



**Safety and Service Delivery Committee**

**Information Item III-A**

**June 14, 2018**

**Roadway Worker Protection Update**

Washington Metropolitan Area Transit Authority  
**Board Action/Information Summary**

Action  Information

MEAD Number: 202000 Resolution:

Yes  No

**TITLE:**

Roadway Worker Protection (RWP) Update

**PRESENTATION SUMMARY:**

The Department of Safety & Environmental Management (SAFE) will update the Safety and Service Delivery Committee on the Roadway Worker Protection (RWP) enhancements, which are critical in providing protection to individuals occupying the right-of-way.

**PURPOSE:**

The Board Safety and Service Delivery Committee will receive a progress report on RWP enhancements, and actions being implemented to enhance roadway worker safety. The committee presentation provides transparency to our stakeholders, employees, and customers.

**DESCRIPTION:**

Metro continues to work and is committed to identifying and mitigating hazards that pose a safety risk to our employees, contractors, and customers. A comprehensive RWP program is part of the safety defenses designed to keep all roadway workers from harm while on the right-of-way. Several enhancements have been made to the RWP program, including process changes and incorporating new technology.

**Key Highlights:**

- The Federal Transit Administration (FTA)/Protran Grant program is progressing; the pilot is slated to be installed at 13 locations and operational in FY19.
- Recent interim RWP enhancements have improved roadway worker safety.
- RWP training compliance remains strong, with a rate of at least 98 percent since June 2016.

**Background and History:**

Many enhancements have been finalized since the last Board RWP review in November 2017, including instituting an Advanced Mobile Flagger process and completion of the Hot Spot review. There has also been progress in meeting the National Transportation Safety Board (NTSB) recommendation R-08-04 to enhance RWP through the use of technology that will provide another layer of protection. Since developing the technology system-wide will require several years to implement, Metro continues to explore interim measures to improve RWP.

## **Discussion:**

### **RWP Enhancements**

Interim RWP enhancements have been implemented while the technology-based pilot projects are being designed and tested.

The advanced mobile flagger process has been fully adopted. This process deploys a worker at each station that precedes each mobile work crew that is on the right of way.

A survey of the rail system was recently completed. This survey reviewed all areas for track hot spots, which are high hazard areas for roadway workers. These hot spots require special precautions, such as foul time, to pass through.

The RWP Track Access Guide was revised to include system maps that identify the level of protection required for a given section of track. This is currently communicated to roadway workers by chain marker notations without a map reference. Enhanced emergency maintenance procedures have also been developed to ensure the proper levels of protection are employed for certain track-related repairs and activities.

### **RWP Training Compliance**

Many efforts have been made to ensure those on the roadway receive the required level of training. The RWP training group worked with Metro personnel to right-size RWP certifications, as many noncompliant employees had no roadway responsibilities (e.g., office workers). Training compliance management reports are sent weekly to supervisors; these reports highlight those employees that need to be recertified prior to entering the roadway. These efforts have led to a current training compliance rate of 99.36 percent. The compliance rate has not fallen below 98 percent since June 2016.

### **Employee Reporting**

Employees may report unsafe activities to Close Call Reporting via the Bureau of Transportation Statistics or the internal Safety Hotline. RWP information is communicated to employees by either Safety Bulletins or Employee Reporting Newsletters. Finally, employees may communicate with the Process Safety Group which will be in place by 1QFY19. This group will conduct RWP audits and provide onsite safety support during track work activities.

### **FTA Grant / NTSB R-08-04**

Metro continues to explore technology to supplement the protection of roadway workers that will eventually meet the NTSB recommendation R-08-04, which states that the Authority must “implement appropriate technology to automatically alert wayside workers of oncoming trains and alert train operators the presence of wayside workers.”

Metro received an FTA grant to help fund the equipment and testing of advance bi-directional warning technologies to improve roadway worker safety. The project also includes the testing of a roadway worker location awareness system that will communicate the following to the Rail Operations Control Center (ROCC): 1) the right of way location of a roadway worker; 2) the location where the roadway worker entered or exited the ROW; 3) the amount of time that the roadway worker was on the ROW; and 4) the proximity of the train in relationship to the roadway worker.

Several progress milestones are being monitored.

- Eighty-five percent of the pilot equipment has been installed.
- A positive field test was conducted with the FTA in May.
- Training is currently underway for train operators and roadway workers.

### **Vehicle Awareness Technology**

The Vehicle Awareness Technology is designed to enhance RWP at fixed work zones, and is for Class II / Roadway Maintenance Machines (RMMs). Roadway workers wear armbands that provide an audio/visual alert when an equipped train approaches.

Conversely a device installed at the entering end of the work zone informs approaching trains of the workers presence on the right of way by providing an audio/visual alert within the operators cab. In addition, the system is intended to alert Class II operators when their vehicles are within close proximity of each other to reduce the likelihood of collisions between equipped vehicles.

Three of the 30 units available have been installed in prime movers. The test plan, which includes the scope and success parameters, is currently under development. A hazard analysis is also being concurrently developed, to ensure greater hazards are not being introduced as part of the pilot project. It is projected that the technology will be tested starting 1QFY19.

