



Photo: AECOM

Appendix G: RSIP Analysis – Passenger Short-Range and Long-Range Projects

This page left blank intentionally

Passenger Rail Capital Program Needs by Category (Short-Range)

Short-Range Passenger Rail Capital Program Needs by Category (2021–2024)

in Millions of Year of Expenditure (YOE) Dollars

Table G-1: Short-Range Passenger Rail Capital Needs (2021–2024) in Millions of YOE Dollars – Equipment

Project	Corridor	Proposed Funding Source	2021	2022	2023	2024	Total Cost (YOE)
Gwynedd Valley Station Parking	Regional Rail	State/Local	\$2.6	\$0.0	\$0.0	\$0.0	\$2.6
Railroad Substations - Lansdale, Hatboro and 12th Street/Portal Switching Station	Regional Rail	State/Local	\$0.0	\$36.0	\$0.0	\$0.0	\$36.0
Regional Rail Multi-Level Car Acquisition	Regional Rail	Federal/State/Local	\$0.0	\$184.9	\$0.0	\$0.0	\$184.9
Vehicle Overhaul Program	Regional Rail	Federal/State/Local	\$86.5	\$89.0	\$91.7	\$94.5	\$361.7
		Total	\$89.0	\$309.9	\$91.7	\$94.5	\$585.2

Table G-2: Short-Range Passenger Rail Capital Project Funding Needs (2021–2024) in Millions of YOE Dollars – Facilities

Project	Corridor	Proposed Funding Source	2021	2022	2023	2024	Total Cost (YOE)
Chestnut Hill East ADA Improvements	Regional Rail	State/Local	\$0.0	\$0.0	\$0.0	\$12.6	\$12.6
Fern Rock Transportation Center Safety Improvements	Regional Rail	State/Local	\$0.0	\$21.7	\$0.0	\$0.0	\$21.7
Frazier Rail Shop and Yard Upgrade	Regional Rail	State/Local	\$0.0	\$0.0	\$151.9	\$0.0	\$151.9
Harrisburg Line Station Improvements: Coatesville	Keystone	Federal/State Grant Match	\$43.8	\$0.0	\$0.0	\$0.0	\$43.8
Harrisburg Line Station Improvements: Middletown	Keystone	Federal/State Grant Match	\$42.2	\$0.0	\$0.0	\$0.0	\$42.2
Jefferson Station Ventilation	Regional Rail	Federal/State/Local	\$5.3	\$0.0	\$0.0	\$0.0	\$5.3
Jenkintown-Wyncote Station on the Regional Rail Mainline	Regional Rail	Federal/State/Local	\$0.0	\$0.0	\$0.0	\$28.5	\$28.5
Powelton Yard Facility Improvements	Regional Rail	State/Local	\$0.0	\$4.1	\$0.0	\$0.0	\$4.1

Project	Corridor	Proposed Funding Source	2021	2022	2023	2024	Total Cost (YOE)
Railroad Substations - Neshaminy, Bethayres, Yardley	Regional Rail	State/Local	\$25.3	\$0.0	\$0.0	\$0.0	\$25.3
Regional Rail Stations – RRD Station Roof Program	Regional Rail	State/Local	\$11.6	\$0.0	\$0.0	\$0.0	\$11.6
Station Ventilation Improvements at Suburban Station	Regional Rail	Federal/State/Local	\$0.0	\$10.6	\$0.0	\$0.0	\$10.6
Stone Arch Bridge Program – Phase 2	Regional Rail	State/Local	\$0.0	\$11.9	\$0.0	\$0.0	\$11.9
Video Systems Refreshment Program	Regional Rail	State/Local	\$0.0	\$0.0	\$23.5	\$0.0	\$23.5
Station on the Media/Elwyn Regional Rail Line - Phase 2 (Parking)	Regional Rail	State/Local	\$3.1	\$0.0	\$0.0	\$0.0	\$3.1
Harrisburg Line Station Improvements: Harrisburg Transportation Center Roof Replacement	Keystone	Federal/State/Local	\$2.1	\$0.0	\$0.0	\$0.0	\$2.1
Lancaster Station Concourse extension to parking on the north side of tracks	Keystone	Information Not Provided	\$0.0	\$16.4	\$0.0	\$0.0	\$16.4
Parkeburg ADA Platforms	Keystone	Information Not Provided	\$51.5	\$0.0	\$0.0	\$0.0	\$51.5
Total			\$184.9	\$64.8	\$175.4	\$41.1	\$466.2

