

VOLUME I: INTRODUCTION

1.0 INTRODUCTION

1.1 PURPOSE

The Young District (**Figure 1-1**) is an emerging neighbourhood located in the North End of the Halifax Peninsula. The area is currently characterized by several large, vacant, or underutilized land with significant redevelopment potential. This provides a strategic opportunity to create a high-quality and complete transit-oriented community within a large area of land in the urban core of the Halifax Regional Municipality (HRM). HRM's Regional Plan highlights the municipality's significant population growth and set the stage for the to transform with policies that enable over 12,500 new units (or 26,500 new residents) within the Young District.

The purpose of the Young District Infrastructure Plan (YDIP) is to establish a framework for the planning and development of transportation, water, wastewater, stormwater, power, and communication infrastructure over the next 25 years to support this transformation. As a framework, the YDIP identifies short, medium and long-term needs, prioritizes infrastructure projects to support intensification, identifies future property requirements, and an infrastructure implementation strategy. It guides future decision-making for public and private infrastructure investments, policy changes, and strategic initiatives.

Figure 1-1: The Young District (Looking East)



1.2 STUDY AREA

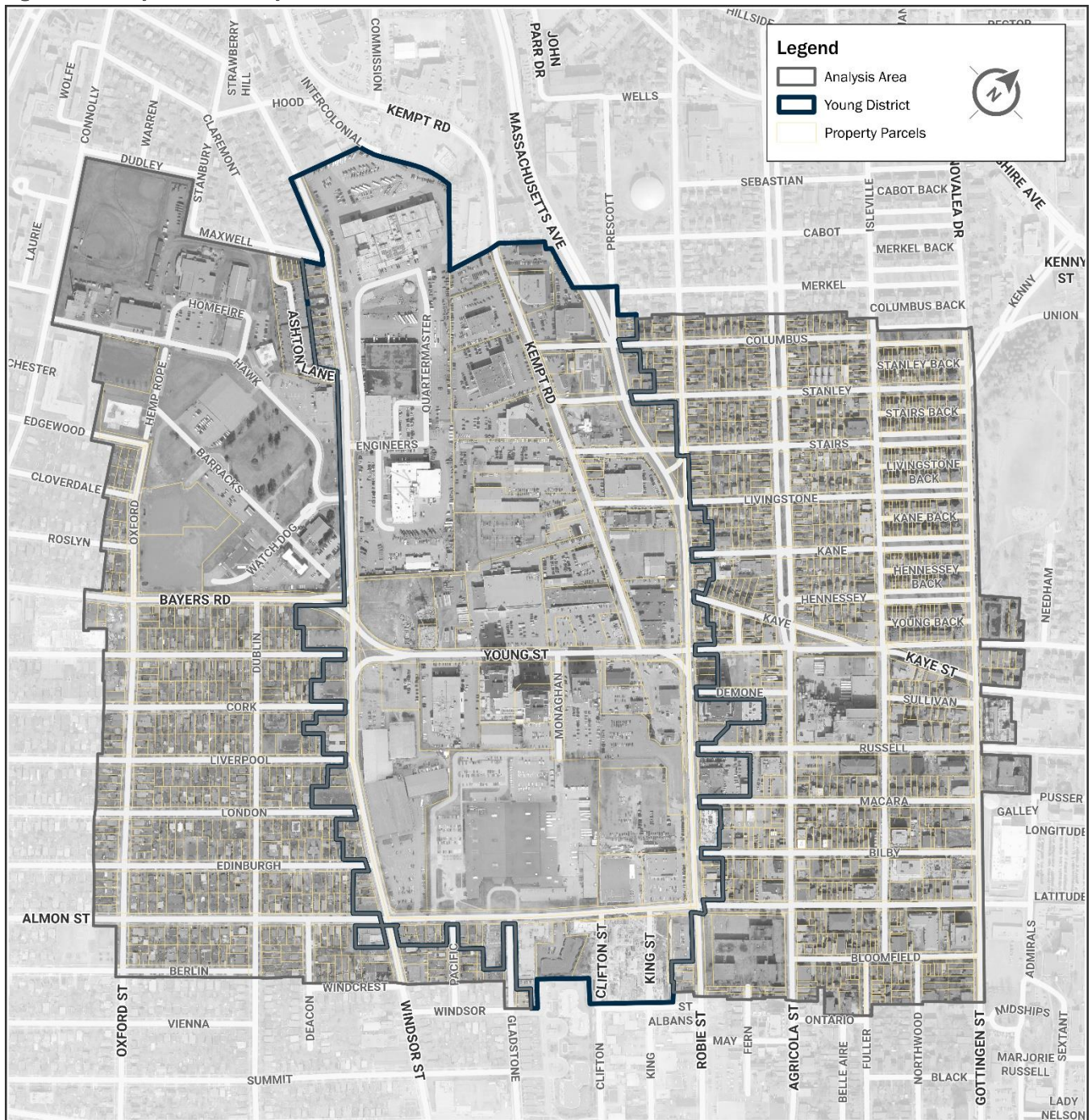
The study area for this project consists of two geographic areas: the Young District Study Area and the Analysis Area, that includes surrounding neighbourhoods. The boundaries of both areas are illustrated in **Figure 1-2**.

The Young District study area generally encompasses lands to the north and south of Young Street. The district is bordered by Almon Street in the south, Windsor Street in the west, Columbus Street in the north, and Massachusetts Avenue/ Robie Street in the east. It contains several large lots with a range of land uses and building types, including a large Canada Post processing facility, warehouses, big box retail, car dealerships, and the Halifax Forum site. Notable higher density developments exist on Young Street, Robie Street, and Almon Street.

The analysis area includes the Young District and extends to Oxford Street in the west and Gottingen Street/Novalea Drive in the east. Existing conditions, infrastructure demand, and the future needs of the Young District cannot be understood in isolation from the broader area. Project recommendations focused on

the Young District Study Area, and identified further studies, needs, and priorities for the analysis area where it provides a contiguous benefit to the function of the infrastructure network surrounding and within the Young District.

Figure 1-2: Study Area and Analysis Area



1.3 OBJECTIVES

Key project objectives for the Young District Infrastructure Plan include:

- Understand the future demand for transportation, wastewater, stormwater, water, power, and communication infrastructure.
- Establish a vision and guiding design principles to harness the district's potential to transform into a transit-oriented community.
- Conduct a comprehensive study process that draws upon key input to propose solutions for the mobility network and streetscaping, this includes new or upgraded infrastructure, policy changes, and strategic initiatives, among others.
- Conduct a comprehensive study to develop preferred solutions for the wastewater, stormwater, water, power, and communication infrastructure to guide decision-making for public and private infrastructure investments over the short, medium, and long-term.
- Understand the benefits and impacts of the proposed changes, the cost of property acquisition requirements and developing land, as well as the return on investment.
- Guide the phasing and implementation of infrastructure improvements to achieve the intended vision for the Young District and leverage upcoming public and private investments in the area to coordinate efforts.

VOLUME II: STUDY CONTEXT

2.0 BACKGROUND REVIEW

2.1 POLICY CONTEXT

2.1.1 REGIONAL MUNICIPAL PLANNING STRATEGY (2014 & 2023)

HRM's *Regional Municipal Planning Strategy (Regional Plan)* sets out the vision, guiding principles, and long-range, region-wide planning policies that outline where, when, and how future settlement, balanced growth, and development should take place. It considers a variety of population growth targets for HRM and recognizes that land use and infrastructure planning need to be considered holistically.

