WELCOME
South LRT Extension
(Century Park to Ellerslie Road)

Public Open House

The purpose of tonight's Open House is to share information about the South LRT Extension project and gather your input.
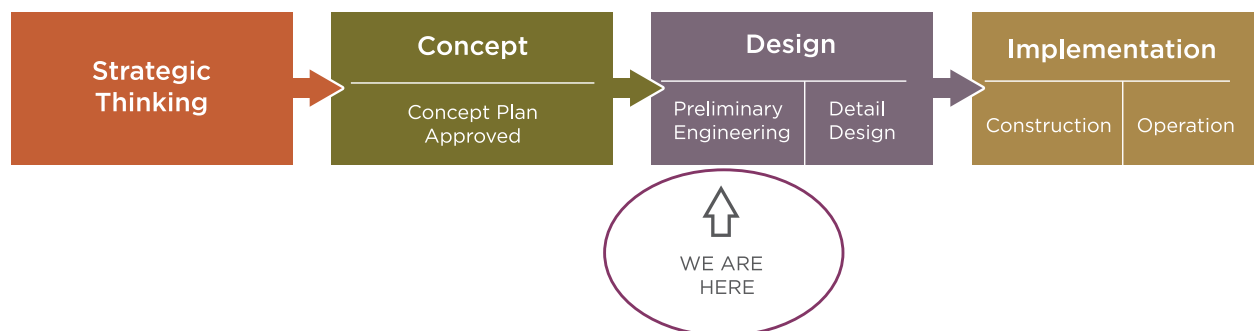
Please review the information displays, ask project team members questions and complete the comment form.

Your feedback will be considered in the Preliminary Design of this project which will be presented at a final Public Information Session in Spring 2010.

To view key information and updates about this project from past meetings and today's open house, please visit the City of Edmonton's website at: **www.edmonton.ca/lrtprojects**

Thank you.

Project Life Cycle

Strategic Thinking	Concept	Design	Implementation
	Concept Plan Approved	Preliminary Engineering | Detail Design	Construction | Operation

WE ARE HERE

Project Schedule

Fall/Winter 2009

- **Stakeholder (business and adjacent residents) Meetings –**
  September 8 & 10, 2009

- **Stakeholder Information Panel Meeting #1 –**
  September 24, 2009

- **Public Open House –**
  October 8, 2009

- **Continue Preliminary Design**

- **Stakeholder Information Panel Meeting #2 –**
  Winter 2009

Early 2010

- **Refinement of Preliminary Design**

- **Public Information Session –**
  Spring 2010

- **Finalize Preliminary Design Report –**
  Spring 2010

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF Edmonton CAPITAL CONSTRUCTION
LRT EXPANSION BRANCH

Edmonton South LRT

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ISL Engineering and Land Services

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 working towards the following deliverables:

- **Public involvement materials for information sharing –** communicating information about the project to the public.

- **Risk Management Plan –** how the City can minimize fiscal risk.

- **Constructability Report –** the best way to implement the LRT extension.

- **Cost Estimates Report –** updated and refined estimates for the extension.

- **Preliminary Engineering Reports:**

  » **Track** - define horizontal and vertical geometry of track alignment.

  » **Noise and Vibration** - sound attenuation and vibration mitigation required in accordance with City policy.

  » **Drainage** - for the LRT and connections to the City's existing system.

  » **Utilities** - relocation of overhead and underground utilities to accommodate LRT.

  » **Roads** - how the LRT willl affect or change the existing roads.

  » **Cyclists and Pedestrians** – ensuring connectivity for cyclists and pedestrians to and across the LRT.

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CENTURY PARK TO ELLERSLIE ROAD

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What is Preliminary Engineering?
(continued)

» **Safety** - ensuring all features of project are designed to current safety standards including CPTED (Crime Prevention Through Environmental Design)

» **Landscape Architecture** - landscaping for the areas in the vicinity of the LRT extension, LRT Station, Transit Centre, and Park & Ride facility.

» **Environmental and Historical** - protection and/or remediation of impact to environmental and historical resources.

» **Geotechnical** - issues relating to soil conditions in the vicinity of the LRT extension and related structures.

» **Systems and Communications** – technology required to operate LRT.

» **Structures** - options for types of structures required to accommodate the LRT extension.

» **Architecture** - building aesthetics incorporated into the design of the LRT.

In addition, the Project Team will design the permanent Park & Ride facility to be located at Ellerslie Road and 127 Street.

