

ITEM 10 – Information
September 21, 2016

Briefing on Mitigation Actions and Experiences
From WMATA’s SafeTrack Surge Activities

Staff

Recommendation: Receive briefing

Issues: None

Background: The board will be briefed on experiences and mitigation actions taken by local jurisdictions and WMATA at locations that have recently undergone significant safety and maintenance work as part of WMATA’s SafeTrack work plan.



MEMORANDUM

TO: Transportation Planning Board
FROM: Eric Randall, TPB Transportation Engineer
SUBJECT: Recent TPB and COG Activities in support of the WMATA SafeTrack Plan
DATE: September 15, 2016

This memorandum provides an overview of recent TPB and COG activities in support of the WMATA SafeTrack safety surges. The board was previously updated at its June and July meetings, focusing on initial experiences and mitigation actions for the first few surges.

Surge #9 (Vienna – West Falls Church) began on September 15. A new SafeTrack schedule was published on September 14 for Surges #10 (NoMa – Fort Totten) and #11 (East Falls Church – West Falls Church). A new schedule will be published in December for the remaining four surges, #11 through #15, with the last surge now extending into April 2017.

COMMUTER CONNECTIONS UPDATE

The Commuter Connections SafeTrack Work Group held conference call meetings on July 28th, August 2nd, 15th, and September 7th. Each meeting was held just prior to an upcoming SafeTrack Surge and allowed meeting participants to exchange information on TDM strategies being used along with lessons learned from previous Surges.

The Commuter Connections SafeTrack web site was updated throughout the summer months with new links added and can be accessed from the Commuter Connections home page at <http://www.commuterconnections.org>

Approximately 25,000 Geo-targeted messages to employers and employees surrounding the impacted Metrorail stations for Surges #5 - 8 were developed and sent. The purpose of the e-mailed messages was to provide alternative commuting information and options to commuters affected by the SafeTrack Surges and for employers to disseminate the information to their respective employees. Social media outreach continued for Surges #4 - 8 along with public service announcements, and paid radio advertisements.

New Ridesharing applications to Commuter Connections climbed 14% during the months of July and August compared to the same time last year.

COG PUBLIC OUTREACH

COG's Office of Communications continues to coordinate monthly conference calls for the public information officers in the region whose jurisdictions are affected by WMATA's SafeTrack work. The most recent calls were held on July 25 to discuss track work on the Red Line for Surges #6 and #7, on August 17 regarding Surge #8 on the Yellow and Blue Lines, and on September 12 to discuss Surges #9 and #10 on the Orange Line.

The calls help Metro officials coordinate outreach and messaging activities for each of the surges. After each call, the Office of Communications distributes the latest flyers and signage Metro has developed to inform the public.

REGIONAL ACTIVITIES

Briefings and discussions of SafeTrack have taken place at recent meetings of the TPB Technical Committee. Aside from regional coordination discussion, traffic analysis of the impacts of the SafeTrack surges is being conducted by TPB staff.

The Metropolitan Area Transportation Operations Coordination (MATOC) Program has hosted Transit Task Force teleconferences, most recently on August 1, to share information on actions and impacts from the surges and transit activities.

TRANSPORTATION AGENCY INFORMATION

Agencies in the region are implementing a number of mitigation measures to provide transportation alternatives during the SafeTrack safety surges, including:

- Additional bus/shuttle service on routes in or near the surge work zones;
- Expanded rush hour parking restrictions along primary commuter and bus routes;
- Traffic signal re-timing and additional traffic control officers;
- Additional Capital Bikeshare bikes and stations, along with a new payment option;
- Bike convoys with guides;
- Promotion of carpooling, telework and flexible work options.

WMATA has also had customer service agents positioned in the impacted Metro stations guiding customers to alternative modes of travel and hosts “pop-up” events at some of the key impacted stations for each surge.

WMATA has also prepared summary reports of the work completed during each surge; attached are reports on the work completed during Surges #4 through #7.

