

Valley Line (SE to West) LRT Preliminary Design

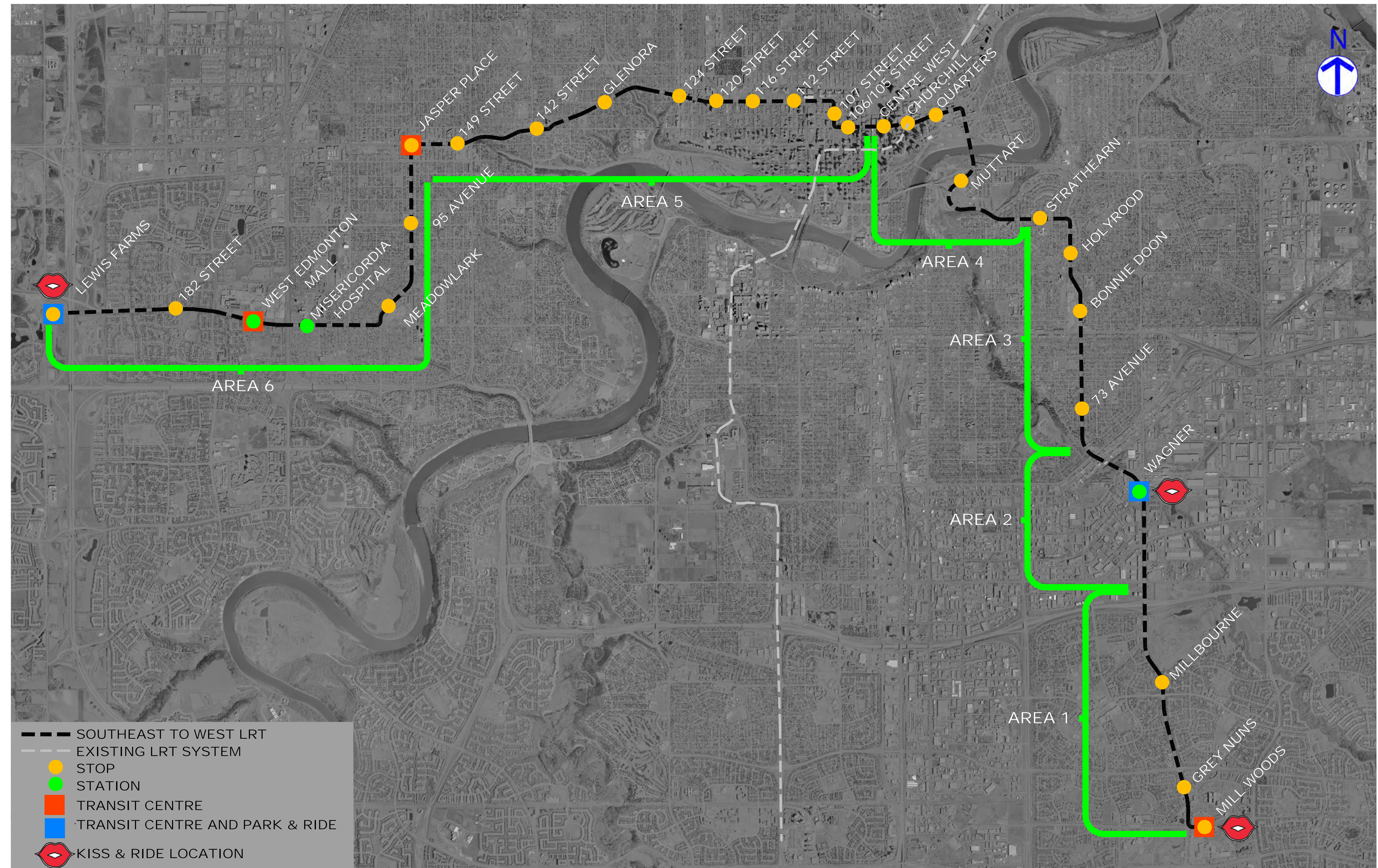


Valley Line LRT Corridor



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- Council approved
- 27 km line with 3 stations, 25 stops
- 6 bridges
 - Over North Saskatchewan River from Muttart Conservatory to Louise McKinney Park
 - Over Groat Road at 104 Avenue
 - Over 170 Street at 87 Avenue
 - Over Anthony Henday at Webber Greens Drive
 - Over Whitemud Drive at 75 Street
 - Over CN/CP rail lines along 75 Street
- 1 pedestrian bridge at Connors Hill
- 1 tunnel between Louise McKinney Park and 102 Avenue
- 2 Park 'n' Ride sites
- 3 Kiss 'n' Ride sites (other sites being considered)
- Integration with 5 transit centres
- 1 Operation and Maintenance Facility



PARK 'N' RIDE

Car park connected to transit station that allows commuters to leave vehicles and transfer to bus or LRT.

KISS 'N' RIDE

A place where commuters are driven and dropped off at a bus or LRT stop/station. Other Kiss 'N' Ride locations are being determined.

TRANSIT CENTRE

A stopping point for bus and LRT where commuters can move from one transit mode to the other.

Welcome!



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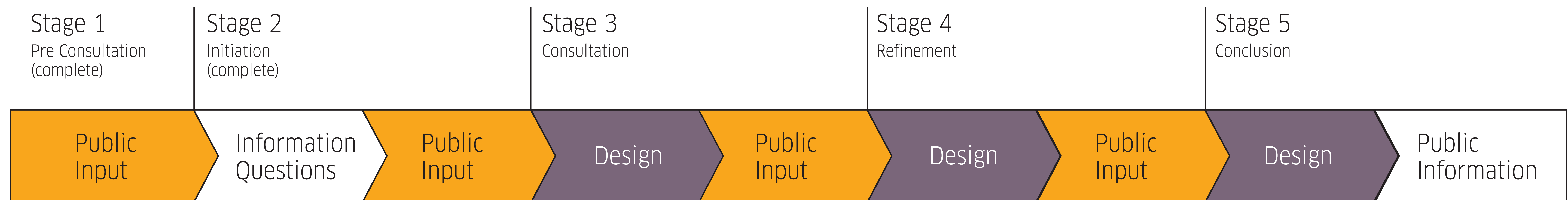
Public Involvement for Preliminary Design of the Valley Line (SE to West) LRT



PROJECT PURPOSE: To develop and finalize the Preliminary Design for a 27 km urban style, low-floor light rail system along the approved corridor from Mill Woods to Lewis Farms.

MEETING PURPOSE: To obtain your feedback to finalize the preliminary design for the Centre West to Lewis Farms segment of the Valley Line LRT.

WE ARE HERE





