SECTION 08330
OVERHEAD COILING SERVICE DOORS
RAPIDSLAT® 611 SERIES ADVANCED PERFORMANCE ROLLING SERVICE DOORS

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PART 1 GENERAL

1.1 SECTION INCLUDES

A. Advanced Performance Rolling Service Doors.

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. NFRC 102 - Test Procedure for Measuring the Steady-State Thermal Transmittance of Fenestration Systems.

B. ASTM E 90 - Standard Test Method for Laboratory Measurement of Airborne Sound Transmission Loss of Building Partitions and Element.

C. ASTM E 330 - Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference.

D. ASTM A 653 - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

E. ASTM A 666 - Standard Specification for Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar.

F. ASTM A 924 - Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process.

G. ASTM B 221 - Standard Specification for Aluminum and Aluminum-Alloy Extruded Bars, Rods, Wire, Profiles, and Tubes.

H. NEMA 250 - Enclosures for Electrical Equipment (1000 Volts Maximum).

I. NEMA MG 1 - Motors and Generators.

1.4 DESIGN / PERFORMANCE REQUIREMENTS

A. Advanced Rolling Service doors:
   1. Windload: Design door assembly to withstand wind/suction load of 20 psf (958 Pa) without damage to door or assembly components. Does not apply to doors with optional wearstrip guides.
   2. Operation: Design door assembly, including operator, to operate for not less than 200,000 cycles

B. Single-Source Responsibility: Provide doors, tracks, motors, and accessories from one manufacturer for each type of door. Provide secondary components from source acceptable to manufacturer of primary components.

C. Products Requiring Electrical Connection: Listed and classified by Underwriters Laboratories, Inc. acceptable to authority having jurisdiction as suitable for purpose specified.

1.5 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. Details of construction and fabrication.
   4. Installation instructions.

C. Shop Drawings: Include detailed plans, elevations, details of framing members, anchoring methods, required clearances, hardware, and accessories. Include relationship with adjacent construction.

D. Selection Samples: For each finish product specified, two complete sets of color chips representing manufacturer's full range of available colors and patterns.

E. Verification Samples: For each finish product specified, two samples, minimum size 6 inches (150 mm) long, representing actual product, color, and patterns.

F. Manufacturer's Certificates: Certify products meet or exceed specified requirements.

G. Operation and Maintenance Data: Submit lubrication requirements and frequency, and periodic adjustments required.

1.6 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 approved by manufacturer.

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.

1.7 DELIVERY, STORAGE, AND HANDLING

A. Store products in manufacturer's unopened packaging until ready for installation.

B. Protect materials from exposure to moisture. Do not deliver until after wet work is complete and dry.

C. Store materials in a dry, warm, ventilated weathertight location.

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 COORDINATION

A. Coordinate Work with other operations and installation of adjacent materials to avoid damage to installed materials.

PART 2 PRODUCTS

2.1 MANUFACTURERS

A. Acceptable Manufacturer: Overhead Door Corp., 2501 S. State Hwy. 121, Suite 200, Lewisville, TX 75067. ASD. Tel. Toll Free: (800) 275-3290. Phone: (469) 549-7100. Fax: (972) 906-1499. Web Site: www.overheaddoor.com. E-mail: info@overheaddoor.com.

B. Substitutions: Not permitted.

C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 ADVANCED PERFORMANCE ROLLING SERVICE DOORS

A. RapidSlat Model 611 Service Doors by Overhead Door Corporation.
   1. Curtain: Interlocking roll-formed metal slats as specified with endlocks attached to each end of alternate slats to prevent lateral movement.
      a. Curved Profile type C-187 for doors up to 15 feet 4 inches wide shall be fabricated:
         1) 22 gauge powder coated steel.
         2) 20 gauge powder coated steel.
         3) 18 gauge powder coated steel.
         4) 22 gauge stainless steel.
         5) 20 gauge stainless steel.
         6) 18 gauge (.040 inch) aluminum.

