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USACE / NAVFAC / AFCEC **UFGS-08 13 73 (August 2025)**

Preparing Activity: USACE **Superseding**
UFGS-08 13 73 (February 2011)

UNIFIED FACILITIES GUIDE SPECIFICATIONS

References are in agreement with UMRL dated April 2026

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SLIDING METAL DOORS

08/25

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SECTION 08 13 73

SLIDING METAL DOORS
08/25

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NOTE: This guide specification covers the requirements for horizontal sliding steel doors used primarily for fire rated application and electrically operated horizontal and biparting sliding doors.

Adhere to UFC 1-300-02 Unified Facilities Guide Specifications (UFGS) Format Standard when editing this guide specification or preparing new project specification sections. Edit this guide specification for project specific requirements by adding, deleting, or revising text. For bracketed items, choose applicable item(s) or insert appropriate information.

Remove information and requirements not required in respective project, whether or not brackets are present.

Comments, suggestions and recommended changes for this guide specification are welcome and should be submitted as a Criteria Change Request (CCR).

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PART 1 GENERAL

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NOTE: This guide specification is intended to cover horizontal sliding steel doors used primarily for fire rated applications. Use a center parting door at locations where an overhead monorail passes through the opening or where there is limited side room due to the lack of unobstructed wall space adjacent to the opening.

The following information should be indicated on the project drawings:

a. Size of door openings.

b. Fire rating classification for each door.

c. Type of door operation.

d. Type of power operators and service characteristics, and emergency/safety controls.

e. Location and type of power operator controls.

f. Type of closing system required.

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1.1 REFERENCES

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NOTE: This paragraph is used to list the publications cited in the text of the guide specification. The publications are referred to in the text by basic designation only and listed in this paragraph by organization, designation, date, and title.

Use the Reference Wizard's Check Reference feature when you add a Reference Identifier (RID) outside of the Section's Reference Article to automatically place the reference in the Reference Article. Also use the Reference Wizard's Check Reference feature to update the issue dates.

References not used in the text will automatically be deleted from this section of the project specification when you choose to reconcile references in the publish print process.

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The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF CIVIL ENGINEERS (ASCE)

ASCE 7	(2017) Minimum Design Loads for Buildings and Other Structures
ASCE 7-22	(2022; Supp 1 2023; Supp 2 2023; Supp 3 2025) Minimum Design Loads and Associated Criteria for Buildings and Other Structures

ASTM INTERNATIONAL (ASTM)

ASTM A36/A36M	(2019) Standard Specification for Carbon Structural Steel
ASTM A240/A240M	(2025a) Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure

	Vessels and for General Applications
ASTM A653/A653M	(2025a) Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
ASTM A924/A924M	(2022a) Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process
ASTM A1008/A1008M	(2025) Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, Required Hardness, Solution Hardened, and Bake Hardenable
ASTM A1011/A1011M	(2025) Standard Specification for Steel, Sheet and Strip, Hot-Rolled, Carbon, Structural, High-Strength Low-Alloy, High-Strength Low-Alloy with Improved Formability, and Ultra-High-Strength
ASTM B136	(2023) Standard Method for Measurement of Stain Resistance of Anodic Coatings on Aluminum
ASTM B137	(1995; R 2021) Standard Test Method for Measurement of Coating Mass Per Unit Area on Anodically Coated Aluminum
ASTM C518	(2021) Standard Test Method for Steady-State Thermal Transmission Properties by Means of the Heat Flow Meter Apparatus
ASTM E330/E330M	(2014; R 2021) Standard Test Method for Structural Performance of Exterior Windows, Doors, Skylights and Curtain Walls by Uniform Static Air Pressure Difference
EUROPEAN COMMITTEE FOR STANDARDIZATION (CEN/CENELEC)	
CEN EN 15804	(2012; A2 2019) Sustainability of Construction Works - Environmental Product Declarations - Core Rules for the Product Category of Construction Products
INTERNATIONAL ORGANIZATION FOR STANDARDIZATION (ISO)	
ISO 4406	(2021) Hydraulic Fluid Power - Fluids - Method for Coding the Level of Contamination by Solid Particles
ISO 14040	(2006) Environmental Management Life Cycle Assessment Principles and Framework

