SECTION 08 31 00
ACCESS DOORS

PART 1 - GENERAL

1.01 SUMMARY

A. This section governs the construction of access doors including the following:

1. Access doors in walls supplementing the requirements included in Divisions 22, 23 and 26.
2. Access doors in ceilings supplementing the requirements included in Divisions 22, 23 and 26.

B. Related Requirements:

1. Section 08 71 00 “Door hardware”.
2. Section 09 29 00 “Gypsum board”.
3. Section 09 90 00 “Painting”
4. Section 22 05 00 "Common Work Results for Plumbing" for additional requirements regarding access doors for plumbing.
5. Section 23 05 00 "Common Work Results for HVAC" for additional requirements regarding access doors for HVAC.
6. Section 23 33 00 "Air Duct Accessories" for heating and air-conditioning duct access doors.

1.1 REFERENCES

C. ASTM: American Society for Testing and Materials

1. ASTM A 36: Standard Specification for Carbon Structural Steel
2. ASTM A 153: Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
3. ASTM A 666: Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar
4. ASTM A 879: Standard Specification for Steel Sheet, Zinc Coated by the Electrolytic Process for Applications Requiring Designation of the Coating Mass on Each Surface
5. ASTM A 1008: Standard Specification for Steel, Sheet, Cold-Rolled, Carbon, Structural, High-Strength Low-Alloy, High Strength Low-Alloy with Improved Formability, Solution Hardened, and Bake Hardenable
6. ASTM F 2329: Standard Specification for Zinc Coating, Hot-Dip, Requirements for Application to Carbon and Alloy Steel Bolts, Screws, Washers, Nuts, and Special Threaded Fasteners

1.02 ADMINISTRATIVE REQUIREMENTS

A. Coordination and Scheduling:

1. Coordinate requirements for installation of door cylinders, where required.

1.03 SUBMITTALS

A. Product Data: Manufacturer's literature describing each type of door to be provided.

B. Shop Drawings:

1. Indicate locations of required access doors not shown on the Drawings.

2. Include construction details, fire ratings, material descriptions, dimensions of individual components and profiles, and finishes.

1.04 CLOSEOUT SUBMITTALS

A. Operation and Maintenance Data: For access doors, to be included in operation and maintenance manuals.

B. Closeout Submittals shall be submitted in accordance with Section 01 77 00 "Closeout Procedures" and Section 01 78 36 "Warranties."

1.05 QUALITY ASSURANCE

A. Fire-Resistance Ratings: Where required, provide access door assembly with panel door, frame, hinge, and latch from manufacturer listed in UL "Classified Building Materials Index" for the rating indicated. Provide UL label on each access door.

B. Single-Source Responsibility: Obtain access doors of each type for entire project from one source from a single manufacturer.

C. Size and Location Verification:

1. Determine specific locations and sizes for access doors needed to gain access to concealed equipment requiring maintenance or operation whether or not indicated on schedule or drawings.

2. Where access doors require personnel to pass completely through opening, door shall be minimum 36" x 36".

PART 2 - PRODUCTS

2.01 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36.

B. Steel Sheet: ASTM A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process

C. Uncoated or electrolytic zinc coated, ASTM A 879, with cold-rolled steel sheet substrate complying with ASTM A 1008/A 1008M, Commercial Steel (CS), exposed.

D. Stainless Steel Sheet, ASTM A666-10, Type 304 (Type 316) Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar. Remove tool and die marks and stretch lines or blend into finish.

E. Frame Anchors: Same material as door face.

F. Inserts, Bolts, and Anchor Fasteners: Hot-dip galvanized steel according to ASTM A 153 or ASTM F 2329.

2.02 MANUFACTURERS

A. Access Doors, Typical:

1. Nystrom, 9300 73rd Ave North, Minneapolis MN 55428. (Basis of Design)
2. JL Industries
3. Acudor
4. Milcor Inc.
5. Karp Associates Inc.,
6. or approved equal.

2.03 PERFORMANCE REQUIREMENTS

A. Non-Rated Flush Access Doors with Exposed Flanges

1. Description: Face of door flush with frame, with 1" exposed flange and continuous piano hinge
2. Locations: Gypsum Board or interior plaster walls and ceiling surfaces not indicated to be fire rated.
3. Door Size: As required.
4. Frame: Galvannealed sheet steel, nominal 0.060, 16 gage, minimum, factory primed in ANSI 70 Gray. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
5. Door: Galvannealed sheet steel, nominal 0.060, 16 gage, minimum, factory primed in ANSI 70 Gray. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
6. Latch and Lock: Screwdriver cam latch; (Key operated cam lock) (hex-head wrench operated) (prepared for mortise lock 1-1/8" cylinder with mortise cylinder provided under Section 08 71 00).
7. Gasketing: Provide continuous gasketing on door stops
8. Products: One of the following, or approved equal:
   a. Nystrom NT
   b. JL Industries TM
   c. Acudor UF-5000

