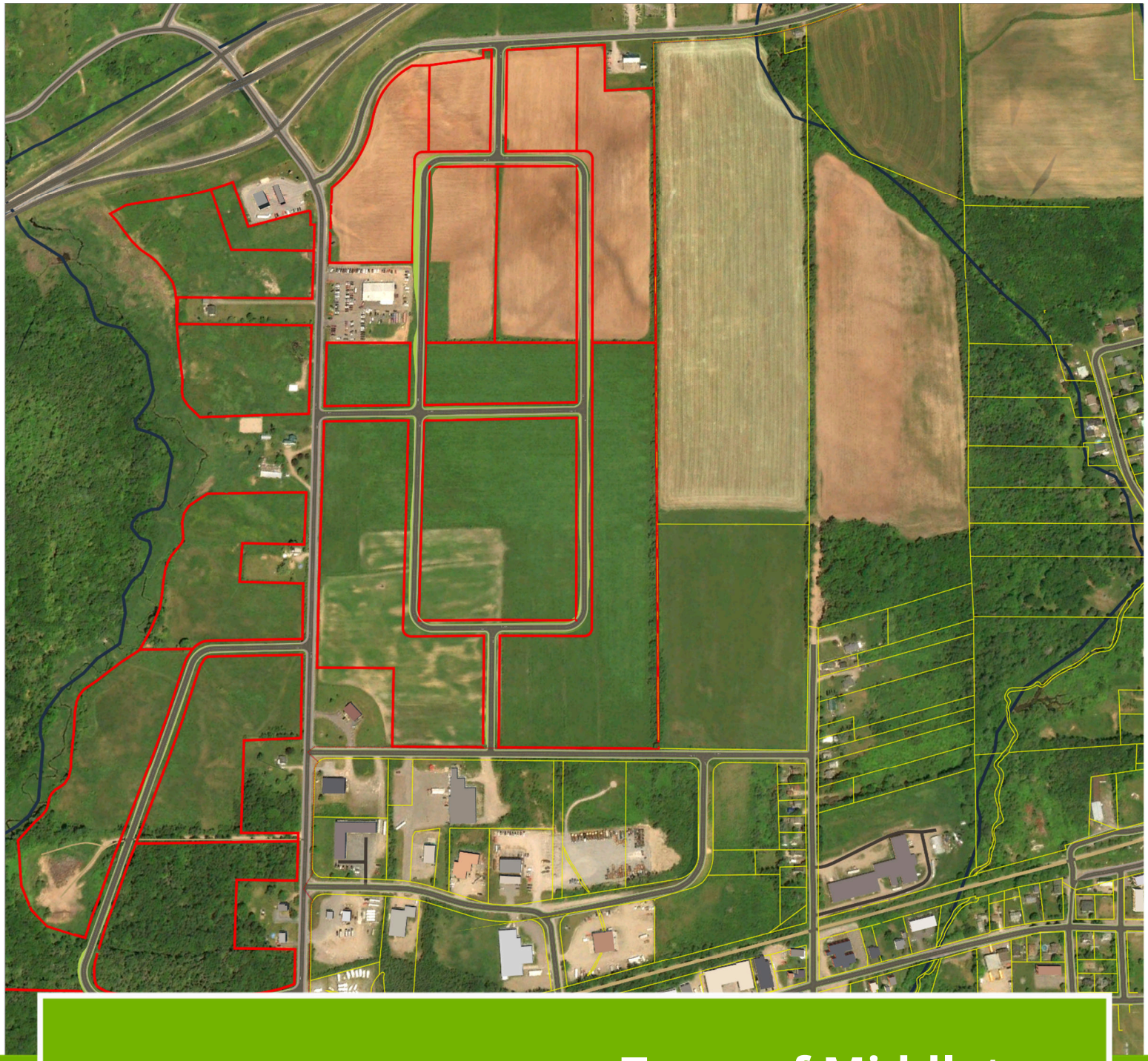

Town of Middleton

Business Park Expansion Study

Final Draft Report

CBCL

211062.00 • November 2022

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	Town of Middleton Business Park Expansion Study – Final Draft Report	Aaron Baillie	November 15 2022	Emanuel Nicolescu
	Town of Middleton Business Park Expansion Study – Draft Report	Aaron Baillie	September 23 2022	Emanuel Nicolescu
Issue or Revision		**Reviewed By:**	**Date**	**Issued By:**

Preliminary Report 211062.00

Ms. Ashley Crocker, CAO
Town of Middleton
131 Commercial Street
PO Box 340
Middleton, NS B0S 1P0

Dear Ms. Crocker:

RE: Town of Middleton Business Park Expansion Study – Final Draft Report

CBCL Limited is pleased to submit this Study of the comparative costs and potential benefits of expanding the Business Park onto adjacent residential lands under three scenarios. We first consider a Status Quo development scenario whereby infill development continues to occur along Brooklyn Street, mostly within the County of Annapolis, with minimal investment to ensure water and sanitary sewer servicing. Subsequently, we investigated two scenarios: 1) rezoning and industrial development within the Town of Middleton, north of Veterans Lane and 2) expansion of road, water and sewer servicing within Annapolis County to permit additional industrial development on lands adjacent Brooklyn Road. The Study presents conceptual layouts for the two expanded development scenarios, and reviews the road, water, and wastewater servicing requirements.

The Study subsequently provides an Opinion of Probable Cost for the three scenarios. Lastly, based on a review of the current Business Park, employment and tax assessments, a comparative analysis is provided between status quo conditions whereby the Town receives revenue from its tax sharing agreement with Annapolis County, from development on properties along Brooklyn Road, and the option of developing and selling new development parcels zoned for industrial uses.

Please do not hesitate to contact us if you have any questions regarding this report.

Yours very truly,

CBCL Limited

Prepared by:
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Project No: 211062.00

Contents

Executive Summary

Experiencing a growth in population and a continued interest in commercial/industrial development, the Town completed an extension of Freeman Street in 2021 to open additional land to satisfy demand as the existing Business Park neared capacity.

Initially, CBCL was contracted to assess the feasibility of extending the Town's Business Park into several properties that had come up for same within the Town of Middleton. As the study progressed, these properties of interest were sold, and became the subject of residential development applications, instead. As a result, the focus of this study shifted to a comparative analysis of industrial development under different scenarios, to provide the Town with an understanding of the financial benefits achievable.

Following a review of existing conditions in the Town and adjacent areas, two scenarios for future development were established. Scenario One involves an expansion of the current Business Park within the Town of Middleton. Scenario Two involves development along Brooklyn Road, primarily within the boundaries of Annapolis County. A high-level servicing review of existing water and wastewater infrastructure was then conducted to assess the feasibility of extending servicing and describe the impact that the future development may have on the Town's water and wastewater systems.

Upon evaluation of the costs associated with Scenarios One and Two, we compared them against a third scenario, Status Quo or "Do Nothing", considering only as-of-right development along Brooklyn Road, with the most minimal investment in servicing. This included the analysis of potential tax revenue generation and costs for the road, water, storm, and sanitary sewer servicing requirements for the proposed sites; bearing in mind the 50% tax revenue sharing agreement in place with Annapolis County.

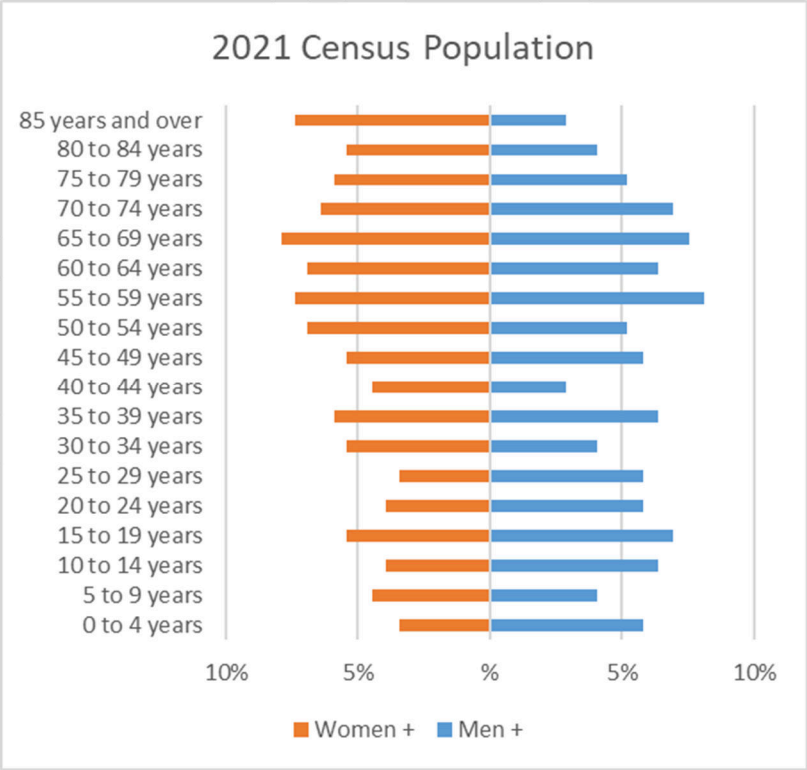
A high-level financial analysis suggests that the Status Quo Scenario would carry costs of approximately $1,282,600 and provide the Town with an annual tax revenue increase of approximately $108,500. Scenario One would carry costs of approximately $3,577,000 and provide the Town with an annual tax revenue increase of approximately $214,580. Scenario Two would carry costs of over $12,034,724 and provide the Town with an annual tax revenue increase of approximately $137,244.

Chapter 1 Introduction and Background

1.1 Introduction

The Town of Middleton is a regional service center located in the Annapolis Valley with a population of over 1,800 people. The Town covers a land area of 5.57 square kilometers, including residential, commercial, institutional, recreational, and historical land uses.

According to the latest national census statistics from 2021, the Town of Middleton has experienced a 2.2% population growth since 2016. Despite this growth, the Town exhibits an aging population, with 30% being aged over 65 years (see Figure 1-1).



In 2008, following completion of a new sewer main and watermain along a portion of Brooklyn Road, the Town of Middleton and Annapolis County entered into a service agreement whereby the Town would provide water and sewer access to the County

properties along Brooklyn Road, in exchange for 50% of the tax revenue collected by the County on the serviced properties. The affected properties are identified in the Brooklyn Road Water & Sewer Connection Bylaw.

At the inception of this study, the Town was receiving interest about developing land within the existing Business Park, which was nearing full buildout. Due to the Business Park nearing capacity, the Town completed the extension of Freeman Street in the summer of 2021 to open some additional industrial/commercial land. At the same time, several large properties north of the Business Park came on the real estate market. Under such conditions, the Town was looking for a review of the revenue from current industrial-zoned lands, and tax revenue sharing agreements with Annapolis County for properties fronting Brooklyn Street, a review of growth trends in business/industrial park developments, and a study of the viability of expanding the Business Park beyond its current established boundaries.

Since the initiation of this study, the initial properties of interest within the Town of Middleton were sold and are now subject to residential development applications. The Study has therefore changed its focus, to provide a comparative analysis of industrial development under several development scenarios, described in detail below.

1.2 Description of Project

The study area (illustrated in Figure 1-2) includes all property within the municipal jurisdiction of the Town of Middleton as well as adjacent lands in the County, with a focus on the Properties of Interest within the Business Park straddling the Town/County boundary (illustrated on Figure 1-3).

The purpose of this report is to provide the Town of Middleton with an understanding of the financial benefit achievable through expansion of the current Business Park within the Town of Middleton (Scenario One), as well as through development along Brooklyn Road within the boundaries of Annapolis County (Scenario Two). These scenarios would entail purchasing the several properties, rezoning in the case of the Town properties, and front-ending the capital investment to subdivide the properties, service and sell developable lots.

The development scenarios were contrasted with a Status Quo scenario only considering as-of-right development along Brooklyn Road, with the most minimal investment in servicing.

