

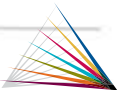


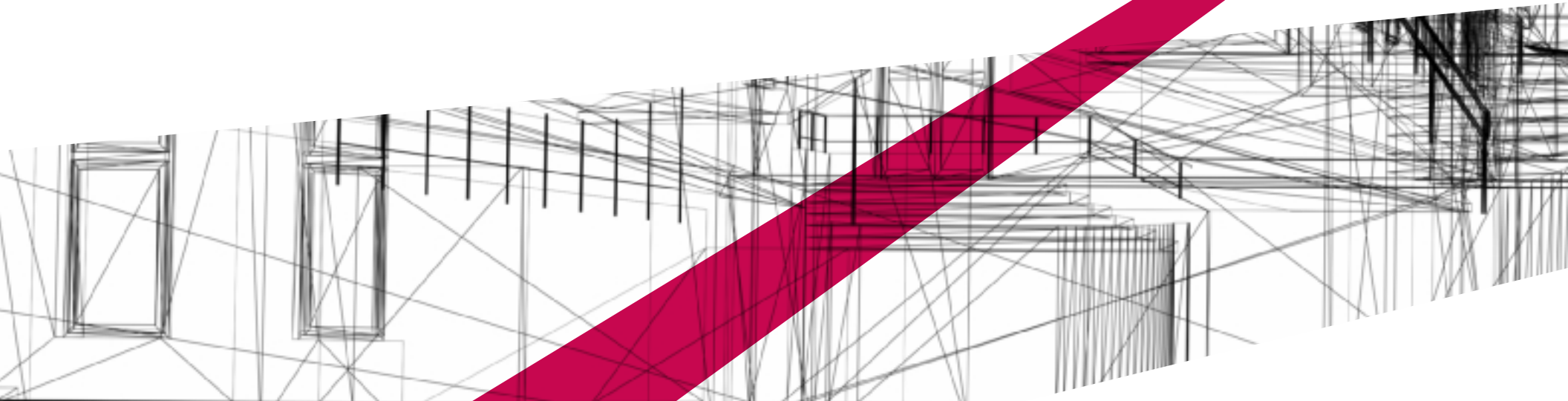
THE QUARTERS D O W N T O W N

URBAN DESIGN PLAN

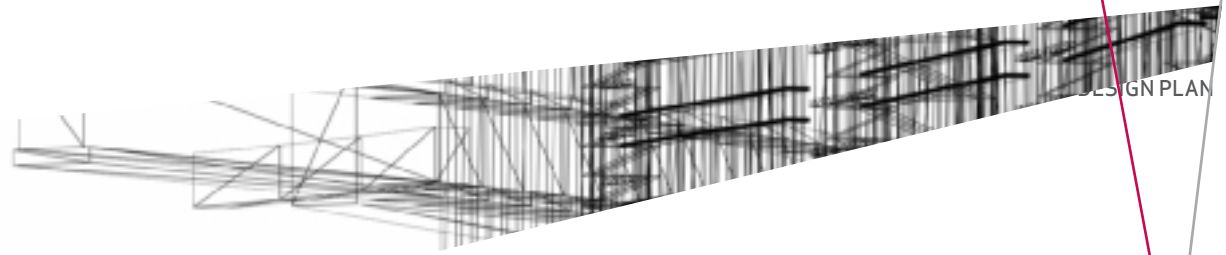
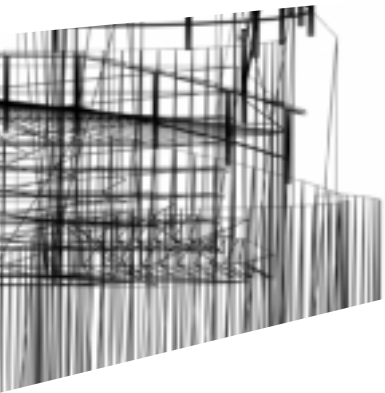
THE WAY
WE GROW

THE CITY OF EDMONTON
PLANNING & DEVELOPMENT DEPARTMENT
SPECIAL PROJECTS OFFICE





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01. OVERVIEW

The Quarters – formerly known as Downtown East – is 18 city blocks (approximately 40 hectares) directly east and adjacent to downtown Edmonton. The area currently houses about 2,400 residents and has abundant room for growth and redevelopment to accommodate many more. The Quarters area has many great attributes; it is rich in history and has heritage buildings and a varied ethnic population; it is near downtown, amenities and services, and the river valley; it has good public transportation and is walkable and bikeable; and it has much vacant land ripe for redevelopment.

Revitalization of The Quarters began with a community visioning process in 2006 that resulted in a Vision, Guiding Principles, and Physical Framework for the area as well as recommendations for immediate actions to kick-start the revitalization. These items were summarized in a document titled, “Downtown East Project: Creating A Vision, August 24, 2006,” hereafter referred to as “The Vision,” which was approved by City Council on September 26, 2006.

The Urban Design Plan is based on The Vision for The Quarters as approved by Council and establishes the overall urban design approach to the area. The document provides direction on urban form, height and floor area ratios, streetscapes, parks, pedestrian walkways, uses, building footprints, setbacks, massing, scale, and architectural focus points. Information is also provided on streets, including all traffic modalities (pedestrian, bicycle, cars, parking, public transportation, trucks and service vehicles), parks and plazas.

The Urban Design Plan is part of a family of documents, which include The Quarters Area Redevelopment Plan (ARP), The Quarters Statutory Plan Overlay (SPO), and Direct Development Control (DC1) provisions for individual precincts within The Quarters area. Together, these documents provide the regulatory and policy foundation for redevelopment of the area. The Urban Design Plan provides the guidance for shaping the sustainable, exciting and vibrant future for this unique inner-city community.



A public meeting at City Hall on February 2, 2006

02. Plan Area and Context

The Quarters is comprised of 18 city blocks immediately east of the downtown core of Edmonton (Fig. 2-1). The neighbourhood is bounded by 97 Street to the west, 103A Avenue to the north, 92 Street to the east, and Jasper Avenue and 101 Avenue to the south. The size of the area is approximately 40 hectares (100 acres).

The plan area is affected by the following major municipal plans and policies:

- City of Edmonton Strategic Plan 2009 - 2018
- Focus Edmonton: City Plan
- Zoning Bylaw 12800
- Smart Choices
- Transportation Master Plan (1999)
- Transportation System Bylaw 13423
- Bicycle Transportation Plan Update
- Boyle Street McCauley Area Redevelopment Plan Bylaw
- Parkland Bylaw 2202
- Cornerstones Housing
- Louise McKinney Riverfront Park
- Edmonton Urban Design Guidelines
- City Policy No. C458A: Percent for Art Policy to Provide and Encourage Art in Public Places
- City Policy No. C513: Public Involvement Policy
- Edmonton's 2006 Environmental Strategic Plan



Fig. 2-1 The Quarters in the context of the City of Edmonton

02.1 Plan Area History

The Quarters is one of the original residential neighbourhoods of Edmonton. Before the arrival of Europeans, The Quarters area was used by First Nations people. Subsequently, waves of mainly Jewish, Chinese, and Ukrainian immigrants made their home here. One hundred years ago, it was the heart of the community and the centre of the city, with vibrant commerce, trade, entertainment and living. Jasper Avenue and 97 Street were the heart of Edmonton’s first business district at the turn of the last century (Fig. 2-2).

With the opening of the Provincial Legislature and High Level Bridge to the west, the focus of commercial activity and development started moving westward. The Quarters dwindled as property values declined and vacancy rates rose. Physical neglect, crime, prostitution and vandalism led to a strong negative public perception of the area.

Because of this long-lasting economic stagnation, many of the buildings in The Quarters were uncared for and eventually demolished. Interestingly, it also preserved the smaller scale buildings and maintained the residential nature of The Quarters.

02.2 Urban Context

The proximity to Edmonton’s central business district makes The Quarters a natural expansion area for the downtown and an area with high potential for growth. The Quarters is adjacent to the Arts District, the commercial and cultural core of downtown (Fig. 2-2a and Fig. 2-3). This district has a concentration of high-density commercial uses. All but one of Downtown’s major office towers (25 storeys or greater) are located in the Arts District.



Fig. 2-2 The Quarters as a residential neighbourhood in 1924.

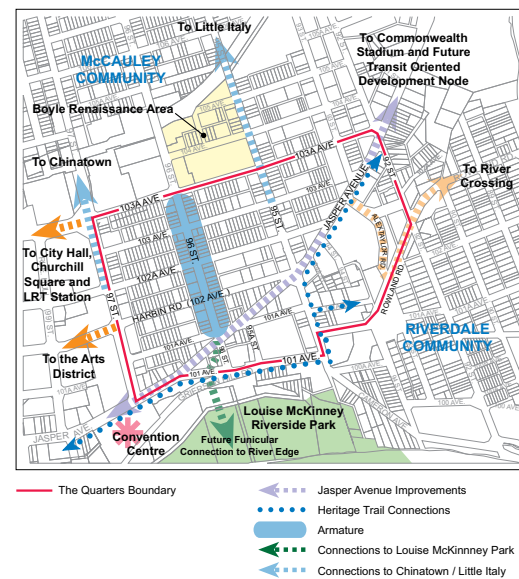


Fig. 2-2a The Quarters in the Context of Adjacent Neighbourhoods.

The Arts District is home to City Hall and the majority of municipal offices. Several cultural facilities such as the Francis Winspear Centre for Music, the Citadel Theatre and Metro Cinema, the Art Gallery of Alberta, the Shaw Conference Centre, and Stanley Milner Library are located here. The focus of the Arts District is Sir Winston Churchill Square. Redeveloped in 2004, this square is a dynamic outdoor programming space which plays host to a variety of events ranging from large festivals to small events year round. It has become an entertainment destination for over 1 million visitors.

Other landmarks of significance near The Quarters include the Edmonton Police Services on 103A Avenue and the Court House and Canada Place on 97 Street.

The location of The Quarters at the top of the valley is exceptional and the visual and physical connection to the valley is very strong. The completion of Louise McKinney Riverfront Park is a very important asset to The Quarters. The park encompasses approximately 15 hectares of land and has 500 meters of breathtaking, unobstructed river view. It is the front door to the river valley parks system and a gateway to trails throughout the city.

The Quarters borders two residential neighbourhoods, Riverdale to the southeast and McCauley to the north. A primary school is located in the Riverdale Neighbourhood. The Boyle Street Community League building and park on 103A Avenue between 95 Street and 96 Street is immediately to the north of the plan area. Fig. 2-3 illustrates the urban context of The Quarters.

02.3 Area Demographics

The project area falls into the southern half of the Boyle Street Federal census area. Data from the 2005 Municipal Census shows that there are approximately 2400 residents living in The Quarters project area. There are more males than females and a large percentage (around one third) of the population is between 20 and 30 years old. Almost two thirds of the population lives in single-person households.

As noted in the census, Boyle Street is an ethnically diverse neighbourhood. Almost half the population identify themselves with a specific ethnic group (including Canadian). The most common ethnic groups are Chinese, Canadian, Aboriginal (including North American Indian, Métis and Inuit), English, Ukrainian, Irish and German.

The majority of dwelling construction took place in the 70s and early 80s. Ownership is exceptionally low in this neighbourhood with an approximate 90% rental rate. Apartment buildings account for over 80% of present day dwelling structures in Boyle Street Neighbourhood and rooming houses account for 15%.

The average household income of Boyle Street is slightly over half of the City's average. The unemployment rate is considerably higher (5.5%) than the City's average (2.5%). The percentage of people over 20 years old with less than a grade 9 education is triple that of the City's rate.



Sir Winston Churchill Square



The Shaw Conference Centre on Jasper Avenue



Canada Place on 97 Street



Edmonton Police Services



- Educational Nodes**
 - 1. Grand MacEwan
 - 2. Riverside School
 - 3. St. Kevin R. High
 - 4. Mackay High School
 - 5. Mother Teresa Elementary
 - Cultural Nodes**
 - 6. Art Gallery of Alberta
 - 7. Windermere Centre for Music
 - 8. Guild Theatre
 - 9. Churchill Square
 - 10. Canada River Building
 - 11. Shaw Conference Centre
 - 12. Fortin Centre
 - 13. Mactavish Community Centre
 - Civic Nodes**
 - 14. Edmonton City Hall
 - 15. Edmonton Law Courts
 - 16. Alberta Legislative
 - 17. Edm. Fire Department
 - 18. Edm. Police Department
 - 19. Edmonton Bernard Centre
 - Community Nodes**
 - 20. Ottawa Armoury
 - 21. Chesham Community Hall
 - 22. Riverside Community Hall
 - 23. Boyle Street Community Hall
 - 24. Edmonton Public Library
- The Quarters**
An 18 block area from the edge of the river valley north to 103rd Avenue and 92nd Street to 97th Street.

Fig 2-3 Surrounding landmarks and important uses



Fig 2-4 Existing land use.

02.4 Smart Choices for Developing Our Community

In March 2004, City Council approved the Smart Choices Initiative designed to accommodate future growth and achieve urban land intensification, while sustaining the quality-of-life in the community. There are seven Smart Choice initiatives of importance to The Quarters.

- Develop a comprehensive transit-oriented development (TOD) strategy
- Make walkability a prime consideration in development decisions
- Develop a neighbourhood reinvestment program
- Develop residential infill
- Enhance consultation processes
- Develop a strategy to redevelop underutilized commercial and industrial lands
- Develop urban design guidelines

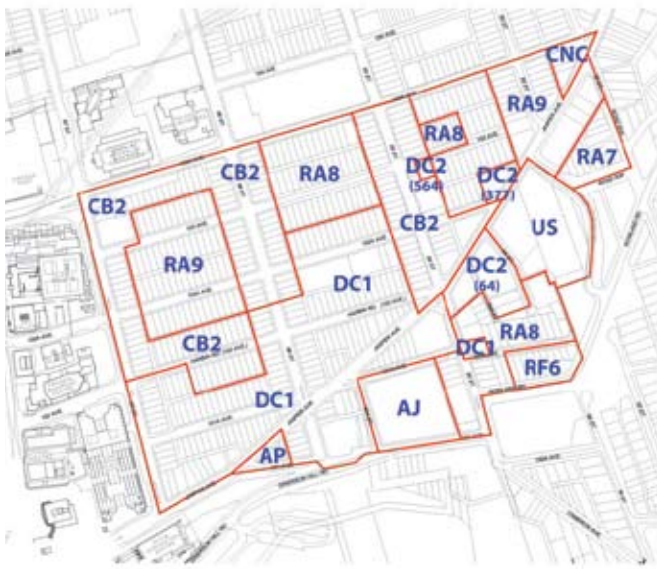


Fig. 2-5 Existing zoning.

Fig. 2-4 Existing land use.

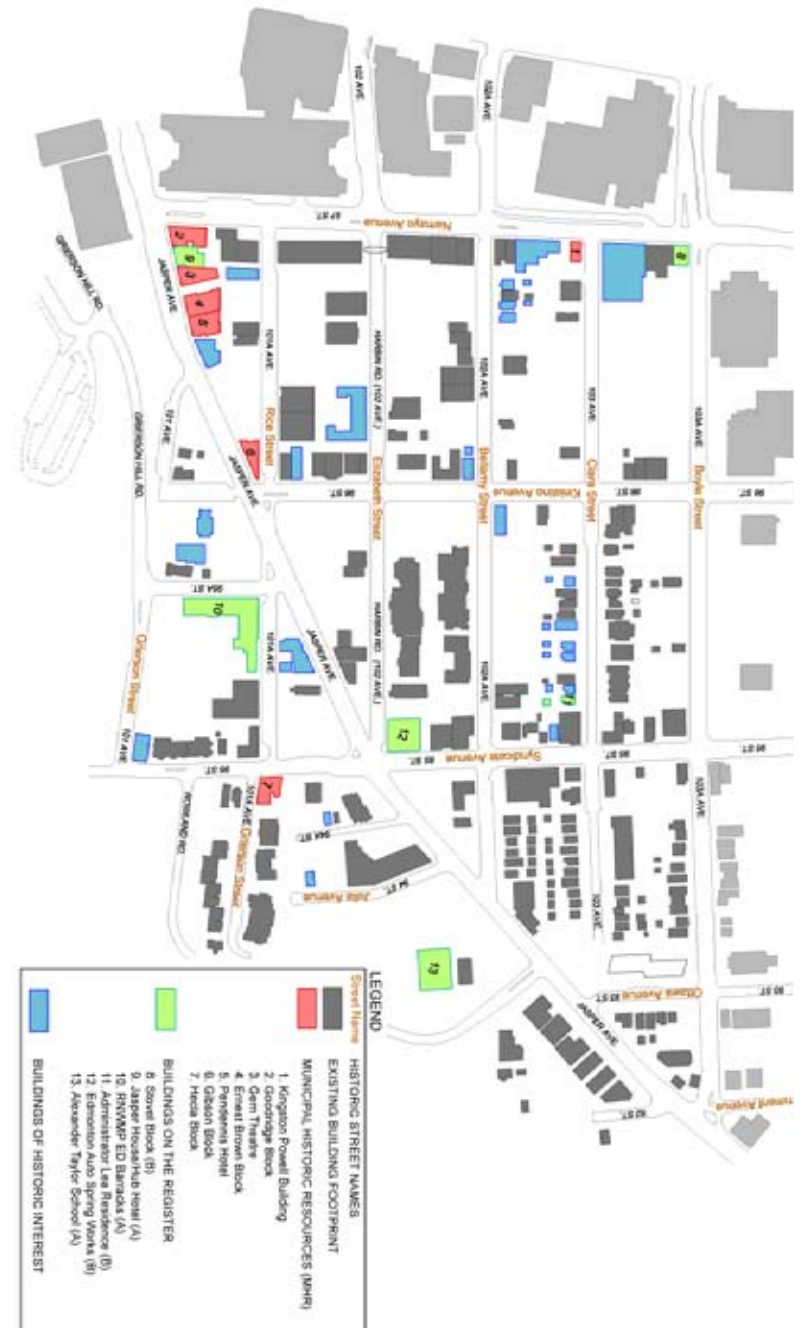


Fig. 2-3 Surrounding landmarks and important uses



02.5 Land Use

Current land uses in the area include One Unit Dwellings, Two Unit Dwellings, Multi Unit Dwellings, Apartments, Other Residential, Commercial, Industrial and Utilities, Institutional, and Vacant Land (Fig. 2-4).

Current zoning in the area are illustrated in Figure 2-5.

- AJ – Alternative Jurisdiction Zone
- AP – Public Parks Zone
- RF6 – Medium Density Multiple Family Housing Zone
- RA7 – Low Rise Apartment Zone
- RA8 – Medium Rise Apartment Zone
- RA9 – High Rise Apartment Zone
- CB2 – General Business Zone
- CNC – Neighbourhood Convenience Commercial Zone
- US – Urban Services Zone
- DC1 – Direct Development Control Provision
- DC2 (64) – Site Specific Development Control Provision
- DC2 (377) – Site Specific Development Control Provision
- DC2 (564) – Site Specific Development Control Provision

Vacant Land

The area has a substantial number of vacant lots (Fig. 2-6). The majority of vacant land is currently being used as surface parking and presents excellent development opportunities.

Environmental Review

The environmental health of the city is a priority. Environmental site assessments and any associated remediation may be required before consideration of redevelopment, especially as The Quarters has a variety of brownfield sites within its boundaries. Existing and former gas stations and dry-cleaning sites occupied the area.

Heritage Buildings

Several properties of historic interest are found in The Quarters. Seven buildings are listed as designated Municipal Historic Resources, 6 are on the Register of Heritage Resources in Edmonton, and several more are buildings of historic interest that have no status (Fig. 2-7).

02.6 Parks, Open Space & Pedestrian Linkages

The Quarters is located directly adjacent to the North Saskatchewan River Valley which boasts the City of Edmonton's Ribbon of Green – a 48-kilometer long stretch of the river valley with 22 major parks. There are several pedestrian links with the river valley and ravine system from The Quarters. There are access stairs at the foot of 97 Street next to the Shaw Conference Centre, and at the foot of 92 Street. Grierson Hill Road, provides limited pedestrian accessibility into the river valley.

The Quarters project area currently contains only a few parks and open space areas directly within its boundaries (Fig. 2-8):

The Quarters is surrounded by a significant amount of public parks and open space. These parks and open spaces include:

- Louise McKinney Riverfront Park;
- McCauley Community Centre and Community Park;
- Sir Winston Churchill Square;
- City Hall;
- A small park adjacent to Canada Place; and
- The Boyle Street Community League Park and community garden.

Fig. 2-8 Existing parks & open space



Fig. 2-9 Traffic volumes in and around The Quarters.



Mature trees line a few streets in the project area. These include 93 Street, 103 Avenue between 95 Street and 96 Street, the south side of 103A Avenue between 93 Street and 95 Street, the south side of Jasper Avenue between 97 Street and 101 Avenue, and the east side of 97 Street between 101A Avenue and 102 Avenue.

02.7 Transportation

The following section on transportation discusses existing traffic patterns, parking, public transportation, and bicycle routes.

Traffic Patterns & Parking

Major traffic flow through the area occurs on the peripheral arterial roads: Jasper Avenue, 103A Avenue, and 97 Street. 95 Street, 102 Avenue, and 102A Avenue are also designated arterial roads within the boundaries of The Quarters. 96 Street is designated a collector roadway.

Traffic flows on the peripheral arterial roads are in the order of 15,000 to 17,000 vehicles per day. There is a moderate amount of traffic on 95 and 95A Streets with some congestion during rush hour due to the amount of traffic entering and exiting the river valley along Grierson Hill and Rowland Road. 95 Street is a designated truck route for vehicles entering the downtown core. In addition, all other streets in the plan area including 96 Street carry low volumes of traffic in comparison to adjacent streets and avenues. Traffic movements on 102A Avenue, 102 Avenue, and 96 Street are in the order of 4,000 to 5,000 vehicles per day (Fig.2-9).

Within The Quarters 102 Avenue and 102A Avenue are one way streets. 102 Avenue flows east, and 102A Avenue flows west. 103 Avenue and 101A Avenue are local streets that end in T-intersections at the western boundary of The Quarters.



The small private park located northwest of Jasper Avenue.



Alex Taylor School and grounds

There are approximately 4,100 on and off-street parking spaces within the project area. Of these spaces, about 525 (13%) spaces are on-street spaces while approximately 3,600 (87%) spaces are located in off-street facilities. Off-street commercial parking spaces represent the majority of the off street parking spaces. Approximately 50% of all of-street parking spaces are designated as commercial parking spaces and are located in surface parking lots.

Bus & LRT Routes

There are 19 bus routes running through or on the periphery of the plan area (Fig.2-10). 21 bus stops are located within the plan area. During peak hours, buses along 102 Avenue loop through 96 Street and continue westbound on 102A Avenue. There are 2 layover bus stops (#1365 and #1582) located westbound on 102A Avenue between 96 Street and 97 Street. The maximum layover time is 9 minutes. These layovers are also used for ETS school specials

Trolley bus routes in the area run north and southbound on 95 Street, north and southbound on 97 Street, westbound on 102A Avenue, and eastbound on 102 Avenue. These routes will be decommissioned in the future. At that time, trolley bus infrastructure e.g. poles, support arms and lines to support overhead conductor wires can be removed.

