



CRC Item No. 6 – May 19, 2017  
**Construction Update**  
May 2017

# Transbay Transit Center

**TJPA**





## Transbay Transit Center

Western Zone  
Gridlines 1 to 10

Central Zone  
Gridlines 10 to 20

Eastern Zone  
Gridlines 20 to 35



# Project Overview







1. Construction Activity
2. Safety & Labor Statistics
3. Budget Overview
4. Contingency Cost
5. Schedule
6. Risks/Operational Readiness

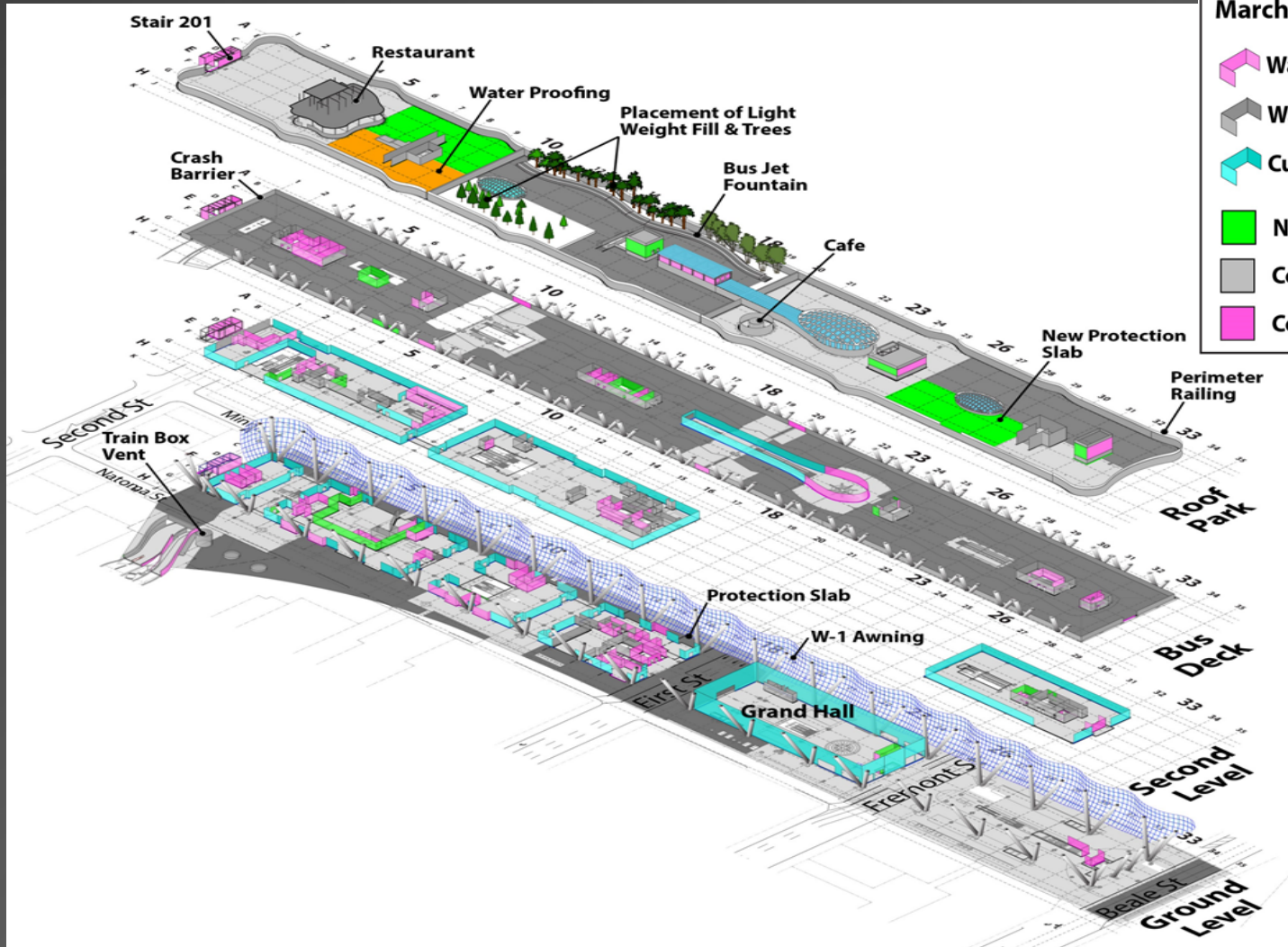




## Transit Center – Upper Levels and Roof Park

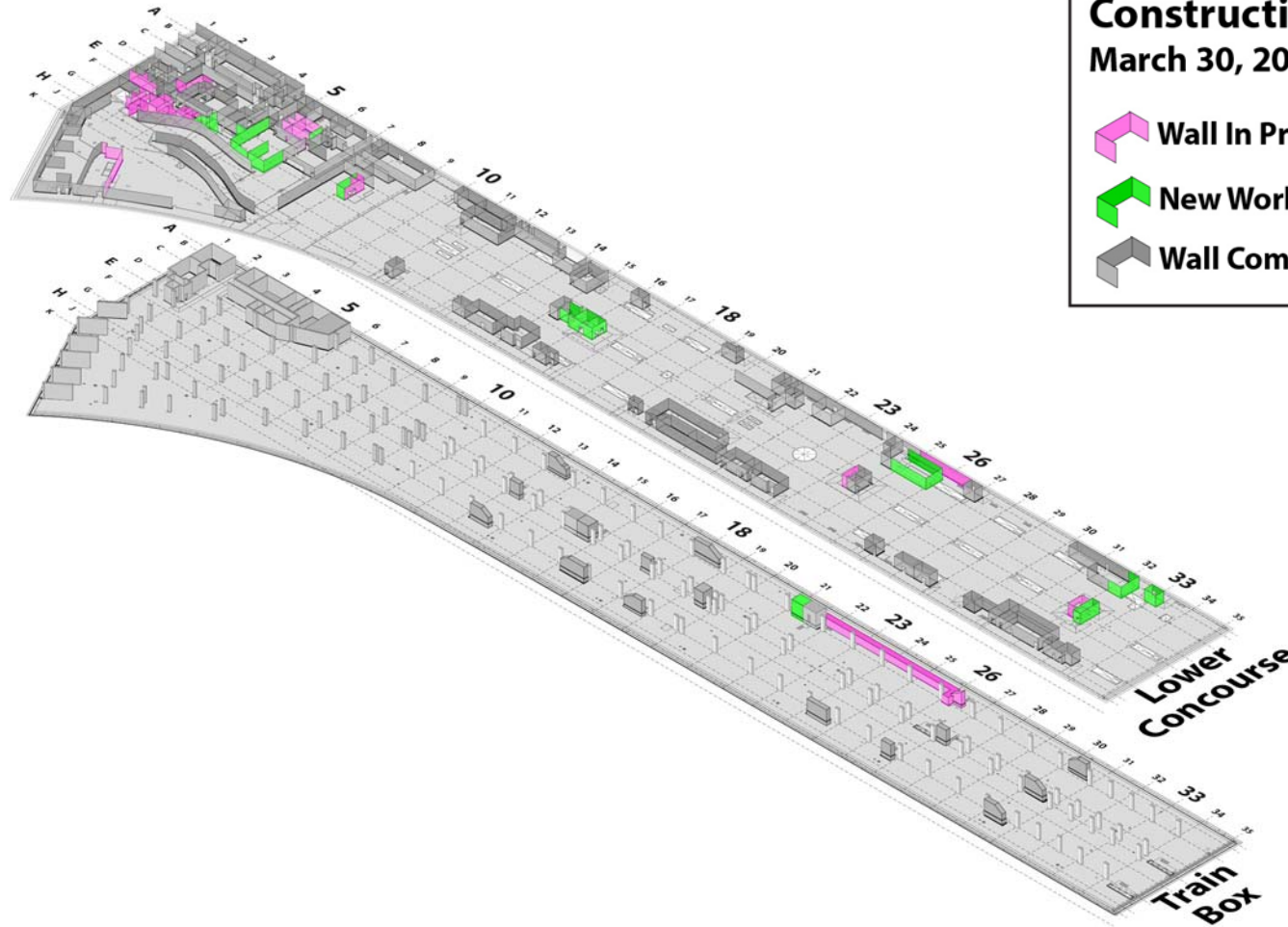
**Transbay Transit Center  
Construction Progress  
March 30, 2017 - April 27, 2017**

-  Wall In Progress
-  Wall Complete
-  Curtain Wall Complete
-  New Work Completed
-  Concrete Slab Complete
-  Concrete Slab In Progress





## Transit Center- Trainbox Lower Levels



**Transbay Transit Center  
Construction Progress  
March 30, 2017 - April 27, 2017**

-  Wall In Progress
-  New Work Completed
-  Wall Complete



## Western Zone (GL 1-10)

- Rooftop waterproofing and protection is underway.
- W1 Exterior Awning nearing completion.
- Bus Deck ceiling framing well underway.
- Main Distribution Frame (MDF) Room and Intermediate Distribution Frame (IDF) Rooms are underway. Electric switchgear and transformer rooms near completion.
- Equipment rooms buildout in progress. (Fire water tanks, Pumps, HVAC Units)
- Metal stud framing of walls, gypsum board, and curtain wall systems install underway.







## Central Zone (GL 10-20)

- Rooftop landscaping and fountain is underway in the north and south.
- All rooftop glass (W10 skylight, W8 glass canopy wall) is installed with trim and leak testing underway.
- Rooftop and Bus Deck seismic joint assembly/ install is in progress.
- Glass Curtain Wall systems install at the Bus Deck level and Ground level are nearing completion.
- Wall framing, gyp board, and metal wall panel enclosures in progress.
- Mechanical/Electrical/Plumbing/Fire Sprinkler (MEPF) install continues.
- Buildout of the Main Electrical, Switchgear and Main Transformer rooms continues.





## Construction Activity March and April 2017



### Eastern Zone (GL 20-35)

- Rooftop Café walls complete.
- Rooftop Light Column “Oculus” Skylight W4 Glass Curtain wall is installed with trim underway.
- Rooftop waterproofing and slab protection continues.
- W1 Exterior Awning installation now in progress.
- Bus Deck concrete drive aisle and pedestrian island nearing completion awaiting scaffold removal and bollards around Light Column.
- All levels now have metal stud framing of walls, gypsum board, curtain wall systems installation underway.
- MEPF systems installation and testing continues at all levels.





# Beale Street Bridge Removal March 2017



## SEQUENCE

1. Beale Street full closure Friday night March 4, 2017.
2. Bridge Demolition, underground utility work, OCS foundations and poles and
3. Beale Street backfill, compaction, Beale curb and gutter and other Civil work.
4. OCS foundations and poles completed - coordinated with other Projects.
5. Transbay permanent OCS Poles and switches, OCS overhead wires
6. Bus testing completed Friday night March 31, 2017.
7. Beale Street open Saturday April 1, 2017

