

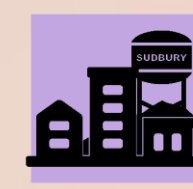


Nelson Street Pedestrian Bridge Replacement



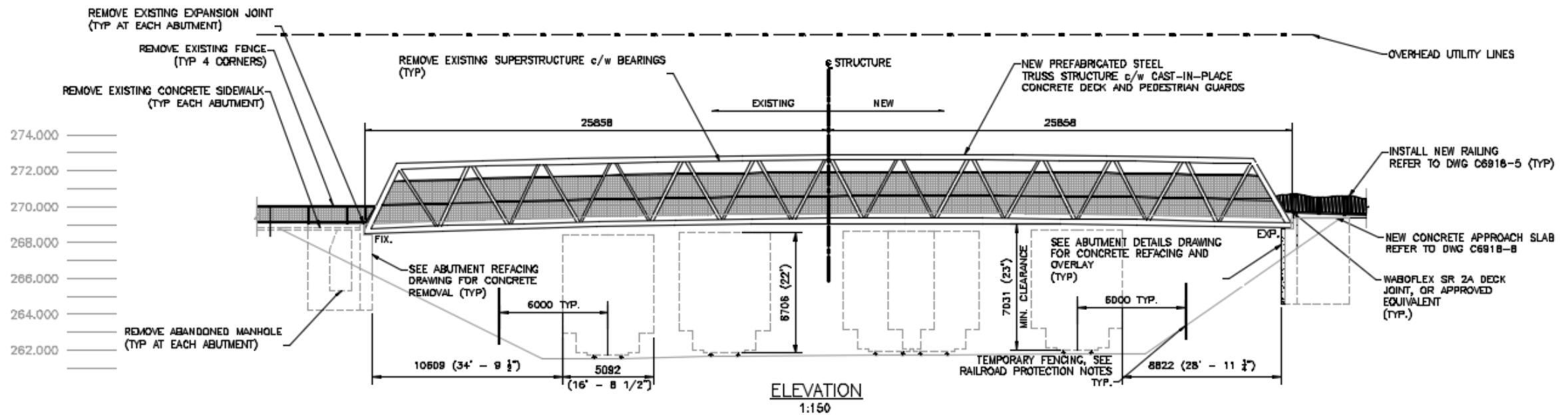
2019-2027 Strategic Plan Priorities

Greater | Grand
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Project Highlights

- Replacing the existing bridge with a similar pre-fabricated truss
- Concrete repairs and improvements to the substructure
- Replacing the concrete sidewalk with asphalt and concrete multi-use path



Structure Highlights

- Nelson Street bridge provides pedestrians and cyclists with a crossing over CPKC Rail, located east of Paris Street
- Originally constructed in 1980
- The Nelson Street bridge is part of the Trans Canada Trail



Existing Structure

- The existing structure has many cracks in the concrete deck, areas of severe delamination and disintegration with exposed and corroded structural steel at the mid-span.
- The coating on the structural steel of the superstructure is in poor condition and exhibits corrosion throughout.
- The concrete abutments are in good condition with minor scaling throughout.
- Replacement of steel superstructure is the preferred option as the costs to rehabilitate the existing structure is approximately the same as replacement with a new structure.



Structure Improvements

- The existing structure will be replaced with a new pre-fabricated Waren Truss with a clear width of 3 metres, providing adequate width for both pedestrian and cyclist use.
- Improvements to the approaches, including new asphalt, pavement markings and widening to 3 metres.
- A new structure means lifespan will be 100 years with minor rehabilitation.
- Galvanized steel will be used, providing less required maintenance throughout the life of the structure.



Structure Improvements: Galvanized Steel Benefits

- Galvanized steel provides both economical and environmental benefits. The life cycle of galvanized steel is on average 8.5% longer than painted steel, and infinitely recyclable.
- While the cost of galvanized steel is roughly the same as painted steel, paint must be touched up, but galvanized steel does not require any maintenance over the bridge's life.
- Galvanized steel eliminates corrosion for up to 100 years and can reduce future maintenance by 50% in comparison to painted steel.



