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# Chapter 4: Final Neighbourhood Renewal Design

### **Executive Summary**

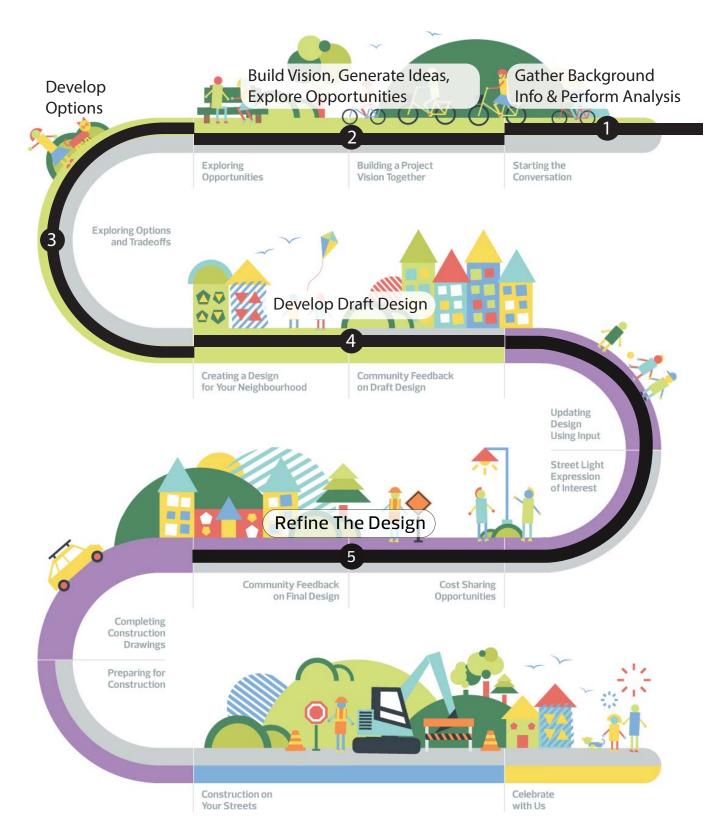
The final chapter of the urban design analysis for Garneau provides a succinct view of all design changes that are proposed for construction in Garneau. The intention of this report is to provide a broader neighbourhood wide perspective of how all design interventions work together as a system to improve functional and aesthetic outcomes in the historic neighbourhood.

The report is intended to be used as a summary handbook and record of improvements and changes that have been included in the final designs for Garneau Neighbourhood Renewal. This report is written in complement to the **What We Decided** report issued for Garneau in December 2020. Many different factors have been weighed in every design choice to arrive at a final urban design plan for Garneau, and evaluated against three different criteria: public engagement input / what we heard, technical requirements, and City policies and programs. A detailed look at the criteria and considerations for each design is available within the What We Decided report.

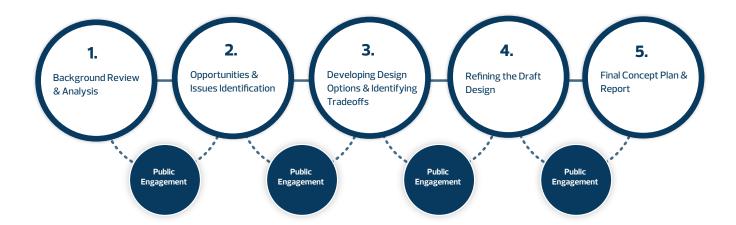
The final urban design plan is the result of collaboration between the City and the community to generate and evaluate opportunities and constraints, and to test and refine design ideas. The coordination of EPCOR's new Low Impact Development (LID) program with Neighbourhood Renewal added new opportunities to provide drainage infrastructure that improves the resilience, aesthetic, and biodiversity of Garneau.

# **Project Process**

# Renewal Path (Where We Are)



# **Urban Design Framework**



#### VISION

Garneau is a unique urban village— a welcoming neighbourhood where a diversity of people live, work, learn, shop, and play, promoting friendly interactions and a high quality of life. Pedestrian focused, the neighbourhood is safe, inclusive, and accessible for all who walk, bike, drive, and use transit, with inviting public spaces and parks that strengthen its sense of community.

#### DESIGN THEMES

Garneau's design decisions are presented within four themes that were explored through neighbourhood renewal: **Biking, Walking, Driving, and Playing.** 



#### **BIKING**

Enhancing bike lanes and adding connectors



#### **PLAYING**

City-owned outdoor spaces, including updates to parks and green spaces



#### WALKING

Active connections including sidewalks, shared-use paths, crosswalks



#### LOW IMPACT DEVELOPMENT FACILITIES (LID)

Relieve pressure on the stormwater system, alleviate potential for future flooding and sewer back up, and integrate planting and biodiversity



#### **DRIVING**

Roads and intersections, including the introduction of traffic calming measures and changes along roads and at intersections

### **Final Urban Design Framework**

# Biking



The Garneau and McKernan portion of the South Side Bike Network will provide a consistent bike connection north-south along 110 Street from the 76 Avenue bike lane to the Saskatchewan Drive shared-use path, and provide east-west connections to and from 109 Street and 112 Street. It will also connect the 83 Avenue bike lane to 112 Street.

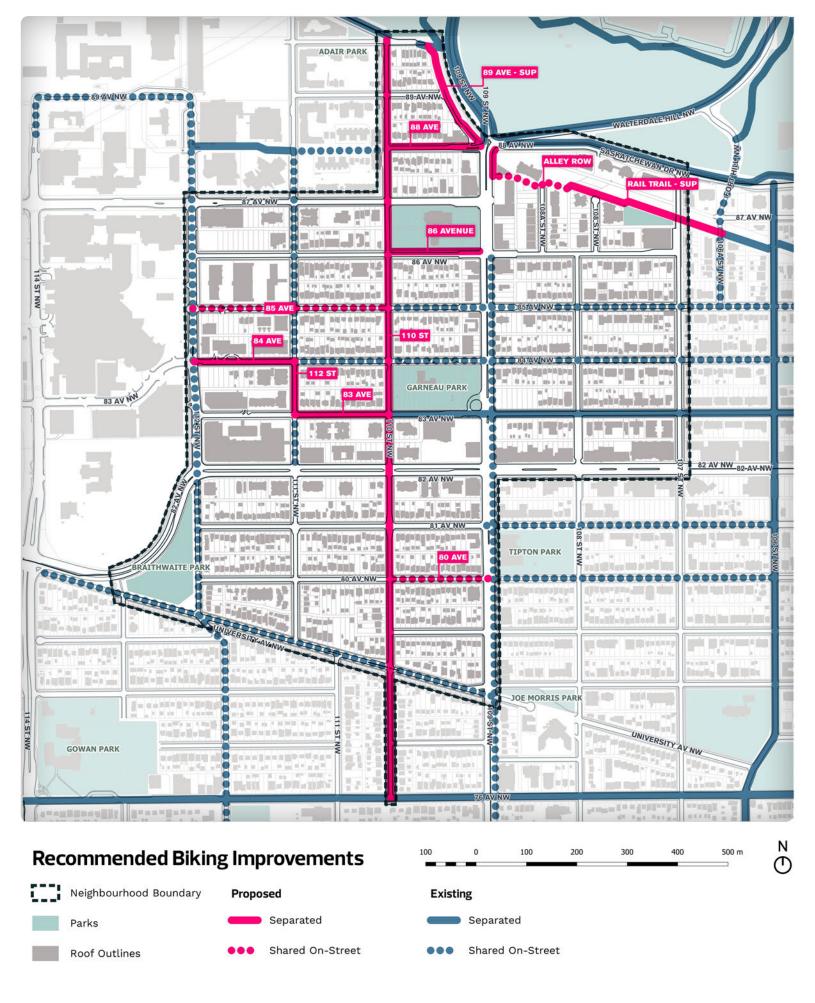
- 110 STREET BIKE LANE SASKATCHEWAN DRIVE TO UNIVERSITY AVENUE
- 88 AVENUE BIKE LANE CONNECTOR 110 STREET TO 109 STREET
- 81 AVENUE 110 STREET TO 109 STREET
- 80 AVENUE BIKE LANE CONNECTOR 110 STREET TO 109 STREET
- 83 AVENUE BIKE LANE CONNECTOR TO 112 STREET