2.1.1.1 REGIONAL MUNICIPAL PLANNING STRATEGY (2014)

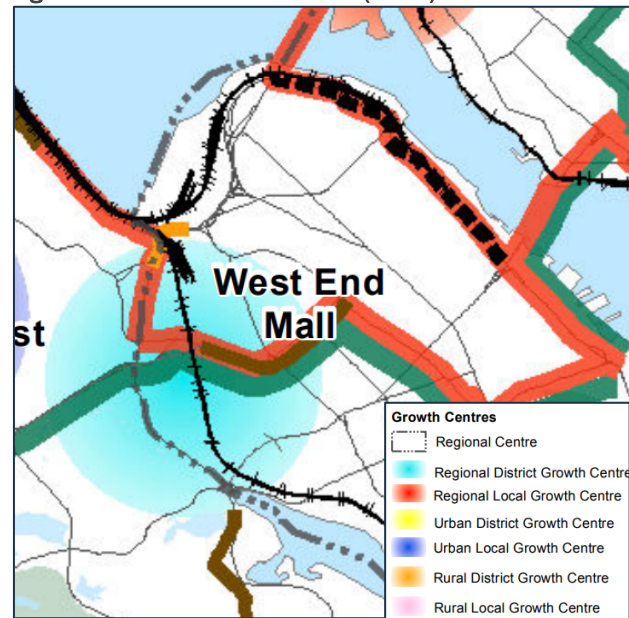
The 2014 Regional Plan (in-force) directs at least 75% of new housing to the regional centre and suburban areas, providing communities with access to goods and services in support of achieving complete communities. The study area is located within the Urban Settlement generalized land use (**Figure 2-1**), which encompasses areas approved or considered for serviced development and may consider lands within or adjacent to a growth centre. Although no specific growth centre designation was identified for the Young District in the 2014 plan, it is noted that the area immediately west, West End Mall was identified as a Regional District Growth Centre (**Figure 2-2**).

Figure 2-1: Generalized Future Land Use (2014)



Source: HRM Regional Plan (2014) Map 2 – Generalized Future Land Use

Figure 2-2: HRM Growth Centres (2014)



Source: HRM Regional Plan (2014) Map 1 – Settlement and Transportation

The 2014 Regional Plan policies also encourage the use of transit priority measures to increase transit reliability and require maximized access to transit in mixed-use development within the Urban Transit Service Boundary, which includes the Young District (see **Figure 2-3**).

Figure 2-3: Urban Transit Service Boundary



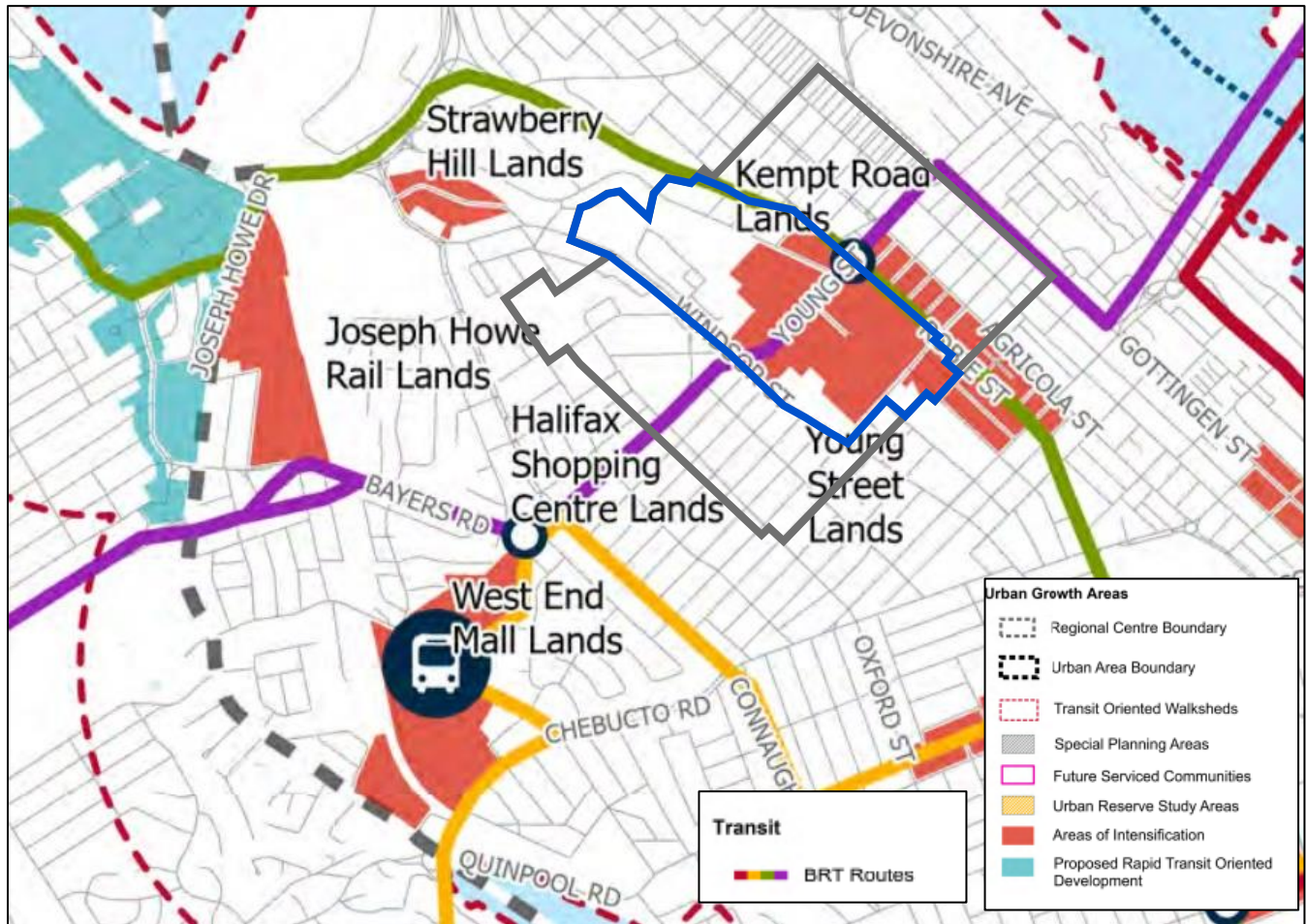
Source: HRM Regional Plan (2014) – Map 7 Urban Transit Service Boundary

2.1.1.2 DRAFT REGIONAL MUNICIPAL PLANNING STRATEGY (JUNE 2023, PENDING COUNCIL APPROVAL)

Following the approval of the Regional Plan in 2014, HRM experienced much higher population growth rates than anticipated, reaching the previously anticipated 2031 population in 2022. Consequently, the 2023 Draft Regional Plan directs municipal strategic growth and infrastructure to consider a future population of 1,000,000 people. This plan directs 90% of new housing units towards urban areas. The Draft Regional Plan also updates the previously established mode share targets.

Lands within the Young District, including the Young Street and Robie Street centres, the Young Street Lands Future Growth Node (FGN), and Kempt Road Lands FGN, are identified as areas of intensification for future growth (**Figure 2-4**). Young Street and Robie Street are also identified as ‘strategic corridors’, which are intended to be designed to improve safety, connect communities, and manage congestion by prioritizing sustainable modes over private motor vehicles. Relevant policies include directing compact transit-oriented development around transit lines and building a connected network of complete streets that support walking, cycling and transit.

Figure 2-4: Urban Growth Areas



Source: HRM Regional Plan (2023) Map 3 – Urban Growth Areas

2.1.1.3 BY-LAW AND PARKING REQUIREMENTS

With regards to parking requirements, the land use by-law reduces minimum parking requirements, establishes maximum parking requirements in some cases, requires bicycle parking, and regulates the location and design of surface parking areas and parking structures to support pedestrian movements and limit the visibility of parking areas from the street. Minimum and maximum parking requirements either do not apply or are not required for most land uses within the Centre and Future Growth Node areas. Some minimum and maximum parking requirements may apply within the other study area zones based on the development land use.

2.1.2 REGIONAL CENTRE SECONDARY MUNICIPAL PLANNING STRATEGY AND LAND USE BY-LAW (2021)

HRM's *Regional Centre Secondary Municipal Planning Strategy (Centre Plan)* (2021) and associated by-laws establish the Regional Centre's vision and core concepts that contribute to its urban structure, built form, cultural importance, and mobility requirements. It aligns with the recommendations of the *Integrated Mobility Plan* (described in section 2.1.4) through supporting the development of growth areas with transit priority corridors and the AAA cycling network. Lands within the study area include a Centre Designation along Young Street and Robie Street, and a Future Growth Node Designation on the Young Street and Kempt Road Lands (**Figure 2-5**). An overview of land use bylaws and built form requirements is provided in **Table 2-1**.