Specific actions by jurisdictions or transportation agencies can be found on their websites:

City of Alexandria <https://www.alexandriava.gov/SafeTrack>

Arlington County <https://topics.arlingtonva.us/safetrack/>

District of Columbia <http://safetrack.godcgo.com/>

Fairfax County <http://www.fairfaxcounty.gov/safetrack/>

Montgomery County

<http://gomontgomery.blogspot.com/2016/06/safetrack-to-affect-montgomery-county.html>

Prince George’s County

<http://www.princegeorgescountymd.gov/2509/SafeTrack>

Virginia Railway Express (VRE) <http://www.vre.org/service/safetrack-information/>

WMATA <https://wmata.com/rail/safetrack.cfm>

Metro News Release

For immediate release: September 14, 2016



Metro announces SafeTrack surge dates for remainder of 2016

Metro today announced revised dates for the remaining SafeTrack surges of this calendar year. The new dates follow changes to the SafeTrack schedule announced in mid-August to address new safety recommendations, incorporate interlockings, and account for the impact of record heat and humidity during the summer months

As previously announced, Surge #9 will begin tomorrow and run for 42 days through October 26. On weekdays, Orange Line will single track at all times between Vienna and West Falls Church. Trains will service Vienna and Dunn Loring stations every 24 minutes. Service from West Falls Church to New Carrollton will be unaffected. On weekends, rail service will be suspended. For details, please see the [Service Advisory](#)

The following SafeTrack surge dates were announced today:

Surge #10: NoMa-Gallaudet-Fort Totten | October 29 - November 22

- **Date change:** This surge will now begin on Saturday, October 29, and continue through Tuesday, November 22.
- **Service info:** Red Line rail service will not operate between Fort Totten and NoMa-Gallaudet stations during this surge. As a result, two stations-Brookland and Rhode Island Avenue-will be closed. Buses will operate between Fort Totten, Brookland, Rhode Island Ave and NoMa. However, customers are encouraged to use the Green Line as an alternate route between Fort Totten and Downtown DC (Gallery Place). Red Line trains will operate less frequently than normal at all stations, and riders are encouraged to use alternate routes or travel outside of rush-hour periods if possible. [More info](#)

Surge #11: East Falls Church-West Falls Church | November 28 - December 21

- **Date change:** This surge will now begin on Monday, November 28, and continue through Wednesday, December 21.
- **Service info:** Trains will single track at all times between East Falls Church and West Falls Church stations, affecting both Orange and Silver line service. Trains will run every 16 minutes at all times, with heavy crowding expected during rush hour periods. Riders are encouraged to use alternate routes or travel outside of rush-hour periods if possible. [More info](#)

Updated SafeTrack schedule information for 2017 will be announced in December with specific start and end dates. However, Metro has revised the order of some surges to reduce weather impacts on above-ground work zones. The sequence of 2017 surges will be:

Early January	Braddock Road-Huntington Blue Line Yellow Line	Single tracking w/weekend shutdowns
Late January - Early February	Rosslyn-Pentagon Blue Line	Line segment shutdown
March	Braddock Road-Huntington Blue Line Yellow Line	Single tracking w/weekend shutdowns
Late March - April	Greenbelt-College Park Green Line	Single tracking w/weekend shutdowns

Metro and the Federal Transit Administration will continue to identify and address maintenance needs that will be incorporated into Metro's maintenance program. For more information about the SafeTrack program, service impacts and travel alternatives, visit wmata.com/safetrack.

SafeTrack is an accelerated track work plan to address safety recommendations and rehabilitate the Metrorail system to improve safety and reliability by significantly expanding maintenance time on weeknights, weekends and midday hours and includes more than a dozen "Safety Surges" - long duration track outages for major projects in key parts of the system. The overall objective of SafeTrack is to bring Metrorail tracks and structures into a state of good repair by eliminating safety hazards, increasing service reliability and improving the ride quality of the system.

9/15/2016

Metro - About Metro - News - Metro announces SafeTrack surge dates for remainder of 2016

News release issued at 2:52 pm, September 14, 2016.

[Subscribe to notifications of Metro news releases](#)

[Metro News Releases](#) | [News Room](#)



