

GO Committee #4
March 3, 2016

Worksession

MEMORANDUM

March 1, 2016

TO: Government Operations and Fiscal Policy Committee
FROM: Dr. Costis Toregas, Council IT Adviser
SUBJECT: Capital Improvements Program – FiberNet P509651

The following are expected to attend:

Sonny Segal, Chief Information Officer, Department of Technology Services (DTS)
John Castner, FiberNet Project Manager, DTS
Phil Roter, Cable and Broadband Communications Administrator, DTS
Gary Thomas, ITPCC Staff
Dennis Hetman, Office of Management and Budget (OMB)

Staff Recommendation:

1. **Endorse** the Executive's recommendation of **\$4,193,000** for the FiberNet program and recommend its full funding to the Council with the following caveats:
 - a. The ultraMontgomery program is not included in this PDF and will be presented as a stand-alone program during subsequent budget submissions. This will preserve clarity among all stakeholders involved, and establish separate goals and required funding resources that can be tracked and evaluated.
 - b. The FiberNet budgeted activities for FY17 onward will be held harmless as the ultraMontgomery program is being established as a separate program with its own funding.
 - c. The Network Operating Center (NOC) will continue to be funded at the full level of \$910,000 as foreseen in the Preliminary 2017 Cable Plan favorably reviewed by the Committee on January 28, 2016.

Background

Approved by the Council in 1996, the FiberNet CIP provides for the planning, design, and installation of a Countywide electro-optical network infrastructure supporting voice, data, and video requirements for public safety, traffic management, Internet access, wireless networking, and network communication

requirements among the participating agencies that include 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. FiberNet is the communications backbone for the Public Safety Radio and Public Safety Mobile Data Systems (collectively, Public Safety Communications System (PSCS)) and for future technology implementations. FiberNet's outside physical fiber plant has a useful life well over 20 years. Upgrades and replacements to electronic components in the core network and at user sites will be required periodically throughout the service life. FiberNet electronic components have an estimated useful life of at least 7-10 years. FiberNet I is a legacy network still used to support specific public safety. 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 planning and pilot phase. When implemented, FiberNet III equipment will allow faster and higher capacity and a more reliable means of optical networking.

FiberNet II, based on MPLS technologies, is a state-of-the-art multiservice wide area network (Metropolitan WAN) platform with the capacity to deliver 100 megabit/second, one and ten gigabit per second WAN links to ITPCC participating agencies. FiberNet III planning anticipates significantly increased bandwidth requirements necessitating implementation of dense wave division multiplexing (DWDM) that enables multiple 10 gigabit channels per fiber strand, dramatically increasing utilization of fiber assets. DWDM solutions are currently being piloted for Montgomery College, WSSC, and Montgomery County E911 requirements. Selected FiberNet Hub sites are also being equipped with DWDM capabilities in response to the emerging needs of the participating agencies.

At the end of FY15, FiberNet reached 476 Locations. FiberNet is scheduled to reach 526 Locations by the end of FY16, 551 locations by the end of FY17, and 576 locations by the end of FY18. The Traffic Management network reaches over 210 traffic cameras and 850 traffic signals, with plans to add 200 pedestrian safety beacons. By the end of FY18, and including sites connected by private carriers and institutional partners, FiberNet is expected to have a total of more than 1,825 sites on the network. The FY16 ITPCC consensus recommendation remains to complete all MCPS elementary school and HOC connections, complete hub-site upgrades, add new sites, complete multi-year planning for FiberNet III implementation, and achieve compliance with ARRA grant requirements.

