



**C071 -
REVISED**

Kidston Lake South Master Planned Community

**Preliminary Submission for Site-Specific Plan Amendment
North American Real Estate Limited (NAREL) – Developer**

Prepared For
HRM Planning &
Development Department

Prepared By
KWR Approvals Inc.



June 6, 2022

Kate Greene, LPP

Regional Policy Program Manager, Planning & Development
HALIFAX MUNICIPALITY
40 Alderney Drive, (2nd Floor, Alderney Gate)
Dartmouth, HRM, Nova Scotia
greenek@halifax.ca

Re: Preliminary submission for **Kidston Lake South Master Planned Community** by **North American Real Estates Limited (NAREL)**, HALIFAX Municipality.

Hello Kate:

KWR Approvals Inc. (KWR) was retained by North American Real Estate Limited (NAREL) to review their four parcel 1,109.74 acres land assembly (**subject property**) near the intersection of Leblin Drive and Old Sambro Road (**Appendix A**). There are four parcels that fall within both the Halifax Mainland South and Planning District 5 community boundary. The parcels are identified as PID No. 00283283 (837 acres) which has a combination of the Holding (H), Single Family (R1) and Urban Reserve (UR) zone designations and the remaining three parcels known as PID No. 40872053 (23.16 acres), 00315283 (21 acres) and 00315291 (137.89 acres) are all zoned Industrial Commercial (C5).

The purpose of this submission is to submit to HRM Planning & Development for consideration an initial planning rationale with foundational studies providing justification ~~that~~ for a Site-Specific Plan Amendment (SSPA) to designate these lands a Residential Development District (RDD) and bring within the serviceable boundary. There are several key factors that lead to this request and planning rationale for what we are calling 'Kidston Lake South'.

1. The Kidston Lake Lands (Urban Reserve Designation) **have already been identified by the HRM Regional Plan** as being considered where service development may be permitted after the life of this plan (Regional Plan 2006-2031). We are simply advocating that due to the pressing housing needs and crisis of HRM with a significant lack of available building lots, these lands be considered for inclusion earlier than the anticipated next Regional Plan of 2032-2057. It will take years for these as with any master planned community to work through the planning, development and subdivision approvals resulting in dwellings residents would be living in. Starting today creates the opportunity for 4,800+ housing units over the next decade.
2. The parcels that are zoned Holding (H) within the Halifax Mainland Secondary Planning Strategy have already been identified as Residential Development District (RDD) in the Generalized Future Land Use Map.
3. The development follows the guidelines for a RDD designation as it combines a offers a mix of different housing types with a proposed 4,800 dwelling units, commercial development, and park space to accommodate the rapid growth in the HRM, while maintaining the natural beauty and creating a complete community.
4. The McCallum Environmental wetland and watercourse study did not find any ecological areas that could not be protected and or incorporated within a proposed Master Plan. Disturbance of any wetlands or altering of watercourses would be kept to minimum. -While there are some wetlands and watercourses, it is believed that the concept plan provided adequately mitigates those factors.
5. SDMM facilitated a servicing capacity study that found there is adequate capacity for the proposed development to be integrated into the current sewer and wastewater system.
6. A Traffic Impact Study (TIS) estimates that the proposed new development will add a net increase of 2,400 vehicles in the AM peak hours and 2,846 in the PM Peak hours and may also increase ridership along the Leblin drive transit line. The initial TIS found that traffic was manageable as a result of the proposed development.
7. The development will provide a connection for the proposed DayBreak trail system which runs from Dentith Road to Herring Cove Village.

The Kidston Lake South Proposed community presents an opportunity for the municipality to act swiftly, address the needs of its constituents, and add housing to the region. Please consider this submission for review.

Thank you,

Original Signed

Jane Rideout
Planner 1

CC: Client

Original Signed

Kevin W. Riles
President & CEO

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Appendix B: Halifax Regional Municipal Plan; Relevant Sections

Appendix C: Halifax Secondary Plan for Halifax Mainland South; Relevant Policies

Appendix D: Kidston Lake South Concept Plan

Appendix E: McCallum Environmental Study

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Appendix I: Proposed DayBreak Trail Network

Appendix J: JLR Traffic Impact Statement

Appendix K: HRM Preliminary Population & Housing Analysis

Property Background

The four parcel 1,019.74-acre land assembly falls within two different planning communities, Halifax Mainland, and Planning District 5 (Chebucto Peninsula). The four parcels are identified as PID No.00283283 (837 acres) which has a combination of the Holding (H), Single Family (R1) and Urban Reserve (UR) zone designations and the remaining three parcels known as PID No. 40872053 (23.16 acres), 00315283 (21 acres) and 00315291 (137.89 acres) are all zoned Industrial Commercial (C5). Only the R1 zoned lands as part of the large PID No. 00283283 (837 acres) is within the Serviceable Boundary where municipal sewer and water are currently available. It is our understanding the R1 and C5 lands can be zoned as of right, however the R1 lots are too large for current residential dwelling construction trends and therefore should be considered for Residential Comprehensive Development District (RCDD) /Commercial Development District (CDD) re-designation.

The lands are currently zoned Urban Reserve (UR) and Holding (H) lands and are located outside the serviceable boundary. The Urban Reserve (UR) and Holding (H) designations do not allow for development (Appendix B). However, this area has already been identified in the Regional Municipal Planning Strategy (MPS) as potential land to be developed and included in the serviceable boundary with the updated 2031 plan. The generalized future land use map for Mainland South has these lands listed as a Residential Development District (RDD) (Appendix C).

Planning Rationale

The Kidston Lake South Master Planned Community is an opportunity to enhance the Spryfield region and respond to the growing need for housing in the region in a timely and efficient manner. The Halifax Regional Plan (Appendix B) lists some of its core principles as encouraging fair, cost-effective, and timely decision-making, promoting a vigorous regional economy, and managing development to ensure the most effective use of land, infrastructure, energy, public services, and facilities, and foster healthy lifestyles. (p.3, Regional Plan). This rationale aims to emphasize how the Kidston Lake South project aligns with these goals and presents an opportunity to create a quality new development in the Halifax Region and creating significant housing benefits.

The 2014 Regional Plan projected that between 2011 and 2031 the population of the region would add 73,115 persons in a best-case scenario (p.10, Regional Plan). In the first 10 years, from 2011 to 2021, the population has already grown by 49,723 persons, bringing the total population of HRM to 439,819 in 2021¹². HRM issued an updated population projection and analysis in 2021 which emphasized that *HRM is one of the fastest growing cities in Canada* (Appendix K). Table 2(p.14) of this document highlights that in a moderate immigration and continued growth scenario, HRM could reach 554,000 people by 2031. In a high immigration and economic boom scenario, that could stretch to 611,300 people by 2031. Either of these scenarios over the next nine years (2031) will place more demand for ground level and multi-residential housing to meet the historic demand. Without decisive action on the housing needs for this growing population, the housing crisis currently being experienced by HRM residents will continue to worsen. With these population considerations in mind, there needs to be additional housing units to accommodate this population growth. The Kidston Lake South Community would create 4,800 additional homes for future Haligonians.

Currently the majority of the North American Real Estate Limited (NAREL) lands lay outside the Urban Settlement designation. Policy S-1 in the Regional Plan states that:

¹ Statistics Canada. 2022. (table). *Census Profile*. 2021 Census of Population. Statistics Canada Catalogue no. 98-316-X2021001. Ottawa. Released April 27, 2022.
<https://www12.statcan.gc.ca/census-recensement/2021/dp-pd/prof/index.cfm?Lang=E> (accessed May 25, 2022).

² Statistics Canada. 2012. *Halifax, Nova Scotia (Code 1209034) and Canada (Code 01) (table). Census Profile*. 2011 Census. Statistics Canada Catalogue no. 98-316-XWE. Ottawa. Released October 24, 2012.
<http://www12.statcan.gc.ca/census-recensement/2011/dp-pd/prof/index.cfm?Lang=E> (accessed May 25, 2022).

The Urban Settlement Designation, shown on the Generalized Future Land Use Map (Map 2), encompasses those areas where HRM approval for serviced development has been granted and to undeveloped lands to be considered for serviced development over the life of this Plan. Amendments to this Boundary may be considered:

(a) where reviews of regional population and housing forecasts have been undertaken and the proposed amendments may assist in achieving the growth targets established by this Plan; and

(b) the lands are within or adjacent to a growth centre.

The Kidston Lake South project is proposing to extend the urban settlement boundary because regional population and housing forecasts have exceeded the growth targets set by this plan and more dwelling units are needed. These lands are already situated close to other residential and commercial areas that are continuing to grow. Moreover, this development will add more commercial and active transportation amenities to this region, contributing to it becoming a complete community.

The Kidston Lake South lands have already been identified by the municipality as having potential to be included in the serviceable boundary over the long-term in Section 3.2.2 of the Regional Plan which states:

“The Urban Reserve Designation shall be established on the Generalized Future Land Use Map (Map 2) to identify those lands situated outside the Urban Settlement Designation where serviced development may be provided after the life of this Plan.” p.37

The Generalized Future Land Use Map (GFLUM) for Halifax Mainland South (Appendix C) has this area labelled as a Residential Development District (RDD) which further emphasizes that the Kidston Lake South project is the anticipated outcome for these lands in the future. The RDD designation is defined as:

“Residential development areas are planned and developed as a whole or in phases under a unified site design, providing a mixture of residential uses and related recreational, commercial and open space uses, with an emphasis on a mix of dwelling unit types.” p. 149

The Kidston Lake South proposal follows this overarching theme while also conforming to the guidelines set forth by the municipality in Schedule One under Policy 1.5.1. According to SDMM, the site has sufficient water and sewage capacity, there is a mix of both residential and commercial developments, while also maintaining greenspace and respecting watercourse boundaries.

Implementation Policy 3.6 enables this land to move from Holding (H) lands to a RDD provided that a detailed plan for the area is adopted. The Kidston Lake South Master Plan is a full residential community that could expedite the process of creating service and housing on these lands. Given the circumstances of the rapid population growth and housing shortage the inclusion of these lands could be brought forth earlier to take decisive action and add more units to the region.

Policy S-33 of the Regional Plan reiterates that:

HRM shall monitor housing and demographic trends to assist in determining future housing needs. (p.33)

In the current housing market, with a vacancy rate of 1%³ and a clear undersupply of housing in the region, the municipality can respond to these pressures and support a project such as Kidston Lake South that could add 4,800 additional units.

Furthermore, the regional plan states that “HRM seeks to support a competitive housing market by maintaining a 15-year supply of serviced lands. A primary tool for achieving these objectives will be directing the supply and

³ Nova Scotia Communications. (2021, December 16). *Nova Scotia reaches one million population milestone*. News Releases. Province of Nova Scotia. Retrieved June 6, 2022, from <https://novascotia.ca/news/release/?id=20211216003>

location of lands to be serviced with wastewater and water services.” (p.92). The current housing market is buckling under the lack of supply for housing in the region. The increase in serviced lands added by this project will build more housing and allow the market to find an equilibrium.

Pursuant to policy G-15 in the Regional Plan (p.108), this project takes into consideration the wetlands and watercourses of the area, the servicing capacity, and the traffic impacts that this development would bring to the Municipality. There is sufficient capacity within this region to support the proposed developments.

This project also considers Policy T-3 in the Regional Plan (p.56) for active transportation and greenways within the region. The Kidston Lake South community will include a portion of the proposed DayBreak trail into its plan, which would not be able to be fully continuous without access onto NAREL's lands. This trail has the potential to be an important community asset and functional active transportation piece in the Spryfield community.

Finally, this master planned community includes both residential and commercial properties in compliance with policy T-9 in the Regional Plan (p.58). This mixed-use environment encourages walkability within the community. It may also increase the current ridership on the Leiblin Drive transit route as the community is adjacent to this node.

Justification

There is a pressing need for housing in the HRM, with a vacancy rate of 1%, the lowest in the country⁴. The extreme nature of the housing crisis could not have been predicted in the 2006 Regional Plan, but the current situation should advent these lands be reconsidered for development to expedite this process. The Kidston Lake Master Planned Community is proposed to have 4,800 available residential units, with a mix of unit types including multi-suite, townhomes, semi-detached, and detached homes. There are commercial and parkland opportunities built into the community design, to make this area a complete community.

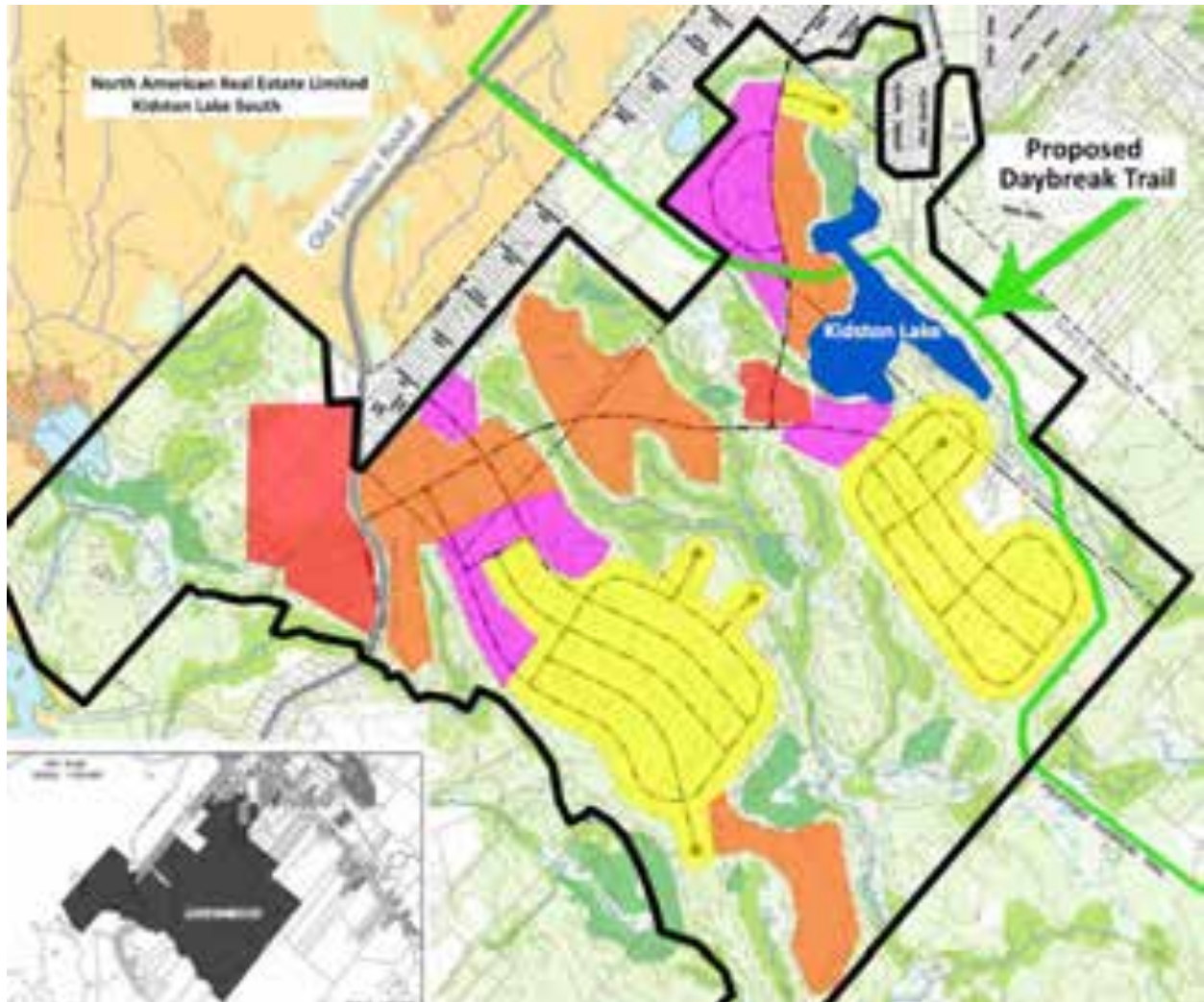
The Municipality has an opportunity to provide a site-specific plan amendment for this master-planned development and push ahead a project that will likely be added within the next planning strategy. The rapid growth and development of the HRM has called for necessary increases in housing and servicing and this project presents a valuable opportunity for the region. The province has advertised a goal of 2 million residents by the year 2060⁵, and this project creates the necessary space and densification that the area desperately needs, while also respecting the environmental constraints and creating a complete community.

⁴ Hampshire, G. (2022, February 18). *Population boom squeezes Halifax vacancy rate back to 1% | CBC News*. CBCnews. Retrieved May 30, 2022, from <https://www.cbc.ca/news/canada/nova-scotia/rental-market-vacancy-rate-population-boom-1.6357253#:~:text=The%20big%20influx%20of%20people,the%20lowest%20in%20the%20country>.

⁵ Nova Scotia Communications. (2021, December 16). *Nova Scotia reaches one million population milestone*. News Releases. Province of Nova Scotia Retrieved June 6, 2022, from <https://novascotia.ca/news/release/?id=20211216003>

Concept Plan

This is an initial concept plan of the project, prepared by Servant, Dunbrack, Mackenzie & MacDonald Inc. (SDMM). The proposed plan includes a mix of housing, commercial, and green space. The plan recognizes the limitations based on wetlands and watercourses, servicing restrictions and traffic impact (see Appendix D).



Wetlands & Watercourse

McCallum Environmental Ltd. conducted a preliminary study of the wetlands and watercourses in this area, as well as other environmental concerns including species at risk (See Appendix E). It is important to note that this area is directly adjacent to the suburban developments of Spryfield. The HRM Green Network Plan has not identified these lands as protected areas or proposed protected areas. This area is currently designated as an area of “high environmental value overlap”. Note that this area is adjacent to a large portion of the green network plan that is deemed of minimal importance (See Appendix F). The McCallum wetland and watercourse study found that the area is within a Moose Concentration Area and a Predicted Boreal Lichen habitat, although a full field study would be needed to determine the extent of these species’ presence on the lands. McCallum found several watercourses on the lands and two major waterbodies, Kidston Lake, and Fish Brook Pond. There are also wetlands within the study area which are categorized as swamps. This initial study has not identified any significant environmental concerns that would significantly impact the ecology within this region.



The concept design for this project takes into consideration the mapping of wetlands and watercourses, to minimize the disruption on the environmental impacts of these lands. With the proper plans these lands could be transformed to protect the natural environment, maintain greenspace while providing necessary housing to the HRM.

Wastewater & Sewer Servicing

The majority of the lands required for Kidston Lake South Master planned community are located outside the HRM serviceable boundary. Servant Dunbrack McKenzie & McDonald (SDMM) completed a servicing capacity study (Appendix G) for this project as required by Halifax Water Design and Construction Specifications (2020), Section 4.2.1 p. 49 (See Appendix H). As these properties are outside the serviceable boundary, Halifax Water could not comment on the downstream terminus. SDMM identified four (4) different options for connecting to the existing sewer system, with the selected option being a connection to Beachstone Drive. SDMM estimates that using the potential population for these lands is 12,730 people, using a nominal development density of 20 people/acre (+/-50 people/hectare) and the entire area of the subject lands being. SDMM has calculated that Beachstone Drive has sufficient capacity to accommodate the proposed project, should the HRM approve the inclusion of these lands in the serviceable boundary.

Proposed DayBreak Trail

Polycorp has proposed a trail system that would run from Dentith Road to Herring Cove Village, approximately 10.5km (Appendix I). This trail would be a major asset to the community and provide green space opportunities for the area. The proposed trail would run through NAREL's Kidston Lake Property and would be included in the master planned community design. This trail network would allow HRM citizens another accessible and usable greenspace, connecting two beautiful communities. The integration of these trail designs within the Kidston Lake Master Planned community would provide added benefit to this area and contribute to it becoming a complete community with recreational and active transportation opportunities.

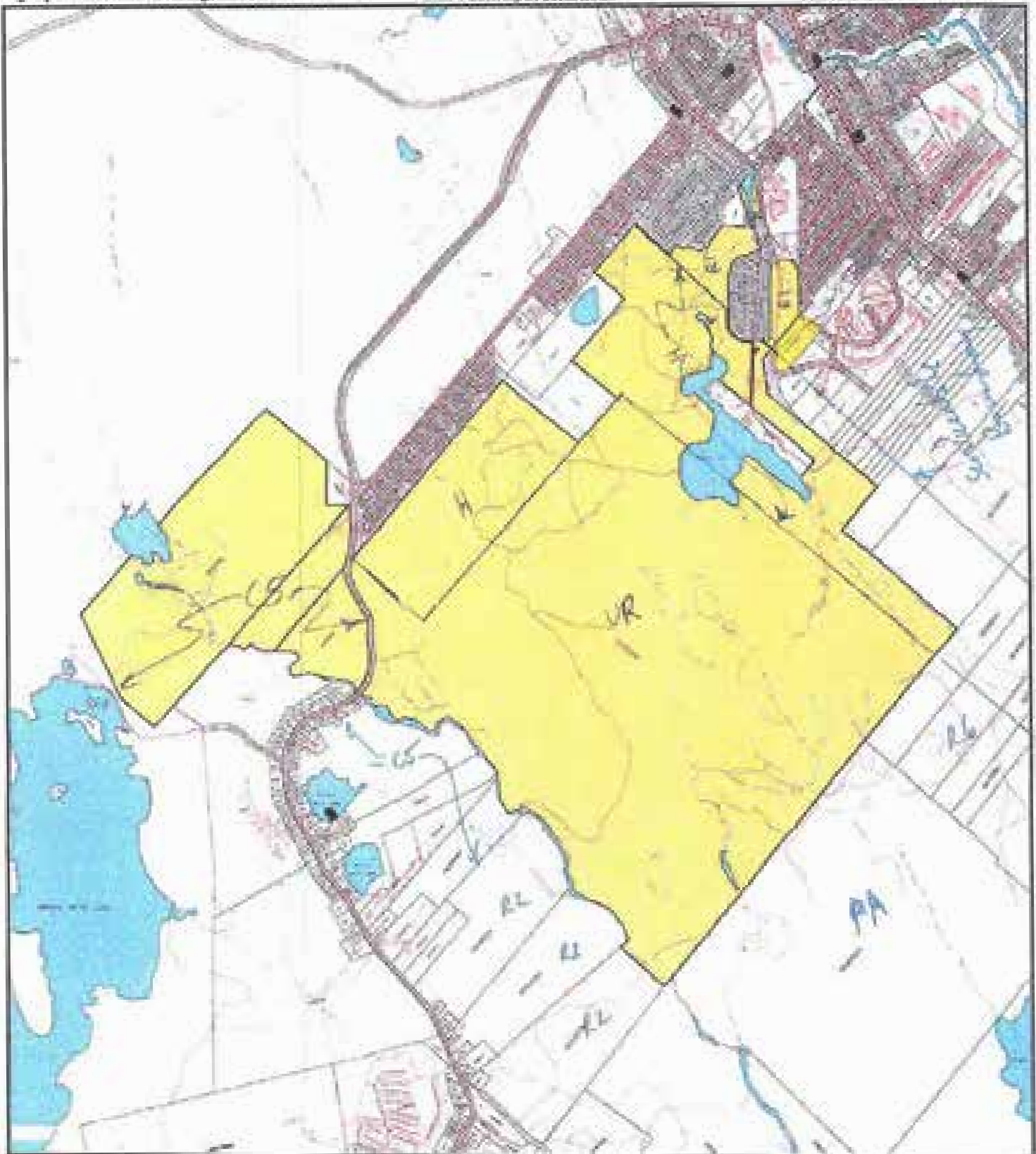
Traffic Impact Statement

JLR Consulting conducted a Traffic Impact Statement (TIS) using the concept plan developed by SDMM (Appendix J). This plan considered the combination of different housing types and commercial properties for the proposed development, and the traffic trends in the Spryfield area. The property is located near the intersection of Leiblin Drive and Old Sambro Road. Old Sambro Road is a major collector road that would be the primary connection for the proposed development. There is no Halifax Transit service on Old Sambro Road but there is service on Leiblin Drive. The TIS estimates that the proposed new development will add a net increase of 2,400 vehicles in the AM peak hours and 2,846 in the PM peak hours. A more detailed Traffic Impact Study will need to be completed pending the approval of the concept plan.

Conclusion

The Kidston Lake South Master Planned community has the potential to bring major benefits to the HRM. As lands that have already been identified for future development, this proposal seeks to expedite the process and create much needed housing for this region. The proposed development considers a mix of housing types, commercial space, and green spaces to ensure a complete community within the Kidston Lake South area. This preliminary submission is to provide HRM staff with a greater understanding of the vision for the community and the potential that this project could have for the region.

Appendix A: Property Boundaries & Parcel Information



Scale 1 : 20000



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This map is a graphical representation of property boundaries which approximate the size, configuration and location of properties. Care has been taken to ensure the best possible quality; however, this map is not a land survey and is not intended to be used for legal descriptions or to calculate exact dimensions or area.
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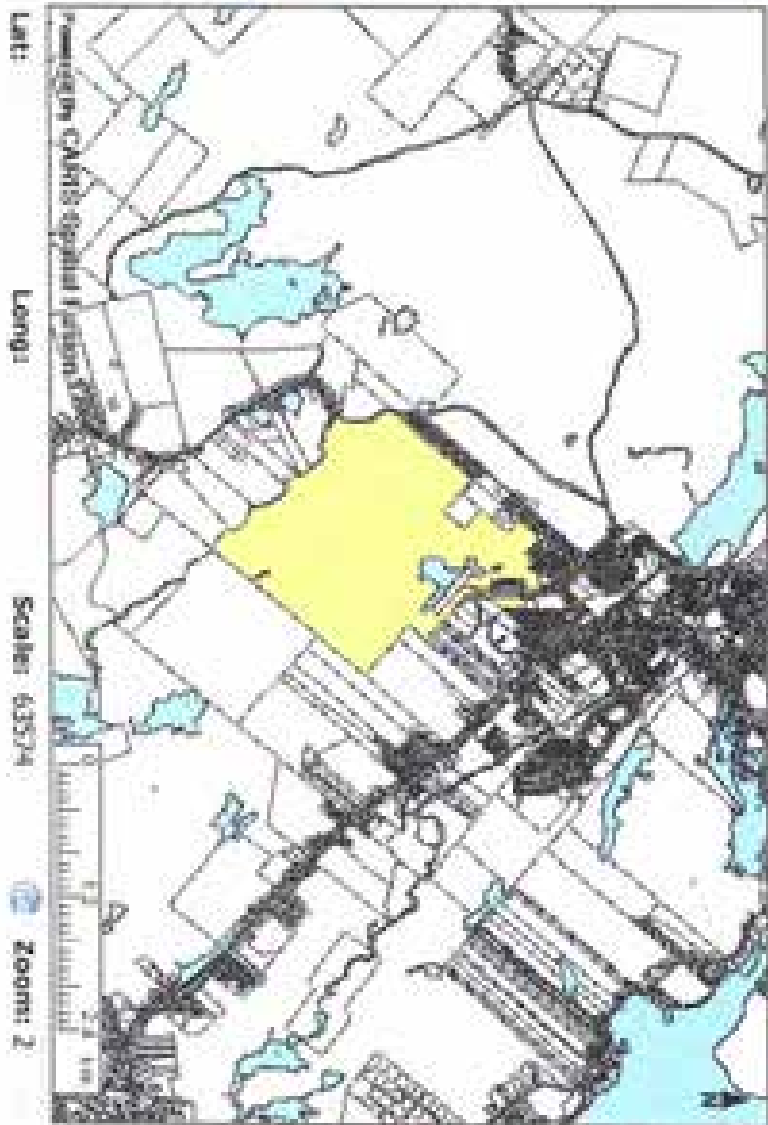
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Map Actions
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Map Layers
 - ☐ Properties
 - ☐ LR Parcel
 - ☐ Shading
 - ☐ Topo
 - ☐ Monuments
 - ☐ Place Names

 Refresh Map

Map Controls
 -  NS Overview
 -  Locator Map
 -  Print Map



Location: [Search](#)

1 Property found

PID:	00283283	Details
ANAL:	03454444	
Value:	\$680,800 (7/020)	
Address:	RESIDENTIAL TAXABLE	
	ROCKINGSTONE ROAD	
	HALIFAX	
County:	HALIFAX COUNTY	
Owner:	NORTH AMERICAN	
	REAL ESTATE LIMITED	
URL:	LAND REGISTRATION	1

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Property Search Results

1 Property found

PID	Owner	Property Address	Assessment Info	Options
PID: 00183283	Owner: NORTH AMERICAN REAL ESTATE LIMITED	ONE Address: ROCKINGSTONE ROAD	VAL: 03434444	☐ Details
Type: STANDARD PARCEL		HALIFAX	Value: \$680,800	☐ Map
Status: ACTIVE			2020	
LI Status: LAND REGISTRATION		County: HALIFAX COUNTY	RESIDENTIAL TAXABLE	

PID	Owner	Area: HECTARE(S)	Property Address	Assessment Info	Options
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1 Property found					1
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Ownership and all information in this report pertaining to Non-Land Registration Parcels is believed to be an accurate reflection of registered documents affecting the lot, parcel or area of land to which it relates, however, it is not intended to be relied upon by the reader as advice on the current state of any title to land. A search of the records at the appropriate Registry of Deeds office may be required to determine the current owner(s) of the lot, parcel or area of land under consideration. THIS IS NOT AN OFFICIAL RECORD.

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☐ Monuments

☐ Place Names

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Location:

1 Property found

[Search](#)

PID: 40872053 Details

ANR: 09235140

Value: \$73,400 (2020)

Address: RESIDENTIAL TAXABLE

OLD SAWBIRD ROAD

HALIFAX

COUNTY: HALIFAX COUNTY

Owner: STANLEY HAYTIL

HAZEL HAYTIL

LAND REGISTRATION

1

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1 Property found

PID	Owner	Property Address	Assessment Info	Opis
PID: 40872053	Owner: STANLEY HAYELL HAZEL HAYELL	Old Address: OLD SARAGO ROAD HALIFAX	Assn: 09235140 Value: \$73,400 (2023) RESIDENTIAL TAXABLE	☐ D ☒ M
Type: STANDARD PARCEL				
Status: ACTIVE				
LR Status: LAND REGISTRATION		Mailing Address: 88 WATERFRONT DRIVE SUITE 901 DEDFORD NS CA B4A 4K4		
		County: HALIFAX COUNTY		
		Area: 23.16 ACRES)		

PID	Owner	Property Address	Assessment Info	Opis
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1 Property found

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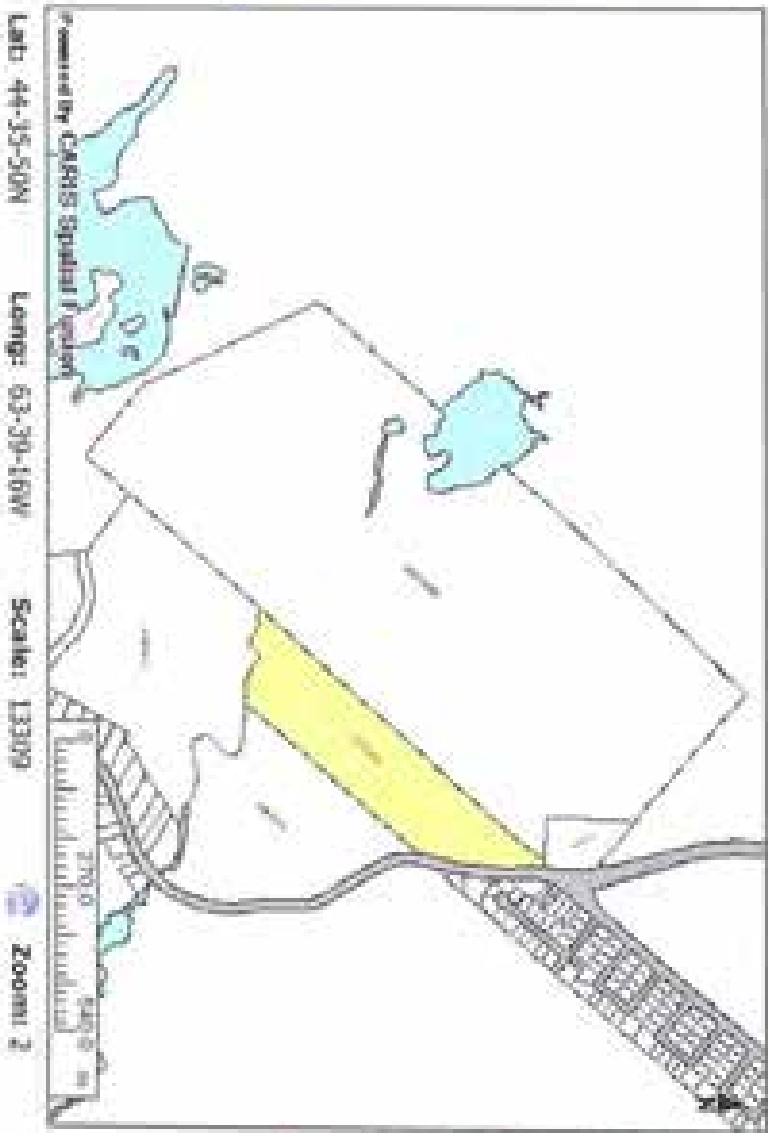
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Location:

1 Property found

Search

PID: 00315283 Details

ANR: 09784705

Value: \$61,500 (2020)

Address: RESOURCE TAXABLE

OLD SAWBRO ROAD

HALEFELSFIELD

County: HALIFAX COUNTY

Owner: NORTH AMERICAN

REAL ESTATE LIMITED

LR: LAND REGISTRATION

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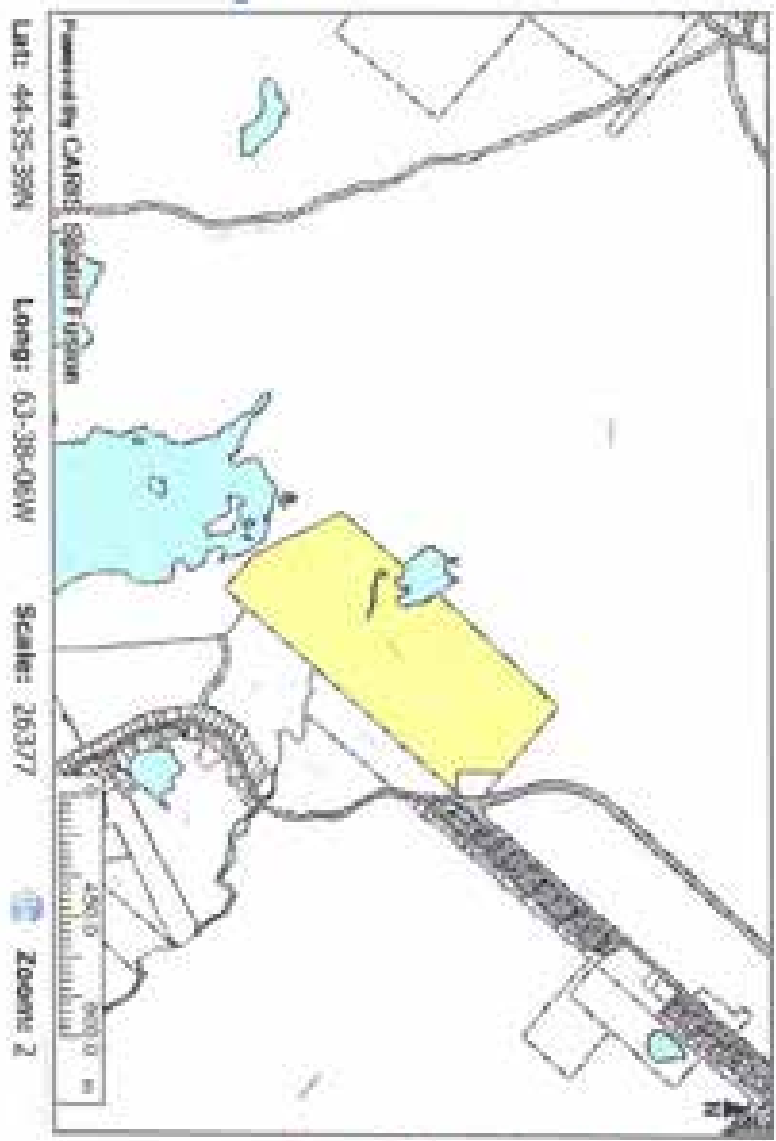
PID	Owner	Property Address	Assessment Info	Options
PID: 00315283	Owner: NORTH AMERICAN REAL ESTATE LIMITED	Chur Address: OLD SAWBRO ROAD	Assn: 09784705	☐ Details
Type: STANDARD PARCEL		Parcel Address: 30 HILLWOOD CRE HALIFAX NS CA B0H 1J4	Value: \$63,500 (2020)	☒ Map
Status: ACTIVE		County: HALIFAX COUNTY	Resource: TAXABLE	
LR Status: LAND REGISTRATION		Area: 21.0 ACRES(S)	Property Address	Assessment Info Options
1 Property found				

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 - ☐ LR Parcel
 - ☐ Shading
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 - ☐ Monuments
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Location:	
1 Property found	
PID:	00315291 Details
AA#:	019-43952
Value:	\$172,900 (2023 RESURVEY TAXABLE)
Address:	OLD SABBRO ROAD HARRIETSFIELD
County:	HALIFAX COUNTY
Owner:	NORTH AMERICAN REAL ESTATE LIMITED
LA:	LAND REGISTRATION

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Property Search Results

1 Property found

1

PID	Owner	Property Address	Assessment Info	Options
PID: 00115291	Owner: NORTH AMERICAN REAL ESTATE UNITED	Current Address: OLD SAMBRO ROAD	Assn: 01943952	☐ Details
Type: STANDARD PARCEL		HERBERTSFELD	Value: \$172,800 (2020)	☒ Map
Status: ACTIVE		HERALD COUNTY	RESOURCE TAXATION	
LR Status: LAND REGISTRATION		Area: 137.89 ACRES	Property Address	Assessment Info Options
1 Property found	Owner			1

Ownership and all information in this report pertaining to Non-Land Registration Parcels is believed to be an accurate reflection of registered documents affecting the lot, parcel or area of land to which it relates, however, it is not intended to be relied upon by the reader as advice on the current state of any title to land. A search of the records at the appropriate Registry of Deeds office may be required to determine the current owner(s) of the lot, parcel or area of land under consideration. THIS IS NOT AN OFFICIAL RECORD.

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Appendix B: Halifax Regional Municipal Plan; Relevant Sections



Regional Municipal Planning Strategy

OCTOBER 2014

Regional Municipal Planning Strategy

I HEREBY CERTIFY that this is a true copy of the Regional Municipal Planning Strategy which was duly passed by a majority vote of the whole Regional Council of Halifax Regional Municipality held on the 25th day of June, 2014, and approved by the Minister of Municipal Affairs on October 18, 2014, which includes all amendments thereto which have been adopted by the Halifax Regional Municipality and are in effect as of the 5th day of February, 2022.

GIVEN UNDER THE HAND of the Municipal Clerk and under the corporate seal of the Municipality this _____ day of _____, 20____.

Municipal Clerk

1.2 VISION AND PRINCIPLES

Vision

HRM's vision for the future is to enhance our quality of life by fostering the growth of healthy and vibrant communities, a strong and diverse economy, and sustainable environment.

Guiding Principle

This Plan will seek to address the needs and views of all sectors of HRM, recognizing the diversity of its citizens, community and geography.

Principles

This Plan:

- **Provides a framework which leads to predictable, fair, cost-effective and timely decision-making;**
- **Supports development patterns that promote a vigorous regional economy;**
- **Preserves and promote sustainability of cultural, historical and natural assets;**
- **Supports the Regional Centre as the focus for economic, cultural and residential activities;**
- **Manages development to make the most effective use of land, energy, infrastructure, public services and facilities, and foster healthy lifestyles;**
- **Ensures opportunities for the protection of open space, wilderness, natural beauty and sensitive environmental areas; and**
- **Develops integrated transportation systems in conjunction with the above principles.**

1.3 OBJECTIVES

Environment, Energy and Climate Change

1. **Promote an approach to environmental management and economic development that supports a sustainable future through cooperation with other levels of government, government agencies, private landowners, and non-government organizations;**
2. **Foster a land management and community design approach which integrates preservation of lands of ecological, cultural and environmental significance; lands suited for renewable resource extraction; and lands suited for parks, trails and corridors which provide recreational and educational opportunities;**
3. **Adopt development practices that sustain air, land, water and groundwater resources and respond to climate change; and**
4. **Conserve energy and respond to climate change.**

Settlement and Housing

1. Direct growth so as to balance property rights and life style opportunities with responsible fiscal and environmental management;
2. Focus new growth in centres where supporting services and infrastructure are already available;
3. Target at least 75% of new housing units to be located in the Regional Centre and urban communities with at least 25% of new housing units within the Regional Centre over the life of this Plan;
4. Design communities that:
 - (a) are attractive, healthy places to live and have access to the goods, services and facilities needed by residents and support complete neighbourhoods as described in **6.2.2A (v) (RC-Sep 18/19;E-Nov 30/19)** of this Plan;
 - (b) are accessible to all mobility needs and are well connected with other communities;
 - (c) protect neighbourhood stability and support neighbourhood revitalization;
 - (d) preserve significant environmental and cultural features;
 - (e) promote community food security;
 - (f) provide housing opportunities for a range of social and economic needs and promote aging in place;
4. Maintain the integrity of rural communities;
5. Preserve agricultural and resource lands;
6. Provide opportunities to establish a network of interconnected greenbelts and open spaces; and
7. Support housing affordability.

Transportation

1. Implement a sustainable transportation strategy by providing a choice of integrated travel modes emphasizing public transit, active transportation, carpooling and other viable alternatives to the single occupant vehicle;
2. Promote land settlement patterns and urban design approaches that support fiscally and environmentally sustainable transportation modes;
3. Forecast HRM's need for mobility and provide service and infrastructure to meet this demand while influencing choices towards transportation sustainability; and

1.5.2 Population and Housing

HRM had relatively stable population growth over the last 25 years. In 1976, the population was less than 280,000, rising to approximately 384,778 by 2006 and to over 409,510 by 2011. This growth has not occurred uniformly across HRM, but has instead been focussed mainly in the urban communities and rural areas within commuting distance of the Regional Centre.

The population growth of HRM over the 25-year period between 2011 and 2031 is projected to be approximately 73,115 persons, using a base case scenario⁹. Two thirds of net migration is expected to come from international sources, while the remainder is expected from other parts of Canada¹⁰. HRM's population is indeed growing increasingly diverse, with over 11,000 new immigrants arriving in HRM since 2006, comprising 76% of provincial in-migration¹¹. HRM is also becoming a magnet for foreign students, who numbered 3,000 in 2002 and 6,000 in 2011¹². The Aboriginal and African Nova Scotian communities are also growing at a faster pace than the rest of the population, presenting significant economic and cultural opportunities.

With respect to an aging population, by 2031 there will be more than twice the number of people over the age of 65 than in 2001 (163% increase), and the number of school aged children is expected to level off (see Fig. 1-2). This shift in age distribution will have significant implications on the demand for housing and types of services provided in HRM.

Potential household growth, and ultimately housing demand, is a function of the projected population by age and the number of people in each age group who are expected to head up a household. As indicated above, using the base case scenario over the period 2011 to 2031, HRM is now expecting a total of almost 39,160 new dwelling units (see Table 1-1)¹³ and 42,239 new commuters.

⁷ Altus Group. 2009. Employment, Population and Housing Projections Halifax Regional Municipality: An Update. p. 12

⁸ Conference Board of Canada, cited in Stantec, Quantifying the Costs and Benefits of Alternative Growth Scenarios, (Halifax Regional Municipality, 2013)

⁹ Stantec, 2013, updated from Altus, 2009.

¹⁰ Altus, 2009.

¹¹ CIC Facts and figures 2011 Canada – permanent residents in province or territory and urban area.

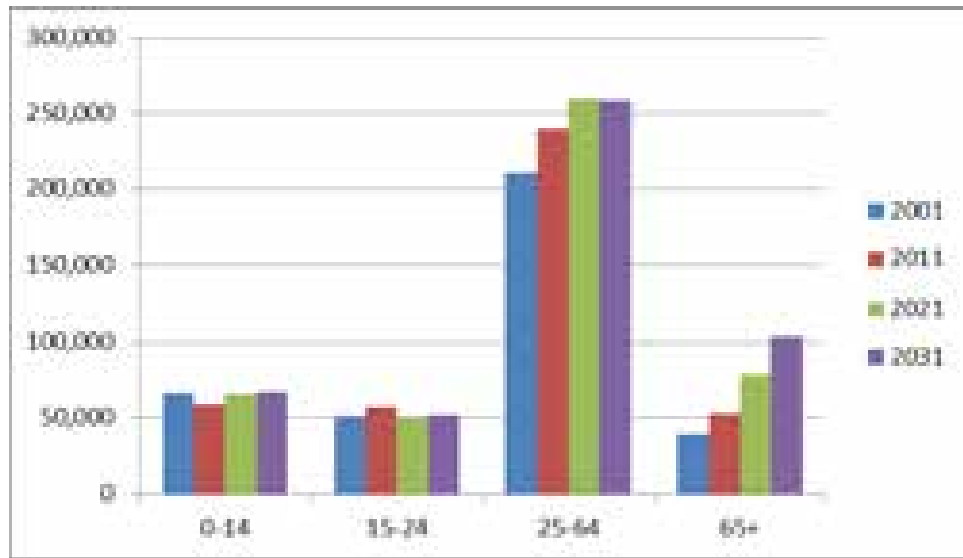
<http://www.cic.gc.ca/english/resources/statistics/facts2011/permanent/11.asp>

¹² CIC Facts and figures 2011 – Immigration overview: Permanent and temporary residents. Temporary residents Canada – Foreign students present on December 1st by province or territory and urban area.

<http://www.cic.gc.ca/english/resources/statistics/facts2011/temporary/16.asp>

¹³ Altus, Group Economic Consulting, 2009, cited in Stantec, 2013

Fig. 1-2: HRM Population Growth by Age (2001-2031) Base Case Scenario



CHAPTER 3: SETTLEMENT AND HOUSING

3.0 INTRODUCTION

HRM seeks a balanced approach to growth and will direct much of its investment to a series of centres where services such as transit, wastewater and water distribution services can be economically provided.

3.1 OBJECTIVES

1. **Direct growth so as to balance property rights and life-style opportunities with responsible fiscal and environmental management;**
2. **Target at least 75% of new housing units to be located in the Regional Centre and urban communities with at least 25% of new housing units within the Regional Centre over the life of this Plan;**
3. **Focus new growth in centres where supporting services and infrastructure are already available;**
4. **Design communities that:**
 - (a) **are attractive, healthy places to live and have access to the goods, services and facilities needed by residents and support complete neighbourhoods as described in 6.2.2A (v) (RC-Sep 18/19;E-Nov 30/19) of this Plan;**
 - (b) **are accessible to all mobility needs and are well connected with other communities;**
 - (c) **promote energy efficiency and sustainable design;**
 - (d) **protect neighbourhood stability and support neighbourhood revitalization;**
 - (e) **preserve significant environmental and cultural features;**
 - (f) **promote community food security¹⁵;**
 - (g) **provide housing opportunities for a range of social and economic needs and promote aging in place;**
5. **Maintain the character of rural communities;**
6. **Preserve agricultural and resource lands;**
7. **Provide opportunities to establish a network of interconnected greenbelts and open spaces; and**

8. Support housing affordability.

3.2 LAND USE DESIGNATIONS

There are seven general land use designations which form the framework for achieving the growth management strategy of this Plan. These are illustrated on Map 2: The Generalized Future Land Use Map with the intent and policy direction for each explained in the following sections.

3.2.1 Urban Settlement Designation

The Urban Settlement Designation encompasses those areas where development serviced with municipal water and wastewater systems (serviced development) exists or is proposed under this Plan. The designation includes three designated growth areas where Secondary Planning Strategies haven been approved (Morris-Russell Lake, Bedford South and Bedford West) three areas for future serviced communities, subject to HRM approval of secondary planning (Port Wallace, Sandy Lake, and the Highway 102 west corridor adjacent to Blue Mountain - Birch Cove Lakes Park).

The Morris-Russell Lake Secondary Plan area has not been able to develop as expected due to the Shearwater air base being re-acquired by the Canadian Armed Forces. Consideration may be given to amending this Secondary Planning Strategy to allow for additional serviced development at the north end of Morris Lake and Eastern Passage if the connector road from Mount Hope Avenue to Caldwell Road is feasible.

- S-1 The Urban Settlement Designation, shown on the Generalized Future Land Use Map (Map 2), encompasses those areas where HRM approval for serviced development has been granted and to undeveloped lands to be considered for serviced development over the life of this Plan. Amendments to this Boundary may be considered:
- (a) where reviews of regional population and housing forecasts have been undertaken and the proposed amendments may assist in achieving the growth targets established by this Plan; and
 - (b) the lands are within or adjacent to a growth centre.
- S-2 Where requests are received to initiate secondary planning for any of the areas identified above as potential growth areas, consideration shall be given to:
- (a) the need for additional lands and the fiscal implications to HRM and Halifax Water and their capacity to meet additional financial commitments; and
 - (b) the implications for achieving the HRM growth targets.

¹⁵ Community food security exists when community residents obtain a safe, culturally acceptable, nutritionally adequate diet through a sustainable food system that maximizes community self-reliance and social justice.

3.2.2 Urban Reserve Designation

The Urban Reserve Designation is intended to ensure that a supply of land is available for serviced development over a longer term horizon. The following seven areas are designated as Urban Reserve:

1. interior lands bounded by Highway 7, Ross Road, Highway 207 and Broom Road (Cole Harbour/Westphal);
 2. land surrounding Anderson Lake area (Dartmouth/Bedford);
 3. Governor Lake North (Timberlea);
 4. Ragged Lake (Halifax);
 5. Kidston Lake lands (Spryfield/Herring Cove);
 6. Purcell's Cove area back lands; and
 7. private lands in the Blue Mountain - Birch Cove Lakes Regional Park area.
- S-3 The Urban Reserve Designation shall be established on the Generalized Future Land Use Map (Map 2) to identify those lands situated outside the Urban Settlement Designation where serviced development may be provided after the life of this Plan.
- S-4 HRM shall, through the applicable land use by-law, establish an Urban Reserve Zone to regulate development of lands within the Urban Reserve Designation. This Zone shall permit open space uses and limit residential development to existing lots and to one lot subdivided from an existing lot under lot frontage exemption provisions of the Subdivision By-law on a property identified by PID No. 00270934.

