TOWN OF CALEDON
PLANNING
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May 19th, 2023

URBANTECH®

FUNCTIONAL SERVICING AND STORMWATER MANAGEMENT COMPLIANCE REPORT

ARGO DRAFT PLAN EAST

TOWN OF CALEDON

REGION OF PEEL

PREPARED FOR
ARGO DEVELOPMENT CORPORATION

Town File No.: 21T-22002 and RZ 2022-0003
Urbantech File No.: 15-458

1st SUBMISSION - DECEMBER 2021
2nd SUBMISSION – MAY 2023

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1.0 INTRODUCTION

1.1 Study Purpose

Urbantech Consulting has been retained by Argo Humber Station Limited (herein referred to as the 'Owner') to continue to advance the applications for Draft Plan of Subdivision (21T-22002) and for Amendment to the Zoning By-Law (RZ 2022-0003) which were originally submitted in March 2022. These applications seek planning approvals to implement redevelopment of the lands legally described as Part of Lots 11 and 12, Concession 5 (Albion), Town of Caledon (the 'Subject Lands') and are generally located on the east side of Humber Station Road, north of King Street.

It is important to note that the original applications submitted in March 2022 related to the ROPA 30 lands only and consisted of approximately 1.59 ha (3.93 ac) and were generally located east of Humber Station Road, north of King Street. Since the applications were submitted in March 2022, the Region of Peel 2051 Official Plan was approved by the Province (Nov., 2022) and surrounding lands have been added to the 2051 Urban Area, including additional lands owned by the Owners. Accordingly, the overall Subject Lands now consist of 5.61 ha (13.86 ac) and are now part of the subject Draft Plan of Subdivision and Rezoning applications.

The Subject Lands are entirely within the Region of Peel's Urban Area (ROP, Nov 2022) and the Region's Major Transit Station Area (MTSA). As well, the Subject Lands are currently part of the Caledon Station Secondary Plan process (POPA-2021-0002). The effect of the Secondary Plan will be to apply land use designations to the Subject Lands, including Mixed Use and GO Transit Hub. The subject Draft Plan of Subdivision and Zoning By-Law Amendment for the Subject Lands will ensure the creation of a Mixed Use and Transit Hub Blocks of lands that will contribute towards the ultimate compact, pedestrian and transit-oriented development of the Subject Lands through implementation of the Secondary Plan policies.

It is also important to note that on March 5, 2021, the Province of Ontario issued a Ministerial Zoning Order ('MZO') under Ontario Regulation 171 / 21 ('O. Reg. 171 / 21') for the Subject Lands. This MZO established zoning for the Subject Lands as a 'Mobility Transit Hub Zone'. This Zone permits a public transit depot with accessory parking and service buildings as well as a variety of commercial, retail services and public uses.

This Functional Serving and Stormwater Management Compliance Report been prepared on behalf of the Owner in support of a Draft Plan of Subdivision ('DPS') and Zoning By-law Amendment ('ZBA' or 'Amendment') resubmission to facilitate the development of the Draft Plan of Subdivision consisting of a sliver of an abutting Medium Density Block, Mixed Use Blocks, and GO Transit Hub Blocks. Refer to **Drawing 102 and 103.**

1.2 Background Studies

The FSR is intended to provide a further level of detail to implement findings and recommendations of several background studies listed below. In this instance, this FSR addresses findings and recommendations from the following studies and guidelines:

- **Beacon Environmental**, Comprehensive Environmental Impact Study and Management Plan, Caledon Station Secondary Plan, May 2023.
- **DS Consultants Ltd.**, Report On: Preliminary Hydrogeological Investigation, Prepared For: Bolton Option 3 Landowners Group, May 2023.
- **DS Consultants**, Preliminary Geotechnical Investigation,, The Gore Road & King Street, November 2022
- **Ministry of the Environment, Conservation and Parks** (MECP, formerly Ministry of the Environment, MOE), Stormwater Management Practices, Planning and Design Manual, March 2003.
- **Region of Peel** and **GM BluePlan Engineering**, 2020 Water & Wastewater Master Plan for the Lake-Based System, Volumes 1 to 5.
- **Region of Peel, Public Works**, Design, Specifications and Procedures Manual – Watermain Design Criteria, June 2010.
- **Region of Peel, Public Works**, Linear Wastewater Standard, March 2023.
- **R.J. Burnside & Associates Limited**, Technical Memorandum, Bolton Option 3 Lands Preliminary Water Modelling, May 2023.
- **Toronto and Region Conservation Authority (TRCA)** and **Civica Infrastructure Inc.**, Final Report, Humber River Hydrology Update, April 2018.
- **Toronto and Region Conservation Authority (TRCA)**, Humber River Watershed Plan, Pathways to a Healthy Humber, June 2008.
- **Toronto and Region Conservation Authority (TRCA)**, Stormwater Management Criteria, August 2012.
- **Town of Caledon**, Development Standards Manual, Version 5.0, 2019.
- **Urbantech Consulting**, Functional Servicing Report, Caledon Station Secondary Plan, May 2023.

1.3 Study Team

Members of the study team involved in the preparation of the CEISMP/FSR documents, and their respective disciplines are listed below:

Beacon Environmental Limited	Ecology Fluvial Geomorphology	CEISMP
DS Consultants Ltd.	Geotechnical Hydrogeology	FSR
Gerrard Design	Land Use Design	FSR
R.J Burnside & Associates Ltd.	Water Distribution	FSR
Glenn Schnarr & Associates Inc.	Planning	CEISMP/FSR/PJR
NAK Design Strategies	Land Use Design	FSR
Urbantech Consulting	Municipal Design Water Resources Group Engineering	FSR

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2.0 EXISTING CONDITIONS

2.1 Existing Drainage

The Subject Lands are situated in the Main Humber River watershed. **Drawing 201** illustrates existing drainage patterns and sub-catchments within the Subject Lands and immediate surrounding area.

Surface drainage runoff from the Main Humber River watershed flows easterly toward the Canadian Pacific Rail (CPR) line.

Refer to **Section 5** for the discussion regarding existing versus proposed drainage outlets.

3.0 PROPOSED GRADING & ROADS

3.1 Grading Objectives

The grading plans established in the CSSP-FSR considered the following:

- Compatibility with the existing grades of King Street, a portion of Humber Station Road, The Gore Road and the CPR line.
- Maintenance of existing drainage patterns for lands situated to the north.
- Compatibility of future road extensions into lands situated to the north.
- Compatibility with existing or proposed elevations in the vicinity of natural features that are part of the community plan.
- Conformance with Town Standards
- Maintaining overall Main Humber River watershed drainage boundaries, where possible.
- Maintain drainage patterns in / out of the natural areas.
- Compatibility with neighboring properties that will develop after the subject lands and maintaining overall grading principles established in the CSSP-FSR.
- Provide overland flow conveyance for major storm conditions.
- Optimize cut and fill operations and work towards a balanced site.
- Maintain appropriate cover over buried utilities.

3.2 Preliminary Grading Design

The preliminary grading design for the CSSP lands is depicted on **Drawings 302 & 304**. The grading plans present proposed road centerline elevation and slopes, existing surface contours, and the direction of overland flow paths. Lot specific grading is not presented at this point. The following sections describe critical elements of the grading design.

3.2.1 Road Centerline Gradients

The preliminary grading design generally conforms to the objectives outlined in the CSSP.

3.3 Roads

The internal road design and proposed Right-of-Way (ROW) widths are shown on the draft plans of subdivision **Drawings 102 and 103**. The draft plan conforms to the the Road Hierarchy plan from the CSSP-FSR. Refer to NAK Design for conceptual road cross sections. Select details of special road cross sections with Low Impact Development (LID) measures and civil infrastructure are provided on **Drawing 305**.

4.0 STORM DRAINAGE

4.1 Stormwater Drainage System

The major and minor drainage systems for the CSSP lands have been designed to convey storm runoff to the proposed SWM facilities prior to discharge to the outlets at the receiving drainage features. **Drawing 501** illustrates the overall drainage areas to the SWM facilities and existing flow nodes.

Major and minor system drainage has been designed in accordance with the CSSP-FSR. **Drawings 502** illustrates the minor system drainage plan and **Drawing 503** illustrates the major system flow paths within the overall catchments areas.

5.0 STORMWATER MANAGEMENT PLAN

5.1 SWM Strategy

The Subject Lands are located within the Main Humber River watershed and the SWM strategy in the CSSP-FSR generally maintains the pre-development individual sub-catchments/outlets. The proposed storm drainage plan is shown in **Drawing 501**.

The proposed SWM strategy aims to satisfy the TRCA SWM Criteria (2012) and the more recent Town of Caledon's Consolidated Linear Infrastructure Environmental Compliance Approval (CLI-ECA) SWM Criteria for water quantity and flood control, water quality control, erosion control, and water balance.

5.2 Hydrologic Modelling

The hydrologic modelling of pre-development conditions was completed as part of the CSSP-FSR based on refinements to the hydrologic model in the 2018 Humber River Hydrology Update prepared by TRCA. The model was calibrated to ensure consistency between the Urbantech and TRCA models and it was determined that the 6-hour AES storm is to be used to determine the required stormwater management for the Subject Lands.

5.3 SWM Targets & Design Criteria

The CSSP-FSR outlines the SWM criteria for the CSSP lands based on the TRCA SWM Criteria (2012) and the TRCA pre-development hydrologic model presented in the Humber River Hydrology Update (2018). The following specific SWM criteria were established:

Water Quality – Achieving Enhanced (Level 1), 80% as per the MOE SWM Planning and Design Manual (March 2003).

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Quantity Control – In accordance with the Humber River Watershed in the TRCA SWM Criteria (2012) no quantity control is required within the Main Humber River watershed. However, there are capacity constraints in the downstream Canadian Pacific Rail (CPR) existing culverts so on-site storage is proposed to mitigate impacts on the culverts.

A Visual OTTHYMO 6.2 (VO6) model was prepared to calculate the storage requirements for the SWM facilities to achieve the target release rates. The evaluation analyzed the 6-hour hour AES storm distributions.

5.4 Quantity Control

As outlined in the CSSP-FSR the following unit storage and flow rates in **Table 5-1** will be the targets for the residential and GO transit areas being conveyed to the CPR culverts.

Table 5-1: Main Humber Unit Storage and Flow

Catchment	Storm	Unit Storage (m^3/ha)	Unit Flow for Storage Tanks (L/s/ha)
103	5	228	43
	100	393	79
102	5	191	63
	100	327	112
101	5	239	39
	100	411	64

In accordance with the CSSP-FSR, The 500 mm Node 7 culvert will be upgraded to 900 mm to convey post-development flows.

5.5 Quality Control

A “treatment train” approach is recommended to achieve the 80% TSS removal objective for the Subject Lands. Residential lots and Go transit lands are proposed to have an ETV certified isolator row or Jellyfish filter. ROWs will be equipped with Catchbasin Shields with a downstream Oil-Grit Separator. Refer to **Section 6.4.2** in the CSSP-FSR for further details.

6.0 LOW IMPACT DEVELOPMENT

6.1 Overall Site Water Balance

The CSSP-FSR provided an overall water balance for the CSSP lands which will be addressed for the Subject Lands and the CSSP as a whole. The 21,851 m^3/year infiltration deficit outlined by DS Consultants and the CSSP-FSR will be mitigated by connected impervious to pervious areas and the incorporation of Silva Cell / LID devices in public owned ROW and parks. Opportunities for rainwater harvesting and reuse through green roofs and irrigation will be investigated further for medium and high-density lots as the design advances.

6.2 Low Impact Development

As outlined in the CSSP-FSR, water balance objectives and water quality could be achieved using low impact development (LID) measures. Proposed LID measures include the following:

- Downspout disconnection
- Additional topsoil depth
- Swales

- Infiltration/filtration facilities
- Rainwater harvesting

The CSSP-FSR provides additional information on the proposed LIDs. Refer to **Drawing 703** for the proposed LID locations.

7.0 SANITARY SERVICING

7.1 Internal Servicing

The internal servicing design is consistent with the recommendations of the CEISMP-FSR. Refer to **Drawing 802** for the internal sanitary drainage plan.

7.2 External Servicing

The proposed development is tributary to the South Peel Wastewater System and is ultimately treated in the G.E. Booth Wastewater Treatment Plant.

The 2020 Bolton Residential Expansion Study (BRES) indicated that the Subject Lands are to be serviced by extensions and improvements of existing infrastructure located on Coleraine Drive. Since 2020, interim and ultimate sewer solutions have been contemplated by Peel Region that diverge from the approved Master Plan.

