Northeast Corridor
One-Year Implementation Plan

Fiscal Year 2019

October 2018

Congress established the Northeast Corridor Commission to develop coordinated strategies for improving the Northeast's core rail network in recognition of the inherent challenges of planning, financing, and implementing major infrastructure improvements that cross multiple jurisdictions. The expectation is that by coming together to take collective responsibility for the NEC, these disparate stakeholders will achieve a level of success that far exceeds the potential reach of any individual organization.

The Commission is governed by a board comprised of one member from each of the NEC states (Massachusetts, Rhode Island, Connecticut, New York, New Jersey, Pennsylvania, Delaware, and Maryland) and the District of Columbia; four members from Amtrak; and five members from the U.S. Department of Transportation (DOT). The Commission also includes non-voting representatives from four freight railroads, states with connecting corridors, and several commuter operators in the Region.

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Boston
MBTA
MA
Springfield
Providence
RI
NY
Hartford
CT
Metro-North Railroad
CTrail
New Haven
Long Island Rail Road
PA
Newark
New York
SEPTA
Trenton
NJ TRANSIT
Harrisburg
Philadelphia
Wilmington
NJ
MARC
Amtrak
Baltimore
MD
DE
Washington DC
VRE
VA
NEC Main Line
NEC Connecting Corridor
Intercity Rail
Commuter Rail
Massachusetts Bay Transportation Authority
CT rail
Metro-North Railroad
Long Island Rail Road
NJTRANSIT
SEPTA
MARC
VRE
AMTRAK

Introduction

The Northeast Corridor Commission

Congress established the Northeast Corridor Commission to develop coordinated strategies for improving the Northeast's core rail network in recognition of the inherent challenges of planning, financing, and implementing major infrastructure improvements that cross multiple jurisdictions. The expectation is that by coming together to take collective responsibility for the NEC, these stakeholders will achieve a level of success that far exceeds the potential reach of any individual organization.

The Northeast Corridor

The Northeast Corridor supports over 800,000 passenger trips each day, approximately 770,000 on eight commuter railroads and over 40,000 on Amtrak's various intercity services. The 457-mile main line railroad still includes many bridges and tunnels that date back to the period between the Civil War and the New Deal. Service disruptions caused by infrastructure failures, rail traffic congestion, and other factors already cost the economy $500 million per year in lost productivity. Without higher levels of capital investment, those losses are likely to grow. A loss of all NEC services for just one day would cost the economy an estimated $100 million.

NEC Capital Plans and Reports

The Commission produces two other plans/reports on an annual basis:

- **NEC Capital Investment Plan:** The NEC Capital Investment Plan identifies how available capital funding is anticipated to be spent over a five-year time horizon, plus how additional capital funding could be used to eliminate the state-of-good-repair backlog and improve performance of the railroad. The NEC Capital Investment Plan for FY19-23 was released in July 2018.
- **NEC Annual Report: Operations and Infrastructure:** The Annual Report is a summary of operational performance and progress on the One-Year Implementation Plan for the most recently completed federal fiscal year.

These plans and reports are developed in collaboration with eight states, the District of Columbia, the United States Department of Transportation, Amtrak, and eight commuter rail agencies. Download a copy of these plans and reports at: www.nec-commission.com.

The NEC One-Year Implementation Plan

The NEC One-Year Implementation Plan: Fiscal Year 2019 is a consolidated cross-agency record of the anticipated capital project activity in the upcoming federal fiscal year based on available capital funding.

This plan was created to comply with the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy, approved by the Commission in 2015. The Policy calls for the collection of scope, schedule, and budget information for capital investments such that reports on their implementation can be generated on a quarterly and annual basis. Also, the Fixing America's Surface Transportation Act calls on the Commission to report annually to Congress on the delivery of the five-year NEC Capital Investment Plan. The One-Year Implementation Plan is the first year of the five-year plan and serves as the baseline against which those reports will measure performance in FY19.

The FY19 One-Year Implementation Plan[1] is organized around two types of capital investments:

- **Capital renewal of basic infrastructure**, starting on page 5, includes the routine repair, replacement, or renewal of existing basic infrastructure assets. The Policy defines basic infrastructure assets as "components that require annual renewal to keep the NEC's structures and systems functioning properly and in a state-of-good-repair for safe train operations." According to the Policy, basic infrastructure includes "rails, ties, ballast, communication systems, electric traction power systems, under-grade bridges, and other similar items." Additionally, basic infrastructure may include individual, component parts of major bridges and tunnels.

  Capital renewal investments are shown in this document for 31 discrete geographic segments, each maintained by one of the four right-of-way owners. These segments represent points on the NEC where the mix of operators changes (see table on page 7 for the full list of segments).

- **Special projects**, starting on page 113, include "major backlog projects" which represent the complete overhaul or replacement of major bridges and tunnels, and "improvement projects" aimed at creating new infrastructure above and beyond existing assets or replacing existing structures with markedly superior ones. Special projects are organized in this document by their coordinating agency.

FY19 NEC Capital Investment by Type

Programs/ Projects	FY19 Investment
Capital Renewal of Basic Infrastructure	**$761,628,000**
Amtrak-owned territory	$570,258,000
Connecticut DOT-owned territory	$148,400,000
MBTA-owned territory	$28,151,000
Metro-North Railroad-owned territory	$14,819,000
Special Projects[1]	**$820,352,000**
Major Backlog	$178,306,000
Improvement Projects	$642,046,000
Total	**$1,581,980,000**

Note: (1) Funding figures for CTDOT's Special Projects reflect programmed dollars, not expenditure forecasts.

[1] Data for this plan was gathered in summer 2018 and is considered accurate as of September 2018.

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Capital Renewal of Basic Infrastructure

Baseline Capital Charge Program

Capital renewal of basic infrastructure investments can be funded with Baseline Capital Charges (BCCs) assigned to service operators based on methods described in the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy. According to the Policy, right-of-way owners must invest operators' BCCs on eligible assets within the operators' service territories in the year the BCCs are contributed. BCC obligations are listed by service operator below. Throughout the plan, funding for capital renewal work above and beyond the BCCs available to owners is labeled "Above BCC Obligations."

FY19 Capital Renewal Contributions & BCC Obligations

Service Operator	FY19 Planned Capital Renewal Contribution	90% Normalized Replacement BCC Obligation	100% Normalized Replacement BCC Obligation
Amtrak	$407,218,200	$263,390,000	$292,656,000
MBTA	$20,454,300	$16,404,000	$18,227,000
Rhode Island DOT	$1,890,100	$1,891,000	$2,101,000
CTDOT (Shore Line East)	$4,791,000	$4,792,000	$5,324,000
CTDOT (New Haven Line)	$133,144,600	$40,643,000	$45,159,000
CTDOT (Hartford Line)[1]	$6,116,800	See note (1)	See note (1)
Metro-North Railroad	$12,717,400	$11,364,000	$12,627,000
Long Island Rail Road	$26,507,600	$22,290,000	$24,766,000
NJ TRANSIT	$95,323,000	$95,318,000	$105,909,000
SEPTA	$35,461,100	$35,457,000	$39,396,000
Delaware DOT	$2,793,400	$2,255,000	$2,505,000
Maryland DOT	$14,700,500	$14,700,000	$16,333,000
Virginia Railway Express	$510,000	$515,000	$572,000
Total	**$761,628,000**	**$509,019,000**	**$565,575,000**

Note: (1) Hartford Line BCCs were not part of the FY19 cost allocation model obligations approved by the Commission. CTDOT and Amtrak have agreed to capital funding amounts for Hartford Line service outside of the model process for FY19.

BCC Segments

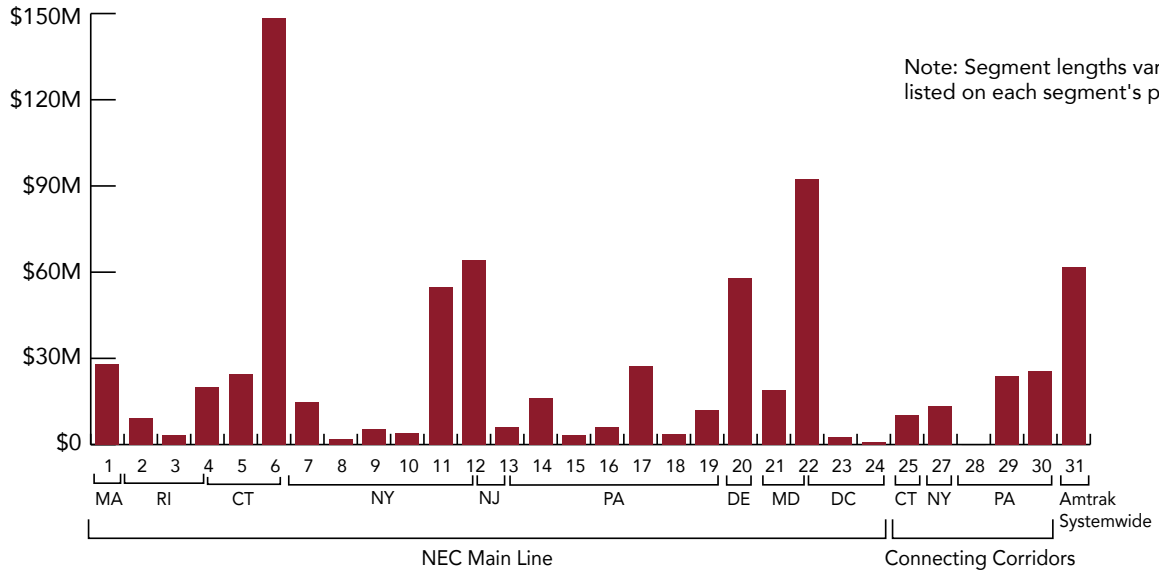
Because segment owners must invest any operator's BCCs within that operator's service territory, capital renewal work is divided into 31 BCC segments defined by points on the NEC where the mix of operators changes. Each segment then has a distinct set of operators whose BCCs may be applied to basic infrastructure investments.

BCC Segment	Owner
1. Boston South Station to MA/RI State Line	MBTA
2. MA/RI State Line to Providence	Amtrak
3. Providence to Wickford Junction	Amtrak
4. Wickford Junction to New London	Amtrak
5. New London to New Haven	Amtrak
6. New Haven to CT/NY State Line	CTDOT
7. CT/NY State Line to New Rochelle	MNR
8. New Rochelle to Harold	Amtrak
9. Harold to F Interlocking	Amtrak
10. F Interlocking to Penn Station New York	Amtrak
11. Penn Terminal	Amtrak
12. Penn Station New York to Trenton	Amtrak
13. Trenton to Morris	Amtrak
14. Morris to Holmes	Amtrak
15. Holmes to Shore	Amtrak
16. Shore to Girard	Amtrak

BCC Segment	Owner
17. Girard to Philadelphia 30th Street	Amtrak
18. Philadelphia 30th Street to Arsenal	Amtrak
19. Arsenal to Marcus Hook	Amtrak
20. Marcus Hook to Bacon	Amtrak
21. Bacon to Perryville	Amtrak
22. Perryville to WAS	Amtrak
23. Washington Union Terminal	Amtrak
24. WAS to CP Virginia	Amtrak
25. Springfield to New Haven	Amtrak
26. Poughkeepsie - Spuyten Duyvil*	MNR
27. Spuyten Duyvil to Penn Station New York	Amtrak
28. Penn to 36th Street	Amtrak
29. 36th Street to Thorndale	Amtrak
30. Thorndale to Harrisburg	Amtrak
31. Amtrak Systemwide	Amtrak

*Segment 26 is exempt from the plan

FY19 Capital Renewal Investment by BCC Segment



Improved Capital Renewal Planning in FY19

The Policy calls for the One-Year Implementation Plan to forecast BCC-eligible (capital renewal) investments by operator territory and create a system for tracking value delivered on scope, schedule, and budget. In prior plans, most of Amtrak's capital renewal investments lacked geographically-specific scope and schedule information, which created challenges for tracking and reporting. This led the Commission to convene a multi-agency working group in 2017 to review Amtrak's planning and reporting practices for capital renewal projects and recommend actions for improvement. The two recommendations resulting from the working group's efforts were as follows:

1. Separate planned from unplanned maintenance.
2. Define planned capital renewal as related activities concurrently at a location including full project scope, schedule, and budget.

Amtrak has since made progress toward implementing these recommendations by building upon ongoing internal efforts within its Engineering Project Delivery organization. Its submission to the FY19 Implementation Plan included improved geographic specificity and additional scope, schedule, and budget details for approximately 59% of its planned capital renewal investments. Specifically, in coordination with Commission stakeholders, Amtrak prioritized the following two categories of capital renewal investments for enhanced FY19 plan information:

1. **Projects with a total lifecycle cost over $5M.** Within this category, Amtrak prioritized projects that already existed in its internal tracking systems as stand-alone projects, such as "Safe Harbor Frequency Converter Replacement Project." It did not provide enhanced plan information for projects over $5M that currently reside within a "program" (i.e., which Amtrak defines as a collection of similar or related projects managed in a coordinated way), such as "Amtrak NEC Frequency Converter Upgrades." For complete details on Amtrak projects over $5M, see Appendix A starting on page 189.
2. **Continuous maintenance production programs.** Amtrak defines these programs as discipline-specific renewal activities with minimum design effort, planned based on steady state levels, and typically performed by Amtrak Division or Production forces. For complete details of Amtrak's continuous maintenance production programs, see Appendix B starting on page 213.

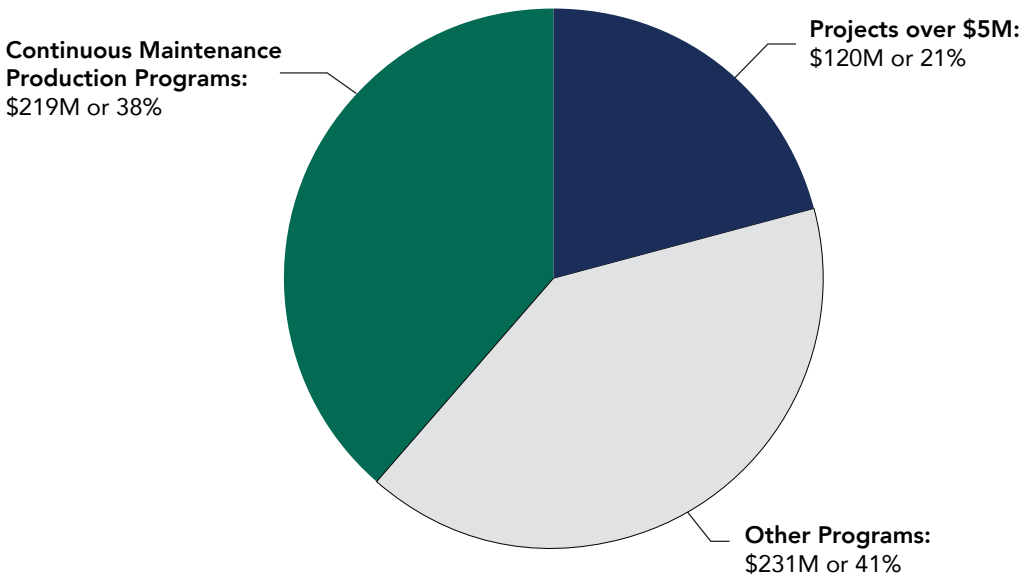
Other Amtrak capital renewal investments—including capital maintenance and improvement programs and projects under $5M—were not prioritized for enhanced FY19 plan information; and as a result, lack geographically-specific scopes and schedules in this plan. NEC-wide scopes for these programs can be found in Appendix C starting on page 225.

FY19 Amtrak Capital Renewal Planning: FY18 vs. FY19

	1. Projects over $5M	2. Continuous Maintenance Production Programs	3. All other BCC-eligible projects and programs
FY18 One-Year Plan	• **Scope**: NEC-wide scopes for programs and project scopes (not specific to FY) for location-specific projects • **Schedule**: N/A • **Budget**: FY18 expenditure estimates NEC-wide and by BCC segments		

FY19 One-Year Plan	• **Scope**:
	  • FY19 scope
	  • Multi-year scope
	• **Schedule**:
	  • By major project milestone
	• **Budget**:
	  • FY19 expenditure forecast
	  • Total project cost estimate
	  • Cost breakdown by project phase
		• **Scope**:
		  • FY19 program scope = target locations & est. production units
		• **Schedule**:
		  • By location
		• **Budget**:
		  • By FY19 program, location-specific, and by BCC segment
			Similar to FY18 Plan information

FY19 Amtrak Capital Renewal Investment by Type



FY19 Capital Renewal Investment by Agency

BCC Segment	Amtrak	Amtrak (Above BCC)	MBTA	MBTA (Above BCC)	RIDOT	CTDOT (SLE)	CTDOT (NHL)	CTDOT (Above BCC)	CTDOT (Hartford)
1	9,046,498	0	15,053,958	4,050,341	0	0	0	0	0
2	7,965,872	0	1,350,042	0	0	0	0	0	0
3	1,425,877	0	0	0	1,890,059	0	0	0	0
4	3,496,762	16,556,840	0	0	0	0	0	0	0
5	20,566,791	0	0	0	0	3,834,120	0	0	0
6	14,298,552	0	0	0	0	956,878	40,643,000	92,501,570	0
7	2,101,666	0	0	0	0	0	0	0	0
8	1,074,167	682,243	0	0	0	0	0	0	0
9	5,291,317	0	0	0	0	0	0	0	0
10	1,711,579	0	0	0	0	0	0	0	0
11	6,282,514	0	0	0	0	0	0	0	0
12	0	0	0	0	0	0	0	0	0
13	0	0	0	0	0	0	0	0	0
14	3,463,459	0	0	0	0	0	0	0	0
15	3,421,935	0	0	0	0	0	0	0	0
16	6,114,633	0	0	0	0	0	0	0	0
17	14,486,659	12,800,400	0	0	0	0	0	0	0
18	1,878,250	1,845,482	0	0	0	0	0	0	0
19	10,239,549	0	0	0	0	0	0	0	0
20	55,059,617	0	0	0	0	0	0	0	0
21	2,134,419	16,927,520	0	0	0	0	0	0	0
22	77,690,476	0	0	0	0	0	0	0	0
23	2,636,829	0	0	0	0	0	0	0	0
24	198,467	0	0	0	0	0	0	0	0
25	4,053,951	0	0	0	0	0	0	0	6,116,772
27	1,888,287	11,606,040	0	0	0	0	0	0	0
28	0	0	0	0	0	0	0	0	0
29	2,975,488	0	0	0	0	0	0	0	0
30	3,786,785	21,761,303	0	0	0	0	0	0	0
31	0	61,747,941	0	0	0	0	0	0	0
Total	263,290,399	143,927,769	16,404,000	4,050,341	1,890,059	4,790,998	40,643,000	92,501,570	6,116,772

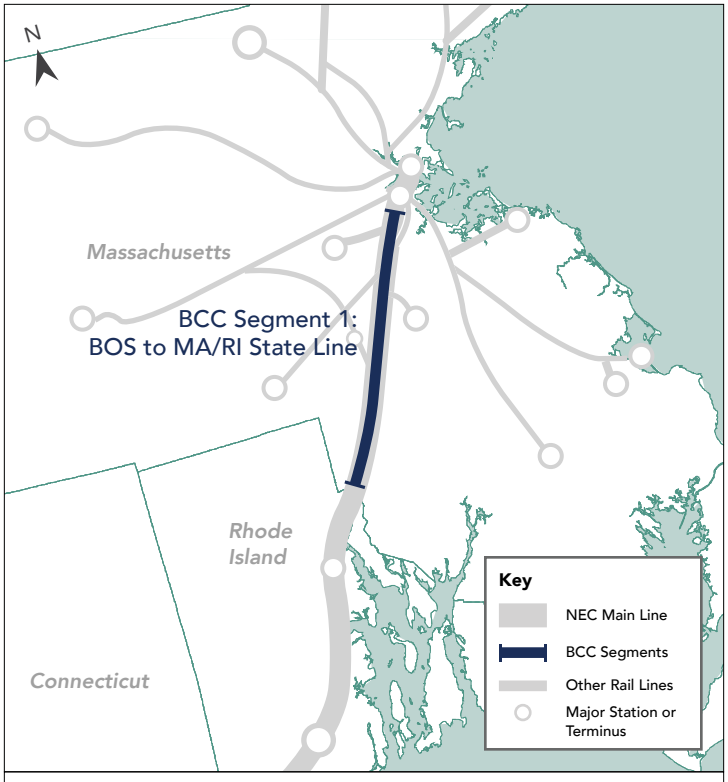
MNR	MNR (Above BCC)	LIRR	NJT	SEPTA	DelDOT	MDOT	VRE	Total	BCC Segment
0	0	0	0	0	0	0	0	28,150,797	1
0	0	0	0	0	0	0	0	9,315,914	2
0	0	0	0	0	0	0	0	3,315,936	3
0	0	0	0	0	0	0	0	20,053,602	4
0	0	0	0	0	0	0	0	24,400,911	5
0	0	0	0	0	0	0	0	148,400,000	6
11,364,182	1,353,252	0	0	0	0	0	0	14,819,100	7
0	0	0	0	0	0	0	0	1,756,410	8
0	0	269,634	0	0	0	0	0	5,560,951	9
0	0	2,271,749	0	0	0	0	0	3,983,328	10
0	0	23,966,177	24,721,872	0	0	0	0	54,970,563	11
0	0	0	64,339,990	0	0	0	0	64,339,990	12
0	0	0	6,261,116	0	0	0	0	6,261,116	13
0	0	0	0	12,820,553	0	0	0	16,284,012	14
0	0	0	0	0	0	0	0	3,421,935	15
0	0	0	0	0	0	0	0	6,114,633	16
0	0	0	0	0	0	0	0	27,287,059	17
0	0	0	0	0	0	0	0	3,723,732	18
0	0	0	0	1,664,052	0	0	0	11,903,601	19
0	0	0	0	0	2,793,421	0	0	57,853,038	20
0	0	0	0	0	0	0	0	19,061,939	21
0	0	0	0	0	0	14,700,459	0	92,390,935	22
0	0	0	0	0	0	0	0	2,636,829	23
0	0	0	0	0	0	0	510,016	708,483	24
0	0	0	0	0	0	0	0	10,170,723	25
0	0	0	0	0	0	0	0	13,494,327	27
0	0	0	0	0	0	0	0	0	28
0	0	0	0	20,976,503	0	0	0	23,951,991	29
0	0	0	0	0	0	0	0	25,548,088	30
0	0	0	0	0	0	0	0	61,747,941	31
11,364,182	1,353,252	26,507,560	95,322,978	35,461,108	2,793,421	14,700,459	510,016	761,627,884	Total

Segment 1: BOS to MA/RI State Line

FY19 Summary

Segment 1 covers nearly 38 miles from Boston South Station to the Massachusetts/ Rhode Island state line and is owned by MBTA, with train operations from MBTA and Amtrak.

Over $28 million will be expended on capital renewal of basic infrastrcuture in this segment in federal fiscal year 2019.



Planned Capital Renewal Expenditure

Type	Amount
Programs/Projects	$28,150,797
Total in Segment 1	**$28,150,797**

Agency Capital Renewal Contribution

Agency	Amount
MBTA BCC	16,404,000
MBTA (Above BCC)	2,700,299
Amtrak BCC	9,046,498
Total in Segment 1	**$28,150,797**

Segment 1 Special Projects

Planned FY19 Special Projects Expenditure: $25,967,447

- Back Bay Concourse Improvements. Page 162
- Back Bay Station Leasehold Improvements. Page 163
- Back Bay Station Stairway Pressurization Package 1. Page 164
- Back Bay Station Platform Ventilation Package 2. Page 165
- Boston South Station. Page 166
- Boston South Station Component: Tower 1. Page 167
- MBTA Station Improvements - Ruggles Street Station. Page 168
- MBTA Station Improvements - South Attleboro Station. Page 169
- Next Generation High Speed Fleet Infrastructure: Southampton St. Yard Facility Improvements. Page 136

FY19 Capital Renewal Investments in Segment 1

PROGRAMS/PROJECTS	FY19 Segment Expenditure
Structures and Facilities	
ROW Fence Upgrades. This project is to install approx. 2,200 LF of impass fencing along Track 3 in Hyde Park, MA.	$1,103,200
Southwest Corridor Water Infiltration Remediation - Design/ Study. Placeholder for design work related to SW Corridor Infiltration Remediation.	$200,000
Pedestrian Footbridge Drain Upgrades - MP221.85. Placeholder to replace the drains on the pedestrian footbridge at MP221.85.	$300,000
Upgrade Emergency Egress Stairways. This project is to upgrade to six emergency egress stairway lights, heaters, and hatchways at 18 locations (6 per year.)	$750,000
South Station Pit Lighting Upgrades. Installation of 915 pit lights with energy efficient LED lamps and fixtures along station Tracks 1-13.	$1,037,943
Backbay Tunnel Ductwork Upgrades - Construction. Placeholder for construction work related to Backbay Tunnel Ductwork Ventilation.	$500,000
South Bay Transformer and Generator Upgrades. Project to upgrade the transformer at the South Bay I/L and install backup generators at Broad, Loop, Cabot, and South Bay.	$211,443
Rt 128 Escalator Elevator Upgrades. Project to replace two escalators and two elevators at RT 128 Station, MA, MP217.1.	$2,681,317
Rt 128 Roof Upgrades. Project to upgrade the roof at RT 128 Station, MA, MP217.1.	$516,876
Rt 128 HVAC and Mechanical Upgrades. Placeholder for HVAC and mechanical system upgrades at RT 128 Station, MA, MP217.1.	$500,000
Readville Material Control Warehouse. Placeholder for the design and construction of a material control warehouse at Yard 5, Readville, MA.	$300,000
Undergrade Bridge Upgrades. This project is for the upgrade and retirement of undergrade bridges along the Attleboro Line.	$360,858
Communications & Signals	
TAMS - Canton Junction STA - TAMS Upgrades. Upgrade TAMS system at Canton Junction, MA, Station, MP 213.7.	$685,958
TAMS - Ruggles STA - TAMS Upgrades. Upgrade TAMS system at Ruggles Street Station (Boston, MA), MP 226.4.	$362,708
South Bay INT - Microlok II and Comm Bldg Upgrades - LL Material. Placeholder for Interlocking Upgrades to South Bay I/L - Long Lead Materials	$1,500,000
HB/DED Upgrades. Replace Hot Box/Dragging Equipment Detectors on Track 1 and Track 2 at MP208.7 (Hawk).	$299,265
Power and Express Cable Upgrades. Install approx.21,120 FT of express and power cables between Read I/L and Forest I/L.	$1,404,000
M3 Switch Machine Upgrades. Upgrade eight M3 switch machines, including rods, attachments and head blocks.	$327,905
Switch Heater Upgrades. Placeholder for switch heater upgrades.	$350,000

PROGRAMS/PROJECTS	FY19 Segment Expenditure
Track	
Tie/Timber Program. Replace 800 ties in FY19.	$653,599
Tower One INT - Slip Switch Upgrades - 911/1011. Replace the double slip turnouts 911/1011 in FY19 at Tower One Interlocking.	$1,750,000
INT Steel Replacement Program. Upgrade 6 units in FY19 of interlocking rail, stockrails, switch points, frogs and assoc. attachments.	$665,790
Transfer INT - Crossover Replacement - 12 Crossover. Renewal of turnouts 12A&B at Transfer Interlocking (MP219.2).	$1,816,078
Transfer INT - Crossover Replacement - 21 Crossover. Renewal of turnouts 21A&B at Transfer Interlocking (MP219.2).	$1,697,726
Read INT - Crossover Replacement - 31 Crossover. Renewal of turnouts 31A&B at Read Interlocking (MP219.4).	$1,861,480
Insulated Joint Upgrades. Replace 20 insulated joints in FY19.	$161,200
Joint Elimination Program. This project is to provide joint elimination at 50 locations.	$285,950
Tree Cutting. This project is to provide tree cutting along the right of way to elliminate known hazards and assist with maintenance practices.	$1,000,000
Out of Face Surfacing. This project is to provide out of face surfacing for up to 84,000 PF in FY19.	$1,200,000
Spot Surfacing. This project is to provide spot surfacing along the Attleboro Line.	$790,614
Spot Undercutting. This project is to provide spot undercutting along the Attleboro Line.	$150,000
South Station Tie and Rail Upgrades. This project is to provide concrete guardrail ties, rail, clip, pads, insulators, and ballast for Tracks 1-2 at South Station.	$2,726,887
TOTAL SEGMENT 1 PROGRAMS/PROJECTS EXPENDITURE	**$28,150,797**

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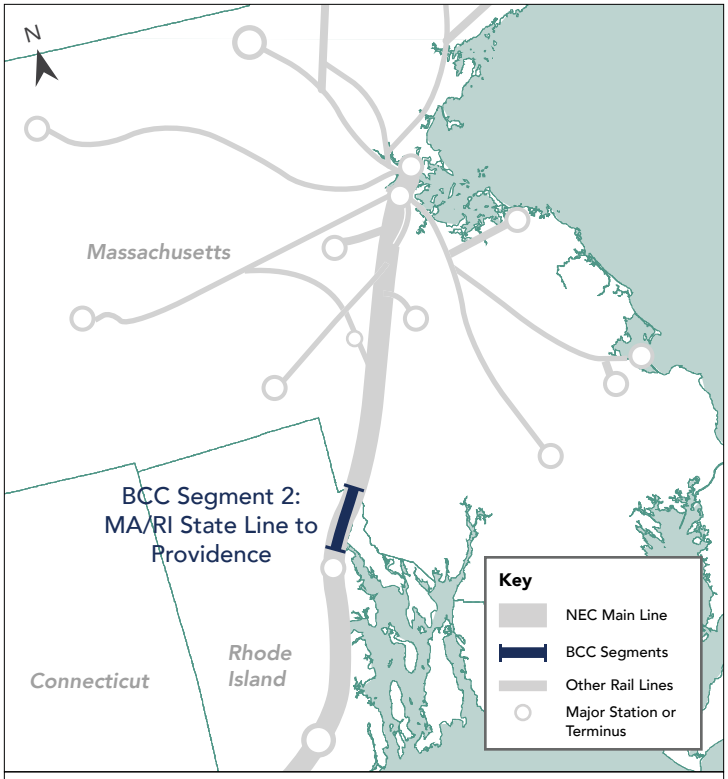
Segment 2: MA/RI State Line to Providence

FY19 Summary

Segment 2 covers nearly 6 miles from the Massachusetts/ Rhode Island state line to Providence, RI and is owned by Amtrak, with train operations from MBTA and Amtrak.

Over $9 million will be expended on capital renewal of basic infrastrcuture in this segment in federal fiscal year 2019.



Segment 2 Special Projects

Planned FY19 Special Projects Expenditure: $8,000,000

- Pawtucket/ Central Falls Station. Page 178

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$2,833,155
Other Programs/Projects	$6,482,759
Total in Segment 2	**$9,315,914**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$7,965,872
MBTA BCC	$1,350,042
Total in Segment 2	**$9,315,914**

FY19 Capital Renewal Investments in Segment 2

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 2 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$1,664,052
FY19 Locations / Planned Schedule / Units*		
Hebronville to Thatcher Tks 1 & 2. MP 193.0 - 196.0. — N/A — 6.22		N/A
Holden to Mansfield Tks 1 & 2. MP 198.0 - 203.0. — N/A — 12.68		N/A
Mansfield to Junction. MP 204.0 - 213.0. — N/A — 12.01		N/A
Junction to Transfer Tks 1 & 2. MP 214.0 - 218.0. — N/A — 10.10		N/A
Read to Forest Tks 1 & 2. MP 219.0 - 223.0. — N/A — 9.26		N/A
Orms to Pawtucket Tk 2. MP 185.0 - 187.0. — N/A — 1.29		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$20,454,155	$1,169,103
FY19 Locations / Planned Schedule / Units*		
AB LINE: Division Support Tie Install - Undetermined Units. MP 228.7 - 72.0. — N/A — Undetermined		$1,169,103
For program details, see Appendix B. *Division Support unit of ties undetermined since they are unplanned until closer to the time of work*		
TOTAL SEGMENT 2 PRODUCTION PROGRAMS EXPENDITURE		**$2,833,155**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$153,605
CATC Amtrak NEC - Constant Tension Catenary Hardware Renewal. C.EN.101695	$640,020	$320,010
FEN Amtrak NEC - Fence Upgrades. C.EN.101711	$6,400,200	$1,785,931
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$87,562
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$211,366
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$432,014
STA Mid Atlantic Division - Station Construction Upgrades. C.EN.101221	$5,333,500	$198,978
STA New England Division - Station Construction Upgrades. C.EN.101211	$2,666,750	$1,066,700
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$106,670
SUB New England Division - Substation Scada-Rtu Upgrades. C.EN.101418	$1,338,709	$66,935
SWHT Amtrak NEC - C&S Switch Heater Improvements. C.EN.101704	$400,013	$213,340
SWHT New England Division - Energy Efficient Sw Heater Repl. C.EN.101510	$320,010	$266,675
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$1,002,698
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$570,276
TOTAL SEGMENT 2 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$6,482,759**

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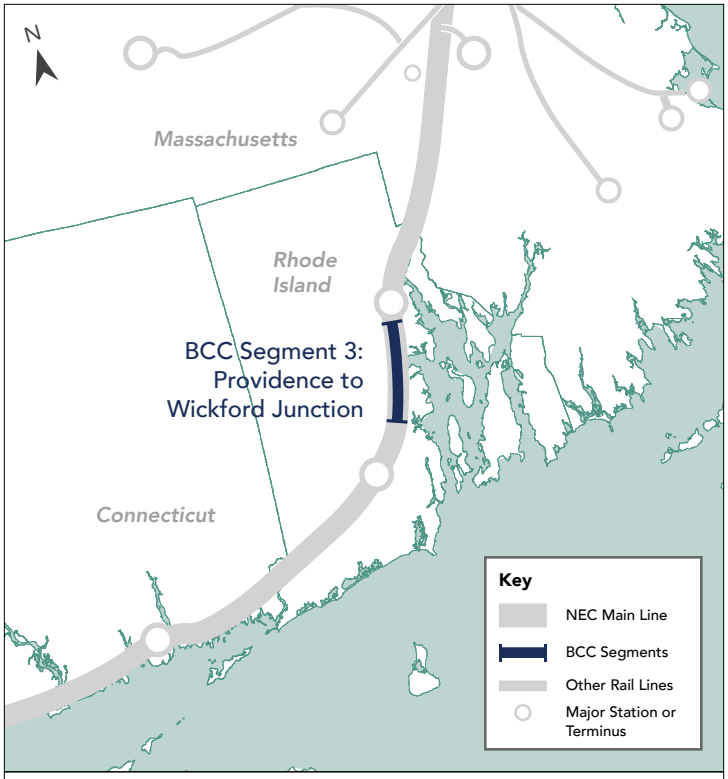
Segment 3: Providence to Wickford Junction

FY19 Summary

Segment 3 covers 19 miles from Providence, RI to Wickford Junction, RI and is owned by Amtrak, with train operations from Amtrak and MBTA, under contract with RIDOT.

Over $3 million will be expended on capital renewal of basic infrastrcuture in this segment in federal fiscal year 2019.



Segment 3 Special Projects

Planned FY19 Special Projects Expenditure: $500,000

- RIDOT Stations: Warwick/ T.F. Green Airport. Page 179

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$2,069,398
Other Programs/Projects	$1,246,538
Total in Segment 3	**$3,315,936**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$1,425,877
RIDOT BCC	$1,890,059
Total in Segment 3	**$3,315,936**

FY19 Capital Renewal Investments in Segment 3

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 3 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Rail Replacement. RAIL Amtrak NEC. C.EN.101661. The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System.	$10,133,650	$266,675
FY19 Locations / Planned Schedule / Units*		
Packard to Cranston Tk 1. MP 185.00 - 185.00. / 05/17/19 - 05/19/19 / 2,400		$266,675
For program details, see Appendix B. *Linear ft		
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$1,109,368
FY19 Locations / Planned Schedule / Units*		
Post to Cranston Tks 1 & 2. MP 178.0 - 180.0. / N/A / 5.20		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$20,454,155	$693,355
FY19 Locations / Planned Schedule / Units*		
AB LINE: Division Support Tie Install - Undetermined Units. MP 228.7 - 72.0. / N/A / Undetermined		$693,355
For program details, see Appendix B. *Division Support unit of ties undetermined since they are unplanned until closer to the time of work*		
TOTAL SEGMENT 3 PRODUCTION PROGRAMS EXPENDITURE		**$2,069,398**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$153,605
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$120,103
INT New England Div East – Interlocking Upgrades. C.EN.101751	$288,009	$288,009
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$144,005
SWHT Amtrak NEC - C&S Switch Heater Improvements. C.EN.101704	$400,013	$186,673
SWHT New England Division - Energy Efficient Sw Heater Repl. C.EN.101510	$320,010	$53,335
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$300,809
TOTAL SEGMENT 3 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$1,246,538**

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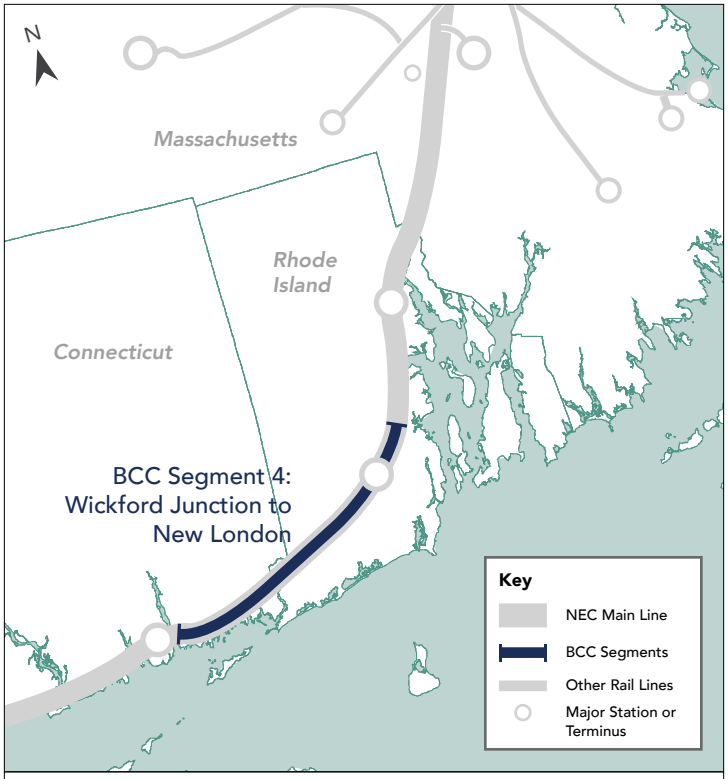
Segment 4: Wickford Junction to New London

AMTRAK

FY19 Summary

Segment 4 covers nearly 43 miles from Wickford Junction, RI to New London, CT and is owned by Amtrak, with train operations from Amtrak only.

Over $20 million will be expended on capital renewal of basic infrastrcuture in this segment in federal fiscal year 2019.



Segment 4 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$1,099,000
Continuous Maintenance Production Programs	$15,105,205
Other Programs/Projects	$3,849,397
Total in Segment 4	**$20,053,602**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$3,496,762
Amtrak (Above BCC)	$16,556,840
Total in Segment 4	**$20,053,602**

FY19 Capital Renewal Investments in Segment 4

PROJECTS OVER $5M			Total Project Cost	FY19 Planned Expenditure
Mystic, CT Interlocking Renewal Project. In FY19 the Project will initiate the procurement process to award a bid to a design contractor for Preliminary Design of the new Mystic Interlocking with anticipated completion of the design in FY20.			$35,319,343	$1,099,000
FY19 Milestones	Schedule			
Procurement Start (Designer)	11/01/18 - 11/01/18			
Procurement Complete (Designer)	12/31/18 - 12/31/18			
Issue NTP - Preliminary Engineering	01/02/19 - 11/30/19			
For project details, see Appendix A.				
TOTAL SEGMENT 4 PROJECTS OVER $5M EXPENDITURE				**$1,099,000**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Rail Replacement. RAIL Amtrak NEC. C.EN.101661. The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System.			$10,133,650	$1,013,365
FY19 Locations	Planned Schedule	Units*		
Groton to High Street Tk 2. MP 141.00 - 141.00.	02/22/19 - 03/15/19	3,200		$266,675
Groton to High Street Tk 1. MP 141.00 - 141.00.	03/15/19 - 04/14/19	3,200		$266,675
Groton to High Street Tk 1. MP 141.00 - 141.00.	03/15/19 - 04/14/19	1,600		$213,340
Kingston to Davisville Tk 2. MP 159.00 - 159.00.	09/13/19 - 09/15/19	2,400		$266,675
For program details, see Appendix B.		*Linear ft		
System Undercutting Program - BLST Amtrak NEC. C.EN.100269. This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.			$66,459,743	$11,377,706
FY19 Locations	Planned Schedule	Units*		
High Street to Kingston Tk 2. MP 143.2 - 158.4.	08/05/19 - 11/15/19	60,000		$11,377,706
For program details, see Appendix B.		*Linear ft		

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.			$28,374,220	$1,386,710
FY19 Locations	Planned Schedule	Units*		
High Street to Kingston Tks 1 & 2 MP 148.0 - 158.0.	N/A	12.66		N/A
For program details, see Appendix B.	*Linear Miles per miles passed			
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.			$11,377,647	$293,037
FY19 Locations	Planned Schedule	Units		
Wood River interlocking. MP 148.0.	9/6/19 - 9/8/19	1		$293,037
For program details, see Appendix B.				
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$20,454,155	$1,034,386
FY19 Locations	Planned Schedule	Units*		
AB LINE: Division Support Tie Install - Undetermined Units. MP 228.7 - 72.0.	TBD	Undetermined		$1,034,386
For program details, see Appendix B.	*Division Support unit of ties undetermined since they are unplanned until closer to the time of work*			
TOTAL SEGMENT 4 PRODUCTION PROGRAMS EXPENDITURE				**$15,105,205**

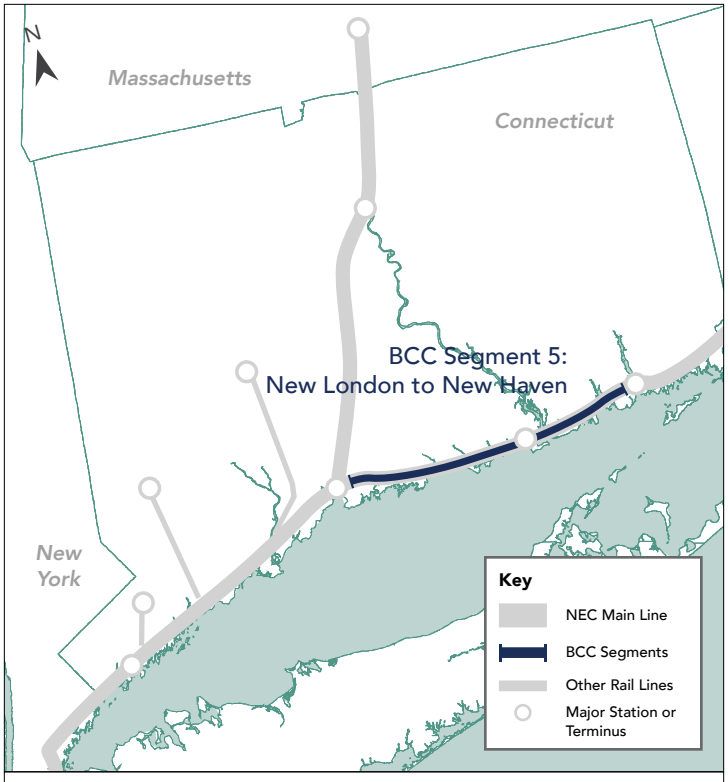
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGMS Amtrak NEC - Movable Bridge Upgrades. C.EN.101705	$800,025	$117,114
BGMS Structures - Movable Bridge Component Design. C.EN.100422	$119,930	$15,879
BGTI Amtrak NEC - Bridge Timber Replacement. C.EN.101696	$5,333,500	$1,066,700
BGUG Amtrak NEC - Undergrade Bridge Upgrades. C.EN.101697	$4,266,800	$533,350
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$230,407
CATC Amtrak NEC - Constant Tension Catenary Hardware Renewal. C.EN.101695	$640,020	$160,005
FAST Amtrak NEC - Concrete Tie Fastener Hardware. C.EN.101648	$266,675	$111,402
PTC Amtrak NEC - PTC Split-Point Derail Program. C.EN.101762	$320,010	$160,005
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$8,336
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$114,732
STA New England Div - Install Train Approach Message SYS. C.TR.100074	$201,459	$201,459
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$106,670
SUB New England Division - Substation Scada-RTU Upgrades. C.EN.101418	$1,338,709	$709,516
SYS Structures Bridges/Tunnels/Walls - Future Design. C.EN.100477	$1,239,734	$109,887
SYS Track - Future Design. C.EN.100333	$366,470	$5,915
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$198,020
TOTAL SEGMENT 4 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$3,849,397**

Segment 5: New London to New Haven

FY19 Summary

Segment 5 covers nearly 50 miles from New London, CT to New Haven, CT and is owned by Amtrak, with train operations from Amtrak and Connecticut's Shore Line East.

Over $24 million will be expended on capital renewal of basic infrastrcuture in this segment in federal fiscal year 2019.



Segment 5 Special Projects

Planned FY19 Special Projects Expenditure: $40,379,189

- New Haven Yard Master Complex Improvements. Page 151.
- SLE Station Improvements. Page 152.
- Yale Interlocking. Page 143.

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$18,914,562
Other Programs/Projects	$5,486,349
Total in Segment 5	**$24,400,911**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$20,566,791
CTDOT BCC (Shore Line East)	$3,834,120
Total in Segment 5	**$24,400,911**

FY19 Capital Renewal Investments in Segment 5

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 5 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Continuous Maintenance Production Programs				
Rail Replacement Program - RAIL Amtrak NEC. C.EN.101661. The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System.			$10,133,650	$266,675
FY19 Locations	Planned Schedule	Units*		
View to Crescent Tk 1. MP 106.00 - 106.00.	02/08/19 - 02/10/19	3,200		$266,675
For program details, see Appendix B.		*Linear ft		
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.			$28,374,220	$2,090,732
FY19 Locations	Planned Schedule	Units*		
Orchard to Meadow. MP 83.0 - 88.0.	N/A	6.44		N/A
Meadow to Triebel. MP 88.0 - 89.0.	N/A	0.60		N/A
Triebel to Guilford. MP 89.0 - 89.0.	N/A	0.66		N/A
Guilford to Brook Tks 1 & 2. MP 90.0 - 103.0.	N/A	31.98		N/A
Crescent to Nan Tks 1 & 2. MP 115.0 - 116.0.	N/A	3.48		N/A
For program details, see Appendix B.		*Linear Miles per miles passed		

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
System Undercutting Program - BLST Amtrak NEC. C.EN.100269. This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.			$66,459,743	$15,423,340
FY19 Locations	Planned Schedule	Units*		
Guilford to Brook Tk 2. MP 91.2 - 104.4.	07/23/18 - 11/15/18	0		$0
Crescent Tk 1 Heading East. MP 115.2.	11/30/18 - 12/02/18	1,200		$229,127
Crescent Tk 2 Heading East. MP 115.2.	12/06/18 - 12/08/18	1,200		$229,127
Branford to Mill River Tk 1 MP 81.2 - 73.9.	04/15/19 - 06/06/19	39,600		$7,482,542
Mill River to Branford Tk 2. MP 74.0 - 81.3	06/10/19 - 08/01/19	39,600		$7,482,542
For program details, see Appendix B.		*Linear ft		
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.			$11,377,647	$673,001
FY19 Locations	Planned Schedule	Units		
Branford interlocking. MP 84.0.	4/26/19 - 4/28/19	1		$379,964
East Lyme Yard interlocking. MP 116.0.	8/23/19 - 8/25/19	1		$293,037
For program details, see Appendix B.				
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$20,454,155	$460,814
FY19 Locations	Planned Schedule	Units*		
AB LINE: Division Support Tie Install - Undetermined Units. MP 228.7 - 72.0.	TBD	Undetermined		$460,814
For program details, see Appendix B.	*Division Support unit of ties undetermined since they are unplanned until closer to the time of work*			
TOTAL SEGMENT 5 PRODUCTION PROGRAMS EXPENDITURE				**$18,914,562**

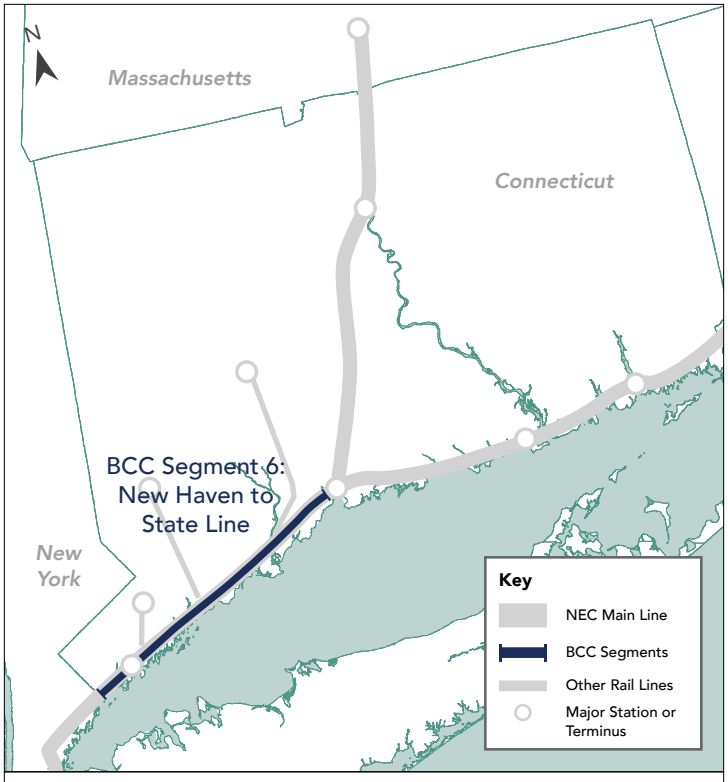
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGMS Structures - Movable Bridge Component Design. C.EN.100422	$119,930	$15,978
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$998,431
CATC Amtrak NEC - Constant Tension Catenary Hardware Renewal. C.EN.101695	$640,020	$160,005
FAST Amtrak NEC - Concrete Tie Fastener Hardware. C.EN.101648	$266,675	$155,273
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$42,453
INT New England Div West- Interlocking Upgrades. C.EN.101744	$426,680	$426,680
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$153,891
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$72,002
STA New England Division - Station Construction Upgrades. C.EN.101211	$2,666,750	$1,600,050
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$106,670
SUB New England Division - Substation Scada-Rtu Upgrades. C.EN.101418	$1,338,709	$562,258
SYS Track - Future Design. C.EN.100333	$366,470	$4,305
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$701,889
TKAP Washington To Boston - Rail Lubicator Replacement. C.EN.100739	$533,350	$426,680
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$59,784
TOTAL SEGMENT 5 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$5,486,349**

Segment 6: New Haven to CT/NY State Line

FY19 Summary

Segment 6 covers 46 miles from New Haven, CT to the Connecticut/ New York state line and is owned by Connecticut DOT, with train operations from Metro-North Railroad, under contract with CTDOT, and Amtrak.

Over $148 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 6 Special Projects

FY19 Special Projects Programmed Amount: $95,000,000

- Devon Bridge: Page 144
- New Haven Line Network Infrastructure Upgrade: Page 149
- New Haven Line Stations Improvements: Page 150
- Saugatuck River Bridge Replacement: Page 145.
- Walk Bridge Program: Page 146

Planned Capital Renewal Expenditure

Type	Amount
Programs/Projects	$148,400,000
Total in Segment 6	**$148,400,000**

Agency Capital Renewal Contribution

Agency	Amount
CTDOT BCC (Shore Line East)	$956,878
CTDOT BCC (New Haven Line)	$40,643,398
CTDOT above BCC-level (New Haven Line)	$92,501,172
Amtrak BCC	$14,298,552
Total in Segment 6	**$148,400,000**

FY19 Capital Renewal Investments in Segment 6

PROGRAMS/PROJECTS		FY19 Segment Expenditure
Substations Replacements. DOT03010072CN (5 Substations), DOT03000153CN (6th Substation). Substation replacements at Woodmont (Substation No. 964), Devon (Substation No. 865), East Bridgeport (Substation No. 814), Bridgeport (Substation No. 736), East Norwalk (Substation No. 537), and South Norwalk (Substation No. 524)		$10,000,000
FY19 Details & Location	Scheduled Completion	
MP 66, MP 60, MP 57, MP 53, MP 41, and MP 41.	5/31/19	
NHL - ALL Moveable Bridge Repairs.		$10,000,000
FY19 Details & Location	Scheduled Completion	
Cos Cob Interim Repairs. DOT03010173CN. Installation of new miter rails and steel ties, structural steel repair, installation of new bridge timbers and rails on Track 1 and 3. MP 29 - MP 30.	6/30/19	
SAGA Interim Repairs. DOT03010177CN. Installation of new miter rails and steel ties, structural steel repair, installation of new bridge timbers and rail on Track 4. MP 44.0.	6/30/19	
DEVON Repairs. DOT03010139CN. Installation of new miter rails and expansion joints, structural steel repair, installation of new bridge timbers on Track 4. MP 60-MP 61.	6/30/19	
NHL CT - Bridges - Sound Beach / Tomac Ave - Construction. DOT03010092CN. The project is for rehabilitation of two bridges, Sound Beach Avenue and Tomac Ave in the Town of Greenwich. The rehabilitation of these bridges will encompass the complete removal of the superstructure under each track followed by the erection of a new superstructure and rehabilitation of abutments.		$2,000,000
FY19 Details & Location	Scheduled Completion	
MP 31.29 to 31.62	5/19	
NHL CT - Bridges - Atlantic Street Bridge, Stamford including Yard/Platform/Catenary. DOT01350301CN (Atlantic Street Bridge Replacement), DOT01350326CN (Atlantic Street Bridge Replacement - Phase 1). There are three projects ongoing in the Stamford area. Project # 301-163 involves the lowering of the catenary system to the standard configuration height, Project 135-301 involves replacement of Atlantic Street bridge and Project # 135-326 is Utility Breakout project (Phase I) for Atlantic Street bridge.		$20,000,000
FY19 Details & Location	Scheduled Completion	
MP 33.15 to 34.00.	Phase 1 almost complete; other projects ongoing	
NHL CT - Signal System Replacement Phase 1.		$12,000,000
FY19 Details & Location	Scheduled Completion	
Signal System. DOT03010154CN. Replacement of existing signal system from CP-229 to CP-240. MP 29-MP 40.	12/31/23	
Signal System Phase 3/4. DOT03010XXXCN. Replacement of existing signal system from CP-243 to CP-274 and New Canaan Branch. MP 43-MP 73.	TBD	

PROGRAMS/PROJECTS		FY19 Segment Expenditure
NHL CT - Network Infrastructure Upgrade - All Phases		$14,000,000
FY19 Details & Location	Scheduled Completion	
Network Infrastructure Upgrade Phase 2. DOT03000178PE, DOT03000178CN. Network Infrastructure Upgrade for Security between Westport and Stratford. MP 47- MP 59.	12/13/19	
Network Infrastructure Upgrade Phase 3. DOT03000202PE, DOT03000202CN. Network Infrastructure Upgrade for Security between Stamford and Westport. MP 33-MP 47.	4/16/21	
Network Infrastructure Upgrade Phase 4. DOT03000XXXPE, DOT03000XXXCN. Network Infrastructure Upgrade for Security between Greenwich and Westport, and three branches. MP 26-MP 33.	12/31/23	
NHL CT - Track Program (C Program)		$18,500,000
FY19 Details & Location	Scheduled Completion	
C-32. DOT03000206CN. Purchase and install wood ties, surface track, install 16 track miles of new 136lb rail for various curves, purchase and install Switch at CP 271, Drainage Improvements at various locations.	12/31/21	
C-31. DOT03000190CN. Purchase and install wood ties, surface track, install 16 track miles of new 136lb rail for various curves, purchase and install Switch at CP 272.	12/31/20	
C-30. DOT03000182CN. Purchase and install concrete and wood ties, undercut tracks, surface track, purchase 16 track miles of new 136lb rail for various curves, purchase and install switch at CP234.	6/30/19	
NHL CT - Catenary Replacement - Segments C1A and C2 - Construction. DOT03010145CN. Replacement of existing Catenary with Auto-Tension Catenary CP-241 to CP248(C1A) and CP255 to CP261(C2)		$20,000,000
FY19 Details & Location	Scheduled Completion	
MP41-MP48(C1A); MP55-MP61(C2)	4/30/19	
NHL S program/Timber Program.		$5,000,000
FY19 Details & Location	Scheduled Completion	
S-22 Program. DOT03000195CN. Major steel and masonry repairs on various bridges. MP 33.41, MP 59.01, MP 59.96.		
S-23 Program. DOT03000XXXCN. Major steel and masonry repairs on various bridges. MP 26 - MP 72.		
Bridge Timber Program. DOT03000161CN. Replacement of bridge timber at various location on N.H line. MP 33.75, MP 40.89, MP 41.28, MP 56.20 and MP 59.96.		