ISO 14044	(2006) Environmental Management Life Cycle Assessment Requirements and Guidelines
ISO 21930	(2017) Sustainability In Buildings and Civil Engineering Works – Core Rules for Environmental Product Declarations of Construction Products And Services

NATIONAL ELECTRICAL MANUFACTURERS ASSOCIATION (NEMA)

NEMA ICS 2	(2000; R 2020) Industrial Control and Systems Controllers, Contactors, and Overload Relays Rated 600 V
NEMA ICS 6	(1993; R 2016) Industrial Control and Systems: Enclosures
NEMA MG 00001	(2024) Motors and Generators

NATIONAL FIRE PROTECTION ASSOCIATION (NFPA)

NFPA 70	(2026; TIA 26-1; ERTA 26-1; TIA 26-2; TIA 26-3; TIA 26-4; TIA 26-5; TIA 26-6; TIA 26-7; ERTA 26-2; ERTA 26-3) National Electrical Code
NFPA 80	(2025) Standard for Fire Doors and Other Opening Protectives

SOCIETY FOR PROTECTIVE COATINGS (SSPC)

SSPC Paint 28	(1991; E 2004) Water-Borne Epoxy Primer for Steel Surfaces
SSPC Paint 36	(2006) Two-Component Weatherable Aliphatic Polyurethane Topcoat, Performance-Based

U.S. DEPARTMENT OF DEFENSE (DOD)

MIL-A-8625	(1993; Rev F; Am 1 2003) Anodic Coatings, for Aluminum and Aluminum Alloys

U.S. GREEN BUILDING COUNCIL (USGBC)

LEED BD+C	LEED Building Design and Construction

UL SOLUTIONS (UL)

UL 10B	(2008; Reprint Oct 2024) Fire Tests of Door Assemblies
UL 506	(2017; Reprint Jan 2022) UL Standard for Safety Specialty Transformers

1.2 SYSTEM DESCRIPTION

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NOTE: The applicable basic wind speed and importance factor will be selected in accordance

with ASCE 7-22, Minimum Design Loads For Buildings and Other Structures. Design wind loads may be reduced by 10 percent when the roof slope is equal to or less than 10 degrees. Delete this paragraph if exterior doors are not specified.

****

Provide sliding metal doors of the type, size and design indicated on the drawings. Provide the standard product of a manufacturer regularly engaged in the production of sliding metal doors. Provide each door with a permanent label showing the manufacturer's name and address and the model number of the door.

1.3 PERFORMANCE REQUIREMENTS

1.3.1 Wind Load Criteria

Design and fabricate all exterior door and frame assemblies provided to resist wind load criteria as indicated on Structural drawings and in accordance with ASCE 7-22 for Components and Cladding.

1.4 SUBMITTALS

****

NOTE: Review submittal description (SD) definitions in Section 01 33 00 SUBMITTAL PROCEDURES and edit the following list, and corresponding submittal items in the text, to reflect only the submittals required for the project. The Guide Specification technical editors have classified those items that require Government approval, due to their complexity or criticality, with a "G." Generally, other submittal items can be reviewed by the Contractor's Quality Control System. Only add a "G" to an item, if the submittal is sufficiently important or complex in context of the project.

For Army projects, fill in the empty brackets following the "G" classification, with a code of up to three characters to indicate the approving authority. Codes for Army projects using the Resident Management System (RMS) are: "AE" for Architect-Engineer; "DO" for District Office (Engineering Division or other organization in the District Office); "AO" for Area Office; "RO" for Resident Office; and "PO" for Project Office. Codes following the "G" typically are not used for Navy and Air Force projects.

The "S" classification indicates submittals required as proof of compliance for sustainability Guiding Principles Validation or Third Party Certification and as described in Section 01 33 00 SUBMITTAL PROCEDURES.

