

**MUNICIPAL
DEPARTMENT**

OILED ROAD CONSTRUCTION.

Mr. T. F. White, of Chino, Cal. in a recent article in the Redlands "Citrograph" gives the following description of the method of using oil in the construction of one and one-half miles of road :-

The road was entirely new, never before graded, and passed at first through bottom land, with soil varying from loose sand to clayey loam, then it struck a hill around and up which the road ascended on a grade of 4.5 per cent. After passing the hill a piece of adobe soil was encountered, which works into deep mud when traveled over after rains in winter. The cost of grading, especially around the hill, was rather heavy. This was done in the early spring. A roadway 40 feet wide including ditches was thrown up through the bottom, and 24 feet around the hill. Through the bottom, which sometimes gets very wet in winter, the roadbed was thrown up a good height and crowned, and well ditched on either side to secure drainage. It was also rolled. No part of the distance had material that would make a satisfactory roadbed for the large travel it would have to accommodate. When grading over the hill a deposit of oil-sand or disintegrated oil sand-stone was found. This material had been tried the year before on a bit of road, and found excellent. It is a sharp sand and gravel with sufficient clay in its composition to cause it to pack down firm and hard, when properly reated, with good wearing qualities, and it is a natural absorbent of oil. It becomes sticky and cuts up, however, in winter, without oil. The one and a half miles of road previously graded was surfaced with this gravel in the summer and early fall,

after the roadbed had become well settled and packed down. Stakes were set for a graveled way 20 feet wide along the middle of the road, and a blade-grader threw the dirt out of this way to a depth of 3 or 4 inches, forming a shoulder on either side 8 or 9 inches high for the surfacing material to abut against.

Upon this foundation the gravel was spread to the depth of 9 inches in the centre down to 8 inches on either side. The foundation was watered ahead of the spreaders to keep it firm and cause the gravel to unite with it better. After the gravel was spread and smoothly shaped, the water-carts soaked it thoroughly, wetting it entirely through. To do this a heavy orchard cultivator was run over it, while the water was being put on. This opened it up and allowed the water to go down instead of running off. The cultivator was kept going after sufficient water was put on, until the surfacing material was worked into a homogeneous mass of the consistency of mud for making brick. The wetting down and cultivating or stirring was done in one day, a section of such length being taken that this part of the work could be finished on that section in one day. Next morning a lever harrow was put on to smooth over and shape up the surface. This required a man with a good eye and some expertness to get the road even and properly crowned. He finished his work during the forenoon,

and it being good drying weather, the roller went on in the afternoon. All of these steps are important, but one of the most important is rolling. On this work there was used a roller weighing 1,600 pounds to the foot width, without loading. This is about right for rolling such a road the first two days, or as long as it is at all spongy. As soon as all sponginess is gone the roller can be weighted. Half-pigs of iron were used, which are convenient to handle, and enough were put on to make finally a weight of 3,000 pounds to the foot. The rolling was continued from day to day until no further impression could be made and the surface was left hard and smooth. After the roadbed dried out, or at least to a depth of 2 inches, the oil was applied, first sending a man over the road with rake and broom to brush off all loose matter from the surface.

(To be continued next week.)

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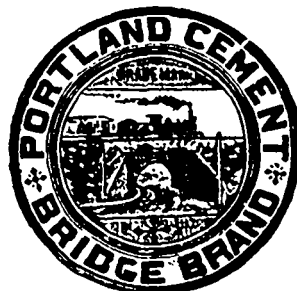
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