



**URBANTECH®**

**FUNCTIONAL SERVICING AND  
STORMWATER MANAGEMENT REPORT**

**Block 415  
Part of Registered Plan 20M-1186**

**TOWN OF OAKVILLE**

**REGIONAL MUNICIPALITY OF HALTON**

**PREPARED FOR  
Fernbrook Homes (Seven Oaks 2021) Limited  
c/o Krpan Group of Companies**

**Urbantech File No.: 21-703**

**1<sup>ST</sup> SUBMISSION – FEBRUARY 2022**

## 1 INTRODUCTION

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Urbantech Consulting has been retained by Krpan Group to prepare a Functional Servicing Brief in support of the draft plan application associated with their property at Sixth Line and Carnegie Drive in the Town of Oakville, Ontario. The 0.91 Ha. parcel is bounded by Sixth Line to the west, Carnegie Drive to the north, Millicent Avenue to the east and residential lots fronting onto Charring Cross Drive to the south.

The proposed draft plan is part of Registered Draft M-Plan 20M-1186, Town of Oakville, Regional Municipality of Halton. The proposed site is located within the Block 415 as illustrated on the Sixth Line Corp – Registered **Plan 20M-1186**. Block 415 has been included originally as a mixed-use development and serviced with the development of Sixth Line Corporation in accordance with the approved engineering plans. **Drawing 104** “*Underground General Plan (Part 1)*” from Sixth Line Corporation engineering package is provided with this submission for reference.

As shown on the **Draft Plan**, prepared by JD Barnes, the proposed development consists of a public lane, nine (9) detached residential lots and four (4) residential townhouse blocks (5, 5, 5 and 4 units) for a total of 28 residential units.

This report presents the recommended stormwater management and municipal servicing scheme for the proposed development.

## 2 SITE CONSTRAINTS, GRADING & ROADS

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Under the existing site condition, a spill has been identified at the intersection of Carnegie Drive and Sixth Line. The spill elevation has been established as an interim floodplain condition associated with the Town of Oakville Sixth Line widening project (stage 1) under the CH permit #7763. The interim floodline is shown on **Drawing 1** for reference.

The interim floodplane will be improved following completion of the ultimate channel corridor grading west of Sixth Line as part of the earthworks program relevant to the existing Upper West Morrison Creek realignment. In the event that the proposed development proceeds with construction ahead of the UWMC realignment, the Agency will reserve the right to impose some development constraints within a temporary 7.5m setback from the interim floodline.

The preliminary grading design considers the following objectives and constraints:

- Conform to the Town of Oakville grading criteria
- Match existing boundary conditions
- Provide overland flow conveyance for major storm conditions
- Provides appropriate cover on proposed servicing

The preliminary grading for the proposed development is provided on **Drawing 1**, “*Preliminary Grading Plan*”. Grading along Sixth Line frontage is based on the ultimate Sixth Line centerline elevations coordinated with the Town’s Sixth Line road widening design project.

A 7.5m residential laneway A is proposed within the draft plan to provide a road connection between Carnegie Drive and Millicent Avenue and provide access to the residential lots on the west side of the block. The laneway conforms to the Town of Oakville Std 7-21A and the typical laneway cross section is shown in **Figure 5**.

**Drawing 1** and **Drawing 2** indicate preliminary layby parking along the draft plan units fronting Sixth Line to satisfy increasing demand for residential parking. The layby configuration will continue to be coordinated with the Town with respect to the on-going Sixth Line road widening project.

### 3 PRELIMINARY SERVICING

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#### 3.1. WATER SERVICING

Block 415 was initially serviced in accordance with the approved LWMC EIR recommendations and as per approved Sixth Line Corp. servicing plans. For context, LWMC EIR **Figure 8.5** “*Internal Water Distribution*” and Sixth Line Corp. **Drawing 104** “*Underground General Plan (Part 1)*” are provided with this submission.

Existing water distribution infrastructure in and around the subject lands is outlined below:

- 600mm CPP watermain (Zone 4) on Sixth Line;
- 150mm PVC watermain on east side of Sixth Line;
- 200mm PVC watermain on Carnegie Drive; and
- 200mm PVC watermain on Millicent Avenue with existing servicing connection provided to approved Block 415.

Water service connections for the proposed development are proposed as follows:

- to the existing 150mm watermain on the east side of Sixth Line are proposed for lots on the west side of the draft plan.; and
- to the existing 200mm watermain on Millicent Avenue for lots on the east side of the draft plan.

Details of the preliminary watermain servicing are indicated on the Preliminary Servicing **Drawing 2** and they will continue to be coordinated with the Town with respect to the on-going Sixth Line road widening project.

#### 3.2. PRELIMINARY SANITARY DRAINAGE

Block 415 was initially serviced in accordance with the approved LWMC EIR recommendations and as per approved Sixth Line Corp. servicing plans. For context, LWMC EIR **Figure 8.1** “*External Wastewater Servicing*” and Sixth Line Corp. **Drawing 104** “*Underground General Plan (Part 1)*” are provided with this submission.

Existing wastewater infrastructure in and around the subject lands is outlined below:

- 525mm concrete sanitary trunk sewer on Carnegie Drive from west to east;
- 200mm PVC sanitary sewer on the east side of Sixth Line from south to north with existing service connection provided to Block 415; and
- 200mm PVC sanitary sewer on Millicent Avenue from north to south.

The approved servicing plans for Sixth Line Corporation assumed mixed use for Block 415, at a population density of 285 persons/ha. The proposed development has a population density of 135 persons/ha and can be accommodated within the existing sanitary drainage system without any concern for increased flow rates.

Sanitary service connections for the proposed development are proposed as follows:

- to the existing 200mm sewer on the east side of Sixth Line are proposed for lots on the west side of the draft plan.; and
- to the existing 200mm sewer on Millicent Avenue for lots on the east side of the draft plan.

The preliminary sanitary servicing for the proposed development is provided on **Drawing 3**, “*Preliminary Sanitary Drainage Plan*”. Details of the preliminary sanitary servicing will continue to be coordinated with the Town with respect to the on-going Sixth Line road widening project.

### 3.3. PRELIMINARY STORM DRAINAGE

The proposed development is located with the Lower West Morrison Creek subwatershed. Proposed major and minor storm drainage will be conveyed to the existing SWM Pond 22A as provided for in the approved drainage design of Pond 22A and shown in the approved LWMC EIR **Figure 6.2C** “*Post Development Storm Drainage Plan*” included with this submission for reference.

The approved servicing plans for Sixth Line Corporation assumed mixed use for Block 415 at a runoff coefficient of 0.90. The proposed development has a runoff coefficient of 0.75 and can be accommodated within the existing storm sewers and Pond 22A without any concern for increased flow rates or pond storage volumes. A portion of the front yard drainage along units facing Sixth Line will be accommodated within the proposed Sixth Line storm sewer which also drains to the existing SWM Pond 22A.

Subject to the future Hydraulic Grade Line Analysis, it will be determined at detailed design if the proposed draft plan units will require sump pumps for basement flooding protection. Typical sump pump details are shown in **Figure 6**.

The preliminary storm servicing for the proposed development is provided on **Drawing 4**, “*Preliminary Storm Drainage Plan*”. Details of the preliminary storm servicing will continue to be coordinated with the Town with respect to the on-going Sixth Line road widening project.

## 4 EROSION AND SEDIMENT CONTROL

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The erosion and sediment control plan for the site will be designed in conformance with the Town of Oakville guidelines and Conservation Halton. Erosion and sediment control measures will be installed and maintained during construction. They include:

- A temporary sediment control fence will be placed prior to grading
- Temporary cut-off swales will be installed for discharge to existing ditch inlet catch basins within the property.
- Temporary sediment traps will be provided along the temporary cut-off swales.
- Gravel mud mat will be provided at construction vehicle access point to minimize off-site tracking of sediments
- All temporary erosion and sediment control measures will be routinely inspected and repaired during construction. Temporary controls will not be removed until the areas they serve are restored and stable.

Details of the proposed erosion and sediment control plan will be provided as the detailed design advances.

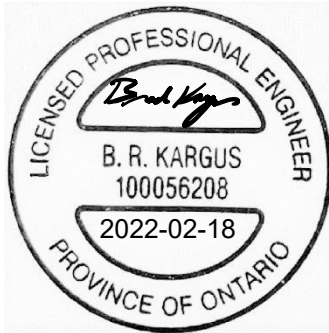
## 5 CONCLUSION

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The proposed residential development at the south-east corner of Sixth Line and Carnegie Drive, which includes nine (9) detached residential units and nineteen (19) townhouse residential units, can be adequately serviced via the existing storm, sanitary and water distribution infrastructure along Sixth Line and within the existing development of Sixth Line Corporation. A 7.5m laneway to conform with Town of Oakville standards is proposed through the draft plan to provide access to units fronting onto Sixth Line and access to the emergency services.

Additional coordination with the Town of Oakville is required during detailed design and construction stage to confirm the proposed development compliance with the Sixth Line widening project and minimize disturbance to existing residents along east side of Millicent Avenue.