SafeTrack: Surge 4

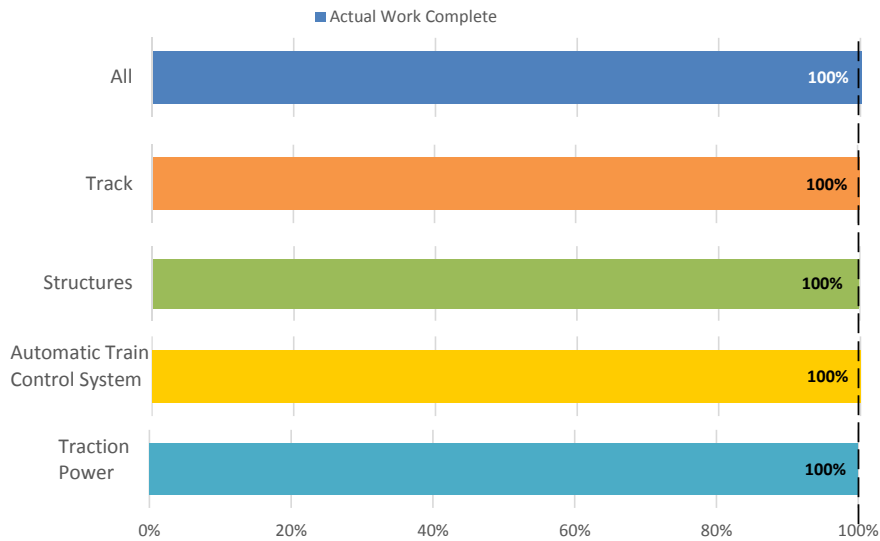
DATES:
July 12 - 18

WORK ZONE:
Pentagon City to Reagan National Airport, Line Segment Shutdown (Crystal City Station Closed)

*Final Report
Data as of 07/21/16*

SCOPE OF WORK: Renewal of rail and power infrastructure on this portion of the Blue and Yellow lines, including rail, fasteners, grout pads, and power cables.

Overall Progress (% Planned Work Complete)



Notes:

*Surge #4 results are preliminary and subject to quality control processes which will remain continuous throughout the duration of SafeTrack. Any remediation work that is identified will be accomplished during normal maintenance times.

Actual work complete represents the % complete across all tasks.

Surge 4 concluded on July 18, 2016 with all critical tasks completed. During the surge, priority was given to addressing potential defects and repairing or replacing critical rail infrastructure that affects train speeds and ride quality. Additional regular and preventive maintenance activities were fit in as time permitted. These maintenance activities are and will continue to be conducted on a regular basis to keep the infrastructure in a state of good repair.

Most of the work zone was in tunnels, where rail is affixed to grout pads with fasteners and studs. As a result, there was much less crosstie and insulator renewal scheduled, and work crews were more shielded from hot temperatures.

The critical tasks completed during the surge include:

- + Welded 26 joints on the rail, improving ride quality and safety
- + Replaced over 2700 linear feet of rail
- + Renewed over 950 linear feet of grout pad
- + Replaced over 2400 fasteners and 1500 studs, some of which were original components
- + Cleaned and repaired tunnel drainage system to help prevent water damage to new components

Shutting down this segment of the Blue and Yellow line allowed the necessary repairs to be completed much more quickly than would otherwise be possible. Replacing over 2400 fasteners would take about 80 nights if performed only after the system closed, or 7 weekends of single-tracking. Replacing 950 feet of grout pads would take two full weekends of single-tracking.

In addition, crews completed preventive maintenance activities, including inspecting and repairing lighting in tunnels and cables at traction power substations and breakers.





SafeTrack: Surge 4 Detailed Report

Final Report: 7/21/2016

	Task	unit	Completed During Surge
Track	Crosstie renewal	# crossties	81
	Insulator replacement	# insulators	31
	Fastener renewal	# fasteners	2,463
	Stud renewal	# studs	1,572
	Third Rail maintenance	# linear feet cover board	310
	Spot Rail renewal	# linear feet	2,730
	Joint elimination	# joints welded	26
Structures	Grout Pad renewal	# linear feet grout pad	959
	Drain maintenance	# grates/baskets	28
	Track Bed cleaning	# linear feet	3,200
Automatic Train Control System	Track Junction Box repair/replacement	# boxes	38
Traction Power System	Power Cable repair/replacement	# cables	54
	Tunnel Light repair/relamp	# units	178