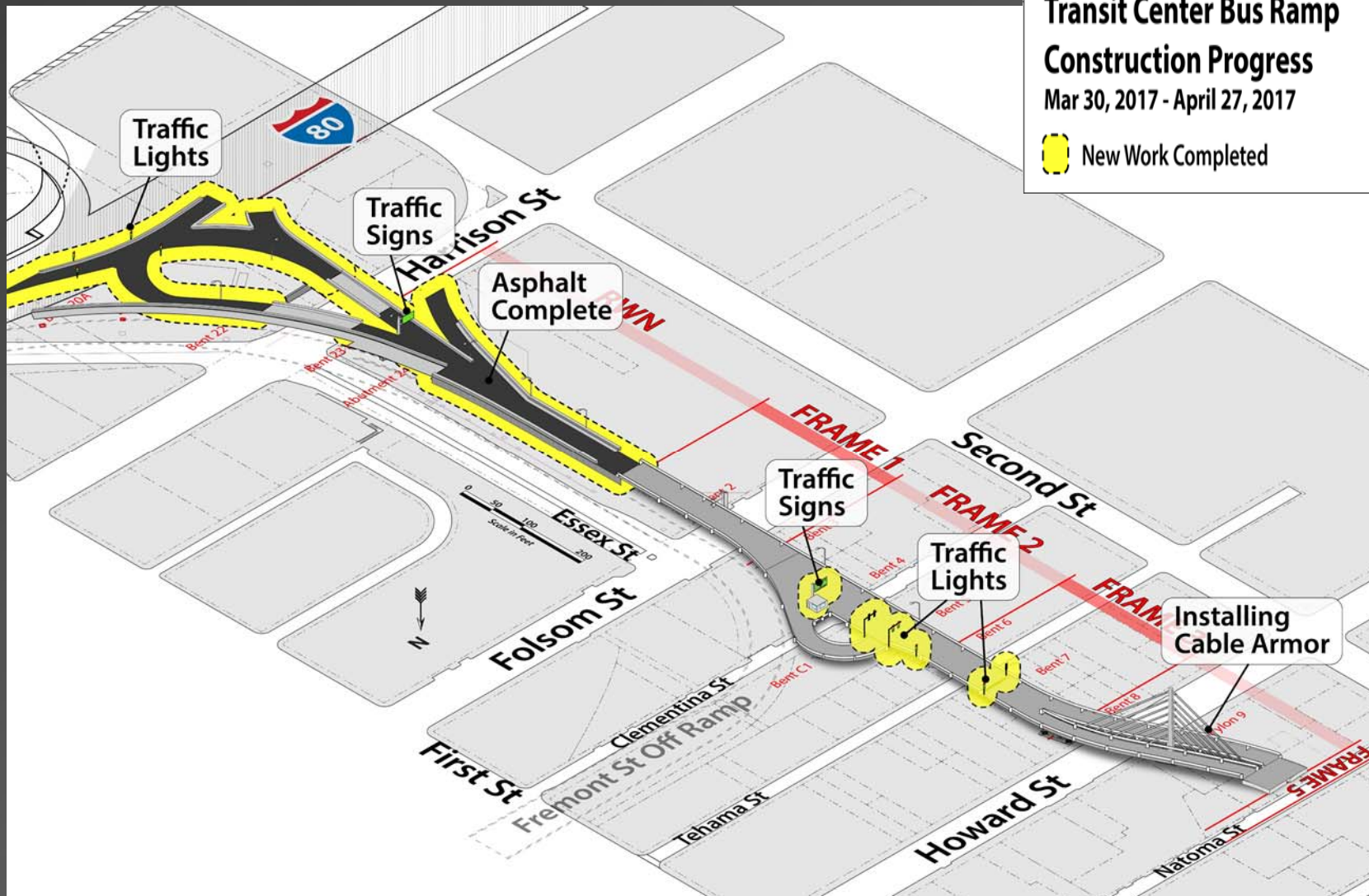




## Bus Ramp and Cable Stay Bridge

**Transit Center Bus Ramp  
Construction Progress**  
Mar 30, 2017 - April 27, 2017

 New Work Completed





## Bus Ramp/Bridge

- All approach slabs and final asphalt paving is complete at all areas of the Bus Ramp.
- Concrete barriers and ST-10 steel railings near complete all areas.
- Security Guard Booth and security cameras are in testing.
- Overhead message signs, Ramp street lights and ramp crash cushions are now installed.
- On Ramp Bus Test with both AC Transit and SFMTA for final striping was satisfactorily completed on April 19-20.
- Cable Stay Bridge contractor (VSL) is near completion.

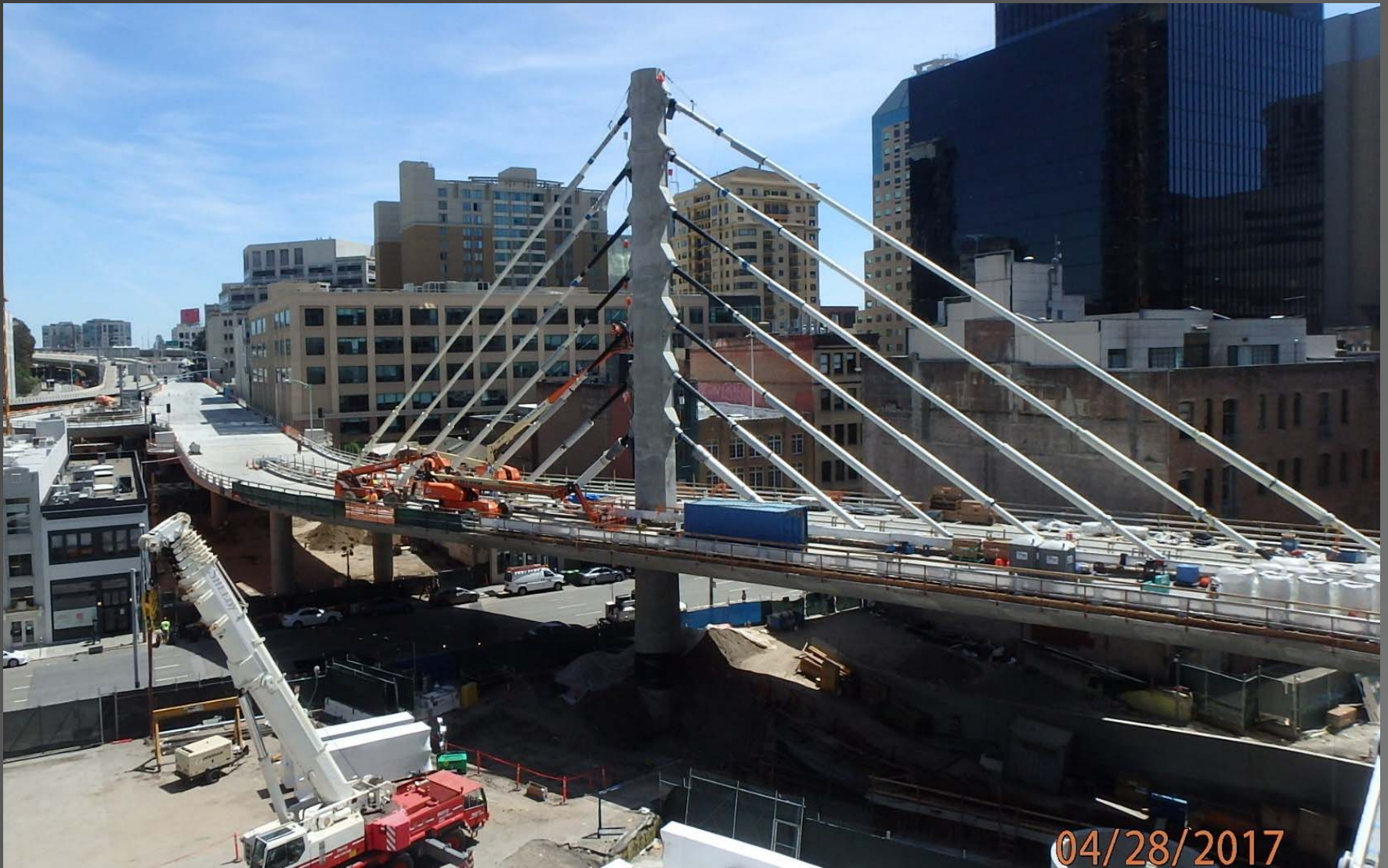






Transbay Transit Center

# Construction Activity







## Bus Storage Facility

- Contract awarded to Ghilotti Construction Company at March TJPA Board Mtg.
- Project Labor Agreement (PLA) Meeting with Building Trades was held April 19<sup>th</sup>.
- Pre-Construction (Kick-off) Meeting was held April 20<sup>th</sup>.
- Archaeology field work was completed May 1<sup>st</sup>.
- Neighborhood public outreach initiated in April.
- Parking Vendor and patrons notified that all parking will cease on May 15<sup>th</sup>.
- Construction completion is Summer, 2018.





