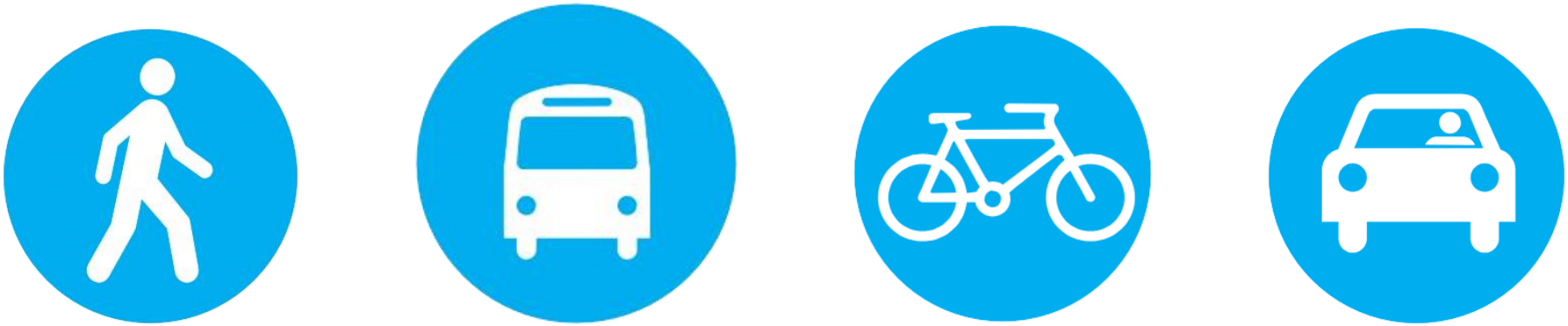
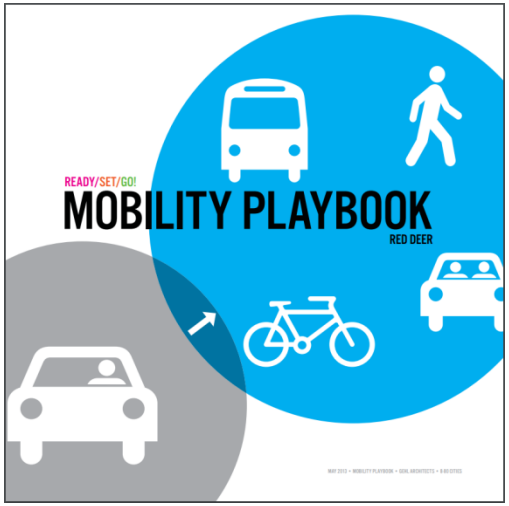
THE CITY OF Red Deer

The Multimodal Transportation Index

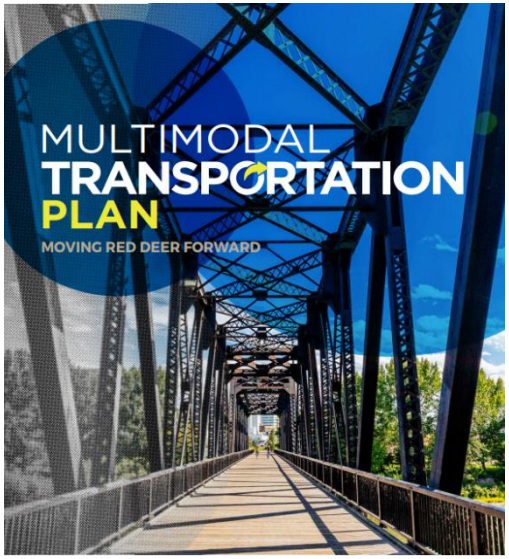


Niki Burkinshaw, P.Eng.
Transportation Engineer

Context



→ Principles



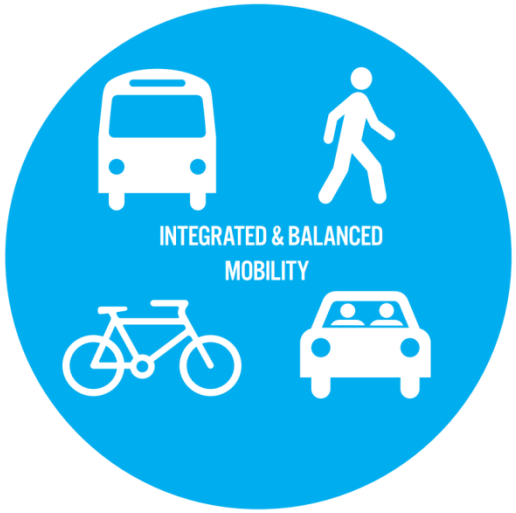
→ Integrated Implementation

Context – Mobility Playbook

01. The overall quality of life
This was ranked as the most important aspect of living in Red Deer. This encompasses many things: time with family, nature and financial security.

02. Active living and recreation
Ranked as the second most important aspect of Red Deer life, the trails and the natural landscape are on Red Deer's doorstep.

03. Economy
As the third most important aspect of city life in Red Deer, the employment and affordability of the city is at the centre of what makes it great.