Report Prepared by:

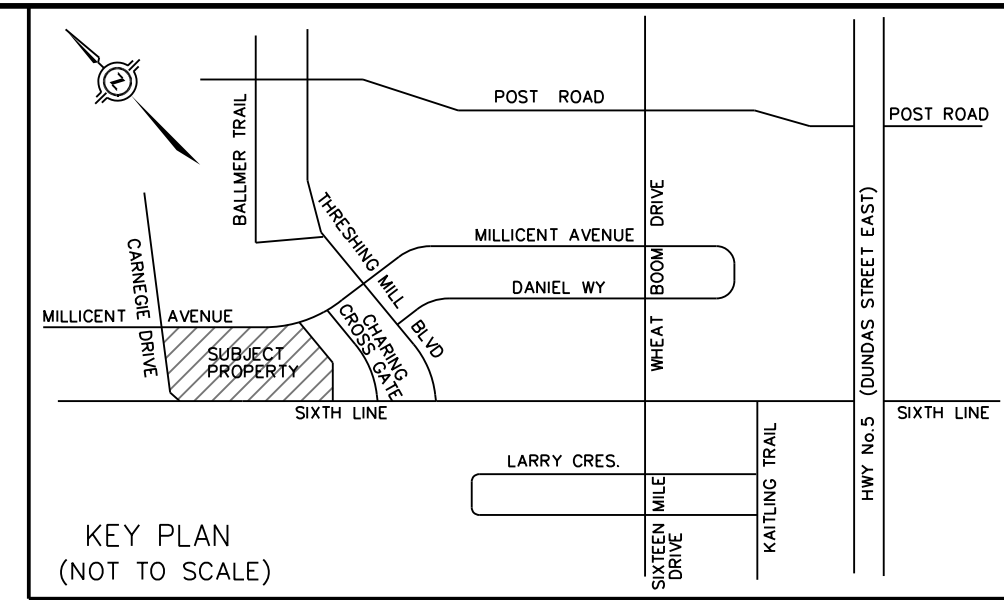
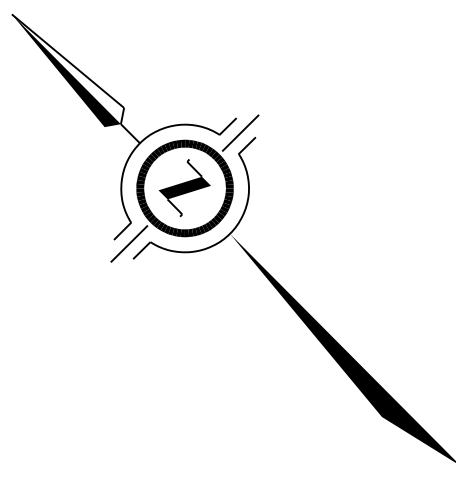


Brad Kargus, P. Eng.  
*Associate, Water Resources*

Dragan Zec, P. Eng.  
*Partner*

## DRAWINGS AND FIGURES

- Draft Plan by JD Barnes
- From Sixth Line Corporation:
  - Registered Plan 20M-1186
  - Drawing 104 – Underground General Plan (Part 1)
  - LWMC EIR Figure 6.2C – Storm Servicing
  - LWMC EIR Figure 8.1 – Wastewater Servicing
  - LWMC EIR Figure 8.5 – Water Servicing
- Drawing 1 – Preliminary Grading Plan
- Drawing 2 – Preliminary Servicing Plan
- Drawing 3 – Preliminary Sanitary Drainage Plan
- Drawing 4 – Preliminary Storm Drainage Plan
- Figure 5 – Typical Laneway Cross Section 7.5m R.O.W.
- Figure 6 – Typical Sump Pump Detail




DRAFT PLAN OF SUBDIVISION OF  
**ALL OF BLOCKS 415 AND  
 BLOCK 418(0.30 RESERVE)**  
**REGISTERED PLAN 20M-1186**  
 TOWN OF OAKVILLE  
 REGIONAL MUNICIPALITY OF HALTON  
 SCALE 1 : 300  
 5 0 5 10 20 metres  
 J.D. BARNES LIMITED

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

**OWNER'S CERTIFICATE**  
 I HEREBY AUTHORIZE J.D. BARNES LIMITED TO PREPARE AND SUBMIT THIS DRAFT PLAN OF SUBDIVISION TO THE TOWN OF OAKVILLE FOR APPROVAL.

SIGNED \_\_\_\_\_ DATE \_\_\_\_\_  
 SIGNATOR'S NAME \_\_\_\_\_  
 SIXTH LINE CORPORATION  
 ADDRESS \_\_\_\_\_  
 ADDRESS \_\_\_\_\_

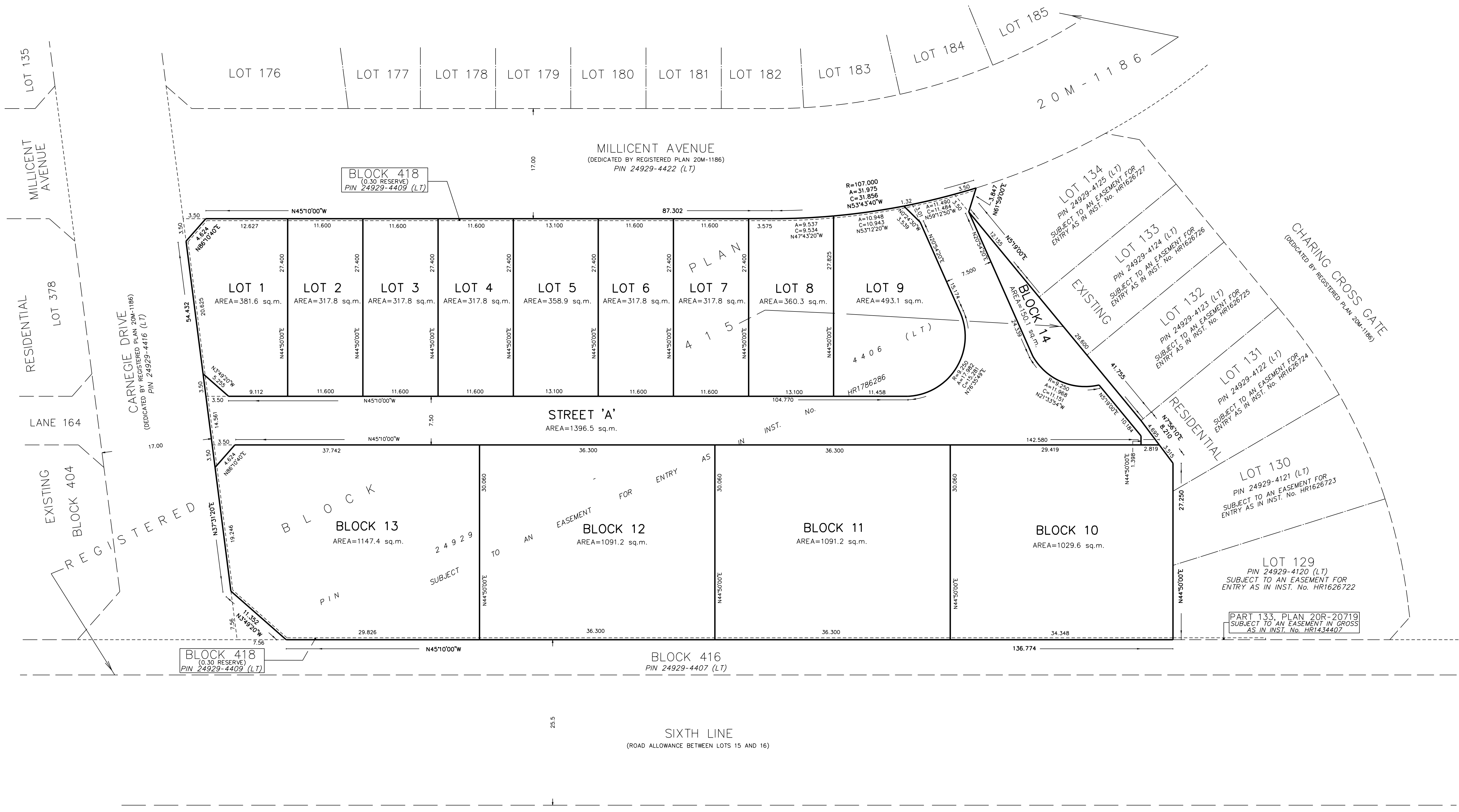
**SURVEYOR'S CERTIFICATE**  
 I HEREBY CERTIFY THAT THE BOUNDARIES OF THE SUBJECT LANDS AND THEIR RELATIONSHIP TO ADJACENT LANDS ARE ACCURATELY AND CORRECTLY SHOWN ON THIS PLAN.

