

Metro Line NW Extension Light Rail Transit

Business Case Summary

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LRT DELIVERY
Integrated Infrastructure Services
City of Edmonton

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Overview

The Metro Line Northwest (MLNW) is the first extension of the existing Metro Line light rail transit (LRT) located in Edmonton, Alberta. As a continuation of Edmonton’s high floor, urban style transit network, it will extend the line from the downtown campus of Northern Alberta Institute of Technology (NAIT) to the newly developing sustainable community of Blatchford.

The delivery of the MLNW will be the first stage in expanding the Metro Line to Northwest Edmonton, which will encourage the further development of the region. Along with other infrastructure investments, this LRT extension will help to position Edmonton as a major economic engine, with a strong focus on energy and urban design and an appreciation for culture, recreation and the arts. It will build upon the vision for the Blatchford redevelopment, help to catalyze transit oriented development, and ensure that the vision for this community is fully realized. The project will reduce congestion, increase transit network capacity, transform surrounding communities, provide long-term environmental benefits and create job opportunities for Albertans and Canadians.

Background & Context

Metro Line NW

The MLNW represents the first extension to the currently operating 3.3-kilometre Metro Line. The overall Metro project is one of the identified LRT lines in the Master Plan -- a 21.3 kilometre high floor, urban style light rail transit (LRT) line extending from Churchill LRT Station in downtown Edmonton northwest to the City of St. Albert. It is envisioned to be a unique hybrid of urban and



suburban styles - certain portions of the alignment will be integrated into urban communities while other segments will run through suburban areas. For the purpose of procurement and implementation, extensions to the Metro Line will likely be delivered in several stages:

1. NAIT to Blatchford (~1.5 kilometres); known as the Metro Line NW Extension
2. Blatchford to Castle Downs (~4.2 kilometres)
3. Castle Downs to Campbell Road (~5.2 kilometres)
4. Campbell Road to St. Albert (~7 kilometres)

Blatchford Redevelopment

Blatchford is a new community located on the 536-acre former City Centre Airport site. Blatchford is a once-in-a-lifetime, city-building opportunity to create a transit-oriented, environmentally sustainable and vibrant community in the heart of the city.

Embedded in the City's vision for Blatchford is creating a 'people-first' community designed for active modes of transportation. In other words, it is envisioned that walking, cycling and transit would be an easy and accessible transportation choice for

those living and working in the neighbourhood. Therefore, the redevelopment of Blatchford has been carefully planned with future LRT expansions in mind.

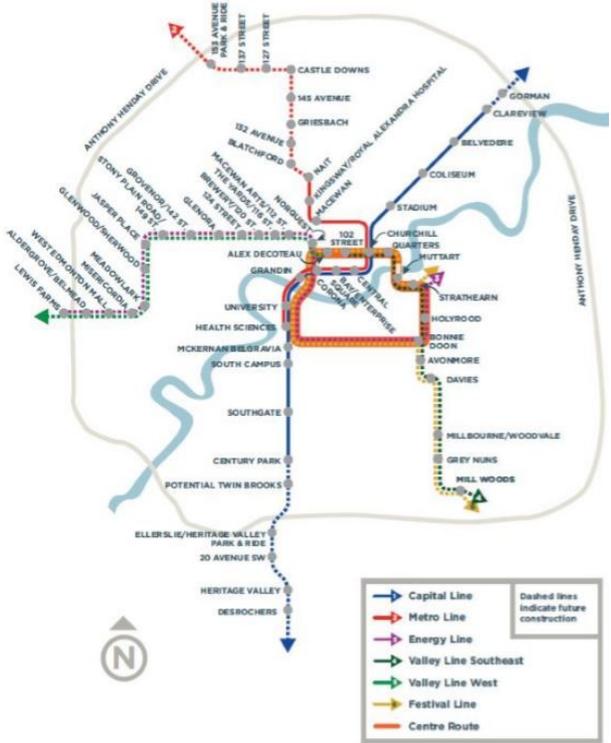
In unison, the Blatchford redevelopment and Metro line will link approximately 30,000 residents with transit connections to post-secondary institutions, shopping and amenities, health care facilities and Edmonton's downtown core. The two projects will showcase the City's aspirations for communities that are urban, sustainable, and livable for the future of Edmontonians.

Blatchford will be home to 30,000 Edmontonians living, working and learning in a sustainable community that uses 100 percent renewable energy, is carbon neutral, significantly reduces its ecological footprint, and empowers residents to pursue a range of sustainable lifestyle choices.



LRT Network

In 2009, the Edmonton Metropolitan Region Board, formerly known as the Capital Region Board, endorsed the Integrated Regional Transportation Plan (Master Plan); a plan designed to connect the Edmonton Metropolitan Region municipalities and set out principles to protect the environment, strengthen communities, minimize the regional footprint and increase regional economic development and transportation choices. The Master Plan identifies the LRT network as a critical component; delivering high quality, fully accessible, safe, efficient and environmentally sustainable mode of



transportation that maximizes passenger convenience and supports transit oriented land use policies. The Metro Line is one of the identified projects in the Master Plan.

Project Benefits

The investment in the MLNW extension will result in a number of benefits that will have a positive impact on commuters, communities, residents, businesses and the environment.

Transportation Benefits

Reduce Congestion



The MLNW project will reduce congestion by moving people out of their cars and onto transit. It is anticipated that the MLNW extension will attract approximately 8,000 transit users on opening day, with expected long-term increases as Blatchford continues to grow and the NAIT campus expands.

