

EMU, Depot and Electrification Infrastructure

Transport Committee

7 December 2011



**Auckland
Transport**

An Auckland Council Organisation

AT Team

- Claire Stewart - Rail Development Projects (EMU, Depot, City Rail Link)
- Tom Salt – EMU Project Director
- Steve Hawkins – Depot Project Director
- Nick Seymour – Electrification Infrastructure Works

Presentation Overview

- EMU Delivery
- Depot
- Electrification Infrastructure
- Q&A

Overview

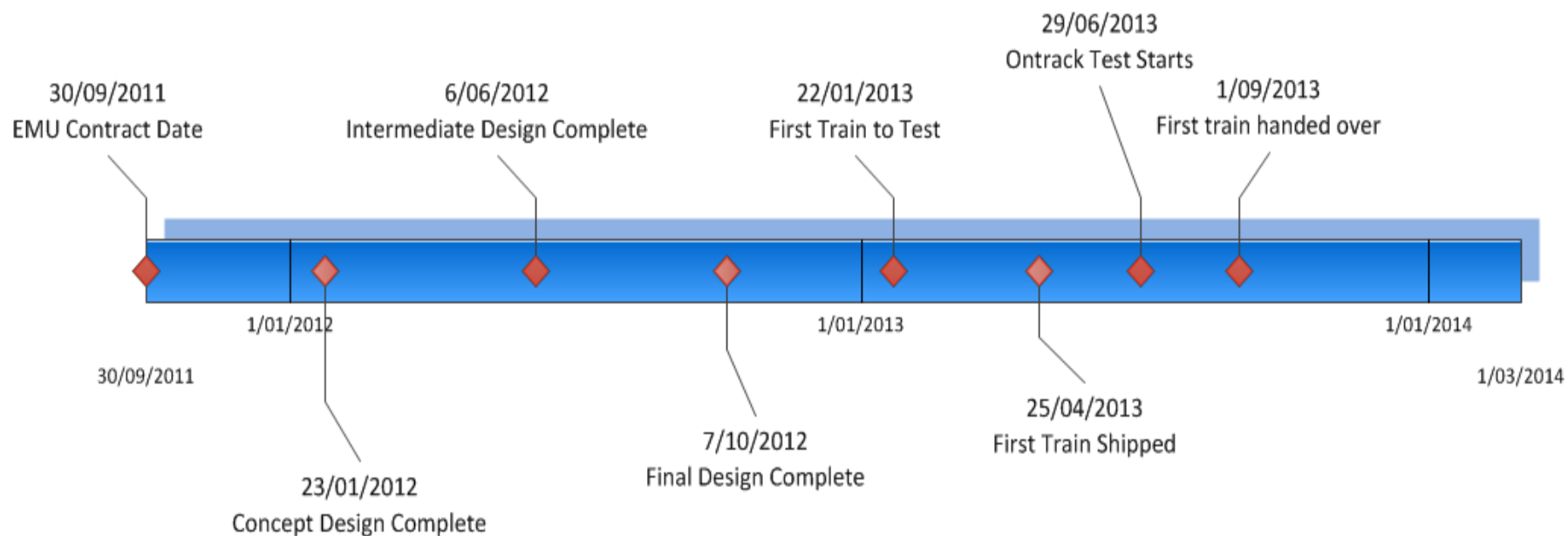
- Timeline
- Operation
- EMU Configuration
- Key Passenger Features
- User Group Engagement

CUSTOMERS ABROAD



Timeline

- First train available for service end 2013
- Full fleet in service mid 2016



Operation

- From Papakura in the **South**
- On **Eastern** line
- From Swanson on the **Western** line

Configuration

- Overall configuration
- Doors
- Manufacturing
- Power & Efficiency
- Technical Specifications

