

Shaganappi Trail Corridor Study Open House

Welcome

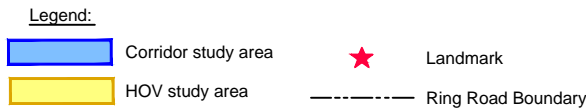
Review of Preliminary Corridor Concepts

Purpose

- Align future corridor plans for Shaganappi Trail with the current Calgary Transportation Plan (CTP) and land use plans.
 - CTP reclassified the section south of Crowchild Trail as an Arterial Street. North of Crowchild remains a Skeletal Road (Expressway).
- Develop a long-term strategy for Shaganappi Trail that accommodates all modes of transportation.
 - CTP identifies Shaganappi Trail as part of the Primary High-Occupancy Vehicle (HOV), Transit, and Cycling networks.

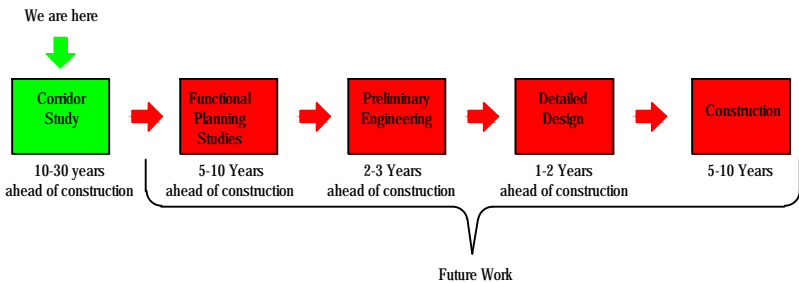
Study consists of two parts:

- Corridor Study (Crowchild Trail to Bowness Road)
 - Develop a plan to encourage walking and cycling.
 - Develop a plan to enhance transit.
 - Confirm right-of-way for future corridor.
 - Support land use goals.
- HOV implementation study (Stoney Trail to Bowness Road)
 - Determine possible HOV (could include transit, carpooling, etc.).
 - Outline connections to Primary Transit and HOV networks.
 - Develop a long-term HOV implementation strategy.

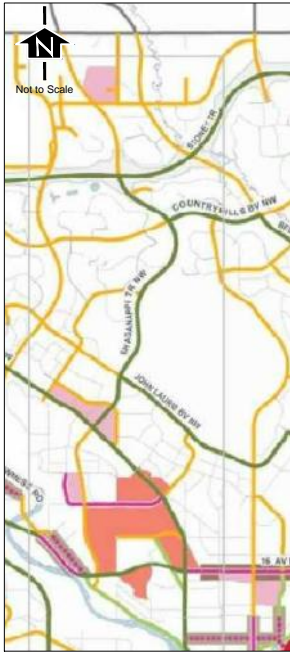


PROJECT ENGAGEMENT SCHEDULE	
Phase 1 - Document and Assess Existing Conditions	
Stakeholder Meeting	July 24, 2012
Phase 2 - Development and Analysis of Corridor Alternatives	
Stakeholder Meeting	October 16, 2012
Public Open House #1	November 6, 2012
Phase 3 - Evaluation and Selection of Preferred Concept *	
Stakeholder Meeting	Winter 2013
Public Open House #2	Spring 2013
Phase 4 - Finalize Recommendation	
Study Reporting and Completion	May 2013

← We are here



Street Network



- Skeletal Road
- Arterial Street
- Urban Boulevard
- Neighbourhood Boulevard

What is a Skeletal Road?

- High speed, high volume, facilitates long distances travel.
- Often have interchanges but can have traffic signals.
- Priority for transit, goods movement, and automobiles.
- E.g. Crowchild Trail, Glenmore Trail

What is an Arterial Street?

- Connects multiple communities and major destinations.
- At-grade intersections only. No interchanges.
- Priority for cycling, transit, goods movement, and automobiles.
- E.g. Nose Hill Drive

■ Community Activity Centre

Primary Transit



- Primary Transit Network
- LRT Network
- Primary Transit Hub

Primary Transit Network

- Provides a network of transit service with LRT, express bus (BRT) and other bus routes.
- Provides high-frequency transit services (10 minutes or less, most of the day, 7 days a week).

Primary Transit Hub

- Accommodates connections to the transit bus and/or LRT between transportation modes (HOV, LRT, automobiles, pedestrians, cyclists, etc.).
- May include Park-n-Ride lots and bicycle lockers.

■ Major Activity Centre

Primary HOV



— HOV Network

Primary HOV Network

- Reduces reliance on single-occupancy (driver-only) vehicles.
- Can increase people-moving capacity of existing road infrastructure.
- HOV may include transit vehicles, vehicles with passengers, taxis, etc.

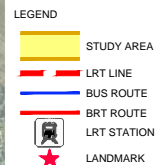
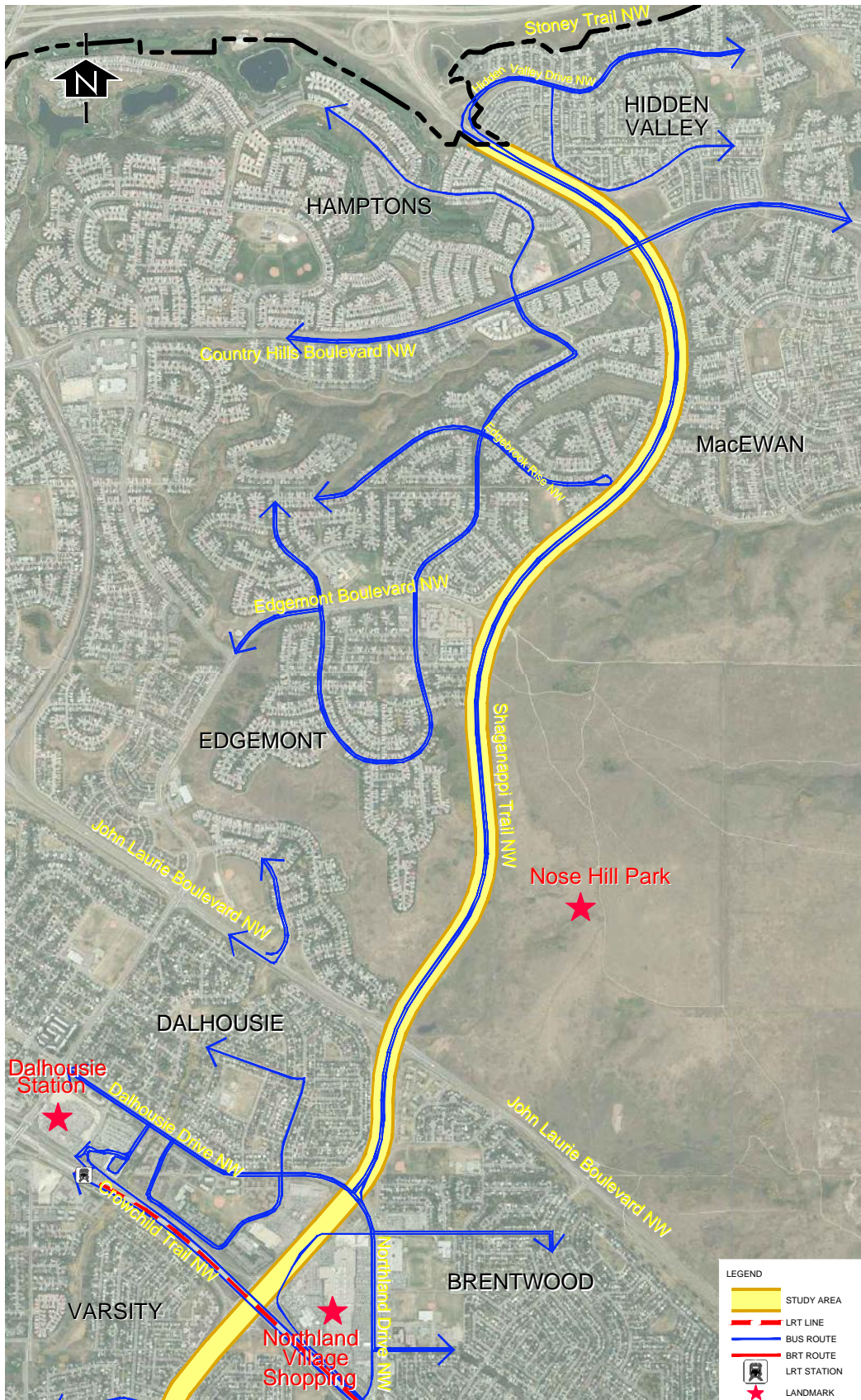
Primary Cycling

