



INUIT OWNED LAND PARCEL E

Lot 1, Block 205, Plan 79985 CLSR

Planning Rationale Report

General Plan Amendment (Development Scheme)

March 2014 (Updated July 2014)



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QIKIQTANI INUIT ASSOCIATION



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Qikiqtaaluk Properties Inc.



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QIKIQTAALUK CORPORATION

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planningAlliance



A photograph of a snowy hillside under a clear blue sky. Several houses are visible on the ridge in the background. A wooden pole stands in the snow in the foreground. A semi-transparent white box containing a table of contents is overlaid on the right side of the image.

Contents

1. Introduction	1
2. Background	2
3. Existing Policy Framework	4
4. Development Scheme for IOL Parcel E	8
5. Proposed General Plan Amendment	42

Appendix A - Legal Survey

Appendix B - Environmental Site Assessments

Appendix C - Geotechnical Report

Appendix D - Wind and Snow Background Study

Appendix E - CPTED Report

Appendix F - Civil Engineering Report

Appendix G - Public Consultation Summary Report

1. Introduction

In April 2013, the Qikiqtani Inuit Association (QIA) completed a General Development Plan for Municipal IOL Parcels in the Qikiqtani Region. The Plan provides an overview of municipal Inuit Owned Land holdings and includes recommendations regarding consultation, benefit statements, and development strategies across a range of land uses. Within the City of Iqaluit, IOL Parcel E was identified as prime developable land. Its proximity to the city's Core Area, location along the Federal Road corridor and existing District Commercial zoning all contribute to the QIA's and Qikiqtaaluk Corporation's (QC) interest in advancing Inuit culture and economic self-sufficiency through development of the site.

In September 2013, QC contracted planningAlliance (supported by Aarluk Consulting) to lead a planning and design study for IOL Parcel E. This exercise included consultation with QIA's Community Lands And Resources Committee to articulate a vision and planning principles for land development. Conceptual and technical planning and design work carried out in support of a Development Scheme and Plan of Subdivision for IOL Parcel E are detailed in this report.

The Development Scheme and Plan of Subdivision described in the following sections of this report will reinforce Inuit rights in land by encouraging uses that capture the highest and best use of the land in terms of economic development, environmental stewardship and cultural expression. All residents of Iqaluit will benefit from the creation of a strong gateway into the city along Federal Road. Development on these Inuit Owned Lands will celebrate and promote Inuit cultural heritage and contribute to the long-term economic, social and environmental sustainability of the city.

In order to advance the development of these Inuit Owned Lands, QIA/QC are requesting a General Plan Amendment to remove IOL Parcel E from the Federal Road Special Policy Overlay (Section 5.10 of the City of Iqaluit General Plan). This planning rationale provides evidence to support the amendment, as well as the approval of a Plan of Subdivision for the lands.

2. Background

The City of Iqaluit is undergoing a period of significant growth and transformation. Lying at the centre of Nunavut's emergence, the capital has changed year-by-year, with new amenities, new arrivals, new opportunities and cultural continuity contributing to a dynamic cityscape and sense of community.

The Qikiqtani Inuit Association (QIA) is one of the largest private land owners in the world, managing approximately 156,370 km² of Inuit Owned Land (IOL) across the Qikiqtani Region. QIA is responsible for safeguarding, administering and advancing the rights and benefits of the Inuit of the Qikiqtani Region. In order to add value to IOL through investment and community input, QIA has mandated the Qikiqtaaluk Corporation (QC) with development of municipal IOL parcels, including IOL Parcel E.

IOL Parcel E is located adjacent to the City of Iqaluit's Core Area, along Federal Road. The parcel currently accommodates certain designated industrial uses on approximately one sixth of the site. The City of Iqaluit General Plan encourages additional commercial, residential and/or institutional uses on the remainder. The Federal Road Special Policy Overlay recognizes the potential of IOL Parcel E to serve as a future extension of the Core Area and to tie in with the proposed expansion of the Airport, located as it is along the north flank of the Airport site (see Figure 1).

Environmental conditions, including a channelized creek dividing the parcel, steep slopes towards the north, tundra landscape features, and wind and solar exposure, have informed the range of development options as well as connectivity within and beyond the parcel. The Development Scheme included in Section 4.0 of this

report also considers the feasibility, cost and phasing of municipal services and the investments required to enable optimal site development.

CITY OF IQALUIT QUICK FACTS

- Iqaluit received its Order of Official Status as a City in April 2001.
- Iqaluit serves as a gateway to Qikiqtani Region communities.
- The City has a diverse history including as a coastal hunting area, a trading post, a military base, and government research and communications centre.
- Census 2011 reported a City population of 6,699, an increase of 8.3 % from 2006.
- In 2011, 59% of Iqaluit residents were Inuit, with 41% non-Inuit.
- By 2030, the City's population is expected to grow to approximately 13,050.
- Non-Inuit cultural groups in Iqaluit include Newfoundlanders, Francophone, Filipino and South Asian.
- The City hosts a mix of long-term and transient residents.

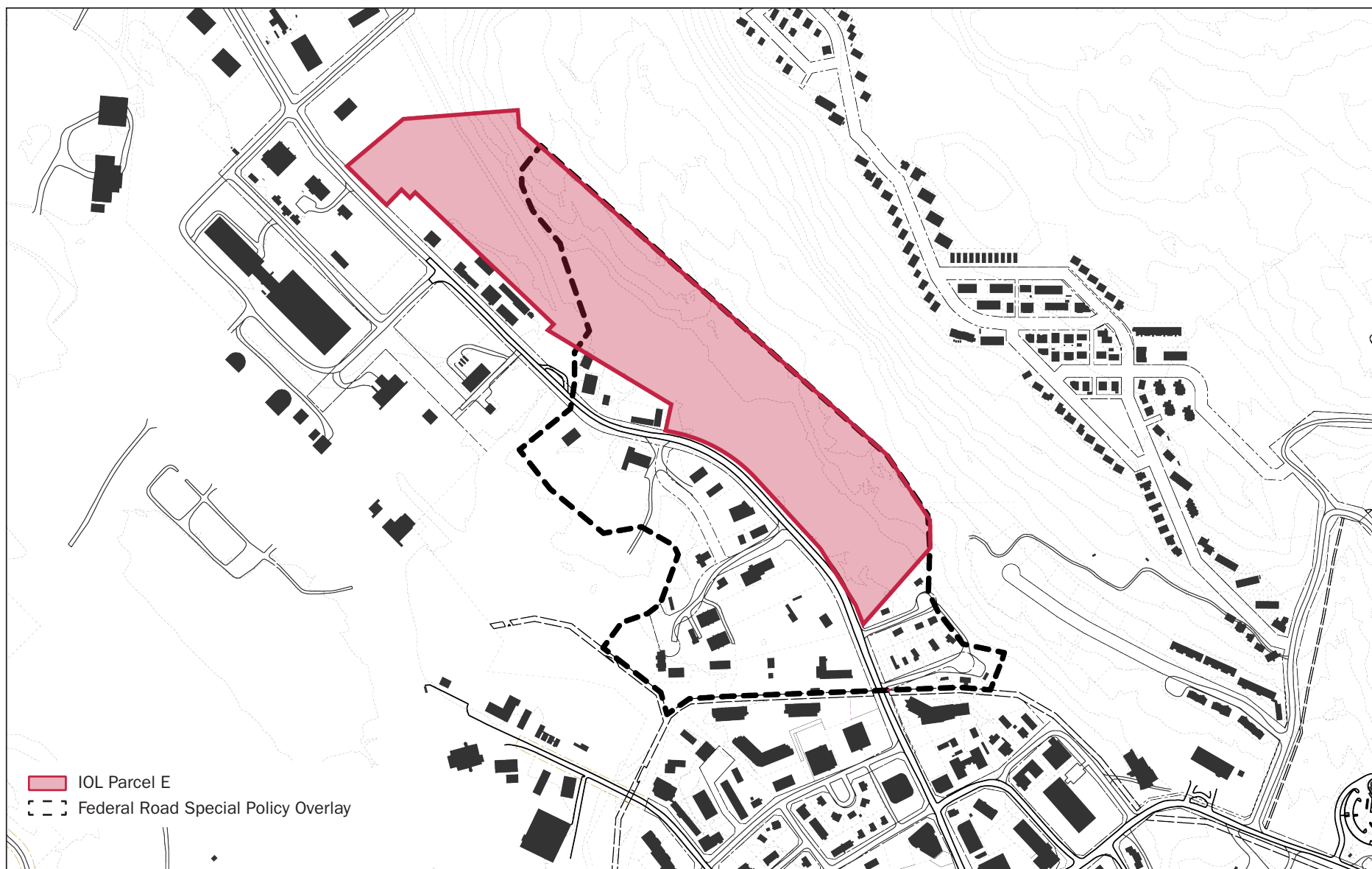


Figure 1: IOL Parcel E in the context of the Federal Road Special Policy Overlay.

3. Existing Policy Framework

3.1 City of Iqaluit General Plan

The City of Iqaluit General Plan (2010) contains policies for managing the physical development of Iqaluit to the year 2030. The General Plan's vision includes the creation of a distinctive Core Area and Capital District; reflecting and celebrating Inuit cultural heritage; providing a clear development strategy for housing choice, ensuring economic opportunities, and that development respects the environment. The Plan provides direction for the City of Iqaluit Zoning By-law to guide land uses in conformity with this Plan.

In the General Plan, the majority of the IOL Parcel E is designated Commercial which permits a range of retail, office and commercial services including entertainment and restaurant facilities, and tourist accommodations. The mixing of commercial uses with institutional and/or residential uses is encouraged, subject to commercial uses being on the main floor of the building at a minimum. Other portions of IOL Parcel E are designated Industrial and Open Space.

IOL Parcel E is located within the Federal Road Special Policy Overlay, which is directly adjacent to the Core Area. The Overlay and Core Area designation are described in more detail in the following sections.

3.2 Federal Road Special Policy Overlay

Due to its location within the Federal Road Special Policy Overlay area, IOL Parcel E is subject to Overlay policies. In addition to the underlying commercial land use designation, Overlay policies support institutional and residential uses.

Future development in the Overlay area will be supported by a Federal Road Study to determine the feasibility of transitioning lands within the Overlay area to a mix of commercial, residential and/or institutional uses. As part of this study, a range of considerations will be investigated including: the feasibility and cost for the extension of services; the impact of a future by-pass road and the relocated Airport terminal building; the range of uses and densities of development appropriate for the lands; and whether the lands could be considered for inclusion in the Core Area.

Importantly, due to its location within the Overlay area, IOL Parcel E is currently subject to a Development Scheme prior to any change in land use designation. Development Schemes provide a detailed plan for specific development areas and include information about intended land use, lot division, servicing requirements, road layout and the phasing of development. The Development Guidelines set out in Section 8.6 of the General Plan specify design criteria to be considered as part of a Development Scheme.

