

Durham St. Bridge

Immediate Repairs

PULLMAN

AGENDA



Company and Personal Introductions



Scope of Work (Rehabilitation)



Key Schedule Milestones



Community Impact



Q & A / Open Discussion



BMROSS
engineering better communities



**TRITON
ENGINEERING
SERVICES
LIMITED**
Consulting Engineers
Established 1964



45.0°N 81.3°W

BRUCE
county

struc'tural
TECHNOLOGIES



PULLMAN

Making Concrete Structures Stronger & Last Longer

struc'tural
TECHNOLOGIES

Products, Investigation & Engineering Design Support

struc'tural

Specialty Contracting

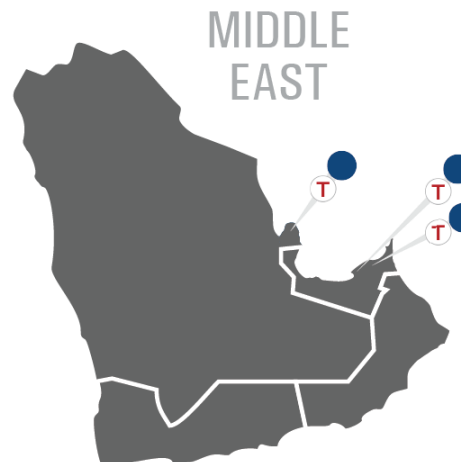
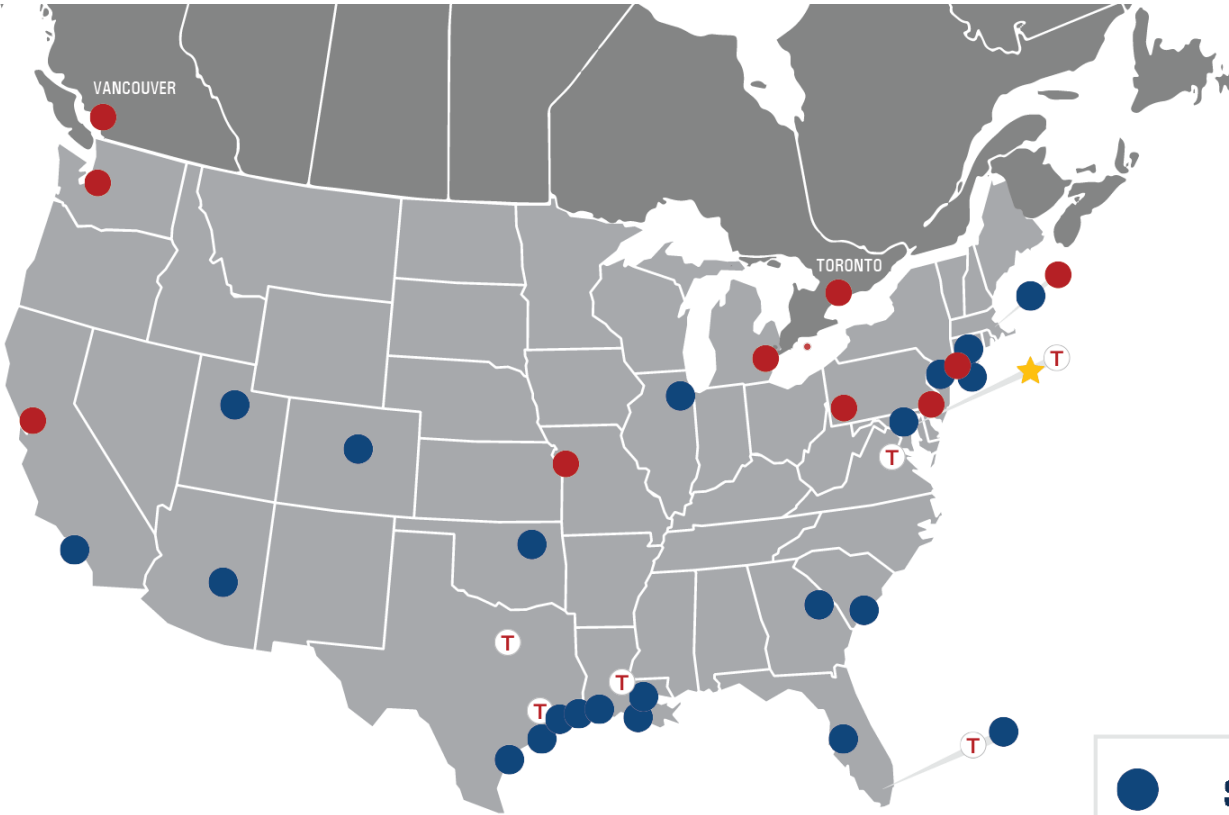
U.S.A & Middle East

PULLMAN

Specialty Contracting

U.S.A. & Canada

BRANCH LOCATIONS



- **structural**
- T ★ **structural TECHNOLOGIES**
- **PULLMAN**

Corporate HQ:

Columbia, MD

US Locations:

- | | |
|--------------------|--------------------|
| Phoenix, AZ | Baltimore, MD |
| Los Angeles, CA | Detroit, MI |
| San Francisco, CA | Kansas City, MO |
| Hartford, CT | Long Island, NY |
| Denver, CO | New York, NY |
| Washington, DC | Tulsa, OK |
| Jacksonville, FL | Philadelphia, PA |
| Pompano Beach, FL | Pittsburgh, PA (2) |
| St. Petersburg, FL | Charleston, SC |
| Augusta, GA | Corpus Christi, TX |
| Chicago, IL | Dallas, TX |
| Kansas City, KS | Freeport, TX |
| Baton Rouge, LA | Houston, TX |
| Lake Charles, LA | Nederland, TX |
| New Orleans, LA | Salt Lake City, UT |
| Boston, MA | Seattle, WA |

International Locations:

- Toronto, ON
- Vancouver, BC
- Abu Dhabi
- Dubai
- Qatar

Your Team for Durham Street Bridge



Carlos Santos
Project Manager – PULLMAN

- 10+ years experience in construction and restoration of bridges.
- Transportation experience throughout Canada and the United States.
- Bachelor's Degree in Civil Engineering.



