

Monthly Report  
**SafeTrack Program**  
Washington Metropolitan Area Transit Authority (WMATA)

March 2017 Progress



WMATA Force Account and Contractor G.W. Peoples installing new crossover at C98 interlocking on the "J" Line (vicinity Alexandria Yard). Photo taken March 10, 2017.

June 1, 2017

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## EXECUTIVE SUMMARY

*Note: Italics in this report denotes a change from the previous report.*

This *eighth* monthly PMOC report for SafeTrack is based on information provided by WMATA at the oversight meeting held on *April 18*, 2017, and subsequent weekly updates. The PMOC concurs with WMATA's assessment of progress in *March 2017* as stated in its monthly report: <sup>1</sup>

*"[On March 4, 2017,] SafeTrack started Surge 13, a continuous single tracking on the Blue/Yellow Line between Braddock Road and Huntington/Van Dorn Street stations. The main focus of the surge was to replace deteriorating crossties, grout pads, fasteners, and insulators on both sets of tracks in this area. As part of the effort, crews also serviced a critical area for train movement – replacing the double crossover leading into the Alexandria Service Yard. A major winter storm that included snow, wind, and freezing temperatures shut down Surge activity for a few days in mid-March, and required a schedule adjustment that extended the Surge by three days to April 12, 2017. [The total duration of the surge was 40 days.] Due in part to that snow event, the scope of work was modified to defer planned work at C15 Huntington interlocking.*

*"[Also during March 2017,] significant planning work was accomplished to prepare for Surge 14, from Greenbelt Station to Prince George's Plaza Station. [One result of the planning was the decision on March 30, 2017, to change the surge] from a single-tracking to a total shutdown. This surge had been planned and advertised as a single track event; however, it posed the same challenges faced in Surge 13, which was to deliver reliable rail service over the length of a single track. After a careful analysis of the service options and in keeping with SafeTrack's practice to utilize lessons learned from the current surge into the next, WMATA determined a shutdown would provide the best overall service with the least impact. Taking these factors into consideration the decision was made, with two weeks' notice to local jurisdictions, to change the surge to a total shutdown."*

Here is a summary of PMOC oversight activities for *March 2017*:

- *March 13 – PMOC completed and submitted SafeTrack report of December 2016 activity*
- *March 15 – PMOC & FTA in a conference call/meeting on revisions to the SafeTrack PMP*
- *March 16 – PMOC provided written comments to FTA on SafeTrack PMP Revision 4*
- *March 21 – Conducted monthly SafeTrack oversight meeting*
- *March 31 – PMOC completed and submitted SafeTrack report of January 2017 activity*

### A. Program Description

*WMATA's Project Management Plan (PMP), Revision 4, describes the program as "a year-long track work plan to accelerate three years' worth of work into approximately one year by significantly expanding maintenance time on weeknights, weekends, and midday hours and includes 15 "Safety Surges" – long duration track outages in key parts of the system.*

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<sup>1</sup> WMATA's March 2017 SafeTrack Report to the PMOC dated April 19, 2017, page 1.

*SafeTrack is a massive, comprehensive, holistic effort to address safety recommendations and rehabilitate the Metrorail system on an accelerated basis by expanding ALL available maintenance windows. It is also an emergency response by new WMATA management to the deteriorating track conditions recognized in early 2016. Through this focused effort, WMATA will eliminate the backlog of track work and enable Metro to return to a sustainable steady-state of annual track and systems renewal projects that can maintain the system in a state of good repair. In addition to delivering this scope, the intent is to carry forward the lessons learned and improvements in work efficiency and productivity to future maintenance and capital rehabilitation programs, after SafeTrack ends.”<sup>2</sup>*

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. Federal funding sources include PRIIA (Passenger Rail Investment Improvement Act), §5307 Urbanized Area Formula, and §5337 State of Good Repair Formula. The SafeTrack Project started on June 4, 2016; the present scope is scheduled to be completed by June 25, 2017.

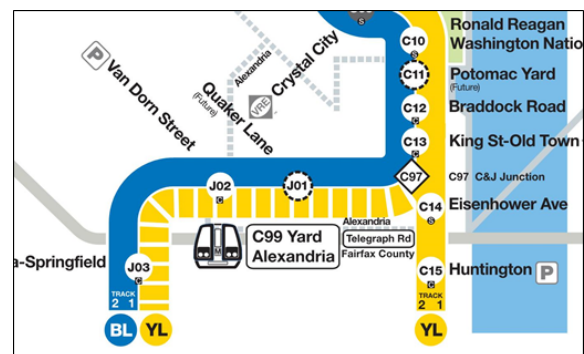
## B. Program Status

With the completion of Surge 13, SafeTrack crews continued making improvements to bring the Metrorail System to a state of good repair. *Adding the accomplishments from 40 days of Surge 13 to the previous accomplishments*, SafeTrack crews and their contractor partners working 305 days have brought 63.1 miles of track to a state of good repair. (The table on page 8 of this report shows the days worked by surge.) SafeTrack Program work accomplished through the end of Surge 13 includes:

- Replaced 34,652 crossties
- Replaced 7,288 insulators
- Replaced 29,934 fasteners
- Replaced 55,367 linear feet of rail
- Welded 533 rail joints
- Installed 33,291 feet of new grout pads
- Repaired/replaced 1,828 tunnel lights
- Repaired/replaced 1,005 power cables
- Replaced 27,834 feet third rail cover board
- Cleaned 108,996 linear feet of track bed
- Refurbished/replaced 2,643 IDW boxes
- Converted 106 wayside signals to LEDs
- Repaired 97 emergency trip stations

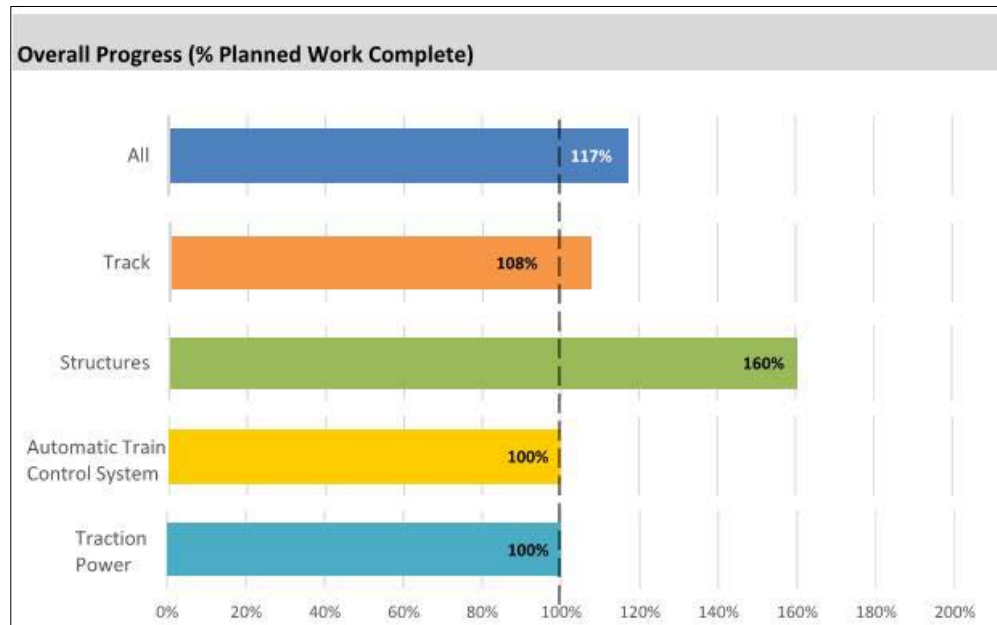
### March through April 12, 2017 Activity

- **Surge 13** – started on March 4 and concluded on April 12, 2017. Crews worked from Braddock Road on the Yellow/Blue (“C”) Line south to Huntington Station and west from the C&J Junction (C97) to Van Dorn Street Station on the “J” Line. All planned tasks were completed, and the structural tasks exceeded what was



<sup>2</sup> From WMATA’s SafeTrack Project Management Plan, Revision 4, dated February 28, 2017, page 1.

*planned. During the surge, priority was given to repairing or replacing critical rail infrastructure that affects safety, train speeds, and ride quality. Additional preventive maintenance activities were integrated and completed as time permitted. Overall, Surge 13 completed 117% of the work that was planned. The green bar in the chart below titled “Structures” reflects the grout pad repair work.*



- **PMP Development** – *Development of the PMP advanced through Revision 4 during March 2017. The PMOC, FTA, and WMATA teleconferenced on Wednesday, March to review comments on Revision 4 and decide how to proceed to Revision 5 and when that would be issued. During the teleconference, different WMATA groups took on responsibility for updating sections of the PMP. It was agreed that Revision 5 would be submitted to FTA on or about Tuesday, April 4, 2017.*

## C. Core Accountability Information

### 1. Cost<sup>3</sup>

Cost – Current SafeTrack Budget (as of March 31, 2017)

Approved FY16-FY17 budget for SafeTrack:	\$133,226,892
Current Budget:	\$134,234,515
Amount Expended thru March 31, 2017:	\$120,687,847
Percent expended:	90%

This month, the cost data shows expenditures of 90% of the budget. *Although the budget was*

<sup>3</sup> FFY = Federal Fiscal Year, October 1 through September 30  
FY = WMATA Fiscal Year, July 1 through June 30

increased by \$134,234,515 last month, as of the end of March 2017, it continues to be apparent that a budget increase is necessary to complete the planned scope of SafeTrack. The SafeTrack team reported at the April 18, 2017 oversight meeting and through subsequent correspondence that the previously reported contingency amount of \$3,342,694 was a “placeholder” for Surges 15 and 16 that were not part of the original SafeTrack scope. SafeTrack team reported on April 18 that they have developed a budget for the remaining scope of SafeTrack work; however, until the Board approves a new budget, it will continue to report the \$134 million budget. SafeTrack expects to report out a revised budget at the May 16, 2017 oversight meeting. It should be noted that the entire contingency amount of \$3,342,694 was allocated in March 2017; therefore, the following cost forecast table shows zero dollars in contingency.