- **# 90 AVENUE / 110 STREET / SASKATCHEWAN DRIVE**
- 90 AVENUE BIKE LANE CONNECTOR
- 85 AVENUE BIKE LANE CONNECTOR 112 STREET TO 110 STREET
- 111 STREET FROM 82 TO 83 AVENUE BIKE LANE CONNECTOR

# **City Policies and Programs:**

- Edmonton City Plan Supports a multi-modal transportation system that provides options to residents and visitors, and guides how biking fits into the vision of a connected and accessible city
- Vision Zero Protected bike infrastructure helps to achieve the long-term goal of zero traffic fatalities and serious injuries
- South Side Bike Network Identified 110 Street as the primary north—south connection between 76 Avenue and Saskatchewan Drive for the all ages and abilities network
- Edmonton Bike Plan Supports the vision of a connected and accessible city by guiding design choices which help people feel safe and comfortable riding their bikes in all seasons

- Accessibility Design Guide Supports access and use for people of all ages and abilities
- Safe Mobility Strategy Edmonton's new approach to achieve Vision Zero through safe and livable streets
- Snow and Ice Policy The City provides year-round maintenance, including snow removal, of protected bike lanes and shared-use paths to support all-season access and use
- Corporate Tree Policy Supports the orderly development and growth of the City's tree inventory and the protection of
- + the tree canopy. Value of trees removed will be replaced with new tree planting in the neighbourhood



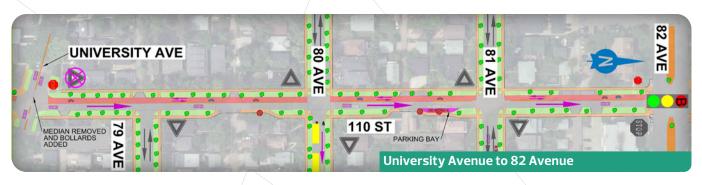
### 110 Street Bike Lane - Saskatchewan Drive to University Avenue

**The Final Design Includes:** Construction of a protected on–street, two–way bike lane on 110 Street, linking the Saskatchewan Drive shared–use path and the 76 Avenue bike lane.



- A two-way, protected bike lane along 110 Street consistent with other bike lanes in the area
- 2. Separated spaces for people who bike, walk and drive
- On-street public parking removed to accommodate the bike lane within road right-of-way and limit boulevard tree removal
- 4. Parking bays / loading zones added to the east side of 110 Street to accommodate resident needs
- Mid-block crossings with curb ramps and connector walks are being considered to shorten the distances to corners / intersections and to accommodate access to homes on the west side of 110 Street
- 6. 76 Avenue to University Avenue: Change traffic flow to one way northbound to accommodate bike lane within road right-of-way
- Bollards (replacing median at 110
   Street and University Avenue to allow for people on bikes to proceed north)













#### 88 Avenue Bike Lane Connector - 110 Street to 109 Street

**The Final Design Includes:** Construction of a protected, east-west bike lane connection on 88 Avenue between the 110 Street bike lane and 109 Street.



- A protected raised, bi-directional bike lane on the northside of 88 Avenue connecting 109 Street to the 110 Street bike lane
- Physically separated spaces for people who bike, walk and drive west of the business area and a visually separated shared-use path in front of the business area
- On-street public parking removed to accommodate the bike lane within road right-of-way and limit boulevard tree removal
- Parking bays are being considered west of the commercial area during Final Design with locations informed by resident feedback
- On-street public parking bay added to the south side of 88 Avenue just west of the alley access to accommodate commercial parking needs
- An enhanced public space in front of businesses that includes new seating, plaza area and walkway





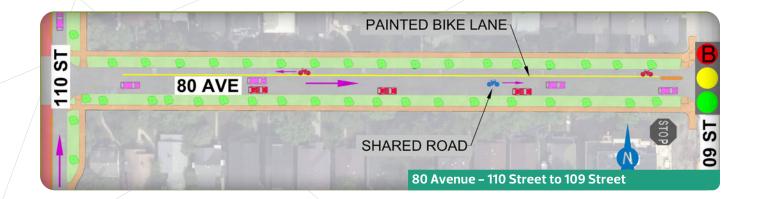
#### 80 Avenue Bike Lane Connector - 110 Street to 109 Street

**The Final Design Includes:**Construction of a painted bike lane and a shared-use roadway connection on 80 Avenue between the 110 Street bike lane and 109 Street.



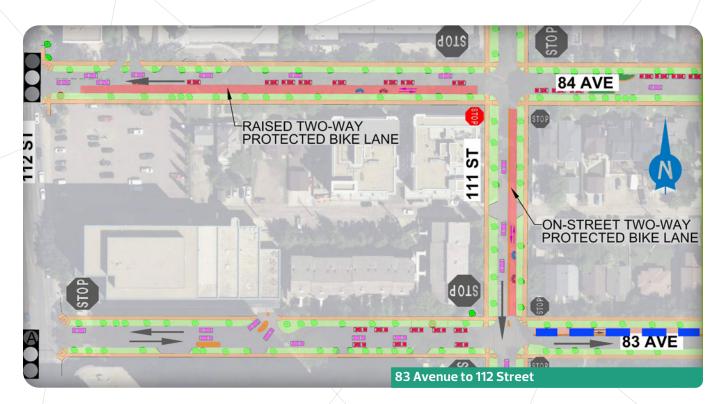
- A westbound painted contraflow bike lane and an eastbound shareduse roadway
- One-way eastbound traffic flow (change from two-way)
- 3. On-street public parking maintained on the south side
- 4. On-street public parking removed on the north side to accommodate the bike lane within road right-of-way and limit boulevard tree removal





#### 83 Avenue Bike Lane Connector to 112 Street

**The Final Design Includes:** Construction of a protected bike lane connection between the 83 Avenue protected bike lane to 112 Street via 111 Street and 84 Avenue.