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Government approval is required for submittals with a "G" or "S" classification. Submittals not having a "G" or "S" classification are for

Contractor Quality Control approval. Submittals not having a "G" or "S" classification are for information only. When used, a code following the "G" classification identifies the office that will review the submittal for the Government. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-02 Shop Drawings

Fabrication Drawings; G, [_____]

Interior [Fire-Rated] [Non-Rated] Sliding Metal Doors; G, [_____]

Exterior Non-Rated Sliding Metal Doors; G, [_____]

Installation Drawings; G, [_____]

SD-03 Product Data

Interior [Fire-Rated] [Non-Rated] Sliding Metal Doors; G, [_____]

Exterior Non-Rated Sliding Metal Doors; G, [_____]

Warranty; G, [_____]

Rails

Paint

SD-04 Samples

Interior [Fire-Rated] [Non-Rated] Sliding Metal Doors; G, [_____]

Exterior Non-Rated Sliding Metal Doors; G, [_____]

SD-05 Design Data

Performance Requirements Validation; G, [_____]

SD-07 Certificates

Installer Qualifications; G, [_____]

Oversized Fire-Rated Door Assembly Certification; G, [_____]

SD-09 Manufacturer's Field Reports

Field quality control reports

SD-10 Operation and Maintenance Data

Interior [Fire-Rated] [Non-Rated] Sliding Metal Doors, Data Package 2; G, [_____]

Exterior Non-Rated Sliding Metal Doors, Data Package 2; G, [_____]

SD-11 Closeout Submittals

Environmental Product Declaration (EPD); S

1.5 QUALITY ASSURANCE

Submit Fabrication Drawings with framing member details, welding details, and finish and painting details for sliding door assemblies. Include in the drawings elevations of each door type, details of anchorage, details of construction, location and installation of hardware, shape and thickness of materials, details of joints and connections, and details of tracks, rollers, power operators, controls, and fittings. Include a schedule showing the location of each door with the drawings, and the manufacturer's catalog data. Provide Installation Drawings with type and location of hardware, framing details, and rough opening dimensions and details for horizontal door and biparting door systems.

a. Section 26 20 00 INTERIOR DISTRIBUTION SYSTEM applies to work specified in this section.

b. Conform to the requirements of Underwriters Laboratories, Inc., for motors, wiring and controls.

1.5.1 Installer Qualifications

A manufacturer's representative, skilled and experienced in the installation of sliding metal doors required for this project.

1.6 DELIVERY, STORAGE, AND HANDLING

Deliver doors to the jobsite wrapped in a protective covering, with the brands and names clearly marked thereon. Store doors in an adequately ventilated, dry location that is free from dust, water, or other contaminants and in a manner that permits access for inspection and handling. Handle doors carefully to prevent damage to the faces, edges, and ends. Replace damaged items that cannot be restored to like-new condition.

1.7 WARRANTY

Provide manufacturer's standard performance guarantees or warranties that extend beyond a one year period. Submit no later than 30 days prior to final inspection.

1.8 MAINTENANCE

Provide manufacturer's installation, operation, and maintenance instructions for Sliding metal doors.

PART 2 PRODUCTS

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NOTE: Use the paragraphs below when Third Party Certification (TPC), such as LEED or Green Globes® criteria, is specified in Section 01 33 29 SUSTAINABILITY REPORTING.

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[2.1 SUSTAINABLE DESIGN REQUIREMENTS

See Section 01 33 29 SUSTAINABILITY REPORTING for sustainable design [and] [LEED BD+C] [Green Globes] requirements.

[2.1.1 Environmental Product Declaration (EPD)

Provide independently verified Environmental Product Declaration (EPD) in accordance with ISO 4406ISO 14025, ISO 14040, ISO 14044 and CEN EN 15804 or ISO 21930 in accordance with the requirements of Section 01 33 29 SUSTAINABILITY REPORTING.