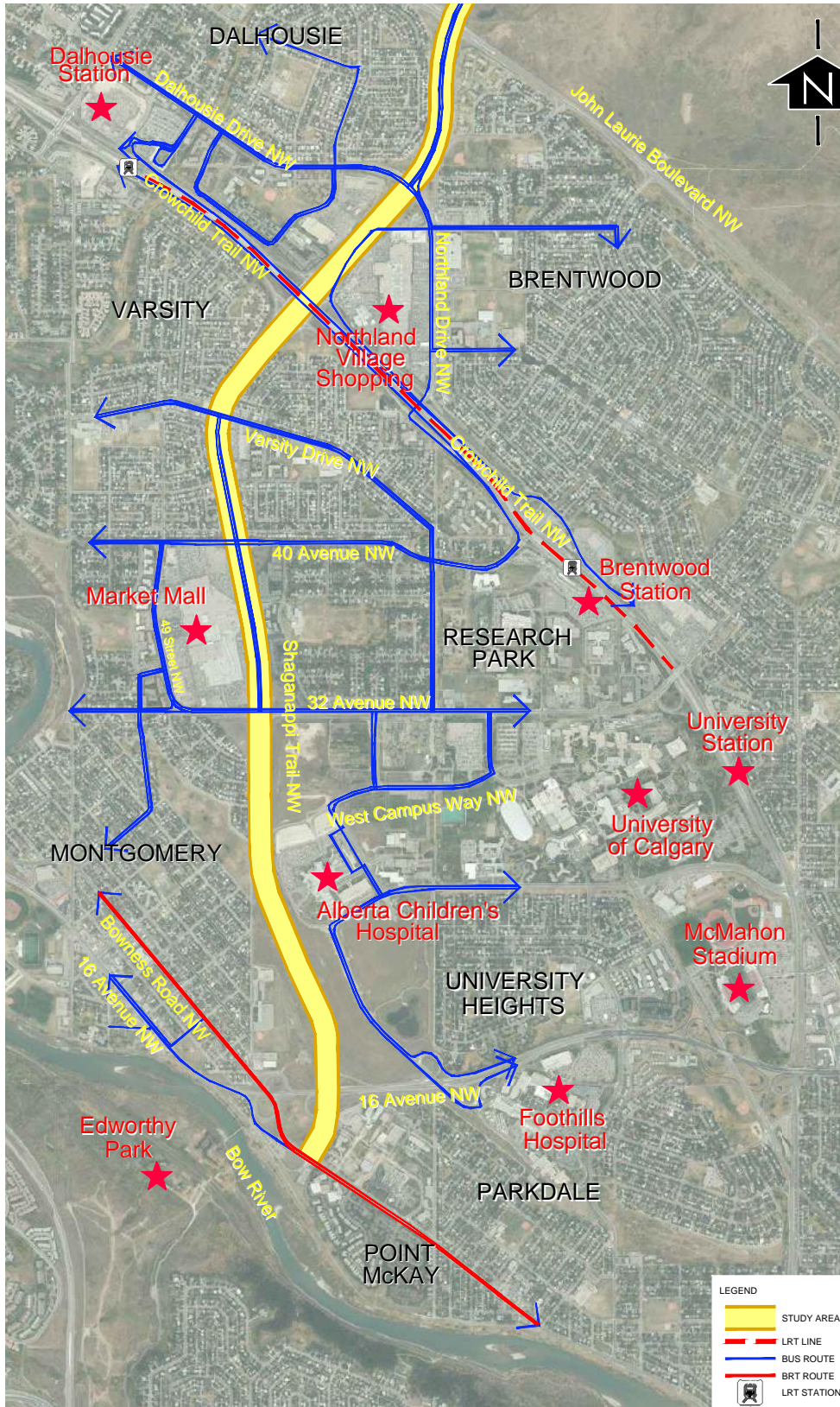


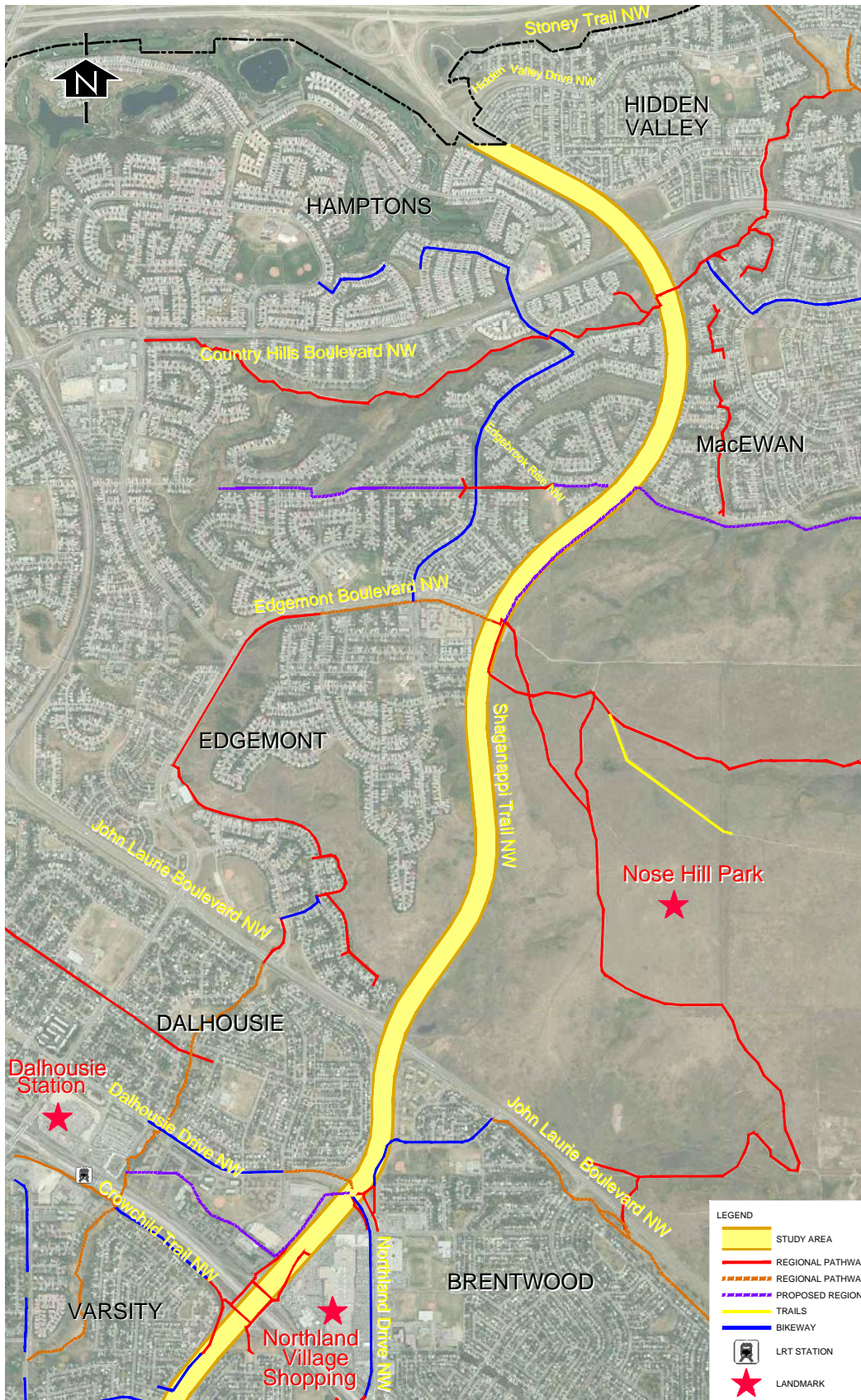
— Primary Cycling Route
— Regional Multi-Use Pathway