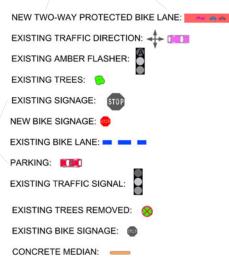


# 111 STREET BETWEEN 83 AVENUE AND 84 AVENUE

- 1. A protected on–street, two–way bike lane on the east side
- 2. On-street public parking removed to accommodate the bike lane within road right-of-way and limit boulevard tree removal

#### 84 AVENUE BETWEEN 111 STREET AND 112 STREET

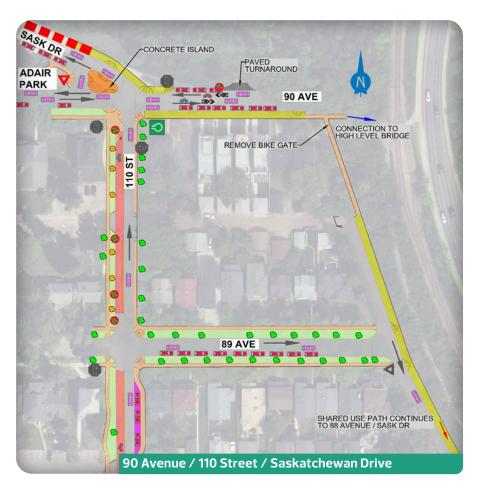
- 3. A protected raised two-way bike lane on the south side
- 4. On-street public parking on the south side next to the bike lane to accommodate access to loading zones and buildings on south side of 84 Avenue



- 5. On-street public parking removed from the north side to accommodate the bike lane within road right-ofway and limit boulevard tree removal
- 6. Separated spaces for people who bike, walk and drive

#### 90 Avenue / 110 Street / Saskatchewan Drive

**The Final Design Includes:** Improvement of the intersection at 90 Avenue / 110 Street and Saskatchewan Drive and the walking and biking connections to key destinations.



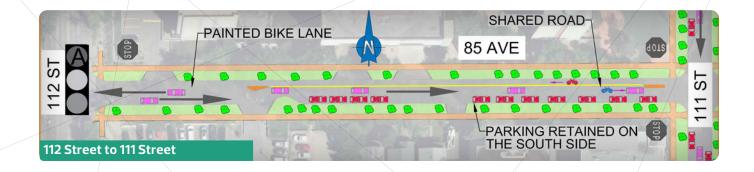




- A traffic island at the intersection to provide a safe waiting area for people walking\*
- 2. Enhanced crosswalks to improve visibility of people walking\*
- 3. Curb extension at 90 Avenue and 110 Street to shorten crossing distances and slow traffic
- 4. A shared-use path on south side of 90 Avenue from 110 Street east for those who bike and walk
- 5. A shared-use roadway for those who bike and drive
- 6. Enhanced cul-de-sac signage to reduce confusion for those who drive

#### 85 Avenue Bike Lane Connector – 112 Street to 110 Street

**The Final Design Includes:** Construction of a painted bike lane and shared-use roadway on 85 Avenue connecting 112 Street to the 110 Street bike lane.





- A painted contraflow westbound bike lane on the north side of 85 Avenue and an eastbound shared-use roadway to add bike connections to 110 Street and provide traffic calming
- 2. No change to parking





#### 81 Avenue - 110 Street to 109 Street

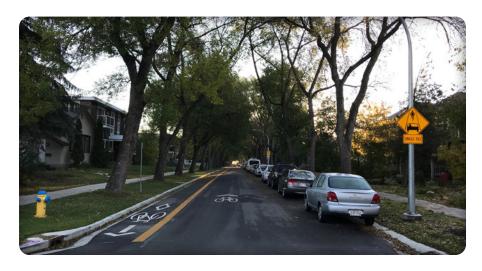
81 Avenue was initially considered as a bike lane connection between the 110 Street bike lane and 109 Street but was not included in the Final Design



- 1. No bike infrastructure
- 2. Two-way traffic flow
- 3. No change to on-street parking

#### 111 Street - 82 to 83 Avenue Bike Lane Connector

**The Final Design Includes:** Construction of a painted bike lane and shared-use roadway on 111 Street between 82 Avenue and 83 Avenue (as currently exists)



 A northbound painted bike lane connection on the east side and a southbound shared-use roadway on 111 Street connecting 82 Avenue and Windsor Park Plaza to the 83 Avenue bike lane

# **Final Urban Design Framework**

# Driving

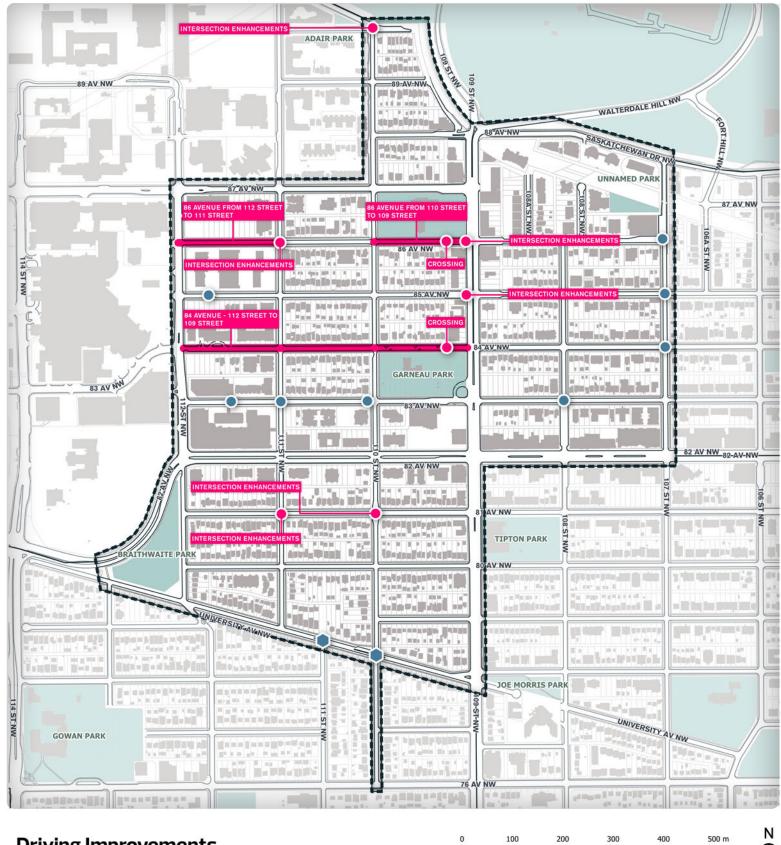


The Final Design for driving and traffic in Garneau includes the addition of traffic calming measures such as curb extensions and enhanced crosswalks, intersection enhancements such as coloured or textured pavement treatment or squaring to decrease confusion and some traffic flow changes. All residential road surfaces will be replaced.

