

**CITY OF BELLEVILLE  
ENGINEERING & DEVELOPMENT SERVICES**

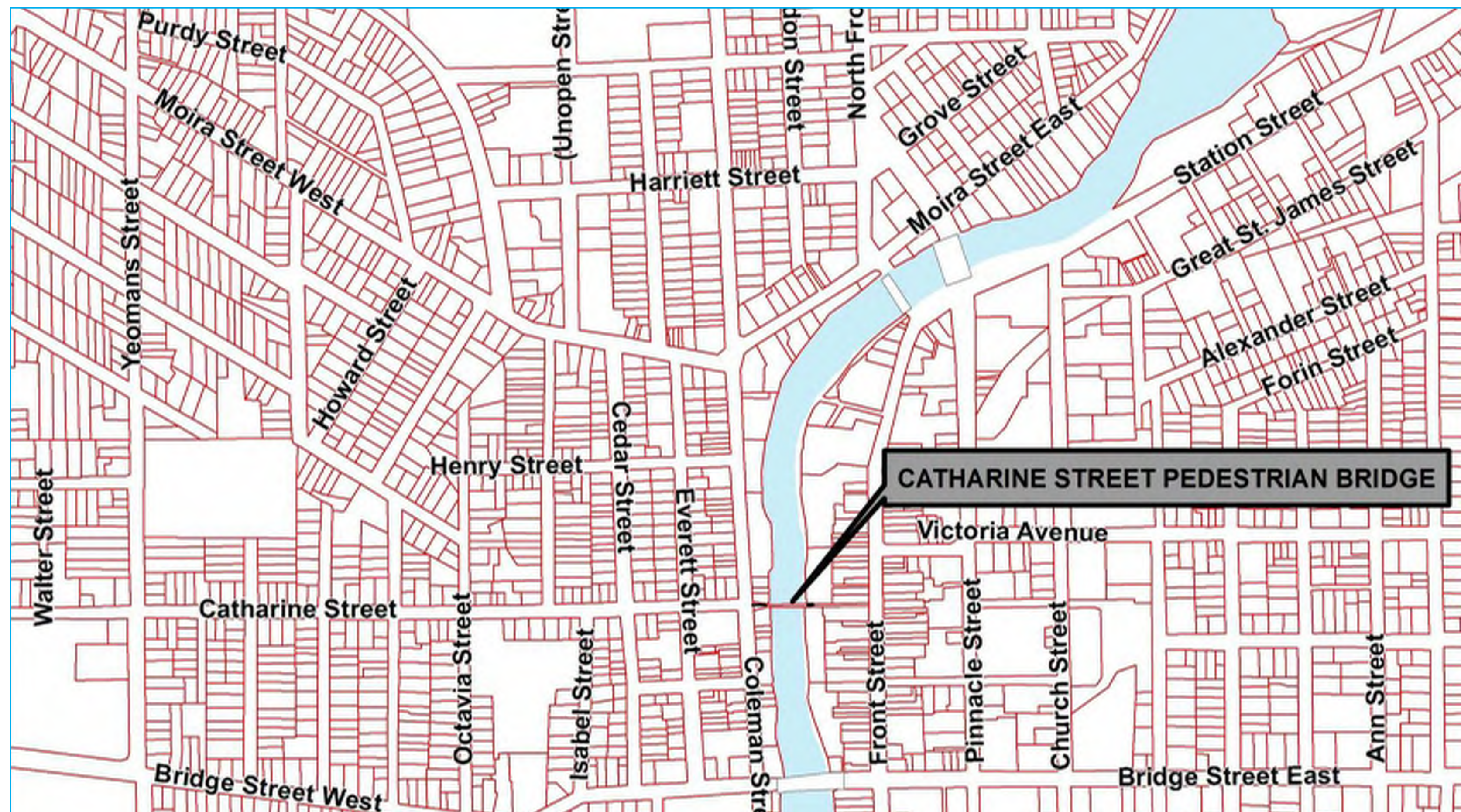
**CATHARINE STREET PEDESTRIAN BRIDGE REPLACEMENT**

**PUBLIC INFORMATION  
CENTRE**



**INVESTING IN OUR COMMUNITY**





In conjunction with implementation of the City's Transportation Master Plan and Downtown Redevelopment, the City is proceeding with preliminary design for the replacement of the Catharine Street pedestrian bridge. The existing structure is in poor condition and in need of rehabilitation. Furthermore, its limited width does not sufficiently provide for pedestrian use while acting as a significant connection in the City's cycling network. A new, wider multi-use structure is proposed in order to effectively accommodate both cyclists and pedestrians while integrating with elements of the ongoing Downtown Revitalization.