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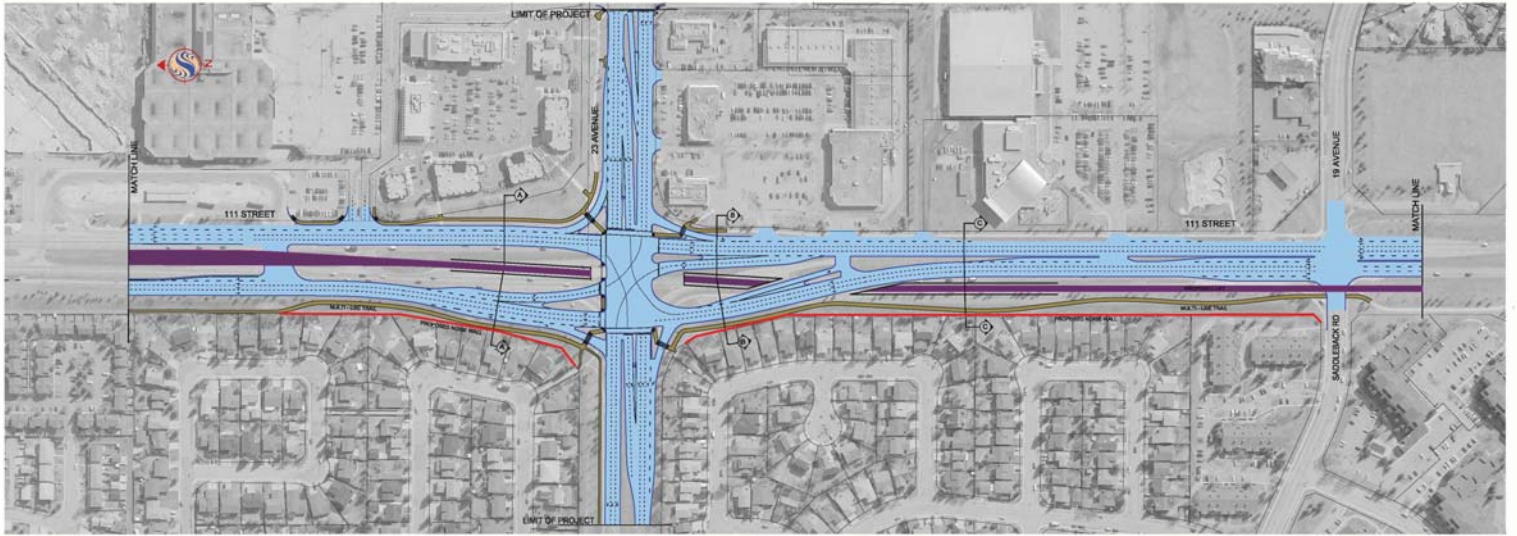
SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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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.

- Grade separated over Anthony Henday Drive

- LRT Station, Transit Centre, and Park & Ride facility at Ellerslie Road/127 Street.

Study Area

CENTURY PARK

PROPOSED LRT

BLUE QUILL

23 AVENUE

SKY RATTLER

SADDLEBACK ROAD

111 STREET

119 STREET

BLACKMUD CREEK

12 AVENUE

TWIN BROOKS

9 AVENUE

ANTHONY HENDAY DRIVE

127 STREET

Mac EWAN

111 STREET

ELLERSLIE ROAD

PROPOSED LRT

TRANSIT CENTRE PARK AND RIDE

ELLERSLIE ROAD

RUTHERFORD

23 AVENUE

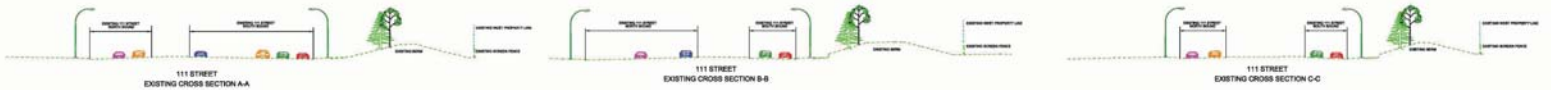ELLERSLIE ROAD

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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111 STREET
CENTURY PARK STATION TO SADDLEBACK ROAD
PLAN & PROFILE

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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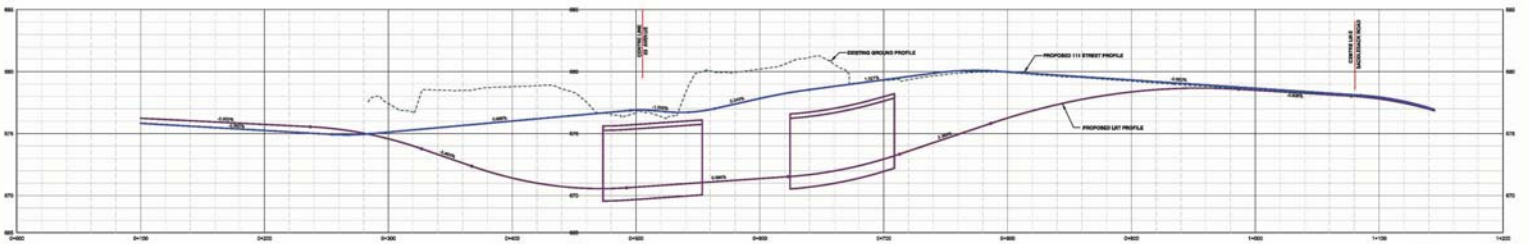
South LRT

111 STREET
CENTURY PARK STATION TO SADDLEBACK ROAD
PLAN & CROSS SECTIONS

111 STREET
EXISTING CROSS SECTION A-A

111 STREET
EXISTING CROSS SECTION B-B

111 STREET
EXISTING CROSS SECTION C-C

111 STREET
PROPOSED CROSS SECTION A-A

111 STREET
PROPOSED CROSS SECTION B-B

111 STREET
PROPOSED CROSS SECTION C-C

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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23rd Avenue & 111th Street Underpass

