Customer Services, Operations, and Safety Committee

Board Information Item III-A

April 8, 2010

Safety and Security Report
# Washington Metropolitan Area Transportation Authority
## Board Action/Information Summary

<table>
<thead>
<tr>
<th>Action Information</th>
<th>MEAD Number:</th>
<th>Resolution:</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>□ Yes □ No</td>
</tr>
</tbody>
</table>

### PURPOSE

To provide an update on Safety and Security as of February 2010.

### DESCRIPTION

The information provides an update on all safety performance data for calendar year 2009 as compared to calendar year 2010, in the areas of derailments, fires, escalator injuries, rail, bus and MetroAccess passenger injuries, preventable and non-preventable bus collision rates, and the MetroAccess collision rate.

The information contains types of Part 1 crimes and quantity in February 2010. The top ten stations in each jurisdiction experiencing crime in February 2010 are identified along with quantity of crimes.

### FUNDING IMPACT

None

### RECOMMENDATION

None
Safety and Security Report

Customer Service, Operations, and Safety Committee

April 8, 2010
Safety Actions Update

- Continue the monthly Local, Departmental and Executive Safety Committees
- Continue the development of the Roadway Worker Protection (RWP) program
- Developing corrective action plan (CAP) in response to the FTA Audit received March 4, 2010 & coordinating with TOC
- Participated in TOC Monthly meetings
- Participated in scheduled TOC capture meetings to address open items and Hazard Identification & Resolution Matrix (HIRM)
- Continue to roll out and train front line staff on Safety Management System, a single consolidated database for capturing of all incidents/accidents.
- Continue recruiting process to fill vacancies within Safety
- Hiring new Chief Safety Officer
Roadway Worker Protection (RWP)

- Right-of-Way (ROW) Safety and RWP was identified as a top priority for the Acting Chief Safety Officer Mike Taborn
- January 11 – 13: Metro ROW Safety Workshop attended by transit partners
- January 21: First meeting with members of the Metro RWP Work Group
- February 22: Federal Railroad Administration’s (FRA) Part 214 presentation
- April 2: Follow-up FRA Part 214 round-table
- April: Scheduling site visits for field research
RWP Work Group

- Created to identify and address Metro’s ROW safety concerns
- Established a Roadway Worker Protection program that utilizes and incorporates best practices from peer transit agencies and other rail transportation entities
- Coordinates Tri-State Oversight Committee and Local 689 priorities to address and strengthen safety on Metro’s ROW
- The RWP Work Group is focused on:
  - Creating a comprehensive RWP Manual
  - Restructuring ROW safety training as a tiered program
  - Examining, testing, and incorporating technologies and processes that work best in the Metro system
RWP Work Group Participants

• The RWP Work Group meets weekly and is attended regularly by representatives from multiple Metro Departments and TOC

• The RWP Work Group consists of two subcommittees:
  − RWP Manual Subcommittee
  − Training Subcommittee
Corrective Actions

- TOC’s Rail Transit Special Safety Study – Roadway Worker Protection (RWP) report presented 18 findings
- All eight Corrective Action Plans (CAPs) Metro proposed for the 18 findings have been approved by TOC
- Metro’s implementation of CAPs for seven findings have been submitted to TOC
- Communications with TOC and progress on all CAPs continue due to the work of the RWP Work Group
- RWP Work Group activities and CAPs are inline with FTA’s March 4th Audit Recommendation
RWP Manual

• An **RWP Manual** is being drafted to ensure adequate safety measures are in place for all persons participating in any activity taking place on the ROW

• Modeled after the APTA RWP Standards which were modeled after the FRA 214.c Standard

• Local 689 members are actively involved with the RWP Manual development

• Metro’s RWP Manual encompasses:
  – Five new types of protection
  – Multi-level protection
  – Change in work zone control
  – Understanding of accountability
  – Increased training
Metrorail Safety Performance Highlights

SAFEST

Inaccessible Track

Foul Time

Exclusive Track Occupancy

Train Coordination

SCALE

Flagmen

Authority

Local Signal Control

LEAST

Train Approach Warning

SAFE

Individual Train Detection

Stop Movements (Working Limits)

Depart Track on Approach
RWP Training

- Currently in the process of inventorying and analyzing Metro’s existing ROW safety training curriculums
- Metro ROW training will be delivered as a tiered program in concert with the new RWP Manual
- FTA Enhanced Track Worker Safety Program
  - Deliver refresher training - track inspection courses
  - An element of the training will include right of way safety
  - Contract award may occur within the next month
  - Metro is the first on the list for training delivery
  - Past effort included Boyd Caton Grant and Zeta-Tech
## Metrorail Safety Performance Highlights

