



Construction Update

May 8, 2014

Transbay Transit Center

TJPA





Transbay Transit Center

Period Summary

- There were five safety related incidents since the last update in March. These incidents included three first aid cases, one recordable incident and one lost time incident. The recordable incident resulted from a nail puncturing the foot of a worker. The lost time incident resulted from a hand injury related to the use of an extension ladder. All incidents have been investigated and corrective actions have been taken.
- There have been over 1,030,000 craft hours completed, excluding demolition, through April 30, 2014. An increase of nearly 42,000 hours since our last construction update in March.
- Re-Bracing continues following wall pours in the west and central zones of the project (also known as zones 1 and 2).



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Period Summary

- Concrete column forming and placement continues between the rail level and the Lower Concourse level in the west and central zones.
- Formwork for the Lower Concourse slab is in progress in the central and western zones. First Concourse Slab pour is scheduled for late May, or early June.
- Geothermal and Grounding is now complete in the eastern zone of the project (also known as zone 4). We continue to evaluate and mitigate any schedule impacts to this area resulting from the discovery of the human remains in Geothermal Field 11.
- Final mud slab placement will be made the week of May 5th. Waterproofing, protection slab and mat foundation slab work continues in the eastern zone.



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Current Project Overview



Western Zone – Gridlines 1 to 10

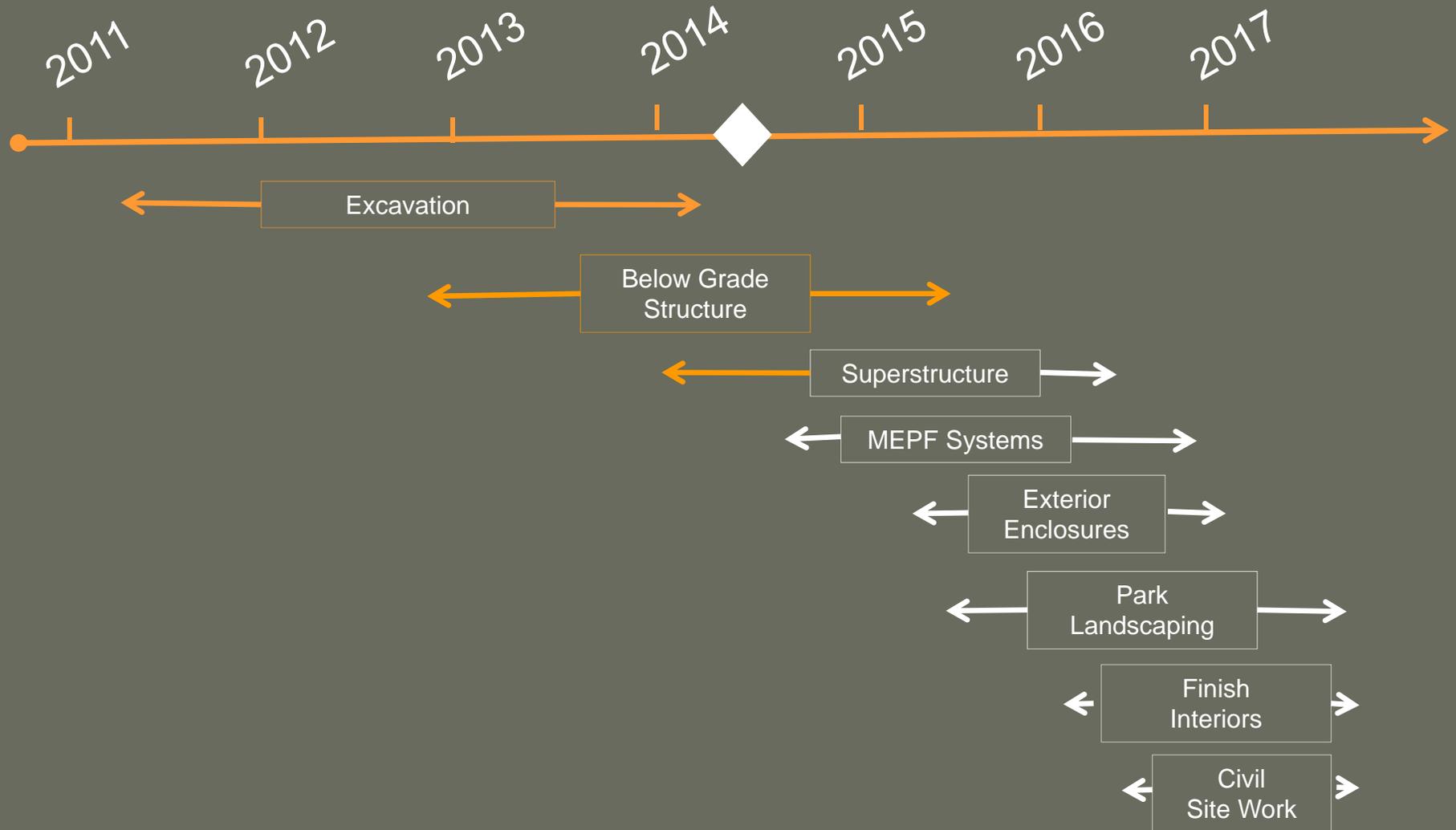
Central Zone – Gridlines 10 to 20

Eastern Zone – Gridlines 20 to 35



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Construction Timeline Summary





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Construction Milestones

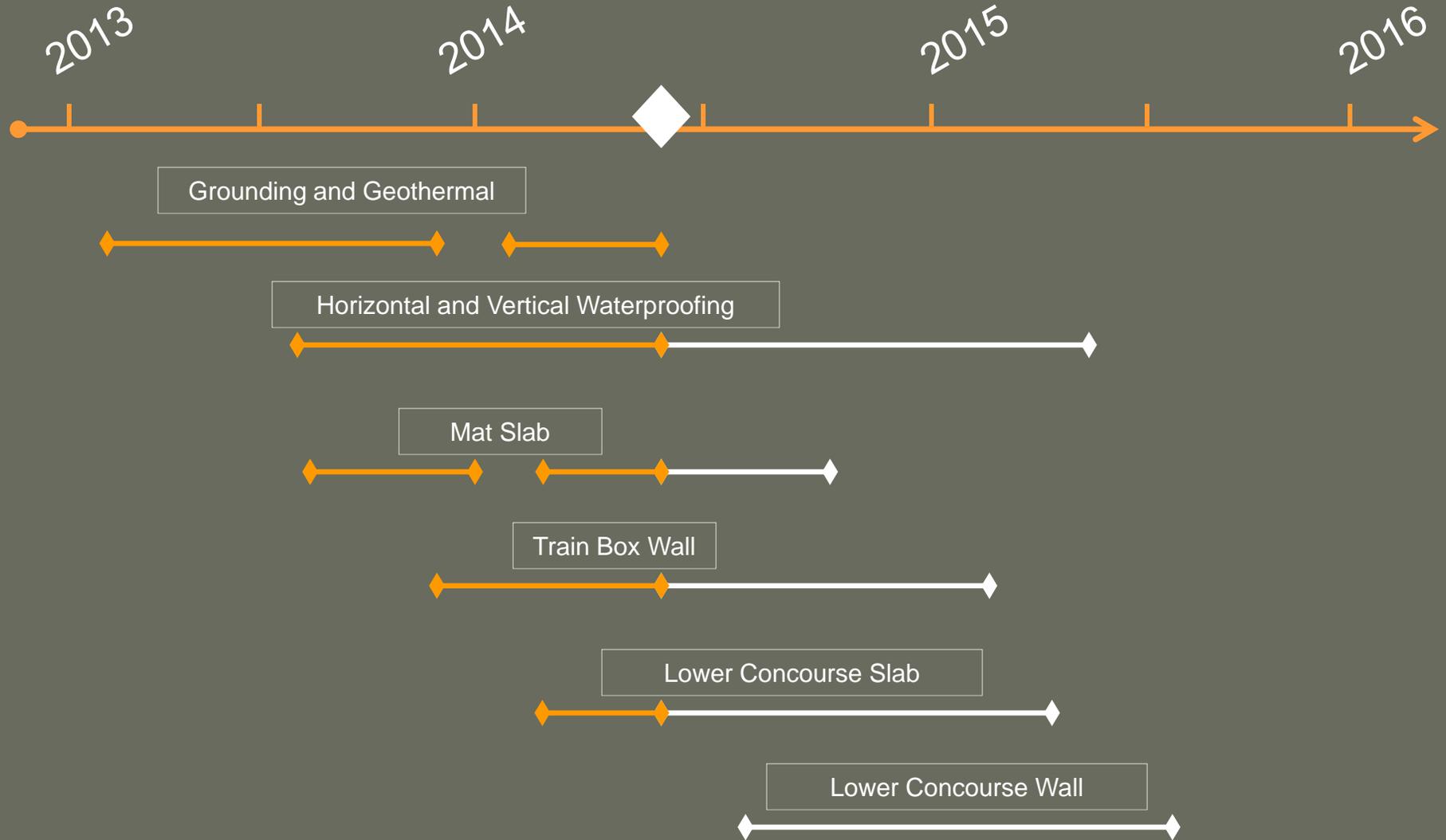
Key Schedule Dates	Baseline	24-Mar-14		Float
Complete Utility Relocations	8-Jul-13	1-Jul-14		857
Complete First Mat Pour	8-Jul-13	9-Sep-13	A	
Complete Zone 2 Mat Pour	27-Aug-13	24-Nov-13	A	
Complete Excavation	6-Jan-14	31-Jan-14	A	
Complete Zone 1 Concourse Level Deck	7-Mar-14	16-Oct-14		0
Begin Steel Erection	6-Jun-14	20-Aug-14		0
Complete Steel Superstructure	19-Nov-15	7-Jan-16		0
Connect Bus Ramps to Transit Center	1-May-16	25-Aug-16		44
Complete Rough Interiors	17-Aug-16	1-Dec-16		11
Complete Exterior Curtain Wall	5-Jan-17	23-Nov-16		35
Complete Finish Interiors	25-Jul-17	25-Jul-17		11
Substantial Completion / Bus Operations	23-Oct-17	23-Oct-17		0
Final Completion	28-Mar-18	21-Jan-18		0