B. Stainless Steel Non-Rated Flush Access Doors with Exposed Flanges

1. Description: Face of door flush with frame, with 1" exposed flange and continuous piano hinge
2. Locations: Tiled walls and ceiling surfaces not indicated to be fire rated.
3. Door Size: As required.
4. Frame: Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish
5. Door: Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish
6. Latch and Lock: Screwdriver cam latch; (Key operated cam lock) (hex-head wrench operated) (prepared for mortise lock 1-1/8" cylinder with mortise cylinder provided under Section 08 71 00).
7. Gasketing: Provide continuous gasketing on door stops

8. Products: One of the following, or approved equal:
   a. Nystrom NT-S
   b. JL Industries TMS
   c. Acudor UF-5000

C. Non-Rated Flush Access Doors with Concealed Flanges

1. Description: Face of door flush with frame, with 1” concealed flange and concealed piano hinge
2. Locations: Gypsum Board walls and ceiling surfaces not indicated to be fire rated.
3. Door Size: As required.
4. Frame: Galvannealed sheet steel, nominal 0.060, 16 gage, minimum, factory primed in ANSI 70 Gray. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
5. Door: Galvannealed sheet steel, nominal 0.060, 16 gage, minimum, factory primed in ANSI 70 Gray. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
6. Latch and Lock: Screwdriver cam latch; (Key operated cam lock) (hex-head wrench operated) (prepared for mortise lock 1-1/8” cylinder with mortise cylinder provided under Section 08 71 00).
7. Gasketing: Provide continuous gasketing on door stops
8. Products: One of the following, or approved equal:
   a. Nystrom NW
   b. JL Industries TMP
   c. Acudor DW-5040

D. Fire-Rated Flush Access Doors with Exposed Flanges

1. Description: Face of door flush with frame, with 1” concealed flange and concealed piano hinge
2. Locations: Gypsum Board walls and ceiling surfaces indicated to be fire rated.
3. Door Size: As required.
4. Fire resistance Rating: Not less than 1-1/2” hours.
5. Temperature Rise Rating: 250 degree F maximum at the end of 30 minutes.
6. Frame: Galvannealed sheet steel, nominal 0.063, 16 gage, minimum, factory powder-coated in paintable white. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
7. Door:
   a. Self-closing
   b. Galvannealed sheet steel, nominal 0.038, 20 gage, minimum, factory powder-coated in paintable white. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
8. Insulation: mineral fiber insulation core enclosed in sheet metal.
9. Latch and Lock:
   a. Self-closing and self-latching;
   b. Operated by Knurled knob (Key operated cam lock) (prepared for mortise lock 1-1/8” cylinder with mortise cylinder provided under Section 08 71 00).
10. Gasketing: Provide continuous gasketing on door stops
11. Products: One of the following, or approved equal:
    a. Nystrom IT
    b. JL Industries FM
    c. Acudor FW-5050-DW

E. Stainless Steel Fire-Rated Flush Access Doors with Exposed Flanges

1. Description: Face of door flush with frame, with 1” concealed flange and concealed piano hinge
2. Locations: Tiled walls and ceiling surfaces indicated to be fire rated.
3. Door Size: As required.
4. Fire resistance Rating: Not less than 1-1/2” hours.
5. Temperature Rise Rating: 250 degree F maximum at the end of 30 minutes.
6. Frame: Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish.
7. Door:
   a. Self-closing
   b. Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish
8. Insulation: mineral fiber insulation core enclosed in sheet metal.
9. Latch and Lock:
   a. Self-closing and self-latching;
   b. Operated by Knurled knob (Key operated cam lock) (prepared for mortise lock 1-1/8” cylinder with mortise cylinder provided under Section 08 71 00).
10. Gasketing: Provide continuous gasketing on door stops
11. Products: One of the following, or approved equal:
    a. Nystrom IT-S
    b. JL Industries FDS
    c. Acudor FW-5050

F. Fire-Rated Flush Access Doors with Concealed Flanges

1. Description: Face of door flush with frame, with 1” concealed flange and concealed piano hinge
2. Locations: Gypsum Board walls and ceiling surfaces indicated to be fire rated.
3. Door Size: As required.
4. Fire resistance Rating: Not less than 1-1/2” hours.
5. Temperature Rise Rating: 250 degree F maximum at the end of 30 minutes.
6. Frame: Galvannealed sheet steel, nominal 0.063, 16 gage, minimum, factory powder-coated in paintable white. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
7. Door:
   a. Self-closing
   b. Galvannealed sheet steel, nominal 0.038, 20 gage, minimum, factory powder-coated in paintable white. (Stainless steel, nominal 0.060, 16 gage, Type 304, No. 4 Finish)
8. Insulation: mineral fiber insulation core enclosed in sheet metal.
9. Latch and Lock:
   a. Self-closing and self-latching;
   b. Operated by Knurled knob (Key operated cam lock) (prepared for mortise lock 1-1/8” cylinder with mortise cylinder provided under Section 08 71 00).
10. Gasketing: Provide continuous gasketing on door stops
11. Products: One of the following, or approved equal:
    a. Nystrom IW
    b. JL Industries FD

c. Acudor FW-5050

G. Acoustical Access Doors for drywall walls and ceilings

1. Description: Face of door flush with drywall with drywall taping bead flange
2. Locations: Interior walls or soffits.
3. Door Size: 24-inches x 24-inches (limited other sizes available per Mfr)
4. Frame: min 18 gage steel with insulation in frame
5. Door: min 20 gage steel with 1-1/2" acoustical liner and recess for 5/8" drywall
6. Hinge: Stainless Steel Continuous Piano Hinge, exposed
7. STC: Min 64 per ASTM E90
8. Insulation: in both frame and door
9. Latch and Lock:
   a. Screw-driver operated compression latch (or hex head with security pin), or
   b. Lift and Turn Compresssion Latch
10. Gasketing: Continuous gasketing on all four sides
11. Products: One of the following, or equal:
    a. Acudor "ACD 2064"
    b. KARP Industries "STC"

