MFP COMMITTEE #2
February 22, 2010

MEMORANDUM

February 18, 2010

TO: Management and Fiscal Policy Committee

FROM: Dr. Costis Toregas, Council IT Adviser

SUBJECT: CIP FiberNet project

Expected to attend:

E. Steven Emanuel, Chief Information Officer, Department of Technology Services (DTS)
John Castner, FiberNet Project Manager and ITAG Chair, DTS
Michael Knuppel, Chief Technology Officer, DTS
Mitsuko R. Herrera, Cable Communications Administrator, DTS
Max Stuckey, DTS
Gary Thomas, ITPCC Program Manager
John Cuff, Office of Management and Budget

Summary of staff recommendations to the MFP Committee:

1. *The Executive recommends an increase in the FiberNet total cost estimate of $7.856m, and requests an appropriation of* ***$2.012m for FY11.*** *Staff recommends that the* ***Committee support the Executive's recommendation for FY11, but defer a decision on the total 6-year budget*** *until more information is provided on the potential impact of Public-Private Partnerships and a closer examination of construction costs and the detailed budget under consideration has been made.*
2. *The Executive's request plans for extending FiberNet to an* ***additional 119 sites*** *(listed on ©8-11): the Committee should review these sites and react to their priority order and selection parameters.*
3. *The request from the Executive* ***is predicated on rising construction costs*** *for Fibernet build out (see ©5). This is counter-intuitive, as construction prices are falling, and costs of construction projects are also being reduced in other fields, such as school construction. The Committee should ascertain why the Executive believes in this alternate model of rising costs, and reconcile the two views of pricing.*
4. *The role of the telecommunications industry in maintaining and expanding FiberNet at a time of tight budgets should be explored robustly. Council staff recommends an exploration of two possibilities:* ***the use of external technologies through partnerships*** *to expand and fully build out the connectivity promise of FiberNet, and the interest of industry to undertake the task of providing connectivity under a long term* ***operation and maintenance (O&M)*** *arrangement that would safeguard privacy and security of data while reducing costs.*
5. *The impact of ARRA (the American Recovery and ReInvestment Act) grants on the County's ability to expand and maintain a broadband capability is yet unknown. However, the Executive branch is hopeful that funds may become available, with a 20% matching component in this FiberNet project budget that would enable a faster deployment of FiberNet and other telecommunications networks. The Committee should be briefed on the* ***status of ARRA, and also on fallback plans for the 20% matching funds in the FiberNet budget*** *should the expected grants not materialize.*
6. *FiberNet benefits all tax-supported agencies, yet funds for its support and maintenance are provided from a single Montgomery County Government source - the Cable Fund. As the financial picture continues to be tight, the Committee should explore with the Executive branch representatives two possible strategies that might relieve that pressure: the notion of* ***charging all users for FiberNet services*** *according to a usage or other formula, and the establishment of a monitoring system that ensures that FiberNet service delivery to a physical location results in* ***a reduction or elimination of all other alternate telecommunications charges.***

Background

The County investment in FiberNet exceeds $35m. It is intended to provide connectivity to all County agencies in a secure and inexpensive manner. The definition and description of Fibernet is described in the Enterprise Technology Strategic Plan and is reproduced on ©1-3. The FiberNet services are provided to 289 locations. This model gives access to robust connectivity, control over costs, and ability to prioritize County needs; these are hard to replicate with other provision models. FiberNet works well and is worthy of strong support.

However, at a time when new, cost-effective telecommunications options appear almost daily and the County is struggling under a major budget challenge, it is important to take a critical, comprehensive look at the long-term investment made and make sure there is consensus from all stakeholders as to a clear path forward. The Interagency Technology Policy and Coordination Committee (ITPCC) undertook a major effort last year to sharpen the focus on this vital resource and provide strategic direction and overall guidance. In accordance with the requirements of the Interagency FiberNet Governance Charter (Nov. 2002), the FiberNet Interagency Technical Advisory Group (ITAG) is

charged with the responsibility of developing the biennial CIP submission for the requested FiberNet CIP project that the Executive decided to propose as part of the FY11-16 CIP. His proposal is on ©4.

Council staff raised several questions regarding the FiberNet project and the FY11 appropriation request. These questions and the answers provided by DTS are on ©5-11.