Churchill LRT Station is one block west of The Quarters and Central LRT Station is 3 blocks west of The Quarters. Opportunity exists for a future underground LRT station situated approximately one block north of 103A Avenue and east of 97 Street.

Non-Motorized Transportation Routes

Louise McKinney Riverfront Park, directly south of the Quarters, is a primary access point for pedestrians and cyclists traveling through the river valley from east and south portions of the city into the Quarters and the Downtown (Fig. 2-11). Pedestrian and bicycle routes converge at the top of Grierson Hill Road

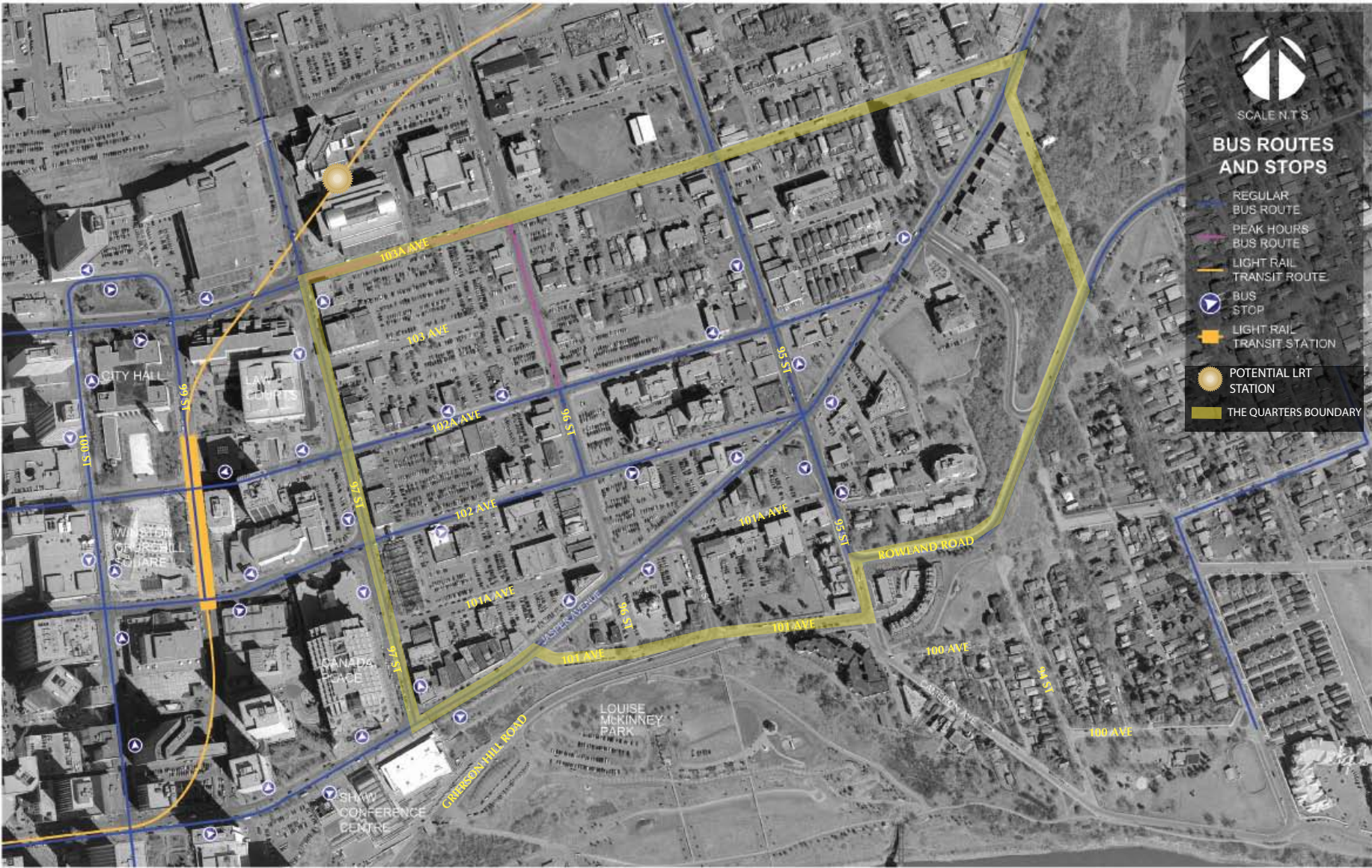


Fig. 2-10 Existing bus and LRT routes.

Note: Potential LRT alignments through The Quarters area to be determined in the future



Off-street parking along 96 Street



A bus running on 102 Avenue

and make The Quarters a primary gateway for pedestrians and cyclists traveling from the river valley into The Quarters as well as for people entering into the river valley from the neighbourhood.

The top-of-bank of the river valley, at the foot of 96 Street boasts a portion of Edmonton's Heritage Trail – a trail that celebrates Edmonton's history and weaves its way through the Downtown and terminates to the west along the Victoria Promenade.

Signed bicycle routes on the roadway exist on 102 Avenue, and 102A Avenue. This route continues east along Jasper Avenue where it intersects with 102 Avenue and then turns north on 92 Street. The bicycle route on 102 Avenue continues west until 136 Street and intersects with several important north south corridors. The route on 92 Street continues north, intersecting with the multi-use trail along the LRT line and eventually connecting with a signed route on 97 Street. Connections to the river valley occur on Grierson Hill and Cameron Avenue. The Cloverdale Footbridge carries bicycles, pedestrians and in-line skaters to the south side of the Saskatchewan River, joining up with Cloverdale Park and Mill Creek Park (Fig. 2-12).

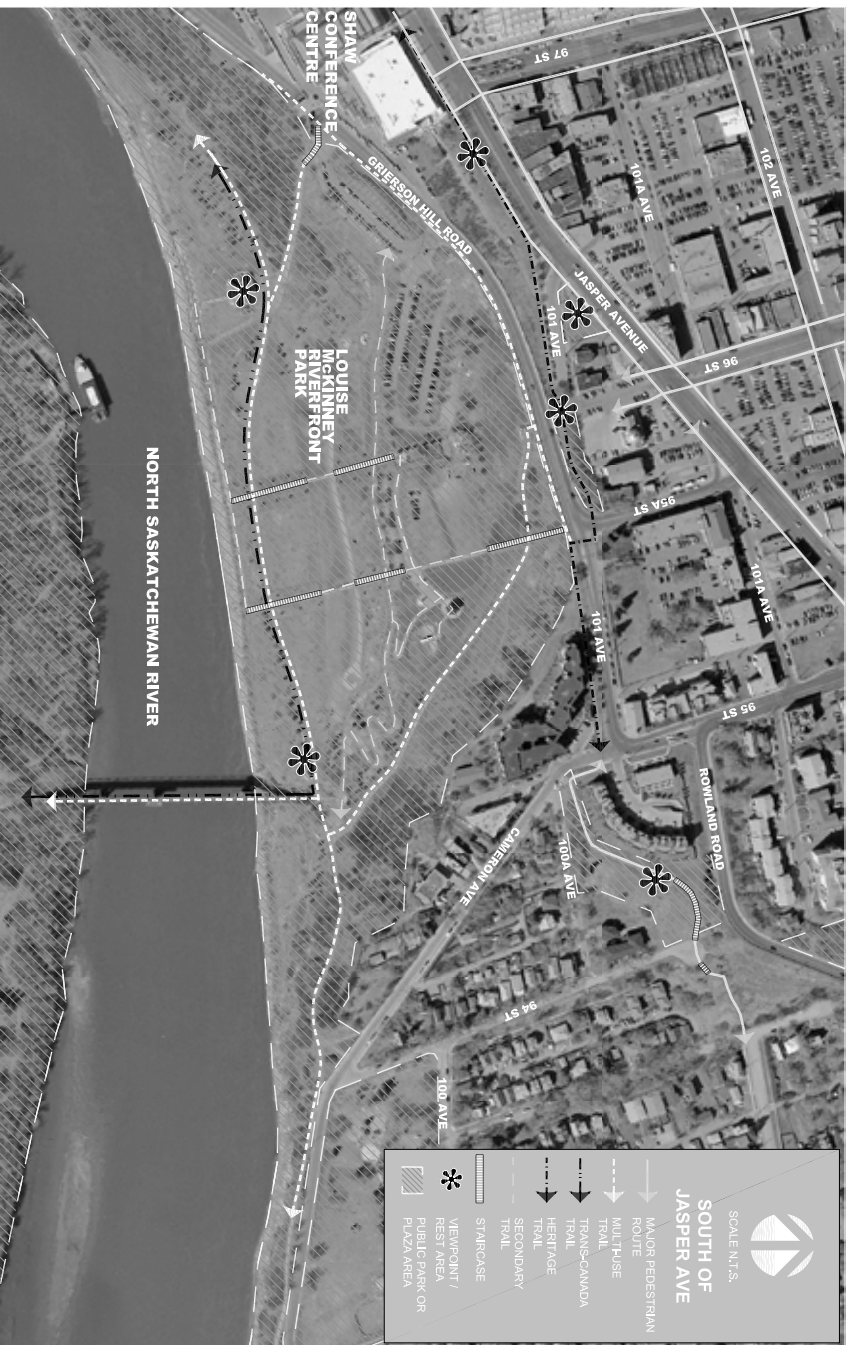


Fig. 2-12 Non-motorized transportation routes - South of Jasper Avenue.



Fig. 2-11 Non-motorized transportation routes - North of Jasper Avenue.

02.8 Infrastructure

A detailed review of the existing infrastructure in The Quarters Downtown was undertaken by the City's engineering consultants with the direct involvement of the utilities (EPCOR, ATCO, Drainage), telecommunications suppliers (TELUS, Shaw), City of Edmonton Transportation and the Urban Design team. Current capacities were calculated and those capacities were reviewed to determine the impact of the proposed new densities and uses. The results of those reviews were used to determine the types of changes necessary to implement the new plan.

Much of the infrastructure in the area is old. There is capacity if no significant redevelopment occurs although even then, some improvements are needed to provide an adequate level of service to existing customers, particularly in the area of drainage where the separation of the sanitary and storm systems is recommended. With higher densities, there will be a need to enhance the capacities of most of the infrastructure. All infrastructure work will ensure that the services in the neighbourhood contribute to its overall sustainability taking into account best practices in the areas of economics and the environment.

The phasing of any infrastructure work will be determined both in response to development proposals and through a logical sequencing of the work to ensure a cost effective redevelopment.

An infrastructure analysis and upgrading report were prepared for the City of Edmonton as a separate document from the Urban Design Plan.



Existing utility services



Existing utility services



Overhead wires along laneway of 96 Street

03. The Vision

The Vision for The Quarters was approved by City Council on September 26, 2006. It is comprised of a Vision Statement, Guiding Principles, and a Physical Framework as summarized below.

03.1 Vision Statement

The Quarters will be a vibrant, healthy community comprised of five distinct areas, each with its own character, activities, and feel, structured around a unique linear park system running through the neighbourhood that provides a defining element for the community. The neighbourhood is well connected to the downtown core and river valley, yet has a distinct image that identifies it as a unique place in the city. Streets are improved with limited through traffic, making the streets safe and inviting for pedestrians and bicyclists. Large city blocks are broken into smaller more inviting and walkable pieces. Activity abounds. There is a mix of parks, shops, employment, services, and housing. There is a diversity of ages, incomes, and cultures. Open space is surrounded by businesses and housing, creating a safe and inviting amenity year round. The Quarters is a place where community is important and pride and investment in the neighbourhood is evident.

03.2 Guiding Principles

The Guiding Principles as stated in The Vision are themes that were emphasized by the public throughout the visioning process. Initially developed after the discussions at the first public meeting, the principles evolved into statements about the preferred future of the area. The ideas expressed were categorized into concise statements about form, circulation, open space, community, economics, and assets and provided the basis for each ensuing step of the visioning process. The Guiding Principles are an important part of the Vision; they are its foundation and will continue to guide the ongoing implementation. These principles have been adapted here to reflect the current work.

Principle #1: Incorporate sustainable neighbourhood design principles in the Quarters.

Principle #2: Use the form of architecture and open spaces to create a distinctive image for the Quarters.

Principle #3: Improve circulation in and around the Quarters by strengthening connections to downtown, the river valley and adjacent neighbourhoods, and creating a variety of street types for the safe movement of pedestrians, cyclists, and vehicles.

Principle #4: Provide open space in the form of parks and plazas that will be physically accessible and useable throughout the year.

Principle #5: Develop a strong community composed of a diversity of people and uses, that is respectful and safe.

Principle #6: Invest economically in the Quarters, developing public amenities and a variety of housing types and styles.

Principle #7: Take advantage of the assets of the Quarters.

03.3 Physical Framework

The Physical Framework described in The Vision is derived from the Guiding Principles and is made up of five components, which are The Quarters, The Armature, Hierarchy of Streets, Rescale the Grid, System of Parks and Paths, and “Pulse Points.” Each of these layers builds upon one another and work together.

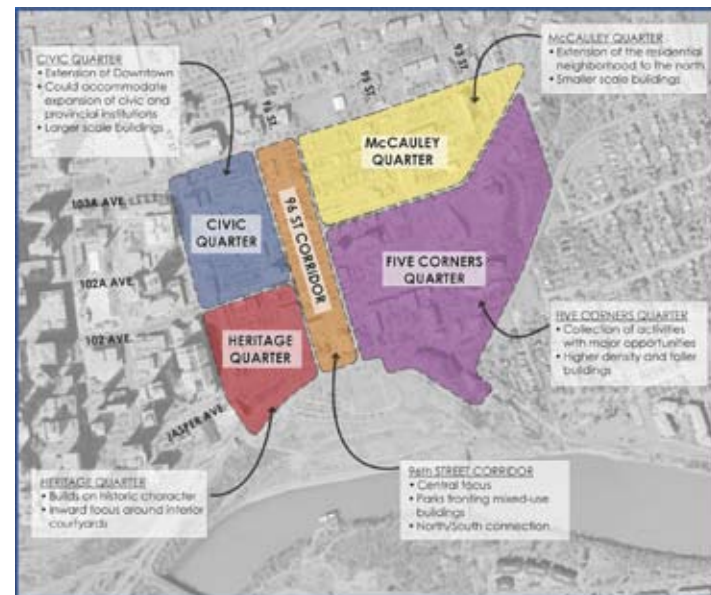


Fig. 3-1 The Quarters character areas as stated in the Vision.



Fig. 3-2 The Armature as stated in the Vision.

The Quarters

The Quarters are districts of special and distinct character within the area (Fig. 3-1). The land uses, building types and heights, open spaces, and special streetscaping enhance each Quarter’s unique character. As a whole, The Quarters focuses on mixed-use development containing residences, businesses, offices, and parks while promoting an emphasis on pedestrian activity.

- The Civic Quarter is an extension of the downtown that accommodates civic and provincial institutions with residential development above.
- The Heritage Quarter builds on the historic character of the area and the importance of preserving buildings with historic significance. New development complements the historic surroundings.
- McCauley Quarter is a continuation of the residential area to the north. Smaller scale buildings occupy this area.
- The Five Corners Quarter is predominantly residential with higher densities and taller buildings. The core of this quarter is the intersection of 95 Street and Jasper Avenue.

The Armature

The term ‘armature’ is defined as a framework on which a sculpture is molded or the central core of an electric motor around which everything spins. These analogies are particularly significant since the Armature is the framework upon which The Quarters is built. It is the central focus for the area and is planned to be a series of linear parks with complementary mixed-use development fronting the park along 96 Street from 103A Avenue to Jasper Avenue (Fig. 3-2). It provides a major north-south connection from the river valley to the area north of The Quarters.

Hierarchy of Streets

The organization of the various modes of transportation creates different functions for streets, avenues, and alleys. While some streets remain key traffic thoroughfares, others are transformed into multimodal or pedestrian-oriented streets (Fig. 3-3). Jasper Avenue and 103A Avenue continue to be the main



Fig. 3-3 The hierarchy of streets as stated in the Vision.



Fig. 3-4 Rescaling the Grid as stated in the Vision.



Fig. 3-5 The system of parks and paths as stated in the Vision.



Fig. 3-6 The “Pulse Points” as stated in the Vision.

traffic boulevards in this area with the highest volumes of traffic. 95 Street and 97 Street are multimodal streets. 102A Avenue is the major transit street of the area connecting the plan area with Downtown. 101A Avenue and 103 Avenue are designated as the pedestrian oriented streets in the area. Arterial streets are located in the southern portion of The Quarters and include Grierson Hill Road, Rowland Road, and Alex Taylor Road.

Rescale the Grid

Rescaling the street grid creates a new connectivity of roads, paths and open space and a more intimate scale for pedestrians (Fig. 3-4). By breaking up large blocks in The Quarters, more opportunities are created for north south access while adding opportunities for active corners and businesses. Smaller blocks also provide for easier land consolidation and development.

System of Parks and Paths

The Quarters will see a multitude of new open spaces, parks, plazas, and courtyards that are entirely interconnected through a network of north-south and east-west access routes (Fig. 3-5). New squares may be located in association with rescaling the grid in the Civic and Heritage Quarters. The Armature features linear park blocks with associated complementary development opportunities stretching from 103A Avenue to the river valley. At the south end of the Armature is a promenade that overlooks the river valley and Louise McKinney Riverfront Park. Two intersections, Jasper Avenue/ Armature and Jasper Avenue/95 Street form important focus points. Various pocket parks can be spread throughout The Quarters.

Pulse Points

“Pulse Points” are areas in The Quarters with immediate development potential (Fig. 3-6). The Five Corners intersection is one such location. With the proper infrastructure upgrades surrounding the junction, the adjacent properties have the highest development potential in The Quarters at this time. Other “Pulse Points” in the Heritage and Civic Quarters benefit from current development and proximity to downtown and have immediate potential for more development activity.

03.4 Sustainable Urban Design

Architects and urban designers have a responsibility to shape better cities, neighbourhoods, ensembles and buildings that go beyond reducing harm to having a positive impact on their environment. To this end the Sustainable Urban Design Practices listed here will have a great influence on development in The Quarters. These practices embrace three components of sustainable urban design: social, economic and environmental principles.

To date, Edmonton's predominant form of growth is a continuous outward expansion of development accompanied by an ever-increasing need for more motorized transportation. Edmonton has one of the lowest densities of any major North American city. With a population of 730,000 occupying 69,980 hectares it has a density of 10.4 inhabitants per hectare. New York City has a population of 8,200,000 on an area that is less than 20% larger than Edmonton. New York's density of 99 inhabitants per hectare is almost 10 times more than Edmonton's!

03.4.1 Density

The focus of the sustainable urban design philosophy in The Quarters is on density. Density can provide a diversity of uses and housing types, with a diverse population. Density can support the growth of local and new businesses and animate the public realm. Density promotes walkability and public transit use and can reduce the use of cars. Dense urban fabrics can create synergy in energy conservation and energy production, limit water use and optimize water reuse.

Treating land as a valuable resource is a very important part of green urban design. By intensifying urban areas such as The Quarters urban sprawl can be reduced. This preserves open space and agricultural land, and reduces the cost of building and maintaining infrastructure for the City. Density is one of the most significant overarching principles of a sustainable city. This Urban Design Plan proposes a future population for The Quarters that will set a new

case study:

On-site Sewage Treatment & Water Use Reduction

Dockside Green, Victoria, BC

http://docksidegreen.com/index.php?option=com_frontpage&Itemid=1

100% of Dockside Green's sewage will be treated on-site. Treated sewage will be used for flushing toilets, for irrigation and in the development's water features. The combination of this water cycling system and the universal installation of low-flow fixtures and appliances throughout the development will reduce potable water use by 56%, reduce operating costs by 50%, and provide an exemption from municipal sewage charges. Excess heat recovered from processing will be used to heat buildings, and excess treated water will be sold to local customers for industrial use. The savings from Dockside's facility are expected to exceed the costs of on-site treatment.

facts:

GREENHOUSE GAS REDUCTION TARGETS

http://www.architecture2030.org/2030_challenge/index.html

The 2030 Challenge asks the global architecture and building community to adopt the following targets:

All new buildings, developments and major renovations shall be designed to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.

At a minimum, an equal amount of existing building area shall be renovated annually to meet a fossil fuel, GHG-emitting, energy consumption performance standard of 50% of the regional (or country) average for that building type.

The fossil fuel reduction standard for all new buildings shall be increased to:

60% in 2010

70% in 2015

80% in 2020

90% in 2025

Carbon-neutral in 2030

These targets may be accomplished by implementing innovative sustainable design strategies, generating on-site renewable power and/or purchasing (20% maximum) renewable energy and/or certified renewable energy credits.

benchmark for Edmonton.

Policies and incentives for sustainable design set by the City of Edmonton form the framework within which The Quarters can develop in a healthy way. The following urban design practices should be employed in The Quarters.

03.4.2 Sustainable Urban Design Practices: Social

- Encourage intergenerational contact and community life. Welcome all ages from infants, to the elderly through the design of buildings and public spaces.
- Design buildings and public space according to the tenets of Universal Design to improve accessibility and encourage exercise and physical activity for people with a range of physical abilities. Municipal park lands will be purchased on an opportunity basis.
- Support conditions for well-being and mental health such as natural areas, quiet zones, a strong community, programs that focus on health rather than illness, social support, and access to safe reliable housing.
- Create clear connections to the local environment, in particular the North Saskatchewan River Valley to facilitate the freedom of movement between the natural environment of the river valley and the urban districts of The Quarters.
- Enhance open space and parkland by way of a network of community gardens and edible landscapes that will contribute to the beauty of the local environment, improve urban ecology, contribute to local food production, and provide informal gathering places.
- Provide amenities such as water fountains and public washrooms for visitors to the area and transient people. Provide a drop-in centre so that the transient population has a place to go during daytime hours when shelters are closed.
- Incorporate conditions and spaces for physical activity such as safe and convenient stairwells, play areas and exercise facilities.
- Encourage active transportation and recreation, providing opportunity for walking, cycling, and outdoor sporting activities along parks, paths and transportation routes.

- Create convenient transit links to ETS bus and LRT systems to encourage people to take public transportation to and from The Quarters area, and to strengthen the integration and physical connections between The Quarters, Downtown, and Greater Edmonton. Construct dedicated lanes to increase punctuality and efficiency of buses.
- Respect the history of the area by improving existing buildings, and honouring the cultural groups that have passed through and continue to live in this area.

03.4.3 Sustainable Urban Design Practices: Economic

- Create mixed-use areas that encourage active street-life and a variety of activities throughout the day. This ensures ‘eyes on the street’ and enhances safety.
- Design housing to support diversity, quality and affordability. Housing should be designed to accommodate people of diverse income levels, age, cultures, and family size.
- Support economic diversity through a range of employment and shopping opportunities for visitors and residents of all income levels.
- Encourage green business practices and social entrepreneurship among commercial tenants in order to foster local employment opportunities, support programs that benefit the community, support the market for emerging sustainable technologies, and offer a variety of socially and environmentally responsible goods and services.

case study: Eco-Restoration & Community Space

401 Richmond, Toronto, Ontario

<http://www.401richmond.net/building/eco.cfm>

401 Richmond is a historic warehouse in downtown Toronto that is now home to 138 visual artists, not-for-profits and micro-enterprises. Originally site of the Macdonald Manufacturing Company, the building was constructed from 1899 through 1923. In 1994 the property changed hands and was transformed into a fully-leased thriving cultural and commercial centre. The architects added green elements like vertical gardens, green roofs, biowalls, and green parking facilities. The roof garden provides a natural setting that is open to the public and is frequently used as an informal gathering space.

case study: Urban Agriculture

Red Hook Community Farm, Brooklyn, NY

<http://www.seasonalchef.com/farmredhook.htm>

Brooklyn's Red Hook community farm is an inner-city community garden that grows produce for local consumption. Produce harvested from the garden is sold weekly at Red Hook Farmers Market. The market supplies fresh produce in an area that has little access to fresh food. This garden and enterprise is an example of the multitude of benefits of urban agriculture: health promotion, community building, improved ecology, education and job creation.

