



Committee: GO
Committee Review: Completed
Staff: Dr. Costis Torgas, Council IT Adviser
Purpose: Final action – vote expected
Keywords: #MoCoNet, #digital equity, #economic development, #state broadband financial aid, #federal broadband financial aid

AGENDA ITEM #21
 May 11, 2022
Action

SUBJECT

FY23-28 CIP: ultraMontgomery (P341700)

EXPECTED ATTENDEES

None

FY23 COUNTY EXECUTIVE RECOMMENDATION

	Total	Thru FY21	Est FY22	Total 6 Years	FY23	FY24	FY25	FY26	FY27	FY28	Beyond 6 Years
EXPENDITURE SCHEDULE (\$000s)											
Planning, Design and Supervision	898	506	92	280	80	80	80	20	20	20	-
Construction	18,346	1,616	2,310	14,420	4,120	4,200	4,120	680	680	680	-
TOTAL EXPENDITURES	19,204	2,122	2,402	14,680	4,180	4,280	4,180	680	680	680	-
FUNDING SCHEDULE (\$000s)											
Current Revenue: Cable TV	8,604	2,122	2,402	4,088	680	680	680	680	680	680	-
Current Revenue: General	1,600	-	-	1,600	500	600	500	-	-	-	-
State Aid	9,000	-	-	9,000	3,000	3,000	3,000	-	-	-	-
TOTAL FUNDING SOURCES	19,204	2,122	2,402	14,680	4,180	4,280	4,180	680	680	680	-
APPROPRIATION AND EXPENDITURE DATA (\$000s)											
Appropriation FY 23 Request			4,180	Year First Appropriation		FY16					
Appropriation FY 24 Request			4,280	Last FY's Cost Estimate		7,244					
Cumulative Appropriation			4,524								
Expenditure / Encumbrances			3,605								
Unencumbered Balance			919								

COMMITTEE RECOMMENDATIONS

The Committee, on a unanimous 2-0 vote of those members present, recommended the FY23 CIP ultraMontgomery (P341700) budget of \$4,100,000 as proposed by the County Executive to the Council after a full discussion.

SUMMARY OF KEY ISSUES

The Committee reviewed the issues in the Staff analysis packet starting on page 1. Major issues included:

- The focus of ultraMontgomery project resources directly on issues of digital equity
- The creation and support of MoCoNet as a residential broadband delivery system to targeted public housing units
- The efforts to secure State of Maryland and Federal grant resources now being made available to improve broadband availability to all, especially in time of pandemic

This report contains:

Committee Staff Report

Pages 1-6

Original ultraMontgomery budget submission

© 1-3

Amended ultraMontgomery budget submission

© 4-6

Updated FiberNet and ItraMontgomery map

© 7

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MEMORANDUM

April 26, 2022

TO: Government Operations and Fiscal Policy Committee
FROM: Dr. Costis Toregas, Council IT Adviser
SUBJECT: FY23-28 CIP: ultraMontgomery P341700

Expected to attend:

Gail Roper, Chief Information Officer, Department of Technology and Enterprise Business Solutions (TEBS)
Joe Webster, Chief Broadband Officer, TEBS
Allison Dollar, Chief Budget Officer, TEBS
Leny Baustista, Finance Manager, Office for Broadband Programs, TEBS
Julie Knight, Fiscal and Policy Analyst, Office of Management and Budget (OMB)

Documents for Committee review:

1. Original budget submission detail (©1-3)
2. Amended budget submission detail (©4-6)
3. Updated FiberNet and UltraMontgomery map (©7)

Council staff *recommends the acceptance of the ultraMontgomery budget at the level of \$5,315,000* that the County Executive has proposed.