Additional Staff Comments

1. FiberNet offers connectivity services to its users. These may include e-mail, Internet provisioning, file transfers, and voice/video services. In a similar vein, these services are offered, and the County is currently receiving them, from other governmental agencies as well as from the private sector. At a time when all departments are looking for ways to reduce spending, it is right that all telecommunications charges in all agencies and departments be looked at and decisions made regarding the use of FiberNet as the sole or preferred provider of connectivity. The total telecommunications bill across all County organizations is certainly a high number. The potential of reducing that number through a more energetic and careful provisioning of FiberNet connectivity should be discussed, and proper go-forward actions reviewed.

2. On June 22, 2009 the Executive provided a 5-year display of costs that take into account all funding sources and the various component costs of FiberNet. In this display (shown on ©12), it is clear that expansion of the network is only a small part of the overall budget. In order to understand the plan of the Executive for Fibernet growth and maintenance, it is necessary to review financial forecasts at the level of the Table on ©12, something that the CIP submission does not provide. However, it seems that 119 sites are to be added to the network over the next 4 years (from FY11 through FY14); the location of these sites is shown on ©8-11.

It is important to consider whether this expansion can be accomplished using other means and at a lesser cost. One such alternative is through the use of Public-Private Partnerships (or PPPs). The Office of Legislative Oversight produced Report 2010-6, dated January 26, 2010 and titled "An Overview of Public-Private Partnerships in Road, Parking, and Transit Projects", which addressed this question in some program areas. This report found that under the right conditions, PPPs can provide a source of significant revenue up front, improve service levels, and reduce long-term costs of operations. Exploring the potential of PPPs in telecommunications and, more specifically, in broadband connectivity is a direction that should be undertaken, if only to verify that the County's current business model of providing services is the best for the times. This exploration should be done in concert with telecommunications providers and be given wide latitude to compare a variety of business models. The amounts requested in the Executive's CIP submission are significant, approaching $14m over 6 years, so the undertaking of such an exploration is vital.

3. Residents have been contacting Councilmember offices regarding the initiative Google has recently launched regarding their desire to deploy an ultra-fast fiber network in a pilot community, and asking the County to become involved. This initiative is summarized below; details can be found at http://www.google.com/appserve/fiberrfi

"...Google Fiber for Communities

Google is planning to launch an experiment that we hope will make Internet access better and faster for everyone. We plan to test ultra-high speed broadband networks in one or more trial locations across the country. Our networks will deliver Internet speeds more than 100 times faster than what most Americans have access to today,

over 1 gigabit per second, fiber-to-the-home connections. We'll offer service at a competitive price to at least 50,000 and potentially up to 500,000 people.

From now until March 26th, we're asking interested municipalities to provide us with information about their communities through a Request for information (RFI), which we'll use to determine where to build our network..."

This offer from Google suggests the readiness of the private sector to find creative ways to partner with government for mutual gain. The economic development benefits of this partnership are undeniable to the succesful partner. However, the notion of sharing infrastructure between the private and public sector, negotiating delicate items such as security concerns of public safety agencies and shared investment in maintenance and growth, is one that is timely for the County to consider. In a time of scarce resources, the County must be prepared to concentrate on areas where government holds a competitive advantage. Telecommunications may be an area where partnerships could be more effective.

4. The Executive's submission suggests that, beyond the $14m request, another $3m is needed to provide support for field ATMS (Advanced Transportation Management Systems) traffic control devices. However, this amount is not currently included in the request. The response from DTS on ©6 does not articulate a firm direction for where the funds will come from and when they will be needed. The Committee must also be made aware of risks associated with not funding this unfunded $3m need in the traffic arena. For example, the Committee should ensure that the ATMS build out is not an essential element (albeit unfunded) of the major traffic signal light fix under way today. It is important to have a complete picture of costs when reviewing, and ultimately approving, long-term funding for major projects. This point needs to be clarified with DTS and OMB.

[redacted]

Goal:
Continue to pursue innovative ways to enhance the PBX platform in a healthy evolutionary mode, which will prevent the need for an expensive replacement in the future.

FiberNet Strategic Plan

Montgomery County Government (MCG) is its own telecommunications carrier. In serving a community of over 950,000 residents, the County Government consumes voice/video/data services in extremely large quantities. In 1995 the County determined that cost savings could be realized and a future-proof network could be created by building its own facilities based fiber optic network. Leveraging work that the Department of Transportation (DoT) had already begun in building a fiber optic network for the Advanced Traffic Management System, The Department of Technology Services (DTS) was given the mission of building an electro-optical network on top of the fiber plant that DoT had already placed. FiberNet was born.

