

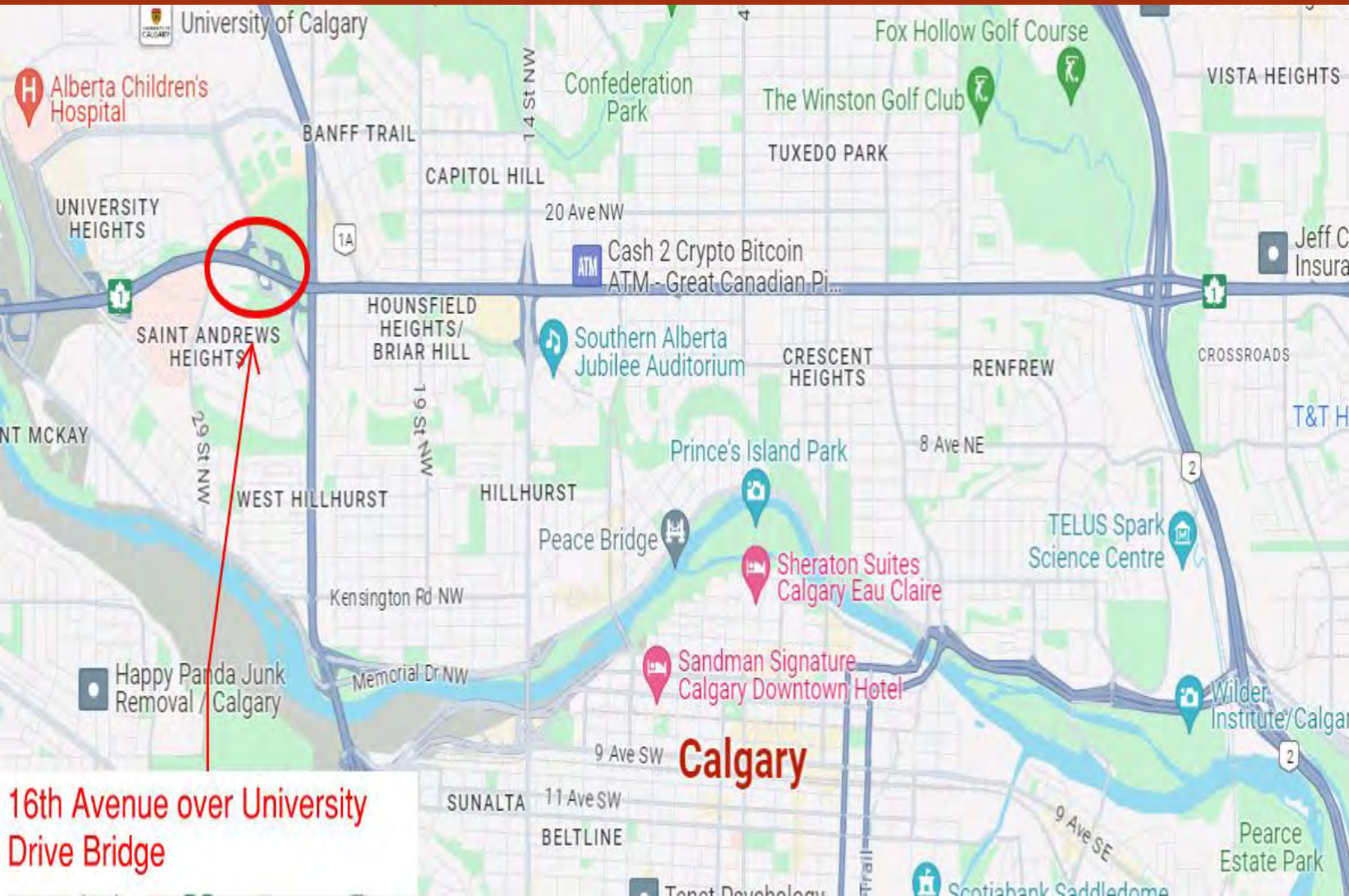


# The Art of Innovative Bridge Rehabilitations

by Andres Capobianco & Jay Lawrence



# Project Overview



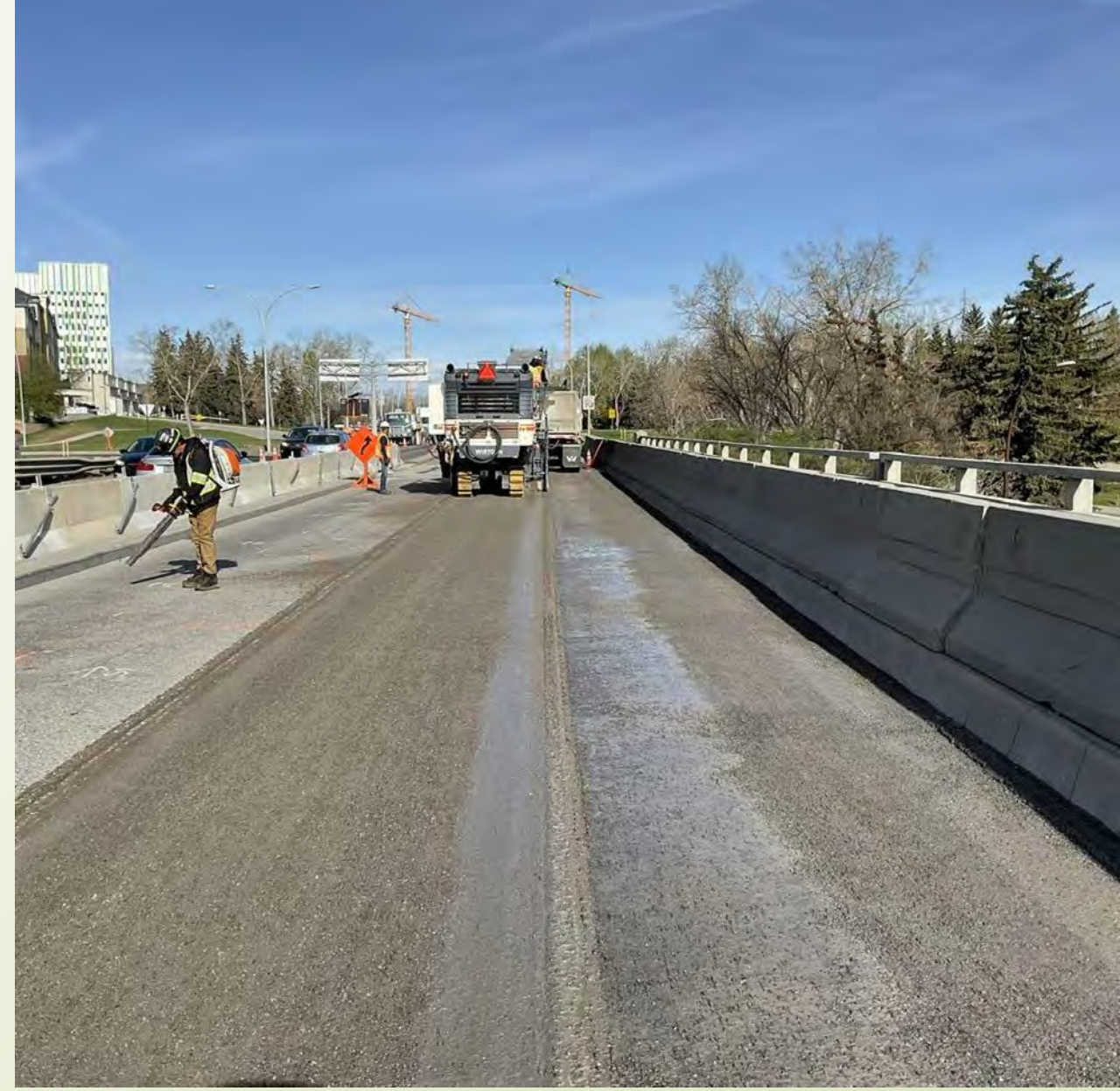
- Client: City of Calgary
- 16<sup>th</sup> Avenue over University Drive in Calgary
- Four-span cast-in-place concrete tee girder
- Constructed in the 1950s
- Bridge inspection in 2020 identified several deficiencies
- Scope of work:
  - Sidewalk removal/upgrades
  - Deck soffit upgrades
  - Bridgerail safety upgrades
  - Expansion joints replacement & Relocation
  - Deck overlay
  - Installation of waterproofing and ACP wearing surface