<table>
<thead>
<tr>
<th>Current Metro ROW Program</th>
<th>New RWP Program (Meets or Exceeds APTA / Industry Standards)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ambiguous work zone control</td>
<td>Roadway Worker In Charge (RWIC) controls work zone</td>
</tr>
<tr>
<td>One layer of worker protection</td>
<td>Multi-layer worker protection</td>
</tr>
<tr>
<td>No clear rules governing who can lead work crews and escort contractors</td>
<td>Only a qualified RWIC can lead work crews and escort contractors</td>
</tr>
<tr>
<td>Training inconsistent &amp; ineffective</td>
<td>RWP I exceeds present training</td>
</tr>
<tr>
<td>Non-Uniform progressive training</td>
<td>RWP II &amp; III provide intense training</td>
</tr>
<tr>
<td>No system-wide across the board retraining/requalification</td>
<td>Retraining/requalification required every 12 months for RWIC, Watchman/Lookouts &amp; ROW Flagman</td>
</tr>
</tbody>
</table>
Bus Maintenance Heavy Overhaul Shops ensure employee safety through clean work environment and new style drum equipment for:

- Ergonomics
- Less back strain
- Easy to move

Using the right tool for the job
DriveCam

- In all dedicated vehicles
- Continuously captures video inside and in front of the vehicle
- Saves data from 10 seconds before and 10 seconds after manual or G-force activation
- All clips reviewed for potential safety infractions
- Clips utilized during driver coaching, counseling, and training
Metro Transit Police (MTPD) Significant Facts
February 2010

- Received 3,546 calls for service (20% decrease over February 2009)
- 100 arrests
- 295 criminal/civil citations for fare evasion and public conduct violations (37% decrease over February 2009)
- 10 bus operator assaults compared to 12 during the same time last year
- The probability of being a victim of a Part I crime in the Metro system is 6.11 per million riders
Metro Comprehensive Exercise Program

Project Overview:
- Engaged multiple levels of government
- Builds essential skills and mutual understanding of respective roles, responsibilities and interests
- Regionally coordinated with local public safety departments
- Funded through the Urban Area Security Initiative (UASI) by Metropolitan Washington Council of Governments (MWCOG)

Recent Tactical Drills:
- 03/28/10 – Rosslyn to Foggy Bottom Simulated Rail Car Explosion/Tunnel
- 03/29/10 – RFK Stadium and Bladensburg Simulated Bus Explosion
Lessons Learned - Rail Car Explosion:

• Jurisdictional participation exceptional
• Three Metro Emergency Response Vehicles (London Carts) performed well
  – Cart strength is portability and ease of assembly on scene
  – One failed late in the drill – exploring causes
  – Necessity of more cart training and development of protocols
• Drill performed well particularly because of extensive preparation with all participating agencies and Metro Departments.
• No injuries occurred during exercise
• Challenges primarily with communications,
• Frequent interruptions of radio and cell phones
Lessons Learned - Bus Explosion:

- Jurisdictional participation exceptional – unified command functioned well.
- Excellent opportunity for multiple jurisdiction equipment testing (UASI equipment such as Mass Casualty Support Unit of Prince George’s County Fire)
- Challenges:
  - Insufficient police personnel for perimeter security, K-9 participation and dual-scene command.
  - Portable radios needed for interoperability.
  - MTPD Office of Emergency Management (EOD) command vehicle needed for briefing and command
- No injuries occurred during exercise
February 11, 2010

- While investigating the February 5, rape, kidnapping, and carjacking of a customer, MTPD Detectives James Duncan and Vernon Clayton recognized the carjacked vehicle at Largo Town Center garage.
- As the vehicle attempted to exit garage, the detectives and MTPD Digital Video Recorder Coordinator, Sean Doody, performed a felony traffic stop and successfully removed two subjects from the vehicle.
- Occupants were identified as a second rape victim and the suspect from the prior incident.
- Suspect confessed to both incidents.
- Indicted on 28 charges and is awaiting trial.

