

# FUNCTIONAL SERVICING REPORT

Mixed Use Development  
550 Ontario Street South, Milton

2613708 ONTARIO INC.



MANTECON PARTNERS INC.  
STRUCTURAL | MECHANICAL | ELECTRICAL | CIVIL  
ENGINEERING & PROJECT MANAGEMENT  
15 FOUNDRY STREET  
DUNDAS, ON L9H 2V6

Project No. 19-109

April 23, 2021

## Table of Contents

1.0	Introduction.....	1
1.1	General Description and Criteria.....	1
2.0	Water Supply and Distribution.....	3
2.1	Existing Watermain.....	3
2.2	Proposed Watermain .....	3
3.0	Sanitary Sewerage .....	3
3.1	Existing Sanitary Sewer .....	3
3.2	Proposed Sanitary Sewer.....	4
4.0	Grading and Drainage .....	4
4.1	Existing Grading and Drainage.....	4
4.2	Proposed Grading and Drainage .....	4
5.0	Summary .....	5

## Drawings

- C000 – Cover Sheet
- C001 – Existing Conditions Plan
- C100 – Site Servicing Plan
- C200 – Site Grading Plan
- C300 – Site Sediment and Erosion Control Plan
- C400 – Site Storm Drainage Area Plan

## Appendices

- Appendix A – Fire Hydrant Testing Results
- Appendix B – Sanitary Flow and Water Demand

## 1.0 Introduction

### 1.1 General Description and Criteria

#### Introduction

Mantecon Partners Inc. has been retained by 2613708 Ontario Inc. to prepare a Functional Servicing Report (FSR) for the proposed mixed-use development being built at 550 Ontario Street South, in Milton, Ontario, with property limits as shown below in Figure 1. This FSR report is being prepared in support of the Zoning By-law Amendment Application and will demonstrate how servicing of the proposed development is achievable and to provide a basis for the Site Plan Application.

#### Existing Site Conditions

The existing 550 Ontario Street South site footprint is approximately 1.68 ha, and currently contains restaurant and commercial/retail development, to be demolished. The site is bounded by residential use to the north with commercial use to the east and south across Ontario Street and Derry Road, with 16 Mile Creek block to the west of the proposed development.

A topographic survey was prepared by MacKay, MacKay & Peters Limited dated February 12, 2020.

Refer to the Aerial Map below for the subject lands.



Figure 1 – Subject Site

#### Proposed Development

The new proposed development area is 1.57 ha with the incorporated 4.1m road widenings on both Derry Road and Ontario Street and includes the daylight triangle at the Ontario Street / Derry Road intersection.

The proposed mixed-use development is comprised of three (3) levels of underground parking and an above grade parking area comprising a total of 848 parking stalls including the required 3% of accessible stalls. The building heights vary to 24 stories. The development will contain approximately 2,039 m<sup>2</sup> of commercial space and 649 residential suites.

The development consists of three (3) main building footprints with varying story heights and the limits of the underground parking encompasses the combined common limits of the 3 building footprints. At-grade parking is in the middle of the site and is accessed from Ontario Street. The upper level of underground parking is accessed from Derry Road as this entrance is roughly 2.75m lower than the Ontario Street access. Refer to Figure 1 - Site Plan, below for orientation.

As the buildings and limit of underground parking garage covers approximately 76% of the proposed site area, the proposed development's stormwater management system will consist of collecting stormwater from building roofs and the interior parking area and storing the runoff within the underground parking area (upper level) and providing controlled release to the 16 Mile Creek system as is currently the existing condition in operation and allowing the perimeter areas to drain uncontrolled off-site accordingly. The required stormwater storage system will be within the building footprint as there is little room outside the building to accommodate an underground tank or superpipe system that will not be impacted by the required excavation for the deep building basement levels. Refer to the Stormwater Management Report under separate cover for further information.

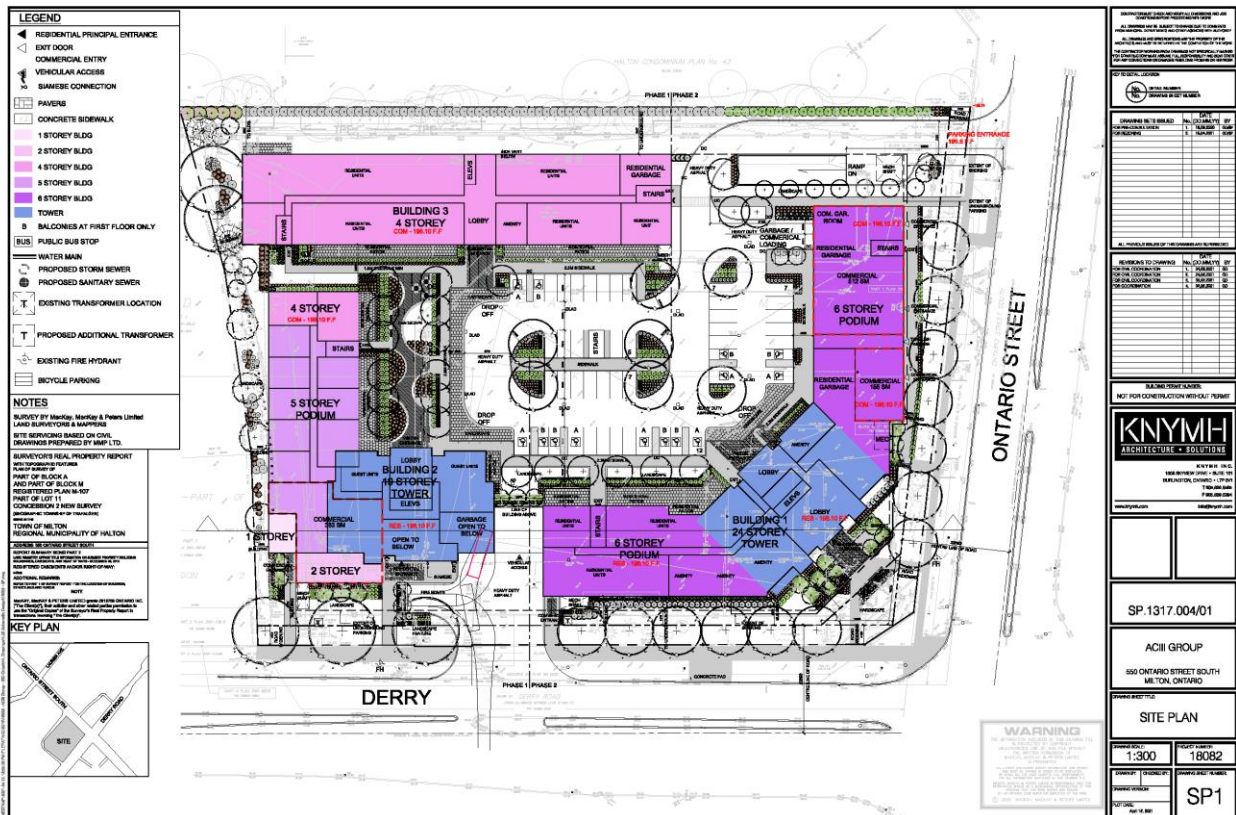


Figure 1 – Site Plan

## 2.0 Water Supply and Distribution

### 2.1 Existing Watermain

There is an existing 400mm diameter D.I watermain along the north side of Derry Road with two existing service locations to the 550 Ontario Street property. There are 200mm diameter and 50mm diameter services near the west side of the subject property and 150mm diameter and 38mm diameter services near the east side of the subject property along Derry Road. The west services support the main commercial/restaurant building and the east services support the standalone restaurant building.

Along the west side of Ontario Street exists an abandoned 200mm D.I. diameter watermain that was replaced with a 300mm diameter D.I. watermain.

One (1) fire hydrant exists on Derry Road near the west side of the subject property. It is to remain in place.

Two (2) fire hydrants exist on Ontario Street fronting the proposed development and are to remain in place.

### 2.2 Proposed Watermain

The existing 200mm diameter fire service noted along the west side of Derry Road is to remain in use and is to be extended to the proposed building. The 50mm diameter domestic water service is to be removed and replaced with a new 100mm diameter domestic water service with new connection to the existing 400mm watermain and extend to the proposed building. A meter and backflow preventor will be required immediately upon entry to the building for the domestic service and a backflow preventor is required for the 200mm fire main.

The estimated water demand for the proposed development based on Region of Halton requirements is approximately **6.8 L/sec**. Refer to **Appendix B** for calculations.

No new fire hydrants are proposed. The fire hydrant on Ontario Street, just north of the intersection, will be within 45m of the Fire Department Connection at the main entrance of Building 1. The fire hydrant on Derry Road will also be within 45m of a second Fire Department Connection on Building 2.

The proposed buildings will be sprinkled. Given the varied height of the building towers (+/-24 stories), internal building fire pumps will be required.

Two (2) fire hydrants adjacent to the proposed site have been tested by Jackson Waterworks and information is provided in **Appendix A**. The fire hydrants tested were located on Derry Road at about 20m east of the west property line and on Ontario Street South at about 18m north of the Derry Road/Ontario Street intersection.

## 3.0 Sanitary Sewerage

### 3.1 Existing Sanitary Sewer

There is an existing 250mm diameter A.C. sanitary sewer in Ontario Street South along the east side of the road flowing northerly to Laurier Avenue.

Sanitary sewage from the existing site outlets to an existing manhole and sewer at the northwest corner of the site. This sewer flows northerly via a 250mm diameter A.C. sewer within an existing 4.57m wide easement to Laurier Avenue. The existing sewer from the site building is a 150mm diameter PVC lateral with slope of approximately 5.5%. This existing 150mm sewer will be removed and replaced with 200mm diameter piping.



### 3.2 Proposed Sanitary Sewer

Sewage flow from the proposed building will utilize the existing 250mm sanitary sewer at the northwest corner of the site, in a grassed/scrub area, as this is the most cost effective and least disruptive to off-site facilities. The alternative 250mm sanitary sewer along the east side of Ontario Street is much more challenging due to the impact to the road and local traffic, requiring road restoration and traffic control.

The new 200mm diameter PVC, SDR-35 sewer at 2% slope will be constructed from the existing sanitary MH in the easement to an inspection manhole near the property line (on the private side). From the proposed inspection manhole, a new 200mm diameter PVC lateral at 2% slope will be constructed to the proposed building. It is intended to keep the sewer as deep as possible to drain lower levels of the building. The benching and connection in the existing sanitary manhole will need to be reworked to accommodate the new 200mm sewer, accordingly.

The estimated flow from the proposed development based on Halton Region requirements is approximately **6.61 L/sec**. Refer to **Appendix B** for calculations.

## 4.0 Grading and Drainage

### 4.1 Existing Grading and Drainage

The existing site has an "L" shaped strip mall with stand alone restaurant in the parking lot. The extent of the site is mainly paved with curbing and site drainage that utilizes parking lot catchbasins and roofs to collect stormwater and convey it by underground piping to a manhole near the southwest corner of the site. This manhole has controlled stormwater release via orifice control to the adjacent 16 Mile Creek system.

Grading around the property varies by more than 4m. Along Ontario Street it is relatively flat, from 195.75m at the north property line to 195.35m at the Ontario St. / Derry Rd. intersection. Frontage along Derry Road varies from 195.00m at the intersection to 191.60m at the west property line. The west property line varies and rises up from the south property line of 191.60m to 193.50m and then back down 191.40m at the north property line. The north property line then slopes easterly from 191.400m back up to 195.75m.

### 4.2 Proposed Grading and Drainage

The proposed mixed-use development has a building footprint and underground parking garage limit that covers approximately 76% of the site. These large roof areas and interior parking area will collect stormwater and convey it to an interior holding tank for controlled release to the adjacent 16 Mile Creek Block through the existing storm sewer outlet control manhole. For further information, refer to the Stormwater Management Report under separate cover.

The internal parking lot area will be graded to utilize area drains with internal piping to be designed by a mechanical engineer and conveyed to an oil grit separator and then to the storage tank. The major overland flow from the interior parking lot area will be directed to the curb opening at the rear of Building 3 and then conveyed by grassed swale to the 16 Mile Creek.

The proposed outlet control manhole near the southwest corner of the site is proposed to be constructed over the existing 300mm diameter storm sewer pipe. A new inlet pipe will be constructed that connects the interior storage tank system to the control structure manhole. It is proposed to provide a stainless-steel orifice plate with orifice for controlled release to 16 Mile Creek and a CB beehive grate will be provided on this structure to allow for the potential blocked stormwater release or high-volume storm events beyond those designed for to escape out of the lid and be directed via a major overland flow route to the adjacent creek area.

The frontages along Derry Road and Ontario Street will have sheet flow drainage to the existing right-of way storm sewer system. These frontages will contain both hard and soft surface features.

The west and north limits of the site are mainly grassed and/or treed and will drain to the adjacent Creek Block via sheet flow from the west side of the site and swale flow from the north side as the rear grade drops more than 3m from east to west.

## 5.0 Summary

Based on the information provided herein, servicing constraints should not be a concern during the consideration of the planning and development for this mixed-use development site. It is concluded that the proposed development at 550 Ontario Street South can be serviced with respect to Water Supply and Distribution, Sanitary Sewerage, and Grading and Drainage, to meet the requirements of Town of Milton and Halton Region.

We trust that the information provided is satisfactory. Should you have any questions please do not hesitate to contact our office at (905) 648-0373.