PLAY 1 PUT PEDESTRIANS FIRST

PLAY 2 CREATE A BALANCED NETWORK

PLAY 3 TIE LAND-USE AND MOBILITY TOGETHER

PLAY 4 MAKE TRANSIT PART OF THE JOURNEY

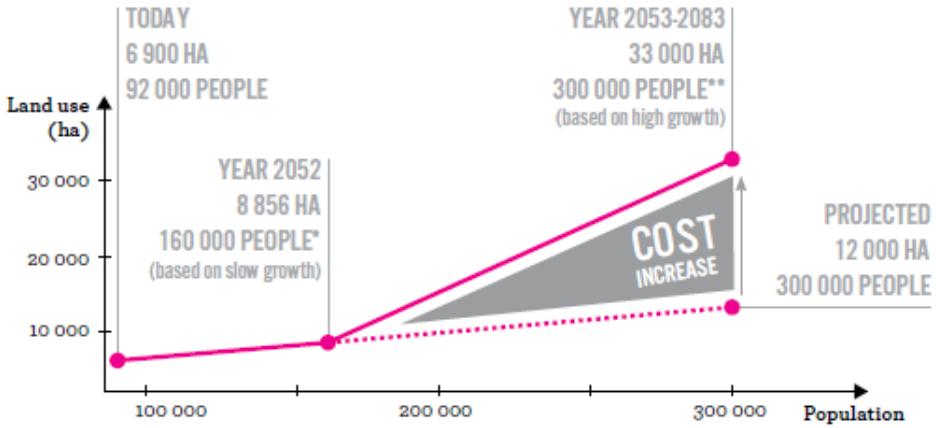
PLAY 5 CONNECT THE TRAILS

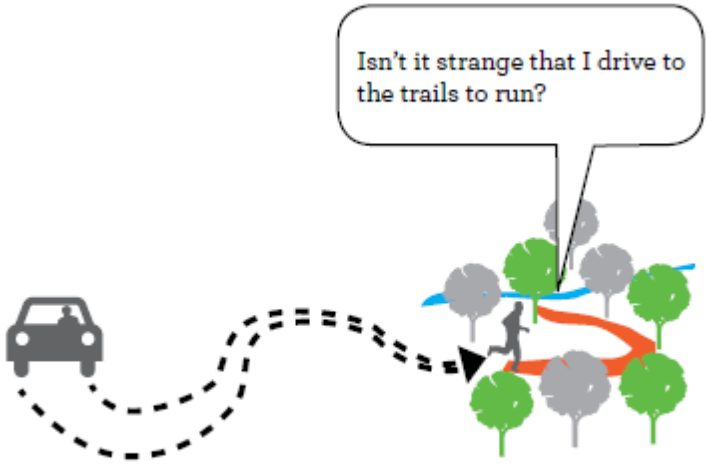
PLAY 6 NURTURE A CULTURE OF CHANGE

Context – Multimodal Transportation Plan

- Council approved the MTP in July 2017.
  - Overall goal is to improve the safety, quality, comfort & connection of all modes, and provide more choice for citizens.
  - The plan pulls together the City's past work on multimodal transportation & is the foundation for how we will improve our transportation network today, tomorrow & in the future.
- Key features of the MTP:
  - Outcomes specific to each mode
  - Priority routes for each mode
  - A new tool to measure and evaluate the walking, cycling & transit experience – the Multimodal Transportation Index (MTI)

Risks of Business as Usual

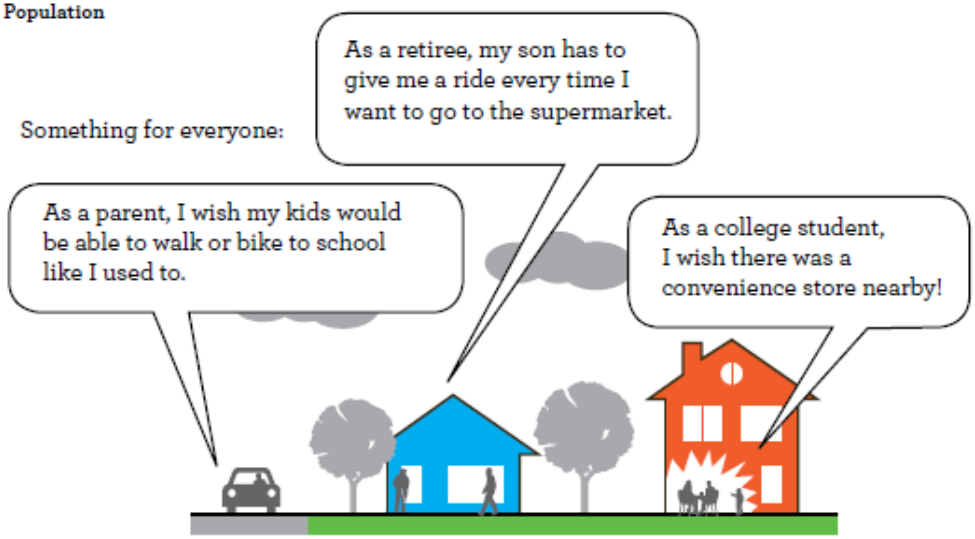




...to Economy

...to Quality of Life

...to Active Living and Recreation



Why do this?

Why do this?

Why do this?

