

Calgary



CITY OF CALGARY
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IN COUNCIL CHAMBER

MAY 15 2017

ITEM: C2017-0467#2
Distribution
CITY CLERK'S DEPARTMENT

Investment in
infrastructure to support
Calgary's growth

Strategic Meeting of
Council
15 May 2017

C2017-0467
Green Line LRT: Building the Core



Planning for the **Future** and Building the Core **Today**.



Calgary



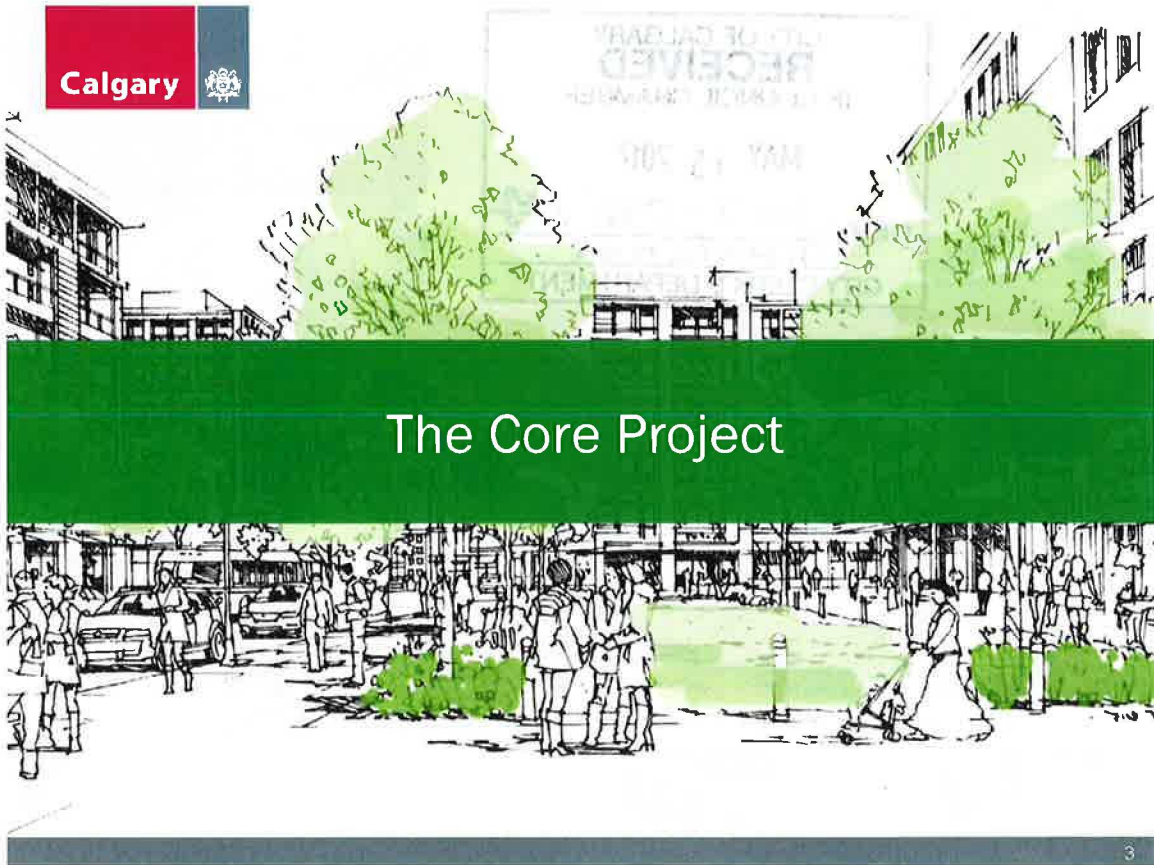
Agenda



The Core Project

Q&A

In Camera



Recommendation: **16 Avenue N (Crescent Heights) to 126 Avenue SE (Shepard)**

Planning for the
future and
building the core
today



Today



Opening day



History of LRT in Calgary

- New LRT lines have started in the downtown and built in stages
- Since 1978 Calgary has been building LRT
- 9 expansions between 1987 – 2015
- Serves over 285,000 daily passengers
- Most successful LRT system in North America
- 59km and 45 Stations



5



Building on our past success:

Red Line Core



1981

12.9 km

15 stations

★ 1 maintenance and storage facility



6



Building on our past
success:

Blue Line Core



1985

9.8 km

7 stations

★1 storage facility (Haysboro)



7



Building on our past
success:

