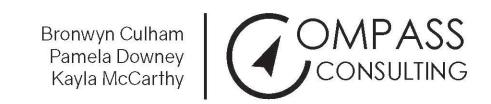
# MARDA LOOP REIMAGINED

A CONCEPTUAL FRAMEWORK FOR A DYNAMIC COMMUNITY



Bronwyn Culham Pamela Downey Kayla McCarthy



EVDP 644: Advanced Professional Planning Studio University of Calgary Instructor: Francisco Alaniz Uribe Environmental DESIGN

architecture + landscape architecture + planning

## **COMPASS CONSULTING**





As a second year Master of Planning student at the University of Calgary, Bronwyn is interested in community building, heritage planning, active transportation, and urban design. She has obtained municipal planning experience during a 4-month internship with the Town of Banff, as well as private sector experience at an engineering and consulting firm, where she was involved with stakeholder engagement for transmission line projects throughout Alberta. Bronwyn also holds a Bachelor of Arts in Urban Studies and Art History giving her the ability to marry the aesthetic considerations of urban environments, with the practical and theoretical frameworks required to build livable communities.



**Pamela Downey** 

Pamela is a second year Master of Planning student at the University of Calgary, she is interested in sustainable and resilient urban design, with a strong emphasis on place-making, walkability, and public health. Pamela brings a unique perspective to the team having participating in international education including "Planning the Cycling City" at the University of Amsterdam and a research Field School in India. She also holds a BA in Geography and Urban Studies from the University of Victoria. With experience in Sponsorship and Events Coordination, and Sales, Pamela is able to easily communicate with individuals and groups to find solutions that work.



**Kayla McCarthy** 

Kayla is a second year Master of Planning student at the University of Calgary, with an interest in the connection between the physical environment, economics and human behaviour. With an undergraduate degree in commerce & marketing, she is constantly thinking about the psychology of human behaviour, and what makes a "good" community. In addition, beginning this program in the foundation year of Architecture, Kayla brings additional experience to the influence of the built form on the public realm. Finally, with 3 years experience in residential home building in Calgary and an internship at the City of Calgary in Civic Innovation, Kayla brings a design thinking perspective to every endeavour.

## **ABOUT THE PROJECT**

#### **About The Project**

Marda Loop is a developed inner city neighbourhood in the southwest of Calgary. It is comprised of three communities: South Calgary, Garrison Woods and Altadore. Due to it's location and it's multitude of services, amenities and parks, this neighbourhood is a desirable place for people of all ages. Development pressures and outdated ARPs make this area much in need of an updated plan moving forward.

In order to explore opportunities for an updated plan, the Marda Loop Communities Association and U of C Master of Planning Senior Studio partnered to explore the possibilities.

Over 15 weeks, each group completed a comprehensive analysis, gained valuable input from community members at a world cafe workshop event, and developed a conceptual framework for growing Marda Loop into the best place it can

The analysis and community engagement completed by Compass Consulting made it clear that Marda Loop is an area much loved by residents and visitors alike. In addition, the significant redevelopment in the area provides a great opportunity for improving the public realm while increasing the population. The recommendations have been divided into four categories, however none exist on their own, and each layer is interwoven with the others. An approach demonstrating a range of interventions and recommendations gives the community a pattern book of plans, big and small, for the short and long term.

Compass Consulting presents Marda Loop Reimagined: A conceptual framework and toolkit for the creation of a livable and vibrant community at the human scale.



- Historic Evolution
- Demographic Analysis
- Environmental Analysis
- Transportation Analysis
- Housing Analysis
- Density Analysis
- Amenities Inventory
- 1:1000 Physical Model February 16, 2018

- Poster Composition
- World Cafe Workshop
- Guiding Principles
- Parks & Environment Recommendations
- Community Attraction Recommendations
- Connectivity Recommendations
- Housing & Development Recommendations

 Preparation of digital and poster presentation to communicate concept.

#### **Final Community Proposal** April 20, 2018

 Preparation of booklet containing full analysis and engagement summaries and community recommendations.

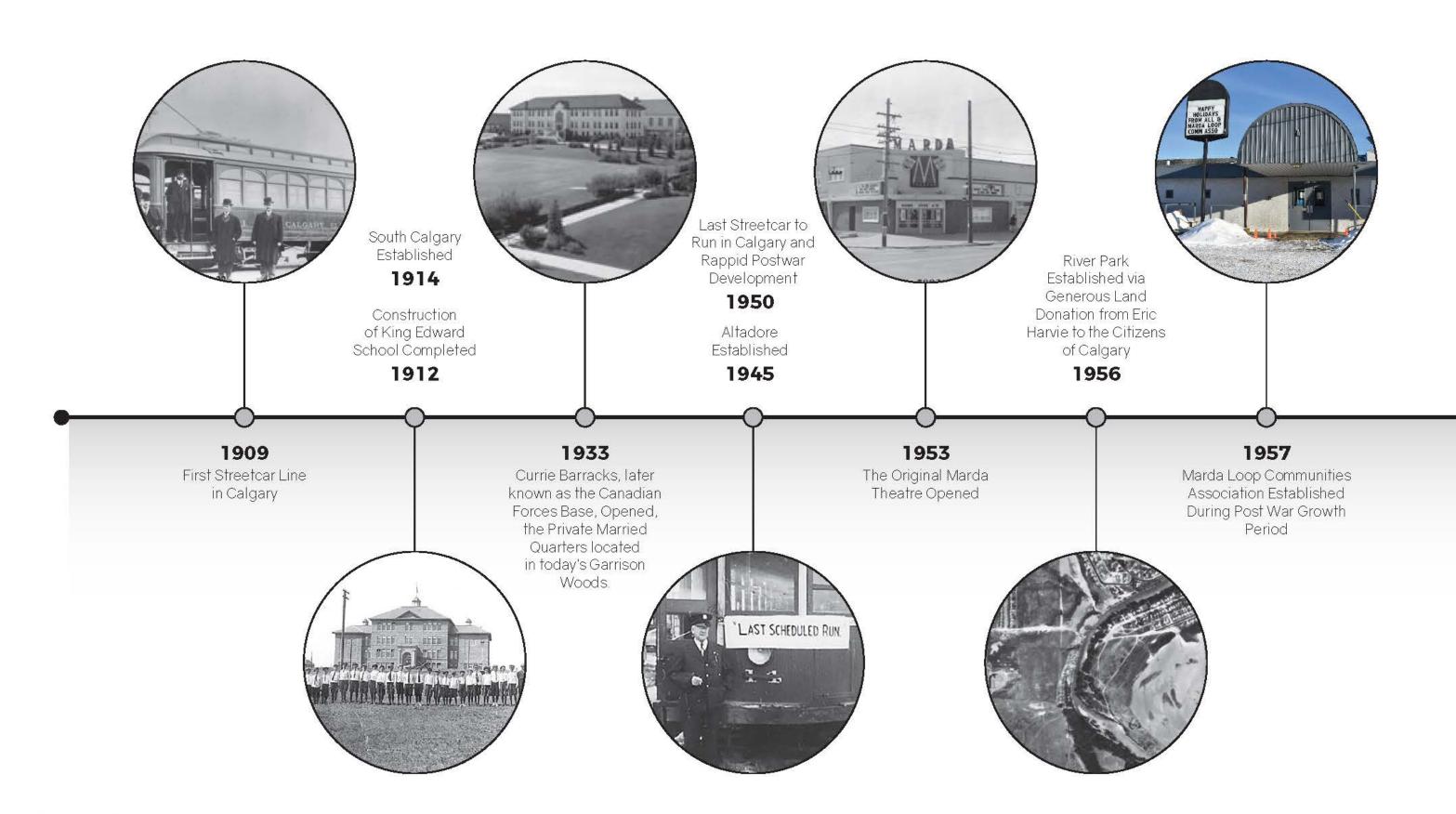
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# **MARDA LOOP**

# **MARDA LOOP HISTORY**





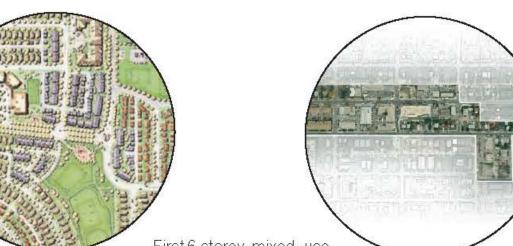
Closure of the Marda Theatre (re-named the Odeon)

1988



King Edward closed its doors as a public school after a decline in inner-city enrolment

2000



First 6 storey, mixed-use building completed in Marda Loop, the Treo at Marda Loop, on the corner of 33rd Ave and 20th St.

2010

Completion of the Odeon, 6 storey, mixeduse building on the corner of 33rd Ave and 20th St. And completion of Garrison Corner, a 3 storey retail/office space on 34th ave and 22nd st.

2017

## 1998

Closure of Canadian Forces Base (CFB) and development of the Garrison Woods CFB East Community Plan



## 2004

Garrison Woods development completed by Canada Lands Company. Development initiatied infilling process in South Calgary and Altadore.



## 2014

City Council approved the Marda Loop ARP.

## 2015

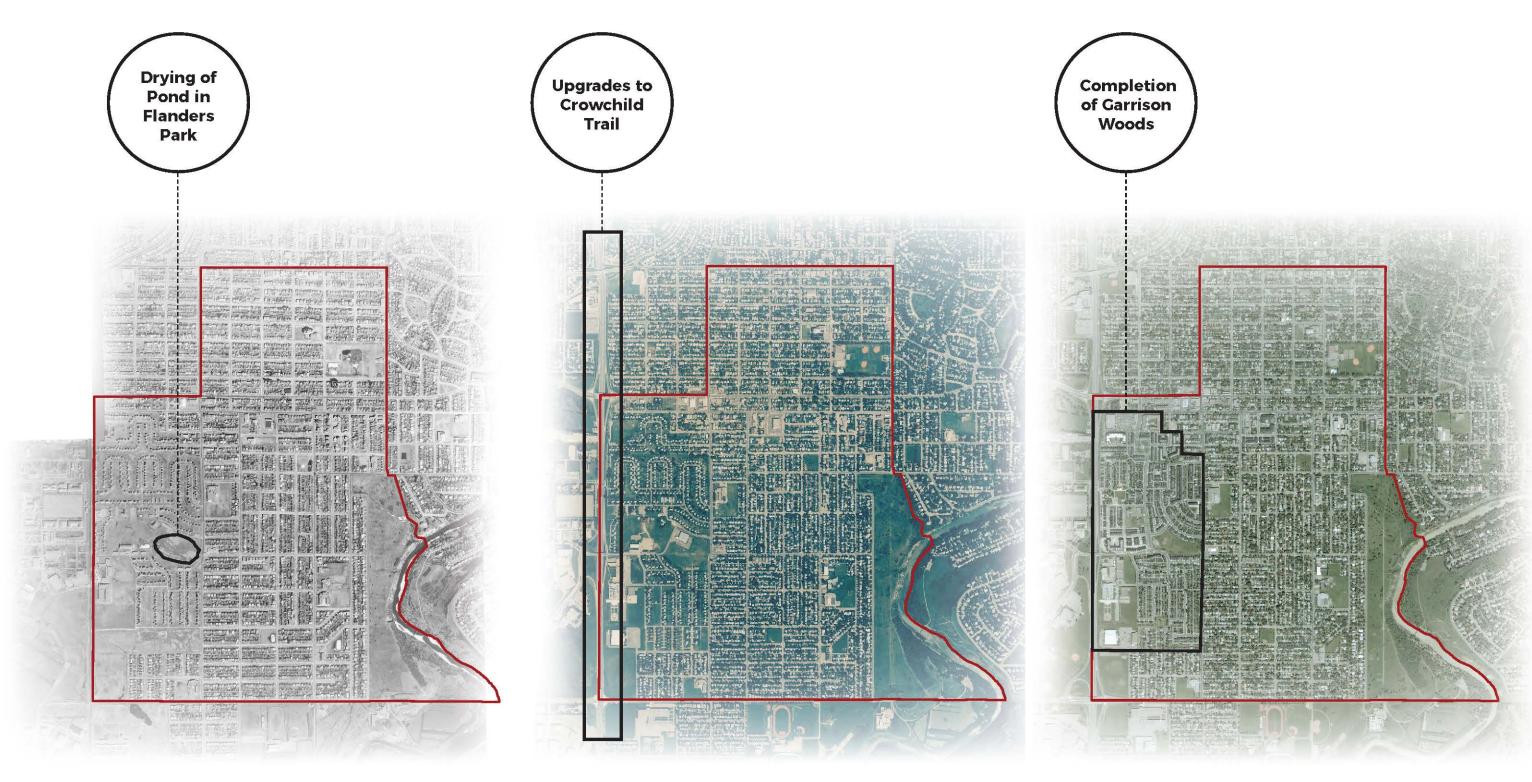
The City of Calgary began the Main Streets Initiative, identifying 33rd Ave SW as a Main Street.



# **MARDA LOOP HISTORY**

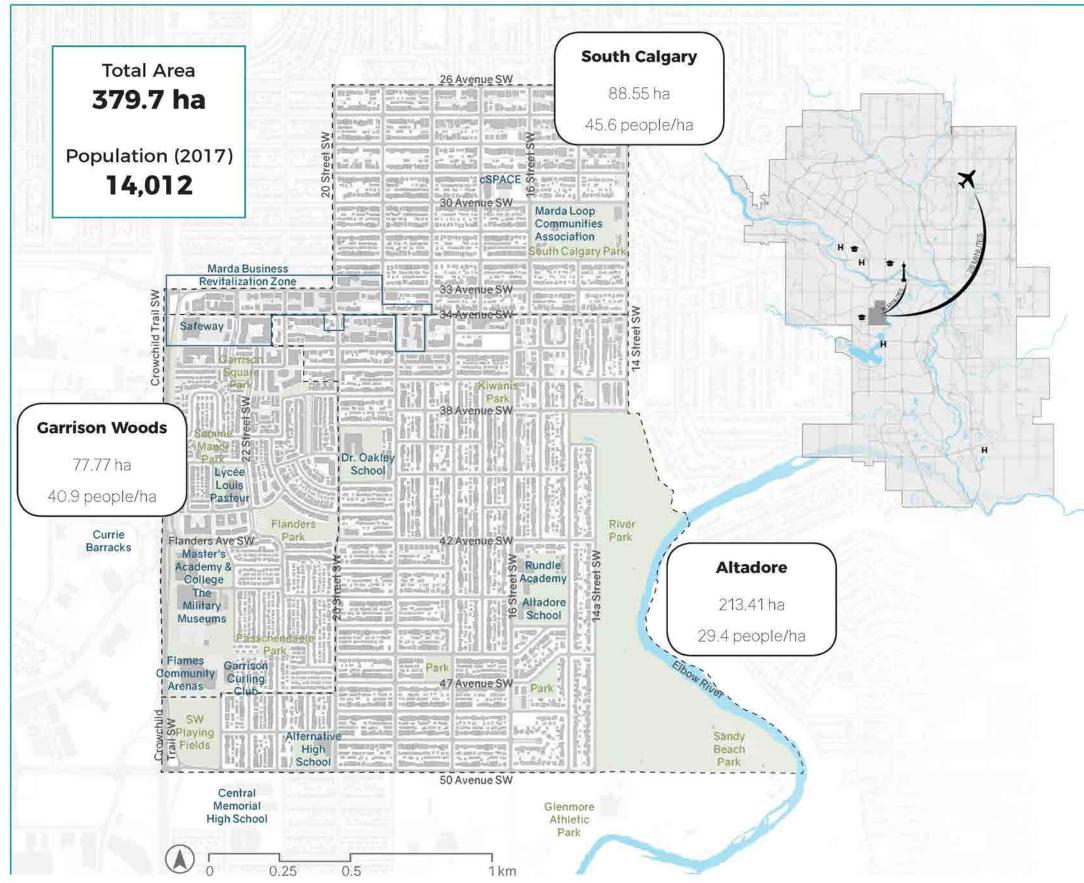


1924 1949 1951



1966 1993 2005

## MARDA LOOP



#### Marda Loop

Marda Loop is located in the southwest quadrant of Calgary, AB and consists of three communities; Garrison Woods, South Calgary and Altadore.

Marda Loop is bounded to the west by Crowchild Trail, to the south by 50th Avenue SW and to the north by 26th Avenue SW and to the east by 14th Street and the Elbow River, which provides a lovely natural amenity to the communities.

It's inner city location and diverse commercial and amenities make it an attractive community for residents and visitors alike.

The population has been rising steadily since it's inception, presently supporting significant amounts of infill development, with the exception of Garrison Woods which was developed as a master planned community after the closing of the Canadian Forces Base.

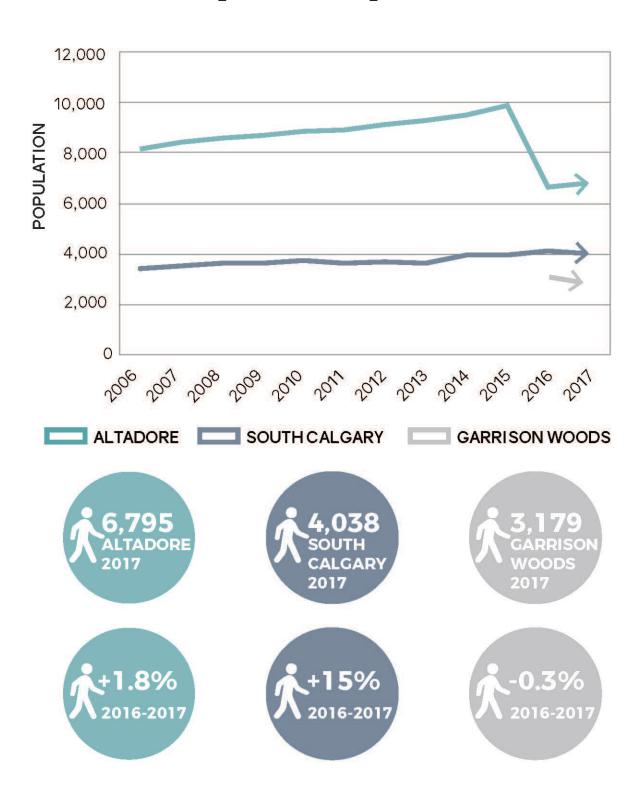
The population pyramids to the right illustrate the communities population composition in 2016 according to the Calgary Civic Census, 2016.

The pyramid of Altadore indicates that a large proportion of young families reside in the area. During the engagement, Compass Consulting was informed that this could be contributed to from the many schools that serve the area, making it an attractive location for young families.

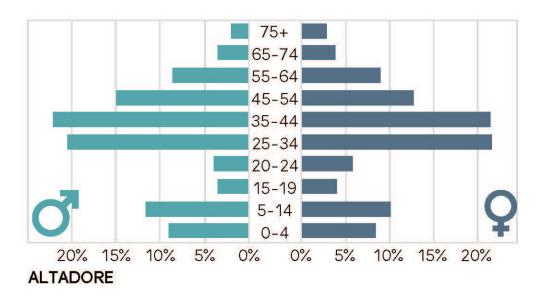
In South Calgary, the large proportion of 25-34 year olds suggests a young, professional population, which could be attributed to the variety of housing types and affordability offered in South Calgary and/or it's proximity to downtown Calgary and public transportation.

Whereas the more evenly dispersed Garrison Woods indicates that both young families and an aging population reside there. The large proportion of people over 75 years of age can also be attributed to the location of the Manor Village and StayWell Manor at Garrison Woods, independent and assisted senior living, respectively.

## **POPULATION [2006-2017]**

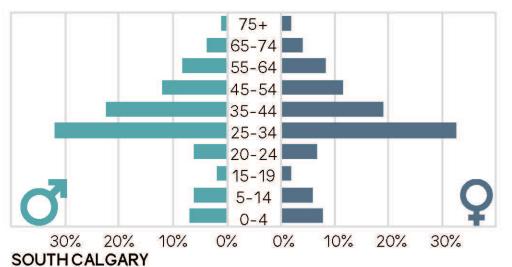


# **POPULATION PYRAMIDS [2016]**



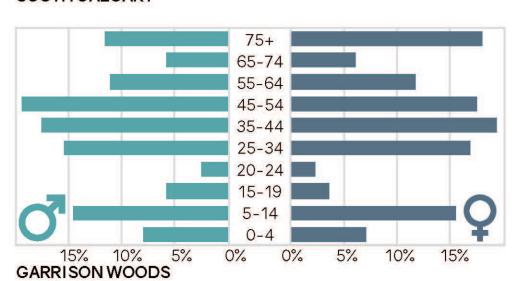
25-44 Are the largest Age **Groups and a Large** 0 - 14

**Indicates Young Families in Marda** Loop.



25-34

Is the Largest age group, this indicates a young, professional population in South Calgary.



35-54

Are the largest age groups, indicating an even age dispersion.

75+

Indicates an aging population in Garrison Woods

## **CURRENT REAL ESTATE & RENTAL MARKET**

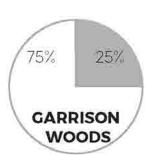
#### **REAL ESTATE LISTINGS**

	ALTADORE	GARRISON WOODS	SOUTH CALGARY
SINGLE FAMILY	Average Bedrooms: 4.18 \$1,464,901 Avg. Price \$1,645,000 Med. Price Average Square Feet: 2,573	Average Bedrooms: 3 \$549,900 Avg. Price \$549,900 Med. Price Average Square Feet: 1,002	Average Bedrooms: 3.3 \$968,000 Avg. Price \$685,000 Med. Price Average Square Feet: 1,713
DUPLEX	Average Bedrooms: 3.7 \$862,330	Average Bedrooms: 2.8 \$642,148	Average Bedrooms: 3.1 \$799,169
APARTMENT	Average Bedrooms: 1.60 \$309,920 Avg. Price \$314,900 Med. Price Average Square Feet: 793	Average Bedrooms: 1.25 \$333,688 Avg. Price \$312,400 Med. Price Average Square Feet: 728	Average Bedrooms: 1.7 \$343,486

[January, 2018 | real-estate.ca]

# 32% **ALTADORE**







[Calgary Civic Census 2016]

### **RENTAL LISTINGS**



[January, 2018 | rentfaster ca]

## **REAL ESTATE SAMPLES**



2044, 40th Avenue

\$1,890,000

4 Bedrooms

3,417 Sq. Feet

Single Family



#1 3794, 16th Street

\$599,000

3 Bedrooms

1,173 Sq. Feet

**Duplex** 



#102, 145, **Burma Star Rd** 

\$345,000

1 Bedroom

712 Sq. Feet

Apartment

## **HOUSEHOLD INCOME & AFFORDABILITY BY CENSUS TRACT**

TRACT 22

\$103.826

Median Household Income [2015]

+24.6%

From 2010

TRACT 22

\$169.790

Average Household Income [2015]

+24.7%

From 2010

TRACT 22

\$600.897

Average Dwelling Value [2016]

+18.25%

From 2011

**TRACT 22** 

25.5%

Of the Population Spends >30% on Shelter Costs [2016]

TRACT 23

\$171.008

Median Household Income [2015]

> +22.7% From 2010

**TRACT 23** 

\$307.722

Average Household Income [2015]

+26.9%

From 2010

**TRACT 23** 

\$897.868

Average Dwelling Value [2016]

+22.1%

From 2011

TRACT 23

15.1%

Of the Population Spends > 30% on Shelter Costs [2016]

TRACT 24

\$101.163

Median Household Income [2015]

+28.8%

From 2010

**TRACT 24** 

\$181.005

Average Household Income [2015]

+26.8%

From 2010

TRACT 24

\$598.046

Average Dwelling Value [2016]

+24.7%

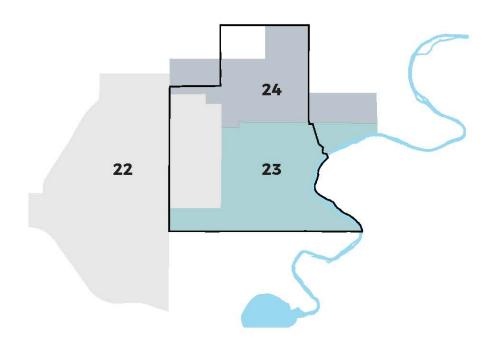
From 2011

TRACT 24

24.1%

Of the Population Spends >30% on Shelter Costs [2016]

\*Does Not Adjust For 5.92% Inflation Rate Between 2011-2016 Data [NHS 2011 + Canadian Census 2016]



#### **Household Income and Affordability**

During the site analysis phase, a market assessment was conducted for current real estate listings, rental options and overall household income and affordability of Marda Loop.

It was discovered that Marda Loop is dominated by owner occupation, which limits the rental market within the three communities. South Calgary having the most even split between owner and renter dwelling occupation, which could contribute to the larger young adult population that resides

However, due to the minority of rental occupation and the attraction of the Marda Loop location, the rental market is expensive. Currently a 2 bedroom rental will cost approximately \$1400 a month. The expense is not limited to rental costs however, the real estate market is quite high in Marda Loop as well. In January, 2018, the average asking sale price for a single family home, was \$1.5 million in Altadore, \$9,680 in South Calgary and \$5,050 in Garrison Woods.

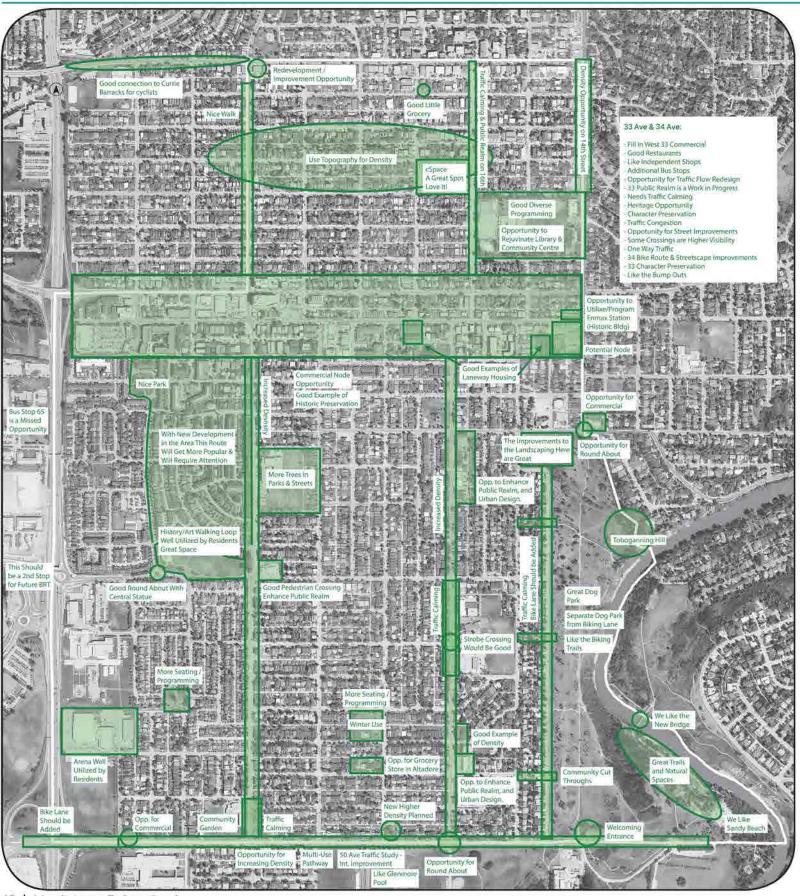
Therefore, Marda Loop is currently not very affordable. Additionally, according to the Canadian Census 2016, an average of 22% of the population in the three census tracts that cover the neighbourhood, spent over 30% of their household income on shelter.

<sup>\*</sup>Does Not Adjust For 8.67% Inflation Rate Between 2010-2015 Data [NHS 2011 + Canadian Census 2016]



# **WHAT WE HEARD**

# WHAT WE HEARD: OPPORTUNITIES



#### **Community Engagement**

A world cafe workshop was held on March 12, 2018 with residents of the community at the Marda Loop Communities Association. The MPIan Senior Studio broke up into six small discussion groups with approximately 25 community members, to discuss the opportunities and constraints that they perceive in their community. Detailed notes were made on area maps and summarized to the left and right. Many of these comments and other feedback from the steering committee influenced the recommendations made throughout this report, and are explained im more detail in each section.

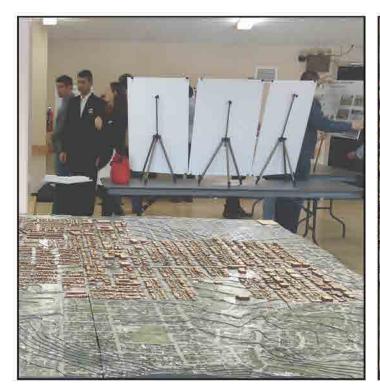
A final Open House was held at the community centre on April 14, 2018 to share the posters containing a summary of Marda Loop Reimagined, where again, members of the community shared their feedback on the final ideas.

Both sets of workshop and open house posters are included in the appendix.



April 14, 2018 - Open House

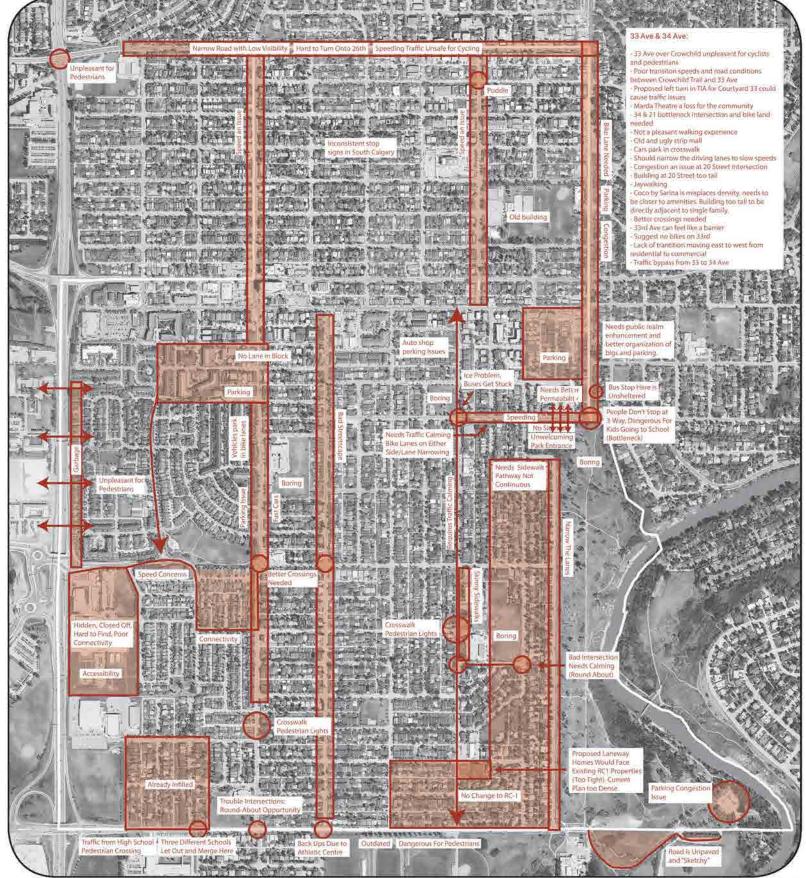
# WHAT WE HEARD: CONSTRAINTS







April 14, 2018 - Open House





# **GUIDING PRINCIPLES**

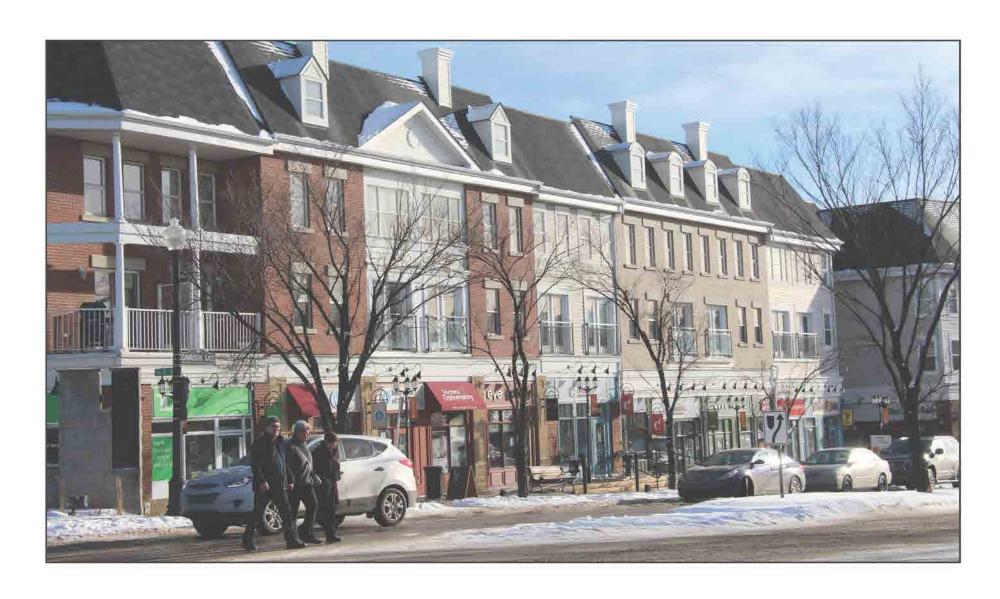
## **GUIDING PRINCIPLES**

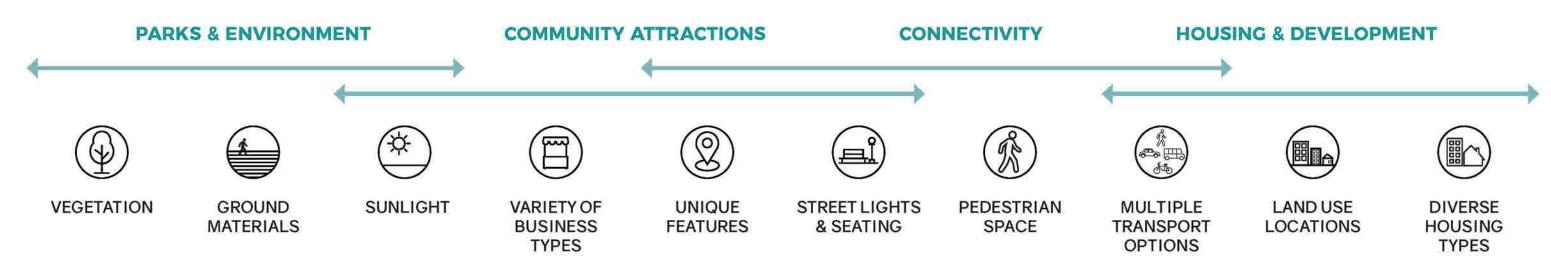
The analysis and public engagement made it clear to Compass Consulting that Marda Loop is a community much loved by residents and visitors alike, and several areas are utilized as good urban design precedents by The City of Calgary. The newer portions of the community, particularly throughout Garrison Woods, embody many characteristics of good urban design. However, the older portions of the community in South Calgary and Altadore are experiencing significant change through spot zoning and infill development.

Since all elements of a planned community are interdependent and rely on one another for efficient implementation and subsequent success, a more considered strategy for managing this growth and change is critical.

Compass Consulting has identified ten guiding principles which we think should be taken into consideration in all future changes in the community. Capaitalizing on the trend that is already taking place we see a great opportunity to improve the community with both large and small interventions, in the short and long term.

Compass Consulting presents Marda Loop Reimagined: A conceptual framework and toolkit for the creation of a livable and vibrant community at the human scale.







## **VEGETATION**



## **GROUND MATERIALS**



SUNLIGHT





## **UNIQUE FEATURES**



Include vegetation because it provides clean air, natural beauty and storm water management.



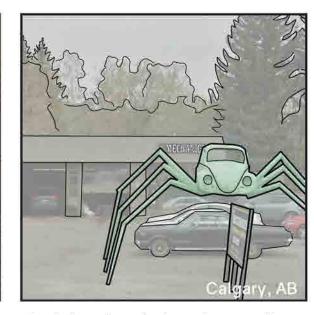
Vary the ground materials because they provide water permeability, historical context and differentiation of space.



Allow for street level sunlight and permeability into buildings because it provides warmth, improves user moods (vitamin D) and increases use.



Plan land uses that allow for a variety of business types because they facilitate economic growth, attract people to the area and encourage all day use.



Include unique features because they assist with wayfinding, contribute to community identity and creates interest in the area.



## STREET LIGHTS & SEATING



Include street lights & seating because they improve safety, extend duration of uses, and contribute to area character through unique design.



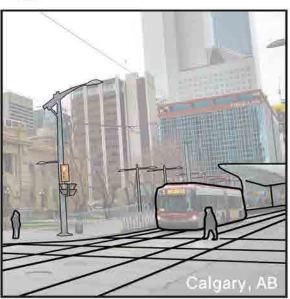
## PEDESTRIAN SPACE



Design thoughtful pedestrian space because it facilitates walkability. improves safety and encourages healthy lifestyles.



## MULTIPLE TRANSPORT OPTIONS



Plan connectivity network for multiple transport options in order to improve accessibility, increase activity in the public realm and reduce pollution.



## STRATEGICALLY **LOCATED LAND USES**



Strategically locate land uses in order to maximize access to commercial areas, encourage multi-modal transportation and facilitate logical community identity.



# **DIVERSE HOUSING**



Include diverse housing types because they create a sense of place and vary the demographic to better utilize transportation networks and improve affordability.





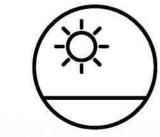


## **OPPORTUNITIES...**

- To integrate a variety of storm water management techniques to protect the Elbow River riparian area.
- 2. To encourage the preservation of River Park as a semi-natural area.
- To invest in street trees and adopt further policies that promote urban canopy resilience.
- 4. To encourage the use of native species and avoid invasive species in all community plantings.
- 5. To enhance connectivity between parks.
- 6. To encourage a diversity of programming for park spaces to appeal to all age groups.









UNIQUE FEATURES

GROUND MATERIALS

SUNLIGHT

VARIETY OF BUSINESS TYPES



**Acton Ave Park** 







MULTIPLE TRANSPORT OPTIONS



STRATEGICALLY LOCATED LAND USES



DIVERSE HOUSING TYPES

## **RIVER PARK NATURAL VEGETATION**



#### Goals

- 1. To encourage the preservation of River Park as a seminatural area.
- 2. To encourage the use of native species and avoid invasive species in all community plantings.

#### **Observations & What We Heard**

Marda Loop features the large natural area of River Park. The widely used park is located adjacent to the southwest community of Altadore on the ridge above Sandy Beach and has a large designated off-leash area. The park contains many native plant species including balsam poplar, aspen, riparian tall shrubs and grasses. Currently, the removal of caragana, an invasive species, is being carried out in River Park. Based on conversations with residents, people seem to appreciate the natural landscape of River Park and think it should be maintained.

#### Recommendations

River Park should be preserved as a semi-natural and recreational area for all Calgarians to enjoy.



The removal of caragana, an invasive species, is being carried out in River Park

## **RIVER PARK RIPARIAN ZONES**



### **Riparian Zone Benefits**



Prevent excessive erosion



Stabilize riverbanks



Slow floodwaters through natural floodplains



Improve water quality



Provide habitat for fish and wildlife



Offer aesthetic, recreational and economic benefits

The areas surrounding rivers, creeks and streams are known as riparian areas. They include riverbanks and floodplains, and can range from a few metres to several hundred metres in size.

Healthy riparian areas provide a range of benefits and ecosystem services, including preventing excessive erosion, stabilizing riverbanks, improving water quality, as well as offering aesthetic, recreational and economic benefits to Calgarians. They are among the most important habitats for fish and wildlife, especially for migratory and nesting birds.

The City of Calgary has implemented the Riparian Strategy, providing direction for the protection, restoration, and management of riparian ecosystems within Calgary's watersheds.

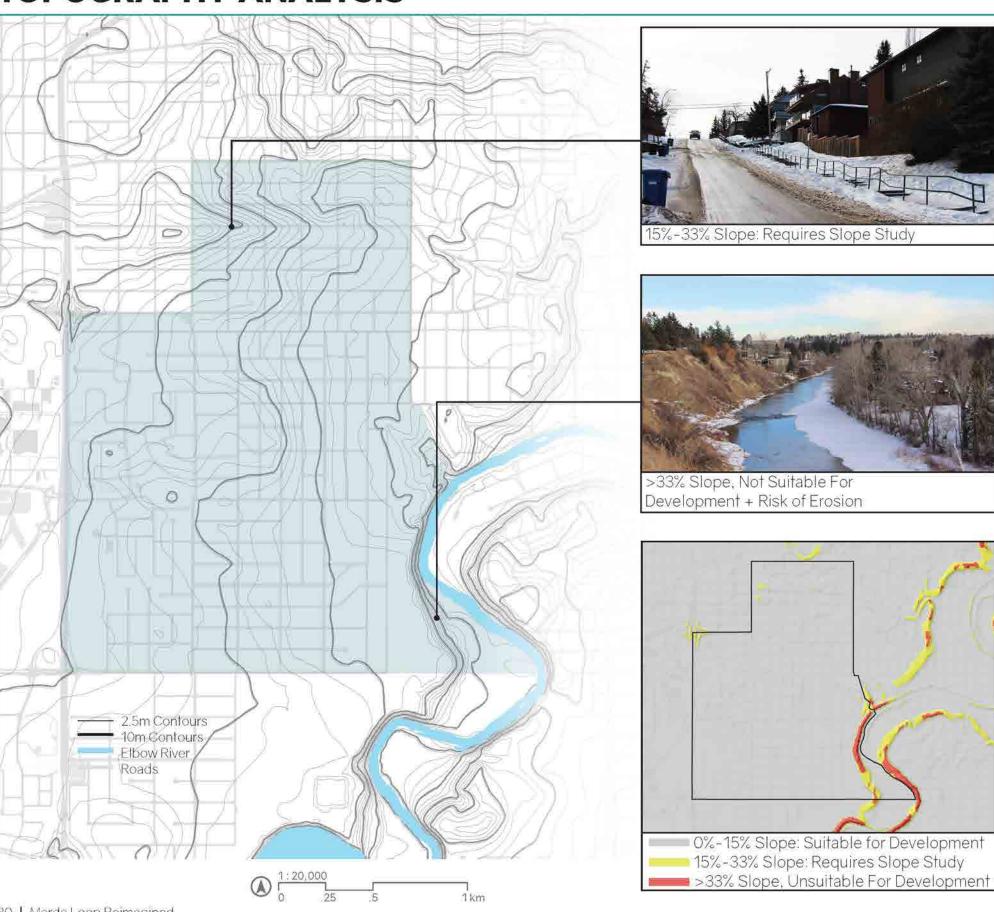
## The Riparian Strategy

Provides direction for the protection, restoration and management of riparian ecosystems within Calgary's watersheds.

