



Downtown LRT Connector

Recommended Concept Plan

April 2011

We're moving forward. Learn more.

On June 21, 2010, City Council approved a street-level Downtown LRT route that connects the future West and Southeast LRT lines.

Since then, the project team initiated work to define:

- track and station locations
- pedestrian and cyclist connections
- vehicle access changes

Following a public consultation last fall, the proposed Downtown LRT concept plan has been refined to address various concerns expressed by Edmontonians. **The Downtown LRT concept plan will be presented to the Transportation and Public Works Committee of Council on May 25, 2011.**

Highlights:

- **A new street-level LRT** that will connect the future West and Southeast LRT lines, with opportunities for transfers to the existing LRT system in the downtown
- **Length of line:** 2.1 km
- **Number of stops:** 5

No funding is currently in place to construct the Downtown LRT Connector.



THE CITY OF
Edmonton

Capital City Downtown Plan

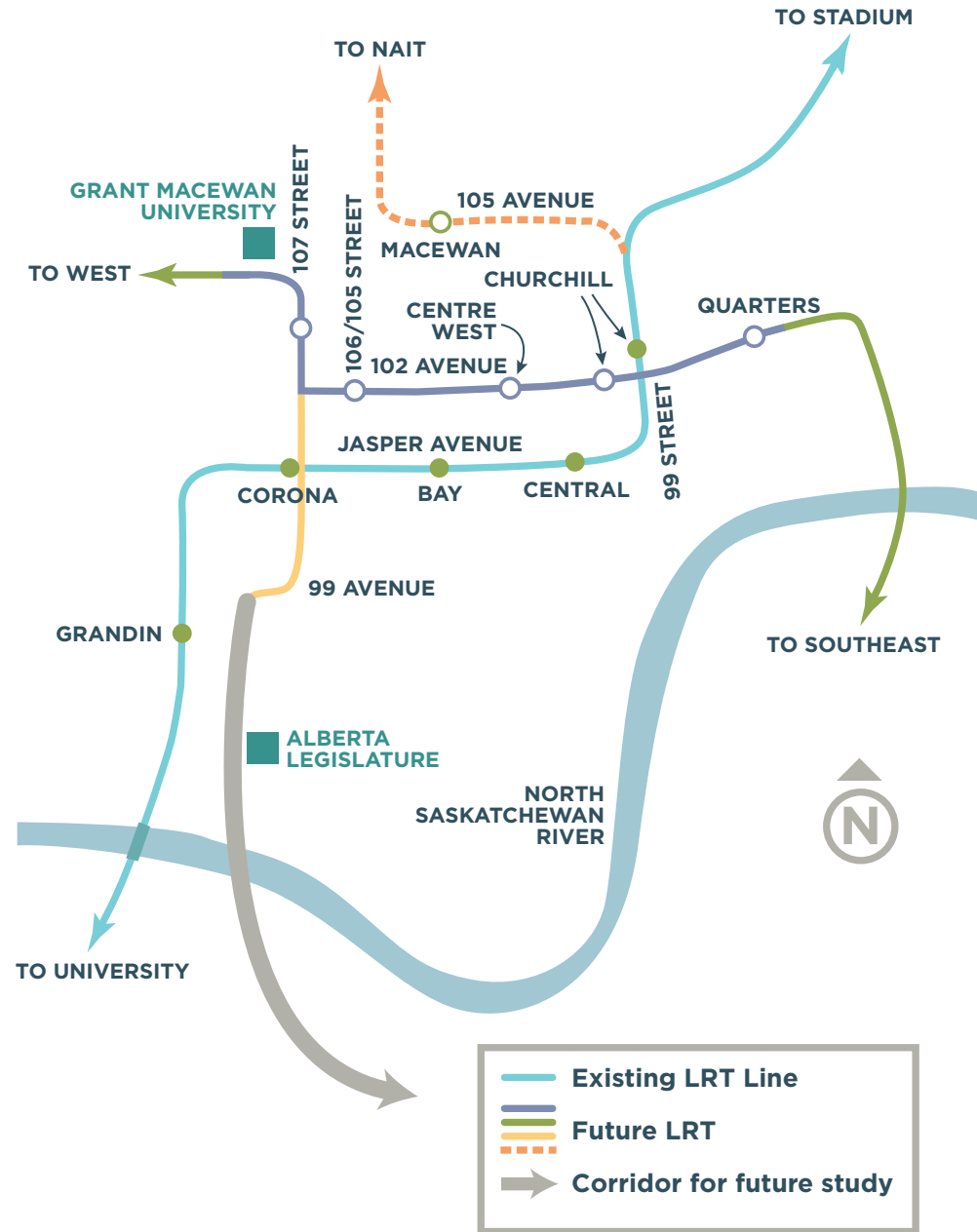
City Council approved the Capital City Downtown Plan, which will guide the development of the downtown into a more vibrant, attractive, higher-density, mixed-use and walkable area. In particular, the plan supports the integration of street-level LRT as a catalyst to encourage mixed-use downtown development and create enhanced pedestrian-oriented public spaces.

