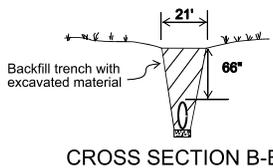
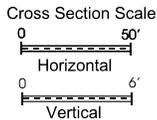
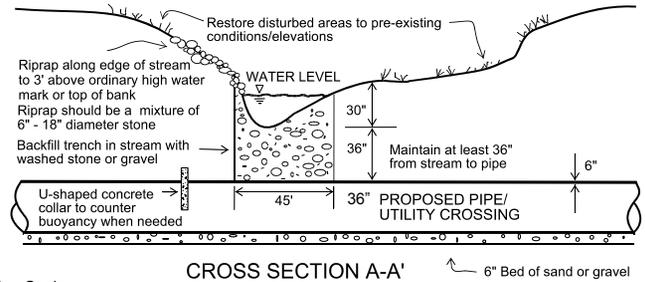
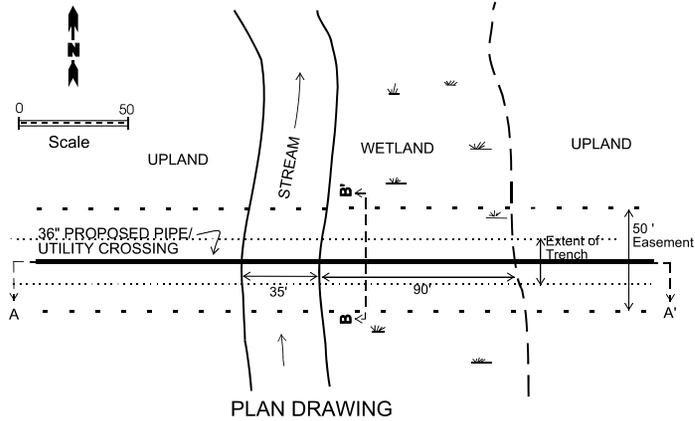


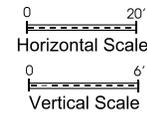
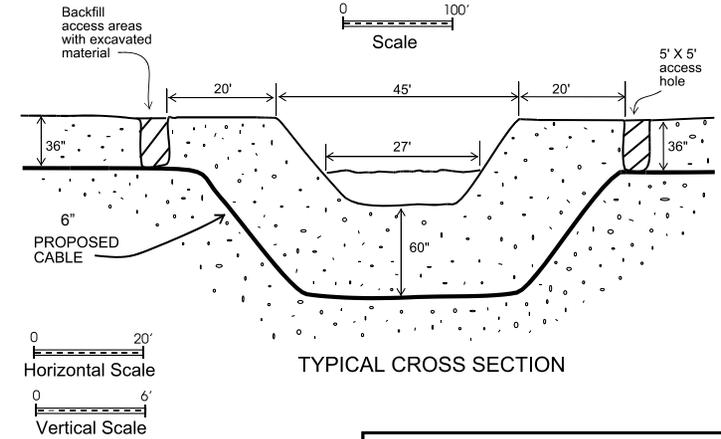
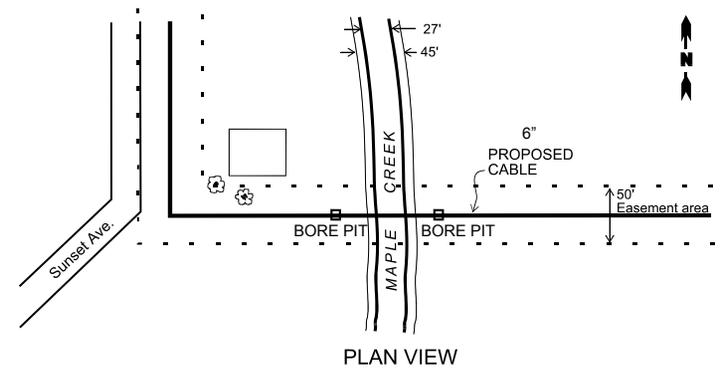
### Sample Drawing 12.



#### PROPOSED PIPE/UTILITY CROSSING IN A TRENCH

APPLICANT:  
 WATERWAY:  
 CITY/TOWNSHIP:  
 COUNTY:  
 NUMBER OF SHEETS: \_\_\_ OF \_\_\_  
 DATE:

### Sample Drawing 13.



#### PROPOSED DIRECTIONAL BORE STREAM CROSSING

APPLICANT:  
 WATERWAY:  
 CITY/TOWNSHIP: SECTION: \_\_\_  
 COUNTY:  
 NUMBER OF SHEETS: \_\_\_ OF \_\_\_  
 DATE:

Complete **Section 18** and **Sections 10A, 10B, 10C, 12, and 13** if applicable to your project.

Provide **plan view** and **cross-section** site-specific drawings adequate for detailed review; include:

- Overall site plan showing existing lakes, streams, wetlands, *floodplains*, and other water features.
- Name of waterbodies, property boundaries, easement boundaries, neighboring property owner information, *soil erosion and sedimentation control measures* and datum used (NGVD 29 or local).
- Location and dimensions (ft) of proposed excavation in both *plan* and *cross-section* views. Calculate excavation volume (cu yd) by multiplying average (depth) x (width) x (length) in feet and dividing by 27.
- Location of disposal area in upland above the 100-year *floodplain*. If spoils will be disposed of off-site, attach a detailed location. If temporary sidcasting, show location and dimensions.
- Proposed backfill material and source.
- Proposed installation method (i.e., *flume*, plow, open trench).
- Pipe diameter, length, and distance below streambed for each crossing.
- Purpose of crossing (i.e. sanitary sewer, storm sewer, watermain, cable, oil/gas pipeline, etc.).

Complete **Section 18** and **Sections 10A, 10B, 10C, 12, and 13** if applicable to your project.

Provide **plan view** and **cross-section** site-specific drawings adequate for detailed review; include:

- Overall site plan showing existing lakes, streams, wetlands, *floodplains*, and other water features.
- Name of waterbodies, property boundaries, easement boundaries, property owner, neighboring property owner information, and *soil erosion and sedimentation control measures*.
- Excavation dimensions (ft) for drilling or boring inlet and outlet points in both *plan* and *cross-section* views. Calculate excavation volume (cu yd) by multiplying average (depth) x (width) x (length) in feet and dividing by 27.
- Proposed construction method (i.e., jack and bore or directional drill).
- Pipe diameter, length, and distance below streambed for each crossing.
- Purpose of crossing (i.e. sanitary sewer, storm sewer, watermain, cable, oil/gas pipeline, etc.).
- Provide contingency plan.