Safety Week 2017





## Recordable & Lost Time Incidents:

<b>Recordable Incidents this period – March &amp; April 2017:</b>	<b>2</b>	<b>Lost Time Incidents this period – March &amp; April 2017:</b>	<b>1</b>
<b>Total Recordable Incidents in 2017:</b>	<b>3</b>	<b>Total Lost Time Incidents in 2017:</b>	<b>1</b>
<b>WOJV Average Annual Recordable Incident Rate 2011 Through 2015</b>	<b>3.04</b>	<b>WOJV Average Annual Lost Time Incident Rate 2011 Through 2015:</b>	<b>0.38</b>
<b>Nat'l/ State Annual Average Recordable Incident Rate 2011 Through 2015:</b>	<b>2.76</b>	<b>Nat'l/ State Annual Average Lost Time Incident Rate 2011 Through 2015:</b>	<b>1.36</b>

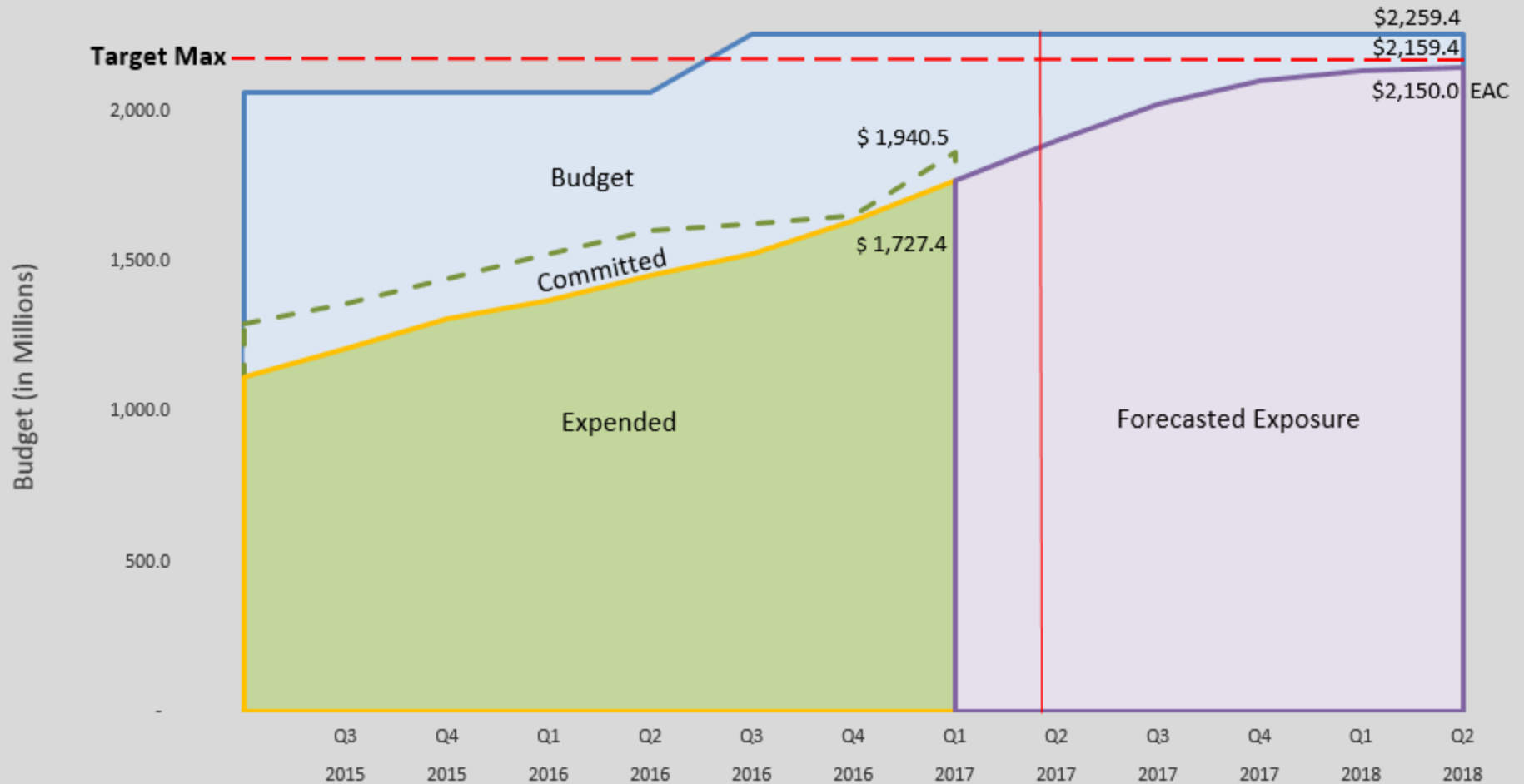
## Craft Hours:

<b>Total Transit Center Craft Hours Year 2011 - YTD 2017 :</b>	<b>Total Hours this Period – <u>March &amp; April 2017:</u></b>	<b>Total Transit Center Craft Hours YTD 2017 :</b>
<b>3,423,919</b>	<b>376,839</b>	<b>578,004</b>





Phase 1  
Transbay Transit Center  
Data thru: March 17



76% Program Budget  
90% Contract Time



# Phase 1 Budget & Expenditures (in millions)

(\$ Millions)	<u>Budget</u>	<u>Committed</u>	<u>Expended</u>	<u>Balance</u> (Budget less Committed Costs)
Construction Costs	\$1,545.6	\$1,386.5	\$1,187.5	\$159.0
Program-wide Costs (Soft Costs)	\$604.4	\$554.0	\$539.9	\$50.5
Contingencies & Reserves	\$109.4	\$0.0	\$0.0	\$109.4
<b>TOTAL</b>	<b>\$2,259.4</b>	<b>\$1,940.5</b>	<b>\$1,727.4</b>	<b>\$318.9</b>



