10.1.14 Compaction of mixtures

Compaction shall be effected by three-wheel rollers and tandem rollers.

Rolling of the mixture shall begin as soon as after placing as the mixture will bear the roller without undue displacement. Delays in rolling freshly spread mixtures will not be permitted. Initial rolling shall be effected by tandem rollers, followed immediately by the three-wheel rollers. Rolling shall start at the extreme sides of the lanes and proceed toward the center of the pavement, overlapping on successive strips by at least one-half the width of the rear wheel of the three-wheel roller. On the superelevated curves, rolling shall begin at the low side and progress toward the high side. Alternative trips of the roller shall be slightly different lengths. Tests for conformity with the smoothness will be made immediately after initial compaction, any deviations in excess of the specified tolerances shall be corrected by loosening the hot surface with rakes and removing or adding material as directed before continuing the rolling.

Generally, rolling shall be executed in such a manner as to produce a smooth surface and shall be continued until a density of at least 100% has been obtained.

During rolling, the wheels of the rollers shall be moistened to prevent adhesion of the mixture to the wheels, but an excess of water will not be permitted. The Contractor shall furnish additional and sufficient rollers if it is found that the pavement density specified is not obtained. In all spaces not accessible to the roller, the mixture shall be thoroughly compacted with hot hand tampers weighing not less than 10 kg, with a tamping face of not more than 300 cm^2. Skin patching of an area that has been rolled will not be permitted.

Any mixture that becomes mixed with foreign material, or is in any way defective, shall be removed, replaced with fresh mixture and re-compacted. The rollers shall not be permitted to stand on pavement which has not been fully compacted. The Contractor shall provide competent workmen who are capable of performing all work incidentals to the correction of all pavement irregularities.

The finished surface shall not vary more than 3 mm when tested with a 3.00 m straight edge applied parallel with the center line of the pavement. After completion of the final rolling, the smoothness of the course will be checked, and any irregularities that exceed the tolerance or that retain water on the surface, shall be corrected by removing the defective area and replacing with new pavement. The completed bituminous pavement will be tested for thickness at such intervals as directed by the Engineer. Where the thickness proves to be more than 5mm smaller than the specified pavement thickness, the deficient pavement shall be removed and replaced with satisfactory pavement with no additional payment.

All joints shall present the same texture, density and smoothness as other areas of the course. The joints between old and new lanes or sections shall be carefully made in such manner as to ensure a continuous bond between the old and new pavement. All trimmed contact surfaces of previously constructed pavement shall be painted with a thin, uniform tack coat before the fresh mixture is placed. When the edges of joints are irregular, honeycombed, or poorly compacted, all unsatisfactory sections of joint shall be trimmed to expose an even, vertical, or sharply sloping surface for the full thickness of the course. Fresh mixture shall be raked uniformly against the joint, followed by rolling; no vehicular traffic of any kind shall be permitted on the pavement for at least 24 hours.

10.1.15 Drainage

Surface water drainage to site roads, hard-standings and access roads consists of a cross-fall on the surface of the roads or paved areas draining to the adjoining ground.