Mill Woods to Centre West: Stage 1

2013 - 2016: **Procurement and Design**

2013: **Utility Relocation Begins**

2015 - 2019: **Construction**

2019: **Opening Day**

- Schedule is dependent on funding approval.

Centre West to Lewis Farms: Stage 2

- Schedule is dependent on funding approval.
- If funding is secured, construction could begin as early as 2020.

Valley Line LRT

- Trains run on approx. 5 minute intervals during peak hours
- Trains share traffic signals with other road users
- A complementary bus network will be developed—some existing bus stops may be relocated to work better with LRT



- Improves connection between LRT and community
- Smaller scale stops, spaced closer together
- Less impact in community
 - Stops at street level
 - Reduced right-of-way
- Encourages pedestrian access
- Fewer barriers, gates and bells
- Strong bus, pedestrian and bicycle connections
- Reduced speeds in congested areas

Urban Style LRT

(continued)

- Investment in landscaping and architectural features
- Maximizes openness of space to create safe environment
- Does not share right of way with other road users but does share traffic signals
- City Council direction for extensions to existing and all new LRT lines

Low Floor Technology

- Stops are similar to bus stops—at street level
- Passengers board at street level
- Industry standard for LRT systems worldwide



Integrated Urban Style

roadways



sidewalks



Integrated Urban Style

catenary



public art



Integrated Urban Style

track



stops & stations



Stops and Stations

What is a stop?

A stop is similar to bus stops in terms of scale. It contains basic amenities and is accessed at street level.

