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DEPARTMENT OF  
PUBLIC WORKS  
  
ENGINEERING DIVISION

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ENGINEERING DIVISION  
MANAGER

April 14, 1987

Budget and Finance Committee  
Transportation and Community Development Committee  
Sacramento, California

Honorable Members In Session:

SUBJECT: (1) Arterial Street Lighting Upgrade Program (CIP No. PW-86-S006),  
and (2) Guy West Bridge Lighting Conversion (CIP No. PW-88-S020) -  
Report on Recommendations for Including Projects in the Proposed  
1987-1992 CIP Program

SUMMARY

This report presents information requested by the Joint Budget and  
Finance/Transportation and Community Development Committee at their meeting  
held on March 31, 1987, in which the CIP program was reviewed.

BACKGROUND

1. Arterial Street Lighting Upgrade Program (CIP No. PW-86-S006)

The Arterial Street Lighting Upgrade Program will accomplish two goals.  
The first is to change the existing 14,000 lower wattage mercury vapor  
luminaires with more energy efficient high pressure sodium vapor  
luminaires. The second is to modify approximately 500 existing post top  
electroliers by adding mast arms in addition to changing the high pressure  
sodium vapor luminaires. This will improve intersection safety for  
motorists and pedestrians.

It is estimated that 1,250 luminaires per year can be modified at the  
projected budget level of \$100,000 per year. This is assuming the use of  
City forces for labor and CIP funds for materials required. When all  
14,000 luminaires have been modified, the energy savings will be \$180,000  
per year.

Budget and Finance Committee

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Typically, the \$100,000 per year cost will be fully recovered through energy savings in approximately five and one-half years. Safety related savings would be an additional benefit.

2. Guy West Bridge Lighting Conversion (CIP No. PW-88-S020)

The existing Guy West Bridge lighting system has experienced a high degree of vandalism in the past few years. The luminaires are located at a height of eight feet and are 100 watt mercury vapor type with a spherical lens cover. Twenty-nine luminaires were destroyed last year (1985/86) and twenty-two have been destroyed during this year (1986/87). The cost of replacing these fixtures has been approximately \$4,000 per year. The new system will be more efficient high pressure sodium vapor luminaires, located at a height of 14 feet. The luminaires will be of a different type and less prone to vandalism.

The 50 existing 100 watt mercury vapor luminaires will be replaced with 20 100 watt HPS luminaires. The new lighting levels obtained will be equal to or greater than existing levels due to the more efficient new luminaires.

The combined savings per year of \$4,000 due to vandalism and \$670 per year due to energy savings will provide a pay back in less than five years at the present utility rates. The California State University at Sacramento will be contacted as to a contribution to the proposed project. Any funds available from CSUS will decrease the contribution required from CIP funds.

FINANCIAL

1. The proposed 1987-92 CIP budget includes \$100,000 per year for each year for the Arterial Street Lighting Upgrade Program. This will result in an annual savings of \$18,000 per year for each year of the project. For the proposed five year budget, it is estimated that a total of \$270,000 in energy savings will have accumulated. The savings will be about \$90,000 per year thereafter if just the first five years of the ten year program is accomplished.
2. The proposed 1987/88 budget includes \$20,000 for the Guy West Bridge Lighting Conversion. It is estimated that a savings of approximately \$5,000 per year can be achieved.

Budget and Finance Committee

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(1) Arterial Street Lighting Upgrade Program (CIP No. PW-86-S006)

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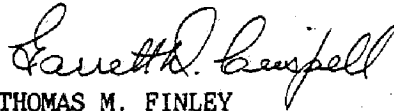
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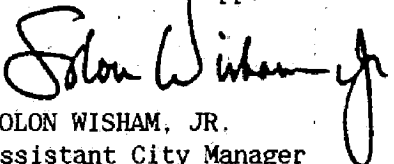
RECOMMENDATION

1. It is recommended that the Arterial Street Lighting Upgrade Program be funded at the proposed level for 1987-88.
2. It is recommended that the Guy West Bridge Lighting Conversion project be funded in the 1987-88 CIP budget as proposed.

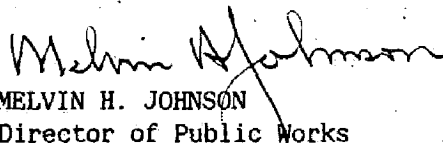
Respectfully submitted,

  
for THOMAS M. FINLEY  
Engineering Division Manager

Recommendation Approved:

  
SOLOM WISHAM, JR.  
Assistant City Manager

Approved:

  
MELVIN H. JOHNSON  
Director of Public Works

NDL:VG:vr

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All Council Districts