FUNCTIONAL SERVICING REPORT

In Support of Site Plan Approval

Taunton Road and Burkholder Drive
City of Pickering
Proposed Commercial Development

Report Prepared for:

Seaton Commercial Developments Ltd.

5400 Younge St., Suite 300

North York, Ontario

M2N 5R5

Report Prepared by:

2453 Auckland Drive

Burlington, Ontario

L7L 7A9

KWA Project#: 23810

Dec 4th, 2025

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1.0 INTRODUCTION

KWA Site Development Consulting Inc. ("KWA") has been retained by Seaton Commercial Developments Ltd. ("Client") to prepare this Functional Servicing Report in support of a Site Plan Approval ("SPA") for the commercial development located at Taunton Road and Burkholder Drive in the City of Pickering, Ontario.

The area that is subject to this application (herein the "site") is approximately 6.08 hectares (ha) and is located within Block 76 and a portion of Block 188 of the Taunton Road and Taunton Road West Subdivision. The site is part of the Duffins Creek Watershed. Generally, the site is sloped northwest to southeast with elevations ranging from 176 m (in the northwest corner) to 167 m (in the southeast corner). The Trans-Northern Pipeline (TNP) Easement is located along the south boundary with Marathon Avenue and is approximately 18 m wide and 0.44 ha in area. There is also approximately 0.16 ha of site area located southwest of the TNP Easement. A private right-of-way, approximately 0.39 ha in area, is proposed along the eastern perimeter and provides connection to Taunton Road and Marathon Avenue. In addition, two other access points are proposed: one from Burkholder Drive and another from Taunton Road.

Surrounding land uses include:

- Taunton Road to the north,
- Private right-of-way (ROW) to the east,
- Marathon Avenue to the south and,
- Burkholder Drive to the west.

The site plan proposes seven (7) commercial buildings. There will be approximately 643 on-site parking spaces. Refer to the **Site Plan (A100)** developed by GetReal Architectural Services.

2.0 BACKGROUND INFORMATION

This Servicing Brief has been prepared in coordination and regarding the following documents and drawings:

- Architectural Site Plan prepared by GetReal Architectural Services (received Dec 2, 2025)
- Topographic Survey by J.D.Barnes Ltd (dated July 28, 2025)
- The Regional Municipality of Durham Design Specifications for Watermains, dated April 2020
- The Regional Municipality of Durham Design Specifications for Sanitary Sewers, dated April 2020
- Ministry of Environment's Design Guidelines for Drinking Water Systems, dated 2008
- Ministry of Environment's Design Guidelines for Sewage Works, dated 2008

3.0 SANITARY DEMAND

3.1 EXISTING SANITARY SERVICING

There is an existing manhole MH-L6-132 with an associated 200 mm diameter sanitary service for Block 76. The sewer is sloped at 1.28% to MH-L6-130 located in Marathon Avenue. Refer to **Appendix A** for the as-constructed drawing of Marathon Avenue sanitary sewers from Station 0+000 and Station 0+227.65 prepared by GEI for Lebovic Enterprises Ltd (SP-2009-14) that shows the provided sanitary service connection from the site to Marathon Avenue. The sanitary sewer flows east on Marathon Avenue via a network of sewers within the Taunton Road and Taunton Road West Subdivision. The sanitary ultimately meets the 900 mm diameter concrete trunk sewer at the intersection of Marathon Avenue and Aquarius Trail.

The existing sanitary allowance for the subject site is based on the **Sanitary Drainage Plan**, **Drawing 301** prepared by Cole Engineering for 1133373 Ontario Inc. (SP-2008-07), see **Appendix A**. Based on the 4.82 ha area for Block 76, an allowance of **5.02 L/s** is provided to the Marathon Avenue sanitary sewer.

3.2 PROPOSED SANITARY SERVICING

This section of the report details the proposed sanitary flow, servicing connection and layout.

3.2.1 SANITARY FLOW

Based on the latest Region of Durham sanitary design standards (2020), the design flow for commercial properties is 180m^3/gross floor area ha/day (2.08 L/s/ha). This design flow rate includes infiltration and peaking effect. The sanitary flows for each building are outlined in **Table 1** below. Refer to the Site Plan **(A100 SP19)** for building I.D.'s.

Table 1: Expected Peak Sanitary Discharge by Building

Building ID	Building Footprint (m^2)	Peak Sanitary Flow (L/s)
A1	3985	0.83
A2	611	0.13
A3	979	0.20
A4	1587	0.33
B	1117	0.23
C	725	0.15
D	650	0.14
E	845	0.18
F	1368	0.29
G	557	0.12
TOTAL	**12,424**	**2.59**

The sanitary demand is estimated to be **2.59 L/s**, including peaking factor and extraneous flows. This value is less than 5.02 L/s and therefore within the allowable limit as defined by the subdivision **Sanitary Drainage Plan**, **Drawing 301** prepared by Cole Engineering. Refer to **Appendix A** for **Sanitary Demand Calculations**.

3.2.2 CONNECTION AND LAYOUT

The proposed buildings will each outlet sanitary flows to a network of 200 mm diameter sanitary sewers within the subject site. Sanitary flows will drain to MH-L6-74 on Marathon Avenue, which has approximately 167 m downstream of the existing sanitary connection provided for the site.

Refer to the **Site Servicing Plan** in **Appendix C**.

4.0 WATER DEMAND

4.1 EXISTING WATER SERVICING

The existing 150 mm diameter domestic and 200 mm diameter fire service for Block 76 is located to the south and connects into the existing 300mm diameter watermain in the northern boulevard of Marathon Avenue. There is no watermain infrastructure within the subject site boundaries, and the site is located within pressure zone 4 based on the **Watermain Pressure Zone Plan**, **Drawing 105** prepared by Cole Engineering for 1133373 Ontario Inc. (SP-2008-07), see **Appendix B**.

4.2 PROPOSED WATER SERVICING

This section of the report details the proposed water demand, servicing connection and layout.

4.2.1 DOMESTIC DEMAND

According to The Region of Durham standards, there are two ways of calculating water demands for a commercial area: by average daily consumption per land use or on a per capita basis.

There are guidelines for commercial water demands specified in the Region of Durham's Design Specifications for Watermains. The average daily consumption rate for shopping centers is provided to be 2500 - 5000 L/day/1000 m^2. This aligns with the rates listed in the Ministry of Environment's Table 3-2 Typical Water Demands for Selected Commercial and Institutional Users.

Assuming the conservative rate of 5 L/d/m^2, the domestic demand for each building is outlined in **Table 2** below. Note, the proposed development consists of seven (7) commercial buildings, labelled 'A' through 'G'. Refer to the Site Plan **(A100 SP19)** for building I.D.'s.

Table 2: Expected Water Demand by Land Use (Avg. Daily Demand)

Building ID	Building Footprint (m^2)	Water Use (L/d/m^2)	Area Flow (L/s)
A1	3985	5	0.23
A2	611	5	0.04
A3	979	5	0.06
A4	1587	5	0.09
B	1117	5	0.06
C	725	5	0.04
D	650	5	0.04
E	845	5	0.05
F	1368	5	0.08
G	557	5	0.03
TOTAL	**12,424**		0.72

On a per capita basis, the equivalent population for the development is determined. The Region's Design Specifications suggest that a population equivalent of 86 persons per hectare shall be used. Based on a commercial development area of 6.08 ha, the equivalent population is as follows:

Equivalent Population = 86 persons/ha x 6.08 ha = 523 people

Though the Region of Durham standards do not provide a design flow for commercial developments, it is understood through previous development applications that the sanitary per capita rate of 364 L/cap/day applies. Accordingly, the site would have an expected water demand of:

Q = 364 L/cap/day x 523 people = 2.20 L/s

Therefore, the expected domestic water demand from the development is expected to be between **0.72** and **2.20 L/s**.

To determine the maximum hour and maximum day demands, a peaking factor must be applied. In lieu of a Region of Durham peaking factor, the Ministry of Environment Table 3-1 Peaking Factors were used. This table applies to Drinking-water systems servicing more than 500 people (refer to excerpt below).

Table 3: Peaking Factors (MOE Table 3-1, 2008)

POPULATION	MINIMUM RATE FACTOR (MINIMUM HOUR)	MAXIMUM DAY FACTOR	PEAK RATE FACTOR (PEAK HOUR)
500 - 1 000	0.40	2.75	4.13

Using the maximum day factor of 2.75 and maximum hour factor of 4.13, the flows for the site using the analysis per average daily consumption per land use are presented in **Table 4** below.

Table 4: Expected Peak Water Demand by Land Use (Maximum Hour & Maximum Day)

Building ID	Area Flow (L/s)	Maximum Day (L/s)	Maximum Hour (L/s)
A1	0.23	0.63	0.95
A2	0.04	0.10	0.15
A3	0.06	0.16	0.23
B	0.09	0.25	0.38
C	0.06	0.18	0.27
D	0.04	0.12	0.17
E	0.04	0.10	0.16
F	0.05	0.13	0.20
G	0.08	0.22	0.33
H	0.03	0.09	0.13
TOTAL	**0.72**	**1.98**	**2.97**

On a per capita basis, the peaking factors for the development are determined as follows:

Maximum Day (L/s) = 2.20 L/s x 2.75 = 6.06 L/s

Maximum Hour (L/s) = 2.20 L/s x 4.13 = 9.10 L/s

Table 5 below summarizes and compares the expected peak water demand for both analysis per average daily consumption per land use and analysis per capita.

Table 5: Expected Peak Water Demand (Maximum Hour & Maximum Day)

Condition	Area Flows (L/s)	Maximum Day (L/s)	Maximum Hour (L/s)
Analysis per Avg. Daily Consumption per Land Use	0.72	1.98	2.97
Analysis per Capita	2.20	6.06	9.10

Analysis per capita results in the highest domestic usage rate with the maximum day demand estimated to be **6.06 L/s** and the maximum hour demand estimated to be **9.10 L/s**.

Refer to **Appendix B** for **Water Demand Calculations**.

4.2.2 FIRE DEMAND

In accordance with Region standards, fire flow demands are determined using the Fire Underwriters Survey 2020 Methodology. Of the buildings on-site, Building A has the highest demand: **83.33 L/s**. This is based on the following inputs:

- NBC Occupancy 'E'
- Construction class: Non-combustible with protected vertical openings
- A fully supervised NFPA 13 compliant Sprinkler system
- Limited Combustible contents factor
- Applicable exposure charges based on distance to adjacent buildings.
- A fire wall with 2hr rating is provided between Building A1 and A2

As per MOE Drinking-Water Guidelines, it is typical to present the total demand for a development as the greater of:

- Maximum day demand plus fire flow, or
- Peak hour demand.

Therefore, the overall water demand for the development is maximum day plus fire flow, **89.39 L/s** (83.33 L/s + 6.06 L/s).

Refer to **Appendix B** for **Fire Flow Calculations**.

4.2.3 CONNECTION AND LAYOUT

As per the **Watermain Pressure Zone Plan, Drawing 105** by Cole Engineering, the site is located within the Zone 4 water supply system for the City of Pickering.

The Site will be serviced by the existing 300mm watermain on Marathon Avenue**.** The existing 150 mm domestic and 200 mm fire service connections for the site will be utilized. These services will feed into a Region water meter room in Building A4 before exiting the building to service the other proposed buildings. A metering device and backflow preventer will be installed within the meter room as per Regional Specifications and Standards. Three (3) new hydrants are proposed within the proposed development to provide fire protection coverage as per NFPA and OBC guidelines. The firemain within the subject site is looped internally to provide a greater level of service and reduce pressure losses found in dead-end watermains. The proposed watermain layout can be seen on the **Site Servicing Plan** in **Appendix C**.

5.0 CONCLUSION

In summary:

Sanitary Demand:

- Based on a sanitary demand factor of 2.08 L/s/ha of commercial floor area, the sanitary demand is estimated to be **2.59 L/s.**
- The site sanitary flows will outlet from the proposed development to MH-L6-74 on Marathon Avenue.

Watermain Demand:

- Using an equivalent population of **523 people,** the water supply demand for the Site is as follows:
    - Average Daily Demand = **2.02 L/s**
    - Max Daily Demand = **6.06 L/s**
    - Peak Hour Demand = **9.10 L/s**
- The overall water demand for the development is maximum day plus fire flow, **89.39 L/s**.
- The Site will be serviced by two existing connections (100 mm domestic and 200 mm fire) to the existing 300mm watermain on Marathon Avenue.

- A metering device and backflow preventer will be installed within the meter room in Building A4 as per Regional Specifications and Standards. Three (3) new hydrants are proposed within the proposed development to provide fire protection coverage as per NFPA and OBC guidelines.

We trust that this report sufficiently addresses the site servicing requirements and that the proposed development is feasible from a municipal servicing perspective.

Please do not hesitate to contact the undersigned if you have any questions or concerns.

Yours very truly,

KWA Site Development Consulting Inc.

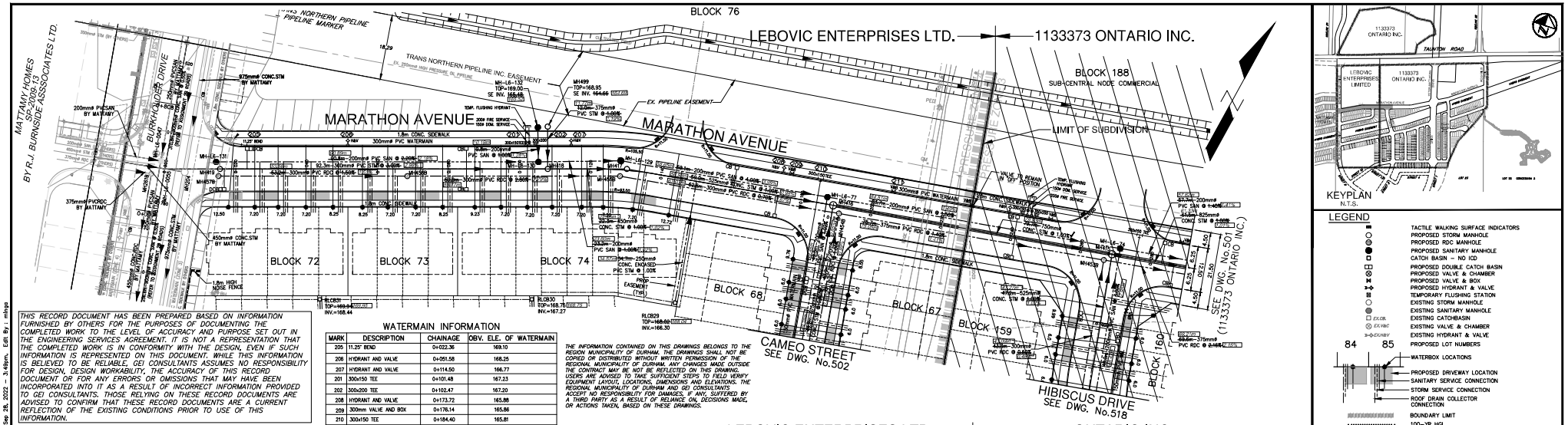
Per:

Ben Jackson, P.Eng.
(416)-984-0970

Pavneet Brar, P.Eng., MASc
(289)-259-3545

APPENDIX A

Sanitary Drainage Plan and Demand Calculations



LEGEND

- TACTILE WALKING SURFACE INDICATORS
- PROPOSED STORM MANHOLE
- PROPOSED RDC MANHOLE
- PROPOSED SANITARY MANHOLE
- CATCH BASIN – NO ICD
- PROPOSED DOUBLE CATCH BASIN
- PROPOSED VALVE & CHAMBER
- PROPOSED VALVE & BOX
- PROPOSED HYDRANT & VALVE
- TEMPORARY FLUSHING STATION
- EXISTING STORM MANHOLE
- EXISTING SANITARY MANHOLE
- EXISTING CATCHBASIN
- EXISTING VALVE & CHAMBER
- EXISTING HYDRANT & VALVE
- PROPOSED LOT NUMBERS
- WATERBOX LOCATIONS
- PROPOSED DRIVEWAY LOCATION
- SANITARY SERVICE CONNECTION
- STORM SERVICE CONNECTION
- ROOF DRAIN COLLECTOR CONNECTION
- BOUNDARY LIMIT
- 100-YR HGL
- PROPOSED CHAIN LINK FENCE
- PROPOSED NOISE FENCE
- PROPOSED PRIVACY FENCE
- POST AND CABLE BARRIER REFER TO DWG 1203 FOR DETAILS
- PROPOSED BENCHMARK
- COMMUNITY MAIL BOX LOCATIONS
- EXISTING BOREHOLE LOCATION
- EXISTING GROUNDWATER MONITORING WELL
- SUMP PUMP TO GRADE

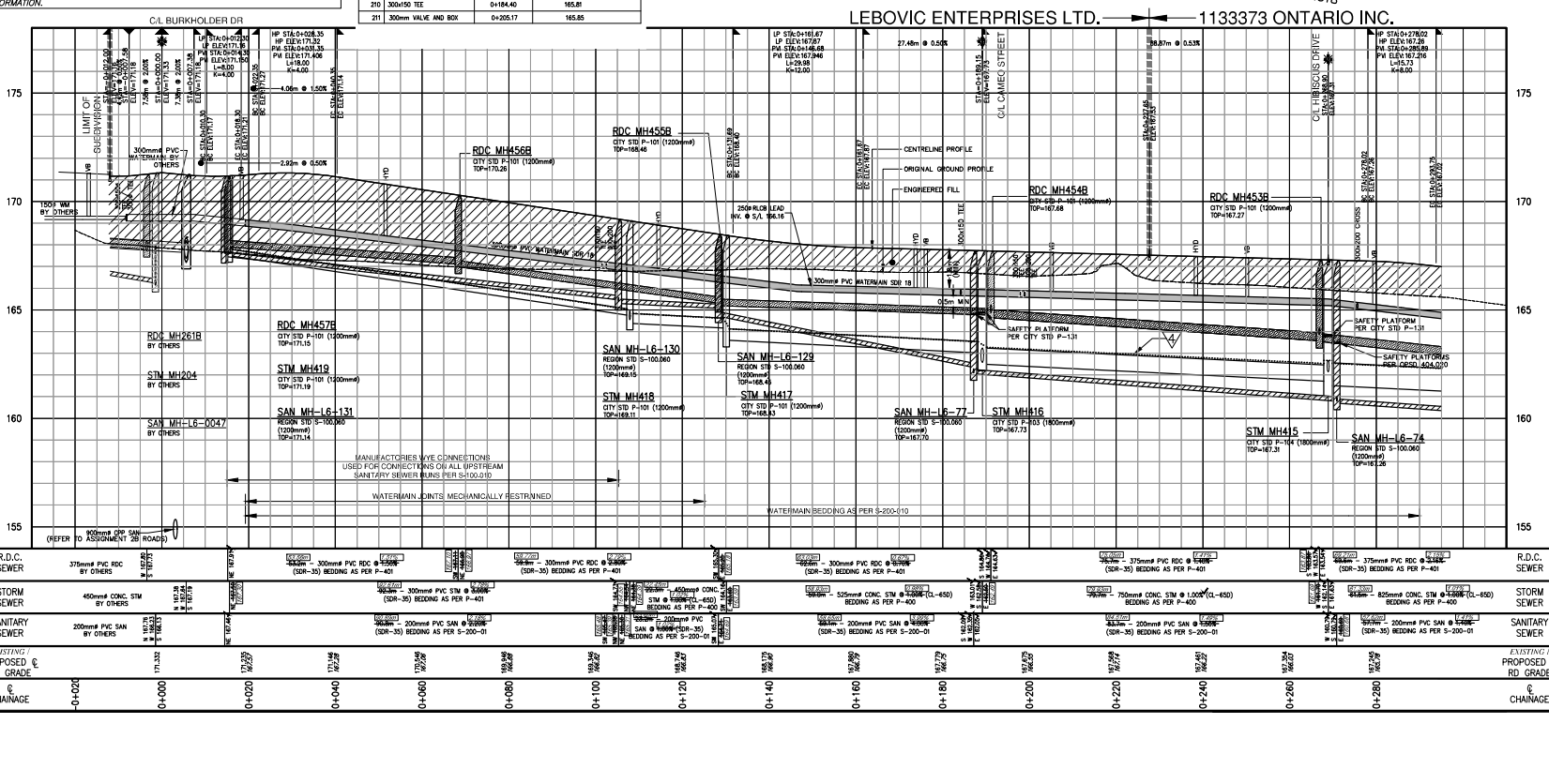
REFER TO DRAWING 100 FOR GENERAL NOTES

NOTES:
1. UNDERSIDE OF BASEMENT FOOTING ELEVATIONS SHALL BE MINIMUM OF 0.3m ABOVE THE 100YR HGL

THIS RECORD DOCUMENT HAS BEEN PREPARED BASED ON INFORMATION FURNISHED BY OTHERS FOR THE PURPOSES OF DOCUMENTING THE COMPLETED WORK TO THE LEVEL OF ACCURACY AND PURPOSE SET OUT IN THE ENGINEERING SERVICES AGREEMENT. IT IS NOT A REPRESENTATION THAT THE COMPLETED WORK IS IN CONFORMITY WITH THE DESIGN, EVEN IF SUCH INFORMATION IS REPRESENTED ON THIS DOCUMENT. WHILE THIS INFORMATION IS BELIEVED TO BE RELIABLE, GEI CONSULTANTS ASSUMES NO RESPONSIBILITY FOR DESIGN, DESIGN WORKABILITY, THE ACCURACY OF THIS RECORD DOCUMENT OR FOR ANY ERRORS OR OMISSIONS THAT MAY HAVE BEEN INCORPORATED INTO IT AS A RESULT OF INCORRECT INFORMATION PROVIDED TO GEI CONSULTANTS. THOSE RELYING ON THESE RECORD DOCUMENTS ARE ADVISED TO CONFIRM THAT THESE RECORD DOCUMENTS ARE A CURRENT REFLECTION OF THE EXISTING CONDITIONS PRIOR TO USE OF THIS INFORMATION.

