

SUBSECTION 13.8 DRAINAGE CONSTRUCTION STANDARDS

13.8A PIPE

1. General

All pipe used for storm drainage shall be either Class IV Reinforced Concrete Pipe (RCP) or High Density Corrugated Polyethylene Smooth Interior Pipe (CPEP).

2. Minimum Cover

The minimum cover over all storm drainage located within the right-of-way shall be two (2) feet. Where conflicts with other subsurface facilities occur, and with approval of the Town Engineer, pipe may have as little as 18 inches of cover, but in such cases extra strength Class V RCP shall be used with a crushed stone bedding extending to a minimum depth of four (4) feet below finished grade.

3. Slotted or Perforated Storm Drains

Where water is encountered in the pipe trenches, or where underdrains are required under Section 13.7H, storm drains shall either be slotted RCP or Perforated High Density Corrugated Polyethylene Smooth Interior Pipe.

4. Additional Underdrains

Where additional underdrains are deemed necessary in locations not requiring other storm drainage, Perforated High Density Corrugated Polyethylene Smooth Interior Pipe with a minimum internal diameter of six (6) inches shall be used.

5. Materials and Methods

Except as noted herein, construction methods shall conform to the State Standard Specifications for "Culverts" and "Underdrain and Outlets". Where High Density Corrugated Polyethylene Smooth Interior Pipe is used for storm drains, it shall be installed in a Type II installation, regardless of the internal pipe diameter, with backfill material conforming to the State Standard Specifications Section M.02.06 - Grading C. For underdrains, pipe shall be installed with holes in a downward position. Aggregate used for backfilling around underdrains and slotted or perforated pipe shall conform to the State Standard Specifications Section M.08.03 - 1 (No. 8 Aggregate). Sand shall not be permitted as backfill around underdrains. Geotextile fabric, conforming to the State Standard

Specification Section M.08.01 - 26, shall be wrapped around the aggregate as shown in the Standard Detail Drawings.

Reinforced concrete pipe shall conform to the State Standard Specifications Section M.08.01 - 6, or Section M.08.0 - 10 for Slotted Reinforced Concrete Pipe. Material used for sealing joints in concrete pipe shall conform to the State Standard Specifications for Cold-Applied Bituminous Sealer (Section M.08.01-18), or Pre-formed Plastic Gaskets (Section M.08.09.19). High Density Corrugated Polyethylene Smooth Interior Pipe shall conform to the AASHTO Standard Specifications M 294 Type S, or M 294 Type SP/M 252 Type SP for Perforated High Density Corrugated Polyethylene Smooth Interior Pipe.

13.8B CATCH BASINS AND MANHOLES

1. General

Catch basins and manholes shall be constructed in accordance with the Connecticut Department of Transportation Standard Sheets.

2. Materials and Methods

Except as noted herein, all materials and construction methods shall conform to the requirements of the State Standard Specifications for "Catch Basins, Manholes and Drop Inlets". No drainage openings formed by the omission of a brick or open vertical joints shall be permitted in the walls of a catch basin or manhole. All catch basin frames and grates shall be 507K - Type A, constructed of painted steel. Manhole frames and covers shall be heavy traffic duty, constructed of cast iron. Frames shall have a twenty-four (24) inch internal opening. Covers shall either have a plain surface with no markings, or marked "STORM". Where required by the Town Engineer, covers shall be bolted.

13.8C FLARED END SECTIONS/HEADWALLS

1. General

Flared end sections and headwalls shall be constructed in accordance with the Connecticut Department of Transportation Standard Sheets.

2. Materials and Methods

All materials and construction methods shall conform to the State Standard Specifications for "Culvert Ends" and "Retaining Walls, Endwalls and Steps".

13.8D RIPRAP

1. General

Stone for this work shall be of the size, and placed to the limits and depth, specified on the Drawings.

2. Materials and Methods

Construction methods shall conform to the requirements of the State Standard Specifications for "Riprap" and materials shall conform to the requirements of the State Standard Specification Section M.12.02. Where geotextile fabric is specified underneath riprap, it shall conform to the requirements of the State Standard Specification Section M.08.01 - 26.

13.8E STABILIZATION OF OPEN CHANNELS

1. General

Open channels shall be stabilized with riprap, sod, or seed protected with erosion control blankets. The method of stabilization shall be as specified on the Drawings.

2. Materials and Methods

For stabilization with rip rap, all work shall conform to the requirements specified in Section 13.8D above. For stabilization with sod or seed protected with erosion control blankets, all materials and methods shall conform to the State Standard Specifications for "Sodding" and "Turf Establishment" respectively.

13.8F SPECIAL STRUCTURES

1. General

Special structures, including but not limited to bridges, box culverts and retaining walls shall be designed and constructed in accordance with the most current applicable standards of the Connecticut Department of Transportation, or as otherwise directed by the Town Engineer.

2. Private Drain Access Structure

Where private drain access structures are required prior to a direct connection to a storm drain, they shall be fabricated from high density corrugated polyethylene pipe and fittings conforming to AASHTO Standard Specification Sections M 294 Type S and M 252 Type S. The

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fabrication of the access structures shall conform to the Standard Detail Drawings, and shall include as a minimum a standard 12"x12"x12" tee with reducers and couplings as required at each end of the horizontal run, and a 12-inch inside diameter vertical riser pipe extending to grade. A snap on end cap shall be securely fastened at the end of the vertical riser pipe, and shall be set flush with the proposed finish grade elevation.