#### Recommendations

Both the natural vegetation and riparian zones of River Park make up the sensitive areas which should be protected as they provide important ecosystem services.

## **TOPOGRAPHY ANALYSIS**



#### Observations & What We Heard

The majority of Marda Loop has a slope between 0% and 15%, which makes the majority of the neighbourhood suitable for development. South Calgary and River Park have areas which require slope studies and the banks of River Park are unsuitable for development, being over a 33% slope.

The topography in South Calgary presents an opportunity for slope adaptive designs, enabling effective use of the land, which will be described in detail in the Housing & Development Section.

The topography also poses a challenge for connectivity as the hills in South Calgary and River Park may be a deterrent for active transportation in those areas and should be considered in the network design.

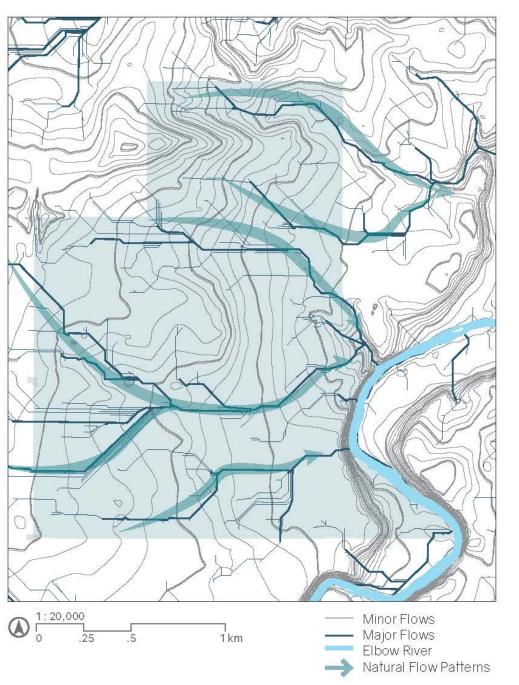
#### Recommendations

Compass Consulting recommends using slope adaptive design to accommodate the varied natural topography. This should be considered in all aspects of design recommendations for Marda Loop, including stormwater management, connectivity, housing and development. Each of which will be described in their respective subsequent sections.

# STORMWATER MANAGEMENT ANALYSIS

#### **Natural Drainage Patterns**

The teal arrows indicate the natural stormwater drainage patterns that the topography creates, without the disruption of roads or buildings, flowing west to east into the Elbow River.



#### **Predicted Drainage Patterns**

Water flows along the easiest path, therefore Compass Consulting overlaid the natural drainage patterns on the current street grid to indicate where stormwater may to flow through Marda Loop. The below map indicates these predicted patterns, flowing west to east and ultimately draining in the Elbow River.

Roads

Predicted Flow Patterns

## Flooding

Elbow River

Flood Way

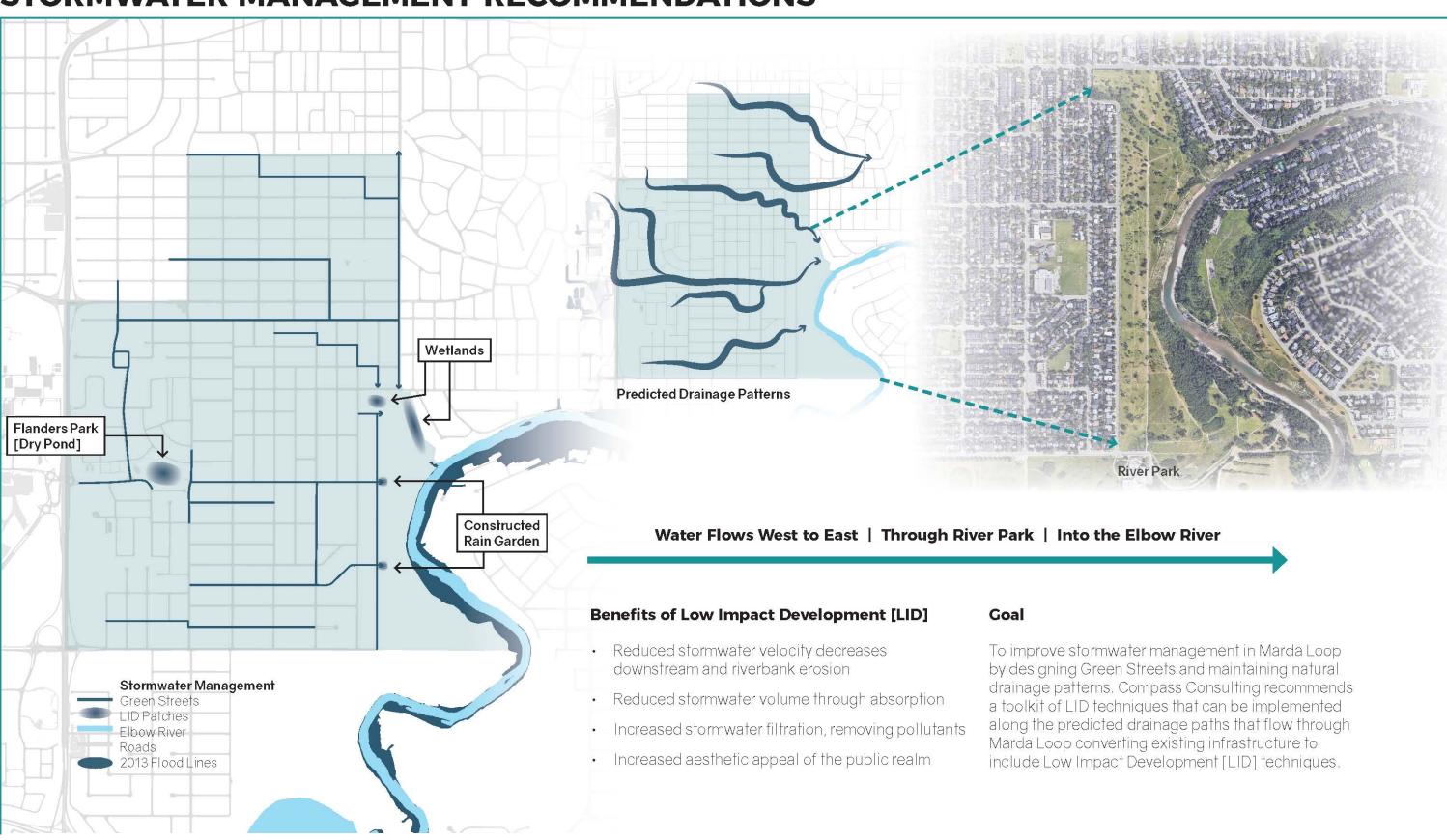
Flood Fringe



10m Contours

2013 Flood Line

# STORMWATER MANAGEMENT RECOMMENDATIONS



#### **Observations & What We Heard**

Stormwater flows along the easiest path, therefore roads and hard, impermeable surfaces often carry the majority of stormwater in urban areas directly into the sewer system or rivers and other water bodies. Currently, Marda Loop contains one dry pond, in Flanders Park, that collects stormwater overflow, in addition to the wetlands along the northern area of River Park, which sequesters water along its natural drainage paths. There are no other constructed stormwater management techniques employed in Marda Loop.

#### Recommendations

With increased development and additional hardscape being introduced into Marda Loop, it is imperative to consider stormwater management in urban design.

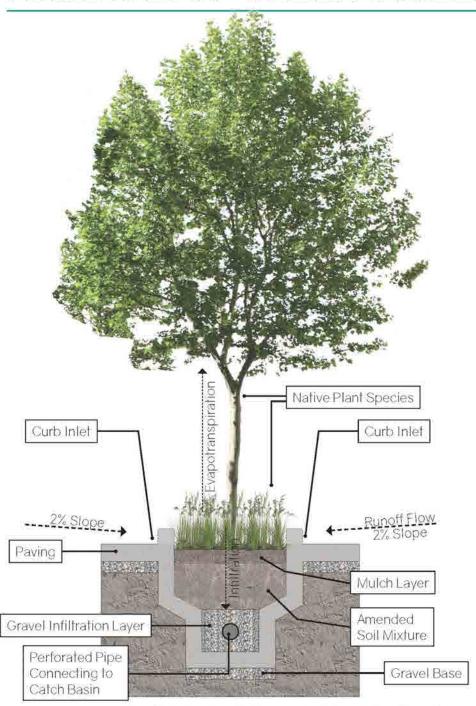
Compass Consulting suggests implementing the Marda Loop Green Streets Design Guide, which retrofits the existing infrastructure to include a variety of LID's, including bioswales and rain gardens located along predicted drainage paths. The map to the left indicates where LID techniques could be effective within Marda Loop.

All LID techniques should follow the recommended native species planting guide and must be tolerant of direct impact of gutter flow velocity and contaminants.

Compass Consulting would suggest that all new commercial, medium-density and multi-family residential developments in Marda Loop include LID techniques to manage their own stormwater runoff.



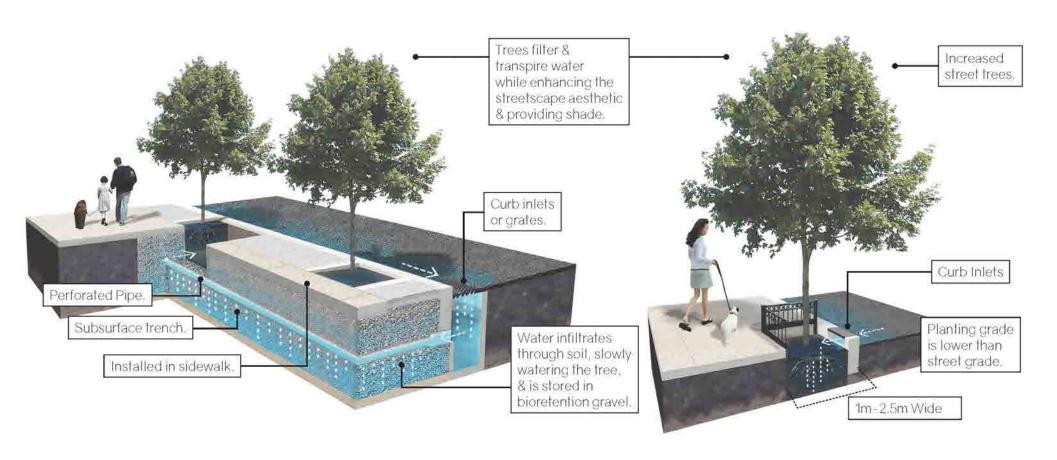
## MARDA LOOP GREEN STREETS DESIGN GUIDE



[Integrated Urban Bioswale Components, 2014, symbioticcities net]

### **Typical On-Street Bioswale Components**

A specialized LID technique, typically installed on the edge of a street to capture, slow and infiltrate stormwater runoff within a planted area or subsurface gravel. The road is sloped with a minimum 2% grade towards the bioswale to direct runoff through the receiving curb inlets and into the bioswale. The elevation of the planting media is below the street to enable drainage into the bioswale, and water retention.



#### **Curbside Tree Trench**

A LID technique that resembles typical street tree planting. However a subsurface perforated pipe transports stormwater through a trench that collects and stores large volumes of stormwater while slowly watering the street trees. Tree trenches improve the streetscape through the addition of street trees, tree grates and paving patterns.

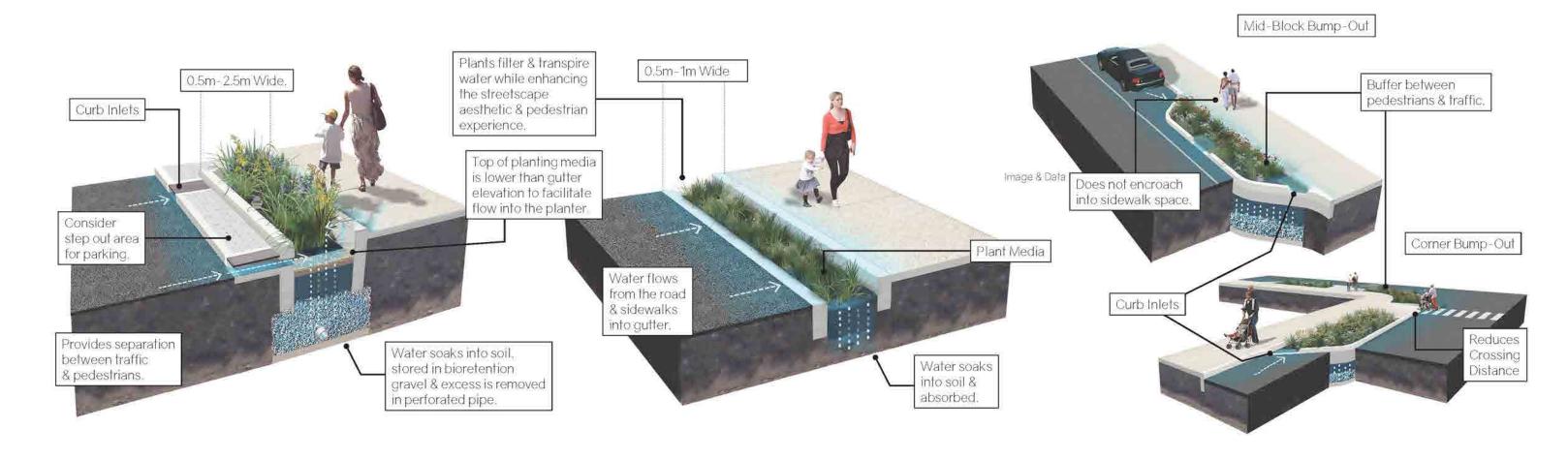
Image & Data [City of Philadelphia Green Streets Design Manual, 2014]

#### Stormwater Tree [Bioswale]

A specifically designed street tree well that enables the capture and infiltration of stormwater runoff. This design fits well within a constrained site, requiring a small footprint, therefore is effective for retrofits. Can accommodate steep topographical changes.

Should follow 6m tree spacing guidelines established by the City of Calgary.

Image & Data [City of Philadelphia Green Streets Design Manual, 2014]



#### Stormwater Planter [Bioswale]

A specialized curbside bioswale that can be retrofitted into existing infrastructure with a recommended 2:1 length to width ratio for effective stormwater management. The planters allocate space for smaller plantings in addition to street trees, therefore improving the variety of vegetation incorporated into the streetscape, increasing the pedestrian experience.

Image & Data [City of Philadelphia Green Streets Design Manual, 2014]
Data [Edmonton Low Impact Development Best Management Practices Design Guide, 2014]

#### **Green Gutter [Bioswale]**

A thin strip of planting, inset into a street curb, designed as a shallow bioswale, to reduce the velocity and volume of runoff infiltrating the existing storm sewer, relieving pressure from the sewer infrastructure.

Image & Data [City of Philadelphia Green Streets Design Manual, 2014]

### Rain Garden Bump-Outs

A landscaped curb-extension specifically designed for stormwater management, however, bump-outs also function as a traffic calming technique by physically and visually narrowing the road, therefore encouraging slower vehicle speeds. Placement should not reroute cyclist routes and planting must accommodate adequate sight distances at intersections.

Image & Data [City of Philadelphia Green Streets Design Manual, 2014]

# MARDA LOOP GREEN STREETS PRECEDENTS







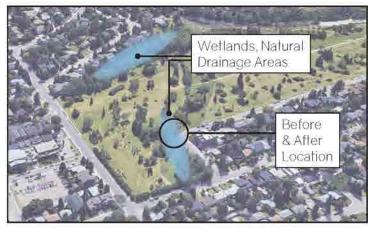






### **RIVER PARK WETLANDS**







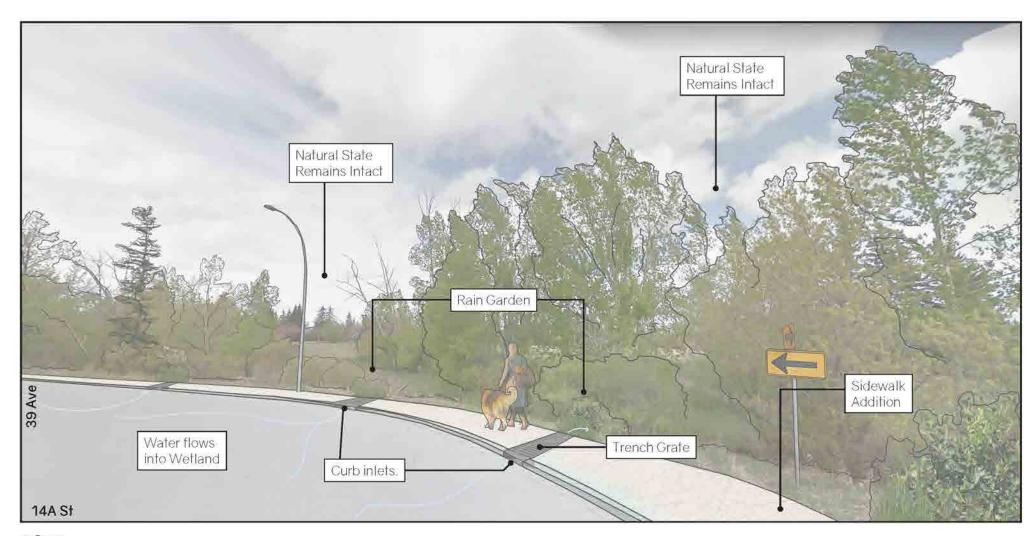


**Before** Image [Google Maps]:

Location

**Natural Forest Wetland** Image [https://pixabay.com/en/forest-swamp-trees-wetland-1704000/]

**Sidewalk Trench Grate** Image [https://www.ironagegrates.com]



Recommendations

River Park contains two wetlands in the north end that naturally collect water and in which standing water can be seen most of the year. Therefore these areas function as natural drainage points and Compass Consulting recommends that the wetlands should be maintained in their natural states and improvements be made to their borders to allow the wetlands to function at their maximum potentials.

Compass Consulting recommends improvements such as curb inlets and the addition of rain gardens of salt tolerant species at the mouths of the inlet, to allow the natural flow of water into the wetlands. Improvements to the public realm include the addition of a sidewalk along the park that includes trench grates and curb inlets to allow drainage into the constructed rain gardens along the sidewalk edge. The rain gardens act to reduce the speed of runoff entering the wetland and protect the slope from erosion.

The trench grates present an opportunity to contribute to the public realm through interesting designs while performing a functional purpose of maintaining the grade of the sidewalk while allowing water to flow under the sidewalk into the wetland.

#### After

### FLANDERS PARK DRY POND RAIN GARDEN



**Before** Image [Fabio Bittencourt, Aug 2016]



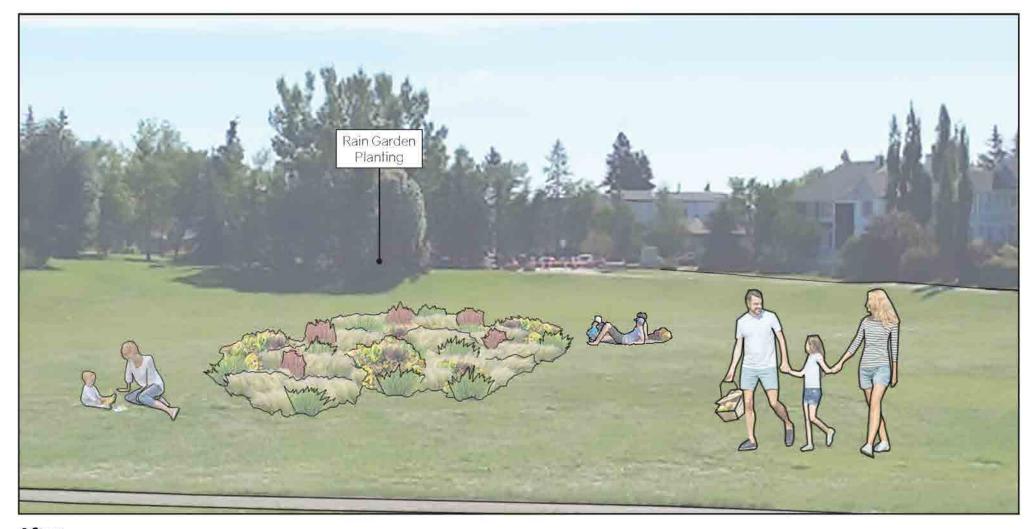
Location



**Rain Garden Precedent** Image [http://www.indy.gov/eGov/City/DPW/SustainIndy/ GreenInfra/Pages/RainGardenResources.aspx]



**Native Vegetation** Image [Edinburgh Gardens Raingarden by GHP Pty Ltd, http://www.landezine.com/]



After

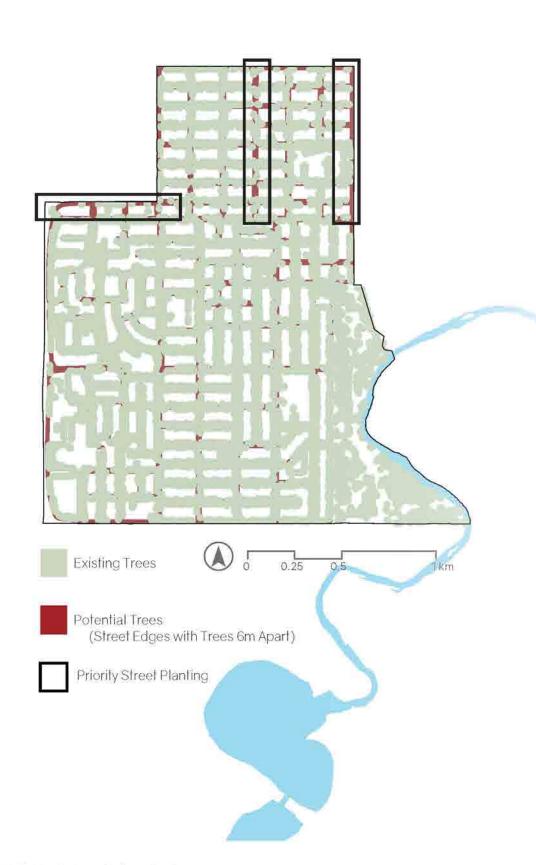
#### Recommendations

Flanders Park currently functions as a dry pond. It is a natural stormwater catchment for the community and should be maintained as such. Improvements can be implemented such as increased use of native fescue in naturalized rain gardens. Using native, hydrophilic plant media will ensure the life of the garden when flooded and muddy. Additional improvements such as increased curb cuts surrounding the park should be included to allow better drainage into the park, enabling the dry pond to perform to its maximum potential.

Rain Gardens are also recommended in two locations in river park, located at the end of the 42 Avenue and 46 Avenue green streets. These gardens will act to slow, filter and reduce stormwater runoff entering River Park.

Overflow drains should be incorporated into the rain gardens to effectively drain stormwater when over water capacity. Rain gardens are an effective and aesthetically pleasing form of stormwater management and can be easily incorporated into the existing landscape.

## **URBAN FOREST**



**GARRISON** WOODS Number of Trees: 1,435

SOUTH CALGARY Number of Trees: 1,002

**ALTADORE** Number of Trees: 2,784

### **Development & Tree Canopy Change**

Garrison Woods

Altadore



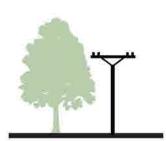
#### **Urban Forest Benefits**



More Inviting Public Realm



Provide Shade



Filtering & Screening Agent



Create Safer Walking Environments

#### Goals

- 1. To invest in street trees and adopt further policies that promote urban canopy resilience.
- 2. To increase the urban canopy by planting trees 6m apart along street edges.
- 3. To encourage the use of native species and avoid invasive species in all community plantings.

#### **Observations & What We Heard**

In a developed neighbourhood like Marda Loop, street trees make up the urban forest and are impacted by redevelopment which often removes mature trees. As a result, the City of Calgary created the Tree Protection Bylaw to protect public trees. A Tree Protection Plan outlines how construction work is to be accomplished and the steps that will be taken to preserve trees. It is important to protect these trees, as the urban forest provides many environmental and socio-economic benefits to communities. According to research and as indicated by residents in Marda loop, the presence of street trees create a sense of well-being and make the community more livable and inviting.

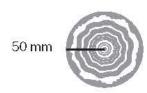
#### Recommendations

One of Compass Consulting's goals is to encourage maintenance and preservation of street trees and to adopt further polices that promote urban canopy resilience.

The map on the left shows the current urban canopy distribution of street trees in Marda Loop in green. The City of Calgary recommends a 5-6m spacing of frees along street edges. Based on this standard, there is opportunity for tree plantings in some areas of Marda Loop, as indicated on the map in red. Compass Consulting has identified three roads as priority street tree planting zones.

In addition, it is recommended that the tree planting and replacement policy should be increased from a 50mm to 100mm trunk diameter to ensure the life of newly planted trees.



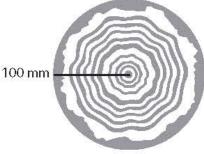


Haras Tyra Daras Wielth Descripted Tra



Home Type	Parcel Width	Required Trees	Size
Single Detached	Over 10m	3	50 mm diameter
Single Detached	10m or less	2	50 mm diameter
Semi- Detached	N/A	2 per unit	50 mm diameter





**Recommended Tree Replacement Policy** 

Home Type	Parcel Width	Required Trees	Size
Single Detached	Over 10m	4	100 mm diameter
Single Detached	10m or less	3	100 mm diameter
Semi- Detached	N/A	3 per unit	100 mm diameter

### **VEGETATION & PLANTING PALETTE**

### **Recommended Plantings** Grasses



Rough Fescue (Festuca campestris)



Moor Grass (Molinia caerulea)



Blue Fescue (Festuca ovina glauca) (Bouteloua gracilis)



Blue Grama

#### **Trees**



Trembling aspen (Populus tremuloides) (Populus balsamifera)



Balsam Poplar



White Spruce (Picea glauca)



Paper/white birch (Betula papyrifera)



Tamarak (Latrix laricina)

#### Recommendations

Compass Consulting recommends a variety of native trees, grasses and shrubs for all community plantings including centre road planting and personal gardens. It is also recommended to plant salt resistant species in drainage areas such as Wolf Willow, and disease resistant plants such as Japanese Tree Lilac, Emerald Spire Crabapple, and Prairie Skyrise Aspen. Invasive species should be avoided in all community plantings.

Native plants are recommended as they are adapted to local environmental conditions, requiring less water, ultimately saving time, and money. Native plants usually survive longer than nonnative species and need less tending, because they are hardier and more disease resistant. In addition native species provide vital habitat for birds and wildlife while preserving biodiversity.

By planting native species, the overall ecological functionality and resilience of the community can be improved.

#### Shrubs



Shrubby Cinquetoil (Potentilla fruticosa)



Water Birch (Betula occidentalis)



Buckbrush (Symphoricarpos occidentalis)



Red Osier Dogwood (Cornus stolonifera)



Wolf Willow (Elaeagnu scommutata)



Wild Rose (Rosa spp.)



Saskatoon (Amelanchier alnifolia)



Chokecherry (Prunus virginiana)



(Shepherdia canadensis)

### **Species to Avoid**



Caragana (Caragana arborescens)



Timothy Hay (Phleum pratens)



Canada Thistle (Cirisium arvense)



Crested Wheat Grass (Agropyron cristatum)



Smooth Brome (Bromus inermis



Kentucky Blue Grass (Poa pratensis)



Toad Flax (Linaria vulgaris)

http://www.jeffriesnurseries.com/p7-17.pdf http://www.jeffriesnurseries.com/p21-38.pdf http://www.sunnysidehomeandgarden.com/Info/Resources/ Brochures/TreesShrubs/PrairieHardyShrubs.aspx

https://www.jardiclub.ca/en/arbustes/caragana-arborescens-detail

## PARK PROGRAMMING PALETTE

### Vegetation



Victory Gardens Fenway, Boston MA (1)



Community Gardens, Calgary (5)



Xeriscaping - Low Water Gardening (9)

### **Accessibility**



Unique Multi-Use Seating, Barcelona (2)



Inclusive Urban Furniture (6)



Pocket Park, New York (10)

### **Activities**



Pop-Up Park, "The Oval" Philadelphia (3)



Splash Pad, Lakeview Park WI (7)



Shaganappi Community Centre, Calgary (11)

### **Special Features**



Rose Kennedy Greenway Fountain, Boston MA (4)

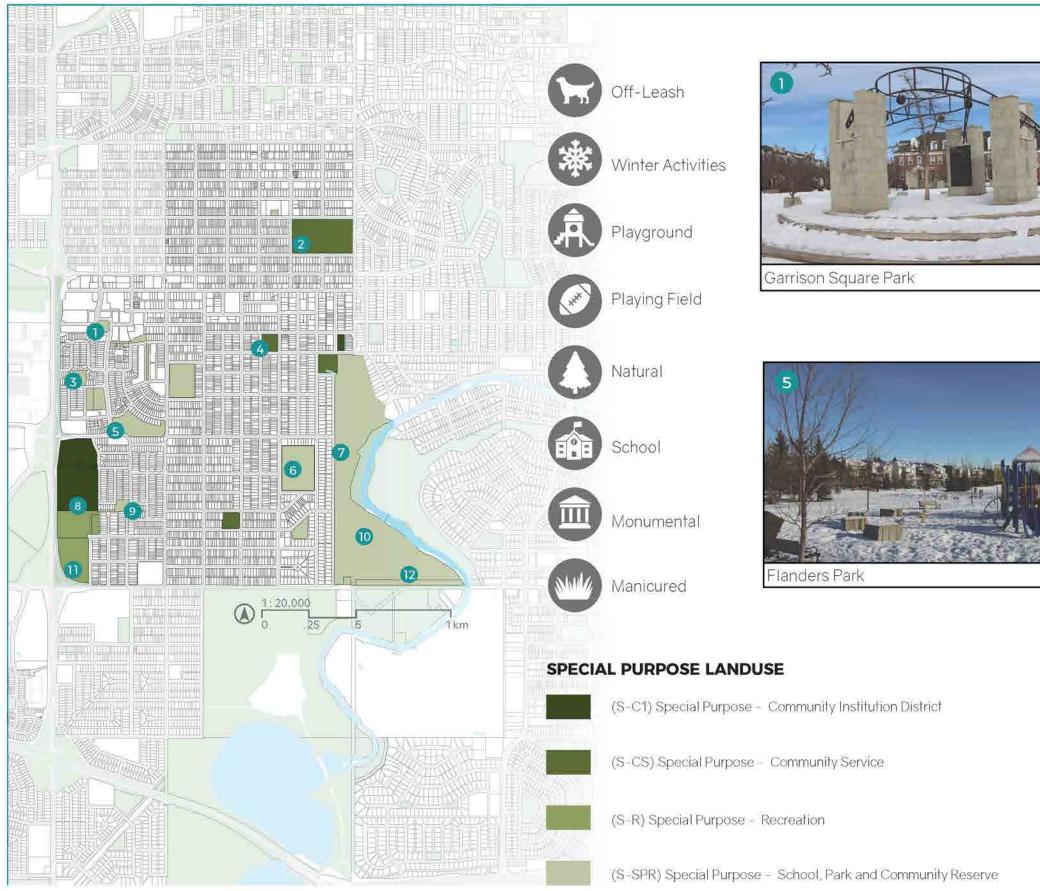


Paley Park, New York NY (8)



Forsyth Park, Savannah GA (12) Marda Loop Reimagined | 43

## **EXISTING PARK PROGRAMMING**







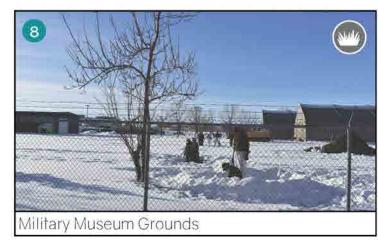












### Goals

- 1. To enhance connectivity between parks through urban design interventions.
- 2. To encourage a diversity of programming for park spaces to appeal to all age groups.

#### **Observations & What We Heard**

A park and its surrounding area can be not only a place to understand and relate to nature, but it can also be a place for social and cultural exchange. These spaces contribute greatly to the quality of urban life.

There is a variety of parks and open spaces in Marda Loop, ranging from manicured to monumental such as Garrison Square, as well as many playgrounds and playing fields. Although there are many parks located in the area, site analysis and conversations with residents indicated that formal programming was lacking. Many of Marda Loop's urban parks have few activities outside of traditional playgrounds, and do not attract people such as seniors, feenagers, or people who are just looking for a place to sit or walk on a daily basis.

By integrating parks into the cultural life of the neighborhood, and by introducing new programming and beffer design, a renewal of these spaces can be achieved. To gain the most value from each of these spaces Compass Consulting captured the essence of the park to apply relevant programming.







### **FLANDERS PARK**







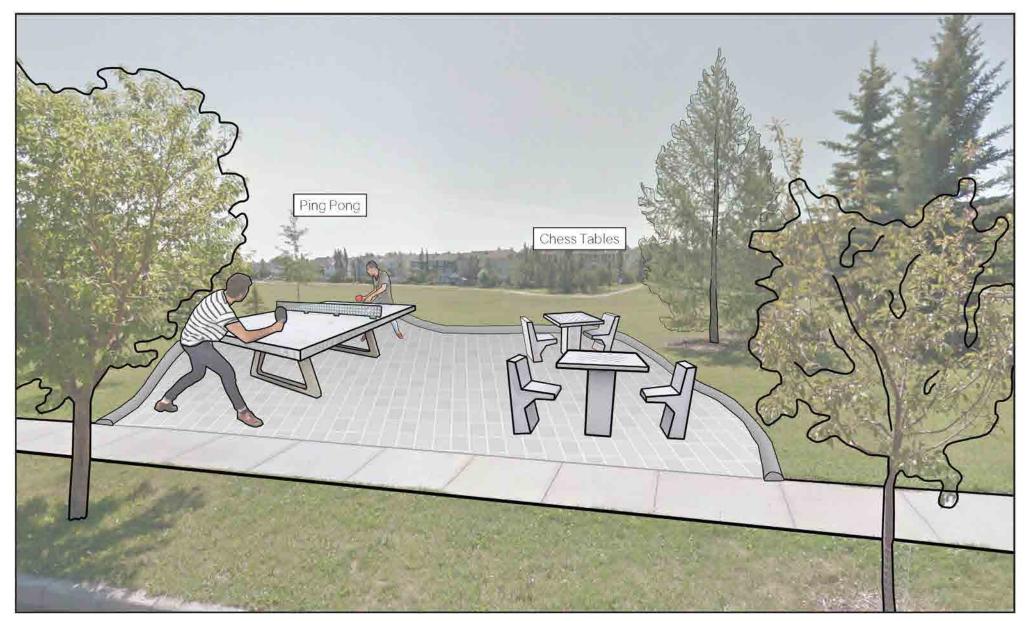
Recommendations



Metcalfe Park, Omaha, Nebraska (1)



Philadelphia Navy Yards - Central Green (2)



#### Recommendations

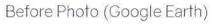
Parks are places for people of all ages to gather and enjoy nature and the outdoors, however site analysis and engagement with community members indicated that there is a lack of programming for non youth age groups. Most parks throughout the community contain only a playground catering towards children. Parks should contain a multitude of activities for different age groups and types of people. Marda Loops' parks should be places to facilitate sociability where the park acts a place to meet other people and is an integral part of community life.

In Flanders Park, Compass Consulting suggests a variety of programming for teen and adult ages groups such as outdoor ping pong and chess tables.

In addition, wider pathways in Flanders Park are recommended for greater accessibility & connectivity. Marda Loop parks should also be easy to get to and connected to the surrounding community via the pedestrian and cyclist network.

### **KIWANIS PARK**







Recommendations



Multi Functional Sport Court (3)



Multi Seasonal Sport Court (4)



#### Recommendations

Analysis of the parks in the area revealed that there is presently a shortage of basketball courts. A popular indoor and outdoor activity for both individuals and groups. A basketball court can go a long way to increasing activity in the area. In Kiwanis Park, Compass Consulting recommends including a multi-functional sport court, that can be used for basketball or other pavement sports in the summer, and can be frozen into a skating rink in the winter months.

In addition, Compass Consulting recommends increasing the seating, vegetation and pedestrian upgrades for improved access to and use of this community park.

Additional traffic calming measures such as upgraded crosswalks, stop signs and buffered sidewalks are also recommended adjacent to park spaces, as noted in the connectivity section.

### **SCHOOL SITE PROGRAMMING**



Before Photo (Google Earth)



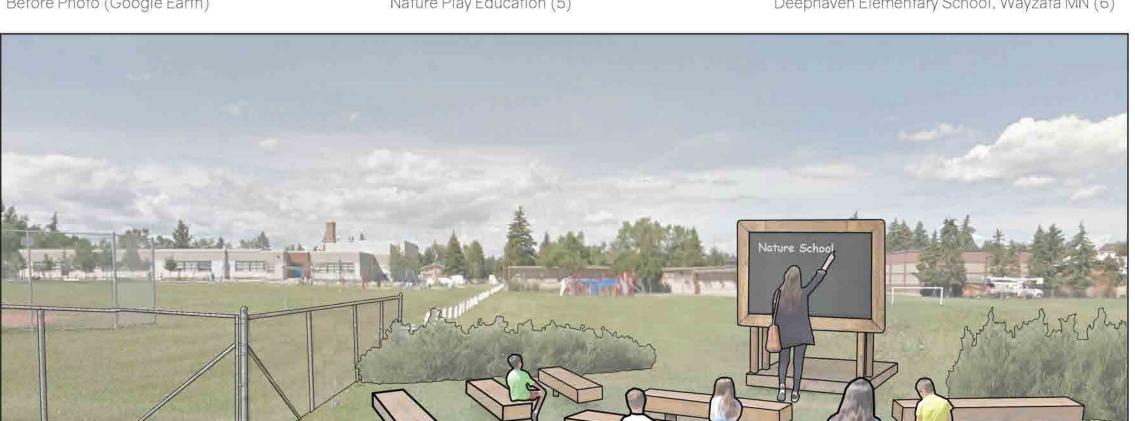
Nature Play Education (5)



Deephaven Elementary School, Wayzata MN (6)



cSPACE, Arts Education Programming (7)



Recommendations



Artisan Gallery, Bow Valley Ranche (8)

School sites present a great opportunity for integration of cultural and educational programming. Constructing an outdoor classroom at the Altadore and Rundle Academy School sites allow students to interact with nature as part of their education. The connectivity section will emphasize a direct connection between this site and River Park which can be utilized for learning in nature. Arts Education programming such as an artisan gallery can also create better connections with the surrounding community and can serve as a place for everyone to appreciate art. Implementation at the school sites or at the cSPACE park would be ideal locations.

### ALTADORE COMMERCIAL ADJACENT PARK & FLAMES ARENA PLAYING FIELDS







Before Photo (Google Earth)



Before Photo (Google Earth)



Improve connection between community commercial and park space.

#### Recommendations

Commercial and park sites are both great draws for socialization, however, connections, both physical and perceived, are often limited. One such example is the park space located behind the community commercial site at 16th Street & 48 Avenue SW. Therefore, Compass Consulting recommends utilizing the northern setback area to provide a clear and accessible pathway between these two locations. In addition, like most other parks in the area, programming other than a playground are insufficient. Since the park presently contains a wide even field, and is not located along any major roads. Compass Consulting recommends installation of some frisbee golf baskets. Although there is not space for an entire course, a few baskets could go a long way in revitalizing this space with an activity suitable for groups and individuals of all ages.

In the playing fields located near the Flames Arena, Compass Consulting recommends improving accessibility and connectivity by removing the existing fence. In addition, more seating such as park benches and vegetation should be provided to screen the area from the adjacent parking lot. An upgraded garbage receptacle is also suggested. These recommendations show how simple programming, small interventions and seating can go along way to improve an

### **RIVER PARK**









Before Photo (Google Earth) Recommendations

Hugh Rogers Wag Park, Whitefish MT (9)

Newtown Dream Dog Park, John's Creek GA (10)



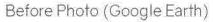


ParkGrounds, Coffee Shop/Dog Park, Atlanta GA (11)

#### Recommendations

In River Park Compass Consulting recommends implementing a dog agility park to capitalize on the popularity of the existing dog park. The agility course can consist of a variety of obstacles, including weave poles, seesaws, tunnels, jumps, and pause tables, that dogs can navigate offleash. A dog agility course can help with improved behavior in dogs, increased health (for dogs and handlers), and a stronger bond between dogs and their owners. The park can be used at the competitive level and as a fun hobby for dogs and their owners to do on their own schedules. Dogs of all ages and breeds as well as owners of all ages and abilities can participate.







Recommendations



Fairy Hill Park, Mottingham, Greenwich GB (12)



Outdoor Fitness Pavilion, Los Angeles CA (13)



#### Recommendations

Also in River Park, to capitalize on this popular running route (as shown in Strava data in the connectivity section), Compass Consulting recommends installing an outdoor fitness area along the northern edge of the park to help promote active living. The equipment itself is unique, and is designed to target a variety of users by providing visitors with a well-rounded exercise experience.