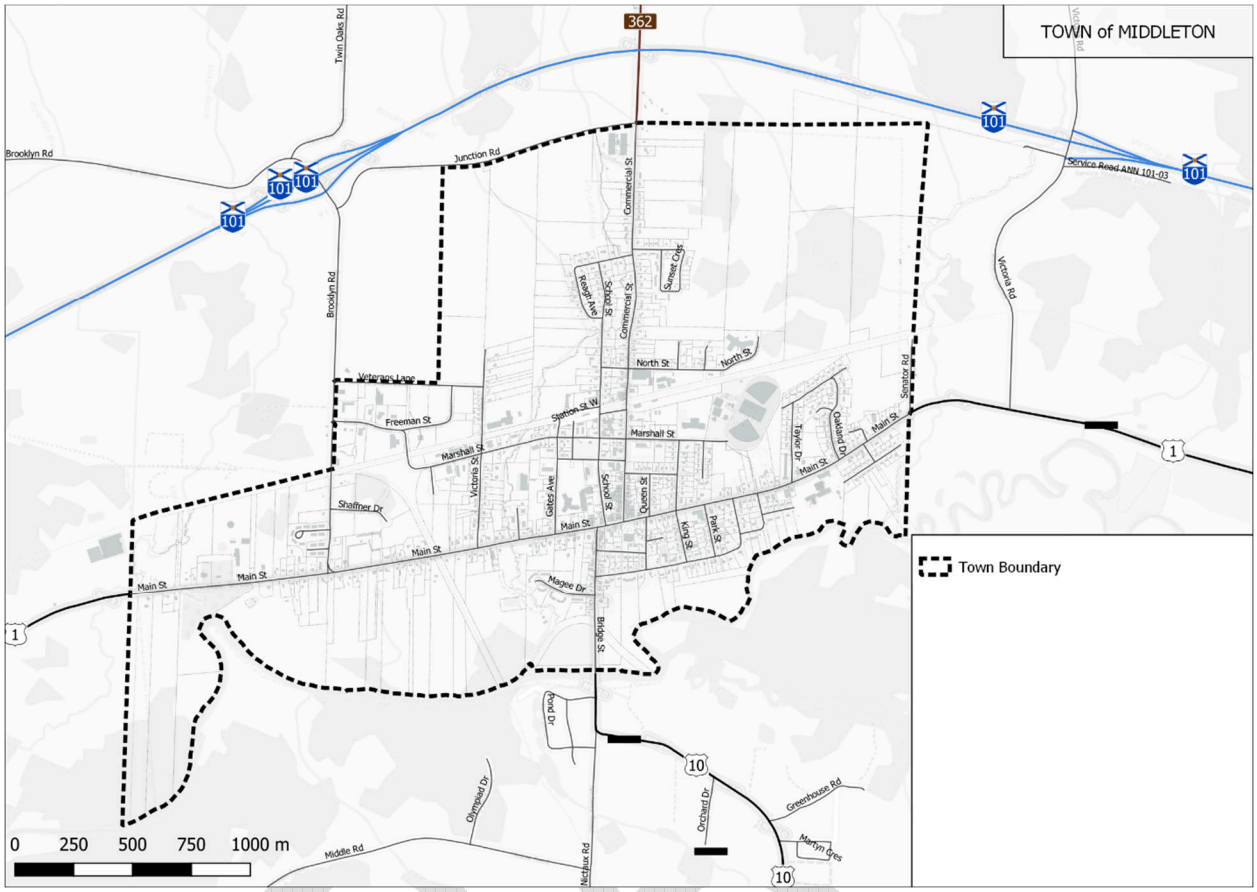


Figure 1-2: Study Area

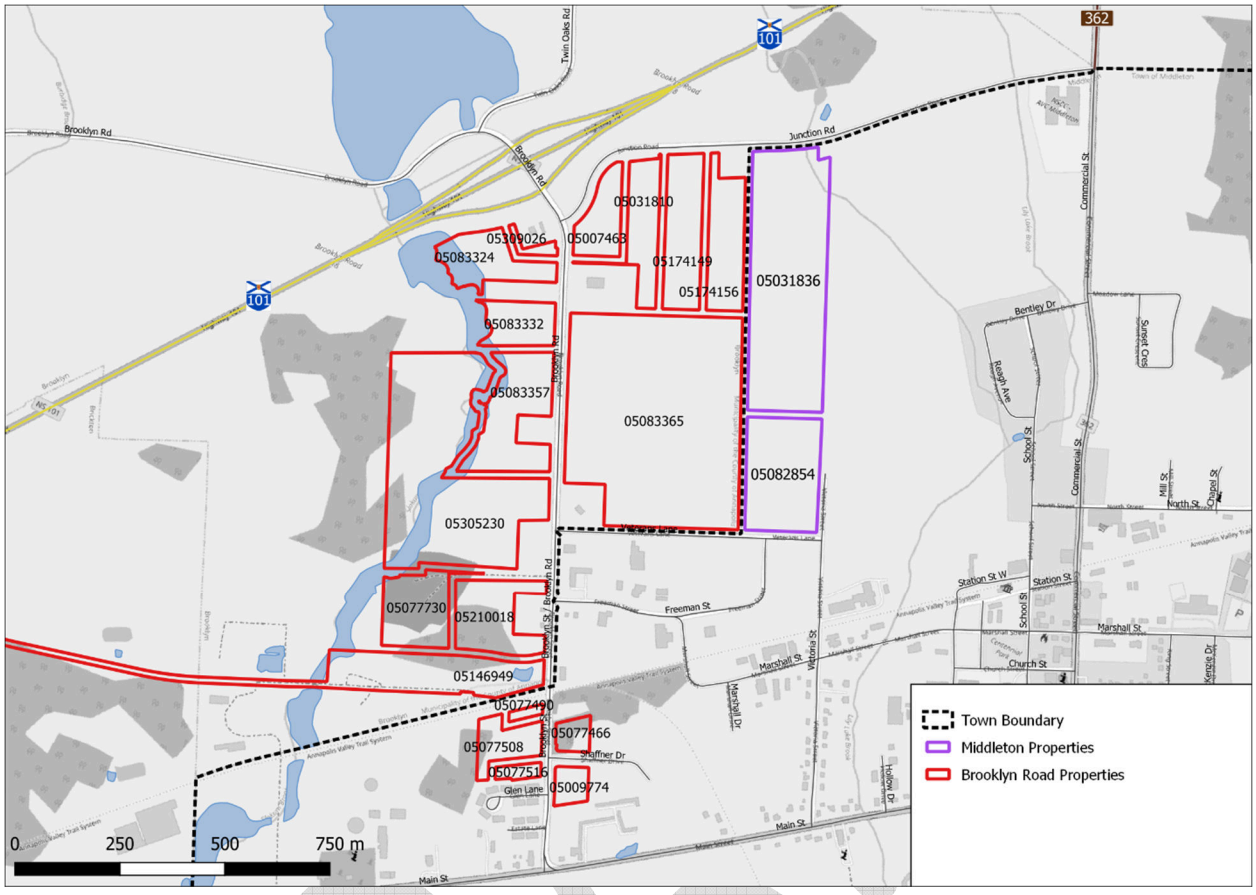


Figure 1-3 Properties of Interest

1.3 Study Process and Methodology

The overall project objective steps were to determine the following:

1. The current and future market value of lots.
2. An assessment of Status Quo infill development along Brooklyn Road in Annapolis County.
3. A cost benefit analysis for rezoning and developing industrial lands within Town limits vs developing industrial lands within the Town and County.
4. Approximate infrastructure costs to develop available lands within Annapolis County and Middleton.

In order to achieve these objectives for this business park expansion study, the following process was developed:

1. Undertake a background and literature review for relevant information on the site and surrounding areas.
2. Establish a suitable location for the expansion and create a conceptual layout of roads, sanitary sewers, watermain, and storm sewers.
3. Complete a comparative cost-benefit analysis from the perspective of the potential impact on the finances of Middleton and the relative net financial benefits that

could accrue to the Town under Scenario One (industrial development on new properties in Middleton) and Scenario Two (industrial development in Annapolis County), versus a Status Quo scenario with minimal up-front investment.

Chapter 2 Existing Conditions Review

To prepare a meaningful business park expansion study for the Town of Middleton, the existing conditions within the Town and adjacent area must be understood. This allows a deeper understanding of the current land uses within the Town, the direction the Town wants to move towards in the future, and opportunities for development and improvement.

2.1 Existing Land Uses and Zones

The Town of Middleton currently has a by-law known as "Land Use By-law of the Town of Middleton" to implement the land use and development control provisions of policies contained in the Town's Municipal Planning Strategy. This is enabled through the Municipal Government Act. In the By-law, the Town of Middleton is divided into zones. The boundaries and land uses of these zones are shown in Figure 2-1.

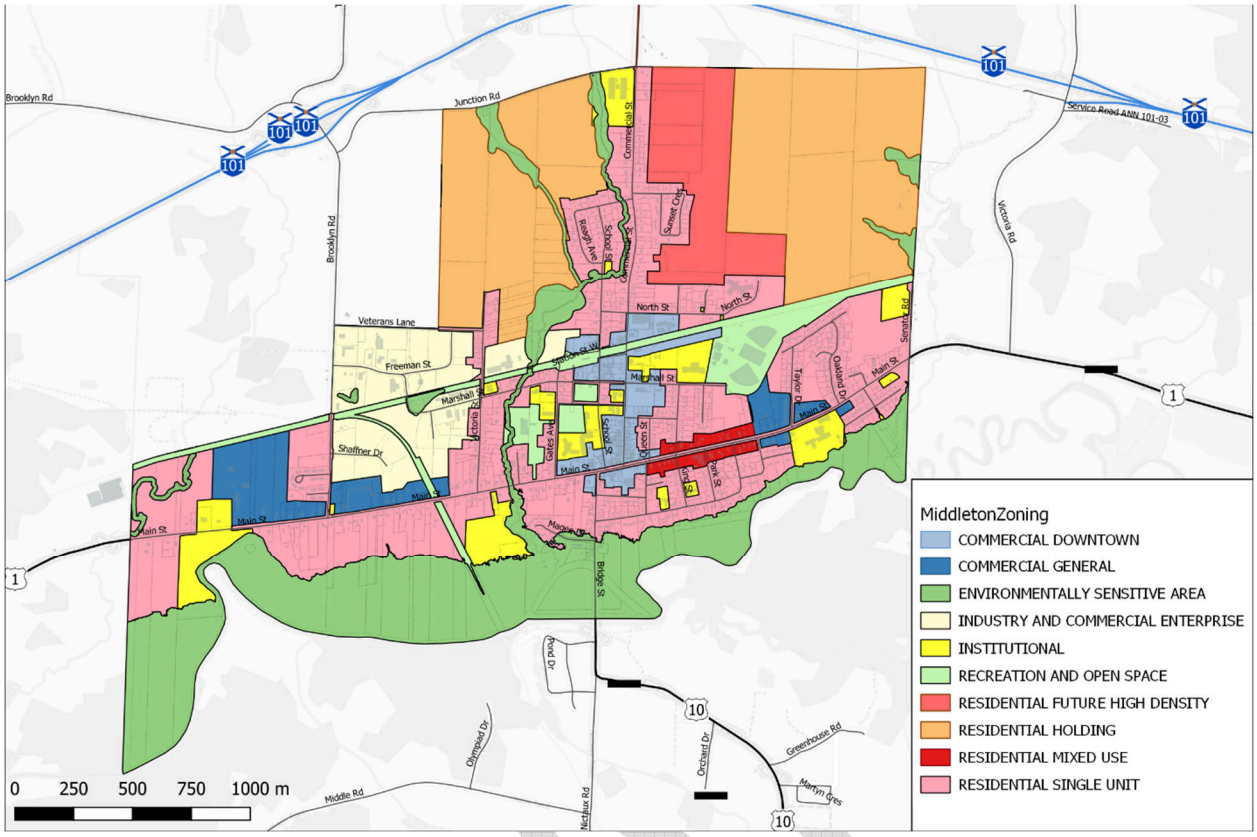


Figure 2-1 Town of Middleton Zoning Map

Like the Town of Middleton, the Municipality of the County of Annapolis has a county-wide by-law, known as the "Annapolis County Land Use By-law" to implement the land use and development control provisions of policies contained in the Municipality's Municipal Planning Strategy. The By-Law covers the area around the Town of Middleton under the East End Planning Area. Land use designations impacted the proposed development scenarios of this report include Industrial (IND1) and Highway Commercial (C-2). The boundaries of these zones are shown in Figure 2-2.

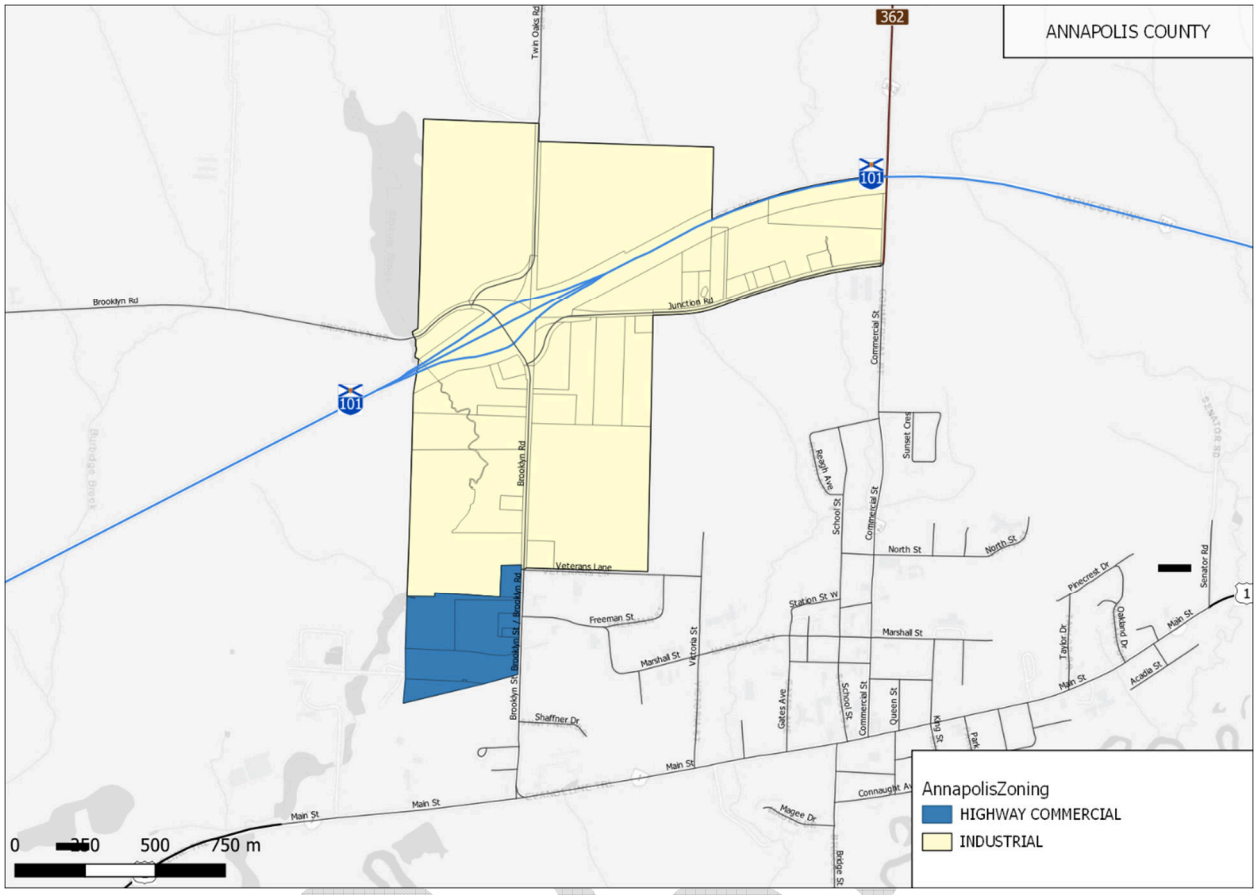


Figure 2-2 Annapolis County East End Area Zoning Map

2.2 Existing Water System

The Town of Middleton's existing water distribution system is briefly described in this section. The existing water system includes:

- **Wells:** Three (3) water supply wells.
- **Water Treatment:** Chlorine injection in the well control/treatment building with downstream chlorine contact piping.
- **Water Mains**: The distribution system piping consists mainly of 100 mm to 300 mm diameter cast iron, ductile iron, and PVC water mains.
- **Zone Building:** A building comprising of a booster pump system that pushes water uphill to the existing reservoir located on Gates Mountain Road and regulates the pressure coming back to the community from the reservoir.
- **Water Storage:** A floating reservoir located on Gates Mountain Road. The reservoir is a concrete lined earth embankment reservoir with known leakage issues, it is at the end of its service life and planning for a new reservoir located near Victoria Street is underway.

