BUS & RAIL OPERATING PRACTICES REVIEW

A Peer Review Provided by the North American Transportation Services Association

June 9 - 12, 2015

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Peer Review Panel Members

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Bus & Rail Operating Practices Review

- **Agenda**
  - Scope of Review
  - Peer Review Objectives
  - Methodology
  - Observations & Findings

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Scope of Review

The Peer Review Panel was convened at the request of Arthur Leahy, former CEO, to assist LACMTA in reviewing its Bus and Rail Operating Practices with an emphasis on Red Light Signal Violations.

The observations and findings provided through this peer review are offered as an industry resource to be considered by LACMTA in support of strengthening the organization's operating policies, plans, procedures and enhancing practices for both the bus and the rail systems.

Peer Review Objectives

1. Review red signal violations for both bus and rail with focus on street running with interlocking signals.
2. Review Metro's rules and procedures with emphasis on defensive driving.
3. Review Metro's program of rules compliance and efficiency testing.
4. Review Metro's disciplinary policies and practices on red light violations and compare to other agencies.
5. Review Metro's Train Control Signal System to preclude red signal violations, including new technology that could be implemented to mitigate violations.
6. Explore confidential close call programs.

Peer Review Methodology

APTA is pleased to use its NATSA resources to support this peer review at LACMTA. The APTA Peer Review process is well established as a valuable resource to the public transit industry.

Highly experienced and respected professionals voluntarily provide their time and support to address the scope required to help the transit system and the industry as a whole.

The panel conducted this peer review through documentation review, field observations and a series of briefings and interviews with LACMTA staff from all levels within the organization.

Bus & Rail Operating Practices Review

Observations & Findings

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Observations & Findings

Opening Comments:

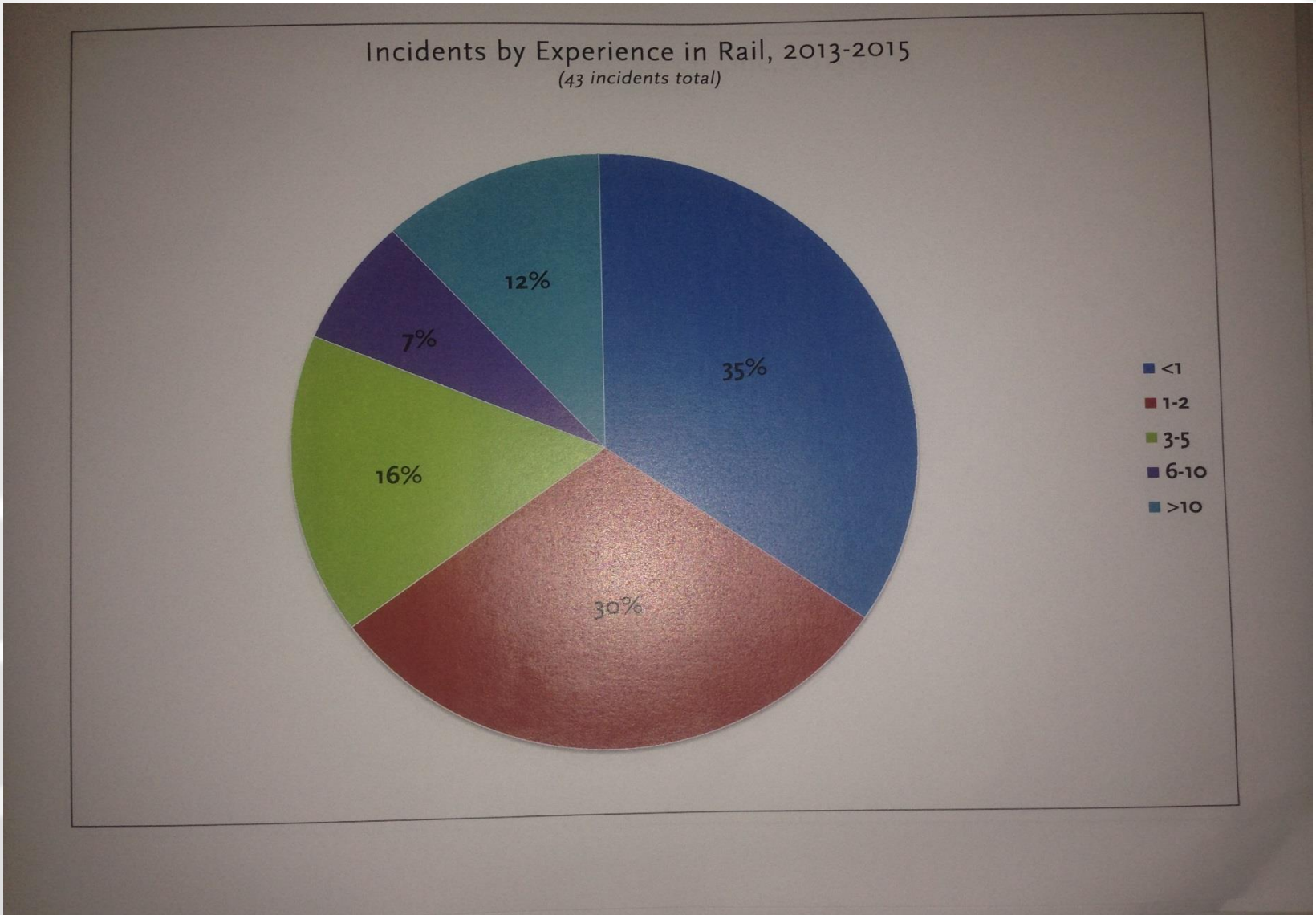
The peer review team found that LACMTA team works well together with open dialog between management and labor on safety issues. It is apparent that there is a well developed level of trust and openness shared by employees on the value of safety to the organization which has permeated all levels in the organization. The management system approaches and organizational structure follow industry practice in establishment of operating rules, procedures, training, discipline, and supervision. In some areas LACMTA has developed best practice and in other areas they have modeled best practice. In short, the peer review team found the conditions and programs were healthy to robust, which enabled the team to focus on areas where programs and practices could be enhanced or strengthened.

