

Project Summary

ODNR Class II Dam at Little Mountain Country Club Concord Township, Lake County, Ohio

- ODNR Class II Dam Design
- Hydrologic and Hydraulic Calculations
- Emergency Action Plan

Foresight Engineering Group, Inc. designed an ODNR Class II earthen dam for the Little Mountain Country Club Development located on Hermitage Road, Concord Township, Lake County, Ohio. The dam height is fifty eight feet and at a normal water level the dam impounds 26.9 acre-feet of water. The maximum impoundment, just before overtopping, is 52.7 acre-feet.

The principal spillway is designed for a twenty five-year storm. The level control system consists of a four foot diameter riser, thirty two feet in height, and a twenty four inch ductile iron pipe outlet. In addition to the principal spillway, there is a grassed emergency spillway and also a twelve inch ductile iron pipe lake drain.

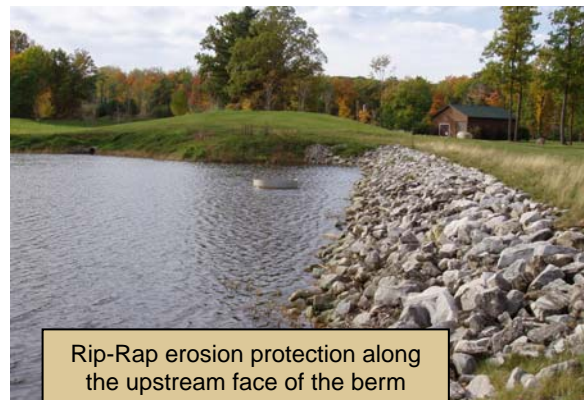
The dam is constructed on shale bedrock and contains a five foot clay liner. The normal dam section has a fifty one foot top width and 3 to 1 side slopes. Toe drains control seepage through the dam and from the valley walls.

The upstream dam face is protected by riprap extending from the top of the dam to about three feet below the low water surface. The balance of the dam and berm is grassed and is part of the golf course that the dam provides with irrigation water.

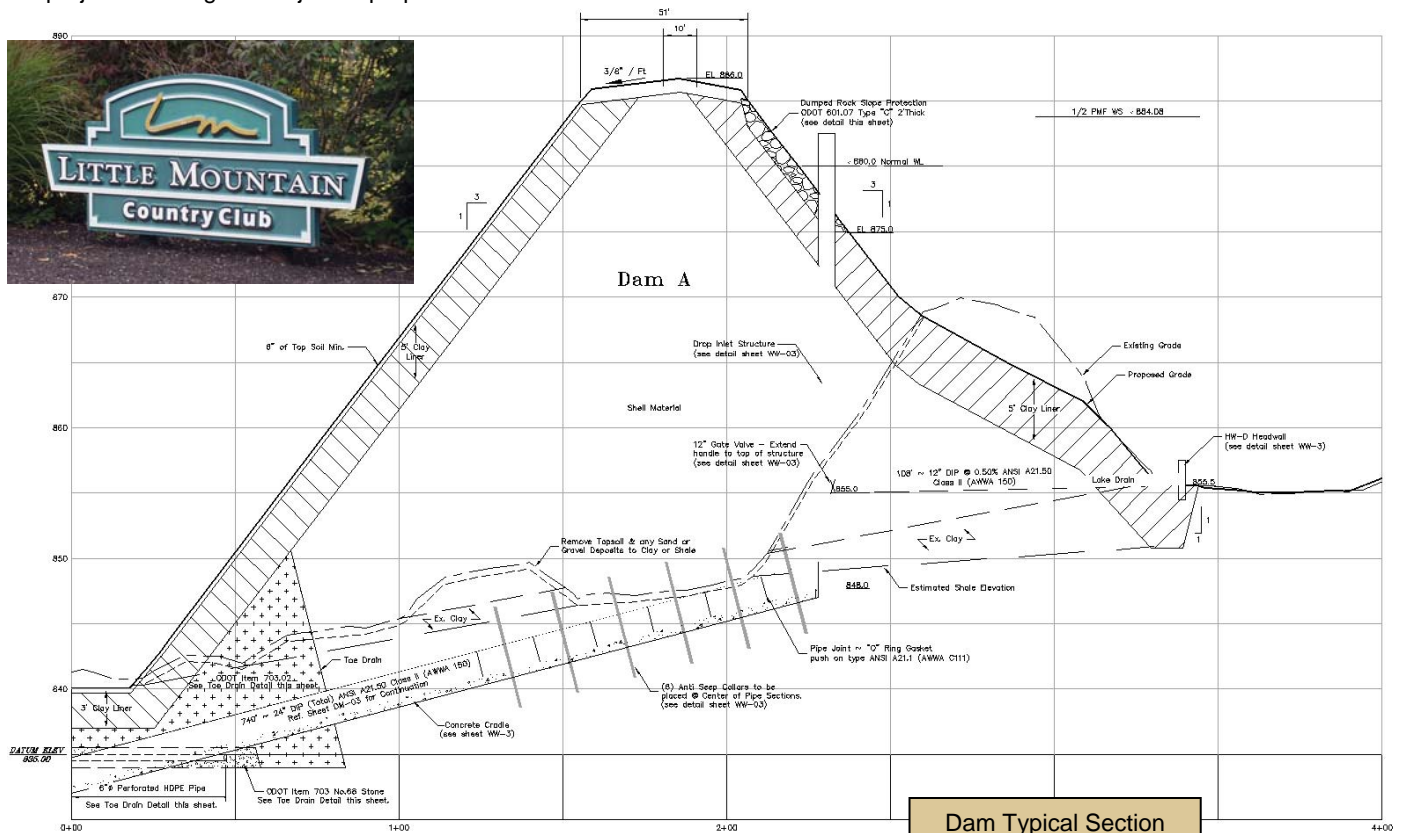
An Emergency Action Plan was developed as part of this project to safe guard adjacent properties.



Little Mountain Country Club Earthen Dam



Rip-Rap erosion protection along the upstream face of the berm



Dam Typical Section

Typical Section