PROGRAMS/PROJECTS		FY19 Segment Expenditure
NHL CT - Bridge Replacement/Repair Program. This program is used to program funding for rehabilitation/reapir or replacement of New Haven Line Railroad bridges.		$5,000,000
FY19 Details & Location	Scheduled Completion	
TBD	Multi-year program	
NHL CT - Bridge Design. DOT03000175PE. This project # is used for all engnieering design related tasks carried out by the Office of Rail Staff.		$1,900,000
FY19 Details & Location	Scheduled Completion	
N/A	Ongoing	
Positive Train Control. DOT03000149PE, DOT03000149CN. Installation of Positive Train Control for the entire New Haven Line.		$30,000,000
TOTAL SEGMENT 6 PROGRAMS/PROJECTS EXPENDITURE		**$148,400,000**

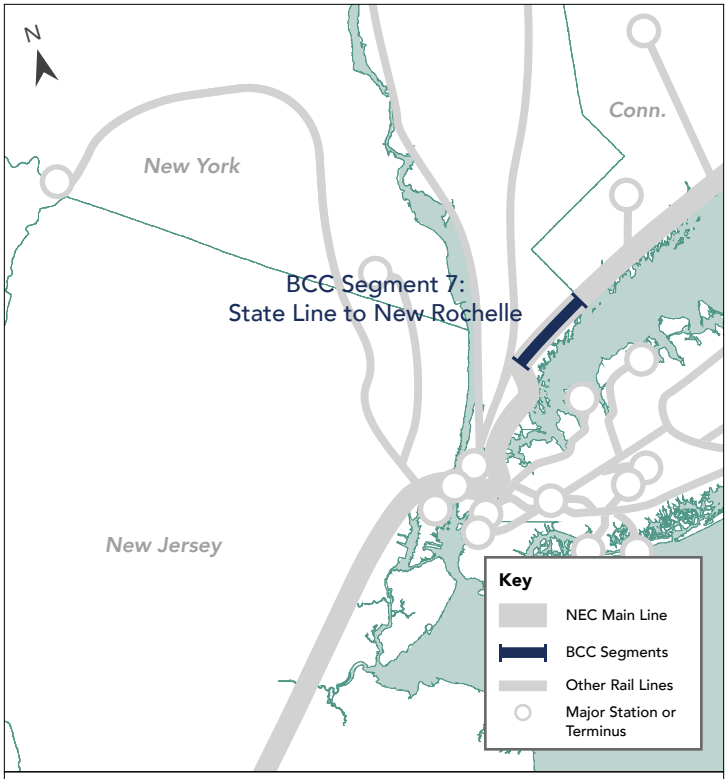
Segment 7: CT/NY State Line to New Rochelle

Metro-North Railroad AMTRAK

FY19 Summary

Segment 7 covers nearly 10 miles from the Connecticut/ New York state line to New Rochelle, NY and is owned by Metro-North Railroad, with train operations from Metro-North and Amtrak.

Almost $15 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 7 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Programs/Projects	$14,819,100
Total in Segment 7	**$14,819,100**

Agency Capital Renewal Contribution

Agency	Amount
Metro-North Railroad BCC	$11,364,182
Metro-North Railroad (Above BCC)	$1,353,252
Amtrak BCC	$2,101,666
Total in Segment 7	**$14,819,100**

FY19 Capital Renewal Investments in Segment 7

PROGRAMS/PROJECTS	FY19 Segment Expenditure
Rebuild Retaining Walls. M7030107. This provides for the replacement of an existing retaining wall located on the New Haven Line in Port Chester, NY. FY19 Details Retaining wall is located between MP 25 and MP 26.	$1,080,000
Undergrade Bridge Rehabilitation. M7030203. This project continues the repair or replacement of bridges listed in serious to critical states of repair. Work in this segment includes the superstructure replacement and substructure rehabilitation of the Willet Avenue and Highland Road Bridges on the NHL in Port Chester. FY19 Details Willet Avenue Bridge (MP 25.74) and Highland Road Bridge (MP 25.83) are located in Port Chester, NY. Project activities are on-going with construction contract award planned for April 2019.	$4,360,000
Cyclical Track Program. M7030111/ M7030112. This project includes cyclical replacement of ties and rail, along with surfacing and grade crossing renewal, system wide, including the NEC on the NHL. FY19 Details Specific locations for the 2019 Cyclical Track Program are still being finalized, but assumes the following scope systemwide: ~24,000 tie replacements, ~5 miles of rail replacment, ~5 miles of 119lb rail replacement, ~140 miles of rail resurfacing, ~1,000 rail welds, and track elements at select grade crossings. Work on the New Haven Line between CP 217 and CP 226 will focus on rail replacement, resurfacing and welding.	$7,410,000
Catenary Painting. M7030212. This project provides for rehabilitation, inspection and design of catenary structures on the NHL in New York. The project will involve the repair and partial painting of catenary and pull off structures located between Mamaroneck and Larchmont. FY19 Details Work expected between MP 18.58 and MP 20.37 (Larchmont to Mamaroneck).	$250,000
Cyclical Repl. Insulated Joint. M7030102. This project provides for the replacement of insulated joints system wide, including the NEC on the NHL.	$117,000
Purchase MoW Equipment. M7030109. This project provides for the replacement of Maintenance of Way Equipment items that have reached the end of their useful life.	$475,200
Replace Timbers - Undergrade Bridges. M7030208. This project provides for installation of bridge timbers on open deck bridges that are at the end of useful life and requiring replacement.	$100,000
Railroad Protective Liability. M7080103. This project provides for costs associated with Railroad Protective Liability.	$232,000
Independent Engineer. M7080104. This project provides oversight and program monitoring for the Captial Program Oversight Committee of the MTA.	$392,000
Program Administration. M7080106. This project funds the costs of departments or individuals that provide administrative support to the capital program but do not charge time directly to specific projects.	$123,500
Program Scope Development. M7080107. This project funds the costs of those departments and individuals that scope capital projects and provide other related support functions to the capital program; includes a study for New Rochelle Annex substation power improvements for NHL.	$279,400
TOTAL SEGMENT 7 PROGRAMS/PROJECTS EXPENDITURE	**$14,819,100**

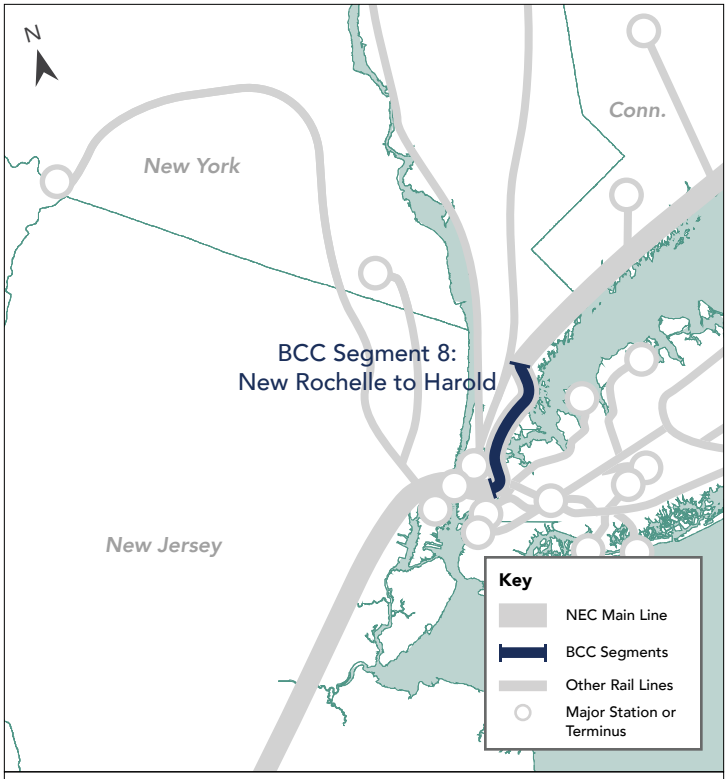
Segment 8: New Rochelle to Harold

AMTRAK

FY19 Summary

Segment 8 covers 3 miles from New Rochelle, NY to Harold Interlocking and is owned by Amtrak, with train operations from Amtrak only.

Over $1 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 8 Special Projects

Planned FY19 Special Projects Expenditure: $27,000,000

- Pelham Bay Bridge Replacement. Page125
- Penn Station Access. Page 170

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$1,756,410
Total in Segment 8	**$1,756,410**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$1,074,167
Amtrak (Above BCC)	$682,243
Total in Segment 8	**$1,756,410**

FY19 Capital Renewal Investments in Segment 8

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 8 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 8 PRODUCTION PROGRAMS EXPENDITURE		**$0**

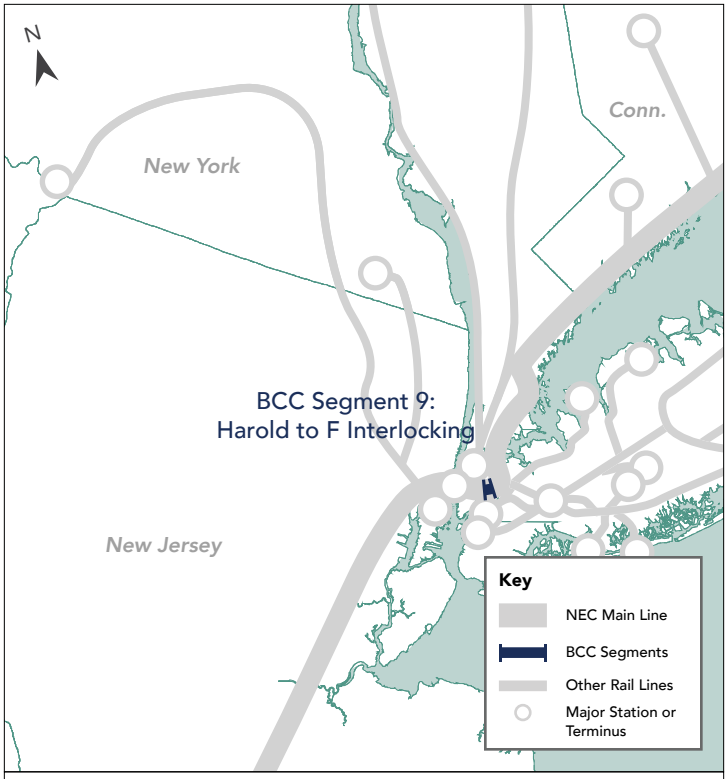
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGMS Amtrak NEC - Movable Bridge Upgrades. C.EN.101705	$800,025	$373,345
INT New York Division East - Interlocking Upgrades. C.EN.101743	$320,010	$320,010
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$268,808
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$432,014
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$362,233
TOTAL SEGMENT 8 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$1,756,410**

Segment 9: Harold to F Interlocking

FY19 Summary

Segment 9 covers 0.7 miles from Harold Interlocking to F Interlocking and is owned by Amtrak, with train operations from Amtrak and Long Island Rail Road.

Over $5 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 9 Special Projects

Planned FY19 Special Projects Expenditure: $14,000,000

- Harold Interlocking: Page 171

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$5,272,942
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$288,009
Total in Segment 9	**$5,560,951**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$5,291,317
Long Island Rail Road BCC	$269,634
Total in Segment 9	**$5,560,951**

FY19 Capital Renewal Investments in Segment 9

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
Q Interlocking C&S Equipment Replacement Project. INT Q INTERLOCKING. C.EN.100676. In FY19 phase 1 will continue and is anticipated to finish by 4/30/19 and phase 2 will start. Construction of Houses and Interface Cases at Lancaster shop will start and complete in FY19.	$14,917,344	$5,272,942
FY19 Milestones — Schedule		
Phase 1 Continued Construction — 10/01/18 - 04/30/19		
Equipment for Phase 1 — 10/01/18 - 04/30/19		
Lancaster Shop Construction of Houses — 10/01/18 - 09/30/19		
Phase 2 - Run Fiber — 10/01/18 - 09/30/19		
For project details, see Appendix A.		
TOTAL SEGMENT 9 PROJECTS OVER $5M EXPENDITURE		**$5,272,942**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 9 PRODUCTION PROGRAMS EXPENDITURE		**$0**

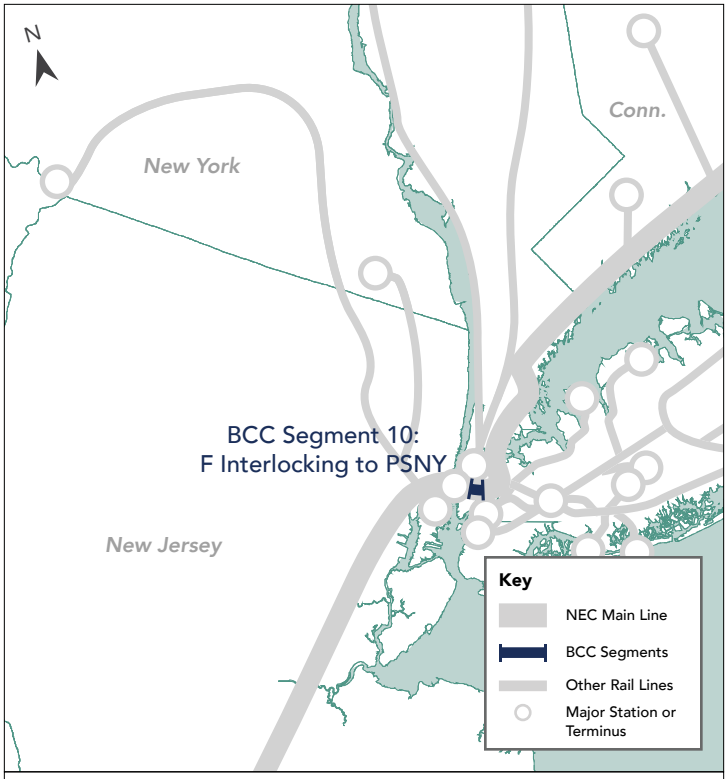
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
Joint Elimination Program - RAIL Amtrak NEC. C.EN.101655.	$7,200,225	$288,009
TOTAL SEGMENT 9 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$288,009**

Segment 10: F Interlocking to PSNY

FY19 Summary

Segment 10 covers nearly 3 miles from F Interlocking to Penn Station New York and is owned by Amtrak, with train operations from Amtrak, Long Island Rail Road, and NJ TRANSIT.

Almost $4 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 10 Special Projects

Planned FY19 Special Projects Expenditure: $34,500,000

- East River Tunnel - Right of Way Infrastructure Improvements: Page 156
- East River Tunnel Rehabilitation: Page 157
- River-to-River Rail Resiliency Projects (R4): Page 158

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$1,066,700
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$2,916,628
Total in Segment 10	**$3,983,328**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$1,711,579
Long Island Rail Road BCC	$2,271,749
NJ TRANSIT BCC	$0
Total in Segment 10	**$3,983,328**

FY19 Capital Renewal Investments in Segment 10

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
East River Tunnels Track Replacement Project. STIP NEW YORK EAST RIVER TUNNELS. Rail/Tie Repl Line 1/2. C.EN.100755. Rail/Tie Repl Line 3/4. C.EN.100756. In FY19 rail and tie replacement will take place on tracks #1 and #2 and also on tracks #3 and #4 as outage opportunities arise. Mostly the work will occur during 55-hour track outages that become available on short notice due to cancelations or early completion of other Project scopes.	TBD	$1,066,700
FY19 Milestones — Schedule		
Rail & Tie Replacement Track #1 — 10/01/18 - 09/30/19		
Rail & Tie Replacement Track #2 — 10/01/18 - 09/30/19		
Rail & Tie Replacement Track #3 — 10/01/18 - 09/30/19		
Rail & Tie Replacement Track #4 — 10/01/18 - 09/30/19		
For project details, see Appendix A.		
TOTAL SEGMENT 10 PROJECTS OVER $5M EXPENDITURE		**$1,066,700**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Continuous Maintenance Production Programs		
None.		$0
TOTAL SEGMENT 10 PRODUCTION PROGRAMS EXPENDITURE		**$0**

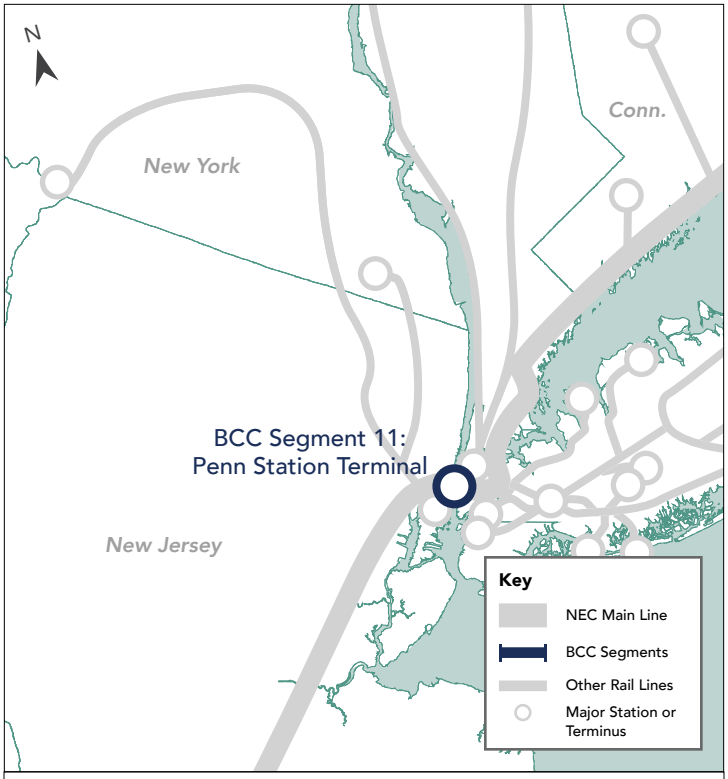
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$32,429
STA New York Division - Station Construction Upgrades. C.EN.101276	$2,133,400	$1,881,322
SYS Track - Future Design. C.EN.100333	$366,470	$202,852
TUN East River Tunnels - Tunnel Improvements. C.EN.101624	$800,025	$800,025
TOTAL SEGMENT 10 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$2,916,628**

Segment 11: Penn Station Terminal

FY19 Summary

Segment 11 covers Penn Station New York and is owned by Amtrak, with train operations from Amtrak, Long Island Rail Road, and NJ TRANSIT.

Almost $55 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 11 Special Projects

Planned FY19 Special Projects Expenditure: TBD

- Penn Station New York - LIRR Projects. Page 157

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$39,639,148
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$15,331,415
Total in Segment 11	**$54,970,563**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$6,282,514
Long Island Rail Road BCC	$23,966,177
NJ TRANSIT BCC	$24,721,872
Total in Segment 11	**$54,970,563**

FY19 Capital Renewal Investments in Segment 11

PROJECTS OVER $5M		Total Project Cost	FY19 Planned Expenditure
Penn Station Infrastructure Renewal Program. TURN PENN STATION NY. C.EN.101104. In FY19, under the Penn Station Infrastructure Renewal Program following locations are planned to be completed: Continuation of rehab work at TK 18, turnout replacement at "C" IL, Replacing ties on TK 16 & 17, Total replacement of 4 turnouts, 1 slip turnout, 2 diamond crossovers, crossing replacement on curves 561/563/565 and partial track rehab work in Zones 2A, 2B & 2C..		$235,965,972	$35,197,317
FY19 Milestones	Schedule		
Renew 635 turnout at "C" Interlocking	10/29/18 - 11/12/18		
Rehab Track 18	10/05/18 - 12/21/18		
Rehab Track 17	01/11/19 - 03/04/19		
Rehab Track 16	03/22/19 - 05/13/19		
Replace crossings on curves 561/563/565	06/20/19 - 08/30/19		
Rehab Track Zone 2A	10/01/18 - 09/30/19		
Rehab Track Zone 2B	10/01/18 - 09/30/19		
Rehab Track Zone 2C	10/01/18 - 09/30/19		
For project details, see Appendix A.			
Penn Station NY Scada Phase II Project. CETC PENN STATION NY. C.EN.100081. In FY2019, the project will facilitate the replacement and upgrade of existing Amtrak New York City Fire & Life Safety (F&LS) SCADA system components that are no longer supported by the manufacturer or which have failed in order to maintain proper monitoring and control of the tunnel and station ventilation system, sump pumps, standpipes, electrical system, fire alarm and security system, and train signaling system at PSCC.		$11,753,067	$4,441,831
FY19 Milestones	Schedule		
Final Design	10/03/16 - 03/29/19		
Construction Phase Services	03/01/17 - 06/29/19		
Contractor - Work Package 2	10/01/18 - 03/29/19		
Contractor - Work Package 3	04/01/19 - 09/30/19		
Amtrak F/A Protection	10/03/16 - 09/30/19		
For project details, see Appendix A.			
TOTAL SEGMENT 11 PROJECTS OVER $5M EXPENDITURE			**$39,639,148**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 11 PRODUCTION PROGRAMS EXPENDITURE		**$0**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGMS Structures - Movable Bridge Component Design. C.EN.100422	$119,930	$19,584
INTB New York Div - Interlocking Lighting Fixture Upgrades. C.EN.100940	$266,675	$119,357
RAD Northeast Corridor - Radio Voter Upgrades. C.EN.100788	$320,010	$78,634
RAD Penn Station Ny - Radio System Upgrades Design & Install. C.EN.100649	$106,670	$106,670
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$777,552
STA New York Division - Station Construction Upgrades. C.EN.101276	$2,133,400	$252,078
STA Penn Station New York - Escalator Replacement. C.EN.100316	$7,466,900	$7,466,900
STA Penn Station New York - Facilities Upgrades. C.EN.101116	$3,200,100	$3,200,100
STA Penn Station New York-Life Safety Facility Improvements. C.EN.101627	$1,066,700	$1,066,700
STA Penn Station Ny - Station Chilled Water System Upgrade. C.EN.101608	$320,010	$320,010
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$160,005
SYS Track - Future Design. C.EN.100333	$366,470	$45,999
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$1,717,825
TOTAL SEGMENT 11 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$15,331,415**

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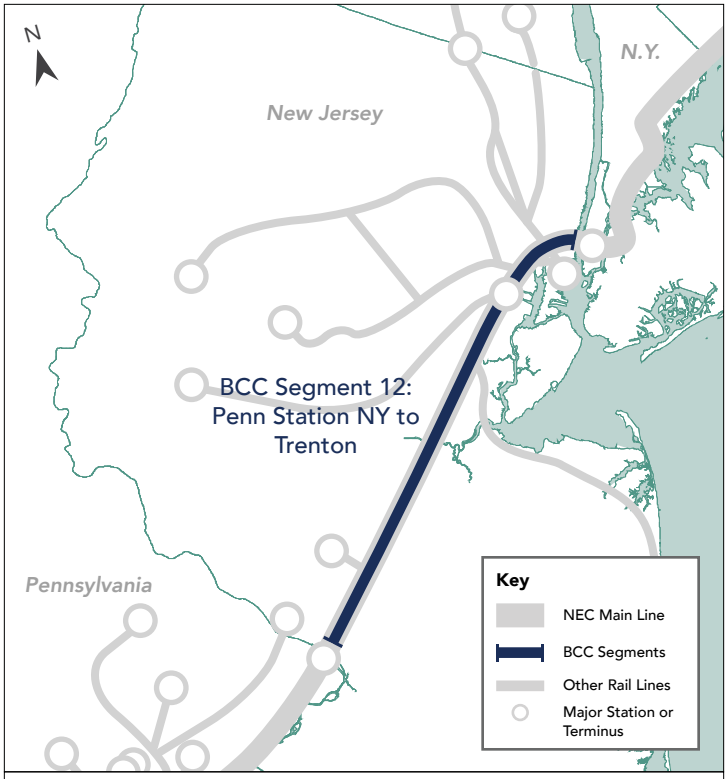
Segment 12: Penn Station NY to Trenton

FY19 Summary

Segment 12 covers 57 miles from Penn Station New York to Trenton, NJ and is owned by Amtrak, with train operations from Amtrak and NJ TRANSIT.

Over $64 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$24,929,679
Continuous Maintenance Production Programs	$13,468,845
Other Programs/Projects	$25,941,466
Total in Segment 12	**$64,339,990**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$0
NJ TRANSIT BCC	$64,339,990
Total in Segment 12	**$64,339,990**

Segment 12 Special Projects

Planned FY19 Special Projects Expenditure: $250,641,565

- Delco Lead Project. Page 172
- Elizabeth Station. Page 173
- Gateway Component: Harrison Fourth Track. Page 119
- Gateway Component: Hudson Tunnel Project. Page 116
- Gateway Component: Hudson Yards Concrete Casing. Page 120
- Gateway Component: Portal North Bridge. Page 117
- Gateway Component: Sawtooth Bridge. Page 118
- Gateway Program: Planning and Program Management. Page 121
- Moynihan Station (Phase 2). Page 130
- New Brunswick Station. Page 174
- New Jersey HSR Improvement Program. Page 131
- Newark Penn Station Platform Rehabilitation. Page 132
- NJ TRANSITGRID. Page 175
- Princeton Junction Station. Page 176

FY19 Capital Renewal Investments in Segment 12

PROJECTS OVER $5M		Total Project Cost	FY19 Planned Expenditure
Clark to Ham Constant Tension Upgrade Project. C.EN. 101765. Scope for FY19 includes: Electric Traction department design review, exploratory digs, requests for proposal and procurement contracts and securing labor clearances are planned, as well as Amtrak program management support.		$193,581,003	$7,466,900
FY19 Milestones	Schedule		
1. Design Reviews	01/03/19 - 09/30/19		
2. Exploratory Digs	05/01/19 - 09/30/19		
3. Procurement Contracts	10/01/18 - 09/30/19		
4. Program Management	10/01/18 - 09/30/19		
For project details, see Appendix A.			
Fair Interlocking Renewal Project. INRL FAIR INTERLOCKING. C.EN.101277. In FY19 the #16 turnout will be built and replaced. Also to be built in late FY19 is the #21 A crossover to be installed along with the #21B crossover in FY20.		$32,001,000	$3,200,100
FY19 Milestones	Schedule		
Build #16 turnout	10/01/18 - 07/31/19		
Install #16 turnout	10/01/18 - 11/01/19		
Build #21A crossover	11/2/18 - 6/30/19		
For project details, see Appendix A.			
Kearny to Waverly - Transmission Tower Upgrade Project. TRN KEARNY TO WAVERLY. C.EN.101787. Scope for FY19 includes: Complete final design. Initiate procurement for construction.		$7,469,615	$517,350
FY19 Milestones	Schedule		
Environmental	08/01/18 - 12/31/18		
60% Design	09/01/18 - 11/01/18		
90% Design	12/01/18 - 02/01/19		
Final Design	03/01/19 - 04/30/19		
ROW / Easements	10/01/19 - 11/15/19		
For project details, see Appendix A.			

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
Metuchen Frequency Converter - Equipment Upgrades Project. FREQ METUCHEN FREQUENCY CONVERTER. C.EN.101747. Scope for FY19 includes: project kick-off meeting with Philadelphia Electric Company (PECO) and Public Service Gas & Electric; reviews of design, construction, technical documents and project invoices; conduct field/site visits to verify the work is being performed in accordance with plans and specifications. FY19 Milestones — Schedule Kick-off meeting with vendor and Amtrak — 10/01/18 - 10/31/18 General Electric on site to perform work — 03/01/19 - 06/30/19 Bi-weekly/monthly meetings with vendor — 11/01/18 - 09/30/19 Amtrak weekly site visits — 11/01/18 - 09/30/19 Invoice review and approval — 11/01/18 - 09/30/19 For project details, see Appendix A.	$8,856,077	$8,856,077
New Hackensack Substation 42 Control House Project. SUB HACKENSACK SUB 42. C.EN.101535. In FY19 the Project anticipates the completion of final design; will obtain permits from NJ Transit; develop Project Management Plan; and advertise procurement for construction. FY19 Milestones — Schedule Complete Final Design — 10/01/18 - 09/30/18 Project Management Plan (FRA) — 10/01/18 - 12/31/18 NJ Transit and Conrail Permit — 10/01/18 - 03/30/19 Procurement (Pre-Bid) — 10/01/18 - 12/31/18 Procurement (Const. Procurement) — 12/31/18 - 04/01/19 Construction/ NEPA Contractor — 04/01/19 - 12/31/20 For project details, see Appendix A.	$12,521,037	$3,289,203
Trenton, NJ Interchange Extension Project. TKRN TRENTON NJ. C.EN.101592. In FY19 the Project will construct 800 linear feet of storage track to complete the construction of the new track #8. A new #8 turnout will also be built and installed for the storage of the ballast car unit trains. FY19 Milestones — Schedule Construction of new #8 track — 11/01/18 - 01/20/19 Install new #8 turnout — 01/20/19 - 02/15/19 For project details, see Appendix A.	$7,246,513	$1,600,050
TOTAL SEGMENT 12 PROJECTS OVER $5M EXPENDITURE		**$24,929,679**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Rail Replacement Program - RAIL Amtrak NEC. C.EN.101661. The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System.			$10,133,650	$533,350
FY19 Locations	Planned Schedule	Units*		
Swift to Dock Tk 3. MP 7.2 - 8.5.	12/14/18 - 12/16/18	4,200		$533,350
For program details, see Appendix B.		*Linear ft		
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.			$28,374,220	$6,058,856
FY19 Locations	Planned Schedule	Units*		N/A
Ham to County Tk 1. MP 55.0 - 32.0.	N/A	28.63		N/A
County to Edison Tks 2 & 3. MP 32.0 - 28.0.	N/A	9.30		N/A
Edison to Lincoln Tks 2 & 3. MP 27.0 - 26.0.	N/A	2.65		N/A
Union to Elmora Tks 2 & 3. MP 19.0 - 15.0.	N/A	10.78		N/A
Lincoln to Menlo Tk 3. MP 25.0 - 23.0.	N/A	2.38		N/A
Iselin to Union Tk 3. MP 20.0 - 22.0.	N/A	3.14		N/A
County to Midway Tk 4. MP 41.0 - 32.0.	N/A	10.11		N/A
Elmora to Lane Tk 4. MP 14.0 - 12.0.	N/A	3.25		N/A
Lane to Hunter Tk 4. MP 11.0 - 10.0.	N/A	1.88		N/A
For program details, see Appendix B.		*Linear Miles per miles passed		
System Undercutting Program - BLST Amtrak NEC. C.EN.100269. This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.			$66,459,743	$448,707
FY19 Locations	Planned Schedule	Units*		
NY Line Tk 2. MP 29.9 - 30.1	11/30/18 - 12/02/18	1,150		$219,580
NY Line Tk 2. MP 32.1 - 32.4	12/07/18 - 12/09/18	1,200		$229,127
For program details, see Appendix B.		*Linear ft		
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.			$11,377,647	$3,793,261

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
FY19 Locations	Planned Schedule	Units*		
Lack interlocking. MP 28.1.	7/12/19 - 7/21/19	1		$801,750
Edison interlocking. MP 28.1.	7/26/19 - 9/8/19	3		$2,991,511
For program details, see Appendix B.				
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$20,454,155	$2,634,671
FY19 Locations	Planned Schedule	Units*		
AN LINE: Hudson Interlocking Tk 1. MP 8.5 - 8.5.	06/10/19 - 06/18/19	400		$1,155,272
AN LINE: Ham Interlocking Tk 4. MP 55.9 - 55.4	09/23/19 - 11/07/19	116		$819,035
For program details, see Appendix B.		*Ties		
TOTAL SEGMENT 12 PRODUCTION PROGRAMS EXPENDITURE				**$13,468,845**

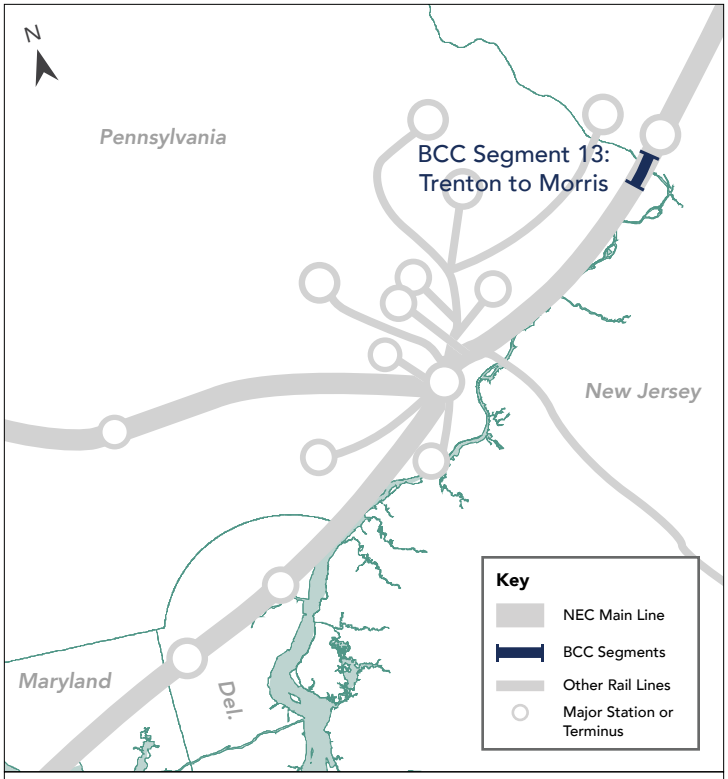
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
ABS Washington To New York - Upgrade Signal System To 562. C.EN.101753	$7,366,499	$3,683,250
BGMS Amtrak NEC - Movable Bridge Upgrades. C.EN.101705	$800,025	$229,563
BGMS Nj008.50 Dock Brg-Upgr Ctrl Line/Emgy Bckup Eng/Aux Drv. C.EN.100709	$266,675	$266,675
BGTI Amtrak NEC - Bridge Timber Replacement. C.EN.101696	$5,333,500	$1,066,700
BGTI Structures - Bridge Tie Design. C.EN.101110	$64,002	$42,668
BGUG Amtrak NEC - Undergrade Bridge Upgrades. C.EN.101697	$4,266,800	$1,066,700
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$2,457,677
DRAN Amtrak NEC - Drainage-Roadbed Improvements. C.EN.101651	$8,693,605	$4,266,800
FEN Amtrak NEC - Fence Upgrades. C.EN.101711	$6,400,200	$1,958,437
INT Amtrak NEC Nyd West - Interlocking Upgrades. C.EN.101474	$1,280,040	$896,028
INT Dock Interlocking - Interlocking Renewal C&S/Et. C.EN.100120	$736,023	$736,023
INTB New York Div - Interlocking Lighting Fixture Upgrades. C.EN.100940	$266,675	$147,318
PTC Amtrak NEC - PTC Split-Point Derail Program. C.EN.101762	$320,010	$160,005
RAD Northeast Corridor - Radio Voter Upgrades. C.EN.100788	$320,010	$84,503
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$13,647
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$1,909,393
STIP Amtrak NEC - Ride Quality Improvement Program. C.EN.101650	$3,200,100	$416,013
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$293,343
SWHT Amtrak NEC - Electrict Traction Sw Htr Improvements. C.EN.101692	$2,080,065	$1,013,365
TEL New York Division - Replace Comm Equipment Houses. C.EN.101358	$106,670	$106,670
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$1,203,238
TKAP Amtrak NEC - Wayside Detector Replacement Program. C.EN.101653	$213,340	$213,340
TUN North River Tunnels - Tunnel Improvements. C.EN.101622	$1,226,705	$1,226,705
TUN Nrt 11Th Ave Vent Shaft - Automatic Transfer Switch Upgr. C.EN.101508	$1,386,710	$1,386,710
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$563,346
WALL Amtrak NEC - Retaining Wall Upgrades. C.EN.101707	$1,066,700	$533,350
TOTAL SEGMENT 12 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$25,941,466**

Segment 13: Trenton to Morris

FY19 Summary

Segment 13 covers 1 mile from Trenton, NJ to Morris in Pennsylvania and is owned by Amtrak, with train operations from Amtrak, NJ TRANSIT, and SEPTA.

Over $6 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 13 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$4,476,715
Other Programs/Projects	$1,784,401
Total in Segment 13	**$6,261,116**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$0
NJ TRANSIT BCC	$6,261,116
SEPTA BCC	$0
Total in Segment 13	**$6,261,116**

FY19 Capital Renewal Investments in Segment 13

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		**$0**
TOTAL SEGMENT 13 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$277,342
FY19 Locations / Planned Schedule / Units*		
Fair to Morris Tk 4. MP 58.0 - 56.0. / N/A / 1.50		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.	$60,801,900	$3,308,602
FY19 Locations / Planned Schedule / Units*		
Morris to West Fair Tk 1. MP 58.0 - 56.8. / 11/26/18 - 12/20/18 / 3,200 ties/ 12,800 CWR*		$3,308,602
For program details, see Appendix B. *Linear		
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$20,454,155	$890,771
FY19 Locations / Planned Schedule / Units*		
AN LINE: Division Support Tie Install - Undetermined Units. MP 0.1 - 87.7. / TBD / Undetermined		$890,771
For program details, see Appendix B. *Division Support unit of ties undetermined since they are unplanned until closer to the time of work		
TOTAL SEGMENT 13 PRODUCTION PROGRAMS EXPENDITURE		**$4,476,715**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGUG Amtrak NEC - Undergrade Bridge Upgrades. C.EN.101697	$4,266,800	$533,350
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$153,605
INT Amtrak NEC Mad North – Interlocking Upgrades. C.EN.100563	$1,280,040	$320,010
INT Amtrak NEC Nyd West - Interlocking Upgrades. C.EN.101474	$1,280,040	$384,012
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$97,238
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$100,270
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$195,917
TOTAL SEGMENT 13 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$1,784,401**

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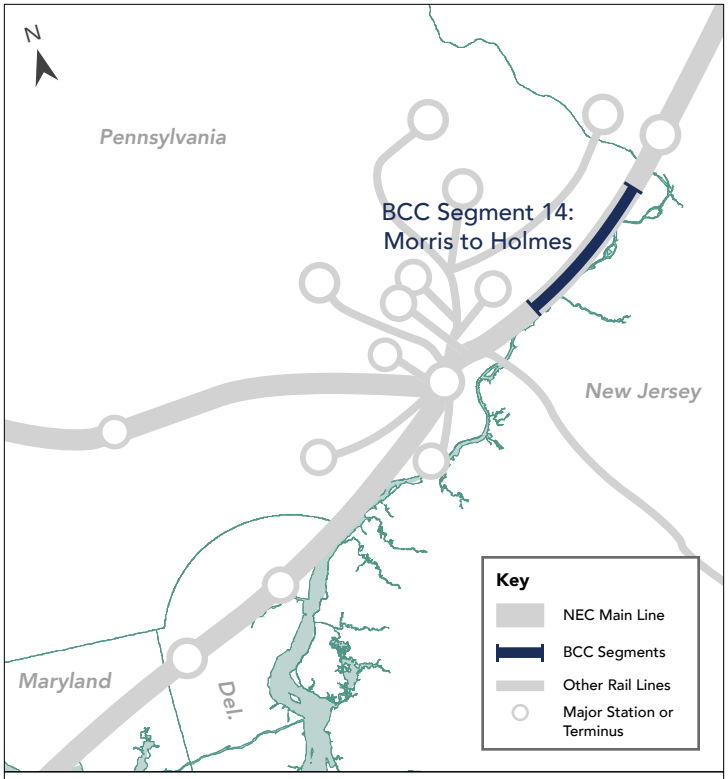
Segment 14: Morris to Holmes

FY19 Summary

Segment 14 covers nearly 19 miles from Morris to Holmes in Pennsylvania and is owned by Amtrak, with train operations from Amtrak and SEPTA.

Over $16 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 14 Special Projects

- None.

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$13,171,551
Other Programs/Projects	$3,112,461
Total in Segment 14	**$16,284,012**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$3,463,459
SEPTA BCC	$12,820,553
Total in Segment 14	**$16,284,012**

FY19 Capital Renewal Investments in Segment 14

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 14 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$1,877,392
FY19 Locations / Planned Schedule / Units*		
Holmes to Grundy Tks 2 & 3. MP 77.0 - 65.0. / N/A / 29.55		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.	$60,801,900	$9,878,648
FY19 Locations / Planned Schedule / Units*		
Grundy to Morris Tk 1. MP 65.3 - 58.0. / 10/08/18 - 11/16/18 / 18,480 ties/ 73,920 CWR*		$9,878,648
For program details, see Appendix B. *Linear		
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$20,454,155	$1,415,511
FY19 Locations / Planned Schedule / Units*		
AN LINE: Grundy Interlocking. MP 65.2. / 05/06/19 - 06/06/19 / 191		$1,415,511
For program details, see Appendix B. *Ties		
TOTAL SEGMENT 14 PRODUCTION PROGRAMS EXPENDITURE		**$13,171,551**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGSG Amtrak NEC - Signal Bridge Upgrades. C.EN.101706	$2,666,750	$1,120,301
BGUG Amtrak NEC - Undergrade Bridge Upgrades. C.EN.101697	$4,266,800	$533,350
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$307,210
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$5,482
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$226,097
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$144,005
SIGP Amtrak NEC - Signal Power Upgrades. C.EN.101694	$1,600,050	$160,005
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$401,079
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$214,934
TOTAL SEGMENT 14 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$3,112,461**

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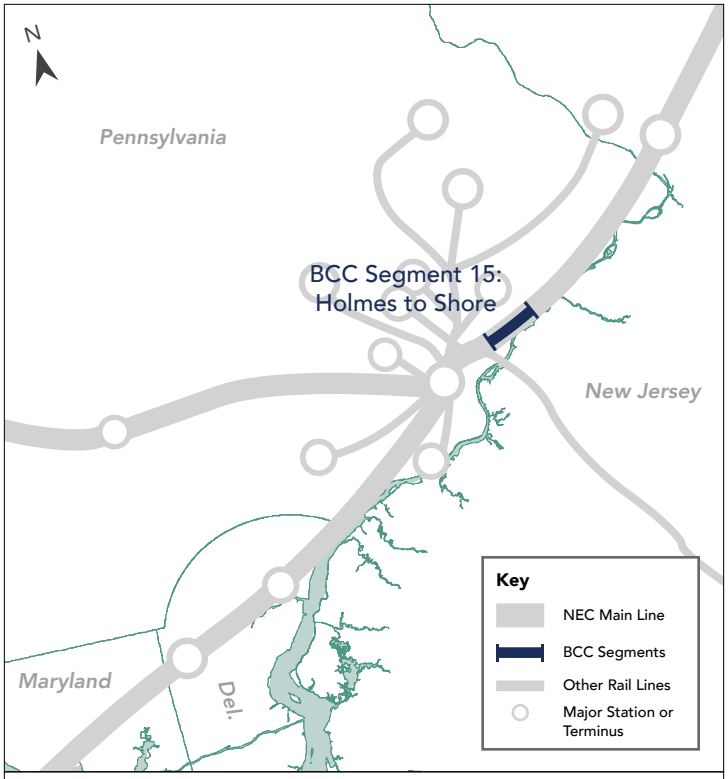
Segment 15: Holmes to Shore

FY19 Summary

Segment 15 covers nearly 5 miles from Holmes to Shore in Pennsylvania and is owned by Amtrak, with train operations from Amtrak and SEPTA.

Over $3 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 15 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$277,342
Other Programs/Projects	$3,144,593
Total in Segment 15	**$3,421,935**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$3,421,935
SEPTA BCC	$0
Total in Segment 15	**$3,421,935**

FY19 Capital Renewal Investments in Segment 15

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		**$0**
TOTAL SEGMENT 15 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$277,342
FY19 Locations / Planned Schedule / Units*		
Shore to Holmes Tks 1, 2 & 3. MP 82.0 - 77.0. — N/A — 5.50		N/A
Mill River to Shore Line Junction. MP 74.0 - 76.0. — N/A — 2.00		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.	$57,000,000	$0
FY19 Locations / Planned Schedule / Units		
Shore to Holmes Tk 1. MP 77.2 - 82.1. — 09/30/19 - 10/31/19 — 0		$0
For program details, see Appendix B. *Linear		
TOTAL SEGMENT 15 PRODUCTION PROGRAMS EXPENDITURE		**$277,342**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$153,605
CULV Amtrak NEC - Culvert Upgrades. C.EN.101698	$3,200,100	$1,066,700
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$245,638
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$504,016
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$601,619
TRN Amtrak NEC - Transmission Line Upgrades. C.EN.101693	$880,028	$146,671
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$426,345
TOTAL SEGMENT 15 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$3,144,593**

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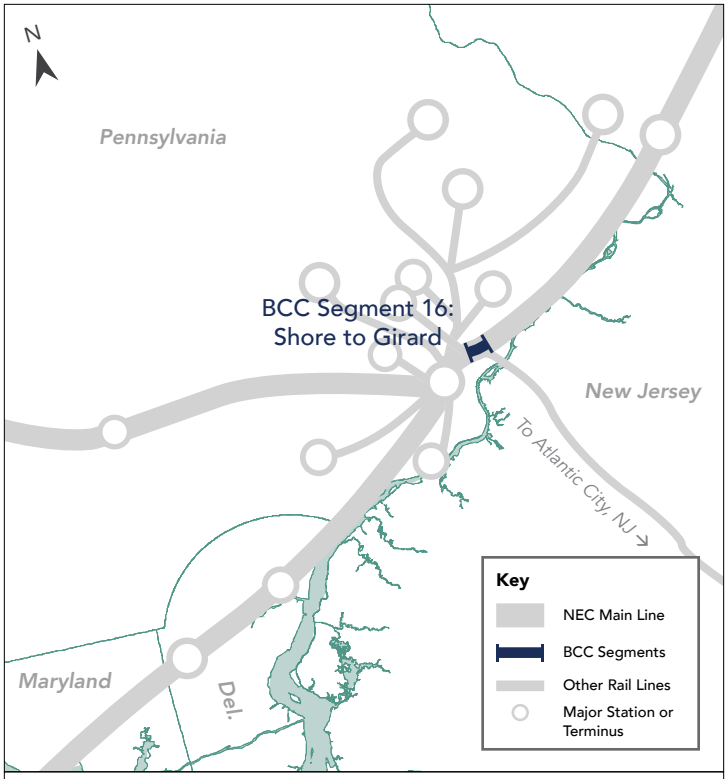
Segment 16: Shore to Girard

FY19 Summary

Segment 16 covers 5 miles from Shore to Girard in Pennsylvania and is owned by Amtrak, with train operations from Amtrak, SEPTA, and NJ TRANSIT.

Over $6 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 16 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$554,684
Other Programs/Projects	$5,559,949
Total in Segment 16	**$6,114,633**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$6,114,633
SEPTA BCC	$0
NJ TRANSIT BCC	$0
Total in Segment 16	**$6,114,633**

FY19 Capital Renewal Investments in Segment 16

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 16 PROJECT EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$554,684
FY19 Locations / Planned Schedule / Units*		
Lehigh to Clearfield Tk 3. MP 85.0 - 84.0. N/A 0.27		N/A
Clearfield to Shore Tk 3. MP 84.0 - 82.0. N/A 2.65		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
TOTAL SEGMENT 16 PRODUCTION PROGRAMS EXPENDITURE		**$554,684**

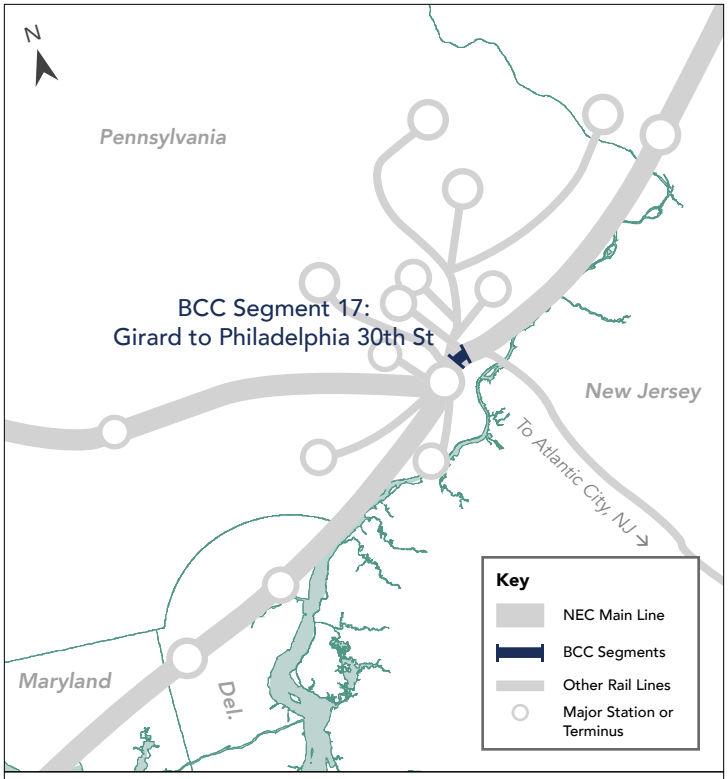
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGSG Amtrak NEC - Signal Bridge Upgrades. C.EN.101706	$2,666,750	$9,279
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$384,012
INT Amtrak NEC Mad North – Interlocking Upgrades. C.EN.100563	$1,280,040	$319,153
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$504,016
STA Mid Atlantic Division - Station Construction Upgrades. C.EN.101221	$5,333,500	$3,475,194
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$601,619
TOWR Mid Atlantic Division-Transportation Facility Upgrades. C.EN.101243	$426,680	$266,675
TOTAL SEGMENT 16 PRODUCTION PROGRAMS EXPENDITURE		**$5,559,949**

Segment 17: Girard to Philadelphia 30th St

FY19 Summary

Segment 17 covers 1 mile from Girard to Philadelphia 30th Street Station and is owned by Amtrak, with train operations from Amtrak, and NJ TRANSIT.

Over $27 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 17 Special Projects

Planned FY19 Special Projects Expenditure: $4,480,000

- 30th Street West Catenary Replacement. Page 180
- Philadelphia 30th Street Station District Plan Implementation. Page 138

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$16,213,840
Continuous Maintenance Production Programs	$3,521,760
Other Programs/Projects	$7,551,459
Total in Segment 17	**$27,287,059**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$14,486,659
Amtrak (Above BCC)	$12,800,400
SEPTA BCC	$0
NJ TRANSIT BCC	$0
Total in Segment 17	**$27,287,059**

FY19 Capital Renewal Investments in Segment 17

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
30th St Sta Façade Restoration STA 30TH STREET STATION. C.EN.100039. Scope for FY19 includes: North recessed masonry, north recessed window restoration for 1,000 windows, north facade masonry, northwest and northeast pavilions masonry, bay #1 and bay #82 windows above SEPTA track #1, and restoration of cast iron gable across all SEPTA tracks on the east side. **Note: The BCC-eligible portion of this planned expenditure is $3,200,100. The remaining $12,800,400 will be covered by Amtrak outside of the BCC Program.* FY19 Phases — Schedule North recessed façade wall — 01/01/19 - 05/30/19 North façade — 07/01/18 - 02/28/19 North recessed window restoration — 07/01/18 - 03/30/19 Façade related work on SEPTA platforms — 05/0/18 - 07/30/19 For project details, see Appendix A.	$106,704,727	$16,000,500
30th Street Station Roof Replacement Project. STA 30TH STREET STATION. C.EN.101772. In FY19, the following activities are planned: completion of 100% design for roof replacement, submission of bids for construction, coordination of phasing plan in conjunction with 30th St Station facade restoration phases and begin construction third quarter of FY19. FY19 Phases — Schedule 1. Complete 100% design — 10/1/18 - 3/31/19 2. Bids for construction — 4/1/19 - 6/30/19 3. NTP and mobilization — 7/1/19 - 7/3119 4. Construction start — 8/1/19 - 9/30/19 For project details, see Appendix A.	$8,857,292	$213,340
TOTAL SEGMENT 17 PROJECTS OVER $5M EXPENDITURE		**$16,213,840**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels. FY19 Locations — Planned Schedule — Units Girard interlocking. MP 87.7. — 10/5/18 - 10/14/19 — 1 For program details, see Appendix B.	$11,377,647	$1,921,710

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
NEC Total Track Replacement Program. C.EN.101774. The NEC Total Track Replacement Program is a continuous program in the Northeast Corridor that replaces the track infrastructure including the ties, rail and fastening system to maintain a state of good repair.			$1,600,050	$1,600,050
FY19 Locations	Planned Schedule	Units*		
30th Street Station Tk 10. MP N/A	01/07/19 - 02/28/19	2,100 CWR*/ 3,400 ties		$1,600,050
For program details, see Appendix B.		*Linear Feet		
TOTAL SEGMENT 17 PRODUCTION PROGRAMS EXPENDITURE				**$3,521,760**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$76,738
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$3,807
STA 30th Street Station - Elevator Replacement. C.EN.100627	$3,200,100	$3,200,100
STA 30th Street Station - Hvac Air Handlers Upgrades. C.EN.100837	$3,200,100	$3,200,100
STA 30th Street Station–Perimeter Electronic Locking System. C.EN.101793	$1,066,700	$1,066,700
SYS Track - Future Design. C.EN.100333	$366,470	$4,014
TOTAL SEGMENT 17 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$7,551,459**

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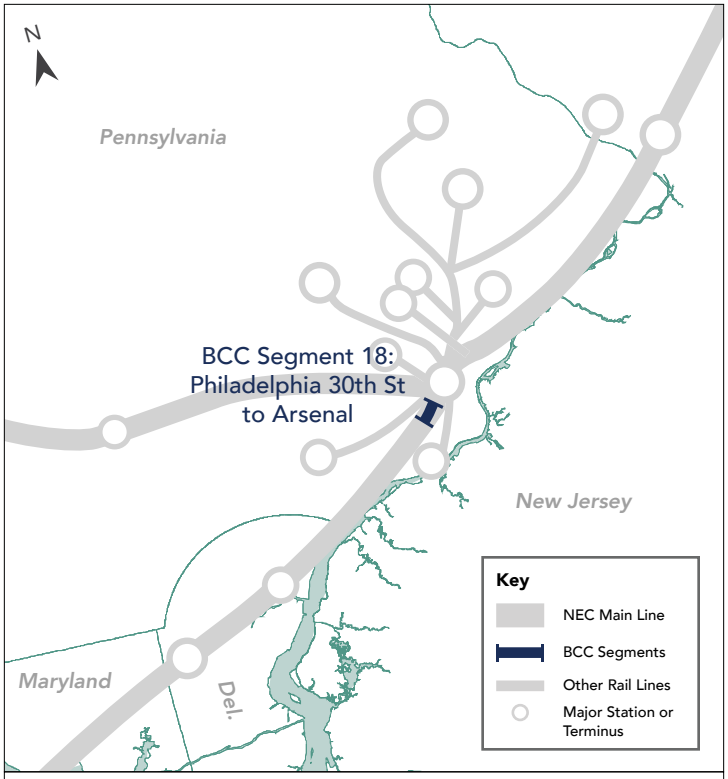
Segment 18: Philadelphia 30th St to Arsenal

AMTRAK

FY19 Summary

Segment 18 covers nearly 2 miles from Philadelphia 30th Street Station to Arsenal and is owned by Amtrak, with train operations from Amtrak only.

Over $3 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 18 Special Projects

Planned FY19 Special Projects Expenditure: $14,639,988

- Southwest Connection Improvement Program (formerly 30th Street to Phil Signals, Catenary and ROW Improvements). Page 184

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$3,723,731
Total in Segment 18	**$3,723,731**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$1,878,250
Amtrak (Above BCC)	$1,845,481
Total in Segment 18	**$3,723,731**

FY19 Capital Renewal Investments in Segment 18

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 18 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 18 PRODUCTION PROGRAMS EXPENDITURE		**$0**

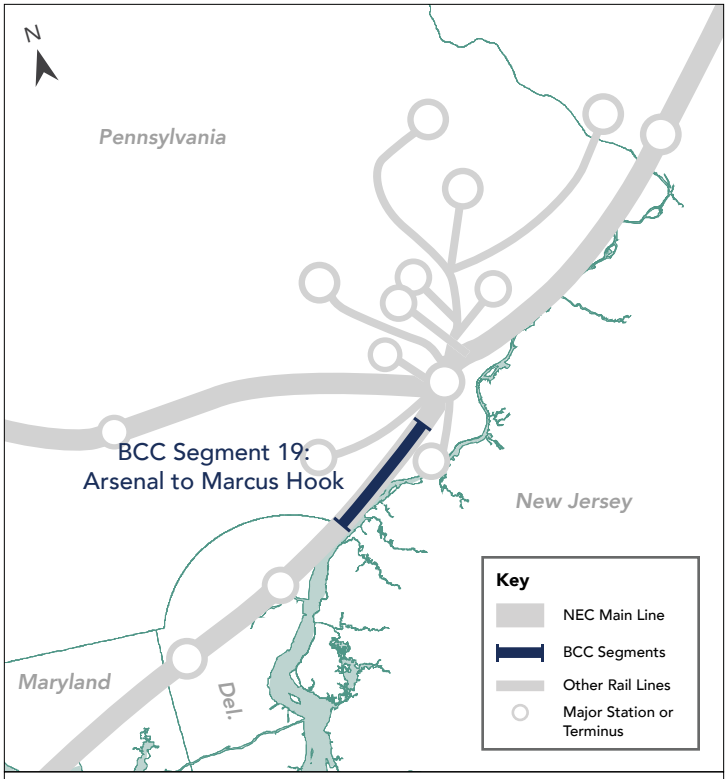
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGSG Amtrak NEC - Signal Bridge Upgrades. C.EN.101706	$2,666,750	$569,018
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$153,605
CAT Amtrak NEC - Catenary Upgrades. C.EN.101689	$2,666,750	$1,173,370
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$135,861
INTB Mid-Atlantic Division-Interlocking Lighting Upgrades. C.EN.100203	$373,345	$56,641
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$150,254
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$80,003
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$871,629
WALL Amtrak NEC - Retaining Wall Upgrades. C.EN.101707	$1,066,700	$533,350
TOTAL SEGMENT 18 PROGRAM EXPENDITURE		**$3,723,731**

Segment 19: Arsenal to Marcus Hook

FY19 Summary

Segment 19 covers 14 miles from Arsenal to Marcus Hook in Pennsylvania and is owned by Amtrak, with train operations from Amtrak and SEPTA.

