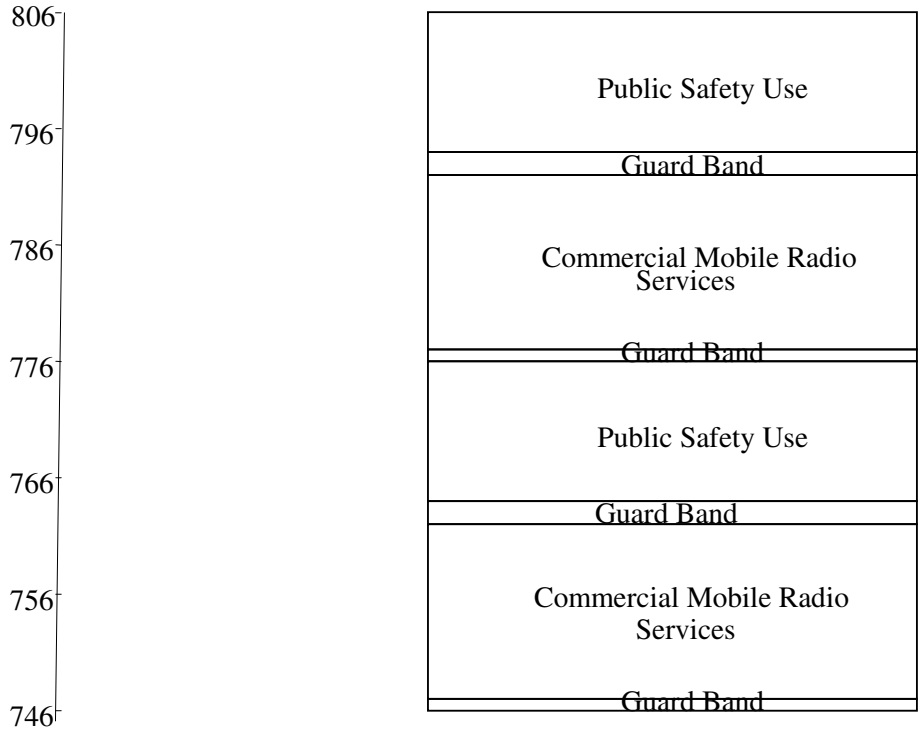
D06E02PS
Public Safety Communications System – PAYGO
Board of Public Works

Public Safety Communications System (Statewide)

PAYGO GF **$10,000,000** **Recommendation: Reduce by $2.5 million**

Project Description: Construct a statewide Public Safety Communications System to provide the State with a new, modern wireless 700 megahertz (MHz) communications system. The system will operate on 24 MHz of spectrum within the 746-806 MHz band as shown in **Exhibit 1**.

Exhibit 1
Proposed Use of the 746-806 MHz Band



Source: Department of Legislative Services

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This spectrum is currently occupied by television channels 60 through 69. These broadcast channels were originally required to move from these frequencies by December 31, 2006, or when 85% of households in a television market receive digital programs (either via digital television sets, a digital converter, or through multichannel digital services via cable or satellite), whichever is later. Most observers recognized that the December 31, 2006, deadline was essentially unreachable, and in December 2005 the U.S. Congress passed legislation establishing a deadline of February 18, 2009, for the transition from analog to digital transmission.

Use of the spectrum is guided by regional plans submitted to the Federal Communications Commission (FCC). For Maryland, the region includes Washington, DC and Northern Virginia. The plan details such things as how the spectrum is to be allotted among eligible users, how it encourages efficient and effective use, how it accommodates current technologies, and how it meets the communication needs of the public safety community.

Why Is Interoperability Important?: The 9/11 Commission cited the inability of first responders to communicate with each other in its initial report. The commission's subsequent follow-up report reiterated the continued failure of first responders to adequately communicate with each other.