CASE CLOSED
March 19, 2010

- Gaithersburg City Police Department, with the assistance of Montgomery County Police Department, arrested a suspect identified while operating a vehicle stolen from the Shady Grove Metrorail Station
- Multiple items of evidence were recovered from the vehicle, and additional evidence was recovered as a result of a search warrant of the suspect’s residence
- It was determined that due to the large number of vehicles damaged, the crime would be classified as a scheme
- Suspect indictment will include charges involving every vehicle damaged at the Shady Grove garage from March 15 to 17
- As many as 12 victims have been identified in the scheme

CASE CLOSED
Appendix A - Statistical Information
<table>
<thead>
<tr>
<th>Category</th>
<th>Calendar Year 2008</th>
<th>Calendar Year 2009</th>
<th>January - February 2009</th>
<th>January - February 2010</th>
<th>2009-2010 Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rail Passenger Injuries (on board)</td>
<td>80</td>
<td>110</td>
<td>7</td>
<td>3</td>
<td>-4</td>
</tr>
<tr>
<td>Rail Fatalities</td>
<td>0</td>
<td>13</td>
<td>0</td>
<td>2*</td>
<td>+2</td>
</tr>
<tr>
<td>Rail Fatalities (Suicides)</td>
<td>3</td>
<td>9</td>
<td>0</td>
<td>1</td>
<td>+1</td>
</tr>
<tr>
<td>Rail Transit Facility Occupant Injuries (In Stations and Parking Facilities)</td>
<td>175</td>
<td>88</td>
<td>16</td>
<td>32</td>
<td>+16</td>
</tr>
<tr>
<td>Rail Passenger Injury Rate</td>
<td>0.05</td>
<td>0.07</td>
<td>0.03</td>
<td>0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td>Escalator Injuries</td>
<td>130</td>
<td>100</td>
<td>21</td>
<td>16</td>
<td>-5</td>
</tr>
<tr>
<td>Derailments (Main Line)</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
<td>0</td>
</tr>
<tr>
<td>Fire Incidents</td>
<td>51</td>
<td>62</td>
<td>7</td>
<td>14</td>
<td>+7</td>
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<tr>
<td>Smoke Incidents</td>
<td>87</td>
<td>96</td>
<td>6</td>
<td>9</td>
<td>+3</td>
</tr>
</tbody>
</table>

* 2 Employee Fatalities categorized as Rail Fatalities
# Metrobus Safety Performance Indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>Calendar Year 2008</th>
<th>Calendar Year 2009</th>
<th>January - February 2009</th>
<th>January - February 2010</th>
<th>2009 - 2010 Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bus Passenger Injuries</td>
<td>157</td>
<td>114</td>
<td>12</td>
<td>6</td>
<td>-6</td>
</tr>
<tr>
<td>Pedestrian Injuries</td>
<td>11</td>
<td>4</td>
<td>0</td>
<td>1</td>
<td>+1</td>
</tr>
<tr>
<td>Pedestrian Fatalities</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Preventable Bus Collision Rate</td>
<td>18.57</td>
<td>15.54</td>
<td>15.96</td>
<td>9.39</td>
<td>-6.57</td>
</tr>
<tr>
<td>Non-Preventable Bus Collision Rate</td>
<td>29.29</td>
<td>23.66</td>
<td>27.25</td>
<td>23.27</td>
<td>-3.98</td>
</tr>
<tr>
<td>Bus Passenger Injury Rate</td>
<td>0.36</td>
<td>0.27</td>
<td>0.18</td>
<td>0.12</td>
<td>-0.06</td>
</tr>
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</table>
## MetroAccess Safety Performance Indicators

<table>
<thead>
<tr>
<th>Category</th>
<th>Calendar Year 2008</th>
<th>Calendar Year 2009</th>
<th>February 2010</th>
<th>1 Month Change (January 2009)</th>
<th>1 Year Change (February 2009)</th>
</tr>
</thead>
<tbody>
<tr>
<td>MetroAccess Collision Rate (per 100,000 service miles)</td>
<td>2.98</td>
<td>3.17</td>
<td>3.89</td>
<td>+0.48</td>
<td>+2.12</td>
</tr>
<tr>
<td>MetroAccess Passenger Injury Rate* (per 100,000 passenger miles)</td>
<td>0.48</td>
<td>0.60</td>
<td>0.46</td>
<td>+0.08</td>
<td>+0.24</td>
</tr>
</tbody>
</table>

### February 2010 Injury Details

<table>
<thead>
<tr>
<th></th>
<th>Collision</th>
<th>On Vehicle (Non-Collision)</th>
<th>Off Vehicle</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Preventable Injuries</td>
<td>0.0%</td>
<td>20.0%</td>
<td>20.0%</td>
<td>40.0%</td>
</tr>
<tr>
<td>Non-Preventable Injuries</td>
<td>60.0%</td>
<td>0.0%</td>
<td>0.0%</td>
<td>60.0%</td>
</tr>
<tr>
<td>Total</td>
<td>60.0%</td>
<td>20.0%</td>
<td>20.0%</td>
<td></td>
</tr>
</tbody>
</table>
• Passenger Injury Rate = $N \times 1,000,000/\text{Passenger Miles}$

