

Specifications for Lime-Treated Base Courses

1. Description: This work is the construction of a Quick Lime treated subbase by use of in-place equipment capable of pulverizing, blending, and mixing existing materials with water and aggregate as needed. Ninety-five percent of the pulverized materials will pass a two inch sieve to assure a well graded mix.

2. Equipment: Two Wirtgen Reclaimers(or approved equal) with a ninety-six inch cutting rotor capable of pulverizing and mixing existing materials and additives to a depth of twelve inches. Ten days prior to the commencement of the work, submit for approval a list of the equipment to be used and their relation to the method of mixing, proportioning, applying, pulverizing, compacting the base, and all other work.

3. Construction: Break down, pulverize and mix the pavement and underlying materials to a minimum depth of eight inches. Apply the designated quantity of Quick lime directly in front of the reclaimer. Meter the Quick Lime into the mixing chamber to assure the proper quantity as per the approved mix design. Shape, grade, and roll the base to the required cross-slope and profile.

Measure the cutting depth at the time of pulverization. Make at least one measurement for each three thousand square yards of work completed and record the measurements to ensure that the specified cutting depth is met. Correct any section deficient of one inch or greater from the specified depth at no expense to the owner.

The restored cross section shall be thoroughly compacted to not less than ninety-seven percent of the maximum dry density. Dry-weight density will be determined in accordance with AASHTO T180.

4. Compaction: A sheepfoot roller of sufficient size and weight will be utilized to ensure proper compaction of the entire base. Final compaction shall be accomplished with a dual drum steel roller (ten – twelve tons).

The completed stabilized base shall be tested for smoothness and accuracy of grade. If any portions are found to lack the required smoothness or accuracy, such portions shall be reshaped and recompacted until the required smoothness and accuracy are obtained.

Determine in place density requirements and optimum moisture under the guidance of a certified nuclear gauge operator and or qualified field technician experienced in field density testing with sand cone. Upon completion of compaction, testing will be required at five hundred feet increments.

5. Finishing: Complete the finishing operation during daylight hours. The roadway must be open to traffic (both lanes) at the end of each day.

6. Curing: The compacted base course should be cured five to seven days prior to the asphalt surface course. Before applying a bituminous surface course, the base should be broomed clean and dampened.

7. Testing: The contractor shall provide approved mix design twenty-one days prior to the commencement of work. The tests shall include but not limited to moisture-density relations (ASTM D-698), Atterberg limits (ASTM D-4318), Eades-Grim (ASTM C-977), unconfined compressive strength (ASTM D-5102), and the limerock bearing ratio.

8. Materials:

Lime. Quick Lime conforming to ASTM 51.

Aggregate.