

CAPTG Presentation

Runway Development Project The Construction/Implementation Perspective

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Agenda

1. Implementation

- Project Delivery
- Schedule & Budget
- Site Logistics

2. Construction

- Work Package Review

“On Board, Let’s Roll”



RDP Project Delivery



OWNER



PROJECT MANAGER



PARSONS



CONSTRUCTION
MANAGER



In Partnership With

CH2MHILL

PRIME CONSULTANT

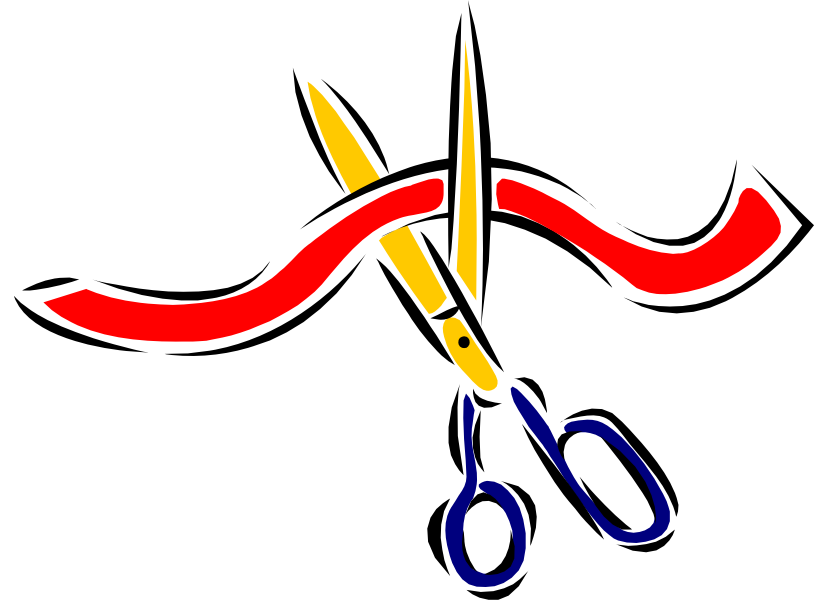
Schedule and Budget

Schedule

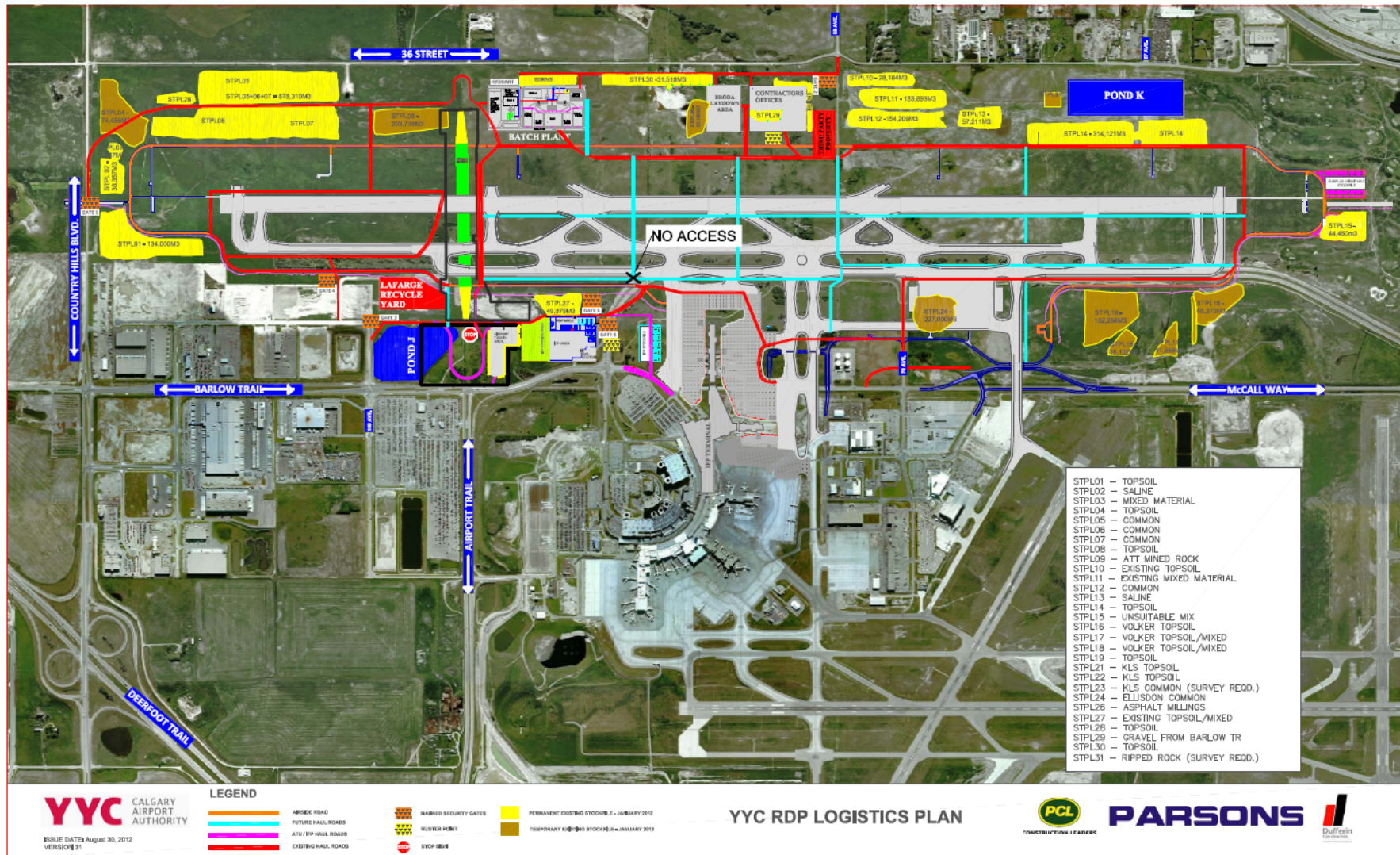
- **Construction Substantially Complete**
- **October 2013**
- **Runway Commissioning**
- **May 2014**