Matt Hickey, P.Eng., PMP
Snr. Branch Director – PULLMAN

- Professional Structural Engineer.
- Certified PTI Level 2 Inspector.
- Constructability and methodology expert for structural rehabilitation and strengthening projects.



Jonathan Romero
Foreman - PULLMAN

- Main site POC for the project.
- Highly experienced in structural strengthening works, concrete repair, and aggressive schedules.
- Highly focused on Safety & Quality and driving results.



Tarek Alkhrdaji, PhD, P.Eng.
Snr. VP – Engineering Solutions - ST

- Structural strengthening expert.
- Diverse experience in value engineering strengthening solutions.
- Chair of ICRI 330 (Concrete Strengthening), and past Chair of ACI 440 (FRP Strengthening).



Jeroen (Jay) Louwers
Construction Manager - PULLMAN

- 25 Years + of heavy PT bridge experience (stay cables, unbonded, monostand, high-strength bars, etc.)
- Lead projects in over 20 different countries around the world.
- Toronto-Based with PULLMAN Team.



Eyad Alhariri
Snr. VP – Last Longer Solutions – ST

- Corrosion and service life extension expert.
- 20+ years of rehabilitation experience across multiple continents.
- NACE CP Level 4 Certified

SCOPE

- Mobilization and Site Setup
- Traffic Management Plan (TMP)
- Scaffolding / Access Installation
- Temporary Shoring
- Bearing and Expansion Joints
- Concrete Repairs to U/S Deck
- Life Extension Measures