## PROJECT BACKGROUND

- 2009 when the City's Municipal Structure Inventory and Inspection Report identified the structure as the number one priority for rehabilitation of the City's open space structures.
- A rehabilitation contract was issued in 2011, but had to be cancelled as the value of the rehabilitation exceeded the approved budget that was based on cost estimates available at that time.
- In 2012 several rehabilitation and replacement options were considered and staff recommended to Council to proceed with rehabilitating the existing structure with a long term plan of replacing the structure in 20 to 25 years. Council did not support this recommendation and referred the issue back to staff to consider expanding the width of the structure.
- In the time that has elapsed since 2012 the City's Transportation Master Plan has been completed and the City's Downtown Redevelopment and Revitalization project was approved. As a result it became apparent that the existing structure does not accommodate either plan or initiative.
- In 2014 Council directed Staff to proceed with the design to replace the bridge with a new wider structure to accommodate cycling and pedestrians.
- In March 2015, Read Jones Christoffersen Ltd. was retained to develop conceptual design options for a replacement structure as well to complete the preliminary design for the selected replacement approach.

## PRELIMINARY DESIGN PROJECT - WORK COMPLETED TO DATE:

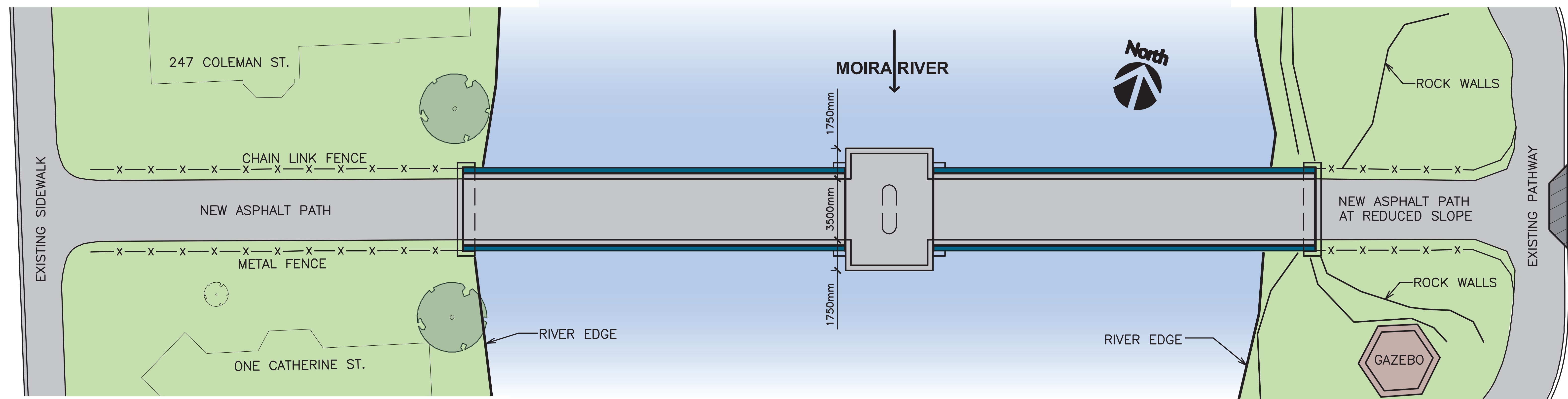
- Legal and Topographical Survey
- Archaeological Investigation
- Geotechnical Investigation
- Preliminary Engineering and Conceptual Design
- City review of Conceptual Designs
- Public Information Centre

## NEXT STEPS:

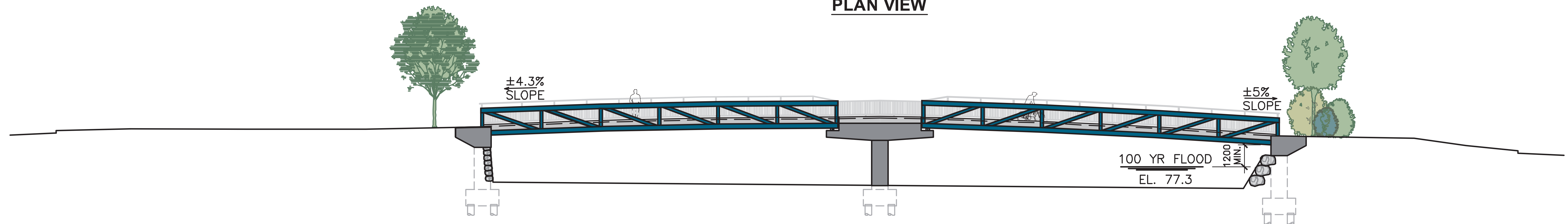
- Finalize Selection of Preferred Replacement Option
- Complete Preliminary Design of Selected Option
- Retain Consultant to Complete Detailed Design and Secure Approvals in 2016
- Tender and Construct Replacement Bridge in 2017