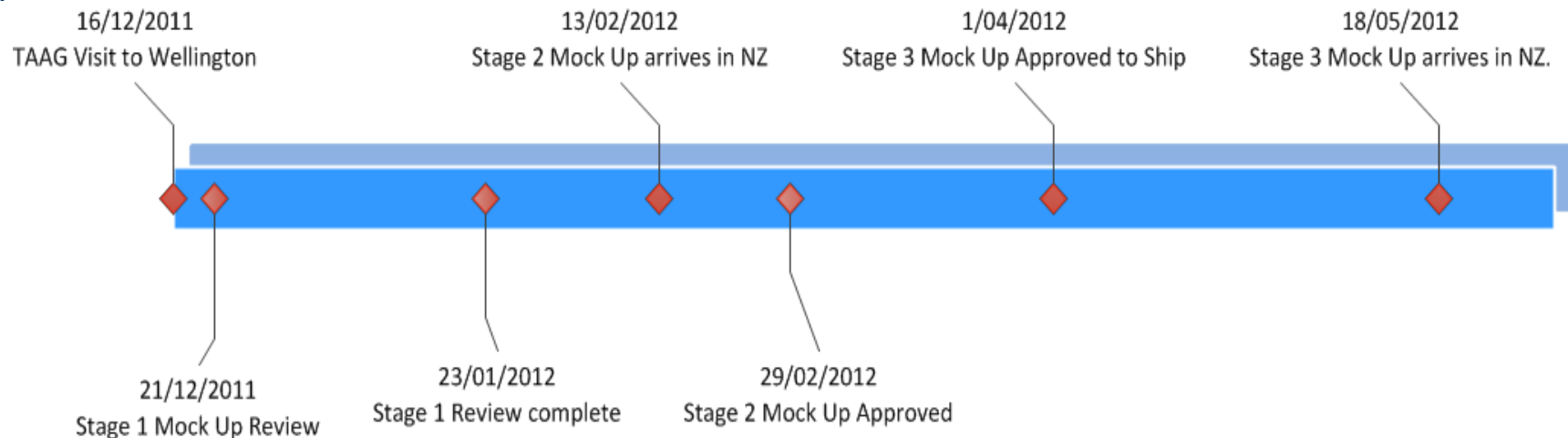


Key Passenger Features

- Capacity – 230 seats, 143 standing room, total 373
- Accessibility
- Passenger Information System - State of the Art
- Passenger Security

