

National Cooperative Highway Research Program

RESEARCH RESULTS DIGEST

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Effective Motivation of Highway Maintenance Personnel: Tools for Peak Performance

*An NCHRP digest of the findings from the final report on NCHRP Project 14-11(2),
“Enhancement to Program for Effective Motivation of Highway Maintenance Personnel,”
conducted by the University of Maryland.
Dr. Everett C. Carter served as Principal Investigator.*

INTRODUCTION

This digest describes a training course for motivating highway maintenance personnel. The course is particularly suited for first and second line supervisors of state, county, and city maintenance organizations.

Highway maintenance organizations are expected to provide rapid, high-quality service for an aging, expanding roadway system that requires substantial maintenance. However, the personnel and financial resources available to these organizations are in short supply and have not been increasing to keep pace with demand. Recognizing the public's expectation of service from public agencies and the limited resources available to deal with highway maintenance requirements, it is critical that employees at all levels be productive; strive for high-quality workmanship; and demonstrate increased commitment, dependability, and adaptability. Maintenance managers and supervisors need effective tools and training to assist them in creating a work climate that is conducive to the development of such attitudes. An initial phase of research was conducted under NCHRP Project 14-11, “Effective Motivation of Highway Maintenance Workers,” by Pennsylvania State University to address this need.

NCHRP Project 14-11, completed in 1992,

developed a training manual and corresponding teaching materials for a course on effective motivation of highway maintenance workers. The course outlined the factors that need to be considered by maintenance supervisors in their efforts to get the highest level performance from their workers. The course materials also provided an overview of how supervisors can interact with their workers so as to support the needs, wants, and motivations of the workers. In addition, the course identified ideas on incentives that could be used in the process. A pilot presentation of the course materials indicated that the training course was useful but that enhancements were necessary. NCHRP Project 14-11(2) was initiated to address this need.

The research, completed in late 2000, was conducted under NCHRP Project 14-11(2), “Enhancement to Program for Effective Motivation of Highway Maintenance Personnel,” by the University of Maryland and Bergstralh-Shaw-Newman, Inc. The research presented, on a CD-ROM, course material consisting of a participant workbook and an instructor's manual for effective motivation of highway maintenance personnel. A summary report that highlights the project objectives and the content of the training course was also prepared. This digest provides a summary of the work performed in this research. The materials in the digest are extracted from project deliverables.

FINDINGS

The project included a review of relevant material, development of a detailed outline and preliminary enhanced course materials, conduct of pilot presentations, preparation of enhanced course materials, and packaging of the course materials on a CD-ROM.

As part of this project, the research team reviewed the course materials developed in Project 14-11, feedback provided subsequent to the 14-11 pilot presentation, and comments provided by the NCHRP. The research team also obtained and reviewed materials and suggestions provided by several state highway agencies regarding the desired training course materials.

The research team then developed the course materials and conducted three pilot presentations to assess the effectiveness of these materials and seek suggestions for improving these materials. To facilitate the conduct of the pilot presentations, several video clips were prepared, although the course can be effectively conducted without reliance on these clips. The comments and suggestions provided by the participants about the pilot presentations and by other reviewers were considered in preparing the enhanced course materials that were later presented on a CD-ROM.

CONTENTS OF THE TRAINING COURSE

The training course, "Effective Motivation of Highway Maintenance Personnel: Tools for Peak Performance," consists of a participant workbook and an instructor's manual, each of which consists of nine chapters.

Chapter 1 highlights the importance and challenge of highway maintenance as well as the knowledge, skills, and ability of those who perform maintenance activities. Chapter 1 also describes the purpose of the course; highlights what is expected of the participants; and outlines the course content, materials, and procedures.

Chapter 2 describes the attributes of a successful organization and the role of motivation in achieving this success.

Chapter 3 addresses individuals' needs, desires, and motivations. This chapter focuses on the supervisor's need to recognize and take advantage of the fact that workers have different needs and desires and may be motivated through different means.

Chapter 4 deals with the use of rewards to motivate workers. This chapter points out that, because rewards must be desired or valued, task assignment could serve as a form of reward.

Chapter 5 deals with ways for determining expected performance and measuring and analyzing actual performance to identify performance problems—an essential step in motivating workers to improve their performance.

Chapter 6 identifies the elements necessary for achieving expected performance. This chapter also discusses the

supervisor's role in selecting, directing, and facilitating work tasks as steps toward improving performance.

Chapter 7 presents principles and techniques for raising workers' performance to a specific level through means that may take different forms (e.g., performance evaluation, coaching and mentoring, giving rewards, and reprimanding when needed).

Chapter 8 deals with communication as a means for improving workers' performance. This chapter describes the elements of good communication and examines how the supervisor-employee relationship and communication affect each other.

Chapter 9 guides the participants in combining all the concepts of the course into written action plans: one for each crewmember and one for the whole crew. It also includes a self-assessment test to help supervisors judge their performance and identify areas in need of improvement.

After completing this course, participants should know the following items:

- Needs of the organization to be successful;
- Strengths and weaknesses of the organization;
- Things the supervisor can do to make the organization successful;
- Means for determining what individuals want from their jobs;
- Means for determining the strongest needs for each individual;
- Understanding that individuals will respond differently to the same reward;
- Understanding that all individuals can be rewarded in some way;
- Means for matching individual needs to rewards;
- Approaches for analyzing performance to determine if there is a performance problem and, if so, the cause of the problem;
- Means for establishing realistic performance expectations;
- Means for planning an activity;
- Means for selecting an individual to perform a specific task;
- Key elements in directing and facilitating work;
- Steps for improving all employees' performance, especially marginal performers;
- Means for coaching;
- Means for identifying potential rewards;
- Ways to become a better communicator; and
- Areas of communication skills in need of improvement.

The training course is designed to provide 2 days of instruction—25 percent lectures and 75 percent exercises. The course contains 13 exercises in which the instructor works closely with each participant to help develop understanding of the concepts presented during the lecture sessions.

CONCLUSIONS

The need to develop training materials to effectively motivate highway maintenance personnel has been recognized by state highway agencies and other organizations. This research presented a training course, “Effective Motivation of Highway Maintenance Personnel: Tools for Peak Performance,” on a CD-ROM. The course materials—consisting of a participant workbook and an instructor’s manual—are designed to provide 2 days of instruction. The course is particularly suited for first and second line supervisors of state, county, and city maintenance organizations, but it should also be of value to other managers in these organizations. Preferably, the manager of maintenance supervisors would conduct the course, although other supervisors may be suited to conduct it.

AVAILABILITY OF THE TRAINING COURSE

The CD-ROM, “Effective Motivation of Highway Maintenance Personnel: Tools for Peak Performance,” contains a participant workbook and an instructor’s manual. The

CD-ROM, which was distributed to NCHRP sponsors (i.e., the state departments of transportation) and T2 centers, is available for purchase by writing to TRB Publications Office, 2101 Constitution Avenue, N.W., Washington, DC, 20418. The cost is \$15.00, including postage. Check or money orders should be made payable to the Transportation Research Board. Purchase may also be made using MasterCard, Visa, or American Express by calling 202/334-3214 or by faxing the request to 202/334-2519. A video-cassette containing 10 clips is also available for loan on request to the National Cooperative Highway Research Program, Transportation Research Board, 2101 Constitution Avenue, N.W., Washington, DC, 20418.

ACKNOWLEDGMENTS

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