Today, FiberNet is the electro-optical backbone for MCG. FiberNet provides communications services for all County agencies including the Government (MCG), Public Schools (MCPS), Montgomery College, Maryland National Park and Planning Commission (MNCPPC), Washington Suburban Sanitary Commission (WSSC) and the Housing Opportunities Commission (HOC). FiberNet has become a big success and every agency wants to participate to the fullest extent possible. Governance is vested in the Information Technology Policy Coordinating Committee (ITPCC) with technical approval delegated to its CIO Subcommittee. DTS provides technical leadership and is operationally responsible for FiberNet.

The alternative to FiberNet would have been and continued to be the purchasing of telecommunications services from the local commercial market. Many state, county and municipal governments operate in this mode. These other agencies are discovering that as applications become more information rich, initiatives to improve services may be frustrated easily by the high cost of carrier leased lines or other tariffed offerings including special pricing agreements. Montgomery County Public Schools (MCPS) is currently seeing the bandwidth requirements for applications growing and the inability of sites, not on FiberNet, to deliver services.

In several cases the carriers are not maintaining their physical plants (underground and overhead wiring, old copper capabilities, etc.) making even simple connections unreliable and data services, problematic. MCPS has this problem with many elementary schools as does the County Government with several small offices. In a recent conversation with representatives from a commercial service provider, prices were quoted several thousand of dollars per month for a 10 MegaBit/second link. MCPS has over one hundred sites still to be added to FiberNet. Although a long term contract would bring this price down, it is possible to see the order of magnitude associated with providing such services through a local exchange carrier still costing hundreds of thousand dollars per month. MCPS and the

[redacted]

(1)

FiberNet Team are looking for alternatives and near term solutions have already been identified.

FiberNet is an integral component of the County's Public Safety Communications Network. Given these systems critical importance to the County's residents, having the County own and operate the underlying transport infrastructure ensures a higher level of service availability and control than would be achievable in a leased carrier system. Additionally, in the time of a real emergency the County is in a position to regulate network access to make sure that calls go through and applications operate. On an open public or commercial network, there is no pre-emption or prioritization for emergencies.

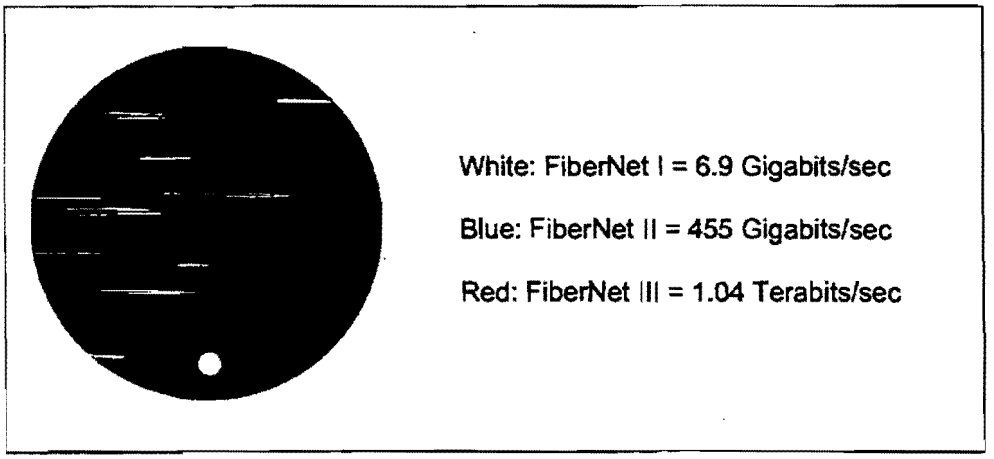
Strategically, FiberNet is working to leverage its resources, increase its footprint, improve security and provide voice/video/data services at lower cost. Tactical successes include:

- Leveraging the County's telephony platform by delivering dial tone to Housing Opportunities Commission (HOC);
- Becoming the Internet Service Provider for Maryland National Capital Park and Planning Commission (M-NCPPC) and HOC, providing Internet Service Provider (ISP) carrier services for the City of Gaithersburg and the American Film Institute;
- Replacing the County's legacy ATM network (FiberNet I) with a state-of-the-art Metro-Ethernet network (FiberNet II);
- Re-architecting the FiberNet core so that no or minimal equipment needs to be purchased to add a new site. Only the cost of fiber or other transport media needs to be considered when adding the location;
- Creating MCG WiFi Hotspots in Silver Spring, Bethesda, recreation centers and County cafeterias;
- Connecting to State of Maryland networks directly;
- Connecting to local government networks directly without going via the Internet;
- Adding a backup Internet Service Provider for the County.