Respectfully submitted,

Mantecon Partners Inc.,



Per: Michael Dessureault, P. Eng.  
Senior Project Manager, Civil

MD/jm

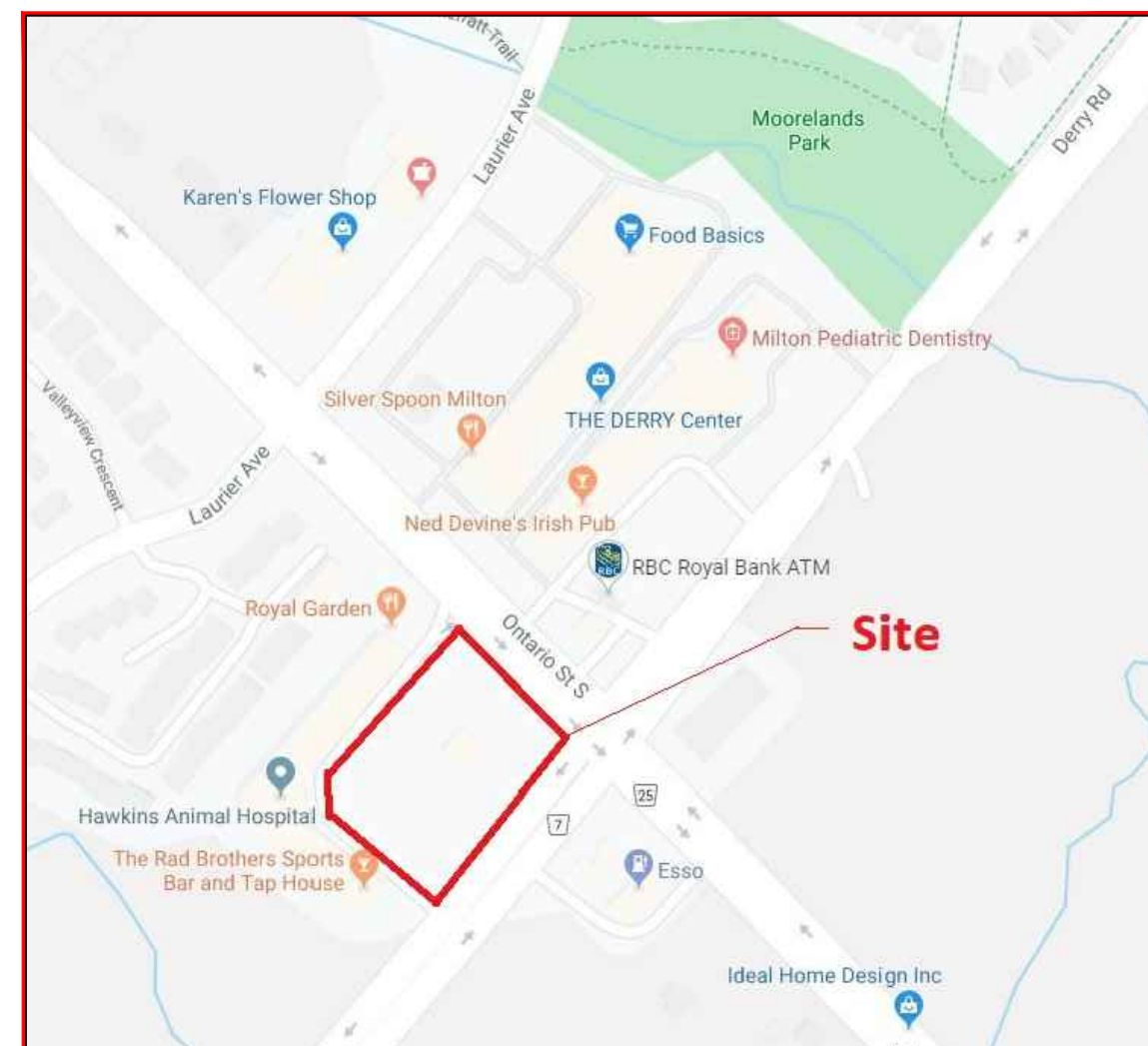


# 550 ONTARIO STREET SOUTH

## TOWN OF MILTON, ON

### MIXED USE APARTMENT DEVELOPMENT FOR 2613708 ONTARIO INC. JOB NO. 19-109

### ISSUED FOR ZONING APPLICATION APRIL 23, 2021



**KEY PLAN**  
NO SCALE

### INDEX TO DRAWINGS

SHEET No.	DESCRIPTION
CIVIL	
C000	COVER SHEET
C001	EXISTING CONDITIONS PLAN
C100	SITE SERVICING PLAN
C200	SITE GRADING PLAN
C300	SITE SEDIMENT AND EROSION CONTROL PLAN
C400	SITE STORM DRAINAGE AREA PLAN

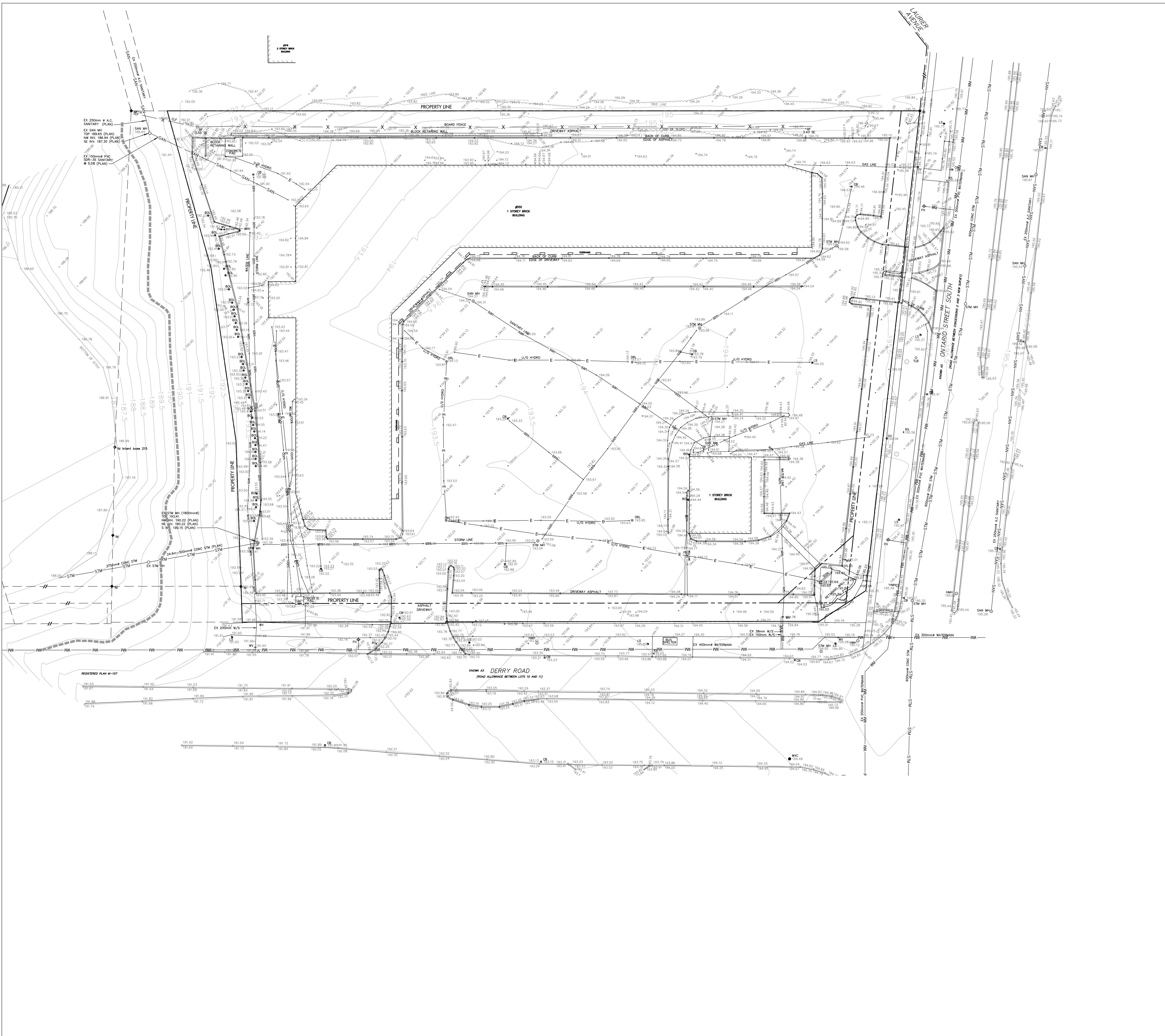


NOT ISSUED FOR CONSTRUCTION



Path: J:\Drawings\19-109-550 Ontario Street - Functional Servicing & Stormwater Management - 2613708 Ontario Inc\3-Working Documents\C100.dwg

Plotted By: mdsureault  
Last Saved: 2021-04-22  
Last Saved By: mdsureault



**LEGEND**

- PROPERTY LINE
- EXISTING BUILDING
- EXISTING SANITARY SEWER
- EXISTING WATERMAIN
- EXISTING HYDRO SERVICE
- EXISTING BELL SERVICE
- EXISTING GASMAIN
- DENOTES A SURVEY MONUMENT FOUND
- DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDARD IRON BAR
- IB DENOTES IRON BAR
- CC DENOTES CUT CROSS
- CP DENOTES CONCRETE PIN
- WIT DENOTES WITNESS
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- (OU) DENOTES ORIGIN UNKNOWN
- P1 DENOTES REGISTERED PLAN M-107
- P2 DENOTES PLAN 20R-9832
- P3 DENOTES PLAN 20R-4428
- P4 DENOTES PLAN 20R-15915
- RW DENOTES RETAINING WALL
- BF DENOTES BOARD FENCE
- CLF DENOTES CHAIN LINK FENCE
- BOL DENOTES BOLLARD
- TIB DENOTES TRAFFIC LIGHT BOX
- RS DENOTES ROAD SIGN
- STM MH DENOTES STORM MANHOLE
- CB DENOTES CATCH BASIN
- HMH DENOTES HYDRO MANHOLE
- LS DENOTES LIGHT STANDARD
- T DENOTES TRANSFORMER
- U/G DENOTES UNDERGROUND
- FH DENOTES FIRE HYDRANT
- WV DENOTES WATER VALVE
- DENOTES CONIFEROUS TREE
- DENOTES DECIDUOUS TREE

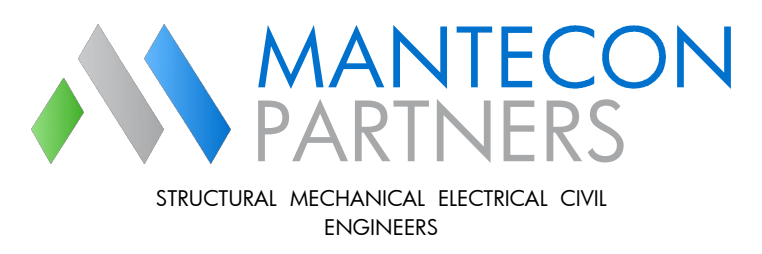
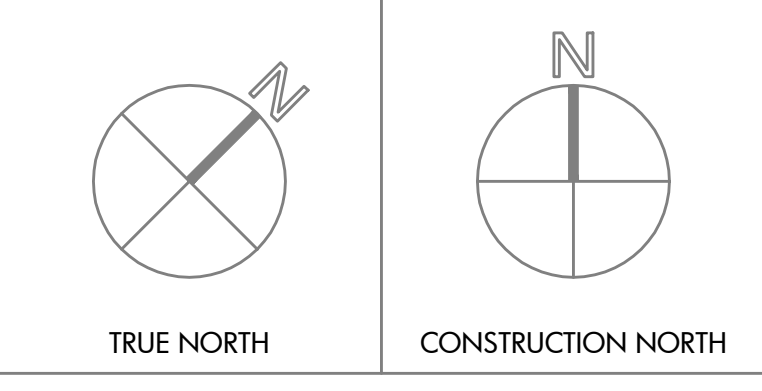
METRIC:  
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

**PLAN OF SURVEY OF**  
PART OF BLOCK A & PART OF BLOCK M  
REGISTERED PLAN M-107, PART OF LOT 11, CONCESSION 2 NEW SURVEY  
TOWN OF MILTON  
REGIONAL MUNICIPALITY OF HALTON

INFORMATION ON THIS SITE PLAN TAKEN FROM  
SURVEY / TOPOGRAPHY PREPARED BY:  
MACKAY, MACKAY & PETERS LIMITED  
LAND SURVEYORS & MAPPERS  
3380 SOUTH SERVICE ROAD, UNIT 101 BURLINGTON, ON  
TELEPHONE (905) 639-1375  
SURVEY COMPLETED ON FEBRUARY 12, 2020

**BENCHMARK NOTE**  
BENCHMARK # 00819628155, ELEVATION = 185.351 METRES  
CONCRETE CULVERT UNDER BRITANNIA ROAD WEST, 1.4 KILOMETRES WEST OF HWY 25, 7.5 METRES WEST OF FIRST LINE ROAD, 6.3 METRES NORTH OF CENTRELINE OF BRITANNIA ROAD WEST (HALTON REGIONAL ROAD 6). TABLET IS SET VERTICALLY IN TOP OF NORTH END OF CULVERT, 0.33 METRES SOUTH OF NORTH END OF CULVERT, 0.32 METRES WEST OF EAST FACE OF CULVERT.

