Quarterly Service Performance Review
Fourth Quarter, FY 2017
April - June, 2017
Operations & Safety Committee
August 15, 2017
<table>
<thead>
<tr>
<th>PERFORMANCE INDICATORS</th>
<th>CURRENT QUARTER</th>
<th>PRIOR QTR ACTUALS</th>
<th>YEAR TO DATE</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>ACTUAL</td>
<td>STANDARD</td>
<td>STATUS</td>
</tr>
<tr>
<td>Average Ridership - Weekday</td>
<td>419,794</td>
<td>446,160</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Customers on Time</td>
<td>83.46%</td>
<td>95.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Peak</td>
<td>87.66%</td>
<td>95.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train on Time</td>
<td>73.79%</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Daily</td>
<td>79.72%</td>
<td>92.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Peak Period Transbay Car Throughput</td>
<td>95.56%</td>
<td>97.50%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>AM Peak</td>
<td>96.15%</td>
<td>97.50%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>PM Peak</td>
<td>573</td>
<td>595</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Car Availability at 4 AM (0400)</td>
<td>4.723</td>
<td>4.000</td>
<td>MET</td>
</tr>
<tr>
<td>Mean Time Between Service Delays</td>
<td>98.57%</td>
<td>98.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Elevators in Service</td>
<td>96.60%</td>
<td>98.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Escalators in Service</td>
<td>87.80%</td>
<td>95.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Elevators in Service</td>
<td>94.73%</td>
<td>96.00%</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Automatic Fare Collection</td>
<td>99.21%</td>
<td>99.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Vendors</td>
<td>95.55%</td>
<td>95.00%</td>
<td>MET</td>
</tr>
<tr>
<td>Wayside Train Control System</td>
<td>1.55</td>
<td>1.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Computer Control System</td>
<td>0.08</td>
<td>0.08</td>
<td>MET</td>
</tr>
<tr>
<td>Traction Power</td>
<td>0.13</td>
<td>0.20</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Track</td>
<td>1.49</td>
<td>0.30</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Transportation</td>
<td>0.42</td>
<td>0.50</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Environment Outside Stations</td>
<td>2.80</td>
<td>2.80</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Environment Inside Stations</td>
<td>2.62</td>
<td>3.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Station Vandalism</td>
<td>2.95</td>
<td>3.19</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Station Services</td>
<td>2.91</td>
<td>3.06</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train P.A. Announcements</td>
<td>3.09</td>
<td>3.17</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train Exterior Appearance</td>
<td>2.79</td>
<td>3.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Train Interior Appearance</td>
<td>2.85</td>
<td>3.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Travel Temperature</td>
<td>3.11</td>
<td>3.12</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Customer Complaints</td>
<td>8.89</td>
<td>5.07</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Safety</td>
<td>1.64</td>
<td>5.50</td>
<td>MET</td>
</tr>
<tr>
<td>Vehicle Incidents/Million Patrons</td>
<td>0.35</td>
<td>1.30</td>
<td>MET</td>
</tr>
<tr>
<td>Lost Time Injuries/Illnesses/Per OSHA</td>
<td>7.22</td>
<td>7.50</td>
<td>MET</td>
</tr>
<tr>
<td>OSHA-Recordable Injuries/Illnesses/Per OSHA</td>
<td>10.12</td>
<td>13.30</td>
<td>MET</td>
</tr>
<tr>
<td>Unscheduled Door Openings/Million Car Miles</td>
<td>0.10</td>
<td>0.30</td>
<td>MET</td>
</tr>
<tr>
<td>Rule Violations Summary/Million Car Miles</td>
<td>0.460</td>
<td>0.500</td>
<td>MET</td>
</tr>
<tr>
<td>Police</td>
<td>0.10</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>BART Police Presence</td>
<td>112.98</td>
<td>N/A</td>
<td>N/A</td>
</tr>
<tr>
<td>Quality of Life per million riders</td>
<td>3.28</td>
<td>2.00</td>
<td>NOT MET</td>
</tr>
<tr>
<td>Crimes Against Persons per million riders</td>
<td>4.64</td>
<td>8.00</td>
<td>MET</td>
</tr>
<tr>
<td>Auto Burglaries per 1,000 parking spaces</td>
<td>2.56</td>
<td>6.00</td>
<td>MET</td>
</tr>
<tr>
<td>Auto Thefts per 1,000 parking spaces</td>
<td>4.24</td>
<td>5.00</td>
<td>MET</td>
</tr>
<tr>
<td>Bike Thefts (Quarterly Total and YTD Quarterly Average)</td>
<td>129</td>
<td>150.00</td>
<td>MET</td>
</tr>
</tbody>
</table>