Budget

- **Capital Cost of \$620M**



Site Logistics



Site Logistics



Construction – Work Breakdown Structure

- General Services
- Rough Grading
- Deep Utilities and Duct Banks
- Pavement Structure, Landscaping
- Electrical
- Underpass
- Roadworks
- CDF – Centralized Deicing Facility

Project Coordination With:

- International Facilities Project
- NavCanada's Air Traffic Control Tower
- City of Calgary's Airport Trail Tunnel

Rough Grading

7.5M m3 of material to be moved:

- **1.3M m3 of Topsoil**
- **600K m3 of Rock Excavation**
- **5.6M m3 of Common Excavation**



- **500,000 truck loads**
- **24/7 operation since May 2011**
- **Up to 100 pieces of Equipment onsite**

Deep Utilities (Storm)

- 24km of storm pipe
 - 7km greater than 1800mm
 - 54km of pavement edge drains
- drains



Deep Utilities (Duct Banks)

- 33km of duct banks ranging between 2 and 42 ducts



- 5 crews active in 2012
- Activity is on critical path for Runway commissioning



Pavements – Granular Base

- **700,000m³ of Granular Materials**
- **Aggregates are produced and hauled from Lafarge's Spy Hill Pit**
- **22km Haul distance from Spy Hill Pit to project site**
- **Conventional equipment equipped with GPS grade control**



Pavements - Cement Stabilized Base (CSB)

- **CSB Paver** - ABG 8820 Capable of paving from widths of 3m to 13m wide - GPS enabled
- **CSB Roller** - BW284AD - A Bomag double drum steel roller for CSB compaction
- **Gomaco Placers** (2) - RTP500 Rubber tracked material transfer machine - used to convey materials from haul equipment to paving equipment



Airfield Electric

Electrical Components:

- New Field Electric Center including Generator
- Airfield Lighting System including Approach Lighting
- Airfield Lighting Control and Monitoring System
- Navigational Aids
- Airfield Guidance Signage