WATERMAIN INFORMATION

MARK	DESCRIPTION	CHAINAGE	OBV. ELE. OF WATERMAIN
205	11.25° BEND	0+022.36	169.10
206	HYDRANT AND VALVE	0+051.58	168.25
207	HYDRANT AND VALVE	0+114.50	166.77
201	300x150 TEE	0+101.48	167.23
202	300x200 TEE	0+102.47	167.20
208	HYDRANT AND VALVE	0+173.72	165.88
209	300mm VALVE AND BOX	0+176.14	165.86
210	300x150 TEE	0+184.40	165.81
211	300mm VALVE AND BOX	0+205.17	165.85



BENCHMARK

ELEVATIONS HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING BENCHMARK No. 2–045, HAVING A PUBLISHED ELEVATION OF 126.055m (COVID–1928/1978). BRASS TABLET SET HORIZONTALLY IN SOUTH FACE OF BRICK BUILDING, LOCATED 650mE WEST OF VALLEY ROAD AND 24mS NORTH OF THE CENTERLINE OF THIRD CONCESSION ROAD. TABLET IS LOCATED 0.47m WEST OF THE SOUTHEAST CORNER OF BUILDING AND IS 0.52m ABOVE GROUND LEVEL.

No.	DESCRIPTION	DATE	BY
1	AS-CONSTRUCTED	09/26/22	M.L.

REVISIONS

THE CORPORATION OF THE CITY OF PICKERING
Engineering Services Department

APPROVED BY: RICHARD HOLBORN, P.Eng., ENGINEERING SERVICES DEPARTMENT
Approval to works required by the City of Pickering and As defined in the Subdivision Agreement. The City is relying on the technical skills and ability of the P.Eng. sealing and signing this drawing.
Date: DECEMBER 19, 2017

APPROVED
Approval of the Regional Works Dept. for the purposes described in the applicable Regional Subdivision or Servicing Agreement. The Region is relying on the technical skill and ability of the P.Eng. sealing and signing this drawing.
By: PAUL ALLEN
Date: DEC. 20, 2017

LEBOVIC ENTERPRISES LIMITED
(SP-2009-14)

ORIGINALLY SIGNED BY A.K. SWENSON PERSTO ON AUGUST 2015 AS-CONSTRUCTED DRAWINGS PREPARED BY GEI CONSULTANTS SHOWING CONTRACTOR'S MARKUPS

MARATHON AVENUE
STA. 0+000 TO STA. 0+227.65

GEI Consultants
75 TAYLOR COURT, UNIT 100
MARKHAM, ONTARIO L3R4K8
905.415.1339
GEI CONSULTANTS PREPARED IN COLLABORATION WITH ERS 519.895.2616

DESIGN BY:	DRAWN BY:	PROJECT No.
A.L.	T.L.	LD12-0605
SCALE: 1:500 (HORIZ) 1:100 (VERT)	DATE: MAY 2021	DRAWING No. 501

CITY FILE No.:

File : B:\Working\LEBOVIC ENTERPRISES LTD\...General\LD12-0605 1133373ON_Taunton\Models_PKR\400-CADD\400-AeBuilt\South\City of Pickering\LEBOVIC\PKR\12-0605 501 STREET B.dwg, Date : Sep 28, 2022 - 3:49pm, Edit By : mlopo

SEE DWG. 304

SEE DWG. 302

TAUNTON ROAD

MARATHON AVENUE

PETER MATTHEWS DRIVE

AQUARIUS TRAIL

CHATEAU COURT

SKYRIDGE BOULEVARD

HIBISCUS DRIVE

EGAN MEWS

SPINDLE MEWS

DELPHINIUM TRAIL

LEBOVIC ENTERPRISES LTD.

1133373 ONTARIO INC.

LIMIT OF SUBDIVISION

LIMIT OF DURHAM REGION BRONOCO ZONE 3 & 4 PUMPING STATION CONTRACT NO. D20

ZONE 1 RESERVOIR CELL No.2

BLOCK 197 SUB-CENTRAL NODE COMMERCIAL

BLOCK 200 (0.3m RESERVE)

BLOCK 78 SUB-CENTRAL NODE COMMERCIAL

BLOCK 188 SUB-CENTRAL NODE COMMERCIAL

BLOCK 199 (0.3m RESERVE)

BLOCK 198 (STREET WIDENING)

BLOCK 187 MIXED CORRIDOR

FUTURE GATEWAY SITE

BLOCK 193 HIGH DENSITY

BLOCK 192 21 Int.

BLOCK 191

BLOCK 161

BLOCK 162

BLOCK 163

BLOCK 154

BLOCK 155

BLOCK 156

BLOCK 157

BLOCK 170

BLOCK 169

BLOCK 171

BLOCK 172

BLOCK 173

BLOCK 185

BLOCK 186

BLOCK 187

BLOCK 188

BLOCK 189

BLOCK 190

COMMERCIAL BLOCK ENTRANCES OF TAUNTON ROAD TO BE CONSTRUCTED AS PART OF ASSIGNMENT 2B ROADS

DEVELOPER TO INSTALL ALL STORM, LOCAL SANITARY AND RDC SEWERS, AND SERVICE CONNECTIONS WITHIN PETER MATTHEWS DRIVE EXCEPT FOR CB'S AND STORM FROM MH493 TO MH495 AND ROAD WORKS WHICH WILL BE INSTALL UNDER REGIONAL CONTRACT 2B ROADS

PROP. 675mmø Corrugated Steel Culverts @ 2.63%

PROP. 600mmø Corrugated Steel Culverts @ 3.40%

PROP. 675mmø Corrugated Steel Culverts @ 3.21%

PROP. 750mmø Corrugated Steel Culverts @ 2.11%

PROP. 675mmø Corrugated Steel Culverts @ 5.40%

PROP. 600mmø Corrugated Steel Culverts @ 3.10%

PROP. 675mmø Corrugated Steel Culverts @ 3.10%

TEMP. ESC POND

TRANS NORTHERN PIPELINE INC. EASEMENT

HONI HYDRO EASEMENT

4.82ha 2.41 GFA 5.02 l/s

6.32ha 3.16 GFA 6.57 l/s

1.84ha 0.92 GFA 1.91 l/s

2.33ha 1398 U 3076 P

0.71ha 13 64

0.10ha 0 0

0.02ha 0 0

0.07ha 0 0

0.03ha 0 0

0.04ha 0 0

0.18ha 0 0

0.19ha 0 0

0.05ha 0 0

0.46ha 5 19

0.16ha 0 0

0.36ha 12 41

0.20ha 3 10

0.33ha 11 35

0.43ha 12 42

0.29ha 6 19

0.34ha 9 32

0.28ha 5 18

0.15ha 2 7

0.32ha 8 26

0.75ha 23 74

0.62ha 19 67

0.60ha 21 69

0.52ha 13 46

0.66ha 19 61

0.90ha 17 60

0.79ha 18 63

0.33ha 6 21

0.16ha 2 7

0.12ha 2 7

0.09ha 0 0

0.18ha 2 7

0.02ha 0 0

0.03ha 0 0

0.11ha 3 11

0.43ha 11 35

0.29ha 6 19

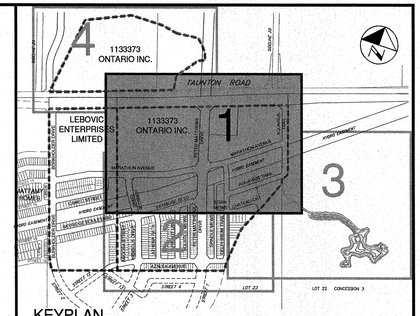
0.15ha 2 7

0.62ha 19 67

0.52ha 13 46

0.60ha 21 69

0.66ha 19 61



KEYPLAN
N.T.S.

LEGEND

- EXISTING SANITARY MANHOLE
- PROPOSED SANITARY MANHOLE
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY DRAINAGE AREA BOUNDARY
- EXISTING SANITARY DRAINAGE AREA BOUNDARY
- 0.71ha / 13 | 64 — PROP. DRAINAGE AREA (ha), POPULATION, # OF UNITS
- 84 85 — PROPOSED LOT NUMBERS
- PROPOSED DRIVEWAY LOCATION
- SANITARY SERVICE CONNECTION (TYP.)
- BOUNDARY LIMIT

REFER TO DRAWING No.100 FOR GENERAL NOTES

BENCHMARK

ELEVATIONS HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING BENCHMARK No. 2-045, HAVING A PUBLISHED ELEVATION OF 126.055m (COVD-1928:1978). BRASS TABLET SET HORIZONTALLY IN SOUTH FACE OF BRICK BUILDING, LOCATED 650m± WEST OF VALLEY ROAD AND 34m± NORTH OF THE CENTERLINE OF THIRD CONCESSION ROAD. TABLET IS LOCATED 0.47m WEST OF THE SOUTHEAST CORONER OF BUILDING AND IS 0.52m ABOVE GROUND LEVEL.

No.	DESCRIPTION	DATE	BY
	REVISIONS		
2	UPDATED SANITARY SEWER DESIGN	03/20/18	L.A.B.
1	ISSUED FOR CONSTRUCTION	12/20/17	A.R.

THE CORPORATION OF THE CITY OF PICKERING
Engineering Services Department

APPROVED

Approval of the Regional Works Dept. for the purposes described in the applicable Regional Subdivision or Servicing Agreement. The Region is relying on the technical skill and ability of the P.Eng. sealing and signing this drawing.

By: PAUL ALLEN

Date: DEC. 20, 2017

1133373 ONTARIO INC.
(SP-2008-07)

ORIGINALLY SIGNED BY A.M. BARBOSA RIBEIRO ON NOV.17,2017 & L.A.BEATON ON MAR. 20,2018

LICENSED PROFESSIONAL ENGINEER K.A. BOBECHKO May 2018 PROVINCE OF ONTARIO

SANITARY DRAINAGE PLAN

COLE ENGINEERING
70 VALLEYWOOD DRIVE, MARKHAM, ON L3R 4T5
T 416.987.8181 / 905.940.8181 F 905.940.2064

DESIGN BY:	DRAWN BY:	PROJECT No.
A.L.	T.L	LD12-0605
SCALE: 1:1000	DATE: MARCH 2015	DRAWING No. 301

CITY FILE No.:

File: S:\2012 Projects\LD\LD12-0605 (2) 1133730N_TauntonWsbdn_PKR\400-CAD\01-CAD\South\Sheets\1133373 Ontario Inc\FC\12-0605 SAN 301 - 304.dwg, Date: May 10, 2018 - 9:46am, Edit By: sgacho

Sanitary Demand

Project Name:	Fieldgate Seaton
Project Number:	23810
Location:	Seaton, ON
Date:	12/1/2025
Prepared by:	PB

Total Site Area 6.08 ha

Water Demands using Average Daily Consumption per Land Use

Flow Data			
Building ID	**Building Area (m^2)**	**Water use (Daily Average) ($L/d.m^2$) [2]**	**Area Flow (L/s)**
A1	3985	18	0.83
A2	611	18	0.13
A3	979	18	0.20
A4	1587	18	0.33
B	1117	18	0.23
C	725	18	0.15
D	650	18	0.14
E	845	18	0.18
F	1368	18	0.29
G	557	18	0.12
Total	**12424**		**2.59**

APPENDIX B

Watermain Pressure Zones and Demand Calculations

LIMIT OF SUBDIVISION

LIMIT OF SUBDIVISION

LIMIT OF SUBDIVISION

PRESSURE ZONE 4

VALVE TO REMAIN IN "OFF" POSITION

LIMIT OF SUBDIVISION

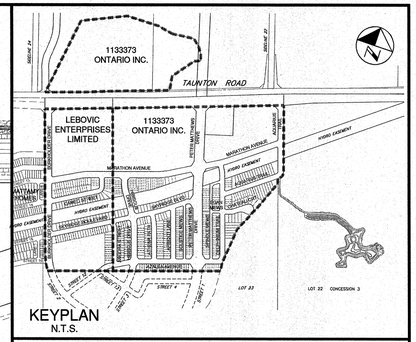
VALVE TO REMAIN IN "OFF" POSITION

PRESSURE ZONE 3

PROP 600mm Corrugated Steel Culverts @ 2.70%

PROP 675mm Corrugated Steel Culverts @ 2.70%

PROP 750mm Corrugated Steel Culverts @ 2.70%



KEYPLAN
N.T.S.

LEGEND

PROPOSED OGS UNIIT

REFER TO DRAWING No.100 FOR GENERAL NOTES

ELEVATIONS HEREON ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING BENCHMARK No. 2-045, HAVING A PUBLISHED ELEVATION OF 126.055m (COVD-1928:1978). BRASS TABLET SET HORIZONTALLY IN SOUTH FACE OF BRICK BUILDING, LOCATED 650m± WEST OF VALLEY ROAD AND 34m± NORTH OF THE CENTERLINE OF THIRD CONCESSION ROAD. TABLET IS LOCATED 0.47m WEST OF THE SOUTHEAST CORONER OF BUILDING AND IS 0.52m ABOVE GROUND LEVEL.

No.	DESCRIPTION	DATE	BY
	REVISIONS		
1	ISSUED FOR CONSTRUCTION	12/20/17	A.R.

THE CORPORATION OF THE CITY OF PICKERING
Engineering Services Department

APPROVED

Approval of the Regional Works Dept. for the purposes described in the applicable Regional Subdivision or Servicing Agreement. The Region is relying on the technical skill and ability of the P.Eng. sealing and signing this drawing.

By: PAUL ALLEN

Date: DEC. 20, 2017

1133373 ONTARIO INC.
(SP-2008-07)

LICENCE PROFESSIONAL ENGINEER K.A. BOBECHKO PROVINCE OF ONTARIO

WATERMAIN PRESSURE ZONE PLAN

COLE ENGINEERING
70 VALLEYWOOD DRIVE, MARKHAM, ON L3R 4T5
T 416.987.8181 / 905.940.8181 F 905.940.2064

DESIGN BY:	DRAWN BY:	PROJECT No.
A.L.	T.I.	LD12-0605
SCALE: 1:2500	DATE: MARCH 2015	DRAWING No. 105
CITY FILE No.:		

File : S:\2012 Projects\LD\LD12-0605 (2) 1133373ON_TauntonWSubdn_PKR\400-CADD\401-CAD\South\Sheets\1133373 Ontario Inc\PC\12-0605 GP 105 WM ZONE.dwg Date : May 10, 2018 - 9:31am, Edit By : sgecho

Domestic Water Demand

Project Name:	Fieldgate Seaton
Project Number:	23810
Location:	Seaton, ON
Date:	12/1/2025
Prepared by:	PB

Total Site Area 6.08 ha

Water Demands using Average Daily Consumption per Land Use

Flow Data			
Building ID	**Building Area (m^2)**	**Water use (Daily Average) ($L/d.m^2$) [2]**	**Area Flow (L/s)**
A1	3985	5	0.23
A2	611	5	0.04
A3	979	5	0.06
A4	1587	5	0.09
B	1117	5	0.06
C	725	5	0.04
D	650	5	0.04
E	845	5	0.05
F	1368	5	0.08
G	557	5	0.03
TOTAL	**12424**		**0.72**

Population Density	86	people/ ha
Population	**523**	people

Water Demands using per Capita Consumption

Region's per capita average consumption	364	Lcpd
Water Demand	**2.20**	L/s

MOE Table 3-1 (2008 Design Guidelines for Drinking-Water Systems) Peaking Factors for Drinking Water Systems Serving More than 500 People

POPULATION	MINIMUM RATE FACTOR (MINIMUM HOUR)	MAXIMUM DAY FACTOR	PEAK RATE FACTOR (PEAK HOUR)
500 - 1 000	0.40	2.75	4.13

MOE Peaking Factors

Max Day Factor	2.75
Peak Hour Factor	4.13

Water Demands using Average Daily Consumption per Land Use (with MOE Peaking Factors)

Building ID	Area Flow (L/s)	Maximum Day (L/s)	Maximum Hour (L/s)
A1	0.23	0.63	0.95
A2	0.04	0.10	0.15
A3	0.06	0.16	0.23
A4	0.09	0.25	0.38
B	0.06	0.18	0.27
C	0.04	0.12	0.17
D	0.04	0.10	0.16
E	0.05	0.13	0.20
F	0.08	0.22	0.33
G	0.03	0.09	0.13
TOTAL	**0.72**	**1.98**	**2.97**

Water Demands using per Capita Consumption (with MOE Peaking Factors)