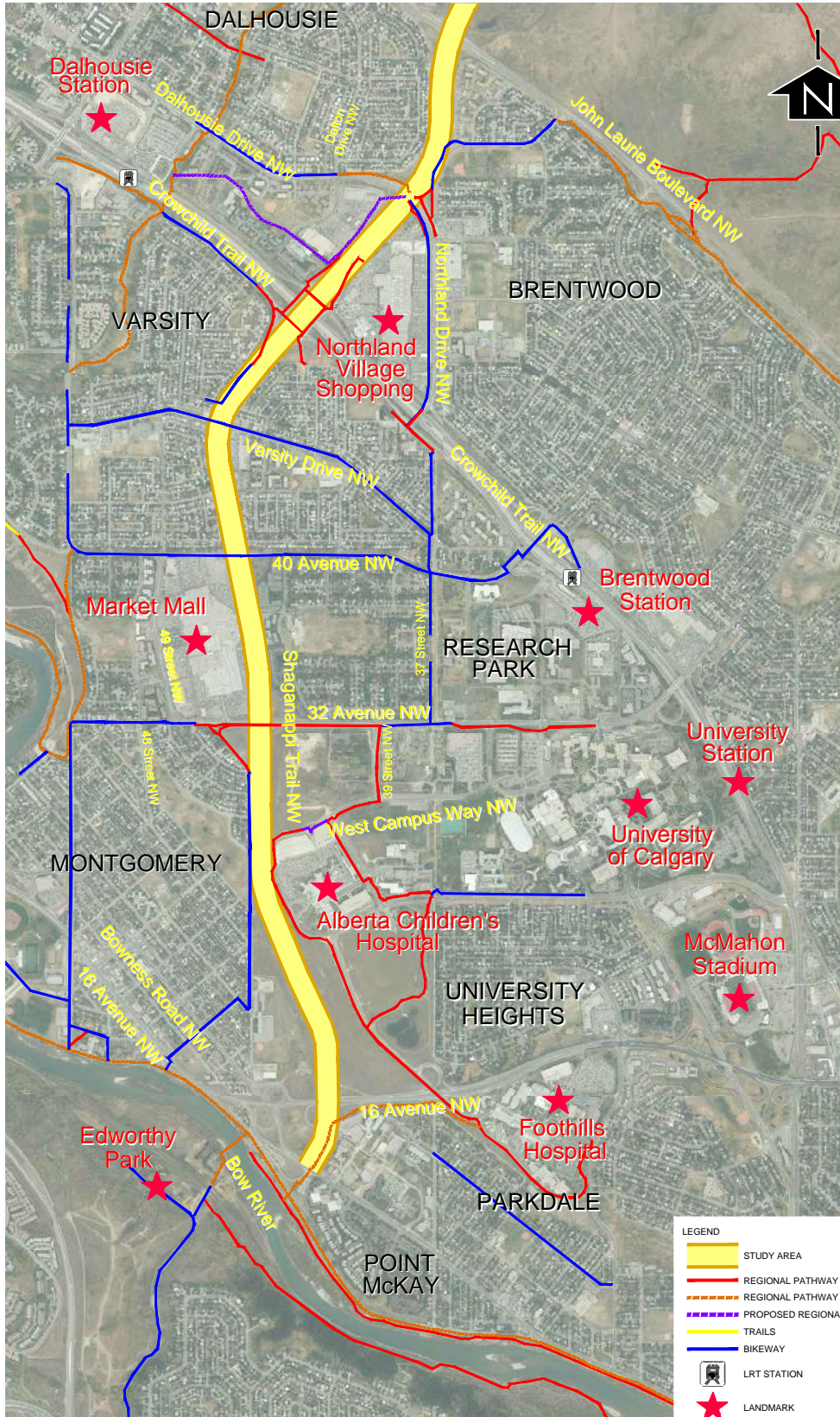
Primary Cycling Network

- Connects major activity centres, corridors and institutions.
- Can be used for commuting and recreation.
- Kept clear of snow, ice and debris.
- Extends existing pathway systems.









Design Considerations

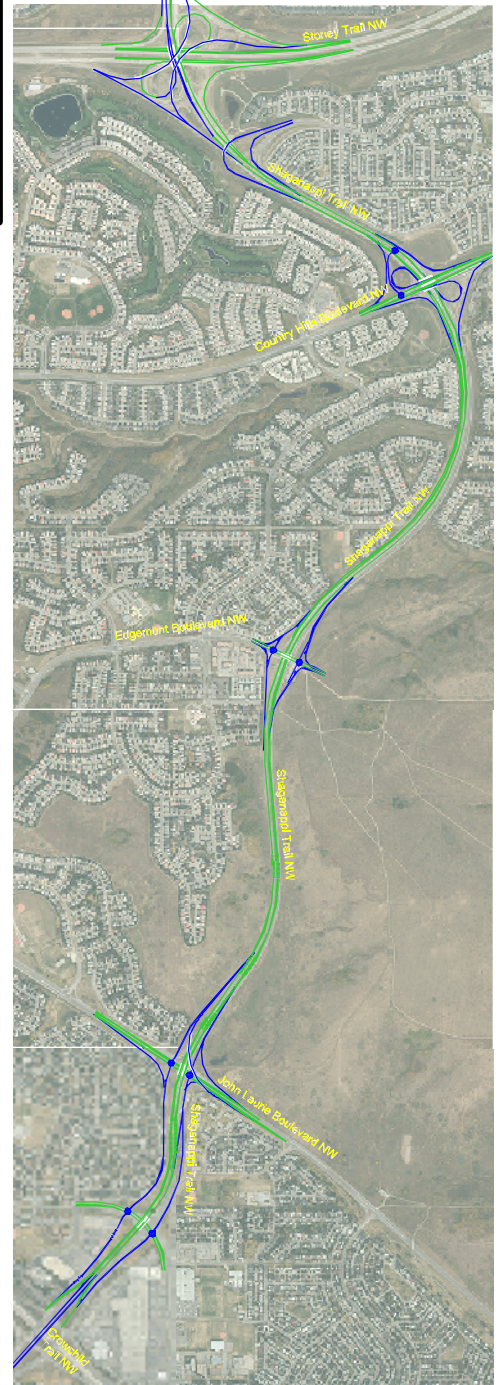
- Shaganappi Trail will be widened to six lanes as per previous plans.
- Interchanges to be constructed in this section of the corridor.

Corridor Concept

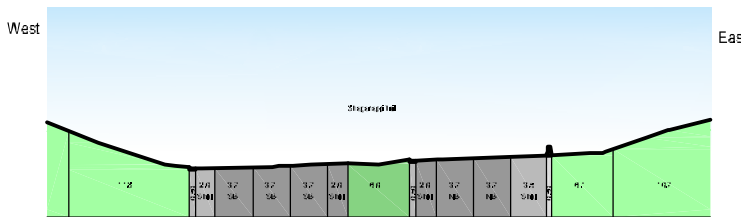
- Transit operations preferred on the outside lane or shoulder (similar to Crowchild Trail south of Bow Trail).
- May incorporate transit priority at existing traffic signals.
- May include "Queue Jump" lanes to allow buses to proceed ahead of other traffic.