Figure 2-5: Land Use By-law Zone Boundaries

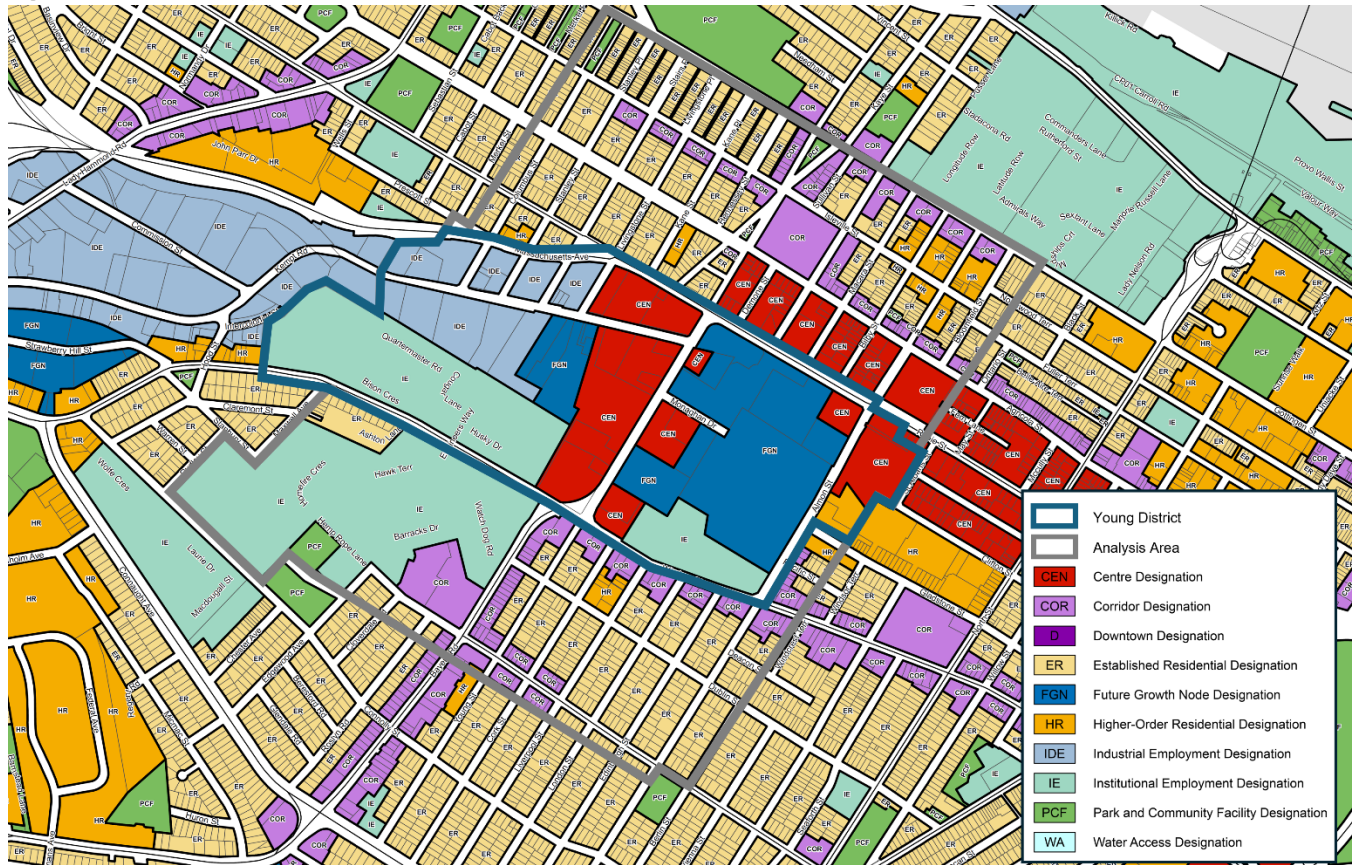


Table 2-1: Overview of By-Law and Built Form Requirements

Designation	Zone/Special Area	Minimum Lot Area (m ²)	Minimum Lot Frontage (m)	Maximum Building Height	Minimum Front or Flanking Setbacks	Maximum Floor Area Ratio
Centre (Along Young Street and Robie Street)	CEN-2	371.0	12.2	Schedule 15	Schedule 18 or 1.5m	1.75 to 10.0 ¹
Future Growth Nodes (Young Street and Kempt Road Lands)	CDD-2	371.0	12.2	Schedule 15	Schedule 18	NA
Corridor (Along Windsor Street)	COR	371.0	12.2	Schedule 15	Schedule 18 or 1.5m	NA
Institutional Employment (DND, Halifax Forum)	DND	371.0	12.2	Schedule 15	Schedule 18 or 4.0m	NA
	INS	371.0	12.2	Schedule 15	Schedule 18 or 4.0m	NA
Industrial Employment (along Kempt Road)	CLI	371.0	12.2	Schedule 15	Schedule 18 or 3.0m	NA
Established Residential (Sections of Robie Street and Almon Street)	ER-3	325.0	10.7	Schedule 15	Schedule 18 or 2.5m	NA
Higher Order Residential (Segments along Robie Street and Almon Street)	HR-1	558.0	12.2	Schedule 15	Schedule 18 or 1.5m	NA
	HR-2	558.0	12.2	Schedule 15	Schedule 18 or 1.5m	NA

The Centre (CEN-2) designation is intended to identify lands with significant development opportunities, including vacant and under-utilized commercial and institutional lands. The goal of the CEN-2 designation is to create a pedestrian-oriented environment by connecting the existing street grid and improving pedestrian movement through new and expanded mobility connections. CEN-2 designation allows for a mix of housing and unit types, services, and employment opportunities, which will support the development of this Centre into a complete community.

- Policy C-7:

- *“The Land Use By-law shall, within the Robie Street and Young Street Centre, establish the following maximum Floor-Area-Ratio (FAR) values, consistent with Map 3 and the policies in Parts 3 and 4 of this Plan:*

- a) maximum FAR values of between 3.5 and 10.0, between Street. Alban’s Street and Young Street, with higher FARs generally concentrated along Robie Street and Young Street;
- b) maximum FAR values of between 3.0 and 4.50 between Street. Albans Street and North Street, with lower FARs generally focused along Agricola Street; and
- c) maximum FAR values of between 1.75 and 3.5 along Fern Lane”

- Policy F-10:

- *“When considering a development agreement for the Young Street Lands Future Growth Node, Council shall consider Policy F-6 and the following:*
 - a) *The general location of proposed land uses, road network connections, and walkways is reasonably consistent with Map 12;*
 - b) *New parks and open spaces provide the full range of recreation and open spaces needed to serve the dense community and act as a focal point for key areas, intersections, and active transportation connections; and*
 - c) *Site and building design support a compact, mixed-use neighbourhood by:*
 - i. *planning for a variety of residential building forms including low to high-rise buildings that transition to low-rise residential areas,*
 - ii. *focusing tall mid-rise and high-rise buildings along Young Street, Robie Street, and Windsor Street, with lower buildings along Almon Street adjacent to low-rise residential areas,*
 - iii. *requiring ground floor commercial uses on properties that front on Pedestrian Oriented Commercial Streets as identified in the master neighbourhood planning exercise,*
 - iv. *supporting a wide range of uses, including office, retail, service, restaurant, cultural and entertainment uses that serve both local and regional needs,*
 - v. *incorporating scenic views and connections to the Halifax Forum and the Hydrostone neighbourhood into the design and location of neighbourhood features, and*
 - vi. *considering heritage contexts.”*

The FGN designation is intended to identify large sites that can accommodate significant growth and require the development of master neighbourhood plans to determine their future land use and densities. The designation is applied to largely vacant and underutilized lands, that have potential to accommodate significant development. Further details regarding by-law and built form requirements are provided in Section 2.1.1.3.