What is a station?

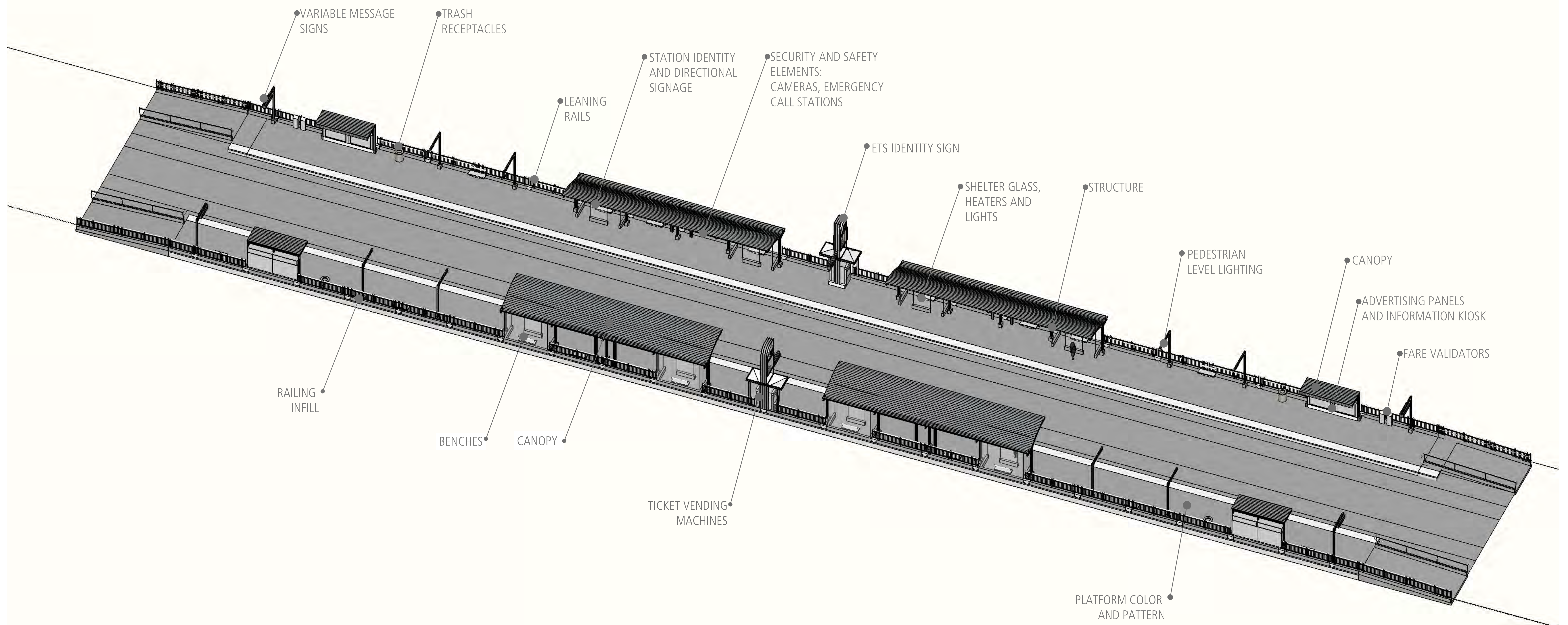
A station is an elevated stop. It contains basic amenities and is accessed using stairs or elevators.



Stop Elements



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- All layouts and scale to be confirmed as design progresses, based on ridership projections

We Heard:
Organic form is preferred
by the public.

Organic form that recalls the river and natural
history of the area.

