



Walterdale Bridge Replacement

Additional Information for the Existing Walterdale Bridge

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Transportation Infrastructure Committee

November 15, 2011





Previous TIC Committee

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- September 20, 2011, TIC follow-up:
 - Design options for deck surface
 - Options for integration into the river valley trail system
 - Additional design options and uses such as a plaza or market.
 - Utilities relocation and cost savings to retain the old bridge



Design Options - Deck

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- Steel grate deck may be replaced with.
- Wood
 - Maintains historical character
 - Reasonable cost
 - Bumpy/slippery for users
- Concrete
 - Preferred surface for ease of use
 - Costly (dead load of concrete will require bridge strengthening)
 - Diminishes historical character with modern deck

Railing Requirements

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- Interior space must be made safe to discourage climbing
- Railings must be installed along truss.
- Creates maintenance challenges





Old Bridge Uses

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- Maintain all three spans
 - Allows some utilities to remain on bridge.
 - Allows pedestrians to be completely separated from the vehicle traffic.
 - View from old bridge is obscured by structure/utilities
- Maintain south single span only
 - Use as a plaza or lookout.



Possible Uses For Old Bridge

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Retention uses include

- Gathering area (street vendors, farmer's market)
- Space is narrow compared to similar gathering places in the city today.

Salvage uses include

- on-site art piece,
- terrace wall
- integrating structural steel pieces into nearby businesses and restaurants





New Bridge

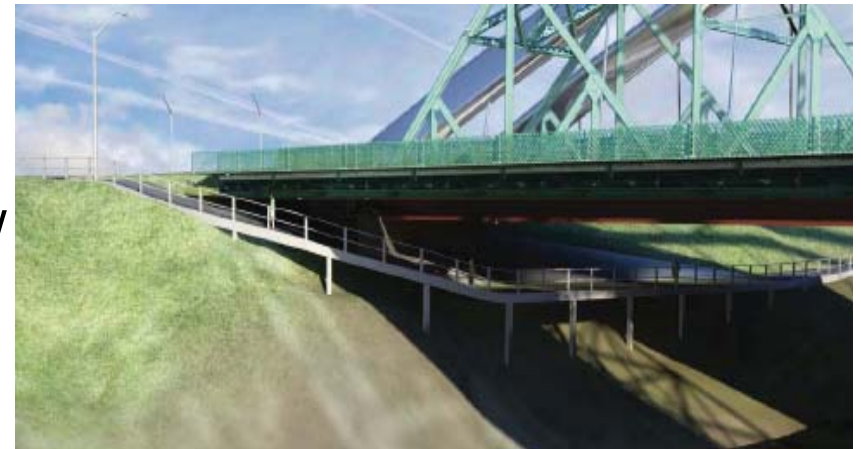
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- New bridge will provide optimal views of river and surroundings.
- Should provide ped/bike facilities even if old bridge remains.
- Trail on new bridge is designed for the east side.
- Provides reliable connection upon temporary or permanent closure of the old bridge.

Trail Integration with Rossdale

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- New bridge integrates with the West Rossdale Redevelopment Plan.
- Proposed “activity node” is primarily along the north bank
- Best connections provided via the new bridge.
- Old bridge creates obstacle for trail connectivity along the north bank
- Becomes problematic for future “Touch the Water” promenade.





Utilities

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- Utilities exist on both sides and underneath the old bridge.
- Utilities on the east side conflict with the new bridge on the northbank.
- Utilities will not be accommodated on the new bridge.



Cost Comparison

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COST COMPARISON – RETAINING VERSUS REMOVING OLD WALTERDALE BRIDGE

| Option | Total Cost |
|--|----------------------|
| Option 1 - Construct New Arch Bridge - Demolish Old Bridge | \$132 Million |
| Option 2 - Construct New Bridge with No Trail - Retain Old Bridge for Pedestrians - Rehabilitate Old Bridge (Wood Deck) | \$161 Million |
| Option 3 <i>(Modified Option 2)</i> - Construct New Bridge with No Trail - Retain Old Bridge for Pedestrians - Rehabilitate Old Bridge (Concrete Deck) | \$171 Million |
| Option 4 <i>(retain 1 span of old bridge)</i> - New Bridge - Retain 1 Span of Old Bridge for Pedestrians - Rehabilitate Old Bridge (Wood Deck) | \$146 Million |