DTS is responsible for FiberNet project management, network operations, and maintenance of electronics on behalf of the participating agencies, while the Department of Transportation (DOT) is responsible for installation and maintenance of the fiber optic cable. Comcast, at the direction of DTS, provides dark fiber used to connect several locations to FiberNet. Connected sites include MCG departments/offices, public safety sites, Montgomery College campuses, MCPS elementary, middle, and high schools plus several administrative facilities, M-NCPPC sites, HOC sites, and WSSC sites, including the headquarters building in Prince Georges County. The municipalities of Takoma Park, Gaithersburg, and Rockville are on FiberNet as well as several cultural centers, including the American Film Institute (AFI), the Fillmore, Strathmore, Bethesda Performing Arts, the Convention Center, Olney Theatre, and Black Rock. Currently, FiberNet is focused on activating all ARRA Grant-funded sites, which includes the MCPS elementary schools and 21 HOC properties. The ITPCC FiberNet Governance Group Charter was approved on November 25, 2002 to establish interagency oversight and governance of FiberNet. On June 26, 2012, the ITPCC approved a Policy Guideline for Special Allocation of FiberNet Resources. This policy governs special fiber resource allocation decisions for FiberNet for all participating ITPCC agencies. ITPCC approved a special allocation request by Montgomery College for creation of a College Fiber Network that would permit MC communications traffic to be routed over dedicated optical fibers within FiberNet's physical plant on electronics owned and operated by the College. In December 2012,

the County and MC entered into a separate Memorandum of Understanding (MOU) to address the use and expansion of FiberNet by the College. In FY16, foundational documents and procedures are being created or updated by DTS, including: Concept of Operations (CONOPS), Agency Service Level Agreements (SLAs), agency customized Service Agreements (SAs), and Standard Operating Procedures. The FiberNet Network Operations Center (FiberNet NOC) initial operations capability was established by DTS on October 1, 2015. The Interagency FiberNet Configuration/Change Control Board (CCB) Charter was adopted by unanimous consent of the ITPCC on February 2, 2016.

CIP Request

© 1-3 are the Executive's request for the FiberNet program in the FY17-22 CIP.

The following Table reflects the financial commitments that are being made to the successful FiberNet program in FY17-22. Of great significance is the projected availability of \$21.2 million for CIP capital costs to expand the FiberNet infrastructure through at least FY21, enabling the realistic consideration of future initiatives now actively under consideration.

	FY17	FY18	FY19	FYFY	FY21	FY22
CIP Request	\$4,193	\$4,390	\$4,340	\$4,250	\$4,069	\$3,996
Preliminary Cable Plan*	\$4,193	\$4,390	\$4,340	\$4,250	\$4,069	NA

*FiberNet costs (in \$000s)

The ARRA Grant ended on August 31, 2013 and provided over \$11.1 million dollars in fiber construction and networking equipment for a matching County contribution of \$2.6 million, resulting in the addition of 102 new sites to FiberNet. The matching contribution was funded as part of the FY12 and FY13 FiberNet CIP and was composed of cash and in-kind matches. In FY14, Current Revenue General funding was shifted from the Information Technology: College (P856509) project to complete FiberNet expansion to College sites in accordance with the terms of the MOU. The City of Takoma Park and the Maryland Municipal League each contributed \$769,000 in FY15 for FiberNet projects in the County. There will be additional restricted-use Cable Fund PEG/I-NET capital grant funding available through the County's three cable franchise agreements because the County has demonstrated the continuing need for expansion and upgrade of the FiberNet network. Previously, funding for the FiberNet CIP was provided by the General Fund, Cable Fund cable franchise fees, and restricted-use Cable Fund PEG/I-NET capital grants. Funding for future years of the FiberNet CIP will be from restricted-use Cable Fund PEG/I-NET capital grants. FiberNet operations and maintenance (O&M) activities are a critical component of FiberNet's cost, but are not funded from the FiberNet CIP. Previously, FiberNet O&M expenses were funded by a Comcast FiberNet operations grant. In the renewed Comcast franchise agreement transmitted by the County Executive for Council approval, restricted-use grant funding available to support FiberNet O&M will be reduced, and a greater portion of FiberNet O&M will be funded by Cable Fund franchise fee revenue. The CIP project expenditure increase is funded by restricted-use Cable Fund PEG/I-NET capital grant revenue that the County has a legal obligation to spend on appropriate uses. FiberNet remains totally funded by the Cable Fund, and this reliance on external revenues for a critical asset should be examined as the County's own economic position permits reallocation of scarce resources.

