



Deerfoot Trail Study

City of Calgary Stakeholders
Option Package Review
May 6, 2020



Agenda

- Introductions
- Recap of Study Process
- Previous Concepts
- What We Heard / What We Did
- Preferred Concepts
- Option Evaluation Summary
- Next Steps

Study Process

- Existing and Historical Context Report
- Problem Definition Report
 - Analysis of Existing and Future Base Conditions
 - Identification of Key Corridor Issues
- Evaluation Framework
- Development of Improvement Options
- Three Step process employed to define the potential options
- Option Evaluation and Recommendations



We Are Here

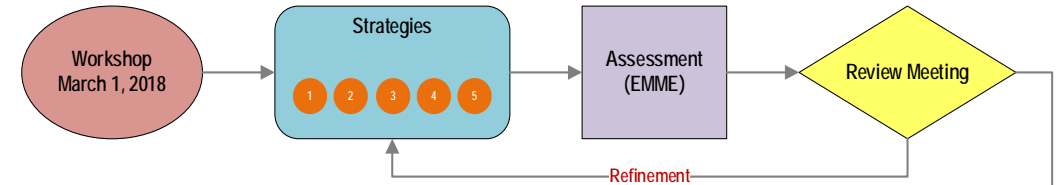


Study Process

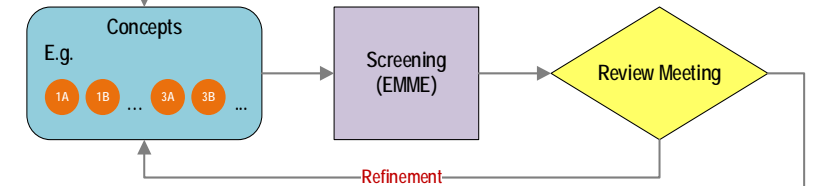
Three Step process employed to define the potential options