Introduction

The project description for ultraMontgomery has changed. As noted on ©4, “... *the ultraMontgomery CIP provides for capital funding to support Montgomery County's economic development program and digital equity initiatives. Like economic development, internet service accessibility and affordability are critical factors in addressing equity disparities. In response to Covid-19, the County Executive and County Council have approved the Office of Broadband Programs, Department of Technology & Enterprise Business Solutions (TEBS') plan to strategically re-direct ultraMontgomery CIP funding to support digital equity initiatives in underserved communities where residents do not have home broadband service. Work will continue to complete the Great Seneca Fiber Hwy from*

Gaithersburg to Ashburn Virginia and Phase 2 of the East County Fiber Hwy from White Oak to Howard County and Prince George's County. The MoCoNet digital equity project to bring free and low-cost high-speed broadband to affordable housing developments will be expanded. ultraMontgomery will continue to leverage opportunities to expand broadband to rural areas of the County, support expanded public WiFi, and grow public-private partnerships for wireless deployments and innovation....”

The shift from solely economic development targets to embrace digital equity initiatives and to invest in those for whom access to the digital world continues to be a challenge is something the Committee requested during the last briefing that was held on CIP progress by TEBS. The project justification presented for this project on ©4 identifies the reasons behind this shift: “...*ultraMontgomery is a broadband economic development and digital equity program, designed to ensure that businesses and underserved residents of affordable housing units in Montgomery County have as much reliable, secure, and robust broadband service as they need to live, work, learn and keep our economy moving at the speed of our ideas. ultraMontgomery also support the County's racial diversity, equity, and inclusion goals by working to close our community's digital divide through deployment of devices and residential broadband in affordable housing developments and underserved communities. ultraMontgomery supports economic development by: ensuring that all businesses can access broadband and by ensuring that all residents have the broadband service and devices to participate in the digital economy; expanding access to competitive broadband services in commercial buildings to support small and large businesses; and by leveraging infrastructure development and strategic conduit network deployment to create public private partnerships and enable leasing of spare County fiber and conduit. Access to broadband infrastructure throughout the County supports business growth and innovation in biotech/bio-health, cybersecurity, IT services, financial services, media and similar high-bandwidth-consuming sectors, and for federal and state government, research and higher education institutions...*”

Background

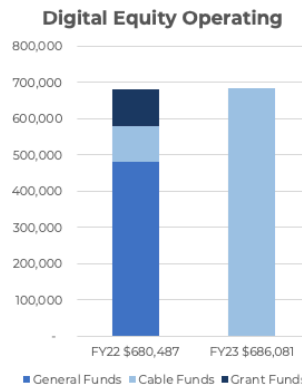
On January 15, 2022, the Executive transmitted a recommended budget for ultraMontgomery (see ©1-3). OMB subsequently requested that review of this submission by the Committee be postponed as additional work was being done that would have significant impact on the figures and requests. An amendment for this item was submitted on March 15, 2022 (see ©4-6); in this amended submission, the Executive provided the following commentary:

My recommended ultraMontgomery CIP amendment prioritizes digital equity by including General Fund support that will likely be needed to match anticipated State and Federal grant funding availability to install free and reduced cost broadband service and devices for residents of local low-income housing developments. ultraMontgomery is an economic development and digital equity program designed to expand broadband infrastructure and access for businesses, and to ensure that all residents can participate in the digital economy. Broadband access, along with devices and training, are important tools to support the County's racial diversity, equity, and inclusion goals by working to close our community's digital divide.

The Executive is reorganizing diverse projects into a focused approach around equity solutions. State and federal funding, cable fund funding and General fund funding are combined to ensure a coherent strategy aimed at reducing the digital divide. The chart and figure below summarize this effort.

Montgomery Connects Investments (Equity Solutions)

- TEBS is rebranding all digital equity programs as “Montgomery Connects”
- General Fund Digital Equity (ultraMontgomery) now funded by Cable Fund to simplify budget
- FY22 \$100,000 Digital Equity Grant funding moved into Cable Fund base budget
- FY23 CE REC CIP includes \$1M match for State grants and assumes \$3M in State grant fund for MoCoNet construction
 - MD will make \$45 million available for broadband to affordable housing; County is seeking \$9M with expected \$3M match requirement



FY23 CE REC CIP	In 1,000s
Economic Development	\$ 80
MoCoNet	\$ 100
County MoCoNet investment available as grant match	\$ 1,000
Target State Grant Funding	\$ 3,000
TOTAL	\$ 4,180



In order to better understand the activities and changes within the recommended budget, Council staff raised a number of questions, and received the following responses from the Executive branch. Council staff has provided comments and suggestions where appropriate. It might be helpful for the Committee to review each answer and provide suggestions and direction during the worksession.