**BEARING REFERENCE**  
BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTHWESTERLY LIMIT OF BLOCK A, AS SHOWN ON REGISTERED PLAN M-107, HAVING A BEARING OF N 38° 56' 50" E. FOR BEARING COMPARISONS, A ROTATION OF 0° 50' 05" CLOCKWISE HAS BEEN APPLIED TO THE P4



15 Foundry Street, Dundas, ON, L9H 2V6  
Phone: (905)648-0373 www.manteconpartners.com

SEAL

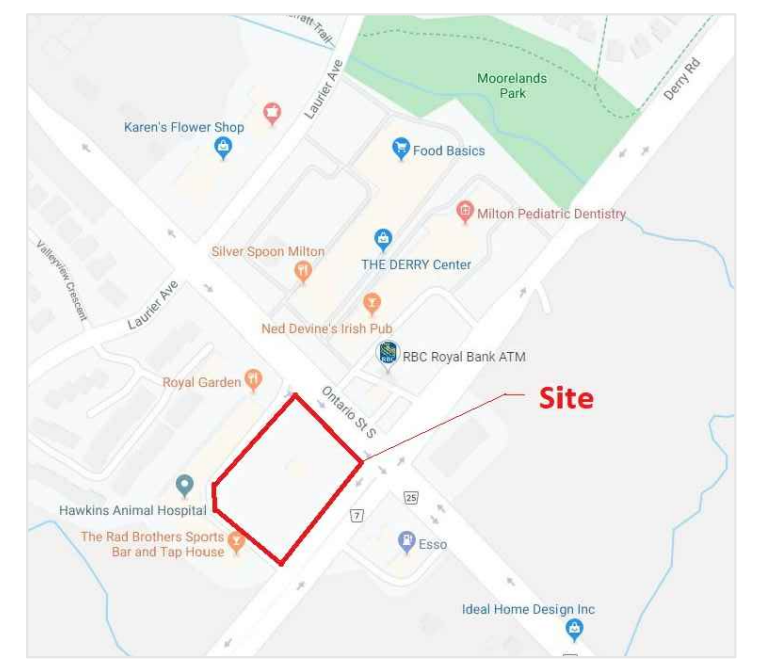
**PRELIMINARY  
NOT FOR CONSTRUCTION**

FEBRUARY, 2020  
Mantecon Partners

REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATION. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF MANTECON PARTNERS AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

NO.	ISSUED FOR	DATE	BY
1	ISSUED FOR ZONING APPLICATION	APR 23, 2021	MD

KEY PLAN



CLIENT  
2613708 ONTARIO INC.

PROJECT  
550 ONTARIO STREET SOUTH  
MILTON, ONTARIO

DRAWING TITLE  
EXISTING CONDITIONS PLAN

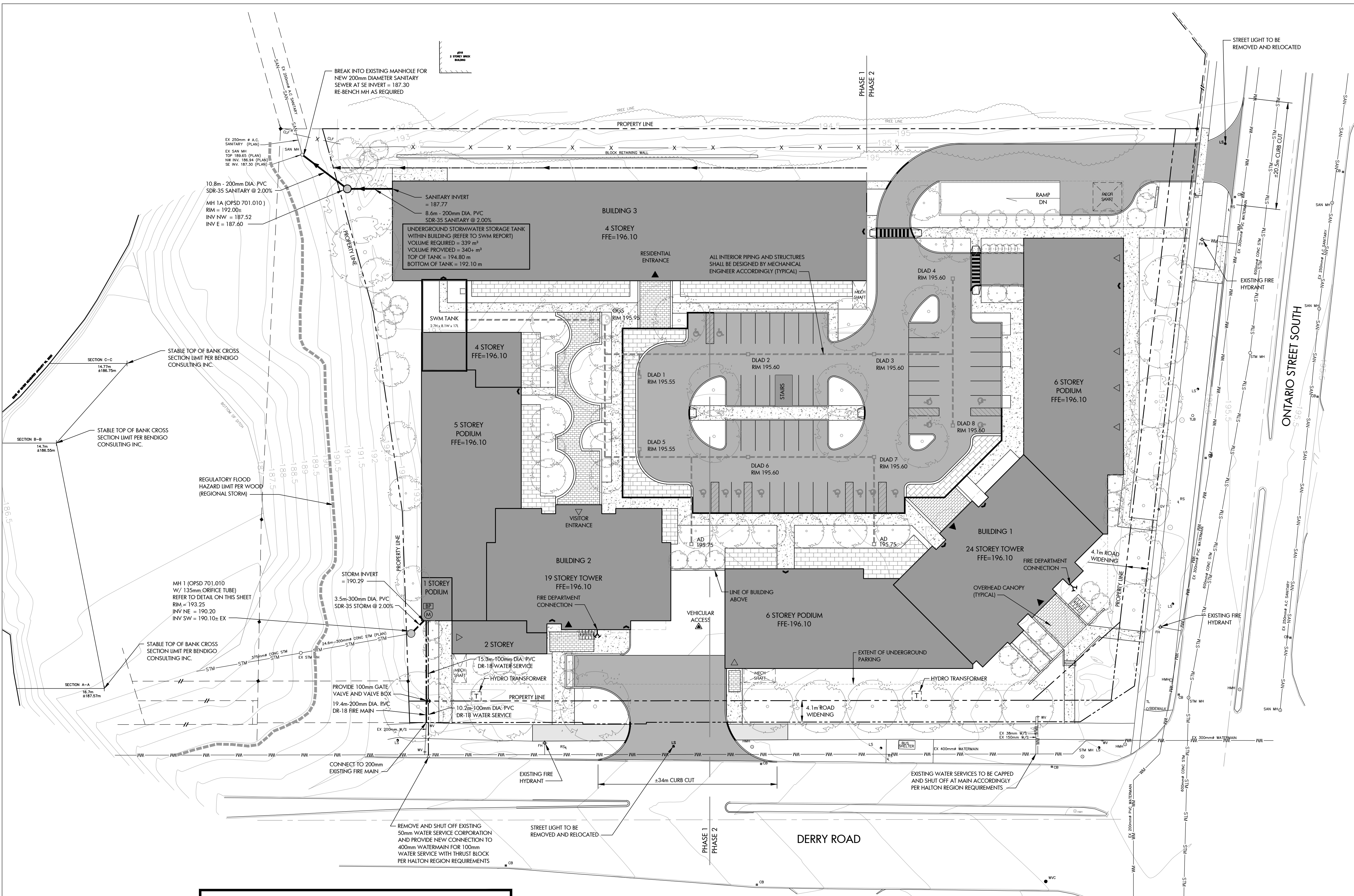
DRAWN BY: A.A.	SCALE: 1:400
CHECKED BY: M.D.	DRAWING NUMBER: C001
DATE: 2019-11-18	
PROJECT NUMBER: 19-109	



Path: J:\Drawings\19-109-550 Ontario Street - Stormwater Management - 2613708 Ontario Inc 3-Working Documents\C100.dwg

Plotted By: mdsureault  
Last Saved By: mdsureault

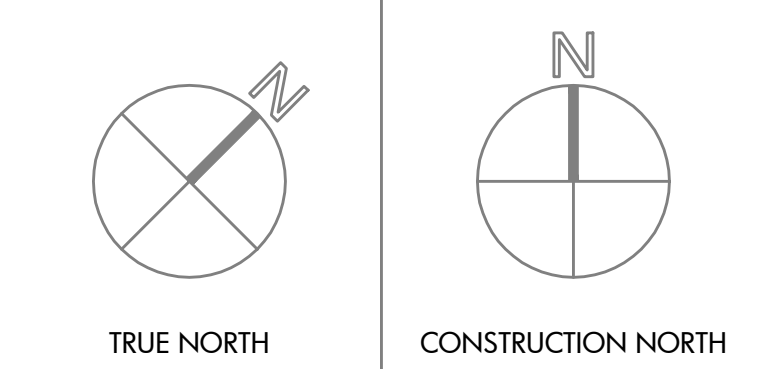
2021-04-23  
2021-04-22



### LEGEND

[Symbol]	PROPERTY LINE
[Symbol]	PROPOSED BUILDING
[Symbol]	PROPOSED CONCRETE PAVEMENT/SIDEWALK
[Symbol]	PROPOSED DRIVEWAY ASPHALT
[Symbol]	PROPOSED PATHWAY ASPHALT
[Symbol]	PROPOSED PAVERS
[Symbol]	PROPOSED STORM SEWER
[Symbol]	PROPOSED SANITARY SEWER
[Symbol]	PROPOSED WATERMAIN
[Symbol]	EXISTING STORM SEWER
[Symbol]	EXISTING SANITARY SEWER
[Symbol]	EXISTING WATERMAIN
[Symbol]	EXISTING MANHOLE
[Symbol]	PROPOSED MANHOLE
[Symbol]	PROPOSED CATCH-BASIN/MANHOLE
[Symbol]	PROPOSED GATE VALVE/CURB STOP
[Symbol]	PROPOSED BACKFLOW PREVENTER
[Symbol]	PROPOSED WATER METER
[Symbol]	PROPOSED SIAMSESE FIRE CONNECTION
[Symbol]	PROPOSED W/M THRUST BLOCK
[Symbol]	PROPOSED LIGHT FIXTURE
[Symbol]	PROPOSED ELECTRICAL SERVICE
[Symbol]	PROPOSED SWALE
[Symbol]	BUILDING ENTRANCES
[Symbol]	DENOTES A SURVEY MONUMENT FOUND
[Symbol]	DENOTES A SURVEY MONUMENT PLANTED
[Symbol]	DENOTES STANDARD IRON BAR
[Symbol]	DENOTES SHORT STANDARD IRON BAR
[Symbol]	DENOTES IRON BAR
[Symbol]	DENOTES CUT CROSS
[Symbol]	DENOTES CONCRETE PIN
[Symbol]	DENOTES WITNESS
[Symbol]	DENOTES PROPERTY IDENTIFICATION NUMBER
[Symbol]	DENOTES ORIGIN UNKNOWN
[Symbol]	DENOTES REGISTERED PLAN M-107
[Symbol]	DENOTES PLAN 20R-9832
[Symbol]	DENOTES PLAN 20R-4428
[Symbol]	DENOTES PLAN 20R-15915
[Symbol]	DENOTES RETAINING WALL
[Symbol]	DENOTES BOARD FENCE
[Symbol]	DENOTES CHAIN LINK FENCE
[Symbol]	DENOTES BOLLARD
[Symbol]	DENOTES TRAFFIC LIGHT BOX
[Symbol]	DENOTES ROAD SIGN
[Symbol]	DENOTES STORM MANHOLE
[Symbol]	DENOTES CATCH BASIN
[Symbol]	DENOTES HYDRO MANHOLE
[Symbol]	DENOTES LIGHT STANDARD
[Symbol]	DENOTES TRANSFORMER
[Symbol]	DENOTES UNDERGROUND
[Symbol]	DENOTES FIRE HYDRANT
[Symbol]	DENOTES WATER VALVE
[Symbol]	DENOTES CONIFEROUS TREE
[Symbol]	DENOTES DECIDUOUS TREE

METRIC:  
DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048



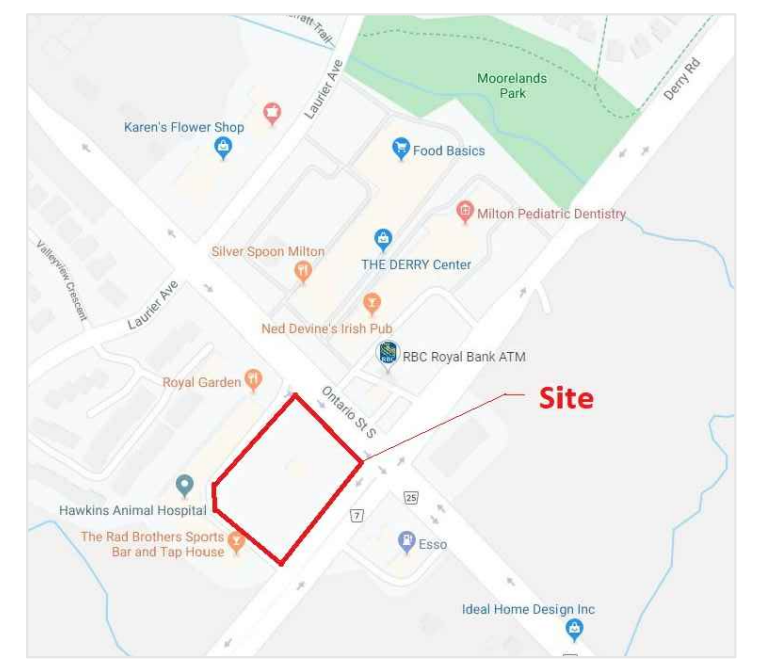
15 Foundry Street, Dundas, ON, L9H 2V6  
Phone: (905)648-0373 www.manteconpartners.com

**PRELIMINARY  
NOT FOR CONSTRUCTION**  
FEBRUARY, 2020  
Mantecon Partners

REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATIONS. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF MANTECON PARTNERS AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