The CEISMP recommends implementing the ultimate solution which provides servicing for the greatest catchment area from day 1 and eliminates the expenditure of the interim solution.

Further coordination with the Region of Peel infrastructure planning group is required to confirm the best solution for servicing of the Subject Lands as well as the design and approval process to accomplish same.

Refer to **Drawings 801, 803-805** for the external sanitary servicing plan and trunk profiles.

8.0 WATER SERVICING

The CSSP-FSR provides the water servicing requirements for the interim and ultimate development of the CSSP. The existing and planned water distribution infrastructure is illustrated on **Drawing 901.**

The required water supply for the Subject Lands will require the Ultimate Condition water infrastructure to be constructed. R.J Burnside completed an updated water supply analysis dated May 11, 2023. This updated water analysis evaluates 9 different modelling scenarios for the build-out of Pressure Zone 7.

9.0 EROSION AND SEDIMENT CONTROL

Erosion and sediment control measures will be designed, implemented, and maintained throughout the construction period. At detailed design, an Erosion and Sediment Control Plan will be prepared in conformance with the Town and Conservation Authority guidelines.

The following erosion and sediment control measures should be considered for use during construction:

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- Natural features will be staked and temporary fencing provided to keep machinery out of sensitive areas;
- Sediment control fence and snow fence will be placed prior to earthworks;
- Logistics/construction plan will be implemented to limit the size of disturbed areas, minimizing the non-essential clearing and grading areas;
- Temporary sediment ponds;
- Rock check-dams and cut-off swales will be provided, where required, in order to control, slow down and direct runoff to sediment basins;
- Sediment traps will be provided;
- Gravel mud mats will be installed at construction vehicle access points to minimize off-site tracking of sediments;
- All temporary erosion and sediment control measures will be routinely inspected / monitored and repaired during construction. Temporary controls will not be removed until the areas they serve are restored and stable; and,
- The “multiple barrier approach” will be applied to all construction stages to ensure erosion is prevented rather than reduced. Recommended measures are to be installed prior to the initiation of the earthworks and grading.
- During home building, sediment traps will be installed in catchbasins, and perimeter ESC fencing will be maintained until surfaces are stabilized.

Reference will be made to the *Guidelines for Erosion and Sediment Control for Urban Construction Sites* prepared by the Greater Toronto Conservation Authorities (2020) when preparing Erosion and Sediment Control Plans.

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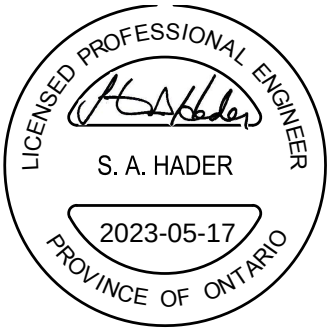
10.0 Conclusions

This FSR has demonstrated general compliance with the CSSP-FSR. The following specific conclusions are offered:

1. The Grading complies with intent of CSSP-FSR.
2. The grading is compatible on an interim basis with neighbours and accommodates future drainage.
3. The Sanitary sewer design complies with the intent of CSSP-FSR with some re-routing required to address anticipated development staging.
4. External sanitary routing will generally follow Humber Station Road from King Road to Mayfield based in recent studies and liaison with the Town and the Region.
5. In accordance with the CSSP-FSR onsite storage will be provided on private residential lots and the GO lands to mitigate impacts to the downstream CPR culverts.
6. Further study and agency consultation is recommended regarding the existing CPR culverts as the FSR is advanced.
7. Quality control will be met through the use of a treatment train approach to meet 80% TSS removal for the Subject Lands.
8. An interim water supply solution is proposed in advance of Regional capital works projects which has been endorsed by the Town and Region.

Report Prepared by:

Urbantech Consulting



Steven A. Hader, P,Eng.
Senior Project Manager



Adham Bakr, P.Eng.
Senior Water Resources Engineer

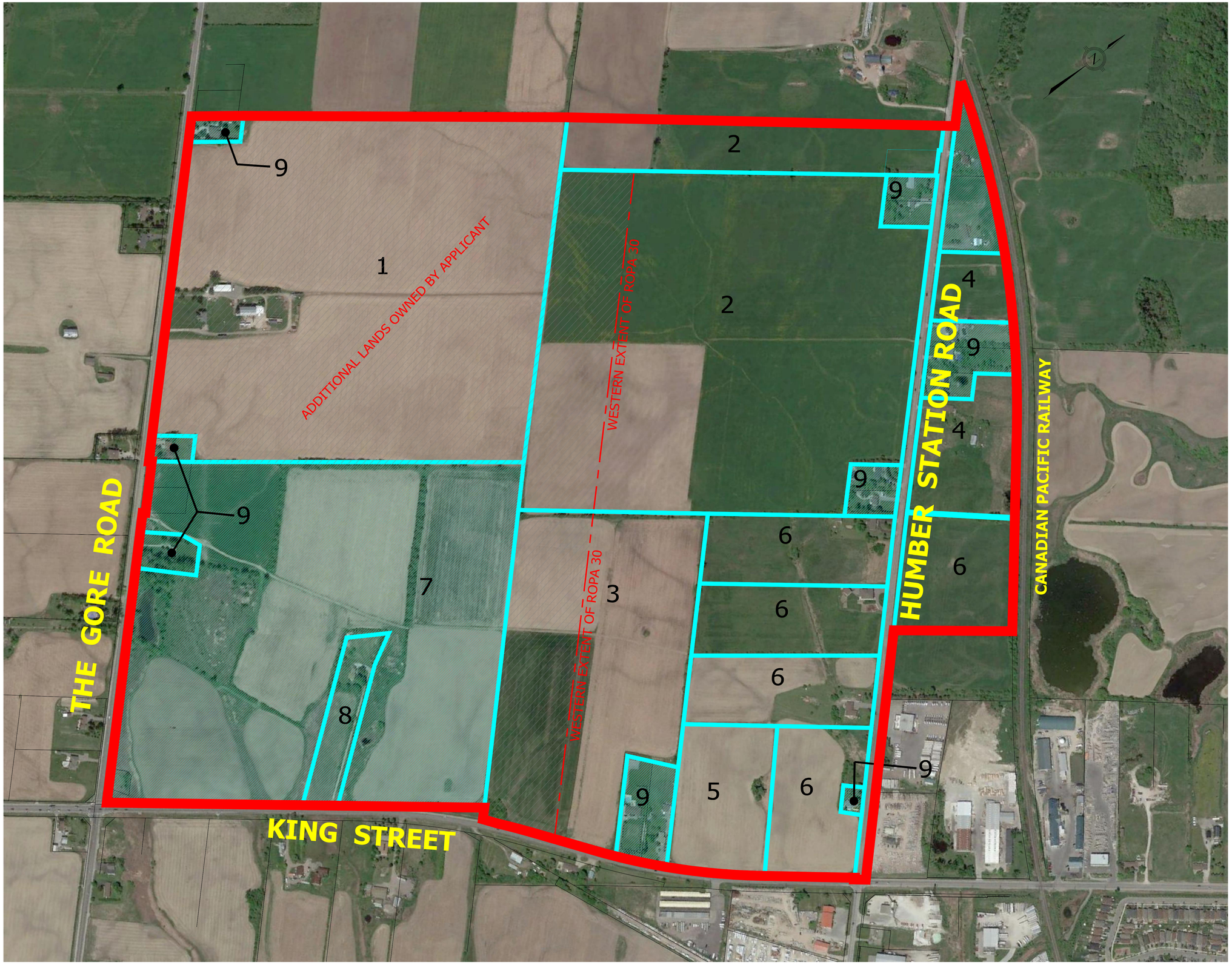
Janna Ormond, EIT
Water Resources Designer

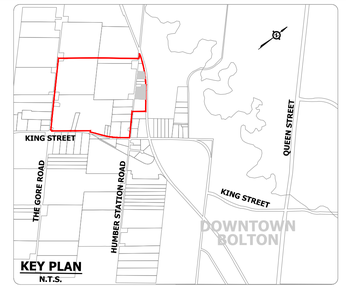
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APPENDIX 1

DRAWINGS

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LEGEND:

- CSSP LIMIT
- 6 — PROPERTY BOUNDARY AND OWNER ID
- NON-PARTICIPATING PROPERTY

Participating Owners

1 - Argo Macville I Corporation
2 - Argo Macville II Corporation
3 - Argo Macville III Corporation
4 - Argo Humberking
5 - Humberking Developments Ltd
6 - Argo Humber Station
7 - Speirs Family
8 - Basile
9 - Others

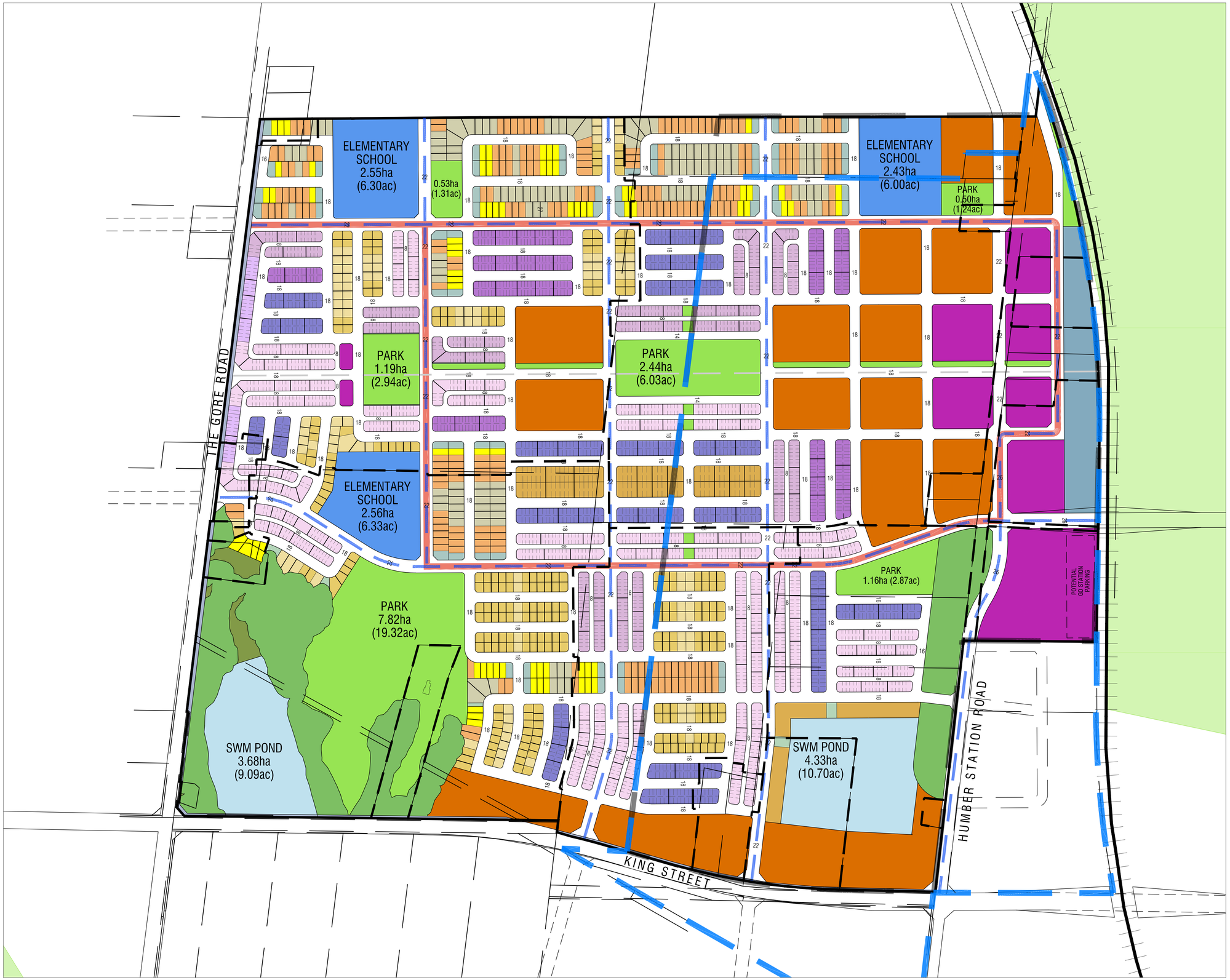
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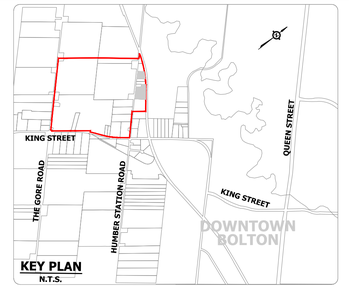
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