	Area Flow (L/s)	Maximum Day (L/s)	Maximum Hour (L/s)
Total Site	2.20	6.06	9.10

Fire Underwriters Survey - Fire Demand Calculations

Project Name: Fieldgate Seaton Commercial
Project Number: 23810
Location: Pickering, ON
Date: 4-Dec-25
Prepared By: PB

Guide for Determination of Required Flow Copyright I.S.O

Building Information					System Type									Occupancy / Contents Information		Exposure Charge															Unadjusted Flow (F=220C sqrt A)			Correction Factors				Required Flow		
																East			West			North			South															
Building	NBC Occupancy	Footprint Area (m²)	# of Storeys [1]	Additional Area(s) (m²)	Construction Class	NFPA 13 Sprinkler	Credit	Standard Water Supply	Credit	Fully Supervised	Credit	Total Credits	Contents Factor	Contents Charge	Distance (m)	L-Ht (ft) [2]	Charge	Distance (m)	L-Ht (ft) [2]	Charge	Distance (m)	L-Ht (ft) [2]	Charge	Distance (m)	L-Ht (ft) [2]	Charge	Total Charges (Maximum 75%) [3]	Building Contiguous	Fire Resistive ≥Min 2 Hr Rating?	C	A (m²)	F (L/min) [4]	Occupancy / Contents	Flow Adjusted for Occupancy / Contents	Sprinkler Decrease	Exposure Charge	Lmin	Lis
A1	E	3985	1	0	NC	YES	30%	YES	10%	YES	10%	50%	LC	-15%	over 45	over 100	0%	0 to 3	over 100	5%	over 45	over 100	0%	over 45	over 100	0%	5%	NO	YES	0.8	3985	11000	-1650	9350	4675	5%	5000	83.33
A2, A3, A4	E	3177	1	0	NC	YES	30%	YES	10%	YES	10%	50%	LC	-15%	0 to 3	over 100	5%	over 45	over 100	0%	over 45	over 100	0%	over 45	over 100	0%	5%	NO	YES	0.8	3177	10000	-1500	8500	4250	5%	5000	83.33
B	E	1117	1	0	NC	YES	30%	YES	10%	YES	10%	50%	LC	-15%	over 45	over 100	0%	over 45	over 100	0%	3.1 to 10	61 to 80	2%	over 45	61 to 80	0%	2%	NO	YES	0.8	1117	6000	-900	5100	2550	2%	3000	50.00
C	E	725	1	0	NC	NO	0%	YES	0%	NO	0%	0%	LC	-15%	over 45	over 100	0%	over 45	over 100	0%	over 45	61 to 80	0%	3.1 to 10	61 to 80	2%	2%	NO	YES	0.8	725	5000	-750	4250	0	2%	4000	66.67
D	E	650	1	0	NC	NO	0%	YES	0%	NO	0%	0%	LC	-15%	3.1 to 10	61 to 80	2%	over 45	61 to 80	0%	over 45	over 100	0%	over 45	over 100	0%	2%	NO	YES	0.8	650	4000	-600	3400	0	2%	3000	50.00
E	E	845	1	0	NC	NO	0%	YES	0%	NO	0%	0%	LC	-15%	20.1 to 30	61 to 80	0%	3.1 to 10	61 to 80	2%	over 45	over 100	0%	over 45	over 100	0%	2%	NO	YES	0.8	845	5000	-750	4250	0	2%	4000	66.67
F	E	1368	1	0	NC	YES	30%	YES	10%	YES	10%	50%	LC	-15%	10.1 to 20	61 to 80	1%	20.1 to 30	61 to 80	0%	over 45	over 100	0%	over 45	over 100	0%	1%	NO	YES	0.8	1368	7000	-1050	5950	2975	1%	3000	50.00
G	E	557	1	0	NC	NO	0%	YES	0%	NO	0%	0%	LC	-15%	over 45	61 to 80	0%	10.1 to 20	61 to 80	1%	over 45	81 to 100	0%	over 45	81 to 100	0%	1%	NO	YES	0.8	557	4000	-600	3400	0	1%	3000	50.00

Inputs and Calculation Notes:

Flow = $F = 220C\sqrt{A}$

where:
- F = the required fire flow in litres per minute (rounded to the nearest 1000 Lpm)
- C = coefficient related to the type of construction
  - = 1.5 for wood frame construction (structure essentially all combustible)
  - = 1.0 for ordinary construction (brick or other masonry walls, combustible floor and interior)
  - = 0.8 for non-combustible construction (unprotected metal structural components, masonry or metal walls)
  - = 0.6 for fire-resistive construction (fully protected frame, floors, roof)
- A = the total floor area in square meters (including all storeys, but excluding basements at least 50% below grade) in the building being considered

Construction Classes
- WF = Wood frame construction
- OC = Ordinary construction
- NC = Non-combustive construction
- FC = Fire-resistive construction

Contents Factors
- NC = Non-combustible (-25%)
- LC = Limited combustible (-15%)
- C = Combustible (No charge)
- FB = Free burning (+15%)
- RB = Rapid burning (+25%)

Notes
Adequate Firewall with rating of not less than 2 hours is present between A1 and A2.
All buildings are assumed non combustible with protected vertical openings as per FUS 2020 (i.e. min 1 hr rating of enclosures and openings with automatic closing doors, etc.)
The architect will review and confirm the assumptions made regarding constuction class, sprinkler systems, contents factor, minimum fire ratings, etc.

Footnotes
[1] Includes all storeys, but excluding basements at least 50% below grade in the building being considered
[2] Length x Height of Facing Wall of Exposure Building determined by multiplying the length of the facing wall of the exposure in feet by the height of the exposure in stories
[3] Maximum exposure charge = 75%
[4] Round to nearest 1,000 L/min

APPENDIX C

Drawings

TAUNTON ROAD

BURKHOLDER DRIVE

MARATHON AVENUE

FUT. RESIDENTIAL DEVELOPMENT

PRIVATE ROAD

BLDG D (±650 S.M.) (±7,000 S.F.) FFE =173.50

BLDG E (±845 S.M.) (±9,096 S.F.) FFE =172.70

BLDG F (±1,368 S.M.) (±14,726 S.F.) FFE =171.70

BLDG G (±557 S.M.) (±6,000 S.F.) FFE =170.70

BLDG C (±720 S.M.) (±7,799 S.F.) FFE =173.90

BLDG B (±1,117 S.M.) (±12,021 S.F.) FFE =172.70

A1 (±3,985 S.M.) (±42,893 S.F.) FFE =170.00

A2 (±611 S.M.) (±6,572 S.F.) FFE =170.55

A3 (±978 S.M.) (±10,528 S.F.) FFE =171.35

A3 FFE =170.90

A4 (±1,586 S.M.) (±17,068 S.F.) FFE =171.80

FFE =173.00

FFE =173.30

FFE =173.90

FFE =173.90

FFE =173.70

FFE =173.70

FFE =173.70

FFE =171.10

MECHANICAL ROOM FOR A2, A3, AND A4

TRANS NORTHERN PIPELINE INC. EASEMENT

APPROX. OUTLINE OF FUTURE SIDEWALK

U/G CHAMBER #1 FOOTPRINT=121/m² TOP OF TANK: 170.40

U/G CHAMBER #2 FOOTPRINT=140/m² TOP OF TANK: 168.00

U/G CHAMBER #3 FOOTPRINT=140/m² TOP OF TANK: 167.00

U/G CHAMBER #3 BTM: 165.50 TOP: 167.00 HIGH G/W: 165.00

MATCH TO EXISTING PAVEMENT STRUCTURE ON TAUNTON ROAD AS PER THE REGIONAL MUNICIPALITY OF DURHAM DRAWING SET (CONTRACT NO. 1797-2B-01), PREPARED BY COLE ENGINEERING, DATED JUNE 14, 2019:

- 40mm SP12.5 FC (PG 64-28)
- 130mm SP 19 (PG 64-28) 2-LIFTS
  - 250mm GRAN 'A'
  - 600mm GRAN 'B'

MATCH TO EXISTING PAVEMENT STRUCTURE ON TAUNTON ROAD AS PER THE REGIONAL MUNICIPALITY OF DURHAM DRAWING SET (CONTRACT NO. 1797-2B-01), PREPARED BY COLE ENGINEERING, DATED JUNE 14, 2019:

- 40mm SP12.5 FC (PG 64-28)
- 130mm SP 19 (PG 64-28) 2-LIFTS
  - 250mm GRAN 'A'
  - 600mm GRAN 'B'

PROPOSED ELEVATIONS ALONG PROPERTY LINE, 2% TO EXISTING MUP

PROPOSED ELEVATIONS ALONG PROPERTY LINE, 2% TO EXISTING CONC. S/W

PROPOSED ELEVATIONS ALONG PROPERTY LINE, 2% TO EXISTING TOP OF CURB

0.3m HIGH R/W AS PER DETAILS BY MBTW

0.3m HIGH R/W AS PER DETAILS BY MBTW

0.5m HIGH RETAINING WALL AS PER PLANS BY MBTW

0.4m HIGH RETAINING WALL AS PER PLANS BY MBTW

3 RISERS @ 0.15m

1 X 0.15m RISERS

3 X 0.15m RISERS

V-NOTCH SWALE AS PER DETAIL ON SDP-2

V-NOTCH SWALE WITH SUBDRAIN AS PER DETAIL ON SDP-2

FLAT BOTTOM SWALE AS PER DETAIL ON SDP-2

FLAT BOTTOM SWALE WITH SUBDRAIN AS PER DETAIL ON SDP-2

SWALE WITH SUBDRAIN AS PER DETAIL ON SDP-2

SWALE WITH SUBDRAIN AS PER DETAIL ON SDP-2

PROPOSED BIOSWALE WITH RAISED CATCHBASIN LID AS PER SDP-2

DCB LID RAISED 6" HIGHER THAN ADJACENT SWALE AS PER DETAIL ON SDP-2

DCB LID RAISED 6" HIGHER THAN ADJACENT SWALE AS PER DETAIL ON SDP-2

PROPOSED TRANSFORMER PAD ELEV=173.30 REFER TO ELECTRICAL DRAWINGS

PROPOSED TRANSFORMER PAD ELEV=171.00 REFER TO ELECTRICAL DRAWINGS

PROPOSED TRANSFORMER PAD ELEV=173.35 REFER TO ELECTRICAL DRAWINGS

REMOVE EXISTING SIDEWALK, REGRADE ENTRANCE, AND INSTALL NEW CONCRETE SIDEWALK TO PROPOSED ELEVATION. MATCH TO LOCATIONS AS SHOWN

MECHANICALLY CUT EXISTING CURB ALONG PROPOSED ENTRANCE TO CREATE MOUNTABLE CURB.

MATCH TO EXISTING SIDEWALK

MATCH TO EXISTING ELEVATION AT PROPERTY LINE

MATCH TO EXISTING ELEVATIONS

MATCH TO EXISTING CURB

LOADING DOCK TRENCH DRAIN AND RETAINING WALL DESIGN AND DETAILS BY OTHERS

TOE WALL AS PER OPSD 3120.100 OR APPROVED EQUIVALENT. VEHICLE GUARD RAIL TO BE INSTALLED BEHIND WALL

20cm MAX HEIGHT HIGH CURB/TOE WALL

20cm HIGH CURB

450mm THICK, 200mm DIA. RIP-RAP ON TERRAFIX 402R FILTER CLOTH

14.4m - 375mm DIA PVC @ ST STM CULVERT @ 2.00% CONNECTED TO CB15 AT INV 166.70

REMOVE CURB, ASPHALT, ETC. IN ORDER TO COMPLETE SERVICE CONNECTIONS. MATCH TO EXISTING ASPHALT WITH STEP JOINT.

CURB CUTS SPACED AS SHOWN

CONCRETE LOADING

CONCRETE

ASPHALT

ASPHALT TRAIL

LANDSCAPING

PAVERS

CONCRETE

CONC. S/W

EX. CURB

EX. SIDEWALK

EX. MUP

EX. DRAINAGE DITCH

EX. RIP RAP

GRAVEL SPILLWAY

EX. C/L

PROPOSED PRIVATE ROAD CROSS SECTION

TYPICAL PRIVATE ROAD CROSS SECTION (N.T.S.)

17.0m ROW

1.80m SOD | 2.10m 2.0% SLOPE | 0.50m TOP/BACK OF CURB / BOTTOM OF CURB / EDGE OF PAVEMENT | 4.45m 2.0% SLOPE | CROWN OF THE ROAD | 4.45m 2.0% SLOPE | 0.50m EDGE OF PAVEMENT / BOTTOM OF CURB / TOP/BACK OF CURB | 3.20m 2.0% SLOPE SOD

SIDEWALK PER OPSD 310.020

CURB & GUTTER PER OPSD 600.040 (TYP.)

SECTION 1-1

HORIZ.: 1:300
VERT.: 1:60

MAX 3:1

EASEMENT

SWALE WITH SUBDRAIN AS PER DETAIL ON SDP-2, MAX 3:1 SLOPING.

5.2%

ASPHALT TRAIL

2.0%

TNP EASEMENT

SWALE WITH SUBDRAIN AS PER DETAIL ON SDP-2, MAX 3:1 SLOPING.

MARATHON AVENUE

MATCH TO EXISTING TOP OF CURB ELEVATION.

APPROXIMATE HIGH G/W AS PER GEMTEC HYDROGEOLOGICAL STUDY, DATED OCTOBER 2025. SEE FIGURE B-5.

U/G CHAMBER #3 BTM: 165.50 TOP: 167.00 HIGH G/W: 165.00

LEGEND

× 100.00	PROPOSED ELEVATION
× 100.00 (SW)	PROPOSED SWALE ELEVATION
× (100.00)	PROPOSED PROPERTY LINE ELEVATION
× 100.00 (TC)	TOP OF CURB ELEVATION
× 100.00 (TW)	TOP OF WALL ELEVATION
× 100.00 (BW)	BOTTOM OF WALL ELEVATION
× 100.00 (G)	PROPOSED EDGE OF GUTTER ELEVATION
× 100.00 (TDC)	PROPOSED TOP OF DEPRESSED CURB ELEVATION
× *100.00 (EX)*	EXISTING ELEVATION
	PROPOSED CATCHBASIN
	MAXIMUM 3:1 SLOPE (UNLESS OTHERWISE NOTED)
	PROPOSED STORM MANHOLE
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED DOUBLE CATCHBASIN
	PROPOSED DOUBLE CATCHBASIN MANHOLE
100.00	PROPOSED SANITARY MANHOLE
	PROPOSED VALVE AND BOX
	PROPOSED HYDRANT
	EXISTING CONTOUR
	PROPOSED BOTTOM OF SWALE
	EMERGENCY OVERLAND FLOW ROUTE
	PROPERTY LINE
	PROPOSED RETAINING WALL AS PER LANDSCAPE DESIGNS AND DETAILS
	PROPOSED TRANSFORMER
	EXISTING STORM MANHOLE
	EXISTING CATCH BASIN

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/23	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER — B.JACKSON 100210382 — DEC. 4, 2025 — PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC. 1 Rosebrugh Crescent Burlington, ON L7L 7A9

NORTH ARROW

KEY PLAN N.T.S

SITE — TAUNTON RD — WATER TOWER DR — CLEAR CREEK DR — BURKHOLDER DR — THIRD CONCESSION RD

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE

0 5 10 20

1:500

SITE GRADING PLAN

FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-0019 - A 06/25 ; PRE 023-108/22
PICKERING, ONTARIO

CHECKED BY: BJ
DRAWN BY: RB
PROJECT No: 23810

SGP

TAUNTON ROAD

CROSSING TABLE

1	300 STM INV=171.62 200 SAN OBV=171.28 VERTICAL SEP=0.34m	8	300 STM INV=168.02 525 STM OBV=167.665 525 STM OUTER OBV=167.765 VERTICAL SEP=0.255m
2	300 STM INV=170.22 200 SAN OBV=169.88 VERTICAL SEP=0.34m	9	300 STM INV=167.21 200 SAN OBV=166.85 VERTICAL SEP=0.36m
3	300 STM INV=170.09 200 SAN OBV=169.78 VERTICAL SEP=0.31m	10	300 STM INV=166.49 525 STM OBV=166.305 525 STM OUTER OBV=166.405 VERTICAL SEP=0.085m
4	300 STM INV=168.62 200 SAN OBV=168.32 VERTICAL SEP=0.30m	11	300 STM INV=165.76 200 SAN OBV=165.36 VERTICAL SEP=0.40m
5	200 SAN INV=168.38 300 STM OBV=167.97 VERTICAL SEP=0.41m	12	200 SAN INV=166.31 300 STM OBV=165.17 VERTICAL SEP=1.14m
6	300 STM INV=169.21 200 SAN OBV=168.80 VERTICAL SEP=0.41m	13	250 STM INV=165.80 300 STM OBV=165.14 VERTICAL SEP=0.66m
7	300 STM INV=168.64 200 SAN OBV=167.50 VERTICAL SEP=1.14m	14	250 STM INV=165.83 200 SAN OBV=164.36 VERTICAL SEP=1.47m
		15	300 STM INV=164.04 EX.200 SAN OBV=161.02 VERTICAL SEP=3.02m

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/23	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER
B.JACKSON
100210382
DEC. 4, 2025
PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC.
1235 North Service Rd. W.
Burlington, ON L7L 7A9