Council staff have been informally advised that the ultraMontgomery program that was funded through Cable Plan revenues and organized under the FiberNet transfers will be developed as a stand-alone program with its own targets and budget authority. This is a welcome change as it will permit the FiberNet governance system to focus on the clearly delineated FiberNet work plan, while the ultraMontgomery initiative can unfold at its own speed and budget capacity. In addition, this will permit Council staff and OMB to make appropriate changes in the wording of the FiberNet PDF so that it more accurately reflects current conditions.

Technology Services

PROGRAM DESCRIPTION AND OBJECTIVES

The goals of the Department of Technology Services (DTS) are to promote effective use of automated information systems and telecommunications technology throughout the County government and ensure that the County's information systems and telecommunications capabilities are planned, developed, implemented, and maintained efficiently and effectively.

The objectives of the DTS capital improvements program are to connect information systems and telecommunications equipment within County buildings to the County's fiber optic network; and to facilitate voice, data, and video transmissions (e.g., Internet access, public-safety radio, traffic control and management) among Montgomery County Government, Montgomery County Public Schools, Montgomery College, Maryland National Capital Park and Planning Commission, Housing Opportunities Commission and Washington Suburban Sanitary Commission facilities.

HIGHLIGHTS

- At the end of FY15, FiberNet reached 476 locations. Based on the current funding schedule, FiberNet is scheduled to reach 526 locations by the end of FY16; 551 locations by the end of FY17; and 576 locations by the end of FY18.
- By the end of FY 18 - and including sites connected by the County (Department of Transportation), private carriers and institutional partners - FiberNet is expected to have a total of more than 1,825 sites on the network serving a tremendous variety of facilities from traffic signals and cameras, wine and liquor stores to major campus networks and large multi-story office buildings.
- Funds have been allocated in FY16 for the following ultraMontgomery initiatives: White Oak Science Gateway connecting the White Oak FiberNet hub to Fairland, Great Seneca Science Corridor providing interconnection to Ashburn to support Internet 2 for Montgomery College and the National Institute for Standards and Technology, and Federal Exchange supporting 100 gigabit networking between Federal agencies.
- Focus remains on performing hub-site upgrades, adding new sites, and constructing inter-jurisdictional connections to enable cost-effective future technology partnerships.
- FiberNet enables the County to create a secure, multi-agency shared network that is flexible and may be configured easily to satisfy agency and department requirements to deploy data, voice, and video applications requiring higher bandwidth.

PROGRAM CONTACTS

Contact Helen Ni of the Department of Technology Services at 240.777.2807 or Dennis Hetman of the Office of Management and Budget at 240.777.2770 for more information regarding this department's capital budget.

CAPITAL PROGRAM REVIEW

The Recommended FY17-22 Capital Improvements Program totals \$25.2 million over the six-year program. This is a \$9.1 million, or a 56.1 percent increase from the \$16.2 million contained in the approved FY15-20 capital program. Cost increases for the FiberNet project are due to the addition of FY21 and FY22 to this project, major hub relocations and upgrades, IP video distribution, registering and monitoring underground plant with Miss Utility, supporting Government and Educational ultraMontgomery broadband initiatives, and completing long-delayed new site constructions. Expenditure increases are funded by restricted-use Cable Fund PEG capital grant revenue that the County has a legal obligation to spend on appropriate uses. Portions of funds are intended to be used to support fiber to the University of Maryland along the Purple Line.

