

Fort Road Urban Design Plan

“A Transit-Oriented Community”

Submission to:



ARMIN A. PREKSAITIS
& ASSOCIATES LTD.

In association with



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1.0 INTRODUCTION

1.1 BACKGROUND AND PURPOSE

The *Fort Road Urban Design Plan* is an important step to implementing the City's 2002 *Fort Road Old Town Master Plan*. Revitalizing the Fort Road area presents the City of Edmonton with a unique transit oriented development (TOD) opportunity that fulfills many of City Council's key initiatives, including *Smart Choices*, to:

- maximize land use in an area with existing infrastructure;
- revitalize an older, industrial 'brownfield' area;
- develop a transit-oriented community that encourages LRT ridership;
- create a walkable, mixed-use neighbourhood that offers housing choice; and
- address future traffic growth.

Once a thriving industrial district in northeast Edmonton, the Fort Road project area has experienced considerable decline in the recent decades. Today, it is characterized by deteriorating streets, buildings and much vacant land. As outlined in the *Master Plan*, the redeveloped area will:

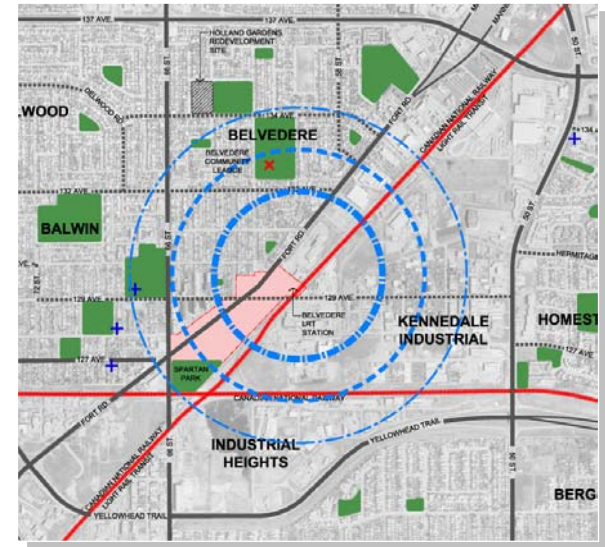
- create higher densities close to the LRT station;
- change land uses from industrial to residential and commercial;
- establish a land use pattern that favors LRT ridership;
- create a pedestrian network within a 5 minute walk of the Belvedere LRT station that integrates public and private properties; and
- develop City owned land as mixed-use demonstration project that combines retail, office and residential uses.

To implement the *Fort Road Old Town Master Plan*, in April 2005 the City of Edmonton's Asset Management & Pabic Works Department retained a multi-disciplinary consulting team to prepare a detailed Urban Design Plan and Guidelines. This report is the culmination of that work.

1.2 PROJECT BOUNDARY

The Plan area is located in northeast Edmonton's Belvedere community and is part of the *Belvedere Station Area Redevelopment Plan*. The area is intersected by Fort Road, a major transportation corridor in northeast Edmonton. To the west are the residential neighbourhoods of Delwood and Balwin, while the Kennedale Industrial and Industrial Heights areas are located to the east and south.

The map below shows the 21 hectare (52 acre) site, which extends on both sides of Fort Road between 66 and 62 Streets. West of Fort Road the project boundary is the lane behind existing retail and business operations. The project area east of Fort Road includes a mix of vacant and light industrial land bounded to the east by the CN rail line and LRT. The Belvedere LRT Station anchors the site to the northeast. Three major roadways serve the project area: Fort Road, 66 Street and 129 Avenue.

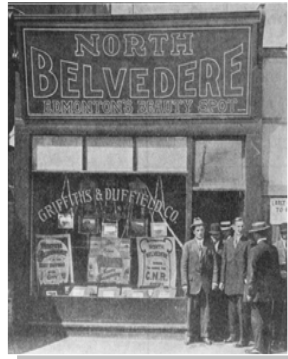


This site presents a unique opportunity for a comprehensively-planned development. If the plan is to be implemented as presented, some obstacles have been addressed and others must still be addressed, including:

- The need for public realm improvements and roadway and municipal services upgrading in the project area.
- The need for environmental remediation of a brownfield site.
- Industrial uses adjacent to the site could hinder site development and marketing.
- Privately-owned land in the project area has been acquired.

1.3 HISTORIC OVERVIEW

Fort Road originated as an early wagon trail to Fort Saskatchewan. Homesteaders began to settle during the 1880s and the railway appeared in the early 1900s. After Burns and Swifts established meat packing plants, the area developed quickly and became a hub for the livestock and meat processing industry. A small commercial core of shops and services, including the Transit Hotel, emerged at the intersection of 66 Street and Fort Road. After 'Packingtown' amalgamated with the City of Edmonton in 1913, it became an important industrial centre for northeast Edmonton. Fort Road, which was first known as Fort Saskatchewan Trail and then Edmonton Avenue, originally accommodated two lanes of traffic with two lanes of angle parking.



Early photo of Fort Road storefront.

1.4 PLANNING PROCESS

The Urban Design Plan was prepared in four phases starting in May 2005. The City of Edmonton's Asset Management & Public Works Department oversaw the project and the consulting team met regularly with a Steering Committee of senior managers from City departments, as well as a Project Team consisting of representatives from the Fort Road Business & Community Association and various civic departments. City representatives also met on a regular basis with the Fort Road Liaison Group whose members included the Balwin and Belvedere Community Leagues and the Fort Road Business & Community Association (also known as the Fort Road Business Revitalization Zone).

Throughout the process, area stakeholders and community members were provided information and consulted. The input received identified important issues and opportunities within the project area (summarized in the box at the right) and formed the basis for the development of the Fort Road development concept.

Outcomes of the various consultation activities are summarized in reports in the Technical Appendix.

Consultation took a variety of forms:

Stakeholder Interviews and Focus Groups – June 2005. 23 stakeholders representing the Belvedere Community League, Ward 3 Councillors, City administration, utility companies and the Steering Committee and Project Team provided input on how they wanted to see the area develop.

Design Ideas Workshop – June 16, 2005. 27 individuals from the Fort Road Liaison Group, Ward 3 Councillors, civic departments, the Steering Committee and Project Team provided feedback on three alternative development concepts.

Public Open House #1 and Questionnaire – November 22, 2005. The consulting team presented a draft concept plan and solicited input from over 250 community and business stakeholders. 87 attendees completed the questionnaire.

Public Open House #2 – June 14, 2006. Over 120 residents and businesses reviewed and commented on a revised concept plan and streetscape plan.

Public Communications -

Information was shared throughout the planning process with updates posted on the City web site and in a *Telegraph* newsletter produced two to three times a year and mailed to area residents and stakeholders.

Important research and technical studies were also undertaken early in the process to ensure that a viable plan was produced. The studies, including a Market Study, Traffic Impact Assessment and a Utility Servicing Study, are included in the Technical Appendix.



Design ideas workshop June 16, 2005.



Deanna Fuhlendorf of Fort Road Business Association and Councillor Ed Gibbons.

Key issues and opportunities identified by stakeholders during public consultation activities:

- Create a pedestrian-friendly environment.
- Address safety of 129 Ave / 62 Street intersection.
- Integrate multi-use trail throughout the site.
- Conduct a Phase I Environmental Site Assessment.
- Determine future of Spartan Park early in the process.
- Address noise attenuation near CN rail line and Fort Road.
- Incorporate affordable housing.
- Include public art in revitalization plan.
- Provide open space and a village square.
- Explore theming for the area.

2.0 PLANNING CONSIDERATIONS & DEVELOPMENT CONCEPT

2.1 PLANNING CONSIDERATIONS

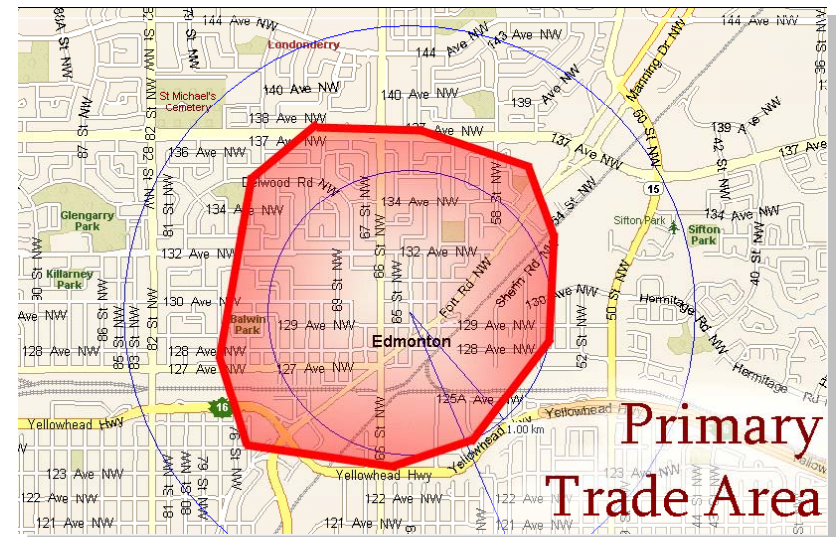
The development of this Urban Design Plan has been guided by market conditions, municipal policies, planning principles, and community consultation.

Market Conditions - A market study conducted by Hudema Consulting Group in September, 2005, assessed current and future residential, retail and service commercial, and office space demand in the Urban Design Plan area to the year 2020. For the complete Market Study, refer to the Technical Appendix. Highlights of the study are summarized below:

Residential – Based on a 35% capture rate, approximately 1,000 units could be absorbed in the Plan area. To achieve this, a variety of building forms are recommended including row houses, and low, mid and high-rise apartments. The market study indicates that master planning and high quality architectural and public space design are vital for the Urban Design Plan area, as potential buyers will value being part of a new community rather than a redeveloped industrial district.

Retail – Approximately 75% of spending at commercial operations in the Urban Design Plan area will be generated by residents in the primary trade area. This covers an area slightly greater than one kilometre from the centre of the Fort Road area (shown in red on the map). In 2001, approximately 8,500 people lived in the primary trade area. By 2020 this could increase to 13,000 people. To serve this population, approximately 7,400 to 9,300 m² of new retail and service commercial floor area is recommended in the Plan area. In addition, new residential development could potentially provide sufficient demand to attract a small to medium-sized grocery store to serve the area.

Office - The Urban Design Plan area is unlikely to compete with higher profile locations for larger tenants who serve regional customers. Thus, a relatively small amount of office space development is recommended for the next ten years. Approximately 1,000 m² of floor area could be developed as small offices in street front or second storey locations. As the Plan area develops, there may be potential to add low rise office development near the Belvedere LRT station.



Customers from the Primary Trade Area will account for nearly 75% of spending at commercial establishments in the Fort Road area.

Transit Oriented, Mixed Use Development - Mixed use, transit oriented development (TOD) is what drives the Urban Design Plan concept. TOD optimizes the use of existing public transit infrastructure and provides more transit options for residents by developing higher-density, mixed use environments with strong pedestrian linkages around transit stations. Transit ridership is best supported by a mixed land use pattern that combines residential, retail and office uses.