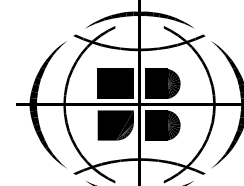
SIGNED  DATE JANUARY 4, 2022  
 R. S. QUERUBIN, O.L.S.  
 J.D. BARNES LIMITED  
 401 WHEELABRATOR WAY, SUITE A  
 MILTON, ON, L9T 3C1

**ADDITIONAL INFORMATION REQUIRED UNDER SECTION 51(17) OF THE PLANNING ACT**  
 FOR A, B, C, E, F, G AND J SEE DRAFT PLAN AND KEY PLAN  
 (D) THIS IS A PROPOSED RESIDENTIAL DEVELOPMENT  
 (H) MUNICIPAL AND PIPED WATER TO BE PROVIDED  
 (I) SANDY LOAM  
 (K) SANITARY AND STORM SEWERS TO BE PROVIDED  
 (L) ALL EASEMENTS AFFECTING THE SUBJECT SITE ARE SHOWN ON THE FACE OF THIS PLAN

**SCHEDULE OF LAND USE**

PROPOSED LAND USE	LOTS/BLOCKS	AREA (sq.m.)	AREA (ac.)
MEDIUM DENSITY-TOWNHOME	10, 11, 12, 13	4,360	1.077
RESIDENTIAL	1, 2, 3, 4, 5, 6, 7, 8, 9	3,183	0.787
STREET 7.5m WIDE	STREET 'A'	1,397	0.345
SNOW STORAGE AREA	14	150	0.037
TOTALS		9,090	2.246



 **J.D. BARNES** SURVEYING LIMITED  
 LAND INFORMATION SPECIALISTS  
 140 RENFREW DRIVE, SUITE 100, MARKHAM, ON L3R 6R3  
 T: (905) 477-3600 F: (905) 477-3882 www.jdbarnes.com

DRAWN BY: CE CHECKED BY: REFERENCE NO: 10-30-011-03-DP  
 FILE: G:\10-30-011-03\drawing\10-30-011-03-DP.dgn DATED: FEBRUARY 17, 2022  
 PLOTTED: 2/17/22

CERTIFY THAT THIS PLAN IS REGISTERED IN THE LAND REGISTRY OFFICE FOR THE LAND TITLES DIVISION OF HALTON (NO. 20) AT 11:38 O'CLOCK ON THE 10 DAY OF February 2017 AND ENTERED IN THE PARCEL REGISTER FOR PROPERTY IDENTIFIER 24929-0260 AND THE REQUIRED CONSENTS ARE REGISTERED AS PLAN DOCUMENT No. HR1431635

Cheryl Steinhilber REPRESENTATIVE FOR LAND REGISTRAR

THIS PLAN COMPRISES ALL OF PIN 24929-0260 (LT) PART OF BLOCK 417 INTERFERING SUBJECT TO AN EASEMENT IN GROSS AS IN INST. NO. HR1431635

PLAN OF SUBDIVISION OF PART OF LOT 15 CONCESSION 1 NORTH OF DUNDAS STREET GEOGRAPHIC TOWNSHIP OF TRAFALGAR TOWN OF OAKVILLE REGIONAL MUNICIPALITY OF HALTON

J. D. BARNES LIMITED METRIC DISTANCES AND/OR COORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048

OWNER'S CERTIFICATE - PLAN OF SUBDIVISION

- I CERTIFY THAT: 1. LOTS 1 TO 379 BOTH INCLUSIVE, BLOCKS 380 TO 415 BOTH INCLUSIVE, THE STRAITS... 2. THE STREETS AND STREET WIDENING... 3. THE STREET WIDENING...

DATED THIS 15 DAY OF DECEMBER 2016

SIXTH LINE CORPORATION

LOCAL AUTHORITY PRESIDENT HAVE THE AUTHORITY TO END THE CORPORATION

NOTES

BEARING AND GRID DERIVED FROM OBSERVED REFERENCE POINTS (ORP) A AND B, BY REAL TIME NETWORK OBSERVATIONS, UTM ZONE 17, NAD83 (CSRS) (2011.0)

INTEGRATION DATA

Table with 4 columns: POINT ID, EASTING, NORTHING, ORP ID. Includes points 01 through 09 and ORP A and B.

COORDINATES CANNOT IN THEMSELVES BE USED TO RE-ESTABLISH CORNERS OR BOUNDARIES SHOWN ON THIS PLAN.

DISTANCES ON THIS PLAN ARE GROUND AND CAN BE CONVERTED TO GRID BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9997046.

- Denotes symbols for Survey Monument Found, Survey Monument Set, Standard Iron Bar, etc.

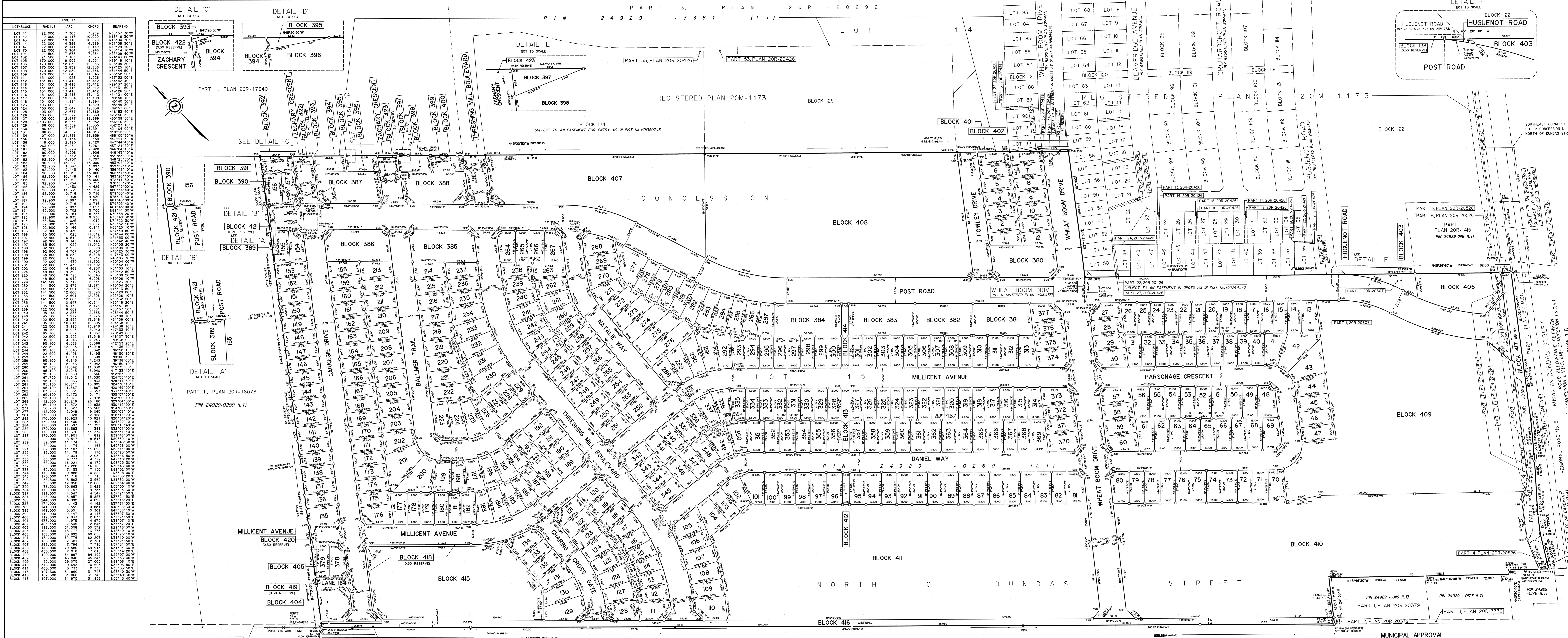
0.30 RESERVES ARE EXAGGERATED FOR CLARITY. SURVEY MONUMENTS PLANTED ARE IRON BARS UNLESS OTHERWISE NOTED.