Fibernet (P509651)

Category General Government
Sub Category Technology Services
Administering Agency Technology Services (AAGE05)
Planning Area Countywide

Date Last Modified 11/17/14
Required Adequate Public Facility No
Relocation Impact None
Status Ongoing

	Total	Thru FY15	Est FY16	Total 6 Years	FY 17	FY 18	FY 19	FY 20	FY 21	FY 22	Beyond 6 Yrs
EXPENDITURE SCHEDULE (\$000s)											
Planning, Design and Supervision	7,245	3,046	0	4,199	731	724	719	705	614	705	0
Land	1,819	4	0	1,815	225	300	300	300	390	300	0
Site Improvements and Utilities	14,568	13,568	0	1,000	200	200	200	200	200	0	0
Construction	21,532	8,839	2,375	10,318	2,040	1,666	1,621	1,545	1,955	1,491	0
Other	33,840	24,210	1,723	7,907	997	1,500	1,500	1,500	910	1,500	0
Total	79,003	49,667	4,098	25,238	4,193	4,390	4,340	4,250	4,069	3,996	0

FUNDING SCHEDULE (\$000s)											
Cable TV	66,123	36,787	4,098	25,238	4,193	4,390	4,340	4,250	4,069	3,996	0
Contributions	1,624	1,624	0	0	0	0	0	0	0	0	0
Current Revenue: General	256	256	0	0	0	0	0	0	0	0	0
G.O. Bonds	4,074	4,074	0	0	0	0	0	0	0	0	0
PAYGO	6,926	6,926	0	0	0	0	0	0	0	0	0
Total	79,003	49,667	4,098	25,238	4,193	4,390	4,340	4,250	4,069	3,996	0

APPROPRIATION AND EXPENDITURE DATA (000s)

Appropriation Request	FY 17	4,193
Appropriation Request Est.	FY 18	4,390
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		53,765
Expenditure / Encumbrances		49,667
Unencumbered Balance		4,098

Date First Appropriation	FY 96
First Cost Estimate	
Current Scope	FY 17 79,003
Last FY's Cost Estimate	61,332

Description

FiberNet CIP provides for the planning, design, and installation of a county wide electro-optical 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. FiberNet is the communications backbone for the Public Safety Radio and Public Safety Mobile Data Systems (collectively, Public Safety Communications System (PSCS)), 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. 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 FY15, FiberNet reached 476 Locations. Based on the current funding schedule, FiberNet is scheduled to reach 526 Locations by the end of FY16; 551 locations by the end of FY17; and 576 locations by the end of FY18. The Traffic Management network reaches over 210 traffic cameras and 850 traffic signals with plans to add 200 pedestrian safety beacons. By the end of FY18 - and including sites connected by private carriers and institutional partners - FiberNet is expected to have a total of more than 1,825 sites on the network serving a tremendous variety of facilities from pedestrian beacons, wine and liquor stores to major campus networks and large multi-story office buildings. The focus remains on the completion of adding MCPS elementary schools, performing hub-site upgrades, adding new sites and constructing inter-jurisdictional connections to enable cost-effective future technology partnerships such as supporting fiber to the University of Maryland along the Purple Line and the Federal Exchange's 100G pilot.

Cost Change

Cost change is due to addition of FY21 and FY22 to this project, major hub relocations and upgrades, IP video distribution, registering and monitoring underground plant with Miss Utility, supporting Government and Educational ultraMontgomery broadband initiatives, and completing new site constructions. Portions of funds are intended to be used to support fiber to the University of Maryland along the Purple Line. Expenditure increase is funded by restricted-use Cable Fund PEG/I NET capital grant revenue that the county has a legal obligation to spend on appropriate uses.

Justification

Fibernet (P509651)

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) it is critical that every County location has robust access to FiberNet, and that FiberNet be secure, reliable, and always-on.