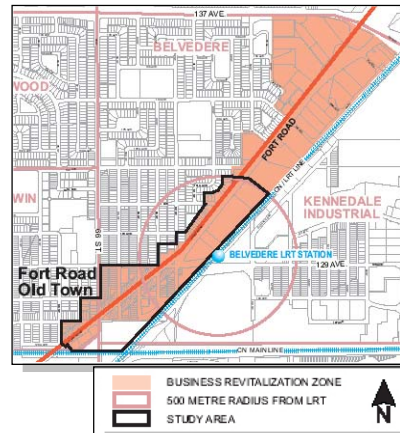
The Urban Design Plan area's proximity to the Belvedere Transit Station makes it an ideal location for this type of development. TOD is an important objective of the *Fort Road Old Town Master Plan*. As well, the City of Edmonton's Smart Choices Initiative has identified the Belvedere Station area as having significant intensification potential.



Transit oriented development in San Jose, California.

Fort Road Widening and Enhancement – Fort Road is an integral component of the Inner and Outer Ring Road System, connecting the Yellowhead Trail and Gretzky Drive to the Outer Ring Road System and Manning Drive to the northeast. Fort Road is currently a four-lane arterial road. The City of Edmonton is widening Fort Road to six lanes to accommodate future traffic growth. This widening also provides an opportunity to introduce median and streetscape improvements to enhance the look, safety and walkability of Fort Road between 66 Street and 129 Avenue. Staging in the Urban Design Plan area will respond to the City's planned roadway improvements.

Fort Road Business Revitalization Zone - The vision of the Business Revitalization Zone is to see Fort Road evolve into an attractive and vibrant main street shopping area. Streetscape improvements will set the stage to leverage additional private and public reinvestment in the area. Business revitalization efforts can be enhanced by ensuring that future residential development integrates well with existing businesses and that complementary mixed use development is allowed on both sides of Fort Road. During the Urban Design Plan preparation, the Fort Road Business and Community Association was continually involved in the planning process.



Fort Road Old Town Master Plan Area in relation to the larger Business Revitalization Zone.

Integration with Overall Neighbourhood - Development in the Urban Design Plan area will involve significant changes and improvements to the southern portion of the Belvedere and Balwin neighbourhoods. Applying sound land use planning and urban design principles will help to ensure that this new development integrates physically, socially and economically with the surrounding neighbourhoods.

Range of Housing - A variety of multi-family development types are encouraged throughout the Plan area, including apartments, row housing, and live-work units. High rise apartments will vary in height, to a maximum of 16 to 18 storeys. Row housing units will be oriented primarily to the street. In keeping with City Council's commitment to increasing the supply of more affordable housing throughout the city, 20% of new residential development will be affordable housing units.



Example of mid-rise and high-rise apartments.

Multi-Use Trail Corridor – Within the east part of the Urban Design Plan area will be the City's proposed Multi-Use Trail Corridor, which will be west of the CN / LRT right of way. The proposed development concept includes a multi-use trail that will integrate with the City's overall trail network and provide pedestrian and bicycle links to the Belvedere LRT Station and Downtown.



A multi-use trail will integrate pedestrian and bicycle traffic and provide a landscaped buffer.

Spartan Park Relocation – Through negotiations with stakeholders, the City is proceeding to relocate the Spartan Park baseball facility to the east in the Montrose community. This has freed up the existing Spartan Park site to accommodate additional housing units, parks and open spaces. This relocation has provided additional park space for the residents of Montrose and a better location for the baseball diamond users. Open spaces in the Urban Design Plan area have been reconfigured to better serve the needs of the new community.

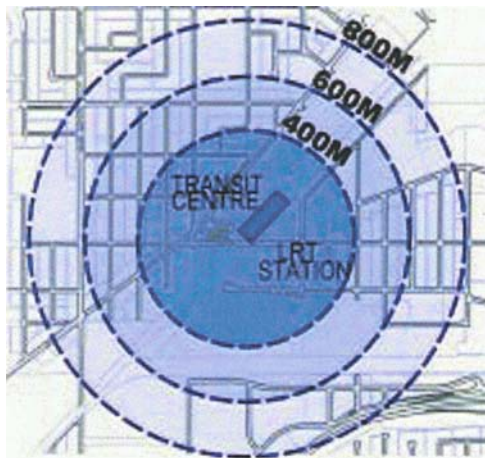
2.2 DEVELOPMENT CONCEPT

The Urban Design Plan concept proposes redeveloping the project area over ten years to transform it into a mixed-use commercial and residential neighbourhood. The Plan area will be linked and defined by three prominent public areas: a village square, a revitalized Fort Road and a multi-use trail corridor. Key features of the development concept include:

Transit Oriented Development

The Urban Design Plan area is located entirely within 400 to 800 metres (a 5 to 10 minute walking distance) of the Belvedere LRT Station. This is a prime location for the development of a walkable, mixed use, transit oriented development. From the Belvedere Station LRT travel times are: Downtown – 9 minutes, University of Alberta – 16 minutes, South Campus – 22 minutes, and Southgate – 25 minutes.

A landscaped multi-use trail for walking, cycling and other non-motorized uses will extend through the Plan area from 66 Street to the Belvedere LRT Station. It will effectively integrate all parts of the Fort Road project area and will link to the City's multi-use trail system, connecting adjacent neighbourhoods and Downtown.



*A typical transit oriented development catchment applied to Belvedere LRT Station.
Image Credit: EDA Collaborative Inc.*

Approved Land Uses

Approved land uses in the Urban Design Plan area are shown on the Development Concept on page 7. Mixed use high density residential and commercial uses are proposed adjacent to the east side of Fort Road, the south side of 129 Avenue and the east side of 66 Street. Commercial development, consisting of retail shops and services, will be located to take advantage of high traffic roadways and will be conveniently located for area residents at the ground level and second storeys. Above commercial development, mid rise apartments up to five storeys will be developed fronting onto Fort Road. This mixed-use commercial and mid rise apartment built form will function as a podium for high rise apartments above.



Example of mixed use with commercial and office space in the podium and high-rise residential behind.

High rise apartment development is proposed in the Plan area. Mid rise apartments and row housing will be developed as a podium for high rise apartment buildings of up to 18 storeys. New residents will have convenient access to existing and proposed commercial uses along Fort Road.

Infill and intensification is planned for the west side of Fort Road as opportunities arise, to accommodate commercial and office uses at the ground floor with low rise apartments above. This mix of land uses will contribute to the vitality of the area. Street level shops and restaurants will create a vibrant pedestrian environment along Fort Road. Identified heritage structures will be encouraged to be retained and incorporated into the future development to preserve the history and character of the area. Work-live space is envisioned, allowing homeowners to live above their place of business, reducing the need for daily work commutes.



Example of mixed use development with commercial frontage on the ground floor and a mid-rise apartment block above.

Parks, Open Space and Streetscaping

A village square, located at the centre of the Urban Design Plan area, will serve as a focal point and landmark for residents and visitors. It will function as a place for relaxation and for community gatherings and events.

A linear 'greenway' park is proposed along the eastern boundary of the Plan area, providing a green edge to the urban village and a buffer between residential uses and the CN / LRT right of way. Mid-block mews, plazas and small playground areas will be provided at strategic locations to break up building massing, to provide safe and inviting routes for pedestrians and to create opportunities for casual social interaction while promoting safety in the area.

Gateway features are proposed at the north, south and central entrances to the Fort Road project area to promote the development of a distinct identity, to provide landmarks and to enhance the appearance of new development.

Streetscape improvements along Fort Road and on local streets in the Urban Design Plan area will provide an improved streetscape, enhancing the look, feel and walkability of the area. This will help set the stage for business revitalization and reinvestment in the area. Public art, landscaping, street furnishings, decorative concrete treatments, enhanced pedestrian level lighting, themed signage and a widened sidewalk are proposed to create a vibrant pedestrian environment for residents and visitors.



A village square (above and below) will be a focal point of the redeveloped area.



A vibrant pedestrian environment is created with visually attractive streetscape features.

Roadway Improvements, Parking and CN / LRT Right of Way Interface

Widening of Fort Road, from four to six lanes, will improve traffic flow through the Urban Design Plan area. The addition of a central landscaped median will enhance pedestrian safety and the visual appearance of the roadways.

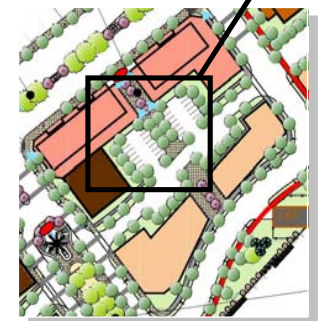


Fort Road will be widened to six lanes and enhanced with streetscape improvements.

Non-peak hour parking will be provided on Fort Road. Resident parking will be provided underground and limited visitor parking will be available. Surface parking in the Plan area will be centrally located internal to the development sites to reduce visual impact. Parking lot appearance will be enhanced through tree planting and pedestrian corridors will be strategically located.

An interface with the CN / LRT right of way will be provided in accordance with City of Edmonton requirements and CNR Guidelines. A safety barrier wall will be built by the City to separate the CN tracks from the project area. Use of high quality materials and opportunities for murals will be considered where retaining walls are required. Attractive landscaping will be utilized to promote the attractive integration of buffering requirements with the linear 'greenway' park.

Parking areas will be landscaped and located behind buildings.



DEVELOPMENT CONCEPT

Area A
Mixed Use High Density Residential Commercial
 • Maximum F.A.R = 4.9
 • Maximum building height = 18 storeys (54.0 m)
 • Maximum density = 370 dwellings / ha

Area B
Mixed Use High Density Residential Commercial
 • Maximum F.A.R = 3.2
 • Maximum building height = 16 storeys (48.0 m)
 • Maximum density = 250 dwellings / ha

