6600 - 1 DESCRIPTION

1.01 The work shall consist of a compacted granular material placed as a foundation for culverts, subsurface drain pipes, curbs, curbs and gutters, sidewalks, driveways, storm sewers, and manholes, catch basins, and other structures. The work shall include backfills for culverts, drain pipes, and bridge abutments. The work shall be performed at the locations and in conformity with the lines, grades, and dimensions shown on the plans or as designated by the Engineer.

6600 - 2 MATERIALS

2.01 Granular material shall be composed of sand or gravel free from undesirable quantities of soft or flaky particles, loam, and organic or other deleterious material. Granular material shall comply with the following requirements:

Sieve Designation	Percent by Weight Passing Canadian Metric Sieve Series		
	TYPE		
	115	116	10
50 mm	100	-	100
9.0 mm	-	100	-
900 μm	-	30 - 100	-
400 μm	-	15 - 75	-
160 μm	-	0 - 10	-
71 μm	0 - 15	-	0 - 20
Plasticity Index	0 - 6	0 - 6	0 - 6

2.02 The above materials will generally be used, as designated by the Engineer, for the following operations:

(a) For backfilling all types of culverts and bridge abutments, **TYPE 115** shall be used.

(b) For backfilling subsurface drain pipes, **TYPE 116** shall be used as a filter material.

(c) For backfilling curbs, curbs and gutters, sidewalks, driveways, storm sewers, and manholes, catch basins, and other ancillary structures, **TYPE 10** shall be used.

6600 - 3 CONSTRUCTION

General

3.01 Overburden shall be removed from material deposits in accordance with the requirements for Removal of Overburden (Specification 2260).

3.02 Granular material shall be hauled in accordance with the requirements for Haul (Specification 2405).

3.03 If foundation conditions are unsuitable, the dimensions shown on the plans for the granular backfill may be increased as directed by the Engineer.

Culverts

3.04 Material shall be placed in layers and compacted to not less than ninety-five (95) percent of the maximum density, as determined by Test 9200. If pneumatic tire rollers are used, the depth of each layer shall not exceed fifteen centimetres (15 cm). If mechanical vibratory compactors are used, the thickness of each layer shall be such that the specified density is obtained.

3.05 If the moisture existing in the granular material is insufficient for compacting to the specified density, the Contractor may elect to add water. The water shall be added in accordance with the requirements for Watering (Specification 2500).

3.06 If excess moisture exists in the granular material, it shall be dried to the optimum moisture content, as determined by Test 9200, at no direct expense to the Department.

3.07 Compacting by puddling or jetting will not be permitted.

Subsurface Drain Pipes

3.08 The material shall be placed in fifteen centimetre (15 cm) layers and compacted with mechanical vibratory compactors or other equipment subject to the approval of the Engineer.

3.09 Compacting by puddling or jetting will not be permitted.

Curbs, Curbs and Gutters, Driveways, and Sidewalks

3.10 The material shall be placed in layers and compacted until no further settlement is apparent and the particles are well keyed into place.

3.11 An eight centimetre (8 cm) granular layer shall be placed beneath sidewalks and a fifteen centimetre (15 cm) granular layer beneath driveways unless otherwise shown on the plans or designated by the Engineer.

3.12 A fifteen centimetre (15 cm) granular layer shall be placed beneath curbs and curbs and gutters. If the finished elevation of the adjacent subgrade surface is more than fifteen centimetres (15 cm) below the base of the curb, the granular layer shall be increased to meet the subgrade level.

3.13 If the granular layer beneath the curb is placed as part of the sub-base construction operation, the material shall be placed in accordance with the requirements for Sub-Base Course (Specification 3300).

3.14 If pneumatic tire rollers are used, the depth of each layer shall not exceed twelve centimetres (12 cm). If mechanical vibratory compactors are used, the thickness of each layer shall be such that adequate compaction can be obtained.

3.15 If moisture existing in the granular material is insufficient for proper compaction, the Contractor may elect to add water. Water shall be added in a manner such that the underlying material is not adversely affected.

3.16 The material shall be placed in layers not exceeding fifteen centimetres (15 cm) in depth and compacted until no further settlement is apparent and the particles are well keyed into place. Mechanical vibratory compactors shall be used for compacting the material.

3.17 The quantity of foundation and backfill material will be in accordance with the requirements for Storm Sewers (Specification 5500) or as designated by the Engineer.

6600 - 4 MEASUREMENT

4.01 Granular Backfill will be measured in tonnes or in cubic metres in the vehicle.

6600 - 5 PAYMENT

5.01 Payment for GRANULAR BACKFILL will be at the contract unit price per cubic metre or tonne as specified on the tender form. The unit price will be full compensation for removing of overburden and excavating, screening, loading, hauling, dumping, spreading, compacting, and tamping the granular material.

5.02 Payment for watering will be in accordance with the requirements for Watering (Specification 2500).

5.03 Payment for granular material placed, as part of the sub base operation, beneath curbs and curbs and gutters will be in accordance with the requirements for Sub-Base Course (Specification 3300).