Resurfacing Old Pavements

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When the subject of resurfacing an old pavement is brought up, probably the first consideration to emerge from any discussion is the cost and how the cost is to be paid—by whom, or from what funds. In cities it is safe to say that the original cost of constructing the pavement was paid by the abutting property owners. Then, who wore out the surface? Surely not just the abutting property owners, who are also the real estate taxpayers. No, you quite generally will agree, it was the motor vehicles using the street; therefore, it would seem to be the fair and logical thing to let the gas tax assume the cost of resurfacing or maintaining the original surface. To back up this conclusion we have the quite generally accepted policy of the State’s paying for its fine roads and pavements out of a tax on the man who buys gas to run his vehicle over the road. The better the pavement, the further he can go on his gas, which is reciprocity. No state roads are built by funds derived by assessment against the abutting property owners nor does that idea ever enter anyone’s mind. If it were a consideration, there would probably be fewer miles of roads built.

Why, then, does not that principle of deriving funds and paying the costs of roads from a gas tax, a vehicle tax, etc., paid by the users of the road, apply with equal force to the construction, maintenance, traffic controls, etc., of city streets? To say that there are not enough funds apportioned to cities to finance all this is stating the truth, but it is likewise begging the question. City streets have their proper place in the whole highway scheme of federal, state, county, and city highways, and the amount and distribution of such taxes may well be given further study. After all, the government, be it federal, state, or local, is the taxpayers; and it is to their interest to have their funds apportioned in a manner that is equitable.

Old, worn-out pavements may be used in their entirety, quite often, as bases for a new wearing surface. Or the worn-out wearing surface may be removed and a new top applied over the old base. During the days of work-relief when labor was plentiful, many ingenious plans were devised to utilize old materials through the expenditure of the plenti-
ful supply of labor, with little cost for new material. Many fine hard-surface street and alley resurfacing jobs were thus performed, using badly worn bricks by turning them or breaking them up and using the broken brick as a coarse aggregate in a concrete mix.

With the advent of war, labor became scarce and it was necessary to turn to other methods, and now modern road building equipment is again prominent. Thus, with very little labor a strip of pavement of, say, ten or twelve feet in width utilizing bituminous-coated aggregate or rock asphalt can be laid down to a uniform thickness, struck off, and tamped by one machine moving forward slowly under its own power. Perhaps only six or eight men are employed, with the amount of pavement laid generally depending on the speed of the transporting of the material by trucks to the machine hopper. After rolling, the job is practically complete.

In Lafayette, over a period of two or three years, more than 40 miles of gravel streets were resurfaced by utilizing the old 8-inch to 12-inch compacted gravel as a base. The top 1½ inches were scarified and shaped with a grader, and emulsified asphalt was applied with a distributor. With a spring-tooth harrow and a grader, the asphalt was thoroughly mixed with the thin, loosened gravel top, the whole surface again graded, rolled lightly, and opened to traffic for additional rolling. Then, after a few days, it was sealed by an application of heavier asphalt, sanded with pea gravel, and again thrown open for traffic. The street was closed to traffic only at short intervals by taking a block or two at one time. This process was comparatively inexpensive, as the only materials used were 0.6 gallon of asphalt and about 15 pounds of pea gravel (almost a waste product) per square yard of pavement. The work was done by street department labor and equipment and the cost of materials was paid out of budgeted material funds, gasoline tax funds, and some federal funds under WPA. This surface, while not permanent, will last for two, three, or more years according to traffic. As this was done in residence districts, it did provide a compact, dustless, moisture-shedding surface. Maintenance, consisting of patching a few holes and sometimes resealing, was greatly reduced, as you can well imagine if you have ever tried to maintain gravel streets under auto and truck traffic. Our citizens have become dust-conscious, and we can no longer endure the untreated surface of the gravel street.

On any resurfacing project, due consideration should be given to the possibilities of a hard surface, such as concrete, because the more yielding bituminous surface, while excellent under uniform traffic, tends to become uneven and roll on the sides where parking is permitted, and
especially so at regular bus stops where the application of brakes tends to corrugate the bituminous surface.

It is my opinion that our principal problem in resurfacing projects is economic. Until we can secure a fair division of the gas tax to take the burden away from the real estate owner and taxpayer, resurfacing may suffer unjustifiable delays. In this connection, the Barret Law method of providing funds for construction is, in my opinion, archaic, obsolete, and useless. It is high time that we face the facts and try to secure remedial legislation so that we can go ahead with a proper foundation for our future plans.