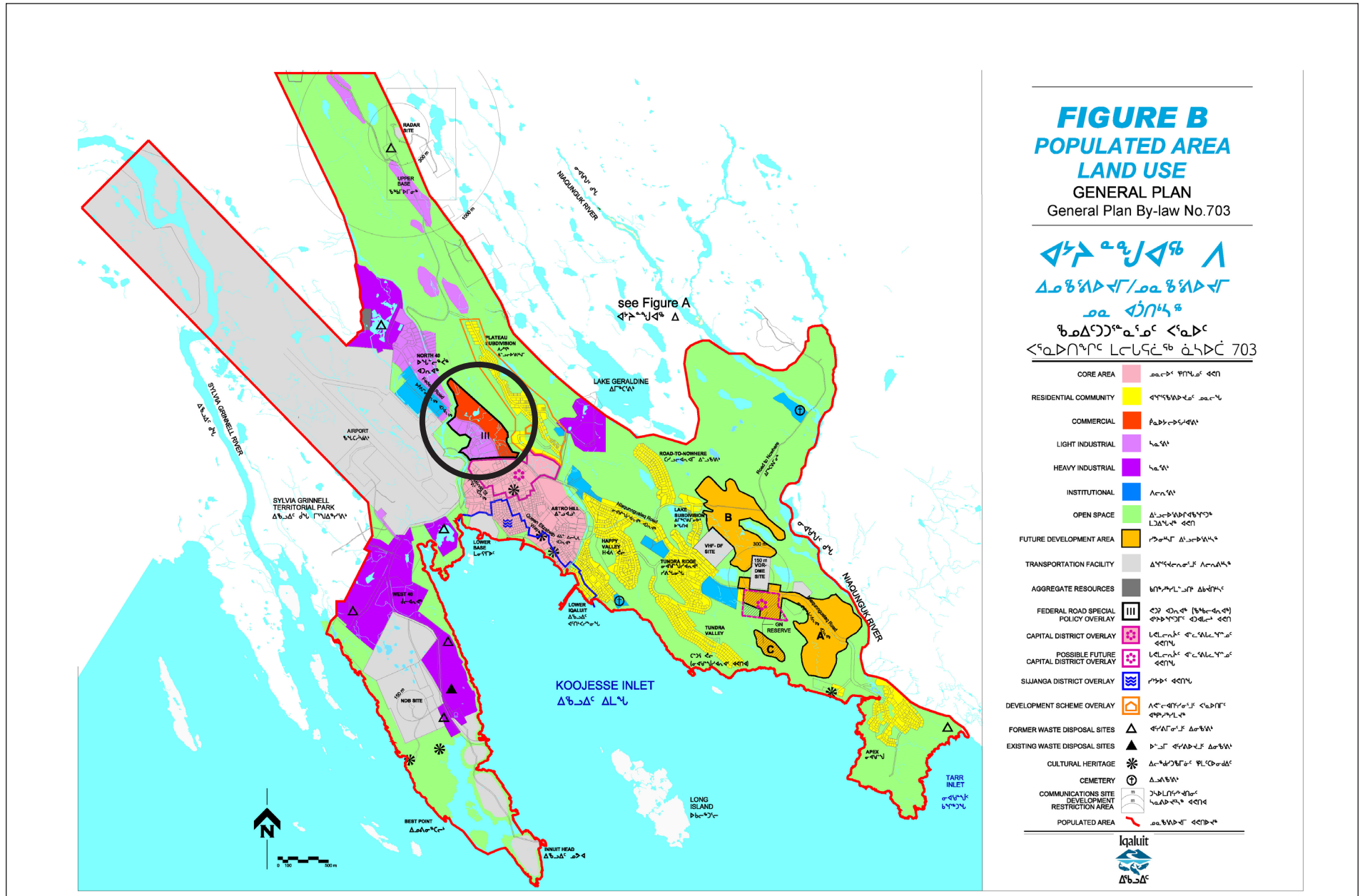


Figure 2: City of Iqaluit General Plan (Figure B: Populated Area Land Use). The Federal Road Special Policy Overlay area is circled.

3.3 Core Area Designation

The Core Area includes a diverse combination of employment, government, retail, tourism, housing, entertainment, recreation and cultural activities. Specific policies have been identified in the General Plan that are aimed at maintaining the employment focus of these areas while also encouraging a mix of land uses, improving on and off-street circulation to increase pedestrian safety and comfort, and promoting a unified urban form and character.

Section 5.1.1 of the General Plan includes land use and housing policies for the Core Area. Permitted land uses in the Core Area include residential, office, retail, commercial, institutional and open space uses. Building heights in the Core Area will generally be a maximum of four storeys where a height increase of two to four storeys may be approved through a Zoning By-Law Amendment. The Plan also recognizes Federal Road as a significant commercial street or Mainstreet that can support mixed-use and higher density developments. Section 5.1.2 includes pedestrian and vehicular circulation policies. Prioritization is given for the development of pedestrian walkways on Mainstreets (including Federal Road) to support a safe pedestrian environment. Transit service and transit-friendly site design will also be considered to improve accessibility to the Core Area from outlying areas.

Section 5.1.3 outlines policies for beautifying the Core Area. Part of this beautification includes the intent to create a gateway between the Airport and Four Corners which will be planned and designed to become the primary access to the city. As part of this strategy, all new development along this gateway will incorporate a high standard of urban design where Council will facilitate the consolidation of lots to permit the redevelopment of land.

3.4 City of Iqaluit Zoning By-law

The Iqaluit Zoning By-law 2010 (By-law No.704) applies the District Commercial Zone (B2) to the portion of IOL Parcel E east of the Carney Creek. West of Carney Creek, lands are zoned Light Industrial Zone (M1). Along the creek, lands are zoned Open Area (OR).

The B2 Zone permits a range of uses including dwelling units in a non-residential building (provided that they are located above the first storey), office, hotel, place of assembly, parking lot, retail store and personal service establishment uses. This area is also subject to Special Exception Zone 3 (B2(3)) which permits additional residential uses including apartment dwellings. A single lot located along Federal Road adjacent to IOL Parcel E and within the Federal Road Special Policy Overlay is subject to Special Exception Zone 2 (B2(2)) which permits an automotive commercial garage on the property.

The M1 Zone covering the western portion of IOL Parcel E beyond Carney Creek permits a range of industrial uses including custom workshop, open storage, warehouses and accessory retail.

4. Development Scheme for IOL Parcel E

4.1 General Development Plan for Municipal IOL Parcels in the Qikiqtani Region

The General Development Plan for Municipal IOL Parcels in the Qikiqtani Region was completed in April 2013. The Plan provides an overview of municipal Inuit Owned Land holdings and includes recommendations regarding consultation, benefit statements, and development strategies across a range of land uses. All development on municipal Inuit Owned Land will be guided by the Nunavut Land Claims Agreement, including the following objectives:

- To provide for certainty and clarity of rights to ownership and use of lands and resources, and of rights for Inuit to participate in decision-making concerning the use, management and conservation of land, water and resources, including the offshore.
- To provide Inuit with wildlife harvesting rights and rights to participate in decision-making concerning wildlife harvesting.
- To provide Inuit with financial compensation and means of participating in economic opportunities.
- To encourage self-reliance and the cultural and social well-being of Inuit.

The Development Scheme for IOL Parcel E demonstrates the intent of Article 17 of the Nunavut Land Claims Agreement which states:

“The primary purpose of Inuit Owned Lands shall be to provide Inuit with rights in land that promote economic self-sufficiency of Inuit through time, in a manner consistent with Inuit social and cultural needs and aspirations.”

4.2 Site Context and Development Scheme Areas

As described in Section 3.2 above, IOL Parcel E is located within the Federal Road Special Policy Overlay area. The Overlay also applies to non-Inuit Owned Lands along the Federal Road corridor. These include a strip of land directly south of IOL Parcel E with frontage on Federal Road, an industrial area on the south side of Federal Road, and a residential area to the southeast of IOL Parcel E. Figure 5 shows the four areas contemplated in the Development Scheme.

A - IOL Parcel E: This area is the primary focus of this planning rationale report. Detailed land use, transportation and municipal servicing analyses have been conducted for the parcel to determine the highest and best use of land.

B - Federal Road Frontage Area: This area is important to the future development potential and access to IOL Parcel E. All parcels in this area have frontage on Federal Road. As the corridor transforms into a gateway to the Core Area, these parcels may come under increased development pressure. Future redevelopment of these parcels will be consistent with Federal Road Special Policy Overlay policies until a Development Scheme for the Overlay area is completed.

C - Federal Road Industrial Area: This area is located on the south side of Federal Road, directly across from IOL Parcel E. Similar to the Federal Road Frontage Area, this area may face increased development pressure over the long term due to its Federal Road frontage and proximity to the Core Area. Future redevelopment of these parcels will be consistent with Federal Road Special Policy Overlay policies until a Development Scheme for the Overlay area

is completed.

D - Federal Road Existing Residential Area: Located to the south-east of IOL Parcel E, this area falls under Special Exception Zone 1 (B2(1)) in the Zoning By-law, which allows the existing residential uses. Future extension of the Core Area may increase development pressure in this area.



Figure 4: The site's topography provides views to the land.

4.3 Vision for IOL Parcel E

The development of IOL Parcel E reinforces Inuit rights in land by encouraging uses that capture the highest and best use of the land in terms of economic development, environmental stewardship and cultural expression. All residents of Iqaluit will benefit from the creation of a strong gateway into the city along Federal Road. Development on these Inuit Owned Lands will celebrate and promote Inuit cultural heritage and contribute to the long-term economic, social and environmental sustainability of the city.

IOL Parcel E will take advantage of its location in the landscape by protecting important views and vistas, enhancing connections through the community to the land, and protecting areas for cultural activities. The community will be human-scaled, providing safe and accessible public spaces connected by trails and a connected network of local roads.

Development within IOL Parcel E will showcase innovative approaches to city building and sustainable design, ones that prioritize the development of a complete community through coordinated private and public investment. As a complete community within the broader city, IOL Parcel E will offer a range of housing options, commercial opportunities and cultural experiences.