**Cost – Latest available forecast for SafeTrack (as of March 31, 2017)**

Estimated total cost for SafeTrack work (Surges 1 thru 15):	\$ 134,234,515
Contingency as of March 31, 2017.	\$ 0
Projected CIP0024 total cost during SafeTrack:	\$ 134,234,515

**Cost – Summary of Funding for SafeTrack**

The funding table has not changed since the February report because the WMATA Board has not approved a revised SafeTrack budget. This table should reflect increased funding in the April 2017 report.

Federal Fiscal Year	Funding Source	Amount
FFY15*	PRIIA	\$ 18,722,282
FFY15	PRIIA	\$ 18,521,477
FFY16	PRIIA	\$ 45,947,000
FFY16	§5337	\$ 10,000,000
FFY16	§5307	\$ 10,000,000
Subtotal	Federal Funding	\$103,190,759
	Short-term borrowing**	\$ 31,043,756
Grand Total	All Sources	\$134,234,515

\*Funds provided from WMATA’s FY16 Budget to support the first month of SafeTrack

\*\*WMATA added \$1,007,623 to the project in February 2017.

**2. Schedule**

- Original SafeTrack project completion date: June 2017
- Current forecast completion date: June 2017. See Appendix I for a detailed schedule.
- Project Time: June 4, 2016 through June 30, 2017, 392 days
- Calendar days expended: June 4, 2016 through March 31, 2017, 300 days
- Percent of time expended: 76.5%

**3. Contingency**

- It is important to understand that the SafeTrack Program views contingency differently

than how WMATA views contingency for one of its capital construction projects. According to the SafeTrack PMP:

“There are zero contingency dollars budgeted in the SafeTrack Program. OMBS has the ability to manage any potential forecasted budget and/or funding shortfalls through adjustment of funding sources and capital budgets. If the forecast increases, funding will be rebalanced to ensure SafeTrack can continue. Between when the funding is requested and when it is allocated to a particular surge, the detail budget will hold this amount of money in contingency as unallocated budget.”

WMATA’s accounting software reports “unallocated budget” as contingency; therefore, this report will use contingency to represent unallocated budget.

- Contingency – The following table summarizes the use of contingency since the new SafeTrack budget was established in November 2016. *Note that there is currently no contingency; however, the revised budget is expected to include an amount for contingency.*

As-of Date	Amount Expended	Remaining Contingency
November 30, 2016	- - -	\$17,661,436
December 31, 2016	\$ 7,201,324	\$10,460,112
January 31, 2017	\$ 5,683,374	\$ 4,776,738
February 28, 2017	\$ 1,434,044	\$ 3,342,694
March 31, 2017	\$ 3,342,694	\$ 0

#### D. Major Problems/Issues

NOTE: Issues are shown in regular type and their latest status is in *italics*. When an issue is closed, it will be marked CLOSED for the month it was closed. The issue will not appear in the report for the following month.

##### 1. Status of Problems/Issues Identified in the PMOC’s Previous Monthly Reports

###### a. Tracking and Completion of Punch List Work

*QICO has not published its Closeout Report for Surge 13. Once this report is published, this report will identify here QICO’s post-surge inspection findings. This issue will remain **OPEN** through the end of the SafeTrack program, and the PMOC will continue to review and report on QICO’s post-surge findings and WMATA’s closeout of those findings as well as punchlist items from earlier surges.*

###### b. Project Management Plan

*Revision 4 of the PMP was submitted and reviewed in March 2017. SafeTrack expects to issue Revision 5 in early April 2017. This issue remains **OPEN**.*

###### c. Safety

*In March 2017, SafeTrack experienced three OSHA recordable injuries.<sup>4</sup> The three are*

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<sup>4</sup> An OSHA recordable injury is defined as an injury where the individual received medical care greater than first aid.



*briefly described below, however, the details of the injuries are still under investigation.*

- 1) On March 13, a WMATA Track Maintenance worker was injured while chocking the flat. The chock fell on his hand and caused a laceration and fracture on his right index finger.*
- 2) On March 9, a Contractor track worker sprained his wrist upon grabbing a rotating lag driver bit.*
- 3) On March 28, a Contractor track worker was injured while installing a clip. The employee fractured his finger after using a clip to attempt to set another clip.*

This issue will remain **OPEN** through the completion of the SafeTrack Program.

d. Grout for Grout Pads

*This issue is the absence of field testing of grout for new grout pads. As of January 31, 2017, a “full grout pad testing program” had not been established. On February 27, 2017, the PMOC asked the Director of the SafeTrack program for an update on the progress WMATA is making developing a grout testing procedure. In a subsequent oral communication, the SafeTrack program director informed that a draft procedure was circulating in the Maintenance of Way Engineering (MOWE) group for comment. As of the April 18, 2017 PMOC oversight meeting, a grout testing procedure had not been issued; consequently, the SafeTrack program is not performing tests on the grout it uses for grout pads. This issue remains **OPEN**.*

e. Project Funding

*The PMOC asked the SafeTrack Team to explain why for a second time, the SafeTrack budget has been fully obligated without all of the work complete. The Team responded there are several reasons. Two are that during a surge, previously unknown conditions are uncovered that require attention. Also, there are times when productivity has been better than expected and the decision was made to take advantage of a track shutdown and accomplish more work rather than end a surge early. The additional scope of work accomplished translates into some additional labor and much higher material costs. In short, due to the state of WMATA’s railroad, it has become imperative to take advantage of every opportunity to bring the roadway to a state of good repair, even if it requires reprogramming funds to pay for this work.*

*The SafeTrack team recognizes that additional funds will be needed to complete all planned SafeTrack work and has reviewed this issue with OMBS. This issue was discussed at the March 21 and again at the April 18, 2017 oversight meetings. The SafeTrack team reported that it is continuing to work with OMBS to develop a budget for Board approval that will support the remaining planned scope, with some contingency. Furthermore, the SafeTrack team restated that the General Manager is committed to providing the funds necessary to complete the SafeTrack program. This issue remains **OPEN**.*



f. Personal Protective Equipment (PPE)

*SafeTrack's report (of data collected by WMATA SAFE) for March 2017 activity shows 100% compliance in all areas except the use of safety glasses. The PMOC averaged the compliance percentages for all five reported areas over the period September 2016 through March 2017. The averages, shown below, indicate that the lowest compliance area is the use of safety glasses. The PMOC will follow up with SafeTrack and WMATA's Department of Safety and Environmental Management (SAFE) to learn what actions are planned to improve the use of safety glasses as well as hard hats and footwear. This issue remains **OPEN**.*

Personal Protective Equipment Compliance					
Six-Month Averages	Hard Hats	Footwear	Reflective Shirt	Safety Glasses	Working Radio
	99%	99%	100%	96%	100%

2. **New Problems/Issues**

g. Single Tracking vs. Shutdown

*In its March report, the SafeTrack Team reported:<sup>5</sup>*

*Most of the effort this period was focused on the service plan for Surge 14, particularly advancing the rail planning analysis based on the challenges experienced to date with the long single track[ing], specifically the time required to turn short-trip trains and the impact of the 35mph speed restriction and its implementation with speed couplers on the adjacent track. In addition, we recognized the need to have sufficient time within the rail schedule to mitigate delays/issues within the work area, to prevent the delay from rippling to other parts of the [Metrorail] system. Rail service problems compound much faster on week days than on weekends due to the higher frequency of planned service. At the beginning of SafeTrack, the focus was on trying to minimize the impact of the surge through rail service planning, stretching to maintain shorter/more normal headways and protect the rest of the system. The lessons learned proved that stakeholders and riders are better served by more conservative planning. While this results in longer headways with more significant impact, the schedule can be more reliably achieved. In particular, the counter-intuitive lesson of Surges 13 and 14 is that in cases of long [periods of] single tracking, the system is best served with a shutdown rather than maintaining single tracking.*

*The SafeTrack Team resolved the issues that arose from long-period single tracking surges by electing to use a total shutdown. This issue is **CLOSED**.*

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<sup>5</sup> WMATA's March 2017 SafeTrack Report, pages 6 & 7.

# MAIN REPORT

## 1. Program Status

The following table summarizes the status of the SafeTrack program for Surge 13 through its completion on April 12, 2017, based on reports submitted by WMATA.

SURGE No.	FROM – TO	TYPE	DAYS SURGING	APPROXIMATE TOTAL MILES		OVERALL % COMPLETE
				TRK 1	TRK 2	
1	East Falls Church to Ballston	Single Tracking	13	2.4	0	100%
2	Eastern Market & Minnesota Ave to Benning Road	Total Shutdown	16	2.0	2.0	100%
3	Natl. Airport to Braddock Rd.	Total Shutdown	7	0.7	0.7	97%
4	Pentagon City to Natl. Airport	Total Shutdown	7	1.3	1.3	100%
5	East Falls Church to Ballston	Single Tracking	12	0	2.4	108%
6	Single Spring to Takoma	Single Tracking	7	1.1	0	105%
7	Shady Grove to Twin Brook	Single Tracking & Wknd Shutdown	12	4.4	0	95%
8	Franconia-Springfield to Van Dorn Street	Single Tracking	17	3.7	3.7	140%
9	West Falls Church to Vienna	Single Tracking Wknd Shutdowns	42	5.2	5.2	111%
10	NoMa Gallaudet U to Fort Totten	Total Shutdown	29	1.3	1.3	133%
11	East Falls Church to West falls Church	Single Tracking	23	1.5	1.5	115%
Note 2	Red Line Van Ness-UDC to Grosvenor-Strathmore	Single Tracking	31	2.1	2.1	See Note 1
	Orange/Blue/Silver Line from Rosslyn to Eastern Market	Single Tracking & Shutdown	31	0.9	0.9	See Note 1
12	Blue Line - Rosslyn to Pentagon	Total Shutdown	18	2.4	2.4	121%
13	Yellow/Blue Line Braddock Rd to Huntington & Van Dorn	Single Tracking	40	5.3	5.3	117%
14	Green Line Greenbelt to College Park	Total Shutdown				
15	Orange Line Minnesota Ave to New Carrollton					
16	Red Line Shady Grove to Twinbrook					
	Totals to Date		305	34.3	28.8	111% <sup>1</sup>

Note 1: Average percentage of the 13 surges on which WMATA has reported.