Current initiatives include migrating all County departments onto FiberNet II; other participating agencies are already on the next generation solution. A major effort continues to be increasing FiberNet's footprint by adding MCPS elementary schools and County Government sites including the Smart Growth initiative. DTS is always looking for economically justifiable alternatives to the high cost of fiber. FiberNet has engaged the Washington Metropolitan Area Transit Authority (WMATA) to consider sharing assets and facility access to improve network reliability and availability for the County's Public Safety Radio System (PSRS). It is expected that this effort will produce positive results and increase the availability of this extremely important system.

FiberNet will be an integral part of the next generation Public Safety Radio System (PSRS). FiberNet has started a proof of concept trial to determine the feasibility of using cable modems to create a virtual private network to replace services leased from Verizon by MCPS and MCG. This is a recent initiative. If successful, it will permit high speed connections to elementary schools and leased County facilities at a fraction of the cost available from commercial carriers. MCPS is excited at the prospect and so is the FiberNet team.

Figure 7 - Raw Aggregate Backbone Bandwidth



FiberNet is built for the future. Raw bandwidth coupled with an intelligent network infrastructure is the hallmark of FiberNet II and the keys to future proofing the County's IT information transport requirements. A simple graphic captures the past, present and future of FiberNet. The figure above captures the raw aggregate bandwidth across all the FiberNet I backbone links. A second image encapsulates FiberNet I and is a proportionate analog for FiberNet II's aggregate backbone bandwidth today when compared to FiberNet I. Finally, the larger image is a graphical analog for FiberNet III's backbone capacity after a nominal capital improvement to FiberNet II.

FiberNet II is an ***intelligent network*** capable of making routing decisions in the network core. The Internet is designed based on this principle; FiberNet I model, is not. FiberNet II exists, is in use and is based on technologies that are being used by large service commercial providers. Funds are currently being accumulated in a capital reserve to move to FiberNet III when the time arrives.

FiberNet is an integrative system that makes inter and intra governmental IT services and communications easier to implement and most of all easier to secure. Ultimately, FiberNet's strategic goal is to deliver mission critical applications over a reliable and robust communications infrastructure at lower prices than those achievable in the open market. The current configuration of FiberNet II is designed to sustain the County's bandwidth requirements for the next ten years.

Goal:
Continue to migrate to the next generation of FiberNet, Communicate and integrate FiberNet advantages within all new and enhanced programs requiring inter-department, inter-agency and inter-jurisdictional voice and data transmission needs

Fibernet -- No. 509651

Category	**General Government**	Date Last Modified	**January 08, 2010**
Subcategory	**Technology Services**	Required Adequate Public Facility	**No**
Administering Agency	**Technology Services**	Relocation Impact	**None.**
Planning Area	**Countywide**	Status	**On-going**

EXPENDITURE SCHEDULE ($000)

Cost Element	Total	Thru FY09	Est. FY10	Total 6 Years	FY11	FY12	FY13	FY14	FY15	FY16	Beyond 6 Years
Planning, Design, and Supervision	3,220	1,814	206	1,200	200	200	200	200	200	200	0
Land	4	4	0	0	0	0	0	0	0	0	0
Site Improvements and Utilities	12,941	11,881	0	1,060	65	65	415	415	50	50	0
Construction	13,513	41	1,811	11,661	1,747	2,441	3,763	1,760	975	975	0
Other	20,735	20,735	0	0	0	0	0	0	0	0	0
Total	**50,413**	**34,475**	**2,017**	**13,921**	**2,012**	**2,706**	**4,378**	**2,375**	**1,225**	**1,225**	**0**

FUNDING SCHEDULE ($000)

