

EISENHOWER BROADBAND COMMUNICATIONS LINK

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: 4600 - 5700 Eisenhower Ave
REPORTING AREA: Eisenhower West

PRIMARY STRATEGIC THEME: Theme 10: Multimodal Transportation

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Citywide Trans. Mgmt. Tech. - Broadband Communications Link													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	1,018,742	1,018,742	-	-	-	-	-	-	-	-	-	-	-
Financing Plan													
State/Federal Grants	1,000,000	1,000,000	-	-	-	-	-	-	-	-	-	-	-
TIP	18,742	18,742	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	1,018,742	1,018,742	-	-	-	-	-	-	-	-	-	-	-
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from prior CIP.

PROJECT DESCRIPTION & JUSTIFICATION

The Eisenhower Broadband Communications Link project designs and constructs the expansion of the Smart Mobility fiber optic communications (broadband) network onto Eisenhower Avenue, between Van Dorn Street and Clermont Avenue. This will allow the City to better synchronize traffic signals along Eisenhower Avenue, install traffic surveillance cameras, and provide the platform to install future smart technology.

With the proposed development in the Eisenhower West area, new smart infrastructure including traffic signals, is needed to manage the anticipated increase in traffic volume. This project aims to mitigate the impacts of proposed development along Eisenhower Avenue with the installation of communications conduit and fiber optic cable, and surveillance cameras at key locations for real time traffic monitoring and a communications network that will connect the new and existing traffic signals to provide synchronization along this corridor.

This project will build onto the infrastructure installed with the ITS Integration project, which has already begun. . Design will be completed in the spring of 2022 with construction beginning in FY 2023.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

DASH TECHNOLOGIES

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation
and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 10: Multimodal
Transportation

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 16 - 20 Years

DASH Technologies													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	3,856,668	627,568	350,000	255,800	-	1,026,000	1,307,400	289,900	-	-	-	-	3,229,100
Financing Plan													
CMAQ/RSTP	3,229,100	-	350,000	255,800	-	1,026,000	1,307,400	289,900	-	-	-	-	3,229,100
NVTA 70% Funds	150,000	150,000	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	477,568	477,568	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	3,856,668	627,568	350,000	255,800	-	1,026,000	1,307,400	289,900	-	-	-	-	3,229,100
Operating Impact	996,100	-	-	-	-	130,000	133,900	137,900	142,100	146,300	150,700	155,200	996,100

CHANGES FROM PRIOR YEAR CIP

Funding schedule updated to reflect latest grant schedule for project.

PROJECT DESCRIPTION & JUSTIFICATION

This project will fund DASH technology initiatives which will provide better operational data to both customers and planners. This project will also allow DASH to operate more efficiently and help to improve the overall DASH customer experience. Phase I of this project funded the purchase of automated passenger counters (APC's), which greatly improve the quality of ridership reporting and any service planning decisions that result from that data and improved real-time prediction software that feeds to customers via digital bus information stop signs, DASH Tracker, WMATA's BusETA, and third-party apps. This project is being coordinated with the City's Smart Mobility Program and other transit and street technology enhancement projects.

For FY 2023, DASH is pursuing additional technological enhancements that may include: real-time bus capacity information for customers, business analytic tools, onboard passenger information displays, replacement/expansion of real-time information displays at stops, smart charge management systems for new electric buses, and the expansion of existing transit signal prioritization equipment and pedestrian detection systems to the entire DASH fleet. Future projects are likely to include the above examples along with the replacement/upgrade of the existing DASH CAD/AVL (Computer-Aided Dispatch/Automated Vehicle Locator) system, which is expected to reach the end of its useful life in the next three years.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Program, Alexandria Transit Vision Plan, Alexandria Mobility Plan

ADDITIONAL OPERATING IMPACTS

Annual fee for licensing and support of data systems implemented by this project.

INTELLIGENT TRANSPORTATION SYSTEMS (ITS) INTEGRATION

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 10: Multimodal Transportation

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Citywide Trans. Mgmt. Tech. - Intelligent Transportation Systems (ITS) Integration													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	14,429,640	10,709,051	735,189	600,000	2,385,400	-	-	-	-	-	-	-	3,720,589
Financing Plan													
Cash Capital	37,629	37,629	-	-	-	-	-	-	-	-	-	-	-
CMAQ/RSTP	3,720,589		735,189	600,000	2,385,400	-	-	-	-	-	-	-	3,720,589
State/Federal Grants	8,298,892	8,298,892	-	-	-	-	-	-	-	-	-	-	-
TIP	2,372,530	2,372,530	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	14,429,640	10,709,051	735,189	600,000	2,385,400	-	-	-	-	-	-	-	3,720,589
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding schedule updated to reflect latest grant schedule for project.