Fiscal Note

There will be more restricted-use Cable Fund PEG/I NET capital grant funding available through the County's three cable franchise agreements because the County has demonstrated the continuing need for expansion and upgrade of the FiberNet network. Previously, funding for the FiberNet CIP was provided by the General Fund, Cable Fund cable franchise fees, and restricted-use Cable Fund PEG/I NET capital grants. Funding for future years of the FiberNet CIP will be from restricted-use Cable Fund PEG/I NET capital grants. FiberNet operations and maintenance (O&M) activities are a critical component of FiberNet's utility but are not funded by the FiberNet CIP. O&M expenses have been partially funded by a Comcast FiberNet operations grant. In the renewed Comcast franchise transmitted by the County Executive for Council approval, restricted-use grant funding available to support FiberNet O&M will be reduced and a greater portion of FiberNet O&M will be funded by Cable Fund franchise fee revenue.

Coordination

DTS, Department of Transportation, Advanced Transportation Management System Project, Montgomery County Public Schools, M-NCPPC, MC, HOC, WSSC, PSCS, Information Technology Policy Coordination Committee (ITPCC), ITPCC CIO Subcommittee, and Interagency Technology Advisory Group (ITAG).

FY17 PRELIMINARY CABLE COMMUNICATIONS PLAN (in \$000's)