Cable TV	39,327	23,964	1,442	13,921	2,012	2,706	4,378	2,375	1,225	1,225	0
Contributions	86	86	0	0	0	0	0	0	0	0	0
G.O. Bonds	8,900	8,325	575	0	0	0	0	0	0	0	0
PAYGO	2,100	2,100	0	0	0	0	0	0	0	0	0
Total	**50,413**	**34,475**	**2,017**	**13,921**	**2,012**	**2,706**	**4,378**	**2,375**	**1,225**	**1,225**	**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 (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 also the communications backbone for the Public Safety Radio and Public Safety Mobile Data Systems (collectively, PSCS), and future technology implementations. Fibernet has an estimated useful life of at least 20 years. Upgrades and replacements to electronic components in the core and at user sites will be required periodically.

COST CHANGE

The increase is due to inclusion of one-hundred and nineteen new sites scheduled to enter construction in the first four years of the CIP, increased contractor cost for laying fiber, and inclusion of FY15 and FY16 expenditures.

JUSTIFICATION

FiberNet is a critical infrastructure asset serving every agency, the fiber plant for Asynchronous Transfer Mode Systems (ATMS), and the dedicated and redundant communications links for the PSCS/800 MHz system. As of September 1, 2009, 289 user sites are on-net and receiving critical services from FiberNet. In FY07, the Department of Technology Services (DTS) completed the re-engineering of FiberNet (now referred to as FiberNet II) to directly support Ethernet connections. This provides a core network that is technologically newer, faster and less expensive on a per-site basis. The Interagency Technology Policy Coordination Committee (ITPCC) focus during the first three years of the CIP is adding the remaining MCPS elementary schools to FiberNet. DTS, in cooperation with ITPCC and its Information Technology Advisory Group (ITAG) workgroup, continues to refine the master implementation schedule. MCG, MCPS, MC, 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 FiberNet. Studies include: Fibernet Master Plan; RAM Comm. Mar 1995; Fibernet Eval. Rpt., TRW, Sept 1997; Fibernet Proj. Cost Est., ARINC, Apr 1998; Fibernet Proj. Cost-Benefit Analysis, ARINC, Oct 1998; FiberNet Strategic Plan, PrimeNet, Jun 2002; FiberNet Strategic Direction, ITAG, Nov 2003; Fibernet service level agreement, Jan 2005.

OTHER

DTS is responsible for project management, network operations, and maintenance of electronics; Department of Transportation (DOT) for installation and maintenance of the fiber optic cable. Comcast, at DTS's direction, also provides fiber used in Fibernet. Sites installed to date include MCG departments/offices, PSCS sites, MC campuses, MCPS high schools/middle schools/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 American Film Institute (AFI), Strathmore, the Convention Center and Black Rock. Sites have been, and will continue to be, installed in a priority order based on the expected cost savings/avoidance; current and future connectivity needs; and availability of fiber optic cable to an area. Approximately $3 million is necessary to build out the cable plant to support ATMS field devices, and is not reflected in the expenditures and funding displayed in the FY11-16 CIP. This need will be captured in the future in accordance with fiscal capacity and project schedules.

FISCAL NOTE

Fibernet maintenance is supported by a grant from the franchise agreement with the County's cable service provider. The original grant amount of $1.2 million/yr is increased by the CPI each year. For this reason the Operating Budget Impact is $0.

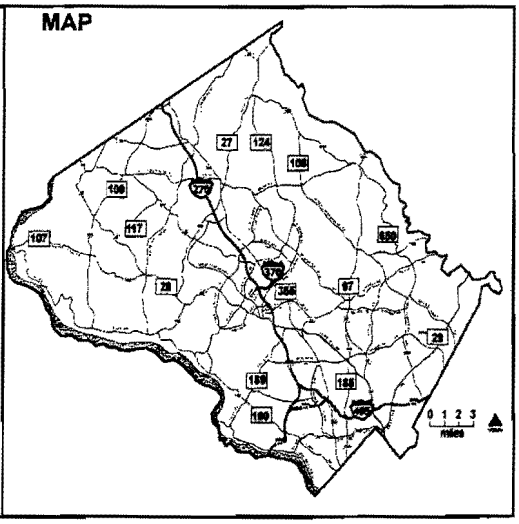
APPROPRIATION AND EXPENDITURE DATA

Date First Appropriation	FY96	($000)
First Cost Estimate Current Scope	FY11	50,413
Last FY's Cost Estimate		42,557
Appropriation Request	FY11	2,012
Appropriation Request Est.	FY12	2,706
Supplemental Appropriation Request		0
Transfer		0
Cumulative Appropriation		36,492
Expenditures / Encumbrances		35,066
Unencumbered Balance		1,426
Partial Closeout Thru	FY08	0
New Partial Closeout	FY09	0
Total Partial Closeout		0