b. Curved Profile type C-275 for doors up to 20 feet wide shall be fabricated of:
    1) 22 gauge powder coated steel.
    2) 20 gauge powder coated steel.
    3) 18 gauge powder coated steel.
    4) 22 gauge stainless steel.
    5) 20 gauge stainless steel.
    6) 16 gauge (.050 inch) aluminum.
c. Flat Profile type F-265 for doors up to 20 feet wide fabricated of:
    1) 22 gauge powder coated steel.
    2) 20 gauge powder coated steel.
    3) 18 gauge powder coated steel.
    4) 22 gauge stainless steel.
    5) 20 gauge stainless steel.
    6) 16 gauge (.050 inch) aluminum.
d. Fenestrated Service Doors: Provide slats with 3 inch by 5/8 inch uniformly spaced openings:
e. Ventilated Service Doors: Provide slats with 1/16 inch (16 mm) diameter perforations 3/32 inch (2.4 mm) on center staggered rows.
f. Finish:
    1) PowderGuard Premium Powder coat with hardening additive.
        (a) Gray.
        (b) Tan.
        (c) White.
    2) Powder coat options:
        (a) PowderGuard Premium Powder coat with hardening additive: Weather resistant polyester powder coat color as selected by the Architect.
        (b) PowderGuard Weathered Finish: Industrial textured powder coat provides a thicker, more scratch resistant coat. Applied to entire door system including slats, guides, bottom bar and head plate.

2. Bottom Bar: Two metal angles, minimum thickness 3/16 inch, bolted back to back to reinforce curtain in the guides and incorporating a 2-wire, self-monitoring, fail safe, electric sensing edge.
    a. Finish: PowderGuard Premium Powder coated steel in black color.
    b. Finish: PowderGuard Premium Powder coated steel, color as selected by Architect.
    c. Finish: PowderGuard Premium Powder coated extruded aluminum, color as selected by Architect.
    d. Finish: Stainless steel.
3. Guides: Three Structural steel angles.
    a. Finish: PowderGuard Premium powder coated steel in black color.
    b. Finish: PowderGuard Weathered finish with iron/black powder.
    c. Finish: PowderGuard Premium Powder coated steel, color as selected by the Architect.
    d. Finish: PowderGuard Zinc Finish: Industrial textured powder coat scratch resistant coat for added protection.
    e. Finish: Stainless steel.
    f. Provide with high usage guide wear strip to minimize wear and reduce sound.
4. Motor: Direct drive, hypoid gear motor/brake assembly sized for openings. Provide with a manual hand crank for operation during power outages. Operator and drive assembly is factory pre-assembled and provided with low voltage factory wiring with quick connect wiring harnesses where applicable.
    a. Opening Speed: 20 inches per second.

b. Closing Speed: 12 inches per second.
c. Electrical Characteristics: 208/230V AC, three phase per motor/drive.
d. Electrical Characteristics: 460V AC, 3 phase per motor/drive.
e. Left hand mount.
f. Right hand mount.

5. 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. Junction box is IP67 rated.
6. Door Roll: Directly driven, springless roll shall be steel tube with integral shafts, keyed on the Drive End and supported by self-aligning greaseable sealed bearings. Door shall not require any counterbalance device.
7. Hood: Protecting drive motor, barrel, chain, drop stop device and sprocket from dirt and debris and extending between the support brackets. Fabricated of:
   a. Steel 24 gauge black painted.
   b. Steel 24 gauge PowderGuard Premium Powder coated, color as selected by Architect.
   c. Stainless Steel with brush finish.
   d. Aluminum: PowderGuard Premium Powder coated, color as selected by Architect.
   e. Provide with sloped top for exterior mounting.
8. Brackets: Provide metal brackets to support motor, curtain, and hood and fabricated of:
   a. Steel PowderGuard Premium Powder coated in black color.
   b. Steel PowderGuard Premium Powder coated, color as selected by Architect.
9. 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. Self-monitoring 2-wire, electric fail-safe sensing edge reverses downward motion upon impact.
   c. Drop stop device eliminates uncontrolled curtain travel independent of other safeties.
10. 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.
11. Windload Design:
    a. Standard windload shall be 20 PSF.
    b. Miami-Dade County NOA ___.
    c. FBC certification FL# ___.
    d. TDI approval # ____.

PART 3 EXECUTION

3.1 EXAMINATION

A. Verify opening sizes, tolerances and conditions are acceptable.

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. Use anchorage devices to securely fasten assembly to wall construction and building framing without distortion or stress.

C. Securely and rigidly brace components suspended from structure. Secure guides to structural members only.

D. Fit and align assembly including hardware; level and plumb, to provide smooth operation.

E. Coordinate installation of electrical service with Section 16150. Complete wiring from disconnect to unit components.

F. Coordinate installation of sealants and backing materials at frame perimeter as specified in Section 07900.

G. Install perimeter trim and closures.

H. Instruct Owner’s personnel in proper operating procedures and maintenance schedule.

3.4 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.

3.5 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.

3.6 PROTECTION

A. Protect installed products until completion of project.

END OF SECTION