

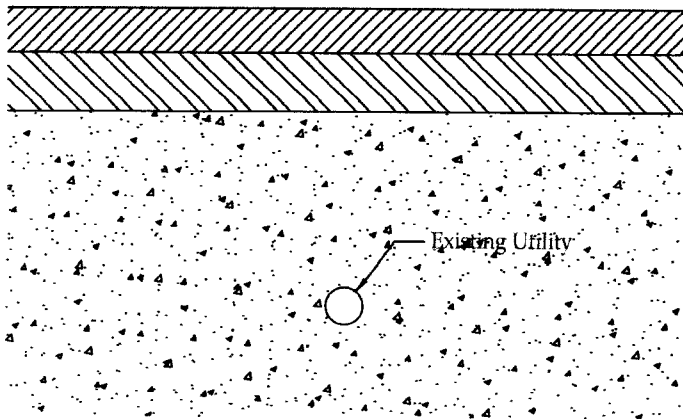
Cookie Cutter

Sample Specification

Sample Specification Utility Access Within a Concrete Roadway/Paved Area

Step #1 - Excavation to Access Utility

Existing Utility within an Existing Roadway (Sectional View)

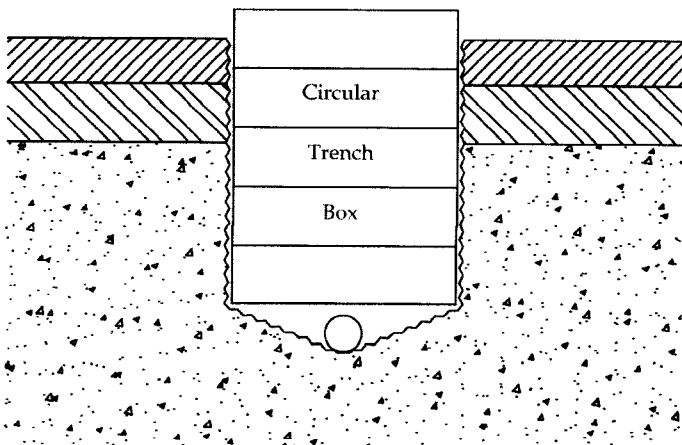


Legend:

- = Existing Concrete Pavement
- = Existing Aggregate Base
- = Existing Soil/Aggregate

- Locate the subject utility as accurately as possible.
- Cut the concrete pavement full depth in a 72" diameter circular fashion, centered over the subject utility. Comply with all OSHA silica control regulations.
- Remove the entire concrete disk in one piece in order to minimize damage to the surrounding concrete.
- Utilize a 70-71" diameter circular trench box with a 6" (min.) knife edge on the bottom and vacuum excavate to lower the trench box into position over the subject utility and expose the utility.

Excavation Complete (Sectional View)



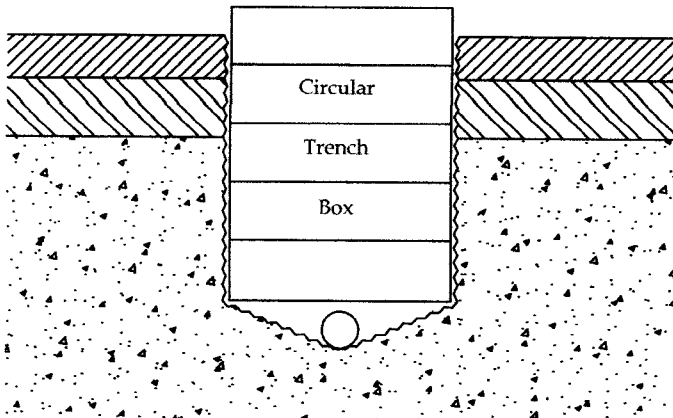
This specification was prepared by:

Brad J. Core: Ohio P.E. #61122; Indiana P.E. #10100448;
Michigan P.E. #6201065648