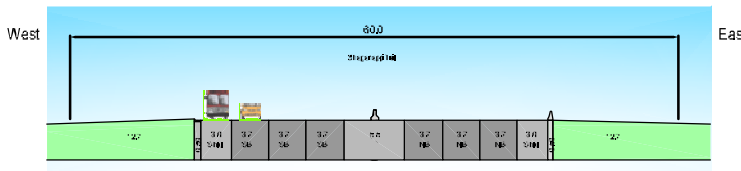
Keyplan



Sample Existing Section



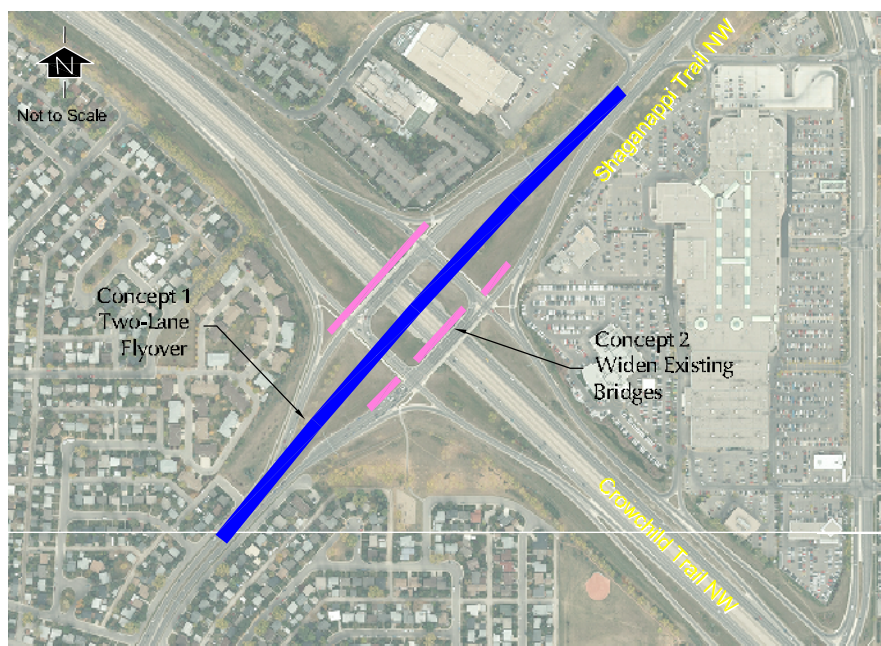
Design Section



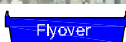
Legend			
	Lane		Shoulder
	Bank/land		Barrier
	Curb		Median

Design Considerations

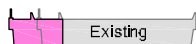
- Relatively new interchange built in late 1990s.
- Current traffic operations meet City guidelines.
- Originally planned to have a six-lane flyover for north/south traffic on Shaganappi Trail, bypassing signals on the interchange.
- Reclassification of Shaganappi Trail to Arterial Street no longer warrants a six-lane flyover.
- Evaluation of concepts will consider cost/benefit of interchange modifications.



West



East



Section View - For Illustration Purposes Only

Concept 1 - Two-Lane Flyover

- A two-lane flyover can provide “express” connections for north/south traffic.
- Flyover could be limited to HOV, reducing travel time.

Concept 2 - Widen Existing Bridges

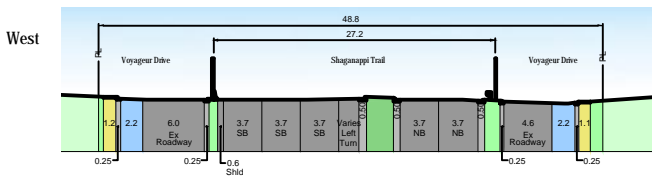
- Enables three through lanes in each direction on interchange.
- Consistent with plan for six-lanes on Shaganappi Trail.
- Ramps to interchange would require modifications to accommodate additional lanes.

Concept 1 - Full Widening on Both Sides

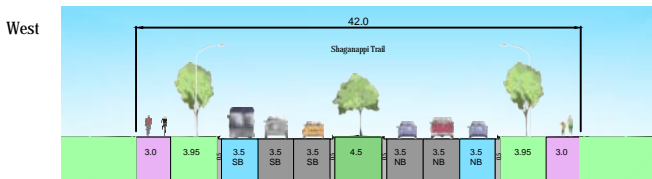
- Widens Shaganappi Trail to six lanes (two travel lanes and one HOV lane in each direction).
- Enhances connections and accessibility with pedestrian facility with pathways/sidewalks on both sides.
- Provides boulevard to separate pedestrian facilities from road.
- Requires closure of residential frontage roads (Voyageur Drive NW).
- May require property acquisition on both sides.

From preliminary evaluation, the concept will not be considered further in this study.

Sample Existing Section



Design Section



Legend			

CRITERIA	EVALUATION
Overall Traffic Operations	Fair
Possible Number of Affected Residential Units	47
Affects Commercial Businesses?	Yes
Lane Widths	City Arterial Standard
Pedestrian Accommodation/Safety	Boulevard Separation

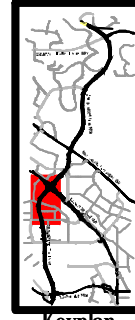


Keyplan

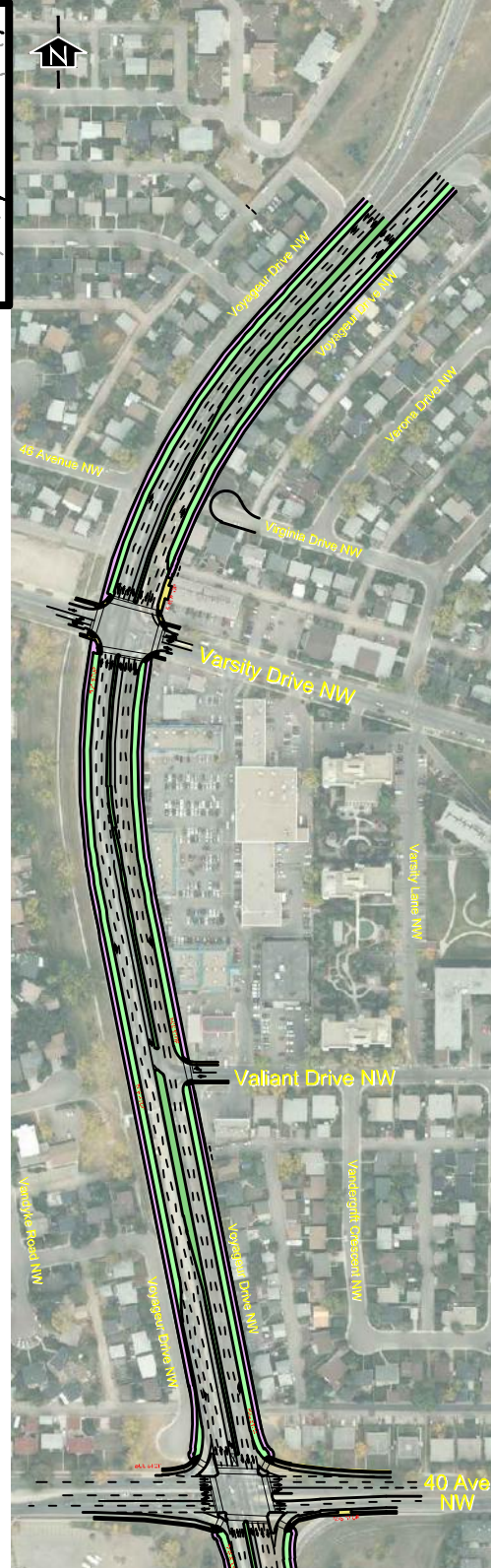


Concept 2 - Widen to East Side Only

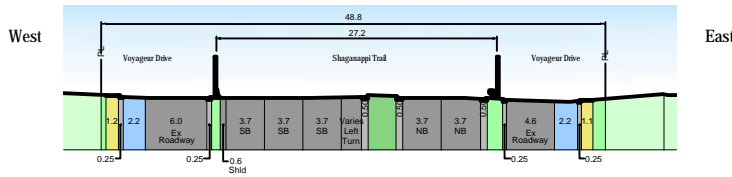
- Widens Shaganappi Trail to six lanes (two travel lanes and one HOV lane in each direction).
- Enhances connections and accessibility with pedestrian facilities with pathways/sidewalks on both sides.
- Provides boulevard to separate pedestrian facilities from road.
- Requires property acquisition along Voyageur Drive east of Shaganappi Trail and in Varsity Plaza and Shaganappi Village.