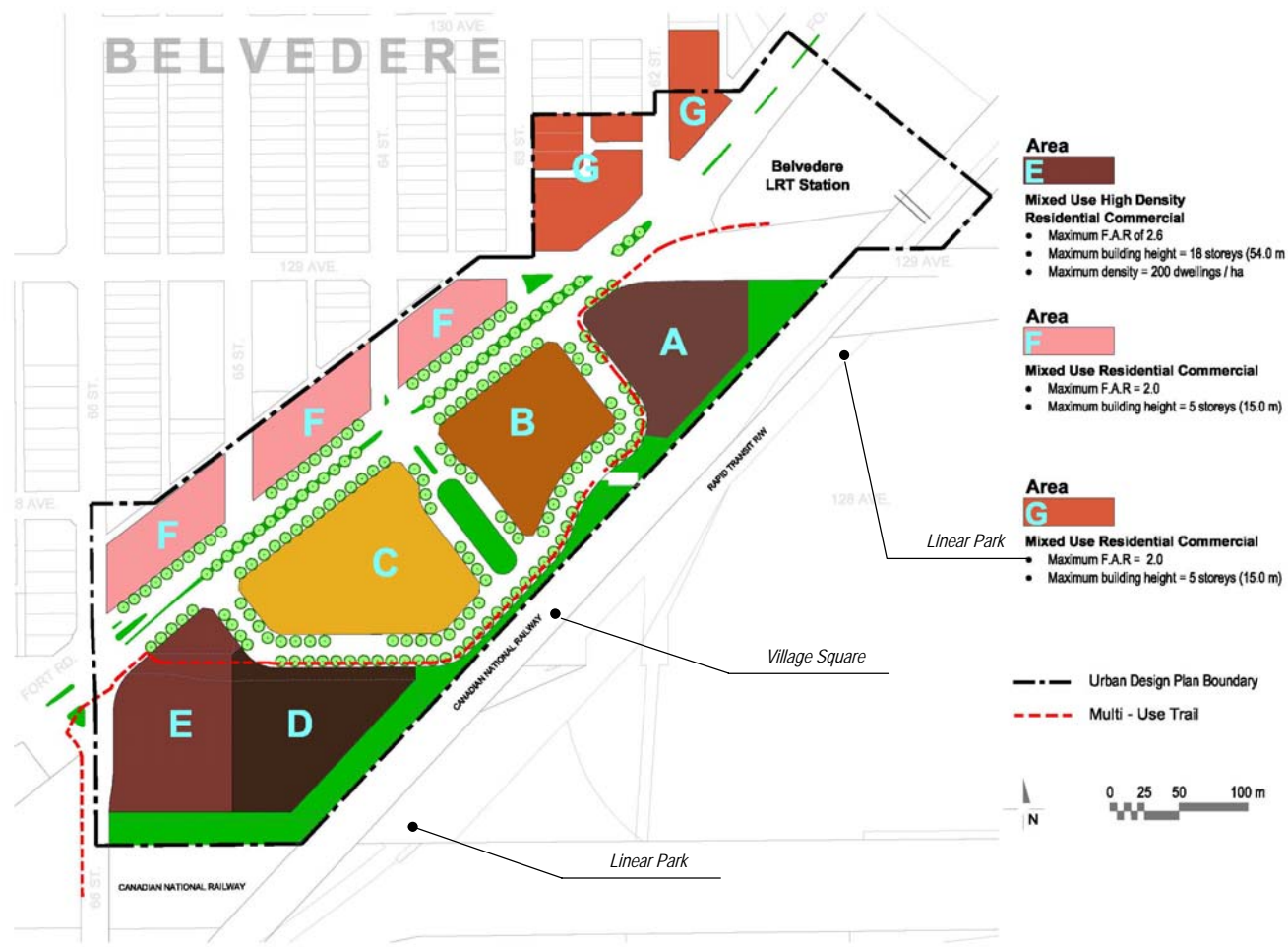
Area C
Mixed Use High Density Residential Commercial
 • Maximum F.A.R = 2.57
 • Maximum building height = 16 storeys (48.0 m)
 • Maximum density = 280 dwellings / ha

Area D
High Density Residential
 • Maximum F.A.R = 2.5
 • Maximum building height = 18 storeys (54.0 m)
 • Maximum density = 220 dwellings / ha

Area E
Mixed Use High Density Residential Commercial
 • Maximum F.A.R of 2.6
 • Maximum building height = 18 storeys (54.0 m)
 • Maximum density = 200 dwellings / ha

Area F
Mixed Use Residential Commercial
 • Maximum F.A.R = 2.0
 • Maximum building height = 5 storeys (15.0 m)

Area G
Mixed Use Residential Commercial
 • Maximum F.A.R = 2.0
 • Maximum building height = 5 storeys (15.0 m)



3.0 STREETScape, PARKS AND OPEN SPACE

Transforming an aging “brownfield” industrial area into a vibrant transit oriented, mixed use urban village provides an ideal demonstration project for implementing the City’s *Smart Choices for Developing Our Community* approved by Council in March of 2004. Addressing the look and feel of all public spaces is an important first step in revitalizing the area, as it will help leverage and attract private investment as well as new residents and merchants.

This section of the Urban Design Plan discusses the streetscape improvements planned for Fort Road in conjunction with the City’s road widening scheduled for 2008-2009. It also discusses and illustrates complementary design concepts for local streets in other parts of the Plan area to be redeveloped.

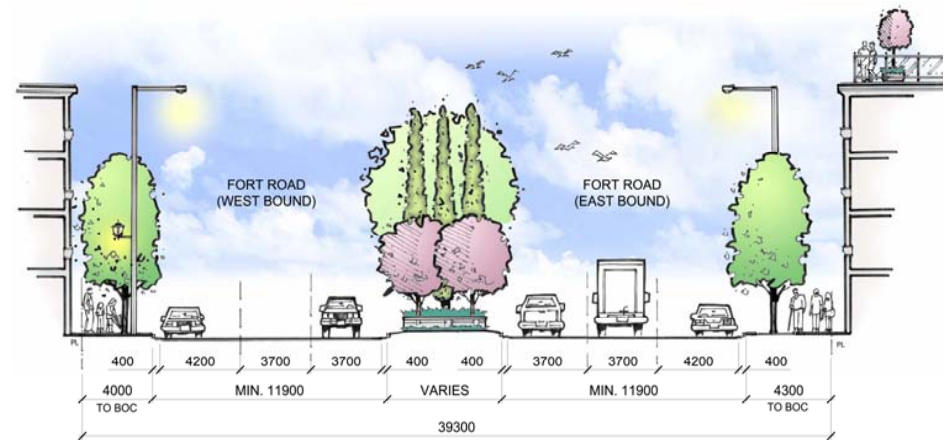
Design ideas are also presented for other public spaces within the Fort Road project area, including the multi-use trail, linear park, the village square and the Belvedere transit station.

3.1 STREETScape IMPROVEMENTS FOR FORT ROAD

Revitalizing Fort Road involves two major initiatives – widening the road from four to six lanes to accommodate increased traffic flow in northeast Edmonton to meet immediate and long term road and utility reconstruction requirements, and creating a positive and memorable streetscape between 66 Street and 129 Avenue.

As a member of the project team, EIDOS Consultants worked closely with the Fort Road Business and Community Association, the City and other stakeholders to develop streetscape improvements that will enhance the look, feel and walkability of Fort Road, setting the stage for future business revitalization and reinvestment. Placemaking is an important aspect in developing a strong theme. Design elements shown on the following pages celebrate Fort Road’s rich history with contemporary design elements that compliment both existing and new development. While widening of Fort Road is designed to accommodate future traffic growth and pedestrian safety, it will also help beautify the street by adding a central treed median with specialty lighting and raised planters.

The streetscape improvement plan includes decorative pavement, public art, gateway features, boulevard trees, ornamental planting beds, coordinated street furnishings, enhanced pedestrian-scale lighting and themed signage to increase Fort Road’s visual appeal and to create a pedestrian friendly environment for residents and visitors.

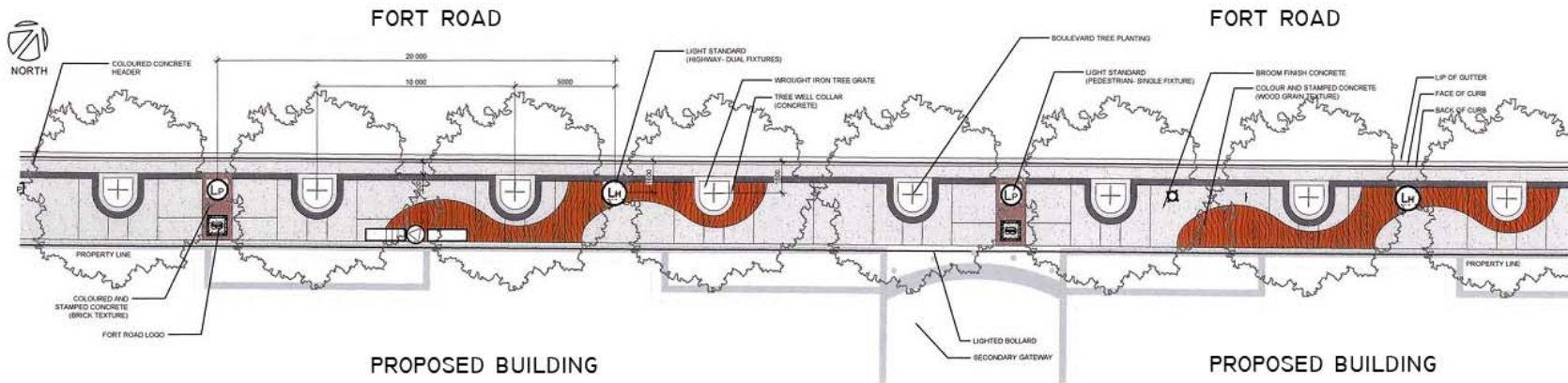


Cross-section and elevation of Fort Road showing traffic, parking, sidewalk and planted median strip.

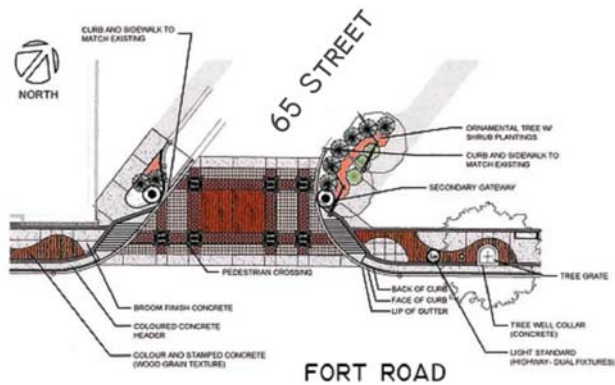
Decorative surface pavement, specifically on walkways, is used to create gathering places and direct pedestrian circulation within boulevards. See the Fort Road Concept Design on the following page. Textured surfacing and unique paving emphasizes pedestrian priority by highlighting pedestrian circulation routes and connecting people to program elements, special features and destinations. Varying the texture and color of materials in the surface pavement conveys interest, urbanity or elegance to passing viewers. The decorative pavement for streetscape improvements along Fort Road will be designed to link key areas of interest through a unified streetscape character and theme. Both colored and stamped concrete will be used to characterize the wooden boardwalk and red brick pavers which once fronted Fort Road. Accent bands of sand-blasted granite insets bearing the Fort Road logo will also be periodically introduced. Decorative crosswalks will further enhance the area’s character and theme.

Fort Road Concept Design

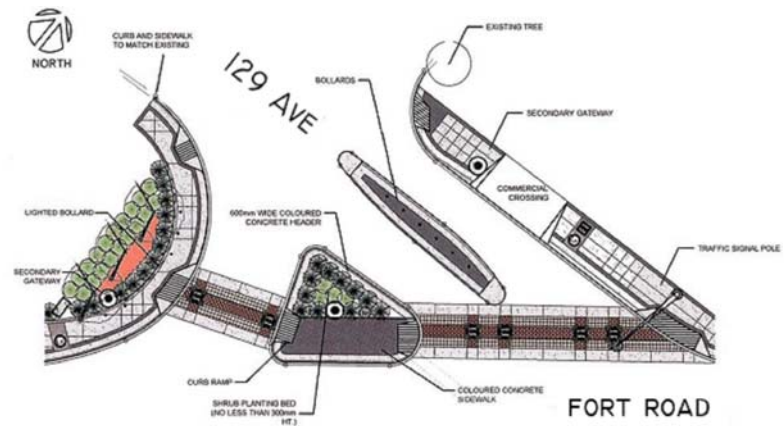
Streetscape concept along Fort Road showing decorative paving treatments.



