

**MEMORANDUM**

February 24, 2020

**TO:** Public Safety Committee  
Government Operations and Fiscal Policy Committee

**FROM:** Susan J. Farag, Legislative Analyst  
Dr. Costis Toregas, Council IT Adviser

**SUBJECT:** **CIP: FY21-26 Public Safety System Modernization (PSSM)**

**PURPOSE:** To review and vote on the recommended CIP.

Those expected to attend this worksession include:

Gail Roper, CIO, Department of Technology Services (DTS)  
Mike Knuppel, CDO/PS Program Director, DTS  
Gerry Adcock, Radio System Manager & PSSM Radio System Project Manager, DTS  
Judy Miller, Site Project Manager, PSSM Radio System Infrastructure Project, DTS  
Adam Kisthardt, Director, Information Management and Technology Division, MCPD  
Suzy Renauer, Deputy Director, Field Services, Information Management and Technology Division, MCPD  
Mike Baltrotsky, Battalion Chief, Public Safety Logistics Section, MCFRS  
Alison Dollar, Lead Fiscal and Policy Analyst, OMB

## **Overview**

---

The County is recommending a total project cost of \$113.494 million, which reflects a funding increase of \$2.742 million over the approved FY19-24 CIP. This project was first approved in FY09 and over the years, it has provided funding for several subprojects and associated staff charges needed to upgrade and modernize various public safety systems. Completed subprojects include:

- Fire Station Alerting;
- Computer Aided Dispatch (CAD) replacement; and
- Public Safety mobile and portable radio replacement.

Current subprojects include:

- Records Management System (RMS); and
- Radio Systems Infrastructure Project (RSIP).

The recommended FY12-26 CIP modifies the funding and expenditure schedule to account for the addition of the purchase of the Advanced Astro Messaging and Responder Location solution (a new part of the RSIP). FY21 expenditures total \$2.274 million, and FY22 expenditures total \$468,000.

The following tables summarize the FY21-26 Recommendation and the FY19-24 approved CIP.

Recommended FY21-26 PSSM CIP (in \$000s)										
	Total	Through FY19	Est. FY20	Total 6 Years	FY21	FY22	FY23	FY24	FY25	FY26
Contributions	\$32	\$32	-	-	-	-	-	-	-	-
Current Revenue: General	\$10,311	\$7,233	\$2,593	\$485	\$17	\$468	-	-	-	-
Federal Aid	\$2,947	\$2,947	-	-	-	-	-	-	-	-
GO Bonds	\$55,728	\$27,058	\$28,400	\$270	\$270	-	-	-	-	-
PAYGO	\$133	\$133	-	-	-	-	-	-	-	-
Short-Term Financing	\$44,343	\$38,554	\$3,802	\$1,987	\$1,987	-	-	-	-	-
<b>Total Expenditures</b>	<b>\$113,494</b>	<b>\$75,957</b>	<b>\$34,795</b>	<b>\$2,742</b>	<b>\$2,274</b>	<b>\$468</b>	-	-	-	-

Approved FY19-24 PSSM CIP (in \$000s)										
	Total	Through FY18	Rem FY18	Total 6 Years	FY19	FY20	FY21	FY22	FY23	FY24
Contributions	\$32	\$32	-	-	-	-	-	-	-	-
Current Revenue: General	\$9,826	\$6,719	\$2,172	\$935	\$935	-	-	-	-	-
Federal Aid	\$2,947	\$2,947	-	-	-	-	-	-	-	-
GO Bonds	\$55,591	\$25,752	\$16,739	\$13,100	\$13,100	-	-	-	-	-
Short-Term Financing	\$42,356	\$38,179	\$2,177	\$2,000	\$2,000	-	-	-	-	-
<b>Total Expenditures</b>	<b>\$110,752</b>	<b>\$73,629</b>	<b>\$21,088</b>	<b>\$16,035</b>	<b>\$16,035</b>	-	-	-	-	-