Summary of staff suggestions (details provided in sections below)

- The Committee should continue to request clarity through the development of an ultraMontgomery set of annual targets and performance indicators that show progress towards these targets.
- The Committee should discuss what processes are in place to accommodate a possible (although not probable) outcome of the state not coming through with the desired \$9m grant.
- The Committee should discuss the selection methodology for providing county broadband services to residences- it should be transparent and with a robust set of qualifications and demand parameters.
- The Committee may want to request a briefing for the Fall where details on this innovative MoCoNet service can be described in detail, as well as long term plans for its success.

Council staff questions, answers from Executive, and (where appropriate), Council staff comments

1. What are the performance targets for ultraMontgomery, with which progress can be discerned?

The ultraMontgomery Program supports economic development and digital equity, to ensure that everyone in Montgomery County can participate in the digital economy.

- *The ultraMontgomery CIP funded extending FiberNet to regional and business centers to provide leasing of fiber capacity and broadband connectivity for businesses in Montgomery County and, expanding broadband in rural Montgomery County.*
- *The ultraMontgomery operating budget within TEBS funds promotion of FiberNet services, and digital equity devices and training, to expand business awareness of broadband and data center infrastructures and services and, to provide technology training to older adults and underserved communities of color.*

As the Covid pandemic continued, in 2021, a decision was made to shift the focus of the portions of the FY21 CIP and the FY22 CIP. New economic development construction was paused, and funding was provided to expand MoCoNet residential broadband infrastructure to affordable housing developments. There was continued uncertainty about when businesses will return employees to commercial building and seek more ultra-highspeed connections to commercial buildings, while at the same time there is new federal and state broadband grant funding available for underserved areas. Montgomery County and other large cities successfully lobbied the U.S. Treasury Department to make urban projects like MoCoNet eligible for Infrastructure grants.

For Economic Development:

- *The ultraMontgomery CIP has built the East County Fiber Highway to connect Data Bridge data center in the White Oak/Viva White Oak area to Burtonsville, added connectivity for Flash Route 29 BRT stations, and designed a conduit network for Viva White Oak.*
 - *Construction to connect to Howard County's and Prince George's County networks is expected to be completed in 2022.*
- *A partnership with Dark Fiber & Infrastructure (DF&I) has been completed to connect Montgomery County from White Oak through Bethesda under the Potomac River to Ashburn Virginia Data Centers (90% of all East Coast internet traffic flows through Ashburn VA data centers.)*
- *The Great Seneca Highway connecting Germantown and Gaithersburg to the DF&I Ashburn route is 95% complete and will be finishing 2022.*

For Digital Equity:

- *MoCoNet residential broadband is available to 245 units and will reach an additional 514 unit in FY23.*
- *ultraMontgomery CIP provided mapping data to enable Comcast to apply for a Connecting Maryland state grant to bring broadband to remaining known occupied unserved properties in the Agricultural Reserve.*

Staff comment:

While the response to the question indicates a lot of activity, it does not provide practical performance targets through which success can be measured. The Committee should continue to request clarity through the development of an ultraMontgomery set of annual targets and performance indicators that show progress towards these targets. Also, the Budget Equity Tool (BET) that has been developed within Office of Management and Budget (OMB) can perhaps be used to show progress towards Social Equity and racial Justice goals.