Downtown LRT Connector

At a public hearing held on June 21, 2010, City Council approved the surface downtown LRT route. The Downtown LRT Connector will use a combination of 107 Street and 102 Avenue. This route meets the objectives for future LRT expansion and supports the Capital City Downtown Plan.

It also has important attributes for integrated LRT/land use planning:

- Short walking distance to existing developed areas of downtown
- Potential to support commercial and residential development in the downtown
- Integration with bus service on 101 Street
- Opportunity to transfer to the existing LRT line at Churchill Square LRT station
- Potential to create more active streets



LRT Network Plan

In June 2009, City Council adopted a long-term LRT Network Plan that defines the future size, scale, and operation of the regional LRT system. Eventually, the LRT network will have six lines extending to the Northwest, Northeast, East, Southeast, South, and West. The LRT Network Plan supports overarching policy direction by making downtown Edmonton the focal point of the LRT system. In reviewing the overall system operation, it was determined that future expansions would need to operate on a separate LRT line due to limited tunnel capacity on the existing system.

As part of the LRT Network Plan, a vehicle technology review was completed to help choose the style of LRT vehicles most appropriate to meet long-term transportation objectives. The review recommended new, low-floor LRT vehicles be used for new lines that do not directly connect to the existing LRT line. The Downtown Connector will be part of the new low-floor LRT network that will connect the other future low-floor LRT lines such as West and Southeast. Opportunities for efficient transfers are proposed where the existing LRT line and the future low-floor LRT lines intersect, such as at Churchill Square.



Low-Floor LRT

Low-floor LRT vehicles were first introduced in the late 1980s and have since evolved to become the industry standard for new LRT systems in Europe and North America. Most of the mechanical equipment on a low-floor LRT vehicle is located on the roof, so doors can be provided at street-level for step-free boarding onto the vehicle.

The biggest advantage to a low-floor LRT system is that the stops can be smaller and require minimal infrastructure - a stop can be as simple as a raised curb and sidewalk. This makes it easier to integrate stops into their local surroundings with a more urban feel. Since ramps and steps are not needed, low-floor LRT stops also provide better pedestrian connections and fewer barriers to people with mobility difficulties.



Changes Made Following November 2010

The following changes have been incorporated into the concept design for the Downtown LRT Connector following the public open house in November 2010:

- The Campus Stop has been moved to 107 Street between 104 and 103 Avenue.
- A single LRT vehicle parking lane has been provided on the west side of 107 Street between 102 Avenue and Jasper Avenue.
- A dedicated two way cycle lane has been provided on 102 Avenue between 107 Street and 99 Street.
- A continuous eastbound traffic lane has been provided on 102 Avenue between 107 Street to Jasper Avenue / 95 Street.
- On-street parking has been provided on 102 Avenue.
- Parking / loading has been provided between 96 and 95 Street.
- Dedicated pedestrian crossing has been provided west of 95 Street across 102 Avenue.



107 Street Stop

The LRT will cross the 109 Street intersection in the centre of the street, before turning south onto 107 Street. The stop is located on the west side of 107 Street between 104 Avenue and 103 Avenue. The route and stop are located within the existing street right-of-way with a single northbound traffic lane (between 103 Avenue to 104 Avenue). The stop provides convenient connection to both Grant MacEwan University and NorQuest College. Property purchase will be required at the corner of 104 Avenue and 107 Street. The LRT continues on the west side of 107 Street through to 102 Avenue.

Features

- Serves Grant MacEwan and NorQuest campuses
- Minimizes LRT impact on 109 Street intersection
- Supports development in the Capital City Downtown Plan Warehouse Campus District





EDMONTON LRT EXPANSION

107 Street Stop

- | | |
|----------------------------------------------------------|----------------------------------------------------------|
| ■ LRT at Grade | ■ Roadworks |
| ■ Underground LRT | ■ Cycle facilities |
| ■ LRT stop platform | ■ Sidewalk |
| | ■ On-street parking |

107 Street

The LRT continues on the west side of 107 Street before turning east onto 102 Avenue. A single LRT vehicle parking lane will be located on the west side of 107 Street between 102 Avenue and Jasper Avenue. The parking lane will help support the operation of the system, allowing a failed or spare vehicle to be stored.