The Properties of Interest are situated near the extent of the existing water distribution system, bordered by the following existing water mains (illustrated on Figure 2-3):

- 200 mm diameter cast iron watermain on Junction Road on the north side of the proposed development.
- 300 mm diameter watermain on Veterans Lane on the south side of the proposed development,
- 300 mm diameter asbestos cement watermain on Victoria St on the east side of the proposed development,
- 250 mm diameter nearby watermains on Brooklyn Road, Victoria Street and Marshall Street.

Figure 2-3 Watermain Network and Properties of Interest

2.3 Existing Sanitary System

The Town of Middleton's existing sanitary water distribution system is briefly described in this section. The existing sanitary water system (illustrated on Figure 2-4) includes:

- **Sanitary Sewers:** There are existing sanitary sewers along Freeman Street, Marshall Street, and Victoria Street.
- **Pump Station:** A sanitary pump station is located at the intersection of Marshall Street and Freeman which conveys sanitary flows through a forcemain on Marshall Street toward Victoria Street.
- **Sewage Treatment Plant:** Sanitary flows are conveyed to the Town of Middleton's sewage treatment plant, located nearby on the south side of Main Street.

Figure 2-4 Sanitary Sewer System and Properties of Interest

The Properties of Interest are situated near the extent of the existing sanitary water distribution system, bordered by:

- 200 mm (assumed) diameter sanitary sewer on Victoria Street on the southeast side of the proposed development.
- 250 mm diameter sanitary sewer on Freeman Street on the south side of the proposed development.
- 250 mm (assumed) diameter sanitary system on Marshall Street on the south side of the proposed development.

- There is no sanitary sewer on Veterans Lane based on CBCL's infrastructure map of the Town of Middleton.

2.4 Existing Stormwater System

The Town of Middleton's existing stormwater system is mainly composed of open shoulder roads and roadside ditches in the area of the Properties of Interest. The downtown area of the town has curb and gutter, catch basins and stormwater piping, as illustrated on Figure 2-5. Stormwater in the community generally flows downhill toward the Annapolis River. The existing site slopes downhill toward the south and stormwater runs off the undeveloped field into the ditches along Veterans Lane.

At this stage, no capacity analysis has been preformed on the existing stormwater system. However, it is not anticipated that the development of the area would contribute significant additional peak flows to the existing system because stormwater should be managed to maintain pre and post development peak flows as described in the following section.

Figure 2-5 Stormwater Sewer System and Properties of Interest

2.5 Topography

The Properties of Interest are currently primarily used for agricultural purposes. The area straddling the Town/County boundary is generally characterized by a gentle sloping of the terrain from the highest point at the northeast corner along Junction Road (elevation 37.5 m), to approximately 22 m at Veterans (see Figure 2-6). The overall slope between the high and low points is approximately 1.6%, however slightly steeper local grades are also. Watercourses on the eastern edge of the study area present more sudden grade changes.

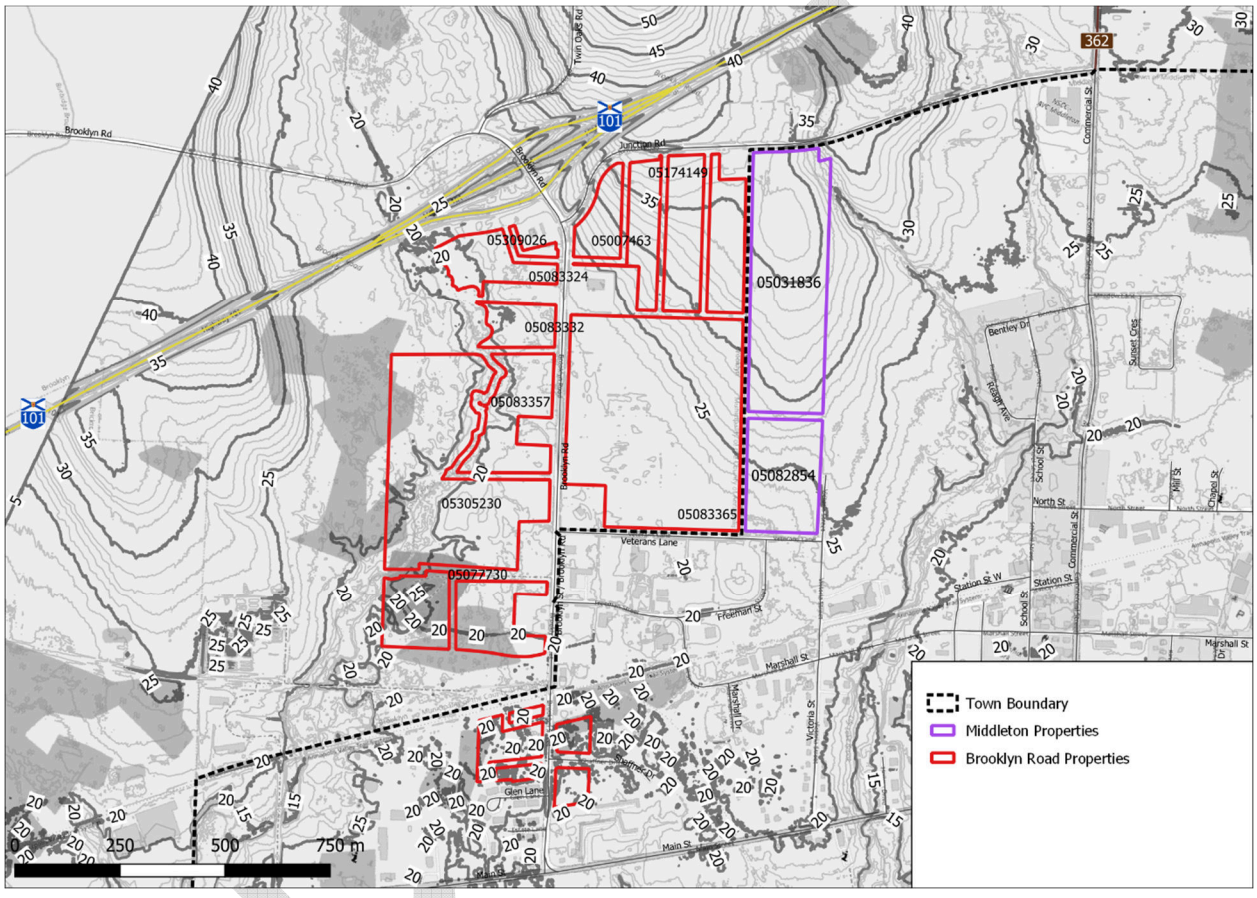


Figure 2-6: Topography

The properties east of Brooklyn Road include forested areas with some wetlands and cleared open space. There is a difference in elevation of approximately 23.5 m from the lowest point of the site in the southwest corner of the site along the South Shore Annapolis Valley Trail (approximate elevation 16.0 m) and the highest point at the northeast corner along Junction Road (approximate elevation 39.50 m). To the east of Brooklyn Road there is a plateau along Junction Road around elevation 35.0 m, from which the land begins to drops southwest at a relatively constant grade until reaching 23.0 m where it begins to plateau again before reaching an elevation of 21.0 m in the southwest where Veterans Lane meets Brooklyn Road.

The land to the west of Brooklyn Road reaches its max elevation of 26.0 m in the southwest portion of the site where it follows a steep slope in all directions before leveling out and reaching a plateau at an approximate elevation of 21.0 m where it remains relatively constant throughout the whole site. The exception to this is along the Slokum Brook where the elevation falls to approximately 19.0 m in the northern portion of the site and reaches the lowest elevation (approximately 16.0) in the southwest corner of the site. The overall slope between the high and low points is approximately 1.6% across the 1.5 km length between them, however slightly steeper local grades would be present.

2.6 Environment

The Properties of Interest are mostly free of environmental constraints, with some notable exceptions on the peripheries (as illustrated on Figure 2-7). Within the Town of Middleton, a natural channel passes across the Northeast corner of PID#05031836, flowing beneath Junction Road and exiting the property to the Southeast. The stream is protected through an Environmentally Sensitive Area zoning, however, any development of this land is not expected to have major impacts on this stream.

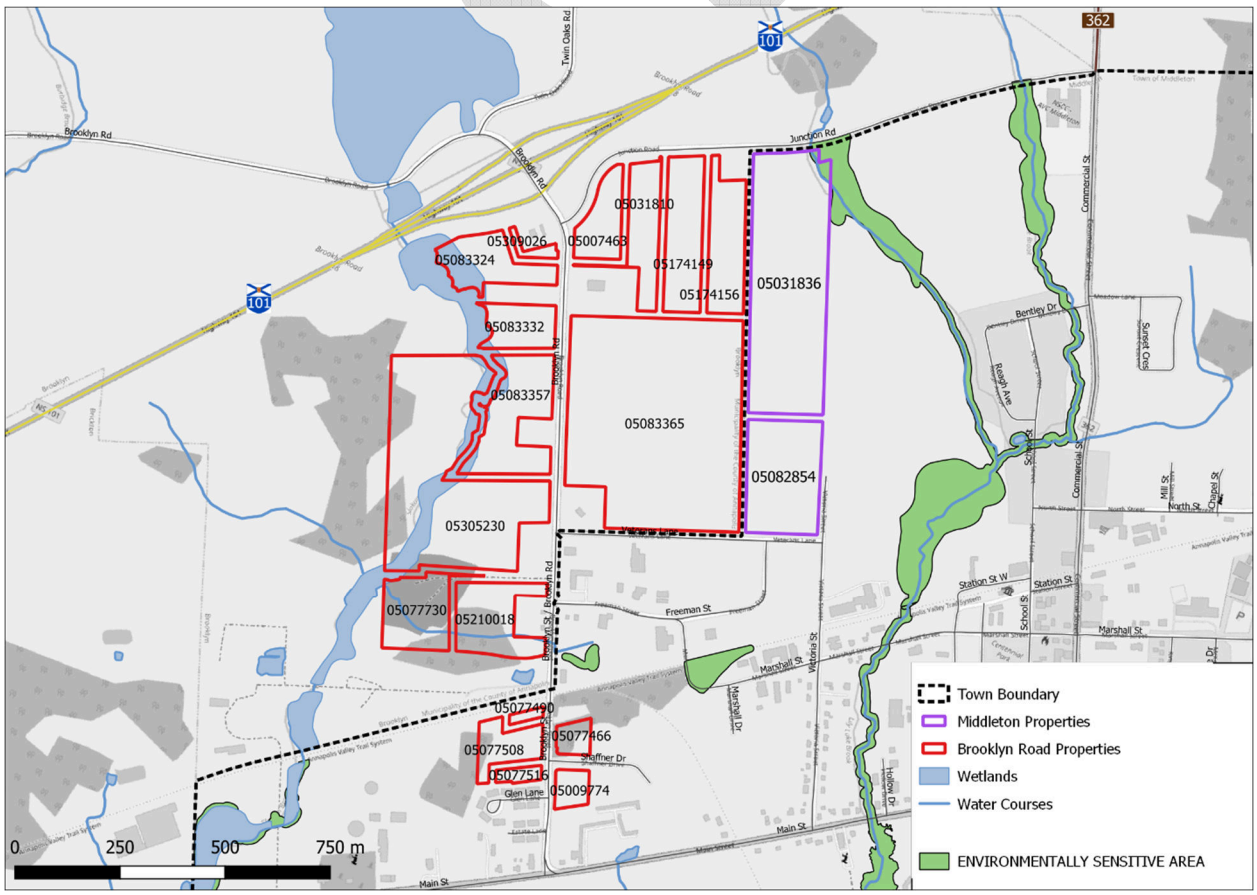


Figure 2-7: Natural Features

Within Annapolis County, the properties of interest are bounded on their west side by Slokum Brook and its natural wetland. This feature affects all properties to varying degrees, ranging form minimal overlap on the edge, to significant traversal, as seen on PID#5305230, which is effectively bisected by the Brook. In total the brook, stream and wetland render approximately 13.2 acres inaccessible/unsuitable for development.

Chapter 3 Future Development

As noted, this Study considered three development scenarios:

- Status Quo infill development along Brooklyn Road and Junction Road
- Scenario One development of properties within the Town of Middleton
- Scenario Two development of properties within Annapolis County

3.1 Status Quo

The Status Quo is limited to infill development of properties fronting Brooklyn Road (as illustrated on Figure 3-1).