Materials:

- Steel structure
- Metal and wood canopy
- Glass shelters
- Unique concrete finishing
on platform

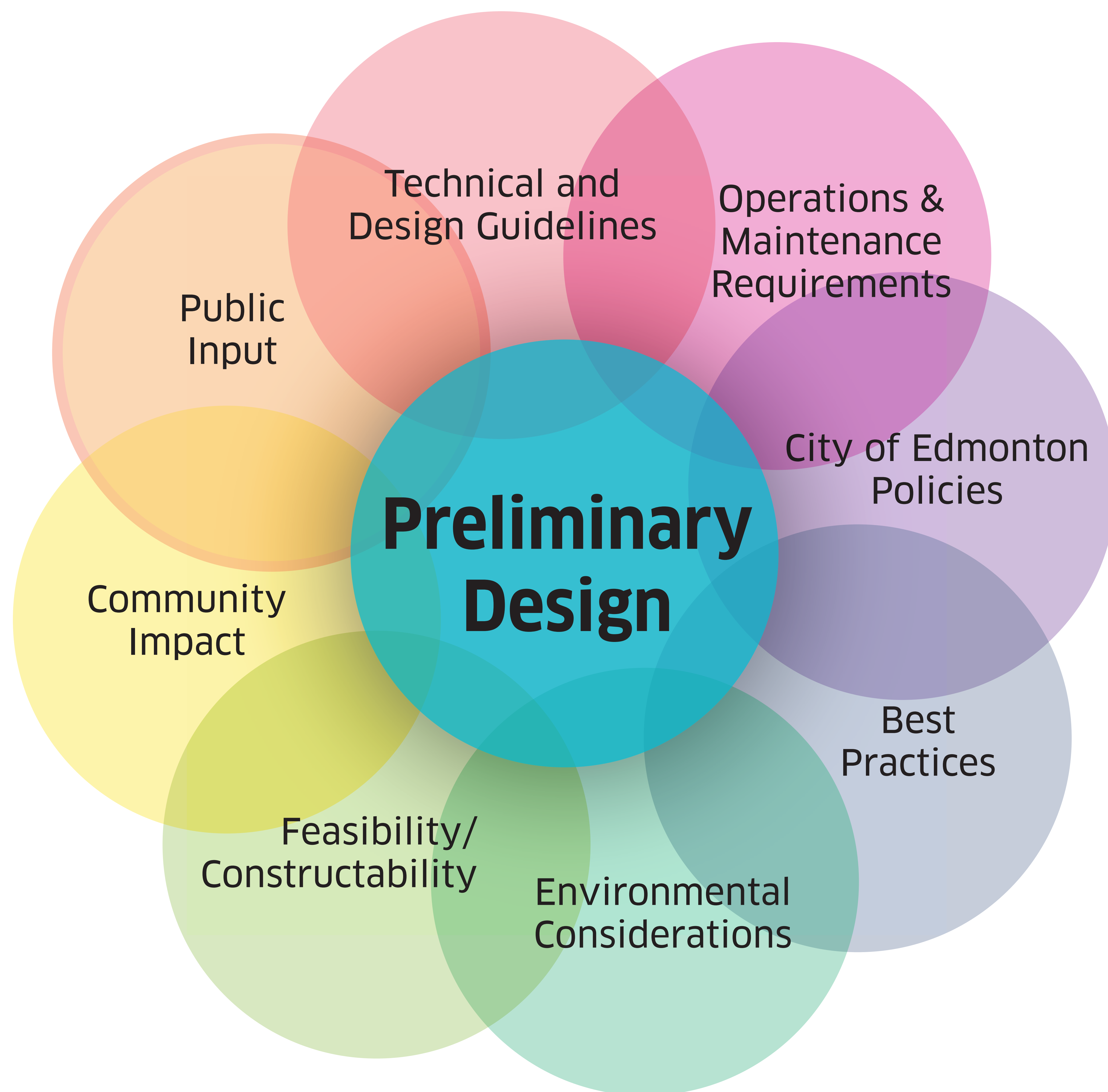


Thanks for Getting Involved!



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Your input is valuable and used along with other information to inform the project.



We look forward to seeing you at our next public event in [September 2013](#).

For more information go to:
www.edmonton.ca/setowestlrt

What We Heard from Stage 3



What We Heard

Stops

- Stakeholders confirmed the vision of all stops and stations, with some direction for a more historic influence for 116 Street and 120 Street stops.
- Stakeholders chose themes for a variety of stop/station elements, such as benches and paving.

Shelter Canopies

- Of three shelter canopy options, stakeholders preferred the organic shaped canopy.