H. Exterior Flush Access Doors with Exposed Flanges

1. Description: Face of door flush with frame, with 1" concealed flange and continuous piano hinge
2. Locations: Exterior walls or soffits.
3. Door Size: As required.
4. Frame: 0.080 inch 12 gage 6063-T5 Extruded Aluminum, Mill Finish.
5. Door: Stainless steel, nominal 0.060, 24 gage, Type 304, No. 2B Finish (Galvannealed 24 gage,
6. Hinge: Stainless Steel Continuous Piano Hinge
7. Insulation: foam insulation, R12.
8. Latch and Lock:
   a. Prepared for mortise lock 1-1/8" cylinder with mortise cylinder provided under Section 08 71 00 (Locking handle latch)
9. Gasketing: Continuous gasketing on all four sides
10. Products: One of the following, or approved equal:
    a. Nystrom XT (XTS)
    b. JL Industries XPA (specs above vary)

2.04 MATERIALS

A. Steel Plates, Shapes, and Bars: ASTM A 36

B. Steel Sheet: ASTM A653, Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy Coated (Galvannealed) by the Hot-Dip Process

C. Uncoated or electrolytic zinc coated, ASTM A 879, with cold-rolled steel sheet substrate complying with ASTM A 1008/A 1008M, Commercial Steel (CS), exposed.

D. Stainless Steel Sheet, ASTM A666-10, Type 304 (Type 316) Standard Specification for Annealed or Cold-Worked Austenitic Stainless Steel Sheet, Strip, Plate, and Flat Bar. Remove tool and die marks and stretch lines or blend into finish.

E. Frame Anchors: Same material as door face.

F. Inserts, Bolts, and Anchor Fasteners: Hot-dip galvanized steel according to ASTM A 153 or ASTM F 2329.

2.05 FABRICATION

A. General: Provide access door and frame assemblies manufactured as integral units ready for installation.

B. Metal Surfaces: For metal surfaces exposed to view in the completed Work, provide materials with smooth, flat surfaces without blemishes. Do not use materials with exposed pitting, seam marks, roller marks, rolled trade names, or roughness.

C. Doors and Frames: Fabricate units of continuous welded steel construction. Grind exposed welds smooth and flush with adjacent surfaces. Furnish mounting holes, attachment devices and fasteners of type required to secure access doors to types of supports indicated.

1. For concealed flanges with drywall bead, provide edge trim for gypsum panels securely attached to perimeter of frames.
2. For concealed flanges with plaster bead for full-bed plaster applications, provide zinc-coated expanded-metal lath and exposed casing bead welded to perimeter of frames.

D. Latch and Lock Hardware:

1. Quantity: Furnish number of latches and locks required to hold doors tightly closed.
2. Keys: Furnish two keys per lock and key all locks alike.

2.06 FINISHES

A. Comply with NAAMM's "Metal Finishes Manual for Architectural and Metal Products" for recommendations for applying and designating finishes.

B. Protect mechanical finishes on exposed surfaces from damage by applying a strippable, temporary protective covering before shipping.

C. Appearance of Finished Work: Noticeable variations in same piece are not acceptable. Variations in appearance of adjoining components are acceptable if they are within the range of approved Samples and are assembled or installed to minimize contrast.

D. Painted Finishes: Comply with coating manufacturer's written instructions for cleaning, conversion coating, and applying and baking finish.

1. Factory Primed: Apply manufacturer's standard, lead- and chromate-free, universal primer immediately after surface preparation and pretreatment.

PART 3 - EXECUTION

3.01

A. Examine substrates for compliance with requirements for installation tolerances and other conditions affecting performance of the Work.

B. Proceed with installation only after unsatisfactory conditions have been corrected.

A. General

1. Comply with manufacturer's written instructions for installing access doors and frames. Coordinate installation with work of other trades.
2. Advise installers of other work about specific requirements relating to access door installation, including sizes of openings to receive access door and frame, as well as locations of supports, inserts, and anchoring devices.
3. Set frames accurately in position and attach securely to supports with plane of face panels aligned with adjacent finish surfaces.

B. Install access doors flush with adjacent finish surfaces.

1. Adjust doors and hardware, after installation, for proper operation.
2. Remove and replace panels or frames that are warped, bowed, or otherwise damaged.
3. Conceal frames with tape and joint compound as specified in Section 09 29 00, "Gypsum Board."

END OF SECTION