A = Actual Completion Date



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Below Grade Concrete Timeline Summary





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Below Grade Concrete Progress Through April 28, 2014

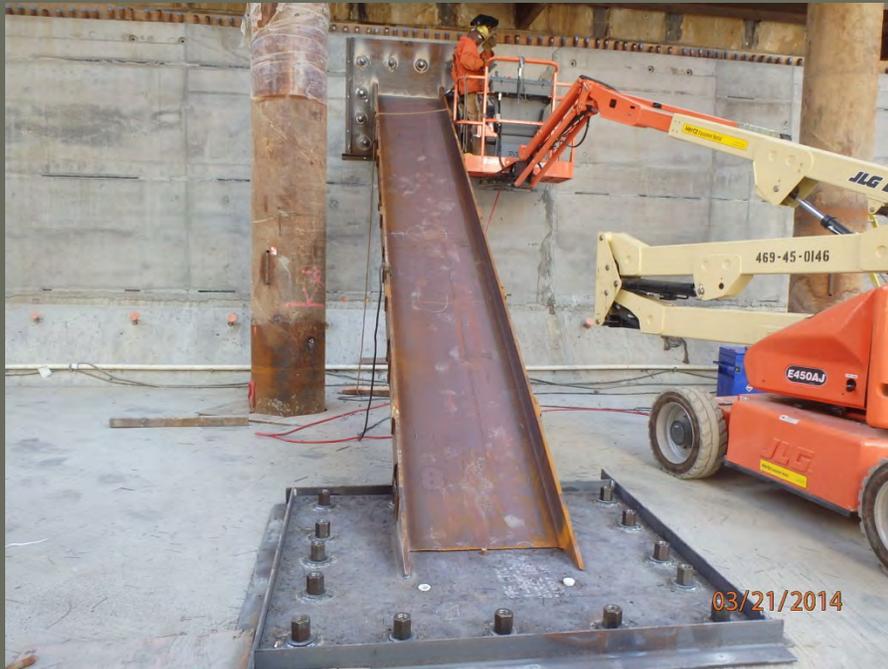
Zone	Total Columns	Columns Complete	Percent Complete	Total 1st Lift Walls	1st Lift Walls Complete	Percent Complete	Total 2nd Lift Walls	2nd Lift Walls Complete	Percent Complete
Western	62	44	71%	35	35	100%	35	6	17%
Central	44	40	91%	20	18	90%	20	16	80%
Eastern	62	0	0%	35	0	0%	35	0	0%