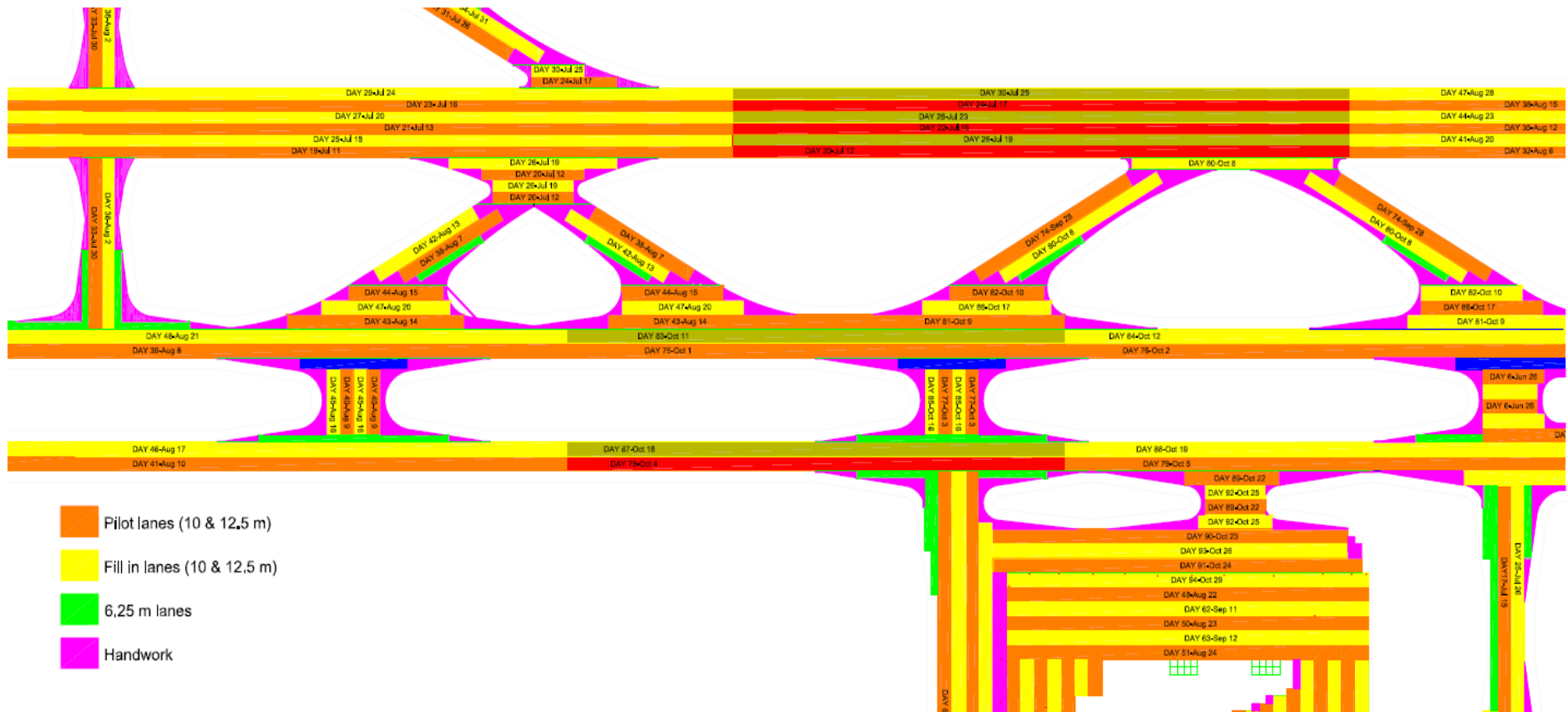


Airfield Electric

YYC CALGARY
AIRPORT
AUTHORITY



Pavements – Portland Cement Concrete (PCC) Paving Plan

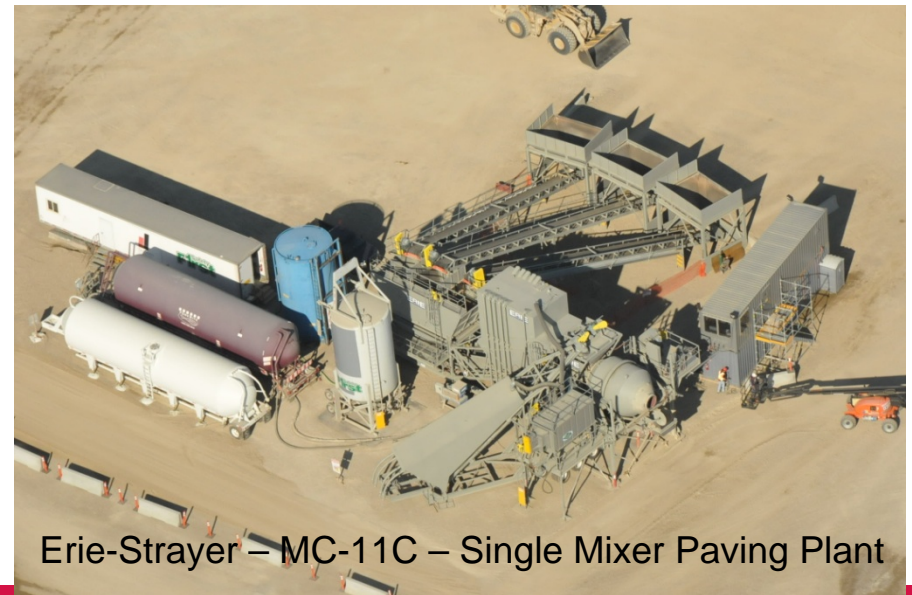


PCC Pavement Batch Operations



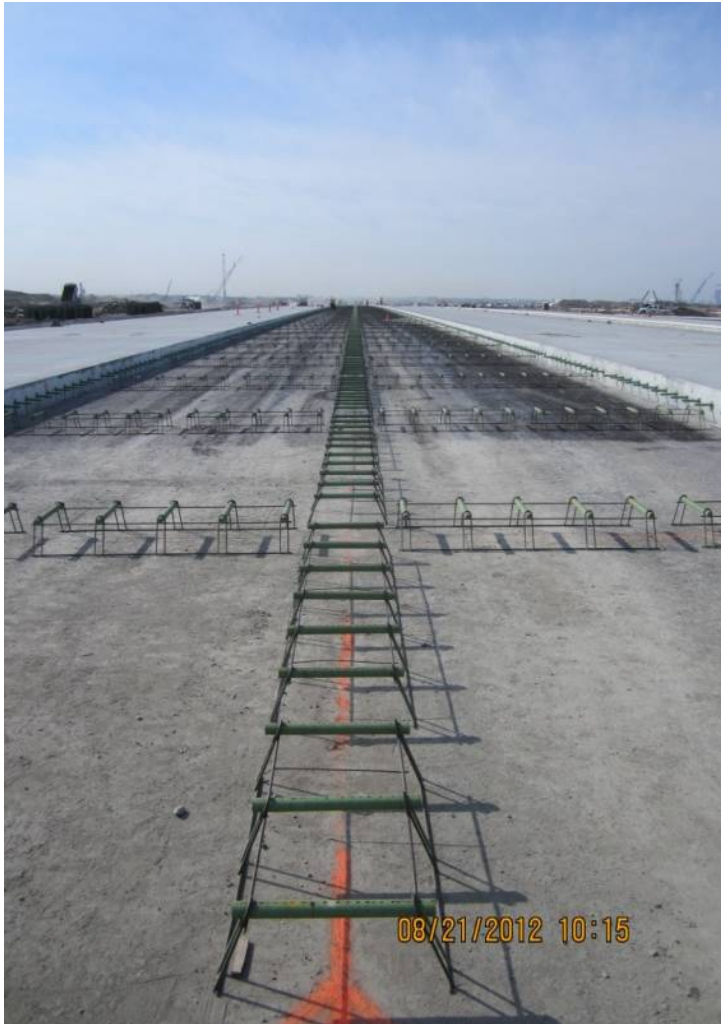
Erie-Strayer – MG-12CP2 – Dual Mixer Paving Plant

- Cement for PCC from Lafarge
- Flyash from Sundance, Alberta
- Cement for CSB from Holcim
- Capacities of 450 and 250m³/hour



Erie-Strayer – MC-11C – Single Mixer Paving Plant

Pavements – Dowel Bar Reinforcement



Pavements – Spreaders



- G&Z PS 1500 –
A four track placer spreader
used in tandem with the
Gomaco RTP500 spreader
and S1500 paver



Pavements – PCC Pavers

- **G&Z S1500** - A four track paver capable of paving from 5.5m to 16m wide. Set at 10m wide for runway pavements and 12.5m wide for taxiways



Pavements – PCC Pavers



Pavements – PCC Pavers

- **G&Z S850** - A four track paver capable of paving from 3m to 8m wide, set at 6.25m and other required widths for the RDP