Observations & Findings

1. Review red signal violations for both bus and rail with focus on street running with interlocking signals (Rail):

- On the rail side there appears to be a disconnect within the levels of the organization on the cause for the spike in red signal violations.
  - -No real evidence that complacency is a factor
  - No observations that OTP pressure is being exerted
  - Signal placement could be a human factor issue
  - Signal display of red and green is being addressed
  - Integration of the interlocking and bar signals would eliminate the condition where proceed and stop are simultaneously displayed. Currently they operate independently of each other.
  - No written procedures found to guide operator on correct use of countdown timers.
  - Information on Blue Line LOS speeds vary between 32, 35, 36 and DOT recommendation of 33 – 35.
  - Training program documentation vs observed operation shows a gap exists. There could be a risk that line training is being taught in a fashion that the engineered system cannot support. Example is countdown and train coming short cycles.
  - Supervisors are not trained to identify operators “Hi-spotting” the signals to get over the road,

Effect of Operating Experience



Observations & Findings

1. **Review red signal violations for both bus and rail with focus on street running with interlocking signals (Bus):**

- On the bus side the motivation for running the signals are different from rail. The minimum recovery time is 6 minutes which can be lost if there are more than one wheelchair boardings, as example, which translates into loss of opportunity for restroom use, smoke break, or decompression time.
  - There is little evidence to suggest that management is prioritizing OTP over safety
  - Statistics showing an increase in bus red light running may be the result of installation of technology (Smartcam) so the management is seeing these events now when they couldn't prior to the installations
  - Smartcam is dependent upon other event tags to be found for a signal violation to be noticed. Not all signal violations are being discovered, so the overall red signal failure rate is likely much higher than currently reported.

Observations & Findings

2. Review Metro's rules and procedures with emphasis on defensive driving (Rail):

- The peer review team takes no exception to the rules and procedures being used
- The rules or procedures governing the countdown timers could not be located and is still an open item
- The rules and defensive driving modules are inconsistent for classroom training and not properly implemented in the field. Inconsistency between classroom training and field application were observed.

Observations & Findings

2. Review Metro's rules and procedures with emphasis on defensive driving (Bus):

- The Bus Defensive Driving modules are considered to be more robust than the peer review team saw in the rail program and this presents an opportunity for transference of program content to be able to improve both programs.
- As noted with the Rail program, the rules and defensive driving modules are inconsistent for classroom training and not properly enforced in the field. Inconsistency between classroom training and field application were observed.

Observations & Findings

3. Review Metro's program of rules compliance and efficiency testing (Rail):

- There is opportunity to improve the program with the development of additional Supervisory oversight activities, such as, using Smartcam clips for skill development instead of just discipline.
- The Efficiency Testing program needs to be more robust.
- The Mystery Rider program is primarily ADA focused but could easily be repurposed to include driver observations which could be used for indicators on what areas the Efficiency Testing program should target.