Table G-3: Short-Range Passenger Rail Capital Project Funding Needs (2021–2024) in Millions of YOE Dollars – Safety

Project	Corridor	Proposed Funding Source	2021	2022	2023	2024	Total Cost (YOE)
Next Generation High Speed Fleet Infrastructure: Ride Quality Investment	NEC	Amtrak-Loan	\$69.0	\$0.0	\$0.0	\$0.0	\$69.0
Positive Train Control	Regional Rail	Federal/State/Local	\$172.0	\$0.0	\$0.0	\$0.0	\$172.0
Safety & Security Shop, Yard and Office Hardening	Regional Rail	State/Local	\$40.7	\$0.0	\$0.0	\$0.0	\$40.7
Total			\$281.7	\$0.0	\$0.0	\$0.0	\$281.7

**Table G-4: Short-Range Passenger Rail Capital Project Funding Needs (2021–2024)
in Millions of YOE Dollars – Track Control Systems and Bridges**

Project	Corridor	Proposed Funding Source	2021	2022	2023	2024	Total Cost (YOE)
562 Upgrade FRAZIER to PAOLI	Keystone/Regional Rail	Information Not Provided	\$2.2	\$2.3	\$2.3	\$2.4	\$9.2
562 Upgrade PAOLI to OVERBROOK/NORTH PENN	Keystone/Regional Rail	Federal/State/Local	\$5.7	\$5.8	\$6.0	\$6.2	\$23.7
562 Upgrade PARK to THORN	Keystone/Regional Rail	Information Not Provided	\$5.2	\$5.3	\$5.5	\$5.6	\$21.5
562 Upgrade THORN to FRAZIER	Keystone/Regional Rail	Information Not Provided	\$4.9	\$5.0	\$5.2	\$5.3	\$20.5
Ardmore Station ADA Improvements (Phase 1)	Keystone/Regional Rail	Federal/State/Local	\$0.0	\$56.9	\$0.0	\$0.0	\$56.9
Bryn Mawr Substation Replacement	Keystone/Regional Rail	Information Not Provided	\$7.7	\$8.0	\$8.2	\$8.4	\$32.3
Critical Bridge Program	Regional Rail	State/Local	\$71.3	\$0.0	\$0.0	\$0.0	\$71.3
Grade Crossing Enhancement Program	Regional Rail	State/Local	\$3.1	\$3.2	\$3.3	\$3.4	\$12.9
Interlocking Improvement Program	Regional Rail	State/Local	\$124.1	\$0.0	\$0.0	\$0.0	\$124.1
Lawndale Station Pedestrian Underpass & High-Level Platform	Regional Rail	Federal/State/Local	\$0.0	\$0.0	\$10.5	\$0.0	\$10.5
Mainline-Schuylkill Bridges (30th St. to Suburban Station) Phase 2	Regional Rail	State/Local	\$0.0	\$0.0	\$0.0	\$12.4	\$12.4
New PARK 2,216 ' 45 MPH Turnback Pocket (Atglen)	Regional Rail	Information Not Provided	\$0.6	\$0.7	\$0.7	\$0.7	\$2.7
Next Generation High Speed Fleet Infrastructure: Safety Mitigation	NEC	Amtrak-Loan	\$92.7	\$0.0	\$0.0	\$0.0	\$92.7
PAOLI Restore 2 Main Stub to 15 MPH	Keystone/Regional Rail	Information Not Provided	\$0.4	\$0.4	\$0.4	\$0.4	\$1.5
Southwest Connection Improvement Project (30th to Phil Signals, Catenary, and ROW Improvements)	Regional Rail	State/Local	\$0.0	\$75.3	\$0.0	\$0.0	\$75.3
THORN-GLEN Track 2 Upgrade	Regional Rail	Federal/State/Local	\$4.3	\$4.4	\$4.6	\$4.7	\$18.0