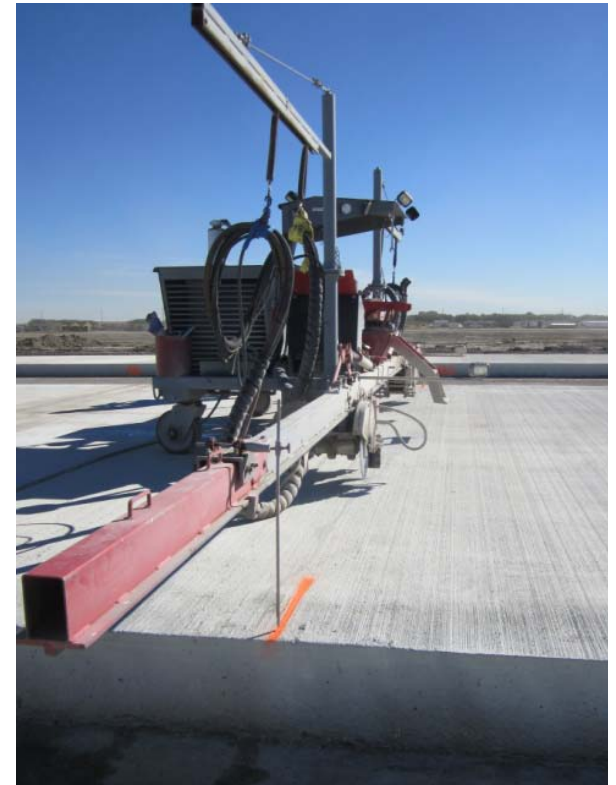
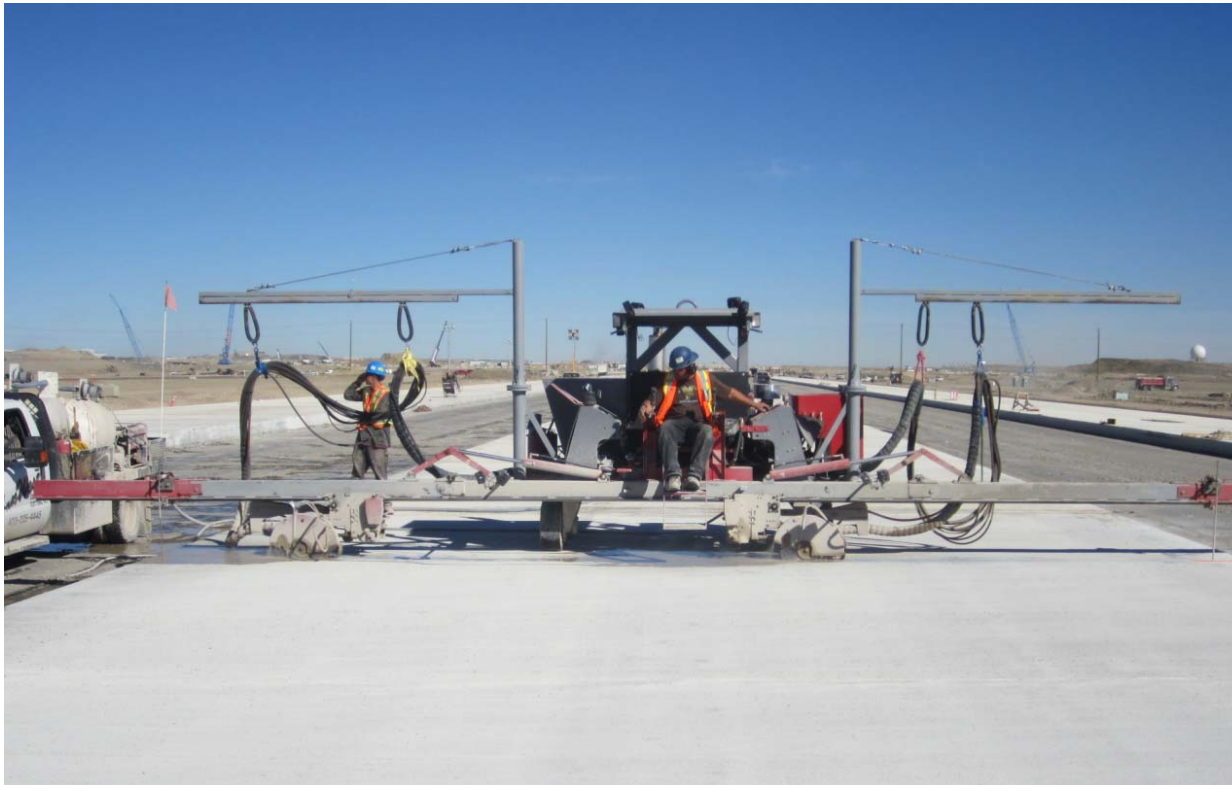


Pavements - PCC Finish/ Curing Compound

- **G&Z T/C 1500** - Used to apply the desired finish and curing compounds
- **Gamaco T/C 600** - Used to apply the desired finish and curing compounds



Pavements – Saw Cutting



Underpasses

Two Underpasses:

- **Taxiway R Underpass (60m Long)**
 - **4 Lanes of Public Traffic**
 - **2 Lanes of Airside Traffic**
 - **Taxiway J Underpass (166m Long)**
 - **2 Lanes of Airside Traffic**
 - **11m Excavation next to a Jet Fuel Tank Farm**
-

