



CAC Phase 2 Update

June 7, 2016

Transbay Transit Center

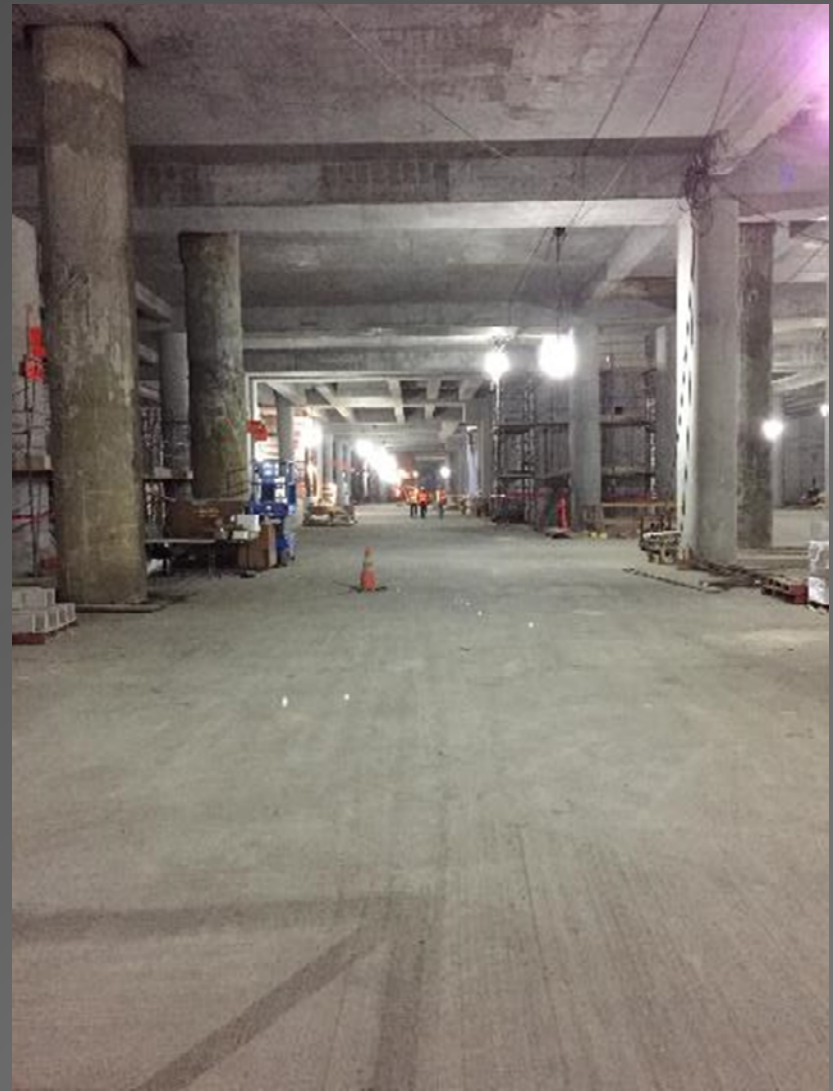
TJPA





Phase 2 Update Agenda

- Project Overview
 - Scope
 - Construction Methodology
- Budget/Cost Estimate History
- Status of Cost Estimate Refresh Effort
- Delivery Plan
- Funding Plan
- Next Steps





Project Overview Scope

The DTX extends rail service to downtown San Francisco (1.95 miles of construction)

Transbay Transit Center

Existing Caltrain Station

Downtown Core





Phase 2 Status

- Supplemental EIS/EIR issued for public comment December 2015; ROD anticipated by end 2016
- DTX 30% Preliminary Engineering (PE) completed in 2010; modifications included in SEIS/EIR require further design
- TTC Design at the 50% Construction Documents (CD) level
- Obtained final sign-off by Federal Railroad Administration (FRA), California High-Speed Rail Authority (CHSRA), and Caltrain for modifications to accommodate high-speed rail
- Alternative delivery options to be presented in July
- On-going coordination with the Railyard Alternatives and I-280 Boulevard Feasibility (RAB) study, FTA, Caltrain and CHSRA



Phase 2 Scope

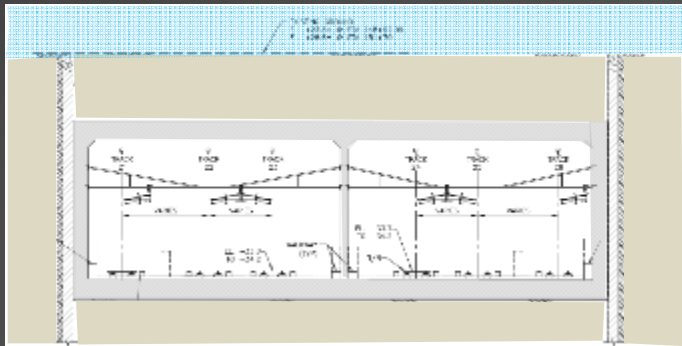


Element added (*) or modified (^) in the SEIS/EIR

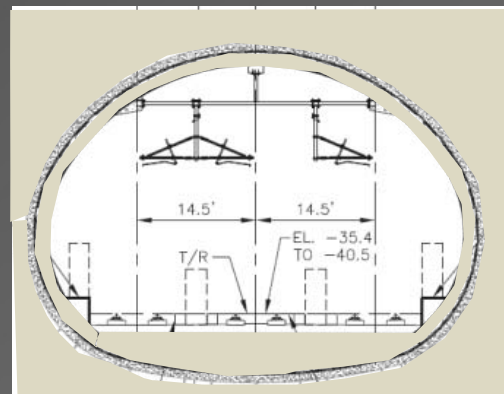


DTX Typical Cross Sections

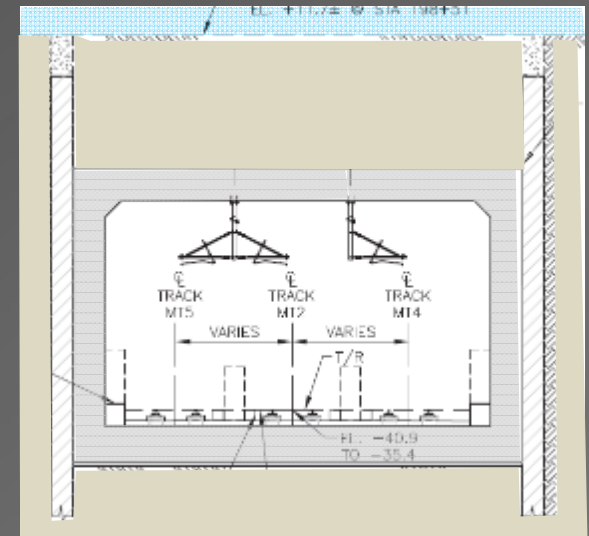
Cut-and-Cover
Throat Structure
Expands from three to six tracks



Mined Tunnel
(sequential excavation method)
Three tracks



Cut-and-Cover
in Townsend Street
Expands from two to three tracks





DTX Operations Needs

Why do we need 3 tracks?

- Operations analyses approved by the FRA, Caltrain and CHSRA required three tracks.
- Train operations at higher frequencies will often require staging two trains entering DTX, while the third track is used for outbound trains.
- A disabled train in the three-track tunnel can be bypassed using the other two tracks. A two-track tunnel is vulnerable to a single point of failure, which limits capacity.
- CHSRA trains must be able to bypass stopped Caltrain trains at the Fourth and Townsend Underground Station.
- Common boarding heights allow trains to use any platform. The third track facilitates the free movement of trains to any platform.