Streetscape concept for local street at 65 Street and Fort Road.



Streetscape concept for 129 Avenue island intersection.

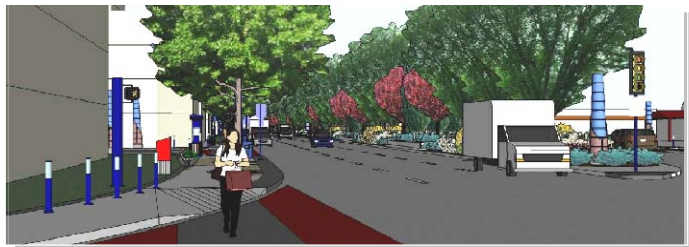


Public art can create a sense of identity for a city and individual neighbourhoods. Art pieces can have powerful meanings and unique spatial qualities that intrigue viewers. A strong commitment to public art - sculpture, murals, bas-reliefs and graphics - can help create a unique place, destination, focal point for activity, meeting place and beloved landmark. It can humanize the urban environment by introducing humour, underscoring a place's cultural or historic significance, engaging people's attention or simply add meaning to the outdoor experience. The City's Art and Design in Public Places Program is well-matched for this project. It aims to raise the profile and liveability of urban neighbourhoods through the development, placement and promotion of public art. Public art in the Plan area will focus on Edmonton and Alberta artists.

Site furniture selection was carefully considered to provide valuable pragmatic and aesthetic assets that will contribute positively to the overall image of area. The scope and design of site furniture will be appropriate to the conditions of the new developments and the full range of its user needs. A hierarchy of well-designed site furniture will be developed to provide a heightened sense of identification for users. Furniture form, color and materials are designed to complement each other and intended to unify the entire development area; yet possess distinctive durability and forms that are sensitive to the City's maintenance requirements. Accessible designs were also considered to provide the same benefits for users with disabilities.



Lighted Bollard.

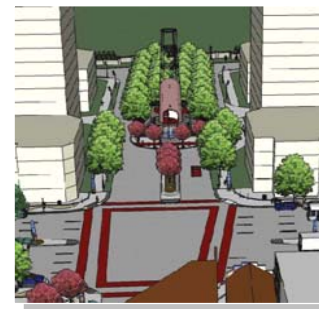


Themed streetscape elements will help create visual interest and a sense of place to Fort Road.

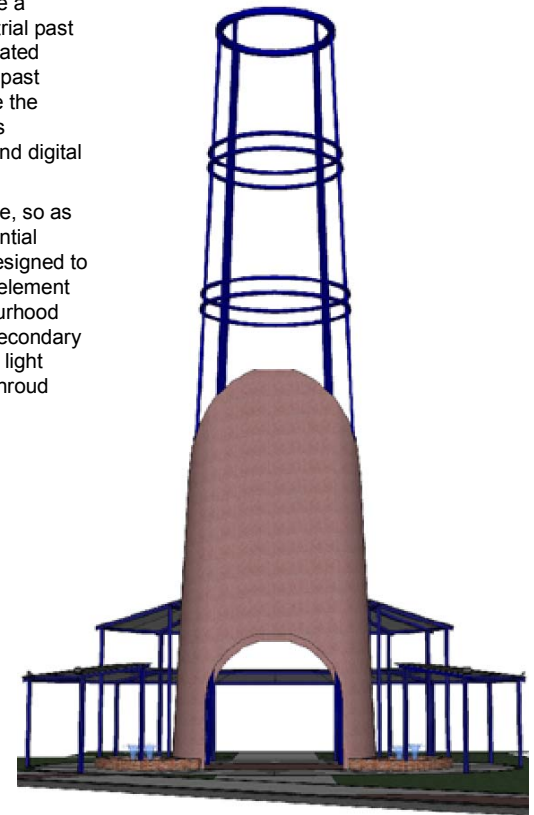
A successful streetscape environment must not only fit the structure of our bodies. It must also fit the way in which our minds work - how we perceive, imagine and feel – what environmental behaviorists call a “sense of a place”. To establish a heightened sense of place for the Fort Road Plan area complementary architectural gateways, which can be separated out into component parts, were introduced to our site planning.

Gateway features play an important role in defining a visitor's first impressions by “celebrating” entry into specific areas. Large primary gateways are a modern interpretation of Fort Road's industrial past and represented through a series of illuminated vertical columns bearing forms resembling past smoke stacks. The gateway surfaces have the additional design prospect of being used as projection screens to illustrate both video and digital still imaging.

Primary gateways must be moderately large, so as not to be visually redundant against substantial building facades. These gateways were designed to serve dual purposes: that of a way-finding element and that of an easily recognizable neighbourhood entry feature. Smaller pedestrian-scaled secondary gateways will consist of illuminated column light standards with a surrounding metal base shroud depicting the Fort Road logo.



A central gateway at Fort Road and 66 Street, modelled after historic smokestacks, acts as a visual marker for the site.

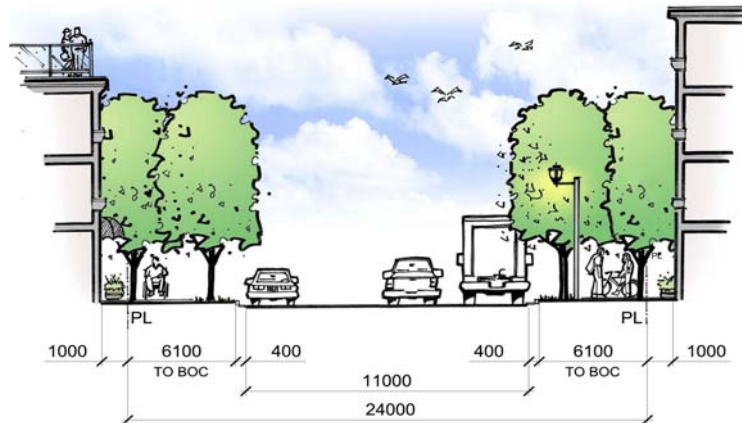


Streetscape improvements are planned to be constructed by the City with the widening of Fort Road and the internal road system in 2008-2009.

3.2 STREETScape STANDARDS FOR LOCAL STREETS

Residential and mixed-use buildings have been oriented to reinforce the street, parks and open spaces. Shallow setbacks and active retail and residential frontages provide 'eyes on the street' to create a safe environment.

As illustrated in the Local Road Elevation below, continuance of the streetscape character established along Fort Road is subtly maintained. Separated concrete sidewalks with large canopy treed boulevards have been introduced to help lessen the visual impact and scale of future adjacent buildings. According to urban design research, visual enclosure is required to transform streets into pedestrian places, which results in increased comfort for pedestrians and decreased comfort for speeding motorists (*Institute of Transportation Engineers, 1999*). The street tree plantings along with grassed boulevards not only help strengthen the pedestrian ambiance along the local roads, but augment open space and park initiatives within the Plan area. The slight difference in paving patterns and textures from those along Fort Road distinguishes the character and activities inherent to residential land uses.



Local Road Elevation cross-section, showing traffic, parking and sidewalk plantings.

For the local roads and village square areas, the introduction of ornamental trees is suggested over large canopy trees. Ornamental trees are intentionally oriented to function as a vegetative gateway where their foliage, size and color would be at variance with their immediate surroundings. The resulting uniqueness focuses attention on the location, while softening the visual dominance of the boulevard.

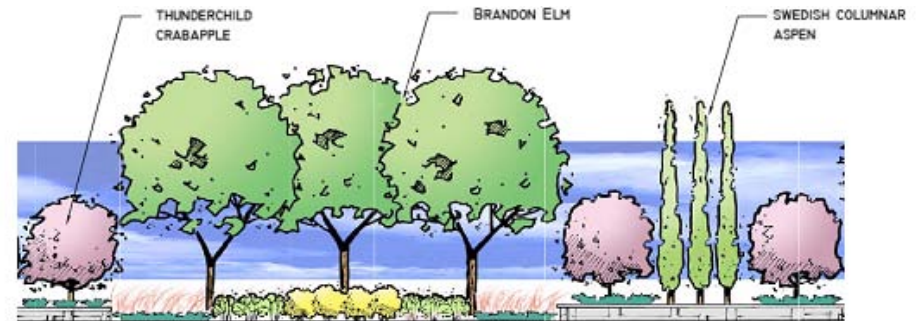


Illustration showing Fort Road's central median strip, featuring various ornamental plantings.

Finally, strategically placed rest areas with coordinated site furniture and pedestrian scaled lighting have also been introduced. The furniture, light fixtures and poles have historic overtones with modern treatments to better reinforce the streetscape character and past genre of the area.

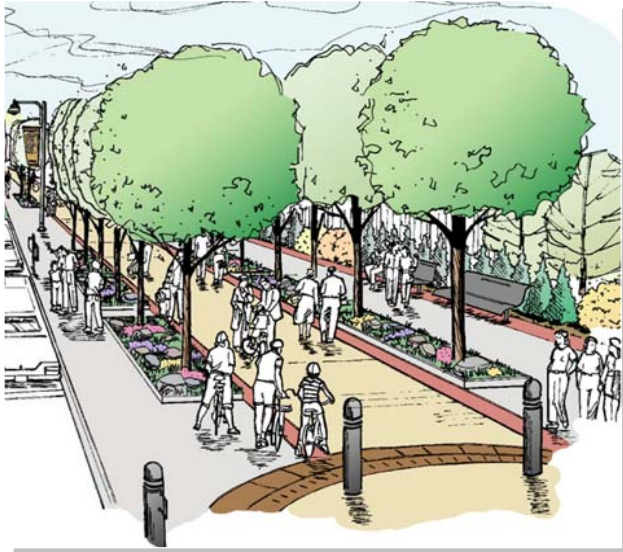


Benches will provide rest areas along Fort Road and local streets.

3.3 MULTI-USE TRAIL ALIGNMENT AND STANDARDS

A landscaped multi-use trail for walkers, joggers and cyclists will extend from 66 Street to the Belvedere LRT Station. It has been incorporated into the linear park which separates residential development and the CN rail line. The multi-use trail adheres to City of Edmonton standards being 3.0 metres wide and hard surfaced with concrete pavement to extend the entire length of the urban village.