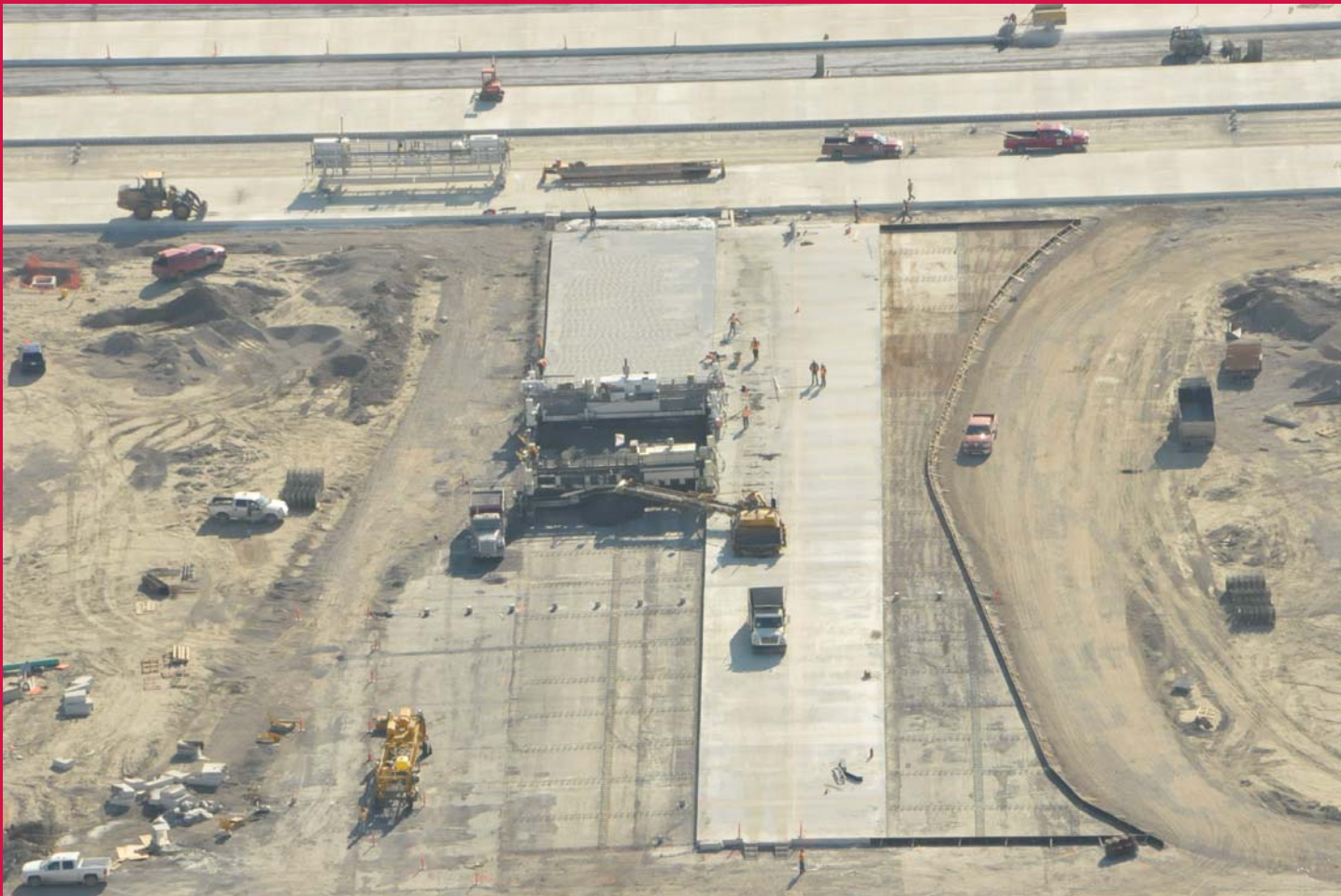
Underpass R



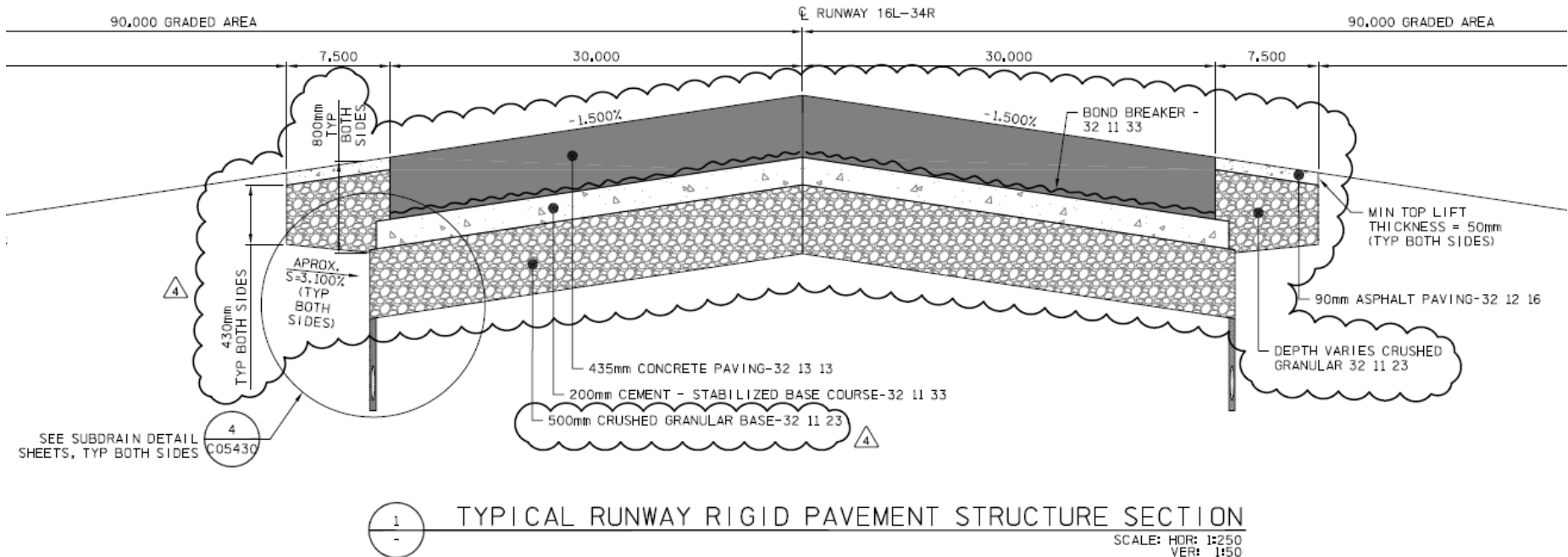
Underpass J



QUESTIONS?