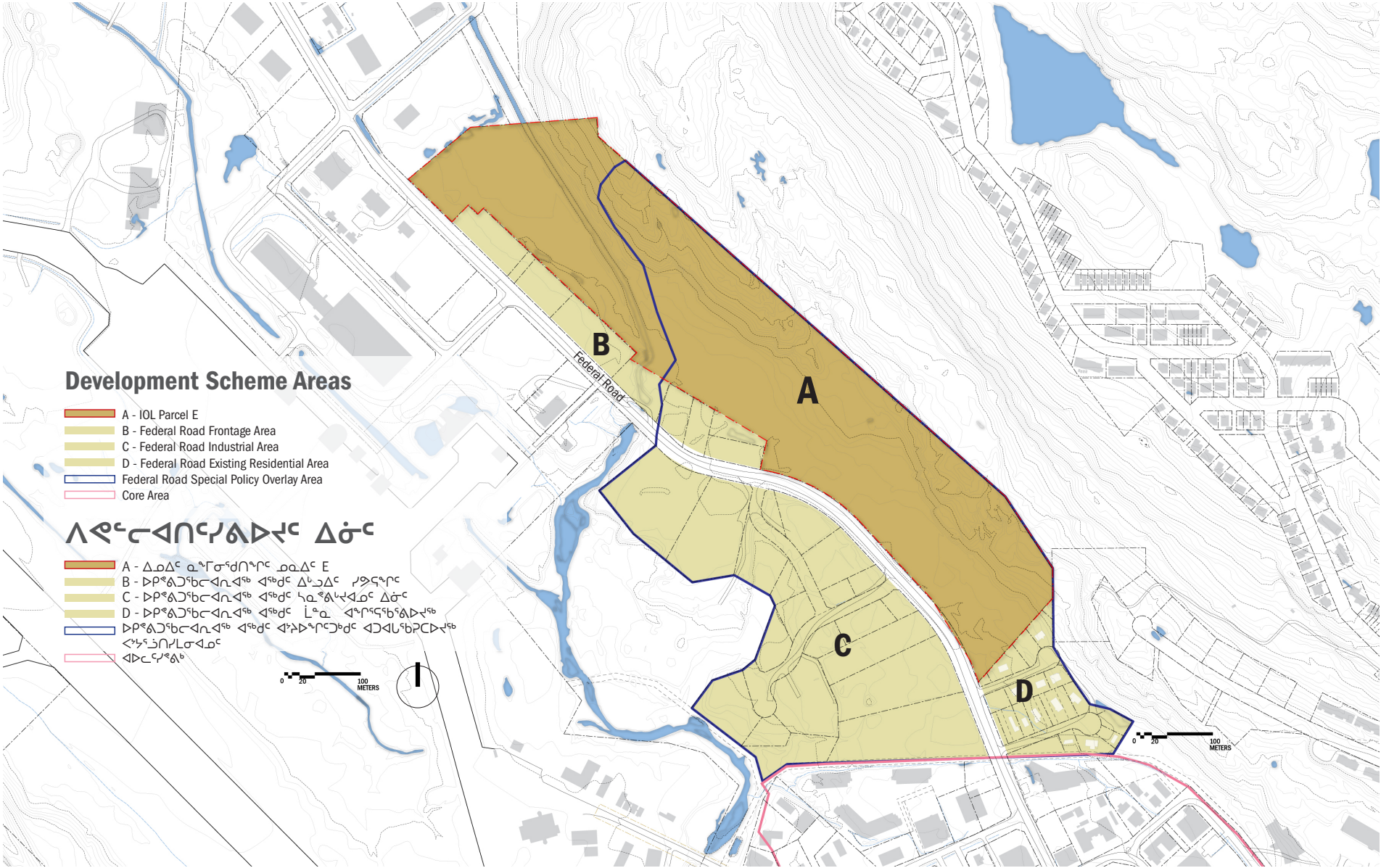


Figure 5: Development Scheme Areas.

4.4 Planning Principles

The following planning principles will guide the Development Scheme and Plan of Subdivision for IOL Parcel E lands:

Enhance relationships to the natural environment: Minimize the impacts of development and promote connection to the land through the use of environmental stewardship best practices and innovative technologies.

Achieve the highest and best use of the land: Promote economic self-sufficiency and prosperity by allowing for an appropriate mix of land uses, establishing density targets and identifying long-term infrastructure requirements.

Celebrate culture: Support Inuit cultural expression through the development of a cultural hub and preservation or enhancement of land access routes, views and vistas, and open spaces. Continuity of heritage and cultural expression within the development, either through future building design or businesses and program delivery within future buildings will be elaborated within future development permit applications.

Support a mix of uses: Allow for a mix of land uses that address the long-term residential, commercial and cultural needs of the community.

Create a beautiful and safe public realm: Use Crime Prevention Through Environmental Design (CPTED) principles and urban design guidelines to establish an inviting and accessible public realm with connections to the broader community.

Establish a gateway to the Core Area: Establish a unique, culturally appropriate and welcoming gateway to the Core Area from the Airport.

CULTURAL PRINCIPLES INFORMING THE PLAN

- Evidence of Inuit settlements in the area of Iqaluit dates back to 500 BC.
- Both migration and settlement patterns were often dependent on changes in climate and sufficient sources of food.
- Flexibility and mobility were, and continue to be, at the heart of living in the north.
- Winter is a time of social interaction after periods of being on the land. The gathering of people provides an opportunity for exchanges of knowledge and experience.
- Organization and orientation of individual dwellings was historically determined by social circumstances, environmental conditions and cultural activities.

Conceptual Land Use Option 1

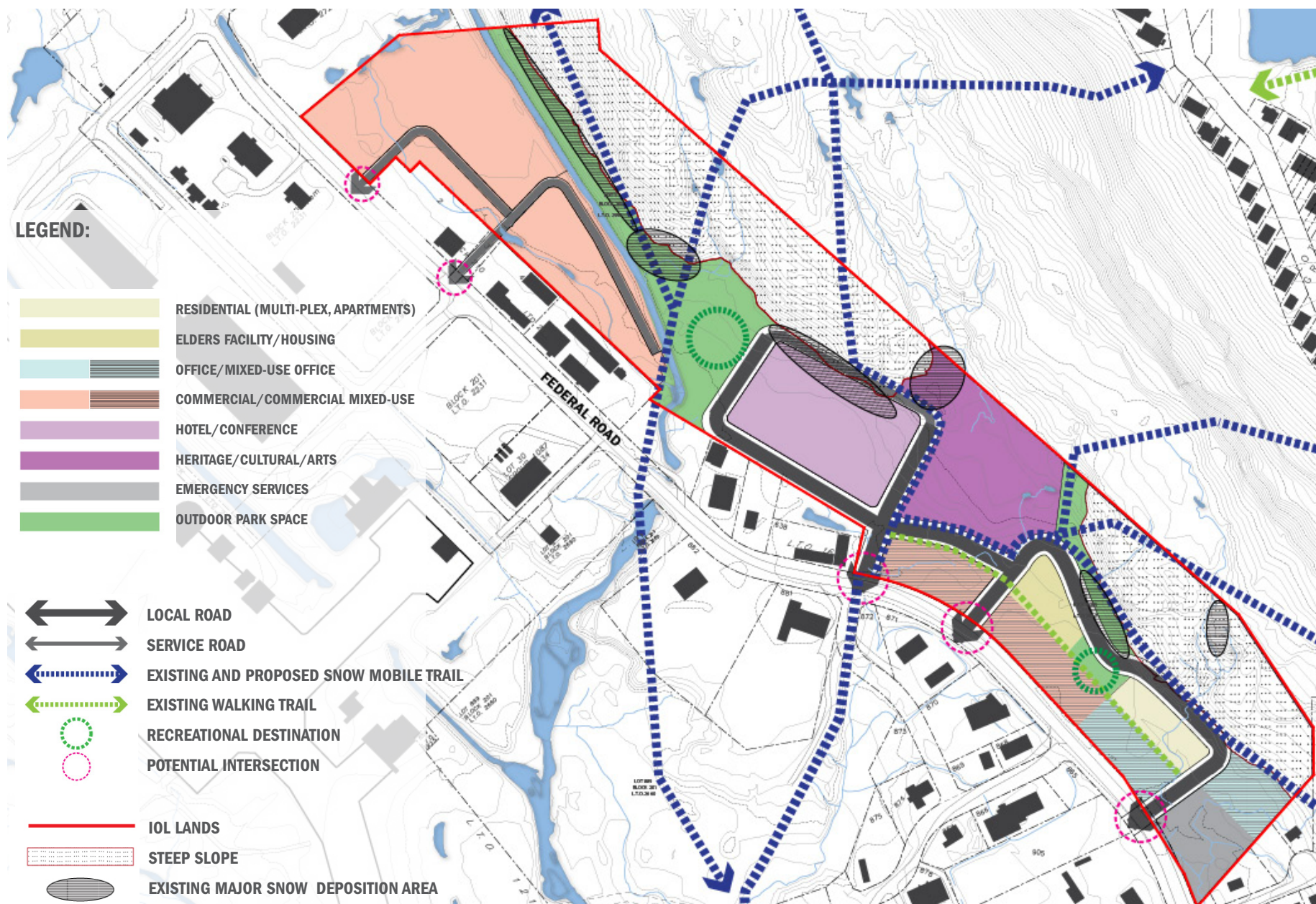


Figure 6: Development Scheme Option 1 with centrally located cultural hub.

