Stittsville Lands (West)

Official Plan Amendment – Urban and Village Boundary Expansion

Stantec

Prepared for:
Claridge Homes and Marchurst Developments

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Revision Schedule

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Executive Summary

Stantec has been retained by Claridge Homes and Marchurst Developments Group Inc. to prepare this Planning Rationale as part of an application for an Official Plan Amendment for their properties ("subject lands") located in Ward 21 Rideau-Jock to be included in the City of Ottawa Urban Boundary as *Category 1 – Future Neighbourhood Overlay* Urban Expansion Area. Should this application be approved, a future Community Design Plan and/or Secondary Plan, as outlined in the *Official Plan Annex 4: Local Plan Framework* and *Section 12 – Local Plan,* will be needed to determine area-specific policies and guidelines.

This rationale responds to significant changes in Provincial legislation and the Provincial Planning Statement since the adoption of the City of Ottawa Official Plan to permit private applications for changes to urban boundaries, and to address more stringent Provincial requirements to maintain a minimum supply of designated and available land for future housing need based on the Province of Ontario's mandated use of Ministry of Finance population projections.

Given the notable changes to the Provincial Planning Statement (2024) and the requirement to rely on Ministry of Finance population forecasts to accommodate growth for a 15-year land supply, amongst others, are critical elements which drive the request for the proposed amendment to the Official Plan. The proximity of the lands to the existing urban boundary and access to infrastructure services support their consideration as a viable option for future development.

This Planning Rationale demonstrates the proposed Official Plan Amendment (OPA) for a Settlement Area Boundary Expansion is consistent with the Provincial Planning Statement (2024), conforms to the general intent and purpose of the City of Ottawa Official Plan (2022), and takes direction from recent legislative changes to the Ontario Planning Act. Further, the rationale discusses how this expansion will support a well-planned extension of municipal services and infrastructure from the existing Stittsville community to develop efficiently and logically. Moreover, this expansion aligns with the City's broader planning objectives, including the creation of complete communities and the advancement of 15-minute neighbourhood principles.

1 Introduction

Stantec Consulting Ltd. is retained by Claridge Homes and Marchurst Developments Group Inc. (the "applicants") to prepare and submit an Urban and Village Boundary Expansion (UVBE) Official Plan Amendment (OPA) application that seeks to expand the City of Ottawa's Urban Boundary to include the Stittsville West Lands ("subject lands") that lie to the north and south of Fernbank Road. The combined area of the subject lands is approximately 111.98 hectares lying immediately to the west of the City of Ottawa's Urban Boundary (see **Figure 1**).

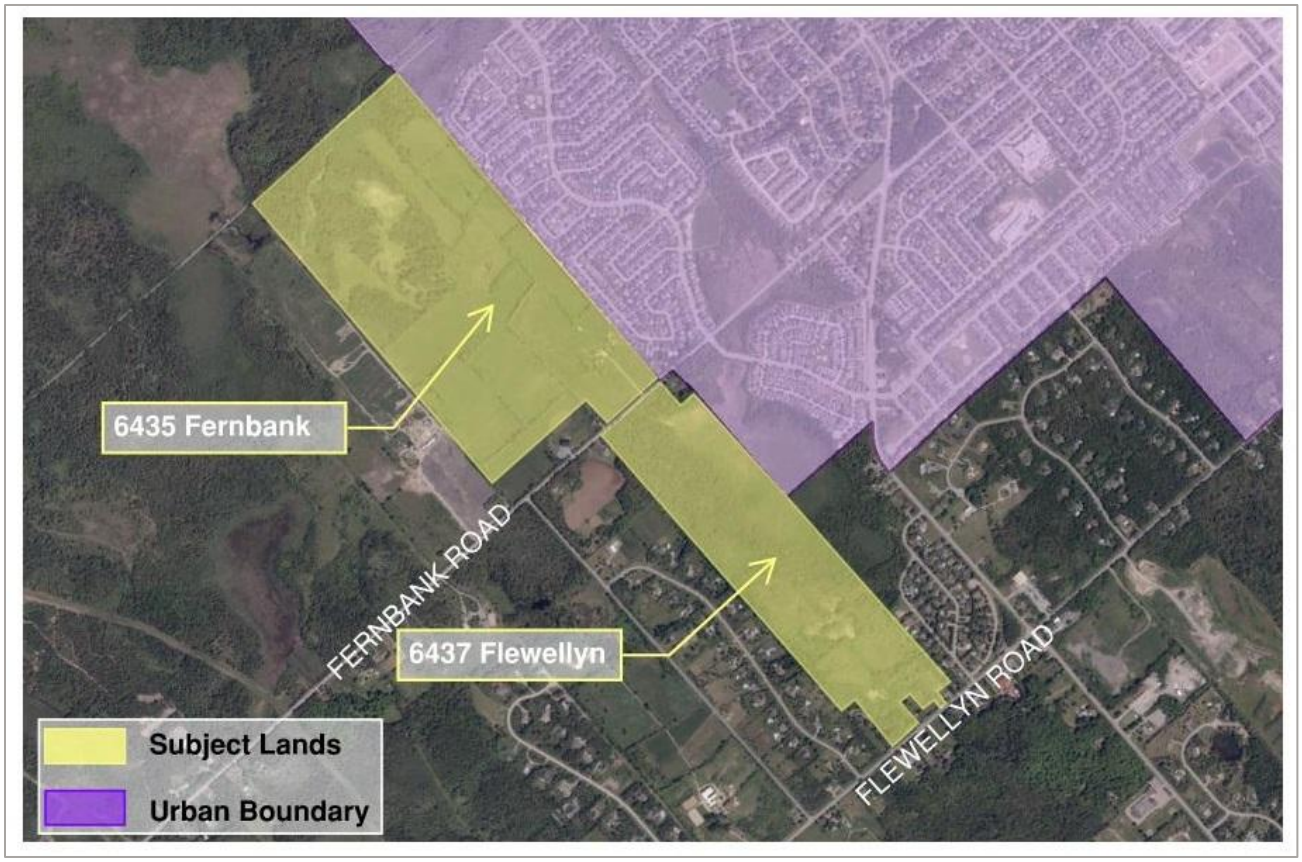

Figure 1. Location of the Subject Lands

The new Provincial Planning Statement (adopted in 2024) permits private applications to expand the urban boundary eliminating the requirement under the previous Provincial Policy Statement (2020) that expansions could only occur through a municipal comprehensive review. This change is one of several legislative measures the province has introduced to help address the ongoing housing supply crisis across Ontario. In response to the updated legislation, the City of Ottawa released a new Urban and Village Boundary Expansion (UVBE) application process in October 2024.

The applicants propose to develop the subject lands into a vibrant community on full municipal services. An amendment to the City of Ottawa Official Plan is required to designate the subject lands appropriately while understanding that a subsequent Secondary Plan process will be required to provide specific policies for guiding the eventual redevelopment of the lands.

This Planning Rationale has been prepared in support of the proposed Urban and Village Boundary Expansion (UVBE) Official Plan Amendment to demonstrate that development of the subject lands is appropriate and promotes their efficient and desirable use

1.1 Overview of the Applicants

The subject lands consist of two large parcels under separate ownership located immediately west of the existing Stittsville community (see **Figure 2**).

Table 1 identifies the registered landowners and their share of the subject lands.

Table 1: Land ownership breakdown

Landowner	Parcel Address	Area per landowner (acre / hectare)	Area Percentage
Claridge Homes	6435 Fernbank Road	177.61 / 71.88	64%
Marchurst Development Group Inc.	6437 Flewellyn Road	99.08 / 40.10	36%
Total		**276.69 ac / 111.98 ha**	**100%**

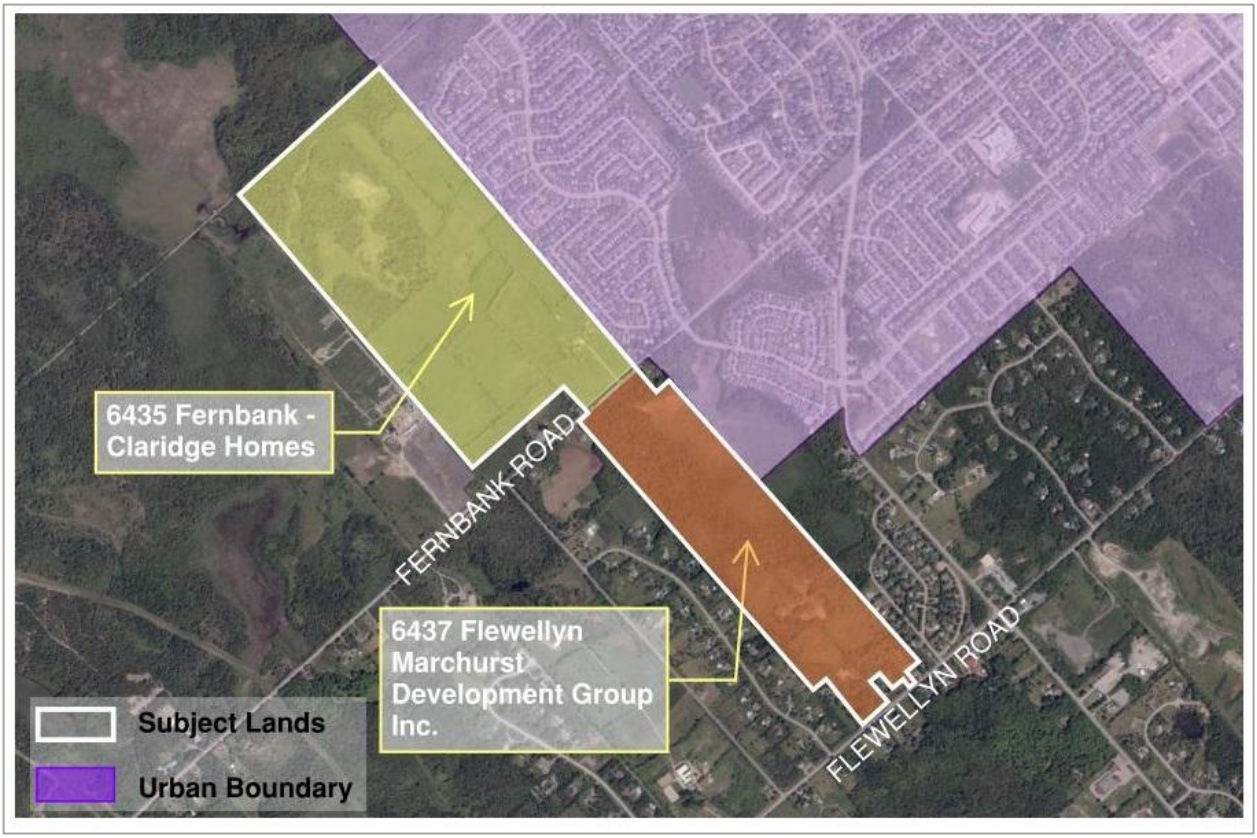

Figure 2. Ownership breakdown of the Subject Lands

1.2 Site Context

The subject lands lie immediately west of the existing community of Stittsville and are separated from each other by Fernbank Road. The subject lands have a total area of 111.98 hectares (or 276.69 acres) The north parcel, being 6435 Fernbank Road is owned by Claridge Homes and has a 209.91 m frontage along Fernbank Road. The south parcel, being 6437 Flewellyn Road is owned by Marchurst Development Group Inc. has 20.12 m of frontage on Flewellyn Road. Both parcels are underdeveloped and naturalized with vegetation.

The Stittsville community is one of the fastest growing communities in Ottawa comprising a mix of housing types, parks, commercial retail, and institutional uses. Further east, Stittsville borders the residential communities of Glen Cairn and Katimavik-Hazeldean. The Greenbelt separates these communities from Barrhaven in southwest Ottawa. **Figure 3** shows the subject lands within the broader city context.

1.3 Surrounding Context

Stittsville has a rich history dating back to the mid-1800's and was originally within the former Goulbourn Township. Water and sewer services were extended in the 1970's which became a catalyst to attracting significant growth in the following decades. Community recreational amenities such as the Cardel Rec Centre and Library were built in the early 2000's. The community saw a massive growth in residential development in the last decade, which led to increased diversity in housing types and an expansion of community services. The community continues to attract residents due to its services, access to parks and open spaces, educational opportunities, and diversity of housing types. At present the population of Stittsville is approximately 52,820 residents. Nearly half or approximately 44% of all the homes in the Stittsville community have been built since 2016[1].

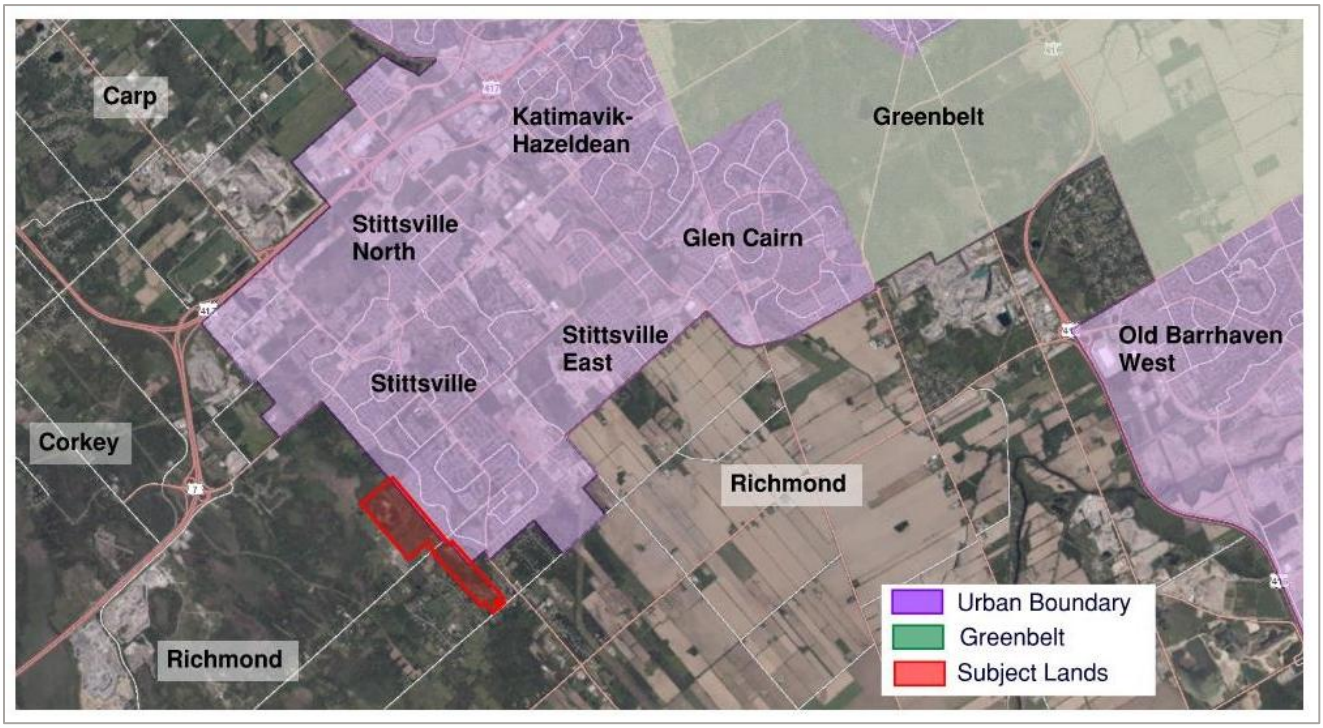

Figure 3. The subject lands within the broader City of Ottawa context

[1] NOTEBOOK: Population growth in Stittsville over the last 50 years - Glen Gower | Councillor / Conseiller | Stittsville

The following uses and features surround the subject lands:

North	Lands immediately north are naturalized with forest and wetland.
East	The subject lands border the existing community of Stittsville on the east. The community is characterized by lower density suburban development. Residential growth continues in this area with new and developing subdivisions signaling the location as a desirable community in Ottawa. A portion of the lands also border the village of Richmond on the east. The majority of the uses in this direction consist of single-family homes on large lots and private services.
South	To the south is Flewellyn Road followed by large rural residential lots. Agricultural uses are found further south.
West	An estate lot subdivision is located immediately west of the south lands, whereas general rural uses are located west of the north lands.

1.4 Connectivity

ROAD

Schedule C9-Rural Road Network of the Official Plan identifies Fernbank Road and Flewellyn Road as exiting collector roads.

Collector streets (which include major collectors and collectors) are the principal streets in urban and village neighbourhoods and are used by residents, delivery and commercial vehicles, transit and school buses, and people walking and cycling.

TRANSIT

The subject lands are not currently serviced by the city's transit network, however, the closest intersection of Fernbank Road and Stittsville Main Street (approximately 1.0 km east of the site) is serviced by OC Transpo with limited stops (**Figure 4**). Transit maybe extended to the subject lands easily as the lands are in proximity to the city's existing transit network. Given proximity of the existing transit network it is anticipated extension of the network to service the subject ands would be feasible.

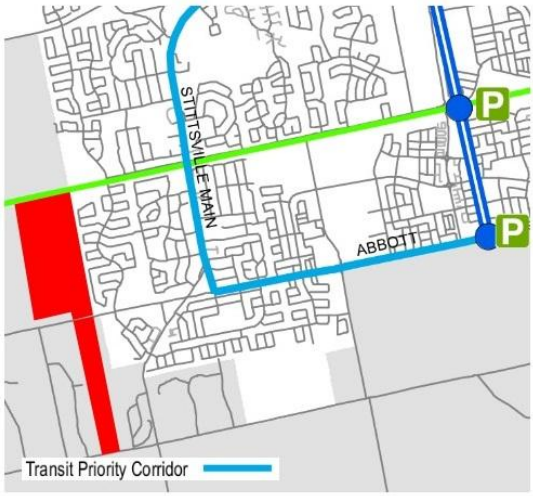

Figure 4. shows an excerpt from Schedule C12- Transit Network showing proximity to existing transit.

1.5 Natural Heritage System

The City of Ottawa Official Plan Schedule C11-A Natural Heritage System (West) shows that the subject lands include Natural Heritage Features Overlay and a watercourse. The Goulburn Wetland Complex system is located to the northwest of the subject lands. The north half of the north parcel (6435 Fernbank Road) contains wetlands and is part of the Goulburn Wetland Complex, which is Provincially Significant Wetland (PSW). The presence of watercourses and a provincially significant wetland system pose significant environmental constraints.

The south parcel includes a Natural Heritage Features Overlay (see **Figure 5**). The subject lands border areas of Urban Natural Feature immediately to the east, which are defined as woodlands, wetlands and vegetated ravines throughout the urban area, protected and managed primarily for their environmental values.

Stantec prepared a Natural Heritage Screening assessment to identify Natural Heritage Feature Area (NHFA) within and adjacent to the subject lands. The screening exercise shows there are no Areas of Natural and Scientific Interest (ANSIs), fish nurseries, linkages and wildlife corridors, significant woodlands, or significant valleylands identified within the Study Area during the desktop review. There are lands within the property boundaries outside of the wetland complex. Further discussion is included in Section 4 of this report.

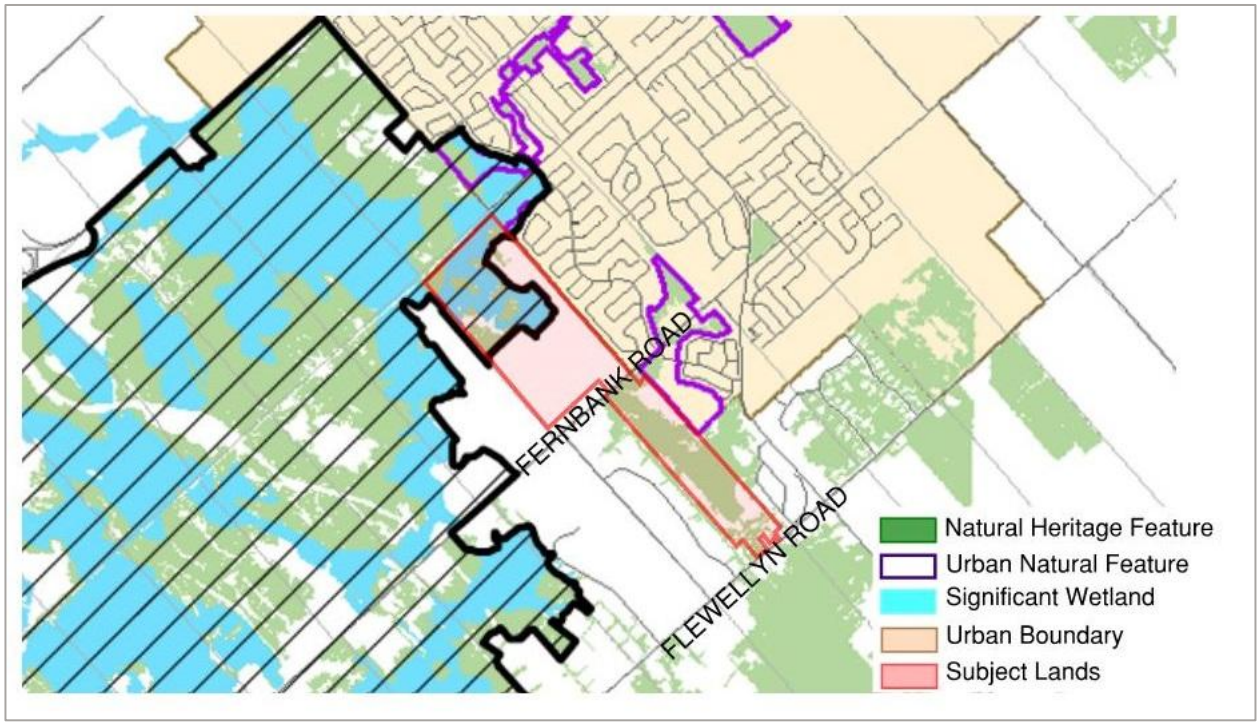

Figure 5. The subject lands seen on Schedule C11-A Natural Heritage System (West)

1.6 Requested Amendment

The applicants are proposing an amendment to the City of Ottawa Official Plan (the "OP") to redesignate the subject lands as a Category 1 – Future Neighbourhood Overlay Urban Expansion Area on Schedule C17 for the purpose of adding them to the City's Urban Boundary (urban settlement area).

Section 2.2 of this report discusses the City and the Province's previous considerations of this land for inclusion within the Urban Boundary.

The proposed OPA will facilitate future development of the lands on full municipal services ensuring that adequate supply of land exists to accommodate a minimum of 15-years supply in accordance with the PPS. The *Category 1 - Future Neighbourhood Overlay* redesignation will allow the subject lands to be studied in greater detail at a future date through a Community Design and/or Secondary Plan process.

The PPS 2024 requires that planning authorities use population forecasts from the Ministry of Finance (MoF) and ensure that sufficient land be made available to accommodate an appropriate range and mix of land uses for a time horizon of at least 20 years but not more than 30 years. The PPS still requires that planning authorities maintain at all times the ability to accommodate residential growth for a minimum of 15 years through lands which are designated and available for residential development. As noted throughout this report, a supporting land needs study prepared by Parcel Economics demonstrates the City's current growth management framework does not currently satisfy this requirement of the PPS, and that as time passes, land need will increase to meet that test.

1.7 Details of the Proposal

A conceptual development scenario has been developed to demonstrate the type of future growth potential envisioned for the subject lands which would consist of a mix of detached homes, traditional townhouses, back-to-back townhouses, and stacked dwellings. This is a high-level concept only for the purposes of an Urban and Village Boundary Expansion Official Plan Amendment application. The proposed community will be connected to full municipal services including water, sanitary and stormwater and would be accessed by existing public roads connecting to a new internal network of public roads. This conceptual development scenario will be refined through a future Community Design Plan and/or Secondary Plan outlined in the *Official Plan Annex 4: Local Plan Framewor*k and *Section 12 – Local Plan* should this application be approved.

The average density of the proposed conceptual development scenario was calculated at 35 dwelling units per net hectare resulting in a total of 2,391 units supporting an approximate population of 6,862. No employment uses have been proposed at this time. The City of Ottawa Official Plan Table 3b Suburban Transects provides a range of 40 to 60 dwelling units per hectare for Neighbourhood and Minor Corridor Residential Density. The 35 DU/ha density of the conceptual development scenario is an appropriate value for establishing the type of critical mass necessary to support efforts towards making Stittsville a 15-minute neighbourhood. This level of proposed density is similar to what is found throughout the newer developments within the Stittsville community, whereas the older areas of the community typically reflect a lower density less conducive to supporting a complete community.

Land uses and urban features such as schools, parks, open space, stormwater facilities, and road network are identified as non-residential, non-developable areas, and account for approximately half of the total subject lands (**Table 2**). This breakdown of land use and features is based on City's standard estimates, our professional experience, and input from the landowners. We note that these are only estimates and will need to be investigated in greater detail through a future Community Design and/or Secondary Plan exercise.

Table 2. Subject lands conceptual development scenario - non-residential non-developable area

Subject Lands	Area (ac/ha)	Percentage (%)
Gross Land	**276.7 / 111.98**	**100%**
School	0.0 / 0.0	0%
Parks	27.67 / 11.20	10%
Stormwater Pond Facility	22.14 / 8.96	8%
Open Space	2.76 / 1.12	1%
Road Network	55.35 / 22.40	20%
Total Non-Residential Non-developable Area	**107.91 / 43.67**	**39%**
Total Developable Area	**168.79 / 68.31**	**61%**

An appropriate mix of low-rise residential housing types is assumed to make up 61% of the total area of the subject lands. Of that residential area, half will be for single detached homes and the other half for a mix of townhomes and stacked dwellings. No employment or commercial uses have been assumed at this time (**Table 3**). The City of Ottawa Sewer Design Guidelines were relied upon to provide an estimate of the persons per household to generate the approximate population for the subject lands.

Table 3. Assumed housing mix and estimated population yield for the subject lands

Housing Types	Dwelling Units (DU)	Proportion	People per DU	Total Population
Single homes	1,195	50%	3.4	4,064
Townhouses	717	30%	2.7	1,937
Stacked Townhouses	478	20%	1.8	861
Total	**2,391**	**100%**		**6,862**

The community will provide approximately 2,391 new homes and support a projected population of 6,862. The proposed OPA seeks to add the subject lands to the City's urban boundary to assist the City in achieving a 15-year supply of land designated and available for housing, as is required by the PPS.

The OPA will redesignate the subject lands as *Category 1 - Future Neighbourhood Overlay* Urban Expansion Lands. The OP provides that the Future Neighbourhood Overlay is intended to guide development in these areas towards creating walkable 15-minute neighbourhoods that are well served by transit. As stated earlier in the report (Section 1.4), the closest intersection serviced by OC Transpo is Fernbank Road and Stittsville Main Street (approximately 1.0 km east of the site). Although the subject lands are outside the limits of the identified transit priority corridor, extending transit service to the site presents a feasible exercise to support additional growth.

We note that a future Community Design Plan or a Secondary Plan process will be necessary to help guide the intended growth by providing detailed land use designations and policy direction to fit with the local context of the planning area meeting the intent of policy 5.6.2.1.6 of the OP. These items are to be investigated in detail in the future. The amendment to the OP is summarized below in **Table 4**.

Table 4. Structure of the proposed OPA

Existing Policy Schedule	Proposed Amended Policy	Rationale
Schedule C17- Urban Expansion Area	Amend Urban Boundary to include the subject lands. Designate a Category 1 - Future Neighbourhood Overlay to the subject lands.	Align schedule with the limits of the subject lands to provide additional land for future growth. This is needed for consistency with the PPS requirement to maintain a minimum 15-year supply of land suitably designated and available for residential development

2 Existing Policy Context

2.1 Official Plan

The subject lands are currently within the Rural Transect and designated Rural Countryside (Schedule B9). The Rural Countryside is made up of a variety of low intensity uses such as farming, small-scale industries, outdoor recreation and tourism, golf courses, and rural-scaled housing. The Rural Countryside designation is intended to accommodate a variety of land uses that are appropriate for a rural location, limiting the amount of residential development and supporting industries that serve local residents and the travelling public, all while ensuring that the character of the rural area is preserved.

At present the subject lands are vacant and naturalized. **Figure 6** shows Schedule B9 illustrating the location of the subject lands (in pink) bordering the city's Urban Boundary to the east.

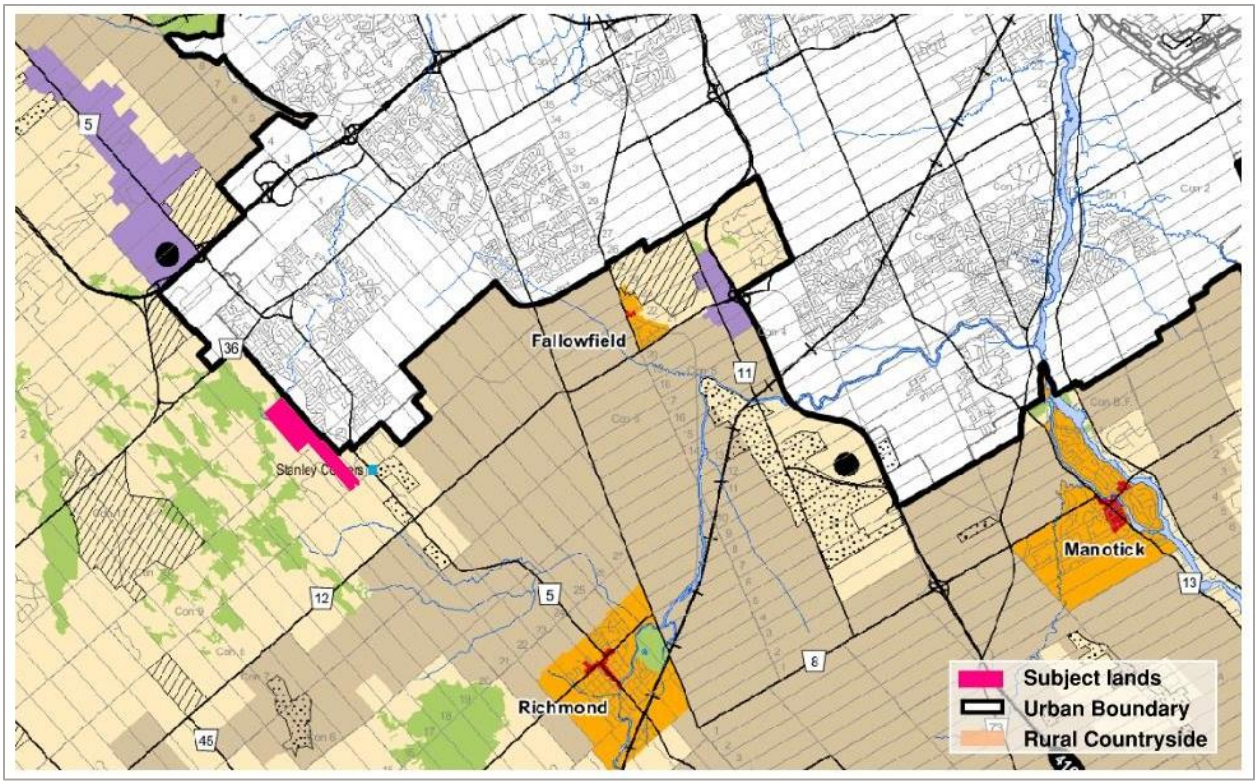

Figure 6. Extract from Schedule B9 of the Official Plan (subject lands are within the Rural Transect and designated Rural Countryside in pink)

2.2 Zoning By-law 2008-250

The subject lands are zoned Rural Countryside (RU) Zone per the City of Ottawa Comprehensive Zoning By-law 2008-250, as amended (**Figure 7**). The intent of the RU zone is to accommodate and permit a range of rural-based land uses which often have large lot or distance separation requirements, and to regulate various types of development in manners that ensure compatibility with adjacent land uses and respect the rural context.

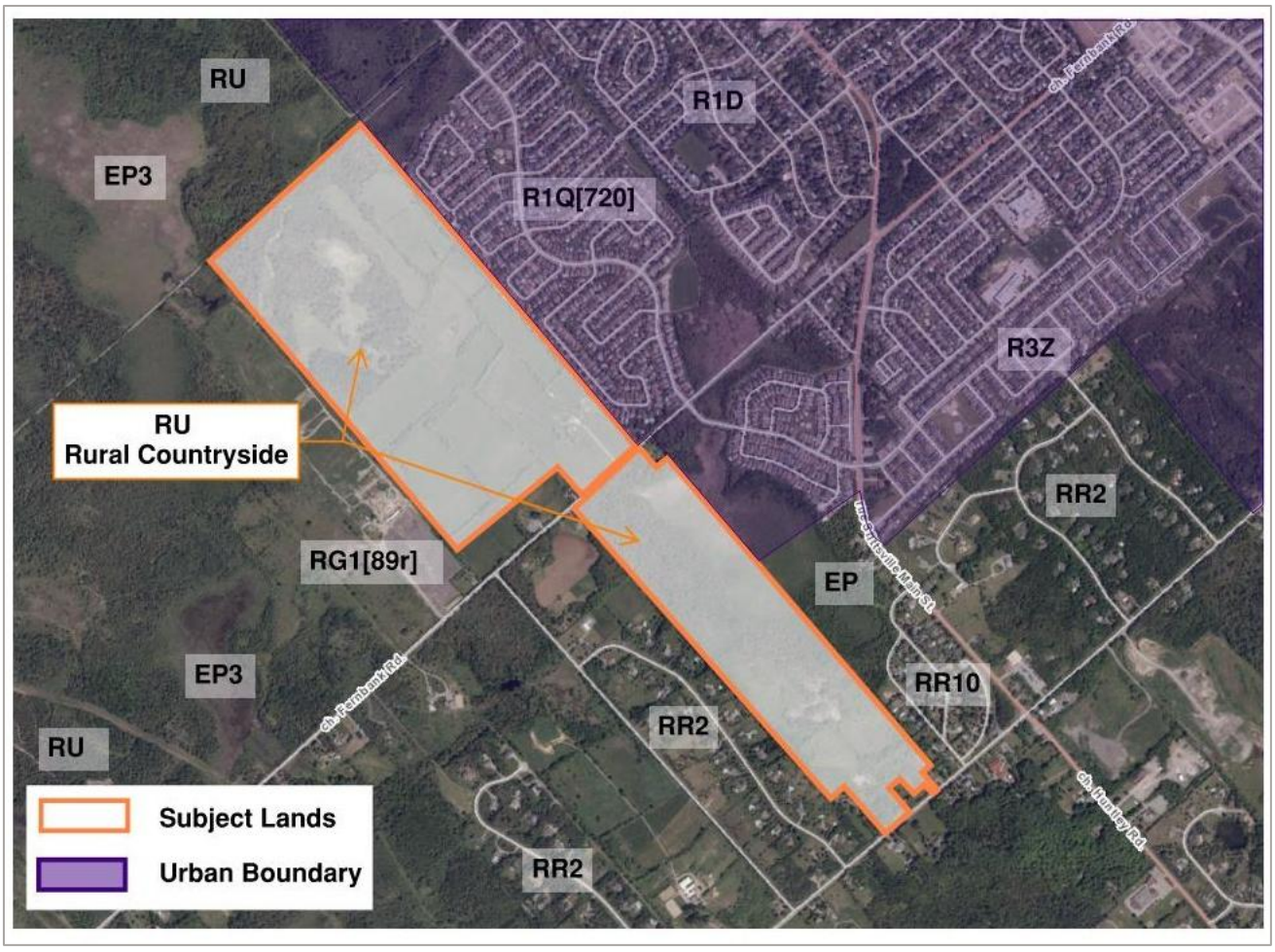

Figure 7 Subject lands are zoned Rural Countryside, with surrounding lands consisting of a range of residential, parks and open space, and mineral extraction type zones.

Rezoning of the subject lands would take place as part of future development initiatives that would follow the aforementioned Community Design Plan or a Secondary Plan process. At that time appropriate urban zones would be sought to help implement the planned function for the lands, with the expectation these zones would permit residential, institutional, and open space type uses.

2.3 Parkland

A subsequent Community Design Plan and/or Secondary Plan exercise will determine what parks are required to support the subject lands, with dedication to occur in accordance with the Parkland Dedication By-law and the Planning Act as part of future subdivision and site plan control approvals. Section 1.7 of this report describes the proposed development to include a proportion of the subject lands being allocated to parkland.

2.4 Previous Considerations of these lands during Comprehensive Review of the Official Plan and the Chronology of Ministerial Decision

In 2019 the City of Ottawa Council adopted new growth projections for population, housing and employment. The growth projections estimate that between 2018 and 2046 the population of Ottawa will grow to almost 1,410,000 people, a growth of about 402,000 people in the 27-year period. Subsequently, the City's new Official Plan was approved by Council in 2021 and by the Minister in 2022.

In preparation of the Official Plan, the City has evaluated the need for an urban area expansion to accommodate anticipated urban population growth and the related need for housing and employment with the existing urban boundary. The City approved the *Residential Growth Management Strategy for the New Official Plan* in 2020 to inform the Official Plan to establish where, and under what conditions, growth in the city can be accommodated with the aim to achieve a desired urban form. It investigated three growth scenarios: Status Quo, No expansion and Balanced Scenario. The report recommended the Balanced Scenario approach providing that approximately 1,281 gross hectares of urban area expansion is required to accommodate future growth. The strategy also provided guidance on the evaluation of lands for potential urban expansion and included a set of criteria for scoring land suitability (**Figure 8**). An expansion of the urban area would be the addition of new land from the rural area to the urban area to accommodate future urban growth.

The policy directions outline a growth management approach to 2046 that emphasizes intensification as the primary means of accommodating growth, while recognizing that other forms of development will also play a role.

The policy directions propose a growth management approach to 2046 where most of the growth will be through intensification, and that intensification will absorb a share of the projected ground-oriented units, such as single-detached, semi-detached and rowhouses, or any new type of low-rise, ground-oriented residential built form that can provide the interior space needed by larger households. Housing mix and choice is expressed through several policies that require accommodation of an appropriate range and mix of residential uses. The report further addressed that housing is to be distributed geographically across the following: first, the built-up area is to accommodate a significant supply and range of housing options, also known as intensification; second, on existing vacant urban greenfield areas in the suburbs; third, in existing vacant village greenfield areas; and fourth, if required, expansion of the urban area.

Over 2021 and 2022, the City of Ottawa completed a Comprehensive Official Plan Review consistent with the *Provincial Policy Statement (PPS) 2020* that was in effect at the time. The strategy provided extensive recommendations on how potential lands for expansion could be identified and also how these candidate lands should be evaluated. The evaluation criteria and methodology created were unique to Ottawa while remaining consistent with the 2020 Provincial Policy Statement and subject to decisions of Council.

Table 1: Criteria and Scoring Summary by Category

Factors	Criterion	Potential Score	% of total
Engineering (serviceability)	Water	8	
OP Sections 2.2.1 4d & 4g	Wastewater	8	
	Stormwater	8	
	Servicing Integration Factor	6	
	Servicing Risk Factors	0 to -4	
Max for Engineering		**30**	**33%**
Transportation	Availability of Rapid Transit	18	
OP Sections 2.2.1 4e, 4g & 4h	Distance to Rapid Transit Station	12	
	Proximity to jobs - median commute distance (all modes)	8	
	Proximity to Convenience Retail- median distance (all modes)	5	
	Proximity to Major City Facilities	5	
	Proximity of Emergency Services – Fire response	4	
	Potential Arterial Road upgrades	0 to -8	
Maximum for Transportation		**52**	**58%**
Community Integration	Connectivity - Barriers to efficient urban integration	8	
Potential Total Integration		**8**	**9%**
Conflicting Uses	Agriculture Resource within 250m	0 to -4	
OP Sections 2.2.1 4 a & c	Natural Linkages	0 to -4	
Potential Total for Conflicting		**0**	
Potential Maximum Score		**90**	**100%**

Following this, the City adopted the selection criteria for the evaluation of rural lands for expansion and candidate parcels were selected. These comprise individual rural lots located within one to two kilometres of the current urban boundary and were then assembled with like lots to create contiguous land areas for consideration.

Figure 8. Extract from the Residential Growth Management Strategy showing the Criteria and Scoring Summary

The main themes of the evaluation and scoring criteria were ranked in order by their total score, from highest to lowest. The themes and their high-level objectives and considerations are detailed below:

Theme	Objective
Transportation	This criterion promotes development in proximity to existing or planned rapid transit stations.
Servicing	Engineering (serviceability) factors assess the ease with which water, wastewater and stormwater services can be provided to accommodate additional development without any or with only minimal need for major upgrades to the existing trunk systems or downstream watercourses.
Community Integration	Community integration ranks the ability of the parcels to be integrated with the adjacent parcels.
Conflicting Rural Uses	Proximity of new urban development to agricultural resource land, villages and country lot subdivisions are identified as the main areas of potential conflict.
Scoring and Selecting Land	Parcels will be scored in the initial evaluation on two passes, as individual parcels and as clusters, to determine if there are advantages or disadvantages that can be identified. The gross developable area will be determined

A City Staff Report was brought before a joint meeting of Planning Committee and Agriculture and Rural Affairs Committee on January 25, 2021, and included two key documents as part of the evaluation process for candidate lands to be brought into the Urban Boundary. Document 1 – Evaluation Methodology Details provided an overview of the evaluation process, and the methodology applied to it. Document 2 – Category 1 and 2 Lands included the evaluation of seven land clusters within the City's rural areas that represented candidate lands for inclusion into the Urban Boundary, and this document consisted of maps and tables detailing how evaluated lands scored against specific evaluation criteria.

Of the seven land clusters, the north parcel (6435 Fernbank Road) and south parcel (6437 Flewellyn Road) were considered within the Stittsville Cluster and were identified as Category 2 – Assessed Lands. These lands were assessed but not recommended by City staff for inclusion in the Urban Boundary. The north and south parcels were further divided into two Servicing Cluster Area (SCAs):

- North parcel (6435 Fernbank Road) – described as S-5 and S-7
- South parcel (6437 Flewellyn Road) – described as S-8 and S-9

Both parcels were identified as having partial adherence to the Growth Management Strategy and the city's Five Big Moves. The lands were scored low primarily due to lack of servicing and connectivity caused by the provincially significant wetland complex located on or adjacent to the parcels, as well as protected habitat of provincially and federally threatened species. We note that in comparison to other land clusters assessed as category 2 lands, the subject lands received lower scoring in servicing and transit. The parcels were also determined to have inadequate size and shape to allow for a transit supportive gridded street pattern.

Following the Balanced Scenario approach, lands determined as Category 1 were added to as future urban lands to provide 1,011 gross hectares of land. Since Category 1 lands did not add up to the necessary 1,281 hectares required under the Growth Management Strategy, staff identified three options:

- Option 1: Distributed Option – Category 2 Lands.
- Option 2: Study Three New Community Options – Category 3 Lands
- Option 3: The single new community option

Under Option1, staff recommended looking for land close to the urban boundary and contiguous to Category 1 lands that did not obtain a passing grade in the scoring under the Council-approved criteria. Staff identified that Category 2 lands would require local transit improvements, servicing infrastructure and new roads infrastructure projects not currently listed in the Transportation Master Plan and Development Charges Background Study. Their selection (in whole or in part) must stipulate that their development is dependent on gating policies in the new OP to address any significant transportation or infrastructure issues prior to being added to the urban boundary.

Both parcels of the subject lands were identified as Category 2 and were considered for inclusion within the urban boundary, as they met several criteria outlined in the Growth Management Strategy. We emphasize that the subject lands have been thoroughly evaluated by city staff and deemed a viable option for inclusion as part of the City's Official Plan process. Their proximity to the developed Stittsville community makes them relatively easy to service and develop. Additionally, the cost of incorporating these lands into the City's urban boundary is comparatively low.

Recently, Protect Ontario by Building Faster and Smarter Act, 2025 received royal assent June 5, 2025, which further streamlines the municipal development process. The Technical Briefing states that the "*Ministry of Finance forecasts for some areas will experience higher growth than previously estimated and recognizing that some of the 50 large and fast-growing municipalities official plans are outdated or misaligned with new projections*". The newly released provincial legislation now requires municipalities to update official plans that reflect current population projections, ensuring better planning for future growth. The Ministry of Municipal Affairs and Housing (MMAH) will "*undertake targeted outreach to municipalities where additional population growth is projected to surpass previous estimates in their current official plans*".

We also understand that City staff are now seeking direction from Council (City File No. ACS2025-PDB-PS-0041) for updating their growth projections to align with the 2025 publication of the Ministry of Finance Population Projections, which is a requirement of the 2024 PPS.

3 Policy Justification

3.1 Consistency with the Provincial Planning Statement, 2024

The 2024 Provincial Planning Statement (PPS) provides policy direction on land use planning and development matters of provincial interest for the Province of Ontario. This direction is for the planning of strong, sustainable, and resilient communities for all people, for clean and healthy environments, and for strong and competitive economies. Under Section 3 of the Planning Act, decisions affecting planning matters "shall be consistent with" the PPS. As noted above, the PPS came into effect on October 20, 2024, replacing the Provincial Policy Statement 2020.

Policies of the PPS relevant to the proposed OPA are discussed in the below subsections.

3.1.1 Building Homes, Sustaining Strong and Competitive Communities

Section 2.1 Planning for People of the PPS provides policy guidance on providing an appropriate mix of densities and housing options to meet the projected population demands.

1. As informed by provincial guidance, planning authorities shall base population and employment growth forecasts on Ontario Population Projections published by the Ministry of Finance and may modify, as appropriate.

3. At the time of creating a new official plan and each official plan update, sufficient land shall be made available to accommodate an appropriate range and mix of land uses to meet projected needs for a time horizon of at least 20 years, but not more than 30 years, informed by provincial guidance. Planning for infrastructure, public service facilities, strategic growth areas and employment areas may extend beyond this time horizon.

4. To provide for an appropriate range and mix of housing options and densities required to meet projected requirements of current and future residents of the regional market area, planning authorities shall:

a) maintain at all times the ability to accommodate residential growth for a minimum of 15 years through lands which are designated and available for residential development; and

b) maintain at all times where new development is to occur, land with servicing capacity sufficient to provide at least a three-year supply of residential units available through lands suitably zoned, including units in draft approved or registered plans.

6. Planning authorities should support the achievement of complete communities by:

a) accommodating an appropriate range and mix of land uses, housing options, transportation options with multimodal access, employment, public service facilities and other institutional uses (including schools and associated child care facilities, long term care facilities, places of worship and cemeteries), recreation, parks and open space, and other uses to meet long-term needs;

b) improving accessibility for people of all ages and abilities by addressing land use barriers which restrict their full participation in society; and

c) improving social equity and overall quality of life for people of all ages, abilities, and incomes, including equity-deserving groups.

The subject lands are located adjacent to the established and expanding Stittsville community, are well connected by the existing road network, and in proximity to existing infrastructure, public services, active transportation links, parks, and open space. In the 2021 Census, the Stittsville community had a

population of 52,820 persons. Expanding the urban area in this location will contribute the critical mass necessary to support efforts towards making Stittsville a 15-minute neighbourhood consisting of a robust transit network, infrastructure upgrades, appropriate housing mix and complementary services.

Section 2.2 Housing of the PPS provides guidance for promoting a range of housing options and densities to meet projected needs of current and future residents of a regional market area such as the City of Ottawa.

1. Planning authorities shall provide for an appropriate range and mix of housing options and densities to meet projected needs of current and future residents of the regional market area by:
a) establishing and implementing minimum targets for the provision of housing that is affordable to low and moderate income households, and coordinating land use planning and planning for housing with Service Managers to address the full range of housing options including affordable housing needs;
b) permitting and facilitating:
1. all housing options required to meet the social, health, economic and well being requirements of current and future residents, including additional needs housing and needs arising from demographic changes and employment opportunities; and
2. all types of residential intensification, including the development and redevelopment of underutilized commercial and institutional sites (e.g., shopping malls and plazas) for residential use, development and introduction of new housing options within previously developed areas, and redevelopment, which results in a net increase in residential units in accordance with policy 2.3.1.3;
c) promoting densities for new housing which efficiently use land, resources, infrastructure and public service facilities, and support the use of active transportation; and
d) requiring transit-supportive development and prioritizing intensification, including potential air rights development, in proximity to transit, including corridors and stations.

The proposed conceptual housing breakdown provides a high-level understanding of the type of development envisioned for the subject lands which includes a mix of detached, townhouse, and stacked dwellings. This high-level housing breakdown is based on a minimum target density of 35 dwelling units per net hectare. The specific breakdown may be further refined as part of a future community design plan or secondary plan process.

Section 2.3 provides general policy guidance on settlement areas and settlement area boundary expansions.

1. *Settlement areas shall be the focus of growth and development. Within settlement areas, growth should be focused in, where applicable, strategic growth areas, including major transit station areas.*
2. *Land use patterns within settlement areas should be based on densities and a mix of land uses which:*
   a) *efficiently use land and resources*
   b) *optimize existing and planned infrastructure and public service facilities*
   c) *support active transportation*
   d) *are transit-supportive, as appropriate; and*
   e) *are freight-supportive.*
3. *Planning authorities shall support general intensification and redevelopment to support the achievement of complete communities, including by planning for a range and mix of housing options and prioritizing planning and investment in the necessary infrastructure and public service facilities.*

Ottawa's urban boundary and villages represent settlement areas. Generally, these areas then consist of built-up lands and greenfield lands, with the built-up lands typically being the areas where higher-order transit and components of a complete community are situated, and therefore where intensification is targeted and supported. Greenfield lands represent undeveloped lands positioned for development. Greenfield lands abutting established and expanding communities are generally most suitable for continued growth of a community, and the subject lands reflect this situation as they abut established urban lands in an area of Stittsville experience growth.