		App FY15	EST FY15	App FY16	Est FY16	Proj. FY17	Proj. FY18	Proj. FY19	Proj. FY20	Proj. FY21
1	BEGINNING FUND BALANCE	(422)	136	1,231	1,905	1,480	1,425	1,434	1,441	1,447
2	REVENUES									
3	Franchise Fees ¹	17,002	17,330	17,281	17,539	17,661	17,773	17,868	17,942	18,018
4	Gaithersburg PEG Contribution ²	175	177	168	173	170	167	165	164	164
5	PEG Operating Grant ^{1,2,3}	2,289	2,278	4,110	3,251	4,120	4,056	4,013	3,991	3,968
6	PEG Capital Grant ^{1,2,3}	6,277	6,559	6,298	6,563	6,517	6,647	6,747	6,814	6,882
7	FiberNet Operating & Equipment Grant ⁴	1,800	1,792	0	903	0	0	0	0	0
8	Interest Earned	0	8	11	11	0	0	0	0	0
9	TFCG Application Review Fees	120	140	150	150	150	150	150	150	150
10	Miscellaneous		10							
12	TOTAL ANNUAL REVENUES	27,663	28,293	28,019	28,590	28,617	28,793	28,943	29,061	29,182
13	TOTAL RESOURCES-CABLE FUND	27,241	28,429	29,250	30,495	30,098	30,218	30,377	30,503	30,630
14	EXPENDITURE OF RESTRICTED FUNDS⁵									
15	A. EXPENDITURE OF RESTRICTED CAPITAL FUNDS									
16	Municipal Capital Support⁶									
17	Rockville Equipment	894	923	946	956	978	997	1,012	1,022	1,033
18	Takoma Park Equipment	894	923	946	956	978	997	1,012	1,022	1,033
19	Municipal League Equipment	824	923	946	956	978	997	1,012	1,022	1,033
20	SUBTOTAL	2,611	2,770	2,837	2,867	2,933	2,990	3,035	3,066	3,098
21	PEG Capital ⁷	852	853	714	714	852	2,204	2,580	2,616	2,647
22	FiberNet - CIP	3,748	2,979	4,098	4,098	4,193	4,390	4,340	4,250	4,069
23	(Must be greater or equal to Line 6) SUBTOTAL	7,211	6,602	7,649	7,678	7,978	9,584	9,955	9,932	9,814
24	B. EXPENDITURE OF OTHER RESTRICTED FUNDS									
25	Municipal Franchise Fee Distribution⁸									
26	City of Rockville	668	701	700	740	757	761	765	770	774
27	City of Takoma Park	240	246	245	245	243	243	244	245	246
28	Other Municipalities	266	270	271	268	268	270	272	274	276
29	SUBTOTAL	1,174	1,217	1,216	1,253	1,268	1,275	1,282	1,289	1,296
30	Municipal Operating Support⁹									
31	Rockville PEG Support	76	76	77	77	78	81	84	87	91
32	Takoma Park PEG Support	76	76	77	77	78	81	84	87	91
33	Muni. League PEG Support	146	76	77	77	78	81	84	87	91
34	SUBTOTAL	299	228	232	230	234	242	251	261	272
35	SUBTOTAL	1,473	1,445	1,448	1,483	1,502	1,517	1,533	1,550	1,568
36	TOTAL EXPENDITURES OF RESTRICTED FUNDS	8,684	8,047	9,097	9,161	9,480	11,100	11,487	11,482	11,382
37	NET TOTAL ANNUAL REVENUES	18,979	20,246	18,922	19,429	19,137	17,693	17,456	17,579	17,800
38	NET TOTAL RESOURCES-CABLE FUND	18,557	20,382	20,153	21,334	20,618	19,118	18,889	19,021	19,247
39	EXPENDITURES OF NON-RESTRICTED FUNDS									
40	A. Transmission Facilities Coordinating Group									
41	TFCG Application Review	175	175	190	190	194	198	202	207	211
42	SUBTOTAL	175	175	190	190	194	198	202	207	211
43	B. FRANCHISE ADMINISTRATION									
44	Personnel Costs - Cable Administration	840	825	885	885	919	956	997	1,040	1,085
45	Personnel Costs - DTS Administration	76	81	82	82	85	89	93	97	101
46	Personnel Costs - Charges for County Atty	110	118	119	119	123	128	134	139	146
47	Operating	81	89	75	75	51	52	53	55	56
48	Engineering & Inspection Services	88	88	98	98	99	101	104	106	108
49	Legal and Professional Services	268,161	145	168	168	171	175	179	183	187
50	SUBTOTAL	1,463	1,346	1,426	1,426	1,450	1,502	1,559	1,619	1,682
51	SUBTOTAL	1,638	1,521	1,616	1,616	1,644	1,700	1,761	1,826	1,894
52	C. MONTGOMERY COUNTY GOVERNMENT - CCM									
53	Media Production & Engineering									
54	Personnel Costs	907	839	647	647	673	700	729	761	794
55	Operating	31	90	31	31	32	33	33	34	35
56	Contracts - TV Production	87	79	87	87	89	91	93	95	97
57	New Media, Webstreaming & VOD Services	38	47	38	38	39	40	40	41	42
58	SUBTOTAL	1,064	1,055	804	804	832	863	896	931	968
59	Public Information Office									
60	Personnel Costs	774	758	796	796	828	861	897	936	976
61	Operating Expenses	12	12	12	12	12	13	13	13	14
62	Contracts - TV Production	0	0	0	0	0	0	0	0	0
63	SUBTOTAL	787	770	809	809	840	874	910	949	990
64	County Council									
65	Personnel Costs	179	184	485	485	504	525	547	571	595
66	Operating Expenses	13	18	13	13	13	14	14	14	14
67	Contracts - TV Production	152	152	152	152	154	158	161	165	169
68	General Sessions and Committee Meetings	101	101	101	101	103	105	107	110	113
69	Multi-Lingual/Cultural Production Services	91	91	91	91	93	95	97	99	101
70	SUBTOTAL	536	546	842	842	868	896	926	958	992
71	MNCPPC									
72	Contracts - TV Production	99	99	99	99	100	103	105	107	110
73	New Media, Webstreaming & VOD Services	24	24	24	24	25	25	26	26	27
74	SUBTOTAL	123	123	123	123	125	128	131	134	137
75	SUBTOTAL	2,509	2,494	2,578	2,578	2,666	2,760	2,863	2,973	3,087

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FY17 PRELIMINARY CABLE COMMUNICATIONS PLAN (in \$000's)