Daily Ridership	Opening Day	20 Years
Metro Line North West	8,000	17,600
Metro Line (Health Sciences to Blatchford Station)	42,600	--
Metro Line (Health Science to Campbell Road)	--	111,000

Operating in its own right-of-way, the Metro project will not only provide a faster service for more people, but as roadway congestion further increases in Edmonton, the LRT line will continue to provide the same, consistent, quality journey time well into the future.

Increasing transit ridership can also play an important role in reducing automobile-related collisions; fewer vehicle kilometres travelled can help decrease the likelihood of collisions particularly during the peak hours of commuter travel.

Improve Access



MLNW will create improved access to the regional transportation network, providing residents with more choices to live or work in close proximity to transit. The current regional transit service will also connect to the rapid transit

network - again providing residents in communities adjacent to the extension more options for commuting and travelling within the City.

In addition, the availability of affordable transportation presents better opportunities for lower-income populations, the elderly, disabled groups and youth -- providing them with greater access to medical facilities, public amenities, education institutions, employment opportunities and recreational facilities with greater ease.

Provide Seamless Integration



People expect efficient and convenient access to transit systems, with adjacent amenities and pedestrian and cyclist infrastructure including kiss and rides, convenient bus connections and park and rides. Where possible, the MLNW will be developed to provide unimpeded and seamless integration to key cycling and pedestrian infrastructure. For instance, the project's design includes several examples for integration including:

- Surface-level operations, which reduces the time of system egress to surrounding amenities
- Smaller scale stops that have reduced physical barriers for seamless integration
- Alignment with the City's cycle track and pedestrian pathways



Economic, Social and Environmental Benefits

Attract Employment and Create Jobs



The MLNW project will generate direct jobs in design, construction, equipment, vehicle supply/installation and operations and maintenance and create indirect jobs with suppliers and services to the companies providing these elements. The expenditure of wages and salaries by these workers will support additional induced employment in a variety of goods and service industries. Altogether, project construction will result in **294** jobs over seven years. Operations and maintenance will result in **55** jobs per year for thirty years.

Transform Communities



In order to maximize the effectiveness of investment in transit, the MLNW will use an integrated approach to land use, enabling informed decisions that support an efficient, sustainable, compact and vibrant City. As set out by the City's Transit Oriented Development (TOD) guidelines, the MLNW project will:

- Focus medium and higher-density residential and employment growth around LRT stations and ensure land use reflects the characteristics of surrounding areas
- Create a system that is safe and convenient for all modes of transportation, including pedestrians and cyclists
- Create a variety of public open spaces that will support existing and future population density and activity around LRT platforms and station areas
- Create compact neighbourhoods that will bring together an appropriate mix of housing, jobs, shopping and services within convenient walking distance around transit stations



- Create opportunities for mixed use developments that include affordable housing, encouraging a healthy labour market by attracting new workers to the City and providing opportunities for families to prosper and remain in neighbourhoods of their choice

Environmental Protection



Climate change is a fundamental issue of our time. The implementation of light rail transit provides opportunities to shift automobile dependencies and reduce harmful greenhouse gases providing cleaner air and a healthier environment. The integration of the Metro Line into Blatchford will support and improve the quality of life and create further healthy sustainable communities in Edmonton.

The MLNW project is expected to reduce GHG emissions by 1,300 tonnes annually. In the first twenty years of operation, it is forecasted that the MLNW will reduce GHG emissions by approximately 7,830 tonnes.

Engagement & Consultation

Edmontonians have played an essential role in the plan and design for the Metro Line LRT since 2010. Providing public experiences and perspectives has been vital to informing the development of MLNW as LRT provides an important role in shaping and connecting the City including daily interactions from public.

Public input for the MLNW began with the identification of the corridor in 2010, through to the finalization of the concept plan in 2013. Thousands of Edmontonians have been engaged through workshops, stakeholder interviews/meetings, questionnaires, online consultations and open houses.

Public Engagement

Since 2016, there have been three phases of engagement:

- In 2016, there was a re-introduction of the project and concept plan to the public

- Concept amendment recommendations were brought forward for feedback; guiding the recommendations brought forward to City Council for final approval in March 2018
- In 2018, a survey regarding design options for various concepts along the MLNW extension. 1,203 people responded in total and a summary report was published in November of that year.

Indigenous Consultation

The Edmonton area resides within both Treaty 6 Territory and Region 4 of the Metis Nation of Alberta with Indigenous peoples. The City is currently undertaking engagement with over 20 Indigenous communities on six LRT projects. The goal is to honour the importance of positive relationships within the spirit of reconciliation. The process includes consultation, involvement, and communication through the design, procurement, construction, and operating and maintenance phases of the project.

Innovation

A critical priority for the City is to design transit systems that are fully integrated into the communities it serves. Sustainable Urban Integration (SUI) was developed to focus the requirements on the integration of transit into the urban environment providing safe, accessible and connected facilities. Building beyond just tracks and trains, the City aims to create neighbourhoods that are livable, pedestrian-friendly environments; adding enhancements that reflect the feel and character of each community along the LRT corridor. Additional features will include enhanced landscapes and hardscapes along the corridor that will create a natural environment incorporating organic material.



Project Timeline



*Timelines subject to change.