OPEN HOUSE NOTICE

York Trunk Sanitary Sewer and Paisley-Clythe Drinking Water Feedermain Class Environmental Assessment

The Study

The City of Guelph has initiated a Class Environmental Assessment study for improvements to the York Trunk Sanitary Sewer and a new drinking water feedermain for the Paisley and Clythe Reservoirs. The Guelph Water and Wastewater Servicing Master Plan (2009) identified the need for these improvements in order to service planned growth in the City.

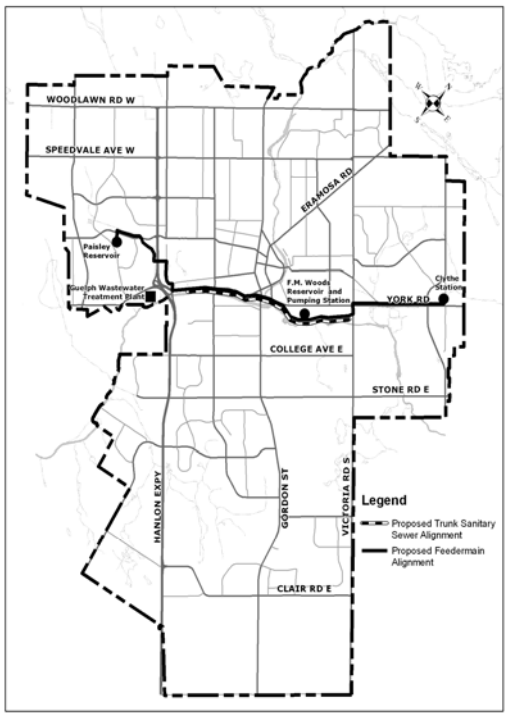
Second Public Open House

Wednesday, June 8
6 - 8 p.m.
Committee Room 112, City Hall, 1 Carden Street

The open house will provide background information on the study, evaluation of various alternatives, and the recommended sewer and feedermain alignments and mitigation measures. Representatives from the City and its consultant will be present to answer questions and discuss the next steps in the project.

About the study

The current York Trunk Sanitary Sewer extends from the former Guelph Reformatory Lands to the Wastewater Treatment Plant west of the Hanlon Expressway along the Eramosa and Speed Rivers.



Recommended Sewer and Feedermain Alignments

This sewer is reaching the end of its useful life and capacity due to a combination of planned population and employment growth in the City and reports of poor condition in sections. A solution is required to replace and/or rehabilitate critical sections of this main trunk sewer.

The Paisley-Clythe Drinking Water Feedermain is a new watermain required to increase the reliability of the supply between the City's F.M. Woods Reservoir and Pumping Station and the Paisley and Clythe Reservoirs located at the west and east ends of the city.

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As part of the York Trunk Sanitary Sewer and Paisley-Clythe Drinking Water Feedermain Class Environmental Assessment, the City has:

- completed an assessment of existing infrastructure and the environment;
- identified the opportunity/problem and alternative solutions;
- determined the capacity requirements to service existing residents and future growth;
- completed an evaluation of alternatives for routing, construction methods and mitigation measures; and
- identified preliminary recommended alternatives to meet the project objectives for both the sewer and feedermain.

The Process

This study is being planned under Schedule B of the Municipal Class Environmental Assessment process (Municipal Engineers Association, October 2000 as amended in 2007) under Ontario's Environmental Assessment Act. The Class Environmental Assessment process includes public and review agency consultation, an evaluation of alternatives, an assessment of the potential environmental effects of the proposed improvements, and identification of reasonable measures to mitigate any adverse impacts that may result.

Provide your comments

You are encouraged to attend the open house and provide your comments. Those comments will be considered in finalizing the preferred solutions. Comments and information regarding this project will be collected in accordance with the Municipal Freedom of Information and Protection of Privacy Act for the purpose of meeting environmental assessment requirements. With the exception of personal information, all comments will become part of the public record.

For more information

Please contact either of the following project team members if you have any questions or comments, wish to obtain more information regarding the project, or if you would like to be added to the project mailing list:

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GENIVAR Consultants
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guelph.ca/yorktrunkea

This notice first issued May 26, 2011.

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www.guelph.ca

Welcome to Public Information Centre (PIC) No. 2 for the

York Trunk Sewer & Paisley-Clythe Feedermain Class Environmental Assessment

Open House

Please complete the sign-in sheet and review the display materials.
One of our representatives will be pleased to answer your questions and address any concerns.

Contact Information

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Your input is much appreciated!

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York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

The City of Guelph
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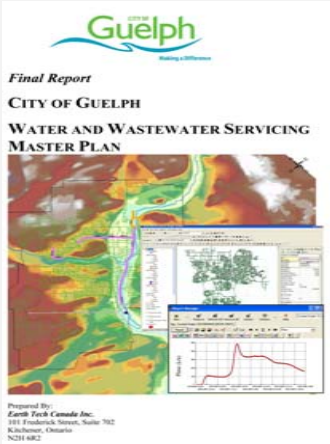
Background

The City of Guelph has initiated a Class Environmental Assessment study for improvements to the York Trunk Sanitary Sewer and a new drinking water feedermain for the Paisley and Clythe Reservoirs. The Guelph Water and Wastewater Servicing Master Plan (2009) identified the need for these improvements in order to service planned growth in the City.



The Need for New Infrastructure

The York Trunk Sewer

The current York Trunk Sanitary Sewer extends from the former Guelph Reformatory Lands to the Wastewater Treatment Plant west of the Hanlon Expressway along the Eramosa and Speed Rivers.

This sewer is reaching the end of its useful life and capacity due to a combination of planned population and employment growth in the City and reports of poor condition in sections. A solution is required to replace and/or rehabilitate critical sections of this main trunk sewer.

Paisley-Clythe Feedermain

The Paisley-Clythe Drinking Water Feedermain is a new watermain required to increase the reliability of the supply between the City's F.M. Woods Reservoir and Pumping Station and the Paisley and Clythe Reservoirs located at the west and east ends of the city.

Project Objectives

The City of Guelph has initiated the Class Environmental Assessment (EA) for the York Trunk Sewer and the Paisley-Clythe Feedermain to determine the preferred servicing alternatives and alignments for both pieces of infrastructure.

The objectives of York Trunk Sewer and Paisley-Clythe Feedermain Class EA are to:

- Establish the Servicing Requirements of the York Trunk Sanitary Sewer
- Confirm the Capacity of the Existing Sanitary Sewer Sections
- Identify Trunk Sanitary Sewer Servicing Alternatives
- Establish the Servicing Requirements of the Paisley-Clythe Feedermain
- Identify Feedermain Servicing Alternatives
- Evaluate the Impacts of each Trunk Sanitary and Feedermain Alternative and Select Preferred Alternatives
- Investigate the Feasibility for Implementing a Treated Wastewater Effluent Reuse Program, also known as a "Purple Pipe" System, within the East-West Study Area
- Investigate the Feasibility for Implementing an Energy Capture System to Use Waste Heat from the Sanitary System

York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

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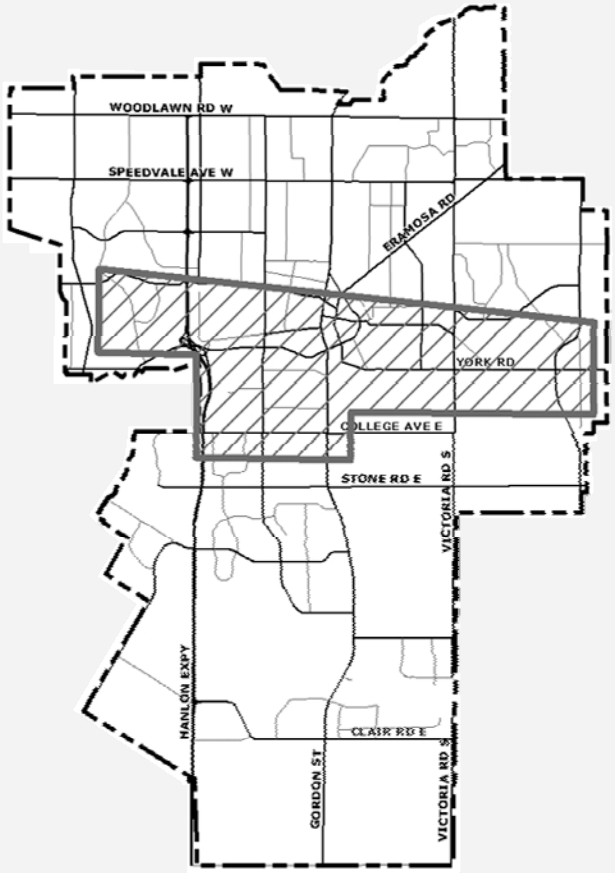
Problem/Opportunity Statement

York Trunk Sanitary Sewer – How to optimize available capacity for the wastewater servicing of existing and future developments in Guelph while minimizing the impacts on the natural, cultural, social and agricultural features in the study area.

Paisley-Clythe Feedermain – How to provide a security of supply to Zone 1 water distribution and to service existing and future developments in Guelph while minimizing the impacts on the natural, cultural, social and agricultural features in the study area.

Study Area

The Study Area extends along a key area within Guelph from the existing Wastewater Treatment Plant, west of the Hanlon Expressway along the shoreline of the Speed River to east of the Royal City Jaycees Park near Watson Road



Study Area

Problem Definition and Service Area

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Class EA Planning Process

The Ontario Environmental Assessment Act, R.S.O., 1990 (the EA Act) requires that projects corresponding to a given class of undertakings (e.g. municipal road, transit, water and wastewater projects) follow an approved Class Environmental Assessment (Class EA) process. The Class EA planning process as documented in the MEA Municipal Class EA document (October 2000, amended in 2007) includes the following five phases:

PHASE 1	PHASE 2	PHASE 3	PHASE 4	PHASE 5
Problem or Opportunity	Alternative Solutions	Alternative Design Concepts for Preferred Solution	Environmental Study Report	Implementation

The water and wastewater infrastructure needs identified in the City's Master Plan fall within the Municipal Class EA process.

Class EA Schedules for this Study

Depending on their environmental impact, municipal projects are classified in the Municipal Class EA in terms of schedules:

- Schedule A or A+
- Schedule B
- Schedule C

The York Trunk Sewer & Paisley-Clythe Feedermain Class EA is being conducted as a Schedule B Class EA which requires completion of Phase 1 and 2 of the MEA Municipal Class EA process.

What Does a Schedule B Project Mean?

