



Construction Update

March 13, 2014

Transbay Transit Center

TJPA





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Period Summary

- A lost time incident occurred on February 6th. Final investigation has not been completed. There was a recordable incident on February 28th, a worker pinched his finger and hand resulting in stiches.
- Micropile installation (totaling 1,896) has been completed. Less than 200 remain to be tested. Testing should be completed by mid-April.
- There have been over 988,000 craft hours completed, excluding demolition, through February 28, 2014. An increase of more than 23,000 since our last construction update in February.
- In order to coordinate with SFMTA – MUNI, the AWSS work continues to proceed at night along Mission Street and will continue westward through August.



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Period Summary

- Bracing removal and rebracing following wall pours continues in the west and central areas of the project (also known as zones 1 and 2).
- Concrete column forming and placement continues between the Rail level and the Lower Concourse in the west and central areas of the project.
- Shoring for the Lower Concourse slab began this period in the central area.
- Grounding, Geothermal, Mud Slab, Waterproofing and Protection Slab installation is now continuing in east area of the project (also known as zone 4). There has been minimal impact to this work resulting from the discovery of the Native American remains.
- Preparations continue for the placement of the next mat foundation slab later this month.



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Micropile Installation Completed

- A total of 1,896 micropiles have been installed throughout the project.
- The work was completed in two mobilizations:
 - Oct. 2012 to Jul. 2013; 1258 piles installed in 35 weeks, ave. rate of 36/wk
 - Dec. 2013 to Feb. 2014; 638 piles installed in 13 weeks, ave. rate of 49/wk (included a night shift)
- All piles continue to pass load testing, final testing should be completed by mid-April.





