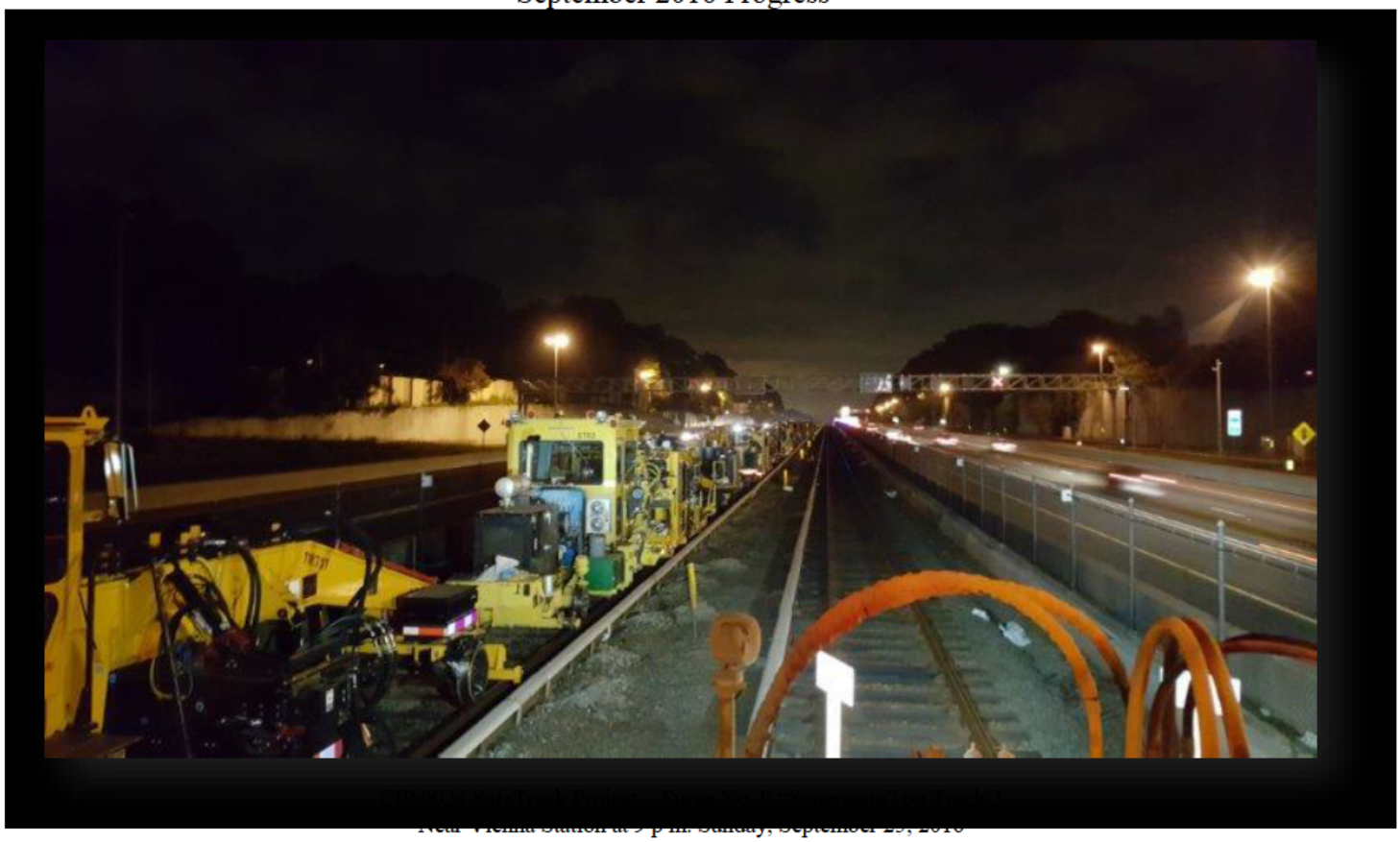
Monthly Report
SafeTrack Program
Washington, DC Metropolitan Area Transit Authority

September 2016 Progress



CIP 0024 SafeTrack Project 1 – Surge No. 2 "Scavenger" on Track 2
Near Vienna Station at 9 p.m. Sunday, September 25, 2016

Submitted November 29, 2016

[redacted]

[redacted]

[redacted]

TABLE OF CONTENTS

Cover Photo: A "Super gang" is lined up at the end of the day (9:00 p m.), September 25, 2016, on Track 2, near Vienna Station ready for the next day's work. A "super gang" is essentially two crosstie gangs integrated together, for a total of over 24 pieces of equipment. By doubling forces, SafeTrack crews can move more quickly down the alignment and keep the "assembly line" of tie replacement moving faster. The regular approach would have been to keep the two gangs separate and divide up the territory between them; in the "two-separate-gangs" approach, each gang has to make multiple passes. With the super gang, pulling old and inserting new crossties can be done in one pass, freeing up more time and space for other groups to work in the area in parallel with the QC effort. – Photo by L. Mason, WMATA.

EXECUTIVE SUMMARY

This second monthly PMOC report for SafeTrack is based on information provided by WMATA at the fourth oversight meeting held on October 18, 2016, and weekly updates since the September 13th meeting. The PMOC concurs with WMATA's assessment of September's progress as stated in its monthly report: [1]

> September saw very positive trends for safety, work planning and work productivity. Significant work was accomplished on the Blue Line between Van Dorn Street and Franconia-Springfield stations as well as beginning the longest Safety Surge on the Orange Line between Vienna and West Falls Church. Three of the four weekends this month were total shutdowns of the surge area, enabling significant increase in the ability to complete work within the interlockings, conduct Quality Control checks throughout the surge area and remove old material.
>
> In addition to the progress made in the field, we completed the rescheduling effort to revise the SafeTrack surge schedule to incorporate lessons learned and refine the scope to include the interlockings adjacent to the surge areas. The revised plan was presented to the FTA on September 8th; following discussions with the FTA, it was announced to the general public on September 14th. The SafeTrack Project Management Plan was also developed in September and submitted for FTA review on September 30, 2016.

Here is a summary of the PMOC oversight activities for September 2016:

- Conducted the regular monthly oversight meeting at WMATA on September 13, 2016.
- Participated in weekly FWSO/PMOC coordination meetings Sept. 7, 14, 21, and 28, 2016.
- Received and began review of the SafeTrack PMP on September 30, 2016.
- Met with OB1 project team on September 9th to confirm coordination with SafeTrack to enable OB1 contractor to remove scaffolding on Orange Line between Stadium Armory and Minnesota Avenue Stations that was erected during Surge 2 (June 18 – July 3, 2016).
- Met with OB1 APM to discuss the coordination between SafeTrack and ROCC to enable shutdown of power to restore service for the newly refurbished TPS at West Falls Church.

A. Program Description

WMATA has described SafeTrack as: "SafeTrack addresses FTA and NTSB safety recommendations, will eliminate the backlog of track work, and will enable Metro to return to a steady-state of annual track and systems renewal projects. SafeTrack will do this by closing the system at midnight on weekends and expanding weekday maintenance opportunities. In addition, SafeTrack intends to carry forward lessons learned and improvements in work efficiency and productivity to future maintenance and capital rehabilitation programs, after SafeTrack ends in mid-2017. The plan includes 15 "Safety Surges" that will utilize long-duration track outages

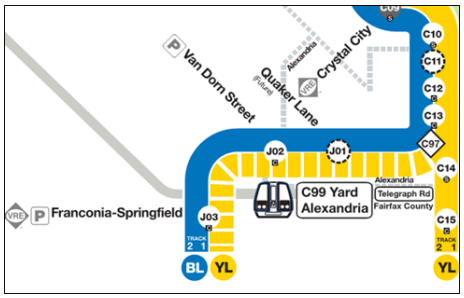
[1] WMATA's SafeTrack Report to the PMOC dated October 17, 2016.

through around-the-clock single tracking or line-segment shutdowns that will impact rush hour commutes."[2]