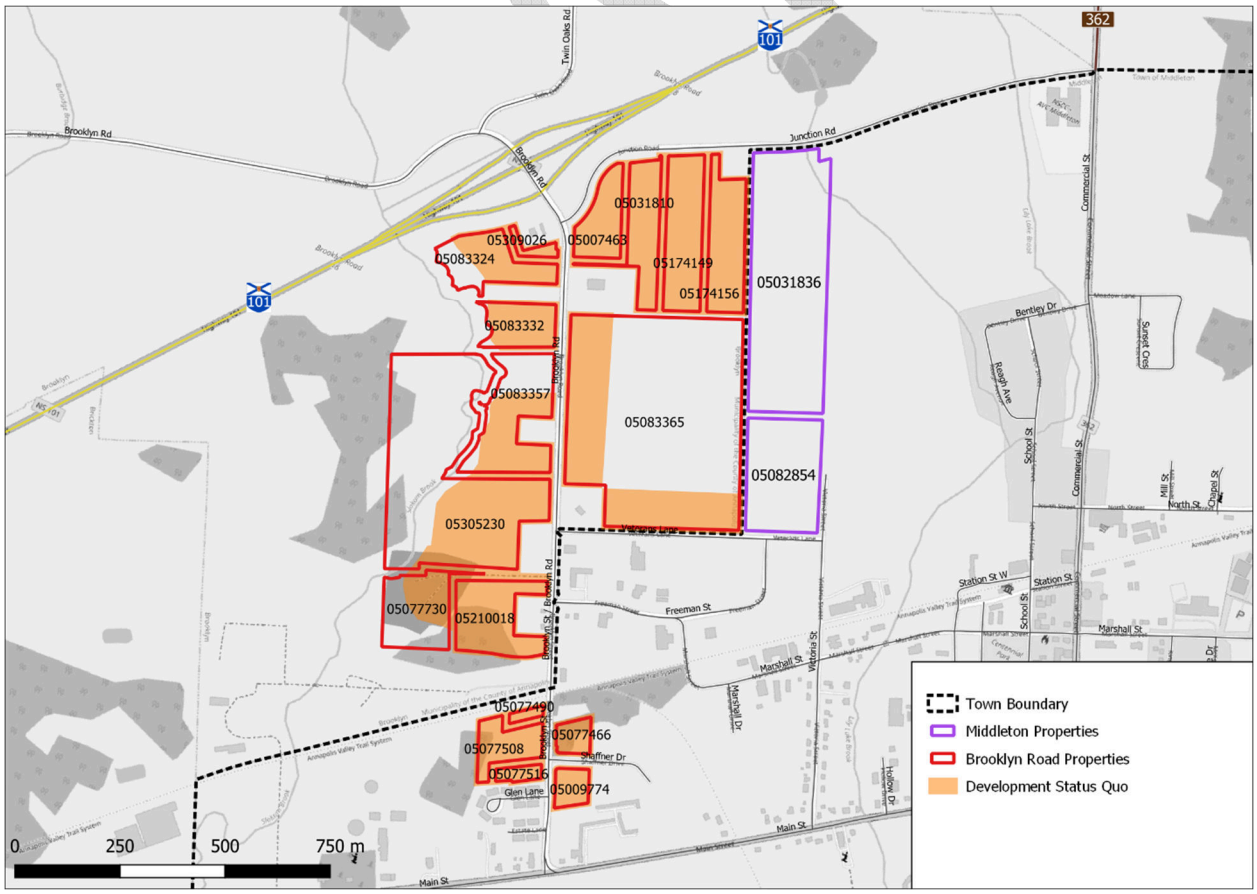


Figure 3-1 Status Quo Development Scenario

Several properties of interest are very large and would likely experience difficulty finding large developers without upfront subdivision and servicing with road and municipal infrastructure. As such, we have considered only partial development of the portions of these properties fronting Brooklyn Road and Junction Road. Portions of these properties situated in wetland areas or bisected by watercourses have also been excluded form consideration (see Figure 3-2).

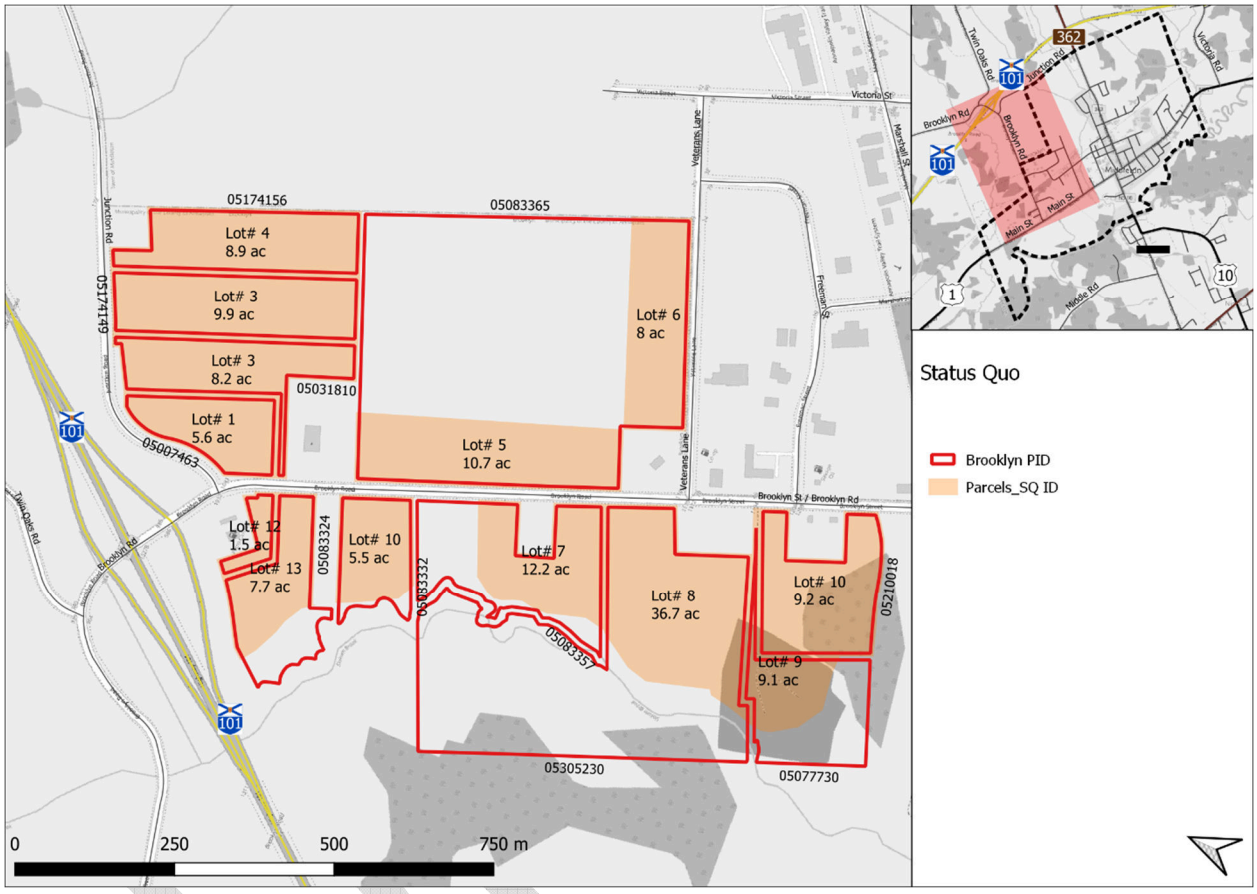


Figure 3-2 Developable Parcels - Status Quo

3.2 Scenario One

The two properties considered under this scenario (PID# 05031835 and PID # 05082854) and shown on Figure 3-3 were recently sold and are subject to a residential development application. The Town also recently purchased the parcel of land north of Victoria Rd identified as PID# 05031703 for the purposes of building a new water Tower. All three properties inside Middleton are currently zoned residential and would need to be rezoned to allow for industrial uses.

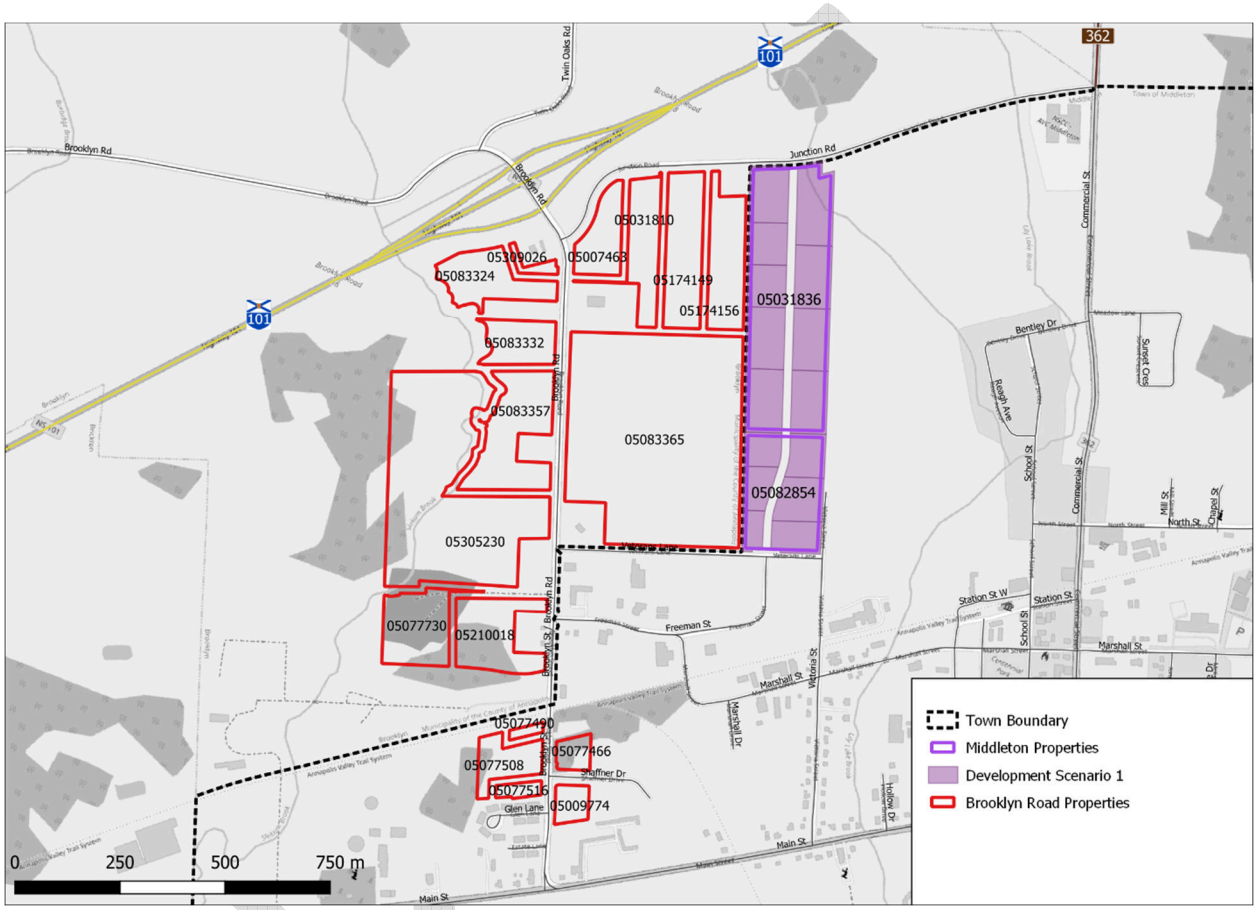


Figure 3-3 Development Scenario 1

To provide access to developments on the properties, a roadway will need to be extended into the properties. To integrate the new industrial area with the existing Business Park, the proposed roadway alignment will begin as an extension of Freeman Street across Veterans Lane, which will change the existing Freeman-Veterans intersection from a three-way T-configuration, into a four-way intersection. As the new road stretches north towards Junction Road, it will follow the middle of the properties, along the natural crest observed on the contour lines. This alignment will provide the simplest and optimal access to development parcels and ensure consistent frontage along the new road.

Figure 3-4 below illustrates the proposed road alignment through PID# 05082854 and PID#05031836, and resulting lot layout.

Figure 3-4: Proposed Road and Parcel Layout – Scenario One

With the alignment of the new road along the middle of the proposed development site, the properties were then subdivided into parcels along each side of the road. The sizes of the new parcels were based on the lot area measured in the existing Business Park south of Veterans Lane, and adapted to meet the geometry of the site to produce a range of lot areas. The two properties of interest have a combined gross area of 18 Ha (44.5 acres). The preliminary layout of the Business Park expansion includes 15 parcels of land located along both sides of the proposed new road. The new properties range in size from 0.47 Ha (1.16 acres) to 1.63 Ha (4.03 acres), with a median lot size of 1.13 Ha (2.79 acres). The horizontal curvature in the lower portion of the proposed alignment creates the smaller varying sized lots, and the portion alongside the tangent section to the north contains the larger sized lots.

The proposed total area to be serviced with water and wastewater, is 16.1 Ha (39.8 acres), excluding the road right-of-way (ROW). Figure 3-5 below illustrates the proposed lot layout. These lots have an average area of 0.75 Ha (1.85 acres), with the largest lot size being 1.96 Ha (4.84 acres). While several existing lots along Freeman Street are vacant, most of the Business Park has fully developed.