3.2.3 Rural Settlement Designations

Under this plan, Rural Settlement Designations encompass all lands outside the Urban Settlement and Urban Reserve Designations. The following three land use designations are established:

3.2.3.1 Rural Commuter Designation

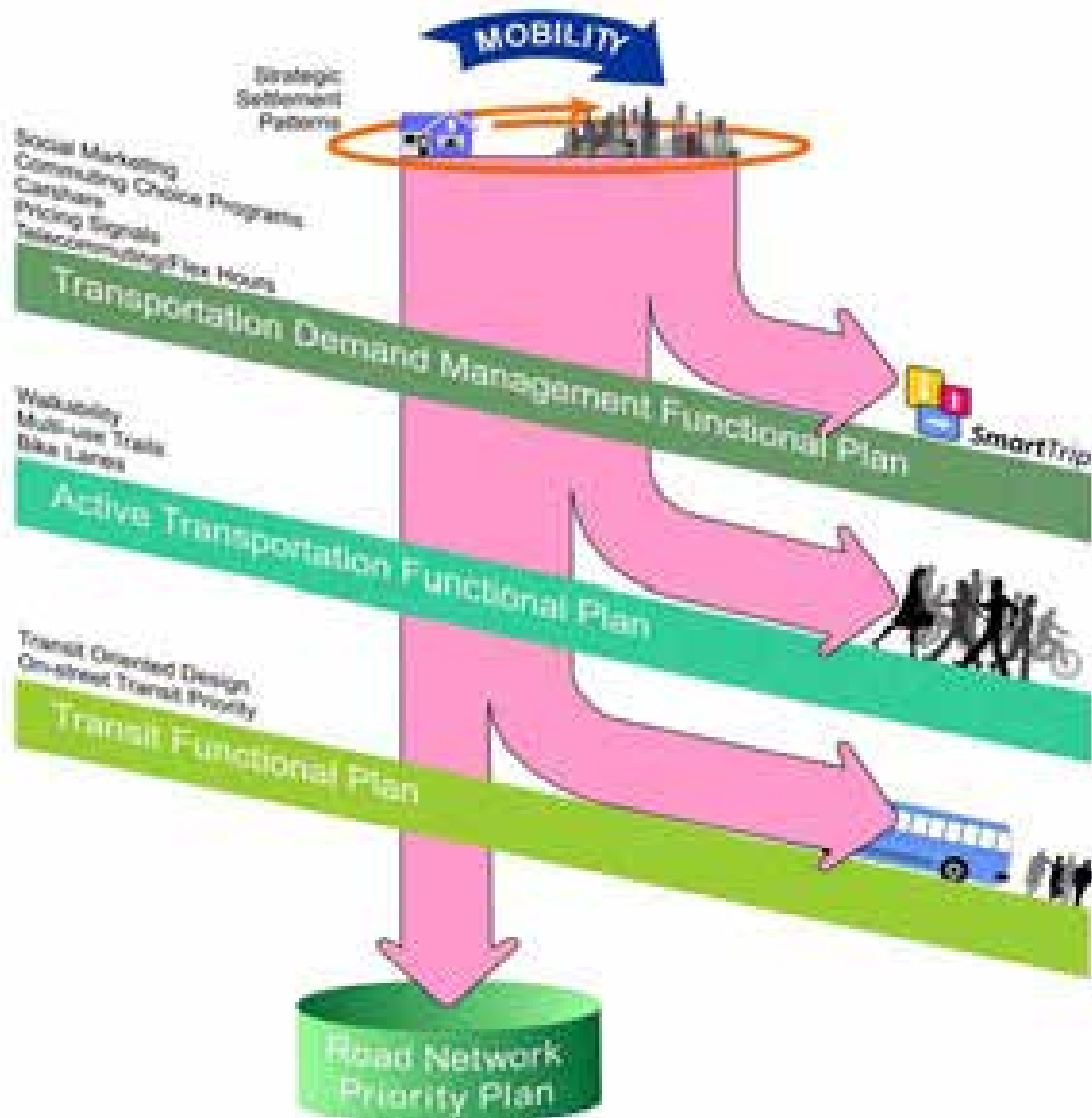
- S-5 The Rural Commuter Designation shall be established on the Generalized Future Land Use Map (Map 2) to encompass those areas within commuting distance of the Regional Centre that are heavily influenced by low-density residential development. The intent for this designation is to:
- to protect the character of rural communities and conserve open space and natural resources by focussing growth within a series of centres, as shown on Settlement and Transportation Map (Map 1);
 - support the delivery of convenience services to the surrounding settlement area;
 - control the amount and form of development between centres; and
 - protect the natural resource base and preserve the natural features that foster the traditional rural community character.

Centre Type	Centre Name	Land Uses and Design	Transit, AT and Parking	Open Space	Cultural Heritage
Urban District Growth Centre	Spryfield Bedford West Sunnyside Mall Sackville Russell Lake Port Wallace Sandy Lake Hwy. 102 West Corridor Bedford South	• Mix of low, medium and high density residential, commercial, institutional and recreation uses • In established residential neighbourhoods, low to medium density residential uses • Existing retail plazas and shopping centres • Encourage infill or redevelopment of large parking lots into traditional blocks with streetwalls and step-backs • Pedestrian oriented facades	• Connecting point for transit routes to other centres and Regional Centre • Enhance pedestrian linkages • Street or shared surface parking at the rear wherever possible • Access to AT routes • Short interconnected blocks for ease of walkability	• Streetscaping featuring landscaped pocket parks and tree-lined streets • Interconnected private and public open space linked with greenbelt corridors • Improved quality and quantity of parkland • Focus on waterfront parks and trails • Private and public realm urban forest canopy cover to be maintained and improved • Riparian canopy cover to be maintained and improved • Provisions for food security	• Built and natural heritage to be maintained and improved • Heritage features integrated with new development • Public art integrated with new development • Scenic public views preserved • Cultural heritage corridors
Urban Local Growth Centre	Herring Cove Lakeside/Beechville Timberlea Village Clayton Park West Birch Cove Kearney Lake Bedford Mill Cove Lower Sackville Main Street Middle Sackville Morris Lake North Westphal Cole Harbour Eastern Passage	• Mix of low, medium and high density residential, small office, small institutional and convenience commercial uses • In established residential neighbourhoods, low to medium density residential uses • Encourage infill or redevelopment of large parking lots into traditional blocks with streetwalls and step-backs • Pedestrian oriented facades	• Transit to connect to other centres and Regional Centre • Pedestrian oriented transit stops • Enhanced pedestrian linkages • Street, or rear yard parking wherever possible • Access to AT routes • Short interconnected blocks for ease of walkability	• Streetscaping featuring landscaped pocket parks and tree-lined streets • Interconnected private and public open space • Improved quality and quantity of parkland • Focus on waterfront parks and trails • Private and public realm urban forest canopy cover to be maintained and improved • Provisions for food security	• Built and natural heritage to be maintained and improved • Heritage features integrated with new development • Public art integrated with new development • Scenic public views preserved • Cultural heritage corridors

participating in partnerships or programs with housing organizations, the Province or the Government of Canada.

- S-30 When preparing new secondary planning strategies or amendments to existing secondary planning strategies to allow new developments, means of furthering housing affordability and social inclusion shall be considered including:
- a) creating opportunities for a mix of housing types within designated growth centres and encouraging growth in locations where transit is or will be available;
 - b) reducing lot frontage, lot size and parking requirements;
 - c) permitting secondary **and backyard** suites in all residential areas; (RC-Sep 1/20;E-Nov 7/20)
 - d) permitting homes for special care of more than three residents of a scale compatible with the surrounding neighbourhood;
 - e) permitting small scale homes for special care as single unit dwellings and eliminating additional requirements beyond use as a dwelling;
 - f) introducing incentive or bonus zoning in the Regional Centre;
 - g) allowing infill development and housing densification in areas seeking revitalization; and,
 - h) identifying existing affordable housing and development of measures to protect it.
- S-31 Where Provincial strategies or programs are made in support of affordable housing, HRM may consider means to further or complement such strategies or programs through its programs, policies or regulations.
- S-32 HRM may consider partnerships or financial support for housing organizations.
- S-33 HRM shall monitor housing and demographic trends to assist in determining future housing needs.
- S-34 HRM shall investigate other means of supporting affordable housing including reducing or waiving of fees.
- S-35 **HRM shall, through the applicable land use by-laws, permit secondary suites and backyard suites in all zones that permit low density residential uses, including single unit, two-unit, and townhouse dwellings. Land use by-law requirements shall ensure that the secondary suite and backyard suite remain accessory to the main dwelling. (RC-Sep 1/20;E-Nov 7/20)**
- S-36 **Existing policies and land use provisions for secondary dwellings established under Secondary Planning Strategies will continue to exist in addition to those land use provisions created under policies S-35 and S-36, subject to a maximum of one secondary dwelling permitted on a lot. (RC-Sep 1/20;E-Nov 7/20)**
- S-37 **HRM shall, through the applicable land use by-law, permit emergency shelter uses, shared housing uses, multi-unit dwellings uses and community facility uses on 5853**

Fig. 4-1: Approach for Transportation Demand Management



4.2.2 Active Transportation

- T-2 *The Active Transportation Plan*, approved by HRM in November 2006, shall provide guidance for the objectives, policies, plans and standards for an active transportation network. Consideration shall be given to revisions to this Plan to further advance the goals of, supporting healthy lifestyles, enhancing mobility and public safety, improving environmental quality and reducing auto dependency.
- T-3 When preparing secondary planning strategies or negotiating development agreements, HRM shall consider:

- (a) protecting greenways from development that would disrupt the continuity of planned greenways;
- (b) requiring planned greenways to be built by developers to HRM standards when the land abutting them is developed; and
- (c) requiring new development be connected to, and provide access to, existing and planned greenways.

T-4 Priority projects for the active transportation network shall be identified in the Active Transportation Priorities Plan, including but not limited to:

- Regional Centre Cycling Network
- Burnside Drive Greenway (Commodore Drive to Akerley Boulevard)
- Kearney Lake Road Paved Shoulder
- Hammonds Plains Road Paved Shoulder
- CN Mainline Crossings (SMU, Halifax Shopping Centre, Chisholm Avenue)
- Porter's Lake Transit Terminal Connection
- Highfield Park Transit Terminal Connection
- Woodside Ferry and Mount Hope Greenway Connection
- Alderney Ferry to Macdonald Bridge Connection
- Middle Sackville River Greenway
- Trans Canada Trail Active Transportation Greenway (Portions of Phase 1)

4.2.3 Public Transit

Transit facilities and services are to be planned in collaboration with land use planning and community design with emphasis on serving the Regional Centre, Regional District, Urban District and Local Growth Centres. As HRM continues to plan for growth, new investments in transit will be required to address emerging transportation issues. Providing system-wide accessibility will be an important consideration. Metro Transit will continue to investigate the potential demand and feasibility of new services such as rail, bus rapid transit and expanded ferry service.

T-5 Transit Service Plans shall be prepared at regular intervals for consideration by HRM. These plans will be developed in consultation with the public and other stakeholders and, upon adoption by HRM, shall provide guidance for investment in transit services.

T-6 HRM shall, through Land Use By-laws, in all zones, excepting land within the 1 in 20 year flood plains for designated watercourses, permit public transit facilities with frontage on or abutting minor collector, major collector, arterial roads and expressways. Such facilities shall not be subject to zone requirements.

- T-7 The Urban Transit Service Boundary, illustrated in Map 7 of this Plan, shall establish the area within which HRM will direct future investment in public transit services, with the exception of rural commuter express service which may be considered outside of this Boundary. The level of service outside this boundary shall not be increased, but modifications to services may be considered that serve to facilitate operational planning. Existing routes and services not contained within this boundary will continue to exist, and as with any public transit routes or services, any service reductions will be based upon performance standards approved by HRM.
- T-8 Transit priority measures, such as designated transit lanes, transit signal priority, and queue jump lanes may be made to improve the reliability and travel time of public transit vehicles.
- T-9 HRM shall require mixed use residential and commercial areas designed to maximize access to public transit (Transit Oriented Development) within the Urban Transit Service Boundary through secondary planning strategies, and shall strive to achieve the intent of this policy through land use by-law amendments, development agreements and capital investments.
- T- 10 HRM may consider programs to encourage and assist communities with developing their own community based transit services in the areas outside the Urban Transit Service Boundary.

Modeling of transportation network demands requires a projection of what percentage of trips will be made by transit. This is referred to as “transit modal split”. Although the regional demand model contains different transit modal split percentages by area, based on Statistics Canada data, there is a reasonable commonality to modal splits throughout four larger zones:

- Regional Centre
- Inner Urban
- Outer Urban
- Rural

- T-11 HRM shall strive to achieve or exceed the 2031 projections for the percentage of trips to work by transit and active transportation set out as follows:

CHAPTER 8: MUNICIPAL WATER SERVICES, UTILITIES AND SOLID WASTE

8.0 INTRODUCTION

This Chapter lays out policies and programs in support of effective service delivery relating to water supply, wastewater management, stormwater management, solid waste management and communications facilities.

8.1 OBJECTIVES

1. **Coordinate municipal initiatives with the Halifax Regional Water Commission (Halifax Water) to:**
2.
 - (a) **provide water, wastewater and stormwater services in a cost-effective manner;**
 - (b) **recoup growth related costs from benefitting property owners; and**
 - (c) **reduce degradation to the natural environment.**
3. **Manage growth to make the best use of existing water, wastewater and stormwater infrastructure and avoid unnecessary or premature expenditures;**
4. **Support environmentally sustainable practices for developments serviced with on-site water and wastewater services;**
5. **Reduce above grade electrical and telecommunication lines;**
6. **Encourage the development of an comprehensive natural gas distribution system; and**
7. **Reduce the amount of solid waste generated and operate solid waste facilities in an environmentally responsible and cost-effective manner.**

8.2 THE TRANSFER AGREEMENT

In 2007, HRM entered into an agreement with Halifax Regional Water Commission (Halifax Water) for the following purposes:

- (a) to transfer municipal waste-water facilities and municipal stormwater facilities and their operation and administration to Halifax Water from HRM to better serve the public interest;
- (b) to have such facilities operated as a public utility integrated with Halifax Water's existing water utility facilities to the extent deemed appropriate by the Utility and Review Board;
- (c) to evolve the operation and administration of municipal wastewater services and municipal stormwater services towards a system whereby the general taxpayer of HRM does not subsidize the utility rate payer of Halifax Water and the utility rate payer of Halifax Water does not subsidize the general tax payer of HRM; and

- (d) to have HRM pay a fee for service on full cost recovery basis for waste-water and stormwater services made necessary by the operation of other municipal services, including, but not restricted to, solid waste management services, and parks and recreation services.

Upon execution of the Transfer Agreement, Halifax Water became the first regulated water/ waste-water/ stormwater utility in Canada. Its jurisdiction applies to a core area, as set out in the transfer agreement, which broadly encompasses lands within the commutershed of the Regional Centre. Outside this area, the public stormwater facilities – comprised primarily of ditches and culverts within road right-of-ways – are owned and maintained by HRM or the N.S. Department of Transportation and Infrastructure Renewal.

Halifax Water has been established pursuant to the *Halifax Regional Water Commission Act* and is regulated by the Nova Scotia Utility and Review Board (the Review Board). The *Public Utilities Act* applies to Halifax Water and any water, wastewater or stormwater facility or system owned, operated, managed or controlled by Halifax Water is deemed to be a public utility. The Review Board establishes policies, rules and regulations governing the operations of Halifax Water which includes approvals for operating and capital budgets, user fees and charges that can be levied for new connections to its facilities.

Halifax Water is expected to finance its operations through the user fees and charges it levies. It must also comply with all provincial and federal regulations established for the design and operation of municipal water, wastewater and stormwater systems.

Halifax Water is a separate corporate body and reports to a Board of Directors. This governance model will require close co-operation between the planning and operational activities of HRM and Halifax Water if the objective of this Plan to manage development in a fair and cost effective manner is to be realized.

SU-1 HRM shall work with Halifax Water to coordinate municipal land use planning and development initiatives with the planning and development of municipal water, waste-water and stormwater facilities in a manner that is consistent with the objectives of this Plan, the Transfer Agreement and can satisfy policies and regulations of Halifax Water and the Review Board.

8.3 WATER, WASTEWATER AND STORMWATER SERVICES: PLANNING FOR GROWTH IN SERVICED AREAS

This Plan seeks to focus development in areas where infrastructure can be provided in a cost-effective manner with consideration given to both capital and operating costs. HRM also seeks to support a competitive housing market by maintaining a 15 year supply of serviced lands. A primary tool for achieving these objectives will be directing the supply and location of lands to be serviced with wastewater and water services.

SU-2 HRM shall establish an Urban Service Area under the Regional Subdivision By-law to designate those areas within the Urban Settlement Designation and the Harbour Designation where municipal wastewater collection and water distribution systems are to be provided. The Area shall initially include all lands within existing service boundaries established under secondary planning strategies at the time of adoption of this Plan. Lands within the Urban Service Area shall only be developed with municipal wastewater collection and water distribution systems. Any service boundary established under existing secondary planning strategies shall be replaced by the Urban Service Area boundary in the Regional Subdivision By-law.

SU-3 HRM shall seek to prevent premature development with on-site services on lands designated Urban Settlement but not yet within the Urban Service Area by establishing an Urban Settlement Zone over these lands under the applicable land use by-law. This zone shall permit public parks and playgrounds but restrict new development to single unit dwellings serviced with on-site sewage disposal systems and wells on two hectare lots on existing roads.

In 2010, the Review Board directed Halifax Water, in consultation with stakeholders, to prepare a long term infrastructure plan estimating capital expenditure requirements for municipal water, waste-water and stormwater infrastructure. Key drivers in developing this Integrated Resource Plan (IRP) are regulatory compliance, asset renewal and growth related costs.

The IRP (Genivar/XCG/Halcrow, October 2012) outlines a 30 year capital program for Halifax Water. The growth related cost estimates are proposed to be used for the development of a regional development charge that will replace the existing charges. Halifax Water also anticipates that area charges will be sought, as required, to pay for service upgrades associated with planned municipal growth through the adoption of secondary planning strategies.

SU-4 When considering any expansion of the Urban Service Area, HRM shall have regard to the following:

- (a) that a Secondary Planning Strategy for the lands to be included within the Urban Service Area has been adopted by HRM except that this requirement may be waived where, in the opinion of HRM, the proposed extension represents a minor adjustment to the Area;
- (b) the financial ability of HRM to absorb any costs relating to the extension;
- (c) if required, a watershed or sub-watershed study has been completed in accordance with Policy E-23;
- (d) that, if required to pay for growth-related municipal infrastructure costs, a municipal infrastructure charge area has been established or is adopted concurrently with the boundary amendment;
- (e) the need to oversize the water, wastewater or stormwater systems to allow for future development within an Urban Settlement or Urban Reserve designation; and
- (f) a charge needed to pay for growth related improvements to the water, wastewater or stormwater systems has, where required, been approved by the Review Board.

9.5 THE REGIONAL SUBDIVISION BY-LAW

A Regional Subdivision By-law was adopted concurrently with this Plan. This By-law is an effective tool in achieving various objectives of this Plan such as regulating where municipal water and wastewater services will be provided and establishing design standards for municipal streets and parkland acquisitions.

- G-11 When amendments to the Regional Subdivision By-law are brought forward for approval, HRM shall consider whether the proposed amendments are consistent with or further achieve the objectives and policies of this Plan, including any plans referenced by policies of this Plan for guidance.

9.6 REGIONAL PLAN REVIEW AND AMENDMENTS

Amendments to this Plan may be brought forward periodically to address non-substantive matters or amendments which are consistent with or further the vision and objectives of this Plan. A more comprehensive review will be undertaken on a five year basis to evaluate the effectiveness of policies and programs in achieving the vision and objectives of this Plan.

- G-12 Amendments to this Plan may be considered from time to time to address non-substantial matters or amendments which are consistent with or further the vision and objectives of this Plan.
- G-13 This Plan shall be reviewed every five years, from the date the most recent five year review has been completed by Council and any changes have come into force, to evaluate the effectiveness of policies and programs adopted pursuant to this Plan in achieving its vision and objectives and where appropriate, amendments may be considered.
- G-14 Proposed amendments to this Plan shall be accompanied by any amendments to Secondary Planning Strategies, Land Use By-laws and the Regional Subdivision By-law or other planning documents required for implementation so that these documents are consistent with this Plan.

9.7 DISCRETIONARY APPROVALS

- G-15 In considering development agreement applications pursuant to the provisions of this Plan, in addition to all other criteria as set out in various policies of this Plan, HRM shall consider the following:
- (a) that the proposal is not premature or inappropriate by reason of:
 - (i) the financial capability of HRM to absorb any costs relating to the development;
 - (ii) the adequacy of municipal wastewater facilities, stormwater systems or water distribution systems;

- (iii) the proximity of the proposed development to schools, recreation or other community facilities and the capability of these services to absorb any additional demands;
 - (iv) the adequacy of road networks leading to or within the development; and
 - (v) the potential for damage to or for destruction of designated historic buildings and sites;
- (b) that controls are placed on the proposed development so as to reduce conflict with any adjacent or nearby land uses by reason of:
 - (i) type of use;
 - (ii) height, bulk and lot coverage of any proposed building;
 - (iii) traffic generation, access to and egress from the site, and parking;
 - (iv) open storage; and
 - (v) signs;
- (c) that the proposed development is suitable in terms of the steepness of grades, soil and geological conditions, locations of watercourses, marshes or bogs and susceptibility to flooding; and
- (d) if applicable, the requirements of policies E-10, T-3, T-9, EC-14, CH-14 and CH-16.

G-16 Provided other policies of this Plan are satisfied and the proposed development is limited in scale, for the purpose of providing for the development of similar uses on properties which abut one another or share a common street line, HRM may consider the following development agreements or amendments to the applicable Land Use By-laws, for lands which are located where land use designations abut one another, as shown on the Generalized Future Land Use Map (Map 2):

- (a) amendments within a designation to provide for the development of uses which are uses permitted within the abutting designation;
- (b) amendments within a designation to provide for the development of uses which are uses permitted by the zone on the abutting property within the abutting designation;
- (c) development agreements within a designation which are extensions of development agreements in effect on the abutting property within the abutting designation; and
- (d) amendments within the Urban Reserve or Rural Commutershed Designations on lands which meet or share a common street line with the Urban Settlement Designation or the Harbour Designation to accommodate development serviced with municipal water or wastewater infrastructure where the development is generally consistent with the intent of the Urban Settlement Designation policies in this Plan including Policy SU-4 and the total number of dwelling units does not exceed twenty. Preference will be given to lands that are naturally tributary to trunk municipal service systems.

9.8 EFFECTIVENESS

G-17 Until this Plan becomes effective in accordance with the requirements of the HRM Charter, the Regional Plan adopted by Council on August 26, 2006 and as amended, shall remain in effect.

Appendix C: Mainland South Secondary Plan; Relevant Policies



MUNICIPAL PLANNING STRATEGY

HALIFAX

**THIS COPY IS A
REPRINT OF THE HALIFAX
MUNICIPAL PLANNING STRATEGY
WITH AMENDMENTS TO
SEPTEMBER 3, 2016**

**MUNICIPAL PLANNING STRATEGY
FOR
HALIFAX**

THIS IS TO CERTIFY that this is a true copy of the Municipal Planning Strategy for Halifax which was passed by a majority vote of the former City Council at a duly called meeting held on the 30th day of March, 1978, and approved by the Minister of Municipal Affairs on the 11th day of August, 1978, which includes all amendments thereto which have been adopted by the Halifax Regional Municipality and are in effect as of the 3rd day of September, 2016.

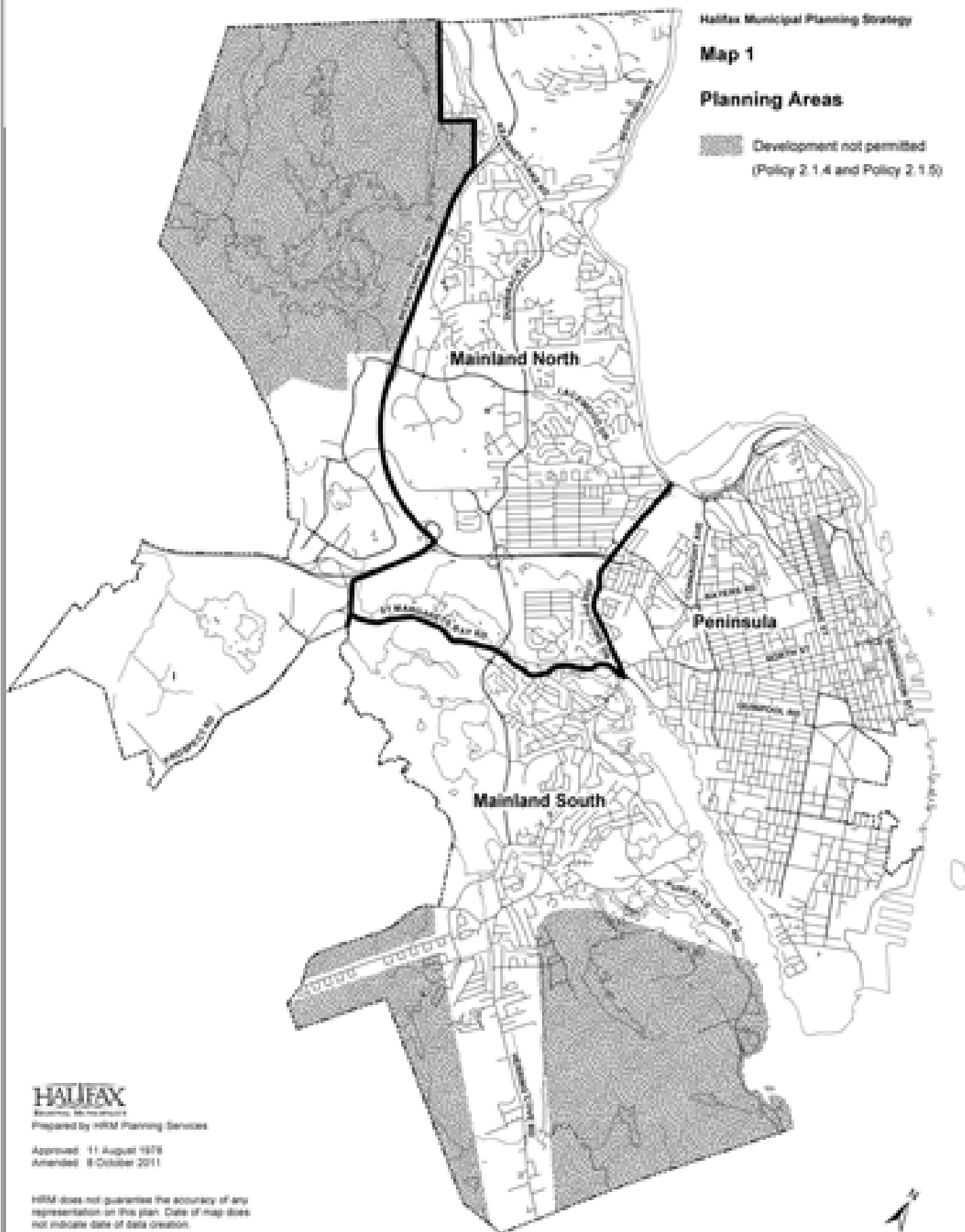
GIVEN UNDER THE HAND of the Municipal Clerk and under the seal of Halifax Regional Municipality this ____ day of _____, 201__.

Kevin Arjoon
Municipal Clerk

Map 1

Planning Areas

 Development not permitted
(Policy 2.1.4 and Policy 2.1.5)



HALIFAX
Business Development

Prepared by HRM Planning Services

Approved: 11 August 1979
Amended: 8 October 2011

HRM does not guarantee the accuracy of any representation on this plan. Date of map does not indicate date of data creation.

2. RESIDENTIAL ENVIRONMENTS

Objective: The provision and maintenance of diverse and high quality housing in adequate amounts, in safe residential environments, at prices which residents can afford.

- 2.1 Residential development to accommodate future growth in the City should occur both on the Peninsula and on the Mainland, and should be related to the adequacy of existing or presently budgeted services.
 - 2.1.1 On the Peninsula, residential development should be encouraged through retention, rehabilitation and infill compatible with existing neighbourhoods; and the City shall develop the means to do this through the detailed area planning process.
 - 2.1.2 On the Mainland, residential development should be encouraged to create sound neighbourhoods through the application of a planned unit development process and this shall be accomplished by Implementation Policy 3.3. It is the intention of the City to prepare and adopt a planned unit development zone subsequent to the adoption of this Plan.
 - 2.1.3 Repealed.
 - 2.1.4 In accordance with Policy 2.1.3, the City shall permit only limited development with on-site services in that portion of the Mainland South area indicated on Map 1 and this shall be accomplished by Implementation Policy 3.6.
 - 2.1.5 Development in the area shown on Map 1 to the west of the Bicentennial Drive shall be limited due to environmental sensitivity and a lack of municipal services. Only detached single unit residential dwellings and community facilities with on-site services shall be permitted.
 - 2.1.6 Development with on-site services shall be permitted on lots which abut the existing public street network for the area surrounding Kearney Lake Road and currently designated "Residential Environments" on Map 9.
- 2.2 The integrity of existing residential neighbourhoods shall be maintained by requiring that any new development which would differ in use or intensity of use from the present neighbourhood development pattern be related to the needs or characteristics of the neighbourhood and this shall be accomplished by Implementation Policies 3.1 and 3.2 as appropriate.
- 2.3 The City shall investigate alternative means for encouraging well-planned, integrated development.
 - 2.3.1 The City should restrict ribbon development which does not conform to the policies of this document and should seek ways to remove any such development which may become obsolete.
 - 2.3.2 Ribbon development along principal streets should be prohibited in order to minimize access points required by local traffic.

- 2.4 Because the differences between residential areas contribute to the richness of Halifax as a city, and because different neighbourhoods exhibit different characteristics through such things as their location, scale, and housing age and type, and in order to promote neighbourhood stability and to ensure different types of residential areas and a variety of choices for its citizens, the City encourages the retention of the existing residential character of predominantly stable neighbourhoods, and will seek to ensure that any change it can control will be compatible with these neighbourhoods.
- 2.4.1 Stability will be maintained by preserving the scale of the neighbourhood, routing future principal streets around rather than through them, and allowing commercial expansion within definite confines which will not conflict with the character or stability of the neighbourhood, and this shall be accomplished by Implementation Policies 3.1 and 3.2 as appropriate.
- 2.4.2 In residential neighbourhoods alternative specialized housing such as special care homes; commercial uses such as daycare centres and home occupations; municipal recreation facilities such as parks; and community facilities such as churches shall be permitted. Regulations may be established in the land use by-law to control the intensity of such uses to ensure compatibility to surrounding residential neighbourhoods.
- 2.4.2.1 Pursuant to 2.4.2 the land use by-law may regulate the number, size, height, illumination and location of signs.
- 2.4.3 Further to city-wide residential and heritage policies which recognize the diversity of residential neighbourhoods and encourage the retention of existing structures which reflect the City's heritage, the City recognizes that areas designated and zoned residential-commercial provide opportunities for conversions to residential tourist accommodations uses. To encourage the reuse of buildings in these areas for these purposes, the land use by-law shall establish provisions which permit these uses in existing buildings subject to special controls.
- 2.5 The City shall prepare detailed area plans for predominantly unstable neighbourhoods or areas. The priorities and procedures by which the City shall prepare these plans shall conform to the official City report entitled Areas for Detailed Planning and subsequent amendments which may be made by the City thereto as set forth in Part III, Section I of this document.
- 2.5.1 The City views the neighbourhood as the foundation for detailed area planning. In the process of detailed area planning, residents shall be encouraged to determine what they consider to be their neighbourhoods, and to work with City Council and staff in arriving at an acceptable definition of their neighbourhood and a neighbourhood plan.
- 2.5.2 For the areas identified below and on Map 3, the City should prepare detailed area plans, adopt them and submit them to the Minister as amendments to this Plan.
9. Simpson's/Eaton's Shopping Area

- 2.5.3 Detailed area plans may deviate from the boundaries shown on Map 3 when justified to accommodate a neighbourhood's characteristics or at the request of the residents of the area.
- 2.5.4 Repealed 6 June 1990.
- 2.5.5 For those areas identified in Policy 2.5.2 above, which are not predominantly residential in use, the City shall use the appropriate policy guidance in this Plan.
- 2.5.6 The City shall develop detailed policies which reflect its position with regard to the future disposition of the Watershed lands. These policies shall define the City's position with respect to: (a) ownership; (b) public and private land uses; (c) land use distribution; (d) environmental standards which will guide land use distribution; and (e) types(s) and location(s) of access at the boundaries and internally. The City shall place primary importance on public control of these lands and on the provision of extensive public parklands, particularly around all lakes and water courses in the Watershed area.
- 2.5.7 The City shall develop appropriate policies and seek any legislation that may be necessary to affirm its proprietary right to air spaces over City-owned buildings, land and open spaces.
- 2.6 The development of vacant land, or of land no longer used for industrial or institutional purposes within existing residential neighbourhoods shall be at a scale and for uses compatible with these neighbourhoods, in accordance with this Plan and this shall be accomplished by Implementation Policies 3.1 and 3.2 as appropriate.
- 2.7 The City should permit the redevelopment of portions of existing neighbourhoods only at a scale compatible with those neighbourhoods. The City should attempt to preclude massive redevelopment of neighbourhood housing stock and dislocations of residents by encouraging infill housing and rehabilitation. The City should prevent large and socially unjustifiable neighbourhood dislocations and should ensure change processes that are manageable and acceptable to the residents. The intent of this policy, including the manageability and acceptability of change processes, shall be accomplished by Implementation Policies 3.1 and 3.2 as appropriate.
- 2.8 The City shall foster the provision of housing for people with different income levels in all neighbourhoods, in ways which are compatible with these neighbourhoods. In so doing, the City will pay particular attention to those groups which have special needs (for example, those groups which require subsidized housing, senior citizens, and the handicapped).
- 2.9 The City shall actively seek to influence the policies and programs of other levels of government in order to implement the City's housing policies and priorities, and shall also actively seek taxation preference as one method of encouraging rehabilitation of existing housing stock.

- 2.10 For low and medium density residential uses, controls for landscaping, parking and driveways shall ensure that the front yard is primarily landscaped. The space devoted to a driveway and parking space shall be regulated to ensure that vehicles do not encroach on sidewalks.
- 2.11 For all residential uses the parking and storage of vehicles such as trailers, boats and mobile campers, shall be restricted to locations on the lot which create minimal visual impact from the street.
- 2.12 Council may permit, by development agreement, new residential uses on lots which do not abut a city owned or maintained street. In considering such proposals, Council shall not approve such a development unless:
- (i) the proposed use is permitted by the zoning by-law;
 - (ii) the lot was in existence prior to the adoption of this provision;
 - (iii) the lot can be adequately serviced by municipal water or sewer or, where permitted by the by-law, an acceptable well and septic system;
 - (iv) the development complies with all other requirements of the by-law with the exception that Council may consider modification to the frontage, area, setback and coverage requirements in accordance with the policies of the plan;
 - (v) the lot abuts an existing recognized travelled way and that the said travelled way provides reasonable passage of motor vehicles, especially emergency apparatus and police protection;
 - (vi) the location and setback of the proposed dwelling does not adversely affect adjacent uses or watercourses, including the North West Arm.
- 2.12A The development agreement requirements of section 2.12 shall not apply to any lot zoned Urban Reserve and subdivided pursuant to section 38 of the Subdivision By-law and a development permit may be granted provided that the development conforms with all other applicable requirements of this By-law. (RC-Jun 25/14; E-Oct 18/14)**
- 2.13 The properties identified as 7 Vimy Avenue; Lot A-1B (at the end of Stoneybrook Court); and 45 Vimy Avenue (Granbury Place Apartments); shall permit high density residential development, however, Lot A-1B shall be limited to a maximum of four storeys due its proximity to the existing low density residential neighbourhood on Laurentide Drive.
- 2.14 For the property at 6955 Bayers Road (PID # 40824005) the Municipality may permit the development of multiple unit residential buildings by development agreement. (RC-Aug 12/08; E-Oct 11/08)**
- 2.14.1 Any development permitted pursuant to Policy 2.14 shall be compatible with the surrounding area and this shall be achieved by attention to a variety of factors for which conditions may be set out in the development agreement, and shall include:**
- a) the adequacy of the servicing capacity of the site;**
 - b) the architectural design of the building including building materials;**

- c) the adequacy of parking facilities;
- d) preservation and/or enhancement of the function of the larger site which includes the existing Cemetery and Community Centre;
- e) provide opportunities for public access to the existing indoor and outdoor components of the larger site;
- f) provision for vehicular and pedestrian access and egress patterns from the surrounding area;
- g) the provision of open space; and
- h) adequate site landscaping and buffering; and
- i) scale, height and massing of the buildings. (RC-Aug 12/08; E-Oct 11/08)

2.15 Pursuant to policies 2.4 and 2.6, residential development may be considered on the former Petro Canada lands between Kencrest Avenue and Barrington Street (LIMS No. 34058) in accordance with the development agreement provisions of the Municipal Government Act. When deciding whether to enter into such an agreement, consideration shall be given to the following matters:

- 1. A mix of housing types is provided for varying accommodation needs;
- 2. The development can be integrated with the surrounding neighbourhood, without causing any unreasonable loss of enjoyment or convenience;
- 3. The development will not adversely affect municipal service levels in the surrounding neighbourhood and or cause the need for upgrading existing municipal infrastructure.

2.16 Pursuant to Policies 2.1, 2.2 and 2.4 a multi-unit building may be considered for civic numbers 7, 9, 11, and 13 Springvale Avenue (LRIS PID Nos. 207019, 207027, 207035 and 207043) by development agreement.

2.16.1 Any development permitted pursuant to Policy 2.16 shall be compatible with the surrounding area and this shall be achieved by attention to a variety of factors for which conditions may be set out in the development agreement, such as but not limited to:

- a) the adequacy of the servicing capacity of the site;
- b) architectural design of the building including building materials;
- c) the scale, height, and massing of the building;
- d) the adequacy of parking provided;
- e) safe accesses to the site and building;
- f) site landscaping including buffering;
- g) location, form and function of open space

2.17 For the property at 6430 Oak Street, Halifax and further to Policies 2.4, 2.4.1, 2.4.2 and 2.4.2.1 of Section II of this Plan, the City may permit, by development agreement, the establishment of a residential pet care facility within a detached one family dwelling house. (RC-Apr 21/09; E-Jun 20/09)

2.17.1 In considering approval of such development agreement for a residential pet care facility, Council shall consider the following:

of 75 feet from the nearest abutting property lines of 3612 High Street and 3618/3620 High Street; and

- c) The three-storey portion of the building shall be set back a minimum of 20 feet from the nearest abutting property line of 6092 Normandy Drive.

(RC-Apr 5/16;E-May 14/16)

2.18.2 In considering a development agreement pursuant to Policies 2.18 and 2.18.1, Council shall consider the following additional matters:

- a) Adequate site landscaping features shall be provided at the ground and podium levels to allow for visual screening of portions of the building from abutting residential properties and useable open space areas for building residents shall be provided;
- b) Ground-level dwelling units along the portions of the building facing Normandy Drive and the public walkway between Normandy Drive and Lady Hammond Road shall have direct pedestrian access to the exterior of the building and adequate site landscaping shall be provided in these areas;
- c) High quality exterior building materials shall be utilized;
- d) Safe vehicular and pedestrian access and egress shall be provided;
- e) Sufficient vehicular and bicycle parking shall be provided for the development;
- f) There shall be suitable solid waste facilities; and
- g) There shall be adequate servicing capacity for the site.

(RC-Apr 5/16;E-May 14/16)

8. ENVIRONMENT

Objective: The preservation and enhancement, where possible, of the natural and man-made environment, and especially of those social and cultural qualities of particular concern to the citizens of Halifax.

- 8.1 The City shall prepare a strategy statement on the environment as called for in Part III of this document, and shall, as part of such statement, make provision for the detailing and implementation of Policies 8.2 - 8.5 below. The City shall address the remainder of the environment policies in preparing the strategy statement. The City, upon adoption of the Environment Strategy Statement, shall amend this Plan and accompanying development regulations as appropriate.
- 8.2 In reviewing public and private land use proposals, including its own capital program, the City will take into account the social, physical, economic and aesthetic effects on the natural and man-made environment, and will establish and maintain appropriate procedures to take such effects into consideration in the approval process for such land uses.
- 8.3 The City shall develop the means to assure the greatest possible degree of compatibility between new developments and desirable aspects or characteristics of the surrounding man-made and natural environment through regulatory procedures or special permit procedures, such as contract zoning, conditional zoning, etc. Preference should be given to development which is aesthetically pleasing, human in scale, and in harmony with the natural and man-made environment. A requirement for an environmental impact statement should be implemented subsequent to completion and adoption of the Environment Strategy Statement as called for in Part III of this document.
- 8.4 The City shall identify areas of natural significance and natural areas which are environmentally sensitive. The City will protect these areas from environmental degradation insofar as possible, through such means as zoning, development standards, and public education.
- 8.5 The City shall establish standards, insofar as it has the power, for maintaining lake systems and their watersheds in a healthy state. These standards should address the infilling of lakes or their tributaries, the preservation of natural resources which are visually or ecologically complementary to those lakes and their tributaries, the control of discharges into lakes or tributaries resulting from public or private developments which would cause long-term degradation of the water quality, and the prevention of any other environmentally damaging effects.
- 8.6 The City should make every effort to ensure that developments do not create adverse wind and shadow effects. The means by which this policy shall be implemented shall be considered as part of the study called for in Part III.
- 8.7 The City shall attempt to ensure that air, water, soils, and noise pollution are minimized and do not damage the quality of life in the City.
- 8.8 The City should protect vistas and views of significant interest.

- 1.3.3 For the purposes of Policies 1.3 family-type units shall mean those with two or more bedrooms conducive to family-type living.
- 1.3.4 **In areas designated as “Medium Density Residential” on the Generalized Future Land Use Map Council may consider townhouse style residential developments according to the development agreement provisions of the *Halifax Regional Municipality Charter*. This form of development is appropriate where subdivision regulations for townhouses can not be met, due to lack of frontage on a public street, or where developments are located on major collector or arterial streets, and direct access to the street is undesirable. In considering such an agreement, Council shall have regard for the following:**
- (a) that the development includes a minimum lot area of 20,000 square feet, with access provided to a public street;
 - (b) that each unit has access to an internal private driveway which services the development;
 - (c) that municipal central services are available and capable of supporting the development;
 - (d) that the site design features including landscaping, screening, fencing, parking areas, and driveways are of an adequate size and design to meet the needs of residents of the development and to address potential impacts on adjacent development;
 - (e) that the height, bulk, lot coverage and appearance of any building is compatible with adjacent uses; and,
 - (f) the general maintenance of the development.(RC-Feb 2/10; E-Apr 17/10)
- 1.4 In areas designated as "High-Density Residential" on the Generalized Future Land Use Map, uses permitted in the low-density and medium-density designation and apartments exceeding four storeys shall be permitted. Apartments in excess of four stories shall be regulated as to size and scale by appropriate regulations in the By-law. Apartment dwellings may be composed of both family and non-family type. Neighbourhood commercial uses shall be permitted in apartment dwellings of 100 units or greater.
- 1.5 Areas designated as "Residential Development District" on the Generalized Future Land Use Map shall be residential development areas planned and developed as a whole or in phases under a unified site design, providing a mixture of residential uses and related recreational, commercial and open space uses, with an emphasis on a mix of dwelling unit types.
- 1.5.1 Pursuant to Policy 1.5, the Land Use By-law shall provide a new zone, the Residential Development District, within which "Low-Density Residential" development and public community facilities shall be permitted and other development shall be permitted only under the contract development provisions of the Planning Act and the requirements in Schedule I.

SCHEDULE I

GUIDELINES FOR RESIDENTIAL DEVELOPMENT DISTRICT

Pursuant to Policy 1.5.1, contract development in any area designated "Residential Development District" on the Generalized Future Land Use Map must conform with the following guidelines:

Uses Which May be Permitted

1. Residential Uses
2. Community Facilities
3. Institutional Uses
4. Neighbourhood Commercial Uses
5. Commercial Convenience Centres.

Site Development Guidelines

5. Residential

- a density of twenty-two persons per gross acre shall be permitted. Proposals in excess of twenty-two persons per gross acre may be considered provided that no development shall exceed the capacity of existing or proposed sewers. In calculating the permissible density of any project, the capacities available to the drainage area shall be considered.

- no more than 15 percent of any area covered by a development agreement may be developed for apartment uses including the building(s), ancillary parking, open space, and landscaping.

- the design and layout of the portion of new residential developments abutting existing residential areas shall endeavour to protect the character and scale of these areas by attention to such matters as use of open space, landscaping, and ensuring adequate transition between areas of differing building forms and densities.

6. Commercial

- neighbourhood commercial uses are permitted at or near the intersection of local streets, and on the ground floor of high-density residential buildings. In addition, consideration may be given for a commercial convenience centre, except in the RDD areas generally west of the Herring Cove Road and south of Leiblin Drive. The amount of gross leasable space may be limited to ensure that the development primarily serves the adjacent neighbourhoods. The intent is to provide for a range of uses such as retail, rental and personal service, household repair shops, service stations, restaurants and office uses. The additional matters to be considered are found in the guidelines of Policy 3.7 of Section II.

Landscaping and Open Space

7. At least 5 percent of the area of the district development must be useable, landscaped, open space.

8. No residential or accessory building shall be constructed within 50 feet of any lake, watercourse, or water body. No commercial or accessory structure shall be constructed within 100 feet of any lake, watercourse, or water body.
9. Any proposal to construct a community facility or institutional use within 100 feet of the water's edge should ensure, through the use of landscaping or other means, that adverse effects on water quality will be avoided or ameliorated during and after construction.
10. A landscape plan shall be submitted as part of the approval process and the preservation of natural amenities, including rock outcroppings, groves of trees, mature trees, ponds, streams, shores, and wetlands should be preserved whenever possible.

Circulation

11. Access to arterial or collector streets should be such that additional traffic along local streets in residential neighbourhoods adjacent to the development is minimized.
12. Where common parking areas are provided, they should be so aligned as to restrict through traffic.

General

13. The minimum required site size for a contract within this area shall be three acres.
14. Municipal infrastructure must be adequate to service any proposed development.

IMPLEMENTATION POLICIES

GENERAL

1. The City of Halifax Municipal Development Plan provides the major framework to guide decision-making with respect to development in the City. This Plan shall be implemented through the powers of City Council under the Planning Act, the Halifax City Charter, and such other statutes as may apply.
2. The City shall follow and maintain a system of ongoing planning generally as detailed in Part III of this document.
- 2.1 (a) Within any designation, where a holding zone has been established pursuant to “Infrastructure Charges - Policy 14.6”, Subdivision Approval shall be subject to the provisions of the Subdivision By-law respecting the maximum number of lots created per year, except in accordance with the development agreement provisions of the MGA and the “Infrastructure Charges” Policies of this MPS.

ZONING

3. Pursuant to the authority of Section 33 of the Planning Act, the City shall adopt the Zoning By-law, Mainland Area and the Zoning By-law, Peninsula Area, both of the City of Halifax substantially as they presently exist to further the objectives and policies of this Plan, except those by-laws shall first be revised according to the directions established by the detailed policies below.
- 3.1 Repealed 6 June 1990
- 3.1.1 The City shall review all applications to amend the zoning by-laws or the zoning map in such areas for conformity with the policies of this Plan with particular regard in residential areas to Section II, Policy 2.4.
- 3.2 For those areas identified in Section II, Policy 2.5.2 of this Plan, the City shall, pursuant to the authority of Section 33(2)(b) of the Planning Act, establish such development control regulations as are necessary to implement the policies of this Plan.
- 3.2.1 Further to Policy 3.2 above, the areas identified in Section II, Policy 2.5.2 and numbered 4, and 9 shall be identified on the zoning map, and within such areas no development permit for multiple-unit residential development of over 50 feet in height or 25 units, or for a commercial or institutional development of over 35 feet in height or 5,000 square feet in floor area shall be issued, except under an agreement with Council pursuant to Section 34(1) of the Planning Act.
- 3.2.1.1 Policy 3.2.1 above shall not apply to the area identified on Map 1 of Section XI.
- 3.2.2 Repealed.
- 3.2.3 Repealed.

- 3.2.4 In entering into agreements pursuant to Policies 3.2.1, and, above, Council shall be guided by the policies contained in Section II of this Plan, and shall not enter into agreements which are inconsistent with the policies of this Plan.
- 3.2.5 Prior to entering into any agreements pursuant to Policies 3.2.1, and, Council shall advertise its intention to do so and shall hold a public hearing at which time any objections shall be heard.
- 3.2.6 The City should amend this plan and accompanying zoning by-laws as appropriate upon the completion of detailed area plans through the provisions of the Planning Act.
- 3.2.7 Notwithstanding Policy 3.1.4 of Section II of this Plan, Council may consider major office and hotel uses within shopping centres pursuant to Policies 3.2.1 to 3.2.6 of this section. (RC-Apr 1/14; E-May 17/14)**
- 3.3 For the residentially designated undeveloped areas of Mainland North, the City shall, pursuant to Section 38(2)(p) of the Planning Act, establish such development regulations as are necessary to implement the policies of this Plan.
- 3.3.1 Further to Policy 3.3 above, these areas shall be identified on the zoning map and within such areas no development permit shall be issued unless the proposed development has been approved by a resolution of Council, and further, except under an agreement with Council pursuant to Section 34(1) of the Planning Act.
- 3.3.2 Further to Policy 3.3.1 above, the purpose for which land within these areas is to be developed shall be primarily residential, and an emphasis shall be placed on a mix of housing types, shall include provision for local commercial uses that are intended to serve the residents of the immediate area, and shall include provision for automobile, transit and pedestrian circulation and an emphasis on conservation of natural environment features including lakes and waterways, mature trees and natural topographic features. In addition to the above, City Council may consider provision for minor commercial uses in accordance with Policy 3.1.2 in Section II, provided that such uses are consistent with the policies of this Plan, are compatible in design form and function with comprehensively planned development and with development adjacent to a comprehensively planned development, and that such uses are located in such manner as to be in accord with Policy 2.4.1 of Section II, as the principles of said policy may apply to areas of vacant land.
- 3.3.3 The City shall prepare and adopt plans for major public facilities including the location of collector roadways, schools and major community open space in the residentially designated undeveloped areas of the City.
- 3.3.4 In entering into agreements pursuant to Policy 3.3.1 above, Council shall be guided by the policies contained in Section II of this Plan, and shall not enter into agreements which are inconsistent with the policies of this Plan.
- 3.3.5 Prior to entering into any agreements pursuant to Policy 3.3.1, Council shall advertise its intention to do so and shall hold a public hearing at which time any objections shall be heard.

Generalized Future Land Use

Designation

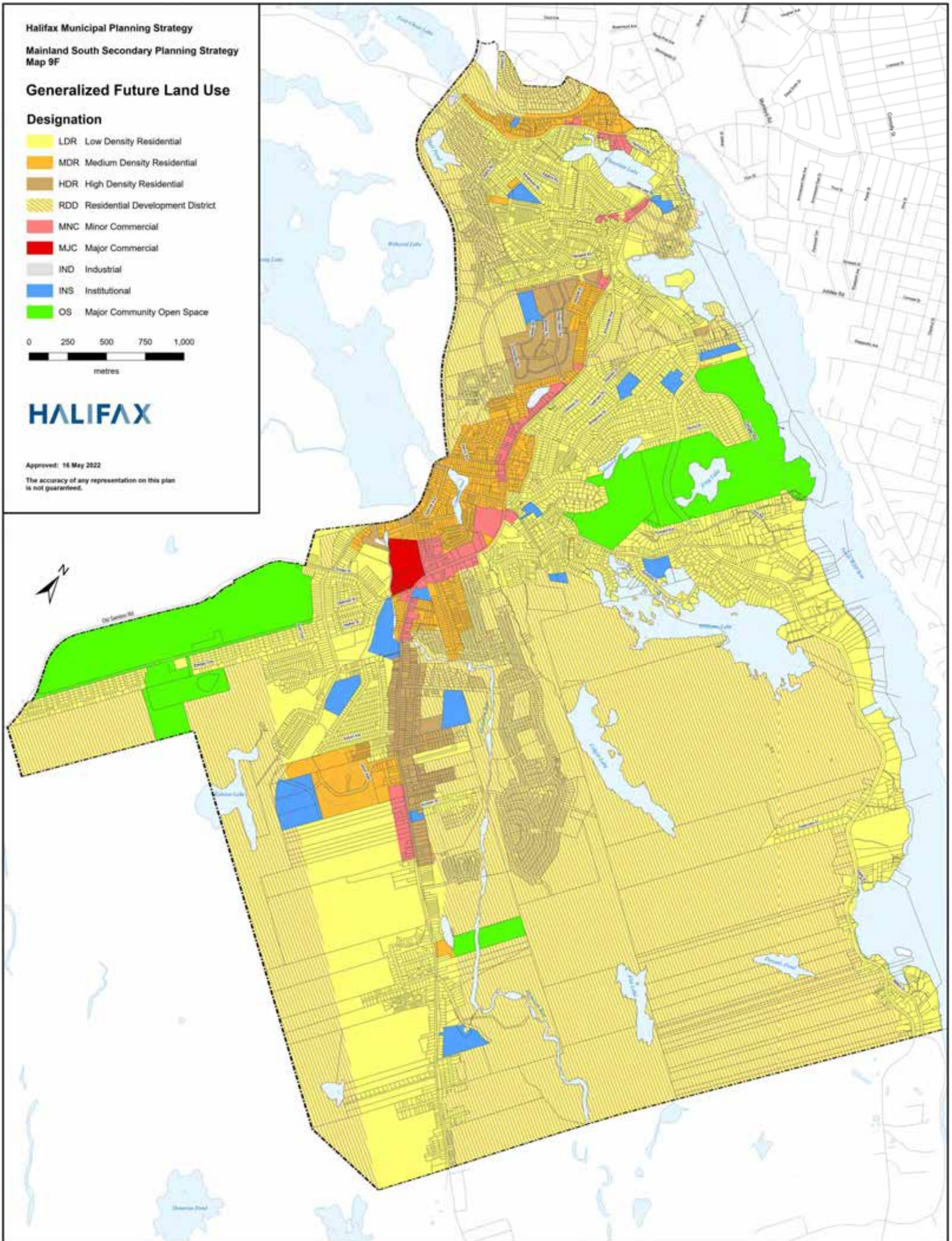
- LDR Low Density Residential
- MDR Medium Density Residential
- HDR High Density Residential
- RDD Residential Development District
- MNC Minor Commercial
- MJC Major Commercial
- IND Industrial
- INS Institutional
- OS Major Community Open Space

0 250 500 750 1,000
metres

HALIFAX

Approved: 16 May 2022

The accuracy of any representation on this plan
is not guaranteed.