03.4.4 Sustainable Urban Design Practices: Environmental

Use solar access and shading in building design and orientation in order to maximize natural illumination and facilitate passive solar heating and ventilation.

Include energy efficiency measures and furnish buildings with efficient fixtures and appliances to reduce energy use. Implement heat recovery systems in new buildings.

- Encourage developers to adopt the 2030 Challenge (www.architecture2030.org) and be carbon neutral (use no fossil fuel, greenhouse gas emitting energy to operate) by 2030.
- Incorporate renewable energy technologies such as solar panels, photovoltaic arrays and wind turbines, to ideally become net energy producers rather than consumers. Excess energy produced by renewable systems can be redirected and sold back into the electricity grid.
- Consider district heating systems and neighborhood energy utilities for larger developments in the Quarters.
- Use LED lighting for City streetscapes.
- Incorporate green roofs into the design for new buildings in order to enhance local ecology, offer green space for recreation and community gathering, accommodate urban agriculture, provide habitat for native species and reduce storm-water runoff.
- Clean and control stormwater volumes to reduce runoff and protect the ecological balance of the river and valley. Management techniques include maximizing vegetated areas and permeable surfaces, rain gardens to retain and clean runoff water, green roofs, and cisterns to store rainwater for reuse.

- Reduce potable water consumption in buildings by installing efficient fixtures and systems to recycle greywater and rainwater for reuse in irrigation and toilets.
- Diversify the plant environment with native and drought resistant vegetation in order to mimic and enhance natural biodiversity, prevent outbreaks such as Dutch Elm Disease, and reduce or eliminate irrigation.
- Design buildings to improve indoor air quality and to create quality interior environments. Provide natural light and operable windows to allow natural ventilation and healthy environments for all inhabitants and employees.
- Where possible naturalize the indoor environment with indoor vegetation and using technologies such as green walls (vertical indoor gardens) that purify the air, are aesthetically appealing, and reinforce connectivity between indoors and outdoors.
- Specify ecologically sustainable and non-toxic building materials such as FSC-certified wood (Forestry Stewardship Council), recycled, salvaged, low-VOC (Volatile Organic Compounds) and rapidly renewable materials.
- Use regional materials, meaning materials that haven't traveled more than 800km by truck or 2400km by rail.
- Use as many rapidly renewable materials as possible. This refers to materials that are harvested every 10 years or less such as straw, hemp, flax, or bamboo among others.
- Use materials that have a low embodied energy. These require less total energy to extract, manufacture, transport, construct, maintain and dispose of through the life-cycle of the material.
- Reduce construction and demolition waste through proper management. Building materials should be salvaged, re-used and recycled to divert waste and mitigate impacts associated with the extraction and production of new materials.

case study:

Renewable Energy

Drake Landing Solar Community Okotoks, Alberta

<http://www.dlsc.ca/about.htm>

The Okotoks development is a 52-house neighbourhood that uses solar energy to meet its heating and hot water demand. The community is heated by a district system designed to store abundant solar energy underground during the summer months and distribute the energy to each home for space heating needs during winter months. The system consists of an array of 800 solar panels located on garage roofs throughout the community that generate 1.5 mega-watts of thermal power during a typical summer day. 90% of space heating requirements are fulfilled by way of stored solar heating.

case study:

Net-Zero Buildings

Southeast False Creek, Vancouver, BC

<http://vancouver.ca/ctyclerk/cclerk/20070227/documents/a8.pdf>

A net-zero building is being constructed to house low-income seniors. The building has a minimum target of LEED Gold certification. This public-private development will produce as much energy as it consumes, maximize occupancy health and comfort, and be used to educate the public about sustainable living choices. The building energy will be supplied and managed through rooftop photovoltaic arrays, passive design, water, heating and electricity metering and high-efficiency appliances.

- Design buildings that are durable and adaptable to changes in configuration so that they can accommodate different uses over their lifespan or be deconstructed and reused in new construction. Design strategies such as moveable walls and under-floor air systems allow easy changes of floor layouts and can significantly reduce costs associated with multiple building uses.
- Include bicycle storage facilities in all buildings, as well as showers and change rooms for bicycle commuters in commercial buildings.
- Construct environmentally appropriate parking structures. Preferred parking should be provided for car-share and alternative-fueled vehicles. A comprehensive parking management program should ensure sufficient on and off street parking.

04. The Quarters Urban Design Concept

The Quarters area has great potential: it is directly adjacent to Edmonton's vibrant downtown core; there is an immediate connection with the river valley with its recreational opportunities and stunning panoramas; there are wide streets offering space for new pedestrian paths and the reduction of vehicular lanes. In addition, generous open spaces and vacant properties are waiting redevelopment. Neighbouring areas are a magnet for government, business, retail and commerce with a variety of employment opportunities. There is an abundance of sunlight, ample servicing and dramatic vistas. There are heritage buildings anchoring the area, providing it with a sense of history and place. There is a good mix of public transportation options and it is close to desirable residential neighbourhoods.

Drawing on this potential has been one of the driving forces behind the Urban Design Plan. Although The Quarters will be an ensemble of distinct districts (Fig. 4-1), certain design elements of urban form, streetscape improvements and land uses will unify the neighbourhood.

Striving for excellence is what drives the architectural and urban design in the Quarters. This will be the area where Edmonton finds a new answer to its car dependency: high density living, working and playing on the edge of the river valley in a well designed and exciting walkable and bikable community where all the necessary amenities are within a hands reach.

This will be the area where Edmonton shows it is the proud, dynamic and modern Capital of Alberta. Stale retro and faux architecture which has been rampant over the years will not be seen in The Quarters. This is one of the important energy centers of North America. That energy needs to translate into an energetic original design culture. Here in The Quarters, designers are encouraged to embrace a new Nordic Architecture that is highly contemporary yet warm; high-tech yet humanistic. New materials and green technology combined with great design will bring Edmonton forward as the North American Gateway to the North not unlike Helsinki has managed to be in Europe.



Fig. 4-1 The boundary of each Quarter and development concept

04.1 Urban Form Characteristics

Future built form in The Quarters will be more a reflection of the European streetscape than a typical North American city. Buildings will be built right up to one another with limited separation spaces at ground level. This creates a continuous street edge and avoids the generation of small wasted spaces between building footprints. In a cold climate such as Edmonton's it also reduces heat loss - improving energy efficiency. There will be little or no front setback in order to better frame pedestrian spaces. The McCauley Quarter and some freestanding towers in the northeast of the Five Corners Quarter are the only exceptions to this unbroken frontage.

Architecture in The Quarters will be of high quality and suited to a northern urban environment. Lasting materials and design will consider the long-term use of each building and enjoyment over time. Edmontonians will want to continue living and working within their walls for generations. There will generally be a minimum 3 storey height required and up to 6 storeys may be built before tower guidelines apply. Towers will be permitted in the Civic and Five Corners Quarters and will have a 3 storey podium as their base. A small area in the northeast of The Quarters will allow freestanding towers with no base building.

04.2 Streetscape Improvements

Sidewalks will be widened and carriageways reduced on almost all roads through The Quarters. The pedestrian will be prioritized over vehicular traffic. The design of safe passage for bicycles and convenient access to transit will foster the use of alternative modes of travel. Street trees will line every sidewalk, bringing lush greenery to a densely populated urban neighbourhood.

The commercial uses that will dominate the streetscape throughout The Quarters will be welcomed into the public realm by allowing spill over into and use of the sidewalks thus enlivening the neighbourhood. In mainly residential zones like the McCauley Quarter grass boulevards next to the sidewalk will help to differentiate these areas from the more urban districts.

Rear lanes will be developed to encourage more pedestrian access and use. Specific lane enhancements will be determined as redevelopment occurs.

04.3 Land Uses

Mixed-use buildings will be encouraged throughout The Quarters. The typical land use scenario will be commercial or office uses on the first to third floors and residential uses above. Hotels and the occasional office or civic buildings are the exception to this, as they will likely not include residential components. Public space is also an important component of The Quarters Urban Design Plan. Formal and informal gathering places will be created throughout the community.

04.4 Development Guidelines and Incentives

In order to create the high-density, sustainable community envisioned, The City of Edmonton is instituting incentive zoning in The Quarters. Building heights, setback and façade stepbacks and Floor Area Ratio (FAR) shape the built form and are valuable commodities that are used to reward developers for including certain features in new development. These features include the sustainable design, green initiatives, public art, publicly accessible open space, and affordable housing to increase the appeal of The Quarters as an attractive and desirable place to live.

Each Quarter has base development guidelines pertaining to FAR, building height, and setbacks, which are described in section 5.0 Urban Design Concept – Quarter by Quarter. Incentive zoning can then be used to achieve additional FAR and building height in exchange for including features from the Sustainable Development Standards. These standards and their application are described in section 6.2 Density Encouragement.



Fig. 4-2 A bird's eye view of the Armature

04.5 Key Urban Design Features of The Quarters

The following elements are key features of The Quarters urban design. These elements address several principles and are therefore referenced throughout the discussion of specific quarters and neighbourhood-wide design considerations that follow in sections 5.0 and 6.0.

04.5.1 The Armature

The Armature is the central focus for the area and is planned to be a linear park along 96 Street from 103A Avenue to Jasper Avenue with complimentary mixed-use development fronting it. The quality and feel of the Armature will be unique in Edmonton. This wide linear park will stitch The Quarters together and link residential communities to the north of The Quarters with the river valley. The width of the park space will range from 15 to 50 meters depending on the built form along its eastern edge. Large boulevard trees will provide shade and a canopy of green that envelops the streets. A balance of green space and hardscape will be developed as the community grows and sculpts the space to meet their needs (Fig. 4-2).

04.5.2 Scrambled Intersection Crossing

A wide “scrambled” pedestrian crossing at 96 Street and Jasper Avenue will connect the Armature north and south of Jasper. The crossing will be clearly defined with signage, lighting, and paving. A pedestrian “scramble” stops all vehicular traffic simultaneously through coordinated traffic signals. Pedestrians then have exclusive access to the intersection and can cross the intersection either way or even diagonally (Fig. 4-3). This essentially extends the pedestrian domain to the top of the riverbank.

04.5.3 Mid-block Pedestrian Street to “Rescale the Grid”

To rescale the street grid into smaller blocks, a mid-block pedestrian street will be created through the Heritage and Civic Quarters. This passageway will break up the large blocks and introduce a smaller intimate feel. A more manageable scale for foot traffic will be created, encouraging non-motorized transportation and enhancing the permeability of the neighbourhood. Townhouses with direct individual entrances will line the mid-block pedestrian street, forming a residential urban oasis that is new to Edmonton. Where the mid-block pedestrian street widens commercial uses could be accommodated and gathering spaces created. Landscaping on both public and private property will tie the public and private realms together yet create a defined edge to the public domain. Spaces will be created for play, for gathering, and for enjoying a solitary moment (Fig. 4-4).

04.5.4 Five Corners Arcade

The junction of 95 Street, Jasper Avenue, and 102 Avenue creates an unusual intersection that will be transformed into a circular public space lined with a monumental arcade (Fig. 4-5). The inner radius will measure 30m from the intersection of Jasper Avenue and 95 Street. The outer radius will be 35m. A five-meter setback for the arcade will apply to the first two floors (9m) of buildings surrounding the arcade. The arcade will tie the intersection together as one urban space. The various buildings surrounding the intersection will create a horizontal alignment through the arcade. The architectural treatment of the buildings may vary but consistency in the rhythm and proportion of the arcades is important. The arcade will be busy with shops, restaurants, galleries and cafés. Ground floor activity will spill out into the arcade, which is alive throughout the year.



Fig. 4-3 Rendering of scrambled pedestrian intersection



Fig. 4-4 Mid- block Pedestrian Street to “Rescale the Grid”

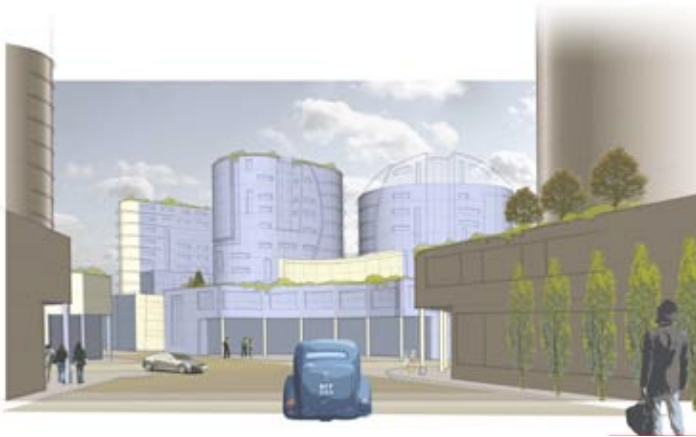


Fig. 4-5 The Five Corners' circular arcade

04.5.5 Funicular and/or Urban Balcony

A funicular or an urban balcony will transport pedestrians and cyclists over Grierson Hill Road and into Louise McKinney Riverfront Park, enhancing access from the Armature to the river valley. A funicular is a type of cable railway used to transport passengers and goods up and down a very steep slope. The urban balcony envisaged to be a large cantilevered deck off the top-of-bank, extending over Grierson Hill Road allowing users to experience a bird's-eye-view of the North Saskatchewan River and river valley (Fig. 4-6). A spiraling ramp and elevator could transport people traveling between The Quarters and the valley. Both the funicular and the urban balcony have the potential to form an architectural gateway between the southern end of the Armature, Louise McKinney Riverfront Park, and the entire system of parks.



Fig. 4-6 Artists rendering of the Urban Balcony

05 Urban Design Concept – Quarter by Quarter

05.1 Heritage Quarter

The purpose of the Heritage Quarter is to preserve and enhance this special historic area and promote it as a tourist destination. Its urban character is derived from the heritage buildings in this area. Among such structures that are important to preserve are the Goodridge Block, Gem Theatre, Ernest Brown Block, Pendennis Hotel, Hub Hotel, Gibson Block, and Chinatown Gate. See 2.2 entitled Heritage Buildings for their locations. These remaining heritage buildings are almost all located in the southern block of the Quarter. While none remain in the northern portion of the Heritage Quarter, new development will nevertheless be designed with a heritage character. Designers are challenged to take inspiration from the past into new, creative and present-day expressions. The Heritage Quarter reiterates the quality of the past, craftsmanship, human scale, attention to detail, a pedestrian orientation, a mixture of uses and a high density without towering buildings. The Heritage Quarter will have a strong and recognizable identity.

Urban Form Characteristics

The Heritage Quarter will have a definite downtown feel. Grandeur, symmetry and a somewhat monumental approach, both in urban and architectural form, will be tangible yet the scale will be friendly and human. Various people with an interesting mix of lifestyles will live in this area. The ground floors of buildings will be programmed for various non-residential uses; above the main floor will be predominantly rental apartments, condominiums and lofts.



The characteristics of new buildings should be inspired from the past



Use specific design options to restore or rehabilitate existing buildings



RECYCLING RECEPTACLES



BOLLARD OPTIONS



LOCALLY SOURCED TREE GRATES



CONTEMPORARY SAW CUT CONCRETE WITH PAVING STONE INSERT



Fig. 5-1 Proposed streetscape furnishings for The Quarters.

The Heritage Quarter will be a magnet for tourists and Edmontonians alike. The view over the river valley, cafés, restaurants, shops and the Ukrainian Canadian Archives and Museum of Alberta, will encourage people to stroll along Jasper Avenue. Through a small mid-block alley Jasper Avenue will connect with the north/south mid-block pedestrian street that rescales the grid to the north of 101A Avenue. Setbacks along 101A Avenue that draw people into the mid-block pedestrian street will create a small public space with cafés, restaurants, shops and other amenities.

The architectural character of the heritage buildings will be the inspiration for new buildings in this quarter. For the architectural form this indicates that buildings will have flat roofs with no cantilevered balconies on the front of the building. The ground floors of the buildings will be transparent with high ceilings and programmed with commercial, retail and entertainment uses to maximize activity in the area. The top of the façades will have a pronounced and detailed cornice without being retro in style.

New developments are encouraged to use materials such as brick, natural stone, glass, wood and metals like zinc and copper. Stucco, vinyl and composite materials are discouraged. Art (murals, sculpture, mosaics, reliefs) incorporated into building façades is encouraged as well as the naming of each building. Signage will be strictly limited in size and placing. Business owners are encouraged to work together with a graphic designer.

Streetscape Improvements

Streetscapes in the Heritage Quarter will be well defined. Jasper Avenue contributes strongly to the identity of this area. Wide sidewalks on the north side of Jasper will create a sunny pedestrian space with ample room for businesses to spill out onto the sidewalk for terraces, merchandise, sidewalk cafés, and other uses. Pedestrian connections across Jasper Avenue will be enhanced through the wide scrambled crossing at 96 Street and Jasper Avenue that will connect the Armature north and south of Jasper. The crossing will be clearly defined with the use of signage, lighting, and paving. Streetscape elements and furniture system for Jasper Avenue will be expanded through this area. Examples of potential paving materials, furnishings and lights for the rest of the Heritage Quarter is shown in Figure 5-1.



New developments are encouraged to use honest materials and creative parameters, as well as incorporate art into façades.



Fig. 5-2 Rice Howard Way

101A Avenue will transform from its present layout to a pedestrian priority street similar to Rice Howard Way (Fig. 5-2). Vehicular traffic will be limited to one lane with one-way traffic flowing east. Space for parallel parking will be included south of this one-way traffic lane (Fig. 5-3). No buses will drive through this pedestrian avenue. On the sunny northern side of the street a 10-meter wide space will be reserved exclusively for pedestrians to walk, sit, gather, and play. One-storey structures, such as screened porches, sunrooms and or conservatories, could be extended into the public realm along the north side of 101A Avenue. Private use of this public right-of-way can be accommodated through agreement with the city.

The mid-block pedestrian street to rescale the street grid will break up the large blocks and introduce a small intimate feel. A more manageable scale for foot traffic will be created, encouraging non-motorized transportation and enhancing the permeability of the neighbourhood. Townhouses with direct individual entrances will line the mid-block pedestrian street, forming

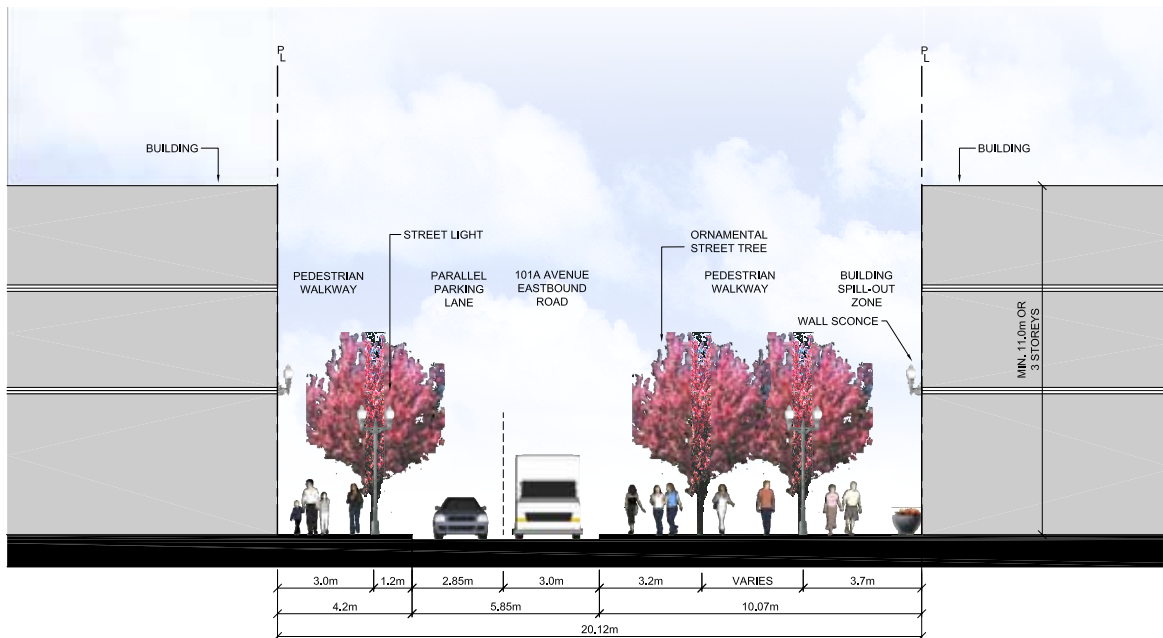


Fig. 5-3 Section 101A Avenue

a residential urban oasis that is new to Edmonton. Where the mid-block pedestrian street widens, commercial uses could be accommodated and gathering spaces created. Landscaping on both public and private property will tie the public and private realms together yet create a defined edge to the public domain. Spaces will be created for play, for gathering, and for enjoying a solitary moment. Buildings will be setback to widen the sidewalk around the entrance to the mid-block pedestrian street on the north side of 101A Avenue, creating a small public gathering space.

The mid-block pedestrian street will be a continuous path within each block but may meander to the east or west between blocks. Widened rights of way in some areas will create larger gathering spaces and could open into small neighbourhood squares at various locations. Commercial and residential uses around these gathering spaces will be encouraged to flow out onto the pavement and interact with passers-by (Fig. 5-4).

Land needed for the creation of the mid-block pedestrian street will be assembled through collaboration with affected property owners and developers. The City may elect to purchase, lease, license or use other instruments to ensure public access through the mid-block pedestrian street and adjoining private lands is maintained. Current land owners adjoining the mid-block pedestrian street will be required to sell or dedicate lands needed for the public portion of the mid-block pedestrian street prior to issuance of a development permit for adjoining development projects.

The Heritage Quarter is an excellent place for public art. Because of the entertainment in the area, evening and night activity are likely to happen here. This will be the 24/7 area of The Quarters. Lighting the façades of heritage buildings will be encouraged, while avoiding light pollution by targeting lighting downward. Visually, 101A Avenue will connect the Heritage Quarter with the historic elements of the Five Corners such as the Hecla Block and the Grierson Centre.