NO.	ISSUED FOR ZONING APPLICATION	DATE	BY
1	ISSUED FOR ZONING APPLICATION	APR 23, 2021	MD

KEY PLAN			
1	ISSUED FOR ZONING APPLICATION	APR 23, 2021	MD

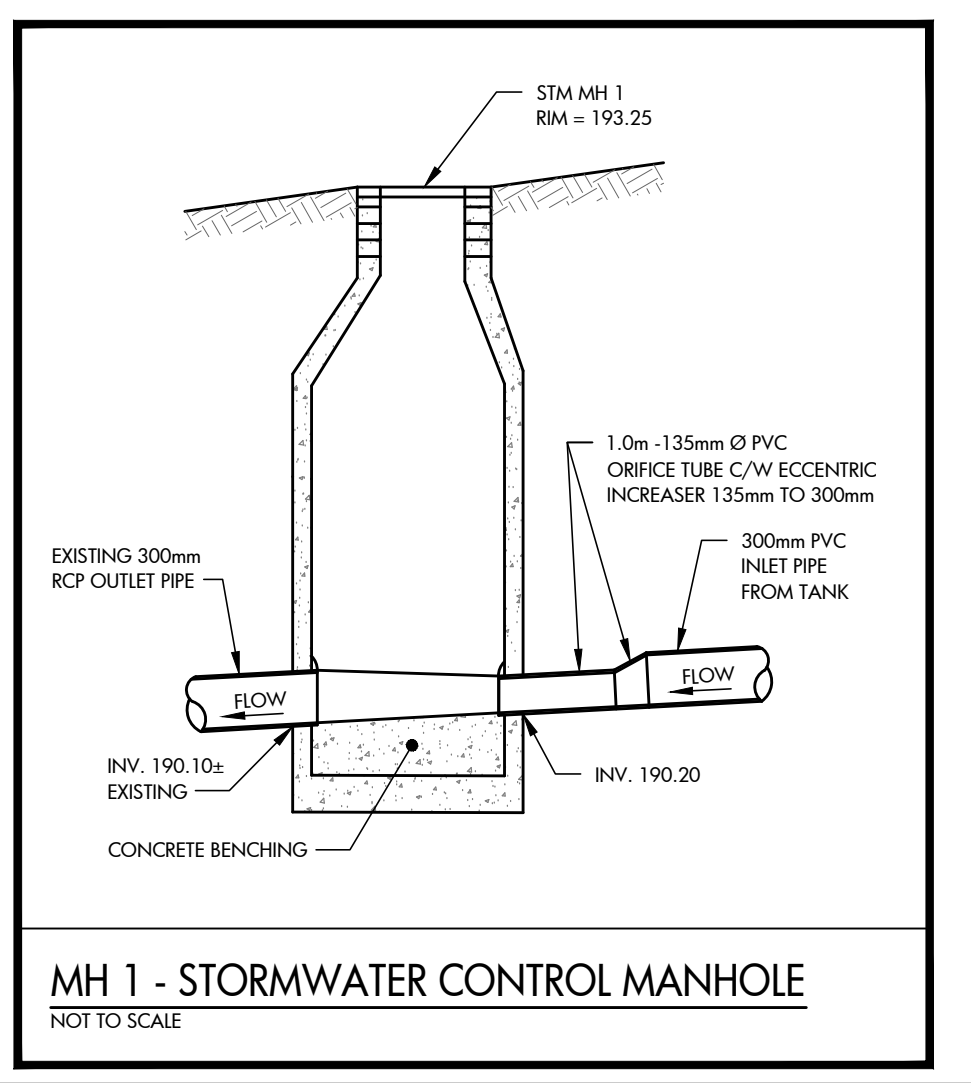
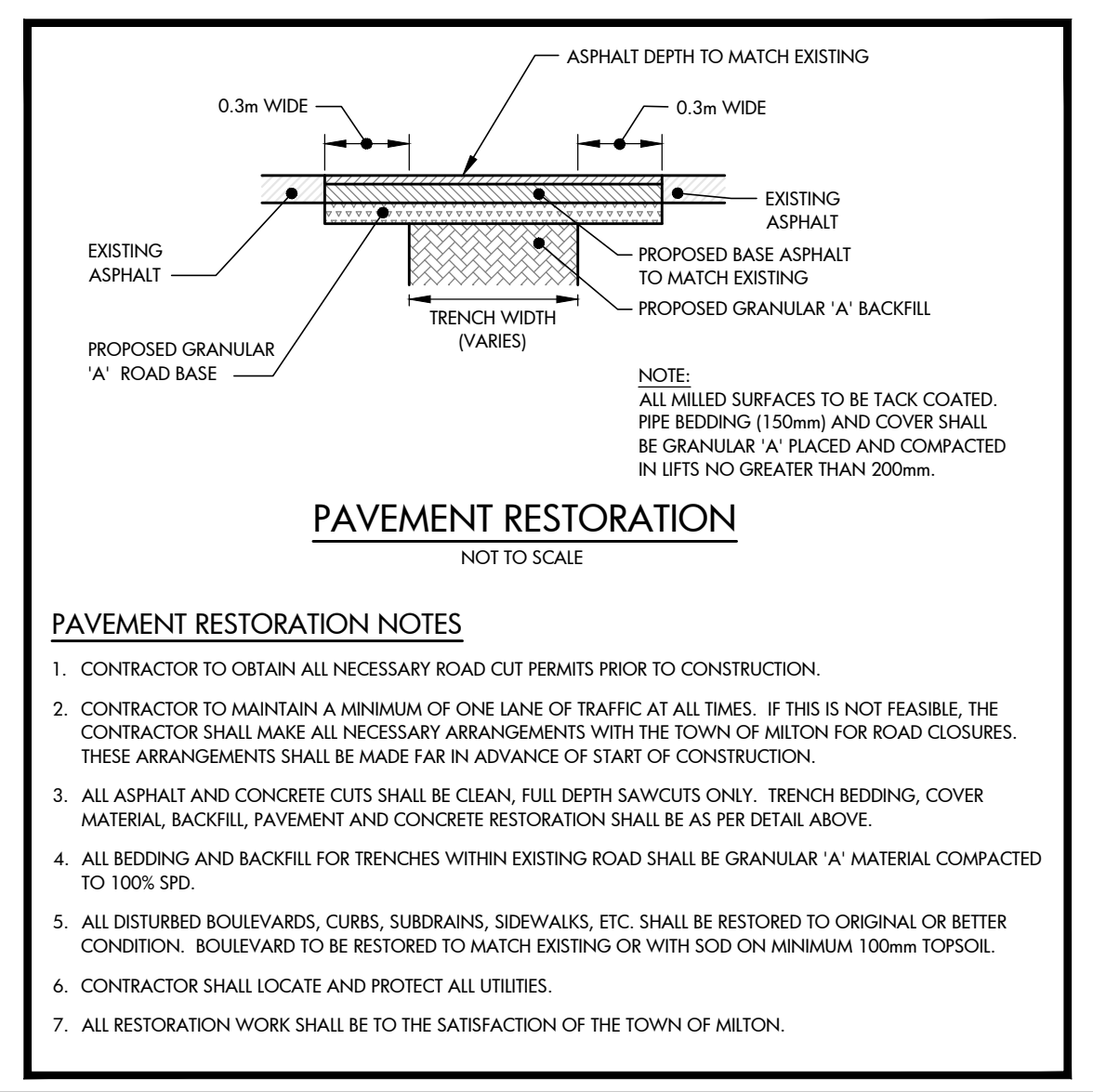


CLIENT  
**2613708 ONTARIO INC.**

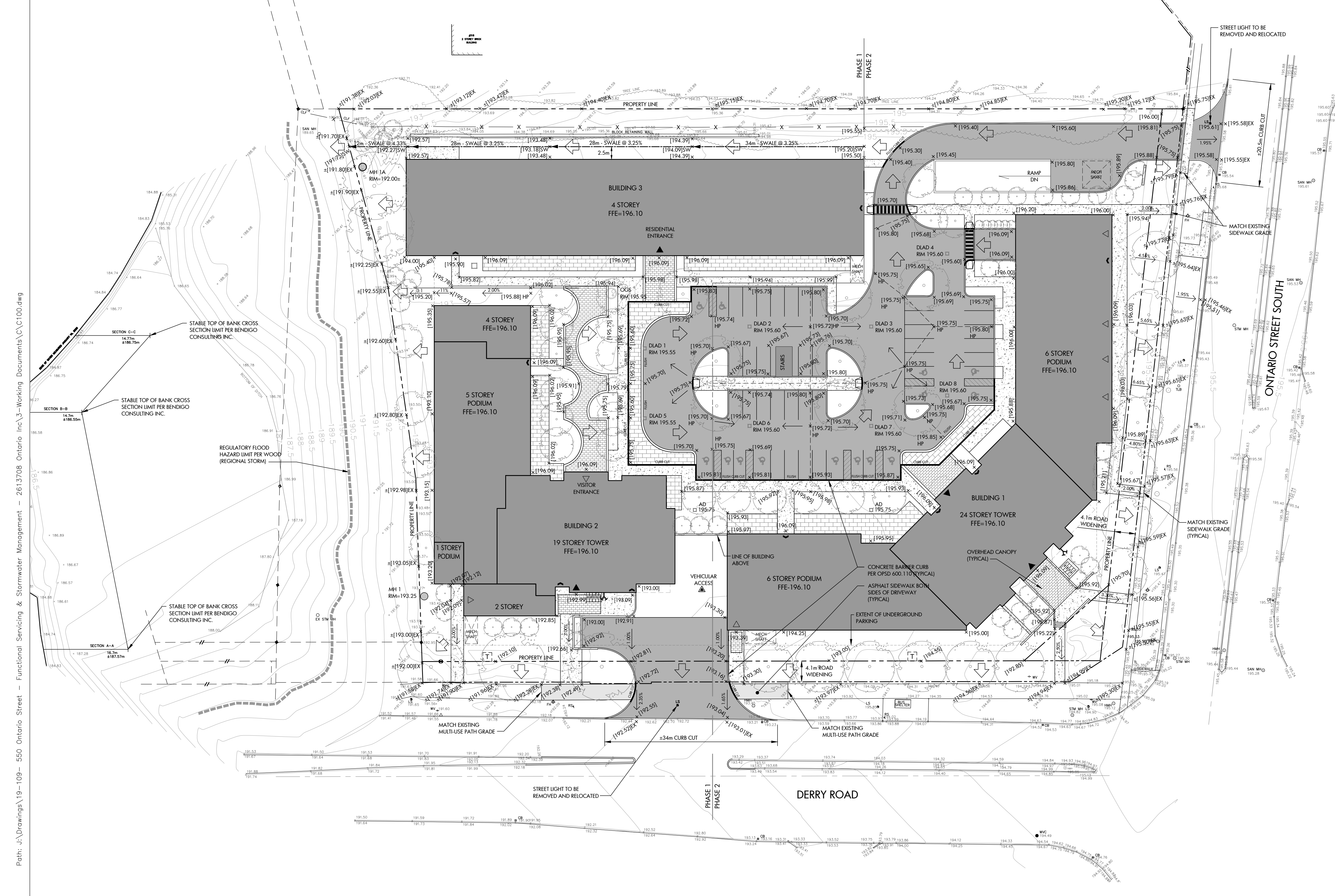
PROJECT  
**550 ONTARIO STREET SOUTH  
MILTON, ONTARIO**

DRAWING TITLE:  
**SITE SERVICING PLAN**

DRAWN BY: <b>A.A.</b>	SCALE: <b>1:400</b>
CHECKED BY: <b>M.D.</b>	DRAWING NUMBER: <b>C100</b>
DATE: <b>2019-11-18</b>	
PROJECT NUMBER: <b>19-109</b>	







**LEGEND**

- PROPERTY LINE
- PROPOSED BUILDING
- PROPOSED CONCRETE PAVEMENT/SIDEWALK
- PROPOSED DRIVEWAY ASPHALT
- PROPOSED PATHWAY ASPHALT
- PROPOSED PAVERS
- EXISTING ELEVATION
- PROPOSED ELEVATION
- DRAINAGE FLOW ARROW
- MAJOR OVERLAND FLOW ROUTE
- PROPOSED SWALE
- PROPOSED MANHOLE
- PROPOSED CATCHBASIN/MANHOLE
- EXISTING MANHOLE
- PROPOSED LIGHT FIXTURE
- BUILDING ENTRANCES
- DENOTES A SURVEY MONUMENT FOUND
- DENOTES A SURVEY MONUMENT PLANTED
- SIB DENOTES STANDARD IRON BAR
- SSIB DENOTES SHORT STANDARD IRON BAR
- IB DENOTES IRON BAR
- CC DENOTES CUT CROSS
- CP DENOTES CONCRETE PIN
- WIT DENOTES WITNESS
- PIN DENOTES PROPERTY IDENTIFICATION NUMBER
- (OU) DENOTES ORIGIN UNKNOWN
- P1 DENOTES REGISTERED PLAN M-107
- P2 DENOTES PLAN 20R-9832
- P3 DENOTES PLAN 20R-4428
- P4 DENOTES PLAN 20R-15915
- RW DENOTES RETAINING WALL
- BF DENOTES BOARD FENCE
- CLF DENOTES CHAIN LINK FENCE
- BOI DENOTES BOLLARD
- TIB DENOTES TRAFFIC LIGHT BOX
- RS DENOTES ROAD SIGN
- STM MH DENOTES STORM MANHOLE
- CB DENOTES CATCH BASIN
- HMH DENOTES HYDRO MANHOLE
- LS DENOTES LIGHT STANDARD
- T DENOTES TRANSFORMER
- U/G DENOTES UNDERGROUND
- FH DENOTES FIRE HYDRANT
- WV DENOTES WATER VALVE
- DENOTES CONIFER TREE
- DENOTES DECIDUOUS TREE