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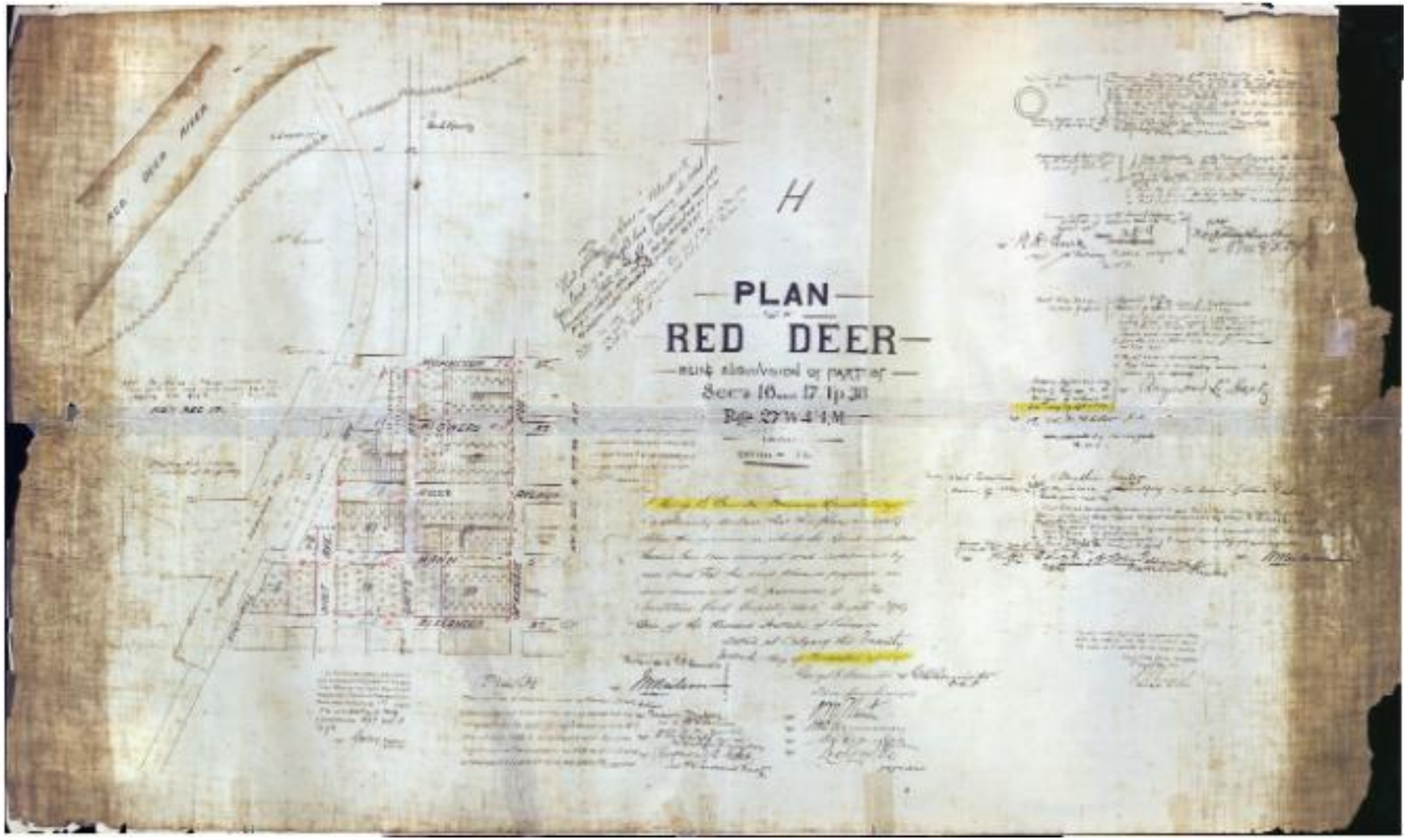


Multimodal Transportation Index

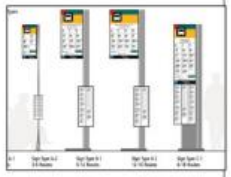
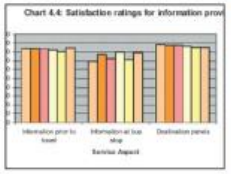
- A **tool** that applies the criteria from the MTP – safety, connection, comfort & quality – when looking at each of the modes (motor vehicle, active transportation & transit).
  - The scores in the MTI tell us about where we are now, and helps us measure improvements as we move forward.
- Applying the tool, Administration can assess what projects should be completed and what elements could be included to improve the user experience for each of the modes.