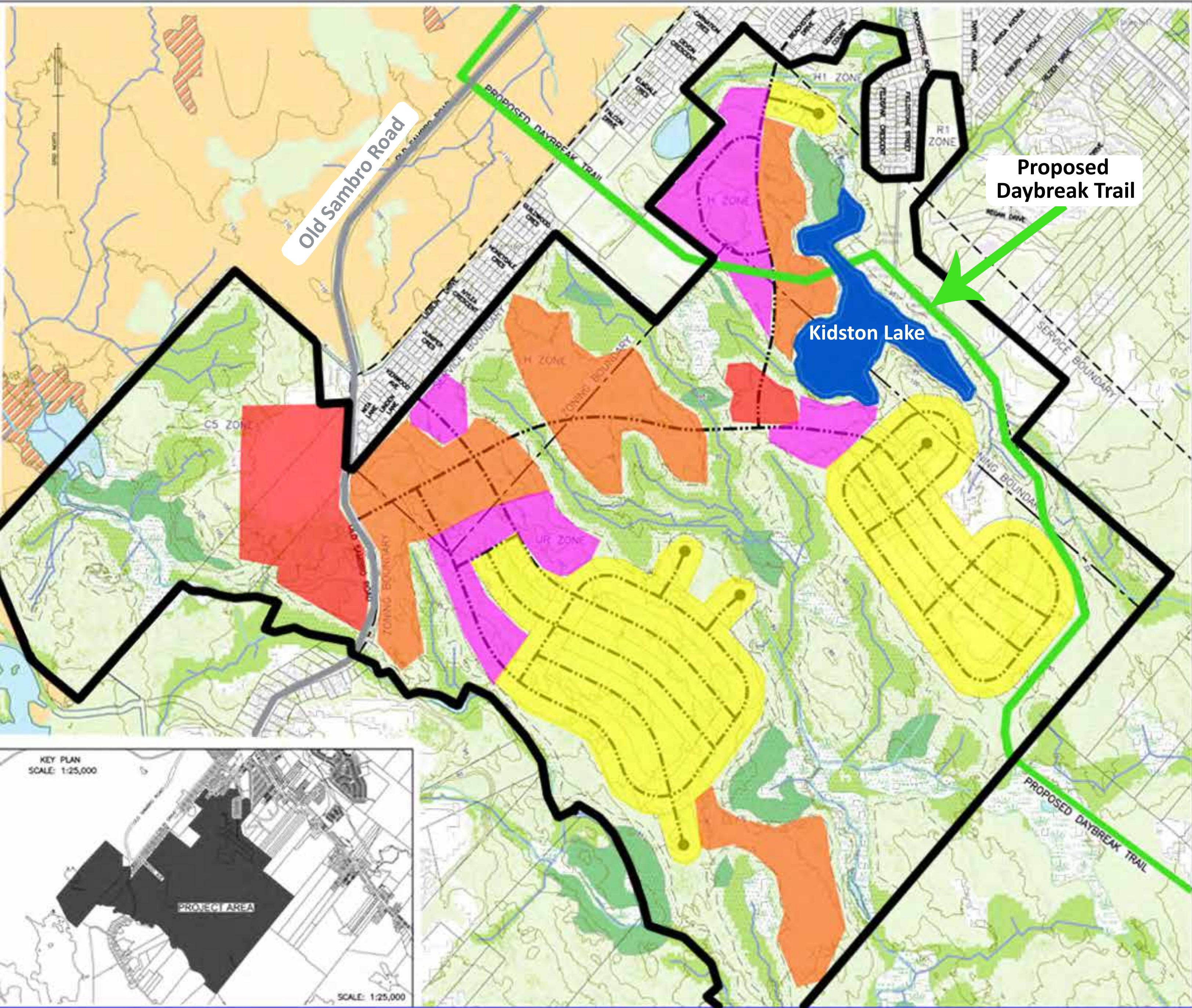


Appendix D: Kidston Lake South Concept Plan

Kidston Lake South

Preliminary Master Concept Plan

North American Real Estate Limited



Planning Approvals

KWR Approvals Inc.



Engineering & Surveying

SDMM

North American Real Estate Limited
Kidston Lake South

Old Sambro Road

Proposed Daybreak Trail

Kidston Lake

- NSE Mapped Watercourses
- Protected Flow Layer
- Wetland of Special Significance
- Maintained Mosier Concentration Area
- Old Forest
- Howe Sound Provincial Park
- NSE Mapped Wetland
- Lake
- Protected Boreal Forest (Urban Habitat)
- Protected Wetland Layer

PROPOSED LAND-USE

- | | |
|---|---------------------------|
|  | 2013-2017 (2013-2017) |
|  | 2018-2022 (2018-2022) |
|  | 2023 & beyond (2023-2023) |
|  | 2024-2028 (2024-2028) |
|  | 2029 & beyond (2029-2029) |

DEVELOPMENT STATISTICS

Parameter	Value	Unit	Source
Population	100,000	Persons	Assumed
Age	25-65	Years	Assumed
Sex	Male	Gender	Assumed
Occupation	Professional	Category	Assumed
Income	\$50,000	Annual	Assumed
Education	High School	Level	Assumed
Health	Good	Status	Assumed
Environment	Urban	Area	Assumed
Time	10 years	Duration	Assumed
Cost	\$100,000	Expense	Assumed
Benefit	\$200,000	Gain	Assumed
Risk	Low	Level	Assumed
Impact	High	Effect	Assumed
Frequency	Once	Event	Assumed
Duration	10 years	Time	Assumed
Location	Urban	Area	Assumed
Population	100,000	Persons	Assumed
Age	25-65	Years	Assumed
Sex	Male	Gender	Assumed
Occupation	Professional	Category	Assumed
Income	\$50,000	Annual	Assumed
Education	High School	Level	Assumed
Health	Good	Status	Assumed
Environment	Urban	Area	Assumed
Time	10 years	Duration	Assumed
Cost	\$100,000	Expense	Assumed
Benefit	\$200,000	Gain	Assumed
Risk	Low	Level	Assumed
Impact	High	Effect	Assumed
Frequency	Once	Event	Assumed
Duration	10 years	Time	Assumed
Location	Urban	Area	Assumed

1999

1990-1991	1991-1992
1992-1993	1993-1994
1994-1995	1995-1996
1996-1997	1997-1998
1998-1999	1999-2000
2000-2001	2001-2002
2002-2003	2003-2004
2004-2005	2005-2006
2006-2007	2007-2008
2008-2009	2009-2010
2010-2011	2011-2012
2012-2013	2013-2014
2014-2015	2015-2016
2016-2017	2017-2018
2018-2019	2019-2020
2020-2021	2021-2022
2022-2023	2023-2024
2024-2025	2025-2026
2026-2027	2027-2028
2028-2029	2029-2030
2030-2031	2031-2032
2032-2033	2033-2034
2034-2035	2035-2036
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KIDSTON LAKE DEVELOPMENT
CONCEPT PLAN

SPRINGFIELD & HARBETSFIELD
HALIFAX COUNTY, NOVA SCOTIA
FEBRUARY 11, 2022
SCALE: 1:5,000

SDMM

Author	Year	Country	Sample Size	Findings
Wang et al.	2005	China	1,000	High levels of anxiety and depression in children of parents with mental illness.
Li et al.	2006	China	1,200	Increased risk of emotional and behavioral problems in children of parents with mental illness.
Chen et al.	2007	China	1,500	Children of parents with mental illness show higher levels of internalizing and externalizing problems.
Wang et al.	2008	China	1,800	Children of parents with mental illness have higher levels of anxiety and depression.
Li et al.	2009	China	2,000	Children of parents with mental illness show higher levels of emotional and behavioral problems.
Chen et al.	2010	China	2,200	Children of parents with mental illness have higher levels of internalizing and externalizing problems.
Wang et al.	2011	China	2,500	Children of parents with mental illness show higher levels of anxiety and depression.
Li et al.	2012	China	2,800	Children of parents with mental illness have higher levels of emotional and behavioral problems.
Chen et al.	2013	China	3,000	Children of parents with mental illness show higher levels of internalizing and externalizing problems.
Wang et al.	2014	China	3,200	Children of parents with mental illness have higher levels of anxiety and depression.
Li et al.	2015	China	3,500	Children of parents with mental illness show higher levels of emotional and behavioral problems.
Chen et al.	2016	China	3,800	Children of parents with mental illness have higher levels of internalizing and externalizing problems.
Wang et al.	2017	China	4,000	Children of parents with mental illness show higher levels of anxiety and depression.
Li et al.	2018	China	4,200	Children of parents with mental illness have higher levels of emotional and behavioral problems.
Chen et al.	2019	China	4,500	Children of parents with mental illness show higher levels of internalizing and externalizing problems.
Wang et al.	2020	China	4,800	Children of parents with mental illness have higher levels of anxiety and depression.
Li et al.	2021	China	5,000	Children of parents with mental illness show higher levels of emotional and behavioral problems.
Chen et al.	2022	China	5,200	Children of parents with mental illness have higher levels of internalizing and externalizing problems.
Wang et al.	2023	China	5,500	Children of parents with mental illness show higher levels of anxiety and depression.
Li et al.	2024	China	5,800	Children of parents with mental illness have higher levels of emotional and behavioral problems.
Chen et al.	2025	China	6,000	Children of parents with mental illness show higher levels of internalizing and externalizing problems.

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KEY PLAN
SCALE: 1"=100,000'

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Appendix E: McCallum Wetlands & Watercourse Environmental Study

May 25, 2021

Mr. Alan Havill

North American Real Estate Limited (NAREL)

Email: alan.havill@icloud.com

Re: Kidston Lake Lands – Environmental Constraints for Wetlands and Watercourses

In support of proposed development, McCallum Environmental Ltd. (MEL) completed an Environmental Constraints Mapping exercise within a Study Area of approximately 1,109 acres in size surrounding Kidston Lake in the Spryfield Area.

The extent of wetland habitat and watercourses across the landscape are all constraints as they relate to the development process.

As part of this exercise MEL has developed a Predicted Wetland Layer (PWL) and Predicted Flow Layer (PFL) to identify potential, predicted aquatic features so that the Proponent (NAREL) can create a strategy for development.

Methodology

The Environmental Constraints Mapping exercise included desktop identification and mapping of the components listed in Table 1, below. Their occurrence within the Study Area is also provided.

Table 1: Environmental Constraints Mapping Results

Environmental Component	Database and Source	Presence Within Study Area
Surface Water features	NS Topographic Database Watercourses (GeoNova, 2021)	Multiple throughout Study Area and used in the PFL
	NS Topographic Database Waterbodies (GeoNova, 2021)	Two throughout Study Area
	NSE mapped wetlands (NSDL&F, 2021)	Multiple throughout Study Area and used in the development of PWL
	MEL Predicted wetlands and flow (see specific methods below)	Multiple throughout Study Area
	Wetlands of Special Significance (NSE, 2020)	One along western edge
	NSDNR Flow Accumulation (NSDL&F, 2021)	Multiple throughout Study Area and used in the PFL
Species at Risk	Mainland Moose Concentration Areas (NSDNR, 2012)	Study Area is within a Moose Concentration Area.
	Bat Critical Habitat (EC, 2015)	No known critical habitat within Study Area
	Wood Turtle Critical Habitat (ECCC, 2019)	No known critical habitat within Study Area
	Boreal Felt Lichen predicted habitat (Cameron and Neily, 2008)	Predicted habitat scattered throughout Study Area
	Atlantic Coastal Plain Flora (NSDNR, 2019)	None within Study Area
	Significant Species and Habitats Database (NSDL&F, 2018)	None within Study Area
General Land Use	Crown Lands (GeoNova, 2021)	Crown land directly northwest and southeast of Study Area.

Environmental Component	Database and Source	Presence Within Study Area
	National Migratory Bird Sanctuaries (Government of Canada, 2021)	None within Study Area
	Important Bird Areas (IBA Canada, 2021)	None within Study Area
	Buildings & Roads (GeoNova, 2021)	No buildings in the Study Area. Roads exists northeast of Kidston Lake, Old Sambro Road runs through the western extent.
	Old Forest (NSDL&F, 2020a)	Old forest identified directly northwest of Study Area.
	Abandoned Mine Openings (NS Abandoned Mine Openings Database, 2020)	None within Study Area
	Water Supply Areas (DNR, 2009)	None within Study Area
	Private Conservation Lands (NSNT, 2020)	None within Study Area
	Provincial Parks & Protected Areas (NSDL&F, 2020b)	None within Study Area. Long Lake Provincial Park is directly northwest of the Study Area. Graves Oakley Memorial Park is located directly north of the Study Area.

Predicted Wetland Layer Methodology

A detailed, stepwise approach to the development of the Predicted Wetland Layer (PWL) using GIS is provided below:

1. A Digital Elevation Model (DEM) based on a 1-m LiDAR was downloaded from Nova Scotia DataLocator – Elevation Explorer.
2. A slope analysis was run to determine all areas exhibiting $\leq 2\%$ slope, as this is where the highest likelihood of wetlands exists.
3. The NSE mapped wetlands and wet areas mapping layers were clipped to the Study Area. Modelled depth to groundwater of 0-0.5 m was selected.
4. The provincial forestry layer was sorted to only include species that are more likely to exist in wetlands (i.e facultative or facultative-wet species). The top three most abundant species within each forest group must meet this criteria.
5. Soils were retrieved from the Soil Survey of Halifax County (National Soil Database, 2002), and were determined to be too coarse of a scale to utilize in this exercise.
6. Suitable topography was determined using the Ecosection GIS layer, filtered for the following attributes: hummocky, smooth flat, salt marsh, and water.
7. The following layers were clipped: slope analysis, NSE mapped wetland, wet areas mapping, forestry vegetation, Ecosection topography
8. A union of the clipped layer was completed to create the final PWL.

Predicted Flow Layer Methodology

The following steps were followed to development the Predicted Flow Layer (PFL):

1. A hillshade model based on a 1-m LiDAR was downloaded from Nova Scotia DataLocator – Elevation Explorer.
2. NSE mapped watercourses and flow accumulation layers were clipped to the Study Area. These layers were merged.
3. Visual analysis of the hillshade was completed to identify topographically low areas, especially those in a linear form. Predicted flow was added to the merged provincial layers.

Results

A mapped watercourse exists along the entire length of the southwest Study Area boundary. Two lakes exist within the Study Area: Kidston Lake and Fish Brook Pond. Several mapped wetlands exist throughout the Study Area, which are categorized as swamps. The wetlands are largely isolated from mapped watercourses; both layers run in a general north-south trend. One Wetland of Special Significance (WSS) exists along the northwest boundary, adjacent to Long Lake Provincial Park

Similar to the mapped NSE wetland layer, the PWL is positioned in a general north-south pattern, following the PFL. It may be that these are long linear wetlands, or they may be disconnected. The PWL has some scattered, less concentrated, “salt and pepper” distribution in the western portion of the Study Area, and to the east and west of Old Sambro Road. These represent areas with a lower likelihood of wetlands as compared to the more concentrated areas surrounding the PFL lines. Although these may have a lower likelihood of being wetlands, they may still indicate potential isolated wetlands.

Desktop review reveals the potential for several Species at Risk within the Study Area. These results do not represent ground-truthed findings, field surveys will need to take place within areas with expected wetland alterations. Predicted boreal felt lichen (*Erioderma pedicellatum*) habitat polygons exist within the Study Area. This layer was created using a GIS habitat model to predict potential habitat for this endangered lichen species (Cameron and Neily, 2008). This layer does not represent ground-truthed data and would need to be verified through field work.

The Study Area exists within a mainland moose (*Alces alces americana*) concentration area. This layer represents a geographic model of moose distribution patterns (NSDNR, 2012), not ground-truthed data. The use of the landscape by mainland moose would need to be verified through field work.

The presence of Long Lake Provincial Park directly northwest of the Study Area may indicate an increased likelihood of constraints adjacent to the shared border. Should development plans occur along the northeast Study Area boundary, regulatory consultation with Nova Scotia Environment and Nova Scotia Department of Lands and Forestry is recommended.

Limitations

The constraints presented in this analysis are based on desktop evaluation, only; field verification will need to occur within seasonally appropriate timing windows to refine predicted constraints. Predictive modelling used in this analysis is based on freely available GIS data, with varying degrees of accuracy and precision, and may overpredict the presence of wetlands and watercourses and/or predict incorrect locations of these features. Field verification should be completed before development takes place.

In closing, we recommend further field verification to refine these constraints once development plans are in place. Additionally, consultation with relevant provincial and municipal agencies to determine setbacks and development constraints are recommended for planning purposes.

If you have any questions, please do not hesitate to contact the undersigned with any questions you might have.

Sincerely,



Emma Posluns

(902) 229-8362

emma@mccallumenvironmental.com

References:

Cameron, R.P., and T. Neily. 2008. Heuristic Model for Identifying the Habitats of *Erioderma pedicellatum* and Other Rare Cyanolichens in Nova Scotia, Canada. *The Bryologist*, 111(4): 650-658.

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Nova Scotia Environment. 2020. Wetland of Special Significance GIS Layer.

Nova Scotia Nature Trust (NSNT). 2020. Private Conservation Lands GIS Layer.

Prepared For:
Mr. Alan Havill

FIGURE 1

Kidston Lake Lands
Environmental Constraints

Predicted Wetland & Flow
Layers

- NSE Mapped Watercourse
- Predicted Flow Layer
- Wetland of Special Significance
- Mainland Moose Concentration Area
- Old Forest
- Nova Scotia Provincial Park
- NSE Mapped Wetland
- Lake
- Predicted Boreal Felt Lichen Habitat
- Predicted Wetland Layer
- Study Area



Coordinate System: NAD 1983 CSRS UTM Zone 20N
Projection: Transverse Mercator
Datum: North American 1983 CSRS
Units: Meter



0 125 250 500 m

1:12,000 Scale when printed @ 11" x 17"

Drawn By: EP
Reviewed By: Date: 2021-05-21



McCallum Environmental Ltd.

Prepared For:

Mr. Alan Havill

FIGURE 1

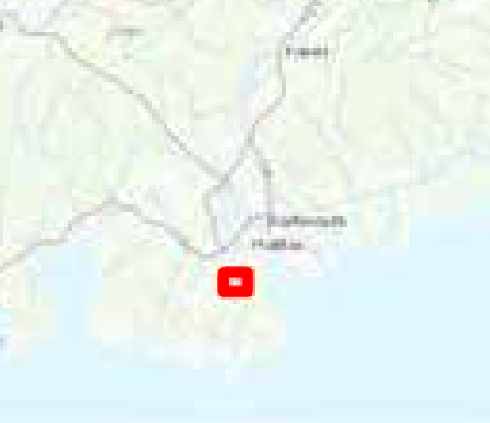
Kidston Lake Lands
Environmental Constraints

DESKTOP
PREDICTED MODEL
Wetland & Flow Layers

- Approximate Proposed Trail Location
- NSE Mapped Watercourse
- Predicted Flow Layer
- Wetland of Special Significance
- Mainland Moose Concentration Area
- Old Forest
- Nova Scotia Provincial Park
- NSE Mapped Wetland
- Lake
- Predicted Boreal Felt Lichen Habitat
- Predicted Wetland Layer
- Study Area

- Possible Trail Crossings
- Bridge
 - Culvert
 - Wetland Crossing

Note = The Predicted Flow and Wetland Layers were generated by a Desktop Modeling Exercise. Field verification is required.



Coordinate System: NAD 1983 CSRS UTM Zone 20N
Projection: Transverse Mercator
Datum: North American 1983 CSRS
Units: Meter



0 125 250 500 m

1:12,000 Scale when printed @ 11" x 17"

Drawn By: EP
Reviewed By: MM
Date: 2021-06-07



McCallum Environmental Ltd.

Appendix F: Halifax Green Network Plan

The background of the entire page is a close-up photograph of green leaves, likely from a tree or shrub, with prominent veins. The image is slightly blurred, creating a soft, naturalistic feel. The leaves are various shades of green, from a vibrant lime green to a deeper forest green.

HALIFAX

GREEN NETWORK PLAN

JUNE 2018



Map 6: GREEN NETWORK ECOLOGY MAP (ZOOMED INTO THE URBAN CORE)

LEGEND

- | | | |
|---|--|---|
|  Airports |  Parks |  Regulated Areas |
|  Roads |  Protected Areas |  Areas of High Environmental Value Overlap |
|  Planned Roads |  Proposed Protected Areas |  Core Areas and Corridors |
|  Lakes |  Essential Corridor |  Minimal Value to Regional Green Network |
| |  Important Corridor | |

Appendix G: SDMM Servicing Capacity Study



Servant, Dunbrack, McKenzie & MacDonald Ltd.
NOVA SCOTIA LAND SURVEYORS & CONSULTING ENGINEERS

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P.Eng., NSLS
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H. JAMES McINTOSH
P.Eng., NSLS, CLS
KEVIN A. ROBB
NSLS
MICHAEL S. TANNER
NSLS
ADAM J. PATTERSON
P.Eng., NSLS

October 4, 2021

Mr. Kevin Riles
KWR Approvals Inc.
P.O. Box 44153
Bedford, NS
B4A 3Z8

Re: Kidston Lake, Spryfield & Harrietsfield – Downstream Wastewater Sewer Analysis

North America Real Estate Ltd. is proposing to redevelop their lands surrounding Kidston Lake in Spryfield, NS. The project incorporates 629 acres (255 ha.) of undeveloped land that generally resides outside the Halifax Regional Municipality (HRM)'s current serviceable boundary, refer to Figure 1 in the appendix. These properties are generally zoned as a Holding zone by HRM, which limit development density. As per Halifax Water Design and Construction Specifications (2020), Section 4.2.1 and at the request of KWR Approvals, SDMM has prepared the following capacity analysis for the sewer systems immediately downstream of the proposed development.

Downstream Terminus and Sewer Route

When consulting with Halifax Water regarding these lands, they would not confirm a terminus point for the downstream review as these lands are currently outside their serviceable boundary and are zoned for rural low-density development, see emailed correspondence in the appendix. From review of HRM's sewer GIS files we see that the main collector sewer follows Herring Cove Road and the McIntosh Run River System with a pump station located on Princeton Avenue, we selected this to be the terminus of our downstream review.

HRM contour mapping files indicate that the subject lands generally slope away from Herring Cove Road and serviceable boundary (see Figure 1). This suggests the project will rely on new sewage lift station(s), positioned within the new development to pump sewage up to existing adjacent gravity systems. The point of sewer connection could be any adjacent existing gravity sewer system.

Sewer Route Options

With the size of the proposed development and flexibility with a pumped connection, four (4) possible pipe sewer routes were considered. These routes could connect to existing gravity sewers located within

Fieldstone Street, Regan Drive, Woodcrest Drive, or Beachstone Drive. A comparison of these various sewer routes can be found in Figure 2 of the appendix.

Options 1

Fieldstone Street is directly adjacent to the subject lands however only has a 250mm sewer with limited capacity. As utilizing this sewer route would require upgrading/replacement, this option was discarded. It was noted that this system connects to the Beachstone Drive system.

Option 2

Regan Drive is in front of the Rockingstone Heights School adjacent to the subject lands however also only has a 250mm sewer, with limited capacity. This system runs adjacent to Greystone Street, crossing Herring Cove Road where it connects to a different trunk sewer which ends at the above noted Princeton Avenue pump station.

Option 3

Woodcrest Drive is potentially lower in elevation than the subject lands however would require crossing various privately owned lands with roughly 550m of sewer pipe. Additionally, Woodcrest Drive is currently serviced by a small pump station which would need to be upgraded to handle the subject lands. Due to these factors this option was discarded.

Option 4 - Selected Route

Beachstone Drive is directly adjacent to the subject lands and has an existing 525mm sewer within however is higher in elevation than the subject lands requiring pump station(s) within the subject lands. As previously noted, the subject lands drain away from the serviceable boundary and pump station(s) are anticipated. Given the proximity and size of this existing sewer we selected this as the project's connection point to the downstream sewer route; with the terminus being the Princeton Avenue pump station forty-nine (49) lengths of sewer were analyzed.

Tributary Drainage Areas & Population

Existing and proposed tributary areas for the sewer sheds are depicted in Figure 3 with magnified views depicted in Figures 4 A – 4 I of the appendix.

Using a nominal development density of 20 people/acre (+/-50 people/hectare) and the entire area of the subject lands being 255ha we estimate a potential population for these lands to be 12,730 people.

We determined equivalent populations for the existing sewer sheds based on the following resources:

- Halifax Water Design & Construction Specifications (2020)
- Atlantic Canada Wastewater Guidelines Manual for Collection, Treatment and Disposal (2006)
- Zoning information from the HRM Land-Use By-Law for Dartmouth
- Correspondence with Halifax Water (Population Densities)

A summary of the density calculations are presented in Table 1 with tributary area and population calculations, including the proposed development, in Table 2 found in the appendix.

Estimated Wastewater Flow Calculations

Estimated wastewater flows were calculated for each reach of sewer based on the hydraulic design formula outlined in Section 4.2.2 of the Halifax Water Design & Construction Specifications (2020). Flows calculated include the Halifax Water safety factor of 1.25 with allowances of 0.30m³ per person per day for residential development and 24m³ per gross hectare per day for infiltration/inflow. A summary of the estimated wastewater flow calculations from the existing and proposed sewer sheds are presented in Table 3 found in the appendix.

Existing Pipe Capacity

Existing pipe capacities were calculated using Manning's Equation for each reach of downstream sewer utilizing pipe characteristics provided by Halifax Water GIS information. A summary of the existing pipe capacities are presented in Table 4 found in the appendix.

Conclusion

Comparisons between the proposed estimated flows calculated in Table 3 and existing pipe capacities calculated in Table 4 indicates that the Beachstone Drive downstream sewer route has sufficient capacity to accommodate the anticipated wastewater flows generated by this proposed development population however note that these lands are not within the serviceable boundary and relocating this boundary is at the discretion of HRM.

For additional information or comment please contact the undersigned.

Regards,

Servant, Dunbrack, McKenzie & MacDonald Ltd.

Geoff MacLean, P.Eng.
Project Engineer

Z:\SDMM\36000-36999\36200\36203\Design\Sanitary\36203 Wastewater Analysis Report.docx

APPENDIX



From: Meghan Woszczyński <meghanw@halifaxwater.ca>
Sent: Thursday, July 8, 2021 1:29 PM
To: Justin MacCallum
Cc: Jennifer Richardson
Subject: RE: Kidston Lake Sanitary Analysis

Hi Justin,

This is a large area outside of the current Service Boundary.

The extend of the downstream analysis will be determine at the planning application stage when HRM has accepted the application and more information on the units and phases is known.

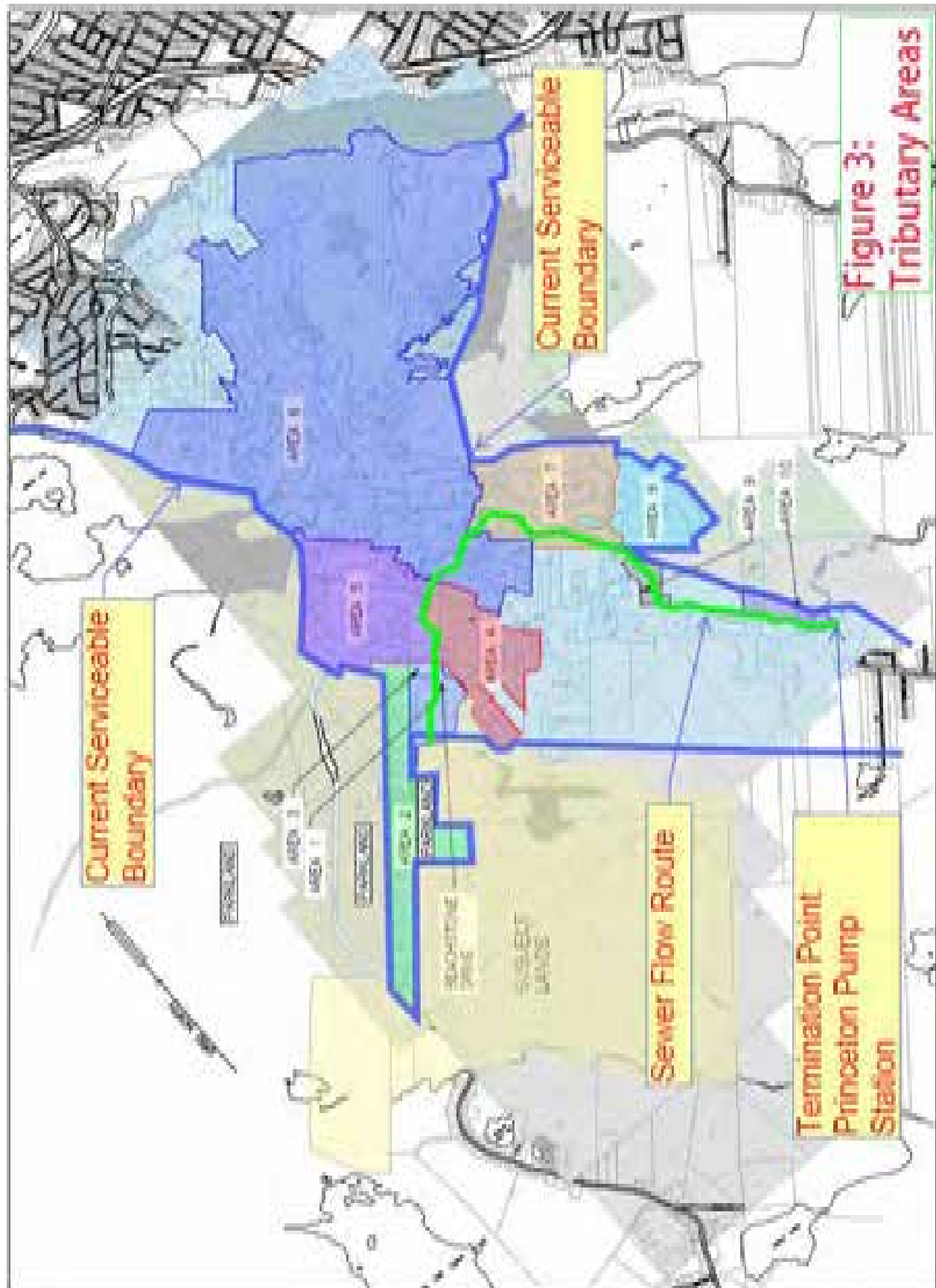
Thanks again
Meghan

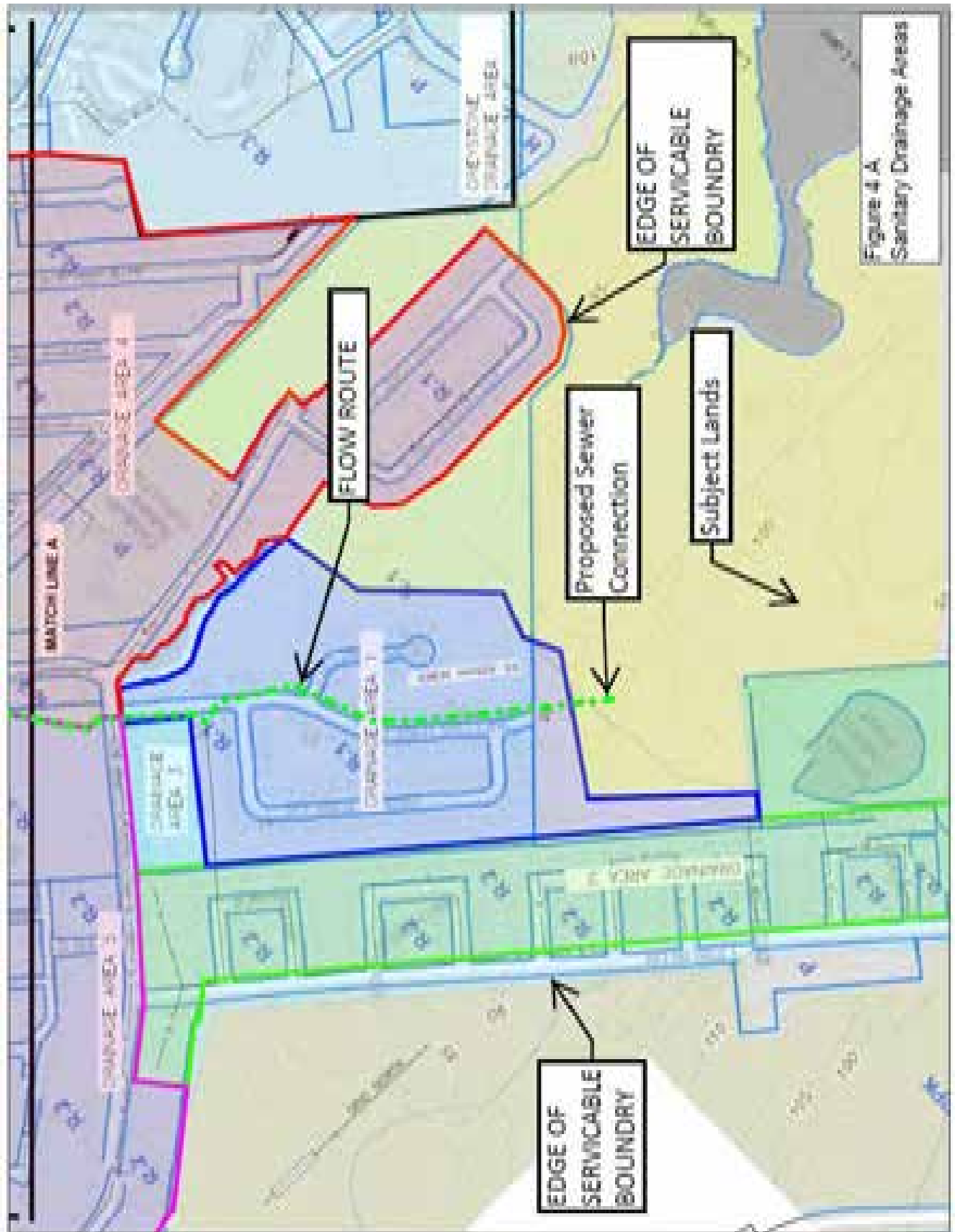
Meghan Woszczyński, M.A.Sc., P.Eng

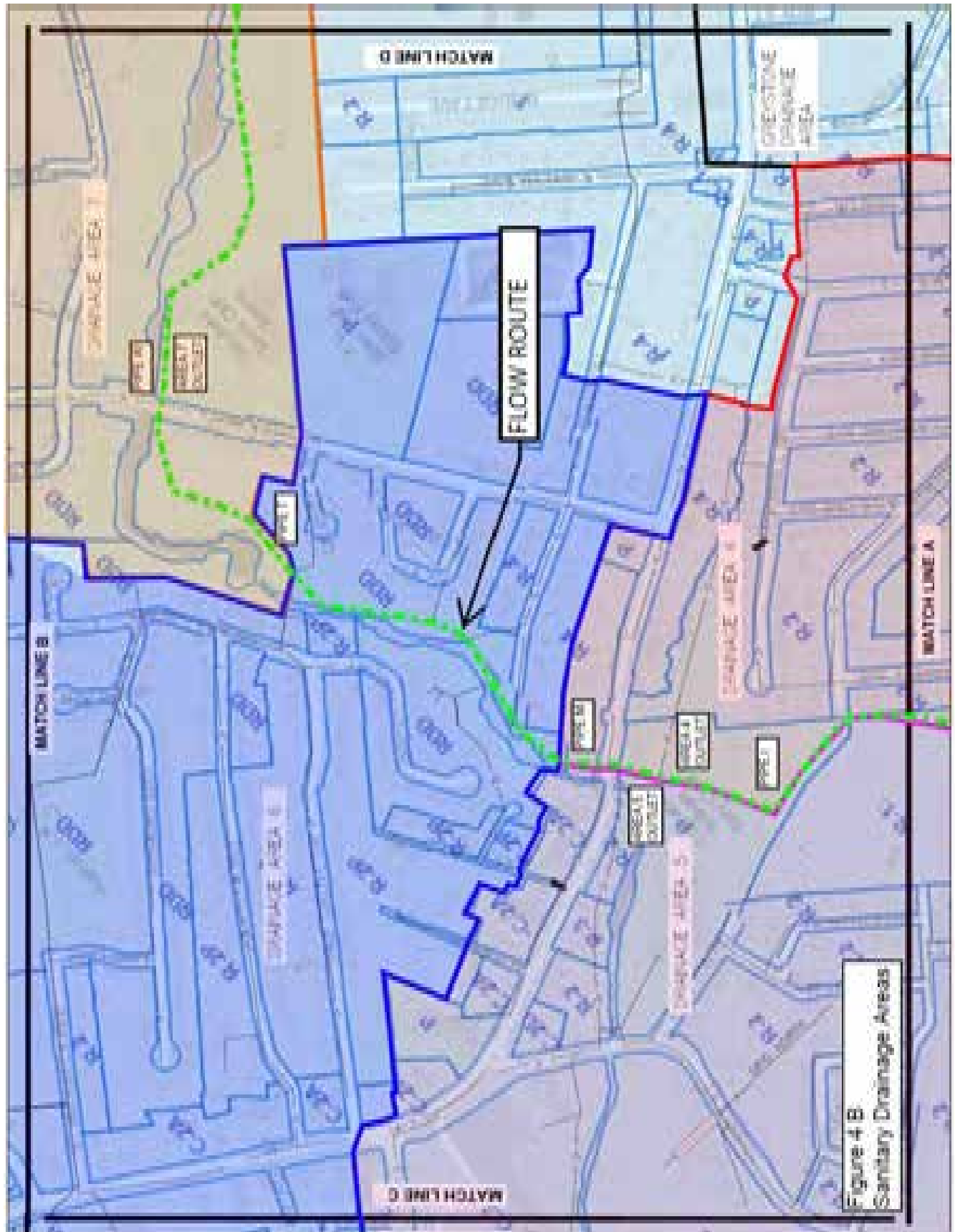
Development Engineer, Halifax Water
480 Cowie Hill Rd, PO Box 6086 RPO CSC Halifax, NS B3K 5M1
C: 903-309-3915 E: meghanw@halifaxwater.ca

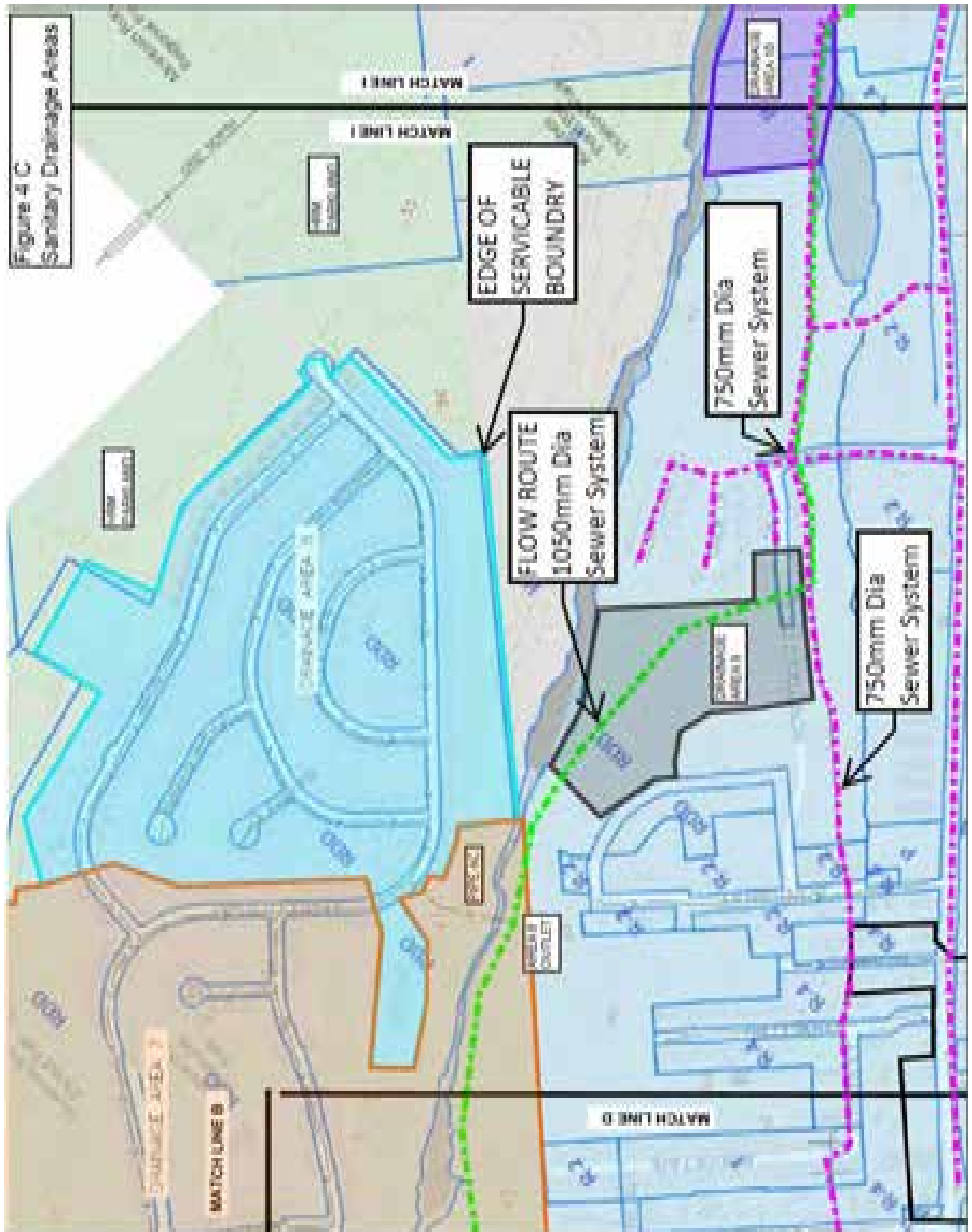
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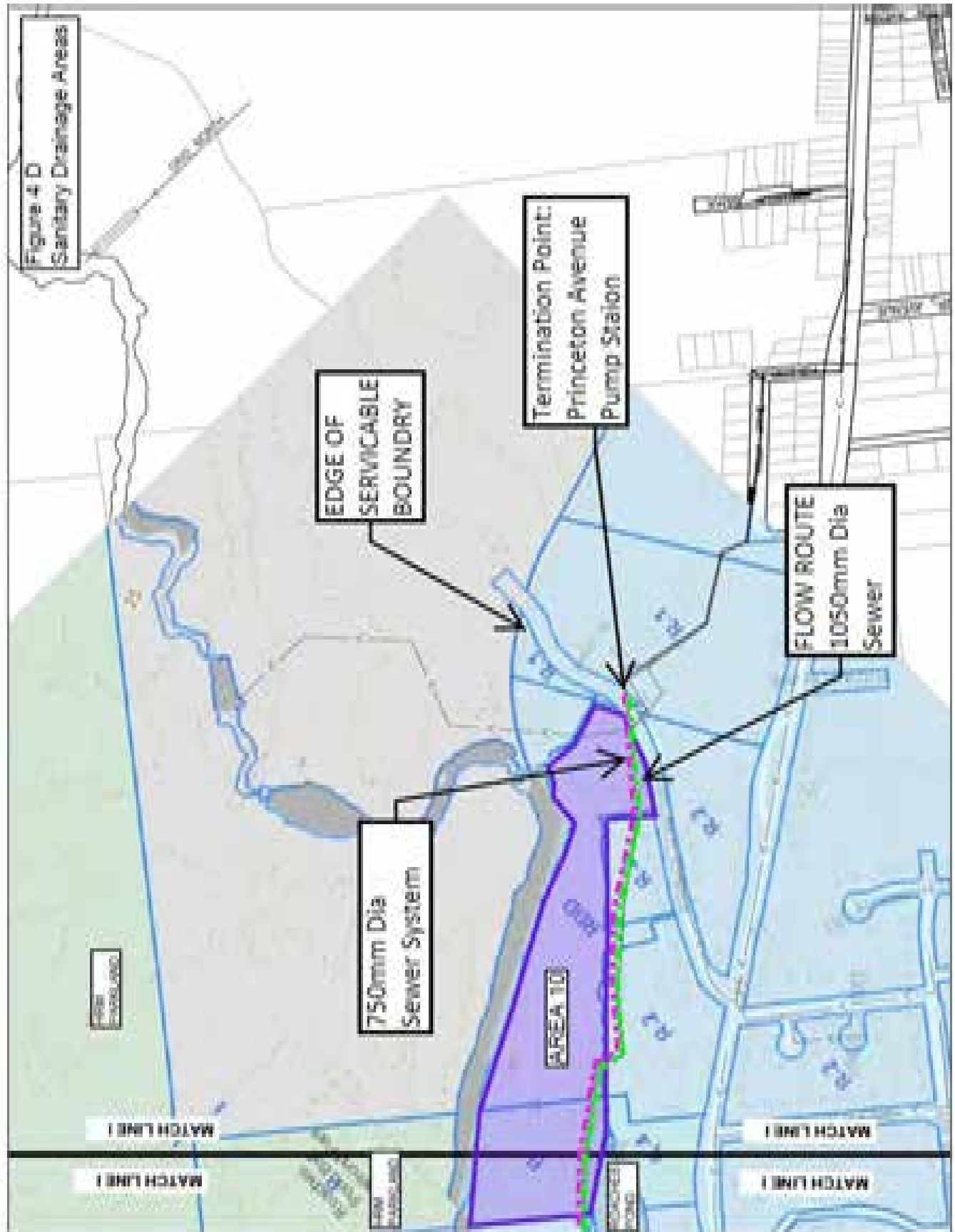
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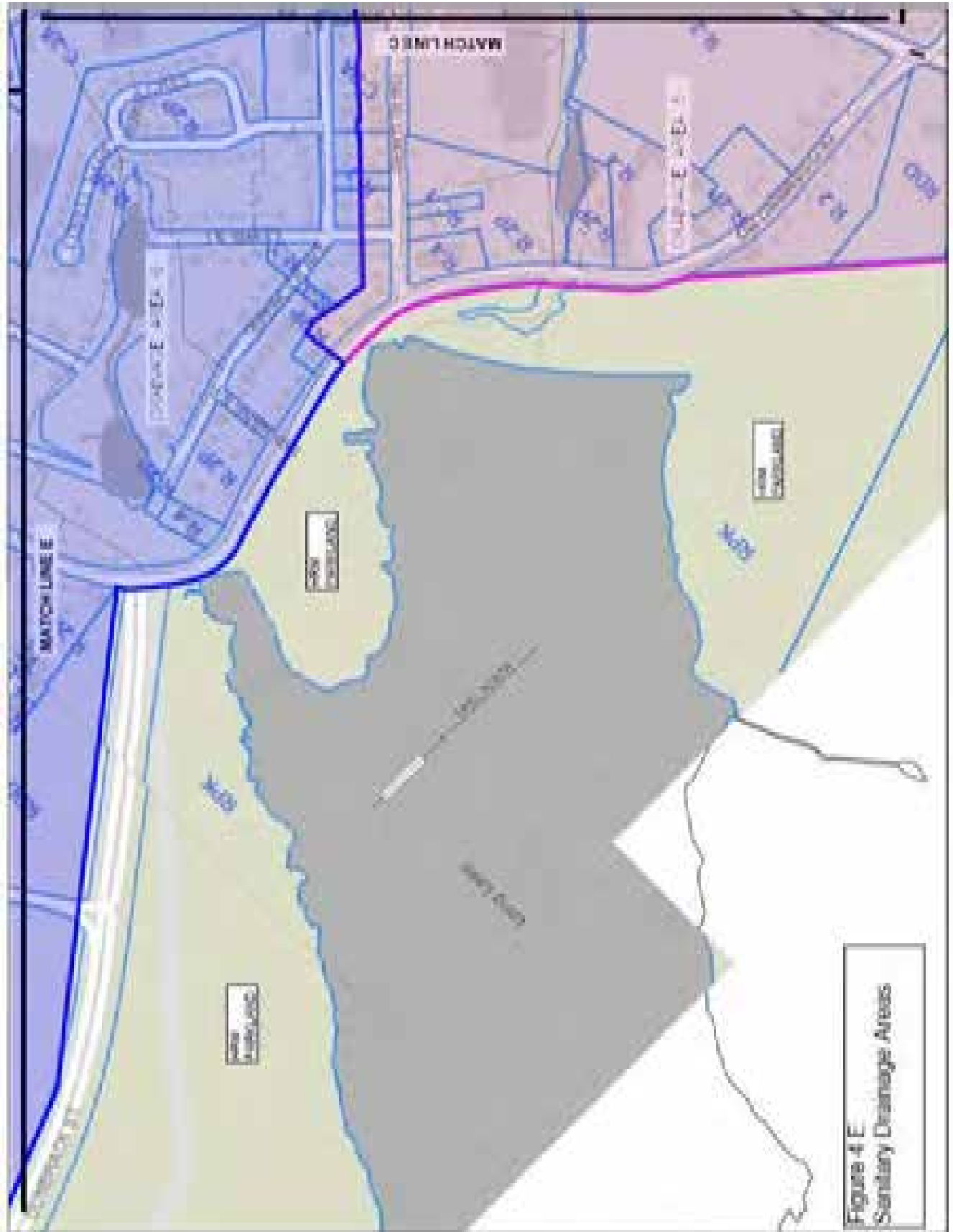