Conceptual Land Use Option 2

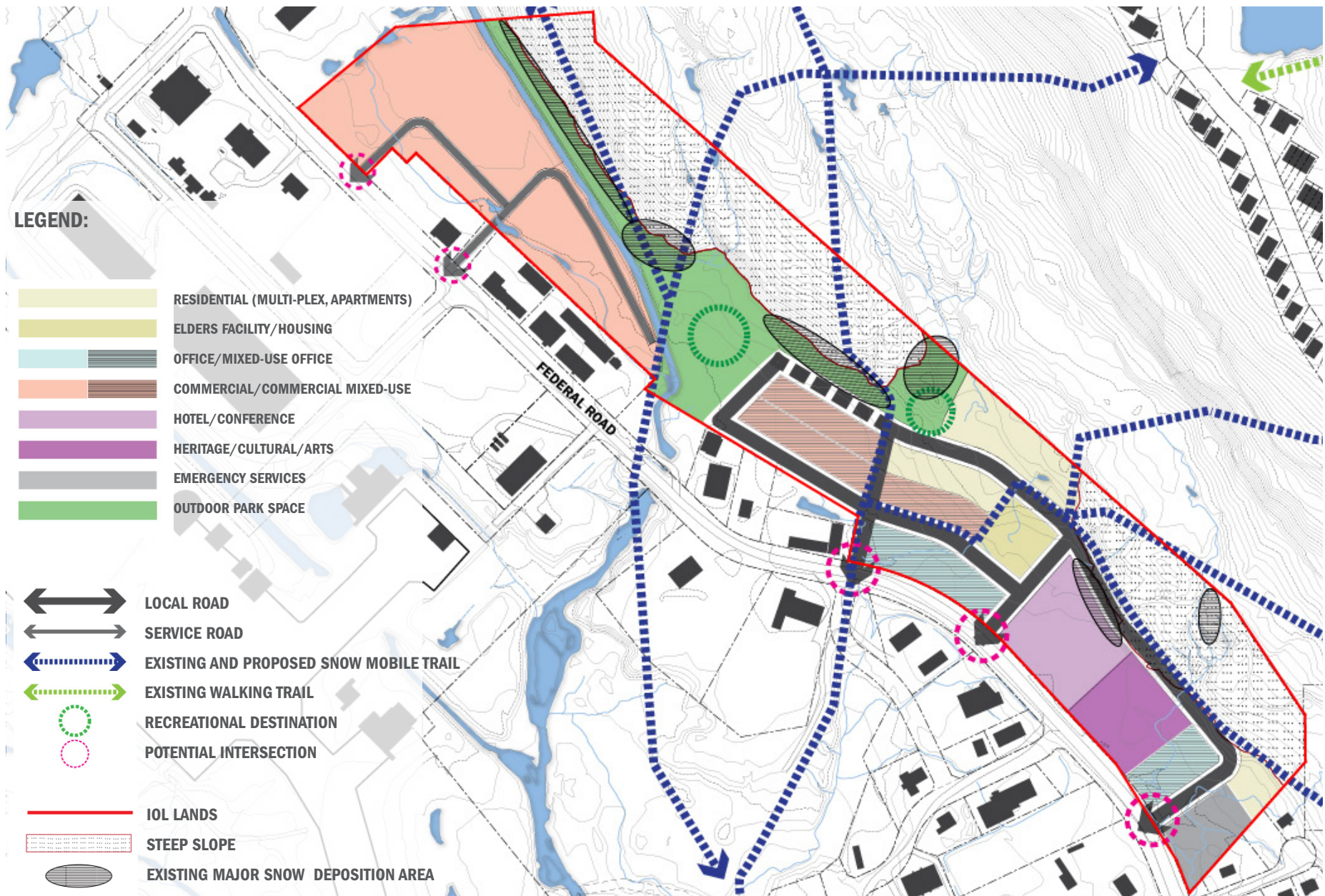


Figure 7: Development Scheme Option 2 with cultural hub located on Federal Road.

4.5 Evaluation of Conceptual Land Use Options

The conceptual land use options shown above in Figures 6 and 7 were developed for IOL Parcel E in consultation with QIA's Community Land and Resource Committee (CLARC), Government of Nunavut and development industry stakeholders. Each option was evaluated within the context of the planning principles outlined in Section 4.4 of this report. Options were also tested for their ability to meet municipal servicing and infrastructure standards. Through evaluation and testing, Conceptual Land Use Option 1 emerged as the preferred land use concept for the Development Scheme.

Conceptual Land Use Option 1

Opportunities

- Preferred location for the Heritage Museum and Visual Arts Centre and hotel/conference amenities. Central Location within the development area allows for integration of cultural amenities on site.
- New roads parallel to Federal Road provide accessibility through site, with connections onto Federal Road.
- Cross-site connections to natural features via trails and snowmobile routes.
- Opportunity to extend existing Core Area and enhance visual quality and urban experience along Federal Road with mixed-use frontage.
- Opportunities to connect into existing municipal services along Federal Road.

- Limited constraints to expanding municipal services from existing serviced area.

Issues

- Multiple connections to Federal Road may not provide optimal intersection spacing and may have negative impacts on traffic flow.
- Single-loaded roads against rock face in the east end of the site and behind hotel/conference amenities do not achieve the highest and best use of proposed road infrastructure.

Conceptual Land Use Option 2

Opportunities

- Location of the Heritage Museum and Visual Arts Centre and hotel/conference amenities allows for direct access to and from the cultural hub on Federal Road.
- New roads parallel to Federal Road provide accessibility through site, with connections onto Federal Road.
- Cross-site connections to natural features via trails and snowmobile routes.
- Opportunities to connect into existing services along Federal Road.
- Limited constraints to expanding municipal services from existing serviced area.

Issues

- Location of the Heritage Museum and Visual Arts Centre and hotel/conference amenities is disconnected from open spaces. Soil conditions along Federal Road do not allow for taller buildings.
- Location of the Heritage Museum and Visual Arts Centre and hotel/conference amenities interrupts the mixed-use office frontage along Federal Road.
- Multiple connections to Federal Road may not provide optimal intersection spacing and may have negative impacts on traffic flow.
- Single-loaded road against rock face in the east end of the site does not achieve the highest and best use of proposed road infrastructure.
- Mixed-use commercial areas are internal to the site with no direct access to and from Federal Road.
- Residential uses are located in areas that do not take advantage of the site's natural topography to provide views and vistas.
- Location of the Heritage Museum and Visual Arts Centre and hotel/conference amenities and road network do not allow for maintenance of an existing walking trail.

4.6 Development Scheme Summary

The Development Scheme for IOL Parcel E proposes future land uses to support the development of a complete community. Key features of the Development Scheme include:

New Residential Development: A residential area in the southeast area of the site can accommodate a range of needs from Elders' to family to employee housing. The Development Scheme and related Plan of Subdivision support the future development of housing types that respond to the social, economic and cultural needs of both Inuit and non-Inuit. The Residential Area is located on an existing rock outcropping and features a road alignment across the top of the rock, providing a double-loaded road and the potential for terraced residential units that complement the Plateau Subdivision. In addition to the Residential Area, residential uses are proposed in Mixed Use areas along Federal Road. This mix of residential and commercial uses is intended to support a safe and vibrant public realm within Mixed Use areas.

A Mixed Use Gateway and Future Expansion of the Core Area: Mixed Use areas along Federal Road enable the development of commercial and residential uses. The Development Scheme contemplates the future extension of the Core Area along the Federal Road corridor towards the redeveloped Airport. While blocks along Federal Road are currently designated Commercial, the Development Scheme has been designed to meet the Core Area requirements and enable intensification, growth and Core Area expansion over time.

A Cultural Hub: The Development Scheme protects for a potential future Nunavut Heritage Museum and Visual Arts Centre, in

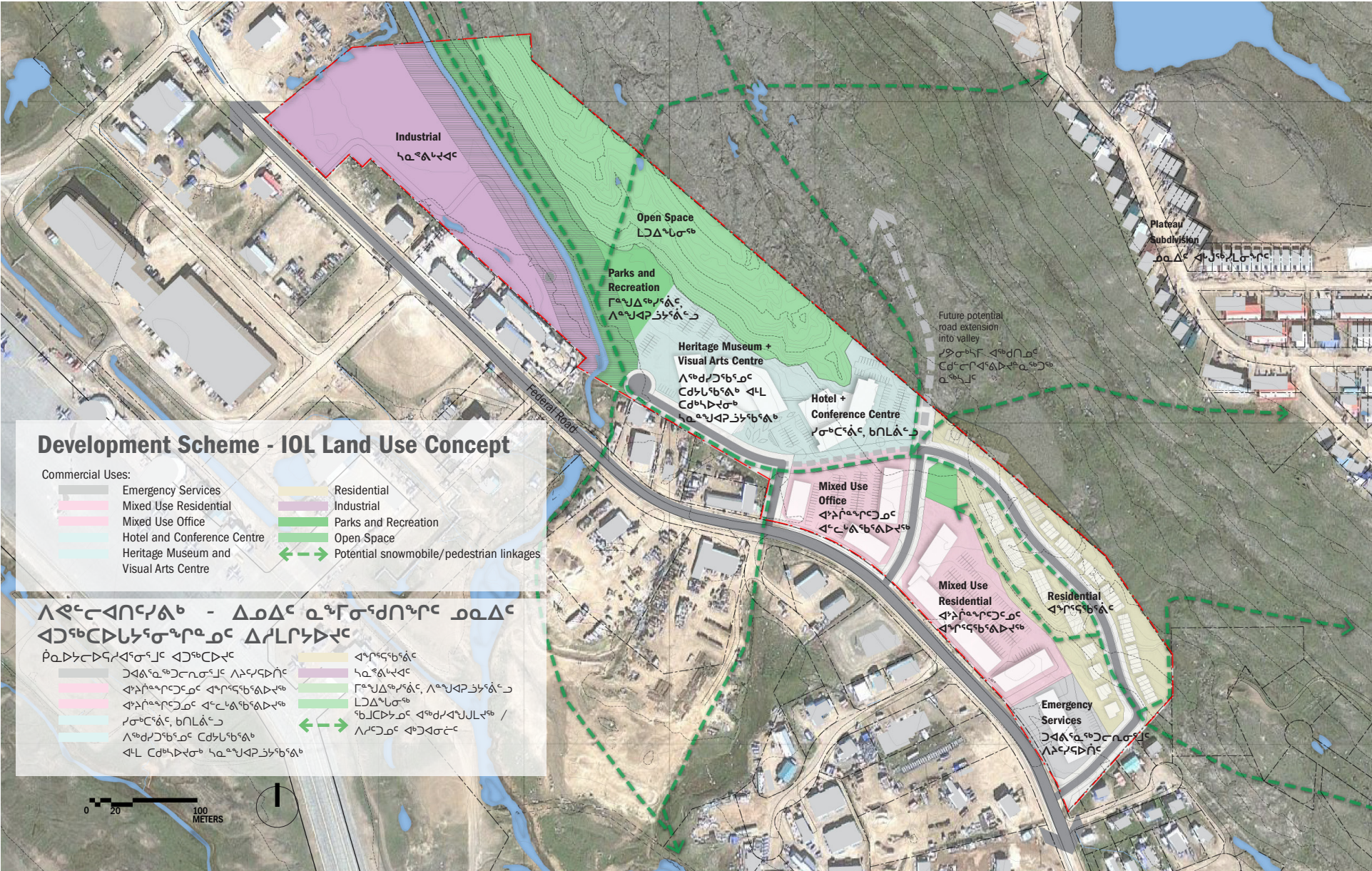


Figure 8: Development Scheme for IOL Parcel E.

addition to a hotel and conference centre, located in the centre of the site. These cultural uses would establish the area as an important cultural destination within the city, drawing economic activity to the area and the broader city.

A Connected Transportation Network: The proposed internal road network provides a high degree of east-west connectivity across IOL Parcel E in addition to key north-south access to the site from Federal Road. The Development Scheme and Plan of Subdivision protect for road allowances that may be developed in the future; however, site connectivity will not be negatively impacted should they remain undeveloped. Additionally, the Development Scheme contemplates a future road connection to the Commissioner's Land north of IOL Parcel E, should this area develop in the future.

Connections to the Land: The Development Scheme features a large Open Space area and active Parks and Recreation lands in the area around Carney Creek, directly adjacent to the Cultural Hub. Existing snowmobile trails will be protected in these areas, providing direct connections to the land through the site. In addition, activities such as berry picking and outdoor cultural programming will be encouraged in Open Space areas.

A Supporting Plan of Subdivision: In addition to the Development Scheme, QIA/QC has prepared a Plan of Subdivision to implement the Development Scheme at the block scale, allowing maximum flexibility as development of the site occurs over time. The Plan of Subdivision was developed and tested using typical building types existing within the City and meets all requirements of the City of Iqaluit Zoning By-law (see Plan of Subdivision under separate cover).