In addition, to capitalize on the beautiful natural environment, Compass consulting recommends utilizing natural materials for this fitness park whenever possible, as demonstrated to the left. The use of natural materials mirrors the character of the area while enhancing fitness activities.

Compass Consulting believes in making positive impacts on communities by promoting active spaces. As many people cannot afford or do not enjoy using indoor fitness facilities to stay healthy, this free outdoor option provides a great alternative. The space is enticing, which allows visitors to explore and have fun in new, active ways that they may not otherwise have had exposure to.

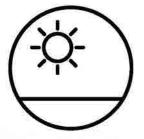


# COMMUNITY ATTRACTIONS











**VARIETY OF** 

BUSINESS TYPES

UNIQUE FEATURES

GROUND MATERIALS

SUNLIGHT

Zone 3: 26 Avenue & 20 Street SW

Zone 1: 33 & 34 Avenues SW

Zone 6: 42 Avenue & 20 Street SW

Zone 5: 48 Avenue & 16 Street SW



& SEATING



PEDESTRIAN SPACE



MULTIPLE TRANSPORT OPTIONS



STRATEGICALLY LOCATED LAND USES



DIVERSE HOUSING TYPES

Zone 2: 14 Street SW

Zone 4: 40 Avenue & 16 Street SW

### TACTICAL URBANISM TOOLKIT

### **Temporary**

#### Goals

Short term action for long term change.

"Tactical Urbanism is an approach to neighbourhood building that uses short-term, low-cost and scalable interventions and policies to catalyze longer term change." (1)

#### Recommendations

Compass Consulting believes in humancentric design at eye level. There are many simple changes that can have a large impact on placemaking and the identity of an area. Compass Consulting recommends the use of tactical urbanism as a toolkit for the creation of public spaces today.

Each tool performs a function while improving the comfort of the public realm and contributing to the character of the community Features such as public art, can be used to insert vibrancy into the area, acknowledge history and bring colour to a blank wall.

The precedents depicted demonstrate that each of these opportunities can be included in many public spaces to enhance the user experience.

Compass Consulting recommends the use of this toolkit to implement simple changes today, that can become permanent solutions tomorrow.



Temporary Traffic Calming: Palo Alto, CA (1)



Temporary Protected Bicycle Lane: Victoria (8)



Simple Seating: Biscayne Green, Miami (4)



Planters, Pylons & Paint: Burlington (6)



Planters, Pylons & Paint: São Paulo, Brazil (7)



Planters & Movable Furniture: Miami (4)



Activated Pavement, Playscape: iPlay, Miami (3)



Activated Pavement, Street Chess: Sarajevo (11)



Ground Treatment (4)

References: See Appendix

#### **Permanent**



Painted Curb Extensions: Lincoln Hub, Chicago (1)



Seating: Riverwalk Calgary (14)



Garbage Receptacles: Central Park, NYC (12)



Bicycle Parking: Britannia, Calgary (15)



Temporary Activation: Biscayne Green, Miami (4)



Movable Furniture, Permanent Planters & Bollards: Lincoln Hub, Chicago (2)



Container Parklet: Placottoir, (A Place to Chat) Montréal (9)



Public Parklet: San Francisco (10)



Increased Planing & Education: Norfolk, VA (5)



Utility Box Public Art: Calgary (17)



No Blank Walls: 7 Ave & 1 St SW, Calgary (13)



Gateway: Fulton Market District, Chicago (16)

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### RECOVERING LOST PUBLIC SPACE



Freeman Plaza West, Hudson Square (1)



Israel Square, Copenhage, DK (3)



Road Hockey, Toronto (5)



Patchwork Park, Prague (2)



Biscayne Green, Miami, FL (4)



Biscayne Green, Miami, FL (4)

#### Goals

Provide casual urban gathering spaces and civic spaces for residents and visitors of Marda Loop.

#### Observations & What We Heard

The site analysis and amenities inventory completed by Compass Consulting

demonstrated a good amount and spread of natural park spaces and commercial amenities. However, the public realm around the commercial spaces is lacking and does not encourage lingering. The benches, vegetation and other public realm amenities in the area encourage more transient use, with evenly spaces street trees or occasional lone benches. In addition, discussions with community members indicated a perception that there was a lack of programming for young adults to casually gather and socialize.

#### Recommendations

The above observations demonstrated the need for publicly available urban gathering space. Interim public plazas transform underutilized areas of roadways into public spaces for surrounding residents and businesses. Using low-cost materials, such as epoxied gravel, movable planters, and flexible seating, interim public plazas reconfigure and revitalize intersections that might otherwise be unsafe or underutilized.

The following pages demonstrate opportunities Compass Consulting has identified to take back public space, better utilizing areas of underperforming pavement. All recommendations could be implemented as temporary seasonal or event installations or as permanent improvements to the community.

The recommendations include a parket, placed in two vehicle parking stalls on 34 Avenue SW; The second is an outdoor patio seating space in the bustling commercial area along 22 Avenue SW; and the final recommendation is better use of an underutilized parking lot adjacent to the community association.

### **PARKLET**







NACTO - Urban Street Design Guide - Parkets (6)



New York City Parklet (7)



Sunset Parklet, San Francisco (8)



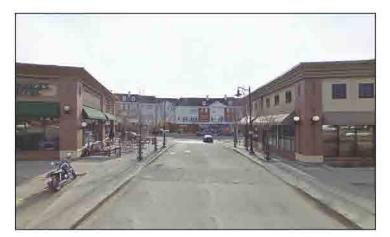
#### Recommendations

Parklets are public seating that convert one or more parallel parking stalls into vibrant community spaces. They are most often the product of a partnership between the city and local businesses, residents or community associations. (NACTO, Urban Street Design Guide) Parklets often include a configuration of seating, vegetation and/or bicycle parking, illustrating the simplicity of tactical urbanism and how these combinations can be applied anywhere to create a public space and enhance the street (NACTO, Urban Street Design Guide, 2018).

For safety and visibility, Parklets should have vertical elements to separate them from traffic, such as planters or bollards. Additionally, the ground treatment should provide a level surface for the Parklet. Placement of Parklets should consider adequate sight lines and visibility, therefore should be placed at least 5m away from an intersection corner (NACTO, Urban Street Design Guide, 2018).

Parklets are a great way to activate a space for temporary events, seasonally or for permanent public spaces.

### INTERIM PUBLIC PLAZA IN GARRISON WOODS







Location (Google Earth Pro)



Interim Public Plaza, Philadelphia (9)



Putnam Triangle Plaza, Brooklyn (10)



#### Recommendations

Interim public plazas are another great application for the Compass Consulting tactical urbanism toolkit, as low-cost materials such as movable planters and flexible seating can revitalize an underutilized area. Compass Consulting recommends the transformation of the 22 Street entrance to the Safeway Parking Lot into an Interim Public Plaza to serve the surrounding businesses and residents.

Interim public plaza's are a great way to program and transform a space into a vibrant, public gathering place. The use of factical urbanism can fransform these underutilized areas into thriving public spaces for both temporary events or long term use as many public plaza's proceed from an interim phase to final reconstruction within three to five years. An interim plaza however, allows the public to benefit from activation in the near term. Public plazas increase foot traffic, boost economic vitality and energize the surrounding streets without large capital expenditures (NACTO, Urban Street Design Guide, 2018).

### COMMUNITY CENTRE PROGRAMMED PAVEMENT



Before Photo (Google Earth Pro)



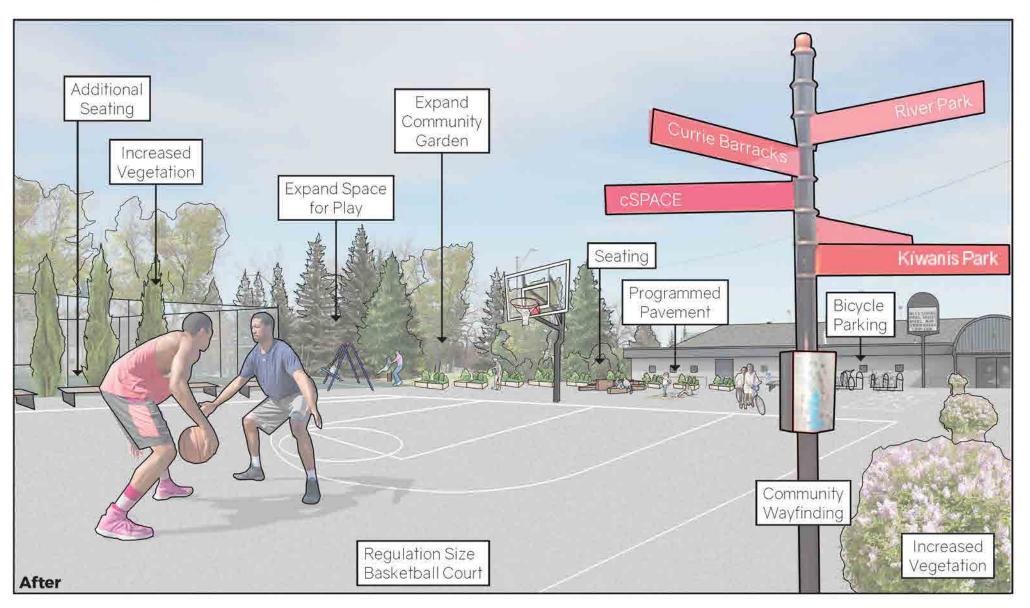
Programmed Pavement, iPlay, Miami (11)



Basketball at Skørping School, Rebild, DK (12)



Beetsplein Playground, Dordrecht, NL (13)



#### Recommendations

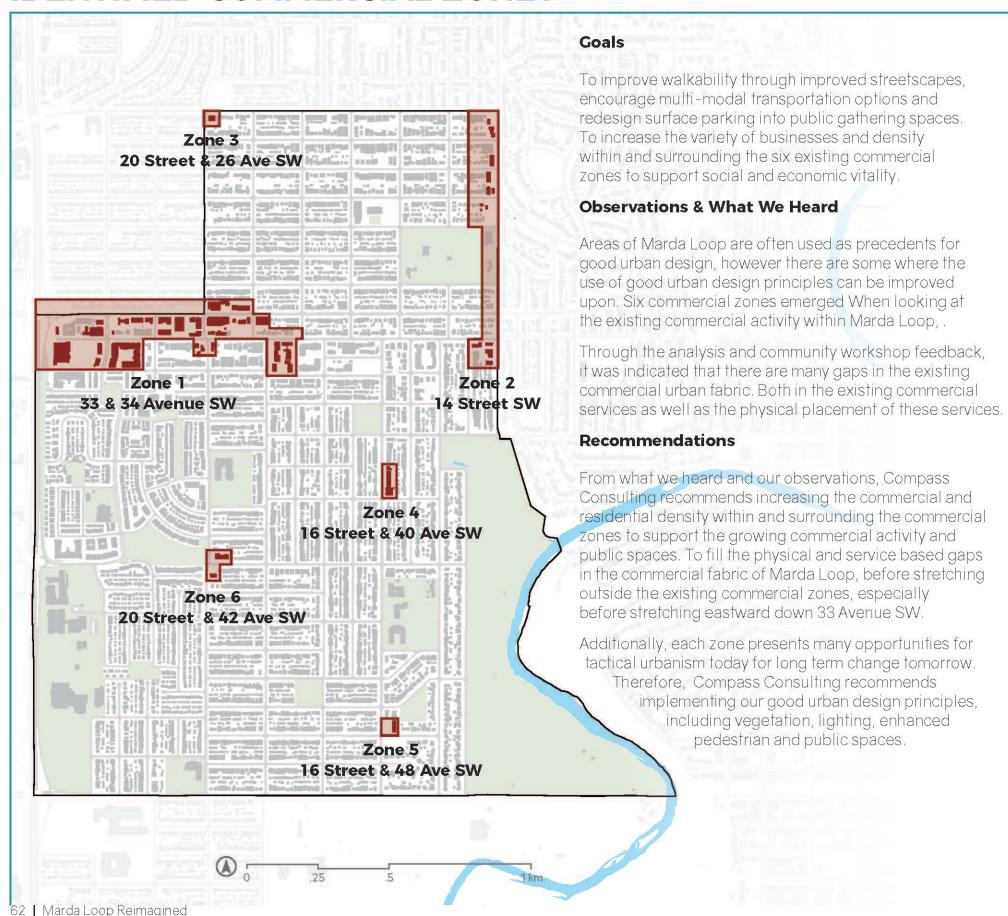
The Mara Loop Communities Association Parking Lot currently presents an opportunity for programmed pavement as it is currently under-performing as a large surface parking lot. Compass Consulting recommends resurfacing the parking lot into a regulation size basketball court that can be used as overflow parking when required. Through our analysis and public engagements, Compass Consulting was informed that public spaces for teenagers and young adults including public outdoor basketball hoops are lacking in the community, therefore revitalizing the parking lot into a court would be an excellent opportunity.

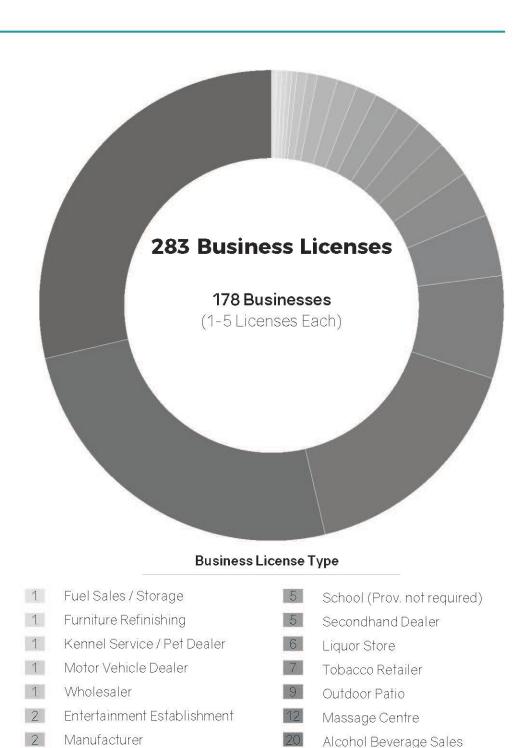
Additionally, the Marda Loop Communities Association hosts many Calgary Sport and Social Club leagues, during the summer. With the provision of a basketball court, this could present another opportunity for outdoor leagues and games of pickup.

To activate the space, Compass Consulting would also recommend additional pavement programming such as painted Twister, Four Square and Hop-Scotch on the East edge closer to the building. Furthermore, the sunny northeast edge presents an opportunity to expand the existing playground and expand the community garden up the hill.

The use of tactical urbanism can revitalize these lost public spaces, creating public gathering spaces for residents and visitors of Marda Loop of all ages to enjoy in the long term.

### **IDENTIFIED COMMERCIAL ZONES**





Personal Service

Food Service

Retail Dealer

Charitable Organization

Motor Vehicle Repair and Service

Contractor

### WHAT WE HEARD

#### Main Street Initiative - 33 Avenue "What We've Heard"

### Opportunities

- 1) Library as more of a community hub
- 2) Reduce speed limit to 40km/hr
- 3) Improve lighting along the street
- 4) Character building for community space, art gallery etc (14 St and 34 Ave)
- 5) Incentives for small grocery stores and shops
- 6) Extend small scale commercial and create a second corridor
- 7) Improve walkability with better sidewalks, trees etc
- 8) Eliminate strip malls
- 9) Leverage in Arts Centre to expand community engagement and vibrancy of street life

### Issues

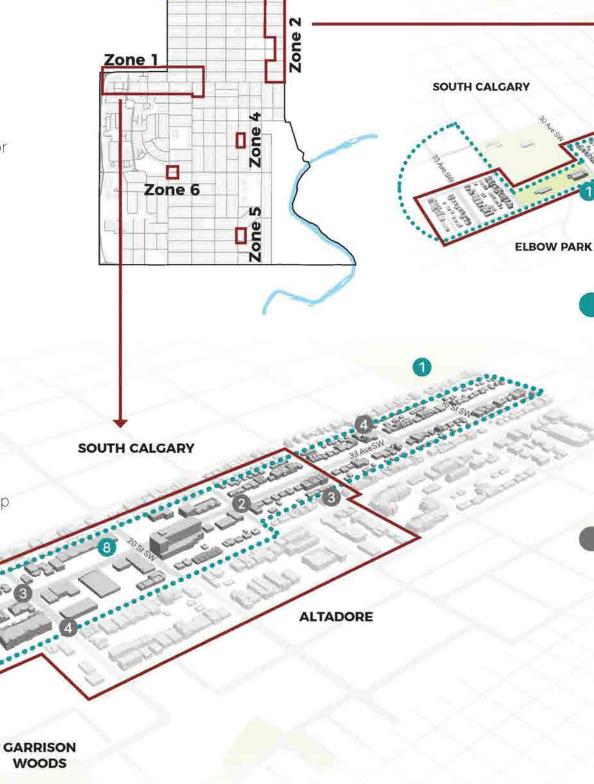
- 1) Traffic speed too fast along 14 St and 33 Ave
- 2) Loss of trees and tree coverage, therefore more street trees, opportunity for better walkability with more trees
- 3) Car-centic, no pedestrian appeal. Narrow, inconsistent sidewalks, opportunity for better walkability with wider sidewalks and consistent urban design
- 4) 14m max height adjacent to residential to address the shadowing concern 33 Ave
- 5) Lack of public garbage containers

• • • • • Main Streets Area Outline

Commercial Node Oulline

6) Dangerous intersection at 34 Ave and 21 St, need 4 way stop

RICHMOND



Zone 3

# Main Street Initiative - 14 Street "What We've Heard"

SUNALTA

OWER MOUNT

### Opportunities

- 1) Library as more of a community hub
- 2) Improve the Communities Association Parking Lot
- 3) More shops / restaurants to attract other businesses
- 4) Improve lighting along street will increase feeling of safety
- 5) Left turn signal for cars going north on 14 St and 33 Ave
- 6) Improve Fire Hall Landscape

BANKVIEW

UPPER MOUNT

ROYAL

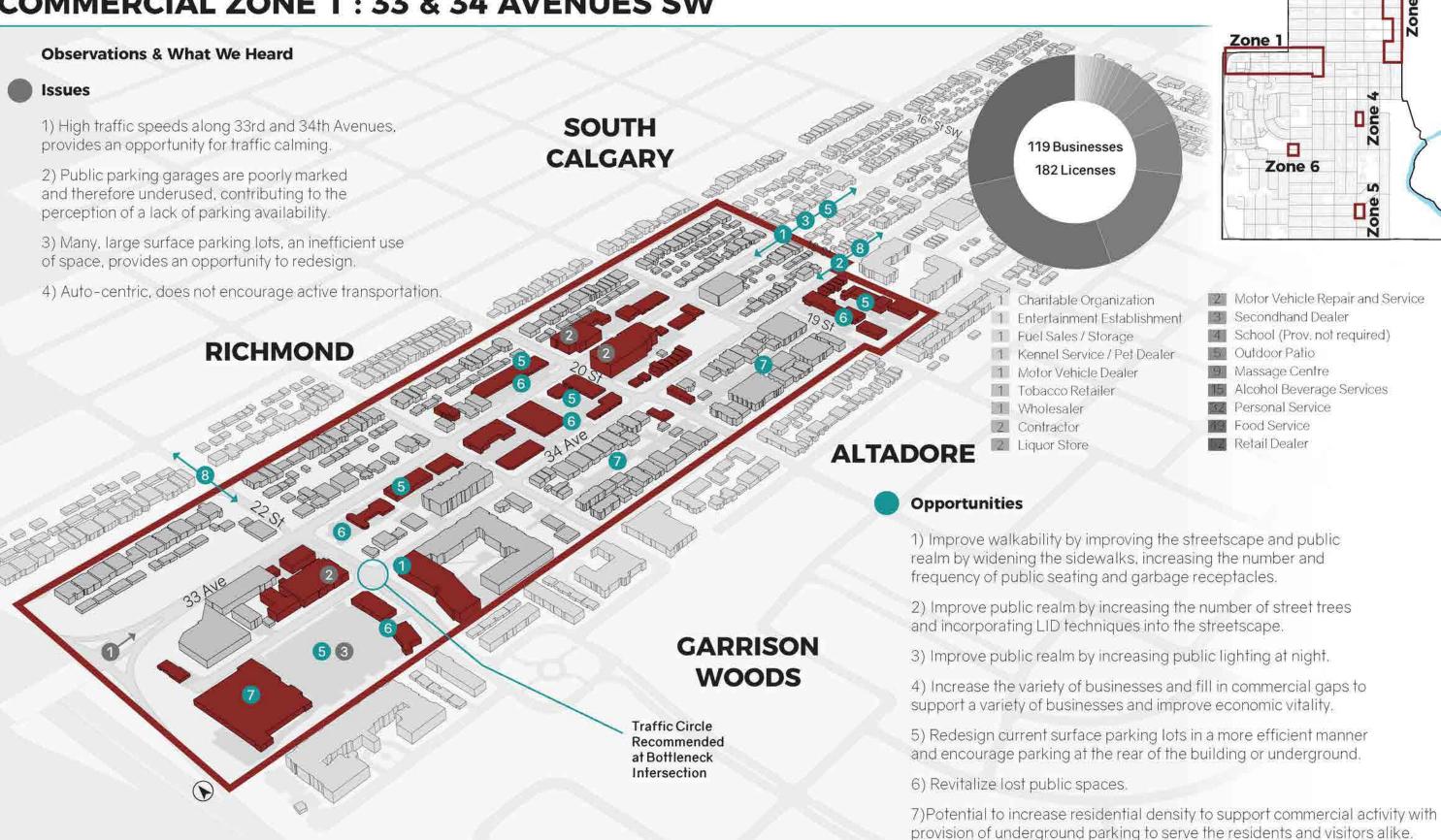
- 7) Incentives or small grocery stores and shops
- 8) Extend small scale commercial and create more opportunity

### Issues

- 1) Traffic speed too fast at 14 St and 33 Ave, and high traffic speeds on 14 St
- 2) Loss of trees and tree coverage, opportunity for better walkability with more trees
- 3) Car-centic, no pedestrian appeal. Narrow, inconsistent sidewalks, opportunity for better walkability with wider sidewalks and consistent urban design

http://www.caigary.ca/PDA/pd/Pages/Main-Streets/yyc-Main-Streets/M-fourteenth-street-sw.aspx http://www.caigary.ca/PDA/pd/Pages/Main-Streets/yyc-Main-Streets/N-thirty-third-ave-sw.aspx

### **COMMERCIAL ZONE 1:33 & 34 AVENUES SW**

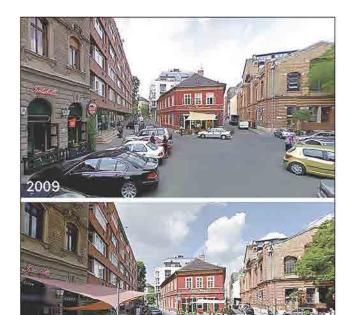


Zone 3

8) Upgrade cycle network connections and bicycle parking.

Zone

Zone



Iskola Utca, Budapest, Hungary (urb-1.com/before-after, 2018)



Before (Google Earth Pro, 2018)

#### Recommendations

As main streets, we see a great opportunity for Zone 1, 33 Avenue and 34 Avenues, to increase the variety of businesses and density of commercial and residential activity within the zone, before spreading eastward down 33 Avenue. This will concentrate social activity within the zone and allow the public areas to thrive before spreading too thinly down the road.

The image to the right illustrates how the current surface parking lot can be reconfigured to include a small public space, and by improving the rear parking efficiency, the public spaces become the priority. The additional mid-block pathway increases the areas accessibility and improves walkability.

The precedent above displays that with a curb extension. furniture, additional vegetation and bollards, a space can be transformed into a comfortable patio, all in the space of a few cars. That principle can be applied in all commercial zones of Marda Loop and is illustrated in the render to the right.



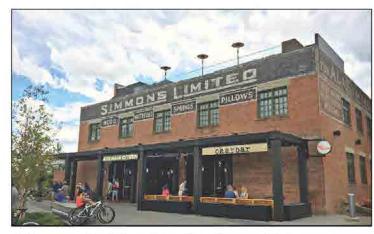
### **COMMERCIAL ZONE 2: 14 STREET SW**



Zone 3



cSPACE, Successful Adaptive Reuse of King Edward School (King Edwards Arts Hub & Incubatro, O2 Design, 2018)



Simmons Building Adaptive Reuse, Calgary (Tourist Site, http://touristsite.com/the-simmons-building/, 2018)



Adaptive Reuse: 14 Street & 34 Avenue, Before (Google Earth Pro, 2018)

#### Recommendations

In all improvements and new developments, Compass Consulting recommends that our good urban design principles be implemented to create a thriving commercial zone. Throughout the zone, Compass Consulting recommends increasing commercial and residential density throughout, encouraging a variety of businesses to thrive and relocating surface parking lots to the rear of buildings or underground.

For example, 14 Street, Zone 2, offers a great opportunity to improve active transportation environments along 14 Street and connect into River Park. Compass Consulting recommends the addition of a separated, bi-directional cycle track along 14 Street and widening the sidewalks to improve the pedestrian walking experience.

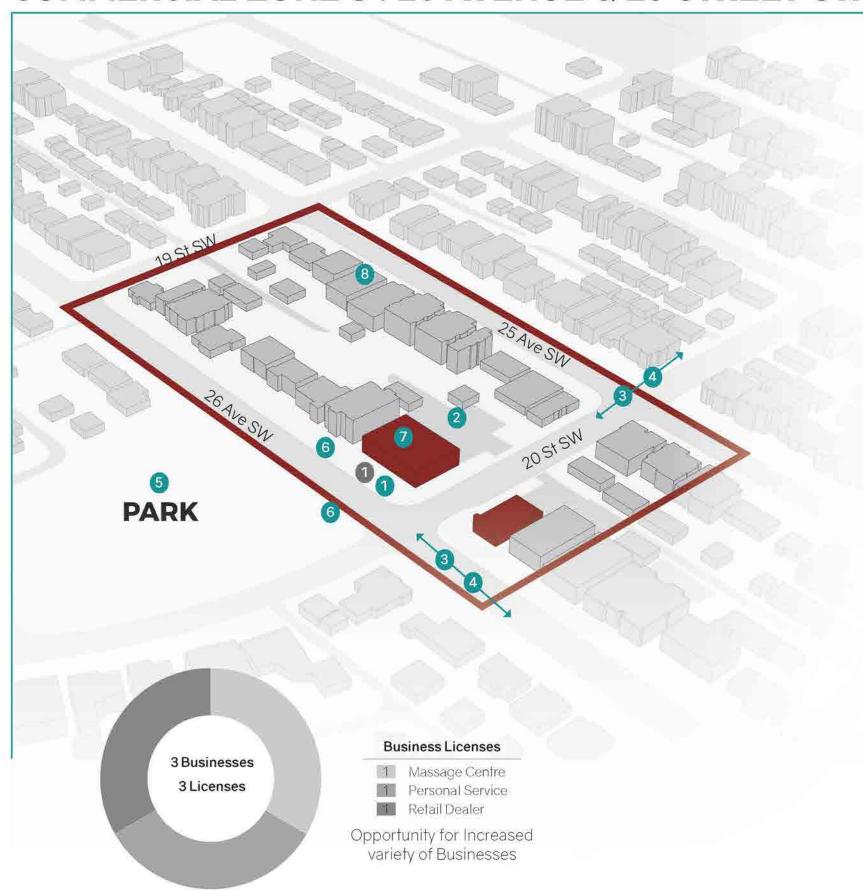
Furthermore, Compass Consulting recommends increasing the provision of streetscape amenities such as lighting, street trees, seating and bus stop amenities.

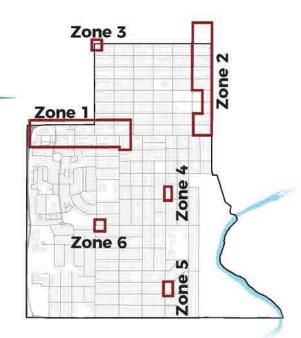
Multiple buildings within Zone 2 present the unique opportunity for adaptive reuse, such as the former Enmax Building on the corner of 34 Avenue and 14 Street, illustrated in the render to the right.

At this location, Compass Consulting recommends using our urban design principles to create a unique public attraction such as a Café, with a wide sidewalk and public patio space, community gardens, increased vegetation and public art to brighten up the blank wall.



### **COMMERCIAL ZONE 3: 26 AVENUE & 20 STREET SW**





#### **Observations & What We Heard**

### **Opportunities**

- 1) Improve public realm interface with 26 Avenue and 20 Street by re-purposing the under performing pavement fronting the roads by incorporating patio spaces, public seating, increased street trees and LID.
- 2) Improve rear parking efficiency.
- 3) Improve walkability by incorporating wider sidewalks, additional street trees, curbside bioswales and a consistent public realm.
- 4) Provide cycling infrastructure along 20 Street and 26 Avenue to connect Zone 3 to the cycling network.
- 5) Improve businesses connection into adjacent Park with increased public seafing and garbage receptacles in the park itself.
- 6) Improve bus stop amenities.
- 7) A great redevelopment opportunity at this location to improve the building, increase the residential density and increase variety of businesses to serve South Calgary.
- 8) Increase density within and surrounding the zone to support commercial activity.

### Issues

- 1) Inefficient pavement lots disrupt the public realm along the street and inhibits interaction with the street.
- 2) Limited businesses engaging with the community.
- 3) Auto-centric, limited pedestrian appeal and lack of active transportation support.



Place Charles III, Nancy, France, 2008 (urb-1.com/before-after, 2018)



Outdoor Market, Place Charles III, Nancy, France, 2015 (urb-1.com/before-after, 2018)



Farmers' Market, Toronto (BlogTO, https://www.blogto.com/eat\_drink/2014/06/farmers\_markets\_in\_foronto\_by\_day\_of\_the\_week/, 2018))



14 Street & 34 Avenue, Before (Google Earth Pro, 2018)

#### Recommendations

Throughout the analysis and public engagement workshop, it was indicated that the current commercial zone at 26 Avenue and 20 Street is not functioning at it's maximum potential.

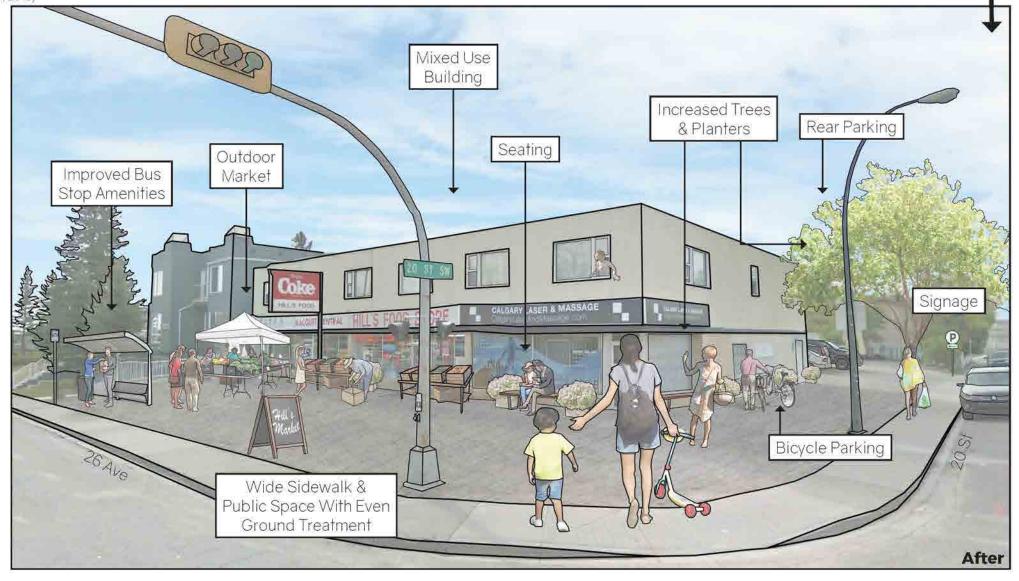
Therefore Compass Consulting recommends the use of tactical urbanism and small changes to improve the liveliness, attraction and functionality of the corner as a thriving commercial hub.

Compass Consulting recommends implementing an even ground treatment should be applied to the space fronting the building to indicate change in use. Tactical urbanism tools such as benches, flower planters signage and market stalls revitalize this underutilized corner into an outdoor market.

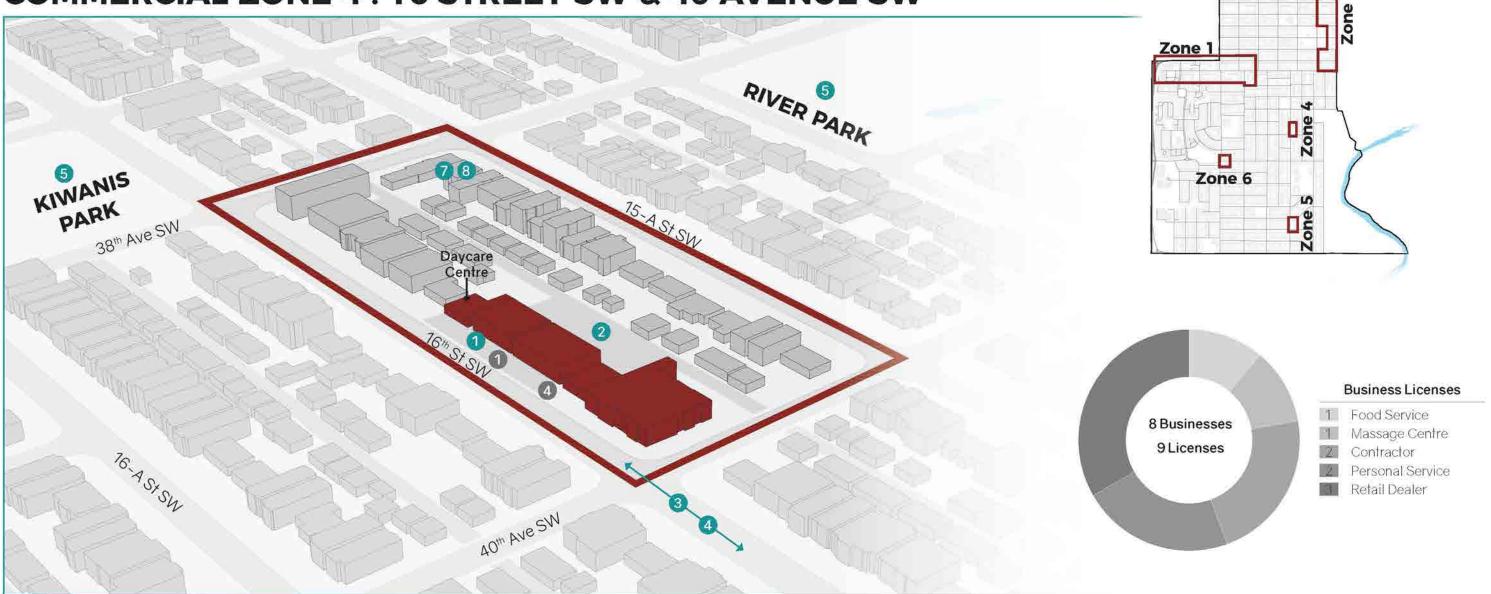
Compass Consulting also recommends the reconfiguration of the rear parking lot with additional signage for efficient vehicular access. Additionally, the inclusion of bicycle parking and improved bus stop amenities increase the multi-modal accessibility to the corner.

The precedents above demonstrate how similar interventions have been successfully implemented in Nancy, France and Toronto, Canada.

Additional recommendations for Zone 3 include increasing the residential and commercial density within and throughout the zone to include medium and middle density as described in the following land use section.



### **COMMERCIAL ZONE 4: 16 STREET SW & 40 AVENUE SW**



#### Observations & What We Heard:



- 1) Improve public realm and interface with 16th street by eliminating the street-facing surface parking lots and incorporating patio spaces, public seating, increased street trees and LID.
- 2) Improve rear parking efficiency and access.
- 3) Improve walkability by incorporating wider sidewalks, additional street trees, curbside bioswales and a consistent public realm.
- 4) Provide cycling infrastructure on 16 Street to connect the cycling network and provide increased bicycle parking for accessibility.

- 5) Improve connection into Kiwanis Park and River Park with increased public seating and garbage receptacles in the parks themselves.
- 6) Increase variety of businesses to serve Marda Loop residents and attract additional visitors.
- 7) A great redevelopment opportunity at this location for a mixed use development, which will increase the residential density and variety of businesses to serve Altadore.
- 8) Increase density within and surrounding the zone to support commercial activity.

#### issues

- 1) Inefficient surface parking lots disrupt the public realm along the street and inhibits interaction with the street.
- 2) Limited businesses engaging with the street.
- 3) Auto-centric, limited pedestrian appeal and lack of active transportation support.
- 4) Limited space and amenities available for lingering in the area.

Zone 3



Rue D'Illiers, Orléans, France, 2010 (urb-i com/before-after, 2018)



Rue D'Illiers, Orléans, France, 2015 (urb-i com/before-after, 2018)



Amsterdamstraat, Antwerp, Belgium, 2014 (urb-i.com/before-after, 2018)



14 Street & 34 Avenue, Before (Google Earth Pro. 2018)

#### Recommendations

Zone 4 currently exhibits an inefficient surface parking lot at the north end of the strip mall and wide expanses of under-performing pavement fronting most of 16 Street.

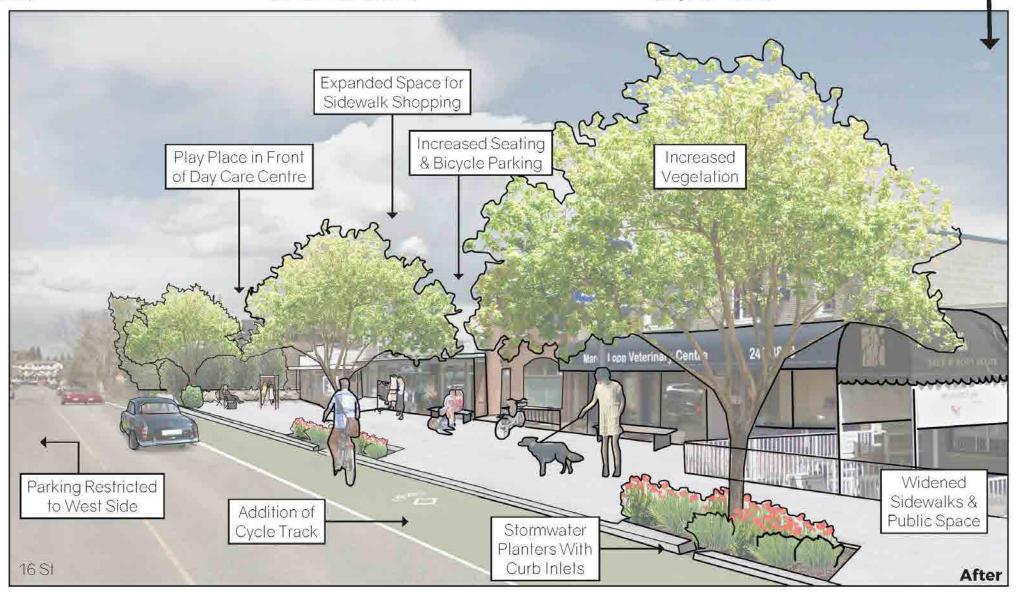
Therefore, Compass Consulting sees a great opportunity for the additional use of tactical urbanism to revitalize this lost community public space as well as increase the zones' connection to both River Park to the east and Kiwanis Park to the northwest.

The front surface parking lot can be transformed into a plaza space with an extended play area in front of the existing day care Centre with additional seating for children and parents. Additional seating is included within the space to serve the other businesses and provide a space to gather.

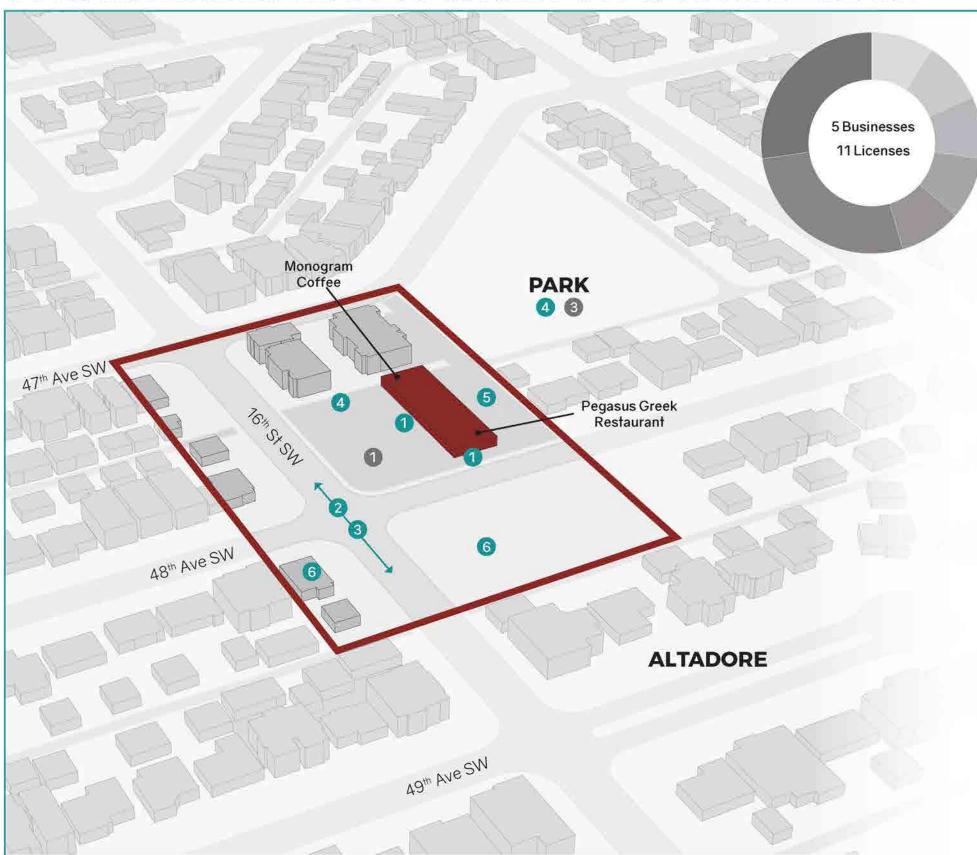
This zone is located along a Compass Consulting recommended Green Street, therefore it is recommended to include Green Streets design. Stormwater planters along the road function in this manner while enhancing the streetscape and overall pedestrian experience.

