

WELCOME!

South LRT Extension (Century Park to Ellerslie Road)

Public Information Session

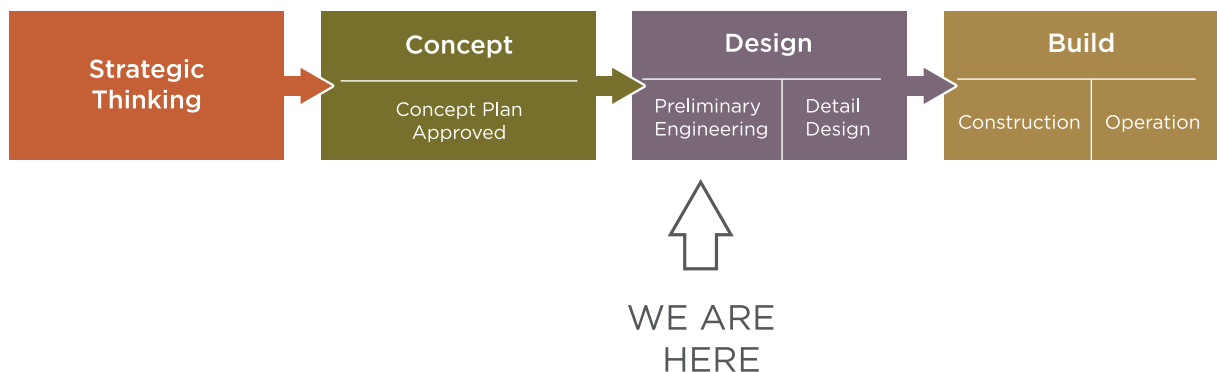
The purpose of tonight's Information Session is to present the recommended preliminary design plans for the future South LRT extension. Feedback from the previous Open House, resident and business meetings and Stakeholder Information Panel meetings in Fall 2009 was considered in the development of the preliminary design plans.

Please feel free to view the information displays, complete a comment form and ask questions of the Project Team.

For updates about this project, please visit the City of Edmonton website: www.edmonton.ca/LRTprojects

Thank you.

Project Life Cycle



AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

Edmonton
CITY OF
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



South LRT Extension (Century Park - Ellerslie Road)

(Concept Plan approved by City Council July 2008)



- 4.5 km LRT extension south from Century Park station to Ellerslie Road
- Underpass at 23 Avenue
- Surface on the west side of 111 Street
- Bridge over Blackmud Creek
- Bridge over Anthony Henday Drive
- LRT Station, Transit Centre and Park & Ride facility at Ellerslie Road/127 Street

AECOM



ISL Engineering and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
LRT EXPANSION BRANCH
CAPITAL CONSTRUCTION



Study Area



AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF EDMONTON
CAPITAL CONSTRUCTION
LRT EXPANSION BRANCH



What is Preliminary Engineering?

The evaluation and recommendation of LRT corridors occurs during the concept planning phase of a project. Preliminary engineering, where we are today, refines how LRT will operate in the corridor; how to integrate the LRT in with adjacent communities and existing landscaping and how to mitigate impacts of the LRT on the existing transportation infrastructure. Our project team is nearing completion on the following:

- **Public Involvement and Information Sharing**
- **Risk Management Plan**
- **Constructability Report**
- **Preliminary Cost Estimates**
- **Preliminary Engineering Reports:**
 - » **Track**
 - » **Noise and Vibration**
 - » **Drainage**
 - » **Station, Park & Ride, and Transit Centre**
 - » **Utilities**
 - » **Roads**
 - » **Cyclists and Pedestrians**
 - » **Safety**
 - » **Landscape Architecture**
 - » **Environmental and Historical**
 - » **Geotechnical**
 - » **Systems and Communications**
 - » **Structures**
 - » **Architecture**

AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Project Schedule

Fall/Winter 2009

- Ongoing Preliminary Design Work
- Stakeholder (business and adjacent residents) Meetings – September 8 & 10, 2009
- Stakeholder Information Panel Meeting #1 – September 24, 2009
- Public Open House – October 8, 2009
- Stakeholder Information Panel Meeting #2 – December 10, 2009

Winter/Spring 2010

- Refinement of Preliminary Design
- Public Information Session – April 7, 2010
- Submission of Station and Transit Centre design to Edmonton Design Committee (EDC) for review – Spring 2010
- Finalize Preliminary Design Report – Spring 2010

Staging Plan & Construction Schedule

- Multi-year construction schedule
- Construction will be staged to accommodate traffic flow and volume, and neighbourhood access.
- Construction not in current 3 year program.



SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD



Public Consultation - What We Heard

- Bridge aesthetics, build less expensive bridges and spend more on landscaping and aesthetics.
- Develop adequate room and protection from the elements at LRT Station.
- Impact on existing berms and trees – relocate mature trees within the community and replace lost trees.
- Impact on property values due to LRT.
- Landscaping/Aesthetics – minimize impacts on the environment, natural suburban theme with lots of trees and use of energy-efficient features.
- Maintenance – easy to maintain LRT features and materials
- Multi-use Trails – pedestrian crossings, trails and connectivity.
- Noise/Noise Walls – desire for noise attenuation.
- Park & Ride/Transit Centre - access and aesthetics, safety and security, pedestrian crossings/trails, lighting and fences.
- Timing and duration of construction
- Traffic and roadway impacts during and following construction – temporary road closures, traffic congestion, access, emergency access and capacity, LRT crossings timed with traffic lights.
- Use of energy-efficient lighting.
- Visual buffering – screening to shield view of LRT. Natural-themed landscaping/screening to shield Park and Ride, LRT Station and Transit Centre.