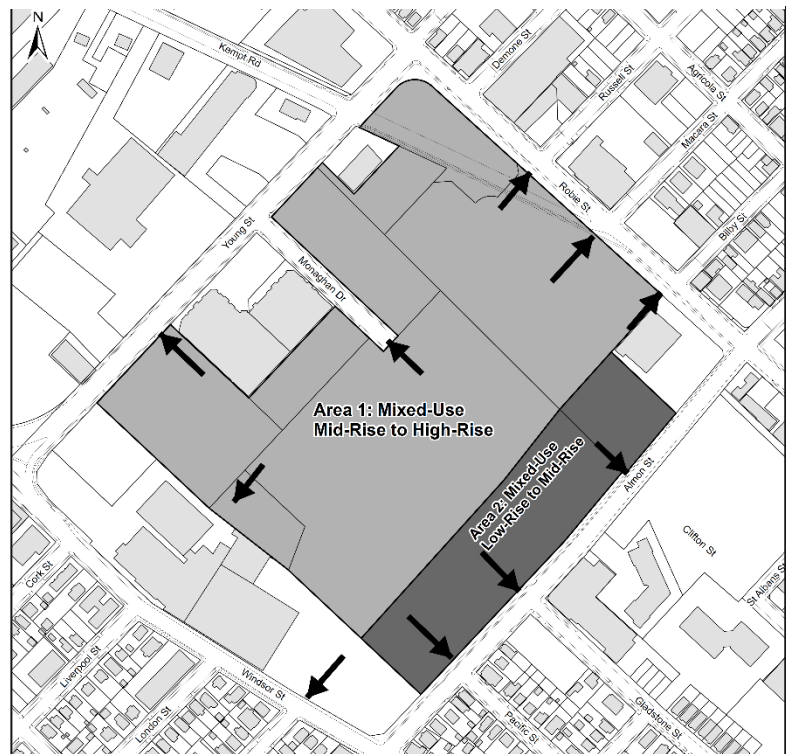
Other urban structure designations within the Young District include the Corridor designation along Windsor Street, the Industrial Employment designation along Kempt Road, the Institutional Employment on the Halifax Forum site and the Department of National Defense lands, and the Established Residential and Higher Order Residential along sections of Robie Street and Almon Street.

2.1.3 COMPREHENSIVE NEIGHBOURHOOD PLANNING PROCESS FOR THE YOUNG STREET LANDS AND KEMPT STREET LANDS FUTURE GROWTH NODES

A concurrent Comprehensive Neighbourhood Planning Process for the Young Street Lands and Kempt Street Lands FGNS will amend the Regional Centre Plan and the Regional Centre Land Use By-law to better enable the development of the FGNS. The Young Street Lands FGN is approximately 11.8ha of land generally bounded by Young Street, Robie Street, Almon Street, and Windsor Street. The Kempt Road Lands FGN is approximately 2.1ha of existing industrial use land along Kempt Road, approximately 200m north of Young Street. The Strawberry Hill FGN is located to the northwest of the Young Street FGN, outside of the analysis area.

The Regional Centre Plan includes a conceptual plan of the potential street connections and type of development to be considered for the Young Street Lands FGN (**Figure 2-6**). Mixed-use, mid-rise to high-rise development is proposed at the centre of the FGN and along the streetline of Young Street, Monaghan Drive, and Robie Street, while mixed-use, low to mid-rise development are proposed along Almon Street. The arrows on **Figure 2-6** illustrate potential connections to existing surrounding streets. It is noted that the existing policy requires that all property owners within the FGN to participate under one development agreement to support the development of new streets and parks.

Figure 2-6: Young Street Lands Future Growth Node



Source: Regional Centre Plan (2021) Map 12

2.1.4 INTEGRATED MOBILITY PLAN (2017)

In 2017, Council endorsed the *Integrated Mobility Plan (IMP)*, which guides investment in active transportation, transit, and the roadway network in HRM to create connected healthy, affordable, and sustainable transportation options through:

- Prioritizing the movement of people over vehicles.
- Improving accessibility; creating links between people and communities.
- Strengthening the relationship between land use and transportation.
- Redesigning existing transportation systems and communities.

It provides policies related to themes of integrated planning, land use and transportation, complete street design approach, and transportation demand management. These policies form the foundation of transforming how people and goods move within HRM and generally provide for inclusive and safe street design that better facilitates active transportation and transit use.

Active transportation policies seek to encourage walking and cycling through building complete and connected networks that meet the needs of communities and regionally. Transit policies aim to enhance service by increasing transit priority measures in strategic locations and improving the integration of transit services with land use and settlement patterns. Additional investments in road infrastructure are to be focused on strategic upgrades that support the municipality's mandate of encouraging a shift towards sustainable transportation modes. The Integrated Mobility Plan establishes a modal hierarchy for complete street design. The complete streets approach recognizes that, in addition to moving people and goods, streets can be destinations and important public spaces.

The Integrated Mobility Plan identifies Windsor Street and Almon Street as candidate routes for protected bikeways as part of the AAA cycling network (**Figure 2-7**). Young Street and Robie Street are designated as Transit Priority Corridors (**Figure 2-8**), which are streets that have been strategically chosen to include measures that improve the efficiency of transit.