- 2. There is a total of \$21,235k of Federal Aid indicated in the Funding Schedule. Please indicate how much is in hand, how much is being prosed but not yet granted, and how much is planned for a request in subsequent years.**

The ultraMontgomery CIP is being amended to reflect an updated understanding of available State and Federal grant funding for digital equity initiatives within Cable Fund affordability constraints. The State of Maryland has allocated \$45M to the Municipal Network Program. The County will seek and reasonably expects to receive \$9M and would need \$3M as a match. Our assumption is that the grant would be spent over three years and would require \$1M match to receive \$3M in State Aid each year for the next three years.

Staff comment:

The Committee should discuss what processes are in place to accommodate a possible (although not probable) outcome of the state not coming through with the desired \$9m grant. Are deployment efforts on hold until this is the case or is the County using its own resources in the hope that matching funds (3 for 1) will eventually come?

- 3. The 500 units per year is a target for 2023 irrespective of federal support? Is there a location or locations selected for 2023?**

If the County receives no additional federal grants, we believe that we can extend MoCoNet service to 500 affordable housing units (approximately 3 locations) per year with County funding alone. Locations for FY2023 are being finalized. They are expected to include Snowden's Ridge Apartments with APAH (Arlington Partnership for Affordable Housing) and Elizabeth House III (with HOC). A third and potentially fourth location for FY23 are being developed. See attached map. ©7

Staff comment:

The Committee should discuss the selection methodology for providing county broadband services to residences- it should be transparent and with a robust set of qualifications and demand parameters.

- 4. ultraMontgomery has been funded at roughly \$600k for the last few years. This CIP request is increasing the amount tenfold. What is changing, and is there adequate management capacity to absorb this increase?**

See responses to questions 2 & 3. The total request has been revised downward to reflect grant funding that the County is competitive to apply for. Funding for expanded management capacity will be included as part of the grant project budget in grant applications.

- 5. Please provide a description of MoCoNet. Is there a governance structure and if so, is the public represented?**

MoCoNet is an innovative 100 Mbps/100 Mbps broadband residential service that enhances and leverages robust FiberNet infrastructure capacity to cost effectively provide digital equity benefits to underserved low-income residents. MoCoNet supports the County's racial equity and social justice goals by narrowing the gap of residents who lack high speed broadband at home. At the

present time, candidates for MoCoNet service are selected based on availability to leverage construction or renovation, distance to FiberNet, number of subsidized units and cost per unit served, and presence of a project champion at the proposed site. A public governance model is not being considered at this time.

Staff comment:

The Committee may want to request a briefing for the Fall where details on this innovative MoCoNet service can be described in detail, as well as long term plans for its success. Managing customer services over the long haul for what is usually a commercial offering can be challenging and require staffing and maintenance expenditures that grow over time.

6. Why did \$10m go from ultraMontgomery to FiberNet?

Funding is not being transferred from ultraMontgomery to FiberNet. FiberNet increase is based on business continuity, equipment replacement, and FiberNet buildout. ultraMontgomery is based on expanding MoCoNet to affordable housing projects and receiving additional State grants to expand to additional affordable housing projects.

7. Why is ultraMontgomery still called ultraMontgomery? Does it reflect current objectives?

ultraMontgomery was designed as an economic development project, which also ensures that all residents have the job skills and technology training to participate in the digital economy. ultraMontgomery focuses on expanding and leveraging spare capacity within FiberNet to expand ultra-high speed broadband services to commercial development areas and is now also focused on leveraging spare capacity within FiberNet to expand high speed broadband services to affordable housing developments. The ultraMontgomery CIP reflects investments in FiberNet that serve a public purpose but are in addition to FiberNet service at ITPCC locations.

ultraMontgomery continues to reflect the objectives of leveraging infrastructure to promote economic development and digital equity.



ultraMontgomery
(P341700)

Category	General Government	Date Last Modified	01/14/22
SubCategory	Technology Services	Administering Agency	Technology Services
Planning Area	Countywide	Status	Preliminary Design Stage

