



Construction Update

February 12, 2015

Transbay Transit Center

TJPA





Transbay Transit Center

Current Project Overview



Western Zone – Gridlines 1 to 10

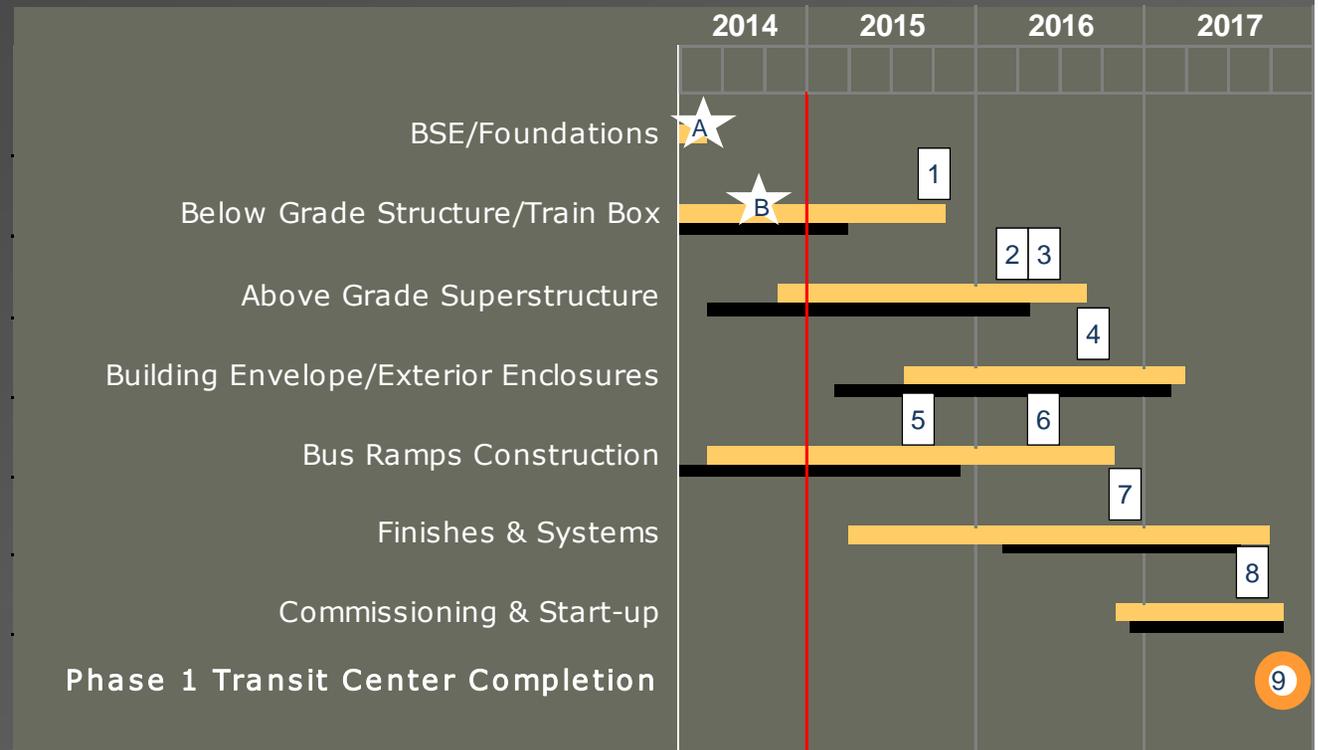
Central Zone – Gridlines 10 to 20

Eastern Zone – Gridlines 20 to 35



Project Status – Schedule

#	Milestone	Current
1	Complete TG 6.0 Below Grade Concrete	Q4 2015
2	Complete Structural Steel Erection and Welding	Q1 2016
3	Complete Above Grade Concrete	Q2 2016
4	Building Watertight	Q3 2016
5	Complete Bus Ramp Below Grade Concrete	Q3 2015
6	Complete Bus Ramp Viaduct and Cable Stay Bridge	Q2 2016
7	Permanent Power to Building	Q4 2016
8	Building Ready for Bus Driver Training	Q3 2017
9	Substantial Completion	Q4 2017



* The current critical path of the project is as follows; structural steel fabrication and erection (GL's 10 -16), central zone lift 3 walls and eastern zone wall lift 2, lower concourse slab, wall lift 3 and re-bracing.

Current Schedule
 Baseline Schedule

★ = Completed Work; A) excavation through "rat" slab installation (re-bracing remains). B) mat foundation slabs.