Phase 2 Transit Center



Current Phase 2 Scope

1. Train box Extension/Train box Fit-out
2. Intercity Bus Facility
3. Ventilation Structures
4. BART/Muni Pedestrian Connector
5. Cut-and-cover Throat Structure
6. Sequential Excavation Method (SEM)
Mined Tunnel/Cut-and-cover & U-wall on
Townsend
7. Fourth and Townsend Underground
Station
8. Tunnel Stub for Future Grade Separation
9. Turnback & Maintenance-of-Way (MOW)
tracks



Phase 2 Added and/or Modified Scope by SEIS/EIR

1. Extended Train box
2. Added ventilation structures
3. Added Intercity Bus Facility
4. Added BART/Muni Pedestrian Connector
5. Widened Throat Structure
6. Modified Fourth and Townsend Underground Station
7. Added Tunnel Stub for Future Grade Separation
8. Added Turnback and MOW tracks





Transbay Transit Center

Project Overview Phase 2 Construction Methodologies





Transbay Transit Center

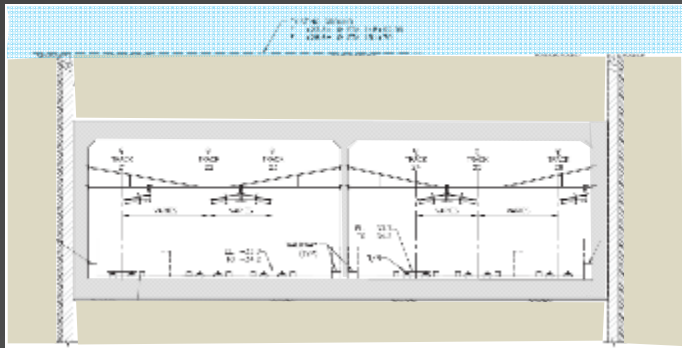
DTX Tunneling: Methodologies





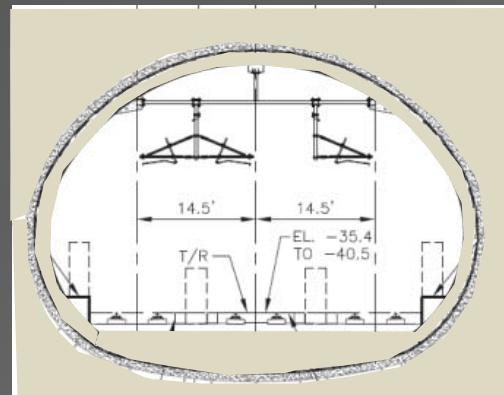
DTX Tunneling: Methodologies

Cut-and-Cover
Throat Structure
Expands from three to six tracks



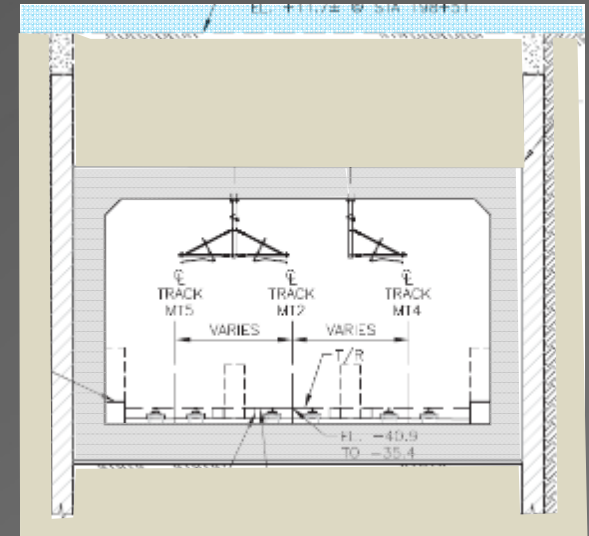
~155'

Mined Tunnel
(sequential excavation
method)
Three tracks



~55' typical

Cut-and-Cover
in Townsend Street
*Expands from two to
three tracks*

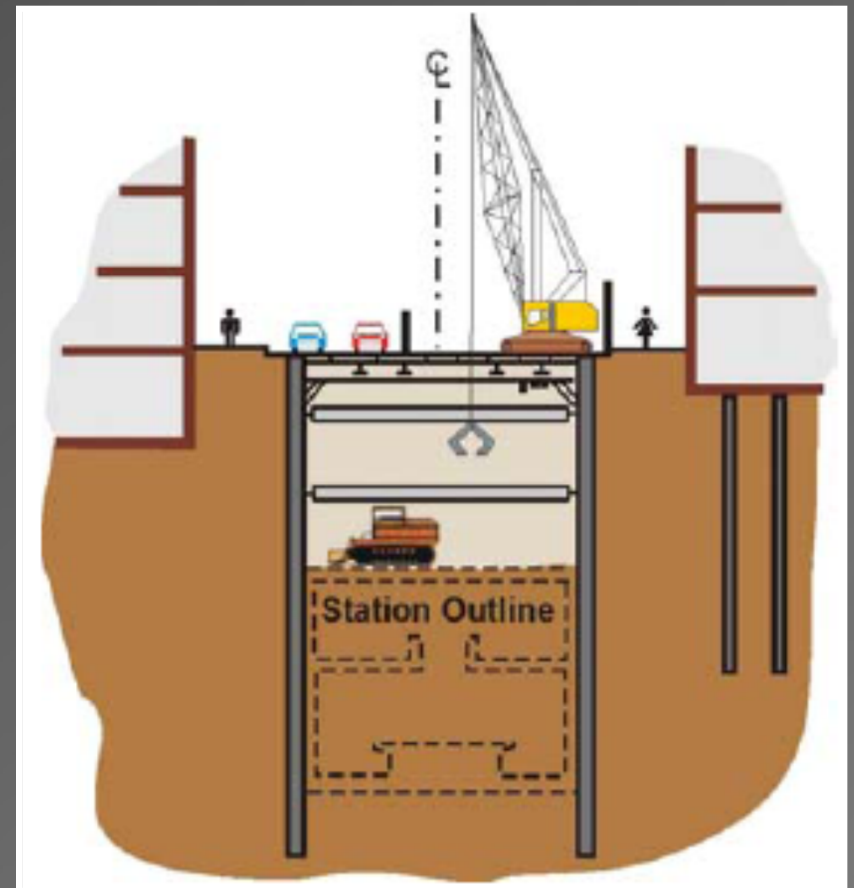


~80'



DTX Tunneling: Cut & Cover Structures

- Deep soil mix support of excavation
- Internal bracing
- Street decking
- Excavation depth 40' to 85'
- Cast-in-place concrete box