Pedestrian Crossings

- Stakeholders value pedestrian access and want information on how they will navigate the LRT corridor.

Bicycles

- Stakeholders indicated they want bicycle lanes on major roadways.

Vehicular Movements and Access

- Stakeholders voiced concerns about impacts to vehicle accesses into neighbourhoods, businesses, schools and residences along the LRT corridor.

Parking

- Stakeholders voiced concerns about the loss of parking along the corridor.

Noise

- Stakeholders voice concerns about noise from the operation of the LRT.

Vibration

- Stakeholders voiced concerns about vibration during construction and operations.

Bridge over 178 Street

- Stakeholders requested that consideration be given to providing a bridge for the LRT over 178 Street.

Shortcutting and Parking in Neighbourhoods

- Stakeholders voiced concerns about people parking in residential neighbourhoods to access the LRT or shortcutting through neighbourhoods.
- Stakeholders identified that the Lewis Farms Park 'n' Ride needed to be increased in size.

How the Information is being used

- The themes for 116 Street and 120 Street stops have been modified to a more historic flavour.
- The preferred themes for stop/station elements are shown on the Corridor and Access Plans adjacent to the stop plans. These are not final selections but provide direction to the design team.
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- New, retained and relocated pedestrian crossings are illustrated on the Corridor and Access Plans. Accommodating pedestrians and creating ease of access for pedestrians to the LRT is a priority.
- Bicycle lanes are included along the corridor as per the Concept Plan approved by City Council. Local connections to the City of Edmonton cycling network will be refined as the cycling network grows and as preliminary design continues.
- New, retained and relocated vehicle movements and accesses are illustrated on the Corridor and Access Plans.
- New and retained vehicle parking is illustrated on the Corridor and Access Plans.
- Noise impact assessments have been conducted. See Noise Impact Board.
- General vibration screening is ongoing. Pre-construction assessment of structures and houses abutting the LRT route may be completed. See Vibration Impact Assessment board.
- The Concept Plan and associated studies do not currently recommend a bridge at this location. This may be reviewed closer to construction of the west leg of the SE to West LRT (Stage 2).
- The City will assess these potential issues after construction to determine their impact and strategies to avoid them.
- The design of Lewis Farms Park 'N' Ride is currently under review.

Public Art



- Public art is considered to be a key component to attractiveness and identity of city
- Public art strengthens local economy
- Support for arts is a reflection of a progressive municipality
- The City dedicates 1% of qualifying construction budgets to public art
- Approved public art will be displayed within or in close proximity to the LRT corridor
- Art will be created by a wide range of artists, including those with Aboriginal and multicultural backgrounds. There will be opportunities for local artists
- Selected art will suit the scale and reflect the diversity of the neighbourhoods
- Art pieces may be functional, integrated and/or stand alone
- The Edmonton Arts Council will develop a Public Art Plan outlining potential public art projects along the LRT corridor



Integrated public art at transit stops.

HAVE YOUR SAY



Have Your Say!

To comply with the City of Edmonton's River Valley Area Redevelopment Plan (Bylaw 7188), an Environmental Impact Assessment of the project is being conducted.

Your input is important.

Please provide any information that you wish the project team to consider regarding the environment within, or adjacent to, the project boundaries. A draft is complete.

Put your comments directly on the map with sticky notes or complete the comment form today or online at www.edmonton.ca/setowestlrt

Your comments will be compiled and considered during the finalization of the environmental assessment and future development of mitigation measures.

As part of the EIA, the following field investigations have been completed or are underway:

- **Vegetation** – vegetation and rare plant surveys, completed in summer 2012.
- **Wildlife** – a breeding bird survey, completed in spring 2012; wildlife movement reconnaissance, winter 2012.
- **Fish** – a fish and fish habitat assessment, completed as part of the earlier planning phase.
- **Geotechnical** – a series of boreholes have been drilled in the river valley, to characterize fills, surficial deposits, and bedrock and, where appropriate, assess contaminants.
- **Hydrology** – borehole data is being used to assess groundwater conditions.
- **Historical Resources** – archaeological and paleontological impact assessments, completed in 2011.
- **Noise and vibration assessment** – completed in 2012.