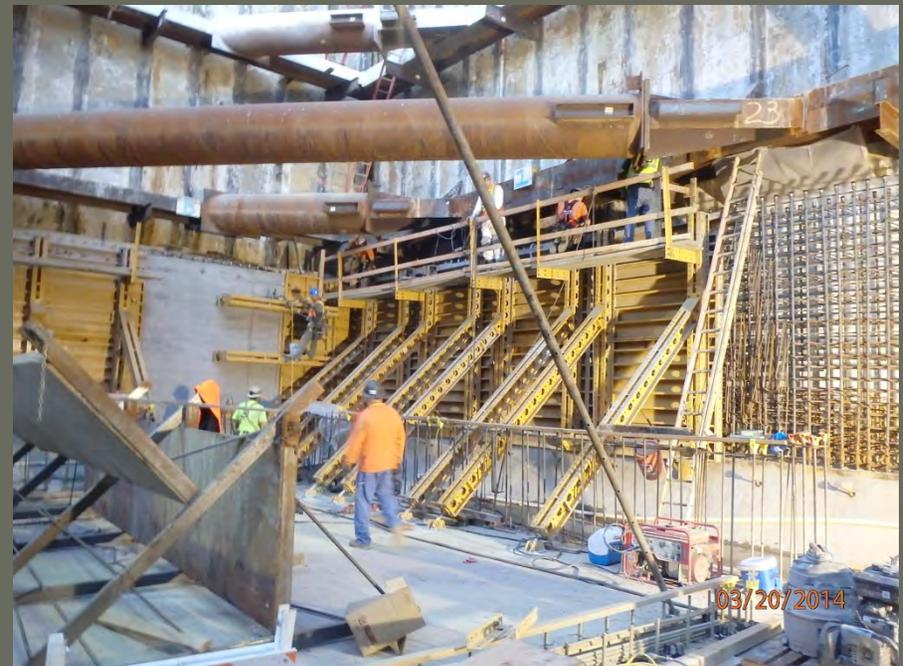
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Western Zone Activity (zones 1 and 2)

Final Bracing,
Southwest Area



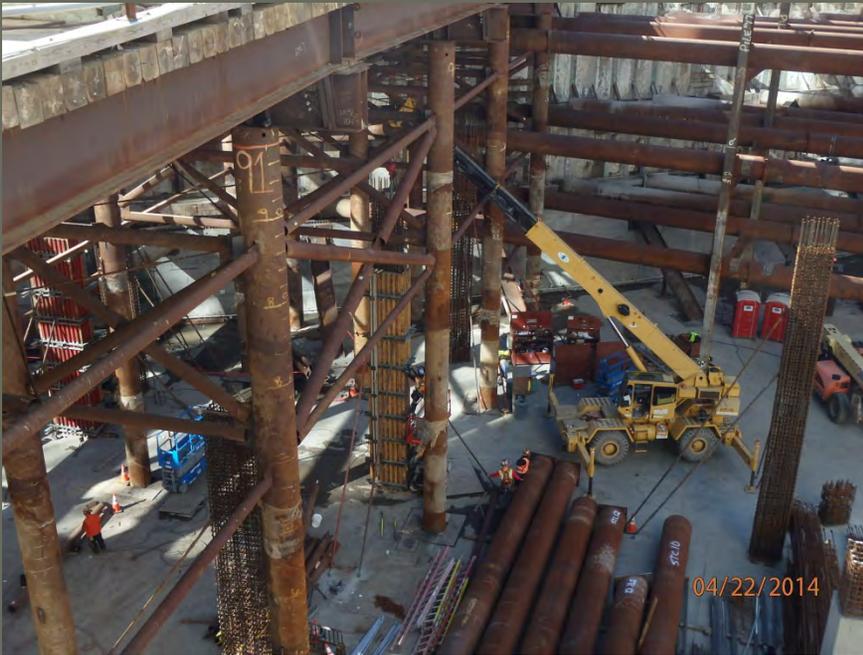
Wall Placement,
Northwest Corner





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Western Zone Activity (zones 1 and 2)