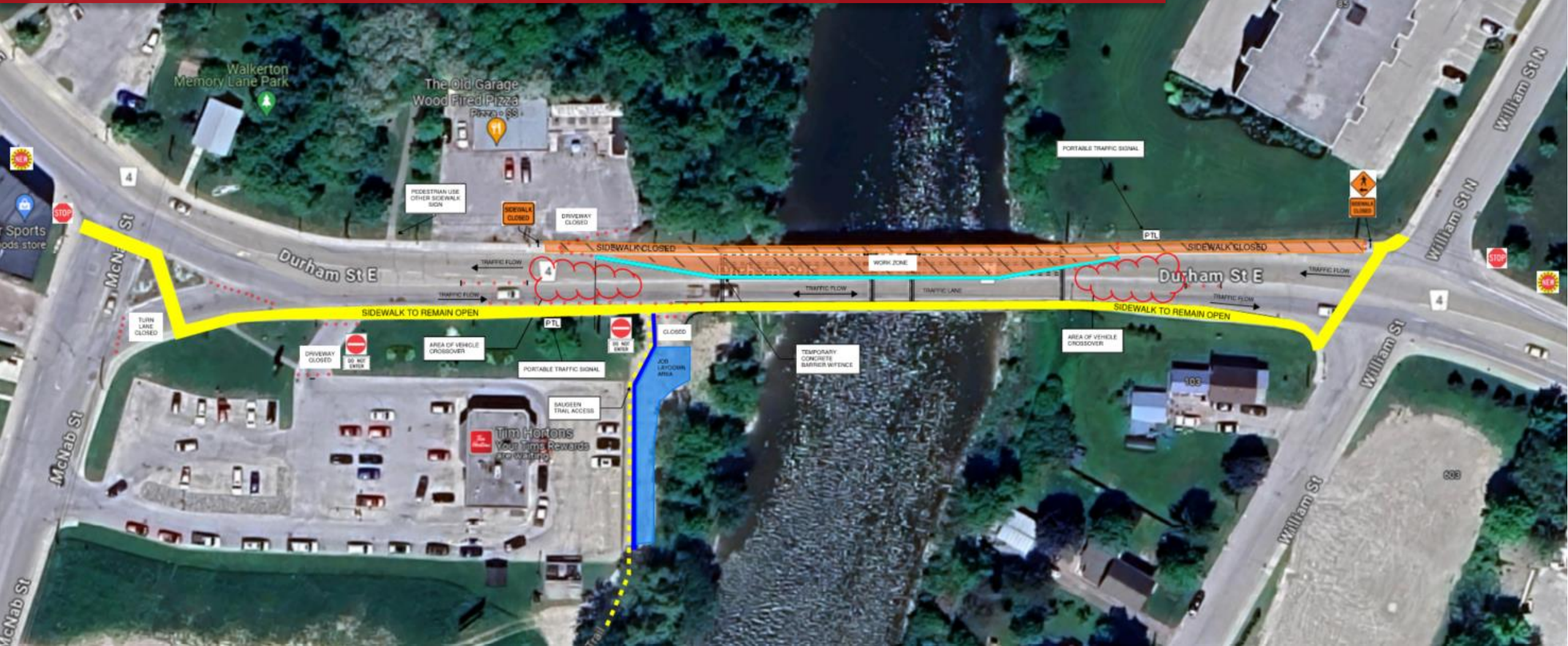


Site Setup and Traffic Control Plan

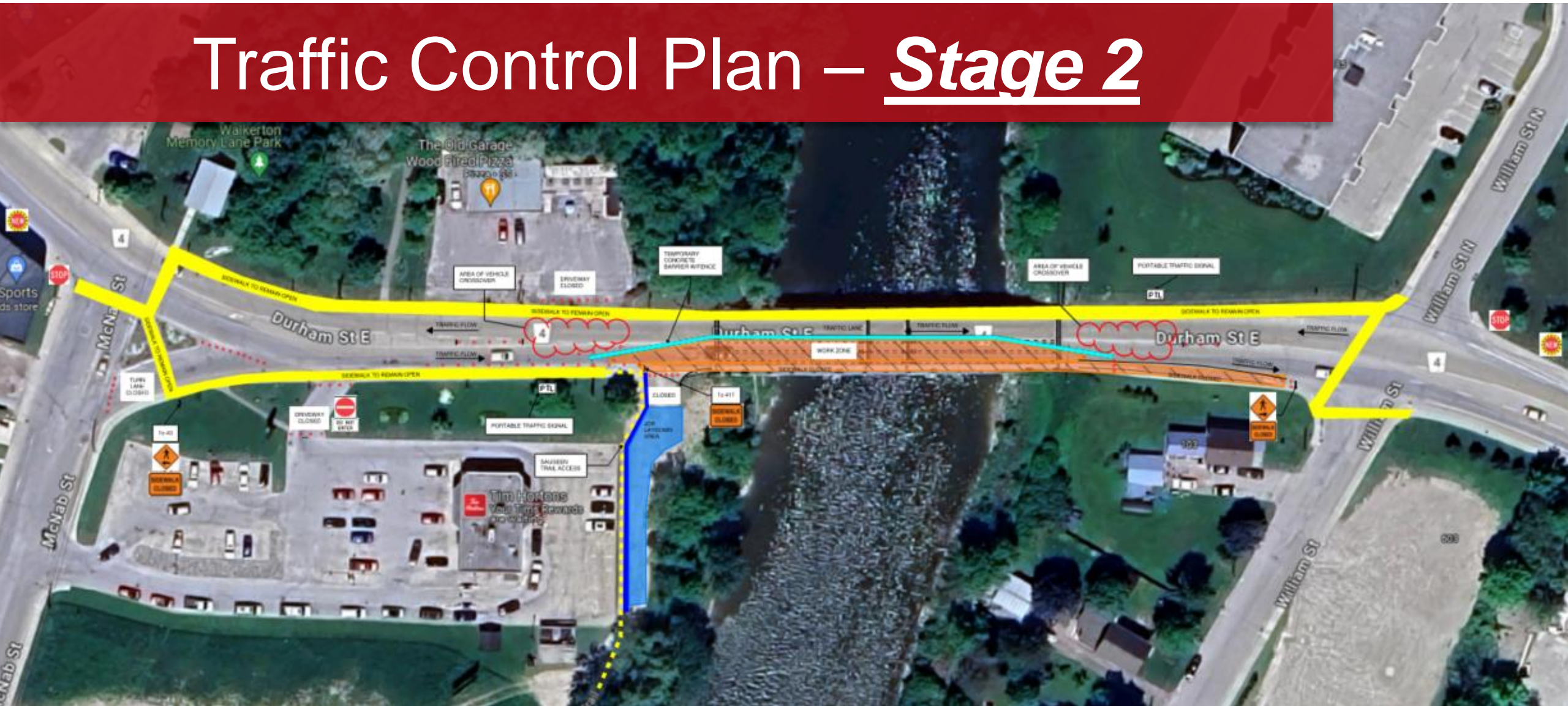


- Primary Truck Access from Durham St
- Secondary Truck Access from McNab St
- Laydown Area:
 - Site Office + Crew Trailer
 - Washroom Facilities
 - Waste Bin(s)
 - Equipment Storage
 - Material Storage