	Total	Thru FY21	Est FY22	Total 6 Years	FY 23	FY 24	FY 25	FY 26	FY 27	FY 28	Beyond 6 Years
EXPENDITURE SCHEDULE (\$000s)											
Planning, Design and Supervision	918	506	92	320	60	80	60	40	40	40	-
Construction	7,766	1,616	2,310	3,840	620	600	640	660	660	660	-
Other	21,235	-	-	21,235	4,635	4,775	4,775	4,775	2,275	-	-
TOTAL EXPENDITURES	29,919	2,122	2,402	25,395	5,315	5,455	5,475	5,475	2,975	700	-

FUNDING SCHEDULE (\$000s)											
Current Revenue: Cable TV	8,684	2,122	2,402	4,160	680	680	700	700	700	700	-
Federal Aid	21,235	-	-	21,235	4,635	4,775	4,775	4,775	2,275	-	-
TOTAL FUNDING SOURCES	29,919	2,122	2,402	25,395	5,315	5,455	5,475	5,475	2,975	700	-

APPROPRIATION AND EXPENDITURE DATA (\$000s)				
Appropriation FY 23 Request		5,315	Year First Appropriation	FY16
Appropriation FY 24 Request		5,455	Last FY's Cost Estimate	7,244
Cumulative Appropriation		4,524		
Expenditure / Encumbrances		3,605		
Unencumbered Balance		919		

PROJECT DESCRIPTION

The ultraMontgomery CIP provides for capital funding to support Montgomery County's economic development program and digital equity initiatives. Like economic development, internet service accessibility and affordability are critical factors in addressing equity disparities. In response to Covid-19, the County Executive and County Council have approved the Office of Broadband Programs, Department of Technology & Enterprise Business Solutions (TEBS)' plan to strategically re-direct ultraMontgomery CIP funding to support digital equity initiatives in underserved communities where residents do not have home broadband service. Work will continue to complete the Great Seneca Fiber Hwy from Gaithersburg to Ashburn Virginia and Phase 2 of the East County Fiber Hwy from White Oak to Howard County and Prince George's County. The MoCoNet digital equity project to bring free and low cost high speed broadband to affordable housing developments will be expanded. ultraMontgomery will continue to leverage opportunities to expand broadband to rural areas of the County, support expanded public WiFi, and grow public-private partnerships for wireless deployments and innovation.

ESTIMATED SCHEDULE

MocoNet projects are under construction and additional projects are being prioritized. The County is also seeking federal funding through various Covid-19 relief and infrastructure acts. The project anticipates connecting 500 units per year, or more depending on available supplemental funding. Construction of the final segment of Great Seneca Fiber Hwy is expected to be completed in 2021. The East County Fiber Highway will be completed in 2022. The Purple Line and White Oak Science Gateway projects have been delayed by factors unrelated to ultraMontgomery and work is expected to resume in FY25.