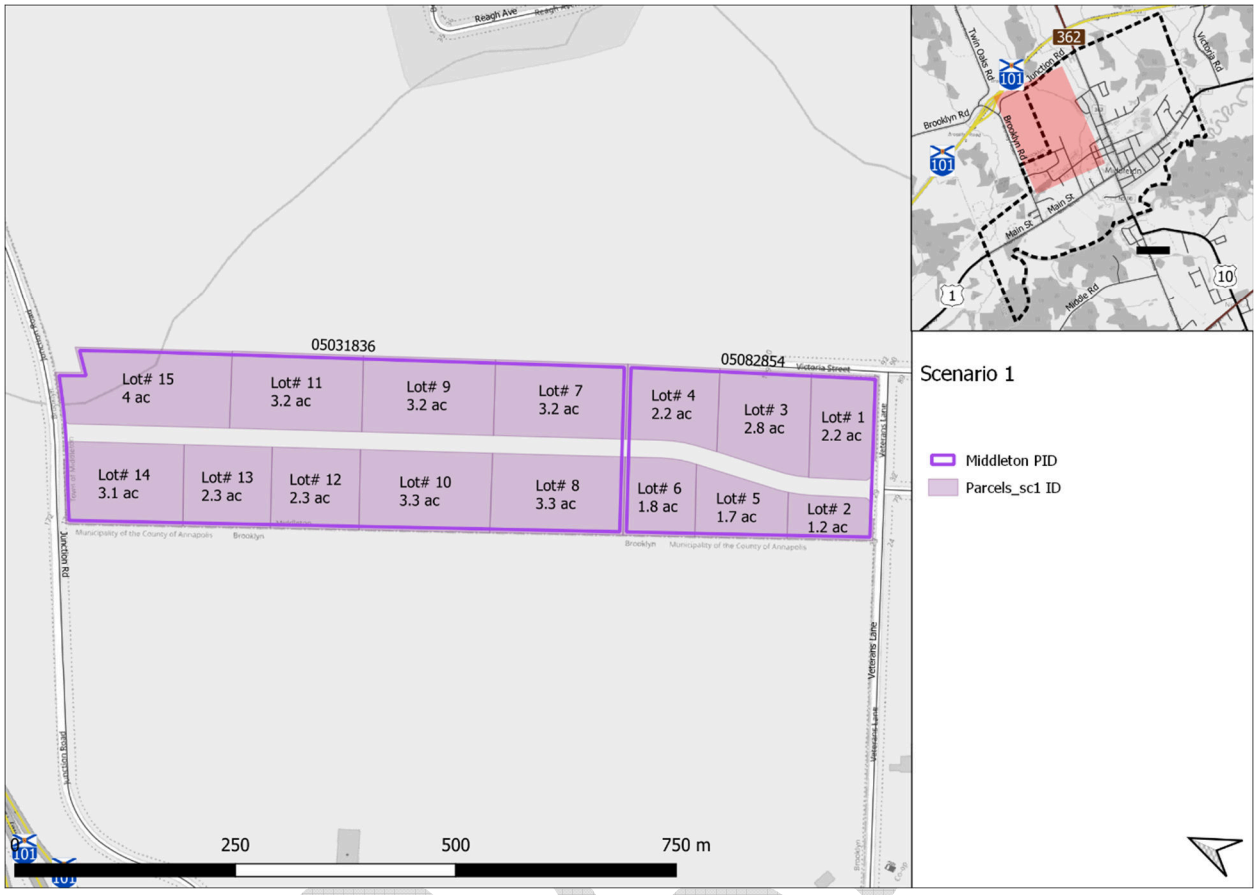


Figure 3-5: Proposed Lots – Scenario One

This road section will have a length of approximately 0.95 km, and will maintain a similar cross-section to that of Freeman Street with the following geometric characteristics:

- 20m wide Right of Way along the length of road
- Two travels lanes, both 3.5m wide
- 2% pavement cross slopes
- 1m wide gravel shoulders
- 2:1 sideslopes, backslopes and fill slopes where needed
- Ditching along both sides of the alignment
- 0.5m wide drainage channel (bottom of ditch)
- Surge rock and geotextile underlay where needed

Figure 3-6 below shows the proposed road cross section through the site.

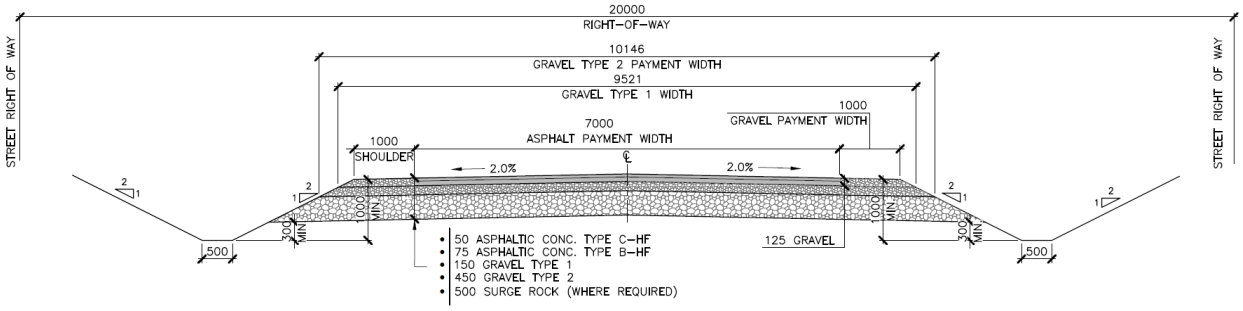


Figure 3-6: Proposed Road Cross Section

The expected change in elevation from the south to north end of the roadway is approximately 12.5 m; however, the grades are expected to remain at reasonable levels below 4% along the length of roadway. These grades fall below the recommended maximum of 7% for areas of rolling terrain as outlined in the TAC Geometric Guidelines.

3.3 Scenario Two

Under Scenario Two, development is proposed along Junction Road and Brooklyn Road. The proposed site is located primarily within the boundaries of the Municipality of the County of Annapolis, with the exception of five lots within the boundary of the Town of Middleton (see Figure 3-7.

The properties in Annapolis County are zoned for industrial uses except for a small number of lots zoned for commercial. The Highway Commercial (C-2) land use designation permits a variety of business and commercial enterprises, as well as a limited number of industrial types of developments.

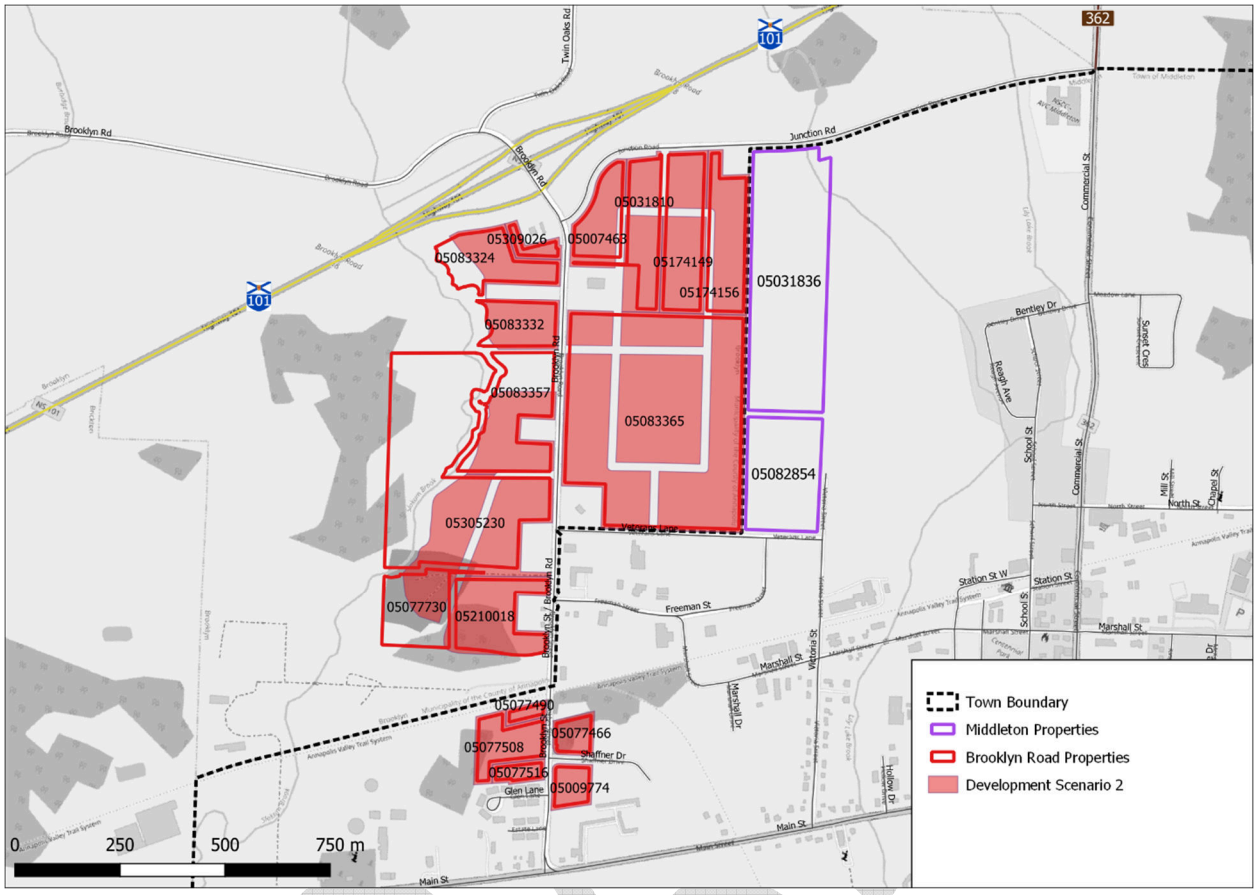


Figure 3-7 Development Scenario 2

The proposed total area to be serviced with water and wastewater, is approximately 53 Ha (131.6 acres), excluding the road right-of-way (ROW). Figure 3-8 below illustrates the proposed lot layout.

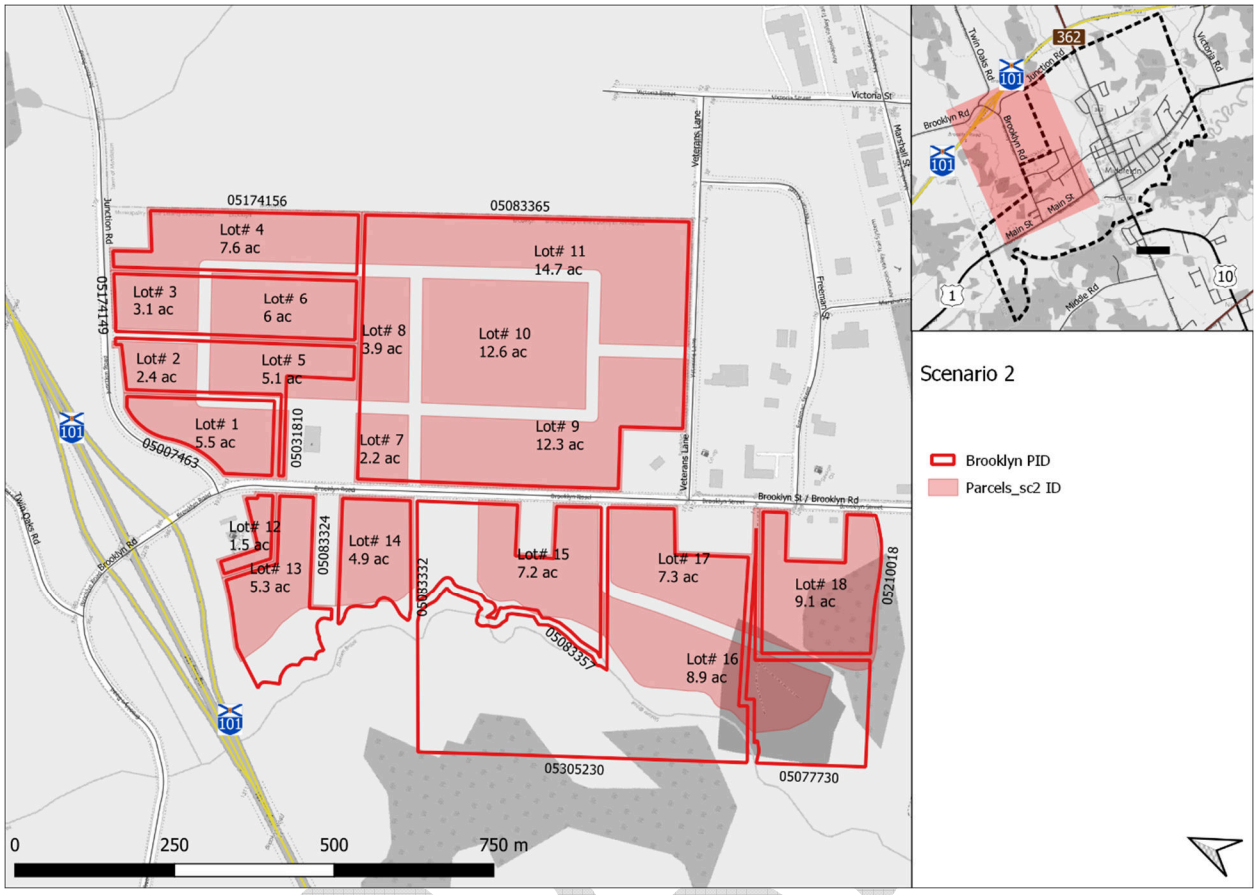


Figure 3-8 Developable Lots – Scenario Two

To allow subdivision of the larger properties into smaller developable lots, it will be necessary to extend new roads and servicing within the properties on both the east and west sides of Brooklyn Road (as illustrated on Figure 3-9).

On the east side, a new road will north from Veterans Lane, which will terminate in a three-way T-configuration intersection with the intersecting streets extending east and west before curving northbound to provide access to development parcels. As the new road stretches north towards Junction Road, it will intersect with a new road running east/west providing access to the site from Brooklyn Road opposite PID# 05083332. From there the new road continues to extend north before curving inward in an east/west direction where it intersects a new road providing site access from Junction Road. This alignment will provide optimal access to development parcels and allows for the land to be subdivided into lots of comparable size to the existing Business Park along the new road network.