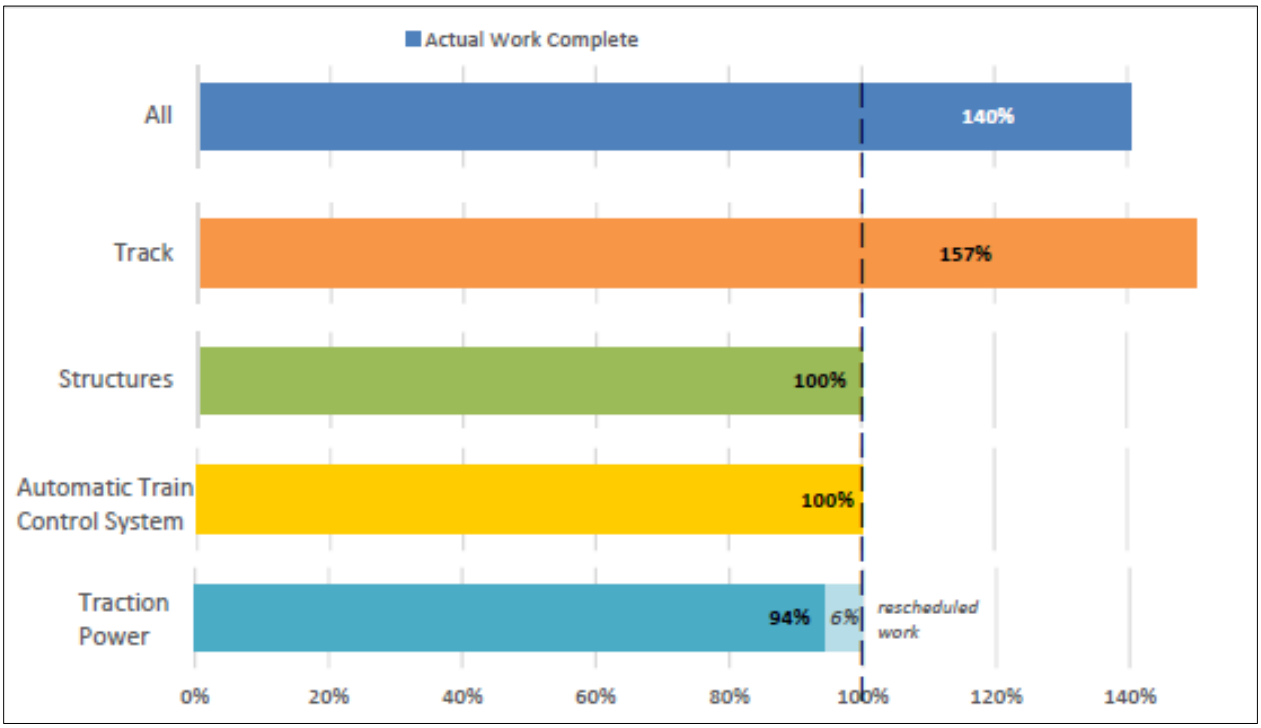
The majority of SafeTrack work is being performed by WMATA forces and is funded primarily through WMATA's Capital Improvement Plan CIP0024, Track Rehabilitation. Additional CIPs fund other related work during the SafeTrack surges. These federal funding sources include PRIIA (Passenger Rail Investment Improvement Act), §5307 Urbanized Area Formula Funds, and §5337 State of Good Repair Formula Funds. SafeTrack is a one-year program, which started on June 4, 2016; the present scope is scheduled to be completed in June 2017.

B. Program Status

Surge 8, Franconia-Springfield (J03) to Van Dorn Street (J02), Blue/Yellow Rush + Line, which began on August 27, concluded on September 11, 2016. Most of the planned tasks were completed as shown in the following bar chart graphic prepared by the SafeTrack team.



Surge 8 Overall Progress – Percent of Planned Work Complete

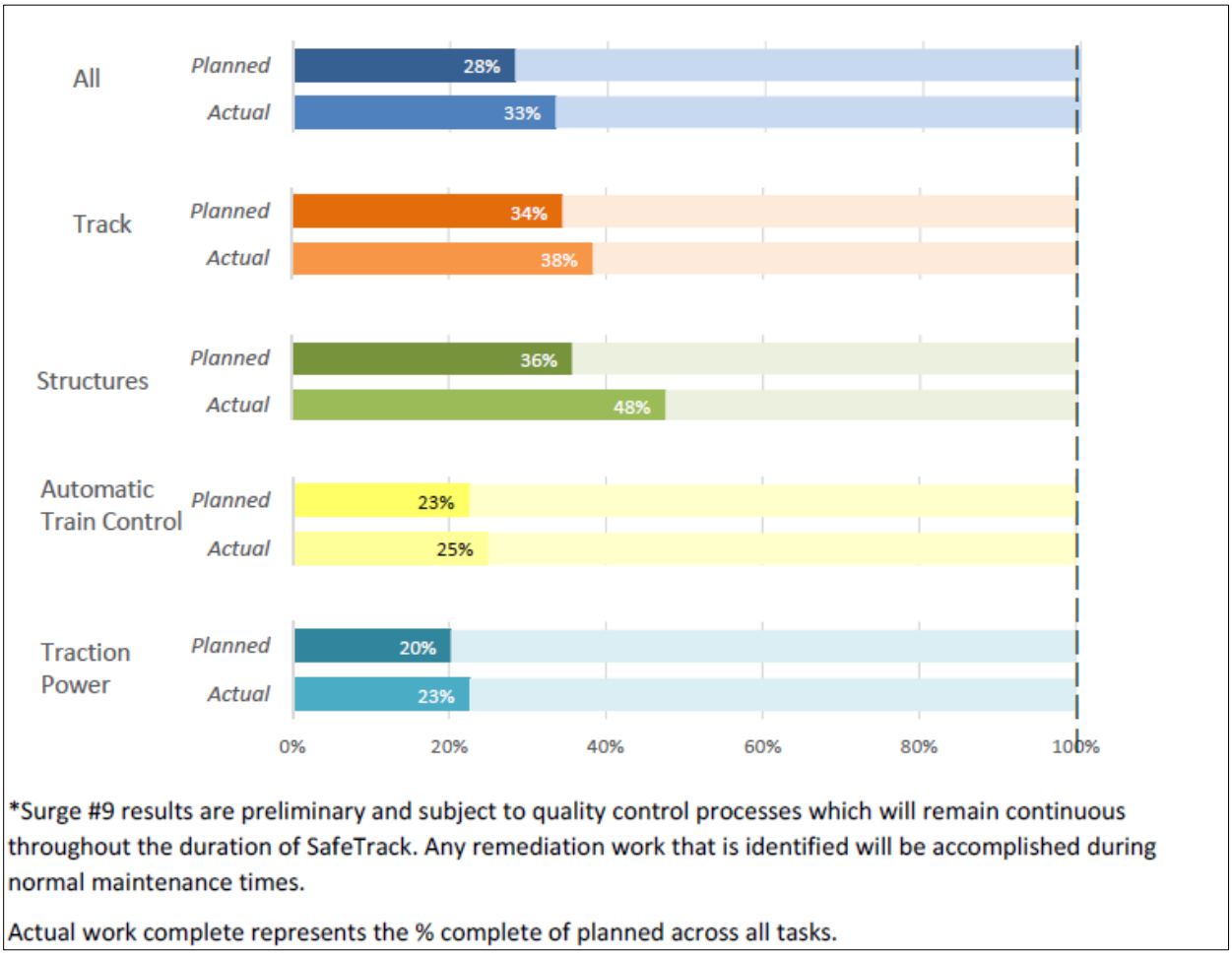


As noted in the last bar of the table above, the missed traction power work is discussed on page 9 of this report.

[2] From WMATA's SafeTrack Project Management Plan, Revision Zero, October 30, 2016.

Surge 9, Orange Line, West Falls Church (K06) to Vienna (K08) began September 15, 2016, and is scheduled to conclude October 26, 2016, 42 continuous days. Detailed work planning for Surge 9 began on August 14, 2016, with additional inspections of the Orange Line from West Falls Church to Vienna as well as Vienna Interlocking. WMATA reported Surge 9 progress as of Sunday, September 25, 2016, using the bar graph below.

Surge 9 Overall Progress – Percent Work Complete Thru Sunday, September 25, 2016



*Surge #9 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 of planned across all tasks.

WMATA further reported on Surge 9 progress through September 25, 2016 noting, "[a]t the conclusion of work on Sunday September 25th, Surge 9 track and structures work, as well as power and automatic train control renewal efforts were slightly ahead of schedule. By this point, 11 days into a 42-day Surge, Metro had planned to complete about 28 percent of work. The weather has

cooperated and Metro staff and contractors have managed to complete about 33 percent of all work planned for the entire Surge.

C. Core Accountability Information

Cost – Current Budget for CIP0024

Estimated Budget Required:	$118,797,984
Board Approved (FY16-FY17) Budget for CIP0024:[3]	$ 74,848,045
Expended through September 30, 2016:	$ 53,855,341
Percent of approved budget expended:	72%
Percent of estimated budget expended:	45%

Cost – Forecast for SafeTrack

Estimated total cost for SafeTrack work (Surges 1 thru 15):	$ 80,067,892
Estimated total cost for track rehabilitation work outside surge areas:	$ 19,636,775
Contingency at 20%:	$ 19,093,317
Estimated CIP0024 total cost during SafeTrack:	$118,797,984

Cost – Summary of Funding

Federal	Funding Source	Amount
FFY15	PRIIA	$11,325,062
FFY16	PRIIA	$46,397,000
FFY16	§5337	$10,000,000
FFY16	§5307	$10,000,000
Subtotal	Funding Available	$77,722,062
TBD	TBD	$41,075,922
Grand Total	All Sources	$118,797,98

Schedule

- Original SafeTrack project completion date: June, 2017
- Current forecast completion date: June 2017 (Schedule to be updated in January 2016)
- Percent of time expended: *33%*

Contingency & Budget

- Contingency – As of September 30, 2016, there is no contingency in the CIP0024 budget.
- Budget – FY17 Budget was approved prior to the development the SafeTrack program; WMATA will seek $60M of additional funding for CIP0024 from the Board in November 2016.

[3] The FY17 Budget was approved prior to the development of the SafeTrack program; WMATA will seek additional funding for CIP0024 from the Board in November 2016.

According to WMATA's budget reports, SafeTrack spent nearly twice as much in September as it did in August: $6,160,556 vs $13,859,247. Expenditures for personnel activity lines exceeded budgeted amounts as of September 30, 2016:

Category	Approved Budget	Expenditure	% Expended
Force Account	$30,289,529	$29,967,485	99%
Project Management	$2,317,556	$3,293,570	142%
WMATA Indirect Cost	$4,108,835	$4,522,036	110%
Total Personnel	$36,715,045	$37,783,091	103%

In addition to personnel expenditures exceeding budget, one contract activity line exceeded budget amount: Mod 1 for Crane Masters Contract exceeded budget by $938,230, yielding 234% of budget expended. However, this is due to an accrual and will be corrected by increasing the contract value following the approval of the additional budget for SafeTrack.