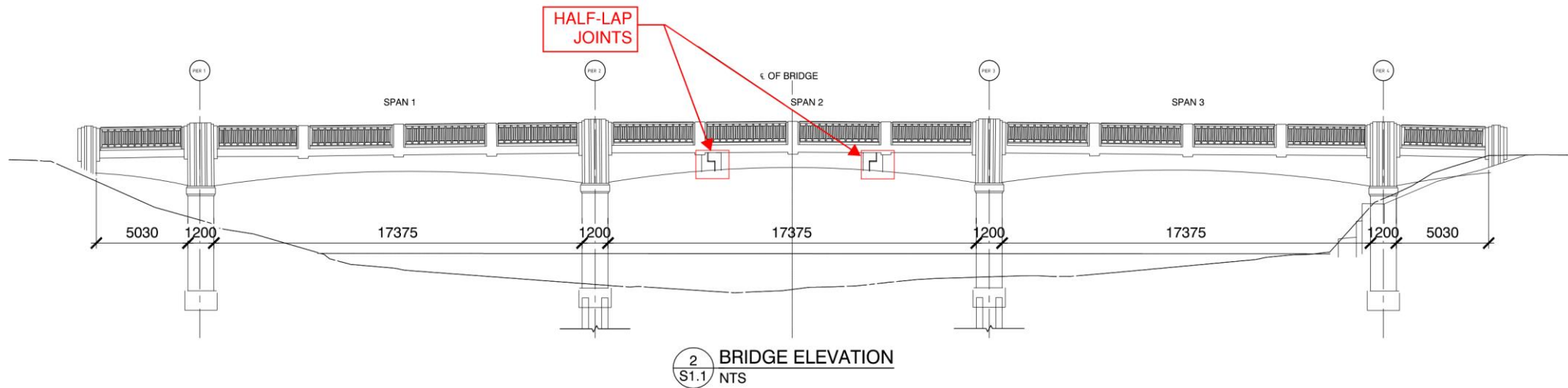
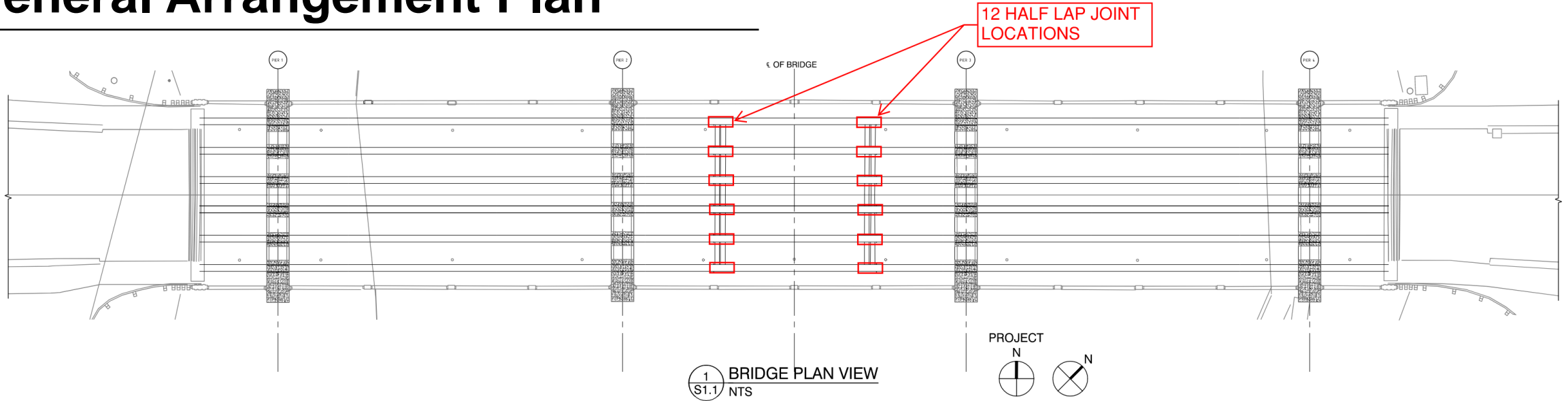
Traffic Control Plan – Stage 1



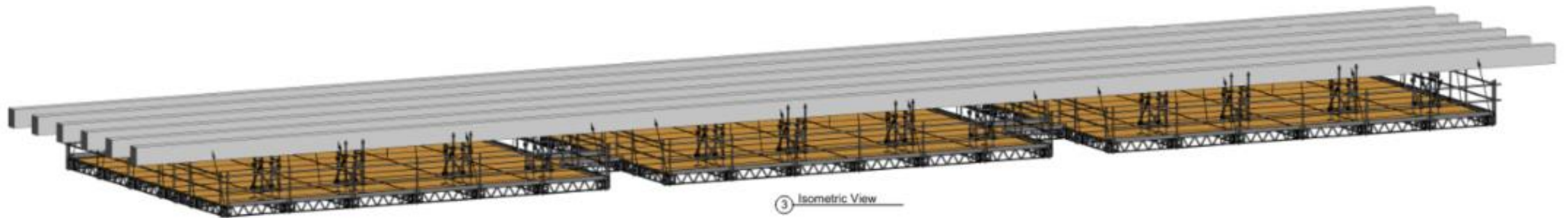
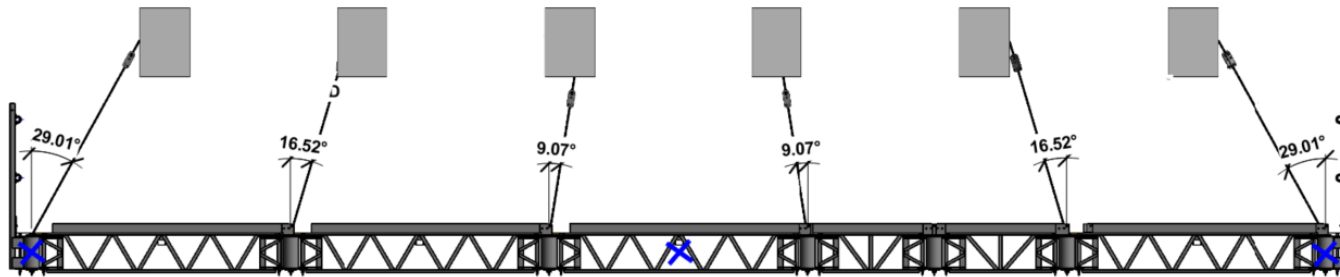
Traffic Control Plan – Stage 2