Red Line Extension



1987

5.8 km

5 stations



8

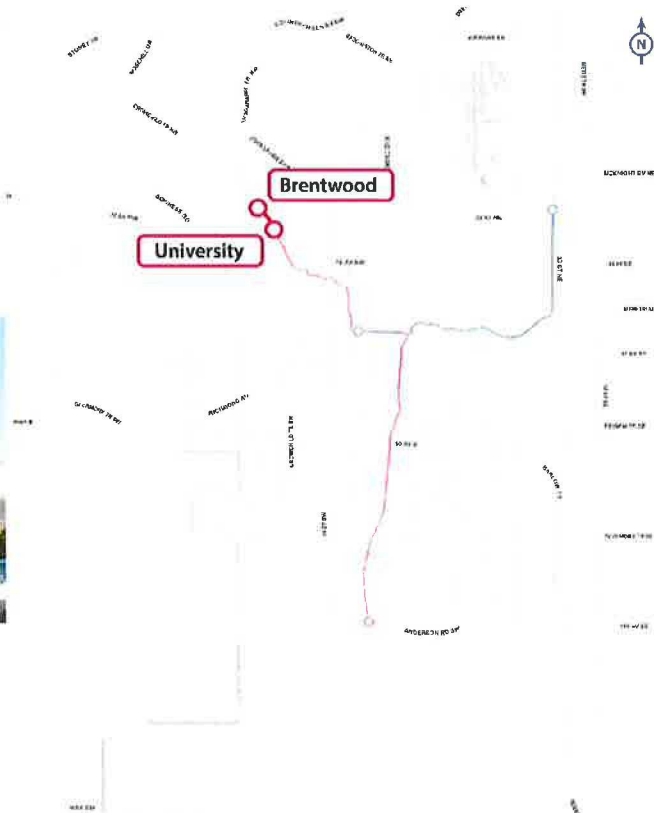


Building on our past
success:
Red Line Extension



1990

0.8 km
1 stations



9

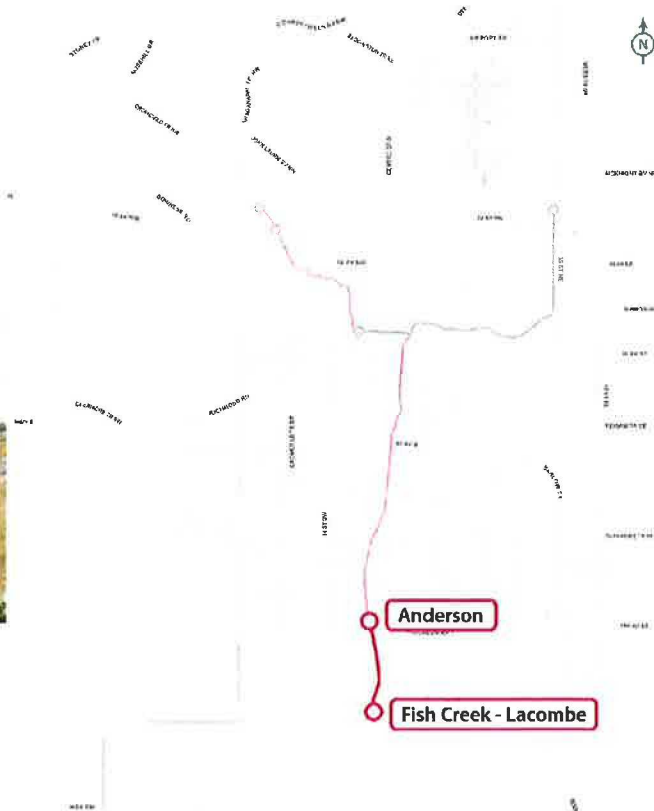


Building on our past
success:
Red Line Extension



2001

3.4 km
2 stations



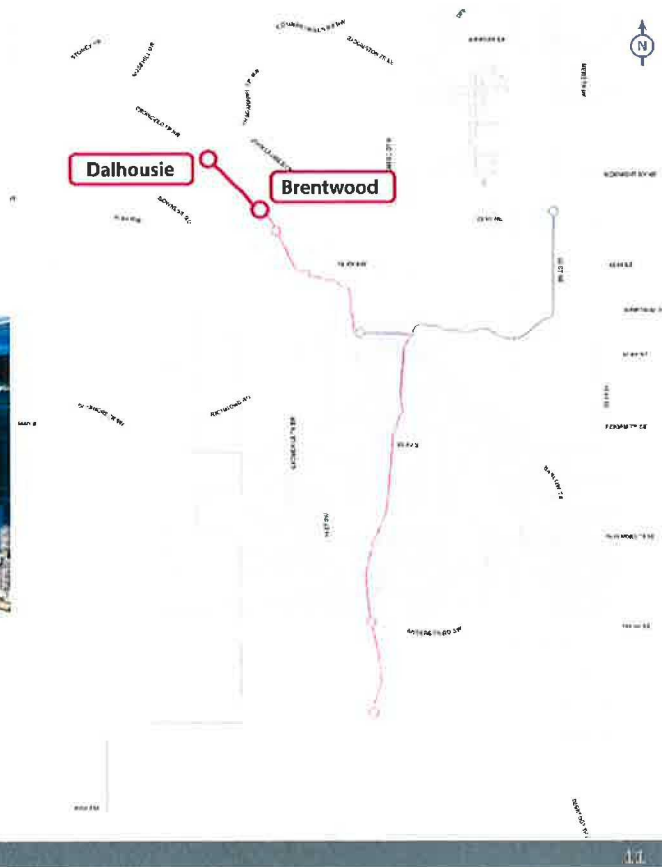
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Building on our past
success:
Red Line Extension