SURVEYOR'S CERTIFICATE

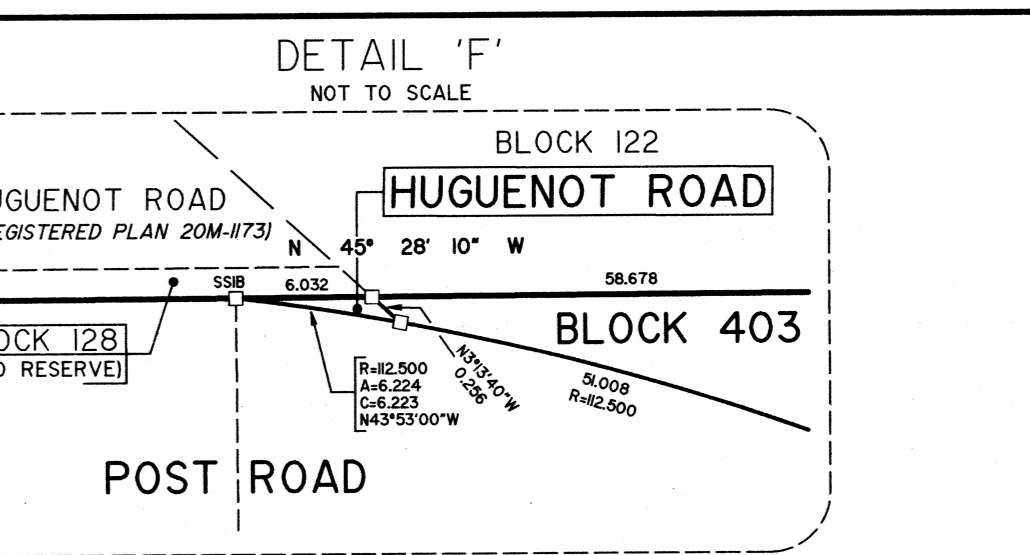
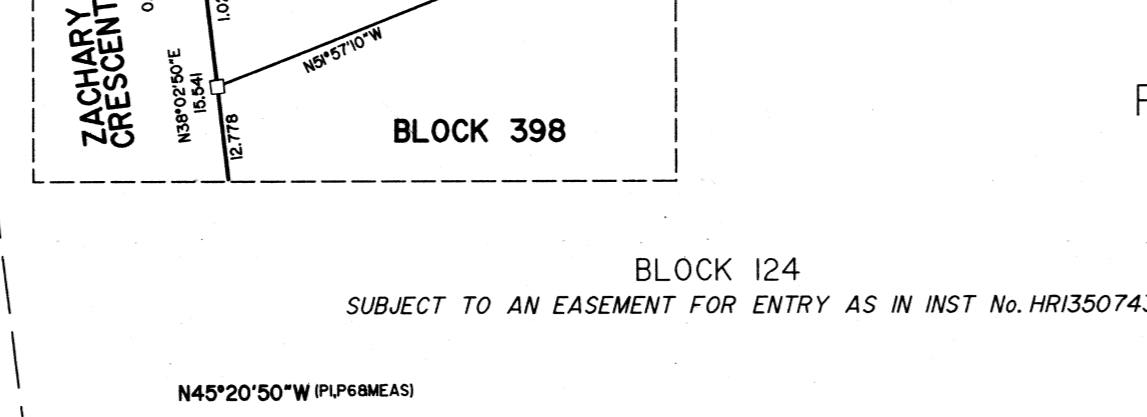
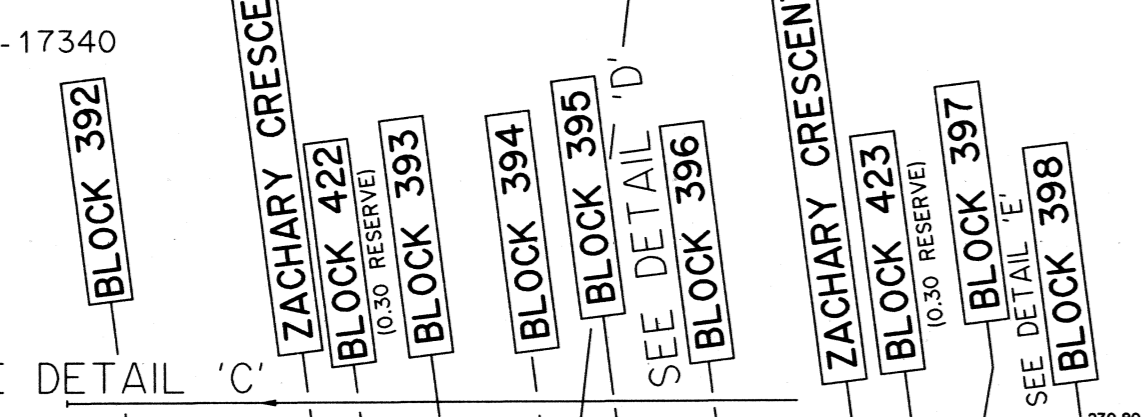
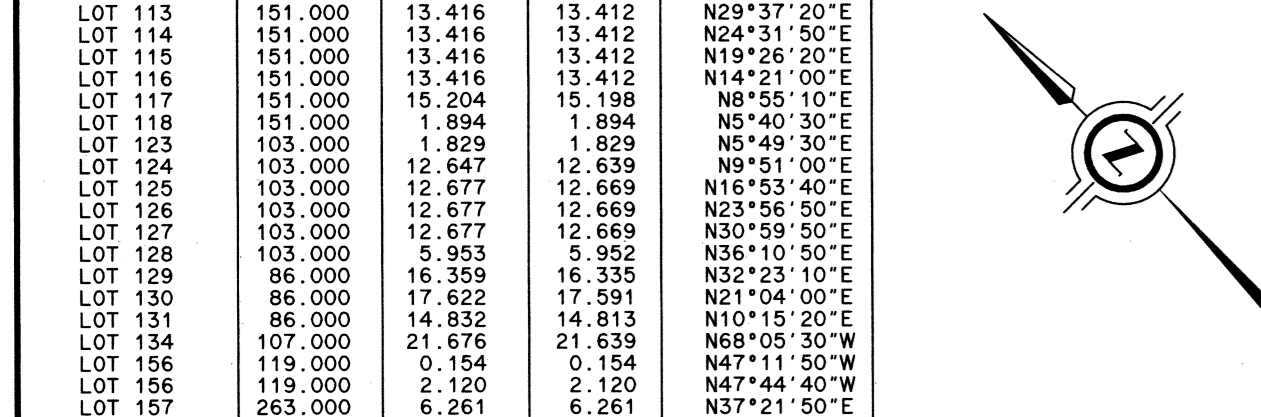
- I CERTIFY THAT: 1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEY ACT... 2. THIS SURVEY WAS COMPLETED ON THE 13th DAY OF SEPTEMBER, 2016.

DATE November 4, 2016

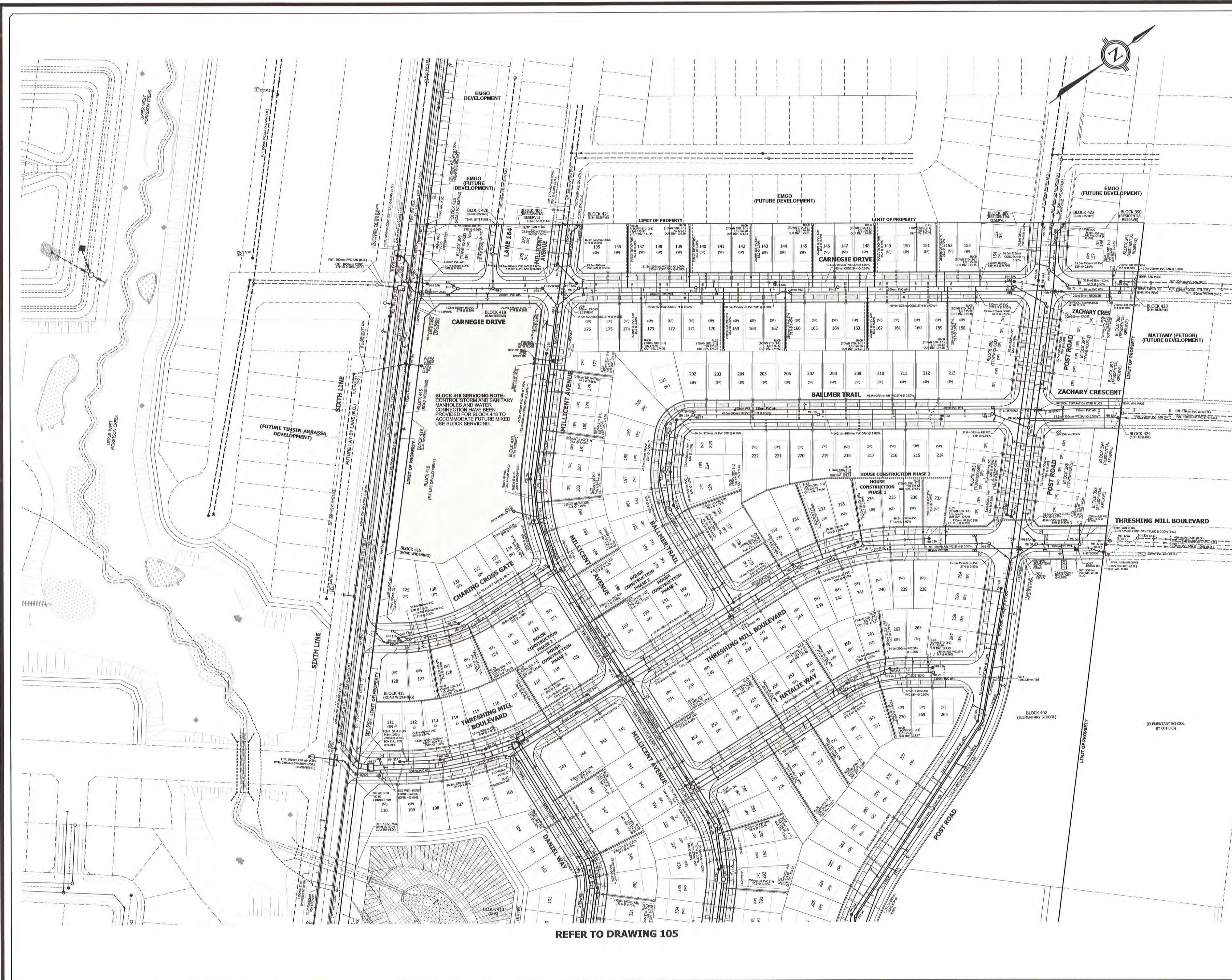
J.D. BARNES SURVEYING PLANNING MAPPING LAND INFORMATION SPECIALISTS



CURVE TABLE with columns: LOT/BLOCK, RAD (US), ARC, CHORD, BEARING. Lists curve data for lots 42 through 418.