		App FY15	EST FY15	App FY16	Est FY16	Proj. FY17	Proj. FY18	Proj. FY19	Proj. FY20	Proj. FY21
76	D. MONTGOMERY COLLEGE - MC ITV									
77	Personnel Costs	1,344	1,344	1,456	1,456	1,513	1,575	1,641	1,712	1,785
78	Operating Expenses	86	86	86	86	88	89	91	94	96
79	SUBTOTAL	1,430	1,430	1,542	1,542	1,492	1,560	1,560	1,560	1,560
80	E. PUBLIC SCHOOLS - MCPS ITV									
81	Personnel Costs	1,490	1,490	1,548	1,548	1,609	1,674	1,744	1,820	1,898
82	Operating Expenses	106	106	106	106	108	110	112	115	118
83	SUBTOTAL	1,596	1,596	1,654	1,654	1,717	1,784	1,857	1,935	2,016
84	F. COMMUNITY ACCESS PROGRAMMING*									
85	Personnel Costs	1,954	1,954	2,042	2,042	2,122	2,208	2,300	2,400	2,503
86	Operating Expenses	67	67	67	67	68	70	71	73	75
87	Rent & Utilities	385	385	396	396	404	412	421	431	441
88	New Media, Webstreaming & VOD Services	23	23	23	23	24	24	25	25	26
89	SUBTOTAL	2,429	2,429	2,528	2,528	2,618	2,714	2,818	2,929	3,045
90	G. PEG OPERATING									
91	Operating Expenses	116	95	206	206	185	189	193	197	202
92	Youth and Arts Community Media	150	150	100	100	102	104	106	109	111
93	Community Engagement	91	91	91	91	93	95	97	99	101
94	Closed Captioning	130	130	163	163	166	170	173	189	189
95	Technical Operations Center (TOC)	10	8	10	10	10	10	11	11	11
96	Mobile Production Vehicle	22	9	19	19	19	20	20	21	21
97	SUBTOTAL	518,288	484	590	590	575	587	600	626	636
98	H. FIBERNET OPERATING									
99	FiberNet - Personnel Charges for DTS	689	546	727	727	756	786	819	855	892
100	FiberNet - Operations & Maintenance DTS	1,131	1,308	1,126	1,126	1,147	1,171	1,197	1,224	1,253
101	FiberNet - Network Operations Center			729	729	910	910	910	910	910
102	FiberNet - Personnel Charges for DOT	76	76	101	101	105	109	114	118	124
103	FiberNet - Operations & Maintenance DOT	359	238	351	351	357	365	373	381	390
104	SUBTOTAL	2,255	2,169	3,034	3,034	3,275	3,341	3,412	3,489	3,568
105	I. MISS UTILITY COMPLIANCE									
106	Miss Utility Compliance	420	374	420	420	428	437	447	457	467
107	SUBTOTAL	420	374	420	420	428	437	447	457	467
108	TOTAL EXPENDITURE OF UNRESTRICTED FUNDS	12,796	12,497	13,963	13,963	14,414	14,883	15,317	15,795	16,274
109	TOTAL EXPENDITURE OF RESTRICTED FUNDS	8,684	8,047	9,097	9,161	9,480	11,100	11,487	11,482	11,382
110	TOTAL EXPENDITURES - PROGRAMS	21,480	20,544	23,059	23,124	23,894	25,984	26,804	27,277	27,656
111	J. OTHER									
112	Indirect Costs Transfer to Gen Fund	579	579	614	614	638	664	692	722	753
113	Indirect Costs Transfer to Gen Fund (ERP & MCTime)	30	30	-	-	0	0	0	0	0
114	Transfer to the General Fund	4,266	4,266	4,787	4,787	3,650	1,647	949	567	277
115	Legislative Community Communications NDA	488	488	490	490	490	490	490	490	490
116	SUBTOTAL	5,363	5,363	5,891	5,891	4,778	2,801	2,131	1,779	1,520
117	TOTAL EXPENDITURES	26,843	25,907	28,951	29,015	28,673	28,784	28,936	29,056	29,176
118	K. ADJUSTMENTS									
119	Prior Year Adjustments	0	0	0	0	0	0	0	0	0
120	Encumbrance Adjustment	0	601	0	0	0	0	0	0	0
121	Transfer for Vehicle		16	0	0					
122	CIP - Designated Claim on Fund	0	0	0	0	0	0	0	0	0
123	TOTAL ADJUSTMENTS	0	617	0	0	0	0	0	0	0
124	FUND BALANCE	398	1,905	299	1,480	1,425	1,434	1,441	1,447	1,453
125	FUND BALANCE PER POLICY GUIDANCE⁵	1,370	1,398	1,395	1,416	1,425	1,434	1,441	1,447	1,453
126	L. SUMMARY - EXPENDITURES BY FUNDING SOURCE									
127	Transfer to Gen Fund-Indirect Costs	610	610	614	614	638	664	692	722	753
128	Transfer to Gen Fund-Mont Coll Cable Fund ⁶	1,430	1,430	1,542	1,542	1,492	1,560	1,560	1,560	1,560
129	Transfer to Gen Fund-Public Sch Cable Fund ⁶	1,596	1,596	1,654	1,654	1,717	1,784	1,857	1,935	2,016
130	Transfer to CIP Fund	3,748	2,979	4,098	4,098	4,193	4,390	4,340	4,250	4,069
131	Transfer to the General Fund-Other	4,266	4,266	4,787	4,787	3,650	1,647	949	567	277
132	Transfer to the General Fund-Legislative Branch NDA	488	488	490	490	490	490	490	490	490
133	FUND TRANSFERS SUBTOTAL	12,137	11,368	13,186	13,186	12,180	10,535	9,888	9,523	9,165
134	Cable Fund Expenditure of Unrestricted Funds	9,770	9,471	10,766	10,766	11,206	11,539	11,900	12,300	12,698
135	Cable Fund Direct Expenditures	14,706	14,539	15,765	15,829	16,493	18,249	19,048	19,532	20,011
136	Cable Fund Personnel	5,651	3,428	3,843	3,843	3,993	4,155	4,329	4,516	4,711
137	Cable Fund Operating	11,055	11,111	11,922	11,986	12,500	14,095	14,718	15,016	15,299