METRIC: DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

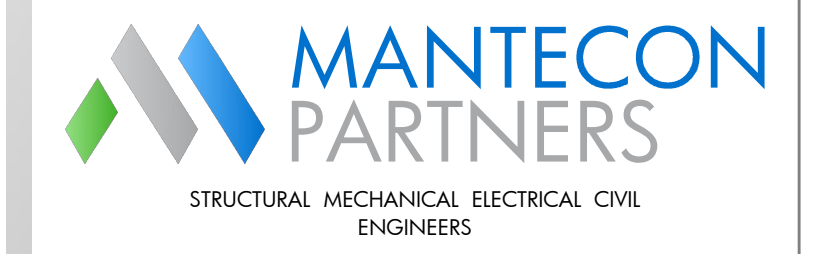
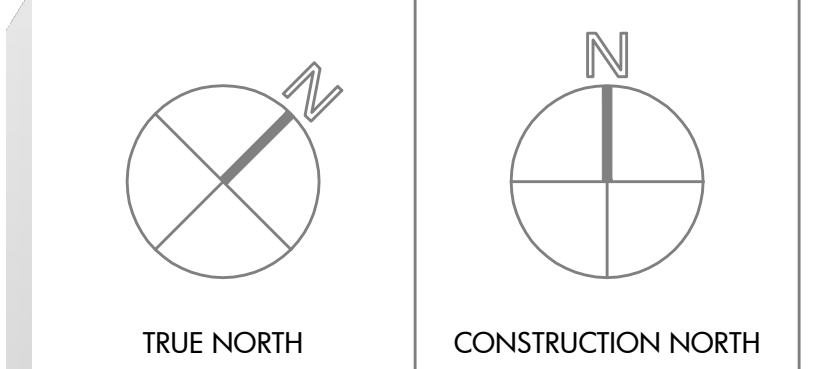
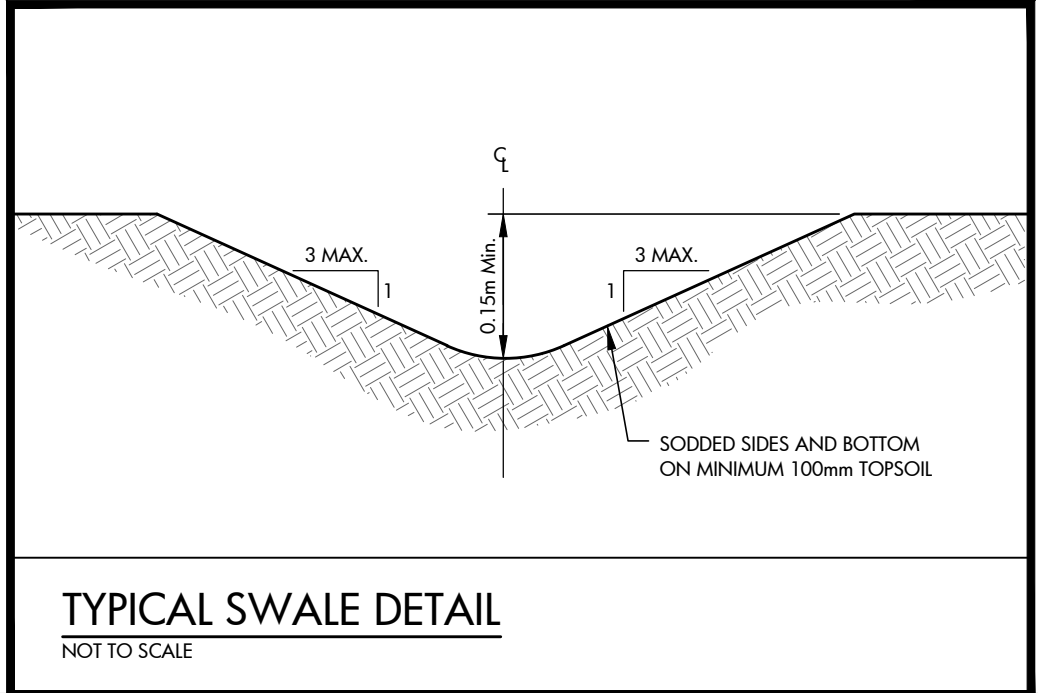
**PLAN OF SURVEY OF**  
 PART OF BLOCK A & PART OF BLOCK M  
 REGISTERED PLAN M-107, PART OF LOT 11, CONCESSION 2 NEW SURVEY  
 TOWN OF MILTON  
 REGIONAL MUNICIPALITY OF HALTON

INFORMATION ON THIS SITE PLAN TAKEN FROM  
 SURVEY / TOPOGRAPHY PREPARED BY:  
 MACKAY, MACKAY & PETERS LIMITED  
 LAND SURVEYORS & MAPPERS  
 3380 SOUTH SERVICE ROAD, UNIT 101 BURLINGTON, ON  
 TELEPHONE (905) 639-1375

SURVEY COMPLETED ON FEBRUARY 12, 2020

**BENCHMARK NOTE**  
 BENCHMARK # 00819828155, ELEVATION = 185.351 METRES  
 CONCRETE CULVERT UNDER BRITANNIA ROAD WEST, 1.4 KILOMETRES WEST OF HWY 25, 75.4 METRES WEST OF FIRST LINE ROAD, 6.3 METRES NORTH OF CENTRELINE OF BRITANNIA ROAD WEST (HALTON REGIONAL ROAD 6). TABLET IS SET VERTICALLY IN TOP OF NORTH END OF CULVERT, 0.33 METRES SOUTH OF NORTH END OF CULVERT, 0.22 METRES WEST OF EAST FACE OF CULVERT.

**BEARING REFERENCE**  
 BEARINGS ARE ASTRONOMIC AND ARE REFERRED TO THE NORTH-WESTERLY LIMIT OF BLOCK A, AS SHOWN ON REGISTERED PLAN M-107, HAVING A BEARING OF N 38° 56' 50" E.  
 FOR BEARING COMPARISONS, A ROTATION OF 0° 50' 05" CLOCKWISE HAS BEEN APPLIED TO THE P4



SEAL

**PRELIMINARY NOT FOR CONSTRUCTION**  
 FEBRUARY, 2020  
 Mantecon Partners

REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATION. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF MANTECON PARTNERS AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

NO.	ISSUED	DATE	BY
1	ISSUED FOR ZONING APPLICATION	APR 23, 2021	MD



CLIENT  
**2613708 ONTARIO INC.**

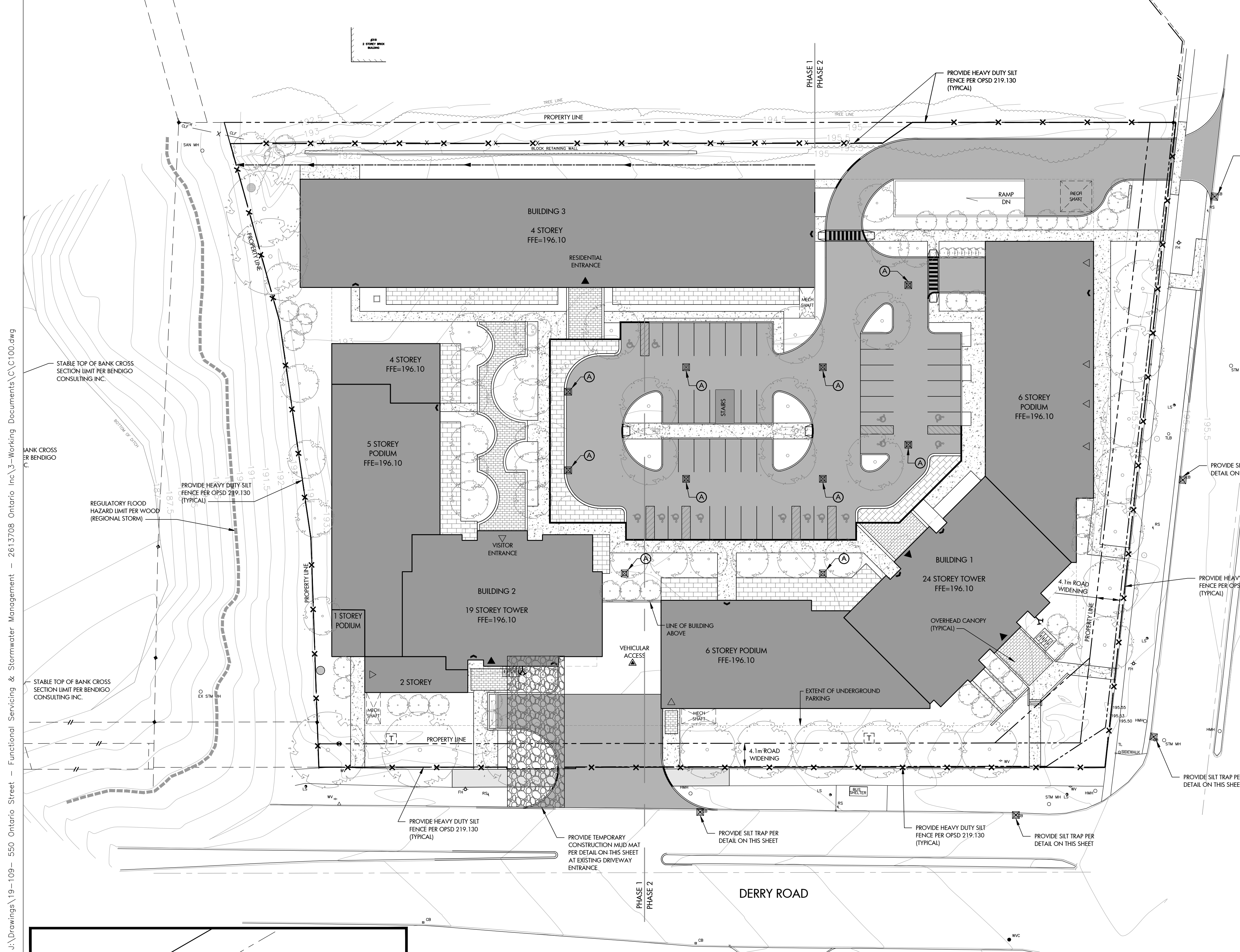
PROJECT  
**550 ONTARIO STREET SOUTH  
 MILTON, ONTARIO**

DRAWING TITLE  
**SITE GRADING PLAN**

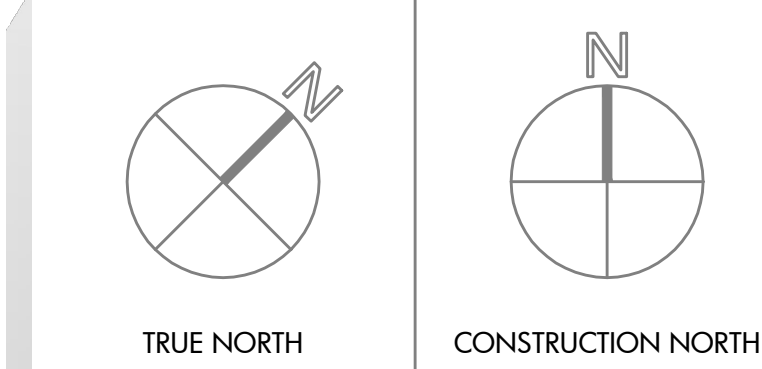
DRAWN BY: A.A.	SCALE: 1:400
CHECKED BY: M.D.	DRAWING NUMBER: C200
DATE: 2019-11-18	
PROJECT NUMBER: 19-109	

Path: J:\Drawings\19-109-550 Ontario Street - Functional Servicing & Stormwater Management - 2613708 Ontario Inc.\3-Working Documents\C100.dwg  
 Plotted By: mmeasurcut  
 Last Saved By: mmeasurcut  
 2021-04-23  
 2021-04-22  
 ORIGINAL SHEET - ARCH D





LEGEND	
	PROPERTY LINE
	PROPOSED BUILDING
	PROPOSED CONCRETE PAVEMENT/SIDEWALK
	PROPOSED DRIVEWAY ASPHALT
	PROPOSED PATHWAY ASPHALT
	PROPOSED PAVERS
	EXISTING ELEVATION
	PROPOSED ELEVATION
	PROPOSED SWALE
	PROPOSED SILTATION CONTROL SACK
	PROPOSED SILT FENCE
	DRAINAGE FLOW ARROW
	PROPOSED LIGHT FIXTURE
	BUILDING ENTRANCES
	DENOTES A SURVEY MONUMENT PLANTED
	DENOTES STANDARD IRON BAR
	DENOTES SHORT STANDARD IRON BAR
	DENOTES IRON BAR
	DENOTES CUT CROSS
	DENOTES CONCRETE PIN
	DENOTES WITNESS
	DENOTES PROPERTY IDENTIFICATION NUMBER
	DENOTES ORIGIN UNKNOWN
	DENOTES REGISTERED PLAN M-107
	DENOTES PLAN 20R-9832
	DENOTES PLAN 20R-4428
	DENOTES PLAN 20R-15915
	DENOTES RETAINING WALL
	DENOTES BOARD FENCE
	DENOTES CHAIN LINK FENCE
	DENOTES BOLLARD
	DENOTES TRAFFIC LIGHT BOX
	DENOTES ROAD SIGN
	DENOTES STORM MANHOLE
	DENOTES CATCH BASIN
	DENOTES HYDRO MANHOLE
	DENOTES LIGHT STANDARD
	DENOTES TRANSFORMER
	DENOTES UNDERGROUND
	DENOTES FIRE HYDRANT
	DENOTES WATER VALVE
	DENOTES CONIFEROUS TREE
	DENOTES DECIDUOUS TREE



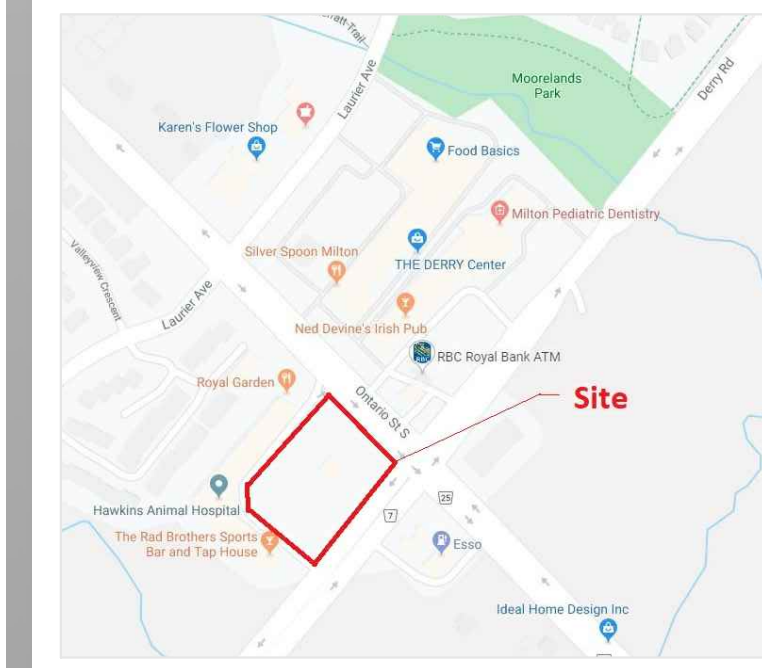
15 Foundry Street, Dundas, ON, L9H 2V6  
Phone: (905)648-0373 www.manteconpartners.com

**PRELIMINARY NOT FOR CONSTRUCTION**  
FEBRUARY, 2020  
Mantecon Partners

REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATION. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF MANTECON PARTNERS AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