COORDINATION

Department of Technology Services
Department of Transportation
Advanced Transportation Management System Project
Montgomery County Public Schools
M-NCPPC
Montgomery College
HOC
WSSC
Comcast
Public Safety Radio System
Information Technology Policy Coordination Committee (ITPCC)
ITPCC CIO Subcommittee
Interagency Technology Advisory Group (ITAG)

MAP



Recommended

February 8, 2010

Responses to Council Questions
Fibernet CIP

1. **Cost increase of $1.6m: Increased contractor costs is counterintuitive at a time when all construction costs are plummeting**

   Response:
   With the acceleration of the implementation, it will be necessary to utilize construction services beyond our agreement with Comcast for fiber construction. If you recall, in FY08, the County's contract with DOT's contractor was re-bid and resulted in a significant increase. While we do anticipate an increase in the construction costs, every effort will be to utilize methods that result in the lowest costs.

   Additionally, the remaining elementary schools that comprise the most significant amount of construction effort are located off the major routes where the main fiber routes have been constructed. Distance from the nearest connectible point of presence, in addition to the increase in the contractor base costs generates the estimated increase being submitted.

2. **Why is FY13 so high in requested funds?**

   Response:
   While it is our intent to accelerate the Fibernet implementation, the sites that are not currently in the planning, will take approximately 12-18 months for the planning and implementation. As such, the expenditures for the actual construction and implementation will fall later in the project expenditure plan and are anticipated to cause a larger expenditure in FY13. The cost model that is presented makes every attempt to place the funds in the fiscal year in which we commit the actual progression of the work by the vendors performing the work.

3. **List 119 sites to be added to network**

   Response:
   See Attached Schedule.

4. **$3m added build out for ATMS devices- why not included in this year's CIP? What is the risk of not executing?**

   Response:

This amount was the proposed amount for the build out of the Fibernet plant to support the connectivity to the traffic control devices and the central traffic control system. The amount has always been a known amount, but the implementation requirement has been subject to the traffic management replacement process. With the most recent challenges with the traffic system, the timing and needs for this buildout came to the forefront, subsequent to the original submission of the Fibernet CIP funding planning. This was simply a timing challenge, but the amount that would be required has been set for some time.

5. **Verizon FiberTower suggestion- what is status? And are costs indicative of other private provisioning? What is wrong with this math: $600x12x289=2m annual recurring cost and $5,000x289=1.4m one time (Using Verizon numbers provided of 600/site and 5k one time)?**

   Response:
   We did receive information from Verizon in September, 2009 proposing this service offering. After a review of the proposed costs and services, the proposed option was deemed to have a higher cost, long term and higher than a similar provider option that had also been explored. The information provided by the Verizon contact had indicate a $5K to $8K one time installation, per site and monthly charge of $550-$650, indicating an average that totaled about $7,200 per year, per facility. The proposed bandwidth for this five year solution was at 5MB.

   As a result, discussions did not proceed at that time. Also, given the growth and use of bandwidth that most of the county users have become accustomed, we feel that having such a significantly low limit as proposed would create new barriers to the use of the county's institutional network. The basis for the current direction remains valid and is in line with the PrimeNet Strategic Planning Study done by the ITPCC.

   The Network services team has developed concepts with other private provision models that may still be a potential option, should the anticipated funding from the ARRA grant not materialize.

6. **ARRA matches- which projects and how much is needed? Chances of success?**

   Response:
   <u>One Maryland Application.</u>
   Montgomery County has applied for about $14.5M and pledged a match of an additional $3,6M as part of the overall $99 Million, nine-County One Maryland ARRA Broadband grant application. If granted, Montgomery County would

receive reimbursement through One Maryland to extend FiberNet to 98 elementary schools, 21 Housing Opportunities Commission sites, 5 hospitals, 4 municipal Wi-Fi extensions, 3 public safety radio towers, and 1 public library. As a condition of the grant, Montgomery County committed to appropriate in FY2010, FY2011, and FY2012, a total over the three years of $2.5M through the FiberNet CIP, and $1M in DTS and DOT labor and operating expenses.