Fig. 5-4 A rendering of 'Rescaling the Grid'

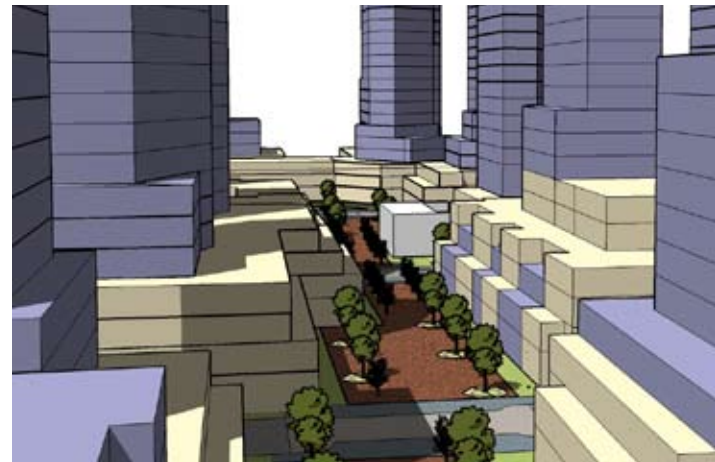


Fig. 5-5 A bird's eye view of 'Rescaling the Grid'



Architecture should provide space for an interesting mix of services and life styles

In harmony with the heritage inspired architecture in the area the components forming the streetscape will be small-scaled, solid, and intimate. Meaningful cultural histories can be made explicit in various elements such as tree grates, plaques, street signs, etc. Examples of potential paving materials and patterns, furnishing and lights are shown in Figure 5-1.

Numerous windows and doors along the sidewalk will promote interaction between the interior and exterior environments. This will enhance natural surveillance and the safety of the street. A minimum of 70% of the ground floor façade should be clear glazing. Corner lots will address the sidewalk along both edges with a consistent façade treatment. Corner entrances will be permitted. Building frontage for properties should be designed so as to break their appearance into 6-15-meter sections.

Land Uses

Mixed-use buildings in the southern portion of the Heritage Quarter will provide commercial and office space on the ground and lower floors with residential above. In the Heritage Quarter, a minimum 33% of FAR must be developed for residential uses. Ground floor residential or commercial may occur along 102 Avenue and the mid-block pedestrian street. The commercial uses on the ground floor of most buildings in this quarter will spill out into the public realm forming a continuous animated pedestrian space. The pedestrian feel will be maintained through architectural detailing.

The focal point at the heart of this quarter will be the public space along the north side of 101A Avenue that creates a linear urban room and draws people into the mid-block pedestrian street in the Civic Quarter.

Development Guidelines

Buildings in the Heritage Quarter must be developed to a minimum of 11m high (approximately 3 storeys) with a base FAR of 3.

Development between Jasper Ave. and 101A Ave. (Heritage Quarter Area 1) will be encouraged to build to a maximum building height of 23m high (approximately 6 storeys) or (Fig 5-6) with a FAR of 4.5. Development between 101A Ave. and 102 Ave. (Heritage Quarter Area 2) will be encouraged to build to a maximum building height of 50m high (approximately 15 storeys) with up to 7.5 FAR. Refer to Sustainable Design Standards (refer to The Quarters: Statutory Plan Overlay, Appendix II: Sustainable Development Standards). All mechanical equipment, including roof mechanical units will be integrated into the total building design and will be in addition to the stipulated building height.

Buildings facing the mid-block pedestrian street may combine varied architectural built forms ranging from townhouse style developments, stacked residential to walk-up and high rise podium style built forms. Height restrictions, setbacks and stepbacks will be required to allow light penetration into both the public spaces and the private dwellings (Fig. 5-7 and Fig. 5-8). The minimum height along the mid-block pedestrian street will be 11m. To encourage basement suites the main floor may be raised up to 1.2m above grade.

Setbacks and Stepbacks

Setbacks and stepbacks in the Heritage Quarter will enhance the particular heritage feeling of this quarter. The best way to do that is to require very little. With some exceptions most of the urban mixed use heritage buildings in Edmonton are between 3 and 6 storeys in height with a strong street presence. Good examples such as the Great West Saddlery Building, the Philips Lofts and the Armstrong Block can be found on 104th street. The urban form of these buildings can be characterized by a strong rectangular presence with hardly any articulation in massing. The beauty and appeal of these buildings lies in their proportions, materials and detailing.

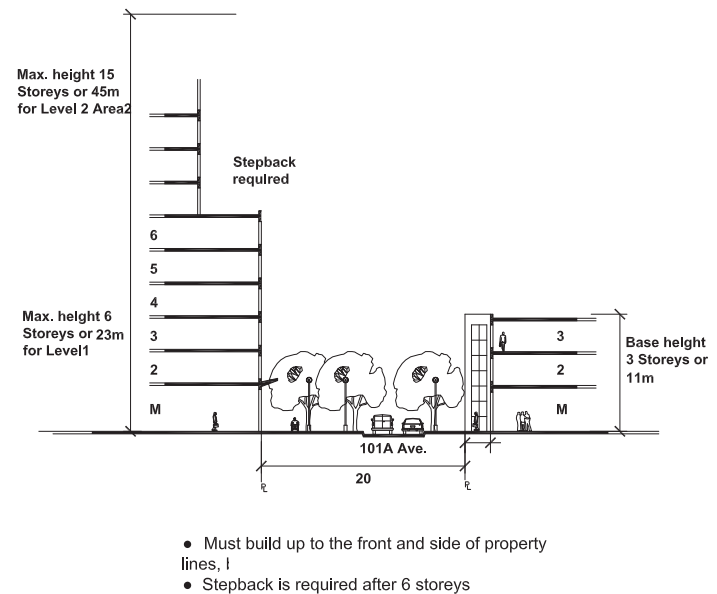


Fig. 5-6 Heights and Setback guidelines - Heritage Quarter

Fig 5-7 Section: Possible built form of Rescaling the Grid
- narrow portion

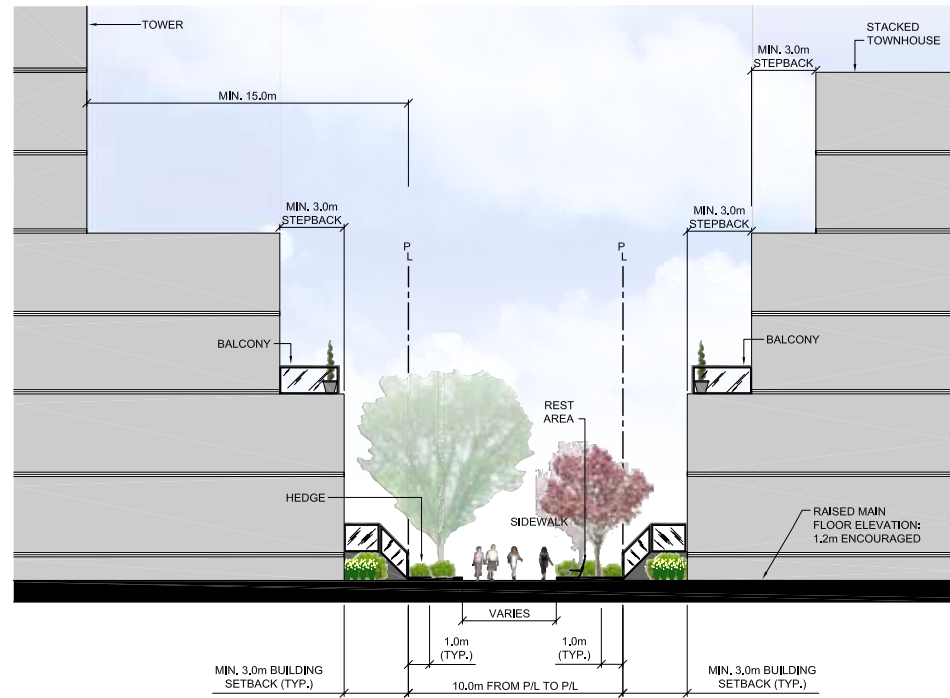
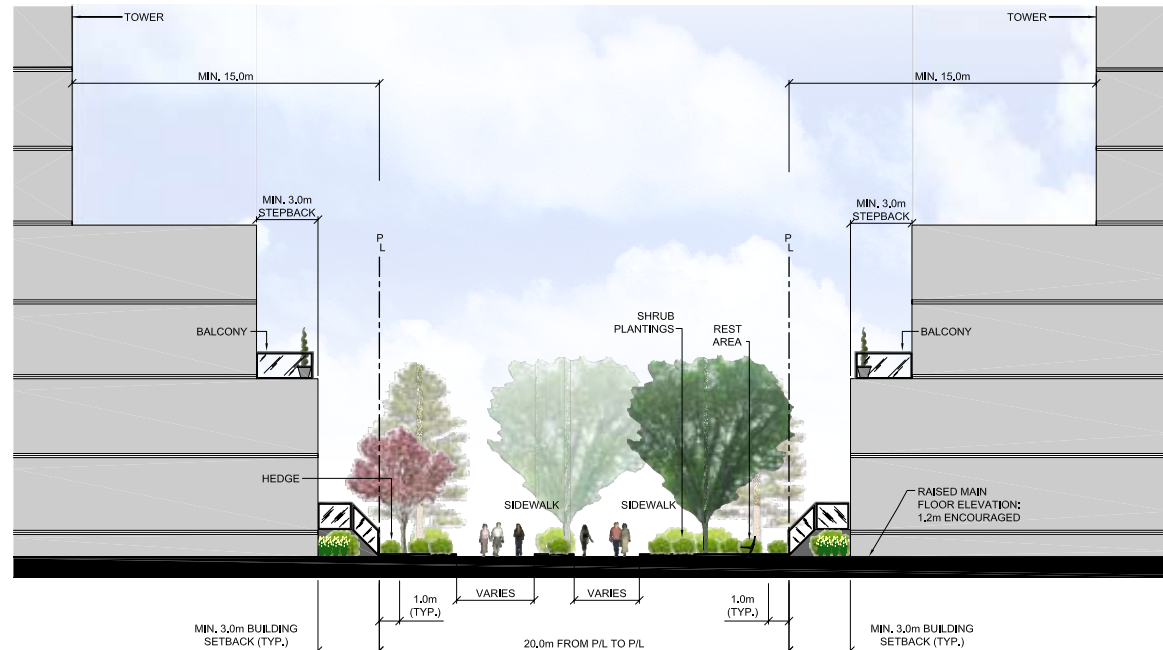


Fig 5-8 Section: Possible built form of Rescaling the Grid
- wide portion



Other heritage buildings elsewhere in the city such as ‘Parkview’ close to the Legislature Building, the ‘McLeod Building’ close to Churchill Square, The Revillon Boardwalk Building again on 104th street and the Strathcona Hotel on Whyte Avenue follow a similar architectonic archetype. All of these buildings are built to the front and side property lines with no setbacks and there are very few if any setbacks.

Likewise buildings in the Heritage Quarter are required to build up to the front and side property lines to create a continuous street front. Front and side setbacks are not encouraged but can be allowed to accommodate entrances and street/avenue related activities such as sidewalk cafés and architectural features and landscaping that will contribute to the historic character of the area. 101A Avenue is already made available to these uses so it is unlikely there is much need for this (Fig. 5-6)

Buildings in the Heritage Quarter do not require a lot of setbacks in order to maintain the distinctive ‘boxy’ presence that is one of the main characteristics of this quarter. So most of the buildings can go straight up to approximately six storeys. For the part of the Heritage Quarter where buildings can be higher than that a setback is required in order to articulate the ‘base’ massing.

With a ‘straight-up’ height like this the ratio of the right-of-way and the building height is approximately 1:1. For the Heritage area that is a perfect ratio.

For the mid-block pedestrian street setbacks and setbacks are in place to create a small-scaled pedestrian environment with as much light penetration as is reasonably possible and to create individual entryways, verandas and landscaping, and provide some privacy for residential developments that could front onto the mid-block pedestrian street. At locations where the mid-block pedestrian street intersects avenues and lanes, a substantial setback from these rights-of-ways will be required to create a sense of entry drawing people into the mid-block pedestrian street and creating a gathering place.

Even though there is no or a limited setback requirement for the lanes in the Heritage Quarter buildings are not encouraged to build up to the property lines. One of the attractive aspects of the lanes in heritage areas such as



A bird's eye view of potential urban form in The Quarters

parts of the Downtown and the Whyte Avenue area is that the lanes manifest as a 'found' space that doesn't appear to be designed or planned. A sort of natural growth has created an attractive random morphology of the 'backside' that is encouraged to continue. Preferably there are lots of stepbacks at the 'backside' as well. This adds to the desired random and 'messy' atmosphere described above. The Development Officer exercising discretion will ensure new developments are designed to compliment adjoining and surrounding architectural urban spaces.

Towers located in Heritage Quarter Area 2 will be sited judiciously in order to maximize view corridors at the upper floor level between towers, to the river valley and for solar gain (Fig. 5-5).

05.2 Civic Quarter

The purpose of the Civic Quarter is to accommodate civic institutions, medium and high-density residential development and commercial uses. The urban character of the Civic Quarter will be a continuation of the character of Edmonton's Arts District located immediately to the west across 97 Street. It may be home to various Provincial, Municipal and private offices and institutions. The majority of the jobs in The Quarters will be located in the Civic area. Most people will bike, walk, or take the LRT to work.

Urban Form Characteristics

The Civic Quarter will be a mixed neighbourhood with a strong residential component. A new form of downtown living will be found here with a mix of uses



Townhouse style residences will line the mid-block pedestrian street

within each building. Horizontal layering with ground floor commercial, a mid section with a few floors of offices, and a top section with a substantial number of residential floors is encouraged. The Civic Quarter will be a high-density area. A break in the building fabric will be created approximately mid-block by the north/south mid-block pedestrian street (Fig. 5-9). Varied architectural built form along this public space will create a feeling of ownership and increase public safety.

Architectural style in this quarter will have an international, modern and high-tech touch. Materials such as glass, concrete, steel, aluminium, titanium, composites and ceramics should predominate. There will be a strong orientation towards the future, metropolitan life-styles, experimentation with emerging technologies, and high performance green buildings. The physical form will be urban, glossy, surprising and refined.

Streetscape Improvements

A primary circulation feature of the Civic Quarter will be the mid-block pedestrian street running the length of the area from Jasper Avenue to 103A Avenue. This passageway will break up the large blocks and introduce a small intimate feel by rescaling the grid. A more manageable scale for foot traffic will be created, encouraging non-motorized transportation and enhancing the permeability of the neighbourhood. Unique residential design can direct individual entrances to the mid-block pedestrian street, forming a residential urban oasis that is new to Edmonton. Where the mid-block pedestrian street widens commercial uses could be accommodated and gathering spaces created. Landscaping on both public and private property will tie the public and private realms together yet create a defined edge to the public domain. Spaces will be created for play, for gathering, and for enjoying a solitary moment. Examples of potential paving materials, furnishings and lights are shown in Figure 5-1.

The mid-block pedestrian street will be a continuous path within each block but may meander to the east or west between blocks. Widened right of ways in some areas will create larger gathering spaces and could open into small neighbourhood squares at various locations. Commercial and residential uses around these civic gathering spaces will be encouraged to flow out onto the pavement and interact with passers-by (Fig. 5-4).



An international, modern and high-tech is encouraged for architecture in the Civic Quarter



A mix of uses within each building is encouraged



Fig. 5-9 Examples of possible routes for 'Rescaling the Grid'

Land needed for the creation of the mid-block pedestrian street will be assembled through collaboration with affected property owners and developers. The City may elect to purchase, lease, license or use other instruments to ensure public access through the mid-block pedestrian street and adjoining private lands is maintained. Current land owners adjoining the mid-block pedestrian street will be required to sell or dedicate lands needed for the public portion of the mid-block pedestrian street prior to issuance of a development permit for adjoining development projects.

Traffic along 102 Avenue will remain eastbound only. Sidewalks will be widened and vehicle lanes narrowed slightly to emphasize the pedestrian realm. Ornamental trees will line both sides of the street (Fig 5.-10). Harbin Gate announces entry into The Quarters.

A dedicated two-way bicycle lane and pedestrian boulevard on 102A Avenue will give new character to this important public transit street (Fig. 5-11). On-street parking for private vehicles will be removed to create two lanes for one-way westbound buses and private vehicle traffic. One of the lanes will accommodate layover buses. The vegetated boulevard on the north side of the avenue will separate bicycle traffic from motorized traffic and provide a loading platform for transit users.

Options exist for the redevelopment of 103 Avenue. Scenario 1 could reshape the avenue into a functional and modern tree-lined street with wide sidewalks, two opposing traffic lanes, and on-street parking on both sides (Fig. 5-12). Scenario 2 could close the avenue to traffic creating a large urban park within the right-of-way. Adjoining developments could collaborate on best use of these closed right-of-way, i.e., common u/g parking and servicing, area security, common energy and heating plants, inter-development circulation networks etc. Through collaborative processes, these options will be explored to determine the go forward solution.

Throughout the Civic Quarter, windows and doors along the sidewalk will promote interaction between the interior and exterior environments. This enhances natural surveillance and the safety of the street. A minimum of 70% of the ground floor façade for commercial uses will be clear glazing. Corner lots

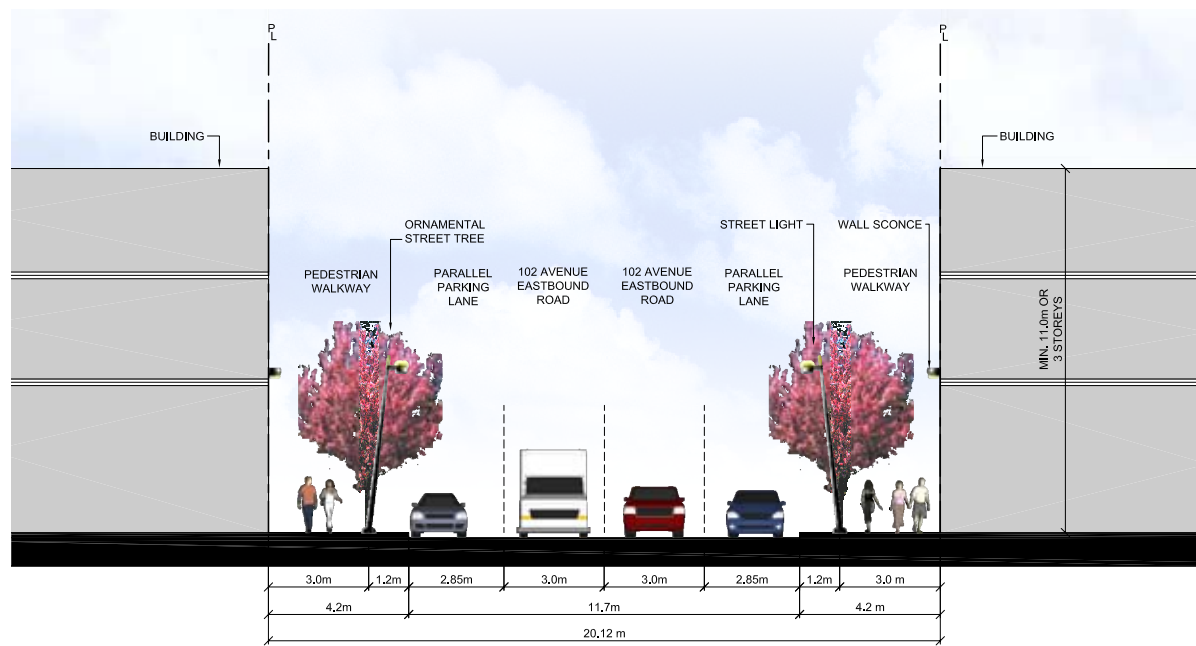


Fig. 5-10 Section: 102 Avenue

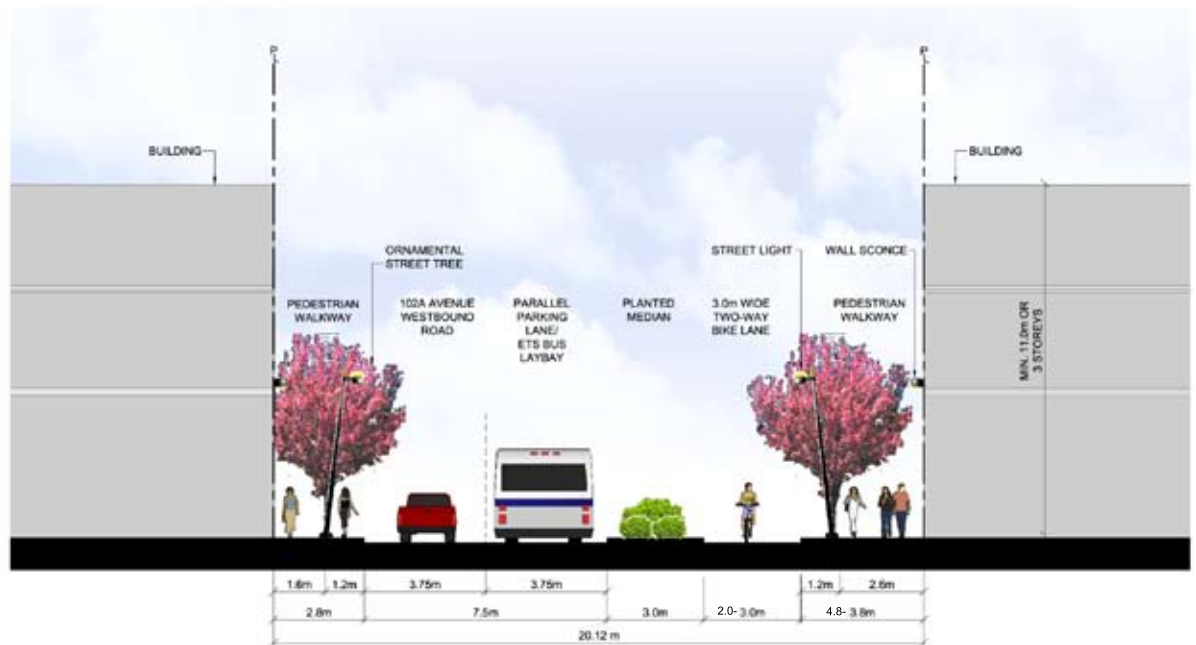


Fig. 5-11 Section: 102A Avenue

will address the sidewalk along both edges with a consistent façade treatment. Building façades should be designed so as to break their appearance into 6-15 meter sections.

Like the architecture in the area, the components forming the streetscapes in the Civic Quarter will be simple, subtle, functional, modern, geometric, clean, light and high-tech. Examples of potential paving materials, furnishings and lights are shown in Figure 5-1.

Land Uses

The Civic Quarter will be an extension of downtown and allow for the expansion of civic and provincial institutions and a mix of commercial, hotel, office, and residential uses.

The mixed use of the area will be expressed in horizontal layering of most of the buildings. Ground floor commercial with a mid section of one or several floors of offices and a number of residential floors on upper levels is the preferred model. Wherever space permits, ground floor commercial use will be encouraged to spill out into the public realm. Major forms of residential living will include rental apartments, condominiums, lofts and townhouses. In the Civic Quarter, developments do not require a residential component. This is to encourage development of facilities that generate employment, such as hotels, offices, institutional commercial operations. Residential is strongly supported as a mixed-use in this context. To enhance the interface between commercial retail units (CRUs) and public rights-of-ways large commercial tenants will be discouraged. The largest single user at grade floor plate will be 2,100m² (approximately 23,000 sq. ft). One large 1,200m² to 2,100m² (approximately 13,000 to 23,000 sq. ft.) single user commercial at grade floor plate will be permitted per block face. This range is approximately the equivalent of 3 to 5 standard lot sizes in the Quarters. Ideally, CRUs with 6m to 15m fronting facades will be encouraged.

