

**FY22 New Capital Projects**

**State of Good Repair Projects**

1	<b>PROJECT: USG Fire Detection System Renovation</b>
	PROJECT OWNER: Human Capital & Development - Technology
	LOP: \$5,950,000 <span style="float: right;">FY22: \$1,000,000</span>
	SCOPE: Complete replacement of the Fire Alarm Panel, devices, wiring and related components at Union Station Gateway Building, USG Parking, Union Station East Portal, and Patsaouras Bus plaza.
	JUSTIFICATION: Replacement parts for the existing Siemens model MXL are hard to find. Siemens will no longer support this model after 2022. Reduced reliability of the existing system is due to age and many tenant improvement during the years. New technologies are now available to improve communication and add features such as an earthquake early warning system, connection to user interfaces (GUI's), remote monitoring, and improvement in troubleshooting capabilities. The Siemens XLS fire alarm equipment is proprietary, and there are limited authorized installation / maintenance contractors available. Full replacement will allow other manufacturers/contractors such as Edwards and Notifier to bid to replace the existing MXL with a new system in compliance with the current NFPA 72 requirements.
ELIGIBLE FUNDING SOURCE: TDA 4	
2	<b>PROJECT: FY22 AQMD 1196 Rule Non-Revenue Vehicles</b>
	PROJECT OWNER: Operations - Non-Revenue Vehicles
	LOP: \$9,400,000 <span style="float: right;">FY22: \$150,000</span>
	SCOPE: This project spans three Fiscal Years (FY22, FY23, and FY24) for the replacement of Non-Revenue Vehicles non-compliant with AQMD Rule 1196 (CLEAN ON-ROAD HEAVY-DUTY PUBLIC FLEET VEHICLES). This project is for the replacement of Metro's non-compliant vehicles in Bus Maintenance, Facilities Maintenance, Logistics, and Community Relations.
	JUSTIFICATION: The vehicles identified for replacement were procured between 2003 and 2010 have been identified as non-compliant with AQMD Rule 1196.
ELIGIBLE FUNDING SOURCE: TDA 4	
3	<b>PROJECT: Integrated Data and Communications System (IDCS)</b>
	PROJECT OWNER: Operations - Rail Vehicle Systems
	LOP: \$33,980,000 <span style="float: right;">FY22: \$5,000</span>
	SCOPE: Design and procure an on-board Integrated Data and Communications System that utilizes both cellular and wi-fi connectivity for remote and real-time access to the on-board CCTV system while also providing real-time access to vehicle systems. This will also allow us to determine vehicle location in the absence of GPS and will provide on-board passenger wi-fi.
	JUSTIFICATION: The project will improve Rail Fleet management and tracking while providing improved customer communication services. Live stream access will support safety and security, allowing staff to monitor the train in case of an emergency.
ELIGIBLE FUNDING SOURCE: PA35% Cash/Debt Proceed	

4	<b>PROJECT: P2000 Vehicle Component Replacement</b>
	PROJECT OWNER: Operations - Rail Vehicle Maintenance
	LOP: \$16,100,000 <span style="float: right;">FY22: \$200,000</span>
	SCOPE: Overhauling 52 cars plus spares of P2000 truck systems on the powered and non-powered trucks. This would include axles, journal bearings, couplers, and friction brake / air compressor.
	JUSTIFICATION: The P2000 component overhaul is required because of fleet age, vehicle mileage, and original equipment manufacturer (OEM) recommendations to maintain the availability, reliability, safety and passenger comfort of the fleet. Based on regular OEM preventative maintenance inspections, the fleet is in need of component overhauls.
ELIGIBLE FUNDING SOURCE: TDA 4	
5	<b>PROJECT: P3010 Fleet-Friction Brake Overhaul</b>
	PROJECT OWNER: Operations - Rail Vehicle Maintenance
	LOP: \$35,990,000 <span style="float: right;">FY22: \$200,000</span>
	SCOPE: Overhaul of Friction Brake and Air Compressor Equipment. Overhaul will be at 5 kits per month to achieve overhaul compliance within a 4 to 5 year period.
	JUSTIFICATION: Friction Brake Overhaul is on a time based (5 year) interval as mandated by the car builder and CPUC regulations.
ELIGIBLE FUNDING SOURCE: PA35% Cash/Debt Proceed	
6	<b>PROJECT: Metro Red Line SEG-2 Supervisory Control and Data Acquisition Systems Equip Replacement</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$8,270,000 <span style="float: right;">FY22: \$5,000</span>
	SCOPE: The project / program includes complete replacement of the Fire/Emergency Management (FEM) Programmable Logic Controllers (PLC) and Local Emergency Management Panels (EMP).
	JUSTIFICATION: The majority of the Metro Red Line Segment 2 equipment is obsolete and spare parts are no longer available. Equipment is Fire/Life/Safety critical and must be replaced as soon as possible.
ELIGIBLE FUNDING SOURCE: PA35%	
7	<b>PROJECT: Metro Green Line Overhead Catenary System (OCS) Replacement</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$38,350,000 <span style="float: right;">FY22: \$35,000</span>
	SCOPE: The proposed project will replace the OCS on the Metro Green Line. In order to deliver the project staff will procure materials, tools, equipment and road-rail vehicles.
	JUSTIFICATION: The OCS on Metro Green Line is near the end of its useful life. Equipment, tools and materials are required to keep the current rail system operational.
ELIGIBLE FUNDING SOURCE: PA35% Cash/Debt Proceeds	