COST CHANGE

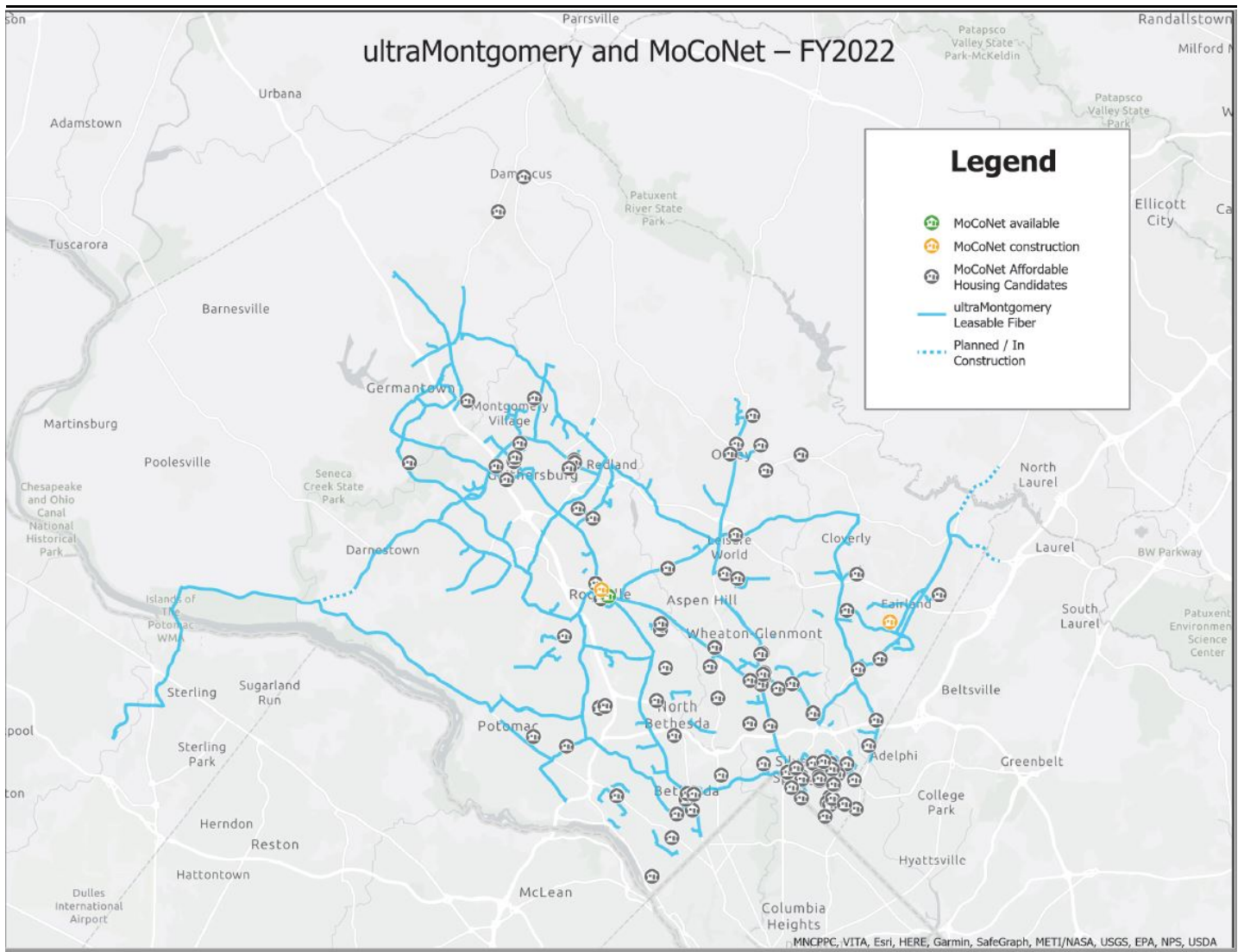
Additional federal infrastructure funding provided to the State is being requested. Additional County funds have been added in FY27 and FY28.

PROJECT JUSTIFICATION

ultraMontgomery is a broadband economic development and digital equity program, designed to ensure that businesses and underserved residents of affordable housing units in Montgomery County have as much reliable, secure, and robust broadband service as they need to live, work, learn and keep our economy moving at the speed of our ideas. As part of the recovery efforts, OBP made internet access available at affordable housing and rural locations. ultraMontgomery supports economic and racial diversity, equity, and inclusion goals by working to close our community's digital divide through: access to the digital economy for underserved communities through deployment of devices and residential broadband in affordable housing developments and expansion of Public WiFi; access to competitive broadband services in commercial buildings through infrastructure development, public private partnerships, strategic conduit network deployment, and leasing of spare County fiber and conduit; and business growth and innovation in biotech/biohealth, cybersecurity, IT services, financial services, media and similar high-bandwidth-consuming sectors and federal, state, research and higher education institutions.

COORDINATION

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



This map shows the location of affordable housing developments in the County that would be served if ultraMontgomery receives the requested funding.

