SITE PREPARATION
1. Temporary erosion control measures in accordance with Minnesota Department of Transportation (MNDOT) General Conditions 2573 shall be installed prior to the start of any construction operation that may cause any sedimentation or siltation at the site.
2. Areas designated for borrow areas, embankment, and structural works shall be cleared, grubbed, and stripped of topsoil.
3. Vegetation and other materials shall be removed from the area.
4. Topsoil shall be stockpiled for future use as specified.

EARTH FILL
1. Fill material shall be taken from approved borrow areas and shall be free of roots, stumps, wood, rubble, stones greater than 6 inches in size, frozen material, and other objectionable materials.
2. Fill material for center of embankment shall conform to Unified Soil Classification SG, CH, or CL, and must have a minimum 95% passing the No. 200 sieve. Consideration may be given to the use of other materials in the embankment if designed by a geotechnical engineer.
3. Materials used in the outer shell of the embankment must have the capability to support vegetation of the quality required to prevent erosion of the embankment.
4. Areas on which fill is to be placed shall be scarified prior to placement of fill. Fill materials shall be placed in maximum 6-inch-thick lift and compacted layers which are to be continuous over the entire length of the fill. The fill shall be placed in continuous portions of the embankment. All fill shall be compacted with construction equipment, rollers, or hand tamper to assure maximum density and minimum permeability. In addition, the embankment shall be placed concurrently with the outer shell of the embankment.
5. When required by the reviewing agency, the minimum required density shall not be less than 95% of maximum dry density with a moisture content within 2% of the optimum. Each layer of fill shall be compacted as necessary to obtain that density, and is to be certified by the engineer at the time of construction. All compaction is to be determined by AASHTO Method T-99 (Standard Proctor).
6. The core of the embankment shall be parallel to the centerline of the embankment. The top width of the core shall be a minimum of four feet. The height shall extend up to at least the 10-year water elevation or as shown on the plans. The sides slopes shall be 1:1 or flatter. The core shall be compacted with construction equipment, rollers, or hand tamper to assure maximum density and minimum permeability. In addition, the core shall be placed concurrently with the outer shell of the embankment.

STRUCTURE BACKFILL
1. Backfill adjacent to pipes or structures shall be of the type and quality conforming to that specified for the adjoining fill material. The fill shall be placed in horizontal layers not exceeding 6 inches in thickness and compacted by hand tampers or other manually-directed compaction equipment. The material needs to fill completely all spaces under and adjacent to the pipe.
2. At no time during the backfilling operation shall driven equipment be allowed to operate closer than four feet, measured horizontally, to any part of a structure. Under no circumstances shall equipment be driven over any part of a concrete structure or pipe, unless there is a compacted fill of 24 inches or greater over the structure or pipe.

CARE OF WATER DURING CONSTRUCTION
1. All work on permanent structures shall be carried out in areas free from water. Temporary dikes, levees, cofferdams, drainage channels, and stream diversions necessary to protect the areas to be occupied by the permanent works shall be installed, as well as pumping and other equipment required for removal of water from various parts of the work.
2. After having served their purpose, all temporary protective works shall be removed or leveled and graded to the extent required to prevent obstruction of the flow of water to the spillway or outlet works.
3. Stream diversions shall be maintained until the full flow can be passed through the permanent works.

STABILIZATION AND EROSION CONTROL
1. All exposed surfaces of the embankment, spillway, borrow, and Borrow Areas, and berms shall be stabilized by seeding, lining, fertilizing, and mulching in accordance with local Natural Resources Conservation Service standards and specifications. A high layer of topsoil shall be placed on these areas to support stabilizing vegetation.
2. Filter fabric placed beneath the rip-rap shall meet state or local Department of Transportation requirements for a Class 10 filter fabric.