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NOTE: Select project-specific items. Comply with structural requirements for wind and seismic loads based on site specific requirements. Comply with fire resistance ratings to be code and construction type requirements. Refer to UFC 3-301-01 and use the online Whole Building Design Guide Structural Load Data Tool for UFC 3-301-01 located at https://www.wbdg.org/additional-resources/tools/ to determine wind load.

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]]2.2 PERFORMANCE REQUIREMENTS

Submit for products and systems indicated to validate compliance with specified [structural] [wind load] [fire resistance rating] performance requirements, provide calculations and design criteria, including engineering analysis data, signed and sealed by the qualified registered Professional Engineer responsible for their preparation.

Submit manufacturer's descriptive product data for each sliding metal door type. Include finishes[fire-rating capacities,] operating characteristics[, and electrical characteristics]. Include description of automatic closing devices. Submit manufacturer's standard sized samples for verification of each exposed factory-applied finish to validate color compliance.

2.2.1 Interior [Fire-Rated] [Non-Rated] Sliding Metal Doors

Comply with manufacturer's standard requirements[and NFPA 80]. Listed and labeled by a qualified testing agency for fire-protection ratings [indicated on the drawings,] [specified herein,] based on testing in accordance with [UL 10B.]

[2.2.1.1 Oversized Fire-Rated Door Assembly

For door fire-rated door assemblies that exceed size limitations of labeled assemblies, provide certification by a qualified testing agency that doors comply with standard requirements for labeled assemblies, except for size.

][2.2.1.2 Fire-Rated Swinging Pass Door Assemblies

Based on testing as a component of sliding metal fire-rated door assembly.

][2.2.1.3 Temperature-Rise Limit

Where indicated,[and as required], provide doors that have a maximum transmitted temperature end point of not more than specified temperature-rise limit above ambient after 30 minutes of standard fire-test exposure.

]2.2.2 Exterior Non-Rated Sliding Metal Doors

Submit drawings showing elevations of each sliding metal door type, including dimensions, clearances, details of construction and anchorage, profiles and thicknesses of materials, details of joints and connections, and details of guides and fittings. Include locations of controls, locking devices, [automatic closing device] and accessories[, as well as wiring diagrams for motors and controls]. Include a schedule showing the location of each sliding metal door.

2.2.2.1 Structural Performance

a. Wind Loads: As indicated on [Structural] drawings in accordance with ASCE 7 requirements for Components and Cladding.

b. Other Design Loads: As indicated on [Structural] drawings.

c. Testing: According to [ASTM E330/E330M.][_____].

2.2.3 Fire-Protection Rating

[As indicated on drawings.][4 hours.][3 hours.][1-1/2 hours.][3/4 hour.]

2.2.3.1 Temperature-Rise Limit

[139 degrees C.250 degrees F][250 degrees C.450 degrees F][361 degrees C. 650 degrees F][non-temperature rise rating].

2.2.4 Thermal Rating

Provide door assembly with U-factor of not more than[(2.16 W/K by square meters) 0.38 deg Btu/F by h by square feet][([_____] W/K by square meters) [_____] deg Btu/F by h by square feet] when tested in accordance with ASTM C518.

2.3 DOORS MATERIALS

2.3.1 Steel Plate, Shapes and Bars

ASTM A36/A36M.

2.3.2 Steel Sheets

[ASTM A1008/A1008M, cold rolled][or][ASTM A1011/A1011M, hot rolled] Commercial Steel (CS) or Drawing Steel (DS).

2.3.3 Metallic-Coated Steel Sheet

ASTM A653/A653M, Commercial Steel (CS), with [G60 (Z180)] [G90 (Z275)] zinc coating; restricted flatness.

2.3.4 Stainless Steel Sheet

ASTM A240/A240M, [Type 304] [Type 316]; stretcher leveled standard of flatness.

2.3.5 Fasteners and Hardware

Manufacturer's standard corrosion-resistant materials compatible with

specified door and frame assembly materials and finishes specified.