Commercial and office uses are encouraged along avenues. The mid-block pedestrian street will have a more intimate residential character with the occasional live/work unit, café, or local shop at intersections and at the widest

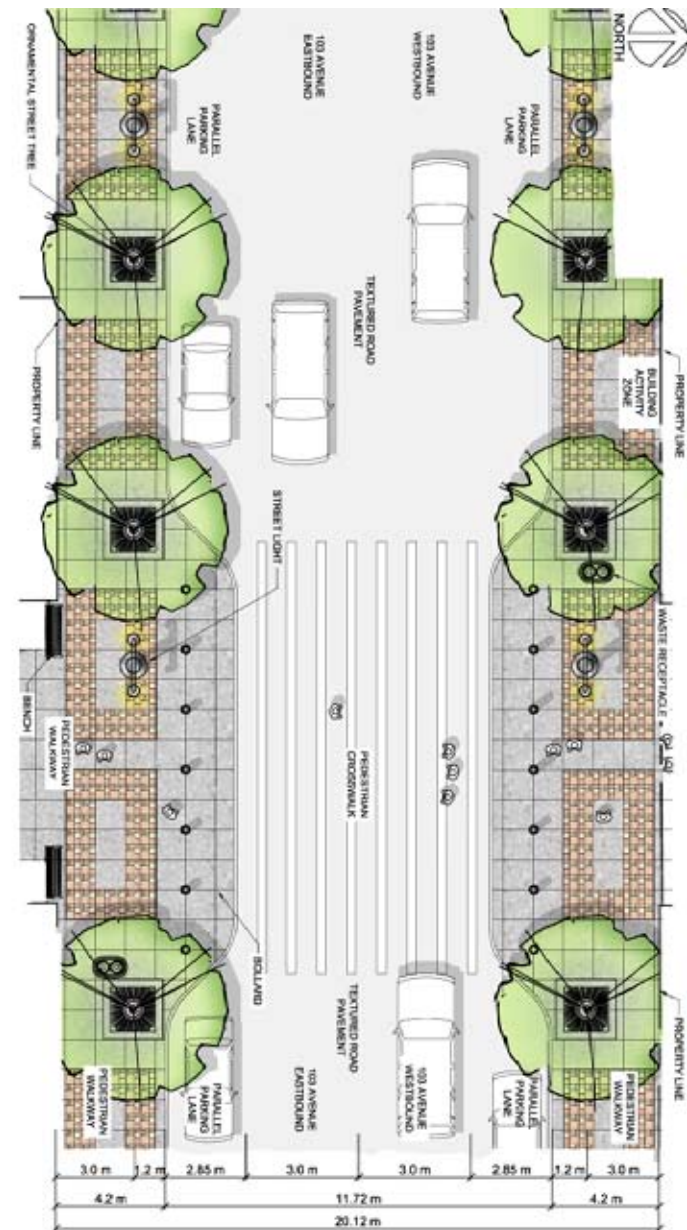


Fig. 5-12 103 Avenue traffic plan

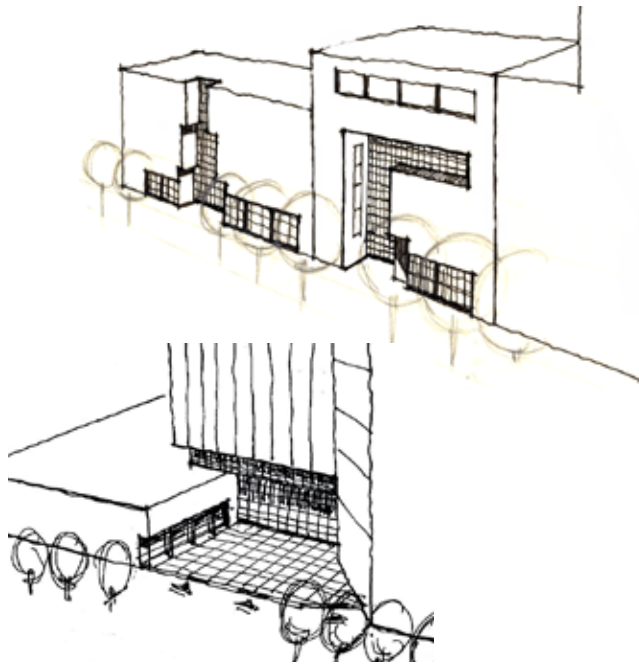


Fig. 5-13 Examples of building recesses

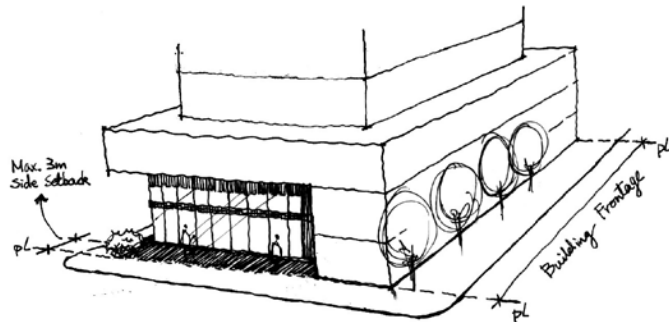


Fig. 5-14 An example of side setback

sections of the mid-block pedestrian street. Stacked townhouse style walk-ups will be the predominant built form here, creating ownership over the space and bringing intimacy to it.

Development Guidelines

The Civic Quarter will be a high-density area. The Civic Quarter will have a minimum height of 11m (approximately 3m). This will create a continuous base of buildings on which towers can occur. Buildings up to 77m (approximately 23 storeys) with 9.5 FAR and will be encouraged with the provision Sustainable Design Standards (Refer to The Quarters: Statutory Plan Overlay, Appendix II: Sustainable Development Standards). In Civic Quarter Area 2 – buildings up to 113m (approximately 33storey) with 12 FAR will be encouraged with the provision Sustainable Development Standards (refer to The Quarters: Statutory Plan Overlay, Appendix II: Sustainable Development Standards).

Buildings taller than 23m (approximately 6 storeys) in Area 1 and Area 2 of the Civic Quarter are considered towers and are encouraged. See section 6.2 Tower Form for guidelines. All mechanical equipment, including roof mechanical units will be integrated into the total building design and will be in addition to the stipulated building height.

Architectural built form adjoining the mid-block pedestrian street will predominantly be stacked residential and can form part of a comprehensive development that fronts on to the Avenue and the midblock pedestrian street. Height restrictions and setback requirements will allow light penetration into both the public spaces and the private dwellings (Fig. 5-7 and Fig. 5-8). The minimum height along the mid-block pedestrian street will be 11m (approximately 3 storeys). To encourage basement suites the main floor may be raised up to 1.2m above grade.

In Area 2 of the Civic Quarter an opportunity exists to intensify the built form at the corner of 103A Ave. and 97 Street. This area represents a logical transition point from the 6 storey development along Jasper Ave to the south and from the Armature to the east. Tower height in Area 2 will be encouraged to be developed to 113m (approximately 33 storeys) subject to Airport Protection Overlay or approval by Transport Canada and NAV Canada and the Edmonton Airport

Authority (refer to section 6.2 Tower Form). All mechanical equipment, including roof mechanical units will be integrated into the total building design and will be in addition to the stipulated building height. The highest level of sustainable design will be required of developments seeking this height (Incentive level 3 zoning requirements).

Setbacks and Stepbacks

Setbacks and stepbacks in the Civic Quarter will enhance the particular modernistic urban feeling of this quarter. This is the area of the Quarters where most of the towers are expected to be built.

To define the modernistic approach the verticality of the towers will be balanced by a well defined horizontality of the pedestal. A stepback after the third storey will introduce a strong horizontal line in the massing of the buildings.

Overhangs (the opposite of a stepback) that are architecturally compatible with the street/avenue character are encouraged beyond the private lands into the road right-of-way to further blur the interface between private and public spaces.

To maintain architectural continuity with existing built form across the downtown and to create a continuous street edge, and to maximize ground floor development opportunities, buildings facades adjoining streets/avenues will have no setback requirement (Fig. 5-6).

With a 'straight-up' height of three storeys the ratio of the right-of-way and the building height is approximately 2:1. This particular ratio is in place to create a sense of openness in an area where many high buildings are expected.

A setback is allowed and building facades can be recessed from property lines to accommodate street/avenue related activities such as sidewalk cafés, architectural features, landscaping, unique entranceways (Fig. 5-13), architectural detailing (Fig. 5-14) and places for public art that will contribute to the urban character of the area.

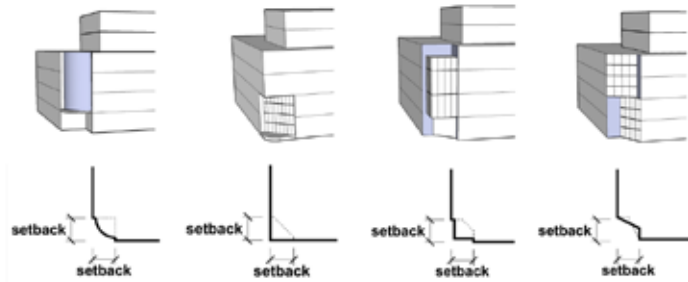
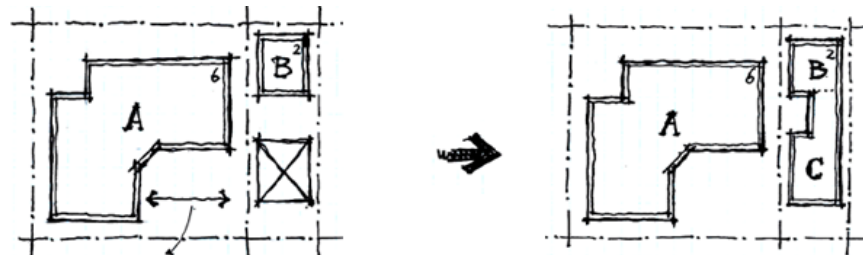


Fig. 5-16 Corner Setback possibilities

A setback or façade recess may be required to accommodate better integration of new developments with adjoining existing structures (Fig. 5-15).

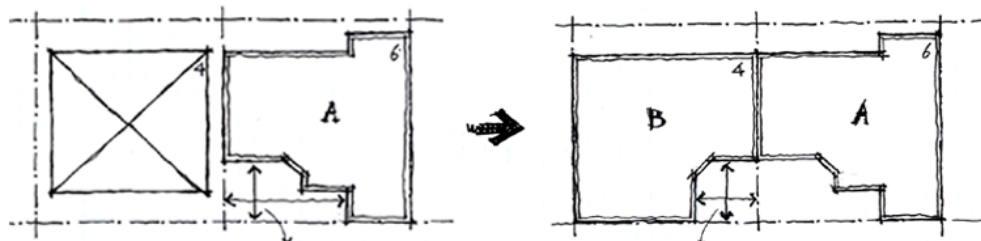
Likewise, building corners may be setback in order to create interesting entranceways and architecturally appropriate entry details (Fig. 5-16).

Building facades adjacent to lanes will be set back 1.5m. This lane set back will be designed to accommodate unique onsite requirements for waste collection, loading and unloading, parkade access and CPTED criteria. Additional building setbacks as determined by the architect may be provided to accommodate these site specific requirements.



setback to accommodate existing neighbouring building

- A: a six-storey new construction**
- B: a two-storey new construction**
- ☒ an existing single-family house**
- C: a new construction attached to B**



setback to accommodate existing neighbouring building

setback to accommodate existing neighbouring building

- A: a six-storey new construction**
- B: a two-storey new construction**
- ☒ an existing single-family house**

For the mid-block pedestrian street setbacks and stepbacks are in place to create a small-scaled pedestrian environment with as much light penetration as is reasonably possible and to allow for individual entryways, verandas and landscaping, and provide some privacy for residential developments that could front onto the mid-block pedestrian street. At locations where the mid-block pedestrian street intersects avenues and lanes, a substantial setback from these mid-block pedestrian streets will be required to create a sense of entry drawing people into the mid-block pedestrian street and creating a gathering place.

Towers in the Civic Quarter will be sited judiciously to maintain view corridors between towers at the upper floor level, to the river valley and for solar gain (Fig. 5-16).

05.3 Armature

The Armature will be designed and operated as a unique signature urban environment in the City of Edmonton. It is intended to act as the hub of all commercial and social activities in The Quarters. The combination of all season parks, urban plazas, shopping, eating and entertainment activities will be a draw for residents, and visitors to the City. The Armature will promote limited mid-rise mixed-use residential development with active retail and residential frontages flanking its eastern and westerly edges.

Fig. 5-15 Setbacks to accommodate existing buildings

The quality and feel of the Armature will be unique in Edmonton. This wide linear park will stitch The Quarters together and link residential communities to the north of The Quarters with the river valley. The width of the park space will range from 15 to 50m depending on the built form along its eastern edge. The predominant building use will be residential with some destination and local commercial needs being met. The atmosphere will be relaxed yet sophisticated with room for children to live and play. Wide sidewalks for strolling and an abundance of public space will create an active yet relaxed street culture (Fig. 5-17).

Urban Form Characteristics

The full height of buildings along the Armature should be activated with balconies to provide opportunities to enliven the space. Setbacks for mid-block properties and corner lots built out to the full extent will create sheltered opportunities for greenery and citizen use and add to the public-private realm. Higher up, large balconies and terraces should face the public space with greenery spilling over the edges. Buildings will step back from the central park space so as not to dominate the sidewalk. Communal roof top gardens will enhance the energy performance of buildings, decrease storm water runoff, provide communal space, and even grow food for residents or restaurants.

A varied palette of architectural form will be drawn from numerous sources, particularly the Heritage and Civic Quarters. Brick, mosaics, stucco and a diversity of other cladding will create vibrant façades. A strong use of colour will add interest to building materials and brighten the winter streetscape. Well-designed awnings will shelter pedestrians and add character and texture to the street. Architectural expression of green design through building integrated photovoltaic panels (solar panels) and green technology should be showcased and made apparent.

Streetscape Improvements

The large linear public park will shape the street character in this area. Large boulevard trees will provide shade and a canopy of green that envelops the streets. A balance of green space and hardscape will be developed as



Fig. 5-17 A rendering of the Armature



Activating the full height of buildings to enhance the indoor-outdoor relationship.

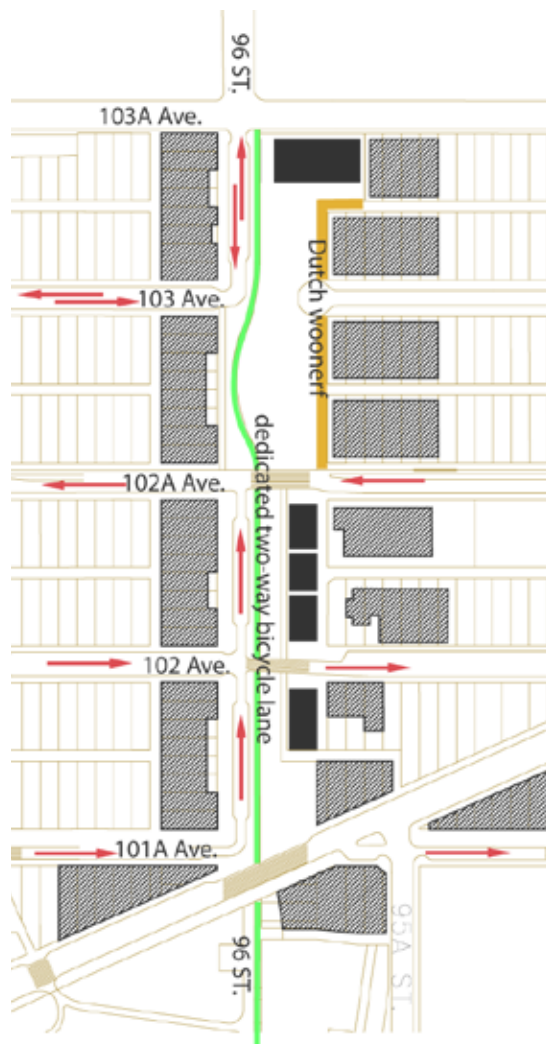


Fig. 5-18 Armature Traffic Plan

the community grows and sculpts the space to meet their needs. Many of the present day buildings along the west side of the Armature will likely be redeveloped over time and create a strong façade for the Armature. This is also true for the two northern blocks on the east side of the Armature. New residential buildings with commercial ground floors will be strategically positioned along the eastern edge of the park south of 102A Avenue. These new buildings will help frame and animate the open space. Indoor and outdoor uses, and public and private spaces should flow seamlessly together. Current land owners on the adjoining the east side of 96 street will be required to sell lands needed for the public portion of the Armature prior to issuance of a development permit for adjoining development projects. Examples of potential paving materials, furnishings and lights are shown in Figure 5-1.

The 96 Street carriageway will be reduced to one lane of traffic in the southern part of the Armature and two lanes of traffic in the northern part (Fig. 5-18). Traffic lanes will have parallel parking on either side. Bicycle traffic will have a dedicated two-way bicycle lane.

The two blocks of 96 Street between 101A Avenue and 102A Avenue will carry only one-way traffic heading north. It will be a common space shared by pedestrians, bicyclists, and low-speed vehicles with traffic calmed through textured paving, frequent pedestrian crossings, narrow lane widths, and parked cars. This type of street is called a “woonerf,” which is a Dutch term meaning “streets for living.”

The closing of 96 Street between 102A Avenue and 103 Avenue will create a large public space. This area can be programmed to provide community activities such as sports and recreation that will become more defined as the neighbourhood develops (Fig. 5-19). Traffic destined for buildings on the west side of this public space can access them using the alleyway and the avenues to the north and south.

The alleyway on the east side of the Armature will remain as is, with the exception of the southern part where the direct connection with Jasper Avenue closed. This will give the vacant parcel on the eastern intersection of the Armature and Jasper Avenue direct park frontage. There will be no access for motorized vehicles from Jasper Avenue onto 96 Street. The north-south

alleyway on the east side of the Armature will service new buildings adjacent to it. North of 102A Avenue the alleyway will become a woonerf to allow some vehicular traffic within a pedestrian priority zone (Fig. 5-20). A small section of 103 Avenue will be closed to form a large contiguous park space between 102A Avenue and 103A Avenue.

Spill-out onto the sidewalk and public space from cafés and shops will enliven the pedestrian zones. Private structures and private furniture on public property should be moveable to allow for flexible use of space. Setbacks in mid-block properties should become patios and courtyards (Fig. 5-21 and Fig. 5-22).

Windows and doors along the sidewalk will promote interaction between the interior and exterior environments. This will enhance natural surveillance and the safety of the Armature. A minimum of 70% of the ground floor façade for commercial uses will be clear glazing. Corner lots will address the sidewalk along both streets with a consistent façade treatment. Architectural façade treatment will add variety and interest to the pedestrian zone and maintain a human scale. Buildings with ground floor commercial should have entranceways at least every 6 – 15m and be designed to mimic this fine-grain.

A wedge shaped square will lie at the junction of Jasper Avenue, 101 A Avenue, and 96 Street. This gathering space and the scrambled pedestrian crossing will tie the southern and northern sections of the park together across busy Jasper Avenue.

South of Jasper Avenue green space will open up again to the west, connecting the Armature to downtown. A parvis, or church courtyard, will be created to the west of St. Barbara's Russian Orthodox Cathedral. Slight knolls in the grass will undulate outward from the church and provide places for respite and picnics at the cusp of the bank. The funicular or urban balcony will transport pedestrians and cyclists over Grierson Hill Road and into Louise McKinney Riverfront Park (refer to section 4.5.5 Funicular and/or Urban Balcony).



A woonerf showing the shared use of street space



Public and private spaces flow seamlessly together

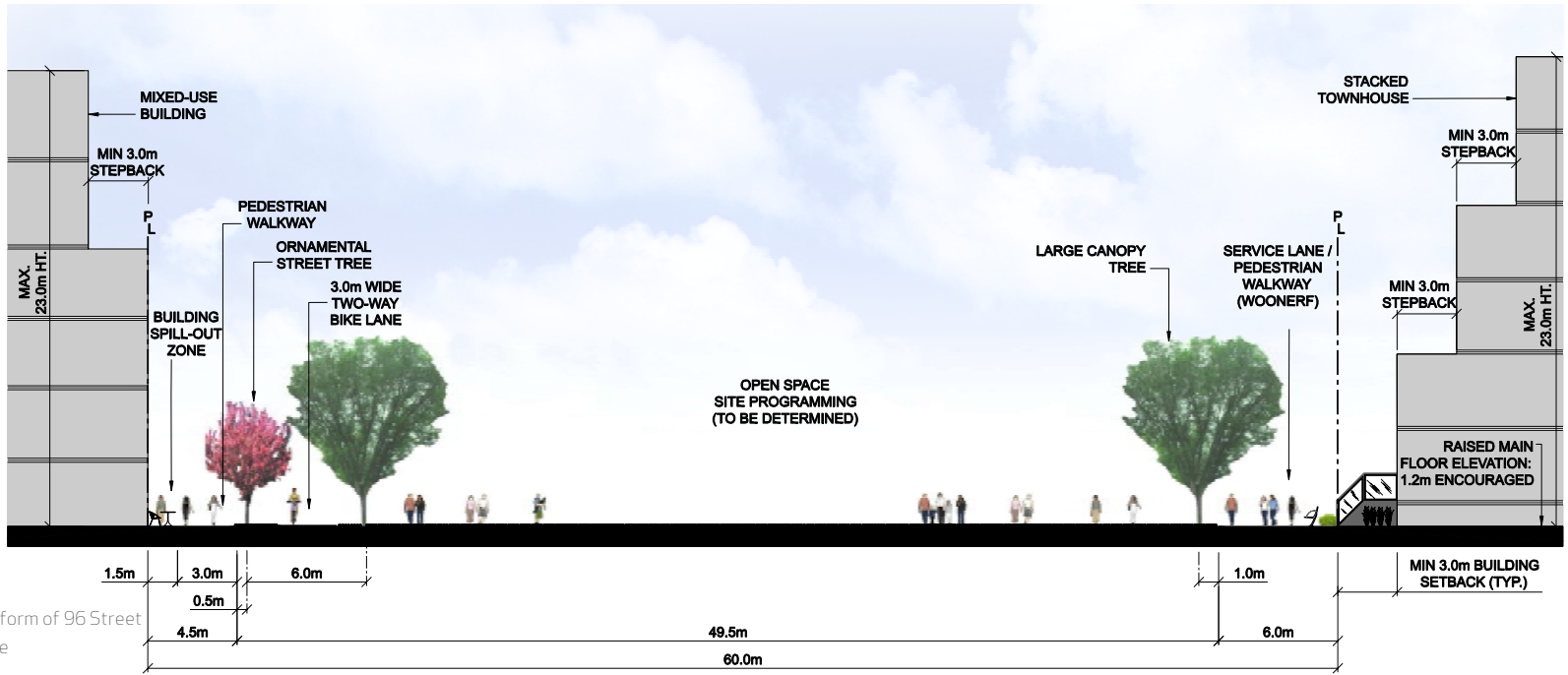


Fig. 5-19 Section: Possible built form of 96 Street from 102A Avenue to 103 Avenue

