

PREFACE

Highway agencies throughout the world face increasing demands and decreasing resources to maintain and preserve their highway networks. The demand to “do more with less” has been an operating slogan for many of these agencies. Historically, the emphasis has been on new facility construction, and rehabilitation or reconstruction of existing facilities. However, most agencies are currently in a maintenance and/or preservation mode, a trend that can be expected to continue in the foreseeable future.

Pavement preservation is a method by which roads are treated before significant failure has occurred. This has the advantage of allowing action before user complaints, and also saving the agency money over the life of the pavement.

This publication was prepared by HQ Maintenance to assist in making better and more informed decisions on maintenance practices. It is designed for several levels of use, ranging from general instruction to specific work practice descriptions. It should be of use to District Maintenance Managers, Maintenance Supervisors, Superintendents, and Field Personnel. Construction personnel and designers may also find use for the information.

This publication consists of several parts. The first chapter is a review of pavement preservation and maintenance principles, as well as a detailed technical discussion on the materials used in maintenance treatments. This is followed by a chapter describing a simplified treatment selection process. The remaining chapters 3-8 describe the various maintenance treatments currently in use by Caltrans and provide information on how to design and construct them. Chapters 3-8 can be used as stand alone documents for the respective treatments. Other chapters on new treatments may be added at a later time.

It is not the intent of this advisory guide to be exhaustive; however, it should serve as a useful reference. Each treatment chapter has field information on troubleshooting problems, and a list of important issues is appended to each chapter to provide the reader guidance on what to consider in achieving a successful outcome. Diagrams and photographs are provided as illustration. Photographs not otherwise acknowledged are provided, by permission for this document, by Glynn Holleran. A training program will supplement this advisory. This will assist in understanding and optimizing its benefit.

ACKNOWLEDGMENTS

This document was prepared under the technical direction of Dr. Shakir Shatnawi, Chief of the Office of Pavement Preservation. The document was reviewed by Caltrans Pavements Standards Team, the Caltrans Industry Maintenance Task Force, and by Caltrans Maintenance Personnel. For questions on the guide, please contact:

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