Design and Schedule Implications

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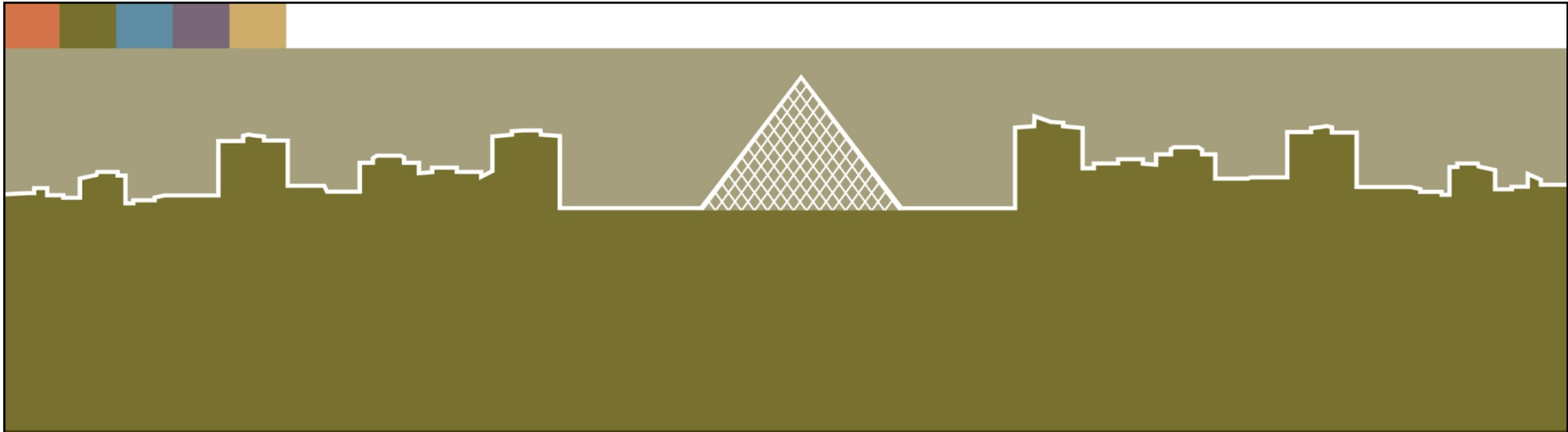
- Preliminary Design is scheduled to be completed in January 2012.
- Design has proceeded on the basis of removing the old bridge.
- Retaining old bridge would present risks including extra time to modify the design as well as escalating construction costs.
- Strategy with environmental agencies has begun and will be delayed and complicated if the old bridge remains in place.



Summary

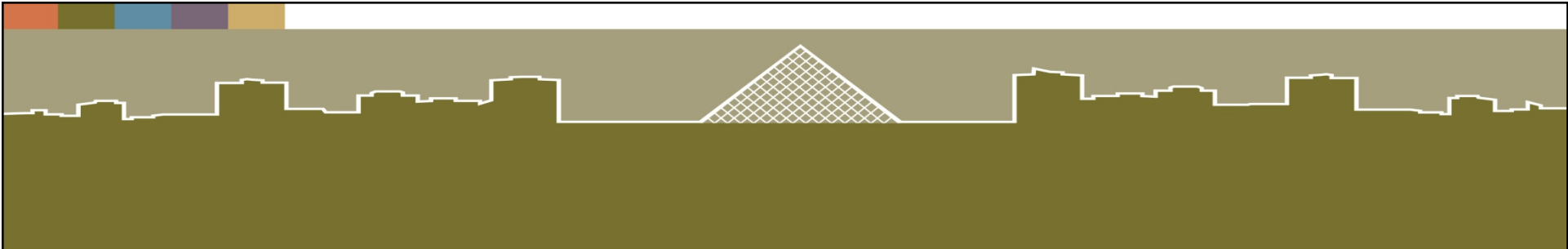
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- Administration does not recommend retaining the old Walterdale Bridge
- The character and scale of the old bridge conflicts with the new bridge
- The old bridge has limited space for programming activities and events
- The old bridge creates additional trail obstacles on the north bank
- Environmental regulators would prefer to remove the old bridge
- All options that retain the bridge increase the overall costs
- Ongoing uncertainty with the fate of the old bridge will have adverse schedule and cost implications for the project



