SR 519 Intermodal Access Project

Design-Build in an Urban Environment

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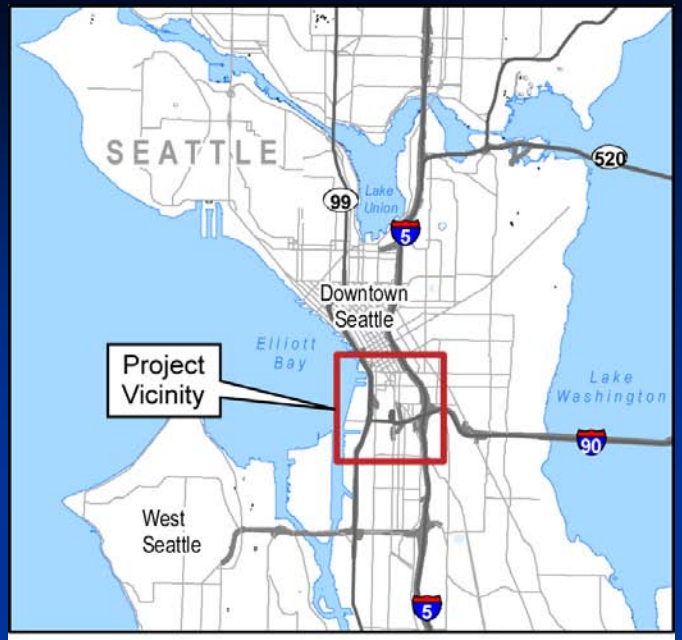
Outline

- Background and Overview
- Project Challenges
- Design-Build Project Approach
- Royal Brougham Overpass
- Atlantic Ramp

