

METRO SUBWAY



Metro Capital Investment Total (FY18-23): \$559,625,000

<i>Metro Railcar and Signal System Overhauls and Replacement</i>	\$443,988,000
<i>Metro Safety Improvements</i>	\$22,448,000
<i>Metro Interlocking Renewals</i>	\$35,460,000
<i>Metro System Preservation Fund</i>	\$14,225,000
<i>Metro Bridge & Elevated Structures Preservation</i>	\$10,713,000
<i>Metro Tunnel Preservation Fund</i>	\$9,973,000
<i>Metro Signal and Traction Power System Preservation</i>	\$8,842,000
<i>Metro Rail Installation Fund</i>	\$8,289,000
<i>Other Metro System Preservation Funding</i>	\$7,687,000



PROJECT: Metro Railcar and Signal System Overhauls and Replacement

DESCRIPTION: Replacement of Metro railcars and repair of critical equipment such as traction motors, gearboxes, axles, and wheels as well as repair and replacement of signal system and associated components.

PURPOSE & NEED SUMMARY STATEMENT: On-going overhauls for Metro vehicle subsystems are required to reduce system failures and improve reliability. The new vehicles will replace the existing fleet which is nearing the end of its useful life. The replacement of the Railcar Fleet will enhance passenger comfort and convenience, ensure better reliability, and improve safety.

STATE GOALS: Maryland Transportation Plan (MTP) Goals/Selection Criteria:

- Safety & Security
- System Preservation
- Quality of Service
- Environmental Stewardship
- Community Vitality
- Economic Prosperity

EXPLANATION: Overhaul and replacement of Metro vehicles and signals system will insure safe, reliable service.

- SMART GROWTH STATUS:** Project Not Location Specific Not Subject to PFA Law
- Project Inside PFA
 - Project Outside PFA
 - PFA Status Yet to Be Determined
 - Grandfathered
 - Exception Will Be Required
 - Exception Granted

ASSOCIATED IMPROVEMENTS:
None.

STATUS: The Notice to Proceed (NTP) has been issued for the Metro Train Control and Vehicle Replacement Project

SIGNIFICANT CHANGE FROM FY 2017 - 22 CTP: The cost has decreased by \$54.4M due to moving the Electrical System Preservation project to Metro Safety Improvements, and bid savings on the Metro Fleet and Train Control Replacement Program.

USAGE: In FY 2017 Metro annual ridership was 10.9 million.

PHASE	POTENTIAL FUNDING SOURCE: <input checked="" type="checkbox"/> SPECIAL <input checked="" type="checkbox"/> FEDERAL <input type="checkbox"/> GENERAL <input type="checkbox"/> OTHER										
	TOTAL ESTIMATED COST (\$000)	EXPEND THRU 2017	CURRENT YEAR 2018	BUDGET YEAR 2019	PROJECTED CASH REQUIREMENTS FOR PLANNING PURPOSES ONLY				SIX YEAR TOTAL	BALANCE TO COMPLETE	
				2020....2021....2022....2023....			
Planning	0	0	0	0	0	0	0	0	0	0	
Engineering	5,284	4,819	465	0	0	0	0	0	465	0	
Right-of-way	0	0	0	0	0	0	0	0	0	0	
Construction	518,807	30,307	35,776	61,503	91,350	92,142	112,642	50,110	443,523	44,977	
Total	524,091	35,126	36,241	61,503	91,350	92,142	112,642	50,110	443,988	44,977	
Federal-Aid	306,206	17,992	24,765	47,726	72,195	70,939	35,995	36,594	288,214	0	

0091, 1281, 1415, 1477



PROJECT: Metro Safety Improvements

DESCRIPTION: Funding to provide repairs and keep Metro tracks in a state of good repair. This project will also provide for improvements to the Metro tunnels and stations to improve their resilience to flooding, as well as electrical system preservation.

PURPOSE & NEED SUMMARY STATEMENT: Replacements and repairs to maintenance of way are necessary to correct general degradation and to ensure safety. Flood resiliency will allow the Metro to continue to operate in severe weather conditions.

STATE GOALS : Maryland Transportation Plan (MTP) Goals/Selection Criteria:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Safety & Security | <input type="checkbox"/> Environmental Stewardship |
| <input checked="" type="checkbox"/> System Preservation | <input type="checkbox"/> Community Vitality |
| <input type="checkbox"/> Quality of Service | <input type="checkbox"/> Economic Prosperity |

EXPLANATION: This project provides track and electrical system repairs as part of Metro's system preservation program.

- SMART GROWTH STATUS:** Project Not Location Specific Not Subject to PFA Law
- | | |
|--|---|
| <input type="checkbox"/> Project Inside PFA | <input type="checkbox"/> Grandfathered |
| <input type="checkbox"/> Project Outside PFA | <input type="checkbox"/> Exception Will Be Required |
| <input type="checkbox"/> PFA Status Yet to Be Determined | <input type="checkbox"/> Exception Granted |

ASSOCIATED IMPROVEMENTS:
Metro Interlocking Renewals - Line 15

STATUS: Construction for the Maintenance of Way and the Electrical System projects are underway.