- There is the potential for some adverse environmental (natural, economic, social) effects.
- A Screening process is required with contact of public and relevant review agencies to make them aware of the project and ensure that any concerns are addressed.
- Following the completion of the screening process and alternative evaluation, a 30 day public review period will be provided for any comments and concerns to be included in the environmental assessment.
- After the 30 day review period the project file will be developed and a Notice of Completion issued.
- Subsequent to the Notice of Completion, the City can move to detailed design and study implementation

York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

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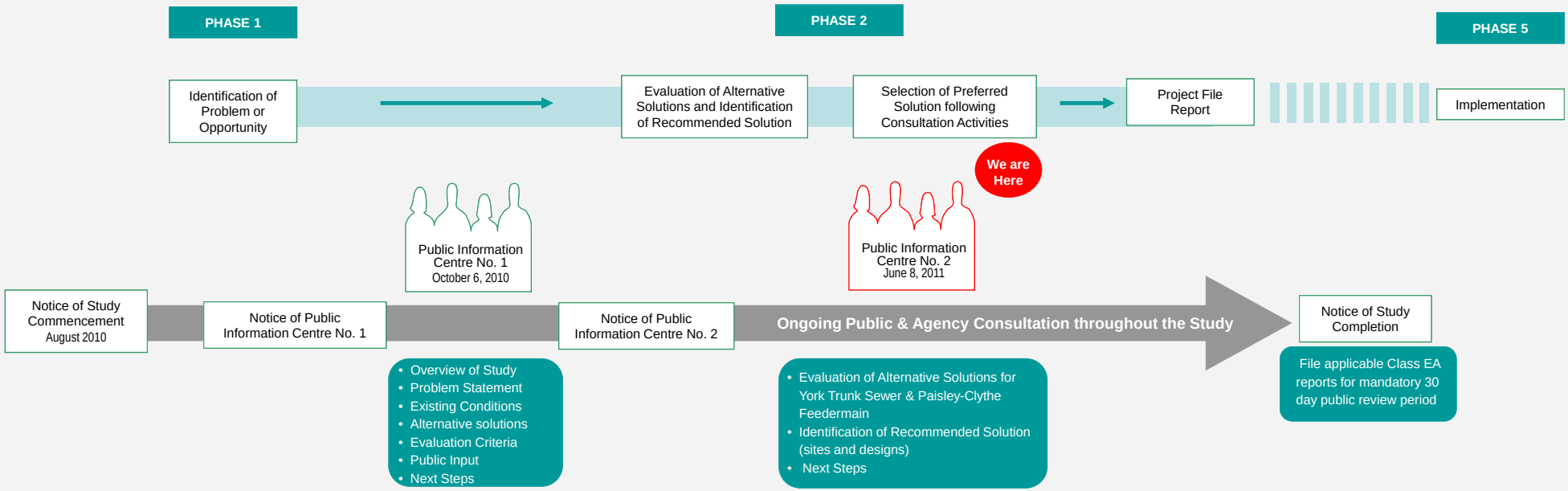

Project Overview

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Public Consultation

- Two Public Information Centres have been held during this Class EA study to obtain public feedback.
- We encourage the public to make comments and provide input to this Class EA study.
- Stakeholders can get involved with this Class EA study in the following ways:
  - Add your name to our project contact list
  - Submit your written comments to the Project Team

Additional Stakeholder Consultation

- Community organizations are being consulted through a parallel process to the Public Consultation, in addition to, First Nations, Aboriginal, and Métis groups.
- Review and Approval Agencies (Grand River Conservation Authority, Ministry of Transportation, and Ministry of the Environment, and others) are being consulted, as needed, throughout the course of the study's undertaking.
- An Internal Steering Committee (ISC), comprised of City staff from various departments, have provided input at key project milestones during the course of the Class EA Study.

York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

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SOCIAL & CULTURAL ENVIRONMENT CONSIDERATIONS

- Impacts on Local Businesses
- Proximity to Built-up Areas
- Traffic Impacts during Construction
- Known Archaeological Features
- Private Properties Affected
- Impact on Recreation Areas

NATURAL ENVIRONMENT CONSIDERATIONS

- Crossing Natural Features (rivers, wetlands, woodlots)
- Proximity to Natural Heritage Features/Vegetation
- Groundwater/Subsurface Conditions
- Surface Water (Quality/Quantity)
- Proximity to Valley Lands and Floodplains
- Watercourse Crossings and Fisheries

TECHNICAL CONSIDERATIONS

- Ability to Service Future Development
- Constructability and Site Access
- Soil / Ground Conditions
- Location and Impacts of other Utilities
- Road/Railway Crossings
- Site Size & Compatibility
- Ability to Connect with Existing Infrastructure
- Speed River/Creek Crossings
- Presence of Historical Landfill Site
- Coordinate with other Projects/Works

ECONOMIC CONSIDERATIONS

- Capital Costs
- Operation and Maintenance (including energy) Costs
- Rehabilitation/Replacement Costs
- Land Acquisition Costs

Evaluation Criteria

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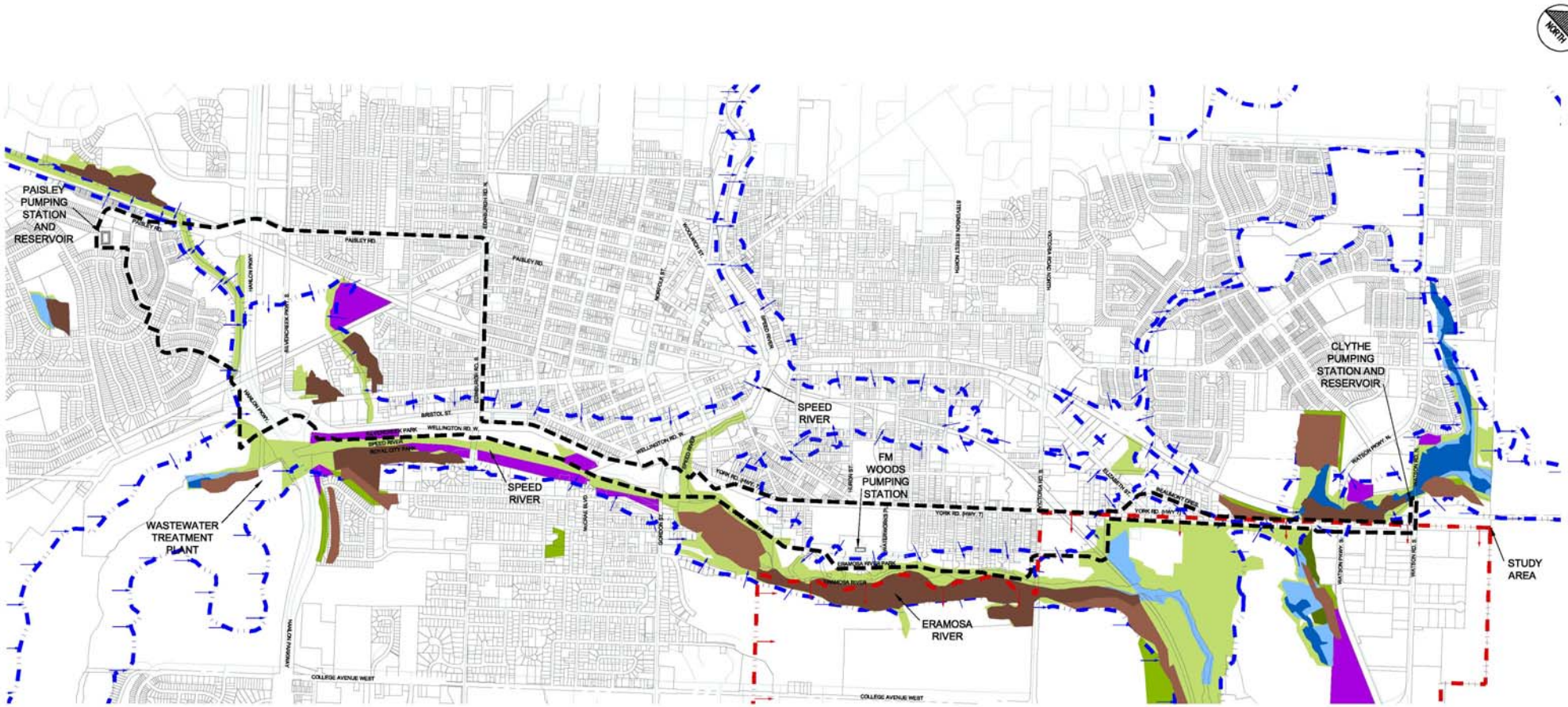

LEGEND

- STUDY AREA
- ARKELL SPRINGS WATER RESOURCE PROTECTION AREA
- FLOOD PLAIN

NATURAL HERITAGE SYSTEMS

- SIGNIFICANT NATURAL AREAS
- NATURAL AREAS
- ECOLOGICAL LINKAGES
- RESTORATION AREAS

SIGNIFICANT WETLANDS

- ONTARIO MINISTRY OF NATURAL RESOURCES DEFINED
- CITY OF GUEPLH DEFINED

SIGNIFICANT WOODLANDS

- SIGNIFICANT WOODLANDS
- CULTURAL WOODLANDS

CITY OF Guelph
Making a Difference

NATURAL HERITAGE FEATURES

SCALE: 1:10,000

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LEGEND

- SEWER WITH ADEQUATE CAPACITY
- SEWER WITH FULL CAPACITY (OVER 80%)
- SEWER WITH SURCHARGED (ABOVE 100% CAPACITY)

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YORK TRUNK SEWER
CLASS ENVIRONMENTAL ASSESSMENT
EXISTING CAPACITY CONSTRAINTS

SCALE: 1:2500

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York Trunk Sewer and Paisley-Clythe Feedermain

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Do Nothing	• Maintain Existing Sanitary Trunk Sewer • Existing system does not provide for future growth and some pipes are deteriorating or undersized for current sanitary sewage flows.
Rehabilitation of Existing York Trunk Sewer	• Sections of the existing sewer which are adequately sized but in need of repair may be rehabilitated as opposed to requiring replacement. • Does not provide for an increase in capacity and may not meet current or future flow demands. • Cannot be easily performed under current flow conditions.
Twinning of Existing Sewer and Rehabilitation of Existing Sewer	• Sections of the existing sewer which are adequately sized but are deteriorating may be rehabilitated as opposed to requiring replacement • A new sewer may be installed alongside the existing sewer, where the sewer is undersized to accommodate future increases in capacity.
Partial Replacement of Existing Sewer and Twinning	• Sections of the existing sewer in poor condition may be replaced and resized as required. • Existing sections of the sewer in good condition, but undersized, can be twinned with a new sewer to provide capacity for current and future flow demands.
Other Opportunities	• Sizing of upgrades to the York Trunk Sewer to accommodate future flow from other Trunk Sewers (Speed/Arthur) and to alleviate flow pending upgrades within the sanitary distribution system. • Overflow interconnections with existing sewers to increase the capacity of the entire system. • Reduction in inflow and infiltration through pipe upgrades will reduce operational costs, increase lifespan of sewage treatment facility, and reduce the cost of future infrastructure. • Servicing to the Guelph Innovation District

Potential Alternatives & Opportunities – York Trunk Sewer

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York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

