanged at top for attachment to header and flanged at bottom to provide longitudinal stiffness.
 - a. Fabricate of:
 - 1) Minimum 22-gauge B&S aluminum.
 - 2) Minimum 24-gauge galvanized steel.
 - 3) Minimum 24-gauge stainless steel.
 - b. Hood Finish:
 - 1) Galvanized steel with polyester top coat in choice of:
 - (a) Gray.
 - (b) Beige.
 - (c) White.
 - (d) Color as selected by the Architect.
 - 2) Aluminum:
 - (a) Clear anodized.
 - (b) Bronze anodized.
8. Control Panel: Provide electronic Variable Frequency drive controller with microprocessor self-diagnostics. LCD readout indicates door action, alarm conditions, and fault conditions. Timer to close programming options and non-resettable cycle counter are included. Enclosure is NEMA 4X rated. Control system is UL508A certified. The junction box is IP67 rated.
9. Motor: Direct drive, integrated gear motor/brake assembly sized for openings. Provide with a manual hand chain for operation during power outages. Operator and drive assembly is factory pre-assembled and provided wiring harnesses needed direct from the factory.
 - a. Opening Speed: 24 inches per second.
 - b. Closing Speed: 12 inches per second.
 - c. Electrical Characteristics: 220V AC, single phase per motor/drive.
 - d. Electrical Characteristics: 230V AC, three phase per motor/drive.
 - e. Electrical Characteristics: 460V AC, three phase per motor/drive.
 - f. Electrical Characteristics: 575V AC, three phase per motor/drive.
 - g. Left hand mount.
 - h. Right hand mount.
10. Safety Devices: Provide door with following safety devices:
 - a. Photoelectric sensors that cast an invisible beam across the door opening and reverses the downward motion of the door when an object enters the path of the beam.
 - b. Wireless, monitored safety edge reverses downward motion upon impact.

- c. Built-in (to motor assembly) brake mechanism eliminates uncontrolled curtain travel independent of other safeties.
- 11. Actuators:
 - a. One Open/Close/Stop push button station incorporated into Control Panel.
 - b. Loop detectors.
 - c. Radio control.
 - d. Interior Push buttons.
 - e. Exterior Push buttons.
 - f. Interior Key switch.
 - g. Exterior Key switch.
 - h. Motion detectors.
 - i. Warning light.
 - j. Horns and/or strobes.
 - k. Second set of photoelectric sensors.
- 12. Weatherstripping: Bottom astragal, optional high usage guide wear strip.
- 13. Windload Design:
 - a. Standard windload shall be 20 PSF.
 - b. Miami-Dade County NOA ____.
 - c. FBC certification FL# ____.
- 14. Mounting:
 - a. Steel jambs.
 - b. Wood jambs.
 - c. Masonry jambs.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. Examine conditions of substrates, supports, and other conditions under which this work is to be performed.
- C. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare surfaces using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install rolling fire doors in accordance with the manufacturer's instructions and in accordance with the requirements of the National Fire Protection Association Standard 80 (NFPA 80).

- C. Install door complete with necessary hardware, jamb and head mold strips, anchors, inserts, hangers, and equipment supports in accordance with final shop drawings, manufacturers instructions, and as specified herein.
- D. Fit, align and adjust rolling door assemblies level and plumb for smooth operation.
- E. Upon completion of final installation, lubricate, test and adjust doors to operate easily, free from warp, twist or distortion and fitting for entire perimeter.

3.4 TESTING

- A. Drop-test rolling steel fire doors in accordance with NFPA 80 and witnessed, attesting to their successful operation at the time of installation.

3.5 MAINTENANCE

- A. Per NFPA 80, paragraph 15-2 4.3: All horizontal or vertical sliding and rolling fire doors shall be inspected and tested annually to check for proper operation and full closure. Resetting of the release mechanism shall be done in accordance with the manufacturers instructions. A written record shall be maintained by the building owner and made available to the authority having jurisdiction.

3.6 ADJUSTING

- A. Test for proper operation and adjust as necessary to provide proper operation without binding or distortion.
- B. Adjust hardware and operating assemblies for smooth and noiseless operation.

3.7 CLEANING

- A. Clean curtain and components using non-abrasive materials and methods recommended by manufacturer.
- B. Remove labels and visible markings.
- C. Touch-up, repair or replace damaged products before Substantial Completion.

3.8 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

3.9 SCHEDULES

- A. :
1.
2.
3.
- B. :
1.

- 2.
- 3.

END OF SECTION