

SECTION 08 31 13 ACCESS HATCHES AND FRAMES

PART 1 - GENERAL

1.01 SUMMARY

- A. This Section includes the following:
 - 1. Floor Access Hatch. (exterior)

1.02 SUBMITTALS

- A. Product Data: For each type of hatch and frame indicated. Include construction details relative to materials, individual components and profiles, finishes, and fire ratings (if required) for access hatches and frames.
- B. Shop Drawings: Show fabrication and installation details of customized hatches and frames. Include plans, elevations, sections, details, and attachments to other Work.
 - 1. Method of attaching hatch frames to surrounding construction.

1.03 QUALITY ASSURANCE

- A. Size hatches to maximize opening.
- B. Manufacturer shall have a minimum of five (5) years of experience with similar products.
- C. Source Limitations: Obtain hatches and frames through one source from a single manufacturer.
- D. Size Variations: Obtain Authority's acceptance of manufacturer's standard-size units, which may vary slightly from sizes indicated.

1.04 COORDINATION

- A. Verification: Determine specific locations and sizes for access hatches needed to gain access to concealed equipment.

1.05 WARRANTY

- A. The Contractor and the Manufacturer shall warrant all manufactured items supplied under this section for a period of one (1) year. Warranty period shall commence on the date of substantial completion. This warranty shall include repair or replacement of any item failing during normal use. In the event that the manufacturer's standard warranty for any given item exceeds the period of one (1) year following substantial completion, then the longer period shall govern.

- B. Manufactured items shall be warranted to be free from defects in workmanship, design and materials. If any part of the equipment should fail during the warranty period, it will be replaced at no expense to the Authority.
- C. The Manufacturer's warranty period shall run concurrently with the Contractor's warranty period. No exceptions to this provision shall be allowed.

PART 2 – PRODUCTS

2.01 MANUFACTURERS

- A. Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated into the Work include, but are not limited to, the following:
 - 1. Floor Hatches:
 - a. Bilco
 - b. Halliday Products

2.02 FLOOR ACCESS HATCH

- A. Floor Access Hatches shall be single or double leaf as indicated on Contract Drawings or identified on applicable schedules.
- B. Performance characteristics:
 - 1. Covers: Shall be reinforced to support AASHTO H-20 wheel load with a maximum deflection of 1/150th of the span. Manufacturer to provide structural calculations stamped by a registered professional engineer upon request. (Note: For installation in an off-street location where not subject to high density, fast moving traffic.)
 - 2. Operation of the covers shall be smooth and easy with controlled operation throughout the entire arc of opening and closing.
 - 3. Operation of the covers shall not be affected by temperature.
 - 4. Entire Hatch, including all hardware components, shall be highly corrosion resistant.
- C. Covers: Shall be 1/4" (6mm) aluminum diamond pattern.
- D. Frame: Channel frame shall be extruded aluminum with bend down anchor tabs around the perimeter.
- E. Hinges: Shall be specifically designed for horizontal installation and shall be through bolted to the cover with tamperproof Type 316 stainless steel lock bolts and shall be through bolted to the frame with Type 316 stainless steel bolts and locknuts.
- F. Drain Coupling: Provide a 1-1/2" (38mm) drain coupling located in the right front corner of the channel frame [note: can be placed at a different location if specified].

- G. Lifting mechanisms: Manufacturer shall provide the required number and size of compression spring operators enclosed in telescopic tubes to provide, smooth, easy, and controlled cover operation throughout the entire arc of opening and to act as a check in retarding downward motion of the cover when closing. The upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside the lower tube assembly. The lower tube shall interlock with a flanged support shoe fastened to a formed 1/4" (6mm) gusset support plate.
- H. A removable exterior turn/lift handle with a spring loaded ball detent shall be provided to open the cover and the latch release shall be protected by a flush, gasketed, removable screw plug.
- I. Hardware:
 - 1. Hinges: Heavy forged Type 316 stainless steel hinges, each having a minimum 1/4" (6mm) diameter Type 316 stainless steel pin, shall be provided and shall pivot so the cover does not protrude into the channel frame.
 - 2. Covers shall be equipped with a hold open arm which automatically lock each cover in the open position.
 - 3. Covers shall be fitted with the required number and size of compression spring operators. Springs and spring tubs shall be Type 316 stainless steel.
 - 4. A Type 316 stainless steel snap lock with fixed handle shall be mounted on the underside of the covers.
 - 5. Hardware: Shall be Type 316 stainless steel throughout.
- J. Finishes: Factory finish shall be mill finish aluminum with bituminous coating applied to the exterior of the frame.

2.03 FABRICATION

- A. General: Provide access hatch assemblies manufactured as integral units ready for installation. Retrofit to existing precast concrete structure.
- 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. Latching Mechanisms: Furnish number required to hold hatches in flush, smooth plane when closed.

2.04 FINISHES, GENERAL

- A. Factory finish shall be mill finish aluminum.

PART 3 – EXECUTION

3.01 PREPARATION

- A. Advise installers of other work about specific requirements relating to access hatch and floor hatch installation, including sizes of openings to receive access hatch and frame, as well as locations of supports, inserts, and anchoring devices.

3.02 INSTALLATION

- A. Comply with manufacturer's written instructions for installing floor access Hatches and frames.
- B. Set frames accurately in position and attach securely to supports with plane of face panels aligned with adjacent finish surfaces.
- C. Install floor access Hatches flush with adjacent finish surfaces or recessed to receive finish material.
- D. Install units level, plumb, and in proper alignment with adjacent work.

3.03 ADJUSTING AND CLEANING

- A. Adjust hatches and hardware after installation for proper operation.
- B. Remove and replace hatches and frames that are warped, bowed, or otherwise damaged.
- C. Exposed surfaces shall be cleaned using methods acceptable to the manufacturer which will not damage the finish.

END OF SECTION