- Strategy Assessment
- Concept Screening
- Option Evaluation

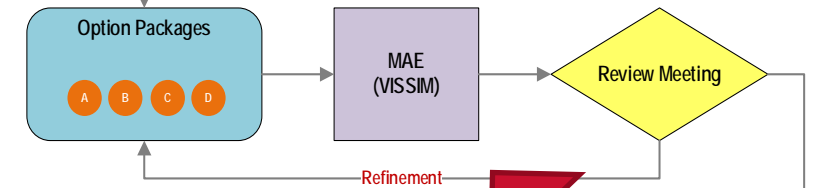
STAGE 1: STRATEGY ASSESSMENT



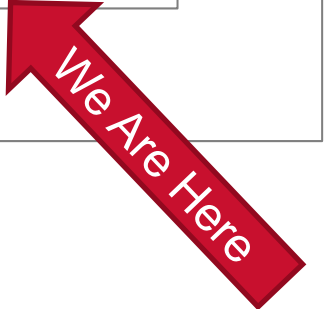
STAGE 2: CONCEPT SCREENING



STAGE 3: OPTION PACKAGE EVALUATION



Preferred Solution



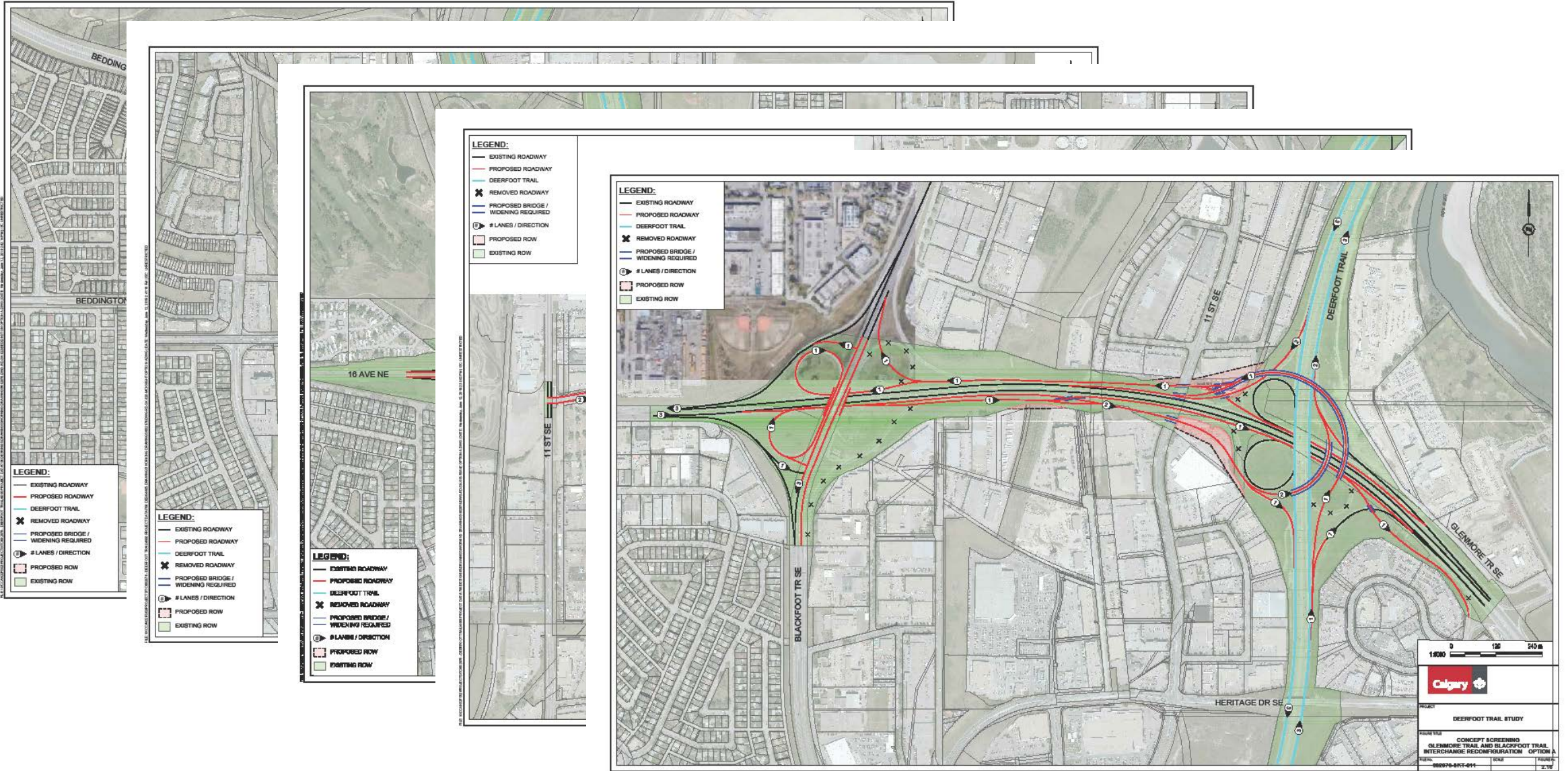


Previous Concepts

- Beddington Trail Interchange
- McKnight Boulevard Interchange
- 16 Avenue Interchange
- Memorial Drive To 17 Avenue Focus Area (3)
- 50 Avenue Connector
- Glenmore Trail Interchange
- Anderson Road / Bow Bottom Trail Focus Area (3)

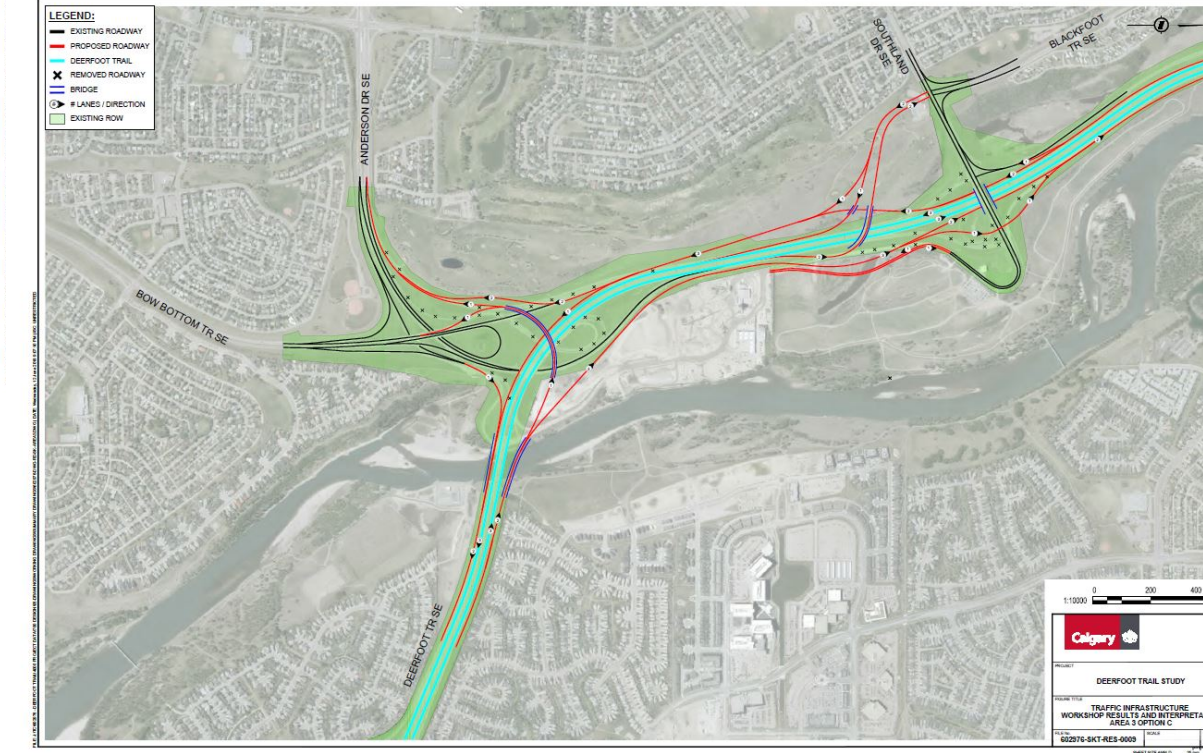
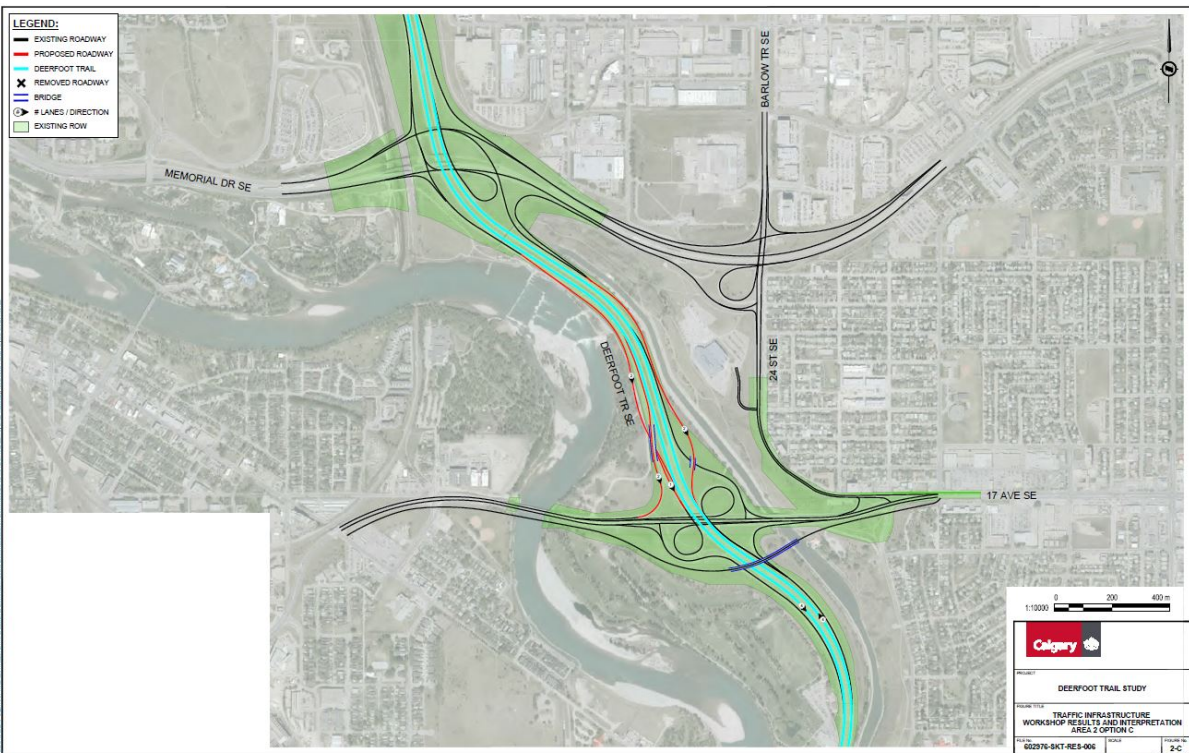