Almost $12 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 19 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$1,664,052
Other Programs/Projects	$10,239,549
Total in Segment 19	**$11,903,601**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$10,239,549
SEPTA BCC	$1,664,052
Total in Segment 19	**$11,903,601**

FY19 Capital Renewal Investments in Segment 19

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 19 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$1,664,052
FY19 Locations / Planned Schedule / Units*		
Hook to Baldwin Tks 2 & 3. MP 16.0 - 11.0 — N/A — 12.20		N/A
Baldwin to Phil Tk 2. MP 11.0 - 3.0. — N/A — 18.78		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
TOTAL SEGMENT 19 PRODUCTION PROGRAMS EXPENDITURE		**$1,664,052**

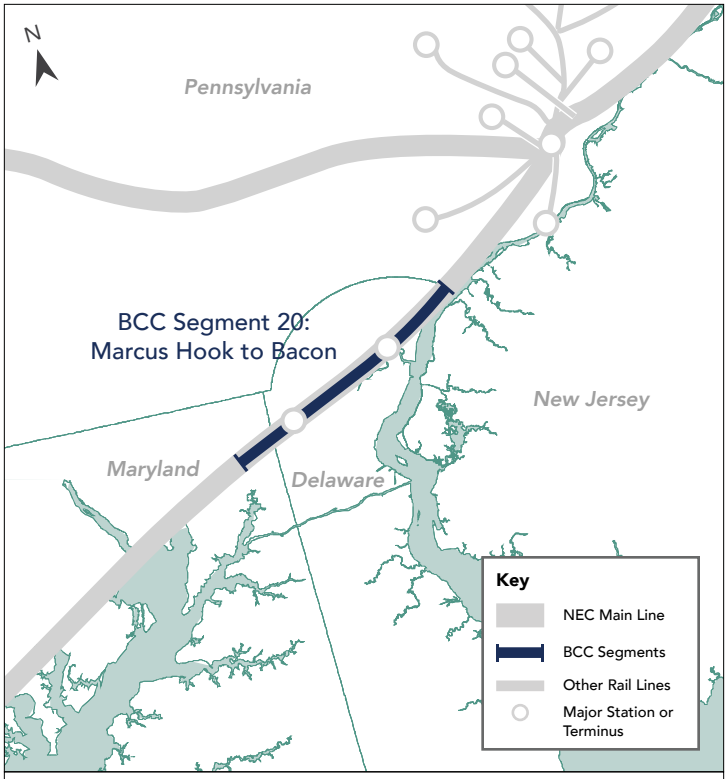
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGTI Amtrak NEC - Bridge Timber Replacement. C.EN.101696	$5,333,500	$3,200,100
BGTI Structures - Bridge Tie Design. C.EN.101110	$64,002	$5,334
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$384,012
CAT Amtrak NEC - Catenary Upgrades. C.EN.101689	$2,666,750	$106,670
INT Amtrak NEC Mad North – Interlocking Upgrades. C.EN.100563	$1,280,040	$320,010
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$12,153
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$185,047
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$432,014
SIGP Amtrak NEC - Signal Power Upgrades. C.EN.101694	$1,600,050	$106,670
STIP Amtrak NEC - Ride Quality Improvement Program. C.EN.101650	$3,200,100	$1,824,057
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$213,340
SYS Track - Future Design. C.EN.100333	$366,470	$5,728
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$3,208,634
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$235,781
TOTAL SEGMENT 19 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$10,239,549**

Segment 20: Marcus Hook to Bacon

FY19 Summary

Segment 20 covers nearly 34 miles from Marcus Hook in Pennsylvania to Bacon in Maryland and is owned by Amtrak, with train operations from Amtrak and SEPTA, under contract with DelDOT.

Over $57 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 20 Special Projects

Planned FY19 Special Projects Expenditure: $59,912,012

- Claymont Regional Transportation Center. Page 153
- Delaware Third Track Program. Page 154
- Newark (DE) Regional Transportation Center. Page 155

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$3,733,450
Continuous Maintenance Production Programs	$46,853,775
Other Programs/Projects	$7,265,813
Total in Segment 20	**$57,853,038**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$55,059,617
DelDOT BCC	$2,260,071
DelDOT (Above BCC)	$533,250
Total in Segment 20	**$57,853,038**

FY19 Capital Renewal Investments in Segment 20

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
Brandy to Ragan Section Improvements Project. STIP BRANDY TO RAGAN. C.EN.201126. Scope for FY19 includes the removal of Yard Interlocking (remove 21 crossover and replace 91 crossover); Track Layout Machine (TLM) to replace ties on track #1; Installation of track panels for new track #3 from Meco Drive (MP 29) to Yard Interlocking (MP 28.2); and Begin modifications to Norfolk Southern's Shellpot Branch. **Note: The BCC-eligible portion of this planned expenditure is $3,200,000. The remaining $533,250 will be covered by Delaware outside of the BCC Program.* FY19 Milestones — Schedule Yard I/L (remove 21 crossover) — 10/01/18 - 09/30/19 Yard I/L (replace 91 crossover) — 10/01/18 - 09/30/19 TLM to replace ties on track #1 — 10/01/18 - 09/30/19 Install new track #3 (MP 29-MP 28.2) — 10/01/18 - 09/30/19 Begin modifications to NS Shellpot Branch — 10/01/18 - 09/30/19 For project details, see Appendix A.	$64,570,407	$3,733,450
TOTAL SEGMENT 20 PROJECTS OVER $5M EXPENDITURE		**$3,733,450**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Rail Replacement Program - RAIL Amtrak NEC. C.EN.101661. The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System. FY19 Locations — Planned Schedule — Units* Ragan to Davis Tk 3. MP 30.0 - 38.2. — 01/07/19 - 02/28/19 — 86,400 For program details, see Appendix B. — *Linear ft	$10,133,650	$7,974,607
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS. FY19 Locations — Planned Schedule — Units* Bacon to Davis Tks 2 & 3. MP 38.0 - 50.0. — N/A — 15.64 Davis to Ragan Tks 2 & 3. MP 30.0 - 30.0. — N/A — 0.50 Holly to Hook Tks 2 & 3. MP 20.0 - 16.0. — N/A — 8.40 Ragan to Yard Tk 3. MP 29.0 - 28.0. — N/A — 1.59	$28,374,220	$3,328,104 N/A N/A N/A N/A

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
For program details, see Appendix B.	*Linear Miles per miles passed		$57,000,000	$30,291,144
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$20,454,155	$2,884,905
FY19 Locations	Planned Schedule	Units*		
AP LINE: B&P Tunnel Tk 2. MP N/A.	01/11/19 - 05/17/19	4,800		$2,884,905
For program details, see Appendix B.		*Ties		
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.			$60,801,900	$32,311,563
FY19 Locations	Planned Schedule	Units		
Davis to Shellpot Tk 1. MP 38.4 - 41.1.	04/08/19 - 05/30/19	24,288 ties / 97,152 CWR*		$14,427,697
Iron to Davis Tk A. MP 41.4 - 38.8.	07/08/19 - 08/08/19	10,824 ties / 43,296 CWR*		$8,283,891
Landilith to Holly Tk 2. MP 20.3 - 25.4.	08/12/19 - 09/26/19	13,200 ties / 52,800 CWR*		$9,599,976
For program details, see Appendix B.		*Linear		
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.			$11,377,647	$354,596
FY19 Locations	Planned Schedule	Units		
West Yard. MP 28.0.	9/22/19 - 9/30/19	1		$354,596
For program details, see Appendix B.				
TOTAL SEGMENT 20 PRODUCTION PROGRAMS EXPENDITURE				**$46,853,775**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGSG Amtrak NEC - Signal Bridge Upgrades. C.EN.101706	$2,666,750	$647,426
BGTI Structures - Bridge Tie Design. C.EN.101110	$64,002	$16,001
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$230,407
CAT Amtrak NEC - Catenary Upgrades. C.EN.101689	$2,666,750	$213,340
CULV Amtrak NEC - Culvert Upgrades. C.EN.101698	$3,200,100	$2,133,400
INT Davisville Interlocking - Upgrade To Microlok 2. C.EN.100727	$1,066,700	$1,066,700
POLE Amtrak NEC - Catenary POLE Upgrades. C.EN.101690	$1,600,050	$562,981
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$38,165
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$648,020
RAIL Amtrak NEC - Rail Grinding. C.EN.101794	$106,670	$53,335
SIGP Amtrak NEC - Signal Power Upgrades. C.EN.101694	$1,600,050	$160,005
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$341,344
SYS Structures Bridges/Tunnels/Walls - Future Design. C.EN.100477	$1,239,734	$123,693
SYS Track - Future Design. C.EN.100333	$366,470	$5,915
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$601,619
TRN Amtrak NEC - Transmission Line Upgrades. C.EN.101693	$880,028	$293,343
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$130,119
TOTAL SEGMENT 20 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$7,265,813**

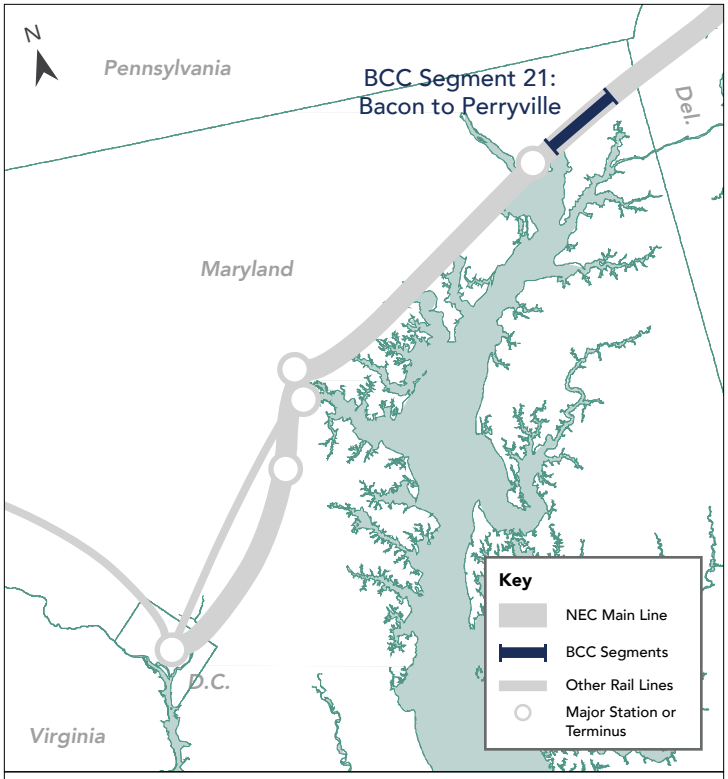
Segment 21: Bacon to Perryville

AMTRAK

FY19 Summary

Segment 21 covers 8 miles from Bacon to Perryville in Maryland and is owned by Amtrak, with train operations from Amtrak only.

Over $19 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 21 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$8,995,369
Other Programs/Projects	$10,066,570
Total in Segment 21	**$19,061,939**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$ 2,134,419
Amtrak (Above BCC)	$16,927,520
Total in Segment 21	**$19,061,939**

FY19 Capital Renewal Investments in Segment 21

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 21 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.	$60,801,900	$7,474,148
FY19 Locations / Planned Schedule / Units*		
Perry to Prince Tk 2. MP 57.3 - 59.9. / 06/03/19 - 07/03/19 / 5,808 ties/ 23,232 CWR*		$7,474,148
For program details, see Appendix B. *Linear		
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$28,374,220	$1,109,368
FY19 Locations / Planned Schedule / Units*		
Prince to Bacon Tks 2 & 3. MP 51.0 - 57.0. / N/A / 1.57		N/A
For program details, see Appendix B. *Linear Miles per miles passed		
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.	$11,377,647	$411,853
FY19 Locations / Planned Schedule / Units		
Prince interlocking. MP 57.0. / 11/2/18 - 12/2/18 / 1		$411,853
For program details, see Appendix B.		
TOTAL SEGMENT 21 PRODUCTION PROGRAMS EXPENDITURE		**$8,995,369**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGSG Amtrak NEC - Signal Bridge Upgrades. C.EN.101706	$2,666,750	$320,726
BGUG Amtrak NEC - Undergrade Bridge Upgrades. C.EN.101697	$4,266,800	$533,350
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$307,210
CAT Amtrak NEC - Catenary Upgrades. C.EN.101689	$2,666,750	$106,670
DRAN Amtrak NEC - Drainage-Roadbed Improvements. C.EN.101651	$8,693,605	$1,682,186
FEN Amtrak NEC - Fence Upgrades. C.EN.101711	$6,400,200	$2,655,832
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$63,461
INTB Mid-Atlantic Division-Interlocking Lighting Upgrades. C.EN.100203	$373,345	$156,153
POLE Amtrak NEC - Catenary POLE Upgrades. C.EN.101690	$1,600,050	$562,981
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$40,888
RAD Northeast Corridor - Radio Voter Upgrades. C.EN.100788	$320,010	$156,873
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$862,466
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$72,002
SIGP Amtrak NEC - Signal Power Upgrades. C.EN.101694	$1,600,050	$80,003
STA Mid Atlantic Division - Station Construction Upgrades. C.EN.101221	$5,333,500	$5,879
STIP Amtrak NEC - Ride Quality Improvement Program. C.EN.101650	$3,200,100	$960,030
SYS Structures Bridges/Tunnels/Walls - Future Design. C.EN.100477	$1,239,734	$717,362
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$100,270
TKAP Washington To Boston - Rail Lubicator Replacement. C.EN.100739	$533,350	$106,670
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$575,558
TOTAL SEGMENT 21 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$10,066,570**

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Segment 22: Perryville, MD to Washington, DC

FY19 Summary

Segment 22 covers 76 miles from Perryville, MD to Washington, DC and is owned by Amtrak, with train operations from Amtrak and MARC.

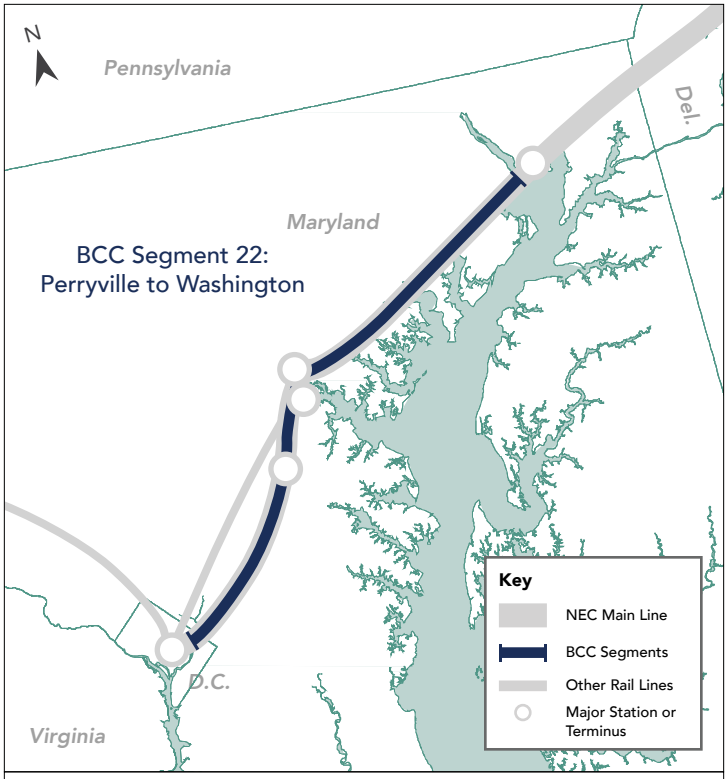
Over $92 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$5,333,500
Continuous Maintenance Production Programs	$64,696,984
Other Programs/Projects	$22,360,451
Total in Segment 22	**$92,390,935**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$77,690,476
Maryland DOT BCC	$14,700,459
Total in Segment 22	**$92,390,935**



Segment 22 Special Projects

Planned FY19 Special Projects Expenditure: $134,282,883

- Baltimore & Potomac Tunnel Replacement. Page 122
- Baltimore Penn Station Infrastructure Improvements. Page 127
- Baltimore Penn Station Master Plan. Page 128
- BWI Thurgood Marshall Airport Station Interim Improvements. Page 159
- Hanson Interlocking. Page 160
- MARC Storage Improvements - Martin Airport. Page 161
- Maryland Section Reliability Improvements. Page 129
- Next Generation High Speed Fleet Infrastructure: Ivy City/ Washington Terminal Yard Facility Improvements. Page 133
- Susquehanna River Bridge Replacement. Page 126
- VRE Midday Storage Facility. Page 186

FY19 Capital Renewal Investments in Segment 22

PROJECTS OVER $5M			Total Project Cost	FY19 Planned Expenditure
Perry Interlocking Renewal Project. INRL PERRY INTERLOCKING. C.EN.101285. In FY19 the #43 and #32 crossovers will be built and installed at Perry Interlocking (MP 59.5). This will be a collaborative work effort from the Track, Communication &Signals and the Electric Traction departments.			$5,333,500	$5,333,500
FY19 Milestones	Schedule			
Final Design	10/01/18 - 11/28/18			
Build #43 and #32 crossovers	1/11/19 - 3/1/19			
Install #43 and #32 crossovers	4/5/19 - 5/6/19			
For project details, see Appendix A.				
TOTAL SEGMENT 22 PROJECTS OVER $5M EXPENDITURE				**$5,333,500**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.			$60,801,900	$6,682,237
FY19 Locations	Planned Schedule	Units		
MP 83 to Gunpow Tk 1. MP 83.0 - 79.3.	03/04/19 - 04/04/19	8,448 ties/ 33,792 CWR*		$6,682,237
For program details, see Appendix B.		*Linear		
Track Surfacing. GEOM Amtrak NEC. C.EN.101649. The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.			$28,374,220	$6,976,218
FY19 Locations	Planned Schedule	Units*		
Carroll to Bowie Tks 1 & 3. MP 125.0 -125.0	N/A	0.38		N/A
Bowie to Grove Tks 1,2 & 3. MP 112.0 - 120.0.	N/A	19.23		N/A
Grove to Bridge Tks 1 & 3. MP 98.0 - 112.0.	N/A	18.32		N/A
Landover to Carroll Tks 2 & 3. MP 128.0 - 127.0	N/A	3.46		N/A

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Gunpow to Magnolia Tk 2. MP 78.0 - 77.0	N/A	1.73		N/A
Bush to Oak Tk 2 & 4. MP 71.0 - 63.0	N/A	12.17		N/A
Wood to Bush Tk 3. MP 75.0 -72.0	N/A	3.46		N/A
For program details, see Appendix B.		*Linear Miles per miles passed		N/A
System Undercutting Program - BLST Amtrak NEC. C.EN.100269. This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.			$66,459,743	$38,239,347
FY19 Locations	Planned Schedule	Units*		
Grove to MP104 Tk2. MP 112.4 - 104.0	08/27/18 - 11/16/18	9,908		$1,813,172
Hanson to Carroll Tk 1. MP 128.8 - 126.6	03/04/19 - 04/18/19	8,448		$2,027,583
Carroll to Bowie Tk 1. MP 126.4 - 120.7	03/11/19 - 05/30/19	30,096		$7,144,613
Bowie to Grove Tk 1. MP 120.3 - 112.7	04/15/18 - 07/11/19	40,128		$9,552,367
Grove to Bridge Tk 1. MP 112.2 - 98.2	05/20/19 - 10/17/19	79,120		$15,028,463
Gunpow to River Tk 3. MP 79.5 - 89.3	09/16/19 - 11/21/19	14,000		$2,673,150
For program details, see Appendix B.		*Linear ft		
Turnout Renewal TURN Amtrak NEC. C.EN.101660. The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.			$11,377,647	$3,635,214
FY19 Locations	Planned Schedule	Units		
Oak interlocking. MP 62.9.	3/8/19 - 3/17/19	2		$2,333,438
Magnolia interlocking. MP 76.9.	3/22/19 - 3/31/19	2		$3,635,214
For program details, see Appendix B.				
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$20,454,155	$9,163,967
FY19 Locations	Planned Schedule	Units*		
AP LINE: Biddle to Gunpow Tk A. MP 94.0 - 79.7	10/01/18 - 11/20/18	18,000		$9,163,967
For program details, see Appendix B.		*Ties		
TOTAL SEGMENT 22 PRODUCTION PROGRAMS EXPENDITURE				**$64,696,984**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
ABS Washington To New York - Upgrade Signal System To 562. C.EN.101753	$7,366,499	$3,683,249
BGMS Amtrak NEC - Movable Bridge Upgrades. C.EN.101705	$800,025	$80,003
BGUG Amtrak NEC - Undergrade Bridge Upgrades. C.EN.101697	$4,266,800	$533,350
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$1,305,641
CAT Amtrak NEC - Catenary Upgrades. C.EN.101689	$2,666,750	$960,030
DRAN Amtrak NEC - Drainage-Roadbed Improvements. C.EN.101651	$8,693,605	$2,656,083
INT Amtrak NEC - Switch Conversion Air To Electric. C.EN.101740	$160,005	$160,005
INT Amtrak NEC Mad South – Interlocking Upgrades. C.EN.100562	$800,025	$800,025
INTB Mid-Atlantic Division-Interlocking Lighting Upgrades. C.EN.100203	$373,345	$160,551
POLE Amtrak NEC - Catenary POLE Upgrades. C.EN.101690	$1,600,050	$474,088
RAD Amtrak NEC - Radio System Upgrades. C.EN.101732	$533,350	$522,683
RAIL Amtrak NEC - Insulated Joint Replacement Program. C.EN.101713	$3,520,110	$175,209
RAIL Amtrak NEC - Joint Elimination Program. C.EN.101655	$7,200,225	$1,618,717
RAIL Amtrak NEC - Rail Grinding. C.EN.101794	$106,670	$53,335
SIGP Amtrak NEC - Signal Power Upgrades. C.EN.101694	$1,600,050	$986,698
STA Mid Atlantic Division - Station Construction Upgrades. C.EN.101221	$5,333,500	$1,275,465
STA New Carrollton Md - Elevator/Escalators Replacement. C.EN.101773	$213,340	$213,340
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$2,880,090
SWHT Amtrak NEC - Electrict Traction Sw Htr Improvements. C.EN.101692	$2,080,065	$1,066,700
TIES Amtrak NEC - Concrete Tie Replacement Program. C.EN.101657	$9,525,631	$601,619
TRN Amtrak NEC - Transmission Line Upgrades. C.EN.101693	$880,028	$293,343
TUN Mid Atlantic Division - Tunnel Upgrades. C.EN.101244	$1,066,700	$1,066,700
TURN Amtrak NEC - Interlocking Steel Renewal Program. C.EN.101658	$7,271,520	$793,529
TOTAL SEGMENT 22 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$22,360,451**

Segment 23: Washington Union Station

FY19 Summary

Segment 23 covers Washington Union Station and is owned by Amtrak, with train operations from Amtrak, MARC, and VRE.

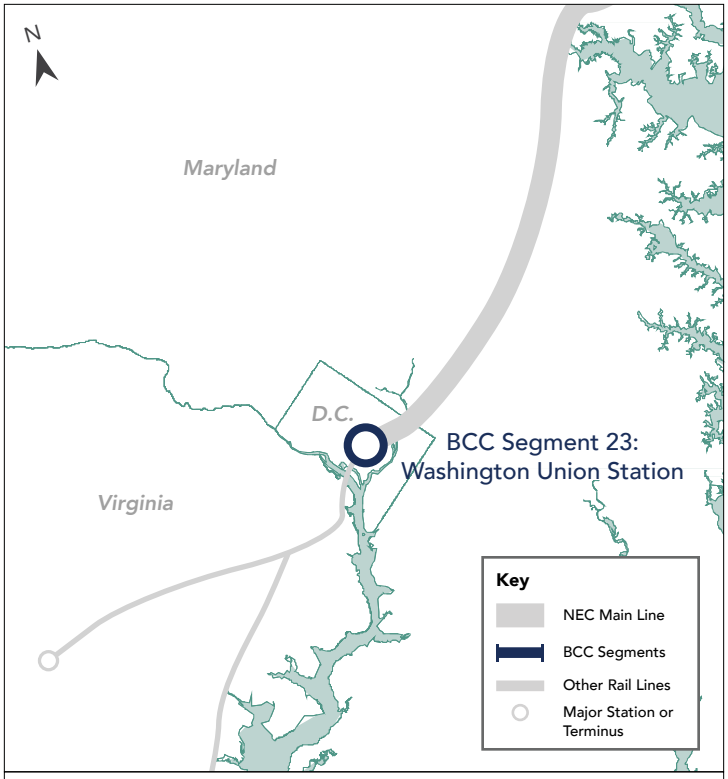
Over $2 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$2,636,829
Total in Segment 23	**$2,636,829**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$2,636,829
Maryland DOT BCC	$0
VRE BCC	$0
Total in Segment 23	**$2,636,829**



Segment 23 Special Projects

Planned FY19 Special Projects Expenditure: $42,300,000

- Washington Union Station Component: Claytor Concourse Modernization Program. Page 139
- Washington Union Station Component: Subbasement Program (formerly Track 22 Rehabilitation). Page 140
- Washington Union Station Long Term Station Expansion (formerly 2nd Century Plan). Page 141
- Washington Union Station Near Term Rail Program. Page 142

FY19 Capital Renewal Investments in Segment 23

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 23 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 23 PRODUCTION PROGRAMS EXPENDITURE		**$0**

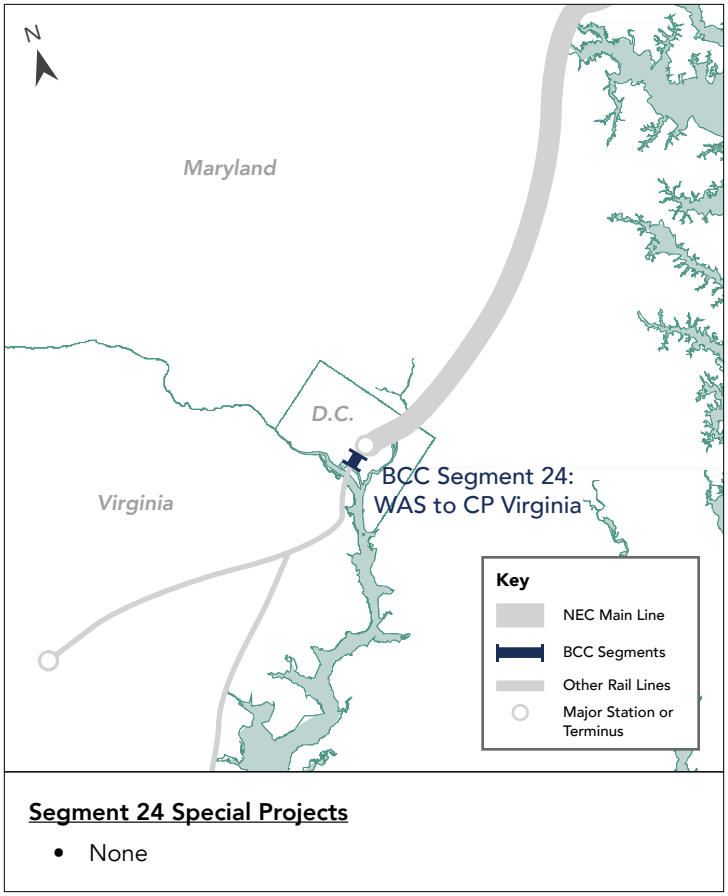
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
Catenary Upgrades - CAT Amtrak NEC. C.EN.101689.	$2,666,667	$106,667
Concrete Tie Replacement Program - TIES Amtrak NEC. C.EN.101657.	$9,525,333	$100,267
Crossing Upgrades - XINR Amtrak NEC. C.EN.101727.	$640,000	$640,000
Facility Electrical Upgrades - STA WASHINGTON TERM & IVY CITY. C.EN.100850.	$533,333	$533,333
Interlocking Steel Renewal Program - TURN Amtrak NEC. C.EN.101658.	$7,271,293	$356,213
Spot Undercutting Program - BLST Amtrak NEC. C.EN.101647.	$7,680,000	$153,600
Substation Upgrades - SUB Amtrak NEC. C.EN.101688.	$4,709,333	$213,333
Undergrade Bridge Upgrades - BGUG Amtrak NEC. C.EN.101697.	$4,266,667	$533,333
TOTAL SEGMENT 23 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$2,636,829**

Segment 24: WAS to CP Virginia

FY19 Summary

Segment 24 covers 1 mile from Washington Union Station to CP Virginia in DC and is owned by Amtrak, with train operations from Amtrak and VRE.

Over $700 thousand will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 24 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$0
Programs	$708,483
Total in Segment 24	**$708,483**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$198,467
VRE BCC	$510,016
Total in Segment 24	**$708,483**

FY19 Capital Renewal Investments in Segment 24

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 24 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 24 PRODUCTION PROGRAMS EXPENDITURE		**$0**

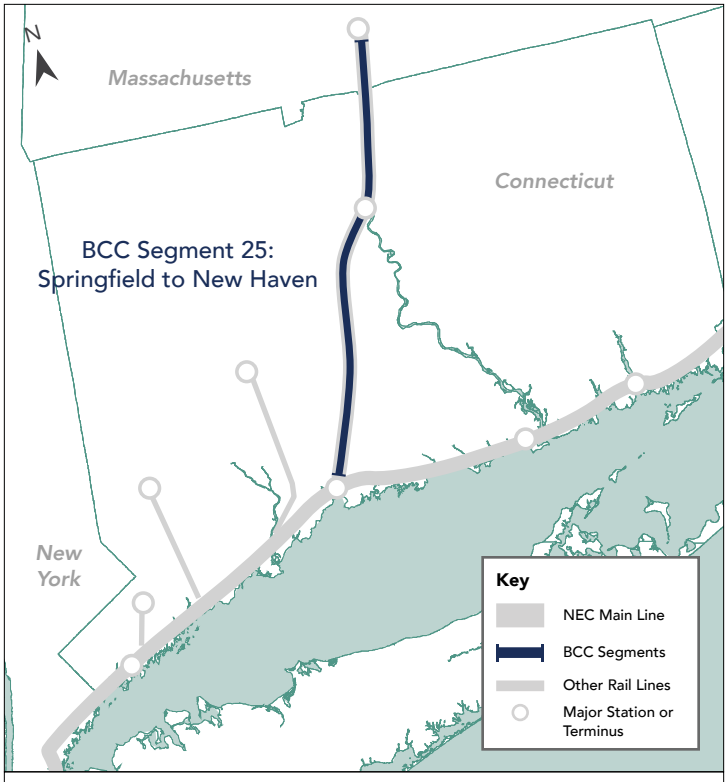
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$76,802
INT Amtrak NEC - C&S Interlocking Upgrades. C.EN.101701	$536,916	$5,256
RAD Washington 1St Street Tunnel - Radio Improvements. C.EN.101593	$373,345	$373,345
SYS Structures Bridges/Tunnels/Walls - Future Design. C.EN.100477	$1,239,734	$106,409
TRN Amtrak NEC - Transmission Line Upgrades. C.EN.101693	$880,028	$146,671
TOTAL SEGMENT 24 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$708,483**

Segment 25: Springfield to New Haven

FY19 Summary

Segment 25 covers 60 miles from Springfield, MA to New Haven, CT and is owned by Amtrak, with train operations from Amtrak and the CT*rail* Hartford Line Service.

Over $10 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 25 Special Projects

Planned FY19 Special Projects Expenditure: $8,000,000

- CTrail Hartford Line Commuter Station Improvements. Page 147
- CTrail Hartford Line Rail Program Phase 3B - 5. Page 148

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$176,729
Other Programs/Projects	$9,993,994
Total in Segment 25	**$10,170,723**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$4,053,951
CTDOT (Hartford Line)	$6,116,772
Total in Segment 25	**$10,170,723**

FY19 Capital Renewal Investments in Segment 25

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 25 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Tie Timber Replacement Program - TIES Amtrak NATIONAL. C.EN.101673. The National Tie/Timber Replacement Program replaces wood ties and timbers along the mainline, siding and yard tracks of the railroad. These ties are replaced due to diminished ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$5,704,533	$176,729
FY19 Locations / Planned Schedule / Units*		
AS LINE: Division Support Tie Install - Undetermined Units. MP 1.5 - 65.0. — TBD — Undetermined		$176,729
For program details, see Appendix B.		
*Division Support unit of ties undetermined since they are unplanned until closer to the time of work.		
TOTAL SEGMENT 25 PRODUCTION PROGRAMS EXPENDITURE		**$176,729**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGTI Ned Springfield Line - Bridge Timber Replacement. C.EN.101256	$533,350	$533,350
BLST Amtrak National - Spot Undercutting Program. C.EN.101667	$1,600,050	$16,001
DRAN Amtrak National - Drainage-Roadbed Improvements. C.EN.101669	$6,400,200	$4,027,740
INRL Spring Interlocking - Interlocking Renewal. C.EN.101777	$266,675	$266,675
PTC Springfield Line - PTC Installation Wayside. C.EN.101607	$4,480,140	$4,480,140
RAIL Amtrak National - Joint Elimination Program. C.EN.101672	$1,226,705	$134,938
SYS Track - Future Design. C.EN.100333	$366,470	$9,187
TURN Amtrak National - Interlocking Steel Renewal Program. C.EN.101674	$880,028	$130,752
XINR Amtrak National - Crossing Upgrades. C.EN.100764	$1,013,365	$395,212
TOTAL SEGMENT 25 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$9,993,994**

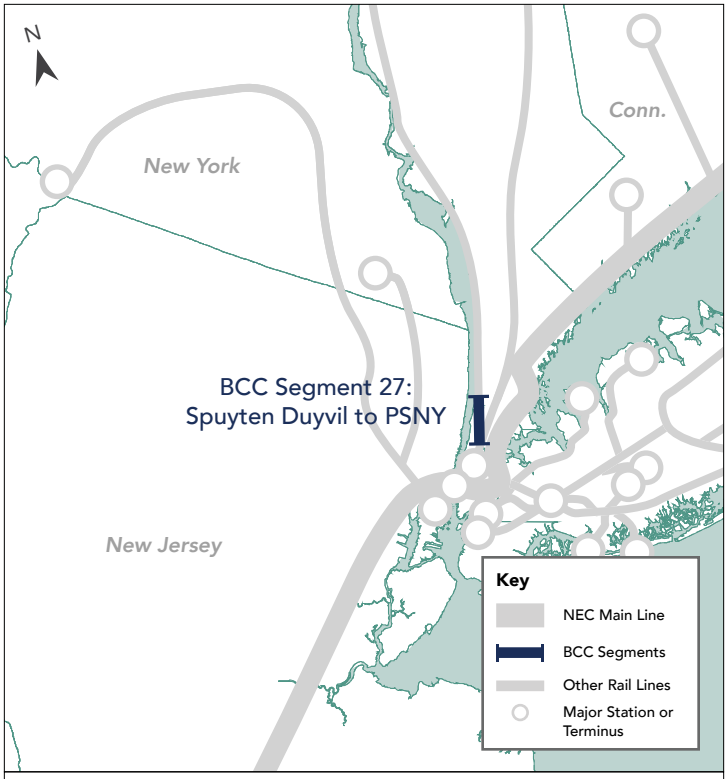
Segment 27: Spuyten Duyvil to PSNY

AMTRAK

FY19 Summary

Segment 27 covers nearly 11 miles from Spuyten Duyvil, NY to Penn Station New York and is owned by Amtrak, with train operations from Amtrak only.

Over $13 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019.



Segment 27 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$55,380
Other Programs/Projects	$13,438,947
Total in Segment 27	**$13,494,327**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$1,888,287
Amtrak (Above BCC)	$11,606,040
Total in Segment 27	**$13,494,327**

FY19 Capital Renewal Investments in Segment 27

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 27 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Tie Timber Replacement Program - TIES Amtrak NATIONAL. C.EN.101673. The National Tie/Timber Replacement Program replaces wood ties and timbers along the mainline, siding and yard tracks of the railroad. These ties are replaced due to diminished ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$5,704,533	$55,380
FY19 Locations / Planned Schedule / Units*		
AE LINE: Division Support Tie Install - Undetermined Units. MP 0.0 - 10.8. — TBD — Undetermined		$55,380
For program details, see Appendix B.		
*Division Support unit of ties undetermined since they are unplanned until closer to the time of work.		
TOTAL SEGMENT 27 PRODUCTION PROGRAMS EXPENDITURE		**$55,380**

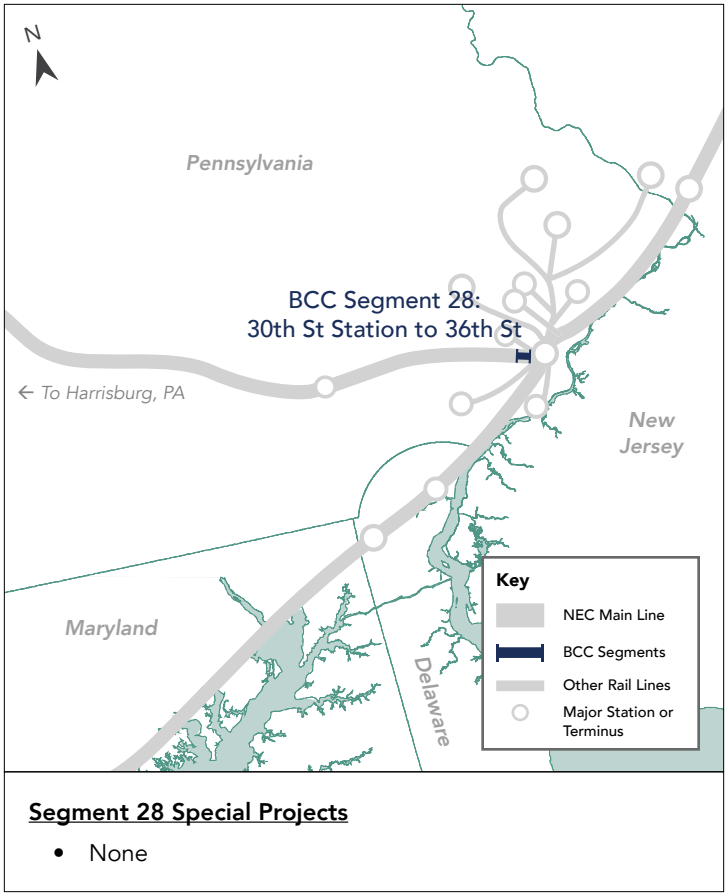
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGMS Amtrak National - Movable Bridge Upgrades. C.EN.101708	$261,342	$261,342
BGMS Ny010.25 Spuyten Duyvil - Fender System Upgrades. C.EN.101791	$5,333,500	$5,333,500
BGMS Ny010.25 Spuyten Duyvil-Sandy Damage Mech-Electrical. C.EN.101528	$533,350	$533,350
BLST Amtrak National - Spot Undercutting Program. C.EN.101667	$1,600,050	$144,005
MOFW Amtrak National - MOFW Base Upgrades. C.EN.101680	$677,355	$113,740
SYS Track - Future Design. C.EN.100333	$366,470	$8,275
TKRH Westside Connection Tunnel - Track Infrastructure Upgrs. C.EN.101646	$5,333,500	$5,333,500
TUN Empire Tunnel - Tunnel Improvements. C.EN.101625	$1,066,700	$1,066,700
TURN Amtrak National - Interlocking Steel Renewal Program. C.EN.101674	$880,028	$644,535
TOTAL SEGMENT 27 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$13,438,947**

Segment 28: 30th St Station to 36th St

FY19 Summary

Segment 28 covers 2 miles from Philadelphia 30th Street Station to 36th Street in Pennsylvania and is owned by Amtrak, with train operations from Amtrak and SEPTA.

No capital renewal investments will be made in this segment in federal fiscal year 2019.



Segment 28 Special Projects

- None

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$0
Continuous Maintenance Production Programs	$0
Other Programs/Projects	$0
Total in Segment 28	**$0**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$0
Total in Segment 28	**$0**

FY19 Capital Renewal Investments in Segment 28

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
None.		$0
TOTAL SEGMENT 28 PROJECTS OVER $5M EXPENDITURE		**$0**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 28 PRODUCTION PROGRAMS EXPENDITURE		**$0**

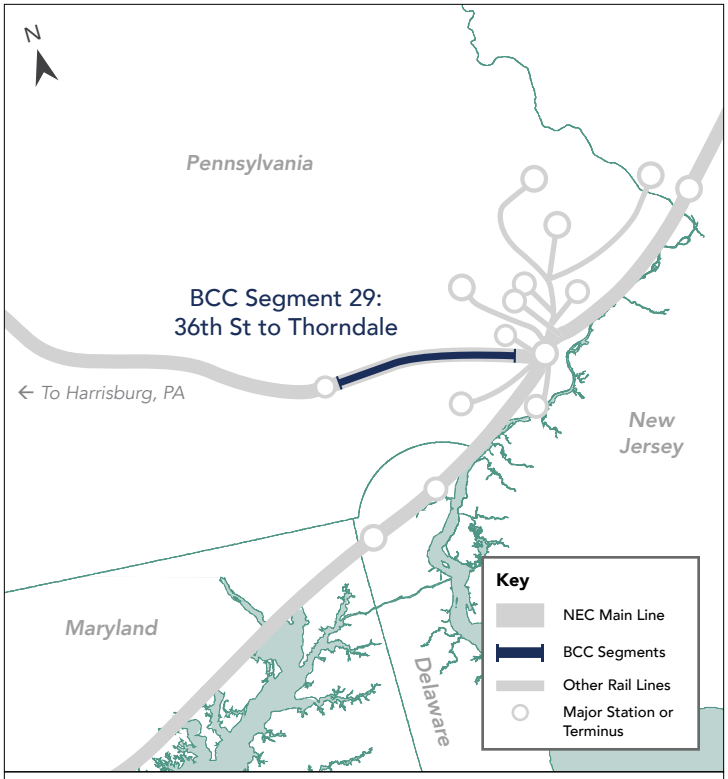
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
None.		$0
TOTAL SEGMENT 28 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$0**

Segment 29: 36th St to Thorndale

FY19 Summary

Segment 29 covers 33 miles from 36th Street to Thorndale, PA and is owned by Amtrak, with train operations from Amtrak and SEPTA.

Almost $24 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019



Segment 29 Special Projects

Planned FY19 Special Projects Expenditure: $30,354,214

- Ardmore Station ADA Improvements. Page 181
- Exton Station Improvements. Page 182
- Frazer Rail Shop and Yard Upgrade. Page 183
- Paoli Transportation Center - Phase 1 (ADA & Infrastructure). Page 137
- Villanova Station Improvements. Page 185

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$362,678
Continuous Maintenance Production Programs	$13,552,929
Other Programs/Projects	$10,036,384
Total in Segment 29	**$23,951,991**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$2,975,488
SEPTA BCC	$20,976,503
Total in Segment 29	**$23,951,991**

FY19 Capital Renewal Investments in Segment 29

PROJECTS OVER $5M			Total Project Cost	FY19 Planned Expenditure
Zoo to Paoli Catenary Structure Upgrade Project. POLE ZOO TO PAOLI. C.EN.201264. Scope for FY19 includes: Complete final design. Advertise procurement for construction.			$209,417,654	$362,678
FY19 Milestones	Schedule			
100% Design Completion	07/01/11 - 01/31/19			
Procurement	01/31/19 - 09/30/19			
Construction	10/01/19 - 01/31/25			
For project details, see Appendix A.				
TOTAL SEGMENT 29 PROJECTS OVER $5M EXPENDITURE				**$362,678**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Surfacing Program - GEOM Amtrak NATIONAL. C.EN.101668. The National Surfacing Program performs high speed surfacing on the tracks throughout the Harrisburg Line. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The National Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.			$3,733,450	$784,025
FY19 Locations	Planned Schedule	Units*		
Glen to Downs Tks 1 & 4. MP 25.0 - 31.0	N/A	16.22		N/A
Paoli to Frazer Tks 1 & 4. MP 20.0 - 23.0	N/A	8.36		N/A
Frazer to Glen Tks 1 & 4. MP 23.0 - 25.0	N/A	2.76		N/A
Valley to Overbrook Tk 1. MP 4.0 - 5.0	N/A	0.39		N/A
For program details, see Appendix B.		*Linear Miles per miles passed		
System Undercutting Program - BLST Amtrak NEC. C.EN.100269. This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.			$66,459,743	$420,066
FY19 Locations	Planned Schedule	Units*		
Paoli Station Tk 1 to East of Station. MP 19.9 - 19.9.	11/02/18 - 11/04/18	800		$152,751
Overbrook Station Tk 1. MP 5.9 - 5.8.	11/09/18 - 11/11/18	1,000		$3,635,214
Paoli Station Tk 4 to East of Station. MP 19.9 - 19.9.	11/16/18 - 11/18/18	400		$76,376
For program details, see Appendix B.		*Linear ft		

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Tie Timber Replacement Program - TIES Amtrak NATIONAL. C.EN.101673. The National Tie/Timber Replacement Program replaces wood ties and timbers along the mainline, siding and yard tracks of the railroad. These ties are replaced due to diminished ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$5,704,533	$3,467,018
FY19 Locations	Planned Schedule	Units*		
AH LINE: Paoli to Park Tk 1. MP 20.2 - 35.3.	03/18/19 - 07/18/19	7,805		$1,965,990
AH LINE: Park to Paoli Tk 4 . MP 20.2 - 35.3.	07/22/19 - 10/24/19	5,845		$1,501,028
For program details, see Appendix B.		*Ties		
Turnout Renewal Program - TURN Amtrak NATIONAL. C.EN.101675. The National Turnout Renewal Program replaces wayside and interlocking turnouts, removes the old ballast and track, helping to restore proper drainage. New track panels are also installed under this Program.			$10,634,256	$8,881,820
FY19 Locations	Planned Schedule	Units		
Thorn interlocking. MP 35.0.	3/22/19 - 5/2/19	2		$2,561,165
Downs interlocking. MP 32.1.	5/3/19 - 7/18/19	3		$2,807,674
Paoli interlocking. MP 19.9.	7/26/19 - 8/22/19	2		$1,591,679
Overbrook interlocking. MP 5.4.	08/23/19 - 10/11/19	2		$2,086,967
TOTAL SEGMENT 29 PRODUCTION PROGRAMS EXPENDITURE				**$13,552,929**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
ABS Harrisburg Ln Park To Zoo - Upgrade Signal System To 562. C.EN.101770	$4,077,038	$4,077,038
BGUG Amtrak National - Undergrade Bridge Upgrades. C.EN.101678	$1,066,700	$266,675
BLST Amtrak National - Spot Undercutting Program. C.EN.101667	$1,600,050	$1,440,045
CAT Amtrak National - Catenary Hardware Renewal. C.EN.101663	$266,675	$266,675
FAST Amtrak National - Concrete Tie Fastener Hardware. C.EN.101719	$53,335	$53,335
MOFW Amtrak National - MOFW Base Upgrades. C.EN.101680	$677,355	$113,739
NET Amtrak National - C&S Network Upgrades. C.EN.101766	$586,685	$106,670
POLE Amtrak National - Catenary POLE Upgrades. C.EN.101686	$106,670	$106,670
RAIL Amtrak National - Insulated Joint Replacement Program. C.EN.101722	$549,351	$106,670
RAIL Amtrak National - Joint Elimination Program. C.EN.101672	$1,226,705	$846,426
STA Harrisburg Line Stations - Station Improvements. C.EN.100578	$2,133,400	$88,551
SUB Amtrak National - Substation Upgrades. C.EN.101662	$4,426,805	$1,897,202
TEL Harrisurg Line - Fiber Optic System Upgrades. C.EN.101752	$1,333,375	$266,675
TOWR Mid Atlantic Division-Transportation Facility Upgrades. C.EN.101243	$426,680	$80,003
TRN Amtrak National - Transmission Line Upgrades. C.EN.101666	$426,680	$213,340
WALL Amtrak National - Retaining Wall Upgrades. C.EN.101709	$533,350	$106,670
TOTAL SEGMENT 29 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$10,036,384**

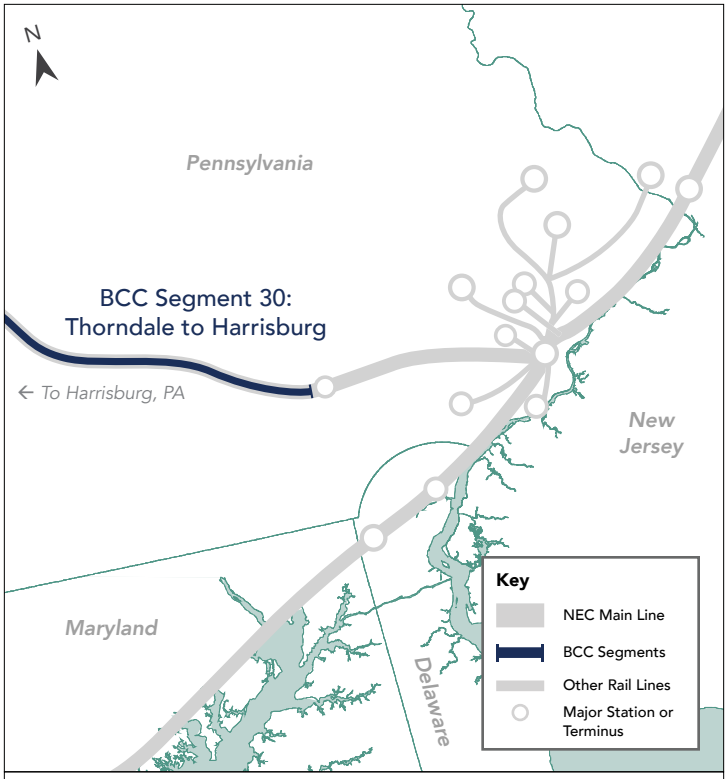
Segment 30: Thorndale to Harrisburg

AMTRAK

FY19 Summary

Segment 30 covers nearly 70 miles from Thorndale, PA to Harrisburg, PA and is owned by Amtrak, with train operations from Amtrak only.

Over $18 million will be expended on capital renewal of basic infrastructure in this segment in federal fiscal year 2019



Segment 30 Special Projects

Planned FY19 Special Projects Expenditure: N/A.

- Harrisburg Line Station Improvements. Page 177

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$1,920,060
Continuous Maintenance Production Programs	$6,150,392
Programs	$17,477,636
Total in Segment 30	**$25,548,088**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$3,786,785
Amtrak (Above BCC)	$21,761,303
Total in Segment 30	**$25,548,088**

FY19 Capital Renewal Investments in Segment 30

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
Conestoga to Royalton Transmission Line Replacement Project. TRN CONESTOGA TO ROYALTON 11 LINE. C.EN.101785. In FY19 design will be begin and the procurement process will be initiated after the design is complete in FY20.	$50,265,025	$1,920,060
FY19 Phases — Schedule		
Preliminary Design (30%) — 02/13/19 - 09/09/19		
Environmental — 12/07/18 - 01/27/20		
60% Design — 07/11/19 - 12/02/19		
90% Design — 10/24/19 -02/03/20		
For project details, see Appendix A.		
TOTAL SEGMENT 30 PROJECTS OVER $5M EXPENDITURE		**$1,920,060**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Surfacing Program - GEOM Amtrak NATIONAL. C.EN.101668. The National Surfacing Program performs high speed surfacing on the tracks throughout the Harrisburg Line. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The National Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.	$3,733,450	$2,912,091
FY19 Locations — Planned Schedule — Units*		
Caln to Park Tks 1 & 4. MP 36.0 - 46.0. — N/A — 23.56		N/A
Park to Leaman Tks 1 & 4. MP 46.0 - 56.0. — N/A — 25.96		N/A
Leaman to Holland Tks 1 & 4. MP 57.0 - 66.0. — N/A — 22.46		N/A
Rheems to Roy Tk 2. MP 83.0 - 94.0. — N/A — 13.28		N/A
Roy to State Tks 1 & 2. MP 94.0 - 103.0. — N/A — 22.28		N/A
Cork to Roy Tk 1. MP 68.0 - 94.0. — N/A — 32.49		N/A
For program details, see Appendix B. *Linear Miles per miles passed		

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS			FY19 Program Expenditure	FY19 Segment Expenditure
Tie Timber Replacement Program - TIES Amtrak NATIONAL. C.EN.101673. The National Tie/Timber Replacement Program replaces wood ties and timbers along the mainline, siding and yard tracks of the railroad. These ties are replaced due to diminished ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.			$5,704,533	$1,485,865
FY19 Locations	Planned Schedule	Units*		
AH LINE: Paoli to Park Tk 1. MP 35.4 - 45.3.	03/18/19 - 07/18/19	3,345		$842,567
AH LINE: Park to Paoli Tk 4. MP 35.4 - 45.3.	07/22/19 - 10/24/19	2,505		$643,298
For program details, see Appendix B.		*Ties		
Turnout Renewal Program - TURN Amtrak NATIONAL. C.EN.101675. The National Turnout Renewal Program replaces wayside and interlocking turnouts, removes the old ballast and track, helping to restore proper drainage. New track panels are also installed under this Program.			$10,634,256	$1,752,436
FY19 Locations	Planned Schedule	Units		
Caln interlocking. MP 36.6.	3/8/19 - 3/21/19	1		$1,291,797
For program details, see Appendix B.		*Ties		
TOTAL SEGMENT 30 PRODUCTION PROGRAMS EXPENDITURE				**$6,150,392**

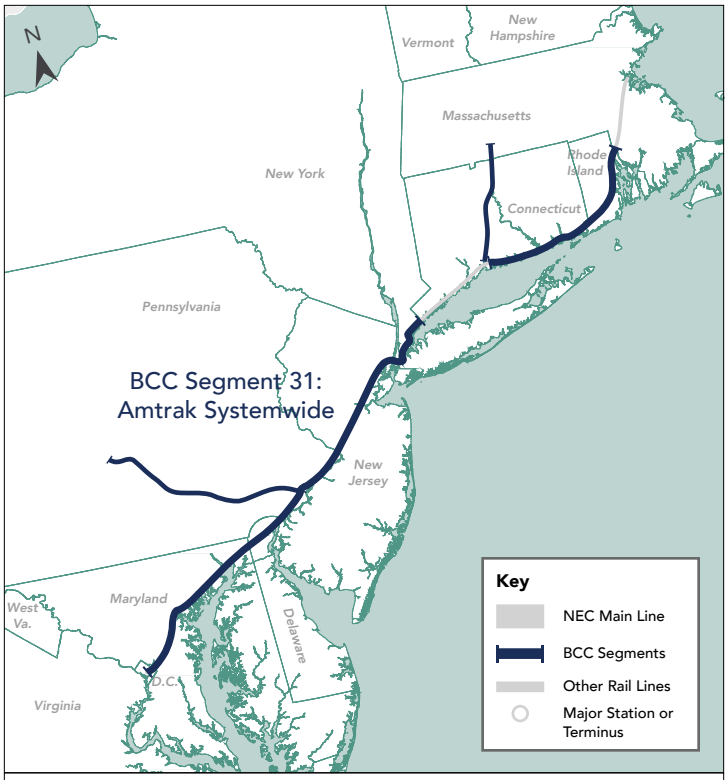
OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
BGSG Amtrak National - Signal Bridge Upgrades. C.EN.101712	$533,350	$533,350
BGUG Amtrak National - Undergrade Bridge Upgrades. C.EN.101678	$1,066,700	$800,025
CULV Amtrak National - Culvert Upgrades. C.EN.101679	$320,010	$320,010
DRAN Amtrak National - Drainage-Roadbed Improvements. C.EN.101669	$6,400,200	$2,372,460
FEN Amtrak National - Fence Upgrades. C.EN.101710	$320,010	$320,010
GEOM Amtrak System - Surfacing Program Development. C.EN.100750	$394,679	$394,679
MOFW Amtrak National - MOFW Base Upgrades. C.EN.101680	$677,355	$449,875
NET Amtrak National - C&S Network Upgrades. C.EN.101766	$586,685	$480,015
NET C&S System - Network Upgrades. C.EN.101354	$266,675	$266,675
PTC Amtrak National - PTC Split-Point Derail Program. C.EN.101758	$480,015	$480,015
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$50,951
RAIL Amtrak National - Insulated Joint Replacement Program. C.EN.101722	$549,351	$442,681
RAIL Amtrak National - Joint Elimination Program. C.EN.101672	$1,226,705	$233,074
RAIL Amtrak National - Rail Replacement Program. C.EN.101720	$2,133,400	$2,133,400
SAFE Employee Arc Flash Protection. C.EN.100371	$853,360	$661,097
SIGP Amtrak National - Signal Power Upgrades. C.EN.101665	$160,005	$160,005
STA Harrisburg Line Stations - Station Improvements. C.EN.100578	$2,133,400	$2,044,849
STA Mid Atlantic Division - Station Construction Upgrades. C.EN.101221	$5,333,500	$377,984
SUB Amtrak National - Substation Upgrades. C.EN.101662	$4,426,805	$2,529,603
SYS Track - Future Design. C.EN.100333	$366,470	$38,866
TEL Harrisurg Line - Fiber Optic System Upgrades. C.EN.101752	$1,333,375	$1,066,700
TEL Mid-Atlantic Division - Comm Shelter Alarm System Upgrs. C.EN.101426	$106,670	$101,337
TOWR Mid Atlantic Division-Transportation Facility Upgrades. C.EN.101243	$426,680	$80,003
TRN Amtrak National - Transmission Line Upgrades. C.EN.101666	$426,680	$213,340
TURN Amtrak National - Interlocking Steel Renewal Program. C.EN.101674	$880,028	$104,740
WALL Amtrak National - Retaining Wall Upgrades. C.EN.101709	$533,350	$426,680
XINR Amtrak National - Crossing Upgrades. C.EN.100764	$1,013,365	$395,212
TOTAL SEGMENT 30 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$18,656,712**

Segment 31: Amtrak Systemwide

FY19 Summary

Segment 31 covers Amtrak systemwide projects from Washington, DC to the Massachusetts/ Rhode Island state line and the connecting corridors.

Over $61 million in capital renewal investments will be made in this segment in federal fiscal year 2019.