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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South LRT

Bridge over Blackmud Creek
Option 1 Multi Use Trail on LRT Bridge
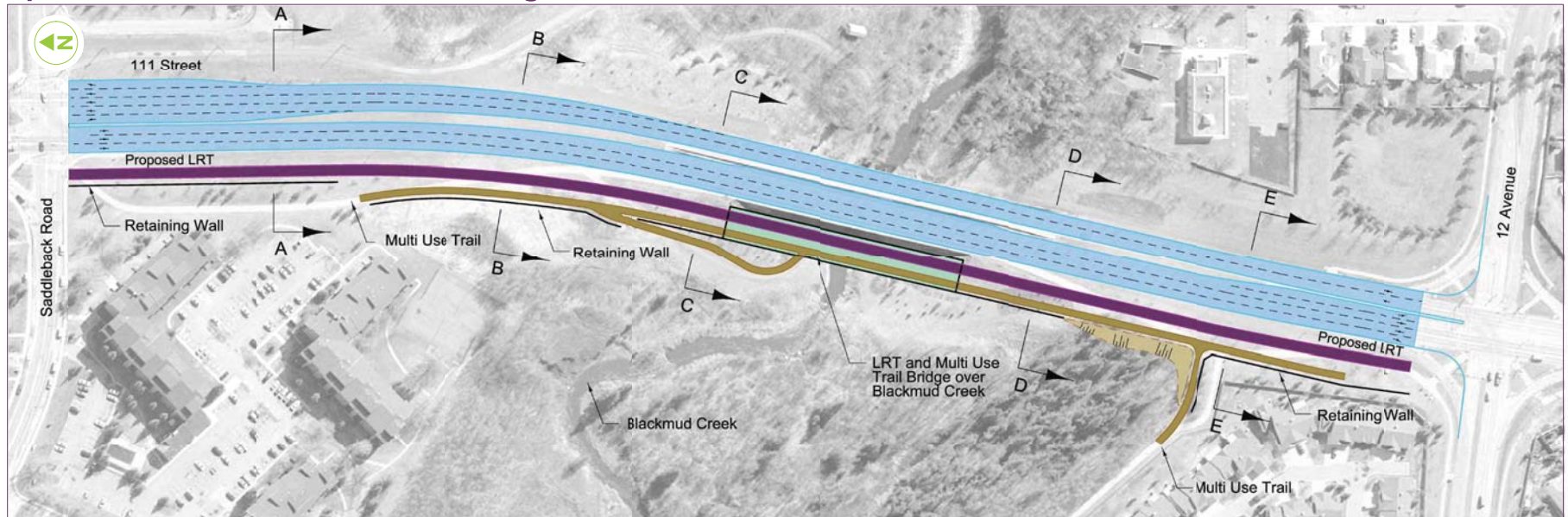
Possible Bridge Concepts
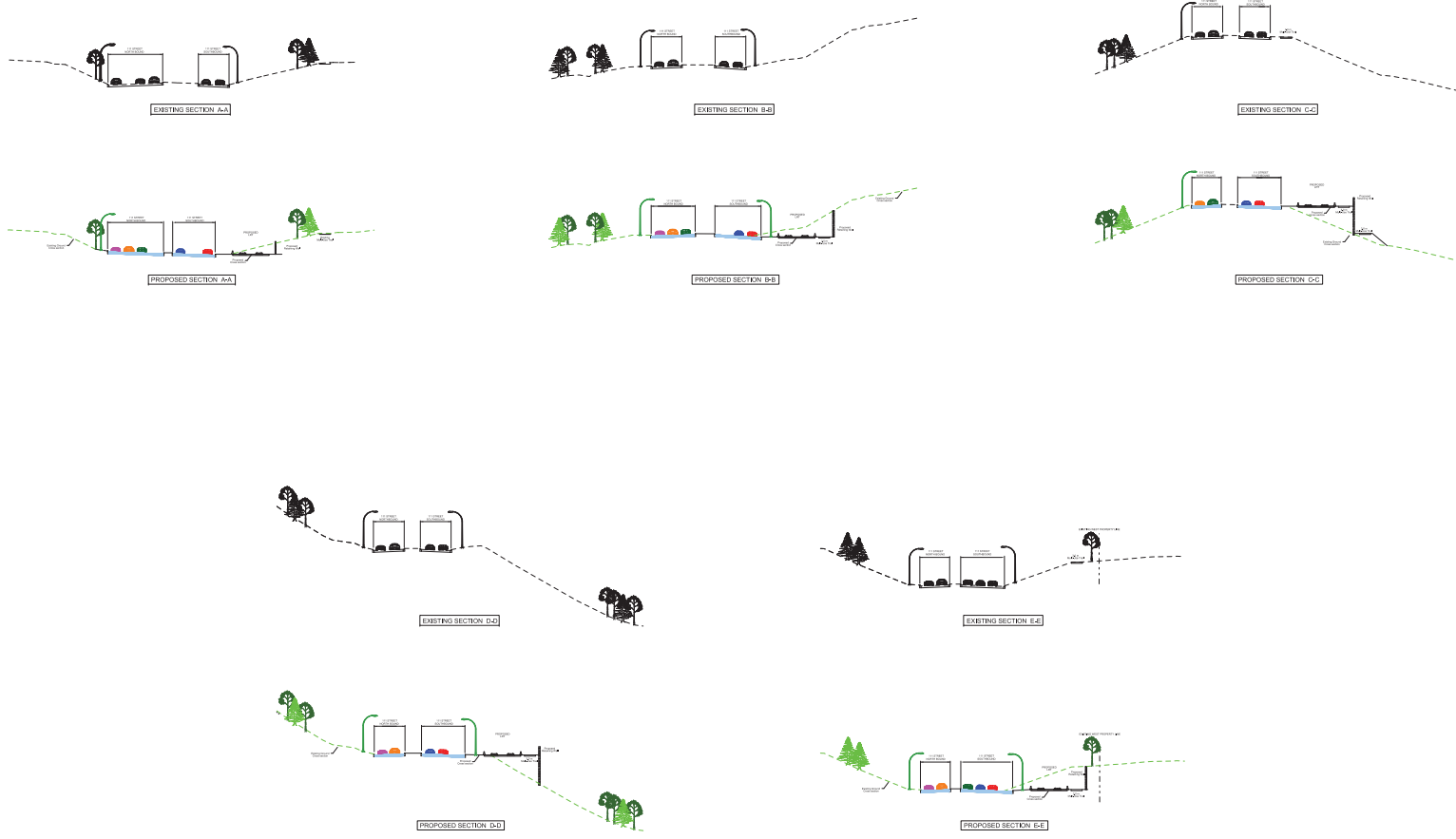