- LEGEND**
- STORM SEWER AND MANHOLE
  - SANITARY SEWER AND MANHOLE
  - WATERMAIN REDUCER
  - WATER SERVICE CONNECTION
  - UNIT WITH INSULATED WATER SERVICE APPROVED EQUIV.
  - DWELLING WITH SURF PUMP
  - SINGLE STM. & SINGLE SAN. SERVICE CONNECTION
  - DOUBLE STM. & SAN. SERVICE CONNECTION
  - EXISTING STORM MANHOLE
  - EXISTING SANITARY MANHOLE
  - EXISTING FOUNDATION DRAIN COLLECTOR
  - FUTURE STORM MANHOLE
  - FUTURE SANITARY MANHOLE
  - DOUBLE CATCHBASIN
  - CATCHBASIN WITH ITS BOTTOM INSULATED AS PER 801 H04.01 ON DWG. 702
  - HYDRANT & VALVE
  - VALVE AND BOX
  - VALVE CHAMBER
  - EX. UNDERGROUND HYDRO LINES
  - EX. UNDERGROUND GAS LINES
  - TEMPORARY FLASHING DEVICE (REFER TO DWG. 703 FOR DETAILS)

**FUTURE DEVELOPMENT NOTES:**  
 \* BLOCK 416 TO BE REMAINED UNDEVELOPED FOR A PERIOD OF 3 YEARS FROM EITHER (A) THE DATE OF REGISTRATION OF THE ENTIRE PLAN OF SUBDIVISION, OR (B) THE DATE UPON WHICH THE TOWN DEEMS THE REQUIREMENTS OF THE PHASING POLICIES IN THE NORTH OAKVILLE EAST SECONDARY PLAN PRIOR TO DEVELOPMENT IN PHASE 2 TO HAVE BEEN MET, WHICHEVER COMES LATER, FOLLOWING WHICH BLOCK 416 MAY BE USED FOR STAND-ALONE RESIDENTIAL PURPOSES.

**BENCHMARK NOTE**  
 ELEVATION IS REFERRED TO TOWN OF OAKVILLE BENCHMARK No. 145, LOCATED AT THE NORTHEAST CORNER OF CONCRETE BOX CULVERT UNDER SIXTH LINE 0.70 km NORTH OF DUNDAS STREET WEST. ELEVATION 173.3334

No.	REVISION	DATE	BY	APP'D
4				
3				
2				
1				

**SIXTH LINE CORPORATION**  
 PART OF LOT 15, CONCESSION 1  
 (NORTH OF DUNDAS STREET)

**REGIONAL MUNICIPALITY OF HALTON**  
**TOWN OF OAKVILLE**

TOWN FILE No. **SD 599.0** REGION FILE No. **24T-12009 DO-1014**

MUNICIPAL APPROVED IN PRINCIPAL SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO TOWN STANDARDS AND SPECIFICATIONS.

REGIONAL DESIGN OF SANITARY, WATER SERVICES, AND REGIONAL ROAD WORKS APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO HALTON REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.

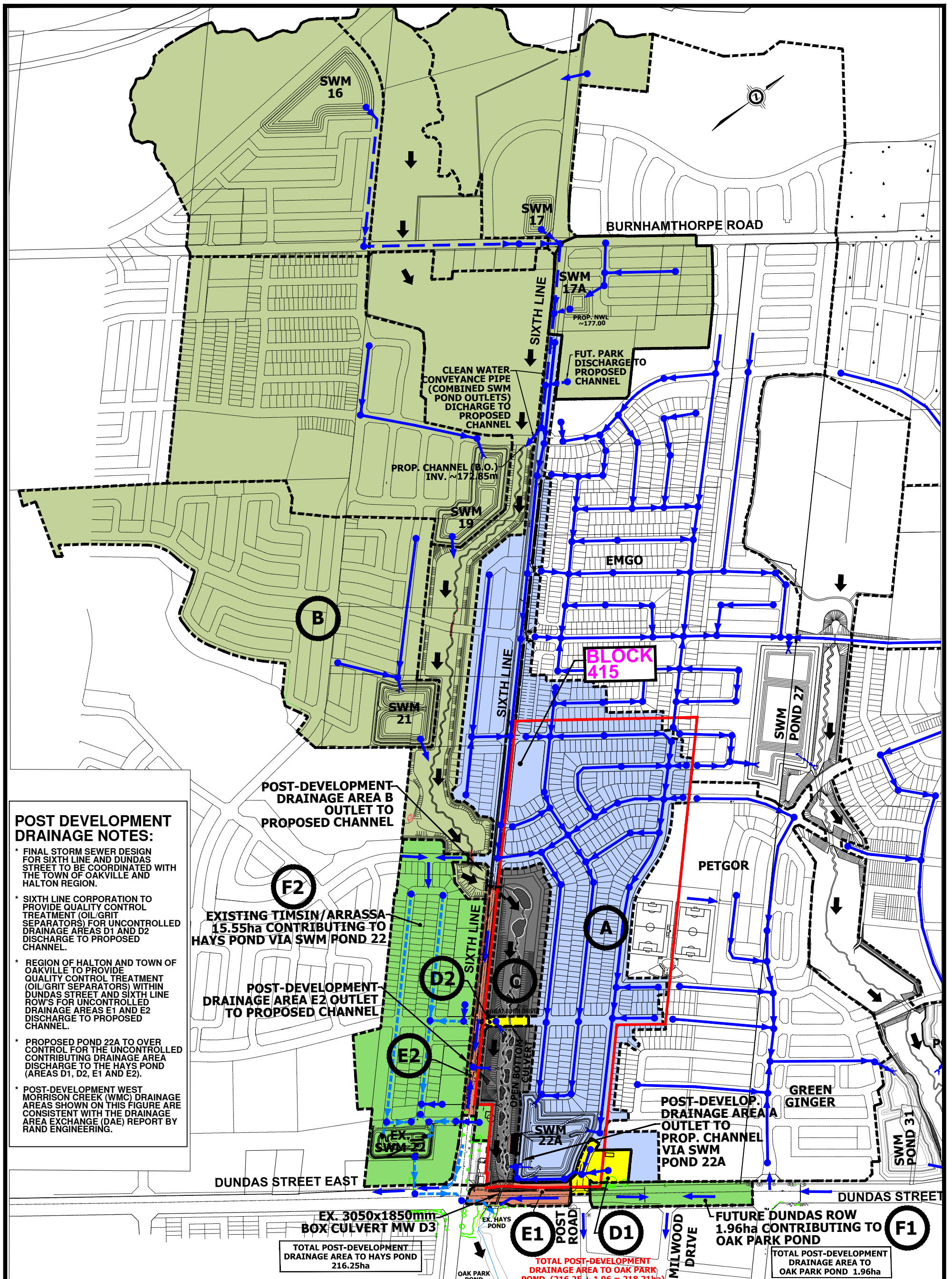
SIGNED: *[Signature]* DATE: **Feb 10/16** SIGNED: *[Signature]* DATE: **Feb 10/16**  
 MANAGER OF DEVELOPMENT ENGINEERING LEGISLATIVE AND PLANNING SERVICES



**UNDERGROUND GENERAL PLAN (PART 1)**

DESIGNED: B.H. CHECKED: D.Z. PROJECT No.: 11-350  
 DRAWN: J.G.S. DATE: JAN., 2016 SHEET No.:  
 SCALE: 1:1000 DRAWING No.: **104**

REFER TO DRAWING 105



**POST DEVELOPMENT DRAINAGE NOTES:**

- \* FINAL STORM SEWER DESIGN FOR SIXTH LINE AND DUNDAS STREET TO BE COORDINATED WITH THE TOWN OF OAKVILLE AND HALTON REGION.
- \* SIXTH LINE CORPORATION TO PROVIDE QUALITY CONTROL TREATMENT (OIL/GRIT SEPARATORS) FOR UNCONTROLLED DRAINAGE AREAS D1 AND D2 DISCHARGE TO PROPOSED CHANNEL.
- \* REGION OF HALTON AND TOWN OF OAKVILLE TO PROVIDE QUALITY CONTROL TREATMENT (OIL/GRIT SEPARATORS) WITHIN DUNDAS STREET AND SIXTH LINE ROW'S FOR UNCONTROLLED DRAINAGE AREAS E1 AND E2 DISCHARGE TO PROPOSED CHANNEL.
- \* PROPOSED POND 22A TO OVER CONTROL FOR THE UNCONTROLLED CONTRIBUTING DRAINAGE AREA DISCHARGE TO THE HAYS POND (AREAS D1, D2, E1 AND E2).
- \* POST-DEVELOPMENT WEST MORRISON CREEK (WMC) DRAINAGE AREAS SHOWN ON THIS FIGURE ARE CONSISTENT WITH THE DRAINAGE AREA EXCHANGE (DAE) REPORT BY RAND ENGINEERING.

