Transit Performance Update
Next 90 Day Plan

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SFMTA Board of Directors
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90 Day Plan - Lessons Learned

- Fewer actions with greater emphasis and connection to key performance indicators (KPIs).
- More intuitive data metrics to better translate results.
Next 90-Day Action Plan Initiatives

**Safety**
Reduce preventable collisions and enhance passenger and operator security

**Service Reliability**
Improve reliability of transit service to ensure passengers are provided with the service they expect

**Subway Performance**
Reduce delays in the subway and improve the customer experience during delays

**LRV4**
Ensure that benefits of the new fleet are realized, and project delivery is on track

**Chase Center**
Operationalize service plan and implement for Chase Center opening
Suggested Plan Metrics

Safety: Reduce preventable collisions

Service Reliability
• Increase service delivery
• Maintain consistent headways on Rapid bus routes
• Improve on time performance on low frequency routes
• Reduce rail switchbacks

Subway performance
• Reduce subway travel time (also report travel time by rail line line)
• Reduce subway delay

LRV4
• Reduce breakdowns in service
• Increase number of vehicles in service

Chase Center: % ready for opening day (self assessment)
LRV4 Modifications On Track

Door Sensitive Edge Modifications

• 35 cars completed as of June 11
• All cars on track for June 30

Couplers

• End stops removed and shear bolts replaced for units without damage will be complete by June 30
• This will allow return of LRV4 Two-car Revenue Service operations without restriction by end of June as forecast
• For couplers with bearing housing damage, removal and replacement of the affected parts to be completed by July 31
LRV4 Reliability Challenges

• LRV4s had increased breakdowns and reduced vehicle availability in May

• Multiple issues contributing, but most significant due to brake component failure
  – Hydraulic Power Unit failure prevents brake release (brakes stay in locked condition as a fail safe)
  – Siemens and brake vendor are working to diagnose
  – Component has experienced other issues (already being addressed) but uncertain whether this recent issue is related
Major Subway Delays (May 1- June 11)

- Train signal issue at West Portal (May 21, early AM)
- Breda mechanical issue at Church Station (May 28, evening)
- LRV4 mechanical issue at Embarcadero Station (May 29, evening)
- LRV4 mechanical issue at Castro Station (May 30, PM peak)
- Switch violation (June 4, early AM to start of PM peak)
- Multiple compounding vehicle and infrastructure issues (June 10)
- Outbound service blocked by disabled train (June 11, AM Peak)
Subway Capacity Discussion
Follow up Board Item: Reducing Subway Congestion

Request: Investigate the effectiveness of using the Embarcadero crossover to turnback lines at Embarcadero
Weekday Actual vs Scheduled Subway Throughput

Subway Hourly Throughput

Gap between Sch. vs Act explained by delay (train queue)

PM Peak post recovery period

Weekday Scheduled Arrivals

Weekday Actual Arrivals
Lessons Learned from other Cities

Major Downtown Rail Terminals
Multiple simultaneous turnbacks at the terminal provide space and time for many trains to turnback at once.

Examples
Grand Central Station, NY
4th & King Caltrain Depot, SF
Union Station, LA

Downtown trunk line, turnbacks in the outskirts
Multiple simultaneous turnbacks off the main line provide space and time for many trains to turn at once.

Examples
Paris
Berlin
Helsinki
DC Metro
Muni Subway Today

2 Turnbacks

Three lines turning back at same location, while two more go through.

All trains require the same main line when making maneuvers.
Embarcadero Crossover

• Turnbacks on mainline reduce subway capacity because they block train movements in both directions for 3 to 4 min

• Embarcadero crossover is critical for managing incidents and gaps in service (similar to Castro)

• Current functionality of crossover limited, but will be enhanced as part of upcoming 90 day plan
Next Steps

To reduce subway congestion, we must:

- Reduce the number of trains turning back at MMT or;
- Increase the capacity to handle train turnbacks.

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<tr>
<th>Short Term</th>
<th>Medium Term</th>
<th>Long Term</th>
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<tbody>
<tr>
<td>Continue to improve efficiency of turnback operations</td>
<td>Explore additional locations for pocket tracks</td>
<td>Evaluate major capital improvements that improve system capacity</td>
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<td>Service changes targeted to reduce congestion</td>
<td>Improve efficiency of existing train control system</td>
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<td>Use Embarcadero/Harrison crossovers when beneficial</td>
<td>Pursue train control replacement</td>
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