The proposed OPA would result in designating the subject lands as *Category 1 – Future Neighbourhood Overlay* to include them within the City's urban boundary with the aim of addressing the City's land need to accommodate its projected population growth to 2046. The subject lands present a reasonable opportunity to accommodate future residential development in a planned and coordinated manner, support the creation of complete communities, and leverage proximity to existing infrastructure and transit services to achieve the City's growth objectives.

Further section 2.3.2 New Settlement Areas and Settlement Area Boundary Expansions provides guidance on identifying a new settlement area or allowing settlement area boundary expansion. These criteria are discussed in detail below:

1. In identifying a new settlement area or allowing a settlement area boundary expansion, planning authorities shall consider the following:

- *a. the need to designate and plan for additional land to accommodate an appropriate range and mix of land uses;*
- *c. whether the applicable lands comprise specialty crop areas;*
- *d. the evaluation of alternative locations which avoid prime agricultural areas and, where avoidance is not possible, consider reasonable alternatives on lower priority agricultural lands in prime agricultural areas;*
- *e. whether the new or expanded settlement area complies with the minimum distance separation formulae;*
- *f. whether impacts on the agricultural system are avoided, or where avoidance is not possible, minimized and mitigated to the extent feasible as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance; and*
- g. *the new or expanded settlement area provides for the phased progression of urban development.*

a) The need to designate and plan for additional land to accommodate an appropriate range and mix of land uses.

The OP recognizes that Ottawa is a large municipality and is expected to grow 40% from 2018 to 2046. The Ministry of Finance's population projections for Ontario and Ottawa are based on detailed Statistics Canada data and the Ministry's own methodology. The Ministry recognizes that Ottawa is the fastest growing census division in Ontario. While the Official Plan anticipates a population growth of approximately 405,000 people within the noted horizon, the more recent Minister of Finance projections, which are to form the basis of OP growth forecasts per policy 2.1.1 of the PPS, demonstrate a much larger growth and subsequent need for housing to 2046. The highlights of the new 2024-2025 projections suggest that Ontario's population is projected to increase by 27.4 per cent, or over 4.4 million, over the next 27 years, from an estimated 16.1 million on July 1, 2024, to over 20.5 million by July 1, 2051.

The recent Ministry forecasts prepared in Summer 2023 forecast a population of 1.66 million persons in the City of Ottawa by 2046. The Ministry has recognized that population forecasts have increased due to a variety of factors including immigration to Canada and the City of Ottawa should be taking the same approach and account for forecasted growth to help address the existing housing crisis.

This rationale relies on the work undertaken by Parcel Economics Inc. in 2024 which investigated if it was reasonable to use the population projections prepared by the Ministry of Finance in assessing land needs in Ottawa till 2046. The report noted that immigration levels used in preparing the MoF forecasts were based on federal government policy and that significant increase in federal immigration targets since 2020 has had an impact on population growth in the province and the city.

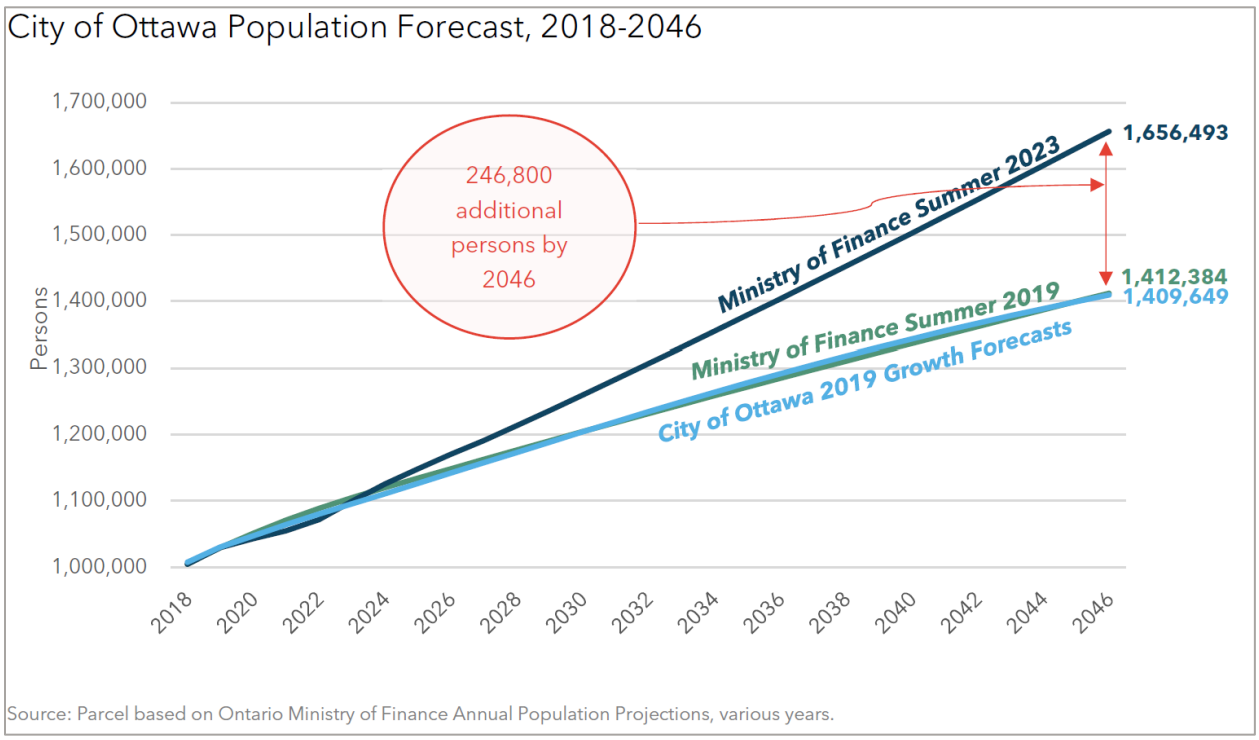

Figure 9.Excerpt from the Parcel Economics report showing population forecast and difference between the City of Ottawa and Ministry of Finance projections

Parcel Economics' report found that the *"City of Ottawa has not updated their population projections since 2019, to account for the higher Federal immigration targets, which were announced in 2020 and more recently in 2023".* The population growth forecasts prepared by the City of Ottawa in 2007 and 2019 are generally consistent with the population growth projections prepared by the MoF around the same time (seen in **Figure 9**). The report found that the population forecast prepared by the MoF in Summer 2019 (around the same time the Ottawa 2019 Growth Forecasts were prepared), forecast a population of 1.4 million persons in the City of Ottawa by 2046. The MoF Summer 2019 forecasts are nearly the same as the forecasts prepared by the City in 2019 (a difference of 2,735 persons between 2018 and 2046, or a 0.7% difference in growth).

The result of this population growth change is that the City's Official Plan does not currently have an adequate supply of designated and available land within the urban boundary to meet the 15-year land need requirement of the PPS. The report concludes that the population forecasts prepared by the MoF (2023 projections) for the City of Ottawa are now 18% higher than their projections from Spring 2019 and the forecasts prepared by the City of Ottawa and contained in Growth Projections for the New Official Plan (Methods and Assumptions for Population, Housing and Employment, 2018 to 2046). Accordingly, the City of Ottawa would need to accommodate 289,505 new dwelling units between 2018 and 2046. This is higher than the City of Ottawa 2019 Growth Forecasts, which estimates the need for 194,800 new units, resulting in the conclusion that the city fails to meet the 15-year land supply of designated and available lands in the Urban Boundary. Further, the report recommends that by proactively addressing these land needs now, rather than when the forecasts are updated as part of the next Official Plan Review, there would be a logical path to follow.

The City prepared a staff report, "Official Plan Update - Growth Projections" (ACS2025-PDB-PS-0041) that was presented to Council on June 25, 2025 which recommended a review of the 2025 Ministry of Finance population projections for the City and develop a growth management strategy to determine the settlement area land requirements for the updated growth projections amongst others.This update will be encompasses the following three-step process:

- First – update the growth projections which includes population, household, and employment projections based on the Ministry of Finance population projections and, if available, staff will review and apply provincial guidance for growth projections as well.

- Second – prepare growth management strategy to determine the settlement area land requirements to accommodate the new growth projections.

- Third - if required, is a selection process for new settlement area lands.

The City intends to complete that update by mid-2027, and to then submit the update to the Minister for approval. Since taking this direction, a new population projection was released by the MOF in August 2025 and forecasted a population for the City of Ottawa of 1.58 million persons in the year 2046. The projection remains greater than the projection of the city's current official plan with a difference of 168,796 (12%), which underscores the city's need to revisit their growth management framework and accommodate additional urban land.

In light of the timing it will take for the city to complete its process, it is noted that section 6.1.7 of the PPS states the following, "*Where a planning authority must decide on a planning matter before their official plan has been updated to be consistent with the Provincial Planning Statement, or before other applicable planning instruments have been updated accordingly, it must still make a decision that is consistent with the Provincial Planning Statement*."

Given the above it is clear the city at present fails to meet a minimum 15-year supply of designated and available land.

In a recent Ontario Land Tribunal (OLT) decision for files OLT-24-001182 and OLT-25-000011, the OLT agreed that the 2024 PPS sets a minimum time period for the 15-year land supply, with no maximum time period. The decision states:

" [101] […] *The Tribunal agrees that the 2024 PPS sets a minimum time period, with no maximum time period specified in the policy. In other words, if an authority had complied with this requirement within the minimum 15-year supply period, including additional lands within the urban boundary would not offend the policy as there is no maximum time period. Rather, it would only serve to increase the number of years for land supply in our Province which is known to have a housing crises and shortage of housing supply* […]."

To address the growing population in accordance with the PPS, the proposed addition of the subject lands to the urban boundary would achieve appropriate growth in a location that will support an existing community. Further, the proposed addition of the subject lands will increase housing supply, encourage economic growth, and provide opportunity for efficient use and expansion of infrastructure.

Moreover, it is noted that this redesignation to *Category 1- Future Neighbourhood Overlay* is the first critical step to providing more residential land supply but it still does not address the immediate demand. As a first step it serves to position the City for consistency with the PPS. Following the proposed amendment to the OP, the site would still require a Community Design Plan and/or Secondary Plan process, followed by subdivision processes, which are complex approval processes requiring several years of consultation, negotiations, and detailed studies. The intent would be for first occupancy to be achieved within the planning horizon of the current Official Plan, understanding there are factors that will influence the timing of this.

c) whether the applicable lands comprise specialty crop areas

The subject lands are not a designated Specialty Crop Area as defined by the PPS.

d) *the evaluation of alternative locations which avoid prime agricultural areas and, where avoidance is not possible, consider reasonable alternatives on lower priority agricultural lands in prime agricultural areas;*

The lands have been scored within the City of Ottawa's Land Evaluation and Area Review (LEAR) for Agriculture. The LEAR system is a high-level decision-making tool that enables every agricultural property to be evaluated quantitatively to assess the capability of the soils on the land, the use of the land and other surrounding influences that might determine the suitability of the property for ongoing agricultural use or not. The subject lands scored 0-115 which represents the lowest quality land and is therefore not a prime agricultural area. The PPS includes policies to ensure that municipalities identify and protect "prime agricultural areas" for ongoing agriculture use. The subject lands are not prime agricultural areas.

e) *whether the new or expanded settlement area complies with the minimum distance separation formulae*

A review of GeoOttawa aerial imagery (2022) and Google Streetview was conducted and there are no apparent livestock operations within or adjacent to the subject lands.

f) whether impacts on the agricultural system are avoided, or where avoidance is not possible, minimized and mitigated to the extent feasible as determined through an agricultural impact assessment or equivalent analysis, based on provincial guidance;

The subject lands are not located in proximity to any active farms or farmland and will not negatively impact agricultural areas. The lands were not identified as significant agricultural lands in the City's Land Evaluation and Area Review (LEAR) in its 2016 update, nor were the lands designated as an Agricultural Resource Area in the 2021 Official Plan. On that basis, no impact assessment is necessary.

g) ***the new or expanded settlement area provides for the phased progression of urban development.***

The subject lands present a logical area for urban expansion and development as they will help to address the continued pressures for growth in the Stittsville community, with the added density providing rationale for greater investment in transit and other growth-related infrastructure and services.

In the OLT decision for files OLT-24-001182 and OLT-25-000011, it states there is a legislative intention to move away from the comprehensive review process for evaluation of urban boundary expansions. This is important to note since it clarifies there is no legislative requirement for an applicant to provide the same comprehensive analysis as prepared by the City as part of their 2022 Official Plan for the purpose of supporting a privately initiated urban boundary expansion. Accordingly, the test for consideration of the proposed OPA is established by the PPS and the policy statements reviewed above.

In particular, the OLT ruled against requiring a Settlement Area Parcel Analysis (SAPA). This report was added as a requirement in the UVBE application process released by the City in October 2024. However, in the recent OLT decision, the Tribunal found this requirement "unreasonable" stating that a relevant discussion of the City's criteria and scoring methodology for the evaluation of individual land candidate parcels for urban boundary expansion is acceptable evidence.

Further the city does not have a list of required plans and studies to support Planning Act applications within their official plan which is a requirement of the Planning Act if the city wishes to enforce their requirement upon applicants. In acknowledging this the city approved OPA 47 in June 2025 with the intent of adding a list of potential submission requirements to their official plan and included the SAPA. Although OPA 47 was approved by council it is not in force and effect as the city was to receive Ministerial approval for proceeding with this amendment per Bill 17 (Sch 7, s.2). It is our understanding that the city has still not received Ministerial approval and therefore Ottawa proceeding with OPA 47 is in violation of Bill 17. Accordingly, the SAPA which is not listed in the city's official plan is not a study the city can require.

Furthermore, the City has prepared a staff report "Development Application Study Policy and OPA 47: Housing Acceleration Plan Update" (ACS2025-PDB-PS-0075 dated: December 17, 2025) to be tabled for Council review on January 28, 2026. The report recommends removing Settlement Area Parcel Analysis (SAPA) from the list of studies that can be requested to support a UVBE.

3.1.2 Infrastructure and Facilities

Section 3.1 General Policies for Infrastructure and Facilities contains policy direction on providing infrastructure and public service facilities in an efficient manner while also accommodating projected needs. Section 3.6 Sewage, Water and Stormwater provides policy direction specific to planning for sewage and water services for communities.

1. Planning for sewage and water services shall:
a) accommodate forecasted growth in a timely manner that promotes the efficient use and optimization of existing municipal sewage services and municipal water services and existing private communal sewage services and private communal water services;
b) ensure that these services are provided in a manner that:
1. can be sustained by the water resources upon which such services rely;
2. is feasible and financially viable over their life cycle;
3. protects human health and safety, and the natural environment, including the quality and quantity of water; and
4. aligns with comprehensive municipal planning for these services, where applicable.
c) promote water and energy conservation and efficiency;
d) integrate servicing and land use considerations at all stages of the planning process;
e) consider opportunities to allocate, and re-allocate if necessary, the unused system capacity of municipal water services and municipal sewage services to support efficient use of these services to meet current and projected needs for increased housing supply; and
f) be in accordance with the servicing options outlined through policies 3.6.2, 3.6.3, 3.6.4 and 3.6.5

Policy 3.6.2 states that municipal sewage services and municipal water services are the preferred form of servicing for settlement areas to support protection of the environment and minimize potential risks to human health and safety. The intent would be for the subject lands to be supported by full municipal services.

Policy 3.6.8 states that planning for stormwater management shall:

Planning for stormwater management shall:
a) be integrated with planning for sewage and water services and ensure that systems are optimized, retrofitted as appropriate, feasible and financially viable over their full life cycle;
b) minimize, or, where possible, prevent or reduce increases in stormwater volumes and contaminant loads;
c) minimize erosion and changes in water balance including through the use of green infrastructure;
d) mitigate risks to human health, safety, property and the environment;
e) maximize the extent and function of vegetative and pervious surfaces;
f) promote best practices, including stormwater attenuation and re-use, water conservation and efficiency, and low impact development; and
g) align with any comprehensive municipal plans for stormwater management that consider cumulative impacts of stormwater from development on a watershed scale.

Policy 3.9.1 states that healthy, active, and inclusive communities should be promoted by:

a) planning public streets, spaces and facilities to be safe, meet the needs of persons of all ages and abilities, including pedestrians, foster social interaction and facilitate active transportation and community connectivity;
b) planning and providing for the needs of persons of all ages and abilities in the distribution of a full range of publicly-accessible built and natural settings for recreation, including facilities, parklands, public spaces, open space areas, trails and linkages, and, where practical, water-based resources;
c) providing opportunities for public access to shorelines; and
d) recognizing provincial parks, conservation reserves, and other protected areas, and minimizing negative impacts on these areas.

The application for Step 1 and 2 Infrastructure Capacity Assessment (ICA) was submitted to the City in March 2025. Results from this application (Technical Memos) were received on October 17, 2025 and were reviewed to determine the capacity of municipal water and sewage services to meet the projected needs for the subject lands.

Claridge Homes retained Arcadis to review the Technical Memos provided by the City. A detailed discussion of their review is provided in section 4.2.1 and the Technical Memos are provided in Appendix B of this report.

The proposed OPA is not intended to establish the final land use strategy for the subject lands, however, it provides a high-level breakdown of potential housing options and estimated population. A future Community Design Plan and/or Secondary Plan process will determine the details such as land use, densities, location of services, and transportation network.

3.2 Official Plan

In 2022, the Minister approved the City's new Official Plan which established that a portion of future growth will be accommodated through the development of existing greenfield land supply and intensification within the built-up area. However, not all future growth can be met through existing greenfield development and intensification. Previously, the growth management strategy identified a requirement of 1287 hectares of land (12.87 km2) to meet the city's needs for residential land supply to the year 2046. The amount of land required was calculated using a balanced scenario of increasing rates of intensification in the existing urban area balanced with modest expansion of greenfield development at locations that are largely transit-supported and can be developed as walkable 15-minute neighbourhoods (based on the prescribed Selection Criteria).

The OP states that Ottawa's population is projected to grow 40 percent from 2018 to 2046, reaching an estimated 1.4 million people and supports the need to have an appropriate range and mix of housing that considers the geographic distribution of new dwelling types and/or sizes to 2046. Further, the OP establishes that *"sufficient land shall be designated for growth to meet the projected requirement for population, housing, employment and other purposes for a period of 25 years in accordance with the Provincial Policy Statement*".

The City of Ottawa used the *PPS 2020* in effect at the time as a guiding document to develop the *Official Plan (2022)*. The 2020 PPS only permitted urban expansion to take place as part of a municipal-led comprehensive official plan review.

The Provincial Planning Statement came into effect in 2024 and requires planning authorities to use population forecasts from the Ministry of Finance (MoF) to ensure sufficient land is made available to accommodate an appropriate range and mix of land uses for a time horizon of at least 20 years but not more than 30 years. The PPS 2024 requires that planning authorities maintain at all times the ability to accommodate residential growth for a minimum of 15 years through residential development lands which are designated and available. As a result of a significantly higher population in the 25-year planning horizon shown in the Ministry of Finance's latest (2024) population projections, the OP requires more land to address the additional land need. The MoF's updated population projections released in Fall 2024 for the City of Ottawa forecasts a population projection of 1.66 million people by 2046 compared to the 1.4 million people forecast completed by City staff in 2019.

Policy 2.3.2 of PPS 2024, New Settlement Areas and Settlement Area Boundary Expansions, permits private applications for additions to settlement areas outside of comprehensive reviews by the municipality.

In response to this, City staff released a report "*New Urban and Village Boundary Expansion Official Plan Application Process*" dated October 16, 2024, that went to joint Planning and Housing Committee/Agricultural and Rural Affairs Committee meeting and incorrectly directs a private expansion application to use the population and growth projections as contained in the approved Official Plan 2022. Policy 6.1.6 of the PPS is clear that a decision on a planning matter must be consistent with the PPS even when an Official Plan has not yet been updated for consistency with the PPS.

In the following subsections of this report, we have evaluated applicable policies of the Official Plan in support of the proposed amendment.

3.2.1 Strategic Directions

The Official Plan proposes five (5) broad policy directions as the foundation to becoming the most liveable mid-sized city in North America over the next century. These moves include the following:

Big Policy Move 1: Achieve, by the end of the planning period, more growth by intensification than by greenfield development.

Ottawa is projected to grow by 402,000 people by 2046, requiring 194,800 new private households. The City will accommodate this growth within its existing neighbourhoods and villages, in undeveloped greenfield areas within Ottawa's urban boundary and by expanding the City's urban boundary. The City's approach will have significant impacts on the evolution of Ottawa's neighbourhoods, on housing options and affordability and on our ability to meet our climate change responsibilities. Not all of the growth forecasted can be accommodated through intensification.

The proposed OPA seeking to bring the subject lands within the urban boundary will contribute to land supply necessary for housing to satisfy Ottawa's projected growth. This directly responds to the Ministry of Finance's growth projections for Ottawa which highlights a shortfall in the OP's projections and therefore a need for additional land supply.

Big Policy Move 2: By 2046, the majority of trips in the city will be made by sustainable transportation.

The overarching mobility goal of the Official Plan is that by the end of its planning horizon, more than half of all trips will be made by sustainable transportation such as walking, cycling, transit or carpooling.

The OP's goal is to increase the share of trips by sustainable modes of transportation as 40% of Ottawa's current greenhouse gas emissions are transportation related. Supporting active transportation and transit is also crucial to creating a healthier and more equitable and inclusive city, where anyone can get to work, to school and to daily activities without needing a car. As a result, safe and convenient sustainable transportation options are fundamental to 15-minute neighbourhoods and vibrant communities that support economic activity and social interaction throughout the day and evening.

The subject lands provide an opportunity to extend transit services given their proximity to existing routes and infrastructure. Integrating these lands into the transit network would not only improve accessibility for future residents but also help advance Stittsville toward becoming a complete community. Enhanced transit connectivity will reduce reliance on private vehicles, support sustainable growth, and align with the City's vision for 15-minute neighbourhoods.

Big Policy Move 3: Improve our sophistication in urban and community design and put this knowledge to the service of good urbanism at all scales, from the largest to the very small.

The goal of this Plan is to contribute towards stronger, more inclusive, and more vibrant neighbourhoods and Villages in a way that reflects the differences from highly urbanized and dense areas in the downtown, to lower-density suburban areas farther out. The Plan should also contribute towards stronger, more inclusive, and vibrant neighbourhoods and Villages that reflect and integrate Ottawa's economic, racial and gender diversity in every neighbourhood.

The subject lands propose to develop as a low-to-medium density housing offering a mix of housing options conveniently located adjacent to the developing Stittsville community. The parcel's proximity to the established Stittsville community makes them highly suitable for development, offering a "plug and play" opportunity to create a new community with minimal infrastructure investment.

Big Policy Move 4: Embed environmental, climate and health resiliency and energy into the framework of our planning policies.

The Official Plan contains bold policies to encourage the evolution of neighbourhoods into healthy, inclusive, and walkable 15-minute neighbourhoods with a diverse mix of land uses, including a range of housing, shops, services, local access to healthy and affordable food, schools, employment, mature trees, greenspaces, and pathways. It also includes policies to help the City achieve its targets on the reduction of greenhouse gas emissions and the increase in the urban forest canopy as part of addressing its resiliency to the effects of climate change. At subsequent stages of planning, should this application be approved, specific design principles and features can be included in a Community Design Plan and/or Secondary Plan.

In 2023, a paper titled Residential density and 20-minute neighbourhoods: A multi-neighbourhood destination location optimisation approach[2], highlighted 20-minute neighbourhoods as key to promoting local living and active travel. We reference this paper as it provides a current discussion of the concept of "complete communities" and recognizes that "*land uses and urban design must integrate supportive active transportation infrastructure and build upon concepts of complete streets".* It further explores the idea that the cost of 20-minute neighbourhoods is negatively correlated with dwelling density. The paper recommends that communities of 15,000 to 30,000 residents are more likely to be serviced by a broad range of amenities and community facilities. Increased dwelling density is vital because it ensures that there are employment opportunities, services, and economically viable public transport.

As mentioned earlier in this report, Stittsville community is home to approximately 52,820 residents and continues to growth with new development. The subject lands present a good opportunity to be added to the urban boundary and will be subject to a subsequent Secondary Planning process to ensure "*delivery of diverse amenities over time and urban design that creates connected street networks, residential and destination diversity, and neighbourhood desirability"*.

Expanding the urban boundary to include the subject lands represents a practical and forward-looking solution due to its proximity to the Stittsville community. By directing additional population, there is an opportunity to make new amenities and transit services economically viable. This increased population density can help justify and sustain investments in infrastructure, public services, and commercial development, which in turn enhances the livability and functionality of the area. Ultimately, this approach strengthens Stittsville's ability to meet the goals of a 15-minute neighbourhood, where residents can access most daily needs within a short walk or bike ride from home.

As previously stated in section 3.1.1, the lands are not designated prime agricultural lands and scored significantly low on the LEAR, implying that the lands represent low-quality farmland. Inclusion of the subject lands in the urban boundary would not conflict with policies aimed at

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1 [2] Residential density and 20-minute neighbourhoods: A multi-neighbourhood destination location optimisation approach authored by Afshin Jafari , Dhirendra Singh , Billie Giles-Corti Residential density and 20-minute neighbourhoods: A multi-neighbourhood destination location optimisation approach - ScienceDirect

protecting high-quality farmland. The subject lands provide an opportunity to address the City's land supply gap and support planned growth by accommodating future residential and mixed-use development in a location that aligns with long-term infrastructure and servicing strategies.

The proposed OPA seeks to develop the subject lands by bringing them into the urban boundary in order to support the growth of Stittsville through the logical development of adjacent lands. The addition of the subject lands will support the policies of the Official Plan by contributing to the creation of a 15-minute community supportive of environmental, climate and health resiliency policies.

Big Policy Move 5: Embed economic development into the framework of our planning policies.

A range of interconnected factors influence economic sustainability and growth. In the Official Plan, an economic development lens is taken to policies throughout the Plan spanning the rural, suburban, and urban contexts. While land use policies in the Official Plan alone do not ensure economic development, they provide an important foundation for other City initiatives and programs to support economic development and create a context for business and entrepreneurship to succeed.

The proposed OPA will create conditions for additional housing and population, which will help facilitate economic resiliency and growth in the Stittsville community. This approach aligns with the City's vision for complete communities and supports Stittsville's evolution into a more vibrant, accessible, and inclusive 15-minute neighbourhood.

3.2.2 Growth Management Framework

Section 3 of the Official Plan establishes the City's framework to accommodate projected population, household, and employment growth to the year 2046 and beyond. The framework seeks to provide sufficient development opportunities and an appropriate range of choice by locating and designing growth to increase sustainable transportation mode shares and use existing infrastructure efficiently, while reducing greenhouse gas emissions.

Ottawa's population is projected to grow by 40% during the OP's time horizon, reaching 1.4 million residents by 2046. Section 3.1- Designate Sufficient Land for Growth, states:

3) The urban area and villages shall be the focus of growth and development.
4) The City will allocate household growth targets as follows:
a) 93 per cent within the urban area where:
i) 47 per cent is within the urban area that is built-up or developed as of July 1, 2018, and
ii) 46 per cent is within the greenfield portion of the urban area

The proposed addition of the subject lands will add to the City's land supply for housing and facilitate residential growth adjacent to an existing built-up urban area. It is our conclusion that the subject lands have adherence to the Growth Management Strategy criteria, Five Big Moves, and Growth Management Framework of the Official Plan. While both parcels received low scores for servicing and transportation,

they represent a logical extension of the adjacent Stittsville community. We believe the requested addition of will result in the efficient management of the subject lands to add to the city's land supply for housing.

3.2.3 Transect and Designations

The proposed Official Plan Amendment seeks to bring the subject lands within the urban boundary by amending Schedule C17 and designate the subject lands as *Category 1 - Future Neighbourhood Overlay* where Category 1 is described as a new urban expansion area.

Policy 5.6.2 establishes that the Future Neighbourhood Overlay is applied to lands that have been added to the urban boundary to accommodate City growth in the Suburban Transect and that form part of the Urban Greenfield Area. The Future Neighbourhood Overlay is intended to guide development in these areas towards creating walkable 15-minute neighbourhoods that are well served by rapid transit.

1) Development may only receive draft approval or final approval on land within the Future Neighbourhoods Overlay once the overlay has been removed through an Official Plan amendment. Removal of the overlay can only occur once the policies of this section have been satisfied.
2) The underlying designation within the Future Neighbourhoods Overlay is Neighbourhood. Through the Official Plan amendment to remove the overlay, other designations may be established, where applicable, and shall be consistent with designations of the parent Official Plan.
3) Lands within Category 1 and 2 include individual parcels or clusters of land requiring an extension or upgrade of services including transit and infrastructure (being water, wastewater and stormwater). In addition to the other requirements listed in this section, all of the following must be satisfied prior to the Future Neighbourhoods Overlay being removed for lands that are not within the catchment area of an existing rapid transit station (including those under construction) or a funded rapid transit station and/or have infrastructure servicing issues that would require major upgrades to an existing system and/or unplanned extension of infrastructure:

a) A Council-approved funding source and/or legal funding mechanisms is required where infrastructure servicing issues need major upgrades to an existing system and/or an unplanned extension of water, wastewater and stormwater services, to service the lands within the overlay;

b) Provision of rapid or equivalent quality transit service within a 1.9 km radius of the centroid of the proposed subdivision, as well as sufficient road connections and system capacity to accommodate the forecast level of demand. Road and transit facilities must either be operational at the time of development approval or have sufficient funding secured for their implementation through a Council approved mechanism. In establishing equivalent transit service, consideration should be given to both the frequency and quality (reliability/speed) of transit operations; and

c) Completion of a transportation study to the satisfaction of the City which:

i) Identifies a mode share that is consistent with, or better than, the objectives of the Big Policy Move 2 of this Official Plan;

ii) Identifies any downstream transit or road capacity deficiencies triggered or made worse by the new development;

iii) Identifies measures to address these deficiencies (including improvements to the road, transit and active transportation networks); and

iv) Sets out an implementation timeframe for each measure corresponding to the anticipated phasing of development

5) A Community Design Plan including applicable studies per section 12 shall be approved by Council and that approval may be concurrent with the adoption of an Official Plan Amendment which would remove the Future Neighbourhood Overlay and establish a Secondary Plan for the lands.
6) Notwithstanding Policy 5), an update of an existing Community Design Plan or Secondary Plan to include the new land area may be acceptable when the proposed development is adjacent to an area subject to an existing such plan and the scale of the addition is commensurate to an update process, provided supporting studies, such as a master servicing study, are also updated.

The proposed OPA is seeking to add the subject lands into the urban boundary and recognizes that future detailed study will be essential to further study and define that growth. On October 9, 2024, City staff presented a report to the Joint meeting of the Agricultural and Rural Affairs Committee and Planning and Housing Committee entitled *New Urban and Village Boundary Expansion Official Plan Application Process.* The report outlined a new process to support a boundary expansion request. Stantec has supported the clients in submitting the Step 1 Infrastructure Capacity Assessment which is currently under review by the City.

4 Supporting Documents

4.1 South March Lands, Ottawa – Ministry of Finance Population Forecast, Parcel Economics

Parcel Economics Inc. was retained by the South March Landowners Group for a similar application to include their lands in the Urban Boundary. This rationale relies on and has permission to use the findings of a report prepared in 2024 by Parcel Economics Inc. This report is not area specific and provides a comprehensive summary of population forecast used by the Ministry of Finance (MoF).

The purpose of the Parcel report was to determine if it is reasonable to use the population projections prepared by the MoF in assessing land needs in the City of Ottawa to 2046. The report stated that the population forecasts prepared by the MoF for the City of Ottawa are now 18% higher than their projections from Spring 2019 and the forecasts prepared by the City of Ottawa and contained in *Growth Projections for the New Official Plan: Methods and Assumptions for Population, Housing and Employment, 2018 to 2046.*

Key findings of the report are:

- The population growth forecasts prepared by the City of Ottawa in 2007 and 2019 are generally consistent with the population growth projections prepared by the MoF around the same time (difference of 0.3% to 0.7% in 2007 and 2019, respectively). The consistency between the forecasts suggests that if the City of Ottawa were to update their population forecasts today, they would be in line with the MoF Summer 2023 forecasts.
- A review of historical MoF forecasts between 2005 and 2018 demonstrates that these forecasts have been reasonably accurate in forecasting population growth in Ottawa over the proceeding 5-

year period. Further, any revisions to the long-term forecasts generally resulted in MoF anticipating a larger population in the City of Ottawa.

- The MoF population projections have historically been consistent with population forecasts prepared by the City of Ottawa up to 2019 and the longer-term population forecasts do not significantly change year-to-year. The report recommends that the Summer 2023 MoF forecasts should be used in assessing land needs in Ottawa to 2046.
- The MoF revises population forecasts from year-to-year for the City of Ottawa. It is noted that the revised forecasts typically result in the 2046 population in the city being larger than estimated in the previous years' projection. This reduces the risk that the city would expand its Urban Boundary beyond what is needed to 2046.
- Further the Parcel report concludes that the population forecasts prepared by the MoF for the City of Ottawa are now 18% higher than their projections from Spring 2019 and the forecasts prepared by the City of Ottawa and contained in Growth Projections for the New Official Plan (Methods and Assumptions for Population, Housing and Employment, 2018 to 2046). Accordingly, the City of Ottawa would need to accommodate 289,505 new dwelling units between 2018 and 2046. This is higher than the City of Ottawa 2019 Growth Forecasts, which estimates the need for 194,800 new units, summarizing that the city fails to meet the 15-year land supply of designated and available lands in the Urban Boundary.
- The conclusion of the Parcel Economics report is that City of Ottawa Official Plan growth numbers are too low and do not reflect future growth forecasted by the MoF which means Ottawa does not have sufficient land to be consistent with the 2024 PPS.

4.2 Servicing Considerations

A Step 1 Infrastructure Capacity Assessment application was submitted on March 4, 2025 (BEOPA-2024-681617) to determine the existing and planned servicing (water and sanitary) capacity. Based on the results of Step 1, a Step 2 assessment was triggered to determine where system capacities will not be available to support the proposed development based on planned system upgrades, identifying off-site works and the associated costs required to accommodate the expansion. Results from this application were received on October 17, 2025.

Wastewater Technical Memo

The report described three scenarios were reviewed as part of the Step 1 and 2 assessment process:

1. Existing Conditions
2. WWMP Future Conditions
3. OPA Future Conditions (with and without servicing conditions)

The report identifies that the subject lands can be potentially serviced by the following pumping stations (PS):

1. Shea Road PS
2. Kanata West PS
3. Hazeldean PS

Shea Road PS was initially considered but dismissed due to not have sufficient capacity to service the subject lands. This option was replaced by a fourth option: Kanata West PS would service parcel 6436 Fernbank Road while Hazeldean PS would service parcel 6437 Flewellyn Road.

The memo finds that the under the existing conditions, both Kanata West PS and Hazeldean PS can easily accommodate peak flows under typical wet weather events. The WWMP Future Conditions scenario also reported a similar result, stating that the Fernbank Trunk and the Stittsville Trunk and pumping station contain sufficient residual capacity. The OPA Future Conditions (with and without servicing conditions) scenario reviewed three potential considerations as there are multiple facilities to service the subject lands.

All three options were found to be viable with sufficient capacity remaining at the Kanata West and Hazeldean PS. The report stated that in spite of the presence of adequate servicing infrastructure, additional off-site sewer projects may be required to allow flows from the expansion area to connect into the system as there is no existing trunk infrastructure immediately adjacent to the subject lands.

Step 2 assessment reviewed the topography to understand on-site servicing constraints and routing challenges within the subject lands. The memo recommended that the flow be split between Kanata West and Hazeldean PS to accommodate growth within the 2046 growth horizon.

Water Technical Memo

The subject lands were evaluated through an analysis of existing pressure zone (PZ) boundaries to identify potential servicing constraints and assess the feasibility of supporting urban expansion. The Step 1 assessment concludes that, while the lands do not necessitate upgrades to upstream infrastructure within the existing 2W and 3W pressure zones, the current water distribution system is not capable of directly servicing the area in alignment with the targets outlined in the 2024 Infrastructure Management Plan (IMP).

To address this limitation, the assessment recommends the establishment of a new Stittsville pressure zone, supported by a new Stittsville Booster Pumping Station (PS). The extent and configuration of this new PZ will be determined through detailed engineering studies in future.

Furthermore, the memo identifies the need for off-site water distribution infrastructure to enable servicing of the subject lands. This requirement will result in additional infrastructure-related costs, which must be considered in the broader planning and implementation framework for urban expansion in the area.

Overall, we note that the servicing memo's provided by the City do not raise major concerns or risks to service the subject lands, contrary to the relatively low servicing score the lands received in the City Staff Report to the joint meeting of Planning Committee and Agriculture and Rural Affairs Committee on January 25, 2021.

The memos identify off-site servicing works to ensure long-term serviceability. We note that there is need for future infrastructure investment that should be factored into planning and financial considerations as the area moves toward urban expansion. The servicing memos are attached in Appendix A of this report.

4.2.1 Arcadis Review of City's Technical Memos

Claridge Homes retained Arcadis to perform a detailed review the City's servicing assessment memos for water and wastewater infrastructure required to support the subject lands. A high-level summary of the Arcadis's review for wastewater and water is provided below:

Review of Wastewater Memo

Arcadis acknowledged that the flow splitting wastewater servicing alternative is a technically viable solution. However, Arcadis notes that additional investigation may be beneficial in identifying a single outlet alternative that could be more efficient and cost effective solution to service the subject lands.

The single outlet sanitary sewer alternative will also eliminate the need to do any trunk sanitary sewer work in the immediate vicinity of the wetland to the north of the Claridge lands, in order to develop the 6435 Fernbank Road portion of the subject lands, eliminating any environmental concerns associated with the proposed sewer connection to Abbott Street.

The complete review is attached as Appendix B to this report.

Review of the Water Memo

Arcadis notes that in the City's technical water memo, the City's new water servicing plan removes a previously planned solution for Stittsville's low water pressure (a new pressure zone and pumping station). This change allows for 2W Expansion Area to develop early without paying for its share, while subject lands face restrictions and could bear major costs alone. In their review of the City's memo, Arcadis recommends to either allow interim water access for the subject lands or reinstate the pressure zone in the Infrastructure Master Plan so all areas contribute fairly and the low-pressure issue is resolved.

The complete review is attached as Appendix B to this report.

4.3 Environmental Considerations

A Natural Heritage Screening (NHS) was completed by Stantec for the subject lands and lands within 120 m of the subject lands. The purpose of the desktop review was to identify Natural Heritage Features and Areas (NHFA) that may overlap the Study Area which includes species at risk (SAR) and their habitats, Areas of Natural Scientific Interest (ANSI), Provincially Significant Wetlands (PSWs), Significant Wildlife Habitat (SWH), unevaluated wetlands, watercourses, fish nurseries, linkages and wildlife corridors,

significant woodlands, and significant valleylands. A variety of background documents and sources of information were consulted during the preparation of this report, to identify recent records (i.e., records from 2005 or later) of SAR and species of conservation concern (SOCC) within the subject lands.

The subject lands are within the Mississippi Valley Conservation Authority (MVC) and Rideau Valley Conservation Authority (RVCA) regulated areas and on lands designated as Natural Heritage System Core Area, Goulbourn PSW Complex, Fernbank Wetland (evaluated, non-significant), and woodlands.

The Goulburn Wetland Complex is located to the northwest of the subject lands. The northern half of the north parcel (6435 Fernbank Road) contains Provincially Significant Wetlands part of the Goulburn Wetland Complex (seen in **Figure 10**). The presence of these wetlands, along with associated watercourses, presents substantial environmental constraints that limit development opportunities on a significant portion of the site. These constraints may restrict the amount of land available for urban development and may also require careful planning and protection measures to preserve ecological integrity. As a result, the development potential of the parcel depends on adopting an environmentally sensitive approach to future land use planning in the area.

Approximately 38% of the parcel (27.54 hectares) is designated as Provincially Significant Wetland (PSW) (which also includes a 30.0m buffer), which limits development in those areas due to environmental protection policies. However, the remaining 61% of the parcel (approximately 44.34 hectares) lies outside the PSW boundary and therefore presents a significant opportunity for development. Subject to appropriate planning and environmental considerations, this portion of the land is suitable for future urban or rural development. If the lands are designated to *Category 1 – Future Neighbourhood Overlay*, we note that a future Secondary Plan and/or Community Design process will address the environmental constraints identified on the subject lands. We note that detailed studies and assessments will be required to ensure any future development is appropriately guided by ecological consideration which include the protection of provincially significant wetlands.

Furthermore, we note that including the PSW within the *Category 1 – Future Neighbourhood Overlay* does not prevent the City from considering development of these lands in the future, should the City deem the lands appropriate for urban development.

The southern parcel located at 6437 Flewellyn Road contains areas identified as Other Evaluated Wetlands. While these features require careful consideration, the parcel still holds development potential. Any future development would need to be preceded by appropriate environmental studies and precautionary measures to assess the suitability of the land and ensure compliance with applicable regulations.

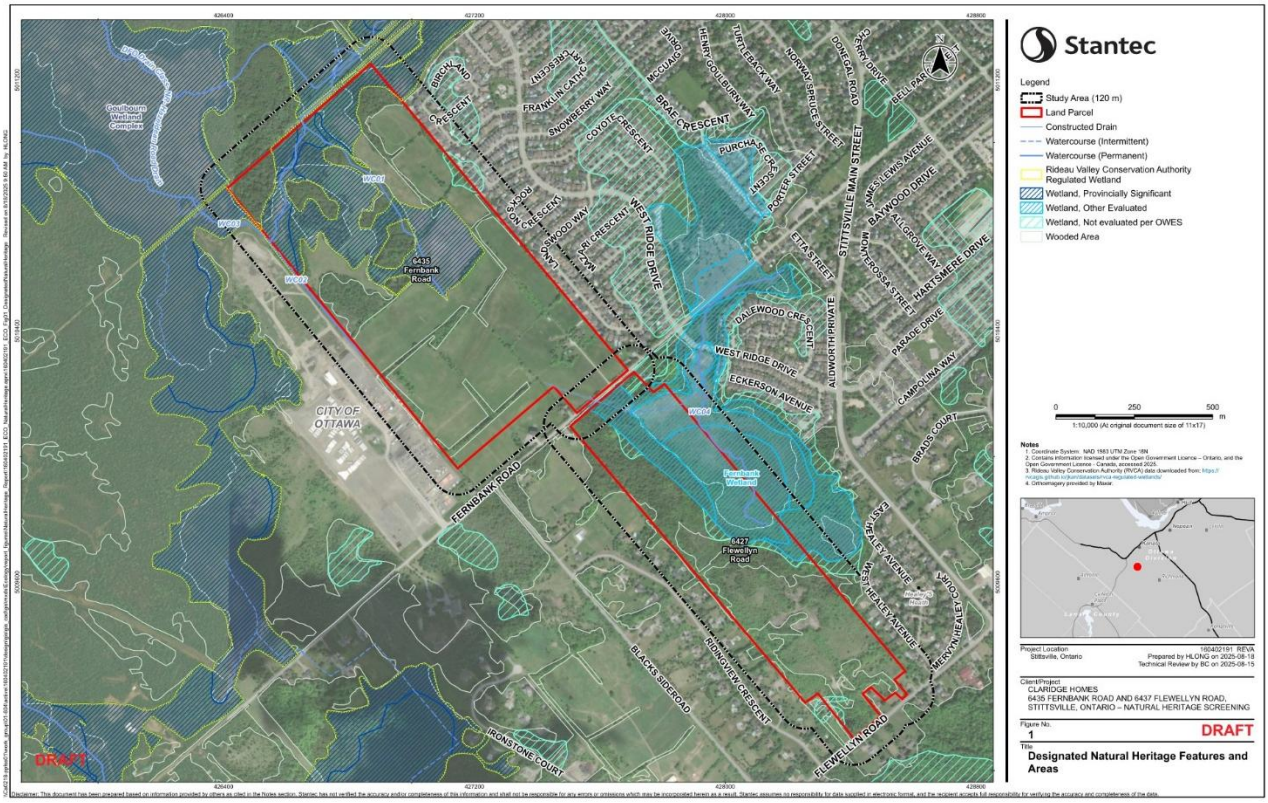


Figure 10. shows designated Natural Heritage Features and Areas within the subject lands.

The subject lands provide habitat for plant Species at Risk (SAR such as Black Ash, Butternut), breeding and migratory birds, including species listed on Schedule 1 of the MBCA (Pileated Woodpecker), and potentially fish communities. Additionally, candidate SWH (bat maternity colonies, reptile hibernacula, turtle nesting areas, amphibian breeding habitat, marsh bird breeding habitat, habitat for SOCC) have been identified within the subject lands. We note the ecological significance of the site and understand that any future development will need to align with applicable environmental regulations and conservation guidelines.

Findings of the screening are provided below:

- There are no ANSIs, fish nurseries, linkages and wildlife corridors, significant woodlands, or significant valleylands within the Study Area.
- The north parcel (6435 Fernbank Road) contains permanent watercourses and provincially significant wetlands, part of the Goulburn Wetland Complex. There are no fish records for any of the watercourses. Portions of the subject lands provide habitat for species at risk (SAR), including plants, birds, and potentially fish communities. As such, further investigation and appropriate environmental assessments will be required to determine the suitability of the lands for future development.

- The south parcel (6437 Flewellyn Road) contains areas classified as Other Evaluated Wetlands. While these wetlands may require environmental consideration, they do not carry the same level of restriction as Provincially Significant Wetlands. As such, the lands are generally suitable for urban development, pending further review and appropriate mitigation measures through the planning process.
- The subject lands provide habitat for a variety of animal and plant species and plants, which require additional detailed assessments and evaluations. Understanding the ecological value of the site will help guide responsible development and ensure compliance with environmental regulations and conservation policies.

4.4 Transportation Considerations

A Transportation Report was completed by Stantec in support of the OPA to assess the available transportation capacity through an evaluation of whether the existing and planned transportation infrastructure (such as roads and public transit) can support the proposed development on the subject lands.

The report finds that the subject lands require minimal changes to the Transportation Master Plan (TMP) concepts for auto and transit networks. The report conducted a screenline analysis to find that the trips from the subject lands will effectively utilize residual capacity in the roadway and transit network in the future total 2046 conditions. Minor changes to TMP concepts are recommended to better support transit and active transportation usage to and from the subject lands.

The report concludes that under:

- Existing Conditions – there is insufficient transit capacity for ridership across screenline 1, specifically on West Ridge Drive and Eagleson Road. There is residual auto roadway capacity across both screenlines.
- Existing Conditions – The subject lands would benefit from nearby, planned TMP projects, such as Transit Priority Corridors on Stittsville Main Street, Hazeldean Road, and Fernbank Road, O-Train Line 3 Extension, road urbanization and main street improvement projects on Stittsville Main Street and Fernbank Road, expanded roadway capacity through Carp Road and Robert Grant Avenue, and bike lanes on West Ridge Drive.

Future Background 2046 – There is overall residual transit capacity across screenline 1 in future background conditions likely from planned transit improvements and increased capacity in the area. However, West Ridge Drive and Eagleson Road continue to have insufficient capacity for the projected ridership on the screenline. There is residual auto roadway capacity across both screenlines in future background conditions.

Future Total 2046 – Recommendations – In terms of screenlines in future total conditions with the addition of site-generated trips, the transit network across screenline 1 will reach capacity and the

roadway network will remain well under capacity. Therefore, site-generated trips will effectively use future residual transit and roadway capacity at a network level.

4.5 Climate Change Master Plan Considerations

The Climate Change Master Plan is the City's overarching framework to reduce greenhouse gas emissions and respond to the current and future effects of climate change. Although, premature to relate the plan to the proposed OPA, the development of the subject lands will help provide an efficient use of land proximate to the urban boundary that can contribute the critical mass necessary to support conditions for a 15-minute neighbourhood within this area of Stittsville.

5 Conclusion

The Official Plan recognizes that the City is growing, and this growth presents significant challenges such as the provision of a range of housing choices, encouraging transportation reliability, and improving public amenities and services.

It is our professional opinion that the redesignation of the subject lands, to *Category 1 - Future Neighbourhood Overlay* on Schedule C17 represents a logical and efficient approach to accommodating growth. This designation would support a well-planned extension of municipal services and infrastructure, making use of the lands that are adjacent to the existing Stittsville community. The inclusion of these lands within the urban boundary offers a timely opportunity to respond to population growth pressures while promoting compact, sustainable development.

Based on the findings of the Parcel Economics report, it is logical to proactively address land needs now, rather than when the forecasts are updated as part of the next Official Plan Review would be a logical path to follow.

Moreover, this expansion aligns with the City's broader planning objectives, including the creation of complete communities and the advancement of 15-minute neighbourhood principles. By integrating these lands into the urban framework, it provides an opportunity to facilitate the delivery of new housing in a compact manner benefiting both current and future residents. In this context, urban expansion a forward-thinking solution as well as a proactive step toward building a more resilient and inclusive city. By including the subject lands in the urban boundary, the City can better accommodate future population needs, support infrastructure investment, and promote complete communities that offer a high quality of life for all residents.