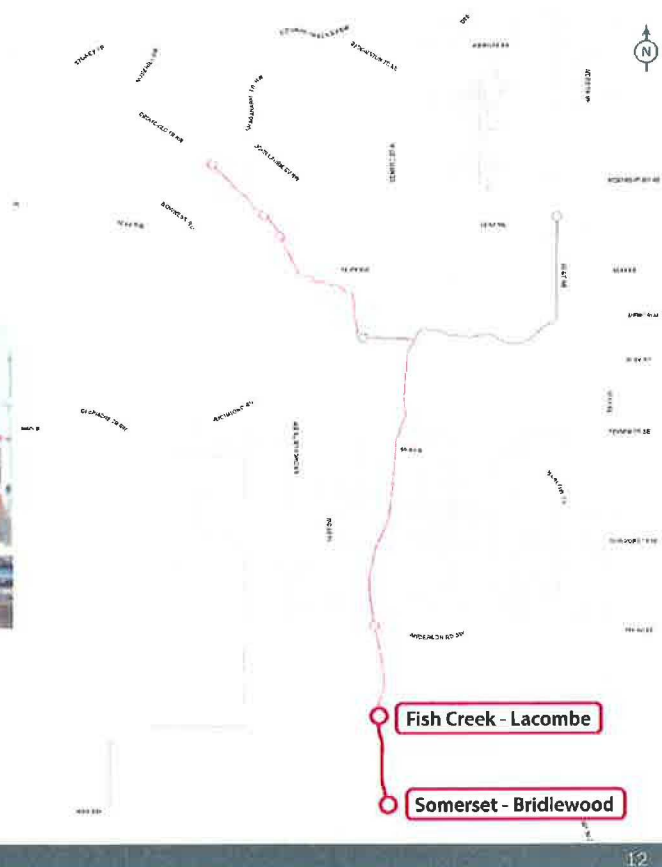
2003
3.0 km
1 stations



Building on our past
success:
Red Line Extension



2004
3.0 km
2 stations





Building on our past
success:

Blue Line Extension



2007

2.8 km

1 stations

★ 1 maintenance and storage facility



13



Building on our past
success:

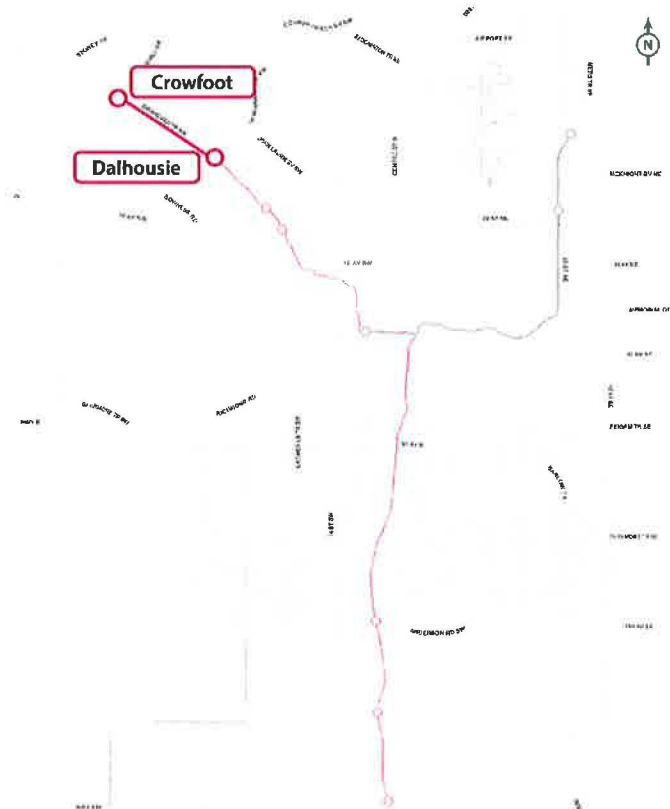
Red Line Extension



2008

3.6 km

1 stations



14



Building on our past
success:
Blue Line Extension



2012
2.9 km
2 stations



15



Building on our past
success:
Blue Line Extension



2012
8.2 km
7 stations



16

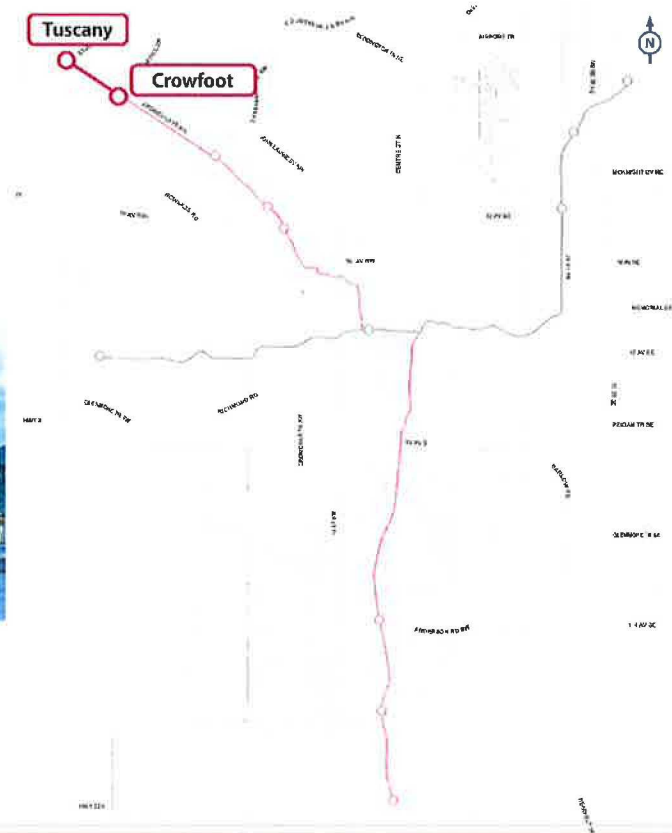


Building on our past success: Red Line Extension



2014

2.0 km
1 stations



17

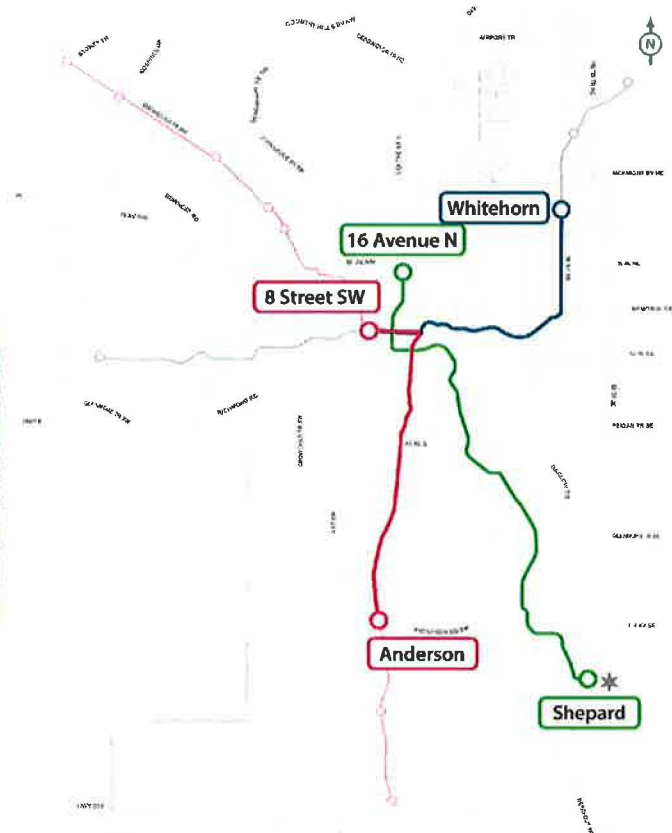


Building on our past success: Green Line Core



2026

20.0 km
14 stations
★ 1 storage and maintenance facility



18

Planning for the Future

Meet Darshan:
23 year old
professional



Meet Erica:
6 year old active
kindergartner



Planning for the Future

Darshan:



Community:
Douglas Glen

Destination:
Downtown via
302 BRT

**Today's
Challenge:**
Reliability of
service, travel
time

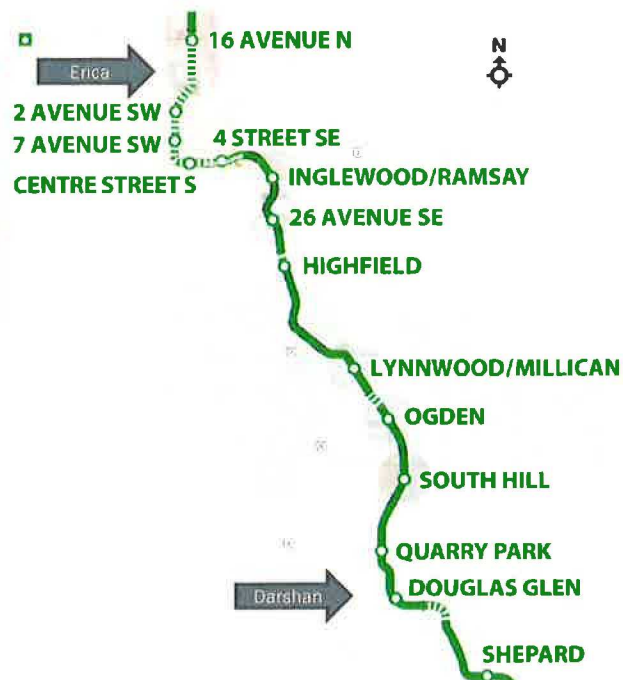
Erica:



Community:
Crescent Heights

Destination:
Cultural events
throughout the
city

**Today's
Challenge:**
Access to
destinations



Darshan's Commute to Downtown - Douglas Glen to 7 Avenue SW

Today's challenge

- Unreliability: traffic, weather, delays due to Heavy Rail crossing
- Driving costs: gas, maintenance, parking

Current	  	55-60 min
Driving	 	30-45 min
Green Line	  	20-25 min

Green Line benefits

- Reliability
- Time and cost savings
- Mobility choice



Erica 10 years later as a 16 year old teenager

Green Line benefits

- Increased accessibility to destinations across the city with 80km of LRT
- Ability to work anywhere with transit access
- Flexibility in not having a vehicle