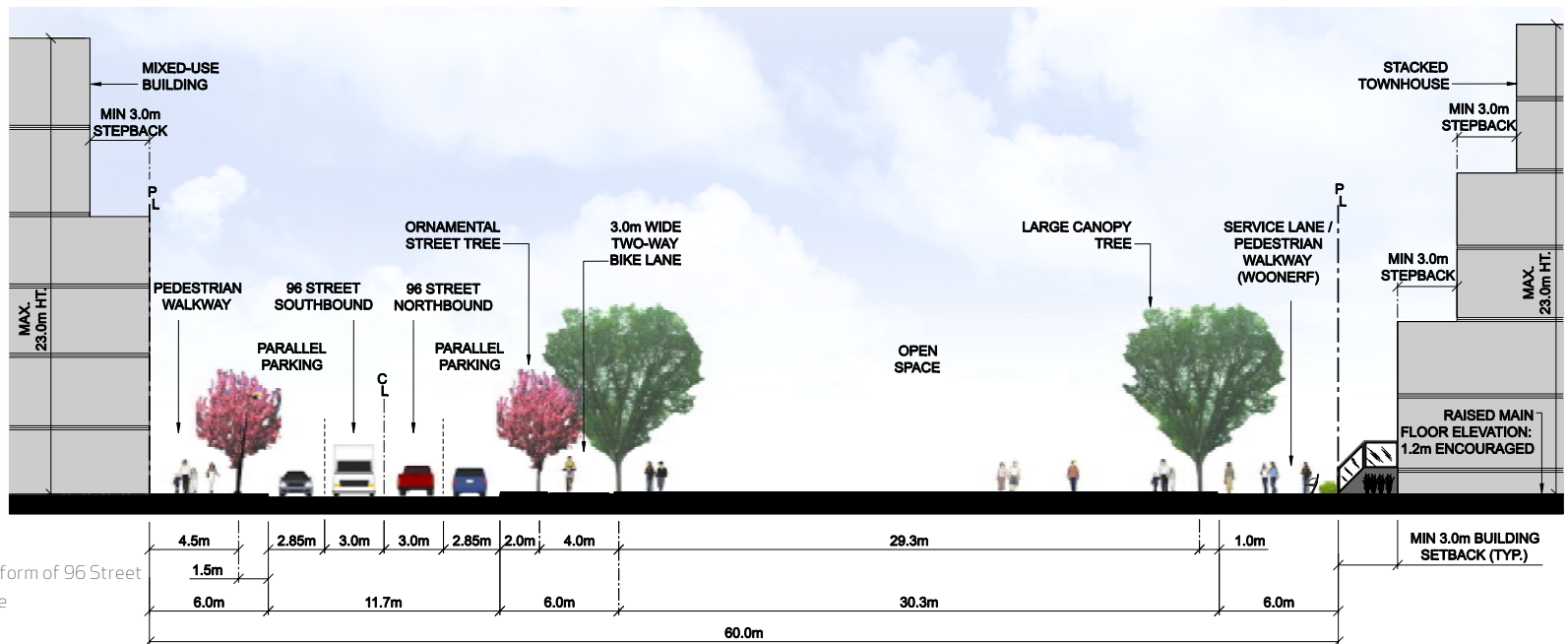


Fig. 5-20 Section: Possible built form of 96 Street from 103 Avenue to 103A Avenue

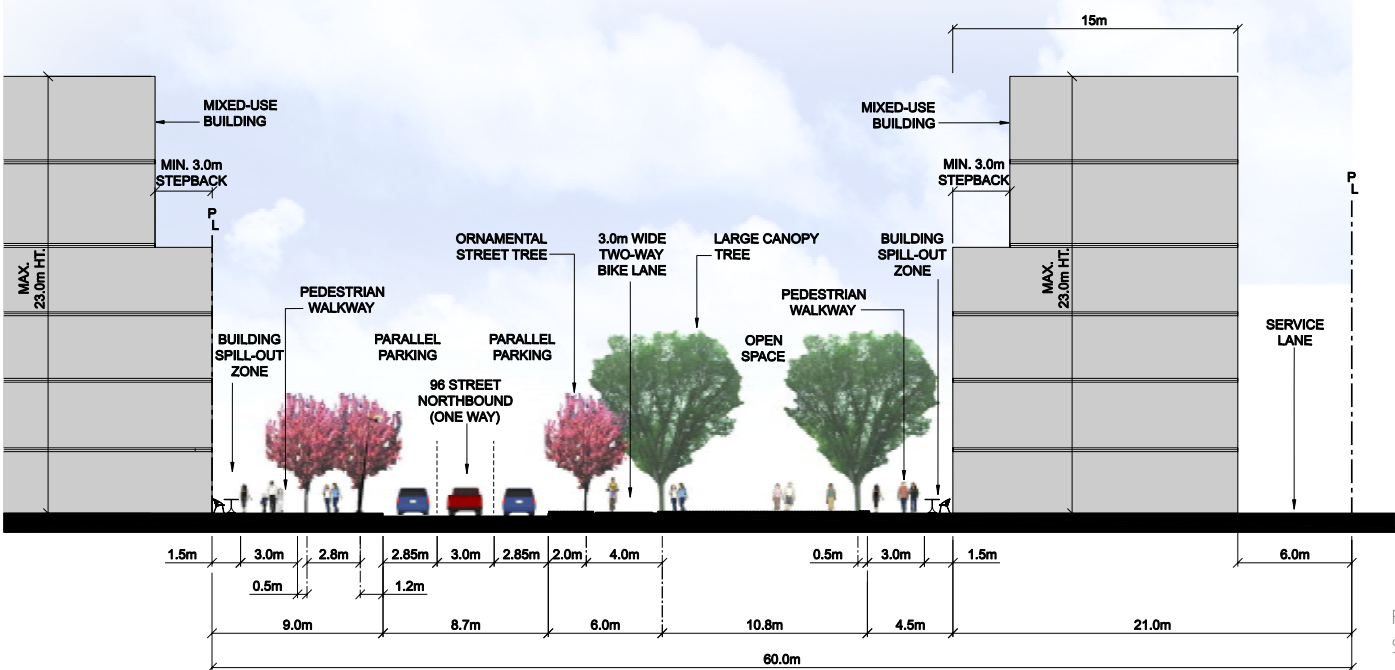


Fig. 5-21 Section: Possible built form of 96 Street from 101A Avenue to 102 Avenue

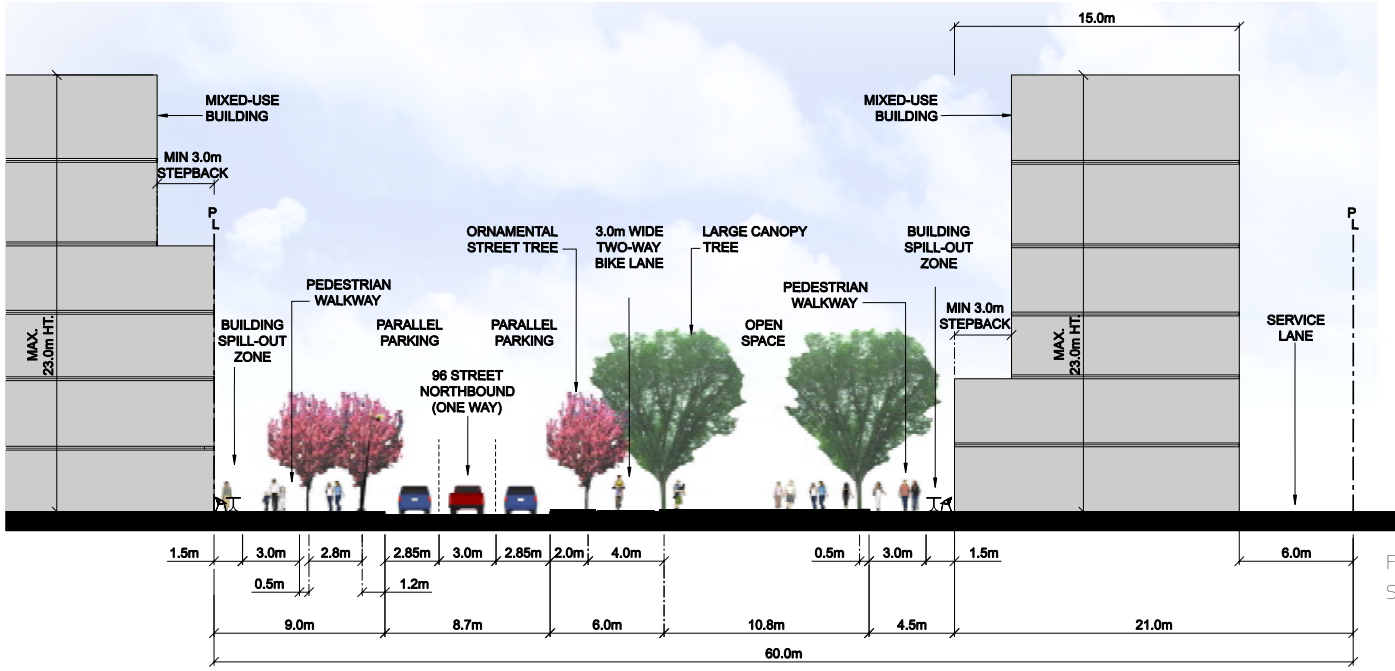


Fig. 5-22 Section: Possible built form of 96 Street from 102 Avenue to 102A Avenue

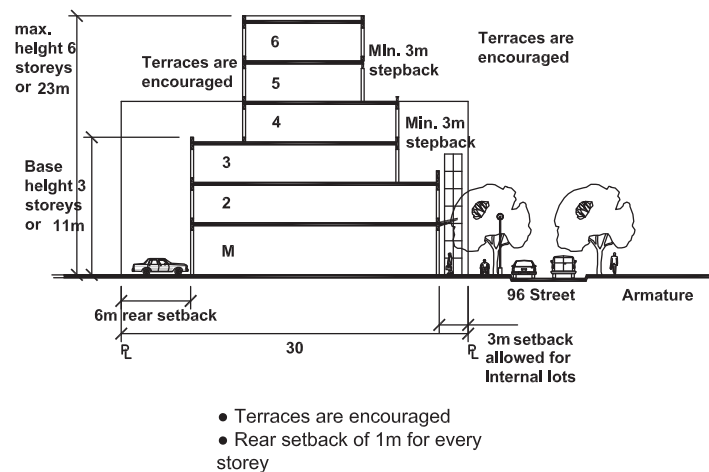


Fig. 5-23 Setback guidelines in the Armature - 96 Street West

Land Uses

The Armature will contain mixed-use development. The outer lots on the ends of each block would best serve ground floor commercial uses. Mid-block development on the ground floor would support commercial or residential use. Upper floors will have a mixture of residential and office uses. On the Armature a minimum of 33% of FAR must be developed for residential uses.

The land between 96 Street and the north/south alleyway to the east of 96 Street will become a mix of green space, hardscaped public space, and buildings. The public space will provide opportunities for gateway features, art placement, gardens, spill out from businesses and public amenities (bicycle storage, washrooms, furniture, playgrounds, etc). Ideally the park will be a 'green machine' as well with a ground source heat field providing district heat, storm water retention and treatment, and other ecological services. Zoning considerations to promote sustainable utility services would be explored by the City in the future.

Development Guidelines

The minimum height will be 11m. The maximum height will be 23m. All mechanical equipment, including roof mechanical units will be integrated into the total building design and will be in addition to the stipulated building height.

The base floor area ratio along the Armature will be 3 FAR. Up to 4.5 FAR will be encouraged with the provision of Sustainable Development Standards (refer to The Quarters: Statutory Plan Overlay, Appendix II: Sustainable Development Standards).

Setbacks and Stepbacks

The Armature is the Quarter where creativity and playfulness thrives. Therefore architects are encouraged to be as creative and original as possible. Setbacks and stepbacks can be an important part of such a creative design approach, resulting in interesting shapes and forms. But there are many ways to create interesting architecture and to break monotony. So in order not to limit creative expression few setback and stepback requirements are proposed.

Stepbacks and setbacks are encouraged where they make sense. Since the Armature is the 'green lung' of the Quarters the flanking architecture could adopt a 'green' architectural style with lots of balconies, green roofs, terraces etc. Setbacks and stepbacks could be considered to create such outdoor amenity spaces for gathering and rooftop gardening (Fig. 5-23).

Additionally setbacks and building facades recessed from property lines can accommodate armature related activities such as seating areas, small plazas, micro parks, sidewalk cafés, architectural features, landscaping, unique entranceways (Fig. 5-13), architectural detailing (Fig. 5-14), that will contribute to the signature character of the area. A setback or façade recess may be required to accommodate better integration of new developments with adjoining existing structures (Fig. 5-15).

05.4 McCauley Quarter

The purpose of the McCauley Quarter is to accommodate medium density residential development with some commercial and mixed-use along 95 Street. The McCauley Quarter will be largely residential in nature and at a smaller scale than the rest of The Quarters. It helps to ease the transition between the high density of The Quarters and the lower density of the McCauley residential neighbourhood to the north. Low-rise single and multi-family dwellings dominate here. Commercial uses permitted along 95 Street will have residential units above.

Urban Form Characteristics

Small-scale multi-family housing, townhouses, duplexes and stacked townhouses are preferred over single-family homes. Small setbacks from the property lines will be places for intensive gardening with fruit trees, shrubs or perennials to give a green feel to the area. Lines of trees along the avenues will be restored to enhance the neighbourhood. A cul-de-sac where 103 Avenue meets the Armature will allow for more contiguous park space while also adding to the intimacy of the McCauley Quarter.



Multifamily housing and duplexes are preferred



Owners are encouraged to build creatively and personally



A mixture of residential and commercial development is encouraged along 95 Street

Owners will be encouraged to build creatively and personally. Small-scale construction with an owner-built feel will make the area homey and earthy. Sensitivity to the neighbourhood and its past should be maintained, but diversity is encouraged.

Local businesses along 95 Street will support the community. A mixture of residential and commercial development will be encouraged on the ground floor with residential provided above any commercial.

Streetscape Improvements

The quiet residential nature of the McCauley Quarter will be enhanced through traffic calming and street trees. Grass will separate the sidewalk from the street. Setbacks from property lines will open up the streetscape and make room for trees and gardens on private property. Vehicular access to dwellings will be from the abutting alleyways. An open and welcoming community will be fostered through minimal use of fencing, particularly along the front façades. Examples of potential paving materials, furnishings and lights are shown in Figure 5-1.

There are irregular front property lines along 95 Street and the sidewalk is very narrow. To improve the pedestrian experience and hence commercial success along this section new development will be built to the front property line that is furthest from the centre line of the road on each block. Windows and doors along the sidewalk should promote interaction between the interior and exterior environments. A minimum of 70% of the ground floor façade for commercial uses will be clear glazing. Corner lots will address the sidewalk along both streets with a consistent façade treatment. Architectural façade treatment will add variety and interest to the pedestrian zone and maintain a human scale. Buildings with ground floor commercial should have entranceways at least every 6 – 15m and be designed to mimic this fine-grain.

Land Uses

The McCauley Quarter will be an extension of the residential neighbourhood to the north of The Quarters. It is a medium density area. Live/work housing and home businesses are encouraged. In the McCauley Quarter, a minimum of 50% of FAR must be developed for residential uses.

New residential projects built on two properties or more will be an opportunity for townhouses and walk-up style developments. Row houses perpendicular to the avenues will be permitted. On sites equal to or greater than 2000 m² architectural variation is encouraged to imitate a variety of small-scale developments. Cooperative housing will be welcomed. Secondary suites will be encouraged where single detached housing occurs.

Commercial or office uses should occupy the ground floor of development along 95 Street, particularly corner lots, with residential uses above. Mid-block sections may have residential or commercial uses on the ground floor.

Development Guidelines

The residential character of the McCauley Quarter will be reflected in a lower scale of development. The residential streets will have a minimum height of 7m (approximately 2 storeys) to encourage density and preserve the neighbourhood character. The maximum height will be 23m (approximately 6 storeys) for the majority of residential areas. The properties directly north of, and adjacent to, 102A Avenue between the Armature and the lane west of 95 Street have a maximum height of 27m (approximately 8 storeys). The base floor area ratio along the avenues in the McCauley Quarter will be 1.5 FAR. Along 95 Street base will be 2 FAR and up to 3.5 FAR will be encouraged with the provision of Sustainable Development Standards (refer to The Quarters: Statutory Plan Overlay, Appendix II: Sustainable Development Standards). All mechanical equipment, including roof mechanical units will be integrated into the total building design and will be in addition to the stipulated building height.

Legend

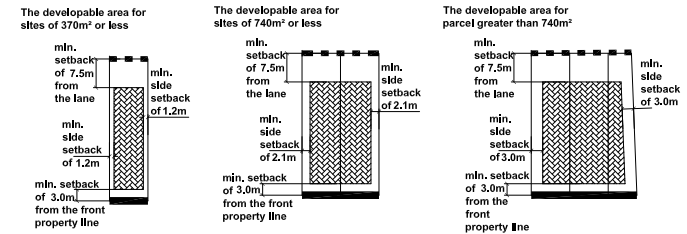
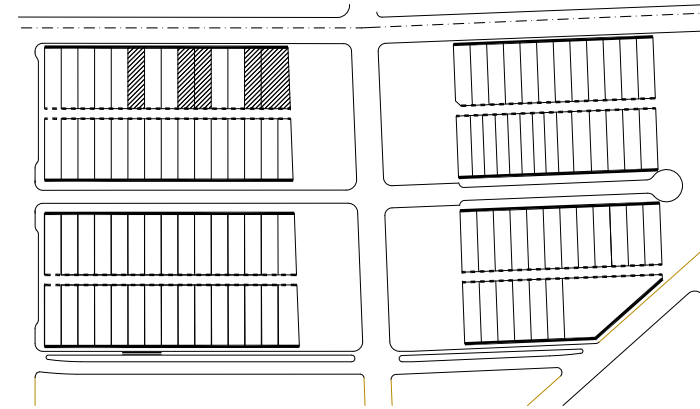
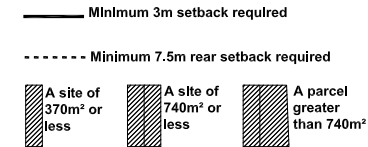


Fig. 5-24 Setbacks guidelines in the McCauley Quarter

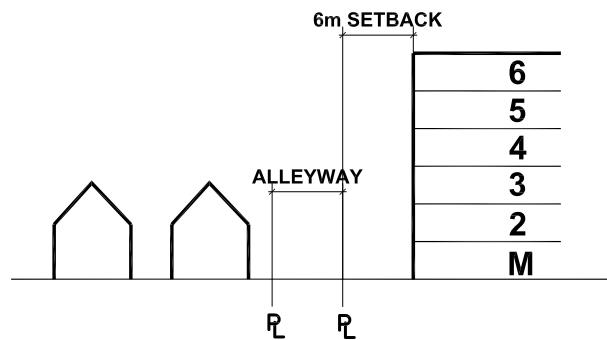


Fig. 5-25 Rear setback guideline along 95 Street

Setbacks and Stepbacks

The present and future character of McCauley can be defined as a small scaled residential oasis in the downtown. To enhance that small scaled character and promote a lower density than the other quarter's, setbacks are proposed. Except for the part of McCauley facing 95th street buildings cannot be built up to the property lines (Fig. 5-24). This area requires stand alone buildings in a garden/ lawn/ courtyard-like setting. The expected building typology such as duplexes, stacked townhouses, small walk-up apartment buildings and urban villa's needs a well defined open setting. A strong street front is unnecessary or even undesired in McCauley except for 95th street. Variation and playfulness in the setbacks of buildings will enhance the desired individuation.

Architecturally, buildings in the McCauley Quarter need to be very articulated with a wide variety in massing. Stepbacks to be used for balconies and green roofs are strongly encouraged to make interesting forms and shapes.

95th street needs urban definition by creating a continuous street front. Buildings are required to build up to the front and side property lines. Since property lines along the street do not line up with one another the furthest removed property line from the centre of the right of way will be the minimum setback line for all properties on 95 Street.

95th street is fairly busy and relatively narrow stepbacks from façades adjacent to a public roadway are required in order to create more openness and light penetration.

Setbacks to reflect neighboring building form will be encouraged and can be accommodated at the discretion of the Development Officer (Fig. 5-15).

In order to prevent overshadowing of neighbouring residential parcels building heights along the rear property line on 95 Street will be encouraged to be set back 1m for each storey of a building (Fig. 5-25).

05.5 Five Corners Quarter

The purpose of the Five Corners Quarter is to accommodate mixed-use high-density residential development with commercial uses in predominantly high-rise buildings. The Five Corners Quarter is named after the intersection of Jasper Avenue, 95 Street and 102 Avenue. The Five Corners will be the highest density area in The Quarters. Various residential towers and large-scale residential building blocks will create a dynamic and varied urban area that benefits from the best of both worlds: a metropolitan way of life right on the crest of a large natural ecosystem.

Urban Form Characteristics

The Five Corners Quarter will be the least homogeneous quarter. Because Jasper Avenue runs diagonally through the street grid, blocks in the Five Corners have uncommon shapes. This will result in attractive and unusual architecture. Like the corner of the Gibson Block (96 Street and Jasper Avenue) in the Heritage Quarter, odd block shapes will craft organic, curved and rounded building forms that create a comprehensive ensemble of buildings. Signature developments designed and programmed with originality and experimentation will be abundant and will enhance the character of the Five Corners.

Jasper will be the string tying the Five Corners Quarter together, but a road is a 'streaming' urban place; there is no sense of arrival. The Five Corners arcade will provide such an arrival place. With its circular shape created by the 2-storey arcade surrounding it, this public space will enhance and define a clear sense of place (Fig. 5-26).

Although the traffic handling of the intersection will not change significantly, the feel of this area will change dramatically. Patterned pavement and streetscaping material will shape the urban room. The arcade will be busy with shops, restaurants, galleries and cafés. Ground floor activity will spill out into the arcade, which is alive throughout the year.



Fig. 5-26 The Five Corners' circular arcade

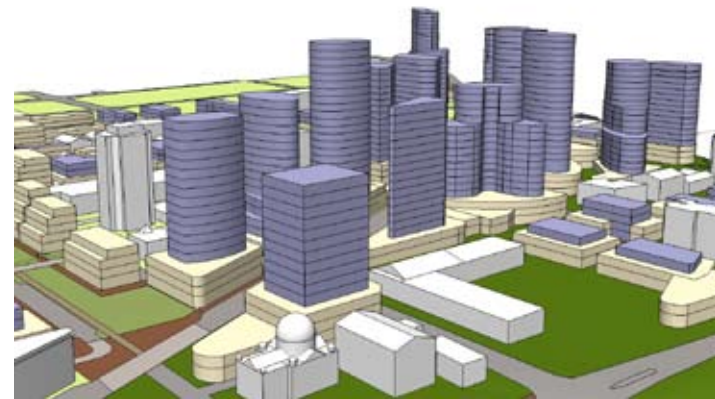


Fig. 5-27 A rendering of the Five Corners Quarter



Signature developments enhance the character of the Five Corners Quarter

A much quieter but equally important place will be the Grierson complex. After the federal prison moves out, this historic complex can be restored and made available for uses such as a museum, a boutique style hotel, residential development, a community hall or preferably a combination of all of the above. With new building potential at the new eastern edge of the complex the historic parade grounds could be spatially defined, forming an intimate green space overlooking the river valley.

In the majority of the Five Corners Quarter building plinths will be built up to the sidewalk edge and to their neighbours. Commercial uses will front the main streets with residential towers above. The northeast section of the high-density area is treated slightly differently, however. There is separation space between buildings, while still being high density. Base buildings are not required and freestanding towers are permitted. Buildings may take up no more than 60% of their property (Fig. 5.27). This district is a transition away from the higher density around the five corners intersection to the freestanding high-rises further east along Jasper Avenue beyond The Quarters boundary. The character here emulates the Oliver neighbourhood to the west of downtown Edmonton.