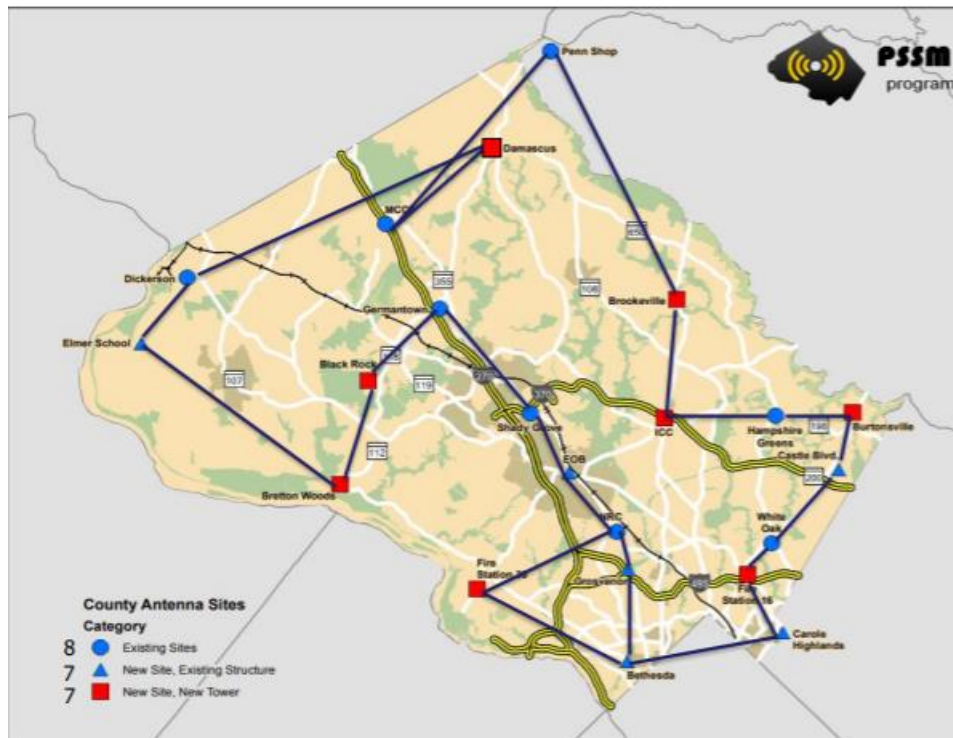
## Sub-Project Updates

**Radio Systems Infrastructure Project:** This subproject provides for the replacement of the Public Safety Radio System (excluding radios but including antennas and support systems).

**History:** The current 11 site radio system that provides communication among the 911 call center, police, fire, ambulances, and other users was purchased in 1999 and was made operational in 2003. It is a Motorola SmartZone 3.0 radio communications system comprised of 11 radio sites around the County and connected by a legacy FiberNet 1 network, using Asynchronous Transfer Mode (ATM) backhaul equipment and design. The towers transmit directly to user radios by radio waves in the 800 MHz range. It is past its end-of-life date (2009) and experienced significant system disruptions last year. The Council was concerned about the delay of two radio tower sites (at the ICC and Georgia Avenue, and one in Bretton Woods) that would delay the cutover of the entire system by up to a year and increase program costs by

up to \$1 million.<sup>1</sup> Council and the Executive ultimately agreed to maintain the original tower locations and the December 2020 cutover date.<sup>2</sup>

**Current Project Status:** Total subproject costs for the RSIP are approximately \$50 million. This closely aligns with the estimated cost provided in FY10, even though the system was not purchased until FY17. The new system will use redundant-ring architecture microwave radio to connect 22 County public safety radio sites. Executive staff advises this technology is “self-healing” in the event of a link failure. The decision to choose microwave connectivity was driven by the higher cost to extend fiber to numerous newly-added and remotely-located towers. The new microwave enables a second diverse path for redundancy at a lower cost than extending new FiberNet fiber along two routes to all 22 sites. The graphic below shows the locations of the 22 sites to be used for the new system.



The new system is on target to be completed in December 2020. DTS advises that the cutover in December will require all aspects of the remaining M-NCPPC Planning hearings, building permits issuance, construction site work tasks, and various layers of radio system testing to proceed “nearly flawlessly.” Please see DTS’ latest update on the project status at ©7-15.

All civil work has been completed on the following sites:

- Dickerson;
- Penn Shop;
- Shady Grove;

<sup>1</sup> [June 19 Staff Report](#) for Public Safety Communications Towers

<sup>2</sup> [July 30 Staff Report](#) for an Amendment to the Public Safety System Modernization project.

- Bethesda;
- Carole Highlands;
- Elmer School;
- Castle Blvd.;
- Burtonsville; and
- Fire Station 30.

Projected completion dates for the remaining sites are:

- MCCF (February);
- NRC (March);
- EOB (May);
- Grosvenor (May);
- Brookeville (June);
- Germantown (June);
- ICC (June);
- White Oak (June);
- Black Rock (July);
- Bretton Woods (July);
- Damascus (July);
- Fire Station 16 (July); and
- Hampshire Greens (August)

Council staff asked questions to help the Joint Committee members appreciate the degree of risk and management challenges ahead; these questions and answers provided by the Executive attached on ©16-20.

***New applications added to RSIP subproject:*** The \$2.7 million funding increase for this subproject reflects both the purchase and implementation of the Astro Advanced Messaging and Responder Location solution, as well as new desktop radio consoles. Advanced Messaging is a text-based radio application that allows first responders to send and receive pre-programmed or free-form text messages to individuals or groups directly from their radios. The Responder Location application allows first responders to accurately status themselves when they reach an emergency, and accurately and automatically report their locations when they are away from their vehicles. The Executive advises that this feature is critical for first responder safety. Current systems only report on the location of the vehicle and not the actual responders.

***Desktop Radio Consoles for the AECC:*** Phase I of the RSIP installation includes the Core Astro 25 system, new dispatch consoles throughout the County, including the Emergency Communications Center (ECC) and the Alternate Emergency Communications Center (AECC). Consoles at the ECC have been replaced. It is necessary to replace consoles at the AECC to simplify and streamline operations. Both the ECC and AECC must be functional equivalents of one another to both facilitate training and ensure staff have consoles that they are familiar with in both centers.

**Records Management System (RMS):** This sub-project is related to CAD-replacement sub-project. Several years ago, Motorola had provided a proposal to the County for the RMS and the County indicated that it should meet its needs. However, the project kickoff for RMS was postponed because staff resources had been focused on the CAD and body cameras. Originally, the project was supposed to begin in calendar 2016. The RMS project team has now completed a request for expressions of interest (REOI), which resulted in a pre-qualified list of several vendors who can compete in the RFP process.

MCPD's current record management system, EJustice, is an oracle-based database system that was acquired in 2004 and has an expected lifespan of seven to nine years. While the system has been stabilized and is expected to remain functional until a new system is implemented, the current system is unwieldy and inefficient for meeting current data reporting and analysis needs, such as submitted data to the FBI in the format required by the National Incident-Based Reporting System (NIBRS). Council staff also notes that the Office of Legislative Oversight, as part of the FY20 work plan, is reviewing Police Data to describe the specific types of data that are collected by the Police Department.<sup>3</sup> Additional information may be available about police data capabilities once that report is complete.