NORTH ARROW

FUTURE RESIDENTIAL DEVELOPMENT AREA

SITE
KEY PLAN N.T.S
TAUNTON RD
SHERWOOD FOREST DR
THIRD CONCESSION RD
BROCK RD

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

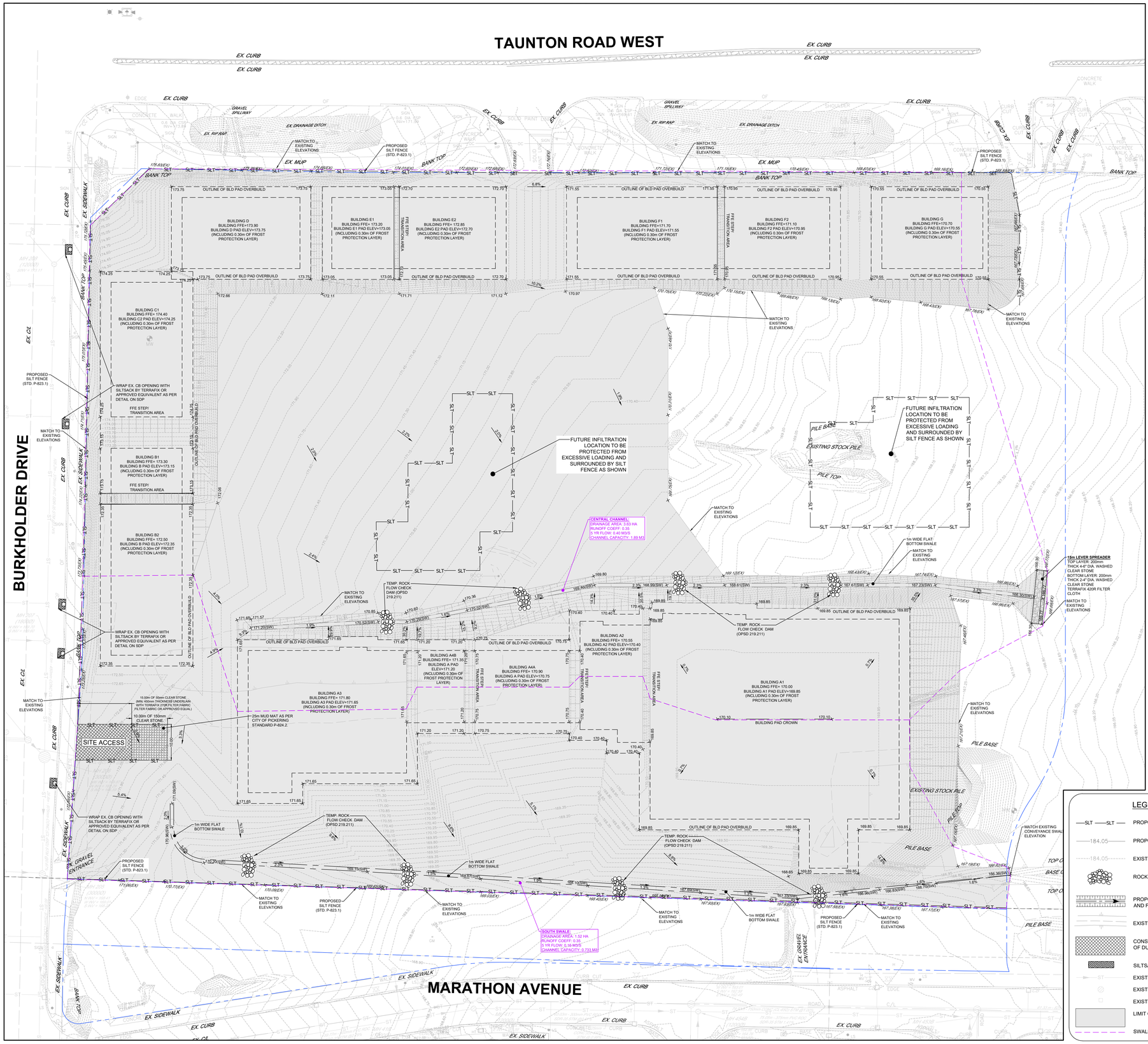
METRIC SCALE
0 5 10 20
1:500

LEGEND

- PROPOSED STORM SEWER (<750Ø)
- PROPOSED STORM SEWER (>=750Ø)
- PROPOSED STORM MANHOLE (OPSD 701.010 - 701.012) (SIZE AS SHOWN)
- PROPOSED DOUBLE CATCHBASIN MANHOLE (OPSD 701.010) (SIZE AS SHOWN)
- PROPOSED STORM CATCHBASIN MANHOLE(OPSD 701.011 / 703.021) (SIZE AS SHOWN)
- PROPOSED CATCHBASIN (OPSD 705.010)
- PROPOSED DOUBLE CATCHBASIN (OPSD 705.020)
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING STORM CATCHBASIN MANHOLE
- EXISTING CATCHBASIN
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE (OPSD 701.010) (SIZE AS SHOWN)
- EXISTING SANITARY SEWER
- EXISTING SANITARY MANHOLE
- PROPOSED WATERMAIN
- PROPOSED HYDRANT AND VALVE
- PROPOSED VALVE AND BOX
- EXISTING WATERMAIN
- EXISTING HYDRANT
- EXISTING VALVE AND BOX
- PROPOSED SUBDRAIN BENEATH SWALE AS PER DETAILS ON SDP-2
- PROPOSED SWALE BOTTOM
- PIPE CROSSING

SITE SERVICING PLAN
FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001/P - A 06/25 - PRE 023-026/22
PICKERING, ONTARIO
PROJECT No: 23810 | DRAWN BY: RB | CHECKED BY: BJ

SSP



EROSION & SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORK, MAINTAINED THROUGHOUT CONSTRUCTION, AND ONLY REMOVED UPON STABILIZATION OF THE DISTURBED AREAS.
2. SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS WITH A MINIMUM FREQUENCY OF:
   2.1. ON A WEEKLY BASIS
   2.2. BEFORE AND AFTER EVERY RAINFALL EVENT (>12mm)
   2.3. AFTER SIGNIFICANT SNOWMELT EVENTS
   2.4. MONTHLY DURING INACTIVE PERIODS (> 30 DAYS), AND
   2.5. DAILY DURING EXTENDED RAIN OR SNOWMELT PERIODS.
3. REPAIRS TO ESC MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
4. ADDITIONAL MATERIALS SUCH AS CLEAR STONE (12mm OR GREATER), FILTER FABRIC, PUMPS, HOSES AND SILTSOXX TO BE KEPT ONSITE AT ALL TIMES FOR CONDUCTING REPAIRS TO SEDIMENT CONTROL MEASURES.
5. ALL DISTURBED AREAS THAT WILL BE LEFT INACTIVE FOR MORE THAN THIRTY (30) DAYS ARE TO BE STABILIZED WITH THE EXCEPTION OF THE PREGRADED AREAS WHERE DRAINAGE IS COLLECTED IN AN APPROPRIATE EROSION CONTROL SYSTEM (IE. POND, SEDIMENT BASIN).
6. ENGINEERED CHANGES TO THE ESC MEASURES MAY BE NEEDED AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT CONTROL AND EROSION ONSITE AND SHOULD BE COMPLETED BASED ON DIRECTION FROM THE SITE ENGINEER. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
7. REFUELING IS TO TAKE PLACE ONLY WITHIN DESIGNATED AREAS AND SHALL BE A MINIMUM OF THIRTY METRES FROM ANY WATERCOURSE OR ENVIRONMENTALLY SENSITIVE AREA.
8. SILT CLEANUP EQUIPMENT SUCH AS ABSORPTIVE MEDIA IS TO BE MAINTAINED ON-SITE FOR IMMEDIATE USE IN THE EVENT OF A SPILL.
9. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN-UP AND RESTORATION, INCLUDING ALL COSTS, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
10. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS (EG. ROAD OCCUPANCY PERMIT, ACCESS PERMIT, ETC).
11. SPILLED OR TRACKED MATERIALS FROM THE CONTRACTOR'S HAULING VEHICLES ON ROADS WILL BE CLEANED UP AND THE SITE WILL BE LEFT IN A NEAT CONDITION AT THE END OF EACH WORKING DAY. THE CONTRACTOR WILL ARRANGE FOR OFF-SITE DISPOSAL OF ALL WASTE MATERIAL AND RUBBISH IN A MANNER THAT COMPLIES WITH ALL LAWS AND REGULATIONS.
12. SECONDARY CONTAINMENT IS REQUIRED FOR ALL STATIONARY NON-SELF-PROPELLED PETROLEUM FILLED EQUIPMENT (I.E. PUMPS, GENERATORS, ETC.)
13. THE CONTRACTOR WILL KEEP THE SITE FREE FROM ACCUMULATIONS OF WASTE MATERIALS, SURPLUS FILL, TOPSOIL AND ALL DEBRIS SUCH AS BOULDERS, BROKEN ASPHALT, BROKEN CONCRETE OR UNSUITABLE EARTH MATERIALS.
14. PROVIDE TERRAFIX SILT SACK (OR APPROVED EQUIVALENT) ON ANY EXISTING OR PROPOSED CATCH BASINS / CATCHBASIN MANHOLES WITHIN THE INFLUENCE OF THE CONSTRUCTION REFER TO DETAIL ON SD..
15. SEDIMENT TO BE REMOVED FROM THE SEDIMENT BASINS BEFORE IT IS 25% FULL AND FROM SILT FENCE BEFORE IT IS 33% FULL.
16. SLOPE TRACKING TO BE USED AS NEEDED WHERE EROSIVE ACTIVITIES ARE OBSERVED AND ON SLOPES IN EXCESS OF 3:1. SEE TRACKING DETAIL ON DWG SDP. MULCHING, SEEDING, OR EROSION BLANKETS MAY BE REQUIRED FOR FURTHER STABILIZATION.
17. ALL STOCKPILE AREAS LEFT EXPOSED FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH APPROPRIATE NON-INVASIVE SPECIES. WINTER CONTINGENCY MEASURES SHALL BE IMPLEMENTED AS EROSION CONTROL FOR APPROPRIATE STABILIZATION OUTSIDE THE GROWING SEASON.
18. DUST CONTROL IS TO BE PROVIDED AS REQUIRED THROUGHOUT THE DURATION OF THE PROJECT TO PREVENT SIGNIFICANT DUST WITHIN THE AIR DURING CONSTRUCTION.
19. GOOD HOUSEKEEPING PRACTICES ARE TO BE FOLLOWED ON SITE DURING CONSTRUCTION AND MONITORED ON A DAILY BASIS. THIS INCLUDES, BUT IS NOT LIMITED TO:
    19.1. APPROPRIATE STORAGE AND DISPOSAL OF CONSTRUCTION MATERIALS,
    19.2. APPROPRIATE STORAGE AND DISPOSAL OF GARBAGE AND DEBRIS,
    19.3. APPROPRIATE DISPOSAL OF CONCRETE WASTE TO AN APPROVED DISPOSAL FACILITY, AND
    19.4. SECONDARY CONTAINMENT OF PETROLEUM-BASED PRODUCTS (JERRY CANS, OIL, ETC.).

CITY OF PICKERING - EROSION AND SEDIMENT CONTROL GENERAL NOTES

1. PRIOR TO COMMENCEMENT OF ANY ON-SITE WORK/TOPSOIL STRIPPING, EROSION AND SEDIMENT CONTROL (ESC) MEASURERS, AS PER APPROVED EROSION & SEDIMENT CONTROL PLAN, MUST BE INSTALLED TO PREVENT SURFACE RUNOFF FROM LEAVING THE SITE "UNTREATED". ALL ESC MEASURES ARE TO BE MAINTAINED UNTIL THE SITE HAS BEEN STABILIZED.
2. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE PROPER INSTALLATION, MAINTENANCE AND REMOVAL OF ALL TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES DURING CONSTRUCTION, AS DIRECTED BY THE ENGINEER OR CITY OF PICKERING.
3. SEDIMENT CONTROL FENCE TO USE GEOTEXTILE WITH WEAVE DENSITY OF 270R TERRAFIX OR EQUIVALENT.
4. ALL EXPOSED SOIL SHALL BE IMMEDIATELY STABILIZED AS DIRECTED BY THE ENGINEER OR CITY OF PICKERING.
5. CHECK DAMS ARE TO BE USED IN ANY TEMPORARY DRAINAGE SWALES REQUIRED DURING CONSTRUCTION PERIOD.
6. ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES MAY BE REQUIRED AND SHALL BE DETERMINED BY THE ENGINEER OR CITY OF PICKERING.
7. ALL SWALES ARE TO BE STABILIZED PRIOR TO USE.
8. INSPECTION OF THE PROPOSED EROSION AND SEDIMENT CONTROL MEASURES WILL OCCUR ON A WEEKLY BASIS, AFTER RAINFALL EVENTS EXCEEDING 10mm OR AFTER RAPID SNOW MELT EVENTS AND DAILY DURING EXTENDED RAIN OR SNOW MELT PERIODS. THE SILT CONTROL FENCE MUST BE INSPECTED FOR RIPS OR TEARS, BROKEN STAKES, BLOW OUTS AND ACCUMULATION OF SEDIMENT. THE SILT CONTROL FENCE MUST BE FIXED AND/OR REPLACED IMMEDIATELY WHEN DAMAGED. ACCUMULATED SEDIMENT MUST BE REMOVED FROM THE SILT CONTROL FENCE WHEN ACCUMULATION REACHES 50% OF THE HEIGHT OF THE FENCE.
9. ROCK CHECK DAMS ARE O BE CLEANED OF ALL ACCUMULATED SEDIMENT AS SOON AS SEDIMENT HAS ACCUMULATED TO A DEPTH GREATER THAN 50% OF ALL THE UPSTREAM CHECK DAMS.
10. CLEANING AND REPAIR OF MUD MATS AND ANY OTHER TEMPORARY SEDIMENT CONTROL MEASURES SHALL BE DONE AS NECESSARY THROUGH REGULAR INSPECTION OR AS DIRECTED BY THE ENGINEER OR CITY OF PICKERING. ALL DAMAGED ESC MEASURERS SHALL BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF INSPECTION.
11. MATERIAL TO REPAIR DAMAGED ESC MEASURES MUST BE KEPT ON-SITE AT ALL TIMES.
12. THE ESC STRATEGIES ON THESE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASES. FAILED ESC MEASURES MUST BE REPAIRED IMMEDIATELY.
13. NO CONSTRUCTION ACTIVITY OR MACHINERY SHALL INTRUDE BEYOND THE SITE CONTROL FENCE OR LIMIT OF DEVELOPMENT. ALL CONSTRUCTION VEHICLES SHALL LEAVE THE SITE AT DESIGNATED LOCATION(S) AS SHOWN ON THE PLAN. ALL MATERIALS AND EQUIPMENT SHALL BE STORED ON SITE IN A DESIGNATED AREA. NO MATERIAL OR EQUIPMENT SHALL BE STORED ON THE MUNICIPAL RIGHT OF WAY. NO CONSTRUCTION VEHICLES WILL PARK ON MUNICIPAL ROADS.
14. SERVICING OF CONSTRUCTION EQUIPMENT ON SITE IS PROHIBITED.
15. THE CONTRACTOR MUST CLEAN ADJACENT ROADS ON A REGULAR BASIS. THE ROAD SHALL BE, AT A MINIMUM SCRAPED DAILY AND FLUSHED (IF NECESSARY) ON FRIDAY EVENINGS OR SATURDAY MORNINGS.
16. DUST CONTROL TO BE REVIEWED DAILY. WATER TRUCK OR CALCIUM CHLORIDE IS TO BE PROVIDED ON-SITE AND HAUL ROADS/WORKING AREAS ARE TO BE TREATED AS REQUIRED TO ENSURE THAT DUST IS CONTROLLED ON-SITE.
17. AT THE END OF CONSTRUCTION PERIOD, ACCUMULATED SEDIMENT IS TO BE REMOVED OFF SITE PRIOR TO THE REMOVAL OF SILT FENCE.
18. ALL LITTER AND DEBRIES SHALL BE MONITORED AND DISPOSED OF DAILY OR AS NECESSARY THROUGH REGULAR INSPECTION.
19. ALL TOPSOIL STOCKPILES SHALL BE SURROUNDED WITH SEDIMENT CONTROL FENCE AND STABILIZED WITH SEED MIX AS PER THIS DRAWING.
20. DISTURBED AREAS ARE TO BE MINIMIZED TO THE EXTEND POSSIBLE AND STABILIZED AS THE WORK PROGRESSES. ANY AREA EXPOSED FOR MORE THAN 30 DAYS WILL BE STABILIZED.

TRCA - STANDARD NOTES

1. EROSION AND SEDIMENT CONTROL (ESC) MEASURES WILL BE IMPLEMENTED PRIOR TO, AND MAINTAINED DURING THE CONSTRUCTION PHASES, TO PAVEMENT ENTRY OF SEDIMENT INTO THE WATER . ALL DAMAGED EROSION AND SEDIMENT CONTROL MEASURES SHOULD BE PREPAID AND/OR REPLACED WITHIN 48 HOURS OF THE INSPECTION.
2. DISTURBED AREAS WILL BE MINIMIZED TO THE EXTENT POSSIBLE. ANY AREAS LEFT UNDISTURBED FOR A PERIOD LONGER THAN 30 DAYS TO BE TEMPORARILY OR PERMANENTLY STABILIZED AND RESTORED AS THE WORK PROGRESSES , UTILIZING TERRASEEDING.
3. ALL IN-WATER AND NEAR WATER WORKS WILL BE CONDUCTED IN DRY WITH APPROPRIATE EROSION AND SEDIMENT CONTROLS.
4. THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREAS. IF THE PRESCRIBED MEASURES ON THE PLANS ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF A DELETERIOUS SUBSTANCE, INCLUDING SEDIMENT, THEN ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE POTENTIAL ECOLOGICAL IMPACTS. TRCA ENFORCEMENT OFFICER SHOULD BE IMMEDIATELY CONTACTED. ADDITIONAL ESC MEASURES TO BE KEPT ON SITE AND USED AS NECESSARY.
5. AN ENVIRONMENTAL MONITOR WILL ATTEND THE SITE TO INSPECT ALL ESC CONTROLS, AS WELL AS ON A REGULAR BASIS, OR FOLLOWING RAIN/SNOWMELT EVENT, TO MONITOR ALL WORKS RELATED TO EROSION AND SEDIMENT CONTROL, DEWATERING OR UNWATERING RESTORATION AND IN- OR NEAR-WATER WORKS. SHOULD CONCERNS ARISE ON THE SITE THE ENVIRONMENTAL MONITOR WILL CONTACT THE TRCA ENFORCEMENT OFFICER AS WELL AS AS THE PROPONENT.
6. ALL ACTIVITIES INCLUDING MAINTENANCE PROCEDURES, WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR REFUELING AND MAINTENANCE WILL BE CONDUCTED A MINIMUM OF 30 METERS FROM WATER.
7. THE PROPONENT/ CONTRACTOR SHALL MONITOR THE WEATHER SEVERAL DAYS IN ADVANCE OF THE ONSET OF THE PROJECT TO ENSURE THAT THE WORKS WILL BE CONDUCTED DURING FAVORABLE WEATHER CONDITIONS. SHOULD AND UNEXPECTED STORM ARISE, THE CONTRACTOR WILL REMOVE ALL UNFIXED ITEMS FROM THE REGIONAL STORM FLOOD PLAIN THE WOULD HAVE THE POTENTIAL TO CAUSE A SPILL OR AS OBSTRUCTION TO FLOW, E.G., FUEL TANKS, PORTA-POTTIES, MACHINERY, EQUIPMENT, CONSTRUCTION MATERIALS, ETC.
8. ALL DEWATERING/UNWATERING SHALL BE TREATED AND RELEASED TO THE ENVIRONMENT AT LEAST 30 METERS FROM A WATERCOURSE OR WETLAND AND ALLOWED TO DRAIN THROUGH A WELL VEGETATED AREAS. NO DEWATERING EFFLUENT SHALL BE SENT DIRECTLY TO ANY WATERCOURSE, WETLAND OR FOREST, OR ALLOWED TO DRAIN ONTO DISTURBED SOILS WITHIN THE WORK AREA. THESE CONTROL MEASURES SHALL BE MONITORED FOR THE EFFECTIVENESS AND MAINTAINED OR REVISED TO MEET THE OBJECTIVE OF PREVENTING THE RELEASE OF SEDIMENT LADEN WATER.
9. IN ORDER TO COMPLY WITH THE MIGRATORY BIRDS CONVICTION ACT, TRCA RECOMMENDS THAT TREE REMOVALS BE COMPLETED BETWEEN AUGUST 1 AND APRIL 1.
10. PLEASE NOTIFY TRCA ENFORCEMENT OFFICER AND TRCA PROJECT MANAGER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
11. AN ENVIRONMENTAL MONITOR WILL BE ON SITE, AND PROVIDE ADVICE, TO ENSURE THAT ACTIVITIES THAT SHOULD HAVE A NEGATIVE IMPACT TO THE NATURAL ENVIRONMENT ARE EFFECTIVELY MITIGATED AS CONSTRUCTION PROCEEDS. THE ENVIRONMENTAL MONITOR SHALL NOTIFY THE TRCA ENFORCEMENT OFFICER AND PROJECT MANAGER IF AN ISSUE ARISE.

SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES

1. INSTALL SILT FENCING AROUND THE SITE PERIMETER AS SHOWN ON THIS PLAN PER CITY OF PICKERING STANDARD DETAIL P-823.1 AS WELL AS THE SEDIMENT PROTECTION MEASURES AS SHOWN ON THIS PLAN.
2. INSTALL TEMPORARY CONSTRUCTION MUDMAT AT NORTHWEST CORNER OF SITE AS PER DETAIL ON SDP.
3. BUILD TEMPORARY BERM ALONG EAST SIDE OF THE SITE TO PROPOSED GRADES SHOWN ON THIS PLAN.
4. BUILDING 1m WIDE FLAT BOTTOM CUT-OFF SWALES WITH ROCK CHECK DAMS AT PROPOSED GRADES SHOWN ON THIS PLAN.
5. PLACE APPROVED FILL AND COMPACT BUILDING PAD TO SUBGRADE ELEVATIONS SHOWN ON THIS PLAN. CONFIRM FULLY TESTED CERTIFICATION OF BUILDING BY GEOTECHNICAL ENGINEER OF RECORD.
6. GRADE THE REST OF THE SITE AS SHOWN ON THIS PLAN AND MONITOR EROSION AND SEDIMENT TRAPS REGULARLY TO ENSURE THEIR FUNCTIONS ARE MAINTAINED.
7. COMPLETE AS-BUILT SURVEY WORK.

PERMIT CONDITIONS

1. ALL PERMIT HOLDERS SHALL:
   A) NOTIFY THE DIRECTOR, OR HIS/HER DESIGNATE A MINIMUM OF TWO BUSINESS DAYS PRIOR TO THE COMMENCEMENT OR RECOMMENCEMENT OF ANY LAND DISTURBING ACTIVITY;
   B) OBTAIN PERMISSION IN WRITING FROM THE DIRECTOR OR HIS/HER DESIGNATE PRIOR TO MODIFYING ANY ELEMENT OF THE EROSION AND SEDIMENT CONTROL PLAN;
   C) INSTALL ALL CONTROL MEASURES AS IDENTIFIED IN THE APPROVED EROSION AND SEDIMENT CONTROL PLAN;
   D) MAINTAIN ALL ROAD DRAINAGE SYSTEMS, STORMWATER DRAINAGE SYSTEMS, CONTROL MEASURES AND OTHER FACILITIES IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN;
   E) PROMPTLY REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPING OR DISTURBING ACTIVITIES;
   F) INSPECT THE SEDIMENTATION CONTROL MEASURES AT LEAST ONCE PER WEEK AND AFTER EACH RAINFALL OF AT LEAST ONE CENTIMETER AND MAKE NEEDED REPAIRS;
   G) ALLOW CITY OFFICERS OR AGENTS OF THE CITY TO ENTER THE SITE FOR THE PURPOSE OF INSPECTING FOR COMPLIANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN OR PERFORMING ANY WORK NECESSARY TO BRING THE SITE INTO COMPLIANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN;
   H) MAINTAIN A COPY OF THE PERMIT ON THE SITE;
   I) NOTIFY ALL SUB-CONTRACTORS AND SUPPLIERS OF APPROVED ACCESS ROUTES TO THE SITE AND ENSURE COMPLIANCE WITH THESE INSTRUCTIONS;
   J) MAINTAIN ALL ROADS IN SAME OR BETTER CONDITION THAN EXISTED PRIOR TO THE COMMENCEMENT OF THE WORK AND KEEP ALL ROADS FREE FROM ANY MATERIALS OR EQUIPMENT FROM THE WORK SET OUT IN THE PERMIT; AND
   K) ENSURE THAT NO CONSTRUCTION MACHINERY IS OPERATED IN CONTRAVENTION OF BY-LAW NUMBER 3021, AS AMENDED, (NOISE BY-LAW) OR ANY SUCCESSOR THERETO.
2. THE CITY:
   A) UPON THE FAILURE BY THE PERMIT HOLDER TO COMPLETE ALL OR PART OF THE WORKS IN THE TIME STIPULATED IN THE EROSION AND SEDIMENT CONTROL PLAN, THE CITY MAY DRAW THE APPROPRIATE AMOUNT FROM THE SECURITIES POSTED AND USE THE FUNDS TO ARRANGE FOR THE COMPLETION OF THE SAID WORKS, OR ANY PART THEREOF;
   B) UPON FAILURE BY THE PERMIT HOLDER TO INSTALL, REPAIR OR MAINTAIN A SPECIFIC PART OF THE WORKS AS REQUESTED BY THE CITY, AND IN THE TIME REQUESTED, THE CITY MAY AT ANY TIME AUTHORIZE THE USE OF ALL OR PART OF THE SECURITIES TO PAY THE COST OF ANY PART OF THE WORKS IT MAY IN ITS OR THEIR ABSOLUTE DISCRETION DEEM NECESSARY; AND
   C) IN THE CASE OF EMERGENCY REPAIRS OR CLEAN-UP, THE CITY MAY UNDERTAKE THE NECESSARY WORKS AT THE EXPENSE OF THE PERMIT HOLDER AND REIMBURSE ITSELF OUT OF SECURITIES POSTED BY THE APPLICANT.

24 HOUR CONTACTS:
GIANMARCO TAVANIELLO 416-989-8104
BRIAN TILLEY (416)717-8319

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/25	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER
B.JACKSON
100210382
DEC. 4, 2025
PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC.
1235 North Service Rd. E., Unit 171
Burlington, ON L7L 7A9

NORTH ARROW

SURVEY AND BENCHMARK NOTE

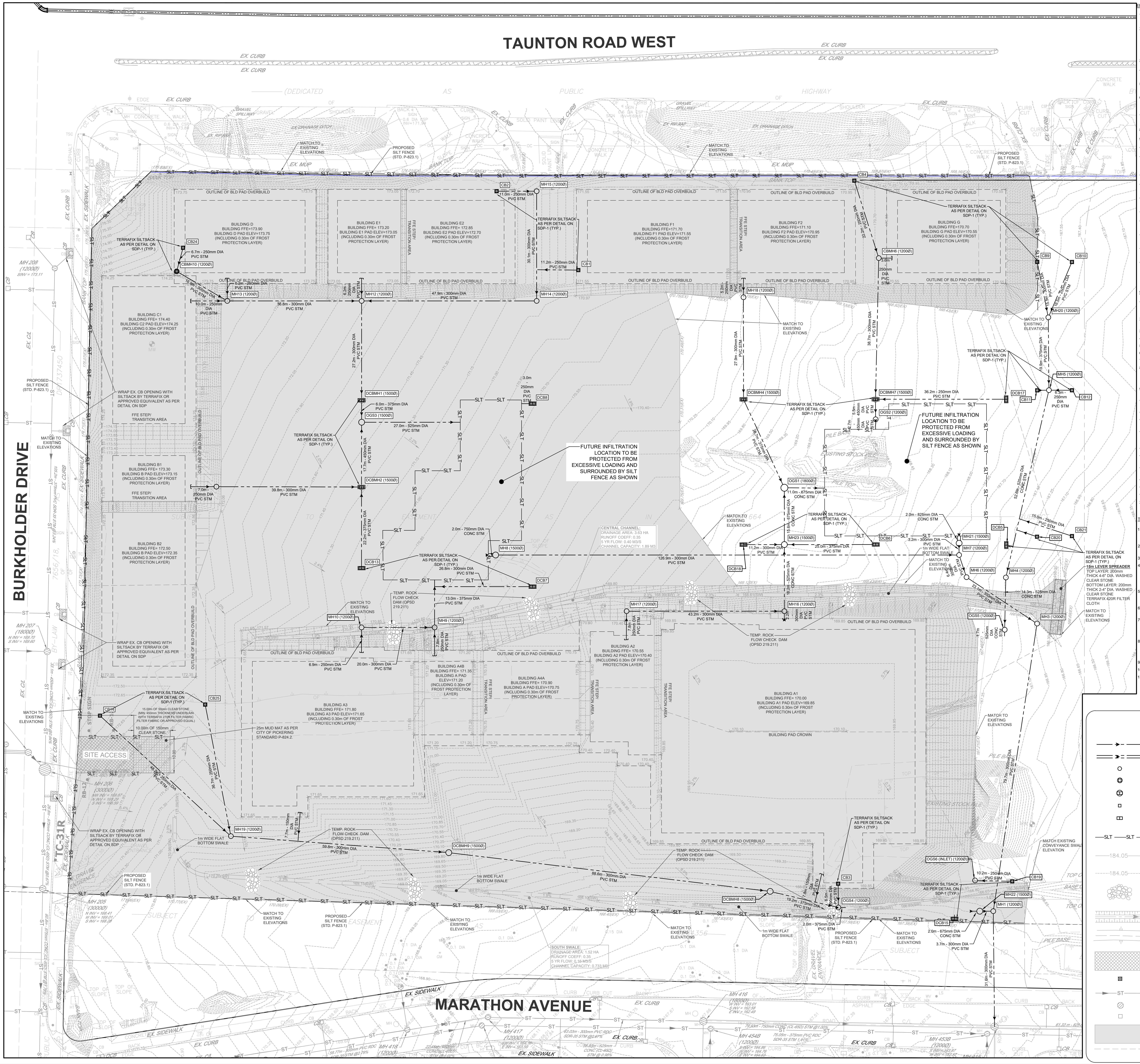
EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE
0 5 10 20
1:500

EROSION AND SEDIMENT CONTROL PLAN - 1
FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001/P - A 06/25 - PRE 023-02622
PICKERING, ONTARIO CITY OF PICKERING FILE: FB 01-2025
PROJECT No: 23810 DRAWN BY: RB CHECKED BY: BJ

ESC-1



EROSION & SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL MEASURES ARE TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORK, MAINTAINED THROUGHOUT CONSTRUCTION, AND ONLY REMOVED UPON STABILIZATION OF THE DISTURBED AREAS.
2. SEDIMENT CONTROLS SHOULD BE INSPECTED ON A REGULAR BASIS WITH A MINIMUM FREQUENCY OF:
   - 2.1. ON A WEEKLY BASIS
   - 2.2. BEFORE AND AFTER EVERY RAINFALL EVENT (>12mm)
   - 2.3. AFTER SIGNIFICANT SNOWMELT EVENTS
   - 2.4. MONTHLY DURING INACTIVE PERIODS (> 30 DAYS), AND
   - 2.5. DAILY DURING EXTENDED RAIN OR SNOWMELT PERIODS.
3. REPAIRS TO ESC MEASURES MUST BE COMPLETED IN A TIMELY MANNER TO PREVENT SEDIMENT MIGRATION.
4. ADDITIONAL MATERIALS SUCH AS CLEAR STONE (12mm OR GREATER), FILTER FABRIC, PUMPS, HOSES AND SILTSOXX TO BE KEPT ONSITE AT ALL TIMES FOR CONDUCTING REPAIRS TO SEDIMENT CONTROL MEASURES.
5. ALL DISTURBED AREAS THAT WILL BE LEFT INACTIVE FOR MORE THAN THIRTY (30) DAYS ARE TO BE STABILIZED WITH THE EXCEPTION OF THE PREGRADED AREAS WHERE DRAINAGE IS COLLECTED IN AN APPROPRIATE EROSION CONTROL SYSTEM (IE. POND, SEDIMENT BASIN).
6. ENGINEERED CHANGES TO THE ESC MEASURES MAY BE NEEDED AS SITE CONDITIONS CHANGE THROUGHOUT THE CONSTRUCTION PROCESS. THESE UPDATES MUST REFLECT BEST MANAGEMENT PRACTICES TO CONTROL SEDIMENT CONTROL AND EROSION ONSITE AND SHOULD BE COMPLETED BASED ON DIRECTION FROM THE SITE ENGINEER. ADDITIONAL MEASURES MAY BE REQUIRED AS DIRECTED BY AN ENGINEER THROUGHOUT THE CONSTRUCTION PROCESS.
7. REFUELING IS TO TAKE PLACE ONLY WITHIN DESIGNATED AREAS AND SHALL BE A MINIMUM OF THIRTY METRES FROM ANY WATERCOURSE OR ENVIRONMENTALLY SENSITIVE AREA.
8. SILT CLEANUP EQUIPMENT SUCH AS ABSORPTIVE MEDIA IS TO BE MAINTAINED ON-SITE FOR IMMEDIATE USE IN THE EVENT OF A SPILL.
9. THE CONTRACTOR WILL BE RESPONSIBLE FOR CLEAN-UP AND RESTORATION, INCLUDING ALL COSTS, DUE TO THE RELEASE OF SEDIMENT FROM THE SITE.
10. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING ALL NECESSARY PERMITS (EG. ROAD OCCUPANCY PERMIT, ACCESS PERMIT, ETC).
11. SPILLED OR TRACKED MATERIALS FROM THE CONTRACTOR'S HAULING VEHICLES ON ROADS WILL BE CLEANED UP AND THE SITE WILL BE LEFT IN A NEAT CONDITION AT THE END OF EACH WORKING DAY. THE CONTRACTOR WILL ARRANGE FOR OFF-SITE DISPOSAL OF ALL WASTE MATERIAL AND RUBBISH IN A MANNER THAT COMPLIES WITH ALL LAWS AND REGULATIONS.
12. SECONDARY CONTAINMENT IS REQUIRED FOR ALL STATIONARY NON-SELF-PROPELLED PETROLEUM FILLED EQUIPMENT (I.E. PUMPS, GENERATORS, ETC.)
13. THE CONTRACTOR WILL KEEP THE SITE FREE FROM ACCUMULATIONS OF WASTE MATERIALS, SURPLUS FILL, TOPSOIL AND ALL DEBRIS SUCH AS BOULDERS, BROKEN ASPHALT, BROKEN CONCRETE OR UNSUITABLE EARTH MATERIALS.
14. PROVIDE TERRAFIX SILT SACK (OR APPROVED EQUIVALENT) ON ANY EXISTING OR PROPOSED CATCH BASINS / CATCHBASIN MANHOLES WITHIN THE INFLUENCE OF THE CONSTRUCTION REFER TO DETAIL ON SD..
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2. DISTURBED AREAS WILL BE MINIMIZED TO THE EXTENT POSSIBLE. ANY AREAS LEFT UNDISTURBED FOR A PERIOD LONGER THAN 30 DAYS TO BE TEMPORARILY OR PERMANENTLY STABILIZED AND RESTORED AS THE WORK PROGRESSES , UTILIZING TERRASEEDING.
3. ALL IN-WATER AND NEAR WATER WORKS WILL BE CONDUCTED IN DRY WITH APPROPRIATE EROSION AND SEDIMENT CONTROLS.
4. THE EROSION AND SEDIMENT CONTROL STRATEGIES OUTLINED ON THE PLANS ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO MINIMIZE SEDIMENT LADEN RUNOFF FROM LEAVING THE WORK AREAS. IF THE PRESCRIBED MEASURES ON THE PLANS ARE NOT EFFECTIVE IN PREVENTING THE RELEASE OF A DELETERIOUS SUBSTANCE, INCLUDING SEDIMENT, THEN ALTERNATIVE MEASURES MUST BE IMPLEMENTED IMMEDIATELY TO MINIMIZE POTENTIAL ECOLOGICAL IMPACTS. TRCA ENFORCEMENT OFFICER SHOULD BE IMMEDIATELY CONTACTED. ADDITIONAL ESC MEASURES TO BE KEPT ON SITE AND USED AS NECESSARY.
5. AN ENVIRONMENTAL MONITOR WILL ATTEND THE SITE TO INSPECT ALL NEW CONTROLS, AS WELL AS ON A REGULAR BASIS, OR FOLLOWING RAIN/SNOWMELT EVENT, TO MONITOR ALL WORKS RELATED TO EROSION AND SEDIMENT CONTROL, DEWATERING OR UNWATERING RESTORATION AND IN- OR NEAR-WATER WORKS. SHOULD CONCERNS ARISE ON THE SITE THE ENVIRONMENTAL MONITOR WILL CONTACT THE TRCA ENFORCEMENT OFFICER AS WELL AS AS THE PROPONENT.
6. ALL ACTIVITIES INCLUDING MAINTENANCE PROCEDURES, WILL BE CONTROLLED TO PREVENT THE ENTRY OF PETROLEUM PRODUCTS, DEBRIS, RUBLE, CONCRETE OR OTHER DELETERIOUS SUBSTANCES INTO THE WATER. VEHICULAR REFUELING AND MAINTENANCE WILL BE CONDUCTED A MINIMUM OF 30 METERS FROM WATER.
7. THE PROPONENT/ CONTRACTOR SHALL MONITOR THE WEATHER SEVERAL DAYS IN ADVANCE OF THE ONSET OF THE PROJECT TO ENSURE THAT THE WORKS WILL BE CONDUCTED DURING FAVORABLE WEATHER CONDITIONS. SHOULD AND UNEXPECTED STORM ARISE, THE CONTRACTOR WILL REMOVE ALL UNFIXED ITEMS FROM THE REGIONAL STORM FLOOD PLAIN THE WOULD HAVE THE POTENTIAL TO CAUSE A SPILL OR AS OBSTRUCTION TO FLOW, E.G., FUEL TANKS, PORTA-POTTIES, MACHINERY, EQUIPMENT, CONSTRUCTION MATERIALS, ETC.
8. ALL DEWATERING/UNWATERING SHALL BE TREATED AND RELEASED TO THE ENVIRONMENT AT LEAST 30 METERS FROM A WATERCOURSE OR WETLAND AND ALLOWED TO DRAIN THROUGH A WELL VEGETATED AREAS. NO DEWATERING EFFLUENT SHALL BE SENT DIRECTLY TO ANY WATERCOURSE, WETLAND OR FOREST, OR ALLOWED TO DRAIN ONTO DISTURBED SOILS WITHIN THE WORK AREA. THESE CONTROL MEASURES SHALL BE MONITORED FOR THE EFFECTIVENESS AND MAINTAINED OR REVISED TO MEET THE OBJECTIVE OF PREVENTING THE RELEASE OF SEDIMENT LADEN WATER.
9. IN ORDER TO COMPLY WITH THE MIGRATORY BIRDS CONVICTION ACT, TRCA RECOMMENDS THAT TREE REMOVALS BE COMPLETED BETWEEN AUGUST 1 AND APRIL 1.
10. PLEASE NOTIFY TRCA ENFORCEMENT OFFICER AND TRCA PROJECT MANAGER 48 HOURS PRIOR TO COMMENCING CONSTRUCTION.
11. AN ENVIRONMENTAL MONITOR WILL BE ON SITE, AND PROVIDE ADVICE, TO ENSURE THAT ACTIVITIES THAT SHOULD HAVE A NEGATIVE IMPACT TO THE NATURAL ENVIRONMENT ARE EFFECTIVELY MITIGATED AS CONSTRUCTION PROCEEDS. THE ENVIRONMENTAL MONITOR SHALL NOTIFY THE TRCA ENFORCEMENT OFFICER AND PROJECT MANAGER IF AN ISSUE ARISE.