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Current Project Overview



Western Zone – Gridlines 1 to 10

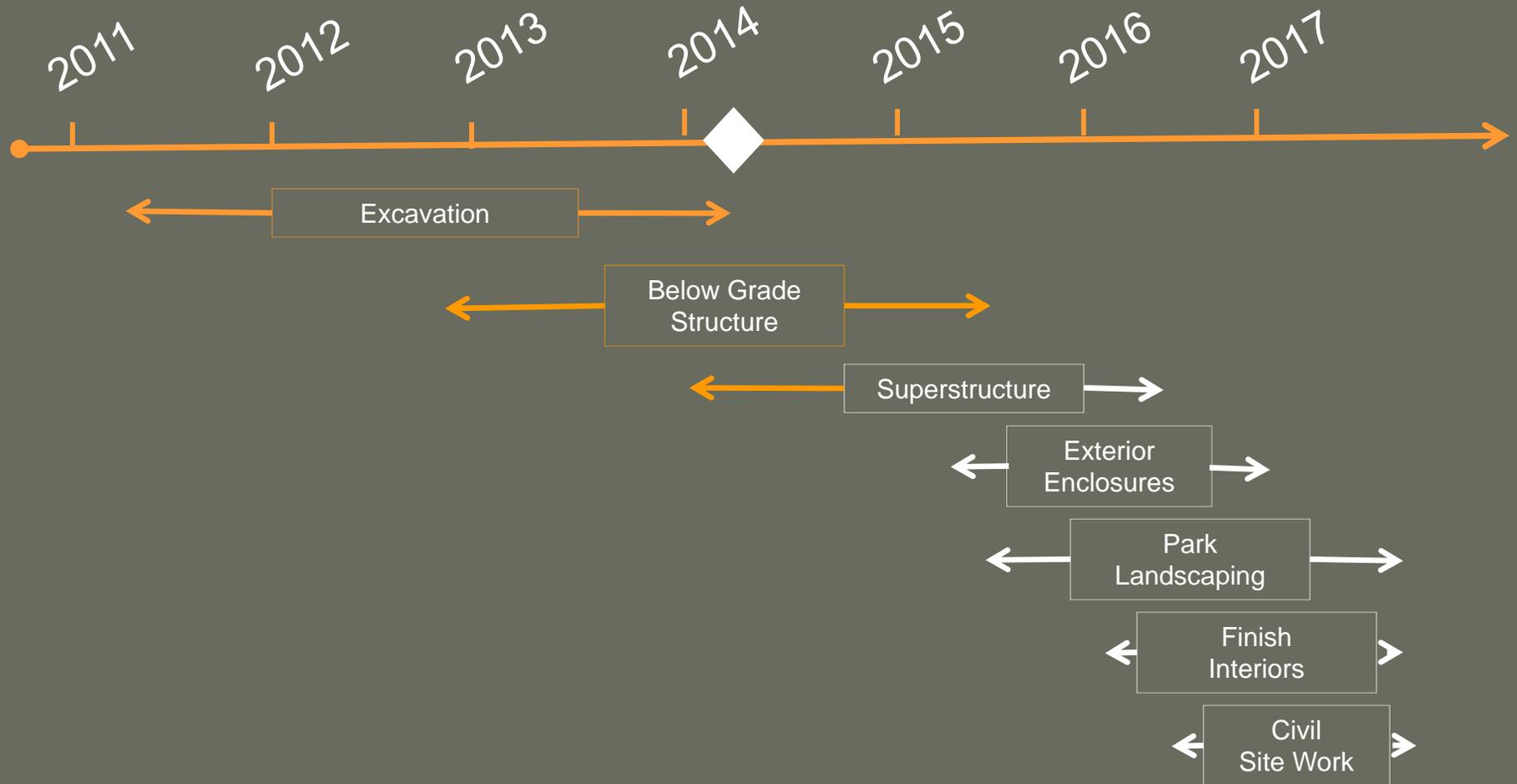
Central Zone – Gridlines 10 to 20

Eastern Zone – Gridlines 20 to 35



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Construction Timeline Summary





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Construction Milestones

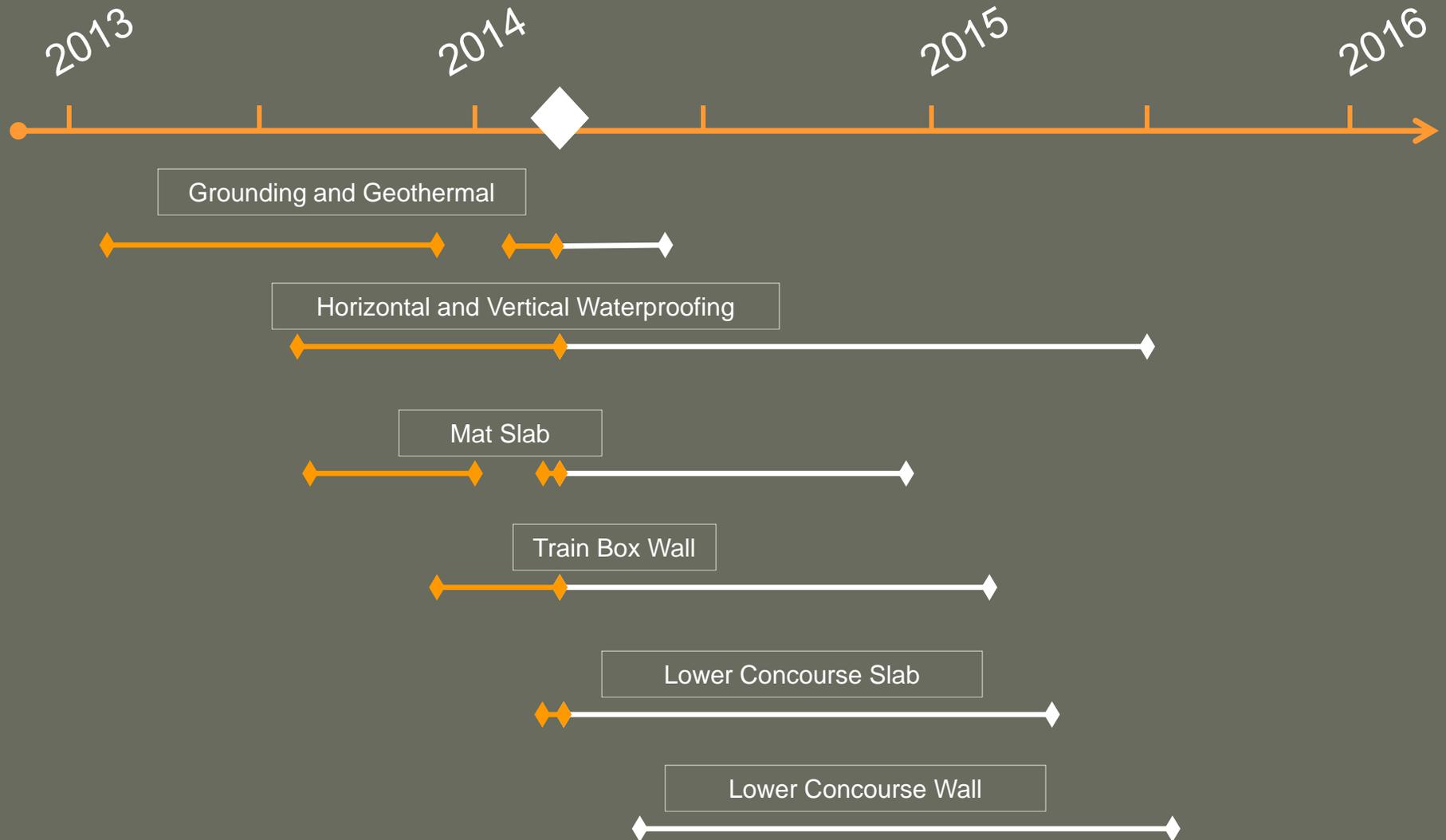
Key Schedule Dates	Baseline	27-Jan-14		Float
Complete Utility Relocations	8-Jul-13	7-May-14		857
Complete First Mat Pour	8-Jul-13	9-Sep-13	A	
Complete Zone 2 Mat Pour	27-Aug-13	24-Nov-13	A	
Complete Excavation	6-Jan-14	31-Jan-14	A	
Complete Zone 1 Concourse Level Deck	7-Mar-14	20-Oct-14		1
Begin Steel Erection	6-Jun-14	18-Jul-14		0
Complete Steel Superstructure	19-Nov-15	1-Dec-15		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
Begin 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