Sources	Amount (\$millions)	Expended to Date	Balance
Land Sales	\$519.60	\$492.81	\$26.80
FRA Grants	\$402.70	\$402.65	\$0.05
TIFIA Loan	\$171.00	\$59.92	\$111.09
Bridge Loan	\$153.50	\$141.65	\$11.85
FTA Grants (including One Bay Area Grant)	\$68.40	\$61.47	\$6.93
FEMA Grants	\$0.10	\$0.10	\$0.00
Regional Measures 1 & 2	\$197.40	\$195.30	\$2.10
AB 1171	\$150.00	\$146.93	\$3.07
San Francisco Prop K	\$139.30	\$127.06	\$12.24
AC Transit Capital Contribution	\$39.70	\$39.47	\$0.23
Regional Transportation Improvement Program	\$10.20	\$10.15	\$0.05
Miscellaneous Local	\$15.40	\$10.25	\$5.15
San Mateo County Sales Tax	\$4.50	\$4.50	\$0.00
Transit Center District Plan (Mello-Roos CFD)	\$146.40	\$0.00	\$146.40
City Financing	\$241.20	\$35.16	\$206.05
<b>Total Funds</b>	<b>\$2,259.40</b>	<b>\$1,727.40</b>	<b>\$532.00</b>

Note: Expenditures include retention withheld, but not paid out.



## Contingency Tracking (\$millions)

	Construction Contingency	CM/GC Contingency	Program Reserve	Total Contingency & Reserve
Baseline Budget Amounts	\$61.8	\$32.5	\$116.9	\$211.3
Contingency Usage Through Feb 2017	(\$22.1)	(\$2.0)	\$5.1	(\$19.2)
Remaining Baseline Budget Amounts (Feb 2017)	\$39.7	\$30.5	\$122.0	\$192.2
Total Draws/Adds March 2017	(\$0.5)	(\$0.1)	(\$0.0)	(\$0.6)
Remaining Balances	\$39.2	\$30.4	\$122.0	\$191.6

### Uses of Contingency this period:

Misc. Metals changes, Misc. Electrical changes, Civil Works and MEP trades and Fireproofing. Bus Ramp Project misc. changes.

### Forecasted Contingency Use

CM/GC: \$0.6

Construction: \$3.7

Program Reserve: \$0



# Risk Assessment Update for the \$2.259B approved budget

## Mitigated

Confidence Level	<u>Bottom Up Model</u>		<u>Top Down Mode (FTA)</u>	
	EAC	Anticipated Savings	EAC	Anticipated Savings
30%	\$ 2,146	\$ 114	\$ 2,157	\$ 103
50%	\$ 2,149	\$ 110	\$ 2,183	\$ 76
70%	\$ 2,154	\$ 105	\$ 2,216	\$ 43

- Assumes schedule is mitigated for December 2017 Substantial Completion, minimal claims, adherence to schedule and strict control over change orders.

## Unmitigated

Confidence Level	<u>Bottom Up Model</u>		<u>Top Down Mode (FTA)</u>	
	EAC	Anticipated Savings	EAC	Anticipated Savings
30%	\$ 2,200	\$ 60	\$ 2,175	\$ 85
50%	\$ 2,212	\$ 47	\$ 2,212	\$ 47
70%	\$ 2,230	\$ 29	\$ 2,258	\$ 1

- Assumes schedule slippage to March 19, 2018 and no mitigation.

NOTE: The information above are based on Risk Management Committee Meeting No. 8, in September 2016.





## Top Risks

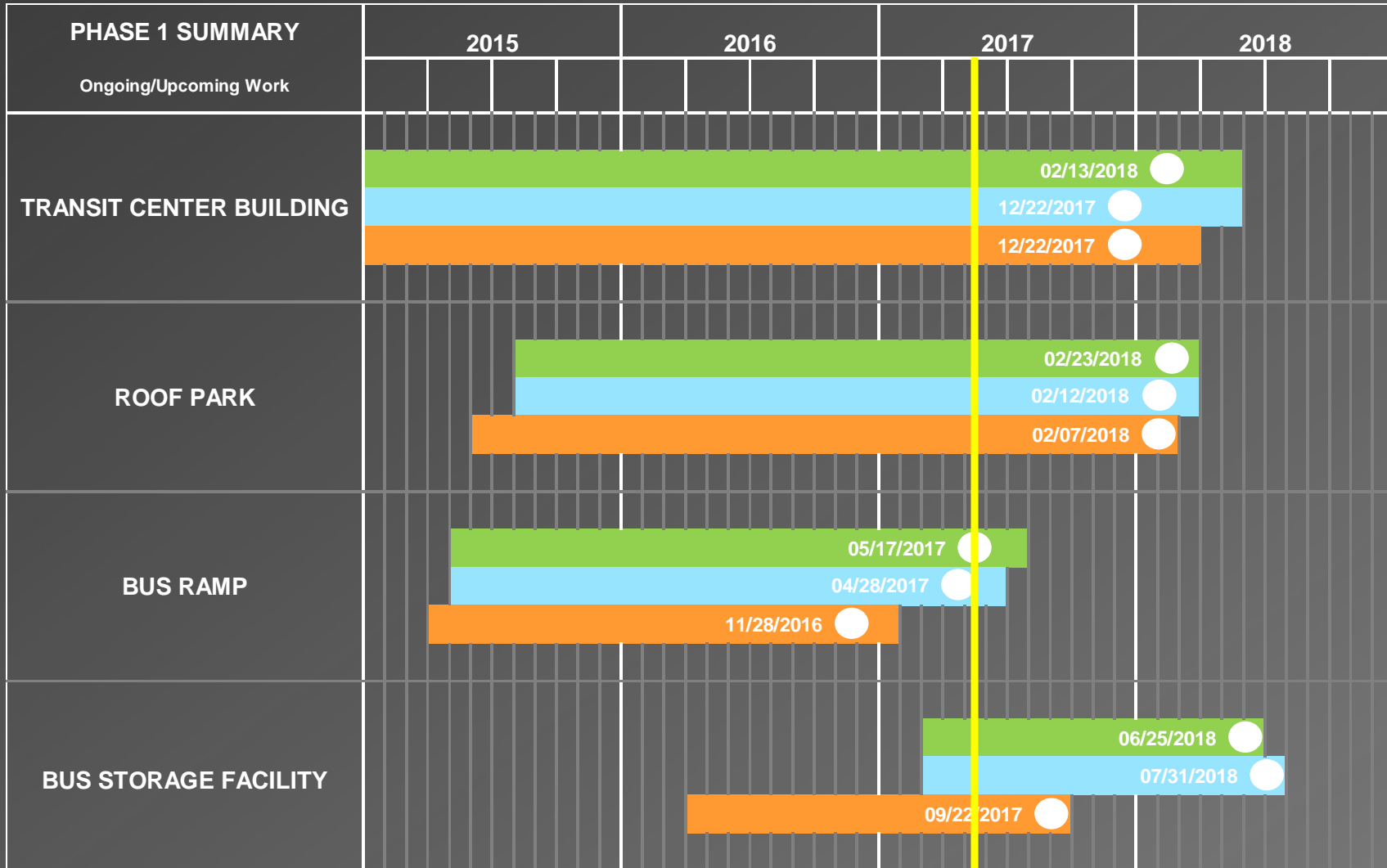
- **Schedule Mitigation**
- **Future Claims from trade contractors**
- **Compatibility Issues between various Building Management Systems and Communication Systems**
- **Market pricing - Bus Storage**