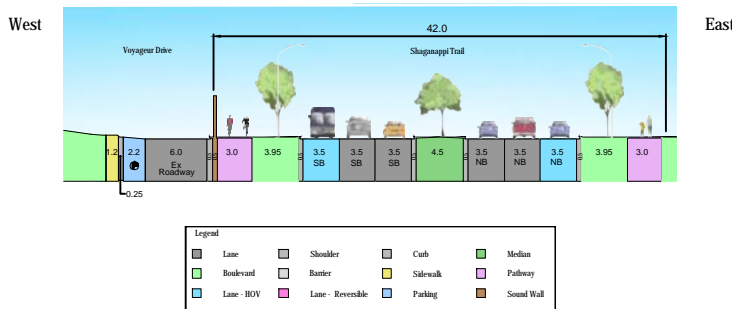
Keyplan



Sample Existing Section



Design Section



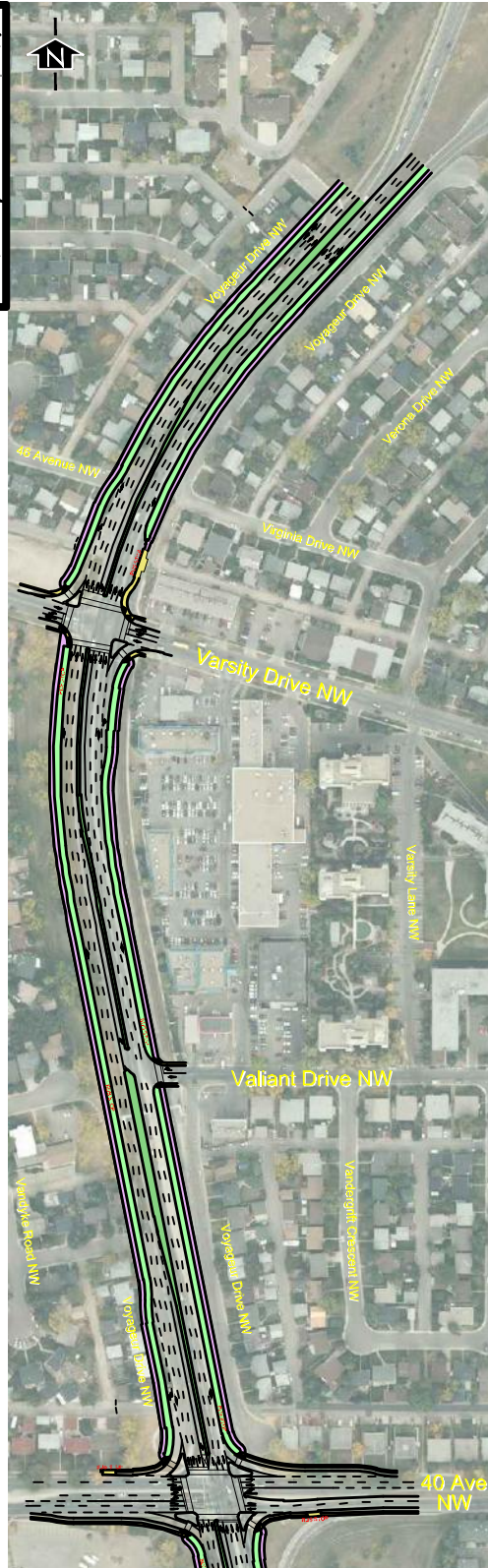
CRITERIA	EVALUATION
Overall Traffic Operations	Fair
Possible Number of Affected Residential Units	25
Affects Commercial Businesses?	Yes
Lane Widths	City Arterial Standard
Pedestrian Accommodation/Safety	Boulevard Separation

Concept 3 - Widen to West Side Only

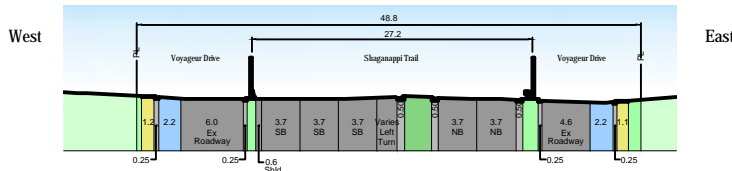
- Widens Shaganappi Trail to six lanes (two travel lanes and one HOV lane in each direction).
- Enhances connections and accessibility with pedestrian facilities with pathways/sidewalks on both sides.
- Provides boulevard to separate pedestrian facilities from road.
- Requires property acquisition along Voyager Drive west of Shaganappi Trail.



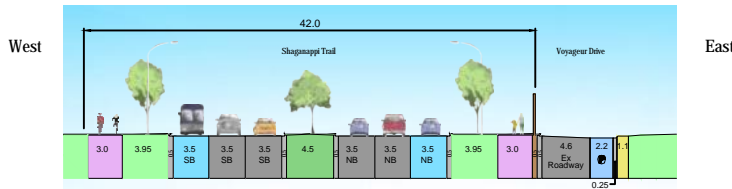
Keyplan



Sample Existing Section



Design Section



Legend			
	Lane		Shoulder
	Boulevard		Barrier
	Lane - HOV		Sidewalk
	Lane - Reversible		Parking
	Median		Sound Wall

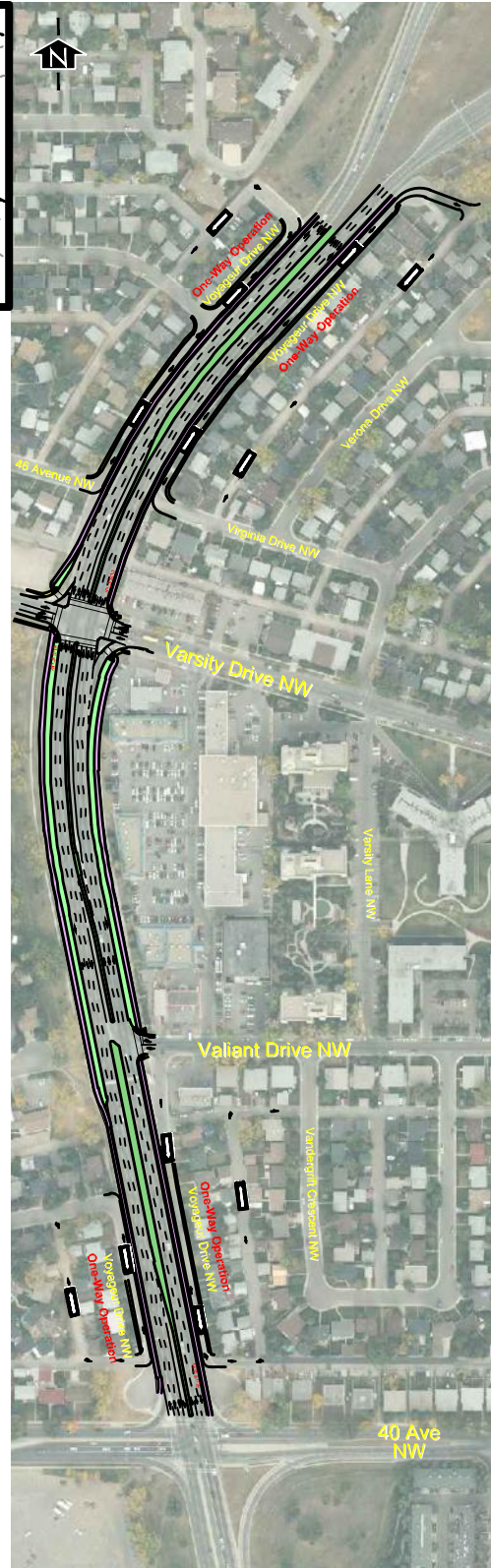
CRITERIA	EVALUATION
Overall Traffic Operations	Fair
Possible Number of Affected Residential Units	22
Affects Commercial Businesses?	No
Lane Widths	City Arterial Standard
Pedestrian Accommodation/Safety	Boulevard Separation

Concept 4 - Widen to Both Sides with Constrained Section

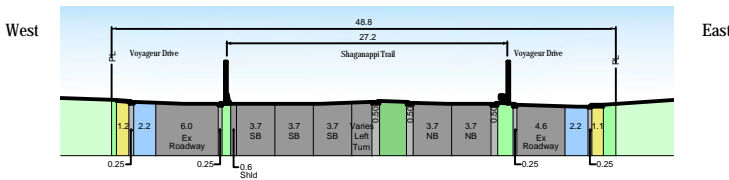
- Widens Shaganappi Trail to six lanes but with narrower lane widths (two travel lanes and one HOV lane in each direction).
- Enhances connections and accessibility with pedestrian facilities with pathways/sidewalks on both sides.
- Concrete barriers used to separate pedestrian facilities from road.
- Converts Voyageur Drive on both sides of Shaganappi Trail to one-way streets with on-street parallel parking and would require travel through rear lanes.
- Relocates existing sidewalks on Voyageur Drive onto existing residential yards by one to four metres.