SafeTrack: Surge 5

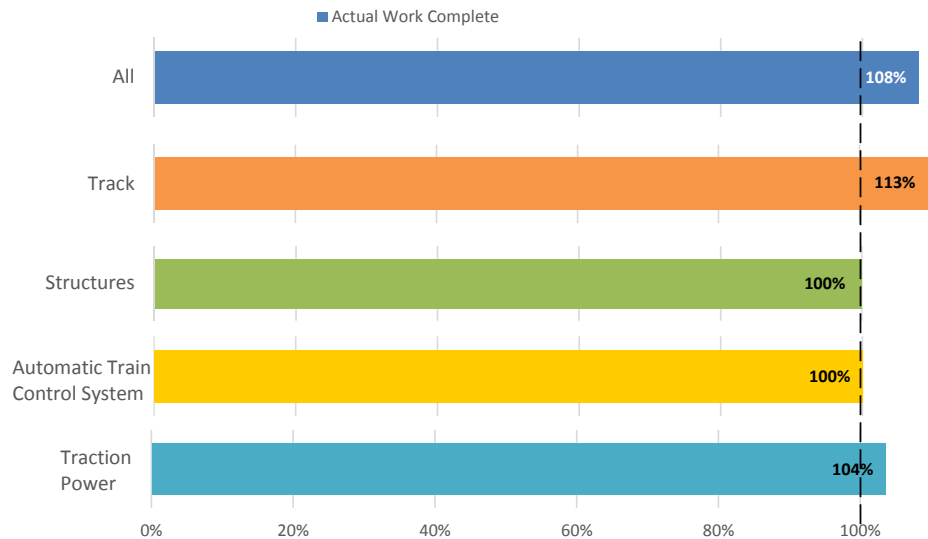
DATES:
July 20 - 31

WORK ZONE:
Ballston to East Falls Church, Continuous Single Tracking

*Final Report
Data as of 08/05/16*

SCOPE OF WORK: Renewal of rail and power infrastructure on this portion of the Orange and Silver lines, including crossties, fasteners, and power cables.

Overall Progress (% Planned Work Complete)



Notes:

*Surge #5 results are preliminary and subject to quality control processes which will remain continuous throughout the duration of SafeTrack. Any remediation work that is identified will be accomplished during normal maintenance times.

Actual work complete represents the % complete across all tasks.



Surge 5 concluded on July 31, 2016 with all critical tasks completed. During the surge, priority was given to addressing potential defects and repairing or replacing critical rail infrastructure that affects train speeds and ride quality. Additional regular and preventive maintenance activities were fit in as time permitted. These maintenance activities are and will continue to be conducted on a regular basis to keep the infrastructure in a state of good repair.

Lessons learned from dealing with the heat during Surge 3 were successfully applied to this effort. For example, crosstie replacement crews conducted multiple passes through an area in order to prevent the rail from kinking. Crews were able to complete all planned track work ahead of schedule, giving them time to replace 4,680 linear feet of rail and an additional 450 crossties, work which had been planned for a later date. In addition, power crews were able to repair an additional set of expansion cables

The critical tasks completed during the surge include:

- + Welded 24 joints on the rail, improving ride quality and safety
- + Replaced over 1400 crossties
- + Replaced over 4600 linear feet of rail
- + Replaced over 2300 fasteners and almost 500 studs, some of which were original components
- + Repaired over 75 power cables

Shutting down this segment of the Orange and Silver lines allowed the necessary repairs to be completed much more quickly than would otherwise be possible. Replacing over 2300 fasteners would take about 79 nights if performed only after the system closed. Replacing 4,600 linear feet of rail would take two weekends of single-tracking.

In addition, crews completed preventive maintenance activities, including inspecting and repairing lighting in tunnels and over 12,400 linear feet of fiberoptic cables.



SafeTrack: Surge 5 Detailed Report

Final Report: 8/5/2016

	Task	unit	Completed During Surge
Track	Crosstie renewal	# crossties	1,405
	Insulator replacement	# insulators	121
	Fastener renewal	# fasteners	2,369
	Stud renewal	# studs	495
	Third Rail maintenance	# linear feet cover board	820
	Rail renewal	# linear feet	4,680
	Joint elimination	# joints welded	24
Structures	Track Bed cleaning	# linear feet	5,110
Automatic Train Control System	Track Junction Box repair/replacement	# boxes	17
Traction Power System	Power Cable repair/replacement	# cables	79
	Tunnel Light repair/relamp	# units	242