3 Span Girder Bridge

Suspended Arch Bridge

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF Edmonton CAPITAL CONSTRUCTION
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Bridge over Blackmud Creek
Option 1 Multi Use Trail on LRT Bridge
Cross - Sections

EXISTING SECTION A-A

EXISTING SECTION B-B

EXISTING SECTION C-C

PROPOSED SECTION A-A

PROPOSED SECTION B-B

PROPOSED SECTION C-C

EXISTING SECTION D-D

EXISTING SECTION E-E

PROPOSED SECTION D-D

PROPOSED SECTION E-E

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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Bridge over Blackmud Creek
Option 2 Multi Use Trail on Separate Bridge
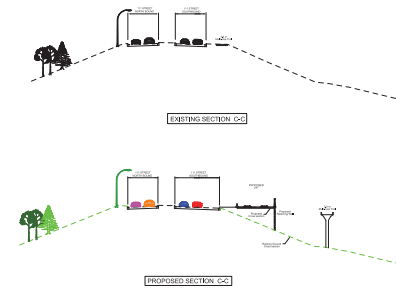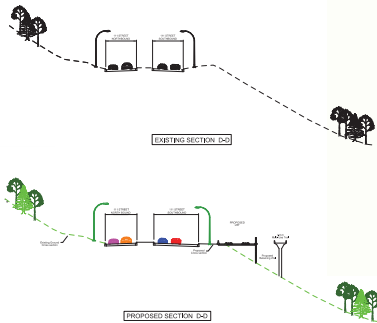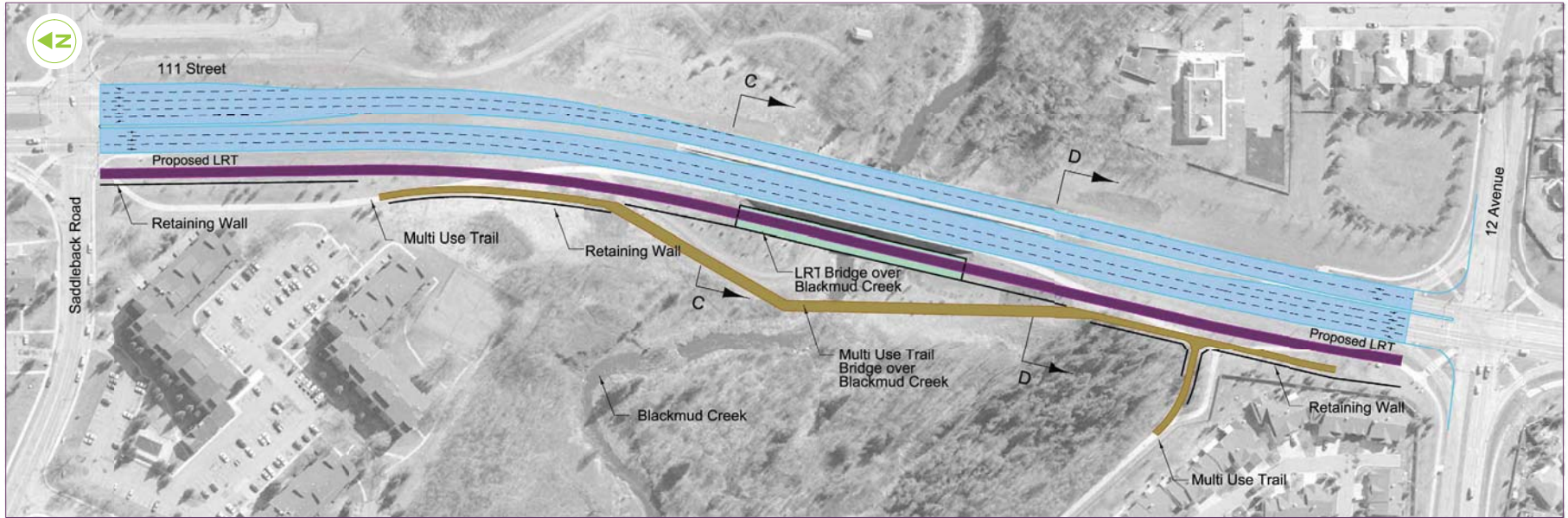
111 STREET
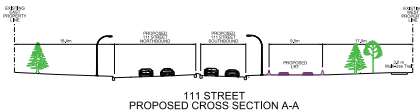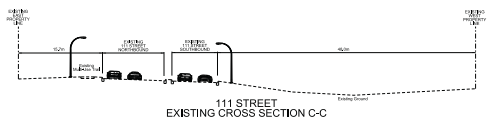## 12 AVENUE TO ANTHONY HENDAY DRIVE
PLAN & CROSS SECTIONS