Figure 9: Conceptual massing for IOL Parcel E, looking southeast toward the Core Area from the Plateau Subdivision.

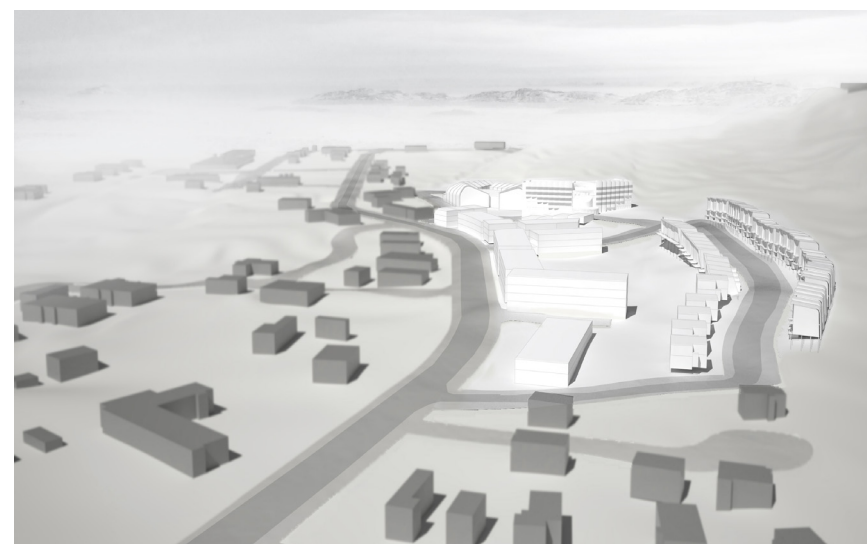


Figure 10: Conceptual massing for IOL Parcel E, looking northwest along the Federal Road corridor.

4.7 Land Uses

Proposed land uses within the Development Scheme for IOL Parcel E are shown above in Figure 8. Land uses are conceptual and may be refined or changed in future stages of planning. All land uses described below are permitted as-of-right or through minor variance within the District Commercial Zone (B2), Light Industrial Zone (M1), and Open Area Zone (OR) currently in place for IOL Parcel E. Future amendments to land use may require amendments to the Zoning By-law.

4.7.1 Commercial Uses

Mixed Use Office: There are two Mixed Use areas within IOL Parcel E, both with frontage on Federal Road. The Mixed Use Office area is the western-most block, directly south of the proposed Hotel and Conference Centre. Mixed Use Office refers to a mix of commercial uses with a predominantly office character. This area will support both horizontal mixing (different uses in separate buildings) and vertical mixing (different uses in the same building). In cases of vertical mixing, office and other commercial uses will be ground-oriented with some residential uses on upper floors of the building. Development in this area is restricted to a maximum of four storeys in height. If, in the future, IOL Parcel E is designated Core Area, building heights in the Mixed Use Office area may be increased as per Section 5.1.1 of the General Plan.

Mixed Use Office Area Summary	
Total Land Area	0.82 ha / 2.03 ac
Total Gross Floor Area (approx.)	9,400 m ²
Total Commercial GFA (approx.)	2,300 m ²
Total Residential GFA (approx.)	7,100 m ²
Average Residential Density	87 units/net ha
Parking Spaces	93
Site Coverage	29%

Mixed Use Residential: The Mixed Use Residential area is located east of the Mixed Use Office block and south of the proposed Residential area. Mixed Use Residential includes a mix of commercial and residential uses. This area will support both horizontal mixing (different uses in separate buildings) and vertical mixing (different uses in the same building). In cases of vertical mixing, commercial uses will be ground-oriented with residential uses on upper floors of the building. Development in this area is restricted to a maximum of four storeys in height. If, in the future, IOL Parcel E is designated Core Area, building heights in the Mixed Use Office area may be increased as per Section 5.1.1 of the General Plan.

Mixed Use Residential Area Summary	
Total Land Area	1.4 ha / 3.46 ac
Total Gross Floor Area (approx.)	14,600 m ²
Total Commercial GFA (approx.)	3,600 m ²
Total Residential GFA (approx.)	11,000 m ²
Average Residential Density	79 units/net ha
Parking Spaces	141
Site Coverage	26%

Heritage Museum and Visual Arts Centre: The proposed location of the Heritage Museum and Visual Arts Centre in the centre of IOL Parcel E encourages the development of a cultural hub at the gateway to the city (see Figure 11). The Heritage Museum and Visual Arts Centre is proposed as a Commercial/Institutional use under the Core Area designation. Existing District Commercial (B2) zoning may require a minor variance to allow development of the Heritage Museum and Visual Arts Centre as a Museum/Library. Although a planned use within the Development Scheme, should a Heritage Museum and Visual Arts Centre not be built on IOL Parcel E, its proposed location can accommodate a range of other similar Commercial/Institutional uses (e.g. a community/recreation centre, a sports centre, other large-scale cultural uses, etc.).

Heritage Museum and Visual Arts Centre Summary	
Total Gross Floor Area (approx.)	9,640 m ²
Parking Spaces	75

Hotel and Conference Centre: A Hotel and Conference Centre is shown directly adjacent to the proposed Heritage Museum and Visual Arts Centre. The Hotel and Conference Centre presents a significant economic development opportunity and also supports the establishment of a cultural hub at the gateway to the city. The Hotel and Conference Centre is a Commercial use under the Core Area designation. Existing District Commercial (B2) zoning allows for the as-of-right development of the Hotel and Conference Centre as a Hotel (see Figure 12).

Hotel and Conference Centre Summary	
Total Gross Floor Area (approx.)	9,400 m ²
Parking Spaces	60

Emergency Services: An Emergency Services facility is proposed for the easternmost portion of IOL Parcel E, with frontage on Federal Road. Development of this facility will require either a lease agreement or land exchange between QIA and the City of Iqaluit. Preliminary facility design provides for direct vehicular access onto Federal Road as well as side access via a potential service road on the western side of the lot (see Figure 12).



Figure 11: Conceptual rendering of the proposed Nunavut Heritage Museum and Visual Arts Centre (source: Diamond + Schmitt Architects).

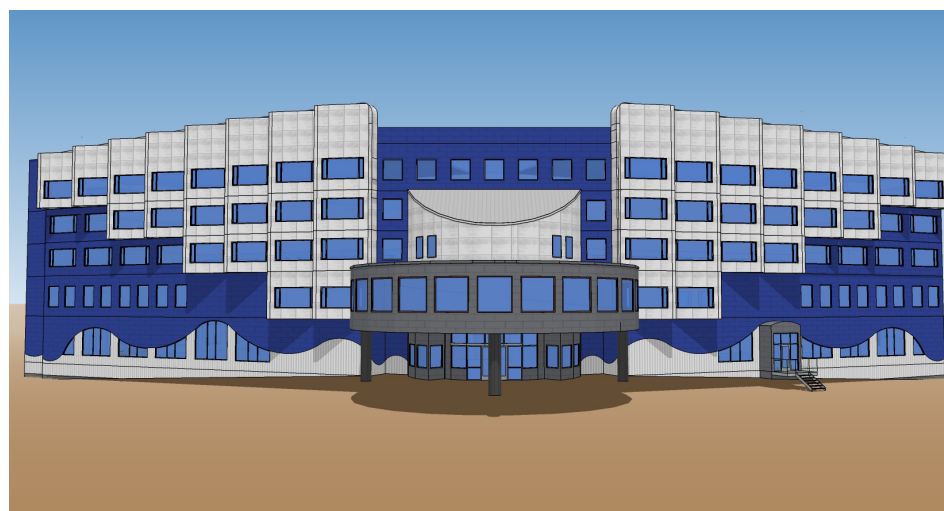


Figure 12: Right: Conceptual rendering of the proposed Hotel and Conference Centre (source: Livingstone Architects) and left: City of Iqaluit Emergency Services Centre (source: Stantec).

Emergency Services Summary	
Total Gross Floor Area (approx.)	1,320 m ²
Parking Spaces	25
Site Coverage	25%

4.7.2 Residential Uses

Multi-Unit Residential: Development in the Residential area located in the southeast portion of IOL Parcel E will have a Multi-Unit Residential character. This refers to multi-family housing such as duplexes, fourplexes, sixplexes, row dwellings, stacked row dwellings and apartments (see Figure 13). Multi-Unit Residential buildings may follow Cluster Development principles (described below).

Cluster Development: This form of development, as described in the Plateau Development Scheme and City of Iqaluit Zoning By-law, may be used in the Residential area of IOL Parcel E. Cluster Development often results in reduced land and servicing costs and can be designed to meet enhanced performance criteria regarding snow and wind exposure. Similar to the intent described in the Plateau Development Scheme, Cluster Development may also be used on IOL Parcel E to take advantage of views and vistas and create a sense of community. Built form in Cluster Development areas will include Multi-Unit Residential types.

Residential Summary	
Total Land Area	1.82 ha / 4.51 ac
Total Gross Floor Area (approx.)	8,700 m ²
Total Residential Units (approx.)	66
Total Residential GFA (approx.)	8,700 m ²
Average Residential Density	36 units / net ha
Parking Spaces	1 per 2 dwelling units

4.7.3 Industrial Uses

The area to the west of Carney Creek is designated Industrial and zoned Light Industrial Zone (M1). The Development Scheme for IOL Parcel E does not contemplate changes to the existing land use designation or zoning in this area. Currently, the area has trucked services. Any future non-industrial uses on these lands will require a servicing analysis and plan prior to development. The lands designated Industrial within IOL Parcel E are not included in the Federal Road Special Policy Overlay area.

Industrial Summary	
Total Land Area	2.13 ha / 5.27 ac



Figure 13: Residential precedents in the City of Iqaluit, including high, medium and low density built form.

4.7.4 Parks and Recreation

Parks and Recreation areas within IOL Parcel E include a large area located directly to the east of Carney Creek, south of the Open Space area and west of the proposed Heritage Museum and Visual Arts Centre. The Parks and Recreation area is situated on relatively even ground and can accommodate major recreational infrastructure such as an outdoor skating rink, baseball diamond or soccer pitch. A linear strip of Parks and Recreation land runs along the east bank of Carney Creek across IOL Parcel E, providing land-to-sea connections for snowmobiles and pedestrians. In addition to the Parks and Recreation area shown in the Development Scheme, smaller Parks and Recreation areas in the form of tot lots will be accommodated within Residential areas in order to satisfy the requirements of Section 5.7 of the City of Iqaluit General Plan.