Appendix G: RSIP Analysis – Passenger Short-Range and Long-Range Projects

Project	Corridor	Proposed Funding Source	2021	2022	2023	2024	Total Cost (YOE)
Track & ROW Rail Service Improvements	Regional Rail	State/Local	\$19.9	\$0.0	\$0.0	\$0.0	\$19.9
Wayne Junction Static Frequency Converters #1-4	Regional Rail	State/Local	\$0.0	\$0.0	\$65.6	\$0.0	\$65.6
Woodbourne Substation	Regional Rail	State/Local	\$0.0	\$0.0	\$0.0	\$26.4	\$26.4
LUKENS-GRAHAM Freight Platform Runaround/ Bypass track (Coatesville)	Keystone/Regional Rail	Federal/State/Local	\$3.1	\$3.2	\$3.3	\$3.4	\$12.9
New POTTS Initial Crossover(s) 45 MPH	Regional Rail	Information Not Provided	\$0.4	\$0.4	\$0.4	\$0.4	\$1.6
Willow Grove Station on the Warminster Regional Rail Line	Regional Rail	State/Local	\$5.4	\$5.5	\$5.7	\$5.9	\$22.5
Elwyn to Middletown/US Route 1 Rail Service Restoration	Regional Rail	State/Local	\$0.0	\$0.0	\$210.9	\$0.0	\$210.9
Harrisburg Line Station Improvements: Downingtown	Keystone	Federal/State/Local	\$0.0	\$0.0	\$142.1	\$0.0	\$142.1
		Total	\$350.8	\$176.3	\$474.5	\$85.7	\$1,087.3

Passenger Rail Capital Program Needs by Category (Long-Range)

Long-Range Passenger Rail Capital Program Needs by Category (2025–2045) in Millions of 2020 Dollars

Table G-5: Long-Range Passenger Rail Capital Project Funding Needs (2025–2045) in Millions of 2020 Dollars – Equipment and Facilities

Project	Planned Implementation	Carrier	Corridor	Estimated Cost (\$2020)
Rail Car Procurement	2025	Keystone/NEC	Amtrak, PennDOT	\$250.0
Vehicle Overhaul Program	2025-2032	Regional Rail	SEPTA	\$684.7
Ardmore Station Parking Improvements (Phase 2)	2026-2032	Keystone/Regional Rail	Amtrak, SEPTA	\$26.1
Philadelphia 30th Street Station Improvement Program	2050	NEC, Regional Rail	Amtrak, SEPTA	\$517.0
Paoli Transportation Center – Station & Intermodal Improvements (Phase 2)	2026-2032	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$50.3
POTTS Full buildout	2025-2035	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$0.0
Thorndale West Bound High Level Platform	2025-2035	Regional Rail	PennDOT	\$0.0
Fern Rock Complex	2026-2032	Regional Rail	SEPTA	\$77.5
Malvern Station ADA High Level Platforms	2026-2032	Regional Rail	SEPTA	\$15.3
Midvale Facility and Security Enhancements	2028	Regional Rail	SEPTA	\$23.2
Noble Station, Parking Garage and Storage Track	2026-2032	Regional Rail	SEPTA	\$53.0
Philmont Station Parking	2026-2032	Regional Rail	SEPTA	\$25.0
Regional Rail Stations – Devon	2026-2032	Regional Rail	SEPTA	\$20.0
Regional Rail Stations – Glenside	2026-2032	Regional Rail	SEPTA	\$24.8
Regional Rail Stations – Hatboro	2026-2032	Regional Rail	SEPTA	\$7.2
Regional Rail Stations – Ivy Ridge	2026-2032	Regional Rail	SEPTA	\$18.5
Regional Rail Stations – Marcus Hook	2026-2032	Regional Rail	SEPTA	\$22.5
Regional Rail Stations – Roslyn	2026-2032	Regional Rail	SEPTA	\$6.5
Regional Rail Stations – Swarthmore	2026-2032	Regional Rail	SEPTA	\$18.0