# Main Challenges and Innovative Solutions

- Safety
- Structural Capacity
- Accessibility
- Durability
- Pedestrian Accommodation
- Traffic Accommodation





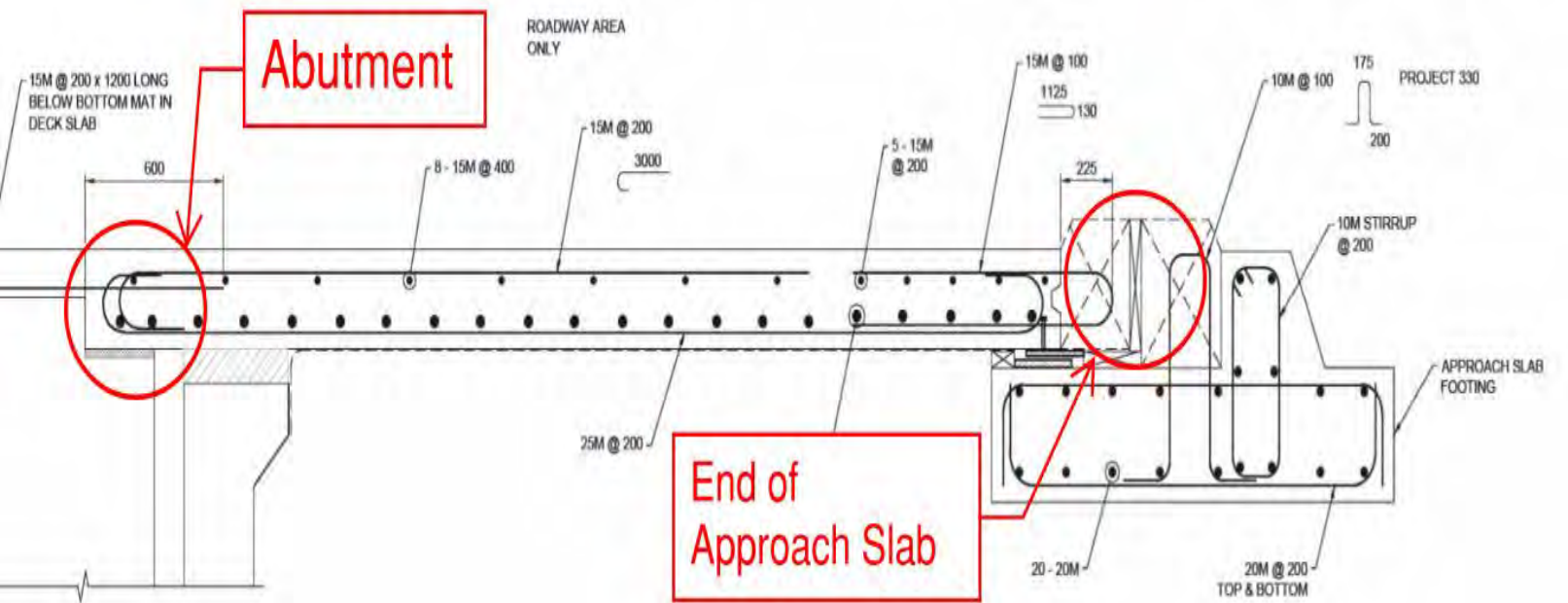
Rebar Scan and Deck Milling



Deck Soffit and Girder Partial Depth Repairs

# Full Depth Repairs & Deck Soffit Upgrades Benefits of Agilia





Expansion Joints  
Away from the abutments