PROJECT DESCRIPTION & JUSTIFICATION

This project provides funding for the design and installation of upgrades to the City's Smart Mobility initiative, which keeps City streets safe and running smoothly, while also laying the groundwork for emerging technologies that will shape transportation over the next five, ten, twenty years and beyond. Completion of this project will replace much of the City's 30-year old traffic signal communications and allow public safety departments to monitor real time conditions on the City's roadway network. Staff is working with the ITS Department to determine if cost savings can be achieved by coordinating construction of this project with the Municipal Fiber project.

This project has five phases that largely focus on the design and installation of the City's fiber optic communications (broadband) network, which is the laying of cable that allows regional transportation agencies to communicate faster and more efficiently to manage traffic and respond to emergencies. The project also includes the installation of field devices such as traffic cameras, weather stations, flood monitoring equipment and pavement temperature sensors which capture data that can be used to reduce congestion and better manage the City's roadways.

The five phases are as follows:

- Phase I (Complete): Installed a broadband fiber optic communications network, 11 traffic surveillance cameras, and a traffic management center.
- Phase II (Complete): Supplemented the first phase, expanded the broadband network and installed additional traffic surveillance cameras.
- The design for Phase III began in FY 2019 and will be complete in FY 2022. Construction will begin in early FY 2023. This phase includes the installation of 10 new traffic surveillance cameras, upgrading the control center video wall, connecting 50 traffic signals to the fiber optic backbone and running fiber optic cable along parts of Van Dorn Street and the western end of Duke Street. Funding from this grant will also provide staff support for this project and coordinate with the ITS Department regarding technology aspects of this project.
- The design for Phase IV began in FY 2022 and construction is scheduled to begin in late FY 2023. This phase will add 10 more traffic surveillance cameras and connect 46 traffic signals to the fiber optic backbone.
- The funding for Phase V becomes available in FY 2025 and design will begin at that time. Phase V will focus mainly on installing a fiber optic backbone to the Mount Vernon Avenue corridor and connecting approximately 20 traffic signals to the fiber optic backbone and installation of approximately 5 traffic surveillance cameras. This project may be constructed in coordination with the Municipal Fiber project to reduce costs and limit disturbance to the community.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

PARKING TECHNOLOGIES

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 10: Multimodal Transportation

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: 6 - 10 Years

Citywide Parking - Parking Technologies													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	1,860,169	1,610,169	250,000	-	-	-	-	-	-	-	-	-	250,000
Financing Plan													
CMAQ/RSTP	873,629	623,629	250,000	-	-	-	-	-	-	-	-	-	250,000
State/Federal Grants	986,540	986,540	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	1,860,169	1,610,169	250,000	-	-	-	-	-	-	-	-	-	250,000
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

No changes from previous CIP. During spring 2022, this project was awarded an additional \$202,021 in CMAQ/RSTP funds for FY 2023. This additional amount was not reflected in the FY 2023 Capital Budget Appropriation and will be added to the project during the Fall 2022 Supplemental Appropriation Ordinance (SAO). Once the Fall 2022 SAO is adopted, the project will have a total FY 2023 appropriation of \$452,021.

PROJECT DESCRIPTION & JUSTIFICATION

Parking and curbside management is high priority for the City. By using parking technology, the City can more efficiently manage on and off-street parking resources and help provide more information about parking options to the community and visitors. This project provides funding for an analysis of potential parking technologies for the City, development of an implementation plan, and the deployment of new parking technologies. These technologies could include real time parking occupancy systems for on-street spaces and parking garages/lots, and web-based interactive maps, dynamic signage that illustrates real-time parking availability in city-owned garages, and other parking technologies. These technologies will mostly be off-the-shelf solutions requiring minimal design and engineering.

This project is fully funded with CMAQ/RSTP funds each year from FY 2018 – 2023. In FY 2021, the City completed a framework plan for implementation of parking technologies, including prioritizing specific categories of technologies to purchase and implement. The City will focus on user experience and payment technologies as well as data collection and management systems.