Previous Concepts





Previous Concepts





What We Heard / What We Did

- Beddington Trail Area
- Memorial Drive to 17 Avenue Focus Area
- 50 Street Connector
- Glenmore Trail - Blackfoot Trail to Deerfoot Trail
- Anderson Road / Bow Bottom Trail Interchange



What We Heard / What We Did

WHAT WE HEARD	WHAT WE DID
Beddington Trail Area	
<ul style="list-style-type: none"> • Sensitive lands / wetlands in northeast quadrant 	<ul style="list-style-type: none"> • Wetland area noted in environmental review • Potential mitigation required when project progresses
<ul style="list-style-type: none"> • Crossing Nose Creek 	<ul style="list-style-type: none"> • Configuration reduces new crossings to only one new structure.
<ul style="list-style-type: none"> • Off-leash dog park impacts 	<ul style="list-style-type: none"> • Alignment for connecting roadway modified to avoid impacts to the park
Memorial Drive to 17 Avenue Focus Area	
<ul style="list-style-type: none"> • Access to Max Bell Arena insufficient in connecting to 17 Avenue 	<ul style="list-style-type: none"> • Developed additional access at the north end of the parking lot that connects to Barlow Trail north of Memorial Drive
<ul style="list-style-type: none"> • Pedestrian access across Deerfoot Trail 	<ul style="list-style-type: none"> • New ped / cycling structure proposed south of Memorial Drive
<ul style="list-style-type: none"> • Staging area for taxis and limos along Barlow Trail or 24 Street 	<ul style="list-style-type: none"> • No changes could be made to proposed concept as Barlow Trail will be upgraded and separated from 24 Street SE