We request the redesignation of the subject lands for the following reasons:

- The proposed redesignation is consistent with the PPS by seeking to develop larger, underutilized parcels of land in proximity to existing services and amenities. The proposed boundary expansion is intended to support a diverse range of housing options, provide generous

green space for recreation, and leverage existing public service facilities and infrastructure where possible.

- There is a need to expand the boundary to provide a sufficient supply of lands to meet the 15-year supply requirement of the PPS based on the requirement to use the Ministry of Finance population forecast. The subject property is ideally located to meet the City's objectives while achieving the necessary land supply since it is adjacent to an existing urban area, and readily serviceable with very minor enhancements to existing infrastructure.

- The redesignation and proposed development conform to the goals, objectives, and policies of the Official Plan. The lands are in proximity to the urban boundary and will help contribute the critical mass necessary to support a 15-minute community. The density and housing choices proposed for the subject lands help achieve the City's objectives for growth management to accommodate the projected growth in population.

- After being added to the urban area on Scheduled C17, the subject lands will follow a Secondary Plan process or Community Design Plan in accordance with the *Annex 4: Local Plan Framework* and *Section 12 – Local Plan of the Official Plan* to outline community design and goals that support a 15-minute neighbourhood concept.

- The proposed future development of the subject lands will require additional Planning Act approvals, including rezoning. The future zoning would allow for a more compact redevelopment of the lands.

- The servicing memos reviewed as part of the Step 1 and 2 Infrastructure Capacity Assessment do not identify any major concerns suggesting that, from a technical standpoint, the lands are considered serviceable within the broader municipal infrastructure framework. The memos indicate that infrastructure upgrades will be required in the future to support full build-out and ensure long-term service reliability.

- The presence of the Goulburn Wetland Complex on the north parcel (6435 Fernbank Road), which includes Provincially Significant Wetlands (PSWs), introduces environmental constraints that will need to be carefully addressed through more detailed investigation and planning. These constraints will require detailed environmental studies and assessments to determine the extent of protection needed and to guide any potential development.

- Accordingly, we recommend approval of the proposed Official Plan Amendment to redesignated them as *Category 1 - Future Neighbourhood Overlay* on Schedule C17, add the subject lands into the City's Urban Boundary, and support the City's requirement under the PPS to provide a 15-year supply of land designated and available for residential development.

Appendix A

MEMO

To:	Cam Elsby, P.Eng. (City of Ottawa)	From:	GEI Consultants Canada Ltd.
GEI Project:	2501074 – City of Ottawa Urban Expansion Area Hydraulic Assessments (Wastewater)	Date:	September 23, 2025

West Stittsville Urban Expansion Area Assessment

1 Introduction

The City of Ottawa (the "City") has recently completed the new Official Plan (OP) and Infrastructure Master Plan (IMP). GEI Consultants Canada Limited (GEI, formerly GM BluePlan Engineering Limited) was previously retained to complete the Wastewater Master Plan (WWMP) as part of the IMP.

The Ministry of Municipal Affairs and Housing (MMAH) provided a set of urban expansion lands that were reviewed as part of the IMP. The IMP recommended system-level water and wastewater infrastructure to support these lands and to be ultimately incorporated into the urban boundary as part of the Province's final approval of the City's Official Plan. However, these expansion areas were subsequently removed from the Official Plan (and therefore from the IMP), with individual developers now eligible to apply to expand the urban area on an ad-hoc basis. This new process is the result of the Province of Ontario issuing a Provincial Planning Statement (PPS) in October 2024, which enables private landowners to request an expansion of the urban boundary at any time, outside of a comprehensive review or OP update. If a proponent wishes to include land within the urban boundary, they may make an application for an Urban and Village Boundary Expansion Official Plan Amendment (OPA). This process is generally site-specific and consist of the following five (5) steps:

Step 1: Assess existing servicing capacity
Step 2: Identify new servicing capacity
Step 3: Assess land need
Step 4: Settlement area parcel analysis
Step 5: Council decision

The City has retained GEI to complete Steps 1 and 2 as part of the "Sanitary Infrastructure Needs Assessment for Boundary Area Expansion Applications". Step 1 and Step 2 are further detailed below:

Step 1 aims to establish the baseline capacity of the system as well as identify deficiencies in supporting the planned growth outlined in the boundary area expansion applications. The key output of Step 1 is a hydraulic model capacity assessment of existing infrastructure.

Step 2 will assess how to address potential capacity constraints in the study area through identifying servicing solutions and developing subsequent conceptual designs to determine feasibility and Class D cost estimates. The key outputs of Step 2 are the development of conceptual design information to inform the feasibility, and Class D cost estimates for required trunk infrastructure.

2 Background

2.1 Study Area

The City has identified that there will likely be impacts to the Stittsville area through expansion of the City's urban boundary (this expansion area is referred to in this document as "West Stittsville"). This will require a review of the extent and timing of projects identified in the recent Wastewater Master Plan. The affected infrastructure downstream of the West Stittsville expansion area proposed in the OPA boundary expansion area may require a conceptual design and Class D cost estimate for the required infrastructure improvements if Step 1 deems the existing off-site infrastructure is unable to support the growth.

As part of the assessment, the area review consisted of the following:

Capacity Review

- Assess the capacity of the Fernbank Road Trunk and the Stittsville Trunk to accommodate the flows from West Stittsville.
- Assess the future capacities of Hazeldean Pumping Station (downstream of Fernbank Road Trunk) and Kanata West Pumping Station (downstream of Stittsville Trunk) to verify remaining capacities at each facility.
- A previous version of the IMP which included additional lands added by the Province of Ontario (MMAH) confirmed sufficient trunk capacity in the downstream infrastructure; however, the area has since expanded to include the area south of Fernbank Road to be assessed. As such, the project flows are higher than previously reviewed in the IMP and may require additional projects not previously identified.

Servicing Solutions

- Identify off-site trunk sewer projects which are required to convey flows to downstream pumping station(s); if no off-site upgrades are required, there may still be a need to provide extension of existing trunk sewer infrastructure to the limits of the expansion area.

The West Stittsville area is currently within the bounds of the suburban community Stittsville, with the study area only considering residential population. Two predominant areas are reviewed as part of the assessment: 6435 Fernbank Road (identified as Area A for the assessment) and 6437 Flewellyn Road (identified as Area B for the assessment). The estimated build-out population is 6,562 people allocated to these developments alone. No employment is currently planned.

The total gross area of the West Stittsville expansion area is 111.98 ha, with the net developable area totalling 68.31 ha. Table 1 summarizes the population estimates and development area information for West Stittsville.

Figure 1 highlights the development plans for West Stittsville and Figure 2 provides an overview of both the study area's population and its subsequent wastewater flow generated.

Table 1: Summary of proposed development in study area

Future Development	Population	Net Developable Area (ha)
6435 Fernbank Road (Area A)	4,405	43.85
6437 Flewellyn Road (Area B)	2,457	24.46
Total:	**6,562**	**68.31**

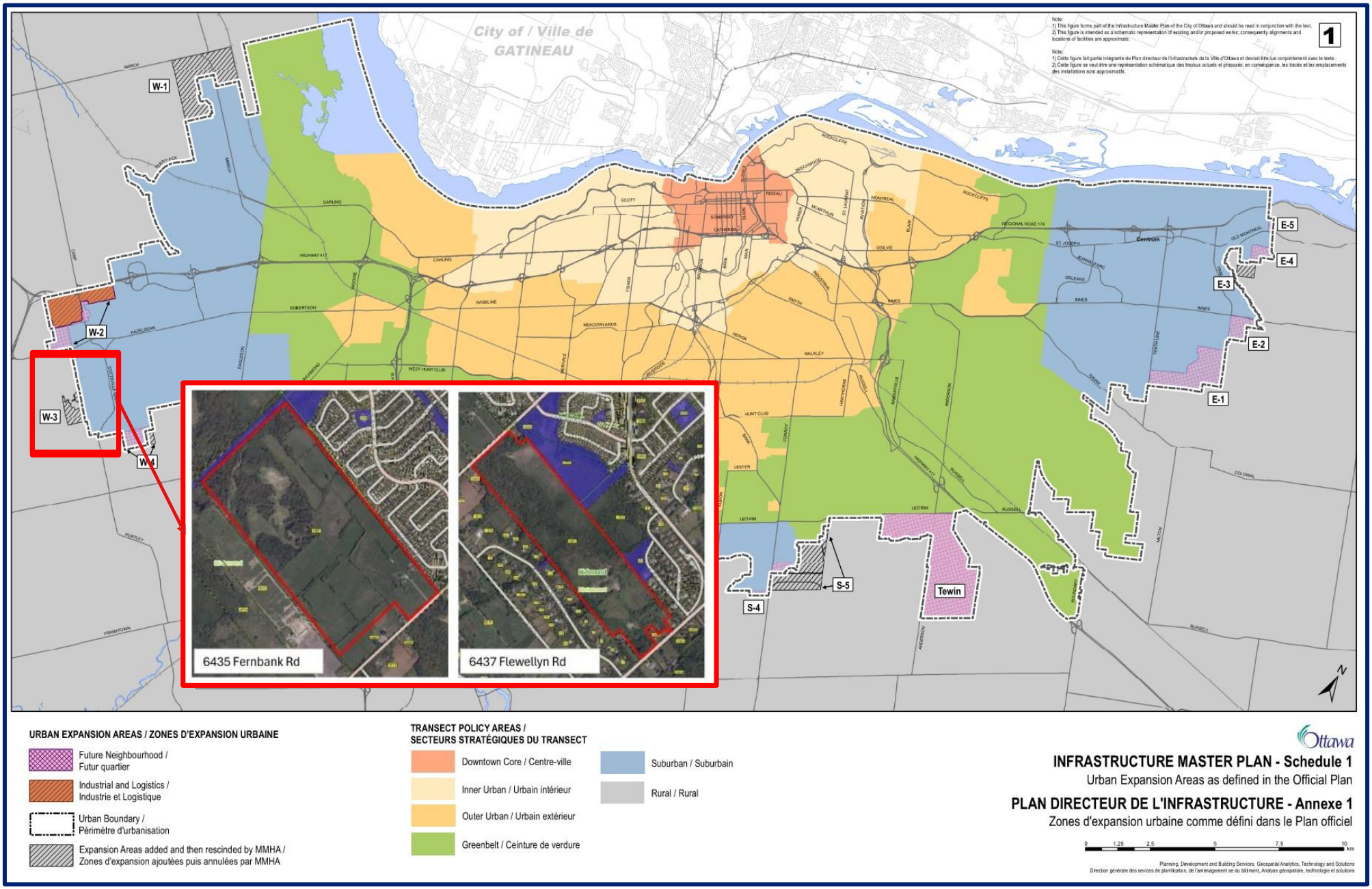


Figure 1: West Stittsville Figure

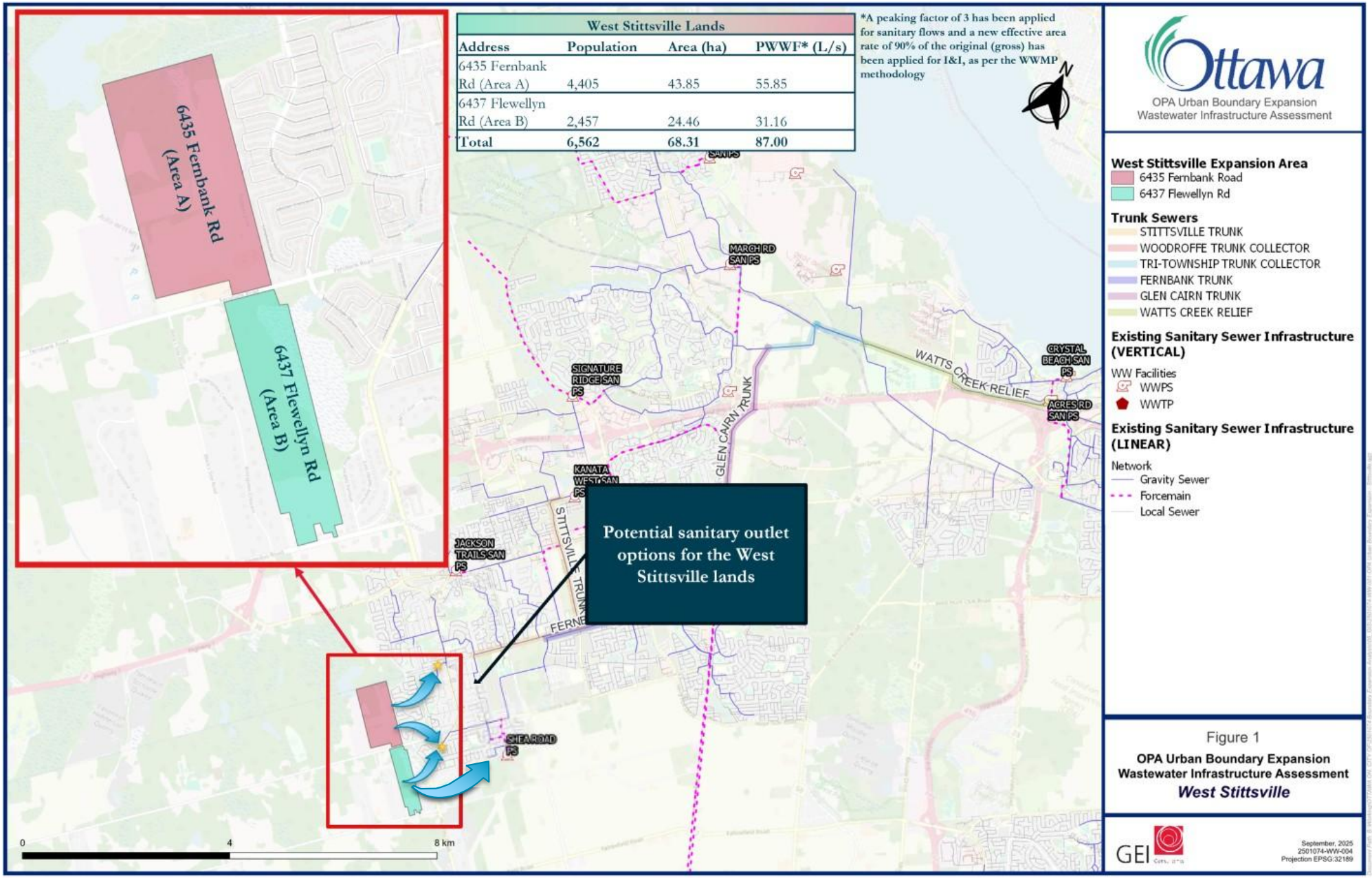


Figure 2: Study Area and System Overview

2.2 Background Information

To better understand the constraints of the study area, previous studies were reviewed. This includes the following studies:

- City of Ottawa 2024 Infrastructure Master Plan (2024)
- Stittsville South Urban Expansion Area (W-4) Master Servicing Study (2025)

City of Ottawa 2024 Infrastructure Master Plan (IMP)

As part of the WWMP assessment, 2046 population growth projections were used to develop a future hydraulic model scenario, with the aim of assessing future collection system performance and identifying necessary infrastructure improvements to accommodate increased demands from population growth.

The 1-in-25-year and 1-in-100-year June 2014 events were the primary triggers to identify a future system capacity constraint. The hydraulic model results were reviewed to identify sewers within the same general location which showed capacity issues and served as the basis for comparison between existing system capacity issues and system capacity issues caused because of future growth.

Six geographical areas were identified for the WWMP, where West Stittsville was assessed as part of the West geographical area. The West area comprises of the West Urban Community, including Carp, Richmond, Kanata, Munster, Bell's Corner and Stittsville. Major trunk sewer infrastructure downstream of the West Stittsville lands (expansion area) include the Fernbank Road Trunk, Stittsville Trunk, Glen Cairn Trunk, Watts Creek Relief, Lynwood Trunk Collector, South Ottawa Trunk Collector, South Ottawa Tunnel, terminating at the City's wastewater treatment plant (ROPEC).

The Watts Creek Relief sewer collects and conveys all flows from this area to the Acres Pump Station. Under existing conditions, surcharging was seen in the March Ridge Tri-Township Area, including the Watts Creek Relief pipe.

Similarly, under future conditions, results were consistent with what was seen in existing conditions: areas that were surcharging under existing conditions continued to surcharge under future conditions without mitigations in place. The IMP identified planned infrastructure improvements which resolve the surcharging already seen in existing conditions, including:

- A capacity upgrade to 110 L/s and new forcemain were recommended as projects for Shea Road PS. The purpose of the projects is to accommodate the projected growth up to 2046 based on growth projections provided by City planning staff.
- A capacity upgrade was a recommended project for Kanata West PS. The purpose of the project is to accommodate the projected growth up to 2046 by increasing the capacity to 1,250 L/s.

MMAH provided a set of provincial lands that were reviewed as part of the IMP, which were then incorporated into the analysis and model to ensure projects identified were able to handle the projected future population.

However, prior to the completion of the IMP these lands were removed from the analysis. While it was previously determined the projects identified had sufficient capacity to support these lands, the growth and future servicing identified for West Stittsville differs than what was previously reviewed; as such, it is imperative to complete this assessment for the new West Stittsville lands to ensure the future projects identified in the IMP can support this additional expansion.

Stittsville South Urban Expansion Area (W-4) Master Servicing Study

A Master Servicing Study was conducted for Stittsville South Urban Expansion Area (SSUEA), otherwise identified as W-4 by MMAH. The area is south of Shea Road PS, adjacent to Flewellyn Road (south) and Shea Road (east). The MSS study indicates that the area would be serviced by Shea Road PS, with significant residual capacity available to be utilized by the SSUEA. While the Infrastructure Master Plan recommended a capacity upgrade at Shea Road PS to 110 L/s, the MSS (led by landowners) ultimately recommended increasing the capacity to 130 L/s based on the preferred land use plan and the inclusion of additional lands not considered in the approved Infrastructure Master Plan.

There would be adequate capacity at the station to accommodate future flows from Stittsville South (W-4); however, there would be insufficient capacity to also accommodate all the flows from the subject West Stittsville expansion area; however, a smaller portion of the flows from West Stittsville could be serviced by Shea Road PS. Because of the long distance from the subject lands to Shea Road PS, however, it is more likely that a servicing option with a shorter route to a nearer trunk sewer (e.g., Fernbank Trunk or Stittsville Trunk) would be a more logical servicing solution.

2.3 Discussions with Stakeholders

To keep stakeholders informed of the recommendations being made for the area, the Technical Advisory Committee (TAC) was consulted in two meetings.

Discussions with the project team at the City as well as the TAC included a summary of the current study area conditions, the impact to hydraulic performance under future demands, and potential concerns with maintaining existing level of service while enabling development in the West Stittsville lands.

As part of stakeholder discussions, the hydraulic assessment and proposed servicing strategy for West Stittsville were presented, and key feedback was received. Capacity of downstream infrastructure was reviewed. Alternative, local facilities were suggested for servicing, such as Jackson Heights PS; however, desktop-level review suggested routing flows from West Stittsville to the station would not be cost effective compared to Kanata West PS, Hazeldean PS, and Shea Road PS.

The concept of splitting the future flows between the two areas within the West Stittsville expansion area was generally agreed as a favourable option by the TAC, with Area A to be serviced by Kanata West PS and Area B to be serviced by Hazeldean PS. This is partially due to a high elevation ridge between the areas, which creates a drainage divide (Area A sloping from south to north and Area B sloping north to south). Additionally, the City noted that splitting the flows would be preferable to minimize the amount of additional flow received by either downstream pumping station (particularly Hazeldean PS as it is an older facility).

2.4 Level of Service and Design Criteria

As part of the hydraulic analysis, level of service (LOS) was assessed based on a set of design criteria. For the purposes of this assessment, level of service is defined as the expected hydraulic performance that serviced residents and business owners should expect to receive from the City's wastewater infrastructure. Methods to maintain the target level of service can include infrastructure upgrades to resolve existing issues and support additional growth, basement and surface flooding prevention measures, inflow and infiltration reduction, etc. The criteria used in this assessment originated from the WWMP to ensure consistency when reviewing and comparing results.

Three main hydraulic models were reviewed as part of this assessment:

- Existing Conditions
- Future Conditions All-Projects (without the addition of West Stittsville)
- Future Conditions All-Projects (with the addition of West Stittsville)

The hydraulic models were simulated under various design storms to compare hydraulic performance. As part of the LOS Review, the following storms will be used:

- 1-in-5-year June 2014 rainfall event (free flow)
- 1-in-25-year June 2014 rainfall event (projects flagged if 2.1 m HGL is triggered)
- 1-in-100-year June 2014 rainfall event (climate scenario for assessing resiliency)

It should be noted that the discussion of results is specific to the 1-in-25-year June 2014 event. Results for the 1-in-5-year and 1-in-100-year Event can be found in Appendix A.

When reviewing the results, the flow conditions for sewers will be assessed as follows:

- A sewer is considered free flowing when depth to diameter ratio (d/D) is less than 0.8 and the peak flow to theoretical pipe capacity ratio (q/Q) is less than 1
- A sewer is considered to be approaching surcharging by depth when the depth to diameter ratio (d/D) is between 0.8 and 1, but the theoretical pipe capacity is not exceeded ($q/Q < 1$)
- A sewer is considered surcharged by depth when the depth to diameter ratio is greater than or equal to 1 ($d/D \geq 1$), but the theoretical pipe capacity is not exceeded ($q/Q < 1$)
- A sewer is considered surcharged by flow when the depth to diameter ratio is greater than or equal to 1 ($d/D \geq 1$), and the theoretical pipe capacity is also exceeded ($q/Q \geq 1$)

In addition to sewer conditions, maintenance holes are also reviewed to identify areas of basement flooding risk.

- When HGL > 1.8m below ground level, the maintenance hole does not indicate basement flooding risk
- When HGL ≤ 1.8m below ground level, the maintenance hole is flagged as at potential risk for basement flooding
    - Clusters of nodes where HGL ≤ 2.4m below ground level were also flagged to identify an area of potential concern
- When HGL is above ground level, the maintenance hole indicates surface breakout (flooding)

2.5 Wastewater Flow Generation

The West Stittsville boundary expansion area would add over 6,500 additional people to be serviced by the City's sanitary system. An estimate of the future peak wet weather flow (PWWF) has been added to Table 2.

Table 2: Summary of proposed development, with PWWF estimate

Development	Population	Net Developable Area (ha)	PWWF[1] (L/s)
6435 Fernbank Road (Area A)	4,405	43.85	55.85
6437 Flewellyn Road (Area B)	2,457	24.46	31.16
Total:	**6,562**	**68.31**	**87.00**

[1] A new effective area rate of 90% of the original has been applied for I&I, as per the WWMP methodology

It is estimated that approximately 87 L/s will be generated from the new development within West Stittsville, which is in addition to the 2046 projected population as represented in the IMP. 2046 growth was identified in the IMP for the following stations:

- **Shea Road PS:** 4,248 future residents
- **Kanata West PS:** 19,107 future residents and 6,781 future employees
- **Hazeldean PS:** 30,826 future residents and 3,974 future employees

3 OPA Step 1 – Assessment of Existing and Planned Infrastructure Capacity

Three scenarios were reviewed as part of the Step 1 and Step 2 process of the OPA:

1. **Existing Conditions:** The system under operating conditions based on the 2019 model calibration
2. **WWMP Future Conditions:** The system under projected future conditions to the 2046 growth horizon, which includes infrastructure upgrades and growth projected for 2046. This scenario was used in the recently-completed 2024 WWMP. This does not include the West Stittsville expansion lands.
3. **OPA Future Conditions (with and without servicing solutions):** The system under anticipated future conditions for the 2046 growth horizon, which includes infrastructure upgrades, growth projected for 2046, and the West Stittsville expansion lands.

3.1 Servicing Configuration

The West Stittsville lands can be potentially serviced by multiple pumping stations, including:

1. Shea Road PS
2. Kanata West PS
3. Hazeldean PS

Shea Road was initially considered; however, after reviewing the Stittsville South Urban Expansion Area MSS and the projected flows from West Stittsville, it was omitted from the remainder of the assessment. This is because the expected ultimate capacity of Shea Road is 110 L/s, with the upgrade accounting for post-period capacity expected for the 2101 horizon. However, West Stittsville was not among the potential areas to be serviced by Shea Road PS in the future.

In addition to this, after servicing 2046 growth alone, the residual capacity at Shea Road PS is approximately 40 L/s in the 1-in-25-year scenario. With the projected flow of 87 L/s from West Stittsville, Shea Road PS does not have sufficient capacity to service the new expansion area.

The potential servicing configurations that were assessed can be seen in Figure 3 and are listed below:

Option 1: Kanata West PS to service Area A and Area B via the Stittsville Trunk

Option 2: Hazeldean PS to service Area A and Area B via the Fernbank Road Trunk

Option 3: Kanata West PS to service Area A, Hazeldean PS to service Area B

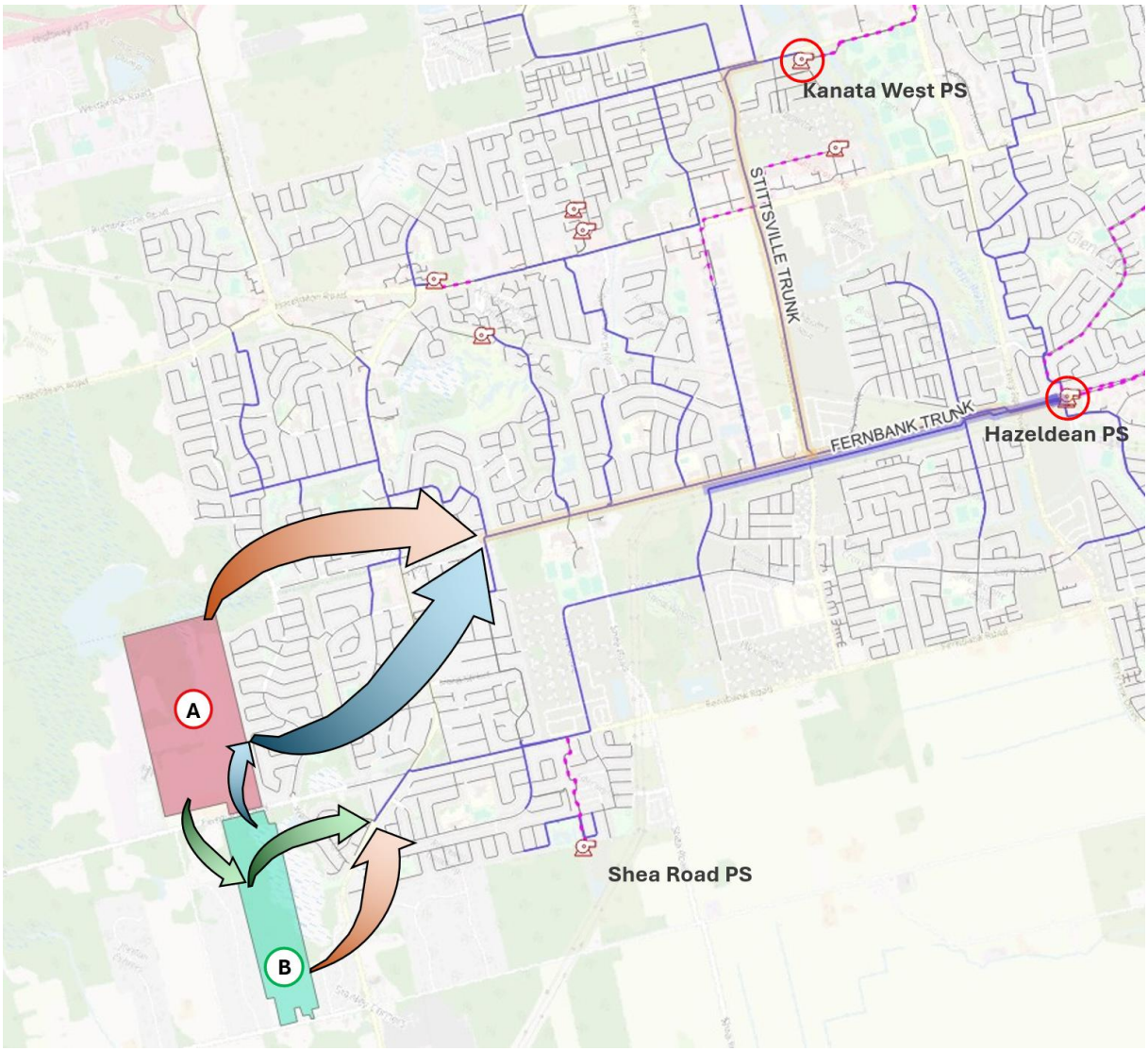


Figure 3: Potential Servicing Configurations

3.2 Capacity Analysis

Two major downstream pumping stations were reviewed through several model scenarios for this assessment: Kanata West PS and Hazeldean PS. Table 3, summarizes the inflow to the pumping stations as well as remaining capacity for existing asnd future conditions.

Table 3: Summary of Kanata West PS Capacity

Model Scenario		1-in-5-year		1-in-25-year		1-in-100-year	
Condition	**Rated Capacity**	**Peak Flow**	**Remaining Capacity**	**Peak Flow**	**Remaining Capacity**	**Peak Flow**	**Remaining Capacity**
Existing Conditions	**528***	334	297	404	227	467	165
WWMP Future Conditions	**1,250**	634	616	693	557	755	495
OPA Future Conditions (Option 1)	**1,250**	710	540	772	478	836	414
OPA Future Conditions (Option 2)	**1,250**	631	619	693	557	760	490
OPA Future Conditions (Option 3)	**1,250**	679	571	742	508	809	441

** The interim theoretical capacity of Kanata West PS is 631 L/s as per the facility's Environmental Compliance Approval (ECA).*

Table 4: Summary of Hazeldean PS Capacity

Model Scenario		1-in-5-year		1-in-25-year		1-in-100-year	
Condition	Rated Capacity	Peak Flow	Remaining Capacity	Peak Flow	Remaining Capacity	Peak Flow	Remaining Capacity
Existing Conditions	**1,225**	410	815	494	731	568	657
WWMP Future Conditions	**1,225**	782	443	865	360	943	282
OPA Future Conditions (Option 1)	**1,225**	783	442	865	360	945	280
OPA Future Conditions (Option 2)	**1,225**	874	351	955	270	1033	192
OPA Future Conditions (Option 3)	**1,225**	814	411	895	330	976	249

Overall, the two major downstream pumping stations have sufficient capacity in all presented scenarios. Both Kanata West PS and Hazeldean PS have significant remaining capacity after the addition of the West Stittsville lands growth.

3.3 Hydraulic Assessment

The following section discusses the hydraulic assessment completed for three scenarios:

1. Existing Conditions
2. WWMP Future Conditions
3. OPA Future Conditions

Capacity and performance at key infrastructure was reviewed, including Kanata West PS, Hazeldean PS, Stittsville Trunk, and the Fernbank Road Trunk.

Existing Conditions

Under existing conditions during a 1-in-25-year event, Kanata West PS has a rated capacity of 631 L/s. There is sufficient capacity remaining at the station, with 227 L/s remaining after a predicted peak flow of 404 L/s incoming to the station. Similarly, the Stittsville Trunk does not experience surcharging or other hydraulic constraints. Hazeldean PS has a rated capacity of 1,225 L/s. Like Kanata West PS, there is sufficient capacity at the station with 494 L/s remaining. Fernbank Road

Trunk also does not experience any significant hydraulic constraints, at 18% full by depth in the sewer segment with the lowest remaining capacity.

The profile of the Fernbank Trunk and Stittsville Trunk under existing conditions can be seen in Figure 4 and Figure 5, respectively.

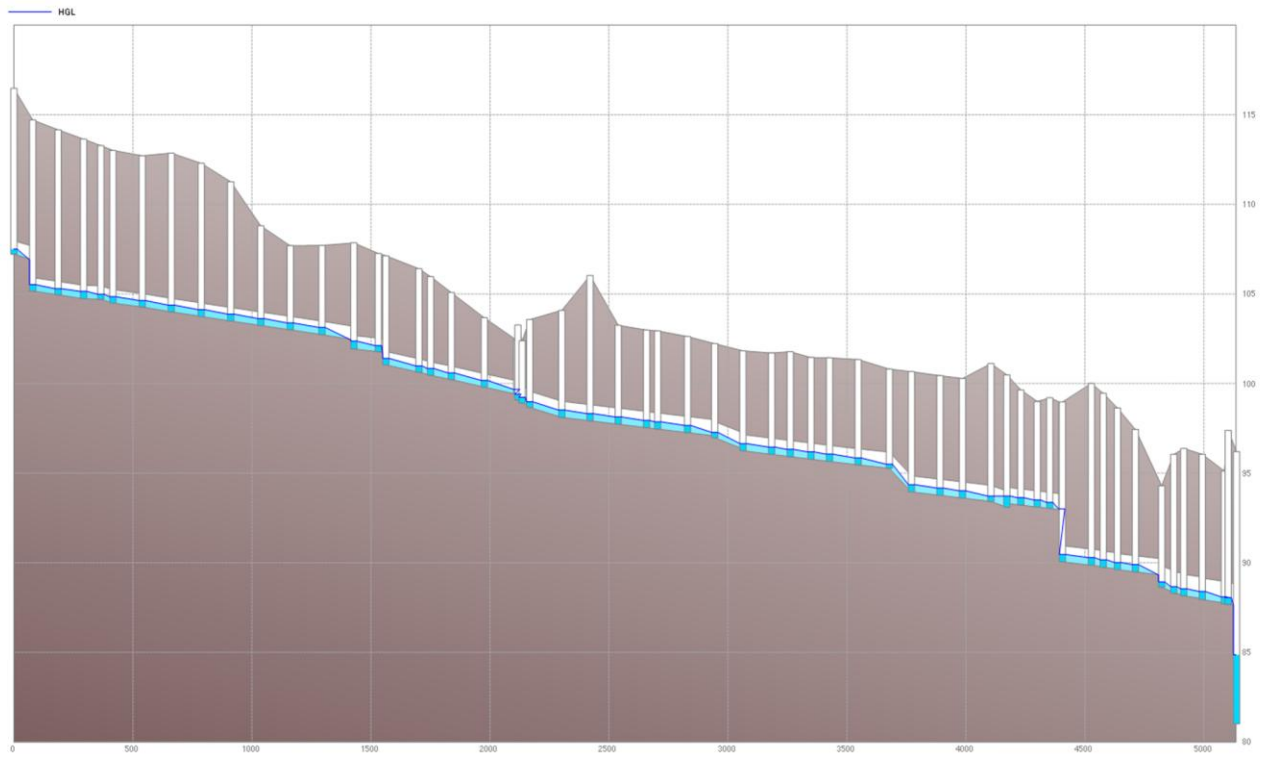


Figure 4: Profile view of Stittsville Trunk to Kanata West PS under existing conditions (1-in-25yr)

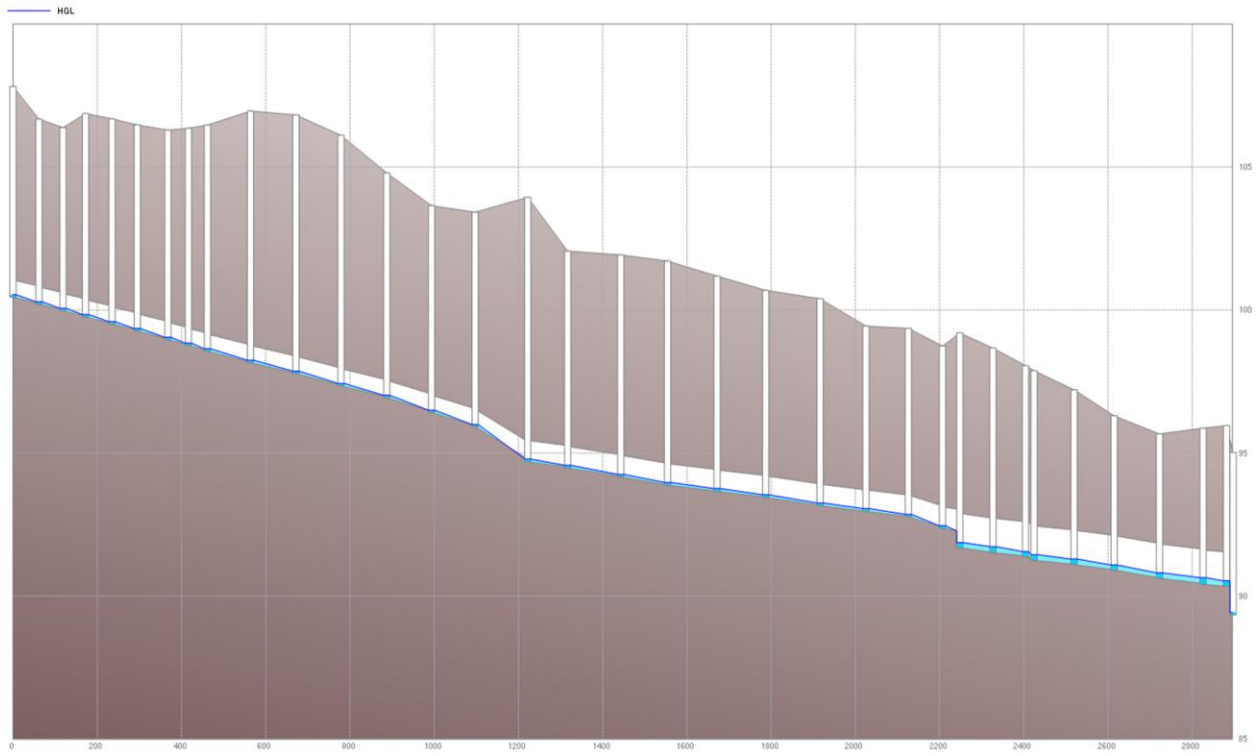


Figure 5: Profile view of Fernbank Road Trunk to Hazeldean PS under existing conditions (1-in-25yr)

WWMP Future Conditions

The WWMP future conditions scenario under a 1-in-25-year event performs similarly to existing conditions. With the implementation of the recommended project, Kanata West PS has an ultimate capacity of 1,250 L/s. With an expected inflow of 694 L/s, there is ample capacity remaining at the station, with 556 L/s remaining. The Stittsville Trunk remains less than 60% full by depth with 2046 growth loaded. Like Kanata West PS, there is sufficient capacity at Hazeldean PS with 360 L/s remaining. Both Stittsville Trunk and Fernbank Trunk do not experience any major hydraulic constraints.

The profile of the Fernbank Trunk and Stittsville Trunk under WWMP future conditions can be seen in Figure 6 and Figure 7, respectively.

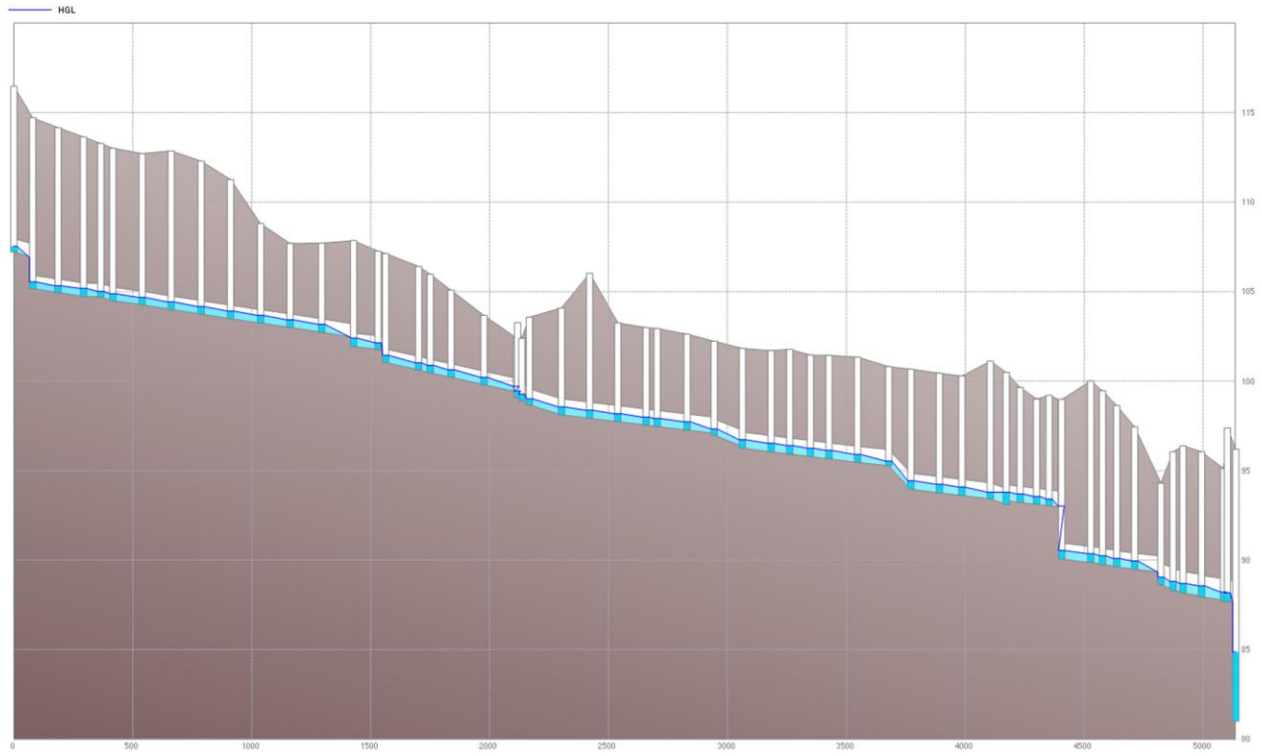


Figure 6: Profile view of Stittsville Trunk to Kanata West PS under WWMP future conditions (1-in-25yr)

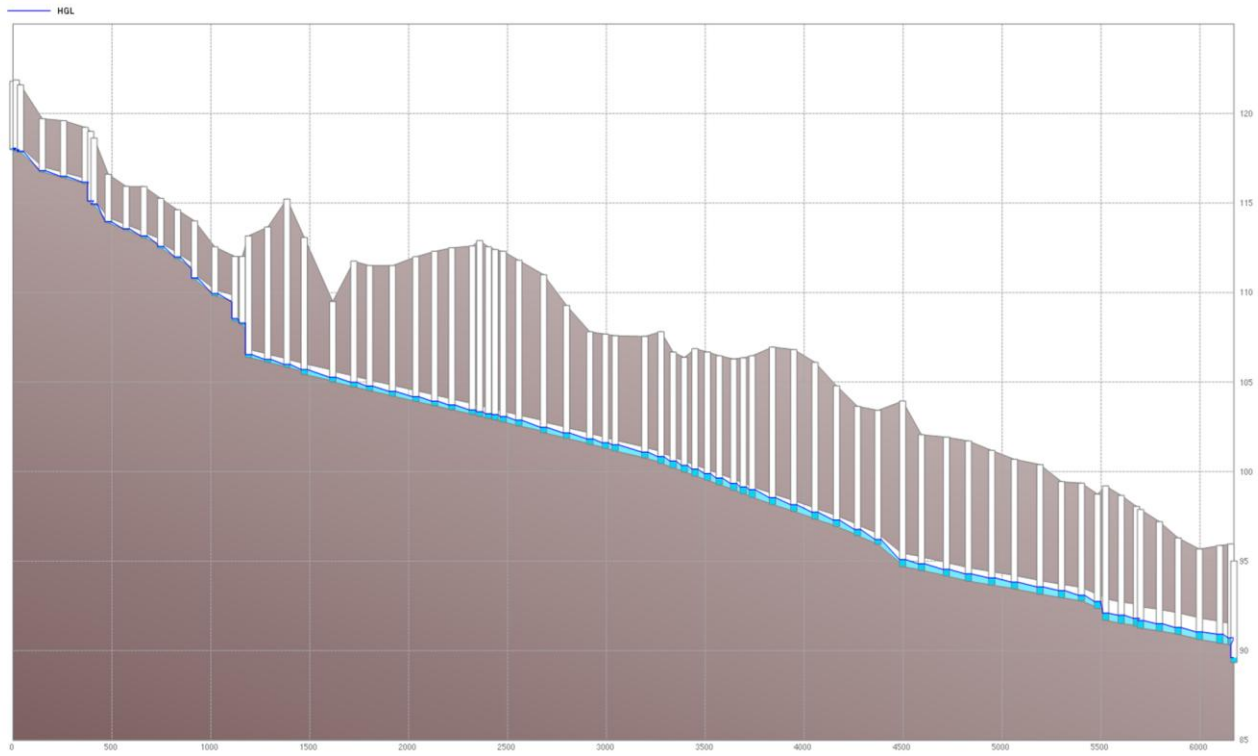


Figure 7: Profile view of Fernbank Road Trunk to Hazeldean PS under WWMP future conditions (1-in-25yr)

OPA Future Conditions (Option 1)

Option 1 proposes the servicing of West Stittsville by Kanata West PS via the Stittsville Trunk. With a peak inflow of 836 L/s into Kanata West PS, 414 L/s of residual capacity remains. As such, Kanata West PS can sufficiently support flows from the expansion area. Stittsville Trunk also does not experience any significant hydraulic bottlenecks, not surpassing 70% full by depth. The minimum freeboard seen along the trunk does not surpass 2.64 m, meeting the criteria noted for basement flooding prevention.

However, it should be noted that while there is sufficient capacity, Stittsville Trunk is approximately 2 km away from the northern area of the expansion lands where the flows would be expected to flow to. As such, for this option to be considered, an extension of the Stittsville Trunk may be required. This would be considered an off-site project.

The profile of the Stittsville Trunk under the OPA future conditions can be seen in Figure 8.

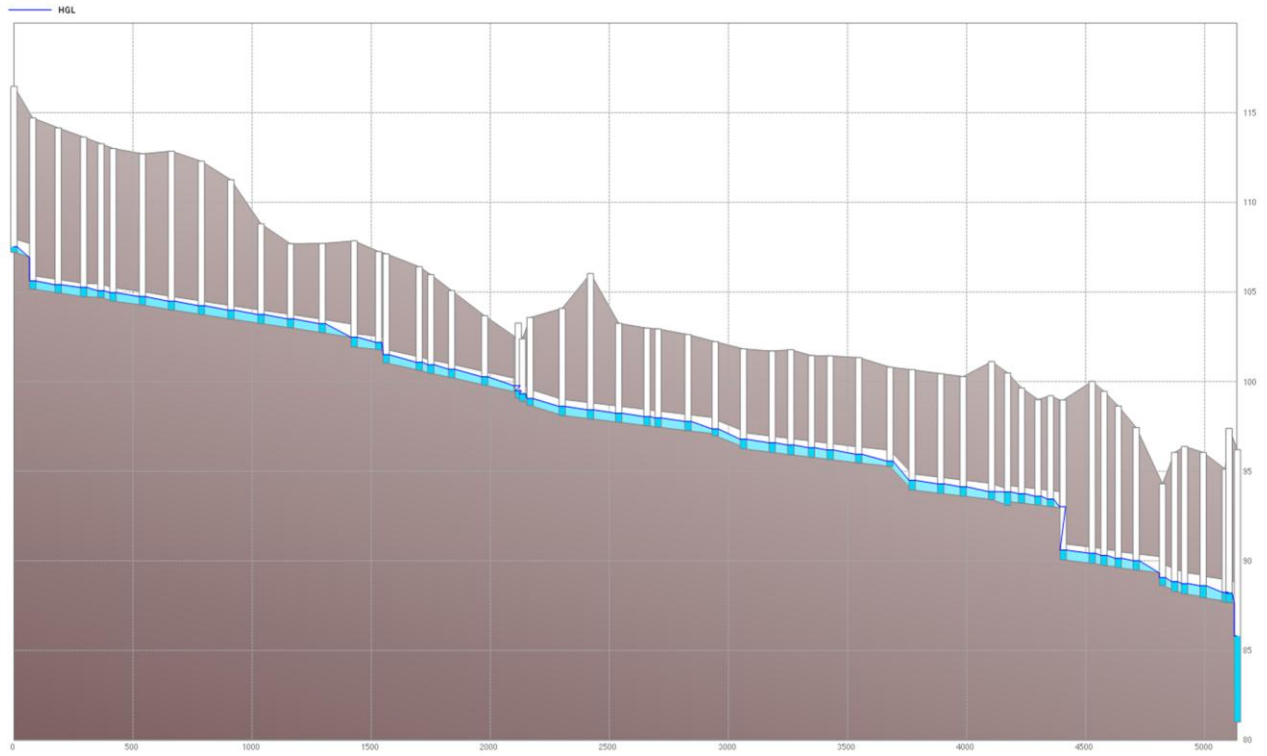


Figure 8: Profile view of Stittsville Trunk to Kanata West PS under OPA future conditions (Option 1) (1-in-25yr)

OPA Future Conditions (Option 2)

Option 2 proposes to service West Stittsville by Hazeldean PS via the Fernbank Road Trunk. With a peak inflow of 955 L/s into Hazeldean PS, 270 L/s of residual capacity remains. As such, Hazeldean PS can sufficiently support flows from the expansion area. Fernbank Road Trunk also does not experience any significant hydraulic bottlenecks; however, hydraulic bottlenecks are present in the local sewers along Fernbank Road, prior to entering the Fernbank Road Trunk. This is due to insufficient capacity within the 300 mm sewers, whereas Fernbank Road is seen to be free flowing. As such, to consider this as a viable option, an upsizing of these local sewers may be required.