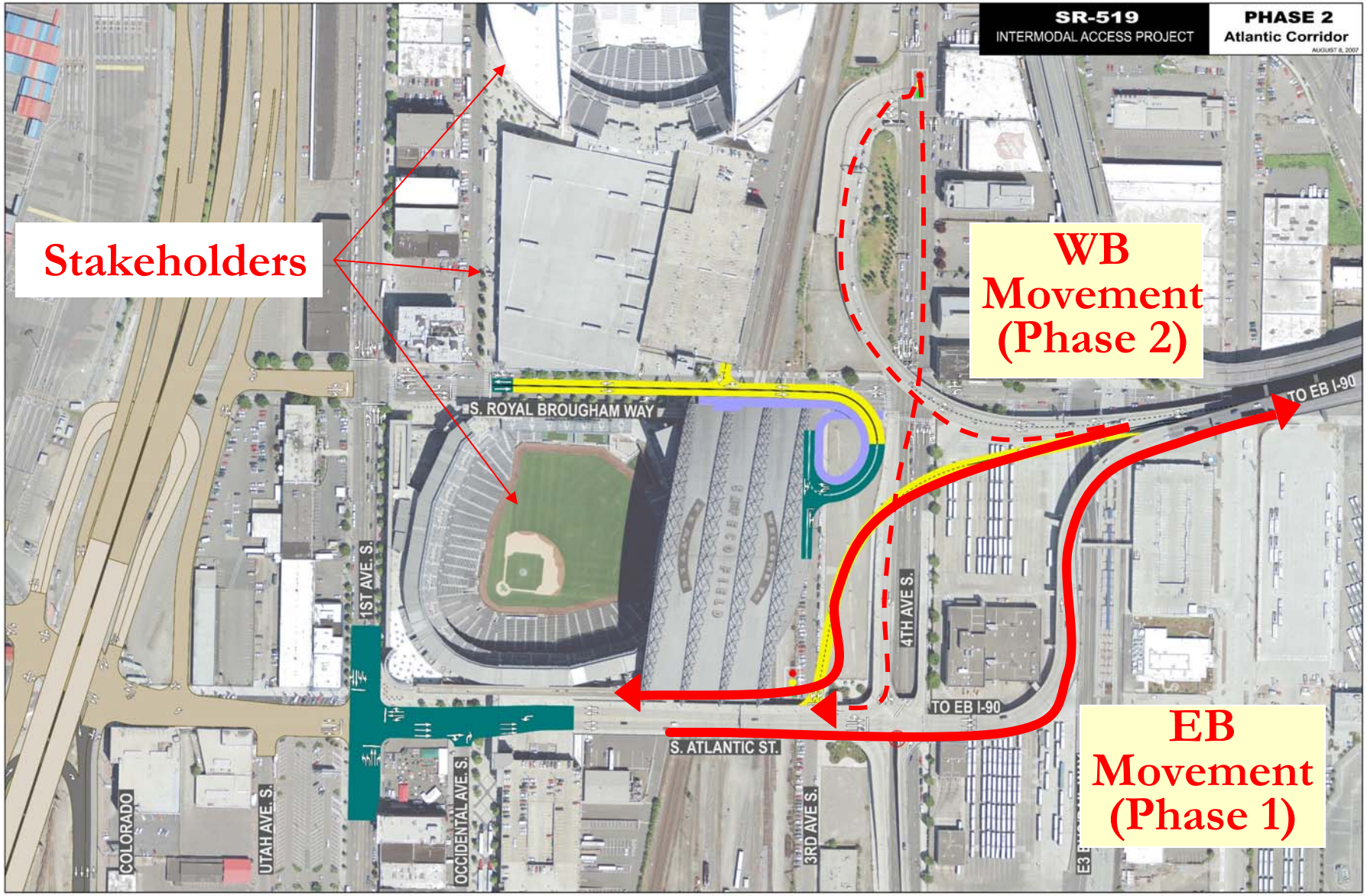
Project Overview

- Downtown Seattle stadium district
- Provides direct access to Seattle waterfront and Port of Seattle
- First project for Alaska Way Viaduct program
- Visible project with many stakeholders