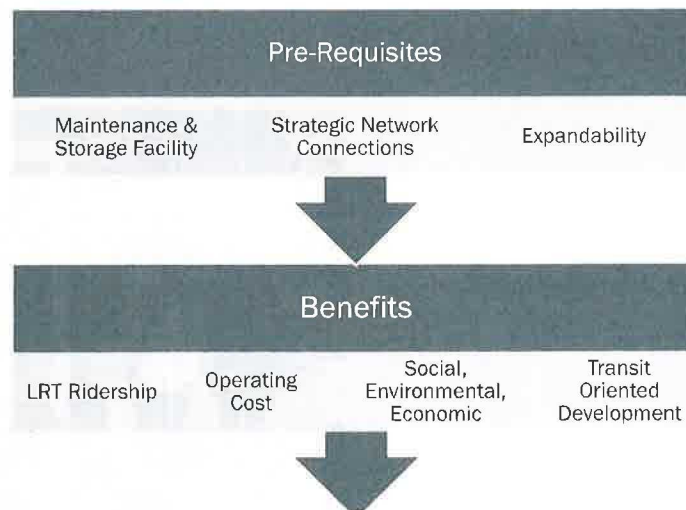


How we determined the Core Project



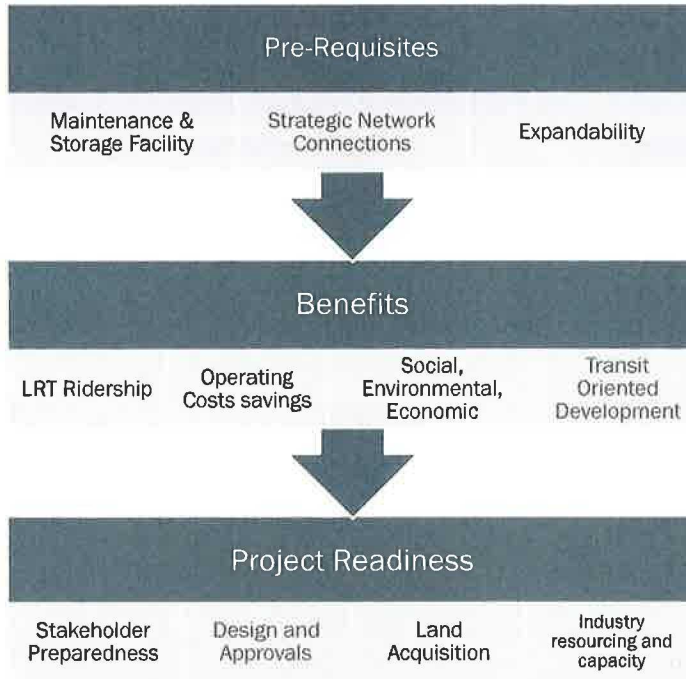
23

How we determined the Core Project



24

How we determined the Core Project



25

Staging options evaluated

Long Term Vision	7 Ave SW to Shepard	2 Ave SW to McKenzie	16 Ave N to Shepard	96 Ave N to 4 St SE	40 Ave N to Shepard	16 Ave N to McKenzie	Beddington to Shepard	40 Ave N to Mckenzie
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26