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- END PRESENTATION

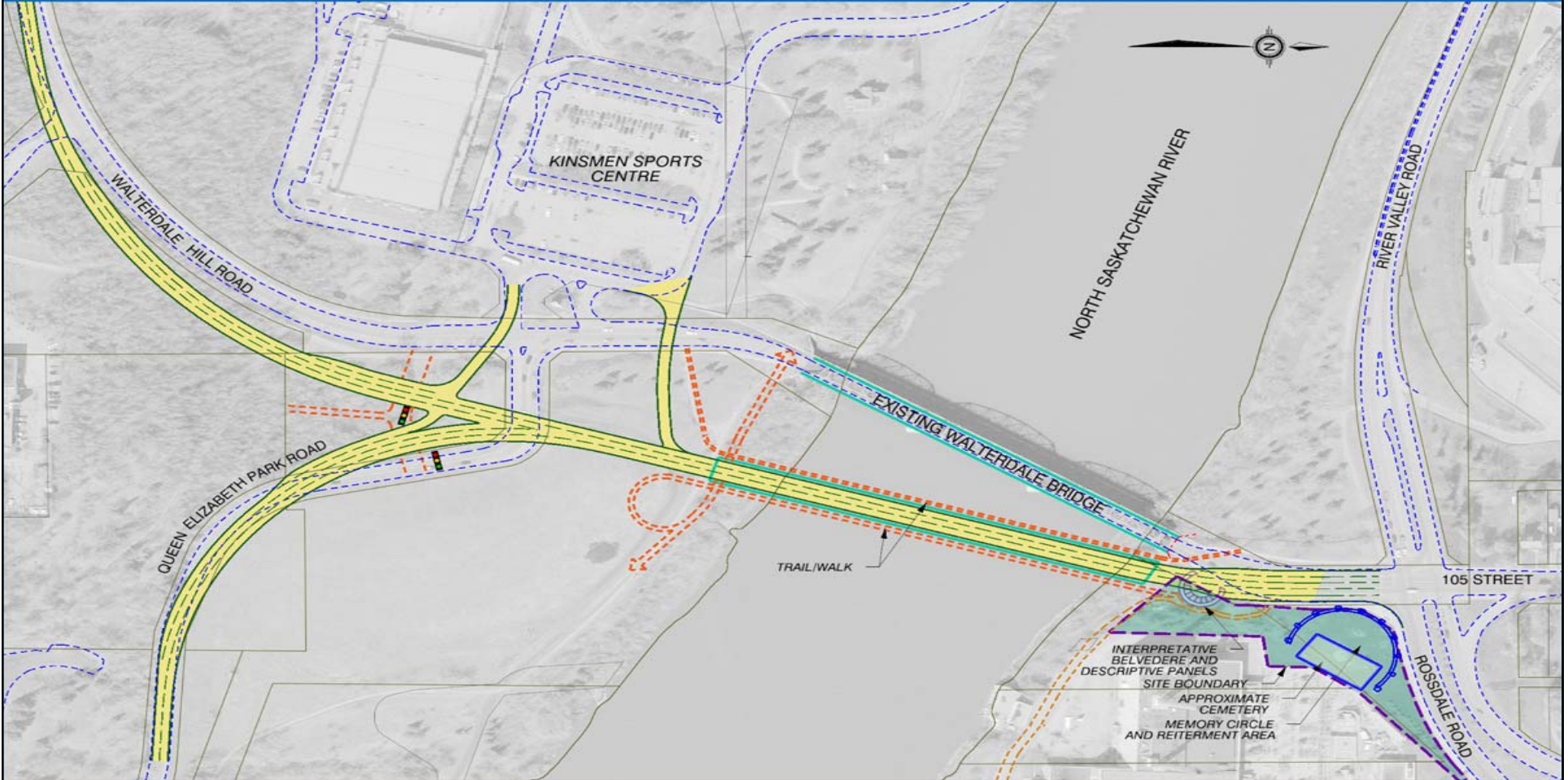


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- **BACK UP SLIDES**

