

CEEn-2018CPST-006

Woodland Hills Pavement Management Project

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Project Description

The Woodland Hills Pavement Management Project consists of a study of the traffic pattern, current surface conditions, and potential surface treatments for three streets in the City of Woodland Hills, Utah. Assessment of roadway conditions, as well as potential treatment recommendations, are based on the PASER Manual rating system; the proposed pavement management system includes a GIS map of the city streets, a website concept, and a form to perform pavement evaluations. The cost of performing maintenance was also compared against the cost of reconstruction. The goal of the project is provide the City of Woodland Hills with the tools and knowledge they need to perform pavement maintenance.

Street Evaluations

Three streets were evaluated as part of the project: West Spring Drive, West Lake View Way, and Oak Drive. According to the PASER classification West Springs Drive was classified as a three on the rating scale and will require a mill and fill or an overlay in the near future. West Lake View Way was classified as a six and could benefit from an asphalt slurry seal coat. Oak Drive was the longest of the roads included in the study and therefore was broken into three segments. The ratings of the segments ranged from a three to a ten according to the PASER manual. Figure 2 is an aerial view of the three streets included as part of this project.

Pavement Classification Website

As part of the project, a website was built to guide employees, residents, and contractors through the PASER manual classification process. This will help the city produce accurate street condition data that can be used to budget and plan for pavement maintenance. The QR code in the bottom right corner leads to the concept website when scanned.