Note 2: Non-surge period overall percent complete was not reported.

The table in Appendix C provides details of the work completed during the 13 surges and the non-surge period.

## **Surge 13 Pre-Inspection and Work Completed in March 2017**

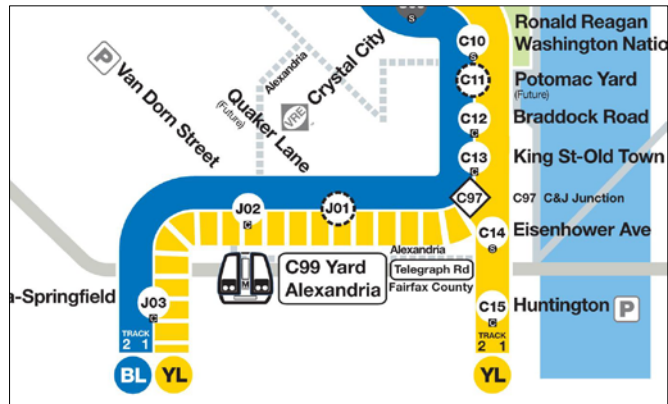
Prior to the start of Surge 13, QICO conducted a pre-surge inspection of the Surge 13 work zone on Tuesday, February 28, 2017. The results of the pre-surge inspection were summarized in QICO's Pre-Surge 13 report:<sup>6</sup>

*"The significant deterioration in the track structure observed during the QICO pre-surge walkthrough justifies the substantial service disruption proposed for upcoming Surge 13 (37 days). For ballasted track sections, several areas require up to 60% timber tie replacement. The most affected areas include a portion of track C1 between Braddock Road Station and King Street Station (C1 529+30 - C1 542+00), the ballasted inclines on either side of the track J1 aerial structure near Alexandria Yard (C99), and a double crossover for the Alexandria Yard lead tracks. For direct fixation track in the surge area, grout pads observed on track C2 were mostly in acceptable condition, with the exception of the systematic cracking of single grout pads at King Street Station. Fastener torqueing is necessary on portion of the aerial curve between Eisenhower Ave and Huntington and at the C15 interlocking (source: trackwalking data from Optram).*

*"WMATA's TrackIt system collects data from accelerometers onboard revenue vehicles to detect abnormalities in ride-quality and categorize them according to severity. For the Surge 13 pre-surge inspection, QICO used this data to prioritize and confirm which rail joints or other track features were producing these flaws in ride-quality. QICO will continue to explore using TrackIt to enhance walking track inspections."*

*Surge 13 began on Saturday, March 4, 2017, and concluded on April 12, 2017. WMATA planned to end this Surge on April 9, but due to a freak snow storm on March 14, WMATA had to suspend SafeTrack activities so that track employees could be redeployed for snow-clearing operations. In addition, the cold temperatures caused ice to form along the aerial structure within the work zone, impeding production and presenting a potential safety risk to workers. The ice had to be removed, which further delayed the project. Metro determined that it would be more efficient to extend Surge 13, keeping all work equipment and safety mechanisms in place, rather than breaking down the site and returning at a later date. Due in part to that snow event, the scope of work was modified because of weather conditions and the work completed is based on the modified scope of work. Significant planning went into mitigating*

**Mini-Map Showing Surge 13: C12 to C15 & J02**



<sup>6</sup> QICO's "Quality Pre-Surge Report, SafeTrack Surge 13, March 1, 2017, pages 1 and 3.

the impact to ridership. Surge 13 was extended to Wednesday, April 12, 2017, for a total period of 40 days. In its report on Surge 13, the SafeTrack team reported:<sup>7</sup>

*“Surge 13 used single-tracking operations while working on the C-Line from C12 Braddock Road Station to C15 Huntington Station and the J-Line from the C&J (C97) Junction to J02 Van Dorn Street station. Surge 13 concluded on April 12, 2017, with all planned tasks completed. During the surge, priority was given to repairing or replacing critical rail infrastructure that affects safety, train speeds and ride quality. Additional preventive maintenance was completed as time permitted. These maintenance activities [were] conducted on a regular basis moving forward to keep the infrastructure in a state of good repair.*

*“The main focus of the surge was to replace deteriorating crossties, grout pads, fasteners and insulators on both sets of tracks in this area. As part of the effort, crews also serviced a critical area for train movement – a double track crossover leading into the Alexandria Service Yard. Final quantities are shown in the table below.*

*“Automatic Train Control (ATC) crews focused on repairing intrusion detection warning (IDW) boxes, as well as replacing signal lamps with brighter, longer-lasting LED bulbs. They also assisted the track maintenance team with the movement of equipment in the area by manually operating switches that were powered down for safety.”*

The accomplishments of Surge 13 are listed in the following table from WMATA’s final report on Surge 13.<sup>8</sup>

**SafeTrack Accomplishments during Surge 13**

	Task	unit	Completed During Surge
<b>Track</b>	Crosstie renewal	# crossties	5,646
	Insulator replacement	# insulators	1,799
	Ballast renewal	# tons	1,800
	Tamping	# linear feet	35,400
	Fastner renewal	# fastners	4,619
	Third Rail maintenance	# linear feet cover board	5,090
	Rail replacement	# linear feet	1,393
<b>Structures</b>	Grout Pad renewal	# linear feet grout pad	12,800
<b>Automatic Train Control System</b>	Signal conversion to LED lighting	# signals	26
	Track Junction box repair/replacement	# boxes	42
<b>Traction Power System</b>	Emergency Trip Station Repair	# units	24
	Tunnel Light repair/relamp	# units	30
	Power Cable repair/replacement	# cables	67

The photos of Surge 13 work, on the next two pages, were taken by SafeTrack team.

<sup>7</sup> WMATA’s March 2017 SafeTrack Report, pages 6 & 7.

<sup>8</sup> SafeTrack: Surge 13 Detailed Report, April 24, 2017, page 2.

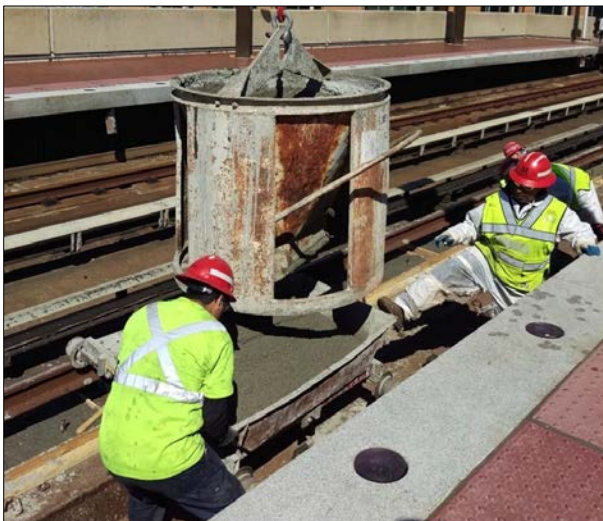


*Replacing C98 Crossover March 10, 2017*





*Surge 13 - Constructing Grout Pads at Eisenhower Avenue Station (top four photos)*

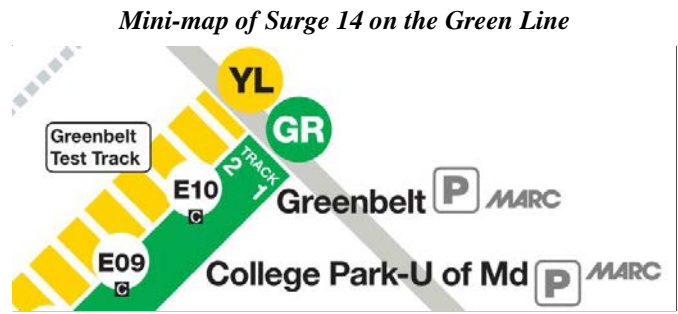


*Surge 13 - From King Street Portal to Eisenhower Avenue Station - Checking the Gage*



### **Surge 14 Planning Work Completed in March 2017**

Surge 14 is scheduled to start on Saturday, April 15, 2017, last for 40 days, and conclude on May 14, 2017. The Surge is planned to replace approximately 8,000 ties, fasteners, rail, insulators, weld open joints, demo old and pour new grout pads, repair fence, perform leak mitigation, replace high-voltage pigtails, relamp edge lights, replace tunnel lights, and inspect and repair 78 ETS phones between College park-University of Maryland (E09) and Greenbelt (E10) Stations, a distance of 2.75 miles.



According to the March 2017 SafeTrack report:<sup>9</sup>

*“SafeTrack and Mobile Command developed work area maps for Surge 14, including reviewing logistics, access, and options to mitigate the impacts on rail car maintenance and 7K series rail car commissioning [at Greenbelt Yard].*

*“Most of the effort this period was focused on the service plan for Surge 14, particularly advancing the rail planning analysis based on the challenges experienced to date with the long, single tracking events. . . . The single tracking service options would have cut Green Line service by 1/3 or more (9+ minute headways), at a time of increased ridership due to the start of baseball season and the need to serve crowds at Navy Yard. Furthermore, due to the shared tracks serving multiple lines, single tracking would have caused rail service across the system to be less reliable as delays in the single track area could spread across the rail system. Delays on the Green Line could impact the Yellow Line at either Mt. Vernon Square or L’Enfant Plaza.*

*“The Yellow Line in turn also shares tracks with the Blue Line and could then spread delays from Blue to Orange/Silver which intersect at Rosslyn. Conversely, a shutdown isolates the most significant impact to four stations (Greenbelt, College Park, Franconia-Springfield and Van Dorn St) allowing WMATA to plan for near normal headways on the remainder of the Green line (6-8min). With a total shutdown, the major impact drops to 29,000 riders per day as opposed to 74,000 per day with single tracking. The major impact drops to 23,000 riders per day when the shutdown area is reduced to College Park to Greenbelt. Reducing the shutdown area reduces the impact system-wide because it improves both reliability and increases scheduled service. [Note: in either single-tracking or shutdown, Yellow Rush+ service would have to be eliminated due to the inability to turn those trains on the mainline, in addition to the Green line trains.] The lesson learned from executing Surge 13 and planning Surge 14 is that in cases of long single*

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<sup>9</sup> WMATA’s March 2017 SafeTrack report, page 7.