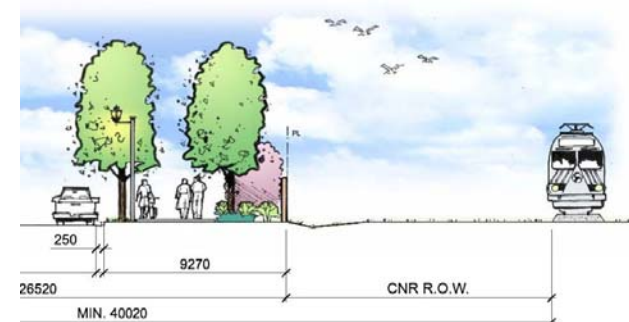
The best public spaces are alive with activity of people of all ages talking, playing, people-watching, passing through or enjoying time alone but in the company of others. Travel routes through the Plan area will encourage walking and other recreational activities through all public parks and open spaces by providing sufficient opportunity for free movement of as many people as are likely to be in the project area at the same time. The multi-use trail alignment will provide the organizing pedestrian framework to link key open spaces with anticipated commercial and residential land uses. Major pedestrian destinations and generators also contributing to the Urban Design Plan are the Belvedere LRT Station, as well as the Northeast Regional Multi-use Trail Corridor immediately south of 66 Street.



A multi-use trail will extend from 66 Street to the Belvedere Transit Station.

Within the Plan area, the multi-use trail is located along utility right-of-way corridors or adjacent landscaped buffers near the CN lands. It is envisioned that secondary pedestrian connections will provide supplementary linkages to open spaces or future land uses allowing entire circuit travel routes within the community.

People with disabilities expect to have the same access to multi-use trails. Our primary design objective within the Plan area was to remove as many barriers as possible. Universal access design was applied by taking a holistic approach to site planning concentrating on a theoretical user with many disabilities at the onset of the design process, rather than addressing specific barrier-free requirements in a retroactive effort as they are encountered. As a general rule, accessibility must be provided to all streetscapes, open spaces and plaza areas serving the public. Seniors, people with visual or mobility impairments, and even parents with strollers would all benefit from truly accessible design. People with vision impairments rely on other design cues to find their way: lighting, audible, tactile and color contrast.



Cross-section of multi-use trail adjacent to CNR right-of-way.

3.4 CONCEPTUAL DESIGN FOR PARKS AND OPEN SPACE

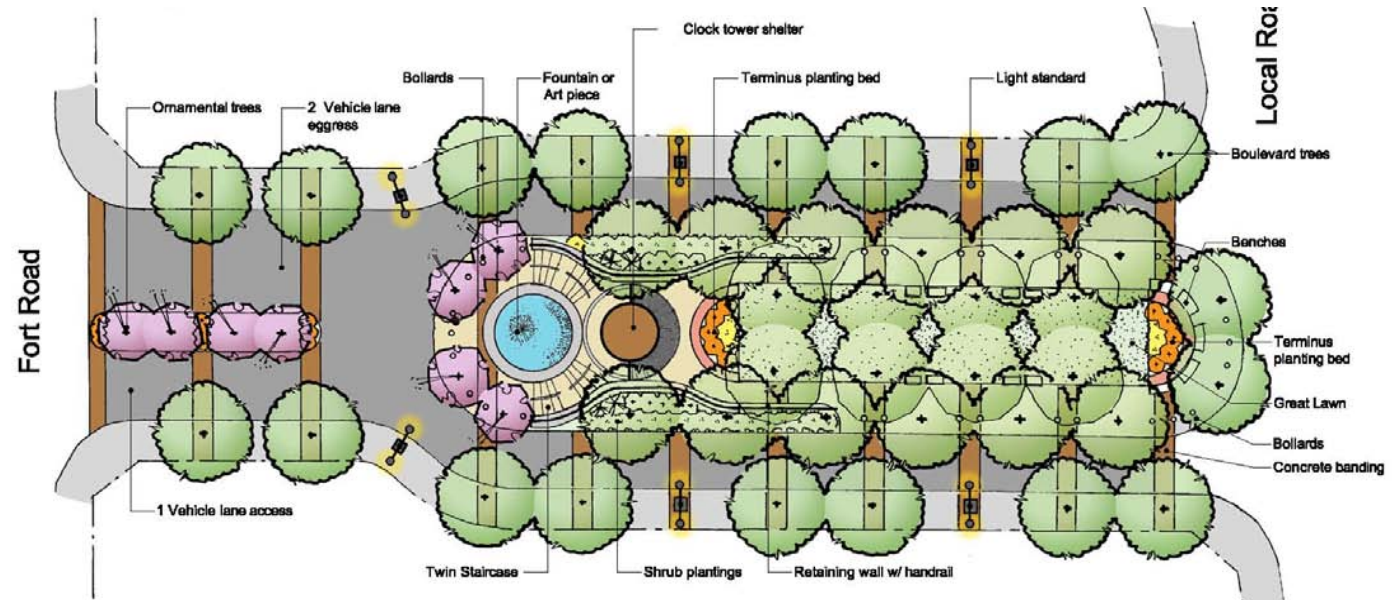
Public parks and open space are the foundation of urban livability. They help improve cultural values, increase environmental conservation and promote recreation. The Fort Road Plan area is not surrounded by a significant amount of open space or parks. Therefore, a fundamental part of the urban design is to develop a linked network of open spaces for all to enjoy as part of everyday life. A total of 1.27 hectares (3.14 acres) has been provided for parks and open space within the Plan area for the use of residents and visitors.

Park uses are often divided into two categories: active and passive recreation. Active recreation is that which requires intensive and structured development and often involves cooperative or team activity, including playgrounds and sports fields. Passive recreation is that which emphasizes the open space aspect of a park and involves a low level of development, including rest areas, picnic areas and trails. A linear park can accommodate active recreation areas along a passive recreation trail.

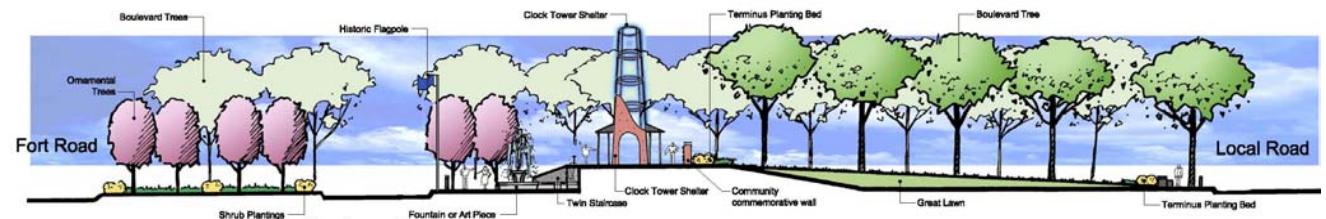
Within the Plan area a series of small open spaces, grassed berms, ornamental planting beds, landscaped buffers and shrub beds were incorporated into a cohesive linear park system along the site's eastern edge (see the Development Concept map on page 7).

Linear parks are places where people and nature mix. The linear park planned for the Fort Road area will help achieve many important goals by providing aesthetic, interpretive and natural spaces and corridors within the community. It also provides attractive outdoor passive leisure opportunities for residents. Smaller open spaces within the linear park may include playgrounds, picnic areas and an interactive water play park to provide a multi-faceted park experience for families who may live nearby. The linear park will be extensively landscaped and completed with a coordinated set of furnishings, signage and lighting.

A centrally-located village square will contribute to the overall sense of community by serving as a park, visual landmark and public gathering place for both community events and social gathering (see the Development Concept map on page 7). It could also serve as a venue for Fort Road business programs and activities. Additionally, the village square will provide an attractive focal point for residences that are developed around it.



Village Square plan view (above) and cross-section (below).



3.5 CONCEPTUAL URBAN DESIGN IDEAS AROUND BELVEDERE LRT STATION

The Belvedere transit station represents an opportunity for development of a full-fledged transit-centered place. The following design ideas support the creation of a sense of place for the transit station and surrounding community:

- Create attractive landmarks and gateways to the development.
- Design and position the station to foster the creation of an activity centre that surrounds the station lands.
- Introduce engaging public spaces, attractive street furniture and public art, as public space is important in the creation of place. It also allows for events such as concerts, markets, exhibits and celebrations – events that bring people and vitality to the area and stimulate economic activity.
- Promote pedestrian connections by creating pleasant walkways and comfortable, well-marked continuous street fronts, which will strengthen the sense of place and create a vibrant public and commercial shopping area.
- Integrate its development with the development scheme for transit oriented development of the Fort Road area, which is within walking distance of this station.



Lit sculpture outside a train station in Redmond, Washington.



Pioneer Courthouse Plaza in Portland, Oregon incorporates elements of good design including seating, open space, sculpture and retail.



Open-air shopping plaza at Mockingbird Station in Dallas, Texas.



Mission Street Station in Los Angeles, California.

4.0 URBAN DESIGN GUIDELINES

This Section presents design guidelines for the Fort Road Plan area. Detailed development regulations are contained in the appropriate DC1. The purpose of the urban design guidelines is to address the physical quality of development at the site, street and neighbourhood scales. Development applications in the Plan area will be subject to review by the Edmonton Design Committee prior to the issuance of a development permit. For ease of reference, this Section contains two sets of design guidelines. General Urban Design Guidelines are broad in nature and guide how all new development within the Plan area will interact with the site and street. Specific Urban Design Guidelines apply to site-specific features and building forms in the Plan area.

4.1 GENERAL URBAN DESIGN GUIDELINES

In order to achieve the goals of this Urban Design Plan, General Urban Design Guidelines are provided to ensure that development throughout the Plan area is transit-oriented, compact, high quality and integrated with the surrounding community and neighbourhoods.

TRANSIT ORIENTED DEVELOPMENT

Design new developments to integrate with transit facilities by:

- Locating higher density mixed use development in proximity to transit facilities to encourage transit use and reduce automobile travel.
- Providing safe and comfortable transit facilities.
- Creating an interconnected multi-use trail network to integrate development with the transit system and to promote cycling, walking and other forms of transportation.
- Ensuring LRT and Transit facilities exhibit a strong sense of place.



Holly St. Transit Oriented Village in Pasadena, California.

INTERFACE WITH CN RAIL LINE

A crash barrier wall will be constructed by the City effectively along the CN boundary line as agreed to by CN. This wall is required along the CN rail line prior to or concurrent with any residential development. A 30 metre building setback shall be maintained from the existing CN rail property line.

OPEN COMMUNITY

Provide development that is physically connected to foster community connectedness within and beyond the project boundaries by:

- Designing all streets and sidewalks for general public use.
- Designing streets to provide access to everyday services.
- Designing streets to encourage alternative modes of transportation.
- Establishing clearly defined and logical pedestrian connections between all parts of the project area and adjacent neighbourhoods.



Sidewalk, bike lane and roadway share the same street.

COMPACT DEVELOPMENT

Provide compact development that fosters livability, transportation efficiency and walkability through a range of densities, Floor Area Ratio (FAR) and building heights by:

- Building housing and commercial development at the densities and FARs proposed for each specific area.



Example of an attractive multifamily development with amenities.

WALKABILITY

Provide appealing and comfortable pedestrian environments to promote pedestrian activity and public health through increased physical activity by:

- Encouraging street-oriented retail along Fort Road for easy access by residents.
- Integrating the multi-use trail within the project area.
- Incorporating landscape elements, street furniture, lighting and seating areas to create a functional pedestrian environment.



Street-oriented retail with office space above.



An attractive pedestrian promenade incorporates rest areas and landscaping.