Transbay Transit Center

Ground Conditions

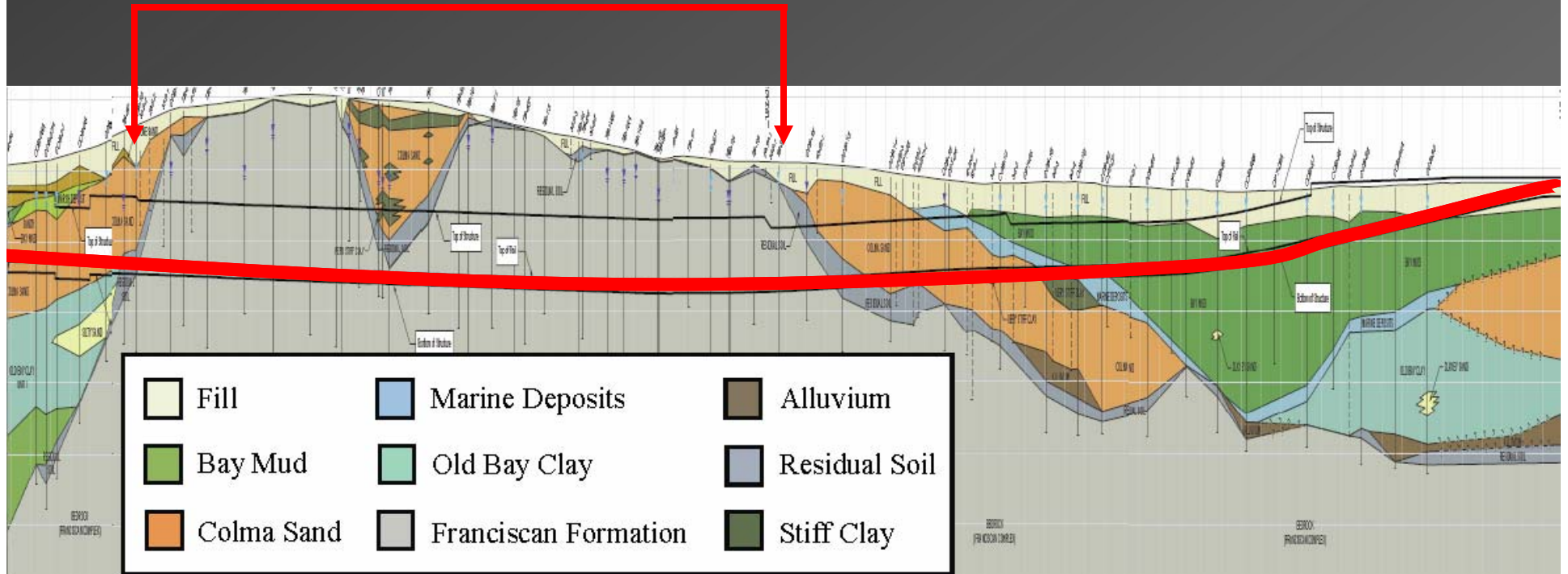


..... Original shoreline



Geotechnical Soil Profile

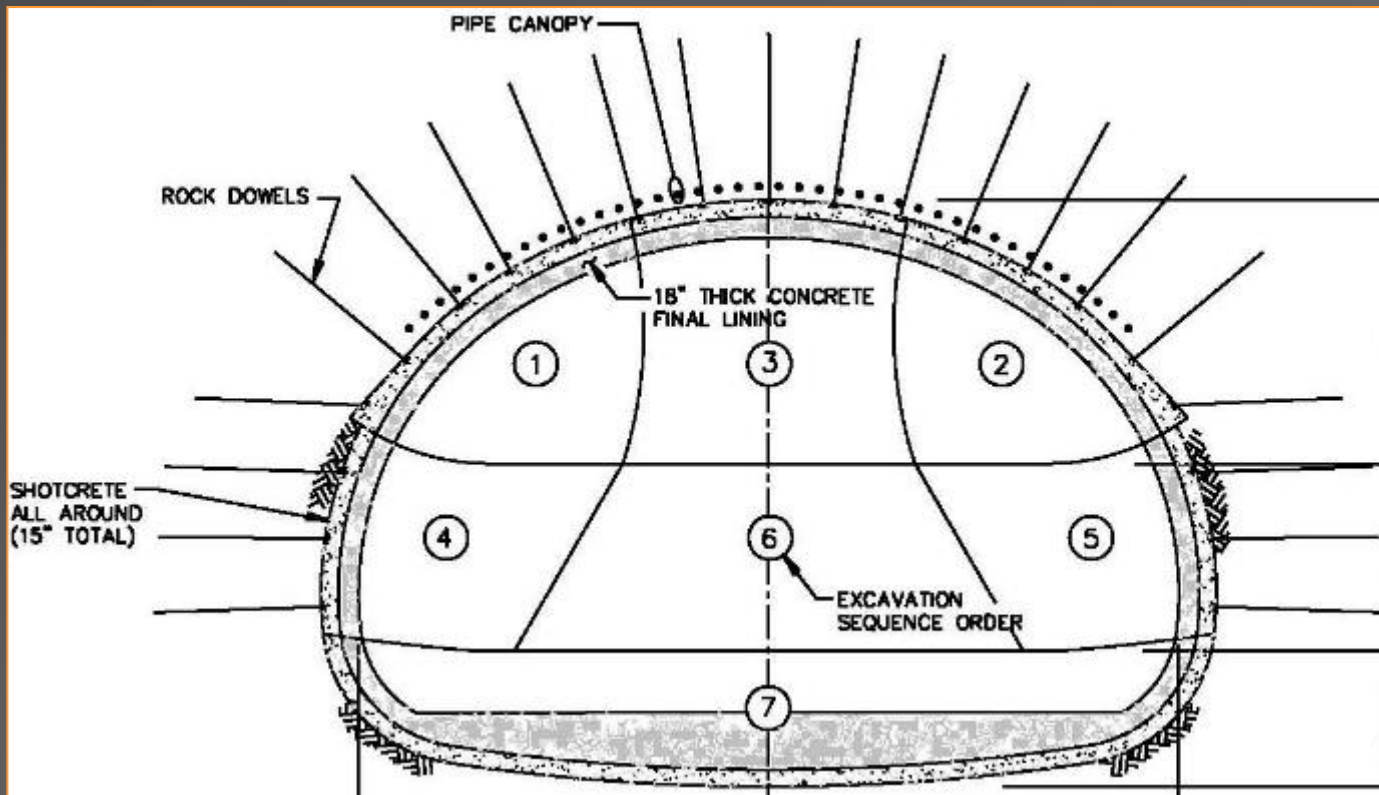
Limits of mined tunnel segment





DTX Tunneling: Mined Tunnel

- 3,210 ft mined tunnel
- SEM/NATM offered best value to Owner for construction, schedule and risk





Transbay Transit Center

SEM: Side Drift Headings





SEM Benefits

Why SEM tunneling for DTX?

- Complex, challenging, and shallow cross sections
- Risk of settlement is minimized by SEM geometry
- Support is tailored to ground conditions in real time
- Equipment procurement is streamlined and economized
- Schedule can benefit from multiple headings and flexibility



Transbay Transit Center

Bay Area SEM Tunnel Successes



Caldecott Tunnel Fourth Bore



Devil's Slide Tunnels



Claremont Tunnel



Budget and Cost Estimate History

Phase 2 2008 Budget Background

March 2008 (based on 2004 FEIS/EIR): TJPA Board approved a budget of \$2.996B

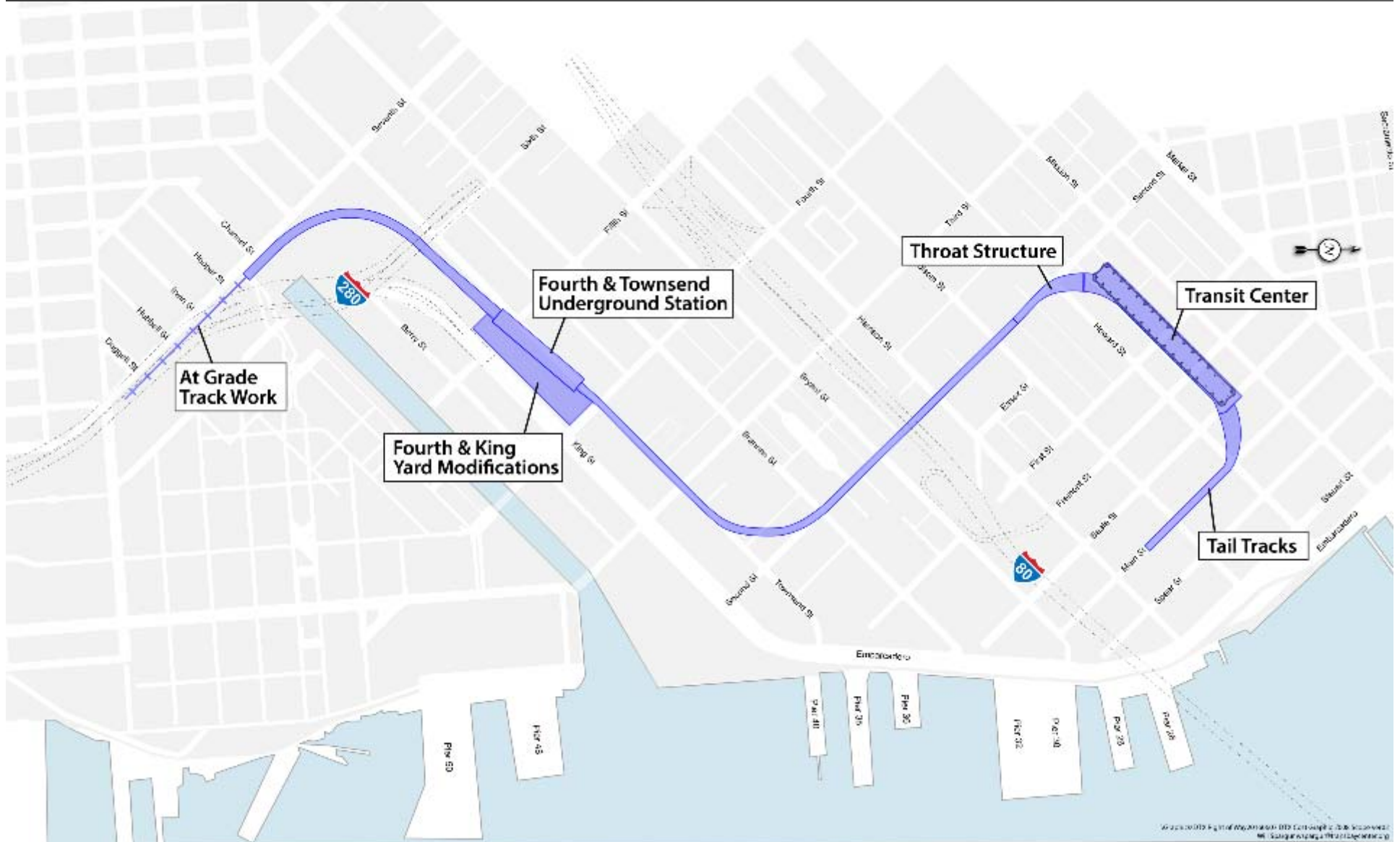
Budget Assumptions

- Scope:
 - Downtown Rail Extension (DTX)
 - Transit Center below grade train box and station (top down)
 - Tail Tracks
- Delivery Method
 - Design Bid Build
- Schedule
 - Construction begins 2011
 - Testing and commissioning 2017
 - Caltrain operations 2018
- Escalation: 4%



Transbay Transit Center

2008 Phase 2 Budget Configuration



2008 Phase 2 Budget Summary

2007 DOLLARS (X\$000)	TRANSBAY TRANSIT CENTER	DOWNTOWN RAIL EXTENSION	TOTAL PHASE 2
Construction	310	956	1,265
Design Contingency	60	154	214
Subtotal	369	1,110	1,479
Escalation	113	340	453
Total Construction Cost	482	1,450	1,932
ROW	-	163	163
Programwide	123	430	553
Program Cost	606	2,042	2,648
Construction Contingency	48	145	193
Program Reserve	39	116	155
Subtotal Contingency & Reserve	87	261	348
Total Program Cost	692	2,303	2,996

