

A stream crossing provides construction traffic temporary access across a stream while reducing the amount of disturbance and sediment pollution. It is a temporary practice which includes restoring the crossing area after construction. Specifications for three typical kinds of stream crossings are provided: bridges, culverts and fords. Each has specific applications and each is designed to minimize stream damage by leaving banks stable and vegetated and adding only coarse stone fill to the channel.

Specifications
for

Culvert Stream Crossing

1. Stream Disturbance -Disturbance to the stream shall be kept to a minimum. Streambank vegetation shall be preserved to the maximum extent practical and the stream crossing shall be as narrow as practical.
2. Clearing shall be done by cutting NOT grubbing. The roots and stumps shall be left in place to help stabilize the banks and accelerate revegetation.
3. To minimize interference with fish spawning and migration, crossing construction should be avoided where practical from March 15 through June 15.
4. 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.
5. Placement -Culverts shall be placed on the existing streambed to avoid a drop or waterfall at the downstream end of the pipe, which would be a barrier to fish migration. Crossings shall be made in shallow areas rather than deep pools where possible.
6. Culvert Size -Culvert diameter shall be at least three times the depth of normal stream flow at the point of the stream crossing. If the crossing must be placed in deep, slow-moving pools, the culvert diameter may be reduced to twice the depth of normal stream flow. The minimum size culvert that may be used is 18 in.
7. Number of Culverts -There shall be sufficient number of culverts to completely cross the stream channel from streambank to streambank with no more than a 12-in. space between each one.
8. Fill and Surface Material -All material placed in the stream channel, around the culverts and on the surface of the crossing shall be stone, rock or aggregate. ODOT No. 1 shall be the minimum acceptable size. To prevent washouts, larger stone and rock may be used and they may be placed in gabion mattresses. NO SOIL SHALL BE USED IN THE CONSTRUCTION OF A STREAM CROSSING OR PLACED IN THE STREAM CHANNEL.
9. Removal -Aggregate stone and rock used for this structure does not need to be removed. Care should be taken so that any aggregate left does not create an impoundment or impede fish passage. All pipes, culverts, gabions or structures must be removed.
10. Stabilization -Streambanks 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