General Arrangement Plan



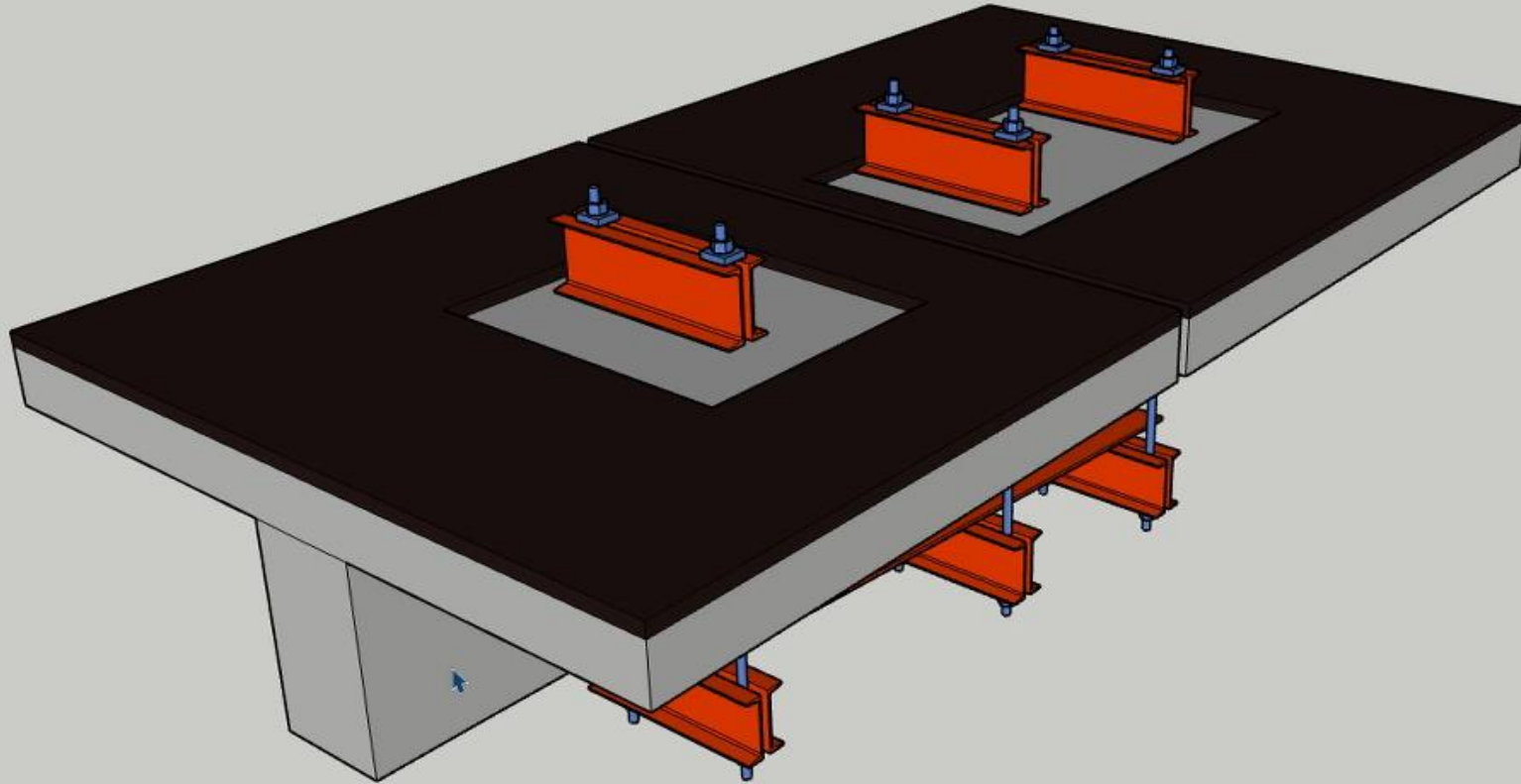
Bridge Access Setup



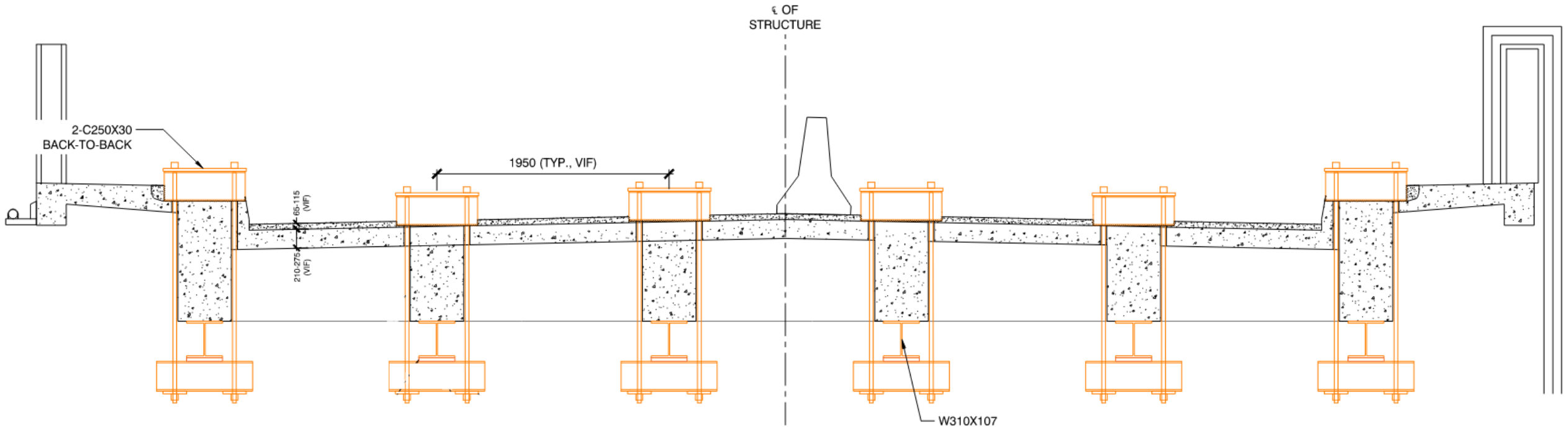