LAND OWNERSHIP MAP

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	101	
SCALE:	1:3000	DATE:	MAY 2023		

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LEGEND:

- MEDIUM DENSITY RESIDENTIAL
- MIXED-USE RESIDENTIAL (AT GRADE COMMERCIAL)
- GO TRANSIT LANDS
- SCHOOL
- PARK
- PROPOSED ENVIRONMENTAL PROTECTION AREA
- ENVIRONMENTAL ENHANCEMENT AREA
- SWM POND

UNIT SPECIFIC USES

- REAR LANE TOWNHOUSE
- DUAL FRONTAGE TOWNHOUSES
- BACK-TO BACK TOWNHOUSES
- STANDARD TOWNHOUSES
- SHALLOW SINGLE DETACHED
- STANDARD SINGLE DETACHED

ROAD CLASSIFICATIONS

- MULTI MODAL LOOP ROAD
- COLLECTOR ROADS
- POST LAND EXCHANGE PROPERTY LINE
- 18 RIGHT OF WAY WIDTH (m)

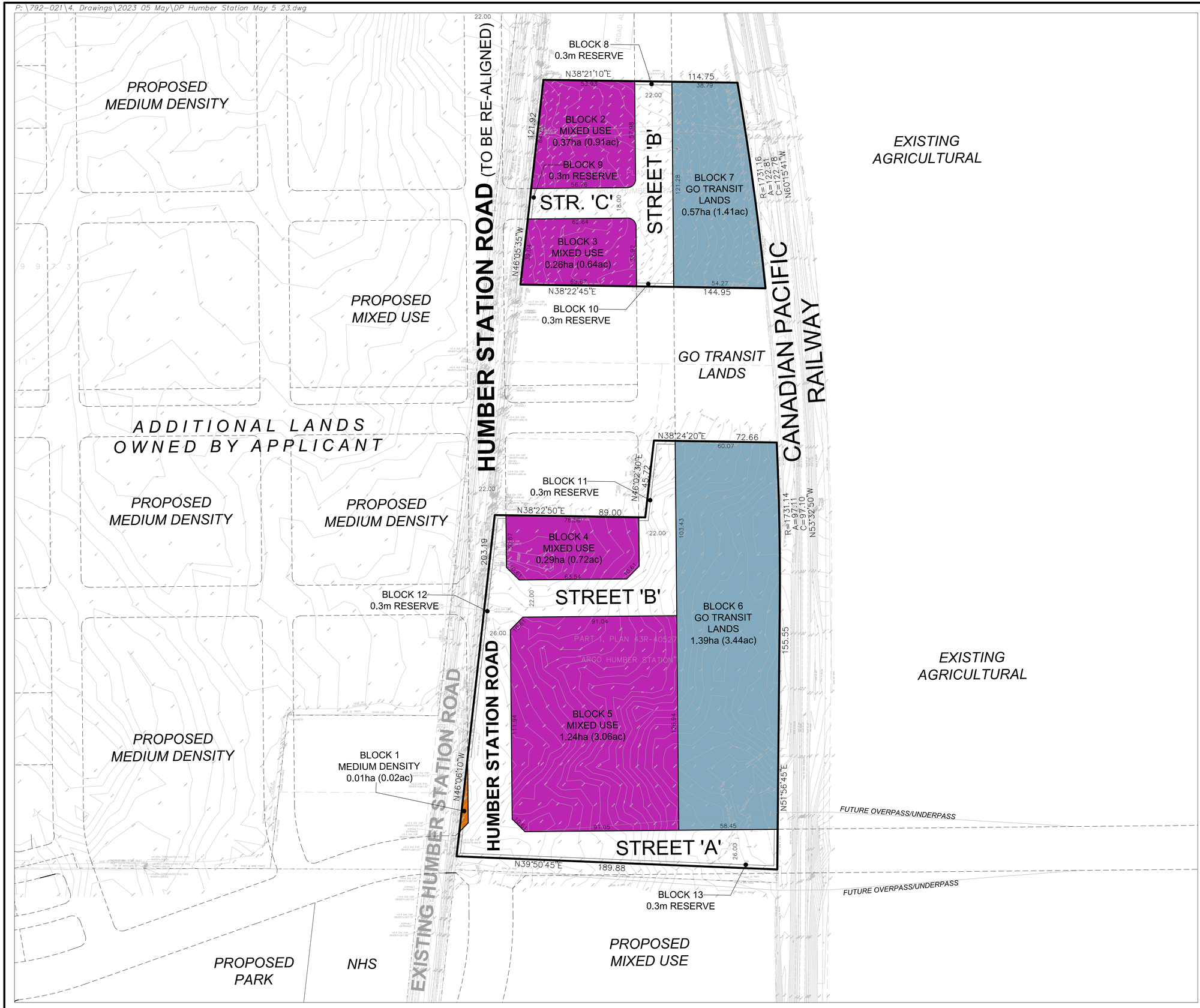
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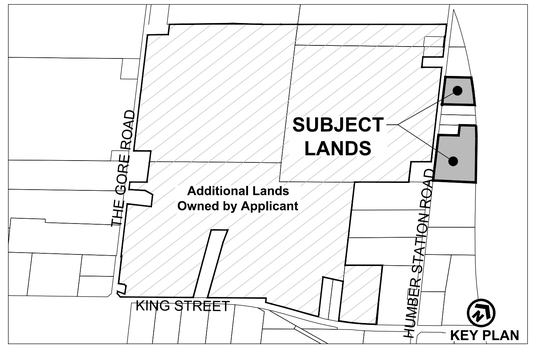
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

FRAMEWORK PLAN

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	102	
SCALE:	1:3000	DATE:	MAY 2023		

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DRAFT PLAN OF SUBDIVISION
ARGO HUMBER STATION LIMITED
FILE# 21T-22002

PART OF THE WEST HALF OF LOT 12,
CONCESSION 5
(TOWNSHIP OF ALBION)
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL

SURVEYORS CERTIFICATE

I HEREBY CERTIFY THAT THE BOUNDARIES OF THE LANDS TO BE SUBDIVIDED AS SHOWN ON THIS PLAN AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE CORRECTLY AND ACCURATELY SHOWN.

SIGNED _____ DATE: MAY 15, 2023

MONIKA BUDZIAK, OLS
J. D. BARNES LIMITED
EMAIL: mbudziak@jdbarnes.com

ADDITIONAL INFORMATION

(UNDER SECTION 51(17) OF THE PLANNING ACT) INFORMATION REQUIRED BY CLAUSES A,B,C,D,E,F,G,J, & L ARE SHOWN ON THE DRAFT AND KEY PLANS.

H) MUNICIPAL AND PIPED WATER TO BE PROVIDED
I) SANDY LOAM AND CLAY LOAM
K) SANITARY AND STORM SEWERS TO BE PROVIDED

LAND USE SCHEDULE

LAND USE	LOTS / BLOCKS	AREA (ha)	AREA (ac)	UNITS
MEDIUM DENSITY RESIDENTIAL	1	0.01	0.02	
MIXED USE	2-5	2.16	5.34	
GO TRANSIT LANDS	6,7	1.96	4.84	
0.3m RESERVE	8-13	0.01	0.02	
26.0m R.O.W. (Length - 300m)		0.67	1.66	
22m R.O.W. (Length - 312m)		0.68	1.68	
18.0m R.O.W. (Length - 63m)		0.12	0.30	
TOTAL	**13**	**5.61**	**13.86**	

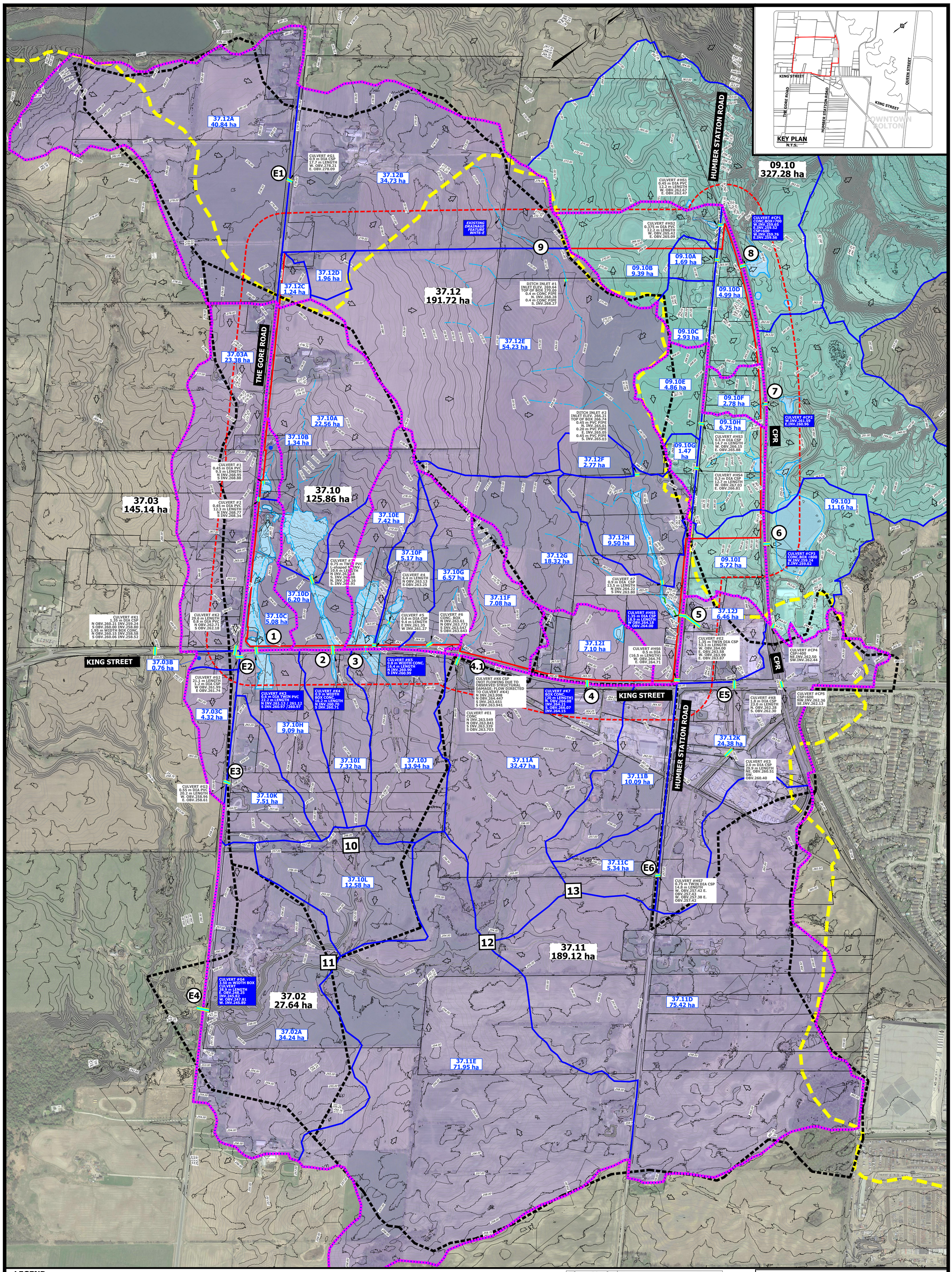
NOTES

-STREET 'A' & STREET 'B' / HUMBER STATION ROAD DAYLIGHT TRIANGLE: 7.5m x 7.5m
-LOCAL / COLLECTOR DAYLIGHT ROUNDINGS: 5m
-ALL INTERSECTIONS ARE 90 DEGREES UNLESS OTHERWISE NOTED

DRAWING 103

SCALE 1:1000
(24 x 36)
MAY 5, 2023

ARGO DEVELOPMENT CORP
GSAI



LEGEND:

- CALEDON STATION SECONDARY PLAN LIMIT
- CEISMP STUDY LIMITS (SUBJECT LANDS + 120M BUFFER)
- EXISTING CONTOUR
- EX. CULVERT LOCATION
- CEISMP HEADWATER DRAINAGE FEATURES (BEACON)
- UNEVALUATED CEISMP HEADWATER DRAINAGE FEATURES (BEACON)
- EXISTING OVERLAND FLOW DRAINAGE PATH
- UNEVALUATED WETLANDS
- PROVINCIALLY SIGNIFICANT WETLAND
- WATERSHED BOUNDARY BETWEEN THE MAIN HUMBER AND THE WEST HUMBER RIVER BY TRCA
- TRCA SUBCATCHMENT BOUNDARY
- 37.02 / 27.64 ha — TRCA DRAINAGE AREA ID
- DRAINAGE SUB-AREA BOUNDARY TO FLOW NODES (URBANTECH)
- SUBCATCHMENT BOUNDARY BASED ON UPDATED TOPOGRAPHY (URBANTECH); REFER TO TABLE CONTRIBUTING DRAINAGE AREAS
- 09.10J / 11.16 ha — DRAINAGE SUB-AREA ID
- 2 — FLOW NODE ID WITHIN STUDY AREA LIMIT
- E3 — FLOW NODE ID OUTSIDE OF STUDY AREA LIMIT (CULVERT)
- 12 — FLOW NODE ID OUTSIDE OF STUDY AREA LIMIT
- CULVERT #K3 0.9 m WIDTH BOX CONC. 16.2 m LENGTH N INV.260.70 S INV.260.71 — FLOW NODE CULVERT DESCRIPTION
- CULVERT #G4 21.1 m LENGTH 1.2 m DIA CSP W OBV.261.99 E OBV.261.74 — EXISTING CULVERT DESCRIPTION
- WEST HUMBER DRAINAGE AREA BY URBANTECH
- MAIN HUMBER DRAINAGE AREA BY URBANTECH

Flow Node ID	Drainage Area to Flow Node (ha)
1	6.42
2	28.76
3	26.24
4	7.10
4.1	7.08
5	163.59
9	78.77
10	127.74
11	537.12
12	324.85
13	209.86
E1	44.04
E2	24.14
E3	4.32
E4	571.36
E5	170.05
E6	194.43
6	18.80
7	2.78
8	19.00

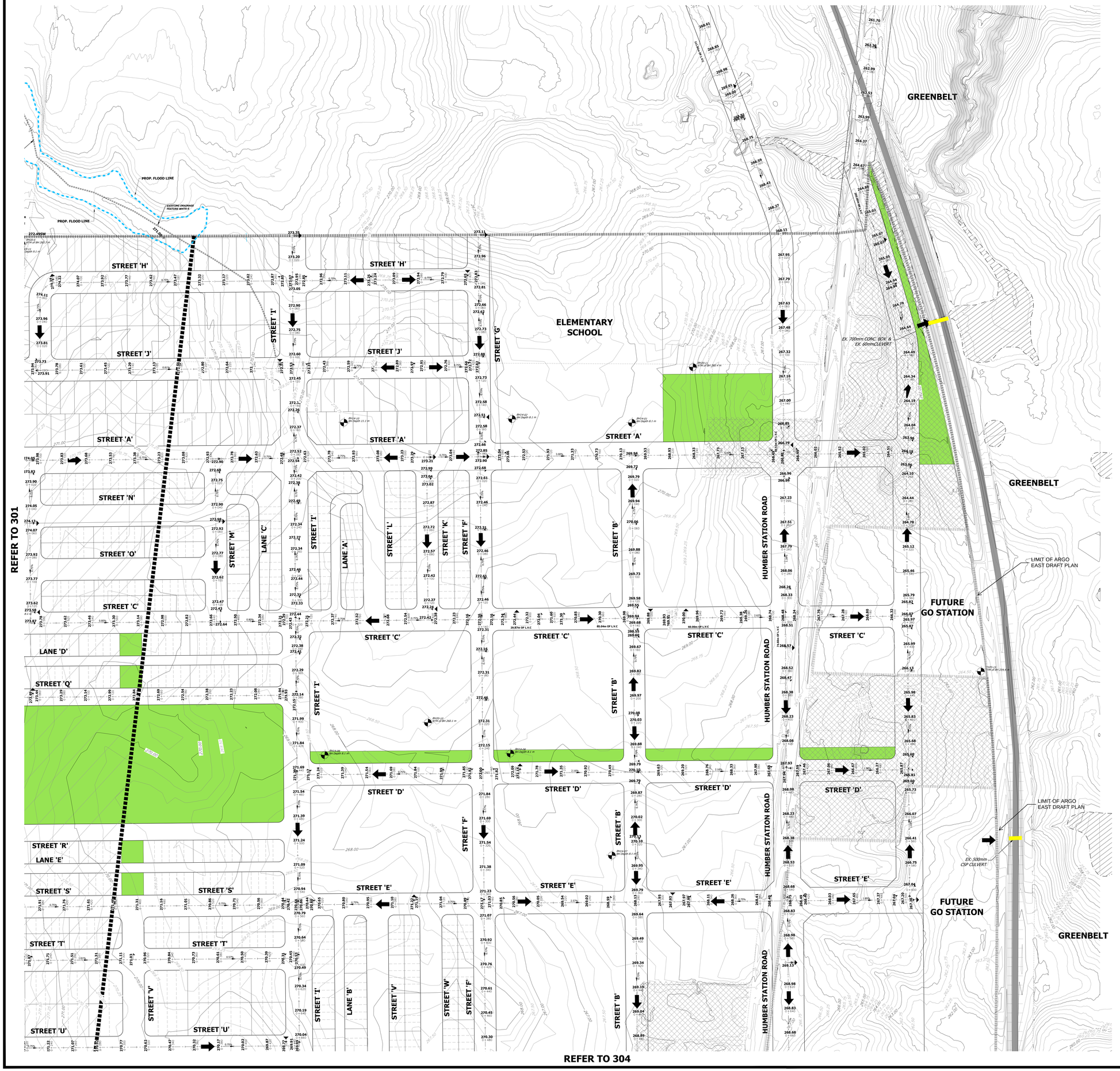
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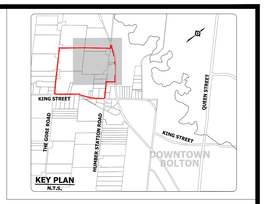
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

PRE-DEVELOPMENT DRAINAGE AREAS TO FLOW NODES

SURVEYED BY:	J.D.B.	DATE:	2021	JOB NO.	15-458
DRAWN BY:	A.G./X.S.	CHECKED BY:	S.H.	DRAWING NO.	201
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	SHEET NO.	
SCALE:	1:5000	DATE:	MAY 2023		

p:\Projects\15-458\Reports\21-03-01 for argo\drawings and figures\02 - EXISITING CONDITIONS\201_PRE-DEVELOPMENT DRAINAGE AREAS TO FLOW NODES.dwg





LEGEND:

- PROPERTY BOUNDARY
- GREENBELT
- EXISTING WETLAND BOUNDARY
- W9 — EXISTING WETLAND ID
- ENVIRONMENTAL POLICY AREA (EPA) INCLUDING BUFFER TO PROPOSED LIMIT OF DEVELOPMENT
- EXISTING DRAINAGE FEATURE
- 261.15 — EXISTING ELEVATION
- 263.50 — EXISTING CONTOUR AND ELEVATION
- PRE-DEVELOPMENT OVERLAND FLOW DIRECTION
- CSSP STUDY AREA LIMIT
- 261.15 — PROPOSED ELEVATION
- POST-DEVELOPMENT OVERLAND FLOW DIRECTION
- PROPOSED SWM POND
- PROPOSED OPEN SPACE BLOCK
- PROPOSED EPA (ENVIRONMENTAL POLICY AREA) / CHANNEL
- PROPOSED GREEN TRAIL
- PROPOSED FLOODLINE

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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

GRADING PLAN
(2 OF 4)

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./A.F.	CHECKED BY:	S.K./A.F.	302	
SCALE:	1:1000	DATE:	MAY 2023		

J:\Projects\15-458 Bayhill\15-458-01 Argo (drawings and figures)\01 - PROPOSED GRADING AND SWM DETAILS (DC)_GRADING PLAN (DRAFT 2).dwg

REFER TO 302

REFER TO 303

STREET 'S'
STREET 'E'
STREET 'T'
STREET 'V'
STREET 'U'
STREET 'X'
STREET 'W'
STREET 'F'
STREET 'B'
STREET 'I'
LANE 'B'
LANE 'F'
STREET 'Y'
HUMBER STATION ROAD
FUTURE GO STATION
GREENBELT
LIMIT OF ARGO EAST DRAFT PLAN
FUTURE GRADE SEPARATION
W9
3.0m WIDE TRAIL
PROP. FLOOD LINE
PROPOSED CHANNEL
LOW FLOW CHANNEL 27m @ 0.59%
MAX. 3:1
EX. 800mm CONC. BOX CULVERT
STREET 'Z'
STREET 'AA'
STREET 'BB'
STREET 'CC'
LANE 'G'
STREET 'FF'
STREET 'GG'
LANE 'J'
STREET 'HH'
MEDIUM DENSITY RESIDENTIAL BLOCK
5.0m WIDE MAINTENANCE ROAD (266.30)
5.0m WIDE ACCESS RAMP (10% MAX.)
FOREBAY
WET CELL
SWM POND 1
FOREBAY WEIR (263.0)
15000 CONC. CULVERT
CONNECTOR CHANNEL
STONE CORE WETLAND (0.3m DEEP)
REMOVE EX. 1350mm CSP CULVERT AND EX. TWIN 1350 CSP CULVERTS AND INSTALL A 1.5X3.0m BOX CULVERT IN INV. 262.70 OUT INV.262.23
EX. 1800mm CSP CULVERT IN INV. 262.28 OUT INV.262.30
EX. 1.9m CONC. BOX CULVERT

KEY PLAN
N.T.S.
KING STREET
QUEEN STREET
THE GORE ROAD
HUMBER STATION ROAD
DOWNTOWN BOLTON

LEGEND:

- PROPERTY BOUNDARY
- GREENBELT
- EXISTING WETLAND BOUNDARY
- W9 — EXISTING WETLAND ID
- ENVIRONMENTAL POLICY AREA (EPA) INCLUDING BUFFER TO PROPOSED LIMIT OF DEVELOPMENT
- EXISTING DRAINAGE FEATURE
- 261.15 — EXISTING ELEVATION
- 263.50 — EXISTING CONTOUR AND ELEVATION
- PRE-DEVELOPMENT OVERLAND FLOW DIRECTION
- CSSP STUDY AREA LIMIT
- 261.15 — PROPOSED ELEVATION
- POST-DEVELOPMENT OVERLAND FLOW DIRECTION
- PROPOSED SWM POND
- PROPOSED OPEN SPACE BLOCK
- PROPOSED EPA (ENVIRONMENTAL POLICY AREA) / CHANNEL
- PROPOSED GREEN TRAIL
- PROPOSED FLOODLINE

NOTE:
REFER TO DRAWING 401 FOR CHANNEL CROSS SECTIONS 1-1 AND 2-2.

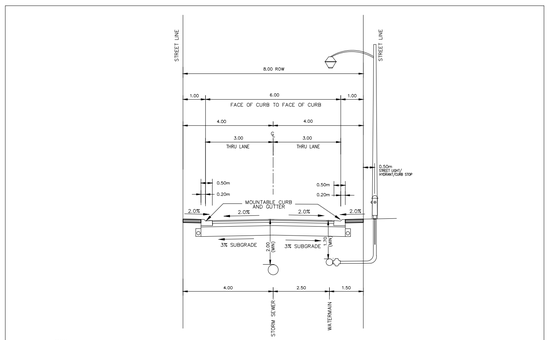
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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN

GRADING PLAN
(4 OF 4)

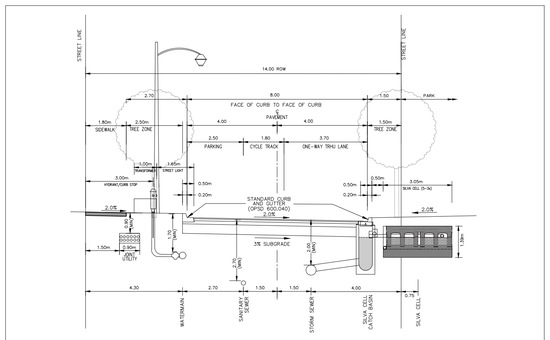
SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./X.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	304	
SCALE:	1:1000	DATE:	MAY 2023		

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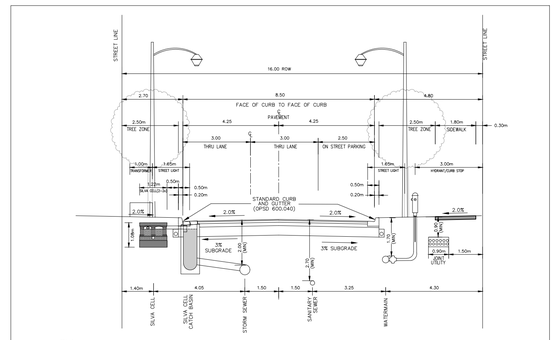
NOTES
1. WATERMAIN TO HAVE MINIMUM COVER OF 1.70m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.90m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
4. STREET LIGHT FIXTURE PER APPROVED TOWN STANDARD.
5. THE FOLLOWING IS A MINIMUM ROAD BASE AND WILL REQUIRE A SOILS REPORT VERIFICATION
   - 40mm HL3
   - 65mm HLB
   - 150mm GRANULAR "A"
   - 300mm GRANULAR "B"
6. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD.
7. ON A CRESCENT THE MINIMUM WATERMAIN SHALL BE PLACED ON THE OUTSIDE.
8. FULL LENGTH MINIMUM 100mm DIA. SUBDRAIN C/W FILTERCLOTH SHALL BE INSTALLED, AS PER APPROVE TOWN OF CALEDON STANDARD NO. 219.
9. SUB-GRADE SHALL BE COMPACTED TO A MINIMUM 95% OF S.P.D. AT OPTIMUM MOISTURE CONTENT.
10. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
11. LONG DIMENSION OF TRANSFORMER TO BE PARALLEL TO STREETLINE.