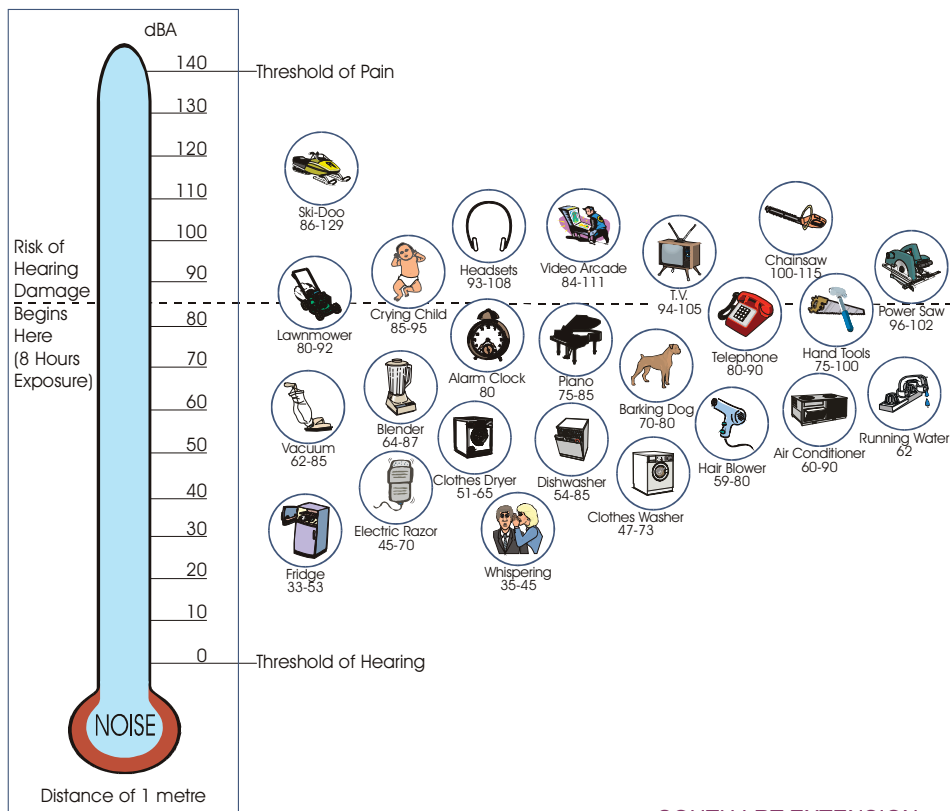
The City of Edmonton Urban Traffic Noise Policy

The Urban Traffic Noise Policy was adopted by City Council on May 16, 2004. Under the Urban Traffic Noise Policy:

The City of Edmonton will seek to achieve a projected attenuated noise level below **65 dBA Leq24** or as low as technically, administratively, and economically practical, with an objective of achieving a noise level of 60 dBA Leq24, where any urban transportation facility (major arterial roadway, light rail transit, or future high speed transit) is proposed to be built or upgraded through or adjacent to a developed residential area. Funding for noise attenuation, where appropriate, and subject to availability, is considered in the cost of the project.

***dBA Leq24** is a measurement that means the traffic noise sound energy level, averaged over a 24-hour period.

Typical Everyday Peak Noise Examples



AECOM



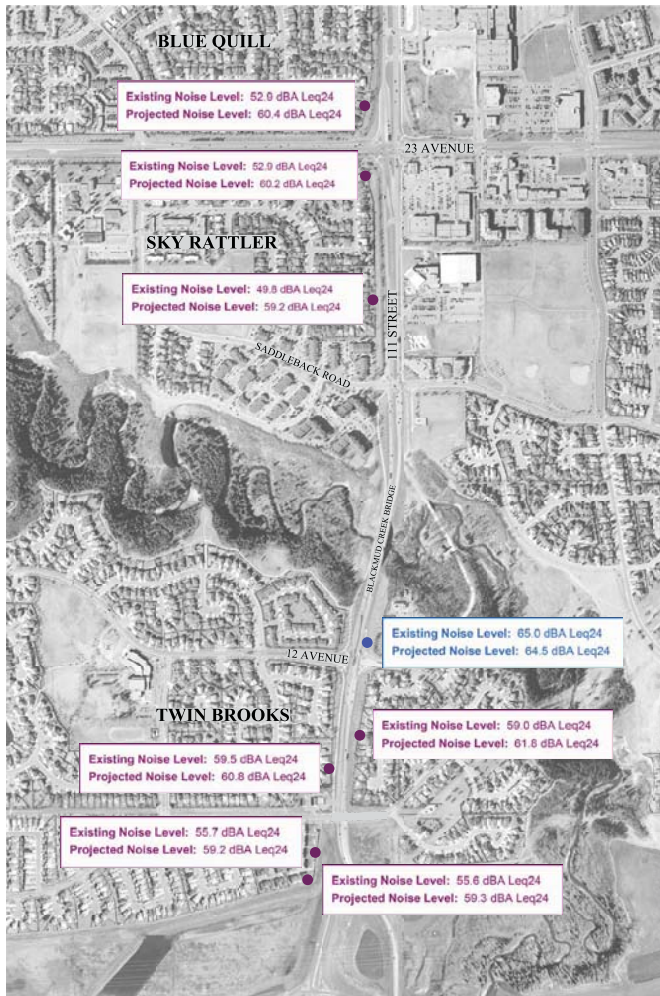
ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Noise Measurements



Noise attenuation (mitigation) was raised as a key concern of this project. As a means to address this, a noise model was developed along the length of the South LRT Extension alignment.