Additional hydraulic constraints may be present depending on the exact connection point into the existing system. The Fernbank Road Trunk is approximately 1 km away from the eastern extent of Area B and as such, there are multiple manholes in the system where both areas may be able to eventually convey flows to the Fernbank Road Trunk. Two potential inlets were considered in later parts of the assessment: near Stittsville Main Street at Flewellyn Road or Fernbank Road at Stittsville Main Street. To utilize Stittsville Main Street, an extension of the existing sewer and upsizing local sewers to 450mm may be required to ensure this option is viable.

The profile of the Fernbank Road Trunk under the OPA future conditions can be seen in Figure 9.

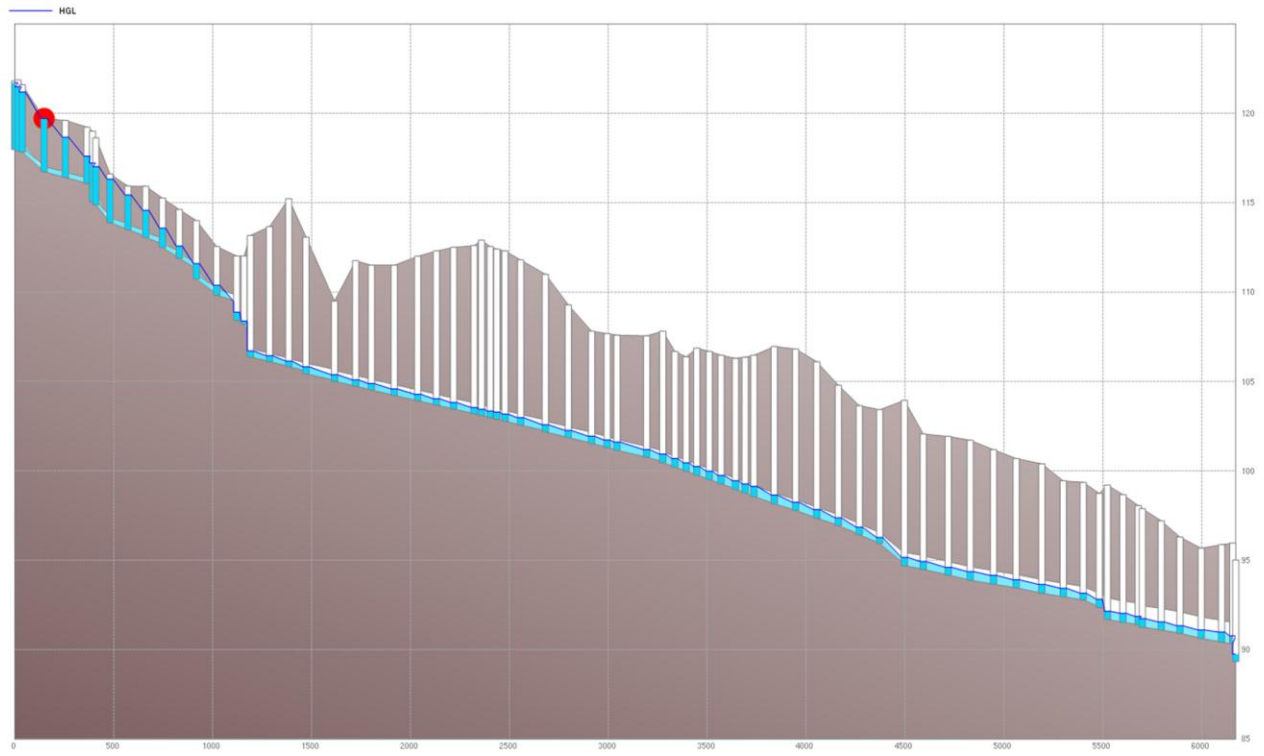


Figure 9: Profile view of Fernbank Road Trunk to Hazeldean PS under OPA future conditions (Option 2) (1-in-25yr)

OPA Future Conditions (Option 3)

Option 3 suggests to split the servicing of Area A and B dependent on the closest trunk available. This would assume Area A would be serviced by Kanata West PS via the Stittsville Trunk and Area B would be serviced by Hazeldean PS via the Fernbank Road Trunk.

With a peak inflow of 55.85 L/s from Area A into Kanata West PS, 508 L/s of station capacity remains. As such, Kanata West PS can sufficiently support flows from Area A. Stittsville Trunk also does not experience any significant hydraulic bottlenecks, not surpassing 67% full by depth. The minimum freeboard seen along the trunk does not surpass 2.68 m, meeting the criteria noted for basement flooding prevention.

Similarly, with a peak inflow of 31.16 L/s from Area B into Hazeldean PS, 330 L/s of residual capacity remains. As such, Hazeldean PS can sufficiently support flows from Area B. Fernbank Road Trunk also does not experience any significant hydraulic bottlenecks, at maximum 73% full by depth. The minimum freeboard seen along the trunk does not surpass 2.26 m, meeting the criteria noted for basement flooding prevention.

Similar projects suggested for Option 1 and 2 may be required to convey growth flows from the expansion area to the trunk infrastructure, such as the extension of the Stittsville Trunk or the extension of sewers along Fernbank Road or Stittsville Main Street. Upsizing of the existing

downstream sewers is not necessary for this option, due to the splitting of flows (i.e., lower incoming flows to each of Stittsville Main Street and Fernbank Road).

The profile of the Fernbank Trunk and Stittsville Trunk under WWMP future conditions can be seen in Figure 10 and Figure 11, respectively.

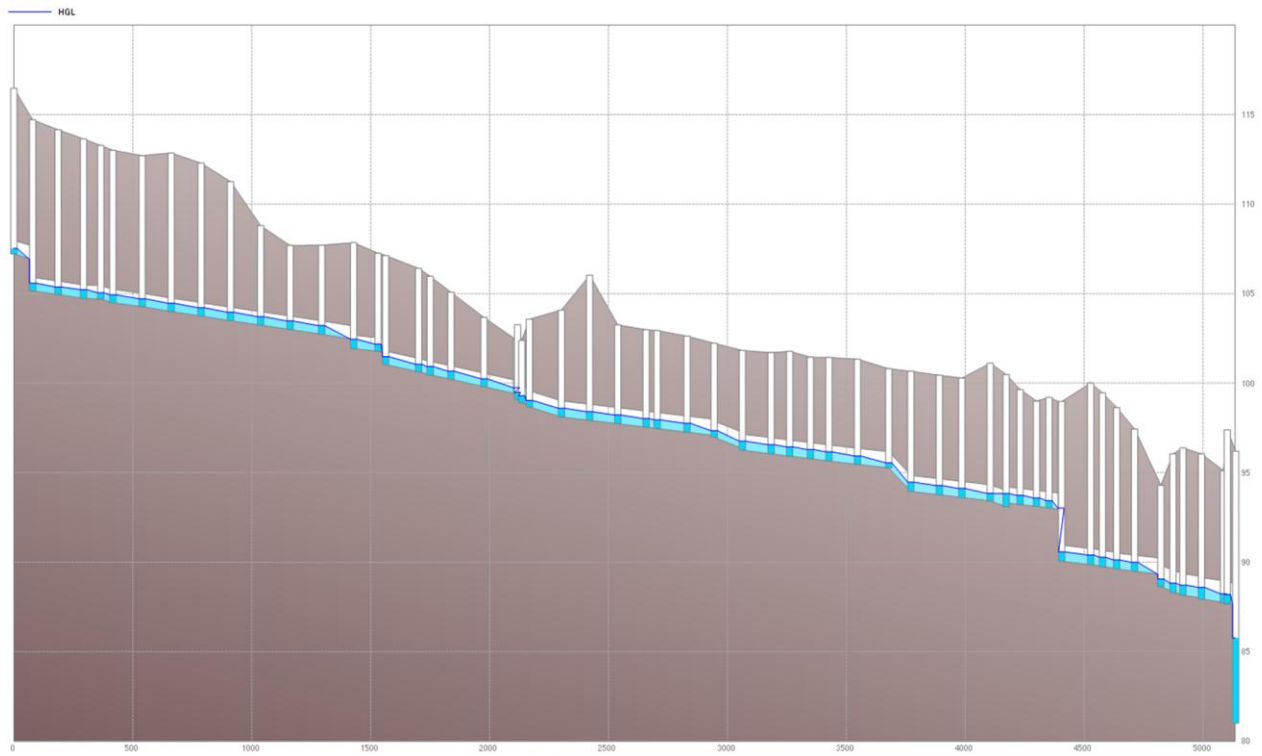


Figure 10: Profile view of Stittsville Trunk to Kanata West PS under OPA future conditions (1-in-25yr)

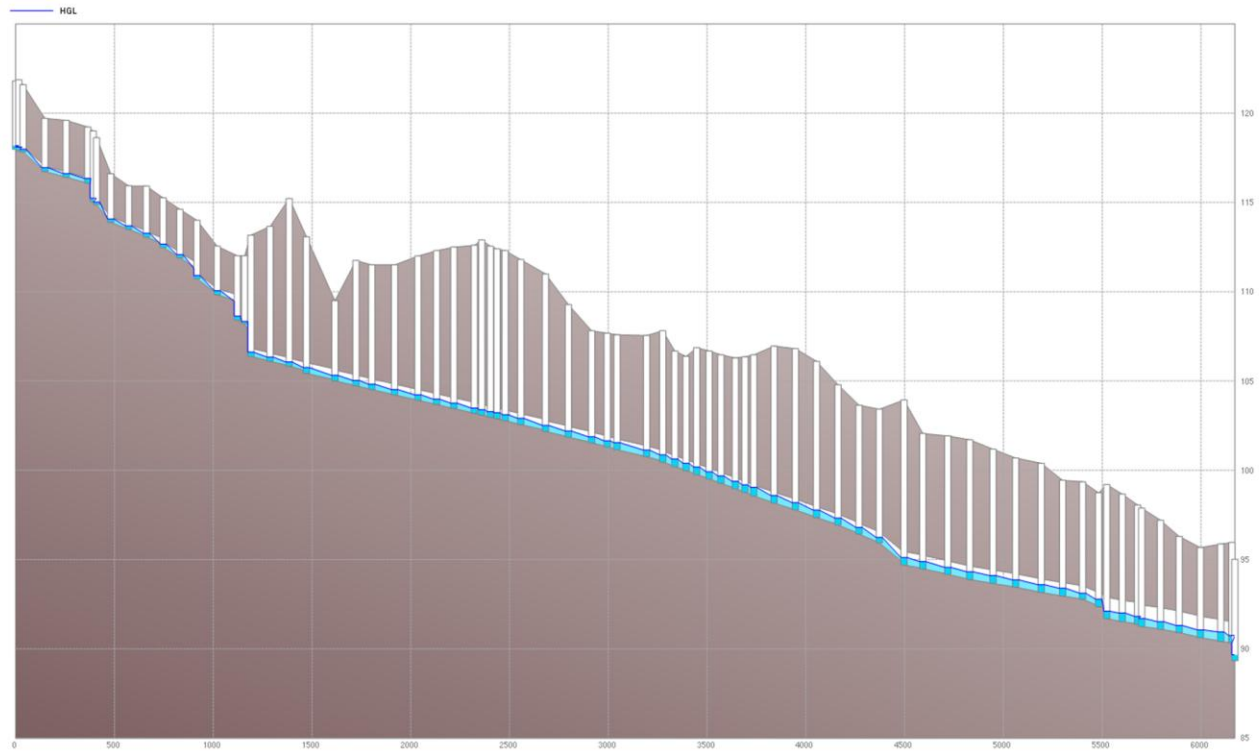


Figure 11: Profile view of Fernbank Road Trunk to Hazeldean PS under OPA future conditions (Option 3) (1-in-25yr)

3.4 Step 1 Conclusions & Recommendations

Overall, the hydraulic assessment evaluated three servicing scenarios for the West Stittsville expansion lands: (1) existing conditions, (2) WWMP future conditions scenario, and (3) OPA future conditions scenario. The OPA future conditions scenario further reviewed sub-scenarios: (3.1) routing flows to Kanata West PS, (3.2) routing flows to Hazeldean PS, and (3.3) splitting flows to both Kanata West PS and Hazeldean PS. These scenarios were assessed using hydraulic model outputs with a focus on identifying system constraints and verifying available capacity within the downstream trunk sewer system.

Under existing conditions, both the Kanata West PS and Hazeldean PS can easily accommodate peak flows under typical wet weather events. The downstream system, both the Fernbank Trunk and the Stittsville Trunk, remains largely free flowing. The WWMP future conditions scenario reports a similar result, with both trunks and pumping station facilities showing sufficient residual capacity.

The OPA future conditions scenario reviews three potential servicing configurations, as there are multiple facilities that can service the West Stittsville lands. All three options were viable, with sufficient capacity remaining at both stations. It should be noted in Option 2, local (<450mm) sewers along Stittsville Main Street were seen to be surcharging. This may indicate a pipe upsizing and trunk extension may be required, should the area be serviced along Stittsville Main Street as the preferred solution.

Overall, West Stittsville can be serviced by the existing downstream infrastructure; however, it is expected that additional off-site sewer projects may be required to allow flows from the expansion area to connect into the system, as there is no existing trunk infrastructure immediately adjacent to the subject lands. As such, the assessment proceeds to Step 2 to review potential servicing solutions for the expansion area.

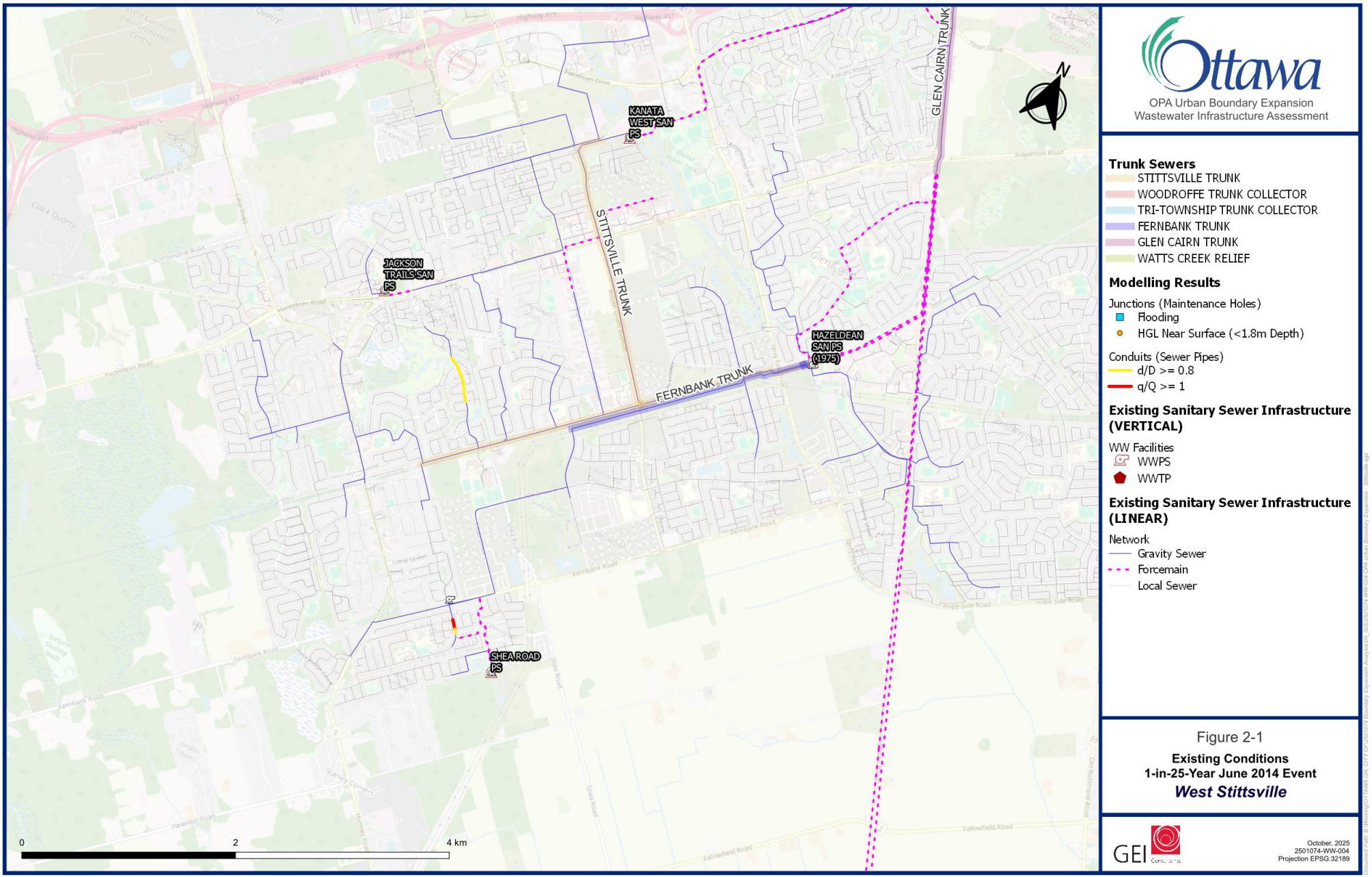


Figure 12: Map view of existing conditions

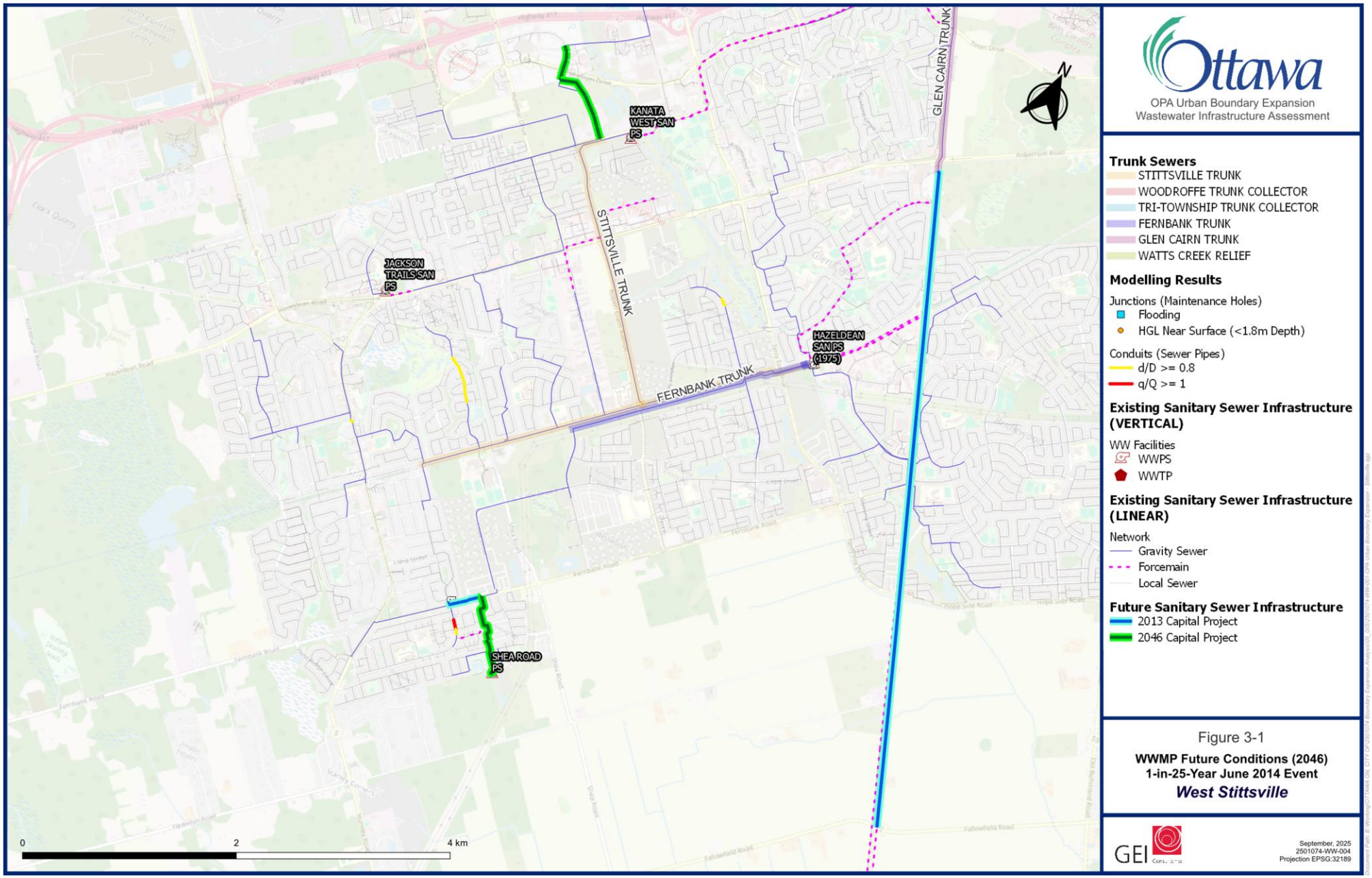


Figure 13: Map view of WWMP future conditions (no expansion area)

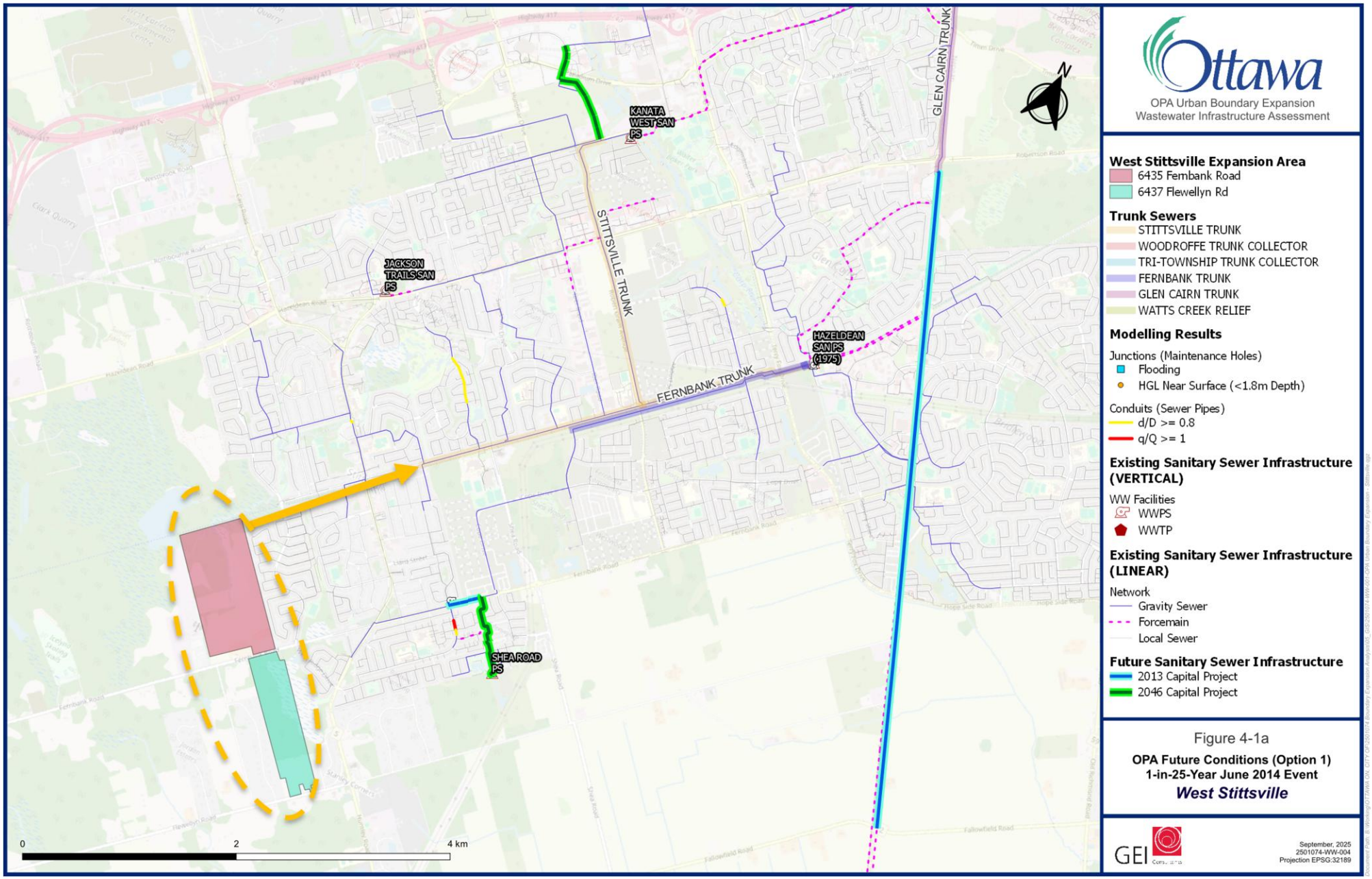


Figure 14: Map view of OPA future conditions (Option 1) (with expansion area)

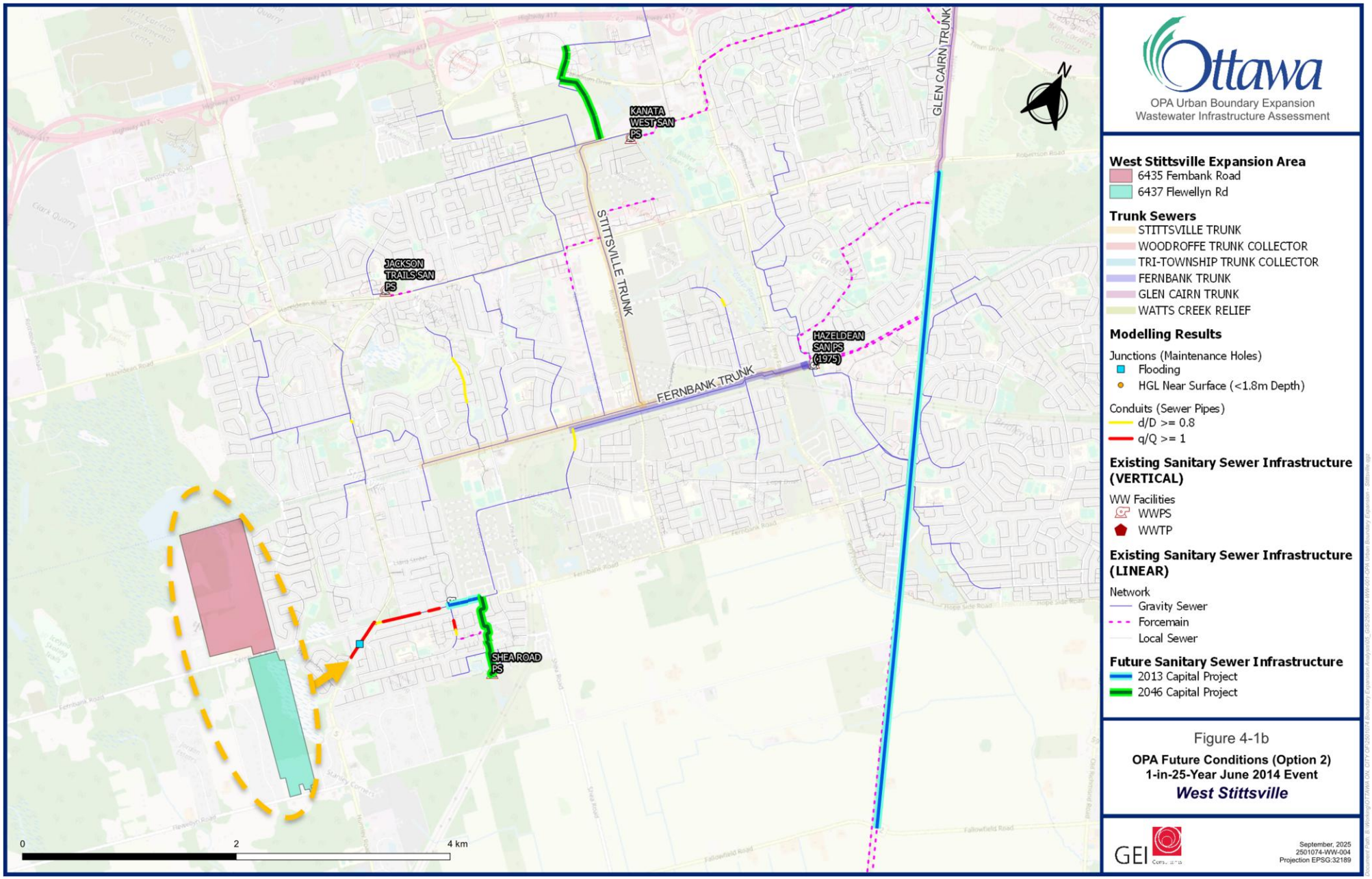


Figure 15: Map view of OPA future conditions (Option 2) (with expansion area)

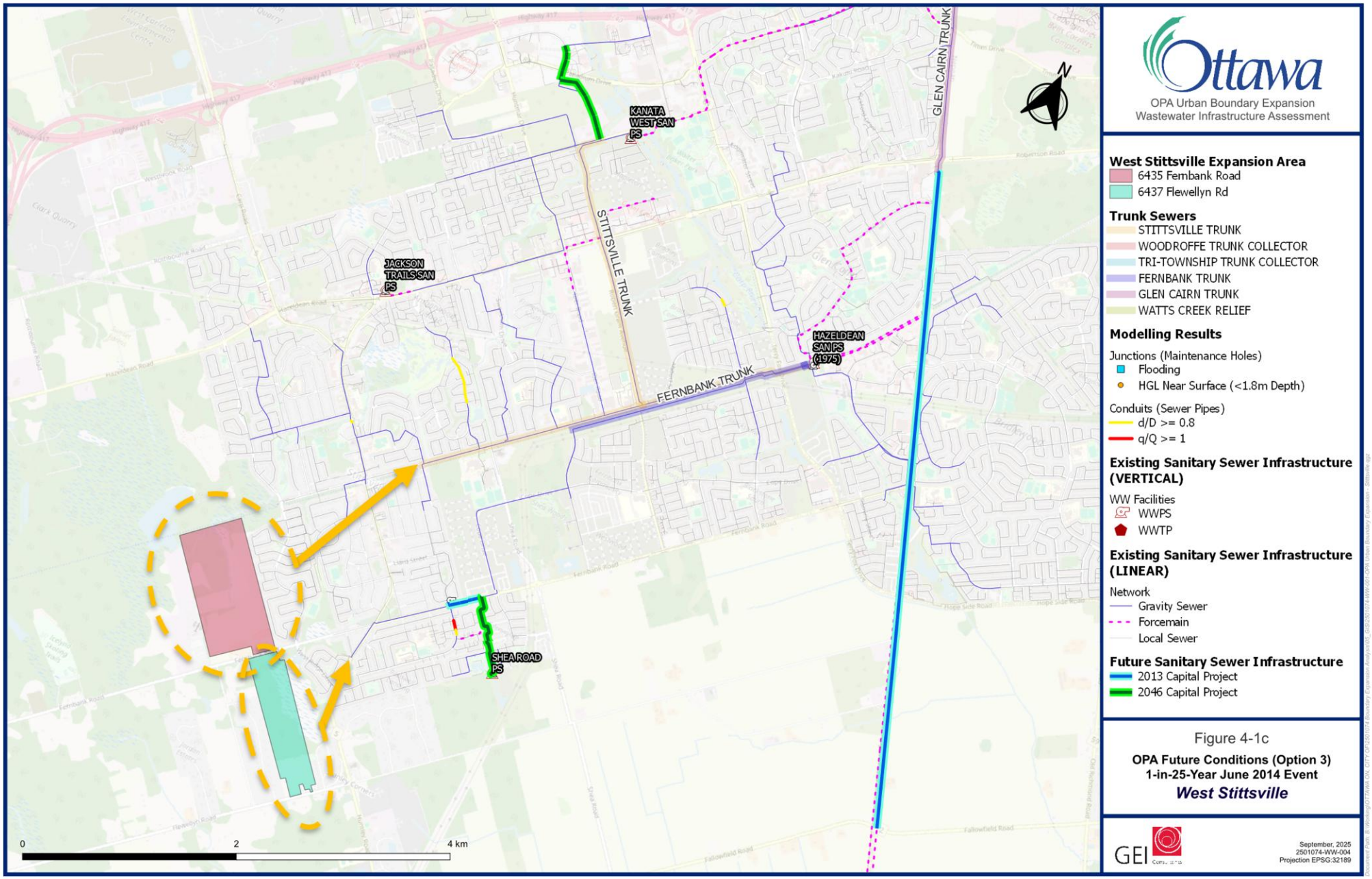


Figure 16: Map view of OPA future conditions (Option 3) (with expansion area)

4 OPA Step 2 – Identification & Assessment of Off-Site Infrastructure Needs

4.1 Servicing Alternatives

Step 1 established that there is sufficient capacity in the downstream sewage pumping stations to support the West Stittsville lands, with three potential servicing alternatives to convey flows. While all options are considered viable, there is a need for off-site trunk projects to convey the growth flows to their intended existing trunk sewer. As such, the following projects for each option are noted in Table 5.

Table 5: Summary of Projects

Option	Project Name	Length (m)	Diameter (mm)
1	Abbott Street Sewer Extension	1,850	450
2-A	Stittsville Main Street Sewer Extension	1,230	450
	Stittsville Main Street Sewer Upsizing	1,160	450
2-B	Fernbank Road Sewer Extension	940	450
	Fernbank Road Sewer Upsizing	800	450
3	Abbott Street Sewer Extension	1,850	300
	Stittsville Main Street Sewer Extension	1,230	300

4.1.1 Topography and Surface Water

A desktop-level assessment of the topography was conducted to understand on-site servicing constraints and routing challenges within the study area. Contour information in the area suggests that, while the elevation remains relatively flat, there is a slight elevation trend downhill from Flewellyn Road to Abbott Street (south to north). Along with the slope, there is a high elevation ridge between the two areas, which may create the need for on-site pumping to convey flows to the preferred outlet. The on-site servicing plan is ultimately the responsibility of the developer(s) and their consultant(s), and will need to be examined in detail through a Master Servicing Study during the secondary planning process. On-site servicing recommendations are not part of the OPA assessment scope of work.

Surface water features were also reviewed at a very high level within the study area. It was noted that there is substantial wetland area within the West Stittsville lands, which will also need to be considered through the secondary planning process.

Figure 17 provides a visual representation of the topography and surface water in the study area.

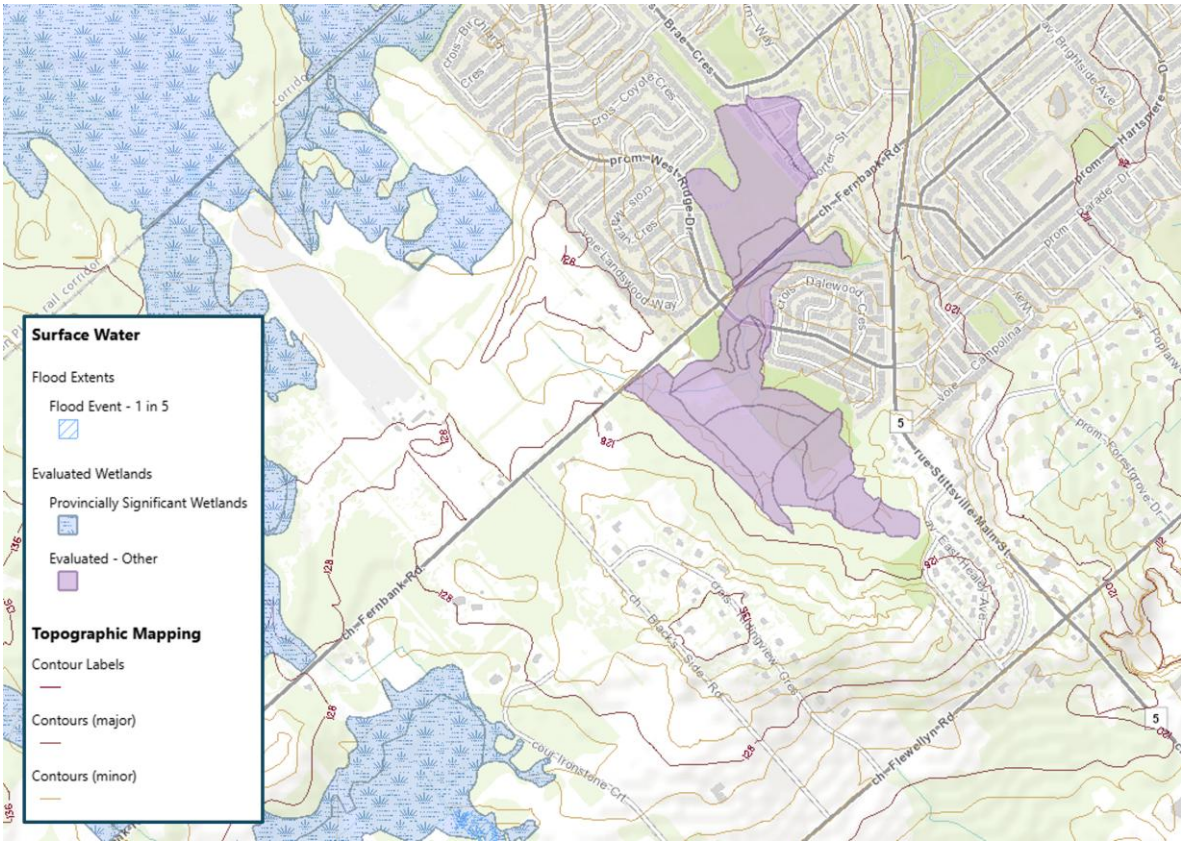


Figure 17: Topography and Surface Water (GeoOttawa)

4.1.2 Hydraulic Assessment

The hydraulic condition of all options remains similar to what was shown in Step 1, where little to no hydraulic constraints are present and level of service is maintained in the immediate area as well as downstream. For Option 2, the surcharging issues seen previously have now been resolved due to the proposed upsizing implemented along Stittsville Main Street. The profile of the Stittsville Main Street sewer to Hazeldean PS can be seen in Figure 18.

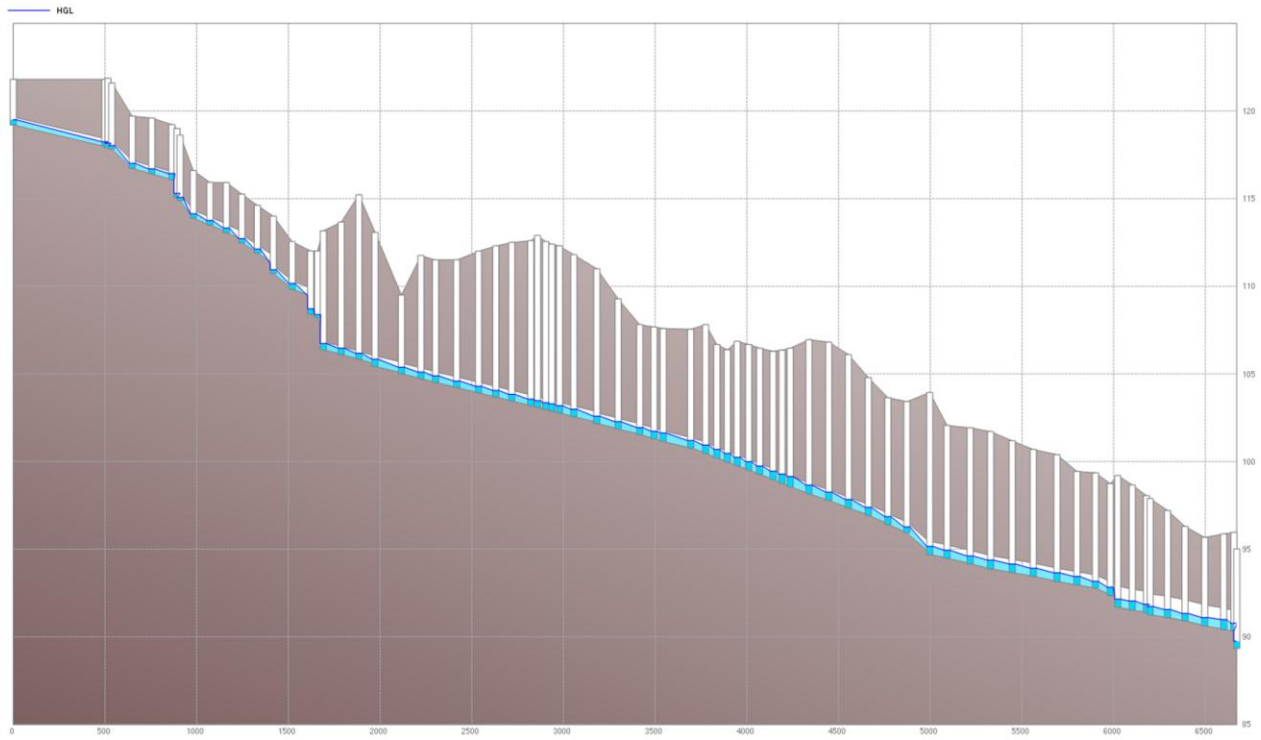


Figure 18: Profile view of Fernbank Trunk to Hazeldean PS under OPA future conditions (Option 2 with recommended projects) (1-in-25yr)

4.2 Servicing Recommendations

The following recommendations for servicing the West Stittsville area are as follows:

1. **Split Servicing (Option 3):** The recommended servicing solution for West Stittsville is to split the servicing, with Area A (6435 Fernbank Road) to be serviced by Kanata West PS and Area B (6437 Flewellyn Road) to be serviced by Hazeldean PS. Option 3 is considered to be the optimal solution given the nature of the study area, with natural features such as the high elevation ridge between Area A and Area B, and the existing wetlands posing challenges to on-site servicing for all flows to one downstream trunk or the other. Additionally, splitting the servicing would also eliminate the need for downstream sewer upsizing to service the expansion area.
2. **Kanata West PS Upgrade Phasing:** With the addition of West Stittsville, the timing of the capacity upgrades at Kanata West PS should be updated to reflect the additional growth added. The IMP previously noted the Kanata West PS upgrade was required by 2029, with a modelled peak flow of 783 L/s by 2046. With the addition of West Stittsville, this peak flow would increase to 846 L/s. With this higher projected 2046 flow, the phasing year for the Kanata West PS advanced slightly from 2029 to 2028.

4.3 Opinion of Probable Cost & Cost Allocation

Based on the recommended Option 3 split servicing solution, the incoming flows into each of the downstream trunk sewers and pumping stations do not exceed 80 L/s each, nor will they require a trunk sewer (450mm or larger) to convey flows from the expansion area to the existing system. As such, Class D cost estimates have not been prepared for the preferred servicing option. The proponent and their consultants will be expected to prepare a cost estimate for the necessary on-site and off-site local sewer extensions to route flows from the West Stittsville expansion area into the existing sanitary sewer system.

4.4 Step 2 Conclusions & Recommendations

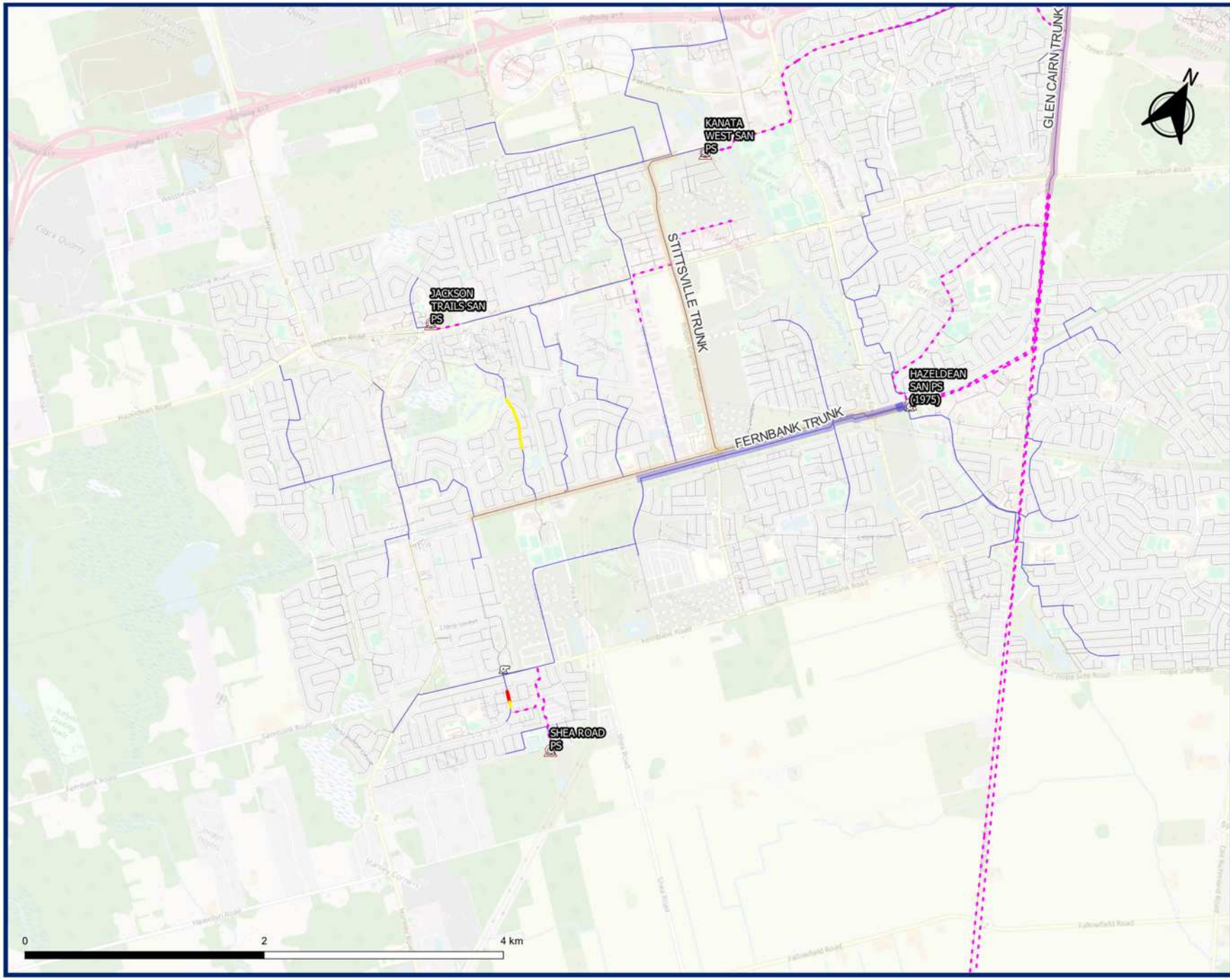
With the addition of the West Stittsville lands, approximately 87 L/s of new peak wet weather flow is expected to enter the existing trunk sewer system. Three potential servicing configurations were established in Step 1: (1) all flow to be serviced by Kanata West PS, (2) all flow to be serviced by Hazeldean PS, or (3) the flow to be split between Kanata West PS and Hazeldean PS dependent on the area closest to the facility. Step 1 confirms through the hydraulic assessment that the existing pumping stations have capacity to support the proposed expansion area; however, there is no readily available off-site trunk infrastructure for conveyance near the West Stittsville lands. As such, the assessment continued to Step 2.

Option 3 would split the flow from Area A to be serviced by Kanata West PS and Area B to be serviced by Hazeldean PS. While new off-site local sewers are required to connect into the existing system, trunk sewer (450mm or larger) projects are not required for this option as the individual flows to each trunk and pumping station are less than 80 L/s. These local sewers will be privately funded as they are required solely to support growth from the subject expansion lands.

Overall, it was determined that Option 3 was the most optimal servicing solution. This, in combination with the expected upgrade at Kanata West PS, is sufficient to accommodate the West Stittsville growth flow within the 2046 growth horizon.

