General Government

Technology Services

FiberNet
(P509651)

Category	General Government	Date Last Modified	01/08/20
SubCategory	Technology Services	Administering Agency	Technology Services
Planning Area	Countywide	Status	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	12,450	2,159	1,291	9,000	2,500	2,500	1,000	1,000	1,000	1,000	-
Land	1,961	4	353	1,604	302	302	250	250	250	250	-
Site Improvements and Utilities	17,535	16,650	85	800	500	100	50	50	50	50	-
Construction	15,719	1,503	2,320	11,896	2,350	2,370	2,088	1,696	1,696	1,696	-
Other	42,322	39,077	245	3,000	500	500	500	500	500	500	-
TOTAL EXPENDITURES	89,987	59,393	4,294	26,300	6,152	5,772	3,888	3,496	3,496	3,496	-

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	1,611	1,611	-	-	-	-	-	-	-	-	-
Current Revenue: Cable TV	77,107	46,769	4,038	26,300	6,152	5,772	3,888	3,496	3,496	3,496	-
Current Revenue: General	256	-	256	-	-	-	-	-	-	-	-
G.O. Bonds	8,866	8,866	-	-	-	-	-	-	-	-	-
PAYGO	2,147	2,147	-	-	-	-	-	-	-	-	-
TOTAL FUNDING SOURCES	89,987	59,393	4,294	26,300	6,152	5,772	3,888	3,496	3,496	3,496	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	3,081	Year First Appropriation	FY96
Appropriation FY 22 Request	3,496	Last FY's Cost Estimate	82,995
Cumulative Appropriation	68,938		
Expenditure / Encumbrances	61,406		
Unencumbered Balance	7,532		

PROJECT DESCRIPTION

FiberNet CIP provides for the planning, design, and installation of a countywide electro-optical fiber communication network with the capacity to support voice, public-safety, traffic management, data, Internet access, wireless networking (including public WiFi) and video transmissions among Montgomery County Government (MCG), Montgomery County Public Schools (MCPS), Montgomery College (MC), Maryland National Capital Park and Planning Commission (M-NCPPC), Housing Opportunities Commission (HOC) and Washington Suburban Sanitary Commission (WSSC) facilities. Video transmission will include distribution of public, education, government access channel and selected cable programming. FiberNet is the communications backbone for the Public Safety Radio and

Public Safety Mobile Data Systems (collectively, Public Safety Communications System (PSCS)), DOT's Advanced Traffic Management System (ATMS), and future technology implementations (including 800 MHz IP public safety radio). FiberNet's outside physical plant has a practically unlimited useful life. Upgrades and replacements to electronic components in the core and at user sites will be required periodically throughout the service life. Each generation of FiberNet electronic components have an estimated useful life of at least 10 years. FiberNet I is a legacy network still used to support specific public safety and traffic communications, with a plan to phase out at or prior to completion of the Public Safety System Modernization. FiberNet II is being used to support all County communications services including 311, e-mail, Internet and local cable channel video. FiberNet III is in the pilot and planning phase. When implemented, FiberNet III equipment will allow faster, higher capacity, more reliable means of optical networking. Using optical technology, all three generations of FiberNet can be run on the same outside physical plant.

ESTIMATED SCHEDULE

At the end of FY19, FiberNet reached 476 locations. Based on the current funding schedule, FiberNet is scheduled to reach 526 locations by the end of FY20. The Traffic Management network reaches over 220 traffic cameras and 880 traffic signals, and backup power to keep traffic signals operations during large scale power outages have been added at 428 traffic signals. By the end of FY22 - and including sites connected by private carriers and institutional partners - FiberNet is expected to have a total of more than 1,845 sites on the network serving a tremendous variety of facilities from pedestrian beacons to public schools to fire stations to wine and liquor stores, to major campus networks and large multi-story office buildings. The primary focus of the FY21-22 CIP will be to upgrade edge and core equipment to exponentially expand capacity within FiberNet and to edge locations, upgrade hub-site HVAC and back-up power supplies, and to leverage inter-jurisdictional connections and Ashburn data center connections, to enable cost-effective future technology public-private partnerships with major research and educational institutions, regional broadband service providers, and large employers.