*tracking, the system is best served with a shutdown rather than maintaining single tracking.”*

- **Work Planned for April 2017**

*During April 2017, WMATA will be finishing Surge 13 (April 12) and then start Surge 14 (April 15). Surge 14 is scheduled to end May 14, 2017. In addition to executing Surge 14, the SafeTrack team will continue planning for Surge 15, Minnesota Avenue Station (D09) to New Carrollton Station (D10) on the Orange Line, and begin planning Surge 16, Twinbrook Station (A13) to Shady Grove Station (A15) on the Red Line. (Please find these stations on the system map in Appendix B.)*

*The following table shows the forecast milestone dates for Surges 14 and 15.<sup>10</sup> Activities are sorted by calendar date and are color coded by line color.*

Surge	Surge 14 & 15 Planning Activities	NLT Dates
15	Develop Plan for work zone and employee parking	4 Apr 17
14	QICO Pre-Surge Report - 14	7-Apr-17
14	Final Work Plan and Surge Scope (March Chart) developed by	12-Apr-17
14	Issue Coordinated Work Plan (MCC) - 14	12-Apr-17
13	End Surge 13	13-Apr-17
14	Begin Surge 14	15-Apr-17
13	Post Surge 13 TGV Run	20-Apr-17
13	QICO Closeout Report - 13	04-May-17
15	Final Work Plan and Surge Scope (March Chart) developed by	08-May-17
15	Issue Coordinated Work Plan (MCC) - 15	10-May-17
15	QICO Pre-Surge Report - 15	08-May-17
15	Begin Surge 15	17-May-17

	Orange Line
	Green Line
	Yellow/Blue Line

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<sup>10</sup> WMATA’s March 2017 SafeTrack report, page 8.

## 2. Program Cost

The SafeTrack budget status as of *March 31, 2017*, is reflected in the following table.

**SafeTrack Program as of March 31, 2017**

Preliminary Estimated Budget	Approved SafeTrack FY16-FY17 Budget	Expenditures Thru March 31, 2017	Percent of Budget Expended
\$118, 797,984	\$134,234,515 <sup>1</sup>	\$ 120,687,847	90%
Discussion of Variances	<i>WMATA reported two variances: force account and indirect costs activity lines have exceeded their budgets.<sup>2</sup></i>		
	<i>Force Account</i>	\$64,495,763	117%
	<i>WMATA Indirect Cost</i>	\$10,437,765	106%
Discussion of Funding sources	Funding for SafeTrack is from Passenger Rail Investment and Improvement Act (PRIIA), §5307 & §5337 formula funds, and short-term borrowing.		
Contingency as of March 31, 2017	\$0.00		
Notes:	<p>1. A reallocation of funding was done in early February 2017 to increase the budget for SafeTrack. Funds were moved into the Force Account Activity Line to preclude the project from overrunning this budget line. Despite this increase to the Force Account Activity Line, WMATA, again reported a variance in this Activity Line in March 2017 of 17%. In addition to the Force Account variance, the Activity Line for WMATA Indirect Cost showed a variance of 6% in the March 2017 report.</p> <p>2. These variances will be reconciled with the next budget revision.</p>		

- Budget Analysis by PMOC
  - *The March 2017 Expenditure Report shows 90% of budget has been expended; however, discussion with the Office of Capital Project Financial Support (CPFS) identified other pending expenses that result in the project being nearly \$11M over the current budget. By reprogramming funds, WMATA will be able to cover these unbudgeted costs.*
  - *13 of 16 planned surges plus the non-surge work are complete.*
  - *Estimated total work days for 16 surges plus 31 days non-surge work = 367 days.*
  - *Total SafeTrack days worked/used to date = 305 days = 83% of the days planned.*
  - *Given that the project is over budget and 17% of the time allocated for the work lies ahead, additional funding will be required to complete the SafeTrack program.*
  - *The PMOC understands that WMATA has been analyzing this situation and will recommend a resolution in April 2017.*
- Budget Analysis by SafeTrack Team
 

*The SafeTrack Team has estimated the cost to completion of SafeTrack through Surge 16. A revised budget will have to be approved by the Board, which meets May 11, 2017. Once approved, the budget will be published.*
- Contingency
 

It is important to understand that the SafeTrack Project Team views contingency differently than how WMATA staff view contingency for capital construction projects. According to the SafeTrack PMP:

“There are zero contingency dollars budgeted in the SafeTrack Program. OMBS has the ability to manage any potential forecasted budget and/or funding shortfalls through adjustment of funding sources and capital budgets. If the forecast increases, funding will

be rebalanced to ensure SafeTrack can continue. Between when the funding is requested and when it is allocated to a particular surge, the detail budget will hold this amount of money in contingency [reserve] as unallocated budget.”

WMATA’s accounting software reports “unallocated budget” or “project reserve” as contingency; therefore, this report will use contingency to represent unallocated budget.

### **3. Program Schedule**

*For surges 1 through 13, the bar chart in Appendix “J” reflects actual dates the work was accomplished. The schedule also shows WMATA’s plan for Surge 14. The start date for Surge 15 is shown in the table on page 14 of this report. The completion date for Surge 15 and the full schedule for Surge 16 have not been published as of March 30, 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**

There were no staffing changes during March 2017.

### **6. Quality Assurance/Quality Control (QA/QC)**

- Quality Plan – Rather than have a separate Quality Plan, PMP Section 10, Quality Control and Quality Assurance, references existing WMATA quality documents and describes the process by which the various responsible WMATA departments control and QICO assures the quality of the work. Responsibilities for quality were presented in detail in the February 2017, SafeTrack monthly report.<sup>11</sup>
- Post-Work Inspection of Surge 13 – QICO performed a final inspection of non-surge work on the C and J Lines following Surge 13; however, QICO had not published its Closeout Report as of April 30, 2017. Once the report is published, its findings will be presented in the PMOC’s monthly report.
- Pre-Surge Inspection for Surge 14 – QICO is scheduled to perform its pre-surge inspection of the Surge 14 work zone in early April 2017. Results of that pre-surge inspection will be reported in the PMOC’s April report.

*The FTA WMATA Safety Oversight group (FWSO) conducted four inspections of the Surge 13 work zone. The following table shows the dates of and reported findings for those inspections. These are presented as examples of the inspection work and reporting accomplished by FWSO. Although these findings are located under the quality section in this report, the reader should understand that FWSO inspects for safety issues only. There is a direct correlation between quality and safety.*

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<sup>11</sup> WMATA’s February 2017 SafeTrack Report to the PMOC dated March 17, 2017, pages 8 and 9.

<p><i>Tuesday March 7<sup>th</sup></i></p>	<p><i>FWSO personnel performed an inspection of SafeTrack Surge #13 between Eisenhower Ave. and Braddock Road. WMATA structures personnel were in the process of replacing grout pads on the right rail of track 1, using the rail elevation process used in surge 12. WMATA personnel were jackhammering old pads and constructing forms for new pads. All personnel were wearing required PPE. FWSO personnel also observed contract personnel performing fastener renewal.</i></p> <p><i>FWSO inspectors noted deteriorating conditions at station platforms, currently being supported with jacks, which is not scheduled to be corrected in the SafeTrack scope of work.</i></p>	<p><i>No reinspection recommended.</i></p>
<p><i>Friday March 10<sup>th</sup></i></p>	<p><i>FWSO personnel observed a Quality Assurance, Internal Compliance &amp; Oversight (QICO) inspection of the SafeTrack surge 13 work area. QICO attempts to walk the entire surge area once per week and provide feedback to the SafeTrack project management team regarding items needing correction.</i></p> <p><i>FWSO inspectors noted continued progress in grout pad and fastener renewal. Due to inclement weather, WMATA was unable to pour new grout pads during the inspection, but continued to demolish old grout pads in preparation. WMATA has also replaced ties at the Braddock Road station platform. Future work on track 1 includes the welding of joints and the replacement of insulators between Eisenhower Avenue and Huntington. WMATA contractors were just beginning to work on insulator replacements at the time of the inspection.</i></p>	<p><i>No reinspection recommended.</i></p>
<p><i>Thursday March 23<sup>rd</sup></i></p>	<p><i>FWSO personnel walked track 1 of the C-Line between Eisenhower Avenue and Braddock Road also inspecting the J-Line between the C and J connector (C97) and the yard lead interlocking near the telegraph road systems maintenance facility. WMATA is nearing completion of this track, preparing to change over to track 2.</i></p> <p><i>FWSO inspectors noted that the grout pad and fastener rehabilitation between the Eisenhower Avenue platform and the portal were nearly complete, with the final work being completed that day. ATC personnel were observed reattaching equipment to the running rail to return the track to service. FWSO did notice several e-Clips that had been overdriven. This was reported to a Track and Structures (TRST) quality officer who was performing an inspection in the area. FWSO also observed fastener and grout pad renewal activities at the King Street Station that was nearing completion.</i></p> <p><i>In addition to this work, FWSO observed recently completed tie work between King Street and Braddock Road. This involved the addition of new ties, new Pandrol plates and clips, and new ballast. No exceptions were taken.</i></p> <p><i>Finally, FWSO noted new additional signage at the C and J connectors indicating track identification, which was helpful in alleviating potential confusion for WMATA personnel.</i></p>	<p><i>No reinspection recommended.</i></p>
<p><i>Friday March 31<sup>st</sup></i></p>	<p><i>FWSO inspectors observed WMATA's power department and electrical contractors performing cable replacement in the SafeTrack surge 13 work zone. During the inspection, FWSO observed the contractor's installation of four pigtailed via CADWELD to the steel 3<sup>rd</sup> rail, which were completed per the Engineering Modification Instruction (EMI) for jumper, expansion, and transition power cables replacement system wide, issued September 16, 2016.</i></p> <p><i>To expedite the installation process, WMATA prepared and tested 6-foot length portions of 1000 kcmil cable, including installing the necessary connection components. FWSO inspectors observed the prepared cables being installed at the orange boot, and then cut to a more exact length and welded to the running rail. All installations included the required slack to allow for the expansion and contraction of the 3<sup>rd</sup> rail, and all cables were elevated from the bridge deck in accordance with the EMI. Finally, in order to support the 100 percent 8-car train power system upgrades, 2 kV voltage rated cables were used.</i></p> <p><b><i>The FWSO Inspector and WMATA personnel did not note any defects during the replacement process.</i></b></p>	<p><i>No reinspection recommended.</i></p>