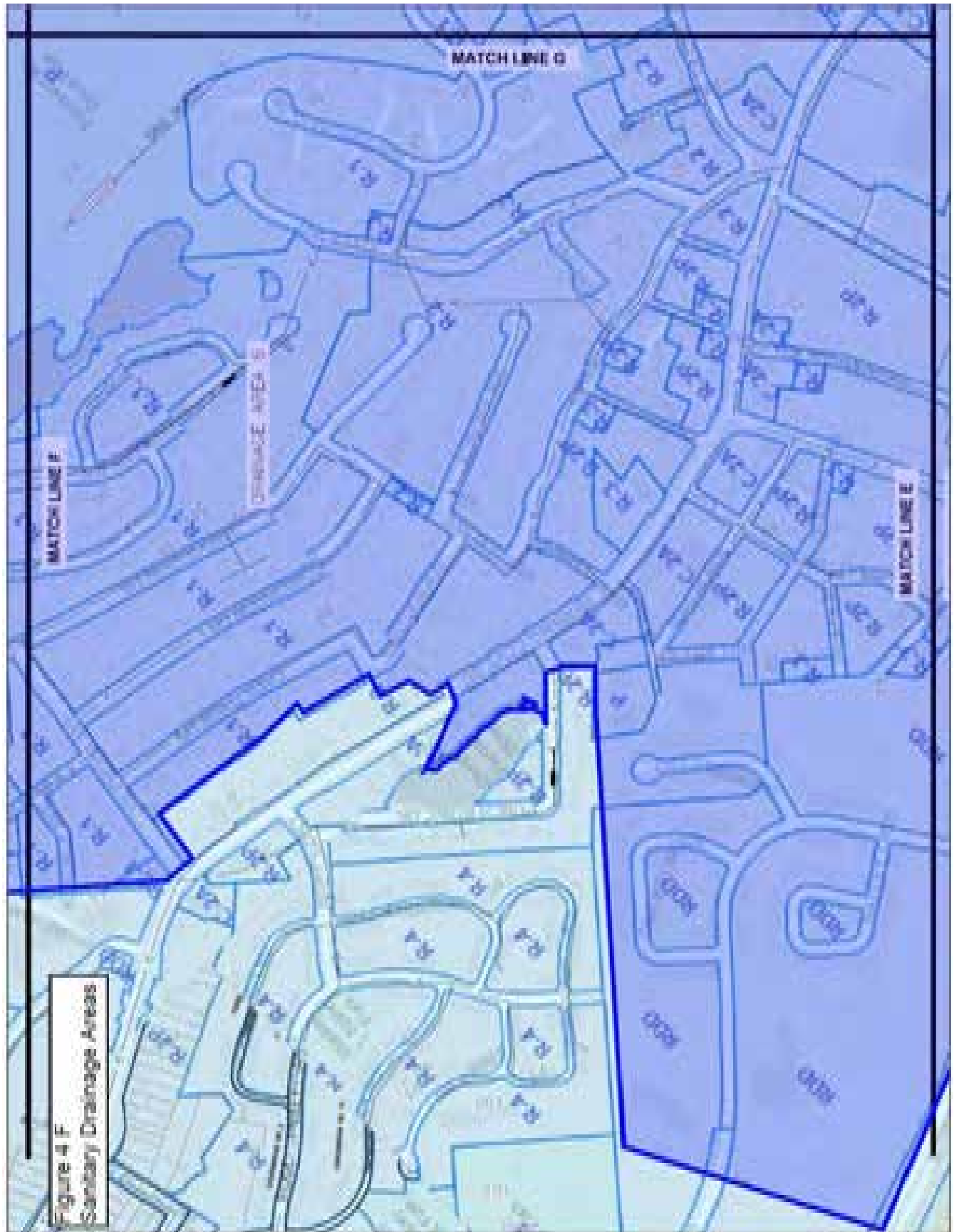




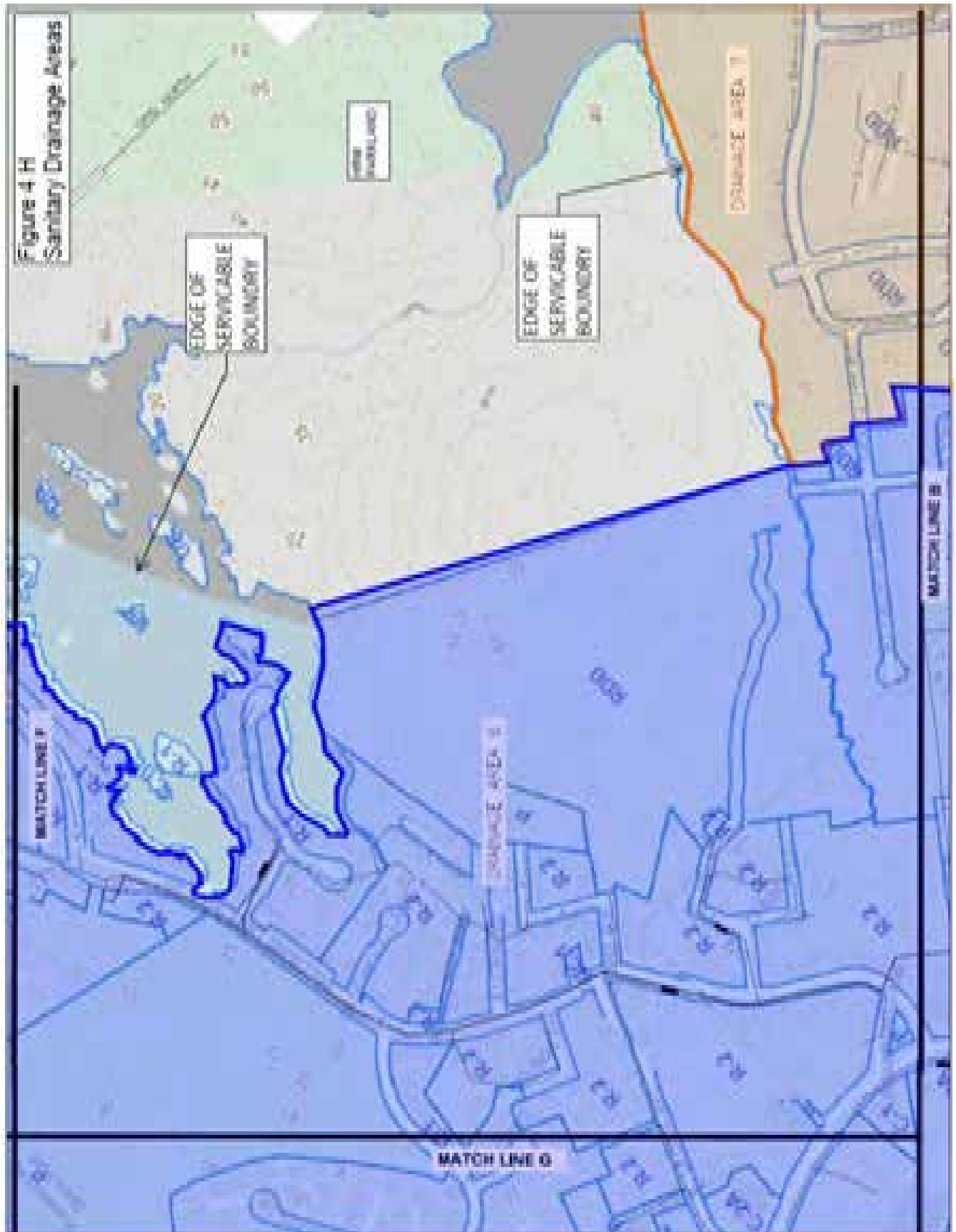












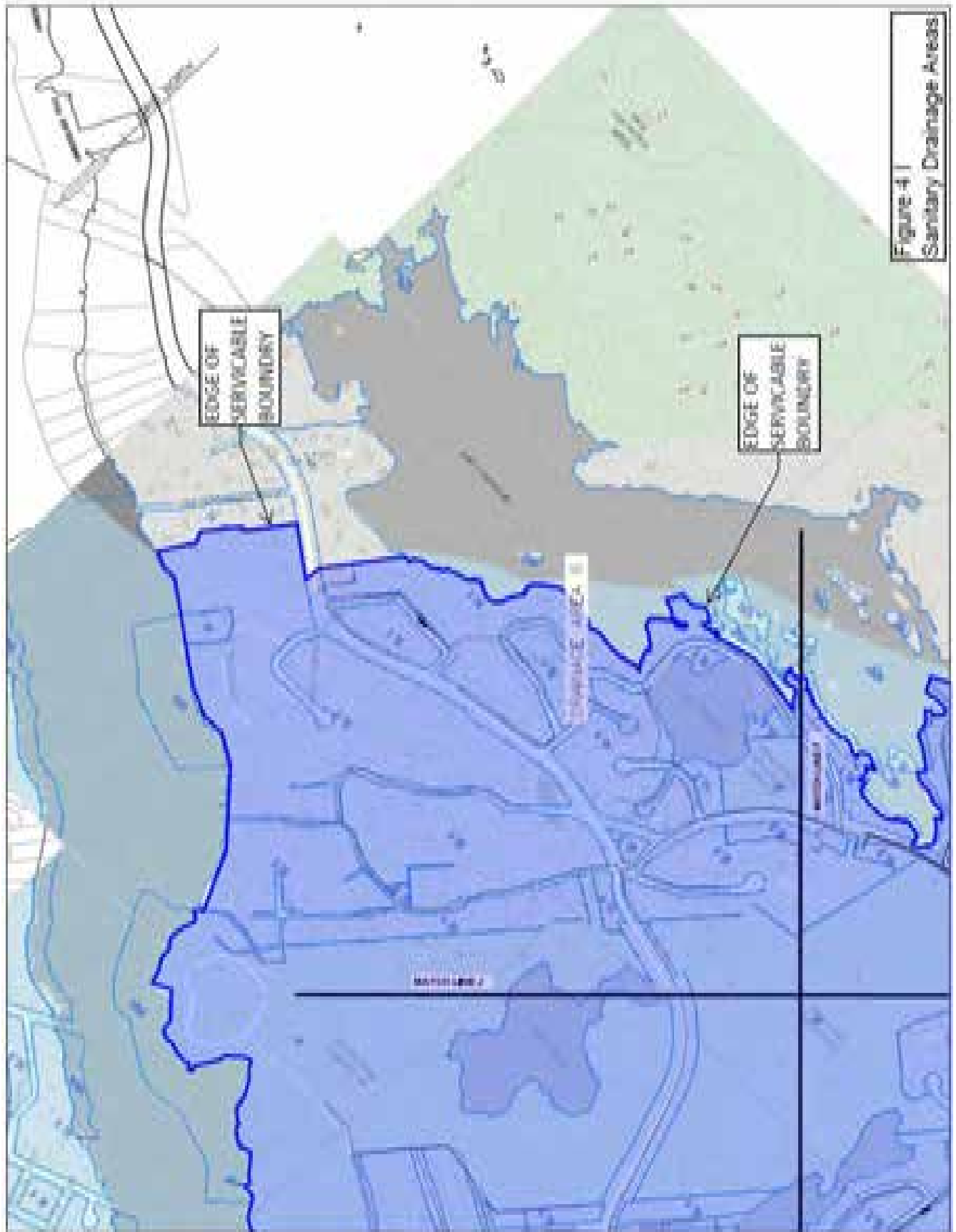


Table 1: Halifax Mainland By-Law Density Values					
Zoning	Number of Units	People per unit (HW)	Min. Lot Area (ft ² Ha)		People per Hectare
R-1 - Single Family Dwelling Zone					
	1	3.35	5,000.00	0.046	73
R-2 - Two Family Dwelling Zone					
	2	3.35	5,000.00	0.046	145
R-2P - General Residential Zone					
	4	3.35	6,000.00	0.056	241
R-3 -Multiple Dwelling Zone					
	*By-Law (125 people per acre - if located outside Schedule A)				310
	*By-Law (250 people per acre - if located in Schedule A)				620
R-4 -Multiple Dwelling Zone					
	*By-Law (75 people per acre)				185
RDD - Residential Development District Zone					
	2	3.35	5,000.00	0.046	145
C-2A - Minor Commercial Zone					
	*Atlantic Canada Wastewater Guidelines				85
P Zone - Park & Institutional Zone					
	*Atlantic Canada Wastewater Guidelines				85

Table 2 - Tributary Areas and Population					
Area	Sub-Area	People per Hectare	Tributary Area (ha)	Equivalent Population	
P (Proposed Development)					
1					
	P	50	254.60	12,730	
	Sub-Totals		254.60	12,730	
2	R-1 Zone	73	10.90	796	
	Sub-Totals		10.90	796	
3	P Zone	85	13.27	1,128	
	R-2 Zone	145	22.22	3,222	
	Sub-Totals		35.49	4,350	
4	R-2 Zone	145	1.28	186	
	Sub-Totals		1.28	186	
5	R-1 Zone	73	4.37	319	
	R-2 Zone	145	12.12	1,757	
	R-3 Zone	310	3.23	1,001	
	R-4 Zone	185	1.94	360	
	P Zone	85	3.57	303	
	Sub-Totals		25.23	3,741	
6	R-1 Zone	73	121.56	8,874	
	R-2 Zone	145	32.85	4,763	
	R-2P Zone	241	29.45	7,097	
	R-3 Zone	310	1.98	614	
	R-4 Zone	185	2.14	396	
	C-2A Zone	85	11.90	1,012	
	P Zone	85	86.26	7,332	
	RDD Zone	145	133.57	19,368	
	Sub-Totals		420	49,456	
7					
	RDD Zone	145	50.13	7,269	
	Sub-Totals		50.13	7,269	
8					
	RDD Zone	145	26.36	3,822	
	Sub-Totals		26.36	3,822	
9					
	RDD Zone	145	4.86	705	
	Sub-Totals		4.86	705	
10					
	P Zone	85	1.84	156	
	RDD Zone	145	3.77	547	
	Sub-Totals		5.61	703	
Totals				875.04	89,438

Table 3: Estimated Wastewater Flow Calculations

Pipe	Area Number(s)	Tributary Area (ha)	Equivalent Population	Average Dry Weather Flow, a (m ³ /d)	Harmon Peaking Factor, M	Infiltration/Inflow Allowance, b (m ³ /d)	Peak Dry Weather Flow, a x M (m ³ /d)	Peak Design Flow, (a x M) + b, (m ³ /d)	Safety Factor	Estimated Flow, Q (m ³ /d)
1	P+1	265.50	13526	4,057.7	2.82	6,372.0	11,456.8	17,828.8	1.25	20,693
A	P+(1-2)	300.99	17876	5,362.7	2.70	7,223.8	14,487.3	21,711.1	1.25	25,333
B	P+(1-2)	300.99	17876	5,362.7	2.70	7,223.8	14,487.3	21,711.1	1.25	25,333
C	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
D	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
E	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
F	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
G	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
H	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
I	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
J	P+(1-3)	302.27	18061	5,418.3	2.70	7,254.5	14,613.3	21,867.8	1.25	25,521
K	P+(1-4)	327.50	21802	6,540.6	2.61	7,860.1	17,103.0	24,963.1	1.25	29,239
L	P+(1-5)	368.37	18061	5,418.3	2.70	8,840.9	14,613.3	23,454.2	1.25	27,108
L2	P+(1-5)	368.37	21802	6,540.6	2.61	8,840.9	17,103.0	25,943.9	1.25	30,220
M	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
N	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
O	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
P	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
Q	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
R	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
S	P+(1-5)	368.37	27484	8,245.2	2.51	8,840.9	20,734.6	29,575.5	1.25	34,759
T	P+(1-6)	788.08	76940	23,081.9	2.10	18,914.0	48,384.0	67,298.0	1.25	79,394
U	P+(1-6)	788.08	76940	23,081.9	2.10	18,914.0	48,384.0	67,298.0	1.25	79,394

V	P+(1-6)	788.08	76940	23,081.9	2.10	18,914.0	48,384.0	67,298.0	1.25	79,394
W	P+(1-7)	838.21	84208	25,262.5	2.06	20,117.1	52,103.9	72,221.0	1.25	85,247
X	P+(1-7)	838.21	84208	25,262.5	2.06	20,117.1	52,103.9	72,221.0	1.25	85,247
Y	P+(1-7)	838.21	84208	25,262.5	2.06	20,117.1	52,103.9	72,221.0	1.25	85,247
Z	P+(1-7)	838.21	84208	25,262.5	2.06	20,117.1	52,103.9	72,221.0	1.25	85,247
AA	P+(1-7)	838.21	84208	25,262.5	2.06	20,117.1	52,103.9	72,221.0	1.25	85,247
AB	P+(1-7)	838.21	84208	25,262.5	2.06	20,117.1	52,103.9	72,221.0	1.25	85,247
AC	P+(1-8)	864.57	88031	26,409.2	2.05	20,749.7	54,037.0	74,786.8	1.25	88,296
AD	P+(1-8)	864.57	88031	26,409.2	2.05	20,749.7	54,037.0	74,786.8	1.25	88,296
AE	P+(1-8)	864.57	88031	26,409.2	2.05	20,749.7	54,037.0	74,786.8	1.25	88,296
AF	P+(1-8)	864.57	88031	26,409.2	2.05	20,749.7	54,037.0	74,786.8	1.25	88,296
AG	P+(1-8)	864.57	88031	26,409.2	2.05	20,749.7	54,037.0	74,786.8	1.25	88,296
AH	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AI	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AJ	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AK	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AL	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AM	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AN	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AO	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AP	P+(1-9)	869.43	88735	26,620.6	2.04	20,866.4	54,391.8	75,258.2	1.25	88,856
AQ	P+(1-10)	875.04	89438	26,831.5	2.04	21,001.0	54,745.3	75,746.3	1.25	89,433
AR	P+(1-10)	875.04	89438	26,831.5	2.04	21,001.0	54,745.3	75,746.3	1.25	89,433
AS	P+(1-10)	875.04	89438	26,831.5	2.04	21,001.0	54,745.3	75,746.3	1.25	89,433
AT	P+(1-10)	875.04	89438	26,831.5	2.04	21,001.0	54,745.3	75,746.3	1.25	89,433
AU	P+(1-10)	875.04	89438	26,831.5	2.04	21,001.0	54,745.3	75,746.3	1.25	89,433

Table 4: Pipe Capacity Calculations

Pipe	Sewer Type	Pipe Shape	Pipe Diameter (mm)	Material	Slope (%)	Mannings Coefficient, n	Manning's Capacity, Qc (m ³ /d)	Wastewater % of Capacity
1	Sanitary	Round	525	PVC	0.70	0.01	40,415	51%
A	Sanitary	Round	600	CONC	0.48	0.013	36,755	69%
B	Sanitary	Round	600	CONC	1.28	0.013	60,020	42%
C	Sanitary	Round	600	CONC	1.72	0.013	69,575	37%
D	Sanitary	Round	600	CONC	1.31	0.013	60,719	42%
E	Sanitary	Round	600	CONC	2.05	0.013	75,957	34%
F	Sanitary	Round	600	CONC	6.09	0.013	130,918	19%
G	Sanitary	Round	600	CONC	3.56	0.013	100,096	25%
H	Sanitary	Round	600	CONC	6.85	0.013	138,847	18%
I	Sanitary	Round	600	CONC	15.42	0.013	208,321	12%
J	Sanitary	Round	600	CONC	9.98	0.013	167,593	15%
K	Sanitary	Round	600	CONC	3.46	0.013	98,680	30%
L	Sanitary	Round	900	CONC	0.38	0.013	96,418	28%
L2	Sanitary	Round	900	CONC	1.05	0.013	160,273	19%
M	Sanitary	Round	900	CONC	1.00	0.013	156,411	22%
N	Sanitary	Round	900	CONC	0.71	0.013	131,794	26%
O	Sanitary	Round	900	CONC	0.74	0.013	134,550	26%
P	Sanitary	Round	900	CONC	0.72	0.013	132,719	26%
Q	Sanitary	Round	900	CONC	0.74	0.013	134,550	26%
R	Sanitary	Round	900	CONC	1.14	0.013	167,001	21%
S	Sanitary	Round	900	CONC	0.57	0.013	118,088	29%
T	Sanitary	Round	1050	CONC	0.21	0.013	108,119	73%
U	Sanitary	Round	1050	CONC	0.20	0.013	105,513	75%

V	Sanitary	Round	1050	CONC	0.20	0.013	105,513	75%
W	Sanitary	Round	1050	CONC	0.20	0.013	105,513	81%
X	Sanitary	Round	1050	CONC	0.20	0.013	105,513	81%
Y	Sanitary	Round	1050	CONC	0.20	0.013	105,513	81%
Z	Sanitary	Round	1050	CONC	0.20	0.013	105,513	81%
AA	Sanitary	Round	1050	CONC	0.20	0.013	105,513	81%
AB	Sanitary	Round	1050	CONC	0.20	0.013	105,513	81%
AC	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AD	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AE	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AF	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AG	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AH	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AI	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AJ	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AK	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AL	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AM	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AN	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AO	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AP	Sanitary	Round	1050	CONC	0.20	0.013	105,513	84%
AQ	Sanitary	Round	1050	CONC	0.20	0.013	105,513	85%
AR	Sanitary	Round	1050	CONC	0.20	0.013	105,513	85%
AS	Sanitary	Round	1050	CONC	0.20	0.013	105,513	85%
AT	Sanitary	Round	1050	CONC	0.20	0.013	105,513	85%
AU	Sanitary	Round	1050	CONC	0.20	0.013	105,513	85%

Appendix H: Halifax Water Design & Construction Specifications



Design Specifications & Supplementary Standard Specifications

for Water, Wastewater & Stormwater Systems



2020 Edition

For any infrastructure to be installed below 4.86 metres (CGVD2013), The Design Engineer is to provide a statement for how the infrastructure still provides an acceptable level of service.

High High Water Level (HHWL):	0.73 metres (CGVD2013)
Sea level rise as a result of climate change:	1.50 metres
Storm surge and wave run-up:	<u>2.63 metres</u>
Total:	4.86 metres (CGVD2013)

4.2 WASTEWATER COLLECTION SYSTEM DESIGN

4.2.1 Wastewater Demand

Design the Wastewater System for wastewater flows generated from all lands within the sewershed in which the system is situated. Any lands which are, or may be anticipated to be tributary to the sewershed, either by future development are to be included in the design flow calculations.

The Wastewater System is to be designed for a gross population density based on the proposed land use. For deriving wastewater flows, a higher population density, due to the proposed land use or zoning of the tributary area may be required by the Engineer if it is determined that capacity is available in the downstream Wastewater System to accommodate the resulting increased flow.

Design the Wastewater System to accommodate the Average Dry Weather Flow:

- Average Dry Weather Flow 300 litres / person / day

Refer to the permitted land uses under the Municipality Municipal Planning Strategy (MPS), Land Use Bylaw (LUB), or approved Development Agreement for a specific area. When determining site populations, refer to numbers below:

- Single unit dwellings 3.35 people / unit
- Semi-detached & townhouse 3.35 people / unit
- Multi-unit dwellings 2.25 people / unit

For site specific flows (Industrial, Commercial & Institutional) refer to the current Atlantic Canada Wastewater Guidelines Manual.

Analyze the downstream Wastewater System for capacity (giving consideration to the tributary upstream flows), septic conditions, and any other adverse effects associated with the proposed Wastewater System. The Engineer will determine the limits of the downstream analysis.

4.2.2 Hydraulic Design

The design flow q (L/s), in the wastewater system is calculated as follows:

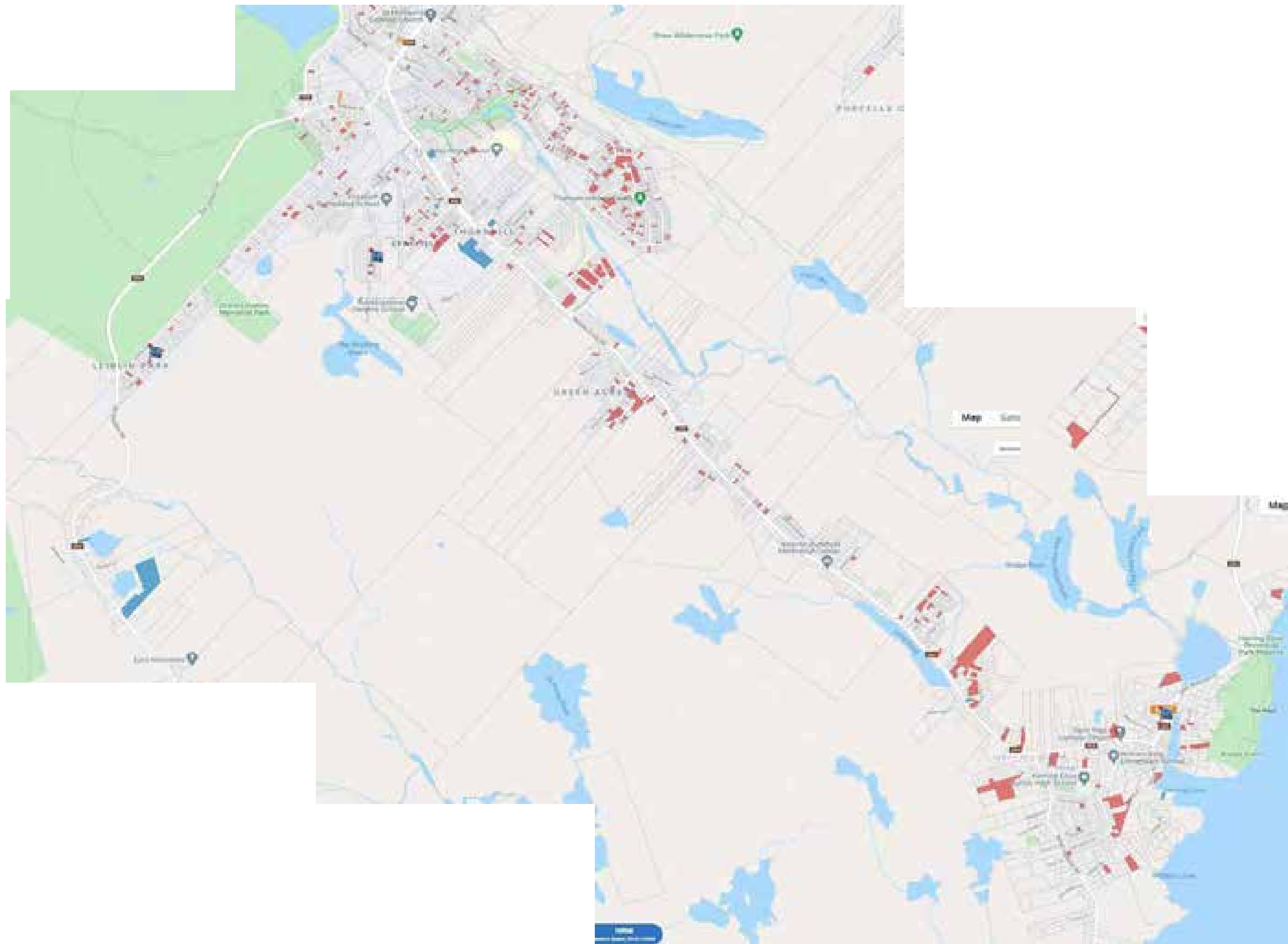
$$q = \frac{[1.25 \times (a \times M)] + (b \times \text{area})}{86.4}$$

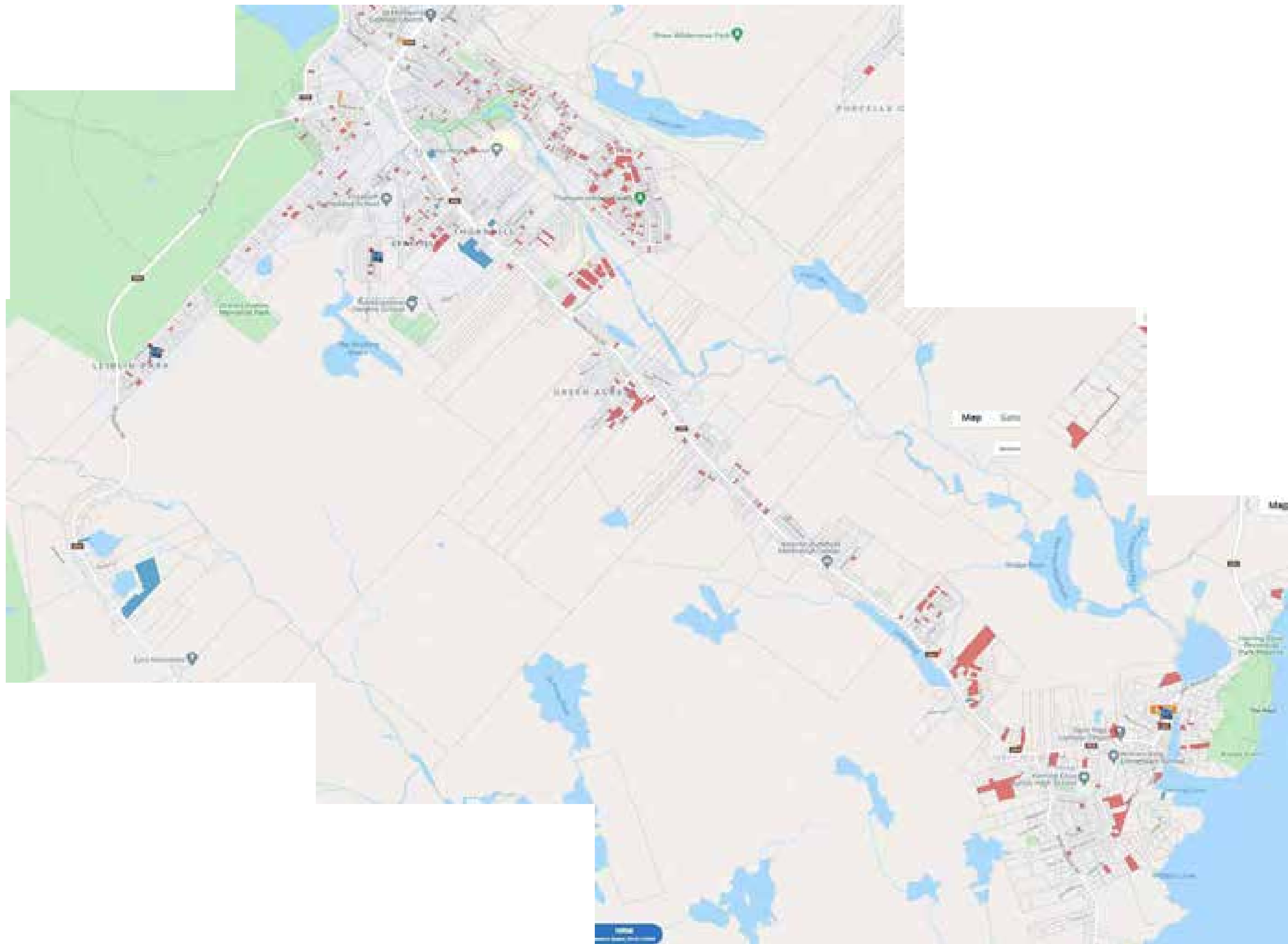
$$M = 1 + \frac{14}{4 + P^{0.5}}$$

where:

- 1.25 is the safety factor.
- a identified here as the average dry weather flow. The allowance is 0.30 m³/person/day for residential development.
- M is the peaking factor as derived from the Harmon Formula. The minimum permissible peaking factor is 2.0.
- b is the future degradation of pipe long-term infiltration/inflow allowance. The allowable is 24 m³/hectare/day.
- area in hectares.
- P is the design population in thousands.
- $(a \times M)$ is the peak dry weather flow.
- $(a \times M) + b$ is the peak design flow to be utilized for the design of wastewater pumping stations and their force mains.

Appendix I: Proposed DayBreak Trail Network





Appendix J: JLR Traffic Impact Statement

Kidston Lake South Traffic Impact Statement

March 2022

Prepared for

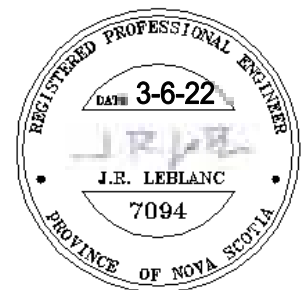
North American Real Estate Ltd





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Prepared by

Jeff R. LeBlanc, P.Eng., PMP

1 Introduction

1.1 Background

KWR Approvals Inc (KWRA), on behalf of the owner North America Real Estate Ltd, is working on a proposal to develop their lands surrounding Kidston Lake in Spryfield, Nova Scotia. Exhibit 1.1 shows the site which will be known as Kidston Lake South in red in the context of the surrounding area in Spryfield.

Exhibit 1.1 – Kidston Lake South in Spryfield, Nova Scotia



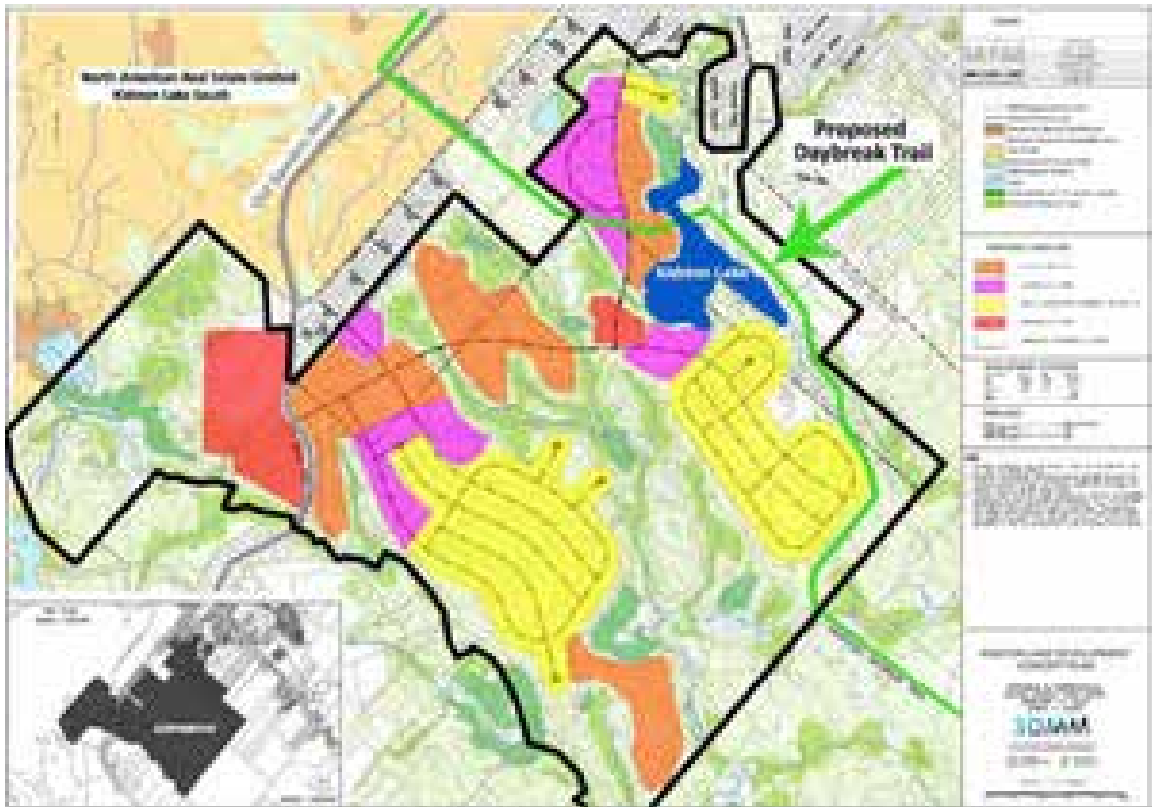
Source: Google Earth

The owner is exploring opportunities for their undeveloped properties totally 629 acres that generally reside outside Halifax Regional Municipality's (HRM) current serviceable boundary. Servant Dunbrack McKenzie & MacDonald Limited (SDMM) completed an initial Downstream Wastewater Sewer Analysis to estimate capacity for the lands based on Halifax Water Design and Construction Specifications. SDMM's review indicated that these lands could accommodate up to 12,730 people.

SDMM has also completed an initial Concept Plan for the lands that shows access points from Old Sambro Road, Kenwood Avenue and Beachstone Drive (refer to Exhibit 1.2). This Concept Plan lists the following proposed development statistics:

- | | |
|--------------------------------|-------------|
| • Multi-family Apartment Units | 2,500 |
| • Single Family Homes | 1,500 |
| • Townhouses | 800 |
| • Commercial | 20,000 sqft |

Exhibit 1.2 – Kingston Lake South Concept Plan



JRL consulting inc. was retained to prepare a Traffic Impact Statement (TIS) to assess the potential traffic impacts of the proposed development in Spryfield, Nova Scotia

The purpose of a Traffic Impact Statement is to provide a high level overview of a proposed development including estimates of site-generated traffic along with an initial review of existing traffic counts in the general area of the proposed development. This information will form part of the initial application to HRM which will be reviewed by staff and council. We are pleased to submit this report which summarizes our findings and provides the information required by HRM for review.

2 Existing Traffic Conditions

2.1 Description

The principal route affected by this proposed development is Old Sambro Road (Highway 306). The proposed development is located east of Leiblin Park. Exhibit 2.1 summarizes HRM's Characteristics of Street Classes.

Exhibit 2.1 - HRM Characteristics of Street Classes

Characteristic	Arterial Street	Major Collector	Minor Collector	Local Industrial	Local Street
1. Traffic Service Function	First Consideration	Traffic movement	Traffic movement of equal importance with land access, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted	Traffic movement secondary consideration with land access primary consideration, parking permitted
2. Land Access Function	Limited Access with no parking	primary consideration, land access secondary consideration, some parking			
3. Range of design traffic average daily volume	More than 20,000	12,000 to 20,000 or more	Up to 12,000	Less than 3,000	Less than 3,000
4. Characteristics of traffic flow	Uninterrupted flow except at signals; w/ pedestrian overpass	Uninterrupted flow except at signals and crosswalks	Interrupted flow	Interrupted flow	Interrupted flow
5. Average running speed in off-peak conditions	50-70 km/hr	40-60 km/hr	30-50 km/hr	15-30 km/hr	15-30 km/hr
6. Vehicle types	All types	All types but trucks may be limited	All types with truck limitation	All types	Passenger and service vehicles, transit buses; large vehicles restricted
7. Connects to	Expressways, arterials, major collectors, minor collectors	Expressways, arterials, major collectors, minor collectors, some locals	Arterials, major collectors, minor collectors, locals	Some major collectors, minor collectors, locals	Some major collectors, minor collectors, locals

Old Sambro Road is a major collector that runs in a general north-south direction from Spryfield to Old Sambro and is also known as Route 306. It provides access to residential and commercial land uses and has one lane in each direction in the area of the proposed development. There is a gravelled shoulder and open stormwater ditches with no sidewalks. The posted speed limit in the area is 60 km/hr.

The **Old Sambro Road at Leiblin Drive** intersection is located close to the property. This unsignalized intersection has an Irving Gas Station on its eastern approach. The Leiblin Drive approach is stop controlled and has a western right turn channelized lane and the northbound approach from Old Sambro Road is flared.

Refer to Exhibit 2.2 for photos of the Study Area around the proposed development.

Exhibit 2.2 – Study Area Photos



Old Sambro Road looking south to proposed development lands



Old Sambro Road at Leiblin Drive looking north



Leiblin Drive at Old Sambro Road looking west



Leiblin Drive at Old Sambro Road looking east



Old Sambro Road at Leiblin Drive looking south

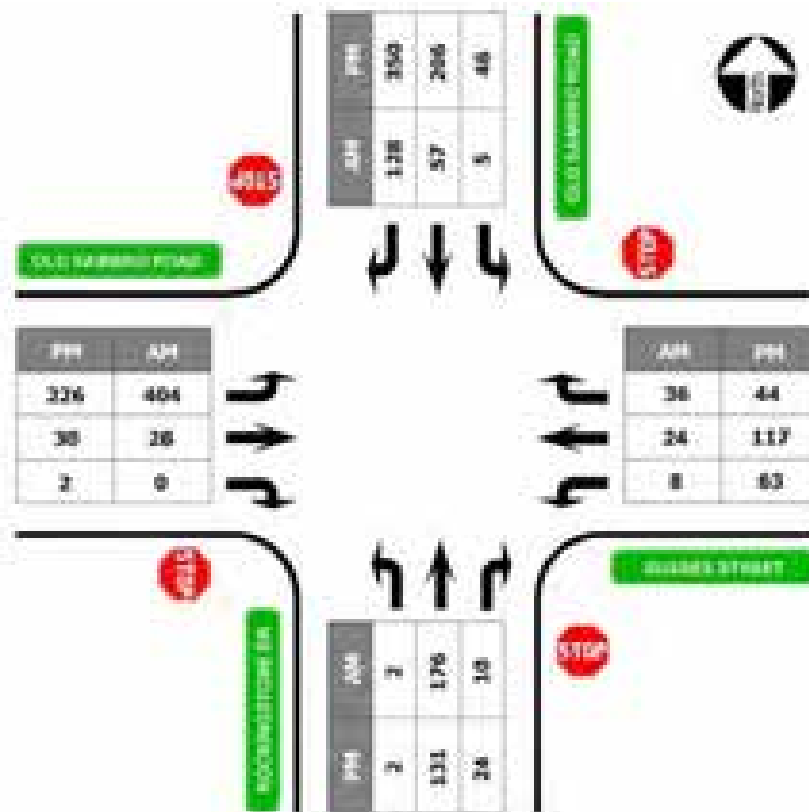


Old Sambro Road at Leiblin Drive looking north

2.2 Existing Traffic Volumes

We completed a site review of the proposed development and analyzed the existing transportation network in the general area. HRM doesn't have any recent counts at the Old Sambro Road/Leiblin Drive intersection or on Old Sambro Road in the area of the proposed development. They did complete AM and PM peak hour manual turning movement counts at the Old Sambro Road/Sussex Street/Rockingstone Drive intersection in November 2015. This intersection is located just over 2 km north of the Old Sambro Road/Leiblin Drive intersection and they can help provide an estimate of traffic on Old Sambro Road in front of the proposed development. We added an annual background growth rate of 2% to estimate the current traffic in 2021 as summarized in Exhibit 2.3.

Exhibit 2.3 – Old Sambro Road/Sussex Street/Rockingstone Dr Estimated Existing Traffic 2021



Based on these counts we estimate that the traffic on Old Sambro Road in front of the development in the AM peak hour will be 432 vehicles northbound towards Spryfield and 154 southbound towards Harrietsfield and Old Sambro. In the PM peak hour we estimate 259 vehicles northbound and 528 southbound in front of the proposed development. This is a worst case estimate of traffic in front of the proposed development as some of this traffic would originate from Leiblin Park so it would not impact the development area.

2.3 Existing Trip Distribution

HRM counts at the Old Sambro Road/Sussex Street/Rockingstone Drive intersection provide an accurate picture of current trip distribution in the study area and we expect that traffic generated by the proposed development to follow a similar pattern with traffic commuting towards Halifax in the AM peak hour and returning home in the PM peak hour.

2.4 Transit and Pedestrians

There is no Halifax Transit service on Old Sambro Road in the area of the proposed development, however, Route 14 Leiblin Park does provide regular service near the proposed development as shown in Exhibit 2.4. There are no sidewalks in the area on Old Sambro Road.

Exhibit 2.4 – Halifax Transit Route 14 Leiblin Park



3 Site Generated Traffic

3.1 Trip Generation

The initial concept plan prepared by SDMM proposes a mixed use development with the following land uses:

▪ Multi-family Apartment Units	2,500
▪ Single Family Homes	1,500
▪ Townhouses	800
▪ Commercial	20,000 sqft

We completed trip generation estimates using equations provided in Institute for Transportation Engineer's Trip Generation Manual 11th Edition.

- ITE Land Use 221 Multifamily Housing (Mid-Rise)

"Mid-rise multifamily housing includes apartments, townhouses, and condominiums located within the same building with at least three other dwelling units and that have between three and 10 levels (floors)." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 215 Single Family Attached Housing

"Single-family attached housing includes any single-family housing unit that shares a wall with an adjoining dwelling unit, whether the walls are for living space, a vehicle garage, or storage space. This land use includes duplexes (defined as a single structure with two distinct dwelling units, typically joined side-by-side and each with at least one outside entrance) and townhouses/rowhouses (defined as a single structure with three or more distinct dwelling units, joined side-by-side in a row and each with an outside entrance)" The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 210 Single Family Detached Housing

"Single-family detached housing includes all single-family detached homes on individual lots. A typical site surveyed is a suburban subdivision." The unit of measurement for average vehicle trip ends is dwelling units.

- ITE Land Use 822 Strip Retail Plaza

"A strip retail plaza is an integrated group of commercial establishments that is planned, developed, owned, and managed as a unit. No shopping plaza with a supermarket as its anchor is smaller than 40,000 square feet GLA." The unit of measurement for average vehicle trip ends is 1,000 sqft Gross Leasable Area.

Exhibit 3.1 – Estimated Site Generated Traffic Volumes for Kidston Lake South Development

LAND USE	QUANTITY	AM PEAK			PM PEAK		
		TOTAL	ENTER	EXIT	TOTAL	ENTER	EXIT
Apartments ITE Land Use 221	2,500	1088	23% 250	77% 838	975	61% 595	39% 380
Single Family ITE Land Use 210	1,500	876	26% 228	74% 648	1267	63% 798	37% 469
Townhouses ITE Land Use 215	800	410	31% 127	69% 283	476	57% 271	43% 205
Strip Retail Plaza ITE Land Use 822	20,000	45	60% 27	40% 18	127	63% 80	37% 47
TOTAL		2420	632	1787	2846	1745	1101

3.2 Site Access

The site plan prepared by SDMM shows three access points to the proposed development from Old Sambro Road, Kenwood Avenue and Beachstone Drive. We have assumed that the main access point will be established from Old Sambro Road.

3.3 Stopping Site Distance

As per the Transportation of Canada Geometric Design Guide for Canadian Roads, adequate stopping site distance *"is essential for safe operation that the vehicle operator be able to see far enough ahead to stop if necessary. Conditions that would force a vehicle operator to stop are for example, an object on the roadway, a culvert washout or other fault in the roadway."*

Adequate stopping site distance is required throughout the length of the roadway. Minimum stopping site distance is the sum of two distances namely:

- *Brake reaction distance*

The distance travelled during the brake reaction time, that is the time that elapses from the instant an object, for which the driver decides to stop, comes into view to the instant the driver takes remedial action (contacts brake pedal).

- *Braking distance*

The distance travelled from the time that braking begins to the time the vehicle comes to a stop."

For a design speed of 60 km/h on Old Sambro Road, the minimum stopping site distance is 85 m.

4 Conclusions and Recommendations

- This Traffic Impact Statement has provided a high level overview of the proposed development of 629 acres of lands surrounding Kidston Lake in Spryfield, Nova Scotia
- It includes an estimate of total new site generated traffic as well as an analysis of existing traffic volumes in the surrounding area.
- The concept plan for Kidston Lake South completed by SDMM proposed a mixed use development with the following land uses:

▪ Multi-family Apartment Units	2,500
▪ Single Family Homes	1,500
▪ Townhouses	800
▪ Commercial	20,000 sqft
- ITE rates for Single Family Homes are often higher than local observed rates in Halifax so we recommend that a local rate be established through actual counts for a similar existing development in the area near the proposed development in Spryfield
- Based on ITE Trip Generation Rates, we estimate that the proposed redevelopment will generate additional net new traffic volumes of **2,420** vehicles in the AM peak hour and **2,846** vehicles in the PM peak hour.
- We recommend that primary access to the proposed development be created from Old Sambro Road in locations that meet Stopping Site Distance of 85m
- New site generated traffic will likely follow existing trip distribution patterns on Old Sambro Road in the AM and PM peak hours.
- A full Traffic Impact Study should be completed for this proposed development once the site plan and development statistics have been confirmed to assess the impacts of site generated traffic on the surrounding transportation network in Spryfield, Nova Scotia.

Appendix K: HRM Population & Housing Preliminary Analysis

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REGIONAL PLAN ISSUE PAPER

PRELIMINARY POPULATION & HOUSING ANALYSIS

HALIFAX

June 2021

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INTRODUCTION

The Regional Municipal Planning Strategy (the Regional Plan) is the document that Regional Council uses to guide land use. It emphasizes a balanced approach to development and establishes targets for directing the location of new housing over the life of the Regional Plan (2006-2031), which are based on population projections.

Each time the Regional Plan is reviewed, the Municipality assesses its progress toward achieving the housing growth targets. This requires evaluating population and housing forecasts and their relationship to the available supply of developable land, housing supply and demand, and the provision of a range of housing choices.

The 2014 Regional Municipal Planning Strategy was based on a population projection of approximately 1% growth year-over-year. Statistics Canada's population estimates have shown HRM growing at a much faster rate - by around 2% each year since 2017. This has led HRM to generate a new population and housing projection which is provided in this Issue Paper.

The Municipality will also be evaluating the supply of developable lands and rate of housing development compared to the 2014 Regional Plan's growth targets, along with the growth targets suggested in the 2017 Integrated

Mobility Plan, and will use this analysis to determine how the targets should be adjusted.

This Issue Paper is a first step in exploring how well-positioned our land use rules are to respond to potential housing demand and population growth and will include analysis by type of housing (such as apartment or ground-based). Housing supply is influenced by many different factors, some which the Municipality can influence (i.e.: land use policy and regulations) and some which the Municipality does not have control over (i.e.: supply of materials and labour, market costs, rate of construction).

The goal of this Issue Paper is to understand the dynamic between the projected demand for housing and Halifax's land use capacity to accommodate residents in different housing types. The projections are not meant to be predictions, but ways of testing and assessing the resiliency of our policy, regulations and growth targets. This will help us to understand the different ways we can create strong policy to support housing our citizens today and in the future.

KEY QUESTIONS CONSIDERED IN THIS ISSUE PAPER:

How many people might be living in Halifax in 2031 and 2050?

How many housing units will be needed for the population to live in?

What type of housing might be needed?

What is Halifax's capacity for additional housing based on existing policy and anticipated future policy?

Are any changes to housing policy needed to accommodate demand or reflect changing conditions?

GROWTH MANAGEMENT TARGETS

In 2006, Regional Council approved the Regional Plan as the first comprehensive plan for the Municipality. It directed 25% of household growth to the Regional Centre (Peninsula Halifax and Dartmouth between the Circumferential Highway and Halifax Harbour); 50% of household growth to suburban communities (communities serviced with publicly managed water and wastewater services outside the Regional Centre) and the remaining 25% to rural areas (the lands outside of the service boundary).

During the first five-year review of the Plan, it was found HRM was underperforming against these targets. A study was commissioned to assess the public, private and social costs and benefits of various growth scenarios from 2011 to 2031. The 2013 study by Stantec, called [“Quantifying the Costs and Benefits of Alternative Growth Scenarios”](#) (known as the Stantec Study) concluded that continued adherence to the Regional Plan growth targets would save the municipality \$670 million in costs and that significant additional cost savings could be achieved by increasing growth in the Regional Centre.

In response, the 2014 Regional Plan adjusted the growth targets to direct at least 75% of new housing units to the Regional Centre and suburban communities, with at least 25% of

new housing units to the Regional Centre. It also set out a requirement that the Municipality maintains a 15-year supply of serviced land.