Segment 31 Special Projects

Planned FY19 Special Projects Expenditure: $30,394,455

- Next Generation High Speed Fleet Infrastructure: Ride Quality Investment. Page 134
- Next Generation High Speed Fleet Infrastructure: Safety Mitigation. Page 135

Planned Capital Renewal Expenditure

Type	Amount
Projects over $5M	$19,997,746
Continuous Maintenance Production Programs	$2,697,443
Other Programs/Projects	$39,052,752
Total in Segment 31	**$61,747,941**

Agency Capital Renewal Contribution

Agency	Amount
Amtrak BCC	$0
Amtrak (Above BCC)	$61,747,941
Total in Segment 31	**$61,747,941**

FY19 Capital Renewal Investments in Segment 31

PROJECTS OVER $5M	Total Project Cost	FY19 Planned Expenditure
Safe Harbor Frequency Converter Replacement Project. FREQ SAFE HARBOR. C.EN.100347. In FY19 the plan is the continuation of work to complete water wheel #1 rehabilitation which include the following activities; Generator restack and rewind the existing stator with new coils, test the rotor poles and fully inspect the stator frame and rotor structure. Repair the intake gate sealing surfaces to allow for future dewatered maintenance. Rehab the intake B powered gate. Replace the screw hoist system with modern hydraulic system. In the turbine area, replace the scroll case drains and Kaplan nose cone drain valve assembly to allow for proper dewatering during maintenance of the hydro turbines and repair the deflector cone drain pipe bracket. In the Operating Pit System replace and refurbish the air, water and coiling systems and pipes to allow for proper coolant flow. Perform Blade Cavitation repair. Perform Kaplan Trunion Seal repair by replaing the Kaplan Trunion seals on each of the 5 blades per Kaplan unit. In the Metering/Electrical Systems replace the original metering and relay protection with new digital metering and relays. Replace the selector and safety switches for pump systems. In the Power & Control Cables provide new unit power and CT/PT control cable cables from the power house to the PPL/PJM Conestoga substation to remove existing failing cables which also contain asbestos and PCB's. Also instal new output circuit breaker on unit #1. These activities that have carried into FY19 and will continue in this fiscal year will help to extend the life of these items for the next 10 years. FY19 Phases — Schedule Complete Construction of Water Wheel #1 — 11/13/15 - 02/28/19 Andritz Rewind — 06/18/18 - 02/15/19 Tekrins Power & Control Cables — 07/23/18 - 11/13/18 Eaton Breakers — 07/02/18 - 2/5/19 ABB Excitation — 10/1/18 - 10/1/18 For project details, see Appendix A.	$30,994,404	$6,374,301
NEC CETC Consolidation Project. CETC CONTROL CENTER. C.EN.100119. In FY19 this Project will accomplish the completion of release of v57.0 in Boston (NED) on October 13, 2018 and in CNOC (SED) on October 20, 2018. ; and negotiate de-scoping with vendor (ARINC) for final payment. Software testing for Boston, testing and Commissioning for Wilmington, DE and Philadelphia, PA, the cutover of servers in the New England Division and On-Site training. FY19 Phases — Schedule Testing and Install of SW and COTS — 12/03/18 - 12/21/18 Software Testing for Boston — 01/02/19 - 01/02/19 Testing and Install for Wilmington & Philadelphia — 01/02/19 - 01/22/19 Cutover of servers in New England Division — 1/30/19 - 3/1/19 On-site Training — 3/29/19 - 4/2/19 For project details, see Appendix A.	$71,766,216	$5,546,840

PROJECTS OVER $5M		Total Project Cost	FY19 Planned Expenditure
Sunnyside Yard Frequency Converter Upgrade Project. FREQ SUNNYSIDE YARD. C.EN.101239. Scope for FY19 includes the solicitation, award and execution of site survey and design development of 15% conceptual design.		$66,354,356	$1,330,524
FY19 Phases	Schedule		
Issue NTP - ROW/Utilities	10/01/18 - 01/02/19		
Project Definition Report	01/02/19 - 04/30/19		
Conceptual Design	05/01/19 - 08/31/19		
Issue NTP - Final Design	05/31/19 - 08/01/19		
Design Development Submission (15%)	09/01/19 - 09/30/19		
Survey Work	10/01/18 - 11/30/18		
For project details, see Appendix A.			
Supervisory Control Data Acquisition (SCADA) Replacement Project. C.EN.101779. FY19 Scope: Finalize scope for the project, procure and issue NTP to Vendor for design/Installation of system and mobilize vendor.		$7,607,515	$533,350
FY19 Phases	Schedule		
Finalize Scope	10/01/18 - 11/16/18		
RFP (Procurement)	11/19/18 - 03/29/19		
NTP (Vendor)	03/29/19 - 03/29/19		
Mobilization	04/01/19 - 05/31/19		
For project details, see Appendix A.			
Washington to Boston ARINC to AMTEC Software Upgrade Project. CETC WASHINGTON TO BOSTON. C.EN.101767. FY19 scope includes completion of installation and testing of all software and hardware on the MAD-Harrisburg line and MAD-Mid-Atlantic Divisions. The project anticipates installation and testing on the NED-Springfield Line in FY19. The remaining work that is needed NED-Mainline will be start and complete in Early FY20.		$6,593,463	$6,212,732
FY19 Phases	Schedule		
MAD-Harrisburg line Phase 1	10/01/18 - 02/28/19		
MAD- Mid-Atlantic Phase 2	01/01/19 - 05/20/19		
NED-Springfield line Phase 3	06/01/19 - 10/01/19		
For project details, see Appendix A.			
TOTAL SEGMENT 31 PROJECTS OVER $5M EXPENDITURE			**$19,997,746**

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Rail Replacement. RAIL Amtrak NEC. C.EN.101661. The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System.	$10,133,650	$78,978
FY19 Details		
Project Administration		$78,978
For program details, see Appendix B.		
System Undercutting Program - BLST Amtrak NEC. C.EN.100269. This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.	$66,459,743	$550,576
FY19 Details		
Final Design		$189,380
Project Administration		$361,196
For program details, see Appendix B.		
Tie Timber Replacement Program - TIES Amtrak NATIONAL. C.EN.101673. The National Tie/Timber Replacement Program replaces wood ties and timbers along the mainline, siding and yard tracks of the railroad. These ties are replaced due to diminished ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$5,704,533	$519,542
FY19 Details		
Project Administration		$213,340
Contingency		$306,202
For program details, see Appendix B.		
Tie-timber Replacement Program - TIES Amtrak NEC. C.EN.101656. The NEC Tie/ Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.	$20,454,155	$106,670
FY19 Details		
Project Administration		$106,670
For program details, see Appendix B.		
TLS Concrete Tie Replacement. TLS Amtrak NEC - C.EN.101652. The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.	$60,801,900	$1,146,703
FY19 Details		
Final Design		$240,008
Construction Management		$480,015

CONTINUOUS MAINTENANCE PRODUCTION PROGRAMS	FY19 Program Expenditure	FY19 Segment Expenditure
Project Management For program details, see Appendix B.		$426,680
Turnout Renewal Program - TURN Amtrak NATIONAL. C.EN.101675. The National Turnout Renewal Program replaces wayside and interlocking turnouts, removes the old ballast and track, helping to restore proper drainage. New track panels are also installed under this Program.	$11,377,647	$294,975
FY19 Details		
Preliminary Engineering		$194,944
Project Administration		$100,031
For program details, see Appendix B.		
TOTAL SEGMENT 31 PRODUCTION PROGRAMS EXPENDITURE		**$2,697,443**

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
For NEC-wide scopes, see Appendix C.		
ACSE Amtrak Owned-Positive Train Control (PTC) Installation. C.EN.201034	$8,646,133	$8,646,133
APP Engineering Asset Management System. C.EN.100123	$4,266,800	$4,266,800
BGMS Structures - Movable Bridge Component Design. C.EN.100422	$119,930	$68,490
BLST Amtrak NEC - Spot Undercutting Program. C.EN.101647	$7,680,240	$76,802
CABF Was To New York-Install Redundant Comm Cbl. C.EN.100846	$1,600,050	$1,600,050
CAT Amtrak Electrified Territory-Osha Fall Protection Study. C.EN.101611	$789,358	$789,358
CAT Electric Traction Training Facility - Upgrades. C.EN.100618	$186,673	$186,673
CETC Amtk NEC-Technology Renewal Program. C.EN.101726	$2,072,065	$2,072,065
CETC Amtrak System-MOFW Enhanced Employee Protection System. C.EN.101714	$224,007	$224,007
CETC Philadelphia Pa - 8Th Floor Fail-Safe CETC Operations. C.EN.101769	$2,026,730	$2,026,730
DRAN Amtrak NEC - Drainage-Roadbed Improvements. C.EN.101651	$8,693,605	$88,536
FREQ Amtrak NEC - Freqency Converter Upgrades. C.EN.101691	$4,058,794	$4,058,794
INT Amtrak NEC Mad North – Interlocking Upgrades. C.EN.100563	$1,280,040	$320,867
NET NEC - It And Police Video Bandwidth Augmentation. C.EN.101417	$1,600,050	$1,600,050
RAD Amtrak NEC - Radio System Upgrades. C.EN.101732	$533,350	$10,667
RAD Amtrak System-Radio Site Backup And Emergency Pwr Upgrs. C.EN.101415	$156,977	$8,413
RAIL Amtrak National - Joint Elimination Program. C.EN.101672	$1,226,705	$12,267
SAFE Electric Traction Employee Arc Flash Protection. C.EN.101517	$266,675	$266,675
SAFE Employee Arc Flash Protection. C.EN.100371	$853,360	$192,263
SIGP Amtrak NEC - Signal Power Upgrades. C.EN.101694	$1,600,050	$106,670
SUB Amtrak NEC - Substation Upgrades. C.EN.101688	$4,709,481	$208,007

OTHER PROGRAMS/PROJECTS	FY19 Program Expenditure	FY19 Segment Expenditure
SYS C&S Lancaster Shop Equipment Purchase/Upgrades. C.EN.100478	$213,340	$213,340
SYS Electric Traction Design Review. C.EN.100331	$469,348	$469,348
SYS Engineering Capital Program - Project Management. C.EN.100418	$6,933,550	$6,933,550
SYS Structures Bridges/Tunnels/Walls - Future Design. C.EN.100477	$1,239,734	$182,382
SYS Track - Future Design. C.EN.100333	$366,470	$35,413
TEL Amtrak System - Operations Voice Recording SYS Upgrs. C.EN.101420	$320,010	$320,010
TEL Mid-Atlantic Division - Comm Shelter Alarm System Upgrs. C.EN.101426	$106,670	$5,334
TEL Mid-Atlantic Division - Replace Comm Equipment Houses. C.EN.101359	$106,670	$106,670
TEL New England Division - Fiber Optic System Upgrades. C.EN.101748	$3,200,100	$3,200,100
TIES Concrete Tie - Redesign Of Concrete Ties. C.EN.101178	$533,350	$533,350
XINR Amtrak National - Crossing Upgrades. C.EN.100764	$1,013,365	$222,940
TOTAL SEGMENT 31 OTHER PROGRAMS/PROJECTS EXPENDITURE		**$39,052,752**

Special Projects

Special Projects

This second half of the plan covers Special Projects, which include any investments which are not the normalized replacement of existing capital assets. Such projects include major backlog projects, which replace the NEC's large century-old moveable bridges and major tunnels, as well as improvements to stations and railroad infrastructure.

Special projects are funded through a mix of sources which may include but are not limited to: federal grants, funds from state and/or commuter railroad capital programs, and other sources of discretionary funding. With limited exceptions outlined in the Policy, most special projects are not eligible for BCCs.

Many special projects are multi-year, complex initiatives that require inter-agency resource coordination and track outages. The plan includes the overall scope of each Special Project, as well as information specific to expenditures and activities expected to take place in FY19.

List of Special Projects by Coordinating Agency

The following is a list of NEC Special Projects organized by the coordinating agency and project type (i.e., Major Backlog Projects or Improvement Projects) listed alphabetically.

Gateway Program

Major Backlog Projects

- Hudson Tunnel Project 116
- Portal North Bridge 117
- Sawtooth Bridge 118

Improvement Projects

- Harrison Fourth Track 119
- Hudson Yards Concrete Casing 120
- Planning and Program Management 121

Amtrak

Major Backlog Projects

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- Connecticut River Bridge Replacement 123
- East River Tunnel Rehabilitation 124
- Pelham Bay Bridge Replacement 125
- Susquehanna River Bridge Replacement 126

Improvement Projects

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- Moynihan Station (Phase 2) 130
- New Jersey HSR Improvement Program 131
- Newark Penn Station Platform Rehabilitation 132
- Next Generation High Speed Fleet Infrastructure: Ivy City/ Washington Terminal Yard Facility Improvements 133
- Next Generation High Speed Fleet Infrastructure: Ride Quality Investment 134
- Next Generation High Speed Fleet Infrastructure: Safety Mitigation 135
- Next Generation High Speed Fleet Infrastructure: Southampton St. Yard Facility Improvements 136
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- Washington Union Station Component: Subbasement Program (formerly Track 22 Rehabilitation) 140
- Washington Union Station Long Term Station Expansion (formerly 2nd Century Plan) 141
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- Villanova Station Improvements....185

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Special Projects: Gateway Program (Major Backlog)

Gateway Component: Hudson Tunnel Project

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT, Gateway Development Corporation, Port Authority of NY & NJ
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project will construct a new two-track rail tunnel beneath the Hudson River and rehabilitate and modernize the existing two-track North River Tunnel, which was inundated with corrosive salt water during Superstorm Sandy and continues to deteriorate without comprehensive rehabilitation. When complete, the project will provide increased reliability and operational flexibility for Amtrak and NJ TRANSIT on the NEC. Additional funding is required for construction. The project has been accepted by the FTA into project development, the first stage of the Capital Investment Grant program.

Total Project Cost Estimate: $12,970,000,000

Project Schedule:

- PE/NEPA: Apr 2016 - TBD
- Right-of-way acquisition: Post-ROD through construction start
- New Tunnel Construction: Jul 2019 - Dec 2026
- Rehab of North River Tunnel Construction: Jan 2027 - Dec 2030

FY19 Information

FY19 Planned Expenditure: $27,300,000

FY19 Planned Activities: Completion of PE and NEPA, development of contract packages, and additional design activities.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Port Authority of New York and New Jersey has agreed to be the Grant Applicant to the Federal Transit Administration Capital Investment Grant program and NEPA Project Sponsor. TIMING – From now until the Gateway Development Corporation takes over as project sponsor.
- Project Agreement status: Yes, multiple agreements will be required.
- Track outages: No.

Notes

Pending issuance of the ROD, several additional activities could begin in FY19, including real estate acquisition and initial construction activities, which would lead to substantial additional expenditures from project partners during FY19.

Cost estimates reflect mid-point of construction; are lower than cost estimates submitted to the Federal Transit Administration (FTA) Capital Investment Grants Program which include finance costs and are stated in year of expenditure dollars.

Additionally, the cost for the Hudson tunnel project in the CIG application included the cost of the Hudson Yards Concrete Casing Section 3. That is another reason for different cost estimates. Here the cost does not include that component, as it is indicated elsewhere in the report.

Gateway Component: Portal North Bridge

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak, Gateway Development Corporation, Port Authority of NY & NJ
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace the century-old swing-span Portal Bridge over the Hackensack River with a new two-track, fixed-span bridge, allowing a modest expansion of capacity. Amtrak and NJ TRANSIT have completed final design and environmental review. The project has been accepted by the FTA into project development for its Capital Investment Grant - Core Capacity grant program but still requires funding for construction. Once complete, the new bridge will save upwards of $1.3 million annually in reduced maintenance and operating costs due to the replacement of a swing bridge with a fixed bridge.

Total Project Cost Estimate: $1,787,000,000

Project Schedule:

- PE/NEPA: End Jul 2017
- Construction: Oct 2017 - Feb 2019
- Construction: 2019 - 2025

FY19 Information

FY19 Planned Expenditure: $8,000,000

FY19 Planned Activities: The initial construction Contract GC.01 is currently underway and includes the following work that is anticipated to be completed during FY19: the construction of a pier within the Hackensack River to accept the delivery of labor, equipment and materials; construction of a 500' long retaining wall and railroad embankment; construction of 2 Transmission Towers that support the NEC's 138kv lines; construction of a temporary Fiber Optic Line, and; utility relocation activities. The procurement phase to pre-qualify, bid and award Contract GC.02 to the successful contractor is scheduled to begin and be completed during FY'19. FTA is currently reviewing the project for entry into the Engineering phase of FTA's Capital Investment Grant program, which is a statutory requirement before the project can be considered for a construction grant award.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak: Though the plans are basically at a 100% level of design completion, some modifications are underway to meet FTA requirements.
  - Project Management from Amtrak: Amtrak Project Management will be needed throughout the duration of construction in support of the Project.
  - Access/Protection from Amtrak: Amtrak Flag Protection services will be needed throughout the duration of construction in support of the Project.
  - Force Account Labor from Amtrak: Amtrak's Track, ET and C&S personnel will be required to cut-in the new track and infrastructure systems to the existing NEC systems, as well as to perform all final testing and acceptance of the same.
- Project Agreement status: Several Agreements have already been entered into with Amtrak in support of the Design, Construction, Funding and Management of the Project.
- Track outages: During several, weekend cut-ins of the new railroad systems to the existing railroad systems, the track, catenary, electric traction, communications and signaling systems will have to be taken out of service. These shutdowns will normally occur over what's commonly called a "55-hour Weekend Outage", from 10 pm on Friday to 5 am Monday.

Notes

Gateway Component: Sawtooth Bridge

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT, Gateway Program Development Corporation, Port Authority of NY & NJ
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace an existing structurally deficient two-track bridge with new structures that would allow for four tracks on the NEC where it crosses over other rail lines between Newark, NJ and Penn Station, NY. Construction staging would be complex because of the intensity of use of the NEC as well as the intensity of rail traffic below the structure.

Total Project Cost Estimate: $1,600,000,000

Project Schedule:

- NEPA: Dec 2017 - Dec 2018
- PE: Jan 2019 - Jan 2021
- Final Design: Feb 2021 - Feb 2024
- Construction: Mar 2024 - Mar 2028

FY19 Information

FY19 Planned Expenditure: $8,300,000

FY19 Planned Activities: Await the issuance of the FONSI document from the FRA then begin Preliminary Engineering for the project.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from NJT. NJT also needs to provide Access/protection on their property in order to collect field info/data for the project, and project management personnel to interface/manage their respective parts in this project.
  - Design Review from PATH. PATH also needs to provide Access/protection on their property in order to collect field info/data for the project, and project management personnel to interface/manage their respective parts in this project.
  - Design Review from Conrail. Conrail also needs to provide Access/protection on their property in order to collect field info/data for the project, and project management personnel to interface/manage their respective parts in this project
- Project Agreement status: Not at this time.
- Track outages: No.

Notes

Gateway Component: Harrison Fourth Track

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT, Gateway Development Corporation, Port Authority of NY & NJ
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project includes the design and construction of approximately 2,000 ft. of additional main track along the Northeast Corridor through the city of Harrison, NJ on the western side of the corridor with new embankment and/or retaining structures, track, signal and third rail systems to allow shifting of the westbound PATH track to this new alignment. The project will identify and design changes necessary to connect the new track with the existing infrastructure and also be coordinated with PATH's on-going Harrison Station replacement project.

Total Project Cost Estimate: Project in early stages of development. Cost information for some phases not yet available.

Project Schedule:

- PE/NEPA: Sep 2018 - Dec 2021
- Construction: 2021 - 2024

FY19 Information

FY19 Planned Expenditure: $1,000,000

FY19 Planned Activities: Complete 30% preliminary design and process NEPA documents for approval with FRA.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - PATH will be providing design reviews at intervals for 30%, 60%, 90%, 100% design.
- Project Agreement status: Yes. Design phase agreement with PATH is being negotiated.
- Track outages: Not at this time.

Notes

Gateway Component: Hudson Yards Concrete Casing

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Long Island Rail Road, NJ TRANSIT, Gateway Development Corporation, Port Authority of NY & NJ
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project is constructing an underground concrete casing to protect the future potential right-of-way of a Hudson River rail tunnel that would connect the NEC in New Jersey to Penn Station, NY. The project extends west from 10th Avenue in Manhattan, under 11th Avenue, to its termination point at 30th Street in the vicinity of 12th Avenue. This project's total cost estimate has increased due to the additional spending on the project over the previous year. As phase I and Phase II have been wrapping up and closing out (The 11th Avenue section - Phase II- is now closed), costs continue to accrue (Phase I in particular has experienced challenges to closing out the LIRR Maintenance of Equipment building element).

Total Project Cost Estimate: $739,000,000

Project Schedule:

- Phase 1, Section 1 Construction: Aug 2013 - Oct 2017
- Phase 2, Section 2 Construction: Dec 2014 - Oct 2017
- Phase 2, Section 3 Construction: Sep 2018 - Dec 2021

FY19 Information

FY19 Planned Expenditure: $12,500,000

FY19 Planned Activities: Construction of Utility Relocation Project, an early works element of Hudson Yards Concrete Casing Section 3 (HYCC-3). Begin full construction of HYCC-3, contingent upon funding and agreement with developer and partners.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from LIRR.
  - Access/Protection from LIRR.
  - Force Account Labor from LIRR.
- Project Agreement status: No, but agreements will be required.
- Track outages: Limited track outages will be required.

Notes

The estimated cost to complete the HYCC project (Section 3) is $440M.

Gateway Program: Planning and Program Management

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT, Gateway Development Corporation, Port Authority of NY & NJ
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: The Gateway Program would create four main line tracks between Newark, NJ and New York, NY to address and alleviate the most severe bottleneck on the NEC. Several of the Gateway Program elements are now progressing into design or construction and are carved out for the purposes of the NEC Capital Investment Plan, including the Hudson Tunnel Project, Portal North Bridge, Hudson Yards Concrete Casing, and the Sawtooth Bridge. The investments listed here focus on planning and program management for these Phase 1 projects and the rest of the program. Cost estimates for the full program are not yet complete as many project elements remain in early stages of development.

Total Project Cost Estimate: $207,660,792

Project Schedule:

- Program Management: Oct 2018 - Sep 2023

FY19 Information

FY19 Planned Expenditure: $10,000,000

FY19 Planned Activities: Ongoing project management of the Gateway Program, including staff salaries, Gateway Development Corporation (GDC) contribution, office rent, Project management consultants, and outside counsel.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - PANYNJ will be contributing to the operation of the Gateway Development Corp. (GDC) through loaned employees, consultant services and revenue.
- Project Agreement status: Yes, for funding related to GDC.
- Track outages: No.

Notes

Special Projects: Amtrak (Major Backlog)

Baltimore & Potomac Tunnel Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace the aging B&P Tunnel, a key chokepoint where the right-of-way is reduced from four to two tracks and the tunnel's tight curvature require trains to reduce speeds to 30 mph. The existing tunnel is in need of constant monitoring and maintenance at high cost. This project would replace the existing two-track tunnel with a new four-track tunnel (as four single track bores) on an improved alignment. Preliminary engineering and environmental review were funded by a $60 million High-Speed Intercity Passenger Rail (HSIPR) grant and the FRA issued the Record of Decision on March 24, 2017. Additional funding is required for final design and construction.

Total Project Cost Estimate: $4,300,000,000
Project in early stages of development. Cost estimates are preliminary.

Project Schedule*:

- PE/NEPA: Apr 2011 - Oct 2017
- Final Design: Oct 2017 - Dec 2021
- Construction: Oct 2020 - Dec 2032

*Subject to funding

FY19 Information

FY19 Planned Expenditure: $30,000,000

FY19 Planned Activities: Continue design development of project, including geotechnical investigation; prepare bid packages for early action/ enabling projects; and prepare for real estate acquisition.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MARC as needed throughout FY19, as packages are developed.
  - Design Review from CSX & NS as needed throughout FY19, as packages are developed.
  - Design Review from third party as needed throughout FY19, as packages are developed.
  - Project Management from Amtrak. Continuous throughout FY19.
  - Access/Protection from Amtrak. Limited/sporadic, as needed.
- Project Agreement status: Currently, there is no project agreement with State and Federal partners in place.
- Track outages: None for FY19 (due to just design work).

Notes

Given the importance of the project, Amtrak has allocated a portion of its limited resources to keep advancing the design, but at a slower pace than what could be achieved with proper funding. Amtrak does not have the resources to commit to construction.

Connecticut River Bridge Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Connecticut DOT
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace the Connecticut River Bridge between Old Saybrook and Old Lyme, CT that carries Amtrak and Shore Line East trains. Completed in 1907, it is the oldest movable bridge between New Haven, CT and Boston, MA. The bridge has a movable span that is raised up to allow boats to pass. By law, the bridge must remain open from May through September for recreational boats to pass and closes only when trains approach. Plans would replace the Connecticut River Bridge with a new design that improves reliability and offers higher speeds for Amtrak and Shore Line East trains. FRA completed NEPA and issued a Finding of No Significant Impact (FONSI) for this project in January 2017. Preliminary design is underway, but no funding is available for final design or construction.

Total Project Cost Estimate: $759,000,000
Project in early stages of development. Cost estimates are preliminary.

Project Schedule:

- Feasibility/Conceptual Design: 2018 - 2019
- Final Design: 2019 - 2022
- Construction: 2024 - 2030

FY19 Information

FY19 Planned Expenditure: $3,705,861

FY19 Planned Activities: Complete Preliminary Design phase.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak as needed.
- Project Agreement status: Currently, there is no project agreement with State and Federal partners in place.
- Track outages: No.

Notes

East River Tunnel Rehabilitation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Long Island Rail Road, NJ Transit
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would rehabilitate East River Tunnel tubes 1 and 2 which connect Penn Station, NY to Queens, NY. Each tunnel is approximately 13,000 feet in length. Through this project, both tunnel tubes will be demolished down to the concrete liner and entirely rebuilt with new bench walls, communication systems, and modern electrical and signaling conduit. Rehabilitation of the track and drainage systems will require removal and replacement of track and ballast, new welded rail installations on a modern direct fixation track system, new impedance bond installations, new I joint installations, drainage system cleaning, and the removal and replacement of the third rail for the entire length of each tube. The tunnel renovations will also be designed to improve the safety and security (to the greatest extent practicable) in the tunnels. Some funding is available through FRA Superstorm Sandy recovery grants, but a significant funding gap remains.

Total Project Cost Estimate: $1,208,900,000
Project in early stages of development. Cost estimates are preliminary.

Project Schedule:

- Feasibility/Conceptual Design: Apr 2015 - Dec 2016
- Final Design: Oct 2017 - Sep 2020
- Construction: Oct 2020 - Sep 2025

FY19 Information

FY19 Planned Expenditure: $9,000,000

FY19 Planned Activities: (1) Complete all weekend survey outages and required weeknight outages for existing conditions documentation and structural repair catalog. (2) Hold full-day design progress seminar in late calendar 2018 (similar to one held in May 2018) to update the subject matter experts on design progress given extended timeline of 60% (due to limited weekend survey outages). (3) Receive final Repair Prioritization Report and Repair Designs (Q4 calendar 2018). (4) Progress design in all disciplines toward a 60% design deliverable in Q3 calendar 2019. (5) Refine work/safety planning for an in-tunnel fire/smoke test to evaluate multiple smoke and heat detection systems for possible inclusion in design. (6) Complete all NEPA environmental sampling (air, noise, vibration; traffic; hazardous materials) to inform FRA and seek appropriate Class of Action (Categorical Exclusion or Environmental Assessment). Progress the selected CoA. (7) Initiate 90% design toward end of FY19.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from LIRR. Resources for design review are on a rolling and as-available basis. Subject matter experts, already identified within Amtrak Engineering Design and Division will receive ongoing small submittals, will be invited to sporadic coordination meetings and will be asked to review the major 60% milestone over the course of 2 months.
  - Access/Protection from Amtrak. Resources for track outages are communicated in advance and scheduled through the Regional Outage Planning multi-agency group as well as the weekly tunnel-outage planning protocol. Protection and required discipline forces in support of the investigative/ survey outages mentioned above. These support services are currently being coordinated via Bryan Tyska of the Capital Construction group.
  - Project Management from Amtrak. Mostly the PM but support from Finance, Capital Reporting and Procurement for ongoing contract maintenance.
- Project Agreement status: Currently, there is no project agreement with State and Federal partners in place.
- Track outages: As with the work in FY18, outages have been sought on an as-available basis on both weeknights and weekends. It is anticipated that by FY19, Line 1 weekend outages will be complete and approximately 2 more weekend outages in Line 2 will be required. Weeknight outages will be ongoing in an as-needed basis but at a lower pace than FY18 where in excess of 40 weeknights were worked among all of the 6 subaqueous NYC tunnels.

Notes: Design costs are currently funded from Sandy Insurance Claims and if/when exhausted will switch to GCAP. Construction funding is unknown.

Pelham Bay Bridge Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:** MNR
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace the century-old movable Pelham Bay Bridge, which crosses the Hutchinson River in the Bronx, NY, with either a new mid-level movable bridge or a new low-level movable bridge with clearance for marine traffic. Additional funding is required for evaluation of these alternatives as well as the NEPA compliance for this project.

Total Project Cost Estimate: $546,000,000
Project in early stages of development. Cost estimates are preliminary.

Project Schedule:

- Feasibility/Conceptual Design: completed Oct 2014 – Sep 2015
- Pre-NEPA: completed Oct 2017 – Sep 2018
- NEPA: Oct 2018 – Sep 2019
- Preliminary Engineering: Oct 2019 – Sep 2022
- Final Design: Oct 2022 – Sep 2025
- Construction: Oct 2025 – Sep 2030

FY19 Information

FY19 Planned Expenditure: $1,000,000

FY19 Planned Activities: Begin the NEPA process assuming Amtrak has a Class of Action determination by the FRA as to NEPA requirements for either EA or EIS.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review/Access/Protection/Project Management – Amtrak.
  - Design Review/Project Management - MNR, MTA Capital Construction, CDO.
- Project Agreement status: Not at this time.
- Track outages: N/A

Notes

Susquehanna River Bridge Replacement

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace the existing two-track movable Susquehanna River Bridge with two modern high-level, fixed structures, each with two tracks. The project would benefit commuter and intercity rail as well as Norfolk Southern, which uses the segment to access the Port of Baltimore. Using a $22 million High-Speed Intercity Passenger Rail (HSIPR) grant, preliminary engineering and environmental review were completed in FY17. Additional funding is required for final design and construction.

Total Project Cost Estimate: $1,885,000,000
Project in early stages of development. Cost estimates are preliminary.

Project Schedule*:

- PE/NEPA: May 2012 - May 2017
- Final Design: May 2017 - Jun 2024

*Subject to funding

FY19 Information

FY19 Planned Expenditure: $6,000,000

FY19 Planned Activities: Advancing 60% Final Design.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MARC. 60% Design Review of select approach bridges by MDOT.
- Project Agreement status: Currently, there is no project agreement with State and Federal partners in place.
- Track outages: No.

Notes

PE and NEPA activities were completed in FY17 but there is only partial funding available for Final Design. The project could theoretically complete Design and advance to construction during FY19-23 but the rate at which work could be accomplished would depend on when additional federal funding is secured, and the magnitude of the additional federal funding.

Special Projects: Amtrak (Improvements)

Baltimore Penn Station Infrastructure Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will construct two additional platforms to support scheduled Acela overtakes of Northeast Regional and MARC trains. The scope includes a new Track 8 (F) platform, including new vertical access and canopy. The Track 3 existing low-level platform will be rebuilt as an accessible high-level facility, including repairs to the existing elevator and stairs. Additional track, signal, and electric traction improvements are also included to support the platform addition and improvement.

Total Project Cost Estimate: $43,000,000

Project Schedule:

- Feasibility/Conceptual Design: Mar 2017 - Oct 2017
- PE/NEPA: Oct 2017 - Oct 2018
- Final Design: Apr 2018 - Aug 2018
- Construction: Jan 2019 - Jan 2021

FY19 Information

FY19 Planned Expenditure: $14,000,000

FY19 Planned Activities: Bidding for Construction; Award for Construction; and Start construction of Platform 5.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies: N/A.
- Project Agreement status: Amtrak-FRA agreement is in place through a RRIF loan.
- Track outages: No. Plan for track outages will be developed at a later date and will follow with meetings for construction with Amtrak Transportation and Construction Manager.

Notes

Additional scope will be added for new ET structures but will be funded outside of the RRIF loan budget.

Baltimore Penn Station Master Plan

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project would provide a comprehensive and integrated approach for Baltimore Penn Station to advance key near-term state-of-good-repair projects while establishing a development framework to leverage under utilized assets and accommodate future growth and redevelopment, potentially through a public private partnership. Additional funding is required for design and construction of improvements.

Total Project Cost Estimate: $95,000,000

Project Schedule:

- Feasibility/Conceptual Design: May 2017 - Feb 2019
- PE/NEPA: Mar 2018 - Apr 2019
- Final Design: Apr 2019 - Apr 2020
- Construction: Jan 2020 - 2023

FY19 Information

FY19 Planned Expenditure: $9,980,260

FY19 Planned Activities: The Baltimore Penn Station State of Good Repair (SOGR) program is advancing the first group of projects, titled "1.A & 1.B" into construction in FY19. These projects include the full station and concourse roof replacement, along with associated drainage systems through the structure and cellar slab. In addition to the roof and drainage work at the station, this group of SOGR projects includes localized façade repairs, fire proofing, and relocating critical electrical equipment. Additionally, ongoing negotiations and execution of development agreements with the selected Master Developer Partner, and completion of the Master Plan for Baltimore Penn Station, are anticipated.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MARC. Dependent on project funding sources.
  - Design Review from USDOT. Dependent on project funding sources.
- Project Agreement status: Currently, there is no project agreement with State and Federal partners in place.
- Track outages: None currently planned.

Notes

Maryland Section Reliability Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will upgrade 30 miles of existing Track 1 in Maryland and make associated signal system and track upgrades for higher speed operations on the Washington-to-Baltimore section of the NEC. In addition, a new 1,050 foot side platform will be constructed on Track 1 at New Carrollton Station, with associated vertical access and other required modifications to connect to the underground station.

Total Project Cost Estimate: $20,600,000

Project Schedule:

- Final Design: Aug 2017 - Dec 2018
- Construction: Mar 2019 - Dec 2019

FY19 Information

FY19 Planned Expenditure: $16,731,623

FY19 Planned Activities: Design Work: (1) ET catenary design for new track alignment; (2) C&S signal system modification design; and (3) PTC system modification design & programming. Construction work: (1) Track construction - Align track No 1 per new track alignment design; (2) ET construction - Align catenary to match new track 1 alignment; (3) C&S construction - Upgrade signal system to match posted track speeds (likely to be completed in FY20); and (4) Install and test new PTC encoders (likely to be completed in FY20).

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Project Management from MARC. MARC will need to review FY19 Track 1 Outage schedule for possible service impacts.
- Project Agreement status: Amtrak-FRA agreement is in place through a RRIF loan.
- Track outages: Extended Track No 1 outages are planned during the FY19 production season. March 2019 until September 2019. The outage will start at the new Hanson Interlocking and end at Bridge Interlocking in the MAD South territory.

Notes

Moynihan Station (Phase 2)

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Other, Long Island Rail Road
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project expands Penn Station New York into the historic James A. Farley Post Office building, which will function as a joint Amtrak and Long Island Rail Road facility. Phase 1, which was completed in FY17, included the expansion and enhancement of the 33rd Street Connector between Penn Station and the West End Concourse; the extension and widening of the West End Concourse to serve nine of Penn Station's eleven platforms; new vertical access points and passenger circulation space; new entrances into the West End Concourse through the 31st and 33rd Street corners of the Farley building; and installation of an emergency ventilation system to improve life safety. Phase 2 (currently underway and associated with the funding and schedule information below) includes the construction of a new train hall occupying a sky-lit atrium section in the Farley building; construction of an emergency platform ventilation system at the perimeter of the Farley building; and improvements to the 33rd Street sub-street corridor connecting Penn Station and Moynihan Station. Moynihan Station Development Corporation (MSDC), the building owner, is coordinating the design of non-train hall work in collaboration with Amtrak and Long Island Rail Road. The project is being managed by the MSDC, a subsidiary of the Empire State Development Corporation, a public benefit corporation of the state of New York and the Port Authority of New York New Jersey, in cooperation with Amtrak and Long Island Rail Road.

Total Project Cost Estimate: $1,600,000,000

Project Schedule:

- Construction: May 2017 - Jan 2021

FY19 Information

FY19 Planned Expenditure: $79,800,000

FY19 Planned Activities: The Moynihan Train Hall is projected to experience its greatest activity during FY19 with significant spends on the Platform Ventilation Fan Plant work and the back-of-house construction to support the needed improvements for the Amtrak passenger area, the concourse and Amtrak operations.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Project Management from Empire State Development. Additional project oversight being added via two contractors - planned for summer 2018.
- Project Agreement status: Agreement with Empire State Development (ESD) for a $75M Amtrak contribution to the Fan Plant work.
- Track outages: Yes, track outages will continue for support of Moynihan and other NYC area projects.

Notes

New Jersey HSR Improvement Program

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: With $450 million in funding from the U.S. Department of Transportation, Amtrak is upgrading its rail infrastructure to support more frequent high-speed rail service and to improve the reliability of current service between New York and Washington. This project will upgrade electrical power, signal systems, tracks and overhead catenary wires along a 23-mile section of track between Trenton and New Brunswick, New Jersey. Amtrak is upgrading 24 miles of rail infrastructure to support faster, more reliable and more frequent service for all NEC users. The project will overhaul power supply systems, signal systems, track infrastructure, and overhead catenary wire between Trenton and New Brunswick, NJ. Modern infrastructure will allow Acela services to reach 160 mph, their highest speed anywhere on the NEC.

Total Project Cost Estimate: $499,147,200

Project Schedule:

- Final Design: Aug 2011 - Aug 2016
- Construction: Aug 2012 - Feb 2020

FY19 Information

FY19 Planned Expenditure: $27,641,565

FY19 Planned Activities: Fixed termination wire renewal with completion of SAP installation track 2 Midway-County; Constant tension installation track 2 Midway to CP Clark; Wire crossovers at Midway Interlocking and place interlocking back into service; Installation of SAP assemblies Ham to CP Clark on all tracks; Program management & other support of ET planned work.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
    - Force Account Labor from Amtrak. Current level of ET staffing throughout FY19; division track support/ protection; C&S support/protection.
- Project Agreement status: N/A
- Track outages: Yes Track 2, continuous outage, Ham-County.

Notes

Total project cost includes NJ HSR Improvement Program Task 1 for upgraded rail infrastructure between Trenton and New Brunswick to support faster, more reliable service. Total project cost does not include Task 2 for improvements to the I-ladder in Penn Station.

Newark Penn Station Platform Rehabilitation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** NJ TRANSIT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project involves improvements to the condition, appearance and functionality on Platforms A, B, C and D in Newark Penn Station. Both Amtrak and NJ TRANSIT have responsibility to maintain to a state of good repair. To date, work on Platform E has been completed. This scope of this project includes the design and rehabilitation of Platforms A, B, C, and D; their roof/ canopy structures; and any other repairs deemed necessary by the initial structure assessment. The structural assessment is complete. Once the final document is produced, Amtrak will prepare a "Make Safe Plan" for platform repairs.

Total Project Cost Estimate: $123,262,000

Project Schedule:

- Structural Assessment: Jul 2017 - Jan 2018
- PE/NEPA: Jun 2018 - Jun 2019
- Construction: Jun 2020 - May 2028

FY19 Information

FY19 Planned Expenditure: $1,500,000

FY19 Planned Activities: Design to start 10/1/18.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak, NJT and PATH/PANYNJ: Amtrak, NJT and PATH/PANYNJ need to review the Design effort since NWK Penn is shard by NJT, PATH and Amtrak.
- Project Agreement status: Yes, project agreement is in place.
- Track outages: No planned outages at this point but there will have to be to survey the existing conditions.

Notes

As the owner of the facility, Amtrak has indicated that it will soon be securing the services of a consultant to more fully understand and get a better grasp on the scope and cost of the rehabilitation work needed at Newark Penn Station. Over $32M was expended by NJ TRANSIT to rehabilitate and modernize Platform E alone. Newark Platforms A, B, C and D are also in dire need of a similar upgrade, particularly the platform surfaces which have suffered through degradation over many decades. The estimated cost of this work on the 4 remaining platforms could therefore equal over $130M (minimum). This estimated cost has therefore been proportioned over the 5 year period noted above.

Next Generation High Speed Fleet Infrastructure: Ivy City/ Washington Terminal Yard Facility Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will satisfy the anticipated facility and infrastructure improvements and maintenance requirements of a new Tier III High Speed Rail (HSR) fleet, the existing Acela fleet and accommodate an increase in service operations. The Tier III train sets are configured differently from the current Acela trainsets and will require modifications to the existing HSR S&I facilities to adequately service both the existing Acela fleet and the Tier III train sets. Scope of Work for Modifications to Existing HSR S&I includes design and Construction Phase Services (CPS) related to: upper level platforms, 480 VAC wayside power, center platform, potable/wastewater water, Inspection pit, split rail system, Alstom office and material storage, nose access platform, monorail crane and sanding system.

Total Project Cost Estimate: $13,200,000

Project Schedule:

- Construction: Aug 2019 - Nov 2020

FY19 Information

FY19 Planned Expenditure: $1,400,000

FY19 Planned Activities: Construction proposal received for retrofit of S&I facility; anticipate NTP by end of June 2018.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak. Engineering Design Review.
- Project Agreement status: Amtrak-FRA agreement is in place through a RRIF loan.
- Track outages: Possibly but unknown until Design is finalized.

Notes

Next Generation High Speed Fleet Infrastructure: Ride Quality Investment

- **Coordinating Agency:** Amtrak
- **Partner Agency:** This is a shared project on the NEC spine that will benefit all commuter rail operators.
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project, which consists of two parts, will establish reference surfacing on those portions of the NEC main line maintained by Amtrak. The first project element is developing the database necessary for computer controlled track surfacing. The second is the acquisition of three sets of equipment for the ongoing surfacing of the NEC. Reference surfacing systems have the capability to correct track geometry error better than the system Amtrak presently uses, which will result in an overall better ride quality with more durable results.

Total Project Cost Estimate: $67,000,000

Project Schedule:

- Selection of methodology/ proof of concept: Sep 2017 - Sep 2019
- Survey, design, and equipment purchase: Oct 2019 - Sep 2021

FY19 Information

FY19 Planned Expenditure: $10,094,455

FY19 Planned Activities: Design Work: (1) Develop requirements for reference surfacing database; (2) Conduct survey of all tracks on the Northeast Corridor between Washington and Boston; (3) Includes post processing (converting raw data into usable format). Procurement of Surfacing Equipment: (1) Work with Amtrak Procurement to release purchase order for 3 High Speed Tamper with Ballast Regulators and Stabilizer systems; (2) Selected Tamper manufacture expected to start building equipment.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Other from USDOT. FRA coordination on RRIF Loan.
- Project Agreement status: Amtrak-FRA agreement is in place through a RRIF loan.
- Track outages: No extended outages though a few outage will be needed for local survey work.

Notes

Next Generation High Speed Fleet Infrastructure: Safety Mitigation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** This is a shared project on the NEC spine that will benefit all / several of commuter rail operators.
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will make several investments to allow Amtrak to permit operation of Tier III Trainsets on the NEC at up to the maximum speed of FRA Tier III standards. Amtrak undertook a detailed and lengthy risk analysis that demonstrates that this standard can be met with a limited investment in infrastructure improvements designed to limit intrusions on to the right of way and/or high- speed tracks in designated high-speed zones expected to be used by Acela. These investments include 20 miles of security fencing, 1/2 mile of guardrails, and other provisions associated with the Tier III FRA Waiver.

Total Project Cost Estimate: $90,000,000

Project Schedule:

- Construction: Oct 2017 - Mar 2021

FY19 Information

FY19 Planned Expenditure: $20,300,000

FY19 Planned Activities: Fencing and Adjacent Track Work continues; design concepts for PTSO to be developed. Fencing: there will be eight fencing-guiderail locations for FY 2019, as follows: New York Division New Brunswick, NJ. MP 35; Hamilton, NJ. MP 53; Trenton, NJ. MP 56 Mid-Atlantic Division Newark, DE. MP 35.6; Baltimore, MD. MP 101.2; Odenton, MD. MP 114 New England Division West Kingston, RI. MP 158; Foxboro, MA. MP 205. Track work: two locations where non-Amtrak owned siding need to be upgraded to meet the conditions required by the FRA waiver are: Merckens Chocolate Lead - 3700 feet, MP 204.2-204.8, adjacent to Main Track 2, Mansfield MA; Blaine Chemical lead (owner unknown) - 2800 feet, MP 204.3-204.8, adjacent to Main Track 1, Mansfield MA.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak. New production gangs, to provide support and install pickets.
  - Force Account Labor from Amtrak. New production gangs, to provide support and install pickets.
- Project Agreement status: Amtrak-FRA agreement is in place through a RRIF loan..
- Track outages: No.

Notes

Next Generation High Speed Fleet Infrastructure: Southampton St. Yard Facility Improvements

- **Coordinating Agency:** Amtrak
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: The project scope includes the design and construction of infrastructure improvements for Southampton Street Yard to support the Next Generation High-Speed Rail (HSR). This project will satisfy the anticipated facility and infrastructure improvements and maintenance requirements of a new Tier III High Speed Rail (HSR) fleet, the existing Acela fleet and accommodate an increase in service operations. The Tier III train sets are configured differently from the current Acela trainsets and will require modifications to the existing HSR S&I facilities to adequately service both the existing Acela fleet and the Tier III train sets. More specifically, Scope of Work includes: (1) a HSR Train Scanner (an 18' x 28' train diagnostic facility): foundation with support bungalow and electric and telecommunications located before the Train Wash; (2) new storage tracks for servicing operations; and (3) an office trailer shell with telecommunications and HVAC for a staff of 10 (Alstom).

Total Project Cost Estimate: $10,500,000

Project Schedule:

- Construction: Aug 2019 - Nov 2020

FY19 Information

FY19 Planned Expenditure: $1,400,000

FY19 Planned Activities: Construction proposal received for retrofit of S&I facility; anticipate NTP by end of June 2018.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak. Engineering design review.
- Project Agreement status: Amtrak-FRA agreement is in place through a RRIF loan.
- Track outages: Possibly but unknown until Design is finalized.

Notes

Paoli Transportation Center - Phase 1 (ADA & Infrastructure)

- **Coordinating Agency:** Amtrak
- **Partner Agency:** SEPTA
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will reconstruct Paoli Intermodal Station on SEPTA's Paoli/Thorndale Regional Rail Line and Amtrak's Keystone Corridor. Phase 1 will make the existing station ADA accessible and include a pedestrian overpass with elevators connecting to parking lots and a new high-level center platform. The outbound parking areas will be reconfigured and pedestrian linkages will be provided throughout the station area such as sidewalks and crosswalks. The project will also include changes to the railroad infrastructure as needed to accommodate the work. The construction cost for Phase 1 is approximately $41 million. SEPTA is contributing 2/3 of the project costs and Amtrak is providing 1/3 of the project costs.

Total Project Cost Estimate: $51,020,000

Project Schedule:

- Construction: Dec 2017 - Apr 2019

FY19 Information

FY19 Planned Expenditure: $7,000,000

FY19 Planned Activities: Complete construction (high level platform and pedestrian overpass in service).

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak.
  - Project Management from Amtrak.
- Project Agreement status: Yes - 1/3 of $40.8M covered by Amtrak, 2/3 by SEPTA.
- Track outages: Yes. Overnight outages only.

Notes

Philadelphia 30th Street Station District Plan Implementation

- **Coordinating Agency:** Amtrak
- **Partner Agency:** SEPTA
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project includes immediate and long-term improvements to passenger and rail facilities. Work currently underway includes the completion of a comprehensive assessment of state of good repair needs, advancing the conceptual design of key station improvement projects and focusing on design projects to enhance the customer experience and expanding capacity of concourse to accommodate anticipated growth in Amtrak ridership. As established in the Philadelphia 30th Street Station District Plan, the plan for the station is multi-phased and incremental strategy designed to enable sustainable operational growth of 30th Street Station, while unlocking the development potential of the real estate assets over the course of a 35-year horizon. The next key project milestone is a two-phased master developer procurement process that will identify a master development partner to assist Amtrak with implementing state of good repair improvements, developing commercial assets, and maximizing the overall value of 30th Street Station.

Total Project Cost Estimate: $517,000,000

Project Schedule:

- Feasibility/Conceptual Design: Jun 2014 - Sep 2016
- Feasibility/Conceptual Design: Oct 2016 - Sep 2018
- Finalize Feasibility/Conceptual Design: Oct 2018 - Dec 2020
- Final Design: Jan 2021 - Jan 2035
- Construction: Jan 2035 - Jan 2050

FY19 Information

FY19 Planned Expenditure: $2,280,000

FY19 Planned Activities: The FY19 planned activities will focus on advancing the master developer procurement process, including the development of Amtrak technical and performance requirements for 30th Street Station, technical and financial analysis of proposals via a multi-tiered Committee review process, and negotiation of terms among bidders to drive a best value proposal.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Other from Other. The detailed resources required to support the PHL Master Developer effort will be known once the program can be fully defined pending the results of the procurement process in late 2019.
- Project Agreement status: Based on the proposals submitted during the RFP process, Amtrak will likely need to agree to share in capital costs for specific program elements as part of the State of Good Repair and station expansion design and construction. Once the scope of the program is determined, further discussions will be required, providing additional oversight and clear agreement on each sides' roles and responsibilities.
- Track outages: No.

Notes

Milestones above are for overall master plan implementation. Additional milestones for overall master plan implementation are TBD.

Washington Union Station Component: Claytor Concourse Modernization Program

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT, VRE, Union Station Redevelopment Corporation, Federal Railroad Administration, WMATA
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This program provides design and construction of immediate operational, safety, and passenger experience improvements to the existing passenger concourse at Washington Union Station, known as the Claytor Concourse. Prior to realizing the full Concourse Modernization, there are two predicate projects that need to be implemented. The Amtrak Police Department (APD) requires relocation from their current location in the station to a new, improved facility outside the Claytor Concourse. Design of the new APD 10,000 sf facility was completed in FY18 and construction is expected from FY19-20. In FY18, Amtrak completed the first predicate project – the relocation and replacement of critical Heating, Ventilation, and Air Conditioning (HVAC) infrastructure. The full Claytor Concourse Modernization will include the renovation of critical passenger areas, the installation of the new glass curtain wall as an entrance to the station from the platforms and the footprint for a new, expanded Metropolitan Lounge (formerly known as the ClubAcela lounge). The modernization will also include constructing back of the house uses on the First Street Level so as to relocate the existing support space from the concourse floor. It will also support the improvement of critical building infrastructure needed to enable the concourse expansion. This infrastructure includes a new emergency generator for the building as well as a new, expanded electrical substation.

Total Project Cost Estimate: $169,145,000

Project Schedule:

- HVAC: Completed FY18
- Amtrak Police Department and Electric Workshop Relocation Construction: Oct 2018 - Sep 2020
- Concourse Modernization Project Design: End Sep 2019
- Concourse Modernization Project Construction: Oct 2018 - Sep 2021

FY19 Information

FY19 Planned Expenditure: $22,600,000

FY19 Planned Activities: Ongoing construction of the Amtrak Police Department and Electric Workshop Relocation Project. Finalization of the Concourse Modernization Project design. Complete procurement of and contract award to a General Contractor for construction of the Concourse Modernization Project. Begin construction of the Concourse Modernization Project.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Amtrak, MARC, VRE and FRA will require resources for design review. Resources will be required throughout FY19 for ongoing construction of Amtrak Police Department and beginning construction on the Concourse.
- Project Agreement status: Cost sharing agreement between USRC and Amtrak for elements of the Concourse Modernization Project. This agreement will be required to be completed in FY19. Execution of an agreement between Amtrak and FRA for the Rail Safety Grant funding will be required.
- Track outages: There are no planned track outages for either the APD Relocation Project or the Concourse Modernization Project.

Washington Union Station Component: Subbasement Program (formerly Track 22 Rehabilitation)

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT, VRE, Union Station Redevelopment Corporation, Federal Railroad Administration
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This program includes two projects Track 22 and the Subbasement Reconstruction. The Track 22 project will not only provide Amtrak and VRE with an additional revenue track by which to board and alight trains, it is a necessary precursor to the Subbasement Structural Replacement project so as to provide an additional run-through track to remain open during the Subbasement project. The Subbasement Reconstruction project will replace the bridging structure at the north portal of the First Street Tunnel spans rail tracks over a back of house station area (known as the Subbasement). The structure is in a state of disrepair and requires replacement. The critical SOGR Project will replace the structurally deficient beams, girders and columns with a new structural support system. The track slab will be replaced and railroad infrastructure will be replaced in kind.

Total Project Cost Estimate: $116,600,000

Project Schedule:

- Track 22 construction: Sep 2018 - Jun 2021
- Subbasement design: End Sep 2019
- Subbasement construction: Oct 2019 - Sep 2023

FY19 Information

FY19 Planned Expenditure: $10,400,000

FY19 Planned Activities: Construction commences for Track 22 project. Design completion for Subbasement Reconstruction.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Other. Design review for Subbasement: FRA, USRC, MARC, VRE, Amtrak. For the other Subbasement needs, Amtrak is responsible. Amtrak is responsible for the Track 22 elements. Operations coordination will be needed with VRE, MARC, and Amtrak for both projects.
  - Design Review from Other. Track 22: Amtrak is responsible for construction, force account labor, construction/ project management, access/protection, and procurement. Construction operations will be coordinated with VRE. Subbasement design review is needed by Amtrak, VRE, MTA, USRC, and FRA. Subbasement construction activities, including construction management/project management oversight, procurement, legal support, contractor support and protection, and force account labor, are Amtrak's responsibility.
- Project Agreement status: Track 22 project is being funded through FRA THUD Grant with matching funds from VRE and Amtrak non-federal revenue source. Finalizing grant documents with FRA and VRE in FY18.
- Track outages: Track 22 construction will need track outages to perform work; will require Track 23 to be out of service for a period of time. Subbasement construction will have significant track outages.

Washington Union Station Long Term Station Expansion (formerly 2nd Century Plan)

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT, VRE, Union Station Redevelopment Program, DDOT, Federal Railroad Administration
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: The Long Term Program builds on the 2012 Washington Union Terminal Master Plan which outlined a long-term vision to redevelop the station to address capacity constraints and aging infrastructure as well as coordinate with the air rights project known as Burnham Place. The Long Term Program consists of a large-scale station expansion including a complete redesign and reconstruction of the rail terminal. This will also include the construction of Burnham Place, which is Akridge's air rights project over the tracks and platforms. This program has begun and is undergoing an Environmental Impact Statement (EIS), a process being led by the Federal Railroad Administration (FRA) and targeted to be complete in FY20. Once that process has concluded, the Long Term Program will require funding for advanced design and program management to begin implementation of the finalized concept followed by full construction. Currently specific projects within this program include: Terminal Infrastructure (concept design of reconstruction of tracks, platforms and related rail infrastructure at Washington Union Station); Station Expansion EIS; Geotechnical work; Constructability reviews; and H Street Bridge (a project being funded by District DOT) coordination.

Total Project Cost Estimate: $8,000,000,000
Total cost decreased due to breaking out additional WAS components.

Project Schedule:

- Feasibility/Conceptual Design: Nov 2013 - Nov 2015
- PE/NEPA: Nov 2015 - Jan 2020
- Final Design: Dec 2020 - Dec2024
- Construction: 2025 - 2040

FY19 Information

FY19 Planned Expenditure: $1,400,000

FY19 Planned Activities: Continuation of activities to support and advance the Station Expansion Project, including support for the EIS, Terminal Infrastructure and Constructability review.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Resources and coordination needed from Amtrak, MARC, VRE, FRA, DDOT. FRA is the lead agency for the Station Expansion EIS so constant need for coordination with them. VRE and MARC involved with design review of design projects and EIS. DDOT is undertaking a bridge reconstruction project that will be design review from Amtrak.
- Project Agreement status: There are MOUs in place for joint funding of many of the Long Term Station Expansion projects between USRC and Akridge. There are also project spend plans for each project within this portfolio.
- Track outages: No current track outages needed in FY19. Future projects in this program will need track outages.

Washington Union Station Near Term Rail Program

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Maryland DOT, VRE, Union Station Redevelopment Corporation
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: The Near Term Rail program provides design and construction of critical rail and infrastructure projects needed to enhance current operational flexibility of the Washington Union Station rail terminal and to provide for the phasing and capacity expansion of the Long Term Program. Projects within the Near Term Rail Program include: (1) Electrification of Tracks 8 & 9; (2) Substation 25A Relocation and Catenary Sectionalizing; (3) Crew Base Renovation; (4) Satellite Commissary Relocation.

Total Project Cost Estimate: $78,500,000

Project Schedule:

- Electrification of tracks 8 & 9, Construction: Oct 2017 - Sep 2019
- Relocation of Satellite Commissary, Design: Completed FY2018
- Relocation of Satellite Commissary, Construction: Oct 2019 - Sep 2020
- Crew Base Relocation, Design: Dec 2018
- Crew Base Relocation, Construction: Oct 2018 - Sep 2020
- Substation 25A Relocation, Design: Sep 2019
- Substation 25A Relocation, Construction: Oct 2020 - Sep 2022
- Rehabilitation of Platform Serving Tracks 15/16, Design: End FY2017
- Rehabilitation of Platform Serving Tracks 15/16, Construction: Oct 2021 - Sep 2023

FY19 Information

FY19 Planned Expenditure: $7,900,000

FY19 Planned Activities: Electrification of Tracks 8&9 – construction complete Q2 FY19; Crew Base Renovation – design complete Q1 FY19; construction manager NTP Q1 FY19; construction begins Q2 FY19; Satellite Commissary Relocation - construction manager NTP Q1 FY19; construction begins Q2 FY19; Substation 25A – design complete Q4 FY19; Tracks 15/16 – no planned activity in FY19.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Resources and coordination needed from Amtrak, MARC, VRE, USRC
- Project Agreement status: There is a project spend plan for each project within this program.
- Track outages: Completion of Electrification of Tracks 8 & 9 will require night and weekend outages; coordination ongoing with Transportation.

Notes

Yale Interlocking

- **Coordinating Agency:** Amtrak
- **Partner Agency:** Connecticut DOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project would include the construction of a new, wired universal interlocking in Clinton, CT that would split the current 16-mile long block between Guilford and View Interlockings. Construction would include the installation of #24 clothoidal turn-outs, rail, switch ties, sub-grade, ballast, components of the overhead catenary system, signal transformers, signal cables, signal masts, switch heaters, switch machines, switch houses, instrument houses, and interlocking lighting. Additional funding is necessary for construction.

Total Project Cost Estimate: $32,400,000

Project Schedule:

- Final Design: Nov 2015 - Dec 2017
- Construction: Oct 2018 - Sep 2021

FY19 Information

FY19 Planned Expenditure: $673,328

FY19 Planned Activities: HNTB (Designer of Record) to complete environmental permitting and wetland mitigation design. Amtrak to begin procurement of long lead items, labor clearances, and RFP development for contractors.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak for construction.
  - Project Management from Amtrak for construction.
  - Force Account Labor from Amtrak for construction.
- Project Agreement status: Agreement negotiations underway for CTDOT to fund 35% of construction costs beginning in FY19 and through FY21 ($11.2M).
- Track outages: No.