Goal: A More Balanced Network

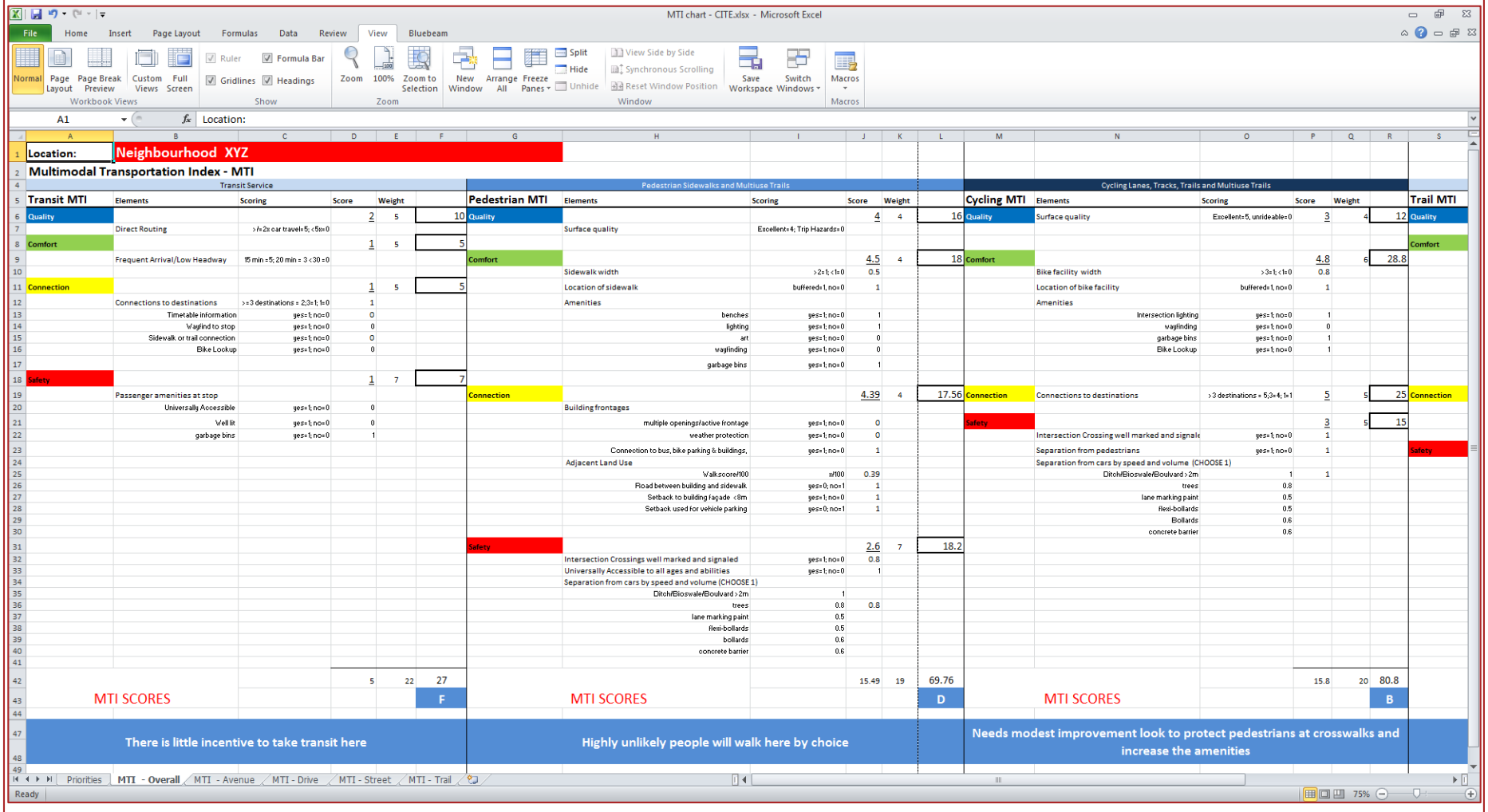
Build the Network

Build the Network

Elements Influencing Design

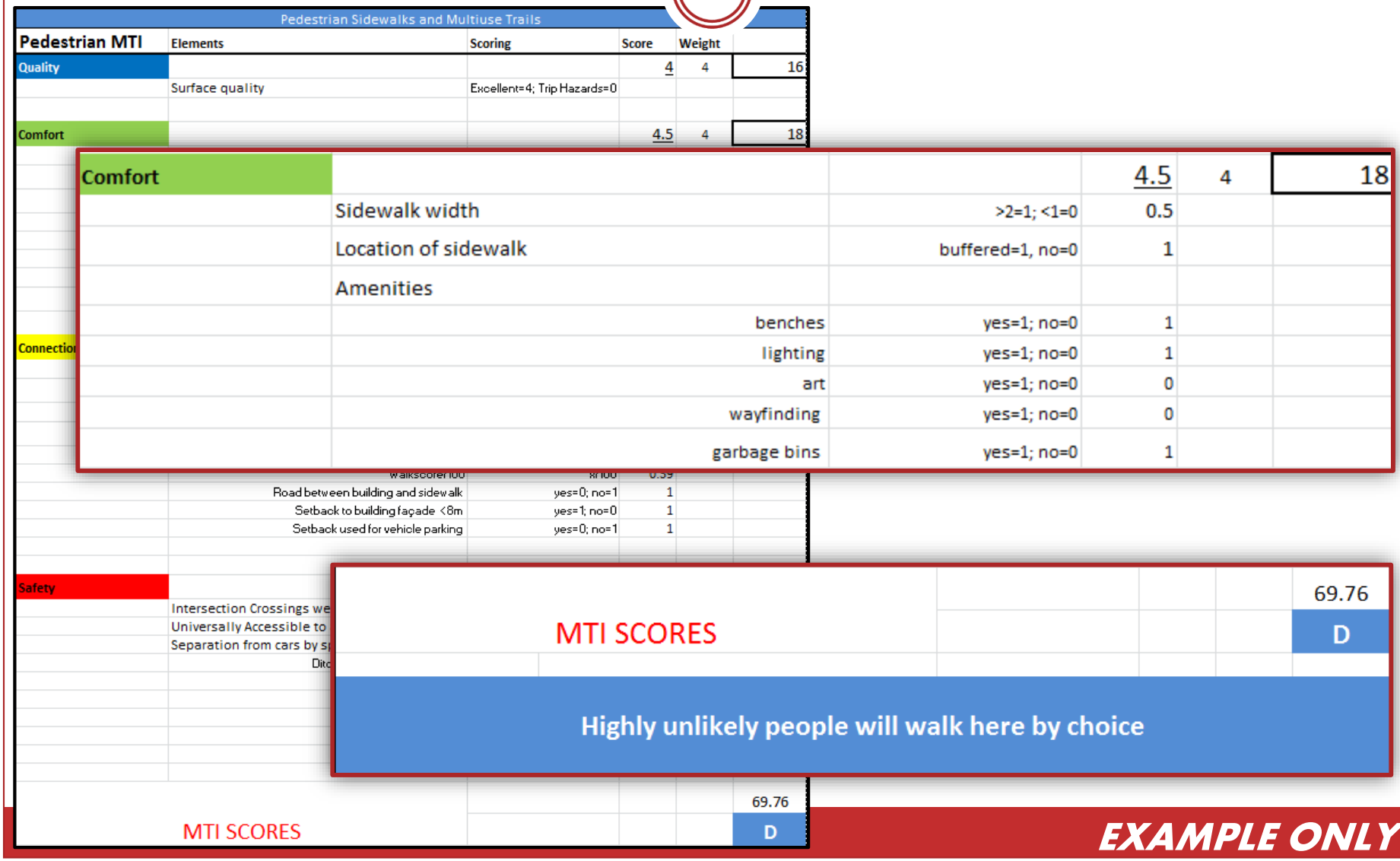
SPECTRUM OF MTI ELEMENTS	MOTOR VEHICLES	ACTIVE TRANSPORTATION	TRANSIT
SAFETY	 	 	 
CONNECTION	 	 	 
COMFORT	 	 	 
QUALITY	 	 	 

What Does the MTI Look Like?



EXAMPLE ONLY

Looking a Little Closer...