User Group Engagement

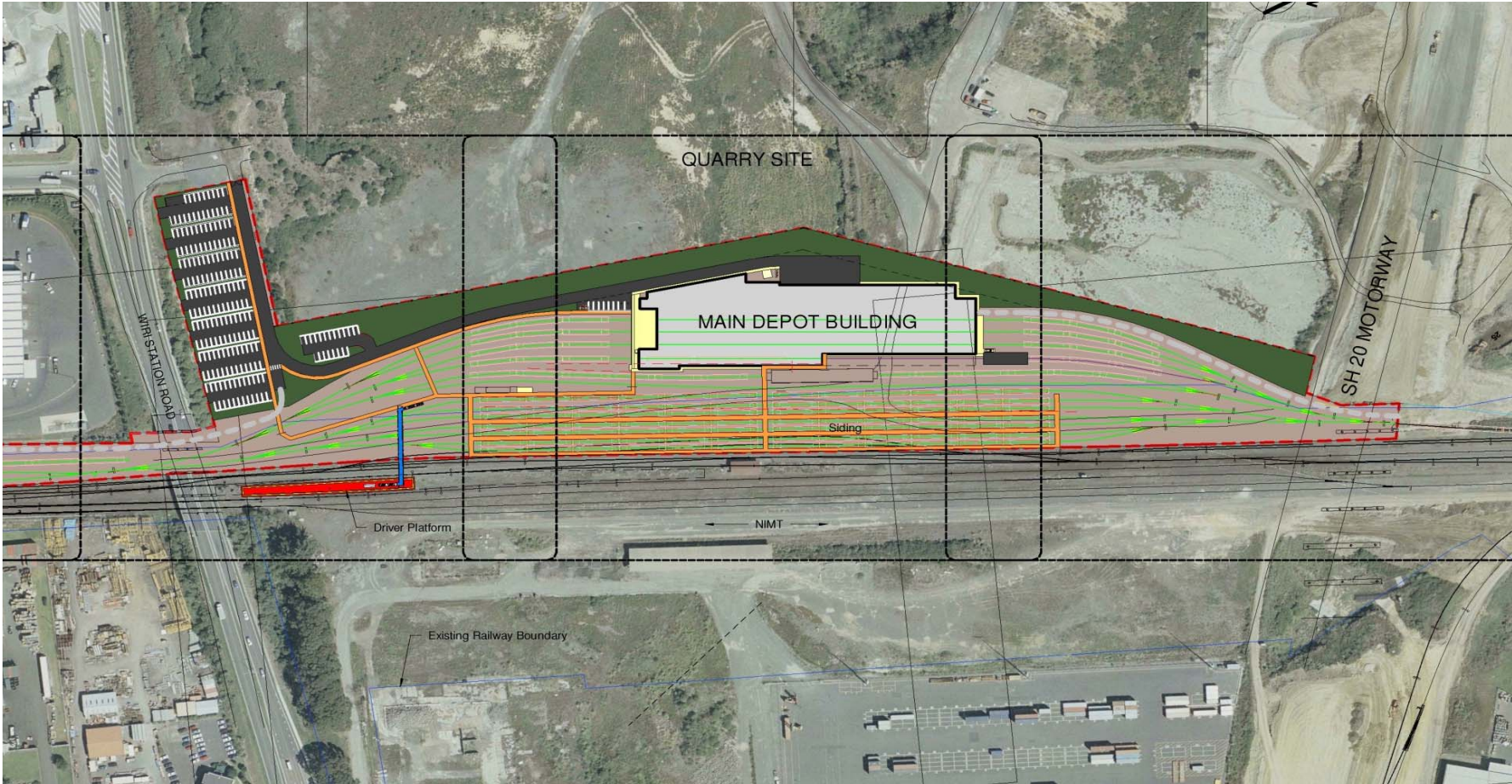
- Cross section of user groups
- TAAG - review passenger interfaces
- Mock ups, images from CAF and December (door, seating layout, wheelchair, bicycle spaces, passenger communications)
- Timeline



