

Stream crossings are the most important BMPs on any given construction site. Because they are located directly on a stream, tributary, or drainage ditch, and they almost always occur at the bottom of a slope, they have the capacity to become the principle erosion area on any given construction site.

Culverted stream crossings are constructed entirely of stone, rock, or recycled concrete. No soil of any type is permitted. They are to be constructed in order to minimize disturbances to the streambed and bank. Disturbed areas of the surrounding banks are required to be temporarily seeded and mulched.

The most effective stream crossings are installed in conjunction with either diversion channels or sediment traps on either side of the drive, at least 20 feet from the stream where possible.

ODNR Rainwater and Land Development Manual Specifications:

- **Disturbance** ~ Stream disturbance shall be kept to a minimum. Stream-bank vegetation shall be preserved to the maximum extent practical and the crossing shall be as narrow as practical.
- Clearing shall be done by cutting, *NOT grubbing*.
- To minimize interference with fish spawning and migration, crossing practices should be avoided where practical from March 15 through June 15.
- Water shall not be allowed to flow along the road directly to the stream. Diversions and swales shall direct runoff away from the access road to a sediment control practice.
- **Placement** ~ Culverts shall be placed on the existing streambed to avoid a drop or waterfall at the downstream end of the pipe. Crossings shall be made in shallow areas rather than in deep pools where possible.
- **Size** ~ Culvert diameter shall be at least three times the depth of normal stream flow at the point of the crossing. The minimum culvert size is 18 inches.
- **Number** ~ There shall be a sufficient number of culverts to cross the stream from stream-bank to stream-bank with no more than a 12" space between each one.
- **Material** ~ All material placed in the stream channel around the culverts and on the surface of the crossing shall be stone or rock only. ODOT size No.1 shall be the minimum.
- **Removal** ~ Stone and rock from this structure does not need to be removed once project is complete. All pipes, culverts, gabions or other structures must be removed.
- **Stabilization** ~ Stream-banks shall be stabilized. Plantings shall include woody vegetation where practical.



Although only over a small stream, the crossing in the above photo is adequately covered in stone while hydro-seeding and mulching have been applied to ensure future bank stabilization.