Parks and Recreation Summary	
Total Land Area	0.43 ha / 1.06 ac

4.7.5 Open Space

A large portion of IOL Parcel E is designated Open Space. The Open Space area is located in the northwest of the parcel and includes a large rock outcropping that transitions into a valley to the north. The slope in the northern portion of this area is steep; however, future development of portions of this Open Space area may be achievable through innovative building design or should the Commissioner’s Land adjacent to IOL Parcel E be developed

in the future. The southern portion, located adjacent to the proposed cultural hub provides opportunities for both passive and active recreation. The Development Scheme for IOL Parcel E also prioritizes pedestrian and snowmobile connectivity to and through the area. Pedestrian and snowmobile trails link Open Space to commercial, residential and cultural areas within the parcel and provide important links to the land and sea.

Open Space Summary	
Total Land Area	5.18 ha / 12.8 ac

4.7.6 Trails

The Development Scheme respects informal snowmobile and walking trails currently in use on the site. A known snowmobile trail along Carney Creek is protected within the Parks and Recreation land use within a watercourse buffer. Site circulation is also supported by the potential network of pedestrian and snowmobile linkages shown in the Development Scheme. Links between residential, commercial and cultural uses are proposed in order to support community connectivity and access to daily needs. The Development Scheme supports future extension of the Core Area designation along Federal Road by establishing a minimum 3 metre setback on the corridor, allowing for the development of demarcated pedestrian spaces. Principles included in the City of Iqaluit *Core Area Redevelopment Plan* regarding snowmobile access and creating a walkable city can be accommodated within the Development Scheme to enhance connectivity between the Core Area, new development and the land.

4.7.7 Roads and Transit

The road layout within the Development Scheme maximizes connectivity. Prevailing winds, site topography and solar orientation of buildings were taken into consideration when developing the road network. Roads within the Development Scheme are aligned to minimize snowdrifting and enable lot patterns that maximize solar orientation. The road network responds to site topography, particularly in the east. In this area, the road runs along the top of a rock outcropping to provide access to a residential community and to reduce drift deposition on the road. Grade modifications are required to develop this road. Access from the east (near the Emergency Services building) is proposed at a slope of approximately 3%. In the west (near the cultural hub), the slope is a maximum of 10%. This road provides access to building lots with superior soil, enabling terraced construction and attractive views.

The road network will accommodate multiple users, including vehicles, pedestrians and snowmobiles. However, pedestrians and snowmobiles will also have access to a dedicated trail system, reducing their reliance on public roads for mobility.

The Development Scheme anticipates future widening of Federal Road to a 25 metre right-of-way, as illustrated in the proposed Plan of Subdivision. Otherwise, all roads within the Development Scheme are designed with an alternative 18 metre right-of-way, as per Section 6.4.3 of the General Plan.

4.7.8 Municipal Servicing

Municipal services required within the development include a water distribution system, sanitary sewer collection system and a storm-water drainage system.

The water and sanitary systems should be below-grade or buried systems with both water and sanitary sewer mains located in a common trench. Maintenance access to the water and sewer mains should be provided through access vaults which protrude above the surface. The water and sewer mains and access vaults are most commonly located within the road right-of-way or within a service easement.

The stormwater drainage system within the City of Iqaluit consists of a series of natural or channelized major drainage courses, secondary drainage or roadside ditches, and culverts. Within IOL Parcel E, the proposed stormwater drainage system will primarily comprise roadside ditches and culverts, located within the road right-of-way. Drainage within development blocks will be designed to work with the proposed major drainage structures and will be designed in future stages of planning for individual lots.

4.8 Land Development Guidelines

Section 8.6 of the City of Iqaluit General Plan includes design criteria and policies to guide the preparation of development plans. Development Schemes should conform to the guidelines included in Section 8.6. The summary below indicates how the Development Scheme for IOL Parcel E has considered and/or meets the requirements of Section 8.6 of the General Plan. In some cases, the Land Development Guidelines apply to future stages of planning on the site. The summary has been organized by land use, including General, Residential, Commercial, Open Space/Parks and Recreational, Roads/Transit, and Municipal Servicing.

4.8.1 General

Section 8.6 Land Development Guidelines	Development Scheme for IOL Parcel E
<p>2. In proposing or reviewing a subdivision plan or Development Scheme, City staff and Council will consider the following:</p> <p>j) The configuration and orientation of lots should respond to the local microclimate and physical site conditions by considering:</p> <ul style="list-style-type: none"> i. Existing drainage patterns; ii. Sun exposure to maximize sunlight on residential buildings; iii. Steep slopes; iv. Prominent views; v. Direction of prevailing winds; vi. Known or potential snow-drifting areas identified through a snow and wind study 	<p>IOL Parcel E is generally a flat, natural tundra area located at the base of exposed bedrock. There is a deep channelized drainage channel that crosses the site in a north-south direction in the northwestern end of the site. A second major drainage course is located between Masik Court and the RCMP Building to the south of IOL Parcel E. In addition, there are several minor culverts located along Federal Road which transmit storm water drainage from the north side of Federal Road or IOL Parcel E to the south.</p> <p>A natural drainage area near the centre of the site is prone to standing water. This area will be re-graded to support future development. The construction of roadside ditches will provide improved drainage across the site and should help to mitigate the issues of standing water. The grading of individual blocks will take into consideration the presence of standing water and provide for grading that promotes drainage to the existing and proposed drainage structures.</p> <p>While the Development Scheme does not directly address the potential for major grade changes (e.g. cut and fill in rock outcrop areas), the proposed land use plan does not preclude future major grade changes. Further geotechnical, engineering and planning studies would be required to ensure compliance with the General Plan.</p> <p>The Development Scheme (and Plan of Subdivision) maximizes solar orientation of lots in the proposed Residential area. Lots and buildings should be oriented a minimum of 20° with south-facing windows.</p>

	<p>Local roads that provide east-west access across the site are oriented parallel with prevailing winds in an approximate NW/SE (320°-330°/140°-150°) alignment. The Development Scheme limits the use of “crosswind” streets. In most cases, roads are located on relatively flat, open terrain. In the proposed Residential area, a local road runs along a windswept hillcrest. To avoid significant drifting, roads are not proposed in downwind hillside areas.</p> <p>The location of building lots relative to roads will influence snow drift conditions on nearby roads and neighbours. Typically, a windward snowdrift will form and extend downwind of the building in a “horseshoe” shaped drift. In addition, a downwind drift forms against the building. The drifts that occur downwind of a building are the main reason why cross-roads, or building placement upwind of a cross-road, are discouraged in the Development Scheme. Where cross-roads are necessary, larger buildings have been placed on the downwind side (e.g., the Heritage Museum and Visual Arts Centre) versus on the upwind side. Drift patterns around elevated buildings that allow wind flow underneath differ from those that occur with slab on grade or a building with solid skirting around the pile foundation. It is anticipated that most development on the site will allow wind flow underneath the building to ensure the downwind drifts are smaller in volume and form away from the building face.</p> <p>The site’s natural features (i.e. level versus steep areas, uphill versus downhill conditions, presence of roads, water, etc.) within approximately 300 metres upwind of the development area all influence the ability to locate snow fencing. Further assessment will be undertaken to determine the potential use of snow fencing to benefit future development on the site.</p>
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<p>k) The presence of known historical or cultural resources, subject to the policies established in Section 5.8.</p>	<p>Figure B of the City of Iqaluit General Plan indicates known historical or cultural resources within the Populated Area using a Cultural Heritage symbol. The General Plan does not indicate the presence of historical or cultural resources on IOL Parcel E.</p> <p>Consultation with QIA's Community Lands And Resources Committee (CLARC) did not reveal known historical or cultural resources on the site; however, traditional and modern pedestrian and snowmobile access corridors were noted, along with prominent views and vistas. IOL Parcel E is also a known berry picking site with most activity occurring on portions of the site that will remain undeveloped (e.g. due to steep slopes, etc.).</p> <p>Prior to development approval, a formal review of historical or cultural resources on IOL Parcel E may be undertaken.</p>
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4.8.2 Residential

Section 8.6 Land Development Guidelines	Development Scheme for IOL Parcel E
<p>2. In proposing or reviewing a subdivision plan or Development Scheme, City staff and Council will consider the following:</p> <p>g) For the residential component of Development Schemes:</p>	<p>Residential development on the site will occur in two areas: a Residential area located in the east portion of the site and the Mixed Use Office/Mixed Use Residential areas located on Federal Road.</p> <p>All residential development on the site will be multi-unit development, in the form of duplexes, fourplexes, sixplexes, row dwellings, stacked row dwellings and apartments.</p>

<p>i. target an average net residential density of 30 units per net hectare. Net residential density is based on the area in exclusively residential use, and excludes public streets, rights-of-way and all non-residential uses;</p> <p>ii. ensure that no more than 40% of the leasable lot area is dedicated to low density residential development;</p> <p>iii. target 7% of the leasable lot area to be affordable to households under the 50th income percentile. The target income percentile may be amended by resolution of Council;</p> <p>iv. consider the location of low density residential areas relative to medium and high density residential areas;</p> <p>v. target at least 5% of housing proposed in a Development Scheme, excluding apartment dwellings, to meet the requirements of an industry-standard energy efficiency rating program, either:</p> <ul style="list-style-type: none"> • R-2000; or • EnerGuide Rating Services (minimum rating 80). 	<p>Based on testing completed for the Plan of Subdivision, average net residential density in the Residential area is targeted at 36 units per net hectare.</p> <p>In the Mixed Use Residential area, average net residential density is targeted at 79 units per net hectare.</p> <p>In the Mixed Use Office area, average net residential density is targeted at 87 units per net hectare.</p> <p>Residential densities will be refined in future stages of planning and design, but will meet the average net residential density target of 30 units per net hectare.</p> <p>Multi-unit built form ensures that the majority of residential development will be medium density with less than 40% of the leaseable lot area dedicated to low density development. Based on the housing typologies tested, the Development Scheme anticipates that approximately 27% of residential development will be low density.</p> <p>Multi-unit built form also provides a broader range of unit sizes and configurations to encourage a minimum of 7% affordable housing stock.</p> <p>With regard to energy efficiency, all residential development on IOL Parcel E will meet or exceed energy efficiency ratings as defined in the <i>Plateau Lot Development Standard</i>.</p>
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4.8.3 Commercial

Section 8.6 Land Development Guidelines	Development Scheme for IOL Parcel E
<p>2. In proposing or reviewing a subdivision plan or Development Scheme, City staff and Council will consider the following:</p> <p>d) Creating a mix of uses along Collector Roads to increase activity and personal security for pedestrians.</p>	<p>The Development Scheme supports an active and secure public realm along Collector Roads by establishing a mixed use precinct with frontage on Federal Road.</p> <p>Section 5.1.2 of the General Plan speaks to the location of parking in Commercial areas with frontage on a Collector Road (Federal Road). Front yard and back-out parking is not permitted in these areas. The Development Scheme conforms to the General Plan by providing parking in parking lots located behind or to the side of buildings, accessible from Local Roads running perpendicular to Federal Road.</p> <p>Commercial development also conforms to existing District Commercial Zone (B2) requirements with regard to lot area and frontage, yard requirements and building heights. This will ensure a uniform street wall along Federal Road, providing a sense of enclosure and safety for pedestrians.</p> <p>The cultural hub, including the proposed Nunavut Heritage Museum and Visual Arts Centre and a Hotel and Conference Centre complements and supports commercial uses located along the Federal Road corridor. Regular pedestrian and vehicular traffic along the Federal Road corridor and into the site in the area of the cultural hub will ensure an active and vibrant public realm.</p>