COST CHANGE

Cost increase due to the addition of FY25 and FY26 to this ongoing level-of-effort project.

PROJECT JUSTIFICATION

FiberNet is a critical infrastructure asset providing communication services and applications to every agency in Montgomery County. As more services are offered electronically (e-applications, e-payment, e-document, e-storage, e-learning), and more services require cloud-access, it is critical that every County location has robust access to FiberNet, and that FiberNet be secure, reliable, and always-on. The FiberNet CIP also supports and expands the ATMS system and networks that monitor, control and collect information along the transportation system, which includes traffic signals, traffic surveillance cameras, lane control systems, traffic adaptive system, back-up power monitoring, and Bus Transit Signal Priority. By leveraging FiberNet, the ATMS has diverse network paths to eliminate single points of failure.

FISCAL NOTE

The FiberNet CIP originally was funded by the General Fund. As restricted-use Cable Fund PEG/I NET capital grant funding grew, the Cable Fund became the primary funding source for FiberNet. Cable revenues are declining as cord cutting increases, and may be negatively impacted by federal government efforts to restrict the authority of local governments to collect revenue for use of public assets by communications providers. Funding for future FiberNet CIPs may need to be supplemented by the General Fund. FiberNet operations and maintenance (O&M) activities are a critical component of FiberNet's utility but are not funded by the FiberNet CIP. Federal regulatory actions, or the outcome of renegotiations when the Comcast and Verizon franchises expire in 2021, may negatively impact the Cable Fund. In FY16 funds were also used to support government and educational ultraMontgomery broadband initiatives.

DISCLOSURES

Expenditures will continue indefinitely.

COORDINATION

DTS, Department of Transportation, Advanced Transportation Management System Project, Montgomery County Public Schools, MNCPPC, MC, HOC, WSSC, PSCS , Information Technology Policy Coordination Committee (ITPCC), ITPCC CIO Subcommittee, and Interagency Technology Advisory Group (ITAG); and supports ATMS, Traffic Signal System Modernization (TSSM) and Traffic Signal CIPs.

Master Lease: Digital Evidence Data Storage
(P342001)

Category	General Government	Date Last Modified	01/04/20
SubCategory	Technology Services	Administering Agency	Technology Services
Planning Area	Countywide	Status	Planning Stage

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
Other	1,237	-	750	487	487	-	-	-	-	-	-
TOTAL EXPENDITURES	1,237	-	750	487	487	-	-	-	-	-	-

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
Short-Term Lease Financing	1,237	-	750	487	487	-	-	-	-	-	-
TOTAL FUNDING SOURCES	1,237	-	750	487	487	-	-	-	-	-	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	487	Year First Appropriation	FY20
Appropriation FY 22 Request	-	Last FY's Cost Estimate	750
Cumulative Appropriation	750		
Expenditure / Encumbrances	-		
Unencumbered Balance	750		

PROJECT DESCRIPTION

The volume of digital evidence has grown exponentially in recent years with the implementation of body worn cameras and increased storage capacity of personal devices including cellphones and laptops. To manage the volume of data, the County requires additional storage capacity through the use of network attached storage and additional servers.

ESTIMATED SCHEDULE

Hardware for the State's Attorneys Office will be purchased in FY20. Hardware for Montgomery County Police Department (MCPD) will be purchased in FY21.

COST CHANGE

Cost increase is needed to provide the Electronic Crimes Unit (ECU) within the Montgomery County Police Department (MCPD) additional storage capacity until a long term solution is fully implemented. Funding allows for six A200s (Dell EMS ISILON Scaled Out Network Attached Storage), storage, and warranty.

PROJECT JUSTIFICATION

This investment addresses FY21 data storage requirements as the County develops a long-term solution.

FISCAL NOTE

This project provides appropriation authority for a purchase funded through the Master Lease program. Master Lease payments will be appropriated through the FY21 Operating Budget.

