

It is likely that the existing fill will contain cobbles, boulders and construction debris. Some of the construction debris could range in size up to a 4 ft. or more in any dimension.

Subgrade Preparation

The subgrade soils at the site are considered susceptible to disturbance due to construction traffic and water. Therefore, equipment and personnel should not be permitted to travel across exposed existing fill or marine deposit subgrades. Final excavation to the marine deposit subgrade should be made using smooth-bladed backhoe equipment. Foundation subgrades should be protected against freezing if exposed to freezing temperatures during construction. Any soft or disturbed subgrade areas should be excavated and replaced with compacted structural fill.

Existing fill, granular fill and marine sand, silt and clay subgrades in paved areas should be protected against freeze/thaw action and from disturbance from water and construction traffic. The pavement base and subbase courses should be placed and compacted as soon as is practicable to protect the silty soils from disturbance.

Spreading and compaction of the structural fill within the building areas should be accomplished using lightweight equipment. Trucks and other heavy rubber tired equipment hauling fill or construction materials should be restricted to areas where there is at least 3 ft. of cover over the foundation, roadway and parking lot subgrades.

Reuse of Onsite Soils

Existing Fill Reused as Compacted Fill

The existing fill soils likely contain a significant quantity of fines (material passing the No. 200 sieve). Even materials that are segregated and meet the Compacted Fill gradation requirements may be difficult to properly place and compact when they become wet. The contractor should be made aware that granular borrow may require moisture conditioning to achieve specified compaction requirements.

The construction time frame may include extended periods of rain fall, and freezing and thawing conditions. Furthermore, it is possible that the natural moisture content of the soil when it is excavated will be near or above the optimum moisture content for compaction. We recommend that the contractor be advised of these conditions and that the earthwork specifications require that the sand, silt and clay used as fill within the building limits, below paved areas and for the detention ponds be placed and compacted at water contents no greater than 2 percent above or below the optimum value as determined by ASTM D1557. This may mean that the excavated soil will need to be dried or mixed with dry soil before it is placed and compacted.