PART 1 GENERAL

1.1 REFERENCES

.1 ASTM C 136-96a, Standard Test Method for Sieve Analysis of Fine and Coarse Aggregates.

.2 ASTMD 698-00a, Standard Test Methods for Laboratory Compaction Characteristics of Soil Using Standard Effort 600kN-m/m^3.

.3 ASTM D 1883-99, Standard Test Method for CBR (California Bearing Ratio) of Laboratory compacted soils.

.4 ASTM D 4318-00, Standard Test Methods for Liquid Limit, Plastic Limit and Plasticity Index of Soils.

.5 Canadian General Standards Board (CGSB)

.1 CAN/CGSB-8.2-M88, Sieves, Testing, Woven Wire, Metric.

1.2 DELIVERY, STORAGE, AND HANDLING

.1 Deliver and stockpile aggregates in accordance with Section 31 05 16 – Aggregates for Earthwork. Stockpile minimum 50% of total aggregate required prior to beginning operation.

PART 2 PRODUCTS

2.1 MATERIAL

.1 Granular base: material in accordance with Section 31 05 16 – Aggregates for Earthwork and following requirements

.1 Crushed stone or gravel.

.2 Gradations to be within limits specified when tested to ASTM C 136 and ASTM C117. Sieve sizes to CAN/CGSB-8.2.

.2 Gradation to

Sieve Designation	% Passing
100 mm	
75 mm	
50 mm	
37.5 mm	
25 mm	
19 mm	
12.5 mm	100
9.5 mm	55-80
4.75 mm	35-60
1.20 mm	17-35
0.300 mm	3-6 (Pit Source)
0.075 mm	3-8 (Rock Source)

.1 Liquid limit: to ASTM D 423 maximum 25.

.2 Plasticity index: to ASTM D 424 maximum 0.

.3 Los Angeles degradation: to ASTM C 131. Max. % loss by weight: 35.

.4 Crushed particles: at least 50% of particles by mass within each of following sieve designation ranges to have at least 1 freshly fractured face. Material to be divided into ranges using methods of ASTM C 136.

Passing		Retained on
50 mm	to	25 mm
25 mm	to	19.0 mm
19.0 mm	to	4.75 mm

.5 Soaked CBR: to ASTM D 1883, min 100, when compacted to 100% of ASTM D 1557.

PART 3 EXECUTION

3.1 SEQUENCE OF OPERATION

.1 Place granular base after subgrade surface is inspected and approved by Departmental Representative.

.2 Placing:

.1 Construct granular base to depth and grade in areas indicated.

.2 Ensure no frozen material is placed.

.3 Place material only on clean unfrozen surface, free from snow and ice.

.4 Begin spreading base material on crown line or on high side of one-way slope.

.5 Place material using methods which do not lead to segregation and degradation of aggregate.

.6 For spreading and shaping material use spreader boxes having adjustable templates or screeds which will place material in uniform layers of required thickness.

.7 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.

.8 Shape each layer to smooth contour and compact to specified density before succeeding layer is placed.

.9 Remove and replace that portion of layer in which material becomes segregated during spreading.

.3 Compaction Equipment

.1 Compaction equipment to be capable of obtaining required material densities.

.4 Compacting

.1 Compact to density not less than 100% corrected maximum dry density.

.2 Shape and roll alternately to obtain smooth, even and uniformly compacted base.

.3 Apply water as necessary during compacting to obtain specified density.

.4 In areas not accessible to rolling equipment, compact to specified density with mechanical tampers approved by Departmental Representative.

.5 Correct surface irregularities by loosening and adding or removing material until surface is within specified tolerance.

3.2 SITE TOLERANCE

.1 Finished base surface to be within plus or minus 10 mm of established grade and cross section but not uniformly high or low.

3.3 PROTECTION

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

END OF SECTION