Project	Planned Implementation	Carrier	Corridor	Estimated Cost (\$2020)
Regional Rail Stations – Wyndmoor	2026-2032	Regional Rail	SEPTA	\$19.5
Regional Rail Stations – Wynnewood	2026-2032	Regional Rail	SEPTA	\$19.5
Regional Rail Stations- Stenton	2026-2032	Regional Rail	SEPTA	\$7.2
Station Ventilation Improvements at NRG Station	2026-2032	Regional Rail	SEPTA	\$10.0
Villanova Station ADA Improvements (Phase 2)	2025	Regional Rail	SEPTA	\$10.5
Regional Rail Stations – Wissahickon	2026-2032	Regional Rail	SEPTA	\$28.2
Exton Station Improvements - Phase 2 & 3	2026-2032	Regional Rail	SEPTA, PennDOT	\$38.6
			Total	\$1,973.1

Table G-6: Long-Range Passenger Rail Capital Project Funding Needs (2025–2045) in Millions of 2020 Dollars –Track Control Systems and Bridges

Project	Planned Implementation	Carrier	Corridor	Estimated Cost (\$2020)
Concrete Tie Installation	2025-2035	Keystone	Amtrak, PennDOT	\$0.0
CORK Turnouts Upgrade to 45 MPH	2025-2035	Keystone	Amtrak, PennDOT	\$0.0
Increase MAS to 125 mph	2025-2035	Keystone	Amtrak, PennDOT	\$0.0
LEAMAN Turnouts Upgrade to 45 MPH	2025-2035	Keystone	Amtrak, PennDOT	\$0.0
ROY Turnouts Upgrade to 45 MPH	2025-2035	Keystone	Amtrak, PennDOT	\$0.0
STATE EAST New Storage Tracks	2025-2035	Keystone	Amtrak, PennDOT	\$0.0
New RUSSELL Interlocking	2025-2035	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$0.0
New Track 2 PAOLI to GLEN	2025-2035	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$0.0
New VILLA Interlocking	2025-2035	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$0.0
Extend Track 2 Cain to LUKENS and Interlocking Improvements	2025-2035	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$0.0

Project	Planned Implementation	Carrier	Corridor	Estimated Cost (\$2020)
Harrisburg Line Interlocking Improvements: Zoo - Wynnefield	2026	Keystone/Regional Rail	Amtrak, SEPTA, PennDOT	\$0.0
New NOVA Interlocking	2025-2035	Keystone/Regional Rail	PennDOT	\$0.0
Paoli 3rd Track and Interlocking Project	2025-2035	Keystone/Regional Rail	PennDOT	\$0.0
30th Street West Catenary Replacement	2025	Regional Rail	SEPTA	\$77.0
Brill Substation Overhaul	2027	Regional Rail	SEPTA	\$12.8
Chestnut Hill East Line Bridge Rehab Program	2024-2027	Regional Rail	SEPTA	\$30.0
Chestnut Hill West Line Bridge Rehab Program	2024-2030	Regional Rail	SEPTA	\$35.0
Mainline-Schuylkill Bridges (30th St. to Suburban Station) Phase 3	2026-2032	Regional Rail	SEPTA	\$45.0
Railroad Substations - 18th Street Switching Station	2025	Regional Rail	SEPTA	\$13.0
Railroad Substations – Chestnut Hill Substation	2026	Regional Rail	SEPTA	\$22.5
			Total	\$235.3

This page left blank intentionally