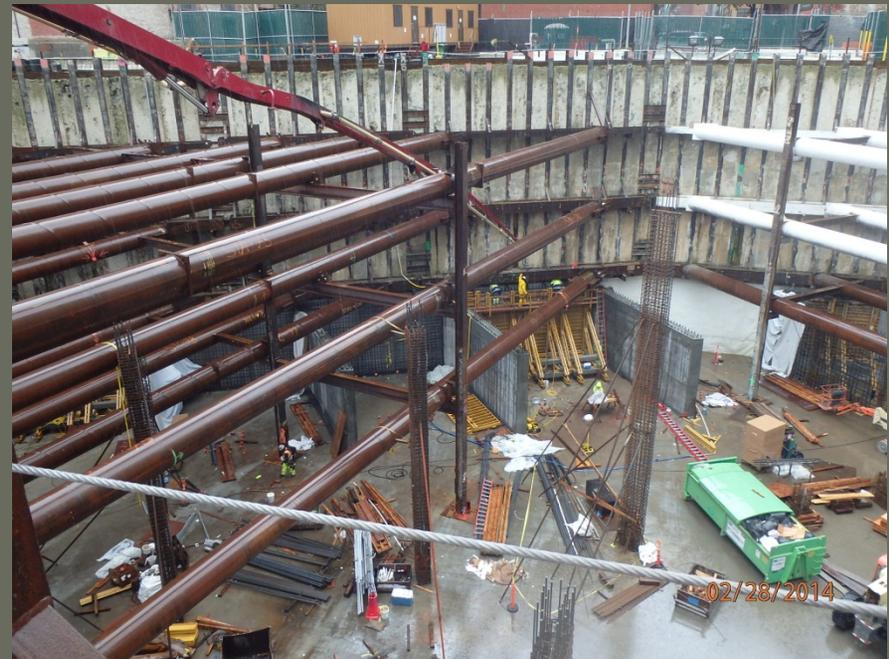




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Western Zone Activity (zones 1 and 2)

West end wall pour,
future tunnel entry
point.