Pedestrian Sidewalks and Multiuse Trails

Pedestrian MTI	Elements	Scoring	Score	Weight	
Quality			4	4	16
	Surface quality	Excellent=4; Trip Hazards=0			
Comfort			4.5	4	18
	Sidewalk width	>2=1; <1=0	0.5		
	Location of sidewalk	buffered=1, no=0	1		
	Amenities				
	benches	yes=1; no=0	1		
	lighting	yes=1; no=0	1		
	art	yes=1; no=0	0		
	wayfinding	yes=1; no=0	0		
	garbage bins	yes=1; no=0	1		
Connectio					
	Walkscore 100	/100	0.39		
	Road between building and sidewalk	yes=0; no=1	1		
	Setback to building façade <8m	yes=1; no=0	1		
	Setback used for vehicle parking	yes=0; no=1	1		
Safety					
	Intersection Crossings we				
	Universally Accessible to				
	Separation from cars by s				
	Ditc				
					69.76
	MTI SCORES				D

MTI SCORES

69.76

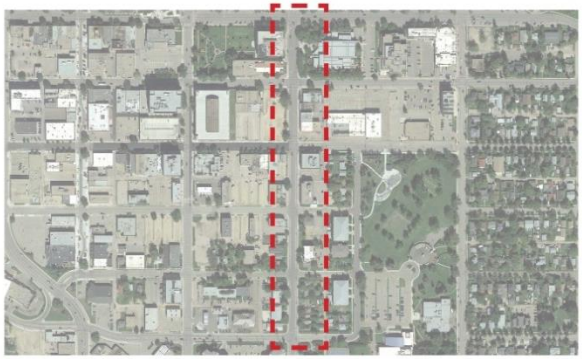
D

Highly unlikely people will walk here by choice

EXAMPLE ONLY

MTI in Use – Different Levels

A Street - Micro



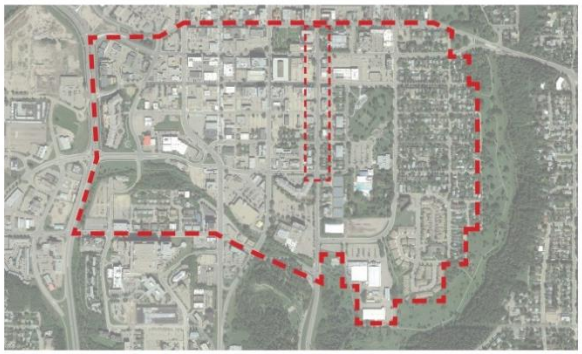
48 th Ave @ 50 to 45 Street

Pedestrian View

Cyclist View

Driver View

A Neighbourhood - Meso



Southern Downtown

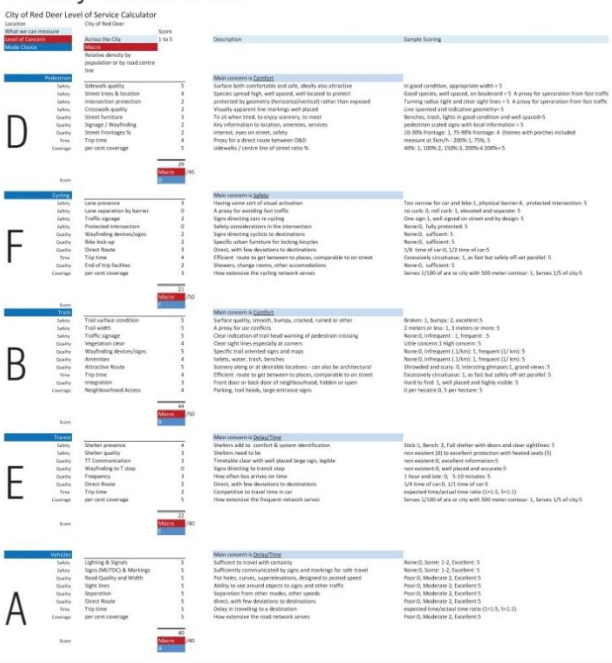
Transit Patron View

Trail User View

Driver View

Our City - Macro

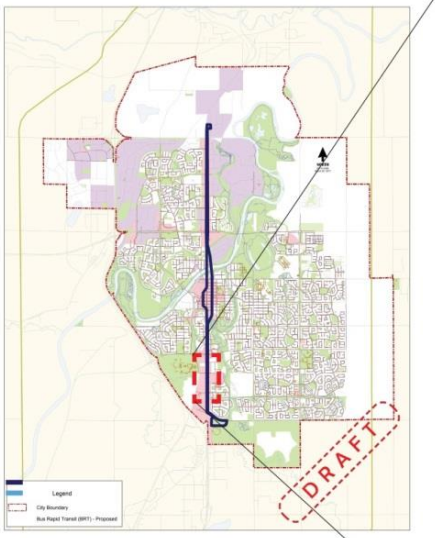
City of Red Deer



MTI in Use – Part of Proposed Project

Bus Rapid Transit (BRT) Example - Gaetz Avenue at Bower Mall

Transit Transportation Plan



Transit Patron View - Low score

Driver View - Highest score

A Bus Rapid Transit (BRT) line will be developed along Gaetz Avenue. Requirements for BRT include aspects of: pre-boarding payments (reducing 'dwell' time at each stop), dedicated or 'queue jump' lanes to speed the bus, well lit and safe crossings of roads for pedestrians to reach bus stops, elevated stops with high quality identifiable shelter and timetable information, articulated buses for higher capacity, fewer stops spaced at 1 to 2 km distance among other details. The current bus stop on Gaetz and the service (bus route 1) scores relatively low with the stops being hardly noticeable, patrons are exposed to the elements and fast passing cars while waiting. Once boarded, the patron endures a much longer trip than a car driver to reach his/her destination as the bus routes are not fast, frequent, direct or linking of destination pairs or triples. However, the MTI can identify and explain what is missing to make the score rise and deliver a more desirable transit service. Administration will prepare a project list with costing and options for increasing the MTI score for budget debate and approval by Council. A Dialogue Plan would be a large component for implementation of a BRT on Gaetz.