Staging options **evaluated**



27



Staging options **evaluated**



Evaluation criteria

Pre-Requisites

Benefits

Project Readiness

28



Staging options **evaluated**



Within expected funding

Exceeded expected funding

Evaluation criteria

7 Ave SW to Shepard
2 Ave SW to McKenzie
16 Ave N to Shepard
96 Ave N to 4 St SE

Pre-Requisites

Benefits

Project Readiness

29



Staging options **evaluated**



Within expected funding

Exceeded expected funding

Evaluation criteria

7 Ave SW to Shepard ✗
2 Ave SW to McKenzie ✗
16 Ave N to Shepard ✓
96 Ave N to 4 St SE ✓

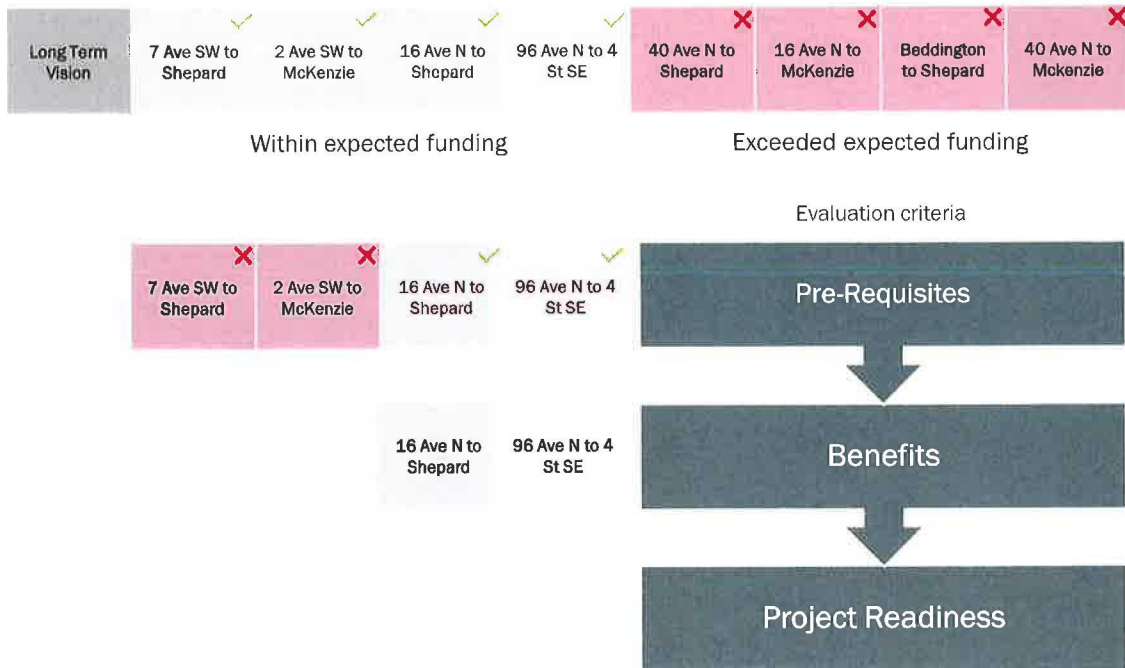
Pre-Requisites

Benefits

Project Readiness

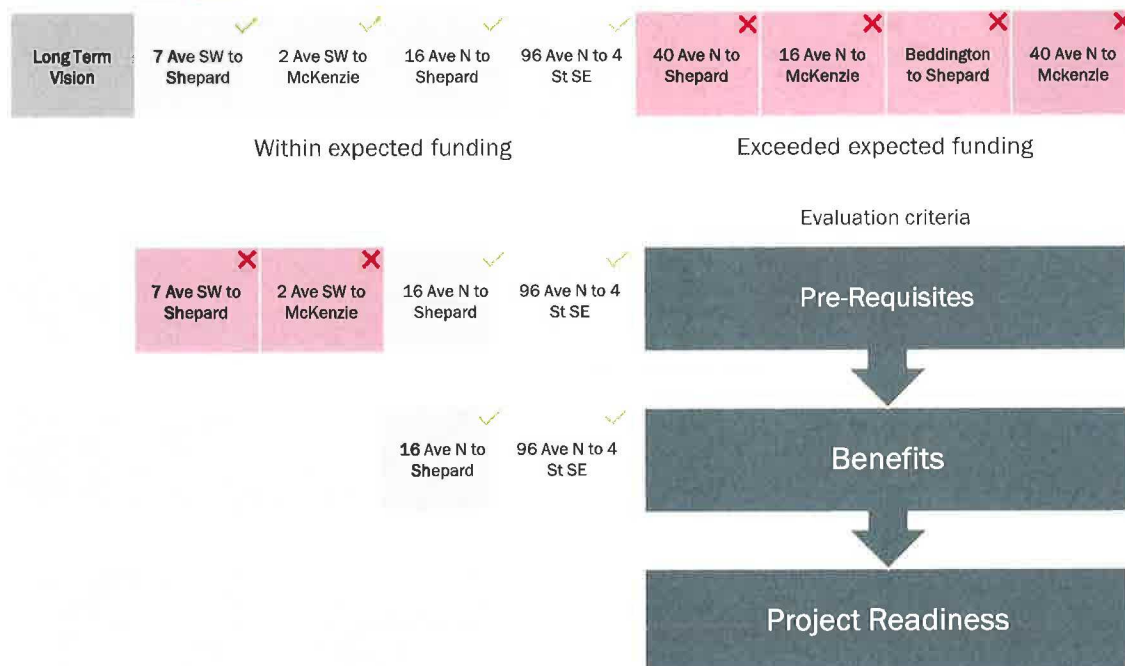
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Staging options **evaluated**