### **FUNDING IMPACT:**

Information item only - no funding impact.	
Project Manager:	Patrick Lavin
Project Department/Office:	Safety Department

### **TIMELINE:**

<b>Previous Actions</b>	<ul style="list-style-type: none"><li>• RWP Review on November 16, 2017</li></ul>
<b>Anticipated actions after presentation</b>	<ul style="list-style-type: none"><li>• Continue to review advanced technology for RWP</li><li>• Complete pilot tests</li></ul>

### **RECOMMENDATION:**

To inform the Board's Safety Committee of the status of the RWP Program enhancements and continuing steps to enhance protection of our employees.

# Roadway Worker Protection

Safety & Service Delivery  
June 14, 2018



# Purpose

- Provide an update on Roadway Worker Protection (RWP) enhancements

# Background

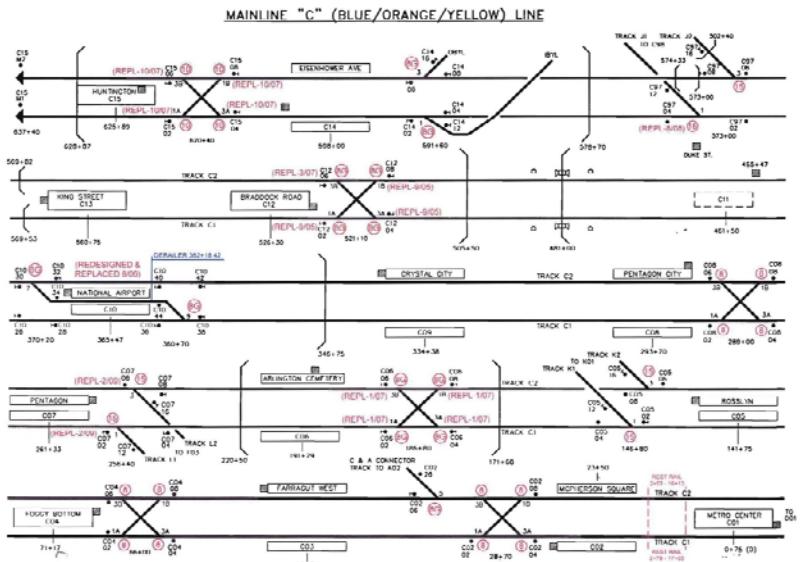
- Eight roadway worker fatalities
  - 2005-2010
- NTSB Recommendation R-08-004
  - Implement technology to alert workers of trains and alert train operators of workers
- Interim RWP enhancements
- Protran Pilot implementation



## Roadway Worker Protection

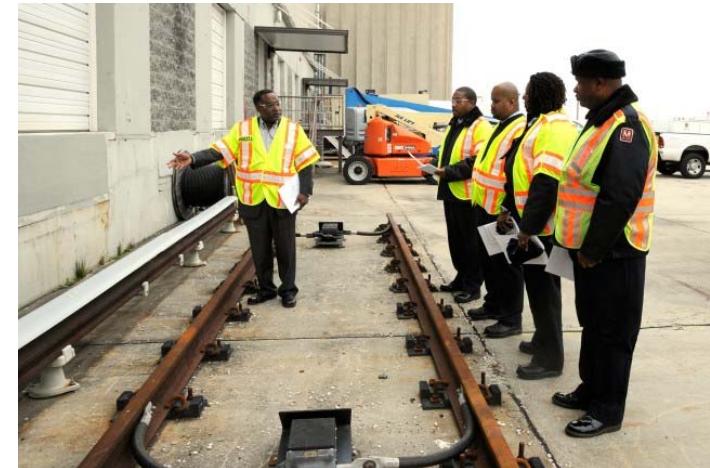
# RWP Enhancements

- Advanced mobile flagger
  - New “Hot Spots” identified and communicated
  - Revised Track Access Guide
  - Safety Stand-down will occur 1QFY19
    - RWP rule modifications
    - Emergency maintenance and flagging procedures



## RWP Training Compliance

- Aligned RWP certifications with required groups
- Weekly compliance reports
- Training compliance rate: 99.36%
- Over 98% compliance rate since June 2016
  - Requires over 500 individuals per month to attend RWP training



## Employee Reporting - RWP

- Deployment of Process Safety Group
- Use of internal reporting
  - Close Call (Bureau of Transportation Statistics)
  - Safety Committee Actionable Items
  - Reported Near Misses
  - Safety Hotline
- Safety Bulletins
- Employee Reporting Newsletters



## Protran RWP Technology Pilot

- Working toward implementing NTSB Recommendation
- Pilot project 85% installed
- Thirteen locations selected
  - 237 roadway units installed
  - 178 armbands available
- Training currently underway
  - Train operators and roadway workers
- Pilot demonstration presented to FTA



## Vehicle Awareness Technology

- For Class II / roadway maintenance machines
- Alarms sound when vehicles/workers are in close proximity of each other
- Thirty units obtained
- Installed in three prime movers
- Test plan in development
- Testing scheduled: 1QFY19



# Safety Management Systems - RWP

- Safety Policy
  - Commitment from leadership
- Safety Risk Management
  - RWP Enhancements/Training
  - Protran Pilot / Vehicle Awareness Technology
- Safety Assurance
  - Field inspections
  - Compliance monitoring
- Safety Promotion
  - Safety Bulletins
  - Close Call / Employee Reporting newsletter



## Questions

