

PlusRide[®] Asphalt Concrete Pavement

WA-RD 130.2

Final Evaluation Report
January 1990



Washington State Department of Transportation

Planning, Research and Public Transportation Division

in cooperation with the
United States Department of Transportation
Federal Highway Administration

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PLUSRIDETM ASPHALT CONCRETE PAVEMENT

SR-405, Contract 2768
S Curve/Cedar River Bridge and RR Bridge

by
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Special Projects Section

Experimental Feature WA-84-01
Final Evaluation Report

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16. ABSTRACT The performance of an experimental installation of PlusRide tm ACP as a bridge deck overlay is summarized in this report. Visual inspections, friction tests, noise readings, and rut depth measurements were taken on both the PlusRide tm and a rubberized ACP control section. No evidence of better frictional properties, noise reduction or increased service life could be attributed to the PlusRide tm in comparison with the rubberized ACP control section.			
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FINAL REPORT
PLUSRIDETM ASPHALT CONCRETE PAVEMENT

SUMMARY

An experimental installation of PlusRideTM ACP was placed on 0.30 miles of SR-405, M.P. 3.51 to M.P. 3.81, on the northbound lanes of the S Curve/Cedar River & RR Bridge located in the City of Renton, Washington. A rubberized ACP was placed on the southbound lanes within the same limits for use as a comparative control section. This section of Interstate 405 has an ADT of approximately 110,000 with 10% truck traffic.

The project was placed in September, 1984. All paving operations were done at night with mild temperatures of 60° to 69°F by Hi-Line Paving Asphalt Co. Inc. of Seattle. Bob Linden of All Seasons Surfacing Corp., Bellevue, Washington, was the technical representative for PlusRideTM and was present for both plant and street operations. The ACP mix designs were as recommended by All Seasons for the PlusRideTM and by Arizona Refining for the rubberized ACP. Both materials were placed in one 0.08' lift. The design density for the PlusRideTM, as recommended by the Technical Representative from All Seasons, was 95% to 98% of Rice density (maximum density) as determined by WSDOT Test Method 705. The contractor was only able to obtain 88% density as monitored by Nuclear Densometer. Density was not monitored on the rubberized ACP because it was an open graded mix which does not have a density requirement under WSDOT specifications.

large areas of the PlusRideTM had debonded or raveled throughout the northbound lanes. Rut depth measurements were 3/8 inch. The rubberized ACP showed only one small area of minor raveling and had rut depth measurements of 3/16".

The site was revisited in October, 1989. At that time, the PlusRideTM was almost totally gone in the wheelpaths having been patched back with standard WSDOT Class B ACP. The rubberized ACP is wearing considerably better. There is evidence of minor raveling and flushing, and one small area of debonding, but the pavement appears to be sound.

CONCLUSIONS

It appears the PlusRideTM product does not stand up to its' developers claims. There is no evidence of better frictional properties, noise reduction or increased service life on this experimental project.