NO.	ISSUED	DATE	BY
1	ISSUED FOR ZONING APPLICATION	APR 23, 2021	MD

KEY PLAN

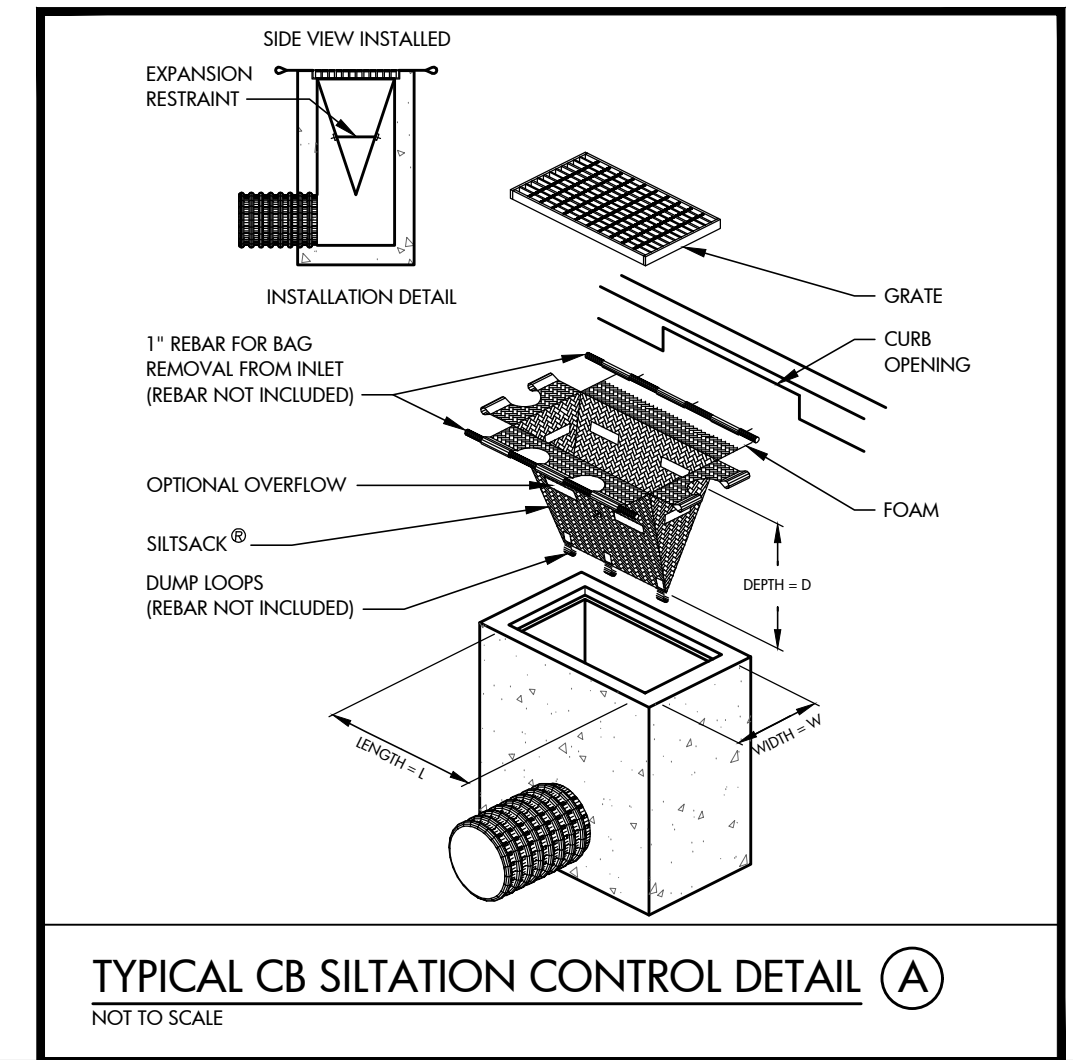
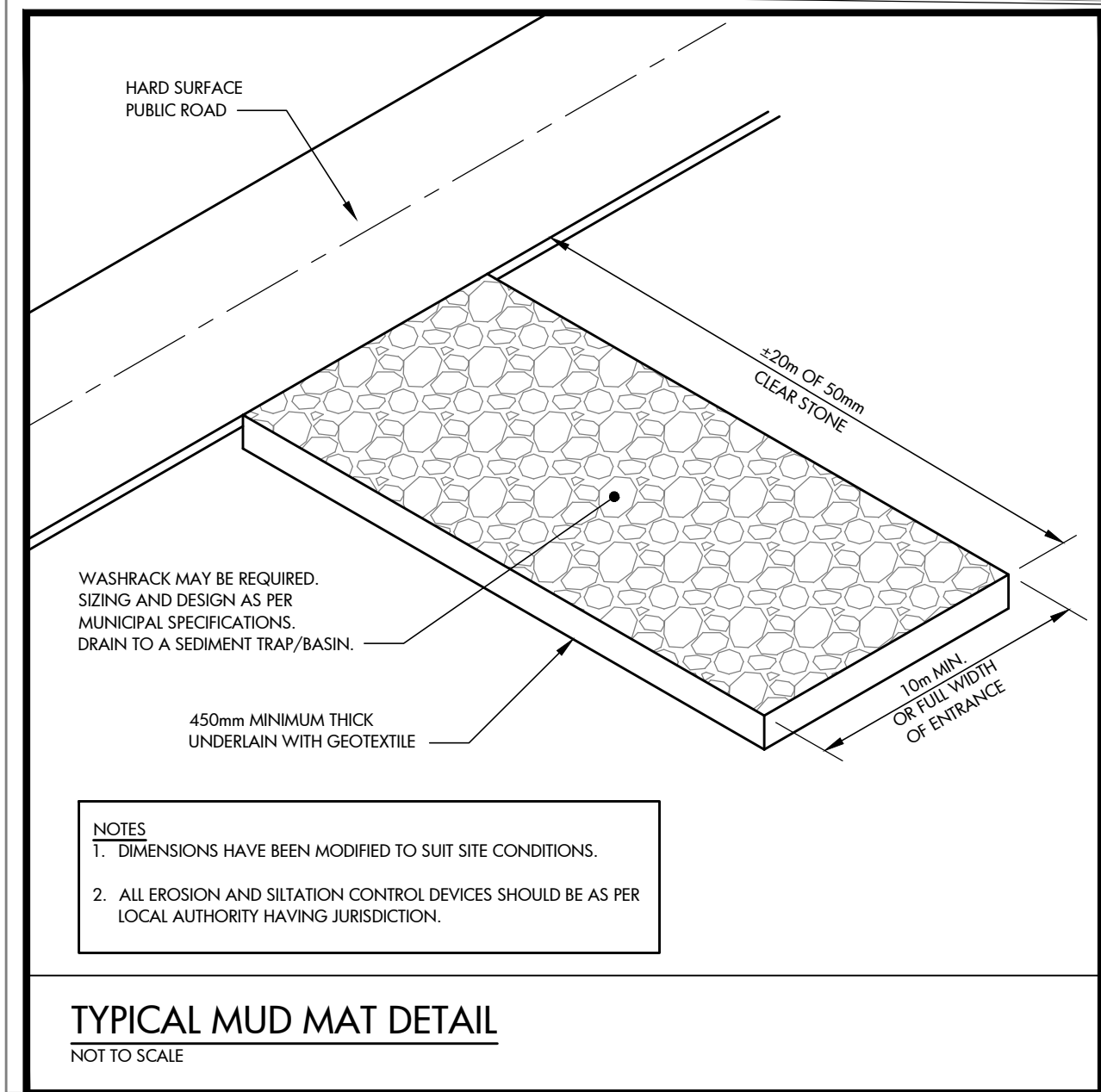
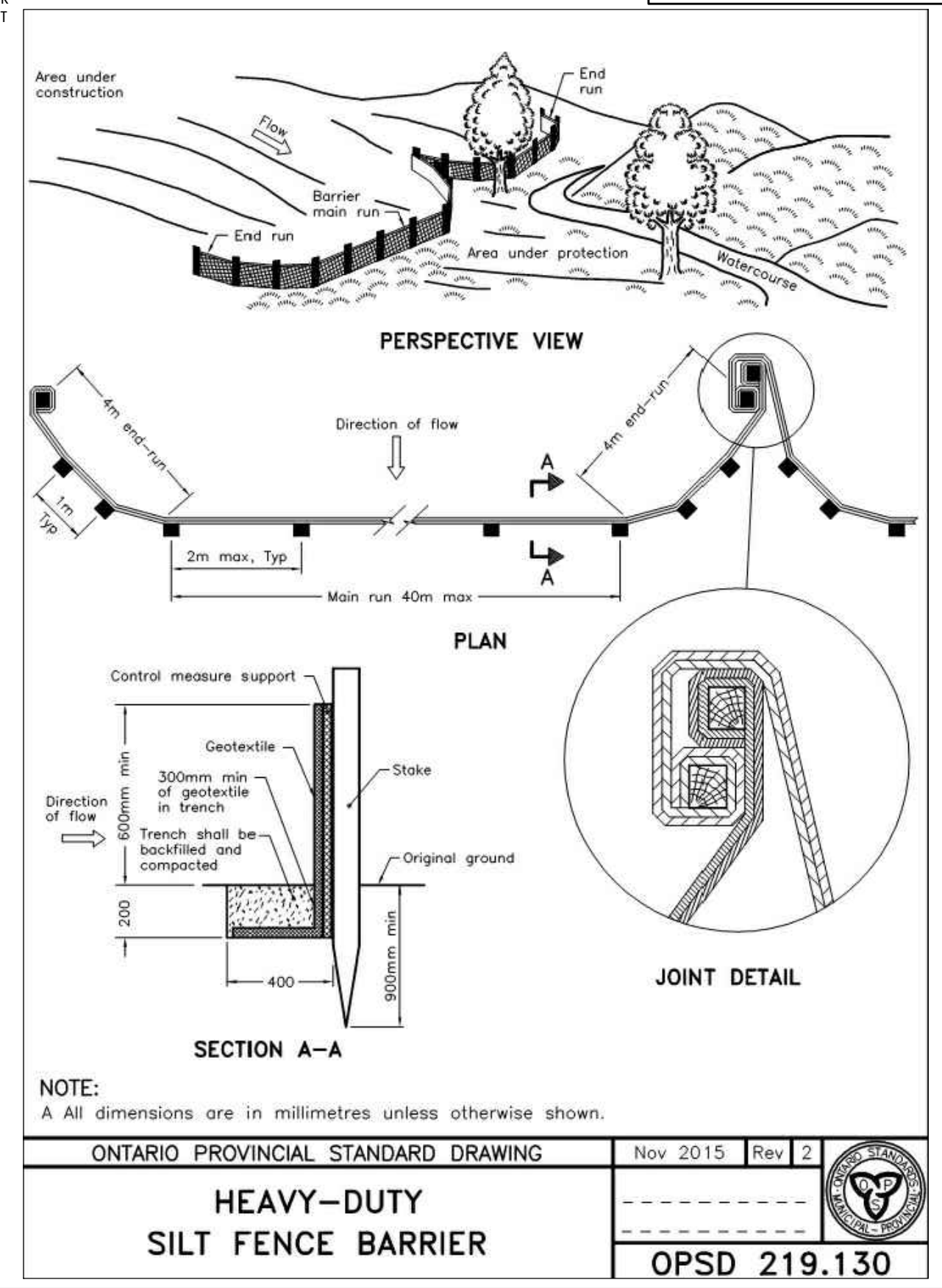


CLIENT  
2613708 ONTARIO INC.