Project Status – Active Milestones

#	Milestone	Planned	Actual / Current
1	Complete TG 6.0 Below Grade Concrete	Q4 2015	Q4 2015
	Milestone Activity Start	March 2013	Jul 17, 2013 (A)
	Milestone Activity Finish	June 2015	November 2015
	Percent Complete as of this Date	76%	90%
2	Complete Structural Steel Erection and Welding	Q1 2016	Q1 2016
	Milestone Activity Start	July 2014	Oct. 29, 2014 (A)
	Milestone Activity Finish	Dec. 2015	Mar 2016
	Percent Complete as of this Date	38%	10%



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Project Status – Contingency Tracking (\$millions)

Trend	Design Contingency	Construction Contingency	CM/GC Contingency	Program Reserve	Escalation	Total Contingency & Reserve
Baseline Budget Amounts (July 2013)	\$8.2	\$62.5	\$36.4	\$87.5	\$30.3	\$224.9
Contingency Usage Through Dec. 2014	(\$3.1)	(\$8.0)	(\$1.7)	(\$72.5)	(\$9.5)	(\$94.8)
Remaining Baseline Budget Amounts (Dec. 2014)	\$5.1	\$54.5	\$34.7	\$15.0	\$20.8	\$130.1
Bus Ramps Change Orders		(\$0.0)				(\$0.0)
BGS Change Orders		(\$0.3)				(\$0.3)
Total Draws/Addds January 2015	(\$0.0)	(\$0.3)	\$0	(\$0.0)	(\$0.0)	\$0.3
Remaining Balances	\$5.1	\$54.2	\$34.7	\$15.0	\$20.8	\$129.8



Project Status – Safety Statistics

	2010 / 2011 / 2012	2013	2014	2015 (through Jan. 31 st)
Total Craft Hours by Year	627,744	315,000	375,615	30,706
Number of Recordable Incidents	9	3	13	1
Number of Lost Time Incidents	1	0	4	0
WO Project Annual RIR / National Annual BLS RIR Average / California RIR Average	2.87 / 3.6 / 3.8	1.90 / 3.8 / 4.0	6.92 / tbd / tbd	tbd / tbd / tbd
WO Project Annual LTIR / National Annual BLS LTIR Average / California LTIR Average	0.32 / 1.9 / 1.8	0.00 / 1.8 / 1.7	1.60 / tbd / tbd	tbd / tbd / tbd

NOTES:

RIR = recordable incident rate, LTIR = lost time incident rate.

These rates are calculated as follows: RIR and LTIR = (# of recordable or lost time incidents for the year X 200,000) / actual hours worked.

* BLS is the Bureau of Labor Statistics, U.S. Department of Labor and State of California, it takes these agencies more than 18 months to produce the statistics after year's end.



Period Summary

- There was one recordable and zero lost time safety incidents this period. The recordable incident involved a member of the structural steel crew and a strained muscle. The incident has been reviewed and corrective action has been taken.
- There have been over 1,349,000 craft hours completed, excluding demolition, through January 31, 2015. An increase of over 34,000 hours since our last construction update.
- In preparation for structural steel erection, the access trestle disassembly has been completed between gridlines 10 and 15. Disassembly work continues between gridlines 15 and 16.
- Structural steel erection continues and is currently in progress between gridlines 10 and 15.
- Steel trial assembly and fabrication continues in all Structural Steel fabrication shops.



Period Summary

- In the eastern zone, wall lift 1 is 100% complete. Wall lift 2 work continues, followed by re-bracing and Lower Concourse formwork. Column concrete placement continues.
- In the western zone, placement of third lift train box walls are 100% complete. Work on the vehicle / bike ramp as well as interior walls continues.
- TG 7.2, above grade concrete has mobilized and begun work in preparation of waterproofing the 4th lift walls.
- Eastern zone Lower Concourse slab placements continue. A total of 7 of 16 have been completed. Total placement of lower concourse slabs is over 75% complete throughout with 27 of 36 finished.
- On the Bus Ramp / Bridge project, work has begun on the pylon 9 foundation for the cable stay bridge and 12 of 29 CIDH piles have been completed for the ramp viaduct structure.



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Below Grade Concrete Progress Through January 31, 2015

Steel Erection Zones	1st Lift Walls	1st Lift Walls Poured	1st Lift Walls Percent	2nd Lift Walls	2nd Lift Walls Poured	2nd Lift Walls Percent	3rd Lift Walls	3rd Lift Walls Poured	3rd Lift Walls Percent
Western	35	35	100%	35	35	100%	35	35	100%
Central	20	20	100%	20	20	100%	20	20	100%
Eastern	35	35	100%	35	20	57%	35	4	11%
Total	90	90	100%	90	75	83%	90	59	66%

Steel Erection Zones	Columns	Columns Poured	Columns Percent	Lower Concourse Decks	Lower Concourse Poured	Lower Concourse Percent
Western	62	62	100%	10	10	100%
Central	48	48	100%	10	10	100%
Eastern	66	46	70%	16	7	44%
Total	176	156	89%	36	27	75%



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Western Zone Activity



Above Left: Bracing removal at southwest corner of the project.