Potential Scenario - Transit

The steps below are generalized to demonstrate the involvement of Citizens, Council, and Administration in the process of improving a motor vehicle project identified in the Multimodal Transportation Plan (MTP).

1) Direction: Transit example - Administration knows, based on the MTP that developing Bus Rapid Transit is a medium term project. Citizens are informed of these guiding documents and are identifying that the quality of bus commute and trip times need to be improved along the key commercial corridor of Red Deer.

2) Review and Analysis: Transit example - Administration analyzes and confirms that this gap needs to be filled, identifies this improvement aligns with the MTP and development is coming in this area in the next 5-7 years. Prior Citizen feedback is considered.

3) Budget: Transit example - Council and Citizens see the Bus Rapid Transit as a project in 2024 capital budget. At a high level, they are informed that it will cost $5M (complete guess) to improve safety, connection, quality and comfort - to a MTI score of at least 10/20 -and complete a public participation process. Citizens have opportunity to comment or ask questions of the project. Council debates the proposal

4) Informed of decisions: Transit example - Citizens see that the BRT dialogue and construction will occur on the City's website or in the newspaper.

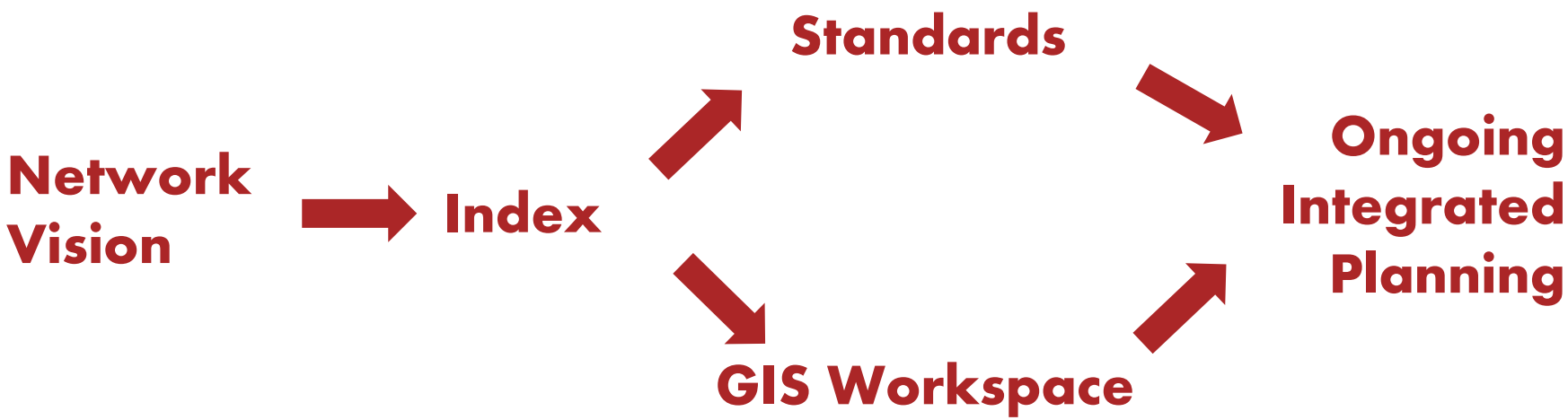
5) Design and Planning: Transit example - Administration begins detailed design of Bus Rapid Transit line, applying the MTI and the Engineering Design Standards. This is a multi-year project and it is determined from the Public Participation Toolbox that there is a need to do a full communication and public engagement strategy because of the extent, duration and impact of the construction.

6) Implementation: Transit example - Administration develops communication materials and sends out notifications. An RFP is completed, contractor hired and work begins. Citizens have access to the project outcomes, timelines and impacts and where to call if have an issue.

