

## Checklist for Ditch Enclosures

1. This Checklist is to be used as a directive in the engineering and construction/installation of drainage ditch enclosures
2. This Checklist applies only to drainage ditches fronting Concord Township roadways. All other roadways require the permission of the specific jurisdiction.
3. The ditch enclosure shall be designed by an Ohio licensed professional civil engineer.
4. Whenever possible, within a subdivision, the homeowners' association should select a single engineer to be utilized within the subdivision for the sake of consistency in engineering design.
5. The engineer's plans shall be submitted to the Concord Township Service Department for review. The Township may also require these plans be reviewed by the Lake County Engineer's Office and the Stormwater Management Department.
6. After review and acceptance of the engineered plans, a road opening permit will be granted by the Concord Township Service Department. A road opening permit must be obtained from the Service Department. In addition the permit holder/property owner shall secure a construction bond for the total sum of the project, or at least \$1,000.00.
7. The permit holder, or their agent, will install the enclosure in accordance with the engineered plans.
8. Inspection by the Concord Township Service Department shall be required prior to the backfilling/covering of the enclosure.
9. Design features should include:
  - Drainage pipes designed and sized in consideration of normal water flow and water flow from a 5 year storm – the current subdivision standard set by the County. The minimum size of any drainage pipe shall be 12 inches in diameter.
  - Pipe materials must be PVC, HDPE, or concrete.
  - Engineering studies will be provided for 10, 25, 100 year storms.
  - Consideration of impact to upstream and downstream flow.
  - Consideration shall be given to the proper stabilization of the drainage ditch, enclosure feature (pipe) and adjoining roadway. (Premium backfill may be required).
  - Intake basins must be installed to accommodate property and roadway drainage.
  - Intake basins should be of a beehive-type.
  - Intake basins must be able to be removed to permit internal pipe service.
  - Proper surface swales above the drainage feature must be established and maintained to promote proper draining. It is recommended that they be 12 inches below the edge of the roadway pavement.
  - Grass must be promoted around and above the drainage feature to reduce sediment runoff and erosion. If a subdivision wishes to utilize a material other than grass, it must be approved by the Township and Stormwater Management.
  - All material and construction methods shall follow ODOT standards.
10. All ditch enclosures shall receive a final inspection by the Concord Township Service Department, before final acceptance. Upon inspection the "as built drawings" shall be provided to the Township for their records.
11. All ditch enclosures and their features remain the responsibility of the property owner to include future repairs and replacements of pipes.
12. If the above conditions are met, the Concord Service Department will perform pipe clearing maintenance as required.