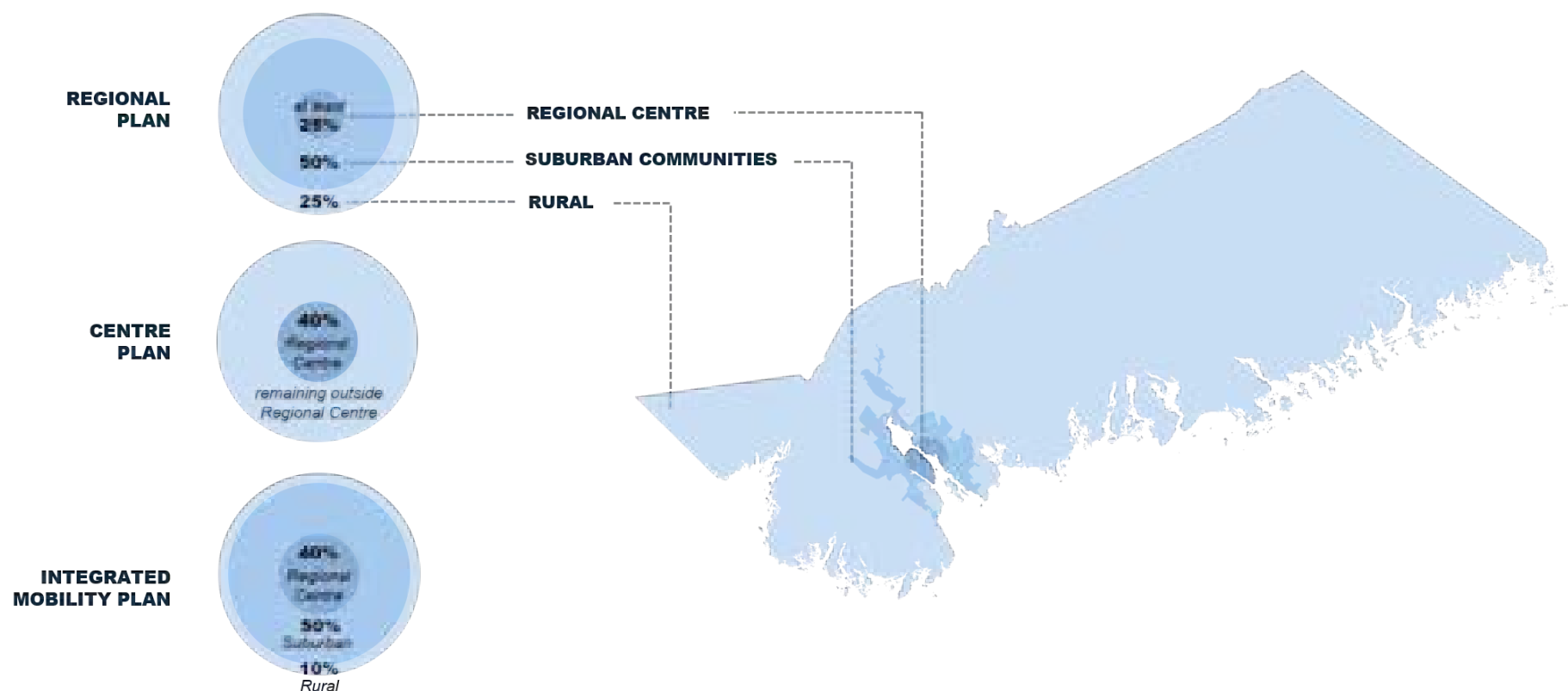
The Regional Centre Plan has followed this direction and allows significant growth to occur in the Regional Centre (Halifax Peninsula and Dartmouth inside the Circumferential Highway); enabling approximately 40% of total projected household growth (greater than the minimum of 25% identified in the Regional Plan). The Integrated Mobility Plan identified that to support the Municipality's mobility goals, it will be important to allocate as much as 90% of growth to the Regional Centre and suburban communities and identifies that 40% of total household growth be directed to the Regional Centre and 50% to suburban communities.

POPULATION ESTIMATES

In preparation for the first Regional Plan, HRM contracted Altus Group to produce population, employment, and housing projections under high, baseline, and low growth scenarios. Their 2004 report outlined the magnitude of expected growth, as well as suggested a possible pattern of growth between rural, suburban, and urban sub-areas. In advance of the first 2014 Regional Plan update, Altus Group was contracted again to update the 2004 report. In addition to newer Census data, the analysis was informed by a drastically different economic outlook arising from the global recession of 2008/2009.

Subsequent studies commissioned by HRM that have required growth forecasts as an input have tended to use the 2009 Altus report as a base, often with some modifications based on more recent observed trends. This has included the 2013 Stantec Study and the 2015 Housing Needs Assessment. The Stantec Study summarized the economic and environmental effects of four alternative growth scenarios on public and private services within the region and provided employment, population, and housing estimates for the period 2011-2031.

Figure 1: Growth Targets



DEMOGRAPHICS

The most significant demographic trend in Halifax in recent years has been the total growth in population, largely due to increased immigration. The overall demographic composition of the population by age group has not changed significantly during the life of the Regional Plan (2006 to present), although there has been a noticeable increase in the population of older adults (65+), as well as

an increase in the number and proportion of people aged 25-34.

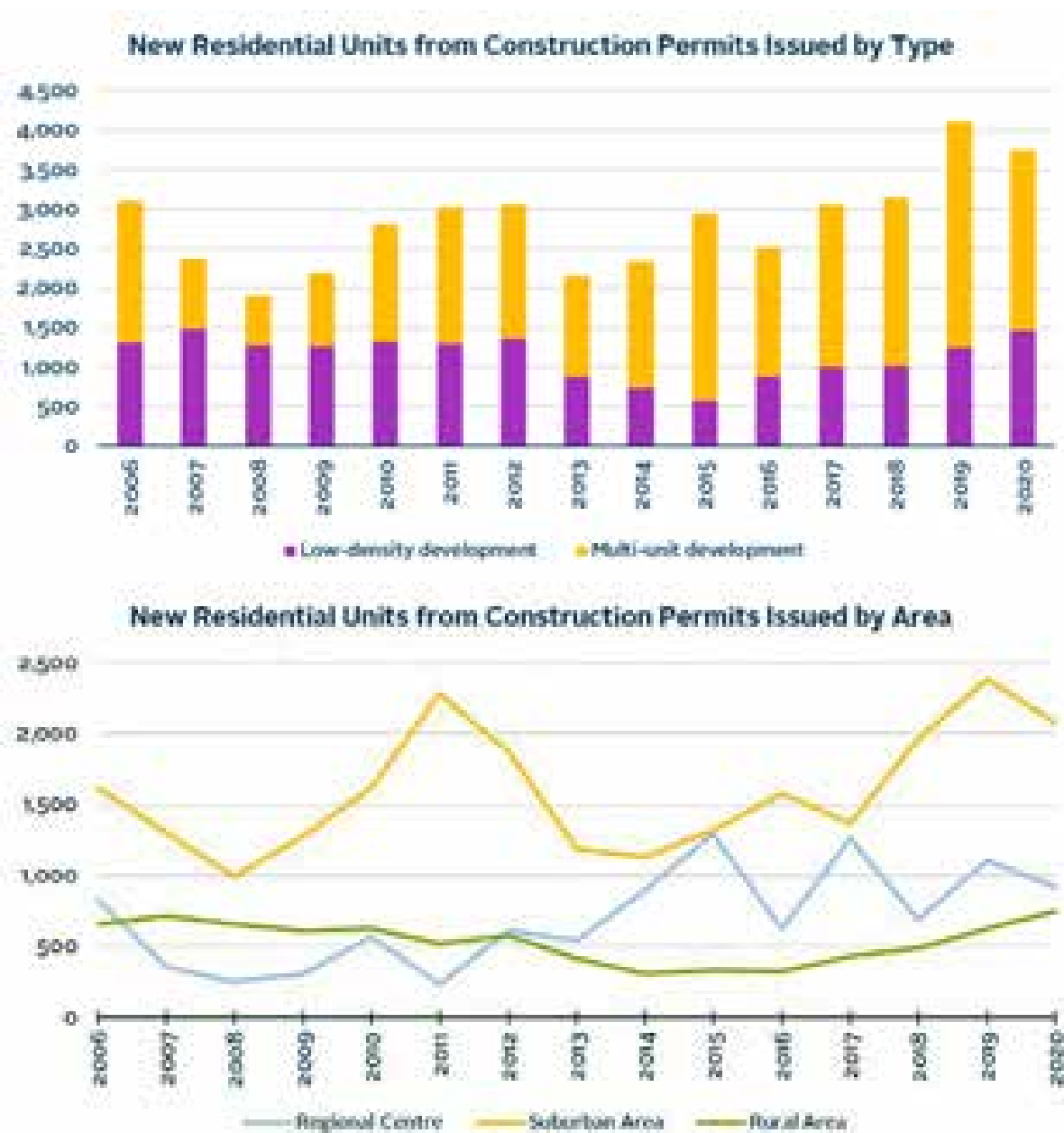
The average household size in Halifax has decreased slightly from 2.4 persons per household in 2006 to 2.3 persons per household in 2016. This is in line with a broader trend across other jurisdictions of moving toward smaller households. In Halifax, the household

size is lowest in the Regional Centre, where there tend to be smaller families and more people living alone, and highest in the rural areas of the municipality.

HOUSING ACTIVITY (2006 TO 2020)

Since 2006, there has been an overall increase in the annual new housing units, although the annual number has varied widely. Annual new unit counts were as low as about 1,900 in 2008 and as high as about 4,100 in 2019. Since 2006, the majority of new units have been in the suburban areas. While lower-density residential development made up the majority of new units for the period from 2007 to 2009, for most of the last fifteen years, most new housing units across the region have been in multi-unit apartment buildings. However, the unit type does vary by subregion: in the Regional Centre, the vast majority of new units are in higher-density forms, while in the rural areas, almost all new units are ground-based. The suburbs have more of a mix of unit types, but the majority (about two-thirds on average) have been multi-unit development.

Figure 2: Historic Housing Activity



HOUSING CONDITIONS TODAY

Recent population estimates from Statistics Canada demonstrate a trend of higher population growth than expected. HRM has seen population growth surpassing 1% annually in the last few years, rising to approximately 2% each year since 2017. Halifax has seen a 19% increase in housing prices in 2020 when compared to 2019, and further, buyers have been looking for homes with more space since the onset of the pandemic. Homes of 2,500 square feet and above had a year-over-year sales growth of 158%.¹ In March 2021, CMHC elevated its assessment of the vulnerability of Halifax's housing market from moderate to high, due to price acceleration and housing overvaluation.² Housing prices are moving beyond what is considered affordable for current residents.³

With the onset of the COVID-19 pandemic, it is too soon to tell if there will be lasting impacts on regional population growth. Despite the pandemic, positive net interprovincial migration continued during 2020, in part due to Halifax's relatively less expensive housing costs

compared to other big cities across Canada.⁴ While the COVID-19 pandemic led to shifts in construction trends throughout the year, Halifax had an overall increase in housing starts and completions compared to 2019, according to CMHC. This increase is primarily attributed to growth in low-density residential construction.⁵ Vacancy rates increased only slightly from their historic low of 1% in 2019 to 1.9% in 2020 and overall average rent prices increased by 4.1%.⁶

As the Regional Plan provides direction on where growth should occur, how much growth should be accommodated, what form of housing and community development is most appropriate, and supports efforts to create affordable housing, the Regional Plan Review is considering and monitoring the following trends noted in 2020:

- Net in-migration continuing despite the pandemic;
- Impacts of the pandemic on residents' employment and income levels;
- Reduction of existing, more affordable building stock to generate new units;
- Secondary-market development, including secondary suites and shared housing regulations; and
- Low risk of overbuilding as the absorption rate of newly completed homeowner units is at 83%.⁷

¹ [CMHC Housing Market Assessment, March 2021](#)

² Price acceleration is signaled when the growth rate of house prices exhibits an upward trend. Overvaluation indicates that house prices are elevated compared to price levels supported by personal disposable income, population, interest rates, and other housing market fundamentals. (CMHC)

³ [CMHC Housing Market Assessment, December 2020](#)

⁴ [CMHC Housing Market Assessment, December 2020](#)

⁵ [CMHC Housing Starts, Completions and Units Under Construction \(Cumulative\)](#)

⁶ [CMHC Rental Market Report 2020](#)

⁷ [CMHC Housing Market Assessment, March 2021](#)

HOUSING CAPACITY TODAY

As the housing market currently faces significant pressures, this issue paper also assesses what type of housing can be realized quickly, today, under the existing regulatory regime. For this purpose, we identified areas where housing could be built today without any changes to policy or land use regulations. There are additional opportunities outside of these key locations; however, the focus of this analysis was on larger areas that could accommodate a significant supply of housing. The **key locations** are:

- Lands in the **Regional Centre Package A** areas (Downtown, Centre, Corridor, Higher Order and Future Growth Node Designations, where policy and regulations are already in place) and Downtown Halifax
- **Suburban Vacant Land** (Vacant parcels zoned for residential use which do not coincide with ‘approved development’ below)
- Development that is **approved, but not yet built** (Areas with approved Development Agreements for 50 units or more, plus Subdivisions that have been approved but not yet fully developed outside of the Regional Centre Package A areas)

Table 1 provides an overview of the estimated

total number of dwelling units that may be accommodated, by housing type, within the key locations, the number of units that exist in those areas today, as well as current approved development that remains to be built. (Further

detail on the methodology used to determine the dwelling unit capacity is outlined in the Housing Projection Methodology section).

Table 1: Current Estimated Housing Capacity (2021)

KEY LOCATIONS	ITEM	TOTAL DWELLING UNITS (ALL TYPES)	GROUND BASED UNITS*	APARTMENT UNITS
Regional Centre Package A (including Future Growth Nodes with existing policy), Downtown Halifax, and Suburban Vacant Land	Estimated Total Dwelling Unit Capacity (based on residential density assumptions)	93,000	13,900	79,100
	Existing Units	(31,700)	(2,300)	(29,400)
	Net New Units that can be accommodated	61,300	11,600	49,700
Outside the above areas	Approximate number of approved units not yet built	23,800	8,000	15,800
Total of Key Locations	Approximate additional residential units that can be accommodated	85,100	19,600	65,500

*includes single detached, semi-detached/duplex, and townhouse dwellings

These results show us that there is capacity within the current regulatory regime to support new growth, both for ground-based and apartment-type units. In many instances, the housing identified in this table is already permitted as-of-right, meaning the approvals process to bring this housing online is the shortest and most efficient approval process available.

While many new apartment units could be built today in these areas identified for intensification, there is existing housing in these locations. This exercise has considered these “existing units” that currently house people and are therefore not contributing to the additional new units that could be physically accommodated. When existing stock is torn down or renovated, this can result in displacement of occupants during construction, who may not be able to afford new rents once construction is complete. The above capacity figures do not include the potential for secondary market housing such as secondary suites. As secondary suites are built, this could offer opportunities for more affordable housing.

While the Municipality continues to work on meeting immediate housing needs, the work presented in this Issue Paper has focused more on meeting the requirements of the next 10 years and the following 30 years. This work will help inform our planning for future

infrastructure, ensure that a sufficient supply of housing can be built in the medium and long-term, and aims to anticipate and mitigate future housing supply challenges. The work will be used to assess our growth management targets, overall settlement policy direction, and inform additional analysis such as for the Integrated Mobility Plan’s mobility targets.

HOUSING PROJECTION METHODOLOGY

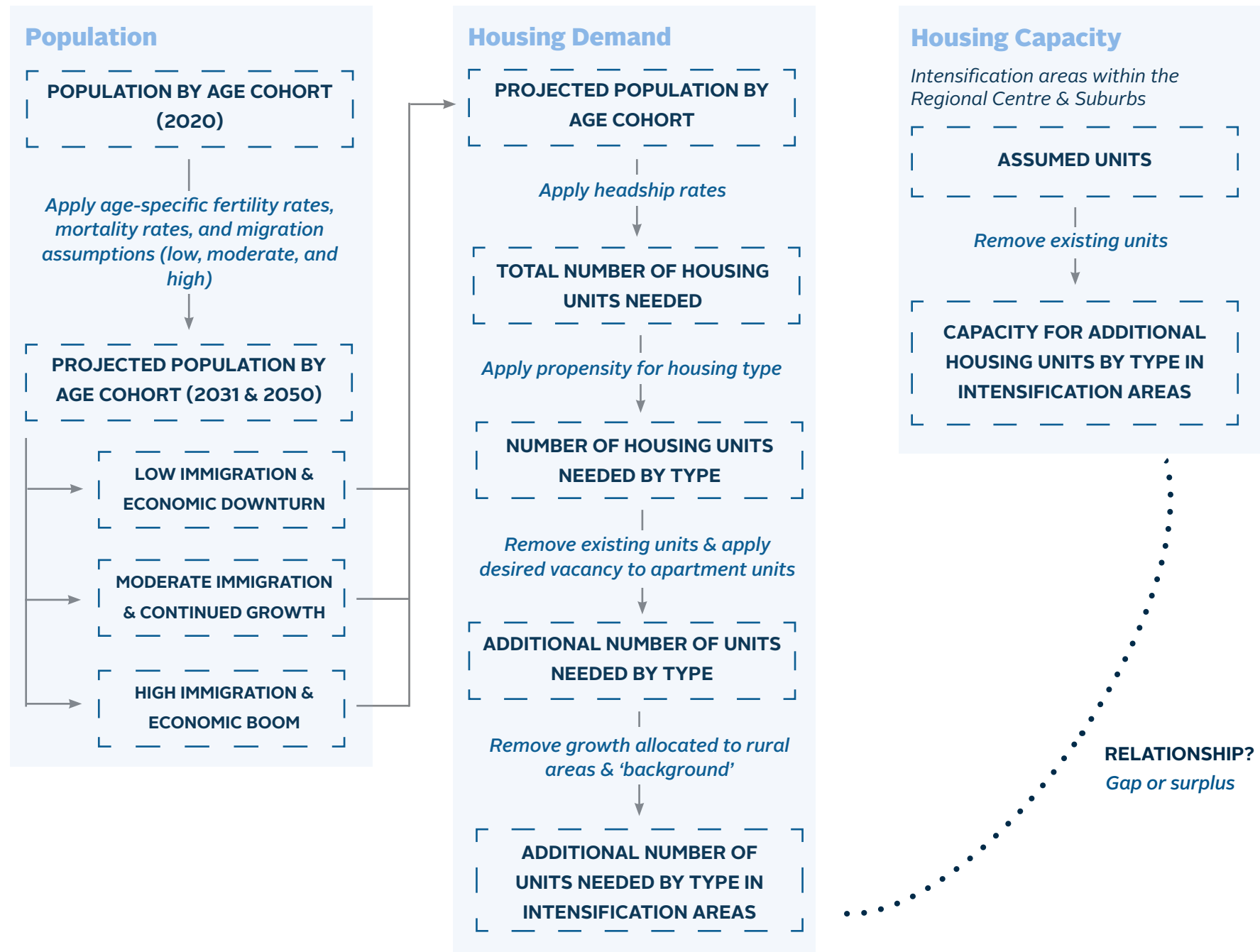
This section provides an overview of the methodology used to assess the dynamic between anticipated demand for housing and Halifax’s land use capacity to accommodate residents in different housing types. The components of this analysis included:

- **Population Projections:** Low, moderate and high growth population projections were developed. By using three different projection scenarios, we can test how well-positioned our policy and regulations are to respond to growth and change in our population over time.
- **Time-Horizon:** The population was projected to two points in time: 2031 (time-horizon of the current Regional Plan) and 2050 (expected time-horizon of the next Regional Plan).
- **Housing Demand:** The likelihood of different age groups to live in households of

different sizes was assessed based on 2016 Census data. By considering the propensity of the current population to choose certain types of housing, we can also test how well-positioned our policy and regulations to respond to increased housing demand over time.

- **Housing Capacity:** Physical locations in the region were identified for housing growth under Regional Plan policy, the Regional Centre Plan, and ongoing policy work, such as the Integrated Mobility Plan. The capacity of these areas has been assessed by assuming densities and calculating the number of units that might be built on the land to provide a rough estimate of the anticipated development.

Figure 3: Housing Projection Methodology



POPULATION PROJECTION

What is the future population we are planning for and what is their demographic profile?

As the projections used in the current Regional Plan are approximately a decade old, a new set of population projections has been generated. Since 2014 economic conditions have shifted, migration patterns have changed, and new census information has been released.

In keeping with previous approaches, a Cohort Survival Model was used to project the population, but new assumptions have been created to reflect current conditions. The model starts with Statistics Canada's 2020 population estimate for the Halifax Census Metropolitan Area, and projects the components of population change (birth, death, and migration), by age and sex, out to the year 2050. It uses the average age-specific fertility and mortality rates from Statistics Canada data for the years 2016 to 2019. If population growth relies entirely on natural population change, with no migration in or out of HRM, the population would peak in 2028 and then begin to decline significantly. Population growth in Halifax is dependent on continued immigration, interprovincial and intraprovincial migration to the region.

Migration Patterns

In developing our migration assumptions, we analyzed each component of migration separately, because they each are driven by different factors: international immigration is largely controlled by Federal and Provincial government policy, while inter- and intra-provincial migration are more affected by economic conditions and employment opportunity in HRM relative to the rest of Canada and Nova Scotia. Migration is the most difficult component of population change to predict, because it is so responsive to factors that can change quickly and unpredictably – like the government of the day, or a recession caused by a global pandemic.

Looking back at the last 15 years of migration data for HRM, there have been noticeable shifts in the trends. One example is a net loss of residents to other provinces around 2011 to 2014, switching to a net gain in residents from other provinces after 2015.

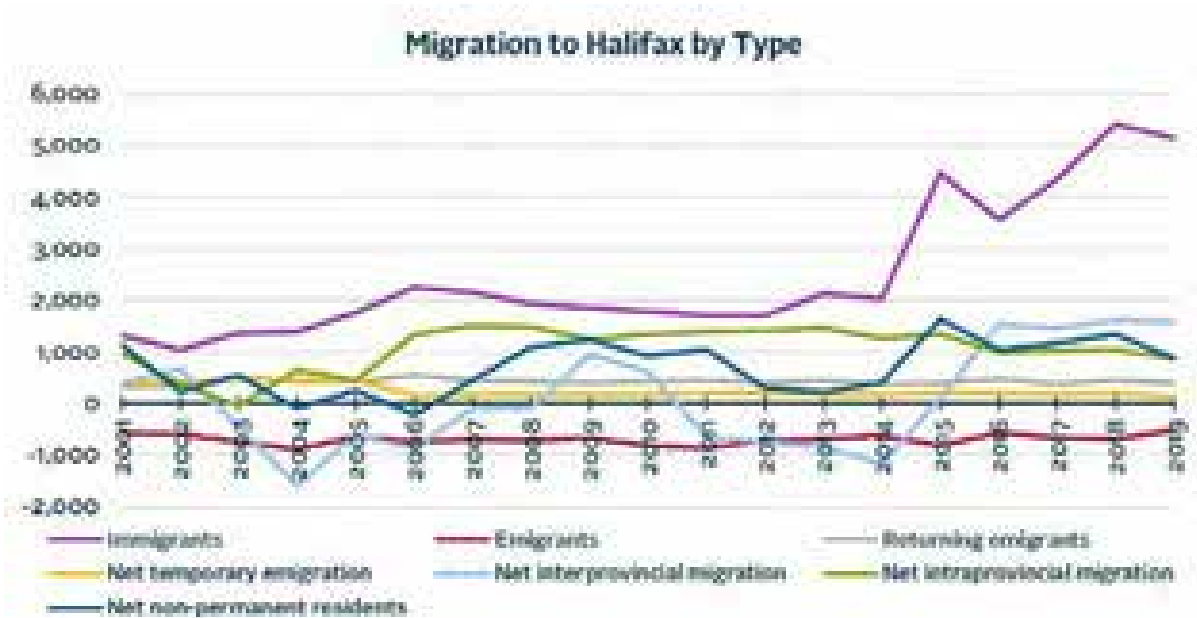
Since we have no way of knowing what economic or societal shifts will occur in the future, nor when they will occur, our baseline assumptions for most components of migration are based on the averages from 2016 to 2019, when the number of most types of migrants was relatively consistent.

Immigration is the only component where our assumptions were driven by another source; we used Statistics Canada's population projections, which were developed for all provinces using historical data and a survey of demographic experts.⁸ We calculated the average percentage of immigrants to Nova Scotia that came to live in Halifax over the last four years, and applied that percentage to Statistics Canada's projected future immigration for Nova Scotia as a whole.

By altering the migration assumptions, we envisioned three possible future population projection scenarios. Each scenario was projected to two points in time: 2031 (Time-Horizon of the current Regional Plan) and 2050 (Time-horizon of the next Regional Plan). By using three projections at two points in time, we can test how well-positioned our policy and regulations are to respond to growth and change in our population over time. The scenarios are:

⁸ [Statistics Canada, Population Projections for Canada \(2018 to 2068\), Provinces and Territories \(2018 to 2043\)](#)

Figure 4: Historic Migration Trends



Source: Statistics Canada, Components of population change by census metropolitan area and census agglomeration, 2016 boundaries ([Table 17-10-0136-01](#))

- **Low Immigration & Economic Downturn:** This scenario uses Statistics Canada's Low Immigration scenario, a net negative interprovincial migration at the average level observed from 2011-2014, and net neutral intraprovincial migration (no more people coming into Halifax from elsewhere in Nova Scotia than are leaving for other parts of the province).
- **Moderate Immigration & Continued Growth:** This scenario uses Statistics Canada's Medium Immigration scenario,

and the averages from 2016-2019 for other components of migration. This scenario is referenced as "moderate", and it most closely reflects recent trends and anticipated growth patterns.

- **High Immigration & Economic Boom:** This scenario uses Statistics Canada's High Immigration scenario, and adjustments were made to inter- and intra-provincial migration of the same amount above the Moderate scenario as the Low scenario was below the Moderate scenario.

Projection Results

The results of the three population projection scenarios are shown in Table 2 below, for the years 2031 and 2050. Figure 5 shows the three population projection scenarios completed for this analysis compared to the projection included in the 2014 Regional Plan. Figure 6 shows the projection scenarios distributed by age and sex, compared to today (2020).

Table 2: Projected Population

PROJECTION SCENARIO	2031	2050
Low Immigration & Economic Downturn	501,000	537,800
Moderate Immigration & Continued Growth	554,000	714,500
High Immigration & Economic Boom	611,300	943,000
Note: Statistics Canada estimated Halifax's population as 448,544 in 2020.		

Figure 5: Population Projection Scenarios

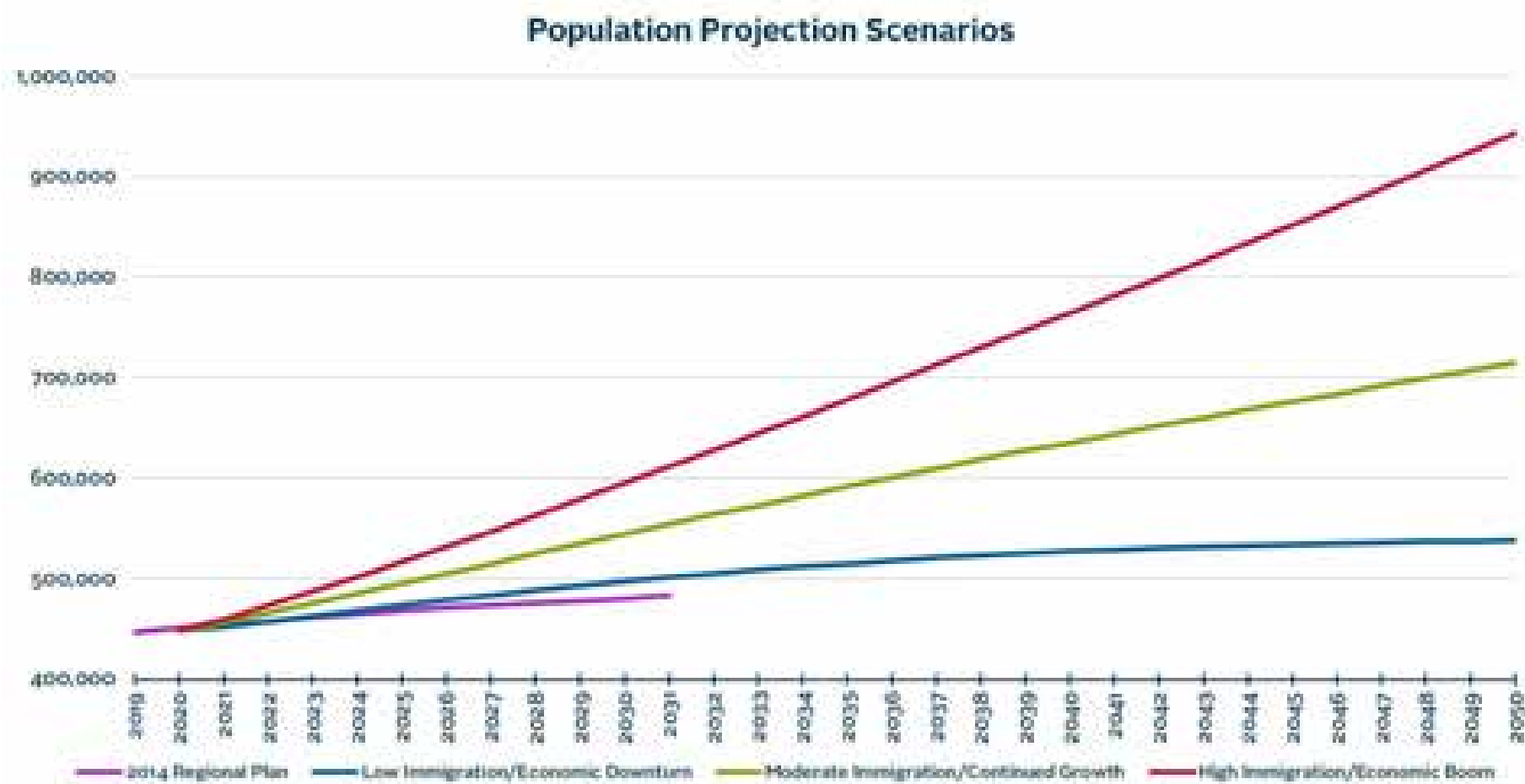
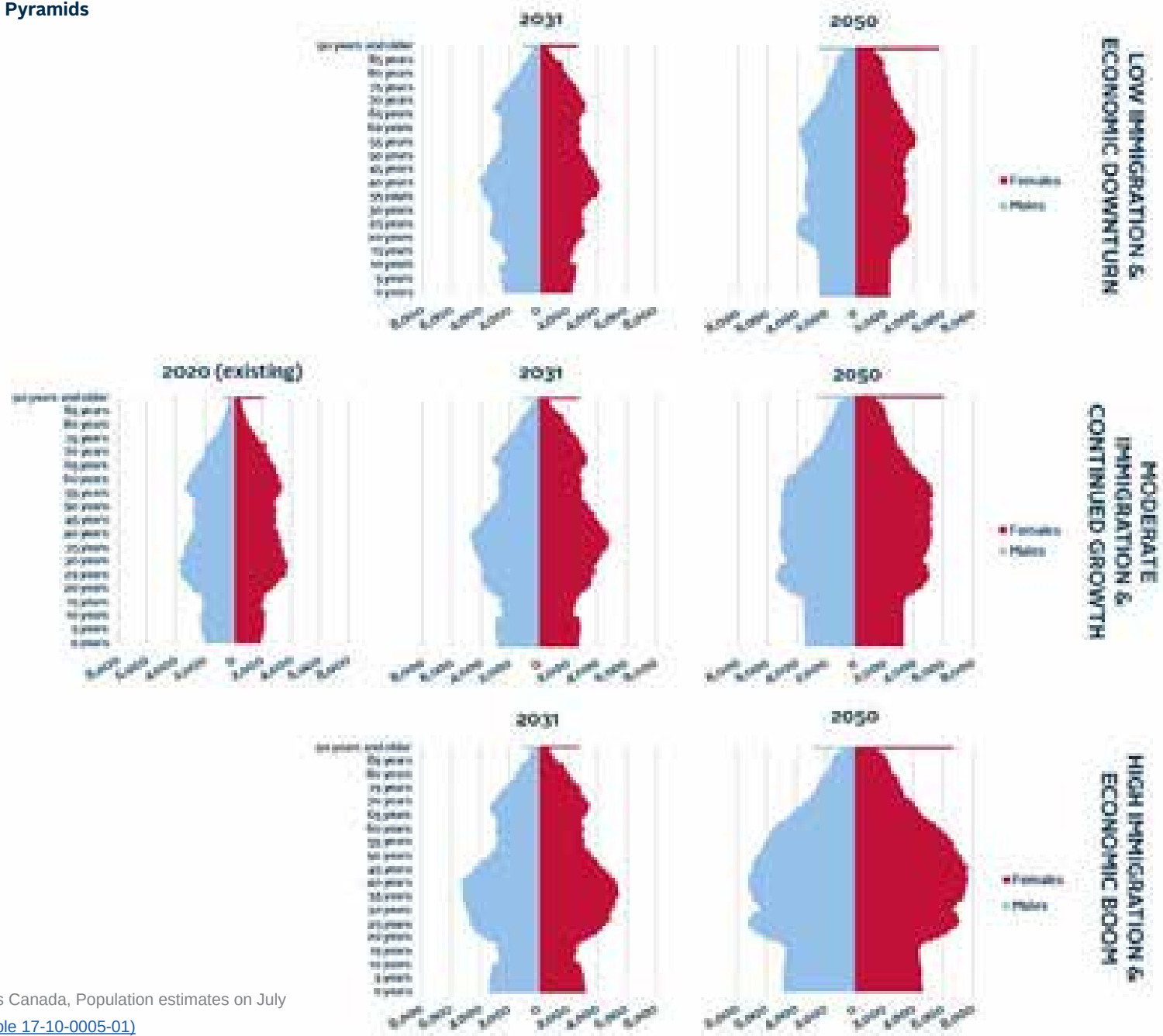


Figure 6: Population Pyramids



HOUSING DEMAND

What will be the total demand for housing in the years 2031 and 2050 based on the population projection scenarios? Based on the propensity of the current population to choose different types of housing, what will be the demand for different types of housing in 2031?

To understand the demand for future housing, we determined the projected number of households and made assumptions about the type of housing that those households would prefer.

The projected number of households was determined by applying a headship rate to the projected population by age group. The headship rate is an indicator of household formation behavior at different life stages – it allows us to see the ages at which people are likely to head a household or share accommodation. The headship rate represents the proportion of a given five-year age cohort that are primary household maintainers. For this projection, we used headship rates based on the 2016 Census. In the most recent Census periods, headship rates have remained relatively stable, apart from those for certain younger age groups.⁹

Applying a headship rate to the projected population provides the potential number of households in each five-year age group. As each household requires one housing unit, the assumption is that the total number of projected households represents the total

demand for housing.¹⁰ We projected the total demand for housing in 2031 and 2050 for each population projection scenario (Low Immigration/Economic Downturn, Moderate Immigration/Continued Growth and High Immigration/Economic Boom).

To understand the demand for housing by different housing types, we can estimate housing preference by generating a “propensity” for the households to choose certain types of housing, in this case, ground-based housing (which includes single-detached, semi-detached/duplex, town/rowhouses, and mobile homes) or apartment housing (all other types, including condos in multi-unit buildings). Using 2016 Census data, dwelling unit propensity was determined by dividing the number of primary household maintainers in each age cohort living in each

housing type by the total number of primary household maintainers in that same age cohort. This generated a rate of propensity which was then applied to future years.

This method assumes that households in 2016 were living in their preferred housing type, and that this propensity will continue. It is likely that housing type preferences will change as the dwelling types in the housing supply change over time. Once the projected total housing demand was generated, we increased the demand for apartment units by 3% to factor in a desired 3% vacancy rate, and removed the demand associated with the residential units we already have.

We also assumed that there would be demand for units outside of the areas identified for future housing capacity. For both the Regional Centre and Suburban Areas, we assumed that 10% of total demand would be realized outside of the primary intensification areas. This was based on permit data analysis from the past 10 years and might be considered a conservative number. Once these values were accounted for, it left us with the total number of units we expect to direct to the intensification areas, based on the future population demand.

⁹ [CMHC Housing Market Insight: Household Projections, 2020](#)

¹⁰ Everyone captured in Statistics Canada's annual population estimates contributes to the demand for housing units in this method, including the population living in collective housing (e.g. nursing homes, correctional facilities, etc.). However, since Statistics Canada estimates population for July 1st, post-secondary students who return to other locations over the summer are likely not included. Further, people without a permanent address may not be fully captured, although Statistics Canada adjusts for the net undercoverage of the census.

HOUSING CAPACITY

What locations have been identified to accommodate future housing demand and development growth and how much capacity do these areas have?

There are several locations within the Municipality that have been identified for possible residential intensification. Some of these areas have already been designated and zoned for growth and could therefore be developed immediately, while other areas have Regional Policy direction or strategic direction

from Regional Council to consider them as growth areas for the future.

To assess how much housing capacity is available in these areas, staff assigned densities within each land use designation identified for potential residential intensification. These density assumptions are based on analysis of

existing densities within the Municipality, the Pattern Book, previous work for the Rapid Transit Strategy, and professional expertise. The densities were applied to the amount of land area in each designation (minus the road right-of-way) to obtain a total assumed number of units.

Figure 7: Potential Timeline for Development of Intensification Areas

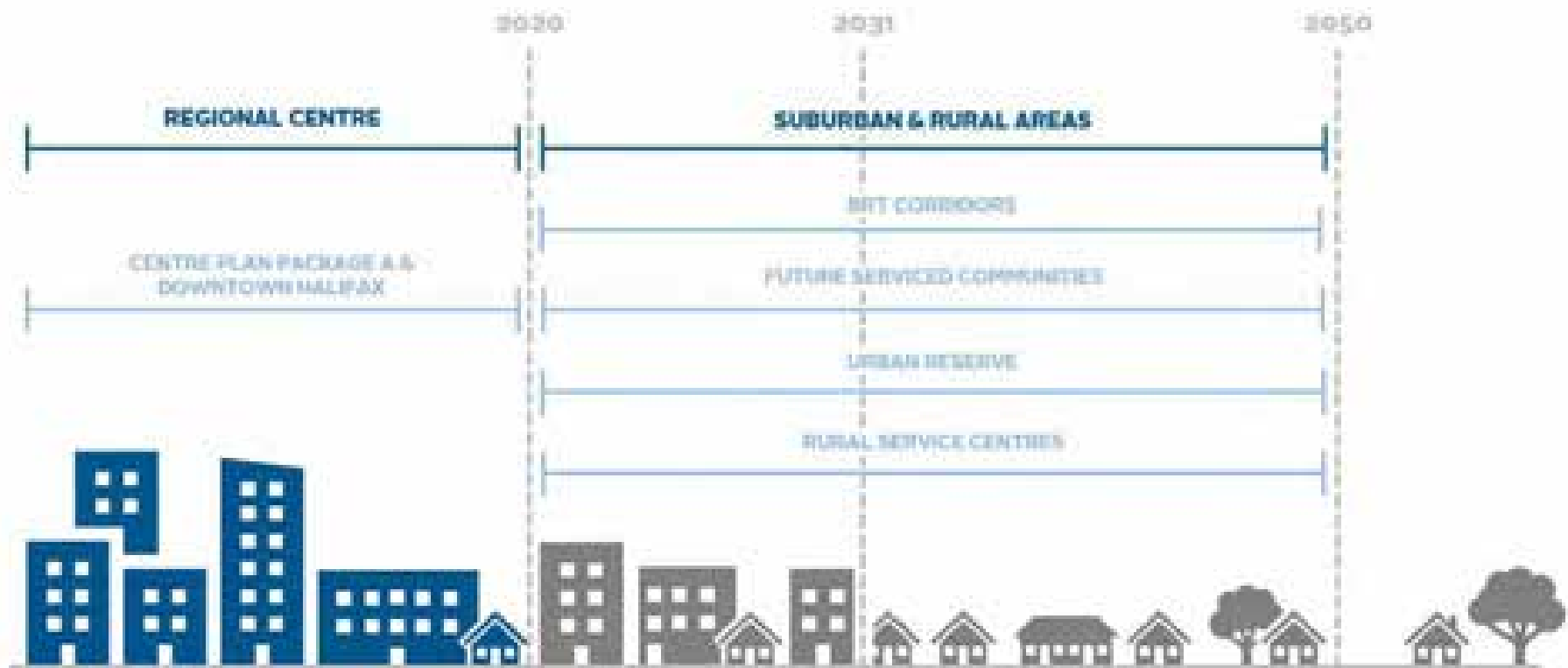


Table 3: Areas Assigned Capacity for Residential Intensification

AREA	DESCRIPTION OF RESIDENTIAL INTENSIFICATION AREAS	SOURCE POLICY
REGIONAL CENTRE	• Downtowns: Downtown Halifax and Downtown Dartmouth are major growth areas where the most intense mix of uses in the Municipality and larger scale developments are supported, while also respecting the local heritage context and transitions to surrounding low-rise neighbourhoods • Centres: These are concentrated nodes of commercial and mixed-use developments along major streets, where major growth areas is expected, including mid-rise and tall buildings. Includes: Gottingen Street; Highfield Park Drive; Quinpool Road; Robie Street and Young Street; Spring Garden Road; Wyse Road • Corridors: These include commercial and community nodes on major streets with established or emerging commercial uses, and typically abut low-rise neighbourhoods in the rear yards. Includes portions of: Agricola Street; Barrington Street – Inglis Street; Chebucto Road; Gottingen Street – Isleville Street – Young Street; Oxford Street – Bayers Road; Pleasant Street; Portland Street; Prince Albert Road – Braemar Drive; Queen Street; Quinpool Road; Robie Street – Cunard Street; Victoria Road – Primrose Street; Windmill Road; Windsor Street; Wyse Road • Higher Order Residential: Applied to lands where low-rise to tall residential buildings are permitted, with limited commercial opportunities. Includes neighbourhoods as well as some individual properties characterized by a concentration of multi-unit dwelling residential buildings • Future Growth Nodes: These are larger commercial, industrial, vacant or otherwise underutilized lands where significant mixed-use growth will be accommodated in the future. While neighbourhood planning has been completed for some of the Future Growth Nodes, others will require detailed planning to develop policy for developing complete communities with sufficient infrastructure, including access to transit, active transportation routes, roads and open spaces. Includes Future Growth Nodes with existing policy: Shannon Park Lands; Penhorn Lands; Young Street Lands; Dartmouth Cove. Future Growth Nodes without existing policy: Halifax Shopping Centre Lands; Joseph Howe Rail Lands; Kempt Road Lands; Strawberry Hill Lands; Mic Mac Mall Lands; West End Mall Lands.	Centre Plan Package A
SUBURBAN AREAS	• Future Serviced Communities: These include lands identified as growth centres within the Urban Settlement designation. Includes: Sandy Lake (north of Hammonds Plains Road); Highway 102 West Corridor (Urban Settlement Lands Only); Morris Lake Expansion (including northern lands); Port Wallace	Regional Plan & Rapid Transit Strategy

AREA	DESCRIPTION OF RESIDENTIAL INTENSIFICATION AREAS	SOURCE POLICY
SUBURBAN AREAS (CONT.)	The Rapid Transit Corridors: These include lands within an 800 m walkshed of streets identified with a future BRT route, including Dunbrack Street, Lacewood Drive, Herring Cove Road, Portland Street, and Commodore Drive. Within the walksheds, properties were assigned a designation, similar to those in the Regional Centre Plan described above (Centre, Corridor, Higher-Order Residential, or Future Growth Node) The Urban Reserve designation identified lands that are expected to be serviced beyond the Regional Plan's 25-year horizon (after 2031) This Includes: Lands on Hwy 7, Westphal; land surrounding Anderson Lake area (Dartmouth/Bedford); Governor Lake North (Timberlea); Kidston Lake lands (Spryfield/Herring Cove); private lands in the Blue Mountain - Birch Cove Lakes Regional Park area.	Regional Plan & Rapid Transit Strategy
RURAL AREAS	As expressed in Figure 3 and outlined in the scenario explanations below, a percentage of total housing demand was assigned to the rural areas of the municipality in keeping with regional growth targets.	Regional Plan

HOUSING SCENARIOS

How can the future population and housing growth be accommodated within the areas that have been planned for residential growth?

To explore how the Municipality plans to grow and how that relates to future housing demand, three land use scenarios have been generated. In these scenarios, we split the total demand for new housing between the Regional Centre, Suburban Areas, and Rural Areas, and assign which specific locations within those larger areas would be intensified (choosing locations from Table 3). This is a first step in assessing current and future housing policy in Halifax.

- The first scenario assesses the **2014 growth targets**, Future Serviced Communities, and Regional Centre Package A lands. It assumes 25% of growth in Rural Communities and

75% in Urban Communities. This shows us how much supply is enabled today relative to the Regional Plan growth targets as they exist today.

- The second scenario assesses the impact of the **Integrated Mobility Plan**, and its suggestion that the municipality further enhance these growth targets to 90% growth inside the Urban Communities, and 10% growth to Rural Communities. It also assumes growth in areas within 800m of the Rapid Transit Corridors, as was generated in the Rapid Transit Strategy.
- The third scenario assesses the impact of the **long-range plan for growth** as

contained within the Regional Plan, layered with recent policy direction centred on mobility and the IMP. This scenario has essentially the same parameters as the second scenario, with the Urban Reserve areas factored in as these areas are set up to be future growth areas in the current Regional Plan.

Over the next few months, the Municipality will use this information to assess the flexibility of current regulations to respond to near term (2031) and longer term (2050) housing demand. It will also be used to assess the ongoing growth management targets, mobility targets, and ongoing supply of serviced land.

SCENARIO A: 2014 REGIONAL PLAN

Growth Targets:	Regional Plan (25% Rural, 75% Urban Communities)
Primary Areas for Growth:	Regional Centre, Future Serviced Communities

Background

In 2014, the Municipality was still planning for 1% annual growth, and analysis revealed that the Regional Plan's growth targets (25% of growth to the Regional Centre, 50% to the Suburbs, and 25% to Rural Areas) were not being met. Meanwhile, the Stantec Scenarios study indicated that achieving the Regional Plan Growth targets would be critical for the Municipality in terms of infrastructure cost savings, and found that it would be beneficial to concentrate even more growth in the Regional Centre than the initial growth targets called for. Therefore, the 2014 Regional Plan took the direction of further concentrating growth in the Regional Centre, and identified Future Serviced Communities that could be brought online in the Suburban Areas. The growth targets became: 75% of growth to the Urban Communities and 25% to Rural areas, with at least 25% of the urban growth going to the Regional Centre. In 2019, the Municipality approved Centre Plan Package A, which could accommodate 40% of growth in the Regional Centre in key areas for intensification.

What is it?

This land use scenario explores growth allocation according to the 2014 Regional Plan, with 25% of total growth going to Rural Areas, and intensification occurring in the Regional Centre Plan Package A lands, as well as the Future Serviced Communities.

Figure 8: Scenario A >>>

SCENARIO A 2014 Regional Plan

Growth Area

- Centre
- Corridor
- Higher-Order Residential
- Downtown
- Future Growth Node
- Future Served Community
- Remaining Approved Development
- Sub-Area Boundary

SUBURBAN AREA

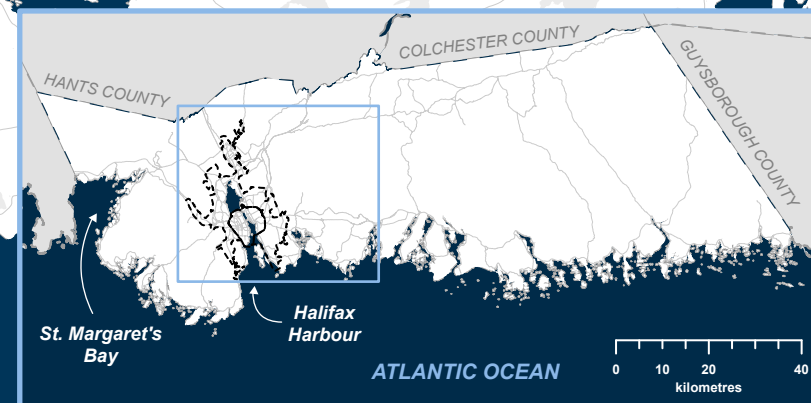
REGIONAL CENTRE

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Datum: North American 1983 CSRS
Projection: Transverse Mercator
Central Meridian: -64.5000
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Longitude of Origin: 0.0000
False Easting: 25,500,000.0000
False Northing: 0.0000
Scale Factor: 0.9999
Map Units: Metre

Map created by Halifax Regional Municipality Research & Data Group.

The following is a graphical representation and although care has been taken to ensure the best possible quality, HRM does not guarantee the accuracy of this document.

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kilometres



0 10 20 40
kilometres

SCENARIO B: THE NEXT 10 YEARS

Growth Targets:	Integrated Mobility Plan (10% Rural, 50% Suburban, 40% Regional Centre)
Primary Areas for Growth:	Regional Centre, Future Serviced Communities , Rapid Transit Corridors

Background

Following the 2014 Regional Plan and the Centre Plan, the Municipality began further assessing growth as it relates to mobility. The Integrated Mobility Plan (2017) assessed the mode share targets and suggested that in order to meet them, as much of 90% of growth should be accommodated within the urban settlement or service boundary. It proposed new regional growth targets of approximately 40% of growth in the Regional Centre, 50% in Suburban communities, and 10% in Rural communities. The Rapid Transit Strategy (2020) was the next step in assessing how this growth could be organized in the suburban communities around proposed Bus Rapid Transit (BRT) routes, and assessed how much development could be realized within 800m of these routes.

What is it?

The primary difference between this scenario and Scenario A, is that by using the IMP growth targets, Scenario B allocates 10% of growth to the Rural Areas, as opposed to 25%. There is also additional capacity available in this scenario, as certain areas within 800m of the BRT routes are identified for residential intensification.

Figure 9: Scenario B >>>

SCENARIO B

The Next 10 Years

Growth Area

- Centre
- Corridor
- Higher-Order Residential
- Downtown
- Future Growth Node
- BRT Walkshed
- FutureServedCommunities
- Remaining Approved Development
- Sub-Area Boundary

BRT: Bus Rapid Transit

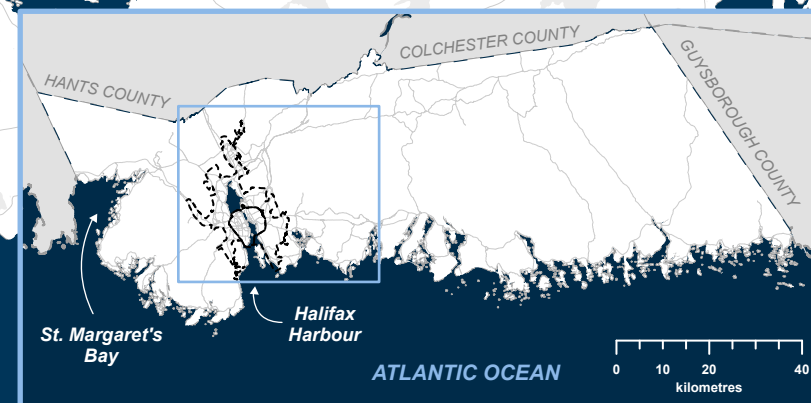
SUBURBAN AREA

REGIONAL CENTRE

PCS: NAD 1983 CSRS 2010 MTM 5 Nova Scotia
 Datum: North American 1983 CSRS
 Projection: Transverse Mercator
 Central Meridian: -64.5000
 Latitude of Origin: 0.0000
 Longitude of Origin: 0.0000
 False Easting: 25,500,000.0000
 False Northing: 0.0000
 Scale Factor: 0.9999
 Map Units: Metre

Map created by Halifax Regional Municipality Research & Data Group.

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SCENARIO C: THE FUTURE

Growth Targets:	Integrated Mobility Plan (10% Rural, 50% Suburban, 40% Regional Centre)
Primary Areas for Growth:	Regional Centre, Future Serviced Communities , Rapid Transit Corridors, Urban Reserve

Background

This scenario seeks to examine longer-range outcomes, by assuming that the Municipality continues with the policy direction for growth allocation from the Integrated Mobility Plan and by bringing on the lands currently designated 'Urban Reserve' as part of the capacity. The Regional Plan Review will consider if adjustments to the Urban Reserve areas are necessary where circumstances may have changed since the Plan was last reviewed in 2014, and will set policy intent to study additional scenarios for future settlement.

Due to the long-range nature of this scenario, it was only evaluated on the 2050 time horizon.

What is it?