ACCESSIBILITY

Design buildings and public areas that utilize universal access practices by:

- Designing the public realm as a barrier-free space for universal access.
- Ensuring a minimum of 10% universally acceptable dwelling units is encouraged in every development.

SAFETY AND SECURITY

Provide developments that define the edges of, and face onto, public parks and accessible open spaces in order to enclose and provide informal surveillance of these spaces by:

- Applying the principles and techniques of Crime Prevention Through Environmental Design (CPTED) in the design of the development.
- Designing entrances, exits, fencing, landscaping and lighting to subtly direct pedestrian and vehicular traffic.
- Utilizing the principles found in the Design Guide for a Safer City – City of Edmonton.



Active streetfronts put "eyes on the street" and manicured plantings eliminate hiding spaces.



Articulated curbs and street plantings help to direct drivers' sightlines and calm vehicle traffic.

SENSE OF PLACE AND PUBLIC ART

Provide places that reflect an area's natural beauty or history and that engender a sense of ownership and pride by:

- Designing architecturally distinctive buildings on prominent sites, such as at the corner of major intersections.
- Designing the street network to maximize the creation of focal points.
- Using public art and heritage buildings as community landmarks, as identified in the City's Art and Design in Public Places Program.



Fountain at Post Office Square Park in Boston, Massachusetts.

DIVERSITY OF HOUSING TYPES

Provide a variety of housing tenure and forms to accommodate a wide range of housing market needs and preferences, including affordable housing, by:

- Designing housing that provides for choice of style, size and cost.
- Applying innovative design features which lead to savings in building operating costs and energy consumption (see page 19 Sustainable Development).



Clockwise from top left: Row housing, duplexes, mixed-use apartments above commercial, mid-rise apartments.

ACTIVE BUILDING FRONTAGE

Provide an attractive, inviting and safe pedestrian realm by:

- Locating the main building façade parallel to the street and lining it up with adjacent buildings to create an “urban room”.
- Orienting primary entrances of buildings and individual ground-floor residential and commercial entrances to the street.
- Ensuring balconies, porches and architectural features address the street and sidewalk.
- Providing sidewalks on both sides of streets, preferably separated from the roadway by street trees.
- Encouraging individual private entrances to all ground floor units to promote a sense of ownership.
- Providing street trees and plantings where feasible to create an attractive pedestrian realm.



Street-oriented retail contributes to vibrant streets and walkability.



Furniture and plantings enhance street comfort and attractiveness.

ARCHITECTURAL CONTROL

Provide architectural features that are sensitive to the surrounding context with respect to scale, form, massing, style, material and color by:

- Using compatible and harmonious exterior finishing materials on all building facades that are also high quality and durable to facilitate easy maintenance.



Adjacent buildings finished with similar material and color treatments in Vancouver.



A richly articulated building façade.



Podium plantings.

- Encouraging architectural articulation of building facades and rooflines and use of colored materials to create visual interest.
- Concealing mechanical equipment by incorporating it within the building, or by screening it in a way that is consistent with the character and finishing of the building.
- Providing gardens or patios on the top of the podium level and building rooftops to improve rooftop aesthetics and provide additional amenity space.
- Incorporating architectural treatments at specific locations on buildings as incorporated in the DC1 Provisions to improve visibility and character of the streetscape.

OPEN SPACE

Provide a variety of open spaces close to work and home to encourage walking, physical activity and time outdoors by:

- Defining the village square by the mass and height of surrounding buildings so it becomes a focal point in the urban village.
- Surrounding the village square with street oriented row houses and apartments to create a pedestrian-friendly atmosphere.
- Linking parks to an overall open space system with pedestrian linkages or pathways.



A village square provides a community gathering place and sense of identity.



A mix of open spaces allow for a variety of activities, both passive and active.

- Ensuring parks provide a combination of playground opportunities, informal play areas, seating areas and passive recreation areas.
- Ensuring parks are designed with access from public streets to allow universal accessibility.

SIGNAGE AND WAYFINDING

A system of wayfinding should be designed and installed to help orient motorists and pedestrians by:

- Coordinating signs with building and site design in terms of location, scale, materials, finishes and colors.
- Using the minimum size and number of signs needed to inform and direct visitors and residents.
- Clearly marking street crossings so they are convenient and safe for pedestrians and visible to motorists.



Conceptual sign blades for the Fort Road area.

SUSTAINABLE DEVELOPMENT

For a community to be sustainable, it requires that the community itself be financially viable. When completed, the redeveloped Fort Road area will once again contribute positively to the City's economy while maximizing the investment already made to the existing underground infrastructure. This is the City's flagship project for sustainable development and will address affordable housing, improved social interaction opportunities, reduce crime and respect the local heritage, including historical sites such as the Transit Hotel.

Buildings will be designed and constructed that utilize green building practices by:

- Encouraging the design and construction of energy efficient buildings to reduce air, water and land pollution, and to reduce environmental impacts from energy production and consumption.
- Minimizing water use in buildings and for landscaping irrigation to reduce the burden on municipal water supply and wastewater systems.
- Encouraging energy efficiency by creating the optimum conditions for passive and active solar strategies and other energy efficient strategies.
- Designing and constructing new residences to minimize the effects of noise pollution from the CN tracks and Fort Road.



A proposed condominium development in Chicago that makes considerable use of passive light sources via a glass curtain wall.



The green rooftop of Chicago City Hall moderates extremes in building temperature and reduces stormwater runoff, as well as providing amenity space.

4.2 SPECIFIC URBAN DESIGN GUIDELINES

Specific Urban Design Guidelines are provided to guide the design of site-specific features and building forms. Areas have been established (refer to the Development Concept map in Section 2.2) to create a unique character for each area while allowing for continuity between areas.

BUILDING ORIENTATION AND DESIGN

Areas A, B, C, D and E:

- The preferred locations for high rise apartment buildings are along Fort Road, 129 Avenue, the internal public road, the public park and the multi-use trail corridor.
- Row housing located along the internal public road and multi-use trail corridor will achieve a balance between privacy for the unit and overlook to the street.

Areas A, B, C, and D:

- Buildings along the internal public road shall address the street, maximize frontage and contribute towards a predominantly residential character.

Precincts A, B and C:

- A mid-block mews is encouraged for development along Fort Road and along 129 Avenue at the intersection with Fort Road to break up massing and provide a safe and inviting route for pedestrians.



A mews at 109 Street and Jasper Avenue in Edmonton.

Areas A, B, C, D and E:

- Buildings should address the public park and provide at least one common entrance fronting the park to enhance accessibility.

Areas A, B, C, E, F and G:

- A separate and prominent access to residential buildings from Fort Road is required for any building whose podium portion fronts onto Fort Road and/or 129 Avenue.

Area A:

- The minimum building setback from commercial uses fronting the public park should be 3 m.

All Areas:

- A dwelling unit at ground level abutting a public roadway, other than a lane, should have its principal entrance with direct external access to the adjacent public sidewalk.

All Areas:

- The first floor of any residential frontage, including associated entranceway, may have a maximum grade separation of 1 m from any adjacent public sidewalk.

Areas A, B, C, E, F and G:

- Commercial frontage provided at ground level abutting a public roadway, other than a lane, should have the principal entrance with direct external access to the adjacent public sidewalk.



Commercial properties should have their principal entrances on the sidewalk.

MIXED USE DEVELOPMENT

Areas A, B, C, E, F and G:

- A minimum of 3 storeys residential development is required above any commercial development.
- Apartment housing with commercial uses on the ground floor should have access at grade that is separate from the commercial premises.
- A minimum of 50% of the ground floor space of any commercial development is required to be dedicated to commercial activities abutting the street frontages with a minimum depth of 10 m.

STREET WALL

All Areas:

- Where the frontage for sites abutting the public street exceeds 10.06 m or the consistent development pattern of the street, the design of the front façade of the building should break the appearance into 10.06 m sections or modules consistently sized with other buildings on the public street.
- Blank walls (with or without windows) of vehicular parking garages should be avoided when adjacent to, or visible from, any public roadway.



Articulated building facades help break up the perceived mass of the buildings and relieve the monotony of linear views.

CORNER DEVELOPMENT

All Areas:

- Design for corner buildings should recognize their importance by giving the building corner greater visual entrance.
- Buildings on corners should address both streets and avenues with a continuity of front entrances and similar building materials
- Developments at street intersections should be distinguished to give them prominence.
- Corner building entrances may be angled or curved, but should not neglect the visual quality of one street façade in favor of the other.



Corner development at Orenco Station Town Centre, Hillsboro in Portland, Oregon.

WEATHER PROTECTION

Areas A, B, C, E, F and G:

- Where commercial uses are developed on the ground (first) floor of a building, weather protection in the form of a canopy at least 2.0 m wide, or any other method suitable to the architectural style of the building or street theme, is required one storey above the sidewalk level to provide a comfortable environment for pedestrians.



Canopies can protect against rain and be designed to match the architectural style of the building.

SPECIFIC ARCHITECTURAL FEATURES

All Areas:

- Special architectural treatment of building faces is required at focal points of the Urban Design Plan area. The use of stucco as a finishing material is not permitted on the podium portion of any development.
- Development on a site shall incorporate functional and decorative lighting to highlight the building's architectural features and enhance the appearance of the building during the winter months.

Areas A, B, C, D and E:

- Stucco on the tower portion of any development may be allowed to a maximum of 30% of the exterior surface area of the tower.

BUILDING SETBACKS

Areas A, B, C, E, F and G:

- The ground floor of any commercial development should be built to the front and side property lines.
- If the ground floor of any development is designated for commercial uses, a maximum of 50% of the building is allowed to be setback by 1 m from the property line to create visual interest in the building.

Areas A, B, C, E, F and G:

- The residential portion of buildings that have residential uses above commercial uses should have a minimum 2 m setback from the lower portion of buildings adjacent to the internal public street.
- An additional building setback may be allowed only to accommodate street related activities such as sidewalk cafes, colonnades, arcades or plazas.

Areas A, B, C, D, E and G:

- Staircases may project up to 2.0 m from the building wall.

Areas F and G

- A minimum of 2 m landscaped setback is required at the rear of a building.

Areas A, B, C, D and E:

- The minimum separation distance required between any two towers is 25 m.

Areas A, B, C, E, F and G

- A 3 m setback is required for buildings fronting onto Fort Road.

HEIGHT, DENSITY AND FLOOR AREA RATIO (FAR)

All Areas:

- The finishing of the podium portion of any development shall consist of a combination of materials such as glass and glazed window wall systems, brick, stone, architectural concrete, and/or pre-cast coloured concrete.
- A minimum of 70% of the ground (first) floor level portion of the commercial façade abutting a public roadway, other than a lane, shall be comprised of clear, non-reflective glazing to promote pedestrian interaction and safety.
- In order to achieve the critical mass required to support a transit oriented development, developers should strive to attain the maximum allowable building height and to achieve the maximum allowable density and FAR as provided in the following table:

Height, Density and Floor Area Ratio (FAR) by Area

Area	Height (storeys / metres)	Density (dwellings / ha)	FAR
A	18 (58)	370	4.9
B	16 (52)	250	3.2
C	16 (52)	280	2.57
D	18 (58)	220	2.5
E	18 (52)	200	2.6
F	5 (18)		2.0
G	5 (18)		2.0

All Areas:

- A building height not exceeding an overall height of 5 stories or 18 m is established for mid rise apartments.