It would be helpful for the Joint Committee to understand the full scope of County public safety records management systems and how they interoperate, if at all. For example, EJustice used to be linked to the Department of Correction and Rehabilitation's records management system, but that this link was severed when DOCR replaced its own aging records system. It is important for any new RMS to be able to capture DOCR data, particularly during the booking process at the Central Processing Unit. Further, the new RMS will be used by both MCPD and the Sheriff's Office. *Council staff recommends that the Joint Committee review the interoperability of County public safety records management systems and how MCPD's new RMS could facilitate more efficient data collection and analysis with other agencies.*

### Council Staff Recommendation

Council staff recommends approval as submitted by the Executive.

<b>This packet contains:</b>	©
Recommended FY21-26 PSSM CIP	1-3
Approved FY19-24 PSSM CIP	4-6
PSSM Radio System Infrastructure Project Update (02/26/20)	7-15
DTS Responses to Questions	16-20

<sup>3</sup> [Office of Legislative Oversight FY20 Work Program](#)



# Public Safety System Modernization (P340901)

<b>Category</b>	General Government	<b>Date Last Modified</b>	01/06/20
<b>SubCategory</b>	County Offices and Other Improvements	<b>Administering Agency</b>	County Executive
<b>Planning Area</b>	Countywide	<b>Status</b>	Ongoing

## EXPENDITURE SCHEDULE (\$000s)

Cost Elements	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
Planning, Design and Supervision	10,028	3,976	5,567	485	17	468	-	-	-	-	-
Construction	32,370	2,872	29,228	270	270	-	-	-	-	-	-
Other	71,096	69,109	-	1,987	1,987	-	-	-	-	-	-
<b>TOTAL EXPENDITURES</b>	<b>113,494</b>	<b>75,957</b>	<b>34,795</b>	<b>2,742</b>	<b>2,274</b>	<b>468</b>	-	-	-	-	-

## FUNDING SCHEDULE (\$000s)

Funding Source	Total	Thru FY19	Est FY20	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26	Beyond 6 Years
Contributions	32	32	-	-	-	-	-	-	-	-	-
Current Revenue: General	10,311	7,233	2,593	485	17	468	-	-	-	-	-
Federal Aid	2,947	2,947	-	-	-	-	-	-	-	-	-
G.O. Bonds	55,728	27,058	28,400	270	270	-	-	-	-	-	-
PAYGO	133	133	-	-	-	-	-	-	-	-	-
Short-Term Financing	44,343	38,554	3,802	1,987	1,987	-	-	-	-	-	-
<b>TOTAL FUNDING SOURCES</b>	<b>113,494</b>	<b>75,957</b>	<b>34,795</b>	<b>2,742</b>	<b>2,274</b>	<b>468</b>	-	-	-	-	-

## OPERATING BUDGET IMPACT (\$000s)

Impact Type	Total 6 Years	FY 21	FY 22	FY 23	FY 24	FY 25	FY 26
Maintenance	2,400	-	-	600	600	600	600
Program-Staff	800	-	-	200	200	200	200
Program-Other	1,056	-	-	264	264	264	264
<b>NET IMPACT</b>	<b>4,256</b>	-	-	<b>1,064</b>	<b>1,064</b>	<b>1,064</b>	<b>1,064</b>

## APPROPRIATION AND EXPENDITURE DATA (\$000s)

Appropriation FY 21 Request	2,274	Year First Appropriation	FY09
Appropriation FY 22 Request	468	Last FY's Cost Estimate	110,752
Cumulative Appropriation	110,752		
Expenditure / Encumbrances	100,407		
Unencumbered Balance	10,345		

---

## **PROJECT DESCRIPTION**

This program will provide for phased upgrades and modernization of computer aided dispatch (CAD), law enforcement records management system (RMS), and voice radio systems used primarily by the County's public safety first responder agencies including Police, Fire and Rescue, Sheriff, Corrections and Rehabilitation, and Emergency Management and Homeland Security. The modernization will include replacement of the current CAD/RMS system, replacement of public safety mobile and portable radios, upgrade of non-public safety mobile and portable radios, and replacement of core voice radio communications infrastructure. The previously approved Fire Station Alerting System Upgrades project (CIP #451000) was transferred to this project in order to coordinate the upgrades with the new CAD system. The alerting system upgrades will modernize the fire station alerting systems at 43 existing work sites, maintaining the ability to notify fire and rescue stations of emergencies. The alerting system, including audible and data signals, is essential for the notification of an emergency and the dispatch of appropriate response units from the County. As voice, data, and video are beginning to converge to a single platform, this project will provide a pathway to a modern public safety support infrastructure that will enable the County to leverage technology advances and provide efficient and reliable systems for first responders. This project will follow the methodologies and strategies presented in the Public Safety Systems Modernization (PSSM) plan completed in July 2009.

## **COST CHANGE**

Cost increase in FY21 and FY22 for desktop radio console, applications for messaging service and person location tracking to be activated on subscriber user radios, and staff charges.