Appendix A

Modelling Results



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

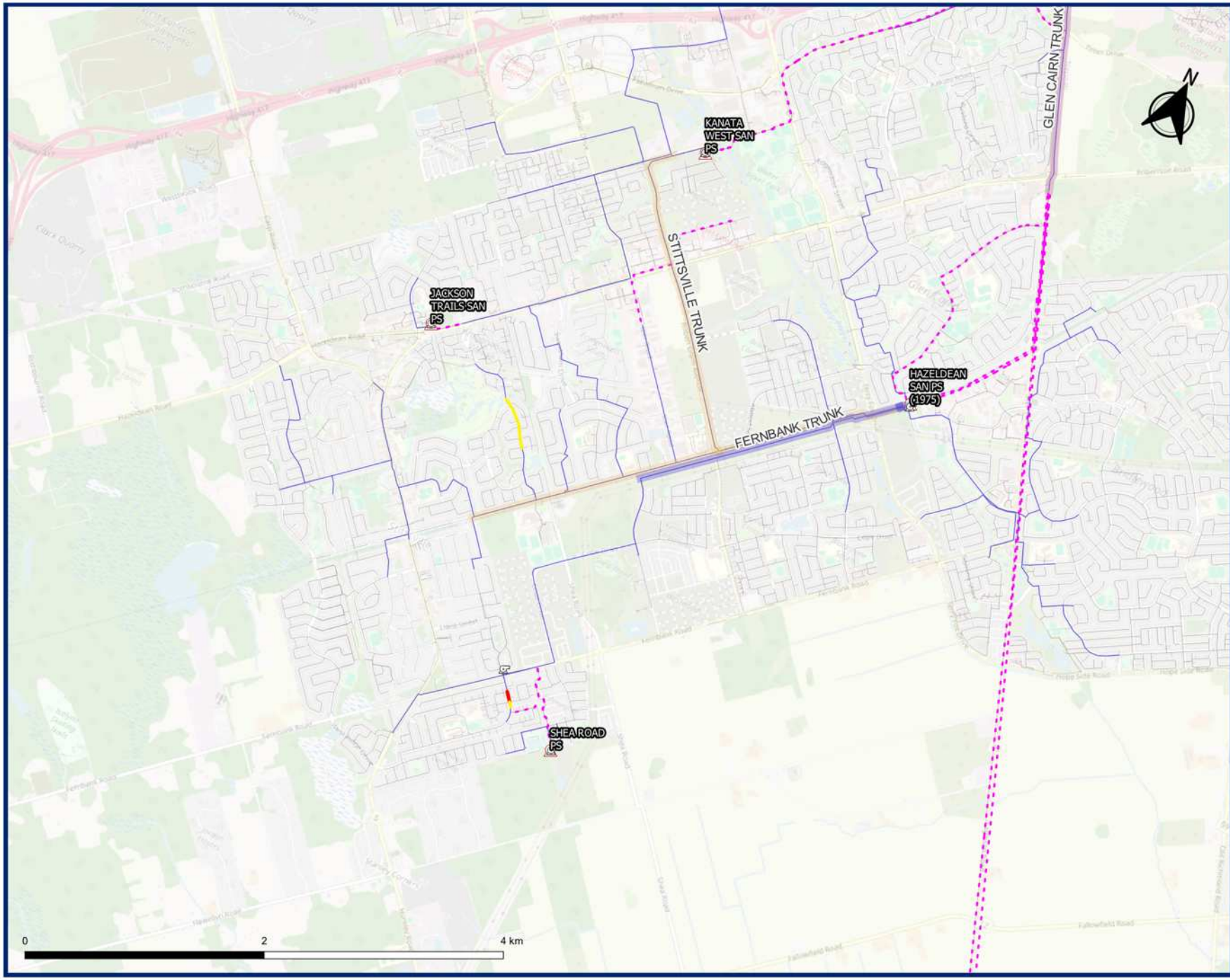
Network
- Gravity Sewer
- Forcemain
- Local Sewer

Figure 2-1

Existing Conditions
1-in-25-Year June 2014 Event
West Stittsville

GEI

October, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

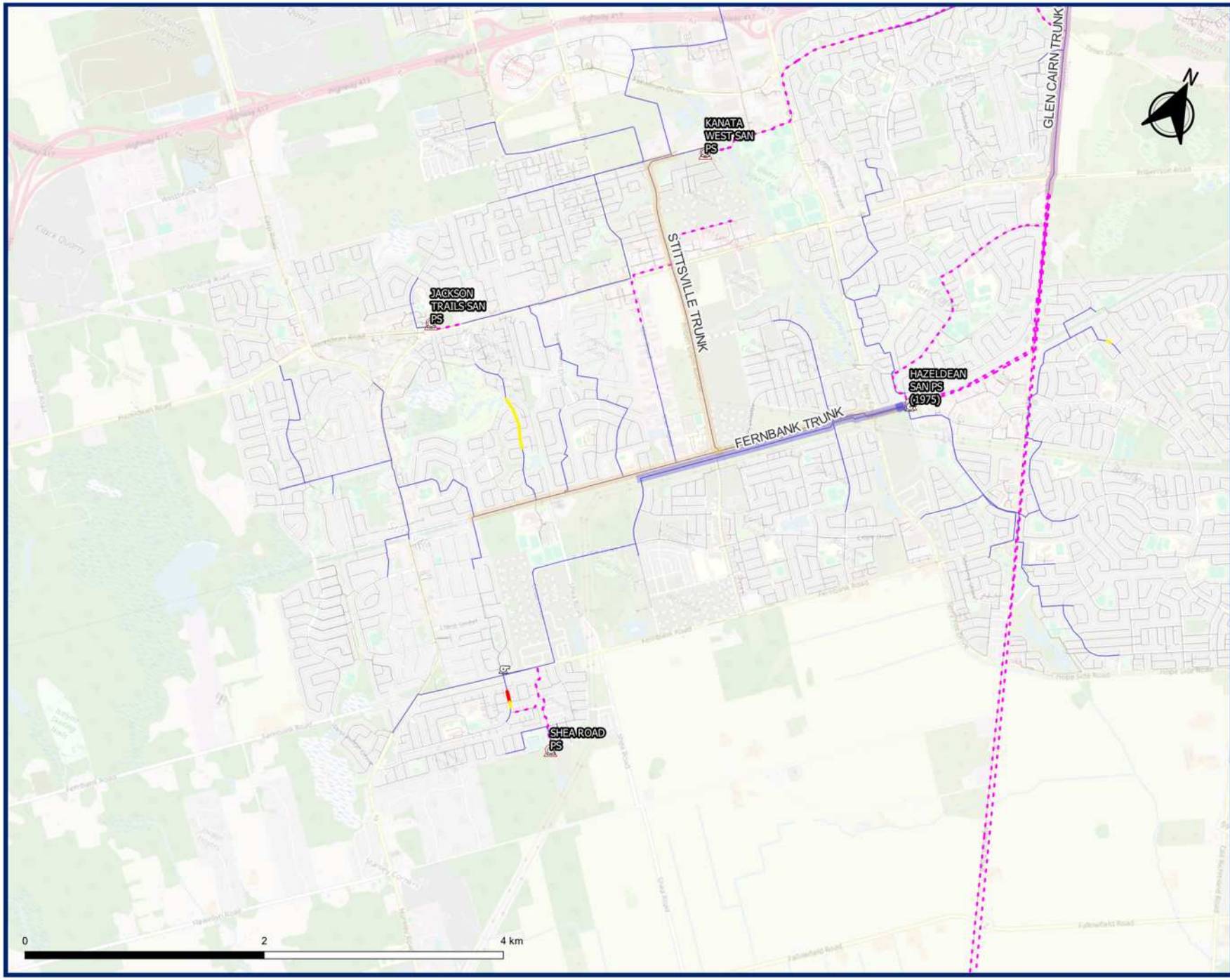
Network
- Gravity Sewer
- Forcemain
- Local Sewer

Figure 2-2

Existing Conditions
1-in-5-Year June 2014 Event
West Stittsville

GEI

October, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

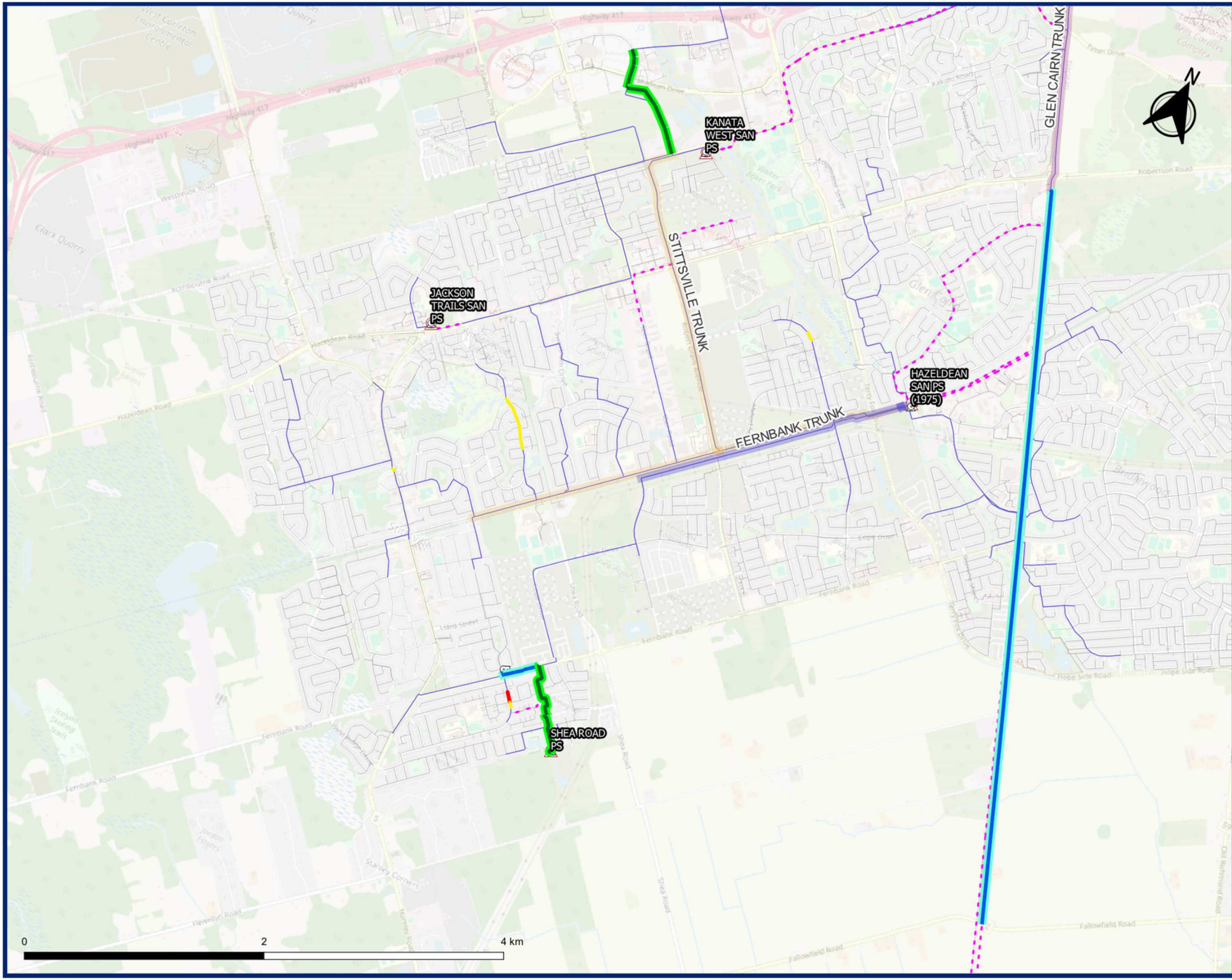
Network
- Gravity Sewer
- Forcemain
- Local Sewer

Figure 2-3

Existing Conditions
1-in-100-Year June 2014 Event
West Stittsville

GEI

October, 2025
2501074-WW-004
Projection EPSG:32189



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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

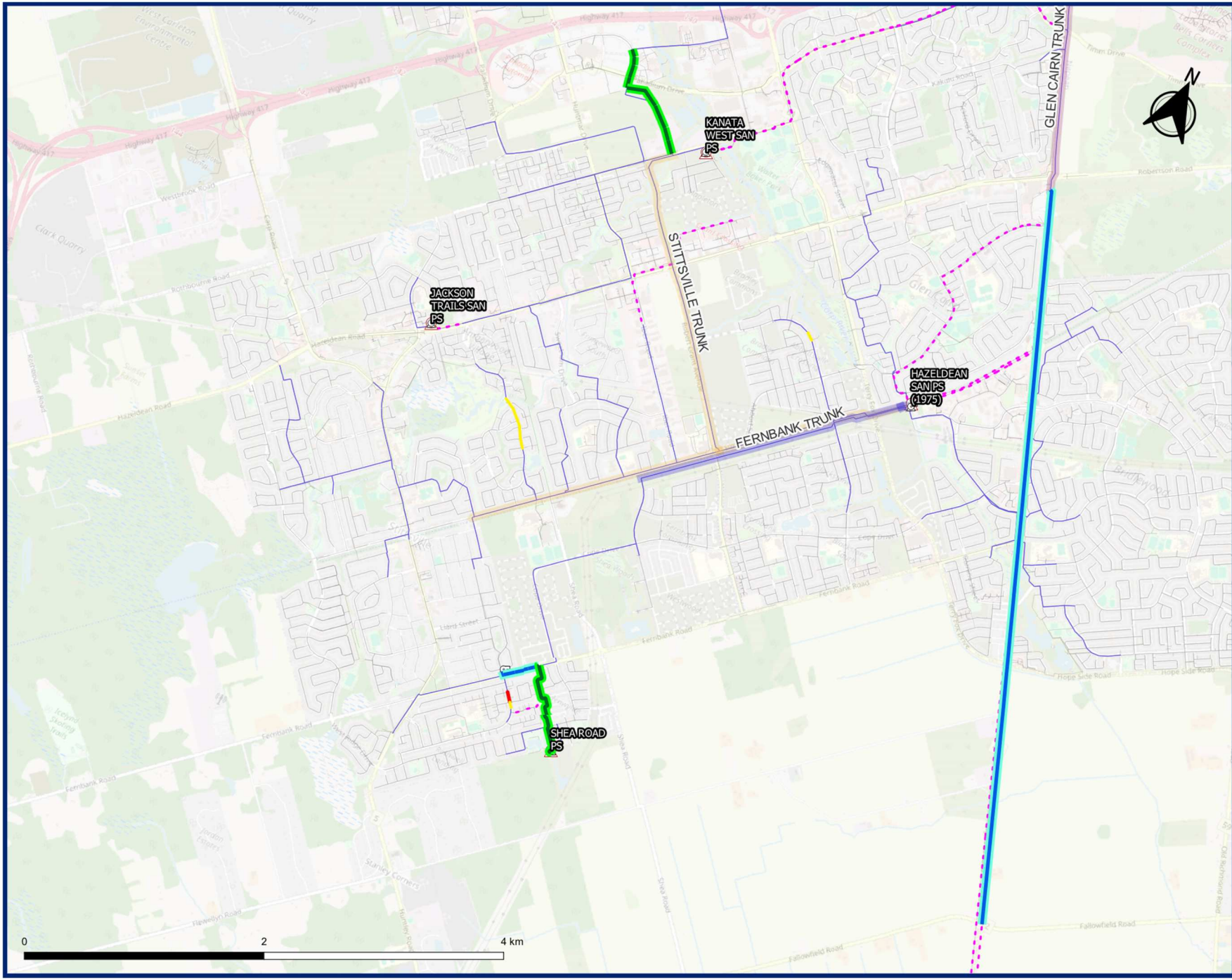
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 3-1

WWMP Future Conditions (2046)
1-in-25-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

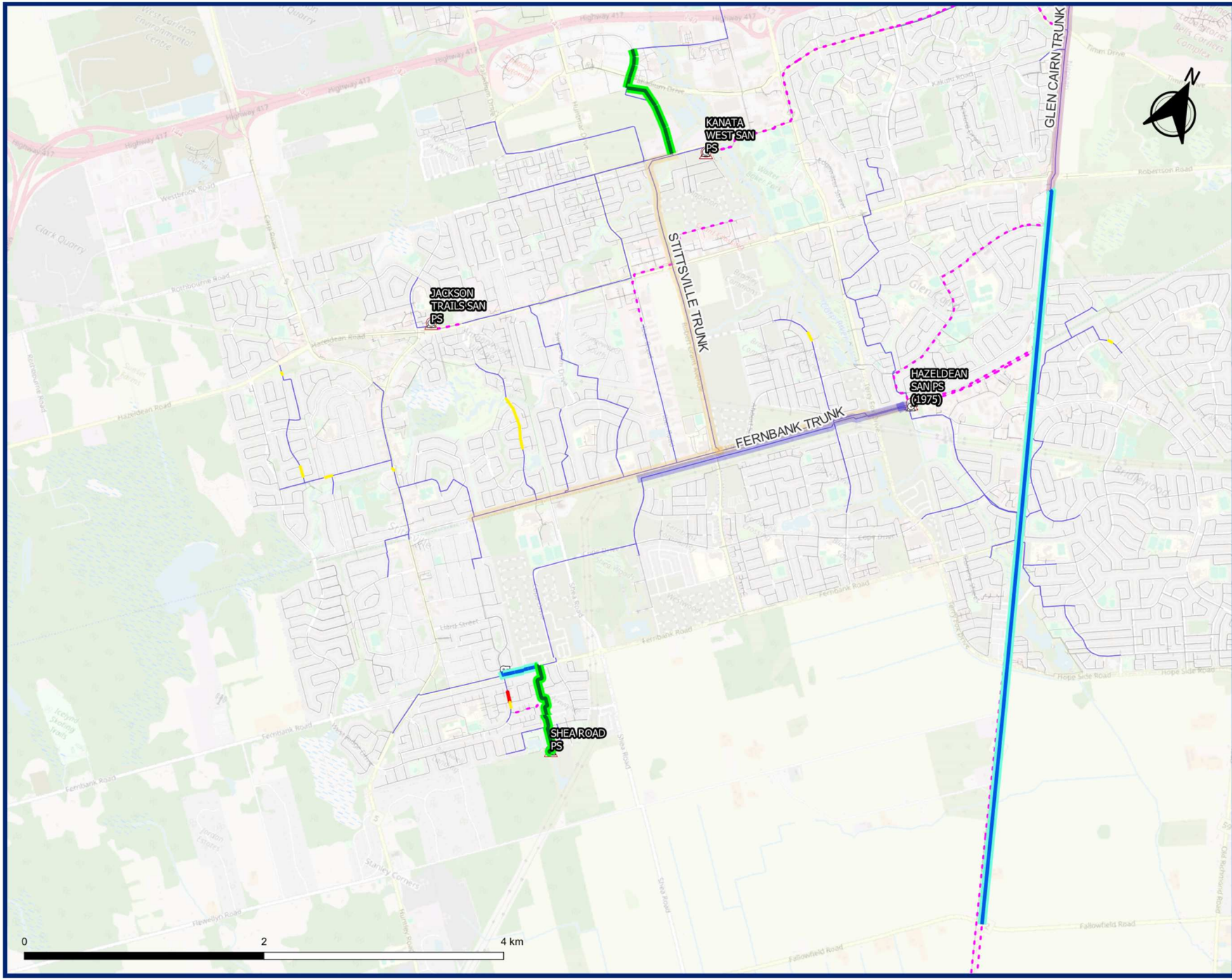
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 3-2

WWMP Future Conditions (2046)
1-in-5-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

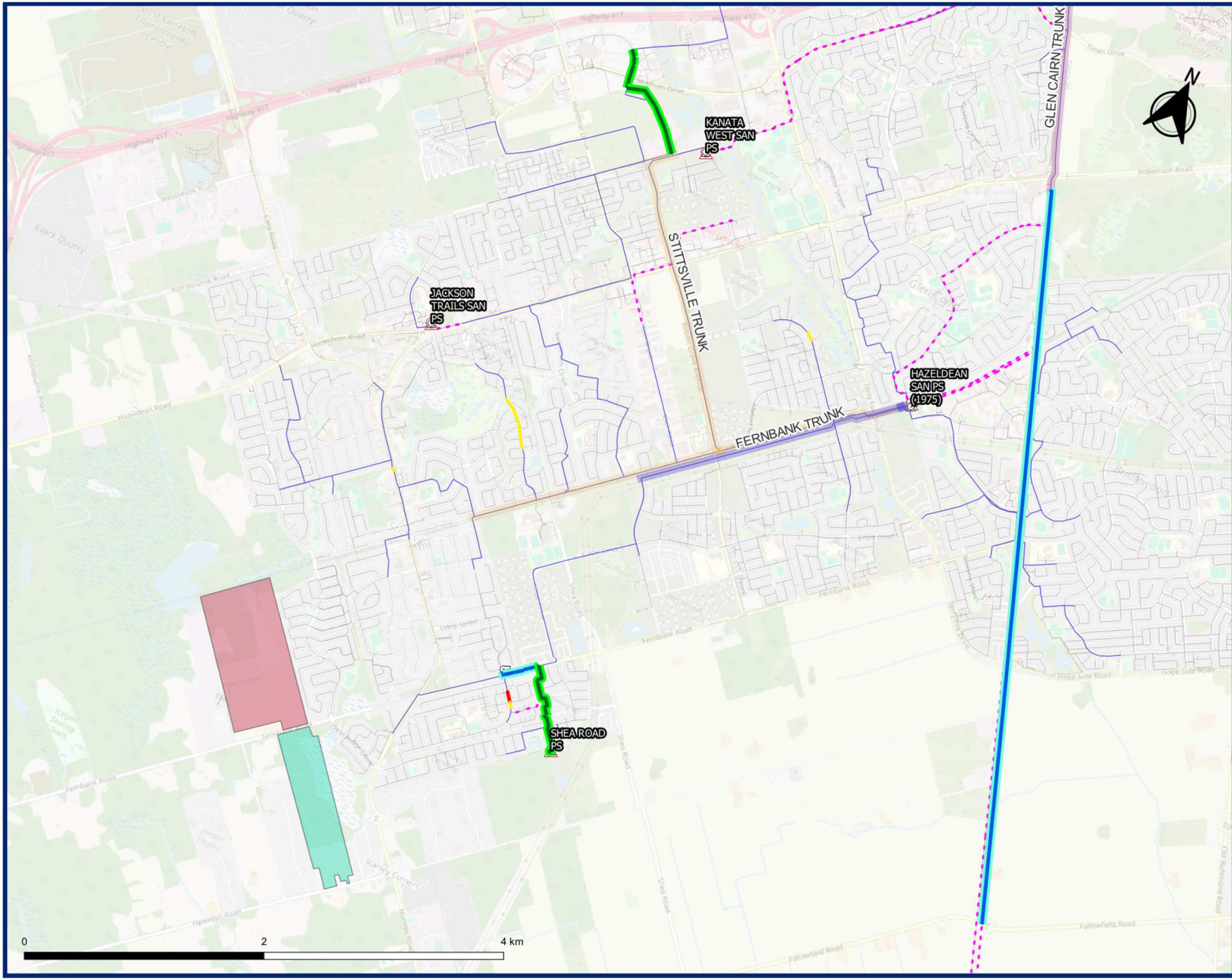
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 3-3

WWMP Future Conditions (2046)
1-in-100-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-1a

OPA Future Conditions (Option 1)
1-in-25-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189

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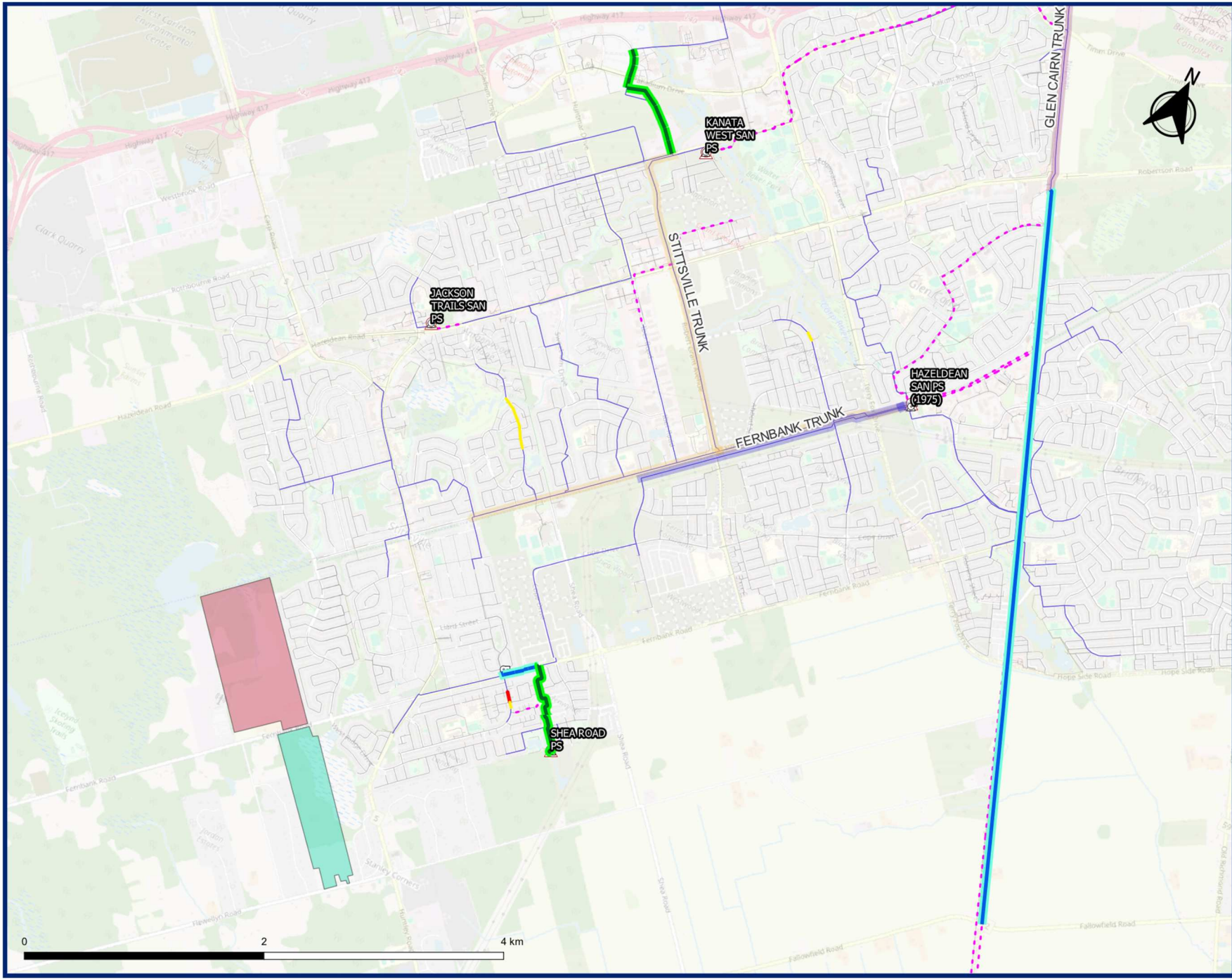

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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-2a

OPA Future Conditions (Option 1)
1-in-5-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189

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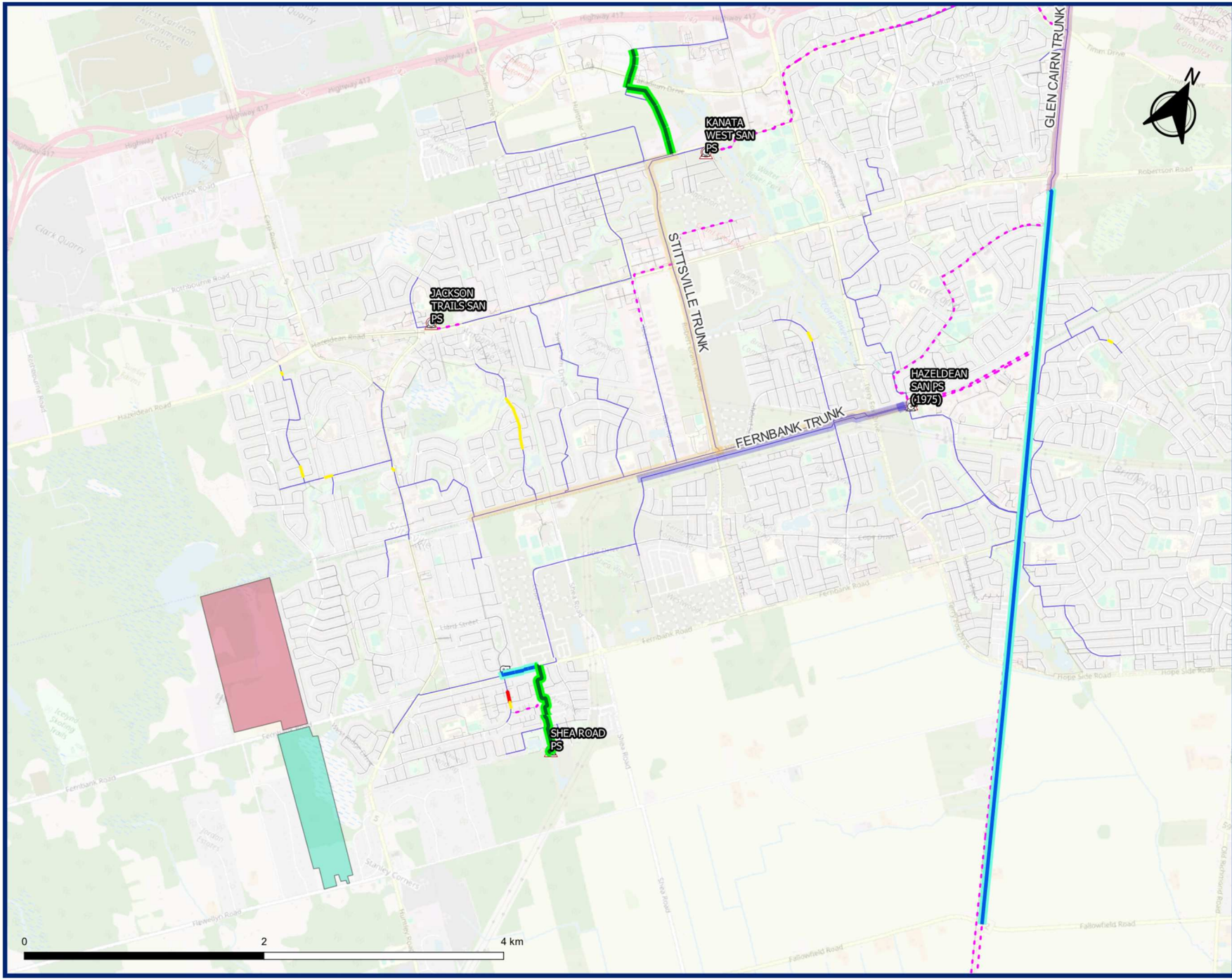

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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-3a

OPA Future Conditions (Option 1)
1-in-100-Year June 2014 Event
West Stittsville

GEI Consultants

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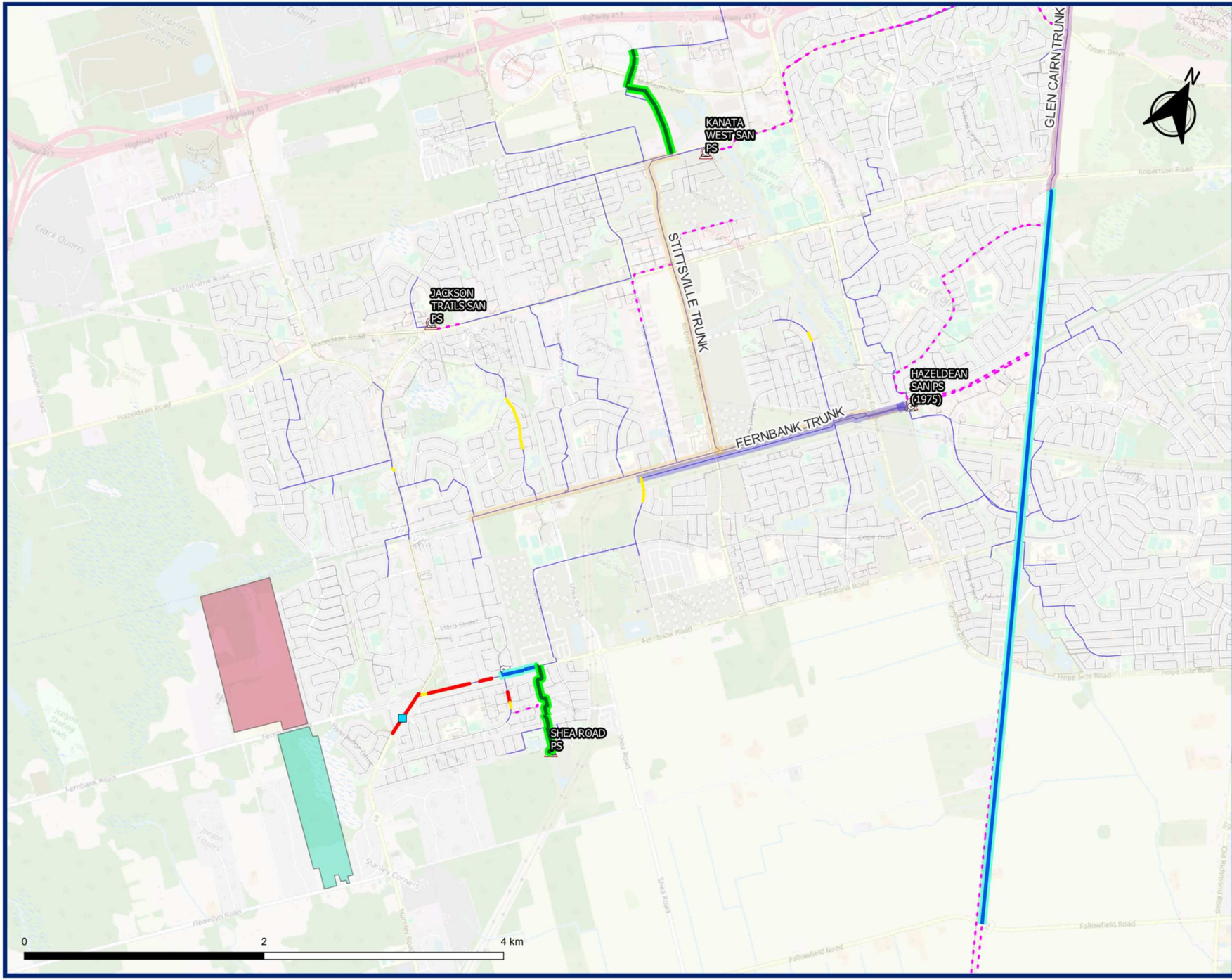
Projection EPSG:32189



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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

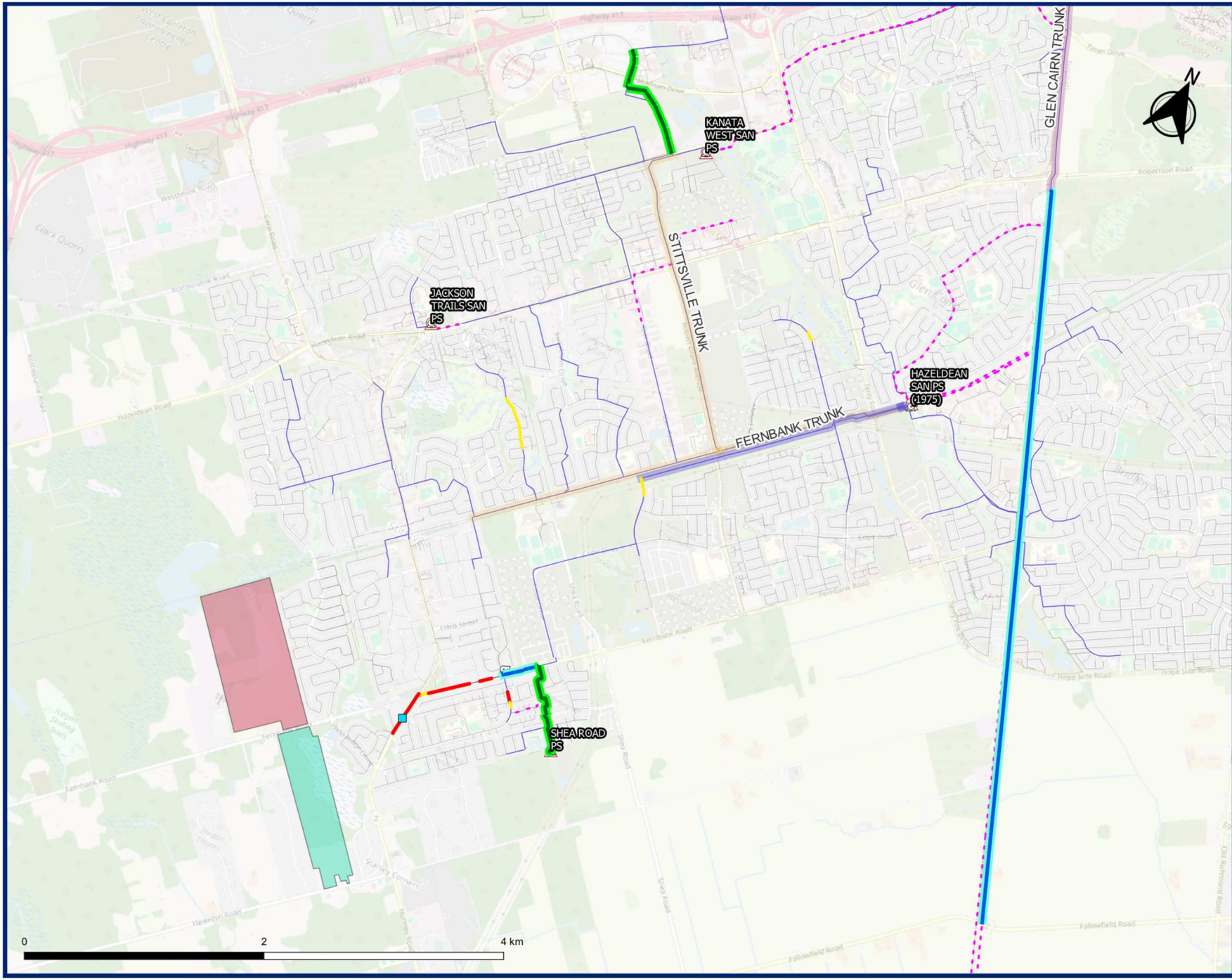
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-1b

OPA Future Conditions (Option 2)
1-in-25-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

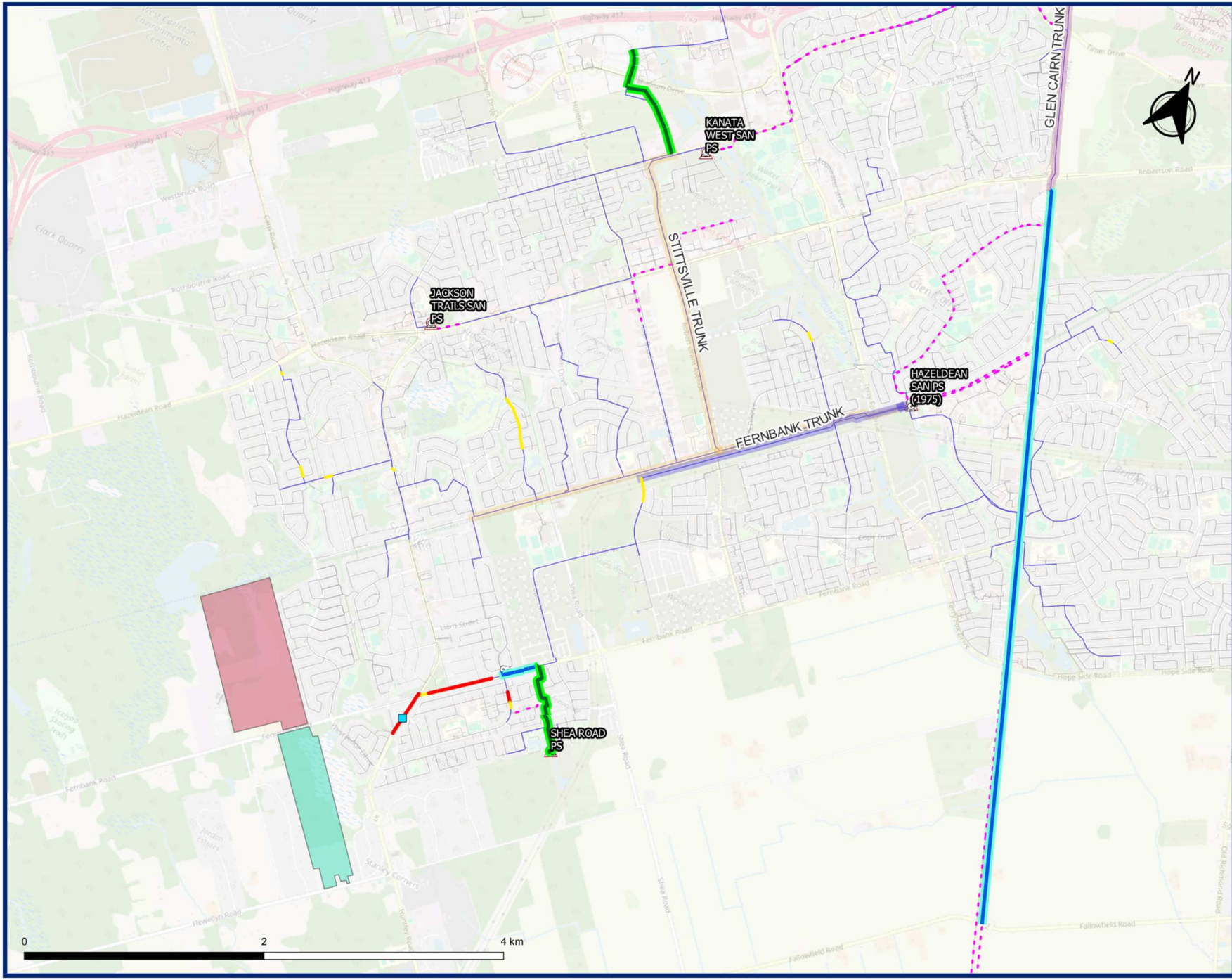
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-2b

OPA Future Conditions (Option 2)
1-in-5-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-3b

OPA Future Conditions (Option 2)
1-in-100-Year June 2014 Event
West Stittsville

GEI Consultants

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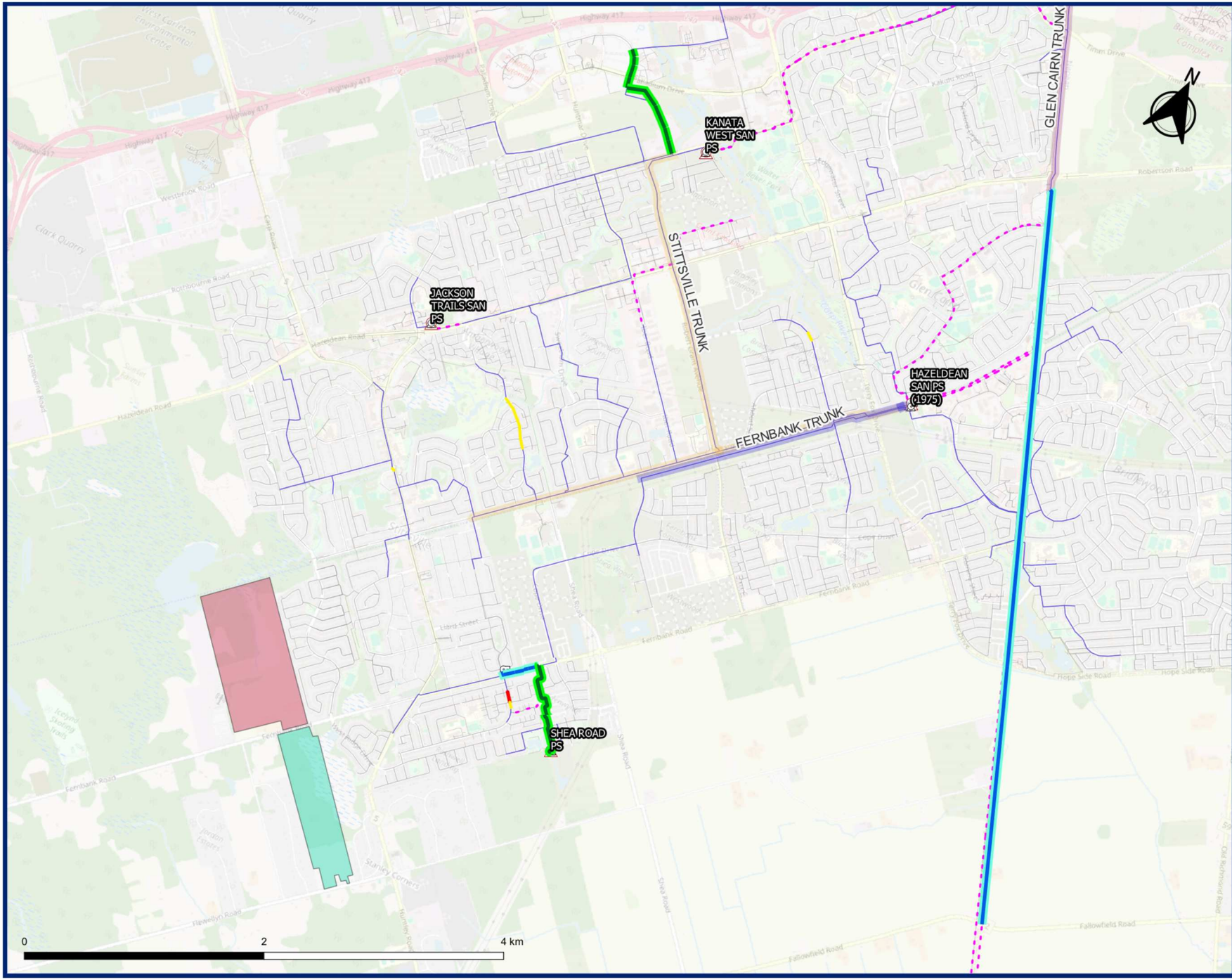
Projection EPSG:32189



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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

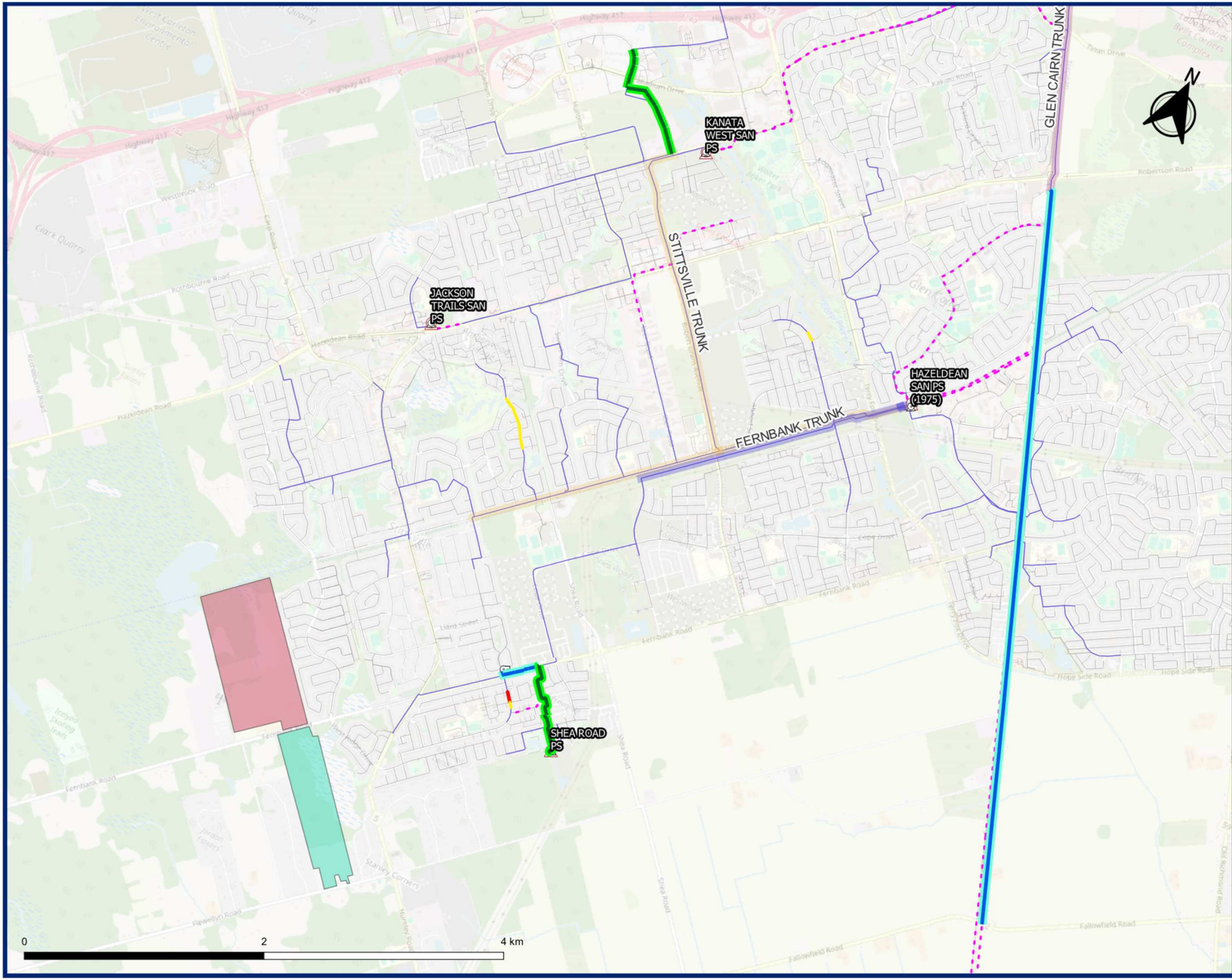
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-1c

OPA Future Conditions (Option 3)
1-in-25-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



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OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