31

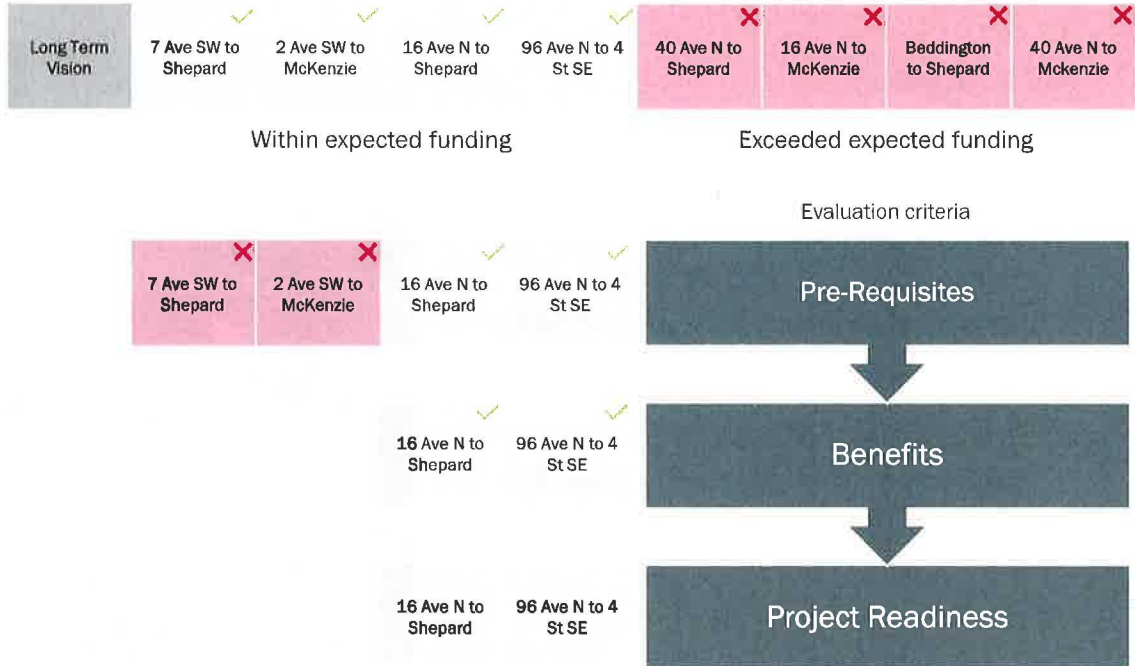
Staging options **evaluated**



32



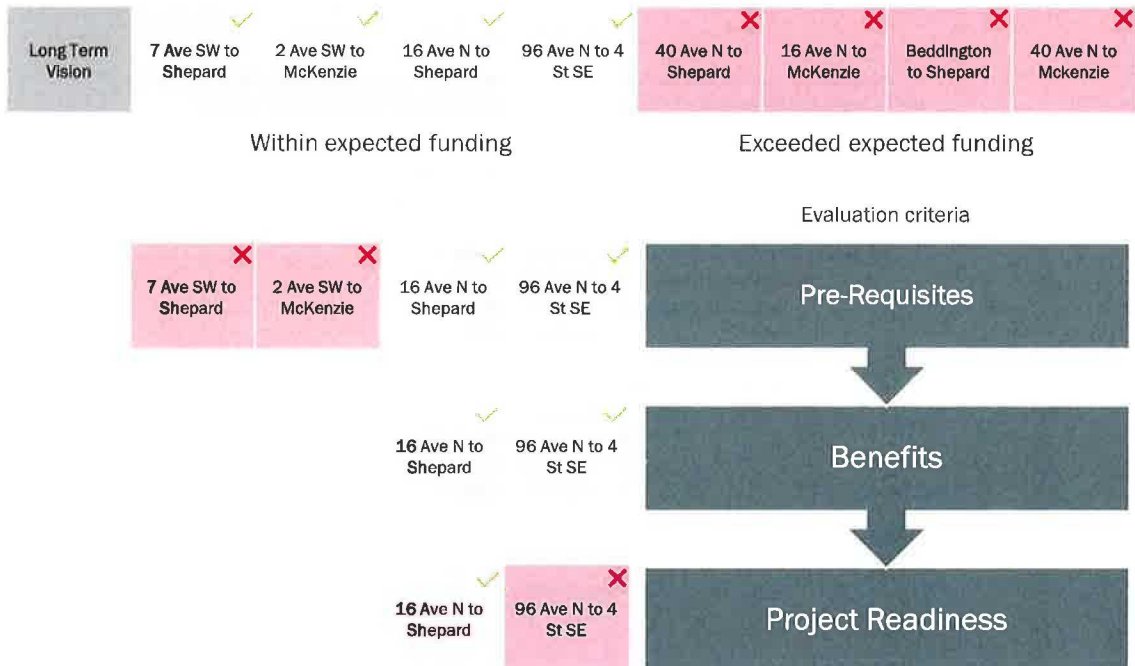
Staging options **evaluated**



33



Staging options **evaluated**



34

Why build the core today?

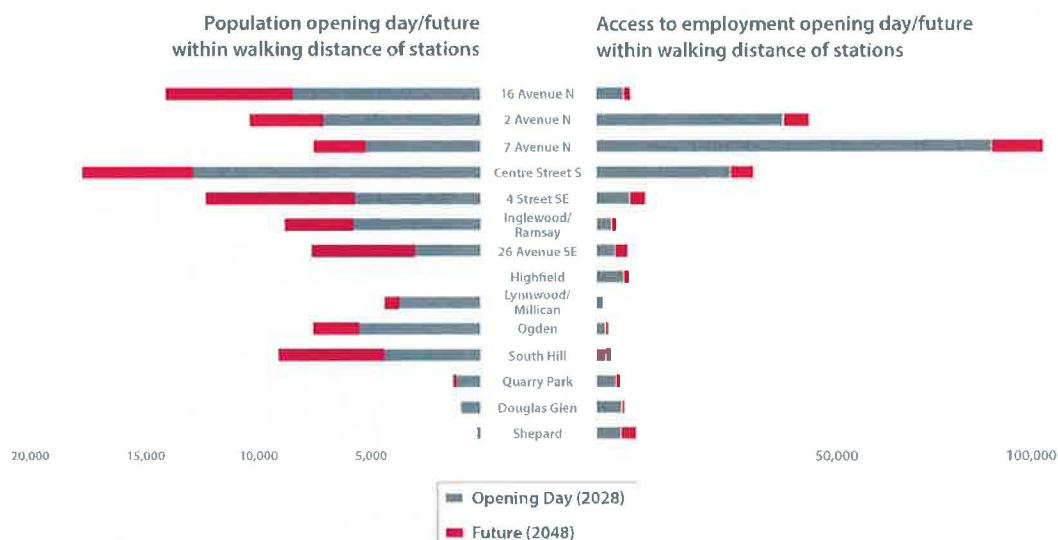
Job creation

- Over the proposed 10 years of planning and construction, the first stage project is estimated to create over 12,000 direct construction jobs and over 8,000 supporting jobs.
- This creation of jobs is in addition to the operating jobs for opening day of service.



35

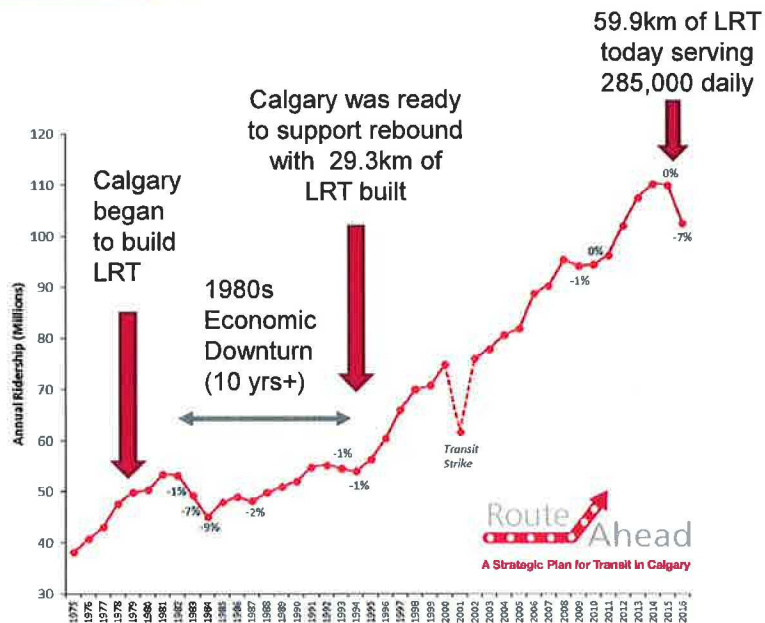
Why build the core today?



36



Why build the core today?



