

Fibernet -- No. 509651

Category **General Government**
 Agency **Technology Services**
 Planning Area **Countywide**
 Relocation Impact **None**

Date Last Modified **May 18, 2005**
 Previous PDF Page Number **7-22 (04 App)**
 Required Adequate Public Facility **NO**

EXPENDITURE SCHEDULE (\$000)

Cost Element	Total	Thru FY04	Remain. FY04	Total 6 Years	FY05	FY06	FY07	FY08	FY09	FY10	Beyond 6 Years
Planning, Design and Supervision	1,245	719	526	0	0	0	0	0	0	0	0
Land	4	4	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	12,163	8,094	3,065	1,004	304	700	0	0	0	0	0
Construction	2,349	13	1,340	996	696	300	0	0	0	0	0
Other	14,225	14,225	0	0	0	0	0	0	0	0	0
Total	29,986	23,055	4,931	2,000	1,000	1,000	0	0	0	0	0

FUNDING SCHEDULE (\$000)

PAYGO	2,100	2,100	0	0	0	0	0	0	0	0	0
G.O. Bonds	8,913	6,357	2,556	0	0	0	0	0	0	0	0
Contributions	73	73	0	0	0	0	0	0	0	0	0
Current Revenue: General	0	0	0	0	0	0	0	0	0	0	0
Cable TV	18,900	14,525	2,375	2,000	1,000	1,000	0	0	0	0	0

ANNUAL OPERATING BUDGET IMPACT (\$000)

Maintenance				192	32	32	32	32	32	32	0
Offset Revenue				-192	-32	-32	-32	-32	-32	-32	0
Net Impact				0							

DESCRIPTION

This project provides for the planning, design, and installation of a Countywide fiber optic cable-based communication network with the capacity to support voice, data, and video transmissions among Montgomery County Government, Montgomery County Public Schools, Montgomery College, M-NCPPC, HOC and WSSC facilities. Fibernet is also the communications backbone which supports the Public Safety Radio System, Public Safety Mobile Data System, and future technology implementations. The Fibernet project builds on a fiber optic-based communication system under construction since FY96 by the Department of Public Works and Transportation to support the enhanced voice, data, and video requirements of the Advanced Transportation Management System (ATMS). The Fibernet project replaced the G-Net broadband cable communication system. Fibernet is designed to support the voice, data, and video needs of all County departments and agencies, and is estimated to have a useful life of at least 20 years. Upgrades and replacements to electronic components, both in the core and at user sites will be required periodically.

JUSTIFICATION

Montgomery County Government, Montgomery County Public Schools, Montgomery College, M-NCPPC, HOC and WSSC will require substantially increased communication services and bandwidth among their facilities. The County will provide fiber optic services to those facilities for which leased telecommunications services cannot meet current or projected demand as cost effectively as provided by Fibernet.

Plans and Studies

The Fibernet Master Plan; RAM Communications, March 1995; Fibernet Evaluation Report, TRW, September 1997; Fibernet Project Cost Estimate, ARINC, April 1998; Fibernet Project Cost-Benefit Analysis, ARINC, October 1998; FiberNet Strategic Plan, PrimeNet, June 2002; FiberNet Strategic Direction, November 2003 ITAG.

Cost Change

The FY05 amended funding supports the transition of FiberNet to the next generation.

STATUS

FiberNet is a critical infrastructure asset for Montgomery County agency use. FiberNet is a facilities based telecommunications network serving every major agency in the County. It also supports the optical fiber plant for ATMS. Over 450 miles of fiber optic cable have been deployed within the County. As of June 2004, 152 user sites are on-net and receiving critical services from FiberNet. FiberNet provides high-speed, dedicated and redundant communications links for the Public Safety Communications Center including the 800 MHz radio system. In FY05 and FY06, DTS will begin to re-engineer FiberNet to directly support Ethernet connections. The steps involved in this process will lead to a core network that is technologically newer, faster and less expensive. This will be accomplished in phases that include a requirements study, an RFP and the procurement of a new network core. The focus for FY05 and FY06 is the next generation of FiberNet (FiberNet/NG), infrastructure improvements, and the deployment of new sites. DTS, in cooperation with ITPCC and its ITAG workgroup, continues to refine the new architecture and the master implementation schedule. Site planning, cost figures, and system design have all been adjusted to more tightly integrate and consolidate all of the County's wide area network assets, including FiberNet.

OTHER

DTS is responsible for project management, network operations, and maintenance of electronics. DPWT is responsible for installation and maintenance of the fiber.

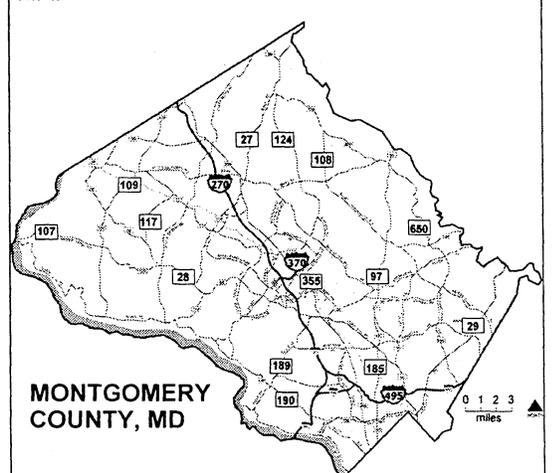
APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY96	(\$000)
Initial Cost Estimate		19,410
First Cost Estimate		
Current Scope	FY05	29,986
Last FY's Cost Estimate		28,986
Present Cost Estimate		29,986
Appropriation Request	FY06	1,000
Supplemental		
Appropriation Request	FY05	0
Transfer		0
Cumulative Appropriation		28,986
Expenditures/		
Encumbrances		25,160
Unencumbered Balance		3,826
Partial Closeout Thru	FY03	0
New Partial Closeout	FY04	0
Total Partial Closeout		0

COORDINATION

Department of Technology Services
 Department of Public Works and Transportation
 Montgomery County Public Schools
 M-NCPPC
 Montgomery College
 HOC
 WSSC
 Cable Communications Management
 Comcast
 Advanced Transportation Management System
 Educational Technology: Global Access
 Public Safety Radio System
 Information Technology: College
 Information Technology Policy Coordination
 Committee
 Interagency Technology Advisory Group

MAP



optic cable. Comcast, at DTS's direction, also provides fiber used in Fibernet. As of September 2003, over 335 miles of fiber optic cable have been deployed, 129 user sites and 11 network hubs have been placed in service and 16 more user sites are planned for FY04. Sites installed to date include Montgomery County Government departments and offices, public safety communications system sites, Montgomery College campuses, high schools and select MCPS administrative facilities, M-NCPPC sites and HOC sites. Sites have been, and will continue to be, installed in a priority order which takes into account the expected cost savings and cost avoidance; current and future connectivity needs; and availability of fiber optic cable to an area.

FISCAL NOTE

Fibernet maintenance is supported by a grant from the franchise agreement for the County's cable service provider. The original grant amount of \$1.2 million per year is increased by the Consumer Price Index each year. The Operating Budget Impact Offset Revenue section reflects the estimated increases in CPI for the FY05-10 CIP.