2.4 SLIDING DOORS

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NOTE: These types of doors are typically specified specified where a fire rating is required but can be specified for non-fire-rated applications.. Manufacturer's product data to be reviewed before a selection is made. Subject to project-specific conditions, tubular frame construction is typically specified where larger doors are required than can be achieved by hollow metal construction.

Edit the following paragraphs to meet project-specific requirements.
****

2.4.1 Door Construction

Manufacturer's standard for opening size and performance requirements;[overhead supported, wall-mounted track][bottom supported, floor track and top guide]. Provide concealed reinforcements for mounting attachments and hardware attachments.[Provide with attached [armor edges][and][astragals].]

2.4.2 Construction Types

[2.4.2.1 Tubular-Frame

Facing material welded to both sides of steel-tube perimeter frame and internal stiffeners, with mitered corner joints in frame and welded frame and stiffener joints; joints in face sheets located over stiffeners. Splice panel sections of wide leaves with manufacturer's continuous, surface-applied, through-bolt splice plate or otherwise reinforce panels at connecting joints to provide a solid one-piece door. Weld and fill joints and grind exposed welds smooth and flush.

][2.4.2.2 Hollow Metal

Facing material bonded to both sides of core and with perimeter steel channels as reinforcing and to enclose the core material. Splice panel sections of wide leaves with manufacturer's continuous, steel H column splice kit with surface-applied splice plate or otherwise reinforce panels at connecting joints to provide a solid one-piece door. Weld and fill joints and grind exposed welds smooth and flush.

]2.4.3 Facing Material

2.4.3.1 Steel Sheet

Minimum thickness[0.8 mm 0.033 inch][[_____] mm [_____]inch].

2.4.3.2 Metallic-Coated Steel Sheet

Minimum thickness[1.0 mm 0.040 inch][[_____] mm [____]inch].

2.4.3.3 Stainless-Steel Sheet

Minimum thickness[0.96 mm 0.038 inch][[_____] mm [_____] inch].

2.4.4 Core Material

Provide manufacturer's standard core material according to fire-protection-rating [and temperature-rise] requirements.

2.4.5 Hardware

Manufacturer's standard, labeled, automatic-closing-type, sliding fire door hardware complete with track, roller assemblies, adjustable roller guides, binders, floor stops, cables, [counterbalance system] [motorized operator system] as required. Provide hangers, fittings, and fasteners required for attaching hardware to door and for door sliding operation.[Provide handle for manual operation.]

2.5 OPERATION

2.5.1 Operating System

[Power operated][and][Manually operated] as indicated on drawings.

Provide [single-slide] [center-parting] [multiple-leaf telescoping] on [level] tracks and designed to normally remain in the [open position and close automatically in case of fire] [and][or] [closed position but permit normal operation for passage].

2.5.2 Power Operators

****

NOTE: Power operators should be specified for sliding doors which are subject to heavy usage and are required to remain closed. Also use power operated sliding doors between heated production areas and unheated storage areas where there is a frequent traffic flow between the two areas. This paragraph applies to both pneumatic and electric operated doors.

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Provide [pneumatic][electric] type operator specified herein. Provide both the door and the power actuating device with a UL or FM listed releasing mechanism that will permit the required self-closing feature to function and close the door automatically in case of fire irrespective of power failure or manual operation. Provide readily adjustable limit switches to automatically stop the door in its full open or closed position. Provide operating devices suitable for the Class, Division, and Group shown and as defined in NFPA 70.

[2.5.3 Pneumatic Operators

****

NOTE: Edit this paragraph to suit the type of controls required. Insert the air pressure that will be available for the door operation.

****

Provide heavy duty industrial type operator, designed to operate the door at [0.3][0.6][0.9][1.2] m [1][2][3][4] ft per second with air pressure of [_____] kPapsi. The operator must open, close, start, and stop the door smoothly. Provide control that is [[electrical, conforming to NEMA ICS 2, Part 8 and NEMA ICS 6. Provide enclosures which are Type 12 (industrial use), Type 7 or 9 in hazardous locations,] [pneumatic,] with[push button wall switches][ceiling pull switches][roll-over floor treadle]][of type as indicated on the drawings].