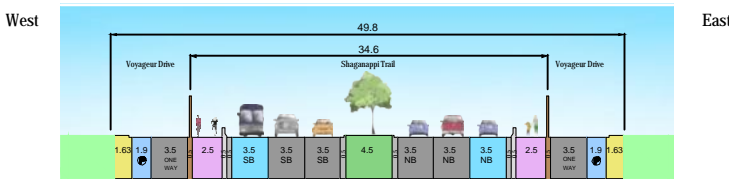
Keyplan



Sample Existing Section



Design Section



Legend	
	Lane
	Shoulder
	Curb
	Median
	Boulevard
	Barrier
	Sidewalk
	Pathway
	Lane - HOV
	Lane - Reversible
	Parking
	Sound Wall

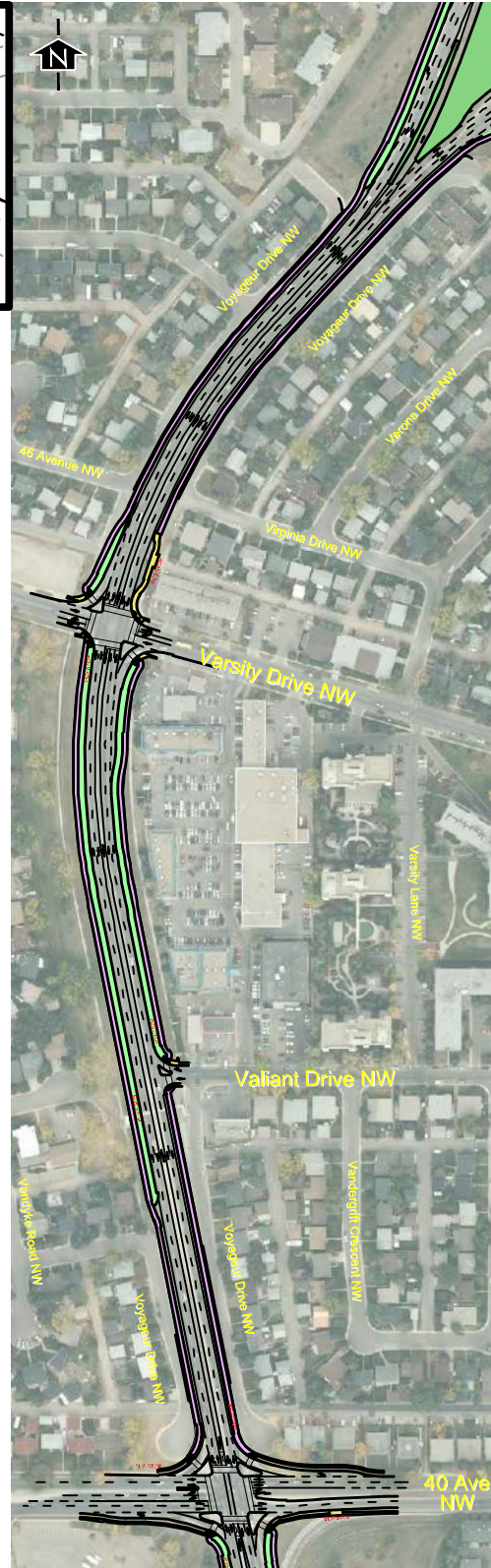
CRITERIA	EVALUATION
Overall Traffic Operations	Fair
Possible Number of Affected Residential Units	36 1 to 4m Front Yard Reductions
Affects Commercial Businesses?	No
Lane Widths	Narrower Width
Pedestrian Accommodation/Safety	Barrier Separation

Concept 5 - Reversible Centre Lane

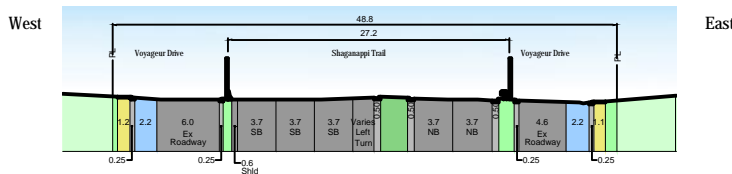
- Converts Shaganappi Trail to five lanes with narrower lane widths. No widening of roadway to accommodate additional lane as Shaganappi Trail stays within the space between existing soundwalls.
- Provides reversible centre lane during morning and afternoon peak periods with no left turn access to Varsity Drive and 40 Avenue.
- Reroutes access to Varsity to other roads (e.g. 53 Street, 32 Avenue) when left-turn restrictions are in effect.
- Enhances connections and accessibility with pedestrian and cycling facilities with pathways/sidewalks on both sides.
- Concrete barriers used to separate pedestrian facilities from road.



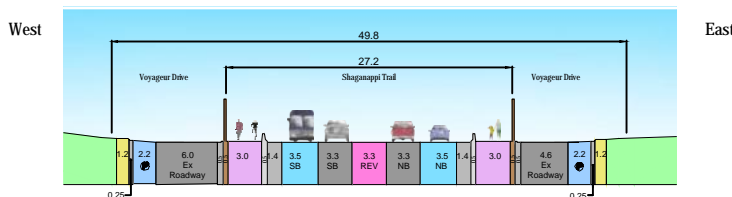
Keyplan



Sample Existing Section



Design Section



Legend			
[Grey Box]	Lane	[Grey Box]	Shoulder
[Green Box]	Median	[Grey Box]	Curb
[Blue Box]	Ex Roadway	[Grey Box]	Barrier
[Light Blue Box]	Lane - BOV	[Yellow Box]	Sidewalk
[Pink Box]	Lane - Reversible	[Purple Box]	Pathway
[Light Blue Box]	Pathing	[Brown Box]	Sound Wall

CRITERIA	EVALUATION
Overall Traffic Operations	Fair, but no left turns from Shaganappi Trail during peak periods
Possible Number of Affected Residential Units	None
Affects Commercial Businesses?	No
Lane Width	Narrower Width
Pedestrian Accommodation/Safety	Barrier Separation

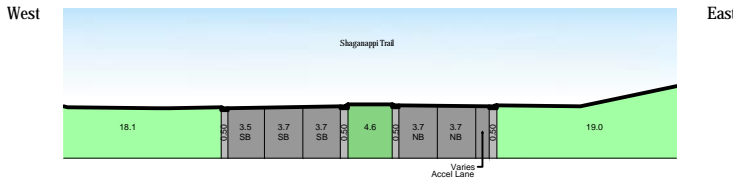
Design Considerations

- Shaganappi Trail will be widened to six lanes (two travel lanes and one HOV lane in each direction).
- Reclassification as Arterial Street no longer warrants interchanges at 40 Avenue or 32 Avenue.
- Right turns at the 40 Avenue and 32 Avenue intersections to be modified to meet typical arterial intersection standards (i.e. slower speed).
- New bus stops at Market Mall.
- West Campus planned as a major Transit Hub and urban development area.
- New intersection under review at West Campus Way to improve pedestrian and transit access to the West Campus Area and Alberta Children's Hospital.