SIGNIFICANT CHANGE FROM FY 2017 - 22 CTP: Project cost decreased by \$36.5M due to moving the Metro Interlocking Renewals project.

PHASE	TOTAL				PROJECTED CASH REQUIREMENTS				SIX YEAR TOTAL	BALANCE TO COMPLETE
	ESTIMATED COST (\$000)	EXPEND THRU 2017	CURRENT YEAR 2018	BUDGET YEAR 2019	FOR PLANNING PURPOSES ONLY	FOR PLANNING PURPOSES ONLY	FOR PLANNING PURPOSES ONLY	FOR PLANNING PURPOSES ONLY		
Planning	0	0	0	0	0	0	0	0	0	0
Engineering	4,196	1,480	1,715	400	300	301	0	0	2,716	0
Right-of-way	0	0	0	0	0	0	0	0	0	0
Construction	26,955	7,223	5,729	2,754	3,078	5,621	2,550	0	19,732	0
Total	31,151	8,703	7,444	3,154	3,378	5,922	2,550	0	22,448	0
Federal-Aid	3,384	463	2,921	0	0	0	0	0	2,921	0



PROJECT: Metro Interlocking Renewals

DESCRIPTION: Complete rebuild of track interlockings on the Metro system, at locations such as Johns Hopkins, Charles Center, State Center, Old Court, Milford Mill and Owings Mills.

PURPOSE & NEED SUMMARY STATEMENT: Interlockings allow trains to cross from one track to another using turnouts and are important for operations. Replacements are necessary to correct general degradation and wear and to ensure safety.

STATE GOALS : Maryland Transportation Plan (MTP) Goals/Selection Criteria:

- | | |
|---|--|
| <input checked="" type="checkbox"/> Safety & Security | <input type="checkbox"/> Environmental Stewardship |
| <input checked="" type="checkbox"/> System Preservation | <input type="checkbox"/> Community Vitality |
| <input checked="" type="checkbox"/> Quality of Service | <input type="checkbox"/> Economic Prosperity |

EXPLANATION: Interlocking renewals are needed to assure customer safety, to provide reliable customer service and to keep the system in a state of good repair.

- SMART GROWTH STATUS:** Project Not Location Specific Not Subject to PFA Law
- | | |
|--|---|
| <input checked="" type="checkbox"/> Project Inside PFA | <input type="checkbox"/> Grandfathered |
| <input type="checkbox"/> Project Outside PFA | <input type="checkbox"/> Exception Will Be Required |
| <input type="checkbox"/> PFA Status Yet to Be Determined | <input type="checkbox"/> Exception Granted |

ASSOCIATED IMPROVEMENTS:
Metro Safety Improvements - Line 14

STATUS: The Johns Hopkins and State Center Interlocking projects are under design.

POTENTIAL FUNDING SOURCE: <input checked="" type="checkbox"/> SPECIAL <input checked="" type="checkbox"/> FEDERAL <input type="checkbox"/> GENERAL <input type="checkbox"/> OTHER											
PHASE	TOTAL		CURRENT YEAR	BUDGET YEAR	PROJECTED CASH REQUIREMENTS FOR PLANNING PURPOSES ONLY				SIX YEAR TOTAL	BALANCE TO COMPLETE	
	ESTIMATED COST (\$000)	EXPEND THRU 2017			2020	2021	2022	2023			
Planning	0	0	0	0	0	0	0	0	0	0	
Engineering	6,996	4,921	1,841	0	100	134	0	0	2,075	0	
Right-of-way	0	0	0	0	0	0	0	0	0	0	
Construction	51,165	17,780	871	3,001	11,001	6,712	1,000	10,800	33,385	0	
Total	58,161	22,701	2,712	3,001	11,101	6,846	1,000	10,800	35,460	0	
Federal-Aid	35,785	13,808	2,165	2,400	8,880	0	0	8,532	21,977	0	

SIGNIFICANT CHANGE FROM FY 2017 - 22 CTP: This project was added to the Construction Program, moved from Metro Safety Improvements project.



Metro System Preservation Funding

Project	FY 18	FY 19	FY 20	FY 21	FY 22	FY 23	Six Year Total
Metro System Preservation Fund	2,535	1,090	3,000	3,000	2,500	2,100	14,225
Metro Bridge & Elevated Structures Preservation	1,542	1,166	2,005	2,000	2,500	1,500	10,713
Metro Tunnel Preservation Fund	2,190	2,833	1,280	670	1,500	1,500	9,973
Metro Signal and Traction Power System Preservation	5,810	-	332	700	1,000	1,000	8,842
Metro Rail Installation Fund	2,025	800	1,164	1,300	1,500	1,500	8,289
Other Metro System Preservation Funding	3,143	1,011	2,278	436	411	408	7,687

Note: Numbers are shown in thousands