What We Heard / What We Did

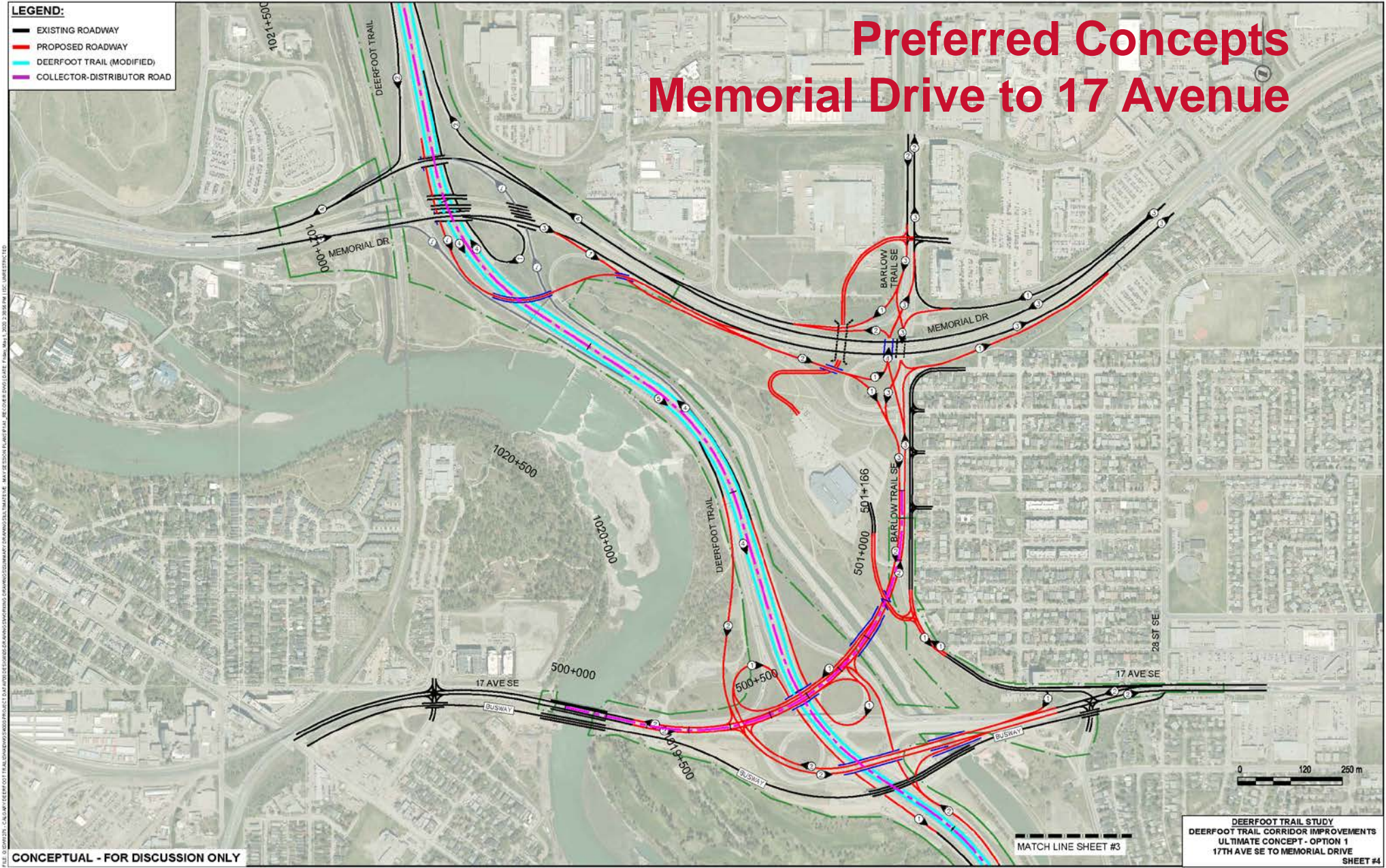
WHAT WE HEARD	WHAT WE DID
50 Avenue Connector Area	
<ul style="list-style-type: none"> Potential impacts to the Old Refinery Park and the plans for an event / festival site 	<ul style="list-style-type: none"> Alignment shifted northward to minimize impact to park Reversed concept such that Deerfoot Trail remains in the existing alignment and 50 Ave is located and extended across the river – smaller footprint as 50 Avenue is proposed to be a four lane arterial
<ul style="list-style-type: none"> What will happen to the existing 50 Ave overpass at Ogden Road 	<ul style="list-style-type: none"> Existing structure to be maintained and twinned to create a four lane arterial Pedestrian / cycling facilities will be included in the new structure
<ul style="list-style-type: none"> Impact to Bonnybrook access road and other existing and future features 	<ul style="list-style-type: none"> Alignment for the 50 Avenue connector modified to avoid / minimize conflicts in the area including the CN rail line and the Greenline LRT. Alignment is still flexible.

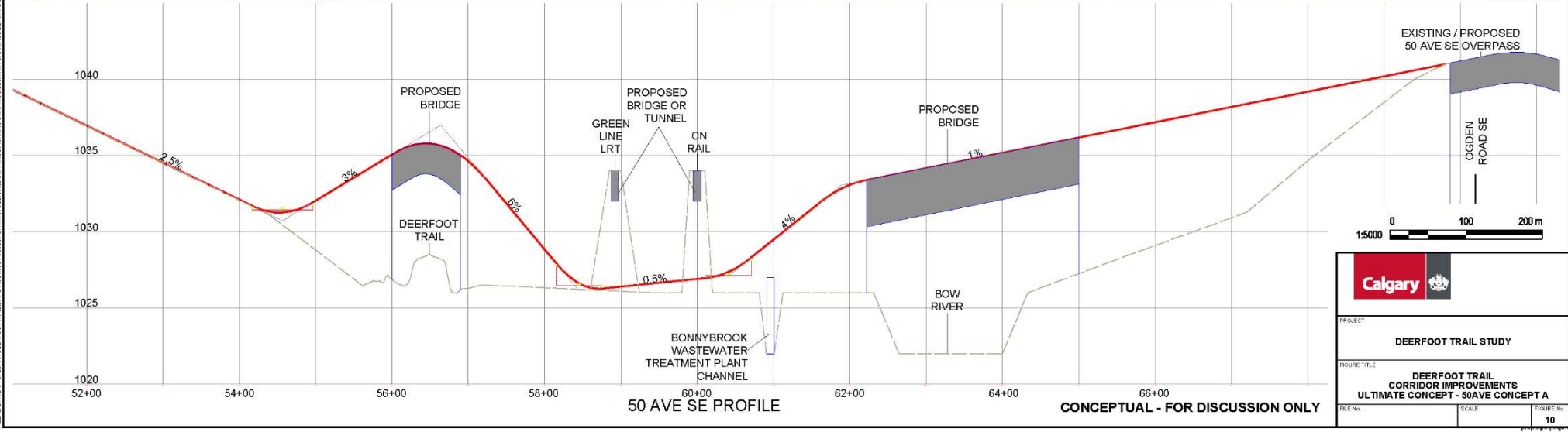
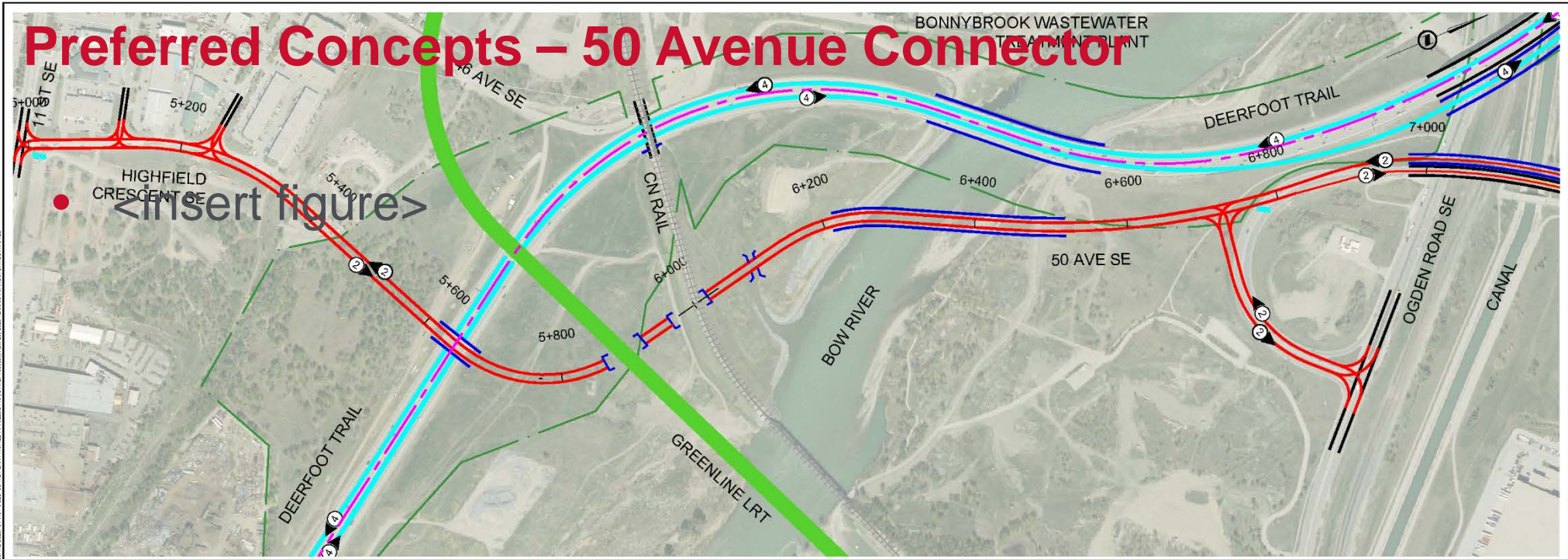