The overall budget picture for CIP0024 as of September 30, 2016, shows a budget of $74,848, 045 and amount expended of $53,855,341, which is 72% of budget. This leaves $20,992,702 remaining in the CIP0024 budget. If expenditures in October and November for Surges 10 and 11 keep pace with September expenditures, CIP0024 will run out of budget by the end of November 2016. The SafeTrack management team is aware of this issue and is working with WMATA's OMBS to both seek additional funding from the Board, as described above, and realign the budget amounts among the activity lines to ensure no stoppage of the work due to budgetary constraints.

D. Major Problems/Issues

1. Status of Problems/Issues Identified in the PMOC's Previous Monthly Report

- Lack of coordination among various WMATA departments that are working in a surge area.
  - The work in September shows significant improvement in the coordination of work.
- Lack of a decision protocol for times when other high-priority or high-dollar work conflicts with Surge work.
  - This issue is addressed below in 2.a.
- Ability to segregate SafeTrack surge expenses from other concurrent maintenance expenses.
  - A response to this issue is pending further analyses by the SafeTrack management team's Business Analyst, [redacted]. The next monthly PMOC report will provide an update.
- Weather: hot weather in August and the possibility of it continuing into September (as well as heavy rains) can affect productivity.
  - Very hot weather continued in September, but the SafeTrack Team has taken prudent steps to address the effects of hot weather on workers.

- Misters have been set up in "cooling tents" to refresh workers during breaks. As before, plenty of water is available also.

- 12-hour work days, six days a week can negatively affect productivity
  - The SafeTrack program continues to work 12-hour shifts;
  - The departments have improved their scheduling of workers and place a strong emphasis on workers getting rest during off-shift hours.
- Lack of communication and coordination among the departments involved in a surge during the Lock-Out/Tag-Out process for electrical sources needs to be improved
  - Coordination for Lock-Out/Tag-Out has improved, and should continue to do so as the departments continue to work together;
  - Weekly SafeTrack Team coordination meetings address Lock-Out/Tag-Out requirements at the beginning of a surge.
  - The PMOC will follow up with WMATA at the December meeting.
- Tracking and Completion of Punch List Work
  - WMATA is developing a procedure for the collection, reporting, and managing of post-surge punch list work. The procedure is titled: SafeTrack Work Documentation Protocols Rev 0, 10/07/2016, provided to FTA on 10/07/2016, to facilitate resolution of PMOC comments. The document is still being refined with further input from the SafeTrack team.

2. <u>New Problems/Issues</u>

- <u>Work Conflict Protocol</u> – Lack of a decision protocol for times when other high-priority or high-dollar work conflicts with Surge work. Specifics of this issue were reported in this section of the PMOC's report of August 2016 SafeTrack activities. Since then, the PMOC asked the SafeTrack team whether a protocol was being developed. According to the team, "any conflicts between surge work and other high priority or high-dollar work are resolved at the weekly Track Rights meeting, chaired by AGM-Rail, [redacted] and attended by representatives from all involved departments and major capital projects. Resolving conflicts at this meeting enables work to be rescheduled or compromises to be reached with sufficient notice to avoid delay claims or other negative effects. In some cases, this may mean that other work is conducted during a surge, for example allowing the DDOT bridge repairs at Monroe Street and Franklin Street bridges to be done within Surge 10."

  SafeTrack further commented, "within the surge, the decision protocol is the rigorous work planning process that goes into creating the march chart; the root causes of the issue within Surge 4 (mentioned in the PMOC's August SafeTrack report) were communication-based, ensuring that the personnel at Mobile Command understood the march chart and the work prioritization. Since then, we have worked to improve the communication of the priorities and day-to-day communication to avoid such incidents." This response addresses conflicts among

crews working on SafeTrack and instances when others reach out to SafeTrack to achieve accommodation.

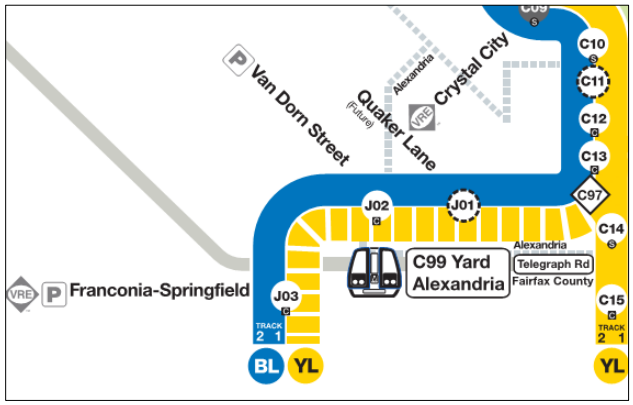
- Project Management Plan – The PMOC identified areas for improvement in the first version of the PMP and sent its comments to SafeTrack on 11/3/16. The PMOC and the SafeTrack management team have scheduled a PMP workshop for November 18, 2016.

MAIN REPORT

1. Program Status

Work Completed in September 2016

Surge 8 was completed in September and Surge 9 was started in September. SafeTrack's accomplishments in September as reported to the PMOC are described below.



Surge 8, Blue/Yellow Rush+ Line, Franconia-Springfield to Van Dorn Street – started on August 27 and concluded on September 11, 2016. This surge consisted of continuous single tracking and full shutdown on three weekends: August 27-28, September 3-5, and September 10-11. The general scope of work was renewal of rail and power infrastructure on this portion of the Blue and Yellow Rush+ lines, including crossties, track circuit equipment, and power cables. The main focus of the work was to replace deteriorating crossties on both sets of tracks in this area, many of which were original to this part of the system. Approximately 4,000 crossties needed to be replaced to achieve a state of good repair. WMATA said, "due to better planning and milder weather, crews replaced over 7,000 crossties, the most of any surge to date. Faster-moving crossties work also enabled crews to weld 27 open joints in this area, which were not part of the original scope.

Again, the increased track access provided by SafeTrack enabled WMATA to "accomplish in 16 days about 70 percent of what it accomplished in all of FY2016. In that year, WMATA replaced 10,000 crossties system-wide."

The following table shows the work WMATA accomplished during Surge 8. In addition, WMATA employees removed vegetation and trash from over 16,000 feet of the track bed, improving drainage and eliminating fire hazards. Crews also replaced missing or damaged signs.

	Task	unit	Completed During Surge
Track	Crosstie renewal	# crossties	7,102
	Insulator replacement	# insulators	353
	Ballast renewal	# tons	2,000
	Tamping	# linear feet	39,400
	Third Rail maintenance	# linear feet cover board	230
	Joint elimination	# joints welded	27
Structures	Track Bed cleaning	# linear feet	16,180
Automatic Train Control System	Intrusion Detection Warning System (IDW) refurbishment and replacement	# boxes	500
	Track Junction Box refurbishment	# boxes	66
	Signal conversion to LED lighting	# signals	16
Traction Power System	Power Cable repair/replacement	# cables	52

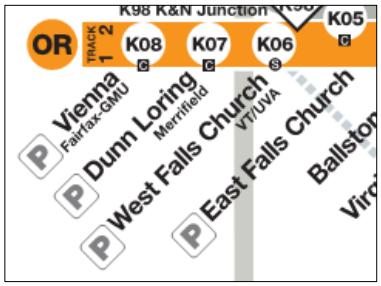
Power crews also addressed recent FTA Safety Directive 16-4 by changing out bolts on expansion cables throughout the area. While the work associated with this safety directive was completed, the Power crews need to return to the area to complete work on several remaining power connection cables near Van Dorn Street station. According to WMATA, "the work to replace these power cables was scheduled as part of the Traction Power System upgrades, but are not high priority cables and do not pose an immediate safety risk." It should be noted that the Traction Power Maintenance Department (TPRM) used Surge 8 to accelerate cable replacements in this area, and the cables that remain to be replaced will be done under the ongoing cable replacement program, "which focuses first in underground (higher risk) areas." In addition to the power cable work, the project team identified 44 items on the Surge 8 punch list that need to be completed. All other tasks were complete. Examples of the items from the punch list are:

Van Dorn Street to Franconia-Springfield Tracks 1 & 2 Punch List					
Chain Marker	**Defect**	**Department**	**Completed (Y/N)**	**Forecast Completion**	**Maximo WO#**
J1 826+20	(2) Missing 3rd rail coverboards	TRST-Track	N		9873240
J2 714+68	(1) Missing Clip (LR)	TRST-Track	N		13075320
J2 818+45	(2) Missing Screw Spikes (LR)	TRST-Track	N		13067329
J2 866+00 to 871+30	(46) Deteriorated Cross Ties	TRST-Track	N		13067354
J1 702+30	Blue Light not on-circuit damaged during Surge work	TRPM	N	12/15/2016	13052197

Punch List – during the October 18, 2016 monthly meeting, the SafeTrack team described the punch list process. At the end of the surge, each group/department working on a surge creates a punch list for the surge scope of work it was unable to complete. This development of a punch list is typical in the construction industry. QICO conducts sampling when work groups advise them that the work is complete. Typically, QICO samples about 25% of the scheduled surge work. If QICO finds items within scope that the departments missed or is non-compliant, these items are either corrected prior to the end of the surge, if possible, or added to the punch lists. Punch list items may be entered into the Maximo System for tracking. The departments schedule the punch list work as needed, either during scheduled non-passenger service or through an additional weekend single tracking or shut down event. QICO noted that they analyze the punch lists looking for trends and recurring deficiencies, and feed that information back to the departments for corrective action. WMATA is developing a procedure titled: "SafeTrack Work Documentation Protocols." Revision 0, dated 10/07/2016, was provided to the FTA on 10/07/2016. The document is being refined with further input from SafeTrack, the working departments, and QICO.