111 Street

Proposed LRT

Multi-Use Trail

Multi-Use Trail

Proposed LRT

12 Avenue

9 Avenue

A

A

B

B

C

C

111 STREET
EXISTING CROSS SECTION A-A

111 STREET
EXISTING CROSS SECTION B-B

111 STREET
EXISTING CROSS SECTION C-C

111 STREET
PROPOSED CROSS SECTION A-A

111 STREET
PROPOSED CROSS SECTION B-B

111 STREET
PROPOSED CROSS SECTION C-C

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

Edmonton
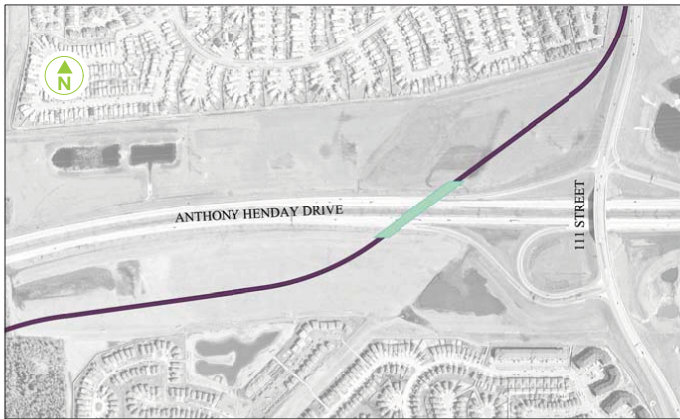CAPITAL CONSTRUCTION
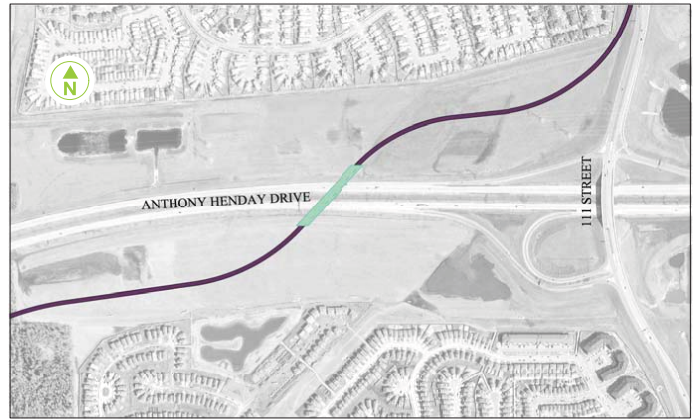LRT EXPANSION BRANCH

Edmonton
SOUTH LRT

LRT over Anthony Henday Drive

Option 1 - Concept Plan

- **Under powerlines**

- **Over Anthony Henday Drive**

  at 111 Street ramp terminals

- **166m long bridge**

Option 2

- **Aligned parallel to Anthony Henday Drive**

- **Under powerlines further to west.**

- **Over Anthony Henday Drive**

- **Improved crossing angle**

- **116m long bridge**

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF Edmonton
LRT EXPANSION BRANCH

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**Decision on alignment dependant
on further technical evaluation**

Anthony Henday Drive Bridge Crossing

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**Draft Ultimate Stage
Ellerslie Park and Ride Concept**

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD
Edmonton THE CITY OF
LRT EXPANSION BRANCH CAPITAL CONSTRUCTION

Edmonton South LRT

LEGEND

TRANSIT CENTRE

ULTIMATE STAGE PARKING

KISS AND RIDE

STORMWATER MANAGEMENT FACILITY

SE 25-51-25-4

POTENTIAL 135 STREET

TRACTION POWER SUBSTATION

484

531

SE 25-51-25-4

875

1023

127 STREET

ELLERSLIE ROAD

SE 25-51-25-4

127 STREET

POTENTIAL 135 STREET

SE 25-51-25-4

ELLERSLIE ROAD

LEGEND

- TRANSIT CENTRE
- STAGE 1 PARKING
- KISS AND RIDE
- STORMWATER MANAGEMENT FACILITY

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**Draft Stage 1 - 2010 Construction
Ellerslie Park and Ride Concept**

SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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Public Involvement - What We've Heard

To date the project team has met with:

