

SECTION 15415
DRAINAGE

PART 1 - GENERAL

1.01 DESCRIPTION OF WORK

- A. Extent of Drainage Work is indicated on the Drawings and by the requirements of this Section. Coordinate with Section 15410 for piping and Division 7 for flashing work.

1.02 CODES AND STANDARDS

- A. Comply with applicable portions of the Building Code of the City of New York and with the latest standards and rules of the Department of Environmental Protection, Bureau of Sewers and Division of Drainage Basin Management.
- B. Where requirements for products, materials, systems, equipment, methods and other portion of the work specified herein exceed minimum requirements of regulatory agencies having jurisdiction over the construction work, contractor shall comply with such requirements specified herein, unless specifically approved otherwise by the Authority.

1.03 SUBMITTALS

- A. Submit shop drawings for the following:
1. Roof Drains
 2. Flashing Sleeves
- B. The Contractor shall submit shop drawing for and obtain approval of each type of drain with location to be installed before delivery and installation. The shop drawings shall be marked as to type and shall include all dimensions, free area, and features as to meet the specifications.
- C. Certifications: Submit an affidavit stating that the flashing and sealing work at drains and vent stacks is acceptable and in conformance to the New York City Building Code. (RS 16, P110.10 or NYCCC - PC 1105.3)
- D. Maintenance materials

- E. Manuals: Operation & maintenance manuals for the grease interceptors and the acid neutralizing system. Include in the maintenance manuals of the acid neutralization system, logs detailing chips replacement.

1.04 EXTRA MATERIALS

- A. The Contractor shall furnish the School Custodian or a Representative of the Authority with spanner type tools that may be used for removal of clean-out covers, strainers and grates. Two (2) such tools shall be provided for each different type drain and clean-out covers. Tools shall match products installed and shall be packaged with protective covering for storage and identified with labels describing contents.

PART 2 - PRODUCTS

2.01 PIPING

- A. Piping, fittings and piping joints shall be as specified in Section 15410.

2.02 FLASHING SLEEVES (CAULKING TYPE ROOFING)

- A. Flashing sleeves: vent stack flashing sleeve cast iron body, inside caulk type fabricated to accommodate roof system flashing shall be one of the following:

1. Jay R. Smith Fig. 1740
2. Zurn Z196
3. Josam 26450
4. MIFAB MI-910
5. Wade 3670-C

2.11 ROOF DRAINS

- A. Type "B": Roof drain shall be Jay R. Smith Fig. 1011-CID-C-R-U, Zurn ZC100-84-C-R-VP, Josam 21500-19-3-22-30-X, Wade 3000-DP-5-52-53-42-IC or Watts Drainage Products RD-300-X-GSS-B-D-K-L or MIFAB R1200G-U-B-6-M-X for use in conjunction with roof systems where the insulation is installed directly under the crushed stone surfaced

waterproof membrane (Built-up roof). Drain shall have cast-iron body with bottom caulk outlet, vandal proof cast-iron dome, underdeck clamp, sump receiver and with 4" high stainless steel perforated gravel stop 1/16" thick with 3/8" diameter openings equally spaced.

- B. Domes for roof drains shall have slots no greater than 1/2" in width and they shall be secured to the drain body by means of locking device.
- C. For type "B" and type "C" roof drains insulation is to be tapered at drain location. Refer to roof drain Details.
- D. Type "E": Roof drain shall be Jay R. Smith Fig. 1019C-CID-U-6HS, MIFAB R1200-G-M-Z-6, Wade 3000E-DP6-5-42-53, Watts Drainage Products RD-300-X-D-F-GSS-K-L, Zurn ZC107-84-C-E-VP or approved equal and shall be used with a liquid roof membrane system (no roof detention). Drain shall have cast iron body with bottom caulked outlet, extended anchor flange, vandal proof cast iron dome, perforated stainless steel gravel stop with holes.

The height of the stainless steel gravel stop shall be 6".

PART 3 - EXECUTION

3.01 SOIL, WASTE AND VENT LINES

- A. At the foot of the soil, waste and vent stacks and at all offsets and at other points indicated on drawings, there shall be installed in accessible location an approved tapped T-fitting of same size and material as the stack to which it connects, and provided with an approved brass screw plug. Plugs shall be the same size as the piping up to size 4".
- B. Cleanouts and drains in membrane waterproof floors shall be installed with flashing secured to the flashing flange with brass bolts and clamping device.

3.02 ROOF DRAINS

- A. Install roof drains where indicated on the Drawings. Drains shall be set not less than 30" from parapet wall, chimney, bulkhead, etc.
- B. Roof drain cast iron dome shall extend at least 4" above the surface of the roof immediately adjacent to the roof drain.

- C. Flashing shall be installed as part of the work of Section 07600 but shall be acceptable to the licensed master plumber.

3.03 RAIN LEADERS

- A. Inside leaders shall be located where indicated on the Drawings. Leaders shall be offset as required, to keep the pipes close to walls or columns or in chases. The lower ends of leaders shall be turned by means of long sweep, 90 degree bends; install accessible tapped tee cleanouts with brass screw plug above bends, all properly supported on brick or concrete piers, or wrought iron hangers which must be approved before being used. Leader connections at roof shall be kept in hung or furred ceilings where possible.
- B. It is the intent that the leaders shall be put into service as soon as required. The leaders shall be protected against frost, obstructions and all damage, by the Contractor, who shall replace damaged leaders and remove obstructions until the work is completed and accepted.

3.04 PROTECTION

- A. All open ends of pipes shall be temporarily capped or closed by a proper fitting, to prevent obstruction and damage, until piping is approved and ready for service.

3.05 PIPING SYSTEM TRANSITIONS

- A. When a transition is required from one piping system to another, an approved transition coupling shall be used.
- B. When connecting No-hub to a bell & spigot fitting of cast iron piping system, an approved transition coupling shall be used. When it is necessary to cut a new fitting into an existing bell & spigot cast iron piping system, a section of the hubed cast iron piping shall be removed to allow a three-piece fold-in installation of new bell & spigot cast iron piping with lead and oakum joints. The use of No-hub shall not be permitted within a bell & spigot cast iron piping system.

3.13 NO-HUB PIPING -ADDITIONAL REQUIREMENTS

- A. No-Hub piping suspended in excess of 18" below structure shall be provided with sway bracing to prevent horizontal movement.
- B. Horizontal piping shall be installed with additional hangers at each horizontal branch connection.
- C. Horizontal piping 6" and larger shall be braced to prevent joint separation.
- D. Vertical piping shall be braced at each joint to assure maintaining alignment.
- E. Vertical piping shall be secured at base of stack to building structure with socket clamp and rods or trapeze hangers.

END OF SECTION

LIST OF SUBMITTALS

<u>SUBMITTAL</u>	<u>DATE SUBMITTED</u>	<u>DATE APPROVED</u>
Product Data:		
1. Mfr's product data	_____	_____
2. Installation Inst.		
Shop Drawings:		
1. Roof Drains	_____	_____
2. Flashing Sleeves	_____	_____
Maintenance/ Materials		
1. Special Tools	_____	_____

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