Procurement of short-term parking technology installations began in FY 2022 and will continue each year thereafter as funding is available. In FY 2023, staff will continue procurement and implementation of specific technology in City garages and in on-street parking areas that improves the user's experience, such as real time signage, online parking maps, and enhanced payment options. This program will include evaluations of new parking technologies being installed as well as research on best practices for future technology applications that will help the City better manage parking, curbside uses and traffic. Funding is available annually through FY 2023.

Depending on the readily changing types of and uses for parking and curbside management technology, additional funding may be needed to complete this project or maintain installed equipment or software, or the project's scope may need to be narrowed.

Once implemented, these technologies will support economic development by providing more efficient parking strategies for residents, employees, and visitors and will allow the City to manage parking and traffic assets more efficiently.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Alexandria Mobility Plan; T&ES Strategic Plan; Old Town Area Parking Study; Del Ray Parking Study

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

SMART MOBILITY IMPLEMENTATION

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation
and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Themes 4 & 10

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Smart Mobility Implementation													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	4,189,400	-	-	-	-	3,306,400	883,000	-	-	-	-	-	4,189,400
Financing Plan													
CMAQ/RSTP	4,189,400	-	-	-	-	3,306,400	883,000	-	-	-	-	-	4,189,400
Financing Plan Total	4,189,400	-	-	-	-	3,306,400	883,000	-	-	-	-	-	4,189,400
Operating Impact	76,600	-	-	-	-	10,000	10,300	10,600	10,900	11,300	11,600	11,900	76,600

CHANGES FROM PRIOR YEAR CIP

New project added to FY 2023 - FY 2032 CIP. During spring 2022, this project was awarded an additional \$803,470 in CMAQ/RSTP funds. This additional amount was not reflected in the FY 2023 Capital Budget Appropriation and will be added to the project during the FY 2024 CIP Development Process.

PROJECT DESCRIPTION & JUSTIFICATION

Smart mobility is a broad term that incorporates the application of technology to streets, traffic signals, vehicles, parking systems, and other transportation infrastructure to make them more efficient and safer, while providing data that can help improve long-term decision-making about where and what changes to make to our streets. In the coming decade, converging innovations and technology are likely to play a transformative role in transportation.

The Smart Mobility Implementation Project is funded by CMAQ/RSTP dollars beginning in FY 2026. These funds will be used to implement projects outlined in the Smart Mobility Framework Plan which is being updated in FY 2023 and will help to prioritize projects for implementation.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

It is anticipated that many of these services will be cloud based and future operating costs will be in the form of subscription based services.

TRAFFIC ADAPTIVE SIGNAL CONTROL

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 10: Multimodal Transportation

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Traffic Adaptive Signal Control													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	8,219,347	5,266,347	2,953,000	-	-	-	-	-	-	-	-	-	2,953,000
Financing Plan													
State/Federal Grants	5,266,347	5,266,347	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants (Smartscale)	2,953,000	-	2,953,000	-	-	-	-	-	-	-	-	-	2,953,000
Financing Plan Total	8,219,347	5,266,347	2,953,000	-	-	-	-	-	-	-	-	-	2,953,000
Operating Impact	222,309	-	-	-	25,000	25,750	26,523	27,318	28,138	28,982	29,851	30,747	222,309

CHANGES FROM PRIOR YEAR CIP

Funding schedule updated to reflect latest grant schedule for project.

PROJECT DESCRIPTION & JUSTIFICATION

This two-phase project will install new control software, hardware, and traffic sensors to monitor traffic in real-time. It also funds the design and installation of traffic adaptive signal control systems. This project will allow the City's traffic signals to adjust in real-time to changing traffic, helping to eliminate delays and reduce the incentive to cut through neighborhoods. Traffic adaptive signal control is a traffic management strategy in which traffic signals automatically adjust operations to adapt to changes in traffic. These changes are based on real-time traffic demand. This allows traffic signals to adjust to actual traffic demand and flow rather than variables that are less effective predictors, and continuously synchronize with each other to optimize traffic flow throughout a network to better manage traffic flow on the City's roadways.