POST-DEVELOPMENT DRAINAGE AREA B OUTLET TO PROPOSED CHANNEL

EXISTING TIMSIN/ARRASSA 15.55ha CONTRIBUTING TO HAYS POND VIA SWM POND 22

POST-DEVELOPMENT DRAINAGE AREA E2 OUTLET TO PROPOSED CHANNEL

POST-DEVELOPMENT DRAINAGE AREA A OUTLET TO PROP. CHANNEL VIA SWM POND 22A

TOTAL POST-DEVELOPMENT DRAINAGE AREA TO HAYS POND 216.25ha

TOTAL POST-DEVELOPMENT DRAINAGE AREA TO OAK PARK POND (216.25 + 1.96 = 218.21ha)

TOTAL POST-DEVELOPMENT DRAINAGE AREA TO OAK PARK POND 1.96ha

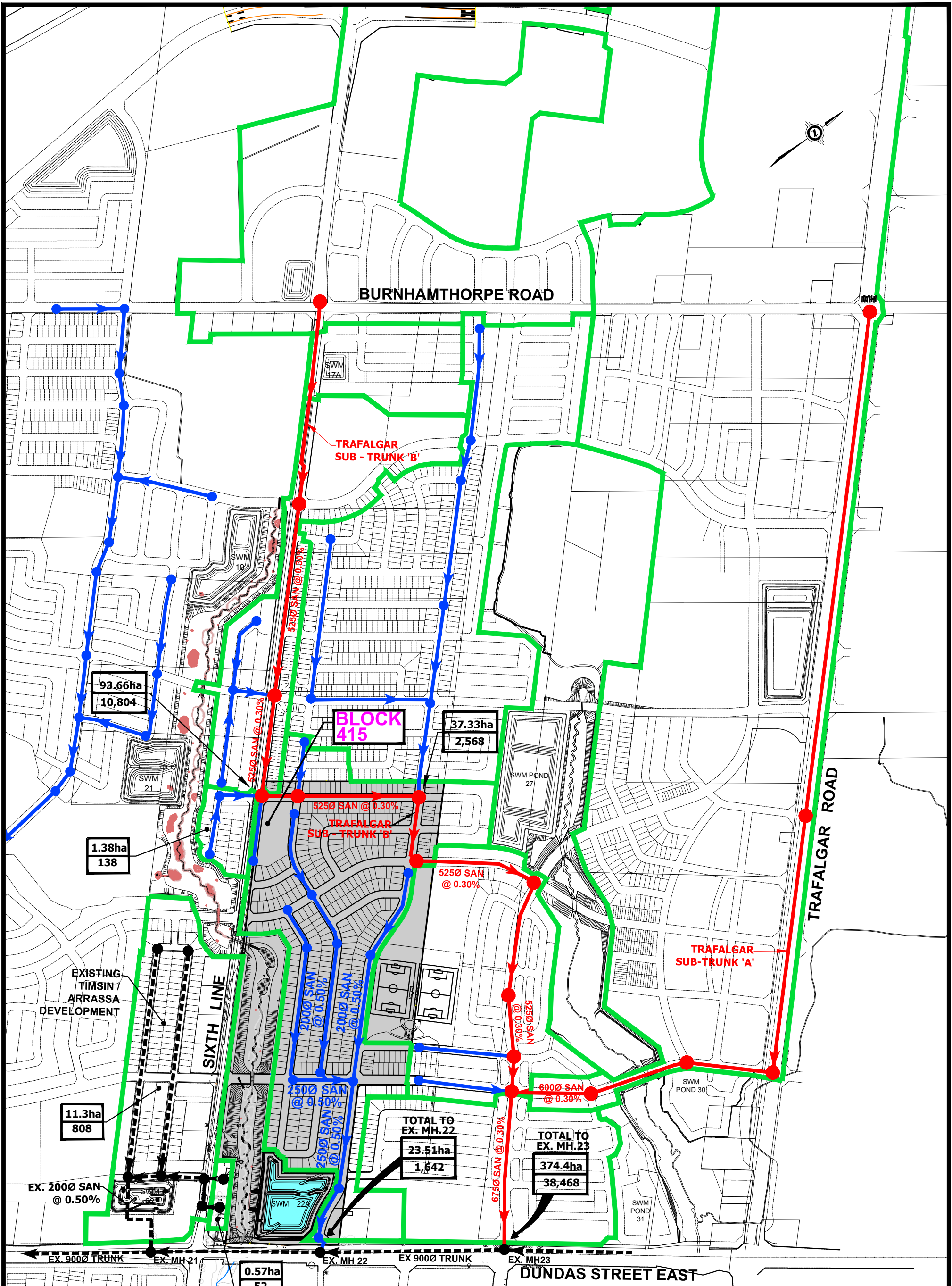


**LEGEND:**

- FSS Study Area
- Post Development Drainage Boundary
- Proposed Minor System Flow Direction
- Existing Minor System Flow Direction
- Overland Flow Direction

39.45ha	Post Development Drainage Area (A) Contributing to Pond 22A (IMP. 65%)
150.70ha	Controlled Post Development Drainage Area B Contributing to Sixth Line Corp. Channel via proposed Sixth Line Culvert (by others)
17.46ha	Controlled Post Development Drainage Area F1 (1.96 ha) + F2 (15.5 ha) = 17.46ha to downstream Hays and Oak Park Ponds
6.66ha	Uncontrolled Post Development Drainage Area C (Sixth Line Corp Open Space-Channel Block)
1.22ha	Uncontrolled Post Development Drainage Area D1 (1.00 ha) + D2 (0.22 ha) = 1.22 ha (Within Sixth Line Corp Property)
2.72ha	Uncontrolled Post Development Drainage Area E1 (1.13 ha) + E2 (1.59 ha) = 2.72ha (External ROW's IMP. 72%)

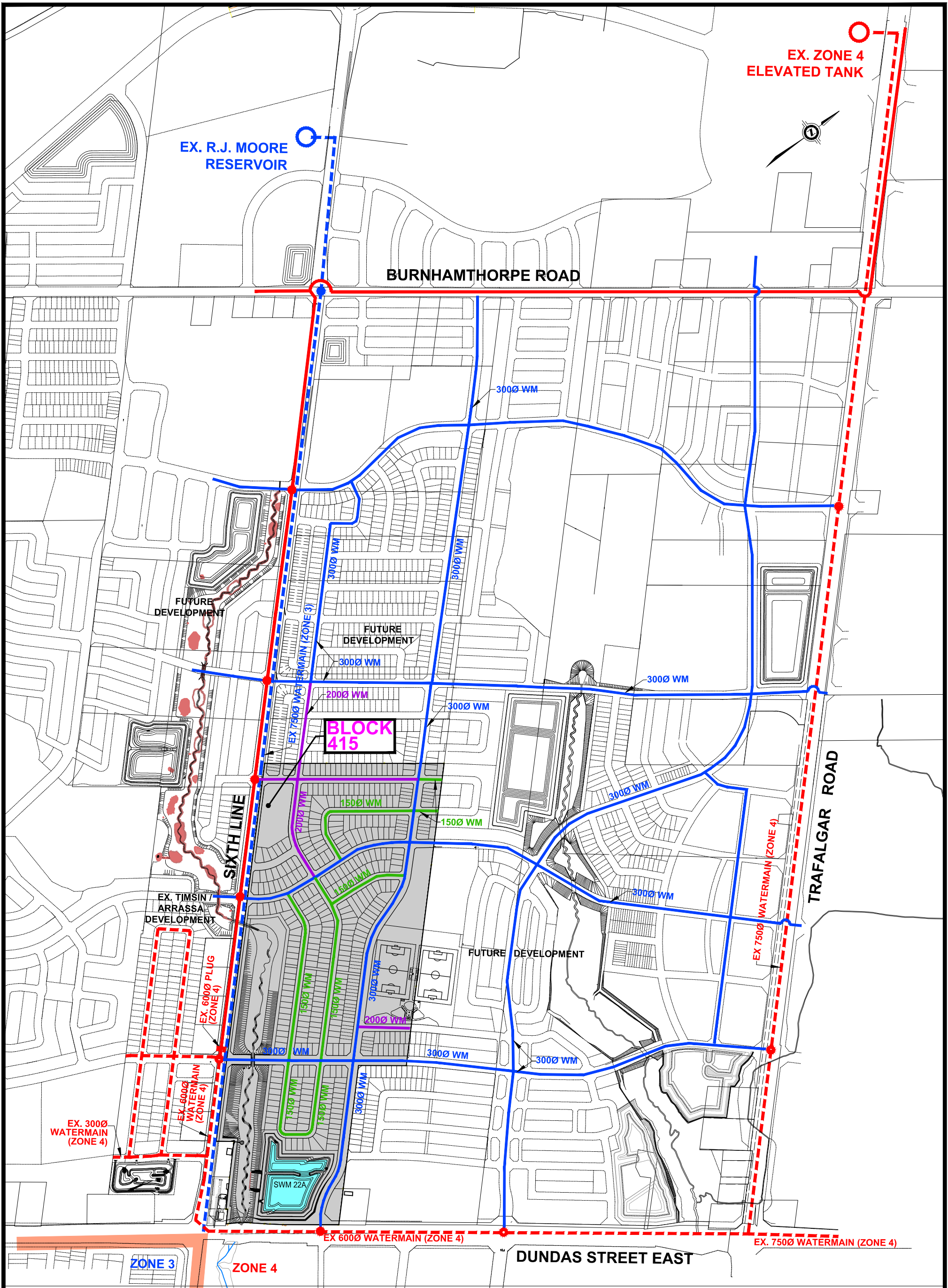
ENVIRONMENTAL IMPLEMENTATION REPORT AND FUNCTIONAL SERVICING STUDY FINAL SUBMISSION  
 SIXTH LINE CORPORATION NORTH OAKVILLE  
**Figure 6.2C**  
**Post Development Storm Drainage Plan**  
 DATE: September 2016  
 SCALE: 1:8,000