An Environmental Impact Assessment (EIA) document is being prepared to meet the requirements of the City of Edmonton's North Saskatchewan River Valley Area Redevelopment Plan (Bylaw 7188).

The EIA:

- Describes existing environmental conditions
- Assesses potential impacts
- Describes mitigation measures intended to eliminate or reduce impacts to each Valued Environmental Component (VEC)
- The following VECs are being assessed to identify ways in which the proposed project could affect biophysical and socio-economic resources:
 - **geology and geomorphology (including slope stability)**
 - **soils**
 - **surface water and groundwater**
 - **vegetation**
 - **wildlife**
 - **habitat connectivity**
 - **fish and aquatic resources**
 - **land disposition and zoning**
 - **residential land use**
 - **recreational land use**
 - **utilities**
 - **worker and public safety**
 - **visual resources**
 - **historical resources**
- The EIA may also be submitted to Fisheries and Oceans Canada and Transport Canada as supporting information for **Fisheries Act** and **Navigable Waters Protection Act** approvals, respectively.

Noise Impact Assessment

FAMILIAR NOISES dBA

Inside average urban home	50
Quiet street	50
Normal conversation at 1 m	60
Noisy restaurant	70
Highway traffic at 15 m	75
Busy traffic intersection	80
Bus or heavy truck at 15 m	88-94
Jackhammer	88-98
Freight train at 15 m	95
Jet taking off at 600 m	100
Amplified rock music	110

- **The City of Edmonton Urban Traffic Noise Policy (UTNP)** states that existing residential locations backing onto transportation facilities that experience noise levels in **excess of 65 dBA Leq(24) will require noise attenuation.**
- **Noise modeling** has been conducted along the Valley Line (SE to West) LRT route.
- Based on modeling, **noise attenuation may be required in specific locations along the West segment.**
- Noise attenuation will be constructed at the same time as the LRT.


Vibration Impact Assessment

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- Vibration could occur during LRT construction and operation
- LRT runs on a continuous welded rail, a technology that minimizes vibration during operation
- A complete vibration screening of the SE to West corridor (route) is being conducted as part of Preliminary Design
- Vibration screening is based on the US Federal Transit Administration (FTA) screening process
- Corridor Wide Assessment is ongoing
 - Screening based on general vibration assessment
 - Accounts for train type, speed, distance from track
 - Screens out residences not affected by vibration
 - Identifies areas that may be affected
- Detailed Vibration Assessment
 - Includes site specific vibration measurements
 - Conducted at Winspear Centre for Music and Citadel Theatre areas (acoustic sensitivities)
 - Recommendations to reduce vibration during LRT operations will be provided if warranted
- Pre-construction assessments of structures and houses abutting the LRT route may be completed



- Land requirements were initially identified in the Concept Plan.
- Engineering completed through preliminary design has confirmed land requirements.
- Land requirements are identified on the corridor maps in purple. 
- The City is actively pursuing property purchases between Mill Woods and Centre West but is not actively pursuing properties between Centre West and Lewis Farms.

City Process to Acquire Land

- The City prefers to purchase land that is up for sale.
- Once the City begins to actively acquire properties for the project and a property is not up for sale, the City will contact the property owners.
- The City will negotiate in good faith to reach an agreement to purchase the property for fair compensation.
- If the property owners and the City cannot reach an agreement, the City may proceed with expropriation.