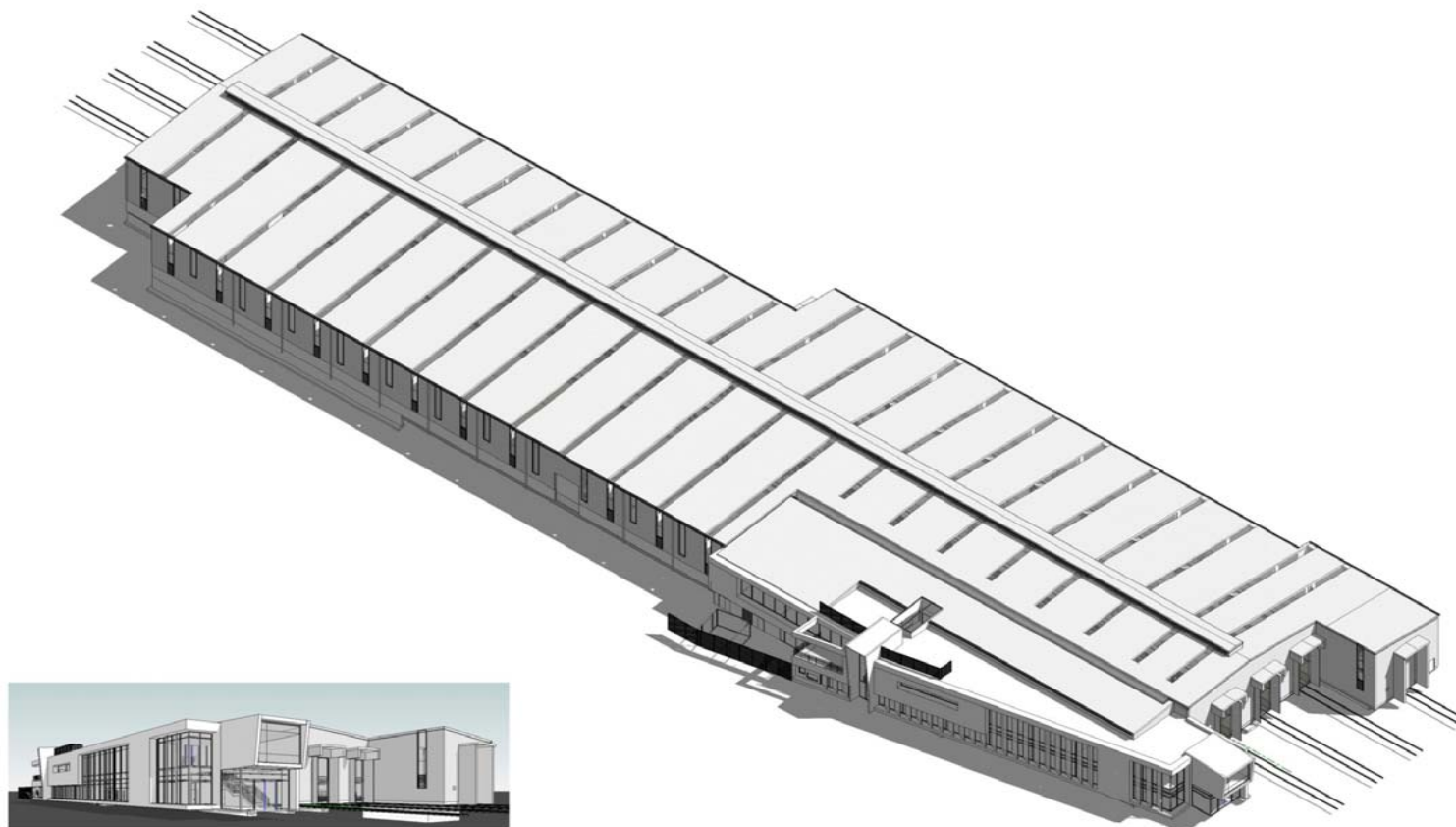
Overview

- Layout
- Building
- Programme

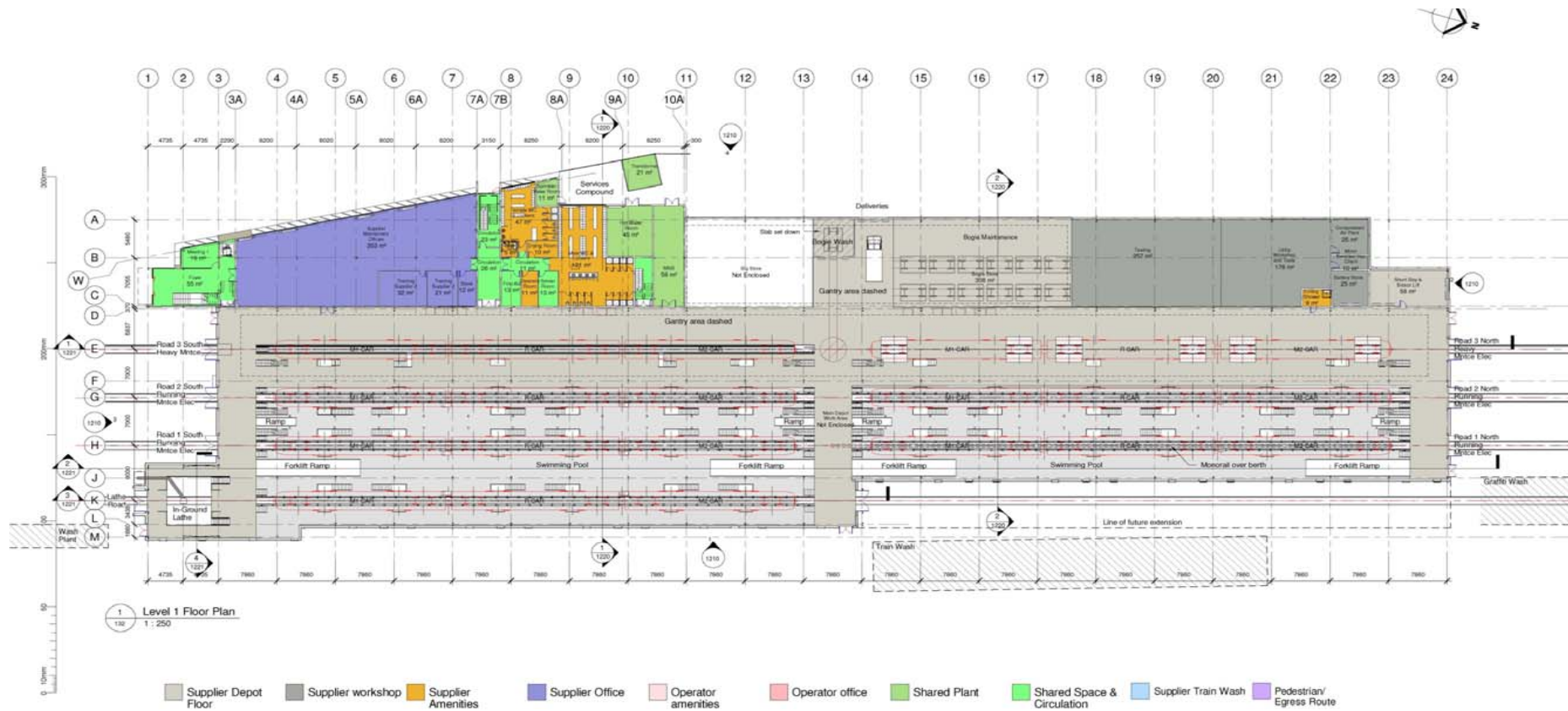