8.0m LOCAL ROAD
6.0m ROADWAY (5.4m PAVEMENT)
SCALE: N.T.S.



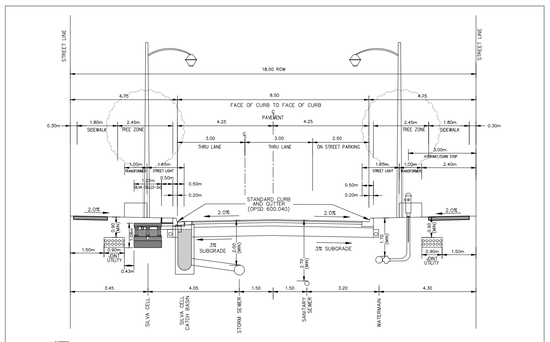
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1. WATERMAIN TO HAVE MINIMUM COVER OF 1.70m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.90m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
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10. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
11. LONG DIMENSION OF TRANSFORMER TO BE PARALLEL TO STREETLINE.

14.0m LOCAL ROAD
8.0m ROADWAY (7.4m PAVEMENT)
SCALE: N.T.S.



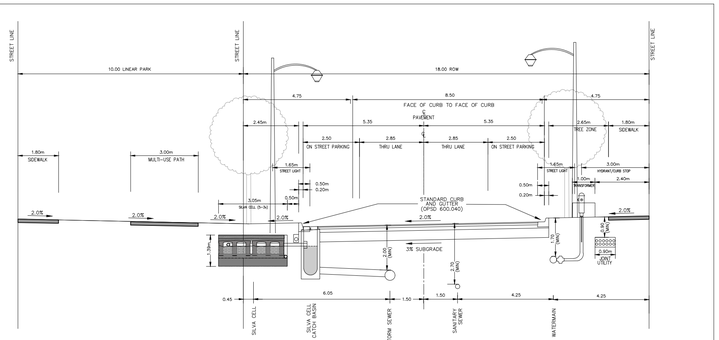
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10. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
11. LONG DIMENSION OF TRANSFORMER TO BE PARALLEL TO STREETLINE.

16.0m LOCAL ROAD
8.5m ROADWAY (7.9m PAVEMENT)
SCALE: N.T.S.



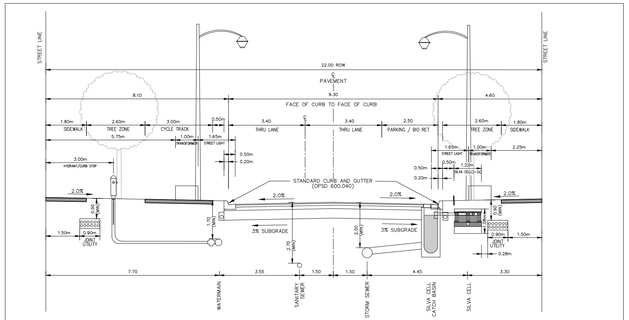
NOTES
1. WATERMAIN TO HAVE MINIMUM COVER OF 1.70m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.90m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
4. STREET LIGHT FIXTURE PER APPROVED TOWN STANDARD.
5. THE FOLLOWING IS A MINIMUM ROAD BASE AND WILL REQUIRE A SOILS REPORT VERIFICATION
   - 40mm HL3
   - 65mm HLB
   - 150mm GRANULAR "A"
   - 450mm GRANULAR "B"
6. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD.
7. ON A CRESCENT THE MINIMUM WATERMAIN SHALL BE PLACED ON THE OUTSIDE.
8. FULL LENGTH MINIMUM 100mm DIA. SUBDRAIN C/W FILTERCLOTH SHALL BE INSTALLED, AS PER APPROVE TOWN OF CALEDON STANDARD NO. 219.
9. SUB-GRADE SHALL BE COMPACTED TO A MINIMUM 95% OF S.P.D. AT OPTIMUM MOISTURE CONTENT.
10. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
11. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD

18.0m LOCAL ROAD
8.5m ROADWAY (7.9m PAVEMENT)
SCALE: N.T.S.



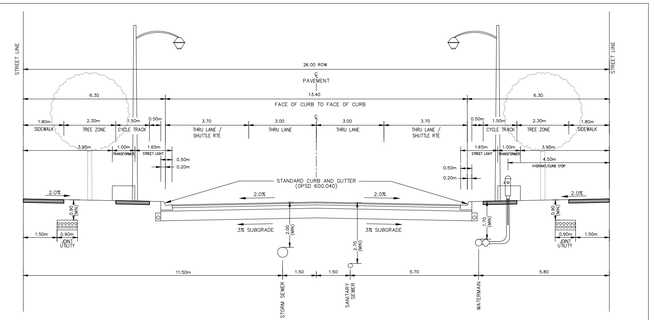
NOTES
1. WATERMAIN TO HAVE MINIMUM COVER OF 1.70m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.90m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
4. STREET LIGHT FIXTURE PER APPROVED TOWN STANDARD.
5. THE FOLLOWING IS A MINIMUM ROAD BASE AND WILL REQUIRE A SOILS REPORT VERIFICATION
   - 40mm HL3
   - 65mm HLB
   - 150mm GRANULAR "A"
   - 450mm GRANULAR "B"
6. ON A CRESCENT THE MINIMUM WATERMAIN SHALL BE PLACED ON THE OUTSIDE.
7. FULL LENGTH MINIMUM 100mm DIA. SUBDRAIN C/W FILTERCLOTH SHALL BE INSTALLED, AS PER APPROVE TOWN OF CALEDON STANDARD NO. 219.
8. SUB-GRADE SHALL BE COMPACTED TO A MINIMUM 95% OF S.P.D. AT OPTIMUM MOISTURE CONTENT.
9. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
10. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD

18.0m LOCAL ROAD WITH LINEAR PARK
8.5m ROADWAY (7.9m PAVEMENT)
SCALE: N.T.S.



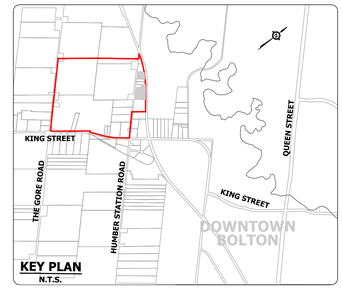
NOTES
1. WATERMAIN TO HAVE MINIMUM COVER OF 1.70m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.90m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
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5. THE FOLLOWING IS A MINIMUM ROAD BASE AND WILL REQUIRE A SOILS REPORT VERIFICATION
   - 40mm HL3
   - 90mm HLB
   - 150mm GRANULAR "A"
   - 450mm GRANULAR "B"
6. ON A CRESCENT THE MINIMUM WATERMAIN SHALL BE PLACED ON THE OUTSIDE.
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8. SUB-GRADE SHALL BE COMPACTED TO A MINIMUM 95% OF S.P.D. AT OPTIMUM MOISTURE CONTENT.
9. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
10. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD

22.0m LOCAL THROUGH/URBAN
9.3m ROADWAY (8.7m PAVEMENT)
SCALE: N.T.S.



NOTES
1. WATERMAIN TO HAVE MINIMUM COVER OF 1.70m.
2. UTILITY CORRIDOR TO HAVE A MINIMUM COVER OF 0.90m.
3. TREES TO BE PLACED IN LOCATIONS PER APPROVED LANDSCAPE PLAN.
4. STREET LIGHT FIXTURE PER APPROVED TOWN STANDARD.
5. THE FOLLOWING IS A MINIMUM ROAD BASE AND WILL REQUIRE A SOILS REPORT VERIFICATION
   - 40mm HL3
   - 90mm HLB
   - 150mm GRANULAR "A"
   - 450mm GRANULAR "B"
6. ON A CRESCENT THE MINIMUM WATERMAIN SHALL BE PLACED ON THE OUTSIDE.
7. FULL LENGTH MINIMUM 100mm DIA. SUBDRAIN C/W FILTERCLOTH SHALL BE INSTALLED, AS PER APPROVE TOWN OF CALEDON STANDARD NO. 219.
8. SUB-GRADE SHALL BE COMPACTED TO A MINIMUM 95% OF S.P.D. AT OPTIMUM MOISTURE CONTENT.
9. WHERE POSSIBLE MANHOLE LIDS TO BE LOCATED OUT OF TIRE LANE OF TRAFFIC.
10. THE BOULEVARDS REQUIRE A MINIMUM OF 300mm OF TOPSOIL AND NURSERY SOD

26.0m LOCAL THROUGH/URBAN
13.4m ROADWAY (12.8m PAVEMENT)
SCALE: N.T.S.



KEY PLAN
N.T.S.

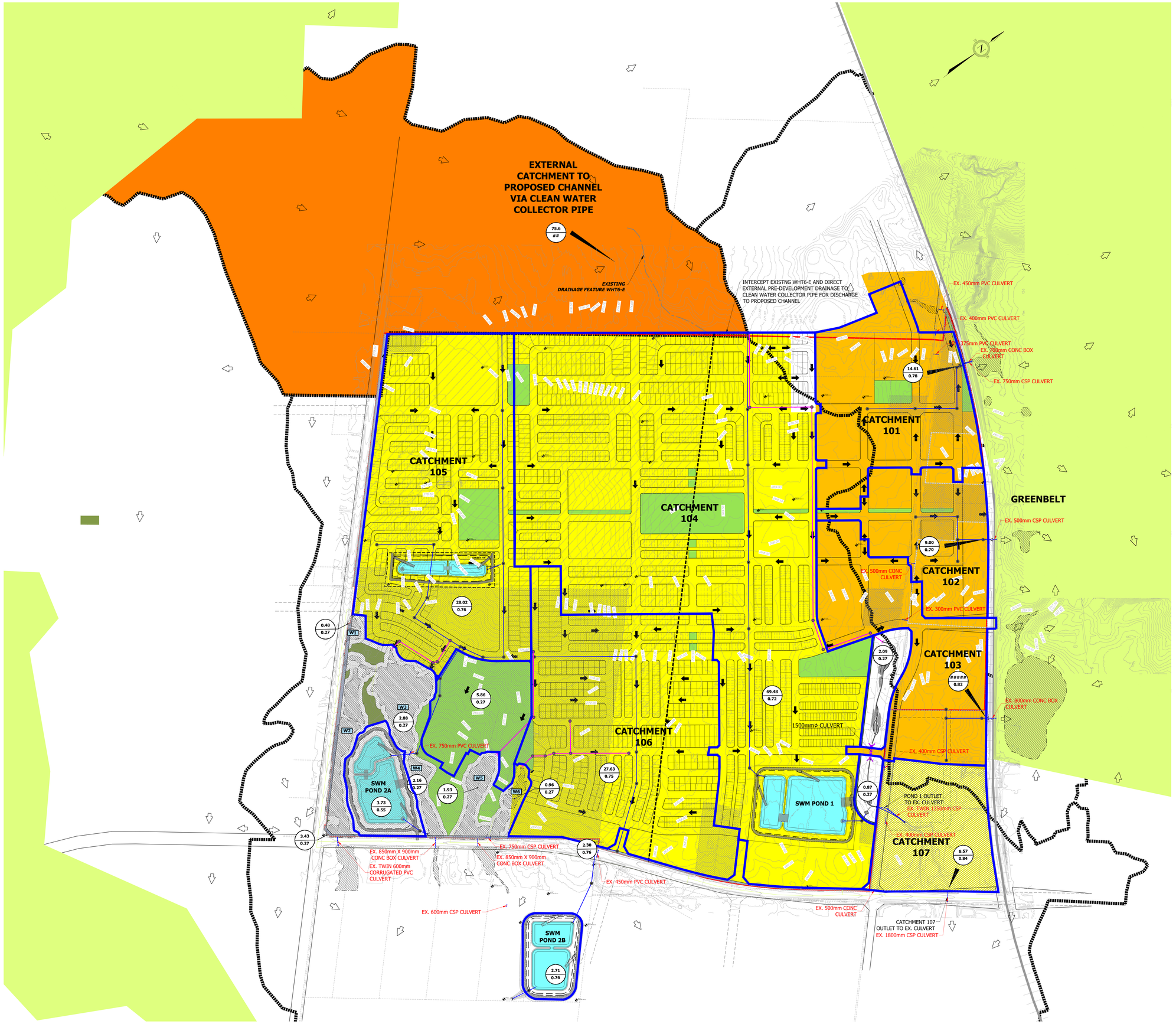
NOTE: SILVA CELLS ONLY PROPOSED ALONG RIGHT OF WAYS WHERE SHOWN ON DRAWING 703. IF SILVA CELLS ARE DESIGNED AS FILTERS, AN UNDERDRAIN SHALL BE INSTALLED AND CONNECTED TO STORM SEWER SYSTEM.