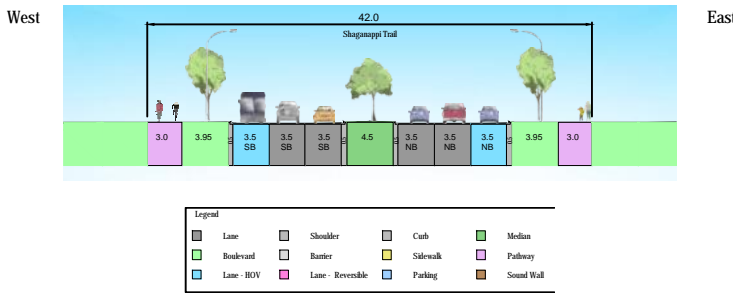
Corridor Concept

- Accommodates pedestrian and cycling facilities within existing right-of-way.
- Makes available surplus lands around 40 Avenue and 32 Avenue for other purposes (e.g. park space, urban development, etc.).

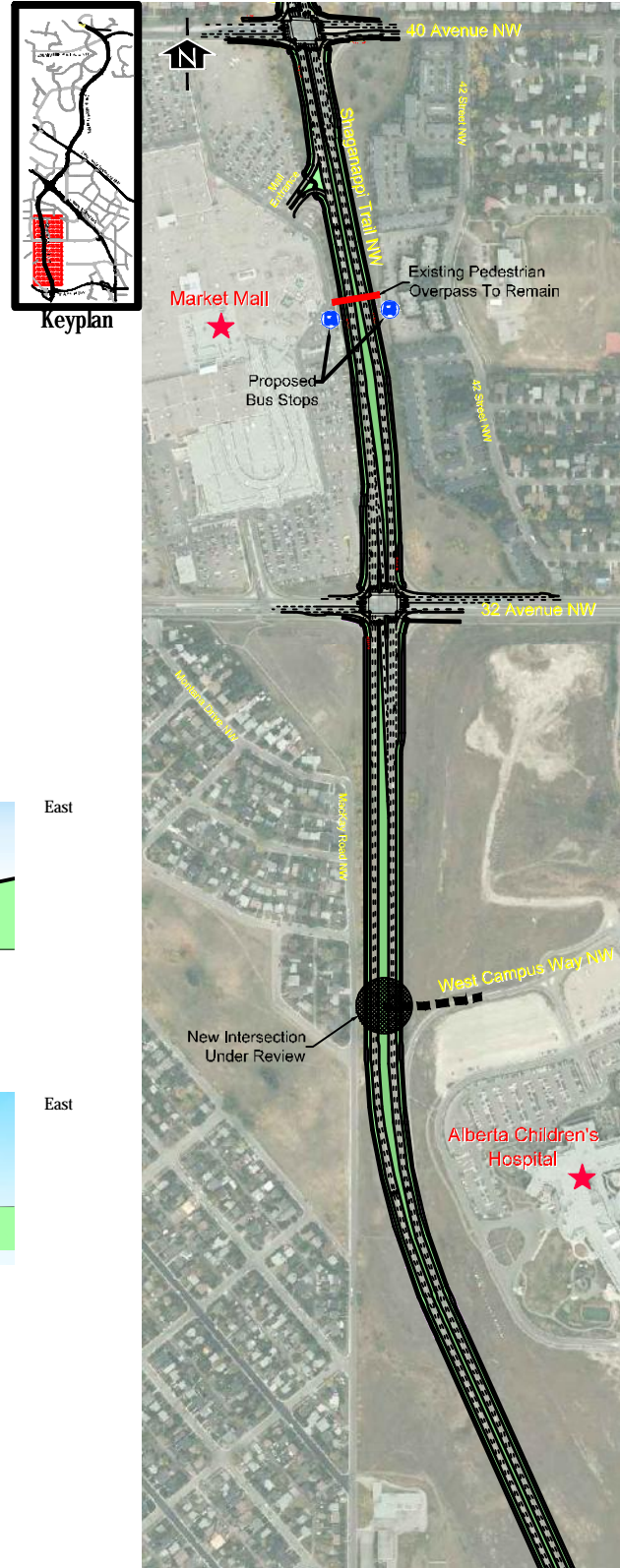
Sample Existing Section



Design Section



CRITERIA	EVALUATION
Affects Commercial Businesses?	Revised Access for Lower Speed
Lane Widths	Meets City Standards
Pedestrian Accommodation/Safety	Boulevard Separation



Current Challenges

- Traffic from five intersecting roads collect at two partial interchanges (Bowness Road west and Shaganappi Trail).
- Significant congestion at Bowness Road and Shaganappi Trail intersection during peak periods.
- Lack of pedestrian and cyclist connections near interchange.
- Abrupt entrance and exit ramps onto 16 Avenue.

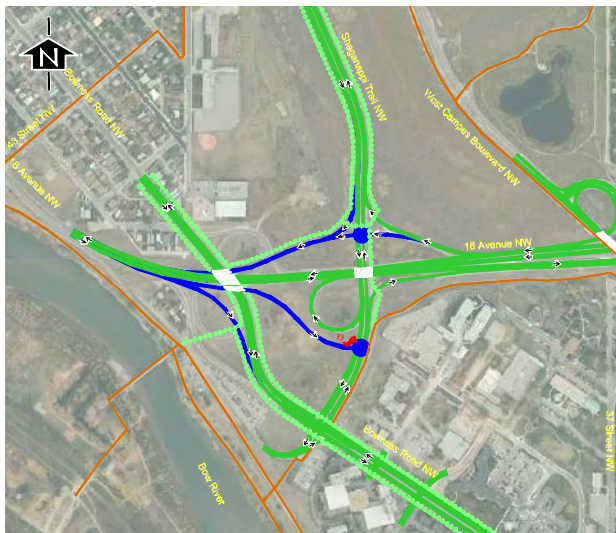
Design Considerations

- Maintain directness of transit routes on Bowness Road.
- Accommodate pedestrian and cyclist connections.
- Opportunities for future urban development.
- Improve mobility for all modes of transportation.



Keyplan





Concept 1A

- Re-uses most of the existing roads.
- Provides all movements through a single interchange.
- Bowness Road would underpass 16 Avenue and would not have direct connections to 16 Avenue.
- Bridge for 16 Avenue over Shaganappi Trail would need to be widened.

Evaluation against design considerations:

- No direct connection to Bowness Road from 16 Avenue.
- Maintains existing transit services.
- New 16 Avenue ramp reduces traffic at Bowness Road / Shaganappi Trail intersection.
- Minimizes land impacts, ramps may reduce urban development.
- Requires new bridge structures and modification to existing 16 Avenue bridge over Shaganappi Trail.
- Pedestrians and cyclists are accommodated through the intersections.



Concept 1B

- Similar to Concept 1A, with some variations.
- Considers a roundabout at Bowness Road / Shaganappi Trail.
- Revises Bowness Road connection to tie west of the roundabout.
- Removes two ramps at the 16 Avenue interchange - access from 16 Avenue East would only be provided to Shaganappi Trail north.

Evaluation against design considerations:

- Not all turning movements provided at interchange.
- Transit services maintained with adjustments.
- Within existing interchange footprint, could provide accesses for potential urban development.
- Pedestrians and cyclists are accommodated at the intersections.
- Reduced turning movements may divert traffic.
- Revised Bowness Road connection will mitigate weaving.