This 700 MHz communications system will link several large State agency users (for example, Maryland State Police, Maryland Department of Transportation, Maryland Transportation Authority, and the Department of Natural Resources) as well as multiple smaller agencies (for example, the Maryland Department of the Environment, the Department of Juvenile Services, and the Department of Public Safety and Correctional Services). The infrastructure will also be available to participating local jurisdictions. Current local users include Anne Arundel, Caroline, Cecil, Dorchester, Frederick, Harford, Howard, Montgomery, Queen Anne's, Talbot, and Worcester counties as well as Ocean City.

The 700 MHz system will also be interoperable with local public safety communications systems that are being developed in the 800 MHZ spectrum, ensuring that first responders, regardless of jurisdiction, can effectively and easily communicate with one another. This interoperability depends on local jurisdictions developing their own 800 MHz system and the availability of mobile, portable, and base station equipment that can operate in both bands.

How Are We Doing?: In January 2007, the federal Department of Homeland Security released scorecard assessments of interoperable communications capabilities in 75 urban and metropolitan areas nationwide. The scorecard was based on established policies, technology, and training that enables various first responders to effectively communicate within one hour of an incident. The assessment focused on:

- Governance (leadership and strategic planning);
- Standard Operating Procedures (plans and procedures); and
- Usage (use of equipment).

As shown in **Exhibit 2**, both metropolitan Washington (which includes Montgomery and Prince George's counties) and Maryland (which in this assessment is limited to the cities of Baltimore and Annapolis, and Anne Arundel, Baltimore, Carroll, Harford, and Howard counties) received positive assessments.

Exhibit 2
Results from the Nationwide Interoperability Scorecard
January 2007

	Governance		Standard Operating Procedures		Usage	
	Score	**Comment**	**Score**	**Comment**	**Score**	**Comment**
Maryland	2	Formal regional decision-making group established and strategic plan agreed upon for funding of regional needs	2	Procedures established and during exercise demonstration only minor issues identified	2	First responders use interoperability solutions regularly and easily
National Capital Region	1	Existing strategic plans are regularly updated and decision-making groups are proactive in expanding membership	1	Procedures established and during exercise demonstration effectively utilized	1	First responders at all organization levels use interoperability solutions regularly and seamlessly

Note: The scorecard used a graphical scoring system which for ease of presentation has been converted to a numerical system with 1 being the highest level of assessment and 4 the lowest.

Source: Department of Homeland Security

The Department of Budget and Management (DBM) is moving forward in developing a collaborative effort to solve the interoperability problem within State government and between State and local government, including establishing an interoperability Governance Working Group representing State, county, and municipal first responders and technical staff.

In addition, through DBM's Wireless Interoperability Project, the State is moving forward with the identification of functional requirements, identifying a channel plan, and a detailed design and implementation strategy for the 700 MHz system. It is anticipated that this strategy will be developed by the end of fiscal 2007. At that time, DBM will move forward with a proof of concept pilot either in two sites (as originally proposed last year) or perhaps with a smaller agency but on a

wider geographical scale. This proof of concept methodology will then be used to establish actual system requirements.

Given that the spectrum will be fully available to the State in February 2009, it might be anticipated that operating budget expenditures may begin in fiscal 2009. At this time any estimate of the extent of those expenditures will remain unknown until the proof of concept pilot has been evaluated.

Proposed Fiscal 2008 Expenditures: As shown in **Exhibit 3**, the proposed fiscal 2008 funding supports a variety of projects in Anne Arundel, Baltimore, Charles, Calvert, Cecil, Garrett, Howard, Kent, Prince George's, Queen Anne's, and Washington counties plus some statewide and unallocated expenditures. The projects are primarily tower construction, the construction of equipment shelters, and the installation of microwave dishes.