LEGEND

─ ➤ ─	PROPOSED STORM SEWER (<750Ø)
═ ➤ ═	PROPOSED STORM SEWER (>=750Ø)
○	PROPOSED STORM MANHOLE
⊡	PROPOSED DOUBLE CATCHBASIN MANHOLE
⊕	PROPOSED STORM CATCHBASIN MANHOLE
▫	PROPOSED CATCHBASIN
◫	PROPOSED DOUBLE CATCHBASIN
─SLT ─SLT ─	PROPOSED SILT FENCE
──184.05──	PROPOSED CONTOUR
- - -184.05- - -	EXISTING CONTOUR
⁂	ROCK CHECK DAM
═ ➤ ═	PROPOSED INTERCEPTOR SWALE AND FLOW DIRECTION AS PER (OPSD 219.211)
═	EXISTING SWALE TO REMAIN
▩	CONSTRUCTION ENTRANCE AS PER REGION OF DURHAM STANDARD S-301.050
▨	TERRAFIX SILTSACK INLET SEDIMENT CONTROL DEVICE
─➤─ST─	EXISTING STORM SEWER
⊘	EXISTING STORM MANHOLE
□	EXISTING CATCH BASIN
▒	LIMIT OF REGRADING
— — —	SWALE TRIBUTARY BOUNDARY

SEQUENCE OF MAJOR CONSTRUCTION ACTIVITIES

1. INSTALL SILT FENCING AROUND THE SITE PERIMETER AS SHOWN ON THIS PLAN PER CITY OF PICKERING STANDARD DETAIL P-823.1 AS WELL AS THE SEDIMENT PROTECTION MEASURES AS SHOWN ON THIS PLAN.
2. INSTALL TEMPORARY CONSTRUCTION MUDMAT AT NORTHWEST CORNER OF SITE AS PER DETAIL ON SDP.
3. BUILD TEMPORARY BERM ALONG EAST SIDE OF THE SITE TO PROPOSED GRADES SHOWN ON THIS PLAN.
4. BUILDING 1m WIDE FLAT BOTTOM CUT-OFF SWALES WITH ROCK CHECK DAMS AT PROPOSED GRADES SHOWN ON THIS PLAN.
5. PLACE APPROVED FILL AND COMPACT BUILDING PAD TO SUBGRADE ELEVATIONS SHOWN ON THIS PLAN. CONFIRM FULLY TESTED CERTIFICATION OF BUILDING BY GEOTECHNICAL ENGINEER OF RECORD.
6. GRADE THE REST OF THE SITE AS SHOWN ON THIS PLAN AND MONITOR EROSION AND SEDIMENT TRAPS REGULARLY TO ENSURE THEIR FUNCTIONS ARE MAINTAINED.
7. COMPLETE AS-BUILT SURVEY WORK.

PERMIT CONDITIONS

1. ALL PERMIT HOLDERS SHALL:
   - A) NOTIFY THE DIRECTOR, OR HIS/HER DESIGNATE A MINIMUM OF TWO BUSINESS DAYS PRIOR TO THE COMMENCEMENT OR RECOMMENCEMENT OF ANY LAND DISTURBING ACTIVITY;
   - B) OBTAIN PERMISSION IN WRITING FROM THE DIRECTOR OR HIS/HER DESIGNATE PRIOR TO MODIFYING ANY ELEMENT OF THE EROSION AND SEDIMENT CONTROL PLAN;
   - C) INSTALL ALL CONTROL MEASURES AS IDENTIFIED IN THE APPROVED EROSION AND SEDIMENT CONTROL PLAN;
   - D) MAINTAIN ALL ROAD DRAINAGE SYSTEMS, STORMWATER DRAINAGE SYSTEMS,, CONTROL MEASURES AND OTHER FACILITIES IDENTIFIED IN THE EROSION AND SEDIMENT CONTROL PLAN;
   - E) PROMPTLY REPAIR ANY SILTATION OR EROSION DAMAGE TO ADJOINING SURFACES AND DRAINAGE WAYS RESULTING FROM LAND DEVELOPING OR DISTURBING ACTIVITIES;
   - F) INSPECT THE SEDIMENTATION CONTROL MEASURES AT LEAST ONCE PER WEEK AND AFTER EACH RAINFALL OF AT LEAST ONE CENTIMETER AND MAKE NEEDED REPAIRS;
   - G) ALLOW CITY OFFICERS OR AGENTS OF THE CITY TO ENTER THE SITE FOR THE PURPOSE OF INSPECTING FOR COMPLIANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN OR PERFORMING ANY WORK NECESSARY TO BRING THE SITE INTO COMPLIANCE WITH THE EROSION AND SEDIMENT CONTROL PLAN;
   - H) MAINTAIN A COPY OF THE PERMIT ON THE SITE;
   - I) NOTIFY ALL SUB-CONTRACTORS AND SUPPLIERS OF APPROVED ACCESS ROUTES TO THE SITE AND ENSURE COMPLIANCE WITH THESE INSTRUCTIONS;
   - J) MAINTAIN ALL ROADS IN SAME OR BETTER CONDITION THAN EXISTED PRIOR TO THE COMMENCEMENT OF THE WORK AND KEEP ALL ROADS FREE FROM ANY MATERIALS OR EQUIPMENT FROM THE WORK SET OUT IN THE PERMIT; AND
   - K) ENSURE THAT NO CONSTRUCTION MACHINERY IS OPERATED IN CONTRAVENTION OF BY-LAW NUMBER 3821, AS AMENDED, (NOISE BY-LAW) OR ANY SUCCESSOR THERETO.
2. THE CITY:
   - A) UPON THE FAILURE BY THE PERMIT HOLDER TO COMPLETE ALL OR PART OF THE WORKS IN THE TIME STIPULATED IN THE EROSION AND SEDIMENT CONTROL PLAN, THE CITY MAY DRAW THE APPROPRIATE AMOUNT FROM THE SECURITIES POSTED AND USE THE FUNDS TO ARRANGE FOR THE COMPLETION OF THE SAID WORKS, OR ANY PART THEREOF;
   - B) UPON FAILURE BY THE PERMIT HOLDER TO INSTALL, REPAIR OR MAINTAIN A SPECIFIC PART OF THE WORKS AS REQUESTED BY THE CITY, AND IN THE TIME REQUESTED, THE CITY MAY AT ANY TIME AUTHORIZE THE USE OF ALL OR PART OF THE SECURITIES TO PAY THE COST OF ANY PART OF THE WORKS IT MAY IN ITS OR THEIR ABSOLUTE DISCRETION DEEM NECESSARY; AND
   - C) IN THE CASE OF EMERGENCY REPAIRS OR CLEAN-UP, THE CITY MAY UNDERTAKE THE NECESSARY WORKS AT THE EXPENSE OF THE PERMIT HOLDER AND REIMBURSE ITSELF OUT OF SECURITIES POSTED BY THE APPLICANT.

24 HOUR CONTACTS:
GIANMARCO TAVANIELLO 416-989-8104
BRIAN TILLEY (416)717-8319

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/23	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

B.JACKSON
100210382
DEC. 4, 2025

KWA SITE DEVELOPMENT
CONSULTING INC.
2453 Auckland Drive
Burlington, ON L7L 7A9

NORTH ARROW

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE
0 5 10 20
1:500

EROSION AND SEDIMENT CONTROL PLAN - 2

FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001/P ; A 06/25 ; PRE 023-026/22
PICKERING, ONTARIO
CITY OF PICKERING FILE: FB 01-2025
PROJECT No: 23810
DRAWN BY: RB
CHECKED BY: BJ

ESC-2

TAUNTON ROAD WEST

MARATHON AVENUE

BURKHOLDER DRIVE

TC-31R

SITE ACCESS

SITE TRAILER LOCATION

TEMPORARY PARKING SPACE

AREA TO BE USED FOR TRADES AND EQUIPMENT PARKING. 150 mm COMPACTED GRANULAR 'A'

TEMPORARY STOCKPILE LOCATION

EXISTING STOCK PILE

PILE BASE

PILE TOP

FUTURE INFILTRATION LOCATION TO BE PROTECTED FROM EXCESSIVE LOADING AND SURROUNDED BY SILT FENCE AS SHOWN

BUILDING A1 BUILDING FFE= 170.00 BUILDING A1 PAD ELEV=169.85 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING A2 BUILDING FFE= 170.55 BUILDING A2 PAD ELEV=170.40 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING A3 BUILDING FFE= 171.80 BUILDING A3 PAD ELEV=171.65 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING A4A BUILDING FFE= 170.90 BUILDING A PAD ELEV=170.75 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING A4B BUILDING FFE= 171.35 BUILDING A PAD ELEV=171.20 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING B1 BUILDING FFE= 173.30 BUILDING B PAD ELEV=173.15 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING B2 BUILDING FFE= 172.50 BUILDING B PAD ELEV=172.35 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING C1 BUILDING FFE= 174.40 BUILDING C2 PAD ELEV=174.25 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING D BUILDING FFE=173.90 BUILDING D PAD ELEV=173.75 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING E1 BUILDING FFE= 173.20 BUILDING E1 PAD ELEV=173.05 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING E2 BUILDING FFE= 172.85 BUILDING E2 PAD ELEV=172.70 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING F1 BUILDING FFE=171.70 BUILDING F1 PAD ELEV=171.55 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING F2 BUILDING FFE=171.10 BUILDING F2 PAD ELEV=170.95 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING G BUILDING FFE=170.70 BUILDING G PAD ELEV=170.55 (INCLUDING 0.30m OF FROST PROTECTION LAYER)

BUILDING PAD CROWN

OUTLINE OF BLD PAD OVERBUILD

FFE STEP/ TRANSITION AREA

FUTURE INFILTRATION LOCATION TO BE PROTECTED FROM EXCESSIVE LOADING AND SURROUNDED BY SILT FENCE AS SHOWN

TEMP. ROCK FLOW CHECK DAM (OPSD 219.211)

TEMP. ROCK CHECK DAM (OPSD 219.211)

WRAP EX. CB OPENING WITH SILTSACK BY TERRAFIX OR APPROVED EQUIVALENT AS PER DETAIL ON SDP

PROPOSED SILT FENCE (STD. P-823.1)

MATCH TO EXISTING ELEVATIONS

MATCH EXISTING CONVEYANCE SWALE ELEVATION

1m WIDE FLAT BOTTOM SWALE

15.00m OF 50mm CLEAR STONE (MIN. 450mm THICK)(NEEDS UNDERLAIN WITH TERRAFIX 270R FILTER FABRIC) FILTER FABRIC OR APPROVED EQUAL)

10.00m OF 150mm CLEAR STONE

25m MUD MAT AS PER CITY OF PICKERING STANDARD P-824.2.

STOP SIGN

RB-12

RB-31

EX. GRAVEL ENTRANCE

PROPOSED CONSTRUCTION ENTRANCE AS PER REGION OF DURHAM STANDARD S-301.050

15m LEVER SPREADER TOP LAYER: 200mm THICK 4-6" DIA. WASHED CLEAR STONE BOTTOM LAYER: 200mm THICK 2-4" DIA. WASHED CLEAR STONE TERRAFIX 420R FILTER CLOTH

EX. SIDEWALK

EX. CURB

EX. GAS

EX. HYDRO POLE

EX. CATCH BASIN

EX. MANHOLE

EX. MUP

EX. RIP RAP

EX. DRAINAGE DITCH

GRAVEL SPILLWAY

BANK TOP

LEGEND

- PROPOSED SILT FENCE
- PROPOSED CONTOUR
- EXISTING CONTOUR
- ROCK CHECK DAM
- PROPOSED INTERCEPTOR SWALE AND FLOW DIRECTION AS PER (OPSD 219.211)
- EXISTING SWALE TO REMAIN
- CONSTRUCTION ENTRANCE AS PER REGION OF DURHAM STANDARD S-301.050
- SILTSACK INLET SEDIMENT CONTROL DEVICE
- EXISTING STORM SEWER
- EXISTING STORM MANHOLE
- EXISTING CATCH BASIN
- LIMIT OF REGRADING
- SWALE TRIBUTARY BOUNDARY

GENERAL NOTES

1. ALL WORK SHALL BE IN ACCORDANCE WITH THE CITY OF PICKERING AND REGION OF DURHAM STANDARDS, ONTARIO PROVINCIAL STANDARD DRAWINGS AND SPECIFICATIONS (OPSD & OPSS), THE WATER RESOURCES ACT, AND THE APPLICABLE ENVIRONMENTAL PROTECTION ACTS. WHERE A TOWN OR REGION STANDARD EXISTS, IT SHALL BE USED IN PLACE OF THE PROVINCIAL STANDARD. ALL WORK SHALL CONFORM TO THE APPLICABLE HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
2. INFORMATION REGARDING ALL EXISTING UNDERGROUND UTILITIES AND SERVICES SHOWN ON THE DRAWINGS IS BASED ON INFORMATION PROVIDED BY OTHERS AND/OR AVAILABLE HISTORICAL DRAWINGS. THE ACCURACY OF THIS INFORMATION HAS NOT BEEN CONFIRMED BY KWA SITE DEVELOPMENT CONSULTING AND ALL UNDERGROUND INFORMATION NEEDS TO BE VERIFIED IN THE FIELD PRIOR TO BIDDING AND CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO ACQUIRE ALL UTILITY LOCATES PRIOR TO CONSTRUCTION AND TO NOTIFY THE ENGINEER OF ANY DISCREPANCIES. ANY LOST TIME DUE TO FAILURE TO IDENTIFY DISCREPANCIES OR NOTIFY THE ENGINEER SHALL BE AT THE CONTRACTOR'S EXPENSE.
3. THIS PLAN SHOULD BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANT'S PLANS AND ANY DISCREPANCIES REPORTED TO THE ENGINEER PRIOR TO CONSTRUCTION.
4. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO ANY CONSTRUCTION AND ANY DISCREPANCIES REPORTED TO THE ENGINEER. INFORMATION REGARDING PRIVATE ROADS, PARKING LOT CURBS, BUILDING LOCATIONS, AND SETBACKS SHALL BE TAKEN FROM THE SITE PLAN.
5. NO SUBSTITUTIONS SHALL BE ALLOWED WITHOUT ENGINEERS APPROVAL.
6. ALL DISTURBED AREAS SHALL BE REPAIRED TO ORIGINAL CONDITION OR BETTER AND TO THE SATISFACTION OF THE ENGINEER.
7. THE CONTRACTOR IS ADVISED THAT WORKS BY OTHERS MAY BE ONGOING AT THE SAME TIME AS THIS CONTRACT. THE CONTRACTOR SHALL COORDINATE CONSTRUCTION ACTIVITIES AND PREVENT CONSTRUCTION CONFLICTS.
8. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING AND PAYING FOR ALL PERMITS INCLUDING ROAD OCCUPANCY PERMITS AND THIRD PARTY UTILITY COSTS.
9. THE CONTRACTOR IS RESPONSIBLE FOR ALL TRAFFIC AND SAFETY MEASURES DURING THE CONSTRUCTION PERIOD, INCLUDING ALL NECESSARY SIGNALS, SIGNS, DELINEATORS, MARKERS AND BARRIERS. ALL TRAFFIC AND SAFETY MEASURES SHALL CONFORM TO CITY STANDARDS AND THE ONTARIO TRAFFIC MANUAL, BOOK 7 - TEMPORARY CONDITIONS, LATEST EDITION.
10. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE CITY AND THE REGION AND ANY OTHER REGULATORY AGENCIES. ALL WORK ON TOWN OR REGION RIGHT-OF-WAY AND EASEMENTS, SEWER WORK, AND WATERMAIN WORK SHALL BE INSPECTED BY THE TOWN OR REGION (AS REQUIRED) PRIOR TO BACKFILLING.
11. THE CONTRACTOR SHALL COORDINATE ALL REQUIRED INSPECTIONS WITH THE GEOTECHNICAL ENGINEER THROUGHOUT ENTIRE DURATION OF THE PROJECT.
12. THE CONTRACTOR IS RESPONSIBLE TO INSTALL AND MAINTAIN EROSION AND SEDIMENT CONTROLS AS REQUIRED BY THIS CONTRACT AND TOWN AND PROVINCIAL STANDARDS.
13. CONTRACTOR RESPONSIBLE TO SUPPLY AND INSTALL ALL NECESSARY CONSTRUCTION FENCING.
14. CONTRACTOR TO PROVIDE WEEKLY REDLINE LINE AS-BUILT SURVEY TO THE ENGINEER FOR REVIEW. AS-BUILT TO SHOW PIPE INVERT, PIPE SIZE, AND PIPE MATERIAL.
15. CONTRACTOR TO PROVIDE AS-BUILT SURVEY OF COMPLETED SERVICING AND GRADING WORKS; INCLUDING INVERTS, ALL ABOVE GROUND WORKS AND SPOT ELEVATIONS AT MAXIMUM 15M GRID INTERVAL. SURVEY TO BE PREPARED BY LICENSED ONTARIO LAND SURVEYOR.
16. DRAWING TO BE READ IN CONJUNCTION WITH THE GEOTECHNICAL INVESTIGATION REPORT PREPARED BY GEMTEC, DATED SEPTEMBER 30, 2025 AND ALL APPLICABLE ADDENDUMS.
17. NO QUEUING AND IDLING WILL BE ALLOWED.
18. MATERIAL WILL NOT BE BROUGHT TO THE SITE OR LEAVE THE SITE THROUGH RESIDENTIAL AREAS AND ALL DISPOSAL MATERIAL WILL BE BROUGHT TO APPROVED AND LICENSED FACILITIES. DELIVERIES SHALL ARRIVE USING PROVINCIAL HIGHWAYS AND REGIONAL ROADS, AND STAGING SHALL BE DONE INTERNAL TO SITE WITHIN THE FUTURE PHASE LANDS AND WITHOUT IDLING OR QUEUING ON EXTERNAL ROADS.