- 84 AVENUE 112 STREET TO 109 STREET
- 81 AVENUE 110 STREET INTERSECTION / 111 STREET INTERSECTION
- + 90 AVENUE / SASKATCHEWAN DRIVE / 110 STREET
- \* 86 AVENUE FROM 110 STREET TO 109 STREET
- 86 AVENUE FROM 112 STREET TO 111 STREET
- + PARKING

# **City Policies and Programs:**

- Edmonton City Plan Supports a multi-modal transportation system that provides options to residents and visitors to support the vision of a connected and accessible city
- Community Traffic Management Policy Supports chicanes to reduce driver speeds and deter shortcutting
- Vision Zero Roadway designs can help to achieve the longterm goal of zero traffic fatalities and serious injuries
- Safe Mobility Strategy Edmonton's new approach to achieve Vision Zero through safe and livable streets



# **Driving Improvements**

Neighbourhood Boundary

#### Proposed

Road Enhancements

Parks

**Roof Outlines** 

Curb Extension

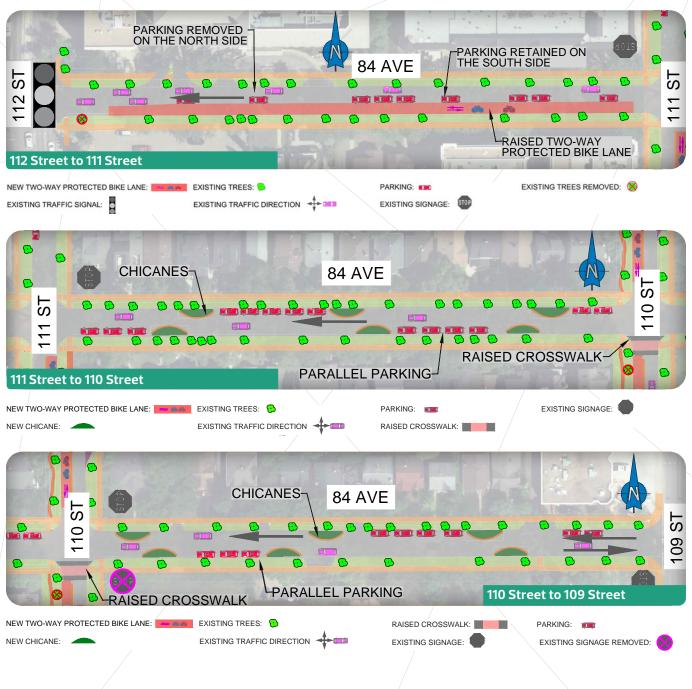
Median

**Existing** 

Crossing & Intersection Enhancements

#### 84 Avenue - 112 Street to 109 Street

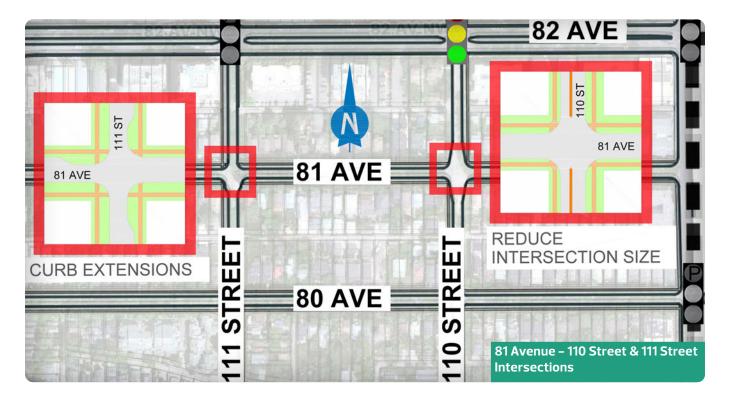
The Final Design Includes: Additional traffic calming measures on 84 Avenue between 112 Street and 109 Street.



- 1. 109 Street to 111 Street: Landscaped chicanes with parallel parking on both sides of the street
- 2. 111 Street to 112 Street: A raised bike lane with on-street public parking on the south side (next to the bike lane) aligning with loading zones
- 3. An enhanced crosswalk at the alley west of 109 Street

#### 81 Avenue - 110 Street Intersection / 111 Street Intersection

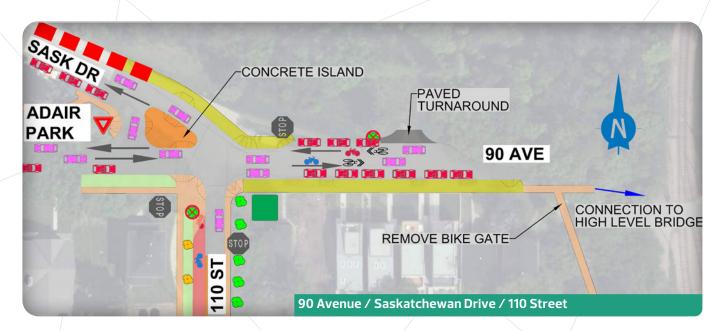
**The Final Design Includes:** The improvement of pedestrian crossing distances and reduce overall confusion occurring at the wide intersections of 81 Avenue / 110 and 111 streets.



- 1. 110 Street / 81 Avenue: Squaredup intersection to encourage slower traffic, improve the visibility of people walking\* and for people driving and reduce the crossing distance for people walking\*
- 111 Street / 81 Avenue: Squared-up intersection and curb extension installed on the northwest northeast and southeast corners to encourage slower traffic, improve the visibility of people walking\* for people driving and reduce the crossing distance for people walking\*

#### 90 Avenue / Saskatchewan Drive / 110 Street

**The Final Design Includes:** The improvement of the intersection and reduce confusion for all users and add walking and biking connections between the Saskatchewan Drive shared-use path to destinations to the east.



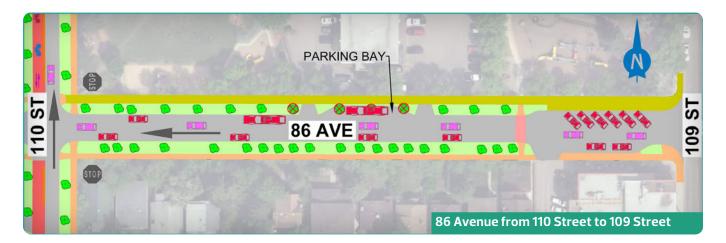
- A traffic island to provide a midway landing area for people crossing (walking and biking)
- 2. Curb extensions at the intersection of 90 Avenue and 110 Street to shorten crossing distances and slow traffic
- 3. A shared-use path on south side of 90 Avenue from 110 Street east
- 4. A shared-use roadway for those who bike and drive
- 5. Enhanced cul-de-sac signage to reduce confusion for those who drive





#### 86 Avenue from 110 Street to 109 Street

**The Final Design Includes:** The improvement of connections to Garneau School for those who walk, bike or ride the school bus.

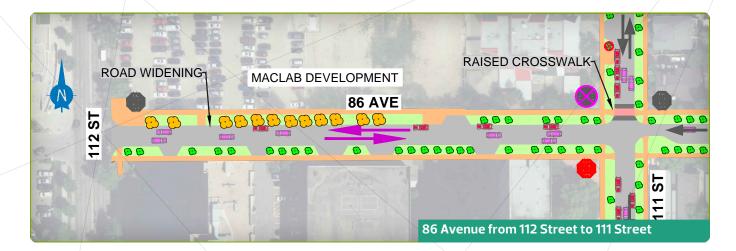


- A shared-use path on the north side of 86 Avenue to provide a connection from the 110 Street bike lane to the school, playground and 109 Street
- 2. A parking bay in front of the school for community use and school buses to pick-up and drop-off students
- An enhanced pedestrian crossing (west of the alley) to improve visibility of people crossing 86 Avenue and to encourage slower traffic



### 86 Avenue from 112 Street to 111 Street

**The Final Design Includes:** The improvement of pedestrian and driver safety and the functionality of 86 Avenue between 112 Street and 111 Street.