Exhibit 3
Proposed Fiscal 2008 Expenditures

County	Project	Cost
Anne Arundel	Microwave dish (2)	$250,000
Baltimore	Tower and shelter construction	440,000
Calvert	Towers (2) and shelter construction (2)	1,000,000
Cecil	Microwave dish, tower and shelter construction	565,000
Charles	Microwave dish, towers (2) and shelter construction (2)	1,015,000
Garrett	Microwave dishes (2), tower and shelter construction	850,000
Howard	Microwave dish	125,000
Kent	Towers (3) and shelter construction (3)	1,320,000
Prince George's	Microwave dishes (4), towers (5) and shelter construction (5)	2,700,000
Queen Anne's	Microwave dish	125,000
Washington	Shelter construction (4) and site improvements	420,000
Unallocated	Microwave dishes (may be used in proof of concept pilot)	250,000
Statewide	Frequency coordination, soil investigations, and other	150,000
Statewide	Contingencies (8.9%)	790,000
Total	**General Fund PAYGO**	**$10,000,000**

Source: Department of Budget and Management

Comment: It is generally accepted that the development of the Public Safety Communications System is the optimal solution to first responder interoperability. However, as shown in the project data authorization summary below, beginning in fiscal 2006, when the appropriations for this project increased significantly, the pace of expenditures fell dramatically. Just over 3% of the $19 million appropriated in fiscal 2006 and 2007 had been spent based on January 2007 data, with only 9% encumbered.

The ramp-up of funding was required in order to meet a key deadline set by the federal government. Specifically, in order to preserve the frequencies allocated to the State for public safety use, the State must demonstrate a certain level of operations by December 31, 2014. Prior to fiscal 2006, based on the pace of funding authorized and proposed in the out-years to this project, the estimated completion date for the project at that level of funding was well beyond this deadline. Thus, funding levels were increased significantly beginning in fiscal 2006 for a planned fiscal 2012 infrastructure completion date.

At the same time funding was increased, a significant amount of planned construction was put on hold pending the results of an inventory to determine where towers are currently located and how best to build out future towers. This inventory could allow the State to utilize capacity on existing public or private towers and then build-out as appropriate. While DBM indicates that it is accelerating tower construction projects where possible, it is unclear how quickly the department will be able to spend-down existing unencumbered funds as well as the funding proposed for fiscal 2008. It should be noted, however, that any reduction to the fiscal 2008 allowance simply defers that spending to future years. While the State share of the cost of the project may fall if it is able to develop resource-sharing proposals with government or private entities (budgeted in prior years as nonbudgeted funds), no such proposals are anticipated in fiscal 2008. Nevertheless, significant out-year expenditures by the State are anticipated and programmed into the five-year 2007 *Capital Improvement Program*.

Project Data

Activity by All Funding Sources

($ in Millions)

Description	*Prior Authorization*	*2008 Request*	*2009 Estimate*	*2010 Estimate*	*2011 Estimate*	*2012 Estimate*
Acquisition	$0.125	$0.000	$0.000	$0.000	$0.000	$0.000
Planning	2.751	0.000	0.000	0.000	0.000	0.000
Construction	31.597	7.750	7.750	7.750	7.750	4.265
Equipment	26.025	2.250	2.250	2.250	2.250	1.235
Total	**$60.498**	**$10.000**	**$10.000**	**$10.000**	**$10.000**	**$5.500**

Total Project Cost: $105.998 **Estimated Completion Date:** December 2011

Authorization Summary – State Funds Only
($ in Millions)

		Funds		*Balances*	
Fiscal Year	*Authorization*	*Encumbered*	*Expended*	*To Be Encumbered*	*To Be Expended*
Prior Years	$10.380	$10.373	$10.373	$0.007	$0.007
2003	3.000	3.000	2.991	0.000	0.009
2004	2.500	2.411	2.401	0.089	0.099
2005	5.000	4.896	4.591	0.104	0.409
2006	9.000	1.634	0.622	7.366	8.378
2007	10.000	0.000	0.000	10.000	9.000
Total	**$39.880**	**$22.314**	**$20.978**	**$17.566**	**$18.902**

Recommended Actions

		Amount Reduction	
1.	Reduce funds based on the current level of unencumbered funds for this project. Almost $17.4 million of the $19 million authorized in fiscal 2006 and 2007 for this project remain unencumbered.	$ 2,500,000	GF
	Total General Fund Reductions	**$ 2,500,000**	