Project Elements

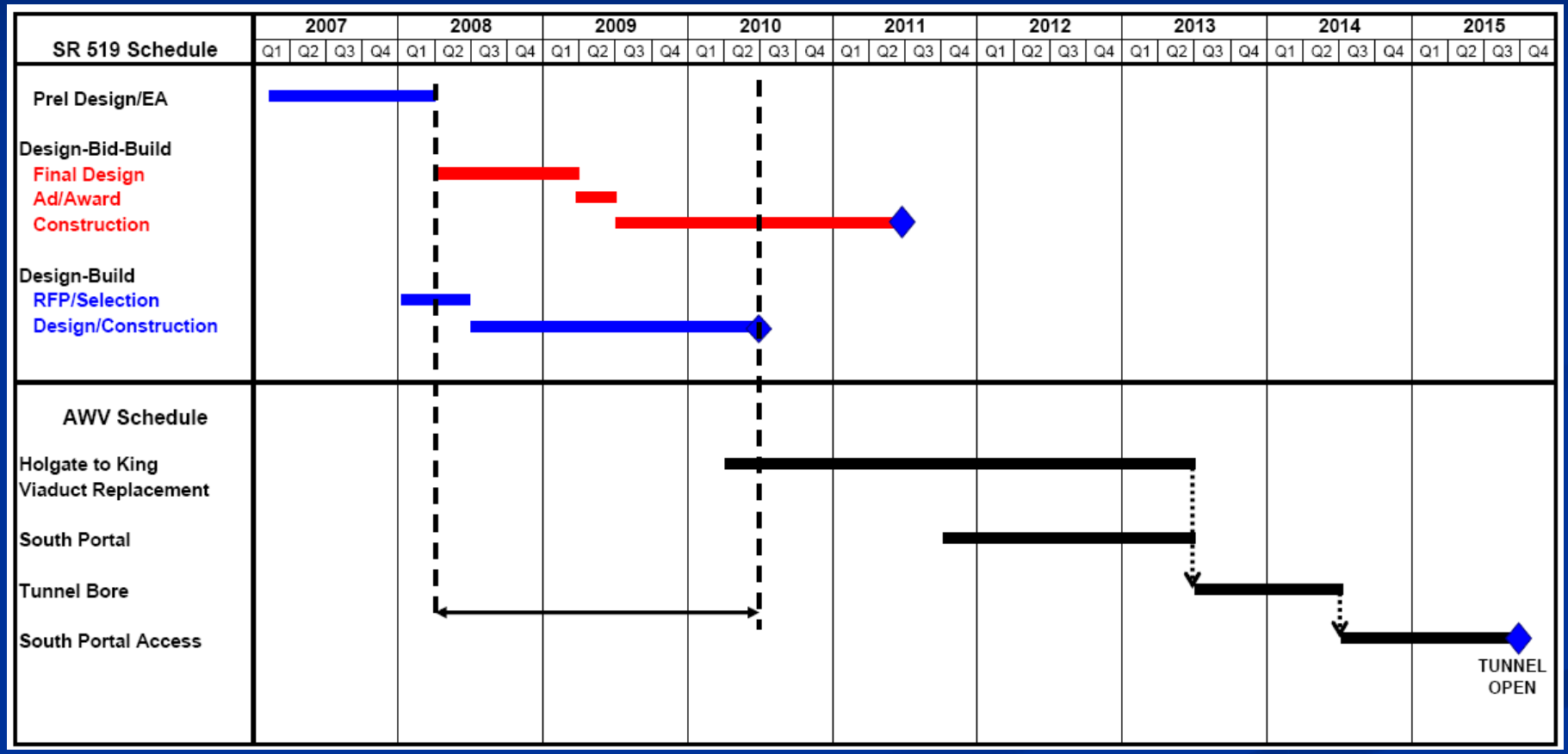
Project Purpose



Project Challenges

Technical	Policy Level
■ Constrained Site ■ Poor Soils ■ Utilities ■ Aesthetics in stadium district	■ Multi-agency lead ■ Many stakeholders ■ Short schedule to complete project