LEGEND:

- |  |                        |  |  |  |  |
|--|------------------------|--|--|--|--|
|  | Urbantech Consulting   |  | FSS Study Area                                   |  | Drainage Area In ha                                  |
|  | Golder Associates Ltd. |  | Wastewater Drainage Area Boundary                |  | Total Population                                     |
|  | Geomorphix             |  | Existing Sanitary Sewer and Flow Direction       |  | Proposed Sub-Trunk Sanitary Sewer and Flow Direction |
|  | Genivar                |  | Proposed Local Sanitary Sewer and Flow Direction |  |  |

ENVIRONMENTAL IMPLEMENTATION REPORT  
AND FUNCTIONAL SERVICING STUDY  
FINAL SUBMISSION  
SIXTH LINE CORPORATION  
NORTH OAKVILLE  
**Figure 8.1**  
**External Wastewater Servicing**  
DATE: September 2016  
SCALE: 1:10,000



**LEGEND:**

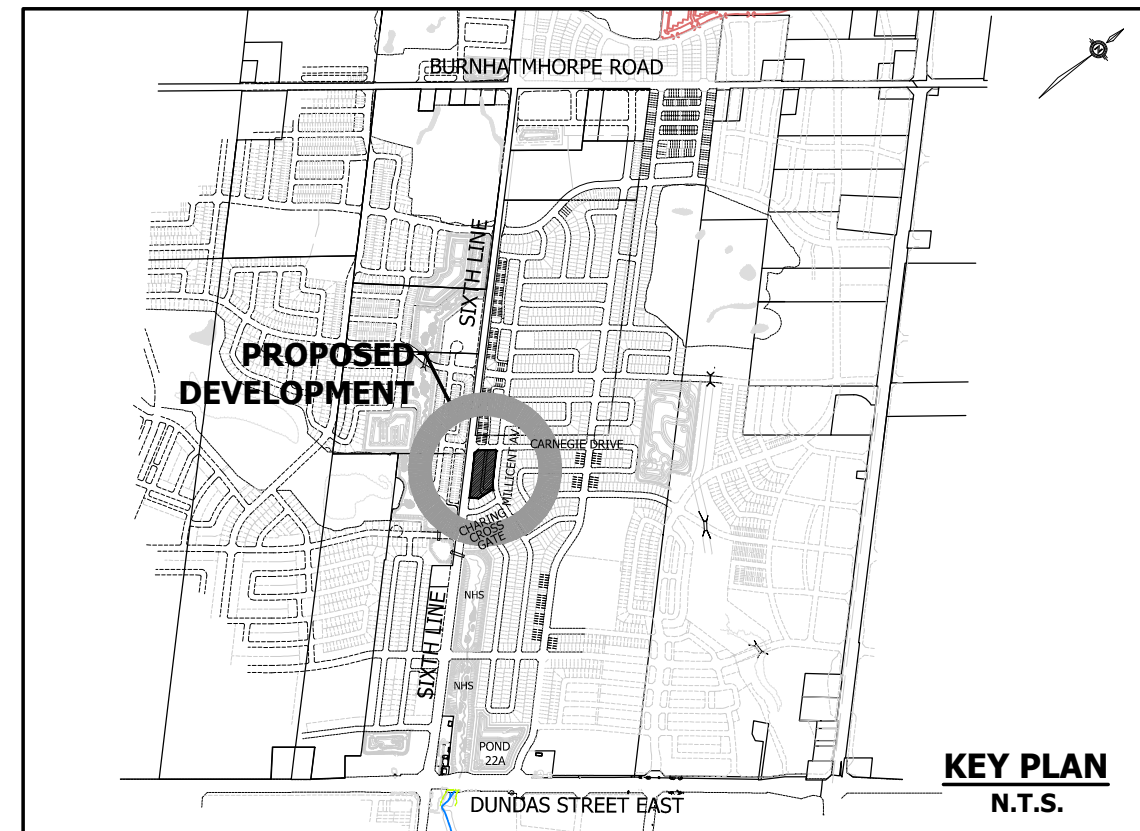
- |  |                        |  |  |  |   |
|--|------------------------|--|--|--|---|
|  | Urbantech Consulting   |  | FSS Study Area                           |  | Proposed 3000 Watermain                             |
|  | Golder Associates Ltd. |  | Existing Watermain Zone 3                |  | Proposed 2000 Watermain                             |
|  | Geomorphix             |  | Existing Watermain Zone 4                |  | Proposed 1500 Watermain                             |
|  | Genivar                |  | Water Zone Boundary                      |  | Connections To Regional Watermain on Boundary Roads |
|  |                        |  | Future Zone 4 6000 Watermain (by others) |  |   |

ENVIRONMENTAL IMPLEMENTATION REPORT  
AND FUNCTIONAL SERVICING STUDY  
FINAL SUBMISSION

SIXTH LINE CORPORATION  
NORTH OAKVILLE

**Figure 8.5**  
**Internal Water Distribution**

DATE: September 2016  
SCALE: 1:10,000



**LEGEND**

- EXISTING CONTOUR AND ELEVATION
- EXISTING ELEVATION
- PROPOSED ELEVATION
- PROPOSED ELEVATION (BY OTHERS)
- PROPOSED OVERLAND FLOW DIRECTION
- SUBJECT PROPERTY
- DRIVEWAY
- INTERIM FLOODLINE PRIOR TO UWMC REALIGNMENT (SEE CH PERMIT #7763)
- INTERIM HEC-RAS STATION
- INTERIM RFL ELEVATION
- PROPOSED STORM MANHOLE
- EXISTING STORM MANHOLE
- PROPOSED SANITARY MANHOLE
- EXISTING SANITARY MANHOLE
- SINGLE/ REARLOT CATCHBASIN
- DOUBLE CATCHBASIN
- EXISTING VALVE CHAMBER
- HYDRANT & VALVE
- PROPOSED HYDRO POLE

- GRADING NOTES:**
- EXISTING DEVELOPMENT BOUNDARY GRADES AND DRAINAGE PATTERN TO BE RESPECTED DURING PROPOSED SITE GRADING.
  - SIXTH LINE GRADES AND LAYBY PARKING CONFIGURATION TO BE COORDINATED WITH AND CONFIRMED BY THE TOWN AS PART OF THE ON GOING ROAD WIDENING DESIGN PROJECT.
  - PROPOSED HYDRO POLE LINE ALONG EAST SIDE OF SIXTH LINE TO BE CONFIRMED BY OAKVILLE HYDRO AS PART OF THE ON GOING ROAD WIDENING DESIGN PROJECT.
  - INTERIM SPILL CONDITION AT THE INTERSECTION OF SIXTH LINE AND CARNEGIE DRIVE WILL BE ELIMINATED FOLLOWING GRADING COMPLETION OF THE UWMC REALIGNMENT WEST OF SIXTH LINE.

**BENCHMARK NOTE**  
 ELEVATION IS REFERRED TO TOWN OF OAKVILLE BENCHMARK No. 145, LOCATED AT THE NORTHEAST CORNER OF CONCRETE BOX CULVERT UNDER SIXTH LINE 0.70 km NORTH OF DUNDAS STREET WEST. ELEVATION 173.3334