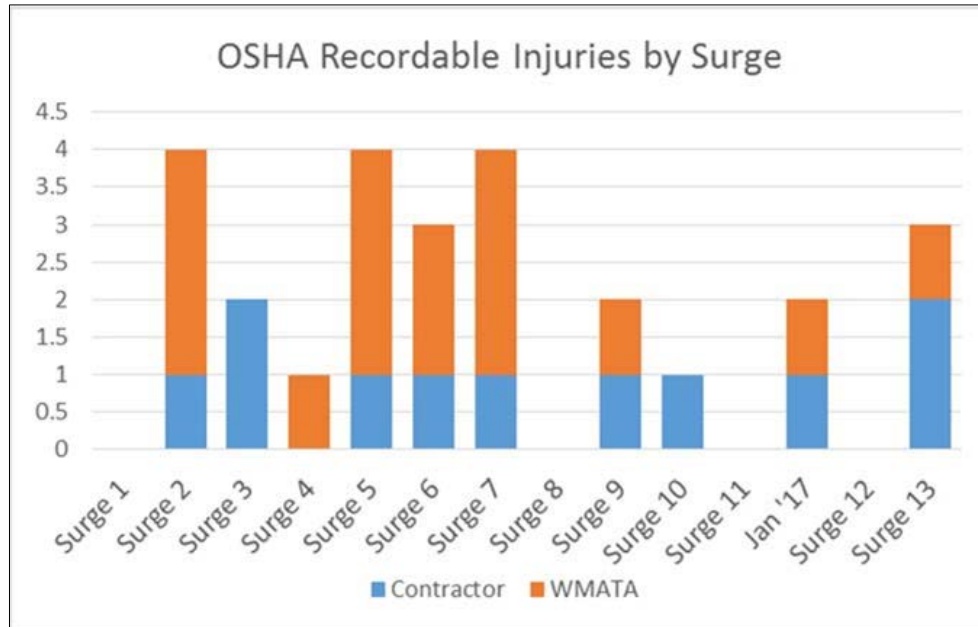
- Project Audit – In a report prepared for the February 14, 2017 Quarterly Program review meeting, QICO presented its schedule of 2017 project audits. The SafeTrack project is scheduled *to be audited in April 2017*. QICO's audit for Safe Track will identify and assess the risks to non-compliance with FTA mandated Quality Management System Guidelines 2012 (FTA-PA-27-5194-12.1) and with the industry best practices on Project Management methodology per Project Management Book of Knowledge (PMBOK). The detailed Audit Report will be presented to the agency's executive leadership team in the last week of May, 2017.

## 7. Safety and Security

- *Safety is addressed in several WMATA manuals:*
  - *Track Maintenance and Inspection Manual, Rev. 7 (TRST-1000)*
  - *TRST-1000 Field Manual, Final Draft March 2017*
  - *Standard Operating Procedures (SOP)*
  - *Metrorail Safety Rules and Procedures Handbook (MSRPH)*
  - *Roadway Worker Protection Manual (RWPM)*
- 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 that 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 available to the riders.
- According to Revision 4 of the PMP, the Department of Safety & Environmental Management (SAFE) is actively engaged in SafeTrack by providing additional field personnel 24 hours a day, 7 days a week to support hazard mitigation for a safer work environment. In the Surge work zones, the responsibilities and activities of SAFE Managers and Safety Officers are:
  - *Monitor Work Zone Safety and compliance with RWPM and MSRPH*
  - *Perform Rule Compliance Checks*
  - *Address Safety Concerns*
    - *Notify Maintenance Group supervisors/managers of safety concerns needing immediate resolution.*
    - *Verify correction of safety concerns*
  - *Investigate Incidents/Accidents*
- Occupational Safety and Health Administration (OSHA) Recordable Injuries – The SafeTrack Team tracks OSHA recordable injuries by surge. SafeTrack's history of OSHA recordable injuries is depicted in the chart below. The chart shows that there were no recordable injuries during Surges 1, 8, 11, and 12.

In March 2017, SafeTrack experienced *three* OSHA recordable injuries: *On March 9, a Contractor track worker was sprained his wrist upon grabbing a rotating lag driver bit. On March 13, a WMATA Track Maintenance worker was injured while chocking the flat. The chock fell on his hand and caused a laceration and fracture on his right index finger;*

and, on March 28, a Contractor track worker was injured while installing a clip. The employee fractured his finger after using a clip to attempt to set another clip.



- Employee Injury Rate** – The next graph, provided by WMATA, compares various employee injury rates. Different work groups have experienced different injury rates based on the nature of their work. It is most useful to compare the WMATA overall rate (blue squares) to the SafeTrack overall rate (dotted line), which shows that SafeTrack is performing better than WMATA overall.



- PPE Compliance – In addition to tracking recordable injuries, SafeTrack has been tracking worker compliance with requirements for wearing personal protective equipment (PPE). SafeTrack reported PPE compliance in the following table:<sup>12</sup>

Personal Protective Equipment Compliance					
	Hard Hats	Footwear	Reflective Shirt	Safety Glasses	Working Radio
<b>Sept</b>	99%	100%	100%	89%	100%
<b>Oct</b>	98%	100%	100%	96%	100%
<b>Nov</b>	99%	100%	100%	98%	100%
<b>Dec</b>	100%	100%	100%	100%	100%
<b>Jan</b>	100%	100%	100%	100%	100%
<b>Feb</b>	98%	96%	100%	96%	98%
<b>Mar</b>	100%	100%	100%	94%	100%

## 8. Contract Administration

- Administration of third-party contracts related to SafeTrack is the responsibility of WMATA's maintenance departments. SafeTrack has agreed to include in Revision 5 of its PMP a section describing how the maintenance departments administer contracts related to SafeTrack work.
- DBE Participation – SafeTrack provided a summary of the DBE goals and attainment of those goals *through February 2017*.

**DBE Goals and Accomplishments through February 2017.**

Contract Number	Name of Prime Contractor	DBE Participation Goal	Goal Attainment as of 2/28/17
		5.0%	100%
		9.0%	100%
		DBE Prime	95%
		5.0%	100%
		5.0%	100%
		DBE Prime	6%
		2.0%	89%
		5.5%	100%
		5.0%	100%
		5.0%	100%

<sup>12</sup> WMATA's March 2017 SafeTrack Report, page 1.



## **9. Program Risk**

- The SafeTrack management team published a two-page risk register in Revision 1 to its draft PMP, *which has been updated in revision 4 of the PMP*. The SafeTrack Risk Register includes a mitigation/response plan for each risk identified. This risk register *was* reviewed by the PMOC as a part of the review of the entire Revision 1 PMP. The PMOC had no comments on the Risk Register.

## **10. Action Items**

- Action Items are shown in Appendix H of this report.

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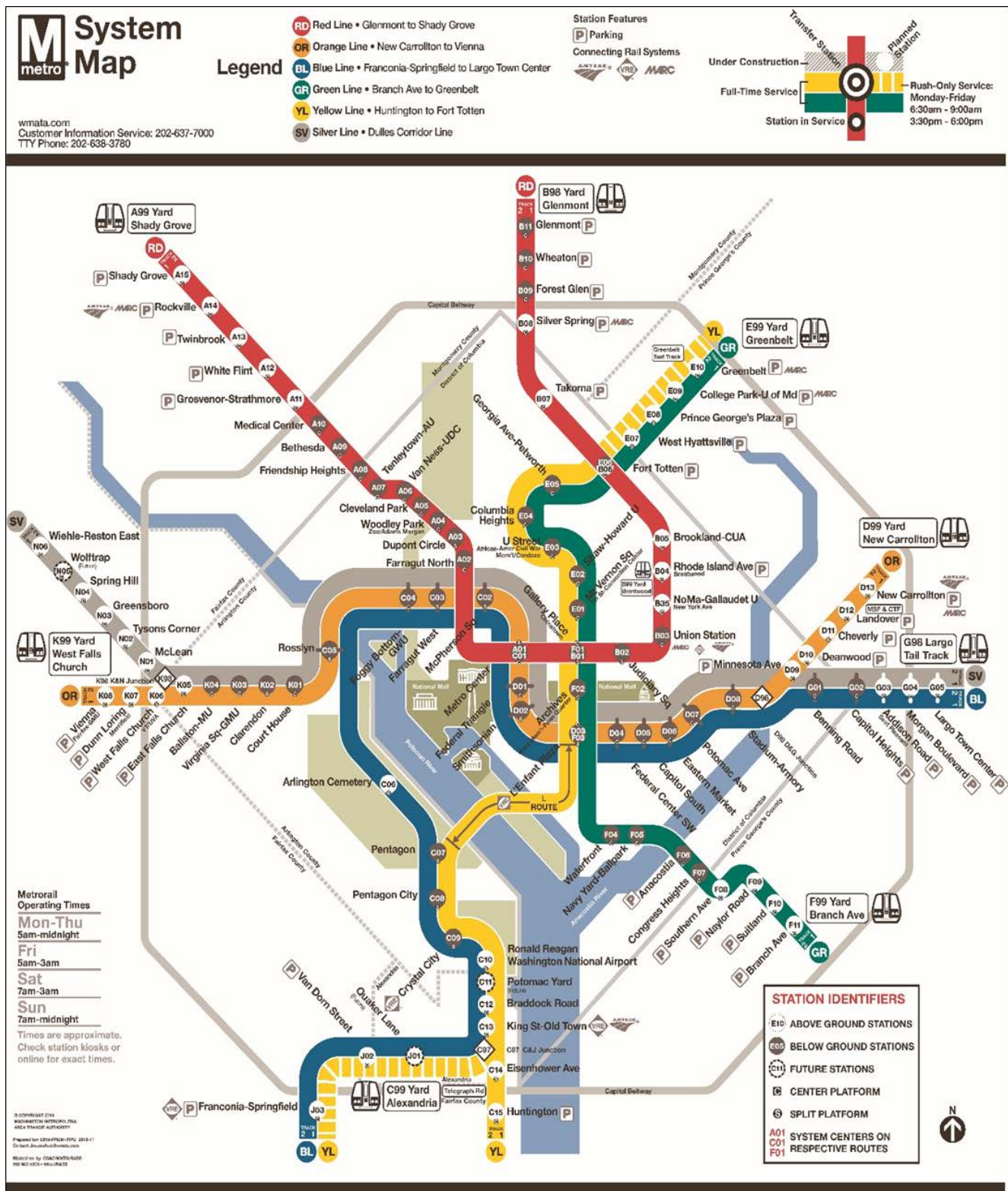
## APPENDIX A – ACRONYMS AND ABBREVIATIONS