Project Schedule & Delivery Options



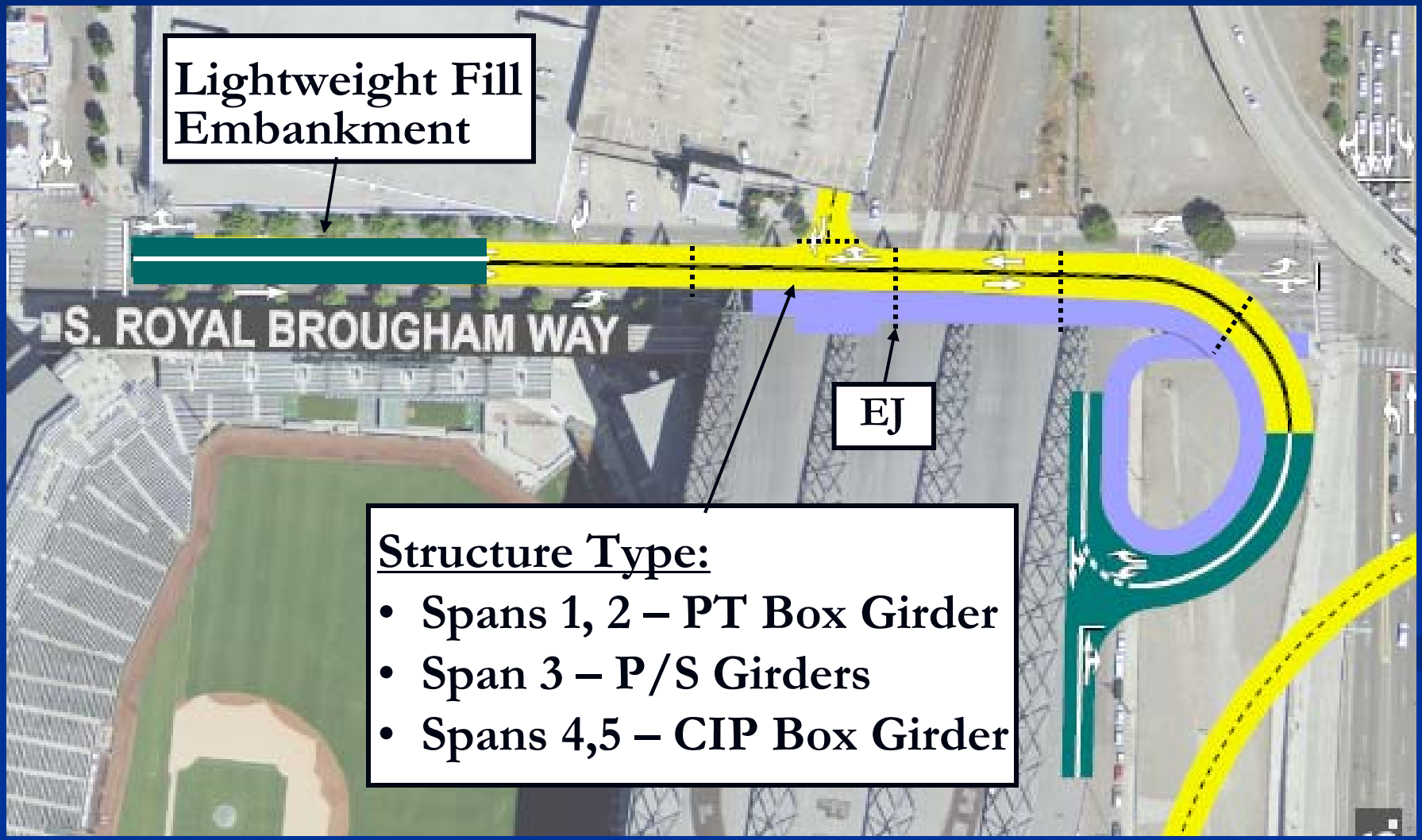
Royal Brougham Overpass

Challenges:

- Soils
- Utilities
- ADA Compliance
- Work over railroad
- Aesthetics

Royal Brougham Overpass

Structure Type Solutions

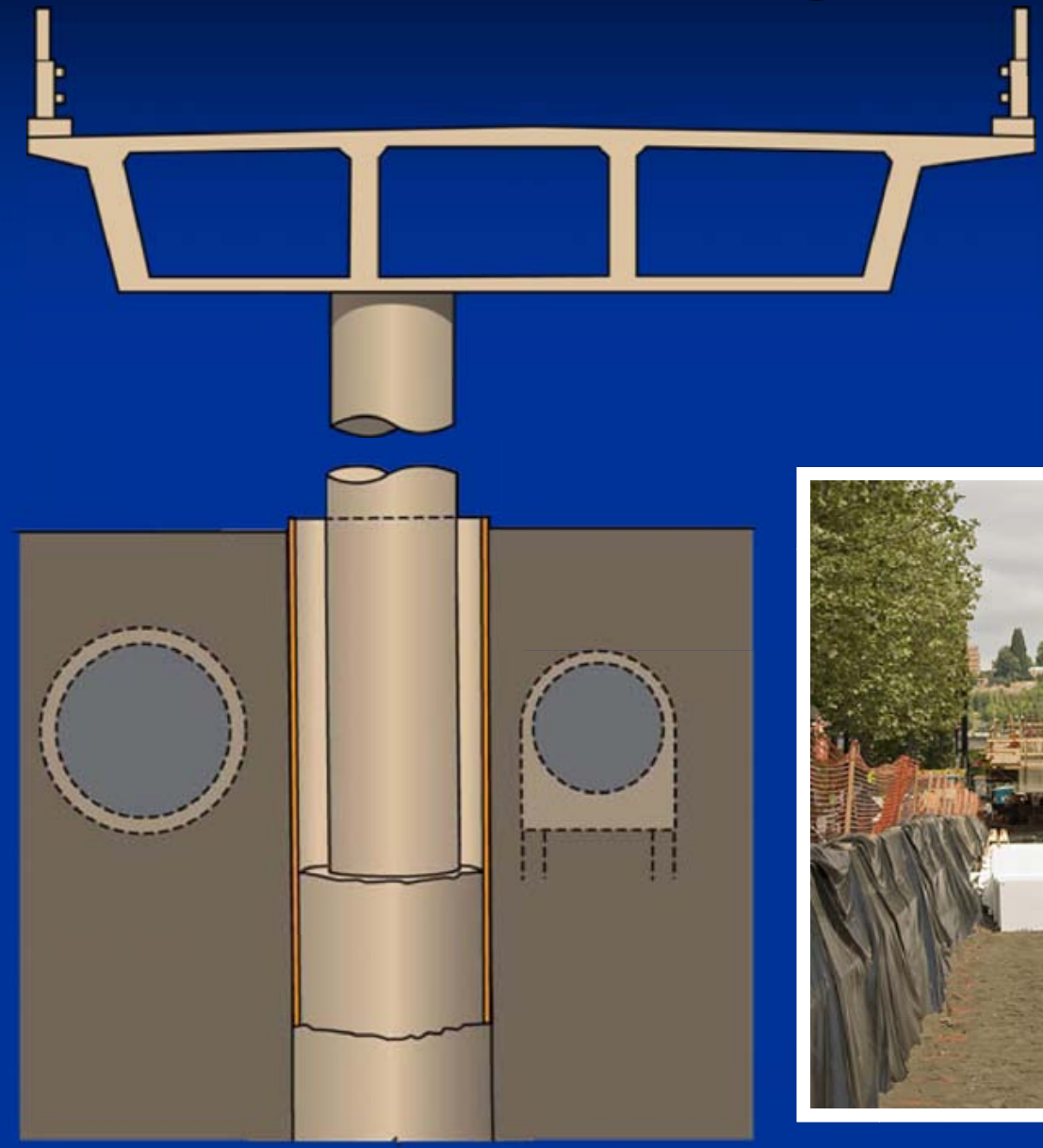


Royal Brougham Overpass

Solutions

- Use of haunched P/S girders over railroad tracks

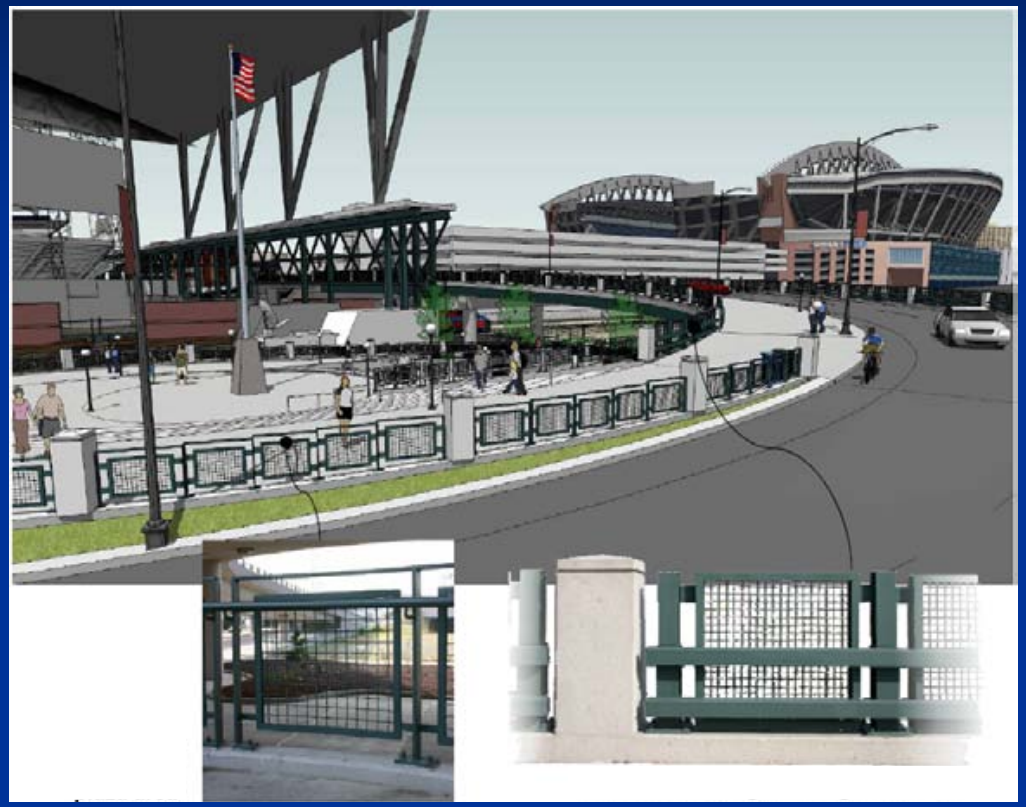
Royal Brougham Overpass



Solutions