Sample Specification Utility Access Within a Concrete Roadway/Paved Area

Step #2 - Excavation to Access Utility

Excavation Complete (Sectional View)

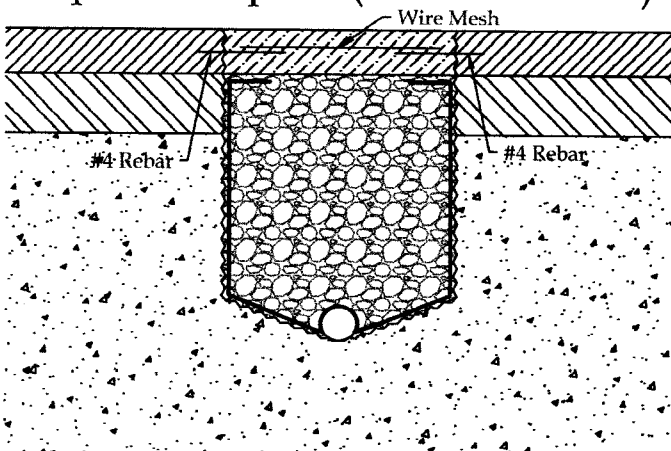


Legend:

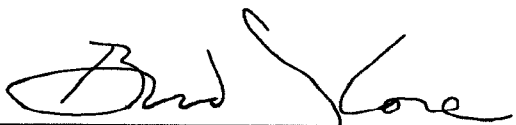
-  = Existing Concrete Pavement
-  = Existing Aggregate Base
-  = Existing Soil/Aggregate
-  = Compacted #57 Aggregate
-  = New Concrete Pavement
-  = Filter Fabric

- Upon completion of the utility work, encase the exposed utility in any or all protective materials required by the utility company responsible for the utility.
- Line the entire bottom of the circular trench with filter fabric and allow the filter fabric to extend up the inside of the circular trench box.
- Place 6" of #57 aggregate in the bottom of the circular trench box.
- Raise the circular trench box 6" and compact the aggregate using a jumping jack or plate compactor.
- Repeat the previous 2 steps until the top of the #57 aggregate is even with the bottom of the existing concrete. Add additional filter fabric to the sides as necessary so that there is no direct interaction between the #57 aggregate and the adjacent soil/aggregate. Fold the excess filter fabric over the top of the #57 aggregate.
- Drill into the existing concrete 9" deep at mid section with a 1/2" masonry bit and install 8-24" long epoxy coated #4 rebars radially and evenly spaced around the circular opening.
- Cut 6x6 W5.5/W5.5 Grade 80 WWR Mesh in a 66" diameter circle and place it on top of the 8-24" #4 rebars that protrude 16" out of the existing concrete. Wire tie the mesh to all of the rebars in multiple locations.
- Utilize ODOT Class C Concrete or a 4000 psi (min.) concrete with 6% ± 2% entrained air and a water/cement ratio of 0.45 (max.) to pour new concrete the same thickness as the existing concrete pavement. The surface of the new concrete shall be flush with the surface of the existing concrete pavement everywhere. The edge of the new concrete shall be rounded (1/4" radius) where it meets the existing concrete.
- Fill the groove, created by the rounding of the edge of the new concrete, with a crack sealer such as Sikaflex[®] Crack Flex Concrete Sealant.
- Apply an acrylic polymer concrete curing and sealing compound, such as Rez-Seal, to the surface of the new concrete according to manufacturer's specifications.
- Barricade the area around the new concrete to protect it until the concrete attains a modulus of rupture of 400 pounds per square inch. A chemical admixture that acts as an accelerator may be used to speed up the process if the roadway needs to be opened sooner.
- Maintain the crack sealer over time to prevent water from entering the crack between the new and old concrete pavements.

Repair Complete (Sectional View)



This specification was prepared by:


 Brad J. Core: Ohio P.E. #61122; Indiana P.E. #10100448;
 Michigan P.E. #6201065648