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Evaluation Criteria	Existing Alignment – Do Nothing	Rehabilitation of Existing York Trunk Sewer	Twinning of Existing Sewer and Rehabilitation of Existing Sewer	Partial Replacement of Existing Sewer and Twinning
Natural Environment Overall Rating	• Potential Impact to Natural Environment in the Event of Sewer Surcharge due to Structural Failure in Addition to Impacts Resulting from Exfiltration (Groundwater Contamination)	• Potential Impacts to Natural Environment in The Event of Sewer Surcharge (Overflow)	• Sanitary Surcharging (Overflow) Mitigated • Sanitary Sewer Crossing of Speed River would be Required	• Sanitary Surcharging (Overflow) Mitigated • Sanitary Sewer Crossing of Speed River would be Required
Social and Cultural Overall Rating	• Risk Of Damage to Private Properties Adjacent to the York Trunk in the Event of Surcharging	• Risk of Damage to Private Properties in the Event of Surcharging • Some Direct Impact on Public Facilities during Construction	• Risk of Damage to Properties can be Readily Mitigated • Impact on Public use if Sewer Route is through Parkland	• Risk of Damage to Properties can be Readily Mitigated • Public use of Parkland Impacted during Construction • Opportunity to Realign Sewer in Area of Woods Pumping Station To Allow for Plant Expansion
Technical Overall Rating	• No Additional Capacity for Sewer System Expansion within service area • Existing Sewer Due to Age Likely in Poor Condition in Some Locations	• No Additional Capacity for Sewer System Upgrades • Limited Rehabilitation Possible Due to Level of Flow in Sewer Pipes	• Provides Additional Capacity for Sewer System Expansion • Opportunity to Relieve Flow in Speed Trunk Sewer • Ease of Installation by Open Cut Construction • Allows for Future Rehabilitation of Existing Sewer to Gain Additional Capacity	• Provides Additional Capacity for Sewer System Expansion • Opportunity to Relieve Flow in Speed Trunk Sewer • Ease of Installation by Open Cut Construction • Allows for Rehabilitation of Existing Sewer to Gain Additional Capacity
Economic Overall Rating	• No Immediate Capital Costs • Potential for Future Costs Associated with Emergency Repairs • Does Not Permit Population Growth • Cost: est. $0	• Uncertain Costs for Rehabilitation • Does Not Permit Population Growth due to Inaccessibility • Cost: est. $3.6M	• High Initial Capital Cost • Allows for Growth for beyond 2041 • Cost: est. $18.5M	• High Initial Capital Cost • Allows for Growth beyond 2041 • Cost: est. $14.9M
OVERALL PREFERENCE RATING	• Does not Solve Identified Problem	• Does not Solve Identified Problem	• Does Provide a Solution to the Problem	• Does Provide a Solution to the Problem

PREFERRED

LEGEND

Most Preferred | **Less Preferred** | **Least Preferred**

York Trunk Sewer – Alternative Evaluation Summary

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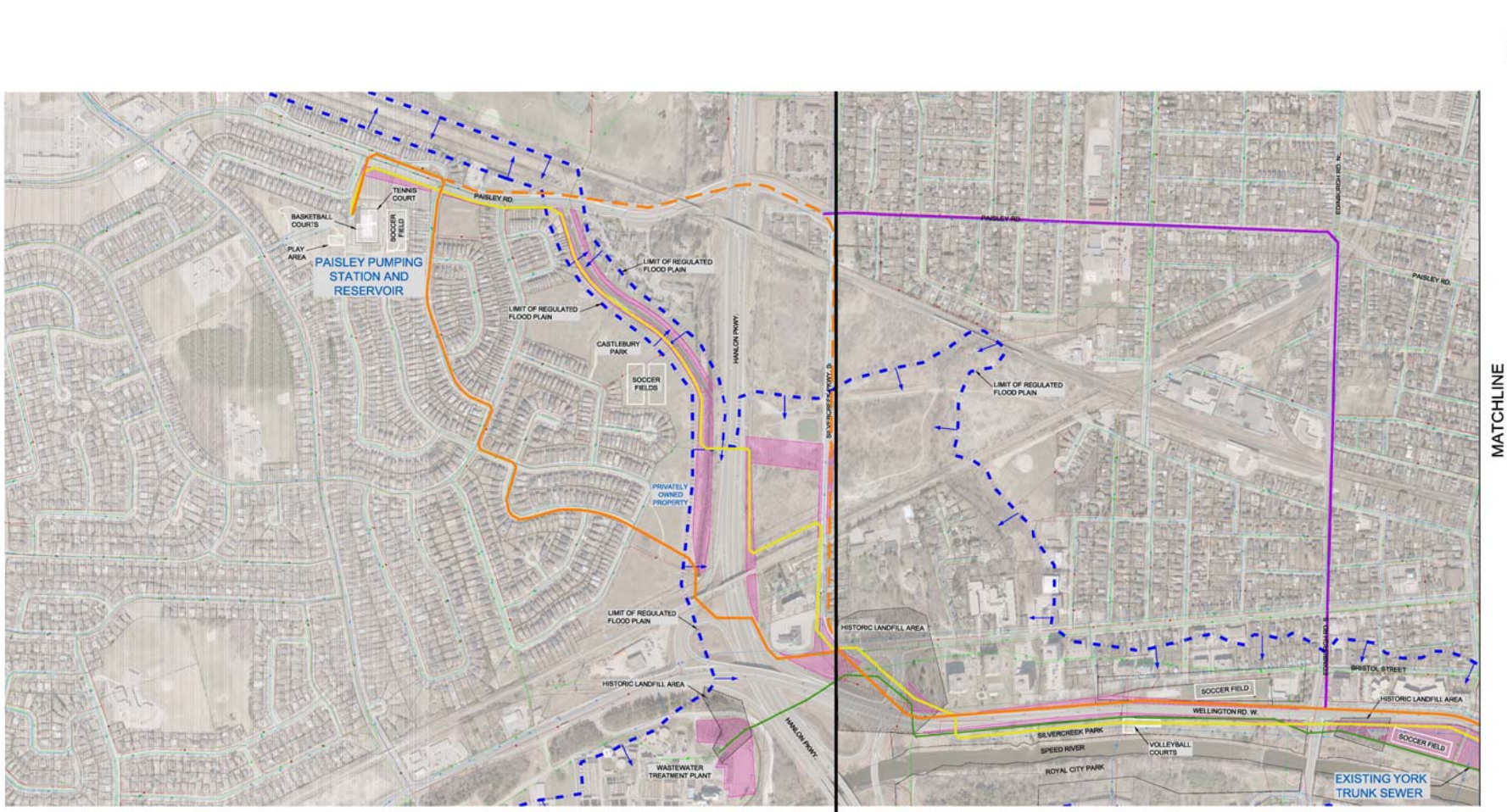

SECTION No. 5 | SECTION No. 4

LEGEND

- MASTER PLAN ALTERNATIVE
- MASTER PLAN ALTERNATIVE 'B'
- NEW ALIGNMENT No. 2
- NEW ALIGNMENT No. 3
- NEW ALIGNMENT No. 4
- NEW ALIGNMENT No. 5

UNCERTAIN ARCHAEOLOGICAL POTENTIAL: LAND MAY HAVE BEEN AFFECTED BY ADJACENT DEVELOPMENT, REQUIRES STAGE 2 ASSESSMENT PRIOR TO CONSTRUCTION

HIGH ARCHAEOLOGICAL POTENTIAL: NOT PREVIOUSLY DISTURBED

PAISLEY-CLYTHE FEEDERMAIN
CLASS ENVIRONMENTAL ASSESSMENT
ALTERNATIVES REVIEWED
SHEET 1 OF 2

SCALE: 1:2500

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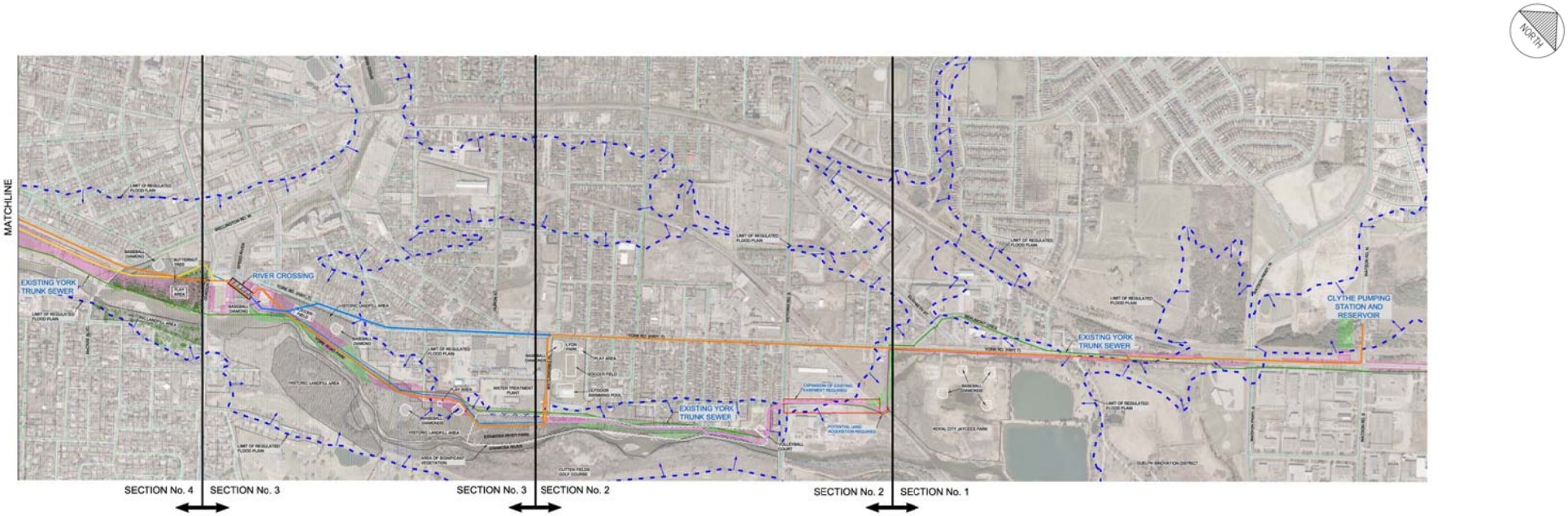

LEGEND

- MASTER PLAN ALTERNATIVE
- MASTER PLAN ALTERNATIVE 'B'
- NEW ALIGNMENT No. 2
- NEW ALIGNMENT No. 3
- NEW ALIGNMENT No. 4
- NEW ALIGNMENT No. 5
- UNCERTAIN ARCHAEOLOGICAL POTENTIAL: LAND MAY HAVE BEEN AFFECTED BY ADJACENT DEVELOPMENT, REQUIRES STAGE 2 ASSESSMENT PRIOR TO CONSTRUCTION
- HIGH ARCHAEOLOGICAL POTENTIAL: NOT PREVIOUSLY DISTURBED

PAISLEY-CLYTHE FEEDERMAIN
CLASS ENVIRONMENTAL ASSESSMENT
ALTERNATIVES REVIEWED
SHEET 2 OF 2

SCALE: 1:2500

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Do Nothing	• Maintain existing water distribution system. • Does not meet identified future operational requirements.
Provide New Water Feedermain to Connect Clythe Pumping Station to Paisley Pumping Station Reservoir	• Provides improved east-west water transmission in Zone 1 of water distribution system. • Provides a backup water supply if repairs are required at other points in the distribution system. • Provides backup in the event of unexpected service interruptions. • Opportunity of cost savings by performing work in conjunction with upgrades to the York Sanitary Trunk Sewer. • Opportunity for future inter-connections to future Clair Road and Verney Water Tower feedermains.
Upgrade Existing Water Distribution Network	• Upgrade existing pipes to accommodate future growth and demand. • Can be performed in conjunction with road works upgrades to other services. • Does not provide effective system redundancy. • May not provide for future demand or operations requirements (pressure, etc.).