Areas A, B, C, D, E and G:

- A building height not exceeding an overall height of 12 m or 3 stories is established for row houses.

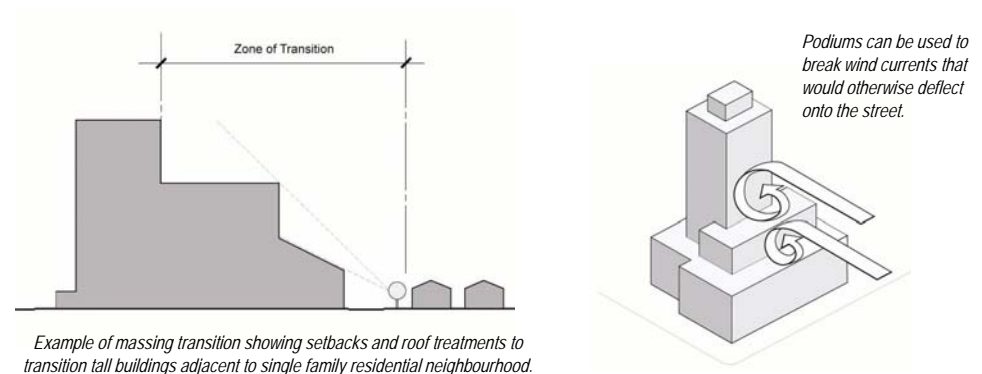
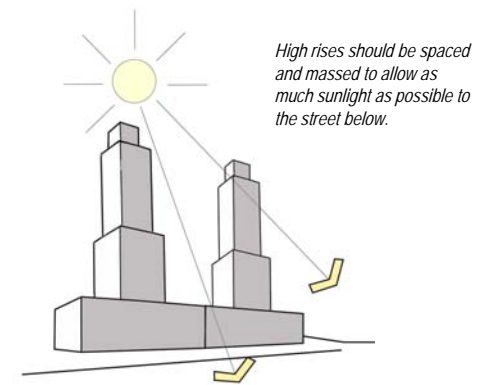
Areas A, B, C, D and E:

- The maximum height opportunity should be utilized to develop high rise buildings that reduce the impact of the building portion above the podium to maintain view corridors, maximize solar penetration and reduce adverse microclimatic effects related to wind and shadowing.

BUILDING MASSING AND SUN / SHADOW EFFECTS

Areas A, B, C, D and E

- The built form should maintain views, create attractive skylines and minimize shadowing.
- Avoid adverse micro climatic effects such as wind tunnelling, shadowing, and loss of sunlight on and off site, through massing and location of buildings.
- Minimize perceived height and massing through building setback variations at the upper levels, building orientation, roof treatment and the choice of exterior materials and colors.
- Use the height and massing of buildings to define and enclose public streets and spaces.



PARKING

All Areas:

- Parking, loading and passenger drop-off areas should be easily accessible and designed to minimize pedestrian-vehicle conflicts.
- Provide all residential parking underground or in a structure.
- Locate all off-street parking facilities in the side or rear of a building.
- Access to vehicular parking garages will be from the internal roadway system. No direct access to parking will be permitted from Fort Road.
- Visitor and customer parking may be provided at grade located to the rear of any building fronting onto Fort Road or 129 Avenue and screened from the internal public street and the public park by appropriate orientation of the built form and enhanced landscaping measures.

- If parking uses front on the public street in any portion of the podium above first and/or second storey level of the mid-rise apartment building then:

-- an enhanced architectural façade treatment, harmonious with the adjacent commercial or residential frontage, is required on the podium portion to the building, and

-- parking areas above the second storey of the podium shall not be visible from the public street.



Parking areas are to be accessed from internal roadways rather than Fort Road.



Building with ground floor commercial and three floors of parking above.

HIGH RISES

Tower Base Zone

- The tower base zone shall be integrated with mid rise apartments or row housing and shall be no higher than 6 storeys.

Mid Tower Top Zone

- The maximum floor plate for the mid tower top zone shall be square in shape and shall not exceed 743 m².
- The mid tower zone shall step back from the tower base zone by a minimum of 3.0 m.
- No one side shall be greater than 30 m.

Tower Top Zone

- The tower top zone shall be 2 to 4 storeys in height.
- The tower top zone shall step back from the mid tower zone by a minimum of 1.5 m from the faces of the tower.
- The maximum typical floor plate area of the tower top zone shall be a minimum of 10% smaller than the mid tower floor plate area.
- Special architectural detailing, variation in materials and special lighting are required to create an interesting skyline.

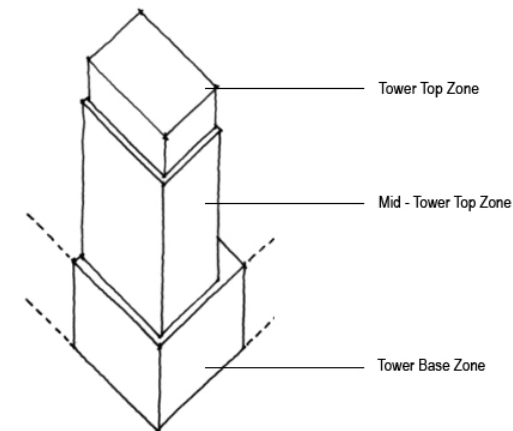
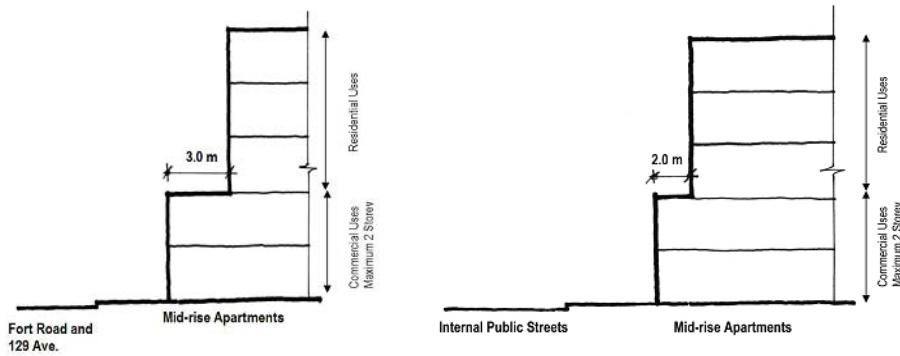


Illustration of tower stepback zones.

BUILDING STEPBACKS

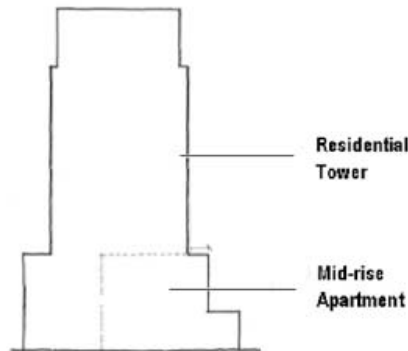
Areas A, B, C, D, E, F and G:

- Where residential uses are located above commercial uses in a building, the residential portion of the building above the second floor shall be set back a minimum 3 m from the lower portion of the building adjacent to Fort Road and 129 Avenue, and 2 m from the adjacent internal public street.



Setbacks required from Fort Road (left) and internal roads (right).

- High rise apartments shall be integrated with row housing, mid rise apartments or commercial uses at the ground (first) floor to provide a pedestrian-scaled building edge. High rise apartment buildings shall provide a minimum setback of 3 m from the top storey of all commercial uses, row housing or mid rise apartments.



Relationship of residential tower to mid-rise apartment.

MID RISE APARTMENTS AND / OR ROW HOUSING

All Areas:

- Buildings should address all adjacent public roadways, other than lanes, with individual entrances that are clearly visible to lend a sense of occupancy to the street.

Defined entrances, landscaping and low walls create a semi-private space that lends a sense of ownership to the properties.



LANDSCAPING

All Areas:

- Landscaping of sites should consider the use of plant materials that provide color throughout the year to enhance their appearance during the winter months.
- Where the ground floor of any development is designed for residential uses, the building shall contain a landscaped yard of 3 m.
- A combination of hard and soft landscaping shall be provided within the 3 m setback.
- Enhanced landscaping shall be used if surface parking areas front the multi-use trail corridor.

PUBLIC ART

Areas A, B, C, D and E:

- Public art should be incorporated into the architecture and streetscape, and spread throughout the site to enhance the livability and attractiveness of public and private spaces.
- Public art should be installed on site with the completion of street level commercial structures, unless artwork is to be integrated with the building's architecture.



Two examples of engaging public sculpture.

5.0 MUNICIPAL IMPROVEMENTS

The following describes the transportation, parking and municipal service improvements needed in the Fort Road Plan area to accommodate new development and to leverage and attract private investment. These municipal upgrades are in addition to the Fort Road widening and streetscape improvements discussed in Section 3.1 of this report.

5.1 TRANSPORTATION AND PARKING

As part of the Urban Design Plan, transportation engineers Bunt & Associates conducted a Traffic Impact Assessment (TIA) based upon land uses proposed in the development concept.

Roadways in the vicinity of the site include the arterial, collector, and local roadways as shown in the map at the right. 66 Street is an existing four-lane divided arterial roadway that runs north / south along the west edge of the Belvedere neighbourhood. The posted speed along 66 Street is 50 km/hr and the average annual daily traffic volumes are in the order of 21,500 vehicles per day (vpd 2003).

Fort Road adjacent to the site is an existing four-lane undivided arterial roadway that is the extension of Highway 15 into Edmonton from northeast regional communities. The *Transportation Master Plan* identifies Fort Road as a Highway Connector, a high standard roadway that connects the inner and outer ring road and provides a link to the provincial highway system. The posted speed limit along Fort Road is 50 km/hr. Current daily traffic volumes are in the order of 24,800 vpd (2004). Widening of Fort Road from four lanes to six lanes is scheduled to begin in 2008 and be completed in 2009. 129 Avenue is a four-lane undivided collector roadway that bisects the area. The posted speed limit on 129 Avenue is 50 km/hr. Daily traffic volumes on 129 Avenue are in the order of 11,300 and east of 61 Street (2000).

TRANSIT

The existing Belvedere LRT Station is serviced by nine bus routes and 'school special' trips via Fort Road. These include:

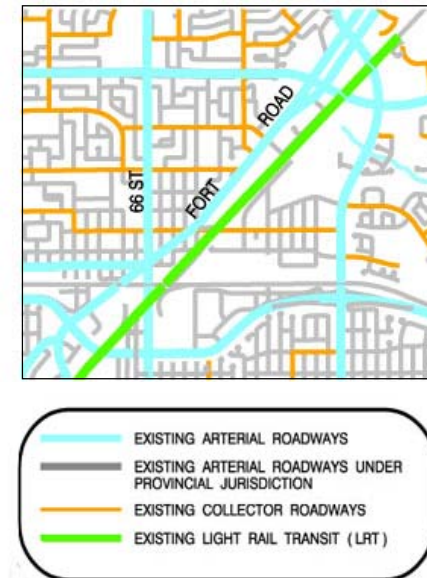
- Route 10 – Clareview / Coliseum
- Route 99 – Capilano
- Route 127 – Westmount
- Route 152 – Northgate
- Route 153 – Northgate / Lago Lindo
- Route 154 – Northgate
- Route 180 – Northgate / Abbottsfield
- Route 181 – Clareview
- Route 186 – Clareview / Northgate

In addition to transit traffic, park 'n' ride parking lots and a Kiss & Ride drop-off bay on 129 Avenue east of Fort Road are provided.