This scenario builds on Scenario B, and allocates additional growth to the areas currently designated 'Urban Reserve', for the 2050 time horizon only.

Figure 10: Scenario C >>>

SCENARIO C The Future

Growth Area

- Centre
- Corridor
- Higher-Order Residential
- Downtown
- Future Growth Node
- BRT Walkshed
- Future Served Community
- Urban Reserve
- Remaining Approved Development
- Sub-Area Boundary

BRT: Bus Rapid Transit

SUBURBAN AREA

REGIONAL CENTRE

PCS: NAD 1983 CSRS 2010 MTM 5 Nova Scotia
 Datum: North American 1983 CSRS
 Projection: Transverse Mercator
 Central Meridian: -64.5000
 Latitude of Origin: 0.0000
 Longitude of Origin: 0.0000
 False Easting: 25,500,000.0000
 False Northing: 0.0000
 Scale Factor: 0.9999
 Map Units: Metre

Map created by Halifax Regional Municipality Research & Data Group.

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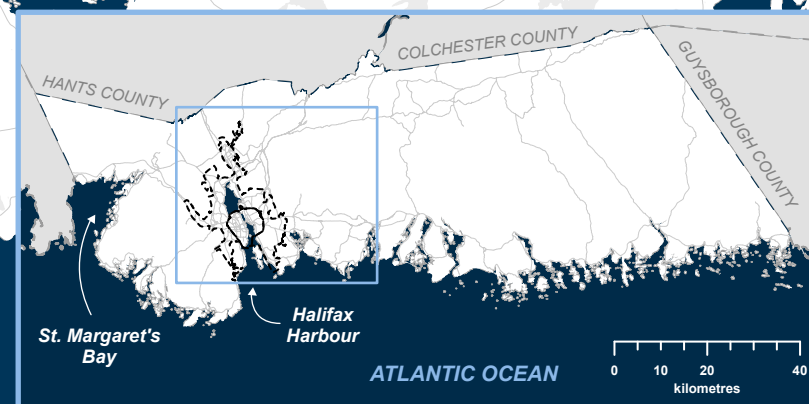


Table 4: Results

			SCENARIO A: 2014 REGIONAL PLAN	SCENARIO B: THE NEXT 10 YEARS	SCENARIO C: THE FUTURE
Growth Allocation			25% Rural 75% Urban Communities	10% Rural 50% Suburban Areas 40% Regional Centre	10% Rural 50% Suburban Areas 40% Regional Centre
Intensification Areas			Regional Centre Future Serviced Communities	Regional Centre Future Serviced Communities Rapid Transit Corridors	Regional Centre Future Serviced Communities Rapid Transit Corridors Urban Reserve
Capacity (Housing Units)			92,600  9,200  83,400	141,000  17,200  123,800	181,300  42,600  138,700
Demand Allocated to Intensification Areas	Low Immigration & Economic Downturn Demand Scenario	2031	13,000  13,000  0	15,500  15,500  0	
		2050	26,100	31,300	31,300
	Moderate Immigration & Continued Growth Demand Scenario	2031	27,900  21,300  6,600	33,500  26,300  7,200	
		2050	76,800	92,200	92,200
	High Immigration & Economic Boom Demand Scenario	2031	44,400  28,800  15,600	53,300  36,700  16,600	
		2050	141,300	169,500	169,500

 = Ground Based Units (single detached, semi-detached/duplex, townhouse)
 = Apartment Units

Due to the long time period from 2021-2050 and the uncertainty around future trends in housing propensity, we did not evaluate housing type on the 2050 time horizon.

CONCLUSION

The goal of this Issue Paper is to understand the dynamic between the projected demand for housing and Halifax's land use capacity to accommodate residents in different housing types. The analysis presented in this paper is not meant to be predictive, but instead explores a way of testing and assessing our policy, regulations and growth targets. This work will help us to understand the different ways we can create strong policy to support housing everyone today and in the future.

Evaluating different scenarios for growth allows us to consider a potential future and the resiliency of Halifax's policy. These are not decisions: the scenarios represent the direction of Regional Council's since the 2014 Regional Plan, and how they interact with changes in population and anticipated demand for housing. Many assumptions were necessary to complete this exercise, based on data and/or previous policies and analysis, and staff expertise.

Preliminary analysis of the scenarios tells us that based on the 2016 propensity of the population to live in different housing types, there continues to be high demand for ground-based units. The analysis does not assess to what extent housing propensity is driven by market availability. The initial analysis shows that there is regulatory capacity to accommodate overall population growth in the short to moderate term. Further analysis of the scenarios indicates the development of the remaining Future Serviced Communities should be considered in the near term, if Regional Council chooses to respond to 2016 propensity to live in ground-based units.

Over the next few months, the Municipality will use this information to assess the flexibility of current regulations to respond to near term (2031) and longer term (2050) housing demand. It will also be used to assess the ongoing growth management targets, mobility targets, and ongoing supply of serviced land.

Additional questions or ideas we can consider as the work progresses include:

- How should the ongoing policy work program be organized to best respond to current housing conditions?
- How might propensity (or preferences for housing) shift over time as the population changes?
- What do we anticipate the housing needs will be for key segments of the population, students, seniors, recent immigrants, and how should housing policy change to support these needs?
- Are there other growth scenarios that should be analyzed as part of the Regional Plan Review?

HAVE YOUR SAY!

Find out more about the Regional Plan Review and send us your feedback on the project webpage:

www.shapeyourcityhalifax.ca/regional-plan

Questions? Email us: regionalplan@halifax.ca

**Appendix A. New Residential Units from Construction
Permits Issued by Type**

	Total	Low-density development	Multi-unit development
2006	3,108	1,300	1,808
2007	2,375	1,480	895
2008	1,897	1,282	615
2009	2,198	1,262	936
2010	2,809	1,314	1,495
2011	3,035	1,286	1,749
2012	3,061	1,356	1,705
2013	2,147	880	1,267
2014	2,339	729	1,610
2015	2,946	572	2,374
2016	2,519	875	1,644
2017	3,060	996	2,064
2018	3,140	1,012	2,128
2019	4,112	1,239	2,873
2020	3,739	1,459	2,280

Includes new units resulting from new construction, additions, and renovations. Low-density residential development includes single-, two-, three-, and four-unit dwellings.

**Appendix B. New Residential Units from Construction
Permits Issued by Area**

	Regional Centre	Suburban Area	Rural Area
2006	829	1,622	657
2007	357	1,301	717
2008	248	992	657
2009	307	1,279	612
2010	567	1,619	623
2011	236	2,276	523
2012	613	1,874	574
2013	545	1,189	413
2014	898	1,131	310
2015	1,290	1,321	335
2016	623	1,575	321
2017	1,262	1,367	431
2018	688	1,962	490
2019	1,108	2,380	624
2020	915	2,077	747

Includes new units resulting from new construction, additions, and renovations.

Appendix C. Total Projected Housing Demand

Population Scenario		Total Units	Ground-based Units	Apartment Units
2031	Low	220,200	146,800	73,400
	Moderate	242,100	160,700	81,400
	High	266,300	175,400	90,900
2050	Low	239,400	N/A	N/A
	Moderate	313,800		
	High	408,300		

Rounded to the nearest hundred

C071

February 1st, 2021

Miles Agar, MCIP, LPP

Principal Planner

Planning & Development | Regional Planning | Urban Plan Amendments

PLANNING & DEVELOPMENT

HALIFAX MUNICIPALITY

40 Alderney Drive, (2nd Floor, Alderney Gate)

Dartmouth, HRM, Nova Scotia

P.O. Box 1749

Halifax, N.S., B3J 3A5

agarm@halifax.ca

Maggie Holm, LPP, MCIP

Principal Planner

Urban Enabled Applications

PLANNING & DEVELOPMENT

holmm@halifax.ca

Re: Re-Development of **North American Real Estate Limited** (NAREL) 1,019.74 Acre Land Assembly (Spryfield, Sambro), HALIFAX Municipality.

Hello Miles and Maggie:

KWR Approvals Inc. (KWAR) was retained by North American Real Estate Limited (NAREL) to review their four parcel 1,109.74 acres land parcel (**subject property**) near the intersection of Leiblin Drive and Old Sambro Road (**Appendix A**) to determine what planning approaches are available and possible best path to re-develop. The four parcels are identified as PID No. 00283283 (837 acres) which has a combination of the Holding (H), Single Family (R1) and Urban Reserve (UR) zone designations and the remaining three parcels known as PID No. 40872053 (23.16 acres), 00315283 (21 acres) and 00315291 (137.89 acres) are all zoned Industrial Commercial (C5).

Only the R1 zoned lands as part of the large PID No. 00283283 (837 acres) is within the Serviceable Boundary where municipal sewer and water are available. It is our understanding the R1 and C5 lands can be zoned as of right, however the R1 lots are too large for current residential dwelling construction trends and therefore we would like these considered for RCDD/CDD re-designation. Our focus is on the Urban Reserve (UR), (R1) and Holding (H) zone portions of PID No. 00283283.

Please consider:

- **Appendix F** highlights the HRM Regional Plan Serviceable Boundary map in the area of the Subject Property.
- **Appendix D** highlights Map 1 of the HALIFAX Mainland South Municipal Planning Strategy (MPS) and the area of the subject property in an around Kidston Lake & Leiblin Drive that are deemed '**Development not permitted.**' MPS Policy 2.1.4 & 2.1.5 and 3.6 regarding this 'development not permitted' is outlined in **Appendix F**.
- Transportation (future road) access to the subject property depending on how a Master Plan community is laid out and what phases would come off Old Sambro Road, Leiblin Park, Beachstone Drive, Kenwood Avenue and Fieldstone Street.
- The subject property given its sheer size, is part of two planned areas, four zones and numerous designations in the Generalized Future Land Use Map (GFLUM).

▪ **REGIONAL Plan Growth Areas**

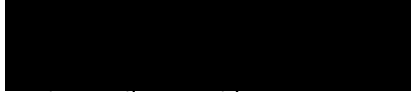
MPS Policy 3.2.2. The Urban Reserve (UR) designation which applies to the majority of the Subject Property is intended to ensure that a supply of land is available over a longer term horizon. There were seven areas identified as Urban Reserve (UR) in the 2006/2014 Regional Plan and one being North American Real Estate Limited **No. 5 Kidston Lake lands (Spryfield/Herring Cove)** subject parcel. Further Policy S-3 states *"The Urban Reserve Designation shall be established on the Generalized Future Land Use Map (Map 2) to identify those lands situated outside the Urban Settlement Designation where serviced development may be provided after the life of this Plan."*

- As highlighted in **Appendix B** with the zoning maps the NAREAL subject property is adjacent to dense residential subdivisions to the Northeast (north of Kidston Lake) and has Holding (H) zone lands adjacent to dense subdivision development to the west on Leiblin Drive. Also, the Village Centre (**Appendix C**) designation is established on the GFLUM future land use map just below NAREL C5 zoned three parcel land assembly and the main Urban Reserve parcel.
- The GFLUM (**Appendix C**) has designated the Urban Reserve (UR) lands within the NAREL land assembly (majority of PID No. 00283283 (837 acres) on the GFLUM as Comprehensive Development District (CDD). This makes complete sense from planning and to eventually consider/implement via a development agreement.

Given the record development in HRM, historically low apartment vacancy rate and significant shortage of available PAD ready lots, we are looking to discuss with HRM Planning & Development collaboratively the possibility and path to consider an CDD development agreement for the Urban Reserve/Holding zoned lands within NAREL land assembly. Also looking to see the possibility of having the NAREL Sambro lands analyzed as part of the current Regional Plan review or a District 5 (Chebucto Peninsula review)

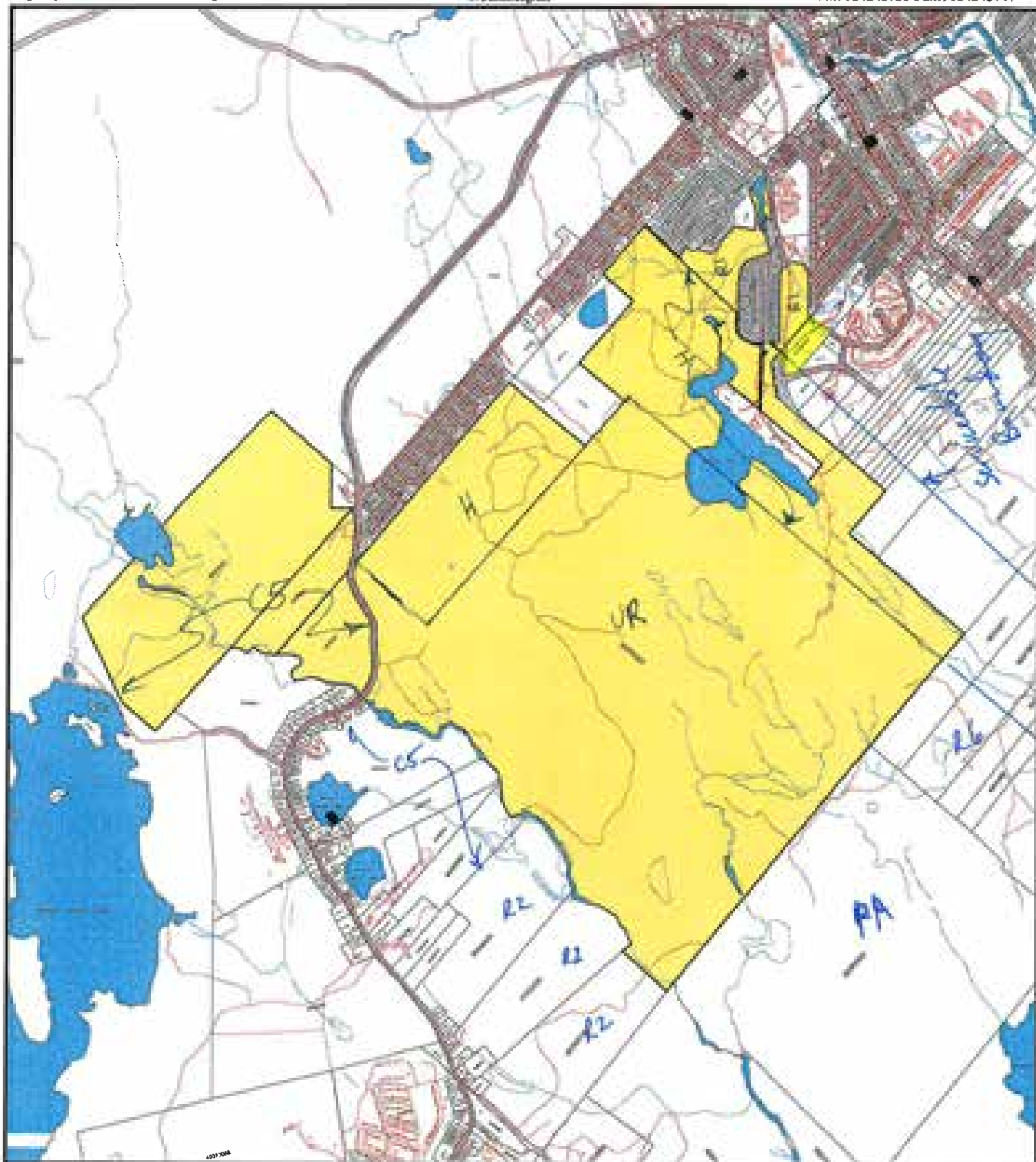
Would appreciate your thoughts and a discussion with Staff upon review. Much appreciated.

Thank You & Warmest Regards,

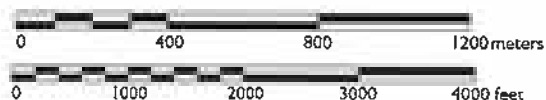


Kevin W. Riles, President
KWR Approvals Inc.

Appendix A

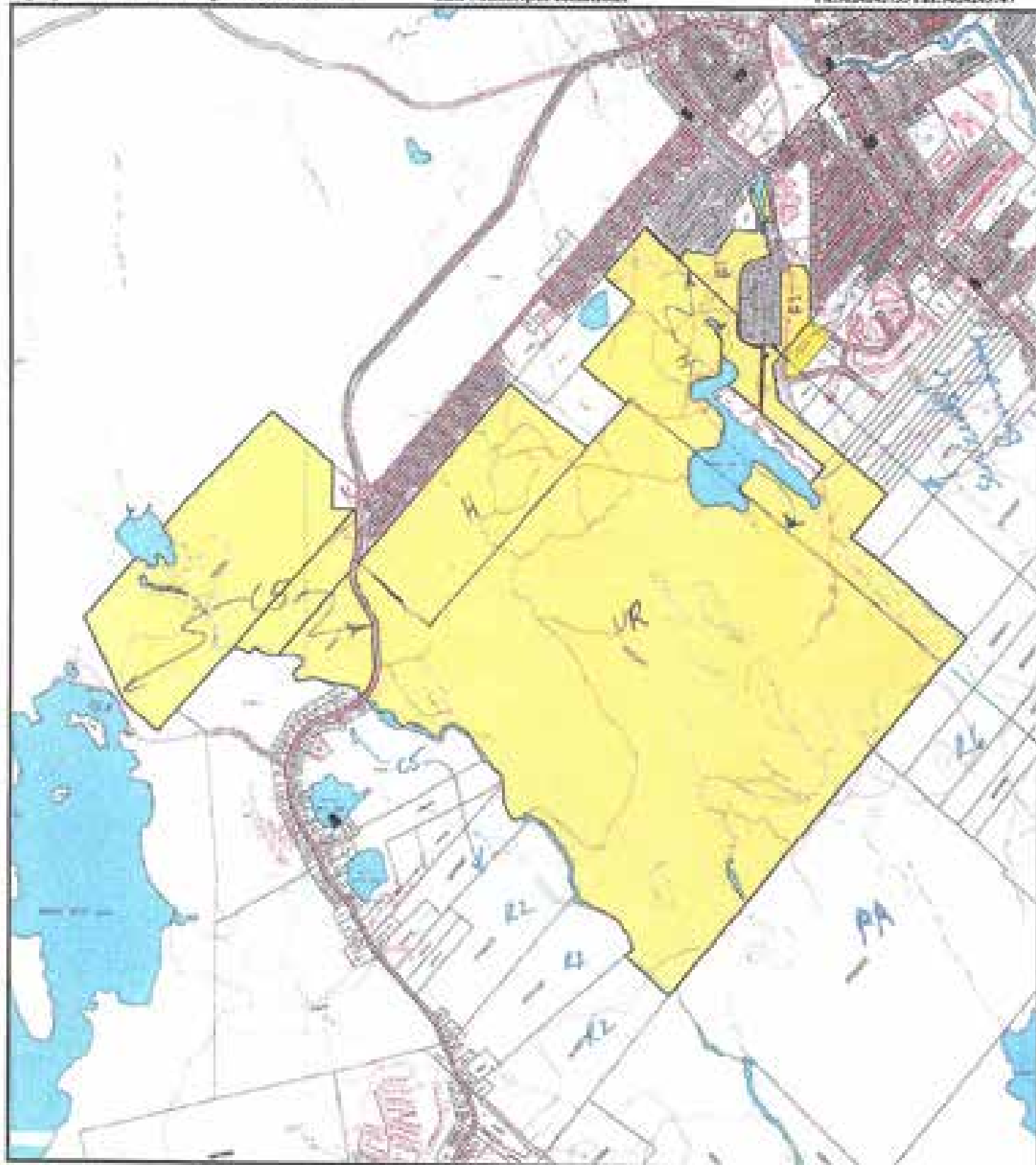


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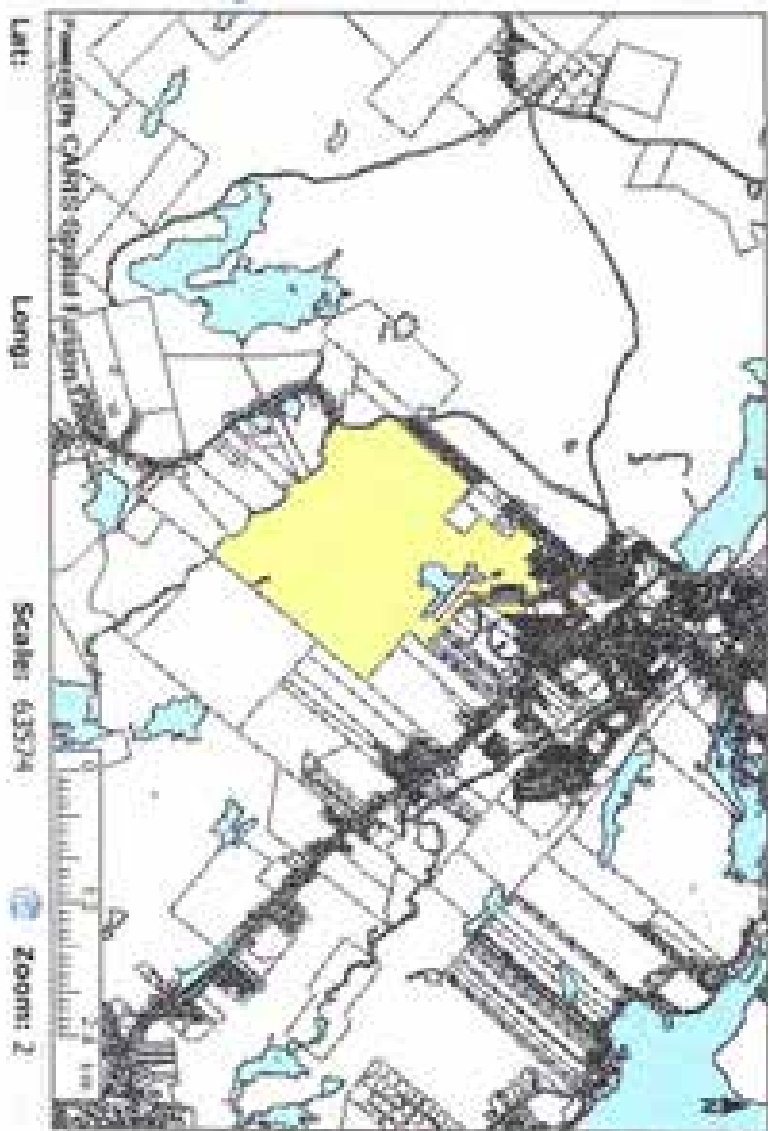
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Location:		Search
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ANAL:	03454444	
Value:	\$680,800 (2020)	
Address:	RESIDENTIAL TAXABLE	
	ROCKINGSTONE ROAD	
	HALIFAX	
County:	HALIFAX COUNTY	
Owner:	NORTH AMERICAN	
	REAL ESTATE LIMITED	
URL:	LAND REGISTRATION	1

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PID	Owner	Property Address	Assessment Info	Options
PID: 00183283	Owner: NORTH AMERICAN REAL ESTATE LIMITED	ONE Address: ROCKINGSTONE ROAD	VAL: 03434444	☐ Details
Type: STANDARD PARCEL		HALIFAX	Value: \$680,800	☐ Map
Status: ACTIVE			(2020)	
LI Status: LAND REGISTRATION		County: HALIFAX COUNTY	RESIDENTIAL TAXABLE	

PID	Owner	Area: HECTARE(S)	Property Address	Assessment Info	Options
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1 Property found					1
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- ☐ LA Parcel
- ☐ Shading
- ☐ Topo
- ☐ Monuments
- ☐ Place Names

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Location:

1 Property found

[Search](#)

PID:	40872053	Details
ANR:	09235140	
Value:	\$73,400 (2020 RESIDENTIAL TAXABLE)	
Address:	OLD SAWBIRD ROAD HALIFAX	
County:	HALIFAX COUNTY	
Owner:	STANLEY HAYTIL HAZEL HAYTIL	
LAND REGISTRATION	1	



Search Provincial Map Parish Board Help

Property Search Results

1 Property found

PID	Owner	Property Address	Assessment Info	Opis
PID: 40872053	Owner:	STANLEY HAVILL HAZEL HAVILL	Assn: 09235140	☐ C
Type: STANDARD PARCEL			SANSHU VALUE: \$73,400	☐ M
Status: ACTIVE			ROAD	(2023
UR Status: LAND REGISTRATION	Mailing Address: 88 WATERFRONT DRIVE SUITE 901 BEDFORD NS CA B4A 4K4	HALIFAX COUNTY	HALIFAX COUNTY	RESIDENTIAL TAXABLE)

County:	HALIFAX COUNTY
Area:	23.16 ACRES)

PID	Owner	Property Address	Assessment Info	Opis
1 Property found				

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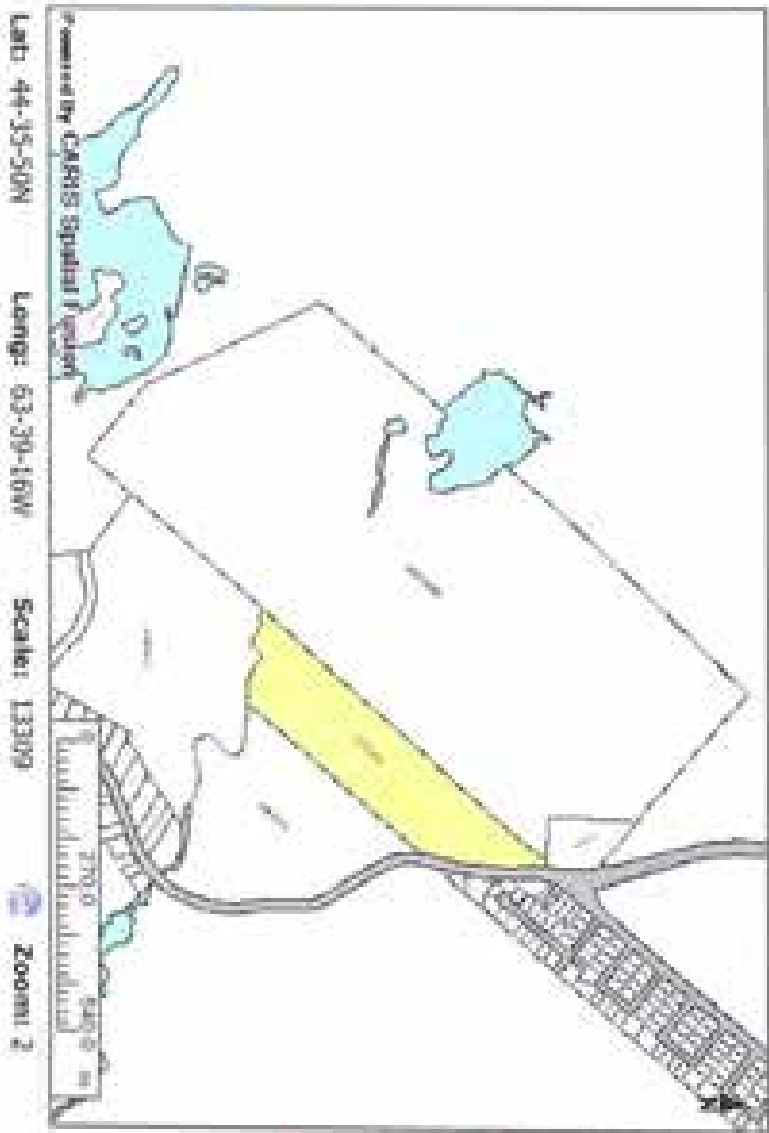
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Location:

1 Property found

[Search](#)

PID: 00315283 [Details](#)

ANR: 09784705

Value: \$61,500 (2020)

Address: RESOURCE TAXABLE

OLD SAWBRO ROAD

HALEFELSFIELD

COUNTY: HALIFAX COUNTY

Owner: NORTH AMERICAN

REAL ESTATE LIMITED

LR: LAND REGISTRATION

1

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1

PID	Owner	Property Address	Assessment Info	Options
PID: 00315283	Owner: NORTH AMERICAN REAL ESTATE LIMITED	Chap Address: OLD SAWBRO ROAD	Assn: 09784705	☐ Details
Type: STANDARD PARCEL		Parcel Address: 30 HILLWOOD CRE HALIFAX NS CA B0H 1J4	Value: \$63,500 (2020)	☒ Map
Status: ACTIVE		County: HALIFAX COUNTY	Resource: TAXES/UT	
LR Status: LAND REGISTRATION				

PID	Owner	Area: 23.0 ACRES(S)	Property Address	Assessment Info	Options
1 Property found					1

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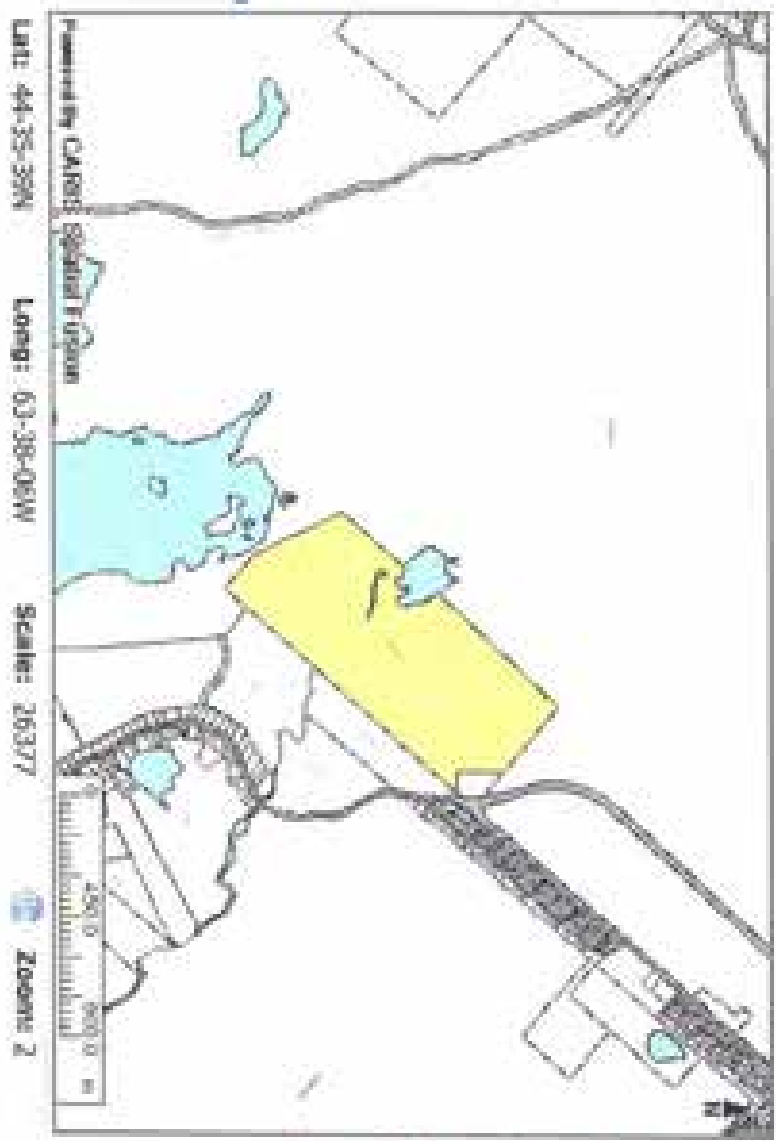
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Location:	
1 Property found	
PID:	00315291 Details
AA#:	019-43952
Value:	\$172,900 (2023 RESURVEY TAXABLE)
Address:	OLD SABBRO ROAD HARRIETSFIELD
County:	HALIFAX COUNTY
Owner:	NORTH AMERICAN REAL ESTATE LIMITED
LR:	LAND REGISTRATION

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1 Property found

1

PID	Owner	Property Address	Assessment Info	Options
PID: 00115291	Owner: NORTH AMERICAN REAL ESTATE LIMITED	Current Address: OLD SAMBRO ROAD	Assn: 01943952	☐ Details
Type: STANDARD PARCEL		HERBERTSFIELD	Value: \$172,800 (2020)	☒ Map
Status: ACTIVE			RESOURCE TAXABLE	
LR Status: LAND REGISTRATION		County: HALIFAX COUNTY		
Area: 137.89 ACRES				
PID	Owner	Property Address	Assessment Info	Options
1 Property found				1

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Appendix B



LAND USE BY-LAW

HALIFAX MAINLAND

H ZONE: HOLDING ZONE

61(1) The following uses shall be permitted in any H Zone:

- (a) a detached one-family dwelling, provided that on-site sewage disposal and water services are provided on the lot on which the dwelling is proposed to be located;
- (b) a public park or playground;
- (c) a public recreational centre, provided that sewer and water service connections for the centre are made to the existing city services;
- (d) the office of a professional person located in the dwelling house used by such professional person as his private residence;
- (e) any use, other than a privy, accessory to any of the uses in (a), (b), (c) and (d).

61(2) No person shall in any H Zone carry out, or cause or permit to be carried out, any development for any purpose other than one or more of the uses set out in subsection (1).

61(3) No person shall in any H Zone use or permit to be used any land or building in whole or in part for any purpose other than one or more of the uses set out in subsection (1).

REQUIREMENTS FOR SFD IN HOLDING ZONE

61(4) Buildings erected, altered or used as single family residences in a Holding Zone shall comply with the "Single Family Dwelling Zone" requirements as contained in Section 21(a) and (c) through (h) inclusive of this by-law.

348 PURCELL'S COVE ROAD (RC-Aug 2/16;E-Sep 3/16)

61(5) Notwithstanding the definitions of "accessory building" and "accessory use" in sections 2, sections 14A, 14C, and 14U, clauses 21 (a), (b), (ba), (c), (f) and (g) and subsections 61(1), 61(2), 61(3), 61(4), for those properties known as Lots G1, G2 and a portion of a water lot located at 348 Purcell's Cove Road, Halifax (PID #00270975, 41158452 and 00633511) and shown on Map ZM-27, the following shall apply:

- (a) An existing single family dwelling and an accessory building shall be permitted on Lot G2 (PID #41158452) and a portion of a water lot (PID #00633511) as shown on Map ZM-27. No additions to the single family dwelling building or the accessory building which would increase the floor area on Lot G2 shall be permitted. No new buildings on Lot G2 shall be permitted. However, nothing in this clause shall prevent repairs and renovations to or the replacement of buildings that existed on the effective date of this provision on Lot G2;
- (b) (i) An accessory building existing on the effective date of this provision and located in the northern corner of Lot G1 (PID #00270975) shall be permitted:
 - (A) to be accessory to the dwelling located on Lot G2,
 - (B) at a height of a maximum of three storeys and a maximum of thirty (30) feet and

- (C) to have a minimum setback of zero (0) feet from a side or rear property line, as shown on Map ZM-27.
 - (ii) The accessory building in the northern corner of Lot G1 shall not be occupied at any time as a dwelling.
 - (iii) No additions to the accessory building in the northern corner of Lot G1 which would increase the floor area of this building or increase the existing height of this building shall be permitted.
 - (iv) However, nothing in this clause shall prevent repairs and renovations to or the replacement of the accessory building in the northern corner of Lot G1;
- (c) An existing accessory building located on the eastern side of Lot G1 (PID #00270975) shall be permitted to have a minimum setback of zero (0) feet from a side or rear property line, as shown on Map ZM-27. Additions to this building shall comply with clause 21(f) and shall have a maximum height of fourteen (14) feet;
 - (d) The southernmost accessory building on Lot G1 shall be permitted to expand, subject to compliance with clause 21(f) and subject to a maximum height of fourteen (14) feet;
 - (e) New accessory buildings on Lot G1 which are accessory to the dwelling located on Lot G2 shall comply with the requirements of Section 21 and shall have a maximum height of fourteen (14) feet; and
 - (f) The provisions of clauses 61(5) (a), (b), (c), (d), (e) and subsection 62EE (7) shall not exempt the existing buildings from any associated approvals from any agency or government which may be necessary in order to obtain municipal permits for the existing buildings.

RDD ZONE: RESIDENTIAL DEVELOPMENT DISTRICT ZONE

62A(1) The following uses shall be permitted in any RDD Zone:

- (a) R-1 and R-2 uses as hereinbefore set out;
- (b) Uses accessory to the foregoing.

R-1 AND R-2 USES IN RDD ZONE

62A(2) Buildings erected, altered or used for R-1 and R-2 uses in an RDD zone shall comply with the requirements of the R-1 and R-2 zones respectively.

62A(3) No person shall in any RDD zone carry out, or cause or permit to be carried out, any development for any purpose other than one or more of the uses set out in subsection(1).

62A(4) No person shall in any RDD zone use or permit to be used any land or building in whole or in part for any purpose other than one or more of the uses set out in subsection (1).

62B(1) Notwithstanding any other provision of this by-law, Council may, by resolution, approve any specific development application pursuant to Policy 1.5.1 of Part II, Section X (Schedule I) of the Municipal Planning Strategy.

62B(2) Application for development agreements in any Residential Development District (RDD) shall include the following information:

- (i) a legal description of the total site proposed for development, to include present and proposed ownership;
- (ii) a development schedule to indicate the stages or phases of development from beginning to completion;
- (iii) total number and type of dwelling units, lot size, proposed lot coverages, approximate gross and net population densities, total amount of open space and usable open space, total amount of commercial and, where applicable, institutional facilities;
- (iv) site plan and supporting maps to describe existing topographic conditions including contours at 5 foot intervals, water courses or bodies, flood plains, wetlands, significant natural features and forest cover including the general location of trees 6 inches in diameter or greater, proposed lot lines, location and size of all existing and proposed buildings and structures including maximum heights, types of dwelling units, density per type, and non-residential structures;
- (v) the location and size of all areas to be dedicated or reserved as common open spaces, public parks, recreation areas, and other public uses; existing and proposed street circulation systems including parking and serviced areas, and major points of ingress and egress to the development; existing and proposed pedestrian circulation system, including its interrelationship with the vehicular circulation system; existing and proposed public utility system, and, where applicable, provide sanitary and water systems on and adjacent to the development site; and general schematic landscape plan indicating the treatment

of private and public open spaces, information on areas adjacent to the proposed development to indicate the relationship to these areas, to include land uses, zoning classifications, densities, circulation systems, public facilities and significant natural features and sensitive landscape.

- (vi) any other information which may be required to evaluate the impact of the proposed development.



LAND USE BY-LAW

PLANNING DISTRICT 5 (CHEBUCTO PENINSULA)

PART 25: UR (URBAN RESERVE) ZONE (RC-Jun 25/14;E-Oct 18/14)

25.1 UR USES PERMITTED

No development permit shall be issued in any UR (Urban Reserve) Zone except for the following:

Single unit dwellings, on existing lots provided that a private on-site sewage disposal system and well are provided on the lot

Passive recreation uses

Uses accessory to the foregoing uses

25.2 UR ZONE REQUIREMENTS

In any UR Zone, no development permit shall be issued except in conformity with the following:

Minimum Front or Flankage Yard:	9.1m
Minimum Side Yard:	2.5m
Minimum Rear Yard:	2.5m
Maximum Lot Coverage:	35%
Maximum Height of Main Building:	11m

PART 18: C-5 (INDUSTRIAL COMMERCIAL MIX) ZONE

18.1 C-5 USES PERMITTED

No development permit shall be issued in any C-5 (Industrial Commercial Mix) Zone except for the following:

All uses permitted in the C-2 Zone, except single and two unit dwellings.
Any industrial, assembly, manufacturing operation or **cannabis production facility (RC-Sep18/18;E-Nov 3/18)** which is conducted and wholly contained within a building and which does not involve process water treatment;
Service industries;
General contracting storage yards and services;
Machinery sales and service outlets;
Service stations;
Trucking, landscaping and excavating services;
Automotive repair outlets and auto body shops;
Warehouses;
Hotels and motels;
Restaurants including drive-in and take out restaurants;
Outdoor display courts;
All uses permitted in the P-2 (Community Facility) Zone;
Mobile dwellings and single unit dwellings which are accessory to any permitted use.
Composting operations (see section 4.29) (MC-Feb 26/96;E-Mar 28/96)

18.2 C-5 ZONE REQUIREMENTS

In any C-5 Zone, no development permit shall be issued except in conformity with the following:

Minimum Lot Area	20,000 square feet (1858 m ²)
Minimum Frontage	100 feet (32.84 m)
Minimum Front or Flankage Yard	30 feet (4.1 m)
Minimum Rear or Side Yard	15 feet (4.5 m)
Minimum Separation Distance Between Accessory Buildings	15 feet (4.5 m)
Maximum Height of Main Building	35 feet (10.7 m)

18.3 OTHER REQUIREMENTS: SINGLE AND TWO UNIT DWELLINGS

Notwithstanding Section 18.1, no person shall erect any single or two unit dwelling unless such a dwelling is located on a lot in existence on the effective date of this By-law, except where a single or two unit dwelling is accessory to any permitted use.

18.4 OTHER REQUIREMENTS: SEPARATION DISTANCES

- (a) Where any C-5 Zone abuts any park or conservation zone, no building or structure shall be permitted within fifty (50) feet (16.4 m) of the abutting zone.
- (b) Where any commercial or industrial use in any C-5 Zone abuts any residential or

community facility use, no building or structure shall be permitted within fifty (50) feet (16.4 m) of the abutting use.

- (c) Where any C-5 Zone abuts any other zone, no bulk fuel storage tanks shall be permitted within one hundred (100) feet (32.84 m) of the abutting zone, and in no case shall any bulk fuel storage tanks be located within one hundred (100) feet of a residential use.

18.5 OTHER REQUIREMENTS: OPEN STORAGE, OUTDOOR DISPLAY, PARKING AND LOADING AREAS

- (a) No open storage shall be permitted in any required front or side yard.
- (b) No outdoor display shall be permitted within ten (10) feet (3 m) of any lot line.
- (c) No open storage or outdoor display shall be permitted in any yard which abuts any residential or community facility use except where a visual barrier is provided.
- (d) No parking or loading area shall be permitted in any required side or rear yard where the required yard abuts any residential or community facility use except where a visual barrier is provided.
- (e) Notwithstanding the provisions of Section 4.27, the parking area shall be paved or otherwise maintained with a stable surface which is treated in a manner so as to prevent the raising of dust and loose particles.

18.6 OTHER REQUIREMENTS: ENVIRONMENTAL

No building, structure, open storage or parking area shall be located within twenty-five (25) feet of Fish Brook or within twenty-five (25) feet of Spruce Hill Lake.

18.7 OTHER REQUIREMENTS: SERVICE STATIONS

Where a service station is erected in any C-5 Zone, the following shall apply:

- (a) Minimum Lot Area: 30,000 square feet (2787 m²);
- (b) Minimum Lot Frontage: 150 feet (45.7 m);
- (c) No portion of any pump island shall be located closer than twenty (20) feet (6.1 m) from any street line;
- (d) The minimum distance between ramps or driveways shall be thirty (30) feet (9.1 m);
- (e) The minimum distance from a ramp or driveway to a road intersection shall be fifty (50) feet (16.4 m);
- (f) The minimum angle of intersection of a ramp to a road line shall be forty-five (45) degrees;
- (g) The width of a ramp shall be a minimum of twenty (20) feet (6.1 m) and a maximum of twenty-six (26) feet (7.9 m);
- (h) Any materials or automobiles being stored as part of the service station operation shall be enclosed by a fence, vegetation or other means which provide a visual and physical barrier.

18.8 OTHER REQUIREMENTS: AUTO BODY SHOPS

- (a) Any materials associated with an auto body shop operation shall be contained within a building or otherwise enclosed by a fence, vegetation or other means which provide a visual and physical barrier.
- (b) No open storage of vehicles or equipment shall be permitted within any required yard.

18.9 OTHER REQUIREMENTS: ONE MAIN BUILDING ON A LOT

No person shall erect more than one (1) main industrial or commercial building on a lot within any C-5 (Industrial Commercial Mix) Zone. Developments which involve more than one main commercial or industrial building on a lot may be considered by development agreement subject to Policy P-81 of the Municipal Planning Strategy and Section 3.6 of this By-law.

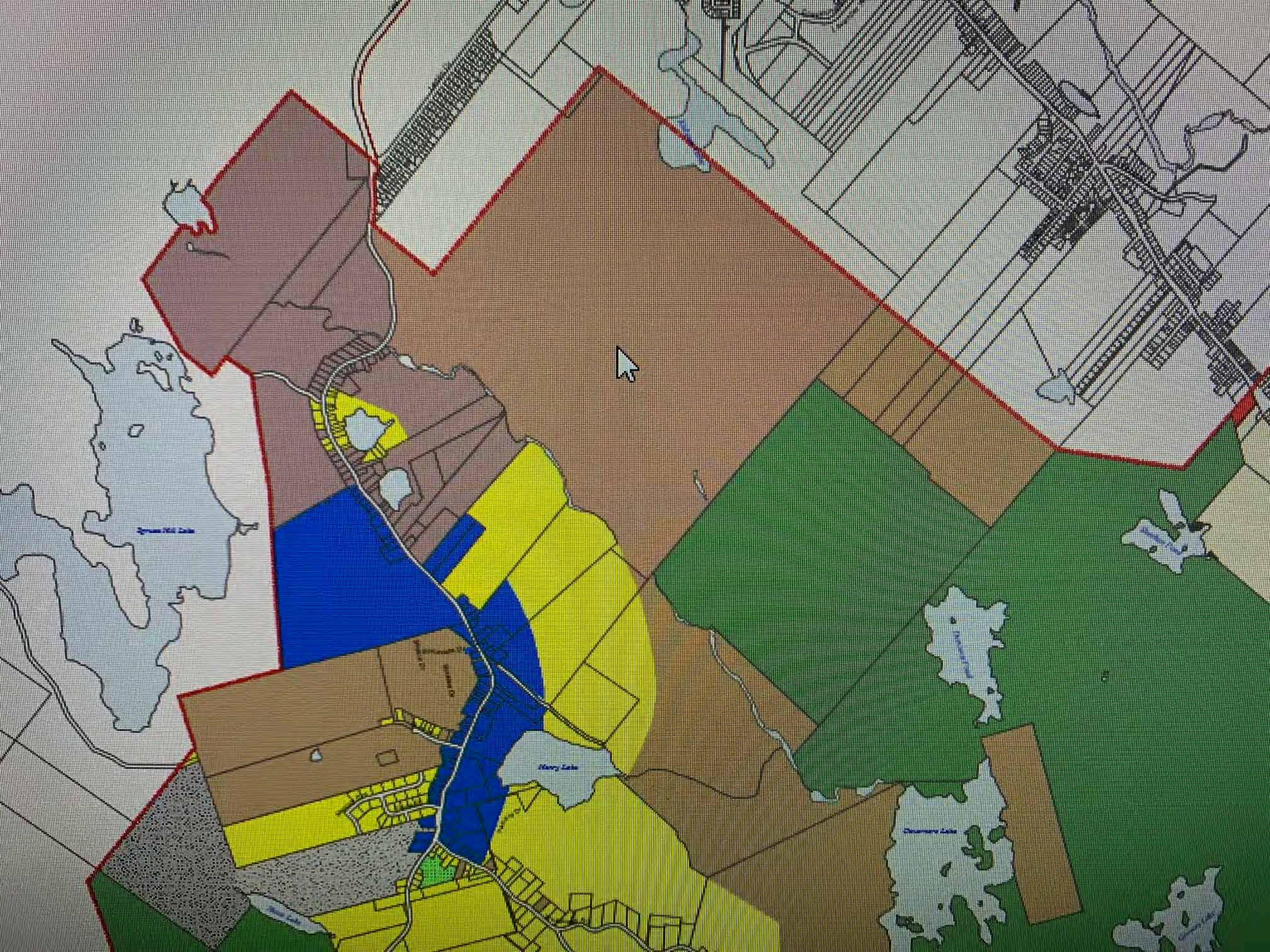
18.10 OTHER REQUIREMENTS: USES WITHIN 250 FEET

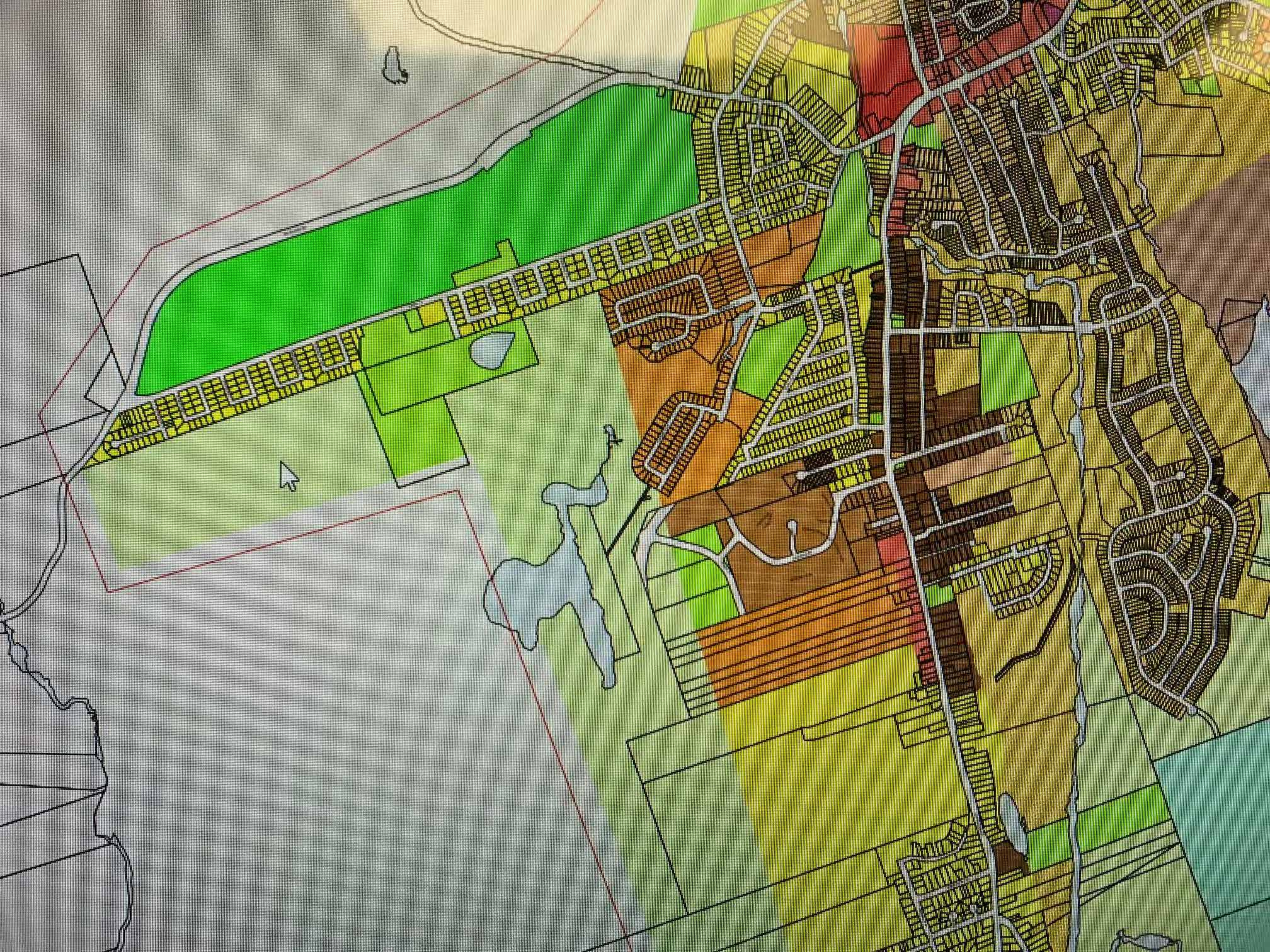
Notwithstanding Section 18.2, no development permit shall be issued for any commercial or industrial use located within 250 feet of the Old Sambro Road north of Fish Brook, or within 250 feet of Long Lake Provincial Park, except pursuant to Section 3.6(j) of this By-law.

18.11 OTHER REQUIREMENTS: CANNABIS PRODUCTION FACILITY (RC-Sep18/18; E-Nov 3/18)

- (a) Where a lot containing a cannabis production facility abuts a lot
 - (i) zoned or used for residential purposes, or
 - (ii) that is used for a daycare, community centre, school, religious institution, public park or playground,

such facility, including any building or outdoor area used as a Cannabis production facility, shall be set back a minimum 230 feet (70 metres) from the abutting lot line.