Traffic Adaptive Signal Control is a key project in the Smart Mobility program. Traffic navigation apps have rendered traditional time of day traffic signal control obsolete. Everyday navigation apps alter traffic behavior depending on regional traffic conditions. Traffic Adaptive Control will help take the City into the future. This project will utilize many of the features installed by previous Smart Mobility projects as well as seek to integrate with navigation apps and other data sources as well as incorporate artificial intelligence.

- Phase I began in FY 2021 and will be finalized in FY 2022. Construction will start in FY 2023. Phase I of this project will install a new server with a traffic signal management and adaptive system. Adaptive control will be implemented on both Van Dorn St and Duke Street. This work will involve installing vehicle detection as well as smart traffic signal controllers along the adaptive corridors.
- Phase II design is anticipated to begin in FY 2023. This phase will expand adaptive control to other areas of the City as well as install DSL communications to support Ethernet communications to traffic signals that are currently not served by fiber optic communications cable. As with Phase I, detection and smart traffic signal controllers will be installed along adaptive corridors.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan

ADDITIONAL OPERATING IMPACTS

A software support/maintenance agreement will be needed to maintain this asset.

TRAFFIC CONTROL UPGRADE

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 10: Multimodal Transportation

PROJECT CATEGORY: 1
ESTIMATE USEFUL LIFE: Varies

Citywide Trans. Mgmt. Tech. - Traffic Control Upgrade													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	2,933,400	653,000	60,000	175,200	202,800	208,800	215,000	221,400	228,200	235,100	242,200	491,700	2,280,400
Financing Plan													
Cash Capital	2,883,400	603,000	60,000	175,200	202,800	208,800	215,000	221,400	228,200	235,100	242,200	491,700	2,280,400
Private Capital Contributions	50,000	50,000	-	-	-	-	-	-	-	-	-	-	-
Financing Plan Total	2,933,400	653,000	60,000	175,200	202,800	208,800	215,000	221,400	228,200	235,100	242,200	491,700	2,280,400
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding reduced to accommodate funding restriction and increased needs in other projects.

PROJECT DESCRIPTION & JUSTIFICATION

The Traffic Control Upgrade project funds ongoing capital maintenance, support and required hardware upgrades associated with implementation of the City's Smart Mobility initiative and state of good repair for City assets.

The project supports necessary technology upgrades and software/system support contracts associated with the City's traffic surveillance cameras, broadband fiber optic communications network and hardware/systems in the management center. Additionally, this project provides funding for emergency repairs and replacement in cases of equipment failure of the existing traffic control system.

FY 2022 funding was used to upgrade the Duke Street Digital Subscriber Line (DSL) communication system. This system is 10 years old and has reached its useful life. The Duke Street DSL system is important because it allows video to be broadcast from the traffic cameras along Van Dorn Street. This segment of Duke Street does not have fiber optic cable and the DSL system allows the City to leverage the existing copper communications cable to the greatest extent possible.

FY 2023 funding will be used to pay for the annual support contracts for the City's traffic signal control system, and video management system. In addition, deployment of technology is being evaluated to port live streaming traffic camera video to DEC and the EOC.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

TRANSIT SIGNAL PRIORITY

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation
and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Themes 4 & 10

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Transit Signal Priority													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	3,365,491	1,255,491	-	374,000	1,736,000	-	-	-	-	-	-	-	2,110,000
Financing Plan													
NVTA 30% Funds	60,000	60,000	-	-	-	-	-	-	-	-	-	-	-
NVTA 70% Funds	1,195,491	1,195,491	-	-	-	-	-	-	-	-	-	-	-
State/Federal Grants	2,110,000	-	-	374,000	1,736,000	-	-	-	-	-	-	-	2,110,000
Financing Plan Total	3,365,491	1,255,491	-	374,000	1,736,000	-	-	-	-	-	-	-	2,110,000
Operating Impact	124,000	-	-	-	12,000	13,000	14,000	15,000	16,000	17,000	18,000	19,000	124,000

CHANGES FROM PRIOR YEAR CIP

Funding schedule updated to reflect latest grant schedule for project.

PROJECT DESCRIPTION & JUSTIFICATION

This project will install Transit Signal Priority (TSP) on priority transit corridors throughout the City. Transit Signal Priority allows buses to request priority at intersections, thereby reducing wait time for passengers. This also allows transit vehicles to bypass congestion and offer more reliable services, making transit faster, easier and more appealing as a travel option. The existing bus fleet has been retrofitted with TSP equipment as the City upgrades traffic signals with TSP on corridors throughout the City, starting with Duke Street, Route 1 and King Street. All new buses will be equipped with TSP technology.