- Residential landowners and business owner/operators directly adjacent to the LRT alignment on September 8 and 10, 2009; and

- Stakeholder Information Panel (SIP) members on September 24, 2009

Concerns Raised at these Meetings Included:

- Access & Emergency Access –LRT Crossings Timed with Traffic Lights and Maintain Access

- Bridge Aesthetics – Minimize Impacts on the Environment and Build Less Expensive Bridges and Spend Money on Landscaping and Aesthetics

- Impact on Existing Berms and Mature Trees – Relocate Trees within Community and Replace Lost Trees

- Impact on Property Values due to LRT

- Impacts During and Following Construction – Temporary Road Closures and Traffic Congestion

- Landscaping/Aesthetics – Natural Theme with Lots of Trees

- Multi Use Trails – Protected Pedestrian Crossings, Connectivity and Safe, Well Lit Trails

- Noise/Noise Walls – Natural Theme and Avoid Long Straight Noise Walls

- Park & Ride/Transit Centre Access and Aesthetics – Natural Theme with Landscaping/Screening to Shield View of Park & Ride Parking Lot and Transit Centre

- Potential for Crime around LRT Stations

- Safety and Security – Protected Pedestrian Crossings, Trails, Lighting and Fences

- Station Aesthetics – Natural Theme with Landscaping/Screening to Shield View of Station

- Timing of Construction – When the LRT will be Built, Duration of Construction and Don't Lose Momentum for LRT Extension

- Traffic Impacts and Roadway Modifications – Maintain Access and Capacity

- Visual Buffering – Screening to Shield View of LRT

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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LRT EXPANSION BRANCH

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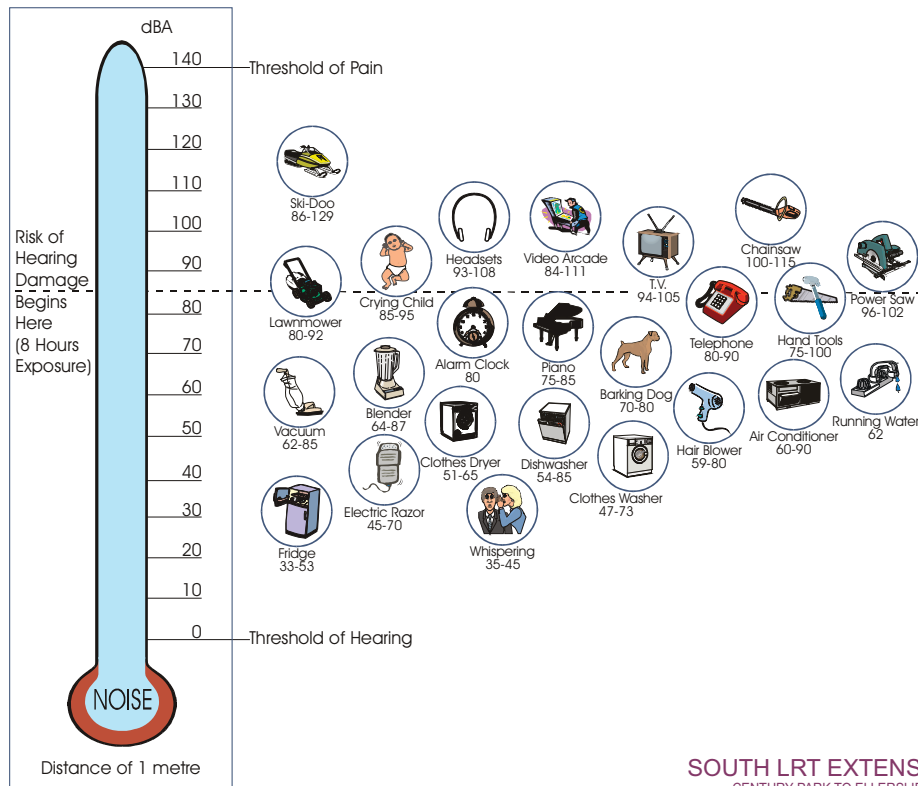
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The City of Edmonton Urban Traffic Noise Policy

The Urban Traffic Noise Policy, adopted by City Council on May 16, 2004:

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

dBA

- 140 — Threshold of Pain
- 130
- 120
- 110
- 100
- 90
- 80 — Risk of Hearing Damage Begins Here (8 Hours Exposure)
- 70
- 60
- 50
- 40
- 30
- 20
- 10
- 0 — Threshold of Hearing

NOISE

Distance of 1 metre

Ski-Doo 86-129
Headsets 93-108
Video Arcade 84-111
T.V. 94-105
Chainsaw 100-115
Power Saw 96-102
Crying Child 85-95
Lawnmower 80-92
Alarm Clock 80
Piano 75-85
Telephone 80-90
Hand Tools 75-100
Vacuum 62-85
Blender 64-87
Barking Dog 70-80
Air Conditioner 60-90
Running Water 62
Clothes Dryer 51-65
Dishwasher 54-85
Hair Blower 59-80
Electric Razor 45-70
Clothes Washer 47-73
Fridge 33-53
Whispering 35-45

Existing Noise Measurements

Monitoring Location
52.9 dBA Leq 24

Monitoring Location
52.9 dBA Leq 24

Monitoring Location
49.8 dBA Leq 24

Roadside noise Level
65.0 dBA Leq 24

Monitoring Location
59.0 dBA Leq 24

Monitoring Location
59.5 dBA Leq 24

Monitoring Location
55.7 dBA Leq 24

Monitoring Location
55.6 dBA Leq 24

Measurements taken throughout September 2009 in rear outdoor amenity areas.