## **PROJECT JUSTIFICATION**

The public safety systems require modernization. Prior to replacement, the CAD system was reaching the end of useful life and did not meet the County's current operational requirements, impacting the response time of first responders to 9-1-1 calls. The CAD Roadmap Study, completed in March 2009, recommended replacement of the system to address existing shortcomings and prepare for the next generation 9-1-1 systems. The manufacturer's support for the voice radio system had to be phased out as of December 31, 2009. Beyond that date, the manufacturer will only continue to provide system support on an as available basis, but will not guarantee the availability of parts or technical resources. The CAD modernization initiated a detailed planning phase that included the use of industry experts to assist with business process analysis and to develop detailed business and technical requirements for the new CAD system. This process allowed the County to incorporate lessons learned and best practices from other jurisdictions. As more of the County's regional partners migrate to newer voice technologies, it will affect interoperable voice communications. To ensure that the County maintains reliable and effective public safety (voice radio) communications for the operations of its first responders and to sustain communications interoperability for seamless mutual aid among its regional partners, the County needed to implement a project to upgrade and modernize its portable and mobile radio units and subsequently the radio voice communications infrastructure. Acceleration of the public safety radio purchases was initiated to take advantage of a Partial Payment in Lieu of Re-Banding offer from Sprint/Nextel toward the financing of new, upgraded, P-25 compliant public safety radios and to meet the Federal Communications Commission (FCC) mandated 800 MHZ frequency rebanding requirements for nationwide public safety radio frequency interoperability. Now, the installation of the new core radio communication infrastructure is needed. The fire station alerting system upgrades were identified as a need under Section 5 of the MCFRS Master Plan (adopted by the County Council in October 2005) and detailed in the Station Alerting and Public Address (SA/PA) System for Fire/Rescue Stations, Rev 1, 2006. This project allows for the continuous and seamless functioning of the alerting systems within each fire station. A preliminary survey by DTS of existing conditions at all stations revealed system-wide concerns, including inadequate spare parts inventory and lack of available maintenance support for alerting systems.

## **OTHER**

---

\$20.936 million was appropriated in FY11 to purchase P-25 compliant radios that allowed the County to complete immediate re-banding within the 800 MHz frequency as required by the FCC. The radio replacement program includes the M-NCPPC Montgomery County Park Police. The future purchase of public safety radios (other than to replace broken equipment) must be able to be supported by a P25 Phase-2 compliant infrastructure. The use of State of Maryland infrastructure will be aggressively pursued in order to minimize costs to Montgomery County. The CAD procurement request will reflect the County's interest in maintaining the station alerting functionality at the current level or better through the CAD system. The RFP for CAD replacement will include replacement of the following systems: CAD, mapping, and the existing Law Enforcement Records Management and Field Reporting systems. Coordination with participating department/agencies and regional partners will continue throughout the project.

## **FISCAL NOTE**

Funding in FY09 included Urban Area Security Initiative (UASI) grant funding of \$2.055 million and Fire Act grant funding of \$988,000. Funding schedule reflects FY18 supplemental adding \$32,000 in Contributions for additional equipment required for Local Fire Rescue Departments (LFRDs). FY18 funding switch is due to a transfer of Current Revenue General for \$283,000 from Technology Modernization (MCG) project offset by an equal reduction in Short Term Financing.

## **COORDINATION**

PSSM Executive Steering Committee, Executive Program Directors, Department of Technology Services, Department of Police, Montgomery County Fire and Rescue Service, Sheriff's Office, Department of Correction and Rehabilitation, Office of Emergency Management and Homeland Security, Department of Transportation, Department of Liquor Control, Montgomery County Public Schools (MCPS), Maryland-National Park and Planning Commission (M-NCPPC) Park Police, Washington Metropolitan Area Transit Authority (WMATA)





# Public Safety System Modernization (P340901)

<b>Category</b>	General Government	<b>Date Last Modified</b>	01/11/19
<b>SubCategory</b>	County Offices and Other Improvements	<b>Administering Agency</b>	County Executive
<b>Planning Area</b>	Countywide	<b>Status</b>	Ongoing

## EXPENDITURE SCHEDULE (\$000s)

Cost Elements	Total	Thru FY18	Rem FY18	Total 6 Years	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Beyond 6 Years
Planning, Design and Supervision	9,543	3,379	5,229	935	935	-	-	-	-	-	-
Construction	33,594	2,635	15,859	15,100	15,100	-	-	-	-	-	-
Other	67,615	67,615	-	-	-	-	-	-	-	-	-
<b>TOTAL EXPENDITURES</b>	<b>110,752</b>	<b>73,629</b>	<b>21,088</b>	<b>16,035</b>	<b>16,035</b>	-	-	-	-	-	-

## FUNDING SCHEDULE (\$000s)

Funding Source	Total	Thru FY18	Rem FY18	Total 6 Years	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24	Beyond 6 Years
Contributions	32	32	-	-	-	-	-	-	-	-	-
Current Revenue: General	9,826	6,719	2,172	935	935	-	-	-	-	-	-
Federal Aid	2,947	2,947	-	-	-	-	-	-	-	-	-
G.O. Bonds	55,591	25,752	16,739	13,100	13,100	-	-	-	-	-	-
Short-Term Financing	42,356	38,179	2,177	2,000	2,000	-	-	-	-	-	-
<b>TOTAL FUNDING SOURCES</b>	<b>110,752</b>	<b>73,629</b>	<b>21,088</b>	<b>16,035</b>	<b>16,035</b>	-	-	-	-	-	-

## OPERATING BUDGET IMPACT (\$000s)

Impact Type	Total 6 Years	FY 19	FY 20	FY 21	FY 22	FY 23	FY 24
Maintenance	3,600	600	600	600	600	600	600
Program-Staff	1,200	200	200	200	200	200	200
Program-Other	1,584	264	264	264	264	264	264
<b>NET IMPACT</b>	<b>6,384</b>	<b>1,064</b>	<b>1,064</b>	<b>1,064</b>	<b>1,064</b>	<b>1,064</b>	<b>1,064</b>