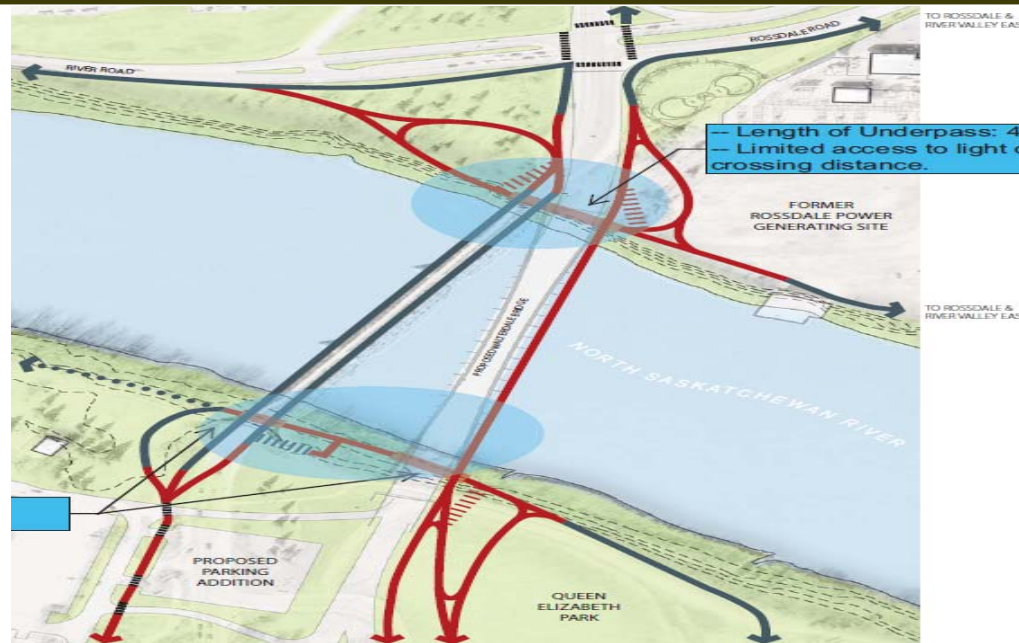
Alignment Recommendation

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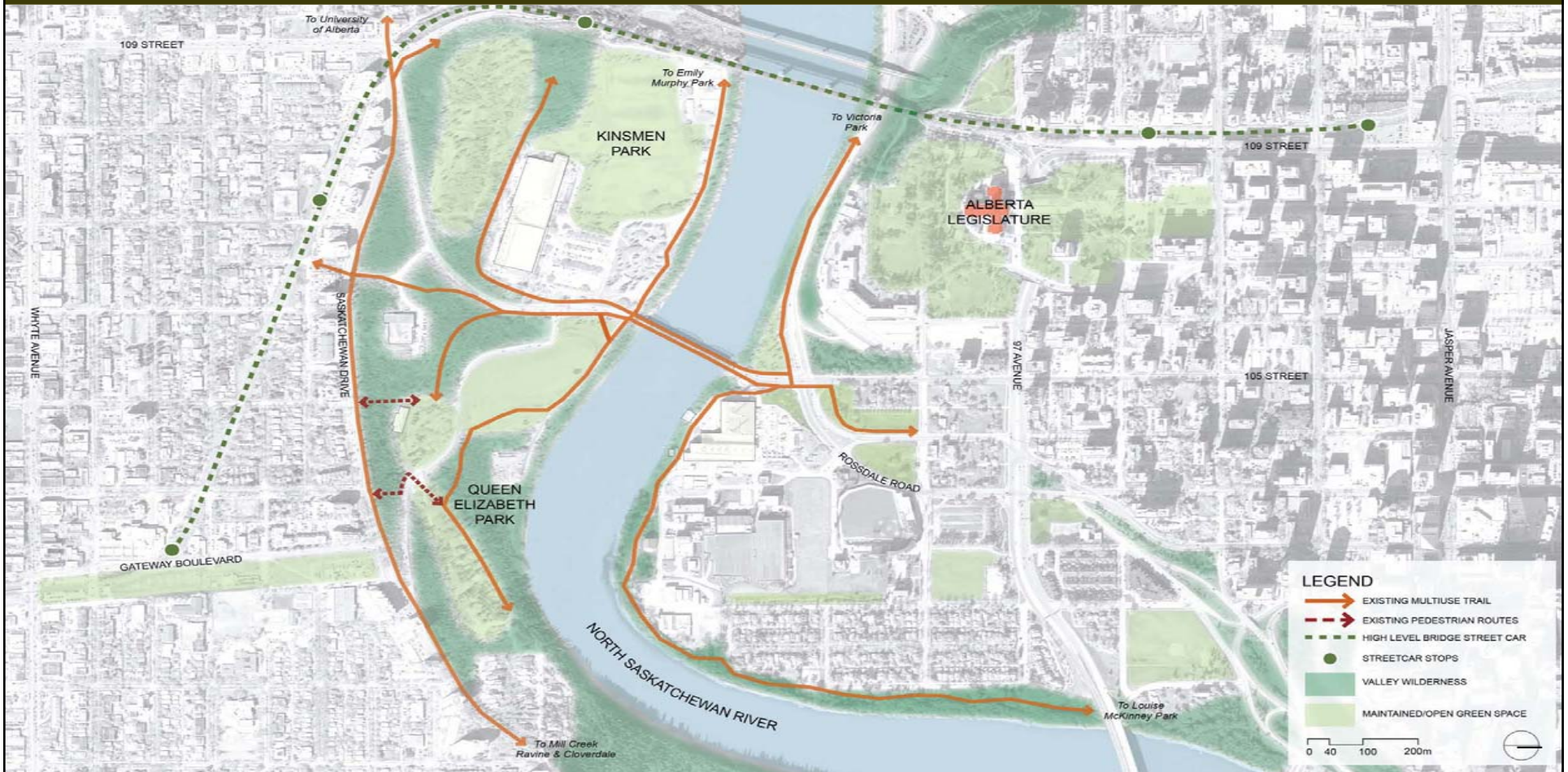
Trails – Maintaining Old Bridge