]2.5.4 Electric Operators

****

NOTE: Edit this paragraph to suit the type of controls required. Insert the electrical characteristics that will be available for the door operation.

****

Provide heavy-duty industrial type operator, designed to operate the door at not less than [0.3][0.6][0.9][1.2] m [1][2][3][4] ft per second. Provide [push button wall switches] [ceiling-pull switches] [roll-over floor treadle] electrical controls as indicated. Provide all electrical power operators complete with electric motor, brackets, controls, limit switches, magnetic reversing starter, and all other accessories necessary. Design the operator so that the motor may be removed without disturbing the limit-switch timing and without affecting the emergency closing system. Provide the power operator with a slipping clutch coupling or torque limiter, as required to prevent stalling of the motor. Provide operators with provisions for immediate emergency manual operation of the door in case of electrical failure. Where control voltages differ from motor voltage, provide an integrated control voltage transformer as part of the starter. Provide electric control conforming to NEMA ICS 2, Part 8 and NEMA ICS 6 with voltage of 120 volts or less. Provide enclosures of the Type 12 (industrial use), Type 7 or 9 in hazardous locations, [with [push button wall switches.] [ceiling pull switches.] [roll-over floor treadle.]] [as indicated on the drawings.]

2.5.4.1 Motors

Provide drive motors conforming to NEMA MG 00001, have high-starting torque, reversible type, and with sufficient power and torque output to move the door in either direction from any position at the required speed without exceeding the rated capacity. Provide motors suitable for operation on [_____] volts, [60] [_____] hertz, [single] [three] phase, and suitable for across-the-line starting. Design motors to operate at full capacity over a supply voltage variation of plus or minus 10 percent of the motor voltage rating.

2.5.4.2 Controls

Provide each door motor with thermal overload protection, limit switches, and remote-control switches with control equipment conforming to NEMA ICS 2. Provide NEMA ICS 6 Type 12 (industrial use) enclosures, Type 7 or 9 enclosures in hazardous locations, or as otherwise indicated. Each wall control station to be the three-button type, with the controls marked "OPEN," "CLOSE," and "STOP." When the door is in motion and the "STOP" control is pressed, the door is to stop instantly and remain in the stop position; from the stop position. Provide doors operable in either direction by the "OPEN" or "CLOSE" controls. Provide full-guarded

controls to prevent accidental operation.

2.5.5 Electrical Work

Provide conduit and wiring necessary for proper operation in accordance with Section 26 20 00 INTERIOR DISTRIBUTION SYSTEM. Make flexible connections between doors and fixed supports with extra flexible type SO cable, except in hazardous locations where wiring conforms to NFPA 70. Provide cable with spring-loaded automatic take-up reel coil cord or an equivalent and approved device.

2.5.6 Transformer

Conform to UL 506 for control transformers.

2.6 HARDWARE

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NOTE: Door design should eliminate corrosive contaminants collection location. Proper design should include effective drain-to-drain-through requirements. If materials are expected to be exposed to corrosive contaminants, select design geometries, materials, manufacturing processes, and coatings that prevent or control corrosion.

Selected design disciplines should enable designers to evaluate the following general approaches to design: selecting the right materials and manufacturing processes, applying protective coatings as necessary, using proper corrosion preventative and control designs, and modifying the environment.

Avoid materials that are dissimilar and can cause galvanic corrosion. Consider compatibility when using multiple materials. If dissimilar materials cannot be avoided, isolate those materials from each other through the use of sealants, protective coatings, barrier materials, etc.

****

Provide hardware conforming to NFPA 80, UL 10B and the requirements specified herein. Design tracks, roller assemblies, and installation hardware to support a dead load equal to 1.5 times the weight of the door and attached hardware without deformation that would interfere with the operation of the door. Form tracks of galvanized G90 steel not lighter than 1.9 mm (14 gauge) 14 gauge. Provide ball or roller bearing wheels or rollers with case hardened races on all devices incorporating wheels or rollers. Attach hardware using zinc plated through bolts, nut plates, or similar devices to ensure adequate fastener strength. Provide recessed steel pulls on both sides of all door leaves. Provide closing system for [sliding doors] [and] [sliding fire doors] that is [counterweight closing with weight boxes] [cable reel closer] [controlled speed cable reels].