# Catharine Street Pedestrian Bridge Replacement, Belleville, Ontario Project Overview

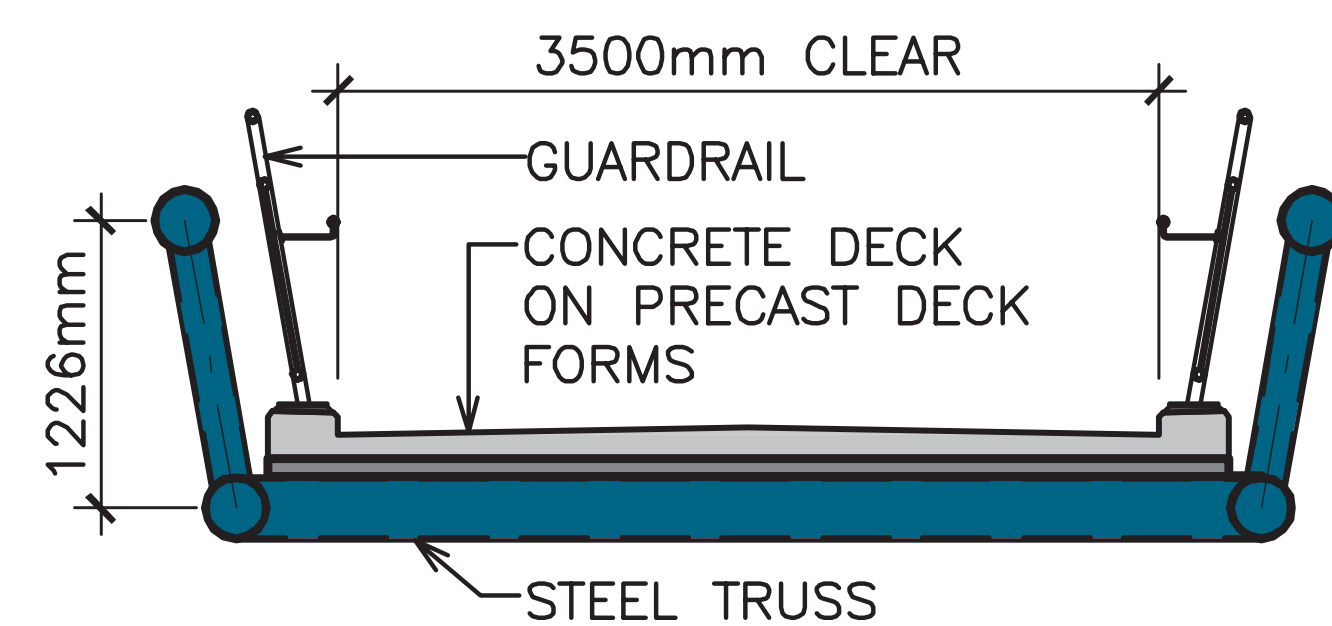




**PLAN VIEW**



**ELEVATION VIEW**



**TYPICAL SECTION**

#### ADVANTAGES

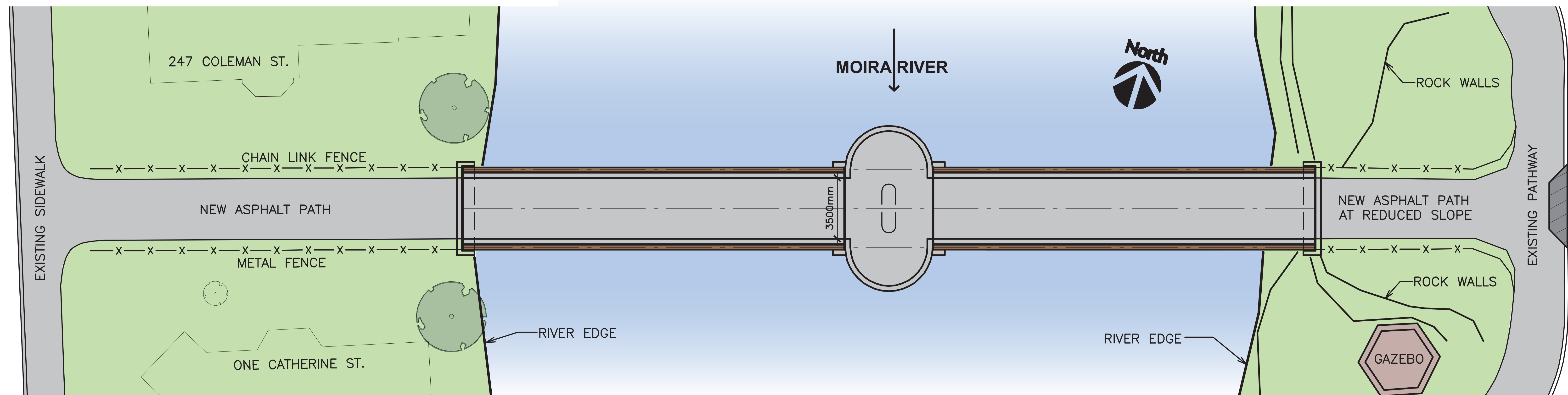
- Variety of colour options
- Highly durable deck material
- Moderate vandal resistance