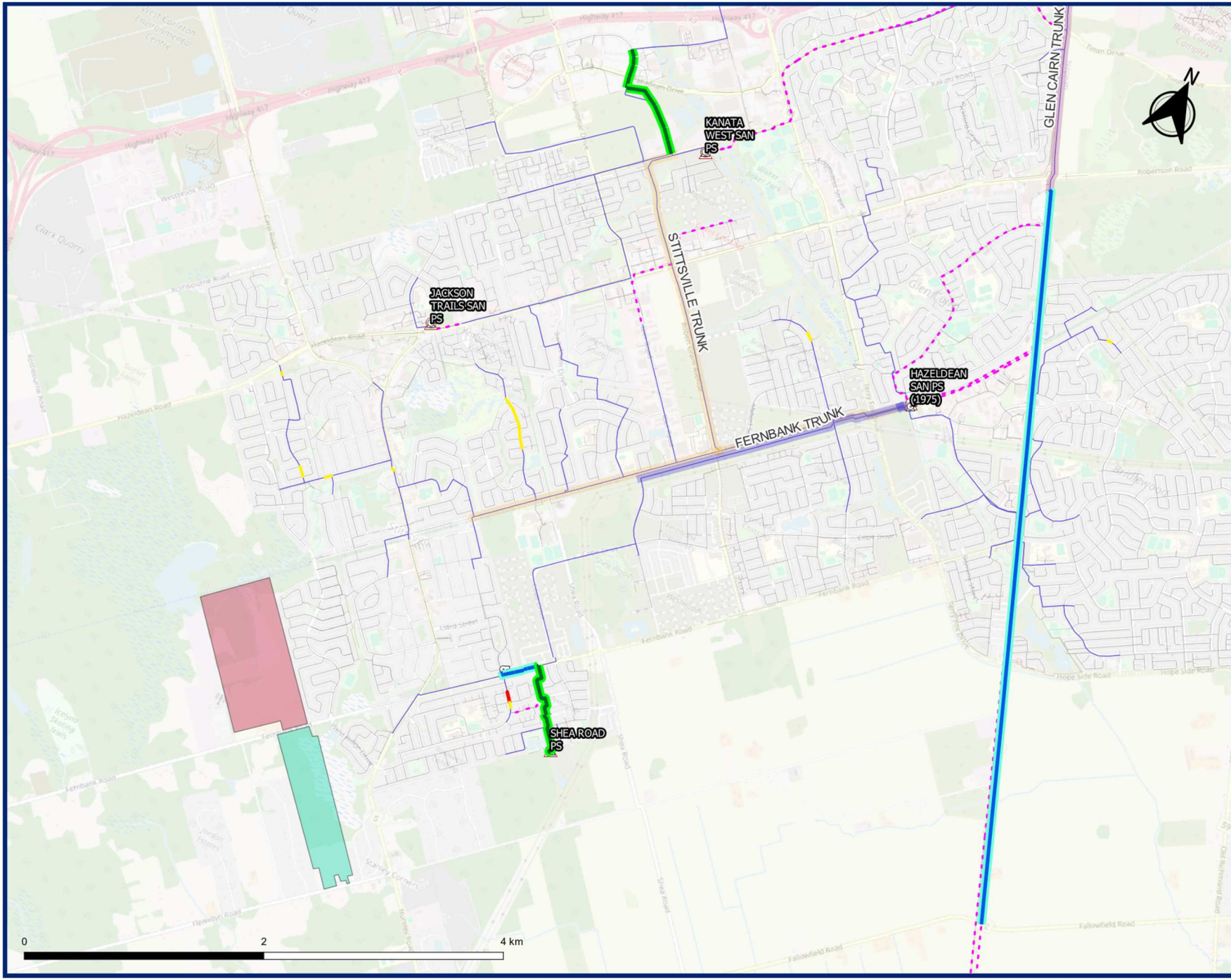
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-2c

OPA Future Conditions (Option 3)
1-in-5-Year June 2014 Event
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Trunk Sewers
- STITTSVILLE TRUNK
- WOODROFFE TRUNK COLLECTOR
- TRI-TOWNSHIP TRUNK COLLECTOR
- FERNBANK TRUNK
- GLEN CAIRN TRUNK
- WATTS CREEK RELIEF

Modelling Results

Junctions (Maintenance Holes)
- Flooding
- HGL Near Surface (<1.8m Depth)

Conduits (Sewer Pipes)
- d/D >= 0.8
- q/Q >= 1

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

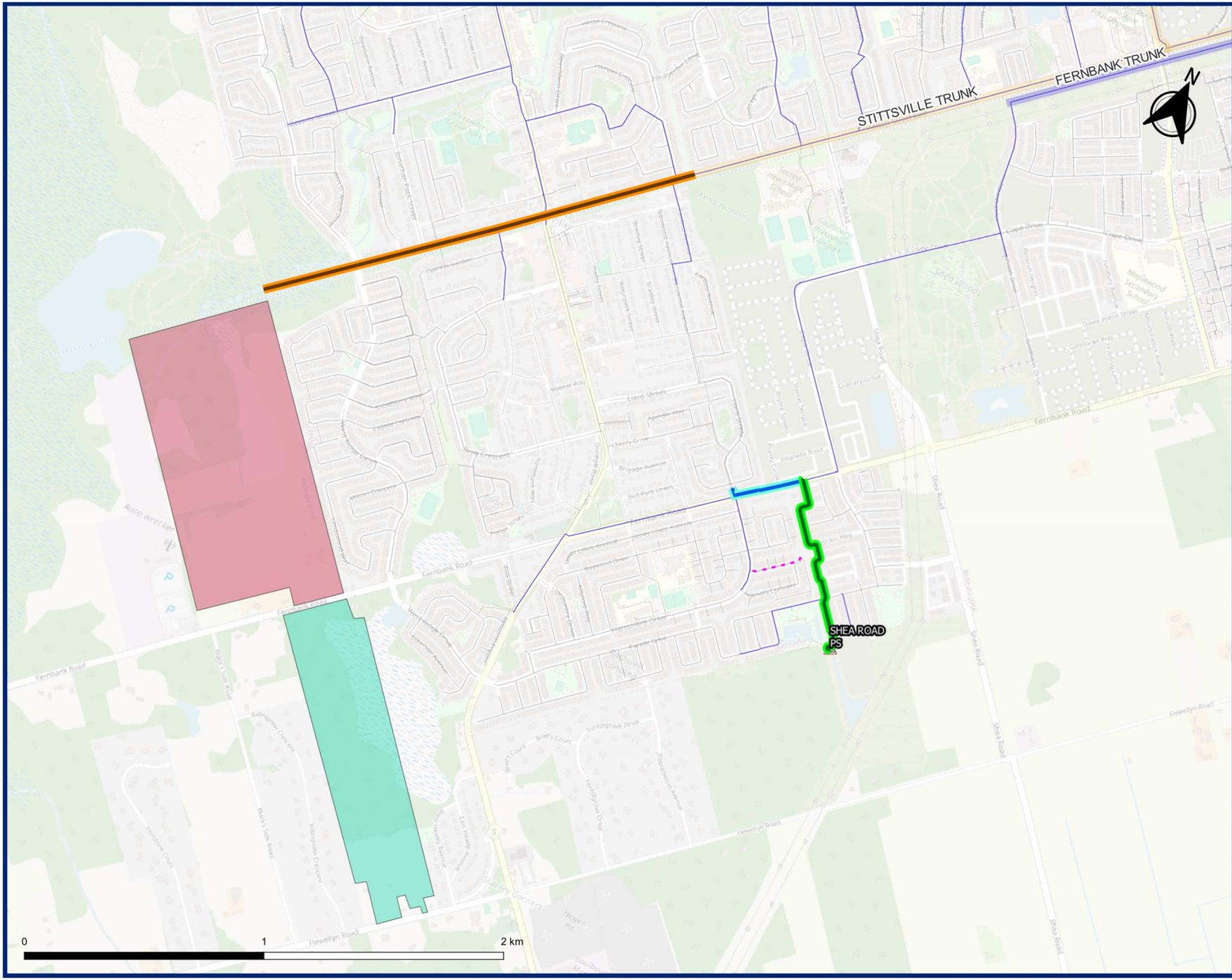
Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Figure 4-3c

OPA Future Conditions (Option 3)
1-in-100-Year June 2014 Event
West Stittsville

GEI

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

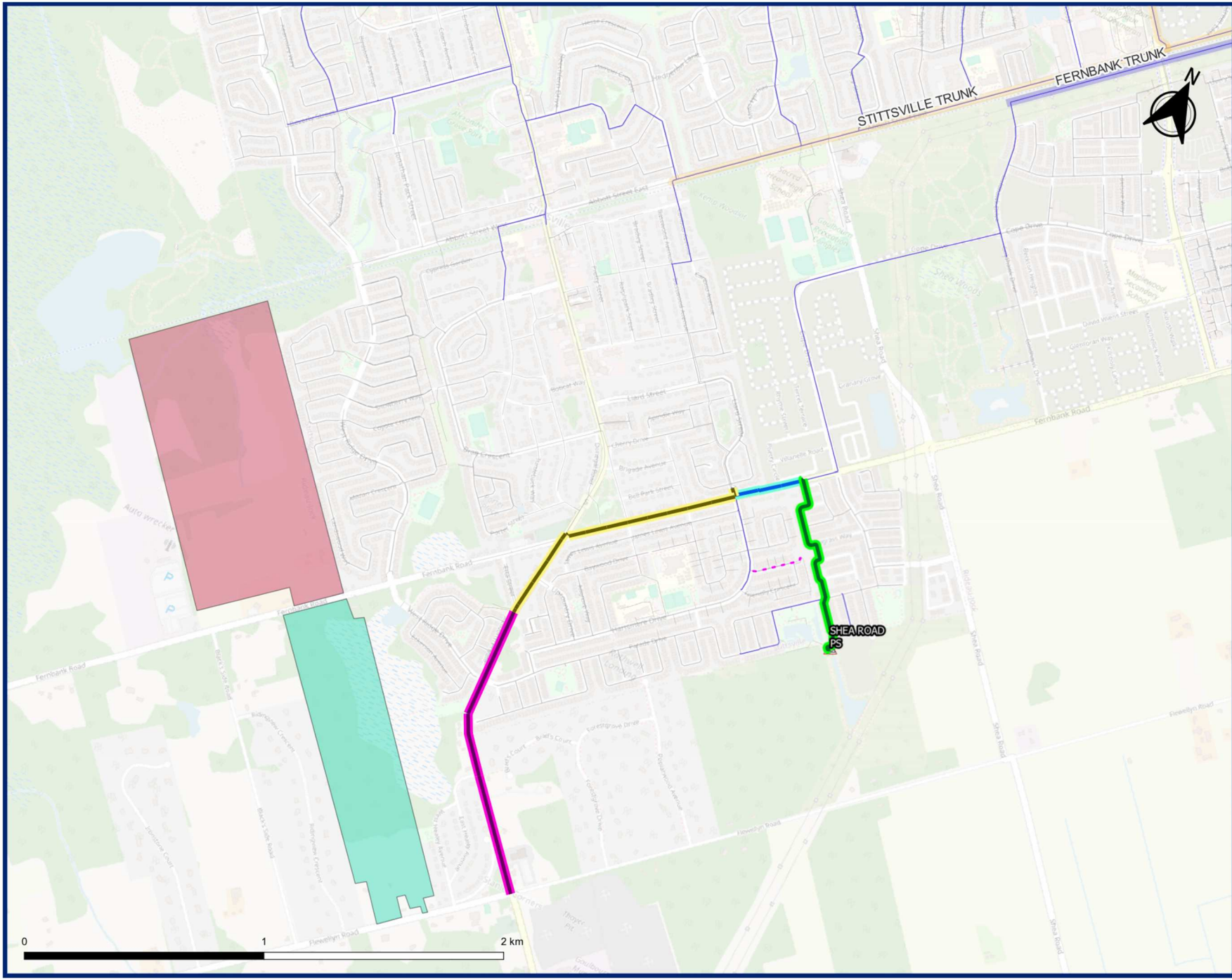
Potential Servicing Solutions
- Abbott Street Sewer Extension

Figure 6-1

Potential Servicing Solutions
Option 1
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

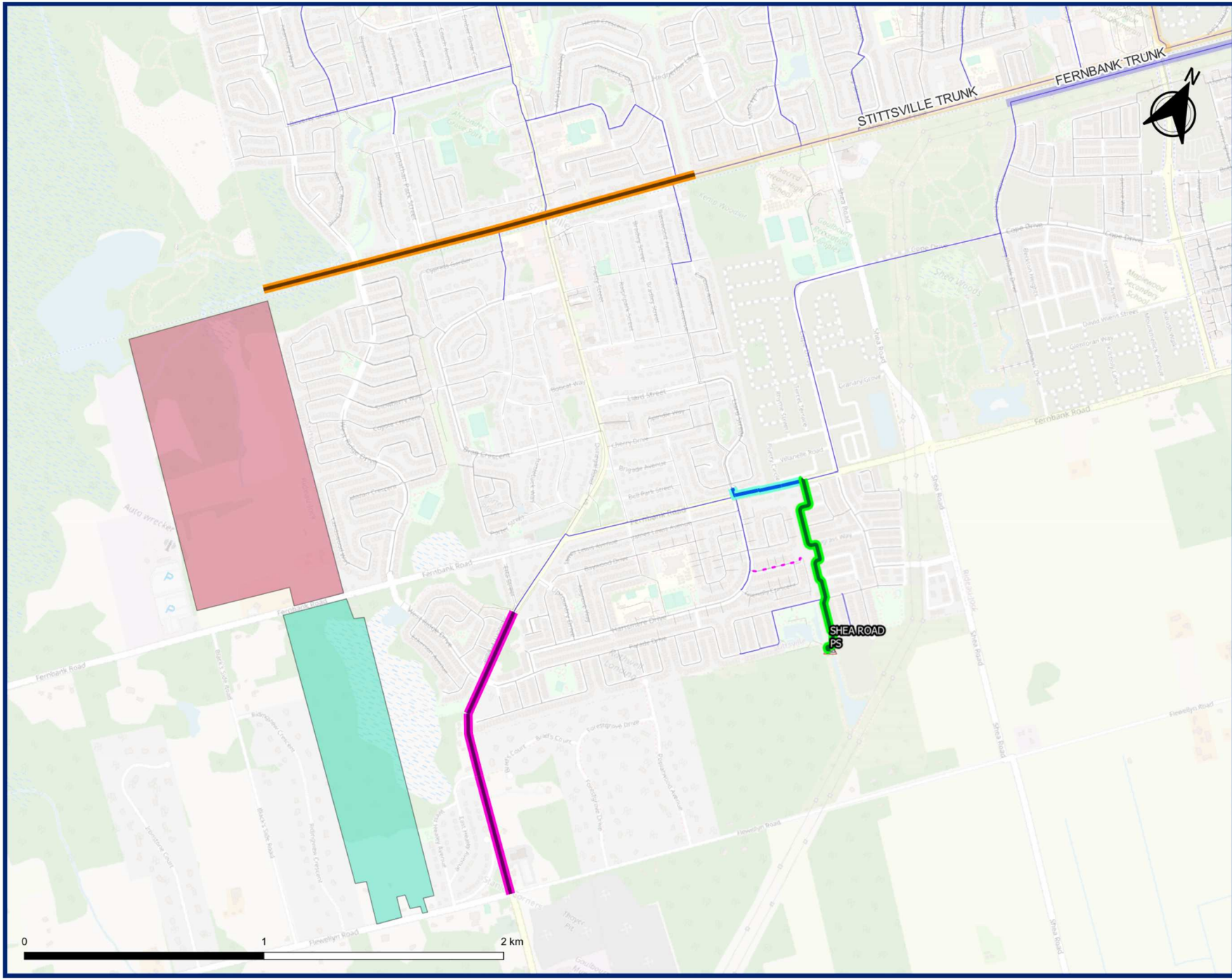
Potential Servicing Solutions
- Stittsville Main Street Upsizing to 450mm
- Stittsville Main Street Extension

Figure 6-2

Potential Servicing Solutions
Option 2
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Potential Servicing Solutions
- Abbott Street Sewer Extension
- Stittsville Main Street Sewer Extension

Figure 6-3

Potential Servicing Solutions
Option 3

West Stittsville

GEI Consultants

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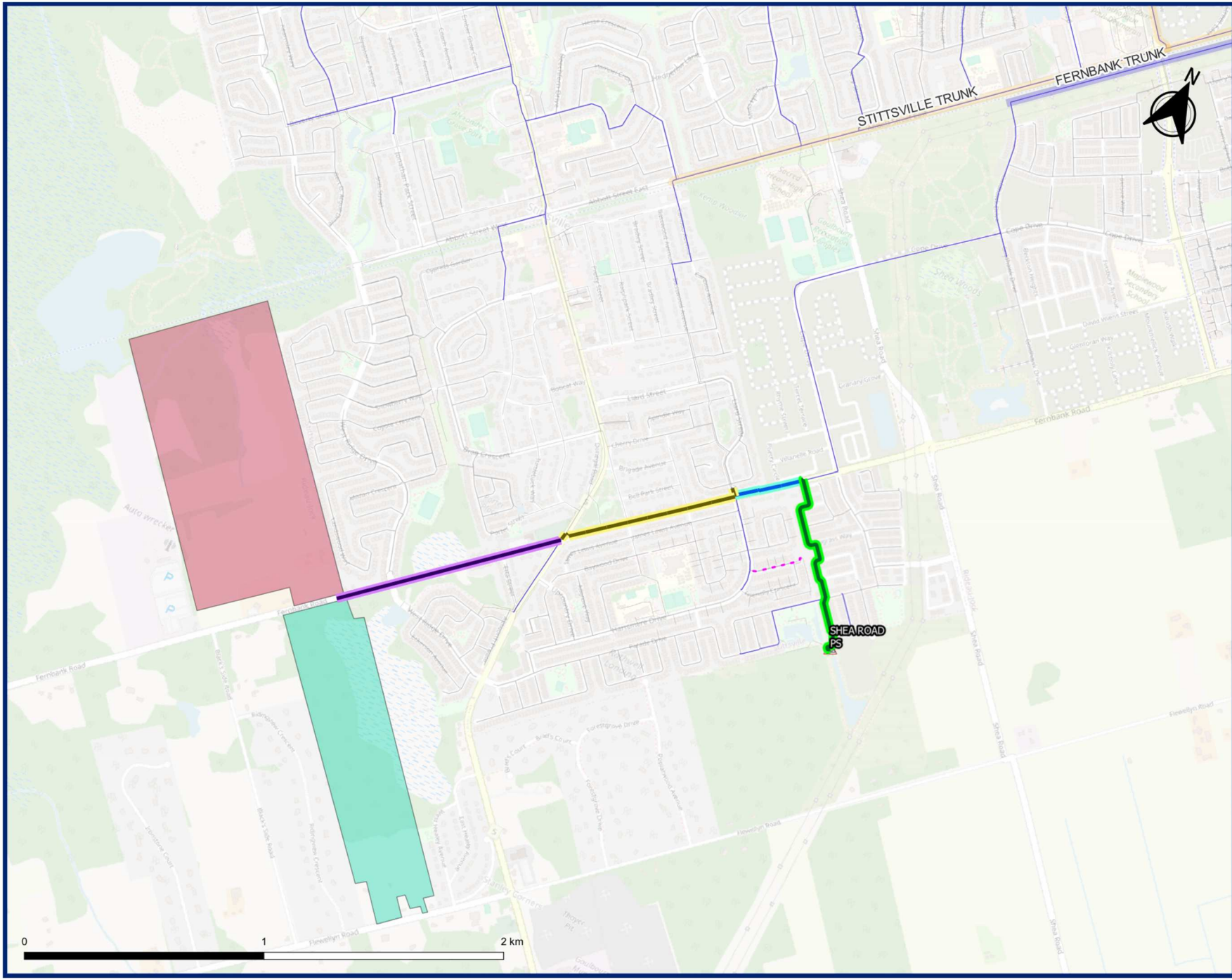
Projection EPSG:32189



OPA Urban Boundary Expansion
Wastewater Infrastructure Assessment

West Stittsville Expansion Area
- 6435 Fernbank Road
- 6437 Flewellyn Rd

Existing Sanitary Sewer Infrastructure (VERTICAL)

WW Facilities
- WWPS
- WWTP

Existing Sanitary Sewer Infrastructure (LINEAR)

Network
- Gravity Sewer
- Forcemain
- Local Sewer

Future Sanitary Sewer Infrastructure
- 2013 Capital Project
- 2046 Capital Project

Potential Servicing Solutions
- Fernbank Road Sewer Extension
- Fernbank Road Sewer Upsizing

Figure 6-4

Potential Servicing Solutions
Option 4
West Stittsville

GEI Consultants

September, 2025
2501074-WW-004
Projection EPSG:32189

MEMO

To:	Cam Elsby, P.Eng. (City of Ottawa)	From:	Stantec Consulting Ltd.
Stantec Project:	163402031 – City of Ottawa Urban Expansion Area Hydraulic Assessments	Date:	October 17, 2025

West Stittsville Urban Expansion Area Assessment

1. Introduction

The City of Ottawa (City)'s New Official Plan (OP) was adopted by City Council in 2021. To identify infrastructure needs required to support growth to the 2046 horizon of the OP, the City updated its Infrastructure Master Plan (IMP) in 2024.

The Province of Ontario issued a Provincial Planning Statement[1] (PPS) in October 2024, enabling private landowners to request an expansion of the urban boundary at any time, including outside of a comprehensive review or OP update. If a proponent wishes to include land within the Urban Boundary, they may make an application for an Urban and Village Boundary Expansion Official Plan Amendment (OPA), which are generally site-specific, and consist of the following five (5) steps:

- Step 1 - Assess existing servicing capacity
- Step 2 - Identify new servicing capacity
- Application submission
- Step 3 - Assess land need
- Step 4 - Settlement area parcel analysis
- Step 5 - Council decision

Steps 1 and 2 are to be performed before the planning process. Steps 3 through 5 are part of the planning process. Before applicants begin the planning process, applicants must consult with the City to obtain Servicing Capacity information as part of steps 1 and 2. To provide the Servicing

[1] https://www.ontario.ca/page/provincial-planning-statement-2024

Capacity information, the following assessments were completed for the proposed areas to be included within the urban boundary area:

1. an assessment of existing and planned servicing (water and sanitary) capacity, and
2. where system capacities will not be available to support the OPA application based on planned system upgrades, an assessment identifying off-site works and the associated costs required to accommodate the expansion.

The following technical memorandum (TM) presents the findings of the Step 1 and Step 2 assessments for the proposed West Stittsville urban boundary expansion OPA application, as they pertain to potable water distribution infrastructure needs.

2. Background

2.1 Study Area

The West Stittsville Urban Expansion Area (West Stittsville UEA) is located in the West Urban Community (WUC) and is adjacent to Stittsville. The area is generally bound by the following:

- To the north by Abbott St W;
- To the east by the Deer Run community and by the Fernbank Wetland;
- To the south by Flewellyn Rd; and,
- To the west by a storage facility and by estate lots along Ridingview Cres.

The West Stittsville UEA comprises the following two (2) parcels:

- 6435 Fernbank Rd, to the north of Fernbank Rd; and,
- 6437 Flewellyn Rd, to the south of Fernbank Rd.

Figure 1 shows the location of the West Stittsville UEA within the overall water distribution system. **Figure 2** provides a closer view of the West Stittsville UEA and adjacent infrastructure. The West Stittsville UEA is directly adjacent to the existing pressure zone 3W. The potential to service the West Stittsville UEA from this pressure zone is assessed in **Section 3.1.**

West Stittsville Urban Expansion Area Assessment

Figure 1: Existing Water Distribution System & Proposed West Stittsville UEA

Legend

- PS — Pump Station (Active)
- PS — Pump Station (Backup)
- Elevated Tank
- Reservoir

Backbone Watermain
- 152 mm - 305 mm
- 406 mm - 508 mm
- 610 mm - 914 mm
- 1067 mm - 1372 mm
- 1524 mm - 1981 mm
- 2550 mm

Distribution Watermain
- ≤ 102 mm
- 152 mm - 305 mm
- 356 mm - 508 mm
- 610 mm - 914 mm
- 1372 mm

Existing Pressure Zones
- 1E
- 1W
- 2C
- 2E
- 2W
- 3SW
- 3W
- EMR
- LEIT
- ME
- MG
- MONT
- SHADOW RIDGE
- SUC
- YOW

- Official Plan Urban Expansion Area
- West Stittsville Urban Expansion Area
- Villages
- Greenbelt
- Major Rivers
- Wetlands (from Ontario GeoHub)

Ottawa

0 0.45 0.9 1.8 Km

West Stittsville Urban Expansion Area Assessment

Figure 2: Proposed West Stittsville UEA & Adjacent Infrastructure

Legend

- PS — Pump Station (Active)
- Elevated Tank

Backbone Watermain

- 152 mm - 305 mm
- 406 mm - 508 mm
- 610 mm - 914 mm
- 1067 mm - 1372 mm
- 1524 mm - 1981 mm
- 2550 mm

Distribution Watermain

- ≤ 102 mm
- 152 mm - 305 mm
- 356 mm - 508 mm
- 610 mm - 914 mm
- 1372 mm

- Official Plan Urban Expansion Area
- Greenbelt
- Major Rivers
- Wetlands (from Ontario GeoHub)

Ottawa

0 0.25 0.5 1 Km

The land use within the West Stittsville UEA will be primarily residential. **Table 1** presents the projected growth unit counts within the West Stittsville UEA. The unit types assumed for water demand calculations (based on the unit types defined in the 2024 Water Master Plan (WMP)) are also presented in the table.

Table 1: Projected West Stittsville UEA Growth Unit Counts

Land Use	Unit Type	Area	Unit Type for Water Demand Calculations	Count
Residential	**Single Detached**	N/A	Single Family House (SFH)	1,195
	Townhouses		Multi-Level Townhouse (MLT)	717
	Stacked Townhouses		MLT	478
	Total	**112 ha**	**N/A**	**2,390**

While an estimated build-out population of 6,862 was also provided, the potable water demand calculations are based on the dwelling counts and 2024 WMP level of service criteria, which include revised population calculations based on population density by unit type. The results are presented in **Section 2.5**.

No detailed concept plan or phasing plan was available at the time of this assessment, therefore a uniform distribution (density) of demand across the area was assumed, and potential phasing of recommended infrastructure is assessed based on assumed phasing of demands as a percentage of calculated build-out demand.

Projected potable water demands for the West Stittsville UEA are presented in **Section 2.5**.

2.2 Background Information

The following background studies were reviewed for this analysis:

- Infrastructure Master Plan (City of Ottawa, 2024) *[2024 IMP]*, including supporting studies such as:
  - City of Ottawa 2024 Water Master Plan (Stantec Consulting Ltd., 2024) *[2024 WMP]*
  - Appendix H – Benefit to Existing Calculations *[2024 IMP Appendix H]*
- Stittsville Water Booster Pumping Station – Class Environmental Assessment Schedule "B" Report – Alternatives Evaluation & Recommended Solution – Final (Stantec Consulting Ltd., 2005) *[2005 Stittsville BPS EA Study]*
- Stittsville Pumping Station Pump Curve Analysis – 2011 Population Projection (Stantec Consulting Ltd., 2007) *[Stittsville BPS 2011 Horizon Pump Curve Memo]*
- Stittsville Pumping Station – Proposed Pump Curve Hydraulic Analysis (Stantec Consulting Ltd., 2007) *[Stittsville BPS Pump Curve Memo]*

A draft version of the IMP was initially prepared in 2023 (Draft 2023 IMP), which included recommendations for servicing urban expansion areas added to the Official Plan (OP) by the

provincial Ministry of Municipal Affairs and Housing (MMAH). These additional urban expansion areas included the West Stittsville UEA's 6435 Fernbank parcel as well as the adjacent 6591 Fernbank Rd parcel, then denoted as W-3. However, this provincial decision was reversed in October 2023, and these additional urban expansion areas were removed from the OP. Hence, the recommendations for servicing urban expansion areas were not finalized, and are subject to revisions based on the more recent available information, updated UEA boundaries and the final 2024 IMP recommendations and supporting analyses.

2.3 Discussions with Stakeholders

Technical advisory committee (TAC) meetings were held with City staff to gather input on infrastructure planning, asset management and operations considerations for this assessment. The following considerations were discussed:

- The proposed UEA is adjacent to and includes wetlands within its boundaries. The proposed UEA's concept plan or phasing information was not available for this assessment. Conceptual alignments for off-site watermains were identified, which may border or cross wetlands.
  - The serviceability of the proposed UEA considering these environmental constraints and the constructability of new watermains was not further reviewed, and should be re-assessed in future design studies based on detailed on-site concept plans and servicing information.
- The proposed UEA is adjacent to estate lots outside the urban boundary, which are currently on private services (e.g., along Healey Ave, along Ridingview Cres). Additionally, potential off-site infrastructure alignments considered in this assessment are along roads adjacent to these estate lots. However, these estate lots are not within the boundaries of the proposed UEA.
  - Therefore, their demands were not considered for off-site infrastructure sizing (new PS, new watermains) or cost allocation. However, these assumptions should be reviewed in future studies based on updated planning information and decisions which may impact off-site infrastructure sizing and alignments.
- The W-2 UEA (approved in the OP) is located directly northwest of Stittsville. Servicing studies pertaining to W-2 are ongoing, considering servicing directly from 3W. However, previous Draft 2023 IMP and 2024 WMP assessments identified this area as benefitting from a pressure zone reconfiguration. While W-2 could be serviced from 3W in the interim, it is ultimately recommended to be serviced from a new Stittsville pressure zone as new developments which could also be serviced from a new pressure zone are identified (such as the current West Stittsville UEA).
  - For the purposes of assessing servicing capacity and needs for the West Stittsville UEA, servicing of W-2 is not further assessed, and should be reviewed as part of a separate pressure zone reconfiguration study or as part of a servicing study specific to W-2.
- The W-4 UEA (approved in the OP) is located directly south of Stittsville. Based on previous Draft 2023 IMP and 2024 WMP assessments, this area would likely experience high pressures if serviced from a new Stittsville pressure zone, however it is adjacent to sections of the network which could be located within the new pressure zone.

- For the purposes of assessing servicing capacity and needs for the West Stittsville UEA, the new Stittsville pressure zone boundaries (as identified in **Section 4.1**) will include the W-4 UEA. Including W-4 also provides a more conservative estimate of demands which will be supplied by the new BPS. Resulting servicing pressures in W-4, however, are not further reviewed, and should be re-assessed as part of a separate pressure zone reconfiguration study or as part of a servicing study specific to W-4.

2.4 Level of Service and Design Criteria

The potable water servicing analysis is based on the level of service (LOS) and design criteria established in the 2024 WMP *Table 3-1* and supporting technical memoranda (TMs). The proposed servicing alternatives and recommended alternative were developed based on an assessment of peak domestic demand conditions, fire flow (FF) conditions, reliability scenarios, and water quality.

Table 2 summarizes the main LOS targets used to develop proposed servicing alternatives, and identify a recommended alternative. The required fire flow (RFF) target is 13,000 L/min (217 L/s; 18.7 MLD) for 3 hours.

Table 2: Summary of Pressure LOS Targets

Condition	Pressure	
	(kPa)	(psi)
Maximum Pressures		
Basic Day (BSDY) Demands (Occupied Areas)	552	80
BSDY (Unoccupied Areas)	689	100
Minimum Pressures		
Maximum Day (MXDY) Demands	345	50
Peak Hour (PKHR) Demands	276	40
BSDY+FF (Reliability) ***Maximum duration below target pressure should not exceed 24 hrs***		
MXDY+FF & BSDY+FF (Reliability)	140	20

2.5 Potable Water Demands

Potable water demands were calculated for the West Stittsville UEA projected developments and existing lots, using the unit counts presented in **Section 2.1** and the 2024 WMP design criteria. While parameters from the existing adjacent pressure zone 3W were used to generate the water demands, pressure zone servicing is reviewed in **Section 3.1**. The demands are summarized in **Table 3**.

These demands are higher than previously calculated for the W-3 area in the 2023 Draft IMP, due to the larger urban expansion area being considered, with the addition of the 6437 Flewellyn Rd parcel.

Table 3: Water Demand Projections

Area	Pressure Zone Parameters	BSDY (MLD)	5-Year MXDY(1) (MLD)	1-Year MXDY(2) (MLD)
West Stittsville UEA	3W(3)	1.7	3.8	3.1

Notes:

(1) MXDY demand based on an outdoor water demand (OWD) with a design frequency of 5 years, used for assessing and planning the pressure zones' high-lift pumping and storage capacities.

(2) MXDY demand based on an OWD with a design frequency of 1 year, used for assessing and planning the WPPs' treatment capacity. The impact of the additional demands on WPP treatment capacity, however, is not assessed in this site-specific study, and is to be reviewed at a Master Plan level.

(3) Existing pressure zone 3W parameters from 2024 WMP design criteria used for water demand calculations. Pressure zone servicing recommendations are reviewed in **Section 3.1**.

3. OPA Step 1 – Assessment of Existing and Planned Infrastructure Capacity

3.1 Pressure Zone Boundary Analysis

The serviceability of the West Stittsville UEA is first assessed conceptually using an analysis of existing pressure zone (PZ) boundaries. This analysis can help identify constraints within the existing pressure zones, which are confirmed using the hydraulic model. This analysis is also used as a preliminary evaluation of the serviceability of urban expansion areas, which are then further evaluated in the capacity analysis spreadsheet tool and hydraulic model. Feasible conceptual pressure zone servicing strategies can be identified from the onset of the analysis, and alternatives and permutations for the capacity and hydraulic assessments can be reduced.

The pressure zone boundary analysis incorporates head losses generated by flows through the system. A typical industry best practice target head loss rate of 1 m/km within the upstream water distribution network is used to derive the theoretical pressure zone boundaries. However, actual head loss rates within the network can vary due to distribution system characteristics including watermain looping, varying pipe roughness, and distribution of demands, and thus the pressure distributions are further assessed using the hydraulic model. Pressure distributions based on hydraulic model hydraulic gradelines (HGLs) and calculated West Stittsville UEA demands are presented in the hydraulic assessment in **Section 3.3**.

Figure 3 shows the pressure zone boundary analysis results for the pressure zone 3W, as they pertain to servicing the West Stittsville UEA. **Figure 3a** shows that the minimum target pressure of 40 psi would not be met throughout most of the West Stittsville UEA. The southern parcel (6437 Flewellyn Rd) is particularly constrained even under higher HGL conditions (**Figure 3b**), due to its higher elevations. **Figure 3c** shows that with a pressure zone reconfiguration where the West Stittsville UEA is supplied from a new Stittsville pressure zone operating at a target HGL of at least 168 m, minimum pressures are above 40 psi throughout the entire UEA.

Therefore, to service the West Stittsville UEA, a new Stittsville pressure zone serviced from a new Stittsville Booster PS (BPS) will be needed. This aligns with the previous recommendations of the 2023 Draft IMP to service the W-3 UEA. However, considering the revised operating target HGLs, the proposed pressure zone boundaries and resulting PS sizing will need to be reviewed, as presented in **Section 4.1**. Servicing the West Stittsville UEA from the new Stittsville PZ is further assessed in the hydraulic model, as presented in **Section 3.3**.

a) 3W Minimum HGL (153.9 m)
Head Loss Rate = 1 m/km
Facilities: Glen Cairn PS,
Campeau Dr PS,
Stittsville ET

b) 3W Maximum HGL (161.9 m)
Head Loss Rate = 1 m/km
Facilities: Glen Cairn PS,
Campeau Dr PS,
Stittsville ET

c) New Stittsville PZ HGL (168 m)
Head Loss Rate = 1 m/km
Facilities: New Stittsville BPS
(near Stittsville ET)

West Stittsville
Urban Expansion Area

West Stittsville Urban Expansion Area Assessment

Figure 3: Pressure Zone Boundary Analysis - West Stittsville UEA Servicing

West Stittsville UEA demands are not considered in this theoretical analysis. Instead, head losses due to additional demands and resulting flows are generated using the head loss rates noted.

Legend

Pressures (psi)

- Not Serviceable
- 0 psi < Pressure ≤ 20 psi
- 20 psi < Pressure ≤ 25 psi
- 25 psi < Pressure ≤ 30 psi
- 30 psi < Pressure ≤ 35 psi
- 35 psi < Pressure ≤ 40 psi
- 40 psi < Pressure ≤ 45 psi
- 45 psi < Pressure ≤ 50 psi
- 50 psi < Pressure ≤ 60 psi
- 60 psi < Pressure ≤ 70 psi
- 70 psi < Pressure ≤ 80 psi
- 80 psi < Pressure ≤ 85 psi
- 85 psi < Pressure ≤ 90 psi
- 90 psi < Pressure ≤ 95 psi
- 95 psi < Pressure ≤ 100 psi
- Pressure > 100 psi

Ottawa

0 0.17 0.35 0.7 Km

3.2 Capacity Analysis

The capacity of the existing water distribution's pumping stations (PS) and storage facilities was assessed using the City's capacity analysis spreadsheet tool. Capacity constraints requiring upgrades were assessed based on a trigger year of 2046, which is the 2024 IMP's growth horizon. Planned upgrades in the 2024 IMP were considered.

The results shown in **Table 4** indicate that the existing and planned upstream infrastructure can accommodate the demands from the West Stittsville UEA when added onto the 2046 OP growth projections. Additional upgrades (i.e. upgrades of upstream reservoirs and pump stations in the 2W and 3W pressure zones) may not be triggered before the 2046 OP planning horizon based on the West Stittsville demand data analyzed under this 2025 UEA study. Although the West Stittsville demand does not trigger the need for upstream existing infrastructure upgrades, the existing water distribution system cannot directly supply the West Stittsville UEA to fulfil the 2024 IMP's target LOS criteria within both the development lands and the existing service areas. These findings are further discussed in the hydraulic assessment presented in **Section 3.3**.

The proposed new Stittsville PZ will be a closed zone (i.e., without floating storage) downstream of 3W and 2W+, therefore the PZ reconfiguration does not impact the upstream capacity triggers presented in **Table 4**, as peak demands are unchanged.

Table 4: Impact of West Stittsville UEA Peak Demands on Facility Upgrade Growth Triggers

Servicing Scenario	Existing & Planned(1) Facilities		Timeline of Additional Facility Upgrades *In addition to 2024 IMP Recommendations*	
	Pumping	**Storage**	**w/o West Stittsville UEA**	**w/ West Stittsville UEA**
Servicing from 2W+	**Existing:** Britannia WPP HLP-2W Carlington Heights 2W	**Existing:** Glen Cairn Reservoir Fallowfield reservoir Stittsville ET Moodie Dr Tank **Planned:** New Riverside South Elevated Tank (RSET) in place by 2031(1)	2101+	2101+
Servicing from 3W	**Existing:** Glen Cairn PS Campeau Dr PS	**Existing:** Stittsville ET	2101+	2101+

Legend: Upgrades required by 2046

Notes:

(1) Planned facilities & trigger years per the 2024 IMP's recommendations.

3.3 Hydraulic Assessment

The need for potential off-site watermain upgrades (new watermains and/or existing watermain replacement) was assessed based on a review of existing watermains in the vicinity of the West Stittsville UEA, and using the City's hydraulic model, under future growth (2046 growth from the OP) and infrastructure conditions (i.e., with planned infrastructure).

Table 5 presents a summary of direct servicing opportunities and infrastructure gaps. There are no adjacent watermains for direct servicing opportunities; therefore, new off-site infrastructure is needed to service the West Stittsville UEA. The infrastructure gaps were identified as needed, in addition to planned infrastructure recommended in the 2024 IMP.

As shown in **Figure 4a**, with three new direct connections to the existing distribution system alone, the minimum target pressure of 40 psi cannot be achieved within the West Stittsville UEA. Additionally, the demand from the West Stittsville UEA with only the three service connections from the existing network, further reduces minimum pressures that are already below 40 psi in the existing service areas. Therefore, further off-site infrastructure improvements are needed to satisfy minimum level of service requirements. Based on the current West Stittsville UEA unit and population projections, ground elevation constraints within the proposed development lands, and existing low pressures in the Stittsville area of Zone 3W, a need for a new pressure zone in Stittsville that is serviced by a new BPS to maintain the minimum target pressure of 40 psi, was identified. However, as shown in **Figure 4b**, some elevated lands are still anticipated to experience minimum pressures below 40 psi. As such, a new twin feedermain from the proposed Stittsville BPS to the West Stittsville UEA is also recommended to achieve minimum LOS requirements, as demonstrated in **Figure 4c**. This aligns with the recommendation made in the Draft 2023 IMP. Hydraulic assessment results indicate that the addition of the new twin watermain also improves the LOS from a pressure perspective within the existing service areas.

Table 5: Direct Servicing Opportunities and Infrastructure Gaps for West Stittsville UEA

Servicing Area	Opportunities for Direct Servicing	Infrastructure Gaps
West Stittsville UEA	• No adjacent watermains for direct connection to existing distribution system	• New watermain connections to existing distribution system • New Stittsville PZ serviced by a new Stittsville BPS and new twin discharge feedermain needed to achieve minimum target pressure of 40 psi within the West Stittsville UEA lands • Pressure reduction measures to address high maximum pressures above 80 psi under BSDY demand conditions in existing service areas and W-4

a) PKHR Minimum Pressure Distribution
w/o New Stittsville BPS

b) PKHR Minimum Pressure Distribution
w/ New Stittsville BPS
w/o Twin Watermain on Hazeldean Rd & West Ridge Dr

c) PKHR Minimum Pressure Distribution
w/ New Stittsville BPS
w/ Twin Watermain on Hazeldean Rd & West Ridge Dr

Proposed new off-site twin watermain from new Stittsville BPS to West Stittsville UEA, along Hazeldean Rd & West Ridge Dr

West Stittsville Urban Expansion Area

3W

ABBOTT ST W

FERNBANK RD

WEST RIDGE DR

HAZELDEAN RD

STITTSVILLE MAIN ST

West Stittsville Urban Expansion Area Assessment

Figure 4
: West Stittsville UEA Servicing - Pressure Distribution With & Without Off-Site Infrastructure Upgrades

Legend

- Official Plan Urban Expansion Area
- West Stittsville Urban Expansion Area
- Proposed Connection Points
- Proposed New Off-Site Watermains

Pressures (psi)

- Not Serviceable
- 0 psi < Pressure ≤ 20 psi
- 20 psi < Pressure ≤ 25 psi
- 25 psi < Pressure ≤ 30 psi
- 30 psi < Pressure ≤ 35 psi
- 35 psi < Pressure ≤ 40 psi
- 40 psi < Pressure ≤ 45 psi
- 45 psi < Pressure ≤ 50 psi
- 50 psi < Pressure ≤ 60 psi
- 60 psi < Pressure ≤ 70 psi
- 70 psi < Pressure ≤ 80 psi
- 80 psi < Pressure ≤ 85 psi
- 85 psi < Pressure ≤ 90 psi
- 90 psi < Pressure ≤ 95 psi
- 95 psi < Pressure ≤ 100 psi
- Pressure > 100 psi

Ottawa

0 0.17 0.35 0.7 Km

3.4 Step 1 Conclusions & Recommendations

The capacity of the existing water distribution system to directly service the West Stittsville UEA was assessed. **Although the West Stittsville demand does not trigger the need for upstream existing infrastructure upgrade in the 2W and 3W Zones, however, the existing water distribution system cannot directly supply the West Stittsville UEA to fulfil the 2024 IMP's target LOS criteria within the development lands and existing service areas. Therefore, the OPA Step 2 assessment is needed to identify off-site infrastructure needs** and address the following infrastructure gaps:

- New watermain connections to existing distribution system;
- New Stittsville PZ serviced by a new Stittsville BPS and new twin discharge feedermain needed to achieve minimum target pressure of 40 psi within the West Stittsville UEA lands; and,
- Pressure reduction measures to address high maximum pressures above 80 psi under BSDY demand conditions in existing service areas and W-4.

Off-site infrastructure needs to address these constraints, along with Class D opinions of probable costs (OPCs) and cost allocation are addressed in Step 2 of the OPA, presented in **Section 4**.

4. OPA Step 2 – Identification & Assessment of Off-Site Infrastructure Needs

4.1 Pressure Zone Boundary Analysis

As identified in the Step 1 pressure zone boundary analysis (**Section 3.1**), a pressure zone reconfiguration where the West Stittsville UEA is supplied from a new Stittsville pressure zone operating at a target HGL of at least 168 m will be needed to meet minimum pressure target LOS throughout the UEA.

To supply the new PZ, a new Stittsville BPS will be needed, identified on the site of the existing Stittsville ET, per the 2005 Stittsville BPS EA Study recommendations. However, the location should be confirmed as part of separate function design and EA studies for the new BPS. The new PZ is assumed to operate as a closed zone (i.e., without floating storage).

Based on the target HGL of 168 m and an assumed head loss rate of 1 m/km, the boundaries of the pressure zone were delineated, as illustrated in **Figure 5**. Based on these revised new Stittsville PZ boundaries, the demands serviced by the new PZ and resulting new BPS size were quantified using the hydraulic model demands, as presented in **Table 6**. A new 33 MLD BPS will be needed to service the new Stittsville PZ.

This new Stittsville PZ boundary and proposed PS sizing is used to demonstrate the serviceability of the West Stittsville UEA. As discussed in **Section 2.3**, serviceability of other growth areas (e.g., W-2, W-4) from the new PZ should be reviewed as part of a separate pressure zone reconfiguration study or in separate studies specific to those areas.

New Stittsville PZ HGL (168 m)
Head Loss Rate = 1 m/km
Facilities: New Stittsville BPS
(near Stittsville ET)

417

W-2

W-2-1

W-2

W-2

New Stittsville BPS on existing Stittsville Tank site, as identified in 2005 Stittsville BPS EA Study. Location to be confirmed in separate studies.

Stittsville Tank

PS

Proposed new Stittsville PZ boundaries. To be optimized and confirmed in separate functional design studies.

Abbott/Iber St Backup PS

Official Plan Urban Expansion Area W-2. Interim servicing directly from 3W per ongoing servicing studies. Ultimate servicing from new Stittsville PZ to be reviewed in separate functional design studies.

West Stittsville Urban Expansion Area

W-4

Official Plan Urban Expansion Area W-4. Pressures could exceed 80 psi. Servicing and pressure zone boundary adjustments to be reviewed in separate studies.

West Stittsville Urban Expansion Area Assessment

Figure 5: Proposed New Stittsville Pressure Zone

West Stittsville UEA demands are not considered in this theoretical analysis. Instead, head losses due to additional demands and resulting flows are generated using the head loss rates noted.

Ottawa

0 0.25 0.5 1 Km

Legend

- Official Plan Urban Expansion Area
- West Stittsville Urban Expansion Area
- Proposed New Stittsville PZ Boundaries
- Existing Pressure Zone Boundaries
- Elevated Tank
- Pump Station (Active)
- New Stittsville BPS

Backbone Watermain

- 152 mm - 305 mm
- 406 mm - 508 mm
- 610 mm - 914 mm

Distribution Watermain

- ≤ 102 mm
- 152 mm - 305 mm
- 356 mm - 508 mm
- 610 mm - 914 mm

Pressures (psi)

- Not Serviceable
- 0 psi < Pressure ≤ 20 psi
- 20 psi < Pressure ≤ 25 psi
- 25 psi < Pressure ≤ 30 psi
- 30 psi < Pressure ≤ 35 psi
- 35 psi < Pressure ≤ 40 psi
- 40 psi < Pressure ≤ 45 psi
- 45 psi < Pressure ≤ 50 psi
- 50 psi < Pressure ≤ 60 psi
- 60 psi < Pressure ≤ 70 psi
- 70 psi < Pressure ≤ 80 psi
- 80 psi < Pressure ≤ 85 psi
- 85 psi < Pressure ≤ 90 psi
- 90 psi < Pressure ≤ 95 psi
- 95 psi < Pressure ≤ 100 psi
- Pressure > 100 psi

Furthermore, a reliability analysis of the new Stittsville PZ (i.e., PS failure under BSDY+FF conditions) would require larger master-planning considerations beyond assessing the serviceability of the West Stittsville UEA only. Reliability for the new Stittsville PZ was therefore not assessed but should be reviewed as part of a pressure zone reconfiguration study.

However, a localized reliability analysis for the West Stittsville UEA was performed assuming the service connection along Abbott St was out of service under BSDY+FF conditions. The hydraulic analysis results indicated that 2% of the areas under the 100% BSDY+FF demand might experience pressure below 20 psi. However, reliability should be reviewed further as part of a separate pressure zone reconfiguration study.

Table 6: New Stittsville PZ Demands & BPS Sizing

Demand Scenario	West Stittsville UEA	Existing Demands within UB	Growth (2046) within UB	Total
BSDY (MLD)	1.7	4.0	0.8	**6.4**
MXDY (MLD)	3.8	9.5	1.0	**14.3**
PKHR (MLD)	8.8	20.0	1.7	**30.5**
FF	18.7			
MXDY+FF (MLD)	22.5	28.2	19.7	**33.0**
Governing Demand Scenario				**MXDY+FF**
Recommended BPS Sizing				**33.0**

4.2 Capacity Analysis

As identified in the Step 1 capacity analysis (**Section 3.2**), the existing and planned pumping and storage facilities supplying 2W and its downstream zones, as well as 3W, can accommodate the demands from the West Stittsville UEA when added onto the 2046 OP growth projections. Therefore, no additional system capacity upgrades are triggered for the existing 2W and 3W pressure zone infrastructure before the 2046 OP planning horizon.

Furthermore, as discussed in **Section 3.2**, the proposed new Stittsville PZ will be a closed zone (i.e., without floating storage) downstream of 3W and 2W+, therefore the PZ reconfiguration does not impact the upstream pumping and storage capacity, as peak demands are unchanged.

4.3 Hydraulic Assessment

As identified in the Step 1 hydraulic analysis (**Section 3.3**), infrastructure gaps need to be addressed off-site. Potential off-site infrastructure solutions for each infrastructure gap are presented in **Table 7**. As discussed in the Step 1 hydraulic analysis, these off-site infrastructure solutions would be needed in addition to already planned infrastructure from the 2024 IMP.