As illustrated to the left, existing noise levels were measured throughout September 2009 in the rear outdoor amenity areas of residences adjacent to 111 Street. Subsequently, a 3D Model was developed using noise monitoring data, survey data (existing topography), and existing and future traffic projects volumes (see photo).

The City of Edmonton bases noise decisions on the City Council approved Urban Traffic Noise Policy. As noise projections along the 111 Street corridor did not exceed 65 dBA Leq (24), noise walls are not warranted.

In keeping with the natural theme, visual screening has been designed as an alternating wood-styled concrete and stone wall. In addition to the primary purpose of providing aesthetic and visual screening benefits, these walls will provide some ancillary noise mitigation.

In some locations a reduction of approximately 2-3 dBA from projected noise levels will occur.

Safety & Security

- Crossing protection identified through safety analysis of each individual crossing
 - » Gates and flashing lights for vehicles
 - » Directional crossing bells for pedestrians
- Security features:
 - » Closed Circuit TV cameras at stations
 - » Appropriate lighting
 - » Security patrol
- Designed/evaluated against Crime Prevention Through Environmental Design (CPTED) standards

Safety & Security Examples



AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF
Edmonton
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH

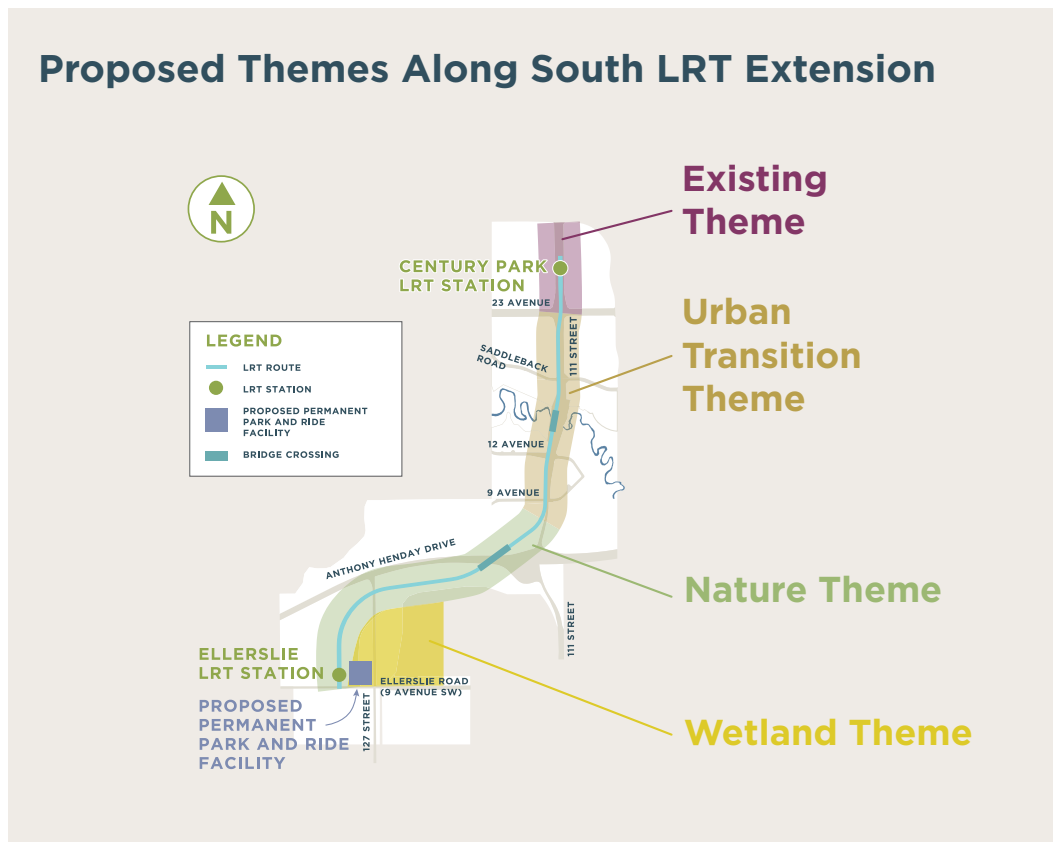


Stakeholder Information Panel (SIP)

Valuable feedback on aesthetics, landscaping, safety, noise attenuation and visual screening was provided by a volunteer Stakeholder Information Panel (SIP) representing the communities adjacent to the South LRT. SIP members were consulted about proposed ideas and concepts, and their input was considered in the final recommended Preliminary Design plans.

Though stakeholder input has to be balanced with budgetary and technical considerations, knowing what residents would prefer makes it easier for the City and project team to develop a “best fit” for the surrounding areas.

The graphic below illustrates the transition from the existing urban theme north of Century Park to a natural theme at the Ellerslie Station and Park and Ride.