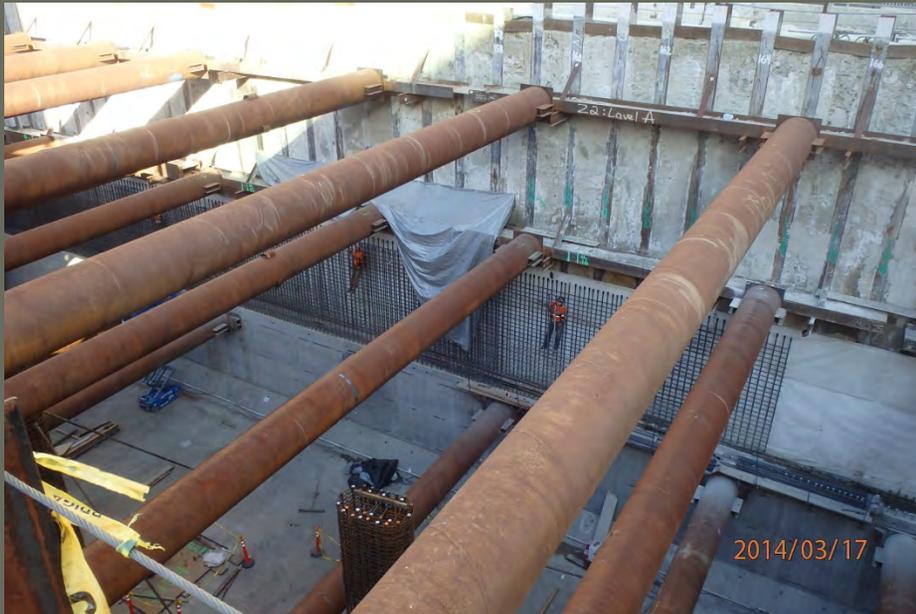
Column Installation, Western End





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Western Zone Activity (zones 1 and 2)



Continued Work on
Foundation Walls and
Re-Bracing

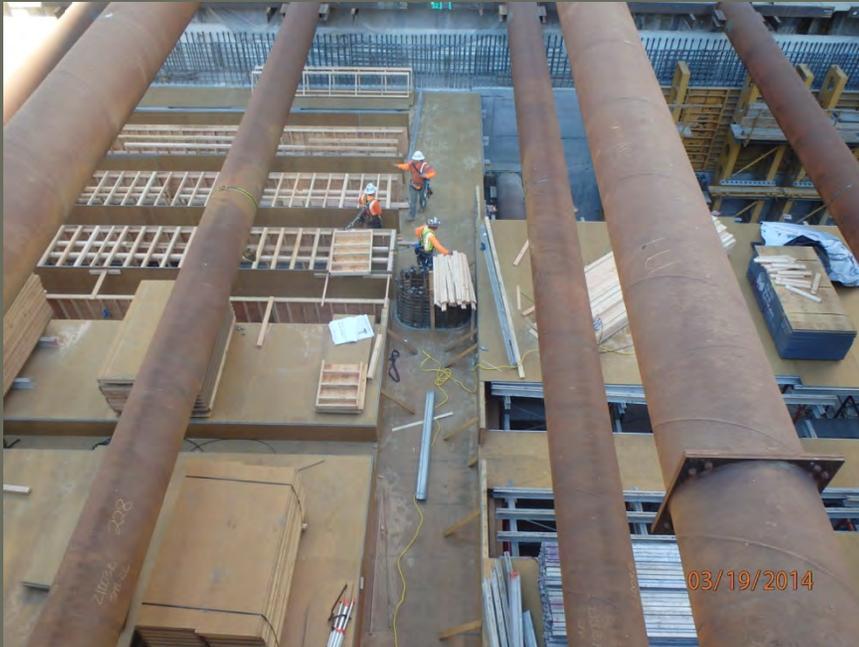




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Central Zone Activity (zones 2 and 3)

Lower Concourse Slab Forming Continues





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Central Zone Activity (zones 2 and 3)