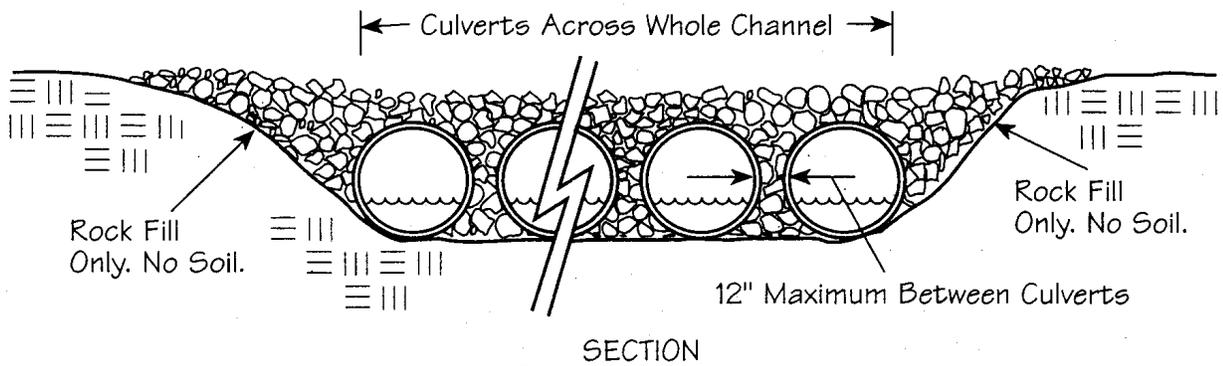
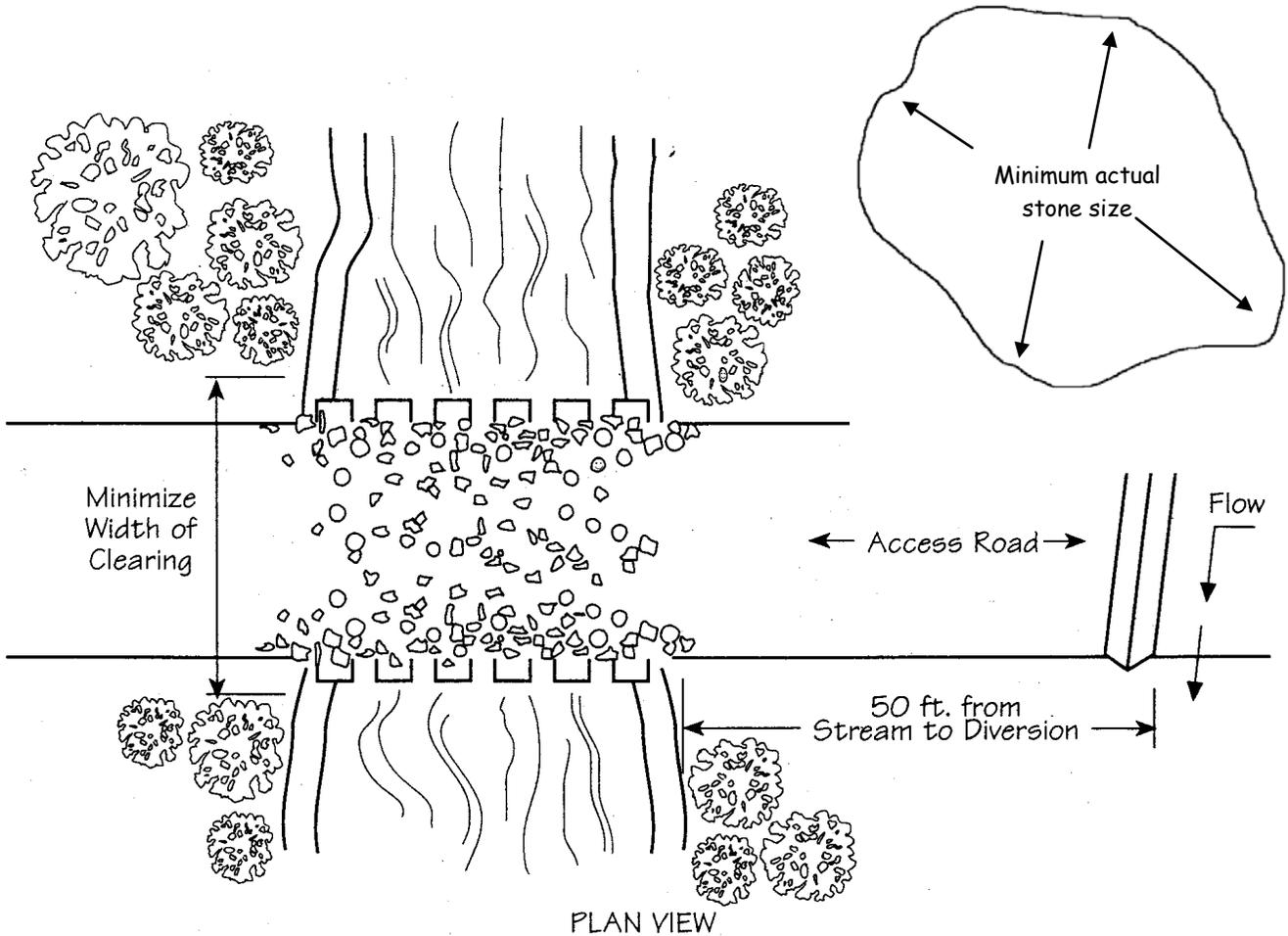


The stream crossing of Arcola Creek in the above photo lacks culverts of any type as well as the necessary stone that prevents sediment from washing into the stream.



No soil shall be used in the construction of a stream crossing or placed in the stream channel. Only rock, stones, or recycled concrete larger than ODOT No. 1 shall be used.

Specifications for Culvert Stream Crossing



Note: Stone size must be greater than ODOT Type 1. Rock or clean recycled cement of the accepted size may also be used.