• MetroAccess Passenger Injury Rate = $N \times 100,000/\text{Passenger Miles}$, where $N$ resulting in transport for medical treatment

• $N =$ Number of injuries requiring immediate transportation from the accident scene to a medical facility

• Preventable Accident – an accident that occurred because the employee failed to do everything reasonably expected of a trained professional to avoid involvement in an accident

• Non-Preventable Accident – an accident that occurs despite every reasonable action by the employee to avoid involvement in an accident.

• MetroAccess Preventable/Non-Preventable Injuries – Percentage of injuries that occurred onboard a vehicle (not collision related), off a vehicle, or as a result of a collision.

• Bus Collision Rate = $N \times 1,000,000/\text{Vehicle Miles}$

• MetroAccess Collision Rate = $N \times 100,000/\text{Service Miles}$

• Service Miles = The miles that vehicles are scheduled to or actually travel while in revenue service.
<table>
<thead>
<tr>
<th>Metro Stations Experiencing Most Part 1 Crime</th>
<th>Aggravated Assault</th>
<th>Auto Theft</th>
<th>Larceny</th>
<th>Robbery</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Largo Town Center</td>
<td>0</td>
<td>1</td>
<td>6</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>2. New Carrollton</td>
<td>0</td>
<td>0</td>
<td>4</td>
<td>3</td>
<td>7</td>
</tr>
<tr>
<td>3. Gallery Place</td>
<td>1</td>
<td>0</td>
<td>1</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>4. Minnesota Avenue</td>
<td>2</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>7</td>
</tr>
<tr>
<td>5. Metro Center</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>6</td>
<td>6</td>
</tr>
<tr>
<td>6. Capitol Heights</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>3</td>
<td>5</td>
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<tr>
<td>7. Shaw/Howard Univ.</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>5</td>
<td>5</td>
</tr>
<tr>
<td>8. Tenleytown</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>4</td>
</tr>
<tr>
<td>9. Huntington</td>
<td>0</td>
<td>0</td>
<td>3</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>10. Cheverly</td>
<td>0</td>
<td>0</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Part I Crime</td>
<td>2006</td>
<td>2007</td>
<td>2008</td>
<td>2009</td>
<td>2010</td>
</tr>
<tr>
<td>------------------------------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
<td>------</td>
</tr>
<tr>
<td>Aggravated Assault</td>
<td>6</td>
<td>7</td>
<td>6</td>
<td>9</td>
<td>7</td>
</tr>
<tr>
<td>Burglary</td>
<td>3</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Homicide</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Larceny (theft without force)</td>
<td>30</td>
<td>48</td>
<td>51</td>
<td>53</td>
<td>27</td>
</tr>
<tr>
<td>Motor Vehicle Theft</td>
<td>7</td>
<td>18</td>
<td>15</td>
<td>15</td>
<td>5</td>
</tr>
<tr>
<td>Rape</td>
<td>0</td>
<td>1</td>
<td>0</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>Robbery (theft with force or implied force)</td>
<td>23</td>
<td>38</td>
<td>59</td>
<td>42</td>
<td>81</td>
</tr>
<tr>
<td>Total</td>
<td>69</td>
<td>112</td>
<td>131</td>
<td>119</td>
<td>123</td>
</tr>
</tbody>
</table>
District of Columbia Top Ten Metrorail Stations Ranked By Part 1 Crime

- Non-Vehicle Crimes
- Vehicle Crimes

- Metro Center
- Minnesota Avenue
- Gallery Place
- Shaw-Howard
- L'Enfant Plaza
- Rhode Island Ave.
- Anacostia
- Tenleytown
- Capitol Heights
- Fort Totten
Maryland Top Ten Metrorail Stations Ranked By Part 1 Crime

Non-Vehicle Crimes

Vehicle Crimes

Largo Town Center
Prince George’s Plaza
New Carrollton
Grosvenor
Suitland
West Hyattsville
Shady Grove
Cheverly
College Park
Landover
Virginia Top Ten Metrorail Stations Ranked By Part 1 Crime

* Only three Virginia Metrorail stations experienced Part 1 crime to date in 2010