NOTE: The information above are based on Risk Management Committee Meeting No. 8, in September 2016.



# Transbay Transit Center

# Schedule



### LEGEND

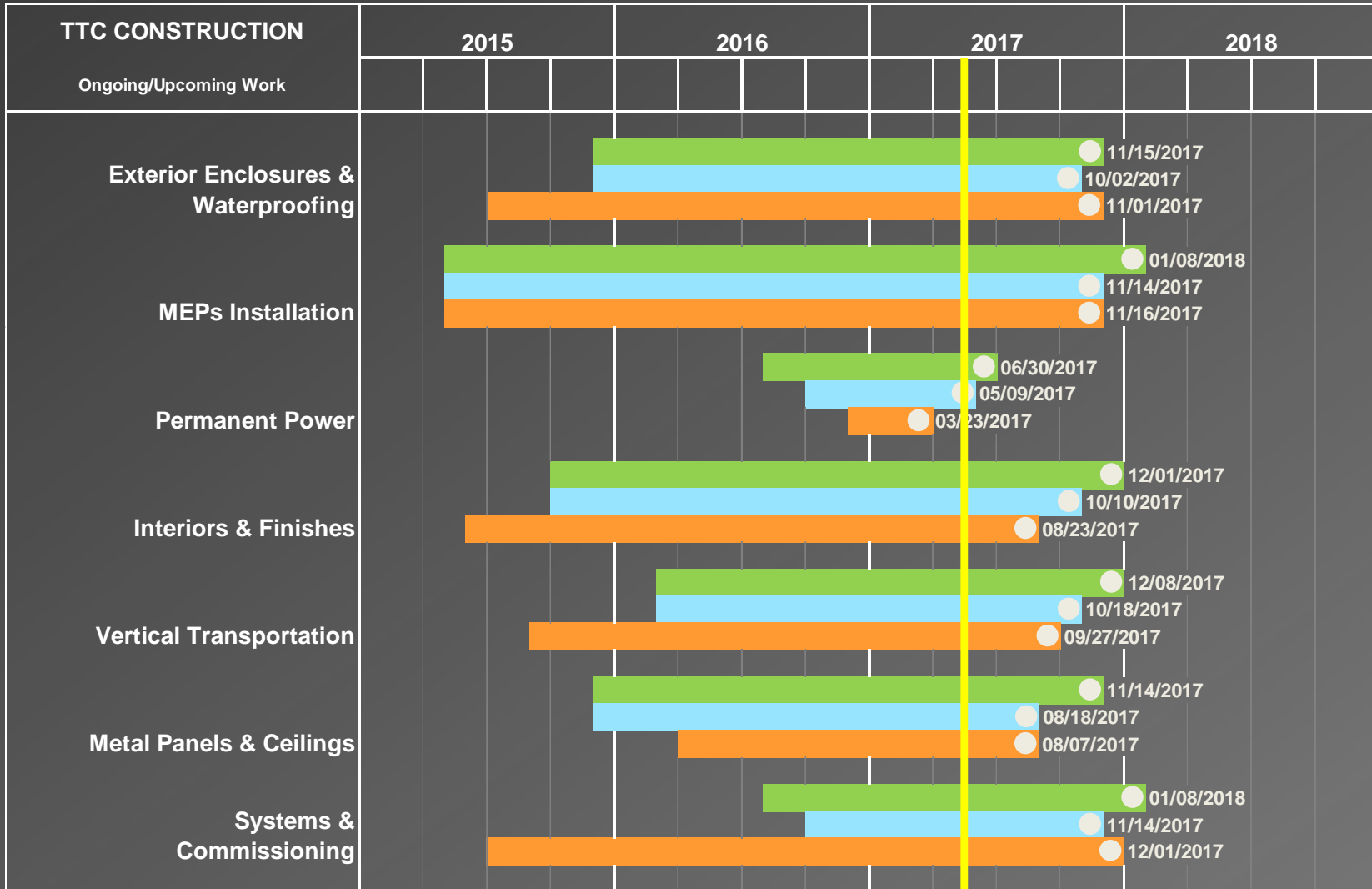
- Current Forecast
- Previous Report
- Baseline
- Substantial Completion





# Transbay Transit Center

# Schedule



### LEGEND

- Current Forecast
- Previous Report
- Baseline
- Construction Complete



## Schedule

Schedule currently indicating a 7 week slippage on Substantial Completion.

### Challenged Activities include:

1. Electrical Subcontract both Normal Voltage and Low Voltage Distribution.
2. Main & Intermediate Distribution Frame Rooms. (MDF & IDF Rooms)
3. Concern on Roof Park soil installation.

### Mitigation Measures

1. Enlisted additional 2<sup>nd</sup> Tier Electrical Subcontractors for selective work.
2. Implementation of strategic premium time work hours on weekends.
3. WOJV elevated focus on Commissioning with new personnel.
4. Project Leadership issue resolution forum continues to avoid delays.





## Systems Installation & Commissioning

Building Management, Fire / Life Safety and Security Systems installation and commissioning activities will drive the schedule as we approach Substantial Completion.