To provide service connections to the West Stittsville UEA, three new off-site watermains are proposed along Abbott St, Fernbank Rd and Stittsville Main St. These three watermains are there to provide connection and looping to the north and south parcels of the West Stittsville areas. In addition to these three service connections, a booster pump station and a twin 610 mm watermain

along Hazeldean Rd and West Ridge Dr are recommended to achieve the target minimum pressure 40 psi within the development lands and avoid impacting LOS in existing service areas. The twin 610 mm watermain is a conceptual solution that demonstrates the additional equivalent hydraulic capacity required, in addition to the existing watermains along Hazeldean Rd and West Ridge Dr. However, this and other alternatives (e.g., single watermain) may be further evaluated at the functional design stage. It is further recommended that continuous large diameter watermain looping be achieved on-site, which should be reviewed as part of the master servicing study (MSS) for this area.

During BSDY demand conditions, some off-site areas within the existing Stittsville service area and future W-4 lands may experience maximum pressures greater than 80 psi. Therefore, off-site pressure reduction measures should be implemented. Pressure reduction measures could consist of pressure reducing valves (PRVs) at each property, or a single PRV station for the areas projected to experience high pressures. This should be reviewed as part of the MSS for this area through the Future Neighbourhoods process, should this area be added to the urban boundary.

Table 7: Infrastructure Gaps and Potential Off-Site Solutions and Additional Internal Needs to Support Off-Site Solutions

Servicing Area	Infrastructure Gaps	Potential Off-Site Solutions	Additional Internal Needs to Support Off-Site Solution
West Stittsville UEA	• New watermain connections to existing distribution system	• New watermains along Abbott St, Fernbank Rd and Stittsville Main St to the West Stittsville UEA	• Large internal backbone watermain
	• Measures to increase supply HGL + head loss reduction measures in existing water distribution network within existing Stittsville service area to achieve minimum target pressure of 40 psi	• New Stittsville PZ serviced by a new Stittsville BPS and new twin 610 WM along Hazeldean Rd and West Ridge Dr	• None
	• Pressure reduction measures to address high maximum pressures above 80 psi under BSDY demand conditions in existing service areas and W-4	• Some adjacent off-site areas may experience pressures above 80 PSI – to be addressed by off-site PRVs	• None – to be addressed off-site

4.4 Servicing Recommendation

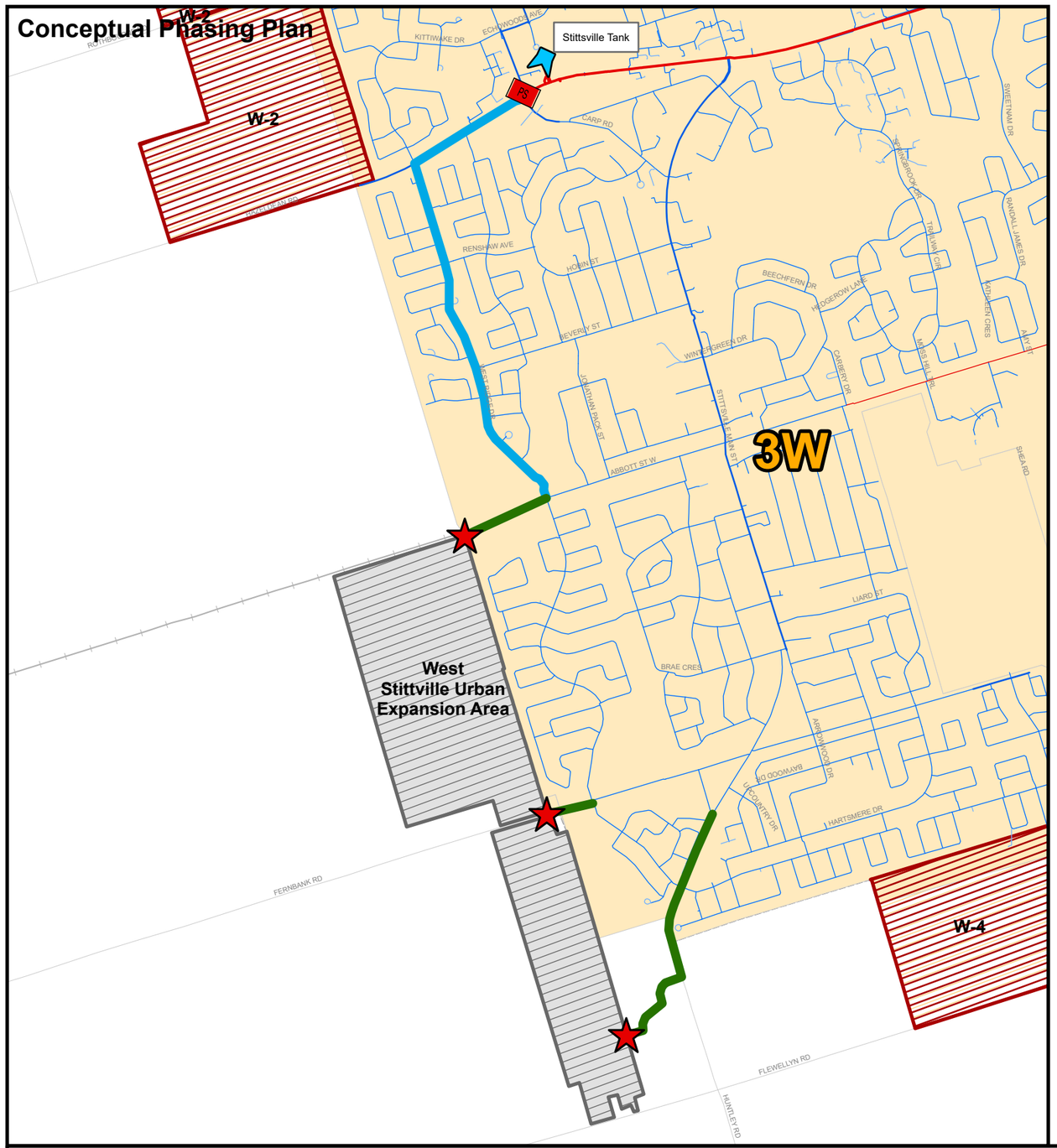
To address the infrastructure gaps identified in Step 1, off-site infrastructure needs were identified and assessed. **Table 8** summarizes the infrastructure recommendations, which are illustrated in **Figure 6**. The total OPC for the recommended infrastructure is $41.1 M, which was developed using the Class D costing templates from the 2024 IMP. Details on the OPCs are provided in **Section 4.5**.

Table 8: West Stittsville UEA Servicing Constraints and Off-Site Infrastructure Needs

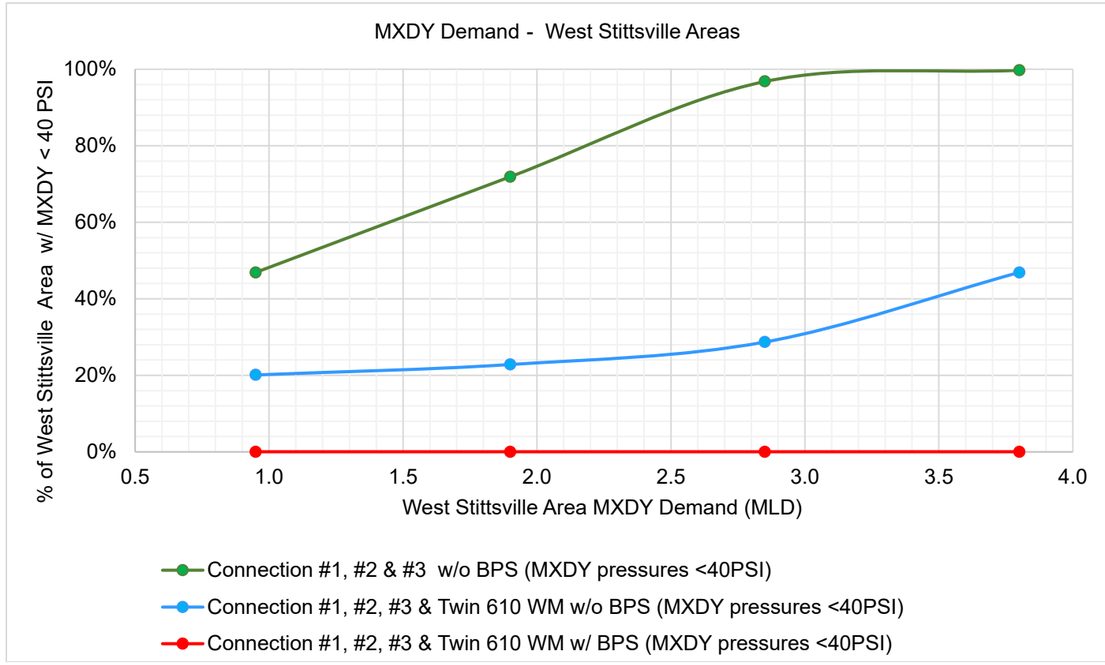
Servicing Area	Phase (ID)	Description	Diameter (mm)	Length (m)	Along	From	To
West Stittsville UEA	Phase 1	New Watermain	400	615	Abbott St	West Ridge Dr	West Stittsville UEA boundary
		New Watermain	400	401	Fernbank Rd	West Ridge Dr	West Stittsville UEA boundary
		New Watermain	400	1,047	Stittsville Main St	Etta St	West Stittsville UEA boundary
	Phase 2	New Twin Watermain	610	2,329	Hazeldean & West Ridge Dr	Carp Rd	Abbott St
	Phase 3	New 33 MLD Booster Pumping Station (BPS)	-	-	-	-	-

Figure 6 also illustrates potential phasing opportunities for the proposed infrastructure. Each phase is assessed in terms of LOS achieved (percentage of areas experiencing MXDY minimum pressures below 40 psi) as a function of demand supplied. There is capacity to supply up to ~3.8 MLD (100% West Stittsville demand) in MXDY demands. However, during Phases 1 and 2, some areas could experience pressures below the target minimum 40 psi. As demonstrated in **Appendix A**, with just Phase 1 in-place, additional existing service areas would experience pressures below 40 psi. However, with the addition of Phase 2, the new twin 610 mm watermain would improve minimum pressures within the existing service areas. To mitigate the creation of low-pressure areas during interim infrastructure phasing conditions, development of the West Stittsville UEA may be aligned with areas of readily serviceable elevations (e.g., align developing the higher elevation areas within the south parcel with the BPS installation). A review of minimum acceptable pressures under interim conditions may also be considered until such time that off-site infrastructure can be fully constructed and commissioned.

Timing of the implementation of the BPS should also be reviewed during the MSS through the Future Neighbourhoods process, should this area be added to the urban boundary, considering the design guidelines' requirements to avoid the creation of vulnerable service areas (VSAs).



Level of Service by Phase, Based on West Stittsville UEA MXDY Demand (MLD)



West Stittsville Urban Expansion Area Assessment

Figure 6: West Stittsville UEA Servicing Potential Phasing of Infrastructure & Level of Service

Legend

- PS — Pump Station (Active)
- Elevated Tank
- Official Plan Urban Expansion Area
- West Stittsville Urban Expansion Area
- Proposed Connection Points
- Proposed Off-Site Watermains (Phase 1)
- Proposed Off-Site Watermains (Phase 2)
- PS — Proposed New Stittsville BPS (Phase 3)

Ottawa

0 0.3 0.6 1.2 Km

4.5 Opinion of Probable Cost & Cost Allocation

Using the Class D costing templates developed by Ainley Graham & Associates Limited – Ainley Group for use in the 2024 IMP, OPCs were developed for the servicing recommendation presented in **Section 4.4**. The OPCs are presented in 2025$, using the 2020-2024 inflation rates established in the 2024 IMP and an assumed rate of 3% from 2024 to 2025.

Cost allocations between growth stakeholders and benefit-to-existing (BTE) were developed based on the framework outlined in the *2024 IMP Appendix H*. At the time of this assessment, the details of the mechanisms to recuperate fees for the costs allocated to growth were unknown, as this assessment does not directly support an update to the Development Charges By-Law. The BTE components were determined as follows:

- For new watermains which are growth-driven and which are not sized to accommodate existing development, no BTE (BTE = 0%) was applied.
- For the new BPS which is primarily growth-driven, but also provides improved LOS to existing low-pressure service areas in Stittsville, 20% BTE was applied.

Table 9 presents the OPCs (in 2025$) and allocation by phase and between growth and BTE for the recommended off-site infrastructure. Detailed OPC calculation sheets are provided in **Appendix B**.

Table 9: OPCs (2025$), Potential Phasing and Preliminary Cost Allocation

Servicing Area	Phase (ID)	Growth (M$)	BTE (M$)	Total (M$)	Growth %	BTE %
Stittsville UEA	**Phase 1**	$12.2	$0	**$12.2**	100%	0%
	Phase 2	$17.3	$0	**$17.3**	100%	0%
	Phase 3	$9.3	$2.3	**$11.6**	80%	20%
	Total	***$38.8***	***$2.3***	***$41.1***	***94%***	***6%***

4.6 Step 2 Conclusions & Recommendations

Off-site water distribution infrastructure will be needed to service the West Stittsville UEA, as presented in **Table 9.** The Class D OPC for the proposed off-site infrastructure is $41.1 M, of which 94% is allocated to growth. This OPC and the proposed allocation should be reviewed in more detail as part of future studies.

The following servicing components should be reviewed in separate master servicing studies, functional design studies and Environmental Assessments:

- Impact of the final location of the new BPS on West Stittsville UEA servicing;
- Sizing, alignment, location, design and operation of the new BPS, twin 60 WM and service connection WMs;
- Providing continuity of large diameter watermain looping within the West Stittsville UEA;

- Pressure reduction measures within existing areas and future W-4 lands; and,
- Review of West Stittsville UEA detailed concept plans and phasing plans, once available.

Stantec Consulting Ltd.

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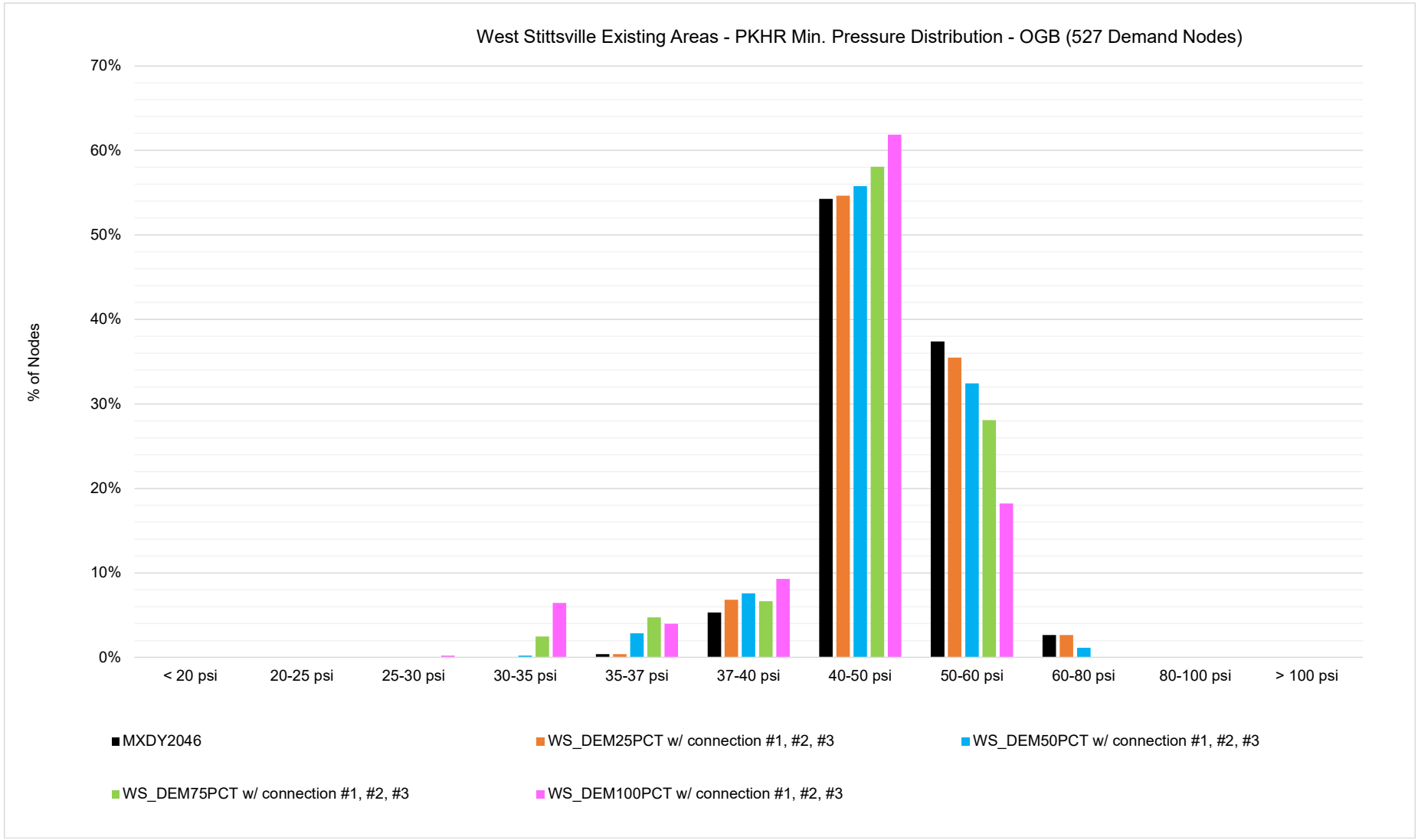
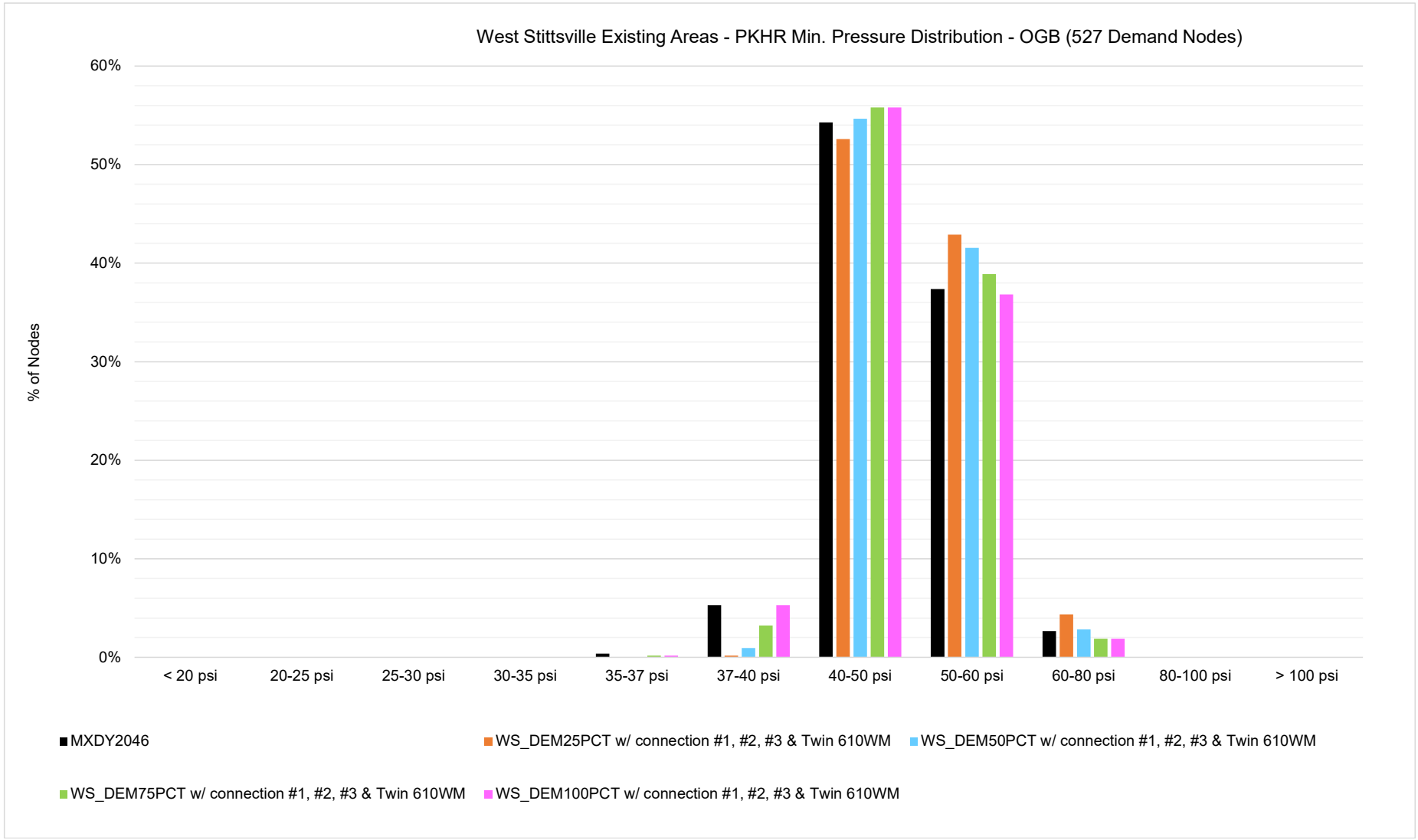
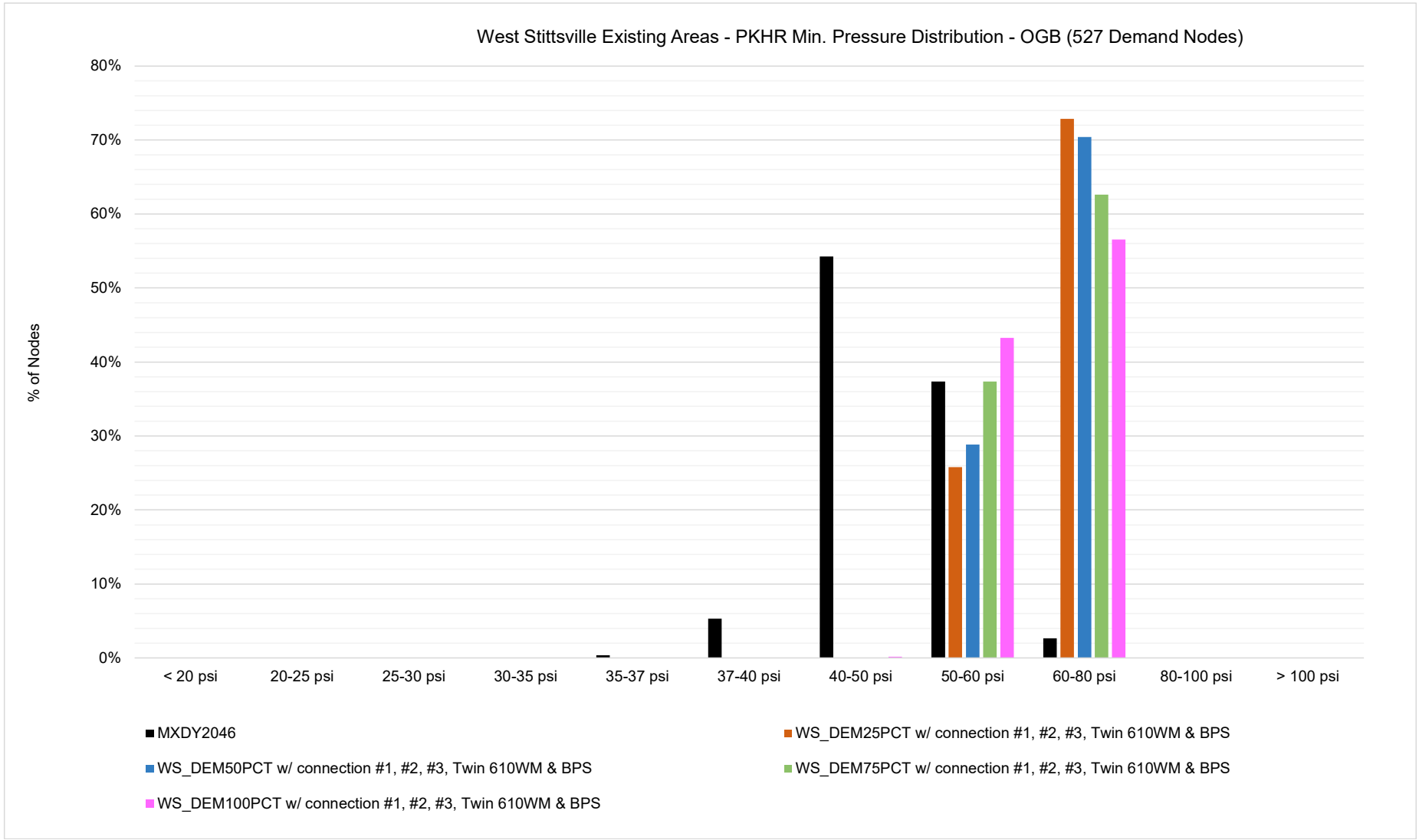
Attachments:
Appendix A: Effects of the West Stittsville Demand on the Existing Areas' Pressure Distribution
Appendix B: Opinions of Probable Costs

Appendix A Effects of the West Stittsville Demand on the Existing Areas' Pressure Distribution


West Stittsville Existing Areas - PKHR Min. Pressure Distribution - OGB (527 Demand Nodes)
% of Nodes
70%
60%
50%
40%
30%
20%
10%
0%
< 20 psi
20-25 psi
25-30 psi
30-35 psi
35-37 psi
37-40 psi
40-50 psi
50-60 psi
60-80 psi
80-100 psi
> 100 psi
MXDY2046
WS_DEM25PCT w/ connection #1, #2, #3
WS_DEM50PCT w/ connection #1, #2, #3
WS_DEM75PCT w/ connection #1, #2, #3
WS_DEM100PCT w/ connection #1, #2, #3


West Stittsville Existing Areas - PKHR Min. Pressure Distribution - OGB (527 Demand Nodes)
% of Nodes
60%
50%
40%
30%
20%
10%
0%
< 20 psi
20-25 psi
25-30 psi
30-35 psi
35-37 psi
37-40 psi
40-50 psi
50-60 psi
60-80 psi
80-100 psi
> 100 psi
MXDY2046
WS_DEM25PCT w/ connection #1, #2, #3 & Twin 610WM
WS_DEM50PCT w/ connection #1, #2, #3 & Twin 610WM
WS_DEM75PCT w/ connection #1, #2, #3 & Twin 610WM
WS_DEM100PCT w/ connection #1, #2, #3 & Twin 610WM


West Stittsville Existing Areas - PKHR Min. Pressure Distribution - OGB (527 Demand Nodes)
% of Nodes
80%
70%
60%
50%
40%
30%
20%
10%
0%
< 20 psi
20-25 psi
25-30 psi
30-35 psi
35-37 psi
37-40 psi
40-50 psi
50-60 psi
60-80 psi
80-100 psi
> 100 psi
MXDY2046
WS_DEM25PCT w/ connection #1, #2, #3, Twin 610WM & BPS
WS_DEM50PCT w/ connection #1, #2, #3, Twin 610WM & BPS
WS_DEM75PCT w/ connection #1, #2, #3, Twin 610WM & BPS
WS_DEM100PCT w/ connection #1, #2, #3, Twin 610WM & BPS

Appendix B Opinions of Probable Costs

Date: 9/30/2025

Asset Management

Infrastructure Planning Unit

Infrastructure Category:	**Watermain**
Project Type:	**Trunk Watermain and Appurtenances**
Project Title:	**New Watermain for West Stittsville UEA**
Project Phase:	**Conceptual Design**
SAP Project Number:	TBD
Project Location:	Refer to report figures for project location

Project Location Map:
Refer to report figures for project location

Project Description
400mm diam. WM along Abbott St. from West Ridge Dr. to West Stittsville UEA

FINAL - 2020 - CLASS D - ESTIMATED CONSTRUCTION COSTS (NO HST):	**$1,020,200**

CAPITAL COST COMPONENTS AND RISK FACTORS

Item	Percentage**	Yes/No = 1/0	Estimated Cost
Capital Cost Components*		**Change as Required**	
Engineering - Design, Contract Adm. (15% - 25%)	20.0%	1	$204,040
Utilities (5% - 20%)	10.0%	1	$102,020
Property - REPDO Estimate (1% - 10%)	1.0%	1	$10,202
City Internal Costs (7% - 10%)	8.5%	1	$86,717
Misc. Soft Costs - Permit, Public Art, etc. (5%)	5.0%	1	$51,010
Risk Factors**			
Geo-Tech Issues - Soil (1% - 10%)	5.0%	1	$51,010
Geo-Tech issues - Bedrock (1% - 5%)	2.0%	1	$20,404
Geo-Tech Issues - Grey Silty Clay (1% - 10%)	0.0%	0	$0
Special Hydro-Geo Conditions (1% - 10%)	5.0%	1	$51,010
Change in Design Standards (1% - 5%)	0.0%	0	$0
Construction Contract Duration (2% per year)	0.0%	0	$0
Species at Risk and Project Mitigation (1% - 5%)	1.0%	1	$10,202
Planning, Design and Land use Approvals (5% - 10%)	5.0%	0	$0
Provincial and Federal Environmental Assessments (5% - 10%)	5.0%	0	$0
CONSTRUCTION COST AND CAPITAL COST COMPONENTS SUBTOTAL:			**$1,474,189**
RISK FACTORS SUBTOTAL:			**$132,626**
OVERALL CLASS D CONTINGENCY (40%-50%) * **	**40%**	**1**	**$589,676**
FINAL - 2020 - CLASS D - ESTIMATED TOTAL CAPITAL COST (No HST):			**$2,196,491**

*** Capital Cost Components Percentage Allowance Range as per City 2013 PDR**

**** Risk Factors Percentage Allowance to be Applied Based on the Project Complexity**

***** Overall Contingency is Applied to Estimated Construction and Capital Cost Components**

Project Related Comments:

COST INFLATION CHART

Year	Inflation % per Year	Yearly Total Cost Projection
2021	17.2%	$2,574,287
2022	9.9%	$2,829,141
2023	7.8%	$3,049,814
2024	5.79%	$3,226,399
2025	3%	$3,323,191
2026	3%	$3,422,886
2027	3%	$3,525,573
2028	3%	$3,631,340
2029	3%	$3,740,280
2030	3%	$3,852,489
2031	3%	$3,968,063
2032	3%	$4,087,105
2033	3%	$4,209,718
2034	3%	$4,336,010
2035	3%	$4,466,090
2036	3%	$4,600,073
2037	3%	$4,738,075
2038	3%	$4,880,217
2039	3%	$5,026,624
2040	3%	$5,177,423
2041	3%	$5,332,745
2042	3%	$5,492,728
2043	3%	$5,657,510
2044	3%	$5,827,235
2045	3%	$6,002,052
2046	3%	$6,182,114

CITY OF OTTAWA	Trunk Watermains (300mm, 400mm, 600mm, 750mm & 900mm) FINAL - 2020 - Class D - Construction Cost Estimating Template New Watermain for West Stittsville UEA

Estimate Note:
This Construction Cost Estimate Template for Trunk Watermains has been prepared for guidance in project evaluation and implementation from the information available at 2020 unit cost prices.

NOTE	ADJUST QUANTITIES/UNIT PRICES AS REQUIRED

Section A - General						
Code	**Spec**	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
A010		**Field Office**				
A010.01	F-1001	Field office for Contract Administrator 35-70m2	16	wk	$1,000	$16,000
A020		**TRAFFIC CONTROL PLAN**				
A020.01	F-1010	Traffic Control Plan	16	wk	$1,000	$16,000
A020.02	F-1012	Police Assistance at Intersection	0	hr	$280	$0
A030		**PEDESTRIAN CONTROL**				
A030.01	F-1013	Construction Site Pedestrian Control Implementation	1	LS	$17,400	$17,400
A040		**EROSION & SEDIMENT CONTROL**				
A040.01	805, F-1004	Erosion and Sediment Control Plan and Monitoring	1	LS	$2,300	$2,300
A040.03	805, F-1004	Erosion and Sediment Control Measures	1	LS	$5,800	$5,800
A060		**PRE-CONSTRUCTION INSPECTION**				
A060.01	F-1011	Pre-Construction Inspection	1	LS	$5,800	$5,800
A999		**Non-Standard Items**				
A999.01	GC 6.04	Construction Site Health and Safety Management and Control	1	LS	$17,400	$17,400
					Sub-Total Section A:	**$80,700**

Section G - Watermains						
G010		**EXCAVATION AND BACKFILL**				
G010.02	401, 441,F-4411, F-7010	Additional excavation & backfill with 50mm clear stone	0	m^3	$75	$0
G020		**SELECT SUBGRADE MATERIAL**				
G020.01	212, 314, F-2120, F-3147	Select subgrade material for Trench Backfill	0	m^3	$50	$0
G030		**WATERMAIN - PVC PIPE**	**615**			
G030.05	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	300mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$800	$0
G030.06	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$1,000	$0
G050		**WATERMAIN - CONCRETE PRESSURE PIPE**				
G050.01	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, concrete pressure pipe, CL C303 including all appurtenances	615	m	$1,200	$738,000
G050.02	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	600mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$1,500	$0
G050.03	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	750mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$2,000	$0
G050.04	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	1050mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$3,200	$0
G070		**VALVE AND VALVE CHAMBER**	**4**			
G070.04	F-4411 ,F-4413, F-4491, F-4492, F-4493, F-4494	300mm Gate valve,valve chamber, W3	0	ea	$9,500	$0

G080		**BUTTERFLY VALVE AND VALVE CHAMBER**				
G080.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	400mm Butterfly valve,W5 & valve chamber, W2	4	ea	$20,000	$80,000
G080.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Butterfly valve,W5 & valve chamber, W2	0	ea	$35,000	$0
G080.03	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	750mm Butterfly valve,W5 & valve chamber, W2	0	ea	$50,000	$0
G080.04	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1050mm Butterfly valve,W5 & valve chamber, W2	0	ea	$80,000	$0
G090		**VALVE CHAMBER ONLY FOR TVS**				
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1500mm Valve Chamber (Only) FOR 300mm TVS per W4	0	ea	$10,000	$0
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	R-1 valve chamber (only) for TVS(any size) off 400mm watermain, W10	0	ea	$12,000	$0
G100		**MISCELLANEOUS VALVE CHAMBER**				
G100.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	610mm access, air relief and drain out valve chamber type R-1 per W10	0	ea	$20,000	$0
G100.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Automatic Flushing Chamber per W3.2	0	ea	$10,000	$0
G110		**BRANCH VALVE CHAMBER**				
G110.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 600mm watermain per W11	0	ea	$35,000	$0
G110.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 900mm watermain per W11	0	ea	$65,000	$0
G120		**LINE VALVE CHAMBER**				
G120.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line valve chamber Type R-3 per W12	0	ea	$80,000	$0
G120.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line valve chamber Type R-3 per W12	0	ea	$120,000	$0
G130		**BRANCH AND LINE VALVE CHAMBER**				
G130.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$120,000	$0
G130.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$150,000	$0
G140		**HYDRANTS**				
G140.01.	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W19	5	ea	$7,000	$35,000
G140.02	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W20 Complete with Ditch Culvert	0	ea	$6,500	$0
G140.03	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI CL52 or PVC CL150, DR-18	0	m	$350	$0
G140.04	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI, CL52 or PVC CL 150 DR18, including reinstatement	50	m	$500	$25,000
G170		**TEMPORARY OVERLAND SERVICES**				
G170.999.01	F-4411, F4416, F-4491, F-4492 F-4493, F-4494	Temporary Service Connections - Supply, Installation & Protection	0	ea	$700	$0
G180		**TRENCH REINSTATEMENT (ALL INCLUSIVE PRICE METHOD)**				
G180.02	F-4411, F-4419, F4491, F-4492. F-4493, F4494	Trench Reinstatement - Existing Road(All Inclusive Method)	0	m	$500	$0
G180.03	F-4411, F-4419, F4491, F-4492, F-4493, F4494	Trench Reinstatement - Green Field (All Inclusive Method)	615	m^2	$100	$61,500

G999		**TRENCHLESS CONSTRUCTION**				
G999.01	450, F-4491, F-4492, F-4493, F-4494	Entry and Exist Pits for Trenchless Comstrction (All Inclusive)	0	ea	$15,000	$0
G999.02	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 750mm Steel Casing Pipe by Boring & Jacking	0	m	$8,000	$0
G999.03	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 400mm Concrete Pressure Pipe Watermain Class C303 inside the 750mm Steel Casing, including Spacers and Flowable Grout	0	m	$2,000	$0
G999.04	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1000mm Steel Casing Pipe by Boring & Jacking	0	m	$10,000	$0
G999.05	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 600mm Concrete Pressure Pipe Watermain Class C301 inside the 1000mm Steel Casing, including Spacers and Flowable Grout	0	m	$3,000	$0
G999.06	450, F-4491, F-4492, F-4493, F-4494	Supply and Install >1500mm Steel Casing Pipe by Boring & Jacking	0	m	$15,500	$0
G999.07	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1050mm Concrete Pressure Pipe Watermain Class C301 inside the >1500 mm Steel Casing, including Spacers and Flowable Grout	0	m	$5,500	$0
					Sub-Total Section G:	**$939,500.00**
Section U - Labour and Equipment						
UO10		**Labour**				
U010.01	127, F-8025	Unskilled labour (including supervision where not otherwise provided)	0	hr	$70	$0
U010.02	127, F-8025	Skilled labour (including supervision where not otherwise provided)	0	hr	$75	$0
U020		**Equipment**				
U020.01	127, F-8026	Bulldozer, 45 kW min (D3) (operated)	0	hr	$135	$0
U020.02	127, F-8026	Crawler mounted hydraulic backhoe, 24,500 kg minimum operating weight (Operated)	0	hr	$175	$0
U020.03	127, F-8026	Dump truck - rear axle, tandem drive, 22,000kg GVW min (operated)	0	hr	$110	$0
U020.04	F-8026	Front end loader backhoe, rubber tired 45 kW min (operated)	0	hr	$110	$0
U020.05	127, F-8026	Hydraulic rock breaker, boom mounted - 1400 Joules (operated)	0	hr	$500	$0
U020.06	127, F-8026	Portable air compressor 9m3/min including air hammer and all attachments (operated)	0	hr	$100	$0
U020.07	127, F-8028	Sweeper (Operated)	0	hr	$150	$0
U020.08	F-8026	Water truck - 7,500l min (operated)	0	hr	$125	$0
U020.09	F-4109	Flusher (Operated)	0	hr	$150	$0
U020.11	127, F-8028	CCTV Video Unit (with pan tilt camera)	0	hr	$180	$0
U020.12	F-4110	Combo Cleaning Unit	0	hr	$200	$0
U020.13	127, F-8026	Hydro Excavating/Vacuum Truck (Operated)	0	hr	$325	$0
					Sub-Total Section U:	**$0**
					FINAL - 2020 - Class D - Estimated Construction Costs (No HST):	**$1,020,200**

Date: 9/30/2025

Asset Management

Infrastructure Planning Unit

Infrastructure Category:	**Watermain**
Project Type:	**Trunk Watermain and Appurtenances**
Project Title:	**New Watermain for West Stittsville UEA**
Project Phase:	**Conceptual Design**
SAP Project Number:	TBD
Project Location:	Refer to report figures for project location

Project Location Map:
Refer to report figures for project location

Project Description
400mm diam. WM along Fernbank Rd. from West Ridge Dr. to West Stittsville UEA

FINAL - 2020 - CLASS D - ESTIMATED CONSTRUCTION COSTS (NO HST):	**$831,500**

CAPITAL COST COMPONENTS AND RISK FACTORS

Item	Percentage**	Yes/No = 1/0	Estimated Cost
Capital Cost Components*		**Change as Required**	
Engineering - Design, Contract Adm. (15% - 25%)	20.0%	1	$166,300
Utilities (5% - 20%)	10.0%	1	$83,150
Property - REPDO Estimate (1% - 10%)	1.0%	1	$8,315
City Internal Costs (7% - 10%)	8.5%	1	$70,678
Misc. Soft Costs - Permit, Public Art, etc. (5%)	5.0%	1	$41,575
Risk Factors**			
Geo-Tech Issues - Soil (1% - 10%)	5.0%	1	$41,575
Geo-Tech issues - Bedrock (1% - 5%)	5.0%	1	$41,575
Geo-Tech Issues - Grey Silty Clay (1% - 10%)	0.0%	0	$0
Special Hydro-Geo Conditions (1% - 10%)	5.0%	1	$41,575
Change in Design Standards (1% - 5%)	0.0%	0	$0
Construction Contract Duration (2% per year)	0.0%	0	$0
Species at Risk and Project Mitigation (1% - 5%)	1.0%	1	$8,315
Planning, Design and Land use Approvals (5% - 10%)	5.0%	0	$0
Provincial and Federal Environmental Assessments (5% - 10%)	5.0%	0	$0
CONSTRUCTION COST AND CAPITAL COST COMPONENTS SUBTOTAL:			**$1,201,518**
RISK FACTORS SUBTOTAL:			**$133,040**
OVERALL CLASS D CONTINGENCY (40%-50%) * **	**40%**	**1**	**$480,607**
FINAL - 2020 - CLASS D - ESTIMATED TOTAL CAPITAL COST (No HST):			**$1,815,165**

*** Capital Cost Components Percentage Allowance Range as per City 2013 PDR**

**** Risk Factors Percentage Allowance to be Applied Based on the Project Complexity**

***** Overall Contingency is Applied to Estimated Construction and Capital Cost Components**

Project Related Comments:

COST INFLATION CHART

Year	Inflation % per Year	Yearly Total Cost Projection
2021	17.2%	$2,127,373
2022	9.9%	$2,337,983
2023	7.8%	$2,520,345
2024	5.79%	$2,666,273
2025	3%	$2,746,262
2026	3%	$2,828,649
2027	3%	$2,913,509
2028	3%	$3,000,914
2029	3%	$3,090,942
2030	3%	$3,183,670
2031	3%	$3,279,180
2032	3%	$3,377,555
2033	3%	$3,478,882
2034	3%	$3,583,248
2035	3%	$3,690,746
2036	3%	$3,801,468
2037	3%	$3,915,512
2038	3%	$4,032,978
2039	3%	$4,153,967
2040	3%	$4,278,586
2041	3%	$4,406,944
2042	3%	$4,539,152
2043	3%	$4,675,326
2044	3%	$4,815,586
2045	3%	$4,960,054
2046	3%	$5,108,855

CITY OF OTTAWA	Trunk Watermains (300mm, 400mm, 600mm, 750mm & 900mm) FINAL - 2020 - Class D - Construction Cost Estimating Template New Watermain for West Stittsville UEA

Estimate Note:
This Construction Cost Estimate Template for Trunk Watermains has been prepared for guidance in project evaluation and implementation from the information available at 2020 unit cost prices.

NOTE	ADJUST QUANTITIES/UNIT PRICES AS REQUIRED

Section A - General						
Code	**Spec**	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
A010		**Field Office**				
A010.01	F-1001	Field office for Contract Administrator 35-70m2	12	wk	$1,000	$12,000
A020		**TRAFFIC CONTROL PLAN**				
A020.01	F-1010	Traffic Control Plan	12	wk	$1,000	$12,000
A020.02	F-1012	Police Assistance at Intersection	0	hr	$280	$0
A030		**PEDESTRIAN CONTROL**				
A030.01	F-1013	Construction Site Pedestrian Control Implementation	1	LS	$10,700	$10,700
A040		**EROSION & SEDIMENT CONTROL**				
A040.01	805, F-1004	Erosion and Sediment Control Plan and Monitoring	1	LS	$1,400	$1,400
A040.03	805, F-1004	Erosion and Sediment Control Measures	1	LS	$3,500	$3,500
A060		**PRE-CONSTRUCTION INSPECTION**				
A060.01	F-1011	Pre-Construction Inspection	1	LS	$3,500	$3,500
A999		**Non-Standard Items**				
A999.01	GC 6.04	Construction Site Health and Safety Management and Control	1	LS	$10,700	$10,700
					Sub-Total Section A:	**$53,800**

Section G - Watermains						
G010		**EXCAVATION AND BACKFILL**				
G010.02	401, 441,F-4411, F-7010	Additional excavation & backfill with 50mm clear stone	0	m^3	$75	$0
G020		**SELECT SUBGRADE MATERIAL**				
G020.01	212, 314, F-2120, F-3147	Select subgrade material for Trench Backfill	0	m^3	$50	$0
G030		**WATERMAIN - PVC PIPE**	**401**			
G030.05	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	300mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$800	$0
G030.06	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$1,000	$0
G050		**WATERMAIN - CONCRETE PRESSURE PIPE**				
G050.01	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, concrete pressure pipe, CL C303 including all appurtenances	401	m	$1,200	$481,200
G050.02	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	600mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$1,500	$0
G050.03	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	750mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$2,000	$0
G050.04	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	1050mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$3,200	$0
G070		**VALVE AND VALVE CHAMBER**	**3**			
G070.04	F-4411 ,F-4413, F-4491, F-4492, F-4493, F-4494	300mm Gate valve,valve chamber, W3	0	ea	$9,500	$0

G080		**BUTTERFLY VALVE AND VALVE CHAMBER**				
G080.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	400mm Butterfly valve,W5 & valve chamber, W2	3	ea	$20,000	$60,000
G080.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Butterfly valve,W5 & valve chamber, W2	0	ea	$35,000	$0
G080.03	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	750mm Butterfly valve,W5 & valve chamber, W2	0	ea	$50,000	$0
G080.04	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1050mm Butterfly valve,W5 & valve chamber, W2	0	ea	$80,000	$0
G090		**VALVE CHAMBER ONLY FOR TVS**				
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1500mm Valve Chamber (Only) FOR 300mm TVS per W4	0	ea	$10,000	$0
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	R-1 valve chamber (only) for TVS(any size) off 400mm watermain, W10	0	ea	$12,000	$0
G100		**MISCELLANEOUS VALVE CHAMBER**				
G100.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	610mm access, air relief and drain out valve chamber type R-1 per W10	0	ea	$20,000	$0
G100.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Automatic Flushing Chamber per W3.2	0	ea	$10,000	$0
G110		**BRANCH VALVE CHAMBER**				
G110.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 600mm watermain per W11	0	ea	$35,000	$0
G110.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 900mm watermain per W11	0	ea	$65,000	$0
G120		**LINE VALVE CHAMBER**				
G120.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line valve chamber Type R-3 per W12	0	ea	$80,000	$0
G120.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line valve chamber Type R-3 per W12	0	ea	$120,000	$0
G130		**BRANCH AND LINE VALVE CHAMBER**				
G130.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$120,000	$0
G130.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$150,000	$0
G140		**HYDRANTS**				
G140.01.	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W19	3	ea	$7,000	$21,000
G140.02	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W20 Complete with Ditch Culvert	0	ea	$6,500	$0
G140.03	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI CL52 or PVC CL150, DR-18	0	m	$350	$0
G140.04	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI, CL52 or PVC CL 150 DR18, including reinstatement	30	m	$500	$15,000
G170		**TEMPORARY OVERLAND SERVICES**				
G170.999.01	F-4411, F4416, F-4491, F-4492 F-4493, F-4494	Temporary Service Connections - Supply, Installation & Protection	0	ea	$700	$0
G180		**TRENCH REINSTATEMENT (ALL INCLUSIVE PRICE METHOD)**				
G180.02	F-4411, F-4419, F4491, F-4492. F-4493, F4494	Trench Reinstatement - Existing Road(All Inclusive Method)	401	m	$500	$200,500
G180.03	F-4411, F-4419, F4491, F-4492, F-4493, F4494	Trench Reinstatement - Green Field (All Inclusive Method)	0	m^2	$100	$0

G999		**TRENCHLESS CONSTRUCTION**				
G999.01	450, F-4491, F-4492, F-4493, F-4494	Entry and Exist Pits for Trenchless Comstrction (All Inclusive)	0	ea	$15,000	$0
G999.02	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 750mm Steel Casing Pipe by Boring & Jacking	0	m	$8,000	$0
G999.03	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 400mm Concrete Pressure Pipe Watermain Class C303 inside the 750mm Steel Casing, including Spacers and Flowable Grout	0	m	$2,000	$0
G999.04	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1000mm Steel Casing Pipe by Boring & Jacking	0	m	$10,000	$0
G999.05	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 600mm Concrete Pressure Pipe Watermain Class C301 inside the 1000mm Steel Casing, including Spacers and Flowable Grout	0	m	$3,000	$0
G999.06	450, F-4491, F-4492, F-4493, F-4494	Supply and Install >1500mm Steel Casing Pipe by Boring & Jacking	0	m	$15,500	$0
G999.07	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1050mm Concrete Pressure Pipe Watermain Class C301 inside the >1500 mm Steel Casing, including Spacers and Flowable Grout	0	m	$5,500	$0
					Sub-Total Section G:	**$777,700.00**
Section U - Labour and Equipment						
UO10		**Labour**				
U010.01	127, F-8025	Unskilled labour (including supervision where not otherwise provided)	0	hr	$70	$0
U010.02	127, F-8025	Skilled labour (including supervision where not otherwise provided)	0	hr	$75	$0
U020		**Equipment**				
U020.01	127, F-8026	Bulldozer, 45 kW min (D3) (operated)	0	hr	$135	$0
U020.02	127, F-8026	Crawler mounted hydraulic backhoe, 24,500 kg minimum operating weight (Operated)	0	hr	$175	$0
U020.03	127, F-8026	Dump truck - rear axle, tandem drive, 22,000kg GVW min (operated)	0	hr	$110	$0
U020.04	F-8026	Front end loader backhoe, rubber tired 45 kW min (operated)	0	hr	$110	$0
U020.05	127, F-8026	Hydraulic rock breaker, boom mounted - 1400 Joules (operated)	0	hr	$500	$0
U020.06	127, F-8026	Portable air compressor 9m3/min including air hammer and all attachments (operated)	0	hr	$100	$0
U020.07	127, F-8028	Sweeper (Operated)	0	hr	$150	$0
U020.08	F-8026	Water truck - 7,500l min (operated)	0	hr	$125	$0
U020.09	F-4109	Flusher (Operated)	0	hr	$150	$0
U020.11	127, F-8028	CCTV Video Unit (with pan tilt camera)	0	hr	$180	$0
U020.12	F-4110	Combo Cleaning Unit	0	hr	$200	$0
U020.13	127, F-8026	Hydro Excavating/Vacuum Truck (Operated)	0	hr	$325	$0
					Sub-Total Section U:	**$0**
					FINAL - 2020 - Class D - Estimated Construction Costs (No HST):	**$831,500**

Date: 9/30/2025

Asset Management

Infrastructure Planning Unit

Infrastructure Category:	**Watermain**
Project Type:	**Trunk Watermain and Appurtenances**
Project Title:	**New Watermain for West Stittsville UEA**
Project Phase:	**Conceptual Design**
SAP Project Number:	TBD
Project Location:	Refer to report figures for project location

Project Location Map:
Refer to report figures for project location

Project Description
400mm diam. WM along Stittsvile Main St. from Etta St. to West Stittsville UEA

FINAL - 2020 - CLASS D - ESTIMATED CONSTRUCTION COSTS (NO HST):	**$1,887,300**

CAPITAL COST COMPONENTS AND RISK FACTORS

Item	Percentage**	Yes/No = 1/0	Estimated Cost
Capital Cost Components*		**Change as Required**	
Engineering - Design, Contract Adm. (15% - 25%)	20.0%	1	$377,460
Utilities (5% - 20%)	10.0%	1	$188,730
Property - REPDO Estimate (1% - 10%)	1.0%	1	$18,873
City Internal Costs (7% - 10%)	8.5%	1	$160,421
Misc. Soft Costs - Permit, Public Art, etc. (5%)	5.0%	1	$94,365
Risk Factors**			
Geo-Tech Issues - Soil (1% - 10%)	5.0%	1	$94,365
Geo-Tech issues - Bedrock (1% - 5%)	5.0%	1	$94,365
Geo-Tech Issues - Grey Silty Clay (1% - 10%)	0.0%	0	$0
Special Hydro-Geo Conditions (1% - 10%)	5.0%	1	$94,365
Change in Design Standards (1% - 5%)	0.0%	0	$0
Construction Contract Duration (2% per year)	0.0%	0	$0
Species at Risk and Project Mitigation (1% - 5%)	1.0%	1	$18,873
Planning, Design and Land use Approvals (5% - 10%)	5.0%	0	$0
Provincial and Federal Environmental Assessments (5% - 10%)	5.0%	0	$0
CONSTRUCTION COST AND CAPITAL COST COMPONENTS SUBTOTAL:			**$2,727,149**
RISK FACTORS SUBTOTAL:			**$301,968**
OVERALL CLASS D CONTINGENCY (40%-50%) * **	**40%**	**1**	**$1,090,859**
FINAL - 2020 - CLASS D - ESTIMATED TOTAL CAPITAL COST (No HST):			**$4,119,976**

*** Capital Cost Components Percentage Allowance Range as per City 2013 PDR**

**** Risk Factors Percentage Allowance to be Applied Based on the Project Complexity**

***** Overall Contingency is Applied to Estimated Construction and Capital Cost Components**

Project Related Comments:

COST INFLATION CHART

Year	Inflation % per Year	Yearly Total Cost Projection
2021	17.2%	$4,828,612
2022	9.9%	$5,306,644
2023	7.8%	$5,720,563
2024	5.79%	$6,051,783
2025	3%	$6,233,337
2026	3%	$6,420,337
2027	3%	$6,612,947
2028	3%	$6,811,335
2029	3%	$7,015,675
2030	3%	$7,226,146
2031	3%	$7,442,930
2032	3%	$7,666,218
2033	3%	$7,896,204
2034	3%	$8,133,090
2035	3%	$8,377,083
2036	3%	$8,628,396
2037	3%	$8,887,248
2038	3%	$9,153,865
2039	3%	$9,428,481
2040	3%	$9,711,335
2041	3%	$10,002,675
2042	3%	$10,302,756
2043	3%	$10,611,838
2044	3%	$10,930,194
2045	3%	$11,258,099
2046	3%	$11,595,842

CITY OF OTTAWA	Trunk Watermains (300mm, 400mm, 600mm, 750mm & 900mm) FINAL - 2020 - Class D - Construction Cost Estimating Template New Watermain for West Stittsville UEA

Estimate Note:
This Construction Cost Estimate Template for Trunk Watermains has been prepared for guidance in project evaluation and implementation from the information available at 2020 unit cost prices.