What We Heard / What We Did

WHAT WE HEARD	WHAT WE DID
Glenmore Trail Area	
<ul style="list-style-type: none"> • Access to Heritage Drive from Glenmore and impacts to property owners 	<ul style="list-style-type: none"> • Modified alignments for access to Heritage Drive to provide full access and mitigate traffic operations concerns. Some property impacts remain in order to maintain full access to Heritage Drive.
<ul style="list-style-type: none"> • Blackfoot Trail interchange reconfiguration may impact access to Enmax facility 	<ul style="list-style-type: none"> • Current configuration should allow access to be maintained from remaining / new roads.
Anderson Road / Bottom Trail Focus Area	
<ul style="list-style-type: none"> • Impacts to Maple Ridge golf course 	<ul style="list-style-type: none"> • Shifted alignments to reduce impacts, however, the golf course is still impacted with Option 2 and to a lesser degree in Option 1
<ul style="list-style-type: none"> • Impacts to Sue Higgins Park and planned restoration of wetlands 	<ul style="list-style-type: none"> • Shifted alignments to reduce impacts, however, there remains some impacts to the park in Option 2 and to a lesser degree in Option 1
<ul style="list-style-type: none"> • Additional river crossing at Ivor Strong Bridge 	<ul style="list-style-type: none"> • Additional lanes are required to cross the Bow River in all options. However, the options have been optimized such that only one new bridge is recommended, west of the existing bridge.