### Pre-Mitigation Strategy

1. Focus of Bimonthly Temporary Certificate of Occupancy (TCO) Meetings.
  - Activity Concentration on Priority Electrical and Data Rooms.
  - Permanent Power to Power to Building.
2. SFFD Fire Alarm Review and Approvals followed on Risk List closely.
3. Specific Items to monitor:
  - Roof Park Pylons relationship to Fire Alarm System as well as Emergency Communication System / Mass Notification.
  - Door Hardware interface & coordination with Building Management Systems & Security Systems.



## Concerns

1. Asset Manager Delayed On-Boarding Impact.
  - Building Systems Commissioning.
  - Building Systems Testing, Training and Hand Off.
2. Timely Transit Operator's Transition.
  - Route "Sign-On" & Driver Training Schedules.
  - Transit Operator's Tenant Improvements, Fixtures, Furniture, & Equipment.
3. Establishment of Operational Budget & Plan.
  - Security Staffing.
  - Facility & Park Operations Staffing.





## Concerns

4. Completion of MOU's and Agreements with Transit Operators.
  - Transit Agency participation letters / term sheets distributed.
  - Related Tenant Improvement Completion.
  - Sidewalk Legislation Approval – curbside operations.
5. Neighboring Project Work.
  - Street closures and related disruptions.
  - Mission Square completion schedule.



## Transition Update

- Final Transition Plan & Schedule now positioned to advance in full force:
  - Facility Manager – Hired and Began Work on April 17, 2017.
  - Chief Security Officer – Hired and Began Work on April 17, 2017.
  - Asset Manager –
    - Contracting approved by Board at March Meeting.
    - Contracting and Planning Advancing.
- Forecast for Full Transit Operations Remains:
  - AC Transit : March 2018
  - Muni : March 2018
  - Others : To be determined
- Primary Transition window remains in January & February 2018.