## APPROPRIATION AND EXPENDITURE DATA (\$000s)

Appropriation FY 20 Request	(96)	Year First Appropriation	FY09
Cumulative Appropriation	110,848	Last FY's Cost Estimate	110,848
Expenditure / Encumbrances	98,889		
Unencumbered Balance	11,959		

## PROJECT DESCRIPTION

---

This program will provide for phased upgrades and modernization of computer aided dispatch (CAD), law enforcement records management system (LE RMS), and voice radio systems used primarily by the County's public safety first responder agencies including Police, Fire and Rescue, Sheriff, Corrections and Rehabilitation, and Emergency Management and Homeland Security. The modernization will include replacement of the current CAD/LE RMS system, replacement of public safety mobile and portable radios, upgrade of non-public safety mobile and portable radios, and replacement of core voice radio communications infrastructure. The previously approved Fire Station Alerting System Upgrades project (CIP #451000) was transferred to this project in order to coordinate the upgrades with the new CAD system. The alerting system upgrades will modernize the fire station alerting systems at 43 existing work sites, maintaining the ability to notify fire and rescue stations of emergencies. The alerting system, including audible and data signals, is essential for the notification of an emergency and the dispatch of appropriate response units from the County. As voice, data, and video are beginning to converge to a single platform, this project will provide a pathway to a modern public safety support infrastructure that will enable the County to leverage technology advances and provide efficient and reliable systems for first responders. This project will follow the methodologies and strategies presented in the Public Safety Systems Modernization (PSSM) plan completed in July 2009.

## **COST CHANGE**

Reduction in Federal Aid of \$96,000.

## **PROJECT JUSTIFICATION**

The public safety systems require modernization. The CAD system is reaching the end of useful life and does not meet the County's current operational requirements, impacting the response time of first responders to 9-1-1 calls. The CAD Roadmap Study, completed in March 2009, recommended replacement of the system to address existing shortcomings and prepare for the next generation 9-1-1 systems. The manufacturer's support for the voice radio system has begun to be phased out as of December 31, 2009. Beyond that date, the manufacturer will only continue to provide system support on an as available basis, but will not guarantee the availability of parts or technical resources. The CAD modernization has initiated a detailed planning phase that included the use of industry experts to assist with business process analysis and to develop detailed business and technical requirements for the new CAD system. This process will allow the County to incorporate lessons learned and best practices from other jurisdictions. As more of the County's regional partners migrate to newer voice technologies, it will affect interoperable voice communications. To ensure that the County maintains reliable and effective public safety (voice radio) communications for the operations of its first responders and to sustain communications interoperability for seamless mutual aid among its regional partners, the County needs to implement a project to upgrade and modernize its portable and mobile radio units and subsequently the radio voice communications infrastructure. Acceleration of the public safety radio purchases was initiated to take advantage of a Partial Payment in Lieu of Re-Banding offer from Sprint/Nextel toward the financing of new, upgraded, P-25 compliant public safety radios and to meet the Federal Communications Commission (FCC) mandated 800 MHz frequency rebanding requirements for nationwide public safety radio frequency interoperability. Now, the installation of the new core radio communication infrastructure is needed. The fire station alerting system upgrades were identified as a need under Section 5 of the MCFRS Master Plan (adopted by the County Council in October 2005) and detailed in the Station Alerting and Public Address (SA/PA) System for Fire/Rescue Stations, Rev 1, 2006. This project allows for the continuous and seamless functioning of the alerting systems within each fire station. A preliminary survey by DTS of existing conditions at all stations revealed system-wide concerns, including inadequate spare parts inventory and lack of available maintenance support for alerting systems.

## **OTHER**

\$20.936 million was appropriated in FY11 to purchase P-25 compliant radios that allowed the County to complete immediate re-banding within the 800 MHz frequency as required by the FCC. The radio replacement program includes the M-NCPPC Montgomery County Park Police. The future purchase of public safety radios (other than to replace broken equipment) must be able to be supported by a P25 Phase-2 compliant infrastructure. The use of State of Maryland infrastructure will be aggressively pursued in

---

order to minimize costs to Montgomery County. The CAD procurement request will reflect the County's interest in maintaining the station alerting functionality at the current level or better through the CAD system. The RFP for CAD replacement will include replacement of the following systems: CAD, mapping, and the existing Law Enforcement Records Management and Field Reporting systems. Coordination with participating department/agencies and regional partners will continue throughout the project.

## **FISCAL NOTE**

Funding in FY09 included Urban Area Security Initiative (UASI) grant funding of \$2.055 million and Fire Act grant funding of \$988,000. Funding schedule reflects FY18 supplemental adding \$32,000 in Contributions for additional equipment required for Local Fire Rescue Departments (LFRDs). FY18 funding switch is due to a transfer of Current Revenue General for \$283,000 from Technology Modernization (MCG) project offset by an equal reduction in Short Term Financing.