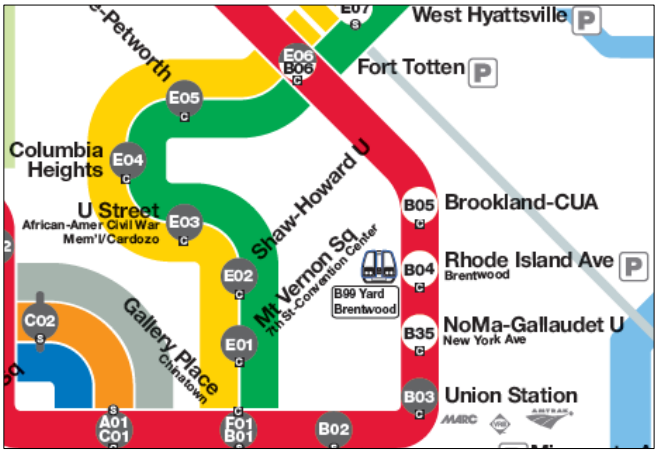
Defect out of Scope (DOS) – deficiencies noted during the post-surge walk-downs of the surge area by either department crews or QICO inspectors are entered into WMATA's Maximo system. These defects are managed separately from the punch list work and tracked through the Maximo System.

Surge 9, Orange Line, West Falls Church to Vienna – This six-week surge began on September 15, 2016, and is scheduled to conclude on October 26, 2016. Planned work includes replacement of 4,408 crossties, 926 insulators, third rail cover board, joint elimination, ballast renewal, track bed cleaning, and replacement/ refurbishment of IDW boxes and track junction boxes. Extensive pre-surge planning includes weekly coordination meetings and culminated in issuance of pre-surge planning documents on September 14, 2016. These pre-surge documents included detailed scopes of work on total-shutdown weekends and single-track weekdays. Also included are a High-level Work Plan describing the overall approach to the surge as well as notes on access points and parking for work crews, and location of bathrooms, and WMATA's Mobile Command Center; and a Coordinated Work Plan that includes responsibilities of the Mobile Command Center, the Safety and Quality Departments, emergency phone numbers, and maps to local hospitals. The SafeTrack's management team's SafeTrack Coordinator coordinates the work of each of the departments that will be working on the surge.



Work Planned to start in October

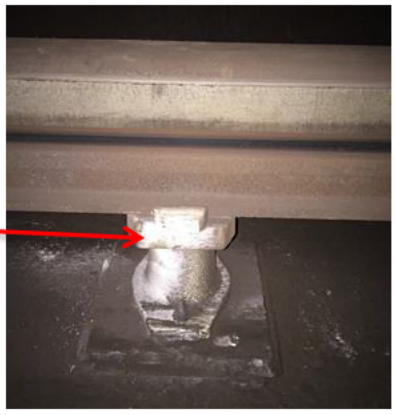
Surge 10, Red Line, No-Ma Gallaudet (B35) to Fort Totten (B06) – This 25-day surge is scheduled to begin Saturday, October 29, 2016 and continue through Tuesday, November 22, 2016. This surge will be a complete shutdown of the Red Line between Fort Totten and No Ma Gallaudet Stations. Planning and coordination for this surge started approximately one month before the surge is scheduled to begin. Some key planning and coordination dates are shown in the following table.



Surge 10 Planning Activities	NLT Dates
SafeTrack/MCC to issue Preliminary Map of Surge 10	23 Sep 16
All groups develop the scope of work they plan to accomplish	2 Oct 16
The TRST Execution Plan (March Chart) is developed by	6 Oct 16
Final Work Plan and Surge Scope (March Chart) developed by	14 Oct 16
Develop plan for work zone and employee parking	18 Oct 16
Issue Coordinated Work Plan (MCC)	27 Oct 16
Begin Surge 10	29 Oct 16

The scope of Surge 10 work can be summarized as follows:

- Renewal of double crossover at B04 interlocking
- Work on 3 switches from mainline to B99 yard
- Work on 3 switches at B06 interlocking
- Replace 2,235 crossties
- Replace 541 insulators
- Refurbish 94 IDW boxes
- Replace 8 Signals with LED lights
- Replace 15 grout pads and 40 insulator pads
- Replace pigtail, expansion, and transition cables; megger feeder cable for ground shorts
- Inspect, repair, and secure telephone and fiber optic cabling
- Verizon will be repairing and testing their cellular communications equipment in Franklin St. tunnel
- Relamp tunnel lights for tracks 1 and 2
- At Brookland and Rhode Island Avenue Stations
  - Clean vent shafts, mechanical equipment rooms
  - Service and repair sump pumps, sewage ejectors, air compressors, exhaust fans
  - Service and repair ventilation units for AC switchgear rooms
  - Clean and repair/relamp edge lights and trackbed lights
  - Clean granite benches, pylons, fare machines, gates, and kiosks
  - Perform detailed cleaning of restrooms, elevators and escalators
  - Perform landscape tasks



Third Rail Insulator on Grout Pad

In addition to SafeTrack work during the Surge 10 period, October 29 – November 22, 2016, WMATA will take advantage of the closing of Rhode Island Avenue Station for Surge 10 by engaging a contractor to effect repairs to the overhead concrete structure at Rhode Island Avenue Station. Also during Surge 10, the Washington, D.C. Department of Transportation (DDOT) will be able to complete emergency repairs on Monroe Street and Franklin Street bridges.

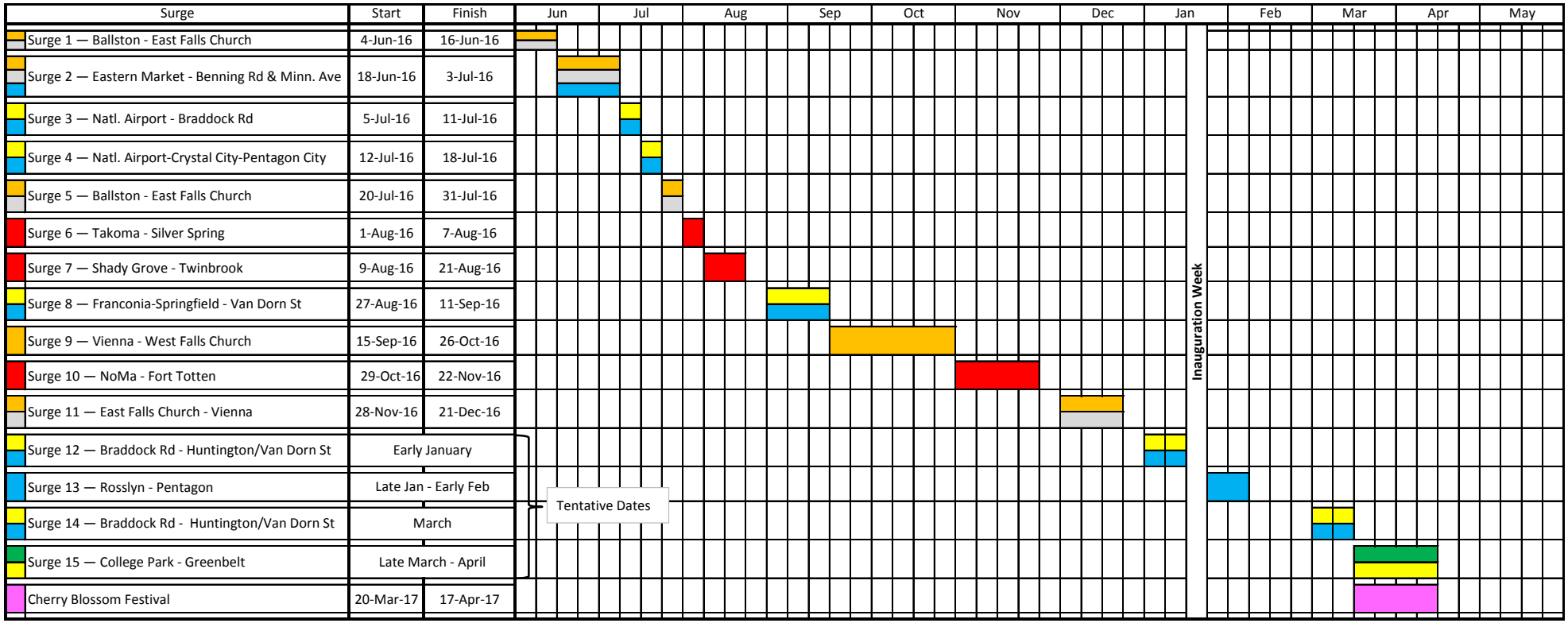
2. Program Cost

SafeTrack Program CIP0024

Initial Estimate	Current Board Approved Budget	Expenditures To Date	Percent Expended
$118, 797,984	*$74,848,045*	*$53,855,341*	*72%*
Discussion of Variances	None at this time		
Discussion of Funding sources	Funding for SafeTrack is from Passenger Rail Investment and Improvement Act (PRIIA), and Formula funds.		
Contingency	Currently, there is no contingency for CIP0024. Budget reprogramming before the end of CY 2016 should rectify this.		