A 3D Model similar to the sample below will be developed using:

• Noise monitoring data

• Topography

• Existing and projected future traffic volumes

The results from the model will be used to determine if attenuation will be required, based on the City of Edmonton Urban Traffic Noise Policy.

Sample Noise Model:

24-Hour Noise Modeling Results from Southwest Anthony Henday Drive Noise Study
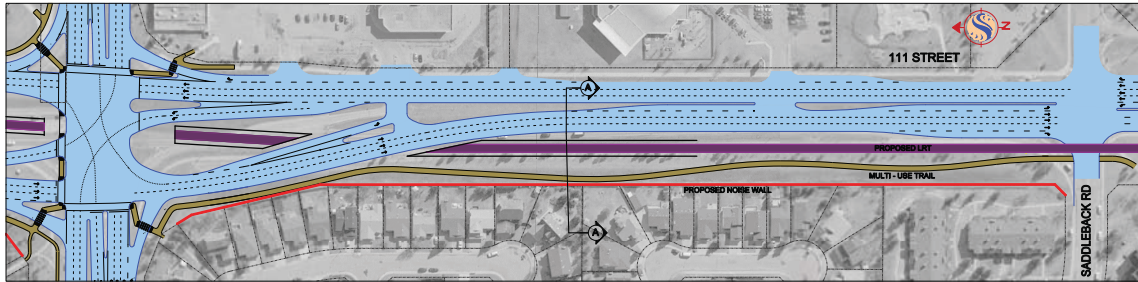
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SOUTH LRT EXTENSION
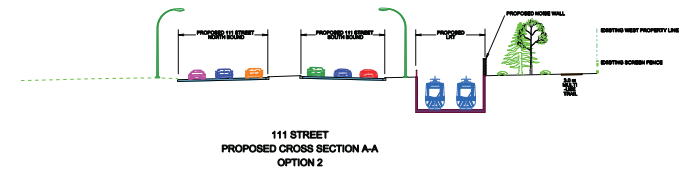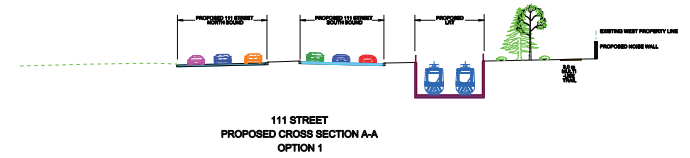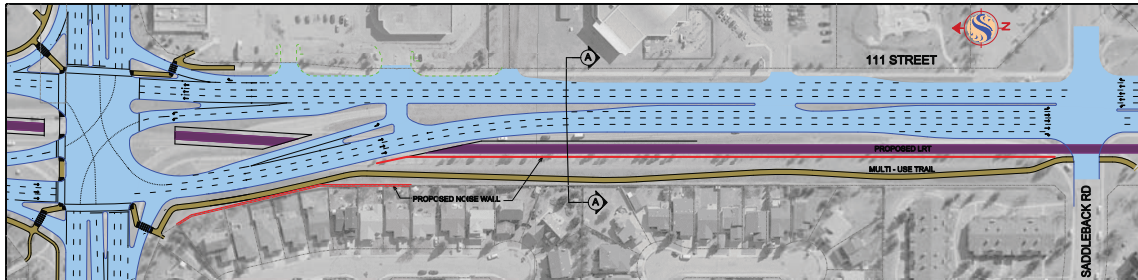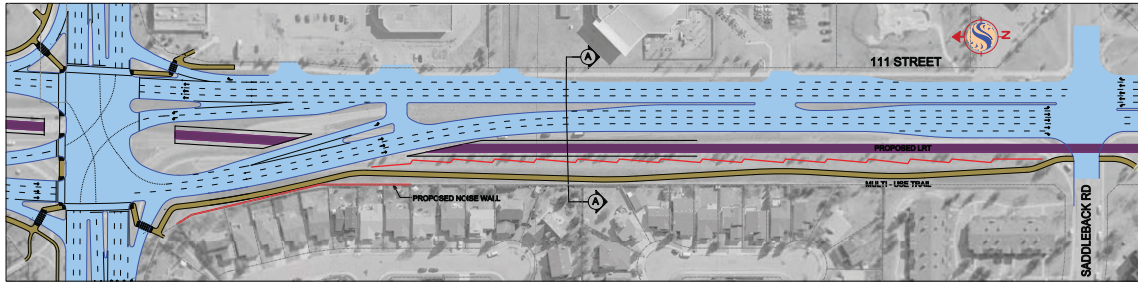CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF Edmonton
LRT EXPANSION BRANCH
CAPITAL CONSTRUCTION

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South LRT

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111 STREET (23 AVENUE - SADDLEBACK ROAD)
NOISE ATTENUATION ALTERNATIVES

