

Bi-Level Railcar Project Update



SECTION 305 NGEC 2016 ANNUAL MEETING

FEBRUARY 19, 2016

Bi-level Railcar Project Overview

- Multi-state Contract - Caltrans, in partnership with the Illinois Department of Transportation (IDOT), signed a Master Agreement Contract 75A0362 to purchase 130 bi-level rail cars.
- Caltrans is the lead agency with the primary authority to administer the procurement contract.
- Caltrans ordered 42 cars for use on passenger rail corridors within California. IDOT, representing the Midwest Coalition of states that include Illinois, Missouri, Michigan, and Iowa, ordered 88 cars.
- The contract is with Sumitomo Corporation of Americas (SCOA). Their principal subcontractor with design and production responsibility is Nippon-Sharyo (NS).
- The cars are being built to the PRIIA (Passenger Rail Infrastructure and Investment Act) Bi-level Railcar technical specifications, developed and accepted by the NGEC (Next Generation Equipment Committee).

Nippon Sharyo's Bi-Level Railcar



Four Car Types:

- Coach Car
- Cab Car
- Café Lounge Car (Caltrans)
- Business Class Car (IDOT)

Features:

- Crash Energy Management
- Positive Train Control
- 125 MPH capable
- Built to PRIIA Specifications

Major Project Milestones (Completed)

Milestones Status

Completed

- Milestone A – Various CDRLs, including Quality Assurance Plan, Project Management Plan, Warranty Service Plan, and Organizational Chart, etc. (Oct. 2013)
- Milestone B – Preliminary Design Review, 30% level of design completion, including compliance matrix, drawing schedule, and arrangement drawings, etc. (Dec. 2013)
- Milestone C – Intermediate Design Review, 60% level of design completion, including draft production drawings, arrangements, and component and material specifications, etc. (Sept. 2014)
- Milestone D – Mockup Review, Full-sized hard mock ups, including passenger seats, workstation table, cab control compartment, etc. (Sept. 2014)

Major Project Milestones (Upcoming)

Milestones Status

Upcoming

- Milestone E – Final Design Review - Carshell redesign is underway. A supplementary design review is currently planned for May 2016.
- Milestone H – Subsystem FAI - First Article Inspections on the subsystems continue. Vast majority of FAI have been conducted. (32 out of 45 FAI have been conducted. 71% Complete)
- Milestone I – Pilot Car FAI
- Milestone J – Completion of Conformance Testing
- Milestone M – Final Acceptance of Pilot Cars
- Milestone O – Final Acceptance of Production Cars

Major Project Milestones (Upcoming)

Milestones Status

Upcoming

- Milestone E – Final Design Review - Carshell re-design is underway. The next design review is currently planned for May 2016.
- Milestone H – Subsystem FAI - First Article Inspections on the subsystems continue. Completion is expected once carshell re-design is completed and “design is frozen”
- Milestone I – Pilot Car FAI
- Milestone J – Completion of Conformance Testing
- Milestone M – Final Acceptance of Pilot Cars
- Milestone O – Final Acceptance of Production Cars

Carshell Compression Test

- As part of the specification and to comply with federal safety regulations, the cars must be able to withstand a number of loading scenarios. One of the most critical is a load of 800k lbs applied steadily to both ends of the car. The carshell should not show cracks, deformations, or fractures during and after the test
- During the August 20, 2015 test, the SCOA/NS test fell short of the required 800k lbs compression at 798k lbs.
- SCOA/NS is working toward compliance with federal safety regulations and requirements in the contract and are working towards a solution with the carshell
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Next Steps

- Caltrans is analyzing the revised schedule activities to understand impact on deliverables and timing, while working closely with IDOT.
- A supplementary design review will be undertaken – currently planned for Spring 2016 – to review the proposed modifications and their impact on the overall carshell structure, FAls, and overall schedule.
- NS has built three pilot cars along with the structural test car. These pilots cover the three configurations of car – cab car, coach car, and food service car.
- NS is currently fitting these vehicles out in their factory with subassembly components to validate the production processes and timings to reduce risk when production commences.

Questions?

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Thank you!