EDMONTON LRT EXPANSION

107 Street

- LRT at Grade
- Underground LRT
- LRT stop platform
- Roadworks
- Cycle facilities
- Sidewalk
- On-street parking

105/106 Street Stop

The LRT turns from 107 Street onto the north side of 102 Avenue. The 105/106 Street stop is on the north side of 102 Avenue, with a low level stop platform occupying much of the block between 105 Street and 106 Street. The LRT continues from this stop along the north side of 102 Avenue to the Centre West stop.

The stop platform on the north side of the street is integrated with the existing sidewalk and exclusive bicycle lanes are provided along 102 Avenue through to 99 Street. One lane of traffic is provided along 102 Avenue (eastbound) for local traffic access. Parking is shown along the south side of 102 Avenue and is indicated in blue.

Features

- Passenger and pedestrian focused stop
- Dedicated bicycle lanes provided in both directions
- Wide sidewalks and a safe pedestrian-friendly environment
- Local vehicle access maintained
- Parking provided where possible





EDMONTON LRT EXPANSION

105/106 Stop

- | | |
|----------------------------------------------------------|----------------------------------------------------------|
| ■ LRT at Grade | ■ Roadworks |
| ■ Underground LRT | ■ Cycle facilities |
| ■ LRT stop platform | ■ Sidewalk |
| | ■ On-street parking |