- Estimate prepared in December \$2007



2010 Revised Phase 2 Baseline Budget

May 2010: Reallocated the train box scope to Phase 1 in anticipation of receipt of \$400M ARRA funding. **Revised Baseline Budget from \$2.996B to \$2.596B**

Budget Assumptions

- Revised Scope:
 - Downtown Rail Extension (DTX)
 - **Transit Center below grade station fit-out only (bottom up)**
 - Tail Tracks
- Delivery Method
 - Design Bid Build
- Schedule
 - Construction begins 2011
 - Testing and commissioning 2017
 - Caltrain operations 2018



Phase 2 Cost Estimate History

- July 2010: DTX 30% PE estimate completed by Parsons
 - DTX Construction Estimate: \$1.171B
 - Year of Operation: 2017
- June 2012: TTC 50% CD Estimate Completed by PCPA
 - Train Box fit-out including the Intercity Bus Facility Construction Estimate: \$146.6M
 - Train Box Below Grade Extension Construction Estimate: \$47.7M
 - Total TTC Phase 2 Construction Estimate: \$194.3M



2013 Combined Phase 2 Cost Estimate Revision

Major Revisions since the 2008 Budget:

- Deleted Tail Tracks
- Added Train Box Extension and widened existing Throat Structure
- Added Above Grade Intercity Bus Facility
- Added Tunnel Stub Box under the U-wall to accommodate future DTX underground extension and grade separation
- Increased depth of Fourth and Townsend Street Station
- TJPA increased contribution to Railyard reconfiguration
- Increased ROW acquisition Budget
- Revise Train Operations date to 2024
- Revise escalation from 4% to 3%



Phase 2 Cost Estimate Escalation History

2008 Phase 2 budget assumption: 4% escalation

2013 Revised assumption: 3% escalation

- CPI 10 yr average: 2.4%
- HSR: 2% 2013-15; 3% 2016 & beyond
- MTC Plan Bay Area: 2.2%







Transbay Transit Center 2013 Phase 2 Cost Estimate

YEAR OF EXPENDITURE DOLLARS (X\$000)	COST
Construction Cost (DTX& TTC):	\$1,290,320
Design Contingency:	\$205,816
Subtotal	\$1,496,136
Escalation	\$449,240
Construction Cost (with Design Contingency and Escalation)	\$1,945,376
ROW	\$266,200
Programwide	\$418,590
Program Cost	\$2,630,166
Construction Contingency	\$183,819
Program Reserve	\$190,750
Subtotal Contingency and Reserve	\$374,569
Total Program Cost	\$3,004,735

- Estimate Date: October 2013; Delivery Method: DBB ; Year of Operation: 2024



Phase 2 MTC Cost Review

- **Construction Schedule: 7 years found to be reasonable**
- **Indirect Cost Markup (Overhead): 26% found to be reasonable**
- **Increase Escalation: 3%  5%**
- **Increase Contractor Fee: 5%  10%**
- **Increase Project Contingency: 23%  27%**
- **Added scope items:  \$58 M**
 - Townsend Street traffic decking (\$22.46 M)
 - Turnback / Maintenance of Way tracks (\$33.8 M)
 - Temporary utility relocation (\$1.85 M)

Summary of Potential Adjustments to Phase 2 Cost Estimate

Item	(\$ millions)
TJPA Base Estimate (YOE)	\$3,005
Escalation (using 5%, instead of 3%)	\$433
Fee adjustment (assuming 10%, instead of 5%)	\$100
Contingency (using 27%, instead of 24%)	\$93
Missing items	\$58
Total Adjustments	\$684
Add BART/Muni Pedestrian Connector	\$120-310
Total Adjusted Estimate	\$3,809-3,999



Status of Cost Estimate Refresh Effort



2016 Phase 2 Estimate Refresh Methodology

- Parsons, PCPA, and the TJPA worked to produce a refreshed estimate that reflects the current level of design, and current market rates for labor and materials.
- Scope elements from the 2010 and 2011 DTX cost estimates were updated line item by line item to labor and materials based on current market rates.
- Rough order of magnitude estimates were used for elements that have not reached a 30% PE design level.
- The refreshed estimate also utilizes the recommendations from the MTC Phase 2 Cost Review.
- Programwide costs & contingencies are % based
- R/W Cost was not updated due to time constraints



2016 Phase 2 Cost Estimate

YEAR OF EXPENDITURE DOLLARS (X\$000)	TOTAL PHASE 2 (JUNE 2016)
Construction	1,504
Design Contingency*	211
Subtotal	1,715
Escalation 5% to mid construction (2023)	583
Construction Cost w/Design Contingency and Escalation	2,298
ROW**	266
Programwide @22.5%	517
Program Cost	3,082
Construction Contingency* @ 10%	230
Program Reserve* @15%	462
Subtotal Contingency and Reserve	692
Total Program Cost	3,774
BART/Muni Ped. Connector (\$110M direct cost + \$51M escalation & construction contingency)	161
Total	3,935

*Total Contingency/Reserves is \$903 million or 29.3% of Subtotal Program Costs

**ROW number has not be updated

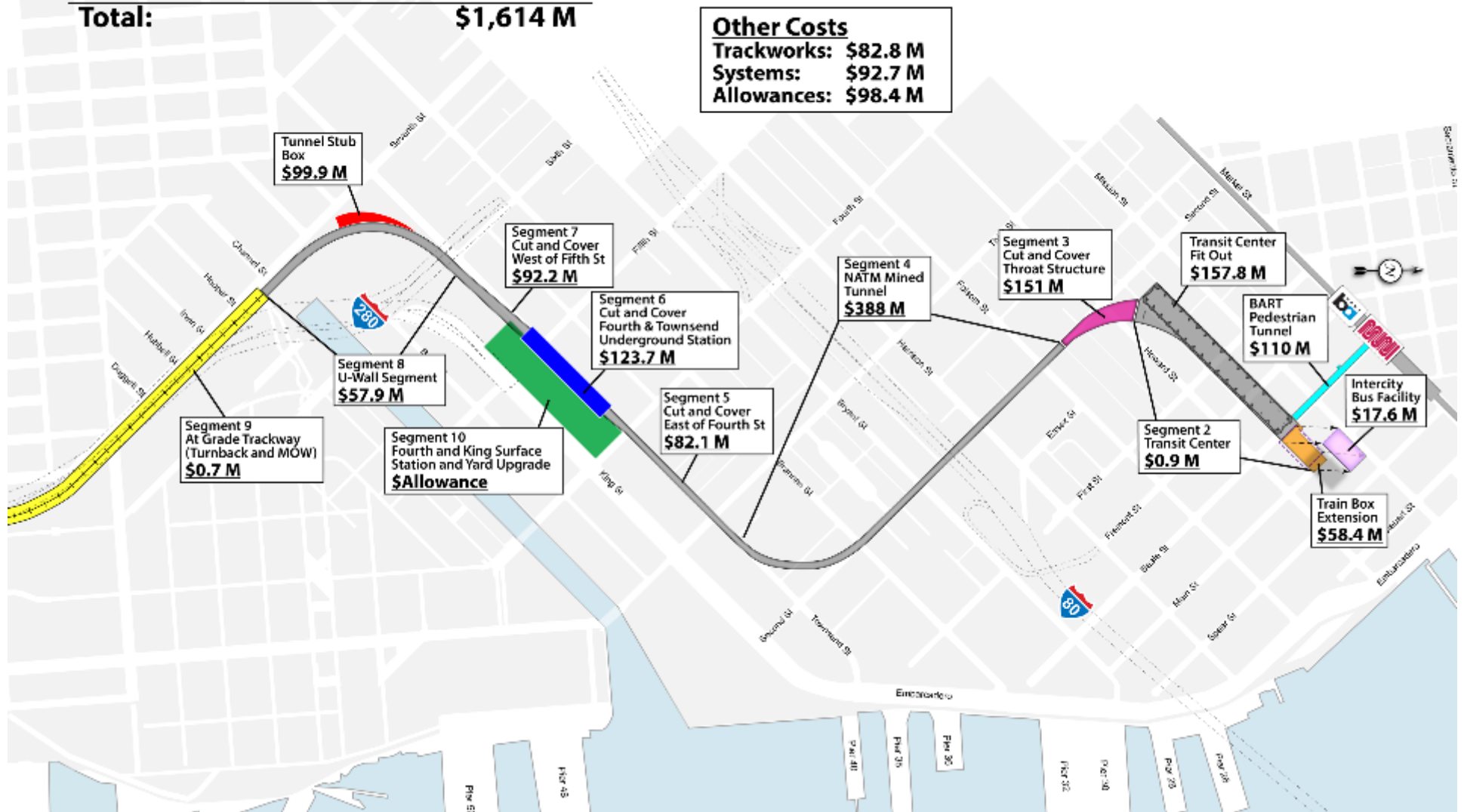


Transbay Transit Center

Phase 2 Direct Construction Cost Estimate Breakdown

Direct Construction Costs: \$1,504 M
BART Pedestrian Tunnel: \$ 110 M
Total: \$1,614 M