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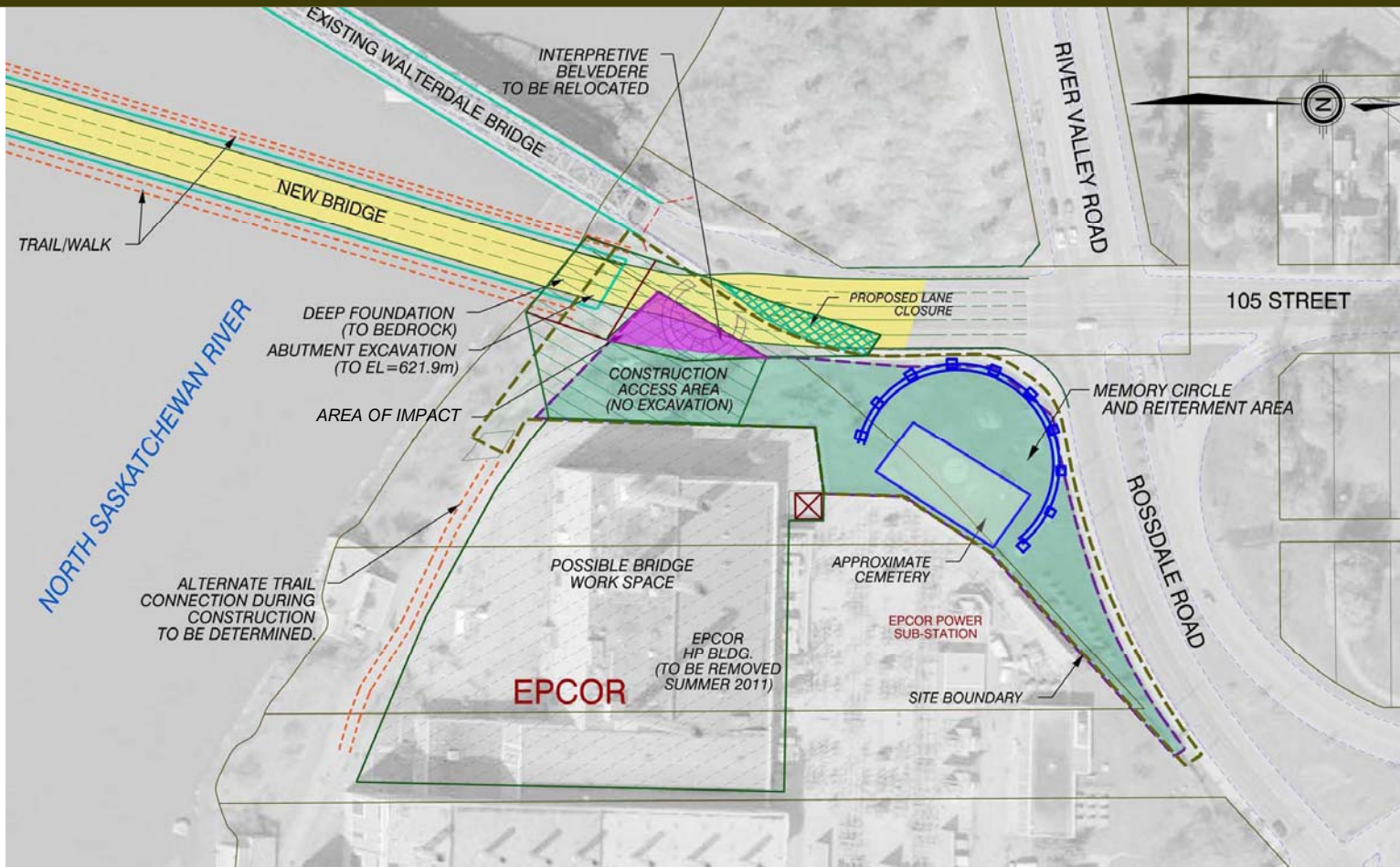
Pedestrian Network