TSP has been installed at 56 traffic signals within the City. These signals are on major transit corridors including Seminary Road, King Street, Duke Street, Van Dorn Street and Beauregard Street. The City is coordinating TSP implementation with WMATA and DASH and considering future technology to further enhance performance of the transit system.

An additional benefit of installing TSP infrastructure is that emergency vehicles can utilize this equipment to request preemption at intersections. Technology is being installed in emergency vehicles to allow them to respond to emergencies with less delays by utilizing the installed TSP.

TSP was installed on both Duke Street and King Street in FY 2021. In future phases of this project, TSP will also be installed along the high capacity transit corridors when those projects are constructed. Future funding is anticipated to be requested to install additional TSP equipment at intersections in key transit corridors across the City, including King Street, Duke Street, Van Dorn Street, Seminary Road and Beauregard Street. This funding also supports installing retrofitted TSP equipment on any remaining DASH buses that are not outfitted with TSP technology.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

Smart Mobility Framework Plan, Alexandria Transit Vision Plan

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.

TRANSPORTATION TECHNOLOGIES

DOCUMENT SUBSECTION: Smart Mobility
MANAGING DEPARTMENT: Department of Transportation and Environmental Services

PROJECT LOCATION: Citywide
REPORTING AREA: Citywide

PRIMARY STRATEGIC THEME: Theme 10: Multimodal Transportation

PROJECT CATEGORY: 3
ESTIMATE USEFUL LIFE: Varies

Citywide Trans. Mgmt. Tech. - Transportation Technologies													
	A (B + M)	B	C	D	E	F	G	H	I	J	K	L	M (C:L)
	Total Budget & Financing	Prior Appropriations	FY 2023	FY 2024	FY 2025	FY 2026	FY 2027	FY 2028	FY 2029	FY 2030	FY 2031	FY 2032	Total FY 2023 - FY 2032
Expenditure Budget	4,090,412	1,620,312	265,300	-	281,500	-	298,500	309,500	316,800	326,300	336,100	336,100	2,470,100
Financing Plan													
GO Bonds	115,000	115,000	-	-	-	-	-	-	-	-	-	-	-
Reprogrammed TIP Bonds	95,312	95,312	-	-	-	-	-	-	-	-	-	-	-
TIP	3,880,100	1,410,000	265,300	-	281,500	-	298,500	309,500	316,800	326,300	336,100	336,100	2,470,100
Financing Plan Total	4,090,412	1,620,312	265,300	-	281,500	-	298,500	309,500	316,800	326,300	336,100	336,100	2,470,100
Operating Impact	-	-	-	-	-	-	-	-	-	-	-	-	-

CHANGES FROM PRIOR YEAR CIP

Funding added for FY 2032.

PROJECT DESCRIPTION & JUSTIFICATION

This project funds the deployment of small-scale transportation technology projects to improve efficiency of the transportation infrastructure including parking technology, traffic signals and signs. This technology will improve the reliability and integrity of future transportation studies and informed decision making. These technologies will also contribute to the engineering improvements being implemented as part of the City's Vision Zero and Complete Streets Programs as well as parking technologies to better manage on-street and garage parking.

Prior year funding has been used to upgrade city parking meter modems from 2G to 3G to ensure continued operation and reliability as cellular providers phase out 2G service. It has also been used to collect data and install signal detection, parking technologies, and the City's first pavement sensors to assist in snow removal operations.

In FY 2022, funding was used to deploy additional pavement sensors, parking garage technology, assess vehicle electrification needs and support data collection efforts that will enable better analysis of traffic trends and real time decision making. Funds were also used to pilot signal detection technology to evaluate various systems. The possibility of connecting some of the City's remote traffic signals to the traffic center using wireless communications was evaluated in FY 2022. In FY 2023, additional parking technology will be deployed. The City will continue to contract with data providers that analyze traffic and parking.

EXTERNAL OR INTERNAL ADOPTED PLAN OR RECOMMENDATION

N/A

ADDITIONAL OPERATING IMPACTS

No additional operating impacts identified at this time.