#### DISADVANTAGES

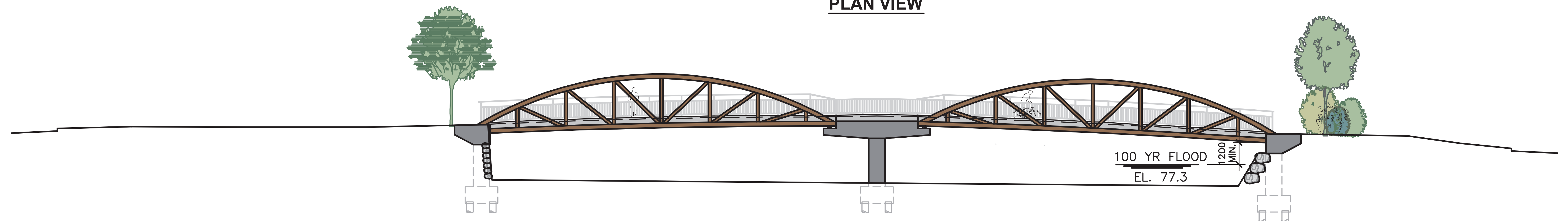
- Highest cost
- Periodic repainting required
- Longer construction duration

#### ESTIMATED CONSTRUCTION COST (+/- 30%)

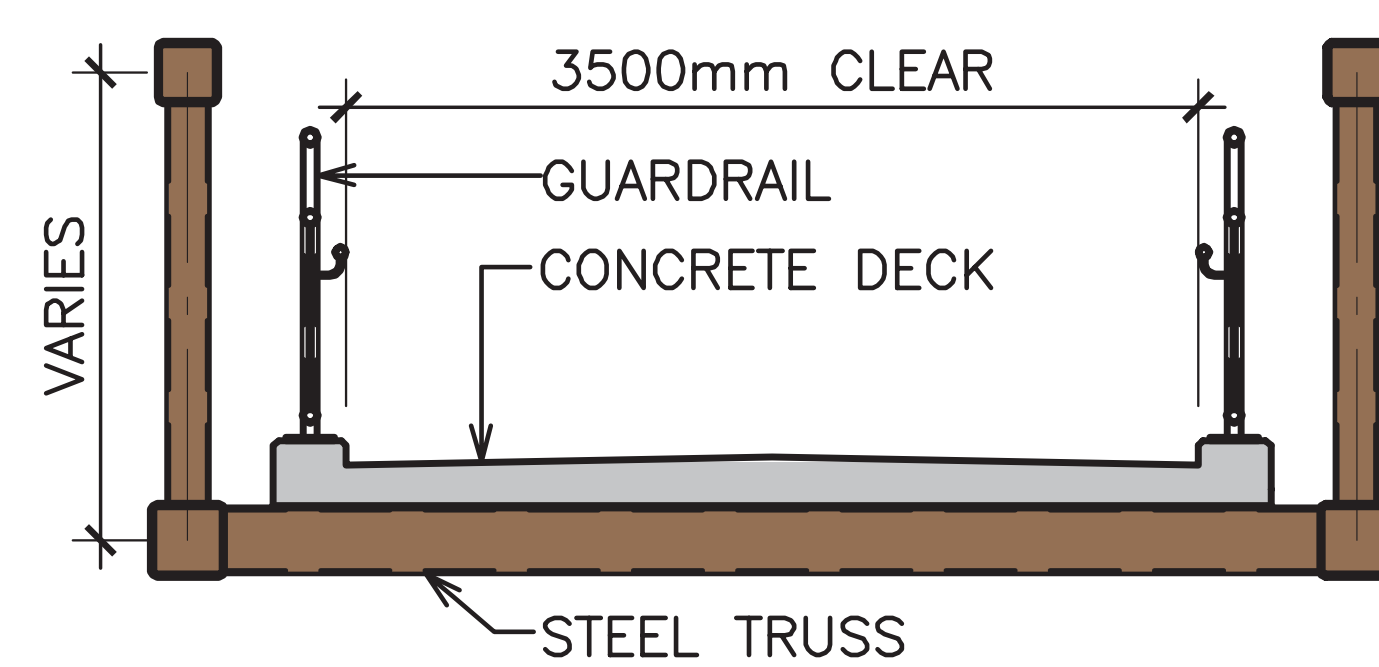
\$2,322,000.00



**PLAN VIEW**



**ELEVATION VIEW**



**TYPICAL SECTION**

#### ADVANTAGES

- Similar style to other City arch spans
- Highly durable deck material
- Moderate vandal resistance