**Legend:**
- Goal met
- Goal not met but within 5%
- Goal not met by more than 5%
Customer Ridership

✓ Total ridership decreased by 4.2% compared to same quarter last year
✓ Average weekday ridership (419,794) down by 3.4% from same quarter last year
✓ Core weekday ridership down by 3.0% from same quarter last year
✓ SFO Extension weekday ridership down by 6.1% from same quarter last year
✓ Average peak ridership down by 2.85% compared to same quarter last year
✓ During Q4 there were two Top 10 Ridership Days:
  • 6/15/2017: 518,743 – Warriors Championship Parade/Rally; A's vs. NY Yankees (#5 Weekday)
  • 6/25/2017: 243,933 – SF Pride Celebration & Parade; Giants vs. NY Mets (#7 Sunday)
✓ Saturday and Sunday down by 7.0% and 9.8%, respectively, from same quarter last year
On-Time Service - Customer

✓ 87.66%, 95.00% goal not met, up .67%
✓ 5 of the 10 biggest delays due to “Procedures”
✓ Delay events causing the most late trains:

<table>
<thead>
<tr>
<th>No.</th>
<th>Date</th>
<th>Location</th>
<th>Event Description</th>
<th>Type</th>
<th>Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>28-Apr-17</td>
<td>Lake Merritt</td>
<td>FOTF Test Train (Won’t Move In Any Mode) (0437-1058) (Push Operation To A55 Spur)</td>
<td>Vehicle FOTF</td>
<td>180</td>
</tr>
<tr>
<td>2</td>
<td>30-May-17</td>
<td>W. Oak. I-Lk</td>
<td>Train Gapped (Train Would Not Move In Any Mode) (0628-III) (Hostile Operation Required) (Train Had Been Diverted to M 15)</td>
<td>Wayside Misc.</td>
<td>151</td>
</tr>
<tr>
<td>4</td>
<td>12-Apr-17</td>
<td>T-Bay Tube</td>
<td>Brake (Brake Control Unit) (1530-1851)</td>
<td>Vehicle</td>
<td>130</td>
</tr>
<tr>
<td>5</td>
<td>30-May-17</td>
<td>Lake Merritt</td>
<td>Track Maint. Proc. (MUX Receiver Cable Wire Cut Off By Tamper) (0435-2154) (Crank Installed/Alternate Routing Required)</td>
<td>Wayside Track</td>
<td>120</td>
</tr>
<tr>
<td>6</td>
<td>20-May-17</td>
<td>D.C. I-Lock</td>
<td>Train Derailment (No Injuries/Bus Bridge Established 15:30) (1452-EOR) (Single Tracking Began 16:37)</td>
<td>Wayside Track</td>
<td>112</td>
</tr>
<tr>
<td>7</td>
<td>14-Apr-17</td>
<td>N. Concord</td>
<td>Overload 3rd Rail Power To Trains (Problems between Bay Point and N. Concord) (0942-2226) (PL-6 Through Area)</td>
<td>Wayside Misc.</td>
<td>92</td>
</tr>
<tr>
<td>8</td>
<td>20-Apr-17</td>
<td>Montgomery</td>
<td>Track Work In Area (MUX Cable Damaged) (0450-1548) (Routing Impaired)</td>
<td>Wayside Track</td>
<td>83</td>
</tr>
<tr>
<td>9</td>
<td>23-Jun-17</td>
<td>T-Bay Tube</td>
<td>Smoking Debris on Trackway (Report of Smoke Under Train and (1744-2050) (Training Impaired)</td>
<td>Misc. Debris</td>
<td>77</td>
</tr>
<tr>
<td>10</td>
<td>03-Apr-17</td>
<td>H.Yd. I-Lk S/Ld</td>
<td>Construction (Contractor Excavation Work (Routing Impaired/Multiple Cranks Installed) Severed MUX Cable)</td>
<td>Construction Contractor</td>
<td>69</td>
</tr>
</tbody>
</table>
On-Time Service - Train

- 79.7%, 92.00% goal not met; unchanged from prior quarter
- 43.2% of late trains were late due to multiple small delays, each under 5 minutes
- Categorization of late trains due to a known delay event of 5 minutes or greater:

  1. POLICE ACTIONS  17.3% of delayed trains
  2. WAYSIDE OTHER: Post Derailment Adj.  12.3% of delayed trains
  3. TRACK  10.0% of delayed trains
  4. VEHICLE  9.4% of delayed trains
  5. TRAIN CONTROL  8.9% of delayed trains
Wayside Train Control System

Includes False Occupancy & Routing, Delays Per 100 Train Runs

✓ Goal Not Met - Actual 1.55/Goal 1.00.
✓ 21% improvement from last quarter
✓ No Major Delays of 50+ trains
✓ Goal not met due to minor delays from minor component failures, repairs performed promptly.
✓ Switch Machine Motor Controllers upgrade project to stronger revision. Last quarter we installed 117 of 456 of the prematurely failing motor controllers. Prioritized with OCC to change most critical Interlockings first. Completed A05, A85, K23, K25, K35, M03, M87, M97 and all WSX/SV BX.
✓ Stray current study continues. August will see final testing at M55, M85 and M87 and a comprehensive report provided to BART.
✓ Prototype MUX LRUs continue to function flawlessly at the HTT. Anticipate a mainline installation in 2018.
✓ TCM continues to focus on PM’s and Capital project replacing RX-Loop and RX-Coils.
Includes ICS computer & SORS, Delays per 100 train runs

Goal met
✓ Goal met
✓ Equipment failure on A Line, Identified as core BRK issue - resolved.
   Transfer Trip system works as designed.
✓ Quarterly Wayside PM Inspections (all lines) continue, CB issues mitigated ASAP
Transportation

Includes Late Dispatches, Controller-Train Operator-Tower Procedures and Other Operational Delays Per 100 Train Runs

✓ Goal not met – Actual .52/Goal .50
✓ Increased Train Operator staffing shortages
✓ Goal not met

Track contributed to (3) three major delays during this quarter.

✓ Number 1 on the list-the M87 derailment, is still under investigation as to cause-We are awaiting the final report from TTCI as to cause.

✓ Number 2 on the list-MUX receiver was most likely damaged during surfacing operations during the A15 weekend shut down-but did not manifest itself during return-to-service testing.

✓ Number 3 on the list-MUX cable damage was not a result of track work

✓ Number 4 on the list-Debris fire-was the result of debris in the West Sliding joint-PM’s had been omitted during Earthquake Safety repairs and had not been returned to the PM schedule.
Goal met – MTBSD 4,723 hours
Car Equipment –
Availability @ 0400 hours

Goal not met – 573 Actual vs. 595 Required
Still recovering from the power line problem on the C-line. We transferred cars to other shops for repair to help get out of the hole. Overloading the other shops had an impact on them meeting service but overall its improving service. Recently swapped C-cars to ORY for A-cars to give the shop some relief.
Goal 98%. Goal met – Actual 98.57%

Blue line measures availability including planned project work (doors and floors)
Goal 98% - Goal not me - Actual 96.6%

- Elevator Drives failures
- - M90 / R60 Vandalism
Goal 95% - Goal not met - Actual 87.8%

- 5 Heavy Repairs throughout 4th Qtr. 4 have been completed (M50-S2 remains with a RTS date of 8/4)
- 2 O&K Mod’s are progressing, Anticipate completion end of Month.
✓ Goal 96% - Goal not met - Actual 94.73%.
✓ - 6 Heavy repairs throughout 4th QTR – 1 (M40-P3) remains. Forecasted RTS 8/18.
✓ Goal met - 99.2%
✓ Goal met, 95.55%
✓ Add Fare Availability – 98.6%
✓ Parking Validation Machines Availability – 99.93%
Environment - Outside Stations

Composite rating of:
- Walkways & Entry Plaza Cleanliness (50%) 2.64
- BART Parking Lot Cleanliness (25%) 2.97 ↑
- Appearance of BART Landscaping (25%) 2.78

✓ Ratings of Excellent or Good
- Walkways & Entry Plaza Cleanliness 60.9%
- BART Parking Lot Cleanliness 77.6%
- BART Parking Lot Cleanliness 67.7%

↑ indicates a statistically significant increase from the prior quarter
Environment - Inside Stations

Composite rating for Cleanliness of:
- Station Platform (60%) 2.75
- Other Station Areas (20%) 2.57
- Restrooms (10%) 2.19
- Elevator Cleanliness (10%) 2.39

✓ Ratings of Excellent or Good
- Station Platform 66.8%
- Other Station Areas 58.0%
- Restrooms 41.0%
- Elevator Cleanliness 51.4%