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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

ROW SECTIONS

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./X.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	305	
SCALE:	N.T.S.	DATE:	MAY 2023		



NOTES:
* REFER TO DRAWING 502 FOR MINOR SYSTEM DRAINAGE AREAS AND STORM SERVICING.
* REFER TO DRAWING 503 FOR MAJOR SYSTEM FLOW.
* REFER TO DRAWING 504 FOR PRELIMINARY CLEAN WATER COLLECTOR (CWC) PIPE DETAILS.

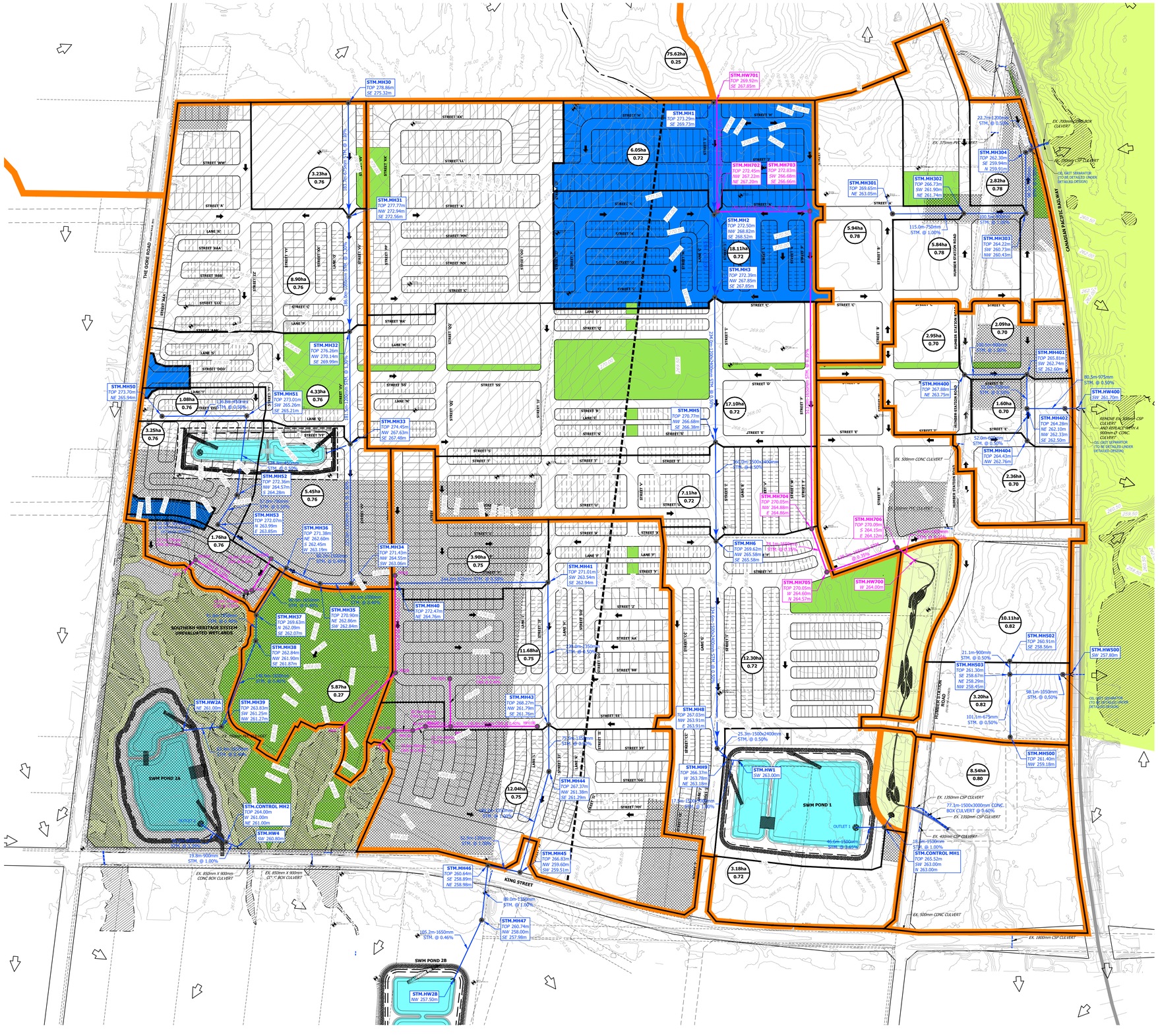
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Vaughan, ON, L6A 4P9
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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

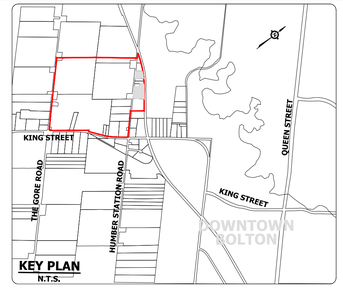
STORM DRAINAGE AREAS TO SWM PONDS

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	501	
SCALE:	1:3000	DATE:	MAY 2023		

J:\Projects\15-458\Reports\1-SSSS for engineering and figures\01 - STORM DRAINAGE TO PONDS.dwg



NOTE:
REFER TO DRAWING 503 FOR MAJOR SYSTEM CAPTURE DETAILS



LEGEND

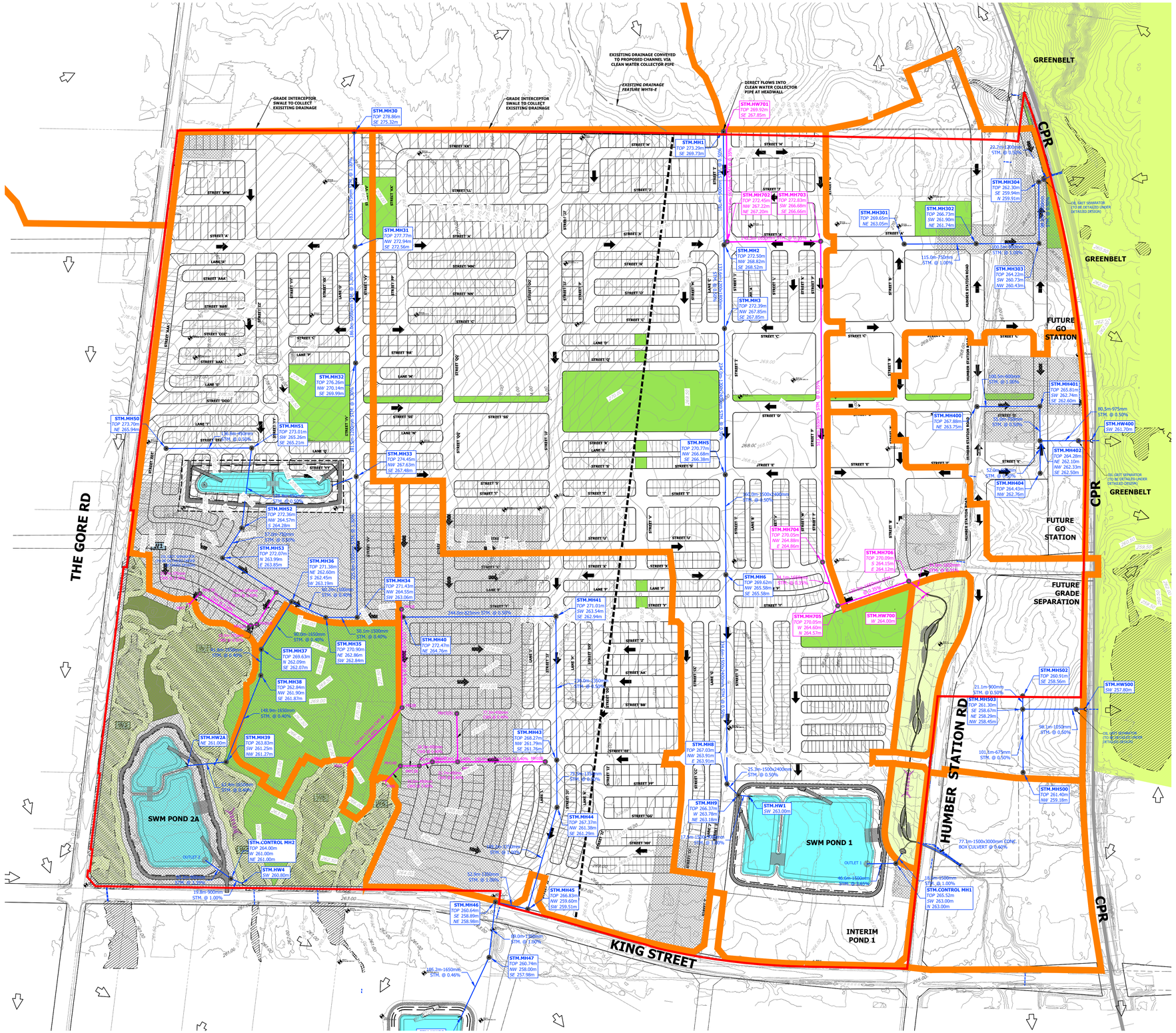
- DRAFT PLAN AREAS
- EXISTING CONTOUR & ELEVATION
- MINOR SYSTEM STORM DRAINAGE AREA BOUNDARY TO SWM POND AND FLOW NODE
- MINOR SYSTEM STORM DRAINAGE AREA BOUNDARY
- PROPOSED STORM SEWER
- EXISTING STORM SEWER
- CLEAN WATER COLLECTOR PIPE
- PROPOSED CULVERT AT ROAD CROSSING
- MAJOR SYSTEM CAPTURE AREA
- GREENBELT
- W5 EXISTING UNEVALUATED WETLAND AND WETLAND ID
- PROPOSED OPEN SPACE BLOCK
- PROPOSED EPA (ENVIRONMENTAL POLICY AREA) / CHANNEL
- PROPOSED SWM POND
- EXISTING OVERLAND FLOW ROUTE
- PROPOSED OVERLAND FLOW ROUTE
- 2.00ha / 0.70 AREA Ha. / RUNOFF COEFFICIENT
- STM.MH2 / TOP 90.70m / S 85.00m / E 85.00m / W 85.00m / N 85.00m — STORM MANHOLE ID; PROPOSED GROUND ELEVATION; PROPOSED SEWER INVERTS

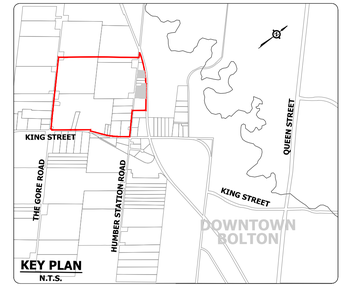
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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

MINOR SYSTEM DRAINAGE PLAN AND STORM SERVICING

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	502	
SCALE:	1:3000	DATE:	MAY 2023		





LEGEND

- DRAFT PLAN AREAS
- EXISTING CONTOUR & ELEVATION
- GREENBELT
- W5 — EXISTING UNEVALUATED WETLAND AND WETLAND ID
- PROPOSED OPEN SPACE BLOCK
- PROPOSED EPA (ENVIRONMENTAL POLICY AREA) / CHANNEL
- PROPOSED SWM POND
- EXISTING OVERLAND FLOW ROUTE
- PROPOSED OVERLAND FLOW ROUTE
- MINOR SYSTEM STORM DRAINAGE AREA BOUNDARY TO SWM POND AND FLOW NODE
- PROPOSED CULVERT AT ROAD CROSSING

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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

MAJOR SYSTEM DRAINAGE PLAN

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	503	
SCALE:	1:3000	DATE:	MAY 2023		

EXISTING
DRAINAGE FEATURE WHT6-E

INTERCEPT EXISTNG WHT6-E AND DIRECT EXTERNAL PRE-DEVELOPMENT DRAINAGE TO CLEAN WATER COLLECTOR PIPE FOR DISCHARGE TO PROPOSED CHANNEL

CATCHMENT 105
105
8.95

CATCHMENT 104
104
14.75

CATCHMENT 101
101
0.76

CATCHMENT 102
102
0.30

CATCHMENT 103

CATCHMENT 106
106
2.28

CATCHMENT 107

GREENBELT

1500mmϕ CULVERT

POND 1 OUTLET TO EX. CULVERT

PROPOSED CHANNEL

W1 W2 W3 W4 W5 W6

POND 1
3.01

POND 2
1.75

CHANNEL
3.01

CHAN 1
2.05

KING STREET
THE GORE ROAD
HUMBER STATION ROAD
QUEEN STREET
DOWNTOWN BOLTON

KEY PLAN
N.T.S.