Potential Alternatives & Opportunities – Paisley-Clythe Feedermain

York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

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Evaluation Criteria	Section 1	Section 2 (from Industrial Road to Waterworks Pl)		Section 3 (from Waterworks Pl to Gordon St)		Section 3 (Speed River Crossing)	
	Master Plan Alternative (along York Rd from Watson Rd. North) Distance: 1,800 m	New Alignment No.3 (down existing utility corridor, along PDI plant, to Eramosa River Park through to Waterworks Pl) Distance: 1,550 m	Master Plan Alternative (from Industrial Ave, down York Rd, down Waterworks Pl) Distance: 1,700 m	New Alignment No. 2 (from Waterworks Pl to Speed River via York Road) Distance: 1,100 m	Master Plan Alternative (from Waterworks Pl to Speed River via York Road Park) Distance: 1,200 m	Master Plan Alternative (Speed River Crossing to Gordon St.) Common alignment – Open Cut Crossing Distance: 190 m	Master Plan Alternative (Speed River Crossing to Gordon St.) Common alignment – Tunneled Undercrossing Distance: 190 m
Natural Environment Overall Rating	• Located Within Existing Road Allowance, which is Already Disturbed • Adjacent to Designated Natural Heritage Area South of York Road	• Located Within Existing Utility Easement • Disturbance to Trees and Vegetation in Eramosa River Park • Passes through Designated Natural Heritage and Restoration Area and Wetland	• Located Within Existing Road Allowance	• Located Within Existing Road Allowance • Potential Disturbance of Historic Landfill • Passes through Designated Natural Heritage and Restoration Area	• Located within Existing Utility Corridor • Disturbance to Trees and Vegetation in York Road Park • Potential Disturbance of Historic Landfill • Passes through Designated Natural Heritage and Restoration Area	• Tree Removal Required on both Sides of Speed River • Open Cut of River Bottom will Disturb Wildlife Habitat • River is Part of Natural Heritage System	• Staging and Receiving Pits will Require Large Excavations • May Disturb Bedrock Formations and Groundwater • River is Part of Natural Heritage System
Social and Cultural Overall Rating	• Located Within Existing Built-Up Area • Potential for Performing Work in Conjunction with Expansion of York Road to Minimize Disruption to Local Residents and Businesses	• Work Will Impact use of Eramosa River Park • Limited Disturbance to Roads and Traffic	• Alignment Along York Road Would Cause Disruption to Local Businesses and Residents • York Road / Victoria Road reconstructed	• Alignment along York Road would Cause Disruption to Local Businesses and Residents	• Construction Will Impact use of York Road Park • Limited Disturbance to Roads and Traffic	• Disturbance to Park use • Section of River Impacted not Typically used for Recreation	• Significant Disturbance to Park and Public Use on Both Sides of the River for Tunneling Works
Technical Overall Rating	• Limited Conflict with Existing Utilities • Railroad Crossing Required at Ontario and Southland	• Feedermain Installation in Eramosa River Park May be Performed in Conjunction with Twinning of York Trunk Sewer • Railroad and Road Crossing Required	• Potential Conflicts With Existing Utilities in Road Allowance • No Synergy with other Proposed Works (York Trunk)	• Potential Conflicts with Existing Utilities in Road Allowance • No Synergy with other Proposed Works (York Trunk)	• Feedermain Installation in York Road Park May be Performed in Conjunction with Twinning of York Trunk Sewer	• Feedermain Installation may be Performed in Conjunction with Twinning of York Trunk Sewer • Open Cut of River Bottom Will Require Cofferdams and Dewatering	• Trenchless Installation of Watermain Will Require Staging Pits in Addition to Dewatering • Cannot be Installed in Conjunction with Twinning of York Trunk Sewer
Economic Overall Rating	• Capital Cost: est. $2.5M	• Additional Land Acquisition Likely Required • Capital Cost: est. $1.5M	• Capital Cost: est. $2.3M	• Capital Cost: est. $1.6M	• Capital Cost: est. $1.3M	• Capital Cost: est. $400,000 in Conjunction with Installation of York Trunk Sewer	• Capital Cost: est. $1.2M in Conjunction with Installation of York Trunk Sewer
OVERALL PREFERENCE RATING							
	PREFERRED	**PREFERRED**			**PREFERRED**	**PREFERRED**	

LEGEND

Most Preferred | Less Preferred | Least Preferred

Paisley-Clythe Feedermain – Alternative Evaluation Summary

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York Trunk Sewer and Paisley-Clythe Feedermain

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Evaluation Criteria	Section 4 (from Gordon Street to the Hanlon Parkway)			Section 5 (from the Hanlon Parkway to Paisley Road Booster Station)		
	Master Plan Alternative (West through Silvercreek Park, crossing to the north side of Wellington Street) Distance: 2,100 m	New Alignment No. 4 (West through Silvercreek Park following along the south side of Wellington Street) Distance: 2,300 m	New Alignment No.5 (following the Master Plan alternative, but turning north up Edinburgh and West Paisley Road to the Hanlon Expressway) Distance: 2,100 m	Master Plan Alternative (West Across the Hanlon Expressway and Northwest though the subdivision to Paisley Booster Station) Distance: 2,000 m	Master Plan Alternative 2 (North on Silvercreek Parkway South to Paisley Road, crossing the Hanlon, and following Paisley Road to the Paisley Booster Station) Distance: 1,800 m	New Alignment No. 4 (North on Silvercreek Road Parkway, through a tract of municipally owned land and up the west side of the Lafarge lands, crossing the Hanlon Expressway, and along a municipal drain to Paisley Road) Distance: 1,900 m
Natural Environment Overall Rating	• Located within Existing Utility Corridor • Disturbance to Trees and Vegetation in Silvercreek Park • Potential Disturbance of Contaminated Soils and Groundwater	• Located within Existing Utility Corridor • Disturbance to Trees and Vegetation in Silvercreek Park • Potential Disturbance of Contaminated Soils and Groundwater • Passes Through Designated Natural Heritage and Restoration Area	• Located Primarily in Existing Road Allowances (i.e. Disturbed Area)	• Located Primarily in Existing Road Allowance (i.e. Disturbed Area)	• Located Primarily in Existing Road Allowance (i.e. Disturbed Area)	• Located Primarily in Lands Proposed to be Developed or Within Municipal Easement • Feedermain Proposed to be Installed adjacent to Municipal Drain • Passes Through Designated Natural Heritage and Restoration Area
Social and Cultural Overall Rating	• Construction will Impact use of Silvercreek Park	• Construction will Impact use of Silvercreek Park	• Alignment on Paisley Road and Edinburgh Road would cause Disruption to Local Businesses and Residents	• Alignment within Subdivision Would Cause Disruption to Local Residents • Alignment Crosses Privately Owned Land • May Require Easement of Property Acquisition	• Principally within Road Allowance • Potential Impact on Private Properties and Traffic during Construction	• Principally Within Municipally Owned Property • Limited Impact on Private Properties
Technical Overall Rating	• Some Conflicts with Existing Services in Silvercreek Park • May be Performed in Conjunction with Twinning of York Trunk Sewer • Four Road Crossings Required	• Some Conflicts with Existing Services in Silvercreek Park • May be Performed in Conjunction with Twinning of York Trunk Sewer • Five Road Crossings Required	• Potential Conflicts with existing Utilities Located in Road Allowance • No Synergy with Other Works • Multiple Road Crossings and Two Railroad Crossing are Required	• Limited Conflict with Existing Utilities • Undercrossing of Hanlon Expressway and One Railroad Required • Various Crossings of Roads in Residential Subdivision	• Feedermain Installation may be Coordinated with Development of Lafarge Lands along Silvercreek Parkway South • Potential Conflicts with Future MTO Developments at Paisley Road	• Feedermain Installation may be Coordinated with Development of Lafarge Lands along Silvercreek Parkway South • Potential Synergy with Installation of Sanitary Sewer under Hanlon Expressway Associated with Development of Lafarge Lands
Economic Overall Rating	• Capital Cost: est $2.2M	• Capital Cost: est. 1.9M	• Capital Cost: est. $2.9M	• Capital Cost: est. $2.9M	• Capital Cost: est. $2.7M	• Capital Cost: est $2.5M
OVERALL PREFERENCE RATING						
		PREFERRED				**PREFERRED**

LEGEND

Most Preferred | **Less Preferred** | **Least Preferred**

Paisley-Clythe Feedermain – Alternative Evaluation Summary

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York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

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Description:

- New trunk sewer to twin or replace sections of the existing York Trunk Sewer where existing sewer is approaching or exceeding capacity.
- New pipe size varies from 1,050 mm (42”) to 1,200 mm (48”)

Rationale for Preferred Alignment:

- Mitigates surcharging and allows for reuse of and (as required) rehabilitation of the existing Trunk Sewer
- Provides additional flow capacity for future growth of the City to at least 2041.
- Provides opportunity for realignment of sewer to allow for expansion at F.M. Woods Pumping Station.
- Provides opportunity for relieve flows in the Speed Trunk Sewer by diverting flow into the upgraded York Trunk Sewer, thus extending the life of that system.

Disadvantages of Other Alternatives:

- Does not allow for future growth.
- Repairs/upgrades to existing Trunk Sewer are limited due to capacity constraints.
- Existing sewer conflicts with future expansion of water plant.
- Access to existing sewer for maintenance is limited in some locations (i.e. by Gordon Street crossing).

Cost Estimate:

Total Cost: $19.4 M

Including: Sewer Replacement, River Crossing, Allowance for Dewatering of Contaminated Ground Water, Allowance for Disposal of Contaminated Soils, Detailed Design and Construction Administration, Contingency Allowance

York Trunk Sewer – Preferred Alternative

GENIVAR

Description:

- A new feedermain between the F.M. Woods Pumping Station and the Clythe and Paisley Booster Stations, at the east and west ends of the City, respectively.

SECTION 1 – CLYTHE BOOSTER STATION TO INDUSTRIAL ROAD

Rationale for Preferred Alignment:

- Located within existing road allowance.
- May be excavated in conjunction with future expansion of York Road to four lanes.
- Limited conflict with existing utilities.

SECTION 2 – INDUSTRIAL ROAD TO F.M. WOODS PUMPING STATION

Rationale for Preferred Alignment:

New Alignment 3

- Located within existing utility corridor and publically owned land.
- Limited disturbance to roads and traffic.
- Disturbance of trees and vegetation in Eramosa River Park can be mitigated by renaturalization and replanting.
- Limited conflict with existing utilities.
- Can share construction corridor with York Trunk Sewer.

Disadvantages of Other Alternatives

Master Plan Alternative:

- Significant impact to traffic and private property due to limited space available within existing road allowance.
- Potential conflicts with existing utilities, railways, etc.
- Higher capital cost.

Paisley-Clythe Feedermain – Preferred Alternative

SECTION 3 – WATERWORKS PLACE TO GORDON STREET

Rationale for Preferred Alignment

Master Plan Alternative:

- Located within existing utility corridor.
- Limited disturbance to existing roads and traffic.
- Disturbance of trees and vegetation in York Road Park can be mitigated by renaturalization and replanting.
- Synergy with upgrades to York Trunk Sewer.

Disadvantages of Other Alternatives

New Alignment No. 2:

- Significant impact to traffic and private property due to construction.
- Potential conflict with existing utilities.
- Higher capital costs.

SECTION 3 - SPEED RIVER CROSSING

Rationale for Preferred Alignment

***Open Cut*:**

- Disturbance of trees and vegetation in Eramosa River Park can be mitigated by renaturalization and replanting.
- Opportunity to perform work in conjunction with upgrades to York Trunk Sewer.
- Lower capital cost.

Disadvantages of Other Alternatives

Tunneled Undercrossing:

- Staging and receiving pits require large excavations.
- Extensive disturbance to park use and facilities.
- May disturb bedrock formations.
- Limited ability to phase with other works.

SECTION 4 – SILVERCREEK PARK TO WELLINGTON ROAD

Rationale for Preferred Alignment

New Alignment 4:

- Located within existing utility corridor.
- Limited disturbance to existing roads and traffic.
- Disturbance of trees and vegetation in Silver Creek Park can be mitigated by renaturalization and replanting.
- Synergy with upgrades to York Trunk Sewer.

Disadvantage of Other Alternatives

Master Plant Alternative:

- Higher capital cost.