Half-Lap Bridge Joints



Temporary Shoring of Joint

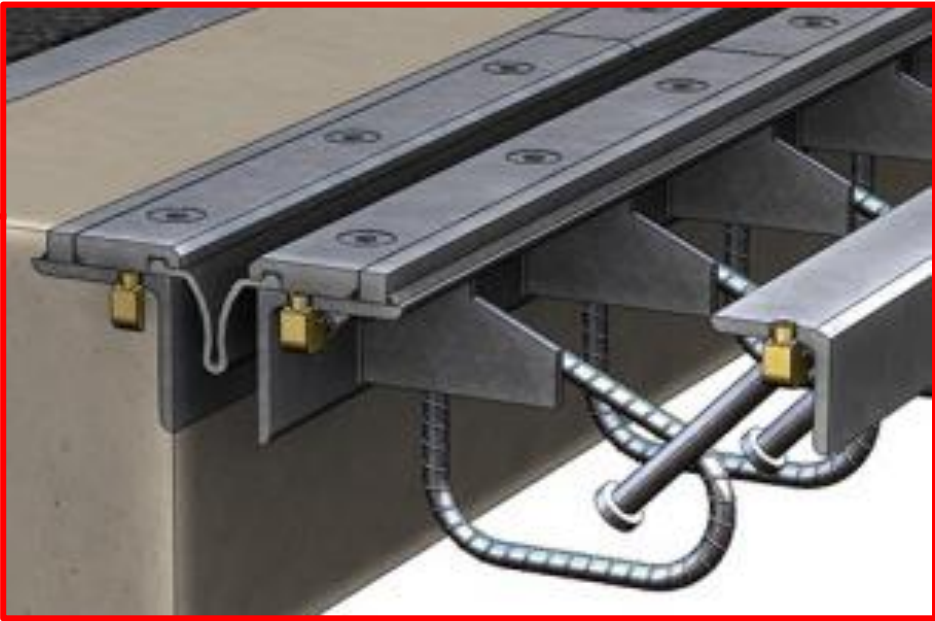
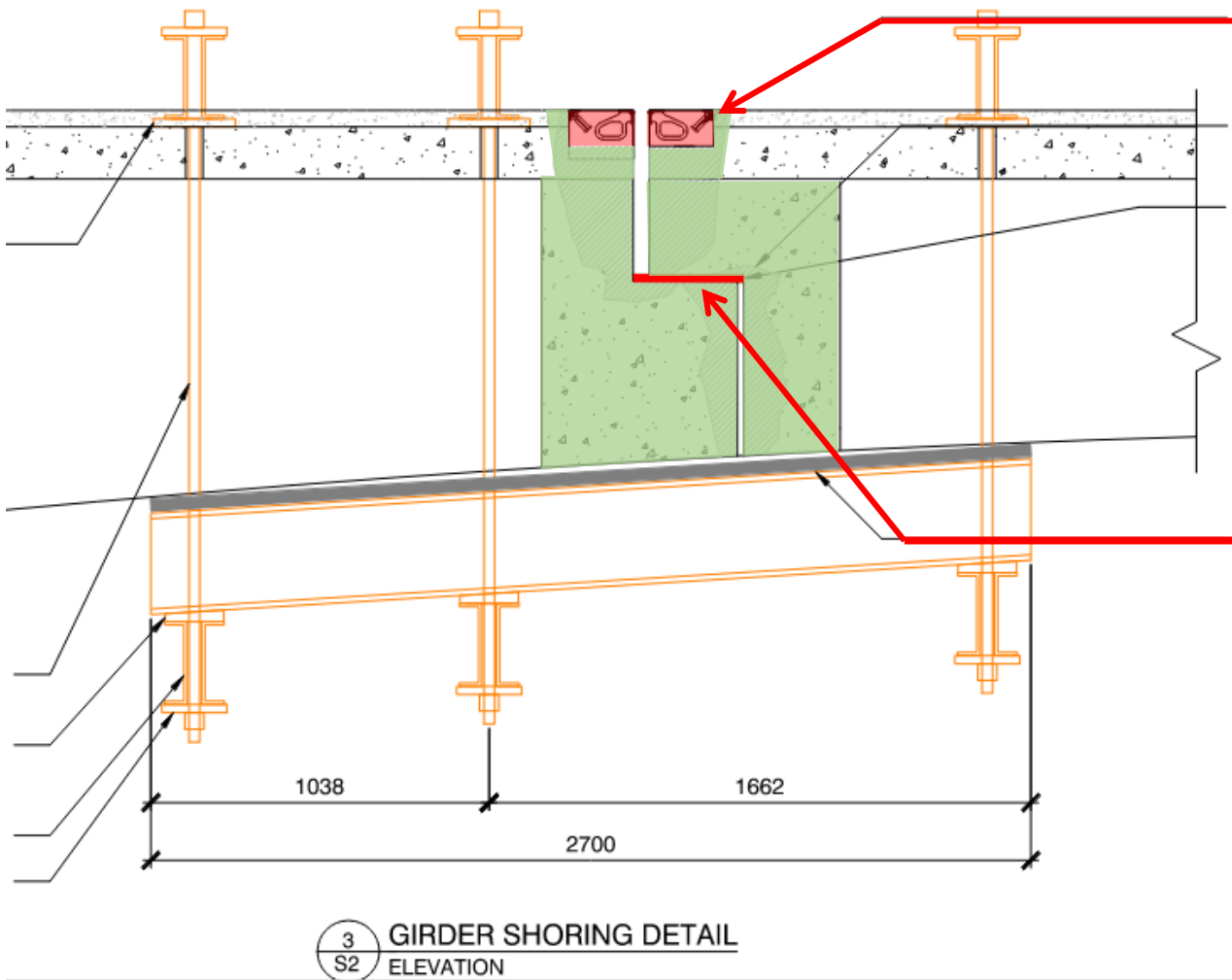