4.8.4 Open Space / Parks and Recreation

Section 8.6 Land Development Guidelines	Development Scheme for IOL Parcel E
<p>2. In proposing or reviewing a subdivision plan or Development Scheme, City staff and Council will consider the following:</p> <p>a) Identification of an open space network and ways to connect it to the existing network. Design of the open space network will consider:</p> <ul style="list-style-type: none"> i. Protection of natural features such as prominent rock bluffs, tundra, and watercourses; ii. Location of neighbourhood parks and public buildings and/or services; iii. Where appropriate, creating connections through the development area and linking existing open spaces to the land (Nuna) beyond the Populated Area. iv. Provision of safe and convenient access points to the Walking Trail and Snowmobile Trail systems, as designated in Figure D. v. Where appropriate, identification of new connections to the Walking Trail and Snowmobile Trail systems, protected by designating the subject lands Open Space. 	<p>The Open Space network proposed in the Development Scheme respects the topography of the site. In the northwest area of the site, steep slopes are designated Open Space to protect existing natural features and maintain connections from the site to the land (Nuna). Protection of this area under an Open Space land use designation also allows for continued and enhanced cultural uses including berry picking and outdoor cultural programming.</p> <p>A large Parks and Recreation area adjacent to the Open Space area provides an opportunity for the development of a programmed park space including amenities such as an outdoor skating rink, soccer pitch or a baseball diamond.</p> <p>The Parks and Recreation area extends as a linear space along Carney Creek, providing direct connections to and through the site for pedestrians and snowmobiles within the 30.5 metre watercourse setback from the creek centreline.</p>
<p>b) The size and location of neighbourhood parks are subject to the policies contained in Section 5.7</p>	<p>Section 5.7.5 of the General Plan speaks to parkland ratio for new residential development areas. The proposed Residential area is well-served by parkland in the Development Scheme. In addition, residential uses within Mixed Use areas have direct access to parkland.</p>

	<p>The Development Scheme includes 1,000 m² (0.1 ha) of tot lots, meeting the General Plan requirement of 100 m² for every 30 households. The “tot lot” is located in the northeast portion of the site and is directly accessible from surrounding residential uses without crossing an Arterial or Collector Road.</p> <p>In addition to tot lots, a large Parks and Recreation area is shown in the northwest area of the site, adjacent to the channelized creek and Open Space area. This Parks and Recreation area is 3,300 m² (0.33 ha) and is within a 750 metre walking circle of all residential uses on IOL Parcel E, in compliance with Section 5.7.5 b) of the General Plan.</p>
<p>c) All public spaces should be designed to ensure personal security by preserving unobstructed sight lines for persons passing through, and visibility of such spaces to people in adjacent buildings or other public spaces.</p>	<p>Public spaces within the Development Scheme have been located in areas that maximize sightlines and views across the site.</p> <p>The proposed tot lot is sited within the residential area to ensure both accessibility and natural surveillance.</p> <p>The Parks and Recreation area is located along an existing snowmobile trail. This trail provides direct sight lines from the lands north of the IOL parcel to the sea.</p> <p>The Development Scheme identifies land use relationships that support the development of secure public spaces, following CPTED principles (see Section 4.9.5, below). Detailed design of all public spaces within the IOL parcel will be undertaken in future stages of planning. Evaluation of public space design will occur through the City’s development approvals process in accordance with Section 8.7.5 of the General Plan.</p>

<p>e) Consultation with the community and various levels of government to determine the need for new community or public land. Public uses should occupy prominent locations with good access and good visibility from the surrounding neighbourhood or proposed neighbourhood.</p>	<p>The Development Scheme and Plan of Subdivision process included initial stakeholder and community consultation. Meetings with QIA's Community Land and Resources Committee (CLARC) were critical to the development of early land use concepts. Feedback from Elders and the public received during meetings in February 2014 helped shape the final Development Scheme.</p> <p>Additional community and government consultation will take place throughout the development process. A Development Scheme(s) for other lands within the Federal Road Special Policy Overlay will require the City of Iqaluit to undertake broader public consultation, which may include IOL Parcel E as a component (potentially in partnership with QIA/QC. Consultation specific to IOL Parcel E will be particularly focused on uses within the cultural hub, as they require partnership to support implementation.</p> <p>Public uses, including the proposed uses within the cultural hub, Open Space, and Parks and Recreation uses are centrally located within the site, with direct access for pedestrians and snowmobiles along a dedicated trail system. Vehicular access is provided directly from Federal Road.</p>
<p>h) Respect watercourse setback requirements as established in Sections 5.6.8 and 5.6.9.</p>	<p>Industrial and Commercial land uses adjacent to the existing channelized creek (Carney Creek) are setback 30.5 metres from the centreline of the creek, as per Section 5.6.8 of the General Plan. Under Section 5.6.9, an exception to the standard setback may be made based on the findings of further geotechnical study. Through the development process, the creek may be further studied to determine if a reduction in setback is appropriate.</p>

4.8.5 Roads and Transit

Section 8.6 Land Development Guidelines	Development Scheme for IOL Parcel E
<p>2. In proposing or reviewing a subdivision plan or Development Scheme, City staff and Council will consider the following:</p> <p>i) Provide Arterial, Collector and Local Roads in accordance with the policies in Section 6.4 and a hierarchy of roads that connects to the existing road network.</p>	<p>The site's internal road network comprises Local Roads. Local Roads include two 4.25 metre lanes and a 1.0 metre shoulder, as per the typical cross section shown in Section 6.4.3 of the General Plan. However, as per Section 6.4.3.3 of the General Plan, all Local Roads within the site will be developed with an alternative 18 metre right-of-way. Local Roads will be constructed from local gravel and in general will be elevated above the existing ground. Drainage works, ditches and culverts associated with the road network will generally be located within the road allowance within drainage easements. The preferable maximum grade of a Local Road is 8% with an absolute maximum grade of 10%. The road network within IOL Parcel E will meet these grade requirements. The lands within the Federal Road Special Policy Overlay, but outside IOL Parcel E, feature an existing road network, road allowances and snowmobile routes. The site's Federal Road frontage provides direct connection from the internal Local Road network to a Collector Road.</p> <p>Section 6.4.4 of the General Plan protects for the development of a Bypass Road to alleviate traffic congestion along Federal Road in the Core Area. The Development Scheme considered the Iqaluit Core Area Bypass Road Preliminary Design Report (2007) and tested the configuration of the Bypass Road shown in Figure D of the General Plan. The Preliminary Design Report indicates a conceptual Bypass Road alignment through IOL Parcel E and identifies the key constraints to road development.</p>

<p>I) Where transit service is proposed, provide safe and convenient access to bus stops or waiting areas and ensure that they are appropriately sheltered.</p>	<p>In order to achieve the highest and best use of lands within IOL Parcel E, the Development Scheme considers an alternate Bypass Road alignment along the proposed Street A, as shown in the Plan of Subdivision and Figure 14 on the following page. The preferred alignment of the Bypass Road through IOL Parcel E should be determined by the City of Iqaluit and QIA/QC through ongoing discussion and a future development agreement. A final preferred alignment may require an amendment to Section 6.4.4 of the City of Iqaluit General Plan.</p> <p>Transit service through the site will be determined in a future stage of the planning process. Right-of-way widths and turning radii shown in the Development Scheme and Plan of Subdivision comply with the City of Iqaluit General Plan (Section 6.4) and road design practices in order to enable future transit planning.</p> <p>Transit service along the Federal Road corridor will directly serve the IOL parcel. The specific location and design of bus stops or waiting areas will also be determined in a future stage of the planning process; however, in general they should be located at key points along the Federal Road mixed use frontage.</p>

Existing Bypass Road Alignment — — — — —
 Alternative Bypass Road Alignment - - - - -
 Conflicts □

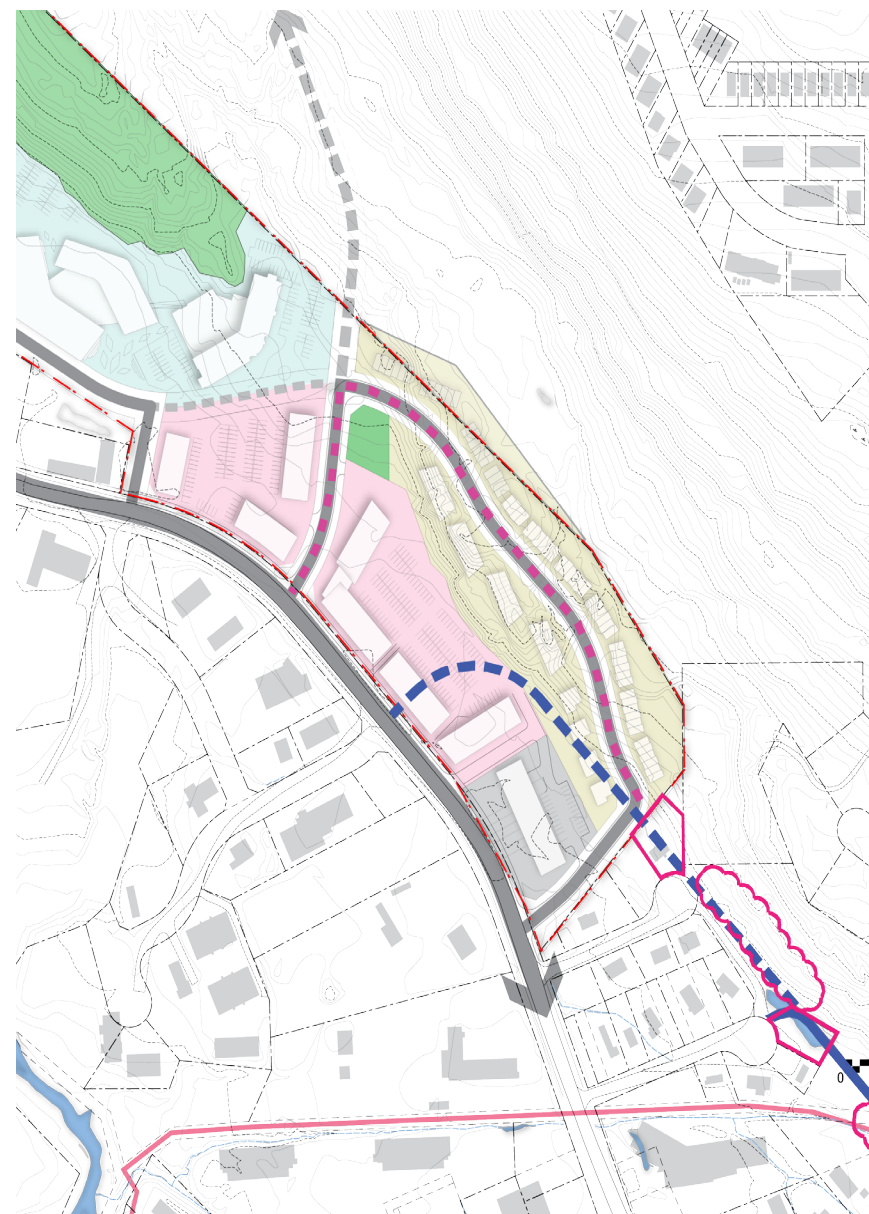


Figure 14: Existing and Alternative Bypass Road Alignments.