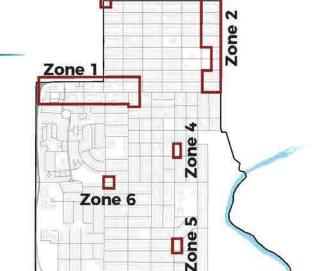
The public space should include bicycle parking to facilitate multi-modal accessibility. Additionally adequate lighting should be included throughout the public space to ensure safety and visibility at all hours and increase the hours of use.

Compass Consulting also recommends this Zone as an area for sensitively increased residential and commercial density, as outlined in the following Land Use section.



### **COMMERCIAL ZONE 5: 16 STREET SW & 48 AVENUE SW**





Zone 3

#### **Observations & What We Heard**

### **Opportunities**

**Business Licenses** 

1 Alcohol Beverage Sales

1 Liquor Store

1 Outdoor Patio

Food Service Retail Dealer

 Tobacco Retailer Personal Service

- 1) Improve public realm and interface with 16th street by reconfiguring the existing parking lot to provide space for patio spaces and public seating.
- 2) Improve walkability by incorporating wider sidewalks, additional street trees, green streets bioswales, amenities such as seating and lighting to create a consistent and pleasant public realm.
- 3) Provide active transportation infrastructure.
- 4) Increase vegetation by converting the northern portion of the parking lot into a garden space, and provide a connection to the existing park to the east with a new pathway.
- 5) Improve the efficiency of rear parking.
- 6) Opportunity to increase density of the zone and connect with the new, townhome proposal [west corner] and multi-family proposal [east corner] on 48th Avenue and 16th Street.
- 7) Opportunity to increase variety of businesses.

#### Issues

- 1) Surface parking lots disrupt the public realm along the street and inhibits interaction with the street.
- 2) Auto-centric, limited pedestrian appeal and lack of active transportation support.
- 3) Lack of programming in the Park.



Rose Kennedy Greenway, Boston, MA (Boston, https://www.bostonusa.com/listings/rose-fitzgerald-kenne-dy-greenway-conservancy/11801/\_2018)



Boulevard de Prague, Nimes, France, 2008 (urb-i com/before-after, 2018)



Boulevard de Prague, Nimes, France, 2015 (urb-i.com/before-after, 2018)



16 Street & 48 Avenue, Calgary, Before (Google Earth Pro. 2018)

### Recommendations

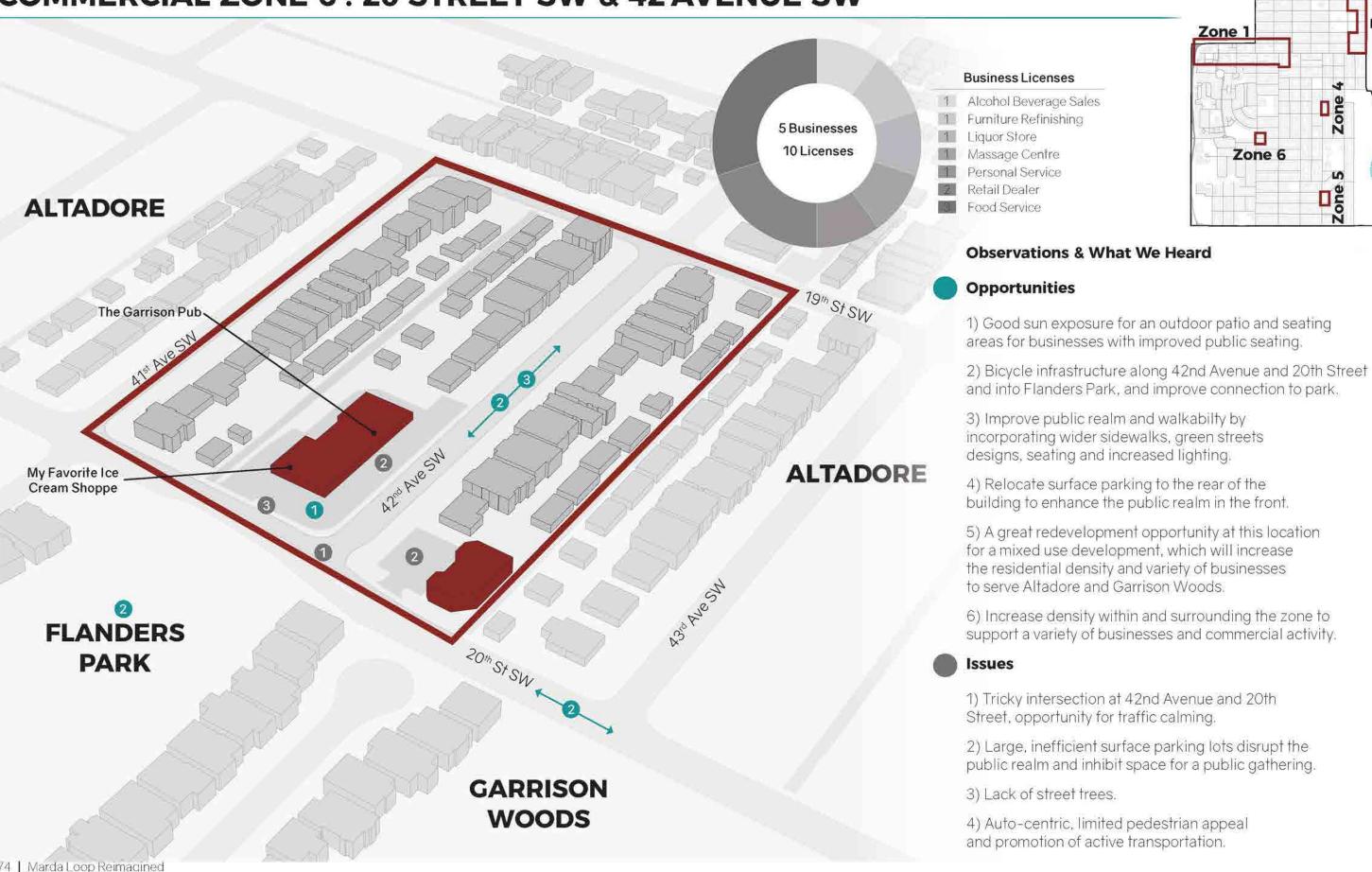
Zone 5 has a great opportunity for increased vegetation and improving it's connection to the park directly to the east. To do this, Compass Consulting recommends transforming the current surface parking lot into a small garden park on the north side, in front of Monogram Coffee. The north side of the garden park should include a pathway that connects along the north side of the building, across the lane and into the park. The precedents above provide examples of how previously underutilized pavement can be transformed into a beautiful green space.

Compass Consulting also recommends increased seating within the park as well as additional patio spaces wrapping around the front and sides of the building, capitalizing on the good southern sun exposure there.

Additional recommendations include enhancing the public. realm through wider sidewalks, increased lighting, and the application of our Tactical Urbanism Toolkit for interim plaza creation. Also, the relocation of parking to the rear of the building combined with the addition of cycle tracks and bicycle parking increase the areas multi-modal accessibility and enhance the public realm at the human scale.



### **COMMERCIAL ZONE 6: 20 STREET SW & 42 AVENUE SW**



Zone 3



Rue Pannecau, Bayonne, France, 2011 (urb-1.com/before-after, 2018)



Rue Pannecau, Bayonne, France, 2016 (urb-Lcom/before-after 2018)



Place Pierre Renaudel, Bordeaux, France, 2015 (urb-Lcom/before-after, 2018)



20 Street & 42 Avenue, Calgary, Before (Google Earth Fro, 2018)

### Recommendations

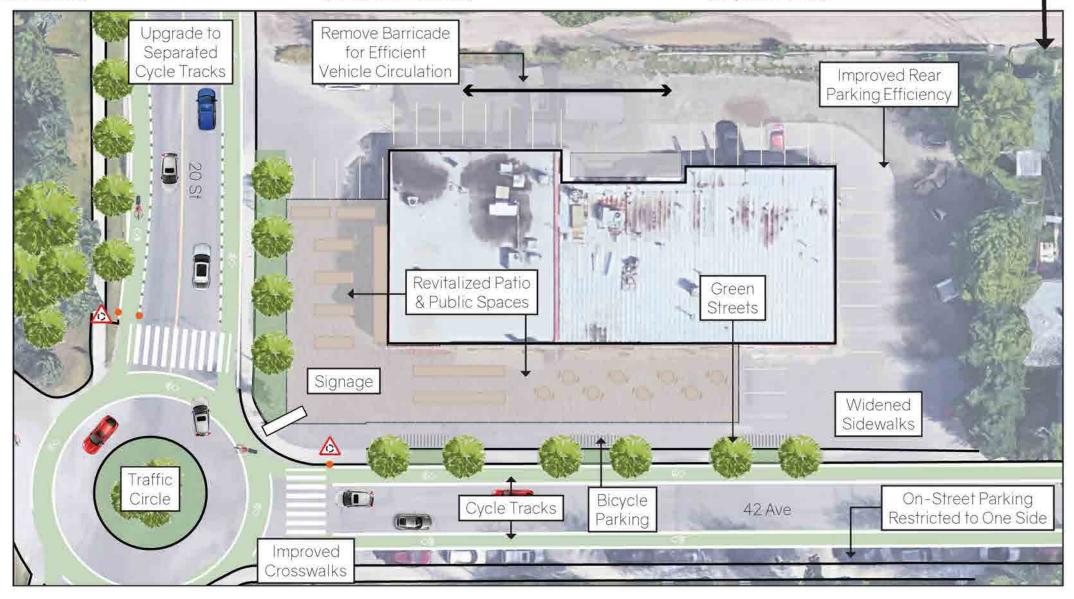
Zone 6, presents an excellent opportunity for improved connection to Flanders Park, increased vegetation through the use of green streets design and the revitalization of lost space currently occupied by surface parking lots.

The south and west sides of the building (current parking) have excellent sun exposure, unimpeded by any shadowing. Therefore, Compass Consulting recommends to enhance the public realm of Zone 6 by capitalizing on the good sun exposure by creating public patio spaces.

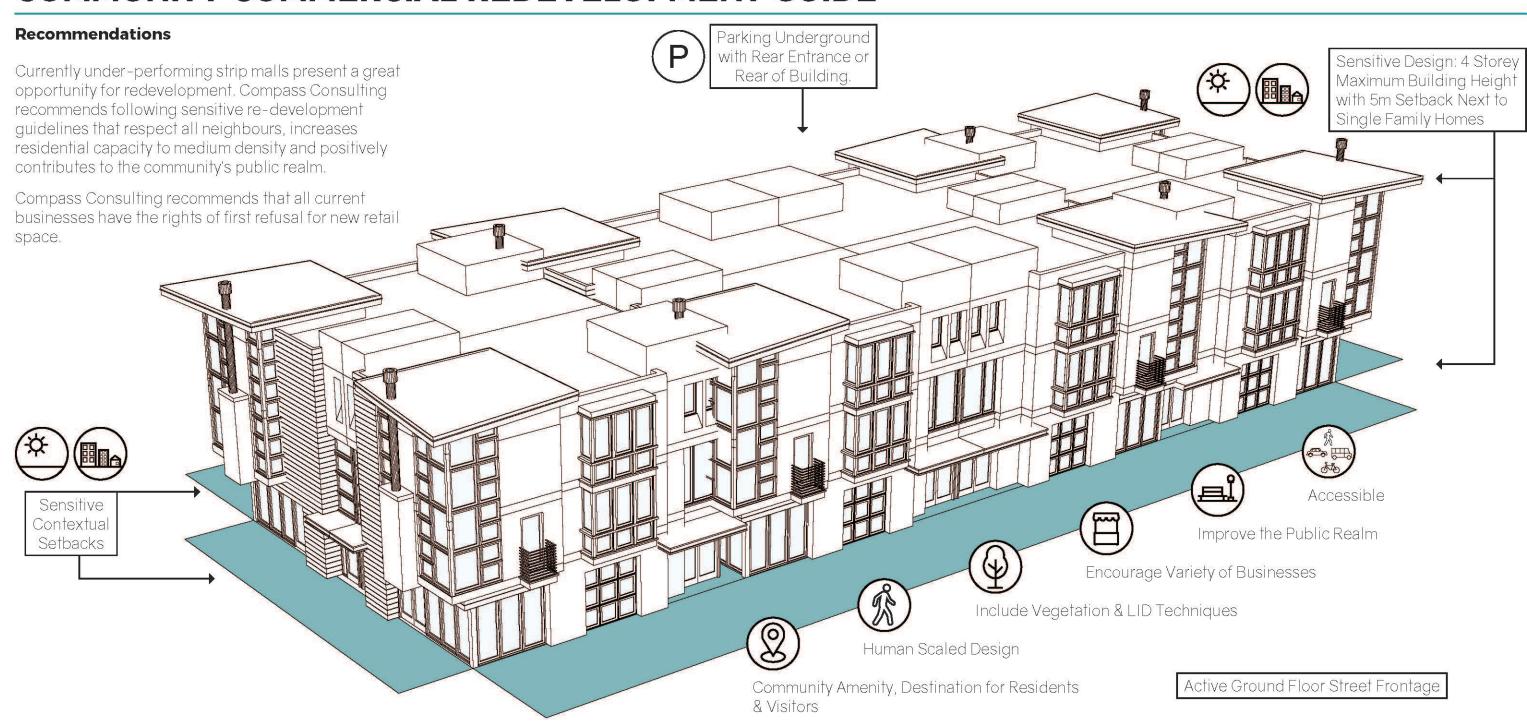
Additionally, as the patio replaces the current surface parking lot, Compass Consulting recommends the relocation of parking to the rear of the building and improved efficiency of use.

To improve the streetscape and pedestrian experience, Compass Consulting recommends the inclusion of green streets design, increasing vegetation, seating and lighting and widening the sidewalks. Separated Cycle Tracks are recommended along the busy 20 Street and Cycle Tracks are recommended along 42 Avenue to connect west-east through Flanders Park. Combined with an improved streetscape, the inclusion of bicycle infrastructure will increase the zones accessibility for all modes of transportation.

To ease the congestions at the intersection of 42 Avenue and 20 Street, Compass Consulting recommends a traffic circle, to facilitate continuous flow of traffic.



### COMMUNITY COMMERCIAL REDEVELOPMENT GUIDE



### **Mixed Use**

Redevelopments should offer a "Mixed Use" land use, with commercial, retail on the ground floor, with medium density residential on the floors above.

### **Sensitive Design**

Redevelopment should be sensitive to it's neighbours & designed to reduce impacts of shadowing and concerns of privacy. Compass Consulting recommends a four storey maximum height for contextual sensitivity.

Public amenities such as street trees, seating & bicycle parking should be included in the public realm.

### **Public Realm**

The public realm should encourage a sense of place and neighbourhood identity. All street frontage should be commercially activated, engaging with the street & easily accessible, with a front setback to include public space. Each business should have a maximum frontage of 10m to encourage street front interest.



Active Street Frontage, Plaza Saltillo District, Austin TX (1)



Public Realm, Plaza Saltillo District Austin TX (1)



Mixed Use Retail & Multifamily, Navy Yard, Washington DC (2)



Before (Google Earth Pro)

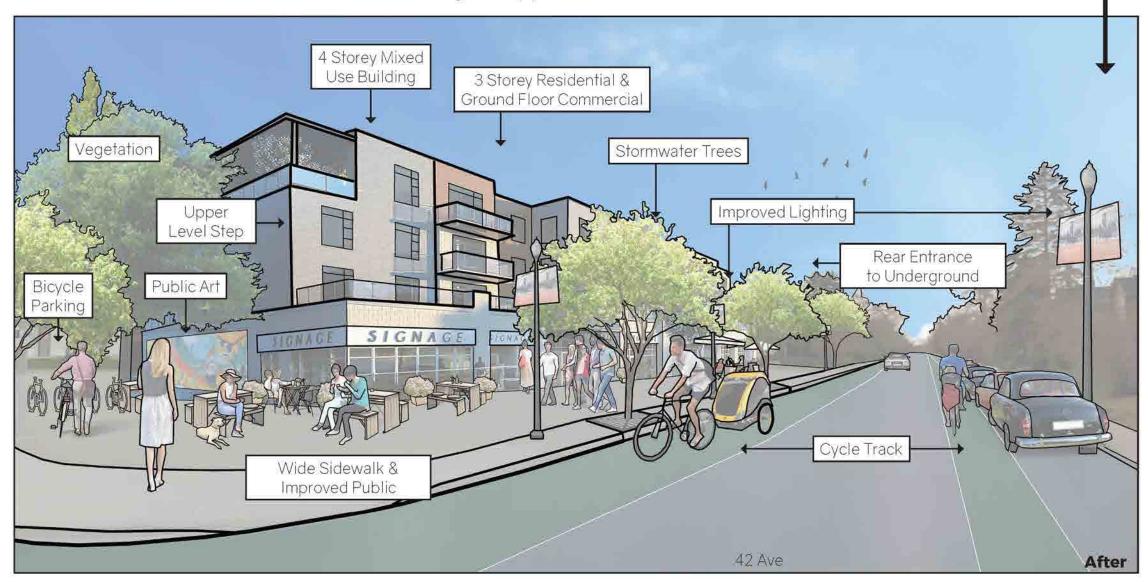
### Recommendations

Compass Consulting recommends that each community commercial redevelopment should be Mixed Use, with commercial-retail on the ground floor and residential above, to a maximum of four storey's with contextually respectful setbacks and step backs as outlined in the diagrams.

The public realm should serve Marda Loop residents and visitors alike, encouraging a sense of place and neighbourhood identity through an engaging and accessible street frontage.

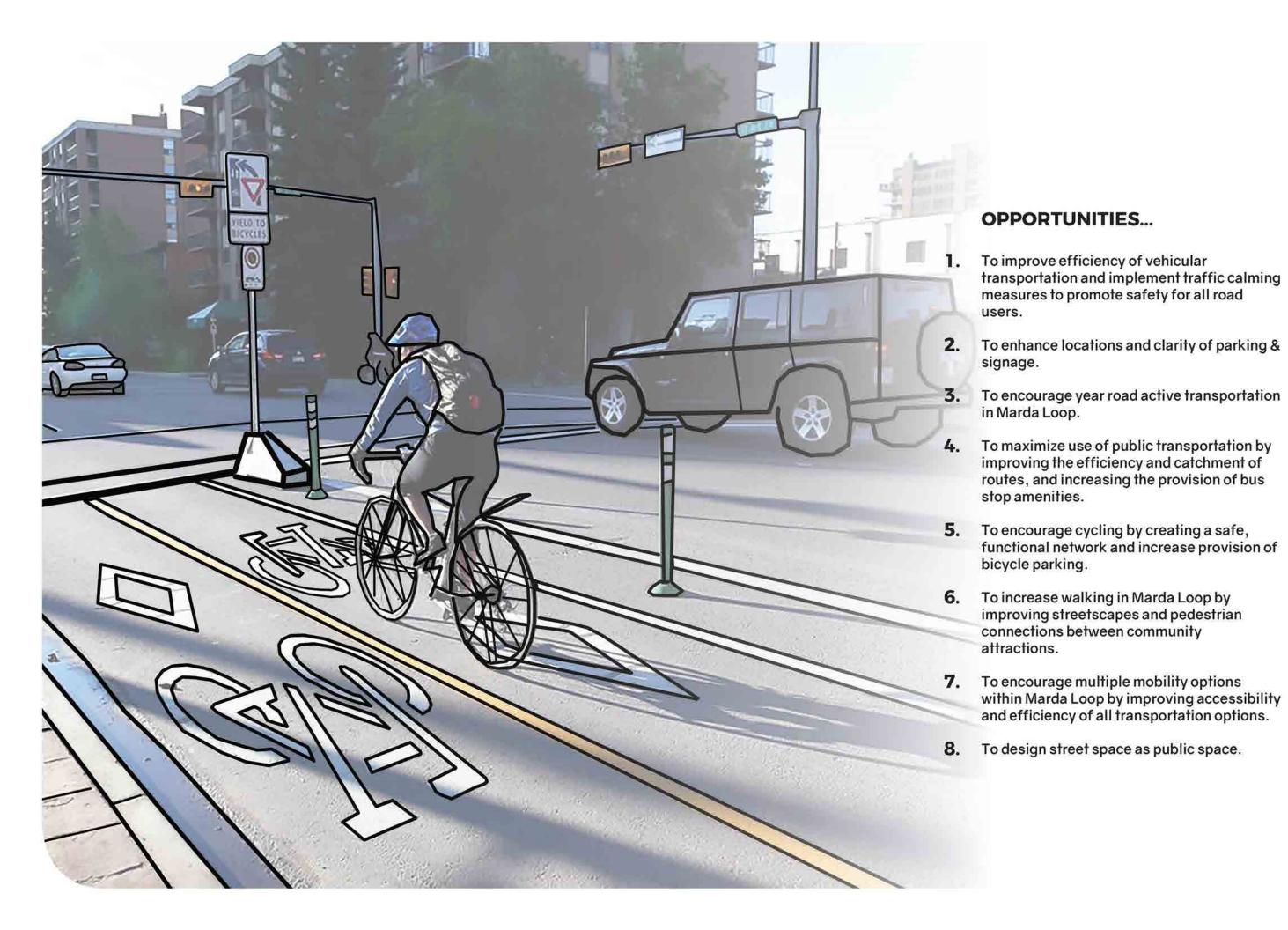
As an example of how the Commercial Redevelopment Guide can be put to use, Zone 6 has been transformed to include a four storey mixed use building that suits the local context and respects it's neighbours. Parking has been relocated underground with a rear entrance and the addition of cycle tracks and bicycle parking has increased the multi-modal accessibility. The street frontage has been activated with a public patio, wide sidewalks, additional lighting and stormwater trees, contributing to an enhanced streetscape at the human scale.

These guiding principles should be followed for new developments to encourage a vibrant public realm within Marda Loop.





## CONNECTIVITY





### TRANSPORTATION POLICY

### **Calgary Transportation Plan**

The Calgary Transportation Plan (CTP) is a long range plan that responds to the critical transportation issues facing Calgary now and in the future. A key goal of the CTP is to provide more convenient, affordable and attractive transportation choices for all Calgarians. To accomplish this, the CTP emphasizes safe walkable streets, enhances transit services, increased emphasis on sustainable travel choices, and has policies to maintain automobile, commercial goods and emergency vehicle mobility.

### **Complete Streets Guide**

The Complete Streets Guide, a sub document of the CTP. contains more specific strategies and implementation tactics for the concepts contained in the CTP. The document details multi-use street classifications that "aim to increase the attractiveness, convenience and safety of all modes of transportation by creating a new selection of multimodal streets that emphasize walking, cycling and transit, incorporate elements of green infrastructure and function in the context of surrounding land uses."

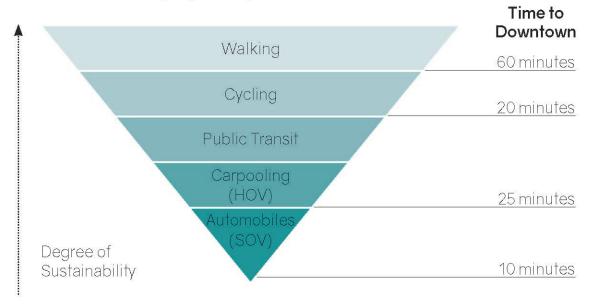
### **Calgary Main Streets Initiative**

"Main streets are active areas that attract Calgarians to socialize, work, shop, dine, celebrate local events and are often important transportation routes." The City of Calgary's Main Streets Initiative has identified 24 main streets across Calgary for analysis and updates. The initiative will look into improving the streetscape and urban design, public transportation, walking features, cycling features, population growth, new development, parks and public spaces, heritage buildings, transportation infrastructure and parking. 33 Ave SW and 14 Street SW in Marda Loop are included in this initiative.

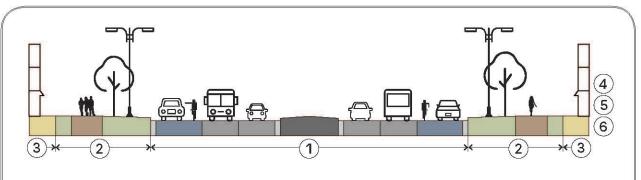
### **Current Transportation Activity**

Data from the 2016 Civic Census demonstrates that the area is still largely car dependent, with low rates of residents cyling or walking to work. However, the transit usage is above the current Calgary Transportation Plan goal.

### **Calgary Transportation Plan**



### **Complete Streets Guide**



### Horizontal Elements of a Complete Street

- 1) Roadway Zone (provides travel and parking lanes for motorized vehicles and bicycles in a mixed traffic environment)
- 2) Public Realm Zone (includes green infrastructure, street furnishings, and travel lanes for pedestrians and, often, cyclists.)
- 3) Interface Zone (includes pedestrian-oriented land use and design. As private ownership falls within this area, more space can be created through the use of building setback, bylaw setbacks, and/or public access easements.)

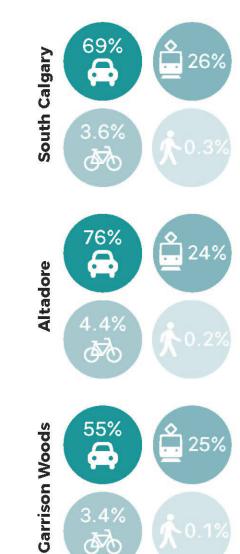
### Vertical Elements of a Complete Street

- 4) Aerial Zone (includes street lights, signal heads, tree canopy, etc.)
- 5) Surface Zone (includes sidewalks, pathways, street furniture, curbs, bike racks.) 6) Buried Zone (includes parkades, plant

and tree trenches, deep and shallow utilities.)

### **Mode of Transportation to Work**

Civic Census, 2016



### **CTP Transit Mix Goals**

	% of all daily trips		
Mode of Transportation	Current	Goal	
Walk / Cycle	14%	20-25%	
Transit	9%	15-20%	
Vehicles (SOV & HOV)	77%	65-55%	

Calgary Transportation Plan (p 3-4)

### Main Street Initiative - 14 Street "What We've Heard"

### Opportunities

- 1) Improve lot of Community Centre at 14 St and 30 Ave
- 2) Improve lighting along street
- 3) Left turn signal for cars going north on 14 St and 33 Ave
- 4) Paint crosswalk at 14 St and 13 Ave

### Issues

- 1) Traffic speed too fast along 14 St and 33 Ave.
- 2) Car-centric; no pedestrian appeal
- 3) High traffic speeds on 14 St
- 4) Better walkability (wider sidewalks and trees)
- 5) Narrow inconsistent sidewalks
- 6) Lack of consistent urban design along 14 St near 26 Ave
- 7) Better lighting eyes on Streets

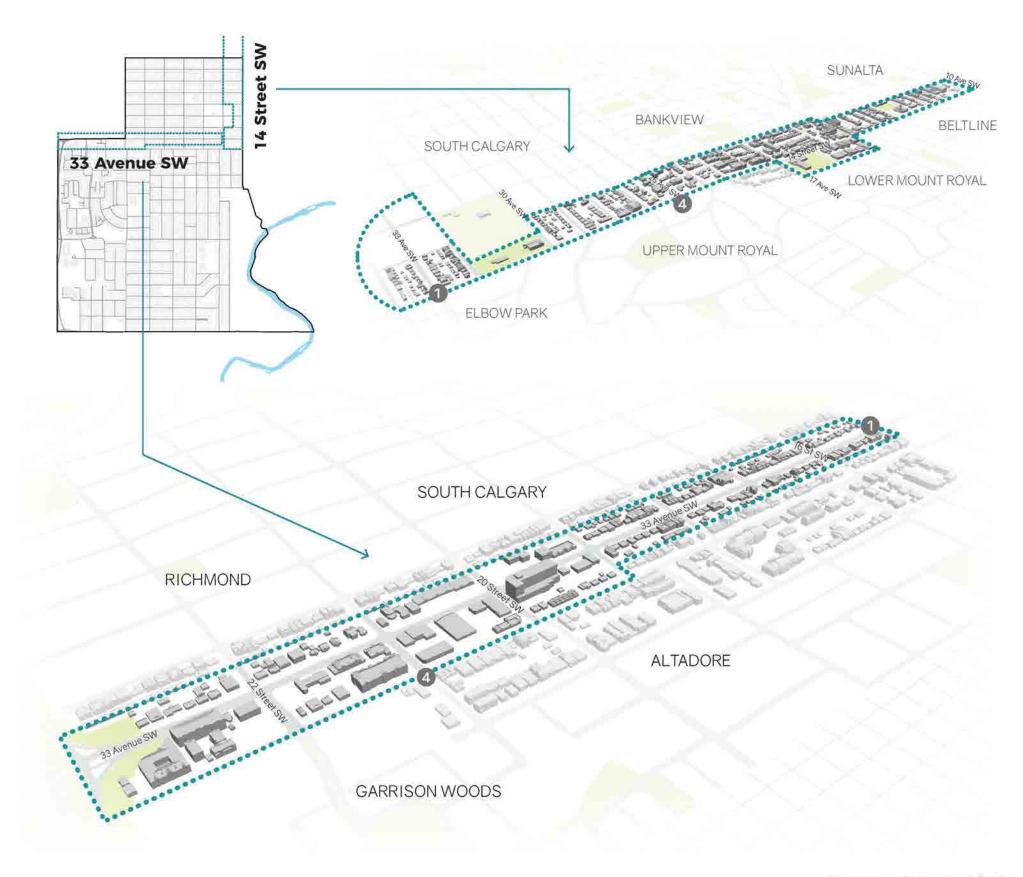
### Main Street Initiative - 33 Avenue "What We've Heard"

### Opportunities

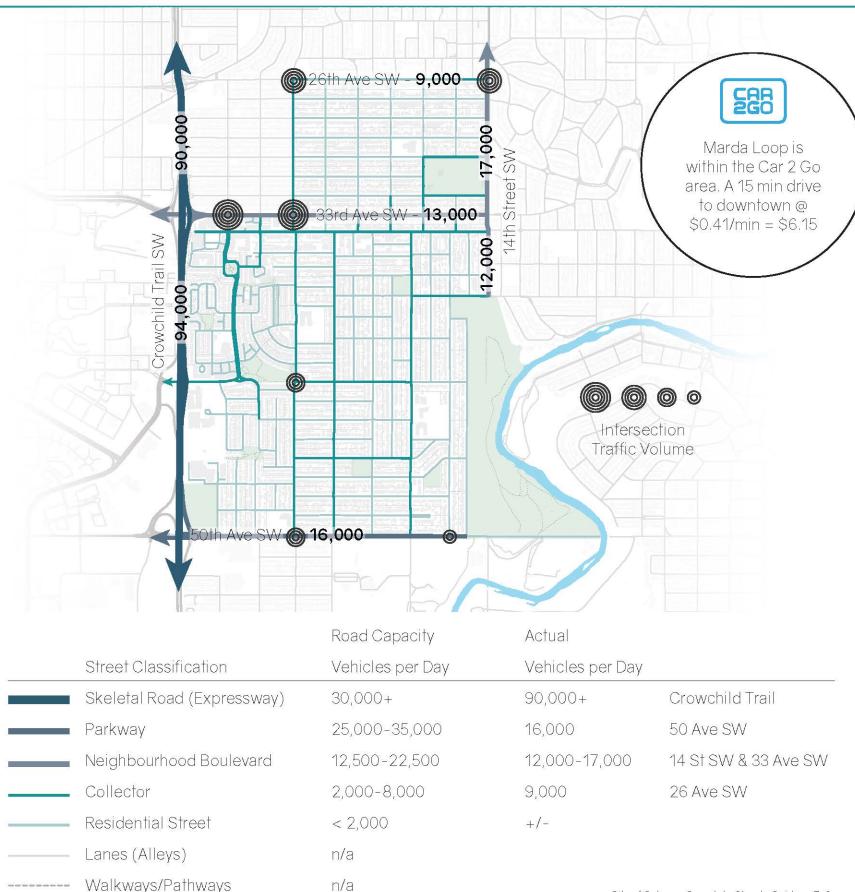
- 1) Reduce speed limit to 40km/hr
- 2) Improve lighting along the street
- 3) Improve walkability with better sidewalks, trees etc

### Issues

- 1) Traffic speed too fast along 14 St and 33 Ave. Speed limit of 50 km.hr along 33 Ave is too fast, 40km preferred
- 2) Car-centic, no pedestrian appeal. Narrow, inconsistent sidewalks, opportunity for better walkability with wider sidewalks and consistent urban design
- 3) Crime not well lit can feel sketchy at night. Better lighting for eyes on the street.
- 4) Intersection of 34 Ave and 21 Street dangerous - need 4 way stop



### **ROAD NETWORK**



### Goals

To improve efficiency of vehicular transportation and implement traffic calming measures to promote safety for all road users.

### **Observations & What We Heard**

The current road network is oriented in an efficient grid network, with higher order roads moving around the edges and through the centre of the community, with slower residential roads on the interior. All roads are operating under their intended capacity as per City of Calgary guidelines, with the exception of 26 Avenue SW. This road is operating above capacity because it crosses to the West side of Crowchild Trail without access to it, therefore collecting a significant amount of East-West volume. Remedying this issue is not within the scope of this report.

Site specific analysis and discussions with the community indicated the perception of high traffic volume, bottlenecking and specific intersections, during peak times, as well as some specific intersections considered unsafe.

### Recommendations

Recommendations to improve the efficiency of vehicular transportation include various designs for traffic calming. Although counter-intuitive the natural and voluntary reduction in speed can improve the flow of traffic by reducing accidents and sudden starts and stops.

Specific traffic calming measures have been outlined to the right and are recommended primarily for the boulevards and collector streets experiencing higher traffic volume, particularly when adjacent to commercial or community amenity areas.

The following recommendations are small simple elements on a street comprised of multiple modes of transportation, and can be implemented on their own or in conjunction with other features such as bike lanes or sidewalk improvements. Therefore, some site specific implementation examples will be demonstrated in the streetscape section.

### **Traffic Calming Measures**



Curb extensions make intersections safer for pedestrians by making them more visible to vehicles. reducing the crossing distance and eliminate driving in the parking lane.

Reducing the radius of corners operate similarly to curb extensions, making pedestrians more visible and reducing crossing distance. It also reduces the speed of turning vehicles.

Ladder style crosswalk paint is much more visible to vehicles than the standard two line crosswalks. which is important for pedestrian safety in areas of higher speed or volume.

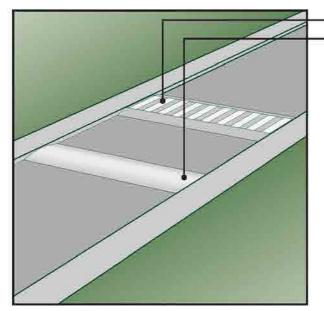
Narrower lanes can improve multimodal safety, as wider lanes give a false sense of security and encourage higher speeds. Most roads in Marda Loop are wider than necessary and could benefit by giving more road space to active transportation.



### **Traffic Circle**

Traffic Circles require vehicles to slow down when moving around them, thus reducing risk of collision. Traffic circles also improve efficiency of bottleneck intersections, by allowing for a continuous flow of traffic.

Recommended at: 34 Ave & 22 St, 38 Ave & 14 St, 42 Ave & 20 St.



### Raised Crosswalks & Speed Bumps

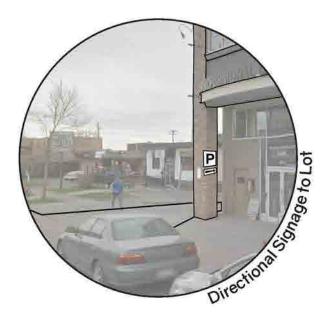
Raised crosswalks and speed bumps reduce vehicle speed and increase pedestrian visibility. They are particularly valued around school sites for kids' safety.



### Signage

A simple posted speed limit is often not enough to encourage behaviour change. Therefore radar signs posting current speeds or more visible pedestrian triggered flashing lights can improve compliance with posted speed limits and increase pedestrian safety.

### **PARKING**







### Goal

To enhance locations and clarity of parking & signage.

### **Observations & What We Heard**

Communication with members of the community and local business owners indicated a perception in the community that there is a lack of parking available, particularly around the primary commercial area on 33 Ave SW. However, site analysis indicated that there is substantial public parking in the area via street parking, surface lots and underground lots. If was concluded that the issue may be due more to a lack on knowledge of parking availability and permissions of guests to the area.

### Recommendations

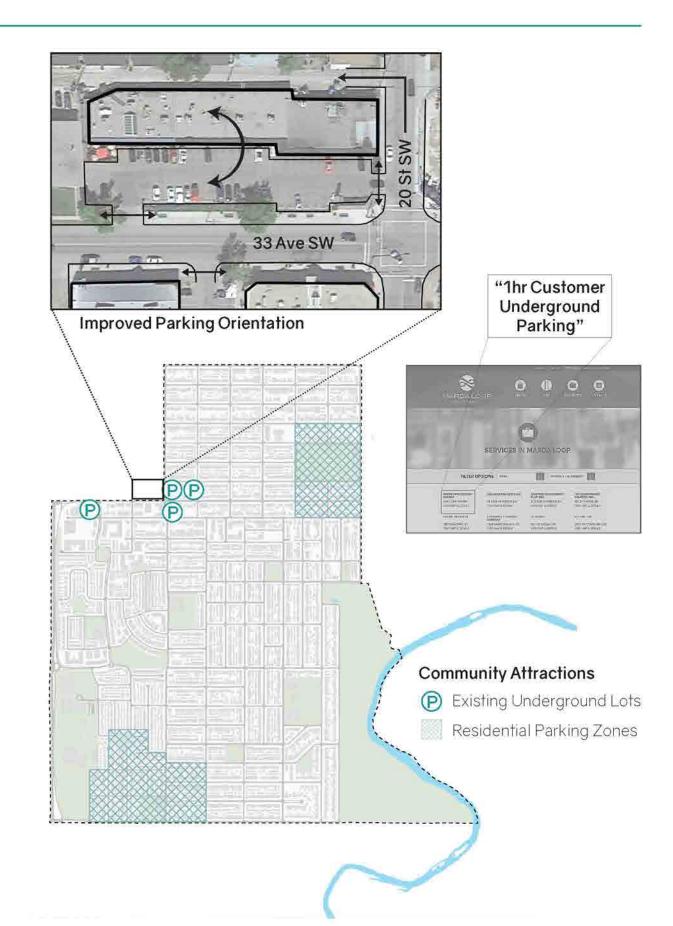
In order to address this issue, Compass Consulting recommends a policy requiring visible signage at underground lots that indicates the entry location and permissible users ("public", "customer" or "private").

In addition, parking information for individual businesses or developments should be posted on the BRZ website, so users seeking out a specific business may pre-plan their parking strategy.

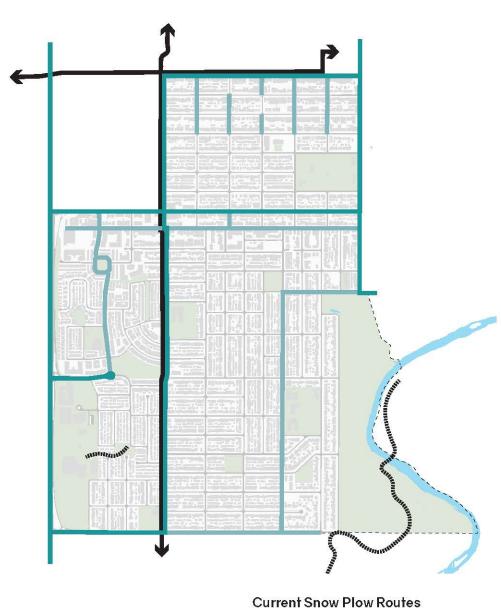
With respect to new developments, both of the above recommendations should also apply, in addition to design strategies to improve the public realm. For example, underground parking should be encouraged wherever possible. Also, any surface parking should be oriented at the back of the building, thus creating a continuous public realm at the front and buffering with neighbouring residential at the back.

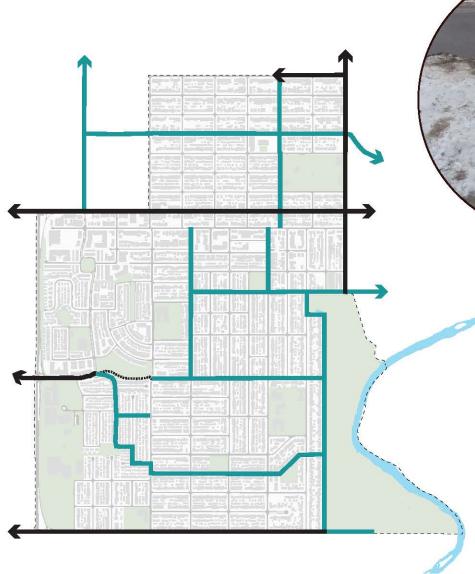
There are also two residential parking zones in the area which only allow local residents with passes to utilize the street parking. We recommend changing these zones to permit or pay zones, where residents may still park free with their permit and guests can pay for 2 hour parking, thereby reducing the limitations for people visiting the area.

Finally, the other recommendations in the connectivity section to improve active transportation infrastructure also assist with alleviating the burden on parking by reducing it's demand.