On the west side of Brooklyn Road, a new road will provide access from Brooklyn Road, following the lot line of PID# 05083357 and PID# 05305230 before curving south through the properties.

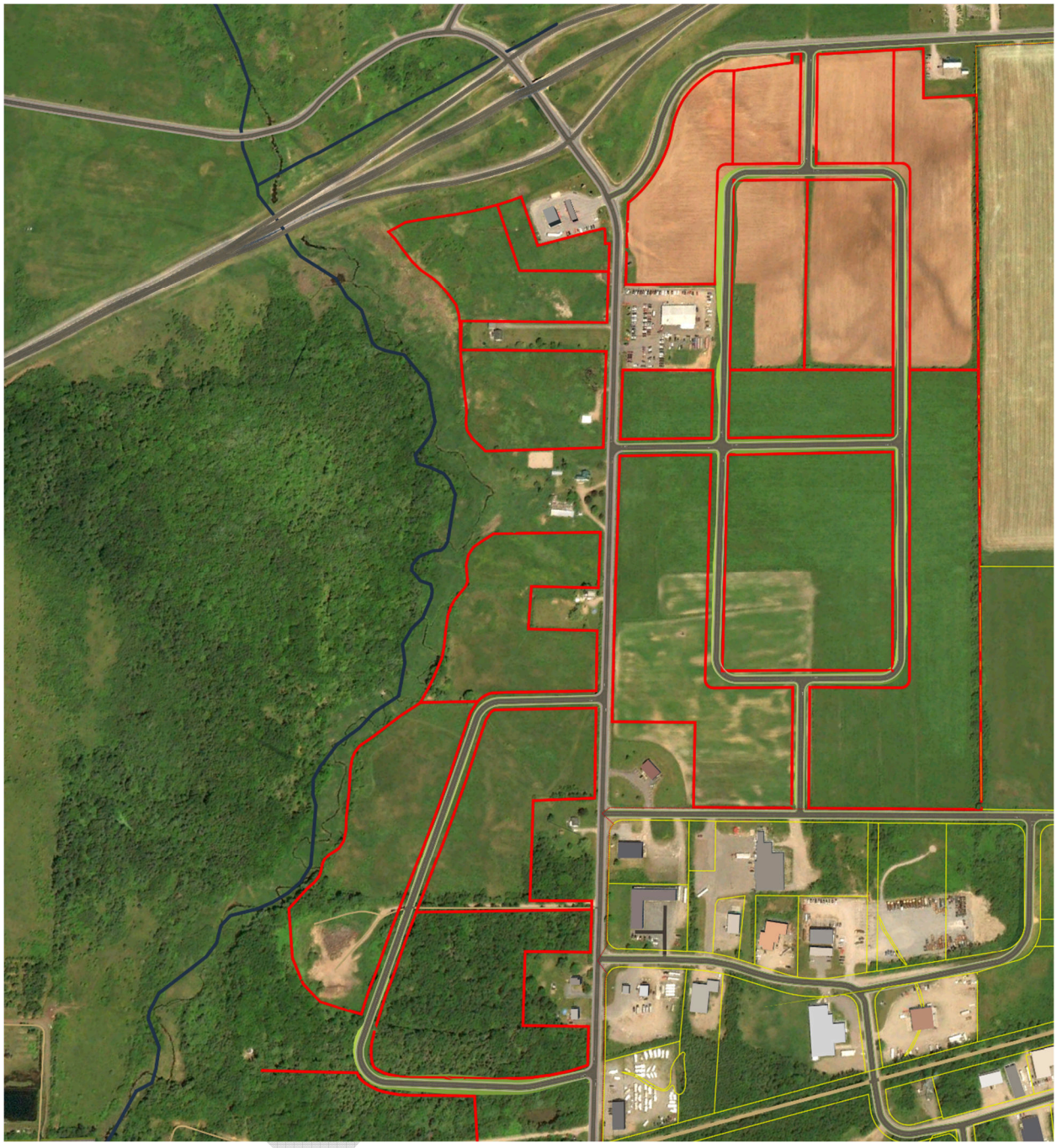


Figure 3-9 Proposed Road and Parcel Layout

The new roads will extend over approximately 2.26 km on the east side of Brooklyn Road, and over 0.85 km on the west side, for a combined length of approximately 3.11 km. Both will maintain a similar cross-section to that of Freeman Street with the following geometric characteristics:

- 20m wide Right of Way along the length of road
- Two travels lanes, both 3.5m wide

- 2% pavement cross slopes
- 1m wide gravel shoulders
- 2:1 sideslopes, backslopes and fill slopes where needed
- Ditching along both sides of the alignment
- 0.5m wide drainage channel (bottom of ditch)
- Surge rock and geotextile underlay where needed

Figure 3-10 below shows the proposed road cross section through the site.

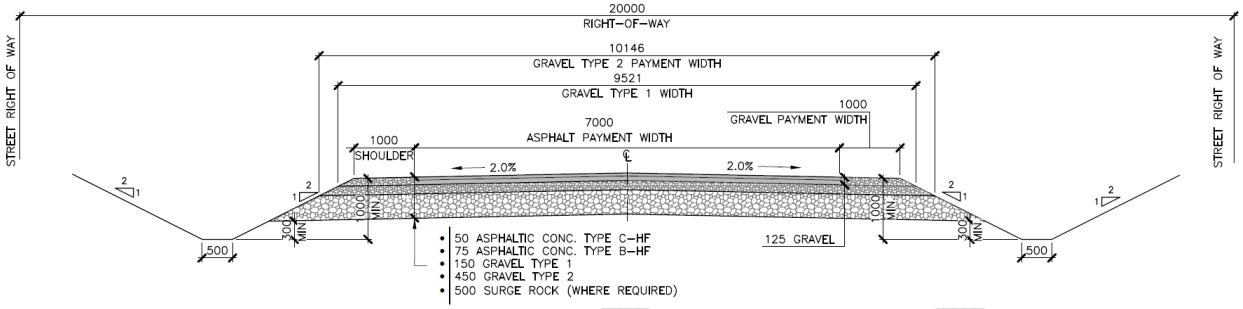


Figure 3-10: Proposed Road Cross Section

Chapter 4 Servicing Review

CBCL conducted a high-level review of the existing water and wastewater infrastructure to assess the feasibility of extending water and sanitary servicing this development and describe the impact that the future development may have on the Town of Middleton's water and wastewater systems.

4.1 Water Servicing

4.1.1 Water Design Parameters

The design parameters for the Town of Middleton water system are based on guidelines and standards typically applicable to similar communities in Atlantic Canada:

- Atlantic Canada Guidelines for Drinking Water Supply Systems, 2004.
- Design Specifications & Supplementary Standard Specifications for Water, Wastewater, & Stormwater Systems, Halifax Water.

4.1.2 Water Demand Estimation

CBCL conducted a high-level estimate of the water demands to better understand the possible flows for an industrial development of this size at full build-out and to help provide context for possible watermain sizing. The estimated future daily domestic water demand for the proposed business park was determined based on a light industrial zoning flow allowance of 35 m3/hectare/day, as described in Section 3.2. The possible future water demands of the business park at full build-out are summarized in Table 4-1.

Table 4-1 Summary of Estimated Water Demands

Design Demand	Flow Rate
Average Day Demand (ADD)	6.5 L/s (560 m^3/day)
Maximum Day Demand (MDD)	7.1 L/s (616 m^3/day)
Peak Hour Demand (PHD)	7.8 L/s (28 m^3/hour)
Fire Flow Rate (FF) (3 hour duration)	227 L/s (817 m^3/hour)

Maximum Day Demand (MDD) peaking factor of 1.1 and the Peak Hour Demand (PHD) peaking factor of 1.2 were determined based on the commercial and industrial peaking factors laid out in Halifax Water's design specifications. The actual peaking factors for industrial uses can vary greatly depending on the actual water usage requirements. The impacts of actual water consumption patterns from potential land users should be checked before the town approves any potential industrial user.

Fire Flow Requirements

The estimated fire flow requirement for industrial zoning is 227 l/s for a duration of 3 hours as indicated by the Water Supply for Public Fire Protection manual, by the Insurance Advisory Organization. The same fire flow rate and duration were used as a design basis for the proposed reservoir, as described in Reservoir Replacement Options Technical Memorandum, dated February 1, 2019, although this flow is not achievable in all sections of the existing water system. Fire protection that does not meet or exceed the standards can mean higher risk and higher insurance rates.

4.1.3 Proposed Watermain

We anticipate that the Town would install a new watermain following the proposed new road alignments through the Business Park expansion properties and connect into the existing water system at the intersection of Freeman Street and Veterans Lane to the south, Junction Road to the north, and Brooklyn Road to the west where applicable. The proposed watermain would be approximately 1 km long (scenario one) or 3.1 km long (scenario 2), with a diameter of 300 to 350 mm.

The water main extension will provide potable water and fire protection to the proposed industrial development. Fire hydrants are anticipated to be spaced at 90 m intervals to provide fire protection in keeping with the existing community and allow flushing of the water main for operation and maintenance purposes. A 300mm diameter watermain will be able to convey the anticipated daily and peak flows without producing significant headloss, therefore the water pressure in the industrial park is anticipated to be similar to the available pressure in the adjacent developed sections of the Town. The Atlantic Canada Water Guidelines recommend that distribution mains are sized to convey fire flows with a velocity not exceeding 3.0 m/s (10 ft/s), the design conveyance capacity of a single 300 mm diameter water main is approximately 210 L/s with this upper limit velocity. Since the proposed watermain would feed the development from north and south, and is situated close to the proposed reservoir, the design conveyance capacity is anticipated to exceed the fire flow requirement within the proposed development.

CBCL considered an alternative option for servicing the new development, to provide water servicing to the new lots of the Business Park with individual water services from the existing water main to the east. This is not a typical configuration and would require water utility easements through the lots on the eastern side of the proposed new road to provide service to the lots on the west side. The cost of a new watermain would be avoided but the

length and cost of each service for the individual lots would increase. There would no benefits to the existing water system, and the fire suppression of each lot may vary and be less robust. This alternative option was therefore excluded from further consideration.

For the purposes of this report and cost estimates, we have assumed that the watermain will be 300mm diameter and included allowances for connections to the existing system, hydrants, valves, and individual water services for each lot.

4.1.4 Existing Water Distribution System

The development of the Business Park in this location with a new watermain provides an opportunity to improve conveyance and redundancy of the overall distribution system. The proposed industrial development is located on the lot directly to the west of the Town's proposed new water reservoir. The proposed watermain would help provide water to and from the proposed reservoir and provide redundancy that will assist future maintenance or replacement of the existing watermain adjacent to the proposed reservoir as it reaches the end of its service life. The proposed watermain will also connect existing sections of piping that are currently dead ends and should improve overall water quality in dead ends of the system and provide an additional flow path for conveyance of peak demands and fire flows.

The full-build out of the industrial park along with other future community growth could increase the Town's Maximum Day Demand. The Atlantic Canada Guidelines for Drinking Water Supply Systems, 2004 state that water treatment facilities should be capable of supplying the maximum day demand. If this development were to move forward, the Town should consider the anticipated water demand generated by this business park along with other future flows when doing future assessments or replacements of well pumps and treatment infrastructure.

4.2 Sanitary Servicing

4.2.1 Sanitary Design Parameters

The design parameters for the Town of Middleton sanitary system are based on guidelines and standards typically applicable to similar communities in Atlantic Canada:

- Atlantic Canada Wastewater Guidelines Manual, 2006.

4.2.2 Sanitary Flow Estimation

CBCL conducted a high-level estimate of the sanitary flows to help provide context for sanitary sewer sizing for an industrial development on this size at full build-out. The estimated future daily sanitary flows for the proposed business park were determined based on a light industrial zoning flow allowance of 35 m3/hectare/day. The light industrial zoning flow allowance was derived from the Atlantic Canada Wastewater Guidelines Manual, 2006 which suggests a typical industrial flow allowance of 35 m3/hectare/day for light industry and 55 m3/hectare/day for heavy industry. Industrial flows can vary greatly depending on the

actual land users. The possible future sanitary flows of the business park at full build-out are summarized in Table 4-2.

Table 4-2 Summary of Estimated Sanitary Flows

Design Flow	Flow Rate
Average Dry Weather Flow (ADWF)	7.3 L/s (630 m^3/day)
Peak Dry Weather Flow (PDWF)	30.5 L/s
Peak Wet Weather Flow (PWWF)	34.3 L/s

A Harmon peaking factor was applied to the estimated average daily dry weather flow to estimate the peak dry weather flow. The peaking factor was determined based on a survey of businesses in the Park, that revealed an average employee occupancy or approximately 18 people per hectare.

Inflow and infiltration allowance was added to the sanitary Peak Dry Weather Flow (PDWF) to determine the Peak Wet Weather Flow (PWWF). Infiltration areas were assumed to include the entire development area. The infiltration rate used is 0.210 L/s per hectare which is the median of the range outlined within the Atlantic Canada Sewage Guidelines. Note that inflow and infiltration typically start to affect piping as it ages, and new infrastructure would be expected to have less inflow and infiltration than the allowance being used for these checks.

4.2.3 Proposed Sanitary Sewer

We anticipate that the Town would install a new sanitary sewer following the proposed new road alignments through the Business Park expansion and connect into the sanitary system at the intersection of Freemans Street and Veterans Lane to the south, and to Junction Road to the north. The proposed sanitary sewer would be approximately 1 km long (scenario one), or 3.1 km long (scenario two), with a diameter ranging from 200 to 250 mm.