3. Program Schedule

For surges 1 through 8, the schedule below reflects actual dates the work was accomplished. The schedule also shows WMATA's plan for Surges 9, 10, and 11. The dates for Surges 12, 13, 14, and 15 are tentative, and are planned to be announced in January 2017.

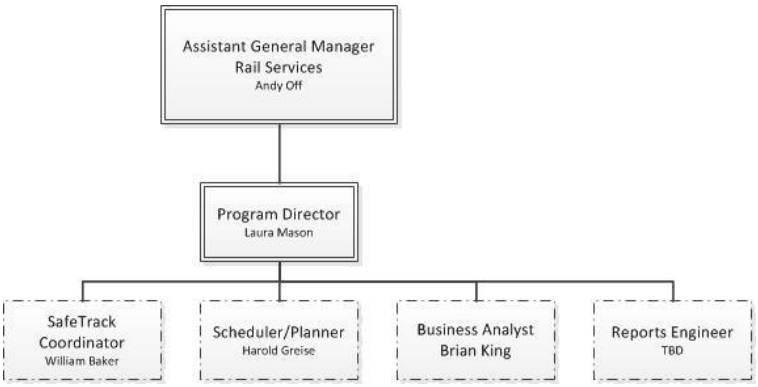


4. Environmental Mitigation Measures

   During each surge, WMATA continues to perform maintenance on drainage facilities and clean up trash along the track right of way.

5. Program Management Capacity and Capability

   At the October 18, 2016 monthly PMOC oversight meeting, the Program Director for SafeTrack advised that a fourth management team member should be on board by the end of October. That person will fill the Reports Engineer position, and the team will be organized as shown below. The dotted lines represent consultants.



   Duties and responsibilities of the SafeTrack Management Team were reported in last month's report. The duties and responsibilities of the new Reports Engineer were not provided at the November 17, 2016 meeting, but will be included in the next revision of the SafeTrack PMP.

6. Quality Assurance/Quality Control

   Quality Plan – In the revision zero version of WMATA's SafeTrack Project Management Plan (PMP), Section 8 of the PMP provided some details on how quality assurance and quality control activities would be managed on the SafeTrack project, but the PMOC has provided feedback and requested additional information in the next revision of the PMP.

   The PMP did include an informative flow chart of QA/QC activities performed by both the maintenance groups and the Office of Quality and Internal Compliance (QICO). The flow chart is on page 14 of this report.

   The PMOC understands from briefings at weekly and monthly meetings with SafeTrack and SafeTrack has confirmed that the following quality activities are procedural:

   - **Pre-surge Inspection**: QICO will perform pre-surge inspections looking at all defects in upcoming surge areas. The results of the pre-surge inspections will be provided in future monthly reports from the SafeTrack team.

- **During the surge**: Through daily surge inspections, QICO compiles a log with conditions noted as site condition, safety, and quality of work; these item(s) are then tracked daily for status change. An example tracking log for Surge 8 is located in Appendix E.
- **Post-surge**: According to the SafeTrack management team, after each surge, [T]hree reports are generated:

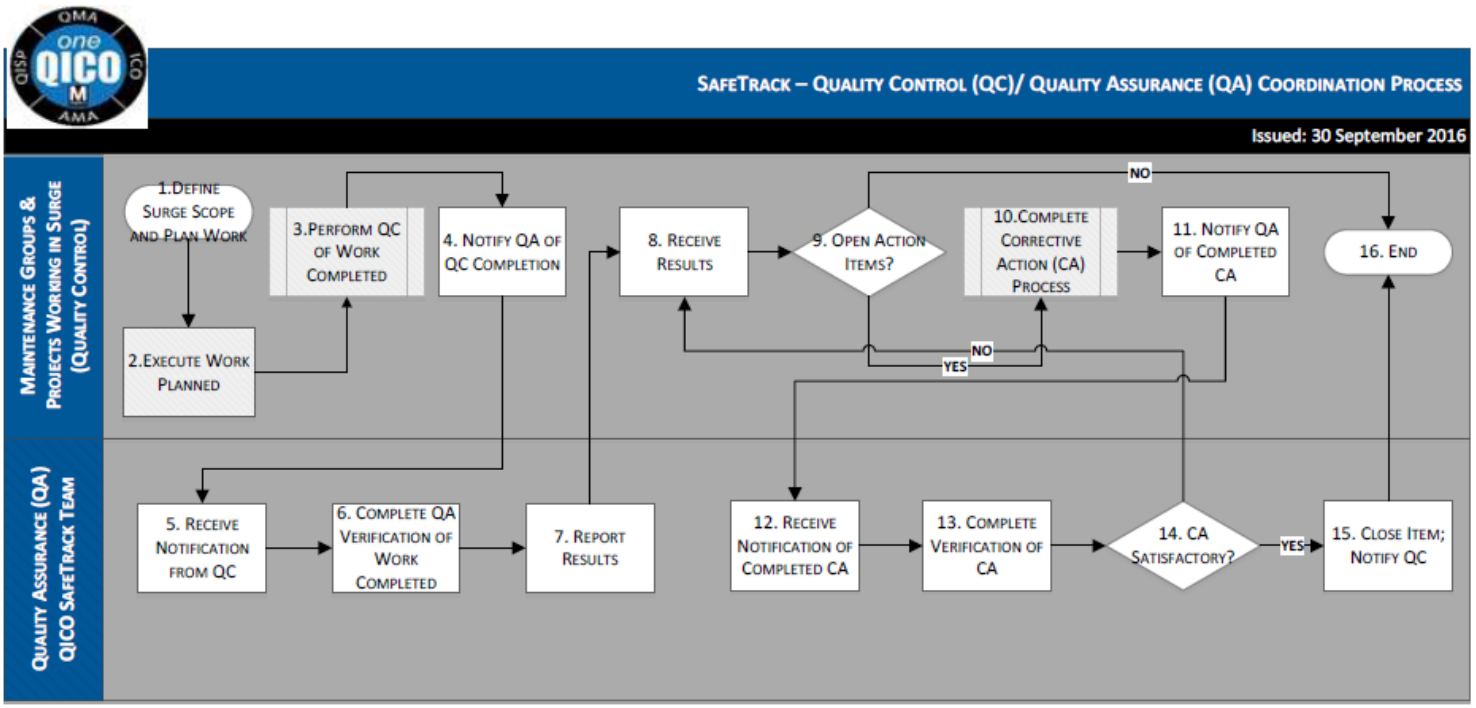
  (1) SafeTrack generates the "Punch List Report." This is a compilation of the punch lists generated by each work group. The Punch List Report is a report of in-scope work not accomplished in each surge and any defects in the work performed found by QICO after the completion of the surge (also noted in the Sampling and Verification Report).

  (2) QICO generates the final "QICO Sampling and Verification Report." Any defects captured during sampling is added to the compiled Punch List Report.

  (3) QICO then generates a "Closeout Report" which includes a summary of what happened during the surge, wins/losses and a set of recommendations, discrepancies tracked during the surge, and all daily reports from QICO field team inspectors.

  These reports are turned over to the maintenance departments, which prioritize the work items by:
  - Speed Restrictions / Emergency Services
  - Punch list items prioritized by risk, safety, & track access requirements

  The SafeTrack management team added that "[t]he procedures and reports regarding the completion of work post-surge are still under development. A preliminary version was provided on 10/7/2016, and this continues to be an area we are working on."
- **Project Audit** – QICO has not scheduled a date to audit the SafeTrack program. This audit will measure how well the project team follows its project management plan and the various WMATA procedures regarding contract administration, procurement, safety, security and quality.



QC Requirements

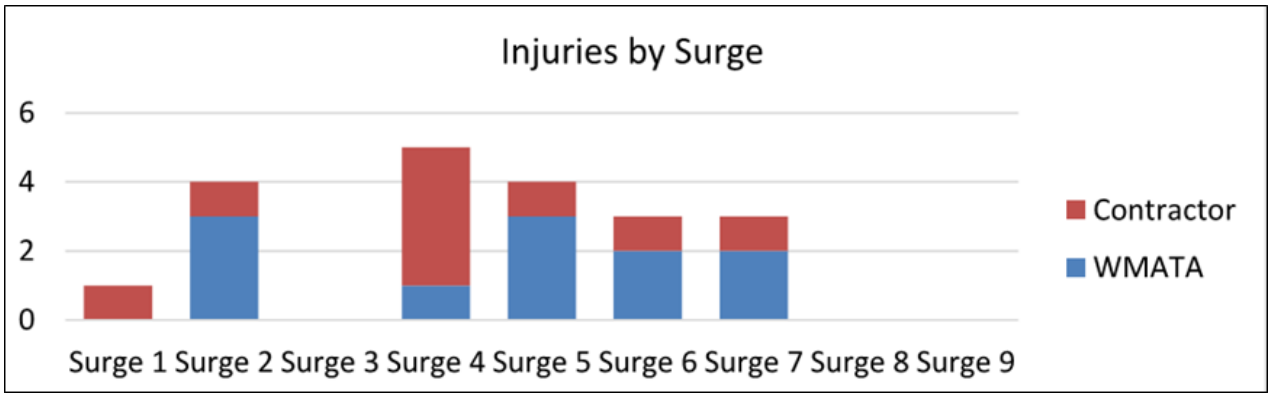
- Maintenance Groups are responsible for performing Quality Control (QC) and ensuring it is performed in accordance with WMATA procedures and requirements, including having senior personnel conduct QC inspections as part of the work process.
- Quality Control (QC) is the responsibility of the maintenance group performing the work.
- Managers and Supervisors of Maintenance groups shall review the Quality Assurance Summary Report to identify issues, address issues and provide written responses to QA.
- Managers and Supervisors of maintenance groups will work with QICO to plan the timing of QA sampling inspections.
- Managers and Supervisors of maintenance groups will notify QICO when QC checks are complete.
- Managers and Supervisors of maintenance groups will create a punch-list for any corrective actions and/or issues that need to be resolved.