Preferred Concepts Memorial Drive to 17 Avenue



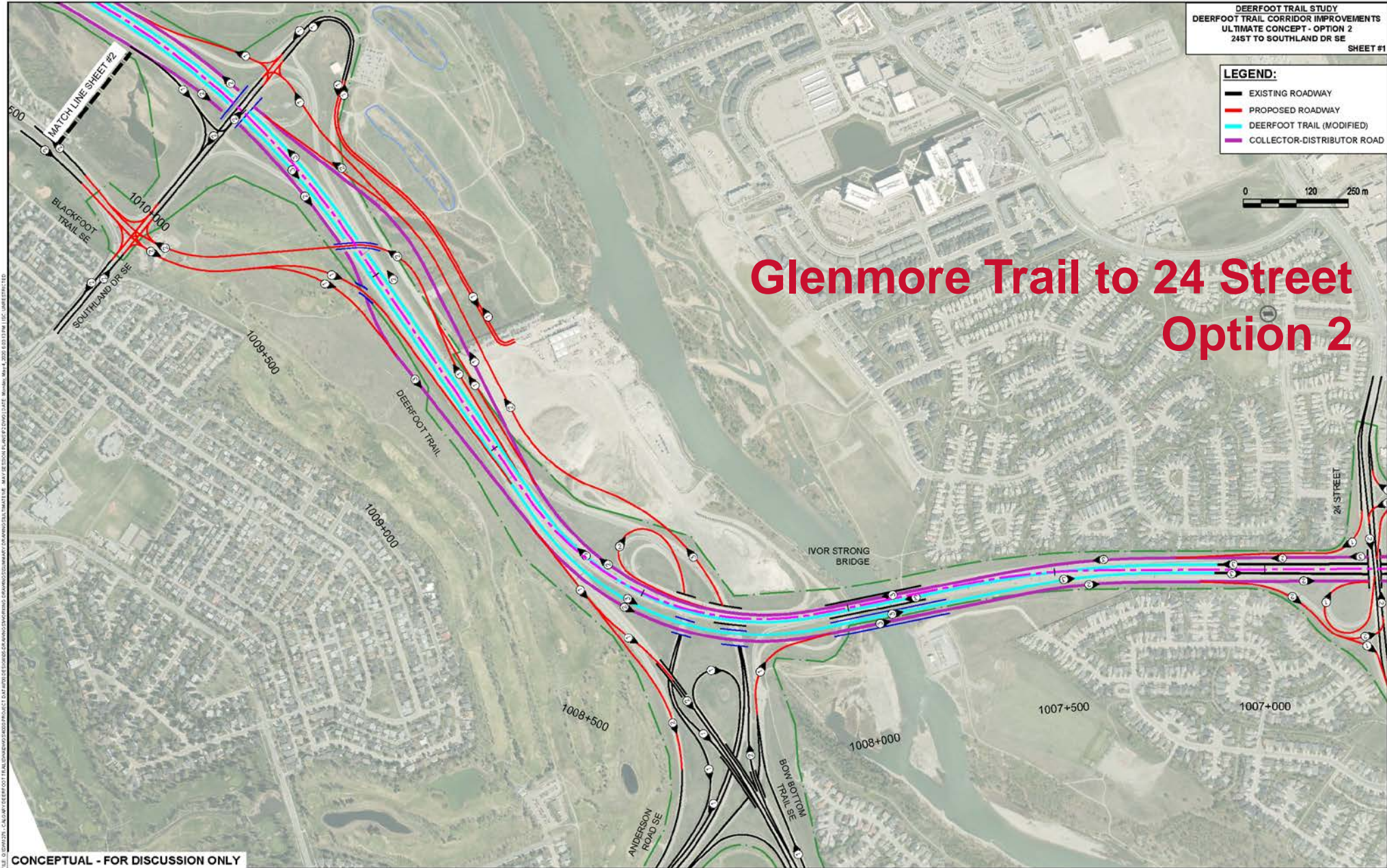


LEGEND:

- EXISTING ROADWAY
- PROPOSED ROADWAY
- DEERFOOT TRAIL (MODIFIED)
- COLLECTOR-DISTRIBUTOR ROAD



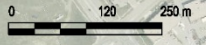
Glenmore Trail to 24 Street Option 2



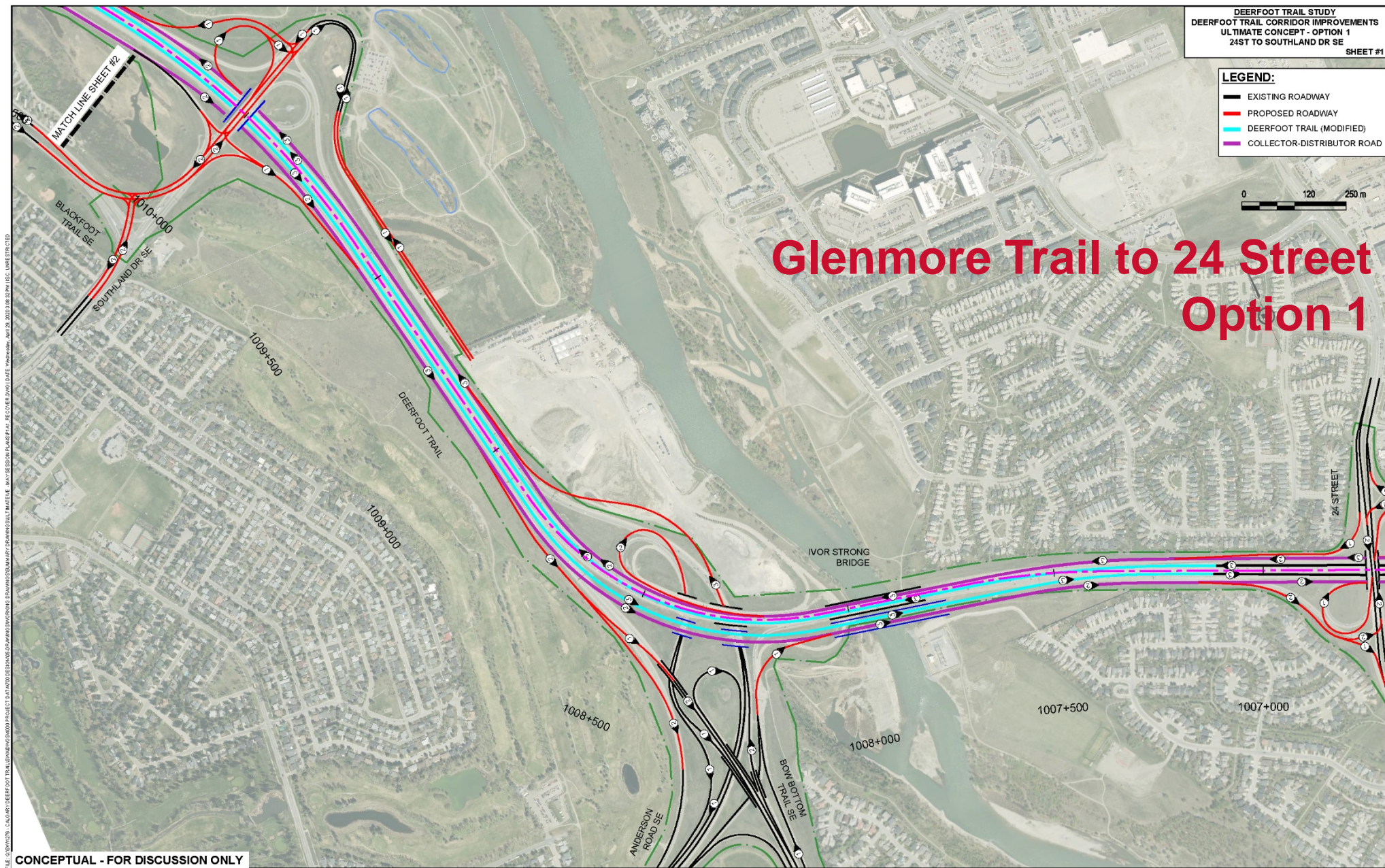
CONCEPTUAL - FOR DISCUSSION ONLY

LEGEND:

- EXISTING ROADWAY
- PROPOSED ROADWAY
- DEERFOOT TRAIL (MODIFIED)
- COLLECTOR-DISTRIBUTOR ROAD

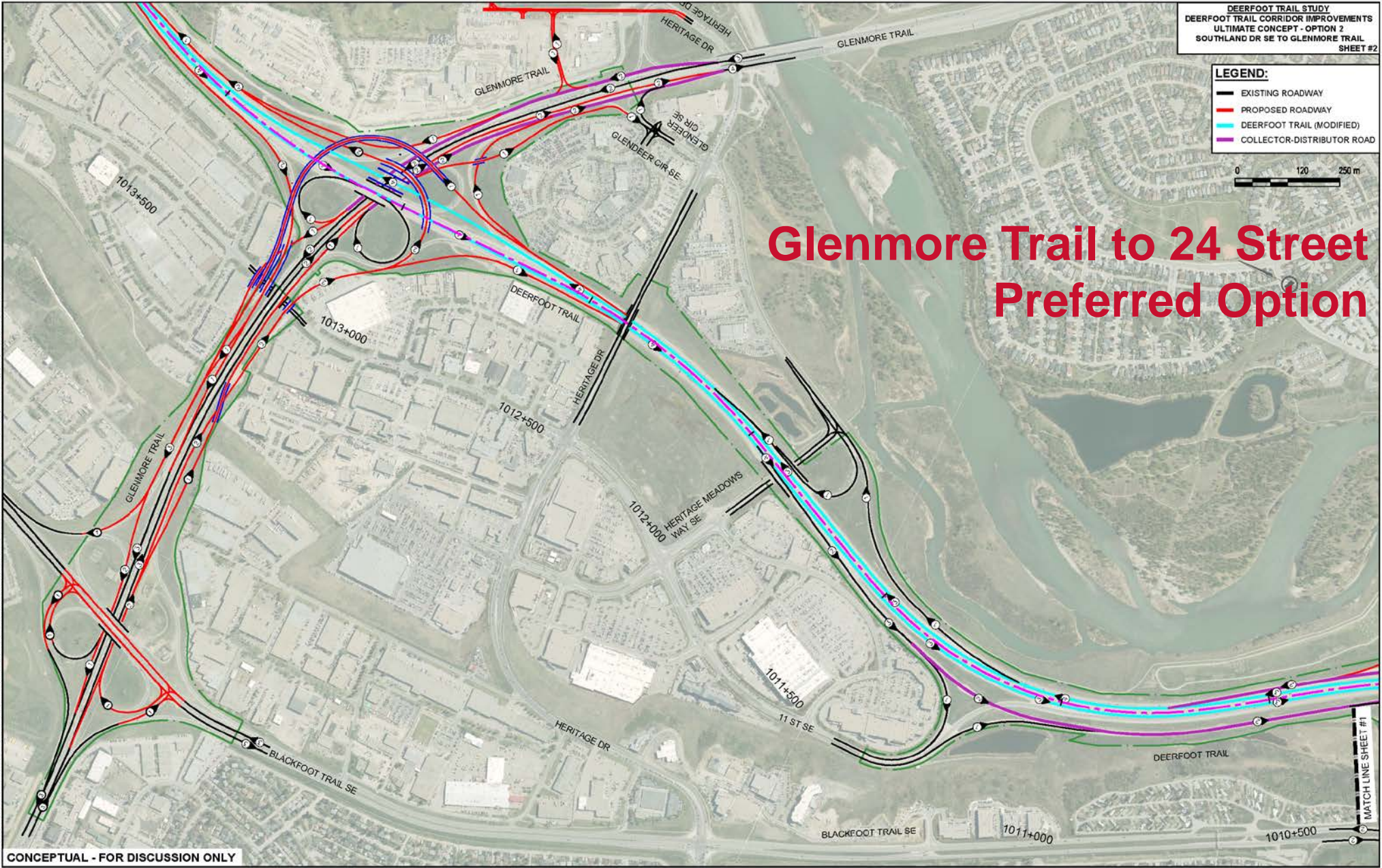


Glenmore Trail to 24 Street Option 1



FILE: C:\GOWETS - CALGARY\DEERFOOT TRAIL STUDY\GLENMORE TO 24 STREET\DRAWINGS\WORKING DRAWINGS\SUMMARY DRAWINGS\ULTIMATE.E - MAX SESSION PLANES.PLT RECOVER.DWG DATE: Wed Jun 12, 2020 10:37 PM 15C UNRESTRICTED

CONCEPTUAL - FOR DISCUSSION ONLY





Option Package Evaluation

- Financial Account
- Customer Service Account
- Socio-Community Account
 - Property Impacts
 - Noise Impacts
 - Visual Impacts
 - Emergency Service Accessibility
- Environmental Account
 - Aquatic
 - Vegetation
 - Wildlife
 - Historical Resources
 - Greenhouse Gas Emissions
 - Criteria Air Contaminants



