

8.2 Design Practices

8.2.1 ConnDOT

The following design practices are specific to culverts:

- All culverts shall be hydraulically designed.
- The overtopping flood selected shall be consistent with the class of highway and commensurate with the risk at the site.
- Data collection shall include topographic features, channel characteristics, aquatic life, highwater information, existing structures and other related site specific information.
- Culvert location in both plan and profile shall be investigated to avoid sediment build-up in culvert barrels unless specifically designed to have sediment for aquatic life.
- The cost savings of multiple use (utilities, livestock and wildlife passage, land access and fish passage) shall be weighed against the advantages of separate facilities.
- Culverts shall be designed to accommodate debris or proper provisions shall be made for debris maintenance.
- Material selection shall include consideration of service life which includes abrasion and corrosion. (See Chapter 4, Culvert Repair, Materials, and Structural Design.)
- Culverts shall be located and designed to present a minimum hazard to traffic and people.
- The detail of documentation for each culvert site shall be commensurate with the risk and importance of the structure. Design data and calculations shall be assembled in an orderly fashion and retained for future reference as provided for in Section 8.3.12.
- Where practicable, some means shall be provided for personnel and equipment access to facilitate maintenance.
- Adequate cover must be provided over the crown for structural requirements. (See Chapter 4, Culvert Repair, Materials, and Structural Design.)

8.2.2 ConnDEP Requirement

See Bridge chapter, Section 9.2.3.

8.2.3 Temporary Hydraulic Facilities

See Bridge chapter, Section 9.6.12.