Above and Below Right: Concrete placement and continuing formwork and reinforcing steel for bike and vehicle ramp from street level to lower concourse.





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Central Zone Activity

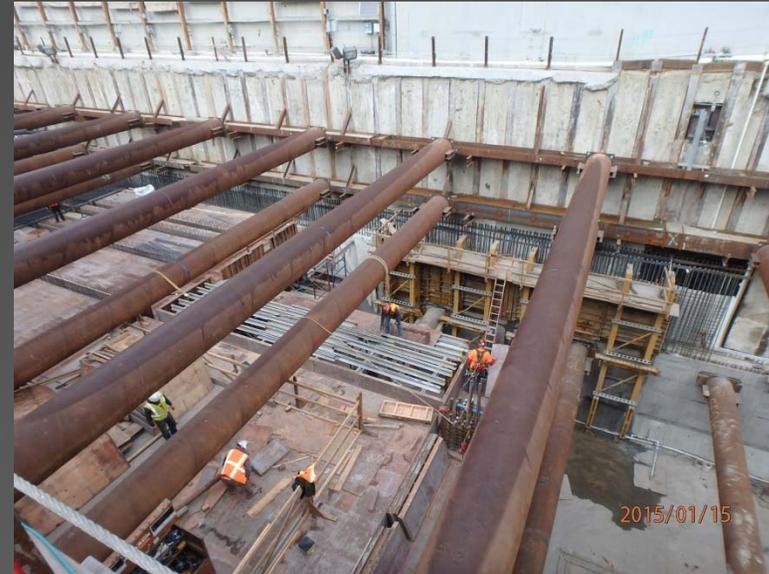


Ongoing steel erection activities.





Eastern Zone Activity



Above: Forms for final first lift wall at east end of trainbox.

Above Right: Lower concourse formwork and reinforcing being installed east of Fremont.

Below Right: Re-bracing in progress after first lift walls complete.





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Ongoing Structural Steel Fabrication



Above: QA/QC shop visit to XKT facility in Vallejo, CA.

Above Right: Cast nodes ready for welding as part of light column ring, XKT facility.

Right: Cast nodes and pipe pieces, all part of the light column assembly, XKT.



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Cast Node Fabrication as of January 31, 2015

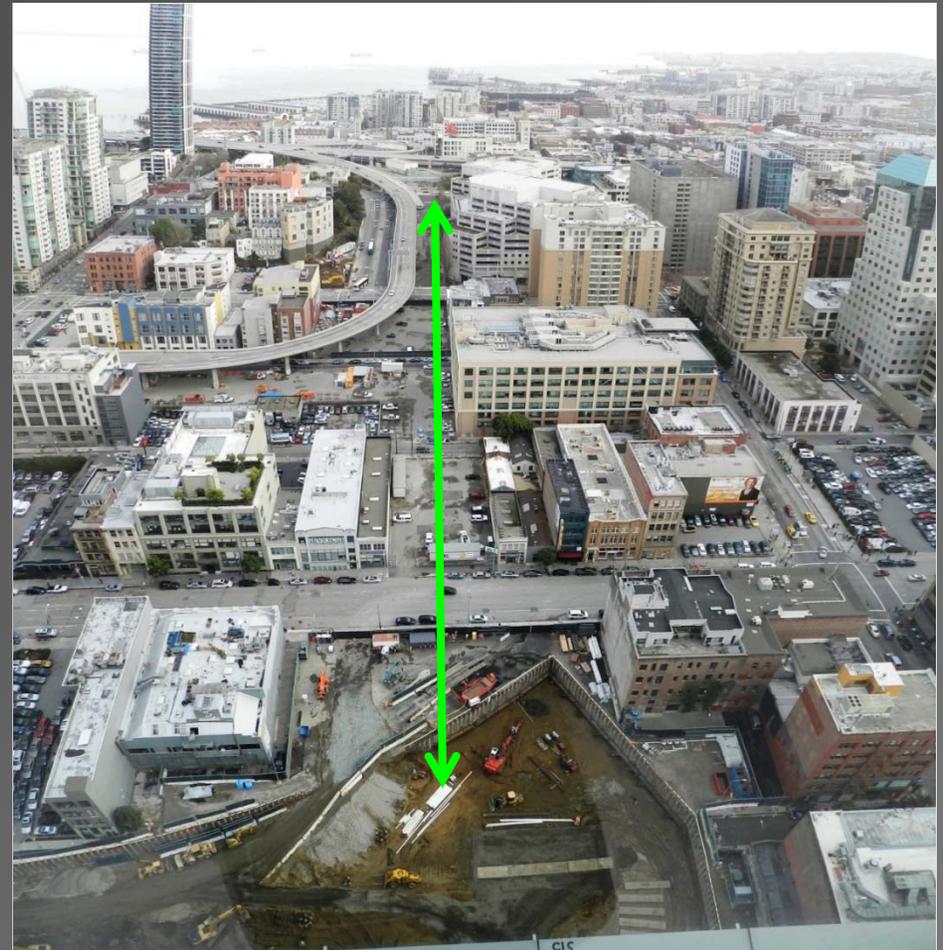
Casting Group	Totals	Shipments Mar.-May	Shipment May-June	Shipment August	Shipment September - October	Shipment November - December	Shipment January - February	Total Shipped to Date
Ground Level - Atchison 19,600 - 46,300 lbs	35	8	6	8	2	0	0	24
Bus Deck - Amite 9,500 - 22,800 lbs	75	16	5	10	16	8	3	58
Roof Level - Atchison 4,400 - 5,400 lbs	138	32	32	14	24	12	7	121
Light Columns	56	0	0	8	0	33	12	53
Totals	304	56	43	40	42	53	22	256