Observations & Findings

3. Review Metro's program of rules compliance and efficiency testing (Bus):

- There is opportunity to develop a supervisory oversight or formal efficiency testing program for bus operations and with the development of wireless capabilities of the TVX video system, a digital Efficiency Testing program could emerge.
- Currently there is little supervisory oversight programs being applied to verify that rules, procedures and training skills are being applied at an acceptable level.
- As with the Rail program, the Mystery Rider program is primarily ADA focused but could easily be repurposed to include driver observations which could be used for indicators on what areas the Efficiency Testing program should target.

Observations & Findings

4. Review Metro's disciplinary policies and practices on red light violations and compare to other agencies (Rail):

- The Rail disciplinary policies, such as successfully bargaining the issue of Red Light Violations from a minor to a major classification were highly regarded by the review team as was the strict suspension to termination progression of 3 – 15 – termination policy. The team considers this program to be at the level of best industry practice.

Observations & Findings

4. Review Metro's disciplinary policies and practices on red light violations and compare to other agencies (Bus):

- The Bus disciplinary policies, although successful bargaining raised the issue of Red Light Violations from a minor to a major classification, was considered by the team as an area where improvement can be made. It was considered to put the agency at too much risk due to the 6 month roll back provision. It is possible that an operator could continue to work with a major violation on his/her record without ever escalating the Level 1 discipline category as long as the events were spaced greater than 6 months apart.
- Both Bus and Rail could benefit from a database that documents the major violations in the same way that is being done with accidents.

Observations & Findings

5. **Review Metro's Train Control Signal System to preclude red signal violations, including new technology that could be implemented to mitigate violations (Rail):**

- **Line of Sight in the corridor does provide for interlocking signals for normal and reverse running. The signalling system does not provide an approach signal to the interlocking (home) signal which provides the operator no information as to what the aspect should be ahead. Because of space restrictions, these signals are not uniformly placed. Consistency of location and an advance approach indication would be helpful.**
- **Hot spot of the signal lens need to be aimed for the operators vision when berthed.**

Observations & Findings

5. **Review Metro's Train Control Signal System to preclude red signal violations, including new technology that could be implemented to mitigate violations (Rail):**

- **Consider separating the Normal and Reverse running signal heads as they are often set side by side and easily confused. (on approach we saw 3 reds and one green). Another option would be to make reverse running approach lit or use program view heads.**
- **Several locations were observed displaying proceed interlocking signal indications with a stop semaphore bar signal. These signals are not independent of each other. It is poor practice to display a stop signal and proceed signal at the same location.**

Observations & Findings

5. **Review Metro's Train Control Signal System to preclude red signal violations, including new technology that could be implemented to mitigate violations (Rail):**

- **Audible warnings for grade crossings were observed to not be consistant with the operating rule warning pattern established.**
- **Several locations were observed displaying proceed interlocking signal indications with a stop semaphore bar signal. These signals are not independent of each other. It is poor practice to display a stop signal and proceed signal at the same location.**

Observations & Findings

5. **Review Metro's Bus Control Center including new technology that could be implemented to mitigate violations (Bus):**

- **The Bus Control Center and the Emergency Operations Center were found to be very impressive. The controller's 3 display monitors, the colocation of the Sheriff's communication desk and the division of responsibility among the supervisors were excellent.**

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Observations & Findings

Explore Confidential Close Call Programs (Rail):

- Rail operations has several key conditions and operator competence issues to resolve as a more immediate and fundamental action before the team were to suggest that a Confidential Close Call Reporting system considered. Structure needs to be put place to support the program.

Observations & Findings

Explore Confidential Close Call Programs (Bus):

- The Bus Divisions may be in a position to engage a Confidential Close Call pilot at a few divisions.

