



Advanced Signal System CBOSS PTC

Project Overview/Update

LPMG Meeting
August 22, 2013

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CBOSS PTC - What is it?

- Communications Based Overlay Signal System (CBOSS) Positive Train Control (PTC)
- Fiber Optic Network
- Project Requirements
 - Includes federal mandate (PTC)
 - Improves Caltrain performance
- Project Partners
 - FRA, UP, CHSRA, JPB
- Needed for Blended System

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CBOSS PTC Requirements

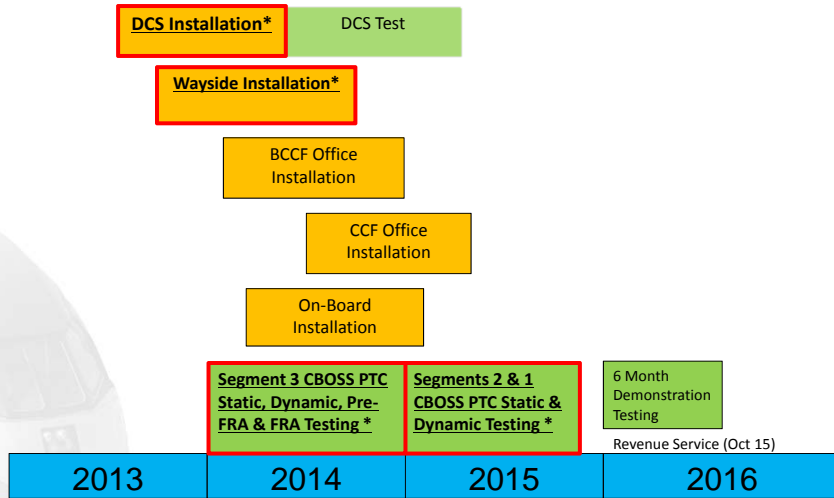
- PTC
 - Prevent train to train collisions
 - Prevent over speed derailments
 - Prevent incursions into established work zones
 - Prevent movement through a misaligned switch
 - Interoperability
- Caltrain
 - Enhanced crossing safety / performance
 - Improved headways and operational flexibility
 - Enforcement of scheduled station stops
 - Schedule management
 - Employee In Charge

Project Total Cost and Milestones

Description	Cost (in millions)	Milestones
Project Planning and Procurement	\$5	2010 - 2011
Phase 1 - Critical Design	\$25	2012 – 2013
Phase 2 - Final Design, Data Communications Subsystem & Fiber Backbone Installation	\$51	2013 – 2014
Phase 3 - Installation, Testing, Commissioning	\$150	2014 – 2016 (Revenue service Oct. 2015)
Total	\$231	



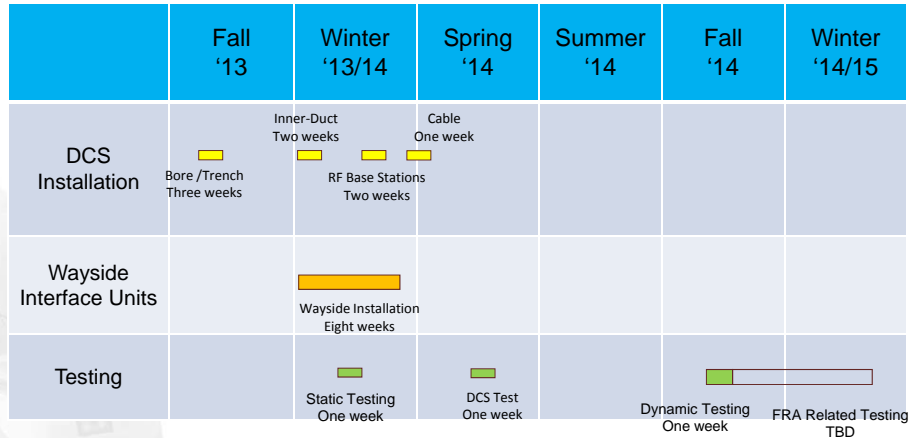
Installation Milestones (Entire Corridor)



Segments – South to North



Milestones (Example San Jose)



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Fiber Installation



Trench (42" deep x 9.5" wide, within the Caltrain right of way)



Boring (required at many crossings, within the Caltrain right of way)



Conduit on tunnel or bridge
(clamps/hangers, may require lane closure during off-peak hours)

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Base Station Installation



Pour foundation



Base station footprint



Example 80' pole already on right of way

Outreach

- Activities (March – August 2013)
 - CSCG (3 meetings)
 - LPMG (2 meetings)
 - One-on-one (each of the 17 cities/3 counties)
- Next Steps
 - Permits / Installation coordination
 - Outreach plan and implementation (each jurisdiction)



Q/A