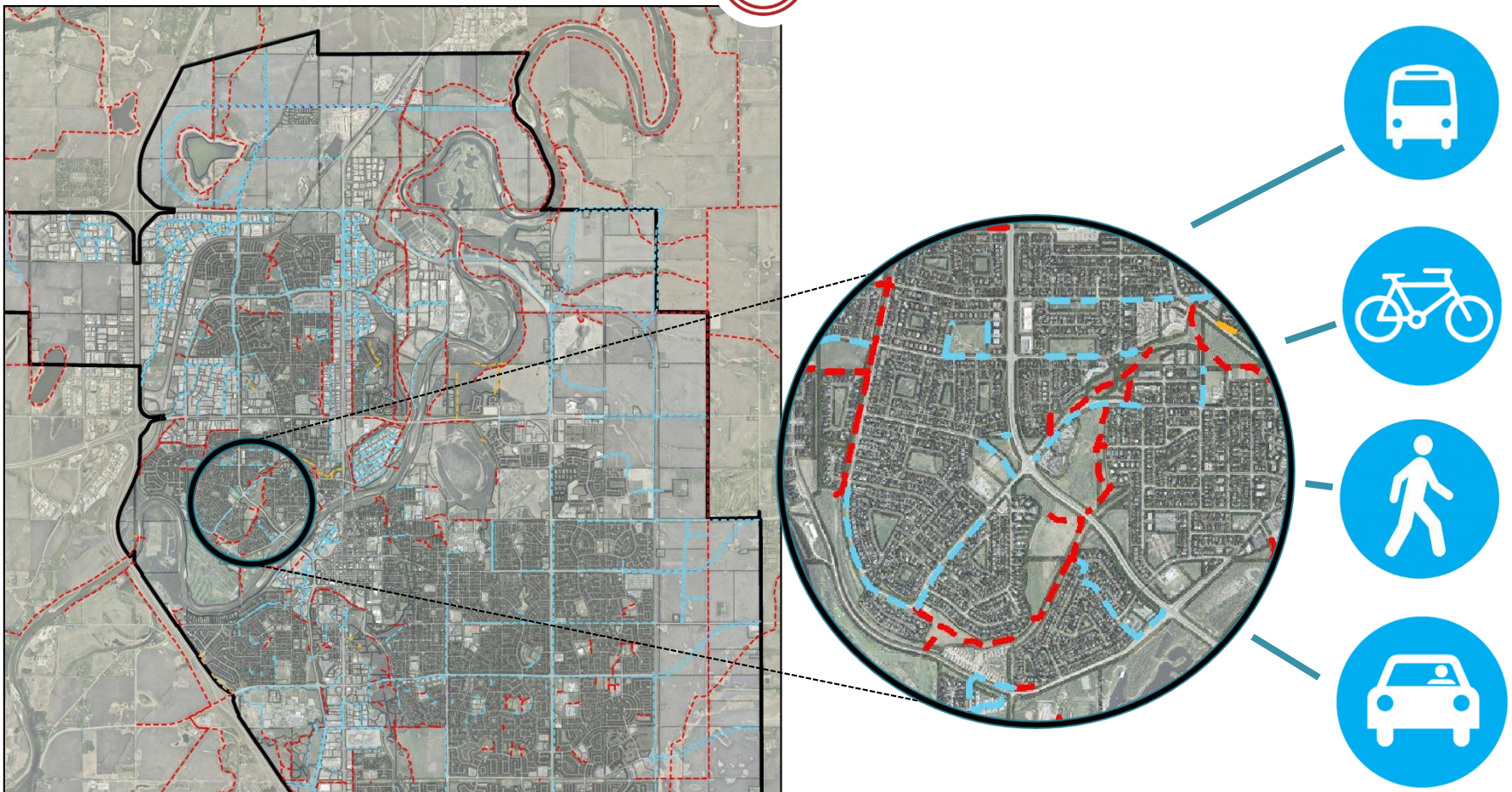
7) Progress report: Transit example - Administration posts notifications on the city's construction page. Citizens are writing letters to Administration and Council that the BRT line has issues on certain sections of Gaetz Avenue. Council is updated via email or at City Manager Briefing on ways Administration is responding to the issue.