QA Requirements

- Quality and Internal Compliance (QICO) is responsible for performing Quality Assurance (QA) and serves as the independent verification of the entire work process, including spot checks to confirm the quality of the work performed.
- QICO will perform QA sampling inspections of ~20 – 25% of a designated SafeTrack Surge area.
- QICO will produce daily observation reports (Quality Assurance Summary Report) that provide feedback for the work teams, to help drive the focus on quality and safety.
- QICO will perform QA as soon as practical after the work maintenance group has completed QC checks.
- QICO will perform QA sampling inspections during the outage (where possible), provided that the QC check is completed by the assigned maintenance group and there is sufficient time prior to the pre-revenue testing process.
- QICO may inspect areas not inspected during the surge within the next 48 hours so that any issues found can be added to the punch-list for the work teams and lessons learned can be carried forward in to the next outage.

7. Safety and Security

- Safety and security are addressed in WMATA's procedures for performance of track work. The PMOC has requested this procedure for review.
- As a part of its safety and security program, WMATA has developed an outreach program to keep the public apprised of the plans for each surge. As a part of the outreach program, the WMATA public outreach team continues to inform riders about the upcoming surges and the impact to their commute. Informational material is provided to explain safety risks, train delays, bus schedules, and contact information to the riders.
- The SafeTrack program reports the injuries that occurred during each surge. As the following chart from Safe Track shows, the program enjoyed zero injuries during Surges 8 and 9 in the month of September 2016.



8. Contract Administration
   - WMATA's Track and Structures Department (TRST) administers third-party contracts related to SafeTrack. In November 2016, the PMOC will review the roles and responsibilities for contract administration activities. Currently, according to the budget report, there are three contractors working on SafeTrack: G.W. Peoples Construction Company, Inc., Crane Services Company, Inc., and Crane Masters, Inc.

9. DBE Participation
   - The PMOC will also be reviewing the progress of WMATA's third-party contractors with meeting DBE goals on the SafeTrack Program. To accomplish this, the PMOC will be meeting with TRST staff who administer the third party contracts.

10. Program Risk
    - The SafeTrack management team has indicated that it has developed a risk register for the project. The PMOC expected to see this register as a part of the Revision zero version of the PMP. The PMOC has scheduled a PMP workshop with the SafeTrack management team for November 18, 2016 at which time the risk register will be discussed.

11. Action Items
    - (see Appendix D)

APPENDICES

Page

APPENDIX A – LIST OF ACRONYMS AND ABBREVIATIONS

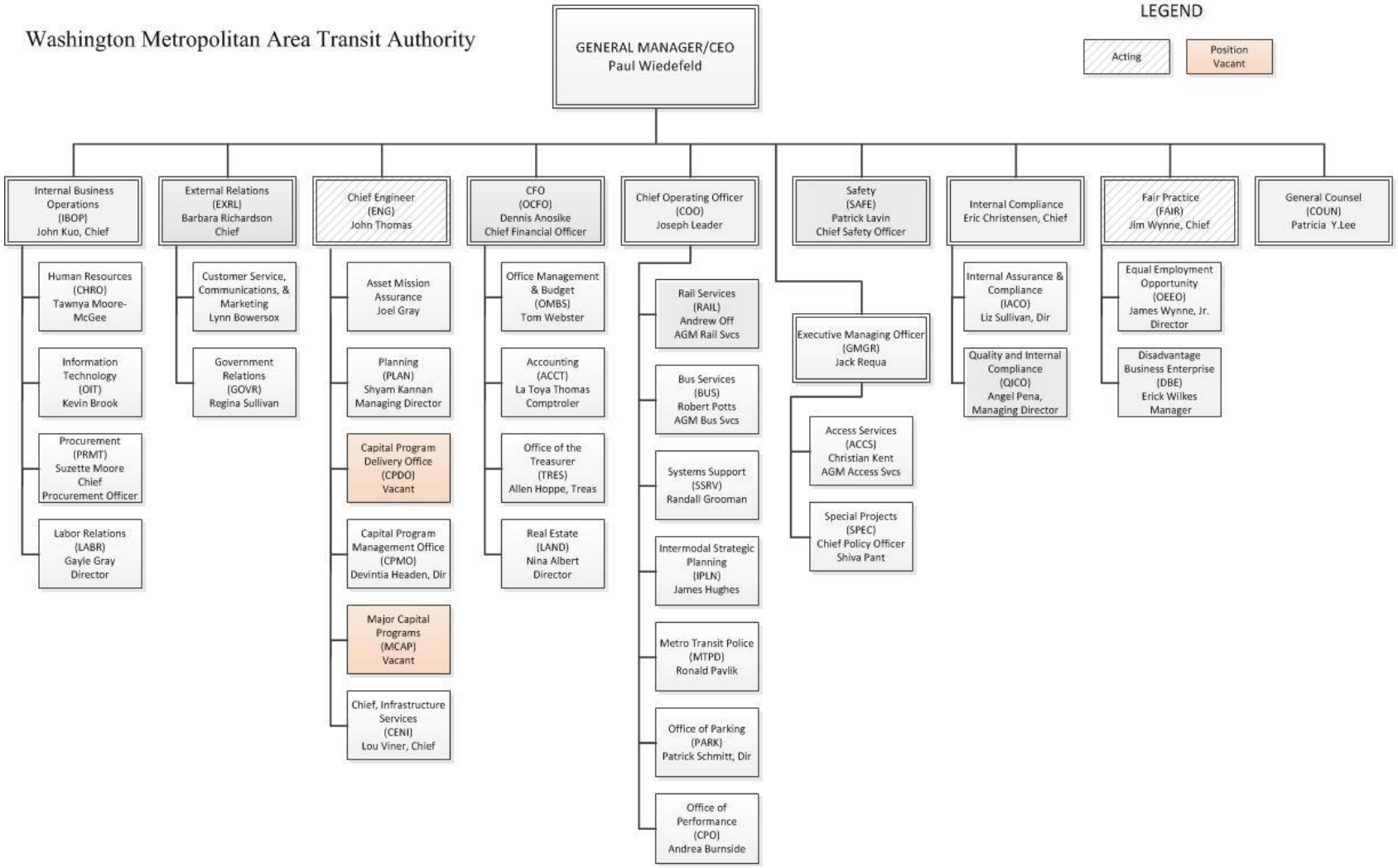
(that may be used in this report)

ACC	Air Conditioner Condenser (a rooftop or a ground-mounted unit)
ADA	Americans with Disabilities Act
AGT	Aboveground Storage Tank
AHU	Air Handling Unit
APM	Assistant Project Manager
ARF	Authority Representative's Facility
ARRA	American Recovery and Reinvestment Act
AST	Aboveground Storage Tank
ATC	Automatic Train Control
ATO	Automatic Train Operation
BAFO	Best and Final Offer
BFMP	Bus Fleet Management Plan
BMNT	Office of Bus Maintenance
BMP	Best Management Practice for storm water (by Maryland Dept. of Environment)
BOM	Bill of Materials
BOMF	Bus Operations and Maintenance Facility
C-35A	WMATA Form for Work Authorization
CA	Conditional Acceptance
CCB	Car Control Building at New Carrollton Rail yard
CCTV	Closed Circuit Television
CENI	Chief Engineer Infrastructure
CIP	Capital Improvement Program
CMF	Car Maintenance Facility (a building in a rail yard)
CMB	Car Maintenance Building
CNG	Compressed Natural Gas
COUN	WMATA's Office of General Counsel
CPM	Critical Path Method (Schedule)
CPDO	Capital Project Delivery Office (office responsible for the SIRP)
CPMO	Capital Project Management Office
CPN	Contractor Proposal Number
CSP	Construction Safety Program
CSX	The name of a Class 1 Freight Railroad
D-B	Design-Builder
DAS	Distributed Antenna System
DDOE	District of Columbia Department of the Environment
DDOT	District of Columbia Department of Transportation
DEF	Diesel Exhaust Fluid
ENSS	WMATA Engineering Support Services
ETS	Emergency Trip Station
FA	Force Account
FACP	Force Account Capital Projects