Transbay Transit Center

# Plan for 2017 Operational Readiness

## Transit Operators

Bus Deck & Grand Hall

Training: August 2017

Activate: TBD

Greyhound Waiting Area

Tenant Improvements Start: TBD

Activate: TBD

Security Operations  
Center

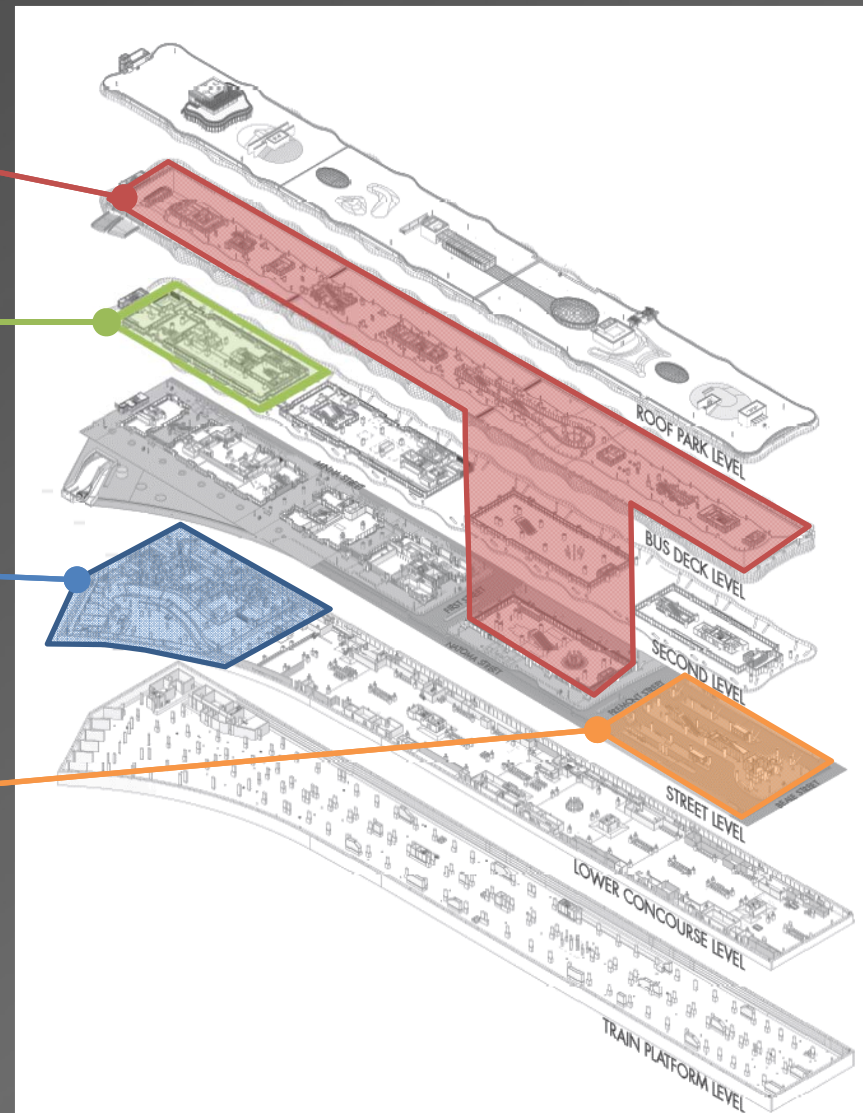
Training: October 2017

Activate: TBD

Bus Plaza

Training: July 2017

Activate: TBD







# Plan for 2017 Operational Readiness

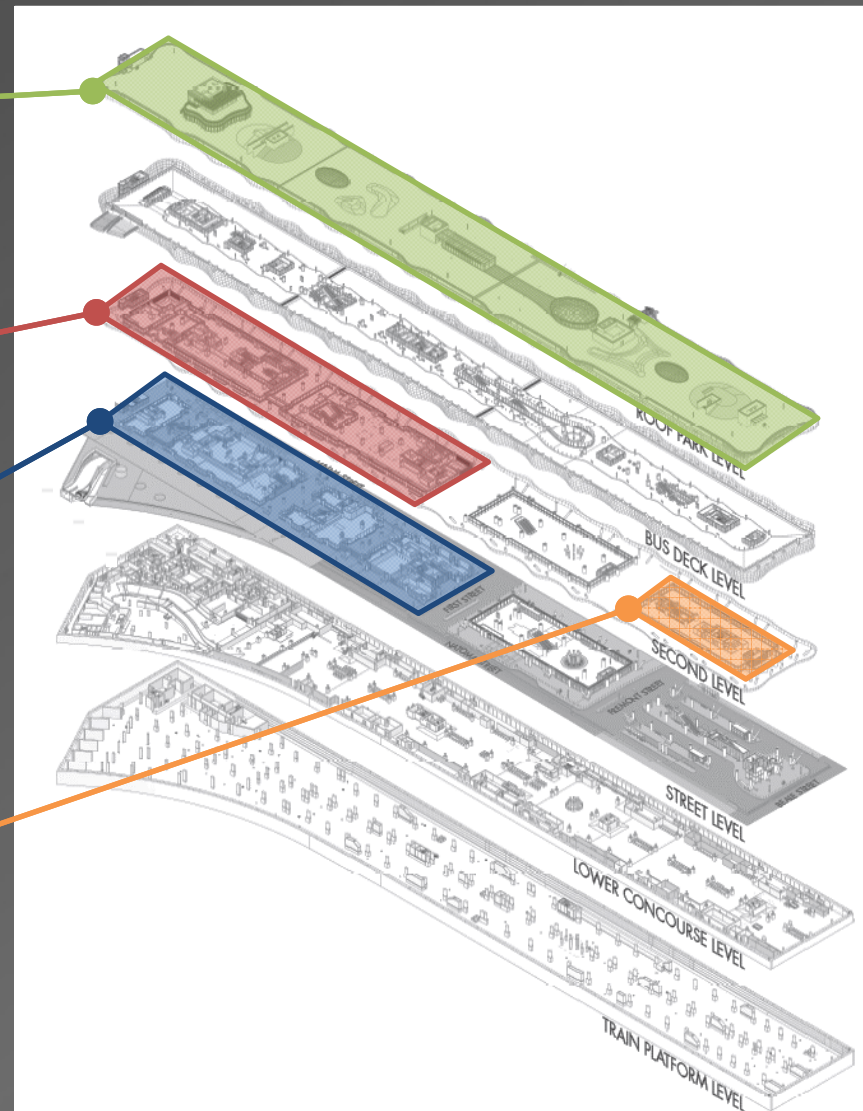
## Asset Manager

Rooftop Park & Restaurant  
Park Activation: February 2018  
Restaurant TI: TBD  
Restaurant Activation: TBD

Second Floor Retail - West  
Tenant Improvements Start: July 2017  
Tenant Improvements Complete: TBD  
Activate: TBD

First Floor Retail - West  
Tenant Improvements Start: July 2017  
Tenant Improvement Complete: TBD  
Activate: TBD

Second Floor Retail - East  
Tenant Improvements Start : July 2017  
Tenant Improvement Complete: TBD  
Activate: TBD