## **COORDINATION**

PSSM Executive Steering Committee, Executive Program Directors, Department of Technology Services, Department of Police, Montgomery County Fire and Rescue Service, Sheriff's Office, Department of Correction and Rehabilitation, Office of Emergency Management and Homeland Security, Department of Transportation, Department of Liquor Control, Montgomery County Public Schools (MCPS), Maryland-National Park and Planning Commission (M-NCPPC) Park Police, Washington Metropolitan Area Transit Authority (WMATA)

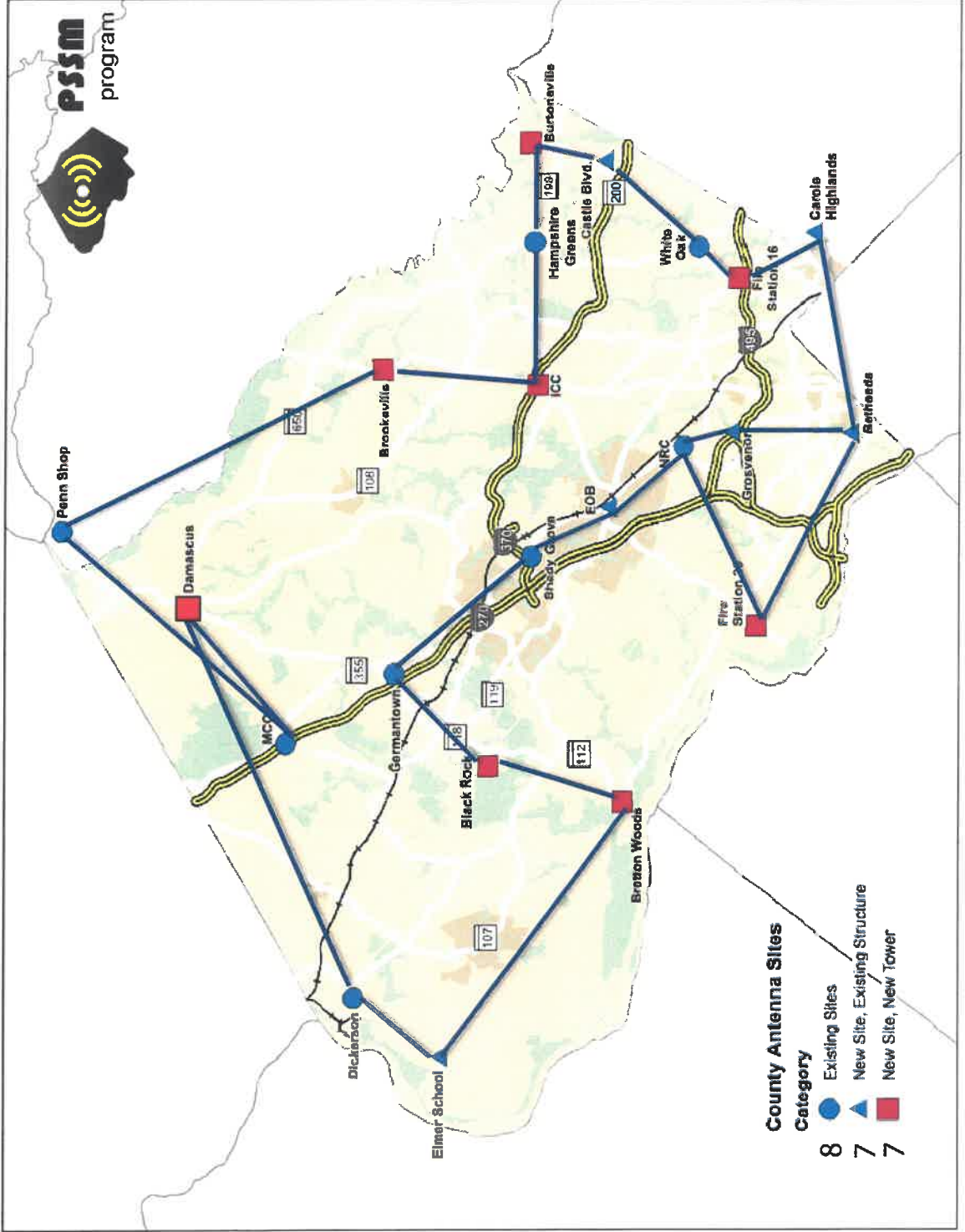
# Public Safety Systems Modernization Program (PSSM)

## Radio System Infrastructure Project Update

February 26, 2020



# Radio System Site Map



# PSSM RSIP - 22 Radio System Site Status

## Existing Sites

- ✓ Dickerson
- Germantown
- Hampshire Greens
- MCCF
- NRC
- ✓ Penn Shop
- ✓ Shady Grove
- White Oak

## New Sites

- Damascus
- ✓ Bethesda
- ✓ Carole Highlands
- ✓ Elmer School
- EOB
- Grosvenor
- ✓ Castle Blvd.
- ✓ Burtonsville
- Bretton Woods
- Brookeville
- Fire Station 16
- ✓ Fire Station 30
- ICC (State tower / co-locating)
- Black Rock

● medium risk for Dec 2020 Cutover

✓ all civil work complete



## Greenfield Sites



**PSSM**  
program

- **Black Rock** –
  - Pepco and Motorola were able to reach agreement on the Right of Entry (ROE). The ROE was signed by Motorola on Feb. 20, 2020 and waiting for Pepco's final acceptance. M-NCPPC Planning hearing tentatively scheduled on March 26, 2020.
- **Bretton Woods** –
  - The building permit (BP) and the sediment control permit are targeted to be issued by Feb. 28, 2020.
- **Brookeville** –
  - M-NCPPC Planning hearing scheduled on February 27, 2020.
- Damascus** –
  - M-NCPPC Planning hearing scheduled on February 27, 2020.



## Greenfield Sites (cont.)



**PSSM**  
program

### ● **Fire Station 16** –

- M-NCPPC Planning hearing scheduled on March 05, 2020.