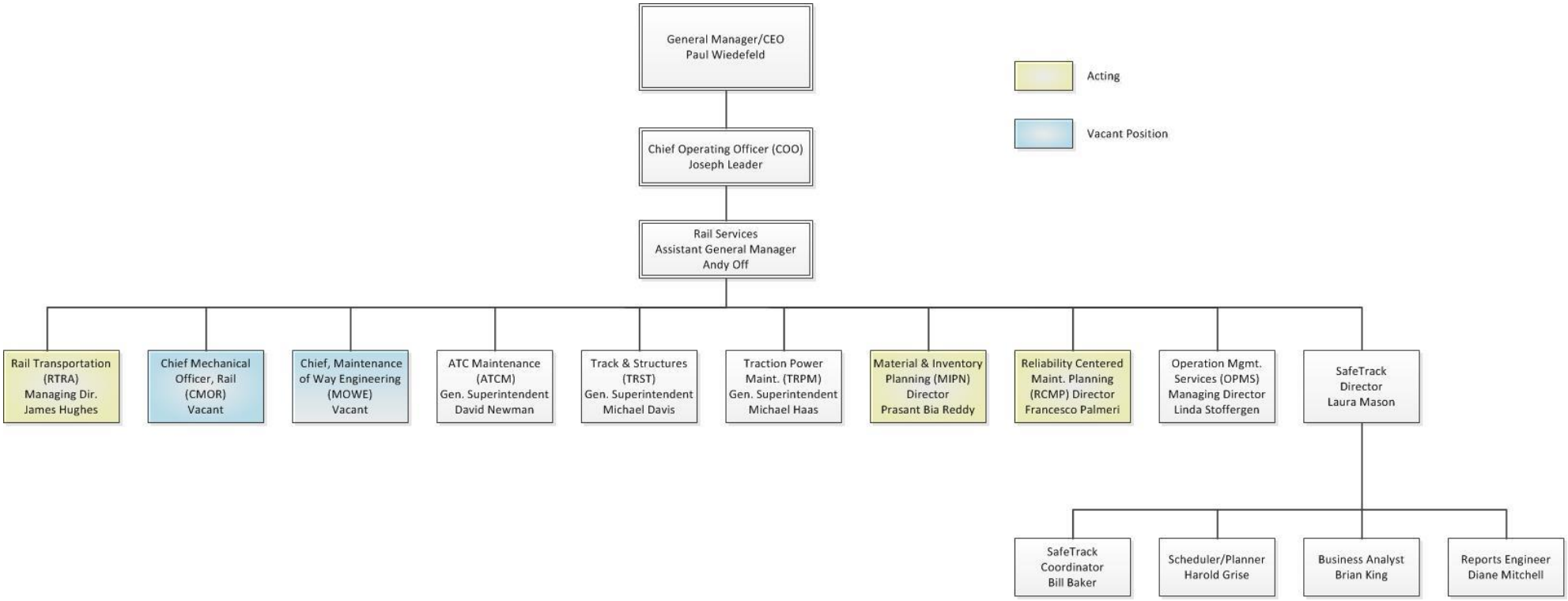
FTA	Federal Transit Administration
FWSO	FTA's WMATA Safety Oversight Office
FY	Fiscal Year
GOTRS	General Orders/Track Rights System
HAZMAT	Hazardous Materials
HVAC	Heating, Ventilating, and Air Conditioning
IDW	Intrusion Detection Warning
ICE	Independent Cost Estimate
IDW	Intrusion Detection Warning
IEEE	Institute of Electrical and Electronic Engineers
IFC	Issued for Construction
IRPG	Infrastructure Rehabilitation Program
JOC	Job Order Contract
LED	Light Emitting Diode
LEED	Leadership in Energy and Environmental Design
MAXIMO	WMATA's Enterprise Maintenance Management System
MCAP	Major Capital Project (as defined by WMATA)
MCX	Medical Center Crossover
MOW	Maintenance of Way, a personnel qualification by CSX
NCN	Non-conformance Notice
NTP	Notice to Proceed
OMBS	WMATA's Office of Management and Budget Services
O&M	Operation and Maintenance
OFS	Order for Services
NOV	Notice of Violation
O/B 1	Orange/Blue Lines 1 Contract
PA	Public Address
PCCI	Potomac Construction Company, Inc.
PCN	Proposed Change Notice (from the contractor)
PCO	Pending Change Order
Pepco	Potomac Electric Power Company
PG	Prince George's (County)
PLNT	Office of Plant Maintenance
PM	Project Manager
PMOC	Project Management Oversight Consultant
PMP	Project Management Plan
PPLE	Program, Planning and Energy
PRMT	WMATA's Office of Procurement
QA	Quality Assurance
QAP	Quality Assurance Plan
QICO	WMATA's Department of Quality and Internal Compliance Operations
QPRM	Quarterly Progress Review Meeting
RAMP	Real Estate Acquisition Management Plan
RF	Radio Frequency

RFMP	Rail Fleet Management Plan
RFP	Request for Proposal
RFQ	Request for Qualifications
RSA	Rail Service Adjustment
RTU	Remote Terminal Unit
SCADA	Supervisory Control and Data Acquisition
S&I	Service and Inspection
SCI	Substantial Completion Inspection
SCWG	Safety Certification Working Group
SOW	Scope of Work
SHPO	State Historical Preservation Office
SIRP	Systemwide Infrastructure Rehabilitation Program
S/O	Switch Order (needed for removal of AC power)
SOA	State Oversight Agency (for Safety and Security) [formerly SSOA]
SPM	Senior Program Manager (Most senior WMATA manager on a project)
SSCP	Safety and Security Certification Plan
*S*SCMP	Safety and Security Certification Management Plan
SSMP	Safety and Security Management Plan
SSP	System Security Plan
SSPP	System Safety Program Plan
SSPS	System Safety Program Standards
SSWP	Site Specific Work Plan
T&E	Trainman and Engineman, a personnel qualification by CSX
TAES	Track Allocation & Escort Support Office at WMATA
TAMS	Transit Asset Management System
TASS	Track Access Support Services
TBS	Tiebreaker Station
TCR	Train Control Room
TPSS	Traction Power Substation
TRST	WMATA's Department of Track and Structures
TSSM	Track and Structures – System Maintenance
TTCF	Test Track and Commissioning Facility
TUN	Temporary Use Notice
TVA	Threat Vulnerability Analysis
UPS	Uninterrupted Power Supply
UST	Underground Storage Tank
VEF	Ventilation & Exhaust Fans
WMATA	Washington Metropolitan Area Transit Authority
WSSC	Washington Suburban Sanitary Commission
YOB	Yard Operations Building

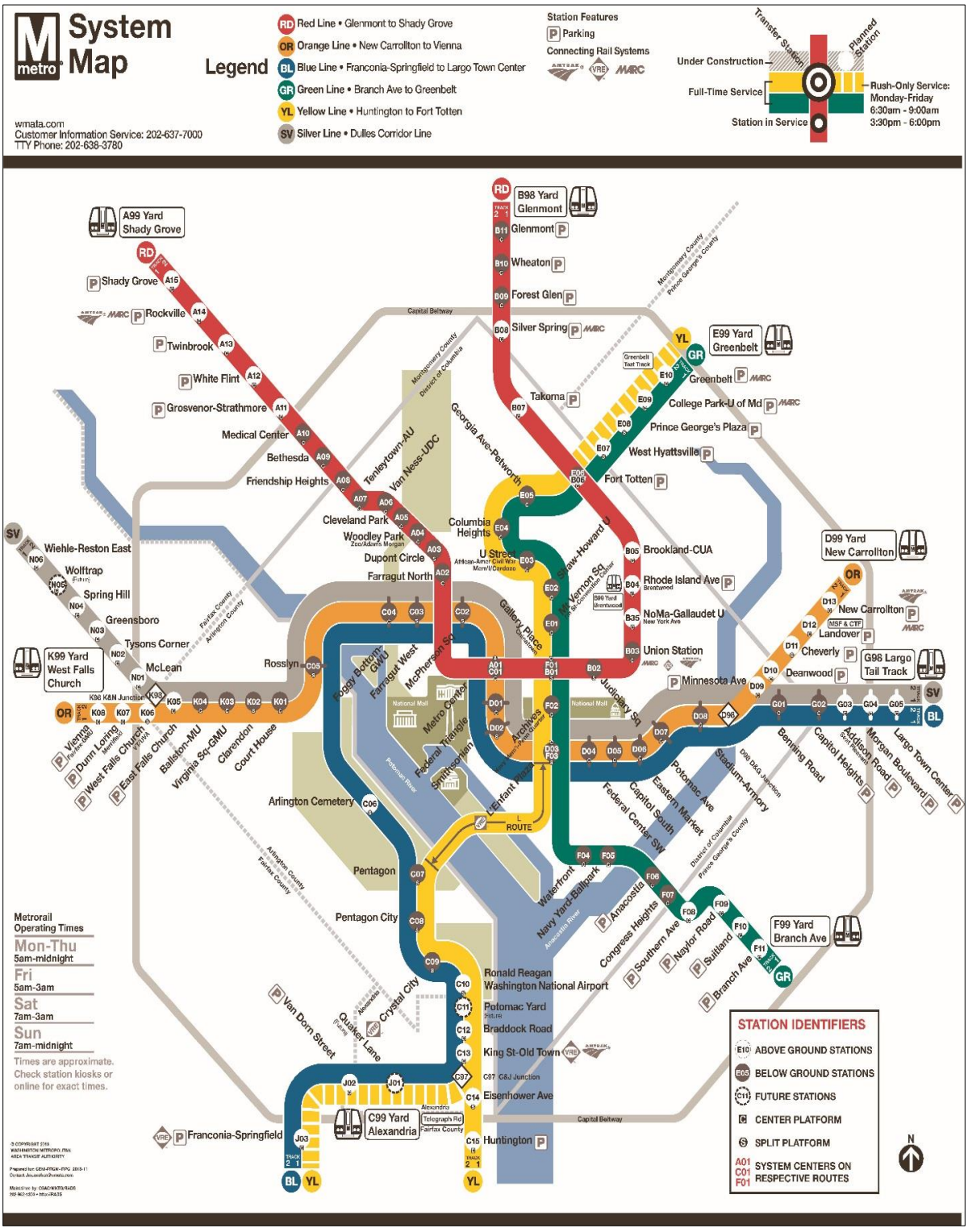
APPENDIX B – ORGANIZATION CHARTS & DESCRIPTION