Other Costs
Trackworks: \$82.8 M
Systems: \$92.7 M
Allowances: \$98.4 M





Phase 2 Estimate Refresh vs MTC Cost Review

ITEM	MTC COST REVIEW	COST ESTIMATE REFRESH
7 Yr Construction Schedule	Found to be reasonable	No change
Indirect Cost Markup (Overhead)	Found to be reasonable at 26%	Used 54% for tunnel scope and 26% for other scope
Escalation	Recommended 5%	Used 5%
Contractor Fee	Recommended 10%	Used 15% for tunneling and 5% for other scope
Total Project Contingency	Recommended 27%	Used 29.2%
Scope	Recommended adding \$58M : Townsend St traffic decking (\$22.5M), turnback/MOW tracks (\$33.8M), temporary utility relocation (\$1.9M)	Included in estimate based on current market rates
Other	Recommended review of productivity rates in final design	No change, will review in final design phase



2016 Phase 2 Cost Estimate

YEAR OF EXPENDITURE DOLLARS (X\$000)	TOTAL PHASE 2 (OCTOBER 2013)	MTC COST ESTIMATE (NOVEMBER 2015)	TOTAL PHASE 2 (JUNE 2016)	VARIANCE: MTC VS JUNE 2016 ESTIMATE
Construction	1,290	1,448	1,504	56
Design Contingency	206	206	211	5
Subtotal	1,496	1,654	1,715	61
Construction Escalation	449	722	583	(139)
Construction Cost w/Design Contingency and Escalation	1,945	2,376	2,298	(78)
ROW**	266	266	266	-
Programwide	419	418	517	100
Program Cost	2,630	3,060	3,082	22
Construction Contingency	184	184	230	46
Program Reserve	191	444	462	18
Subtotal Contingency and Reserve	375	628	692	64
Total Program Cost	3,005	3,688	3,774	86
BART/Muni Ped. Connector	120	120-310	161	-
Total	3,125	3,808-3,998	3,935	86