[2.7 RAILS

Provide [steel][_____] rails for horizontal sliding doors of[18 kg 40 pound][as indicated].

]2.8 SAFETY DEVICE

Provide the leading edge of doors with a safety device that will immediately reverse the door movement upon contact with an obstruction and cause the door to return to its full open position. The safety device cannot substitute for a limit switch. Provide exterior doors with a combination weather seal and safety device.

2.9 ACCESSORIES

2.9.1 Track Hood

Provide zinc-coated steel no lighter than 1.3 mm (18 gauge) 18 gauge track hood for exterior doors mounted on the exterior face of the wall.

2.9.2 Glass Lights

Provide glass lights of the size indicated, except that in no case can the size be larger than that permitted by the required fire rating. Provide glass in accordance with Section 08 81 00 GLAZING.

2.9.3 Weatherstripping

Provide weatherstripping on head, jamb, and sills of exterior doors. Provide 1.6 mm 1/16 inch thick fabric-reinforced neoprene or nylon-brush type weatherstripping and consisting of continuous metal retainers and UL listed.

[2.9.4 Locking Device

****
NOTE: Do not provide locking devices on doors of required exitways unless approval is first obtained from the Fire Protection Engineer. Delete this paragraph if locking devices are not required.
****

Provide [heavy-duty hasp and staple] [electric solenoid lock] on doors [_____], locate on [_____] side.

][2.9.5 Pass Door

Provide a pass door of nominal size [_____] [as shown on the drawings] complete with an integral frame. Factory install and fit the pass door. The pass door to be complete with three full mortise spring hinges and a mortise latch set with flush cup and lever handle with US32D finish.

]2.9.6 Top Guide Rollers

Provide top guide rollers of the [horizontal] [_____] type [with single wheel] [as indicated]. Provide rollers of [steel] [malleable iron] [cast iron] and sized for load conditions. Provide rollers that have [permanently lubricated] [_____] anti-friction bearings. Construct assemblies allowing removal. Construct top roller assemblies to transmit the load from the door to the building structure.

2.9.7 Bottom Rollers

Provide bottom rollers of [double-flanged cast steel] [welded pressed steel] [_____] having minimum tread diameter of [455] mm [18] inch [_____]. When the door leaf height-to-width exceeds 3, provide adjustable rollers. Construct rollers for removal without removing the door leaf from rail.

a. Provide treads with bearing seats. Provide horizontal clearance between the wheel and the rail that is 3 mm [1/8] inch [_____] maximum at the bottom and [6] mm [1/4] inch [_____] maximum at edge of flanges.

b. Provide bearing seats meeting the bearing manufacturer's requirements. Have bearings of [ball] [roller] type arranged to ensure that vertical loads and horizontal wind loads will be transmitted from leaves to wheels. Provide bearings with seals that retain grease and prevent the entrance of dirt. Equip bearings with high-pressure grease fittings.

2.9.8 Track Cleaners

Provide door leaves with sweeps to clear debris from the rail head and wheel flange grooves as the leaf is moved.

2.9.9 Toe Guards

Attach an adjustable full-length flexible toe guard reaching to the floor to the exterior bottom edge of each leaf of bi-parting doors.

2.9.10 Warning Device

Provide alarms with each leaf which signals door movements and are [electronically] [electrically] [mechanically] activated.

2.9.11 Track Bumpers

When limit switch fails, provide bumpers to limit door travel and automatically stop the door.

2.9.12 Drive Clutch

When power is not applied, the clutch is to disengage from the door drives.

2.9.13 Manual Operators

Provide a manual [removable crank] [hand wheel] device that open doors. [Provide door leaf with readily accessible brackets for crank storage.]