### WINTER CONSIDERATIONS





### Proposed Additional Snow Plow Routes

- Protected Bike Lanes [Cleared within 24 hours]
- Shared Roads [Cleared within 24 hours]
- Trails [Cleared within 24 hours]





### Goal

Encourage year round active transportation in Marda Loop.

### **Observations & What We Heard**

Currently, there are few designated roads, cycle tracks and sidewalks that are cleared within 24 hours within Marda Loop. The lack of snow removal discourages active transportation during the winter months.

Calgary Parks clears approved pathways within 24 hours after the snow has stopped falling and sidewalks adjacent to parks within 72 hours.

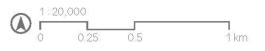
### **Recommendations: Additional Snow Plow Routes**

Based on the existing snow plow routes and proposed cycle network upgrades, Compass Consulting recommends additional snow plow routes to fill the gaps. These additional snow plow routes were chosen to ensure that the most heavily used cycle paths are available year round.

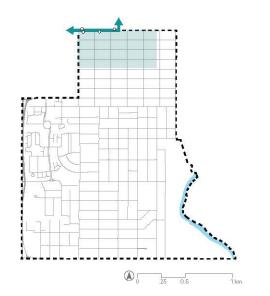
The Protected Bike Lanes should to be cleared within 24 hours selected roads with painted bike lanes have been selected as "shared roads" and to be treated as priority 1 snow plow routes. One additional pathway through Flanders Park has been added to the Calgary Parks pathway snow plow routes.

### Juneili Silow Flow Roules

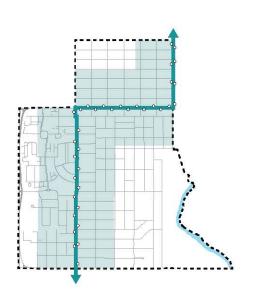
- Priority 1 [Cleared within 24 hours]
- Priority 2 [Cleared within 48 hours]
- Designated Bike Lanes + Shared Roads
  [Cleared within 24 hours]
- Trails [Cleared within 24 hours]
- Sidewalks [Cleared within 24 hours]



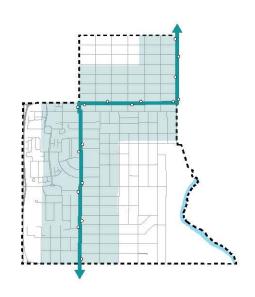
### **PUBLIC TRANSPORTATION**



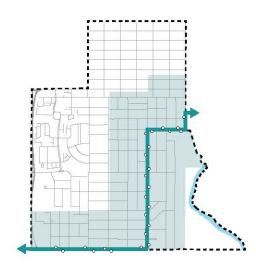




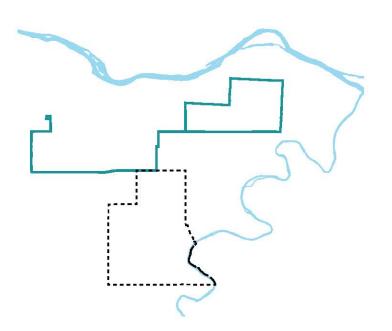
**Bus Route 7 - Marda Loop (North)** 

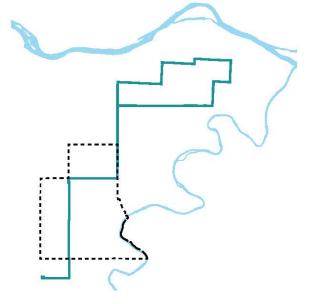


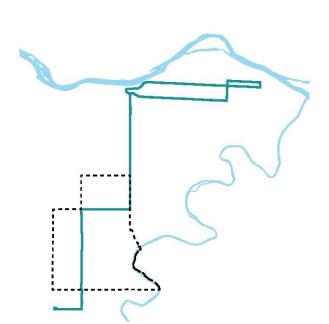
**Bus Route 107 - South Calgary** 

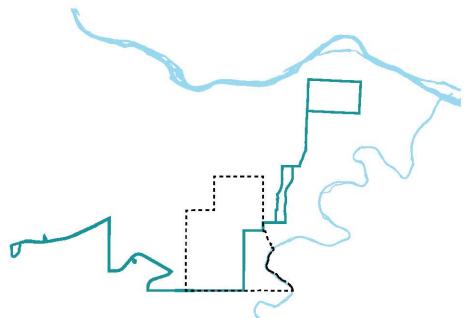


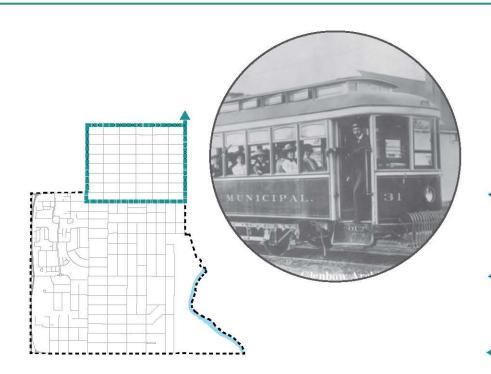
**Bus Route 13 - Mount Royal** 









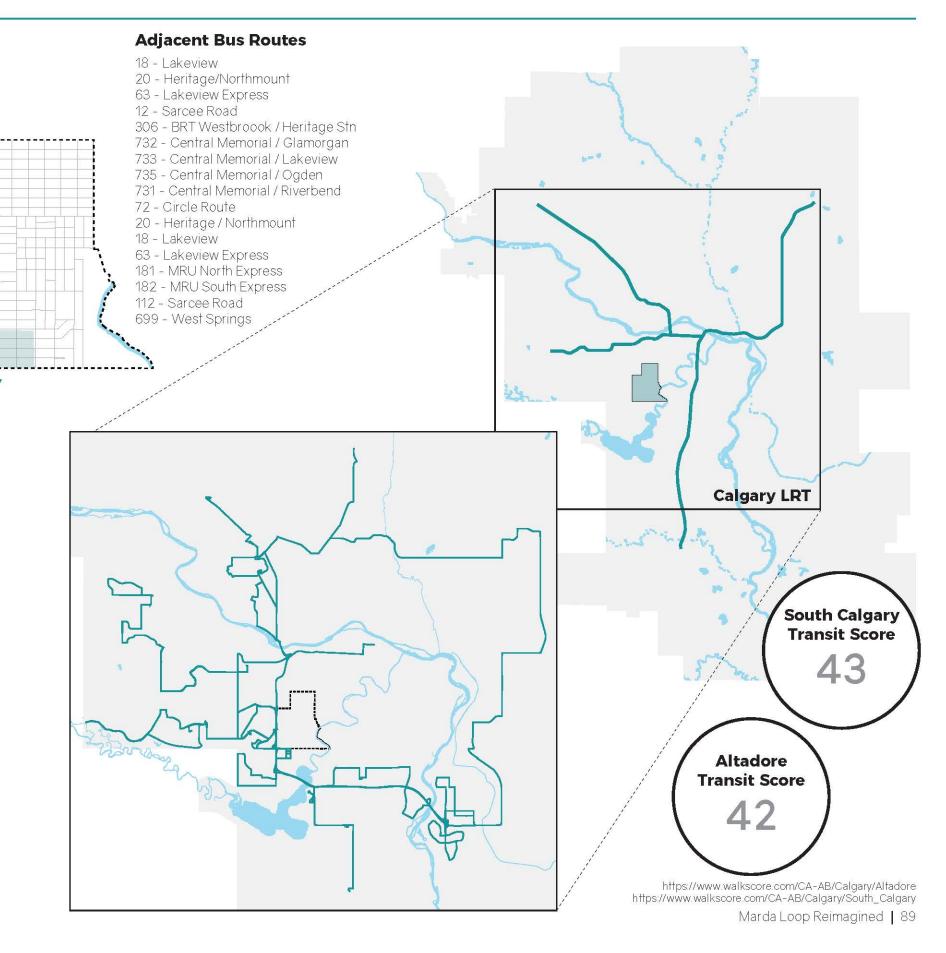




### **Public Transportation**

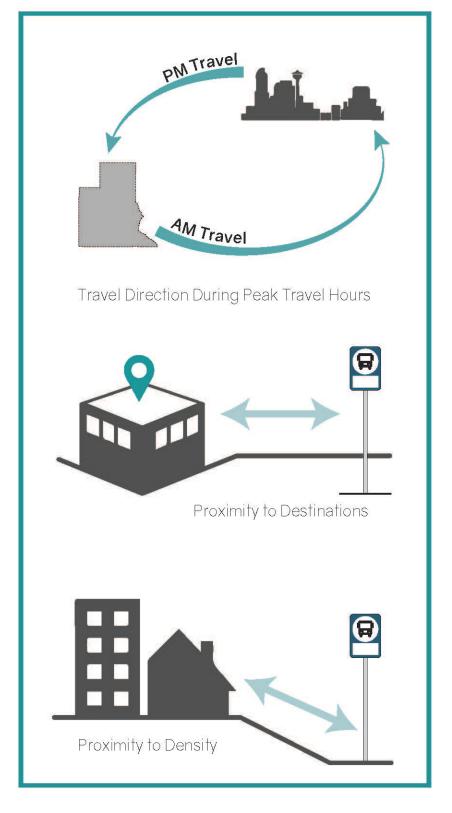
There are four bus routes that travel through Marda Loop and many more that travel adjacent to it along Crowchild Trail and 50th Avenue that can be utilized by residents. The light teal shade represents approximately 400m from the bus routes and demonstrates that most areas of the community are within short walking distance of a bus stop.

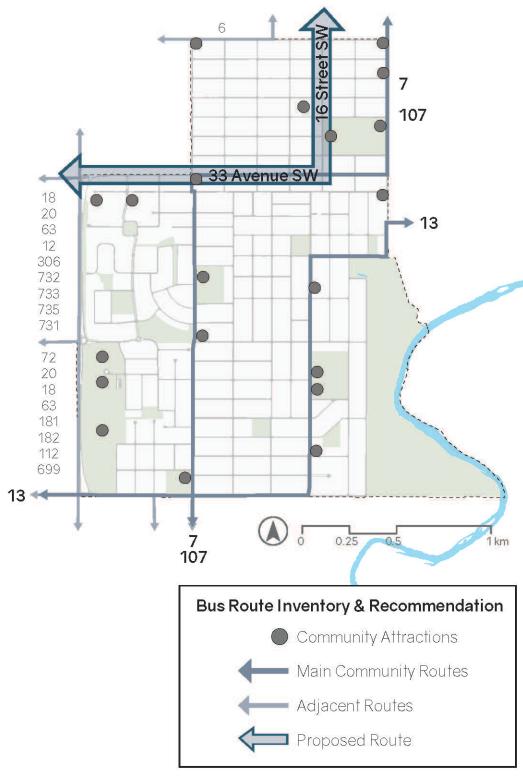
The wider route maps along the bottom demonstrate that most routes are planned for transportation in and out of the downtown core, with other portions of the city accessible by wider reaching routes along Crowchild Trail. The proximity to Crowchild Trail, although more difficult to access due to the large walls along the western edge of this community, give the area far reaching public transit accessibility, despite it's lack of adjacency to the LRT line.



### **PUBLIC TRANSPORTATION**

### **Public Transit Route Considerations**





### Goals

To maximize use of public transportation by:

- 1. Improving the efficiency and catchment of routes; and
- 2. Increasing the provision of bus stop amenities.

### **Observations & What We Heard**

There are three bus routes that go directly through the community. According to discussions with the community these routes are well located and well-utilized. Site analysis also indicated that these routes are adjacent to many of the amenities available in the area, with the exception of the commercial area along 33 Avenue and the community centre.

In addition, there are a variety of amenities that can be made available at the bus stops to make the journey more comfortable including seating, shelter and lighting. A bus stop inventory showed that no stops have stop specific lighting and are generally lit by standard street lights, which in most cases is sufficient. The provision of seating and shelter, however, varies greatly across these routes, with most amenities available on the northbound stops for people traveling into the downtown core.

### Recommendations

Due to the lack of direct public transit access to the highest density commercial area, we recommend the re-routing or addition of a bus to 33 Ave SW and 16 St SW, to improve access to popular amenities in these areas.

With respect to amenities, the wider provision of amenities on northbound stops is logical considering the most transit users would have a downtown destination, while southbound stops are utilized more for departure. However, this is not the case for stops adjacent to schools or commercial areas, as users travel to and from these destinations from all directions. Therefore, we recommend prioritizing amenity upgrades at the six stops indicated on the map first, followed by upgrades to other stops with no amenities.



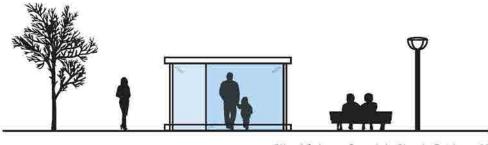




### **Bus Stop Amenity Inventory**

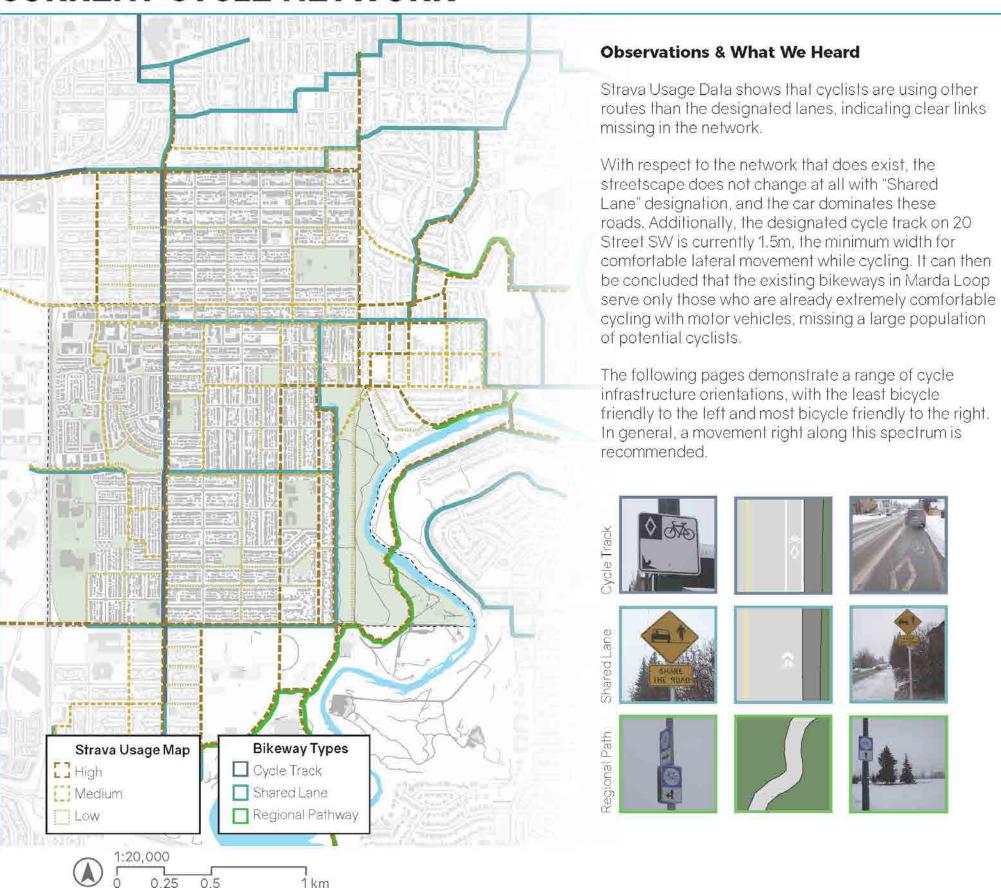
	TOTAL STOPS	No Amenities	Seating	Seating & Shelter
7	35	6	17	12
107	17	2	8	7
13	25	16	3	6

Note: Bus route 7 and 107 travel the same route, however route 107 does not stop at every identified location and only runs during peak AM and PM hours.



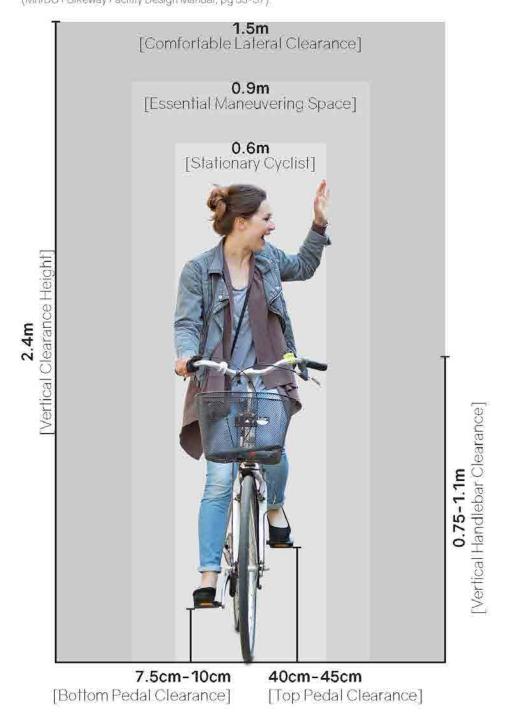
City of Calgary, Complete Streets Guide, p. 41

### **CURRENT CYCLE NETWORK**

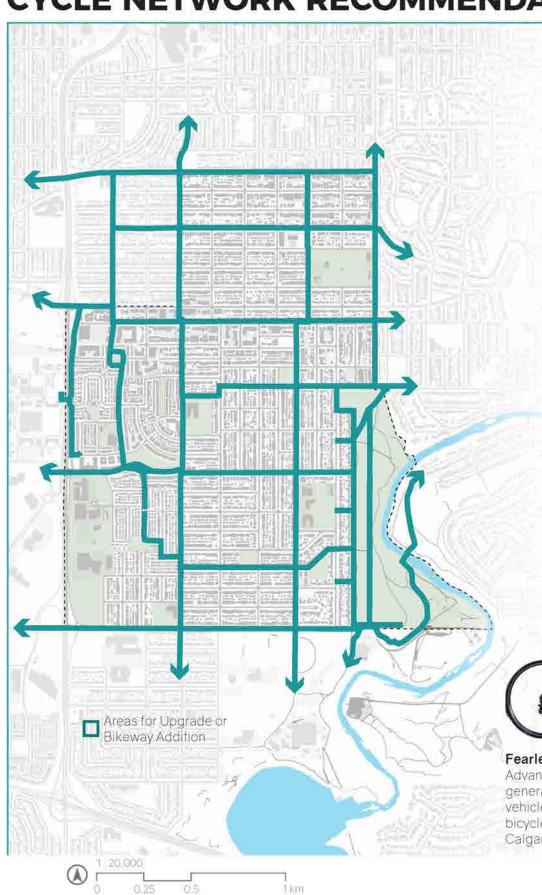


### **Bicycle Dimensions**

Essential Maneuvering space, describes the width required for a bicycle to maintain balanced at low speeds and allow for crosswind. This also allows for some maneuvering to avoid potholes, curbs or cracks. The Comfortable Lateral Clearance allows for wider cyclists, such as bicycles with trailers [average physical width ranges 0.6m-1.1m] and allows for tight passing. (Mn/DOT Bikeway Facility Design Manual, pg 55-57).



### CYCLE NETWORK RECOMMENDATIONS



### Goals

To encourage cycling in Marda Loop for all ages and abilities by improving the ubiquity, safety, functionality and efficiency of the cycle network. Therefore creating an inclusive cycling network, that supports all user needs, interests and skills while acting as a functional network.

### Recommendations

The Proposed Cycle Network Improvements Map indicates where Compass Consulting would recommend the placement of upgraded or new bicycle infrastructure.

The majority of the right of ways (ROW's) are 20m across, while the curb to curb widths average 9m, therefore, there is space within the current ROW to integrate the infrastructure that will allow cycling to thrive.



### **Design for All Ages & Abilities**

### Exclusive

### **Cyclist Categories**

(The City of Calgary Cycling Strategy, 2011)



### Fearless

Advanced cyclists, are generally undeterred by motor vehicles & will cycle without bicycle infrastructure. Calgarian Percentage: 2%



### Confident

Intermediate cyclists, are slightly comfortable sharing a road with motor vehicles & will cycle if most of the route includes bicycle infrastructure. Calgarian Percentage: 20%



### Interested

Novice cyclists, are not comfortable sharing a road with motor vehicles & will only consider cycling if their entire route contains bicycle infrastructure. Calgarian Percentage: 51%



### Beginners & Children

Beginner cyclists, including children, who may bike on their own or require supervision while cycling. hesitant teenagers or new

\*Additional category to the Calgary Cyclnig Strategy



Inclusive

### Reluctant

Individuals who do not identify as cyclists, are not comfortable sharing the road with motor vehicles without designated bicycle infrastructure & are not very interested in cycling. Calgarian Percentage: 28%

### MARDA LOOP BIKEWAY DESIGN GUIDE

### Shared Lane [Existing]

An example of a narrow shared lane with curbside parking. The only indication of bicycle inclusion are the painted sharrows and "Share the Road" signage. This infrastructure caters to people who are generally undeterred by motor vehicles, the "fearless" category.

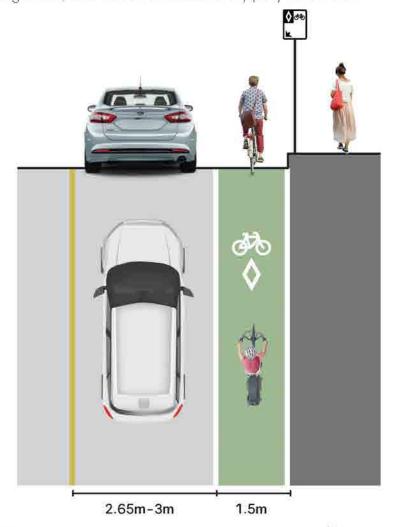
Compass Consulting would recommend traffic calming measures such as large speed bumps to reduce the speed of traffic to include additional cyclists.

# 2.65m-3m 2m-2.2m

### Cycle Track [Existing on 20 Street, SW]

An example of existing, narrow, on-road cycle track. 1.5m is the minimum width for comfortable lateral clearance on a bicycle. this allows a cyclist to avoid cracks or potholes on the ground surface, avoid knocking pedals on the curbs and, tightly pass another cyclist. This category of bikeway expands the types of cyclists to include both "fearless" and "confident" cyclists.

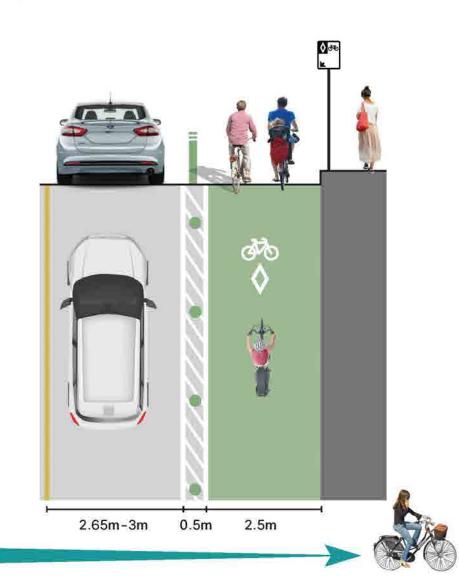
The green asphalt is not currently existing on 20 Street, however the use of colour provides a visual cue to other road users, increases their awareness to the presence of cyclists. The material can also be seen in all weather conditions, including snow, and does not become slippery when wet.



### **Separated Cycle Track**

Width ranges from 1.5m to 2.5m for a single direction, separated cycle track. 2.5m is recommended, as this lane width provides comfortable passing clearance and facilitates conversational cycling. It also provides more space for trailers, cargo bikes, disabled cycling and those who are less comfortable being on the road, expanding the cyclist types to include the "interested" category.

The buffer ranges from 0.5m to 1.2m, increasing as the maximum speed of the road increases. Separation can be in the form of removable flexi-bollards (below), planters or empty space when beside parked cars.



### **Bi-Directional Separated Cycle Track**

Width ranges from 3m-4m, with 3m being the minimum width to enable individuals to pass each other. Wider lanes allow for increased social opportunities while cycling, allow for wider bicycles (such as with trailers or cargo bikes) and increase width of cycle space during the winter season due to snow pile up on the side of the road, sidewalk and/or in the buffer space.

Additionally, the wider the lanes, the more comfortable the experience for nervous cyclists, while providing space for more confident cyclists to pass when necessary.



### **Raised Cycle Track**

This bikeway design takes the cycle track off the road entirely, by through a separation of height, up onto the curb. The width ranges from 2m-2.5m for a single direction track, with additional spill space onto the adjacent sidewalk, as required. The width of the buffer can range from 0.3m to 2.5m. 1m is the minimum buffer required when next to a parking lane as this space provides protection from being "doored" by the parked cars, while 1m also provides adequate space for curbside rain gardens or trees.

This extra separation expands the network to include the reluctant cyclists who are not comfortable cycling on the road at all.



### Off Road Multi-Use Pathway

The multi-use pathway is the most user-friendly bikeway design as the 4m width allows for social interactions and adequate maneuvering around all activities, including walking, running, cycling and in-line skating.





### PEDESTRIAN ENVIRONMENT

### **Commercial Walksheds**

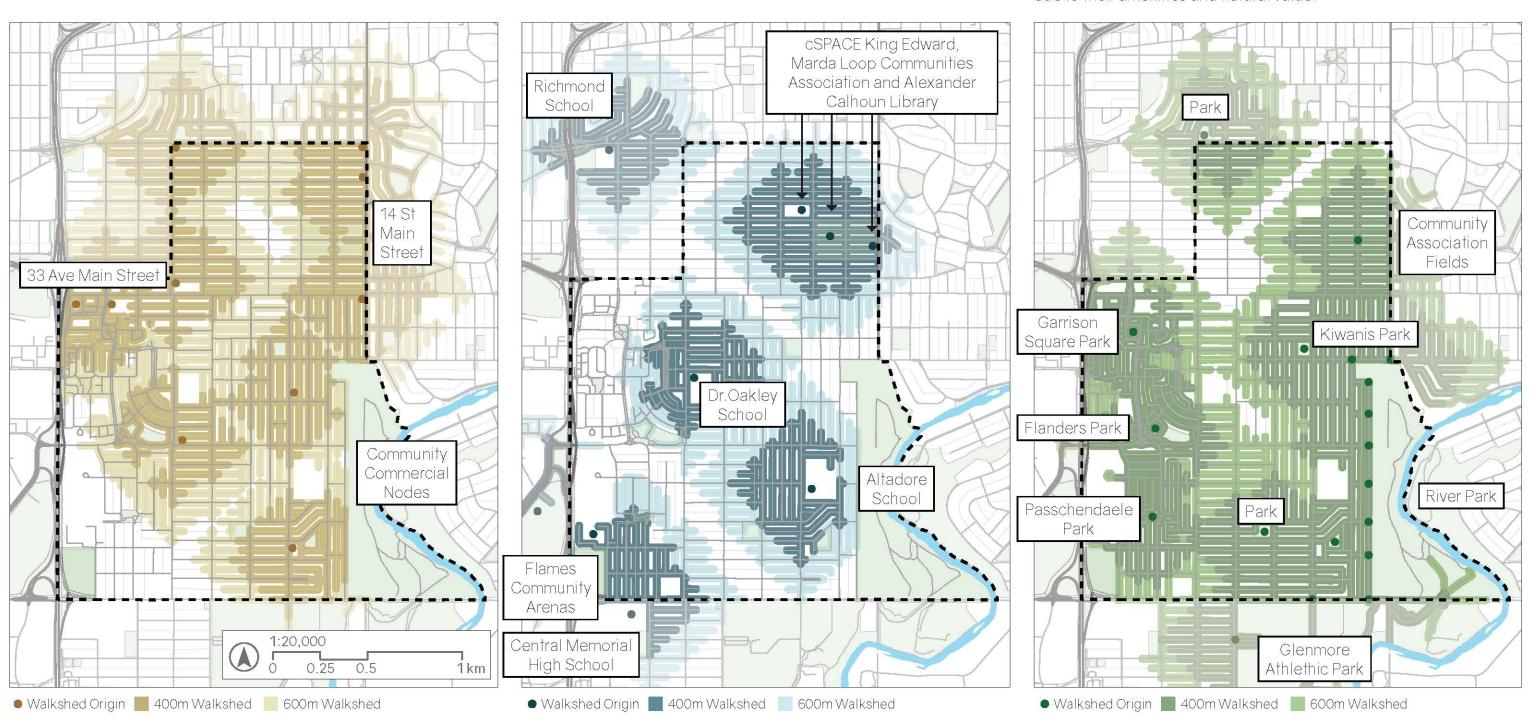
The 400m and 600m commercial walksheds below demonstrates an ideal spread of commercial amenities throughout the communities, with almost every resident within 600m walking distance of some community commercial.

### **Institutional Walksheds**

The 400m and 600m institutional walksheds show that large portions of the communities are within walking distance of institutional amenities such as schools, the Flames Community Arena and the Marda Loop Communities Association.

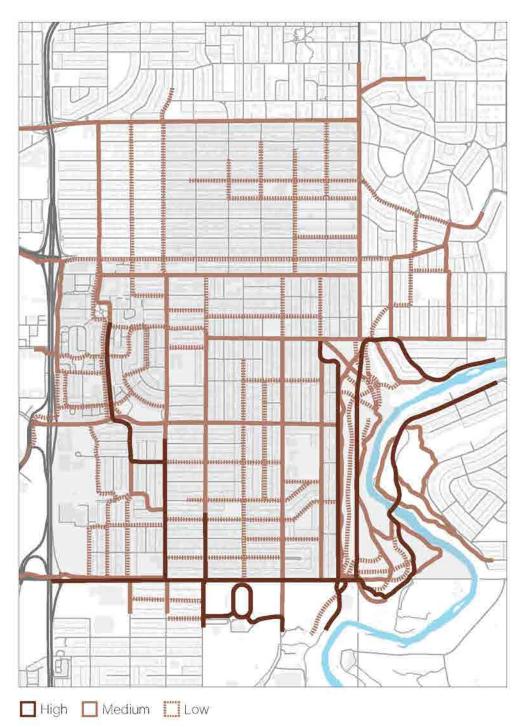
### **Park Walksheds**

The 400m and 600m park walksheds indicate that almost all residents of Marda Loop are within walking distance of a local park. Not shown here is the observation that some larger parks such as River Park or Glenmore Athletic park have wider catchment areas due to their amenities and natural value.



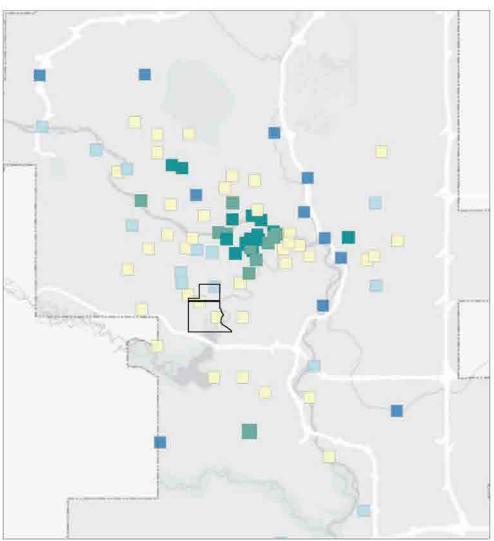
### Strava Running Usage Map

The Map below displays the paths taken by runners in Marda Loop, indicating their desire lines within and throughout the community. The data was retrieved from Strava, which utilizes voluntary GPS tracking data from runners using the application.



### **Pedestrians Counted**

The City of Calgary performed a bicycle and pedestrian count in 2016 in which they counted cyclists, pedestrians and mobility scooter users at 90 locations across the city. The map below represents the approximate counts of pedestrians at each of these locations.



May, June, July and September 6:30-9:30 a.m. & 3:30-6:30 p.m.

### Pedestrians Counted

> 1000-12,131

>500-1000

> 100-500

>50-100

0-50

### Walkscore

Walkscore is a private website that rates the walkability of various communities across the world. The measurements are based on proximity to commercial and whether "errands can be completed on foot". There are many considerations for what makes an area walkable and walkscore does not consider them all, so a walkscore should be considered as one metric among many.

> South Calgary **Walk Score** 22<sup>nd</sup> in Calgar





### **Pedestrian Environment**

Overall Marda Loop is oriented in a very walkable grid network with a good distribution of commercial. institutional and natural amenities. Additional analysis and recommendations for walkability are outlined on the following page.

### PEDESTRIAN ENVIRONMENT

# Sidewalk Inventory

### Impacts on Walking Environment:



Separation Between Cars and People



Sidewalk Width



Sidewalk Surface



Lighting and Sun Exposure



Vegetation

### Goals

- 1. To increase walking in Marda Loop by improving streetscapes.
- 2. To increase walking in Marda Loop by improving pedestrian connections between community attractions.

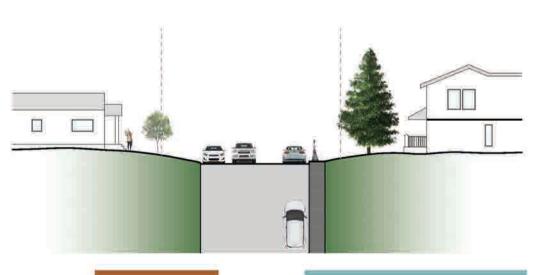
### Observations & What We Heard

The walksheds performed by Compass Consulting in the analysis phase demonstrate that Marda Loop is oriented in a very walkable network. The grid oriented streets and even distribution of commercial, amenity and park spaces make this a very walkable community. However, additional analysis and discussions with community members indicated room for improvement in the walking environment, with many of the existing sidewalks being quite narrow or uneven.

The conditions for a walking environment include the existence and placement of sidewalks with respect to streets, each varying in their level of safety and comfort, as demonstrated by the diagram below. Additionally, factors such as sidewalk width, lighting, vegetation and surface quality play a part in the walking environment.

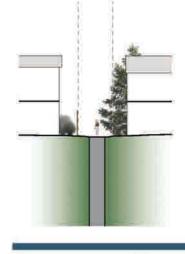
MOST PEDESTRIAN FRIENDLY

### **LEAST PEDESTRIAN FRIENDLY**

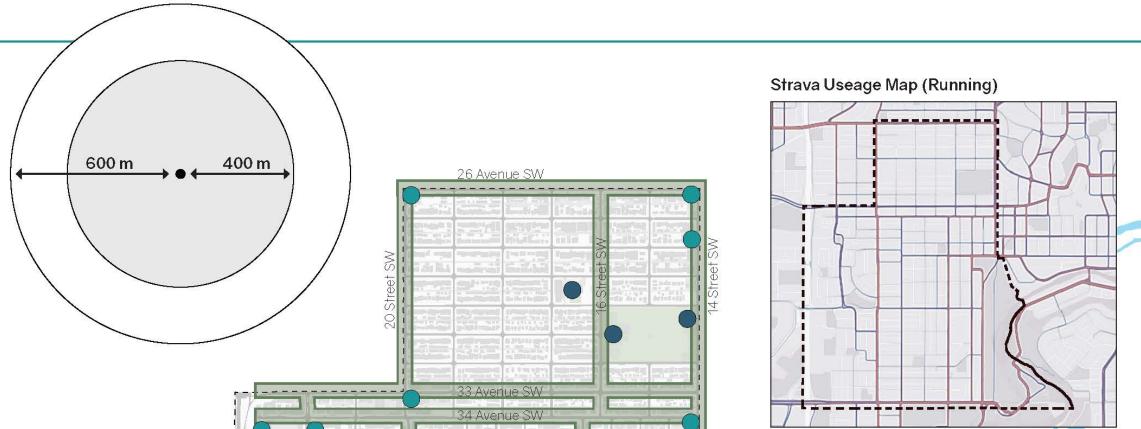


3) Buffered Sidewalk (w/o trees)

4) Buffered Sidewalk (w. trees)



5) Separate Walkway



### Recommendations

The recommendations for improving the walking environment align with those factors outlined. Ideally each street would contain wide even sidewalks on both sides, buffered from the street with tree, with ample lighting. However, limits on space, time and funding in a developed community requires prioritization of these improvements.

The first recommendation is to add sidewalks in each area missing a sidewalk altogether. Within this, prioritizing the areas around schools and parks that experience higher (youth) pedestrian traffic.

Pedestrian improvements can then be prioritized based on proximity to commercial or community attractions as demonstrated on the map to the right. The areas most in need of improvement due to both useage rates and sidewalk condition are outlined in green on the map to the right.

As pedestrian improvements never exist on their own as necessarily have an impact on all other modes of transportation, some site specific examples have been demonstrated in the streetscapes section.



### **STREETSCAPES**



### Goals

- 1. To encourage multiple mobility options within Marda Loop by improving accessibility and efficiency of all transportation options.
- 2. To design street space as public space.

### **Observations & What We Heard**

Each element of connectivity was explored on it's own: the street network and vehicular considerations, public transportation, cycle network and pedestrian environment. However, none of these elements exist on their own, since the streetscape provides space for them all and the use and safety of one necessarily impacts the use and safety of the others. In addition, there are multiple orientations and combinations that each form of infrastructure can take. each impacting the quality of experience of that mode and the others. For example, retrofitting a new bike lane often requires the elimination of one side of street parking, but also provides more buffer from moving traffic for both cyclists and pedestrians.

The following streetscapes section has explored some opportunities for integrating improvements into the connectivity network to encourage multiple mobility options. Each page demonstrates various options, for integrating one or more recommendations. Each recommendation getting closer to a Marda Loop "where life connects".

### **20 STREET & 42 AVENUE RECOMMENDATIONS**

### Recommendations

At the intersection at 42 Avenue and 20 Street Compass Consulting recommends constructing a traffic circle to facilitate traffic flow. By removing the medians, and building into the entrance of Flanders Park this can be achieved.



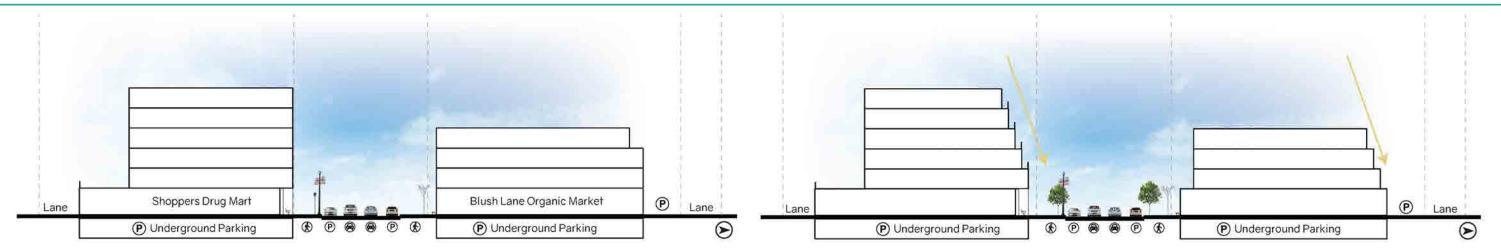
Upgrading the existing cycle track on 20 Street to a separated cycle track and the addition of a cycle track on 42 Avenue is recommended. This will facilitate accessibility by multiple modes of transportation.

The image below illustrates the separated cycle track interaction with public transit bus stops indicated on 20 Street.





### **33 AVENUE RECOMMENDATIONS**



### **Existing Section**

**Public Realm Improvement** 



### Recommendations

Treating the street space as public space involves the coordination of multiple elements to make the street as pleasant and safe a place as possible for all road users.

Several residents at the community engagement workshop indicated that although the commercial draw was there along the west end of 33 Avenue,

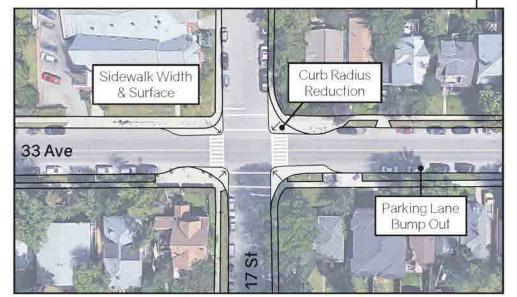
the public realm and street environment was in need of improvement. The sections above and hypothetical render to the left demonstrate the integration of the guiding principles into the streetscape to achieve the goal of making it a great public space.

Future developments in this area should consider sun exposure to the street and step back upper levels for sensitive design, not only for neighbouring properties, but for the fronting street. Many elements such as unique street lighting, street trees, unique ground treatments, rear & underground parking, wide even sidewalks and seating do already exist in this area, but are uneven with gaps in their use in front of each store front. Utilizing a consistent urban design palette can help create a more defined sense of place in this highly utilized commercial area.

Addition of a turn lane at 20 St, could also help with reducing back-ups from turning vehicles at this intersection.



**Existing Conditions along 33 Avenue SW** 



33rd Avenue & 17 Street Intersection



33rd Avenue & 19 Street Bus Stop Amenities



Bicycle Signal Precedent



Bicycle Signal Precedent

Reviewing the full length of 33 Avenue, some of the main concerns raised by community members were the quality of the walking environment and the perception of 33 Avenue as a north-south barrier.

Therefore, Compass Consulting recommends implementing traffic calming measures along the length of 33 Avenue. including traffic lane bumpouts and curb radius reduction to slow vehicles, limit driving in the parking lane and reduce the crossing distance for pedestrians. Additionally, more consistent crosswalk paint would improve visibility and thus pedestrian safety. In general, two lane crosswalks are sufficient for less utilized intersections, however those at 22 Street, 20 Street, 16 Street and 14 Street should all be upgraded to ladder style crosswalk paint. Widened and buffered sidewalks would further improve the walking environment, along the length of this avenue.

Finally, as noted in the public transportation section, some bus stops in highly trafficked areas are currently lacking any bus stop amenities, such as this one at 33 Ave & 19 Street. Addition of seating and shelter to this stop would make it's utilization more comfortable and thereby encouraging additional use.