**ROW number has not be updated

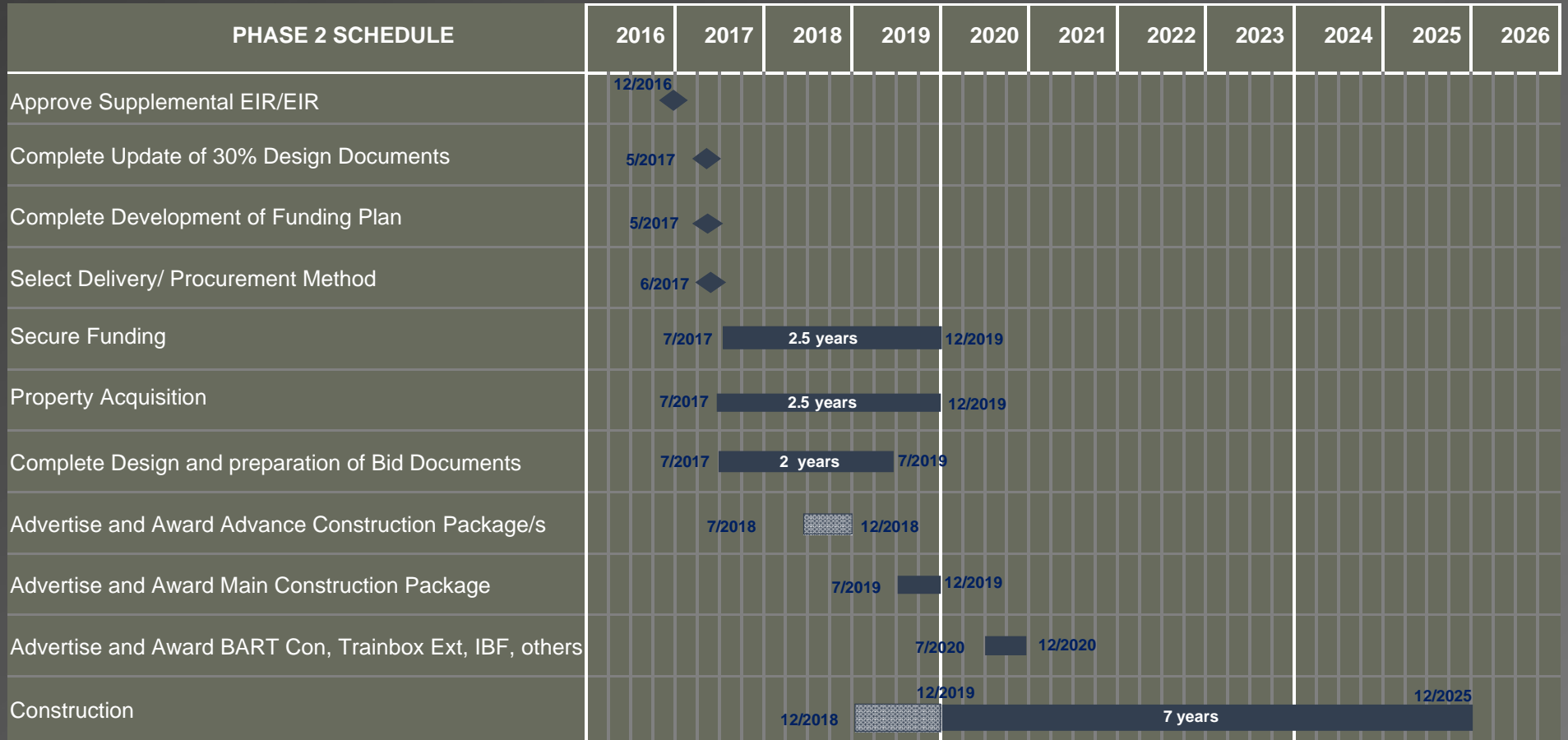


Transbay Transit Center

Delivery Plan



Phase 2 Draft Delivery Schedule

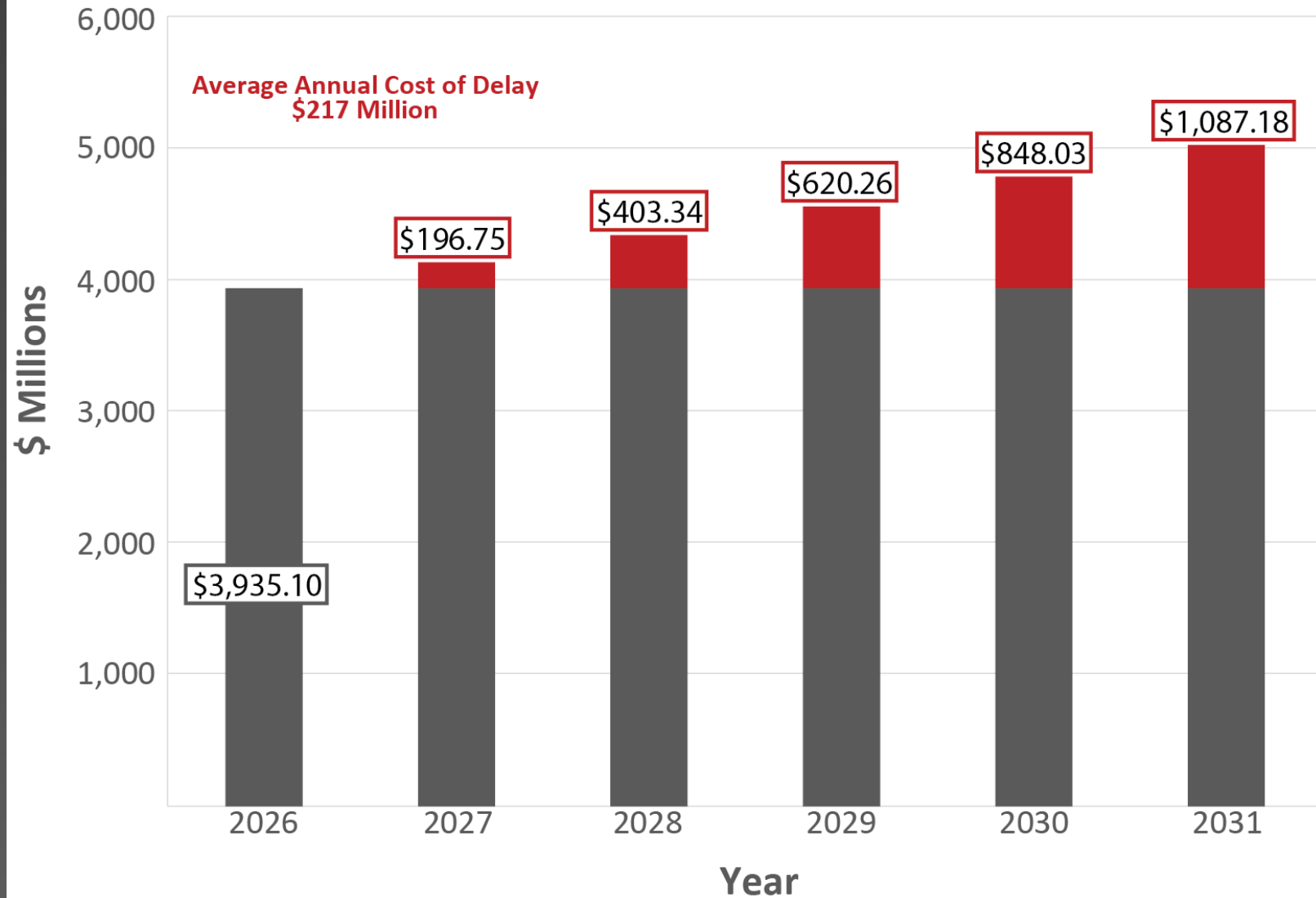


Delivery schedule timelines are based on DBB procurement



Cost of Delay to Phase 2

Phase 2 Delay Costs at 5% Escalation





Transbay Transit Center

Funding





Investment Strategy #4:

New Starts / Small Starts: Region's Next Generation

- Proposed Plan Bay Area funding plan for 5 projects, including New Starts / Small Starts recommendation totaling ~\$1.8 billion:

"Big" Starts	Cost (YOE\$, Millions)	Committed Funding	Proposed Funding Strategy					
			New Starts	New Bridge Tolls	HSR	Sales Tax Extensions/ Other Local	Express Lanes	Joint Development
BART to San Jose/Santa Clara (Phase 2: Berryessa to Santa Clara)	3,962	1,504	1,100		378	298	682	0
Transbay Transit Center - Phase 2B (Caltrain Downtown Extension)	2,596	639	650	300	557	350		100
TOTAL	6,558	2,143	1,750	300	935	648	682	100

"Small" Starts	Cost (YOE\$, Millions)	Committed Funding	Proposed Funding Strategy	
			Small Starts	New/ Augmented Sales Tax
AC Transit Grand-MacArthur BRT	37	0	30	7
Van Ness BRT	126	67	30	29
AC Transit East Bay BRT	205	115	28	63
TOTAL	368	181	88	99

- Proposal retains ~\$660 million reserve for projects in planning stages for future consideration and discussion

Macro Assumptions

- Construction start date: December 31, 2018
- Construction period: 7 years
- Commencement of operations: January 1, 2026
- Core funding assumptions are committed funds and Plan Bay Area (highlighted in grey)
 - All statistics other than spent funds are approximated
 - Present value is rounded to the nearest five million

Phase 2 Funding Scenario 1 Summary

TJPA Phase 2 Funding: Caltrain PFC of \$2.00 (\$2026) and HSR PFC of \$8.00 (\$2026)

Funding Outputs

Total Project Funding (\$ Year of Expenditure)

	Low		High		Notes	Timeframe
	Total Funds	Net Proceeds	Total Funds	Net Proceeds		
San Francisco County Sales Tax*	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	Committed; \$50 million spent	2016-2019
San Mateo County Sales Tax*	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	Committed; spent	N/A
Committed MTC/BATA Bridge Tolls*	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	Committed; spent	N/A
Tax Increment ¹	\$ 665,000,000	\$ 200,000,000	\$ 735,000,000	\$ 340,000,000	Committed	2021-2050
Mello-Roos Special Tax	\$ 275,000,000	\$ 275,000,000	\$ 375,000,000	\$ 375,000,000	Committed	2020-2025
Regional Transportation Improvement Program	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	Committed	2030
Future San Francisco County Sales Tax	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	Subject to SFCTA or voter approval	2019-2026
FTA New Starts	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	Subject to federal approval	2019-2026
New MTC/BATA Bridge Tolls	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	Subject to MTC/BATA and voter approval	2019-2026
Future California High Speed Rail Funds	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	Subject to federal/state approval	2019-2026
Land Sales (Block 4)	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	Contingent upon sales	2018
Passenger Facility Charges (PFCs)	\$ 2,510,000,000	\$ 865,000,000	\$ 5,430,000,000	\$ 1,365,000,000	Subject to CHSRA and Caltrain approval	2026-2060
	\$ 5,479,000,000	\$ 3,369,000,000	\$ 8,569,000,000	\$ 4,109,000,000		

Assumptions

Core funding assumptions are committed funds and Plan Bay Area (highlighted in grey)

All statistics other than spent funds are approximated

Value is rounded to the nearest five million

* Funds have already been spent or will be provided by 2019

1. Assumes refinancing of existing Phase 1 TIFIA loan at lower rate and capture of additional tax increment debt capacity for Phase 2 in high scenario
2. Assumes certain Mello Roos funds are used for Phase 1 (Train Box and Park) and Phase 1 is fully funded; figures are being revised in conjunction with City Financing
3. Assumes Measure voted by 2020.
4. Assumes funds will be provided as needed in amounts shown
5. Assumes Block 4 Sale after Phase 1 completion; value based on Block 4 Option Agreement.
6. Assumes 35 years of operations

Phase 2 Funding Scenario 2 Summary

JTPA Phase 2 Funding: Caltrain PFC of \$2.25 (\$2026) and HSR PFC of \$9.00 (\$2026)

Funding Outputs

Total Project Funding (\$ Year of Expenditure)

	Low		High		Notes	Timeframe
	Total Funds	Net Proceeds	Total Funds	Net Proceeds		
San Francisco County Sales Tax*	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	Committed; \$50 million spent	2016-2019
San Mateo County Sales Tax*	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	Committed; spent	N/A
Committed MTC/BATA Bridge Tolls*	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	Committed; spent	N/A
Tax Increment	\$ 665,000,000	\$ 200,000,000	\$ 735,000,000	\$ 340,000,000	Committed	2021-2050
Mello-Roos Special Tax	\$ 275,000,000	\$ 275,000,000	\$ 375,000,000	\$ 375,000,000	Committed	2020-2025
Regional Transportation Improvement Program	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	Committed	2030
Future San Francisco County Sales Tax	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	Subject to SFCTA or voter approval	2019-2026
FTA New Starts	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	Subject to federal approval	2019-2026
New MTC/BATA Bridge Tolls	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	Subject to MTC/BATA and voter approval	2019-2026
Future California High Speed Rail Funds	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	Subject to federal/state approval	2019-2026
Land Sales (Block 4)	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	Contingent upon sales	2018
Passenger Facility Charges (PFCs)	\$ 2,830,000,000	\$ 1,030,000,000	\$ 6,110,000,000	\$ 1,530,000,000	Subject to CHSRA and Caltrain approval	2026-2060
	\$ 5,799,000,000	\$ 3,534,000,000	\$ 9,249,000,000	\$ 4,274,000,000		

Assumptions

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Value is rounded to the nearest five million

* Funds have already been spent or will be provided by 2019

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2. Assumes certain Mello Roos funds are used for Phase 1 (Train Box and Park) and Phase 1 is fully funded; figures are being revised in conjunction with City Financing
3. Assumes Measure voted by 2020.
4. Assumes funds will be provided as needed in amounts shown
5. Assumes Block 4 Sale after Phase 1 completion; value based on Block 4 Option Agreement.
6. Assumes 35 years of operations

Phase 2 Funding Scenario 3 Summary

JTPA Phase 2 Funding: Caltrain PFC of \$2.50 (\$2026) and HSR PFC of \$10.00 (\$2026)

Funding Outputs

Total Project Funding (\$ Year of Expenditure)

	Low		High		Notes	Timeframe
	Total Funds	Net Proceeds	Total Funds	Net Proceeds		
San Francisco County Sales Tax*	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	Committed; \$50 million spent	2016-2019
San Mateo County Sales Tax*	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	Committed; spent	N/A
Committed MTC/BATA Bridge Tolls*	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	Committed; spent	N/A
Tax Increment	\$ 665,000,000	\$ 200,000,000	\$ 735,000,000	\$ 340,000,000	Committed	2021-2050
Mello-Roos Special Tax	\$ 275,000,000	\$ 275,000,000	\$ 375,000,000	\$ 375,000,000	Committed	2020-2025
Regional Transportation Improvement Program	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	Committed	2030
Future San Francisco County Sales Tax	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	Subject to SFCTA or voter approval	2019-2026
FTA New Starts	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	Subject to federal approval	2019-2026
New MTC/BATA Bridge Tolls	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	Subject to MTC/BATA and voter approval	2019-2026
Future California High Speed Rail Funds	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	Subject to federal/state approval	2019-2026
Land Sales (Block 4)	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	Contingent upon sales	2018
Passenger Facility Charges (PFCs)	\$ 3,140,000,000	\$ 1,195,000,000	\$ 6,790,000,000	\$ 1,695,000,000	Subject to CHSRA and Caltrain approval	2026-2060
	\$ 6,109,000,000	\$ 3,699,000,000	\$ 9,929,000,000	\$ 4,439,000,000		