Notes: These projections are based on the Executive's Recommended budget and include the revenue and resource assumptions of that budget. The projected future expenditures, revenues, transfers, and fund balances may vary based on changes not assumed here to fee or tax rates, usage, inflation, future labor agreements, and other factors.

- Subject to municipal pass-through payment.
- Restricted revenue and expenditures: Certain Cable Fund revenues, required in excess of the federal limit on franchise fees, and corresponding expenditures (Municipal Franchise Fees/Pass-throughs, PEG Capital/Equipment Grants, and PEG Operating Revenue) are contractually required by franchise, municipal, and settlement agreements, and by the County Code, and may only be used for permissible federal purposes and in a manner consistent with applicable agreements.
- The Comcast franchise renewal process is ongoing and specific elements of a final agreement are uncertain. Restricted categories such as PEG Capital and Operating support revenues, as well as Municipal Capital and Operating Support expenditures, will be affected. Municipal cost sharing is dependant on final negotiation of agreements between the County and municipalities. The County may require Capital Grants based on community needs. The County may negotiate, but may not require Operating Grants in addition to Franchise Fees. FY16-FY21 assumes that the County will receive payments from Comcast calculated at a new franchise agreement, but assumes Municipal payments as similar to the previous franchise agreement.
- Montgomery Community Television, Inc., d/b/a Montgomery Community Media, is designated as a sole source contractor to provide community access media services.
- Fund balance per policy guidance is calculated as 8% of total non-restricted revenues (franchise fees, tower fees, and investment income).