Temporary Shoring of Joint



2
S2 GIRDER SHORING DETAIL
SECTION

Remove and Replace Half-Lap Joints

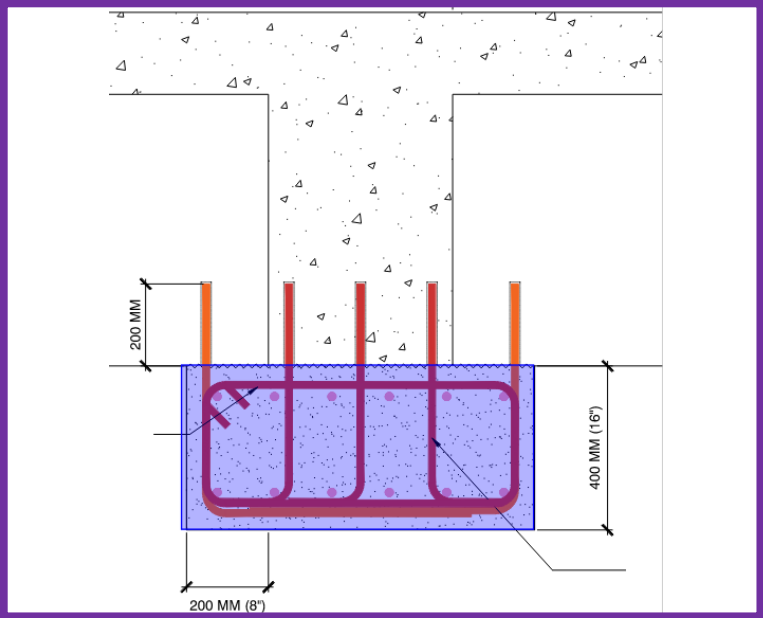
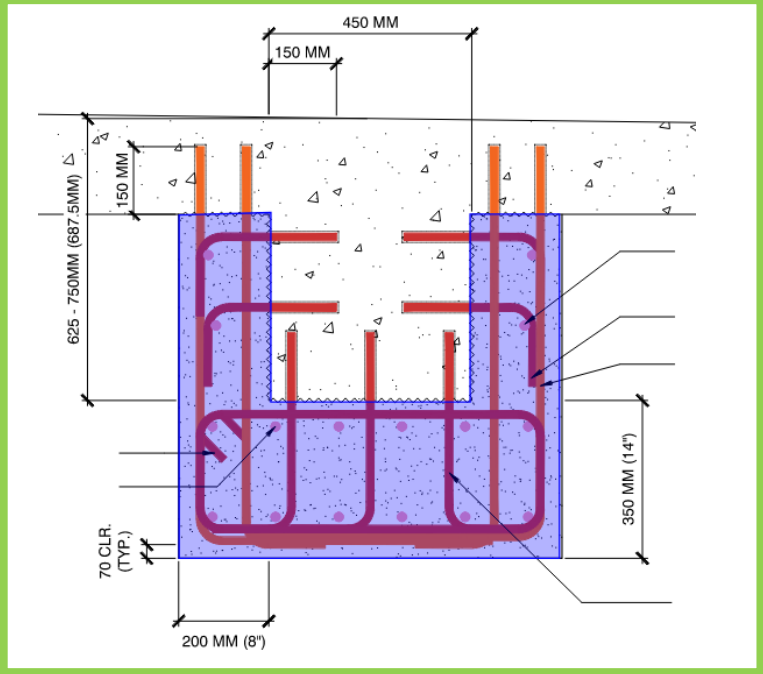
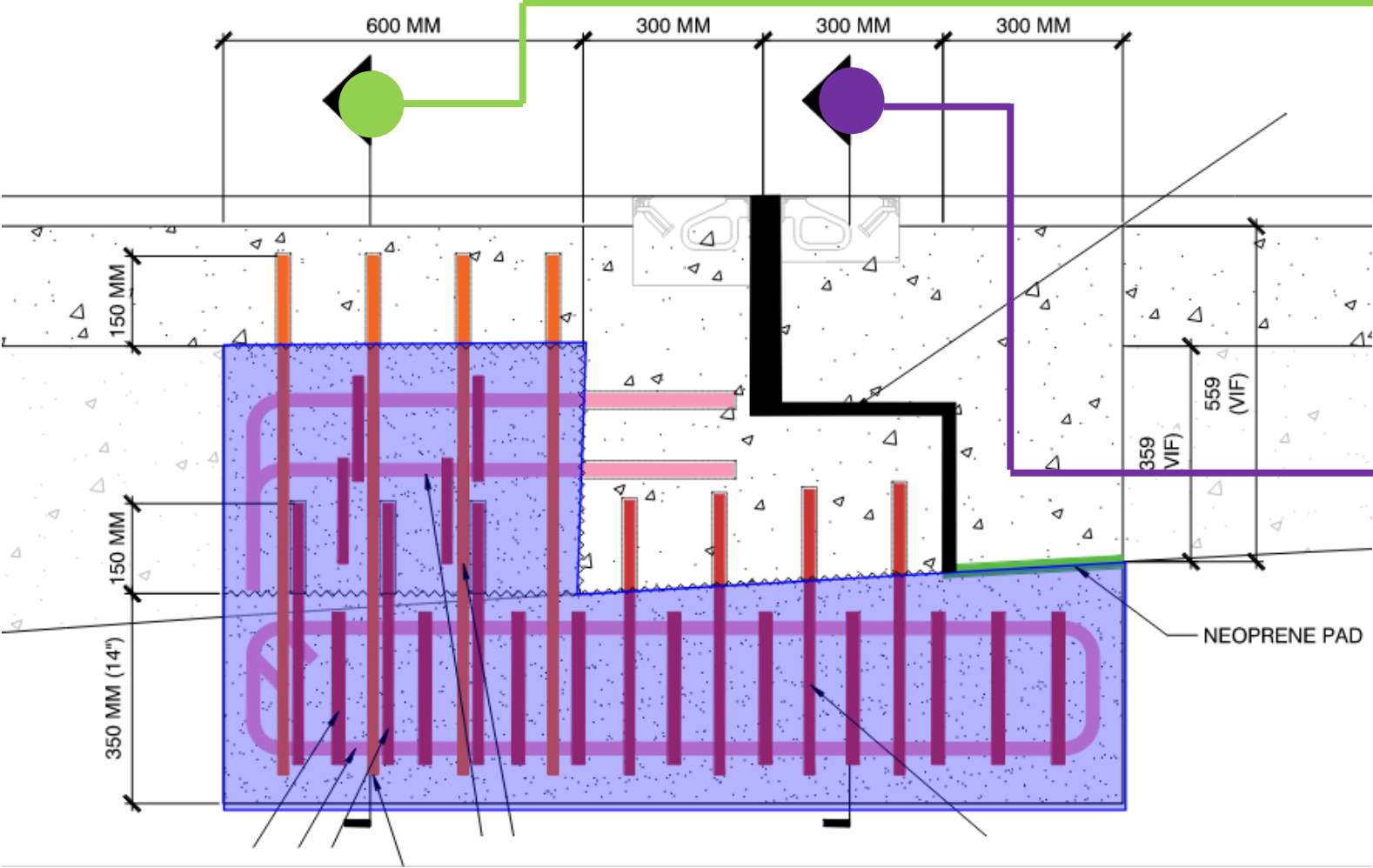