### **ICC (State)** –

- MD FIRST waiting for the building permit from Maryland Department of the Environment (MDE) and will start construction when received. The tower and shelter building have been ordered.

\* These sites have been added to the “medium risk for Dec 2020 Cutover” since the last update





# Site Risks and Mitigation Strategy



**PSSM**  
program

Challenge or Risk (Medium Risk)	Mitigation Strategy
<ul style="list-style-type: none"> <li>◆ Black Rock, Brookville, and FS 16: M-NCPPC Planning hearings.</li> </ul>	<ul style="list-style-type: none"> <li>◇ Motorola's vendor (NB&amp;C) contacts Planning regularly to get updates and to answer any questions. M-NCPPC Planning hearings have been scheduled.</li> </ul>
<ul style="list-style-type: none"> <li>◆ Black Rock, Bretton Woods, Brookeville, and FS 16: Building permits</li> </ul>	<ul style="list-style-type: none"> <li>◇ The PSSM radio project team has weekly meetings with DPS. Communication and escalations channels have been established and working well.</li> </ul>
<ul style="list-style-type: none"> <li>◆ Black Rock: Right of Entry (ROE) Agreement with Pepco</li> </ul>	<ul style="list-style-type: none"> <li>◇ Pepco delivered the ROE on Jan. 13, 2020. Pepco and Motorola were able to reach agreement on the ROE after numerous senior level executive discussions. The ROE was signed by Motorola on Feb. 20, 2020 and waiting for Pepco's final acceptance.</li> </ul>
<ul style="list-style-type: none"> <li>◆ Damascus: Weather (salt dome)</li> </ul>	<ul style="list-style-type: none"> <li>◇ Site being used by the Department of Transportation (DoT) to store salt and snowplows. Actively coordinating tower construction and other activities with DoT operations.</li> </ul>



## Non-Greenfield Sites



- EOB –Construction started on Jan. 18, 2020. The County decided on Feb. 14, 2020 to relocate the HVAC condenser units. The units will be set on a new platform installed on existing I-beams. A portable A/C unit will be acquired so installation of the radio system equipment can occur on schedule. This is a temporary solution and Motorola is developing the quote and timeline for permanent installation of the relocated units.
- Germantown – Shelter delivered on Feb. 08, 2020. The meter socket has been installed and the conduit is targeted to be completed by Feb. 28, 2020.
- Grosvenor – Shelter construction continues on the rooftop and is planned to be completed by March 16, 2020. The plumbing permit for the generator gas pipes was received on Feb. 20, 2020. Trenching and pipe installation being scheduled. Washington Gas will schedule the connection, which will cause a brief gas shutdown of the building.
- Hampshire Greens – The electrical has been approved. The new soil boring report was completed on Feb. 21, 2020. The foundation drawings will be updated to reference the new soil report and resubmitted to DPS by Feb. 25, 2020.
- MCCF – HVAC vendor replaced new compressor fan motor on Unit 1 on Feb. 18, 2020. It was determined that Unit 2’s compressor fan motor will need to be replaced too.
- NRC – The Federal GSA contractor finally corrected the installation of the Lexan wall panels. The County’s crane lift day is being scheduled for Feb. 29, 2020.
- White Oak – The crane lift was completed on Feb. 19, 2020. The shelter platform assembly is underway.



## Sites – Civil Work Completed



**PSSM**  
program

- **Bethesda**
- **Burtonsville**
- **Carole Highlands**
- **Castle Blvd.**
- **Dickerson**
- **Elmer School**
- **Fire Station 30**
- **Penn Shop**
- **Shady Grove**

\* This site has been added to completed list since the last update

## CIP review questions

To inform GO&PS Committees Work session

10:30am on February 27 at 7CHR

### Public Safety System Modernization (P340901)

2020 ACTUAL \$34.8m

2021 REQUESTED \$2.3m (and \$0.5m in 2022)

- 1. Is the total radio system and antenna deployment on schedule to be operational by December 2020? If not, what are the plans for December 2020 operations?**

On target for a radio system cutover in December. The project team continues to work and resolve issues. The cutover in December will require all aspects of the remaining M-NCPPC Planning hearings, building permits issuance, construction site work tasks, and various layers of radio system testing to proceed nearly flawlessly.

- 2. The Executive is requesting an additional \$2.7m appropriation; what are the reasons for this increase in the amount already allocated to this project?**

Increased funding in the Public Safety Systems Modernization project is to acquire desktop radio consoles for the Alternative Emergency Communications Center. This is needed to simplify and streamline operations by having the same equipment at both the Emergency Communications Center and the Alternative Communications Center.

In addition, funding is requested to purchase the Advanced Astro Messaging and Responder Location solution. It will greatly improve the accuracy of personnel locations and reporting times for incident responses. It will utilize the new public safety radio system infrastructure. It will integrate the CAD system and personnel together where they have been separated in the past due to technological limitations. The messaging feature will allow first responders to accurately status themselves when they reach the emergency, and accurately report their locations (automatically) when they are away from their actual vehicles. These features have become an absolute necessity for law enforcement and firefighter safety as currently the systems only report the location of the vehicle and not the actual responders. The addition of the Astro Messaging features will inevitably save time in response to emergencies, provide a greater level of reporting to our customers based on real times, and provide a blanket of safety that cannot be obtained elsewhere.