4.8.6 Municipal Services

Section 8.6 Land Development Guidelines	Development Scheme for IOL Parcel E
<p>2. In proposing or reviewing a subdivision plan or Development Scheme, City staff and Council will consider the following:</p> <p>f) New land for municipal servicing infrastructure, such as a sewage lift station, water booster station or reheat stations.</p>	<p>The servicing plans for IOL Parcel E will follow the City's Municipal Servicing Guidelines dated March 2004.</p> <p>The requirement of a sewage lift station has been identified for the servicing of lands within the Federal Road Special Policy Overlay which include the portion of the IOL Parcel E to be serviced. The preliminary servicing plan prepared proposes a sewage lift station be located in the southwest area of the Federal Road Special Policy Overlay.</p>
<p>m) The feasibility and cost of installing power cables and infrastructure underground.</p>	<p>The existing power and communication distribution routing through IOL Parcel E will require relocation prior to development of the site. Installation of underground electrical servicing is intended if feasible and will be further explored with Qulliq Energy Corporation and Northwestel prior to future development applications.</p> <p>Preliminary cost estimates for underground water and sanitary services internal to the site will be established in consultation with the City prior to future development applications.</p> <p>Alternative infrastructure options may also be explored for IOL Parcel E, including alternative energy, water and wastewater solutions to address specific lot development criteria listed in Section 8.7 of the General Plan.</p>

4.9 Supporting Studies

4.9.1 Legal Survey (Appendix A)

North Tech Consultants Inc. completed a topographic survey report for Lot 1, Block 205 in the City of Iqaluit in November 2013. The survey is included in this report as Appendix A.

4.9.2 Environmental Site Assessments (Appendix B)

In September 2013, Qikiqtaaluk Environmental Inc. undertook Phase I and II ESAs for IOL Parcel E. Key findings of the study include:

- Although no spill was recorded onsite, two spills were recorded in the vicinity of the site (within a 100 metre radius) on a down-gradient location and therefore do not represent an environmental risk to the site; and
- A local contractor has been using a parcel of the site to store heavy equipment and other construction goods. This particular area was not assessed in the scope the ESAs completed for IOL Parcel E, but should be the subject of future Phase I and II ESAs.

An analysis of data obtained from existing documents, a site visit and an interview, the Phase I ESA did not reveal significant potential and/or real evidence of contamination on the property or from the surrounding properties.

4.9.3 Geotechnical Report (Appendix C)

Exp Services Inc. completed a geotechnical study of IOL Parcel E. A total of 16 boreholes were drilled in December 2013 to test soil conditions. Bedrock was inferred in 13 of 16 borehole locations at depths ranging from 2.4 metres to 13.7 metres. The inferred bedrock surface was deeper along the southwest edge (Federal Road) of the site and shallower nearer the exposed bedrock slope. In general, the bedrock surface appears to continue at similar or slightly reduced grades below the surface.

Resistivity tests were performed on select soil samples to assess corrosion potential of the on-site soils. The test results indicate that the on-site soils are mildly corrosive to extremely corrosive to buried steel. It is recommended that a corrosion specialist should be consulted so that appropriate measures can be incorporated in the design to mitigate corrosion potential of the soil.

Based on the above, the bedrock surface will either be exposed or shallow enough that it can be used for the building foundations throughout much of the site. The bedrock surface was not encountered within a 15 metre depth at the borehole locations west of Carney Creek. Therefore, alternatives to bedrock foundations (i.e. granular pad underlain by thermosyphons, adfreeze piles, etc.) may be necessary throughout this area unless further investigation proves otherwise.

4.9.4 Wind and Snow Background Study (Appendix D)

A wind and snow assessment of IOL Parcel E and design guidance for the Development Scheme and Plan of Subdivision was provided to the planning team by Novus Environmental Inc. The assessment included a review of the regional weather records to identify key wind directions associated with blowing snow in conjunction with a site visit and review of wintertime aerial imagery to identify existing drift prone areas. A Background Report was initially provided to the planning team and was supplemented with consultant participation during progress meetings through the planning and design process. A Final Report was provided upon completion of the Plan of Subdivision. These reports provided design guidance with respect to alignment of roads to reduce snow deposition, possible use of snow fencing, influences of local terrain and location of existing areas of significant drift deposition, and also design considerations for buildings and lots.

The final Development Scheme has considered the wind and snow design guidance through orientation of the main road and reducing the number of cross-roads that intersect with Federal Road. The Hotel and Conference Centre will be a facility of significant size and will have a sizable drift impact. For this reason, the portion of the main road running east-west across IOL Parcel E is considered only for possible seasonal use due to the potential significant snow deposition associated with this future facility. The road layout has high regard to known drift prone areas within the parcel. Simplified building footprints were considered for the Residential Area during testing of the Plan of Subdivision with a view to reducing snowdrift severity and facilitating snow removal operations.

4.9.5 Crime Prevention Through Environmental Design (CPTED) (Appendix E)

A CPTED assessment was conducted by Liahona Security Consortium Inc. CPTED principles were actively considered throughout the Development Scheme planning process. CPTED considerations may have overlapped into other areas of the planning and that is how CPTED works most effectively. There may be practical or environmental reasons why certain concepts may or may not be feasible or capable of being implemented. All have been balanced by the planning team in creating a Development Scheme that meets City of Iqaluit criteria and fulfills mandates established by the General Development Plan for Municipal IOL Parcels in the Qikiqtani Region. The Development Scheme for IOL Parcel E of Parcel represents a positive activity generator for this site and the surrounding area.

Incidents of nuisance behaviour / street stress and crime can be mitigated (not facilitated) by the land use scheme in this plan; subject to how the future developer plans, designs and builds. In meeting the planning and design guidelines of the City of Iqaluit and following the mandate of the General Development Plan for Municipal IOL Parcels in the Qikiqtani Region, the Development Scheme helps keep Inuit and Inuit culture connected to this development. The cultural connection is essential in CPTED so the people who live work and socialize in this space take ownership and defend it as part of the fabric of their community after the site has been developed.

The proposed land use plan has no obvious areas of conflict or confusion allowing residents and property owners to take responsi-

bility for what they perceive is theirs and for what is actually theirs. This translates into space that is well defined where unwelcome behaviour stands out and draws the attention of residents and property owners. Should disorder and crime occur, it will more likely be reported. This is an important component to responding to and preventing undesirable behaviour and crime. Future development of IOL Parcel E should include CPTED Principles and Design Guidelines.

4.9.6 Civil Engineering Report (Appendix F)

A preliminary layout for the water distribution system has been developed based on the Development Scheme for IOL Parcel E (see Appendix F). The proposed network incorporates a looped piping arrangement which will facilitate a circulation pattern within the network as a freeze protection measure. The preliminary water distribution system design includes an independent water loop to extend along internal roads returning to the existing system on Federal Road, at which point water will be recirculated back at the main through an injection pump. Provision of a water recirculation line along Road B would allow Road B to be developed independently of Road A. The water system along Road C is proposed to be a continuation of the Airport Loop and would include a watermain and recirculation line. The water system on Road C could be developed independently of the water distribution system on Road A and B.

As per the requirements of the Federal Road Special Policy Overlay, a preliminary water distribution layout has also been provided

for the servicing of lands under the Federal Road Special Policy Overlay area which are outside IOL Parcel E. The proposed water distribution system layout for IOL Parcel E will not interfere with the future watermain extension into the Federal Road Special Policy Overlay lands.

As indicated above, the preliminary assessment of the existing water distribution system indicates that the Airport Loop will be able to provide domestic water and fire protection for the proposed development. Therefore, no major offsite works will be required to improve the water system's capacities or pressures.

The proposed road alignment for IOL Parcel E results in conflicts between the location of existing access vaults and the proposed alignment of Road B and Road C. As part of the development of IOL Parcel E it has been determined that the preferred alternative would be to relocate the access vaults adjacent to their existing location but outside the proposed rights-of-ways for the new road network.

5. Proposed General Plan Amendment

4.10 City of Iqaluit General Plan Interpretation

The Development Scheme for IOL Parcel E presents a high-level concept for the purpose of establishing and testing future land use relationships on the site. Currently, the location of IOL Parcel E within the Federal Road Special Policy Overlay necessitates the creation of a Development Scheme prior to any change in land use designations. As part of the Federal Road Special Policy Overlay, IOL Parcel E is also currently subject to a Federal Road Study as per Section 5.10.3 of the General Plan. For the reasons outlined in Section 4.2 of this planning rationale, the Development Scheme is limited to IOL Parcel E.

While all proposed land uses included in the Development Scheme are permitted as-of-right or through minor variance under the existing Commercial, Industrial and Open Space land use designations and District Commercial (B2), Light Industrial (M1) and Open Area (OR) zoning, QIA/QC has completed a Development Scheme as due diligence to meet the intent of Section 5.10 of the City of Iqaluit General Plan. In preparing the Development Scheme, the planning team tested a series of development scenarios to determine the highest and best use of the land, potential future maximum build out, residential densities, approximate total commercial ground floor area, parking requirements, and municipal servicing requirements.

As a result of this study, the Development Scheme includes a number of land uses that best support and are best supported by the Core Area land use designation.

The proposed amendment to the City of Iqaluit General Plan (By-law 703, October 2010) is as follows:

Amend Figure B: Populated Area Land Use of the City of Iqaluit General Plan to designate the portion of IOL Parcel E that falls within the Federal Road Special Policy Overlay as Core Area. At this time, the underlying Commercial, Industrial, and Open Space land uses and District Commercial (B2), Light Industrial (M1), and Open Area (OR) zoning will remain unchanged and in place for IOL Parcel E.

The proposed amendment is shown in Figure 15.



Figure 15: Proposed General Plan Amendment

Appendix A - Legal Survey

Appendix B - Environmental Site Assessments

Appendix C - Geotechnical Report

Appendix D - Wind and Snow Background Study

Appendix E - CPTED Report

Appendix F - Civil Engineering Report

Appendix G - Public Consultation Summary Report