Streetscape Improvements

Jasper Avenue and 95 Street are main traffic routes and large volumes are processed daily through this intersection. Traffic handling at the intersection will not change significantly.

The arcade will help to reduce the dominance of vehicular traffic at the five corners and reclaim some of the space for pedestrian use. The recessed walls of the first 2 floors of every building surrounding the arcade will provide shelter for pedestrians and become an open-air room for commercial activity.

Secondary streets in the Five Corners Quarter will have a more residential feel, including street trees and reduced traffic flows. The connection between the Heritage Quarter and the historic elements of the Five Corners such as the Hecla Block, located at 95 Street and 101A Avenue, and the Grierson Centre will be enhanced through a similar widening of the north sidewalk along 101A Avenue in both quarters and a consistent streetscape design. Streetscape

upgrading will occur for large sections of Jasper Avenue and 95 Street. The Jasper Avenue Promenade will expand east from downtown through the length of The Quarters.

The historic RCMP parade grounds at the Grierson Centre should be restored and made public. They could become a point of interest along the Heritage Trail, which follows the top of the bank along the north side of the North Saskatchewan River from the Royal Alberta Museum in the west to the foot of 96 Street. The Heritage Trail should be continued along the top of bank to 95 Street where it will then wind its way northwest to join up with the Jasper Avenue Promenade in The Quarters.

Windows and doors along the sidewalk will promote interaction between the interior and exterior environments. This enhances natural surveillance and safety. A minimum of 70% of commercial ground floor façades will be clear glazing. Corner lots will address the sidewalk along both streets with a consistent façade treatment. Architectural façade treatment adds variety and interest to the pedestrian zone and maintains a human scale. Buildings with ground floor commercial should have entranceways at least every 6 – 15m and be designed to mimic this fine-grain. Several double fronting properties exist in the Five Corners Quarter, which should address both streets.

Streetscape elements from the Jasper Avenue street furniture system will be extended through this area.

Land Uses

The Five Corners Quarter will feature the highest density and the tallest buildings in The Quarters. Commercial and office uses will be mixed into residential buildings. Ground floor residential may occur on quieter secondary streets. In the Five Corners Quarter a minimum 33% of FAR must be developed for residential uses. To promote a rich interface between commercial retail units (CRUs) and public rights-of-ways large commercial tenants that limit commercial diversity will be discouraged. The largest single user at grade floor plate will be 2,100m² (approximately 23,000 sq.



Curved and rounded building forms reflect the uncommon shape of blocks

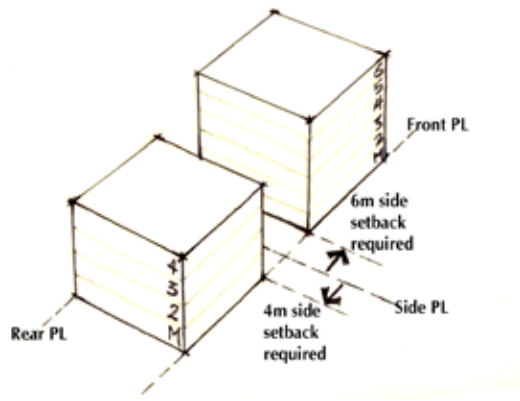


Fig. 5-28 Setback guidelines in Five Corners Quarter

One large 1,200m² to 2,100m² (approximately 13,000 to 23,000 sq. ft.) single user commercial at grade floor plate will be permitted per block face. This range is approximately the equivalent of 3 to 5 standard lot sizes in the Quarters.

The original RCMP parade grounds at the Grierson Centre are as important a historic resource in this area as are the heritage buildings neighbouring them. Potential uses such as a museum, a hotel, residential development, and/or a community hall the role of this complex of buildings in the neighbourhood should be significant. A new public user of the Grierson complex may generate some commercial spin off. New development can potentially occur to the east of the parade grounds but within the Grierson property. New on-site construction should have public space on the main floor and residences above. The parade grounds should be public open space available for community use. Any parking on the premises will be underground.

Development Guidelines

The Five Corners represents the highest built form and density of The Quarters plan area.

The minimum height in the Five Corners Quarter will be 11m (approximately 3 storeys). This will create a consistent street scale. Additional height and Far is encouraged with the provision of Sustainable Development Standards (refer to The Quarters: Statutory Plan Overlay, Appendix II: Sustainable Development Standards).

In Area 1 and Area 2 a tower with a maximum height of 85m (approximately 28 storeys) may be erected if certain requirements are met. Buildings with no tower will be able to build up to a height of 23m (approximately 6 storeys).

In Area 3 of the Five Corners Quarter a unique opportunity exists to create a signature development to frame the eastern limits of the City's skyline. Tower height in Area 3 will be encouraged to develop to 150m (approximately 45 storeys) subject to Airport Protection Overlay or approvals by Transport Canada and NAV Canada and the Edmonton Airport Authority (refer to section 6.2 Tower Form). All mechanical equipment, including roof mechanical units will be integrated into the total building design and will be in addition to the stipulated

building height. The highest level of sustainable design will be required of developments seeking this height (Incentive level 3 zoning requirements).

Setbacks and Stepbacks

Like the Civic Quarter the Five Corners Quarter is a high density area and opportunities exist to develop several predominantly residential towers. For the most part a similar build form is expected here with towers on pedestal buildings. Only in area 1 freestanding towers without a base building are permitted. Free-standing buildings in a garden-like setting enhance a connection with the McCauley Quarter and with developments further east on Jasper Avenue (Fig. 5-28).

The fact that the Five Corners are has very interestingly formed sites invites extraordinary building designs. Setbacks and stepbacks can be introduced by the architects to make more interesting buildings. Area 2 and 3 will have a distinct urban feel which is enhanced by buildings having zero, or small setbacks.

Except for the 95th street/ Jasper Avenue intersection buildings will be encouraged to build up to front and side property lines in order to maintain architectural continuity, a continuous street edge and to maximizes ground floor development opportunities.

Building recesses from the front property line may be permitted to accommodate street related activities and entranceways. Stepbacks may be permitted from all sides but are required after three storeys.

With a 'straight-up' height of three storeys the ratio of the right-of-way and the building height is approximately 2:1. This particular ratio is in place to create a sense of openness in an area where many high buildings are expected.

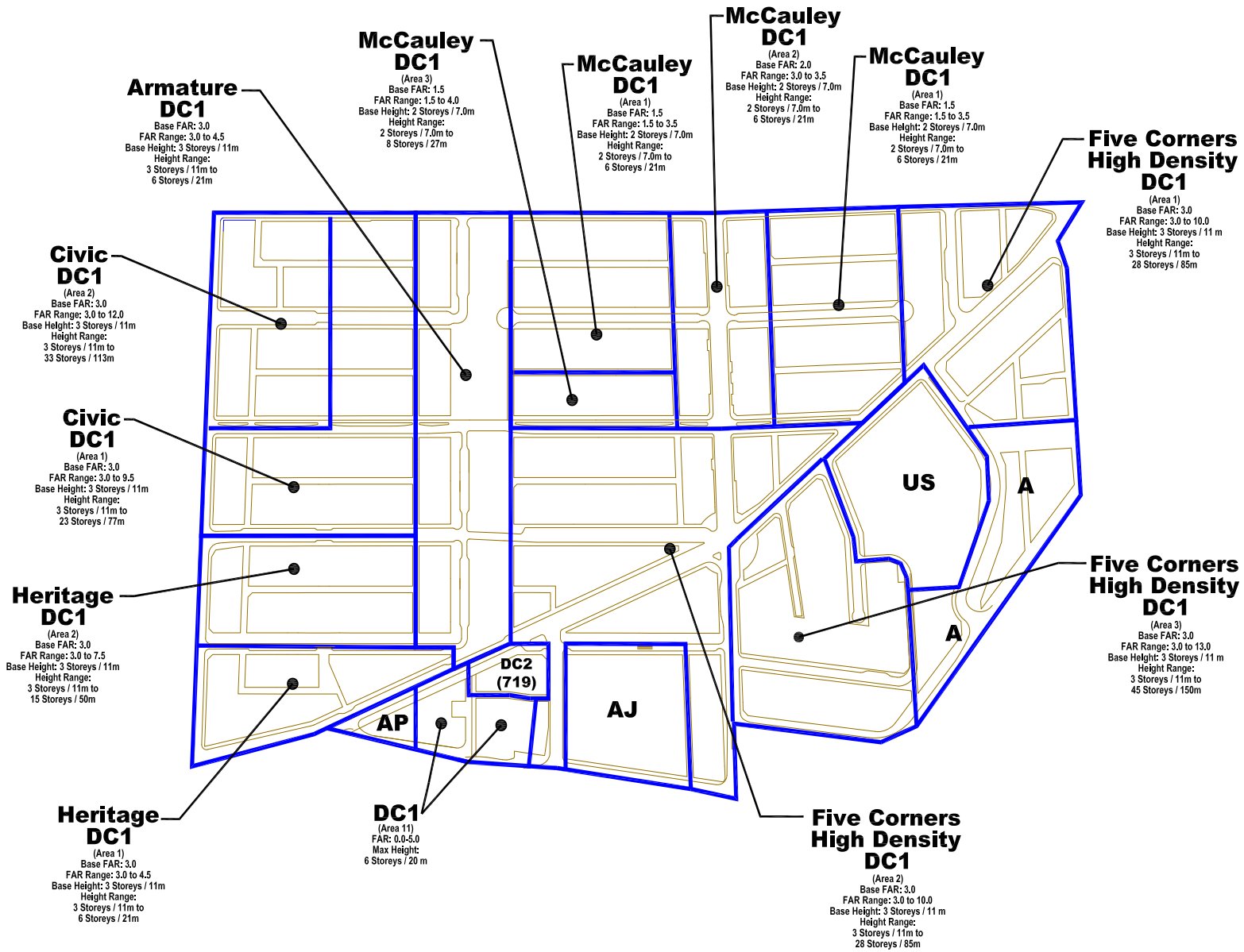


Fig. 6-9 Proposed height and FAR in each precinct

06. Neighbourhood-wide Design Considerations

06.1 Tower Form

As mentioned previously there will be two types of towers in The Quarters: towers on a podium (base) and freestanding towers. Depending on the quarter, buildings may vary in height, but any building over 6 storeys in height is considered a tower.

The Quarters is situated beneath runway 30 of the Edmonton Municipal Airport. The maximum height determination throughout The Quarters is subject to the Airport Protection Overlay or approval of the Transport Canada and NAV Canada and the Edmonton Airport Authority.

Towers are a means for architectural expression yet they should be considerate of their context. They should form one comprehensive architectural whole, both in form, building mass, and articulation. Towers should provide pedestrian-scaled form and function at their base where it is adjacent to pedestrian circulation. This can be created in various ways, including through setbacks and stepbacks in the building mass, building articulation, and through the architectural treatment of the façades.

Residential and commercial uses at the tower base will provide a pedestrian-scaled building edge and complement adjacent buildings or open space. The base building should define street and open space edges. Development on the site should provide gardens or patios on the roof of the base building to improve rooftop aesthetics and provide amenity space. All mechanical equipment, including roof mechanical units will be integrated into the total building design and are not included in building height. A minimum tower separation space of 15m will be required.

The tower will be designed and oriented to the site in a way that complements the base building, minimizes shadows and maximizes views for existing and

future development. No side of a tower should be more than 35m long. The longest axis of a tower should be in a north/south direction in order to preserve view corridors and allow sunlight to reach street level. Exemptions may be granted for unusually shaped lots.

The average floor plate for residential or mixed-use towers will not exceed 750 m² (Refer to The Quarters Statutory Plan Overlay and Direct Control Districts for specific tower setback and stepback requirements Fig. 6-1).

06.2 Density Encouragement (Incentive Zoning)

The Quarters has the potential to be one of the highest density and most sustainable areas in Edmonton once it is fully built-out. To encourage developers to maximize their allowable building envelope and provide sustainable features in new development, The City of Edmonton is offering incentives.

The Sustainable Development Standards are features that developers can incorporate into new developments in exchange for additional FAR and building height. The Standards incorporate the elements of social, economic and environmental sustainability (refer to section 6.1 Sustainable Urban Design) and are divided into seven categories: design, energy, water, matter, air, movement, and community.

The standards are implemented through a point system using the Sustainable Development Standard Checklist. There are 11 requirements and 58 available points. Three levels of higher FAR are available in The Quarters if all the requirements and a certain number of points are met. To attain Incentive Level I all the requirements and 15 points must be achieved. To attain Incentive Level II all the requirements and 30 points must be achieved. To attain Incentive Level III all the required elements must be met and 50 points must be achieved from this Checklist. This provides flexibility and allows the developer to choose which points to pursue. The maximum FARs for each Incentive Level varies throughout The Quarters.

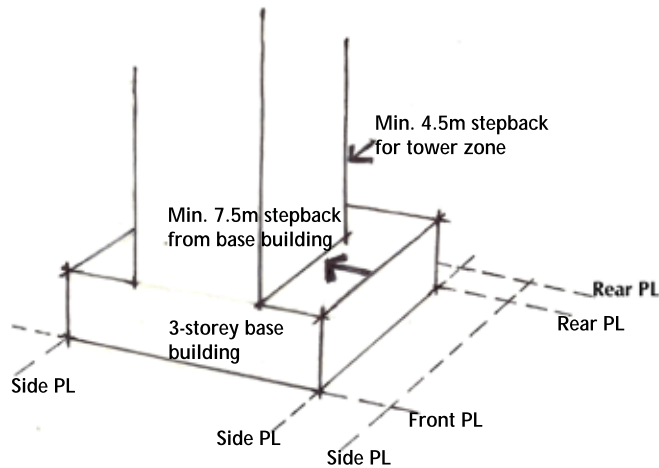


Fig. 6-1 Side setback guidelines for towers

For demonstration purposes, figure 6-9 shows the maximum FAR and height available at each Incentive Level for each quarter. The official and more detailed description of the standards and checklist is found in The Quarters Statutory Plan Overlay (SPO) under separate cover.

06.3 Roadways

Streetscaping provides an aesthetic environment for pedestrians and enhances their quality of life and experience in the urban setting. Improved design and amenities support and encourage social interaction.

06.3.1 Objectives and Key Improvements

Specific streetscape design objectives in The Quarters are:

- Improving the multi-modal mix of pedestrians, bicyclist and transit opportunities;
- Expressing the “special character” of 96 Street by incorporating capacity for landscape architectural expression – through a set of themed elements (i.e. entrance gateways, public art and way-finding elements);
- Linking adjacent neighbourhoods;
- Creating a high profile, urban park while enhancing current open space and environmental activities;
- To promote the quality of the 96 Street right-of-way as experienced in all seasons and times of the day; and,
- To improve the overall organization of the 96 Street right-of-way in accordance to barrier-free, Transportation Association of Canada (TAC) and Crime Prevention Through Environmental Design (CPTED) guidelines.

Key roadway and open space improvements in The Quarters include the introduction of:

- Distinctive boulevard tree and ornamental tree plantings;
- Site furniture to provide a unifying sense of identification and to implement an equal distribution of park furniture and amenities;
- Clear and understandable directional signing and way finding elements;
- Coordinated intersection treatments to convey interest, urbanity and elegance to passing viewers;
- Distinguishing forms and patterns that preserve and enhance the character of adjoining neighbourhoods;
- Public art locations; and, year-round, impromptu, outdoor public gathering spaces.

06.3.2 Site Furniture

Site furniture, if carefully considered, can become a valuable pragmatic and aesthetic asset that will contribute positively to the image of The Quarters. There will be three separate and distinct street furniture systems proposed for The Quarters.

1. Jasper Avenue – Existing street furnishings will be extended through The Quarters east of 97 Street.
2. Heritage Trail - Existing Street furnishing will be extended through The Quarters eastward along a future alignment along the river valley top-of-bank.
3. The Quarters - The rest of The Quarters will adopt a street furnishing system that reinforces the proposed urban and architectural character of these areas. Examples of potential paving materials, furnishings and lights for The Quarter is shown in Figure 5-1.

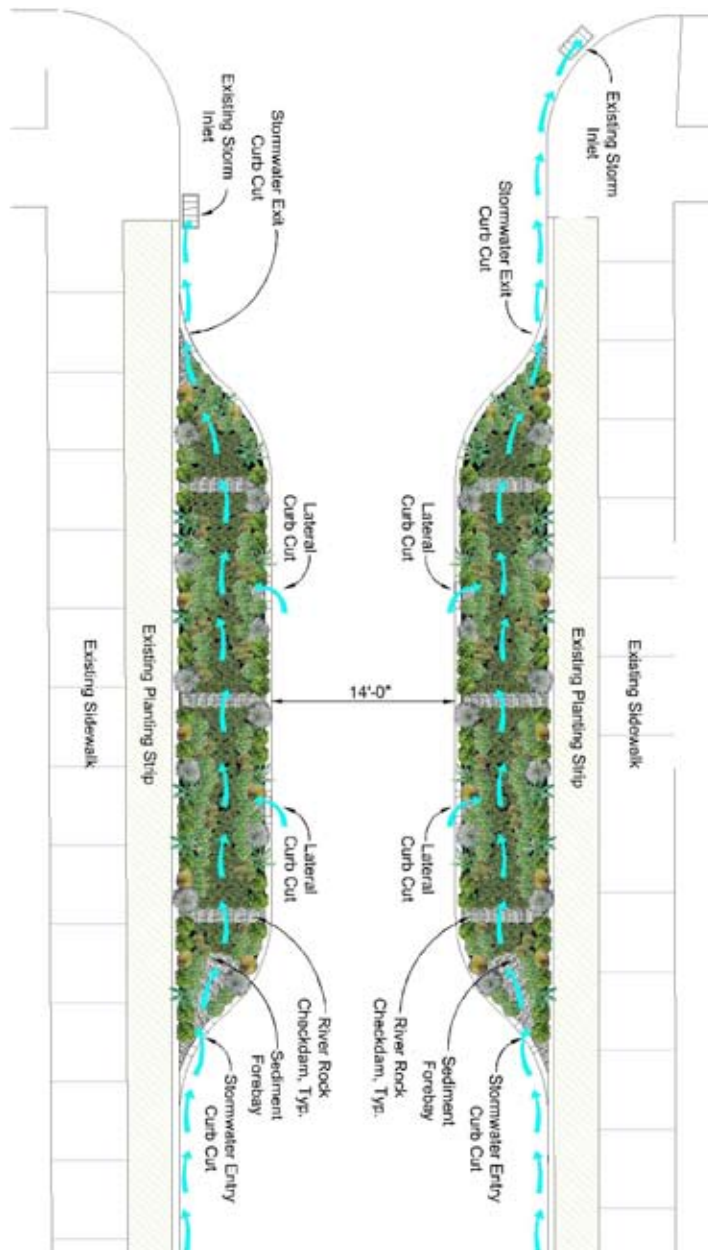


Fig. 6-2 An example of storm water flow

The following coordinated site furniture has been considered:

- Benches with and without backs;
- Waste receptacles and optional ash urns;
- Bicycle racks;
- Bollards;
- Picnic tables;
- Tree grates;
- Transit shelters
- Information kiosks;
- Water fountains;
- Public toilets;
- Information kiosks and newspaper boxes; and
- Emergency telephone booths.

Bicycle racks, lighting and extra waste/recycling receptacles will be readily available. Water fountains should be located near main entrances of the multi-use trail and accessible to those in wheelchairs. Some varieties of fountains are also available with lower dog basins.

06.3.3 Landscaping and Plant Materials

Trees will be used throughout streets, parks, and open spaces in The Quarters to provide aesthetic pedestrian friendly environments. Trees play an especially important ecological role in reducing environmental problems such as carbon dioxide uptake and absorbing chemical pollutants in the atmosphere. The use of a natural diversity of species in The Quarters is important to provide a successful urban landscape. A dense canopy is valuable in filtering air, water, and sunlight. Landscaped streets help stormwater management and energy use.

In addition, the trees modify the climate in the area. They provide shade in the summers and block cold winds in the winters.

Along both sides of 96 Street, large high canopy boulevard trees will soften the visual dominance of the roadway and existing or new land use developments. The boulevard trees will extend over the street creating a traffic calming effect through a sense of enclosure. Alternating tree plantings on each avenue avoids monoculture planting and promotes species diversity. Ornamental trees in other locations will be intentionally oriented to function as a vegetative gateway; their foliage, size and colour should be at variance with their immediate surroundings.

The use of under-storey shrubs in comprehensive planting beds will help provide vibrant winter colours and dramatic texture. Similar to decorative fencing, hedges can provide a strong visual buffer by partially screening unwanted views and visually connecting otherwise separate elements in the landscape where space prohibits tree plantings. Shrub plantings should be chosen with care for their branch patterns, leaf and fruit litter, and drought tolerance. Low-water turf grass mixes are promoted and should feature native species.

Rain gardens are encouraged in curb bulb-outs throughout The Quarters (Fig. 6-2) and in green space along the Armature. These natural stormwater collection areas slow down and treat runoff water, reducing stress on the sewage system and the North Saskatchewan River. They will add visual interest and greenery to the streetscape while providing biological services at little cost.

06.3.4 Lighting

Lighting can serve both pragmatic and aesthetic needs in street improvements. Design considerations for decorative lighting are:

- Increase the project's visual distinctiveness from other developments;
- Provide safe multi-modal traffic movement;
- Enhance viewers' appreciation of the neighbourhoods at night and during winter;
- Higher illumination levels will be considered where security problems exist;
- Provide pedestrian-scaled lighting (- 20 - 24 foot height) and consistent luminance levels along all segments of the multi-use trail, pedestrian crossings and associated open spaces;
- Provide standard TAC luminance levels for roadways;
- Minimize light pollution through targeted downward lighting and minimized light trespass;
- Enhance other light sources or highlight attractive elements and public art;
- Provide visual direction and way-finding for users (i.e. signing, banners);
- Add additional vertical design emphasis; and
- Consider LED lighting to significantly reduce energy use.

Lighting throughout The Quarters will create distinctive separation of light styles between the five sections, yet subtle similarities will create unity. The Heritage and McCauley Quarters will be lit with a classical dual fixture styled light similar to that used along the Heritage Trail. The Civic Quarter and the Five Corners will be illuminated with a contemporary version of the light fixture used in the Heritage Quarter.

06.3.5 Surface Treatment

Surface pavement will be used to provide gathering places and direct pedestrian or bicycle circulation within boulevards, parks and open spaces. Textured surfacing and unique paving will emphasize pedestrian priority and aid in traffic calming. Recommended surface paving treatments include concrete, pavers, or asphalt trails.

Varying the texture and colour of materials used upon the surface pavement conveys interest, urbanity and elegance to passing viewers. When a stark ground surface with little seasonal variation is contrasted with vibrant colours, patterns and texture, it can be transformed into a rich and dramatic feature. Pavement treatments on traditional concrete sidewalks should be further augmented by saw cutting, adding colour, or applying a sandblast finish to the surfaces.

Textured surfacing should be used primarily in four main areas within The Quarters:

- The mid-block pedestrian street through the Civic and Heritage Quarters and along the top of the bank in the Five Corners Quarter;
- Pedestrian connections between each park block of the Armature including the wide pedestrian scrambled crossing across Jasper Avenue;
- The arcade at the Five Corners intersection; and,
- The sidewalks within the Heritage Quarter.