New Alignment No. 5:

- Significant disruption to local businesses and residents.
- Potential conflicts with existing utilities.
- Multiple road and railroad crossings required.
- Higher capital costs.

SECTION 5 – HANLON ROAD TO PAISLEY ROAD BOOSTER STATION

Rationale for Preferred Alignment

New Alignment 4:

- Generally Located within Municipal property.
- Limited impact to private properties.
- Synergy with development of Lafarge Lands.

Disadvantage of Other Alternatives:

Master Plant Alternative:

- Routing through subdivision would cause significant disruption to residents.
- Would require land acquisition / easement.
- High capital cost.

Master Plant Alternative 2:

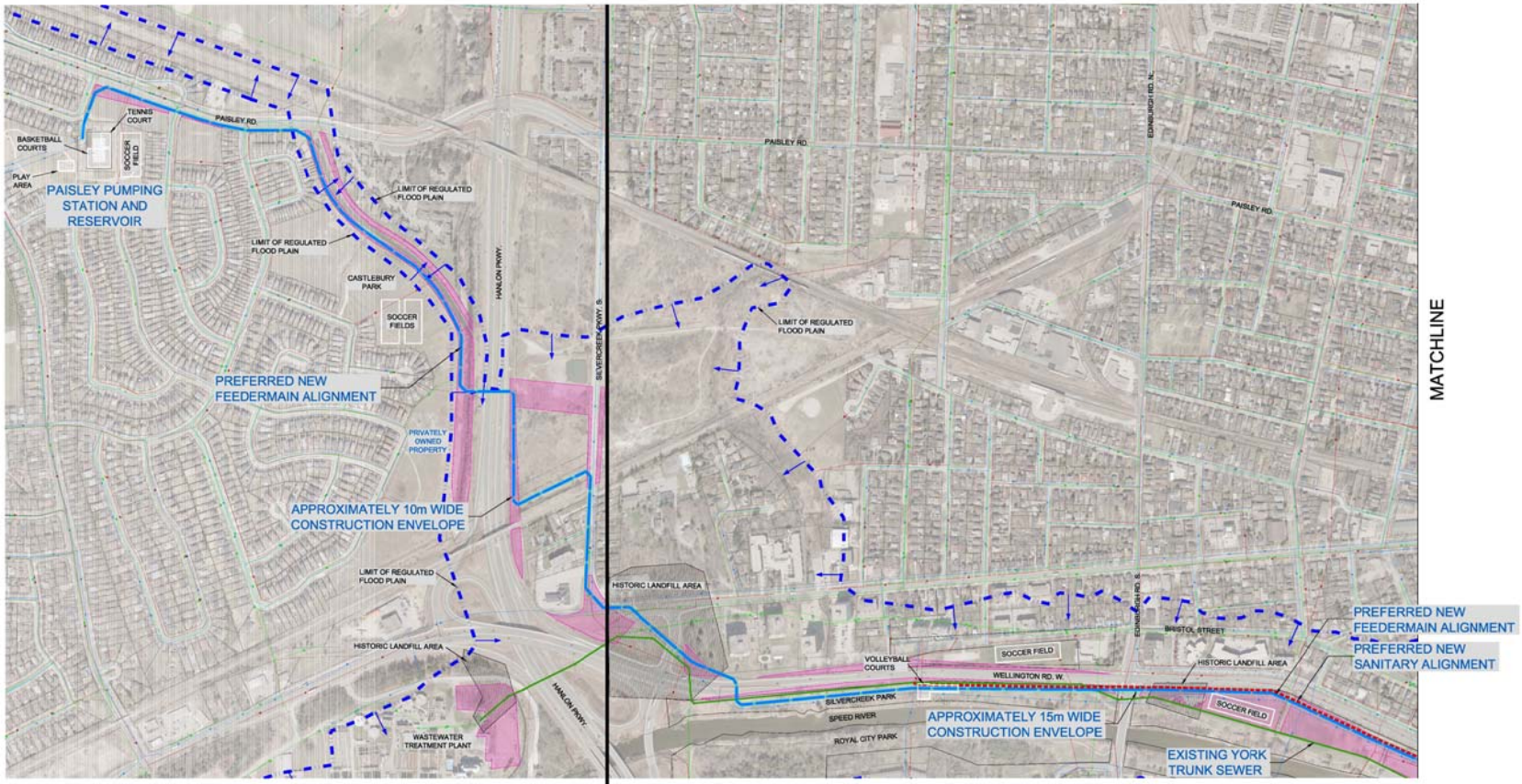
- Potential conflict with future MTO development.
- Potential disruption to traffic and private properties.

Cost Estimate:

Total Estimated Cost: $17.8 M

Including: Feedermain Installation, Allowance for Dewatering of Contaminated Groundwater, Allowance for Disposal of Contaminated Soils, Detailed Design and Construction Administration. This cost assumes a common trench with the York Trunk Sewer for the Speed River Undercrossing

Paisley-Clythe Feedermain – Preferred Alternative



SECTION No. 4 | SECTION No. 3

LEGEND

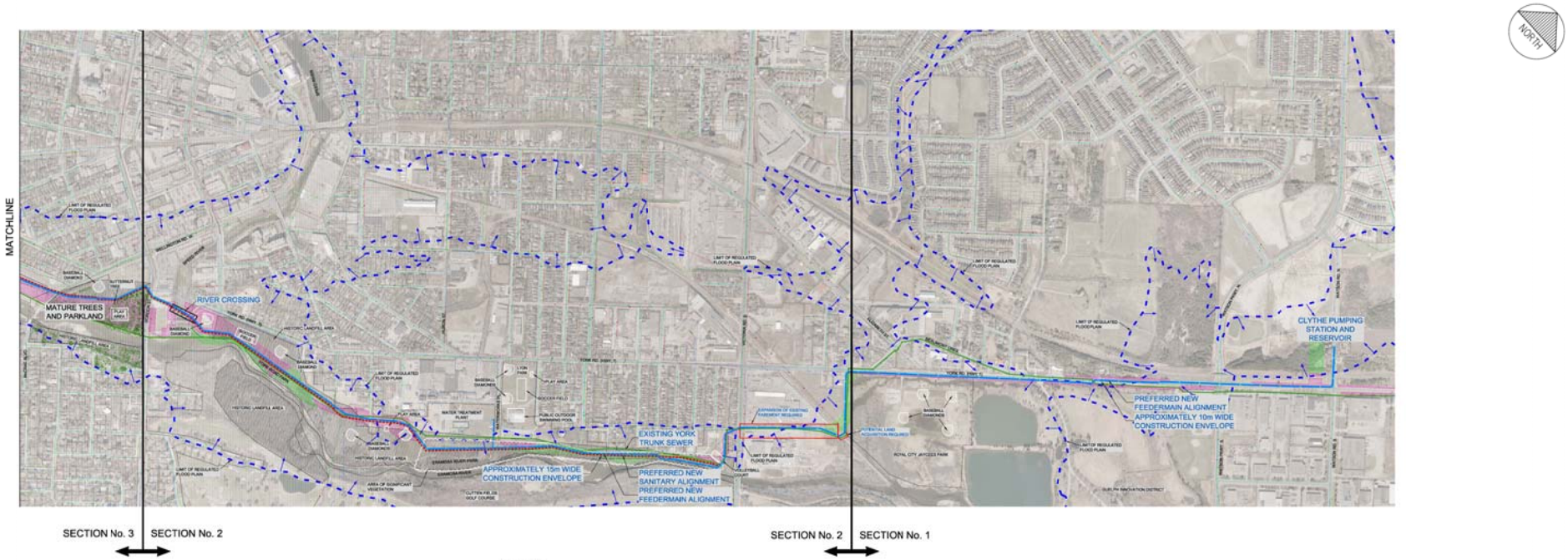
UNCERTAIN ARCHAEOLOGICAL POTENTIAL: LAND MAY HAVE BEEN AFFECTED BY ADJACENT DEVELOPMENT, REQUIRES STAGE 2 ASSESSMENT PRIOR TO CONSTRUCTION

HIGH ARCHAEOLOGICAL POTENTIAL: NOT PREVIOUSLY DISTURBED

YORK TRUNK SEWER AND PAISLEY-CLYTHE FEEDERMAIN PREFERRED ALIGNMENTS SHEET 1 OF 3

SCALE: 1:2500

GENIVAR



SECTION No. 3 | SECTION No. 2 | SECTION No. 2 | SECTION No. 1

LEGEND

UNCERTAIN ARCHAEOLOGICAL POTENTIAL: LAND MAY HAVE BEEN AFFECTED BY ADJACENT DEVELOPMENT, REQUIRES STAGE 2 ASSESSMENT PRIOR TO CONSTRUCTION

HIGH ARCHAEOLOGICAL POTENTIAL: NOT PREVIOUSLY DISTURBED

YORK TRUNK SEWER AND PAISLEY-CLYTHE FEEDERMAIN PREFERRED ALIGNMENTS SHEET 2 OF 3

SCALE: 1:2500

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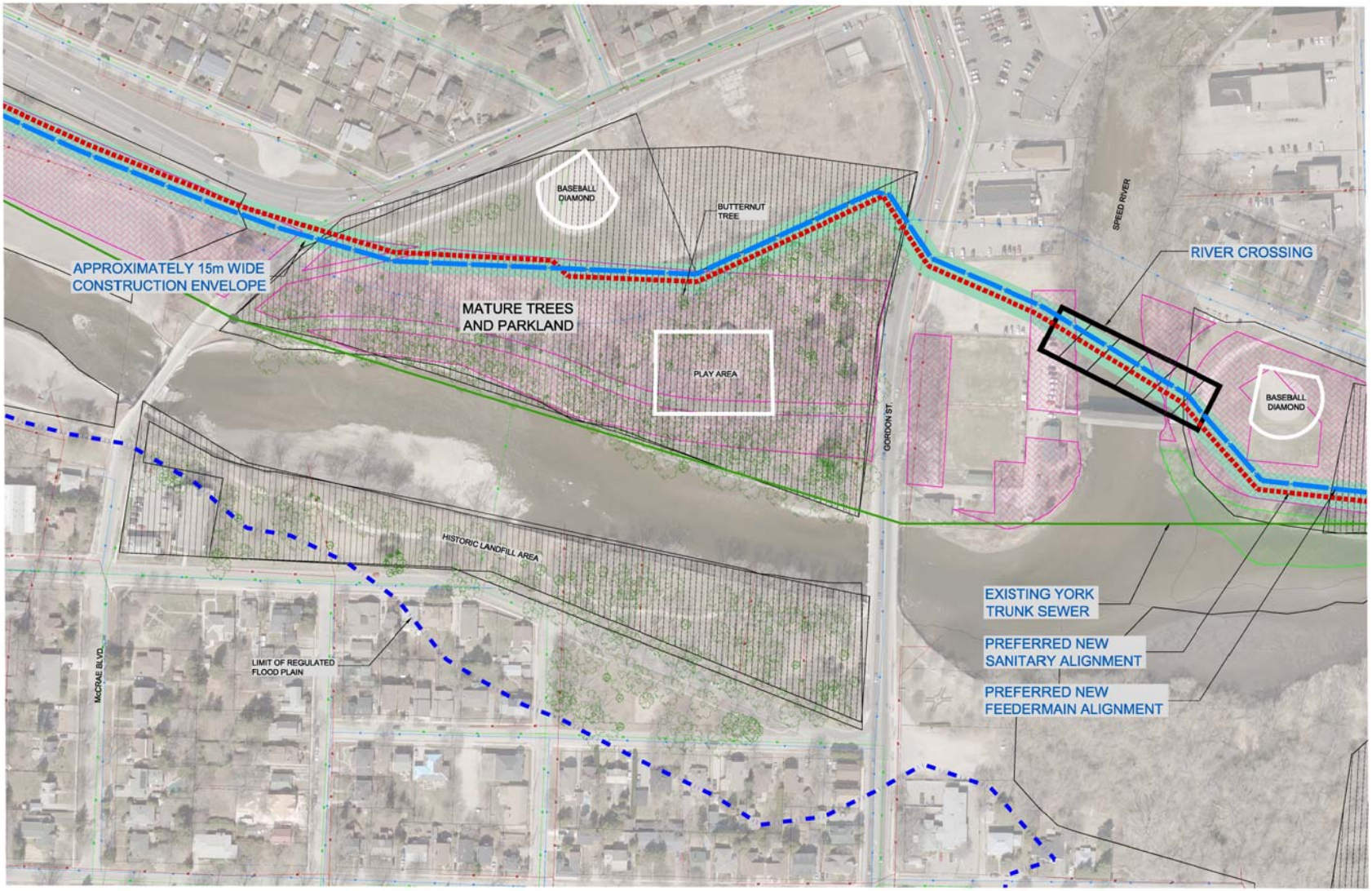

