



Communication Based Overlay Signal System Project Status

Board of Directors
September 3, 2015
Agenda Item 13



Background

- Issue Communications Based Overlay Signal System Design/Procure/Install Turn-key RFP: August 2010
- Awarded Prime Contact: October 2011
- Executed a Service Agreement with California High Speed Rail Authority (HSR11-04) for Federal Railroad Administration Funding: December 2011
- Issued Notice to Proceed to Parson Transportation Group: Jan. 27, 2012
- Executed Fiber Optic Option: April 26, 2012
- Exercised Option 1 (Phase 2): April 30, 2013
- Exercised Option 2 (Phase 3): Aug. 1, 2013
- Exercised Option 2 (Phase 4): Dec. 4, 2014

CBOSS Project Requirement

Positive Train Control (Rail Safety Act 2008)

- Prevent Train-to-Train Collisions
- Prevent Overspeed Derailments
- Prevent Incursions into Established Work Zones
- Prevent Movement through a Misaligned Switch

Additional Requirements

- Enhanced Crossing Safety / Performance
- Improved Headways and Operational Flexibility
- Enforcement of Scheduled Station Stops
- Schedule Management
- Employee in Charge

Project Key Milestones

Project Key Milestones		Planned Baseline Finish	Actual/ Forecast Finish
1	JPB Issued Notice to Proceed to PTG – Phase 1	Jan 2012	Jan 2012
2	Completion of Preliminary Design Review and Acceptance	Sept 2012	Nov 2012
3	Completion of Critical Design Review and Acceptance	Feb 2013	Jun 2013
4	Completion of Final Design Review and Acceptance	Jul 2013	Jun 2014
5	Complete Factory Integrated Systems/Subsystem Demo	Sept 2014	Apr 2015
6	Completion of Data Communication Subsystem (DCS) Installation and Verification	Sept 2014	Apr 2015
7	Completion of Field Subsystem Installation and Verification	Jan 2015	Mar 2015
8	Completion of Onboard Subsystem Installation and Verification	Jun 2015	Aug 2015
9	Complete build out of BCCF for CBOSS PTC	Feb 2014	Sept 2014
10	Commence FRA Pilot Section Demonstration	Oct 2014	May 2015
11	Submit Revenue Service Demonstration Application (including PTC Safety Plan)	Jul 2015	Oct 2015
12	Revenue Service Demonstration	Oct 2015	Dec 2015
13	Final System Acceptance	May 2016	Jun 2016

Project Total Installed Cost Update

Description	Turn-key Contractor Cost	Total Project Cost
Project Planning and Procurement	0	\$4.6MM
Phase 1 - Contract NTP – Critical Design	\$16.3MM	\$22.8MM
Phase 2 - Final Design and DCS Installation Including Fiber Backbone	\$35.3MM	\$53.7MM
Phase 3/4 - Field Installation, Testing and Commissioning through Acceptance & Warranty	\$87.6MM	\$149.9MM
Total	\$139.2MM	\$231.0 MM

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Challenges

- I-ITCS Software Release Delays
- Contractor Execution of Test Plans and Schedules
- Interoperability: UPRR requires that JPB execute an Interoperability Agreement and pay all UPRR expenses associated with establishing and maintaining interoperability
- FRA Revenue Service Demonstration application: No written FRA guidelines
- Long-term Maintenance and Support

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Schedule Mitigation Activities

- Improve Dates for Delivery I-ITCS Software Releases
- Increase the Productivity of Contractor Testing of the System
- Increase the Number of Technical Resources
- Increase Access to the Railroad for Testing
- Focus on Stabilizing the Infrastructure
- Improve Date for PTC Safety Plan Development
- Initiate Planning of Interoperability Testing with Caltrain Tenant

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Next Steps

- Complete Cab Software Release and Factory Testing
- Continue Segment #3 Pilot Testing and FRA Witness Testing
- Complete All Wayside and Communications Subsystem Testing
- Cut-over and begin using new mileposts
- Verify all base station towers have acceptable coverage
- Submit RSD Application (including PTCSP)
- Complete Segment #2 and Segment #1 Testing
- CBOSS PTC Initial Revenue Service by Dec. 31, 2015

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Questions?

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