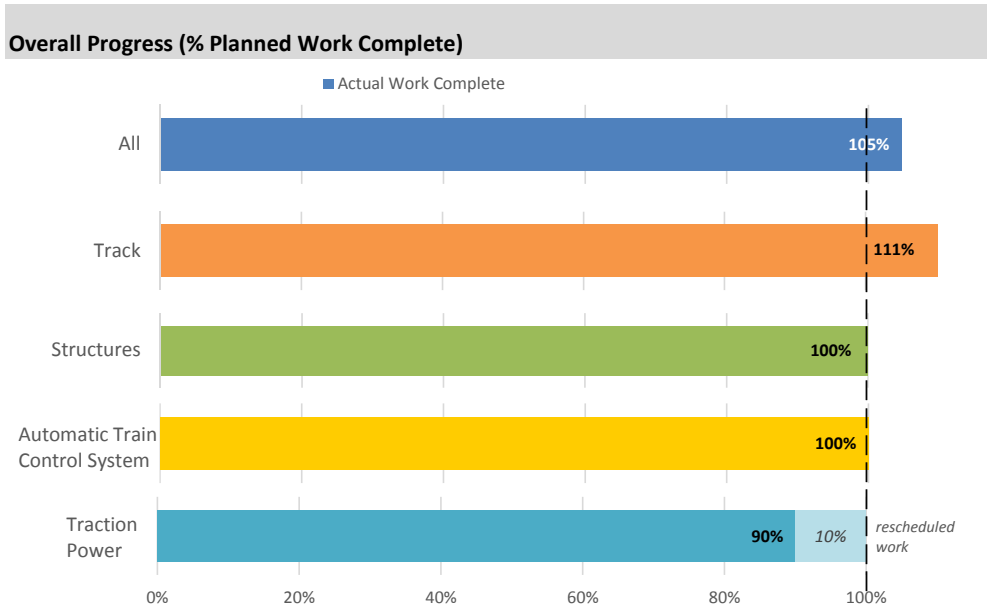
SafeTrack: Surge 6

DATES:
August 1 - 7

WORK ZONE:
Takoma to Silver Spring, Continuous Single Tracking

*Final Report
Data as of 08/11/16*

SCOPE OF WORK: Renewal of rail and power infrastructure on this portion of the Red line, including crossties, insulators, and power cables.



Surge 6 concluded on August 7, 2016. All tasks were completed except for the replacement of one set of power expansion cables. This work will be conducted after the system closes at night, since power must be removed from both tracks.

During the surge, priority was given to addressing potential defects and repairing or replacing critical rail infrastructure that affects train speeds and ride quality. Additional regular and preventive maintenance activities were fit in as time permitted. These maintenance activities are and will continue to be conducted on a regular basis to keep the infrastructure in a state of good repair.

- The critical tasks completed during the surge include:
- + Replaced over 1300 crossties, several hundred more than originally planned and about 35 percent of all ties in the area
 - + Replaced over 300 linear feet of rail and welded 14 joints
 - + Replaced almost 500 insulators
 - + Repaired 20 power cables
 - + Repaired marker coils and D-loops that provide station stopping information and speed commands to trains
 - + Removed vegetation and trash from over 8,100 feet of the track bed, improving drainage and eliminating fire hazards

Notes:

*Surge #6 results are preliminary and subject to quality control processes which will remain continuous throughout the duration of SafeTrack. Any remediation work that is identified will be accomplished during normal maintenance times.

Actual work complete represents the % complete across all tasks.



Operating a continuous single track for seven days on this segment of the Red line allowed the necessary repairs to be completed much more quickly than would otherwise be possible. Replacing over 1300 crossties would take about 260 nights if performed only after the system closed.

In addition, crews completed preventive maintenance activities, such as inspecting and repairing platform edge lights and over 140 intrusion detection warning (IDW) boxes located along the fence line of the tracks.



SafeTrack: Surge 6 Detailed Report

Final Report: 8/11/2016

	Task	unit	Completed During Surge
Track	Crosstie renewal	# crossties	1,311
	Insulator replacement	# insulators	496
	Tamping	# linear feet	9,240
	Third Rail maintenance	# linear feet cover board	1,280
	Rail renewal	# linear feet	312
	Joint elimination	# joints welded	14
Structures	Track Bed cleaning	# linear feet	8,129
Automatic Train Control System	Marker Coil and D-Loop junction box repair/replacement	# items	4
Traction Power System	Power Cable repair/replacement	# cables	20