2.10 FINISH

2.10.1 Steel Surfaces of Exterior Doors

****

NOTE: When increased corrosion protection and coating system durability is needed, a coating system of SSPC Paint 28 primer with a SSPC Paint 36 topcoat applied by spray application can be used. This option is suggested for areas of high corrosion and heavy use.

****

Provide galvanized coating conforming to ASTM A653/A653M or ASTM A924/A924M, coating designation G90, for steel sheets on all steel surfaces of exterior doors, after first applying a shop-primed finish. Prior to receiving primer, clean and phosphate-treat all surfaces for maximum paint adherence. Provide metallic oxide or synthetic resin primer of the manufacturer's standard type and apply by dipping or spraying. [For increased corrosion protection and coating system durability apply a coating system of SSPC Paint 28 primer with a SSPC Paint 36 topcoat by spray application.]

2.10.2 Exposed Steel Surfaces of Interior Doors

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NOTE: When increased corrosion protection and coating system durability is needed, a coating system of SSPC Paint 28 primer with a SSPC Paint 36 topcoat applied by spray application can be used. This option is suggested for areas of high corrosion and heavy use.

****

Provide exposed steel surfaces of interior doors with a [shop-primed finish] [and] [galvanized coating]. Galvanizing will conform to ASTM A653/A653M or ASTM A924/A924M, coating designation G90, for steel sheets. Provide primer which is a metallic oxide or synthetic resin primer of the manufacturer's standard type and applied by dipping or spraying. Prior to receiving primer, clean and phosphate treat all surfaces for maximum paint adherence. [For increased corrosion protection and coating system durability apply a coating system of SSPC Paint 28 primer with a SSPC Paint 36 topcoat by spray application.]

[2.11 SPECIAL FINISHES

Provide surfaces of [aluminum] [_____] doors with [an anodic] [_____] coating conforming to [MIL-A-8625, Type II] [_____]; seal coating. Determine weight and effectiveness of sealing and coating(s) in accordance with [ASTM B137 and ASTM B136] [_____]. Apply [_____] coat(s) of [a clear [methacrylate lacquer] [_____]] to [_____] surfaces prior to shipment.

][2.12 SHOP PAINTING

a. Paint [steel] [_____] portions of doors with [_____] coats of manufacturer's standard [rust-inhibitive] Paint.

b. Paint [aluminum] [_____] surfaces which contact dissimilar metals with bituminous paint.

c. Coat both dissimilar metal surfaces to prevent galvanic corrosion.

d. Submit certificates of inspection from an independent testing laboratory, for oversize fire doors, stating that the doors and hardware are identical in design, materials, and construction to a door that has been tested and meets the requirements for the class indicated.

]PART 3 EXECUTION

3.1 INSTALLATION

Install doors in accordance with NFPA 80, approved detail drawings and manufacturer's instructions. Accurately locate anchors and inserts for guides, brackets, [motors,] [switches,] hardware, and accessories. Upon completion, doors are to be free from warp, twist, or distortion. Provide weather tight exterior doors. Lubricate and properly adjust doors, and demonstrate doors operate freely. Provide field quality control reports.

[3.2 FIELD FINISHING

Finish doors to receive field finish in accordance with Section 09 90 00 PAINTING, GENERAL. Provide color [in accordance with Section 09 06 00 SCHEDULES FOR FINISHES] [_____]. For field coatings applied to the exterior and interior of steel doors use coatings described in Paragraphs STEEL SURFACES OF EXTERIOR DOORS and EXPOSED STEEL SURFACES OF INTERIOR DOORS

]3.3 TESTING

Test doors in the presence of a representative of the door manufacturer and the Contracting Officer. Perform test consisting of [10] complete opening and closing cycles for each individual door, each pair of doors, and [three] complete manual cycles. On the fifth and tenth cycles, check, the inflatable seals for wear and leakage. Switches are to function properly, and operation of doors is to be smooth. Show an airtight condition when a successful soap-bubble test is made with the doors closed.

-- End of Section --