Figure 2-7: Integrated Mobility Plan Proposed AAA Cycling Network

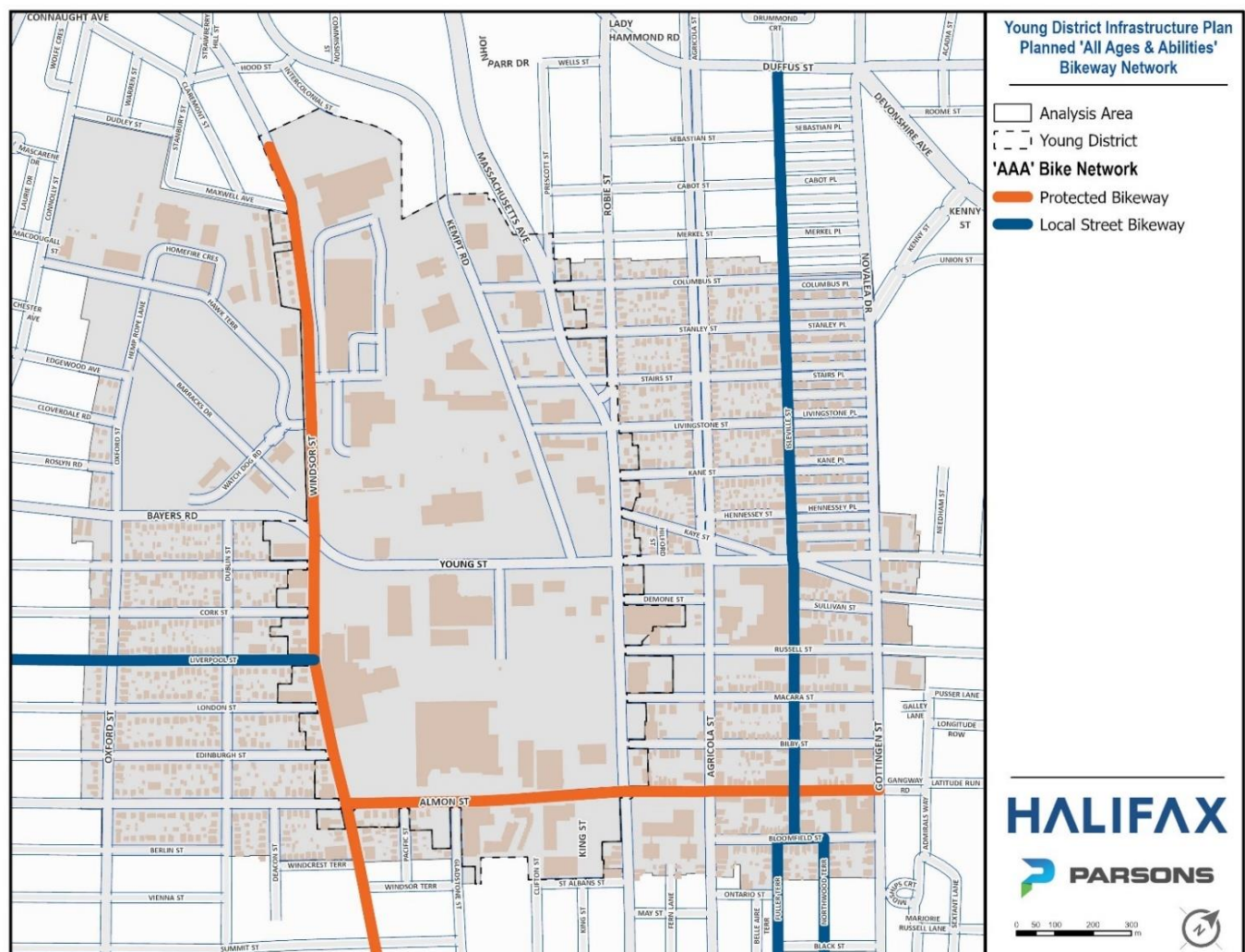
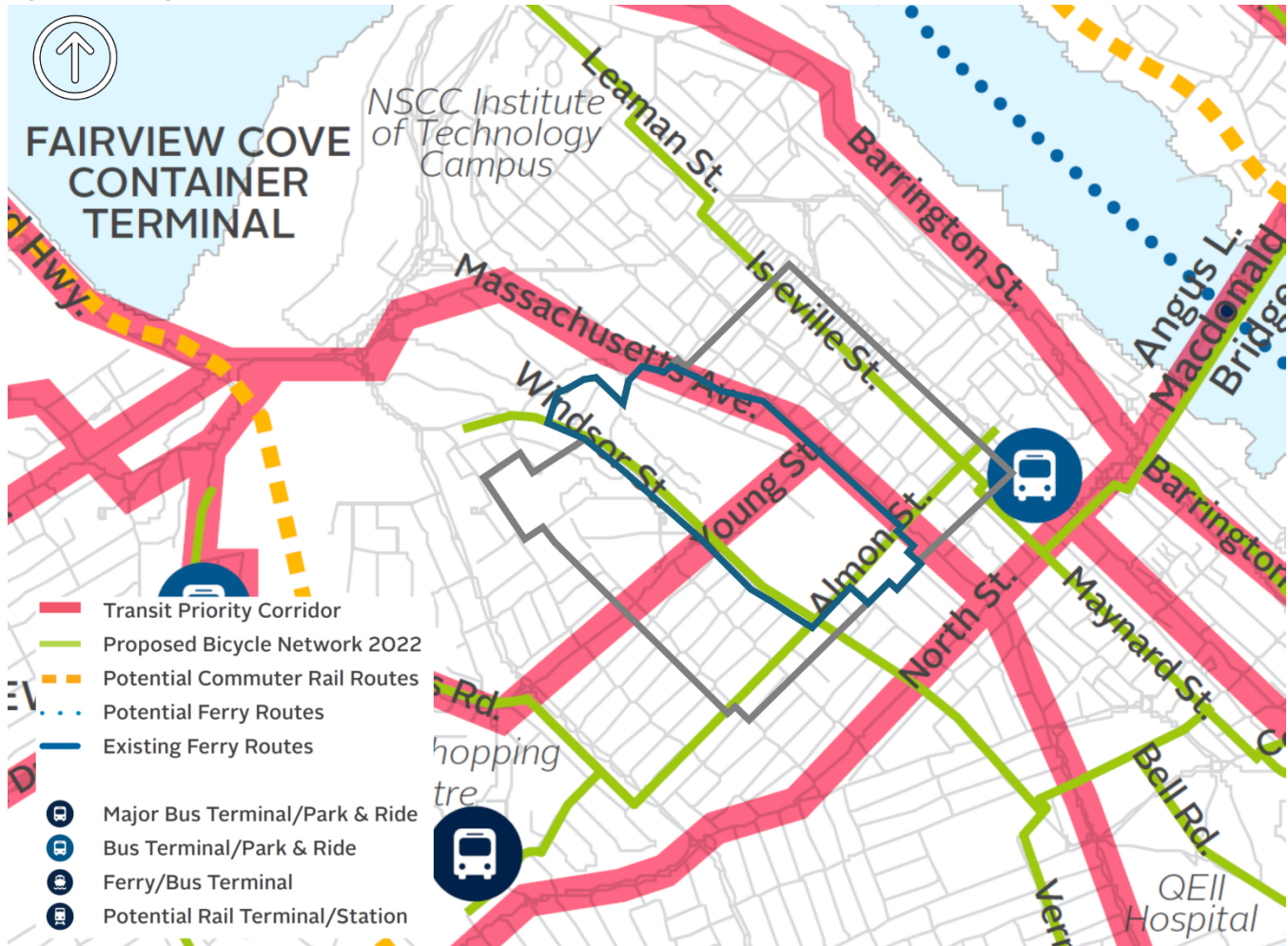


Figure 2-8: Integrated Mobility Plan Transit Priority Corridors



Source: Integrated Mobility Plan (2017) – Figure 20

2.1.5 RAPID TRANSIT STRATEGY (2020)

HRM's *Rapid Transit Strategy (RTS)* (2020) provides a plan for higher order transit within the next 10 years, focusing on high-speed ferries and bus rapid transit. The Rapid Transit Strategy builds on the Integrated Mobility Plan and outlines HRM's plan to build a rapid transit system. The Strategy aims to improve sustainable transportation options to better support population growth within HRM by establishing a rapid transit network and setting new directions for land use policies that align with rapid transit.

The proposed rapid transit network features four fixed route lines, the Purple Line, Green Line, Yellow Line, and Red Line, that will provide all day service with a 10-minute frequency between 6am and 10pm (Figure 2-9).

Figure 2-9: Rapid Transit Strategy Proposed Rapid Transit Network



Source: Rapid Transit Strategy (2020) – Figure 18

The Rapid Transit Strategy proposes the following rapid transit plans for the Young District Study Area:

- Purple Line on Young Street/Bayers Road
- Green Line on Robie Street
- Enhanced rapid transit station near the Young Street/Robie Street intersection (where the Purple Line and Green Line intersect)

In alignment with the Regional Centre Plan, the Rapid Transit Strategy provides policy direction for coordinating land use and transportation planning around rapid transit, applicable policies are outlined below.

- Plan for higher-density, mixed-use development within 400m and 800m of rapid transit stations to support walkable, transit-oriented communities.
- Improve connectivity of local streets and provide high-quality active transportation infrastructure near stations and terminals.

2.1.6 TRANSIT'S MOVING FORWARD TOGETHER PLAN (2016)

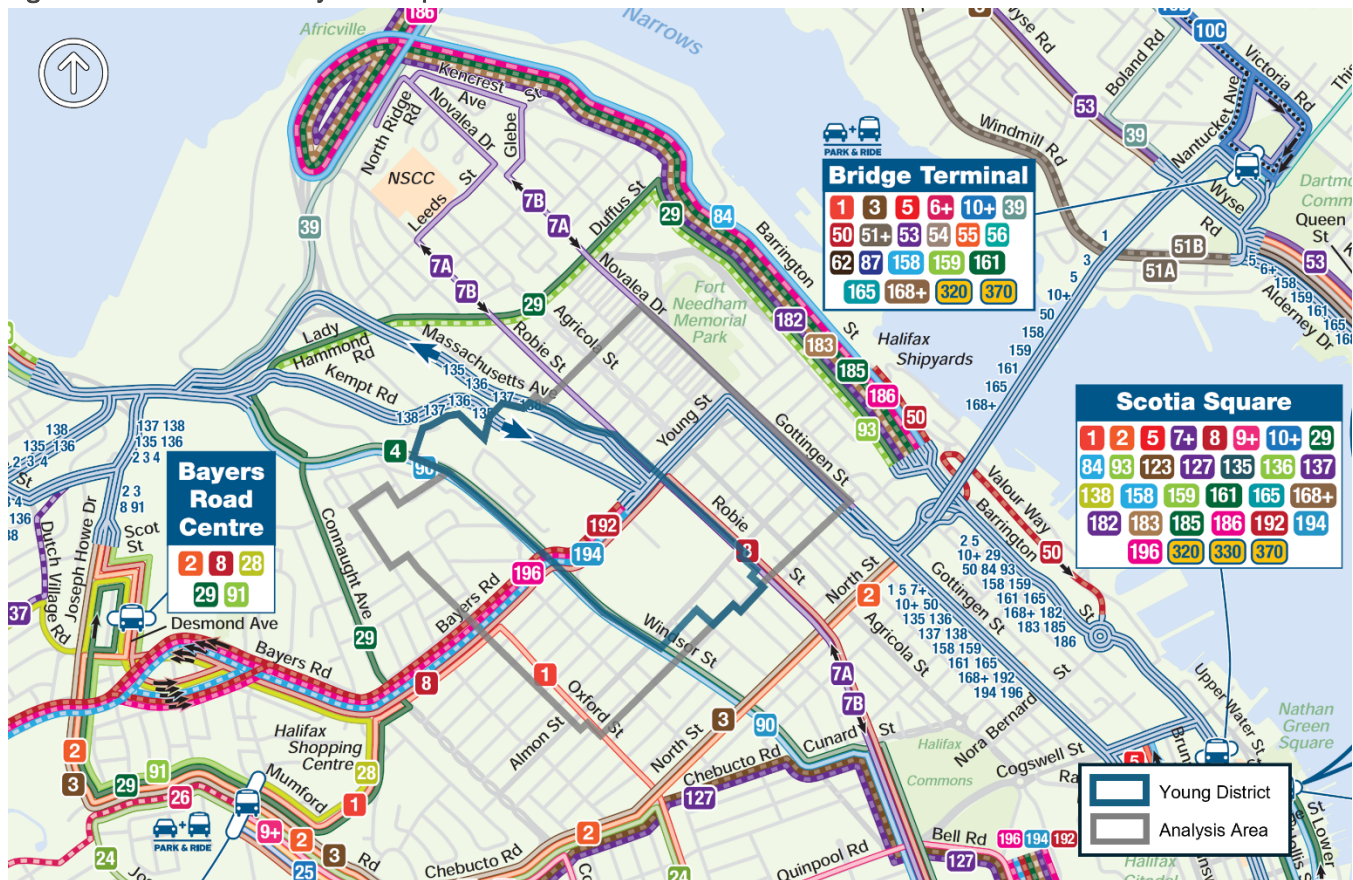
The *Moving Forward Together Plan (MFTP)* establishes four principles to restructure HRM's transit network and guide implementation of service improvements. These include increasing the proportion of resources allocated towards high ridership services in HRM, building a simplified transfer-based system, investing in service quality and reliability, and giving transit increased priority in the transportation network. As of 2025,