Notes

Special Projects: Connecticut DOT (Major Backlog)

Devon Bridge Replacement

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project would replace the functionally obsolete 111-year-old Devon Bridge. The bridge, which carries four New Haven Line tracks over the Housatonic River, has experienced serious deterioration, and is the next most critical movable bridge for replacement on the New Haven Line portion of the NEC after the Walk Bridge Program. Additional funding is required for design and construction of a replacement bridge.

Total Project Cost Estimate: $1,500,000,000
Project in early stages of development. Construction estimates are preliminary.

Project Schedule:

- Feasibility/Conceptual Design: End Jan 2019
- PE/NEPA: End Apr 2021
- Final Design: End Apr 2023
- Construction: 2023 - 2027

FY19 Information

FY19 Programmed Amount: $2,000,000

FY19 Planned Activities: Begin preliminary engineering and advance design to 15% and 30% levels

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MNR.
  - Access/Protection from MNR.
  - Force Account Labor from MNR during construction phase
- Project Agreement status: No project agreement is needed.
- Track outages: Yes, foul time required for design work, major outages expected for construction.

Notes

Saugatuck River Bridge Replacement

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: The Saugatuck River Bridge is a 458-foot-long bascule bridge constructed in 1904. The bridge is actually not one, but two parallel bridges, each carrying two tracks. Like the Norwalk River Bridge, its age and deferred maintenance have caused deterioration encompassing both its electrical and mechanical components. CTDOT is aiming to fully replace major components of the bridges, including the movable spans and the approach tracks. This work would also include the replacement of mechanical and electrical systems, new signal equipment, and a new operator's house. This new bridge would greatly improve reliability for Amtrak and Metro-North riders, as well as maritime traffic.

Total Project Cost Estimate: $1,100,000,000

Project Schedule:

- Feasibility/Conceptual Design: 2017 - 2020
- PE/NEPA: 2025 - 2026
- Final Design: 2026 - 2028
- Construction: 2028 - 2032

FY19 Information

FY19 Programmed Amount: $3,000,000

FY19 Planned Activities: During the specified period the consultant (AECOM) will start design following negotiations for the revised scope and the design will progress toward 60%.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MNR.
  - Access/Protection from MNR. Railroad Protective Services.
- Project Agreement status: •No project agreement is needed.
- Track outages: Yes, engineering investigations will require foul time. No major outages at this time.

Notes

Walk Bridge Program

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Major Backlog
- **Benefit:** Shared

Project Information

Project Scope: This project will replace the functionally obsolete 120-year-old Walk Bridge which has experienced increasing deterioration of electrical and mechanical components. Connecticut DOT has committed to replace this asset with a combination of federal and state funds. Construction will require an extended continuous outage of two tracks where normally four are operational. This change in track availability could cause changes in schedule, decreases in reliability, or even reductions in service. Two additional capital projects in the vicinity of Walk Bridge will help address these concerns. The construction of CP243 interlocking will shorten the block length between Westport and Norwalk while increasing operational flexibility. Additionally, improvements at Dock Yard including the electrification of the lower Danbury Branch will allow for Metro-North trains to turn at Norwalk without increasing congestion on the main line of the NEC. FTA completed NEPA and issued a Finding of No Significant Impact (FONSI) for this project in July 2017.

Total Project Cost Estimate: $1,170,000,000

Project Schedule:

- Final Design: End Jun 2017
- Construction Phase 1 - CP243 / Dock Yard: End Jan 2021
- Construction Phase 2 - Walk: Jun 2019 - Sep 2023

FY19 Information

FY19 Programmed Amount: $80,000,000

FY19 Planned Activities: Progressing the design of the Walk Bridge and other program projects from the current 60% to 90% and then 100% design plans. The two advanced projects necessary to support construction of the Walk Bridge, the CP243 interlocking and the Danbury Dockyard improvements, are currently in construction phase and will continue throughout all of FY19.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from MNR. Railroad Protective Services.
  - Design Review from MNR.
  - Force Account Labor from MNR. Signal, communication and track support.
- Project Agreement status: No project agreement is needed.
- Track outages: Yes, minor track outages for engineering, 1 and 2 track outages for bridge and interlocking construction.

Notes

Special Projects: Connecticut DOT (Improvements)

CT*rail* Hartford Line Commuter Station Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will add additional station stops between New Haven, CT to Springfield, MA including North Haven, Newington, West Hartford, and Enfield. An additional platform at the State Street Station in New Haven is also in construction allowing riders on the new Hartford Line service walk-up access to downtown New Haven.

Total Project Cost Estimate: $90,000,000

Project Schedule:

- Construction: Apr 2019 - 2021

FY19 Information

FY19 Programmed Amount: $3,000,000

FY19 Planned Activities: North Haven, West Hartford, Windsor and Windsor Locks Stations will be in Design. The Windsor Locks station has the highest priority. This station will include the design of platforms, MOW track, siding track, and the Bridge Street at grade crossing. Windsor design will also advance to Final Design during this period. Track work at the Windsor Station with the exception of the gauntlet track will be installed prior to October 2018 under Phase 3A North.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak.
  - Access/Protection from Amtrak.
  - Force Account Labor from Amtrak.
- Project Agreement status: Yes, costs for Hartford Line stations are 100% state.
- Track outages: Yes, foul time for design work, track outages for construction.

Notes

CT*rail* Hartford Line Rail Program Phase 3B - 5

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: The program is being progressed in phases to rebuild and upgrade infrastructure between New Haven, CT and Springfield, MA. The final phases, not yet funded for construction, include adding a second track between Hartford and Enfield, rehabilitating or replacing many bridges and culverts, and improving stations at Windsor and Windsor Locks. The program also includes costs associated with replacing the elevated track structure through Hartford and the Connecticut River Bridge in Windsor Locks.

Total Project Cost Estimate: $250,250,000

Project Schedule:

- Final Design: End 2019
- Construction: 2020 - 2023

FY19 Information

FY19 Programmed Amount: $5,000,000

FY19 Planned Activities: Track design for Phase 3B will be active during this period. Cleaning of existing culverts and waterways will need to be completed to evaluate the condition of existing culverts. Surveys, borings and environmental activities will occur. Design reviews and design meetings will be with Amtrak.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak. Track design review.
  - Access/Protection from Amtrak. Railroad Protective Services.
  - Force Account Labor from Amtrak. Track and signal work during construction phase.
- Project Agreement status: Yes, costs for expansion of the Hartford line are 100% CTDOT.
- Track outages: Yes, foul time needed for engineering, track outages required for construction.

Notes

New Haven Line Network Infrastructure Upgrade

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will upgrade the communications network infrastructure along the New Haven Line segment of the NEC by installing fiber optic communication cable and equipment to support closed circuit television safety cameras at vulnerable passenger stations and bridges. This system will also be capable of supporting passenger information displays and other amenities at passenger stations.

Total Project Cost Estimate: $70,000,000

Project Schedule:

- Construction: End 2021
- Construction: 2020 - 2022

FY19 Information

FY19 Programmed Amount: $5,000,000

FY19 Planned Activities: The design for Phase 3 is on-going and will be complete by the end of 2018. Phase 3 will install security cameras at the Greens Farms, Westport, East Norwalk, South Norwalk, Rowayton, Darien, and Noroton Heights railroad stations. Phase 3 also installs security cameras at the Saga Bridge. Once the processing phase is complete, the construction phase of the project will start in the Summer 2019.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from MNR. Railroad Protective Services.
- Project Agreement status: No project agreement is needed.
- Track outages: Yes, minor track outages and foul time required for equipment installation.

Notes

New Haven Line Stations Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This program will upgrade and repair the Stamford Station to ensure continued safe operation and improve the passenger experience. Work will increase canopy and windscreen coverage, provide additional pedestrian paths, repair and replace platform sections that are failing due to their age, and ensure ADA compliance. The future program also includes the construction of a pedestrian bridge at Stamford Station as well as a new parking garage. Additionally, the program includes a new parking garage for New Haven Station and the installation of real time audio and video systems at all main line stations.

Total Project Cost Estimate: $320,000,000

Project Schedule:

- Construction: End Nov 2018
- Construction: 2020 - 2022

FY19 Information

FY19 Programmed Amount: $5,000,000

FY19 Planned Activities: The construction phase of the Stamford Station Improvements project is on-going. It is anticipated that all the elevator and escalator work will be complete by the end of the Fall 2018 and the construction phase of the project will be complete by the end of 2018. The other two projects (Pedestrian Bridge and Parking Garage) are in the design phase.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from MNR. Railroad Protective Services.
  - Design Review from MNR.
- Project Agreement status: No project agreement is needed.
- Track outages: Yes.

Notes

New Haven Yard Master Complex Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project is a multi-year initiative that receives funding on an annual basis to store and maintain the rail fleet and spare parts. Connecticut received $9 million in FTA Emergency Relief funds to install a backup feeder as an alternative power source at New Haven Yard. Additional funding would design and construct other modernization elements, including new facilities to improve efficiency and allow for growth.

Total Project Cost Estimate: $750,000,000

Project Schedule:

- Final Design: Jan 2017 - 2020
- Construction: 2019 - Feb 2023

FY19 Information

FY19 Programmed Amount: $30,000,000

FY19 Planned Activities: Construction: Complete Yard Power Upgrade Project; Complete Central Distribution Warehouse/ Brewery Street Gate Project; Commence East End Connector Project; Commence/Complete Stores Building Demolition; Commence/Complete M-8 Parts Storage Warehouse; Commence West End Yard project. Design: Complete West End Yard design; Commence S&I Building design; Continue Pedestrian Bridge Overpass design

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MNR.
  - Access/Protection from MNR.
  - Force Account Labor from MNR.
- Project Agreement status: No project agreement is needed.
- Track outages: Yes, but minimal disruption of mainline track.

Notes

SLE Station Improvements

- **Coordinating Agency:** Connecticut DOT
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project is a series of investments to expand and improve stations, constructing two high-level platforms, improved waiting areas, and expanded parking at several stations. Work is underway at Clinton, Madison, and New Haven State Street. In addition, the state will study the feasibility of constructing a new station in Niantic, CT.

Total Project Cost Estimate: $70,000,000

Project Schedule:

- Construction: End Sep 2020

FY19 Information

FY19 Programmed Amount: $6,000,000

FY19 Planned Activities: Additional platform, pedestrian bridge, and parking will begin construction for the Clinton Station.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak.
  - Force Account Labor from Amtrak.
- Project Agreement status: Yes, Capital expenses for SLE service that are sole use are 100% state.
- Track outages: Yes. Outages and foul time for platform and pedestrian bridge construction.

Notes

Special Projects: Delaware DOT (Improvements)

Claymont Regional Transportation Center

- **Coordinating Agency:** Delaware DOT
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will replace the existing Claymont, DE train station. The new station will be located north of the current site to the former Evraz Steel Site in Claymont, Delaware. It will meet all current ADA standards, with two high-level platforms and a pedestrian overpass over the NEC. The new station will be a multi-modal transportation center with improved access for bus transit, bicycles, and pedestrians as well as added parking capacity.

Total Project Cost Estimate: $45,612,000

Project Schedule:

- PE/NEPA: Jan 2016 - Mar 2018
- Final Design: Apr 2018 - Aug 2018
- Construction: Dec 2018 - Dec 2020

FY19 Information

FY19 Planned Expenditure: $8,500,000

FY19 Planned Activities: Catenary design work will continue. The design build team will be selected in the fall of 2018 and design will be finalized. Construction activities for the station may begin in the spring of 2019.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak. Design reviews will be on-going throughout the year.
- Project Agreement status: N/A
- Track outages: N/A

Notes

Delaware Third Track Program

- **Coordinating Agency:** Delaware DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will increase capacity for intercity and commuter service between Wilmington and Newark, DE by eliminating a current two-track bottleneck and thereby restoring a third track through most of the state. This joint Amtrak/Delaware DOT project is funded by a combination of federal and state sources.

Total Project Cost Estimate: $62,788,860

Project Schedule:

- Construction: Jul 2013 - Jul 2019

FY19 Information

FY19 Planned Expenditure: $10,459,128

FY19 Planned Activities: The final inspection for the project was held during the summer of 2018. The contractor will be finalizing punch list work in the fall of 2018.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - N/A
- Project Agreement status: N/A
- Track outages: N/A

Notes

Newark (DE) Regional Transportation Center

- **Coordinating Agency:** Delaware DOT
- **Partner Agency:** SEPTA
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will construct an updated Regional Transportation Center in Newark, DE that will increase capacity and support additional SEPTA service between Newark and Wilmington, DE. The project includes construction of a new station house, a new platform, a new freight track connection, and a new pedestrian bridge so passengers are not forced to cross an active track. The project will make the station ADA-compliant, eliminate conflicts with freight operations, and permit expansion of regional and commuter service. This project is funded by a combination of federal, state, and local sources.

Total Project Cost Estimate: $57,000,000

Project Schedule:

- PE/NEPA: Jul 2013 - Dec 2015
- Final Design: Dec 2015 - Apr 2018
- Construction: Jul 2017 - May 2021

FY19 Information

FY19 Planned Expenditure: $40,952,884

FY19 Planned Activities: Parking lot construction will be completed. Station building construction will be on-going. Catenary and railroad signal foundation work will begin after the project is awarded in the fall of 2018. Design of the platform and Track A will be on-going.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - N/A
- Project Agreement status: NA
- Track outages: N/A

Notes

East River Tunnel - Right of Way Infrastructure Improvements

- **Coordinating Agency:** Long Island Rail Road
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project includes several initiatives in the East River Tunnels, including: Stray Current Study; Communications antenna replacement in lines 3 and 4; Total track replacement in line 4; and 1st Avenue substation replacement. Work would evaluate and mitigate stray current in the tubes, improve radio system infrastructure in the tunnels and on the platforms at Penn Station New York used by Amtrak and LIRR, renew track and track-bed infrastructure in East River Tunnels 3 & 4, and install a new fully operational AC-DC traction power substation to replace a substation that was damaged by Hurricane Sandy. These projects would improve reliability and reduce delays and maintenance costs by replacing and/or upgrading existing equipment. Some funding for these improvements is available. Additional funding is required for other improvements.

Total Project Cost Estimate: $88,500,000

Project Schedule:

- Construction: Jan 2017 - Dec 2022

FY19 Information

FY19 Planned Expenditure: $5,500,000

FY19 Planned Activities: Stray Current work anticipated in 2019 = _____. Communications Antenna replacement will continue in ERT 3 or 4. Total track replacement will continue in ERT Line 4 pending available weekend outages (ERT Line 3 was completed in 2016). (The 1st Avenue substation replacement will not be included in the 2019 work, since this project will be completed in Fall 2018.)

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Other from Amtrak. For the Line 4 total track replacement, and Communications Antenna replacement in Lines 3 and 4, the LIRR's share of the cost will be 100% per the Joint facilities Agreement with Amtrak.
- Project Agreement status: N/A
- Track outages: Yes.

Notes

Penn Station New York - LIRR Projects

- **Coordinating Agency:** Long Island Rail Road
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will widen and raise the ceiling of the 33rd Street Corridor at Penn Station New York. This project will also repair and improve other assets at Penn Station New York. Work would include replacing elevators and escalators, upgrading customer service facilities, installing new HVAC equipment, improving lighting, and rehabilitating platforms. Elevators and escalators assets have reached the end of their useful life, stairways are in poor condition, and rehabilitation or upgrades are needed to HVAC, platforms, and lighting. Some funding for these improvements is available. Additional funding is required for other improvements.

Total Project Cost Estimate: $253,500,000

Project Schedule:

- Construction: Jan 2017 - Dec 2020

FY19 Information

FY19 Planned Expenditure: TBD based on the completed designs

FY19 Planned Activities: If the Governor's initiative for the 33rd Street corridor expansion at Penn Station is approved, construction will begin in September 2019, which will include lighting improvements. Refurbishment of elevators and escalators will continue, and staircase replacements. The installation of a heating plant will be ongoing as part of the HVAC system replacement. Platform #9 construction will commence, to include lighting, line-of-sight ceiling, column cladding, granite floor tiles, painting and tactile strips.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Since all of the improvements will be on LIRR leased Amtrak territory, the LIRR will pay 100% of all costs.
- Project Agreement status: N/A
- Track outages: Yes.

Notes

The MTA Board amended the MTA 2015-19 Capital Program in February 2017 to include the new Penn Station-33rd Street Corridor project, which would improve customer experience and flow throughout the LIRR concourse with additional space, upgraded lighting, and digital information screens. February 2018 Update: 30% Penn Station Critical Improvements Design complete 8/2017; HVAC 60% Design complete 10/2017; Platform Survey and Design awarded 8/2017; Elevator and Escalator Refurbishment awarded 8/2017.

River-to-River Rail Resiliency Projects (R4)

- **Coordinating Agency:** Long Island Rail Road
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This program will protect the East River Tunnels and the West Side Yard against flood hazards to ensure connectivity at New York Penn Station for Amtrak, LIRR, and NJ TRANSIT. The program consists of multiple elements, including West Side Yard perimeter protection and drainage improvements, hardening the Queens Portals of the East River Tunnels, resiliency improvements within the East River Tunnels, including the installation of permanent emergency generators, and waterproofing of the entrances and manhole/conduit points of entry to two ventilation facilities.

Total Project Cost Estimate: $108,100,000

Project Schedule:

- Feasibility/Conceptual Design: Sep 2016 - Oct 2018
- Construction: Start 2019

FY19 Information

FY19 Planned Expenditure: $20,000,000

FY19 Planned Activities: 2019 activities: Construction of the Queens Portals flood walls. The construction of the West Side Yard flood walls will need to be coordinated with the Related Developer's construction of the WSY Overbuild Project.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Since all of the improvements will be on LIRR Queens, NY territory, the LIRR will pay 100% of all costs.
- Project Agreement status: N/A
- Track outages: Yes.

Notes

Special Projects: Maryland DOT (Improvements)

BWI Thurgood Marshall Airport Station Interim Improvements

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will complete renovation of the existing BWI Thurgood Marshall Airport Station building to provide improved customer service, accessibility, and security. The project involves interior station improvements including new ADA-compliant restrooms; updated interior finishes and lighting; exterior station improvements to windows, the roof and canopies.

Total Project Cost Estimate: $9,502,000

Project Schedule:

- PE/NEPA: Oct 2013 - Jan 2014
- Final Design: Dec 2013 - Oct 2016
- Construction: Mar 2018 - May 2019

FY19 Information

FY19 Planned Expenditure: $6,274,000

FY19 Planned Activities: Planned activities for FY19 include continuation of construction. BGE transformer arriving in August to be connected and then moved from station to trailer.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak. Site overseeing, escorting and flagging.
- Project Agreement status: Project Initiation 75 in place for construction.
- Track outages: No track outages.

Notes

Hanson Interlocking

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project would improve operational flexibility at New Carrollton station and reduce delays for Amtrak and MARC service. A new interlocking would allow universal moves and reduce conflicts that occur when trains must pass other trains stopped at New Carrollton. Construction of Hanson Interlocking would also advance a state of good repair by allowing for the retirement of aging Landover Interlocking.

Total Project Cost Estimate: $90,000,000

Project Schedule:

- Feasibility/Conceptual Design: Jun 2007 - Jun 2009
- Final Design: Jun 2007 - Jul 2009
- Construction: Oct 2011 - Dec 2023

FY19 Information

FY19 Planned Expenditure: $30,000,000

FY19 Planned Activities: Planned activities for FY19 include installation of: catenary poles, C&S huts & signal wire, signal bridges, and crossovers.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak. Access/Protection needed from March 2018 to June 2019.
- Project Agreement status: MTA's contribution amount of $10,000,000 was met in FY18. All remaining work will be paid under a full executed cost-sharing agreement. (Amtrak-MTA Access Agreement, Amendment No. 4).
- Track outages: Track and catenary outages will be required between Landover, MP 129.5 and Carroll, MP 128 on a regular basis to provide a means to expedite work performed by contractors & Amtrak's workforce.

Notes

MARC Storage Improvements - Martin Airport

- **Coordinating Agency:** Maryland DOT
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will construct additional storage tracks and related infrastructure at the Martin State Airport Facility. MARC trains lack adequate storage along the Penn Line and often are required to run empty trains between Perryville and Baltimore, MD, using up track capacity and increasing operating costs.

Total Project Cost Estimate: $16,465,000

Project Schedule:

- PE/NEPA: Apr 2016 - Apr 2019
- Final Design: May 2016 - Mar
- Construction: Jun 2018 - Dec 2019

FY19 Information

FY19 Planned Expenditure: $2,247,000

FY19 Planned Activities: FY19 planned activities include real estate acquisition. MTA RE will either negotiate for purchase of required ROW or successful condemnation through legal proceedings. Additional, delivery of design to MTA Procurement for Advertisement of Invitation for bid contingent on real estate acquisition.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
    - Access/Protection from Amtrak. Access/Protection from Amtrak.
- Project Agreement status: Project Initiation (PI) Agreements for the project costs allocated to Amtrak.
- Track outages: No track outages on the NEC during FY19.

Notes

Back Bay Concourse Improvements

- **Coordinating Agency:** MBTA
- **Partner Agency:** Amtrak, MassDOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: Boston Properties (BP) has signed a long term lease and has assumed operational control of the concourse level of Back Bay Station. In accordance with the lease agreement, Boston Properties will be responsible for the maintenance, security, repairs and cleaning of the concourse level of the station. BP is also responsible for designing and constructing $32M of major concourse level station improvements including; new entrance doors, windows, lighting, renovated rest rooms, new retail space and public waiting areas, and a revised concourse layout.

Total Project Cost Estimate: $32,000,000

Project Schedule:

- Final Design: Aug 2015 - Jun 2019

FY19 Information

FY19 Planned Expenditure: $2,000,000

FY19 Planned Activities: Boston Properties (BP) has signed a long term lease and has assumed operational control of the concourse level of Back Bay Station. In accordance with the lease agreement, Boston Properties will be responsible for the maintenance, security, repairs and cleaning of the concourse level of the station. BP is also responsible for designing and constructing $32M of major concourse level station improvements including; new entrance doors, windows, lighting, renovated rest rooms, new retail space and public waiting areas, and a revised concourse layout.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
- Project Agreement status: No.
- Track outages: N/A

Notes

BP will progress their design sometime in 2018, and will likely extend the completion date into 2019.

Back Bay Station Leasehold Improvements

- **Coordinating Agency:** MBTA
- **Partner Agency:** MassDOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will upgrade power and other mechanical improvements to the concourse to enable renovation/ upgrades.

Total Project Cost Estimate: $6,000,000

Project Schedule:

- Feasibility/Conceptual Design: Jan 2018 - Jul 2018
- Full Design: Sep 2018 - May 2019
- Construction: Jul 2019 - Jul 2020

FY19 Information

FY19 Planned Expenditure: $1,000,000

FY19 Planned Activities: Study infrastructure needs, such as power and mechanical system upgrades, commence full design, and bid work

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
- Project Agreement status: No.
- Track outages: N/A

Notes

We need to upgrade power within the station to handle future renovations and development. We are performing early scoping under a current task and once the new scope is identified, a separate task will be developed and the costs tracked.

Back Bay Station Stairway Pressurization Package 1

- **Coordinating Agency:** MBTA
- **Partner Agency:** Amtrak, MassDOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: Ventilation Package No. 1 will provide for the design and construction of pressurized Stairways No.'s 5 and 6 for Tracks and Platforms No.'s 1, 2 and 3 to significantly reduce the diesel fumes migrating up to the concourse level.

Total Project Cost Estimate: $5,000,000

Project Schedule:

- Construction: Mar 2018 - Mar 2019

FY19 Information

FY19 Planned Expenditure: $5,000,000

FY19 Planned Activities: Complete installation of Stairs 5 and 6 ventilation systems

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
- Project Agreement status: No.
- Track outages: N/A

Notes

Back Bay Station Platform Ventilation Package 2

- **Coordinating Agency:** MBTA
- **Partner Agency:** Amtrak, MassDOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: Ventilation package No. 2 will provide for the design and construction of an advanced ventilation system at the track and platform level. This will help remove diesel fumes from the Tracks and Platforms No.'s 1, 2 and 3. The air flows are currently being modeled and will render a preferred design solution.

Total Project Cost Estimate: $7,000,000

Project Schedule:

- Feasibility/Conceptual Design: Jun 2017 - Oct 2018
- Full Design: Nov 2018 - May 2019
- Construction: Jul 2019 - Jun 2020

FY19 Information

FY19 Planned Expenditure: $1,000,000

FY19 Planned Activities: We are engaged in the conceptual/preliminary design phase and are working with a citizens advisory committee on ventilation options. We expect to be in full design in FY2019 and for that design to be completed by the end of the FY.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
- Project Agreement status: No.
- Track outages: N/A

Notes

Boston South Station

- **Coordinating Agency: MBTA**
- **Partner Agency: Amtrak**
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project would expand Boston South Station for future growth. The terminal is currently operating at capacity, in terms of train movements and passengers, creating a significant bottleneck and a major obstacle to service expansion. State funding and a HSIPR grant are funding preliminary engineering and environmental review. Additional funding is required for final design and construction.

Total Project Cost Estimate: TBD

Project Schedule:

- PE/NEPA: Jul 2012 - Dec 2019
- Final Design:
- Construction:

FY19 Information

FY19 Planned Expenditure: $831,772

FY19 Planned Activities: 1. Completion of Preliminary Engineering Plans and response to comments; 2. Completion of Station Ventilation Study; 3. NEC Future Assessment; 4. Finalize Rail and Transit Operational Report; 5. Complete Existing Conditions report if additional access is provided to USPS and Layover sites; 6. Finalize Construction Phasing Plan and Schedule; 7. Complete Funding Strategy Report; 8. Complete Project Readiness Document; and 9. Ongoing stakeholder and project coordination.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MBTA. Final review of preliminary engineering plans, station ventilation study, and project readiness document.
  - Design Review from Amtrak. Review of station ventilation study and project readiness document.
- Project Agreement status: N/A
- Track outages: N/A

Notes

Boston South Station Component: Tower 1

- **Coordinating Agency:** MBTA
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: The examination of Tower 1 Interlocking is part of the Boston South Station Expansion (SSX) project. MassDOT and the MBTA have determined that this task could be implemented separately from the entire SSX project and provide more immediate operational improvements, but not preclude future expansion. Additional grant funds remain after completion of SSX preliminary engineering. With FRA's approval, MassDOT is examining this redesign project. The goal of the Tower 1 Early Implementation project is to address current reliability and resiliency issues that occur within this critical interlocking immediately south of South Station. The existing systems in place at Tower 1 are somewhat obsolete and prone to increased maintenance and decreased reliability. This project would address numerous issues contributing to operational deficiencies, including: replace the existing signal system, address differential settlement at switch points, heat switches so they don't freeze during winter months, and provide troughs to allow easier access to wires and cables. The improvements proposed will improve service reliability and provide operational flexibility. This project includes conceptual, preliminary, and final engineering design.

Total Project Cost Estimate: $0 (included in Boston South Station total)

Project Schedule:

- Final Design: Mar 2018 - Dec 2019

FY19 Information

FY19 Planned Expenditure: $2,235,273

FY19 Planned Activities: 1. Ongoing Tower 1 design and agency/stakeholder coordination; 2. 30% Tower 1 design to MassDOT/MBTA/Amtrak/FRA - October 2018; 3. 60% Tower 1 design to MassDOT/MBTA/Amtrak/FRA - April 2019; and 4. 90% Tower 1 design to MassDOT/MBTA/Amtrak/FRA - August 2019.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MBTA. Review of Tower 1 design submissions
  - Design Review from Amtrak. Review of Tower 1 design submissions
  - Access/Protection from Amtrak. Access to Tower 1 for existing conditions confirmation
- Project Agreement status: N/A
- Track outages: N/A

Notes

MBTA Station Improvements - Ruggles Street Station

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will construct a new platform and make other improvements at Ruggles Station to enable all inbound and outbound MBTA trains to serve the station and to increase system capacity along this segment of the NEC. The project will improve accessibility by upgrading the existing elevators and adding one new elevator in the lower busway, and make interior and exterior repairs to bring the station to code. A TIGER grant partially funds this project, which is part of a larger initiative to modernize the Ruggles Station which requires additional funding for full construction.

Total Project Cost Estimate: $36,500,000

Project Schedule:

- Final Design: Mar 2012 - Jan 2017
- Construction: Feb 2017 - Mar 2019
- Feasibility/Conceptual Design: 2020 - 2021

FY19 Information

FY19 Planned Expenditure: $12,000,402

FY19 Planned Activities: The construction of the new platform, complete accessible paths and concrete sidewalks, replace four (4) existing elevators and construct one (1) new elevator in the lower busway and complete all remaining work. Preliminary design work to be completed to address alternate accessible egress for the Orange Line platforms.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak for the entire duration October 2018 to September 2019
  - Force Account Labor from Amtrak for catenary work.
- Project Agreement status: Yes.
- Track outages: There is a P.I. Agreement between Amtrak and MBTA.

Notes

Ruggles Station will later undergo more construction under a modernization and improvement. RFP will be needed for the design.

MBTA Station Improvements - South Attleboro Station

- **Coordinating Agency:** MBTA
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will improve South Attleboro Station including rehabilitation of stairways, pedestrian walkways, establishment of a new bus stop for RIPTA, accessible parking improvements, pedestrian crossings, and two side-by-side mini-high platforms. Emergency repairs currently are underway, but permanent improvements are needed.

Total Project Cost Estimate: $3,900,000

Project Schedule:

- Final Design: Jul 2016 - Jun 2017
- Construction: 2018 - 2020

FY19 Information

FY19 Planned Expenditure: $500,000

FY19 Planned Activities: Design contract awarded August 2018 for 1 year duration

FY19 Cross-Agency Coordination:

- Resource needs from other agencies: N/A
- Project Agreement status: N/A
- Track outages: N/A

Notes

Amtrak flagging will be required for future improvement work. Major platform level work and station work, if the major improvement option is implemented (based on funding) will require station outage.

Penn Station Access

- **Coordinating Agency:** Metro-North Railroad
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will open a new Metro-North Railroad link directly into Penn Station New York from the New Haven Line in Westchester and the State of Connecticut. Four new Metro-North stations will be built in the Bronx – near Co-op City, Morris Park, Parkchester/Van Nest, and Hunts Point. The project also includes upgrading the power and signal systems along the Hell Gate Line; adding new interlockings and tracks, and modifying existing ones and curves on a portion of the line; modifying existing over-the-street railroad bridges as necessary; and reinforcing the Bronx River Bridge.

Approved Project Funding: $695,000,000

Project Schedule: Project in the early stages of development. Information regarding Capital Delivery Phases to be established at a later date.

FY19 Information

FY19 Planned Expenditure: $26,000,000

FY19 Planned Activities: It is anticipated that the General Engineering contract will be awarded and preliminary design will be underway. In addition, the environmental assessment will be prepared and coordination with FTA ongoing.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak. Technical review during design phase.
- Project Agreement status: N/A.
- Track outages: N/A.

Notes

Harold Interlocking

- **Coordinating Agency:** MTA Capital Construction
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will construct new conflict-free train routes through Harold Interlocking, the busiest switch point on the NEC. Located in Queens, NY, this interlocking sorts Amtrak, LIRR, and NJ TRANSIT trains as they travel north and east of Penn Station or access Sunnyside Yard for service and storage.

Total Project Cost Estimate: $763,870,448

Project Schedule:

- Construction: End Jul 2025 Schedule under review pending Amtrak staffing commitments

FY19 Information

FY19 Planned Expenditure: $14,000,000

FY19 Planned Activities: Complete trackwork connection to Westbound Bypass approach; project and program management.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Continued staff resources assigned to ESA work by Amtrak and LIRR
- Project Agreement status: All agreements are currently in place for the above work.
- Track outages: Project continues to coordinate with Amtrak and LIRR to obtain outages as needed.

Notes

Staffing Needs: The Harold Interlocking project relies on Amtrak for direct force account construction and 3rd party contractor access and protection including additional ET personnel, Communication and Signal staff, track foremen and watchmen. MTACC and Amtrak will review staffing agreements with the goal of maximizing productivity based on reliable levels of support in light of competing regional priorities. Similarly, the project relies on the LIRR force account for direct construction and access and protection services. The LIRR forces include flagmen, 3rd rail protection, and track foreman in support of the 3rd party construction as well as signalmen, 3rd rail and track staff for direct force account construction. Again, MTACC works with the LIRR to maximize force account resources available to support the project.

Special Projects: NJ TRANSIT (Improvements)

Delco Lead Project

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will construct a safe haven storage facility on the NEC south of the New Brunswick station to protect rail rolling stock against damage resulting from a storm surge. A service and inspection facility that is part of the project will facilitate the rapid return of equipment to service following a storm event. This project is supported by FTA Emergency Relief Program funds. Phase I of the Delco Lead Project is the County Yard project which will expand the existing County Storage Yard from its current footprint to include an unused part of an adjacent rail freight yard. The Delco Lead project, with County Yard improvements, will provide safe storage capacity for up to 444 rail cars in the event of flooding at other locations.

Total Project Cost Estimate: $245,992,000

Project Schedule:

- PE/NEPA: Oct 2014 - Feb 2016
- Final Design: Mar 2016 - May 2018
- Construction: Feb 2019 - Apr 2022

FY19 Information

FY19 Planned Expenditure: $20,000,000

FY19 Planned Activities: Notice-to-Proceed is anticipated to be issued for Construction Contract GC.01 in September 2018, allowing work to begin in the field. The activities for Construction Contract GC.02 are expected to advance to the 100% level of design completion. Thereafter, the contract will be advertised, bid and awarded with an anticipated NTP issued in July 2019.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak: Flag protection services will be required as work will be taking place near and adjacent to the NEC.
  - Force Account Labor from Amtrak: Some force account work may be required in order to tie-in the newly rehabilitated tracks into the existing NEC.
- Project Agreement status: Project Initiation (PI) forms are in the process of being executed between NJ Transit and Amtrak.
- Track outages: An occasional track outage is anticipated to be required to support the work of the Contractor.

Notes

Elizabeth Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project would reconstruct two side high-level concrete passenger platforms and two station buildings including new elevators, stairs, ticketing offices, operational office spaces, and retail spaces. Additional funding is required for design and construction.

Total Project Cost Estimate: $54,920,000

Project Schedule:

- PE/NEPA: Jan 2012 - Dec 2012
- Final Design: Jan 2013 - Dec 2015
- Final Design: Jun 2018 - Dec 2022
- Construction: Jun 2018 - Dec 2022

FY19 Information

FY19 Planned Expenditure: $15,000,000

FY19 Planned Activities: Notice-to-Proceed is anticipated to be issued to the successful bidder, allowing construction work to proceed.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak: Flag protection services will be required in support of the construction of the Project.
- Project Agreement status: Project Initiation (PI) forms are in the process of being executed between NJ Transit and Amtrak.
- Track outages: As this is a major platform construction project, track outages will are anticipated to be required to support the work of the Contractor.

Notes

This project is being advanced under a "Design / Build" concept. A 30% level design package was completed by NJ TRANSIT's internal staff. The contractor / engineering team will complete the design as well as construct the project.

New Brunswick Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project would extend the current eastbound platform at New Brunswick Station by approximately 230 feet. Additional funding is required to design and construct an extension of the westbound platform and upgrade customer amenities at the station. The station is slated to undergo significant rehabilitation of its exterior brick façade; installation of new lighting, windows, HVAC system, and escalator; and painting.

Total Project Cost Estimate: $21,791,000

Project Schedule:

- Feasibility/Conceptual Design: May 2007 - May 2012
- Final Design: Jun 2012 - May 2019
- Construction: Dec 2010 - Mar 2022

FY19 Information

FY19 Planned Expenditure: $4,000,000

FY19 Planned Activities: Obtain NJ Transit Board approval to begin the rehabilitation of the Elevator Tower. Advertise, Bid and Award the Escalator Replacement contract. Advance the design of the Walkway Overpass to a 100% level of design completion and advertise the construction contract. The design phase of the platform extension project will be completed and, the construction contract is anticipated to be publicly advertised.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak: Some of the design activities are nearing completion, but still require Amtrak review, approval and signoff.
  - Access/Protection from Amtrak: Flag protection services will be called upon as needed in order to support the work in the field.
- Project Agreement status: Project Initiation (PI) forms are in the process of being executed between NJ Transit and Amtrak.
- Track outages: Track outages are not anticipated, but might be occasionally required to support the work of the Contractor.

Notes

This Project is delineated into 8 separate components. Each has a separate start and completion date for each phase of the Project; New Elevator Tower; Pedestrian Walkway Overpass; Elevator Rehabilitation; Escalator Replacement; Escalator Rehabilitation; NEC Eastbound Extension; Station Repairs and, Soft Costs.

NJ TRANSITGRID

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will create a microgrid power generation and distribution system as a backup to the regional power network, allowing transit systems to function during storms or other times when the centralized power grid is compromised. NJ TRANSITGRID will incorporate renewable energy, distribution generation, and other technologies to provide resilient power to key NJ TRANSIT stations, maintenance facilities, bus garages, and other buildings. The project will also provide resilient electric traction power to NJ TRANSIT trains on critical corridors, including portions of the NEC, to continue to operate even when the traditional power grid fails.

Total Project Cost Estimate: $577,353,000

Project Schedule:

- PE/NEPA: Dec 2014 - May 2017
- Final Design: Feb 2017 - Jan 2019
- Construction: Mar 2019 - May 2023

FY19 Information

FY19 Planned Expenditure: $35,000,000

FY19 Planned Activities: Advance the designs of both the Distributed Generation (DG) system and the Central Power Plant (CPP) to a 20% level of completion; Advertise, Bid and Award both the DG and CPP contacts. Issue Notice-to-Proceed to the DBOM contract for the Central Power Plant.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak: The Project Management staffs of Amtrak's Catenary and Electric Traction Power departments will be called upon to review and approve of the design plans and specifications for the DG and CPP Projects.
  - Access/Protection from Amtrak: Flag protection services will be required along the NEC as the tie-in work begins.
  - Force Account Labor from Amtrak: Amtrak's Catenary and Electric Traction Power force account personnel will more than likely be required to tie-in the new electrical systems into the old, existing systems.
- Project Agreement status: NJ Transit is assuming all design, construction and management costs for the project
- Track outages: Some track outages may occasionally be required along both the NEC and NJ Transit's Main Line to tie-in the new electrical grid system with the existing electric traction power system feeding both rail lines.

Notes

The project is generally fully funded with a mixture of State, Federal and other local funds.

Princeton Junction Station

- **Coordinating Agency:** NJ TRANSIT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will install a tactile edge panel at each of the three platforms where passengers load onto trains bound for Trenton and Newark as well as the local Dinky to Princeton. Interim repairs to the platforms will also be undertaken as needed.

Total Project Cost Estimate: $1,000,000

Project Schedule:

- Final Design: Jul 2011 - Oct 2011
- Construction: Apr 2019 - Dec 2019

FY19 Information

FY19 Planned Expenditure: $600,000

FY19 Planned Activities: Award the construction contract and issue Notice-to-Proceed to the winning Contractor to begin the platform rehabilitation work.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak: Amtrak flag protection will be needed to provide safety to the construction personnel.
- Project Agreement status: Project Initiation (PI) forms are in the process of being executed between NJ Transit and Amtrak.
- Track outages: An occasional track outage might be required as the work entails repairing the edges of the platforms that are nearest the NEC tracks.

Notes

Special Projects: Pennsylvania DOT (Improvements)

Harrisburg Line Station Improvements

- **Coordinating Agency:** Pennsylvania DOT
- **Partner Agency:** Amtrak, Federal Transit Administration.
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will eventually modernize virtually all of the Amtrak stations along the Harrisburg Line. PennDOT is leading construction of five new stations at Middletown, Mount Joy, Coatesville, Parkesburg, and Downingtown. All of the new stations will provide ADA access with high-level boarding platforms, improved/expanded parking, and multimodal connections. These projects will improve the passenger experience and lead to community and economic development. Middletown, Mount Joy, and Coatesville are fully funded while Parkesburg and Downingtown still requires additional funding for construction.

Total Project Cost Estimate: $160,000,000

Project Schedule:

- Construction: End 2025
- Construction: Start 2025

FY19 Information

FY19 Planned Expenditure: N/A

FY19 Planned Activities: N/A

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - N/A
- Project Agreement status: N/A
- Track outages: N/A

Notes

Completion of station projects is dependent on availability of Amtrak labor. Benefit: Middletown (sole – Amtrak), Mount joy (sole – Amtrak), Coatesville (sole – Amtrak), Parkesburg (sole – Amtrak), Downingtown (shared – Amtrak & SEPTA)

Special Projects: Rhode Island DOT (Improvements)

Pawtucket/ Central Falls Station

- **Coordinating Agency:** Rhode Island DOT
- **Partner Agency:** MBTA
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will build a new infill commuter rail station along MBTA's Providence Line in Pawtucket, RI with an anticipated opening in 2021/2022. The scope includes station platforms, a pedestrian overpass, and associated pedestrian access points. The project was the recipient of a 2016 USDOT TIGER Award.

Total Project Cost Estimate: $40,000,000

Project Schedule:

- Feasibility/Conceptual Design: End Jun 2007
- PE/NEPA: End Apr 2018
- Final Design: Nov 2018 - Aug 2019
- Construction: Apr 2019 - Jul 2022

FY19 Information

FY19 Planned Expenditure: $8,000,000

FY19 Planned Activities: A design/build procurement is currently under way. The DB team is expected to be awarded and final design completed in FFY19.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from MBTA
  - Design Review from Amtrak.
  - Access/Protection from Amtrak.
  - Force Account Labor from Amtrak.
- Project Agreement status: Finalizing force account agreement with Amtrak.
- Track outages: Yes. Station construction will include appropriate track infrastructure, platforms and catenary modifications near MP 189.7.

Notes

RIDOT Stations: Warwick/ T.F. Green Airport

- **Coordinating Agency:** Rhode Island DOT
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project would expand Warwick/T.F. Green Airport rail station which opened in 2010. In that project, Rhode Island DOT constructed a station house and a single high-level platform to support the introduction of MBTA commuter rail services to the Airport and to new communities south of Providence. For this project, RIDOT and Amtrak have proposed expanding the station with additional track and platform capacity to accommodate intercity rail.

Total Project Cost Estimate: $110,000,000

Project Schedule:

- Feasibility/Conceptual Design: Sep 2016 - Apr 2017
- Engineering Study: Jul 2018 - Jun 2019
- PE/NEPA: Oct 2019 - Sep 2020
- Final Design: Oct 2020 - Sep 2021
- Construction: Oct 2021 - Sep 2023

FY19 Information

FY19 Planned Expenditure: $500,000

FY19 Planned Activities: RIDOT and Amtrak will jointly conduct a study of the infrastructure and costs associated with bringing intercity service to TF Green. This analysis is intended to be a precursor to preliminary engineering.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Project Management from Amtrak. Shared oversight of the engineering study with Amtrak.
- Project Agreement status: Agreement anticipated in FFY 2018.
- Track outages: No.

Notes

30th Street West Catenary Replacement

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will replace and modernize the SEPTA overhead catenary system from 30th Street Station westbound to K and Zoo Interlockings, an area that includes SEPTA's Powelton Yard. Work also includes repairs to aging catenary support structures, foundations, retaining walls, tunnels, and site drainage.

Total Project Cost Estimate: $77,000,000

Project Schedule:

- Design: Feb 2015 - Dec 2018
- Construction: Oct 2019 - Oct 2022

FY19 Information

FY19 Planned Expenditure: $2,200,000

FY19 Planned Activities: During FY19 design will be finalized and the project will be bid. Construction is expected to start at the beginning of FY20.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak will be needed.
  - Access/Protection from Amtrak will be needed during the construction phase of the project (FY20).
- Project Agreement status: Agreements are executed for the design review.
- Track outages: Track outages will be required for certain construction activities. No outages will be needed in FY19.

Notes

Ardmore Station ADA Improvements

- **Coordinating Agency:** SEPTA
- **Partner Agency:** Amtrak, Pennsylvania DOT
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will make ADA improvements to Ardmore Station on SEPTA's Paoli/Thorndale Regional Rail Line and Amtrak's Keystone Corridor to make the station fully ADA compliant. The project includes a new station building, high-level platforms, modifications to the existing pedestrian tunnel, new canopies and passenger shelters, and site and circulation improvements. There is a separate project for construction of a parking garage at the station (see Ardmore Station Parking Improvements in the FY19-23 NEC Capital Investment Plan). SEPTA currently leases this station from Amtrak.

Total Project Cost Estimate: $36,290,000

Project Schedule:

- Construction: Mar 2019 - Oct 2021

FY19 Information

FY19 Planned Expenditure: $1,256,448

FY19 Planned Activities: The project will be bid in the fall of 2018 and construction is expected to begin in the spring of 2019. The project schedule is contingent upon availability of Amtrak support.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak is needed for construction.
- Project Agreement status: The project agreement is currently in development.
- Track outages: Track outages will be needed during construction.

Notes

Exton Station Improvements

- **Coordinating Agency:** SEPTA
- **Partner Agency:** Pennsylvania DOT, Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will provide for overall improvements to Exton Station on SEPTA's Paoli/Thorndale Regional Rail Line and Amtrak's Keystone Corridor and includes full-length high-level boarding platforms. Work includes construction of high-level boarding platforms, ramps and stairs, a new station building, new canopies, and shelters. The project will bring the station to a state of good repair and make the station ADA compliant. SEPTA currently leases this station from Amtrak.

Total Project Cost Estimate: $24,420,000

Project Schedule:

- Construction: Jun 2015 - Apr 2019

FY19 Information

FY19 Planned Expenditure: $6,679,800

FY19 Planned Activities: Planned activities for FY19 include the continuation and substantial completion of construction.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Access/Protection from Amtrak will continue to be needed for construction work.
- Project Agreement status: The project agreement is executed.
- Track outages: Track outages are needed during construction.

Notes

Frazer Rail Shop and Yard Upgrade

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will make significant renovations and expand the Frazer Rail Shop and Yard facilities. SEPTA procured new locomotives and a fleet of multi-level cars for the Regional Rail System and needs these investments to accommodate the increased fleet size. Phase 1 of this project included significant earthwork and stormwater improvements at the 40-acre site to create space for additional yard tracks. Phases 2 and 3 of work will include extending three existing storage tracks and adding three new storage tracks; major upgrades to the repair shop and equipment, including the wheel truing machine and drop table; construction of a shop extension, new cleaning track, vehicle washer building, and yardmaster building; and utility upgrades. Also, the roof will be upgraded and mechanical equipment and electrical connections will be replaced.

Total Project Cost Estimate: $139,000,000

Project Schedule:

- Construction: Mar 2016 - Sep 2022

FY19 Information

FY19 Planned Expenditure: $12,875,408

FY19 Planned Activities: Planned activities for FY19 include the completion of Phase 2 construction, completion of Phase 3 design and bidding of Phase 3 construction.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies: N/A.
- Project Agreement status: N/A.
- Track outages: N/A.

Notes

Southwest Connection Improvement Program (formerly 30th Street to Phil Signals, Catenary and ROW Improvements)

- **Coordinating Agency:** SEPTA
- **Partner Agency:** Amtrak
- **Type:** Improvement
- **Benefit:** Shared

Project Information

Project Scope: This project will reconfigure and rebuild Regional Rail signals, track, catenary, and interlockings from 30th Street Station to Phil Interlocking (in University City). Work includes new track special work, Overhead Contact Systems (OCS), and switch and lock mechanisms, as well as the addition of new Positive Train Control (PTC) systems. Also, the existing signal block layout will be modified. Design and construction will progress in phases with construction outages scheduled for the summer of 2018, 2019 and 2020. As part of the project, SEPTA will assume maintenance responsibility for Amtrak's tracks on a segment where SEPTA is the sole operator.

Total Project Cost Estimate: $45,900,000

Project Schedule:

- Construction: Mar 2017 - Dec 2020

FY19 Information

FY19 Planned Expenditure: $14,639,988

FY19 Planned Activities: During FY19 design will be finalized and construction will continue with planned summer outages.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak will be needed. The project is being advanced in phases, which explains the design review during construction.
  - Access/Protection from Amtrak will be needed for certain outages.
- Project Agreement status: Agreements are executed and pending for design review (there are multiple design elements and agreements). Agreements may be needed to support future track outages.
- Track outages: Track outages are scheduled for the summer of 2019 and 2020.

Notes

Villanova Station Improvements

- **Coordinating Agency:** SEPTA
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: This project will modernize Villanova Station on SEPTA's Paoli/Thorndale Regional Rail Line. Work includes high-level platforms with canopies, a new pedestrian underpass with ramps and stairs, station building exterior improvements, parking lot modifications, stormwater management, and new signage, lighting, passenger amenities, and landscaping. The improvements will make the station fully ADA accessible. The project will be advanced in phases. Phase 1 will improve station accessibility through the construction of a new pedestrian tunnel with access ramps and stairs, and modify the parking lot to improve stormwater management. Phase 2 will build high-level platforms, canopies, and an improved station building. SEPTA currently leases this station from Amtrak.

Total Project Cost Estimate: $32,200,000

Project Schedule:

- Phase 1 Construction: Apr 2016 - Sep 2018
- Phase 2 Construction: Jan 2025 - Jun 2028

FY19 Information

FY19 Planned Expenditure: $2,542,558

FY19 Planned Activities: Planned activities in FY19 include the close-out of Phase 1 construction and completion of Phase 2 design.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak is needed for Phase 2.
  - Access/Protection from Amtrak is needed for Phase 2 construction, which is currently planned for FY25.
- Project Agreement status: Agreements are executed for Phase I construction and Phase 2 design review.
- Track outages: Track outages are needed during construction but none are needed for FY19.

Notes

VRE Midday Storage Facility

- **Coordinating Agency:** VRE
- **Partner Agency:**
- **Type:** Improvement
- **Benefit:** Sole

Project Information

Project Scope: The Midday Storage Facility project will replace the current storage space leased from Amtrak at the Ivy City Coach Yard in the District of Columbia. The project will include planning, designing, and constructing a permanent midday storage facility for VRE trains that travel to the District. The proposed facility will be used to store commuter trains on weekdays between the inbound morning commute and the outbound afternoon commute.

Total Project Cost Estimate: $89,666,508

Project Schedule:

- Development: Jun 2015 - Dec 2019
- Final Design & Property Acquisition: Jun 2018 - Jan 2019
- Construction: Jul 2020 - Dec 2021

FY19 Information

FY19 Planned Expenditure: $17,650,000

FY19 Planned Activities: Confirm State of Good Repair (SGR) option; initiate preliminary design; receive NEPA clearance from FTA; initiate RE acquisition process; execute design and real estate agreement with Amtrak.

FY19 Cross-Agency Coordination:

- Resource needs from other agencies:
  - Design Review from Amtrak. Design review of current State of Good Repair (SGR) option to confirm engineering and operational issues during upcoming preliminary design effort.
- Project Agreement status: N/A
- Track outages: N/A

Notes

Capital Renewal Appendix

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Appendix A: Amtrak Projects over $5M

Amtrak's submission to the FY19 One-Year Implementation Plan included improved geographic specificity and additional scope, schedule, and budget details, including **projects with a total lifecycle cost over $5M**. Within this category, Amtrak prioritized projects that already existed in its internal tracking systems as stand-alone projects, such as "Safe Harbor Frequency Converter Replacement Project." It did not provide enhanced plan information for projects over $5M that currently reside within a "program" (i.e., which Amtrak defines as a collection of similar or related projects managed in a coordinated way), such as "Amtrak NEC Frequency Converter Upgrades."

List of Amtrak Projects over $5M

1. Mystic, CT Interlocking Renewal Project (BCC Segment 4)
2. Q Interlocking C&S Equipment Replacement Project (BCC Segment 9)
3. East River Tunnels Track Replacement Project (BCC Segment 10)
4. Turn Penn Station NY - Infrastructure Renewal Program (BCC Segment 11)
5. Penn Station NY Scada Phase II Project (BCC Segment 11)
6. Clark to Ham Constant Tension Upgrade Project (BCC Segment 12)
7. Fair Interlocking Renewal Project (BCC Segment 12)
8. Kearny to Waverly - Transmission Tower Upgrade Project (BCC Segment 12)
9. Metuchen Frequency Converter - Equipment Upgrades Project (BCC Segment 12)
10. New Hackensack Substation 42 Control House Project (BCC Segment 12)
11. Trenton, NJ Interchange Extension Project (BCC Segment 12)
12. 30th St Station Façade Restoration Project (BCC Segment 17)
13. 30th Street Station Roof Replacement Project (BCC Segment 17)
14. Brandy to Ragan Section Improvements Project (BCC Segment 20)
15. Perry Interlocking Renewal Project (BCC Segment 22)
16. Zoo to Paoli Catenary Structure Upgrade Project (BCC Segment 29)
17. Conestoga to Royalton Transmission Line Replacement Project (BCC Segment 31)
18. NEC CETC Consolidation Project (BCC Segment 31)
19. Safe Harbor Frequency Converter Replacement Project (BCC Segment 31)
20. Supervisory Control Data Acquisition (SCADA) Replacement Project (BCC Segment 31)
21. Sunnyside Yard Frequency Converter Upgrade Project (BCC Segment 31)
22. Washington to Boston ARINC to AMTEC Software Upgrade Project (BCC Segment 31)

Forecasted expenditures in the following project sheets provided by Amtrak do not include general and administrative (G&A) expenses as authorized by the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy. All other capital renewal planned expenditures in this document include G&A.

FY19 Capital Plan

P000044 - Mystic, CT Interlocking Renewal Project

Program/Project: Multi-Year Project

Scope:

Mystic, CT Interlocking Renewal Project (MP 133.0)

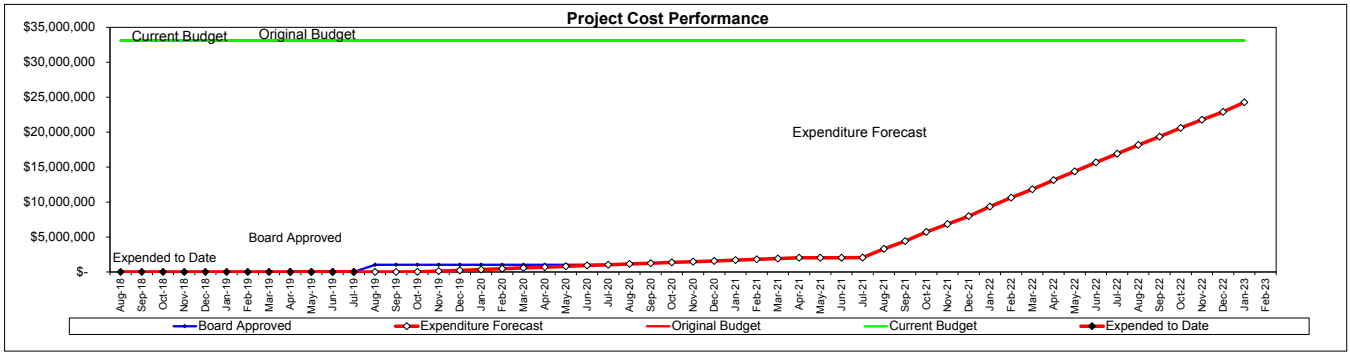
The Mystic, CT Interlocking Renewal Project includes design and construction for the new interlocking. Major elements of the projects includes installation of new turnouts; installation of new rail; installation of new ties; preparation of sub-grade; placement of ballast; installation of catenary components; installation of signal transformers; installation of signal cables; installation of signal bridge; installation of switch heater; installation of signal house; and installation of interlocking lighting.

The new interlocking project benefit would provide operation flexibility, improve reliability, and allow for future maintenance outages.

FY19 Scope:

In FY19 the Project will initiate the procurement process to award a bid to a design contractor for Preliminary Design of the new Mystic Interlocking with anticipated completion of the design in FY20.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$1,900,000	$0	$1,900,000	$0	$957,590	$0	$1,900,000	$1,900,000	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$30,572,867	$0	$30,572,867	$0	$0	$0	$30,572,867	$30,572,867	$0	0.0%
5. Construction Management	$310,000	$0	$310,000	$0	$0	$0	$310,000	$310,000	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$45,178	$0	$45,178	$0	$10,270	$0	$45,178	$45,178	$0	0.0%
Sub-Total	$32,828,045	$0	$32,828,045	$0	$967,860	$0	$32,828,045	$32,828,045	$0	0.0%
8. Contingency	$282,804	$0	$282,804	$0	$62,420	$0	$282,804	$282,804	$0	0.0%
Total	$33,110,849	$0	$ 33,110,849	$0	$1,030,280	$0	$33,110,849	$33,110,849	$0	0.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Procurement Start (Designer)	11/01/18	11/01/18	11/01/18	11/01/18
2. Procurement Complete (Designer)	12/31/18	12/31/18	12/31/18	12/31/18
3. Issue NTP - Preliminary Engineering	01/02/19	11/30/19	01/02/19	11/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 1,030,280	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 1,030,280**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.101309.0001-.0005

FY19 Capital Plan

P000066 - Q Interlocking C&S Equipment Replacement Project

Program/Project: Multi-Year Project

Scope:

Q Interlocking C&S Equipment Replacement Project

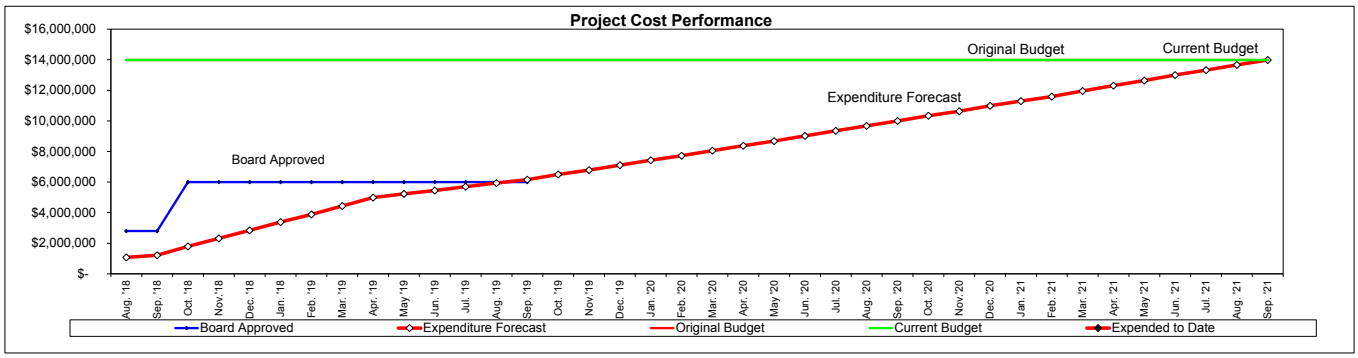
The Q Interlocking C&S Equipment Replacement Project for Phase 1 is to perform preliminary construction to support the retirement of Q Tower by installing a new Central Instrument House (CIH) and Communications Bungalow. This will be accomplished by performing the construction necessary to route fiber cable between the new Q CIH and the HSR control tower and new QRT house. A signal cable route must also be established between the Q CIH and QTW and QTE cases and to provide cable paths between QRT House and local control appliances. In addition, construction of foundations for the CIH and the Communications Bungalow will be completed and interface cases adjacent to QTW and QTE cases will be built and set to provide a quick transition between existing and future infrastructure.