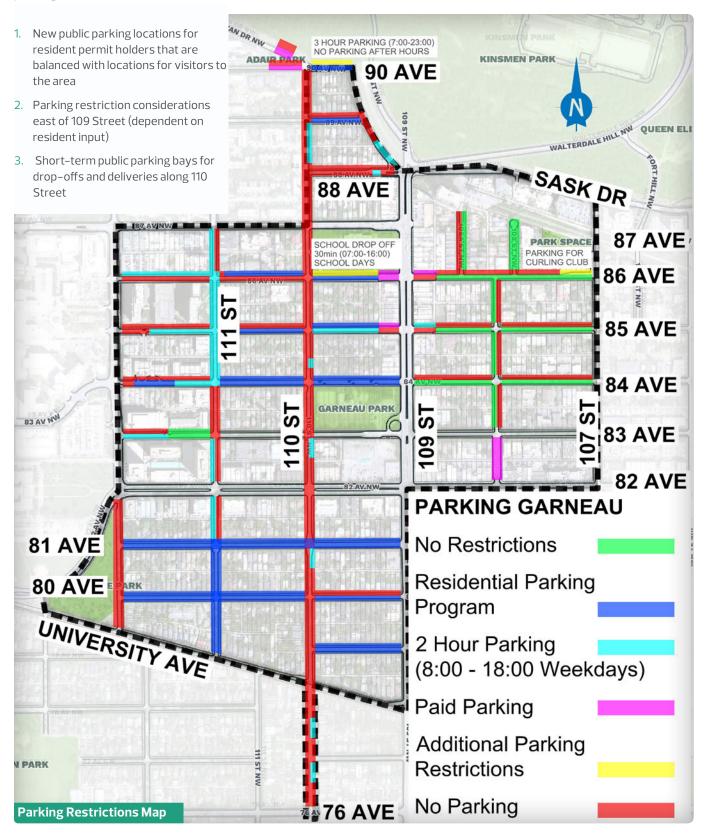


- A change in traffic direction from one-way westbound to two-way to improve access to the public parkade on the south side of 86 Avenue and prevent wrong way traffic
- 2. A curb extension at the southeast corner of the 111 Street / 86 Avenue intersection to prevent wrong way driving infractions and to shorten the crossing distance to destinations to the north and to the south
- Enhanced crosswalks installed at the north and east sides of the 111 Street / 86 Avenue intersection to improve the visibility of people crossing
- 4. DATS loading zones on the west side of 111 Street (east of Bader Assisted Living and just south of the alley)
- 5. Parking relocated from the east side of 111 Street to the west side to align with the DATS loading zone and correct the intersection alignment at 111



### **Parking**

**The Final Design Includes:** Additional on–street public parking where possible and restrictions to current unrestricted parking areas east of 109 Street.



### **Final Urban Design Framework**

# Walking



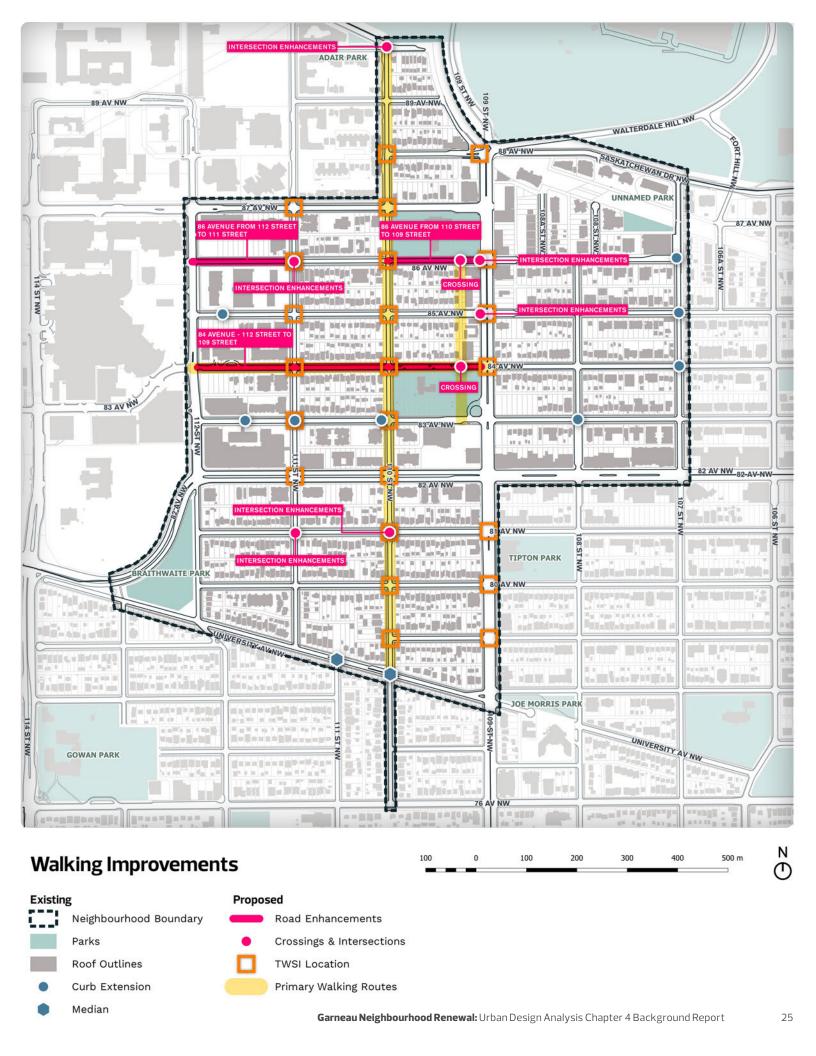
The design for walking improvements in Garneau includes replacement of all existing sidewalks and, when possible, adding missing sidewalk links. Primary walking routes identified on 110 Street and 84 Avenue will have wider sidewalks, where possible. Several pedestrian crossing locations will be improved with curb extensions and enhanced crosswalks. Tactile warning indicators will be placed along key walking routes to support the visually impaired.