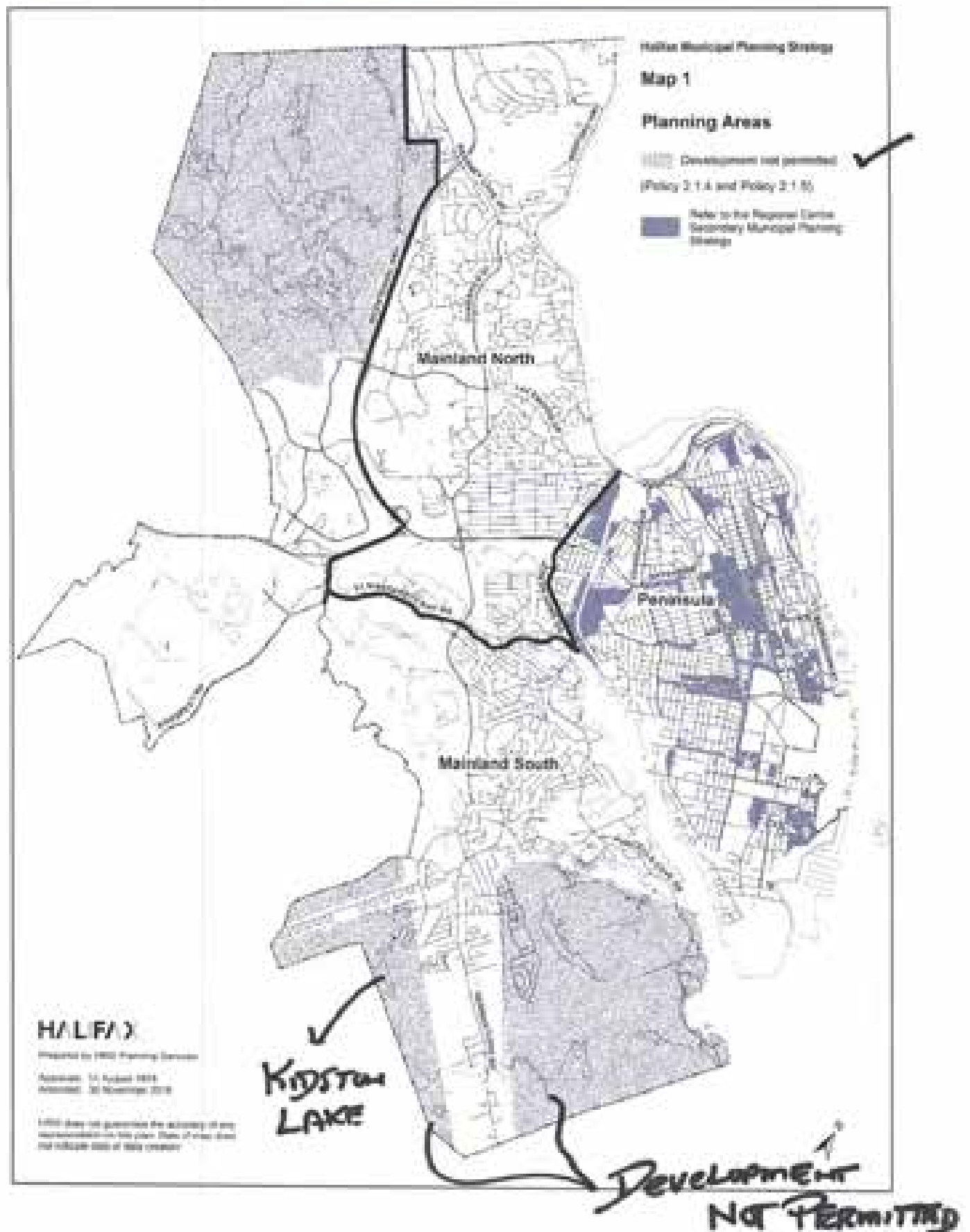
Appendix C



MUNICIPAL PLANNING STRATEGY

HALIFAX

Map 1: Planning Areas (RC-Sep 18/19;E-Nov 30/19)



Map 1

Generalized Future Land Use

- Designation**
- Park
 - Residential
 - Village Centre
 - Rural "A"
 - Rural "B"
 - Conservation
 - Industrial Commercial
 - Prostitution
 - Comprehensive Development
 - District
- ~ Plan Area Boundary
- ~ Hunting Cove Village



16. GENERALIZED FUTURE LAND USE MAP

- 16.1 Map 9 shall be considered as the expression of intent of the City of Halifax for a future land use pattern based on the policies outlined heretofore.
- 16.2 The areas of future land use shown on Map 9 shall be determined primarily by the objectives and policies which correspond to the primary use shown. All other objectives and policies shall apply as appropriate, but shall be subordinate to the primary objectives and policies.
- 16.2.1 Pursuant to Policy 15.2, for those areas where a detailed area plan forms a part of this Plan, and where the areas of future land use are shown on a Generalized Future Land Use Map for such area, as indicated on Map 9, the City shall determine the areas of future land use in accordance with the policies of the detailed area plan. In addition to the requirements of Policy 15.2 above, where the matter under consideration is not addressed by the policies of the detailed area plan, the policies of Part II, Section II of this Plan shall apply as appropriate.

~~SECTION III - CENTRAL BUSINESS DISTRICT~~

~~Deleted (RC-Jun 16/09; E-Oct 24/09)~~

~~SECTION IV - HALIFAX WATERFRONT DEVELOPMENT AREA~~

~~Deleted (RC-Jun 16/09; E-Oct 24/09)~~

2. RESIDENTIAL ENVIRONMENTS

Objective: The provision and maintenance of diverse and high quality housing in adequate amounts, in safe residential environments, at prices which residents can afford.

2.1 Residential development to accommodate future growth in the City should occur both on the Peninsula and on the Mainland, and should be related to the adequacy of existing or presently budgeted services.

2.1.1 On the Peninsula, residential development should be encouraged through retention, rehabilitation and infill compatible with existing neighbourhoods, and the City shall develop the means to do this through the detailed area planning process.

2.1.2 On the Mainland, residential development should be encouraged to create sound neighbourhoods through the application of a planned unit development process and this shall be accomplished by Implementation Policy 3.3. It is the intention of the City to prepare and adopt a planned unit development zone subsequent to the adoption of this Plan.

2.1.3 Repealed.

✓ 2.1.4 In accordance with Policy 2.1.3, the City shall permit only limited development with on-site services in that portion of the Mainland South area indicated on Map 1 and this shall be accomplished by Implementation Policy 3.6.

✓ 2.1.5 Development in the area shown on Map 1 to the west of the Bicentennial Drive shall be limited due to environmental sensitivity and a lack of municipal services. Only detached single unit residential dwellings and community facilities with on-site services shall be permitted.

✓ 2.1.6 Development with on-site services shall be permitted on lots which abut the existing public street network for the area surrounding Kearney Lake Road and currently designated "Residential Environments" on Map 9.

2.2 The integrity of existing residential neighbourhoods shall be maintained by requiring that any new development which would differ in use or intensity of use from the present neighbourhood development pattern be related to the needs or characteristics of the neighbourhood and this shall be accomplished by Implementation Policies 3.1 and 3.2 as appropriate.

2.3 The City shall investigate alternative means for encouraging well-planned, integrated development.

2.3.1 The City should restrict ribbon development which does not conform to the policies of this document and should seek ways to remove any such development which may become obsolete.

2.3.2 Ribbon development along principal streets should be prohibited in order to minimize access points required by local traffic.

Map 3a: Environmental Sensitivity – Significant Natural Features



- 3.3.1 Further to Policy 3.3 above, these areas shall be identified on the zoning map and within such areas no development permit shall be issued unless the proposed development has been approved by a resolution of Council, and further, except under an agreement with Council pursuant to Section 34(1) of the Planning Act.
- 3.3.2 Further to Policy 3.3.1 above, the purpose for which land within these areas is to be developed shall be primarily residential, and an emphasis shall be placed on a mix of housing types, shall include provision for local commercial uses that are intended to serve the residents of the immediate area, and shall include provision for automobile, transit and pedestrian circulation and an emphasis on conservation of natural environment features including lakes and waterways, mature trees and natural topographic features. In addition to the above, City Council may consider provision for minor commercial uses in accordance with Policy 3.1.2 in Section II, provided that such uses are consistent with the policies of this Plan, are compatible in design form and function with comprehensively planned development and with development adjacent to a comprehensively planned development, and that such uses are located in such manner as to be in accord with Policy 2.4.1 of Section II, as the principles of said policy may apply to areas of vacant land.
- 3.3.3 The City shall prepare and adopt plans for major public facilities including the location of collector roadways, schools and major community open space in the residentially designated undeveloped areas of the City.
- 3.3.4 In entering into agreements pursuant to Policy 3.3.1 above, Council shall be guided by the policies contained in Section II of this Plan, and shall not enter into agreements which are inconsistent with the policies of this Plan.
- 3.3.5 Prior to entering into any agreements pursuant to Policy 3.3.1, Council shall advertise its intention to do so and shall hold a public hearing at which time any objections shall be heard.
- 3.4 Repealed 6 June 1990.
- 3.5 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.5.1 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.5.2 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.5.3 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.5.4 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.5.5 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.5.6 Deleted (RC-Jun 16/09; E-Oct 24/09)
- 3.6 In accordance with Section II, Policy 2.1.4 the City shall establish a holding zone to be in effect at least until such time as the detailed area plan for Mainland South is adopted and approved as an amendment to this Plan.



Old Sambro Rd

Elmdale Cres

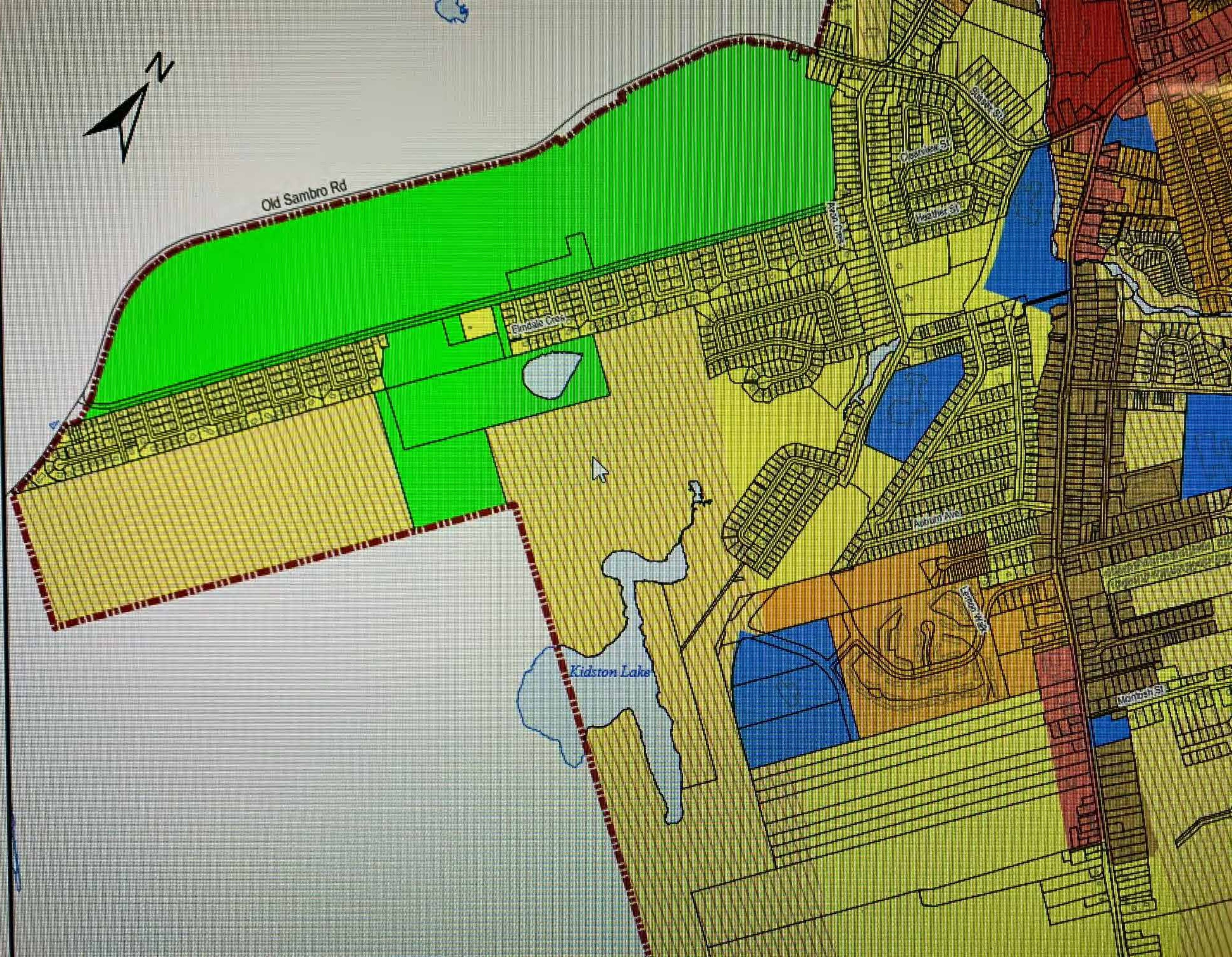
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Weather St

Autumn Ave

Montbush St

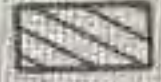
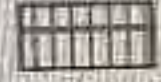
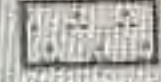
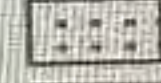
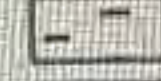
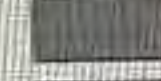
Kidston Lake



Map 1

Generalized Future Land Use

Designation

-  Park
-  Residential
-  Village Centre
-  Rural "A"
-  Rural "B"
-  Conservation
-  Industrial Commercial
-  Preservation
-  Comprehensive Development District

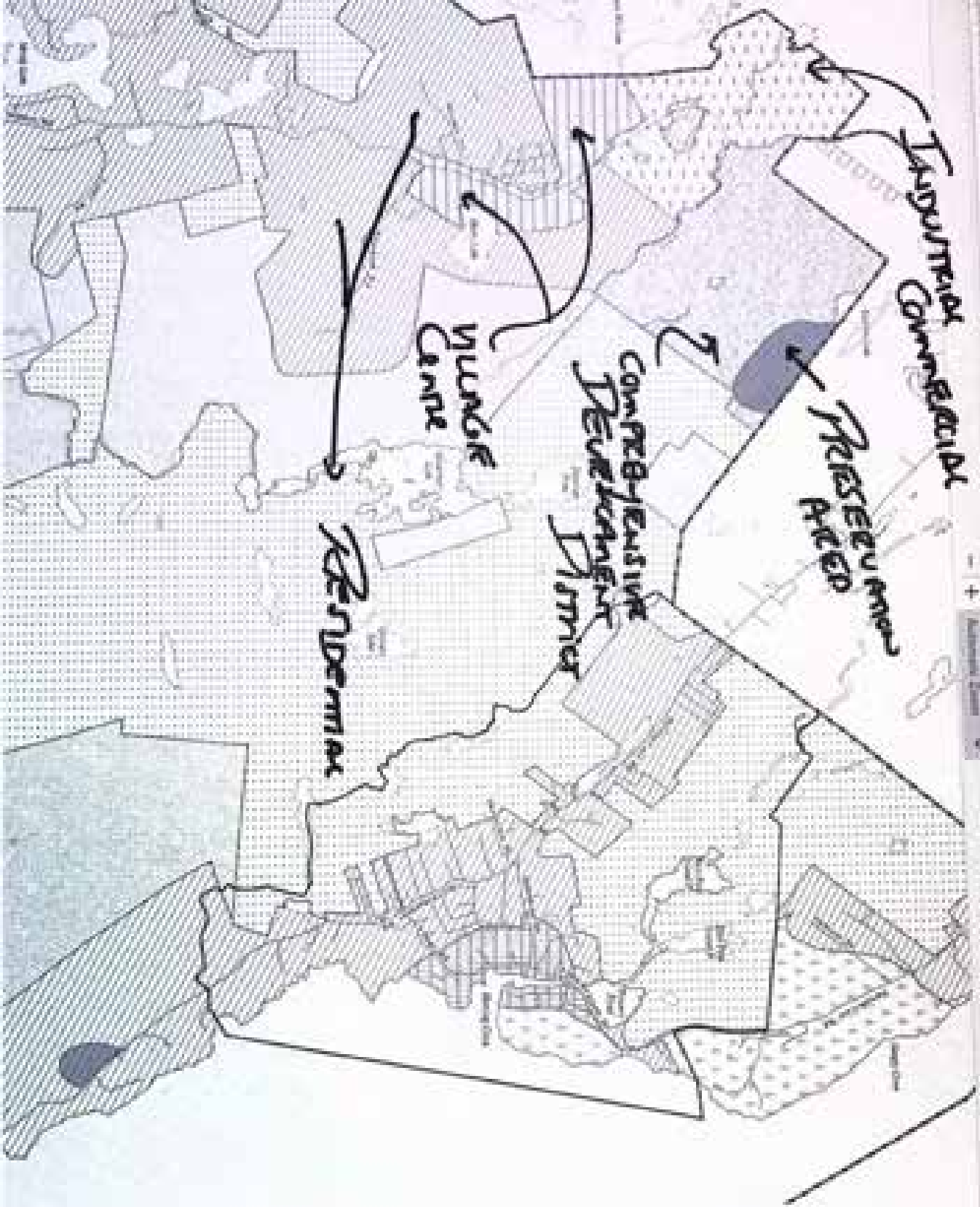
-  Plan Area Boundary
-  Herring Cove Village Boundary



Map 1

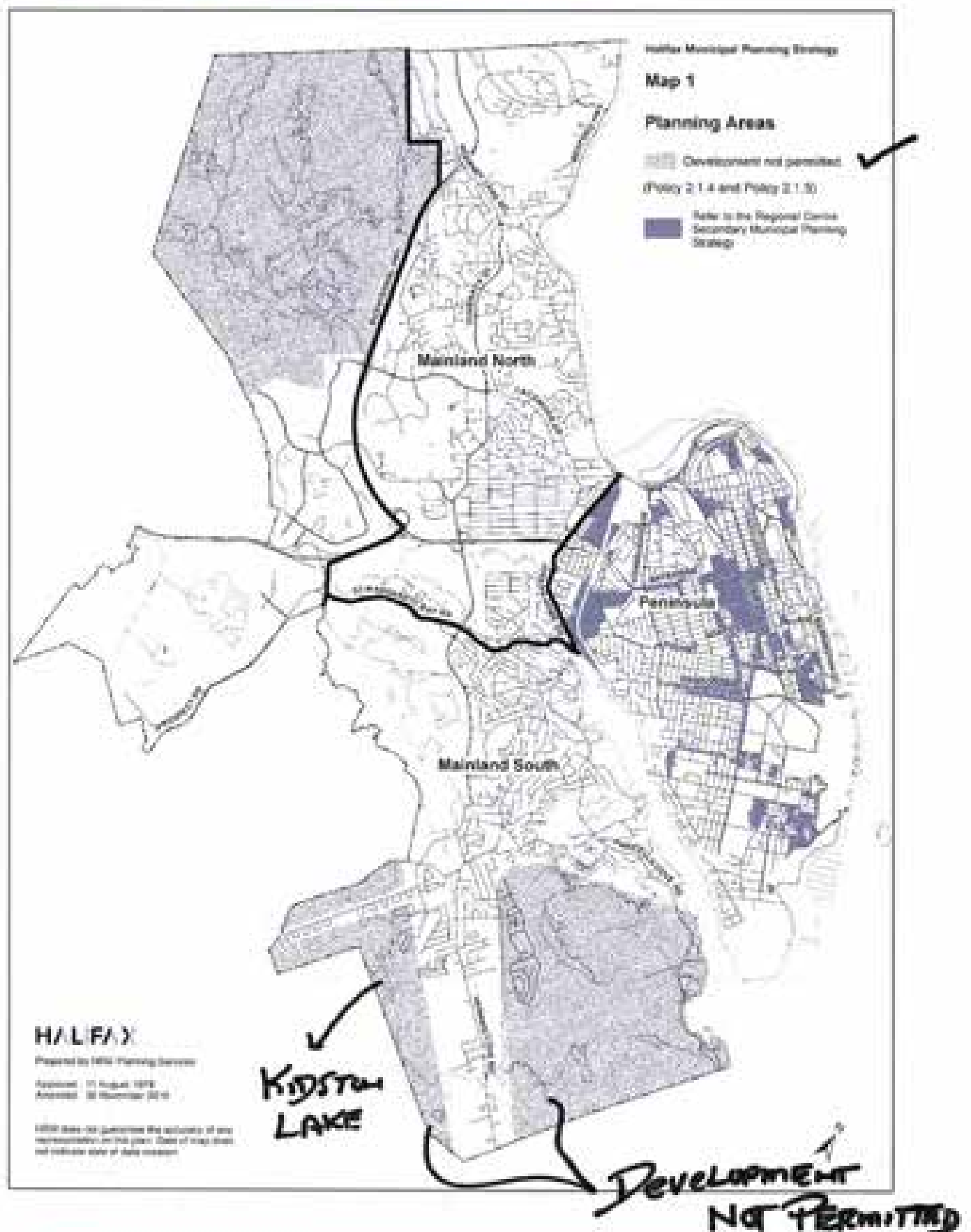
Generalized Future Land

- Designation**
- Park
 - Residential
 - Village Centre
 - Rural "A"
 - Rural "B"
 - Conservation
 - Industrial/Commercial
 - Preservation
 - Comprehensive Development District
- ~ Plan Area Boundary
~ Herring Cove Village



Appendix D

Map 1: Planning Areas (RC-Sep 18/19;E-Nov 30/19)



Appendix E

2. RESIDENTIAL ENVIRONMENTS

Objective: The provision and maintenance of diverse and high quality housing in adequate amounts, in safe residential environments, at prices which residents can afford.

2.1 Residential development to accommodate future growth in the City should occur both on the Peninsula and on the Mainland, and should be related to the adequacy of existing or presently budgeted services.

2.1.1 On the Peninsula, residential development should be encouraged through retention, rehabilitation and infill compatible with existing neighbourhoods; and the City shall develop the means to do this through the detailed area planning process.

2.1.2 On the Mainland, residential development should be encouraged to create sound neighbourhoods through the application of a planned unit development process and this shall be accomplished by Implementation Policy 3.3. It is the intention of the City to prepare and adopt a planned unit development zone subsequent to the adoption of this Plan.

2.1.3 Repealed.

2.1.4 In accordance with Policy 2.1.3, the City shall permit only limited development with on-site services in that portion of the Mainland South area indicated on Map 1 and this shall be accomplished by Implementation Policy 3.6.

✓ 2.1.5 Development in the area shown on Map 1 to the west of the Bicentennial Drive shall be limited due to environmental sensitivity and a lack of municipal services. Only detached single unit residential dwellings and community facilities with on-site services shall be permitted.

✓ 2.1.6 Development with on-site services shall be permitted on lots which abut the existing public street network for the area surrounding Kearney Lake Road and currently designated "Residential Environments" on Map 9.

2.2 The integrity of existing residential neighbourhoods shall be maintained by requiring that any new development which would differ in use or intensity of use from the present neighbourhood development pattern be related to the needs or characteristics of the neighbourhood and this shall be accomplished by Implementation Policies 3.1 and 3.2 as appropriate.

2.3 The City shall investigate alternative means for encouraging well-planned, integrated development.

2.3.1 The City should restrict ribbon development which does not conform to the policies of this document and should seek ways to remove any such development which may become obsolete.

2.3.2 Ribbon development along principal streets should be prohibited in order to minimize access points required by local traffic.

Appendix F



Regional Municipal Planning Strategy

OCTOBER 2014

3.2.2 Urban Reserve Designation

The Urban Reserve Designation is intended to ensure that a supply of land is available for serviced development over a longer term horizon. The following seven areas are designated as Urban Reserve:

- 1 interior lands bounded by Highway 7, Ross Road, Highway 207 and Broom Road (Cole Harbour/Westphal);
- 2 land surrounding Anderson Lake area (Dartmouth/Bedford);
- 3 Governor Lake North (Timberlea);
- 4 Ragged Lake (Halifax);
- 5 Kidston Lake lands (Spryfield/Herring Cove);
- 6 Purcell's Cove area back lands; and
- 7 private lands in the Blue Mountain - Birch Cove Lakes Regional Park area.

✓ S-3 The Urban Reserve Designation shall be established on the Generalized Future Land Use Map (Map 2) to identify those lands situated outside the Urban Settlement Designation where serviced development may be provided after the life of this Plan.

S-4 HRM shall, through the applicable land use by-law, establish an Urban Reserve Zone to regulate development of lands within the Urban Reserve Designation. This Zone shall permit open space uses and limit residential development to existing lots and to one lot subdivided from an existing lot under lot frontage exemption provisions of the Subdivision By-law on a property identified by PID No. 00270934.

3.2.3 Rural Settlement Designations

Under this plan, Rural Settlement Designations encompass all lands outside the Urban Settlement and Urban Reserve Designations. The following three land use designations are established:

3.2.3.1 Rural Commuter Designation

S-5 The Rural Commuter Designation shall be established on the Generalized Future Land Use Map (Map 2) to encompass those areas within commuting distance of the Regional Centre that are heavily influenced by low-density residential development. The intent for this designation is to:

- to protect the character of rural communities and conserve open space and natural resources by focussing growth within a series of centres, as shown on Settlement and Transportation Map (Map 1);
- support the delivery of convenience services to the surrounding settlement area;
- control the amount and form of development between centres; and
- protect the natural resource base and preserve the natural features that foster the traditional rural community character.

HRM intends to recognize the established Water Service Districts and allow for consideration of further extensions in accordance with the following policies:

SU-13 In recognition of the Water Service Districts established under the former Halifax County Municipality Subdivision By-law, HRM shall, through the Regional Subdivision By-law, establish Water Service Areas where development shall be permitted which is serviced by a public water distribution system but without a municipal wastewater system. Within these areas, a water distribution system shall be required to service all new developments located adjacent to an existing water distribution system where a new or extended public street or highway is proposed. Further, no water distribution system shall be permitted to extend outside of a Water Service Area.

✓ SU-14 HRM may consider establishing new Water Service Areas, subject to the financial ability of HRM to absorb any related costs, provided a wastewater management plan is also considered in accordance with Policy SU-20, if:

- (a) (i) the area is within a Rural Commuter, Rural Resource or Agricultural centre and it has been determined through a secondary planning process that new growth is to be encouraged in this area; or
- (ii) the lands are adjacent to an existing Water Service Area and a Classic Conservation Design development is proposed; or
- (iii) the lands are adjacent to an existing Water Service Area and a Classic Conservation Design development is proposed within an Urban Reserve designation, subject to the provisions of clause (d) of policy G-16; and
- (b) the new service area and a charge needed to pay for growth related improvements to the water or stormwater services has, where required, been approved by the Review Board.

SU-15 HRM may consider expanding existing Water Service Areas to existing communities, subject to the financial ability of HRM to absorb any costs related to the expansion, if:

- (a) the lands are in proximity to a water transmission main planned or constructed by Halifax Water to improve the performance of the water distribution system;
- (b) a study has been prepared by a qualified person verifying that there is a water quality or quantity problem that cannot reasonably be rectified by an alternative means;
- (c) there are environmental concerns related to the long-term integrity of on-site sewage disposal systems and a wastewater management plan is also considered in accordance with Policy SU-19; and
- (d) an area charge needed to pay for growth related improvements to the water, or stormwater services has been approved by the Review Board or Halifax Water has advised that an area charge is not required.



Halifax Regional Municipality

Subdivision By-law

Service Requirement Map

Schedule "B"

Legend

Urban Service Area

Water Service Area

Serviced (Sewer Only)

Rural Service Area

 Street construction, storm drainage system, sanitary sewage system, water distribution system and other primary and secondary services in accordance with the Design Guidelines for Urban Streets.

 Same as Rural Service Requirements and a water distribution system where adjacent to existing water services.

 Infill lots required to connect to sewer system.

 Street construction, storm drainage system and other primary and secondary services in accordance with the Design Guidelines for Rural Streets.

1.25 2.5 5 7.5

Kilometers

North American Real Estate Land Assembly Inquiry

	Reg Plan Designation	Plan Area	Community Plan Designation	Zone	
PID 00283283 (see Map 1 below) 837 acres					
	Urban Settlement	Halifax – Mainland South	Residential Development District	H	These are designated for the development of residential and commercial uses under Schedule I of the Halifax MPS. To be eligible for development there has to be a minimum of 3 acres allocated to the proposed development and sewer and water services have to be available to service the proposed development. These subject lands are within the Urban Settlement Designation but are outside of the Service Boundary under the Regional Subdivision By-law. An amendment to the RSUB would be required to bring these lands into the Service Boundary.
	Urban Reserve	PD 5	CDD	UR	The CDD policy was deleted from plan when area was designated UR under RP in 2006 but the GFLUM was not amended to carry this out. The lands were rezoned from CDD to the UR Zone pursuant to Policy S-4 of the Regional Plan in 2006. Policy S-4 created this zone as a Holding Zone to hold the lands for future urban development after the life of the Regional Plan. The UR Zone was designed to act in the same manner as the H Zone that was applied to the

North American Real Estate Land Assembly Inquiry

	Reg Plan Designation	Plan Area	Community Plan Designation	Zone	
					portion of the Kidston Lake Land Assembly that was under the Halifax Mainland South LUB.
	Urban Reserve	PD 5	Preservation	UR	This portion of the Kidston Lake Land Assembly is an IPB Site. It was rezoned from CDD to a UR Zone pursuant to Policy S-4 of the Regional Plan in 2006. Policy PRS-2 of the PD 5 MPS specified the intention to apply the base zone (CDD Zone) for the Kidston Lake Land Assembly, in order to reflect the private property rights. PRS-3 states an intention to request the Department of Natural Resources to designate this IBP site as a protected site under the Special Places Protection Act.
Additional Notes Concerning this site.					This site also contains the Rocking Stone which is a site of significant cultural heritage in Kidston Lake and a place that is of great importance for Place Making. Any plan for the development of this site should consider and preserve the important aspects of this site as part of this cultural landscape.

North American Real Estate Land Assembly Inquiry

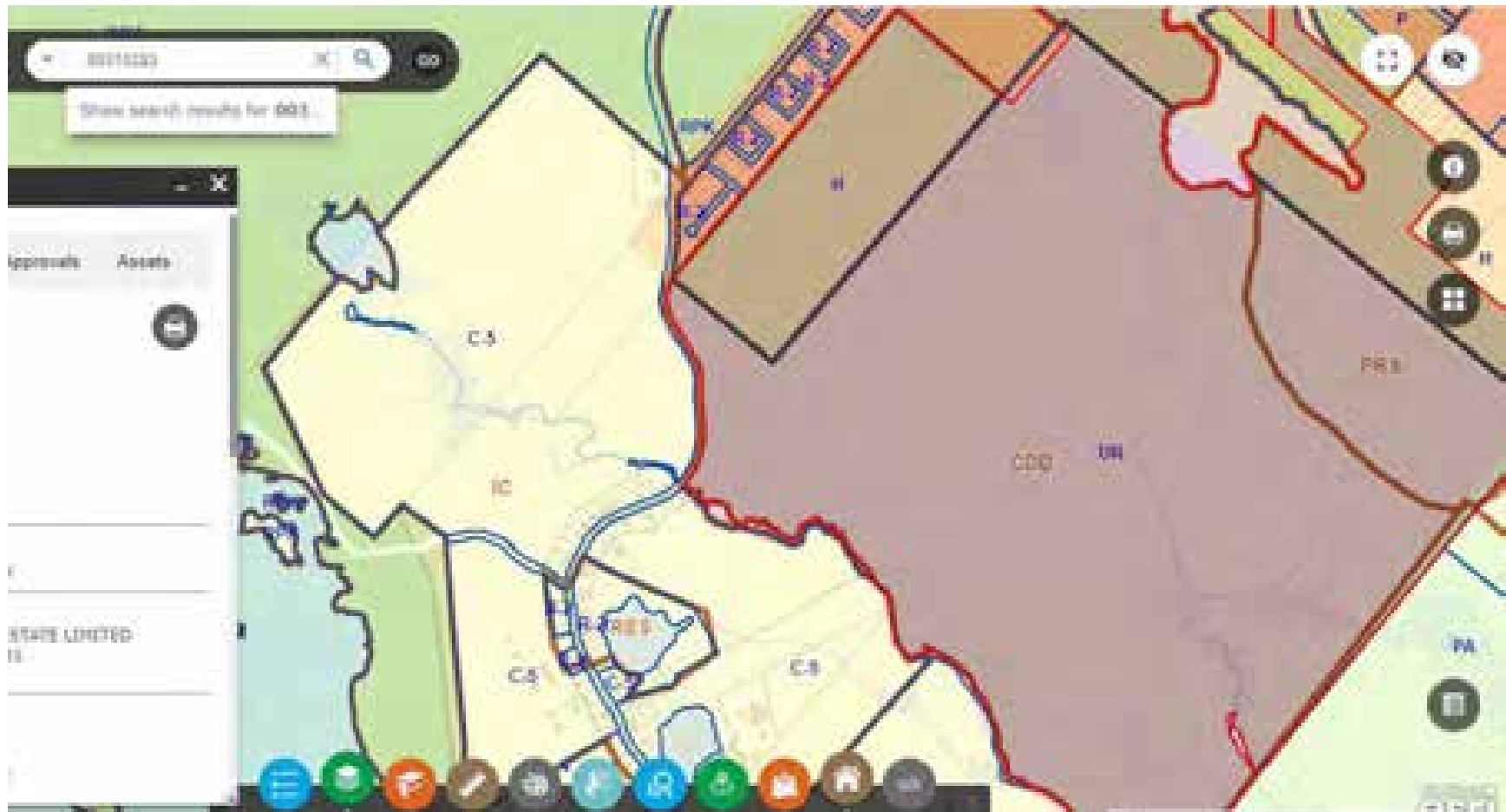
	Reg Plan Designation	Plan Area	Community Plan Designation	Zone	
					Assuming a plan of this size and this magnitude will undergo a secondary plan or CDD process, Regional Plan Policy CH-8 should be addressed.
PID 40872053 (see Map 2 below) 23.16 ac					
	Rural Commuter	PD 5	Industrial - Commercial	C-5	Under the District 5 MPS the Industrial-Commercial Designation was established over the North Harrietsfield area in recognitions of the industrial and commercial operations that were concentrating in this area off the Old Sambro Road. The plan recognizes the potential for conflict between the industrial – commercial operations and the adjacent Long Lake Provincial park on the north and western side of the designation and the Kidston Lake Land Assembly on the eastern side of the designation. This designation is a reflection of the types of land uses that had developed incrementally in this area on the boundaries of the former City of Halifax. This area is part of a larger area designated for this form of development. The plan aims to reduce conflict with the provincial park and Kidston Lake Housing development through performance

North American Real Estate Land Assembly Inquiry

	Reg Plan Designation	Plan Area	Community Plan Designation	Zone	
					controls and setbacks. Industrial or commercial development is permitted within 250 feet of the Park or the Old Sambro Road through the provisions of a DA. This approach is aimed at managing conflict only. No housing development is permitted in the Industrial Commercial Designation. Redesignation would be required to permit a housing development in this area.
PID 00315283 (see Map 3 below) 21 ac					
	Rural Commuter	PD 5	Industrial - Commercial	C-5	See note above
PID 00315291 (see Map 4 below) 137.89					
	Rural Commuter	PD 5	Industrial - Commercial	C-5	See note above

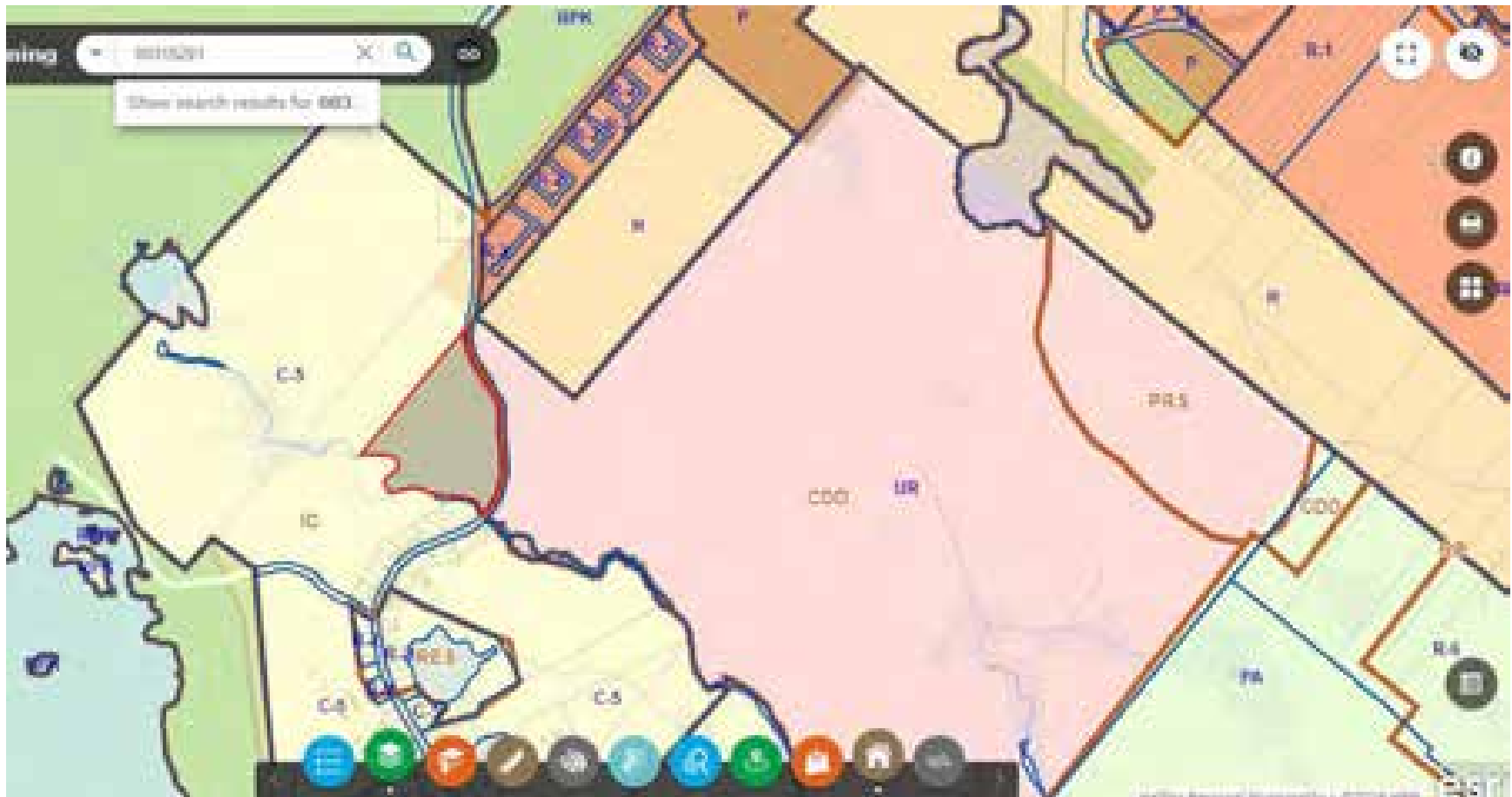
North American Real Estate Land Assembly Inquiry

Map 1 – PID 00283283



North American Real Estate Land Assembly Inquiry

Map 2 – PID 40872053



North American Real Estate Land Assembly Inquiry

Map 3 – PID 00315283



North American Real Estate Land Assembly Inquiry

Map 4 – PID 00315291



Nova Scotia



Department of
Education

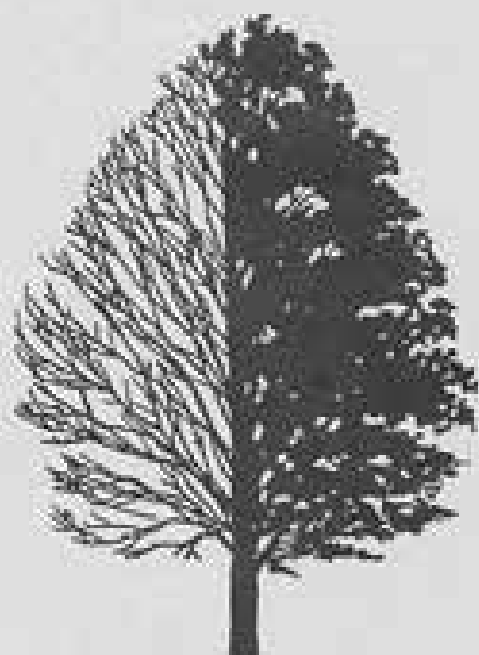
Nova Scotia Museum Complex

Curatorial Report Number 49

Important Ecological Sites in Nova Scotia

By Robert Ogilvie
October 1984

Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia, Canada
B3H 3A6



Nova Scotia



Department of
Education

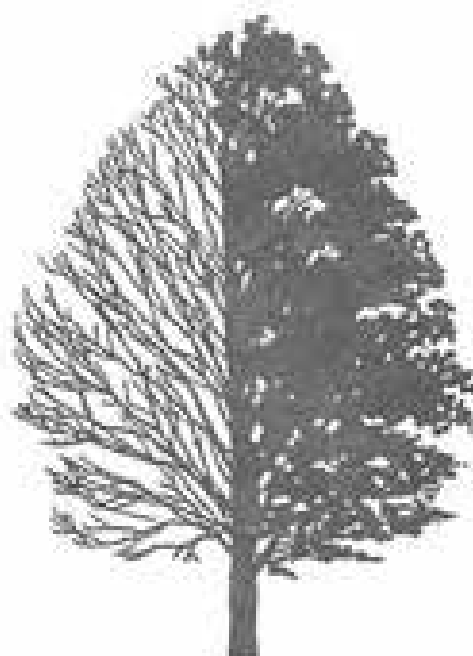
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October 1984

Nova Scotia Museum
1747 Summer Street
Halifax, Nova Scotia, Canada
B3H 3A6



Curatorial Reports

The Curatorial Reports of the Nova Scotia Museum contain information on the collections and the preliminary results of research projects carried out under the program of the museum. The reports may be cited in publications, but their manuscript status should be clearly indicated.

INTRODUCTION

The purpose of this report is two-fold. On the one hand, it contains the information gathered on ecological sites in the province, while on the other it establishes a guide for preliminary research into new sites. Funding was made available to enable the author to compile this information, which will be utilized and expanded upon by the Curator of Special Places. All of this was made possible by the enactment of the Special Places Protection Act of 1980, which acknowledges our responsibility to preserve important ecological, archeological and paleontological sites.

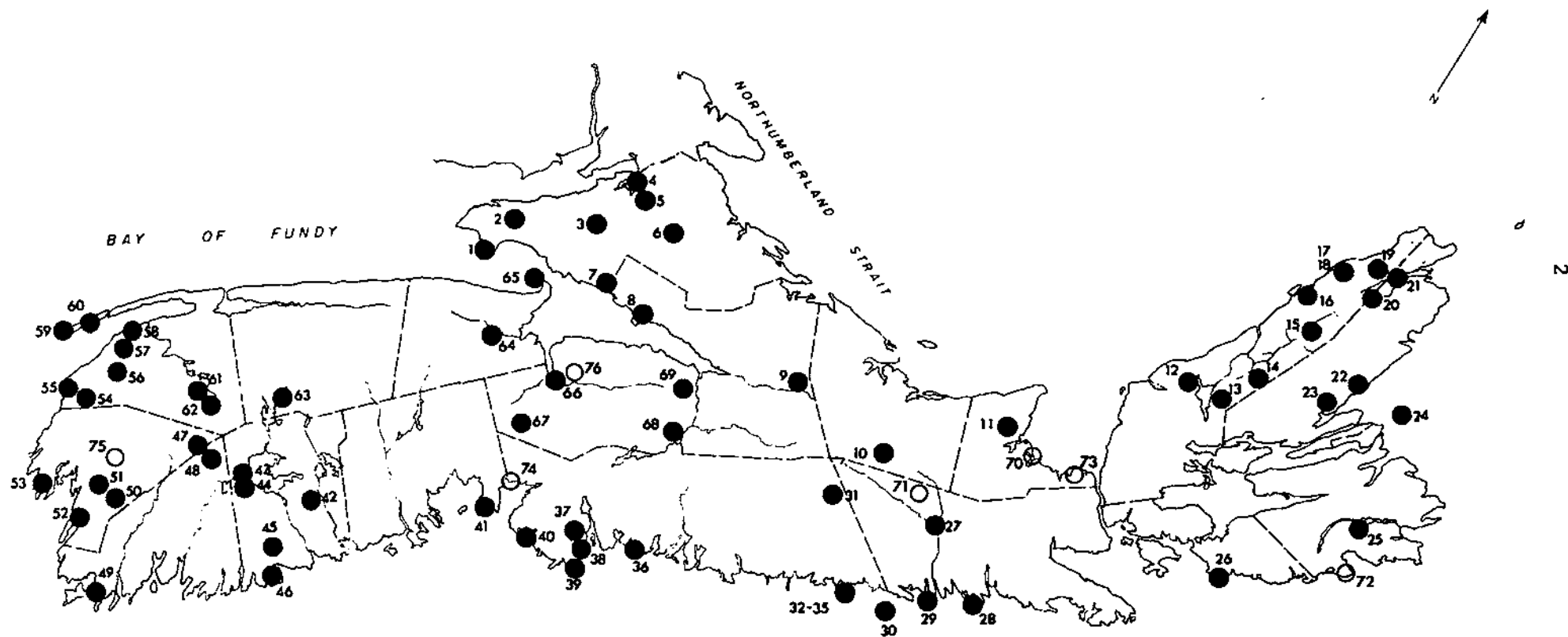
This report is a summary of the effort to date. Research into the status of seventy-six ecological sites was conducted and was entered in abbreviated form in a computer index. The contents of the index compose the body of this report, and are printed in the full standard format. Other formatting options available with our Apple III computer allow generation of a variety of reports and therefore offer a valuable information retrieval tool. As new sites are identified they will be researched and added to the index. Due to time limitations paleontological sites were not investigated.

The listed ecological reserves were chiefly those identified by the IBP-CT program of the early 1970's. The other seven sites were identified after the publication of the IBP final report and the decision was made to continue the site numbering system used therein. It should be noted that none of these sites have been proclaimed. Protection that does exist is incidental on their inclusion within the boundaries of various parks, refuges and management areas, along with the good graces of the owners. One site, the Wight Nature Preserve, is administered by the Nova Scotia Museum. Preliminary investigations indicate that several sites have suffered damage and others are in danger. It is hoped that the resources now becoming available will be enough to ease the pressure on these and other important areas.

NOVA SCOTIA

10 5 0 10 20 30 miles

Provincial boundary.....
County boundary.....
Symbols for IBP (CT) areas
 checked.....
 sites (since 1974).....



EXPLANATION OF FIELD CONTENTS

SITE : The site number and name are adopted from the IBP-CT final report " Ecological Reserves in the Maritimes, Region 7 ". Sites identified since 1974 are being numbered sequentially.

COUNTY : County or counties in which site is located.

ECOSYSTEM : Description of the important ecosystems within the site.

ECO : Continuation of ECOSYSTEM.

SIZE : Approximate area in hectares.

MAP BK : Page and grid reference from the " Map Book of Nova Scotia, 1979 ", as used in the museum's locality index.

NTS : National Topographic System map(s).

FSA : Forestry Series 'A' map(s), indicating forest type, tree heights density and other information. Scales 1"=1 mile, 1"=.5 mile, 1"=.25 mile.

MAP REF : Lists other map resources on file. See Appendix A.

MR : MAP REF continued.

FILE DATE : The date that the file was established. For IBP sites, this is the date of completion of the check sheet.

AIR PHOTOS: The first letter indicates whether the coverage is complete, incomplete or non-existent. The other letters indicate whether the photos on hand are monoscopic or stereoscopic, colour or black and white. This is followed by a listing of roll numbers and shot numbers of the photos in our possession.

AP : AIR PHOTOS continued.

GEOL INFO : The code number signifies the age, group and formation of the rocks underlying the site. The system is also used on the museum's geological collections. See Appendix B.

CROWN % : Approximate percentage of the site owned by the Crown.

ACRES : Approximate crown acreage.

HECTARES : Approximate crown hectareage.

DOC : Indicates whether ownership documentation is on file and if it is complete, incomplete or unavailable.

PRIVATE % : Approximate percentage of the site owned privately.

ACRES : Approximate private acreage.

HECTARES : Approximate private hectareage.

DOC : See above.

WILD HAB : Codes listed in this field are derived from " Important Freshwater Wetlands & Coastal Wildlife Habitats of Nova Scotia, 1982 ", compiled by the Wildlife Division, Department of Lands & Forests. See Appendix C.

WH : WILD HAB continued.

THEME REG UNIT : This number is derived from the report " Natural History of Nova Scotia ", and indicates habitat considerations.

STATUS : This indicates the protection status of the site. At the present time the status of most sites is unknown, except for those found within provincial and national parks. Other sites are protected to some extent by their location within wildlife sanctuaries, while site 74, Wight Nature Preserve, is administered by the museum.

REF : References to studies conducted on the site are on file if listed in this field.

REF : REF continued.