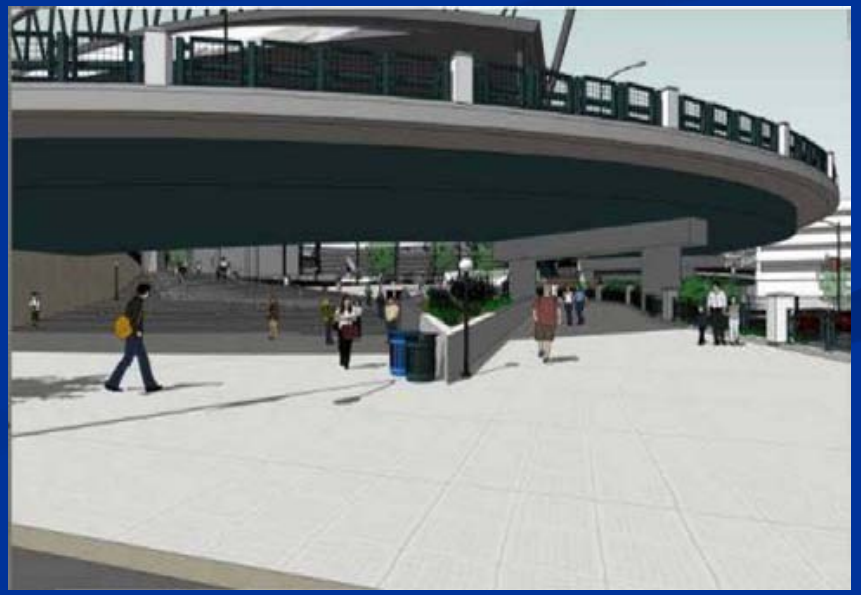
- Mitigate utility constraints
- Lightweight Fill

Royal Brougham Overpass



Solutions

- Urban design (UD) guidelines
- UD Task Force



Royal Brougham Overpass

Solutions

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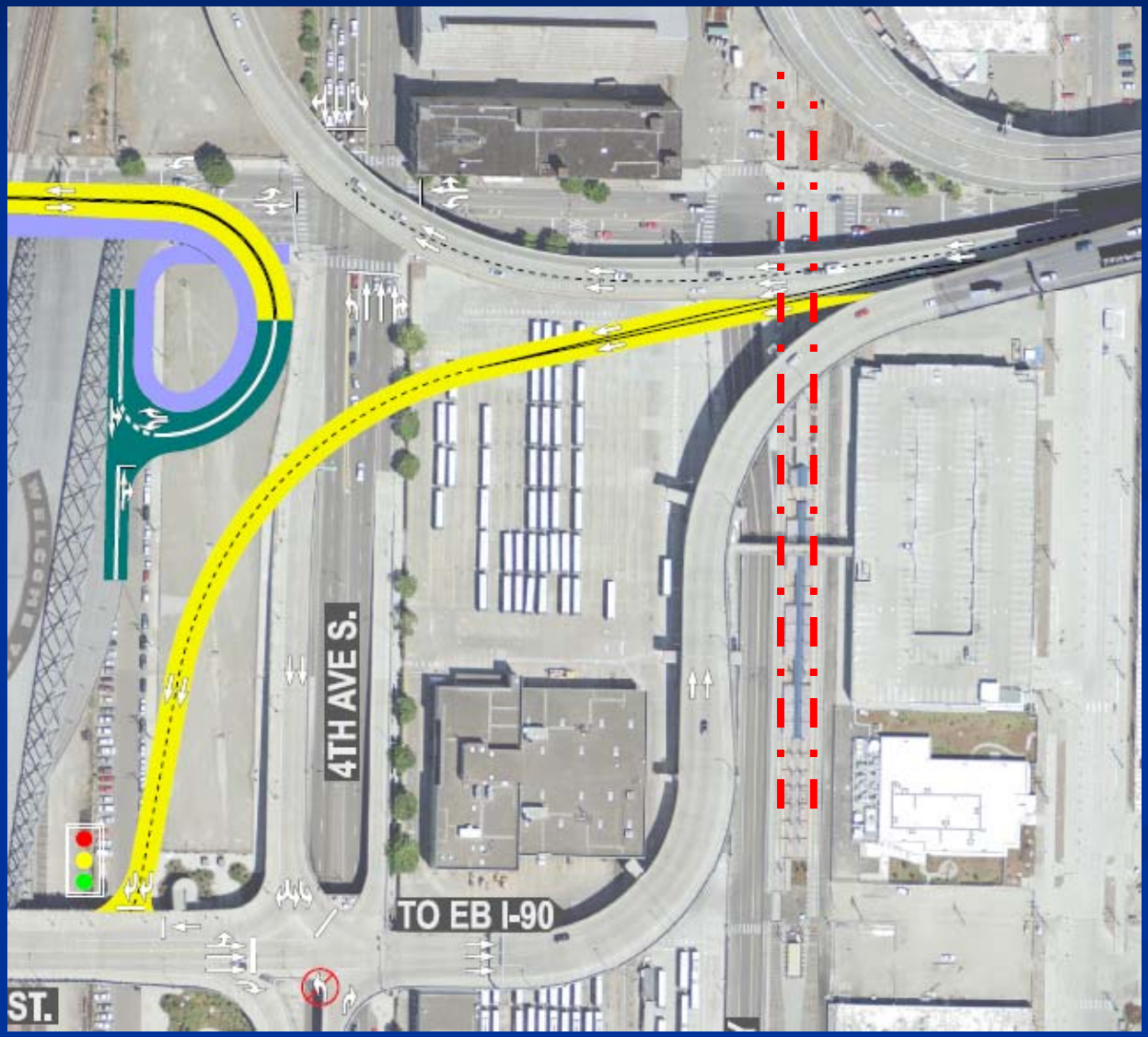
Atlantic Ramp