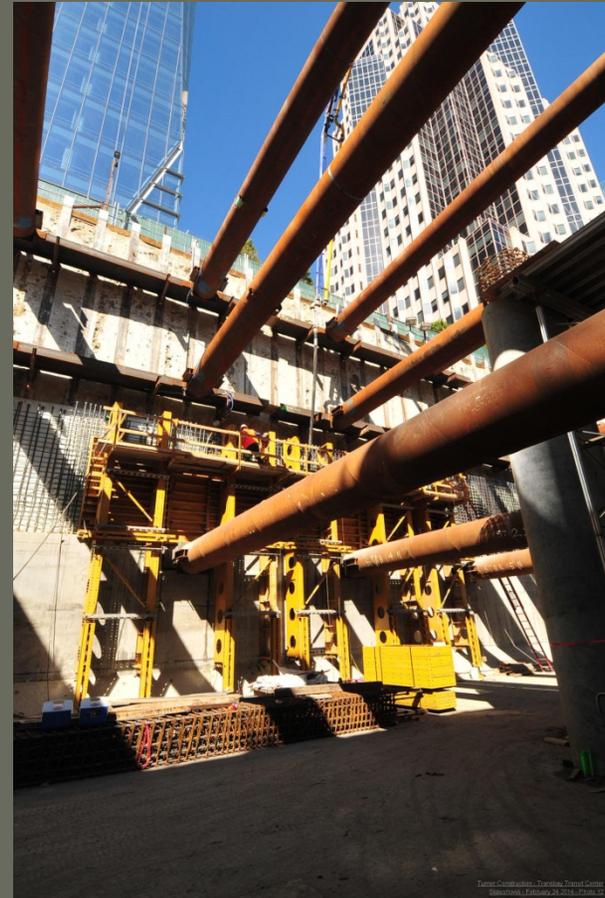


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Western Zone Activity (zones 1 and 2)



Column placement



2nd Lift Wall placement



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Central Zone Activity (zones 2 and 3)



Bracing
removal
continues in
preparation
for wall and
Lower
Concourse
formwork



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Central Zone Activity (zones 2 and 3)



Started
forming for
Lower
Concourse



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Central Zone Activity (zones 2 and 3)

Started forming for Lower
Concourse





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Eastern Zone Activity (zones 3 and 4)



Sub grade and mud slab
preparation





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Eastern Zone Activity (zones 3 and 4)



Sub grade and mud slab
preparation





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Cast Node Fabrication as of February 28, 2014

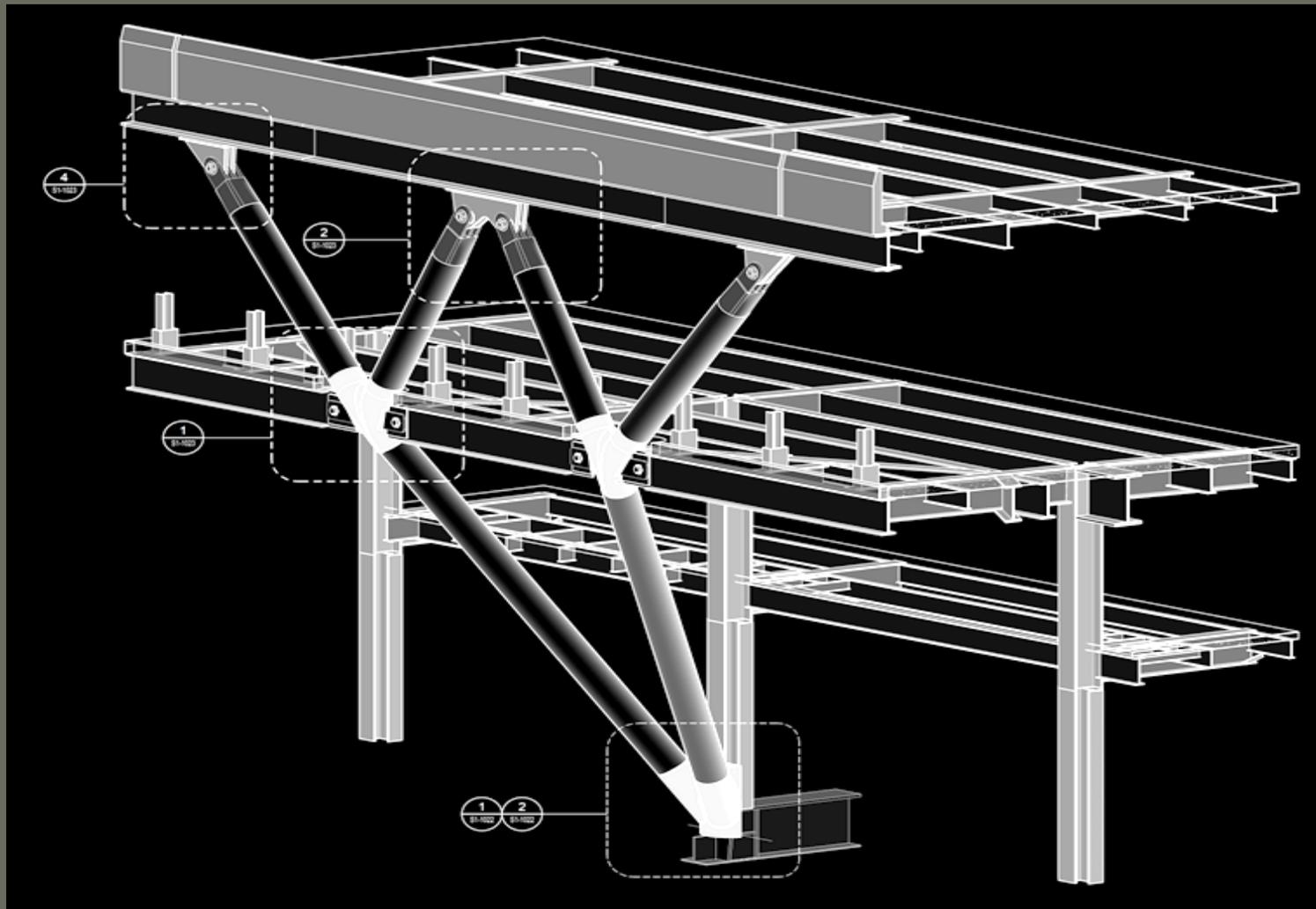
Cast Nodes	Bradken Casting Totals	In-Process Pattern Completion	In-Process Casting Machining	Anticipated First Release – March 24th	Shipped to Skanska (6 Shipments)
Ground Level	35	12	18	8	0
Bus Deck Level	75	18	13	16	0
Roof Level	138	2	31	32	0
Light Columns	56	22	20	0	0
Total Cast Nodes	304	54	82	56	0