06.4 Parks and Open Space

Open public space is the foundation of urban livability. It helps to increase environmental conservation and promotes recreation and community interaction. One of the fundamental design approaches in The Quarters is to develop a linked network of open spaces for all to enjoy (Fig. 6-3).

Park uses are often divided into two categories: active and passive recreation. Active recreation requires intensive and structured development and often involves cooperative or team activity, including playgrounds and sports fields. Passive recreation emphasizes a low level of development, including rest areas, picnic areas and trails. Open space in The Quarters will contain a balance of active and passive uses. In addition to parks shown in Fig. 6.3 additional parks and urban green areas may be assembled on an opportunity basis.

Open spaces and parks within The Quarters may contain design elements, such as:

- Public seating and impromptu social gathering areas;
- Focal features, such as public art;
- Decorative light standards and fixtures;
- Water elements, such as spray play components or fountains;
- Landscaped planting beds;
- Planters or tree grates; and
- A mixture of hard and soft pavement surfacing.

06.4.1 Plazas

Public plazas may be developed in various places in The Quarters. Development adjacent to plazas will be encouraged to develop frontage facing the public space and to animate and interact with it.

The widest passages along the mid-block pedestrian street that rescales the grid in the Heritage and Civic Quarters could become small squares. The character of these squares is informal, small-scale and intimate and creates a place for residents and employees of the neighbourhood to meet, relax, play and rest. The urban balcony on Grierson Hill overlooking the North Saskatchewan River, and the Parade Grounds at the old RCMP Barracks would also function very well as public plazas.



NOTE: Alignment for Rescaling the Grid is shown conceptually for illustrative purposes. Other alignments that achieve the same planning principle will be considered.

Fig. 6-3 Proposed public areas and spaces in The Quarters



Fig. 6-4 Examples of funicular systems

The arcade around the Five Corners intersection will be an important public space. Although not literally a plaza, the circular space will create a strong sense of identity and space. The 2 storey arcade will enhance the pedestrian realm enveloping this plaza.

A large triangular plaza will be created at the convergence of Jasper Avenue, the Armature, and 101A Avenue. The continuity of pedestrian space that will be created by the closing of traffic around this plaza will provide an island refuge for public gathering. The visibility and prominence of this space along the Jasper Avenue corridor will also make it an ideal gathering place, as people enjoy watching others and being seen.

06.4.2 Connectivity to the River Valley System

Louise McKinney Riverside Park and the river valley and ravine systems are enormous assets to Edmonton and The Quarters. There currently exist three main points of access from The Quarters. Grierson Hill Road is a graded connection but the traffic flow presents a challenge to pedestrian movement. There are also stairways on either end of The Quarters, one associated with the Shaw Conference Centre and one at the foot of 92 Street. The connectivity between The Quarters and the river valley should be enhanced, particularly for people with mobility challenges and cyclists. Two suggestions for how to do this are presented here and others could be developed in the future.

A funicular system is proposed for the southern end of the Armature that will enhance pedestrian access to Louise McKinney Riverside Park and the river valley. A funicular is a type of cable railway used to transport passengers and goods up and down a very steep slope. See Figure 6-4 for examples. The funicular could run from the approximate intersection of 96 Street and 101A Avenue and descend into the river valley across Grierson Hill road to Louise McKinney Riverside Park. The funicular could become a prominent feature of Louise McKinney Park and The Quarters.

Another solution to increase connectivity is an urban balcony. A feature such as this could provide a dramatic opportunity to enjoy views of the majestic river valley (Fig. 4-6). The urban balcony is envisioned to be a large cantilevered

deck off the top-of-bank, extending over Grierson Hill Road allowing users to essentially experience a bird's eye view of the North Saskatchewan River and river valley. A spiraling ramp and elevator would transport people traveling between The Quarters and the valley.

Both the funicular and the urban balcony have the potential to form a connecting architectural gateway between the southern end of the Armature, Louise McKinney Riverside Park, and the entire system of parks. The southern end of the Armature would become a "front porch" for Louise McKinney Park and the river valley. A combination of these two approaches could also meet the intent of enhanced mobility and connectivity.

06.5 Public Art

Public art can be in three or two dimensions such as sculpture, murals, bas-reliefs and graphics. It is an important aspect of enriching the public realm in The Quarters. The Edmonton Arts Council and the appointed members of the Public Art Committee direct the public art procurement process for the City and will play an important role in programming public art in The Quarters.

Public art can create a sense of identity for individual neighbourhoods. It can create a unique place, a destination, a focal point for activity, a meeting place, or a beloved landmark. It can humanize the urban environment by introducing a sense of humour, underscoring the cultural or historic significance of particular places, engaging people's attention or simply adding meaning to the observer's outdoor experience.

Land art (Fig 6-5) or environmental art (Fig. 6-6) could be one of the directions to programme The Quarters. Considering the emphasis on green design and the sustainability of the neighbourhood in The Quarters, art that celebrates these principles is appropriate.



Fig. 6-5 An example of urban art



Fig. 6-6 An example of environmental art in winter

06.6 Architectural Focus Points and Way-Finding Elements

A well-coordinated series of design elements in The Quarters will enhance the observer's "sense of place" by ensuring that they relate identifiable design features to one another, thereby creating an understandable pattern of the entire project.

Creating a positive and memorable identity for The Quarters is a high design priority. Gateways should be created with coordinated materials and built form. Gateway features play an important role in defining a visitor's first impressions by celebrating entry into specific areas through the establishment of way-finding values of coherence and design continuity. A gateway may not be a literal gate or arch, but may be a prominent piece of public art or other design feature that marks entry into an area and assists in wayfinding.

Primary gateways will be designed to serve dual purposes: a wayfinding element, or an easily recognizable neighbourhood entry feature. The architectural design of the primary gateways will be of high quality and will utilize consistent forms so that they contribute to the overall identity of the area. Quality details will be incorporated that are sensitive to the area's urban and green character, while addressing contemporary issues of durability and economy.

Secondary gateways will generally be designed for pedestrian scaled environments. Although smaller in size to primary gateways, they will employ aesthetically compatible materials in a durable design that will discourage vandalism, minimize maintenance and ease replacement time and costs.

Coordinated signs should be located within consistent setbacks, at every roadway intersection – preferably in combination with decorative lighting and other wayfinding elements.

The City of Edmonton owns and has copyrighted the use of The Quarters logo. Any company or individual wishing to use The Quarters logo must obtain the permission of the City of Edmonton.

06.7 Mobility, Transportation and Parking

Council's endorsement of this Urban Design Plan will result in the preparation of a detailed Transportation Impact Statement that will include, loading and unloading design criteria, waste collection design guidelines, reduced parking requirements and consideration of future LRT and Transit routing.

06.7.1 Pedestrian Mobility

Several pedestrian priority areas will be created in The Quarters (Fig. 6-7). The large blocks in The Quarters area decrease pedestrian mobility. The north/south mid-block pedestrian street through the Civic and Heritage Quarters rescales the street grid. Mid-block crossings and pavement treatment will maintain the continuity of the pedestrian street across roads. In the Armature, walking paths will be provided through the linear park with pavement treatment between each park block to enhance north/south pedestrian connections (fig. 4-2). 101A Avenue becomes a pedestrian priority street with generous sidewalks on the north side. As on Rice Howard Way, little distinction will be made between vehicular and pedestrian space through similar pavement treatment and minimal or no curb.

Generous sidewalks will enhance pedestrian mobility throughout The Quarters. Narrowed carriageways, curb bulb-outs on sidewalks, and mid-block crossings improve pedestrian connectivity. With the removal of a vehicular connection between 96 Street and Jasper Avenue pedestrians will be able to travel safely and easily from the Armature to the Heritage Quarter. The scrambled intersection crossing will improve pedestrian connections across Jasper Avenue where it intersects the Armature. The funicular or the urban balcony will greatly improve access to Louise McKinney Riverside Park and the river valley for both pedestrians and cyclists.

Pedestrians may follow the Heritage Trail west or east bound along the edge of the river valley. A future Heritage Trail alignment is contemplated eastwards along 101 Avenue. The trail alignment would then proceed eastward on an as yet undetermined alignment until it can link with Jasper Avenue where it would run on the riverside of the avenue. The trail would then merge with the Jasper Avenue Promenade in order to take advantage of the magnificent views of the North Saskatchewan River Valley and ravine system.

06.7.2 Bicycle Mobility

Cyclists will have efficient north/south and east/west connections through The Quarters (Fig. 6-7). A two-way dedicated bicycle lane on the north side of 102A Avenue will run from Jasper Avenue to 97 Street. This bicycle lane will connect to the bus/taxi/bicycle lane existing west of 97 Street. 102A Avenue is a bus corridor therefore a boulevard will be created to separate cyclists from the buses and provide a waiting area for bus passengers. A multi-use trail to the east of 96 Street will transport cyclists from the river valley to 103A Avenue where they can readily connect with the multi-use trail along the LRT line just to the north.

The funicular or urban balcony with a spiral ramp similar to those on the Dudley B. Menzies Bridge proposed for the southern end of the Armature will provide cyclists and pedestrians with enhanced access to the North Saskatchewan River Valley (refer to section 6.5.2 Connectivity to the River Valley System).

06.7.3 Public Transportation

The Quarters is well connected by public transit. Close to 20 routes run through or on the periphery of The Quarters. Two major corridors are 102 Avenue for eastbound buses, and 102A Avenue for westbound buses (Fig. 6-7). The layover bus stops on 102A Avenue will be maintained.

The Quarters benefit enormously from the proximity of the LRT station underneath Churchill Square. A future station is planned near the Remand Center at 103A Avenue and 97 Street. When this station becomes operational the majority of the Quarters will be within walking distance of an LRT station.

In addition, the alignment of future LRT routes is being contemplated through The Quarters. At grade or below grade LRT routes with accompanying stations are supported to enhance Smart Choices initiatives such as the creation of comprehensive transit oriented development (TOD).

06.7.4 Vehicular Movement

Pedestrian and bicycle travel and public transportation will be the desired modes of transportation in The Quarters. A vehicular road network will remain in order to maintain connectivity with neighbouring communities and allow visitors to access the area.

Arterial roadways in The Quarters will remain as they are currently (Fig. 6-8). Secondary roads other than 96 Street will not be disrupted though most of them will have their carriageway reduced. Local roads will be reduced in width and various means will be employed to slow traffic.

To enhance the pedestrian character of the Armature and reduce vehicular traffic, 96 Street will become one-way running north from 101A Avenue to 102A Avenue. Roads running east/west between each of the park blocks will be textured. The continuous stretch of park on the Armature from 102A Avenue to 103A Avenue dead-ends 103 Avenue on the east side of 96 Street. 96 Street will be open to two-way traffic between 103 Avenue and 103A Avenue. 102 Avenue and 102A Avenue will continue to exist as one-way streets; however 102 A Avenue will be a dedicated bus and bicycle street with limited access for private vehicles.

To improve traffic flow around development southeast of the Five Corners intersection, the alleyway connecting 94 Street to 101A Avenue should be upgraded and widened.

06.7.5 Parking

The key objective regarding parking in The Quarters is to reduce parking and encourage transit, cycling and pedestrian activities.

One of the biggest challenges facing smart growth is identifying new ways to address the need for parking while minimizing its negative impacts. Parking currently consumes a large amount of land within The Quarters, which is used mostly by downtown employees. Most often, surface and structured parking lots present sterile, unattractive environments and often isolate land uses, which preclude the ability to develop lively pedestrian-friendly streets.



Fig. 6-7 Roadways and circulation



Fig. 6.8 Vehicular traffic patterns

As individual areas of the Quarters are redeveloped over time maintaining an appropriate traffic and parking plan for the area is recommended. This parking management program should enhance the modal split to transit and cyclists' and pedestrians' opportunities while controlling the growth in single occupant vehicle travel and excessive parking requirements.

In developing parking standards for land use development activity in The Quarters parking design, parking financing, and parking supply and demand must be re-examined to better meet the needs of existing and future residents, employees and visitors. Developers in the area should not be constrained by high parking requirements. There is a risk that the difficulty and expense of providing parking may limit the amount of density achieved in The Quarters. Creative approaches are required to promote better project design, reduce construction and operational costs, add value to development projects, and ensure that the desired densities are achieved.

Appropriate ways of managing parking supply and demand in The Quarters include:

- Limiting parking supply – reduce or eliminate parking minimums and use parking maximums;
- Shared parking – allow daytime and night time uses to share parking spaces;
- Cash/fee in lieu of parking – fees may be used to develop offsite parking, and improve transit, car pool and pedestrian travel;
- Transportation Demand Management (TDM) – provide incentives to developers for implementing TDM;
- Management of both on and off street parking resources;
- Control parking demand – invest in alternative transportation, provide incentives and utilize pricing to influence parking demand; and
- Traffic Impact Assessment (TIA) – a TIA will study in greater detail sustainable traffic and parking plans for each of the individual precincts within The Quarters.

Parking structures are encouraged to be located underground. An above ground parkade will only be allowed if it is enveloped on all visible street and avenue sides by commercial and or residential uses with a minimum depth of 10m. The side of a parkade facing an alleyway will not need a programmed use to cover it but it does need full architectural treatment so it does not stand out from a residential building (Refer to The Quarters Statutory Plan Overlay: Parking Requirements).

06.7.6 Service Vehicles / Fire & Safety Access

Service alleys are provided as a means for access, escape, delivery, and waste removal. Two north/south service alleys run through the Heritage and Civic Quarters behind development fronting 97 Street and 96 Street. Additional service alleys run east/west through the middle of each block, but these may be consolidated in the future for large developments. The north/south mid-block pedestrian street will maintain a minimum 6 meter drive width for emergency services that will not be accessible to private vehicles.

North/south service alleys in the McCauley Quarter are immediately behind the development fronting 95 Street. East/west service alleys run through the middle of each block. If alleys are consolidated the developer should provide alternate public access through the block in order to meet the objective of a fine-grained pedestrian scale.

Service alleys in the Five Corners Quarter exist in various locations however the unusual block shapes mean that many properties front on two roads and do not require service alleys. Consolidation of alleys in this area would enhance development. Public access through these new buildings is encouraged to maintain connectivity and a fine network of pedestrian paths.

Alleyway consolidation in order to develop larger blocks will be carefully considered by the City in order to ensure sufficient access for service and emergency vehicles.

07. Demonstration Plan

07.1 Programming

To help visualize the options for density in The Quarters three scenarios were researched through 2D and 3D modelling. What would it look like if 8,000, 11,000 or 14,000 extra people moved into the area (Fig. 7-1)? Currently the Oliver neighbourhood located adjacent and to the west of downtown, with a population of over 15 000, is Edmonton's most populous neighbourhood. Oliver covers approximately 60 city blocks, whereas The Quarters occupies approximately 18 city blocks. These modeling studies tested what the spatial impact of housing the number of people and associated services, amenities and businesses of each population scenario would be.

Incentives to encourage density increase the possible number of people in The Quarters to approximately 20,000 overall (Fig. 7-2). Residents will generate 5% floor space for commercial uses such as supermarkets, pharmacies, medical clinics, liquor stores, restaurants, coffee shops, daycare centers or a community hall. 20,000 residents would generate approximately 46,500 m² (500,000 ft²) of this type of commercial space. Other commercial space will be a result of new businesses, offices and institutions being located in the area. These numbers need to be revisited. These new ventures will create employment for residents. For details of the programming analysis please refer to The Quarters Technical Reports.

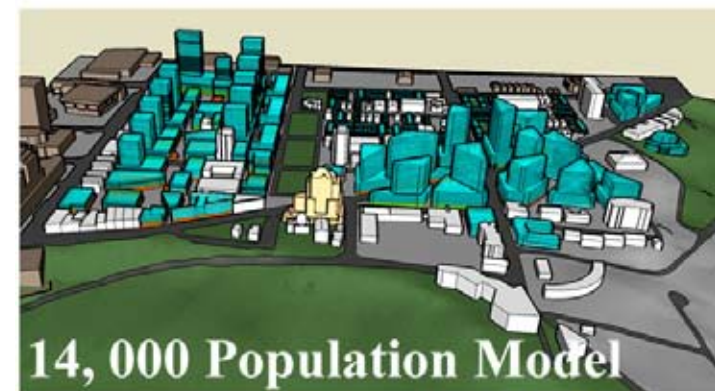
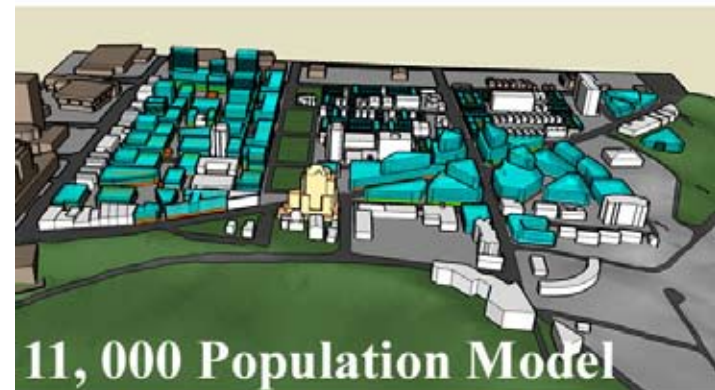
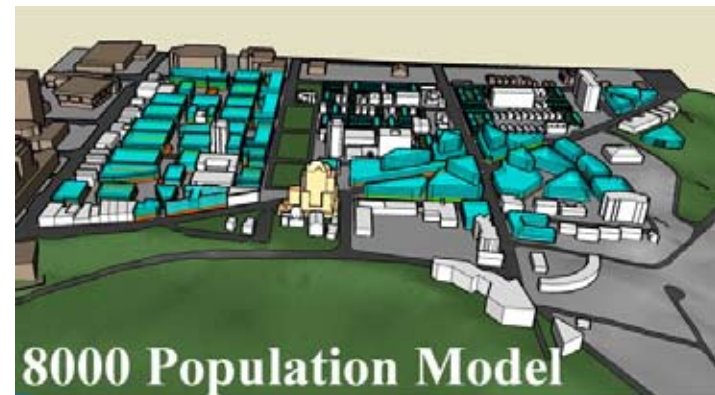


Fig. 7-1 Population model study



Fig. 7-2 Population model study

07.2 Built Form Testing

Testing of building forms was done in order to get an accurate idea of floor area ratios and densities that could be achieved in The Quarters. This evidence is fundamental in proving the feasibility of the proposed residential densities. The evidence illustrates that the proposed density is not only achievable, but also can be realized with plenty of commercial and service space, sunlight, view corridors, and diverse dwelling forms.

Examining eight models over 6 sites produced the density evidence. Sites included one in the Civic Quarter, two in the Armature, one in the McCauley Quarter, and two in the Five Corners Quarter. Since sites in the Heritage Quarter are mostly built-out, no site was chosen in this district. Please refer to The Quarters Technical Reports for the details of the analysis.

Several constraints were considered during the analysis. These included building height requirements, setback and stepback requirements, urban form characteristics, floor area ratios (FAR), and other programming requirements (Fig. 7-3). Architectural aesthetic is important but was not the emphasis in the evidence testing. A relatively boxy building form was used to demonstrate building volumes only. Check the built form against the setback and step charts.

Building forms followed three basic assumptions:

1. Property consolidations would occur,
2. Floor heights were 3.2m for residential and 5m for the ground floor,
3. Average dwelling size was 93.0 m².

07.3 Demonstration Plan

A demonstration plan was designed to illustrate what The Quarters might look like in 2018, a decade from now (Fig. 7-4). The demonstration plan illustrates one possible scenario of development that may occur in The Quarters. It is based on many factors including the design team's understanding of the area, programming and built form testing, pulse points (e.g. where development will likely occur first), current development proposals, future public investment in the area, meetings with stakeholders and where private development might happen.

In designing the demonstration plan, all development principles and urban design guidelines specified in this document were applied. It was an iterative process where principles and guidelines became more and more refined as the design team's understanding of their applicability grew through designing the demonstration plan. The plan has been instrumental in determining heights and floor area ratios.

Any demonstration plan should be a work in progress. As specific building proposals, streetscape proposals, etc. come forward, the demonstration plan should be refined and updated. As such it is a tool to protect and guide comprehensive development of The Quarters. This way a demonstration plan matures over time from just a possible scenario into a realistic picture of the urban design of The Quarters. The planning department is encouraged to be the keeper of this plan and update it as development occurs.

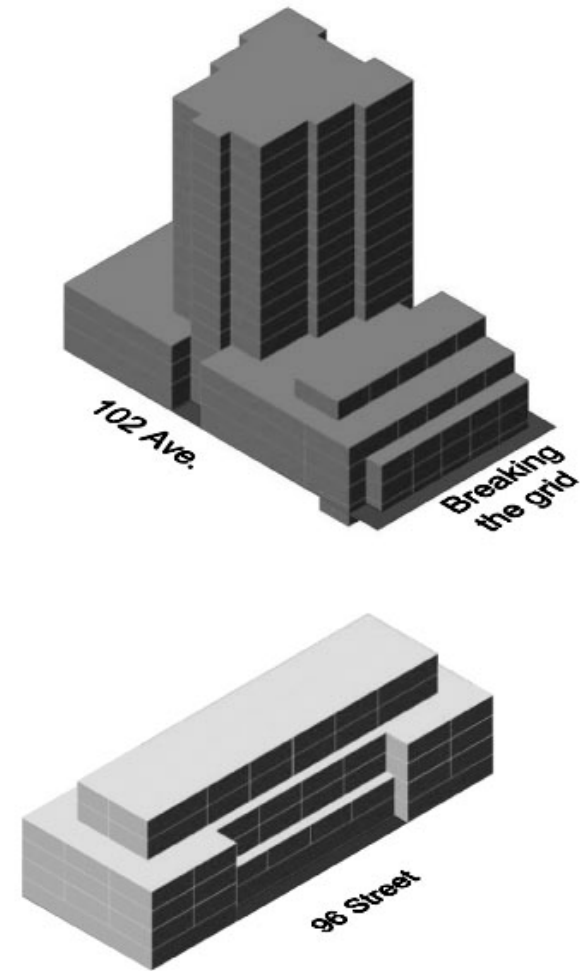


Fig. 7-3 Examples of build form testing models in the Civic Quarter and along the Armature

08. Implementation

08.1 Policy

The adoption of The Quarters Area Redevelopment Plan (ARP) will provide a planning framework to guide development and revitalization of The Quarters consistent with a Council-approved Vision and guiding principles. The Quarters ARP was informed by this Urban Design Plan and establishes the special character areas, future land uses and densities, and fosters sustainable development within the ARP area. The ARP provides a basis for amendments to the Zoning Bylaw and will be prepared and adopted in accordance with Sections 634 and 635 of the Municipal Government Act.

08.2 Phasing

A phasing plan that schedules the implementation of public work in The Quarters will be developed at a later date, once budgeting and funding has been determined and detailed design work begins. Infrastructure upgrading, pulse points, traffic considerations, urban design rationale, and proposed private development will all influence the final phasing plan. It is logical that growth and upgrading would emanate out from areas that are already successfully developed such as the Downtown. Also, improvements to 101A Avenue, Jasper Avenue and the Five Corners intersection would encourage and kick start development in a significant and meaningful way.