Assumptions

Core funding assumptions are committed funds and Plan Bay Area (highlighted in grey)

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* Funds have already been spent or will be provided by 2019

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2. Assumes certain Mello Roos funds are used for Phase 1 (Train Box and Park) and Phase 1 is fully funded; figures are being revised in conjunction with City Financing
3. Assumes Measure voted by 2020.
4. Assumes funds will be provided as needed in amounts shown
5. Assumes Block 4 Sale after Phase 1 completion; value based on Block 4 Option Agreement.
6. Assumes 35 years of operations, TIFIA loan in High Scenario assumes 33% of Project Cost (\$3.954bn)

Phase 2 Funding Scenario 4 Summary

JTPA Phase 2 Funding: Caltrain PFC of \$2.74 (\$2026) and HSR PFC of \$10.96 (\$2026)

Funding Outputs

Total Project Funding (\$ Year of Expenditure)

	Low		High		Notes	Timeframe
	Total Funds	Net Proceeds	Total Funds	Net Proceeds		
San Francisco County Sales Tax*	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	\$ 83,000,000	Committed; \$50 million spent	2016-2019
San Mateo County Sales Tax*	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	\$ 19,000,000	Committed; spent	N/A
Committed MTC/BATA Bridge Tolls*	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	\$ 7,000,000	Committed; spent	N/A
Tax Increment ¹	\$ 665,000,000	\$ 200,000,000	\$ 735,000,000	\$ 340,000,000	Committed	2021-2050
Mello-Roos Special Tax	\$ 275,000,000	\$ 275,000,000	\$ 375,000,000	\$ 375,000,000	Committed	2020-2025
Regional Transportation Improvement Program	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	\$ 18,000,000	Committed	2030
Future San Francisco County Sales Tax	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	\$ 350,000,000	Subject to SFCTA or voter approval	2019-2026
FTA New Starts	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	\$ 650,000,000	Subject to federal approval	2019-2026
New MTC/BATA Bridge Tolls	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	\$ 300,000,000	Subject to MTC/BATA and voter approval	2019-2026
Future California High Speed Rail Funds	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	\$ 557,000,000	Subject to federal/state approval	2019-2026
Land Sales (Block 4)	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	\$ 45,000,000	Contingent upon sales	2018
Passenger Facility Charges (PFCs)	\$ 3,440,000,000	\$ 1,240,000,000	\$ 8,025,000,000	\$ 1,920,000,000	Subject to CHSRA and Caltrain approval	2026-2060
	\$ 6,409,000,000	\$ 3,744,000,000	\$ 11,164,000,000	\$ 4,664,000,000		

Assumptions

Core funding assumptions are committed funds and Plan Bay Area (highlighted in grey)

All statistics other than spent funds are approximated

Value is rounded to the nearest five million

* Funds have already been spent or will be provided by 2019

1. Assumes refinancing of existing Phase 1 TIFIA loan at lower rate and capture of additional tax increment debt capacity for Phase 2 in high scenario
2. Assumes certain Mello Roos funds are used for Phase 1 (Train Box and Park) and Phase 1 is fully funded; figures are being revised in conjunction with City Financing
3. Assumes Measure voted by 2020.
4. Assumes funds will be provided as needed in amounts shown
5. Assumes Block 4 Sale after Phase 1 completion; value based on Block 4 Option Agreement.
6. Assumes 35 years of operations, TIFIA loan in High Scenario assumes 33% of Project Cost (\$4.453bn)



Phase 2 Funding Additional Revenue Streams

PFC Additional Funds (2061-2070; 45 Years)					
<i>Caltrain</i>	<i>CHSRA</i>		<i>Low</i>		<i>High</i>
\$2.00	\$8.00	\$	1,105,000,000	\$	5,405,000,000
\$2.25	\$9.00	\$	1,240,000,000	\$	6,080,000,000
\$2.50	\$10.00	\$	1,380,000,000	\$	6,755,000,000
\$2.74	\$10.96	\$	1,510,000,000	\$	7,405,000,000

Tax Increment (2051-2060)		
10 Year Extension	\$	590,000,000



Phase 2 Funding Scenario

Key Assumptions

- PFC is assumed to be enacted by Caltrain and/or CHSRA Board by 2019
- Plan Bay Area funds are assumed to be provided on an as needed basis and are not discounted or escalated
- Financings assume securing PFCs and/or TI using a Federal credit program or loan with a 35 year repayment period
- All funds shown are amounts available after Phase 1 is fully paid for



Next Steps





Next Steps

- Complete 30% PE drawings
- Update ROW estimate
- Update ridership study
- Perform risk assessment
- Update Program cost estimate
- Complete development of funding plan
- Select delivery method
- Update budget
- Continue coordination with RAB study, Caltrain and CHSRA

Phase 2 Scope not at 30% PE

1. Ventilation Structures
2. BART/Muni Pedestrian Connector
3. Widened Throat Structure
4. Fourth and Townsend Underground Station
5. Tunnel Stub for Future Grade Separation
6. Turnback and Maintenance-of-Way tracks



Questions?