Note: The project QA/QC Team visited both Bradken Foundries (Kansas and Louisiana) the week of 2/10/14



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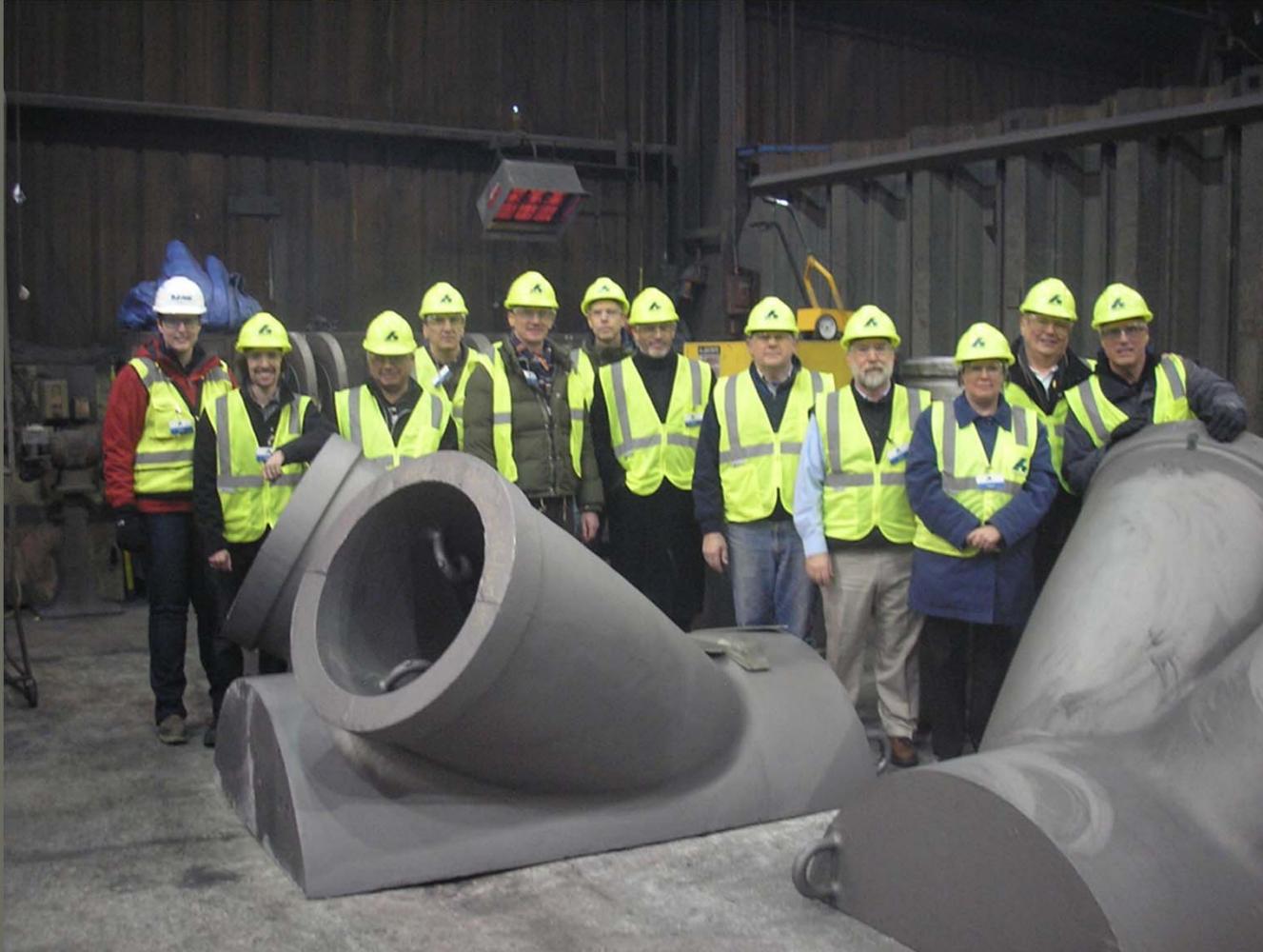
Cast Node Fabrication