LEGEND

UNCERTAIN ARCHAEOLOGICAL POTENTIAL: LAND MAY HAVE BEEN AFFECTED BY ADJACENT DEVELOPMENT, REQUIRES STAGE 2 ASSESSMENT PRIOR TO CONSTRUCTION

YORK TRUNK SEWER AND
PAISLEY-CLYTHE FEEDERMAIN
PREFERRED ALIGNMENTS
RIVER CROSSING
SHEET 3 OF 3

SCALE: 1:750

GENIVAR

York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

The City of Guelph
www.guelph.ca

1. Sheet Piling is Installed Across the River

2. Water Flow is Diverted Across the Channel, Excavation is Pumped Out

3. Construction Begins…

4. The River is Restored

Construction Methods – Open Cut River Crossings

GENIVAR

Open-Cut Sewer Construction on a Road Shoulder

Typical Open-Cut Sewer Trench

Typical Construction Crew

Use of a Trench Box

Construction Methods – Open Cut

York Trunk Sewer and Paisley-Clythe Feedermain

Municipal Class Environmental Assessment

The City of Guelph
www.guelph.ca

- Crossing Natural Features (rivers, wetlands, woodlots)
- Proximity to Natural Heritage Features/Vegetation
- Groundwater/Subsurface Conditions
- Surface Water (Quality/Quantity)
- Proximity to Valley Lands and Floodplains
- Watercourse Crossings and Fisheries

Proximity to Natural Heritage Features/Vegetation

- Maintain natural heritage buffers as setbacks
- Protect Species-at-Risk in the area of work (butternut tree, turtles, etc.) through routing of infrastructure, identification, and scheduling of work

Groundwater/Subsurface Conditions

- Develop alternatives to minimize impacts
- Locate construction activities away water bearing formations (soils) where possible
- Use proper dewatering techniques, including treatment of impaired groundwater and options to minimize necessary water taking
- Scheduling to avoid seasonal high groundwater levels (i.e. Spring)
- Employ environmental management practices during construction (equipment storage, refueling, etc.)
- Maintenance of the existing groundwater regime through engineering design (i.e. backfill to match existing conditions)

Crossing Natural Features

- Avoid Wetland areas south of York/Wellington Road adjacent to Speed River / Eramosa River
- Reinstate to improved end state conditions including naturalization and promotion of wildlife habitats

Watercourse Crossing and Fisheries

- Minimize tree removal
- Stage work to non-critical times (i.e. outside of fish spawning season March 31st - July 31st)
- Restore stream bed to pre-construction condition or better
- Schedule work around seasonal constraints (high water levels in spring, land uses)
- Implement spill control and emergency management through out works
- Maintain natural heritage buffers and setbacks

Proximity to Valley Lands and Flood Plains

- Restoration of impacted vegetation
- Use of indigenous (native) species
- Inventory of work to avoid nesting and breeding areas prior to any removal of vegetation
- Minimize tree removal and implement reinstatement plan consistent with the City's Natural Heritage System Approvals

Natural Environmental Mitigation Measures

GENIVAR

Impact on Recreation Areas

- Staging of construction to minimize disruption to sports field and parks use (late fall – early spring)
- Preserve or reinstate existing amenities: flower gardens, playground equipment, sport fields, etc.

Archeological Features

- Perform a Stage 2 Archeological Assessment prior to construction to identify any artifacts or features in the identified area of work.
- Stage 3 Archeological Assessment as required with on-site Archaeologist within key areas during construction

Proximity to Built-up Areas/Private Properties Affected:

- Employ noise and dust control measures
- Maintain pedestrian walkway system by providing temporary detours around areas of work

Traffic Impacts During Construction

- Consult with public services (mail, garbage collection, transit, etc.) and adjacent landowners regarding temporary access routes and provision of services during construction
- Phase construction to minimize period of disruption
- Ensure mandatory access for emergency response vehicles/personnel
- Schedule work with other capital projects to avoid duplication of disruptions

Social & Cultural Mitigation Measures

GENIVAR

Following this Public Information Centre, all comments received from the public and all review agencies will be incorporated into the analysis of the preferred alternatives for the York Trunk Sewer and Paisley-Clythe Feedermain alignments. Please complete a survey form and submit it to a representative at tonight's Public Information Centre or send it to the project contacts:

Colin Baker, P.Eng.
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Guelph, ON N1H 3A1
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Project Manager
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1-367 Woodlawn Road West
Guelph, ON N1H 7K9
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Fax: 519-827-1483
Email: jamie.witherspoon@genivar.com

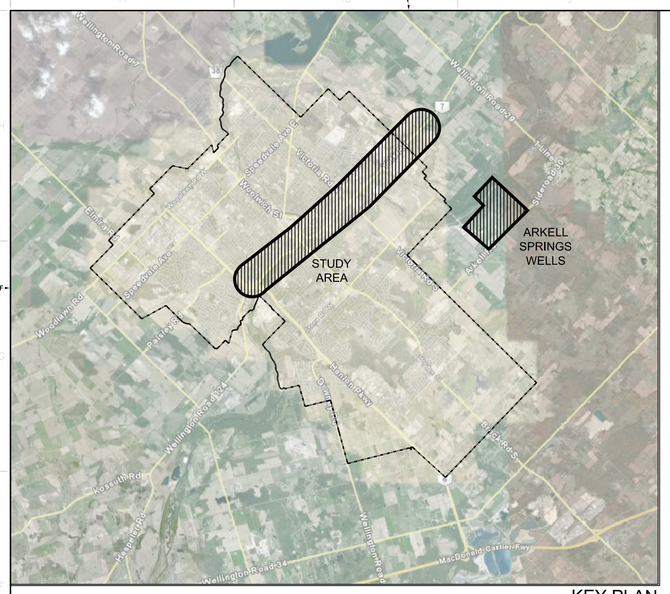
Development of Project File Notice of Completion - Fall 2011

30 Day Public Review Period - Fall 2011

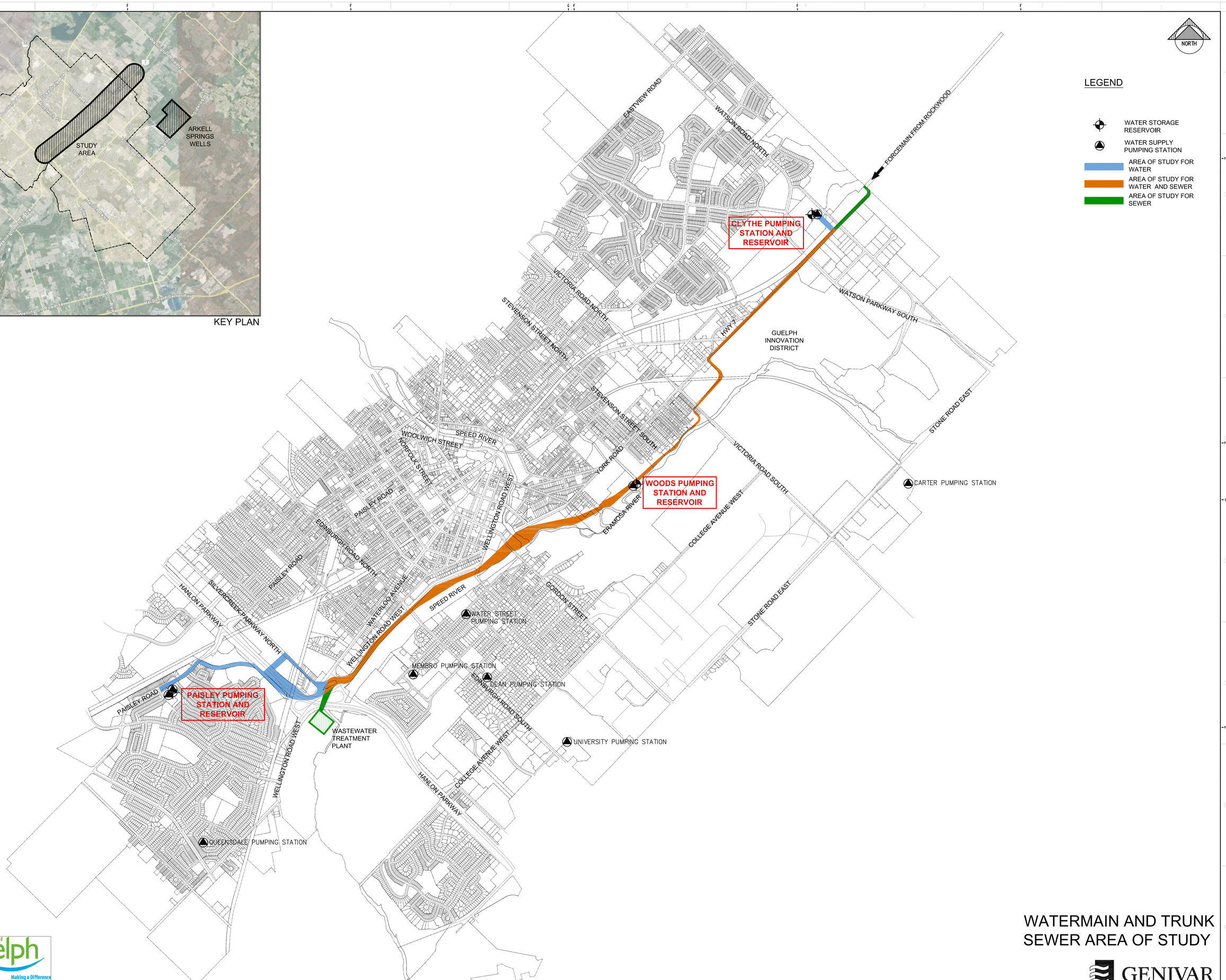
Detailed Design, Permits, Approvals - 2012