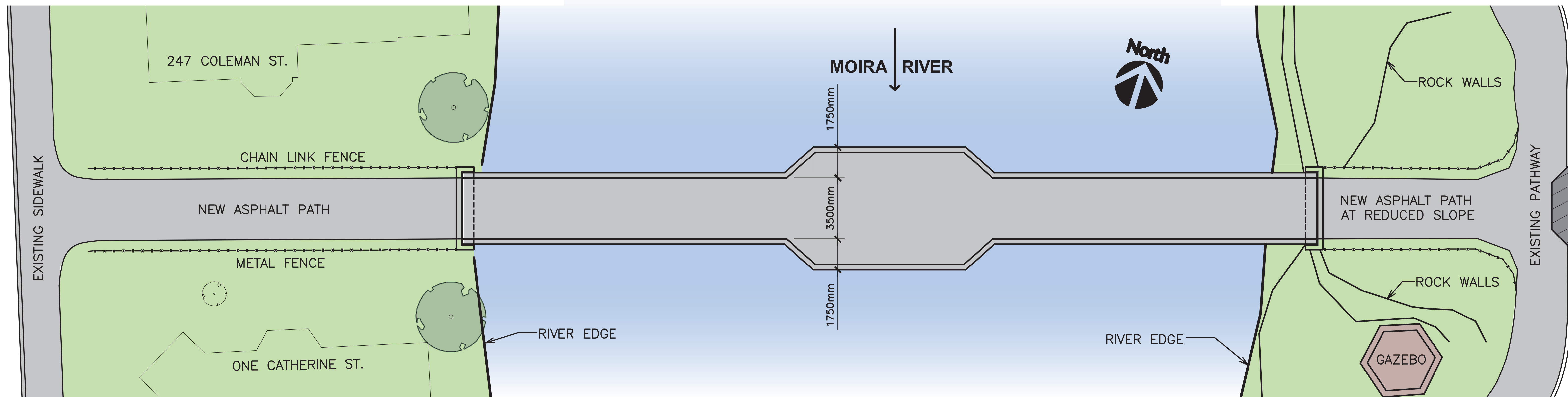
#### DISADVANTAGES

- High cost
- Standardized truss appearance
- Longer construction duration

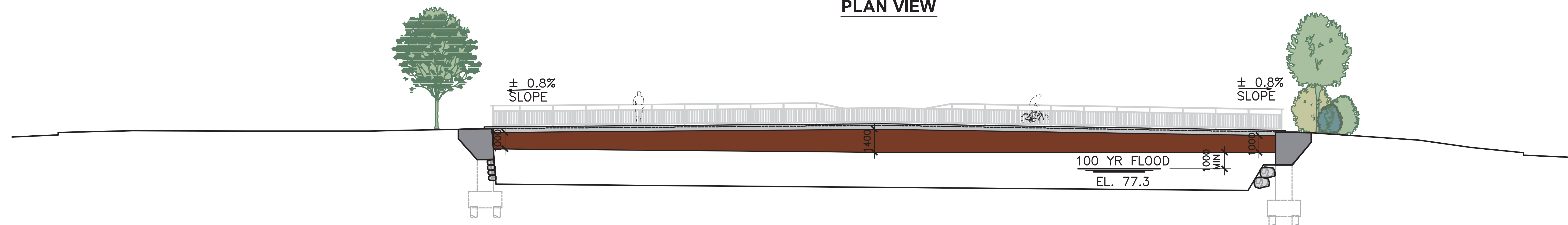
#### ESTIMATED CONSTRUCTION COST (+/- 30%)