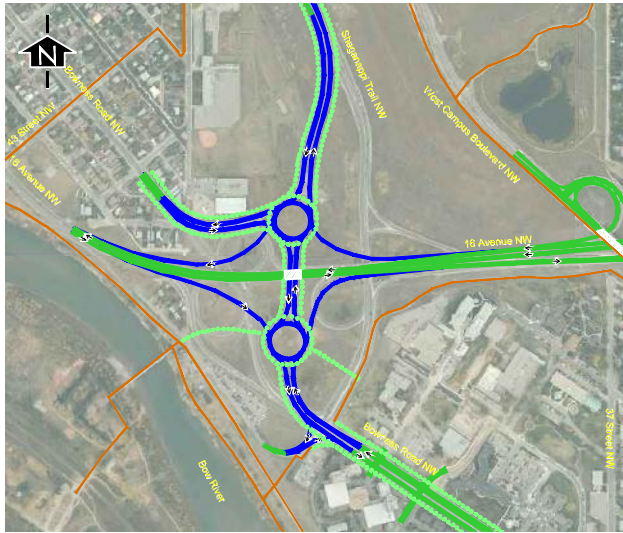
Concept 1C

- Similar to Concept 1B.
- Adds a "loop" ramp for access from northbound Shaganappi Trail to westbound 16 Avenue.
- No traffic lights on Shaganappi Trail.

Evaluation against design considerations:

- Not all turning movements provided at interchange.
- No additional intersections on Shaganappi Trail.
- Transit services maintained with adjustments.
- Within existing interchange footprint, could provide accesses for potential urban development.
- Pedestrians and cyclists to be routed away from the loop ramps for safety - long walkaround.

— Existing Road — Existing Pathway and Bike Lanes
— Proposed Road ●●●● Proposed Pathway

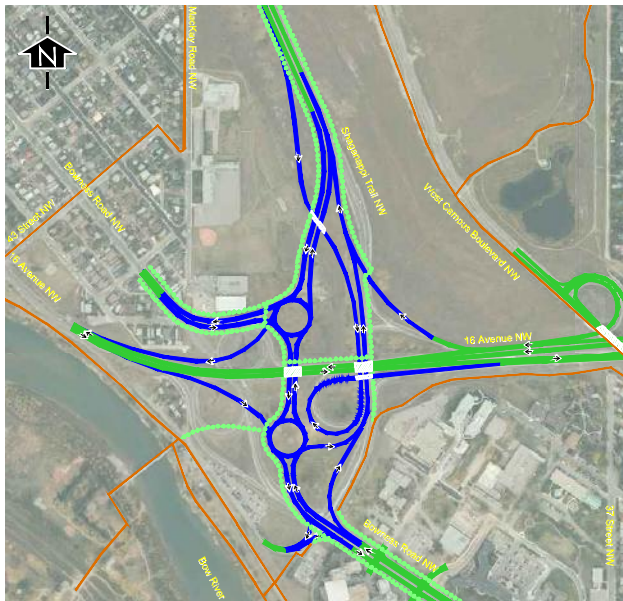


Concept 2A

- Provides all movements through a single interchange.
- Re-aligns Shaganappi Trail to the west and increases weaving distance on 16 Avenue.
- New bridge structures required on 16 Avenue over Shaganappi Trail.
- Existing bridges would be removed.
- Convert Bowness Road / Edworthy Park intersection to right-in/right-out.

Evaluation against design considerations:

- All turning movements provided.
- Longer weaving distance on 16 Avenue.
- Transit services maintained through roundabouts.
- Roundabouts may provide access for potential urban development.
- Pedestrians and cyclists are accommodated through the intersections.






Concept 2B

- Similar to Concept 2A, with some variations.
- Direct ramps provided for Shaganappi Trail north/south.
- Free-flow ramps divert traffic away from the roundabouts.
- No direct connection from east 16 Avenue to Shaganappi Trail south or westbound Bowness Road.
- Existing 16 Avenue bridge over Shaganappi Trail maintained with enhanced pedestrian facility.

Evaluation against design considerations:

- Not all turning movements provided at interchange.
- Increased weaving distance on 16 Avenue.
- Transit services maintained through roundabouts.
- Flexible design - not all ramps required on opening day and could be reserved for HOV.
- Pedestrians and cyclists are accommodated through the intersections.

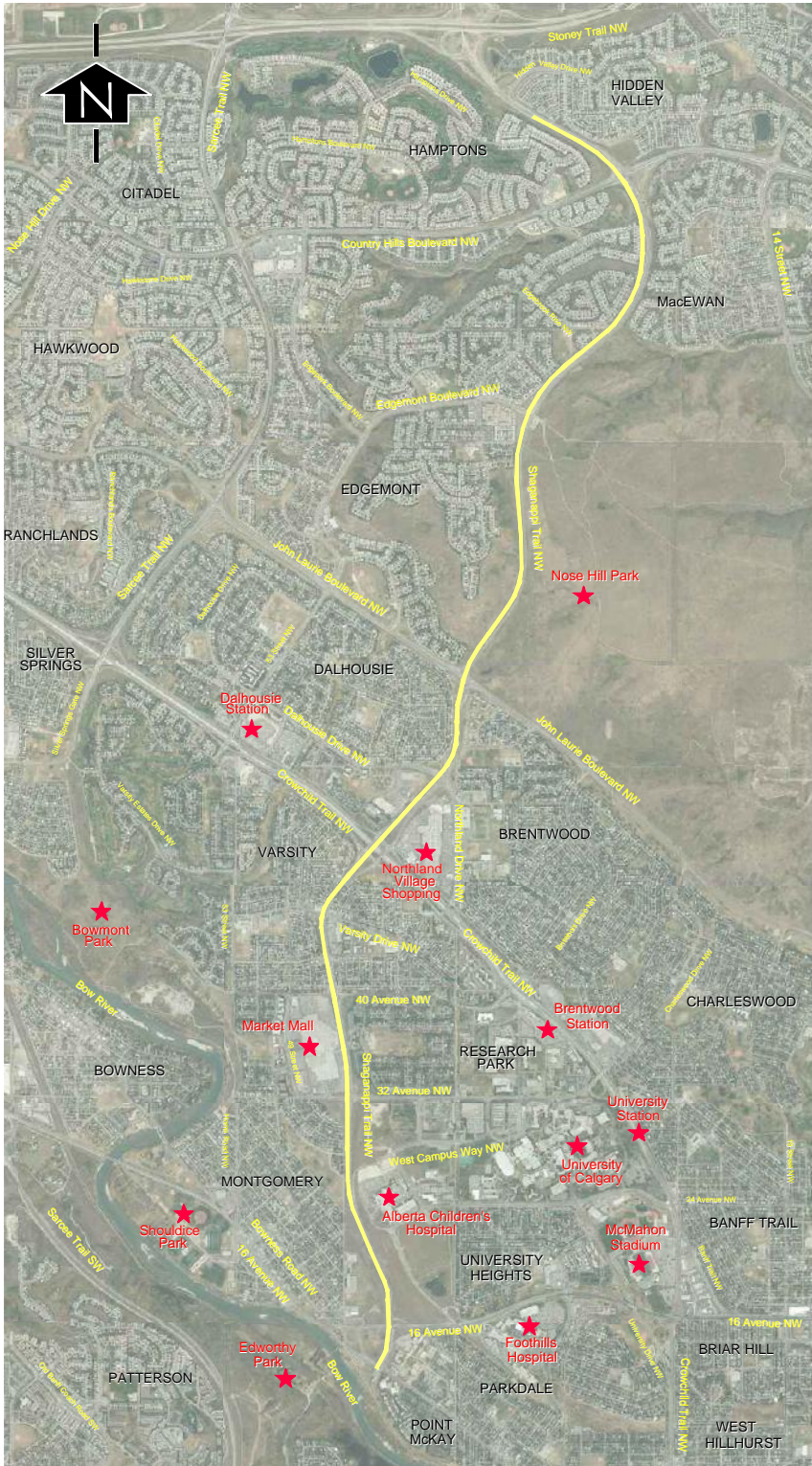
- | | |
|--|---|
|  Existing Road |  Existing Pathway and Bike Lanes |
|  Proposed Road |  Proposed Pathway |

Next Steps

- Review of public feedback
- Evaluation of concepts
- Selection and further development of the preferred concept
- Public engagement Winter / Spring 2013
- Study Completion May 2013

Please Complete the Feedback Form

Thank you for attending!



Using the pins,
please indicate
where you live
and/or work on
this map.

Thank you.