Sewer and Feedermain Construction - Fall 2013-2018

Next Steps



KEY PLAN



WATERMAIN AND TRUNK SEWER AREA OF STUDY

CITY OF Guelph Making a Difference

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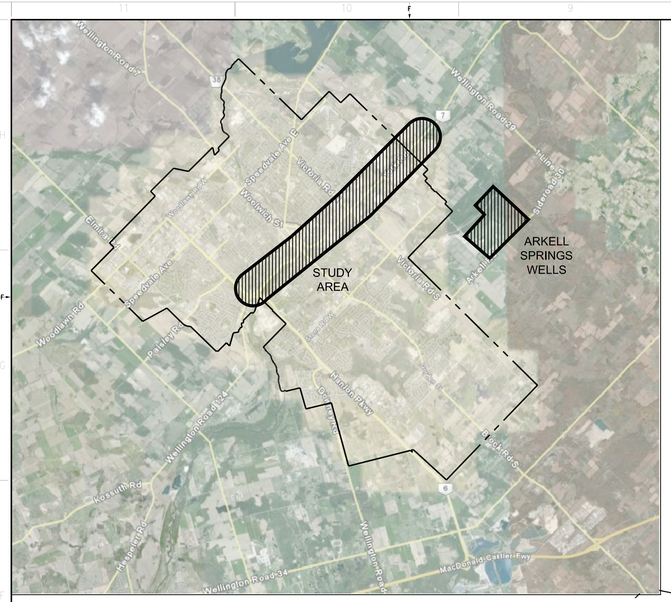
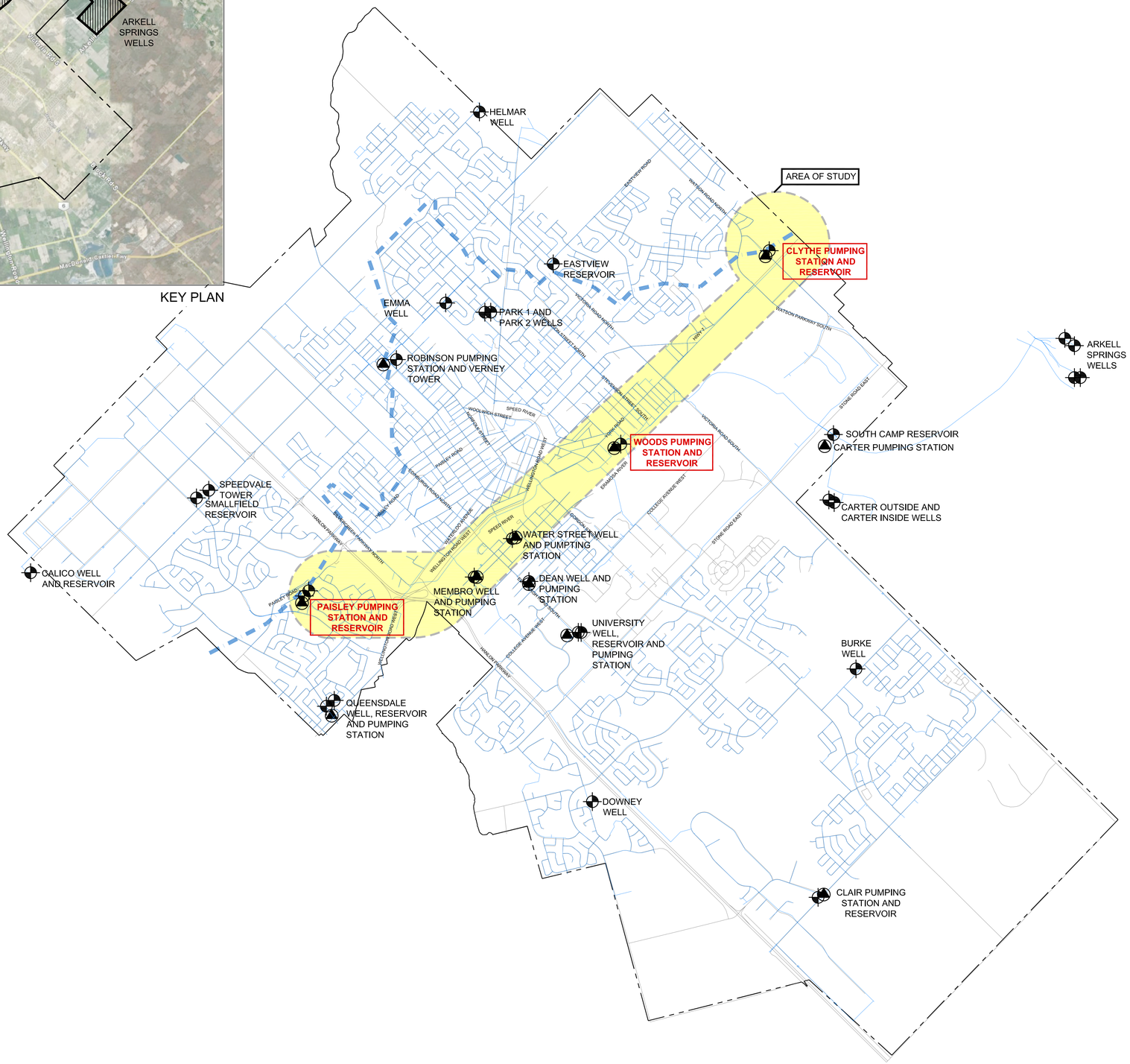


KEY PLAN

NORTH

LEGEND

- WATER STORAGE RESERVOIR, W ELL, OR TOWER
- WATER SUPPLY PUMPING STATION
- WATERMAIN
- ROAD
- CITY BOUNDARY
- WATER DISTRIBUTION ZONE BOUNDARY
- AREA OF STUDY



EXISTING WATER DISTRIBUTION SYSTEM FOR THE CITY OF GUELPH

CITY OF Guelph
Making a Difference

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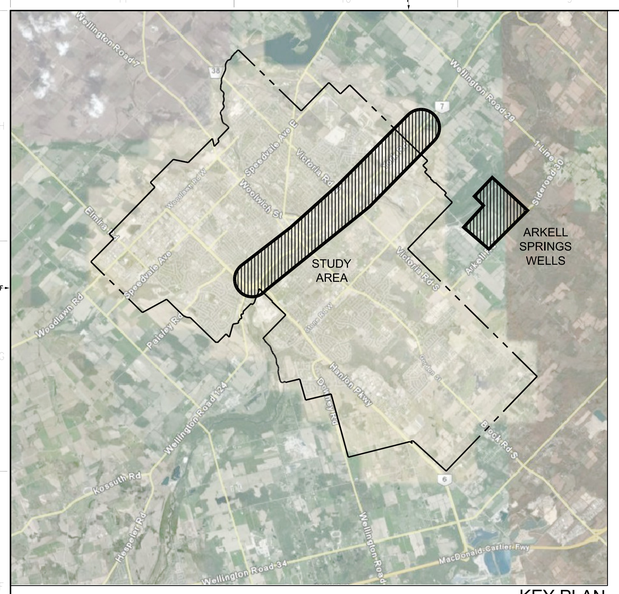

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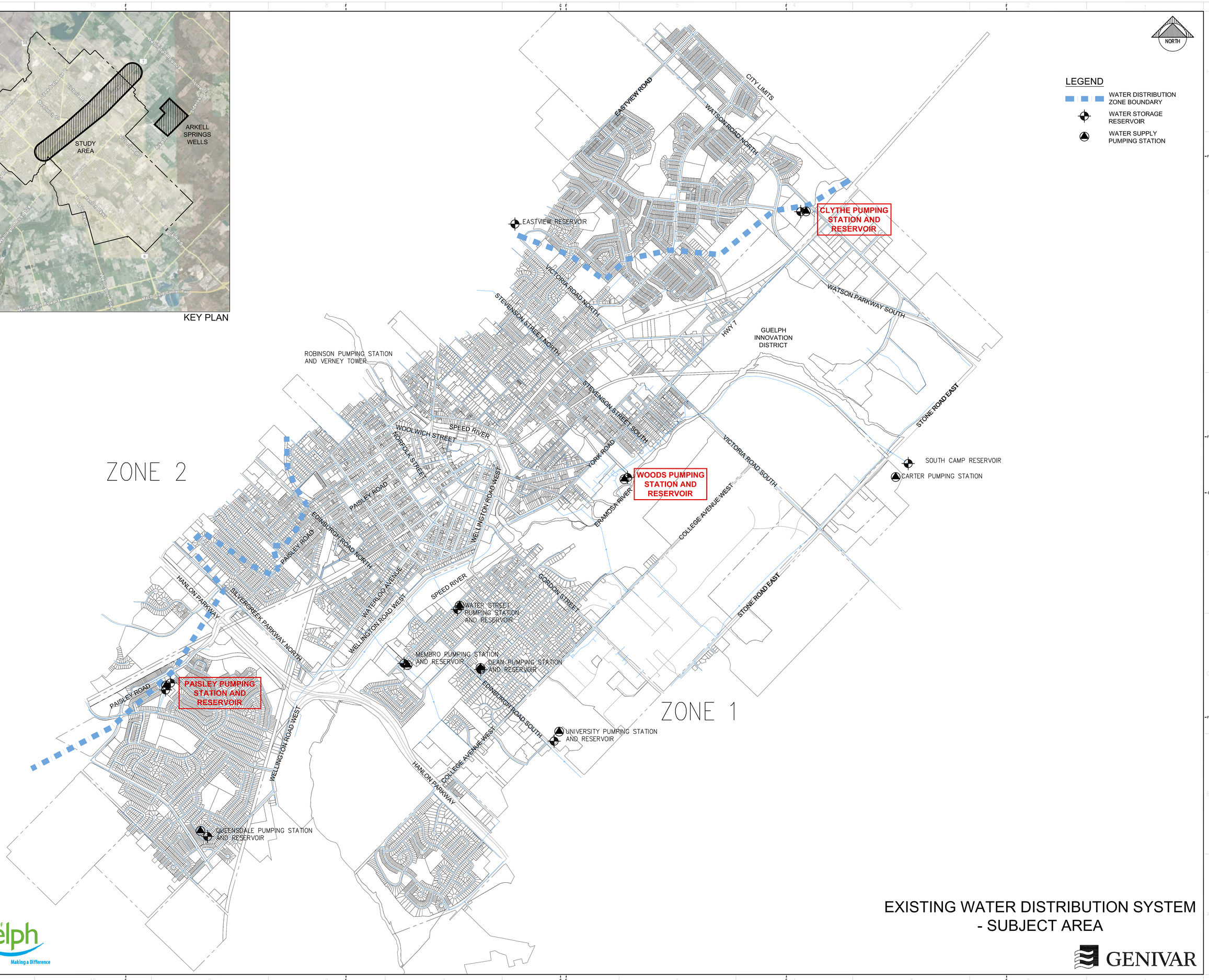

EXISTING WATER DISTRIBUTION SYSTEM - SUBJECT AREA

CITY OF Guelph
Making a Difference

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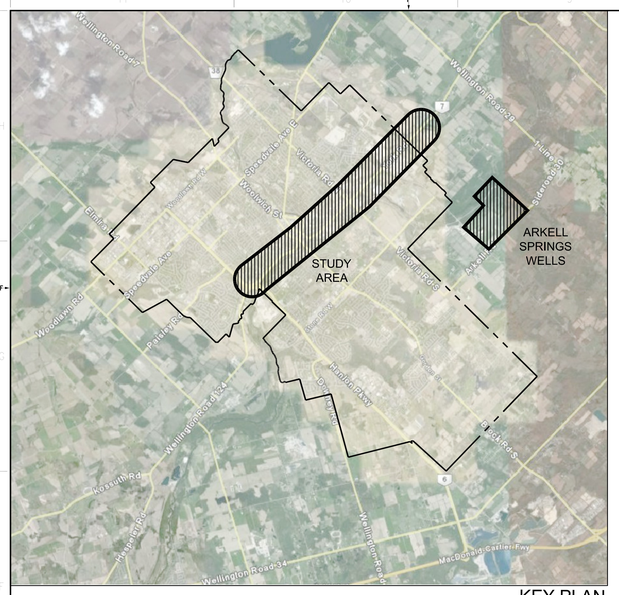

