

Broken Arrow Road: Yet to complete	Joseph T. Lantry	approximately 47,000 Yds.
Owasso Road : Yet to complete	Joseph T. Lantry	" 92,000 "
Yet to Complete		446,400 "

This is the yardage covered by the original contracts and does not include the yardage caused by the widening of sixteen foot roads to eighteen feet.

An inspection of these figures will show that it is reasonable to suppose that the Bix Four Paving Company, with 40,400 yard to build and the Standard Paving Company with approximately 50,000 square yards will be able to complete their work within the next working season.

Joseph T. Lantry with approximately 360,000 square yards yet to build can hardly be expected to get material and labor fast enough to do the same. Plans for this work contemplate securing material and men to run three mixing plants at a rate of 600 yards each per day which would be very satisfactory arrangement, but even if this could be done, you can see that he would have to get 200 working days in the next season to finish his work and this is more than we can expect.

If we take the average weather conditions into account we will probably figure that during the calendar year 1921 there will be available 150 working days which would mean that during that time the Big Four Paving Company Job, the Standard and approximately 150,000 yards of the Lantry jobs could be built, making a total approximately 240,000.

Should you order granite top on all work on these contractors, you would need during the calendar year approximately \$120,000.00 to pay for same, of which sum, \$50,000.00 should be secured from the bureau of Public Roads, as the Big four job as well as the Lantry jobs to Bixby and Skiatook are both Federal Aid.

Yours truly,  
DAN W. PATTON? COUNTY ENGINEER.

--- T. C. HUGHES, CONSULTING ENGINEER.  
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#### SPECIFICATIONS FOR GRANITE WEARING SURFACE FOR PLAIN CEMENT CONCRETE PAVEMENTS.

##### DESCRIPTION.

Granite wearing surface for plain cement concrete pavements shall consist of a wearing surface of crushed granite rock, forced into the surface of a plain cement concrete pavement and made a part thereof. The thickness of the surfacing material and the concrete pavement shall be separately determined for each road.

##### APPLICATION FOR SPECIFICATIONS.

The provisions of all clauses in the general specifications particularly those covering the construction and protection of plain concrete pavements, as to materials, sampling, testing, joints, curing, etc., shall govern the construction of roads with this type of wearing surface, except that the use of roller for compressing concrete and removing excess water shall not be required where granite wearing surface is to be applied.

##### SURFACING MATERIAL.

Surfacing material shall consist of clean, sound crushed granite rock, having a French Coefficient of wear of not less than fifteen (15). Particular care shall be used in selecting the source of supply so as to insure uniform quality in the rock. Crushed granite shall be so screened that all particles will pass a screen having circular perforations one and one half (1½) inches in diameter and be retained on a screen having circular perforations three fourths (¾) inch in diameter and all dust shall be removed.

##### DELIVERY OF MATERIAL.

Material for granite wearing surface shall be distributed in such manner as to insure against mixing with other aggregates or foreign materials on the work, and care shall be taken to prevent laborers from mixing earth or other material with granite when spreading same. To this end all surfacing material shall be deposited in selected places along the roadside on dumping boards, canvases or similar devices to prevent contact with the ground, and surfacing material that has become dirty or mixed with other material shall be screened or washed before being applied.

##### APPLICATION AND TAMPING.

After the surface of the plain concrete pavement has been struck off and made true to grade and cross section, the crushed granite rock for the wearing surface shall be cast upon and carefully spread so as to cover the entire surface of same. Distribution shall be made with shovels or forks and the stone may be arranged by raking lightly but shall be distributed as little as possible after being cast to place. This course of stone shall then be forced into the surface of the concrete pavement and made a part thereof and the whole mass thoroughly compacted by means of any device or appliance, mechanically operated, which will force out of the excess water and will leave the course of crushed granite embedded in the mortar and parallel to the finished surface of the pavement. Any excess mortar shall be uniformly spread over the entire surface.