8	<b>PROJECT: Metro Gold Line Arroyo Seco Hill Stabilization</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$10,660,000 <span style="float: right;">FY22: \$35,000</span>
	SCOPE: The Arroyo Seco Hillside Improvement project will conduct geotechnical surveys then excavate the hillside, repairing the slope.
	JUSTIFICATION: During the rainy season, the hillside at Arroyo Seco gives away and dirt and debris falls onto mainline tracks. This is a safety concern and there is potential for derailment, impacting revenue service and the risk of injury to patrons and employees.
ELIGIBLE FUNDING SOURCE: TDA 4	
9	<b>PROJECT: Systemwide Corrosion Control</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$21,350,000 <span style="float: right;">FY22: \$35,000</span>
	SCOPE: Defective components of the corrosion control system must be replaced with new rectifiers, sacrificial anodes, field test terminals, and wiring.
	JUSTIFICATION: The components are critical for long term continuous use of the rail network.
ELIGIBLE FUNDING SOURCE: TDA 4	
10	<b>PROJECT: Metro Red Line Mainline Fastener Replacement</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$28,130,000 <span style="float: right;">FY22: \$35,000</span>
	SCOPE: Need to replace approximately 112,000 fasteners in order to maintain our current service levels.
	JUSTIFICATION: Metro Red and Purple Line Mainline Fasteners have been in service for 27 years and the (Type 1) fasteners are showing signs of wear and cracking. The damp environment in the tunnels coupled with weight stress is detrimental to the structural integrity of the fasteners.
ELIGIBLE FUNDING SOURCE: PA35%	
11	<b>PROJECT: Metro Red Line UPS/Batteries FY22-FY25</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$5,640,000 <span style="float: right;">FY22: \$30,000</span>
	SCOPE: Replacement of obsolete Uninterruptible Power Supplies (UPS) with new energy efficient units.
	JUSTIFICATION: The manufacturer no longer supports repairs. Also, the Battery Banks have reached the end of their useful life. The UPS provides power for emergency operation of Public Address (PA) Systems, Fire Protection Detection Systems, Security System/CCTV, Radio Communication Systems, Gas Monitoring Systems, Emergency Backup Power Systems (EBPS) Load Shed Panels and Traction Power Substation Control Power to operate High Voltage Breakers.
ELIGIBLE FUNDING SOURCE: TDA 4	
12	<b>PROJECT: Metro Blue Line 7th/Metro Substation Replacement</b>
	PROJECT OWNER: Operations - Wayside Systems
	LOP: \$7,860,000 <span style="float: right;">FY22: \$30,000</span>

SCOPE: The job involves design and review of existing structural and electrical systems for compatibility and updated code requirements. A contractor will manufacture and install a new Traction Power Substation (TPSS) along with all necessary ancillary components, and structural upgrades necessary to make the system operational.

JUSTIFICATION: The 7th/Metro Traction Power Substation that handles the Blue and Expo lines failed and needs to be replaced for proper operation of Blue and Expo lines.

ELIGIBLE FUNDING SOURCE: PA35%

13 **PROJECT: Call Point Security Light Boxes**

PROJECT OWNER: System Security and Law Enforcement - Regional & Hubs

LOP: \$13,950,000

FY22: \$5,000,000

SCOPE: Replace the existing emergency blue light call boxes systemwide.

JUSTIFICATION: The existing analog emergency telephones are obsolete and no longer comply with updated American Disabilities Act standards. ITS is transitioning from analog to digital technology. The new call boxes will have voice over internet protocol (VOIP) with a phone integrated camera and a blue light for more visibility. The new system will be ADA compliant and will enhance safety and security for the general public, patrons, and employees.

ELIGIBLE FUNDING SOURCE: TDA 4