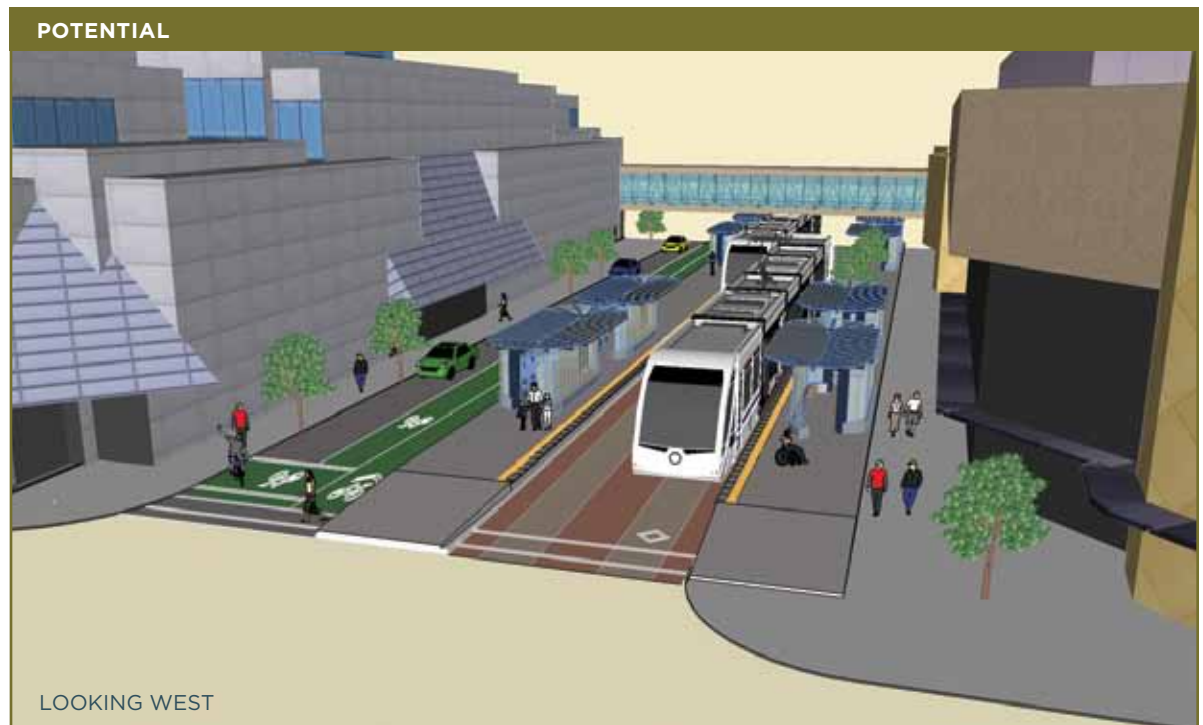
Centre West Stop

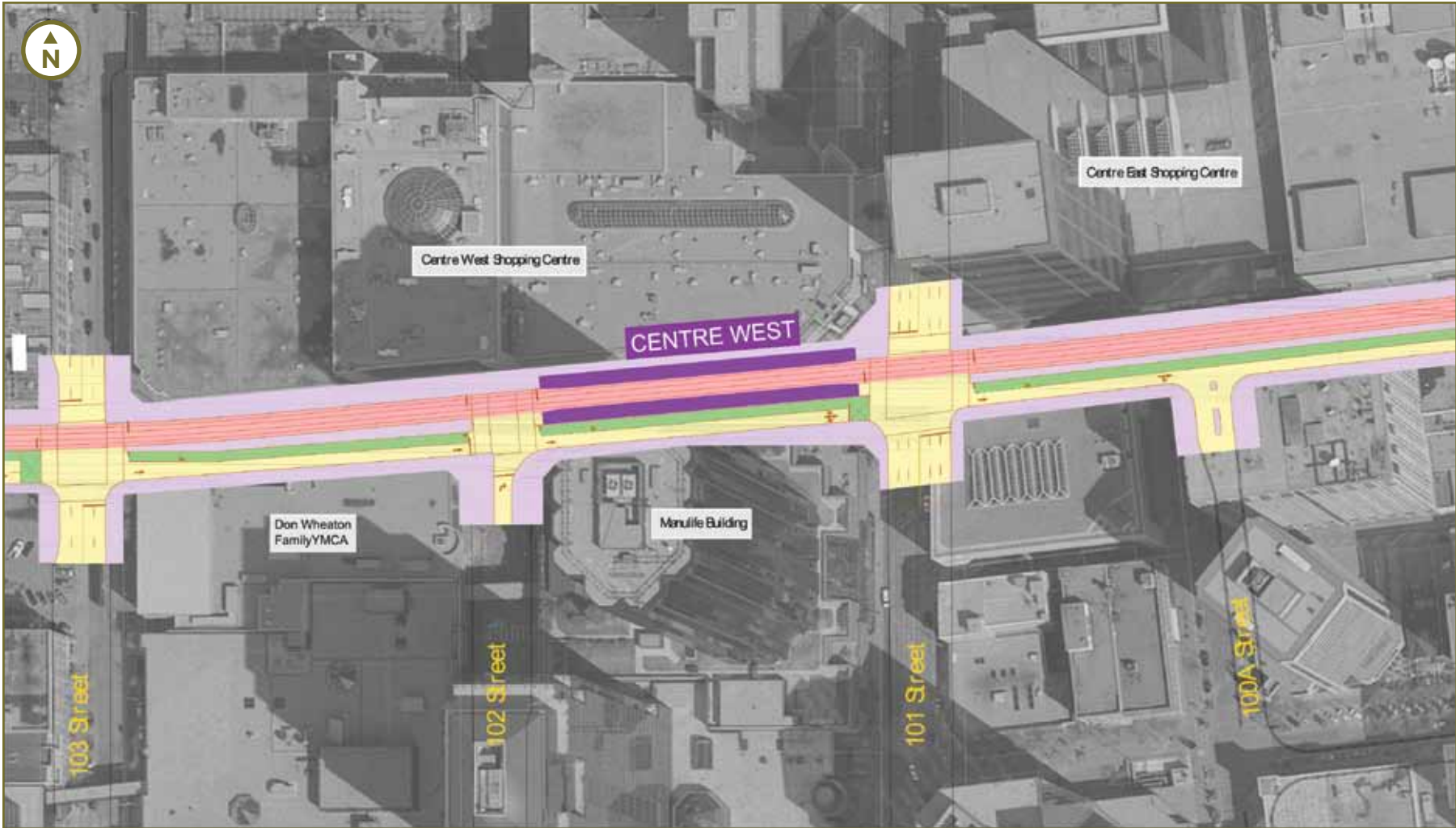
The LRT continues along the north side of 102 Avenue. The Centre West stop is located on the north side of 102 Avenue, with the stop platform located between 101 Street and 102 Street.

The stop platform is integrated with the existing sidewalk. Bicycle lanes are provided. One eastbound vehicle lane is provided from 103 Street through to 101 Street.