# Main Challenges and Innovative Solutions

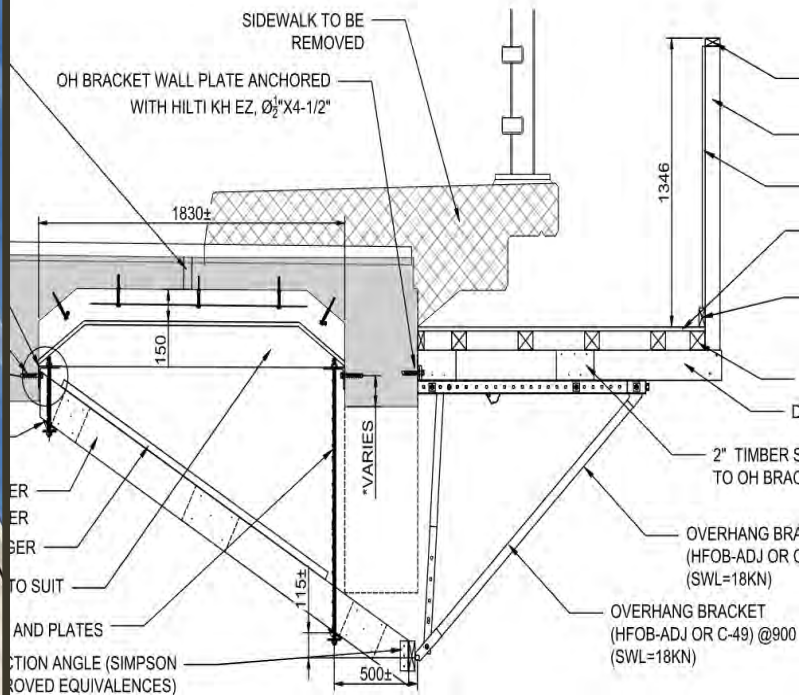
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**Sidewalk removal... but what about pedestrians?**

# Overhang Work Platform





Improved Accessibility

# Main Challenges and Innovative Solutions

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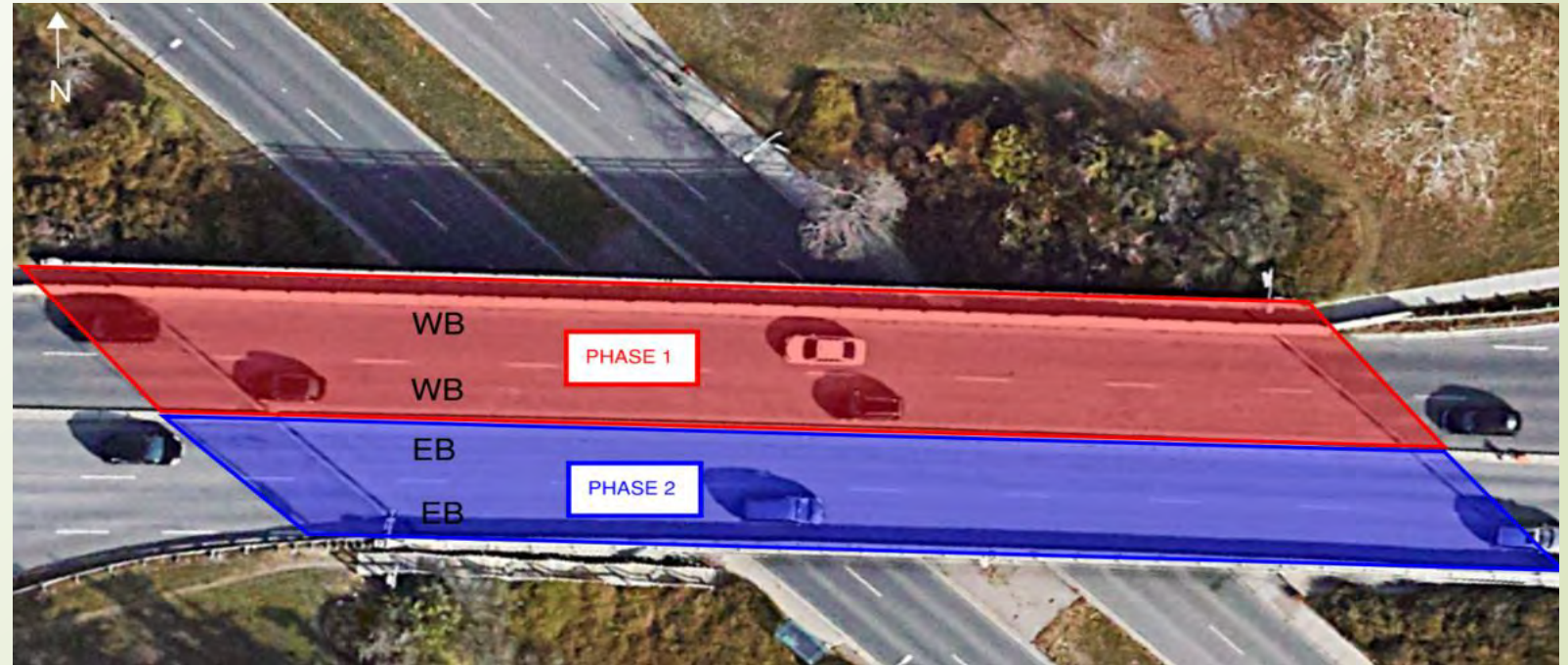
# Three Phases vs Two Phases