New Expansion Joint



New Bearing

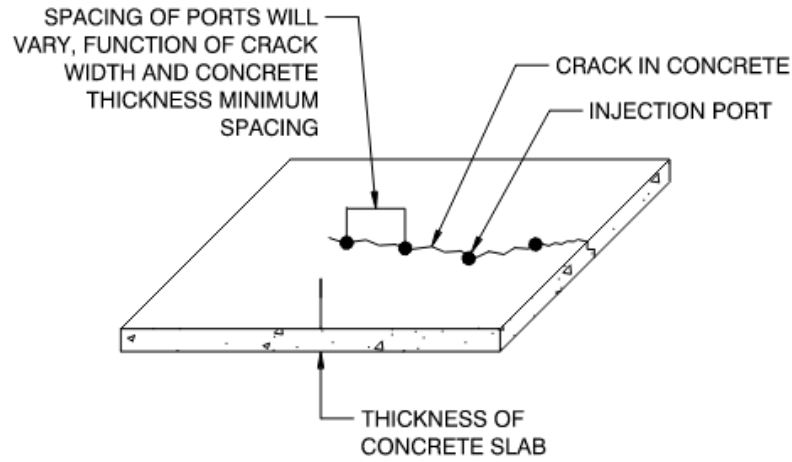
Adding Redundancy Within the Joint



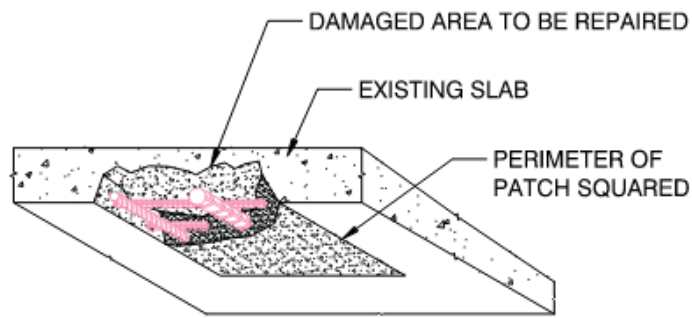
Bridge Deck Restoration



Bridge Deck Restoration



7 PRESSURE EPOXY INJECTION
S1.1



6 TYPICAL BOTTOMSIDE CONCRETE SLAB REPAIR
S1.1 NTS

STRUCTURE REHABILITATION MANUAL



Ontario

PROVINCIAL HIGHWAY MANAGEMENT DIVISION
HIGHWAY STANDARDS BRANCH
BRIDGE OFFICE
MINISTRY OF TRANSPORTATION

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SCHEDULE



PROJECT MILESTONES

Mobilization & Site Setup

- May 2024
- 4 Weeks
- Site Laydown Area
- Installation of Access Platform

Stage 1 Westbound Lane

- 15 Weeks
- Installation of Concrete Barrier
- Bridge Deck Restoration
- Half-Lap Bridge Joint Repair
- Expansion Joint Replacement

Stage 2 Eastbound Lane

- 12 Weeks
- Installation of Concrete Barrier
- Bridge Deck Restoration
- Half-Lap Bridge Joint Repair
- Expansion Joint Replacement

Closeout & Demobilization

- December 2024
- 5 Weeks
- Removing of Access Platform
- Removing Project Facilities

Construction Startup

- Temporary Lane Reduction
- High Volume of Construction Signage
- Increased Construction Vehicle Volume
- Equipment & Material Deliveries
- Utilization of Local Labour, Subcontractors, and Vendors

Stage 1 / Stage 2 Construction

- In-Place Traffic Control Measures
- Long-Term Lane Reduction
- Construction Activities Monday – Saturday
- Working Hours (7am – 6pm)
- Concrete Removal / Chipping Noise
- Pedestrian Trail Maintained

Completion of Immediate Repairs

- Two lane traffic Bridge Reopened
- Removed Construction Signage

- Future work to be completed in accordance with MCEA outcome.

COMMUNITY IMPACT

A photograph of a construction site with a red semi-transparent overlay. The overlay contains the text 'THANK YOU!' in large white capital letters, and 'Questions?' in smaller white capital letters below it. The background shows a concrete floor with some equipment and a white bucket.

THANK YOU!

Questions?