Features

- Serves the central business district and downtown retail destinations
- Access to the proposed downtown arena development
- No land acquisition required
- Dedicated bicycle lanes in both directions
- Local vehicle access maintained
- Wide sidewalks and a safe pedestrian-friendly environment





EDMONTON LRT EXPANSION

City Centre West Stop

- | | |
|-----------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| LRT at Grade | Roadworks |
| Underground LRT | Cycle facilities |
| LRT stop platform | Sidewalk |
| | On-street parking |

Churchill Square Stop

The LRT runs on the north side of 102 Avenue between 101 and 100 Streets. Special design provisions will be incorporated to minimize potential noise and vibration impacts to the Winspear Theatre.

The Churchill Square stop is located on the north side of 102 Avenue between 100 Street and 99 Street. A single eastbound traffic lane runs through to 97 Street. Dedicated bicycle lanes are provided in both directions, with a connection to the continuing east west route provided along 99 Street and 102A Avenue. A new entrance to the existing underground Churchill LRT station will be built at the northwest corner of the 99 Street/102 Avenue intersection. A single north bound lane with on-street parking will be retained on 99 Street between 102 Avenue and 102A Avenue.

Features

- Direct and enhanced connections to underground LRT at Churchill Square for easy transfer
- No land acquisition required
- Direct access to Churchill Square
- Dedicated bicycle lanes in both directions
- Wide sidewalks and a safe pedestrian-friendly environment





EDMONTON LRT EXPANSION

Churchill Square Stop

- LRT at Grade
- Underground LRT
- LRT stop platform
- Roadworks
- Cycle facilities
- Sidewalk
- On-street parking

Quarters Stop

The LRT continues on the north side of 102 Avenue up to 96 Street, where it crosses over to the south side of the street and continues on the Southeast LRT route across the river to the Muttart Conservatory stop.

The Quarters stop is located on the north side of 102 Avenue, west of the 96 Street intersection. This location provides opportunity for the LRT to encourage mixed-use development and revitalize the area.

A single eastbound traffic lane will be provided from 97 Street through to 96 Street.

Features

- LRT as a stimulus to encourage future development and revitalization
- Pedestrian plaza adjacent to stop platforms
- Wide sidewalks and a safe pedestrian-friendly environment
- Local vehicle access and on-street parking for local businesses maintained





EDMONTON LRT EXPANSION

Quarters Stop

- | | |
|----------------------------------------------------------|----------------------------------------------------------|
| ■ LRT at Grade | ■ Roadworks |
| ■ Underground LRT | ■ Cycle facilities |
| ■ LRT stop platform | ■ Sidewalk |
| | ■ On-street parking |

Quarters Connection to Southeast Line

The LRT will continue east of the Quarters Station and the Downtown corridor on the south side of the existing 102 Avenue. Just east of 96 Street, the LRT will ramp down into a tunnel portal within the centre of 102 Avenue to transition to become an underground line, crossing Jasper Avenue underground, and continuing south under 95 Street in an approach to cross the North Saskatchewan River.

The LRT design has been coordinated with the ultimate roadway configuration planned for the Quarters. 102 Avenue east of 96 Street will be reconfigured to provide one lane of traffic in each direction. To accommodate the track as the LRT enters the tunnel portal and curves to the south, some property acquisition is required on the south side of 102 Avenue approaching Jasper Avenue.

Pedestrian crossing will be provided at 96 Street and at the east end of the portal. Loading and drop off parking spaces will be provided at the east end of 102 Avenue.

Features

- Service to Quarters redevelopment area
- Coordination with ultimate Quarters roadway configuration
- Tunnel under 95 Street





EDMONTON LRT EXPANSION

Tunnel Portal

- LRT at Grade
- Roadworks
- Underground LRT
- Cycle facilities
- LRT stop platform
- Sidewalk
- On-street parking

Strategy

Where we are today
CONCEPT
PHASE

Design

Build

Operate

What Happens Next?

City Council will decide whether to approve the Downtown LRT Connector concept plan that will be presented on May 25, 2011.

Edmontonians will also have the opportunity to present their views about the plan.

Concept Plan Presentation

Wednesday, May 25, 2011

Transportation and Public Works Committee
City Hall, 1 Sir Winston Churchill Square

Register to speak on www.edmonton.ca/meetings, or call the City Clerk's office at **780-496-8178**.

To find more about the Downtown LRT Connector project

Visit www.edmonton.ca/LRTprojects

Call the LRT projects info line at
780-496-4874

E-mail LRTprojects@edmonton.ca

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