Layout



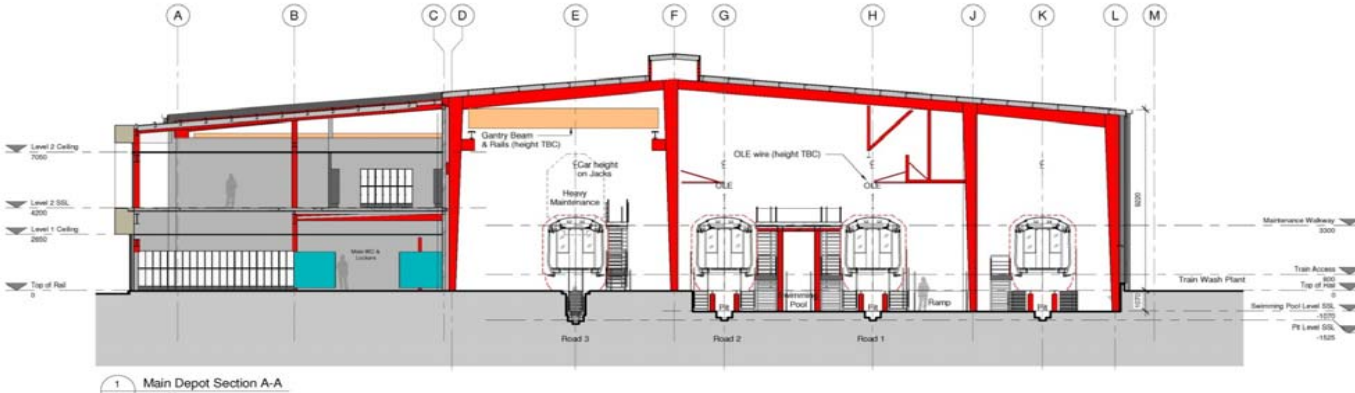
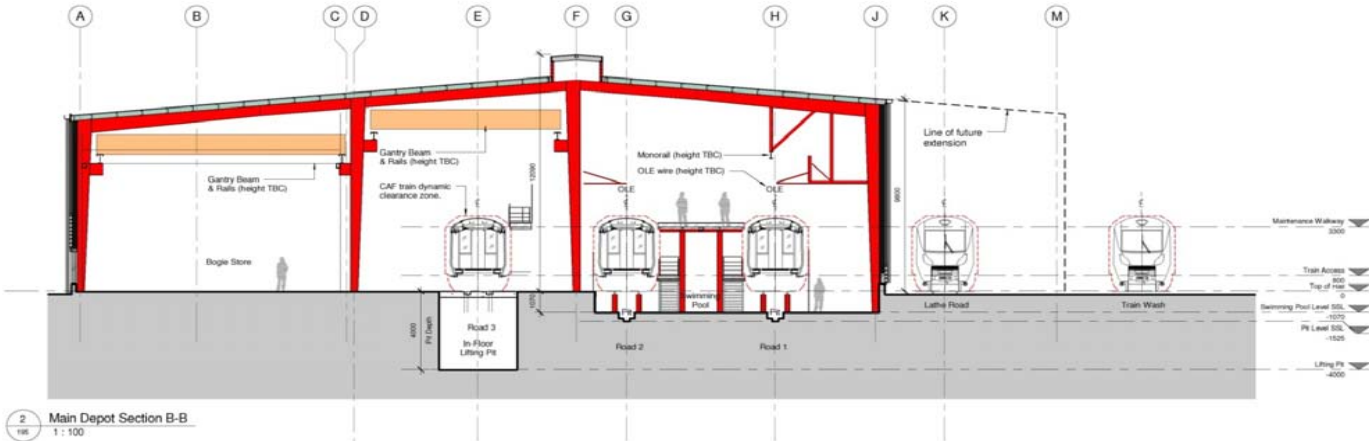
Building