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
CWP	<i>Coordinated Work Plan</i>
D-B	Design-Builder
DAS	Distributed Antenna System
DDOE	District of Columbia Department of the Environment
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
IEEE	Institute of Electrical and Electronic Engineers
IFC	Issued for Construction
IRPG	Infrastructure Rehabilitation Program
JOC	Job Order Contract
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
RMM	<i>Railway Maintenance Machine</i>
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
SSCMP	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 – MAP OF WMATA's RAIL TRANSIT SYSTEM



## APPENDIX C – SAFETRACK WORK COMPLETED TO DATE

As of April 24, 2017

Surge No.	Miles in Length <sup>1</sup>	Crosstie Renewal (each)	Insulator Renewal (each)	Fasteners Replaced (each)	Stringer Rail Renewal (feet)	Joints Welded (each)	Grout Pad Renewal (feet)	Tunnel Light Repair (each)	Power Cables (each)	Third Rail Cover Board (feet)	IDW Boxes (each)	Signal Conversion to LED (each)	Track Bed Cleaning (feet)	Emergency Trip Station Repair (each)
1	2.4	1,856	541	2,214	3,184	16		17	54	410	208	0	3,150	0
2	4.0	533	235	2,116	1,745	22	2,005	140	183	642	0	12	3,160	13
3	1.4	1,327	233	1,062	78	6	800	355	20	170	0	0	0	19
4	2.6	81	31	2,463	2,730	26	959	178	54	310	0	0	3,200	0
5	2.4	1,405	121	2,369	4,680	24	0	242	79	820	0	0	5,110	0
6	1.1	1,311	496	0	312	14	0	0	20	1,280	0	0	8,129	0
7	4.4	3,572	1,120	0	0	6	0	0	72	2,000	62	12	1,692	0
8	7.4	7,102	353	0	0	27	0	0	52	230	500	16	16,180	0
9	10.4	7,159	402	0	4,758	97	0	0	225	8,490	1,090	16	30,021	0
10	2.6	2,028	795	1,245	1,738	105	5,737	0	38	4,910	405	15	38,354	0
11	3.0	1,937	213	0	15,795	50	0	0	106	3,450	366	0	0	0
Note 2	4.2	0	0	3,261	12,129	42	0	212	0	0	0	0	0	0
Note 3	1.8	0	49	4,954	1,560	47	3,113	218	Note 4	32	0	5	0	12
12	4.8	695	900	5,631	5,265	51	7,877	436	35	0	0	4	0	29
13	10.5	5,646	1,799	4,619	1,393	0	12,800	30	67	5,090	12	26	0	24
14														
15														
Totals	63.0	34,652	7,288	29,934	55,367	533	33,291	1,828	1,005	27,834	2,643	106	108,996	97

Note 1: Miles are computed by adding length of track 1 and track 2 rehabilitated during the surge. See other table for breakdown of each surge.

Note 2: Non-surge work on the A Line reported in WMATA's January SafeTrack report, page 9.

Note 3: Non-surge work on the C & D Lines reported in WMATA's January SafeTrack report, page 9.

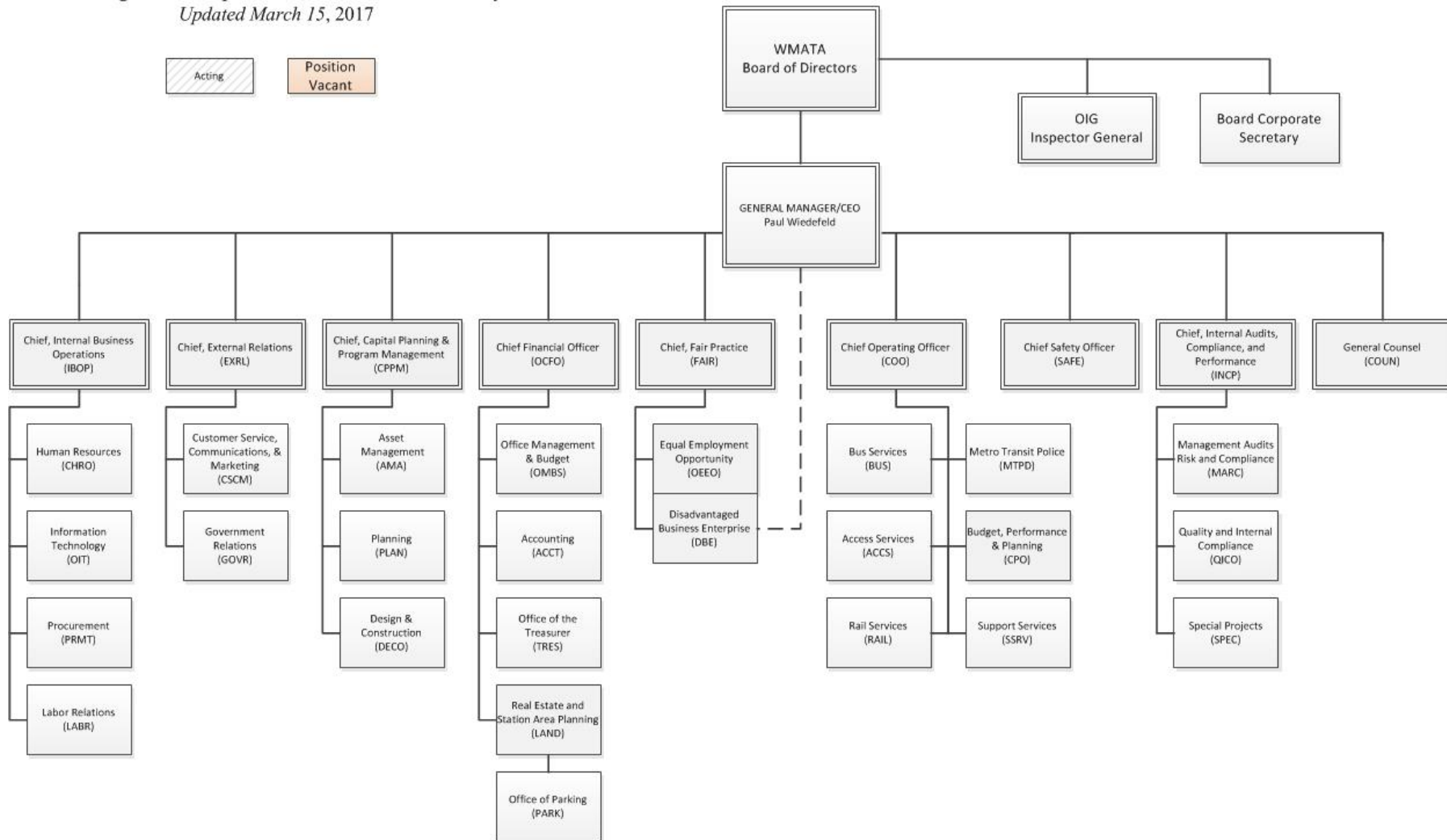
Note 4: WMATA reported 1,060 feet of cable replaced in lieu of report number of cables replaced as it had for the first 11 surges.