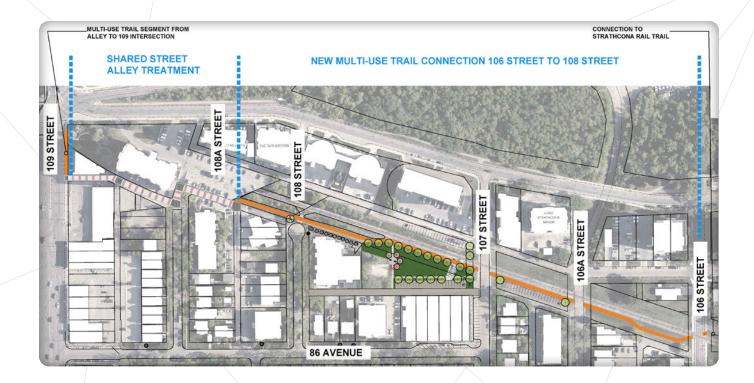
- RAIL TRAIL
- ENHANCED INTERSECTION CROSSINGS
- \* TACTILE WARNING SURFACE INDICATORS (TWSI)
- CHARACTER STREET PLAQUES
- MISSING SIDEWALK CONNECTIONS
- PRIMARY WALKING ROUTES

# **City Policies and Programs:**

- Edmonton City Plan Supports a multi-modal transportation system that provides options to residents and visitors to support the vision of a connected and accessible city
- Active Transportation Policy Optimize Edmontonians opportunities to walk, roll, and cycle, regardless of age, ability, or socio-economic status; to enhance the safety, inclusivity and diversity of our communities, and to minimize the impact of transportation activities on Edmonton's ecosystem
- PED Connections: a Sidewalk Strategy To increase the priority of walkability in Edmonton by maximizing opportunities for walking and enhancing safety, convenience, and strategic improvements and expansions of the sidewalk system, thereby promoting a healthy and sustainable community
- Council Report 7079 City Sidewalks Missing Connections June 11, 2019
- Safe Mobility Strategy Edmonton's new approach to achieve Vision Zero through safe and livable streets

- Winter City Design Guidelines Provide ideas and standards that improve our streetscapes in the context of Edmonton's winter climate and conditions for a more accessible, safe, aesthetically pleasing and enjoyable year round experience
- Complete Streets Design and Construction Standards –
   Requires sidewalks on both sides of a street, where possible
- Universal Design Standards The City follows universal design (for example, Access Design Guide) to support access and use for people of all ages and abilities
- Neighbourhood Renewal Program Funds the construction of new sidewalks and shared—use paths. This cost is not shared with property owners.
- Corporate Tree Policy Supports the orderly development and growth of the City's tree inventory and the protection of the tree canopy. Value of trees removed will be replaced with new tree planting in the neighbourhood





#### **Rail Trail**

To complete the rail corridor shared-use path connection from 106 to 109 Street. The Rail Trail connection from 106 Street to 109 Street via:

- 1. 106 Street to 108A Street shared-use path along the south side of the rail corridor
- 2. 108A Street to 109 Street shared-use road treatment in the alley
- 3. 109 Street to Saskatchewan Drive widen existing sidewalk to create a new shared-use path



### **Missing Sidewalk Connections**

Where possible, to add new sidewalks along avenues and streets to improve connectivity and eliminate missing connections. New sidewalks added to the:

- 1. North side of 86 Avenue from 110 Street to 109 Street
- 2. East and west sides of 110 Street from 82 to 90 Avenue
- 3. East and west sides of 111 Street from 82 to 90 Avenue



# **Primary Walking Routes**

To add wider sidewalks in high pedestrian areas, along the primary walking routes. Wider sidewalks (where possible) along the:

- 4. East side of 110 Street
- 5. North and south sides of 84 Avenue

# **Enhanced Crossings**

To improve visibility for people crossing streets and to encourage slower traffic. Enhanced crosswalks at:

- 6. Alleys west of 109 Street at: 84 86 and 88 avenues
- 7. 86 Avenue at 111 Street intersection north and east sides
- 8. 86 Avenue west of the alley between 109 and 100 Street



# **Tactile Warning Strips (TWSI)**

To improve the safety and comfort of pedestrians with visual impairments. Tactile walking surface indicators (TWSI) on curb ramps along the following primary walking routes.



### **Final Urban Design Framework**

# Parks & Public Space



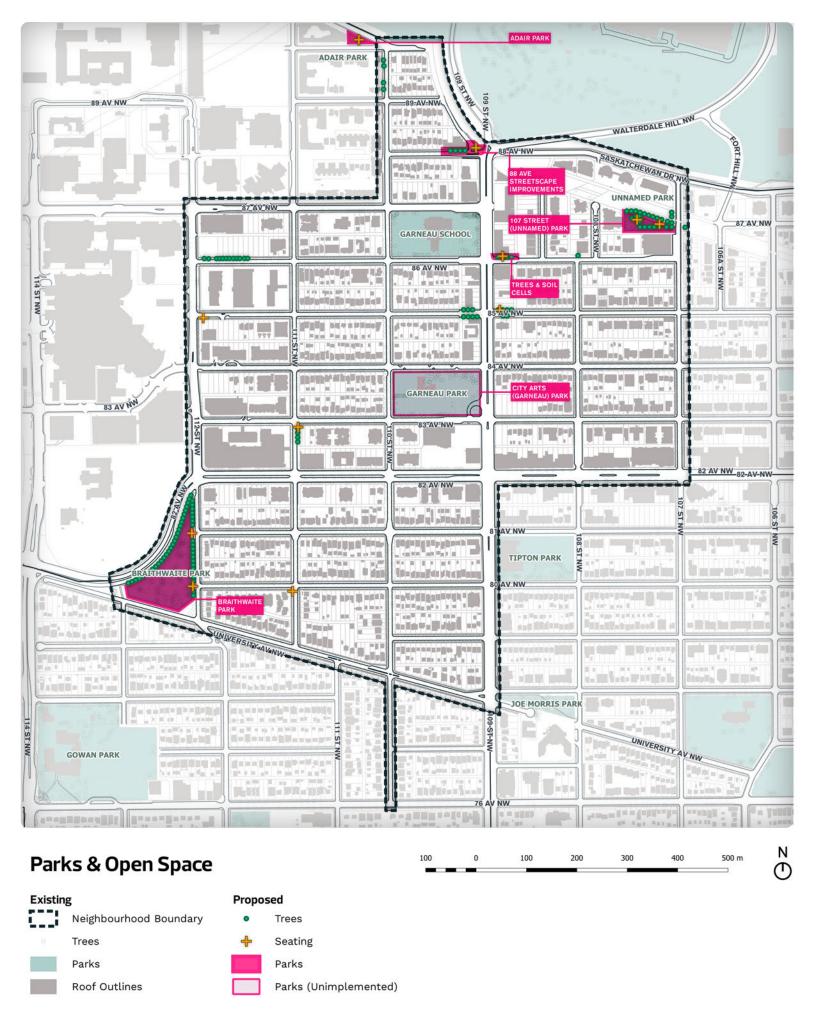
The park spaces throughout Garneau are designed with different levels of enhancement to improve usage, beauty and safety. These changes will offer new and different uses of the parks and improve how pedestrians travel through them. The construction of the park designs is subject to further funding and approvals.