\$2,280,000.00

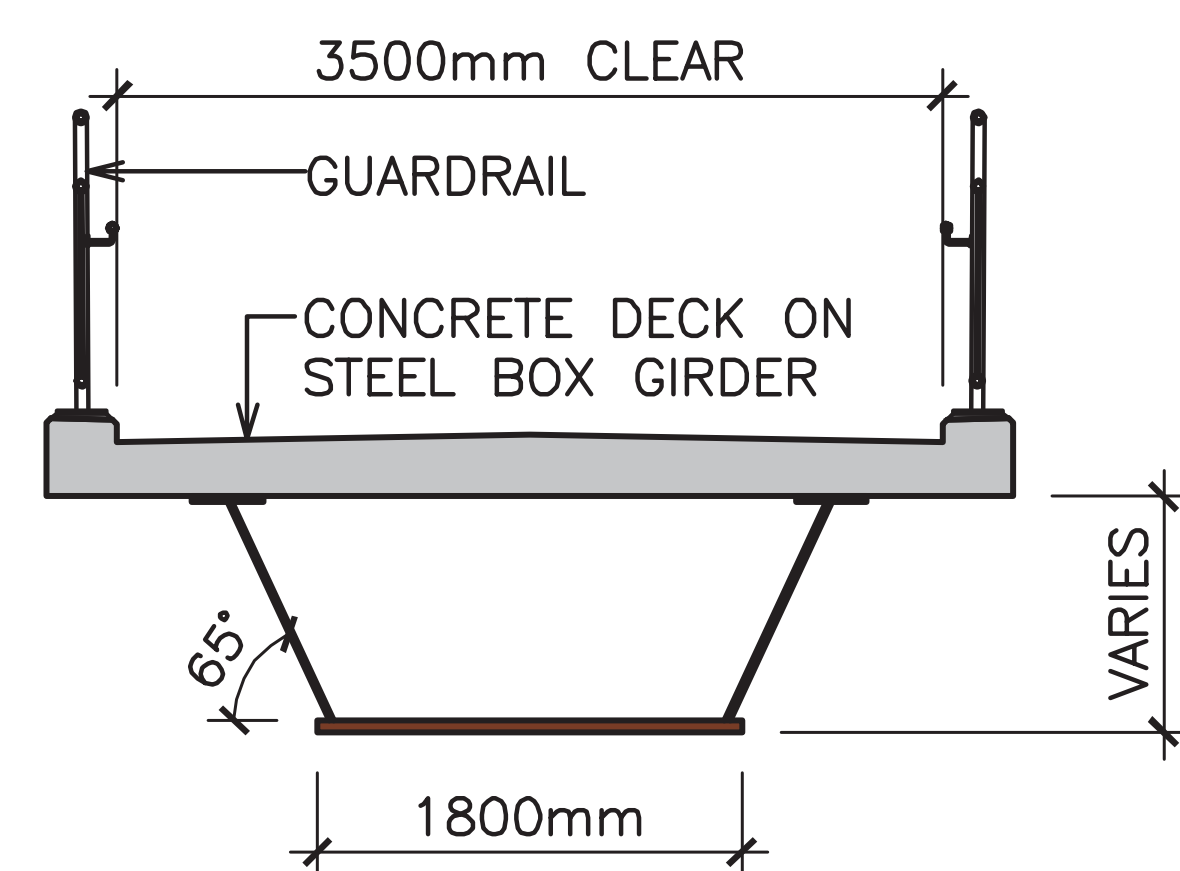




**PLAN VIEW**



**ELEVATION VIEW**



**TYPICAL SECTION**

#### ADVANTAGES

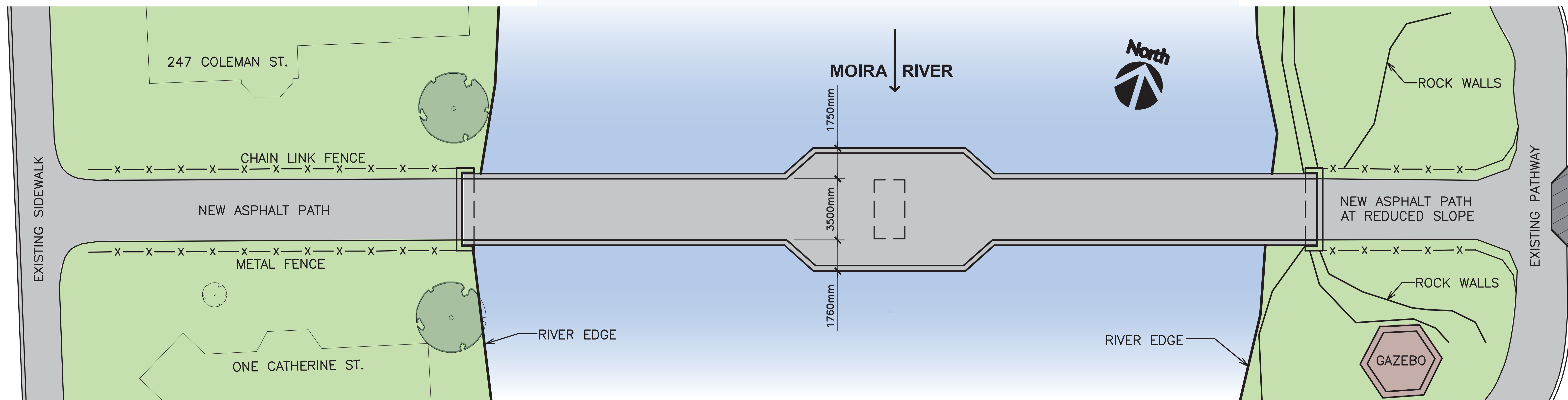
- Low cost
- Reduced obstruction to views
- High vandal resistance

#### DISADVANTAGES

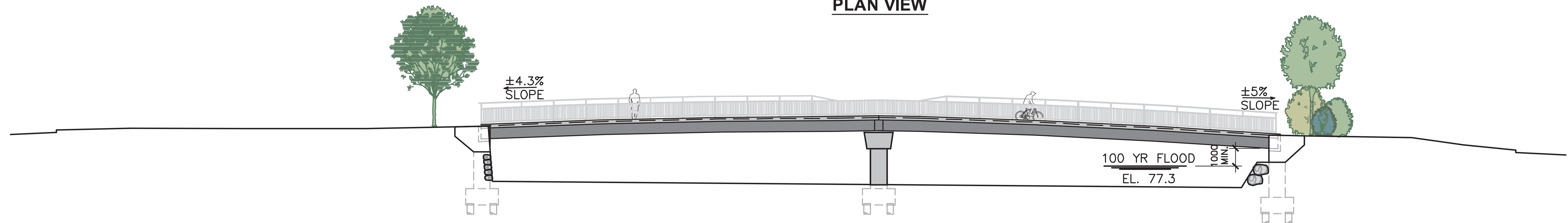
- Less iconic design
- More assembly done on site
- Plain colour palette