NOTE	ADJUST QUANTITIES/UNIT PRICES AS REQUIRED

Section A - General						
Code	**Spec**	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
A010		**Field Office**				
A010.01	F-1001	Field office for Contract Administrator 35-70m2	14	wk	$1,000	$14,000
A020		**TRAFFIC CONTROL PLAN**				
A020.01	F-1010	Traffic Control Plan	14	wk	$1,000	$14,000
A020.02	F-1012	Police Assistance at Intersection	30	hr	$280	$8,400
A030		**PEDESTRIAN CONTROL**				
A030.01	F-1013	Construction Site Pedestrian Control Implementation	1	LS	$30,400	$30,400
A040		**EROSION & SEDIMENT CONTROL**				
A040.01	805, F-1004	Erosion and Sediment Control Plan and Monitoring	1	LS	$5,200	$5,200
A040.03	805, F-1004	Erosion and Sediment Control Measures	1	LS	$9,700	$9,700
A060		**PRE-CONSTRUCTION INSPECTION**				
A060.01	F-1011	Pre-Construction Inspection	1	LS	$9,700	$9,700
A999		**Non-Standard Items**				
A999.01	GC 6.04	Construction Site Health and Safety Management and Control	1	LS	$29,200	$29,200
					Sub-Total Section A:	**$120,600**

Section G - Watermains						
G010		**EXCAVATION AND BACKFILL**				
G010.02	401, 441,F-4411, F-7010	Additional excavation & backfill with 50mm clear stone	0	m^3	$75	$0
G020		**SELECT SUBGRADE MATERIAL**				
G020.01	212, 314, F-2120, F-3147	Select subgrade material for Trench Backfill	0	m^3	$50	$0
G030		**WATERMAIN - PVC PIPE**	**1,047**			
G030.05	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	300mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$800	$0
G030.06	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$1,000	$0
G050		**WATERMAIN - CONCRETE PRESSURE PIPE**				
G050.01	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, concrete pressure pipe, CL C303 including all appurtenances	1,047	m	$1,200	$1,256,400
G050.02	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	600mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$1,500	$0
G050.03	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	750mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$2,000	$0
G050.04	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	1050mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$3,200	$0
G070		**VALVE AND VALVE CHAMBER**	**5**			
G070.04	F-4411 ,F-4413, F-4491, F-4492, F-4493, F-4494	300mm Gate valve,valve chamber, W3	0	ea	$9,500	$0

G080		**BUTTERFLY VALVE AND VALVE CHAMBER**				
G080.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	400mm Butterfly valve,W5 & valve chamber, W2	5	ea	$20,000	$100,000
G080.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Butterfly valve,W5 & valve chamber, W2	0	ea	$35,000	$0
G080.03	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	750mm Butterfly valve,W5 & valve chamber, W2	0	ea	$50,000	$0
G080.04	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1050mm Butterfly valve,W5 & valve chamber, W2	0	ea	$80,000	$0
G090		**VALVE CHAMBER ONLY FOR TVS**				
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1500mm Valve Chamber (Only) FOR 300mm TVS per W4	0	ea	$10,000	$0
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	R-1 valve chamber (only) for TVS(any size) off 400mm watermain, W10	0	ea	$12,000	$0
G100		**MISCELLANEOUS VALVE CHAMBER**				
G100.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	610mm access, air relief and drain out valve chamber type R-1 per W10	0	ea	$20,000	$0
G100.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Automatic Flushing Chamber per W3.2	0	ea	$10,000	$0
G110		**BRANCH VALVE CHAMBER**				
G110.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 600mm watermain per W11	0	ea	$35,000	$0
G110.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 900mm watermain per W11	0	ea	$65,000	$0
G120		**LINE VALVE CHAMBER**				
G120.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line valve chamber Type R-3 per W12	0	ea	$80,000	$0
G120.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line valve chamber Type R-3 per W12	0	ea	$120,000	$0
G130		**BRANCH AND LINE VALVE CHAMBER**				
G130.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$120,000	$0
G130.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$150,000	$0
G140		**HYDRANTS**				
G140.01.	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W19	8	ea	$7,000	$56,000
G140.02	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W20 Complete with Ditch Culvert	0	ea	$6,500	$0
G140.03	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI CL52 or PVC CL150, DR-18	0	m	$350	$0
G140.04	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI, CL52 or PVC CL 150 DR18, including reinstatement	80	m	$500	$40,000
G170		**TEMPORARY OVERLAND SERVICES**				
G170.999.01	F-4411, F4416, F-4491, F-4492 F-4493, F-4494	Temporary Service Connections - Supply, Installation & Protection	0	ea	$700	$0
G180		**TRENCH REINSTATEMENT (ALL INCLUSIVE PRICE METHOD)**				
G180.02	F-4411, F-4419, F4491, F-4492. F-4493, F4494	Trench Reinstatement - Existing Road(All Inclusive Method)	524	m	$500	$262,000
G180.03	F-4411, F-4419, F4491, F-4492, F-4493, F4494	Trench Reinstatement - Green Field (All Inclusive Method)	523	m^2	$100	$52,300

G999		TRENCHLESS CONSTRUCTION				
G999.01	450, F-4491, F-4492, F-4493, F-4494	Entry and Exist Pits for Trenchless Comstrction (All Inclusive)	0	ea	$15,000	$0
G999.02	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 750mm Steel Casing Pipe by Boring & Jacking	0	m	$8,000	$0
G999.03	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 400mm Concrete Pressure Pipe Watermain Class C303 inside the 750mm Steel Casing, including Spacers and Flowable Grout	0	m	$2,000	$0
G999.04	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1000mm Steel Casing Pipe by Boring & Jacking	0	m	$10,000	$0
G999.05	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 600mm Concrete Pressure Pipe Watermain Class C301 inside the 1000mm Steel Casing, including Spacers and Flowable Grout	0	m	$3,000	$0
G999.06	450, F-4491, F-4492, F-4493, F-4494	Supply and Install >1500mm Steel Casing Pipe by Boring & Jacking	0	m	$15,500	$0
G999.07	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1050mm Concrete Pressure Pipe Watermain Class C301 inside the >1500 mm Steel Casing, including Spacers and Flowable Grout	0	m	$5,500	$0
					Sub-Total Section G:	**$1,766,700.00**
Section U - Labour and Equipment						
UO10		**Labour**				
U010.01	127, F-8025	Unskilled labour (including supervision where not otherwise provided)	0	hr	$70	$0
U010.02	127, F-8025	Skilled labour (including supervision where not otherwise provided)	0	hr	$75	$0
U020		**Equipment**				
U020.01	127, F-8026	Bulldozer, 45 kW min (D3) (operated)	0	hr	$135	$0
U020.02	127, F-8026	Crawler mounted hydraulic backhoe, 24,500 kg minimum operating weight (Operated)	0	hr	$175	$0
U020.03	127, F-8026	Dump truck - rear axle, tandem drive, 22,000kg GVW min (operated)	0	hr	$110	$0
U020.04	F-8026	Front end loader backhoe, rubber tired 45 kW min (operated)	0	hr	$110	$0
U020.05	127, F-8026	Hydraulic rock breaker, boom mounted - 1400 Joules (operated)	0	hr	$500	$0
U020.06	127, F-8026	Portable air compressor 9m3/min including air hammer and all attachments (operated)	0	hr	$100	$0
U020.07	127, F-8028	Sweeper (Operated)	0	hr	$150	$0
U020.08	F-8026	Water truck - 7,500l min (operated)	0	hr	$125	$0
U020.09	F-4109	Flusher (Operated)	0	hr	$150	$0
U020.11	127, F-8028	CCTV Video Unit (with pan tilt camera)	0	hr	$180	$0
U020.12	F-4110	Combo Cleaning Unit	0	hr	$200	$0
U020.13	127, F-8026	Hydro Excavating/Vacuum Truck (Operated)	0	hr	$325	$0
					Sub-Total Section U:	**$0**
					FINAL - 2020 - Class D - Estimated Construction Costs (No HST):	**$1,887,300**

Date:	9/30/2025

Asset Management

Infrastructure Planning Unit

Infrastructure Category:	**Watermain**
Project Type:	**Trunk Watermain and Appurtenances**
Project Title:	**New Watermain for West Stittsville UEA**
Project Phase:	**Conceptual Design**
SAP Project Number:	TBD
Project Location:	Refer to report figures for project location

Project Location Map:
Refer to report figures for project location

Project Description
600mm diam. WM along Hazeldean & West Ridge Dr. from Carp Rd. to Abbott St.

FINAL - 2020 - CLASS D - ESTIMATED CONSTRUCTION COSTS (NO HST):	**$5,223,260**

CAPITAL COST COMPONENTS AND RISK FACTORS

Item	Percentage**	Yes/No = 1/0	Estimated Cost
Capital Cost Components*		**Change as Required**	
Engineering - Design, Contract Adm. (15% - 25%)	20.0%	1	$1,044,652
Utilities (5% - 20%)	10.0%	1	$522,326
Property - REPDO Estimate (1% - 10%)	1.0%	1	$52,233
City Internal Costs (7% - 10%)	8.5%	1	$443,977
Misc. Soft Costs - Permit, Public Art, etc. (5%)	5.0%	1	$261,163
Risk Factors**			
Geo-Tech Issues - Soil (1% - 10%)	5.0%	1	$261,163
Geo-Tech issues - Bedrock (1% - 5%)	5.0%	1	$261,163
Geo-Tech Issues - Grey Silty Clay (1% - 10%)	0.0%	0	$0
Special Hydro-Geo Conditions (1% - 10%)	5.0%	1	$261,163
Change in Design Standards (1% - 5%)	0.0%	0	$0
Construction Contract Duration (2% per year)	0.0%	0	$0
Species at Risk and Project Mitigation (1% - 5%)	1.0%	1	$52,233
Planning, Design and Land use Approvals (5% - 10%)	5.0%	0	$0
Provincial and Federal Environmental Assessments (5% - 10%)	5.0%	0	$0
CONSTRUCTION COST AND CAPITAL COST COMPONENTS SUBTOTAL:			**$7,547,611**
RISK FACTORS SUBTOTAL:			**$835,722**
OVERALL CLASS D CONTINGENCY (40%-50%) * **	**40%**	**1**	**$3,019,044**
FINAL - 2020 - CLASS D - ESTIMATED TOTAL CAPITAL COST (No HST):			**$11,402,377**

*** Capital Cost Components Percentage Allowance Range as per City 2013 PDR**

**** Risk Factors Percentage Allowance to be Applied Based on the Project Complexity**

***** Overall Contingency is Applied to Estimated Construction and Capital Cost Components**

Project Related Comments:

COST INFLATION CHART

Year	Inflation % per Year	Yearly Total Cost Projection
2021	17.2%	$13,363,585
2022	9.9%	$14,686,580
2023	7.8%	$15,832,134
2024	5.79%	$16,748,814
2025	3%	$17,251,279
2026	3%	$17,768,817
2027	3%	$18,301,881
2028	3%	$18,850,938
2029	3%	$19,416,466
2030	3%	$19,998,960
2031	3%	$20,598,929
2032	3%	$21,216,897
2033	3%	$21,853,403
2034	3%	$22,509,006
2035	3%	$23,184,276
2036	3%	$23,879,804
2037	3%	$24,596,198
2038	3%	$25,334,084
2039	3%	$26,094,107
2040	3%	$26,876,930
2041	3%	$27,683,238
2042	3%	$28,513,735
2043	3%	$29,369,147
2044	3%	$30,250,221
2045	3%	$31,157,728
2046	3%	$32,092,460

CITY OF OTTAWA	Trunk Watermains (300mm, 400mm, 600mm, 750mm & 900mm) FINAL - 2020 - Class D - Construction Cost Estimating Template New Watermain for West Stittsville UEA

Estimate Note:
This Construction Cost Estimate Template for Trunk Watermains has been prepared for guidance in project evaluation and implementation from the information available at 2020 unit cost prices.

NOTE	ADJUST QUANTITIES/UNIT PRICES AS REQUIRED

Section A - General						
Code	**Spec**	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
A010		**Field Office**				
A010.01	F-1001	Field office for Contract Administrator 35-70m2	80	wk	$1,000	$80,000
A020		**TRAFFIC CONTROL PLAN**				
A020.01	F-1010	Traffic Control Plan	80	wk	$1,000	$80,000
A020.02	F-1012	Police Assistance at Intersection	72	hr	$280	$20,160
A030		**PEDESTRIAN CONTROL**				
A030.01	F-1013	Construction Site Pedestrian Control Implementation	1	LS	$66,000	$66,000
A040		**EROSION & SEDIMENT CONTROL**				
A040.01	805, F-1004	Erosion and Sediment Control Plan and Monitoring	1	LS	$12,000	$12,000
A040.03	805, F-1004	Erosion and Sediment Control Measures	1	LS	$19,400	$19,400
A060		**PRE-CONSTRUCTION INSPECTION**				
A060.01	F-1011	Pre-Construction Inspection	1	LS	$19,400	$19,400
A999		**Non-Standard Items**				
A999.01	GC 6.04	Construction Site Health and Safety Management and Control	1	LS	$58,300	$58,300
					Sub-Total Section A:	**$355,260**

Section G - Watermains						
G010		**EXCAVATION AND BACKFILL**				
G010.02	401, 441,F-4411, F-7010	Additional excavation & backfill with 50mm clear stone	0	m^3	$75	$0
G020		**SELECT SUBGRADE MATERIAL**				
G020.01	212, 314, F-2120, F-3147	Select subgrade material for Trench Backfill	0	m^3	$50	$0
G030		**WATERMAIN - PVC PIPE**	**2,329**			
G030.05	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	300mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$800	$0
G030.06	441, F-4411, F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, PVC, CL 150, DR-18 including all appurtenances	0	m	$1,000	$0
G050		**WATERMAIN - CONCRETE PRESSURE PIPE**				
G050.01	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	400mm watermain, concrete pressure pipe, CL C303 including all appurtenances	0	m	$1,200	$0
G050.02	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	600mm watermain, concrete pressure pipe, CL C301 including all appurtenances	2,329	m	$1,500	$3,493,500
G050.03	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	750mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$2,000	$0
G050.04	F-4411 ,F-4412, F-4491, F-4492, F-4493, F-4494	1050mm watermain, concrete pressure pipe, CL C301 including all appurtenances	0	m	$3,200	$0
G070		**VALVE AND VALVE CHAMBER**	**6**			
G070.04	F-4411 ,F-4413, F-4491, F-4492, F-4493, F-4494	300mm Gate valve,valve chamber, W3	0	ea	$9,500	$0

G080		**BUTTERFLY VALVE AND VALVE CHAMBER**				
G080.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	400mm Butterfly valve,W5 & valve chamber, W2	0	ea	$20,000	$0
G080.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Butterfly valve,W5 & valve chamber, W2	6	ea	$35,000	$210,000
G080.03	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	750mm Butterfly valve,W5 & valve chamber, W2	0	ea	$50,000	$0
G080.04	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1050mm Butterfly valve,W5 & valve chamber, W2	0	ea	$80,000	$0
G090		**VALVE CHAMBER ONLY FOR TVS**				
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	1500mm Valve Chamber (Only) FOR 300mm TVS per W4	0	ea	$10,000	$0
G090.05	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	R-1 valve chamber (only) for TVS(any size) off 400mm watermain, W10	0	ea	$12,000	$0
G100		**MISCELLANEOUS VALVE CHAMBER**				
G100.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	610mm access, air relief and drain out valve chamber type R-1 per W10	0	ea	$20,000	$0
G100.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Automatic Flushing Chamber per W3.2	0	ea	$10,000	$0
G110		**BRANCH VALVE CHAMBER**				
G110.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 600mm watermain per W11	0	ea	$35,000	$0
G110.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	Branch Valve chamber type R-3 off 900mm watermain per W11	0	ea	$65,000	$0
G120		**LINE VALVE CHAMBER**				
G120.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line valve chamber Type R-3 per W12	0	ea	$80,000	$0
G120.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line valve chamber Type R-3 per W12	0	ea	$120,000	$0
G130		**BRANCH AND LINE VALVE CHAMBER**				
G130.01	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	600mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$120,000	$0
G130.02	F-4411, F-4413, F-4491, F-4492, F-4493, F-4494	900mm Line & (150mm - 400mm) Branch Valve Chamber Type R-4 per W13	0	ea	$150,000	$0
G140		**HYDRANTS**				
G140.01.	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W19	0	ea	$7,000	$0
G140.02	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	Hydrant W20 Complete with Ditch Culvert	0	ea	$6,500	$0
G140.03	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI CL52 or PVC CL150, DR-18	0	m	$350	$0
G140.04	F-4411, F4414, F-4419, F4491, F-4492. F-4493, F-4494	150 mm Hydrant lateral DI, CL52 or PVC CL 150 DR18, including reinstatement	0	m	$500	$0
G170		**TEMPORARY OVERLAND SERVICES**				
G170.999.01	F-4411, F4416, F-4491, F-4492 F-4493, F-4494	Temporary Service Connections - Supply, Installation & Protection	0	ea	$700	$0
G180		**TRENCH REINSTATEMENT (ALL INCLUSIVE PRICE METHOD)**				
G180.02	F-4411, F-4419, F4491, F-4492. F-4493, F4494	Trench Reinstatement - Existing Road(All Inclusive Method)	2,329	m	$500	$1,164,500
G180.03	F-4411, F-4419, F4491, F-4492, F-4493, F4494	Trench Reinstatement - Green Field (All Inclusive Method)	0	m^2	$100	$0

G999		**TRENCHLESS CONSTRUCTION**				
G999.01	450, F-4491, F-4492, F-4493, F-4494	Entry and Exist Pits for Trenchless Comstrction (All Inclusive)	0	ea	$15,000	$0
G999.02	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 750mm Steel Casing Pipe by Boring & Jacking	0	m	$8,000	$0
G999.03	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 400mm Concrete Pressure Pipe Watermain Class C303 inside the 750mm Steel Casing, including Spacers and Flowable Grout	0	m	$2,000	$0
G999.04	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1000mm Steel Casing Pipe by Boring & Jacking	0	m	$10,000	$0
G999.05	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 600mm Concrete Pressure Pipe Watermain Class C301 inside the 1000mm Steel Casing, including Spacers and Flowable Grout	0	m	$3,000	$0
G999.06	450, F-4491, F-4492, F-4493, F-4494	Supply and Install >1500mm Steel Casing Pipe by Boring & Jacking	0	m	$15,500	$0
G999.07	450, F-4491, F-4492, F-4493, F-4494	Supply and Install 1050mm Concrete Pressure Pipe Watermain Class C301 inside the >1500 mm Steel Casing, including Spacers and Flowable Grout	0	m	$5,500	$0
					Sub-Total Section G:	**$4,868,000.00**
Section U - Labour and Equipment						
UO10		**Labour**				
U010.01	127, F-8025	Unskilled labour (including supervision where not otherwise provided)	0	hr	$70	$0
U010.02	127, F-8025	Skilled labour (including supervision where not otherwise provided)	0	hr	$75	$0
U020		**Equipment**				
U020.01	127, F-8026	Bulldozer, 45 kW min (D3) (operated)	0	hr	$135	$0
U020.02	127, F-8026	Crawler mounted hydraulic backhoe, 24,500 kg minimum operating weight (Operated)	0	hr	$175	$0
U020.03	127, F-8026	Dump truck - rear axle, tandem drive, 22,000kg GVW min (operated)	0	hr	$110	$0
U020.04	F-8026	Front end loader backhoe, rubber tired 45 kW min (operated)	0	hr	$110	$0
U020.05	127, F-8026	Hydraulic rock breaker, boom mounted - 1400 Joules (operated)	0	hr	$500	$0
U020.06	127, F-8026	Portable air compressor 9m3/min including air hammer and all attachments (operated)	0	hr	$100	$0
U020.07	127, F-8028	Sweeper (Operated)	0	hr	$150	$0
U020.08	F-8026	Water truck - 7,500l min (operated)	0	hr	$125	$0
U020.09	F-4109	Flusher (Operated)	0	hr	$150	$0
U020.11	127, F-8028	CCTV Video Unit (with pan tilt camera)	0	hr	$180	$0
U020.12	F-4110	Combo Cleaning Unit	0	hr	$200	$0
U020.13	127, F-8026	Hydro Excavating/Vacuum Truck (Operated)	0	hr	$325	$0
					Sub-Total Section U:	**$0**
					FINAL - 2020 - Class D - Estimated Construction Costs (No HST):	**$5,223,260**

Date: 9/30/2025

Asset Management
Infrastructure Planning Unit

Infrastructure Category:	**Pump Station**
Project Type:	**Pump Station**
Project Title:	New Stittsville Booster PS
Project Phase:	**Conceptual Design**
SAP Project Number:	TBD
Project Location:	Refer to report figures

Project Location Map:
Refer to report figures for project location

Project Description
New 33 MLD booster pumping station for new Stittsville zone

FINAL - 2020 - CLASS D - ESTIMATED - CONSTRUCTION COSTS (No HST):			**$3,637,520**
Class D Capital Cost Components and Risk Factors			
Item	**Percentage**	**Yes/No = 1/0**	**Estimated Cost**
Capital Cost Components*			
Engineering - Design, Contract Adm. (15% - 25%)	20.0%	1	$727,504
Utilities (5% - 20%)	5.0%	1	$181,876
Property - REPDO Estimate (1% - 10%)	1.0%	1	$36,375
City Internal Costs (7% - 10%)	8.5%	1	$309,189
Misc. Soft Costs - Permit, Public Art, etc. (5%)	5.0%	1	$181,876
Risk Factors**			
Geo-Tech Issues - Soil (1% - 5%)	2.0%	1	$72,750
Geo-Tech issues - Bedrock (1% - 5%)	2.0%	1	$72,750
Geo-Tech Issues - Grey Silty Clay (1% - 10%)	0.0%	0	$0
Special Hydro-Geo Conditions (1% - 5%)	2.0%	1	$72,750
Change in Design Standards (1% - 5%)	1.0%	1	$36,375
Construction Contract Duration (2% per year)	2.0%	1	$72,750
Species at Risk and Project Mitigation (1% - 5%)	1.0%	1	$36,375
Planning, Design and Land use Approvals (5% - 10%)	5.0%	1	$181,876
Provincial and Federal Environmental Assessments (5% - 10%)	0.0%	0	$0
CONSTRUCTION COST AND CAPITAL COST COMPONENTS SUBTOTAL:			**$5,074,340**
RISK FACTORS SUBTOTAL:			**$545,628**
OVERALL CLASS D CONTINGENCY (40%-50%) * **	**40%**	**1**	**$2,029,736**
FINAL - 2020 - CLASS D - ESTIMATED TOTAL CAPITAL COST (No HST):			**$7,649,705**

*** Capital Cost Components Percentage Allowance Range as per City 2013 PDR**
**** Risk Factors Percentage Allowance to be Applied Based on the Project Complexity**
***** Overall Contingency is Applied to Estimated Construction and Capital Cost Components**

Project Related Comments:

COST INFLATION CHART		
Year	**Inflation % per Year**	**Yearly Total Cost Projection**
2021	17%	$8,965,454
2022	10%	$9,853,034
2023	7.8%	$10,621,570
2024	5.79%	$11,236,559
2025	3%	$11,573,656
2026	3%	$11,920,866
2027	3%	$12,278,492
2028	3%	$12,646,846
2029	3%	$13,026,252
2030	3%	$13,417,039
2031	3%	$13,819,551
2032	3%	$14,234,137
2033	3%	$14,661,161
2034	3%	$15,100,996
2035	3%	$15,554,026
2036	3%	$16,020,647
2037	3%	$16,501,266
2038	3%	$16,996,304
2039	3%	$17,506,193
2040	3%	$18,031,379
2041	3%	$18,572,320
2042	3%	$19,129,490
2043	3%	$19,703,375
2044	3%	$20,294,476
2045	3%	$20,903,310
2046	3%	$21,530,409

City of Ottawa	Water Booster Station 500 L/s - Greenfield FINAL - Class D - Construction Cost Estimating Template
	New Stittsville Booster PS

A. Division Description	Costs
Division 1 - General Requirements	$166,900
Division 2 - Site Work	$542,216
Division 3 - Concrete	$687,500
Division 4 - Masonry	$64,931
Division 5 - Metals	$190,972
Division 6 - Wood and Plastics	$40,000
Division 7 - Thermal and Moisture Protection	$93,472
Division 8 - Doors and Windows	$25,000
Division 9 - Finishes	$30,000
Division 10 - Specialties	$42,917
Division 11 - Equipment	$480,487
Division 12 - Furnishings	$0
Division 14 - Conveying Systems	$20,000
Division 15 - Mechanical	$336,111
Division 16 - Electrical & Communication	$917,014
2020 - Class D - Estimated Construction Costs (No HST):	**$3,637,520**

Estimate Note:
The Construction Cost Estimating Template for 500 L/s Water Booster Station has been prepared for guidance in project evaluation and implementation from the information available at the time of the 2020 unit prices.

NOTE:	ADJUST QUANTITIES/UNIT COSTS AS REQUIRED

Division 1, General Requirements

Item No:	Description	Qty	Unit	Unit Cost	Costs
D1.1	Field office for Contract Administrator 35m2 to 70m2	76	wk	$1,000	$76,000
D1.2	Mobilization and Demobilization	1	LS	$47,300	$47,300
D1.3	Commissioning & Training and O & M Manuals & Record Drawings	1	LS	$16,100	$16,100
D1.4	Erosion and Sediment Control Measures	1	LS	$7,600	$7,600
D1.5	Traffic Control Plan	1	LS	$3,800	$3,800
D1.6	Pre-Construction Inspection	1	LS	$1,900	$1,900
D1.7	Construction Site Safety Management and Control	1	LS	$3,800	$3,800
D1.8	1.8m High Construction Interlock Safety Fencing	1	LS	$10,400	$10,400
	Subtotal Construction Costs Division 1:				**$166,900**

Division 2 - Site Work

Item No:	Description	Qty	Unit	Unit Cost	Cost
D2.1	Clearing and Grubbing	0	LS	$0	$0
D2.2	Removal & Disposal of Clearing and Grubbing Materials	0	LS	$0	$0
D2.3	Sheeting and Shoring of Excavations	0	LS	$0	$0
D2.4	Excavating, Backfilling, and Compacting	0	LS	$0	$0
D2.5	Earthworks & Site Grading, Including Imported Backfill Material	0	LS	$0	$0
D2.6	Unshrinkable Backfill	0	m^3	$0	$0
D2.7	Hydro Underground Service	0	LS	$0	$0
D2.8	Telephone Underground Service	0	LS	$0	$0
D2.9	Sub-Drain	0	LS	$0	$0
D2.10	Underground Yard Piping for Washroom Potable Water Service and Sanitary Service	1	LS	$8,000	$8,000
D2.11	Supply and Install 300 mm diameter Concrete Pressure Class DR C303 Watermain c/w all Appurtenances and Mechanical Restraints and Connections on the Site	100	m	$3,438	$343,800
D2.12	Connections to Existing Watermains	2	ea	$19,097	$38,194
D2.13	Access, Air Release and Drain-Out Valve Chamber	1	LS	$61,111	$61,111
D2.14	Water Pressure Reducing Valve Chamber	1	LS	$61,111	$61,111
D2.15	Underground Yard Piping - Storm Drainage	1	LS	$30,000	$30,000
D2.16	Supply and Install Watermain Insulation	0	LS	$0	$0
D2.17	Natural Gas Service and Coordination	0	LS	$0	$0
D2.18	Pump House & Reservoir Asphalt Access Driveway & Parking Area	0	LS	$0	$0
D2.19	1.82 Chain-link Security Fencing with Top Rail as per OPSD 972.102 and 3m wide Swing Gate OPSD 972.102 with locking hardware.	0	LS	$0	$0
D2.20	Topsoil & Sod and Landscaping & Plantings	0	LS	$0	$0
	Subtotal Construction Costs Division 2:				**$542,216**

Division 3 - Concrete Work					
Item No:	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
D3.1	Cast-in-place Concrete, including Forming & Reinforcing of Structural Concrete Foundation, including Slabs on Grade, Footings, Floor Slabs, Beams, Columns, Walls, Working Slabs, Pipe and Equipment Supports, Cutting and Coring for Water Booster Station Building	1	LS	$687,500	$687,500
D3.2	Miscellaneous 30MPa Concrete, Formed, where not otherwise Provided	0	m3	$0	$0
D3.3	Miscellaneous Reinforced 30MPa Concrete, Formed, where not otherwise Provided	0	m3	$0	$0
D3.4	Reinforced Concrete100% Containment Curb for Standby Generator & Reinforced Concrete100% Containment Crib Box for Fuel Tank at Water Booster Station Building	0	LS	$0	$0
D3.5	Concrete Foundations for Communications /Alarms Tower	0	LS	$0	$0
D3.6	Concrete Footings for Chain-link Fence Posts	0	LS	$0	$0
			Subtotal Construction Costs Division 3:		**$687,500**
Division 4 - Masonry					
Item No:	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
D4.1	Masonry & Bricks, including supply and placing all Masonry & Bricks Units for Water Booster Station Building	1	LS	$64,931	$64,931
			Subtotal Construction Costs Division 4:		**$64,931**
Division 5 - Metals					
Item No:	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
D5.1	Metal Roofing, Metal Flashings and Metal Fascia Water Booster Station Building	0	LS	$0	$0
D5.2	Structural Steel including Fabrication, Supply and Installation of Beams, Columns, Open Web Steel Joists, Crane Beams and Rails, Steel Stairs & Landings with Handrailing, Metal Grating, Ladders, Ladders with Fall Arrest System, Equipment Frames, Access Hatches, Vents, and all other Miscellaneous Metals, including but not limited to Bolts, Brackets, etc. and the supply of Window and Door Lintels. Water Booster Station Building	1	LS	$190,972	$190,972
			Subtotal Construction Costs Division 5:		**$190,972**
Division 6 - Wood & Plastics					
Item No:	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
D6.1	Wood and Plastics, including Roof Trusses and all Carpentry	1	LS	$40,000	$40,000
			Subtotal Construction Costs Division 6:		**$40,000**
Division 7 - Thermal and Moisture Protection					
Item No:	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
D7.1	Waterproofing Membrane for Exterior Below Grade Surfaces Thermal and Moisture Protection including Corrosion Protection, Rigid Board Insulation, Vapour Barriers, Trim Sealants, Construction Joint Watertight Sealer, etc.Water Booster Station Building	1	LS	$53,472	$53,472
D7.2	Waterproofing and Sealing of Concrete Containment Slab & Curb around the Diesel Generator and Waterproofing and Sealing of Concrete Containment Slab & Crib around Fuel Tank	1	LS	$40,000	$40,000
			Subtotal Construction Costs Division 7:		**$93,472**
Division 8 - Doors and Windows					
Item No:	**Description**	**Qty**	**Unit**	**Unit Cost**	**Cost**
D8.1	Doors, and Windows including Framing, Hollow Metal Doors, Roll-Up Door, Metal Flashing and Hardware for Water Booster Station Building	1	LS	$25,000	$25,000
			Subtotal Construction Costs Division 8:		**$25,000**

Division 9 - Finishes					
Item No:	Description	Qty	Unit	Unit Cost	Cost
D9.1	Finishes, including Wall Finishes, Floor Finishes, Ceiling, Painting	1	LS	$30,000	$30,000
				Subtotal Construction Costs Division 9:	$30,000
Division 10 - Specialities					
Item No:	Description	Qty	Unit	Unit Cost	Cost
D10.1	Washroom Hot Water Tank, Sink, Toilet, Mirror, Fan and all Piping and Accessories	1	LS	$20,000	$20,000
D10.2	Seismic Restraints	1	LS	$22,917	$22,917
D10.3	Fire Proofing	0	LS	$0	$0
				Subtotal Construction Costs Division 10:	$42,917
Division 11 - Equipment					
Item No:	Description	Qty	Unit	Unit Cost	Cost
D11.01	Equipment General Requirements	0	LS	$0	$0
D11.02	Five (5) Centrifugal Pumps - , Four Duty and One Standby Sized to meet the maximum flow of **300 L/s**. The Pumps will operate on an alternating duty basis.	5	ea	$84,028	$420,140
D11.03	Pressure under no-flow or minimum-flow conditions controlled by a Low Flow Protection Pressure Tank	1	LS	$5,347	$5,347
D11.04	Air Release and Drain Valves	0	ea	$0	$0
D11.05	Backflow Preventer Valve	0	ea	$0	$0
D11.06	Water Pressure Reducing Valve	0	ea	$0	$0
D11.07	Chemical Feed Equipment c/w Pumps, Chemical Storage Tank, Miscellaneous Pipe/Tube/Fittings	1	LS	$40,000	$40,000
D11.08	Chemical Analyzer	1	LS	$15,000	$15,000
				Subtotal Construction Costs Division 11:	$480,487
Division 12 - Furnishings					
D12.1	Storage Shelves for Drawings in Water Booster Station Building	0	LS	$0	$0
D12.2	Desk & Chair, Cabinet in Water Booster Station Building	0	LS	$0	$0
				Subtotal Construction Costs Division 12:	$0
Division 14 - Conveying Systems					
Item No:	Description	Qty	Unit	Unit Cost	Cost
D14.1	Lifting Equipment including all Gantry and Davit Cranes, Lifting Davits and other Specified Lifting Equipment	1	LS	$20,000	$20,000
				Subtotal Construction Costs Division 14:	$20,000
Division 15 Mechanical					
Item No:	Description	Qty	Unit	Unit Cost	Cost
D15.01	304L SS Process Piping and Valves including Supply an Installation of all Process Piping, Valves, Fittings, Couplings, Restraints, Adjusting, Testing, Disinfection	1	LS	$267,361	$267,361
D15.02	Flowmeters and Transmitters	0	LS	$0	$0
D15.03	Building Mechanical including Drainage, Heating, Ventilation, Air Conditioning, Equipment, and Controls.	1	LS	$68,750	$68,750
				Subtotal Construction Costs Division 15:	$336,111

Division 16 - Electrical & Communications					
Item No:	Description	Qty	Unit	Unit Cost	Cost
D16.01	Electrical General Requirements	0	LS	$0	$25,000
D16.02	Electrical Supply for Five (5) Centrifugal Pumps with VFD Drive with Electric Valve Actuators and Related Equipment	1	LS	$229,167	$229,167
D16.03	Electrical Power Supply Feeds and Conduit, MCCs, Soft Starters, Distribution for the Works, Interior Lighting, Receptacles, Security Systems, Base Board Heater, and Complete Wiring of all Instruments and Equipment	1	LS	$305,556	$305,556
D16.04	Supply and Install Communication Tower, Antenna/Dish, Supply, Install, Terminate & Test Coax w/ Cable & Conduitand Cisco AirNet 1200 System	0	LS	$0	$0
D16.05	Instrumentation and Control including PLCS, HMI, SCADA Programming and Control Panel, Radio Equipment, all level and Pressure Sensors and Transmitters, Chlorination System Alarms, Smoke and CO Detectors and Alarms, MCC Power Metering Instrumentation.	1	LS	$141,319	$141,319
D16.06	Supply and Install Stand-By Emergency Diesel Generator, including Transfer Switch, DG Exhaust Code Requirements and Fuel Tank (See Division 3 for Containment Crib and Curb)	1	LS	$190,972	$190,972
D16.07	Lighting Pole (3.3m ht), 2 x Brackets and 2 x 70 Watt HPS Specialty Flat Glass Luminaire with Photo - Controller for Security and Maintenance	0	ea	$0	$0
D16.08	Arc Flash Study, Coordination Study and Harmonic Analysis	0	LS	$0	$0
D16.09	Auto dialer with Panel, System Controller, Power Supply Module, Programming Keypad, Telephone Line Surge Protector, Supply, Install, Terminate & Test DI/O w/Cable & Conduit	1	LS	$25,000	$25,000
				Subtotal Construction Costs Division 16:	**$917,014**
				FINAL 2020 - CLASS D - ESTIMATED CONSTRCTION COSTS (No HST):	**$3,637,520**

Appendix B

Memo

SUBJECT
West Stittsville Urban Expansion Area

TO
Stephen Willis
Stantec

DATE
2025-12-09

OUR REF
Urban Expansion

DEPARTMENT
Land Engineering

PROJECT NUMBER
9999_Proposals

COPIES TO

Claridge Homes is pursuing the inclusion of their West Stittsville lands, commonly referred to as 6435 Fernbank Road (Area A), into the urban area. As part of this process Claridge has retained Arcadis to review and comment on servicing assessment memos prepared by the City for water and wastewater infrastructure required to support the development of the Claridge lands in West Stittsville. The specific assessment memos reviewed by Arcadis are:

- West Stittsville Urban Expansion Area Assessment (Wastewater), dated Sept. 23, 2025, prepared for the City by GEI Consultants Canada.
- West Stittsville Urban Expansion Area Assessment (water), dated Oct. 17, 2025, prepared for the City by Stantec Consulting Limited.

The City's presentation to GOHBA, dated May 10, 2025, to review the proposed IMP update was also referenced in support of our review. The following is a brief summary of the findings of the Arcadis review.

West Stittsville Urban Expansion Area Assessment (Wastewater)

We note that this assessment of wastewater infrastructure requirements lumps the Claridge lands in with a second parcel of land immediately south of Fernbank Road opposite the Claridge site. Commonly referred to as 6437 Flewellyn Road (Area B).

The City memo goes into some detail developing several wastewater servicing alternatives utilizing several major sanitary outlets in the vicinity of the West Stittsville lands. After a high-level review of these major outlets the memo concludes that each of the major outlets identified individually has sufficient residual capacity to accommodate the addition of the West Stittsville Urban Expansion Area lands into the urban area. The memo then goes on to identify a wastewater servicing alternative to use in evaluating the impact of including the West Stitsville lands on the City's local sanitary sewer infrastructure. It is at this time that concern seems to develop over the rise in topography which occurs across the middle of the proposed development area. This rise in topography is evident on the topographical mapping available for the area, and seems to become a determining factor in concluding that wastewater drainage for the West Stittsville expansion lands should be split on this rise in topography and directed to two local trunk sewers, the Abbott Street sewer to the north east and the Fernbank Road sewer to the south east. The north portion of the expansion lands ultimately draining to the Abbott Street trunk sanitary sewer, and the south half ultimately draining to the Fernbank trunk sanitary sewer. This conclusion to split the flow then becomes reinforced by the fact that splitting the flow will result in no new sanitary sewer infrastructure being Development Charge eligible, but ignores the fact that the two-outlet sewer alternative requires the long extension of two sewers, which results in a more expensive overall cost per unit to develop.

We acknowledge that the flow splitting wastewater servicing alternative is a technically viable solution, and it was not the mandate of the City's consultant to resolve on site area specific issues, but we believe, that with some additional investigation, a single outlet alternative could be determined to be a more efficient and cost effective solution to service the entire West Stittsville development area. Assuming the topographical concern can be

effectively dealt with. We also understand that the Fernbank Collector sewer has recently been extended to Fernbank Road just west of Shae Road. With this understanding, and given the City's concern about topography within the proposed development area, Arcadis undertook to investigate, in more detail, the potential to service that portion of the Claridge lands which would have to cross the ridge in question in order to reach the Fernbank outlet.

This review included the development of a functional level grading plan, which incorporated a conceptual storm system design and sanitary sewer system design for area A, and concluded that the entire Claridge site can, in fact, be developed with a single sanitary sewer outlet to Fernbank Road. This new trunk sewer in Fernbank Road, really the extension of the Fernbank Collector sewer, will provide the most direct outlet for the entire West Stittsville expansion area. This single outlet sewer alignment will also be a common outlet sewer for both Area A and Area B of the West Stittsville Expansion area and will therefore provide cost sharing opportunities between the two development parcels, Area A and Area B, which will help reduce the overall per unit cost to service these lands. This single outlet servicing alternative will also direct more flow to the new Fernbank Collector sewer which could provide the incentive to extend the Fernbank collector westerly in Fernbank Road providing the opportunity for the City to decommission the older Laird Street pumping station.

The single outlet sanitary sewer alternative will also eliminate the need to do any trunk sanitary sewer work in the immediate vicinity of the wetland to the north of the Claridge lands, in order to develop Area A, eliminating any environmental concerns associated with the proposed sewer connection to Abbott Street.

Considering the viability of the single trunk sewer outlet, and the facts that this alternative will be less expensive, less disruptive to the existing development area (only one main road dug up), and less environmental risk than the currently proposed two outlet scenario, revising the preferred wastewater servicing scenario from two outlets to one single outlet in Fernbank Road thereby resolves the currently perceived difficulties in servicing the West Stittsville Expansion lands associated with the current two outlet servicing scenario.

West Stittsville Urban Expansion Area Assessment (Water)

As with the wastewater assessment the water assessment also lumps the Claridge Lands, commonly referred to as 6435 Fernbank Road (Area A), in with a second parcel of land commonly referred to as 6437 Flewellyn Road (Area B). The water memo then goes into significant detail assessing the impact of the West Stittsville Urban Expansion Area in its entirety, and develops a water servicing alternative, which, for all intents and purposes, is consistent with the water servicing strategy developed in the previous Infrastructure Master Plan (IMP), which also included the Claridge urban expansion lands in west Stittsville. It should be noted, however, that this previous water servicing plan, and IMP, recognized and addressed a much larger level of service issue which encompasses a significant portion of the existing Stittsville urban area. This larger issue is an existing low operating pressure issue in the existing urban area of Stittsville, which extends through the existing local trunk watermains which will ultimately service the West Stittsville Urban Expansion Area. The previous IMP addressed this issue by proposing infrastructure which would resolve the low pressure issue. The current preferred water servicing alternative continues to identify the need to address the low pressure issue with a new water pressure zone in Stittsville, in the form of a new water pumping station and a 610 diameter trunk feeder main, to resolve the low operating water pressure in existing Stittsville, and service the existing and proposed expansion lands. This infrastructure, estimated at $41 million dollars, was included in the previous IMP, with these costs ultimately to be distributed between the existing urban area and expansion lands through DCs. Unfortunately, the current IMP is proposing to delete the infrastructure associated with the new pressure zone in its entirety, as identified in the City's presentation to G.O.H.B.A, dated May 10th 2025, while acknowledging that portions of areas in the undeveloped W-2 expansion area, which will ultimately require the new pressure zone to meet the City's current level of service requirements, will be allowed to develop on an "interim basis " in advance of the new pressure zone infrastructure being included in any IMP update. This new servicing strategy effectively isolates the West Stittsville Urban Expansion Area by not proposing these lands, or any portion of them, to be included to participate in the use of the existing water distribution system, on an "interim basis", subject to detailed analysis, similar to area W-2.

This current water servicing proposal also basically excludes area W-2 from having to participate in paying a share of the cost of the new pressure zone for Stittsville, which is required to ultimately help Area W-2 meet the City's level of service requirements for water, by letting Expansion Area W-2 develop prior to the new pressure zone infrastructure being included in an IMP, and ultimately the water portion of Development Charges, which Expansion Area W-2 will pay on development.

This current water servicing strategy also basically delays resolving the low operating pressure issue in existing Stittsville until a currently unknown date (by removing the new pressure zone works from the current IMP), allows development to occur in expansion area W-2 without that area contributing to the cost of the ultimate water servicing solution for that area (by allowing area W-2 to develop prior to the ultimate water servicing solution being included in the IMP and DC), and by default implies that the West Stittsville Urban Expansion Lands would be the sole trigger for the requirement to install the twin 610 dia feedermain, at an estimated cost of $11.4 million, along with the installation of three offsite local trunk watermains, even though the City memorandum does acknowledge that the preferred water servicing alternative for Area W-2 does include a new pressure zone, and that significant portions of the existing Stittsville area require the same new pressure zone to meet current City level of service requirements.

To resolve the inequalities between how the West Stittsville Urban Expansion Lands area is evaluated, and how Urban Expansion Area W-2 is evaluated, the City could simply acknowledge that the West Stittsville Urban Expansion Lands can be provided with potable water from the existing water distribution system, in whole or in part, subject to detailed analysis, on an interim basis until such time as the new pressure zone for the Stittsville Area is constructed. However, the City could also decide to be more proactive and add the infrastructure required to provide the new pressure zone back into the IMP. This would ensure that all the affected expansion areas will contribute their fair share to the cost of these works, through their payment of DCs which includes the cost of the new pressure zone infrastructure. This pro-active approach would also put the resolution of the low-pressure issue in the existing Stittsville urban area back in the queue to be dealt with.

_____

Bob Wingate, P.Eng.,
Senior Specialist
Land Engineering

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Stantec

Stantec is a global leader in sustainable engineering, architecture, and environmental consulting. The diverse perspectives of our partners and interested parties drive us to think beyond what's previously been done on critical issues like climate change, digital transformation, and future-proofing our cities and infrastructure. We innovate at the intersection of community, creativity, and client relationships to advance communities everywhere, so that together we can redefine what's possible.

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