- **BRAITHWAITE PARK (112 STREET AND 82 AVENUE)**
- CITY ARTS CENTRE PARK (109 STREET AND 83 AVENUE)
- ADAIR PARK (SASKATCHEWAN DRIVE AND 90 AVENUE)
- **\* 88 AVENUE STREETSCAPE IMPROVEMENTS**

- PARK SPACE 107 STREET AND 86 AVENUE (NW OF GRANITE CURLING CLUB)
- TREE PLANTING
- NEW SEATING & BENCHES

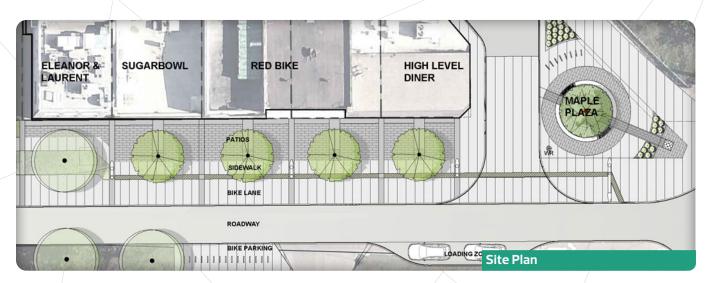
# **City Policies and Programs:**

- BREATHE Green Network Strategy Promotes an adequate supply, quality and distribution of open space, that is accessible and inclusive for all
- Universal Design Standards The City follows universal design (for example, Access Design Guide) to support access and use for people of all ages and abilities
- Dogs in Open Spaces Strategy Provides best practices for designing dog off-leash areas
- Winter City Design Guidelines Provide ideas and standards that improve our streetscapes in the context of Edmonton's winter climate and conditions for a more accessible, safe, aesthetically pleasing and enjoyable year round experience
- Neighbourhood Renewal Program The Neighbourhood Renewal Program has funding limitations and cannot accommodate all of the proposed park improvements. The Project Team will explore other City programs and funding sources to support these improvements



# **88 Avenue Streetscape Improvements**

To improve pedestrian connections through the park, and provide open recreation spaces and a dog off leash area.



- Tree-lined sidewalk on west side of 112 Street (east side of park)
- 2. Tree-lined sidewalk on north side of University Avenue (south side of park)
- 3. Tree-lined boulevard along the existing sidewalk on 82 Avenue
- 4. New seating plaza with planters at intersection of 109 Street and 88 Avenue







# **New Tree Planting, Seating & Benches**

#### TREE PLANTING

To add to the City's tree canopy and look for opportunities to plant new trees in a mature area as succession planting.

- New boulevard trees planted across the neighbourhood where space is available along streets and avenues without utility conflicts
- 2. New trees planted in existing and proposed park spaces
- 3. New trees planted in coordination with the location of EPCOR's low impact development facilities
- 4. New trees planted in place of others that will be removed due to poor health or due to conflict with other design proposals

#### **NEW SEATING & BENCHES**

To add places to stop and rest for people biking and walking in Garneau

- 5. New seating provided at many locations throughout the neighbourhood
- 6. New seating and tables at existing and proposed park spaces
- 7. New seating integrated with the designs for low impact development facilities

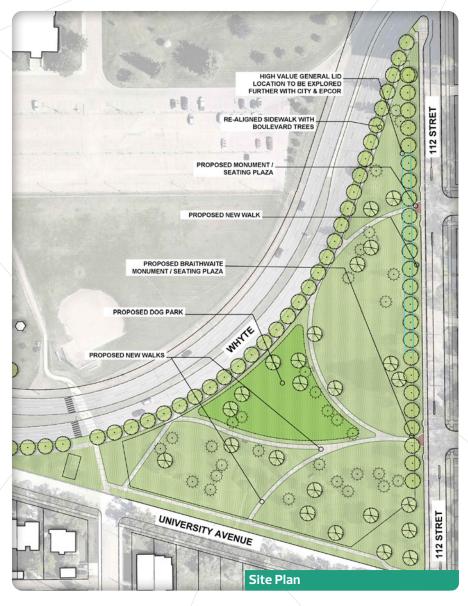




### **Braithwaite Park**

To improve pedestrian connections through the park, and provide open recreation spaces and a dog off leash area.

- Tree-lined sidewalk on west side of 112 Street (east side of park)
- Tree-lined sidewalk on north side of University Avenue (south side of park)
- 3. Tree-lined boulevard along the existing sidewalk on 82 Avenue
- 4. Pathways through park to connect to destinations to the west
- 5. Memorial plaza relocated to an area where it is more visible and improves the sightlines throughout the park
- 6. Dog park enclosed with plantings and fencing
- 7. Open area recreation space







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# City Arts (Garneau) Park

The City Arts Park final design is well supported as a recommended concept in the final design, yet will require future funding sources to achieve the scale of changes that are proposed for the park. The design transforms the existing park into a continuous space with a pedestrian path and improve sightlines within the park space. The design included:

- A continuous north-south linear park connecting the existing plaza to the old bus turnaround
- 2. Reduction to the existing berm improving sight lines in the park
- 3. Boulevard trees planted along 109 Street
- 4. Pedestrian path through park
- 5. Realigned parking lot

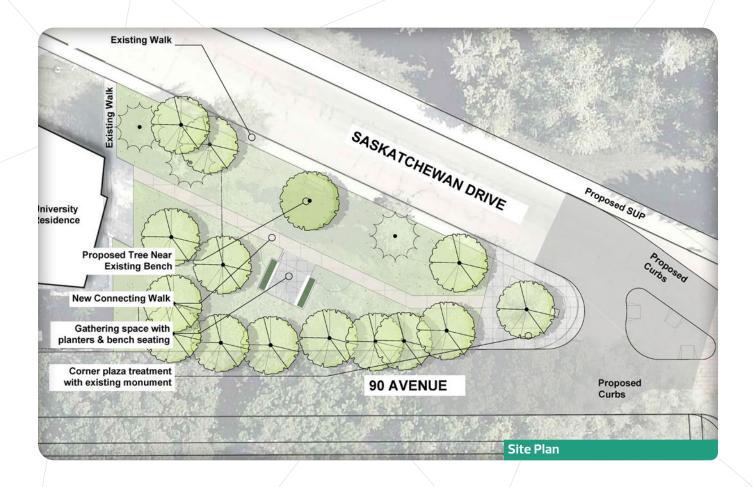






#### **Adair Park**

To improve the park space by making it more welcoming and attractive for gathering. **The Final Design Includes:** 



- A plaza with seating
- 2. Upgrades to existing monument

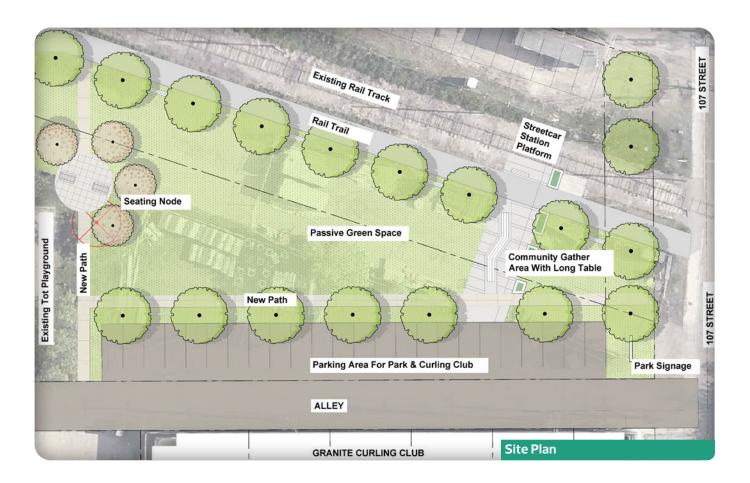
- 3. Pedestrian connections
- 4. Note: No changes will be made to the existing lookout on the north side of Saskatchewan Drive





# Park Space 107 Street and 86 Avenue

To enhance the usability of the park space by improving access to the existing playground and making it more welcoming and attractive for gathering. **The Final Design Includes:** 