Project Deliverables for Phase 1 of is comprised of the following: heavy construction, trenching and cross track digs to route fiber cable to the high speed rail building and new QRT house; construction of the foundation for the CIH (Central Instrument House); construction of cable paths from the new CIH to QW and QE cases; construction of cable paths from the QRT house, which controls the new ready tracks to local control appliances; set case for Communications Bungalow; and set interface cases adjacent to QTW and QTE.

FY19 Scope:

In FY19 phase 1 will continue and is anticipated to finish by 4/30/18 and phase 2 will start. Construction of Houses and Interface Cases at Lancaster shop will start and complete in FY19.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$308,006	$0	$308,006	$0	$100,000	$308,006	$308,006	$308,006	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$11,267,604	$0	$11,267,604	$1,189,716	$4,130,356	$11,267,604	$10,077,888	$11,267,604	$0	10.6%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$262,178	$0	$262,178	$0	$0	$262,178	$262,178	$262,178	$0	0.0%
7. Project Management	$202,692	$0	$202,692	$27,213	$72,873	$202,692	$175,479	$202,692	$0	13.4%
Sub-Total	$12,040,480	$0	$12,040,480	$1,216,929	$4,303,229	$12,040,480	$10,823,551	$12,040,480	$0	10.1%
8. Contingency	$1,944,093	$0	$1,944,093	$0	$640,000	$1,944,093	$1,944,093	$1,944,093	$0	0.0%
Total	$13,984,573	$0	$ 13,984,573	$1,216,929	$4,943,229	$13,984,573	$12,767,644	$13,984,573	$0	8.7%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Phase 1 Continued Construction	10/01/18	04/30/19	10/01/18	04/30/19
2. Equipment for Phase 1	10/01/18	04/30/19	10/01/18	04/30/19
3. Lancaster Shop Construction of Houses	10/01/18	09/30/19	10/01/18	09/30/19
4. Phase 2 - Run Fiber	10/01/18	09/30/19	10/01/18	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 4,943,229	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 4,943,229**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.100676.

FY19 Capital Plan 10/1/2018

P000021 & P000022 - East River Tunnels Track Replacement Project

Program/Project: Multi-Year Project

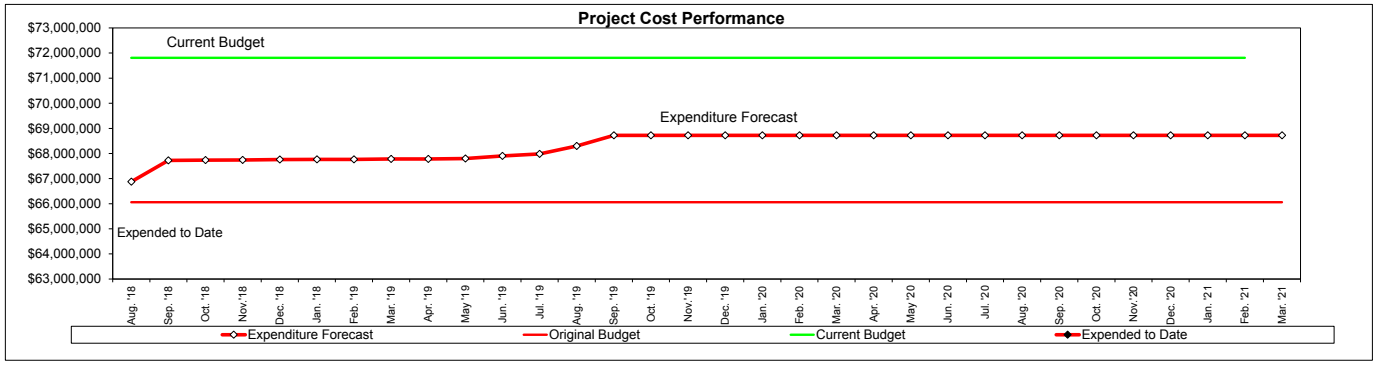
Scope:

East River Tunnels (ERT) - MP 128.4
The ERT Project is a flexible project that is necessary for the rehabilitation tracks, ties and ballast within our tunnels, however it isn't scheduled into a specific timeframe due to it's ability to be used to when a variety of conditions or opportunities arise. These include an opportune extended track outage, the need to cover a major work cancelation or when our Amtrak workforce has a gap in their work before moving to another project or maintenance related working task. Taking place between MP2.04 to MP2.12, this Project will replace 60 foot track panels, approximately 400 linear feet of rail and rail ties. These replacements are necessary due to the damp tunnel conditions and wear and corrosion due to a high volume area.

FY19 Scope:

In FY19 rail and tie replacement will take place on tracks #1 and #2 and also on tracks #3 and #4 as outage opportunities arise. Mostly the work will occur during 55-hour track outages that become available on short notice due to cancelations or early completion of other Project scopes..

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Expended + Accrued To Date	FY19 Forecast
1. Preliminary Engineering	$0	$0
2. Final Design	$0	$0
3. Right of Way / Utilities	$0	$0
4. Construction	$58,653,600	$900,000
5. Construction Management	$0	$0
6. Testing & Commissioning	$0	$0
7. Project Management	$500,000	$100,000
Sub-Total	$59,153,600	$1,000,000
8. Contingency	$6,905,955	$0
Total	$66,059,355	$1,000,000

Originally this was a large scale total track replacement Program and as it progressed and the tunnel renewal achieved better reliability of the track structure, competing Programs limited some of the outages needed after Hurricane Sandy. The need as well as the assessment for the PSNY renewal corporation decided on a total tunnel rehab in lieu of just a track replacement. This Program is now essentially an extension of life of the tunnel tracked to allow a consistent level of service while the tunnel rehab design and the PSNY renewal work is being completed. In light of this, the Financials are being reevaluated and a deeper dive will be taken to assess the effects of the changing scope against the budgetary needs.

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Rail & Tie Replacement Track #1	10/01/18	09/30/19	10/01/18	09/30/19
2. Rail & Tie Replacement Track #2	10/01/18	09/30/19	10/01/18	09/30/19
3. Rail & Tie Replacement Track #3	10/01/18	09/30/19	10/01/18	09/30/19
4. Rail & Tie Replacement Track #4	10/01/18	09/30/19	10/01/18	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 1,000,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 1,000,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.100755 and C.EN.100756.

FY19 Capital Plan

P000059 - Turn Penn Station NY - Infrastructure Renewal Program

Program/Project: Multi-Year Project

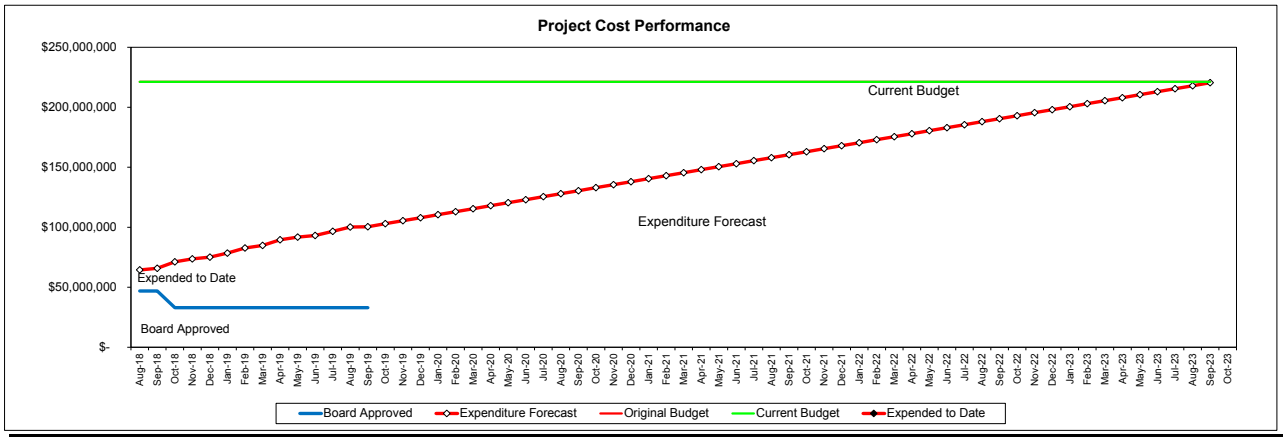
Scope:

The Penn Station Infrastructure Renewal Program will replace milestone track infrastructure components in NY Penn Station before in-service failure occurs. Fully reconstructed zones of track will include concrete block tie, direct fixation and ballasted body tracks, and total replacement of turnouts, complex Track work and ballasted track in “A”, “C”, “JO” and “KN” Interlockings and Ladder Tracks. Work will be planned to minimize impact to train operations when possible, but body track work and major interlocking rehabilitation efforts will require train schedule modifications from Amtrak, New Jersey Transit & Long Island Railroad. Body track work will be performed as annual cycle and priority of tracks will be determined through inspection and evaluations by Amtrak employees and outside consultants. The project would provide benefit in regards to operation flexibility, reliability improvement, and allow for future maintenance outages.

FY19 Scope:

In FY19, under the Penn Station Infrastructure Renewal Program following locations are planned to be completed: Continuation of rehab work at TK 18, turnout replacement at "C" IL, Replacing ties on TK 16 & 17, Total replacement of 4 turnouts, 1 slip turnout, 2 diamond crossovers, crossing replacement on curves 561/563/565 and partial track rehab work in Zones 2A, 2B & 2C.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$217,852,450	$0	$217,852,450	$60,815,756	$32,516,454	$0	$157,036,694	$217,852,450	$0	27.9%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$3,358,736	$0	$3,358,736	$808,075	$480,000	$0	$2,550,661	$3,358,736	$0	24.1%
Sub-Total	$221,211,186	$0	$221,211,186	$61,623,831	$32,996,454	$0	$159,587,355	$221,211,186	$0	27.9%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$221,211,186	$0	$ 221,211,186	$61,623,831	$32,996,454	$0	$159,587,355	$221,211,186	$0	27.9%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
Renew 635 turnout at "C" Interlocking	10/29/18	11/12/18	10/29/18	11/12/18
Rehab Track 18	10/05/18	12/21/18	10/05/18	12/21/18
Rehab Track 17	01/11/19	03/04/19	01/11/19	03/04/19
Rehab Track 16	03/22/19	05/13/19	03/22/19	05/13/19
Replace crossings on curves 561/563/565	06/20/19	08/30/19	06/20/19	08/30/19
Rehab Track Zone 2A	10/01/18	09/30/19	10/01/18	09/30/19
Rehab Track Zone 2B	10/01/18	09/30/19	10/01/18	09/30/19
Rehab Track Zone 2C	10/01/18	09/30/19	10/01/18	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 32,996,454	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 32,996,454**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.101104.

FY19 Capital Plan

P000060 - Penn Station NY Scada Phase II Project

Program/Project: Multi-Year Project

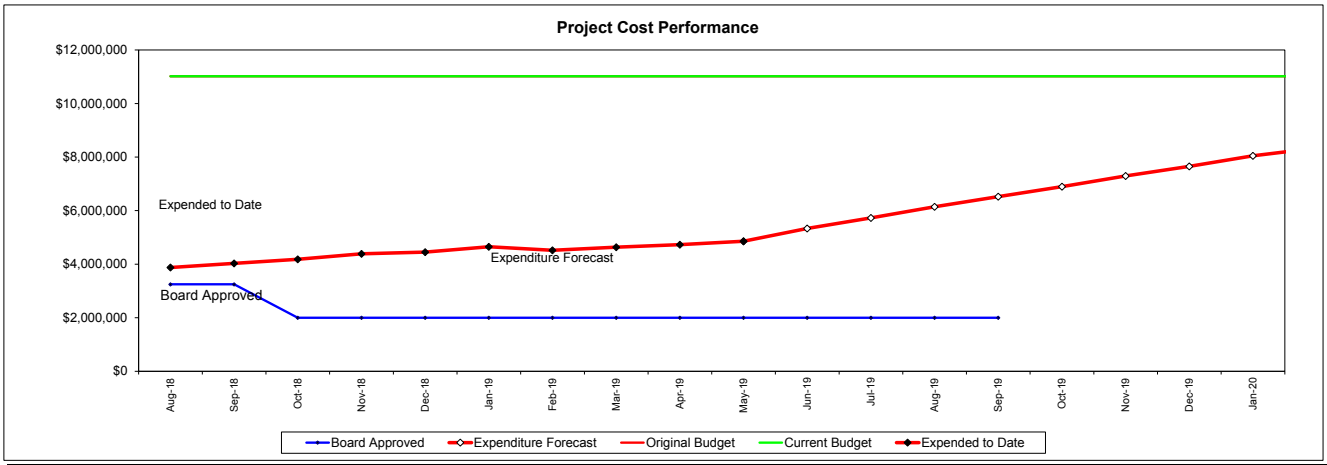
Scope:

Penn Station NY Scada Phase II Project

The scope for the Penn Station NY SCADA Phase II project will provide design is to provide supervisory and data control ventilation fans and floodgates and integrate with 1st Avenue, Weehawken standpipe into Penn Station Control Center (PSCC) SCADA.

FY19 Scope: In FY2019, the project will facilitate the replacement and upgrade of existing Amtrak New York City Fire & Life Safety (F&LS) SCADA system components that are no longer supported by the manufacturer or which have failed in order to maintain proper monitoring and control of the tunnel and station ventilation system, sump pumps, standpipes, electrical system, fire alarm and security system, and train signaling system at PSCC.

Budget:



Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$2,433,363	$0	$2,433,363	$0	$0	$0	$2,433,363	$2,433,363	$0	0.0%
2. Final Design	$1,700,000	$0	$1,700,000	$3,187,665	$443,545	$0	($1,487,665)	$1,700,000	$0	187.5%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$4,170,558	$0	$4,170,558	$1,097,799	$2,630,794	$0	$3,072,759	$4,170,558	$0	26.3%
5. Construction Management	$2,400,000	$0	$2,400,000	$0	$978,947	$0	$2,400,000	$2,400,000	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$314,235	$0	$314,235	$158,428	$110,799	$0	$155,807	$314,235	$0	50.4%
Sub-Total	$11,018,156	$0	$11,018,156	$4,443,892	$4,164,086	$0	$6,574,263	$11,018,156	$0	40.3%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$11,018,156	$0	$ 11,018,156	$4,443,892	$4,164,086	$0	$6,574,263	$11,018,156	$0	40.3%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
Final Design	10/03/16	03/29/18	10/03/16	03/29/19
Construction Phase Services	03/01/17	06/29/18	03/01/17	06/29/19
Contractor - Work Package 2	04/02/18	06/29/18	10/01/18	03/29/19
Contractor - Work Package 3	04/03/18	09/28/18	04/01/19	09/30/19
Amtrak F/A Protection	10/03/16	09/28/18	10/03/16	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 4,164,086	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 4,164,086**	

Project Note: All project costs are captured under the following WebWEE (SAP) WBS Elements; C.EN.100081.

FY19 Capital Plan

P000011 - Clark to Ham Constant Tension Upgrade Project

Program/Project: Multi-Year Project

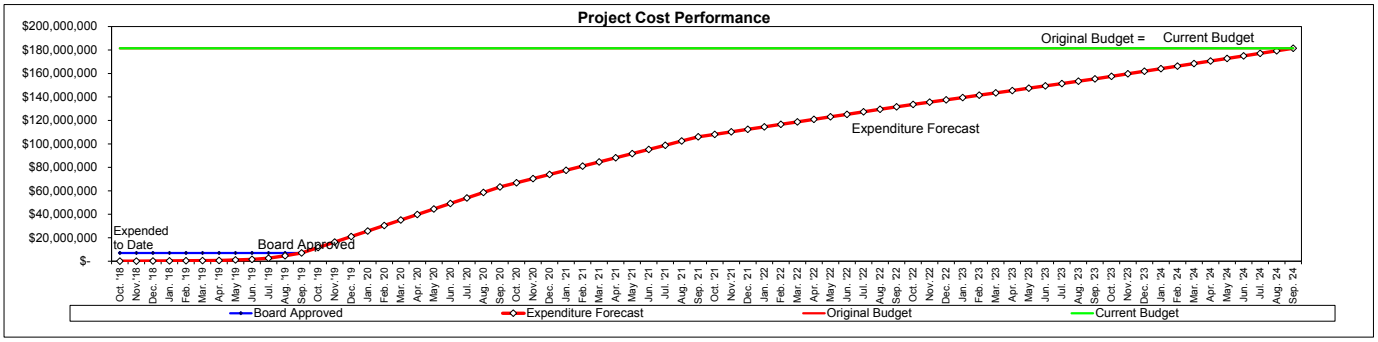
Scope:

Clark to Ham Constant Tension Upgrade (MP48.5 to MP55.7)

The scope of Clark to Ham Constant Tension Upgrade project includes the replacement of Electric Traction (ET) Infrastructure between MP 48.5 and MP 55.7 (approximately CP Clark to Ham I/L) on the AN line, bringing 28 miles of catenary and 160 catenary structures up to a State of Good Repair (SoGR). The project will extend the constant tension section of catenary that was recently installed (MP 41.57 to MP 48.5) through to MP 55.7 (Ham Interlocking) and will enable an increase of operating speeds to 160 mph for Acela Trains by upgrading the existing fixed termination catenary to constant tension. Improvements to the Overhead Contact System (OCS) include replacement of existing circa 1932 fixed termination catenary with new constant tension catenary for approximately 7 route miles of four track mainline (28 miles of catenary). The project will also install 160 new catenary structures (poles/portal beams/cantilever structures) along with the associated structure and guy foundations to replace the existing structures which have fallen into a state of disrepair since their installation in 1931. The specific assets that will be constructed include the following: 465 Foundations (structures and down guys); 154 Catenary Portal Structures (2 poles/structure = 308 poles); 154 Portal Beams (requires 4 track outage); 6 Catenary Cantilever Structures (1 pole/structure); 28 Track Miles New Catenary; and Removal of 134 existing catenary structures.

FY19 Scope: Scope for FY19 includes: Electric Traction department design review, exploratory digs, requests for proposal and procurement contracts and securing labor clearances are planned, as well as Amtrak program management support.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$250,000	$0	$250,000	$0	$150,000	$0	$250,000	$250,000	$0	0.0%
2. Final Design	$3,772,000	$0	$3,772,000	$0	$1,850,000	$0	$3,772,000	$3,772,000	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$146,123,884	$0	$146,123,884	$0	$4,000,000	$0	$146,123,884	$146,123,884	$0	0.0%
5. Construction Management	$7,512,769	$0	$7,512,769	$0	$0	$0	$7,512,769	$7,512,769	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$7,320,000	$0	$7,320,000	$0	$1,000,000	$0	$7,320,000	$7,320,000	$0	0.0%
Sub-Total	$164,978,654	$0	$164,978,654	$0	$7,000,000	$0	$164,978,654	$164,978,654	$0	0.0%
8. Contingency	$16,497,865	$0	$16,497,865	$0	$0	$0	$16,497,865	$16,497,865	$0	0.0%
Total	$181,476,519	$0	$ 181,476,519	$0	$7,000,000	$0	$181,476,519	$181,476,519	$0	0.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Design Reviews	01/03/19	09/30/19	01/03/19	09/30/19
2. Exploratory Digs	05/01/19	09/30/19	05/01/19	09/30/19
3. Procurement Contracts	10/01/18	09/30/19	10/01/18	09/30/19
4. Program Management	10/01/18	09/30/19	10/01/18	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 7,000,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 7,000,000**	

Project Note: All project costs are captured under the following WebWEE WBS Element(s): C.EN.101765

FY19 Capital Plan

10/1/2018

P000026 - Fair Interlocking Renewal Project

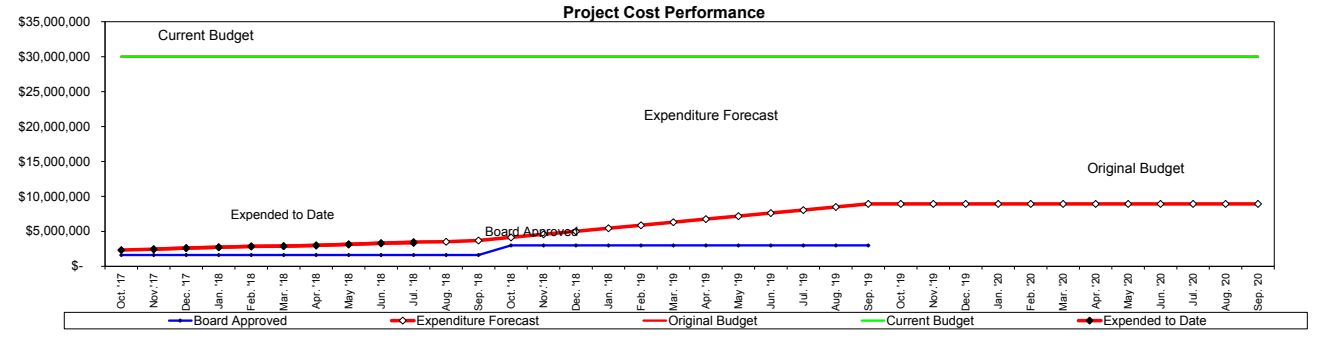
Program/Project: Multi-Year Project

Scope:

Fair Interlocking
The Fair Interlocking Renewal Project includes building and replacing turnouts and crossovers in kind, within the limits of Fair Interlocking. Also performed under this Project is the removal of old ballast for the restoration of proper drainage along the tracks and right of way (ROW).

FY19 Scope: In FY19 the #16 turnout will be built and replaced. Also to be built in late FY19 is the #21 A crossover to be installed along with the #21B crossover in FY20.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$28,500,000	$0	$28,500,000	$2,725,724	$2,900,000	$5,000,000	$25,774,276	$28,500,000	$0	9.6%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$1,500,000	$0	$1,500,000	$70,623	$100,000	$0	$1,429,377	$1,500,000	$0	4.7%
Sub-Total	$30,000,000	$0	$30,000,000	$2,796,347	$3,000,000	$5,000,000	$27,203,653	$30,000,000	$0	9.3%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$30,000,000	$0	$ 30,000,000	$2,796,347	$3,000,000	$5,000,000	$27,203,653	$30,000,000	$0	9.3%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Build #16 turnout	09/13/19	09/15/19	10/01/18	07/31/19
2. Install #16 turnout	09/20/19	09/22/19	10/01/18	11/01/19
3. Build #21A crossover	9/27/2019	9/29/2019	11/2/2018	6/30/2019

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 3,000,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 3,000,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.101277.

FY19 Capital Plan **PM - Joanna Pardini**

P000036 - Kearny to Waverly Transmission Tower Upgrade Project

Program/Project: Multi-Year Project

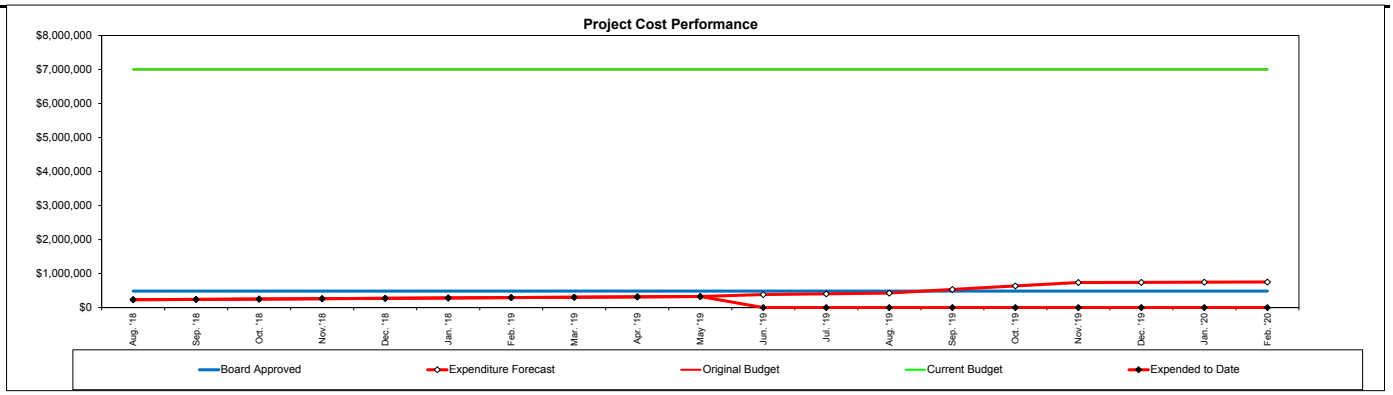
Scope:

Kearny to Waverly Transmission Tower Upgrade Project

The scope for the Kearny to Waverly Transmission Tower Upgrade Project will provide design and construction of six new monopole structures that carry the four transmission circuit lines from Kearney Substation at MP 7.2 over the Passaic River to Waverly Substation (MP 12.2).

FY19 Scope: Scope for FY19 includes: Complete final design. Initiate procurement for construction.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$375,275	$0	$375,275	$325,528	$50,000	$0	$49,747	$375,275	$0	86.7%
2. Final Design	$330,468	$0	$330,468	$0	$335,000	$0	$330,468	$330,468	$0	0.0%
3. Right of Way / Utilities	$96,802	$0	$96,802	$0	$100,000	$0	$96,802	$96,802	$0	0.0%
4. Construction	$5,000,000	$0	$5,000,000	$0	$0	$0	$5,000,000	$5,000,000	$0	0.0%
5. Construction Management	$100,000	$0	$100,000	$0	$0	$0	$100,000	$100,000	$0	0.0%
6. Testing & Commissioning	$100,000	$0	$100,000	$0	$0	$0	$100,000	$100,000	$0	0.0%
7. Project Management	$100,000	$0	$100,000	$0	$0	$0	$100,000	$100,000	$0	0.0%
Sub-Total	**$6,102,545**	**$0**	**$6,102,545**	**$325,528**	**$485,000**	**$0**	**$5,777,016**	**$6,102,545**	**$0**	**5.3%**
8. Contingency	$900,000	$0	$900,000	$0	$0	$0	$900,000	$900,000	$0	0.0%
Total	**$7,002,545**	**$0**	**$ 7,002,545**	**$325,528**	**$485,000**	**$0**	**$6,677,016**	**$7,002,545**	**$0**	**4.6%**

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Environmental	08/01/18	12/31/18	08/01/18	12/31/18
2. 60% Design	09/01/18	11/01/18	09/01/18	11/01/18
3. 90% Design	12/01/18	02/01/19	12/01/18	02/01/19
4. Final Design	03/01/19	04/30/19	03/01/19	04/30/19
5. ROW / Easements	10/01/19	11/15/19	10/01/19	11/15/19
6. Final Phase - Access Road	11/16/19	02/28/20	11/16/19	02/28/20

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 485,000	
	$ -	
	$ -	
Total Funding	**$ 485,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements: C.EN.101787

FY19 Capital Plan

P000042 - Metuchen Frequency Converter - Equipment Upgrades Project

Program/Project: Single-Year Project

Scope:

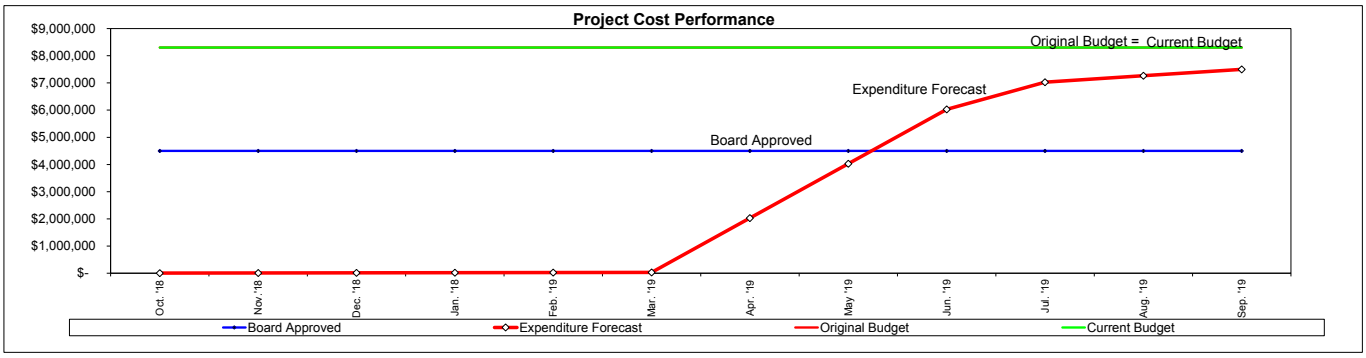
Metuchen Frequency Converter - Equipment Upgrades Project (MP26)

The scope for the Metuchen Frequency Converter Equipment Upgrade project is to design and construction for improvement of the rotary frequency converter at the Metuchen Frequency Converter Station in Metuchen NJ. The Metuchen Rotary Frequency Converter is required to function in order for Amtrak's Electric Traction department to provide traction power to the 25Hz power system. Amtrak has entered into an agreement with PECO to reimburse PECO for the actual cost of major repairs, major parts replacement and capital expenditures.

The scope includes upgrades to control room, MG set room, hydraulic system (Basement), 11kv switchgear interface, and vibration monitoring system. PECO will provide engineering services, project management, installation, procurement, construction and start up and commissioning for the project. Amtrak's Project Manager will reviews of design, construction and technical documents, project invoices, conduct field/site visits to verify work is being performed in accordance with plans and specifications.

FY19 Scope: Scope for FY19 includes: project kick-off meeting with Philadelphia Electric Company (PECO) and Public Service Gas & Electric; reviews of design, construction, technical documents and project invoices; conduct field/site visits to verify the work is being performed in accordance with plans and specifications.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$8,302,313	$0	$8,302,313	$0	$8,302,313	$8,202,313	$8,302,313	$8,302,313	$0	0.0%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Sub-Total	$8,302,313	$0	$8,302,313	$0	$8,302,313	$8,202,313	$8,302,313	$8,302,313	$0	0.0%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$8,302,313	$0	$ 8,302,313	$0	$8,302,313	$8,202,313	$8,302,313	$8,302,313	$0	0.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Kick-off meeting with vendor and Amtrak	10/01/18	10/31/18	10/01/18	10/31/18
2. General Electric on site to perform work	03/01/19	06/30/19	03/01/19	06/30/19
3. Bi-weekly/monthly meetings with vendor	11/01/18	09/30/19	11/01/18	09/30/19
4. Amtrak weekly site visits	11/01/18	09/30/19	11/01/18	09/30/19
5. invoice review and approval	11/01/18	09/30/19	11/01/18	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 8,302,313	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 8,302,313**	

Project Note: All project costs are captured under the following WebWEE WBS Element(s): C.EN.101747

FY19 Capital Plan

P000048 - New Hackensack Substation 42 Control House Project

Program/Project: Multi-Year Project

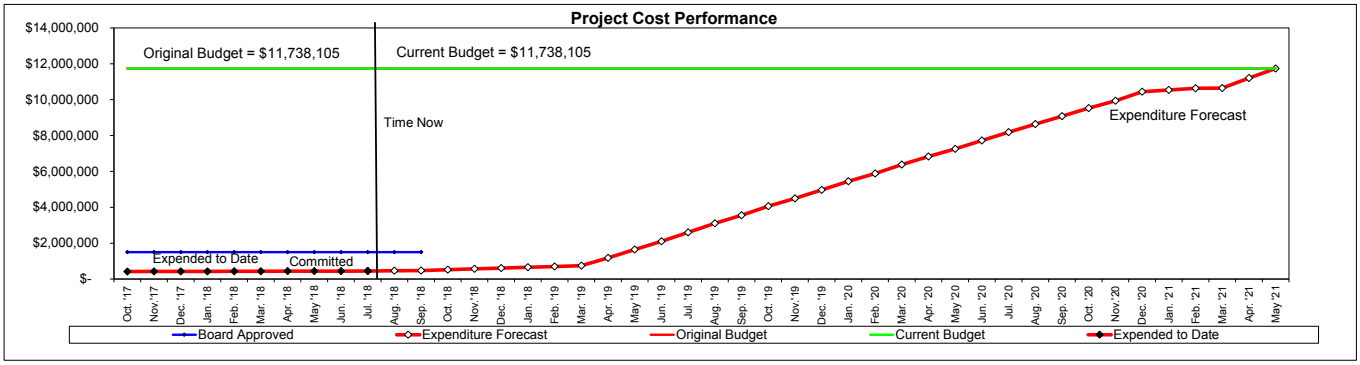
Scope:

New Hackensack Substation 42 Control House Project

The scope for the New Hackensack Substation 42 Control House Project includes design, construct, install, and commission a new Control House for Sub 42. The project will include all required cut-over, demolition, testing/ commissioning work to provide a complete functional control house for Substation 42. The project will also include all required site work associated with the installation of the new control house including grounding work, construction of retaining walls for leveling of the installation area and ancillary work required to construct the project. The project will obtain Section 106/ NEPA requirements and approval prior to construction.

FY19 Scope: In FY19 the Project anticipates the completion of final design; will obtain permits from NJ Transit; develop Project Management Plan; and advertise procurement for construction.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$208,648	$0	$208,648	$208,648	$0	$174,207	($0)	$208,648	$0	100.0%
2. Final Design	$266,029	$0	$266,029	$243,138	$0	$214,368	$22,891	$266,029	$0	91.4%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$9,129,831	$0	$9,129,831	$0	$2,728,824	$0	$9,129,831	$9,129,831	$0	0.0%
5. Construction Management	$638,700	$0	$638,700	$0	$148,441	$0	$638,700	$638,700	$0	0.0%
6. Testing & Commissioning	$216,048	$0	$216,048	$0	$158,627	$0	$216,048	$216,048	$0	0.0%
7. Project Management	$187,552	$0	$187,552	$0	$47,638	$0	$187,552	$187,552	$0	0.0%
Sub-Total	$10,646,808	$0	$10,646,808	$451,786	$3,083,531	$388,574	$10,195,022	$10,646,808	$0	4.2%
8. Contingency	$1,091,297	$0	$1,091,297	$0	$0	$0	$1,091,297	$1,091,297	$0	0.0%
Total	$11,738,105	$0	$ 11,738,105	$451,786	$3,083,531	$388,574	$11,286,319	$11,738,105	$0	3.8%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Complete Final Design	10/01/18	09/30/18	10/01/18	09/30/18
2. Project Management Plan (FRA)	10/01/18	12/31/18	10/01/18	12/31/18
3. NJ Transit and Conrail Permit	10/01/18	03/30/19	10/01/18	03/30/19
4. Procurement (Pre-Bid)	10/01/18	12/31/18	10/01/18	12/31/18
5. Procurement (Const. Procurement)	12/31/18	04/01/19	12/31/18	04/01/19
6. Construction/ NEPA Contractor	04/01/19	12/31/20	04/01/19	12/31/20

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 3,083,531	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 3,083,531**	

Project Note: All project costs are captured under the following WebWee Elements: C.EN.101535

FY19 Capital Plan

P000082 - Trenton, NJ Interchange Extension Project

Program/Project: Multi-Year Project

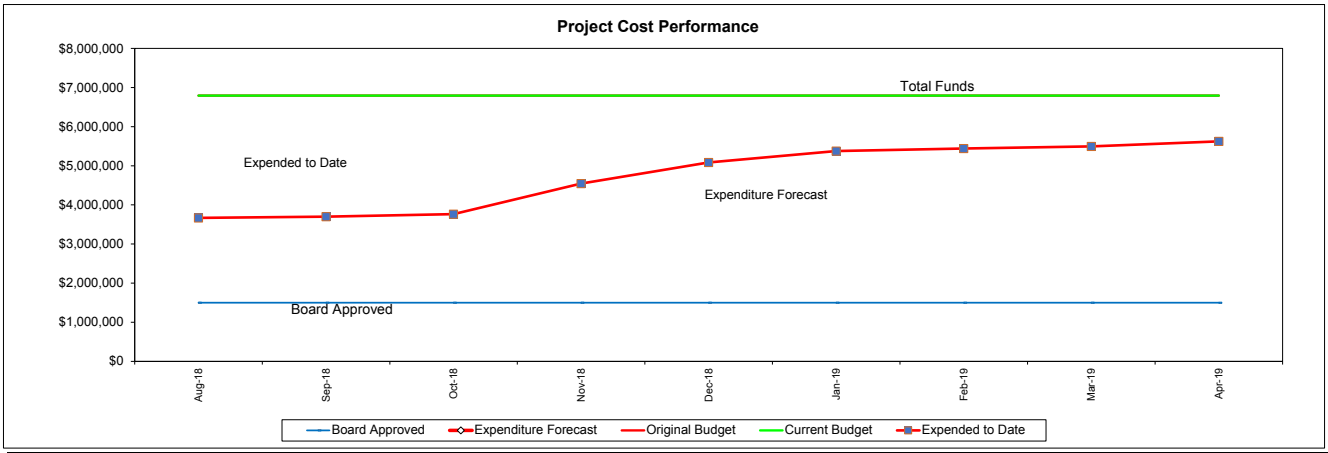
Scope:

Trenton, NJ Interchange Extension Project

The scope for Trenton, NJ Interchange Extension Project is to extend the existing interchange track at Trenton, NJ in order to accommodate additional ballast car unit trains. This includes construction of two storage tracks off of the existing #5 Running track at "Fair" Interlocking and installation of a new track #8.

FY19 Scope: In FY19 the Project will construct 800 linear feet of storage track to complete the construction of the new track #8. A new #8 turnout will also be built and installed for the storage of the ballast car unit trains.

Budget:



Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$6,780,343	$0	$6,780,343	$5,621,327	$1,490,000	$0	$1,159,016	$6,780,343	$0	82.9%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$13,051	$0	$13,051	$3,051	$10,000	$0	$10,000	$13,051	$0	23.4%
Sub-Total	$6,793,394	$0	$6,793,394	$5,624,378	$1,500,000	$0	$1,169,016	$6,793,394	$0	82.8%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$6,793,394	$0	$ 6,793,394	$5,624,378	$1,500,000	$0	$1,169,016	$6,793,394	$0	82.8%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
Construction of new #8 track	11/01/18	01/20/19	11/01/18	01/20/19
Install new #8 turnout	01/20/19	02/15/19	01/20/19	02/15/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 1,500,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 1,500,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.101592.

FY19 Capital Plan

P000091 - 30th Street Station Façade Restoration Project

Program/Project: Multi-Year Project

Scope:

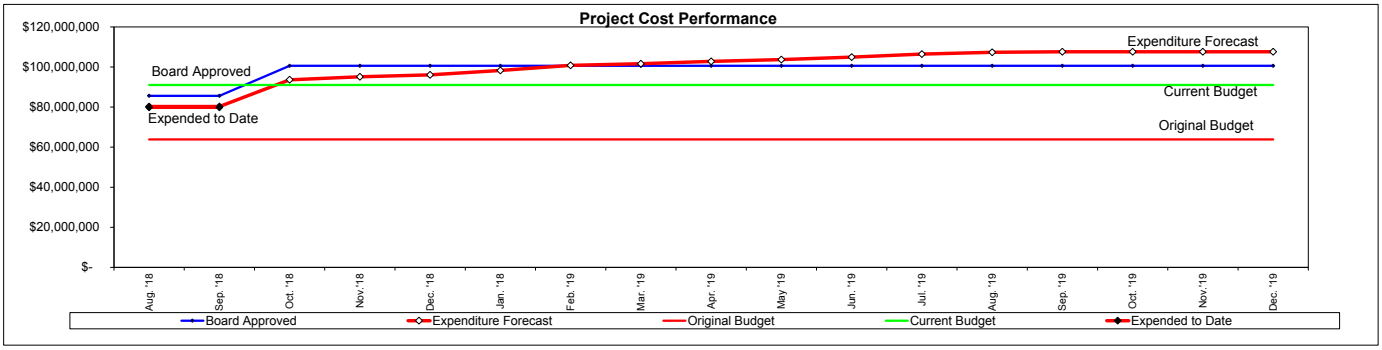
30th Street Station Façade Restoration Project (MP1.5)

The scope of the project includes the repair and restoration of all the exterior surfaces of the building including the east and west viaducts, with the exception of the building roofs and the SEPTA platform canopies. Major elements of the project initially included three phases, plus additional scope: Phase I included limestone repairs; reconstruction of the interior wythe of all parapets except 8th floor roof and east and west main elevations; repairs at the base of curtain wall areas including sills and mullions on the north, south, east, west and recessed north and recessed south elevations; repair or replacement of designated stone units on both east and west viaducts; repair of deteriorated concrete on the exposed beam on southwest and southeast pavilions; and replacement of bush hammered area on the south elevation. Phase II included restoration of cast iron curtain wall areas of the building and removal and replacement of all steel double hung windows within the light court and roof areas; and Phase III included cleaning and repointing of the stone areas of the building and viaducts and repointing of the brick areas in the light court areas. The project has incurred unforeseen conditions, errors and omissions and Amtrak requested changes during restoration construction. These changes includes: removal and abatement of asbestos containing material; installation of blast film; removal and disposal of blast curtains; installation of storm window; installation trailer and cubicles; installation of extra windows; installation of enclosure and heat for winter weather conditions; and other miscellaneous changes.

FY19 Scope:

Scope for FY19 includes: North recessed masonry, north recessed window restoration for 1,000 windows, north facade masonry, northwest and northeast pavilions masonry, bay #1 and bay #82 windows above SEPTA track #1, and restoration of cast iron gable across all SEPTA tracks on the east side.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$6,124	$0	$6,124	$6,124	$0	$6,124	$0	$6,124	($0)	100.0%
2. Final Design	$1,277,306	$74,879	$1,352,185	$1,003,291	$0	$1,024,094	$0	$1,003,291	$348,894	100.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$59,461,964	$26,290,519	$85,752,483	$77,642,155	$11,599,921	$102,557,108	$19,410,539	$97,052,694	($11,300,211)	80.0%
5. Construction Management	$3,009,200	$0	$3,009,200	$1,055,298	$2,900,000	$1,066,900	$568,237	$1,623,535	$1,385,665	65.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$101,204	$809,636	$910,840	$194,271	$500,079	$194,271	$152,641	$346,912	$563,928	56.0%
Sub-Total	$63,855,798	$27,175,034	$91,030,832	$79,901,138	$15,000,000	$104,848,498	$20,131,417	$100,032,556	($9,001,724)	79.9%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$63,855,798	$27,175,034	$ 91,030,832	$79,901,138	$15,000,000	$104,848,498	$20,131,417	$100,032,556	($9,001,724)	79.9%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. North recessed façade wall	01/01/19	05/30/19	01/01/19	05/30/19
2. North façade	07/01/18	02/28/19	07/01/18	02/28/19
3. North recessed window restoration	07/01/18	03/30/19	07/01/18	03/30/19
4. Façade related work on SEPTA platforms	05/0/2018	07/30/19	05/0/2018	07/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 15,000,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 15,000,000**	

Project Note: All project costs are captured under the following WebWEE WBS Element(s): C.EN.100115, C.EN.100039, C.SP.100033.0003, C.EM.100040.0001

FY19 Capital Plan

P000101 - 30th Street Station Roof Replacement Project

Program/Project: Multi-Year Project

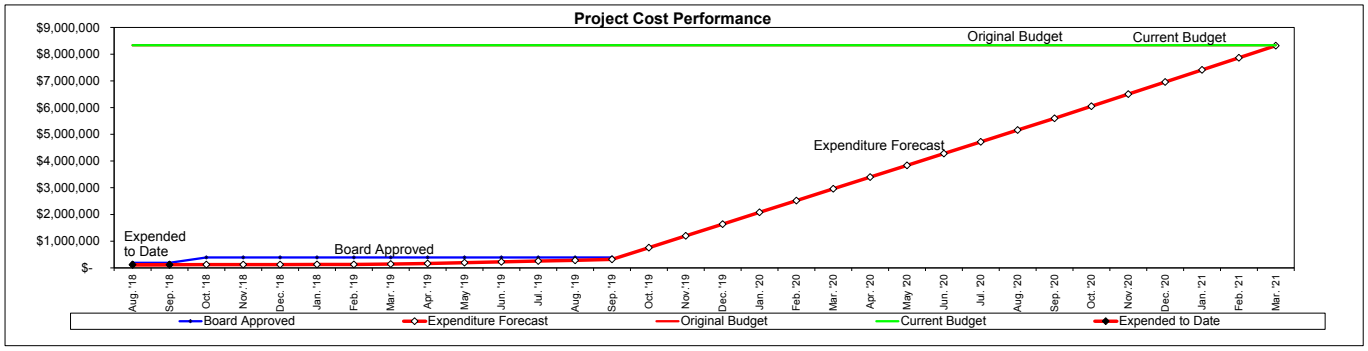
Scope:

30th Street Station Roof Replacement (MP1.5)

The scope for the 30th Street Station Roof Replacement Project includes assessment and study to design the replacement of the 30th Street Station roof. Major elements of the project include: construction contract documents (up to 30%) for replacement of existing roofing in the northwest portion of the 8th floor main concourse roof, including but not limited to terminations, flashings, counter flashings, insulation, and treatment of pipe, duct and conduit penetrations; comprehensive evaluation, survey and assessment of the balance of the station building's roof systems and roof drainage systems, including provisions for a new fall protection system; thirty percent (30%) design package (preliminary engineering); and evaluation of options to provide a vegetative roof system and roof-mounted photovoltaic panels. Additional scope includes construction contract documents (up to 30%) for roof replacement for the southwest pavilion roof, which experienced leaks over the fifth-floor map room. The active warranty on the existing remaining roof sections to maintained for this work.

FY19 Scope: Scope for FY19 includes: completion of 100% design for roof replacement; procurement and advertisement for bids for construction; coordination of phasing plan in conjunction with 30th Street Station Facade Restoration Project; and begin construction Q3 of FY19.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$134,823	$0	$119,823	$104,425	$0	$126,560	$0	$104,425	$15,398	100.0%
2. Final Design	$50,000	$0	$50,000	$0	$50,000	$0	$50,000	$50,000	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$7,650,000	$0	$7,650,000	$0	$100,000	$0	$7,650,000	$7,650,000	$0	0.0%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$515,000	$0	$515,000	$14,472	$50,000	$14,472	$484,556	$499,028	$15,972	2.9%
Sub-Total	$8,349,823	$0	$8,334,823	$118,896	$200,000	$141,032	$8,184,556	$8,303,452	$31,371	1.4%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$8,349,823	$0	$8,334,823	$118,896	$200,000	$141,032	$8,184,556	$8,303,452	$31,371	1.4%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Complete 100% design	10/01/18	03/31/19	10/01/18	03/31/19
2. Bids for construction	04/01/19	06/30/19	04/01/19	06/30/19
3. NTP and mobilization	07/01/19	7/312019	07/01/19	7/312019
4. Construction start	08/01/19	09/30/19	08/01/19	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 200,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 200,000**	

Project Note: All project costs are captured under the following WebWEE WBS Element(s): C.EN.100462.1022 and C.EN.101772

FY19 Capital Plan

P000003 - Brandy To Ragan Section Improvement Project

Program/Project: Multi-Year Project

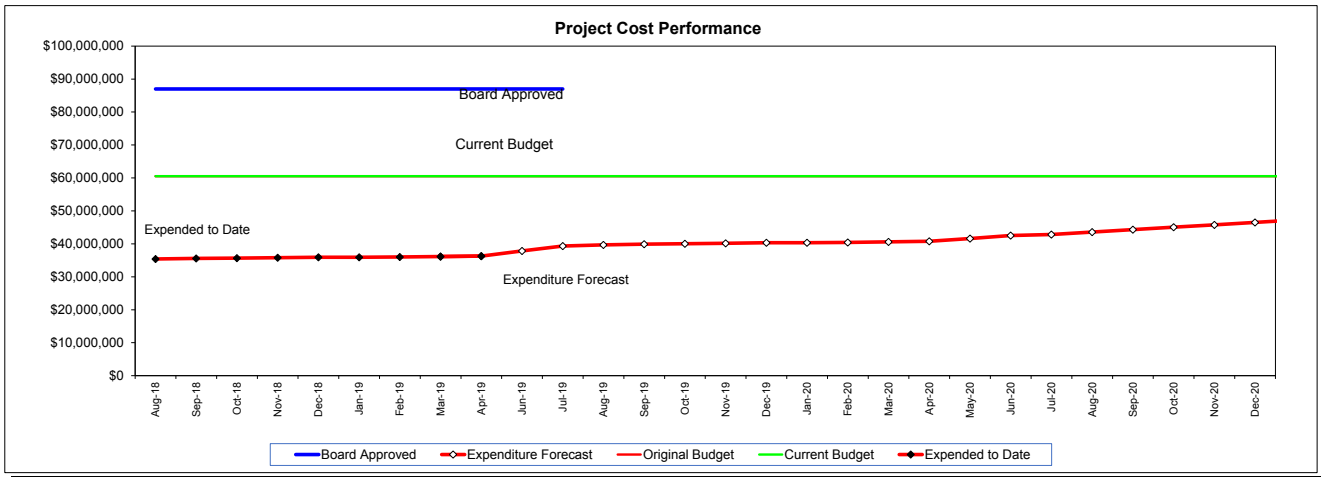
Scope:

Brandy To Ragan Section Improvement Project

The scope for Brandy to Regan Section Improvement project includes design and construction for the modifications to existing Ragan, Brandy and Yard Interlocking. Ragan Phase I includes replacement of the 21 crossover, replacement of the 19 turnout, and replacement of the 23 crossover. Ragan Phase II includes replacement of the 12 and 32 crossovers. Installation of 1.5 miles of track including a new track #3 between Ragan and Yard Interlocking, removal of the 21 crossover and replacing the 91 crossover at Yard Interlocking. Replacing the 12B turnout at Brandy Interlocking and providing flagging protection and support of Delaware Transit Corporation's (DTC) contractor during replacement of the Mill Creek Bridge. Replacement of the Orange Street Bridge and providing flagging protection and support during reconstruction of the street below the bridge. Scope also includes modifications to Norfolk Southern' s Shellpot Branch and Amtrak's Newport Secondary track.

FY19 Scope: Scope for FY19 includes the removal of Yard Interlocking (remove 21 crossover and replace 91 crossover); Track Layout Machine (TLM) to replace ties on track #1; Installation of track panels for new track #3 from Meco Drive (MP 29) to Yard Interlocking (MP 28.2); and Begin modifications to Norfolk Southern' s Shellpot Branch.

Budget:



Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$65,965	$0	$65,965	$65,965	$0	$0	$0	$65,965	$0	100.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$54,525,600	$0	$54,525,600	$35,823,826	$0	$1,352,118	$18,701,774	$54,525,600	$0	65.7%
5. Construction Management	$1,666,800	$0	$1,666,800	$442,631	$0	$0	$1,224,169	$1,666,800	$0	26.6%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Sub-Total	$56,258,365	$0	$56,258,365	$36,332,422	$3,500,000	$1,352,118	$19,925,943	$56,258,365	$0	64.6%
8. Contingency	$4,274,500	$0	$4,274,500	$0	$0	$0	$4,274,500	$4,274,500	$0	0.0%
Total	$60,532,865	$0	$ 60,532,865	$36,332,422	$3,500,000	$1,352,118	$24,200,443	$60,532,865	$0	60.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
Yard I/L (remove 21 crossover)	10/01/18	09/30/19	10/01/18	09/30/19
Yard I/L (replace 91 crossover)	10/01/18	09/30/19	10/01/18	09/30/19
TLM to replace ties on track #1	10/01/18	09/30/19	10/01/18	09/30/19
Install new track #3 (MP 29-MP 28.2)	10/01/18	09/30/19	10/01/18	09/30/19
Begin modifications to NS Shellpot Branch	10/01/18	09/30/19	10/01/18	09/30/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 3,000,000	
STATE	$ 500,000	State of DE
OTHER	$ -	
Total Funding	**$ 3,500,000**	

Project Note: All project costs are captured under the following WebWEE (SAP) WBS Elements; C.EN.201126

FY19 Capital Plan

P000064 - Perry Interlocking Renewal Project

Program/Project: Single -Year Project

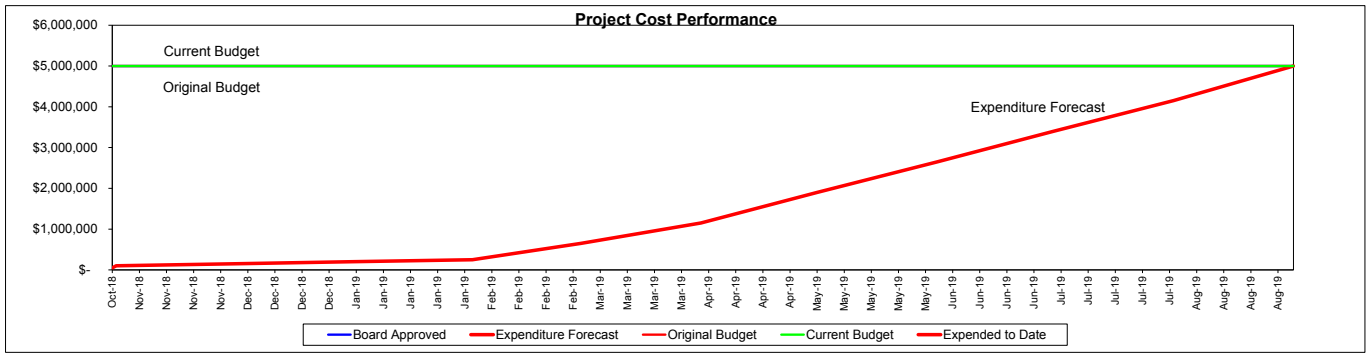
Scope:

Perry Interlocking Renewal Project

The scope for the Perry Interlocking Renewal Project includes design and construction for the Perry Interlocking Replacement, which includes replacement of all turnouts at Perry Interlocking in the same footprint; removal old ballast and track; restoration of proper drainage; and installation of new track panels.

FY19 Scope: In FY19 the #43 and #32 crossovers will be built and installed at Perry Interlocking (MP 59.5). This will be a collaborative work effort from the Track, Communication &Signals and the Electric Traction departments.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$5,000,000	$0	$5,000,000	$311	$4,999,689	$0	$4,999,689	$5,000,000	$0	0.0%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Sub-Total	$5,000,000	$0	$5,000,000	$311	$4,999,689	$0	$4,999,689	$5,000,000	$0	0.0%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$5,000,000	$0	$ 5,000,000	$311	$4,999,689	$0	$4,999,689	$5,000,000	$0	0.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
Final Design	10/01/18	11/28/18	10/01/18	11/28/18
Build #43 and #32 crossovers	1/11/2019	3/1/2019	1/11/2019	3/1/2019
Install #43 and #32 crossovers	4/5/2019	5/6/2019	4/5/2019	5/6/2019

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 4,999,689	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 4,999,689**	

Project Note: All project costs are captured under the following WebWee WBS Elements: C.EN.101285

FY19 Capital Plan

P000090 - Zoo to Paoli Catenary Structure Upgrade Project

Program/Project: Multi-Year Project

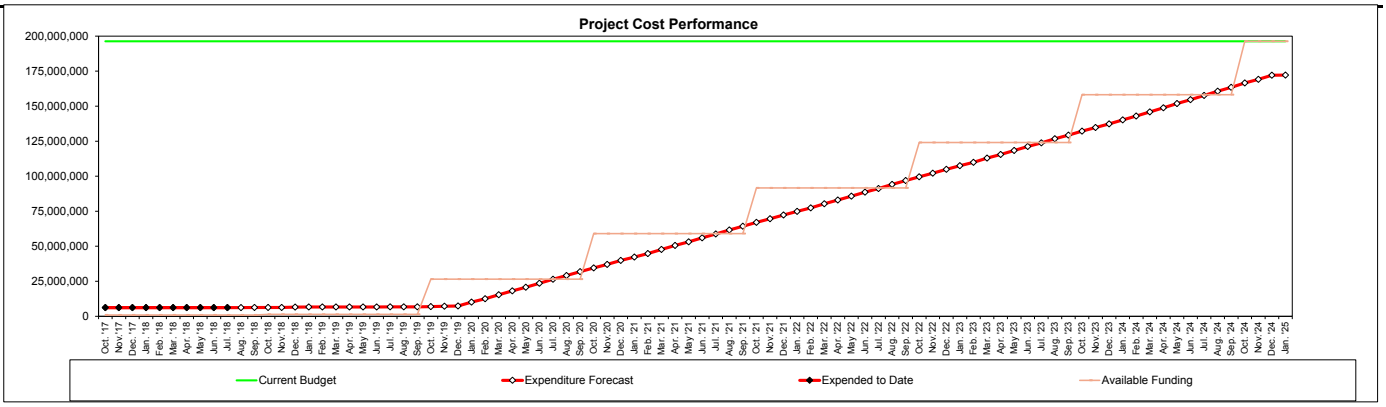
Scope:

Zoo to Paoli Catenary Structure Upgrade Project

The scope for the Zoo to Paoli Catenary Structure Upgrade Project will upgrade the catenary structure and new transmission line installation design. The project will consist of the design for the upgrade of the original Philadelphia to Paoli catenary structures that are nearing 100 years old. As a part of the upgrade of the new structures will support a new 138 kV transmission line to connect Paoli Substation with Zoo Substation. The design will include a new replacement step-down substation at Bryn Mawr (Currently, Bryn Mawr is a switching station, not a substation.)