Ratings guide:
4 = Excellent
3 = Good
3.00 = Goal
2 = Only Fair
1 = Poor
Station Vandalism

✓ Goal not Met
Station Kept Free of Graffiti – 2.95
Ratings of Excellent or Good – 76.8%

Ratings guide:
4 = Excellent
3.19 = Goal
3 = Good
2 = Only Fair
1 = Poor
Station Services

Ratings guide:
4 = Excellent
3.06 = Goal
3 = Good
2 = Only Fair
1 = Poor

Composite rating of:
- Station Agent Availability (65%) 2.89
- Brochures Availability (35%) 2.96

✓ Ratings of Excellent or Good:
- Station Agent Availability 72.5%
- Brochures Availability 76.4%
Train P.A. Announcements

Composite rating of:
- P.A. Arrival Announcements (33%) 3.06
- P.A. Transfer Announcements (33%) 3.03
- P.A. Destination Announcements (33%) 3.17

✓ Ratings of Excellent or Good
- P.A. Arrival Announcements 78.2%
- P.A. Transfer Announcements 77.0%
- P.A. Destination Announcements 83.4%

Ratings guide:
4 = Excellent
3.17 = Goal
3 = Good
2 = Only Fair
1 = Poor

FY2016 Qtr 4 FY2017 Qtr 1 FY2017 Qtr 2 FY2017 Qtr 3 FY2017 Qtr 4
Results
Goal

✓ OPERATIONS
SERVICE: How are we doing?
Train Exterior Appearance

✓ Goal not met
✓ Significantly decrease since prior quarter 2.82 to 2.78
✓ Ratings of Excellent or Good  70.9%
Train Interior Cleanliness

Composite rating of:
- Train interior cleanliness (60%) 2.57
- Train interior kept free of graffiti (40%) 3.26

✓ Goal not met
✓ Ratings of Excellent or Good
  - Train interior cleanliness 57.1%
  - Train interior kept free of graffiti 89.8%

Ratings guide:
4 = Excellent
3 = Good
3.00 = Goal
2 = Only Fair
1 = Poor
Train Temperature

Comfortable Temperature Onboard Train – 3.11

✓ Ratings of Excellent or Good 83.2%

Ratings guide:
4 = Excellent
3.12 = Goal
3 = Good
2 = Only Fair
1 = Poor
• Total complaints lodged this period increased 313 (12.8%) from last quarter, up 654 (31%) when compared with the fourth quarter FY16.
• Complaint numbers increased in the categories: Service, Trains, Train Cleanliness, Station Cleanliness, Personnel, Police Services, Policies, and Quality of Life. Decreases are seen in AFC, Announcements, M&E, Parking, and Bike Program.
• “Compliments” are down at 127 from 157 last quarter (one year ago these numbered 139).
Patron Safety:
Station Incidents per Million Patrons

Goal met
Patron Safety

Vehicle Incidents per Million Patrons

✓ Goal met
Employee Safety:
Lost Time Injuries/Illnesses per OSHA Incidence Rate

Goal met
Employee Safety:
OSHA-Recordable Injuries/Illnesses per OSHA Incidence Rate

✓ Goal met
Operating Safety:
Unscheduled Door Openings per Million Car Miles

✓ Goal met
Operating Safety: Rule Violations per Million Car Miles

✓ Goal met
BART Police Presence

Starting FY17 Q2, the way BART Police Presence is measured was changed. The new questions are:

- Did you see BART Police on the Train? (Yes, No, Don’t Know)
- Did you see BART Police Outside the Station? (Yes, No, Don’t Know)
- Did you see BART Police in the Station? (Yes, No, Don’t Know)

Results are reported for all revenue hours and for after 7:00 PM. Goals will be set after approximately a year of using the new measures.
Quality of Life* incidents are up from the last quarter and up the corresponding quarter of the prior fiscal year.

*Quality of Life Violations include: Disturbing the Peace, Vagrancy, Public Urination, Fare Evasion, Loud Music/Radios, Smoking, Eating/Drinking and Expectoration
Crimes against persons are up from the last quarter and up from the corresponding quarter of the prior fiscal year.
✓ Goal met
✓ The number of incidents per thousand parking spaces are up from last quarter and up the corresponding quarter from the prior fiscal year.
The number of incidents per thousand parking spaces are up from last quarter and down the corresponding quarter from the prior fiscal year.
The average Emergency Response Time goal was met for the quarter and improved over the previous 3 quarters.
Goal met
✓ 129 bike thefts for current quarter, up 56 from last quarter.