SECTION 08362

ALUMINUM SECTIONAL OVERHEAD DOORS

This guide specification has been prepared by C.H.I. Overhead Doors to assist design professionals in the preparation of a specification section covering stile-and-rail sectional aluminum doors, with glazed or solid panels. Refer to C.H.I. Overhead Door literature for additional information on these products.

This specification may be used as the basis for developing either a project specification or an office master specification. Since it has been prepared according to the principles established in the *Manual of Practice* published by The Construction Specifications Institute (CSI), it may be used in conjunction with most commercially available master specifications systems with minor editing.

Other C.H.I. Overhead Doors products are covered by the following guide specifications, available from C.H.I. Overhead Doors:

Section 08334 - Overhead Coiling Doors.

Section 08335 - Overhead Coiling Fire Doors.

Section 08336 - Overhead Coiling Shutters.

Section 08337 - Overhead Coiling Fire Shutters.

Section 08361 - Steel Sectional Overhead Doors.

The following should be noted in using this guide specification:

Notes are included to assist the user in editing the section to suit project requirements. These notes are included as hidden text, and can be revealed or hidden by one of the following methods:

Microsoft Word: From the pull-down menus select TOOLS, then OPTIONS. Under the tab labeled VIEW, select or deselect the HIDDEN TEXT option.

Corel WordPerfect: From the pull-down menus select VIEW, then select or deselect the HIDDEN TEXT option.

Optional text requiring a selection by the user is enclosed within brackets, e.g.: "Section [09000.] [_____.]"

Items requiring user input are enclosed within brackets, e.g.: "Section [_____ - _____]."

Optional paragraphs are separated by an "OR" statement, e.g.:

**** OR ****

"Green" requirements are included for projects requiring LEED certification, and are included as green text. For additional information on LEEDS, visit the U.S. Green Building Council website at www.usgbc.org.

This guide specification is available in a variety of electronic formats to suit most popular word processing programs. Please contact C.H.I. Overhead Doors at 800-677-2650 or www.chiohd.com.

PART 1 - GENERAL

1.1 SUMMARY

A. Section Includes:
   1. Aluminum sectional overhead doors.
   2. Operating hardware, controls, and supports.

B. Related Sections:

Edit the following paragraphs to suit project requirements and to coordinate with other sections in the project manual.

1. Division 1: Administrative, procedural, and temporary work requirements.

Include the following paragraphs as applicable for electrically operated doors.

2. Section [_____] - [_____]: Connection to power supply and control devices.

1.2 REFERENCES

Include only those reference standards that are included within the text of this section. If statements are included in Division 1 addressing the edition dates of standards, delete edition dates from the following statements.

A. American Architectural Manufacturers Association (AAMA) (www.aamanet.org) 611-98 - Voluntary Specification for Anodized Architectural Aluminum.

B. ASTM International (ASTM) (www.astm.org):
   1. B209-04 - Standard Specification for Aluminum-Alloy Sheet and Plate.
   2. B221-02 - Standard Specification for Aluminum-Alloy Extruded Bars, Rods, Wires, Shapes and Tubes.

1.3 SYSTEM DESCRIPTION

Include the following paragraph for exterior doors.

A. Design doors to withstand:

Include the following paragraph for exterior doors.

1. Positive and negative design wind loads [in accordance with Building Code.] [of [__] PSF.]

In the following paragraph, 10,000 cycles is standard.

2. Cycle life of [10,000] [20,000] [50,000] [100,000] [__] cycles.

In the following paragraph, select operation to suit project requirements.

B. Operation: [Electric.] [Manual.] [Chain hoist.]

In the following paragraph, select track type to suit project requirements.

C. Track and Operating Hardware: [Standard lift] [Vertical lift] [High lift] [Roof pitch] [Low headroom] type.

In the following paragraph, select infill panel type to suit project requirements.

D. Panels: Stile and rail aluminum with [glazed] [aluminum] infill panels.

1.4 SUBMITTALS

A. Submittals for Review:
   1. Shop Drawings: Indicate opening dimensions and required tolerances, connection details, anchorage spacing, hardware locations, and installation details.
   2. Product Data: Provide information on component construction, anchorage method, and hardware.

B. Closeout Submittals:
   1. Operation and Maintenance Data.

Include the following for projects requiring LEED certification. Credits are available for the use of recycled materials, and also for regional materials if the project is located within a 500 mile radius of the C.H.I. fabrication facility.

C. Sustainable Design Submittals:
   1. Recycled products: Indicate percentage of recycled material used in manufacture of products, and percentage classified as post consumer.
   2. Regional products: Indicate location of product manufacturer and distance from manufacturer to project site.

1.5 WARRANTIES

A. Provide manufacturer's one year warranty against defects in materials and workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

A. Contract Documents are based on Model 3290 by C.H.I. Overhead Doors.

Include the following paragraph if substitutions are allowed; coordinate with Division 1 requirements.