Pavements

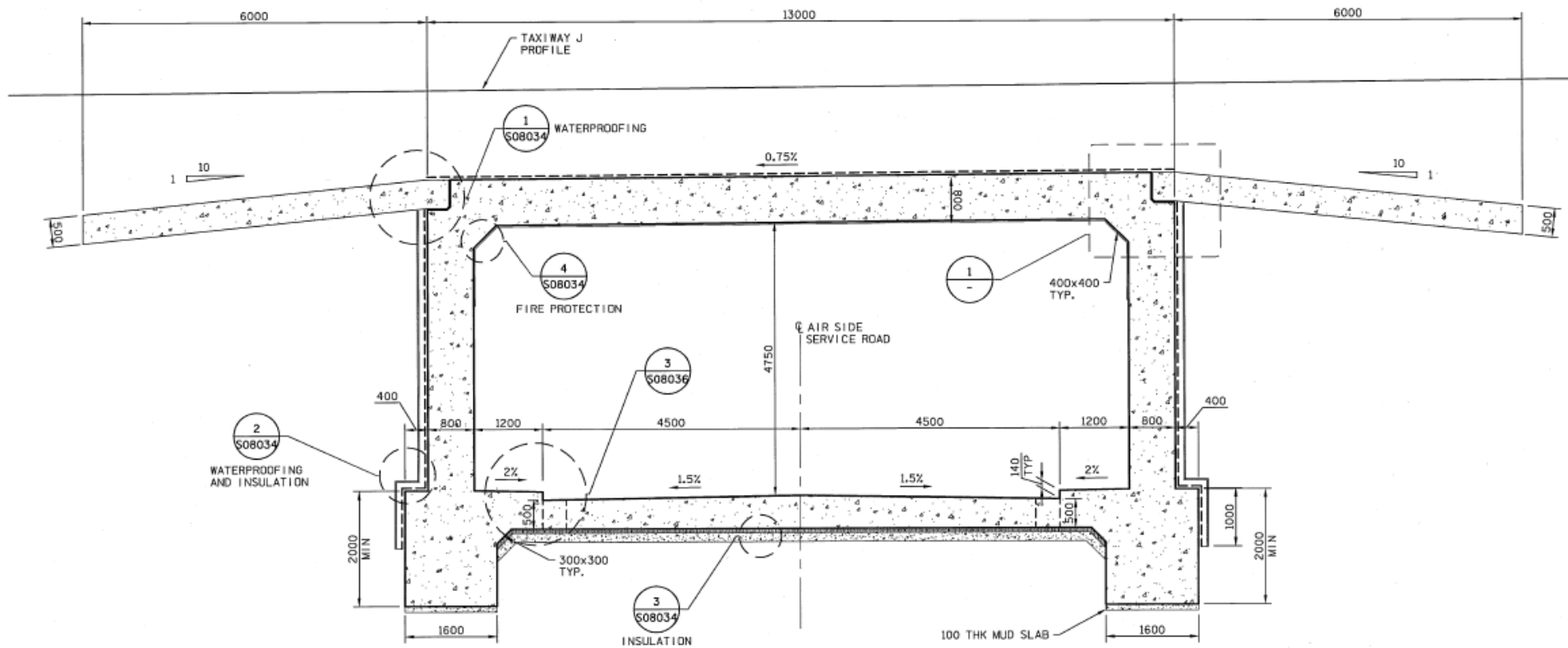


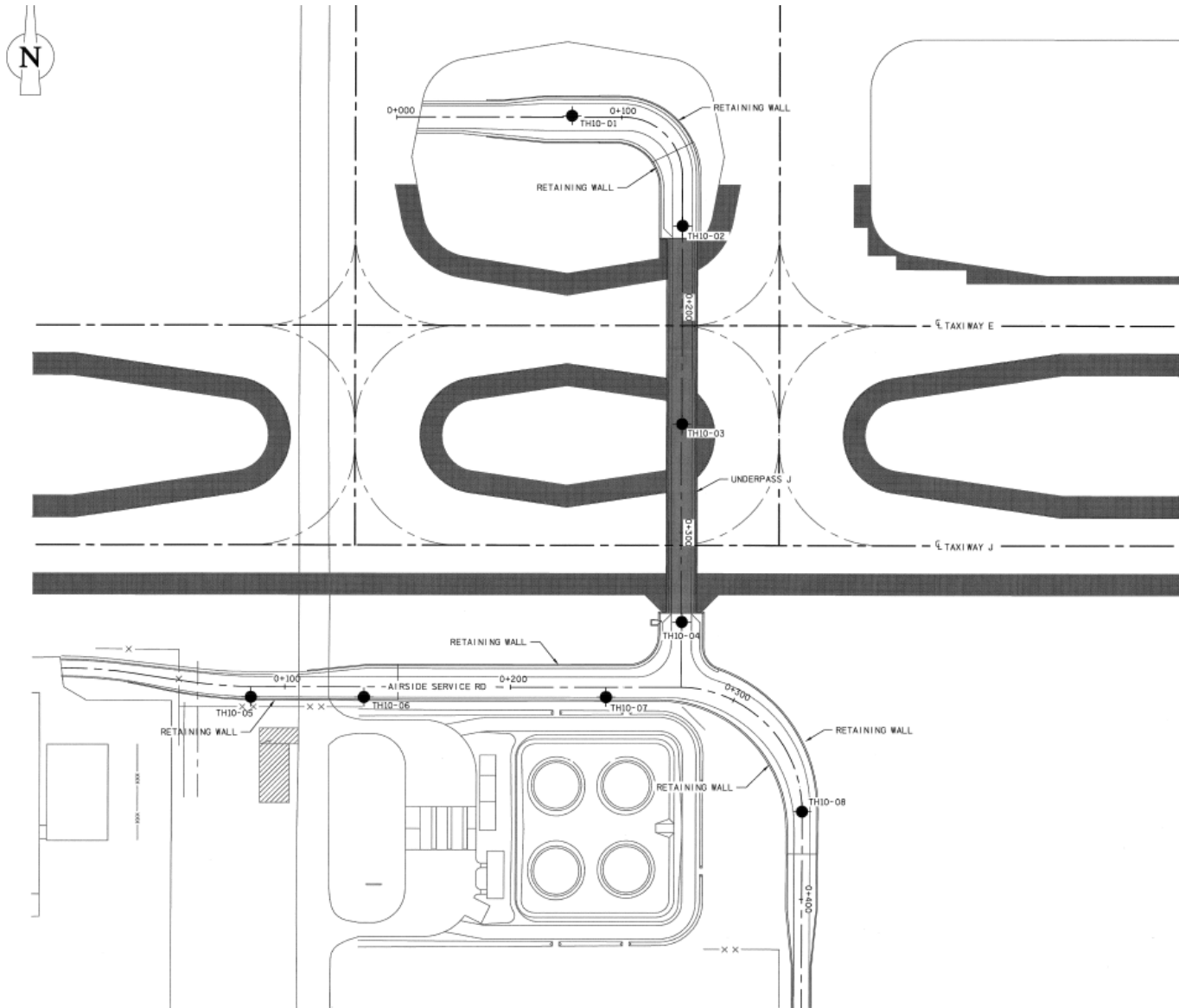
Runway and Taxiway Pavement Section:

- 435mm Portland Cement Concrete
- 200mm CSB Cement Stabilized Base
- 500mm Crushed Granular Base

Underpasses

Underpass J





CHALLENGES AND POINTS OF INTEREST

- Weather
- Various widths
- Reinforcing
- Light cans
- Changing thickness
- Max production