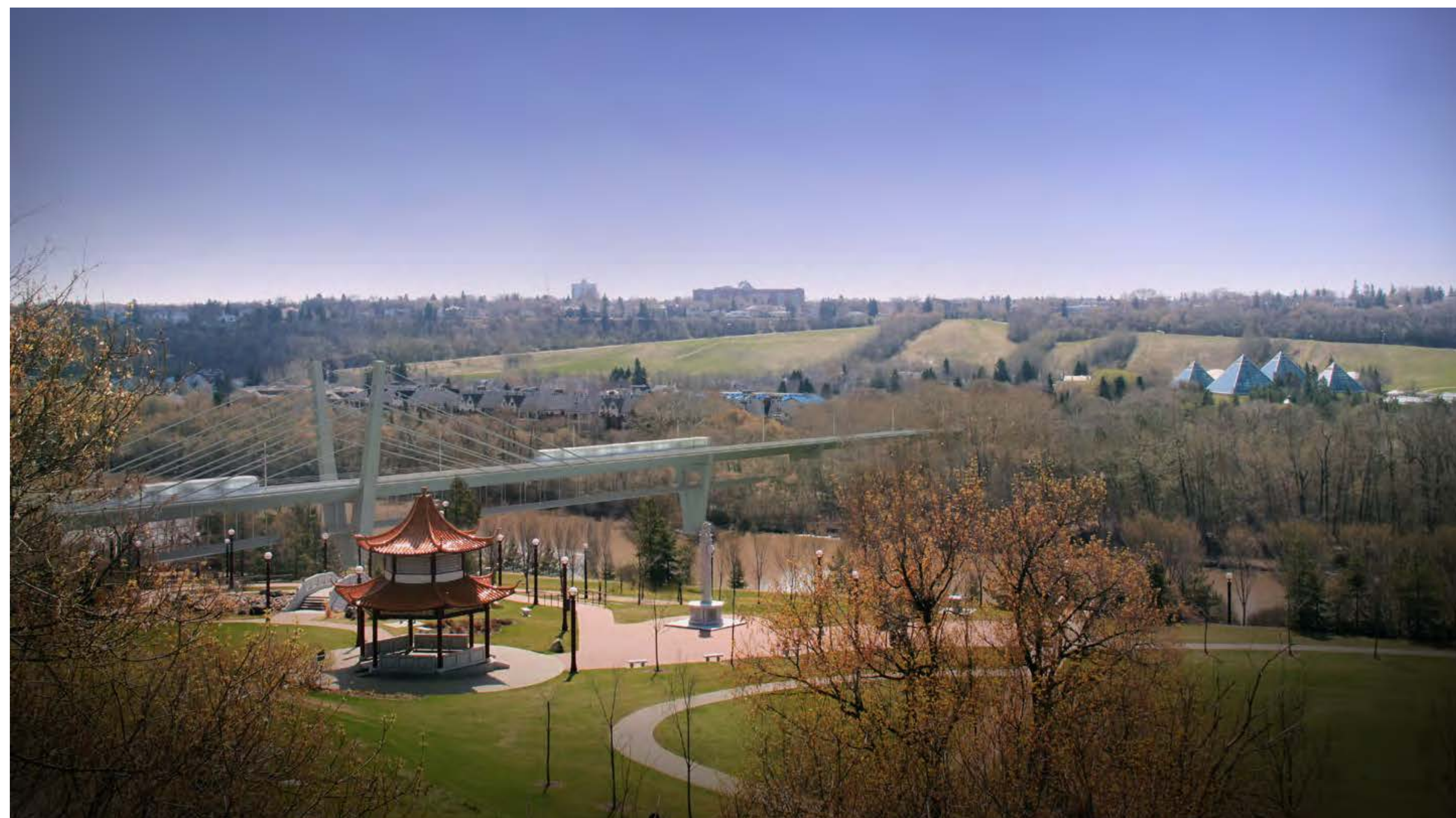
North Saskatchewan River Bridge

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- The new LRT bridge to be built on the existing pedestrian bridge alignment.
- New LRT bridge to incorporate new pedestrian and bicycle facilities under the bridge deck.
- Existing pedestrian bridge to be demolished prior to new LRT bridge construction.
- During construction, pedestrians and bicyclists will be detoured to Low Level Bridge.
- The project team assessed the feasibility of maintaining the existing pedestrian bridge during construction. Due to increased environmental impact on the River and proximity to existing residential development, this option is not being pursued.
- The Extradosed Bridge, as shown here, was approved by Council on February 20, 2013.



Extradosed bridge looking Northwest



Extradosed bridge looking Southeast



Thank you

www.edmonton.ca/setowestlrt