B. Substitutions: Under provisions of [Section [____].] [Division 1.]

**** OR ****

Include the following paragraph if substitutions are not allowed.

C. Substitutions: Not permitted.

2.2 MATERIALS

A. Aluminum:
   1. Extrusions: ASTM B221, 6063-T5 or T6 alloy and temper.
   2. Sheet: ASTM B209, alloy and temper best suited to application.

Include the following paragraph for glazed panels; edit to suit project requirements.

B. Glazing: Clear [1/8 inch float glass] [1/4 inch tempered glass.] [1/8 inch polycarbonate sheet.] [insulating glass.]

2.3 COMPONENTS

A. Door Sections:
   1. Material: Extruded aluminum, stile and rail.
   2. Joints: Tongue-and-groove construction.
   3. Thickness: 2 inches.
   4. Stiles and rails:
      a. End stiles, bottom rail, and top rail: 4 inch face width.
      b. Center stiles and intermediate rails: 2 inch face width.

Include the following paragraph for vision lites.

   5. Vision lites: Full width and height of each door section [, excluding bottom section,] set with silicone sealant and plastic glazing strips.

**** OR ****

Include the following paragraph for infill panels.

6. Infill panels: Aluminum sheet, 16 gage, located [at bottom [and] [top] section.] [at all sections.]

Include the following paragraph for vehicle exhaust ports.

7. Exhaust ports: Aluminum, with hinged cover.

B. Tracks:

In the following paragraphs, select either 2 or 3 inch tracks to suit project conditions and door size.

1. 2 inches wide, roll-formed galvanized steel, 16 gage for doors up to 10 feet high, 14 gage for doors exceeding 10 feet high.

**** OR ****

2. 3 inches wide, roll-formed 13 gage galvanized steel, with galvanized steel mounting brackets.
3. Lower track sections adjustable for weathertight fit.
4. Horizontal tracks reinforced with minimum 13 gage galvanized steel angle according to door weight and size.

C. Hinge and Roller Assemblies: Heavy duty hinges and adjustable roller holders of galvanized steel, with floating hardened steel bearing rollers, located at top and bottom of each panel, each side.

D. Spring Counterbalance:
1. Oil tempered torsion springs mounted on cross-header shaft supported by galvanized steel ball bearing end plates and center carrier brackets as required.
2. Counterbalance transferred to doors via aircraft quality braided steel lift cables.

E. Bottom Weatherstripping: Vinyl weatherseal, full width of door.

Include the following paragraph if head and jamb weatherstripping are desired.

F. Head and Jamb Weatherstripping: Flexible one piece vinyl extrusions.

In the following paragraph, select type of locking desired.

G. Lock: [[Inside slide] [Outside keyed T-handle] [Outside cylinder] type, adjustable keeper, spring activated.] [Chain keeper with padlock provisions.]

Include the following paragraph for electrically operated doors. Select type of control station. Include photoelectric sensor if desired.

H. Electric Operator:
1. Power supply: [115 VAC, single phase.] [220 VAC, [single] [three] phase.] [440-480 VAC, three phase.]
2. Sufficient power to operate door at average speed of 12 inches per second.
3. Disconnect for [manual push-up] [chain hoist] operation in case of power failure.

In the following paragraph, select type of control station. Three-position 24VDC push button is standard.

4. Control station: [24 VDC;] [115 VAC;] [push button] [keyed switch] station marked [OPEN and CLOSE.] [OPEN, CLOSE, and STOP.] [Furnish [four] [__] keys per station.]

Include the following paragraph for a safety device to prevent damage to doors due to obstructions in door path.

I. Safety Device: [Photoelectric sensor; detect obstruction and reverse door without requiring door to contact obstruction.] [Electric pneumatic edge; detect obstruction and reverse door upon contact with pneumatic hose.] [Electric edge; detect obstruction and reverse door upon contact with electric strips in vinyl housing.] [Electric edge; fail-safe, self monitoring.]

In the following paragraph, Class I is suitable for interior use; Class II s recommended for exterior use.

J. Finish: AAMA 611, Class [I] [II] clear anodized.

**** OR ****

K. Finish: Baked-on enamel primer and white polyester finish coat.

PART 3 - EXECUTION

3.1 INSTALLATION

A. Install door assembly in accordance with manufacturer's instructions.

B. Anchor to adjacent construction without distortion or stress.

C. Securely brace door tracks suspended from structure. Secure tracks to structural members only.

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

Include the following paragraph for head and jamb weatherstripping.

E. Position head and jamb weatherstripping to contact door sections when closed; secure in position.

Include the following paragraph for electrically operated doors.

F. Make wiring connections between power supply and operator and between operator and controls.

3.2 ADJUSTING

A. Adjust to operate smoothly throughout full operating range.

END OF SECTION