Challenges

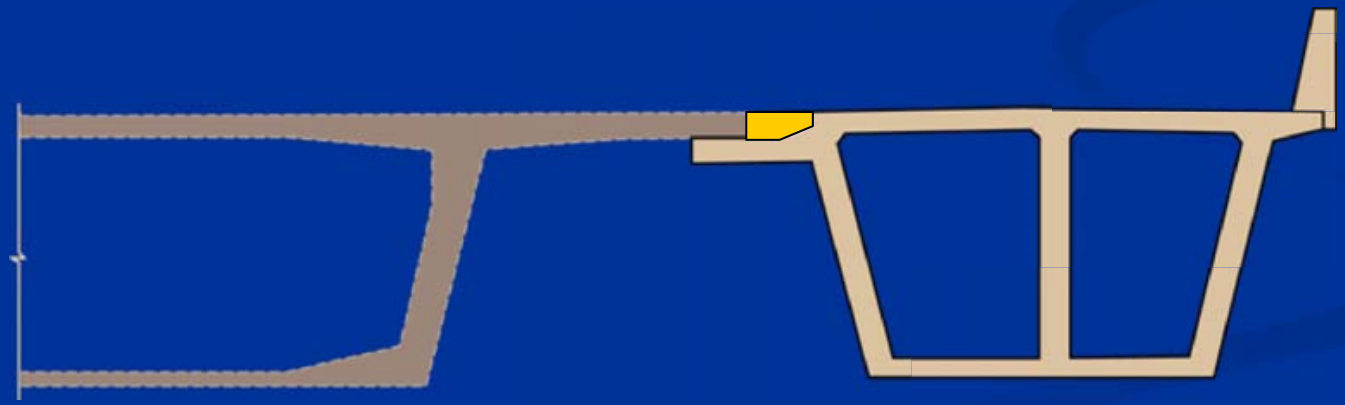
- Soils
- Connection to existing structures
- Variable width structure

Atlantic Ramp

Typical Cross Section

Solutions

- Structure type
- Reduced moment section
- Seismic fuse



Cross Section at Existing Structure

Design-Build Delivery

Advantages

- Accelerated project schedule
- Allowed for innovative design solutions

Requirements

- Advanced the bridge design for D-B RFP contract
- Incorporated stakeholder requirements in D-B RFP contract

Acknowledgments

- Owners – WSDOT, City of Seattle
- Preliminary Urban Design – Makers
- General Contractor – Kiewit
- Design Subcontractor – AECOM

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