### 22 STREET & 34 AVENUE RECOMMENDATIONS

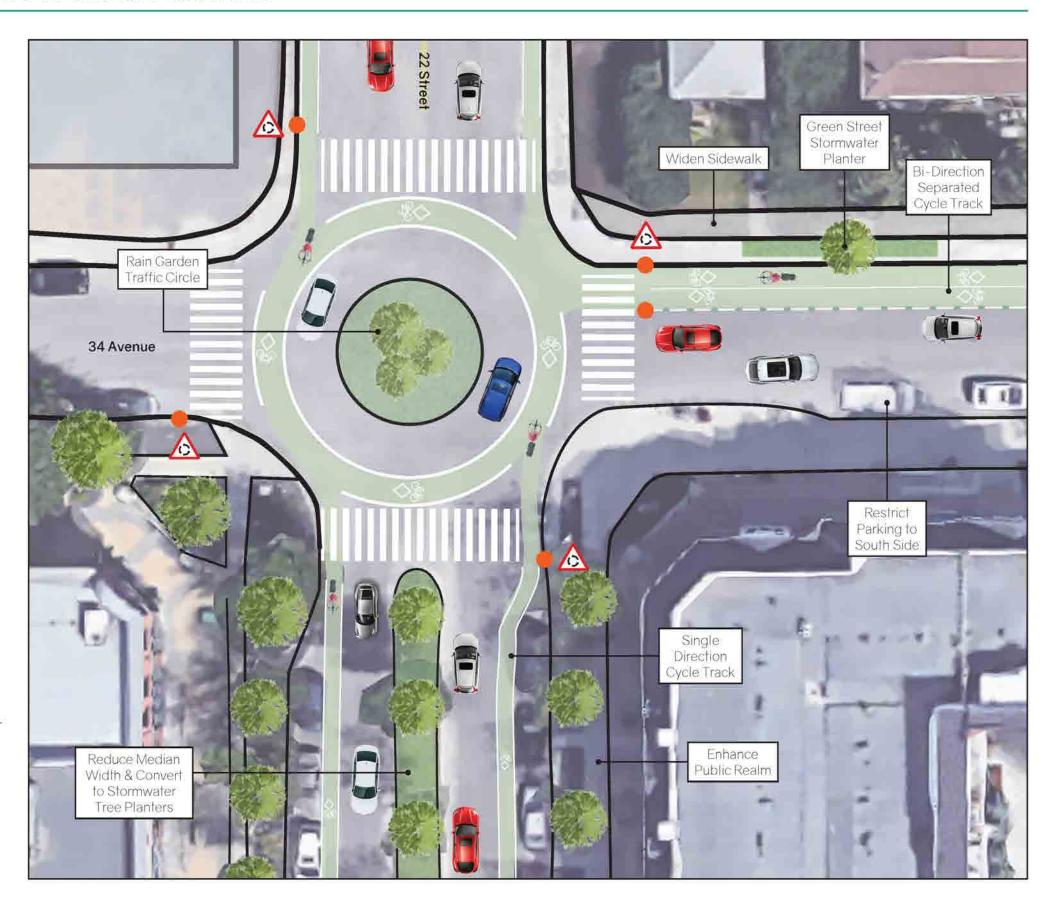
### Recommendations

During a walking tour and the community engagement workshop, it was noted by several community members that the intersection of 22 Street and 34 Avenue acts as a bottleneck intersection with traffic backing up traffic along 22 Street and onto 33 Avenue.

To relieve the bottleneck, Compass Consulting recommends the incorporation of a traffic circle to facilitate the continual movement of people and vehicles. The circle also acts as a traffic calming mechanism, therefore slowing the movement of vehicular traffic, making the intersection safer for all road users. The green space in the middle of the circle improves the aesthetic of the intersection and can incorporate the dual functionality of a stormwater tree planter or rain garden.

Additional improvements include the addition of a separated bidirection cycle track along 34 Avenue, this is achieved through the removal of parking along the north side of the Avenue and a reduction of lane widths throughout. Compass Consulting also recommends retrofitting 34 Avenue to include Green Streets techniques and widening the sidewalks to improve the pedestrian experience and walkability of the area.

Compass Consulting also recommends the addition of single direction cycle tracks along 22 Street by reducing the width of the current median from 4m to 2m and converting it to stormwater trees and planters. This allows the median to continue to enhance the streetscape through vegetation while performing as a functional Green Street. Additionally, the 2m median reduction allows space for the cycle track to be implemented within the current right of way.



### 22 STREET RECOMMENDATIONS



Option A: One Direction Cycle Track with Median Stormwater Tree Planters

Option B: Bi-Direction, Separated Cycle Track with Median Bioswale

### Enhance Public Realm & Pedestrian Experience with additional Lighting & Seating Inclusion of Bicycle Reduce Parking Lane Widths Single Direction Reduce Vole Track Median Width Retrofit Median Direction Vole Trac Curb Inlets for Stormwater tre 22 Street

### Option A

This option does not alter the width of the existing road, curb to curb. Compass Consulting recommends retrofitting the existing median into a functional bioswale rain garden and reducing the width to only 2.5 m. This allows for additional street space to be reallocated to the on-road cycle tracks.

The width of the Cycle Track is 2m to allow for wider bicycles (ex- with a trailer) and to provide enough space for cyclists to stay balanced in poor conditions, pass and avoid obstacles. The cycle track also enables "interested" cyclists the opportunity to be on the road, in a designated space and enjoy their cycling experience.

Compass Consulting also recommends to slightly widen the sidewalks to 2m to facilitate a good pedestrian experience.

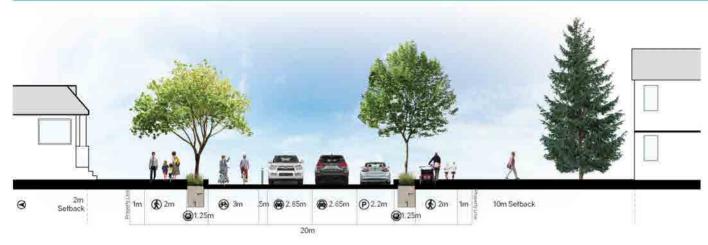
### Option B

This option recommends the same median adjustments to include a functional median bioswale green street. The difference from option A is the inclusion of a Bi-Directional, Separated Cycle Track.

To enable this, parking was reduced on the west side of 22 Street, however lanes were increased in width and the curb on the eastern edge was moved 1m into the existing road, therefore widening the eastern sidewalk.

Option A: One Direction Cycle Track with Median Stormwater Tree Planters

### 14 STREET, 26 & 34 AVENUE RECOMMENDATIONS



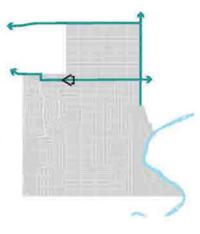
Option A: Bi-Direction Separated Cycle Track with Stormwater Planters

Option B: Raised, Single Direction Cycle Track with Stormwater Planters

# Widen Sidewalks for nhanced Public Realm 3.5m Separated Cycle Track 0.5m Buffer with Parking Flexi-Bollards Restricted to south side 34 Ave

### **Option A**

Compass Consulting recommends upgrading the existing "Shared Lane" to a Bi-Direction Protected Cycle Track with Curbside Bioswales. Thereby providing a safe, comfortable space for cyclists to move east-west through the community, as well as into the growing commercial main streets.



This option replaces a parking lane with the cycle track. Therefore reducing parking along 34 Avenue (one lane permitted on the opposite side of the street from the cycle track) and gaining multi-modal access into the commercial area. Bioswales will replace the existing grass buffers along most of the avenue, providing functional greenstreets. Additionally Compass Consulting would recommend widening the sidewalks to 2m to enhance the walking experience.

### **Option B**

Compass Consulting would recommend to reduce the width of the street to include two lanes of travel and one parking lane. The 1.75m curbside stormwater planters act as protective buffers between vehicular traffic and cyclists using the Raised Cycle Track recommended in this option. This protects cyclists from being "doored" by parked cars as well as removing cyclists from the road, therefore expanding the network to include cycle routes for the "interested" and "reluctant" cyclists including children and those learning to cycle.

Option A: Bi-Direction Separated Cycle Track with Stormwater Planters, 34 Avenue SW

### 14 ST & 38 AVE INTERSECTION RECOMMENDATIONS



Traffic Circle: To improve intersection efficiency and facilitate traffic calming.





Existing 14 Street & 38 Avenue Intersection

### Recommendations

During a walking four and the community engagement workshop, it was noted that the intersection of 14 Street and 38 Avenue often gets backed up 14 Street, acting as a bottleneck to southbound traffic. Therefore, Compass Consulting has recommended the inclusion of a traffic circle at this location, to improve the flow of traffic in this area. Additionally, more prominent pedestrian intersections would also improve pedestrian safety. Finally, as noted in the missing sidewalks inventory, the sidewalk on the northern edge of River Park abruptly ends, despite River Park's frequent use as a running trail. Therefore, we recommend adding sidewalk to the missing areas, thus allowing for a safe and continuous network.

The bottom diagram demonstrated the possibility of integrating additional cycle infrastructure into the road network, either as a single direction or bi-directional painted lane. According to the Strava data in the current cycle network map, this intersection is highly trafficked by cyclists already despite the lack of any current cycle infrastructure. It's inclusion would encourage cyclist safety by eliminating the necessity to cycle in the vehicle driving lane.

### 29, 38 42, & 47 AVENUES, 16 & 20 STREET RECOMMENDATIONS



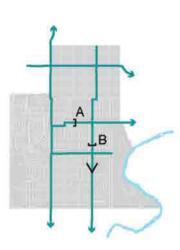
Option A: Raised, Single Direction Cycle Track

Option B: On-Road Cycle Track

# to Curb Width Widen Sidewalk 2m Single Direction Cycle Track 16 Street

### Recommendations

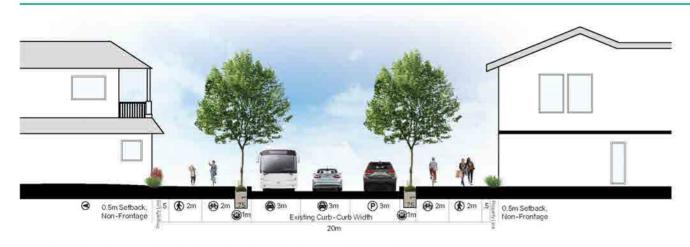
These roads connect the network through the community, therefore increasing the functionality of the cycling network in Marda Loop. Additionally, these routes connect Marda Loop community attractions, and commercial zones providing all categories of cyclists the choice of cycling as a functional modality within and through Marda Loop.



The Raised Single Direction Cycle Track expands the existing sidewalk to include a 2m cycle track with a 0.5m buffer. This allows space for road signage without impeding into the cycle space. This option uses the existing street width (curb to curb) and does not alter the existing traffic flows and parking allotments.

The On-Road Cycle Track option expands the existing street width (curb to curb) to include single direction cycle tracks on either side. To enable this format, parking is restricted to one side of the road. I this option Compass Consulting would also recommend to widen the sidewalks and plant street trees between as a buffer between the sidewalk and private property, enhancing the streetscape for all road users.

V Option B: On-Road Cycle Track, 16 Street in front of Rundle Academy and Alfadore School



Option C: Raised Cycle Track with Curbside Bioswales



Option D: Bi-Direction, Separated Cycle Track with Curbside Bioswales



## Recommendations

The Raised Cycle Track option takes the cyclist off the road and protects the cyclist and pedestrian from traffic by means of a 1m curbside bioswale buffer. This option uses the existing 9m curb to curb width, therefore allows for the existing traffic flows and parking allotments. Option C, depicts a scenario of reduced parking, this allows for wider lane widths to easily accommodate buses.

Compass Consulting would recommend widening the sidewalks to 2m. Being beside the raised cycle track, the two designated areas are able to function as a multi-use path when necessary, allowing spillage between the two modalities to accommodate passing, conversational cycling in-line skating and other activities.

The Bi-Direction, Separated Cycle track, Option D, widens the existing road and reduces parking to one of side of the road. This option also includes curbside bioswales for functional purposes and improving the streetscape aesthetic for all road users.

Both options C and D, expands the cycling network to provide functional infrastructure for all types of cyclists therefore increasing inclusivity of the network and encouraging cycling in Marda Loop.

Option C: Raised Cycle Track, Vancouver BC (pedbikeimages.org - Carl Sundstrom)

1D

## **TRAILS & 14A STREET RECOMMENDATIONS**





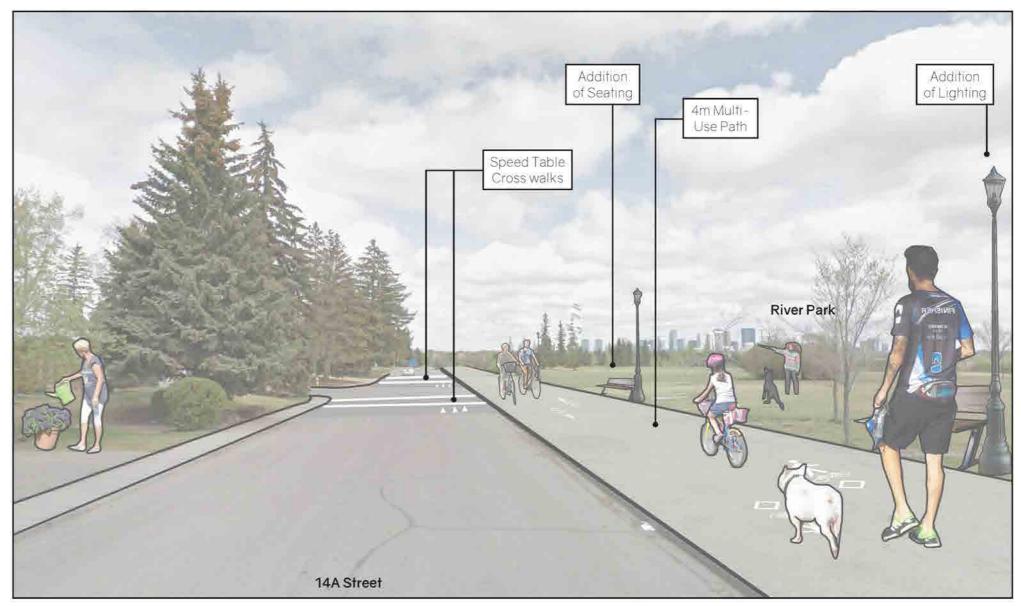
14A Street: Multi-Use Pathway

## Recommendations

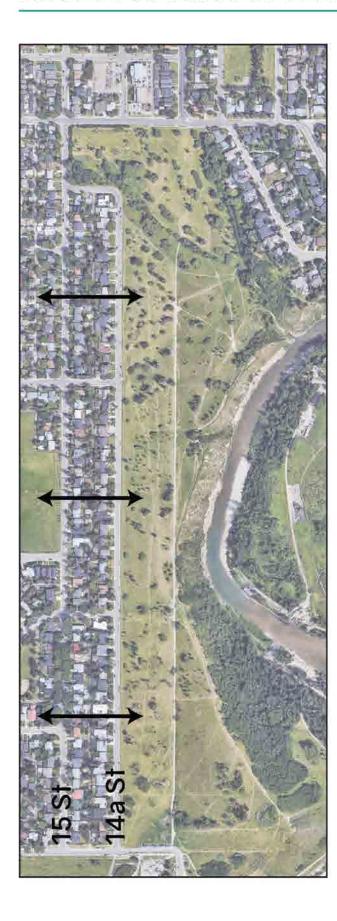
Compass Consulting recommends that all multi-use pathways and trails be expanded to 4m in width. This allows for a comfortable passing width for all modalities, including people walking with strollers or pulling trailers, and wider bicycles such as bike-trailers or cargo bikes. This width also allows space for cyclist, runner and pedestrian maneuvering around other pathway users erratic movement, including those with children or animals.

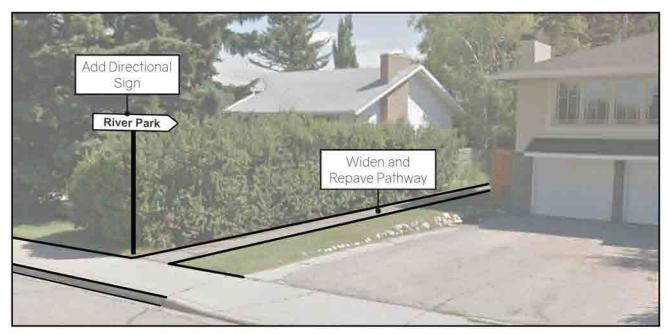
14A Street is a highly used cyclist road, currently designated as a "shared street." Compass Consulting recommends the intervention of the implementation of a woonerf along this road. This would include raised speed table cross walks at every corner, to enhance the walking accessibility to River Park. The speed table format physically reduces the speed of drivers along the road as well, making it a safer place for all road users including dogs.

Additionally, the park does not have a sidewalk and exhibits evidence of use via a dirt path, therefore, Compass Consulting recommends constructing a 4 m multi-use path along the park edge. This will take cyclists off the road if they choose and provide walking and running space along the park edge next to the existing parking.

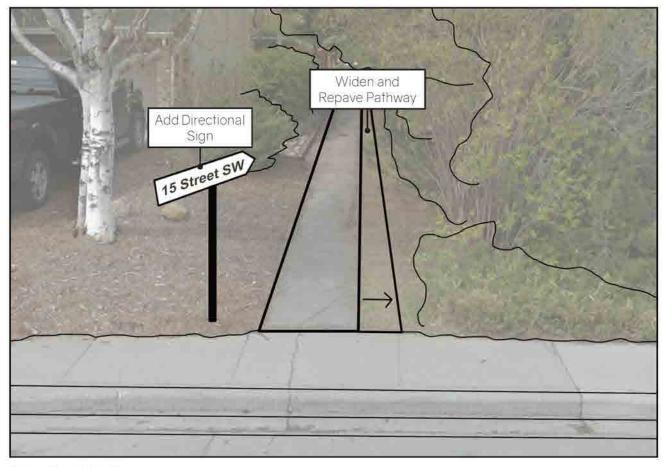


## **RIVER PARK ACCESS WALKWAYS**





River Park Walkway Improvement



River Park Walkway Improvement

## Recommendations

River Park is a highly used area along the Elbow River. It is utilized by both Marda Loop residents within walking distance as well as visitors from a wider area traveling by bike or car. When it comes to pedestrian access however, the parks western edge is flanked by three particularly long blocks, reducing the number of access points. Within these long blocks there are currently three narrow walkways for improving access, however, most of these are currently so narrow and overgrown by vegetation that their existence would be difficult to identify without prior knowledge. Especially, as several appear to be walkways into private yards. In addition, even with knowledge of their locations, the paths are narrow, uneven and unlit, thereby discouraging their use.

In order to take back these access points, Compass Consulting recommends re-paving and widening these paths and trimming away any vegetation obstructing their path. In addition, a small directional sign indicating the pathways public accessibility and destination would draw attention to their existence for public use. In this way, one of Marda Loops greatest amenities, River Park, can be more accessible to all.

# PEDESTRIAN IMPROVEMENTS ADJACENT TO SCHOOLS AND PARKS



Community Park: Pedestrian Safety Improvements

Lycee Louis Pasteur: Pedestrian Safety Improvements













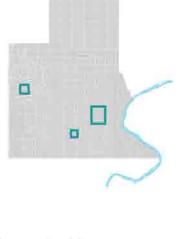
Although the pedestrian environment is important everywhere, for all road users, safety measures are particularly important in areas that are frequented by kids.

Compass Consulting recommends prioritizing pedestrian improvements for areas around school and park sites. Based on the sidewalk inventory map this also appears to be the area where sidewalks are most often missing.

Interventions such as sidewalks, walkways, crosswalks, raised crosswalks, and signage can make a big impact on safety. In addition, referring back to the institutional walksheds map, it is clear that large school sites often act as a barrier to walkability and could benefit from opening up the large open fields to cut through pedestrian traffic. The walkway demonstrated at Altadore school would greatly reduce the walking distance for school children who live East of this site, as well as reduce the amount of time they walk along the road.

This recommendation for a walkway and better access to River Park for Alfadore School & Rundle Academy could also be paired with the outdoor classroom park programming recommendation made earlier.





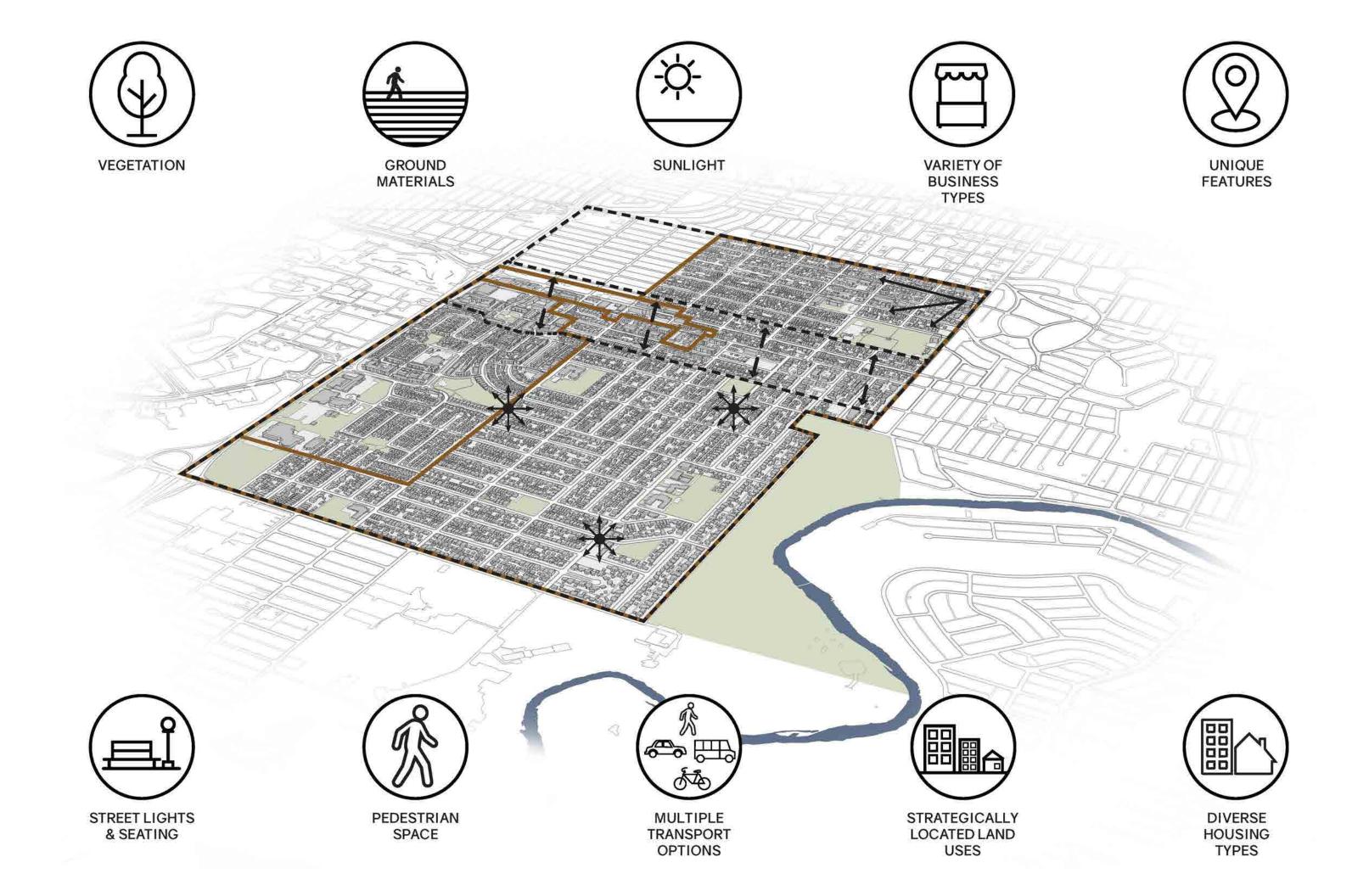




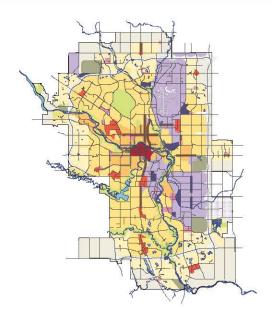


## **OPPORTUNITIES...**

- To maintain vibrancy of Marda Loop by phasing and strategically locating land use changes.
- 2. To strategically arrange density to capitalize on commercial hubs, public transit, active transportation routes and other amenities.
- To improve affordability and achieve density goals through moderate changes adding to the missing middle
- 4. To create densification guidelines at the block level to improve the public realm on all streets and avenues.
- To create contextual built form guidelines for slope adaptive designs and roof styles to reduce the negative impacts of height difference and infill development.
- To encourage sensitive densification through the integration of laneway housing.
- To acknowledge the value of character homes and historical architectural styles, through preservation and modern interpretations.



## **LOCAL AREA POLICIES**



## **Municipal Development Plan**

The MDP sets a sixty year strategy for the kind of city Calgarians want, including a more compact city, attractive communities and streets, more travel choices, convenient affordable and accessible travel, and reliable mobility for private and commercial vehicles.

The Municipal Development Plan (MDP) is a statutory policy mandated by the Municipal Government Act, and should be in alignment with the South Saskatchewan Regional Plan, Calgary Metropolitan Plan and Local Intermunicipal Development Plans. It is a document that provides a vision and strategic framework for how Calgary should develop in the future.

It outlines six broad goals and objectives:

- Creating a prosperous economy;
- · Shaping a compact urban form;
- Great communities;
- Good urban design;
- · Connecting the city; and
- · Greening the city.

Although this initiative will not be a formal Area Redevelopment Plan (a statutory plan that must comply with the MDP), it is important to ensure that all design recommendations are in alignment with the City's vision, thus ensuring it's implementation feasibility.

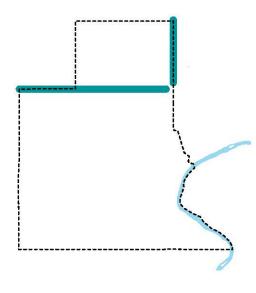


## **Developed Areas Guidebook**

"The Developed Areas Guidebook sets out land use frameworks and common policies to guide growth and change for developed areas in Calgary. Work on the Developed Areas Guidebook began in January 2016, in partnership with the new mixed-use districts and the Green Line and Main Streets community planning teams. City Council adopted the guidebook on April 10, 2017.

The Developed Areas Guidebook is part of Volume 2 of the Municipal Development Plan (MDP) and provides consistency in the local area planning process. It is one of two guidebooks for the Calgary areas that already have established neighbourhoods; the second is the Centre City Guidebook, specific to the communities in the Centre City neighbourhoods and downtown core. The Developed Areas Guidebook is intended to be read in combination with a Local Area Plan."

Marda Loop is within the area considered developed and therefore it's principles should be applied in this area.



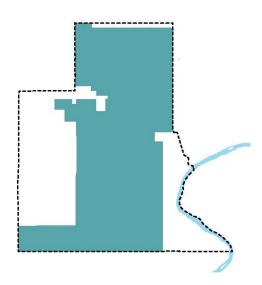
#### **Main Streets Initiative**

The City of Calgary Main Streets Project is a long term initiative to manage the growing population of Calgary through redesign of 24 main streets across the city. "Working closely with Calgarians, main street users, businesses, residents and development experts, The City's Main Streets initiative has been analyzing local needs, along with economic research, to identify success criteria for future growth in these areas" In general, the main street plans intend to incorporate multi-modal transportation and increased residential and commercial density along these corridors.

33rd Avenue SW has been identified as a main street and is currently in the public engagement stage with the City of Calgary. Changes to the planning policy in the area is expected soon.

14th Street SW has also been identified as a main street however, is likely scheduled for planning and implementation following 33 Ave, therefore little information is currently available for the future of this area.

The main streets findings maps were utilized by Compass Consulting to supplement public engagement for these areas.



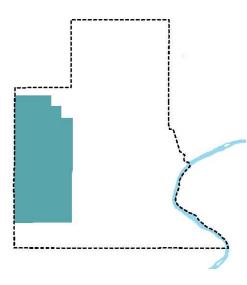
## South Calgary / Altadore Area Redevelopment Plan

The South Calgary / Altadore ARP was most recently updated in July, 2017. However, since it's approval by City Council in September of 1986, the most significant changes the document has seen is the replacement of "Map 2," the land use map. Therefore, the South Calgary / Altadore Area Redevelopment Plan (ARP) is, for the most part, outdated and is in need of a more thorough reassessment. The current goals of the ARP are to implement the policies of the Calgary General Municipal Plan and the Inner City Plan, both obsolete documents.

## The goals are to:

- Promote the preservation and rehabilitation of existing lowdensity accommodation;
- Encourage redevelopment to provide for a variety of housing needs;
- Promote commercial activity that is compatible with community needs; and
- Optimize the quality and type of recreational and open space facilities in the community.

This ARP is in dire need of updating, however, provides an interesting resource to review which aspects of the plan have come to fruition and how.



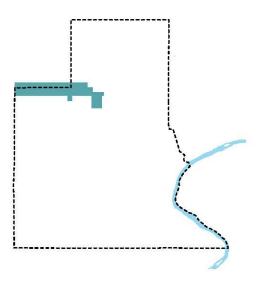
## **Garrison Woods - CFB East Community Plan**

The area currently known as Garrison Woods, within the community of Altadore, was developed according to the guidelines outlined in the April 1998 CFB East Community Plan. Although not a statutory plan, comparisons between the community design in this document, and what exists today, are relatively consistent.

The wider area was originally utilized as a Canadian Forces Base (CFB), the eastern side of which provided family residential or the private married quarters (PMQ's) for military personnel. Therefore, at its peak population of approximately 2700, the area was comprised of predominantly young families. However, after the closing of the base, the population steadily declined, eventually prompting its redevelopment as outlined in this community plan.

Presently the area is fully built out and clearly demonstrates a design inspired by new urbanism. Additionally, the military history is clearly acknowledged through the street and park names, public monuments and preservation of some existing military homes and the Military Museum.

The Garrison Woods area (completed in 2004) is newer than the surrounding Altadore and South Calgary, and therefore is not subject to as many infill and redevelopment pressures. However, acknowledgment of this plan will be important moving forward in understanding the goals and objectives of the original plan and comparing with current circumstances, giving an indication of future recommendation feasibility.



## Marda Loop Area Redevelopment Plan

Approved by City Council in March of 2014, the Marda Loop Area Redevelopment Plan focuses on creating a guiding framework for the redevelopment of the 33rd Avenue SW and the north side of 34th Avenue SW. The Marda Loop area has been experiencing considerable development pressure and the Marda Loop Area Redevelopment Plan (ARP) was created in response to guide development to respect and enhance the character of the community while contributing positively to the community as a whole. With a future-oriented 25-30 year horizon, the ARP envisions Marda Loop to become a human-scaled, vibrant, mixed-use destination for both visitors and residents. "A desirable place for people to live, work and play."

The ARP emphasizes six quiding principles:

Community Character

Livability

Mixed-Use

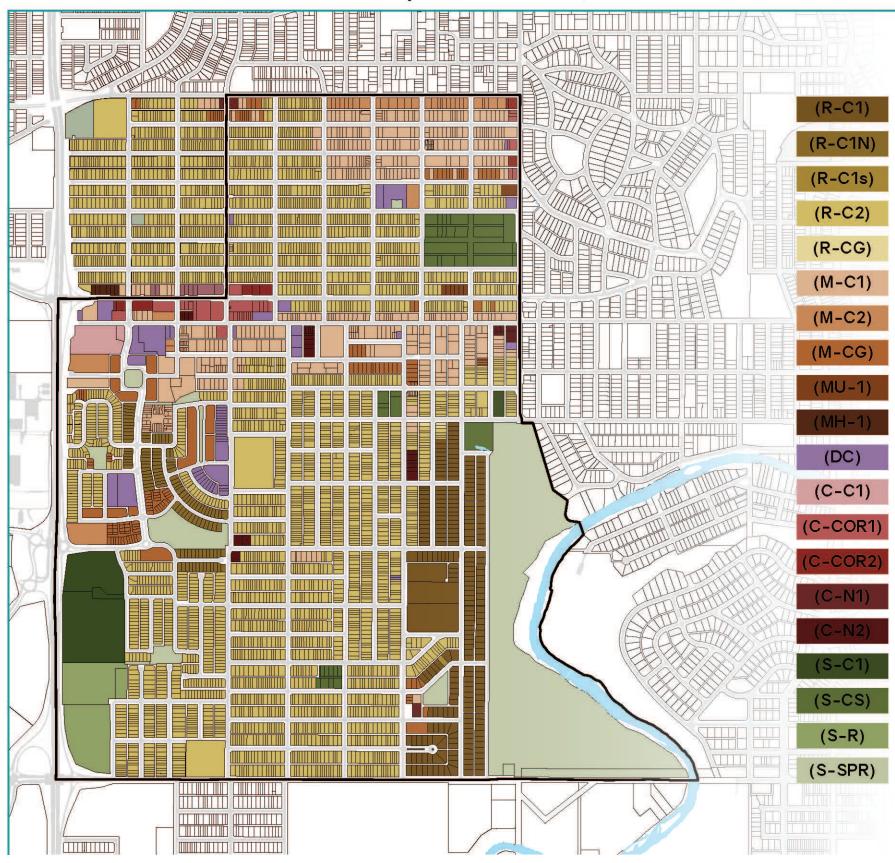
Walkability

Streetscape Design

Street Fronting Buildings.

These six guiding principles compliment the vision and work together to maintain the character of the community, while promoting a moderate increase in density and incorporating a variety of uses into the community.

## **ANALYSIS OF LAND USE, ZONING & BUILDING TYPES**



## Land Use and Zoning

This maps demonstrates the current land use zoning (as of January 2018), according to bylaw 1P2007. The land use bylaw is the most specific level of regulation applied to a parcel and is legally binding. There are specifications for both the use allowed on the lot as well as some specifications for the built form. Although quite specific there is some variation and overlap in each bylaw and thus some uncertainty still remains as to what building type and use will be applied to a parcel with a given land use. For example, some concerns were raised from community members about the R-CG designation, which can accommodate multiple building types and is therefore uncertain to local residents what will be built after the land use designation is amended.

The land use bylaw should also comply with higher level ASP and ARP policies, and reflect the community organization outlined there. For example, "low density" areas are primarily residential districts and "medium density" primarily multiresidential districts. The following analysis was utilized by Compass Consulting to get a sense of the built form organization and styles that currently exist, in order to better plan for it's future.

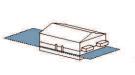
2017	Dwellings per building	Buildings	Dwellings	Population
SF	1 - 2	2,338	2,416	6,136
DUP	2 - 4	638	1,106	2,630
TWN	3+	97	1,071	2,023
MF	4+	252	2,022	2,689

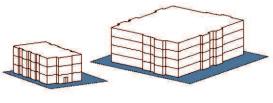


Direct Control











#### SINGLE FAMILY DWELLING **DUPLEX** & W. SECONDARY SUITES SEMI-DETACHED TOWN/ROW HOUSE

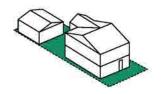
**FOURPLEX** 

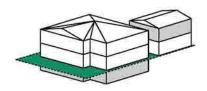
**LOW-RISE MULTI-FAMILY** 

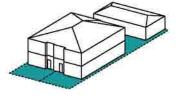
70-40-			
		_	

# **ANALYSIS OF LAND USE, ZONING & BUILDING TYPES**











SINGLE FAMILY DWELLING

W. SECONDARY SUITES

**DUPLEX & SEMI-DETACHED** 

TOWN/ROW HOUSE























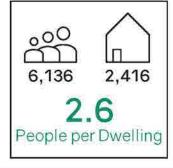












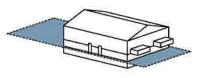


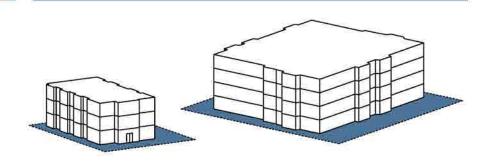


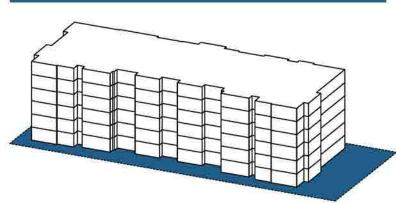












## **FOURPLEX**

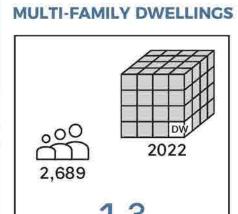


## MID-RISE MULTI-FAMILY









People per Dwelling





















Proposed

Developments

## **ANALYSIS OF LAND USE, ZONING & BUILDING TYPES**

## (R-C1) Contextual One Dwelling

R-C1 is a residential designation in developed areas that is primarily for single detached homes.

# (R-C1N) Contextual Narrow Parcel One Dwelling

R-1N is a residential designation in developing areas that is primarily for single detached homes on narrow or small parcels where homes may include a secondary suite.

## (R-C1s) Contextual One Dwelling (suite)

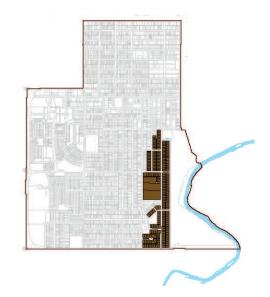
R-C1s is a residential designation in developed areas that is primarily for single detached homes that may include a secondary suite.

## (R-C2) Contextual One / Two Dwelling

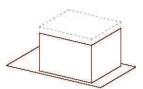
R-C2 is a residential designation in developed areas that is primarily for single detached, sideby-side and duplex homes. Single detached homes may include a secondary suite.

## (R-CG) Grade Oriented Infill

R-CG is a residential designation that is primarily for rowhouses but also allows for single detached, side-by-side and duplex homes that may include a secondary suite.

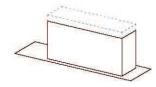


## Maximum Height: 10m

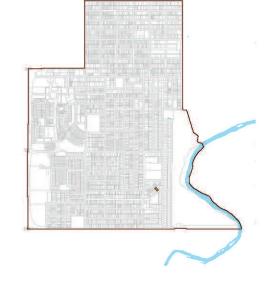


The greater of 8.6m or the contextual height plus 1.5m to max of 10m.

#### Maximum Height: 10m

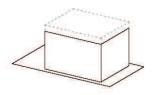


The greater of 8.6m or the contextual height plus 1.5m to max of 10m.



Maximum Height: 10m

Minimum Parcel Area: 330m<sup>2</sup>



Minimum Depth: 22m

The greater of 8.6m or the contextual height plus 1.5m to max of 10m.

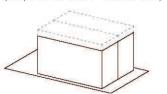


#### Maximum Height: 10m

The greater of 8.6m or the contextual height plus 1.5m to max of 10m.

(single detached)

(duplex or semi-detached)



Min Parcel Area: 233m<sup>2</sup> Min Parcel Area: 400m<sup>2</sup>

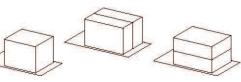


Minimum Width: 12m Minimum Width: 15m

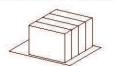


Min Width: 7.5m Min Width: 13m Min Width: 18 m (w/o suite)

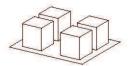




## Maximum Height: 11m (rowhouse/townhouse)



Maximum Height: 8.6m (cottage dwelling)



Parcel specifications are dependent on the dwelling type

## Minimum Parcel Area: 330m<sup>2</sup>



Minimum Width: 12m Minimum Width: 15m



Minimum Depth: 3

Minimum Parcel Area: 233m<sup>2</sup>

Minimum Width: 7.5m (w/o suite) Minimum Width: 9m (w. suite) Maximum Width: 11.6m

Min Width: 9m (w. suite)

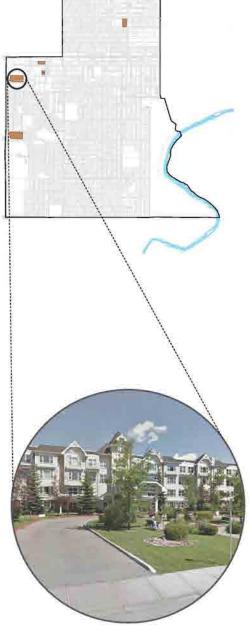
## (M-C1) Contextual Low Profile

M-C1 is a multi-residential designation in the developed area that is primarily for 3 to 4 storey apartment buildings and townhouses.

Maximum Height: 14m
Maximum Density (d#): 148 units/ha

## (M-C2) Contextual Medium Profile

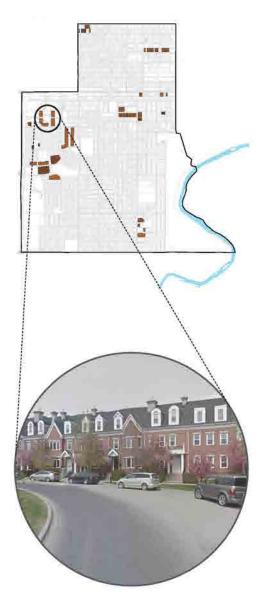
M-C2 is a multi-residential designation in the developed area that is primarily for 3 to 5 storey apartment buildings.



Maximum Height: 16m Maximum Density (d#): n/a Maximum Density (f#): 2.5 FAR

## (M-CG) Contextual Grade Oriented

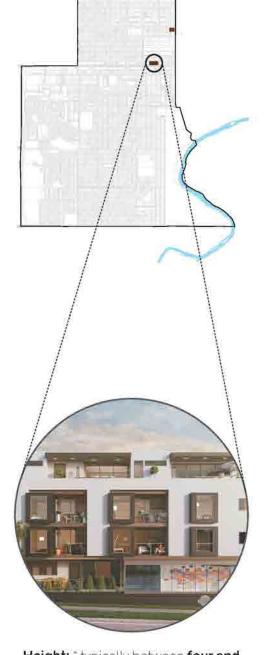
M-CG is a multi-residential designation in the developed area that is primarily for townhouses and fourplexes.