Option Evaluation Summary - Environmental

Option	Base Case Deerfoot Trail	Option Package 1	Option Package 2	Option Package 3
Aquatic Risk / Complexity Rating:	Neutral ●	Somewhat worse ●	Somewhat worse ●	Somewhat worse ●
Aquatic Considerations	<ul style="list-style-type: none"> Potentially several existing small issues. 	<ul style="list-style-type: none"> More detailed design drawings will be required to determine water crossing types and the footprint for these crossings as well as any roads that impact riparian and/or bank habitat. Site-specific fish and/or fish habitat assessments may be required to determine fish presence and habitat type and quality within the Project. This information may be needed to assist regulatory bodies in making final determinations on permit approvals. 	<ul style="list-style-type: none"> More detailed design drawings will be required to determine water crossing types and the footprint for these crossings as well as any roads that impact riparian and/or bank habitat. Site-specific fish and/or fish habitat assessments may be required to determine fish presence and habitat type and quality within the Project. This information may be needed to assist regulatory bodies in making final determinations on permit approvals. 	<ul style="list-style-type: none"> More detailed design drawings will be required to determine water crossing types and the footprint for these crossings as well as any roads that impact riparian and/or bank habitat. Site-specific fish and/or fish habitat assessments may be required to determine fish presence and habitat type and quality within the Project. This information may be needed to assist regulatory bodies in making final determinations on permit approvals.
Vegetation Risk / Complexity Rating:	Neutral ●	Somewhat worse ●	Somewhat worse ●	Somewhat worse ●
Vegetation Considerations	<ul style="list-style-type: none"> Six City of Calgary natural environment areas, four neighbourhood parks, four regional parks, thirteen special purpose parks, one golf course, and an irrigation canal. 	<ul style="list-style-type: none"> Somewhat worse there will be a loss of 6.0 ha of natural grassland, however, the grassland is likely not high-quality native grassland. Somewhat worse there will be a loss of 11.2 ha of natural environment areas. Somewhat worse there will be a loss of 28.1 ha from City active and special purpose parks. Somewhat worse there will be a loss or temporary disturbance to 133.0 ha of riparian area. Neutral there will be a potential loss of 738 urban trees, although all will be replaced as per the Tree Protection Bylaw. 	<ul style="list-style-type: none"> Somewhat worse there will be a loss of 6.0 ha of natural grassland, however, the grassland is likely not high quality native grassland. Significantly worse there will be a loss of 12.2 ha of natural environment areas. Somewhat worse there will be a loss of 35.8 ha from City active and special purpose parks. Somewhat worse there will be a loss or temporary disturbance to 135.8 ha of riparian area. Neutral there will be a potential loss of 847 urban trees, although all will be replaced as per the Tree Protection Bylaw. 	<ul style="list-style-type: none"> Somewhat worse there will be a loss of 5.7 ha of natural grassland, however, the grassland is likely not high quality native grassland. Somewhat worse there will be a loss of 9.5 ha of natural environment areas. Somewhat worse there will be a loss of 27.1 ha from City active and special purpose parks. Somewhat worse there will be a loss or temporary disturbance to 132.7 ha of riparian area. Neutral there will be a potential loss of 1969 urban trees, although all will be replaced as per the Tree Protection Bylaw.
Wetland Considerations	<ul style="list-style-type: none"> Neutral 	<ul style="list-style-type: none"> Somewhat worse there will be direct impacts to thirteen wetlands, with a combined area of 2.4 ha. 	<ul style="list-style-type: none"> Somewhat worse there will be direct impacts to thirteen wetlands, with a combined area of 2.8 ha. 	<ul style="list-style-type: none"> Somewhat worse there will be direct impacts to thirteen wetlands, with a combined area of 2.4 ha.



Option Evaluation Summary - Environmental

Option	Base Case Deerfoot Trail	Option Package 1	Option Package 2	Option Package 3
Wildlife Risk / Complexity Rating:	Neutral ●	Somewhat worse ●	Significantly worse ●	Significantly worse ●
Wildlife Considerations	<ul style="list-style-type: none"> Natural and modified habitat, often in riparian zones, exists in all Segments except Segment 4. This habitat supports wildlife movement and a variety of wildlife species with the potential for some to be provincially or federally listed. One Environmentally Significant Areas overlaps with Segments 1 and 3. 	<ul style="list-style-type: none"> Somewhat worse. Impacts total 198.6 ha of wildlife habitat. 	<ul style="list-style-type: none"> Significantly worse impacts total 209.9 ha of wildlife habitat loss. Highest impact to Maple Ridge Golf Course. 	<ul style="list-style-type: none"> Significantly worse. Impacts total 199.2 ha of wildlife habitat loss. Highest impact to Environmentally Significant Area.
Historical Resources Risk / Complexity Rating:	Neutral ●	Significantly worse ●	Significantly worse ●	Significantly worse ●
Historic Resources Considerations	<ul style="list-style-type: none"> There are 8 significant historic resource sites overlapping the existing Deerfoot Trail corridor. There is considered to be a low likelihood of additional impacts to significant historic resources as well as unknown historic resources; however, chance find procedures should still be developed prior to, and employed during, works or maintenance along the existing Deerfoot Trail. 	<ul style="list-style-type: none"> There are 11 significant historic resource sites overlapping or within 100 metres of the route. While some of the significant sites may be avoided, there is considered to be a high likelihood of impacts to several of these sites as well as potential for previously unrecorded sites to be impacted. 	<ul style="list-style-type: none"> There are 11 significant historic resource sites overlapping or within 100 metres of the route. While some of the significant sites may be avoided, there is considered to be a high likelihood of impacts to several of these sites as well as potential for previously unrecorded sites to be impacted. 	<ul style="list-style-type: none"> There are 9 significant historic resource sites overlapping or within 100 metres of the route. While some of the significant sites may be avoided, there is considered to be a high likelihood of impacts to several of these sites as well as potential for previously unrecorded sites to be impacted.

QUESTIONS