SPILL MANAGEMENT NOTES:

1. NO STORAGE OF BULK FUELS OR CHEMICALS IS ALLOWED ON THE SUBJECT SITE.
2. A SPILL CLEAN-UP PLAN MUST BE IN PLACE AND ALL SPILLS BE REPORTED TO THE MINISTRY OF OF ENVIRONMENT AND CLIMATE CHANGE SPILLS ACTION CENTER.
3. AN ON-SITE MANAGER SHALL BE DESIGNATED AS THE SPILL COORDINATOR AND SHALL CONDUCT REGULAR VISUAL INSPECTION TO IDENTIFY AREAS WITH OILY STAINING OR OTHER EVIDENCE OF ENVIRONMENTAL CONCERN (I.E. POOLS OF LIQUID, ODOURS, VAPOUR,ETC.)
4. A SPILL KIT SHALL BE LOCATED WITHIN THE SITE TRAILER AND IN KEY VEHICLES CONTAINING ITEMS FOR PERSONAL PROTECTION AND SMALL SPILL CLEANUP. THE SPILL KIT SHALL ONLY BE USED BY TRAINED PERSONNEL AND THE SPILL MANAGER SHALL COMPLETE A KIT INVENTORY MONTHLY.
5. IF A SPILL IS DETECTED THAT CANNOT BE CONTAINED SAFELY UTILIZING THE ONSITE SPILL KIT, AN EVACUATION MUST TAKE PLACE AND THE SPILL COORDINATOR MUST CONTACT PICKERING FIRE SERVICES (AND THE OTHER EMERGENCY CONTACTS FOUND BELOW) IMMEDIATELY.
6. SILT LADEN RUN OFF LEAVING THE SITE IS A REPORTABLE SPILL UNDER THE REGION OF DURHAM SEWER USE BY-LAW 55-2013, AS AMENDED, IN ADDITION TO PROVINCIAL AND FEDERAL LEGISLATION. ALL SILT SPILLS THAT IMPACT A SEWER SYSTEM, WATERCOURSE, OR CITY PROPERTY, MUST BE IMMEDIATELY REPORTED TO THE SPILLS ACTION CENTRE (1-800-268-6060).
7. ALL SPILL MONITORING, INCIDENTS, AND CLEANUP SHALL BE DOCUMENTED INCLUDING (BUT NOT LIMITED TO): NAMES, DATES, TIME, LOCATION, DURATION (IF KNOWN), TYPE AND QUANTITY, SOURCE, ENVIRONMENTAL CONDITIONS, ACTIONS TAKEN, AGENCIES CONTACTED, AND FOLLOWUP COMPLETED.
8. ANY AREAS OF CONCERN IDENTIFIED SHALL BE INVESTIGATED AS WOULD ANY SPILL BEFORE CONTACTING THE EMERGENCY CONTACTS LISTED BELOW.
9. PRIOR TO DISCHARGE TO MUNICIPAL SEWERS FOR DE-WATERING A DISCHARGE AGREEMENT MUST BE APPROVED BY ENVIRONMENTAL SERVICES AS PER THE SEWER USE BY-LAW 55-2013.
10. VEHICLE MAINTENANCE SHALL BE COMPLETED A MINIMUM OF 15m AWAY FROM ANY FUTURE INFILTRATION AREAS AND THE PROPOSED ESC POND.

EMERGENCY CONTACTS	
FIRE/POLICE/ AMBULANCE	911
CLIMATE CHANGE SPILL ACTION CENTER	1-800-268-6060
MECP-SPILLS ACTION CENTRE	1 (416) 325-3000
CANUTEC (CANADIAN EMERGENCY CENTRE)	1 (613) 966-6666

24 HOUR CONTACTS:
GIANMARCO TAVANIELLO 416-989-8104
BRIAN TILLEY (416)717-8319

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/25	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER
B.JACKSON
100210382
DEC. 4, 2025
PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC.
1235 North Service Rd. W.
Burlington, ON L7L 7A9

NORTH ARROW

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE

0 5 10 20

1:500

CONSTRUCTION MANAGEMENT PLAN

FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001/P - A 06/25 ; PRE 023-02822
PICKERING, ONTARIO

CITY OF PICKERING FILE: FB 01-2025
PROJECT No: 23810
DRAWN BY: RB
CHECKED BY: BJ

CMP

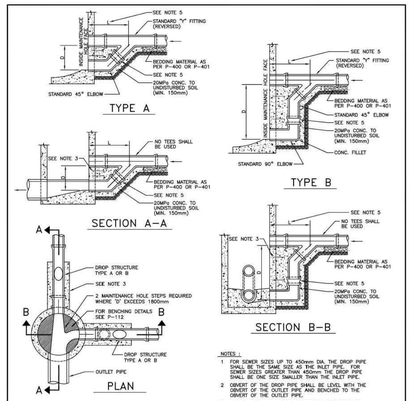
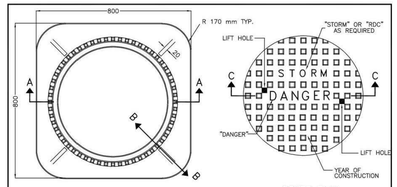


TABLE OF MINIMUM DIMENSIONS AND MAXIMUM VELOCITIES					
DROP PIPE DIAMETER	TYPE "A" "D"	TYPE "A" "L"	TYPE "B" "L"	TYPE "B" "L"	MAX. VELOCITY (m/s)
200	600	750	1200	1050	1.43
250	636	825	1275	1050	1.50
300	689	900	1425	1125	1.70
375	800	1125	1875	1350	1.92
450	975	1200	2025	1275	2.19
525	1050	1275	2175	1425	2.36
600	1125	1350	2400	1500	2.53
675	1200	1425	2475	1575	2.69
750	1275	1500	2625	1650	2.83

NOTES :
1. FOR SEWER SIZES UP TO 450mm DIA. THE DROP PIPE SHALL BE THE SAME SIZE AS THE INLET PIPE. FOR SEWER SIZES GREATER THAN 450mm, THE DROP PIPE SHALL BE ONE SIZE SMALLER THAN THE INLET PIPE.
2. OBVERT OF THE DROP PIPE SHALL BE LEVEL WITH THE OBVERT OF THE INLET PIPE AND BENCHED TO THE OBVERT OF THE OUTLET PIPE.
3. DROP STRUCTURE TO BE ENCASED IN A MINIMUM OF 150mm OF 20MPA CONCRETE. MAINTENANCE HOLE STEPS TO BE PROVIDED ON THE OUTSIDE FACE OF THE MAINTENANCE HOLE. ALL REINFORCING STEEL TO BE STRAPPED TO THE STEPS WITH STAINLESS STEEL BANDS.
4. MAXIMUM VELOCITIES SHOWN IN THE TABLE INDICATE THE MAXIMUM FLOW VELOCITY IN INCOMING PIPE WITHOUT OVERSHOOTING.
5. ADJUSTMENT IN "D" AND "L" TO BE MADE THROUGH THIS SECTION OF PIPE.
6. ALL CONCRETE IN THE DROP STRUCTURE TO BE 20MPa AT 28 DAYS.
7. MINIMUM DIMENSIONS BASED ON USE OF THE STANDARD CONCRETE FITTINGS.

All dimensions are in millimetres unless otherwise noted.

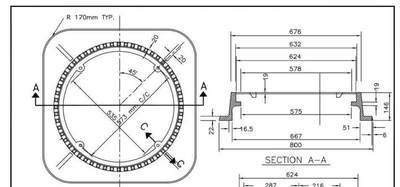
City of Pickering	Engineering Services Department	
DRAWN: P. NEUMAN	DROP STRUCTURES FOR MAINTENANCE HOLES	REVISION NO.: 2
APPROVED: R. W. HOLBORN		DATE: JULY 2003
DATE: JANUARY 1993		P–110



NOTES :
1. THE INITIALS OR MARK OF THE MANUFACTURER AND YEAR ARE TO BE DISTINCTLY CAST IN RAISED LETTERS ON BOTH FRAME AND COVER.
2. THE COVER IS TO HAVE "STORM" OR "ROC" DISTINCTLY CAST IN RAISED LETTERS AS REQUIRED.
3. THE COVER IS TO HAVE "DANGER" DISTINCTLY CAST IN RAISED LETTERS.

All dimensions are in millimetres unless otherwise noted.

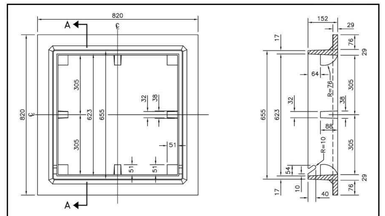
City of Pickering	Engineering Services Department	
DRAWN: J. BARKER	MAINTENANCE HOLE FRAME AND CLOSED COVER	REVISION NO.: 4
APPROVED: R. STARR		DATE: JULY 2019
DATE: APRIL 2011		P–120



NOTES :
1. THE INITIALS OR MARK OF THE MANUFACTURER AND YEAR ARE TO BE DISTINCTLY CAST IN RAISED LETTERS ON BOTH FRAME AND COVER.
2. THE COVER IS TO HAVE "STORM" OR "ROC" DISTINCTLY CAST IN RAISED LETTERS AS REQUIRED.
3. THE COVER IS TO HAVE "DANGER" DISTINCTLY CAST IN RAISED LETTERS.
4. WATERTIGHT FRAME AND COVER TO BE SUPPLIED COMPLETE WITH STAINLESS STEEL BOLTS AND RUBBER GASKETS.

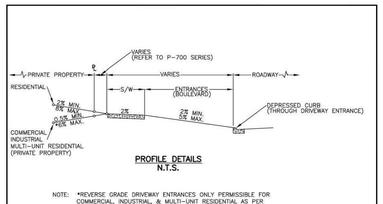
All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: J. BARKER	WATERTIGHT MAINTENANCE HOLE FRAME WITH BOLT DOWN COVER	REVISION NO.: 4
APPROVED: R. STARR		DATE: MAY 2019
DATE: APRIL 2011		P–121



All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: P. NEUMAN	BEEHIVE CATCH BASIN FRAME & COVER	REVISION NO.: 1
APPROVED: S. A. VOKES		DATE: JULY 2003
DATE: JANUARY 1993		P–215



PROFILE DETAILS
N.T.S.

NOTE: *REVERSE GRADE DRIVEWAY ENTRANCES ONLY PERMISSIBLE FOR COMMERCIAL, INDUSTRIAL & MULTI–UNIT RESIDENTIAL AS PER CITY OF PICKERING ENGINEERING DESIGN CRITERIA.
S/W = SIDEWALK

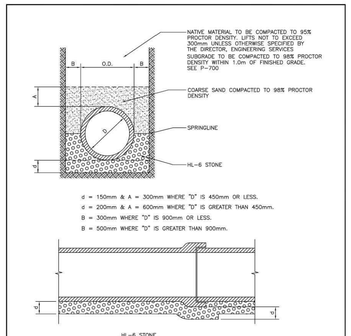
RESIDENTIAL DRIVEWAYS – MINIMUM REQUIREMENTS			
DRIVEWAY MATERIAL	EXCAVATION (mm)	GRANULAR 'A' (mm)	SURFACE MATERIAL (mm)
ASPHALT	200	150	50 (HL3)

COMMERCIAL/INDUSTRIAL/INSTITUTIONAL DRIVEWAYS – MINIMUM REQUIREMENTS					
DRIVEWAY MATERIAL	EXCAVATION (mm)	GRANULAR 'B' (mm)	GRANULAR 'A' (mm)	BASE MATERIAL (mm)	SURFACE MATERIAL (mm)
ASPHALT	700	450	150	50 (HL8)	50 (HL3)

NOTE: 1. MATERIAL DEPTHS FOR RESIDENTIAL DRIVEWAYS MAY NEED TO BE INCREASED WHERE SOIL CONDITIONS WARRANT OR WHERE MATCHING EXISTING CONDITIONS.
2. COMMERCIAL/INDUSTRIAL/MULTI–UNIT RESIDENTIAL – MATERIAL DEPTHS SHALL CONFORM TO SOILS REPORT RECOMMENDATIONS TO MEET DESIGN REQUIREMENTS FOR EXPECTED TRAFFIC VOLUME & VEHICULAR TYPE USE IF FOUND TO BE ABOVE THE MINIMUM STANDARD.

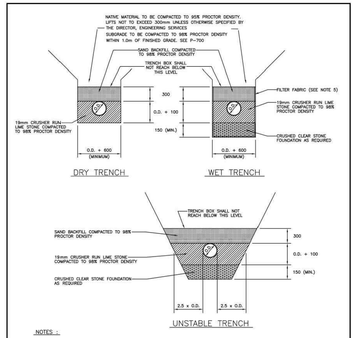
All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: D. POLAK	DRIVEWAY SECTION	REVISION NO.:
APPROVED: P. HELGESEN		DATE:
DATE: JULY 2019		P–607



All dimensions are in millimetres unless otherwise noted.

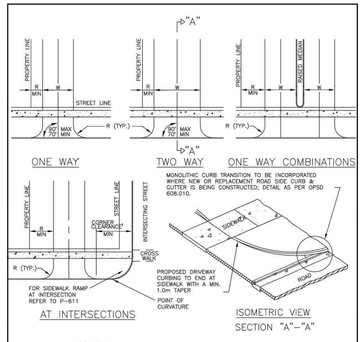
City of Pickering	Engineering Services Department	
DRAWN: P. NEUMAN	TYPE "C" BEDDING FOR CONCRETE PIPE	REVISION NO.: 2
APPROVED: S. A. VOKES		DATE: NOVEMBER 2019
DATE: JANUARY 1993		P–400



NOTES :
1. BEDDING MATERIALS SHALL BE FULLY EXTENDED AND COMPACTED AGAINST TRENCH WALLS. BEDDING MATERIALS SHALL BE PLACED IN 150mm LAYERS.
2. NO MECHANICAL COMPACTION EQUIPMENT SHALL BE USED ON TOP OF THE PIPE PRIOR TO PLACING A MINIMUM COVER OF 300mm.
3. THE PIPE SHALL BE BEDDED TO PROPOSED LINE AND GRADE WITH UNIFORM AND CONTINUOUS SUPPORT FROM THE BEDDING. BLOCKING WITH ANY HARD OBJECT SHALL NOT USED TO BRING THE THE PIPE TO GRADE.
4. CONCRETE SHALL NOT BE USED IN THE EMBEDMENT ZONE.
5. FILTER FABRIC SHALL BE USED IF THE GROUND WATER TABLE IS ABOVE THE TRENCH BED OR IF GROUND WATER IS FLOWING INTO THE TRENCH THROUGH THE EMBEDMENT ZONE.

All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: P. NEUMAN	TYPE "P" BEDDING FOR P.V.C. & H.D.P.E. PIPE	REVISION NO.: 4
APPROVED: S. A. VOKES		DATE: NOVEMBER 2019
DATE: JANUARY 1993		P–401



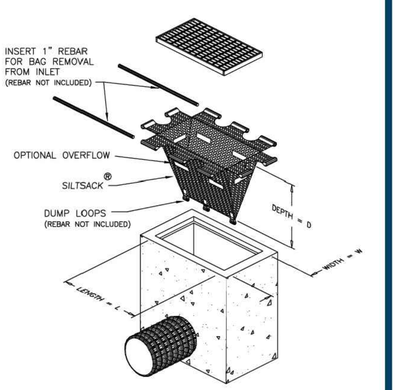
WIDTH (W)	MEDIUM/HIGH DEN. RESIDENTIAL	COMMERCIAL	INDUSTRIAL
ONE WAY	6.0 (MIN.)	6.0–7.5	6.0–9.0
TWO WAY	6.5–12.0	7.2–12.0	9.0–12.0
RADIUS (R)	7.5–9.0	7.5–12.0	9.0–12.0

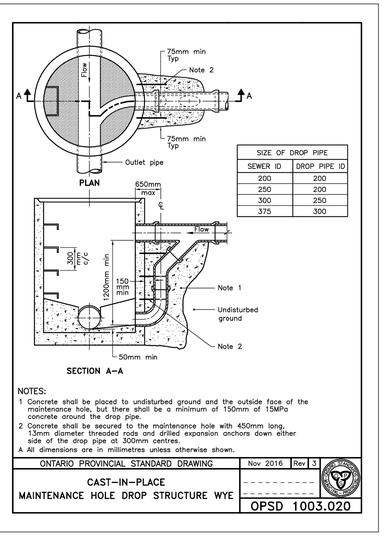
NOTES :
1. FOR DRIVEWAY CORNER CLEARANCES, REFER TO THE TRANSPORTATION ASSOCIATION OF CANADA (TAC) – GEOMETRIC DESIGN GUIDE FOR CANADIAN ROADS FIG. 3.2.5.1 AND FIG. 3.2.9.3.
2. SIDEWALK REINFORCING AS PER P–610.1 THROUGH ALL COMMERCIAL/INDUSTRIAL DRIVEWAYS.
3. PROPOSED DRIVEWAYS SHALL BE DESIGNED TO ACCOMMODATE THE ANTICIPATED VEHICULAR TRAFFIC WITHOUT CAUSING UNDUE INTERFERENCE WITH THE TRAFFIC FLOW ON THE STREET.

All dimensions are in metres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: D. POLAK	MEDIUM TO HIGH DENSITY RESIDENTIAL, COMMERCIAL, AND INDUSTRIAL DRIVEWAY ACCESS	REVISION NO.: 1
APPROVED: P. HELGESEN		DATE: JULY 2019
DATE: JULY 2019		P–605

Typical Siltsack® Construction - Type B

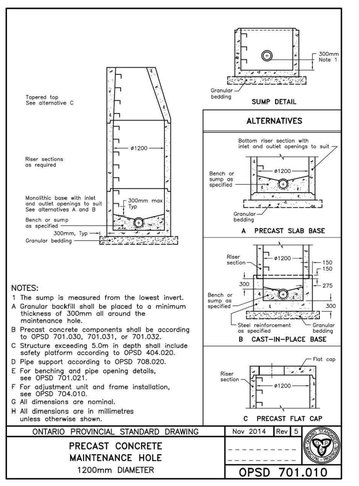




SIZE OF DROP PIPE	
SEWER ID	DROP PIPE ID
200	200
250	200
300	250
375	300

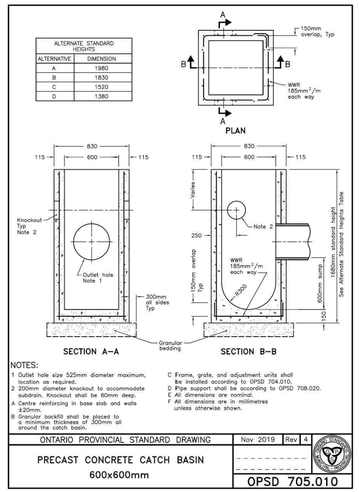
NOTES:
1 Concrete shall be placed to undisturbed ground and the outside face of the maintenance hole, but there shall be a minimum of 150mm of 15MPa concrete around the drop pipe.
2 Concrete shall be secured to the maintenance hole with 450mm long, 13mm diameter threaded rods and drilled expansion anchors down either side of the drop pipe at 300mm centres.
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2016	Rev 3
CAST–IN–PLACE MAINTENANCE HOLE DROP STRUCTURE WYE		OPSD 1003.020



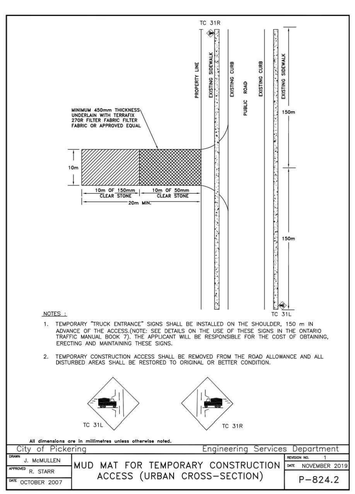
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER		OPSD 701.010



NOTES:
1 Outlet hole size 525mm diameter maximum, location as required.
2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
A Centre reinforcing in base slab and walls ±20mm.
B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
D Pipe support shall be according to OPSD 708.020.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov. 2019	Rev 4
PRECAST CONCRETE CATCH BASIN 600x600mm		OPSD 705.010

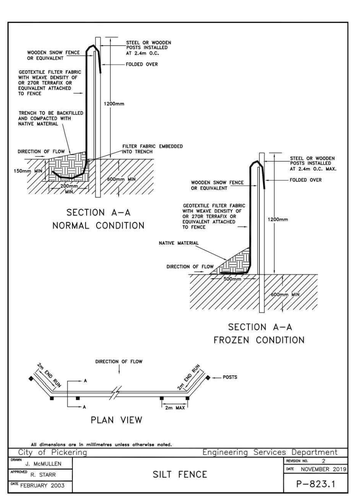


NOTES :
1. TEMPORARY "TRUCK ENTRANCE" SIGNS SHALL BE INSTALLED ON THE SHOULDER, 150 m IN ADVANCE OF THE ACCESS.(NOTE: SEE DETAILS ON THE USE OF THESE SIGNS IN THE ONTARIO TRAFFIC MANUAL BOOK 7). THE APPLICANT WILL BE RESPONSIBLE FOR THE COST OF OBTAINING, ERECTING AND MAINTAINING THESE SIGNS.
2. TEMPORARY CONSTRUCTION ACCESS SHALL BE REMOVED FROM THE ROAD ALLOWANCE AND ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.