most of the service changes from the MFTP have been implemented. A new service plan is in development, which will provide minor changes and is planned for a 3-year horizon.

The MFTP identifies the following routes would run in the district following full implementation (**Figure 2-10**):

- Corridor Routes - consistent, frequent, service on high demand corridors: 2 Fairview, 3 Crosstown, 4 Universities, 7A/B Peninsula, 8 Sackville
- Local Routes - regular service that connect communities and neighbourhoods: 90 Larry Uteck
- Express Routes - limited-stop express service for commuters during peak periods: 135 Flamingo Express, 136 Farnham Gate Express, 137 Clayton Park Express, 138 Parkland Express

Figure 2-10: Halifax Transit System Map

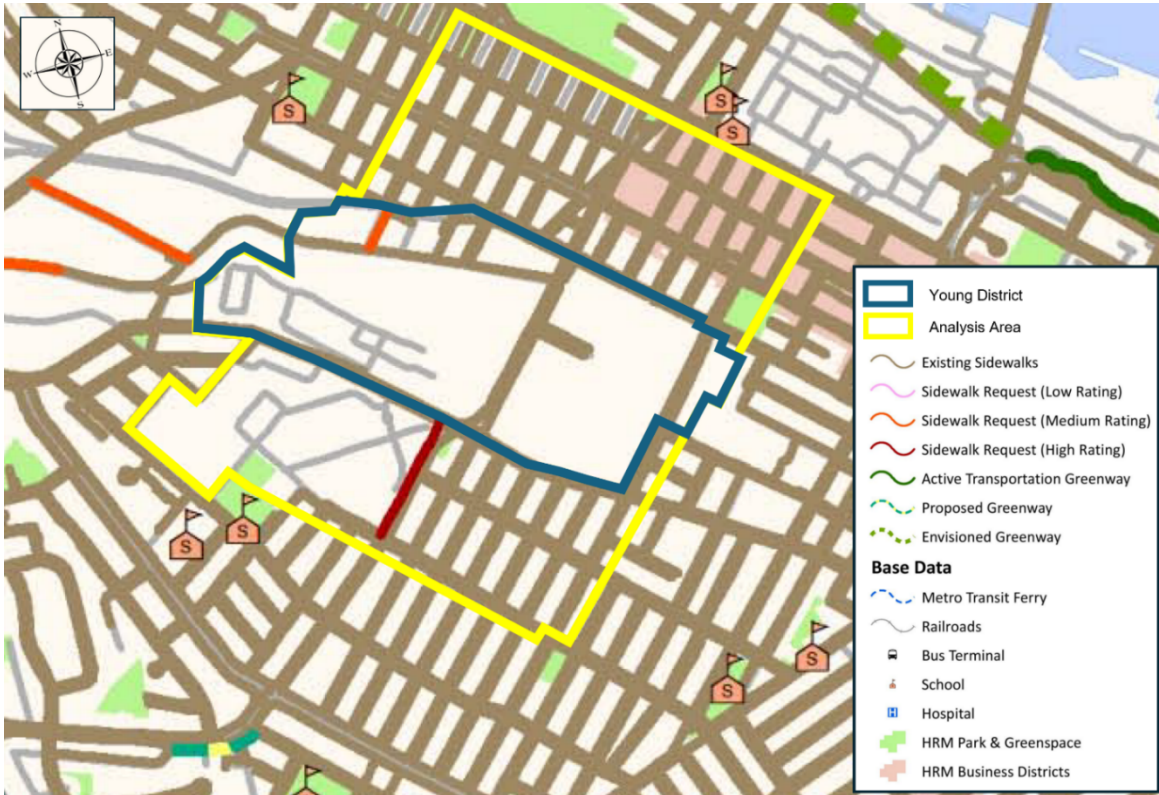


Source: Halifax Transit (2025) – System Map

2.1.7 ACTIVE TRANSPORTATION PRIORITIES PLAN (2014-2019)

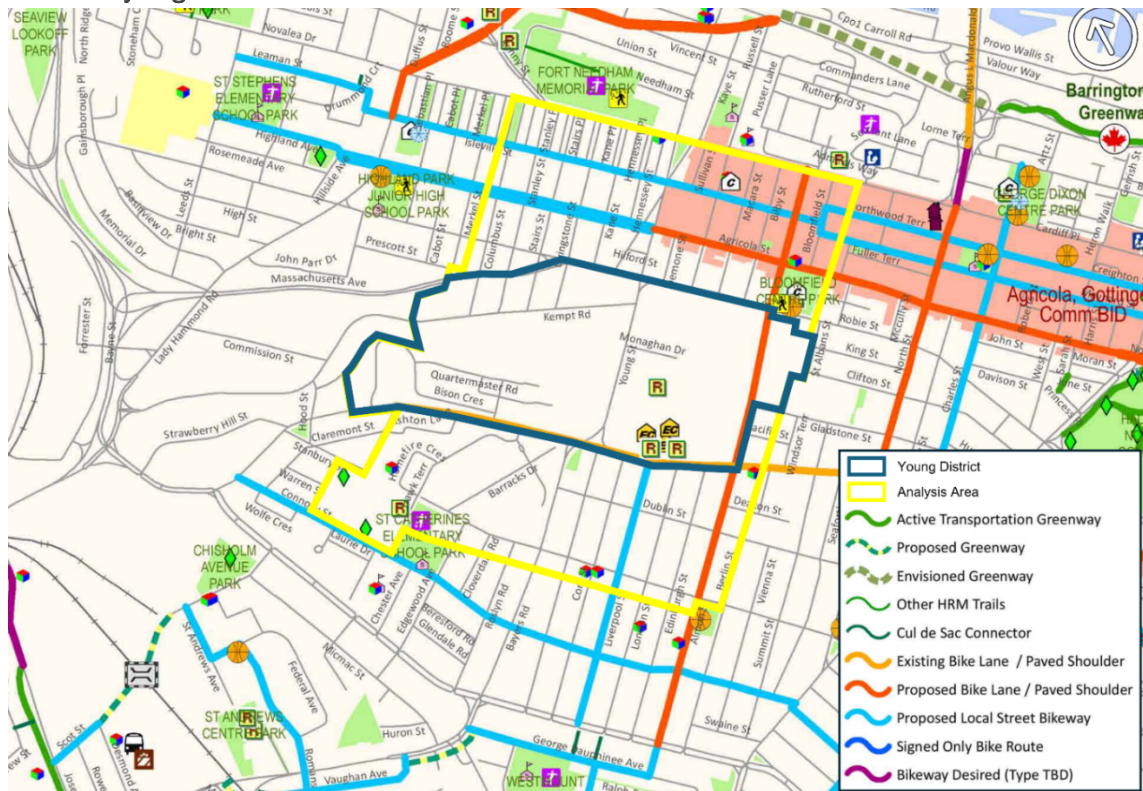
The Active Transportation Priorities Plan (ATPP) created a 2026 vision to increase opportunities for mobility and promote physical activity and healthy lifestyles for all ages. It proposes projects to support walking, cycling, multi-use facilities, and education, as well as promotions to increase use. The existing and future pedestrian and cycling facilities identified in the ATPP are illustrated in **Figure 2-11** and **Figure 2-12**.

