

shall be uniform and complete in its settlement.

Concrete.

Upon the sub-grade thus formed shall be spread the concrete foundation, composed of clean sharp coarse sand and gravel aggregate, containing not to exceed 30% of sand fine enough to pass through a No. 8 screen. (If the aggregate shall at any time exceed 30% of sand it must be remedied either by screening out the excess of sand or by adding a sufficient quantity of broken stone or screened gravel to bring quality of the aggregate to the required standard) and Lehigh or ^{Port} Portland Cement in the following proportion, viz., One part of the cement and six parts of said coarse aggregate. A suitable board platform shall be made on which to mix the concrete. The gravel shall first be placed on the board then the proper amount of cement shall be evenly spread over the gravel. The whole shall then be turned with shovels or hoes at least three times and until the mass is thoroughly mixed and has assumed a uniform color. Clean water shall then be added and the whole turned until thoroughly mixed into what is known as a wet mixture. The same shall then be placed on the sub-grade and shaped to the proper cross-section to give the required thickness at every point.

Shall it be deemed advisable by the Engineer the concrete shall be mixed into a plastic state and thoroughly rammed, after being on the sub-grade.

In case the mixture is made by machinery the concrete shall be of the same general consistency as the hand mixed concrete as above specified. In no case shall a continuous mixing machine be used.

Hand mixed concrete shall not be made in batches of more than one yard in each batch.

Cement

The cement shall be of the best quality of Portland cement of established brand and must be finely ground, free from lumps, caking or water marks. The cement shall be evenly ground and when tested upon standard sieves it shall pass at least the following percentages by weight: No. 100 sieve, 92%; No. 200 sieve, 75%. When tested in the form of briquettes it must show at least the following tensile strengths per square inch; all test briquette being mixed with barely sufficient water to form the consistency of stiff dough: the load to be applied uniformly applied at the rate of 1000# per minute. The expense of all testing shall be borne by the contractor and must be considered as a part of the contract.

Immediately upon delivery, the cement shall be stored by the Contractor in a dry, well covered and ventilated place entirely protected from the weather. Plans and profile for this improvement made in con-