WMATA's RAIL SERVICES GROUP



APPENDIX C – WMATA's RAIL TRANSIT SYSTEM



APPENDIX D – ACTION ITEMS – SAFETRACK PROGRAM

PR	ITEM	IDENTIFICATION	NATURE OF PROBLEM	D	A	I	COMMENTS	PMOC STATUS
2	2A	Prepare a Program Management Plan and submit to FTA by 9/30/2016	No plan was developed before this project began.	Y	N	N	FTA & PMOC have discussed development of the PMP with the SafeTrack management team on several occasions. The SafeTrack team submitted Revision 0 of its PMP to the PMOC and FTA on 9/30/16. PMOC furnished review comments to FTA on 10/26/16. *A PMP workshop with SafeTrack and PMOC is scheduled for November 18, 2016.*	R

ITEM KEY

[redacted]

LEGEND

PRIORITY (PR)
1- Most Critical
2- Critical
3- Least Critical

PROJECT SPONSOR ACTION
D – Remedial Action Developed
A – Remedial Action Approved
I – Action Implemented

PMO CONTRACTOR STATUS
R – Review On-going
C – Completed – No further review required

Note – Items marked with a 'C' in the 'PMO Contractor Status' column will be dropped from future reports**.**

APPENDIX E – SAMPLE QUALITY ASSURANCE SURGE 8 TRACKING LOG

METRO SAFETRACK ASSURANCE
QUALITY ASSURANCE SURGE 8 TRACKING LOG

QA OBSERVATIONS & CONCERNS									FIRST LINE OF DEFENSE		STATUS		
Item	QICO Report No.	QICO Report Date	Surge Day #	Location	Item Type	Description of Item	Before Picture (Objective Evidence)	After Picture (Resolution)	Asset Owner	Action	Comments	Priority*	Status
1	ST-20160829-51	August 28, 2016	2	J1 873+50	Site Condition	Stub up missing, unsealed J1 873+50.			TRPM			Medium	Closed
2	ST-20160902-55	September 2, 2016	7	J2 868+00	Safety	Fuel Spill in the vicinity of 868+00. Previously noted in ST-20160830-52).			TRST			Medium	Closed
3	ST 20160830-52	August 29, 2016	3	J2 841+00	Site Condition	Chain Marker Down at J2 841+00			TRST			Low	Open
4	ST-20160908-59	September 9, 2016	13	J1/J2 826+50,	Site Condition	Insulator installed at the end approach J1/J2 826+50 (1603). While not an immediate problem, if the end approach becomes pitted, a vehicle's collector paddle may start striking parts of the insulator		(Trackwalk 9-11-2016: Same Condition (B Frison)	TRST			Low	Closed
5	ST-20160907-57	September 7, 2016	11	J1870+00, J1 870+10	Site Condition	Ceramic insulator not centered on Cross Tie. J1870+00, J1 870+10			TRST			Low	Closed
6	ST-20160830-52	August 30, 2016	4	J2 874+10.	Site Condition	Fire extinguisher missing from emergency box J2 874+10.			TRST			Low	Closed
7	ST-20160830-52	August 30, 2016	4	J2 873+70, J2 873+10, J2 871+70, J2 859+90	Site Condition	Missing modified E-Clips on rail joints at J2 873+70, J2 873+10, J2 871+70, J2 859+90.			TRST		J2 726+90, J2 871+70 not closed	High	Open

APPENDIX F – SAFETY AND SECURITY CHECKLIST

Updated *9/19/16*

Project Overview	SafeTrack		
Project Mode	Rail		
Project Phase	Construction		
Project Delivery Method	Force Account & Third Party Contractor		
Project Plans	**Version**	**Review By FTA**	**Status**
Safety and Security Management Plan (SSMP)		Pending	WMATA preparing first draft.
Safety and Security Certification Plan (SSCPP)			WMATA Procedures. PMOC has requested for review.
System Safety Program Plan (SSPP)	Jan 2013	N/A	Draft SSPP submitted to FTA, under review pending new accident investigation procedure.
Security and Emergency Preparedness Plan (SEPP)	2014	N/A	Approved by TOC on September 3, 2014
Construction Safety and Security Plan (CSSP)		Pending	WMATA Procedures. PMOC has requested for review.

AREA OF FOCUS	Y/N	NOTES/STATUS
Safety and Security Authority		
Is the Project Sponsor subject to 49 CFR Part 659 State Safety Oversight Requirements?	Y	FTA WMATA Safety Oversight (FWSO)
Has the State designated an oversight agency as per Part 659.9?	Y	FTA is providing temporary direct safety oversight through FWSO
Has the oversight agency reviewed and approved the Project Sponsor's SSPP as per 659.17?	Y	Draft SSPP submitted to FTA, under review pending new accident investigation procedure.
Has the oversight agency reviewed and approved the Project Sponsor's Security Plan or SEPP as per Part 659.21?	TBD	TOC Letter dated September 3, 2014 approves WMATA's 2014 SEPP
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	The FWSO did attend the QPRM held on September 1, 2016.
Has the Project Sponsor submitted its safety certification plan to the oversight agency?	TBD	The SSCP of March 20, 2012, was accepted by TOC on April 2012.

AREA OF FOCUS	Y/N	NOTES/STATUS
Has the Project Sponsor implemented security directives issued by the Department Homeland Security, Transportation Security Administration?	Y	Section 11 of SSMP
SSMP Monitoring		
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	TBD	PMOC coordination with and input from FWSO will determine this.
Project Sponsor reviews the SSMP and related project plans to determine if updates are necessary?	TBD	PMOC coordination with and input from FWSO will determine this.
Does the Project Sponsor implement a process through which the Designated Function (DF) for Safety and DF for Security are integrated into the overall project management team? Please specify.	TBD	PMOC coordination with and input from FWSO will determine this.
Does the Project Sponsor maintain a regularly scheduled report on the status of safety and security activities?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	TBD	Procedures are being developed.
Does the Project Sponsor update the safety and security responsibility matrix/organizational chart as necessary?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor allocated sufficient resources to oversee or carry out safety and security activities?	Y	Awaiting comment/input from FWSO.
Has the Project Sponsor developed hazard and vulnerability analysis techniques, including specific types of analysis to be performed during different project phases?	TBD	PMOC coordination with and input from FWSO will determine this.
Does the Project Sponsor implement regularly scheduled meetings to track resolution of any identified hazards and/or vulnerabilities?	TBD	PMOC coordination with and input from FWSO will determine this.
Does the Project Sponsor monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	PMOC coordination with and input from FWSO will determine this.

AREA OF FOCUS	Y/N	NOTES/STATUS
Does the Project Sponsor ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor ensured the development of safety design criteria?	Y	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor ensured the development of security design criteria?	Y	Incorporated into WMATA Design Criteria and Maintenance Procedures.
Has the Project Sponsor ensured conformance with safety and security requirements in design?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor verified conformance with safety and security requirements in equipment and materials procurement?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor verified construction specification conformance?	Y	QICO tracks and reports on the results of maintenance and repair activities by the SafeTrack crews.
Has the Project Sponsor identified safety and security critical tests to be performed prior to passenger operations?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor verified conformance with safety and security requirements during testing, inspection and start-up phases?	Y	The various departments working on SafeTrack under the Rail Services Group are responsible for verification. QICO verifies this.
Does the Project Sponsor evaluate change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor ensured the performance of safety and security analyses for proposed work-arounds?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor demonstrated through meetings or other methods, the integration of safety and security in the following: • Activation Plan and Procedures • Integrated Test Plan and Procedures • Operations and Maintenance Plan • Emergency Operations Plan?	TBD	PMOC coordination with and input from FWSO will determine this.
Has the Project Sponsor issued final safety and security certification?	TBD	This is done on a surge by surge basis?
Has the Project Sponsor issued the final safety and security verification report?	N	PMOC coordination with and input from FWSO will determine this.

AREA OF FOCUS	Y/N	NOTES/STATUS
Construction Safety		
Does the Project Sponsor have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	The specific section in the 3rd party contractors' contracts must be identified and referenced here.
Do the Project Sponsor's contractor(s) have a documented company-wide safety and security program plan?	TBD	[redacted]
Do the Project Sponsor's contractor(s) have a site-specific safety and security program plan?	TBD	PMOC coordination with and input from FWSO will determine this.
Provide the Project Sponsor's OSHA statistics compared to the national average for the same type of work.	TBD	**Contract** / **WMATA Recordable Rate** / **National Average** [redacted] / TBD / TBD [redacted] / TBD / TBD [redacted] / TBD / TBD
If the comparison is not favorable, what actions are being taken by the Project Sponsor to improve its safety record?	TBD	PMOC coordination with and input from FWSO will determine this.
Does the Project Sponsor conduct site audits of the contractor's performance versus required safety/security procedures?	TBD	PMOC coordination with and input from FWSO will determine this.
Federal Railroad Administration		
If shared track: has Project Sponsor submitted its waiver request application to FRA? (Please identify specific regulations for which waivers are being requested)	N/A	No shared track. This is a heavy rail transit project. There is no FRA involvement.
If shared corridor: has Project Sponsor specified specific measures to address shared corridor safety concerns?		
Is the Collision Hazard Analysis underway?		
Other FRA required Hazard Analysis – Fencing, etc.?		
Does the project have Quiet Zones?		
Does FRA attend the Quarterly Review Meetings?		

APPENDIX G – PMOC TEAM PERFORMING THIS REVIEW

[redacted]