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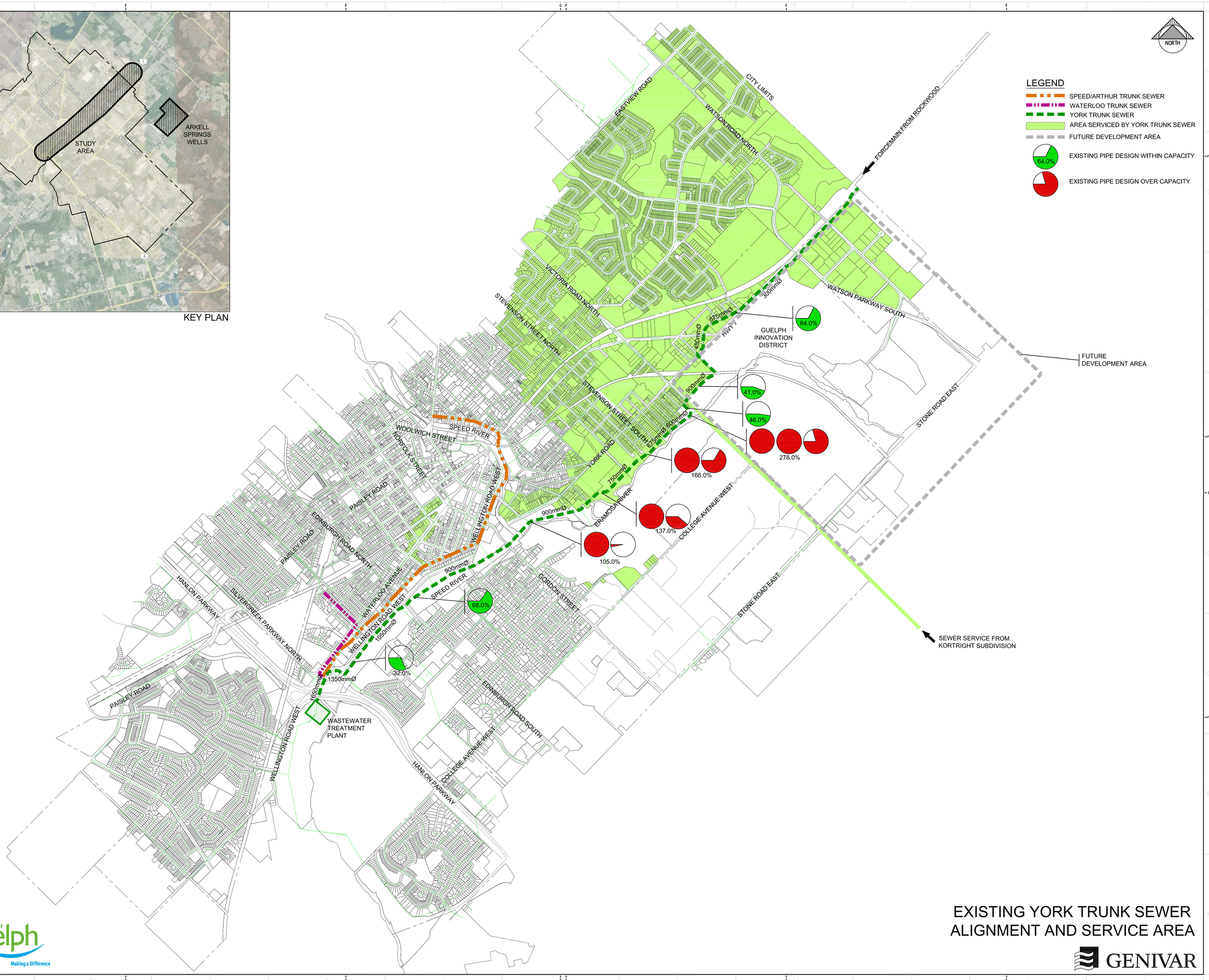

EXISTING YORK TRUNK SEWER ALIGNMENT AND SERVICE AREA

CITY OF Guelph
Making a Difference

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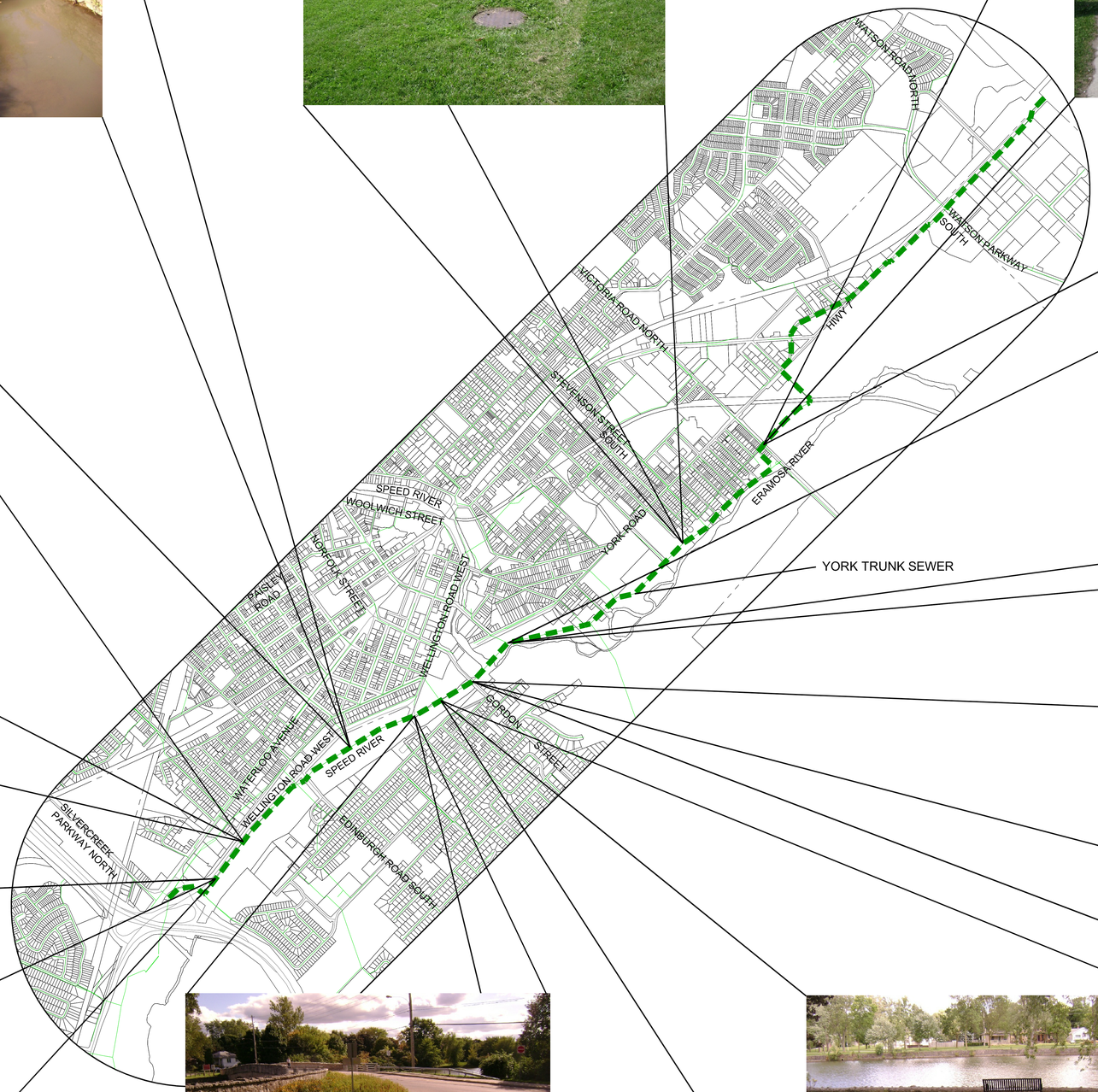
EXISTING YORK TRUNK SEWER CROSSING MUNICIPAL DRAIN IN SILVERCREEK PARK, BETWEEN EDINBURGH ROAD AND GORDON STREET

EXISTING YORK TRUNK SEWER ALIGNMENT LOCATED IN ERAMOSA RIVER PARK

INTERSECTION OF VICTORIA ROAD AND FLORENCE LANE LOOKING NORTH



YORK TRUNK SEWER

EXISTING YORK TRUNK SEWER ALIGNMENT ADJACENT TO SOCCER FIELD LOCATED IN YORK ROAD PARK

EXISTING YORK TRUNK SEWER ALIGNMENT ADJACENT TO VOLLEYBALL COURTS IN SILVERCREEK PARK

EXISTING YORK TRUNK SEWER ALIGNMENT AT GORDON STREET UNDERCROSSING

YORK TRUNK SEWER CROSSING MUNICIPAL DRAIN ON SOUTH SIDE OF WELLINGTON ROAD

EXISTING YORK TRUNK SEWER ALIGNMENT AT MCCRAE BOULEVARD

EXISTING YORK TRUNK SEWER ALIGNMENT IN SILVERCREEK PARK LOOKING SOUTH TOWARDS WATER STREET

YORK TRUNK SEWER - KEY FEATURES

CITY OF Guelph Making a Difference

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York Trunk Sewer & Paisley-Clythe Feedermain Municipal Class Environmental Assessment

The City of Guelph is interested in hearing the community's comments, questions, concerns and suggestions regarding the York Trunk Sewer & Paisley-Clythe Feedermain Class Environmental Assessment. Please take a few minutes to complete this brief comment sheet. All comments will be carefully considered in the Environmental Assessment Process.

1. Do you have any comments related to the **existing environment and key features** in this study area?

   _____
   _____
   _____

2. Do you have any comments, concerns, questions or suggestions regarding the **Environmental Assessment Process or the overall approach** to the Study?

   _____
   _____
   _____

3. Do you have any comments, concerns, questions or suggestions regarding the preferred solutions presented (e.g. water and/or sewer alignments)?

   _____
   _____
   _____

4. Do you have any comments, concerns, questions or suggestions regarding the evaluation criteria for the projects?

   _____
   _____
   _____

5. What do you see as the project features of highest interest for the proposed project from the perspective of your organization or as a resident of the area?

   _____
   _____
   _____

6. Additional comments related to the project.

   _____
   _____
   _____

7. Did you have the opportunity to ask questions, and provide your comments and concerns to the project team? YES / NO

If not, please provide comments as to what issues you would like to further discuss with the project team

_____
_____
_____

9. Were you able to gain a better understanding of the Study? YES / NO

If not, please provide comments as to what elements of the Study are unclear to you.

_____
_____
_____

10. Please provide any other comments regarding the Public Information Centre

_____
_____
_____

8. How would you describe the nature of your interest in this study?

_____ Member of the General Public (including residents and landowners)
_____ Member of an Interest Group (Please specify: _____)
_____ Consultant
_____ Agency Representative (Please specify: _____)
_____ Other (Please specify:_____)

Contact Details

Name:_____

Address:_____

Phone Number:_____

Email:_____

NOTE: Personal information requested on this form is collected in accordance with the Freedom of Information and Privacy Act. All comments will become part of the public record. If you do not wish to have personal information (Name, Address, Telephone, Email) on this comment form in the final report, please check the box below:

( ) Please withhold personal information

Please return this completed Comment Sheet to the project team at the Registration Table or you can fax, email or mail it <u>by June 27th, 2011</u> to one of the following project contacts:

Colin Baker, P. Eng.
Environmental Engineer
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