Addition Comments and Observations

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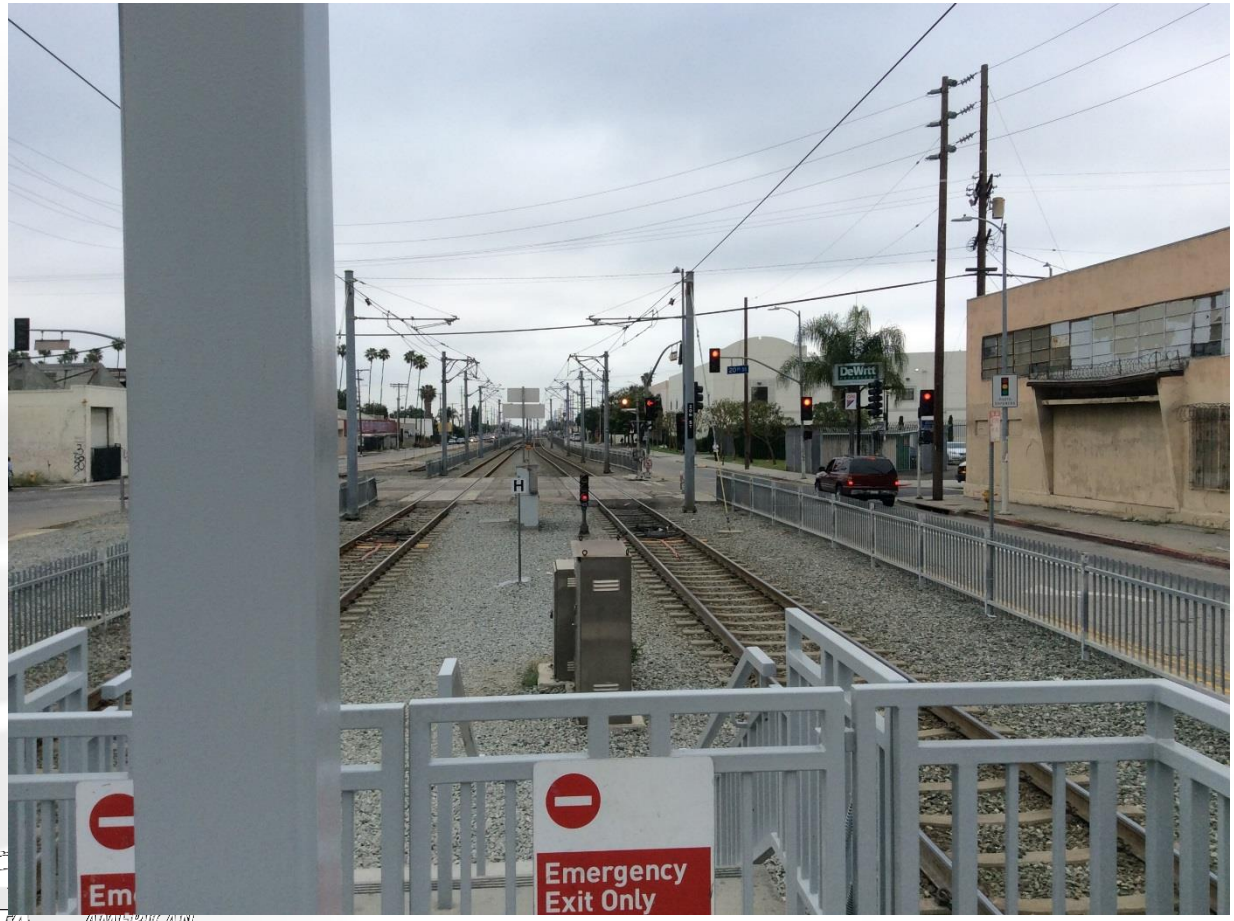

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Suggested Improvements

Suggested Improvements

Suggested Improvements

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Suggested Improvements

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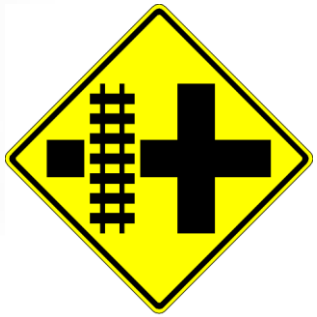
Suggested Improvements

Suggested Improvements

- Advanced warning signs:
  - ✓ W10-2



W10-2
Parallel Railroad Crossing (crossroad)

  - ✓ W10-12

W10-12
Skewed Railroad Crossing

Safety Treatments

- Alternating Black-out sign consists of:
  - ✓ W10-7 "Light Rail Transit Approaching"
  - ✓ R3-1 "No Right Turn" or R3-2 "No Left Turn"

Intersection Study

- Gathering data:
  - ✓ Field review
  - ✓ Surveillance cameras
- Focus of study – risky behavior
  - ✓ Vehicle collisions at crossings are rare
  - ✓ Risky behavior allows to assess the effectiveness of the traffic engineering treatments at crossings
- The “before” and “after” analysis
  - ✓effectiveness in decreasing the frequency of violations

Questions?

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