PROJECT  
550 ONTARIO STREET SOUTH  
MILTON, ONTARIO

DRAWING TITLE  
SITE SEDIMENT AND  
EROSION CONTROL PLAN

DRAWN BY: A.A.	SCALE: 1:400
CHECKED BY: M.D.	DRAWING NUMBER:
DATE: 2019-11-18	C300
PROJECT NUMBER: 19-109	

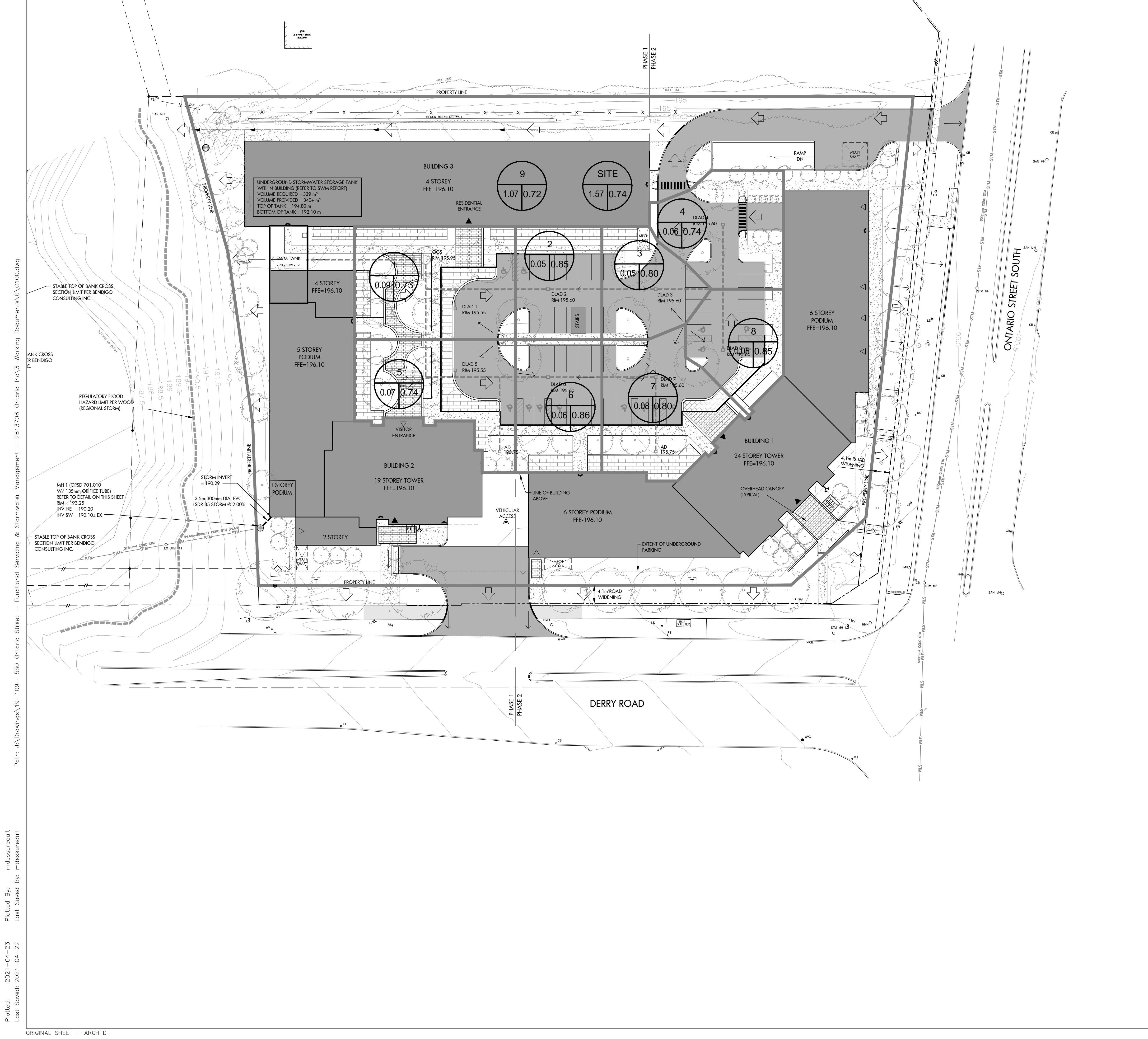


**SILTATION AND EROSION CONTROL NOTES**

- SILTATION CONTROL BARRIERS SHALL BE PLACED AS DETAILED.
- ALL SILTATION CONTROL MEASURES SHALL BE CLEANED AND MAINTAINED AFTER EACH RAINFALL AND ALSO WEEKLY AS DIRECTED AND TO THE SATISFACTION OF THE TOWN OF MILTON.
- ADDITIONAL SILT CONTROL LOCATIONS MAY BE REQUIRED AS DETERMINED BY THE TOWN OF MILTON.
- ALL SILT FENCING TO BE INSTALLED PRIOR TO COMMENCEMENT OF ANY AREA GRADING, EXCAVATING, OR DEMOLITION.
- PROTECT ALL DISTURBED AND EXPOSED AREAS AS A RESULT OF CONSTRUCTION. STORM WATER MEASURES DURING CONSTRUCTION TO BE UTILIZED TO ENSURE SUITABLE DRAINAGE WHILE MINIMIZING EROSION. STOCKPILES ARE TO BE SEED OR COVERED WITH VEGETATIVE GROWTH FOR THE DURATION OF CONSTRUCTION.
- PROTECT ALL MANHOLES, AND PIPE ENDS (EXISTING AND NEW) FROM SEDIMENT INFUSION WITH GEOTEXTILE CLOTH (TERRAFIX 270R). ALL CATCHBASINS TO HAVE SILTSACK AS PER THE ATTACHED DETAILS.
- PREVENT WIND-BLOWN DUST TO THE BEST OF THE CONTRACTOR'S ABILITY. KEEP SOIL DAMP DURING DRY WEATHER OR BY OTHER MEANS NECESSARY TO COMPLETE THE WORK.
- EROSION CONTROL STRUCTURES TO BE MONITORED REGULARLY BY CONTRACTOR AND ANY DAMAGE REPAIRED IMMEDIATELY. SEDIMENTS TO BE REMOVED WHEN ACCUMULATIONS REACH A MAXIMUM OF ONE THIRD (1/3) THE HEIGHT OF THE SILT FENCE.
- ALL EROSION CONTROL STRUCTURES TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION OF VEGETATIVE GROUND COVER.
- THE CONTRACTOR IS RESPONSIBLE FOR REMOVING SEDIMENTS FROM THE MUNICIPAL ROADWAY AND SIDEWALKS AT THE END OF EACH WORK DAY.
- MUD MATS OF 50mm CLEAR STONE WITH MINIMUM DEPTH OF 450mm, (20 METRES LONG, 10 METRES WIDE, 450mm DEEP) SHALL BE PROVIDED ON SITE CONSTRUCTION ENTRANCES. CONTRACTOR TO ENSURE ALL VEHICLES LEAVE THE SITE VIA THE MUD MAT AND THAT THE MAT IS MAINTAINED IN A MANNER TO MAXIMIZE ITS EFFECTIVENESS AT ALL TIMES.

Path: J:\Drawings\19-109-550 Ontario Street - Functional Servicing & Stormwater Management - 2613708 Ontario Inc\3-Working Documents\C\100.dwg  
Plotted By: mmeasurecut  
Last Saved By: mmeasurecut  
2021-04-23  
2021-04-22  
ORIGINAL SHEET - ARCH D

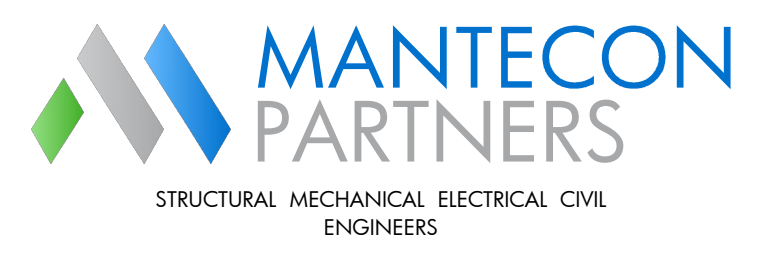
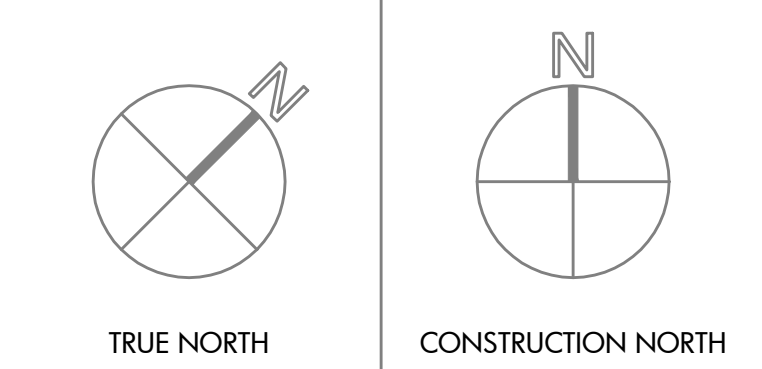




**LEGEND**

- PROPERTY LINE
- PROPOSED BUILDING
- ▨ PROPOSED CONCRETE PAVEMENT/SIDEWALK
- ▩ PROPOSED DRIVEWAY ASPHALT
- ▧ PROPOSED PATHWAY ASPHALT
- ▤ PROPOSED PAVERS
- EXISTING STORM SEWER
- EXISTING STORM SEWER
- PROPOSED MANHOLE
- EXISTING CATCH BASIN/MANHOLE
- EXISTING MANHOLE
- PROPOSED SWALE
- ▲ BUILDING ENTRANCES
- DENOTES A SURVEY MONUMENT FOUND
- DENOTES STANDARD IRON BAR
- DENOTES SHORT STANDARD IRON BAR
- DENOTES IRON BAR
- CC DENOTES CUT CROSS
- CC DENOTES CONCRETE PIN
- WIT DENOTES WITNESS
- PN DENOTES PROPERTY IDENTIFICATION NUMBER
- (OU) DENOTES ORIGIN UNKNOWN
- P1 DENOTES REGISTERED PLAN M-107
- P2 DENOTES PLAN 20R-9832
- P3 DENOTES PLAN 20R-4428
- P4 DENOTES PLAN 20R-15915
- RW DENOTES RETAINING WALL
- BF DENOTES BOARD FENCE
- CLF DENOTES CHAIN LINK FENCE
- ROL DENOTES ROLLARD
- TIB DENOTES TRAFFIC LIGHT BOX
- RS DENOTES ROAD SIGN
- STM MH DENOTES STORM MANHOLE
- CB DENOTES CATCH BASIN
- HMH DENOTES HYDRO MANHOLE
- LS DENOTES LIGHT STANDARD
- T DENOTES TRANSFORMER
- U/G DENOTES UNDERGROUND
- FH DENOTES FIRE HYDRANT
- WV DENOTES WATER VALVE
- DENOTES CONIFEROUS TREE
- DENOTES DECIDUOUS TREE
- STORM DRAINAGE AREA BOUNDARY
- MAJOR OVERLAND FLOW ROUTE
- DRAINAGE AREA IDENTIFIER NUMBER
- AREA (IN HECTARES)
- RUNOFF COEFFICIENT

METRIC: DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

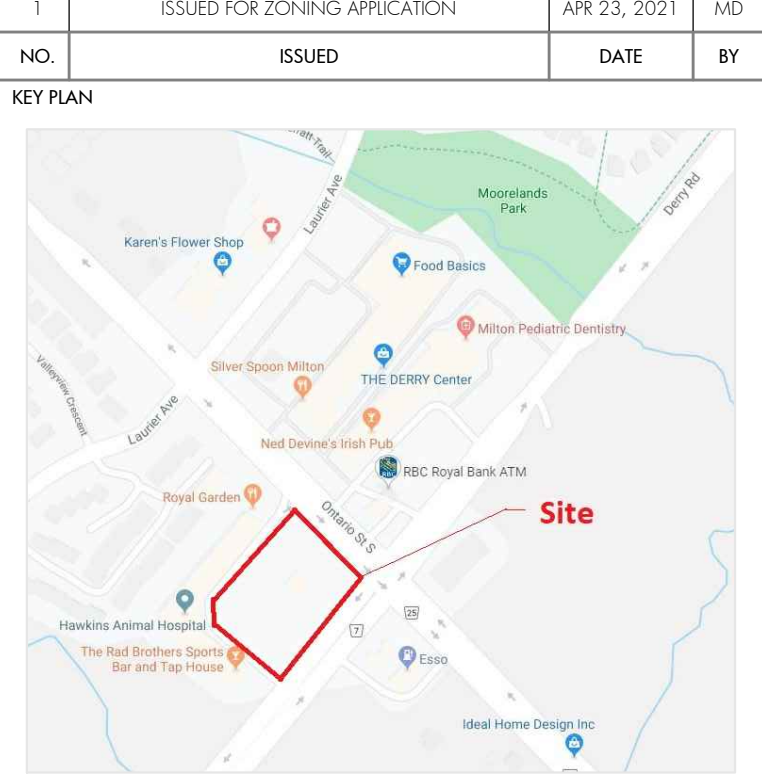


15 Foundry Street, Dundas, ON, L9H 2V6  
Phone: (905)648-0373 www.manteconpartners.com

**PRELIMINARY NOT FOR CONSTRUCTION**  
FEBRUARY, 2020  
Mantecon Partners

REVIEW ALL DRAWINGS AND VERIFY ALL DIMENSIONS AT THE SITE. DO NOT SCALE THE DRAWINGS. REPORT ALL DISCREPANCIES TO THE ENGINEER BEFORE PROCEEDING WITH ANY CONSTRUCTION OR SHOP FABRICATION. ALL DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS ARE THE COPYRIGHT PROPERTY OF MANTECON PARTNERS AND MUST BE RETURNED UPON REQUEST. REPRODUCTION OF DRAWINGS, SPECIFICATIONS AND RELATED DOCUMENTS IN PART OR WHOLE IS FORBIDDEN WITHOUT THE ENGINEER'S WRITTEN PERMISSION.

NO.	ISSUED FOR ZONING APPLICATION	DATE	BY
1	ISSUED FOR ZONING APPLICATION	APR 23, 2021	MD



CLIENT  
2613708 ONTARIO INC.

PROJECT  
550 ONTARIO STREET SOUTH  
MILTON, ONTARIO

DRAWING TITLE  
SITE STORM DRAINAGE  
AREA PLAN

DRAWN BY: A.A.	SCALE: 1:400
CHECKED BY: M.D.	DRAWING NUMBER: C400
DATE: 2019-11-18	
PROJECT NUMBER: 19-109	

Path: J:\Drawings\19-109-550 Ontario Street - Functional Servicing & Stormwater Management - 2613708 Ontario Inc\_3-Working Documents\C400.dwg  
Plotted By: mmeasureout  
Last Saved By: mmeasureout  
2021-04-23  
Last Saved: 2021-04-22  
ORIGINAL SHEET - ARCH D



# APPENDIX A

# RATED THEORETICAL CAPACITY OF FIRE HYDRANTS



**Project Name:** 550 Ontario Street

**Project Number:** 19-109

**Date:** July 2020

**Prepared by:** M. Dessureault

CALCULATION TO DETERMINE THE PREDICTED FLOW OF A FIRE HYDRANT PER NFPA GUIDELINES AND BASED ON THE RATED THEORETICAL CAPACITY AT 20 PSI

Test performed by Jackson Waterworks on March 20, 2020

## Hydrant Flow Test Results #1 (Derry Road)

Predicted Flow (PF)	=	20	(Predicted Flow is always 20 psi)
Static Pressure (SP)	=	92	(per hydrant flow test results)
Residual Pressure (RP)	=	88	(per hydrant flow test results)
Flow (USGPM)	=	1278	(Residual Flow per hydrant flow test results-Imperial Units)

## Theoretical Fire Flow Calculation @ 20 psi

(1) = SP - PF	=	72
(2) = SP - RP	=	4
(3) = (1) / (2)	=	18.000
(4) = (3) ^ 0.54	=	4.763
(5) = Flow x (4)	=	6087 USGPM

## USGPM to L/min Conversion

Flow (USGPM)	=	6087	FAR20
Flow (UKGPM)	=	5068	
Flow (L/sec)	=	384	

## Hydrant Flow Test Results #2 (Ontario Street)

Predicted Flow (PF)	=	20	(Predicted Flow is always 20 psi)
Static Pressure (SP)	=	87	(per hydrant flow test results)
Residual Pressure (RP)	=	81	(per hydrant flow test results)
Flow (USGPM)	=	1278	(Residual Flow per hydrant flow test results-Imperial Units)

## Theoretical Fire Flow Calculation @ 20 psi

(1) = SP - PF	=	67
(2) = SP - RP	=	6
(3) = (1) / (2)	=	11.167
(4) = (3) ^ 0.54	=	3.680
(5) = Flow x (4)	=	4703 USGPM

## USGPM to L/min Conversion

Flow (USGPM)	=	4703	FAR20
Flow (UKGPM)	=	3916	
Flow (L/sec)	=	297	



Mr. Angelo Cutaia  
**AC III Group**  
3380 South Service Road  
Burlington Ontario **L7N 3J5**

**08 April 2020**

Jackson Waterworks has recently completed fire hydrant flow testing at 550 Ontario Street South in Milton.