Elements of the Proposed Themes Along South LRT Extension

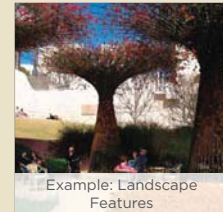
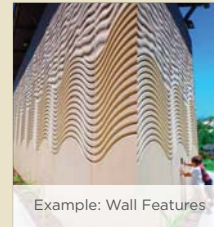
Existing Features:

North of 23 Avenue along 111 Street



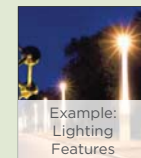
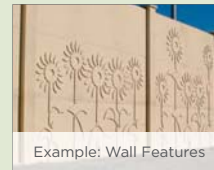
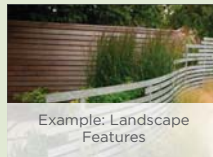
SIP Members Preferred: Urban Transition Theme Features:

Along 111 Street to 9th Ave NW



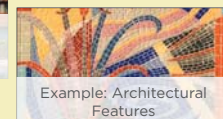
SIP Members Preferred: Nature Theme Vegetation Features:

Along 111 Street from
9th Ave NW to
Ellerslie Road



SIP Members Preferred: Wetland Theme Features:

Along 127 Street south of
Anthony Henday Drive



Urban Transition Theme:

23 Avenue to 9th Avenue NW

23 Avenue/111 Street Southbound Rendering



- Portal wall patterning
- Security fencing
- Grass, trees and other plantings

111 Street/23 Avenue Northbound Rendering



- Multi-use trail
- Alternating wood-styled concrete and stone visual screen wall
- Security fencing and stylized lighting features
- Design elements will extend along 111 Street throughout the urban transition area to 9 Avenue

AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Urban Transition Theme:

23 Avenue to 9th Avenue NW

Blackmud Creek Bridge with Multi-Use Trail on LRT Bridge



- Images of tall grass, leaves, rolling hills and accents of birds on the bridge structure
- Lighting incorporated to increase visibility and safety
- Compliments the creek, trees, plantings and animals in the Blackmud Creek area



Blackmud Creek Bridge Close Up

Urban Transition Theme:

23 Avenue to 9th Avenue NW

111 Street between 12 and 9 Avenue (Twin Brooks)



111 Street and 9 Avenue (Twin Brooks)



- Alternating wood-styled concrete and stone visual screen fence
- Trees and plantings along both sides of 111 Street to enhance the natural look of the community, provide visual screening, and create seasonal interest for pedestrians along the multi-use trail.
- Plants and shrubs selected for this zone typically grow in the Blackmud Creek ravine. Plants and shrubs may include:
 - » trembling aspen, white spruce and lodgepole pine, accented with flowering pin cherry and hawthorn trees
 - » low shrubs may include prickly rose, snowberry, juniper, and low bush cranberry

Urban Transition Theme:

23 Avenue to 9th Avenue NW

111 Street between 9 Avenue and Anthony Henday Drive (Twin Brooks)



- Extension of the urban transition theme to the north border of Anthony Henday Drive
- Alternating wood-styled concrete and stone visual screen fence
- Plants and shrubs continue along both sides of LRT to provide visual screening and enhance natural look of community

AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF EDMONTON
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Nature Theme

South of Anthony Henday Drive to LRT Station

LRT over Anthony Henday Drive

- Under power lines
- Over Anthony Henday Drive
- Bridge concept and alignment currently under review

Aerial of Anthony Henday Drive LRT Bridge between Twin Brooks and MacEwan



- Project team will work with Provincial government on a potential multi-use trail connecting 111 Street to the LRT station

Anthony Henday Drive Bridge Concept



- Nature theme elements will be carried forward into the design
- Bridge concept under review

AECOM

ISL Engineering
and Land Services



SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Nature Theme LRT Station

LRT Station Architectural Rendering



LRT Station Landscape
Architectural Rendering



LRT Station Interior



- Semi-enclosed by a curved, free-formed canopy that provides shelter while maintaining ventilation, clear views, and natural light
- Waiting facilities include both heated, fully enclosed areas, and open sheltered areas
- Focused around increasing the human connection to the natural environment
- Steel roof with natural colour for ease of maintenance and to fit in with community

AECOM

ISL Engineering
and Land Services



SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Nature Theme LRT Station

Ellerslie Park & Ride



- High-headed trees provide shade for transit users
- Low level vegetation helps soften the hard surfaces of the transit center
- Vegetated bioswales throughout the Park and Ride lot
- Safe, centralized walkways

Park & Ride and LRT Station (looking east)



AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
CAPITAL
CONSTRUCTION
LRT EXPANSION BRANCH



Nature Theme LRT Station

LRT Station Landscape Architectural Rendering



Note that the steel art piece shown is only a concept. Actual art elements for the project will be part of the City's "Percent for Art" Policy, administered by the Edmonton Art Council (EAC). Typically, proposals are solicited and art elements are selected by a jury.

Stone Bench Detail for Specimen Trees



Stone Wall and Pavement "River" Detail



Organic-lighting Detail



- Circular stone baskets around selected trees have concrete seats, providing shaded waiting areas
- At the station access location, lower stone walls are capped with secure and unobtrusive fencing
- Paving patterns of alternating sawcut and sandblasted concrete are interrupted by a meandering river of paving stone
- Stone and wire mesh provides a contemporary edge
- Organic-styled lighting

LRT Station & Transit Centre



AECOM



ISL Engineering
and Land Services

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF EDMONTON
CAPITAL CONSTRUCTION
LRT EXPANSION BRANCH



Wetland Theme:

Adjacent to LRT Station

Proposed Stormwater Management Facility



- Stormwater management facility concept under review
- Future land uses surrounding the Park and Ride facility still to be determined
- Location and configuration of stormwater management facility and multi-use trail to be confirmed
- In addition to the stormwater management facility, the wetland theme is also incorporated into the design of the Park and Ride with the use of elements such as vegetated bioswales, organic-styled lighting, and river pattern in the pavement