Transbay Joint Powers Authority

201 Mission Street, Suite 2100

San Francisco, CA 94105

(415) 597-4620

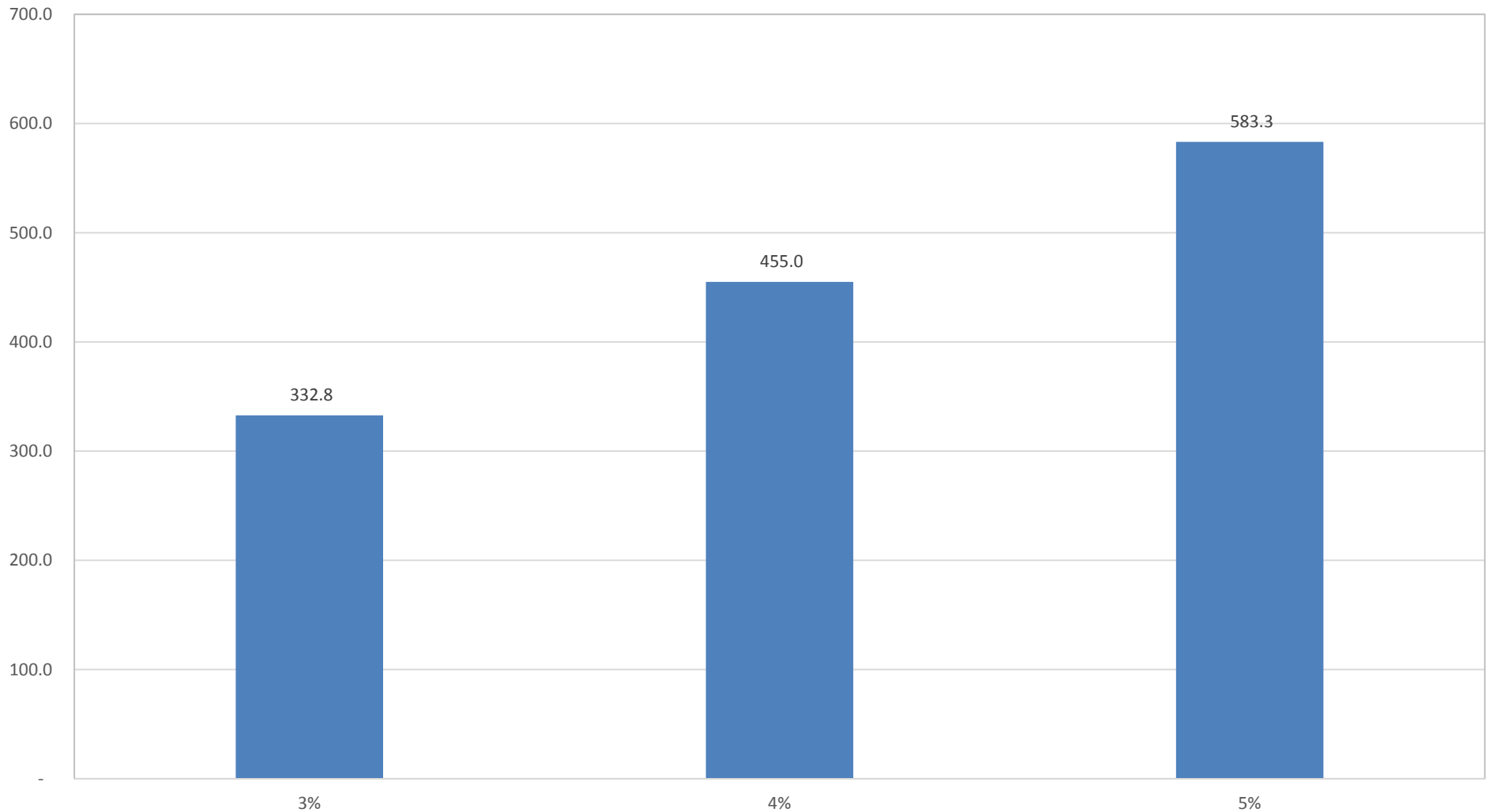
www.transbaycenter.org

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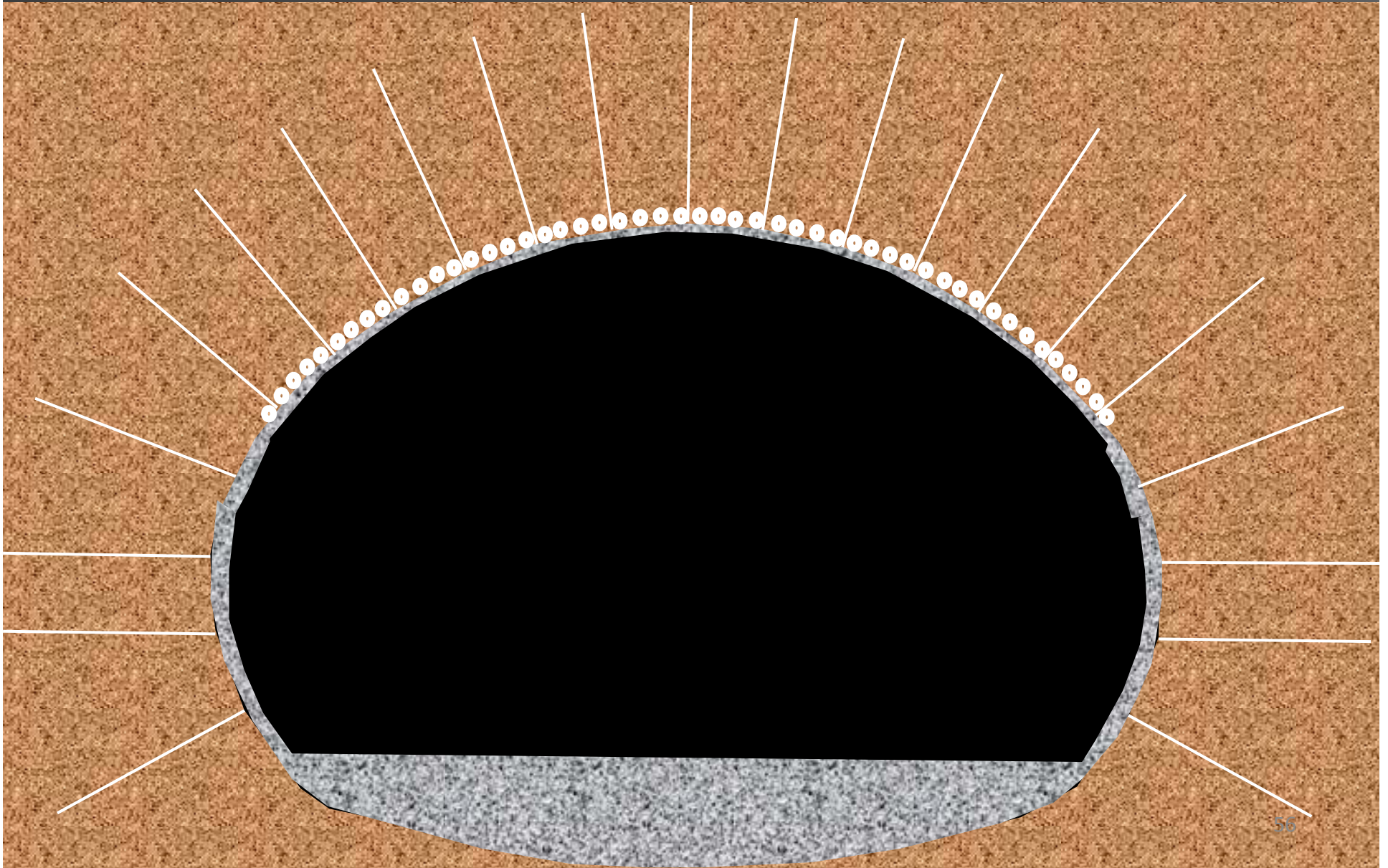
Cost of Delay to Phase 2

Construction Escalation Costs at 3% to 5%
(\$ millions)





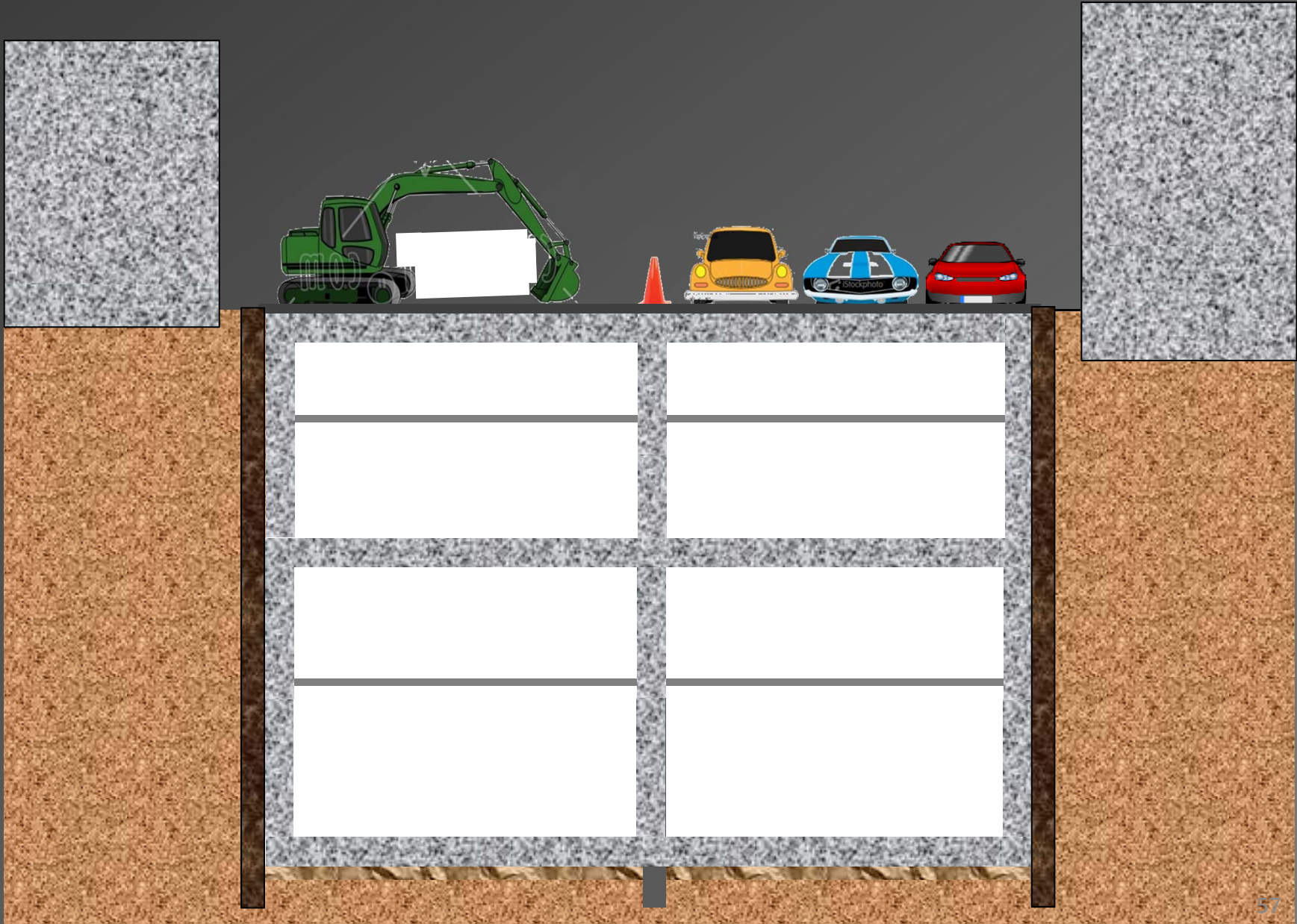
SEM: Two Drifts





Transbay Transit Center

Cut & Cover



Provisions for Future Grade Separation Tunnel

- Accommodates City goal to eliminate at-grade crossings beyond DTX project limits
- Allows for future tunnel connection with minimum disruption to train operations
- Temporary U-Wall retained-cut structure is built above permanent cut-and-cover tunnel
- Within environmentally cleared envelope

