



3530 - SPECIFICATION FOR RECLAIMED BASE COURSE

3530 - 1 DESCRIPTION

1.01 The work shall consist of a layer of screened or crushed reclaimed sand or gravel, with or without binder, filler or blender sand 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:

Base aggregate - The reclaimed aggregate before mixing, when binder, filler or blender sand is added

- The reclaimed aggregate before spreading and compacting, when no binder, filler or blender sand is added.

Base mix - The reclaimed aggregate after mixing with binder, filler or blender sand, but before spreading and compacting.

Base course - The reclaimed base aggregate or base mix in place on the road during and after spreading and compacting.

3530 - 2 MATERIALS

2.01 The base aggregate shall be salvaged from the sub-base course or base course of highways or airports.

2.02 The 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 Base course must comply with the requirements listed in Table 1.

2.04 When the lift of base course is less than eight centimetres (8 cm) the maximum particle size shall not be more than one-half (1/2) the depth of the lift.

TABLE 1

Sieve Designation	Percent by Weight Passing Canadian Metric Sieve Series							
	TYPE							
	30	31	32	33	34	35	36	37
40.0 mm	100							
31.5 mm	95 - 100	100						
25.0 mm		90 - 100	100					
18.0 mm	70 - 90		87 - 100	100	100	100	100	100
12.5 mm		65 - 83	72 - 93	81 - 100	91 - 100	81 - 100	91 - 100	
5.00 mm	35 - 60	40 - 69	45 - 77	50 - 80	70 - 85	50 - 85	70 - 85	82 - 100
2.00 mm	22 - 38	26 - 47	29 - 56	32 - 52	45 - 65	32 - 65	45 - 70	70 - 88
900 µm	15 - 25	17 - 32	18 - 39	20 - 35	28 - 43	20 - 43	28 - 51	51 - 77
400 µm	10 - 18	12 - 22	13 - 26	15 - 25	20 - 30	15 - 30	20 - 35	35 - 65
160 µm	6 - 12	7 - 14	7 - 16	8 - 15	11 - 18	8 - 18	11 - 21	18 - 38
75 µm	5 - 10	6 - 10	6 - 11	7 - 10	8 - 12	7 - 12	8 - 13	10 - 20
Plasticity Index	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 6	0 - 4

3530 - 3 CONSTRUCTION

- 3.01 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) or Reclaimed Bituminous Shoulder Base Course (Specification 3540).
- 3.02 The Contractor may use any construction method to salvage the base course or sub-base material.
- 3.03 All operations in the handling of material shall be such that segregation of the coarser and finer fractions will not occur.
- 3.04 When stockpiles are constructed, the work shall be done in accordance with the requirements for Stockpiling Aggregates (Specification 3600).
- 3.05 Base aggregate shall be screened or crushed to improve uniformity and to remove or break down clay and/or silt lumps.
- 3.06 When mixing is required:
- (a) Mixing operations shall be carried out in a stationary mixing plant. When a continuous-type plant is used the base aggregate, water and/or binder and/or filler and/or blender feeds must be accurately controlled and co-ordinated. The materials shall be dry mixed until uniformly distributed.

- (b) A shredder or pulverizer shall be used to break down any lumps occurring in the binder or filler. The base mix shall be free from clay balls.
 - (c) The moisture content of the base mix shall not be greater than five (5) percent by weight when it leaves the pugmill.
- 3.07 The base aggregate or base mix shall be hauled in accordance with the requirements for Haul (Specification 2405).
- 3.08 Base aggregate or mix shall not be spread and compacted when the atmospheric temperature is two degrees Celsius (2 °C) or less.
- 3.09 Oversize material shall not be incorporated into the base course.
- 3.10 The thickness of any compacted base course lift shall be not less than four centimetres (4 cm) and not greater than ten centimetres (10 cm).
- 3.11 The base aggregate or mix shall be spread by blade patrols or other equipment approved by the Engineer.
- 3.12 When excess moisture exists in the base course it shall be dried at no direct expense to the Department.
- 3.13 Each lift shall be compacted to not less than one hundred (100) percent of the maximum density as determined by Test 9200. The Engineer will determine from the test results, the section of base course to be considered for evaluation. The density of the section will be considered satisfactory when:
- (a) Test results of the section average not less than one hundred (100) percent of maximum density.
 - (b) All individual test results within the section are greater than ninety-eight (98) percent of maximum density.
- 3.14 When necessary for compaction water shall be added to the base course in accordance with the requirements for Watering (Specification 2500). Watering and rolling shall be controlled to prevent pumping the fines to the surface.
- 3.15 The finished surface of the base course shall be true to grade and cross-section and free of any ruts or irregularities.
- 3.16 A prime coat shall be placed on the finished final lift of base course in accordance with the requirements for Bituminous Prime, Tack and Flush Coat (Specification 4000).
- 3.17 Any failures which develop in the subgrade, sub-base course or base course, after depositing the base aggregate or mix on the road shall be repaired at no direct expense to the Department.

3.18 When work must be carried over from one construction season to the next the following will apply:

- (a) A prime coat shall be placed on all base course.
- (b) The Department will bear the cost of prime coat on any unfinished final lift of base course and/or on any other lifts up to a total length of three kilometres (3 km).
- (c) The Contractor shall place a prime coat on all other sections, on the full width of the base course, at no direct expense to the Department.
- (d) When work resumes the Department will bear the cost of removing the prime coat on unfinished surfaces.

3530 - 4 MEASUREMENT

4.01 Reclaimed Base Course will be measured in tonnes.

3530 - 5 PAYMENT

- 5.01 Payment for RECLAIMED BASE COURSE will be made at the unit price per tonne. The unit price will be full compensation for excavating, stockpiling, crushing, screening, watering at the pugmill, mixing, loading, dumping, spreading, compacting and finishing the reclaimed base course. The unit price will also include the addition of binder, filler and/or blender sand at the mixing plant.
- 5.02 Payment for HAULING RECLAIMED BASE COURSE will be made at the unit price per tonne in accordance with the requirements for Haul (Specification 2405).
- 5.03 Payment for RECLAIMED BASE COURSE IN PLACE will be made at the unit price per tonne. The unit price will be full compensation for excavating, stockpiling, screening, crushing, watering at the pugmill, mixing, loading, hauling, dumping, spreading, compacting and finishing the reclaimed base course. The unit price will also include the addition of binder, filler and/or blender sand at the mixing plant.
- 5.04 Payment for watering on the road for Reclaimed Base Course and/or Reclaimed Base Course In Place will be made in accordance with the requirements for Watering (Specification 2500).
- 5.05 Payment for hauling water to the central mixing plant will be made in accordance with the requirements for Haul (Specification 2405).
- 5.06 Payment for hauling binder, filler and blender sand to the central mixing plant will be made in accordance with the requirements for Haul (Specification 2405).
- 5.07 Payment for prime coat will be made in accordance with the requirements for Bituminous Prime, Tack and Flush Coat (Specification 4000).