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ultraMontgomery
(P341700)

Category	General Government	Date Last Modified	03/14/22
SubCategory	Technology Services	Administering Agency	Technology Services
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Current Revenue: General	1,600	-	-	1,600	500	600	500	-	-	-	-
State Aid	9,000	-	-	9,000	3,000	3,000	3,000	-	-	-	-
TOTAL FUNDING SOURCES	19,204	2,122	2,402	14,680	4,180	4,280	4,180	680	680	680	-

APPROPRIATION AND EXPENDITURE DATA (\$000s)			
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Expenditure / Encumbrances	3,605		
Unencumbered Balance	919		

PROJECT DESCRIPTION

The ultraMontgomery CIP provides for capital funding to support Montgomery County's economic development program and digital equity initiatives. Like economic development, internet service accessibility and affordability are critical factors in addressing equity disparities. Funding will support planning, design, and construction of: MoCoNet residential broadband in affordable housing developments to close the digital equity gap through the provision of free or low cost, reliable and robust residential Internet services and devices at affordable housing throughout the County; Public WiFi and Advanced Wireless Conduit Networks to provide conduit and fiber to support public WiFi and wireline and wireless broadband networks in commercial and community gathering areas of Montgomery County; Innovation Testbeds to spur development and expansion of traffic, transit, and pedestrian sensors, Internet of Things (IoT), advanced robotic, and cybersecurity IoT applications and innovation in Montgomery County; Purple Line Fiber to connect Montgomery County research and higher education facilities to MAX and Internet2 at the University of Maryland, College Park; and White Oak Science Gateway Conduit Network to provide broadband conduit infrastructure in Viva White Oak and other White Oak commercial development projects.

ESTIMATED SCHEDULE

Digital equity installations began in FY21 and will continue through FY28. White Oak Science Gateway conduit construction will be performed concurrently with Viva White Oak construction and is expected to occur in FY24-25. Design for public WiFi, advanced wireless, conduit, and testbeds in commercial and community gathering areas are underway and outreach to potential private partners is in development. Purple Line fiber connections are dependent on the Purple Line and third-party construction.

COST CHANGE

Federal funding provided through the State will be requested. County funds have been added in FY23, FY24 and FY25 to meet the anticipated required match for State funds. Additional County funds have also been added in FY27 and FY28 to support this ongoing project.

PROJECT JUSTIFICATION

ultraMontgomery is a broadband economic development and digital equity program, designed to ensure that businesses and underserved residents of affordable housing units in Montgomery County have as much reliable, secure, and robust broadband service as they need to live, work, learn and keep our economy moving at the speed of our ideas. ultraMontgomery also support the County's racial diversity, equity, and inclusion goals by working to close our community's digital divide through deployment of devices and residential broadband in affordable housing developments and underserved communities. ultraMontgomery supports economic development by: ensuring that all businesses can access broadband and by ensuring that all residents have the broadband service and devices to participate in the digital economy; expanding access to competitive broadband services in commercial buildings to support small and large businesses; and by leveraging infrastructure development and strategic conduit network deployment to create public private partnerships and enable leasing of spare County fiber and conduit. Access to broadband infrastructure throughout the County supports business growth and innovation in biotech/bio-health, cybersecurity, IT services, financial

services, media and similar high-bandwidth-consuming sectors, and for federal and state government, research and higher education institutions.

OTHER

In 2021, the Great Seneca Fiber Hwy was completed to provide shortest distance, low latency connection between Great Seneca and Ashburn, Virginia data centers. Phase 2 of the East County Fiber Hwy to provide regional interconnections north-south between White Oak and Howard County and east-west between Burtonsville and WSSC in Laurel will be completed in 2022.