Lower Concourse Slab Forming Continues



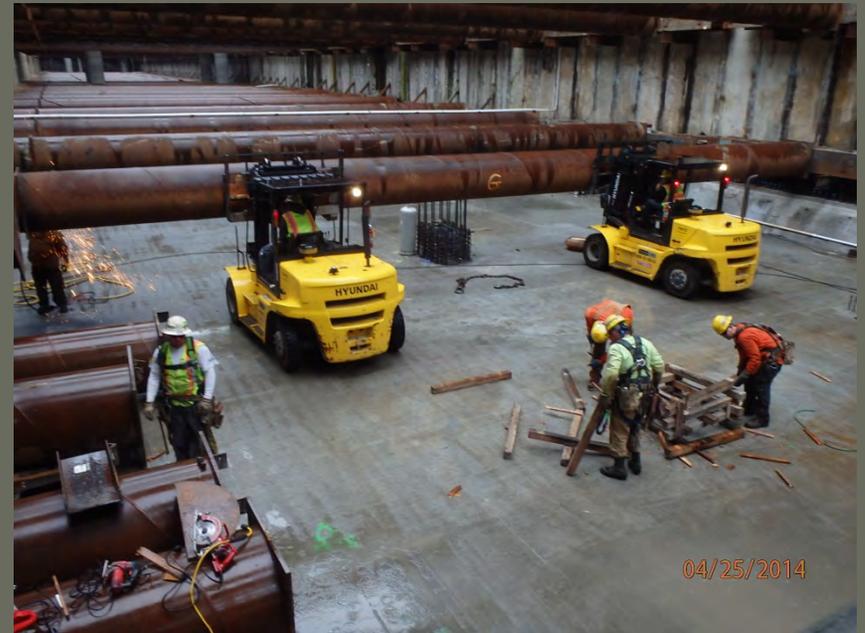


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Central Zone Activity (zones 2 and 3)



Second Foundation Wall
Lift and Re-Bracing
Continues



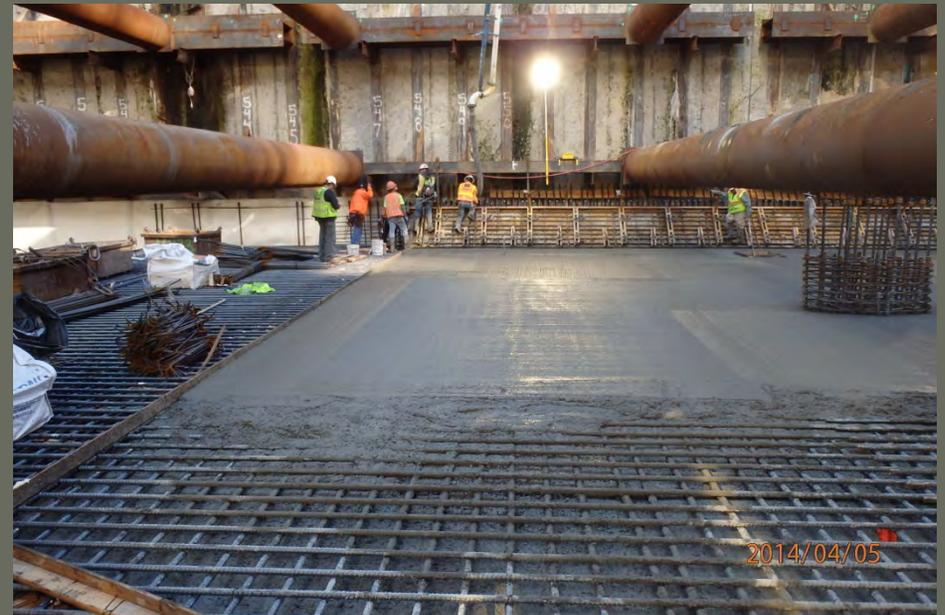


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Eastern Zone Activity (zones 3 and 4)



Foundation Slab Placement, Section # 11





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Eastern Zone Activity (zones 3 and 4)

Light Column Foundation
and Anchor Bolts, part of
Slab #12





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Eastern Zone Activity (zones 3 and 4)

Final Geothermal Work





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Eastern Zone Activity (zones 3 and 4)