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Construction Area of Impact

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Costs to Address Load/Weight Issues

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| Option | Rehabilitate | Strengthen |
|---|---|------------|
| Retain for Vehicles | Yes \$ 15 to 20 Million | |
| Pedestrian Plaza and/or Outdoor Vendors | Yes \$ 5 to 10 Million | No \$0 |
| Restaurants | Yes \$15 to 25 Million, depending on size. | |



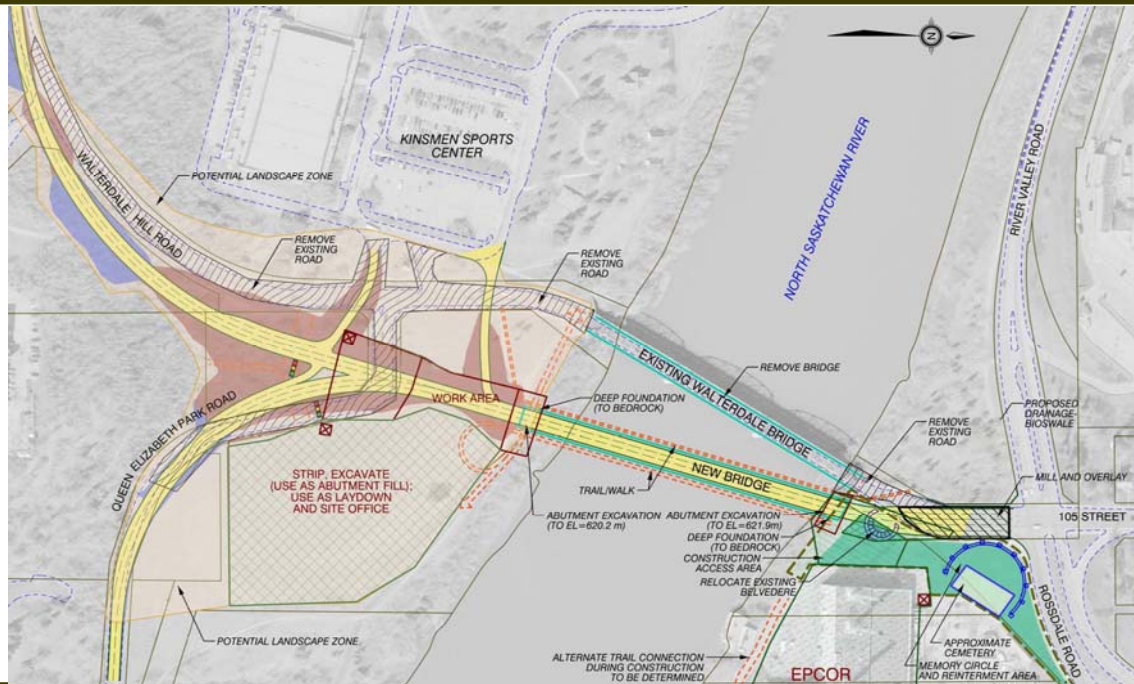
Creative Options for the Existing Bridge

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- The south approach span could be kept in its current location to be used as a public space.
- Existing bridge may accommodate a café or restaurant however requires further studies that may present challenges.
 - Servicing, environmental impact, compliance with the River Valley bylaw, parking, detailed structural analysis.

Construction Area of Impact

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Old bridge removed and in place

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Old bridge left in place

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