Project readiness

10 Competing Projects Across Canada

Transit Length: 6km (Vancouver Broadway) to 67km (Montreal REM)

Total Cost ranges from \$1B (Hamilton) to \$5.4B (Eglinton)



Recommendation: 16 Avenue N (Crescent Heights) to 126 Avenue SE (Shepard)

- ✓ Connects to Centre City and to Crosstown BRT's
- ✓ MSF at Shepard
- ✓ Ensures future expandability
- ✓ 60,000 to 65,000 daily transit trips
- ✓ Connects existing 60+ Community Services
- ✓ Connects 2300+ existing affordable housing units
- ✓ Linking to 191,000+ jobs
- ✓ 30,000 tonnes GHG reduction
- ✓ Adds 4 TOD areas (6 Stations)
- ✓ 20 km's ready for construction



39

Features of the core

TIMELINE

Target Construction
Start: 2020

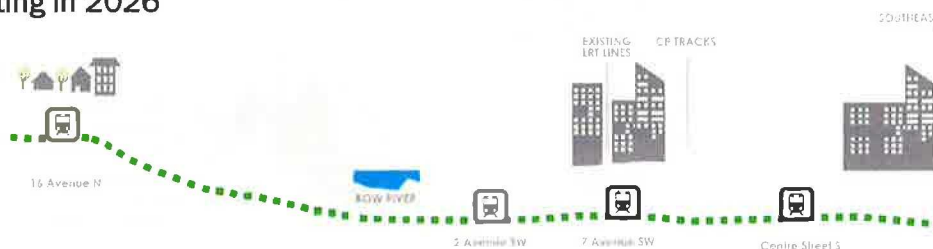
Target Service Opening:
2026

COST

Capital Construction: \$4.65B

Net Operating Cost: \$40M/year
starting in 2026

20 km of LRT Track
14 Stations
8 Bridges
1 km Elevated track
3 Park and Ride Facilities
3 Tunnels
4 km Centre City Tunnel
1 New Maintenance & Storage Facility
70 Low Floor Vehicles

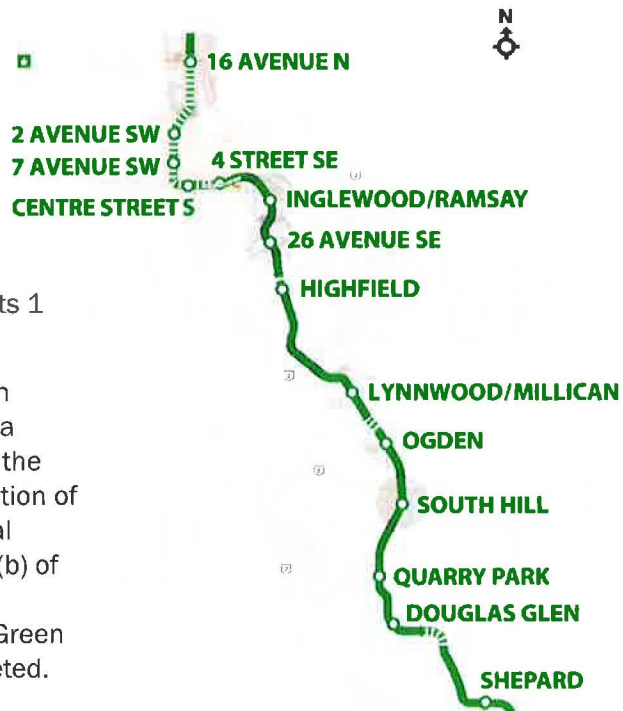


40

Administration Recommendations:

That the Strategic Meeting of Council:

1. Receive this report and attachments 1 and 2 for information;
2. Direct that attachment 2 and any In Camera discussion heard in-camera pursuant to subsection 23(1)(b) of the Freedom of Information and Protection of Privacy Act, and remain confidential under 24(1)(a), 24(1)(b) and 25(1)(b) of the Freedom of Information and Protection of Privacy Act, until the Green Line construction has been completed.



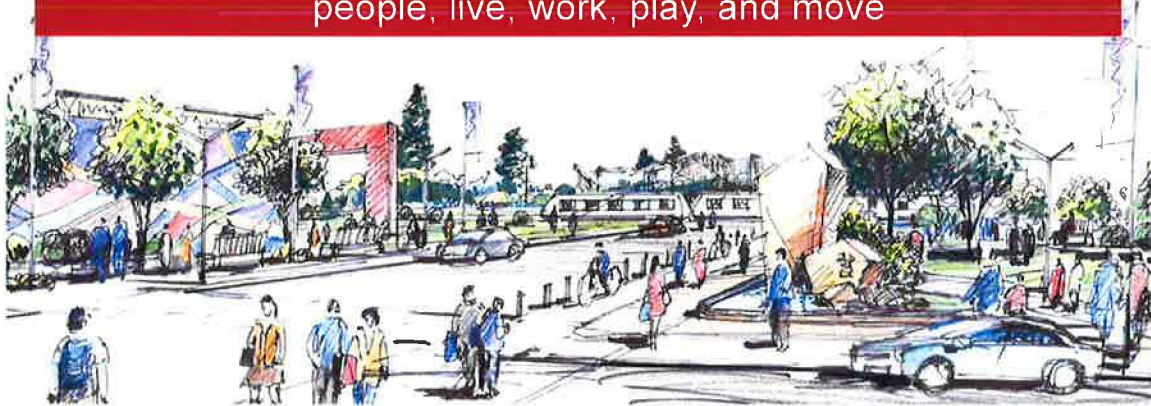
Next Steps





Building the core project serves **Calgarians.**

- Foundation for future extensions
- Builds most technically complex & capital intensive aspects
 - Leverages investment to shape the City and the way people, live, work, play, and move



Artist's sketch of Green Line crossing at 8 Street S.E./9 Avenue S.E.

43



Strategic Meeting of
Council
15 May 2017

Thank You



44