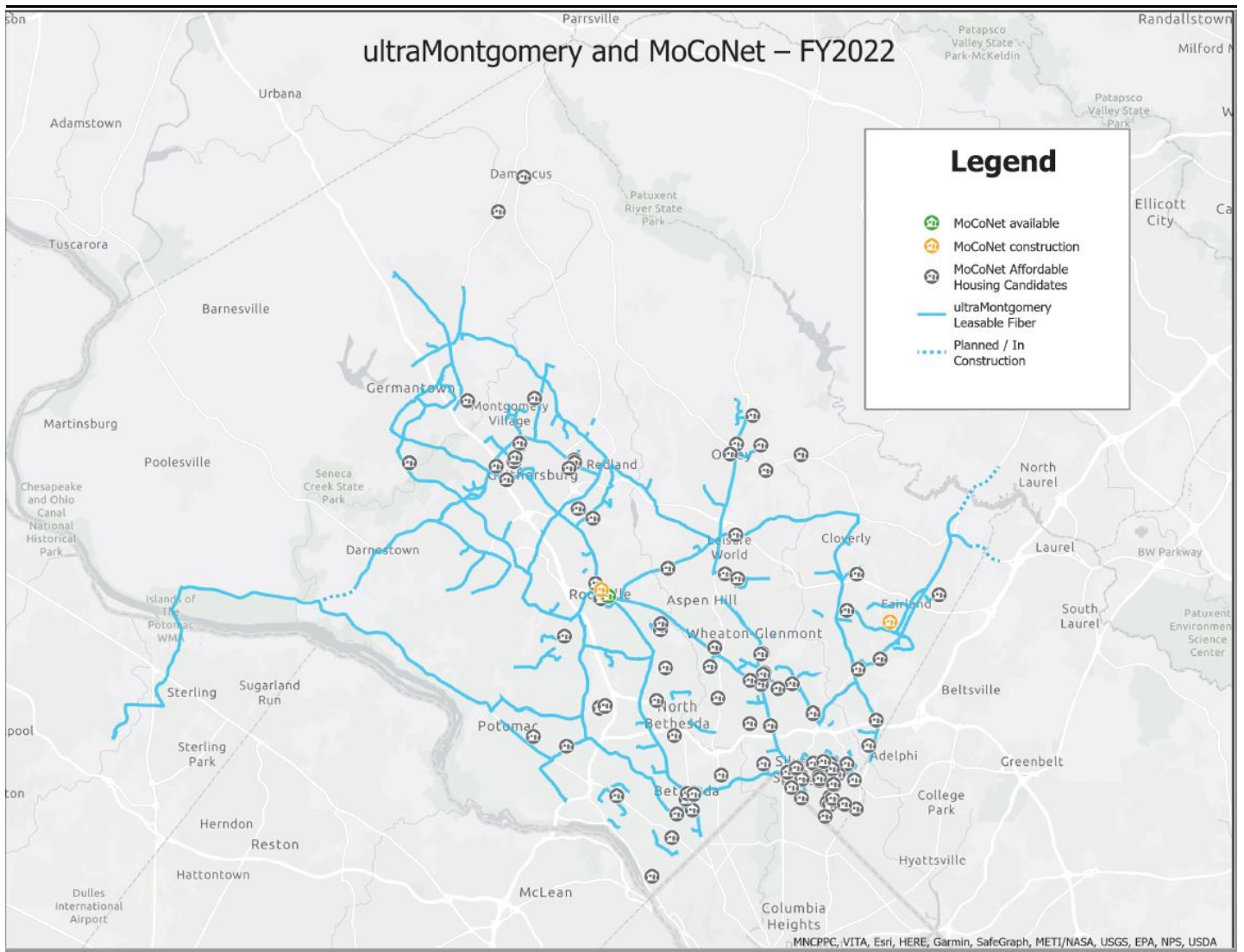
In response to COVID-19, funding for rural broadband is being provided through state and federal broadband grants. Engineering, planning, and design work provided by the ultraMontgomery CIP has been instrumental in preparing state grant applications. Since other resources can meet these needs, funding from the ultraMontgomery CIP is no longer being prioritized for rural broadband.

DISCLOSURES

The County Executive asserts that this project conforms to the requirement of relevant local plans, as required by the Maryland Economic Growth, Resource Protection and Planning Act.

COORDINATION






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



This map shows the location of affordable housing developments in the County that would be served if ultraMontgomery receives the requested funding.

ultraMontgomery and MoCoNet – FY2023

Legend

-  MoCoNet available
-  MoCoNet construction
-  MoCoNet Affordable Housing Candidates
-  ultraMontgomery Leasable Fiber
-  Planned / In Construction