FY19 Scope: Scope for FY19 includes: Complete final design. Advertise procurement for construction.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$6,236,936	$0	$6,236,936	$6,236,936	$0	$0	$0	$6,236,936	$0	100.0%
2. Final Design	$205,980	$0	$205,980	$0	$215,000	$205,980	$205,980	$205,980	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$141,380,000	$0	$141,380,000	$0	$0	$0	$141,380,000	$141,380,000	$0	0.0%
5. Construction Management	$7,500,000	$0	$7,500,000	$0	$0	$0	$7,500,000	$7,500,000	$0	0.0%
6. Testing & Commissioning	$2,000,000	$0	$2,000,000	$0	$0	$0	$2,000,000	$2,000,000	$0	0.0%
7. Project Management	$14,000,000	$0	$14,000,000	$0	$125,000	$0	$14,000,000	$14,000,000	$0	0.0%
Sub-Total	**$171,322,916**	**$0**	**$171,322,916**	**$6,236,936**	**$340,000**	**$205,980**	**$165,085,980**	**$171,322,916**	**$0**	**3.6%**
8. Contingency	$25,000,000	$0	$25,000,000	$0	$0	$0	$25,000,000	$25,000,000	$0	0.0%
Total	**$196,322,916**	**$0**	**$ 196,322,916**	**$6,236,936**	**$340,000**	**$205,980**	**$190,085,980**	**$196,322,916**	**$0**	**3.2%**

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. 100% Design Completion	07/01/11	01/31/19	07/01/11	01/31/19
2. Procurement	01/31/19	09/30/19	01/31/19	09/30/19
3. Construction	10/01/19	01/31/25	10/01/19	01/31/25

FY2019 Funding:

	Forecast		Notes
FED GOV/PRIIA BCC	$ 340,000		
STATE	$ -		
OTHER	$ -		
Total Funding	**$ 340,000**		

Project Note: All project costs are captured under the following WebWEE WBS Elements: C.EN.201264

FY19 Capital Plan

P000014 - Conestoga to Royalton Transmission Line Replacement Project

Program/Project: Multi-Year Project

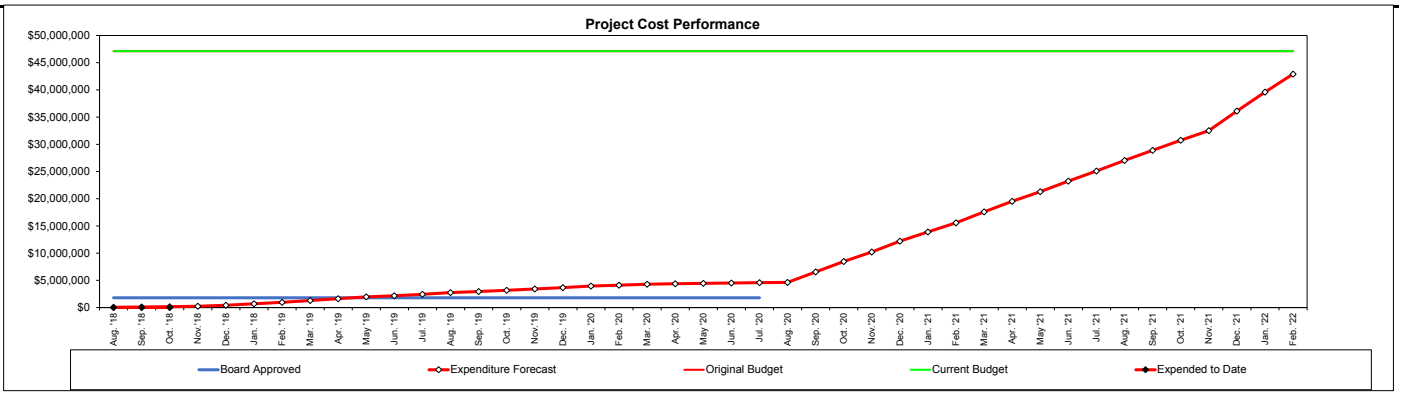
Scope:

Conestoga to Royalton Transmission Line Replacement Project

The scope of Royalton Transmission Line Replacement Project will provide design and construction of 29 miles of the 11 Line Transmission from Conestoga to Royalton substations. Design services include concept design (15%) as well as 30%, 60%, 90%, and 100% design submissions and Construction Phase Services.

FY19 Scope: In FY19 design will be begin and the procurement process will be initiated after the design is complete in FY20.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$2,189,867	$0	$2,189,867	$1,619	$1,800,000	$0	$2,188,248	$2,189,867	$0	0.1%
2. Final Design	$1,081,001	$0	$1,081,001	$0	$0	$0	$1,081,001	$1,081,001	$0	0.0%
3. Right of Way / Utilities	$250,000	$0	$250,000	$0	$0	$0	$250,000	$250,000	$0	0.0%
4. Construction	$35,000,000	$0	$35,000,000	$0	$0	$0	$35,000,000	$35,000,000	$0	0.0%
5. Construction Management	$1,795,256	$0	$1,795,256	$0	$0	$0	$1,795,256	$1,795,256	$0	0.0%
6. Testing & Commissioning	$100,000	$0	$100,000	$0	$0	$0	$100,000	$100,000	$0	0.0%
7. Project Management	$2,500,000	$0	$2,500,000	$0	$0	$0	$2,500,000	$2,500,000	$0	0.0%
Sub-Total	**$42,916,124**	**$0**	**$42,916,124**	**$1,619**	**$1,800,000**	**$0**	**$42,914,505**	**$42,916,124**	**$0**	**0.1%**
8. Contingency	$4,205,864	$0	$4,205,864	$0	$0	$0	$4,205,864	$4,205,864	$0	0.0%
Total	**$47,121,988**	**$0**	**$ 47,121,988**	**$1,619**	**$1,800,000**	**$0**	**$47,120,369**	**$47,121,988**	**$0**	**0.0%**

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Preliminary Design (30%)	02/13/19	09/09/19	02/13/19	09/09/19
2. Environmental	12/07/18	01/27/20	12/07/18	01/27/20
3. 60% Design	07/11/19	12/02/19	07/11/19	12/02/19
4. 90% Design	10/24/19	02/03/20	10/24/19	02/03/20
5. 100% Design	12/26/19	04/13/20	12/26/19	04/13/20
6. Construction	09/01/20	02/28/22	09/01/20	02/28/22

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 1,800,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 1,800,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements: C.EN.101785 (previous costs under C.EN.101666.0004 transfer to this WBS via journal entry)

FY19 Capital Plan

P000045 - NEC CETC Consolidation Project

Program/Project: Multi-Year Project

Scope:

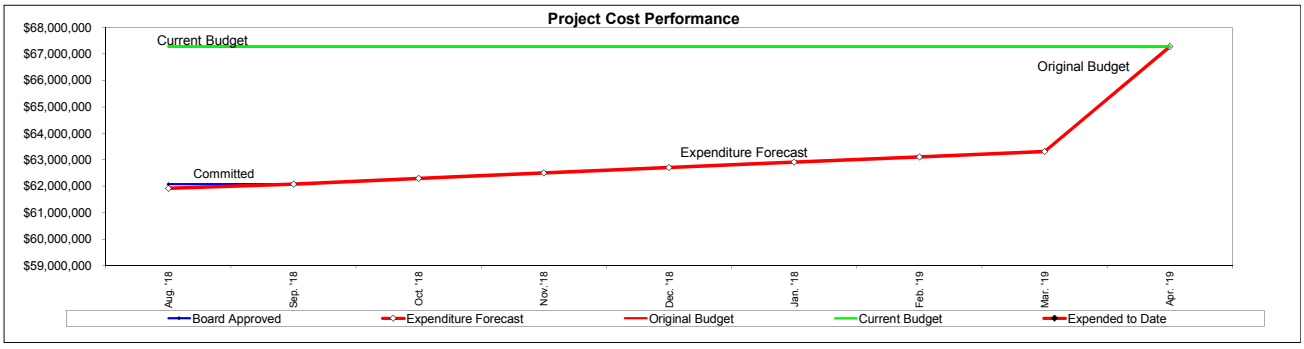
NEC CETC Consolidation Project

The NEC CETC Consolidation Project will consolidate CETC centers in Philadelphia, Boston and New York, CNOC and Amtrak Police Department communications center into a new control center. The project includes design and construction of a new facility for the consolidation of CETC, CNOC and Amtrak Police Department National Communications Center. Replace existing CETC systems in Philadelphia and Boston with a new client-server based system will be located in the new facility.

FY19 Scope:

In FY19 this Project will accomplish the completion of release of v57.0 in Boston (NED) on October 13, 2018 and in CNOC (SED) on October 20, 2018; and negotiate de-scoping with vendor (ARINC) for final payment. Software testing for Boston, testing and Commissioning for Wilmington, DE and Philadelphia, PA, the cutover of servers in the New England Division and On-Site training.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$1,200,000	$0	$1,200,000	$1,200,000	$0	$1,200,000	$0	$1,200,000	$0	100.0%
2. Final Design	$1,200,000	$0	$1,200,000	$1,200,000	$0	$1,200,000	$0	$1,200,000	$0	100.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$52,731,531	$0	$52,731,531	$47,664,492	$4,800,000	$52,731,531	$5,067,039	$52,731,531	$0	90.4%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$12,147,194	$0	$12,147,194	$11,702,240	$400,000	$12,147,194	$444,954	$12,147,194	$0	96.3%
Sub-Total	$67,278,725	$0	$67,278,725	$61,766,732	$5,200,000	$67,278,725	$5,511,993	$67,278,725	$0	91.8%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$67,278,725	$0	$ 67,278,725	$61,766,732	$5,200,000	$67,278,725	$5,511,993	$67,278,725	$0	91.8%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Testing and Install of SW and COTS	12/03/18	12/21/18	12/03/18	12/21/18
2. Software Testing for Boston	01/02/19	01/02/19	01/02/19	01/02/19
3. Testing and Install for Wilmington & Philadelphia	01/02/19	01/22/19	01/02/19	01/22/19
4. Cutover of servers in New England Division	1/30/2019	3/1/2019	1/30/2019	3/1/2019
5. On-site Training	3/29/2019	4/2/2019	3/29/2019	4/2/2019

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 5,200,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 5,200,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.100119.

FY19 Capital Plan

P000069 - Safe Harbor Frequency Converter Replacement Project

Program/Project: Multi-Year Project

Scope:

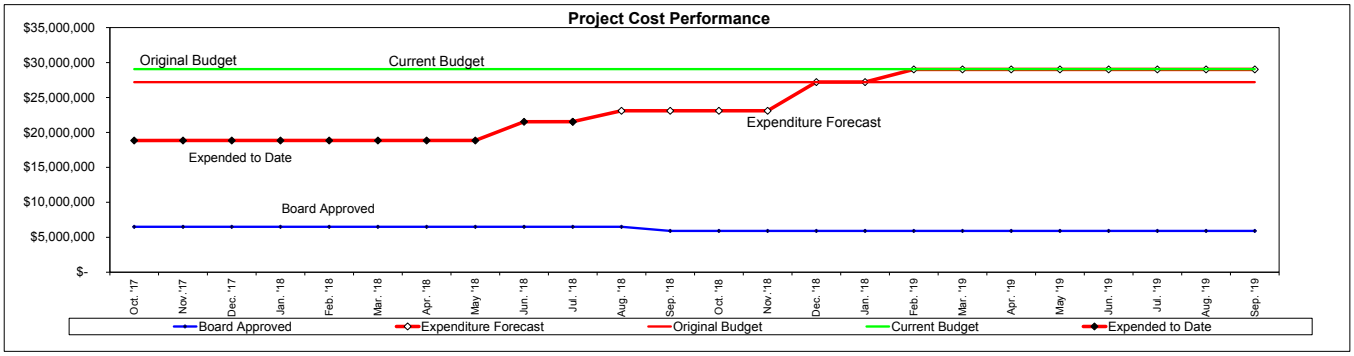
Safe Harbor Frequency Converter Replacement Project

The Safe Harbor Frequency Converter Replacement Project will replace and upgrade the frequency converter at Safe Harbor, MD generating station and includes rewind of the stator; re-alignment of the machines; provide new electrical (power and control) equipment (cables, breakers, excitation system, etc.); thorough cleaning; and testing/ commissioning. The original two (2) water wheels and the (1) rotary frequency converter (RFC) were installed in the 1930's. The water wheels were previously rehabbed in the 1970's and the RFC was previously rehabilitated in mid-2000.

FY19 Scope:

In FY19 the plan is the continuation of work to complete water wheel #1 rehabilitation which include the following activities; Generator restack and rewind the existing stator with new coils, test the rotor poles and fully inspect the stator frame and rotor structure. Repair the intake gate sealing surfaces to allow for future dewatered maintenance. Rehab the intake B powered gate. Replace the screw hoist system with modern hydraulic system. In the turbine area, replace the scroll case drains and Kaplan nose cone drain valve assembly to allow for proper dewatering during maintenance of the hydro turbines and repair the deflector cone drain pipe bracket. In the Operating Pit System replace and refurbish the air, water and coiling systems and pipes to allow for proper coolant flow. Perform Blade Cavitation repair. Perform Kaplan Trunion Seal repair by replaing the Kaplan Trunion seals on each of the 5 blades per Kaplan unit. In the Metering/Electrical Systems replace the original metering and relay protection with new digital metering and relays. Replace the selector and safety switches for pump systems. In the Power & Control Cables provide new unit power and CT/PT control cable cables from the power house to the PPL/PJM Conestoga substation to remove existing failing cables which also contain asbestos and PCB's. Also instal new output circuit breaker on unit #1. These activities that have carried into FY19 and will continue in this fiscal year will help to extend the life of these items for the next 10 years.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$27,136,674	$1,863,326	$29,000,000	$23,050,085	$5,975,720	$0	$5,949,915	$29,000,000	$0	79.5%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
7. Project Management	$56,346	$0	$56,346	$40,488	$0	$0	$15,858	$56,346	$0	71.9%
Sub-Total	$27,193,020	$1,863,326	$29,056,346	$23,090,573	$5,975,720	$0	$5,965,773	$29,056,346	$0	79.5%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$27,193,020	$1,863,326	$ 29,056,346	$23,090,573	$5,975,720	$0	$5,965,773	$29,056,346	$0	79.5%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
Complete Construction of Water Wheel #1	11/13/15	02/28/19	11/13/15	02/28/19
Andritz Rewind	06/18/18	02/15/19	06/18/18	02/15/19
Tekrins Power & Control Cables	07/23/18	11/13/18	07/23/18	11/13/18
Eaton Breakers	07/02/18	2/5/2019	07/02/18	2/5/2019
ABB Excitation	10/1/2018	10/1/2018	10/1/2018	10/1/2018

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 5,975,720	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 5,975,720**	

Project Note: All project costs are captured under the following WebWee Elements: C.EN.100347

FY19 Capital Plan

P000080 - Supervisory Control Data Acquisition (SCADA) Replacement Project

Program/Project: Multi-Year Project

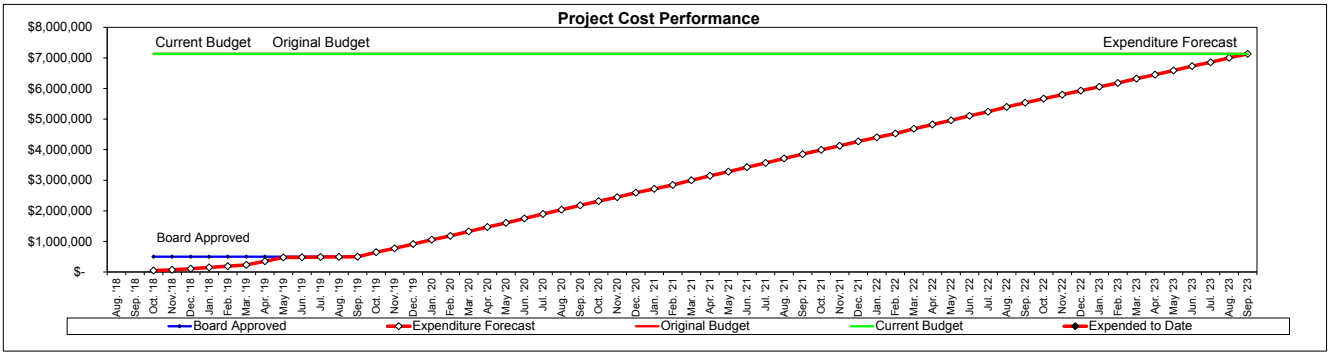
Scope:

Supervisory Control Data Acquisition (SCADA) Replacement Project

The Supervisory Control Data Acquisition (SCADA) Replacement Project will upgrade the New York Power Directors SCADA, Wilmington Power Directors SCADA, New England Power Directors SCADA and Philadelphia Load Dispatchers SCADA systems. Currently three different SCADA systems operate and control the Electric Traction power generation and distribution system for Amtrak's Northeast Corridor (NEC). This project will combine all the three under one system, enabling remote redundancy and operational flexibility. The project will also provide contingency options in the event of a critical issue impacting an operations center. The SCADA system manages all the ET infrastructure and equipment in the New England Division (NED), New York Division (NYD) and the Mid-Atlantic Division (MAD). This includes managing 440MW of generation, 160 transformers, and 490 miles of railroad. There are 9 personnel monitoring and managing this equipment 24/7. Upgrading SCADA to one common system will provide flexibility to update the system on demand as field changes occur, to provide remote redundant servers to increase system resiliency and provide for a platform compatible with the CETC train dispatching system. This project will reduce long term costs by enabling Amtrak personnel to modify graphics and database mapping as required to ensure PDs are operating from the most current system. It will install off-site redundant servers to ensure the system stays operational in the event a critical issue or failure occurs.

F19 Scope: Finalize scope for the project, procure and issue NTP to Vendor for design/Installation of system and mobilize vendor.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$40,000	$0	$40,000	$0	$40,000	$40,000	$40,000	$40,000	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$2,880,000	$0	$2,880,000	$0	$380,000	$2,880,000	$2,880,000	$2,880,000	$0	0.0%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$3,251,796	$0	$3,251,796	$0	$0	$3,251,796	$3,251,796	$3,251,796	$0	0.0%
7. Project Management	$960,026	$0	$960,026	$0	$80,000	$960,026	$960,026	$960,026	$0	0.0%
Sub-Total	$7,131,822	$0	$7,131,822	$0	$500,000	$7,131,822	$7,131,822	$7,131,822	$0	0.0%
8. Contingency	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
Total	$7,131,822	$0	$ 7,131,822	$0	$500,000	$7,131,822	$7,131,822	$7,131,822	$0	0.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Finalize Scope	10/01/18	11/16/18	10/01/18	11/16/18
2. RFP (Procurement)	11/19/18	03/29/19	11/19/18	03/29/19
3. NTP (Vendor)	03/29/19	03/29/19	03/29/19	03/29/19
4. Mobilization	04/01/19	05/31/19	04/01/19	05/31/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 500,000	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 500,000**	

Project Note: All project costs are captured under the following WebWEE WBS Elements; C.EN.101779.

FY19 Capital Plan

P000077 - Sunnyside Yard Frequency Converter Upgrade Project

Program/Project: Multi-Year Project

Scope:

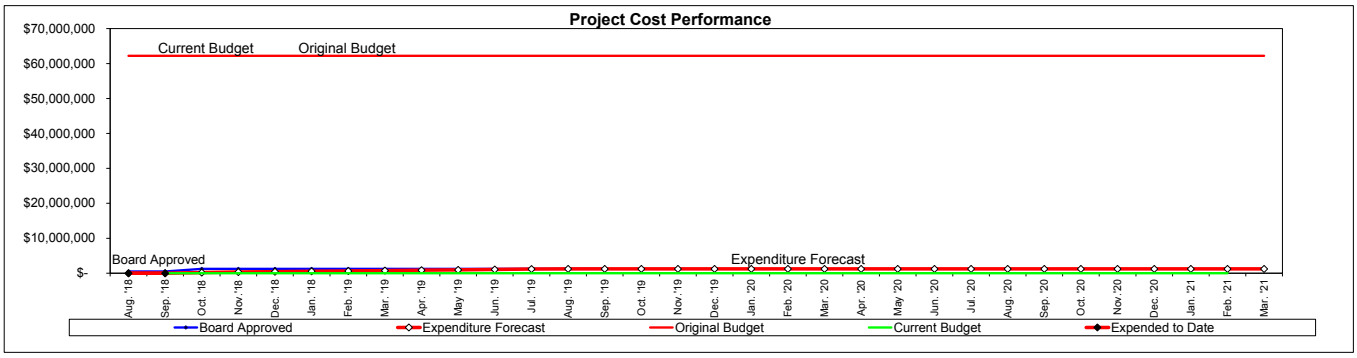
Sunnyside Yard Frequency Converter Upgrade Project

Sunnyside Yard Static Frequency Converter (SSYD SFC) is one of the six frequency converter stations that provide power to Amtrak's 25Hz traction power network on the South End (Washington D.C. to New York and Philadelphia to Harrisburg). It is located within Amtrak's Sunnyside Yard in Long Island City, Queens, NY. This SFC was commissioned in 1998 and has been online, providing power to Amtrak's traction power network ever since. The converters are approaching 20 years of service and consequently the end of their expected service life, thus they need to be replaced. SSYD SFC currently consists of four (4) 9.375MVA (7.5MW) static frequency converters and is rated to provide 37.5MVA (30MW) of power continuously. SSYD SFC provides power primarily to Amtrak and New Jersey Transit train operations in New York, from North Bergen, NJ to Sunnyside Yard, Queens, NY. This includes all operation within Penn Station and the North/ East river tunnels.

The scope for the Sunnyside Yard Frequency Converter Upgrade Project will provide preliminary engineering (30% design), meaning delivery of a complete and detailed biddable package, which Amtrak can use to solicit a Design/ Build contractor to complete 100% Design, and furnish/ install/ commission all required equipment required for this project.

FY19 Scope: Scope for FY19 includes the solicitation, award and execution of site survey and design development of 15% conceptual design.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$1,150,068	$0	$1,150,068	$0	$1,150,068	$0	$1,150,068	$1,150,068	$0	0.0%
2. Final Design	$3,280,871	$0	$3,280,871	$0	$0	$0	$3,280,871	$3,280,871	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$50,433,291	$0	$50,433,291	$0	$0	$0	$50,433,291	$50,433,291	$0	0.0%
5. Construction Management	$867,136	$0	$867,136	$0	$40,647	$0	$867,136	$867,136	$0	0.0%
6. Testing & Commissioning	$440,642	$0	$440,642	$0	$0	$0	$440,642	$440,642	$0	0.0%
7. Project Management	$250,000	$0	$250,000	$0	$56,612	$0	$250,000	$250,000	$0	0.0%
Sub-Total	$56,422,009	$0	$56,422,009	$0	$1,247,327	$0	$56,422,009	$56,422,009	$0	0.0%
8. Contingency	$5,783,256	$0	$5,783,256	$0	$0	$0	$5,783,256	$5,783,256	$0	0.0%
Total	$62,205,265	$0	$ 62,205,265	$0	$1,247,327	$0	$62,205,265	$62,205,265	$0	0.0%

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. Issue NTP - ROW/Utilities	10/01/18	01/02/19	10/01/18	01/02/19
2.Project Definition Report	01/02/19	04/30/19	01/02/19	04/30/19
3. Conceptual Design	05/01/19	08/31/19	05/01/19	08/31/19
4. Issue NTP - Final Design	05/31/19	08/01/19	05/31/19	08/01/19
5. Design Development Submission (15%)	09/01/19	09/30/19	09/01/19	09/30/19
6. Survey Work	10/01/18	11/30/18	10/01/18	11/30/18

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 1,247,327	
STATE	$ -	
OTHER	$ -	
Total Funding	**$ 1,247,327**	

Project Note: All project cost are captured under the following WebWee Elements: C.EN.101239

FY19 Capital Plan

P000085 - Washington to Boston ARINC to AMTEC Software Upgrade Project

Program/Project: Multi-Year Project

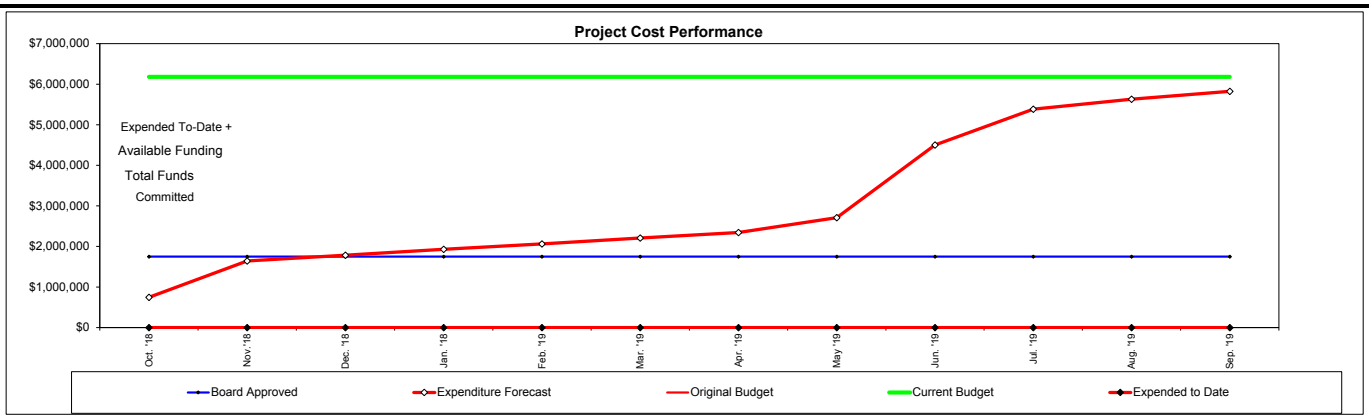
Scope:

Washington to Boston ARINC to AMTEC Software Upgrade Project

The Washington to Boston ARINC to AMTEC Software Upgrade Project will replace the MAD and NED CETC primary and backup system with the AMTEC system. The project will be design, implement and test the new MAD and NED AMTEC systems by in-house PSCC staff as well as maintenance of all system interfaces. Transportation personnel in Wilmington, Boston and Remote locations will be able to transfer their operations to the new system. Power Director and Load Dispatcher operations will continue, either by a newly selected system by Electric Traction (E/T) personnel or by the exiting system. The project will provide training on the new system to both Transportation and CETC specialists.

FY19 Scope: FY19 scope includes completion of installation and testing of all software and hardware on the MAD-Harrisburg line and MAD-Mid-Atlantic Divisions. The project anticipates installation and testing on the NED-Springfield Line in FY19. The remaining work that is needed NED-Mainline will be start and complete in Early FY20.

Budget:



BUDGET: FISCAL YEAR 2019

Cost Analysis by Level II	Original Budget	Approved C.O. / Internal Transfers	Current Budget	Expended + Accrued To Date	FY19 Forecast	Committed to Date	Estimate to Complete	Estimate at Completion	Variance at Completion	% Expended of EAC
1. Preliminary Engineering	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
2. Final Design	$92,852	$0	$92,852	$0	$87,490	$0	$92,852	$92,852	$0	0.0%
3. Right of Way / Utilities	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
4. Construction	$4,479,073	$0	$4,479,073	$0	$4,220,435	$0	$4,479,073	$4,479,073	$0	0.0%
5. Construction Management	$0	$0	$0	$0	$0	$0	$0	$0	$0	0.0%
6. Testing & Commissioning	$265,144	$0	$265,144	$0	$249,834	$0	$265,144	$265,144	$0	0.0%
7. Project Management	$119,024	$0	$119,024	$0	$112,151	$0	$119,024	$119,024	$0	0.0%
Sub-Total	**$4,956,094**	**$0**	**$4,956,094**	**$0**	**$4,669,910**	**$0**	**$4,956,094**	**$4,956,094**	**$0**	**0.0%**
8. Contingency	$1,225,085	$0	$1,225,085	$0	$1,154,344	$0	$1,225,085	$1,225,085	$0	0.0%
Total	**$6,181,178**	**$0**	**$ 6,181,178**	**$0**	**$5,824,254**	**$0**	**$6,181,178**	**$6,181,178**	**$0**	**0.0%**

Schedule:

Major Milestones:	Planned Schedule Start	Planned Schedule Finish	Current Schedule Start	Current Schedule Finish
1. MAD-Harrisburg line Phase 1	10/01/18	02/28/19	10/01/18	02/28/19
2. MAD- Mid-Atlantic Phase 2	01/01/19	05/20/19	01/01/19	05/20/19
3. NED-Springfield line Phase 3	06/01/19	10/01/19	06/01/19	10/01/19

FY2019 Funding:

	Forecast	Notes
FED GOV/PRIIA BCCs	$ 5,824,254	
STATE	$ -	
OTHER	$ -	
Total Funding	$ 5,824,254	

Project Note: All project costs are captured under the following WebWEE WBS Elements: C.EN.101767.0001-0012

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Appendix B: Amtrak Continuous Maintenance Production Programs

Amtrak's submission to the FY19 One-Year Implementation Plan included improved geographic specificity and additional scope, schedule, and budget details, including **continuous maintenance production programs**. Amtrak defines these programs as discipline-specific renewal activities with minimum design effort, planned based on steady state levels, and typically performed by Amtrak Division or Production forces.

List of Amtrak Continuous Maintenance Production Programs

1. NEC Rail Replacement Program
2. NEC Surfacing Program
3. National Surfacing Program
4. NEC System Undercutting Program
5. National Tie/Timber Replacement Program
6. NEC Tie/Timber Replacement Program
7. TLS Concrete Tie Replacement Program
8. NEC Total Track Replacement Program
9. National Turnout Renewal Program
10. NEC Turnout Renewal Program

Forecasted expenditures in the following project sheets provided by Amtrak do not include general and administrative (G&A) expenses as authorized by the Northeast Corridor Commuter and Intercity Rail Cost Allocation Policy. All other capital renewal planned expenditures in this document include G&A.

AMTRAK **FY19 Capital Plan** 10/01/18

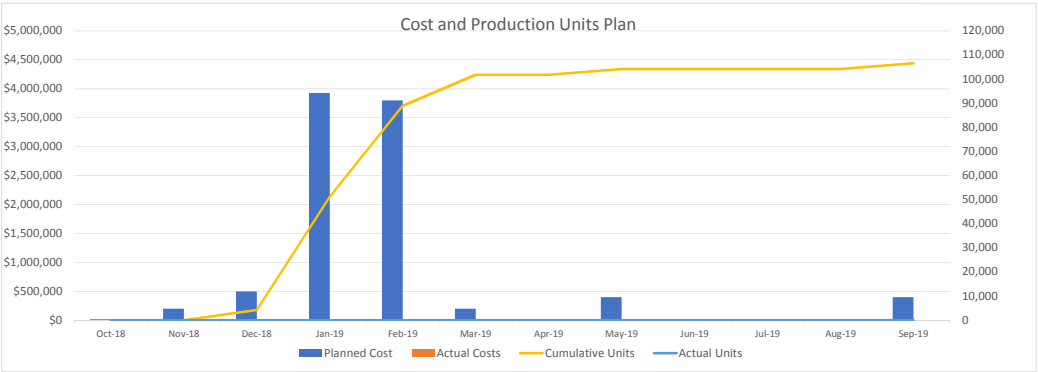
PG00049 - NEC Rail Replacement Program

Program/Project: *Continuous Project*

SCOPE: The NEC Rail Replacement Program is a continuous program in the Northeast Corridor that replaces rail that is approaching the end of its useful service life or meeting the horizontal or vertical wear limits throughout the Amtrak System.

FY19 SCOPE: In FY19, the Rail Replacement Program will work at the following locations: Swift to Dock Track 3, Ragan to Davis Track 3, View to Crescent Track 1, Groton to High Street Tracks 1 and 2, Packard to Cranston Track 1 and Kingston to Davisville Track 2.

The NEC Rail Replacement Program will replace 106,600 feet of rail in FY19.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 3	BCC Segment 4	BCC Segment 5	BCC Segment 12	BCC Segment 20	Original Budget
1. Preliminary Engineering						
2. Final Design						
3. Right of Way / Utilities						
4. Construction	250,000	950,000	250,000	500,000	7,475,960	9,425,960
5. Construction Management						
6. Testing and Commissioning						
7. Project Administration						74,040
Sub-Total	250,000	950,000	250,000	500,000	7,475,960	9,500,000
8. Contingency						
Total						**9,500,000**

FY19 Planned Locations:	Location				Planned Schedule		Units*	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned	Planned
Swift to Dock Tk 3	NJ	12	7.2	8.5	12/14/18	12/16/18	4,200	500,000
Ragan to Davis Tk 3	DE	20	30.0	38.2	01/07/19	02/28/19	86,400	7,475,960
View to Crescent Tk 1	CT	5	106.00	106.00	02/08/19	02/10/19	3,200	250,000
Groton to High Street Tk 2	CT	4	141.00	141.00	02/22/19	03/15/19	3,200	250,000
Groton to High Street Tk 1	CT	4	141.00	141.00	03/15/19	04/14/19	3,200	250,000
Groton to High Street Tk 1	CT	4	141.00	141.00	03/15/19	04/14/19	1,600	200,000
Packard to Cranston Tk 1	RI	3	185.00	185.00	05/17/19	05/19/19	2,400	250,000
Kingston to Davisville Tk 2	RI	4	159.00	159.00	09/13/19	09/15/19	2,400	250,000
Total *Production Units: Linear Feet							106,600	9,425,960

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 9,500,000
Total Funding	**$ 9,500,000**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101661.

AMTRAK

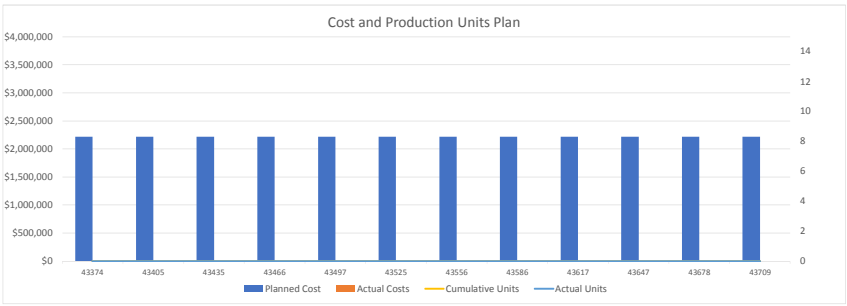
FY19 Capital Plan 10/01/18

PG00060 - National Surfacing Program

Program/Project: *Continuous Project*

SCOPE: The National Surfacing Program performs high speed surfacing on the tracks throughout the Harrisburg Line. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The National Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.

FY19 SCOPE: Please note that the FY19 schedule for the National Surfacing Program is still being evaluated and hasn't been approved. Also, no costs have been assigned to specific locations as they are subject to change and dates haven't been set. Therefore, the below milestones provided are approximations assigned to the proposed budget provided for FY19. Once the schedule has been set, updates to this document will be made accordingly.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segments To Be Finalized	Original Budget
1. Preliminary Engineering		
2. Final Design		
3. Right of Way / Utilities		
4. Construction		3,500,000
5. Construction Management		
6. Testing and Commissioning		
7. Project Administration		
Sub-Total		3,500,000
8. Contingency		
Total		**3,500,000**

FY19 Planned Locations:	Location				Planned Schedule		Units	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned*	Planned
Glen to Downs Tks 1 & 4	PA	29	25.0	31.0	TBD	TBD	16.22	TBD
Paoli to Frazer Tks 1 & 4	PA	29	20.0	23.0	TBD	TBD	8.36	TBD
Frazer to Glen Tks 1 & 4	PA	29	23.0	25.0	TBD	TBD	2.76	TBD
Caln to Park Tks 1 & 4	PA	30	36.0	46.0	TBD	TBD	23.56	TBD
Park to Leaman Tks 1 & 4	PA	30	46.0	56.0	TBD	TBD	25.96	TBD
Leaman to Holland Tks 1 & 4	PA	30	57.0	66.0	TBD	TBD	22.46	TBD
Rheems to Roy Tk 2	PA	30	83.0	94.0	TBD	TBD	13.28	TBD
Roy to State Tks 1 & 2	PA	30	94.0	103.0	TBD	TBD	22.28	TBD
Valley to Overbrook Tk 1	PA	29	4.0	5.0	TBD	TBD	0.39	TBD
Cork to Roy Tk 1	PA	30	68.0	94.0	TBD	TBD	32.49	TBD
Total							167.75	3,500,000

**Units measured in Linear Miles per miles passed*

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 3,500,000
Total Funding	**$ 3,500,000**

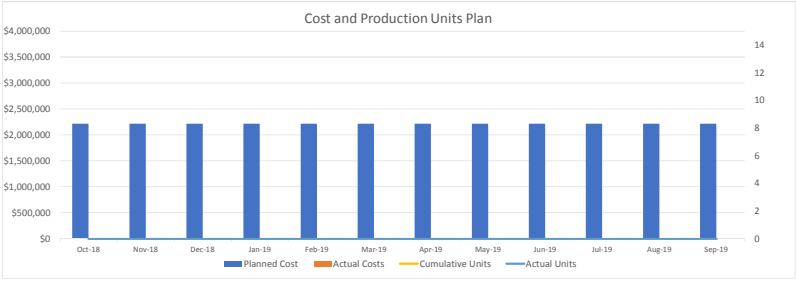
Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101668.

PG00060 - NEC Surfacing Program

Program/Project: *Continuous Project*

SCOPE: The NEC Surfacing Program performs high speed surfacing on the tracks throughout the Northeast Corridor. This is a flexible Program that is continually changing. Due to it's ability to be flexible, it takes the least priority when other Track assignments need to be placed ahead. The NEC Track Surfacing Program is also subject to change due to factors such as weather, the availability of track outages and changes in the schedule of the SES, Undercutter and TLS.

FY19 SCOPE: Please note that the FY19 schedule for the NEC Surfacing Program is still being evaluated and hasn't been approved. Also, no costs have been assigned to specific locations as they are subject to change and dates haven't been set. Therefore, the below milestones provided are approximations assigned to the proposed budget provided for FY19. Once the schedule has been set, updates to this document will be made accordingly.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segments To Be Finalized	Original Budget
1. Preliminary Engineering		
2. Final Design		
3. Right of Way / Utilities		
4. Construction		26,600,000
5. Construction Management		
6. Testing and Commissioning		
7. Project Administration		
Sub-Total		26,600,000
8. Contingency		
Total		**26,600,000**

FY19 Planned Locations:	Location				Planned Schedule		Units	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned*	Planned
Carroll to Bowie Tks 1 & 3	MD	22	125.0	125.0	TBD	TBD	0.38	TBD
Bowie to Grove Tks 1,2 & 3	MD	22	112.0	120.0	TBD	TBD	19.23	TBD
Grove to Bridge Tks 1 & 3	MD	22	98.0	112.0	TBD	TBD	18.32	TBD
Landover to Carroll Tks 2 & 3	MD	22	128.0	127.0	TBD	TBD	3.46	TBD
Gunpow to Magnolia Tk 2	MD	22	78.0	77.0	TBD	TBD	1.73	TBD
Bush to Oak Tk 2 & 4	MD	22	71.0	63.0	TBD	TBD	12.17	TBD
Prince to Bacon Tks 2 & 3	MD	21	51.0	57.0	TBD	TBD	1.57	TBD
Bacon to Davis Tks 2 & 3	MD	20	38.0	50.0	TBD	TBD	15.64	TBD
Davis to Ragan Tks 2 & 3	MD	20	30.0	30.0	TBD	TBD	0.50	TBD
Holly to Hook Tks 2 & 3	MD	20	20.0	16.0	TBD	TBD	8.40	TBD
Hook to Baldwin Tks 2 & 3	PA	19	16.0	11.0	TBD	TBD	12.20	TBD
Baldwin to Phil Tk 2	PA	19	11.0	3.0	TBD	TBD	18.78	TBD
Wood to Bush Tk 3	MD	22	75.0	72.0	TBD	TBD	3.46	TBD
Ragan to Yard Tk 3	MD	20	29.0	28.0	TBD	TBD	1.59	TBD
Shore to Holmes Tks 1, 2 & 3	PA	15	82.0	77.0	TBD	TBD	5.50	TBD
Ham to County Tk 1	NJ	12	55.0	32.0	TBD	TBD	28.63	TBD
Holmes to Grundy Tks 2 & 3	PA	14	77.0	65.0	TBD	TBD	29.55	TBD
County to Edison Tks 2 & 3	NJ	12	32.0	28.0	TBD	TBD	9.30	TBD
Edison to Lincoln Tks 2 & 3	NJ	12	27.0	26.0	TBD	TBD	2.65	TBD
Union to Elmora Tks 2 & 3	NJ	12	19.0	15.0	TBD	TBD	10.78	TBD
Lehigh to Clearfield Tk 3	PA	16	85.0	84.0	TBD	TBD	0.27	TBD
Clearfield to Shore Tk 3	PA	16	84.0	82.0	TBD	TBD	2.65	TBD
Lincoln to Menlo Tk 3	NJ	12	25.0	23.0	TBD	TBD	2.38	TBD
Iselin to Union Tk 3	NJ	12	20.0	22.0	TBD	TBD	3.14	TBD
Fair to Morris Tk 4	NJ	13	58.0	56.0	TBD	TBD	1.50	TBD
County to Midway Tk 4	NJ	12	41.0	32.0	TBD	TBD	10.11	TBD
Elmora to Lane Tk 4	NJ	12	14.0	12.0	TBD	TBD	3.25	TBD
Lane to Hunter Tk 4	NJ	12	11.0	10.0	TBD	TBD	1.88	TBD
Orchard to Meadow	CT	5	83.0	88.0	TBD	TBD	6.44	TBD
Meadow to Triebel	CT	5	88.0	89.0	TBD	TBD	0.60	TBD
Triebel to Guilford	CT	5	89.0	89.0	TBD	TBD	0.66	TBD
Guilford to Brook Tks 1 & 2	CT	5	90.0	103.0	TBD	TBD	31.98	TBD
Crescent to Nan Tks 1 & 2	CT	5	115.0	116.0	TBD	TBD	3.48	TBD
High Street to Kingston Tks 1 & 2	RI	4	148.0	158.0	TBD	TBD	12.66	TBD
Post to Cranston Tks 1 & 2	RI	3	178.0	180.0	TBD	TBD	5.20	TBD
Hebbronville to Thatcher Tks 1 & 2	MA	2	193.0	196.0	TBD	TBD	6.22	TBD
Holden to Mansfield Tks 1 & 2	MA	2	198.0	203.0	TBD	TBD	12.68	TBD
Mansfield to Junction	MA	2	204.0	213.0	TBD	TBD	12.01	TBD
Junction to Transfer Tks 1 & 2	MA	2	214.0	218.0	TBD	TBD	10.10	TBD
Read to Forest Tks 1 & 2	MA	2	219.0	223.0	TBD	TBD	9.26	TBD
Mill River to Shore Line Junction	PA	15	74.0	76.0	TBD	TBD	2.00	TBD
Orms to Pawtucket Tk 2	RI	2	185.0	187.0	TBD	TBD	1.29	TBD
Total							343.58	$ 26,600,000

**Units measured in Linear Miles per miles passed*

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 26,600,000
Total Funding	**$ 26,600,000**

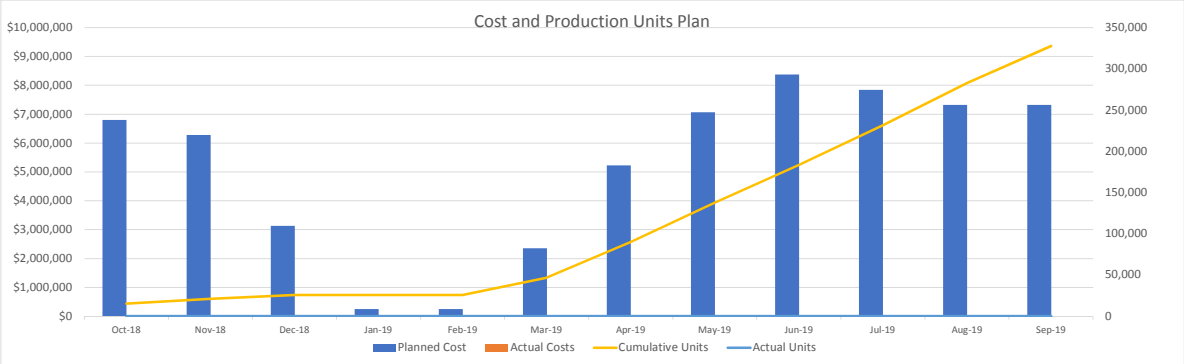
Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101649.

PG00062 - NEC System Undercutting Program

Program/Project: *Continuous Project*

SCOPE: This Program will move the Railroad toward a State of Good Repair (SOGR) by eliminating component failures and reducing maintenance costs. Undercutting will reduce slow orders occurring where the track geometry has a rapid degradation, thereby decreasing service delays. In addition, the life of the rail and ties will be preserved, reducing costly spot replacements.

FY19 SCOPE: In FY19, the Undercutting Program plans to complete a total of 327,850 LF undercutting at the following locations: Grove to MP104 Tk2, Paoli Station Tk 1 to East of Station, Overbrook Station Tk 1, Paoli Station Tk 4 to East of Station, NY Line Tk 2, NY Line Tk 2, Hanson to Carroll Tk 1, Carroll to Bowie Tk 1, Bowie to Grove Tk 1, Grove to Bridge Tk 1, Gunpow to River Tk 3, Guilford to Brook Tk 2, Crescent Tk 1 Heading East, Crescent Tk 2 Heading East, Branford to Mill River Tk 1, Mill River to Branford Tk 2, High Street to Kingston Tk 2.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 22	BCC Segment 29	BCC Segment 12	BCC Segment 5	BCC Segment 4	Original Budget
1. Preliminary Engineering						
2. Final Design						177,538
3. Right of Way / Utilities						
4. Construction	35,848,268	393,800	420,650	14,458,929	10,666,266	61,787,913
5. Construction Management						
6. Testing and Commissioning						
7. Project Administration						338,611
Sub-Total						62,304,062
8. Contingency						
Total						**62,304,062**

FY19 Planned Locations:	Location				Planned Schedule		Units*	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned	Planned
Grove to MP104 Tk2	MD	22	112.4	104.0	08/27/18	11/16/18	9,908	1,699,796
Paoli Station Tk 1 to East of Station	PA	29	19.9	19.9	11/02/18	11/04/18	800	143,200
Overbrook Station Tk 1	PA	29	5.9	5.8	11/09/18	11/11/18	1,000	179,000
Paoli Station Tk 4 to East of Station	PA	29	19.9	19.9	11/16/18	11/18/18	400	71,600
NY Line Tk 2	NJ	12	29.9	30.1	11/30/18	12/02/18	1,150	205,850
NY Line Tk 2	NJ	12	32.1	32.4	12/07/18	12/09/18	1,200	214,800
Hanson to Carroll Tk 1	MD	22	128.8	126.6	03/04/19	04/18/19	8,448	1,900,800
Carroll to Bowie Tk 1	MD	22	126.4	120.7	03/11/19	05/30/19	30,096	6,697,865
Bowie to Grove Tk 1	MD	22	120.3	112.7	04/15/18	07/11/19	40,128	8,955,064
Grove to Bridge Tk 1	MD	22	112.2	98.2	05/20/19	10/17/19	79,120	14,088,744
Gunpow to River Tk 3	MD	22	79.5	89.3	09/16/19	11/21/19	14,000	2,506,000
Guilford to Brook Tk 2	CT	5	91.2	104.4	07/23/18	11/15/18	0	-
Crescent Tk 1 Heading East	CT	5	115.2	N/A	11/30/18	12/02/18	1,200	214,800
Crescent Tk 2 Heading East	CT	5	115.2	N/A	12/06/18	12/08/18	1,200	214,800
Branford to Mill River Tk 1	CT	5	81.2	73.9	04/15/19	06/06/19	39,600	7,014,664
Mill River to Branford Tk 2	CT	5	74.0	81.3	06/10/19	08/01/19	39,600	7,014,664
High Street to Kingston Tk2	RI	4	143.2	158.4	08/05/19	11/15/19	60,000	10,666,266
Total							327,850	$61,787,913

*Production Units: Linear Feet

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 62,304,062
Total Funding	**$ 62,304,062**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.100269.

AMTRAK

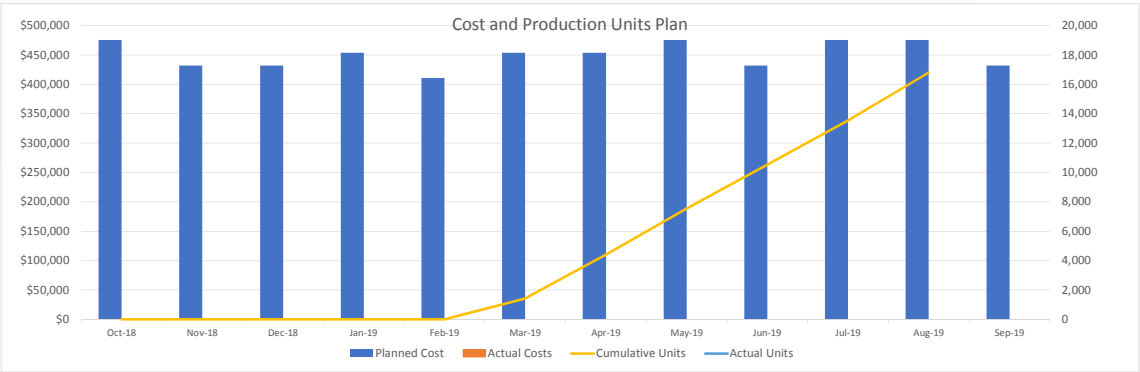
FY19 Capital Plan 10/01/18

PG00071 - National Tie/Timber Replacement Program

Program/Project: *Continuous Project*

SCOPE: The National Tie/Timber Replacement Program replaces wood ties and timbers along the mainline, siding and yard tracks of the railroad. These ties are replaced due to diminished ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.

FY19 SCOPE: In FY19, the National Tie/Timber Replacement Program will replace approximately 19,500 wood ties and timbers between the territory of Paoli to Park Tracks 1 and 4. Division support is also planned to take place on the AS, AE, AH and AX Lines throughout the Right of Way (ROW), however the units of ties and timbers are unplanned for the Division work due to more of a reactive/as-needed support service. Please note that the planned locations in this Program are currently under reevaluation and may change.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 25	BCC Segment 27	BCC Segment 29	BCC Segment 30	Original Budget
1. Preliminary Engineering					
2. Final Design					
3. Right of Way / Utilities					
4. Construction	$165,678	$51,917	$3,250,228	$1,392,955	$4,912,695
5. Construction Management					
6. Testing and Commissioning					
7. Project Administration					200,000
Sub-Total					5,112,695
8. Contingency					287,055
Total					**5,399,750**

FY19 Planned Locations:	Location				Planned Schedule		Units	Costs
	State	BCC**	Start MP	End MP	Start	Finish	Planned*	Planned
AH LINE: Paoli to Park Tk 1	PA	30	35.4	45.3	03/18/19	07/18/19	3,345	789,882
AH LINE: Paoli to Park Tk 1	PA	29	20.2	35.3	03/18/19	07/18/19	7,805	1,843,058
AH LINE: Park to Paoli Tk 4	PA	29	20.2	35.3	07/22/19	10/24/19	5,845	1,407,170
AH LINE: Park to Paoli Tk 4	PA	30	35.4	45.3	07/22/19	10/24/19	2,505	603,073
AE LINE: Division Support Tie Install - Undetermined Units	NY	27	0.0	10.8	TBD	TBD	Undetermined	51,917
AS LINE: Division Support Tie Install - Undetermined Units	MA	25	1.5	65.0	TBD	TBD	Undetermined	165,678
AX LINE: Division Support Tie Install - Undetermined Units	NY	N/A	188.0	199.0	TBD	TBD	Undetermined	51,917
Total							19,500	4,912,695

**Division Support unit of ties undetermined since they are unplanned until closer to the time of work.*

***No BCC Assigned to this Project - not in PRIIA-2012 Territory.*

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 5,399,750
Total Funding	**$ 5,399,750**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101673.

FY19 Capital Plan
PG00071 - NEC Tie/Timber Replacement Program

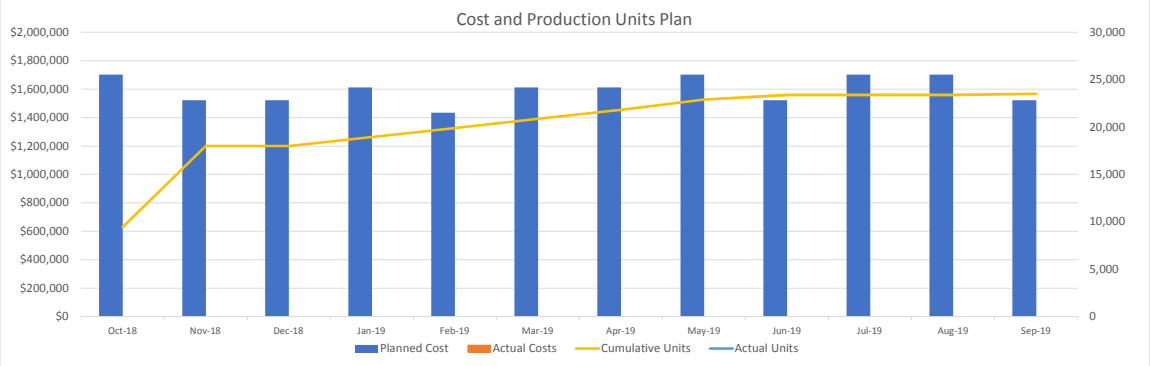
Program/Project: *Continuous Project*

SCOPE:

The NEC Tie/Timber Replacement Program replaces wood ties and timbers along the Northeast Corridor that have lost their ability to hold their gage (distance between the track), due to continued use, loss of strength and increased age.

FY19 SCOPE:

In FY19 the NEC Tie/Timber Replacement Program planned to replace approximately 23,507 wood ties and timbers between the territory of Biddle to Gunpow on Track A, B&P Tunnel Track 2, Grundy Interlocking, Hudson Interlocking Track 1, and Ham Interlocking Track 4. Division support was also planned to take place on the AP, AB and AN Lines throughout the Northeast Corridor, however the units of ties and timbers are unplanned due to more of a reactive/as-needed support service.
Please note that the planned locations in this Program are currently under reevaluation and will change. FY19 scope and report componenets will be adjusted accordingly to reflect any changes.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 2 - 5*	BCC Segment 12 - 14*	BCC Segment 20	BCC Segment 22	Original Budget**
1. Preliminary Engineering					
2. Final Design					
3. Right of Way / Utilities					
4. Construction	$3,147,707	$4,531,999	$2,704,514	$8,590,951	$19,075,171
5. Construction Management					
6. Testing and Commissioning					
7. Project Administration					100,000
Sub-Total					19,175,171
8. Contingency					
Total					**19,175,171**

**While costs are based on previous historical amounts for work performed within these territories, Division support is used on an as-needed basis and geographic specificity isn't determined until closer to the time of work performed. Therefore singular BCC Segments cannot be determined at this time.*

***Please note that $100,000 was added to the overall Construction amount to account for Construction Procurement Contracts.*

FY19 Planned Locations:	Location				Planned Schedule		Units	Costs
	State	BCC**	Start MP	End MP	Start	Finish	Planned*	Planned
AP LINE: Biddle to Gunpow Tk A	MD	22	94.0	79.7	10/01/18	11/20/18	18,000	$ 8,590,951
AP LINE: B&P Tunnel Tk 2	MD	20	N/A	N/A	01/11/19	05/17/19	4,800	$ 2,704,514
AB LINE: Division Support Tie Install - Undetermined Units	MA,RI,CT	2-5	228.7	72.0	TBD	TBD	Undetermined	$ 3,147,707
AN LINE: Division Support Tie Install - Undetermined Units	NJ & PA	12-14	0.1	87.7	TBD	TBD	Undetermined	$ 1,973,218
AN LINE: Grundy Interlocking	PA	14	65.2	65.2	05/06/19	06/06/19	191	$ 707,926
AN LINE: Hudson Interlocking Tk 1	NJ	12	8.5	8.5	06/10/19	06/18/19	400	$ 1,083,034
AN LINE: Ham Interlocking Tk 4	NJ	12	55.9	55.4	09/23/19	11/07/19	116	$ 767,821
Total							23,507	$ 18,975,171

**Division Support unit of ties undetermined since they are unplanned until closer to the time of work.*

***While costs are based on previous historical amounts for work performed within these territories, Division support is used on an as-needed basis and geographic specificity cannot be determined at this time for a singular BCC Segment.*

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 19,175,171
Total Funding	**$ 19,175,171**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101656.

AMTRAK **FY19 Capital Plan** **10/1/2018**

PG00057 - TLS Concrete Tie Replacement Program

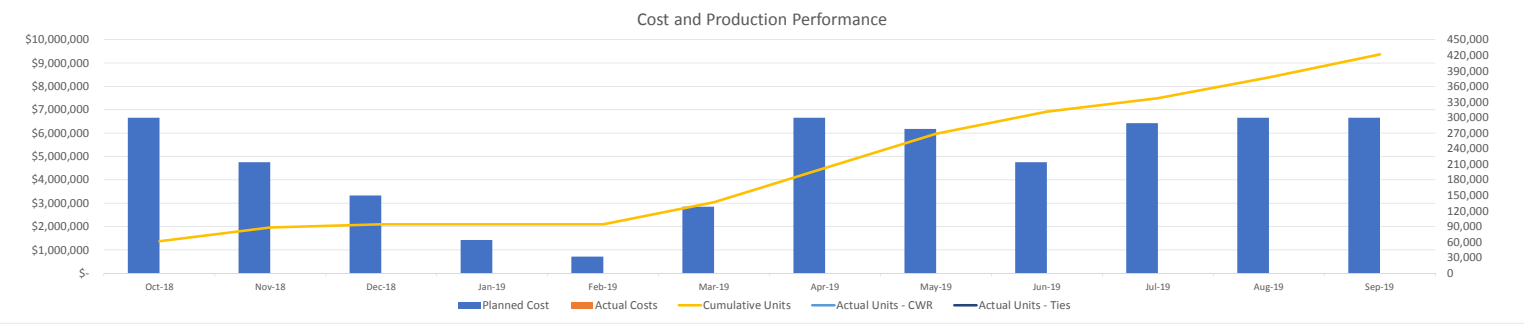
Program/Project: *Continuous Program*

SCOPE: The Track Laying System (TLS) is a mechanized out-of-face rail and concrete tie replacement unit utilizing the Track Laying Machine (TLM). TLS Blue is a 129 person team made up of five gangs (Head-End, TLM, Clipping, Surfacing and Material Handling). In addition, TLS is typically supported by C&S, ET, B&B, Division Track, T&E and Holland Welders.