PARKING

Recognizing that this is a transit oriented development, a reduction in parking requirements is being provided through the Direct Development Control Provisions of the Zoning Bylaw for some use classes. Also, parking requirements may be further relaxed at the discretion of the Development Officer in consultation with the Transportation Department, should initiatives which reduce parking demand be implemented. Such initiatives may include, but are not limited to, dedicated car share / car pool stalls, universal bus pass programs or shared parking between commercial, commercial related, residential and residential related uses.

Roadway hierarchy around the Fort Road project area. From *Transportation System Bylaw # 13939 Map, City of Edmonton.*



The proposed roadway network has been designed to provide sufficient capacity. The Fort Road revitalization project will see the 129 Avenue alignment remain as it currently stands with possible adjustments in the future.

CONCLUSION AND RECOMMENDATIONS

Based on the analysis, development of the site area is anticipated to generate 577 two-way vehicle trips in the AM peak hour, 925 two-way vehicle trips in the PM peak hour, and 8,974 two-way trips over the course of a typical weekday. The trip generation assumed a mode split to auto of 80% for the residential components and a 75% mode split to auto for the commercial components. This is anticipated to represent a realistic reduction in vehicle trips based on the proximity of the site to the Belvedere LRT and transit terminal.

Based on the intersection assessment, the proposed widening of Fort Road to a six-lane cross-section will provide sufficient capacity to accommodate the long term traffic volumes projected on the roadway as well as the estimated site generated traffic. The Transportation Department is considering extending the six lane section north to 137 Avenue, however this will be dictated by funding availability.

Transportation will construct a traffic signal at 64 Street upon development of the site. As well, the analysis of the long term traffic volumes identified that a left turn phase may be required at the 66 Street/Fort Road intersection to accommodate the new left turn that is provided on Fort Road SB in the ultimate geometry scenario.

The proposed widening of Fort Road in 2008 and 2009 will provide additional roadway capacity and is anticipated to operate at acceptable levels of service.

5.2 MUNICIPAL SERVICES

As municipal engineers on the project team, Associated Engineering completed the Utility Servicing Study for the Urban Design Plan. The Study included a review of the existing utilities and the development of a new servicing concept to serve the proposed redevelopment. The following is a brief summary of servicing requirements developed to accommodate the proposed redevelopment. A complete copy of the Study is included in a separate Technical Appendix.

SANITARY AND STORM SEWER SERVICING

The proposed redevelopment area is currently serviced by a combined (sanitary and storm) sewer system installed in 1925. It is now the City's policy that sanitary and storm water flows are conveyed in separate sewer systems.

With the widening of Fort Road, the location of the existing combined sewer was not compatible with the proposed configuration of the Fort Road Urban Design Plan. Therefore, new separated sanitary and storm sewer systems will be constructed to convey collected wastewater from the development.

The City of Edmonton Drainage Services has indicated that the additional wastewater generated by the development of the Fort Road Urban Design Plan can be accommodated in the sanitary trunk sewer that runs along the north side of the existing Spartan Park and the west side of the CN rail line.

The City of Edmonton Drainage Services has indicated that the storm water collected from the Fort Road Urban Design Plan development can be accommodated in the storm trunk sewer that runs along the north side of the existing Spartan Park. This trunk sewer was installed in 1957. The storm sewer servicing concept developed for the Urban Design Plan consists of two minor collection systems with each system discharging into a storm trunk sewer access shaft. The minor storm sewer systems will be designed in accordance with the City of Edmonton Design and Construction Standards.

Typically each lot would have a single sanitary and storm service, however, due to the uncertainty of the final lot and development configuration additional services locations have been provided for each phase.

STORM WATER MANAGEMENT

On-site storm water management may be accomplished with a combination of rooftop, surface and underground storage methods. Design storm water storage release rate is limited to 1:2 year storm event as per the City of Edmonton Drainage Services. Storm sewer mains will be sized for the 1:5 year storm event but restricted to release at the 1:2 year storm event rate to the storm trunk sewer.

Typically each lot would have a single storm service, however, due to the uncertainty of the final lot and development configuration additional services locations have been provided for each phase. Again, due to the uncertainty of the final configuration, each of these additional services will be capable of handling the entire controlled storm water discharge generated from that phase. If more than one of the servicing points is used, then the release rate is to be restricted such that the total release rate of all services does not exceed the release rate indicated.

WATER DISTRIBUTION NETWORK

The proposed redevelopment area is currently serviced by a small diameter water distribution system installed in approximately 1925. With the widening of Fort Road, the location of the existing water mains are not compatible with the proposed configuration of the Fort Road Urban Design Plan.

The existing water main will be abandoned and new mains will be installed along Fort Road and looping through the Fort Road Urban Design Plan area. The mains will be sized to deliver the appropriate level of flow to provide fire protection based on EPCOR Water's fire flow requirement of 300 litres / second for this development. EPCOR Water has also indicated that fire hydrants along Fort Road and through the internal roads are to be installed at about 90 m spacing.

Typically each lot would have a single water service, however, due to the uncertainty of the final lot and development configuration additional services locations have been provided for each phase.

FRANCHISE UTILITIES (POWER, GAS, TELEPHONE AND CABLE TV)

With the widening of Fort Road, the location of the existing franchise utilities is not compatible with the proposed configuration of the Fort Road Urban Design Plan. It is a City requirement that all aerial services be replaced with buried services when an area is redeveloped.

Due to the type of development, there is no opportunity for on-lot easements for the franchise utilities as in typical residential developments. Therefore, each utility was provided a line assignment within the 24 m road right-of-way. Due to the requirement of line assignments under the proposed roadways, the franchise utilities will be required to install service drops at each of the predetermined service locations.

Franchise utility services to the LRT Traction Power Substation located within the redevelopment area are to be maintained at all times during the redevelopment of the Fort Road Plan area.



6.0 IMPLEMENTATION

The Urban Design Plan provides a framework for the implementation actions necessary to revitalize the Fort Road Plan area. A key factor to implementation will also involve public/private partnerships between the City and private developers to build commercial and residential components of the project. A successful partnership relies on the strengths of each partner. The City can ensure that land is available, statutory plans and zoning are in place, and the necessary infrastructure and public amenities exist to make the area attractive to developers, residents and businesses. Private developers bring real estate knowledge, tenant and purchaser contacts, and access to financing.

This section describes the required implementation actions, staging and project schedule.

6.1 AMENDMENTS TO THE BELVEDERE STATION AREA REDEVELOPMENT PLAN BYLAW 5988

The original Belvedere Station Area Redevelopment Plan (ARP) was initially adopted by City Council on September 24, 1980 (Bylaw 5988). An amendment (Bylaw 14651) was prepared to the ASP to reflect the land uses and densities identified in the Fort Road Urban Design Plan. City Council approved the amending Bylaw on September 10, 2007.

6.2 ROAD CLOSURE BYLAW 14652

Bylaw 14652 closing portions of 62, 63, 64 and 65 Streets, as well as all lanes south of 129 Avenue and the existing road right-of-way, was also approved on September 10, 2007. The road closure allows for the consolidation and resubdivision of the redevelopment site.

6.3 AMENDMENTS TO THE LAND USE BYLAW

Also at the September 10, 2007 Council meeting, amendments to the Zoning Bylaw 14653 were approved that provide for seven (7) DC-1 Direct Control Provision Districts that grant the development rights necessary to implement the Fort Road Urban Design Master Plan.

The DC-1s in Areas A through F provide for higher densities close to the Belvedere LRT Station, foster mixed use development, and create a strong pedestrian network throughout the rezoning area. In addition, given this



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project's proximity to the Belvedere LRT Station and status as a pilot project for transit oriented development in Edmonton, the DC-1s also require enhanced architectural, urban design and landscaping regulations, reduced parking, recognition of historically significant buildings, provision of public art as part of the streetscape or building façade, and review of development proposals by the Edmonton Design Committee at the Development Permit stage.

6.4 PHASING PLAN

The figure below shows a phasing plan for anticipated sequence of build out of the development sites.



Phasing plan for redevelopment of the Fort Road area.

6.5 DEVELOPER PROPOSAL CALLS

The Asset Management & Public Works Department has received inquiries from a number of developers interested in submitting proposals to develop the site. All areas will be marketed by way of Requests for Proposals starting in the fall of 2007.

6.6 STRATEGIES FOR AFFORDABLE HOUSING

When the *Fort Road Old Town Master Plan Implementation Report* was approved in 2003, Council directed that 20% of the residential units within the redevelopment site be affordable housing units.

Existing City policy differentiates between “affordable” and “social” housing. Social housing is targeted for occupancy by very low income households, many in receipt of government income supports, through provision of deep and on-going government operating subsidies. Affordable housing requires closer to market-priced rents and ownership costs.

Affordable units in the Fort Road project area will be designed for occupancy by households who have an affordability problem (spend over 30% of their income on housing) and earn less than the median income and who are capable of independent living.

The City recognizes a city-wide need for affordable housing for primarily single, employed adults seeking accommodation, and suitably-sized units for family occupancy. Affordable units will be interspersed throughout the development and will be visually indistinguishable from market-priced units.



Examples of affordable housing developments.

To ensure that 20% affordable units remain affordable over the long term, the economics of providing the affordable units in the project may, amongst other means, be facilitated by varying the amount and level of interior amenities or the size of the unit.

The Asset Management & Public Works Department will ensure the provision of 20% of the residential units in the Fort Road redevelopment area be made available for affordable housing by making it a requirement of the request for proposals.

6.7 IMPLEMENTATION SCHEDULE

The following is a brief summary of the expected implementation schedule.

2007

- Building demolition occurring as properties are being acquired
- Environmental remediation of contaminated land in 2007 and early 2008
- Council approval of Plan amendments, roadway closures and rezoning
- Streetscape design completed
- Spartan Park relocation design initiative
- Request for Proposals from developers
- Relocation of existing Fort Road utilities (water, power, Shaw Cable, sewers, natural gas, traffic signals)

2008

- Fort Road construction to commence upon completion of utility relocation
- Internal servicing and roadway construction
- Selection of developers for sale and development of parcels based upon phasing plan
- Spartan Park maintained to accommodate baseball tournament
- Detailed design of village square, linear park and multi-use trail

2009

- Relocation of Spartan Park
- Construction of village square, linear park, and interface along CN rail line
- Initiate construction of residential and commercial developments

2010

- Completion of public space improvements
- Anticipated occupancy of first residential units / commercial space

7.0 REFERENCES

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