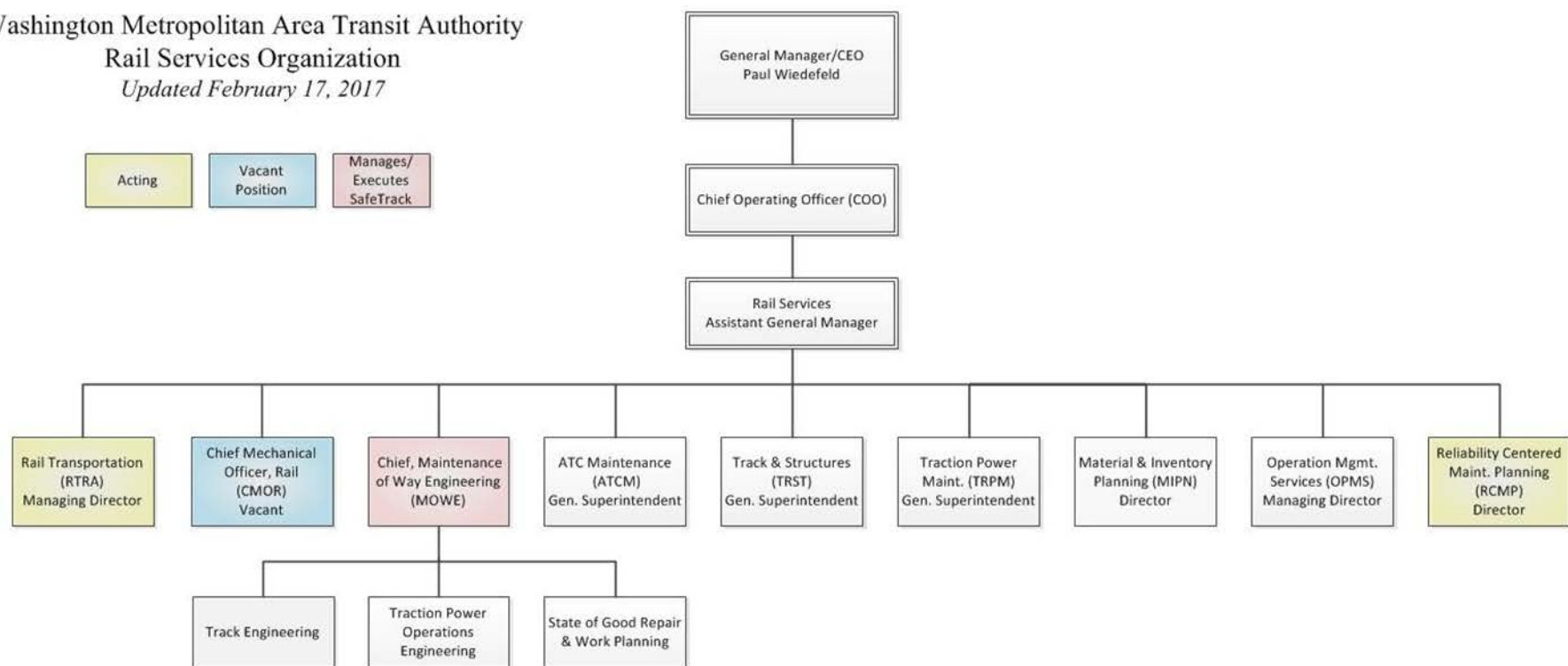
## APPENDIX D – ORGANIZATION CHARTS & DESCRIPTION

Washington Metropolitan Area Transit Authority

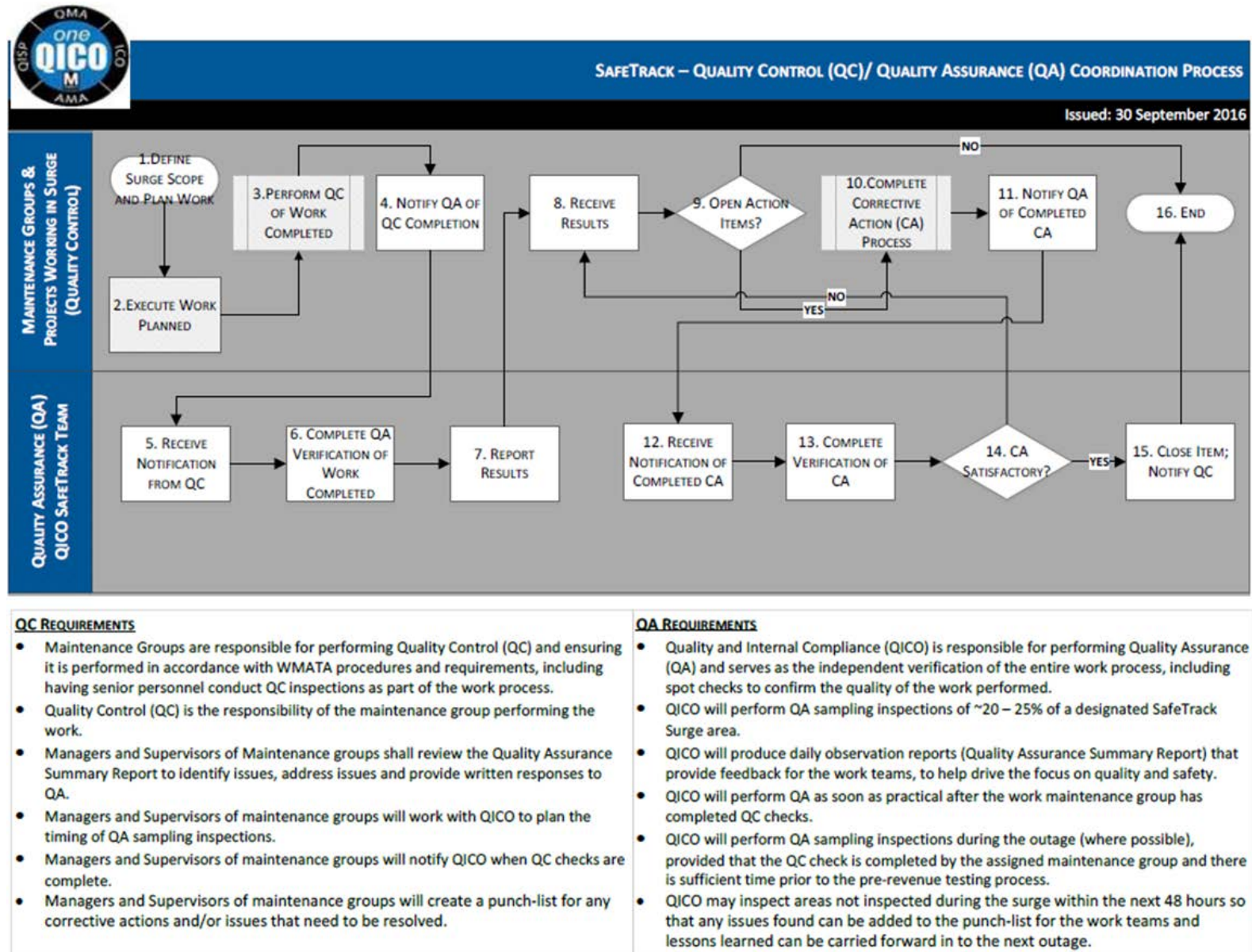
Updated March 15, 2017



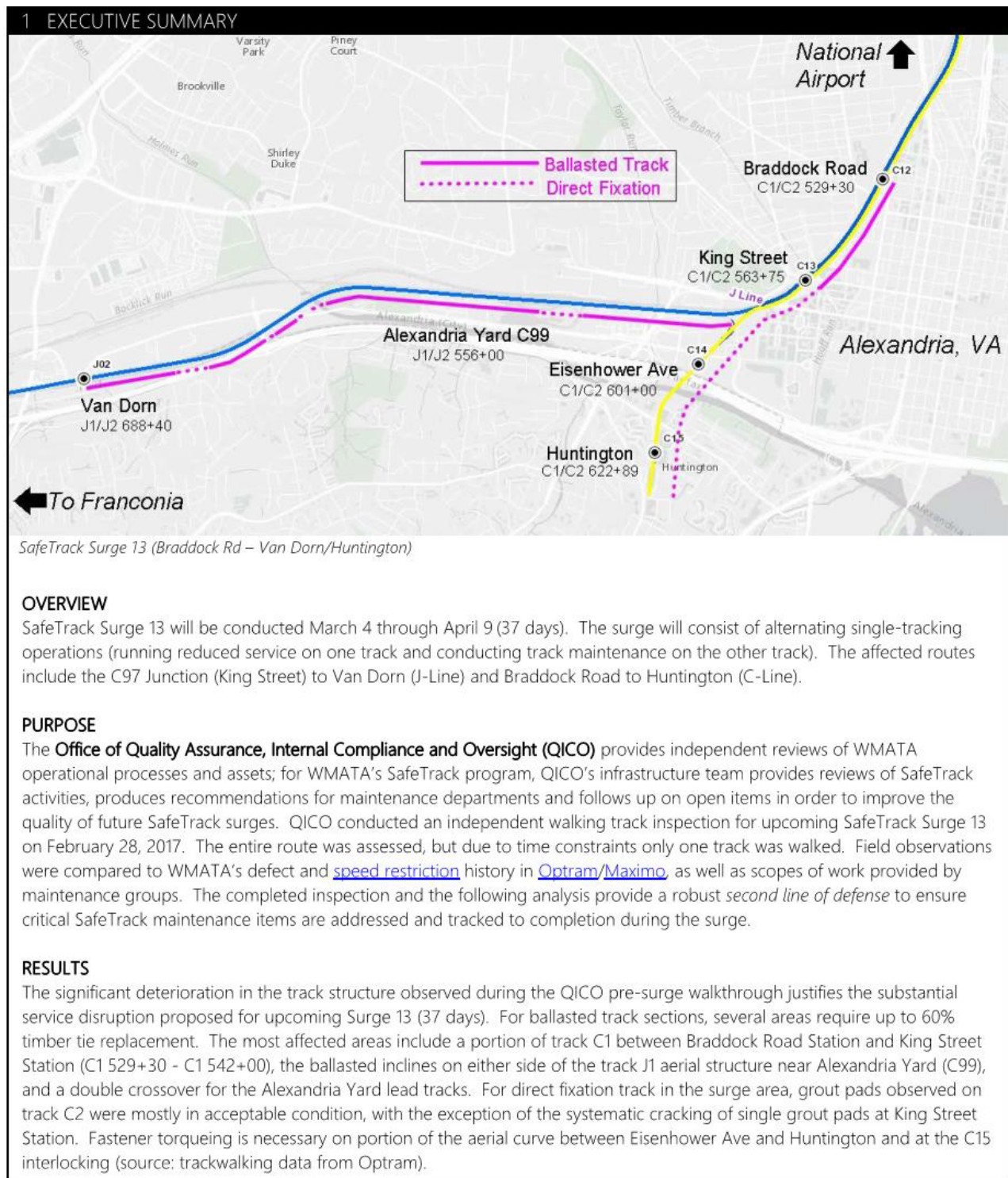
Washington Metropolitan Area Transit Authority  
 Rail Services Organization  
*Updated February 17, 2017*



## APPENDIX E – SAFETRACK QC / QA COORDINATION PROCESS



## APPENDIX F – QICO’s QUALITY PRE-SURGE 13 REPORT





## APPENDIX G – SAFETY AND SECURITY CHECKLIST Updated 2/6/17

Project Overview	SafeTrack Program		
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)		N/A	SSMP not required for SafeTrack, FTA C 5800.1 4. Applicability.
Safety and Security Certification Plan (SSCPP)	March 2015	Pending	The March 2015 SSCP or a project specific SSCP was not issued to FTA.
System Safety Program Plan (SSPP)	January 2017	Yes FWSO	Draft SSPP submitted to FWSO and currently under review.
Security and Emergency Preparedness Plan (SEPP)	2014	Pending	This SSI document must be reviewed on site. The last TOC Letter dated September 3, 2014 approved WMATA’s 2014 SEPP.
Construction Safety and Security Plan (CSSP)	March 2013	Y	WMATA “Construction Safety and Environmental Manual” provides guidelines for WMATA construction, maintenance, and rehabilitation projects. Contractors are required to submit individual plans. WMATA employees follow safety rules outlined in their MSRPH.

