

Part 1 General**1.1 RELATED WORK**

- .1 Section 31 23 33.01 – Excavation, Trenching, and Backfilling

1.2 REFERENCES

- .1 American Society for Testing and Materials (ASTM International).
 - .1 ASTM D698-10 – Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort (12,400ft·lbf/ft³)(600 kN·m/m³).
 - Method A for on-site material
 - Method C for base and sub-base material
 - .2 Ontario Provincial Standard Specifications (OPSS) and Drawings (OPSD).
 - .1 OPSS 1001 – November 2005, Material Specification for Aggregates – General.
 - .2 OPSS 1010 – April 2004, Material Specification for Aggregates – Base, Subbase, Select Subgrade and Backfill Material.

Part 2 Products**2.1 MATERIALS**

- .1 Granular base:
 - .1 Crushed stone or gravel consisting of hard, durable, angular particles, free from clay lumps, cementation, organic material, frozen material and other deleterious materials.
 - .2 Gradations to be within limits specified in OPSS 1010 for Granular 'A', when tested in accordance with OPSS 1001.

Part 3 Execution**3.1 INSPECTION OF UNDERLYING SUB-BASE OR SUBGRADE**

- .1 Do not place granular base until finished sub-base surface is inspected and approved by the Departmental Representative.

3.2 PLACING

- .1 Place material only on clean unfrozen surface, properly shaped and compacted and free from snow and ice.
- .2 Begin spreading base material on crown line or on high side of one-way slope.
- .3 Place using methods, which do not lead to segregation or degradation of aggregate.
- .4 Place material to full width in uniform layers not exceeding 150 mm compacted thickness. Departmental Representative may authorize thicker lifts (layers) if specified compaction can be achieved.

- .5 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.
- .6 Remove and replace that portion of layer in which material becomes segregated during spreading.

3.3 COMPACTING

- .1 Compact to density not less than 95% maximum dry density in accordance with ASTM D698, Method C and D.
- .2 Shape and roll alternately to obtain smooth, even and uniformly compacted base.
- .3 Apply water as necessary during compacting to obtain specified density. If material is excessively moist, aerate by scarifying with suitable equipment until moisture content is corrected.
- .4 In areas not accessible to rolling equipment, compact to specified density with approved mechanical tampers.

3.4 FINISH TOLERANCES

- .1 Finished base surface to be within plus or minus 10 mm of established grade but not uniformly high or low.
- .2 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

3.5 MAINTENANCE

- .1 Maintain finished base in condition conforming to this section until succeeding material is applied or until acceptance by Departmental Representative.

END OF SECTION