#### ESTIMATED CONSTRUCTION COST (+/- 30%)

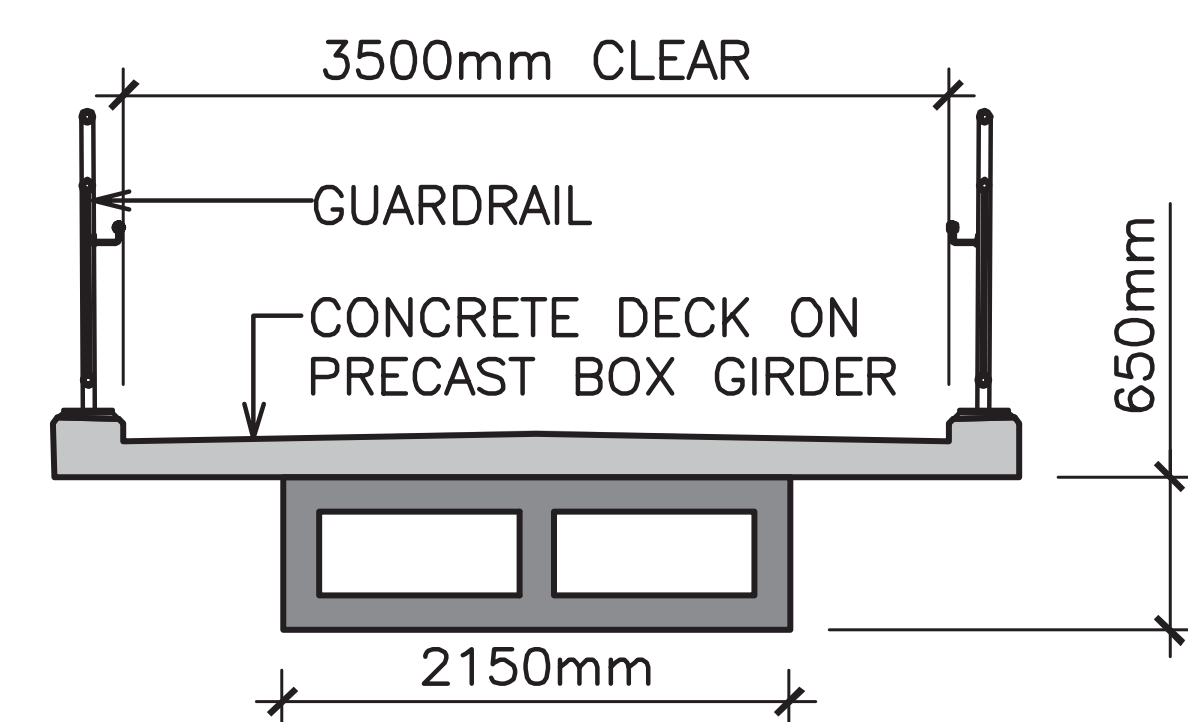
\$1,980,000.00



**PLAN VIEW**



**ELEVATION VIEW**



**TYPICAL SECTION**

#### ADVANTAGES

- Reduces obstruction to views
- Highly durable materials
- High vandal resistance

#### DISADVANTAGES

- Least complimentary to existing architecture
- Longer construction duration
- Plain colour palette