AREA OF FOCUS	Y/N	NOTES/STATUS
<b>Safety and Security Authority</b>		
Is the Project Sponsor subject to 49 CFR Part 659 State Safety Oversight Requirements?	Y	FTA WMATA Safety Oversight (FWSO) has temporary direct responsibility and oversees any TOC activities. FTA "Oversight and Surveillance Plan" Version 1.7, September 2, 2016, defines responsibilities, requirements, processes, and activities to implement FTA's direct safety oversight of the WMATA Metrorail system and to ensure that these goals are achieved.
Has the State designated an oversight agency as per Part 659.9?	Y	TOC was designated per 659.9, and performs oversight responsibilities as directed by FWSO. See notes/status above.

Has the oversight agency reviewed and approved the Project Sponsor's Security Plan or SSPP as per 49 CFR Part 659.17?	Y	WMATA SSPP January 2015 was reviewed and approved by TOC. WMATA SSPP DRAFT 2017 has been received by FWSO and is currently under review.
Did the oversight agency participate in the last Quarterly Program Review Meeting?	Y	The FWSO did attend the QPRM held on November 14, 2016.
Has the Project Sponsor submitted its safety certification plan to the oversight agency?	No	The SSCP of March 20, 2012, was accepted by TOC on April 2012, however a March 2015 version is noted in the DRAFT 2017 SSPP that has not been provided to FTA.
Has the Project Sponsor implemented security directives issued by the Department Homeland Security, Transportation Security Administration?	N/A	DHS Coordination is to be addressed in Section 11 of the SSMP. A SSMP is not required for SafeTrack, FTA C 5800.1 4. Applicability.
<b>SSMP Monitoring</b>		
Is the SSMP project-specific, clearly demonstrating the scope of safety and security activities for this project?	N/A	WMATA's SSPP applies to this work instead of a separate SSMP.
Does the Project Sponsor review the SSMP and related project plans to determine if updates are necessary?	Open	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.	Open	PMOC working with FWSO is reviewing this.
Does the Project Sponsor maintain a regularly scheduled report on the status of safety and security activities?	Y	SafeTrack Monthly Reports issued to FWSO include a safety section with trends of increased RWP, personnel PPE compliance, OSHA recordable injuries by surge, etc.
Has the Project Sponsor established staffing requirements, procedures and authority for safety and security activities throughout all project phases?	Y	SSPP Section 3.0 and Appendix E.
Does the Project Sponsor update the safety and security responsibility matrix/organizational chart as necessary?	Y	SSPP is updated annually.
Has the Project Sponsor allocated sufficient resources to oversee or carry out safety and security activities?	Y	Two safety officers are assigned to construction safety by SAFE. The conduct field observations, inspections of work area, and compliance checks.

Has the Project Sponsor developed hazard and vulnerability analysis techniques, including specific types of analyses to be performed during different project phases?	Y	Section 6 of SSPP defines Hazard Management Program.
Does the Project Sponsor implement regularly scheduled meetings to track resolution of any identified hazards and/or vulnerabilities?	Y	FWSO holds weekly meetings with WMATA staff to address safety events, corrective action implementation, and other hazards.
Does the Project Sponsor monitor the progress of safety and security activities throughout all project phases? Please describe briefly.	Y	Two safety officers are assigned to construction safety by SAFE. The conduct field observations, inspections of work area, and compliance checks.
Does the Project Sponsor ensure the conduct of preliminary hazard and vulnerability analyses? Please specify analyses conducted.	N/A	SafeTrack is a maintenance activity with an existing system.
Has the Project Sponsor ensured the development of <u>safety design criteria</u> ?	Y	WMATA Manual of Design Criteria for Maintaining and Continued Operation of Facilities and Systems.
Has the Project Sponsor ensured the development of <u>security design criteria</u> ?	Y	Incorporated into WMATA Manual of Design Criteria for Maintaining and Continued Operation of Facilities and Systems.
Has the Project Sponsor ensured conformance with safety and security requirements in design?	Y	Materials are physically received by each Department's Materials Controls Group. The Materials Controls Group, briefed by the COTR regarding contract requirements, performs a physical inspection for accuracy and quality of the delivered order.
Has the Project Sponsor verified conformance with safety and security requirements in equipment and materials procurement?	Y	QICO performs quality inspections.
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?	Y	WMATA runs a test train through the area. ATC uses ATC 1000, Track and Structures uses WMATA 1000 and WMATA 2000, and POWR uses SMNT POWR.
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.



Has the Project Sponsor evaluated change orders, design waivers, or test variances for potential hazards and /or vulnerabilities?	N/A	Work is being conducted by WMATA or under direct WMATA supervision. There are no change orders or waivers.		
Has the Project Sponsor ensured the performance of safety and security analyses for proposed work-arounds?	Y	SAFE has the responsibility for hazard mitigation with SafeTrack work and ensures mitigation with WMATA’s MSRPH and RWPM.		
Has the Project Sponsor demonstrated through meetings or other methods, the integration of safety and security in the following: <ul style="list-style-type: none"><li>• Activation Plan and Procedures</li><li>• Integrated Test Plan and Procedures</li><li>• Operations and Maintenance Plan</li><li>• Emergency Operations Plan?</li></ul>	N/A	SafeTrack is a maintenance activity. All work is being conducted with existing standards/procedures. Plans listed with this element are associated with new starts and system extensions.		
Has the Project Sponsor issued final safety and security certification?	N/A	Safety and Security Certification is not done with this work. SafeTrack is a maintenance activity. All work is being conducted with existing standards/ procedures. No new designs have been introduced and there are no system modifications.		
Has the Project Sponsor issued the final safety and security verification report?	N/A	Safety and Security Certification is not done with this work. SafeTrack is a maintenance activity. All work is being conducted with existing standards/procedures. No new designs have been introduced and there are no system modifications.		
Construction Safety				
Does the Project Sponsor have a documented/implemented Contractor Safety Program with which it expects contractors to comply?	Y	WMATA “Construction Safety and Environmental Manual” provides guidelines for WMATA construction, maintenance, and rehabilitation projects. Contractors are required to submit individual plans.		
Do the Project Sponsor’s contractor(s) have a documented company-wide safety and security program plan?	Open	Check G.W. Peoples, Crane Masters, and Crane Services Company, Inc. The PMOC is in the process of evaluating this.		
Do the Project Sponsor’s contractor(s) have a site-specific safety and security program plan?	Open	PMOC in 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.	Open	All SafeTrack Contracts	WMATA Recordable Rate	National Average
		WMATA	PMOC Verifying	PMOC Verifying
If the comparison is not favorable, what actions are being taken by the Project Sponsor to improve its safety record?	Open	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?	Y	WMATA's QICO group monitors work quality and site safety and performs QC inspection consistent with Section 9 of the SafeTrack PMP.
<b>Federal Railroad Administration</b>		
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 H – ACTION ITEMS – SAFETRACK PROGRAM

PR	ITEM	IDENTIFICATION	NATURE OF PROBLEM	D	A	I	COMMENTS	PMOC STATUS
2	2A	Incorporate PMOC comments on PMP Rev 0 and issue Revision 1.	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 was held on November 18, 2016. PMOC discussed revisions to the PMP with SafeTrack Team on December 5, 2016, and then received Revision 1 on December 19, 2016 for review and comment. PMOC's comments were submitted to FTA and SafeTrack team on January 30, 2017. A teleconference to review comments on PMP took place on February 15, 2017. On February 22, 2017, PMOC provided comments on Revision 2 to FTA. SafeTrack Team submitted Revision 3 to PMOC on February 24, 2017. On February 27, 2017, PMOC submitted comments on Revision 3, and then received Revision 4 from SafeTrack Team that same day.	R

### ITEM KEY



### 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 I – SUMMARY SAFETRACK SCHEDULE

Surge	Start	Finish	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun
Surge 1 — Ballston - East Falls Church	4-Jun-16	16-Jun-16													
Surge 2 — Eastern Market - Benning Rd & Minn. Ave	18-Jun-16	3-Jul-16													
Surge 3 — Natl. Airport - Braddock Rd	5-Jul-16	11-Jul-16													
Surge 4 — Natl. Airport-Crystal City-Pentagon City	12-Jul-16	18-Jul-16													
Surge 5 — Ballston - East Falls Church	20-Jul-16	31-Jul-16													
Surge 6 — Takoma - Silver Spring	1-Aug-16	7-Aug-16													
Surge 7 — Shady Grove - Twinbrook	9-Aug-16	21-Aug-16													
Surge 8 — Franconia-Springfield - Van Dorn St	27-Aug-16	11-Sep-16													
Surge 9 — Vienna - West Falls Church	15-Sep-16	26-Oct-16													
Surge 10 — NoMa - Fort Totten	29-Oct-16	22-Nov-16													
Surge 11 — East Falls Church - Vienna	28-Nov-16	20-Dec-16													
Surge 12 — Rosslyn - Pentagon	11-Feb-17	28-Feb-17													
Surge 13 — Braddock Rd - Huntington/Van Dorn St	4-Mar-17	9-Apr-17													
Surge 14 — Greenbelt - College Park	15-Apr-17	14-May-17													
Surge 15 — Minnesota Avenue - New Carrollton	<i>May-Jun (Dates TBD)</i>														
Cherry Blossom Festival	15-Mar-17	16-Apr-17													
Surge 16 — Shady Grove - Twinbrook	<i>June (Dates TBD)</i>														

*Dates shown in italics are planned. All other dates are actual.*