16

- 3. If the system is to meet the promised cut over date of December 2020, what additional work remains to be done that requires \$0.5m of new appropriation in 2021?**

The funding request in FY22 is for the Public Safety Systems Modernization records management system (RMS) project. It is targeted to be completed in FY22. The RMS project team completed a request for expressions of interest (REOI) which resulted in a pre-qualified list of vendors that can compete in the RFP process. The additional funding is for project resources dedicated to the implementation of this last PSSM Program component.

Master Lease: Digital Evidence Data Storage (P342001)

2020 ACTUAL \$750k

2021 REQUESTED \$487k

- 1. Last year, Council was told the additional data storage is a temporary solution; is there progress in FY20 towards a permanent solution, and what does it look like?**

There are multiple issues and storage needs. A permanent solution would involve being able to link all digital evidence files to JustWare using custom software that provided a case view of digital evidence. It would also include suitable network bandwidth. Storage needs are expected to continue to grow based on changes in technology which result in ever larger digital evidence files. Progress has been made toward linking some files thereby eliminating some storage requirements.

a.) Issue: Additional storage was needed for JustWare in order to ingest body worn camera video, interview video and in car camera video so that it could be shared through the eDiscovery portal.

Status: Partially Resolved. Additional storage was added to JustWare and implemented. Additional analysis is required to determine the best approach to link files between Evidence.com and JustWare. This will allow video to be available through the eDiscovery portal without having to ingest and store it a second time in JustWare. This link will apply only to body worn camera video, interview room video and in-car video.

b). The Electronic Crimes Unit generates large volumes of data taken from cell phones and laptops as part of case investigations. The volume has continued to grow at faster rates than anticipated due to rapid changes in technology (larger cell phone and computer memories, 8k video, etc.). Some of this data is shared with the SAO via flash drives or shared drives. This data must be ingested into JustWare in order to share it through eDiscovery. This will continue to increase the storage needs of

JustWare unless we develop a solution that allows linking of files. Such a solution would need to include front end software to manage the files.

Note: Some of the data generated by ECU is not shared because it is considered contraband (i.e. child pornography). Legally they cannot share this data; legally they must share all other data.

Status: Not resolved. The \$487K funding request will allow ECU to store data for new cases for perhaps three more years. It will not assist with any storage needs JustWare will have as a result of this type of data. Nor will this funding facilitate sharing of files more easily.

c). The Electronic Crimes Unit needs increased network bandwidth in order to access and analyze files. Staff spend a significant amount of time waiting for files to be accessed due to them residing at EOB. The servers could be moved to Police HQ but they would still require increased network bandwidth.

Status: Not resolved. The original funding request included \$50k for network analysis and design.

d). The electronic crimes unit has no backup of its data.

Status: No funding has been requested to address this issue. Existing servers could be used as backup of active cases which could be put on newer servers with improved network access. Older cases could be stored in the cloud.

e). Crime scene photos, County CCTV footage used as part of an investigation, private sector CCTV footage and other digital evidence are currently stored in the cloud on the police QTel evidence system. This system is primarily used for the management of physical evidence stored in evidence rooms. However, digital evidence can be attached to cases. This evidence is then shared with the SAO via shared drives and flash drives. This requires storage in JustWare since there is no linking of files; the volume of this type of evidence is not as great as that contained in Evidence.com or generated by ECU.

Status: The current funding request does not include funds to facilitate linking QTel and JustWare; therefore, digital evidence will continue to be stored redundantly in JustWare in order to make it accessible to defense counsel through eDiscovery.

**2. Are there efforts to develop a comprehensive data retention policy that covers both on-premises, as well as cloud-based storage solutions? What are the parameters for such a policy?**

There are retention policies in effect. The SAO follows the retention policies set forth by the State of Maryland Judiciary for District Court and Circuit Courts. The policy

(18)

would be the same for on-premise and for cloud storage, the policy is based on the case type not so much as where the data resides. The police follow the same policies as the SAO.

Cases such as homicide or rape cases require retention periods of 99 years.

Note that retention policies for body worn camera and in-car video that never become part of a case are less because the video is NOT part of a criminal case. Once there is a criminal case, different state mandated retention policies for all evidence take effect.

**3. What new technology options are being explored for the permanent solution?**

As explained above under Question One, the SAO is currently investigating the ability to link files (BWC video) between Evidence.com and the JustWare CMS; this would help reduce the need for future storage for these types of files

The SAO is in contact with the JustWare vendor to investigate their cloud provided services and determine how these services will meet our ongoing business need and at what cost.

Members of the DEMD Strategic Working Group attended a presentation by Information Builders to discuss a permanent integrated solution which would allow linking of files and a common case view. Some components of the solution would be based on licensing of various Information Builder tools, some of which are used by the Police Department and IJIS. Conceivably this could replace the eDiscovery portal or the eDiscovery portal could be updated using this type of technology. Additional analysis will be required to develop this concept and a potential business solution.

ECU believes that older case files could possibly be stored in the Cloud. However, this would still require the development of some type of software to effectively manage and access the cases.

**4. MCPS has a significant data storage challenge from school bus cameras, as do other agencies from video, as well as other data capture devices. What is the position of the ITPCC CIO subcommittee on an enterprise strategy for a potential shared solution to the increasing costs for storing data?**

Shared solutions which would leverage buying power to reduce costs are not likely because each type of video is designed for a unique purpose and has unique software to manage it. The software is generally tied into the storage solution. For example, the companies that make school bus cameras do not make body worn video cameras or in-car cameras and vice versa. It would not be cost effective to store all school bus

data in evidence.com; it could be possible to store school bus data that becomes part of a criminal case in evidene.com - this would well under 1% of all school bus data generated.