COORDINATION

Department of Technology Services, Department of Finance, State's Attorney's Office, and Montgomery County Police Department.

ultraMontgomery
(P341700)

Category	General Government	Date Last Modified	01/04/20
SubCategory	Technology Services	Administering Agency	Technology Services
Planning Area	Countywide	Status	Preliminary Design Stage

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	775	170	245	360	70	70	70	50	50	50	-
Construction	6,469	201	2,548	3,720	610	610	610	630	630	630	-
TOTAL EXPENDITURES	7,244	371	2,793	4,080	680	680	680	680	680	680	-

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
Current Revenue: Cable TV	7,244	371	2,793	4,080	680	680	680	680	680	680	-
TOTAL FUNDING SOURCES	7,244	371	2,793	4,080	680	680	680	680	680	680	-

APPROPRIATION AND EXPENDITURE DATA ($000s)

Appropriation FY 21 Request	680	Year First Appropriation	FY16
Appropriation FY 22 Request	680	Last FY's Cost Estimate	5,884
Cumulative Appropriation	3,164		
Expenditure / Encumbrances	752		
Unencumbered Balance	2,412		

PROJECT DESCRIPTION

The ultraMontgomery CIP provides for capital funding to support Montgomery County's economic development program. Funding will support planning, design,and construction of: (1) East County Fiber Hwy to provide regional interconnections north-south between White Oak and Howard County and east-west between Burtonsville and Rockville; (2) Great Seneca Fiber Hwy to provide shortest distance, low latency connection between Great Seneca and Ashburn, Virginia data centers; (3) White Oak Science Gateway Conduit Network to provide broadband conduit infrastructure in Viva White Oak and other White Oak commercial development projects; (4) Gigabit Innovation Conduit Network to provide conduit and fiber for wireline and wireless broadband networks in commercial areas of Montgomery County; (5) IoT (Internet of Things) and Advanced Wireless Testbeds to spur development and expansion of advanced wireless service companies, protective cybersecurity IoT applications and innovation in Montgomery County; (6) Purple Line Fiber to connect Montgomery County research and higher education facilities to MAX and Internet2 at University of Maryland, College Park.

ESTIMATED SCHEDULE

(1) East County Fiber Hwy Phase 1 (to Burtonsville) completed FY18; Phase 2 to Howard County to be completed in FY20; Phase 3 to Rockville to be completed in FY22. (2) Primary construction of Great Seneca Fiber Hwy to be completed in FY20, with fiber ring to alternate data centers in FY21-22, and additional extensions within Great Seneca in FY23-26. (3) White Science Gateway conduit construction will be performed concurrently with Viva White construction and is expected to begin in FY21-22. (4) Design for conduit in commercial areas is underway and outreach to potential private partners is in development. (5) Pilots IoT and advanced wireless will be developed in FY20 with scheduled deployment in FY21-22. (6) Purple Line utility relocation is underway in FY20, with fiber to be constructed in FY21, but is dependent on the Purple Line and third-party construction schedules.

COST CHANGE

Cost increase due to the addition of FY25 and FY26 to this ongoing level-of-effort project.

PROJECT JUSTIFICATION

ultraMontgomery is a broadband economic development program, designed to ensure that businesses in Montgomery have as much reliable, secure, and robust broadband service as they need to keep our economy moving at the speed of our ideas. ultraMontgomery supports infrastructure development and public private partnerships: to facilitate access to competitive broadband services in commercial buildings through strategic conduit network deployment and leasing of spare County fiber and conduit; and to facilitate access to the digital economy for underserved communities. ultraMontgomery supports business growth and innovation through network connectivity and partnerships, pilot projects for advanced wireless broadband, and cybersecurity innovation to keep wireless networks secure, with a specific focus on federal, state, research and higher education institutions, financial services, biotech/bioheath, IT services, media and similar high-bandwidth consuming companies.

COORDINATION

FiberNet (P509651); Purple Line Department of Transportation; Maryland-National Capital Park and Planning Commission; Montgomery College; WSSC; Information Technology Policy Coordination Committee; and Montgomery County Economic Development Corporation.