#### ESTIMATED CONSTRUCTION COST (+/- 30%)

\$2,190,000.00



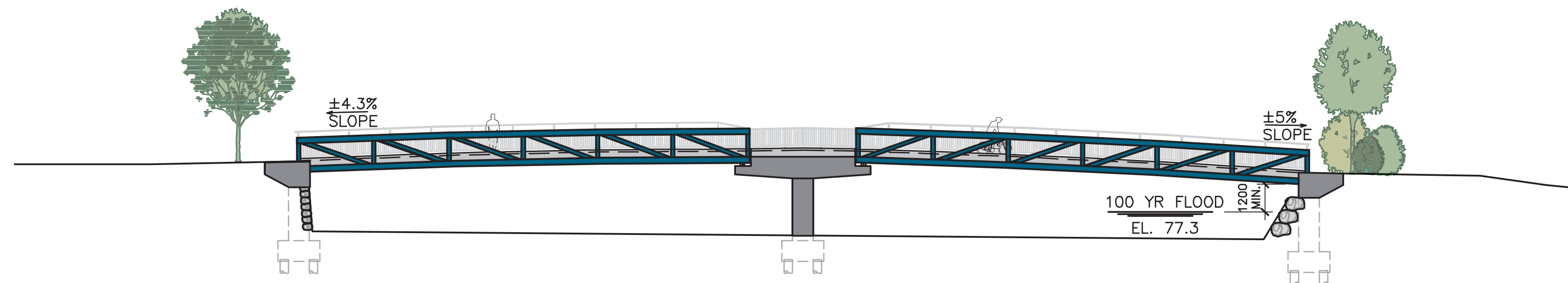
Engineers



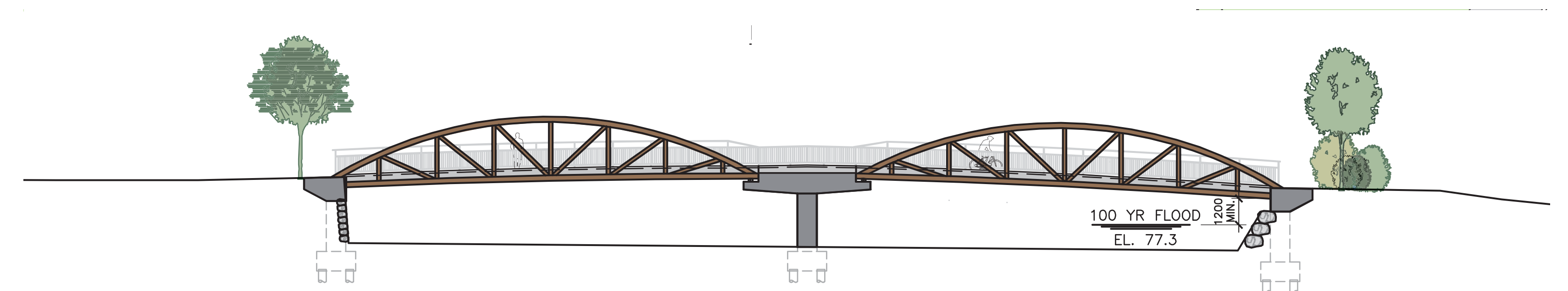
**Catharine Street Pedestrian Bridge Replacement, Belleville, Ontario**  
Preliminary Design  
**OPTION #4 - PRECAST CONCRETE BOX GIRDER**



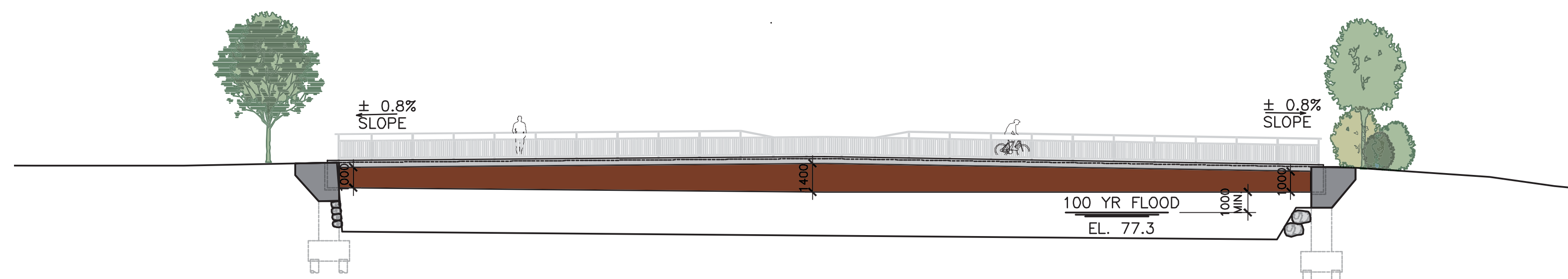
### OPTION #1 - STEEL TRUSS



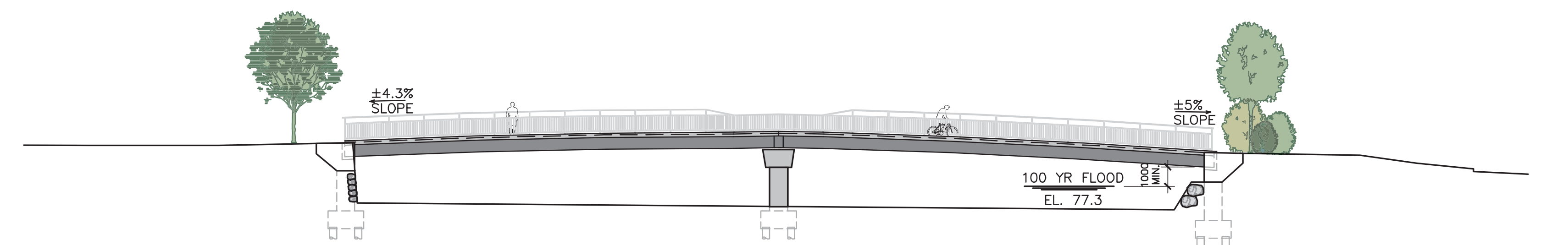
### OPTION #2 - PRE-ENGINEERED STEEL ARCHES



### OPTION #3 - STEEL BOX GIRDER



### OPTION #4 - PRECAST CONCRETE BOX GIRDER



*Please indicate your preferred bridge replacement option by placing a check mark in one of the boxes above*