The existing slope of the land and the proposed new road alignment from north to south will facilitate the conveyance of wastewater by gravity sewer towards Veterans Lane. The slope of this area is approximately 1.6% and the sewers are anticipated to follow the grade of the land. Manholes are anticipated to be spaced at a maximum of 100 m intervals to maintain access for maintenance in keeping with the rest of the Town. For the purposes of this report and cost estimate, we have assumed that the sanitary sewers will be 200 mm and 250 mm diameter. Allowances were made for sanitary manholes and individual sanitary services for each lot. The proposed sanitary sewer is anticipated to increase in size at approximately the halfway point of the proposed road to accommodate the increase in industrial flow from downstream users. Manning's equation was used to size the gravity sewers. The proposed downstream section of sewer is 250 mm diameter at 1.6% slope and has capacity for the anticipated sanitary flows at full-build-out as outlined in Table 4-2,

while the upstream sewer with a 200 mm diameter at 1.6% slope is anticipated to convey approximately 50% of the flows outlined in Table 4-2.

4.2.4 Existing Sanitary System

The expansion of the Business Park in this location will create additional sanitary flows that contribute to the existing downstream sanitary system. The sanitary infrastructure network map indicates that the additional sanitary flow could continue to the wastewater treatment plant via the existing sewers on Victoria Street. Alternatively, the flow could continue via the existing sewer on Freeman Street but would then flow into the existing sanitary pump station at the intersection of Freeman Street and Marshall Street and then continue to Victoria Street and to the wastewater treatment plant. It may be beneficial to avoid adding additional flow into the pump station, however this would need to be investigated further. CBCL has limited record drawings for the area, and we do not have sufficient details of the existing sewers and the pump station to assess their capacity.

The full build-out of the Business Park expansion along with other future community growth will increase loading on the wastewater treatment plant. The wastewater treatment plant performance is monitored and reported to the province. The plant was designed for an equivalent population of approximately 3,170 persons, and it is currently operating with a population of just over 1,800 persons. The plant is equipped with a swirl-flow pump station that contains two pairs of pumps; the first pair is sized for average day flows with approximate capacity of 4,000 m3/day each, while the second pair is sized for peak day flows with an approximate capacity of 12,000 m^3/day each. The average daily flow in the wastewater treatment plan in 2020 was reported to be approximately 2,250 m^3/day, with the highest daily flow reported to be 10,216 m^3/day. Therefore, the plant is currently operating at less than half of its designed flow capacity. There have been no persistent reported issues within the treatment plant regarding effluent quality. The proposed Business Park expansion is not anticipated to create flows that would exceed the capacity of the wastewater treatment plant, however the actual wastewater from potential industrial land users can vary greatly and each one should be checked before the town approves any potential industrial user.

4.3 Stormwater

4.3.1 Proposed Stormwater System

The proposed development's new roadway is anticipated to have open shoulders with ditching to manage stormwater. Stormwater would continue to flow into the existing ditch system along Veterans Lane.

The individual lots are anticipated to be private sites that are designed and managed by the individual industrial users. We recommend that the Town require developers to include stormwater management measures such as on-site storage, which could include perimeter ditching and rain gardens to maintain pre and post development flows. The cost of these

stormwater measures on individual lots are not anticipated to be attributed to the Town. The Town can ensure this is managed through development agreements.

Chapter 5 Cost Evaluation

A high-level financial benefit comparative analysis was carried out, examining the expected financial revenue of proceeding with the proposed Business Park expansion scenarios presented above, in comparison to Status Quo development along Brooklyn Road, with regards to tax revenues accrued from development.

5.1 Tax Assessment

The current property tax regimen was reviewed in the Town of Middleton and Annapolis County. As summarized in Table 5-1, the Town of Middleton currently levies a commercial tax rate of $4.61 / $100 of assessed value, while Annapolis County levies a total tax rate of $2.0704 per $100 of assessed value.

Table 5-1 Commercial Property Tax Rates

	Commercial	Farm*	Sewer	Fire	Hydrant	Total Rate
Middleton	4.27	3.14	0.21	0	0.13	4.61
Annapolis County	1.8	0	0	0.0611	0.2093	2.0704
		* per acre				

This analysis began with a review of the assessment of all properties along Brooklyn Road. As summarized in Table 5-2, of the 19 commercial properties fronting Brooklyn Road, 8 properties are occupied with a total assessment of $1,445,000 and an average assessment of $90,660 per acre.

An additional 11 vacant properties have a combined assessment of $401,800 and an average assessment of $7,169 per acre (see Table 5-3).

Table 5-2 Brooklyn Road Occupied Property Assessment

Admin	No.	PID	Assessment	Area (ac)	Assess/acre	Tax	Tax Levy	50% Share
Ann.Co.	1036	5303110	$ 322,100	1	$ 322,100	2.0704	$ 6,668.76	$ 3,334.38
Ann.Co.	1094	5083357	$ 177,600	12	$ 14,800	2.0704	$ 3,677.03	$ 1,838.52
Ann.Co.	1051	5007455	$ 280,900	5	$ 56,180	2.0704	$ 5,815.75	$ 2,907.88
Ann.Co.	1163	5199583	$ 199,600	2	$ 99,800	2.0704	$ 4,132.52	$ 2,066.26
Midd.	70	5083290	$ 72,500	2	$ 36,250	4.61	$ 3,342.25	$ 1,671.13
Midd.	3	5083191	$ 148,300	2	$ 74,150	4.61	$ 6,836.63	$ 3,418.32
Midd.	4	5083183	$ 123,400	2	$ 61,700	4.61	$ 5,688.74	$ 2,844.37
Midd.	56	5077482	$ 120,600	2	$ 60,300	4.61	$ 5,559.66	$ 2,779.83
Sub-Total			**$ 1,445,000**	**28**			**$ 41,721**	**$ 20,861**
Average					**$ 90,660**			

Table 5-3 Brooklyn Road Vacant Property Assessment

Admin	No.	PID	Assessment	Area (ac)	Assess/acre	Tax	Tax Levy	50% Share
Ann.Co.	LOT 3	5309026	$ 44,800	2	$ 22,400	2.0704	$ 927.54	$ 463.77
Ann.Co.	1052	5083324	$ 104,200	11	$ 9,473	2.0704	$ 2,157.36	$ 1,078.68
Ann.Co.	1076	5083332	$ 53,000	12	$ 4,417	2.0704	$ 1,097.31	$ 548.66
Ann.Co.	1150	5305230	$ 40,000	37	$ 1,081	2.0704	$ 828.16	$ 414.08
Ann.Co.		5077730	$ 16,500	9	$ 1,833	2.0704	$ 341.62	$ 170.81
Ann.Co.		5210018	$ 5,000	8	$ 625	2.0704	$ 103.52	$ 51.76
Ann.Co.	LOT 1&2	5031810	$ 3,200	6	$ 533	2.0704	$ 66.25	$ 33.13
Ann.Co.		5031810	$ 4,600	8	$ 575	2.0704	$ 95.24	$ 47.62
Ann.Co.	LOT 2	5083365	$ 56,800	53	$ 1,072	2.0704	$ 1,175.99	$ 587.99
Midd.	LOT 11	5077466	$ 35,500	2	$ 17,750	4.61	$ 1,636.55	$ 818.28
Midd.	LOT 10	5009774	$ 38,200	2	$ 19,100	4.61	$ 1,761.02	$ 880.51
Sub-Total			**$ 401,800**	**150**			**$ 10,191**	**$ 5,095**
Average					**$ 7,169**			

As presented above, with a total assessment of $1,846,800, the 19 commercial properties yield approximately $51,912 in taxes per annum. According to the tax sharing agreement between the Town of Middleton and Annapolis County, this results in a yearly revenue of $25,956 for the Town of Middleton.

Within the Business Park, 22 occupied industrial properties currently show a total assessment of $4,167,600 and an average assessment of approximately $116,919 per acre, as summarized in Table 5-4.

Table 5-4 Business Park Assessment

Civic/Lot #	Area (Ha)	Area (ac)	Assessment	Assess/acre
70 BROOKLYN ST. - LOT 23A	0.7	1.7	$ 72,500	$ 43,155
3 FREEMAN ST. - LOT 23B	0.7	1.7	$ 148,300	$ 88,274
4 FREEMAN ST. - LOT 12	0.8	2.0	$ 123,400	$ 61,393
6 FREEMAN ST. - LOT 13A	0.7	1.8	$ 86,500	$ 48,870
9 FREEMAN ST. - LOT 25	0.2	0.5	$ 199,000	$ 382,692
10 FREEMAN ST. - LOT 14B	2.0	4.8	$ 1,294,000	$ 267,355
11 FREEMAN ST. - LOT 20AB	0.4	1.0	$ 255,600	$ 245,769
15 FREEMAN ST. - LOT 20C	0.7	1.8	$ 463,200	$ 257,333
4 MARSHALL DR. - LOT 1	0.3	0.7	$ 19,400	$ 28,955
5 MARSHALL DR. - LOT 4A	0.8	2.0	$ 156,100	$ 77,662
MARSHALL DR. - LOT 3	0.4	0.9	$ 6,500	$ 7,471
143 MARSHALL ST. - LOT 15	1.0	2.5	$ 427,600	$ 173,821
182 MARSHALL ST. - LOT X1	0.4	0.9	$ 42,900	$ 48,202
185 MARSHALL ST. - LOT 1D	0.5	1.3	$ 117,200	$ 88,788
193 MARSHALL ST. - LOT A3	0.3	0.8	$ 240,000	$ 315,789
194 MARSHALL ST. - LOT 4	0.2	0.6	$ 4,200	$ 7,500
194 MARSHALL ST. - LOT B	0.6	1.5	$ 85,500	$ 57,770
197 MARSHALL ST. - LOT A	0.1	0.3	$ 37,500	$ 117,188
14 VETERANS LN. - LOT 24	1.9	4.8	$ 378,000	$ 79,245
14 VETERANS LANE - LOT 22A	0.2	0.4	$ 18,300	$ 41,591
20 VETERANS LN. - LOT 19	1.3	3.2	$ 23,900	$ 7,492
24 VETERANS LN. - LOT 18	1.3	3.3	$ 418,000	$ 125,904
TOTAL	**15.5**	**38.4**	**$ 4,617,600**	
AVERAGE	**0.7**	**1.7**		**$ 116,919**

The Town is therefore currently collecting a total of $142,875 ($25,959 + $116,919) a year in tax revenue from the industrial park and surrounding area.

5.2 Status Quo

Without any additional development interventions beyond the extension of water and sanitary services, the Town and the County may expect the eventual development of the remaining vacant commercial properties along Brooklyn Road.

A status quo analysis therefore presents their potential full buildout assessment and resulting tax levy, at the average assessment ratio of $90,660 per acre calculated from the occupied properties along Brooklyn Road. As shown on Table 5-5, this would result in a total assessment increase of approximately $9,200,000 and a yearly tax levy of $217,000 which $108,500 would be remitted to the Town of Middleton, as per the 50% tax revenue sharing agreement in place with Annapolis County.

Table 5-5 Status Quo - – Potential Tax Assessment

Lot	PID	Admin	Area (Ha)	Area (ac)	Developable Area (ac)*	Assess/Acre	Possible Assessment	Tax Rate	Tax Levy	50% Share
	5007463	Ann.	2.3	6	6	$ 90,660	$ 508,603	2.0704	$ 10,530	$ 5,265
LOT 10	5009774	Midd.	0.8	2	2	$ 90,660	$ 181,320	4.61	$ 8,359	$ 4,179
LOT 1&2	5031810	Ann.	3.3	8	8	$ 90,660	$ 739,786	2.0704	$ 15,317	$ 7,658
LOT 11	5077466	Midd.	0.9	2	2	$ 90,660	$ 200,177	4.61	$ 9,228	$ 4,614
	5077490	Midd.	0.4	1	1	$ 90,660	$ 86,399	4.61	$ 3,983	$ 1,991
	5077508	Midd.	2.0	5	5	$ 90,660	$ 440,698	4.61	$ 20,316	$ 10,158
	5077516	Midd.	0.6	2	2	$ 90,660	$ 136,987	4.61	$ 6,315	$ 3,158
	5077730	Ann.	3.7	9	5	$ 90,660	$ 411,687	2.0704	$ 8,524	$ 4,262
1052	5083324	Ann.	3.1	8	6	$ 90,660	$ 523,697	2.0704	$ 10,843	$ 5,421
1076	5083332	Ann.	2.2	6	5	$ 90,660	$ 449,746	2.0704	$ 9,312	$ 4,656
	5083357	Ann.	4.9	12	3	$ 90,660	$ 276,490	2.0704	$ 5,724	$ 2,862
LOT 2	5083365	Ann.	21.3	53	18	$ 90,660	$ 1,590,056	2.0704	$ 32,921	$ 16,460
	5174149	Ann.	4.0	10	9	$ 90,660	$ 783,302	2.0704	$ 16,217	$ 8,109
	5174156	Ann.	3.6	9	9	$ 90,660	$ 783,302	2.0704	$ 16,217	$ 8,109
	5210018	Ann.	3.7	9	9	$ 90,660	$ 835,704	2.0704	$ 17,302	$ 8,651
1150	5305230	Ann.	14.9	37	12	$ 90,660	$ 1,110,373	2.0704	$ 22,989	$ 11,495
LOT 3	5309026	Ann.	0.6	2	2	$ 90,660	$ 139,254	2.0704	$ 2,883	$ 1,442
	Sub-Total		**72.3**	**178.7**	**101.5**		**$ 9,197,582**		**$ 216,980**	**$ 108,490**
	*** Area estimated based on review of watercourses and proximity to Brooklyn Road**									

Under this option, the Town could expect an additional taxation of $108,490 over the current $142,875. We note that under this scenario, there are several large properties, whose market absorption may be more difficult. Full buildout of these properties may therefore extend over a long period.