SITE: 1. Cape D'Or
 ECOSYSTEM: arctic-alpine habitat
 COUNTY: Cumberland
 ECO: - SIZE: 39
 MAP BK: 13A3,13B3 NTS: 21H/07 FSA: G14
 MAP REF: LRIS,CG,CO,SS,GSAM,FFG,GSC
 MR: - FILE DATE: Jun 16 71
 AIR PHOTO: -
 AP: - GEOL INFO: 4(5).1.3
 CROWN %: 6 ACRES: 6 HECTARES: 2.5 DOC: C
 PRIVATE%: 94 ACRES: 90 HECTARES: 36.5 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 710
 STATUS: -
 REF: -
 REF: -

SITE: 2. Shulie River
 ECOSYSTEM: red spruce (*Picea rubens*) stand
 COUNTY: Cumberland
 ECO: - SIZE: 31
 MAP BK: 12C5 NTS: 21H/10 FSA: E16
 MAP REF: CG,CO,SS,GSAM,FFG,GSC
 MR: - FILE DATE: Jul 4 72
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.5.1
 CROWN %: 100 ACRES: 77 HECTARES: 31 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 532
 STATUS: -
 REF: -
 REF: -

SITE: 3. Chignecto
 ECOSYSTEM: red pine (*Pinus resinosa*) stand
 COUNTY: Cumberland
 ECO: - SIZE: 31
 MAP BK: 12E4 NTS: 21H/09 FSA: D18
 MAP REF: CG,CO,SS,GSAM,GSC
 MR: - FILE DATE: Jun 17 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.5.1
 CROWN %: 100 ACRES: 77 HECTARES: 31 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 532
 STATUS: -
 REF: -
 REF: -

SITE: 4. John Lusby N.W. Area COUNTY: Cumberland
 ECOSYSTEM: salt marsh
 ECO: - SIZE: 653
 MAP BK: 18A2 NTS: 21H/16 FSA: C18
 MAP REF: LRIS,CO,SS,GSAM
 MR: - FILE DATE: Aug 27 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.2.
 CROWN %: 92 ACRES: 1493 HECTARES: 600.7 DOC: C
 PRIVATE%: 8 ACRES: 120 HECTARES: 52.3 DOC: C
 WILD HAB: FW,Cu-(16E)-A-1,5944ha,98.5,A;FW,Cu-(15)-A-419,12.3ha,63.5,C
 WH: MBH-H THEME REG UNIT: 523
 STATUS: National Wildlife Area
 REF: -
 REF: -

SITE: 5. Fenwick COUNTY: Cumberland
 ECOSYSTEM: deciduous forest
 ECO: - SIZE: 74
 MAP BK: 18A3 NTS: 21H/09 FSA: D19
 MAP REF: PCL,LRIS,CO,SS,GSAM,GSC
 MR: - FILE DATE: 1972
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.5.2
 CROWN %: 40 ACRES: 73 HECTARES: 30 DOC: C
 PRIVATE%: 60 ACRES: 109 HECTARES: 44 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 581
 STATUS: -
 REF: -
 REF: -

SITE: 6. Black River Road COUNTY: Cumberland
 ECOSYSTEM: jack pine (Pinus banksiana) stand
 ECO: - SIZE: 23
 MAP BK: 18C3 NTS: 11E/12 FSA: D21
 MAP REF: PCL LRIS,CO,SS,GSAM,GSC
 MR: - FILE DATE: Oct 18 72
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.2.
 CROWN %: 100 ACRES: 57 HECTARES: 23 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 521
 STATUS: -
 REF: -
 REF: -

SITE: 7. Moose River COUNTY: Cumberland
 ECOSYSTEM: red spruce (Picea rubens) forest
 ECO: - SIZE: 324
 MAP BK: 19B1,19B2 NTS: 21H/08 FSA: F19
 MAP REF: LRIS,CO,SS,GSAM,FFG
 MR: - FILE DATE: Jun 24 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.6.1
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 800 HECTARES: 324 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 510
 STATUS: -
 REF: -
 REF: -

SITE: 8. Economy River COUNTY: Colchester
 ECOSYSTEM: old-growth spruce (Picea rubens) forest
 ECO: - SIZE: 78
 MAP BK: 19D1 NTS: 11E/05 FSA: F21,F22
 MAP REF: PCL,LRIS,CO,GSAM,FFG,GSC
 MR: - FILE DATE: Jun 24 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.6.1
 CROWN %: 60 ACRES: 115 HECTARES: 46.5 DOC: C
 PRIVATE%: 40 ACRES: 77 HECTARES: 31.5 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 572
 STATUS: -
 REF: -
 REF: -

SITE: 9. Kemptown COUNTY: Colchester
 ECOSYSTEM: river intervale: rare plants
 ECO: - SIZE: 0.4
 MAP BK: 23E1 NTS: 11E/06 FSA: F28
 MAP REF: LRIS,CO,GSAM,FFG,GSC
 MR: - FILE DATE: Aug 70
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.2.
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 1 HECTARES: 0.4 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 572
 STATUS: -
 REF: -
 REF: -

SITE: 10. Glencoe
 ECOSYSTEM: river intervale: rare plants
 COUNTY: Pictou
 ECO: -
 MAP BK: 27D2 NTS: 11E/07 FSA: F32 SIZE: 0.8
 MAP REF: LRIS,CO,SS,GSAM,FFG,GSC
 MR: - FILE DATE: Jul 4 70
 AIR PHOTO: -
 AP: - GEOL INFO: 7b.8.14
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 2 HECTARES: 0.8 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 572
 STATUS: -
 REF: -
 REF: -

SITE: 11. Clydesdale
 ECOSYSTEM: deciduous forest
 COUNTY: Antigonish
 ECO: - SIZE: 78
 MAP BK: 29C4 NTS: 11E/09 FSA: D36
 MAP REF: PCL,LRIS,CO,SS,GSAM,FFG,GSC
 MR: - FILE DATE: Aug 14 72
 AIR PHOTO: -
 AP: - GEOL INFO: 12.17.
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 192 HECTARES: 7B DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 312
 STATUS: -
 REF: -
 REF: -

SITE: 12. Black River
 ECOSYSTEM: alkaline sphagnum bog
 COUNTY: Inverness
 ECO: - SIZE: 304
 MAP BK: 33D3 NTS: 11K/03 FSA: CB68
 MAP REF: PCL,CO,SS,FFG,GSC
 MR: - FILE DATE: Jul 19 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7b.8.
 CROWN %: 16 ACRES: 120 HECTARES: 49 DOC: C
 PRIVATE%: 84 ACRES: 630 HECTARES: 225 DOC: C
 WILD HAB: FW,CB-(19)-66-1,143ha,84,A;BEH
 WH: - THEME REG UNIT: 5B4
 STATUS: -
 REF: -
 REF: -

SITE: 13. Piper Glen COUNTY: Inverness
 ECOSYSTEM: mixed forest
 ECO: - SIZE: 27
 MAP BK: 33E3 NTS: 11K/03 FSA: CB69
 MAP REF: PCL,CG,CO,SS,FFG,GSC
 MR: - FILE DATE: Aug 6 72
 AIR PHOTO: -
 AP: - GEOL INFO: 7b.9.
 CROWN %: 50 ACRES: 33 HECTARES: 13 DOC: C
 PRIVATE%: 50 ACRES: 34 HECTARES: 14 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 591
 STATUS: -
 REF: -
 REF: -

SITE: 14. Lake O'Law COUNTY: Inverness
 ECOSYSTEM: old-growth deciduous and mixed forests
 ECO: - SIZE: 35
 MAP BK: 38A2 NTS: 11K/07 FSA: CB88
 MAP REF: PCL,CG,CO,SS,FFG,GSC
 MR: - FILE DATE: Jul 19 72
 AIR PHOTO: 1,MC
 AP: - GEOL INFO: 12.20.6,7b.9
 CROWN %: 100 ACRES: 86 HECTARES: 35 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 591
 STATUS: -
 REF: -
 REF: -

SITE: 15. Second Fork Brook COUNTY: Inverness
 ECOSYSTEM: old-growth deciduous forest
 ECO: - SIZE: 58
 MAP BK: 3784,37B5 NTS: 11K/07 FSA: CB94
 MAP REF: PCL,CO,SS,FFG,GSC
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 12.
 CROWN %: 100 ACRES: 144 HECTARES: 58 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 220
 STATUS: -
 REF: -
 REF: -

SITE: 16. Petit-Etang COUNTY: Inverness
 ECOSYSTEM: eutrophic marsh
 ECO: - SIZE: 93
 MAP BK: 37A3 NTS: 11K/10 FSA: CB107
 MAP REF: PCL,CG,CO,SS,GSAM,FFG
 MR: - FILE DATE: Jun 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7b.8.
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 230 HECTARES: 93 DOC: U
 WILD HAB: FW,1-(23)-1-1,28ha,89.5,A
 WH: - THEME REG UNIT: 551b
 STATUS: -
 REF: -
 REF: -

SITE: 17. French Mountain Lake COUNTY: Inverness
 ECOSYSTEM: raised and sloping bogs and dystrophic lake
 ECO: - SIZE: 54
 MAP BK: 37B2 NTS: 11K/10 FSA: CB108
 MAP REF: CO,SS,GSAM
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 12.185.1
 CROWN %: 100 ACRES: 134 HECTARES: 54 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 210
 STATUS: Cape Breton Highlands N.P.
 REF: -
 REF: -

SITE: 18. French Mountain Bog COUNTY: Inverness
 ECOSYSTEM: sphagnum bog
 ECO: - SIZE: 15
 MAP BK: 37B2 NTS: 11K/15,11K/10 FSA: CB107
 MAP REF: CO,SS,GSAM,FFG,GSC
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 12.185.1
 CROWN %: 100 ACRES: 38 HECTARES: 15 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 210
 STATUS: Cape Breton Highlands N.P.
 REF: -
 REF: -

SITE: 19. Grand Anse River
 ECOSYSTEM: old growth deciduous forest
 COUNTY: Inverness
 ECO: -
 SIZE: 1619
 MAP BK: 37C1 NTS: 11K/15 FSA: CB116
 MAP REF: CG,CO,SS,GSAM
 MR: -
 FILE DATE: Jun 71
 AIR PHOTO: -
 AP: -
 GEOL INFO: 12(13).205.2,7b.9,12.20.1
 CROWN %: 100 ACRES: 4000 HECTARES: 1619 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: -
 THEME REG UNIT: 220
 STATUS: Cape Breton Highlands N.P.
 REF: Clattenburg,R.E.,1962
 REF: -

SITE: 20. Sunday Lake
 ECOSYSTEM: boreal forest,dry barrens and bogs
 COUNTY: Inverness, Victoria
 ECO: -
 SIZE: 6022
 MAP BK: 37C1,37C2,37D1,37D2 NTS: 11K/10,11K/15 FSA: CB109,CB115,CB116
 MAP REF: CG,CO,SS,GSAM,FFG,GSC
 MR: -
 FILE DATE: May 31 71
 AIR PHOTO: -
 AP: -
 GEOL INFO: 12(13).205.1,12(13).205.2
 CROWN %: 100 ACRES: 14800 HECTARES: 6022 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: -
 THEME REG UNIT: 100
 STATUS: Cape Breton Highlands N.P.
 REF: Beil,C.E.,Comeau,P.L.,and Smith,R.T.,1971;Comeau,P.L.,1971
 REF: -

SITE: 21. North Aspy River
 ECOSYSTEM: old-growth deciduous forest
 COUNTY: Inverness, Victoria
 ECO: -
 SIZE: 256
 MAP BK: 37C1,37D1 NTS: 11K/15 FSA: CB116
 MAP REF: CO,SS,GSAM,FFG
 MR: -
 FILE DATE: Aug 6 72
 AIR PHOTO: -
 AP: -
 GEOL INFO: 12.20.1,12(13).205.1,7b.9
 CROWN %: 100 ACRES: 634 HECTARES: 256 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: -
 THEME REG UNIT: 220,592
 STATUS: Cape Breton Highlands N.P.
 REF: Clattenburg,R.E.,1962
 REF: -

SITE: 22. French River COUNTY: Victoria
 ECOSYSTEM: old-growth mixed forest
 ECO: - SIZE: 89
 MAP BK: 37E4 NTS: 11K/08 FSA: C898
 MAP REF: PCL,CG,CO,SS,FFG,GSC
 MR: - FILE DATE: Aug 15 72
 AIR PHOTO: -
 AP: - GEOL INFO: 12.
 CROWN %: 20 ACRES: 44 HECTARES: 18 DOC: C
 PRIVATE%: 80 ACRES: 177 HECTARES: 71 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 220
 STATUS: -
 REF: -
 REF: -

SITE: 23. Oregon COUNTY: Victoria
 ECOSYSTEM: old-growth hemlock (Tsuga canadensis) stand
 ECO: - SIZE: 19
 MAP BK: 38C1 NTS: 11K/07 FSA: C886
 MAP REF: PCL,CG,CO,SS,GSAM,FFG,GSC
 MR: - FILE DATE: Aug 15 72
 AIR PHOTO: -
 AP: - GEOL INFO: 12(13).205.2
 CROWN %: 100 ACRES: 48 HECTARES: 19 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 220
 STATUS: -
 REF: -
 REF: -

SITE: 24. Bird Islands COUNTY: Victoria
 ECOSYSTEM: coastal islands: bird nesting site
 ECO: - SIZE: 62
 MAP BK: 38E1,42A5,43A1 NTS: 11K/08 FSA: C884
 MAP REF: PCL,CG,SS,FFG,GSC
 MR: - FILE DATE: Aug 15 72
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.4.2
 CROWN %: 100 ACRES: 154 HECTARES: 62 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: IS-C
 WH: - THEME REG UNIT: 531
 STATUS: -
 REF: Smith,R.C.,and Schofield,W.B.,1958
 REF: -

SITE: 25. Marion Bridge COUNTY: Cape Breton
 ECOSYSTEM: deciduous forest
 ECO: - SIZE: 54
 MAP BK: 43C5 NTS: 11F/16 FSA: CB46
 MAP REF: PCL,LRIS,CG,CO
 MR: - FILE DATE: Aug 14 72
 AIR PHOTO: I,SC:83308,55-56
 AP: - GEOL INFO: 12.18.1
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 134 HECTARES: 54 DOC: U
 WILD HAB: -
 WH: - THEME REG UNIT: 870
 STATUS: -
 REF: -
 REF: -

SITE: 26. Point Michaud COUNTY: Richmond
 ECOSYSTEM: beach and sand dunes
 ECO: - SIZE: 159
 MAP BK: 39C4,39C5,39D4,39D5 NTS: 11F/10 FSA: CB4
 MAP REF: PCL,LRIS,CG,CO,SS,FFG,GSC
 MR: - FILE DATE: Jul 22 72
 AIR PHOTO: C,SC:83312,45-48;83309,49-52
 AP: - GEOL INFO: 12.18.1
 CROWN %: 10 ACRES: 39 HECTARES: 16 DOC: C
 PRIVATE%: 90 ACRES: 354 HECTARES: 143 DOC: C
 WILD HAB: SM
 WH: - THEME REG UNIT: 870
 STATUS: -
 REF: -
 REF: -

SITE: 27. Melrose COUNTY: Guysborough
 ECOSYSTEM: old-growth hemlock (*Tsuga canadensis*) stand
 ECO: - SIZE: 26
 MAP BK: 30C3 NTS: 11E/08,11E/01 FSA: G36,H36
 MAP REF: LRIS,CG,CO,SS
 MR: - FILE DATE: Sep 10 72
 AIR PHOTO: C,SC:A80355,146-147
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 65 HECTARES: 26 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 413b
 STATUS: -
 REF: -
 REF: -

SITE: 28. Bickerton Island COUNTY: Guysborough
 ECOSYSTEM: coastal island: bird nesting site
 ECO: - SIZE: 12
 MAP BK: 35A5 NTS: 11F/04 FSA: 139
 MAP REF: PCL,LRIS,CG,CO,SS,FFG
 MR: - FILE DATE: Jul 71
 AIR PHOTO: C,SC:A80301,180-181
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 5 ACRES: 1 HECTARES: 0.4 DOC: C
 PRIVATE%: 95 ACRES: 29 HECTARES: 11.6 DOC: C
 WILD HAB: IS-S
 WH: - THEME REG UNIT: 842
 STATUS: -
 REF: -
 REF: -

SITE: 29. Tobacco Island COUNTY: Guysborough
 ECOSYSTEM: coastal island: bird nesting site
 ECO: - SIZE: 10
 MAP BK: 31D1 NTS: 11F/04 FSA: 137
 MAP REF: PCL,CG,CO,SS,FFG
 MR: - FILE DATE: -
 AIR PHOTO: C,SC:A80301,92-93
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 100 ACRES: 25 HECTARES: 10 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: IS-S
 WH: - THEME REG UNIT: 842
 STATUS: Wildlife Management Area
 REF: McAloney,R.K.,1969
 REF: -

SITE: 30. Little White Island COUNTY: Guysborough
 ECOSYSTEM: coastal island: bird nesting site
 ECO: - SIZE: 8
 MAP BK: 31C2 NTS: 11D/16 FSA: J36
 MAP REF: PCL,CG,SS,GSAM,FFG
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 100 ACRES: 19 HECTARES: 8 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: IS-S
 WH: - THEME REG UNIT: 834
 STATUS: Wildlife Management Area
 REF: -
 REF: -

SITE: 31. Abraham Lake COUNTY: Halifax
 ECOSYSTEM: red spruce (*Picea rubens*)
 ECO: - SIZE: 51
 MAP BK: 2704 NTS: 11E/02 FSA: H32
 MAP REF: PCL,CG,CO,SS,GSAM
 HR: C,SC:82381,148-149 FILE DATE: Aug 11 71
 AIR PHOTO: C,SC:82381,148-149
 AP: -
 CROWN %: 100 ACRES: 125 GEOL INFO: 9(10).12.3
 PRIVATEX: 0 HECTARES: 51 DOC: C
 WILD HAB: - HECTARES: 0 DOC: -
 WH: -
 STATUS: Liscomb Bane Sanctuary
 REF: -
 REF: -
 THEME REG UNIT: 413

SITE: 32. Brokenback Island COUNTY: Halifax
 ECOSYSTEM: coastal island: bird nesting site
 ECO: - SIZE: 4
 MAP BK: 31A2 NTS: 11D/16 FSA: J34
 MAP REF: LRIS,CG,CO,SS,GSAM
 HR: C,SC:82318,34-35 FILE DATE: Jul 15 71
 AIR PHOTO: C,SC:82318,34-35
 AP: -
 CROWN %: 100 ACRES: 14 GEOL INFO: 9(10).12.3
 PRIVATEX: 0 HECTARES: 6 DOC: C
 WILD HAB: - HECTARES: 0 DOC: -
 WH: -
 STATUS: Wildlife Management Area
 REF: -
 REF: -
 THEME REG UNIT: 832

SITE: 33. Long Island COUNTY: Halifax
 ECOSYSTEM: coastal island: bird nesting site
 ECO: - SIZE: 4
 MAP BK: 31A2 NTS: 11D/16 FSA: J34
 MAP REF: LRIS,CG,CO,SS,GSAM
 HR: C,SC:82318,32-33 FILE DATE: Jul 14 71
 AIR PHOTO: C,SC:82318,32-33
 AP: -
 CROWN %: 100 ACRES: 10 GEOL INFO: 9(10).12.3
 PRIVATEX: 0 HECTARES: 4 DOC: C
 WILD HAB: IS-S HECTARES: 0 DOC: -
 WH: -
 STATUS: Wildlife Management Area
 REF: -
 REF: -
 THEME REG UNIT: 832

SITE: 34. Pumpkin Island COUNTY: Halifax
 ECOSYSTEM: coastal island: bird nesting site
 ECO: - SIZE: 6
 MAP BK: 28E3 NTS: 11D/16 FSA: K33
 MAP REF: PCL,CG,SS,GSAM,FFG
 MR: - FILE DATE: Jul 23 71
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 100 ACRES: 16 HECTARES: 6 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: IS-S
 WH: - THEME REG UNIT: 832
 STATUS: -
 REF: -
 REF: -

SITE: 35. Horse Island COUNTY: Halifax
 ECOSYSTEM: coastal island
 ECO: - SIZE: 6
 MAP BK: 31A3 NTS: 11D/16 FSA: K34
 MAP REF: LRIS,CO,CG,SS,GSAM,FFG
 MR: C,SC:82312,31-33 FILE DATE: Jul 71
 AIR PHOTO: C,SC:82312,31-33
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 15 HECTARES: 6 DOC: I
 WILD HAB: IS-S
 WH: - THEME REG UNIT: 832
 STATUS: -
 REF: -
 REF: -

SITE: 36. Conrad Beach COUNTY: Halifax
 ECOSYSTEM: barrier sand dunes
 ECO: - SIZE: 35
 MAP BK: 24C5 NTS: 11D/11 FSA: L26
 MAP REF: PCL,LRIS,CO,CG,SS,GSAM
 MR: C,SC:82318,19-21,50-52 FILE DATE: May 71
 AIR PHOTO: C,SC:82318,19-21,50-52
 AP: - GEOL INFO: 9(10).12.1
 CROWN %: 100 ACRES: 86 HECTARES: 35 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: SM;PPH
 WH: - THEME REG UNIT: 833
 STATUS: Provincial Park
 REF: -
 REF: -

SITE: 37. Kidston Lake
 ECOSYSTEM: dry barrens: rare plants
 COUNTY: Halifax
 ECO: - SIZE: 54
 MAP BK: 25A1 NTS: 11D/12 FSA: M24
 MAP REF: PCL,LRIS,CO,CG,SS,GSAM,FFG
 MR: C,SC:81321,45-46,83-85 FILE DATE: -
 AIR PHOTO: C,SC:81321,45-46,83-85
 AP: -
 CROWN %: 100 ACRES: 134
 PRIVATE%: 0 HECTARES: 54 DOC: C
 WILD HAB: - HECTARES: 0 DOC: -
 WH: -
 STATUS: -
 REF: -
 REF: -
 THEME REG UNIT: 451

SITE: 38. Bear Cove
 ECOSYSTEM: sphagnum bog
 COUNTY: Halifax
 ECO: - SIZE: 8
 MAP BK: 25A1 NTS: 11D/12 FSA: M24
 MAP REF: LRIS,CG,CO,SS,GSAM,FFG
 MR: C,SC:81320,100-101 FILE DATE: Jun 71
 AIR PHOTO: C,SC:81320,100-101
 AP: -
 CROWN %: 0 ACRES: 0
 PRIVATE%: 100 ACRES: 19 HECTARES: 0 DOC: -
 WILD HAB: - HECTARES: 0 DOC: C
 WH: -
 STATUS: -
 REF: -
 REF: -
 THEME REG UNIT: B51

SITE: 39. Duncans Cove
 ECOSYSTEM: coastal barrens
 COUNTY: Halifax
 ECO: - SIZE: 221
 MAP BK: 25A2 NTS: 11D/05 FSA: N24
 MAP REF: PCL,LRIS,CG,CO,SS,GSAM,FFG
 MR: - FILE DATE: Jan 24 74
 AIR PHOTO: C,SC:81319,112-114,147-149
 AP: -
 CROWN %: 60 ACRES: 328
 PRIVATE%: 40 ACRES: 219 HECTARES: 133 DOC: C
 WILD HAB: - HECTARES: 88 DOC: C
 WH: -
 STATUS: -
 REF: -
 REF: -
 THEME REG UNIT: B51

SITE: 40. West Dover COUNTY: Halifax
 ECOSYSTEM: dry heath barrens and bogs
 ECO: - SIZE: 182
 MAP BK: 21C2,21D2 NTS: 11D/05 FSA: N21,N22
 MAP REF: PCL,LRIS,CG,CO,SS,GSAM
 MR: - FILE DATE: May 71
 AIR PHOTO: C,SC:81319,81-83
 AP: - GEOL INFO: 7(8).
 CROWN %: 75 ACRES: 338 HECTARES: 137 DOC: C
 PRIVATE%: 25 ACRES: 112 HECTARES: 45 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 851
 STATUS: Peggys Cove Conservation Area
 REF: -
 REF: -

SITE: 41. Hollahan Lake COUNTY: Lunenburg
 ECOSYSTEM: jack pine (*Pinus banksiana*) stand
 ECO: - SIZE: 4
 MAP BK: 21B1 NTS: 21A/09 FSA: M20
 MAP REF: PCL,SS,CO,GSAM,FFG,BSC
 MR: - FILE DATE: Sep 21 72
 AIR PHOTO: -
 AP: - GEOL INFO: 7(8).
 CROWN %: 100 ACRES: 10 HECTARES: 4.0 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: MBH-H
 WH: - THEME REG UNIT: 451
 STATUS: Prov. Wildlife Sanctuary (waterfowl)
 REF: -
 REF: -

SITE: 42. Burnaby Lake COUNTY: Queens
 ECOSYSTEM: red spruce (*Picea rubens*) stand
 ECO: - SIZE: 39
 MAP BK: 16A1 NTS: 21A/02 FSA: P14
 MAP REF: PCL,CO,CG,GSAM
 MR: - FILE DATE: Sep 21 72
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10),12.3
 CROWN %: 2 ACRES: 2 HECTARES: .8 DOC: C
 PRIVATE%: 98 ACRES: 94 HECTARES: 38.2 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 412
 STATUS: -
 REF: -
 REF: -

SITE: 43. Shelburne River COUNTY: Queens
 ECOSYSTEM: old-growth hemlock (*Tsuga canadensis*) stand
 ECO: - SIZE: 62
 MAP BK: 09C5 NTS: 21A/03 FSA: P11
 MAP REF: PCL,CG,SS,CO,GSAM
 MR: - FILE DATE: Sep 12 72
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.1
 CROWN %: 12 ACRES: 18.5 HECTARES: 7.5 DOC: C
 PRIVATE%: 88 ACRES: 135.5 HECTARES: 54.5 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 412
 STATUS: -
 REF: -
 REF: -

SITE: 44. Sixth Lake COUNTY: Queens
 ECOSYSTEM: hemlock (*Tsuga canadensis*)-red spruce (*Picea rubens*) forest
 ECO: - SIZE: 81
 MAP BK: 10C1 NTS: 21A/03 FSA: P11,Q11
 MAP REF: PCL,CG,SS,GSAM
 MR: - FILE DATE: Sep 14 72
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 200 HECTARES: 81 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 412
 STATUS: -
 REF: -
 REF: -

SITE: 45. Broad River COUNTY: Queens
 ECOSYSTEM: red spruce (*Picea rubens*) forest
 ECO: - SIZE: 51
 MAP BK: 10E2 NTS: 21A/02 FSA: Q13
 MAP REF: PCL,CO,SS,CG,GSAM
 MR: - FILE DATE: Sep 14 72
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 125 HECTARES: 51 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 412
 STATUS: -
 REF: -
 REF: -

SITE: 46. Carter's Beach COUNTY: Queens
 ECOSYSTEM: sand dunes and beach
 ECO: - SIZE: 39
 MAP BK: 16A3 NTS: 20P/15 FSA: R14
 MAP REF: PCL,CG,CO,SS
 MR: - FILE DATE: Jun 10 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7(8).
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 96 HECTARES: 39 DOC: C
 WILD HAB: PPH
 WH: - THEME REG UNIT: 841
 STATUS: -
 REF: -
 REF: -

SITE: 47. Silvery Lake COUNTY: Shelburne
 ECOSYSTEM: old-growth hemlock (Tsuga canadensis) stand
 ECO: - SIZE: 8
 MAP BK: 10A1 NTS: 21A/03 FSA: P9
 MAP REF: PCL,CG,CO,SS,GSAM
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 100 ACRES: 20 HECTARES: 8 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 412a
 STATUS: -
 REF: -
 REF: -

SITE: 48. Shelburne Barrens COUNTY: Shelburne, Yarmouth
 ECOSYSTEM: fire barrens
 ECO: - SIZE: 5653
 MAP BK: 05E1,05E2,10A1,10A2 NTS: 21A/03,21A/04 FSA: Q8,Q9
 MAP REF: PCL,CG,CO,GSAM
 MR: - FILE DATE: Jun 8 71
 AIR PHOTO: -
 AP: - GEOL INFO: 7(8).,9(10).12.3
 CROWN %: 98 ACRES: 13688 HECTARES: 5540 DOC: C
 PRIVATE%: 2 ACRES: 280 HECTARES: 113 DOC: C
 WILD HAB: FW,S-(8)-20-7,4ha,71.5,8;FW,S-(8)-A-41,119ha,71.5,8;FW,S-(8)-18-2,
 WH: 18ha,66.5,C THEME REG UNIT: 412a
 STATUS: -
 REF: Strang,R.M.(1970);Strang,(1971a.);Strang,R.M.(1971b.);Strang,R.M.(1972)
 REF: -

SITE: 49. Sandhills Beach
 ECOSYSTEM: sand dunes and salt marsh
 COUNTY: Shelburne
 ECO: -
 MAP BK: 06E2 NTS: 20P/12 FSA: U8 SIZE: 20
 MAP REF: PCL,CG,SS,GSAM
 MR: - FILE DATE: Jun 3 71
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.5
 CROWN %: 100 ACRES: 50 HECTARES: 20 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: SM,MBH-M
 WH: - THEME REG UNIT: 841
 STATUS: Provincial Park
 REF: -
 REF: -

SITE: 50. Quinan Lake
 ECOSYSTEM: old-growth mixed forest
 COUNTY: Yarmouth
 ECO: -
 MAP BK: 05C4,05D4 NTS: 20P/13 FSA: D21 SIZE: 536
 MAP REF: PCL,CO,CG,GSAM
 MR: - FILE DATE: Jun 21 72
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.5
 CROWN %: 100 ACRES: 1325 HECTARES: 536 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 440
 STATUS: -
 REF: -
 REF: -

SITE: 51. Moses Lake
 ECOSYSTEM: old-growth deciduous forest
 COUNTY: Yarmouth
 ECO: -
 MAP BK: 05C3 NTS: 20P/13 FSA: S6 SIZE: 12
 MAP REF: PCL,CO,CG,SS,GSAM
 MR: - FILE DATE: Jul 72
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 29 HECTARES: 12 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 831
 STATUS: -
 REF: -
 REF: -

SITE: 52. Spinneys Heath
 ECOSYSTEM: sphagnum bog
 COUNTY: Yarmouth
 ECO: -
 MAP BK: 05C4,05C5
 MAP REF: PCL,CG,CO,SS,GSAM
 MR: -
 AIR PHOTO: -
 AP: -
 CROWN %: 100
 PRIVATE%: 0
 WILD HAB: FW,Y-(2a)-A-3,162ha,69,C;FW,Y-(2)-4-15,18ha,66,C
 WH: -
 STATUS: -
 REF: -
 REF: -
 NTS: 20P/13
 FSA: S6
 FILE DATE: Jul 15 71
 GEOL INFO: 9(10).12.1
 ACRES: 691
 HECTARES: 280
 HECTARES: 0
 DOC: C
 DOC: -
 THEME REG UNIT: 831

SITE: 53. Chebogue Lake
 ECOSYSTEM: tidal lake
 COUNTY: Yarmouth
 ECO: -
 MAP BK: 05A4
 MAP REF: CG,CO,SS,GSAM
 MR: -
 AIR PHOTO: -
 AP: -
 CROWN %: 0
 PRIVATE%: 100
 WILD HAB: SM;MBH-H
 WH: -
 STATUS: Prov. Wildlife Sanctuary (waterfowl)
 REF: -
 REF: -
 NTS: 200/16
 FSA: S4
 FILE DATE: Jul 1 72
 GEOL INFO: 9(10).12.3
 ACRES: 0
 HECTARES: 0
 HECTARES: 116
 DOC: -
 DOC: C
 THEME REG UNIT: 831

SITE: 54. Hectanooga
 ECOSYSTEM: eastern white cedar (Thuja occidentalis) stand
 COUNTY: Digby
 ECO: -
 MAP BK: 05A1
 MAP REF: CG,CO,SS
 MR: -
 AIR PHOTO: -
 AP: -
 CROWN %: 0
 PRIVATE%: 100
 WILD HAB: -
 WH: -
 STATUS: -
 REF: -
 REF: -
 NTS: 21B/01
 FSA: Q4
 FILE DATE: Jul 7 72
 GEOL INFO: 9(10).12.3
 ACRES: 0
 HECTARES: 0
 HECTARES: 62
 DOC: -
 DOC: U
 THEME REG UNIT: 411

SITE: 55. Cape St. Mary COUNTY: Digby
 ECOSYSTEM: salt marsh and sand dunes
 ECO: - SIZE: 132
 MAP BK: 02E1 NTS: 21B/01 FSA: 03
 MAP REF: PCL,CG,CO,SS,GSAM
 MR: - FILE DATE: Jul 8 71
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).105.4
 CROWN %: 50 ACRES: 162.5 HECTARES: 66 DOC: C
 PRIVATE%: 50 ACRES: 162.5 HECTARES: 66 DOC: U
 WILD HAB: SM;MBH-M
 WH: - THEME REG UNIT: 820
 STATUS: Provincial Park (dunes & beach)
 REF: -
 REF: -

SITE: 56. Placid Lake COUNTY: Digby
 ECOSYSTEM: lake,river floodplains and old-growth hemlock(*Tsuga canadensis*)stand
 ECO: - SIZE: 175
 MAP BK: 04B4 NTS: 21A/05 FSA: 05
 MAP REF: PCL,CG,CO,SS
 MR: - FILE DATE: May 20 71
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3,9(10).12.1
 CROWN %: 5 ACRES: 22 HECTARES: 8.7 DOC: C
 PRIVATE%: 95 ACRES: 410 HECTARES: 166.3 DOC: U
 WILD HAB: FW,Yar-(3)-2-B0a,17ha,71.5,B
 WH: - THEME REG UNIT: 421a
 STATUS: -
 REF: -
 REF: -

SITE: 57. Belliveau Lake COUNTY: Digby
 ECOSYSTEM: lacustrine plant communities
 ECO: - SIZE: 299
 MAP BK: 04A3 NTS: 21B/08 FSA: 04
 MAP REF: CG,CO,SS,GSAM
 MR: - FILE DATE: Jul 16 71
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 740 HECTARES: 299 DOC: U
 WILD HAB: -
 WH: - THEME REG UNIT: 411
 STATUS: -
 REF: -
 REF: -

SITE: 58. Grosses Coques
 ECOSYSTEM: salt marsh
 COUNTY: Digby
 ECO: -
 MAP BK: 04A3 NTS: 21B/08 FSA: 04 SIZE: 51
 MAP REF: CG,CO,SS,GSAM
 MR: - FILE DATE: Jul 7 71
 AIR PHOTO: -
 AP: -
 CROWN %: 0 ACRES: 0 GEOL INFO: 9(10).12.3
 PRIVATE%: 100 ACRES: 125 HECTARES: 0 DOC: -
 WILD HAB: - HECTARES: 51 DOC: U
 WH: -
 STATUS: - THEME REG UNIT: 820
 REF: -
 REF: -

SITE: 59. Brier Island
 ECOSYSTEM: sedge and sphagnum bogs
 COUNTY: Digby
 ECO: -
 MAP BK: 01C4,01D4 NTS: 21B/01,21B/08 FSA: 02 SIZE: 138
 MAP REF: PCL,CO,CG,SS,GSAM
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: -
 CROWN %: 0 ACRES: 0 GEOL INFO: 4(5).1.3
 PRIVATE%: 100 ACRES: 340 HECTARES: 0 DOC: -
 WILD HAB: FW,Digby-(18)-A-1,70ha,67.5,C;IS-S HECTARES: 138 DOC: C
 WH: -
 STATUS: - THEME REG UNIT: 810
 REF: Gordon,D.P.(1972);Mills,E.L.,1970
 REF: -

SITE: 60. Ventral Bog
 ECOSYSTEM: sphagnum bog
 COUNTY: Digby
 ECO: -
 MAP BK: 01E3 NTS: 21B/08 FSA: 02 SIZE: 97
 MAP REF: PCL,CG,CO,SS,GSAM
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: -
 CROWN %: 10 ACRES: 24 GEOL INFO: 4(5).1.3
 PRIVATE%: 90 ACRES: 216 HECTARES: 10 DOC: C
 WILD HAB: - HECTARES: 87 DOC: C
 WH: -
 STATUS: - THEME REG UNIT: 810
 REF: -
 REF: -

SITE: 61. Birch Lake COUNTY: Digby
 ECOSYSTEM: white pine (*Pinus strobus*) forest
 ECO: - SIZE: 162
 MAP BK: 04D3,04D4 NTS: 21A/05 FSA: 07
 MAP REF: PCL,CG,CO,SS
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 7(8).
 CROWN %: 95 ACRES: 380 HECTARES: 154 DOC: C
 PRIVATE%: 5 ACRES: 20 HECTARES: 8 DOC: I
 WILD HAB: -
 WH: - THEME REG UNIT: 440
 STATUS: -
 REF: -
 REF: -

SITE: 62. Sporting Lake COUNTY: Digby
 ECOSYSTEM: old-growth coniferous forest
 ECO: - SIZE: 32
 MAP BK: 04E4 NTS: 21A/05 FSA: 08
 MAP REF: PCL,CG,CO,SS
 MR: - FILE DATE: Jul 5 72
 AIR PHOTO: -
 AP: - GEOL INFO: 7(8).
 CROWN %: 100 ACRES: 80 HECTARES: 32 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 440a
 STATUS: -
 REF: -
 REF: -

SITE: 63. Big Dam Lake COUNTY: Annapolis
 ECOSYSTEM: old-growth hemlock (*Tsuga canadensis*) forest
 ECO: - SIZE: 152
 MAP BK: 09B2,09C2 NTS: 21A/06 FSA: N10
 MAP REF: CG,CO,SS,GSC
 MR: - FILE DATE: May 25 71
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.1,9(10).12.3
 CROWN %: 100 ACRES: 375 HECTARES: 152 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 433
 STATUS: Kejimikujik N.P.
 REF: -
 REF: -

SITE: 64. Kentville Ravine COUNTY: Kings
 ECOSYSTEM: old-growth hemlock (*Tsuga canadensis*) stand and river floodplain
 ECO: - SIZE: 39
 MAP BK: 13D5 NTS: 21H/01 FSA: 117
 MAP REF: PCL,LRIS,CO,CG,SS,FFG,GSAM
 MR: - FILE DATE: May 4 71
 AIR PHOTO: -
 AP: - GEOL INFO: 5.1.5
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 96 HECTARES: 39 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 610
 STATUS: -
 REF: -
 REF: -

SITE: 65. Cape Split COUNTY: Kings
 ECOSYSTEM: deciduous forest and arctic-alpine habitat
 ECO: - SIZE: 445
 MAP BK: 13D2,13D3 NTS: 21H/08 FSA: 617
 MAP REF: PCL,CG,CO,SS,GSAM
 MR: - FILE DATE: Jul 12 71
 AIR PHOTO: -
 AP: - GEOL INFO: 4(5).1.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 1100 HECTARES: 445 DOC: U
 WILD HAB: -
 WH: - THEME REG UNIT: 720
 STATUS: -
 REF: -
 REF: -

SITE: 66. Saint Croix River COUNTY: Hants
 ECOSYSTEM: mixed forest
 ECO: - SIZE: 121
 MAP BK: 20B1,20B2 NTS: 21A/16 FSA: J20
 MAP REF: LRIS,CG,CO,SS,GSAM
 MR: - FILE DATE: Jun 71
 AIR PHOTO: C,SC:81328,74-77,156-159
 AP: - GEOL INFO: 7b.8.8
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 300 HECTARES: 121 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 511a
 STATUS: -
 REF: -
 REF: -

SITE: 67. Shady Brook COUNTY: Hants
 ECOSYSTEM: red-spruce (Picea rubens)-hemlock(Tsuga canadensis)forest
 ECO: - SIZE: 89
 MAP BK: 2083 NTS: 21A/16 FSA: K20
 MAP REF: LRIS,CG,CO,SS,GSAM
 MR: - FILE DATE: Sep 21 72
 AIR PHOTO: C,SC:81325,28-30
 AP: - GEOL INFO: 8.
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 220 HECTARES: 89 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 451
 STATUS: -
 REF: -
 REF: -

SITE: 68. Shubenacadie COUNTY: Hants
 ECOSYSTEM: clear-cut in mixed woods
 ECO: - SIZE: 14
 MAP BK: 2481 NTS: 11E/03 FSA: I25
 MAP REF: LRIS,CG,CO,SS,GSAM
 MR: - FILE DATE: Jul 26 72
 AIR PHOTO: C,SC:81326,78-80,200-201
 AP: - GEOL INFO: 7b.8.3
 CROWN %: 0 ACRES: 0 HECTARES: 0 DOC: -
 PRIVATE%: 100 ACRES: 35 HECTARES: 14 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 511a
 STATUS: -
 REF: -
 REF: -

SITE: 69. South Maitland COUNTY: Hants
 ECOSYSTEM: river intervale, gypsum cliffs, mixed cliffs and a cave
 ECO: - SIZE: 148
 MAP BK: 23A3,23A4 NTS: 11E/04 FSA: H24
 MAP REF: PCL,LRIS,CG,CO,SS,GSAM,FFG
 MR: - FILE DATE: Mar 15 73
 AIR PHOTO: C,SC:81313,89-93,148-150
 AP: - GEOL INFO: 7b.8,7b.9
 CROWN %: 50 ACRES: 182.5 HECTARES: 74 DOC: C
 PRIVATE%: 50 ACRES: 182.5 HECTARES: 74 DOC: C
 WILD HAB: FW,Col-(1)-9-1,24.5ha,66.5,C
 WH: - THEME REG UNIT: 511a
 STATUS: -
 REF: -
 REF: -

SITE: 70. Pomquet
 ECOSYSTEM: barrier sand dunes
 COUNTY: Antigonish
 ECO: -
 MAP 8K: 29E4 NTS: 11F/12 FSA: D38 SIZE: 233
 MAP REF: PCL,LRIS,CG,CO,SS,GSAM
 MR: - FILE DATE: May 31 78
 AIR PHOTO: -
 AP: - GEOL INFO: 7a.6.3
 CROWN %: 61 ACRES: 350 HECTARES: 142 DOC: C
 PRIVATE%: 39 ACRES: 225 HECTARES: 91 DOC: C
 WILD HAB: SM,MBH-H,PPH,BEH
 WH: - THEME REG UNIT: 521
 STATUS: Provincial Park
 REF: -
 REF: -

SITE: 71. Indian Man Lake
 ECOSYSTEM: red oak (*Quercus borealis*)-white pine (*Pinus strobus*) forest
 COUNTY: Guysborough
 ECO: - SIZE: 40
 MAP BK: 30A3 NTS: 11E/08 FSA: G35
 MAP REF: PCL,CG,CO,SS,FFG,GSC
 MR: - FILE DATE: Jul 78
 AIR PHOTO: C,SC:A80359,16-18,131-133
 AP: - GEOL INFO: 7b.9.5
 CROWN %: 100 ACRES: 98 HECTARES: 40 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 572
 STATUS: -
 REF: -
 REF: -

SITE: 72. Gabarus-Belfry Gut
 ECOSYSTEM: barrier beach
 COUNTY: Cape Breton
 ECO: - SIZE: 890
 MAP 8K: 44B2,44C2 NTS: 11F/16 FSA: CB22,C823
 MAP REF: PCL,LRIS,CG,CO,SS
 MR: - FILE DATE: Dec 18 01
 AIR PHOTO: I,SC:83314,215-216
 AP: - GEOL INFO: 12.18.1
 CROWN %: 100 ACRES: 2200 HECTARES: 890 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 870
 STATUS: -
 REF: -
 REF: -

SITE: 73. Frankville COUNTY: Antigonish
 ECOSYSTEM: mixed forest
 ECO: - SIZE: 50
 MAP BK: 34B4 NTS: 11F/12 FSA: D40
 MAP REF: PCL,LRIS,CG,CO,SS,GSAM
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 7b.9.
 CROWN %: 100 ACRES: 123 HECTARES: 50 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 521
 STATUS: -
 REF: -
 REF: -

SITE: 74. Wight Nature Preserve COUNTY: Halifax
 ECOSYSTEM: bog, barrens and mixed forest
 ECO: - SIZE: 16
 MAP BK: 20B5 NTS: 21A/09 FSA: L20
 MAP REF: PCL,LRIS,CG,CO,SS,GSAM,FFG
 MR: - FILE DATE: Jul 78
 AIR PHOTO: C,SC:B1327,48-49,97-98
 AP: - GEOL INFO: 7(8).
 CROWN %: 100 ACRES: 38.5 HECTARES: 16 DOC: C
 PRIVATE%: 0 ACRES: 0 HECTARES: 0 DOC: -
 WILD HAB: -
 WH: - THEME REG UNIT: 451
 STATUS: Protected under Museums Act
 REF: -
 REF: -

SITE: 75. Gillfillan Lake COUNTY: Yarmouth
 ECOSYSTEM: coastal plain: rare plants
 ECO: - SIZE: 188
 MAP BK: 05C2,05C3 NTS: 20P/13 FSA: R6
 MAP REF: PCL,CG,CO,SS,GSAM
 MR: - FILE DATE: -
 AIR PHOTO: -
 AP: - GEOL INFO: 9(10).12.3
 CROWN %: 60 ACRES: 279 HECTARES: 113 DOC: C
 PRIVATE%: 40 ACRES: 186 HECTARES: 75 DOC: C
 WILD HAB: -
 WH: - THEME REG UNIT: 411
 STATUS: -
 REF: Keddy,P.A.,1980;Keddy,P.A.,and Reznicek,A.A.,1982;Keddy,P.A.,1982
 REF: -

SITE: 76. Meander River

COUNTY: Hants

ECOSYSTEM: river intervale: rare plants

ECO: -

SIZE: -

MAP BK: -

NTS: -

FSA: -

MAP REF: -

MR: -

FILE DATE: -

AIR PHOTO: C,SC:81332,27-32,114-119

AP: -

GEOL INFO: -

CROWN %: -

ACRES: -

HECTARES: -

DOC: I

PRIVATE%: -

ACRES: -

HECTARES: -

DOC: I

WILD HAB: -

WH: -

THEME REG UNIT: 511a

STATUS: -

REF: -

REF: -

APPENDIX A - MAP REF

- PCL : Indicate ownership of land by provincial government departments. Accompanied by ownership documentation on microfiche. Available from Provincial Crown Lands Record Centre.
- LRIS : Indicate land ownership. Accompanying information on file. Available from Land Registration Information Service.
- CG : Crown Grant index sheets showing approximate boundaries of original land grants. Available from N.S. Dept. of Lands and Forests, Map Distribution Unit. Scales 1"=1 mile, 1"=.5 mile.
- FSB : Forestry Series "B", a forest inventory for areas designated as Forest Management Units. Scale 1"=.25 mile.
- FSC : Forestry Series "C", original land grants, scale 1"=.25 mile.
- FSD : Forestry Series "D", base map, scale 1"=.25 mile.
- CO : Contoured Orthophotos showing metric contours. Available from NSDLF Map Distribution Library.
- SS : Soil Survey by county. Map plus report.
- NSCM : Claim maps indicating exploration claims extant. Available from N.S. Dept. of Mines and Energy.
- NSAM : Aeromagnetic maps available from NSDME.
- GSAM : Aeromagnetic maps available from the Geological Survey of Canada.
- FFG : Original GSC geological maps done by Faribault and Fletcher. Out of print.
- GSC : Geological maps of the GSC other than those above. Some available from the GSC, others out of print.
- GBN : Geo-Base Number, computer derived and used for exact locality reference for selected sites. Not yet available.

APPENDIX B - GEOL INFO

AGE	GROUP	FORMATION
1. QUATERNARY		
1a. Recent		
1b. Pleistocene		
2. TERTIARY		
2a. Pliocene		
2b. Miocene		
2c. Oligocene		
2d. Eocene		
2e. Paleocene		
3. CRETACEOUS		
4. JURASSIC	1. Fundy	1. McCoy Brook
	1.	2. Scots Bay
4(5). TRIASSIC/JURASSIC	1.	3. North Mountain
5. TRIASSIC	1.	4. Blomidon
	1.	5. Wolfville
6. PERMIAN		
7. CARBONIFEROUS		
7a. Pennsylvanian	2. Pictou	1. Scotch Village
	2.	2. Broad Cove
	2.	3. Inverness
	3. Stellarton	
	4. Morien	1. Ptychocarpus unitus
	4.	2. Linopteris obliqua
	4.	3. Lonchopteris
	5. Cumberland	1. Upper fine
	5.	2. Upper coarse
	5.	3. Lower fine
	5.	4. Lower coarse
	5.	5. New Glasgow
	6. Riversdale	1. Parrsboro
	6.	2. Boss Point
	6.	3. Port Hood
	6.	4. Claremont
	6.	5. Millsville
	6.	6. Pomquet
7b. Mississippian	7. Canso	1. Londonderry
	7.	2. West Bay
	7.	3. Middleborough
	7.	4. Lismore
	7.	5. Mabou
	7.	6. Point Edward
	7.	7. Cape Dauphin
	7.	8. St. Anns
	7.	9. Watering Brook
	8. Windsor	1. Murphy Road
	8.	2. Green Oaks
	8.	3. Churchville
	8.	4. Wentworth Station
	8.	5. Miller Creek
	8.	6. MacDonalds Road
	8.	7. Forbes Lake
	8.	8. White Quarry

APPENDIX B (continued)

AGE	GROUP	FORMATION
7b. Mississippian	8. Windsor	9. Macumber
	8.	10. Stewiacke
	8.	11. Carrolls Corner
	8.	12. Meaghers Grant
	8.	13. Gays River
	8.	14. Bridgeville
	8.	15. Holmes Brook
	85. No group	1. Grantmire
	9. Horton	1. Cheverie
	9.	2. Horton Bluff
	9.	3. Ainslie
	9.	4. Strathlorne
	9.	5. Craignish
	9.	6. Wilkie Brook
	9.	7. Upper unit
	9.	8. Middle unit
	9.	9. Lower unit
7(8). CARBONIFEROUS/DEVONIAN	95. No group	1. Undifferentiated
	95.	2. Greville River
	95.	3. Rapid Brook
	95.	4. Nuttby
	95.	5. Fisset Brook
8. DEVONIAN	95.	1. Falls
	10. Fountain Lake	1. Diamond Brook
	10.	2. Byers Brook
	10.	3. McAras Brook
	10.	4. Unnamed-sedimentary
	10.	5. Unnamed-volcanic
	105. No group	1. Murphy Brook
	105.	2. McAdam Lake
	105.	3. Torbrook
	105.	4. Portapique River
	105.	5. Knoxdart
8(9). DEVONIAN/SILURIAN	105.	1. undifferentiated
	105.	1. New Canaan
9. SILURIAN	105.	2. Kentville
	105.	3. Wilson Brook
	105.	4. Earltown
	105.	5. Kerrowgare
	105.	6. Glencoe Brook
	11. Arisaig	1. Stonehouse
	11.	2. Moydart
	11.	3. McAdam Brook
	11.	4. French River
	11.	5. Ross Brook
	11.	6. Beechhill Cove
9(10). ORDOVICIAN/SILURIAN	115. No group	1. White Rock-sedimentary
	115.	2. White Rock-volcanic
	115.	3. Bear Brook
	115.	4. McGillivray Brook
	115. No group	5. Dunn Point
	115.	6. Sunnybrae

APPENDIX B (continued)

AGE	GROUP	FORMATION
10. ORDOVICIAN		
10(11). ORDOVICIAN/CAMBRIAN	12. Meguma	1. Halifax
	12.	2. Halifax-metamorphosed
	12.	3. Goldenville
	12.	4. Goldenville-metamorph.
	12.	5. Gneiss
	125.No group	1. McLeod Brook
11. CAMBRIAN	125.	2. MacNeil
	125.	3. MacHullin
	125.	4. Keppoch
	125.	5. undivided
	13. Sourinot	1. Eskasmi
	13.	2. Dugald
	13.	3. Grepwa
	14. Kelvin Glen	1. Victoria Bridge
	14.	2. Gillis Brook
	14.	3. Kelvin Lake
	145.No group	1. McLean Brook
	145.	2. Trout Brook
	145.	3. Canoe Brook
	145.	4. MacCodrum
	145.	5. Morrison River
	15. Iron Brook	1. Ferrona
	15.	2. Little Hollow
	15.	3. Black John
	16. McDonalds Brook	1. Arbuckle Brook
	16.	2. Halignant Cove
11(12). HADRYNTIAN/CAMBRIAN	165.No group	1. Undifferentiated
12. HADRYNTIAN	165.	1. Jeffers
	165.	2. Warwick Mountain
	17. Georgeville	1. Livingstone Cove
	17.	2. Morar Brook
	17.	3. Chisholm Brook
	18. Fouchu	1. Undifferentiated
	185.No group	1. Metavolcanics-unnamed
	185.	2. Slate,schist-unnamed
	185.	3. Metaconglomerate-unn.
	19.Bass River Complex	1. Great Village River
	19.	2. Samble Brook
	19.	3. Folly River
	20. George River	1. Marble, calc-silicates
	20.	2. Metavolcanics
	20.	3. Metamorphic rocks
	20.	4. Quartzite
	20.	5. Metaconglomerate
	20.	6. Paragneiss & schist
12(13). HADRYNTIAN/HELIXIAN	205.Undifferentiated	1. Undivided
	205.	2. mafic gneiss,schist
	205.	3. Felsic gneiss,schist
	21. Mt.Thom Complex	
13. HELIXIAN	22. Basement Complex	

LD HAB

There are 6 types of habitat noted in the previously mentioned book, and a description of them is listed below.

1. Freshwater Wetlands : The code lists habitat type (FW), site code, area in hectares, rating (37-108) according to value to wildlife, and a letter grade (A=Best, B=Better, C=Good)
2. Salt Marsh : SM
3. Islands : Sensitive and critical bird habitats are indicated IS-S and IS-C
4. Migratory Bird Habitats : Moderate and high-use areas are indicated MBH-M and MBH-H.
5. Piping Plover Nesting Habitats : PPH
6. Bald Eagle Habitat : BEH

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