Wetland Themed Features



Example Sustainable Features:
Bioswales

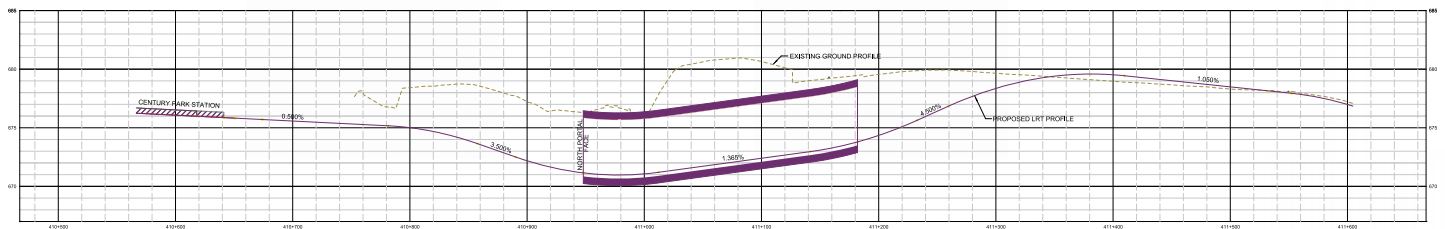
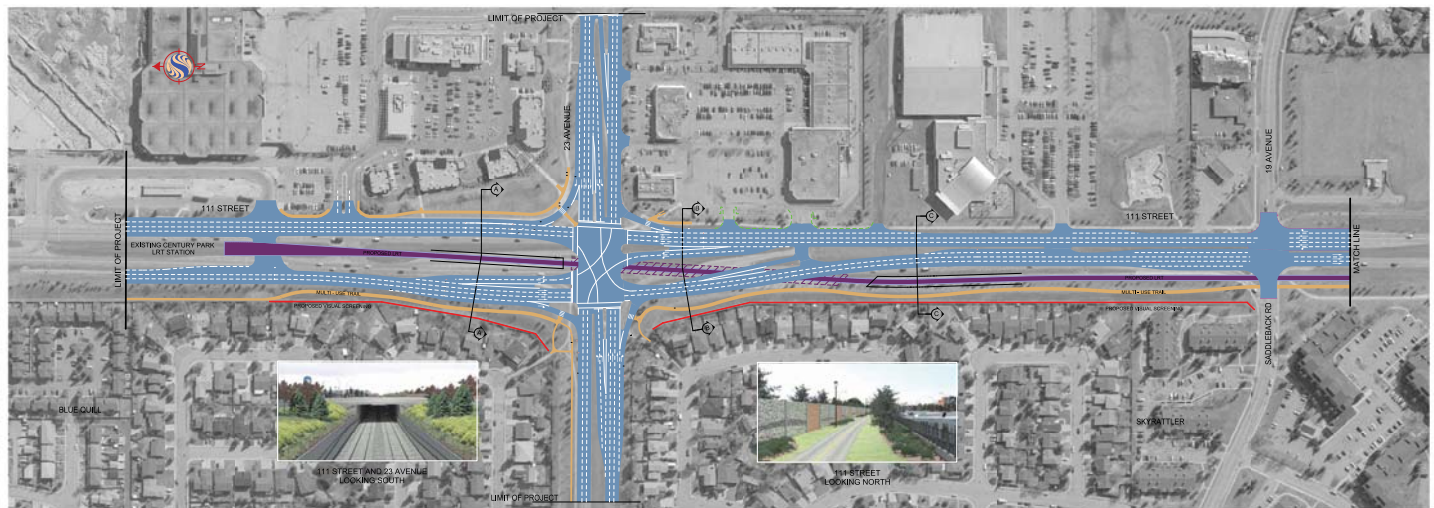


Example Sustainable Features: Bioswales



Example Walk Feature

111 Street Century Park Station to Saddleback Road - Plan & Profile



AECOM

ISL Engineering
and Land Services

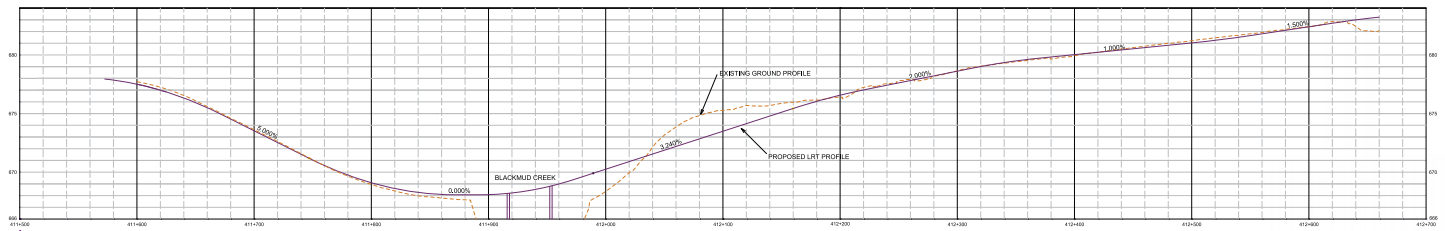


SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF
Edmonton
LRT EXPANSION BRANCH
CAPITAL
CONSTRUCTION