FY19 SCOPE: In FY19, TLS plans to complete total tie and rail replacement at the following locations: Grundy to Morris Track 1, Morris to West Fair Track 1, MP 83 to Gunpow Track 1, Davis to Shellpot Track 1, Perry to Prince Track 2, Iron to Davis Track A, Landilith to Holly Track 2 and Shore to Holmes Track 1. In FY19 this Program will replace 84,248 ties and 336,992 feet of CWR.

Issues:

STATUS UPDATE:



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 13	BCC Segment 14	BCC Segment 20	BCC Segment 21	BCC Segment 22	Original Budget
1. Preliminary Engineering						
2. Final Design						$225,000
3. Right of Way / Utilities						
4. Construction	$3,101,717	$9,260,943	$30,291,144	$7,006,795	$6,264,401	$55,925,000
5. Construction Management						$450,000
6. Testing and Commissioning						
7. Project Management						$400,000
Sub-Total	3,101,717	9,260,943	30,291,144	7,006,795	6,264,401	57,000,000
8. Contingency						
Total						**57,000,000**

FY19 Planned Locations:	Location				Planned Schedule		Units		Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned - Ties	Planned - CWR *	Planned
Grundy to Morris Tk 1	PA	14	65.3	58.0	10/08/18	11/16/18	18,480	73,920	9,260,943
Morris to West Fair Tk 1	PA	13	58.0	56.8	11/26/18	12/20/18	3,200	12,800	3,101,717
MP 83 to Gunpow Tk 1	MD	22	83.0	79.3	03/04/19	04/04/19	8,448	33,792	6,264,401
Davis to Shellpot Tk 1	DE	20	38.4	41.1	04/08/19	05/30/19	24,288	97,152	13,525,543
Perry to Prince Tk 2	MD	21	57.3	59.9	06/03/19	07/03/19	5,808	23,232	7,006,795
Iron to Davis Tk A	MD	20	41.4	38.8	07/08/19	08/08/19	10,824	43,296	7,765,905
Landilith to Holly Tk 2	DE	20	20.3	25.4	08/12/19	09/26/19	13,200	52,800	8,999,696
Shore to Holmes Tk 1	PA	15	77.2	82.1	09/30/19	10/31/19	0	0	0
Total							84,248	336,992	55,925,000

*Production Units: Linear

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 57,000,000
Total Funding	**$ 57,000,000**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101652.

AMTRAK

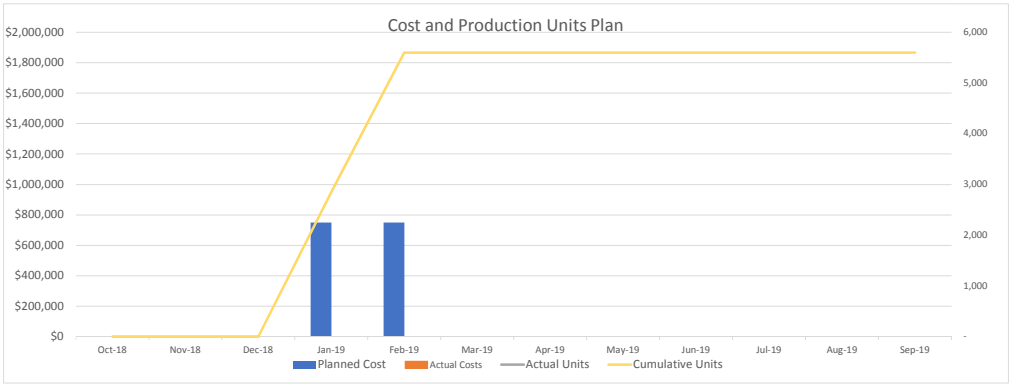
FY19 Capital Plan 10/01/18

PG00058 - NEC Total Track Replacement Program

Program/Project: *Continuous Project*

SCOPE: The NEC Total Track Replacement Program is a continuous program in the Northeast Corridor that replaces the track infrastructure including the ties, rail and fastening system to maintain a state of good repair.

FY19 SCOPE: In FY19, the Total Track Replacement Program will replace the rail and block ties on Track 10 at Amtrak's 30th Street Station in Philadelphia. A total of 2,100 ties and 3,400 feet of rail will be replaced during this project.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 17	Original Budget
1. Preliminary Engineering		
2. Final Design		
3. Right of Way / Utilities		
4. Construction	1,500,000	1,500,000
5. Construction Management		
6. Testing and Commissioning		
7. Project Administration		
Sub-Total	1,500,000	1,500,000
8. Contingency		
Total		**1,500,000**

FY19 Planned Locations:	Location				Planned Schedule		Units - CWR*	Units - Ties	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned	Planned	Planned
30th Street Station Tk 10	PA	17	N/A	N/A	01/07/19	02/28/19	2,100	3,400	1,500,000
Total									
*Production Units: Linear Feet							2,100	3,400	$1,500,000

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 1,500,000
Total Funding	**$ 1,500,000**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101774.

AMTRAK

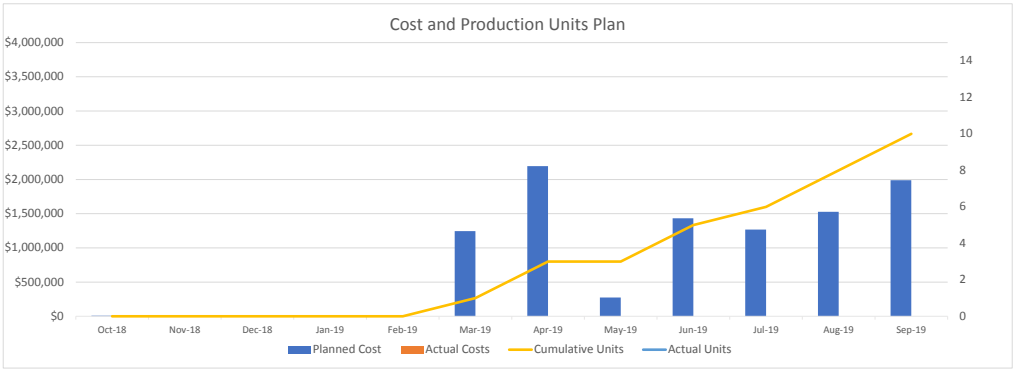
FY19 Capital Plan 10/01/18

PG00065 - National Turnout Renewal Program

Program/Project: *Continuous Project*

SCOPE: The National Turnout Renewal Program replaces wayside and interlocking turnouts, removes the old ballast and track, helping to restore proper drainage. New track panels are also installed under this Program.

FY19 SCOPE: In FY19, the National Turnout Renewal Program will replace switches at the following locations: Caln interlocking, Thorn interlocking, Downs interlocking, Paoli interlocking and Overbrook interlocking. A total of 10 switches will be replaced under this Program.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 29	BCC Segment 30	Original Budget
1. Preliminary Engineering			182,754
2. Final Design			
3. Right of Way / Utilities			
4. Construction	$1,211,022	$8,481,751	$9,692,773
5. Construction Management			
6. Testing and Commissioning			
7. Project Administration			93,776
Sub-Total	1,211,022		9,969,303
8. Contingency			
Total			**9,969,303**

FY19 Planned Locations:	Location				Planned Schedule		Units	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned	Planned
Caln interlocking	PA	30	36.6	36.6	3/8/2019	3/21/2019	1	1,211,022
Thorn interlocking	PA	29	35.0	35.0	3/22/2019	5/2/2019	2	2,401,017
Downs interlocking	PA	29	32.1	32.1	5/3/2019	7/18/2019	3	2,632,112
Paoli interlocking	PA	29	19.9	19.9	7/26/2019	8/22/2019	2	1,492,152
Overbrook interlocking	PA	29	5.4	5.4	08/23/19	10/11/19	2	1,956,470
Total							10	$9,692,773

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 9,969,303
Total Funding	**$ 9,969,303**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101675.

AMTRAK

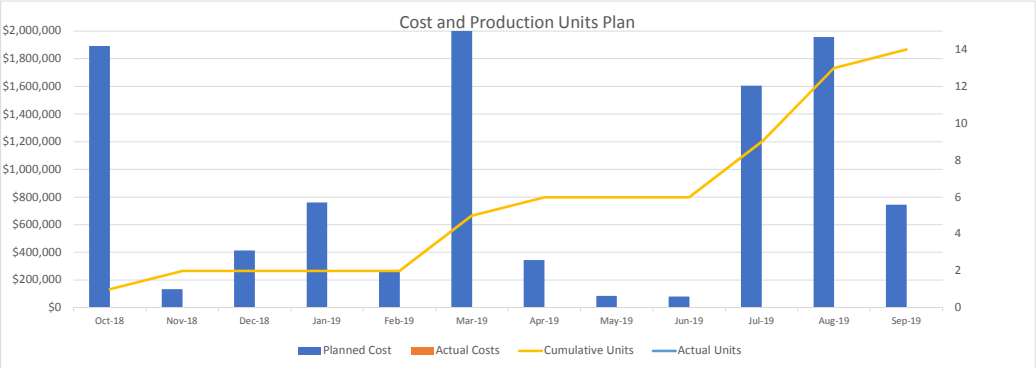
FY19 Capital Plan 10/01/18

PG00065 - NEC Turnout Renewal Program

Program/Project: *Continuous Project*

SCOPE: The NEC Turnout Renewal Program replaces wayside and interlocking turnouts throughout the Northeast Corridor. Also performed under this Program is the removal of old ballast and track to restore proper drainage and the installation of new track panels.

FY19 SCOPE: In FY19, the NEC Turnout Renewal Program will replace switches at the following locations: Girard interlocking, Prince interlocking, Oak interlocking, Magnolia interlocking, Branford interlocking, Lack interlocking, Edison interlocking, East Lyme Yard, Wood interlocking and West Yard. A total of 14 switches will be replaced under this Program.



FY19 BUDGET

FY19 Capital Plan WBS Level II	BCC Segment 4	BCC Segment 5	BCC Segment 12	BCC Segment 17	BCC Segment 20	BCC Segment 21	BCC Segment 22	Original Budget
1. Preliminary Engineering								182,754
2. Final Design								
3. Right of Way / Utilities								
4. Construction	$274,714	$630,919	$3,556,071	$1,801,547	$332,423	$386,100	$3,407,907	$10,389,681
5. Construction Management								
6. Testing and Commissioning								
7. Project Administration								93,776
Sub-Total								10,666,211
8. Contingency								
Total								**10,666,211**

FY19 Planned Locations:	Location				Planned Schedule		Units	Costs
	State	BCC	Start MP	End MP	Start	Finish	Planned	Planned
Girard interlocking	PA	17	87.7	87.7	10/5/2018	10/14/2019	1	1,801,547
Prince interlocking	MD	21	57.0	57.0	11/2/2018	12/2/2018	1	386,100
Oak interlocking	MD	22	62.9	62.9	3/8/2019	3/17/2019	2	2,187,530
Magnolia interlocking	MD	22	76.9	76.9	3/22/2019	3/31/2019	2	1,220,377
Branford interlocking	CT	5	84.0	84.0	4/26/2019	4/28/2019	1	356,205
Lack interlocking	NJ	12	28.1	28.1	7/12/2019	7/21/2019	1	751,617
Edison interlocking	NJ	12	28.1	28.1	7/26/2019	9/8/2019	3	2,804,454
East Lyme Yard interlocking	CT	5	116.0	116.0	8/23/2019	8/25/2019	1	274,714
Wood River interlocking	RI	4	148.0	148.0	9/6/2019	9/8/2019	1	274,714
West Yard	DE	20	28.0	28.0	9/22/2019	9/30/2019	1	332,423
Total							14	$10,389,681

FUNDING: FY2019

	Forecast
GCAP/PRIIA BCCs	$ 10,666,511
Total Funding	**$ 10,666,511**

Program Note: All costs are captured under the following WebWEE WBS Elements; C.EN.101660.

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Appendix C: All Other Amtrak Programs/Projects – Scopes

Amtrak's submission to the FY19 One-Year Implementation Plan included improved geographic specificity and additional scope, schedule, and budget details. However, **other Amtrak capital renewal investments**—including capital maintenance and improvement programs and projects under $5M—were not prioritized for enhanced FY19 Plan information; and as a result, lack geographically-specific scopes and schedules in this plan.

Scopes for all other Amtrak Programs/Projects

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.100120. INT DOCK INTERLOCKING - INTERLOCKING RENEWAL C&S/ET. Due to its size, it will take several years to completely replace Dock. The project scope includes the design of two new remote controlled interlockings to replace the existing tower. Dock West will encompass all the switches and signals on the West side of the Passaic River. A new central instrument house (CIH) will house vital microprocessor controllers that will control this portion of the interlocking. All the switch and signal cases will be replaced with new signal houses and cases with all new switch and signal cables and new track wires. All the air operated switch machines and valves will be replaced with new electric machines. New express cables will be installed between the new CIH and the outlying signal cases. The new CIH will be remote controlled from Penn Station Central Control (PSCC) in New York. The east side of the interlocking will also be designed as a stand-alone interlocking. Dock East will include the movable bridge spans and the signals protecting movements over the bridge as well as all other signals and switches on the East side of the Passaic River. A new CIH will be installed along with all new signal houses and cases for the outlying locations, new signal and switch cables and track wires. All switch machines will be converted from air to electric. Dock East will also be remote controlled from PSCC. The gas switch heaters at Dock will be replaced with electric heaters as the signal work is done. This will remove natural gas lines running parallel to the tracks.	$736,023
C.EN.100123. APP ENGINEERING ASSET MANAGEMENT SYSTEM. Engineering in collaboration with IT Department is establishing an IM system. The IM system maximizes the performance of fixed railroad assets by assisting maintenance managers to know what is going on out there and has a direct impact on achieving Amtrak's objectives. The IM system will be constructed by establishing a Work Management system linked to the existing Asset Management system. The first application will be to ensure regulatory compliance. The second will be a Situational Awareness System that will provide information to manage infrastructure maintenance resources in real time and record work information. Concurrent a Dashboard will be implemented that will provide Maintenance Managers performance indicators through a web-portal. Enterprise Asset Management (EAM) is a component of Amtrak's Infrastructure Management System (IMS) to manage work assignments, asset inventory, work location, inspection work requirements, etc. to manage Northeast Corridor maintenance work.	$4,266,800
C.EN.100203. INTB MID-ATLANTIC DIVISION-INTERLOCKING LIGHTING UPGRADES. This Program is to Improve the safety, security and overall energy useage at various interlockings throughout the MidAtlantic Division by replacing and/or adding energy efficient light fixtures to the interlockings.	$373,345
C.EN.100316. STA PENN STATION NEW YORK - ESCALATOR REPLACEMENT. Continuation of the Amtrak Escalator Replacement Program – PSNY. Amtrak is committed to modernizing all existing Escalators in Penn Station New York (PSNY). 18 escalators in PSNY have been replaced since 2006. There are 6 more units that are on the list to be replaced due to its condition and age. They will be replaced over the next 6 years. This will bring the total to 25 units replaced in PSNY. Escalator 7B East was added to the FY'17 program because this escalator has deteriorated faster than planned and could come out of service at any time. This escalator allows passengers to get down to the platform from B level. The project team ran an initial survey. The existing 7B East escalator unit is heavily used daily by the passengers. The existing 7B East escalator does not have sufficient safety features. In addition, the escalator is reaching its age limit and could come out of service at any time. B&B has spent countless amount of money and time repairing this escalator. This project is crucial because it is related to fire, life and safety issues. It also affects the operability of Platform 7. This project has two prime contractors: Thesaurus (General Contractor); ThyssenKrupp Elevator (Escalator Installer).	$7,466,900

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.100331. SYS ELECTRIC TRACTION DESIGN REVIEW. This program funds the design support for major projects both from inside the ET department and from other departments and agencies within and outside of Amtrak.	$469,348
C.EN.100333. SYS TRACK - FUTURE DESIGN. This will support the Future Track Replacement, Curve Mods, Inter. Renewal Design effort on the entire Northeast Corridor & HBG Line.	$366,470
C.EN.100371. SAFE EMPLOYEE ARC FLASH PROTECTION. The National Fire Protection Association (NFPA) 70 E Standard for electrical safety in work place calls for an Arc Flash Hazard Analysis for employees working while exposed to electrical hazards. Amtrak is undertaking an electrical hazard analysis and arc flash analysis of its facilities. The work will take place in phases over several years by geographical grouping of facilities. The scope of work includes validation and updating of electrical single line diagrams, electrical system capacity analysis, identification of electrical code violations, recommendations for system improvements to address capacity, arc flash mitigation, labeling of equipment and training of electrical workers and more.	$853,360
C.EN.100418. SYS ENGINEERING CAPITAL PROGRAM - PROJECT MANAGEMENT. Engineering capital program, including but not limited to estimating, scheduling, reporting and document control. The resources include Project Management Office (PMO) support for the overall capital process from project initiation to project closeout.	$6,933,550
C.EN.100422. BGMS STRUCTURES - MOVABLE BRIDGE COMPONENT DESIGN. Structures Movable Bridge Component Future Design - This project will be used to design movable bridge components and other structures	$119,930
C.EN.100477. SYS STRUCTURES BRIDGES/TUNNELS/WALLS - FUTURE DESIGN. Future Design This project will be used to design overhead bridges, signal bridges, undergrade bridges, culverts, tunnels, walls and other structures.	$1,239,734
C.EN.100478. SYS C&S LANCASTER SHOP EQUIPMENT PURCHASE/UPGRADES. Planned upgrades include: 1. Upgrade Shop Lighting to LED Fixtures; 2. Install New Fire Alarm Panel and Sensors; 3. Install New Garage Doors; 4. Upgrade Security System; 5. Install 100 HZ Outlet at Rear of Building; 6. Install Water Faucet at Rear of Building	$213,340
C.EN.100562. INT AMTRAK NEC MAD SOUTH – INTERLOCKING UPGRADES. FY15 scope - To replace G.E. Harris RTU's with Microlok II at interlockings on the Mid Atlantic South Division. Original Scope - This project is to replace 11 Chrysler RTU's with Genisys units at interlockings between MP 29 to MP 135, on the Baltimore sub-division."	$800,025
C.EN.100563. INT AMTRAK NEC MAD NORTH – INTERLOCKING UPGRADES. MidAtlantic North:Upgrade existing RTUs with State-of-the-Art Equipment by replacing existing RTU Units w/New Units	$1,280,040
C.EN.100578. STA HARRISBURG LINE STATIONS - STATION IMPROVEMENTS. This Program consists of ongoing projects to improve the condition of our stations on the Keystone Corridor, making them safer, more secure and more efficient facilities for our passengers, employees and tenants. Each project (level-2 WBS from WebWEE) will have a unique set of scope and requirments.	$2,133,400
C.EN.100618. CAT ELECTRIC TRACTION TRAINING FACILITY - UPGRADES. For the upgrades to the E.T. training facilities on the NEC. These locations include Penn Coach Yard , Sunnyside Yard, Baltimore, Princeton Junction, and Midway. Each facility will have different upgrades: Philadelphia - This facility was designed and constructed during the NECIP project. We need to upgrade the facility to comply with the current OSHA safety standards. Also the facility will be expanded to accommodate the increased number of trainees. Sunnyside Yard - placing new trailers, were none existed before and installing utilites to the trailers. Work at other locations will be done in subsequent fiscal years.	$186,673
C.EN.100627. STA 30TH STREET STATION - ELEVATOR REPLACEMENT. Substantial Rehabilitation of Elevator No. 19, Baggage Elevator - Expect major rehabilitation to enable elevator to remain in service for additional 1 - 2 years while design of new elevator is completed.	$3,200,100
C.EN.100649. RAD PENN STATION NY - RADIO SYSTEM UPGRADES DESIGN & INSTALL. Design and renew the radio system throughout Penn Station. This would include new antennas, new cabling, new radio equipment for the four radio systems in use. Integrate the tactical channel used by Amtrak Police into the new system. Correct interference of adjacent radio channels with the channels in use in the station.	$106,670
C.EN.100709. BGMS NJ008.50 DOCK BRG-UPGR CTRL LINE/EMGY BCKUP ENG/AUX DRV. Upgrades for Dock moveable bridge in Newark NJ. MP 8.50 to include control line , direct drive emergency internal combustion engine, and removal and reinstallation of the auxiliary direct drive on span C track 1.	$266,675

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.100727. INT DAVISVILLE INTERLOCKING - UPGRADE TO MICROLOK 2. Replace Microlok I and associated equipment with Microlok II at Davisville Interlocking. Davisville Interlocking is a three track interlocking with a single crossover to a siding track and a high speed universal crossover between the two main tracks. There is a Central Instrument House (CIH) as well as an A and B instrument house. A non-vital Genisys processor and local control panel are located in the CIH. A Vital Microlok I and Microlok plus microprocessor system consisting of eight processors zoned for Tracks 1, 2 and 6 are installed in the CIH, A and B locations. The instrument houses and the majority of equipment remain in a state of good repair, however all microprocessors are beyond their useable life and require replacement.	$1,066,700
C.EN.100739. TKAP WASHINGTON TO BOSTON - RAIL LUBICATOR REPLACEMENT. Rail is one of the most costly assets to maintain and replace. Rail wear is caused by contact between the wheel flange and the head of the rail. Rail lubricators are used in areas where there are curves to minimize this wear. Lubrication extends the life cycle of the rail asset. Many areas where rail has been recently changed out either have no lubricators or the existing lubricators are obsolete and spare parts can not be obtained. New technology rail lubricators use solar panels as a power source. Over a three year period Amtrak plans to install 100 rail lubricators, 20 each on NYD and MAD, 60 on NED.	$533,350
C.EN.100750. GEOM AMTRAK SYSTEM - SURFACING PROGRAM DEVELOPMENT. Develop scope of programs and schedule system and division surfacing resources.	$394,679
C.EN.100764. XINR AMTRAK NATIONAL - CROSSING UPGRADES. The scope of this National project is to upgrade the at grade road crossings to include but not limited to rail, ties, timber, joint elimination, ballast, drainage improvements, and paved/crossing material surface.	$1,013,365
C.EN.100788. RAD NORTHEAST CORRIDOR - RADIO VOTER UPGRADES. With the conversion to FCC required narrow banding, radio coverage will become an issue as signal strength is restricted by bandwidth. Engineering work (including a coverage study) and design are needed to insure adequate coverage along the right of way. As a part of maintaining adequate radio coverage C&S will needs to add additional and replace the existing analog radio voters (quality signal selector) with state of the art voters on the North East Corridor	$320,010
C.EN.100837. STA 30TH STREET STATION - HVAC AIR HANDLERS UPGRADES. The scope of this project includes the demolition and removal of existing AHU (Air Handler Unit) 2, AHU 8, AHU 9, HP (Heat Pump) 3, and HP 6 and all associated piping, duct work, smoke/fire detectors, and electrical services to each respective existing unit to be removed. The existing units to be removed are located in doors in the ceiling above the retail vendor shops. The existing units will be replaced with a new roof top dual deck AHU (designated as AHU 2). The installation of the new AHU will include all associated piping, duct work, smoke/fire detectors, and electrical service. The new rooftop AHU will also include a steel service platform for accessibility and maintenance of the upper AHU. The new AHU-2 will be connected to the existing backnet BAS system. The installation of new AHU-2, on the 2nd floor South concourse roof, will also require extensive roof work and reconfiguration, including flashing and roofing details up to and around an existing skylight. In addition to the installation of the new AHU and removing of exiting AHUs, FA (Fan) 31 will be replaced in kind. Including reconnections of utilities to existing systems and duct work.	$3,200,100
C.EN.100846. CABF WAS TO NEW YORK-INSTALL REDUNDANT COMM CBL. Replace existing copper communication cable with next generation cable and add a fiber cable for redundancy on the NEC from Washington to New York. Install new termination equipment for these cables. It is necessary to use the existing communications cable as a pull cable for installation of the replacement copper cable and the new fiber cable.	$1,600,050
C.EN.100850. STA WASHINGTON TERM & IVY CITY-FACILITY ELECTRICAL UPGRADES. This Program will reduce electrical power outages and overall energy usage, provide better safety and security, and reduce delays caused by power outages throughout various Washington DC and Ivy City facilities by upgrading power equipment where necessary. This Program is to Improve the condition of our Transportation Facilities throughout the MidAtlantic Division, making them safer, more secure and more efficient facilities by making the electrical power more reliable."	$533,350
C.EN.100940. INTB NEW YORK DIV - INTERLOCKING LIGHTING FIXTURE UPGRADES. Interlocking lighting fixture replacement from Morris (MP 58.3) to MP 3 in the New York Division. The current fixtures and bulbs have failed due to vibrations and static electricity and are in need of replacement. Project would upgrade bad fixtures and bulbs with more modern ones.	$266,675
C.EN.101110. BGTI STRUCTURES - BRIDGE TIE DESIGN. This project funds the bridge tie design surveys and support costs require to custom fit the ties to each bridge.	$64,002
C.EN.101116. STA PENN STATION NEW YORK - FACILITIES UPGRADES. This project funds the on going program of upgrades to the many systems, components, and buidlings that makeup the Penn Station New York facility.	$3,200,100

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101178. TIES CONCRETE TIE - REDESIGN OF CONCRETE TIES. Total redesign of the concrete tie used in high speed track. This will include benchmarking current design, developing and evaluating alternate designs, producing prototypes, laboratory testing and installation in track most of the work will be carried out by engineering consultants familiar with concrete tie design.	$533,350
C.EN.101211. STA NEW ENGLAND DIVISION - STATION CONSTRUCTION UPGRADES. This project will be for the upgrades, replacements and major construction to Stations on the NED Division.	$2,666,750
C.EN.101221. STA MID ATLANTIC DIVISION - STATION CONSTRUCTION UPGRADES. This project will be for the upgrades, replacements and major construction to Stations on the Mid Atlantic Division.	$5,333,500
C.EN.101243. TOWR MID ATLANTIC DIVISION-TRANSPORTATION FACILITY UPGRADES. This Program is to Improve the condition of our Transportation Facilities throughout the MidAtlantic Division, making them safer, more secure and more efficient facilities.	$426,680
C.EN.101244. TUN MID ATLANTIC DIVISION - TUNNEL UPGRADES. This project will be for the upgrades, replacements and major construction to Tunnels on the MAD Division.	$1,066,700
C.EN.101256. BGTI NED SPRINGFIELD LINE - BRIDGE TIMBER REPLACEMENT. This project is for the replacement of the Bridge Timbers on the Springfield Line Bridges.	$533,350
C.EN.101276. STA NEW YORK DIVISION - STATION CONSTRUCTION UPGRADES. This project will be for the upgrades, replacements and major construction to Stations on the New York Division.	$2,133,400
C.EN.101354. NET C&S SYSTEM - NETWORK UPGRADES. NET Replace as Req - NETWORK UPGRADES. Replace obsolete telecommunications routing equipment with up to date equipment	$266,675
C.EN.101358. TEL NEW YORK DIVISION - REPLACE COMM EQUIPMENT HOUSES. TEL - Replace Equipment Houses - NYD. Procure and install new communications equipment houses. Move existing equipment and cabling into new houses.	$106,670
C.EN.101359. TEL MID-ATLANTIC DIVISION - REPLACE COMM EQUIPMENT HOUSES. TEL - Replace Equipment Houses - MAD. Procure and install new communications equipment houses. Move existing equipment and cabling into new houses.	$106,670
C.EN.101415. RAD AMTRAK SYSTEM-RADIO SITE BACKUP AND EMERGENCY PWR UPGRS. Radio Site Backup and Emergency Power. - We are looking to bring all radio site backup power systems to a good state of repair and a higher standard than is typically deployed. We are also looking to equip the radio support locations with sufficient generators to address commercial power outages.	$156,977
C.EN.101417. NET NEC - IT AND POLICE VIDEO BANDWIDTH AUGMENTATION. NEC Bandwidth Augmentation for IT and Police Video. - The Amtrak Police have installed numerous cameras to increase security on the system. Additionally, our IT data communications needs have been growing exponentially. Both of these conditions are driving the need to increase our backbone network bandwidth capacity.	$1,600,050
C.EN.101418. SUB NEW ENGLAND DIVISION - SUBSTATION SCADA-RTU UPGRADES. New England SCADA RTU Replacement. - There are 58 wayside locations in New England for controlling the power required to run our trains. This project will replace the aging electronic control equipment at these locations.	$1,338,709
C.EN.101420. TEL AMTRAK SYSTEM - OPERATIONS VOICE RECORDING SYS UPGRS. Operations Voice Recording Upgrades - The Amtrak Police and Transportation Departments desire an upgrade to their current voice recording platform. They desire a system that will present all telephone and radio traffic on a single interface.	$320,010
C.EN.101426. TEL MID-ATLANTIC DIVISION - COMM SHELTER ALARM SYSTEM UPGRS. MAD SNMP Housekeeping Alarm Panels (Comm Shelters) - This project will install and configure SNMP alarm panels to proactively monitor site power, temperature, and intrusion over the network infrastructure. Alarms will be configured in our existing servers and centrally monitored in the Communication`s Control Center.	$106,670
C.EN.101474. INT AMTRAK NEC NYD WEST - INTERLOCKING UPGRADES. INT Install Recorders - New York Division. Install new recorders at interlockings on the New York Division.	$1,280,040
C.EN.101508. TUN NRT 11TH AVE VENT SHAFT - AUTOMATIC TRANSFER SWITCH UPGR. Replacement of sandy damaged Automatic transfer switch (ATS). It is located at the 11th Ave ventalation shaft. The ATS will switch power supply in the event of loss of power.	$1,386,710

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101510. SWHT NEW ENGLAND DIVISION - ENERGY EFFICIENT SW HEATER REPL. SWHT - Multi- year program by State for NED to replace existing switch heaters with new energy efficient switch heaters to save significant operating and replacement costs. The various utilities (NSTAR, GRID, CL&P, etc.) may subsidize and provide some sort of rebate. Eleven interlockings in each state - MA, RI and CT on the NEC. (MRS is not included)	$320,010
C.EN.101517. SAFE ELECTRIC TRACTION EMPLOYEE ARC FLASH PROTECTION. This project funds the assessment of the arc-flash requirements for Amtrak's Electric Traction system and the associated substations, converter stations and signal locations to determine minimum arc flash boundaries and the required personal protective equipment when entering/performing duties at these locations.	$266,675
C.EN.101528. BGMS NY010.25 SPUYTEN DUYVIL-SANDY DAMAGE MECH-ELECTRICAL. This project involves rehabiliation of all mechanical and electrical systems of the Spuyten Duyvil movable bridge that have been affected by Hurricane Sandy. The activities and deliverables of this project will include inspection of all mechanical and electrical systems of the movable portion of Spuyten Duyvil bridge below track level, followed by a design for the rehabilitation of all components that need rehabilitation or replacement. The design will then be used to perform rehabilitation to all affected bridge mechanical and electrical systems that are located below track level.	$533,350
C.EN.101593. RAD WASHINGTON 1ST STREET TUNNEL - RADIO IMPROVEMENTS. TELE - Make improvements to the telecommunications system in the Washington 1st Street Tunnel including relocating the radio base stations supporting tunnel communications to outside the south portal; revising the repeater system for conductors and other employees so that operations are similar in function to those in the New York and Baltimore tunnels; extend coverage of the Washington Police repeater into the tunnel, as well as the installation of the Amtrak Police Tactical base radio for a secondary channel within the tunnel; and an improved connection to the DC Fire Department into our existing RADIAX antenna system within the tunnels.	$373,345
C.EN.101607. PTC SPRINGFIELD LINE - PTC INSTALLATION WAYSIDE. PTC Springfield Line Design - Amtrak is committed to the extension of PTC on the remainder of the main stem and on its tributary routes, including the Springfield Line (New Haven-Springfield).	$4,480,140
C.EN.101608. STA PENN STATION NY - STATION CHILLED WATER SYSTEM UPGRADE. Chiller project will span 4 years. Accessory work will include the provision of associated valves, meters and pumps. Work will also include the demolition of existing chilled water distribution piping. Chilled water distribution piping is to be located in Amtrak back-of-house spaces, public concourse areas and within Amtrak tenant areas in New York Penn Station. The chilled water system will be designed to accommodate the existing conditions, future changes, and have a construction sequencing that will minimize disruptions to existing operations in the station and tenant spaces. Work will be on 3rd shift.The result of this project is a completely new chilled water loop piping system at Pennsylvania Station. The chilled water loop system will eliminate the need for the six existing booster pumps scattered about the site. The required horsepower of the main chilled water operating pumps will be reduced, which will result in a more energy efficient system. The passenger waiting area environmental comfort will be increased and the chilled water loop piping systems serving AMTRAK?s tenants will become more reliable. New metering for the chilled water system will allow Amtrak to obtain chilled water usage of tenants in Penn Station, which will be included Amtrak, LIRR, and NJT. This project will benefit Amtrak and also provide better service to its tenants and passengers.	$320,010
C.EN.101611. CAT AMTRAK ELECTRIFIED TERRITORY-OSHA FALL PROTECTION STUDY. As a result of changes in OSHA Fall Protection regulations which went into effect in April 2015, Amtrak can no longer free climb when working at heights above 4 feet without 100% fall protection. Therefore, Amtrak has initiated and completed in October of 2015 a fall hazard assessment of the entire electrification system on the Northeast Corridor. The recommendations generated from the study will be used to implement changes to Amtrak's current fall protection policies, standards and work practices.	$789,358
C.EN.101622. TUN NORTH RIVER TUNNELS - TUNNEL IMPROVEMENTS. The North River Tunnel , Rehab tunnel improvements include work within the North and South Tubes (track 3 and 2) from the western portals located at Bergen New Jersey to PSNY located at the eastern portals. Within this area there is one Ventilation facility at Weehawken and two sump rooms at 11th Ave and 10th Ave located in Manhattan. The tunnels have a total distance of 6 track miles. Within this area there are various Fire and Life Safety systems that are required to be kept into the state of good repair by performing required improvements.	$1,226,705
C.EN.101624. TUN EAST RIVER TUNNELS - TUNNEL IMPROVEMENTS. The East River Tunnel , Rehab tunnel improvements include work within Lines 1,2,3 and 4 from the western portals adjacent to PSNY to the eastern portals at Sunny Side Yard , including the 1st Avenue and LIC Ventilationd facilities, a distance of 11 track miles. Within this area there are three ventilation structures one located at Long Island City, Queens and two located at 1st Ave Manhattan. Within this area there are various Fire and Life Safety systems that are required to be kept into the state of good repair by performing required improvements.	$800,025

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101625. TUN EMPIRE TUNNEL - TUNNEL IMPROVEMENTS. Provide conceptual, final engineering design, procurement of materials, construction, testing and commissioning services for capital improvement and upgrades for the Empire Tunnel.	$1,066,700
C.EN.101627. STA PENN STATION NEW YORK-LIFE SAFETY FACILITY IMPROVEMENTS. Provide conceptual, final engineering design, procurement of materials, construction, testing and commissioning services for capital improvement and upgrades for Penn Station.	$1,066,700
C.EN.101646. TKRH WESTSIDE CONNECTION TUNNEL - TRACK INFRASTRUCTURE UPGRS. To analyse and replace the track infrastructure within the Empire Tunnel as the Empire Line leaves NYPS.	$5,333,500
C.EN.101647. BLST AMTRAK NEC - SPOT UNDERCUTTING PROGRAM. Perform spot undercutting and/or rail vacuuming maintenance with 3rd party Rail Vacs (Loram) or Vac Trucks in locations determined by System Track and Division Maintenance groups to remove mud spot locations along the NEC Spine.	$7,680,240
C.EN.101648. FAST AMTRAK NEC - CONCRETE TIE FASTENER HARDWARE. Concrete Tie Fastener Hardware is an on-going program in the Northeast Corridor that funds the replacement of track fasteners currently not in a state of good repair. Typical work performed under this program includes the replacement of pandrol clips, worn pads and associated hardware that has exceeded its useful life.	$266,675
C.EN.101650. STIP AMTRAK NEC - RIDE QUALITY IMPROVEMENT PROGRAM. Ride quality improvement program is to diminish rough spots along the right of way on the Northeast Corridor.	$3,200,100
C.EN.101651. DRAN AMTRAK NEC - DRAINAGE-ROADBED IMPROVEMENTS. This project covers drainage improvements across the Northeast Corridor. This work includes, but is not limited to: Vacuum Train, Badger Ditcher/Gradall, Slot Train, Shoulder Cleaner, Slope Stabilization, and Drainage Improvements.	$8,693,605
C.EN.101653. TKAP AMTRAK NEC - WAYSIDE DETECTOR REPLACEMENT PROGRAM. Install wheel impact detectors at various locations on the Northeast Corridor. The wheel impact detectors are designed to record train wheel defects. Development of a database, application and communications network for collecting and analyzing track based measurements from wayside systems and the development of interface tools for importing these measurements into an Advanced Metering Management system (AMM).	$213,340
C.EN.101655. RAIL AMTRAK NEC - JOINT ELIMINATION PROGRAM. Joint Elimination is an on-going program in the Northeast Corridor that funds the elimination of rail joints. These rail joints are created by base corroded rail change outs, Sperry car change outs, surface bent rail, engine burns, defective welds, project related, and other rail defects.	$7,200,225
C.EN.101657. TIES AMTRAK NEC - CONCRETE TIE REPLACEMENT PROGRAM. Concrete tie replacement of non-effective concrete ties on the Northeast Corridor. This project is for replacement of the concrete ties without using the Track Laying machine.	$9,525,631
C.EN.101658. TURN AMTRAK NEC - INTERLOCKING STEEL RENEWAL PROGRAM. This is an on-going project for the renewal of interlocking steel components. This work includes insulated joints, switch points, stock rails, and frogs. It is considered the most difficult of the infrastructure to maintain because they are located between the main track of the Northeast Corridor, and where trains gain access, or egress to, or from the Corridor.	$7,271,520
C.EN.101662. SUB AMTRAK NATIONAL - SUBSTATION UPGRADES. This National program funds improvements to electric traction substation components to include air brakes, breakers, remote terminal units, control house renovations, substation lighting, fencing, etc. as needed based on inspection and testing of the various components.	$4,426,805
C.EN.101663. CAT AMTRAK NATIONAL - CATENARY HARDWARE RENEWAL. This National project funds the replacement of the overhead catenary and hardware such as but not limited to wire, insulators, rods, and clips.	$266,675
C.EN.101665. SIGP AMTRAK NATIONAL - SIGNAL POWER UPGRADES. This National program calls for the replacement and renewal of the existing rotary signal power machines that generate the 6,900 volts for the signal transmission lines. This equipment runs 24 hours a day, seven days a week, has many rotating parts and requires extensive maintenance. Another example of work provided under this program includes the upgrade of the open signal power wire to insulated cable at key locations.	$160,005
C.EN.101666. TRN AMTRAK NATIONAL - TRANSMISSION LINE UPGRADES. This National project will renew transmission hardware components including replacement of transmission wire and renewal of transmission components, i.e. insulators, arms, attachments, etc.	$426,680
C.EN.101667. BLST AMTRAK NATIONAL - SPOT UNDERCUTTING PROGRAM. Perform spot undercutting and/or rail vacuuming maintenance with 3rd party Rail Vacs (Loram) or Vac Trucks in locations determined by System Track and Division Maintenance groups to remove mud spot locations along the AH and AS Lines.	$1,600,050

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101669. DRAN AMTRAK NATIONAL - DRAINAGE-ROADBED IMPROVEMENTS. This National project covers drainage improvements. This work includes, but is not limited to: Vacuum Train, Badger Ditcher/Gradall, Slot Train, Shoulder Cleaner, Slope Stabilization, and Drainage Improvements.	$6,400,200
C.EN.101672. RAIL AMTRAK NATIONAL - JOINT ELIMINATION PROGRAM. Joint Elimination is an on-going program in the Springfield/Harrisburg (National) area that funds the elimination of rail joints. These rail joints are created by base corroded rail change outs, Sperry car change outs, surface bent rail, engine burns, defective welds, project related, and other rail defects.	$1,226,705
C.EN.101674. TURN AMTRAK NATIONAL - INTERLOCKING STEEL RENEWAL PROGRAM. This National project funds the ongoing program for the renewal of interlocking steel components. This work includes insulated joints, switch points, stock rails, and frogs.	$880,028
C.EN.101678. BGUG AMTRAK NATIONAL - UNDERGRADE BRIDGE UPGRADES. The scope of this National program is to address undergrade bridges currently not in a state of good repair and to convert open deck undergrade bridges to ballast deck for improved train performance. Some of the undergrade bridges can be brought to a state of good repair through selective component replacement and others will require complete replacement.	$1,066,700
C.EN.101679. CULV AMTRAK NATIONAL - CULVERT UPGRADES. The scope of this National program is the replacement of culverts that are not in a state of good repair.	$320,010
C.EN.101680. MOFW AMTRAK NATIONAL - MOFW BASE UPGRADES. The scope of this National program is to bring the maintenance of way (MOFW) base assets to a state of good repair. Examples of work performed under this program include HVAC replacement, roof replacement, electrical upgrades and lighting improvement. Typical asset life varies from component to component.	$677,355
C.EN.101686. POLE AMTRAK NATIONAL - CATENARY POLE UPGRADES. The scope of this National program is the renewal and replacement of existing catenary poles, associated hardware, foundations, and guy wire supports that are not currently in a state of good repair. Many of our catenary poles are over 90 years old and are beyond their design service life. Replacement of the network of catenary poles provides physical support to the power transmission and catenary systems and is an integral part of those systems.	$106,670
C.EN.101688. SUB AMTRAK NEC - SUBSTATION UPGRADES. This Northeast Corridor program funds improvements to electric traction substation components to include air brakes, breakers, remote terminal units, control house renovations, substation lighting, fencing, etc. as needed based on inspection and testing of the various components.	$4,709,481
C.EN.101689. CAT AMTRAK NEC - CATENARY UPGRADES. This NEC project funds the replacement of the overhead catenary and hardware such as but not limited to wire, insulators, rods, and clips.	$2,666,750
C.EN.101690. POLE AMTRAK NEC - CATENARY POLE UPGRADES. The scope of this Northeast Corridor program is the renewal and replacement of existing catenary poles, associated hardware, foundations, and guy wire supports that are not currently in a state of good repair. Many of our catenary poles are over 90 years old and are beyond their design service life. Replacement of the network of catenary poles provides physical support to the power transmission and catenary systems and is an integral part of those systems.	$1,600,050
C.EN.101691. FREQ AMTRAK NEC - FREQENCY CONVERTER UPGRADES. This Northeast Corridor program calls for the renewal and/or replacement of frequency converters that have exceeded their useful life and are currently not in a state of good repair. An example of work performed under this program is the replacement of rotary traction power frequency converters.	$4,058,794
C.EN.101692. SWHT AMTRAK NEC - ELECTRICT TRACTION SW HTR IMPROVEMENTS. This Northeast Corridor electric traction program funds the upgrade of the switch heater stations to improve the reliability and serviceability of the equipment and provide reliable winter-time operation to reduce service delays.	$2,080,065
C.EN.101693. TRN AMTRAK NEC - TRANSMISSION LINE UPGRADES. This Northeast Corridor project will renew transmission hardware components including replacement of transmission wire and renewal of transmission components (i.e. insulators, arms, attachments, etc.)	$880,028
C.EN.101694. SIGP AMTRAK NEC - SIGNAL POWER UPGRADES. This Northeast Corridor program calls for the replacement and renewal of the existing rotary signal power machines that generate the 6,900 volts for the signal transmission lines. This equipment runs 24 hours a day, seven days a week, has many rotating parts and requires extensive maintenance. Another example of work provided under this program includes the upgrade of the open signal power wire to insulated cable at key locations.	$1,600,050
C.EN.101695. CATC AMTRAK NEC - CONSTANT TENSION CATENARY HARDWARE RENEWAL. This Northeast Corridor project funds upgrades to the constant tension catenary system. Upgrades include but are not limited to overhead bridge modifications, overhead bridge icicle mitigation, or general hardware replacement.	$640,020

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101696. BGTI AMTRAK NEC - BRIDGE TIMBER REPLACEMENT. The scope of this NEC program is the replacement of timber bridge ties located on open deck bridges that are currently not in a state of good repair.	$5,333,500
C.EN.101697. BGUG AMTRAK NEC - UNDERGRADE BRIDGE UPGRADES. The scope of this NEC program is to address undergrade bridges currently not in a state of good repair and to convert open deck undergrade bridges to ballast deck for improved train performance. Some of the undergrade bridges can be brought to a state of good repair through selective component replacement and others will require complete replacement.	$4,266,800
C.EN.101698. CULV AMTRAK NEC - CULVERT UPGRADES. The scope of this Northeast Corridor program is the replacement of culverts that are not in a state of good repair.	$3,200,100
C.EN.101701. INT AMTRAK NEC - C&S INTERLOCKING UPGRADES. The scope of this Northeast Corridor program is to address interlocking signal system components not currently in a state of good repair. Some of the work performed under this program includes conversion of air switch machines to electric machines, automation of manual towers and replacement of various obsolete interlocking signal system components.	$536,916
C.EN.101704. SWHT AMTRAK NEC - C&S SWITCH HEATER IMPROVEMENTS. This Northeast Corridor communication and signals program funds the upgrade of the switch heater stations to improve the reliability and serviceability of the equipment and provide reliable winter-time operation to reduce service delays.	$400,013
C.EN.101705. BGMS AMTRAK NEC - MOVABLE BRIDGE UPGRADES. The NEC scope of this program is to bring Amtrak's movable bridges to a state of good repair. Some of the bridges will be brought to a state of good repair through selective component replacement while others require complete replacement of movable structure, mechanical and electrical systems.	$800,025
C.EN.101706. BGSG AMTRAK NEC - SIGNAL BRIDGE UPGRADES. The scope of this NEC program is to redeck the signal bridges and install fall protection equipment, including tie offs and safety lines on signals bridges.	$2,666,750
C.EN.101707. WALL AMTRAK NEC - RETAINING WALL UPGRADES. This Northeast Corridor project funds the upgrades or replacement of retaining walls. Masonry and concrete work are examples of what is typically required to keep these assets in good working order.	$1,066,700
C.EN.101708. BGMS AMTRAK NATIONAL - MOVABLE BRIDGE UPGRADES. The National scope of this program is to bring Amtrak's movable bridges to a state of good repair. Some of the bridges will be brought to a state of good repair through selective component replacement while others require complete replacement of movable structure, mechanical and electrical systems.	$261,342
C.EN.101709. WALL AMTRAK NATIONAL - RETAINING WALL UPGRADES. This National project funds the upgrades or replacement of retaining walls. Masonry and concrete work are examples of what is typically required to keep these assets in good working order.	$533,350
C.EN.101710. FEN AMTRAK NATIONAL - FENCE UPGRADES. The scope of this National program is the replacement of fencing that is not in a state of good repair. This program will address the current backlog of 480,000 linear feet system-wide and includes right of way, inner-track and security fencing.	$320,010
C.EN.101711. FEN AMTRAK NEC - FENCE UPGRADES. The scope of this Northeast Corridor program is the replacement of fencing that is not in a state of good repair. This program will address the current backlog of 480,000 linear feet system-wide and includes right of way, inner-track and security fencing.	$6,400,200
C.EN.101712. BGSG AMTRAK NATIONAL - SIGNAL BRIDGE UPGRADES. The scope of this National program is to redeck the signal bridges and install fall protection equipment, including tie offs and safety lines on signals bridges.	$533,350
C.EN.101713. RAIL AMTRAK NEC - INSULATED JOINT REPLACEMENT PROGRAM. Insulated Joint Replacement is an on-going program in the Northeast Corridor that funds the updating of defective rail that is designed to stop the flow of electric current from rail to rail.	$3,520,110

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101714. CETC AMTRAK SYSTEM-MOFW ENHANCED EMPLOYEE PROTECTION SYSTEM. Implement a system to enhance roadway worker protection when working on track under foul time or track out of service. The system will provide roadway workers with an authorization code that corresponds to the blocking protection applied in the CETC control system. Removal of the protection by the CETC train dispatcher will require the authorization code be provided by the roadway worker. The system will utilize modifications to the CETC System platform functionality and mobile devices assigned to roadway workers. Deliverables: • EEPS operating practices documentation; • Modification to each CETC System to provide EEPS functionality: - Wilmington CETC (Mid-Atlantic Division) - Boston CETC (NH to Boston, Springfield Line and MBTA Lines) - NY CETC West - PSCC - CETC Hudson-Albany Line • EEPS mobile devices for roadway workers; • Training program for roadway workers and dispatchers; • Operations management plans and procedures to be used after system acceptance;	$224,007
C.EN.101719. FAST AMTRAK NATIONAL - CONCRETE TIE FASTENER HARDWARE. The scope of this National program calls for the replacement of track fasteners currently not in a state of good repair. Typical work performed under this program includes the replacement of pandrol clips, worn pads and associated hardware that has exceeded its useful life.	$53,335
C.EN.101720. RAIL AMTRAK NATIONAL - RAIL REPLACEMENT PROGRAM. The scope of this National project will include labor, materials, and project management services for rail replacement of worn rail on the mainline, siding, and yard tracks.	$2,133,400
C.EN.101722. RAIL AMTRAK NATIONAL - INSULATED JOINT REPLACEMENT PROGRAM. This National project is an ongoing program that funds the renewal of insulated joints used in the track signal circuit system. The insulated joints to be replaced are in the open track and in interlockings.	$549,351
C.EN.101726. CETC AMTK NEC-TECHNOLOGY RENEWAL PROGRAM. The scope of this NEC program is to bring the Centralized Electrification and Traffic Control (CETC) asset class to a complete state of good repair. The work will include the rehabilitation, replacement or upgrades to various components of the Communications & Signals CETC network infrastructure located on the Northeast Corridor, between Washington, DC, and Boston, MA.	$2,072,065
C.EN.101727. XINR AMTRAK NEC - CROSSING UPGRADES. Upgrade of at grade road crossings on the Northeast Corridor to include but not limited to rail, ties, timber, joint elimination, ballast, drainage improvements, and paved/crossing material surface.	$640,020
C.EN.101732. RAD AMTRAK NEC - RADIO SYSTEM UPGRADES. The project will investigate and remediate poor radio coverage in areas that may create a safety hazard for our ROW employees.	$533,350
C.EN.101740. INT AMTRAK NEC - SWITCH CONVERSION AIR TO ELECTRIC. The scope of this Northeast Corridor program is to address interlocking switch machine system components not currently in a state of good repair. This work will focus on the conversion of air switch machines to electric machines.	$160,005
C.EN.101743. INT NEW YORK DIVISION EAST - INTERLOCKING UPGRADES. The scope of this Northeast Corridor program is to address interlocking signal system components not currently in a state of good repair. Some of the work performed under this program includes conversion of air switch machines to electric machines, automation of manual towers and replacement of various obsolete interlocking signal system components.	$320,010
C.EN.101744. INT NEW ENGLAND DIV WEST- INTERLOCKING UPGRADES. The scope of this Northeast Corridor (New England Division West) program is to address interlocking signal system components not currently in a state of good repair. Some of the work performed under this program includes conversion of air switch machines to electric machines, automation of manual towers, replacement of various obsolete interlocking signal system components, conversion of mechanical components to electrical components, replacement of deteriorated cable and track wires and conversion of color light signals to Light Emitting Diode (LED) units.	$426,680
C.EN.101748. TEL NEW ENGLAND DIVISION - FIBER OPTIC SYSTEM UPGRADES. This project is to upgrade the firber optic communications cores in Boston and New Haven to meet the growing demands for higher bandwidth services. The upgrade will be performed in phases to avoid disruption of railroad operations and secure a path forward for any required future upgrades. The current system will remain operational throughout the upgrade process.	$3,200,100

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101751. INT NEW ENGLAND DIV EAST – INTERLOCKING UPGRADES. The scope of this NEC program is to bring the Automatic Block Signal (ABS) asset class to a complete state of good repair. Much of the work requires conversion of mechanical components to electrical components, replacement of deteriorated cable and track wires and conversion of color light signals to Light Emitting Diode (LED) units.	$288,009
C.EN.101752. TEL HARRISURG LINE - FIBER OPTIC SYSTEM UPGRADES. This project is to upgrade the firber optic communications core in Philadelphia and Harrisburg to meet the growing demands for higher bandwidth services. The upgrade will be performed in phases to avoid disruption of railroad operations and secure a path forward for any required future upgrades. The current system will remain operational throughout the upgrade process.	$1,333,375
C.EN.101753. ABS WASHINGTON TO NEW YORK - UPGRADE SIGNAL SYSTEM TO 562. The scope of this NEC Program will be to upgrade existing 261 ABS System to 562 CAB without wayside signals on the Northeast Corridor between Washington, DC and Penn Station New York. Existing interlocking signals will be replaced with new signal heads with clear block aspects. Intermediate signals will be retired between each interlocking. This will be a multi-year upgrade program which will improve railroad operations.	$7,366,499
C.EN.101758. PTC AMTRAK NATIONAL - PTC SPLIT-POINT DERAIL PROGRAM. National PTC SPLIT-POINT DERAIL PROGRAM. These installations will help to prevent rail equipment from entering main line track. The split-point derails will be installed at 19 locations where the main line track speeds are over 90 miles per hour. By FRA Mandate each of these locations will have a Split-Pont Derail with Electrically Locked Hand Thrown switch stand installed.	$480,015
C.EN.101762. PTC AMTRAK NEC - PTC SPLIT-POINT DERAIL PROGRAM. These installations will help to prevent rail equipment from entering main line track. The split-point derails will be installed at 30 locations where the main line track speeds are over 90 miles per hour. By FRA Mandate each of these locations will have a Split-Pont Derail with Electrically Locked Hand Thrown switch stand installed.	$320,010
C.EN.101766. NET AMTRAK NATIONAL - C&S NETWORK UPGRADES. Upgrades to the communication and signals network equipment to support the increased demands of both communications and data usage.	$586,685
C.EN.101769. CETC PHILADELPHIA PA - 8TH FLOOR FAIL-SAFE CETC OPERATIONS. CETC - Philadelphia CETC Backup Center Construction. For the rehab of the former CETC 8th Floor area at 30th Street Station to set up fail-safe CETC center for the NEC by providing a redundant CETC capability, allowing for safety and security in the event of a disaster of the Wilmington DE CETC center. The rehab will consist of components typically included; (but not limited to) Workstation Consoles, Computers, Displays and Networking Components, Network Cabling, Lighting, Electrical outlets, Walls Carpeting, Paint, as well as Structural Modifications.	$2,026,730
C.EN.101770. ABS HARRISBURG LN PARK TO ZOO - UPGRADE SIGNAL SYSTEM TO 562. The scope of this project includes the design of new remote controlled interlockings on the Harrisburg line to replace existing towers and the upgrade of the existing 261 ABS system to 562 CAB without wayside signals. New Central Instrument houses (CIH) containing vital microprocessor controllers that will control the interlocking will be set. Switch and signal cases will be replaced with new signal houses including new switch and signal cables and new track wires. Interlocking signals will be replaced with new signal heads with clear block aspects. Any intermediate signals will be retired. Any air operated switches will be replaced with new electric machines. New CIH buildings will be remote controlled by CTEC in Wilmington. Work is anticipated to begin at Park and move to Zoo.	$4,077,038
C.EN.101773. STA NEW CARROLLTON MD - ELEVATOR/ESCALATORS REPLACEMENT. This project is for the replacement of two elevators and two escalators at New Carrollton Station in MD.	$213,340
C.EN.101777. INRL SPRING INTERLOCKING - INTERLOCKING RENEWAL. Interlocking renewal at Spring Interlocking on the New England Division in the state of Massachusetts. Interlocking renewal includes the replacement of the following as needed, but not limited to, turn-outs, rail, ties, sub-grade, ballast, components of the overhead catenary, signal transformers, signals cables, signal bridges, switch heater, switch machines, switch houses, instrument houses, and interlocking lighting.	$266,675
C.EN.101791. BGMS NY010.25 SPUYTEN DUYVIL - FENDER SYSTEM UPGRADES. The east side fender system of BGMS 10.20 Spuyten Duyvil Bridge is in the need of replacement. The west fender was replaced around 2008-09. Design for the fender is completed, and project needs to move into the "Construction Phase" and managed by the "Project Delivery" Group.	$5,333,500

All Other Amtrak Programs/Projects – Scopes	FY19 Proposed Budget
C.EN.101793. STA 30TH STREET STATION–PERIMETER ELECTRONIC LOCKING SYSTEM. Design / Mockup Phase and Construction Phase for new locking system for 30th Street Station to achieve Safety and Security goals for the facility. Phase 1: Design & Mockup. Design and create mockup for review by stakeholders, finalization and documentation of acceptable system. Phase 2 Construction of selected system. Amtrak Police Department has expressed the requirement to secure the building perimeter during the overnight hours when the station is not open to the public. It is desired that the locking system would be electric in nature and could lock and unlock doors simultaneously. This would be in line with a corporate wide security system.	$1,066,700
C.EN.101794. RAIL AMTRAK NEC - RAIL GRINDING. Grinding of newly installed continuously welded rail or switches along the NEC. Grinding of older rail and switches will remain in System's Track's core budget.	$106,670
C.EN.201034. ACSE AMTRAK OWNED-POSITIVE TRAIN CONTROL (PTC) INSTALLATION. Installation of Positive Train Control on the Amtrak system. This includes upgrades to CIH's, radio transmission equipment, and wayside interface units.	$8,646,133
C.TR.100074. STA NEW ENGLAND DIV - INSTALL TRAIN APPROACH MESSAGE SYS. STA New England Division - TAMS Installations. Installation of TAMS (Train Approach Message Systems) at various locations on the New England Division between Kingston/Westerly, Rhode Island and Boston, MA. This system is required to replace the existing equipment, signs and components with more reliable, current technology. There are locations on the New England Division where Amtrak trains travel up to 150 MPH and this system is critical to the safe operation of the railroad.	$201,459

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