



3305 - SPECIFICATION FOR RECLAIMED SUB-BASE COURSE

3305 - 1 DESCRIPTION

- 1.01 The work shall consist of a layer of screened reclaimed sand or gravel, with or without binder added, placed on a prepared surface, at the locations and in conformity with the lines, grades and dimensions shown on the plans or as designated by the Engineer.
- 1.02 In sections 1, 2 and 3 of this specification the following definitions will apply:
- Sub-base aggregate**
 - The reclaimed aggregate before mixing, when binder is added.
 - The reclaimed aggregate before spreading and compacting, when no binder is added.
 - Sub-base mix**
 - The reclaimed sub-base aggregate after mixing with binder and water but before spreading and compacting.
 - Sub-base course**
 - The reclaimed sub-base aggregate or sub-base mix in place on the road during and after spreading and compacting.

3305 - 2 MATERIALS

- 2.01 The sub-base aggregate shall be salvaged from the sub-base course or base course of abandoned highways or airports.
- 2.02 The sub-base aggregate shall be composed of fragments of durable rock, free from undesirable quantities of soft or flaky particles, shale, loam, organic or other deleterious materials.
- 2.03 Sub-base course must comply with the following requirements:

Sieve Designation	Percent by Weight Passing Canadian Standard Square Mesh Sieves	
	TYPE	
	16	17
75 mm	100	100
71 µm	0 - 20	0 - 25
Plasticity Index	0 - 6	0 - 10

- 2.04 When the lift of sub-base course is less than twelve centimetres (12 cm), the maximum particle size shall not be more than two-third (2/3) the depth of the lift.
- 2.05 When the fraction retained on the two millimetre (2 mm) sieve is sufficient to ensure adequate load bearing capacity, limited relaxation of the Plasticity Index requirements may be permitted.

3305 - 3 CONSTRUCTION

- 3.01 On sections of subgrade where a clay cap is removed the thickness of sub-base course will depend upon test results obtained after removal of the clay cap.
- 3.02 The bituminous surface course shall be salvaged in accordance with the requirements for Reclaimed Bituminous Sub-base Course (Specification 3310) or Reclaimed Bituminous Base Course (Specification 3535).
- 3.03 The Contractor may use any construction method to salvage the base course or sub-base material.
- 3.04 All operations in the handling of materials shall be such that segregation of the coarser and finer fractions will not occur.
- 3.05 Sub-base aggregate shall be screened to improve uniformity and to remove or break down clay and/or silt lumps.
- 3.06 When stockpiles are constructed, the work shall be done in accordance with the requirements for Stockpiling Aggregates (Specification 3600).
- 3.07 Sub-base shall be hauled in accordance with the requirements for Haul (Specification 2405).
- 3.08 The sub-base aggregate or mix shall be spread by blade patrols or other equipment approved by the Engineer.
- 3.09 When excess moisture exists in the sub-base course it shall be dried at no direct expense to the Department.
- 3.10 When pneumatic tire rollers are used for compaction, the lift of sub-base aggregate or mix shall not exceed twelve centimetres (12 cm) in depth. When mechanical vibratory rollers are used the depth of lift may be increased provided that adequate compaction can be obtained.
- 3.11 The sub-base aggregate or mix shall be compacted until no further settlement is apparent and the particles are well keyed into place. When the natural moisture content of sub-base aggregate or mix is insufficient for proper compaction, water shall be added at the road as directed by the Engineer. Water shall be added such that the underlying material is not adversely affected.
- 3.12 When sub-base course is unstable and traffic is getting stuck with more than occasional frequency, the Contractor shall ensure that traffic will not be required to drive through a depth of more than ten centimetres (10 cm) of unstable material. If the Contractor elects to stabilize sub-base aggregate to accommodate traffic, the thickness of the stabilized material shall not be less than the thickness of unstable material being covered, except where the Contractor can show that a lesser thickness of stable material will suffice.
- 3.13 The final lift of sub-base course shall have sufficient stability that, when compacted, it will not rut or break through during the hauling and placing of the bottom lift of base course.
- 3.14 The sub-base course shall be true to grade and cross-section and shall be compacted as specified when the bottom lift of base course is placed.

- 3.15 The length of sub-base, windrowed or laid but not covered by base course, shall not exceed three kilometres (3 km).
- 3.16 When work must be carried over from one construction season to the next, the following shall apply at the time seasonal operations cease:
- (a) There shall be no sub-base aggregate or mix remaining on the road.
 - (b) There shall be no sub-base course not covered by a lift of base course.
- 3.17 Any failures which develop in the subgrade or sub-base course after dumping the sub-base aggregate or mix on the road, shall be repaired at no direct expense to the Department.
- 3.18 After the salvage operation has been completed the surfaces and slopes of all excavations shall be shaped to a uniform smooth surface.

3305 - 4 MEASUREMENT

- 4.01 Reclaimed sub-base course will be measured in tonnes.
- 4.02 When the Contractor elects to stabilize any lift of reclaimed sub-base course other than the final lift, using the central plant mix method, the reclaimed sub-base course quantity will be the reclaimed sub-base mix weight less the weights of binder and water. The hauling of binder and water from their sources to the mixing plant will not be measured.
- 4.03 When the Contractor elects to stabilize any lift of reclaimed sub-base course other than the final lift, using the road-mix method, the reclaimed sub-base course quantity will be the weight of the reclaimed sub-base aggregate only. The hauling of binder from its source to the road will not be measured.
- 4.04 When the Contractor stabilizes the final lift of reclaimed sub-base course, using the central plant mix method, the reclaimed sub-base course quantity will be the sub-base mix weight. The hauling of binder and water from their sources to the central mixing plant will not be measured.
- 4.05 When the Contractor stabilizes the final lift of reclaimed sub-base course, using the road-mix method, the reclaimed sub-base course quantity will be determined by adding the weights of reclaimed sub-base aggregate and binder. The hauling of binder from its source to the road will not be measured.

3305 - 5 PAYMENT

- 5.01 Payment for RECLAIMED SUB-BASE COURSE will be made at the unit price per tonne. The unit price will be full compensation for excavating, stockpiling, screening, loading, dumping, spreading, stabilizing, shaping and compacting the sub-base.
- 5.02 Payment for HAULING RECLAIMED SUB-BASE COURSE will be made at the unit price per tonne kilometre in accordance with the requirements for Haul (Specification 2405).

- 5.03 Payment for RECLAIMED SUB-BASE COURSE IN PLACE will be made at the unit price per tonne. The unit price will be full compensation for excavating, stockpiling, screening, loading, hauling, dumping, spreading, stabilizing, shaping and compacting the sub-base.
- 5.04 Payment for watering on the road for Reclaimed Sub-base Course and/or Reclaimed Sub-base Course In Place will be made in accordance with the requirements for Watering (Specification 2500).
- 5.05 The hauling of binder or water from their sources to the mixing plant or to the road will not be paid for directly but will be considered as a subsidiary obligation of the Contractor under other contract items.