111 Street Saddleback Road to 9 Avenue - Plan & Profile



AECOM

ISL Engineering
and Land Services

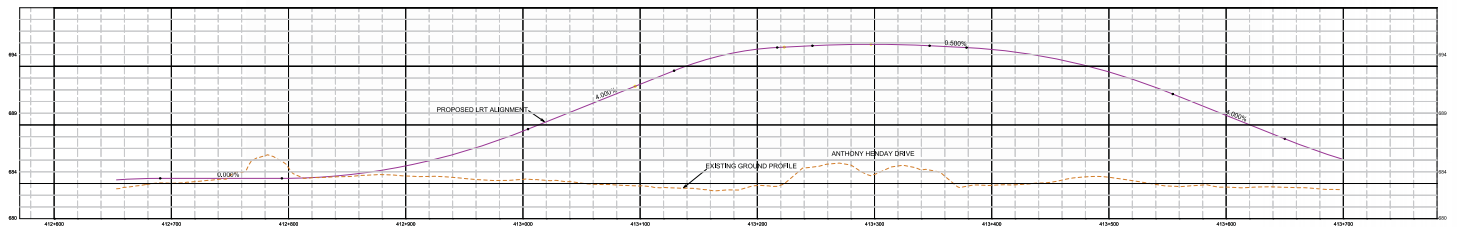
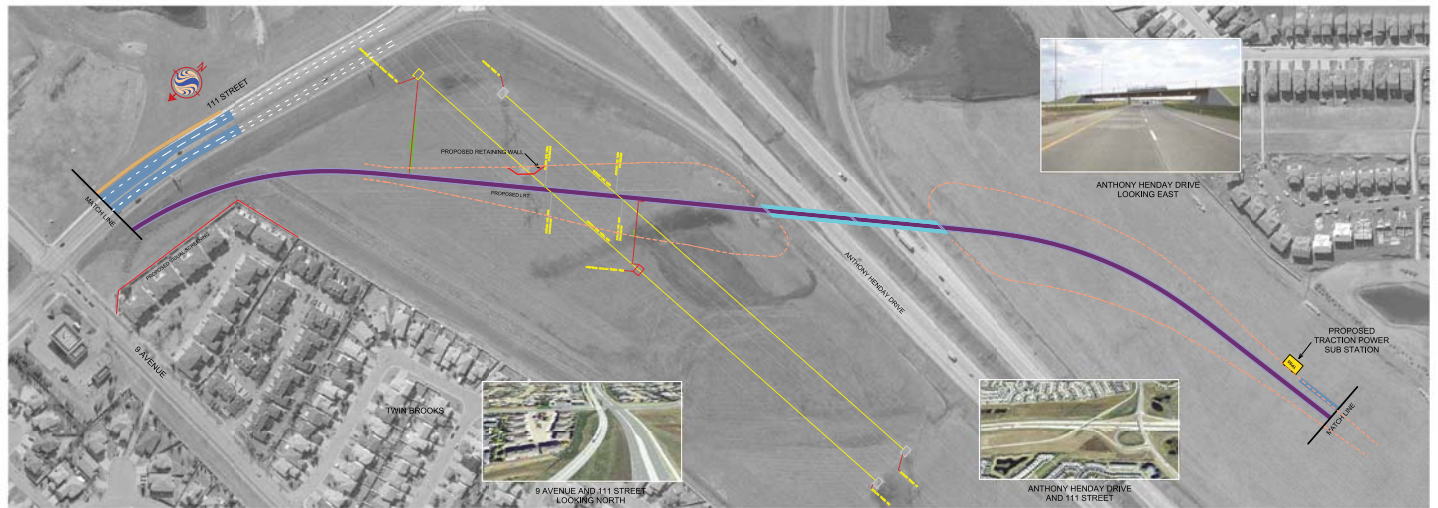


SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

City of Edmonton
LRT EXPANSION BRANCH
CAPITAL CONSTRUCTION



111 Street 9 Avenue South of Anthony Henday Drive - Plan & Profile



AECOM

ISL Engineering
and Land Services

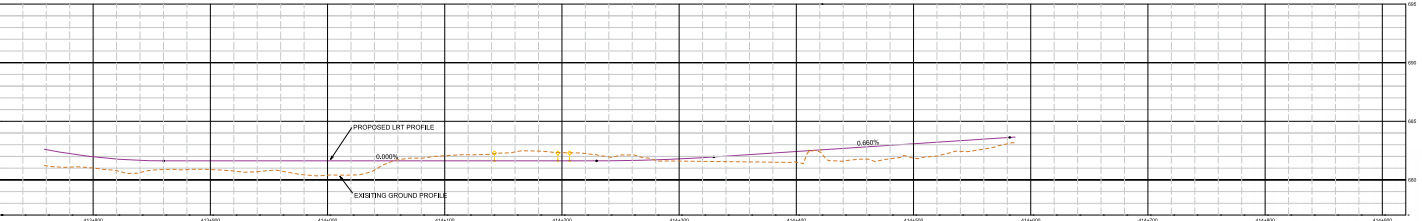
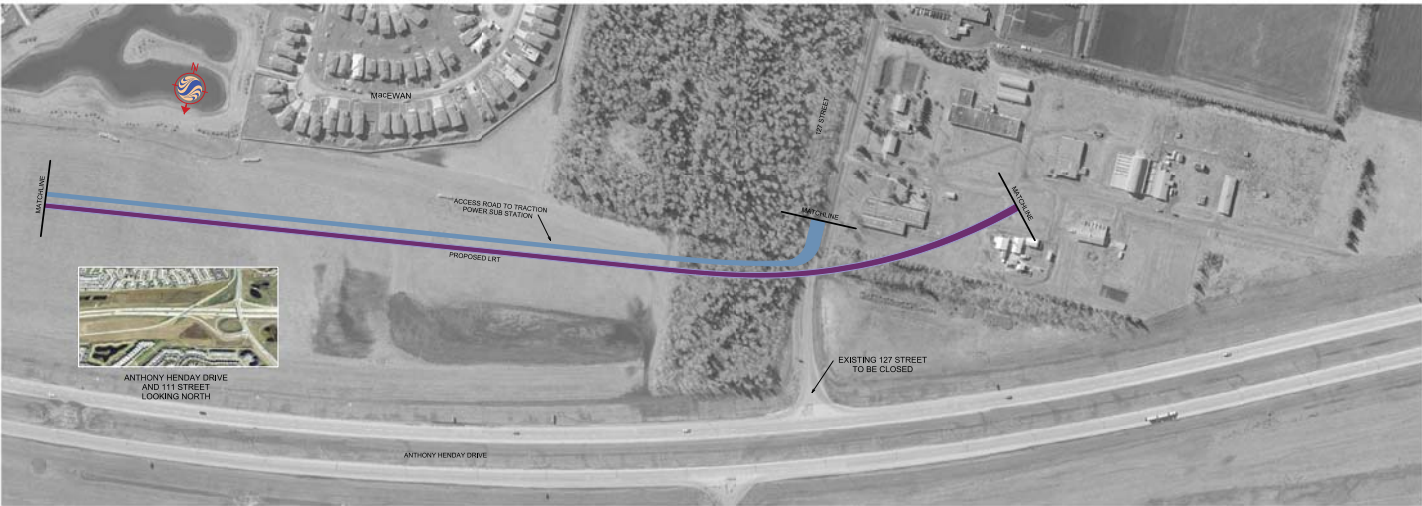


SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

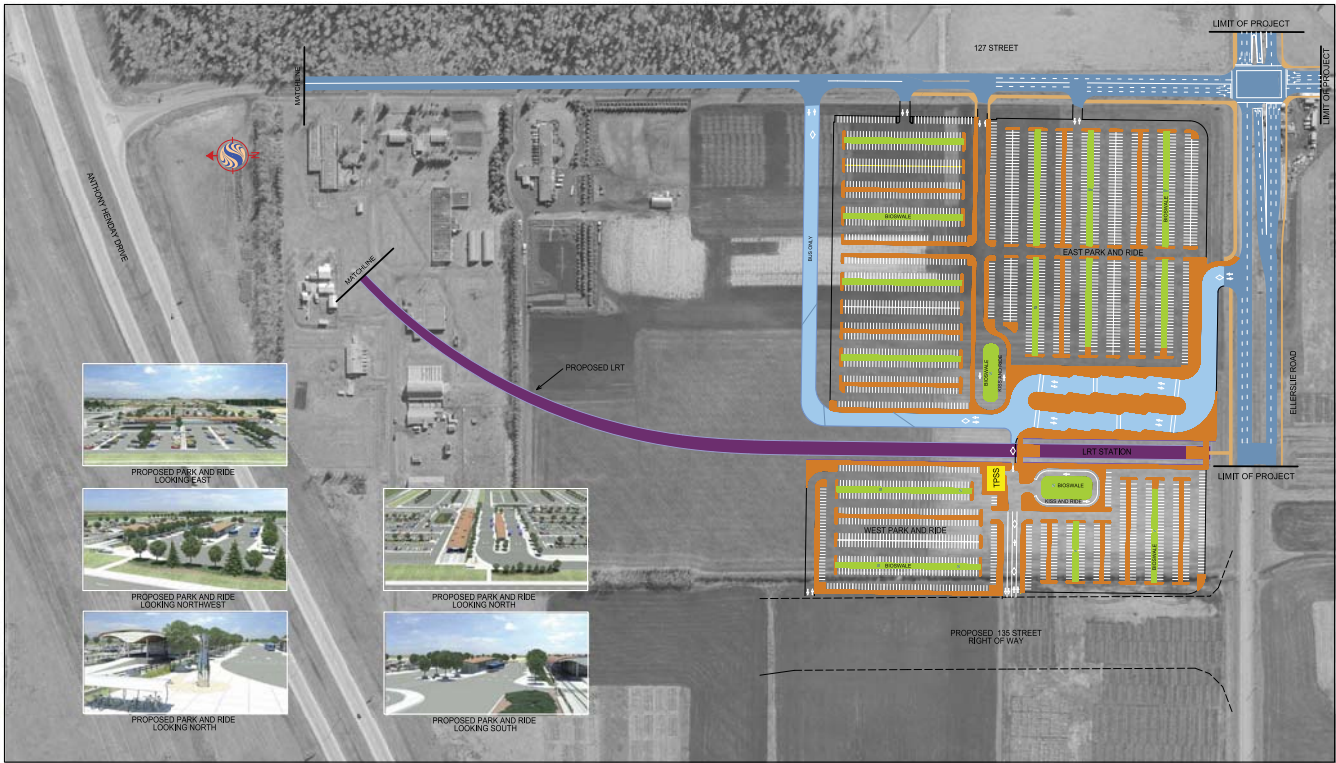
THE CITY OF
Edmonton
LRT EXPANSION BRANCH