Maximum Height: 12m Maximum Density (d#): 111 units/ha

## (MU-1) Mixed Lise - General

The MU-1 district is for commercial and residential uses in street-oriented buildings. The district allows both commercial and residential uses at street level.



Height: "typically between four and six storeys in height and generally not exceeding ten storeys"

## (DC) Direct Control

A Direct Control (DC) is a customized land use designation. It has a list of allowable uses and a set of rules specific to a particular property or development. Most DC designations include a cross-reference to the rules of one of the standard designations of the Land Use Bylaw (e.g. R-1, R-2, I-G, etc.).

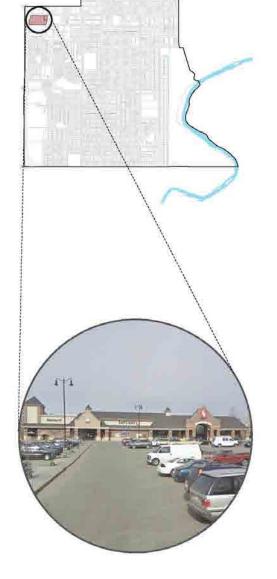


Direct Control	Based On:	Bylaw
DC17Z2006	RM-4	2P80
DC27D2009	MC-1	1P2007
DC18D2013	SP	1P2007
DC22D2016	M-CG	1P2007
DC211D2017	R-C2	1P2007
DC124Z87	RM-4	2P80
DC12Z2005	RM-5	2P80
DC2D2012	C-COR1	1P2007
DC120D2014	C-COR1	1P2007
DC110Z99	RM-5	2P80
DC26Z2008	RM-4	2P80
DC60Z2003	C-1	2P80
DC93Z98	RM-1	2P80
DC36D2012	C-N1	1P2007
DC83D2010	C-COR1	1P2007
DC148Z86	RM-4	2P80
DC40Z85	C-1	2P80
DC123Z2000	RM-1	2P80
DC101Z2001	RM-5	2P80
DC33Z98	RM-5	2P80
DC165Z81 Ma	R-2 rda Loop Rein	2P80 nagined

# **ANALYSIS OF LAND USE, ZONING & BUILDING TYPES**

## (C-C1) Comments

C-C1 is a community commercial designation that is typically for 1 to 2 storey commercial strip malls that primarily serve the immediate surrounding area



## (C-COR1) Commercial Corridor 1

C-COR1 is a commercial corridor designation that is primarily for commercial or mixed use development that must include commercial storefronts. Buildings may vary in height. Residential units are allowed on upper floors.

that is primarily for commercial or mixed use development of varied height. Residential units are allowed on upper floors of buildings.

# (C-COR2) Commercial - Corridor 2

C-COR2 is a commercial corridor designation

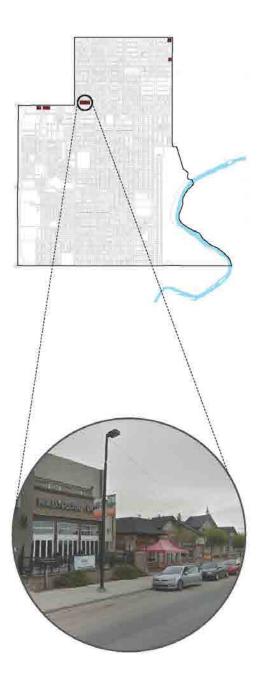
## (C-N1) Commercial - Neighbourhood 1

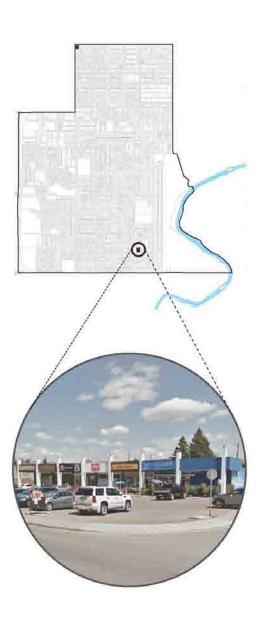
C-N1 is a neighbourhood commercial designation that is primarily for small commercial uses in 1 to 2 storey buildings.

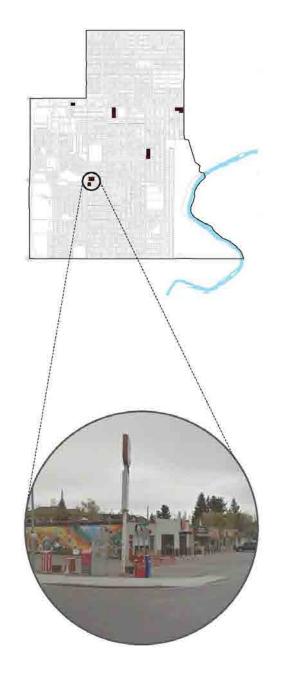
## (C-N2) Commercial - Neighbourhood 2

C-N2 is a neighbourhood commercial designation that is primarily for small commercial uses in 1 to 2 storey buildings; accessible by motor vehicle.









## (S-CI) Community Institution

## (S-CS) Community Service

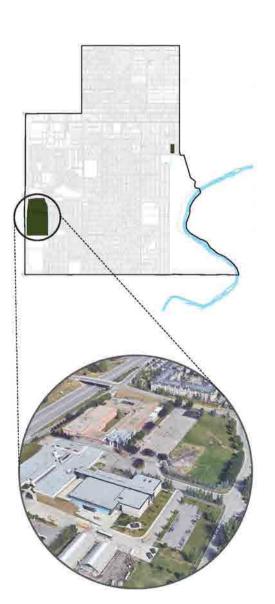
The S-CI designation is primarily for large scale culture, worship, education, health and treatment facilities.

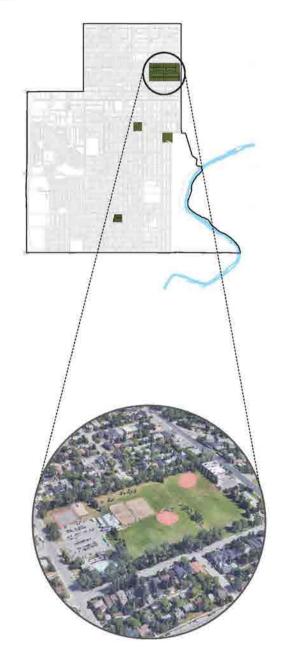
The S-CS designation is for education and community uses. It accommodates a limited range of small scale public recreation facilities, both indoor and outdoor, on land not designated reserve land under the Municipal Government

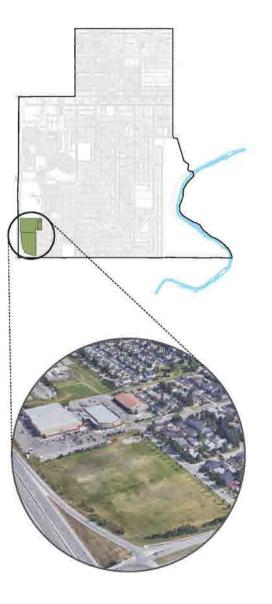
## (S-R) Recreation

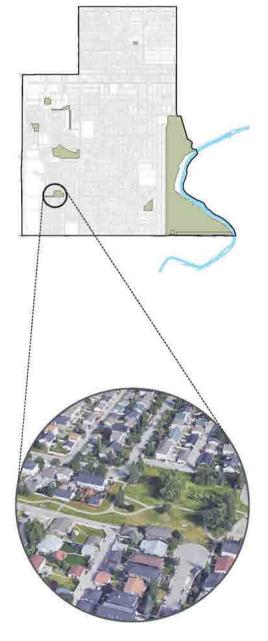
The S-R designation is primarily for private recreation facilities, both indoor and outdoor.

The S-SPR designation is for public parks, open space, schools and recreation facilities on land designated as 'reserve land' under the Municipal Government Act.



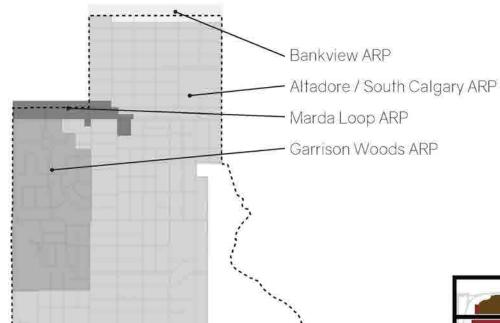






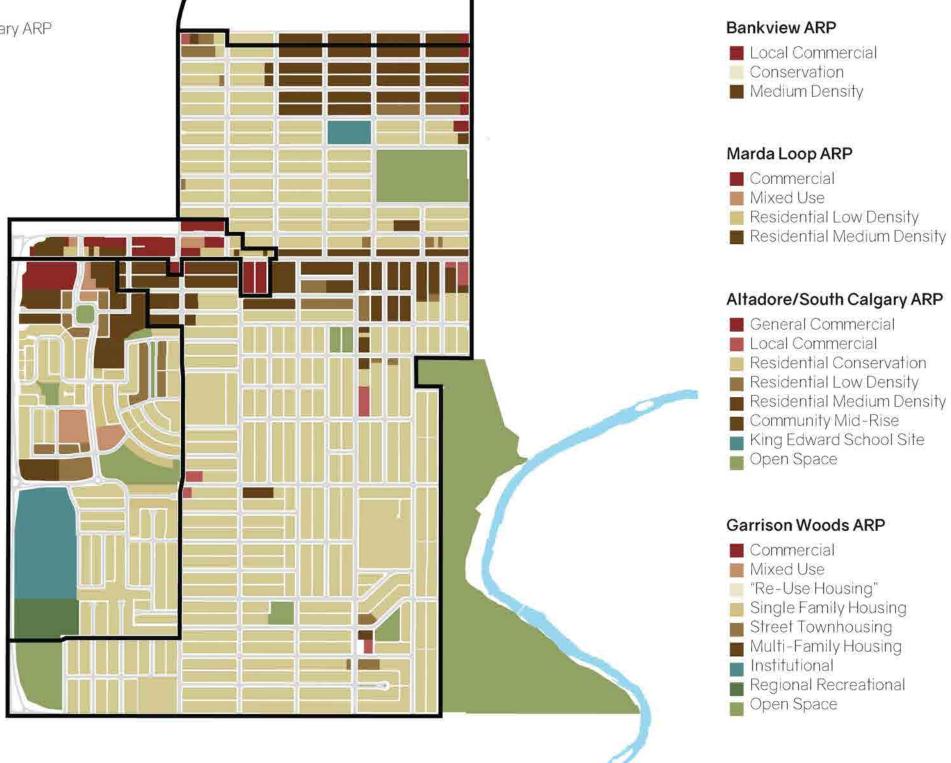
All photos saved from Google Earth Pro

## LAND USE RECOMMENDATIONS



## Planning Policy in Marda Loop

Presently the planning policy in Marda Loop is composed of four separate Area Redevelopment Plans. The Altadore / South Calgary ARP covers the majority of the community and encompasses a mix of single family, multi-family and community commercial land uses. The Garrison Woods, or CFB East Area Redevelopment Plan, was established in 1998 when the area, previously under military ownership was developed. Most buildings in this area were constructed in the early 2000s and demonstrate New Urbanist principles that are often sourced as best practice precedents in Calgary planning documents. Finally, the Marda Loop ARP was written in 2014 and most recently updated in 2017, and was an attempt to focus development strategies on this highly utilized commercial area. Strategies focus not only on development patterns, but also specific recommendations for the public realm.

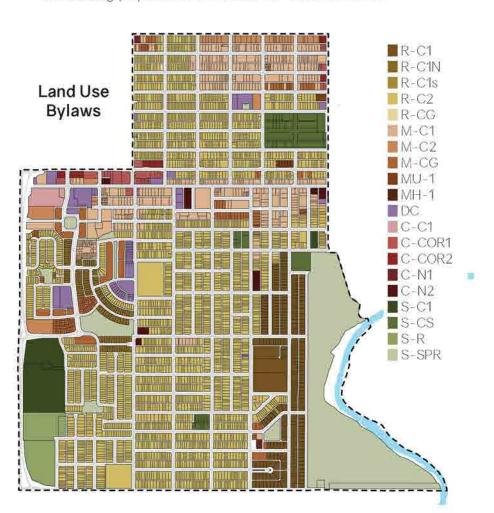


#### Goal

To maintain vibrancy of Marda Loop by phasing and strategically locating land use changes.

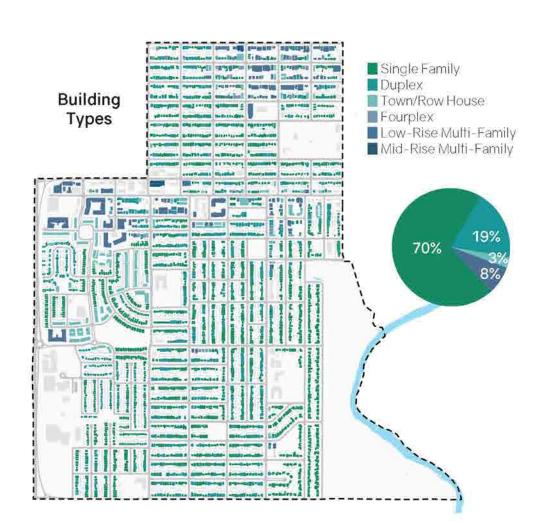
#### **Observations & What We Heard**

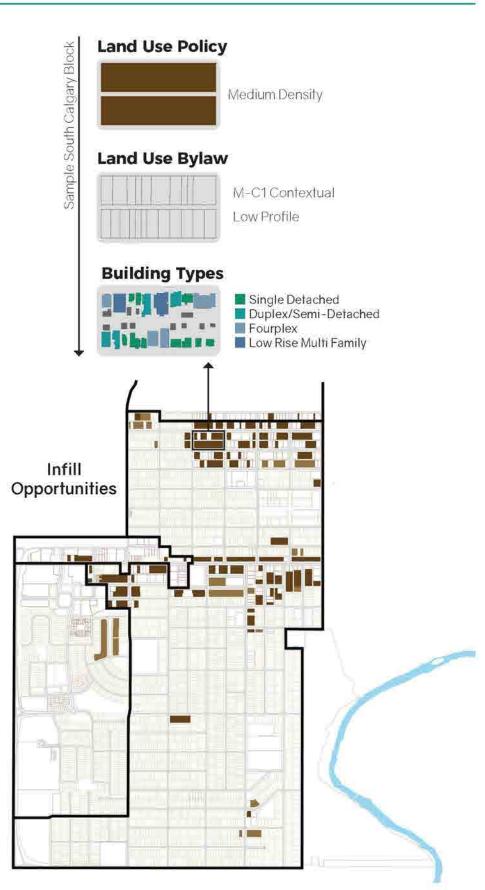
The current Area Redevelopment Plans, land use bylaw map, and building type map were compared to locate areas where there is capacity within the existing policy to increase density. This analysis indicated that there are several locations within the planning area that currently have a building type with lower density than allowable. For example, the block sample to the right shows single family homes and duplexes in a "Residential Medium Density" zone, which could support multi-family developments. Therefore, at this time, the community has the capacity to support an increasing population without ARP amendments.



## Recommendations

In order to maximize the vibrancy of the area, development should fill in the gaps of the existing urban fabric before spreading to wider areas, that are not currently supported by sufficient demand or infrastructure. Also, to avoid new medium density development spreading out to single family areas prematurely, as already seen in a few locations, we recommend filling in the current ARP areas to their capacity as much as possible, in conjunction with the updated policy recommendations.





## LAND USE RECOMMENDATIONS

#### Goals

- 1. To strategically arrange density to capitalize on commercial hubs, public transit, active transportation routes and other amenities.
- 2. To improve affordability and achieve density goals through moderate changes adding to the missing middle.
- 3. All development sites should provide short, direct and convenient multi-modal connections to local neighbourhood services and amenities.

#### Observations & What We Heard

Observations of recent changes in the area combined with feedback from community members indicated several trends occurring in infill development that are undesirable. First were several comments expressing concern about the

shadowing impacts of new multi-family buildings along 33 Avenue particularly when adjacent to single family homes. Second were some mixed concerns regarding the R-CG land use designation and particularly the uncertainty that it presents in single family areas. Finally, were general concerns about the increasing population with respect to capacity on local services, amenities and parking.

Despite the concerns raised, the area does demonstrate more of a diverse housing mix than other areas of Calgary and, due to it's inner city location and thriving commercial area, it is a neighbourhood that is attracting people and thus needs to plan for it. Land uses should be planned strategically around amenities and efficient transportation. Additionally, the housing mix and spread should encourage a diverse demographic and improved affordability, as rising single family home prices, and general affordability of the area is currently an issue.

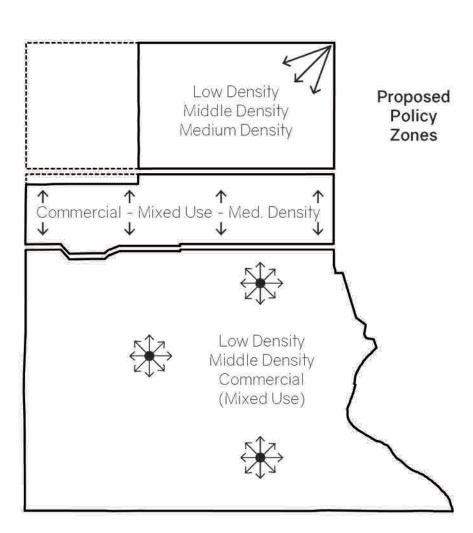
# Proposed Policy Updates

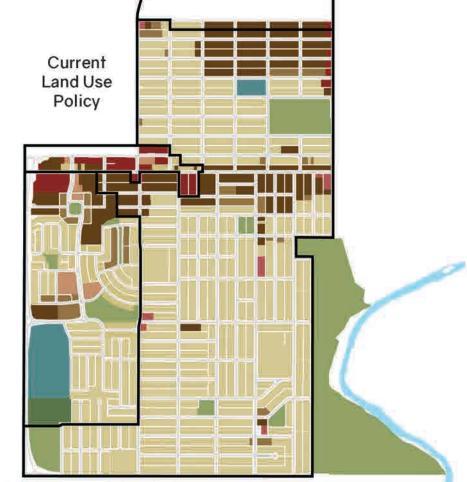
## Recommendations

Based on community engagement and population projections for the area, the recommendations explored by Compass Consulting were geared around sensitive densification, and adding diverse and affordable housing.

First, Compass Consulting recommends redefining the planning areas to regions with consistent strategy and not simply community boundaries.

The northern part of South Calgary transitions in density from east to west and has a great capacity to implement multifamily housing types in the area presently zoned for medium density. In addition the slope in this area, provides a great opportunity for slope adaptive multi-family designs. The commercial developments along 14 Street also provide an opportunity for low rise mixed use developments, due to the





north-south orientation and proximity to downtown.

The central region along the 33 Avenue main street is arranged in a transition both north to south away from the main street as well as West to East. North and South the, height and density should transition in massing down towards the adjacent single family areas. East and West, the capacity for both housing and commercial should fill in from the West end first before moving further east in order to maintain consistent vibrancy in the area.

Finally, the Southern portions of Altadore are maintained as predominantly low density with some growth around the community commercial hubs. These commercial areas have also been redefined as mixed use from community commercial to give the opportunity for redevelopment. In addition, the school sites in the area are presently designated R-2 to provide the opportunity for development should the school no longer be required. However, Compass Consulting believes that should the school sites ever be redeveloped there is a greater opportunity in creating a mixed use, medium density hub, and therefore the Dr.Oakley School site has been labeled as mixed use.

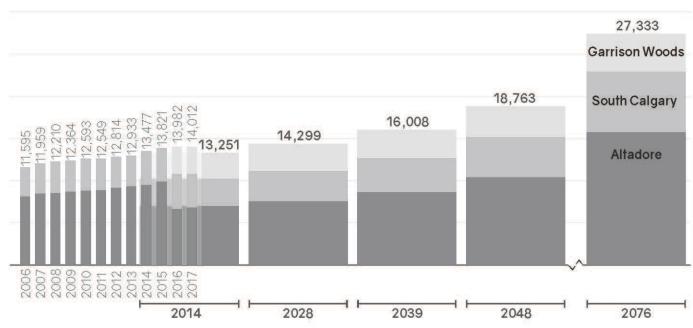
Throughout the community, the corner lots of each block have also been redefined as middle density. This adjustment is not to encourage the R-CG designation on the corners. but to encourage the rotating of the building frontage to create active edges on all streets and avenues. Along main collector streets such as 20 Street or 26 Street this may be in the form of fourplexes or townhomes, and on lower utilized streets between, may simply be duplexes that front in both directions.

Overall, the strategies utilized in composing this updated land use concept map were adding to the middle density to improve affordability, to transition between single and multi-family build forms and to more sensitively integrate an increased population into this area.



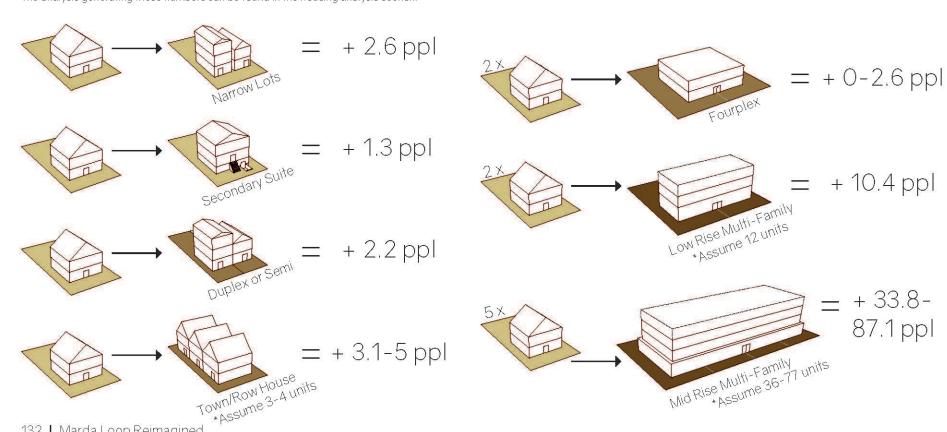
## LAND USE DESIGN GUIDELINES: HOUSING MIX

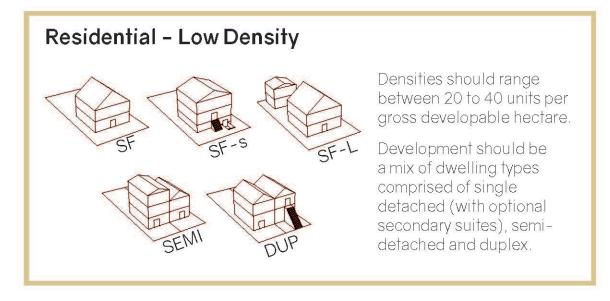
## **Population & Population Projections**

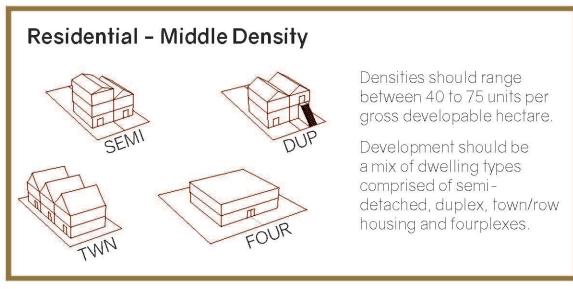


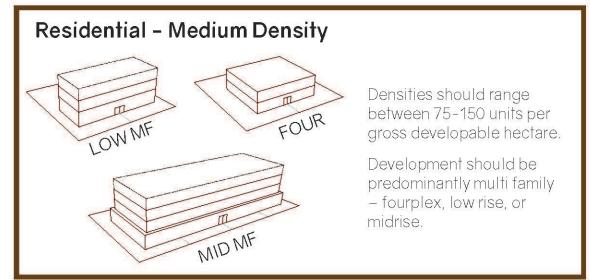
## **Population Changes of Infill Development**

Note: These estimates utilize assumptions for an average household size of 2.6 per single family home, 2.4 people per duplex unit, 1.9 people per townhome unit and 1.3 people per multi-family unit. The analysis generating these numbers can be found in the housing analysis section.









#### **Observations & Recommendations**

Comparing the recommended land use concept updates with the population projections for this area, and the buildings we know are coming in the near future, Compass Consulting believes that a sensitive design approach is sufficient to satisfy demand while maintaining the area character that residents are fond of today.

The population projections indicate a difference of 287 people from the 2017 population to 2028 projection, which will be easily reached with the construction of the four buildings to the right planned for the area in the next year or two. Which only represents a small portion of new construction currently occurring.

The additional 1709 people anticipated between 2028 and 2039 is the approximate population that Compass Consulting has planned for in the updated land use strategy. Given the uncertainty of the population, technology and development trends, Compass Consulting believes a 20 year long term planning strategy is appropriate, and should be reassessed at that time.

Peaks + Plains - RNDSQR - 20 Units (~38 ppl)



1623 - 48 AVE SW

## Coming Soon to Marda Loop...

Marda - Strategic Group - 66 Units (~86 ppl)



CoCo - Sarina Homes - 77 Units (~100 ppl)





Infinity - The SNR Group - 38 Units (~49 ppl)

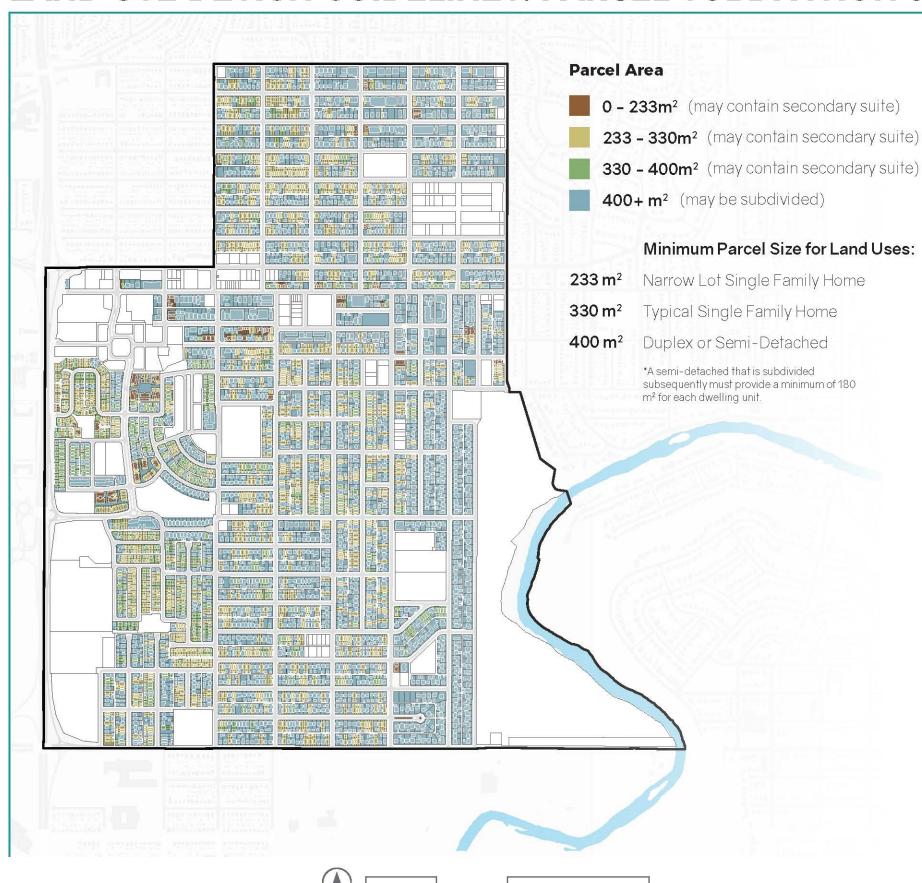


Avenue 33 - Sarina Homes - 36 Units (~47 ppl)



## LAND USE DESIGN GUIDELINES: PARCEL SUBDIVISION & CONSOLIDATION

1km



#### Goal

To create densification guidelines at the block level to improve the public realm on all streets and avenues.

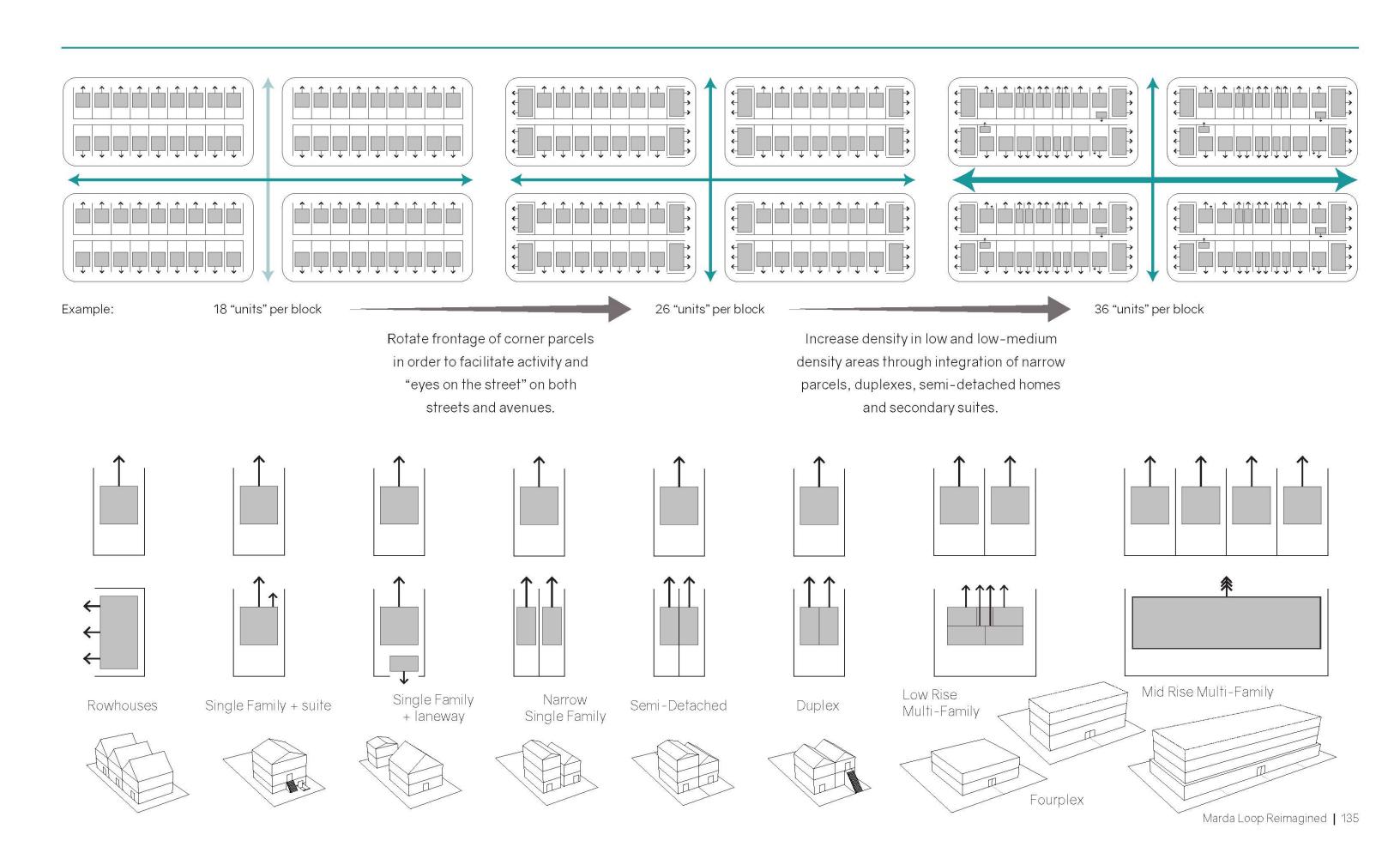
#### **Observations & What We Heard**

Infill and contextual redevelopment is a very site specific process and involves analysis of land use policies, land use bylaws and adjacent parcels. The sensitive densification guidelines outlined in the previous section are higher level guidelines and when moving down to the block level additional factors must be taken into consideration. For example, land use bylaw 1P2007 includes many land uses that specify a minimum parcel size. Therefore redevelopment must take into consideration whether parcel subdivision is possible or parcel consolidation is necessary.

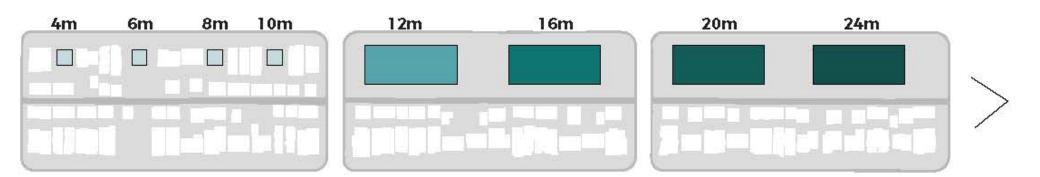
## Recommendations

Consistent with the goal to incorporate density in a sensitive manner, the following block level diagrams demonstrate how population can be increased with low and middle density housing types integrated into an originally single detached block.

The rotating of corner parcels is intended to integrate additional units on the typically larger parcel sizes, as well as encourage frontage on all streets and avenues. Although demonstrated as townhomes in the following diagram, this can also be achieved with duplex or fourplex designs that incorporate perpendicular entrances.

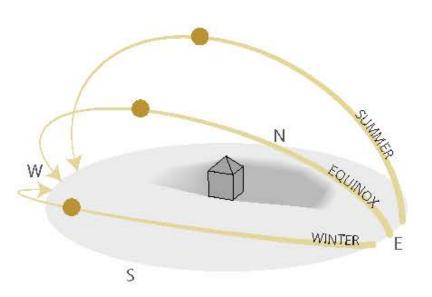


## LAND USE DESIGN GUIDELINES: MAXIMUM BUILDING HEIGHTS



Key Map for Sun & Shadow Diagrams





	Sunrise	Sunset	
March 21, 2018	7:36 am	7:51pm	
June 21, 2018	5:21 am	9:54 pm	
September 21, 2018	7:21 am	7:36 pm	
December 21, 2018	8:37 am	4:31 pm	

#### Goal

To specify built form height guidelines that encourage slope adaptive designs and transitional buildings heights to maximize sun exposure and viewsheds.

## **Observations & What We Heard**

The public engagement session revealed that many community member concerns surrounding new development were regarding the impact of building height and shadowing.

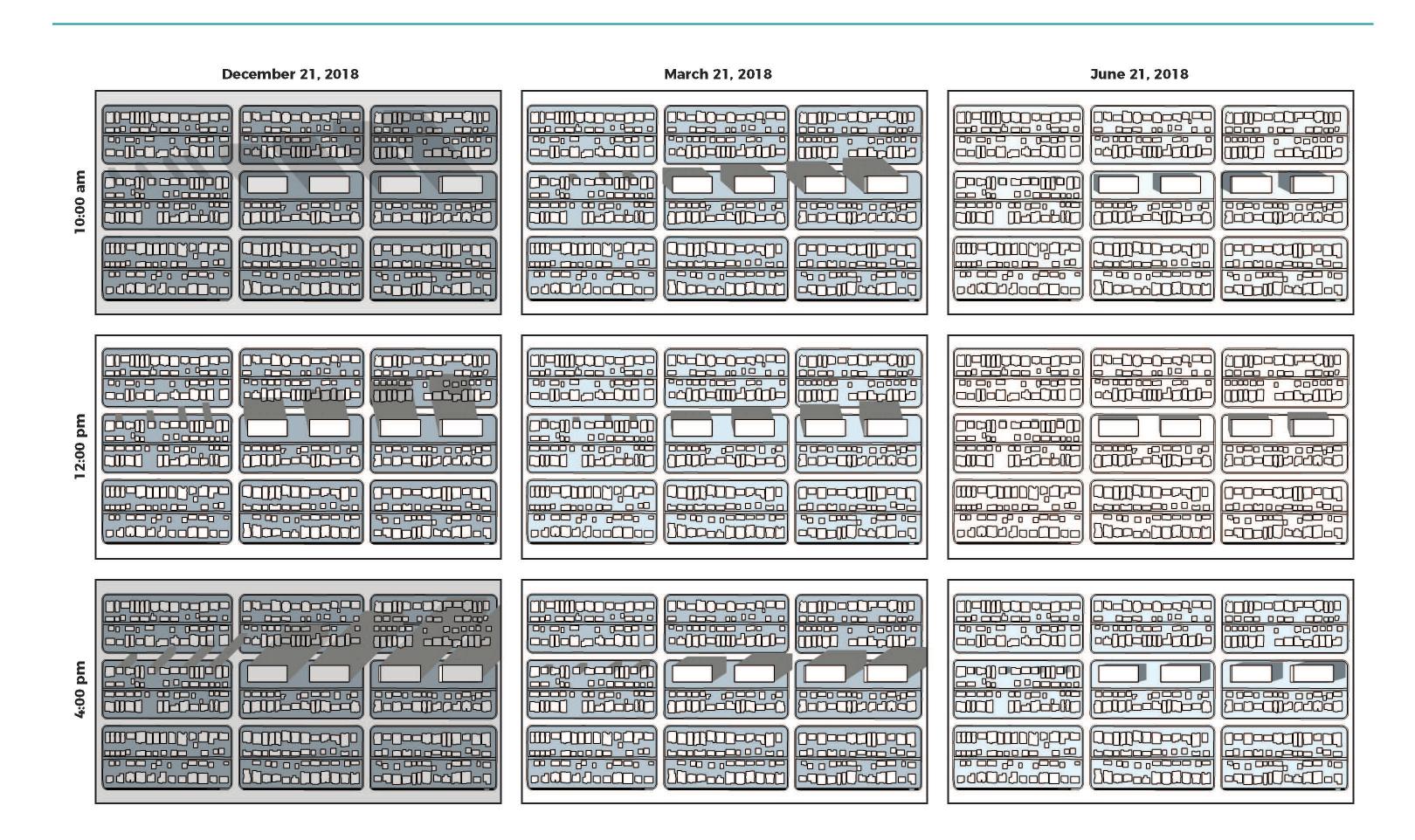
Previous policy documents have encouraged a maximum of four storeys in this area, but we are seeing a trend towards the inclusion of 6 storeys in the proposals for several new buildings in the area. Many residents were opposed to this height, citing that the one existing 6 storey building in the area felt imposing and they did not want to see more.

In addition, several concerns were raised regarding an upcoming four storey building directly adjacent to single family homes.

Maximum building heights are dictated by the land use bylaw with most residential and multi-residential land uses specifying a maximum height, while others denote a specific floor area ratio and maximum height (f# h#) at the time of designation. In reality many building heights do not actually reach their maximum heights, as demonstrated by the current building heights map to the left.

#### Recommendations

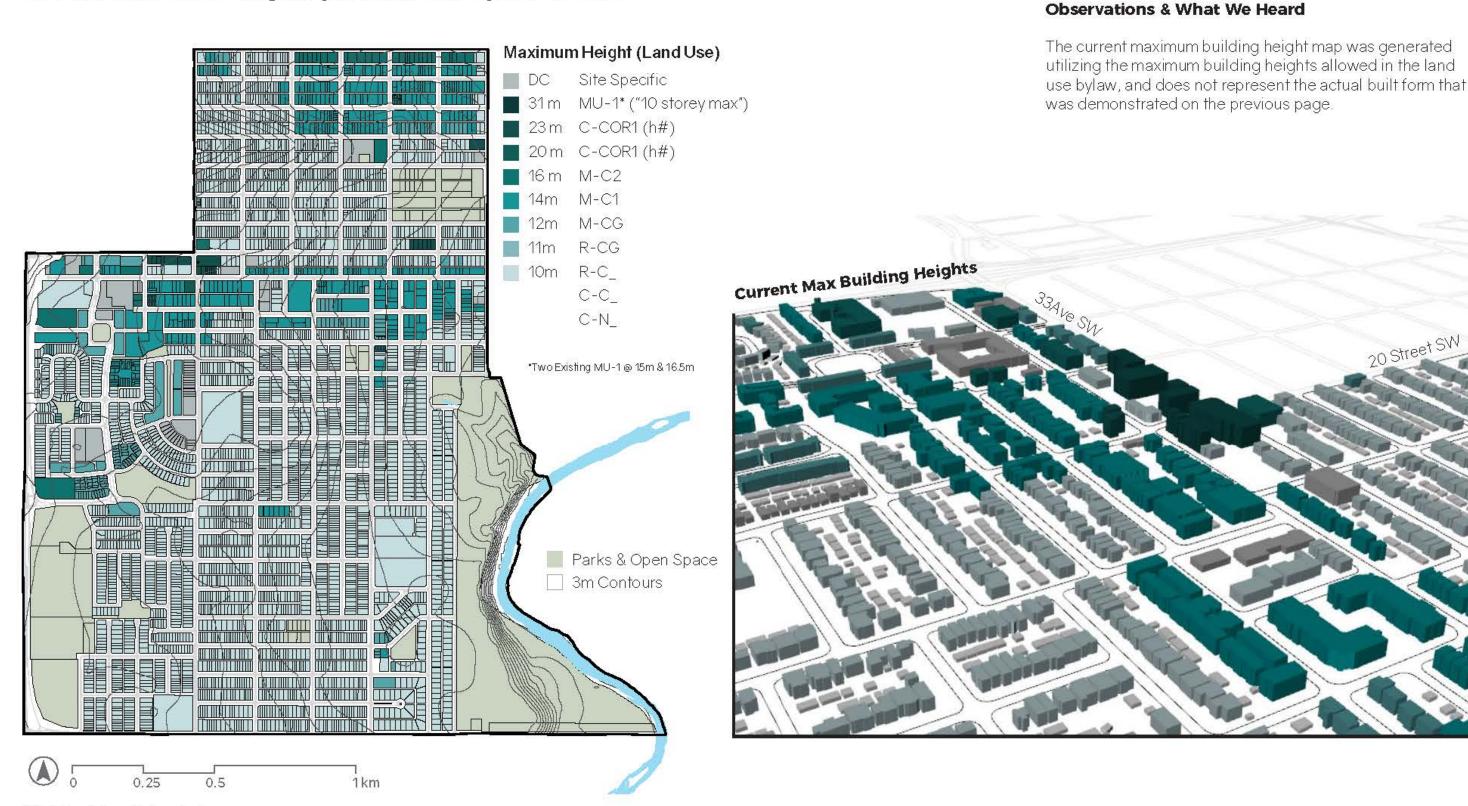
Based on the sun and shadow analysis to the right, and taking the bylaws and local policies into consideration, Compass Consulting recommends implementing the recommended maximum heights outlined on the "recommended maximum heights map". For the most part these heights correspond the the land use map and associated bylaws, however, utilizing a semi-form based code approach where the max height map and bylaws are both taken into consideration is recommended.



