

SECTION 149100 - FACILITY CHUTES

PART 1 - GENERAL

1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of the Contract, including General and Supplementary Conditions and Division 01 Specification Sections, apply to this Section.

1.2 SUMMARY

- A. Section includes laundry chutes.
- B. Related Sections:
 - 1. Division 05 Section "Metal Fabrications" for metal supporting framework at floor penetrations.
 - 2. Division 06 "Rough Carpentry" for linen chute vent curb.
 - 3. Division 07 Section "Sheet Metal Flashing and Trim" for roof-vent flashing and counterflashing.
 - 4. Division 07 Section "Penetration Firestopping" for annular spaces at doors, floors, or roofs.
 - 5. Division 21 Sections for connection to building fire sprinklers and piping.
 - 6. Division 22 Sections for water-service connections for flushing system and for fire sprinkler connections.
 - 7. Division 26 Sections for electrical connections.

1.3 ACTION SUBMITTALS

- A. Product Data: For each type of product indicated. Include construction details, material descriptions, dimensions of individual components and profiles, and finishes for chutes.
- B. Shop Drawings: For chutes. Include plans, elevations, sections, details, weights, operational clearances, and attachments to other work. Indicate method of field assembly.
 - 1. Wiring Diagrams: Power, signal and control wiring.

1.4 INFORMATIONAL SUBMITTALS

- A. Product Certificates: For each type of chute, from manufacturer.

1.5 CLOSEOUT SUBMITTALS

- A. Operation and Maintenance Data: For chutes to include in operation and maintenance manuals.
 - 1. Include manufacturer's recycling plan guidelines.

1.6 QUALITY ASSURANCE

- A. Fire-Rated Door Assemblies: Assemblies complying with NFPA 80 that are listed and labeled by a testing and inspecting agency acceptable to authorities having jurisdiction, for fire ratings indicated.
 - 1. Test Pressure: Test at atmospheric (neutral) pressure according to NFPA 252 or UL 10B.

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2. Intake Door: Class B labeled; 1-1/2-hour fire rated with 30-minute temperature rise of 250 deg F.
 3. Discharge Door: Class B labeled; 1-hour fire rated with 30-minute temperature rise of 250 deg F.
 4. Access Door: Class B labeled; 1-1/2-hour fire rated with 30-minute temperature rise of 250 deg F.
- B. Electrical Components, Devices, and Accessories: Listed and labeled as defined in NFPA 70, by a qualified testing agency, and marked for intended location and application.
- C. Standard: Provide chutes complying with NFPA 82.

PART 2 - PRODUCTS

2.1 MANUFACTURERS

- A. Manufacturer: Wilkinson Hi-Rise, LLC.

2.2 CHUTES

- A. Chute Metal: Aluminum-coated, cold-rolled, commercial steel sheet; ASTM A 463/A 463M, Type 1 with not less than T1-40 coating.
1. Thickness: 0.060 inch (16 gage).
- B. Size: 24-inch diameter.

2.3 DOORS

- A. Intake Door Assemblies: ASTM A 240/A 240M, Type 304 stainless-steel, self-closing units with positive latch and latch handle; as required to provide fire-protection and temperature-rise ratings indicated.
1. Door Type: Side hinged, limited access, 180-degree swing, square.
 2. Size: 21 inches wide x 21 inches.
 3. Finish: Manufacturer's standard satin or No. 3 directional polish.
- B. Discharge-Door Assemblies: Aluminum-coated-steel doors as required to provide fire-protection and temperature-rise ratings indicated; equipped with fusible links that cause doors to close in the event of fire.
1. Horizontal Discharge: Provide top-hinged, self-closing, hopper door with self-latching hardware; floor-mounted leg brace designed to absorb impact of material dropping against chute; and minimum NPS 2 drain pipe connection.
- C. Heat-Detector System: Interlock system with temperature-rise elements that locks chute doors when temperature in chute reaches a predetermined, adjustable temperature.
- D. Access Door Assemblies: Manufacturer's standard ASTM A 240/A 240M, Type 302/304 stainless-steel doors; as required to provide fire-protection and temperature-rise ratings indicated; with frame suitable for enclosing chase construction; and in satin or No. 3 directional polish finish.
- E. Vent: NFPA 82 compliant metal top vent cap with counterflashing, insect screen, and explosion cap.

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2.4 ACCESSORIES

- A. Fire Sprinklers: Manufacturer's standard NPS 1/2 fire sprinklers ready for piping connections.
- B. Flushing Spray Unit: NPS 3/4 spray head unit located in chute above highest intake door, ready for hot-water piping connection, and with access for head and piping maintenance.
- C. Sanitizing Unit: NPS 3/4 disinfecting and sanitizing spray head unit located in chute above highest intake door, including 1-gal. tank and adjustable proportioning valve with bypass for manual control of sanitizing and flushing operation, ready for hot-water piping connection, and with access for head and piping maintenance.

2.5 FABRICATION

- A. General: Factory assemble chutes to greatest extent practical with continuously welded or lock-seamed joints without bolts, rivets, or clips projecting on chute interior. Include intake door assemblies and metal supporting framing at each floor, and chute expansion joints between each support point.
- B. Roof Vent: Fabricate vent unit to extend 48 inches above roof with full-diameter, screened vent and metal safety. Fabricate with curb mounting flange, counterflashing, and clamping ring of nonferrous metal compatible with chute metal.
- C. Fire Sprinklers: Comply with NFPA 13. Locate fire sprinklers at or above the top service opening of chutes, within the chute at alternate floor levels in buildings more than two stories tall, and at the lowest service level.
- D. Equipment Access: Fabricate chutes with access for maintaining equipment located within the chute, such as flushing and sanitizing units, fire sprinklers, and plumbing and electrical connections.

PART 3 - EXECUTION

3.1 INSTALLATION

- A. General: Comply with NFPA 82 requirements and with chute manufacturer's written instructions. Assemble components with tight, nonleaking joints. Anchor securely to supporting structure to withstand impact and stresses on vent units. Install chute and components to maintain fire-resistive construction of chute.
- B. Install chutes plumb, without offsets or obstructions that might prevent materials from free falling within chutes.
- C. Anchor curb mounting flanges of chute vents to curb. Install chute-vent counterflashing after roofing and roof-penetration flashing are installed.
- D. Intake and Discharge Doors: Interface door units with throat sections of chutes for safe, snag-resistant, sanitary depositing of materials in chutes by users.
 - 1. Interconnect sanitizer control with door interlock system.

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- E. Test chute components after installation. Operate doors, locks, and interlock systems to demonstrate that hardware is adjusted and electrical wiring is connected correctly. Complete test operations before installing chase enclosures.
- F. Test heat- sensing devices for proper operation.
- G. Operate sanitizing unit through one complete cycle of chute use and cleanup, and replenish chemicals or cleaning fluids in unit containers.

3.2 CLEANING

- A. After completing chase enclosure, clean exposed surfaces of chute system's components. Do not remove labels of independent testing and inspecting agencies.

3.3 DEMONSTRATION

- A. Demonstrate use of chute and equipment to Owner's personnel.
- B. Demonstrate replenishment of sanitizing-unit chemicals or cleaning fluids.

END OF SECTION 149100