SafeTrack: Surge 7

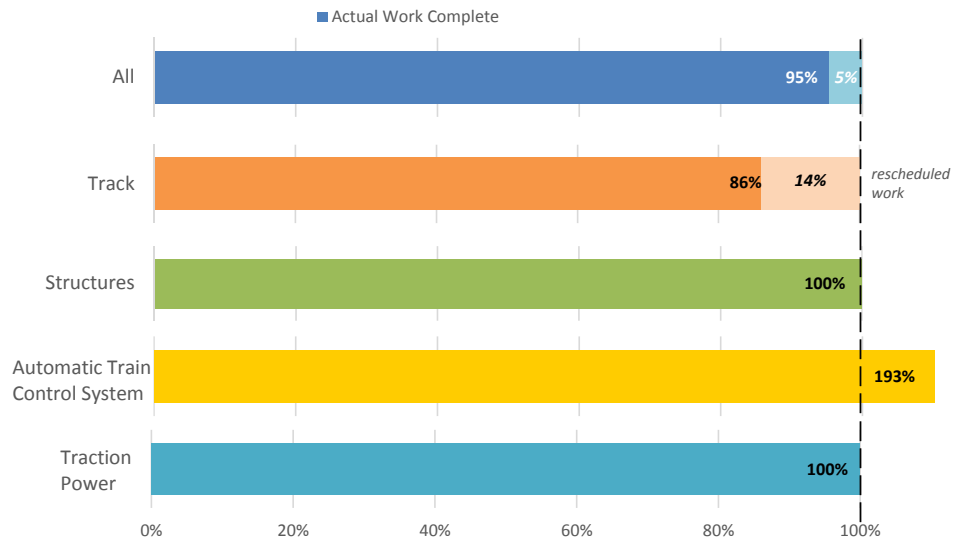
DATES:
August 9-21

WORK ZONE:
Shady Grove to Twinbrook, Continuous Single Tracking (with Full Shutdown August 13-14, August 20-21)

*Final Report
Data as of 08/30/16*

SCOPE OF WORK: Renewal of rail and power infrastructure on this portion of the Red line, including crossties, track circuit equipment, and power cables.

Overall Progress (% Planned Work Complete)



Notes:

*Surge #7 results are preliminary and subject to quality control processes which will remain continuous throughout the duration of SafeTrack. Any remediation work that is identified will be accomplished during normal maintenance times.

Actual work complete represents the % complete across all tasks.



Surge 7 concluded on August 21, 2016 with most planned tasks complete. During the surge, priority was given to addressing potential defects and repairing or replacing critical rail infrastructure that affects train speeds and ride quality. Additional regular and preventive maintenance activities were fit in as time permitted. These maintenance activities are and will continue to be conducted on a regular basis to keep the infrastructure in a state of good repair.

The main focus of the work was to replace deteriorating crossties in this area. The surge was originally scheduled to end August 18th, but was extended through the 21st to allow for additional work on two key crossover tracks, address new safety recommendations and account for the impact of extreme heat, humidity and electrical storms which slowed productivity. Due to these factors, track crews were unable to complete all tasks in the expanded scope and will return to the area to finish maintenance, including crossties, rail renewal and welding.

The surge included two weekend shutdowns, which allowed crews to make repairs on both sets of tracks. These weekend shutdowns enabled crews working on Automatic Train Control systems to complete additional repairs, including refurbishing four times as many Track Junction boxes as originally planned and converting 12 signals to LED lights.

The critical tasks completed during the surge include:

- + Replaced over 3,500 crossties, about 35 percent of crossties in this area
- + Welded 6 joints
- + Replaced over 1,100 insulators
- + Repaired 72 power cables, 4 damaged orange boots and 36 pigtails
- + Repaired 19 track junction boxes and over 60 Intrusion Detection Warning System boxes, important safety features along fence lines
- + Removed vegetation and trash from over 1,600 feet of the track bed, improving drainage and eliminating fire hazards

Limiting service for 13 days on this segment of the Red line allowed the necessary repairs to be completed much more quickly than would otherwise be possible. Replacing over 3500 crossties would take over 2 years if performed only after the system closed.



SafeTrack: Surge 7 Detailed Report

Final Report: 8/30/2016

	Task	unit	Completed During Surge
Track	Crosstie renewal	# crossties	3,572
	Insulator replacement	# insulators	1,120
	Ballast renewal	# tons	140
	Tamping	# linear feet	25,300
	Third Rail maintenance	# linear feet cover board	2,000
	Joint elimination	# joints welded	6
Structures	Track Bed cleaning	# linear feet	1,692
Automatic Train Control System	Intrusion Detection Warning System (IDW) refurbishment and replacement	# boxes	62
	Track Junction Box refurbishment	# boxes	19
	Signal conversion to LED lighting	# signals	12
Traction Power System	Power Cable repair/replacement	# cables	72