



CITY OF HAYWARD AGENDA REPORT

AGENDA DATE 5/19/98

AGENDA ITEM

WORK SESSION ITEM WS#2

TO: Mayor and City Council
FROM: Director of Public Works
SUBJECT: **Pavement Management Program**

Recommendation:

It is recommended that the City Council review and provide comments on the City's Pavement Management Program (PMP).

Background/Discussion:

The City has been utilizing various Pavement Management Programs since the early 1980's. Since 1991, the City has utilized the Pavement Management Program which was developed by the Metropolitan Transportation Commission (MTC). Presently nine of the fourteen cities in Alameda County utilize the same software program developed and periodically updated by MTC.

The City has approximately 250 lane-miles of asphalt streets and every other year rates all the arterial streets, 50 percent of collector streets, and 25 percent of residential streets. From these ratings, each street is assigned a pavement condition index (PCI), which provides an inventory of the City's street system and a method to compare the system's condition. The PCI's can range from zero (failed) to 100 (excellent). This rating system, by its nature, has some subjectivity since it is done by a visual inspection; however, we try to use the same inspectors and it is the best means we have to judge street conditions. The projected 1998 average condition or PCI of the City's street system is 71 (good to fair condition). This number can be somewhat deceiving in that 30 percent of the streets are in fair or worse condition and will deteriorate fairly rapidly.

Some benefits of the PMP include providing an overall condition-assessment of the street system, which allows us to develop a multi-year program and budget for improving the system. This can save money at the project level through life-cycle costing. The system also helps identify projects and priorities based on a defined objective, and allows integrating pavement maintenance decision-making so that the various functions are coordinated between departments. It also allows us to be able to do design work more efficiently because information is more readily available. Having a PMP provides points for our projects under the existing scoring criteria for competitive Intermodal Surface Transportation Enhancement Act (ISTEA) funding, and it satisfies State requirements, under Assembly Bill 471, for jurisdictions receiving funds programmed in the State Transportation Improvement Program (STIP).

The PMP assists the City with planning the most cost effective maintenance action needed to prevent the street system from worsening. It also projects what the future condition of the system will be based on the funding available. In other words, at our present average annual funding level of \$1.6 million for pavement rehabilitation, the system, as a whole, is projected to deteriorate. The rate of future deterioration is determined by the program based on a best-fit curve of Bay Area-wide

historical tests. This prediction will improve as more local field information is gathered, which will adjust the curve to coincide closer with the City's specific conditions. The next biannual update of the PMP is underway and initially approximately 100 centerline miles of the street network will be surveyed. We expect the results of this update to be available in August 1998.

The City's pavement maintenance and rehabilitation decision-making process is associated with three basic repair methods: deep-lift patching and slurry seal; deep-lift patching and asphalt concrete overlay; and, complete reconstruction. In certain situations, a combination of these repair methods is used to rehabilitate the street. The PMP includes City-defined strategies for the use of each method and its related costs. Thus, the program allows us to look at the effect of various budget scenarios, such as:

- Maintaining our current average budget of \$1.6 million per year. In this scenario, the street system PCI will gradually deteriorate to approximately 69 in 2002 from its projected 1998 level of 71.
- Maintaining the street system PCI at the projected 1998 level of 71. This would require the City to budget approximately \$2 million per year over five years.
- Increasing the overall street system PCI from 71 to 85. This would require the City to budget approximately \$5.5 million per year over five years.

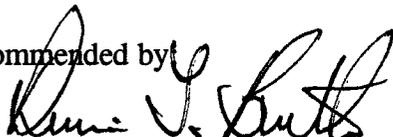
With the demands on the limited City funding, it is difficult to find the funding that is necessary to improve the condition of the street system above its present level, but, the one thing that is certain is that streets kept in good condition cost less to maintain. It has been demonstrated by numerous studies that it will cost anywhere from \$3 to \$10 per square yard more to repair a street, depending on how far you allow the street system to deteriorate. This conclusion is one of the main reasons to use a PMP to select when each street should receive maintenance.

Prepared by:



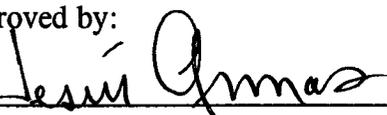
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Recommended by:



Dennis L. Butler, Director of Public Works

Approved by:



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