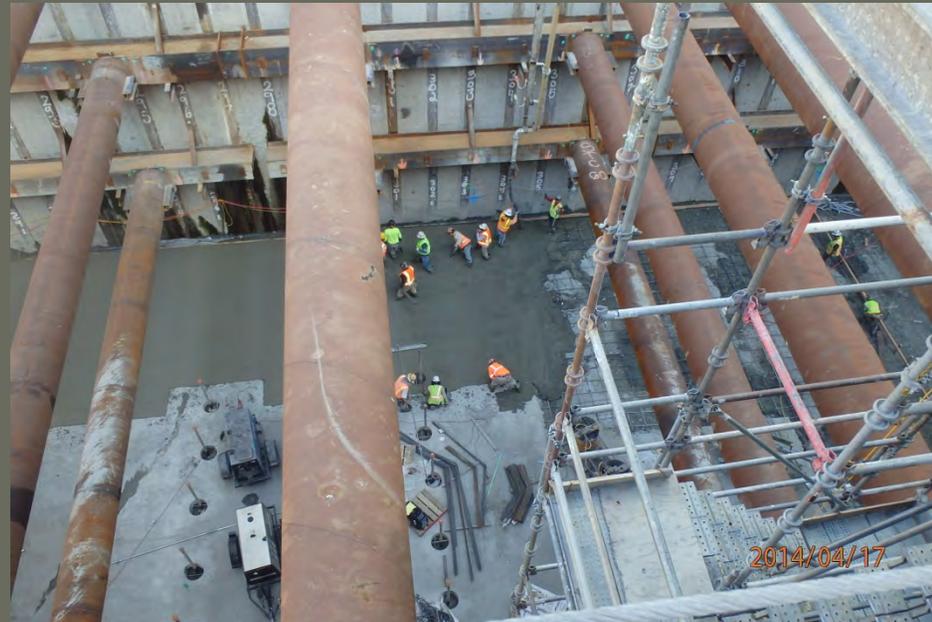
Final Subgrade Preparation





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Eastern Zone Activity (zones 3 and 4)



Mud Slab and Waterproofing





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Cast Node Fabrication as of April 28, 2014

Casting Group	Totals	In-Process Pattern Completion	In-Process Casting and Machining	First Fit-Up Basket Column Nodes Required	Total First Fit-Up Basket Columns Required	Release 1 Shipment #1 Week of March 24	Release 1 Shipment #2 Week of April 14	Release 1 Shipment #3 Week of April 21	Release 1 Total Shipped To Date
Ground Level - Atchison 19,600 - 46,300 lbs	35	12	16	Type 5	4	0	0	4	4
				Type 6	4	0	2	2	4
Bus Deck - Amite 9,500 - 22,800 lbs	75	23	26	Type 21A	8	0	4	2	6
				Type 21B	8	0	0	4	4
Roof Level - Atchison 4,400 - 5,400 lbs	138	2	34	Type 71	16	16	0	0	16
				Type 72	16	16	0	0	16
Light Columns	56	25	36			0	0	0	0
Totals	304	62	112		56	32	6	12	50*

* Shipment of remaining Release 1 Nodes (total 6) anticipated week of May 5th



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Cast Node Fabrication



Type 19 Casting Just Shaken Out of the Mold

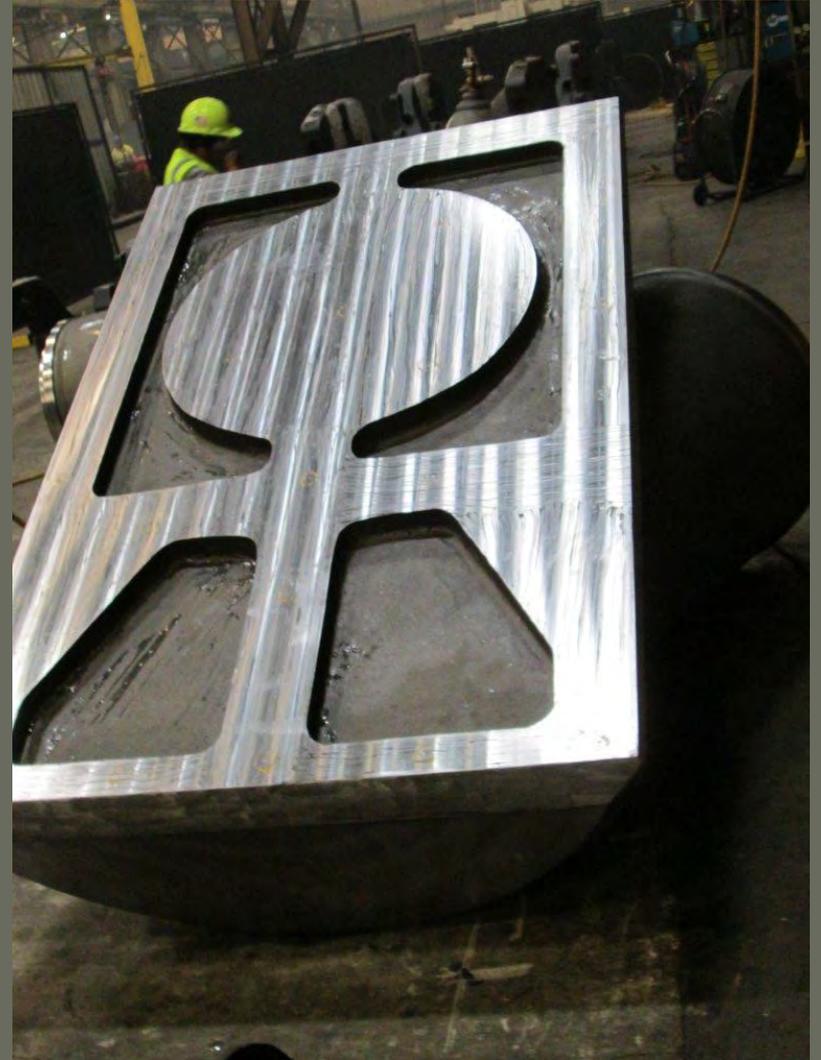


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Cast Node Fabrication



Finished Cast Node Surfaces





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Cast Node Fabrication



First Nodes Arrive in Oregon



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Utility Relocation - AWSS Installation Update