Figure 2-11: ATTP Pedestrian Network



Source: ATTP (2014-2019) Map

Figure 2-12: ATTP Cycling Network



Source: ATTP (2014-2019) Map 2C

2.1.8 ACTIVE TRANSPORTATION PLAN (2006)

The HRM Active Transportation Plan (AT Plan), initially approved in 2006, was superseded by the 2014 ATPP. It forms part of the municipality's Transportation Master Plan and outlines proposed priority active transportation initiatives and seeks to identify the means by which the municipality will achieve increases in mode share for walking and cycling. The AT Plan reinforces transportation objectives of the Regional Centre Plan that include promoting land use patterns that support sustainable transportation modes and designing complete streets for all ages, abilities, and modes of travel.

The AT Plan highlights pedestrian goals of establishing a complete, integrated, and accessible pedestrian network throughout the municipality through addressing infrastructure gaps along major roadways and other areas lacking adequate pedestrian facilities. Similarly, goals for bicycle infrastructure outlined in the AT Plan seek to establish a connected bicycle network by providing appropriate types of infrastructure at strategic locations, including along Young Street and Kempt Road within the Young District.

2.1.9 REGIONAL TRANSPORTATION PLAN (ONGOING)

The Joint Regional Transportation Agency began undertaking the preparation of the *Regional Transportation Plan (RTP)* in 2023, with a draft plan expected to be completed in 2025. The RTP intends to address transportation issues associated with rapid growth in HRM and the surrounding communities by establishing a long-term vision for a regional transportation system. The goals of the RTP are to:

- Strengthen regional connections.
- Enable efficient and sustainable goods movement.
- Lead strategic investments, alignments, and implementation.
- Coordinate and collaborate on sustainable land use.
- Develop a future ready transportation system.

2.1.10 STRATEGIC ROAD SAFETY STRATEGY: THE WAY FORWARD (2024)

The *Strategic Road Safety Strategy* sets safety goals, objectives, and action items to guide the creation of safer roads and decrease the occurrence of injuries and fatalities on roadways. The framework is based on a Towards Zero approach to eliminate transportation injuries and fatalities by 2038 and sets a short-term goal of maintaining a downward rate of collisions. Based on an analysis of historic collision data, the Strategy identifies areas with the highest priority to focus resources. These emphasis areas are:

- | | |
|------------------------|-------------------------|
| • Intersection related | • Vulnerable road users |
| • Safe schools | • Distracted driving |
| • Young demographic | • Data management |
| • Aggressive driving | • Impaired driving |

2.1.11 HALIFAX ACCESSIBILITY STRATEGY (2021)

The *Accessibility Strategy* is based on the *Diversity & Inclusion Framework* and *Nova Scotia's Accessibility Act*, combining them to 30 steps aimed at enhancing accessibility and representation for people with disabilities. These steps are planned to be carried out over a decade to match the requirements of the provincial accessibility act. These objectives serve as a call to action and acknowledge the importance of establishing a municipality that is accessible to everyone, no matter their physical, mental, or economic capabilities.

Strategy objectives include inclusive public services, such as reducing transportation barriers to individuals with disabilities, safe work environment, equitable employment, meaningful partnerships, and accessible information and communication.

2.1.12 HALIFACT 2050 - ENVIRONMENTAL SUSTAINABILITY (2020)

HalifACT 2050 is HRM's climate action plan that provides actions, including decarbonizing transportation, to achieve a net-zero economy by 2050 and reduce impacts on the climate. Action #8 of the plan is to expand transit and active transportation infrastructure with the objective of achieving the 2031 mode share targets established in the IMP.

2.1.13 GREEN NETWORK PLAN (2018)

The *Halifax Green Network Plan* (HGNP) outlines a comprehensive strategy for managing open spaces to promote long-term sustainability. The plan emphasizes the interconnectedness and multifunctionality of open spaces, which include ecological, recreational, cultural, and economic landscapes. Key components of the HGNP include maintaining ecologically and culturally important land systems, promoting sustainable use of natural resources, and planning for parks and corridors. Specific objectives and actions are presented across the following five themes: ecology, working landscapes, community shaping, outdoor recreation, and cultural landscapes.

2.1.14 CULTURAL LANDSCAPE FRAMEWORK (2016)

This study serves as an adjunct to the HGNP and aims to provide a comprehensive framework for identifying, evaluating, and managing cultural landscapes within HRM through a five-step process: identification, research, evaluation, communication, and management. The study emphasizes community engagement to derive cultural landscape values and outlines methodologies for thematic grouping, prioritization, and defining boundaries. It includes a preliminary inventory of over 400 culturally significant sites identified through public engagement, including the Hydrostone neighbourhood, just east of the Young District, which is identified as an area of archeological significance.

2.1.15 ECONOMIC STRATEGY (2022 TO 2027)

HRM's Economic Strategy outlines a comprehensive plan for economic growth and development, focusing on inclusivity, sustainability, and well-being. The Strategy includes a discussion the recent growth despite challenges like the global pandemic, sets out a vision for 2037 to grow the GDP to \$32 billion and the population to 650,000 with intermediate targets for 2027, analyzes factors affecting economic growth including global trends like technological change and local issues such as housing affordability, and provides strategic goals including promoting inclusive and sustainable growth, attracting talent, and improving quality of life. The Strategy identifies Business Improvement Districts, such as the North End Business Association which includes portions of the Young District, as economic contributors to the economies of HRM and Nova Scotia.

2.1.16 HALIFAX WATER PLAN REVIEW (2019 & 2016)

2.1.16.1 HALIFAX WATER INTEGRATED RESOURCE PLAN (2019)

The 2019 Integrated Resource Plan consolidates a comprehensive suite of projects and initiatives to ensure the sustainable and efficient management of water, wastewater, and stormwater services for HRM region. The update builds upon the foundation established by the 2012 Integrated Resource Plan, integrating key studies such as the Infrastructure Master Plan, Compliance Plan, and Asset Management Plans. These foundational

documents tackle the essential drivers of compliance, asset renewal and growth, offering a unified strategy for sustainable long-term service delivery.

The 2019 Integrated Resource Plan emphasizes an iterative planning process that incorporates continuous improvement and updated data collection methodologies. This approach enhances Halifax Water's understanding of existing infrastructure systems and informs the development of robust servicing strategies. The Integrated Resource Plan aligns with Halifax Water's business plans, capital budgets, and regional development charges, offering a strategic framework for resource allocation and infrastructure investment over the next 30 years.

Halifax Water's Infrastructure Master Plan (2019) outlined essential upgrades to local and regional water servicing infrastructure, including the Kempt Road sewer separation project. These upgrades were based on population growth projections from the Regional Centre Local Wastewater Servicing Capacity Analysis Study (LoWSCA, 2016), which estimated a growth of approximately 15,500 people. However, these projections did not account for the unforeseen population surge in the region or the study area. Consequently, the planned upgrades may be insufficient to accommodate the anticipated development. Integrated Resource Plan and the Infrastructure Master Plan will have to be reviewed in conjunction with the proposed YDIP changes in population density and adjust based on these changes.