OPTION 1
NOISE WALL ON PROPERTY LINE

111 STREET

PROPOSED LRT

MULTI - USE TRAIL

PROPOSED NOISE WALL

SADDLEBACK RD

OPTION 2
NOISE WALL ON LRT RETAINING WALL

111 STREET

PROPOSED LRT

MULTI - USE TRAIL

PROPOSED NOISE WALL

SADDLEBACK RD

EXISTING 111 STREET
NORTH BOUND

EXISTING 111 STREET
SOUTH BOUND

EXISTING WEST PROPERTY LINE

EXISTING SCREEN FENCE

111 STREET
EXISTING CROSS SECTION A-A

PROPOSED 111 STREET
NORTH BOUND

PROPOSED 111 STREET
SOUTH BOUND

PROPOSED
LRT

EXISTING WEST PROPERTY LINE

PROPOSED NOISE WALL

MULTI
USE TRAIL

111 STREET
PROPOSED CROSS SECTION A-A
OPTION 1

PROPOSED 111 STREET
NORTH BOUND

PROPOSED 111 STREET
SOUTH BOUND

PROPOSED
LRT

PROPOSED NOISE WALL

EXISTING WEST PROPERTY LINE

EXISTING SCREEN FENCE

MULTI
USE TRAIL

111 STREET
PROPOSED CROSS SECTION A-A
OPTION 2

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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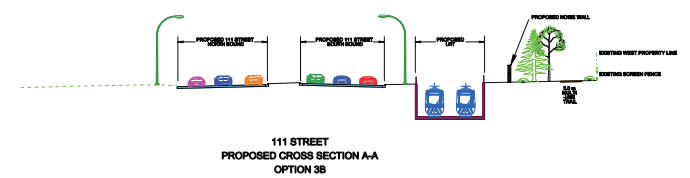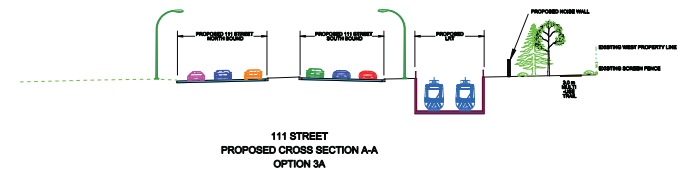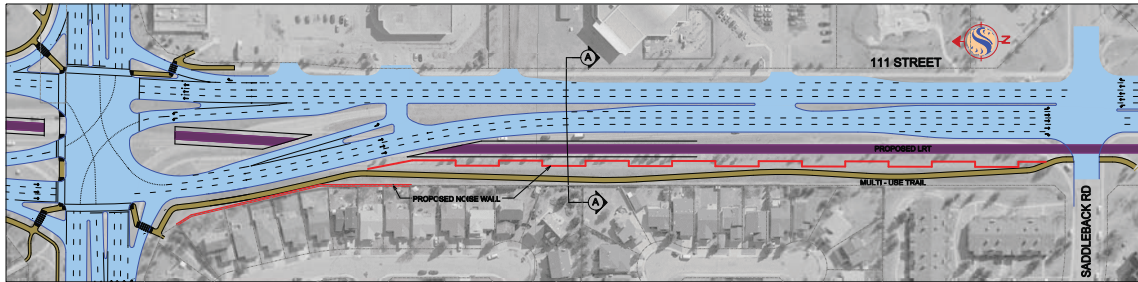LRT EXPANSION BRANCH

Edmonton
South LRT

111 STREET (23 AVENUE - SADDLEBACK ROAD)
NOISE ATTENUATION ALTERNATIVES

OPTION 3A
NOISE WALL BETWEEN LRT AND MULTI - USE TRAIL
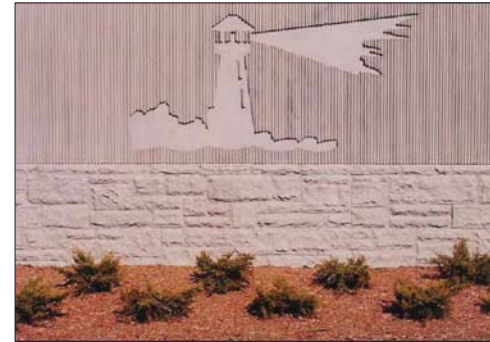

OPTION 3B
NOISE WALL BETWEEN LRT AND MULTI - USE TRAIL

111 STREET
EXISTING CROSS SECTION A-A

111 STREET
PROPOSED CROSS SECTION A-A
OPTION 3A

111 STREET
PROPOSED CROSS SECTION A-A
OPTION 3B

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF Edmonton
CAPITAL CONSTRUCTION
LRT EXPANSION BRANCH

Edmonton South LRT

Safety & Security

- Designed to Crime Prevention Through Environmental Design (CPTED) standards

- 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

Safety & Security Examples

Landscaping

Relocate Existing Trees within Adjacent Community

Blend into Community

Enhance with ew Landscaping

Additional Stormwater Management

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

THE CITY OF Edmonton
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Edmonton South LRT

R

MacEwan Station

Belgravia/Mc ernan Station

South Campus Station

Health Sciences Station

Belgravia/Mc ernan Station

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SOUTH LRT EXTENSION
CENTURY PARK TO ELLERSLIE ROAD

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