Structure Improvements



Figure 2: Digital rendering of the new structure

Structure Improvements

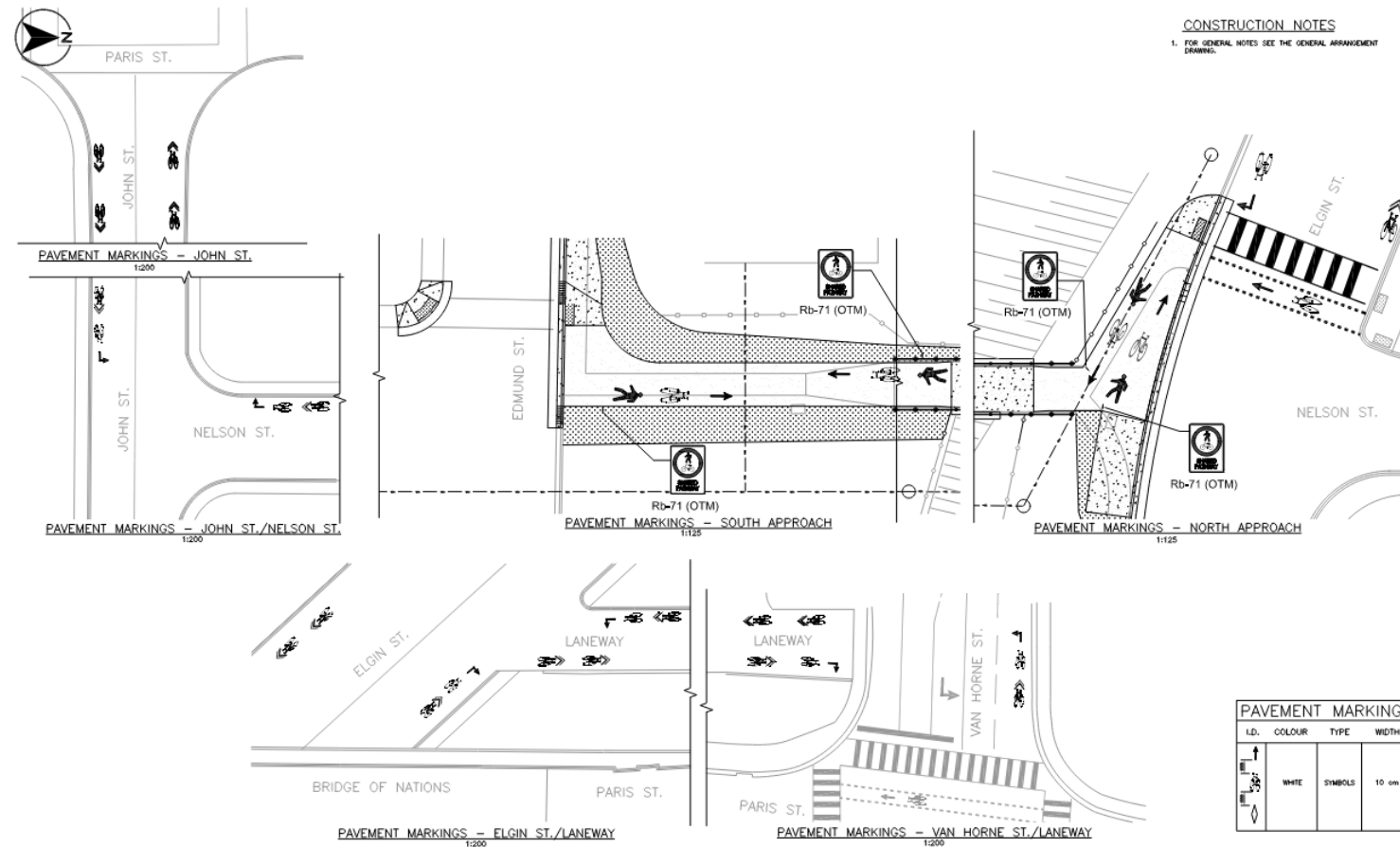
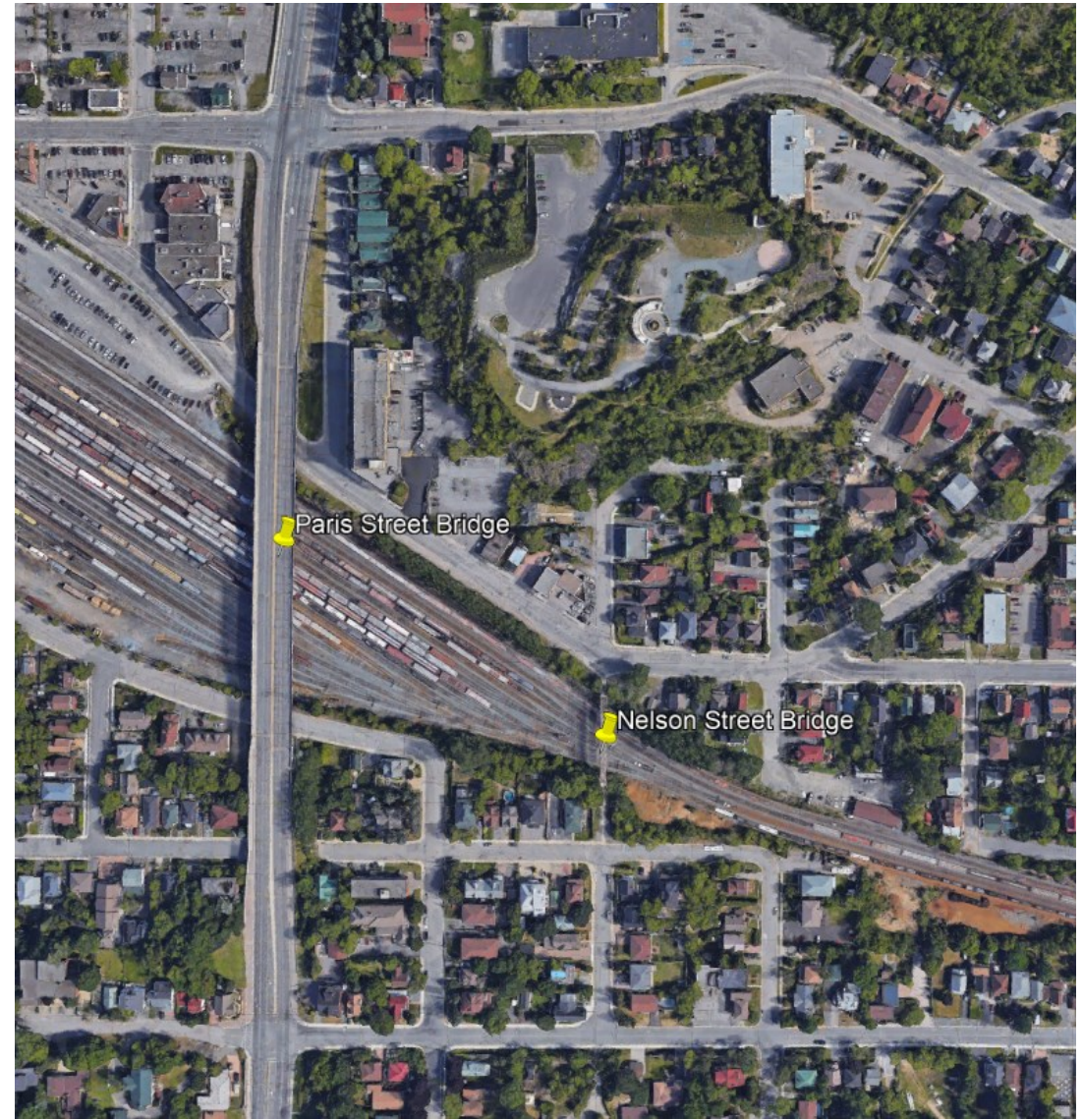