5.3 Scenario One

The 15 conceptual lots laid out for the Business Park expansion within the Town limits range in size from 1.2 acres to 4.0 acres. As summarized in Table 5-6, applying the average assessment value of $116,919 per acre calculated for current Business Park properties in the Town of Middleton, yields a total assessment of approximately $4,650,000. This is the revenue that would be realized should all 15 lots be sold at current assessment value. We note that recent sales prices for undeveloped greenfield lots in this area have reached $8,450 per acre, compared to assessments of ranging from between $550-$1,500 per acre.

At current assessments, the lots issued of the two properties considered in the Town of Middleton provide a total tax levy of approximately $2,650 per year (as summarized in Table 5-6). Applying the Town of Middleton commercial tax rate to the potential full buildout assessments estimated for the 15 new lots would yield a yearly revenue of approximately $214,600 (see Table 5-7).

Table 5-6 Scenario One – Current Tax Assessment

Number	PID	Admin	Area (Ha)	Area (ac)	Current Assess/Acre	Current Assessment	Current Tax Rate	Current Tax Levy
1	5082854	Midd.	0.9	2.2	$ 642	$ 1,410	5.27	$ 74
2	5082854	Midd.	0.5	1.2	$ 642	$ 746	5.27	$ 39
3	5082854	Midd.	1.1	2.8	$ 642	$ 1,793	5.27	$ 95
4	5082854	Midd.	0.9	2.2	$ 642	$ 1,436	5.27	$ 76
5	5082854	Midd.	0.7	1.7	$ 642	$ 1,115	5.27	$ 59
6	5031836	Midd.	0.7	1.8	$ 1,472	$ 2,588	5.27	$ 136
7	5031836	Midd.	1.3	3.2	$ 1,472	$ 4,672	5.27	$ 246
8	5031836	Midd.	1.3	3.3	$ 1,472	$ 4,908	5.27	$ 259
9	5031836	Midd.	1.3	3.2	$ 1,472	$ 4,694	5.27	$ 247
10	5031836	Midd.	1.4	3.3	$ 1,472	$ 4,918	5.27	$ 259
11	5031836	Midd.	1.3	3.2	$ 1,472	$ 4,731	5.27	$ 249
12	5031836	Midd.	0.9	2.3	$ 1,472	$ 3,336	5.27	$ 176
13	5031836	Midd.	0.9	2.3	$ 1,472	$ 3,340	5.27	$ 176
14	5031836	Midd.	1.3	3.1	$ 1,472	$ 4,546	5.27	$ 240
15	5031836	Midd.	1.6	4.0	$ 1,472	$ 5,942	5.27	$ 313
Sub-Total			**16.1**	**39.8**				**$ 2,644**

Table 5-7 Scenario One – Potential Tax Assessment

Number	PID	Admin	Area (Ha)	Area (ac)	Assess/Acre	Possible Assessment	Tax Rate	Tax Levy
1	5082854	Midd.	0.9	2.2	$ 116,919	$ 256,988	4.61	$ 11,847
2	5082854	Midd.	0.5	1.2	$ 116,919	$ 135,860	4.61	$ 6,263
3	5082854	Midd.	1.1	2.8	$ 116,919	$ 326,789	4.61	$ 15,065
4	5082854	Midd.	0.9	2.2	$ 116,919	$ 261,665	4.61	$ 12,063
5	5082854	Midd.	0.7	1.7	$ 116,919	$ 203,205	4.61	$ 9,368
6	5031836	Midd.	0.7	1.8	$ 116,919	$ 205,661	4.61	$ 9,481
7	5031836	Midd.	1.3	3.2	$ 116,919	$ 371,218	4.61	$ 17,113
8	5031836	Midd.	1.3	3.3	$ 116,919	$ 389,925	4.61	$ 17,976
9	5031836	Midd.	1.3	3.2	$ 116,919	$ 372,972	4.61	$ 17,194
10	5031836	Midd.	1.4	3.3	$ 116,919	$ 390,744	4.61	$ 18,013
11	5031836	Midd.	1.3	3.2	$ 116,919	$ 375,895	4.61	$ 17,329
12	5031836	Midd.	0.9	2.3	$ 116,919	$ 265,056	4.61	$ 12,219
13	5031836	Midd.	0.9	2.3	$ 116,919	$ 265,406	4.61	$ 12,235
14	5031836	Midd.	1.3	3.1	$ 116,919	$ 361,163	4.61	$ 16,650
15	5031836	Midd.	1.6	4.0	$ 116,919	$ 472,119	4.61	$ 21,765
Sub-Total			**16.1**	**39.8**		**$ 4,654,667**		**$ 214,580**

Under this option the Town would levy a total tax of an additional $214,580 per annum over the current levy of $142,875.

5.4 Scenario Two

Under Scenario Two, we consider the more conservative assessment of $90,660 per acre observed in the occupied properties on Brooklyn Road. Following a positive development trend, these properties may reach a combined assessment of approximately $12,000,000. This would yield $274,500 in taxes, of which $137,250 would return to the Town (see Table 5-8).

Table 5-8: Scenario Two – Potential Tax Assessment

Lot	PID	Admin	Area (Ha)	Area (ac)	Assess/Acre	Possible Assessment	Tax Rate	Tax Levy	50% Share
1	5007463	Ann.	2.2	5.5	$ 90,660	$ 499,174	2.0704	$ 10,335	$ 5,167
2	5031810	Ann.	1.0	2.4	$ 90,660	$ 218,400	2.0704	$ 4,522	$ 2,261
3	5174149	Ann.	1.3	3.1	$ 90,660	$ 282,043	2.0704	$ 5,839	$ 2,920
4	5174156	Ann.	3.1	7.6	$ 90,660	$ 691,101	2.0704	$ 14,309	$ 7,154
5	5031810	Ann.	2.1	5.1	$ 90,660	$ 461,822	2.0704	$ 9,562	$ 4,781
6	5174149	Ann.	2.4	6.0	$ 90,660	$ 543,416	2.0704	$ 11,251	$ 5,625
7	5083365	Ann.	0.9	2.2	$ 90,660	$ 201,719	2.0704	$ 4,176	$ 2,088
8	5083365	Ann.	1.6	3.9	$ 90,660	$ 350,764	2.0704	$ 7,262	$ 3,631
9	5083365	Ann.	5.0	12.3	$ 90,660	$ 1,114,665	2.0704	$ 23,078	$ 11,539
10	5083365	Ann.	5.1	12.6	$ 90,660	$ 1,146,577	2.0704	$ 23,739	$ 11,869
11	5083365	Ann.	5.9	14.7	$ 90,660	$ 1,329,348	2.0704	$ 27,523	$ 13,761
12	5309026	Ann.	0.6	1.5	$ 90,660	$ 139,254	2.0704	$ 2,883	$ 1,442
13	5083324	Ann.	2.1	5.3	$ 90,660	$ 476,509	2.0704	$ 9,866	$ 4,933
14	5083332	Ann.	2.0	4.9	$ 90,660	$ 446,863	2.0704	$ 9,252	$ 4,626
15	5083357	Ann.	2.9	7.2	$ 90,660	$ 648,582	2.0704	$ 13,428	$ 6,714
16	5305230	Ann.	3.6	8.9	$ 90,660	$ 809,412	2.0704	$ 16,758	$ 8,379
17	5077730	Ann.	3.0	7.3	$ 90,660	$ 662,634	2.0704	$ 13,719	$ 6,860
18	5077730	Ann.	3.7	9.1	$ 90,660	$ 821,108	2.0704	$ 17,000	$ 8,500
19	5077490	Midd.	0.4	1.0	$ 90,660	$ 86,399	4.61	$ 3,983	$ 1,991
20	5077508	Midd.	2.0	4.9	$ 90,660	$ 440,789	4.61	$ 20,320	$ 10,160
21	5077516	Midd.	0.6	1.5	$ 90,660	$ 136,987	4.61	$ 6,315	$ 3,158
22	5077466	Midd.	0.9	2.2	$ 90,660	$ 200,177	4.61	$ 9,228	$ 4,614
23	5009774	Midd.	1.0	2.4	$ 90,660	$ 219,941	4.61	$ 10,139	$ 5,070
Sub-Total			**53.2**	**131.6**		**$ 11,927,683**		**$ 274,487**	**$ 137,244**

Under this option, the Town may levy an additional $137,244 over the current $142,875 levied on the area.

5.5 Opinion of Probable Costs

This section provides a Class D cost estimate for the Status Quo and the two Development Scenarios. Please note that any opinions of probable cost are presented based on experience, qualifications, and best judgement. They have been prepared in accordance with acceptable principles and practices. Sudden market trends, non-competitive bidding situations, unforeseen labour and material adjustments, and the like are beyond the control of CBCL, and as such, we cannot warrant or guarantee that actual costs will not vary significantly from the opinion provided. These costs are bases on comparable projects that were tendered in 2022.

5.5.1 Status Quo

The opinion of probable cost (Class D) for the servicing of the status quo is expected to be $1,283,000 excluding HST. This includes the roadwork, landscaping, environmental protection, as well as the new water, sewer, and drainage infrastructure for the service extension up Brooklyn Road. The cost estimate for the project is summarized in Table **5-9** below.

Table 5-9: Status Quo Scenario Summary of Opinion of Probable Cost

Description	Price
Land Purchase Cost	$ 0
Watermain, Valves, Air Release Valve Chamber & Services Allowance	$ 768,000
Sanitary Gravity Pipe, Manholes & Services Allowance	$ 87,000
Roadwork & Reinstatement	$ 107,000
Environmental Protection	$ 9,000
Design Development Allowance (20%)	$ 195,000
Construction Contingency (10%)	$ 117,000
Total Costs (excluding HST)	**$ 1,283,000**

5.5.2 Scenario One

The opinion of probable cost (Class D) for the servicing of the new Business Park expansion (scenario one) is expected to be $3,223,000, excluding HST. This includes the earthworks, roadwork, landscaping, environmental protection, as well as the new water, sewer, and drainage infrastructure to connect the new lots into the existing network. The cost estimate for the project has been updated based on the proposed concept plans developed at this stage of the project. The cost estimate for the project is summarized in Table **5**-**10** below.

Table 5-10: Scenario One Summary of Opinion of Probable Cost

Description	Price
Land Purchase Cost	$ 354,000
Earthworks	$ 102,000
Watermain, Valves, Air Release Valve Chamber & Services Allowance	$ 892,000
Sanitary Gravity Pipe, Manholes & Services Allowance	$ 529,000
Roadwork & Reinstatement	$ 893,000
Environmental Protection	$ 25,000
Design Development Allowance (20%)	$ 489,000
Construction Contingency (10%)	$ 293,000
Total Costs (excluding HST)	**$ 3,577,000**

5.5.3 Scenario Two

The opinion of probable cost (Class D) for the servicing of the new Business Park expansion (scenario two) is expected to be $10,923,000, excluding HST. This includes the earthworks, roadwork, landscaping, environmental protection, as well as the new water, sewer, and drainage infrastructure to connect the new lots into the existing network. The cost estimate for the project has been updated based on the proposed concept plans developed at this stage of the project. The cost estimate for the project is summarized in Table **5-11** below.

Table 5-11: Scenario Two Summary of Opinion of Probable Cost

Description	Price
Land Purchase Cost	$ 1,111,724
Earthworks	$ 331,000
Watermain, Valves, Air Release Valve Chamber & Services Allowance	$ 3,293,000
Sanitary Gravity Pipe, Manholes & Services Allowance	$ 1,649,000
Roadwork & Reinstatement	$ 2,923,000
Environmental Protection	$ 79,000
Design Development Allowance (20%)	$ 1,655,000
Construction Contingency (10%)	$ 993,000
Total Costs (excluding HST)	**$ 12,034,724**

Chapter 6 Summary

In the areas adjacent to the existing Business Park, two development scenarios were assessed, in terms of potential tax revenue generation and costs for the road, water, storm, and sanitary sewer servicing requirements for the proposed sites. These were compared against a status quo "do nothing" scenario, whereby commercial development would occur along Brooklyn Road with minimal investment by the Town and the County.

A high-level financial analysis suggests that under the Status Quo scenario, the Town could see an annual tax revenue increase of approximately $108,490. By comparison, upon full buildout, development Scenario One could lead to an annual tax revenue of $214,580, while Scenario Two could generate $137,244 annual revenue for the Town.

These possible revenue streams are provided in the context of a Class D Opinion of Probable Costs for the acquisition of the lands in each of Scenario 1 and Scenario 2, and the construction of road infrastructure and servicing (see Table 6-1).

Table 6-1 Summary Analysis

Scenario	Future Tax Revenue Potential	Land Acquisition Costs	Infrastructure Costs
Status Quo	$108,490		$1,282,600
1 - Town of Middleton	$214,580	$336,403	$3,223,000
2 – Brooklyn Road	$137,244	$ 1,111,724	$10,923,000

As summarized, the "Do Nothing" Status Quo scenario presents the lowest costs, with lowest return in terms of taxation revenue. Consisting of several large properties, this development scenario is subject to viable market absorption rates and the difficulty of attracting large developments.

Scenario 1, expansion of the Business Park within the Town of Middleton, presents costs of approximately $3,550,000 for an annual tax revenue of approximately $214,500. The risk of such development would be the Town's, with all revenues captured by the Town.

Lastly, Scenario 2 presents expansion of Business Park activities along Brooklyn Road, with significant extension of road infrastructure and servicing to allow for a finer parcel fabric, marketable to smaller developers. This option would carry costs of over $12,000,000, with returns to the Town an amount of approximately $137,250 in yearly tax revenue. We note that such development would occur outside of the current agreement between the Town and Annapolis County, and may present cost-sharing potential between the municipalities, along with sharing of the risks.

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