

Traffic Signal System Modernization -- No. 500704

Category	Transportation	Date Last Modified	June 23, 2008
Subcategory	Traffic Improvements	Required Adequate Public Facility	No
Administering Agency	Transportation	Relocation Impact	None.
Planning Area	Countywide	Status	Preliminary Design Stage

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY07	Est. FY08	Total 6 Years	FY09	FY10	FY11	FY12	FY13	FY14	Beyond 6 Years
Planning, Design, and Supervision	5,763	298	2,177	3,288	548	548	548	548	548	548	0
Land	0	0	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	28,257	19	0	28,238	4,719	4,626	5,266	4,980	4,502	4,145	0
Construction	0	0	0	0	0	0	0	0	0	0	0
Other	0	0	0	0	0	0	0	0	0	0	0
Total	34,020	317	2,177	31,526	5,267	5,174	5,814	5,528	5,050	4,693	0

FUNDING SCHEDULE (\$000)

Current Revenue: General	1,625	317	1,308	0	0	0	0	0	0	0	0
Federal Aid	269	0	269	0	0	0	0	0	0	0	0
G.O. Bonds	6,673	0	600	6,073	856	353	410	1,117	1,459	1,878	0
State Aid	12,128	0	0	12,128	2,067	1,974	2,323	2,130	1,931	1,703	0
Recordation Tax Premium	13,325	0	0	13,325	2,344	2,847	3,081	2,281	1,660	1,112	0
Total	34,020	317	2,177	31,526	5,267	5,174	5,814	5,528	5,050	4,693	0

DESCRIPTION

This project provided for Phase I which consisted of requirements development, systems engineering, and testing to modernize the County's traffic signal system. The addition of Phase II entails acquisition and implementation of a state-of-the-art replacement of the current central traffic signal control system. Key elements of the modernization include system central hardware and software and communications system cable plant re-configuration.

Anticipated phases of this project include: Phase I - FY07-08. Phase II - FY09-14 - implementation and quality assurance.

COST CHANGE

Based on Phase I findings, Phase II (full implementation of the system) is added to the project. The total project cost for the new system, which includes replacement of the existing functionality and addition of expanded capabilities is \$44M. The expenditure display has been updated to reflect a six-year implementation scenario. The expenditures displayed in FY09-14 (\$31.5M) do not include those costs of the total \$44M system estimate that are associated with the project team's recommendations that will be implemented/expended directly by the Maryland State Highway Administration.

JUSTIFICATION

The existing traffic signal control system, though it has been highly reliable, is an aging system reliant on dated technology. Central and field communications devices are obsolete and problematic to maintain. As the technologies employed in the advanced transportation management system (ATMS) have advanced, it has become increasingly difficult to interface with the existing traffic signal control system (COMTRAC). Because of the limited functionality of the COMTRAC, the system is not able to take advantage of the capabilities of the current generation of local intersection controllers. These capabilities provide a greater level of flexibility to manage traffic demands.

The following reports focus on the condition of the current traffic signal control system and document the need to begin the process of system modernization: White Paper on the Status and Future of the Traffic Signal System in Montgomery County, Maryland, March, 2001; and Traffic Signal Replacement White Paper, January, 2002. The following new reports have been developed in Phase I: Concept of Operations, Revision 1.0 February, 2007; Traffic Signal System Modernization (TSSM) Requirements, Draft Revision F, May, 2007. These two reports further existing systems analysis and replacement systems functional requirements development. Working in conjunction with the Department of Technology Services (DTS), a comprehensive communications master plan is underway to review the existing communications subsystem and development of state-of-the-art communication systems architecture.

OTHER

Phase I Status (As of August 2007)

Concept of Operations - 100% complete/configuration control

APPROPRIATION AND EXPENDITURE DATA	COORDINATION	MAP																																																			
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td>Date First Appropriation</td> <td>FY07</td> <td>(\$000)</td> </tr> <tr> <td>First Cost Estimate</td> <td></td> <td></td> </tr> <tr> <td>Current Scope</td> <td>FY09</td> <td>34,020</td> </tr> <tr> <td>Last FY's Cost Estimate</td> <td></td> <td>2,600</td> </tr> <tr> <td colspan="3"> </td> </tr> <tr> <td>Appropriation Request</td> <td>FY09</td> <td>3,094</td> </tr> <tr> <td>Appropriation Request Est.</td> <td>FY10</td> <td>3,200</td> </tr> <tr> <td>Supplemental Appropriation Request</td> <td></td> <td>0</td> </tr> <tr> <td>Transfer</td> <td></td> <td>0</td> </tr> <tr> <td colspan="3"> </td> </tr> <tr> <td>Cumulative Appropriation</td> <td></td> <td>2,600</td> </tr> <tr> <td>Expenditures / Encumbrances</td> <td></td> <td>1,355</td> </tr> <tr> <td>Unencumbered Balance</td> <td></td> <td>1,245</td> </tr> <tr> <td colspan="3"> </td> </tr> <tr> <td>Partial Closeout Thru</td> <td>FY06</td> <td>0</td> </tr> <tr> <td>New Partial Closeout</td> <td>FY07</td> <td>0</td> </tr> <tr> <td>Total Partial Closeout</td> <td></td> <td>0</td> </tr> </table>	Date First Appropriation	FY07	(\$000)	First Cost Estimate			Current Scope	FY09	34,020	Last FY's Cost Estimate		2,600				Appropriation Request	FY09	3,094	Appropriation Request Est.	FY10	3,200	Supplemental Appropriation Request		0	Transfer		0				Cumulative Appropriation		2,600	Expenditures / Encumbrances		1,355	Unencumbered Balance		1,245				Partial Closeout Thru	FY06	0	New Partial Closeout	FY07	0	Total Partial Closeout		0	<p>Traffic Signals Project Advanced Transportation Management System Maryland State Highway Administration Department of Technology Services</p>	
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Traffic Signal System Modernization -- No. 500704 (continued)

System Requirements - 100% complete/configuration control

Communications Master Plan - 65% complete

Field Inventory - 90% complete

Risk Analyses and Contingency Planning - 5% complete

Cost Estimate and Implementation Plan - 25% complete

FISCAL NOTE

The County's traffic signal system supports over 800 traffic signal locations, of which more than 550 belong to the State but are maintained by the County on a reimbursement basis. The State Aid displayed in the funding schedule is subject to Maryland State Highway Administration budget approval.

Operating Budget Impacts are expected as a result of this project and will be identified as the project continues to develop.

OTHER DISCLOSURES

- The Executive asserts that this project conforms to the requirements of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.