EXAMPLE ONLY

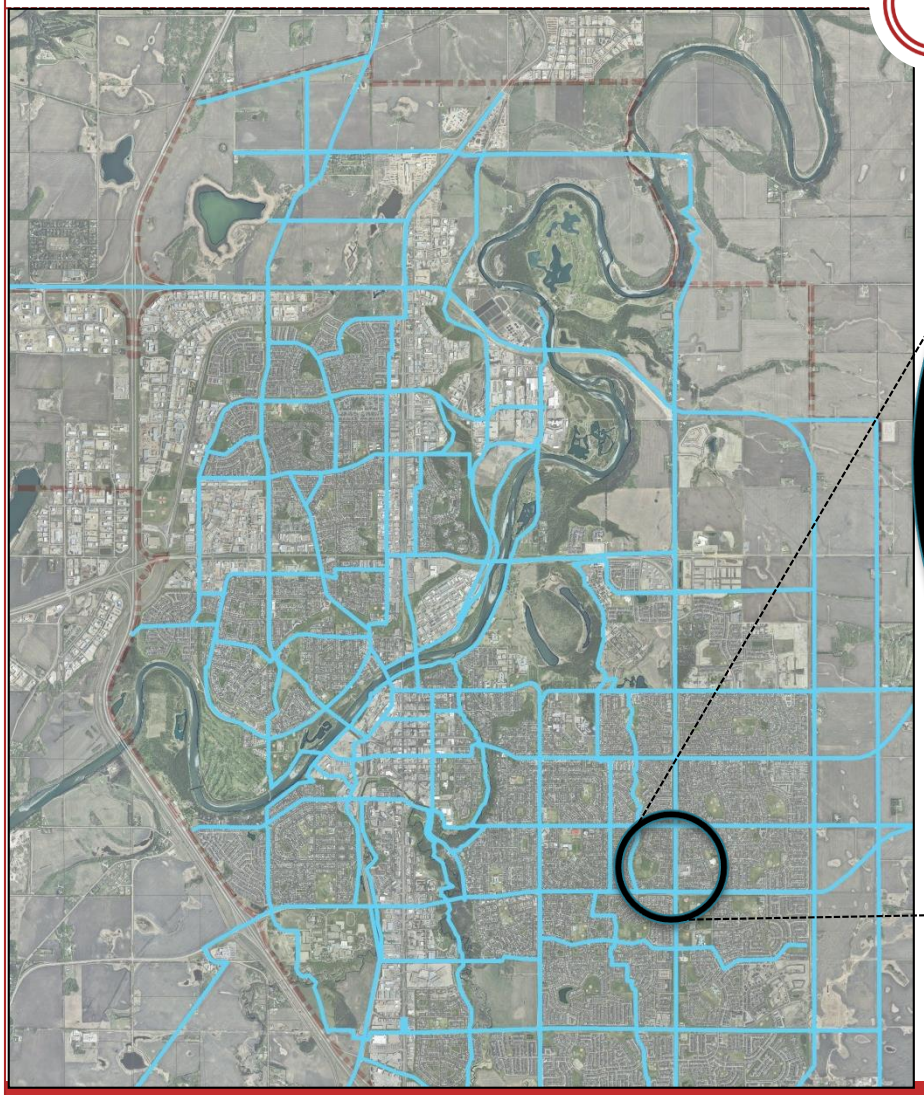
The Shift

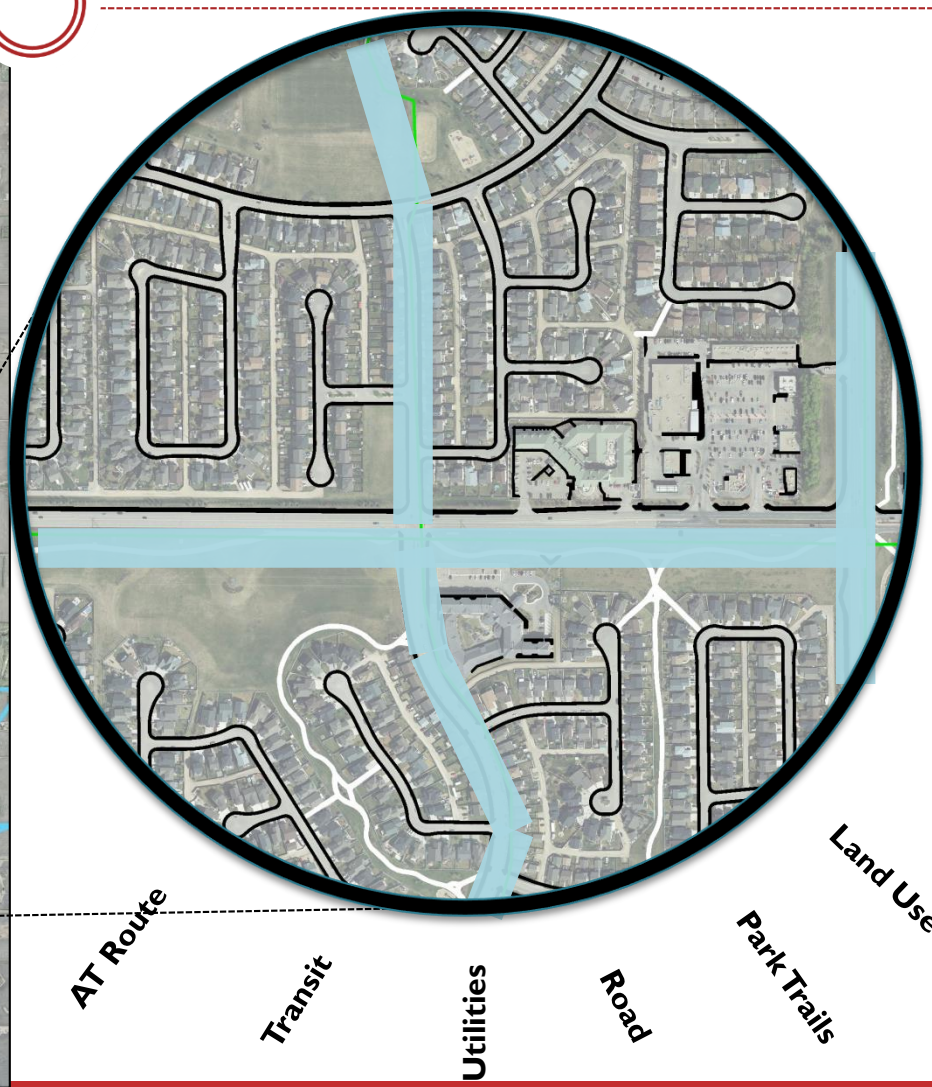

Network Vision
Index
Standards
GIS Workspace
Ongoing Integrated Planning

GIS Workspace



Integrated Planning





Next Steps

- Internal project team working to operationalize the Multimodal Transportation Plan
  - Roll out to internal City departments happening imminently
  - Continue to refine the Multimodal Transportation Index & make use of it on projects
- Aligning the Multimodal Transportation Plan with our budget planning process is a work in progress
- Continue to gain momentum in planning, designing and constructing transportation projects using an integrated approach, rather than siloed past practices

Thank You

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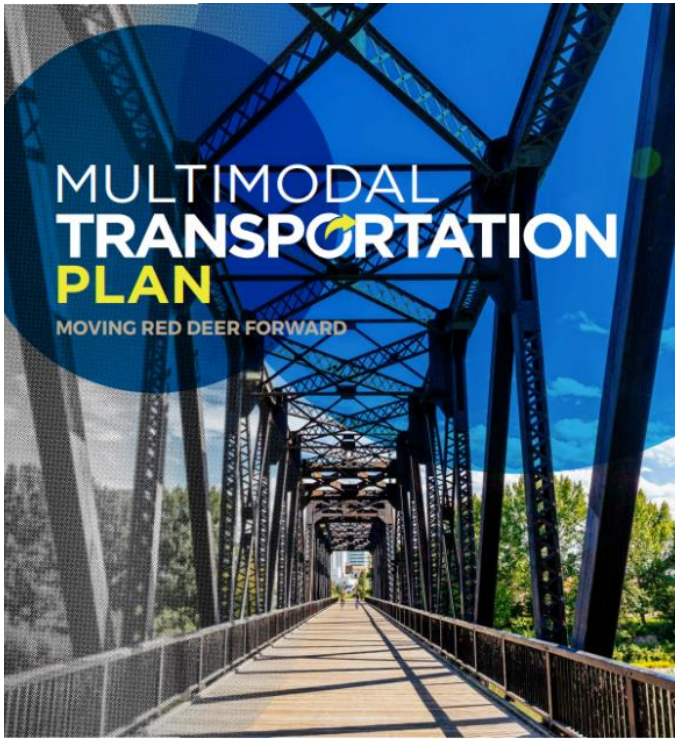
THE CITY OF Red Deer

Special thanks to…
Jeremy Bouw
Cole Hendrigan



http://www.reddeer.ca/city-government/plans-and-projects/ongoing-plans-and-projects/moving-red-deer-forward/