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Cast Node Fabrication



Base nodes from Bradken's Amite, Louisiana foundry



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Cast Node Fabrication



Roof Deck nodes



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Utility Relocation - AWSS Installation Update

- AWSS work continues at night to accommodate bus traffic.
- Road repairs were completed between Main and Beale Streets





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Construction The Next 90 Days

- Next 30 Days (March)
 - Complete fine grading and pit excavation.
 - Continue foundation walls in central and west areas.
 - Continue Zone 4 micropile testing.
 - Complete Zone 3 grounding and geothermal installation.
 - Continue Cast Node fabrication, ship first nodes.
 - Continue AWSS work along Mission Street.
 - Continue work on Lower Concourse slab in the central and western zones.
- In 60 Days (April)
 - Complete Zone 3 mud slab, waterproofing and protection slab installation. Continue Zone 4 geothermal work.
 - Continue foundation walls, columns and re-bracing in West & Central zones.
 - Place mat slab 11 and 12 in Zones 3 and 4.
- In 90 Days (April)
 - Continue work on Lower Concourse slab, as well as columns and walls in central and west areas.
 - Pour mat slab 12 in Zone 3.
 - Continue Structural Steel fab.



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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 (Feb 2014)	\$8.2	\$62.7	\$36.4	\$87.3	\$30.3	\$224.9
Utility Relocation Change Orders		(\$0.1)				(\$0.1)
BSE Change Orders						
Below Grade Change Orders						
Structural Steel Change Orders						
Additional Demolition		(\$0.6)				(\$0.6)
Total Draws (Mar 14)	\$0	(\$0.7)	\$0	\$0	\$0	(\$0.7)
Remaining Balances	\$8.2	\$62.0	\$36.4	\$87.3	\$30.3	\$224.2



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Bay Area Regional Labor Breakdown

Labor by Area	Through February 2014	
Location	Total Hours Completed	Hours Percent
East Bay (Alameda, Contra Costa, Solano)	328,552	33%
North Bay (Marin, Napa, Sonoma)	31,023	3%
South Bay (San Mateo, Santa Clara)	91,295	9%
San Francisco	174,826	18%
Other*	362,331	37%
Totals	988,027**	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

	Through February 2014	
Location	Total Apprentice Hours	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	38,616	27%
North Bay (Marin, Napa, Sonoma)	4,799	3%
South Bay (San Mateo, Santa Clara)	23,957	17%
San Francisco	50,289	35%
Other*	25,543	18%
Totals	143,204	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 February 2014

Classification	TTC Building and RUP's*
Inspectors – Soils / Material Test	42
Carpenters and Related Trades	66
Cement Mason	48
Electrical – Utility Lineman	26
Electrician	43
Field Surveyor	27
Iron Worker	190
Laborer and Related Trades	584
Operating Engineer	348
Pile Drivers	137
Plumber	15
Roofer and Waterproofor	26
Sheet Metal	5
Teamsters	166
Tile Setters / Finishers	7
Water Well Driller	9
Totals	1,739

* Relocation of Utilities Project



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Questions?