Of the 304 total cast nodes required for the project, a total of 256, or 84%, have shipped to the structural steel fabricators.



Bus Ramp and Bridge

- Current Status
 - Contractor demolition of portions of original bus ramp foundations and off-ramps continues.
 - CIDH Piles in progress, total of 12 CIDH piles completed through January 31st.
 - CIDH Piles will continue over the next 30 to 60 days.
 - Pylon 9 grade level footing formwork has begun.
 - Cable stay bridge materials are in fabrication.





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Bus Ramp and Bridge



Above: Preparation of Pylon 9 for footing formwork.

Above Right: Installing CIDH pile casing.

Below Right: Reinforcing steel cage for CIDH pile.





Construction

The Next 90 Days

- Next 30 Days (Feb.)
 - Continue Lower Concourse decking, rebar and concrete in eastern zone.
 - Complete western zone RA re-bracing.
 - Continue foundation walls (lift 2), re-bracing and columns in the eastern zone.
 - Continue Structural Steel and Cast Node fabrication.
 - Continue Bus Ramp CIDH pile work.
 - Continue structural steel work onsite.
 - Continue MEPF Coordination.
 - Continue stair and ladder fabrication.
- Next 60-90 Days (Mar. – Apr.)
 - Continue concrete foundation walls and columns of the Train Box at various levels in the eastern zones.
 - Continue Lower Concourse decking, rebar and concrete in the eastern zone.
 - Continue re-bracing in western and eastern zones.
 - Continue Bus Ramp and Bridge work; CIDH, complete demolition and utility re-location.
 - Continue structural steel erection and fabrication and cast node fabrication.
 - Continue MEPF coordination.
 - Start installation of stairs/ladders.



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Bay Area Regional Labor Breakdown

	Through January 2015	
Location	Total Hours Completed	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	466,725	35%
North Bay (Marin, Napa, Sonoma)	46,560	3%
South Bay (San Mateo, Santa Clara)	123,470	9%
San Francisco	239,826	18%
Other*	472,484	35%
Totals	1,349,065**	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 January 2015	
Location	Total Hours Completed	Percent of Total
East Bay (Alameda, Contra Costa, Solano)	59,100	26%
North Bay (Marin, Napa, Sonoma)	10,825	5%
South Bay (San Mateo, Santa Clara)	31,413	14%
San Francisco	68,847	31%
Other*	52,942	24%
Totals	223,127*	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 January 2015

Classification	TTC Building and RUP's*
Inspectors – Soils / Material Test	43
Carpenters and Related Trades	185
Cement Mason	76
Electrical – Utility Lineman	28
Electrician	47
Field Surveyor	36
Iron Worker	463
Laborer and Related Trades	702
Operating Engineer	423
Pile Drivers	174
Plumber	22
Roofer and Waterproofor	39
Sheet Metal	5
Teamsters	171
Tile Setters / Finishers	7
Water Well Driller	9
Totals	2,430

* Relocation of Utilities Project



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Questions?