TC 31L TC 31R

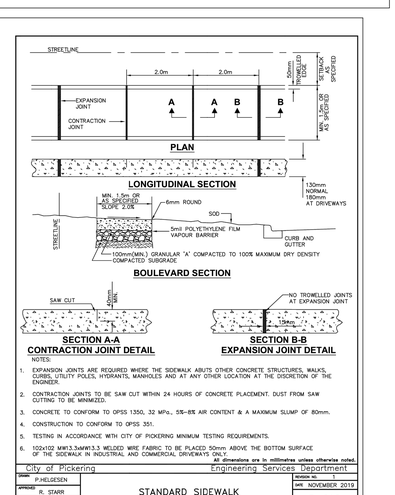
All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: J. McMULLEN	MUD MAT FOR TEMPORARY CONSTRUCTION ACCESS (URBAN CROSS–SECTION)	REVISION NO.: 1
APPROVED: R. STARR		DATE: NOVEMBER 2019
DATE: OCTOBER 2007		P–824.2



All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: J. McMULLEN	SILT FENCE	REVISION NO.: 2
APPROVED: R. STARR		DATE: NOVEMBER 2019
DATE: FEBRUARY 2003		P–823.1



NOTES:
1. EXPANSION JOINTS ARE REQUIRED WHERE THE SIDEWALK ABUTS OTHER CONCRETE STRUCTURES, WALKS, CURBS, UTILITY POLES, HYDRANTS, MANHOLES AND AT ANY OTHER LOCATION AT THE DISCRETION OF THE ENGINEER.
2. CONTRACTION JOINTS TO BE SAW CUT WITHIN 24 HOURS OF CONCRETE PLACEMENT. DUST FROM SAW CUTTING TO BE MINIMIZED.
3. CONCRETE TO CONFORM TO OPSS 1350, 32 MPa., 5%–8% AIR CONTENT & A MAXIMUM SLUMP OF 80mm.
4. CONSTRUCTION TO CONFORM TO OPSS 351.
5. TESTING IN ACCORDANCE WITH CITY OF PICKERING MINIMUM TESTING REQUIREMENTS.
6. 102x102 MW13.3xMW13.3 WELDED WIRE FABRIC TO BE PLACED 50mm ABOVE THE BOTTOM SURFACE OF THE SIDEWALK IN INDUSTRIAL AND COMMERCIAL DRIVEWAYS ONLY.

All dimensions are in millimetres unless otherwise noted.

City of Pickering	Engineering Services Department	
DRAWN: P.HELGESEN	STANDARD SIDEWALK	REVISION NO.: 1
APPROVED: R. STARR		DATE: NOVEMBER 2019
DATE: MAY 2012		P–610

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/23	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER
B.JACKSON
100210382
DEC. 4, 2025
PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC.
1 Hunter Street East, Suite 211, Burlington, ON L7L 7A9

NORTH ARROW

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-350-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE
N.T.S.

SITE DETAILS PLAN 1

FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001/P · A 06/25 : PRE 023-026/22
PICKERING, ONTARIO

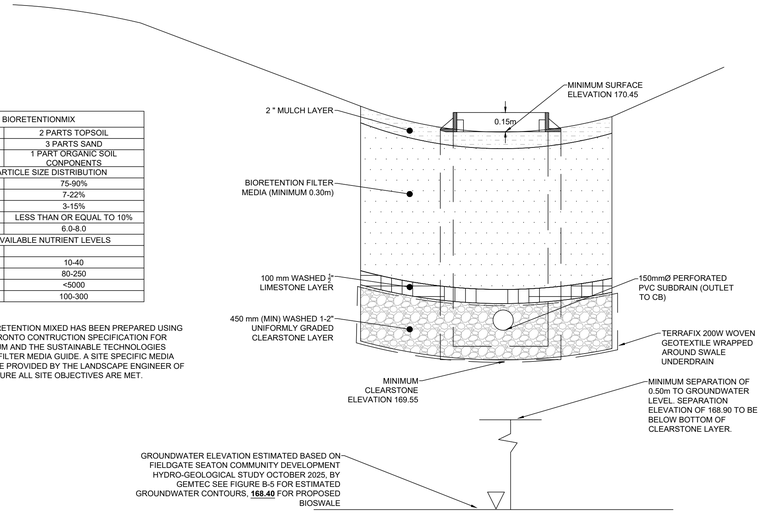
PROJECT No: 23810 | DRAWN BY: RB | CHECKED BY: BJ

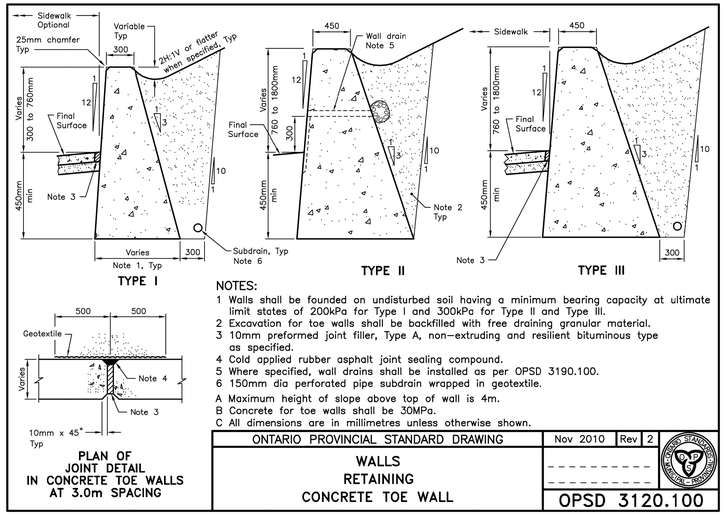
SDP - 1

ELEVATED CATCHBASIN IN BIOSWALE

BIORETENTIONMIX	
TOPSOIL	2 PARTS TOPSOIL
	3 PARTS SAND
	1 PART ORGANIC SOIL CONPONENTS
SOIL PARTICLE SIZE DISTRIBUTION	
SAND	75-90%
SILT	7-22%
CLAY	3-15%
GRAVEL	LESS THAN OR EQUAL TO 10%
PH	6.0-8.0
PLANT AVAILABLE NUTRIENT LEVELS	
PHOSPHORUS	
POTASSIUM	10-40
CALCIUM	80-250
MAGNESIUM	<5000
% ORGANIC	100-300

THE ABOVE BIORETENTION MIXED HAS BEEN PREPARED USING THE CITY OF TORONTO CONTRUCTION SPECIFICATION FOR GROWING MEDIUM AND THE SUSTAINABLE TECHNOLOGIES BIORETENTION: FILTER MEDIA GUIDE. A SITE SPECIFIC MEDIA DESIGN SHALL BE PROVIDED BY THE LANDSCAPE ENGINEER OF RECORD TO ENSURE ALL SITE OBJECTIVES ARE MET.





NOTES:
1 Walls shall be founded on undisturbed soil having a minimum bearing capacity at ultimate limit states of 200kPa for Type I and 300kPa for Type II and Type III.
2 Excavation for toe walls shall be backfilled with free draining granular material.
3 10mm preformed joint filler, Type A, non-extruding and resilient bituminous type as specified.
4 Cold applied rubber asphalt joint sealing compound.
5 Where specified, wall drains shall be installed as per OPSD 3190.100.
6 150mm dia perforated pipe subdrain wrapped in geotextile.
A Maximum height of slope above top of wall is 4m.
B Concrete for toe walls shall be 30MPa.
C All dimensions are in millimetres unless otherwise shown.

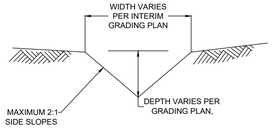
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2010	Rev 2
WALLS RETAINING CONCRETE TOE WALL		OPSD 3120.100

Tc-31R & Tc-31L

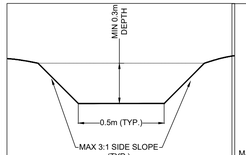
Rb-12 (600x600)mm

SIGN MOUNT LEGEND:
ALL SIGNS ARE SHOWN IN APPROXIMATE LOCATIONS AND TO BE DETERMINED ON SITE. SIGNS MUST BE VISIBLE TO DRIVER AND NOT OBSTRUCTED.

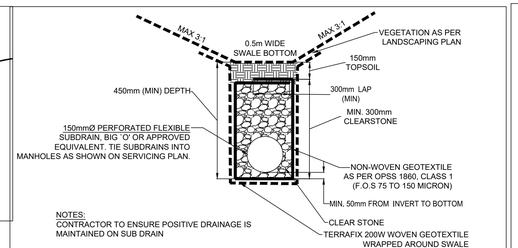
PROPOSED POST



TYPICAL V-NOTCH SWALE

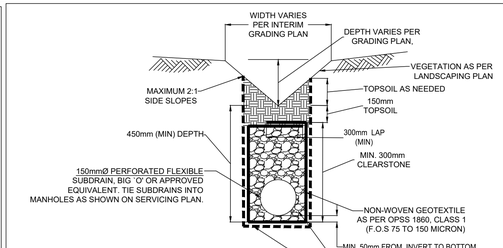


TYPICAL FLAT-BOTTOM SWALE



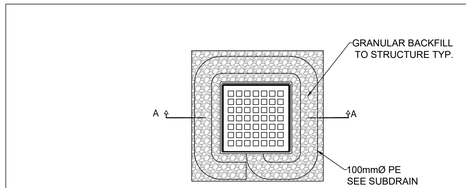
NOTES:
CONTRACTOR TO ENSURE POSITIVE DRAINAGE IS MAINTAINED ON SUB DRAIN

SWALE UNDERDRAIN FOR FLAT BOTTOM SWALE



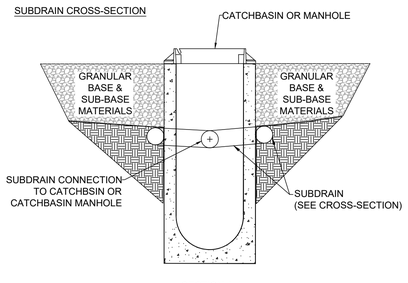
NOTES:
CONTRACTOR TO ENSURE POSITIVE DRAINAGE IS MAINTAINED ON SUB DRAIN

SWALE UNDERDRAIN FOR V-NOTCH SWALE



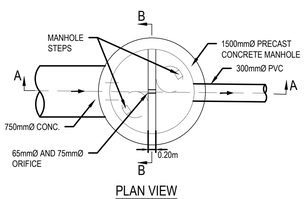
PLAN VIEW

SUBDRAIN CROSS-SECTION

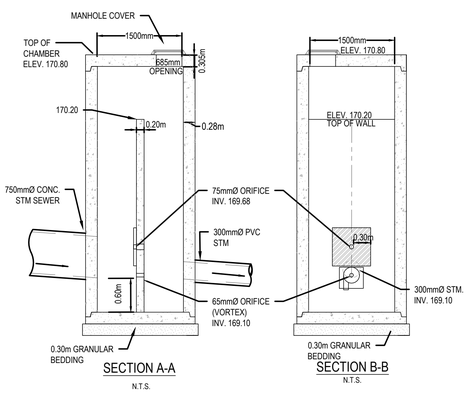


SECTION A-A

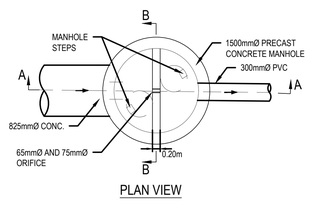
SUBDRAIN AT CATCHBASINS & CATCHBASIN MANHOLES



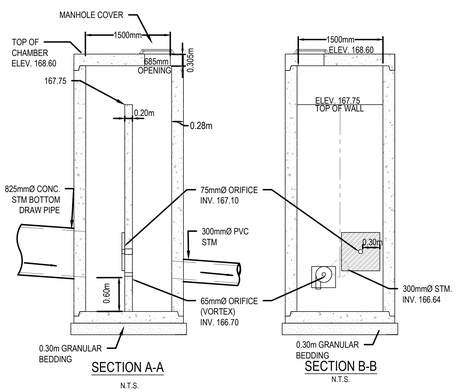
PLAN VIEW
N.T.S.



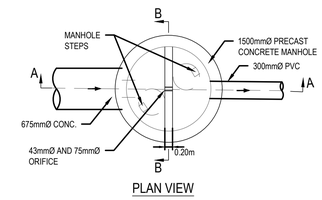
OUTLET CONTROL MANHOLE 8 DETAIL
N.T.S.



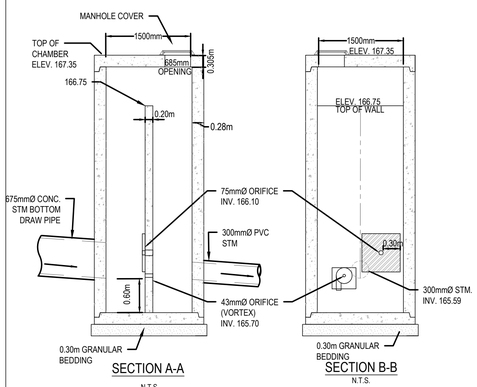
PLAN VIEW
N.T.S.



OUTLET CONTROL MANHOLE 21 DETAIL
N.T.S.



PLAN VIEW
N.T.S.



OUTLET CONTROL MANHOLE 22 DETAIL
N.T.S.

REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/23	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER
B.JACKSON
100210382
DEC. 4, 2025
PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC.
2055 Upper Middle Drive
Burlington, ON L7L 7A9

NORTH ARROW

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE

N.T.S.

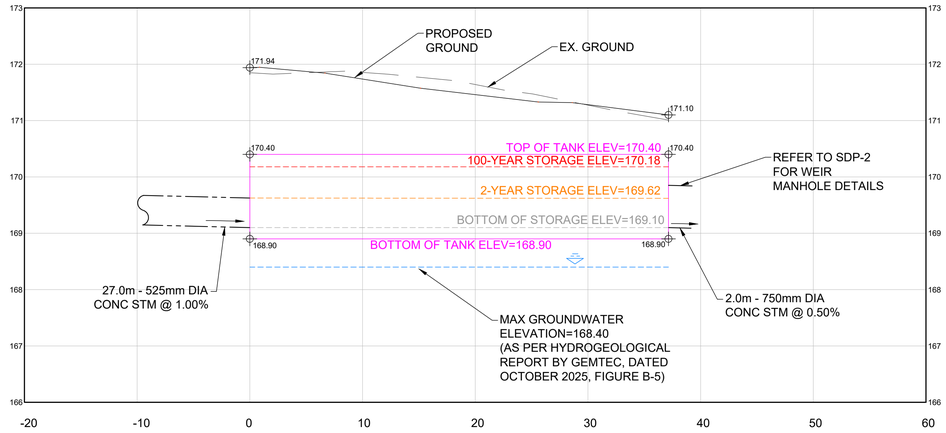
SITE DETAILS PLAN 2

FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001/P - A 06/25 - PRE 023-026/22
PICKERING, ONTARIO

CHECKED BY: BJ
DRAWN BY: RB
PROJECT No: 23810

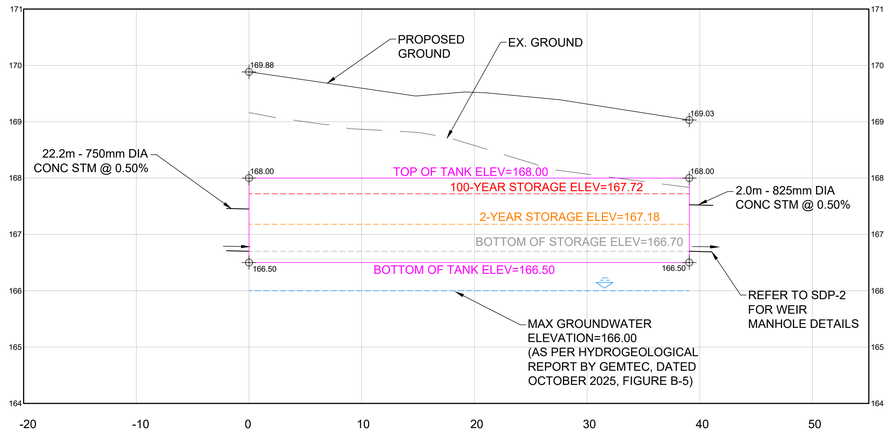
SDP - 2

CHAMBER #1

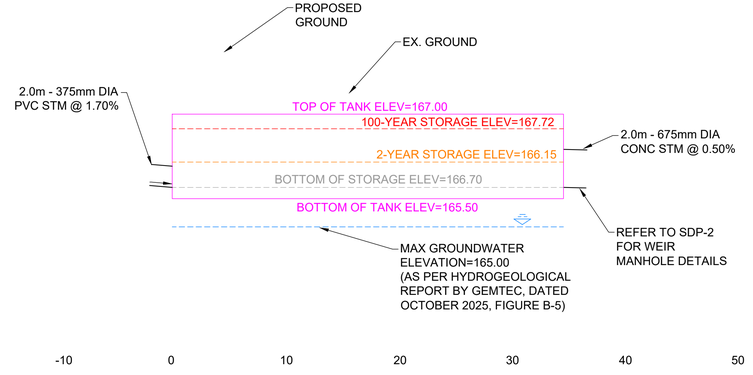


HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:50

CHAMBER #2



HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:50



HORIZONTAL SCALE = 1:250
VERTICAL SCALE = 1:50

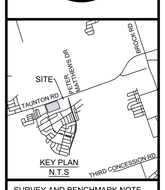
REVISION BLOCK

#	DATE	DESCRIPTION
1	04/14/23	ISSUED FOR SPA
2	12/04/25	ISSUED FOR SPA

REGISTERED PROFESSIONAL ENGINEER
B.JACKSON
100210382
DEC. 4, 2025
PROVINCE OF ONTARIO

KWA SITE DEVELOPMENT CONSULTING INC.
2450 Lakeshore Road West
Burlington, ON L7L 7A9

NORTH ARROW



KEY PLAN
N.T.S

SURVEY AND BENCHMARK NOTE

EXISTING TOPOGRAPHIC INFORMATIONS SHOWN ON THIS PLAN ARE BASED ON J.D. BARNES LTD. DRAWING (REF. NO. 25-25-360-00), DATED AUGUST 20, 2025

ELEVATIONS ARE GEODETIC AND ARE REFERRED TO CITY OF PICKERING VERTICAL

METRIC SCALE

AS NOTED

CHAMBER CROSS SECTIONS

FIELDGATE COMMERCIAL
TAUNTON RD/BURKHOLDER DR.
OPA 2025-001P - A 06/25 ; PRE 023-026/22
PICKERING, ONTARIO

PROJECT No: 23810 | DRAWN BY: RB | CHECKED BY: BJ

XSEC