As of February 12, 2010, the One Maryland application is still under consideration by NTIA, the federal agency charged with awarding the ARRA broadband grants. On January 28, 2010 Senator Mikulski held a hearing asking NTIA and the Commerce Department why only 4% of the ARRA broadband grant funding had been awarded. That same week, NTIA sent letters to applicants whose projects NTIA declined to fund, two of which included rural Maryland projects. Following the hearing, One Maryland has been responding to an average of 2-3 information requests per day from NTIA.

While no one can predict the actions of the grant reviewers and the political agencies charged with awarding the grant, the federal government has invested a significant amount of resources to perform due diligence on the One Maryland application and we are cautiously optimistic. We have heard reports that additional grants would be announced on Tuesday February 16, 2010, and that all grants for the first funding round would be awarded by February 26, 2010, but NTIA has delayed grant announcements beyond previously announced internal deadlines.

Broadband for All Montgomery.

Montgomery County has also applied for $281,225 to fund 137 new computers with associated software and peripherals, 16 new printers, and broadband training and education at 11 Housing Opportunities Commission sites, 2 job centers and 2 libraries. As a condition of the grant, Montgomery County committed to provide matching support of $1.5M in salaries, shared licenses, and operating support contracts, and $2M as in-kind value of facilities. NTIA has not contacted the County to request additional due diligence, nor has NTIA sent a rejection letter. We have been told informally that NTIA is focused on reviewing larger grant applications at this time.

FiberNet CIP FY11-FY16
Schedule of Sites

FiberNet CIP FY11 to FY14 Site Schedule

Fiscal Year	Agency	Site Name
FY11	MCPS	Brown Station ES
		Burning Tree ES
		Clarksburg ES
		Clopper Mill ES
		Cloverly ES
		Fields Road ES
		Glen Haven ES
		Broad Acres ES
		Carderock Springs ES
		Forest Knolls ES
		Glenallan ES
		Goshen ES
		Jackson Road ES
		Maryvale ES
		Mill Creek Towne ES
		Ritchie Park ES
		Rock Creek Forest ES
		Rolling Terrace ES
		Ronald McNair ES
		S. Christa McAuliffe
		Sequoyah ES
		Summit Hall ES
		Clarksburg ES #8 (Fall, 2009)
		Travilah ES
		Wood Acres ES
		Ashburton ES
		Darnestown ES
		Georgian Forest ES
		Watkins Mill ES
		Pine Crest ES
		Montgomery Knolls ES
		New Hampshire Estates ES
		Somerset ES
		Cresthaven ES
		Fox Chapel ES
		Flower Valley ES
		Whetstone ES
		Great Seneca Creek ES
		Westbrook ES
		Lucy V Barnsley ES
	MCPS Total	40 Sites
FY11 Total		40 Sites

(8)

FiberNet CIP FY11-FY16
Schedule of Sites

FY12	MCPS	Harmony Hills ES
		Bradley Hills ES
		Rosemary Hills ES
		Twinbrook ES
		College Gardens ES
		Dufief ES
		Woodlin ES
		Bel Pre ES
		Potomac ES
		Cannon Road ES
		Flower Hill ES
		Oakland Terrace ES
		Capt James E Daly ES
		Viers Mill ES
		Bells Mill ES
		Strathmore ES
		Dr Sally K Ride ES
		Lakewood ES
		Sligo Creek ES
		Candlewood ES
		Farmland ES
		Highland ES
		Wheaton Woods ES
		Thurgood Marshall ES
		Beverly Farms ES
		East Silver Spring ES
		Wyngate ES
		Cold Spring ES
		Bannockburn ES
		Greencastle ES
	MCPS Total	30 Sites
FY12 Total		30 Sites

FiberNet CIP FY11-FY16
Schedule of Sites

FY13	MCPS	Washington Grove ES
		Oak View ES
		Roscoe R Nix ES
		Wayside ES
		Garrett Park ES
		Arcola ES
		Stedwick ES
		Rock Creek Valley ES
		Stone Mill ES
		Fairland ES
		Burnt Mills ES
		Jones Lane ES
		Highland View ES
		Brooke Grove ES
		Kensington Parkwood ES
		Diamond ES
		Greenwood ES
		Westover ES
		William T Page ES
		Kemp Mill ES
		Dr Charles R Drew ES
		Galway ES
		Stonegate ES
		Fallsmead ES
		Strawberry Knoll ES
		Spark M Matsunaga ES
		Cashell ES
		Belmont ES
	MCPS Total	28 Sites
FY13 Total		28 Sites