AWSS work continues at night at direction of SFMTA/MUNI to accommodate bus traffic. Mission Street repaving completed First to Second and Main to Beale Streets.

Mission Street AWSS System
Completed :

First – Second Street
Main – Beale Street

To Go – In Progress :

First Street to Fremont Street -
completion anticipated in May
Fremont Street to Beale Street -
completion anticipated in July





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Construction The Next 90 Days

- Next 30 Days (May)
 - Continue foundation walls in central and west zones.
 - Complete Zone 4 mud slab, waterproofing and protection slab installation.
 - Continue Cast Node fabrication, final shipment of release 1 in progress.
 - Continue AWSS work along Mission Street.
 - Continue work on Lower Concourse slab in the central and western zones.
 - Place mat slab 12 in Zone 3
 - Complete Zone 4 micropile testing on top of mud slab.
- In 60 Days (June)
 - Continue foundation walls, columns and re-bracing in west & central zones.
 - Start re-bracing in eastern zone.
 - Place mat slab 13 in eastern zone.
 - Place first Lower Concourse slab in central zone.
- In 90 Days (July)
 - Continue columns and walls as well as Lower Concourse slabs in central and western zones.
 - Pour mat slab 14 and 15 in Zone 4.



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Contingency Tracking

(\$millions)

Trend	Design Contingency	Construction Contingency	CM/GC Contingency	Program Reserve	Escalation	Total Contingency & Reserve
Remaining Baseline Budget Amounts (March 2014)	\$8.2	\$62.0	\$36.4	\$87.3	\$30.3	\$224.2
Utility Relocation Change Orders		(\$0.1)				(\$0.1)
BSE Change Orders		(\$0.3)	(\$0.5)			(\$0.8)
Below Grade Change Orders		(\$0.1)	(\$0.6)			(\$0.7)
Structural Steel Change Orders						
Award Above Grade Structure				(\$12.6)		(\$12.6)
Total Draws (April 14)	\$0	(\$0.5)	(\$1.1)	(\$12.6)		(\$14.2)
Remaining Balances	\$8.2	\$61.5	\$35.3	\$74.7	\$30.3	\$210.0



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Bay Area Regional Labor Breakdown

Labor by Area	Through April 2014	
Location	Total Hours Completed	Hours Percent
East Bay (Alameda, Contra Costa, Solano)	345,736	33%
North Bay (Marin, Napa, Sonoma)	33,147	3%
South Bay (San Mateo, Santa Clara)	93,981	9%
San Francisco	182,890	18%
Other*	378,774	37%
Totals	1,034,528**	100%

*Other includes workers from throughout California including the Central Valley as well as workers from out of state who are onsite for specific tasks.

**Total hours are for the Transit Center construction work and do not include the initial Demolition work represented by a total of approximately 55,000 craft hours.



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Bay Area Regional Apprentice Hours Breakdown

Apprentices by Area	Through April 2014	
Location	Total Apprentice Hours	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	40,044	26%
North Bay (Marin, Napa, Sonoma)	5,405	4%
South Bay (San Mateo, Santa Clara)	25,692	17%
San Francisco	53,467	35%
Other*	29,499	18%
Totals	154,107	100%

*Other includes workers from throughout California including the Central Valley as well as workers from out of state who are onsite for specific tasks.



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Labor Breakdown by Trade through April 2014

Classification	TTC Building and RUP's*
Inspectors – Soils / Material Test	43
Carpenters and Related Trades	88
Cement Mason	50
Electrical – Utility Lineman	26
Electrician	44
Field Surveyor	27
Iron Worker	203
Laborer and Related Trades	597
Operating Engineer	355
Pile Drivers	140
Plumber	17
Roofer and Waterproofor	29
Sheet Metal	5
Teamsters	166
Tile Setters / Finishers	7
Water Well Driller	9
Totals	1,806

* Relocation of Utilities Project



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Questions?