LEGEND

- STORM DRAINAGE AREA BOUNDARY
- DRAFT PLAN AREAS
- NON-PARTICIPATING PROPERTY
- GREENBELT
- EXISTING UNEVALUATED WETLAND
- PROPOSED EPA (ENVIRONMENTAL POLICY AREA) / CHANNEL
- PARK AREAS
- CLEAN AREAS (ROOFTOP AND YARDS)
- CHAN 1 / 2.05 — AREA ID / AREA (ha)
- SWM PONDS
- LINEAR PARK
- SILVA CELL
- 18 — RIGHT OF WAY WIDTH (m)

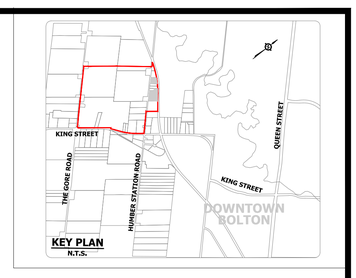
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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

WATER BALANCE PLAN

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./X.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	703	
SCALE:	1:3000	DATE:	MAY 2023		

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LEGEND:

- CALEDON STATION SECONDARY PLAN (CSSP)
- GREENBELT
- PROPOSED BRES SANITARY DRAINAGE AREA BOUNDARY
- 23ha / 60P/ha — SANITARY DRAINAGE AREA / POPULATION DENSITY
- HUMBER STATION WASTEWATER SEWER (REGION DC#23-2271) COUNTRYSIDE DR. TO HEALY ROAD/ CONSTRUCTION COMPLETE BY 2025
- EXISTING SANITARY TRUNK
- ULTIMATE SANITARY SEWER (SEE DRAWINGS 803 & 804)
- INTERIM SANITARY SEWER

ALL PIPE SIZES ARE SUBJECT TO REGION OF PEEL MASTER PLAN UPDATES

GRAVITY SERVICEABILITY OF THIS AREA SUBJECT TO FURTHER REVIEW.

120.3ha 60P/ha POP. ~ 7,218 WHITE BELT LANDS

CSSP LANDS (BRES-3) 169.1ha 145P/ha

BRES-1 LANDS 114.7ha 97P/ha

450mmø SAN. @ 0.40%

PUMP STATION

SANITARY FORCEMAIN

REVERSED FLOW DIRECTION AT KING ROAD SEWER (ULTIMATE)

MH6B TOP 264.29 SW INV 256.50 NE INV 256.41

500.0m-525mm SAN. @ 0.30%

MH5C TOP 264.79 SE INV 256.80

MH5B TOP 264.79 NE INV 258.00

850.0m-600mm SAN. @ 0.75%

EX. CREEK CROSSING (CREEK INV. ~256.60)

BRES-4 LANDS 203ha 60P/ha

MH6C TOP 257.94 NW INV 250.42 SE INV 250.35

EX. CREEK CROSSING (CREEK INV. ~245.80)

400.1m-675mm SAN. @ 0.50%

MH7C TOP 257.46 NW INV 248.35 SE INV 248.30

243ha 60P/ha BRES-5 LANDS

655.0m-675mm SAN. @ 0.50%

MH8C TOP 256.02 NW INV 245.02 SE INV 244.95

571.6m-675mm SAN. @ 1.00%

MH9C TOP 246.11 NW INV 239.23 SE INV 239.20

517.1m-675mm SAN. @ 0.75%

MH10C TOP 242.32 NW INV 235.32 SE INV 235.25

90.4m-675mm SAN. @ 0.75%

EX. MH11A TOP 241.91 SE INV 235.37 NW INV 234.57

EX. 677.6m-1200mm SAN. @ 0.27%

EX. MH2A TOP 237.20 NW INV 231.50 SE INV 231.35

EX. MH12A TOP 233.50 NW INV 227.90 SE INV 227.80

219ha 60P/ha BRES-6 LANDS

EX. 1200mm SAN.

EX. MH4A

EX. MH5A

EX. 1200mm SAN.

EX. MH6A

EX. 1200mm SAN.

EX. MH7A

EX. PLUG SE INV 203.13

EX. 821.1m-1200mm SAN. @ 0.27%

EX. MH1

EX. 1200mm SAN.

EX. MH2

EX. 1200mm SAN.

EX. MH3

EX. 1200mm SAN.

EX. MH4

EX. 1200mm SAN.

EX. MH5

EX. 1200mm SAN.

EX. MH9B TOP 236.30 NW INV 227.20 SE INV 227.05

EX. MH10A TOP 236.30 NW INV 227.20 SE INV 227.05

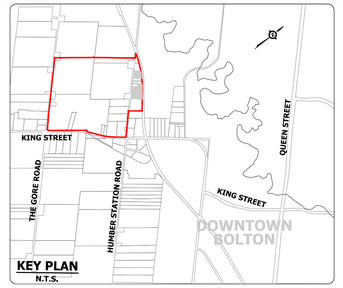
EX. MH11A TOP 236.30 NW INV 227.20 SE INV 227.05

EX. MH12A TOP 236.30 NW INV 227.20 SE INV 227.05

EX. MH13A TOP 236.30 NW INV 227.20 SE INV 227.05

EX.





LEGEND

- DRAFT PLAN AREAS
- NON-PARTICIPATING PROPERTY
- GREENBELT
- EXISTING UNEVALUATED WETLAND
- PROPOSED EPA (ENVIRONMENTAL POLICY AREA) / CHANNEL
- INTERNALSANITARY DRAINAGE AREA BOUNDARY
- EXTERNAL SANITARY DRAINAGE AREA BOUNDARY
- INTERNAL SANITARY SEWER
- EXTERNAL SANITARY SEWER

2.0ha / 70 | 140 — AREA Ha. / POPULATION / POPULATION EQUIVALENT PP/Ha.

97ha / 60 | 5820 — EXTERNAL AREA Ha. / EXTERNAL POPULATION / POPULATION EQUIVALENT PP/Ha.

2.0ha / 70 | 140 — FUTURE AREA Ha. / FUTURE POPULATION / FUTURE POPULATION EQUIVALENT PP/Ha.

SAN.MH5A
TOP 90.75m
S 85.00m
N 85.00m
E 85.00m

SANITARY MANHOLE ID / PROPOSED GROUND ELEVATION / PROPOSED SEWER INVERTS

NOTE:
* REFER TO DRAWING 801 FOR EXTERNAL DRAINAGE AREAS AND TRUNK SEWER.

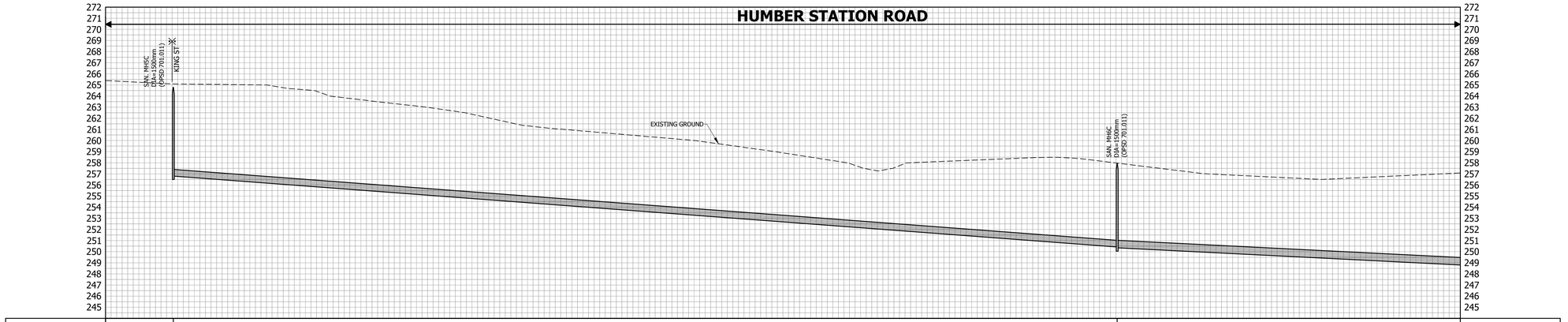
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TOWN OF CALEDON
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CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

INTERNAL SANITARY DRAINAGE PLAN

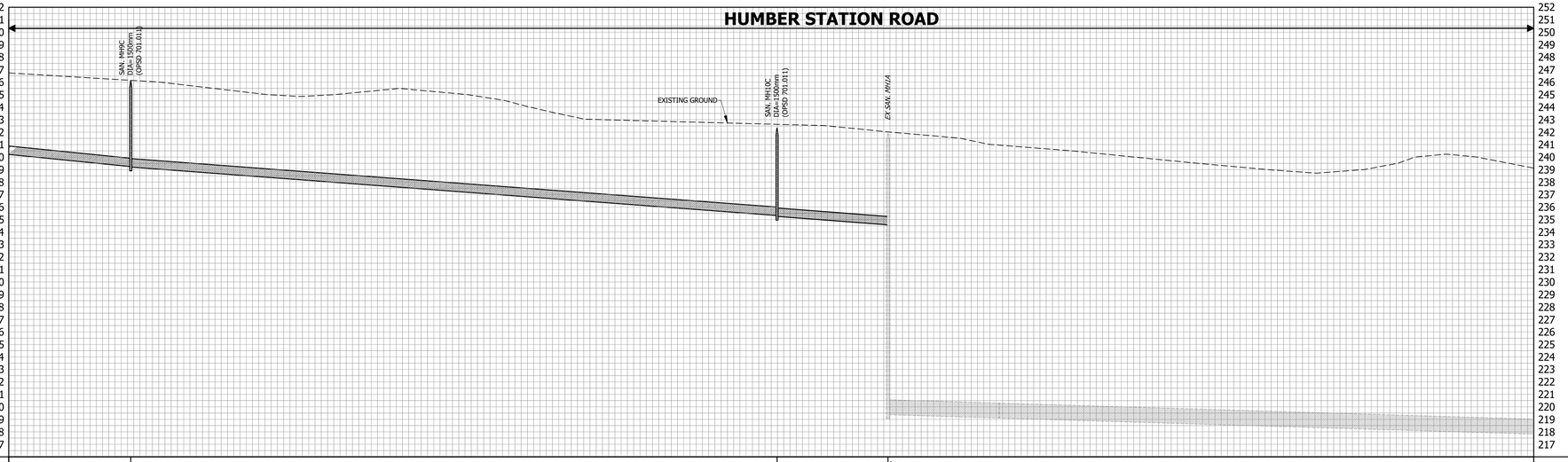
SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./X.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	802	
SCALE:	1:3000	DATE:	MAY 2023		

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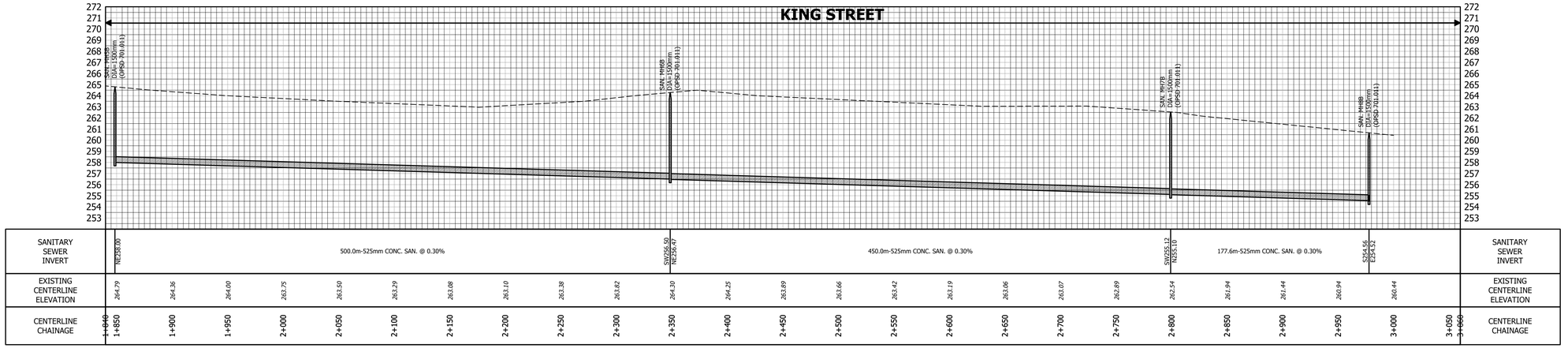