FiberNet CIP FY11-FY16
Schedule of Sites

FY14	HOC	ELIZABETH HOUSE EMORY GROVE VILLAGE PADDINGTON SQUARE APARTMENTS TANGLEWOOD APARTMENTS TOWNE CENTRE PLACE WASHINGTON SQUARE
	HOC Total	6 Sites
	MCG	Child Care Resource and Referral Center East County Community Recreation Center Eastern Montgomery Regional Services Center Good Hope Neighborhood Recreation Center Gwendolyn E. Coffield Community Recreation Center Jane E. Lawton Community Recreation Center Longwood Community Recreation Center W Upper County Neighborhood Recreation Center Wheaton Neighborhood Recreation Center
	MCG Total	9 Sites
	MNCPPC	Pope Farm Nursery Wheaton Ice Arena Wheaton Regional Park
	MNCPPC Total 3 Sites	
	WSSC	Gaithersburg Depot Lyttonsville Depot Seneca WWTP –
	WSSC Total 3 Sites	
FY14 Total		21 Sites
Grand Total		119 Sites

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FY10 CABLE COMMUNICATIONS PLAN ($000's) FY10 Approved

	Approved FY08	Actual FY08	*Approved FY09*	Estimated FY09	Approved'd FY10	%Chg Fr '09Plan	+/- From '09Plan	FY11	FY12	FY13	FY14	FY15
FIBERNET INSTITUTIONAL NETWORK												
1. FiberNet Support (DTS)												
Personnel Costs - FiberNet Operation (DTS)	*231*	231	*281*	192	192	-31.7%	(89)	447	600	752	793	860
Operations - 24/7 Operation (DTS)	*860*	711	*860*	911	950	10.5%	90	950	826	706	706	700
Capital - Equipment Upgrade (DTS) (from CIP)	*91*	91	*91*	129	311	241.8%	220	311	331	351	321	315
SUBTOTAL	**1,182**	**1,033**	**1,232**	**1,232**	**1,453**	**17.9%**	**221**	**1,708**	**1,757**	**1,809**	**1,820**	**1,875**
2. FiberNet Support (DOT)												
Personnel Costs - FiberNet Maintenance (DOT)	*51*	51	*46*	46	46	0.0%	0	36	44	52	60	68
Operations - Fiber Maintenance/Repair/Splicing (DOT)	*198*	198	*198*	198	198	0.0%	0	215	215	215	215	215
SUBTOTAL	**249**	**249**	**244**	**244**	**244**	**0.0%**	**0**	**251**	**259**	**267**	**275**	**283**
3. CIP-FiberNet												
FiberNet I to FiberNet II Service Migration	*200*	200	*300*	300	100	-66.7%	(200)	0	0	0	0	0
Engineer FiberNet I T-1 800 MHz Solution	*0*	0	*0*	0	150	100.0%	150	50	0	0	0	0
Fiber Relocation - Roads and Utility Poles	*50*	100	*50*	183	263	426.0%	213	250	250	225	225	225
Network Relocation - Bldg Renovation/Relocation	*0*	0	*0*	0	66	100.0%	66	0	0	0	0	0
FiberNet - Network Site Expansion	*1,485*	1,435	*1,410*	1,277	200	-85.8%	(1,210)	1,310	1,285	1,235	1,235	1,235
SUBTOTAL	**1,735**	**1,735**	**1,760**	**1,760**	**779**	**-55.7%**	**(981)**	**1,610**	**1,535**	**1,460**	**1,460**	**1,460**
SUBTOTAL	**3,166**	**3,017**	**3,236**	**3,236**	**2,475**	**-23.5%**	**(761)**	**3,569**	**3,551**	**3,536**	**3,555**	**3,617**

Under federal law and applicable franchise agreements, the County must provide at least $1,637,000 in capital and operating support for FiberNet. The County must also spend at least $2,190,000 on FiberNet and PEG capital equipment purchases.

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