We define the Test Hydrants as the ones being flowed, and the Base Hydrant as the one where static and residual pressures are recorded. Wherever possible, we inspect the secondary valve for the Test Hydrants to make sure it is in the fully open position. Likewise, we count the number of turns needed to open the Test Hydrants (to make sure it is opening completely).

We do not use pitot conversion factors for different nozzle profiles. The Engineer may use these factors if desired and warranted.

The secondary valve for the Test Hydrant was found to be fully open at the time of test #2. It could not be inspected at the time of test #1.

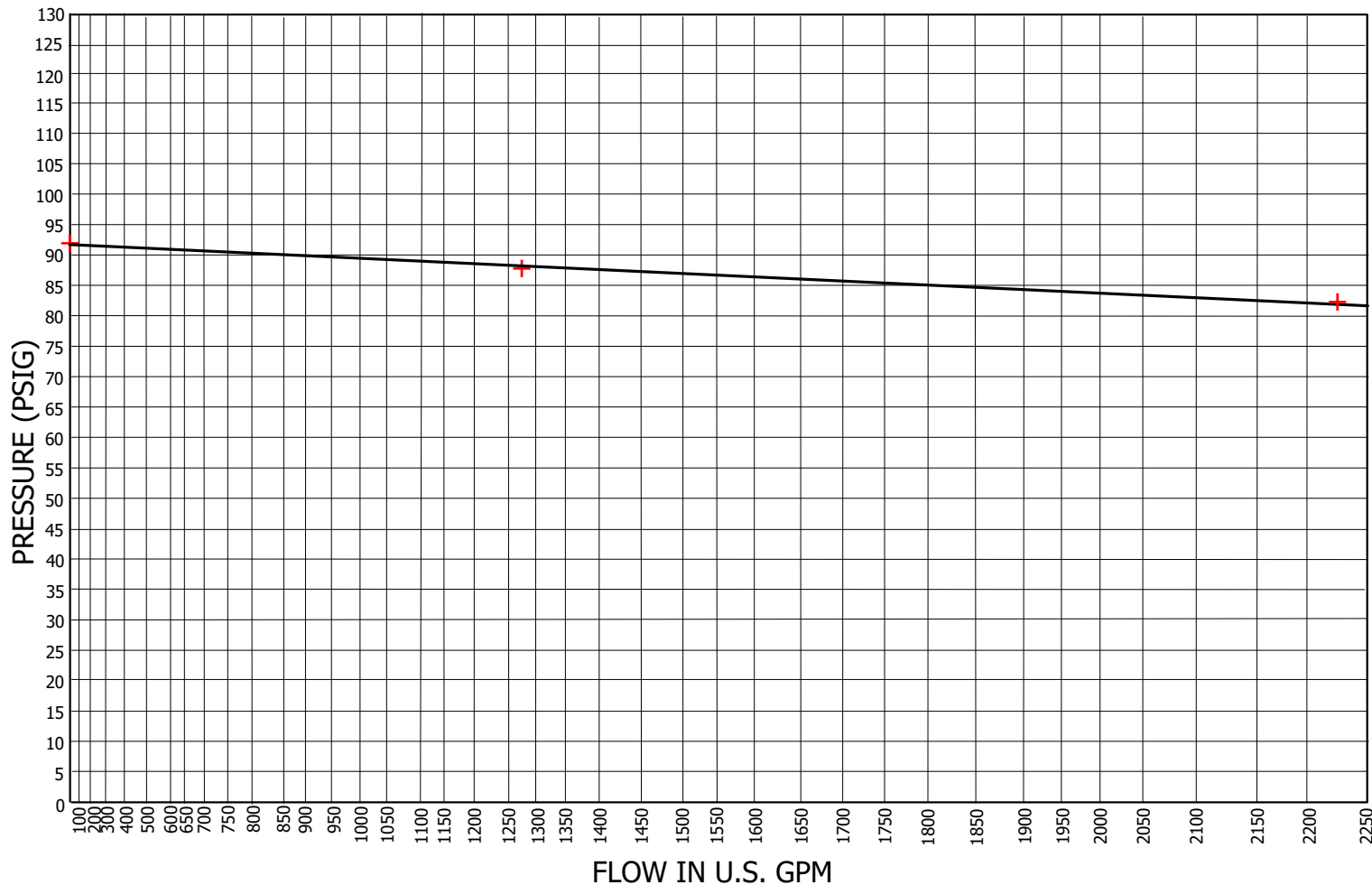
Testing was completed in accordance with NFPA 291 guidelines.

There were no irregularities to report.

Trusting this meets with your approval, we are...

Yours truly,

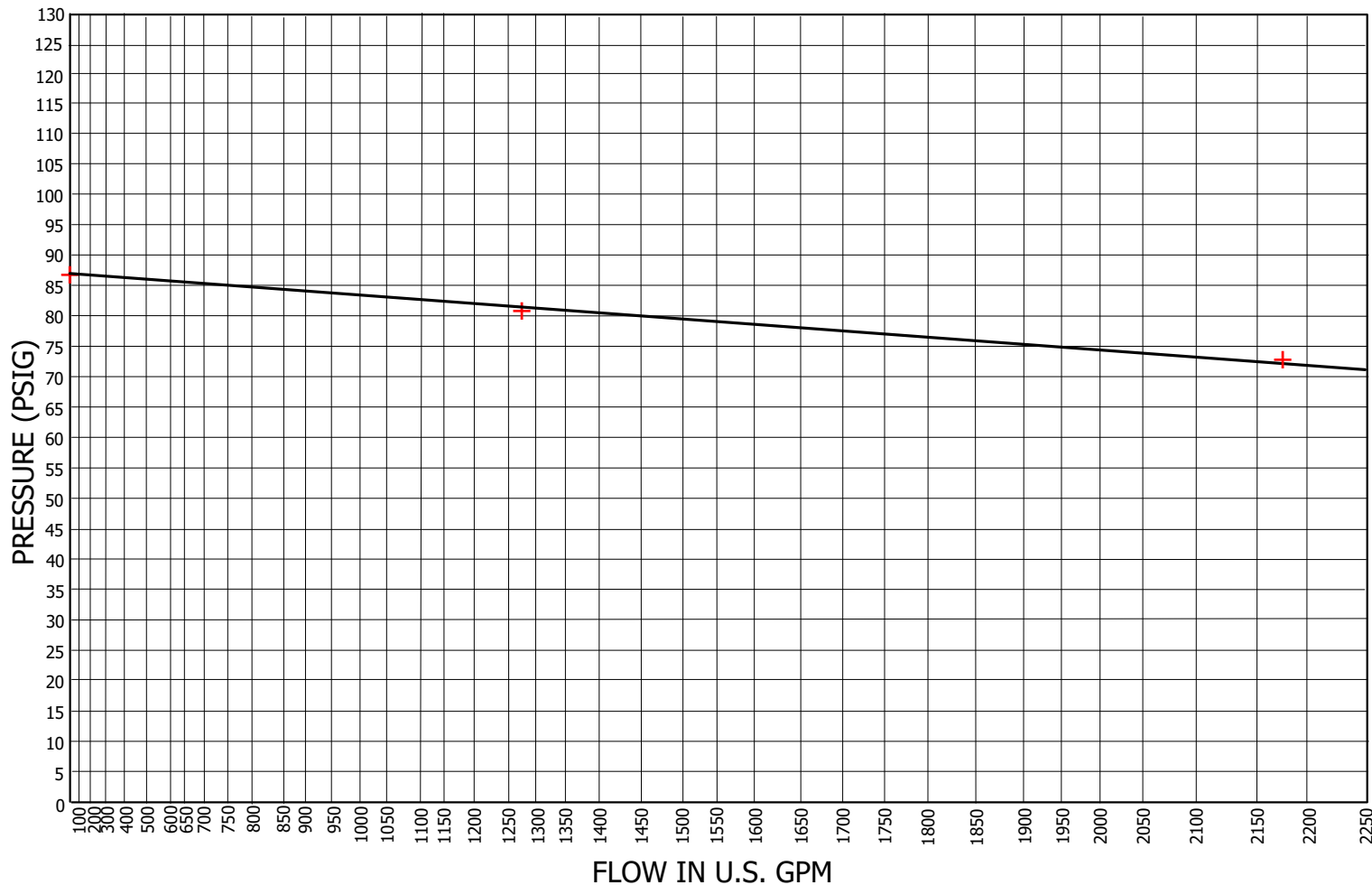
Mark Schmidt  
Jackson Waterworks



# of Ports	PORT DIA. (in/mm)	PITOT (psig)	FLOW (usgpm)	RESIDUAL (psig)
1	2.50/63	58	1278	88
2	2.50/63	44/44	2226	83
<b>THEORETICAL FLOW @ 20psi</b>			<b>6086</b>	

General Data	
Test Date	20 March 2020
Test Time	09:30am
Pipe Dia.	16"
Static	92

Site Information	
Site or Developer Name	AC III Group
Site Address/Municipality	550 Ontario Street South, Milton
Location of Test Hydrant	Derry Road, 1st West of Ontario Street South
Location of Base Hydrant	Ontario Street South, 1st North of Derry Road
Technician's Comments	No conversion factor used for flow calculation based on round and flush internal nozzle configuration. Flow testing has been conducted in accordance with NFPA 291 guidelines wherever possible. Refer to attached report for further information.
	Verified By: Mark Schmidt



# of Ports	PORT DIA. (in/mm)	PITOT (psig)	FLOW (usgpm)	RESIDUAL (psig)
1	2.50/63	58	1278	81
2	2.50/63	42/42	2174	73
<b>THEORETICAL FLOW @ 20psi</b>			<b>4703</b>	

General Data	
Test Date	20 March 2020
Test Time	09:00am
Pipe Dia.	12"
Static	87

Site Information	
Site or Developer Name	AC III Group
Site Address/Municipality	550 Ontario Street South, Milton
Location of Test Hydrant	Ontario Street South, 2nd North of Derry Road
Location of Base Hydrant	Ontario Street South, 1st North of Derry Road
Technician's Comments	No conversion factor used for flow calculation based on round and flush internal nozzle configuration. Flow testing has been conducted in accordance with NFPA 291 guidelines wherever possible. Refer to attached report for further information.
	Verified By: Mark Schmidt



# APPENDIX B

March 31, 2021

The Regional Municipality of Halton  
1151 Bronte Road  
Oakville ON L6M 3L1

Dear Sir/Madam:

**RE: Water Usage and Sanitary Discharge Report for Proposed Mixed-Use Development, 550 Ontario Street South, Town of Milton**

**Background**

The existing strip mall development at 550 Ontario Street South in the Town of Milton is proposed to be demolished and a mixed-used development with towers to 24 storeys high constructed containing mostly residential use with some at-grade commercial use and underground parking.

1. Commercial use (at-grade) – 2,039 m<sup>2</sup>;
2. Residential use (apartments) – 649 units (408 1-bedroom & 241 2-bedroom).

The site is currently an existing strip mall that will be demolished.

The site has an area of ±1.57 ha of which approximately 3,885 m<sup>2</sup> will be landscaped.

Table 8.2.1.3.A & B of the Ontario Building Code has been used to calculate water usage and sanitary discharge for occupant loadings. This mixed-use development does not require water in the process and cooling water and it will not be required.

**Sanitary Discharge**

**Assume Restaurant use (as a worst-case scenario) (not 24hr at 125 L per seat per day):**

1. Restaurant Space = 2,039 m<sup>2</sup>  
Use 80% area for seating and 4 seats per 10 m<sup>2</sup> =  $(2,039 \times 0.80) / 10 \times 4 = 652$  seats (estimated)  
  
 $652 \times 125 \text{ L} = 81,500 \text{ L/day}$   
 $= 81.5 \text{ m}^3/\text{day}$   
 $= \underline{0.94 \text{ L/sec}}$

**Residential use (Table 8.2.1.3.A Residential Occupancy and Subsection 3.1.17):**

1. 649 units (Apartments, Condominiums at 275 L/ca/day)
  - a. 408 1-bedroom
  - b. 241 2-bedroom

408 x 2 people per bedroom = 816 people  
241 x 4 people per 2-bedroom = 964 people  
Total people = 1,780 people

Total Flow = 1,780 x 275 L/day = 489,500 L/day  
= 489.5 m<sup>3</sup>/day  
= 5.67 L/sec

**Total sanitary discharge from site = commercial use + residential use**  
**= 0.94 L/sec + 5.67 L/sec**  
**= 6.61 L/sec or (572 m<sup>3</sup>/day)**

### Water Usage

#### **Mixed-Use building:**

Total water usage from proposed mixed-use development = 572 m<sup>3</sup>/day (see above) = 6.61 L/sec

No process water usage.  
No cooling water usage.

#### **Landscaping for site:**

-Site landscaping area = 3,885 m<sup>2</sup>

25.4 mm / m<sup>2</sup> / week x 3,885 m<sup>2</sup> / 7 / 1000 = 14.1 m<sup>3</sup>/day

Total landscape water usage from site = 14.1 m<sup>3</sup>/day

**Total water usage from site = 572 m<sup>3</sup>/day + 14.1 m<sup>3</sup>/day = 586 m<sup>3</sup>/day = 6.8 L/sec**

Sincerely,

#### **MANTECON PARTNERS INC.**

STRUCTURAL, MECHANICAL, ELECTRICAL, CIVIL ENGINEERING AND PROJECT MANAGEMENT

A handwritten signature in black ink, appearing to read "Michael Dessureault".

Michael Dessureault, P.Eng.  
Senior Project Manager / Civil Engineer

MD/jm