Figure 3: Pavement markings for Multi-use Path

Pedestrian Impacts

- The replacement of the structure will require a full closure for approximately four months, meaning no access will be provided to cross at Nelson Street for the full duration of construction.
- Pedestrians will be detoured to the nearest crossing at the Bridge of Nations on the Paris Street bridge, approximately 200m west of Nelson Street.
- Alternatively, pedestrians can detour to the underground tunnel located at the corner of Riverside Drive and Worthington Crescent connecting to Elgin St.



Utility Impacts

- Utilities at the south end of the bridge will need to be temporarily moved while the existing structure is removed and the new structure is installed.
- Utilities include Agilis, Bell Canada, Greater Sudbury Utilities (GSU) and Eastlink.
- Temporary power outages will be required during the removal and installation of the structure. The outages will be approximately four hours each time.
- It is estimated that the power outages for GSU could affect up to 2,000 customers.



Traffic Impacts

- Elgin Street, Edmund Street and Nelson Street will remain open during construction.
- Traffic will be reduced to local traffic only on the days of removal and installation of the structure.



Construction Schedule



Construction is planned for the summer of 2024



Construction will begin in May and is expected to be completed by the end of August



A pre-fabricated bridge will be removed and installed over a short duration (4 hours) to minimize impact on residents and traffic

The Project Team

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Thank you

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