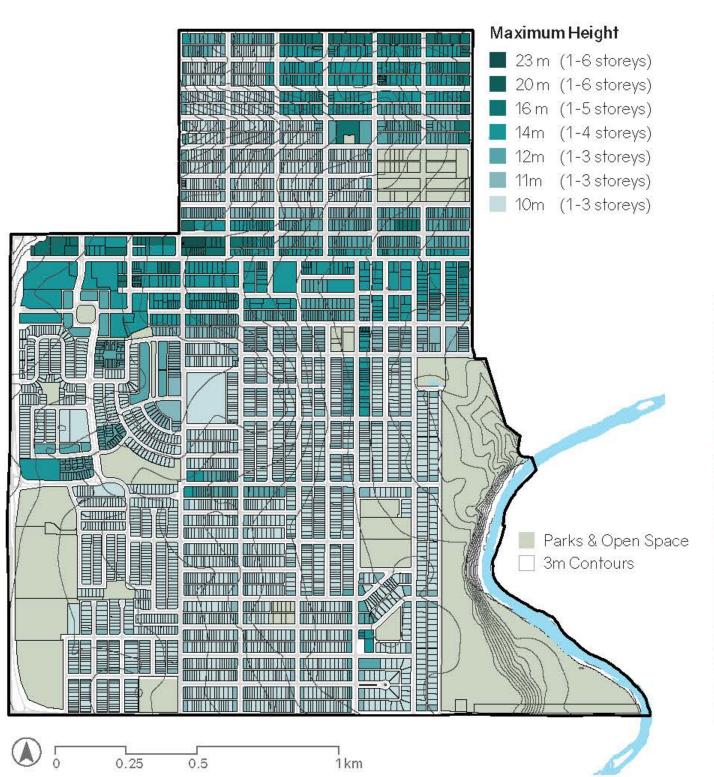
## LAND USE DESIGN GUIDELINES: MAXIMUM BUILDING HEIGHTS

## **Current Maximum Heights per Land Use Bylaw 1P2007**

138 | Marda Loop Reimagined



## **Recommended Maximum Heights**



## Recommendations

Due to feedback from the community, Compass Consulting has outlined a four storey maximum height in most medium density areas of the community with the exception of those already supporting taller buildings. Additional changes also incorporated a more gradual transition of heights from the main street mixed use and commercial buildings, down towards the single family homes.



## LAND USE DESIGN GUIDELINES: RESIDENTIAL BUILDING DESIGN

## Goal

To create built form guidelines that encourage thoughtful contextual designs for infills in this developed community.

## **Observations**

Marda Loop is considered a developed community and therefore all new development must consider the impact on and from the existing context. In addition, the context does not only encompass the built form but the people that reside there. The amount of change occuring in this dynamic community has made many residents uncomfortable with the prospect of neighbouring changes directly impacting the experience or value of their property. Some primary concerns we heard with respect to infill development were shadowing, privacy, parking and property values.

## Recommendations

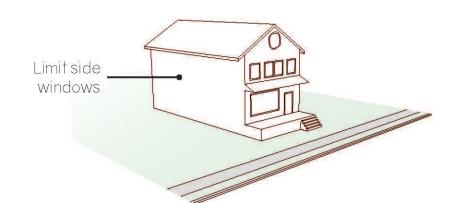
In order to address these concerns Compass Consulting has outlined several built form policies that encourage sensitive integration.

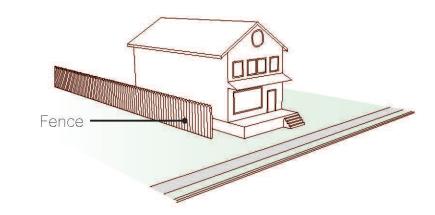
Developments should demonstrate contextual sensitivity by addressing:

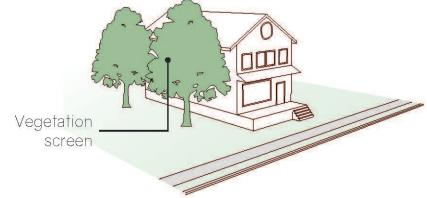
- Adjacent buildings;
- Adjacent setbacks;
- Parcel coverage;
- Placement of balconies and windows: d)
- Appropriate height and massing; e)
- f) Architectural elements and finishing materials; and
- Streetscapes and building entrances. g)

(Springbank Hill ASP)

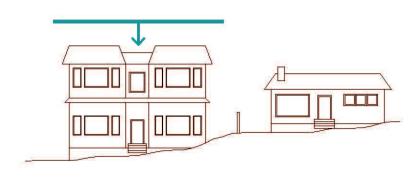
Developments should contribute to a sense of privacy through a variety of design measures (e.g. screening, fencing and landscaping).



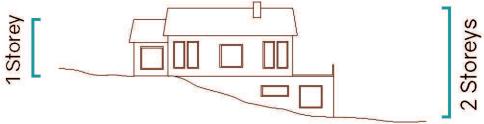




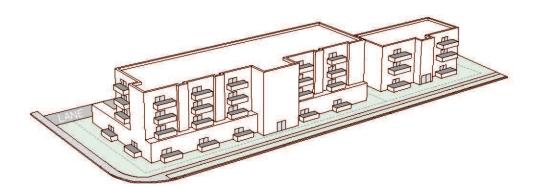
Building massing should conform to the land contours and use slope adaptive techniques. On steeper slopes this may include multi-level buildings to match grade variations.



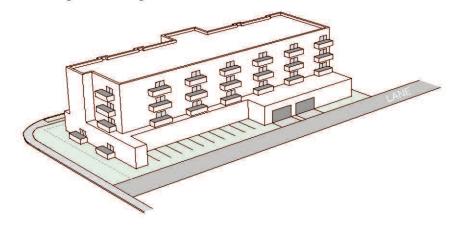




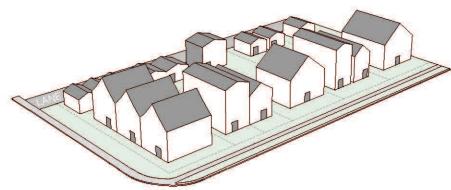
At grade units should be designed with individual entrances.



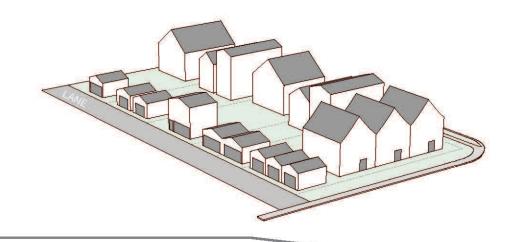
On-site parking should be located at the rear or side of the building or underground.



Building entrances should clearly oriented toward the street or avenue.

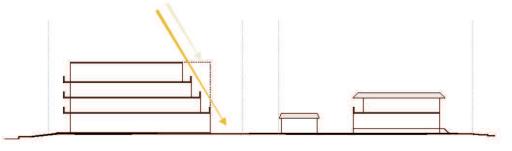


Designated parking should be accessed from the lane.

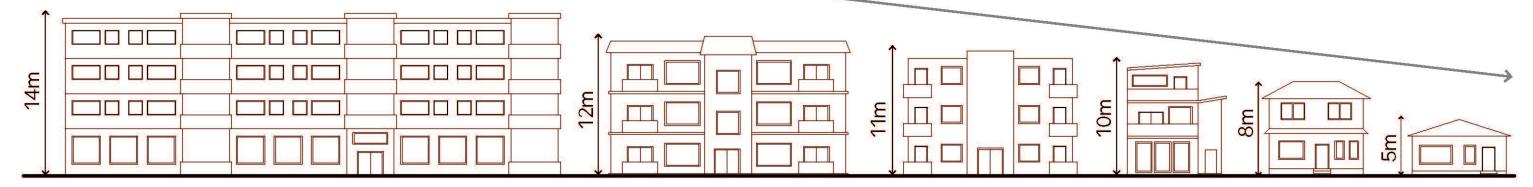


Building massing should minimize shadowing and optimize sunlight exposure for all units within the development. Design tools such as angled roof lines, set backs and step backs should be utilized to improve sun exposure.





Building heights should comply with the maximum building heights map in addition to consideration of site specific conditions and adjacencies. Building heights should transition to reduce shadow and viewshed impacts.



## LANEWAY HOUSING

#### Goals

To encourage sensitive densification through the integration of laneway housing.

#### **Observations & What We've Heard**

Laneway suites are a relatively new housing type in Calgary, but has seen widespread an successful implementation in other large cities in North America. As a grid oriented and laned community, Marda Loop is an ideal location for the widespread use of Backyard Suites in Calgary. Despite this suitability, implementation up until this point has been limited, which is likely due to the complicated regulatory process that currently exists at the City of Calgary. However, recent changes in the application process for secondary suites should mitigate this issue.

At the public engagement workshop Compass Consulting inquired about the residents perception of backyard suites in their neighbourhood. Most residents seemed open to the idea and did not voice any major concerns.

#### Recommendations

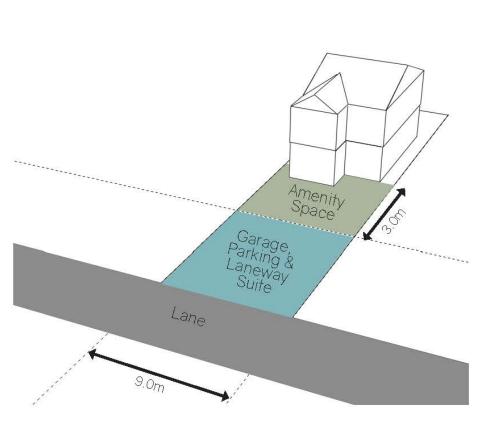
Compass Consulting recommends the increased implementation of laneways in the area, and should also take into consideration all policies for sensitive infill development, such as heights & roof lines maximizing sun exposure, vegetation and fencing for privacy and slope adaptive designs.

In order to maximize the quality of these new housing types Compass Consulting also recommends implementation of the guiding principles for good urban design.

Laneways should have adequate pedestrian-scale light fixtures to ensure public safety. In addition, laneways should be paved to create an inviting public space for people to walk, play, and interact. Both these can also be improved with orientation of lane facing amenity space.

To reduce potential privacy concerns with neighbouring properties, backyard suites should consider the placement of the suite itself, amenity spaces, and the height and location of windows.







## **Backyard Suite Considerations:**

#### Zone

Backyard Suites are allowed as a discretionary use in all lowdensity residential land use districts, as well as the Multi-Residential - Contextual Grade-Oriented (M-CG) land use.

Backyard Suites are only allowed on the same property as single detached dwellings or contextual single detached dwellings. There must not be more than one suite located on a property.

## Lot Size

Minimum property width should be 9.0m or;

Minimum property width should be 7.5 m when located on a corner property or a property with a lane; and three or more motor vehicle parking stalls are provided on the property

## Lane Access

A Backyard Suite should have access to an open lane, if the site is located on a corner served by an open or dedicated lane, or if the lot is located on a double fronting site served by a street on both the front and rear.

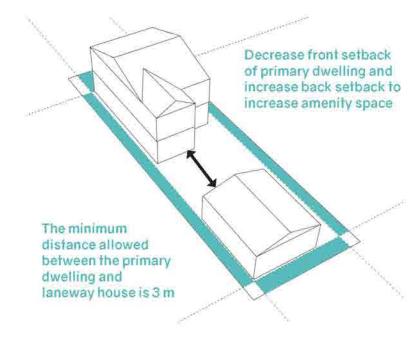
## Fire Access

A Backyard Suite should have a fire access path provided from the street along one of the side yards to the entrance of the Backyard Suite. This path should be atleast 900mm (3ft) in width and must be clear of any projections.

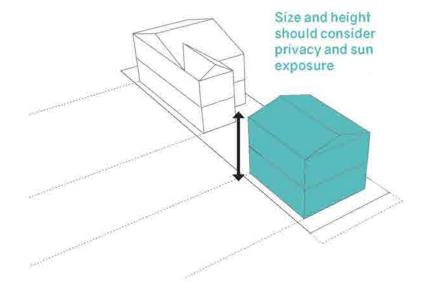
## **Building Separation**

Minimum separation should be 3.0 m between the closest facades of the main residential building to the closest facade of the backyard suite.

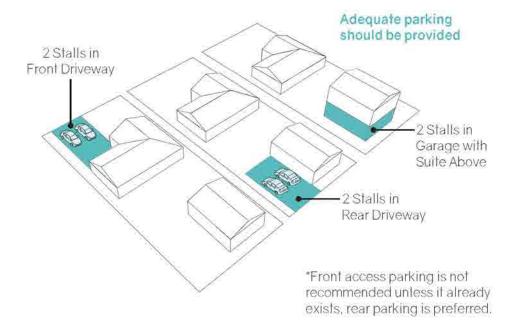
## **Amenity Space**



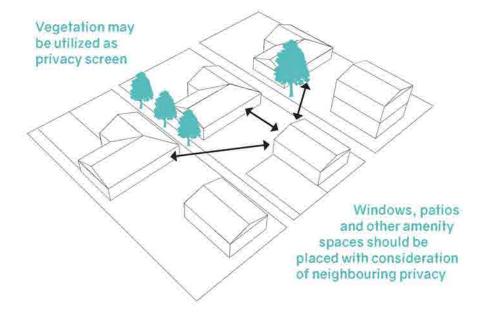
## Size & Height



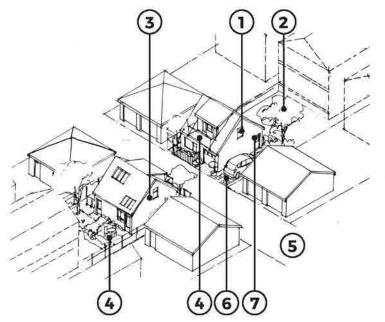
## **Access & Parking**



## Privacy



## **LANEWAY HOUSING**



Laneway Housing How-To Guide, Vancouver (2)

## 1. Living Space



Laneway housing should be designed with architectural details in mind and be stylistically consistent with the primary dwelling.

## 2. Landscaping & Vegetation



Vancouver, BC (4)

Vegetation and landscaping should be utilized to delineate laneway entrance and create an attractive environment.

## 3. Height & Window Placement



Vancouver, BC (5)

Privacy for neighbouring properties should be considered in the placement of windows and amenity spaces.

## 4. Amenity Space



Privacy for neighbouring properties should be considered in the placement of windows and amenity spaces.

## 5. Lane Streetscape



Vancouver, BC (7)

With wide adoption of laneway suites, lanes should integrate some urban design principles such as (permeable) paving, vegetation, lighting and amenity spaces to increase vibrancy of the lane as a streetscape.

## 6. Parking



Vancouver, BC (8)

Parking for laneway may be accommodated in an outdoor stall or inside the garage below the suite.

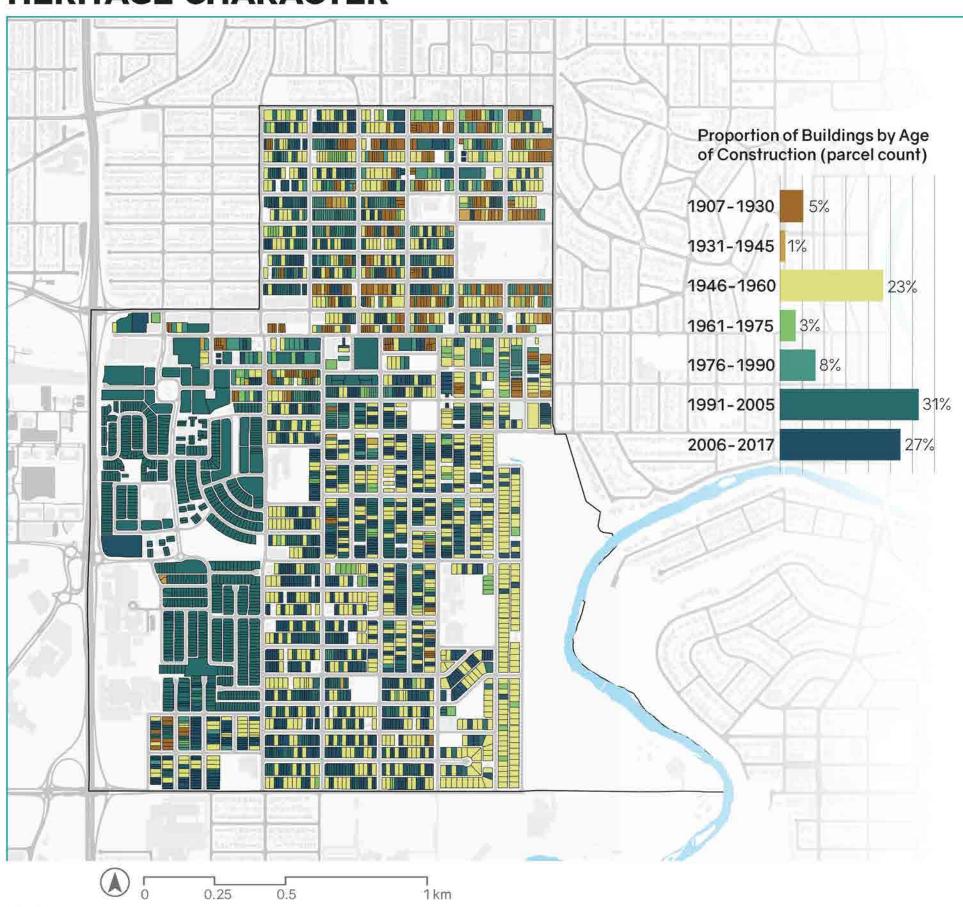
## 7. Access & Entrance



Laneways should be designed with clear entries and "front" landscaping to create a more vibrant laneway experience.



### HERITAGE CHARACTER



#### Goals

To acknowledge the value of character homes and historical architectural styles, through preservation and modern interpretations.

#### **Observations & What We Heard**

First hand observations in this community, age of building analysis and conversations with community residents made it clear that there is a great diversity in the types, styles and ages of homes in this area. With first development occurring in the early 20th century, rapid post-war development and infill development today, the community contains a mosaic of housing styles.

This mosaic does provide visual interest, however there were concerns raised regarding the demolition of heritage character homes in favour of modernist infills and that the area would lose "character." It is also important to note that the age of the building and the perceived "character" do not always correspond.

#### Recommendations

In general, there are three ways this can be addressed: First, through preservation of heritage buildings, which can be achieved through personal homeowner initiative or heritage designation. Second, through adaptive re-use, such as the recommendation to convert the Enmax structure on 14 Street into a cafe. Finally, through modern interpretations of architectural elements which was a common practice in the development of Garrison Woods. Some of these architectural elements are demonstrated in the chart to the right.

Compass Consulting recommends acknowledging the value of character homes and historical architectural styles, through preservation and modern interpretations.

Building facades should be designed to incorporate elements, proportions and character found within the community (e.g. articulation, building materials, building massing).

Refurbishment and re-use should be considered preferable to redevelopment.

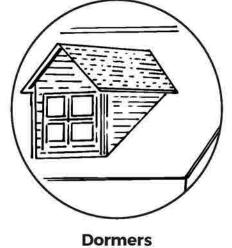




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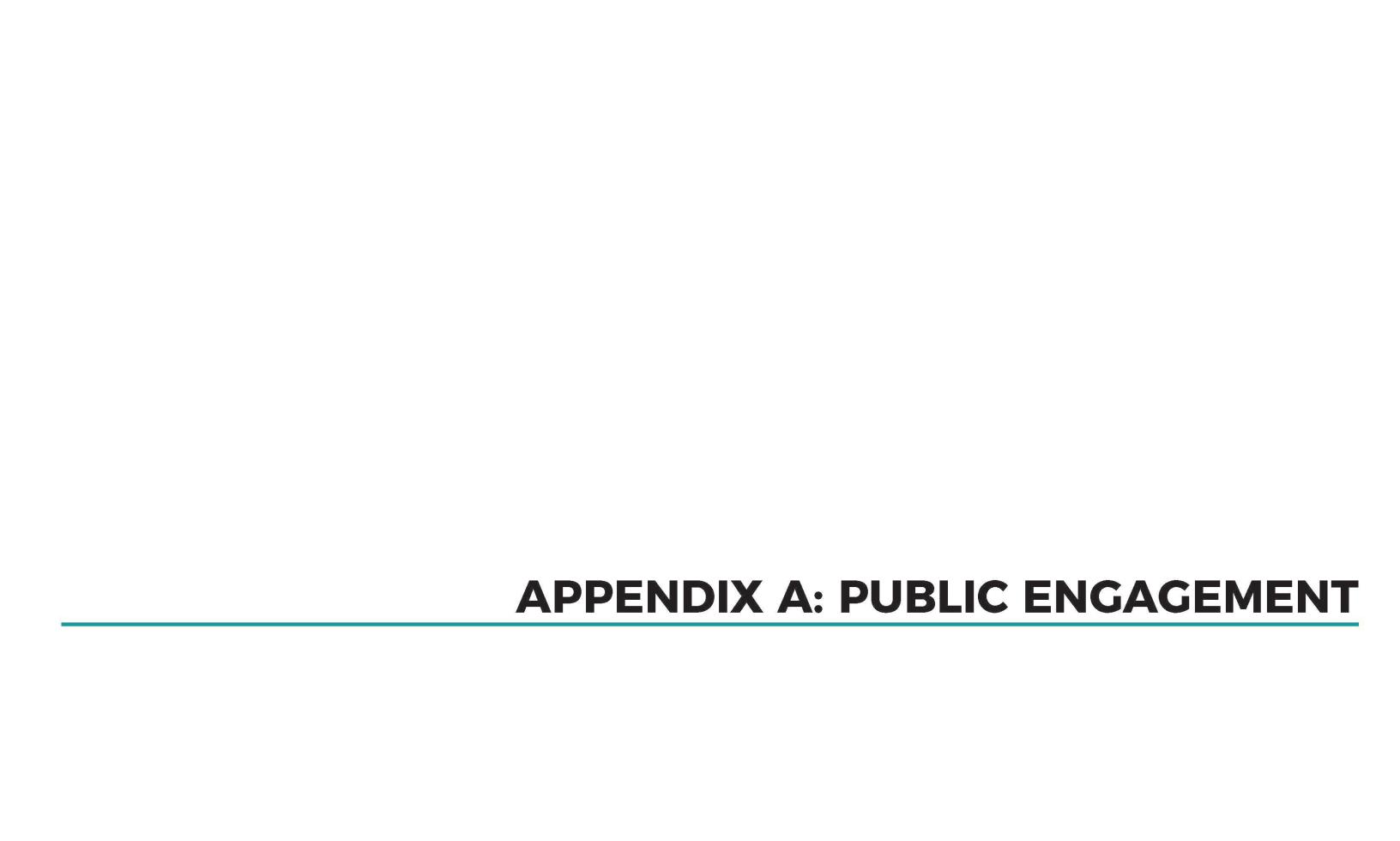




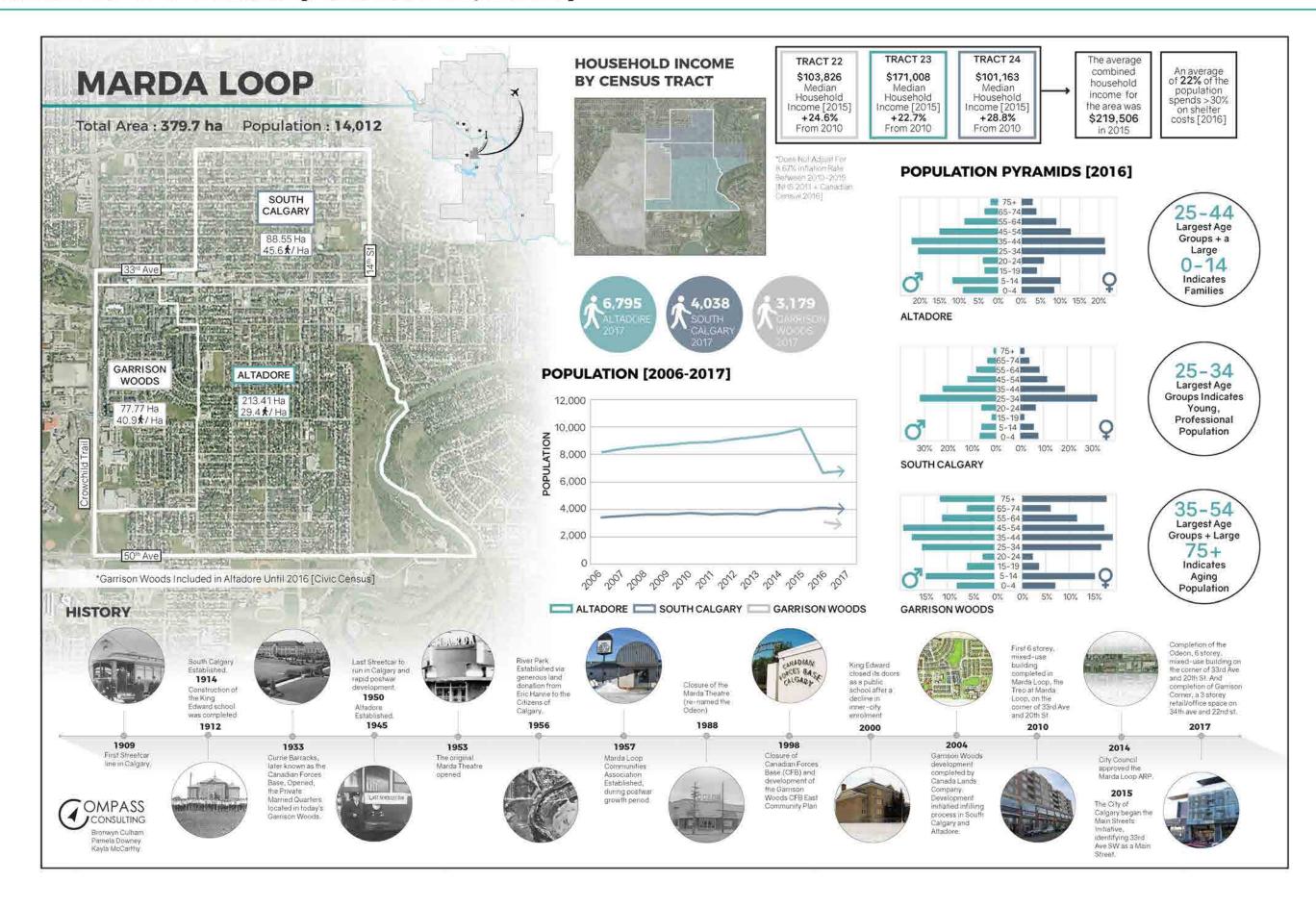


Steep Roof on Second Storey Balconies





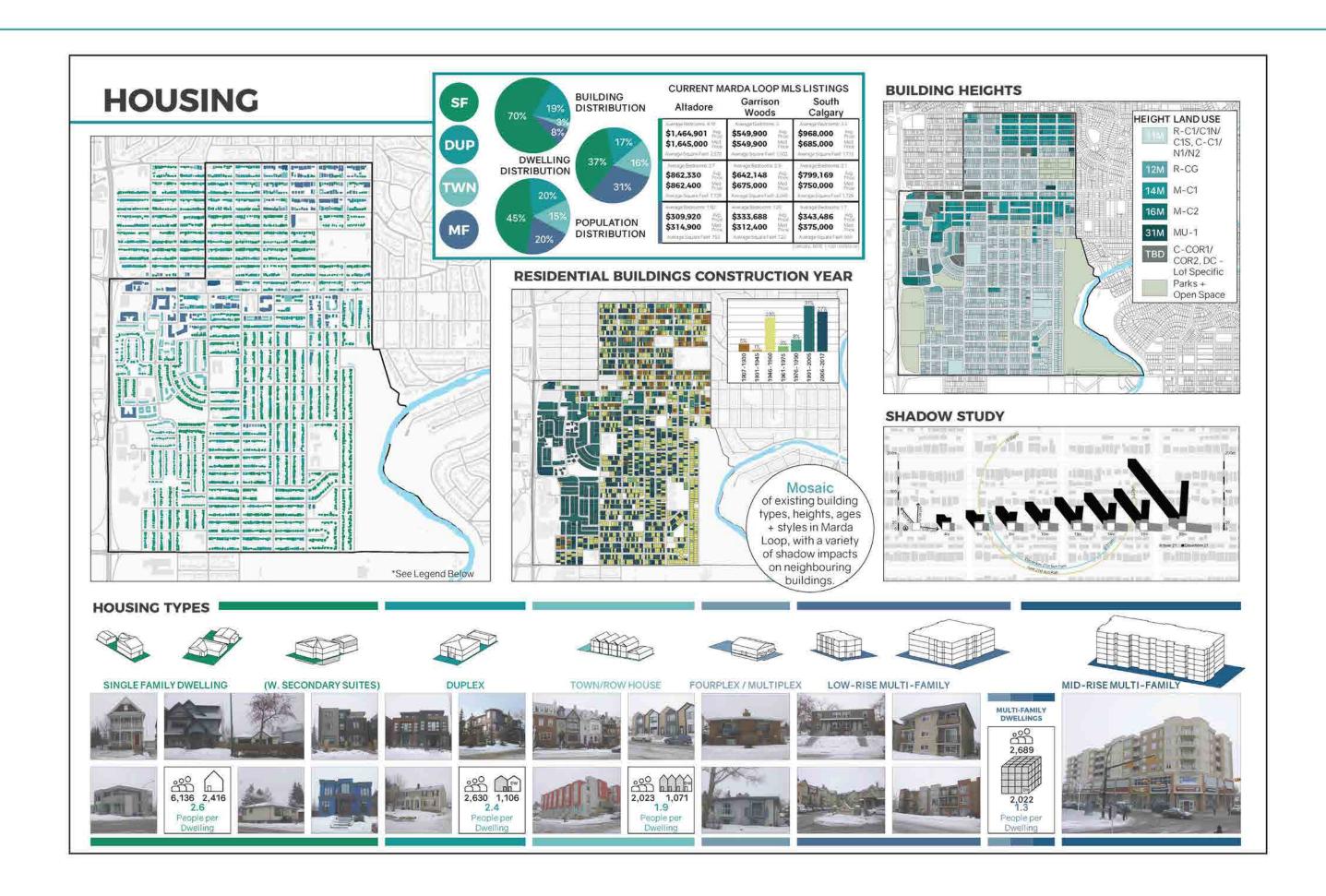
## **WORKSHOP POSTERS (MARCH 12, 2018)**



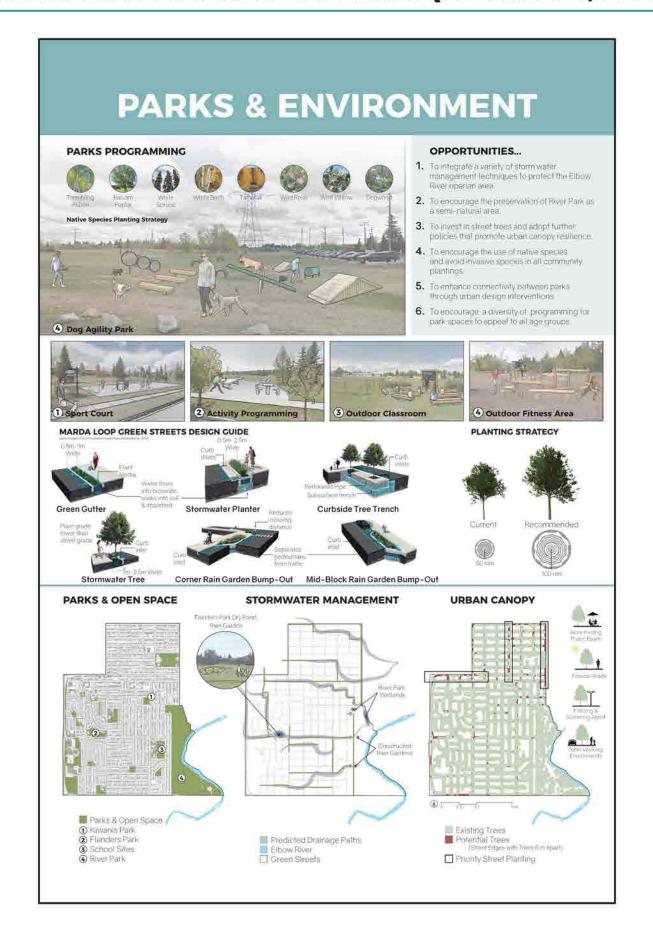


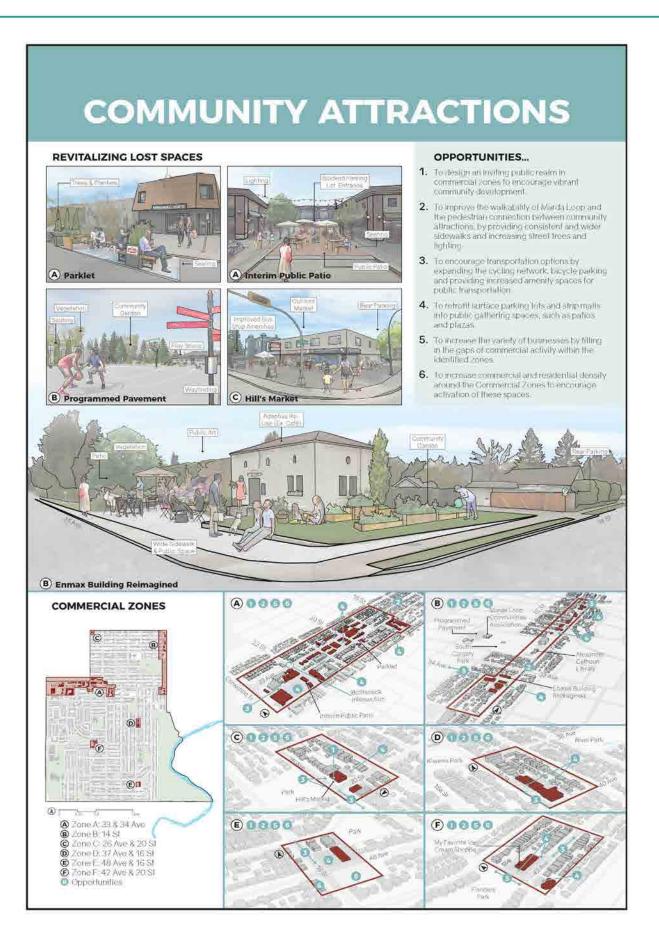
#### Street Classification Road Capacity (vpd) Actual Traffic (vpd) **TRANSPORTATION** 90,000+ Skeletal Road (Expressway) 30,000+ 16,000 The current infrastructure of Parkway 25,000-35,000 Neighbourhood Boulevard 12,500-22,500 12,000-17,000 Marda Loop supports multiple Collector 2,000-8,000 9,000 forms of transportation, however **CALGARY TRANSPORTATION PLAN** Residential Street < 2,000 +/-Time to actual transportation patterns Lanes (Alleys) downtown core reflect auto-dependence. Walkways/Pathways Walking 1 hour What can be implemented Permit Parking Zones Cycling 20 minutes to improve the experience Snow of active transportation? **Public Transit** Plow Routes 25 minutes Priority 1 - cleared within 24 hours Carpooling Priority 2 - cleared wihin 48 hours (SOV) 10 minutes Consider: Degree of Within Car 2 Go Sustainability · Sidewalk location, width and area, 15 min drive buffer, for snow to collect January 17, 2018 to downtown @ · In general, sun explosure is \$0.41/min = \$6.15 higher on roads than avenues clearing them of snow quicker CAA **MODE OF TRANSPORTATION TO WORK [2016]** · Narrow roads becomes oneways in the winter ALTADORE SOUTH CALGARY **GARRISON WOODS** · Seasonal transportation (summer bikes, winter buses) Topography Steep slopes and ice reduce ease of Volume of cars travelling walking and biking through intersection and limit accessibility. **PUBLIC TRANSIT BICYCLE LANES & ROUTES COMMERCIAL WALKABILITY** Route Frequency Bikeway 15-25 min 6 - Killarney 26 Ave Cycle Track 7 - Marda Loop (North) 10-15min 15-45min Shared Lane 13 - Mount Royal S.CALGARY 107 - South Calgary 20-40min WALKSCORE Regional Pathway 10-20min = 18 - Lakeview (124)30min\* - 63 - Lakeview Express 22" IN CALGARY ----- 112 - Sarcee Road 15-30min Future SW BRT Stop 30 [\*3 times per am/pm week days only] 112 ALTADORE WALKSCORE III Historic Streetcar Line 233 65 Strava Usage Map 37" IN CALGARY Crowchild High trail stops are difficult 600m 400m Medium to access.

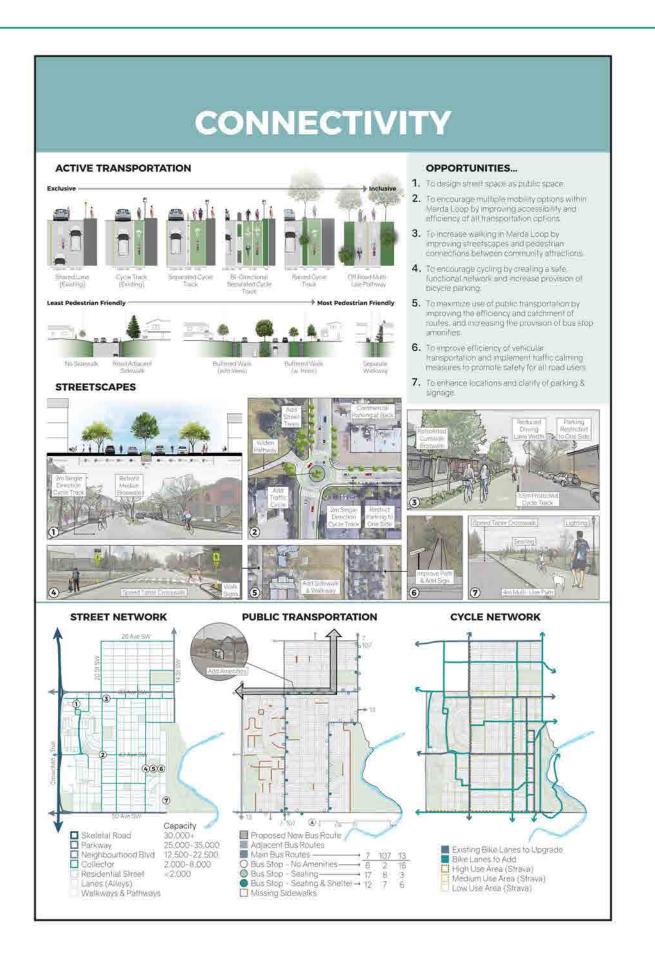
Low



### **FINAL OPEN HOUSE POSTERS (APRIL 14, 2018)**







# **HOUSING & DEVELOPMENT**

#### **CONTEXTUAL DESIGN GUIDELINES** OPPORTUNITIES... intill development should consider 1. To maintain vibrancy of Marda Loop by phasing and strategically locating land use changes. 2. To strategically arrange density to capitalize on commercial hubs, public transit, active Contaxius Height transportation routes and other amenities 3. To improve affordability and achieve density goals through moderate changes adding to the missing middle 4. To create design guidelines at the block level to improve the public realm on all streets and avenues: \*-(P)--5. To create contextual built form guidelines for Serbacks Step packs & Parking slope adaptive designs and roof styles that maximize sun exposure and viewsheds. 6. To acknowledge the value of character homes and historical architectural styles, through preservation and modern interpretations. INFILL DEVELOPMENT STRATEGY 1 Dupley & Semi Defaction Row /Town House **CURRENT LAND USE MAP** PROPOSED LAND USE MAP PROPOSED MAXIMUM HEIGHTS Commercial - Main Street Z3m (up to 6 storeys Commercial - Community Mixed Use 0 m (up to 6 storeys) Residential - Low Density 6 m (up to 5 storeys) LMarda Loop ARP Residential - Middle Density 14 m (up to 4 storeys) - Altadore/South Calgary ARP 12 m (up to 4 storeys) Residential - Medium Density Garrison Woods ARP Parks and Open Space 10 m (up to 3 storeys)





#### Park Palette References (Page 43)

- 1. Victory Gardens #2. Fenway, Boston. Sean Litchfield. (2011). https://newengland.com/today/travel/emerald-necklace/
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- 6. Inclusive Urban Furniture. https://plus.google.com/u/0/photos/117563668763043133826/album/5756890615154331233/5756892043877134130?sqid=112472556246269809510&ssid=759e3c61-4269-42e3-9923-1230fadde982
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- 8. Paley Park: Petite pocket park still powerful. (June 2017) https://www.totallandscapecare.com/landscaping-blog/paley-park/
- 9. Xeriscaping Low Water Gardening. Xeriscaping. Better Homes & Gardens. https://www.bhg.com/gardening/landscaping-projects/landscape-basics/xeriscaping/?sssdmh=dm17.800653&esrc=nwdi052615
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