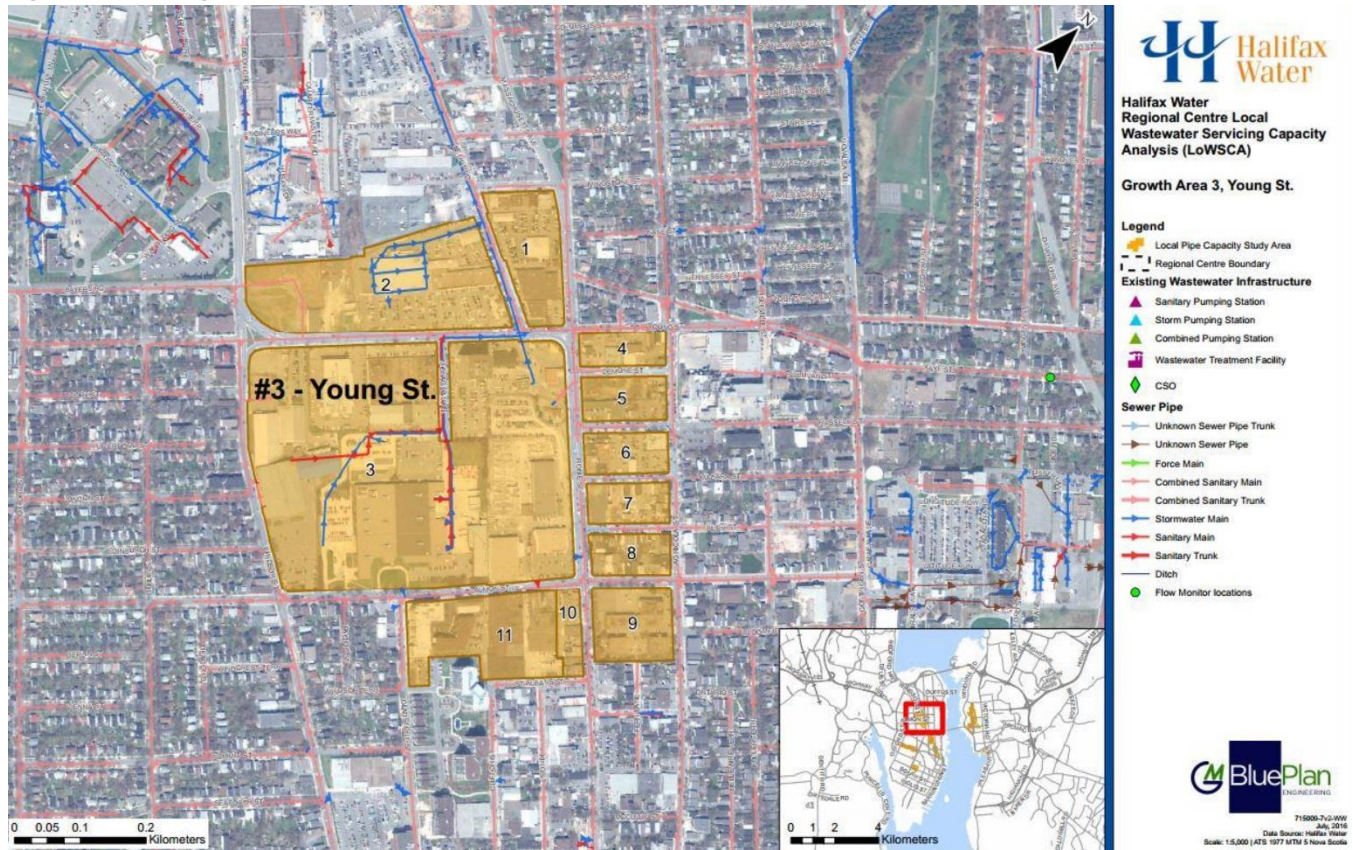
2.1.16.2 REGIONAL CENTRE LOCAL WASTEWATER SERVICING CAPACITY ANALYSIS (2016)

The Local Wastewater Servicing Capacity Analysis (LoWSCA) project aims to support the development of HRM's Regional Centre Plan. The study focuses on six key intensification areas within Halifax and Dartmouth, providing a detailed analysis of the local sewer infrastructure's existing and future capacity. The primary objectives are to assess current capacity, evaluate servicing alternatives, and develop a capital plan to address identified capacity issues.

The analysis involved a comprehensive review of relevant policies and regulations, including Halifax Water's Rules and Regulations, the Halifax Regional Municipality Charter, and previous studies such as the Regional Wastewater Functional Plan (RWWFP) and the Integrated Resource Plan. The capacity analysis for each target area includes growth descriptions, infrastructure evaluations, and cost estimates for various servicing alternatives. Recommendations are made based on these analyses to ensure that the wastewater infrastructure can support anticipated higher density developments. Portions of the Young District were captured in the Young Street area evaluated in this analysis, as shown in **Figure 2-13**.

The report also introduces a Development Capacity Tracking Tool to manage and monitor capacity issues effectively. The final recommended capital plan and cost estimates are designed to address the infrastructure needs identified in the analysis, ensuring that the Regional Centre can accommodate future growth while maintaining adequate wastewater servicing. The LoWSCA project is a crucial step in the strategic planning process for HRM, aligning with broader objectives to promote sustainable urban development.

Figure 2-13: Young Street Capacity and Solution Development Analysis Area



2.2 ANALYTICAL TOOLS AND DESIGN GUIDELINES

2.2.1 MUNICIPAL DESIGN GUIDELINES (2021)

The HRM Municipal Design Guidelines, also referred to as the 'Red Book', establish the minimum design standards for streets, drainage, street trees, lighting, and associated municipal infrastructure.

2.2.2 COMPLETE STREETS CHECKLIST (2017)

Adapted from the IMP, the Complete Streets Checklist guides planning and design phases for any street reconstruction, requiring identification of context, objectives, data needs, design considerations, and evaluation metrics.

2.2.3 REGIONAL CENTRE URBAN DESIGN MANUAL (2021)

The Regional Centre Urban Design Manual is an Appendix to the Regional Centre Plan and was established to implement policies related to urban design goals, providing criteria to consider in development agreements for large lot developments, Comprehensive Development Districts, and heritage development agreements, and encouraging design excellence in the Regional Centre.

2.2.4 MULTIMODAL LEVEL OF SERVICE GUIDELINES (2019)

This guideline outlines the steps for performing multimodal level of service (MMLOS) evaluations for transportation infrastructure in HRM. It details the approach for conducting MMLOS analysis along segments and intersections, as well as setting targets for different modes. MMLOS is evaluated based on the following

three categories: space (the amount of physical space dedicated to the mode), environment (the quality of the space provided for the mode), and time (the amount of delay or hindrance the mode experiences).

2.2.5 HALIFAX WATER DESIGN SPECIFICATIONS AND HALIFAX WATER SUPPLEMENTARY STANDARD SPECIFICATIONS (2023)

The Halifax Water Design Specifications and Halifax Water Supplementary Standards Specifications provides a comprehensive framework for the design and implementation of water, wastewater and stormwater systems. It includes detailed specifications for water distribution, wastewater collection, and stormwater management. This ensures that systems are designed to meet rigorous standards. Some of the key areas covered include water demand calculations, hydraulic modelling, material specifications, valve and hydrant requirements, and service connections. The specifications also address the design and installation of booster stations and pump systems, emphasizing site considerations, safety measures, mechanical and electrical components, and SCADA control systems. Additionally, it outlines hydraulic analysis for stormwater systems, runoff calculations, and downstream effects management.

The document also includes procedural guidelines for securing necessary easements, producing design and record drawings, and meeting application and inspection requirements for system extensions. It sets forth requirements for professional presentation and detailed documentation. This ensures that designs are thoroughly vetted and professionally endorsed, and that water, wastewater, and stormwater systems are not only technically sound but also compliant with safety and environmental standards. The overall goal is to provide clear, detailed, and actionable specifications that facilitate the development of robust, efficient, and reliable infrastructure systems. Proposed water and wastewater infrastructure in YDIP will conform to these standards.

2.2.6 ATLANTIC CANADA WASTEWATER SYSTEM GUIDELINES (2022)

The Atlantic Canada Water and Wastewater Association (ACWWA) Wastewater Systems Guidelines are intended to provide a guide for the development of wastewater projects in Atlantic Canada. These guidelines include technical requirements and integrates climate change considerations for wastewater infrastructure in Atlantic Canada. The guidelines support innovative approaches and emerging technologies while ensuring alignment with established principles. They acknowledge regional variations in regulatory requirements and recommend consulting local standards. The guidelines are supported by Natural Resources Canada (NRCan) under the Building Regional Adaption Capacity and Expertise (BRACE) program. They aim to build capacity for incorporating climate change adaption strategies, reducing energy consumption, and mitigating greenhouse gas emissions within wastewater operations.