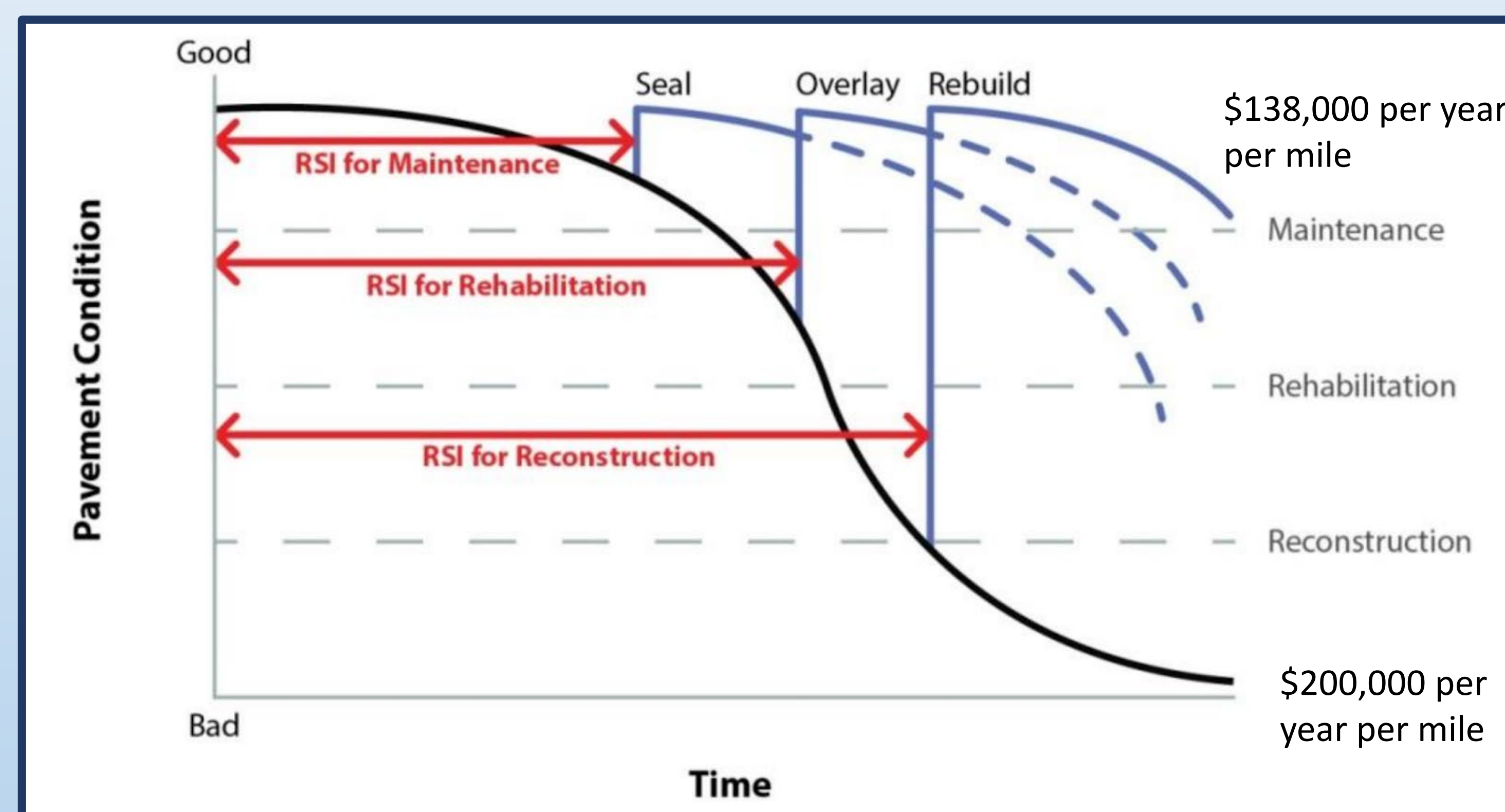


Figure 1: Graph of Pavement Condition Vs. Time

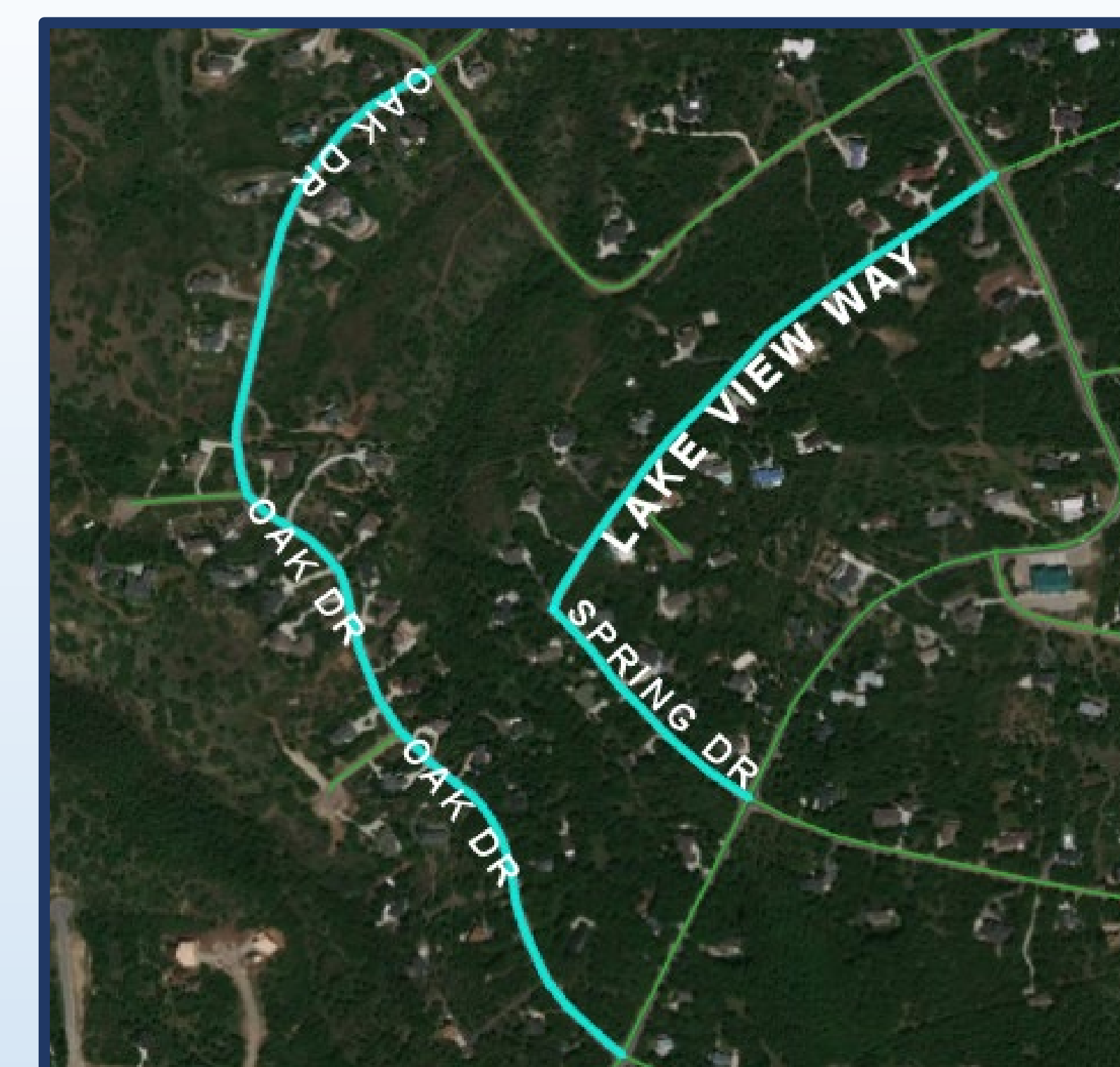


Figure 2: Image Showing The Three Streets

Conclusion

The maintenance of pavement saves resources over time. The final report and website provided to city of Woodland Hills, as part of this project, will allow the city to classify the condition of the remaining streets in a time-efficient manner, which enables the city to budget for pavement maintenance and reconstruction.

Purpose of Pavement Maintenance

The primary reason to practice pavement maintenance is because it saves money. Applying the right treatment to the right road at the right time increases the life of the pavement. In addition to increasing the life of the pavement, streets are kept in better condition by reducing wear and tear on vehicles. Figure 1 shows the effect of performing maintenance on pavement throughout the life of the road. Figure 1 also presents the per year, per mile, cost estimates for streets that are maintained versus streets that are not maintained. According to our analysis, pavement that is routinely maintained costs approximately \$62,000 less per year per mile.