- 1. Open space for seasonal multi-use programming
- 2. Increased green space, trees and greenery
- 3. A pathway connecting to existing playground
- 4. Seating around playground
- 5. Connection to the Rail Trail



# **Final Urban Design Framework**

# LID - Low Impact Development



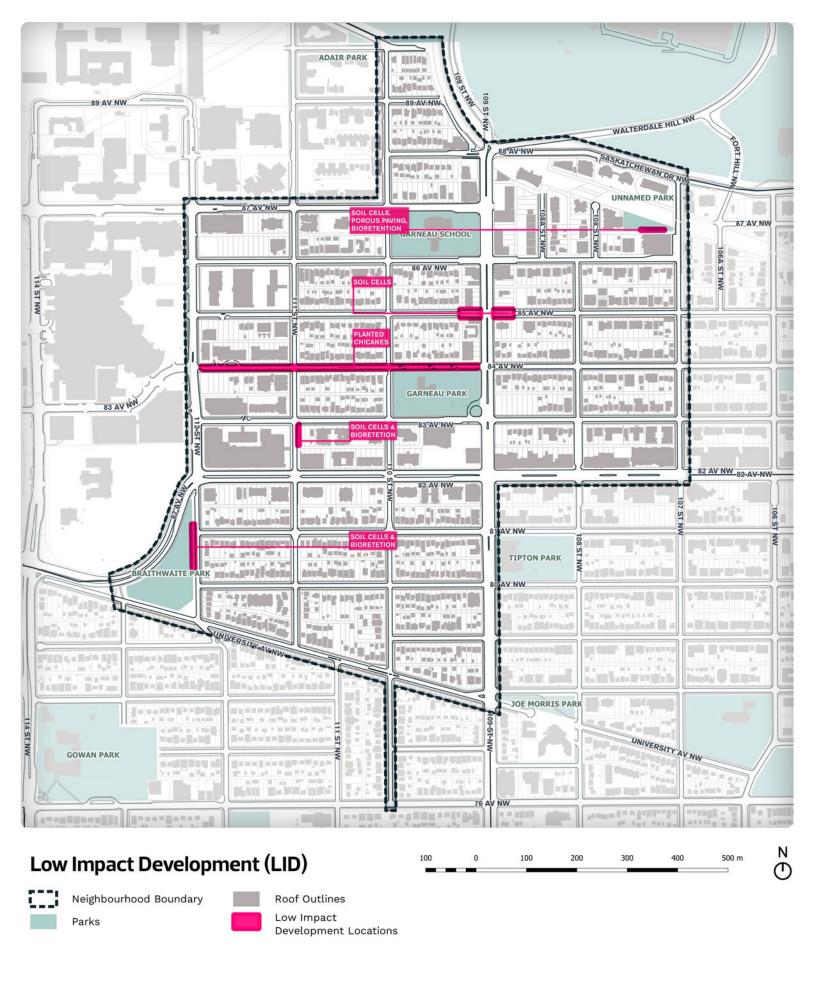
To relieve pressure on the stormwater system and help alleviate the potential for flooding and sewer back up during future storms, and to integrate and add more planting and biodiversity to the neighbourhood.

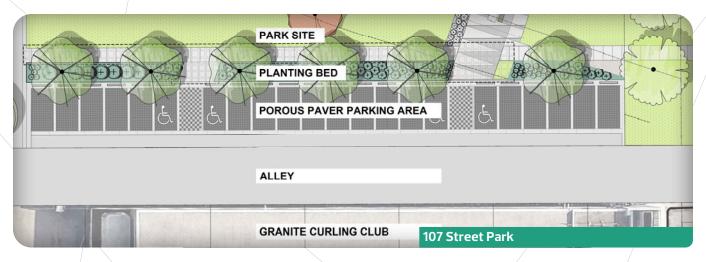




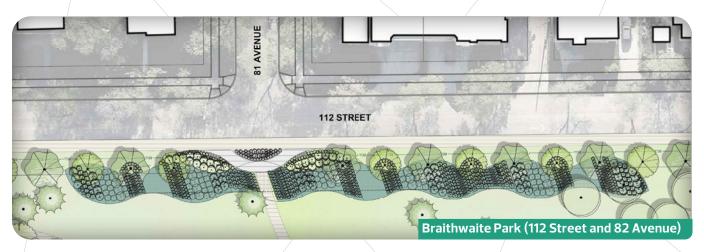


- Bioretention and structural soil cells at 111 Street and 84 Avenue
- 2. Structural soil cells and planters at 85 Avenue west of 109 Street
- 3. Structural soil cells and planters at 85 Avenue east of 109 Street
- 4. Porous paving in the parking lot next to the proposed 107 Street Park
- 5. Bioretention with structural soil cells at Braithwaite Park
- 6. Rain garden plantings in landscaped chicanes on 84 Avenue





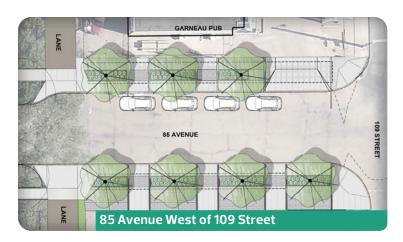
POROUS PAVING IN THE PARKING LOT NEXT TO THE PROPOSED 107 STREET PARK



BIORETENTION WITH STRUCTURAL SOIL CELLS AT BRAITHWAITE PARK



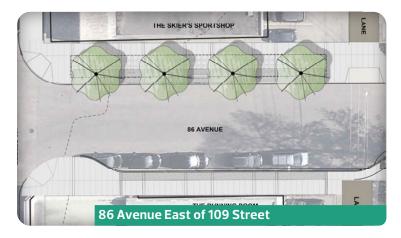
RAIN GARDEN PLANTINGS IN LANDSCAPED CHICANES ON 84 AVENUE



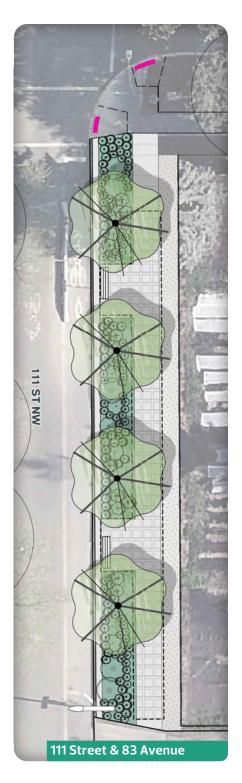
STRUCTURAL SOIL CELLS AND PLANTERS AT 85 AVENUE WEST OF 109 STREET



STRUCTURAL SOIL CELLS AND PLANTERS AT 85 AVENUE EAST OF 109 STREET



STRUCTURAL SOIL CELLS AND PLANTERS AT 85 AVENUE EAST OF 109 STREET



BIORETENTION AND STRUCTURAL SOIL CELLS AT 111 STREET AND 84 AVENUE

# **Final Urban Design Framework**

# **Implementation**



### **Construction Phasing**

The timing and staging of Neighbourhood Renewal construction is dependent on many things including weather conditions, utilities work, and other sometimes unforeseen design and construction issues.

Garneau's neighbourhood renewal construction began in spring 2021 and is expected to take three years to complete. Construction will be staged over three years as seen on the Year Split Construction Phasing Map.