Transbay Transit Center

# Activated Bus Operations

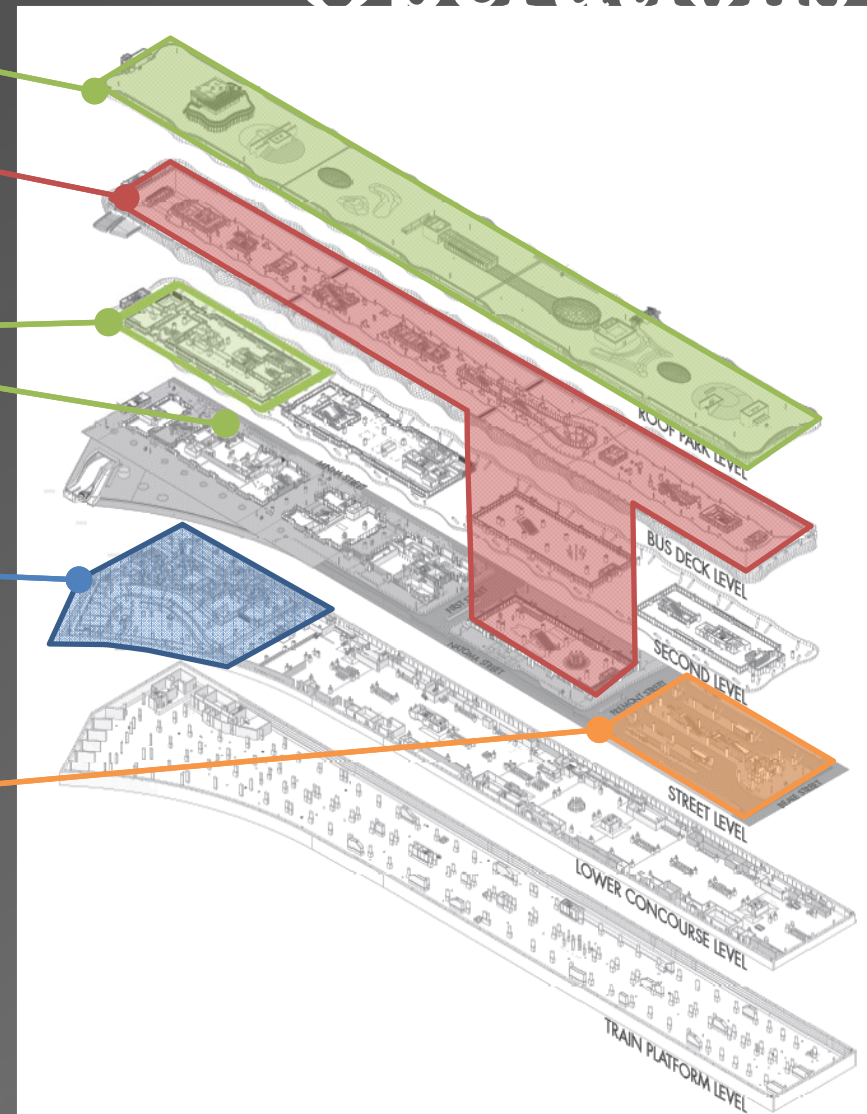
Rooftop Park

Bus Deck & Grand Hall

Greyhound & Amtrak

Security Operations Center

Bus Plaza





- Convened Communications Staff from Partner Agencies to Discuss Initial Ideas and Form Working Group:
  - San Francisco Public Works
  - AC Transit
  - San Francisco Municipal Transportation Agency
  - Additional Partner Agencies, Including Funding Partners, will be incorporated as Planning Process Proceeds (Caltrain, CalTrans, SFCTA, MTC)
- Proposed Event Details
  - Program in Grand Hall (Eliminates Weather Uncertainty)
  - “Open House” Following Program to Allow Public to Explore TTC and Rooftop Park
  - Planned for Week of President’s Day in 2018
    - ❖ Falls Immediately After Park Completion and Just Before Beginning of AC Transit Operations
    - ❖ Coincides with Congressional Recess
- Media Tours Scheduled for Week Preceding Opening Event