Building ground floor



Building sections



Overview

- Project Update
- Key Stations
- Bridge Raising
- AEP Traction, Earthing and Bonding
- Training and Communications

Project Update

- Key stations, Parnell, Papakura, Swanson, Onehunga, Ellerslie
- Bridge Raising Works
- Installation of the AEP Traction Equipment
- Installation of Earthing, Bonding and Screening Equipment
- Communications/Training for the Auckland Electrified Area

Key Stations

- **Parnell and Papakura:** Significant track works over Christmas block of line being undertaken by KRG. Station designs to follow, construction commencing in 2012
- **Swanson:** Joint project with KRG. Land designation issue - park and ride being finalised, construction phase P&R early 2012, Stn to follow
- **Onehunga:** First line to be commissioned by AEP
 - Platform extension design underway for 3 car EMU in coordination with KRG's AEP team
- **Ellerslie:** KRG bridge raising combined with NZTA motorway widening and narrowing of station platform
 - Substantial works over Christmas block of line Include new lifts, stairs, additional shelters
- Further platform extensions may be required - pre 2010 upgraded stations

Bridge Raising

- Substantial workload over Christmas block of line
- Bridgeworks at Orakei Road, Morrin Road and Mt Wellington to include widening and road realignment
- Mountain Road Bridge replacement - AT (AMETI) leading
- Pedestrian Footbridges - Ellerslie, Puhinui, and Otahuhu South
- Minor pedestrian bridge raising at Orakei Station, where existing span and infrastructure can still be used
- Planning advanced in preparation for substantial completion of all bridges during Christmas rail closure

AEP Traction, Earthing and Bonding

- AEP works on at stations;
 - Coordination and support to KRG for Gantry installation on stations
 - Station upgrade overhead line clearances ongoing coordination with KRG
 - Earthing and bonding at Stns - December 2011 (Onehunga) to August 2012 (Otahuhu). KRG to coordinate with AT
 - AT working with KRG to minimise Impact on operations
- AEP Wide bridge screening (Overhead line physical barriers at Bridges and Stations.)
 - Detailed Design well advanced
 - AT/KRG and Auckland Council ongoing coordination

Training and Communications

- Auckland Electrified Area (AEA) training underway AT/Contractors
 - Half day training course for all staff/Contractors on/about rail or close proximity to overhead lines. Training module well underway, further courses ongoing
- AT continue to provide support to KRG on AEP Comms, including public information days and Local Board presentations
- Significant increase in Comms in lead up to Electrification "Go Live"
- AEP once complete will have a significant impact on;
 - Programme and Capital costs for future rail projects
 - Methodology and costs of maintaining AT stations (e.g. use of hoses, ladders, etc.)