Anthony Henday Drive West of 111 Street-127 Street - Plan & Profile



Ellerslie Road and 127 Street Plan



AECOM

ISL Engineering and Land Services

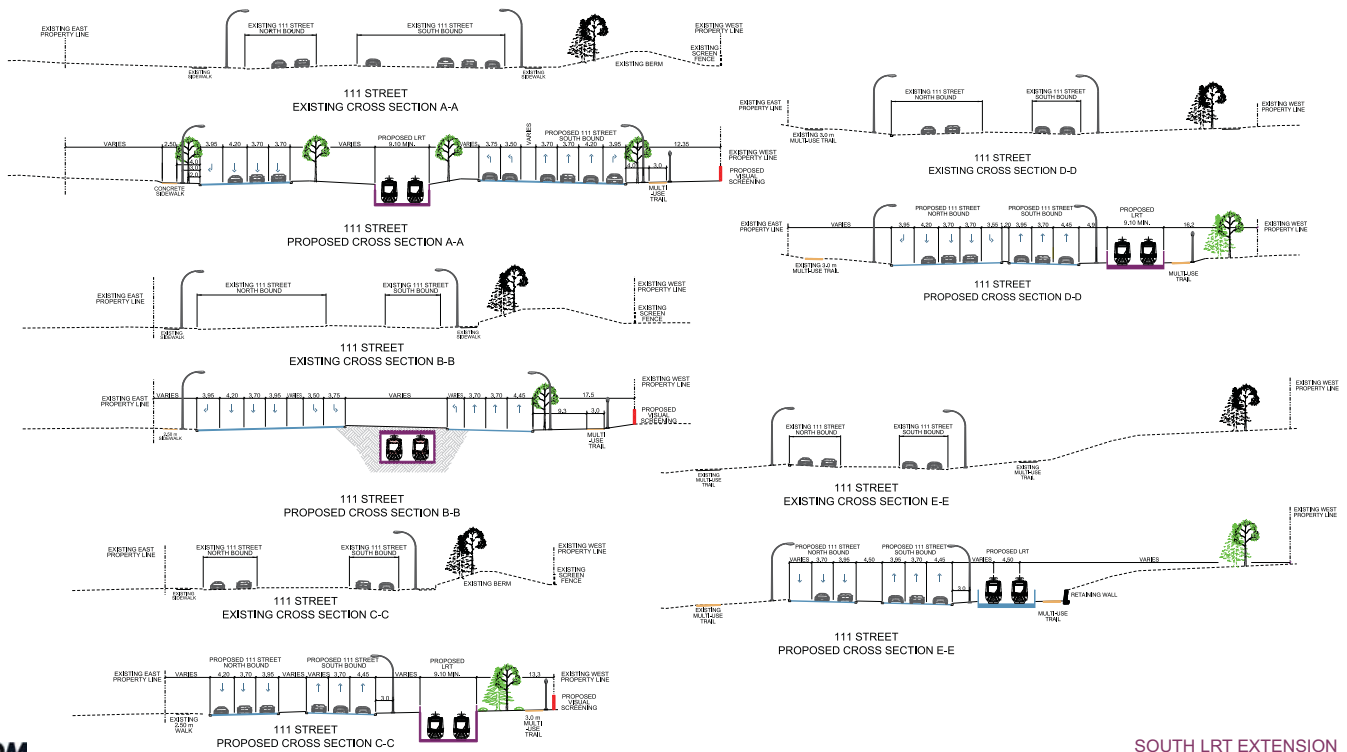


SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF EDMONTON
LRT EXPANSION BRANCH
CAPITAL CONSTRUCTION



111 Street Cross-Sections Century Park Station to Saddleback Road



AECOM

ISL Engineering
and Land Services

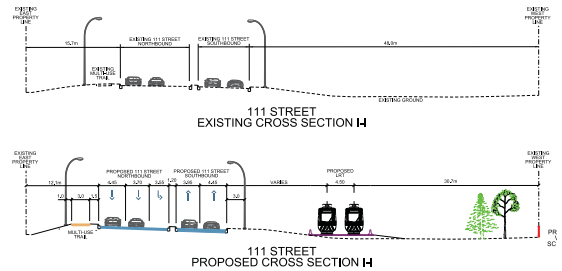
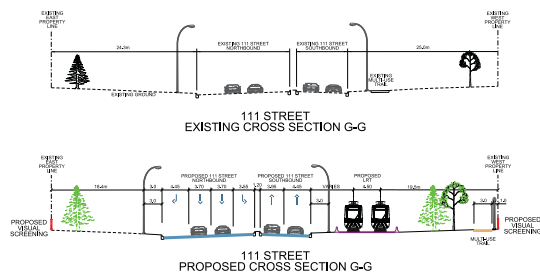
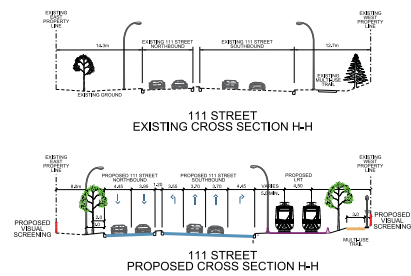
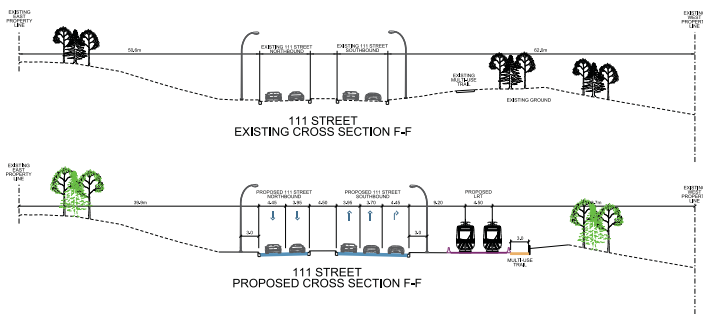


SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF EDMONTON
LRT EXPANSION BRANCH



111 Street Cross-Sections Blackmud Creek to 9 Avenue



AECOM

ISL Engineering
and Land Services



SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF EDMONTON
LRT EXPANSION BRANCH
CAPITAL CONSTRUCTION