## ➤ Phase 1 - North

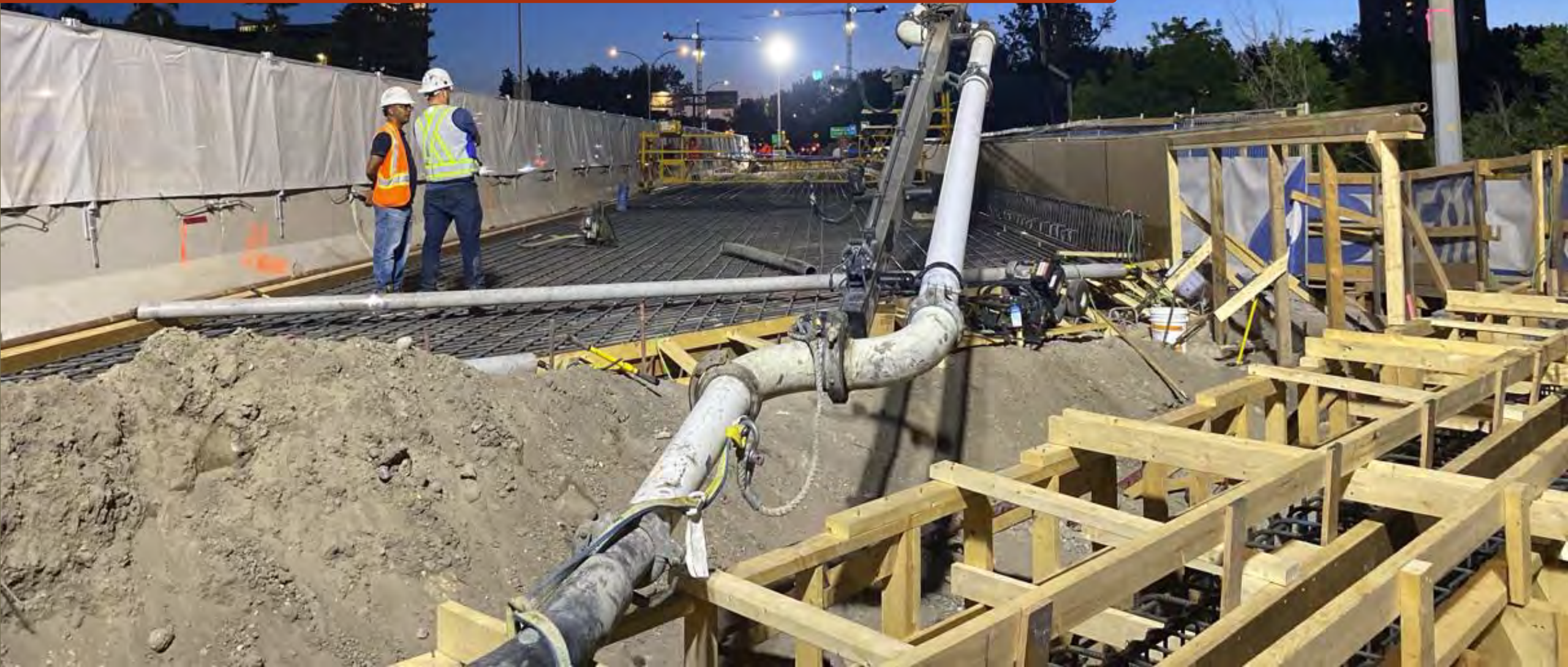
- Deck
- Barrier
- Sidewalk

## ➤ Phase 2 - South

- Deck
- Barrier



# Insight from the Contractor's Success

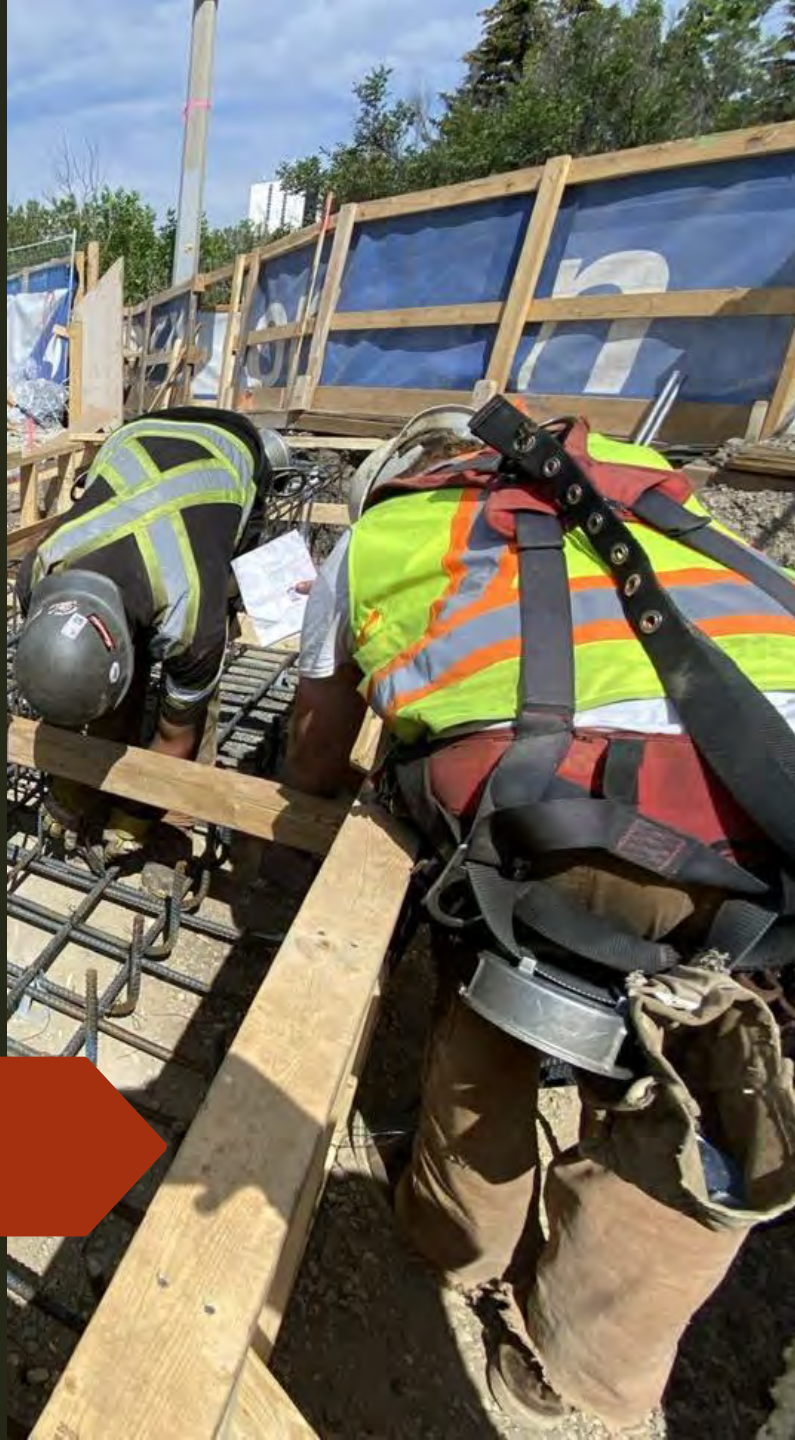


# Self-Perform Work





# The New "Bridge Builder"





Opportunity to Stack  
Operations



Temporary Solutions to Save Schedule

# Proactive Approach to Changes and Delays

## Material Procurement Delays





# Collaboration





Thank you!

Any Questions?