HUMBER STATION ROAD
KING ST
SAN. MHSC DIA=1500mm (OPSD 701.011)
EXISTING GROUND
SAN. MHSC DIA=1500mm (OPSD 701.011)

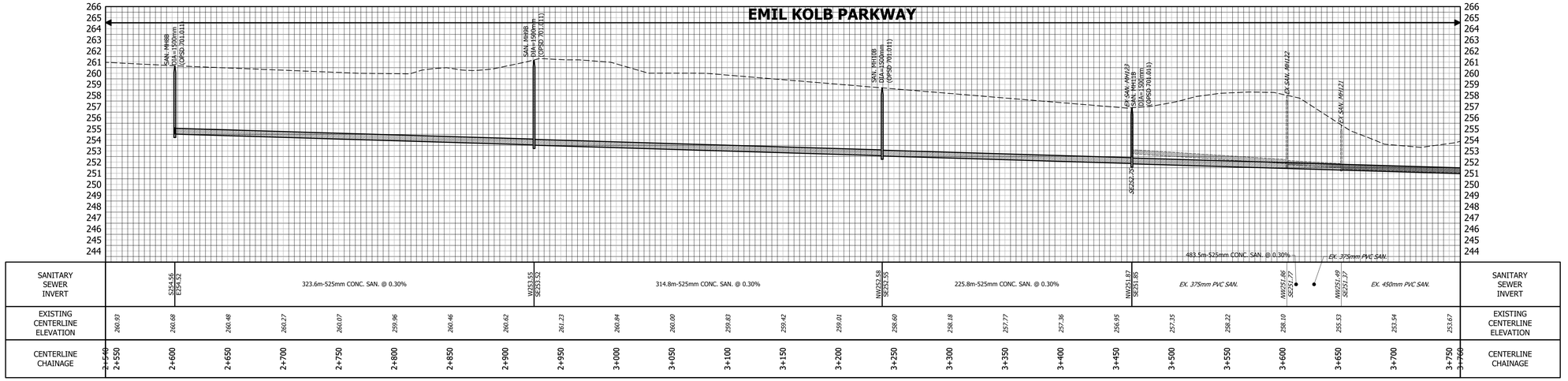
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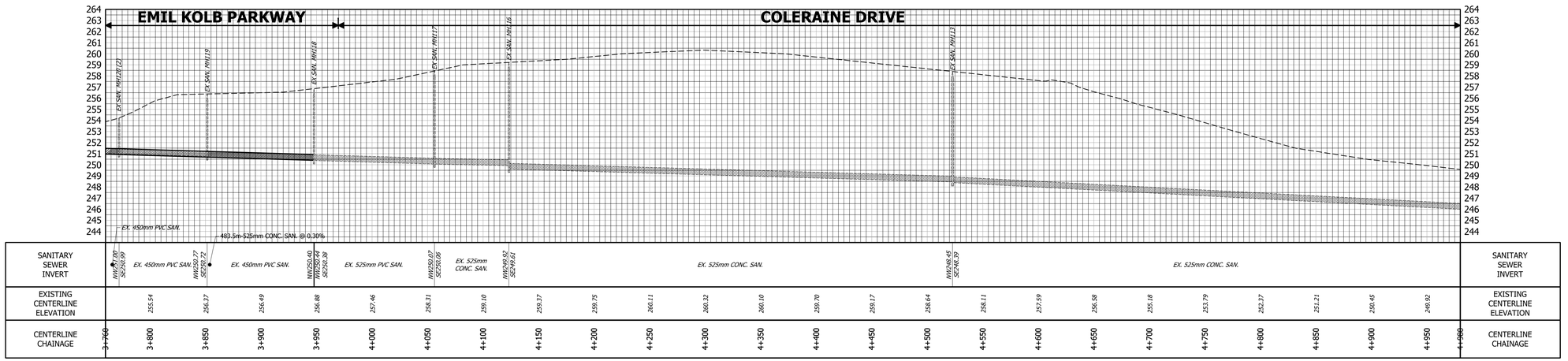
HUMBER STATION ROAD

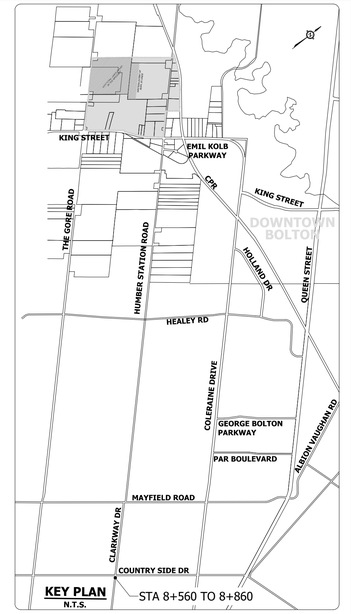


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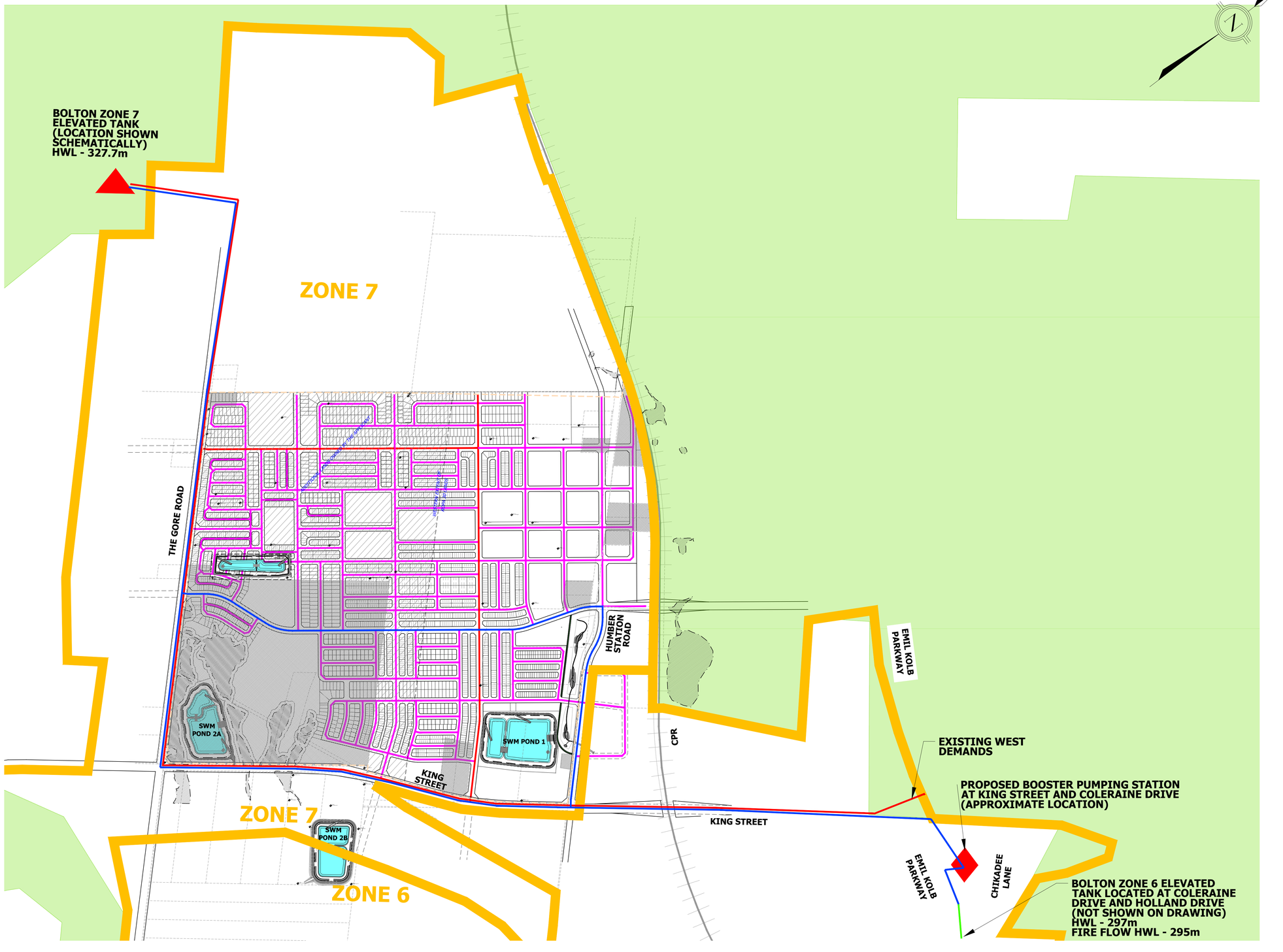
NOTES:
1. REFER TO DRAWING 801 FOR PLANVIEW DESIGN.

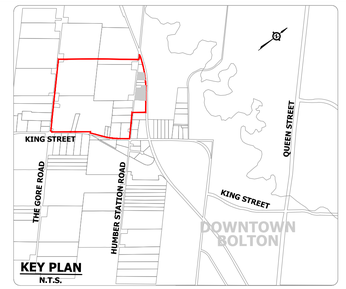
TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN

EXTERNAL SANITARY TRUNK PROFILE (INTERIM)

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	E.L.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	E.L.	CHECKED BY:	S.H.	805	1 OF 1
SCALE:	V 1:200 H 1:2000	DATE:	MAY 2021		

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LEGEND:

- GREENBELT
- WATER PRESSURE ZONE BOUNDARY
- PROPOSED 200mm WATERMAIN
- PROPOSED 400mm WATERMAIN
- PROPOSED 600mm WATERMAIN
- PROPOSED 1050mm WATERMAIN
- EXISTING TRUNK WATERMAIN
- PROPOSED ELEVATED WATER TANK (LOCATION SUBJECT TO EA)
- PROPOSED BOOSTER PUMPING STATION (LOCATION SUBJECT TO EA)

NOTES:

* ULTIMATE CSSP BUILD OUT WILL REQUIRE DEVELOPMENT OF A NEW ZONE 7.
* IT IS EXPECTED THAT A PORTION OF THE INITIAL CSSP DEVELOPMENT WILL BE ABLE TO PROCEED PRIOR TO CONSTRUCTION OF THE ULTIMATE ZONE 7 SERVICING SOLUTION. FURTHER MODELING SHOULD DETERMINE WHICH SERVICING AREAS WILL BE SUPPORTED WITH THE EXISTING ZONE 6 WATERMAIN.
* THE BOOSTER STATION AND ZONE 7 ELEVATED TANK LOCATIONS ARE SUBJECT TO FUTURE EAs.
*THIS PLAN IS A RECREATION OF THE MODEL FORM BOLTON OPTION 3 LANDS PRELIMINARY WATER MODELING BY R.J. BURNSIDE DATED 2023-05-15.

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TOWN OF CALEDON
REGIONAL MUNICIPALITY OF PEEL
CALEDON STATION SECONDARY PLAN
ARGO DRAFT PLAN EAST

WATER DISTRIBUTION PLAN

SURVEYED BY:	J.D.B.	DATE:	2020	JOB NO.	15-458
DRAWN BY:	A.G./K.S.	CHECKED BY:	S.H.	DRAWING NO.	SHEET NO.
DESIGNED BY:	S.K./E.L.	CHECKED BY:	S.K./A.F.	901	
SCALE:	1:6000	DATE:	MAY 2023		

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APPENDIX 2

STORM SEWER DESIGN CALCULATIONS

REFER TO CSSP-FSR FOR APPENDIX

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APPENDIX 3

STORMWATER MANGEMENT

REFER TO CSSP-FSR FOR OTHER STORMWATER MANAGEMENT

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APPENDIX 4

DS CONSULTANTS GEOTECHNICAL AND HYDROGEOLOGICAL REPORTS

REFER TO CSSP-FSR FOR APPENDIX

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APPENDIX 5

WASTEWATER

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APPENDIX 6

R.J. BURNSIDE & ASSOCIATES WATER MODELLING

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