4			
3			
2			
1	FIRST SUBMISSION	JAN 2022	D.Z. D.Z.
No.	REVISION	DATE	BY APPD

**FUNCTIONAL SERVICING REPORT  
 FERNBROOK HOMES  
 (SEVEN OAKS 2021) LIMITED**

REGIONAL MUNICIPALITY OF HALTON  
 TOWN OF OAKVILLE

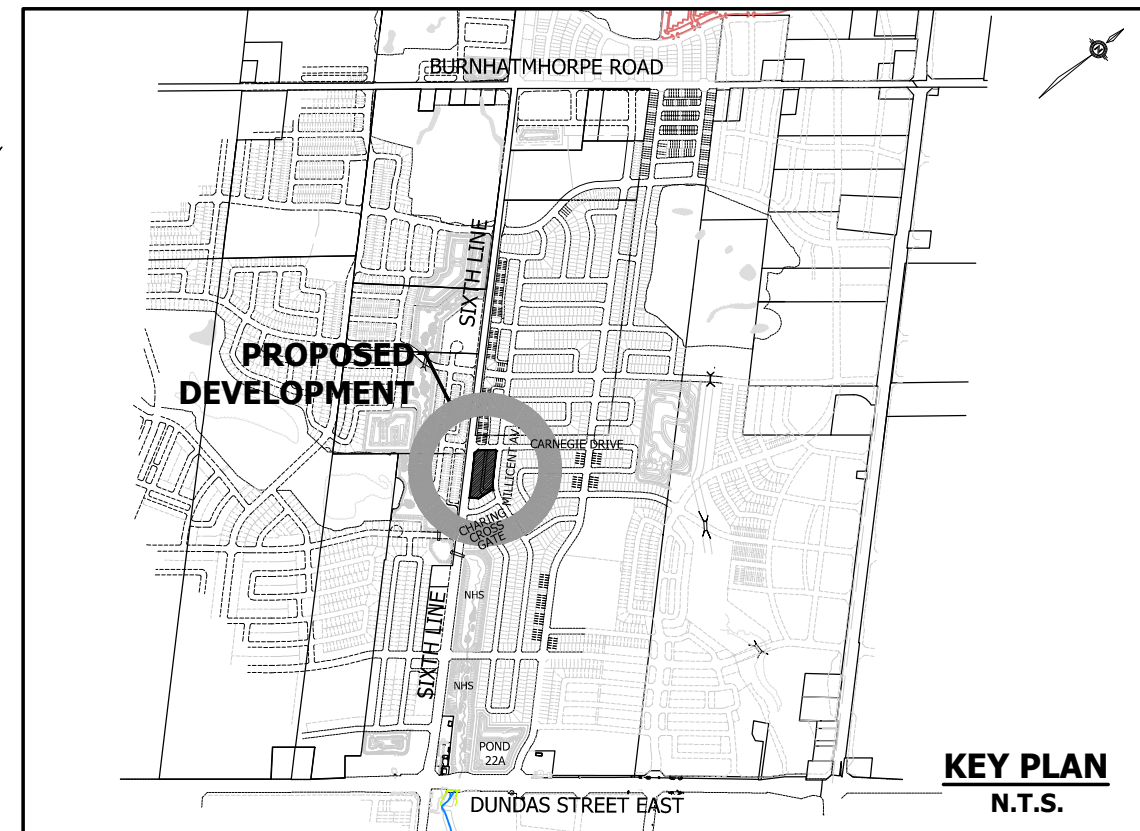
TOWN FILE No. _____	REGION FILE No. _____
MUNICIPAL	REGIONAL
APPROVED IN PRINCIPAL SUBJECT TO DETAIL DESIGN CONSTRUCTION CONFORMING TO TOWN STANDARDS AND SPECIFICATIONS.	DESIGN OF SANITARY, WATER SERVICES, AND REGIONAL ROAD WORKS APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO HALTON REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.
SIGNED _____ DATE _____ MANAGER OF DEVELOPMENT ENGINEERING	SIGNED _____ DATE _____ LEGISLATIVE AND PLANNING SERVICES

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**PRELIMINARY  
 GRADING PLAN**

DESIGNED: D.Z.	CHECKED: D.Z.	PROJECT No.: 21-703
DRAWN: J.B.	DATE: DECEMBER 2021	SHEET No.:
SCALE: H 1:500		DRAWING No.: <b>1</b>



**LEGEND**

	SUBJECT PROPERTY		DOUBLE STM SERVICING CONNECTION
	PROPOSED STORM SEWER & FLOW DIRECTION ARROW		SINGLE STM SERVICING CONNECTION
	EXISTING STORM SEWER & FLOW DIRECTION ARROW		DOUBLE SANITARY SERVICING CONNECTION
	FUTURE STORM SEWER & FLOW DIRECTION ARROW		SINGLE SANITARY SERVICING CONNECTION
	SANITARY MANHOLE & FLOW DIRECTION ARROW		WATER SERVICE CONNECTION
	EXISTING SANITARY MANHOLE & FLOW DIRECTION ARROW		SINGLE/REARLOT CATCHBASIN
	FUTURE SANITARY MANHOLE & FLOW DIRECTION ARROW		DOUBLE CATCHBASIN
	EXISTING WATERMAIN		DRIVEWAY
	EXISTING VALVE CHAMBER		PROPOSED HYDRO POLE

- SERVICING NOTES:**
- SIXTH LINE GRADES AND LAYBY PARKING CONFIGURATION TO BE COORDINATED WITH AND CONFIRMED BY THE TOWN AS PART OF THE ON GOING ROAD WIDENING DESIGN PROJECT.
  - PROPOSED HYDRO POLE LINE ALONG EAST SIDE OF SIXTH LINE TO BE CONFIRMED BY OAKVILLE HYDRO AS PART OF THE ON GOING ROAD WIDENING DESIGN PROJECT.
  - EXISTING LOCAL SANITARY AND WATERMAIN ON SIXTH LINE TO BE UTILIZED FOR SERVICING OF UNITS FRONTING SIXTH LINE ROW.
  - CONSTRUCTION MANAGEMENT AND STAGING PLAN TO BE PREPARED BY PROPONENT AND APPROVED BY TOWN PRIOR TO INSTALLATION OF SERVICE CONNECTIONS ALONG EXISTING MILLCENT AVENUE.

**BENCHMARK NOTE**  
 ELEVATION IS REFERRED TO TOWN OF OAKVILLE BENCHMARK No. 145, LOCATED AT THE NORTHEAST CORNER OF CONCRETE BOX CULVERT UNDER SIXTH LINE 0.70 km NORTH OF DUNDAS STREET WEST. ELEVATION 173.3334

4				
3				
2				
1	FIRST SUBMISSION	JAN 2022	D.Z.	D.Z.
No.	REVISION	DATE	BY	APPD

**FUNCTIONAL SERVICING REPORT  
 FERNBROOK HOMES  
 (SEVEN OAKS 2021) LIMITED**



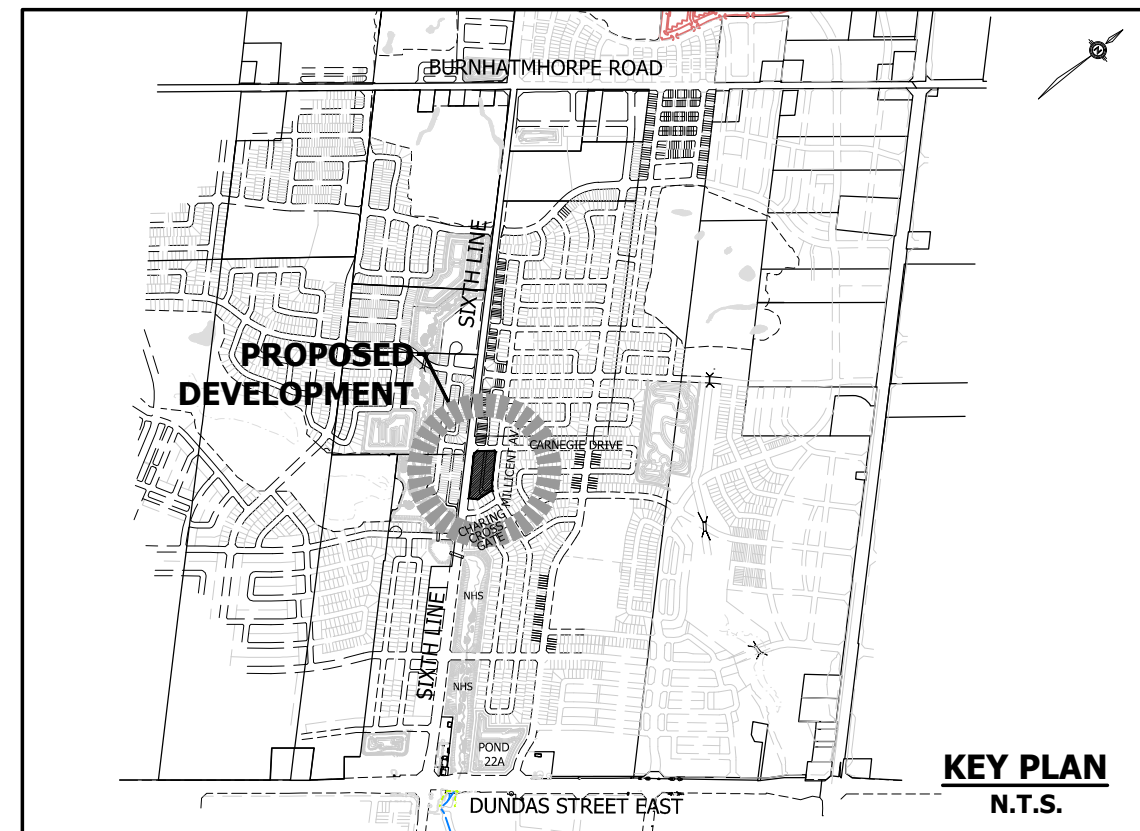
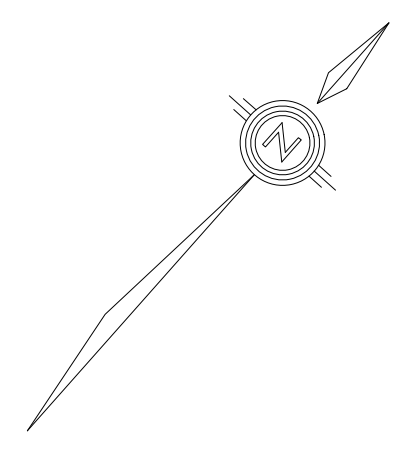
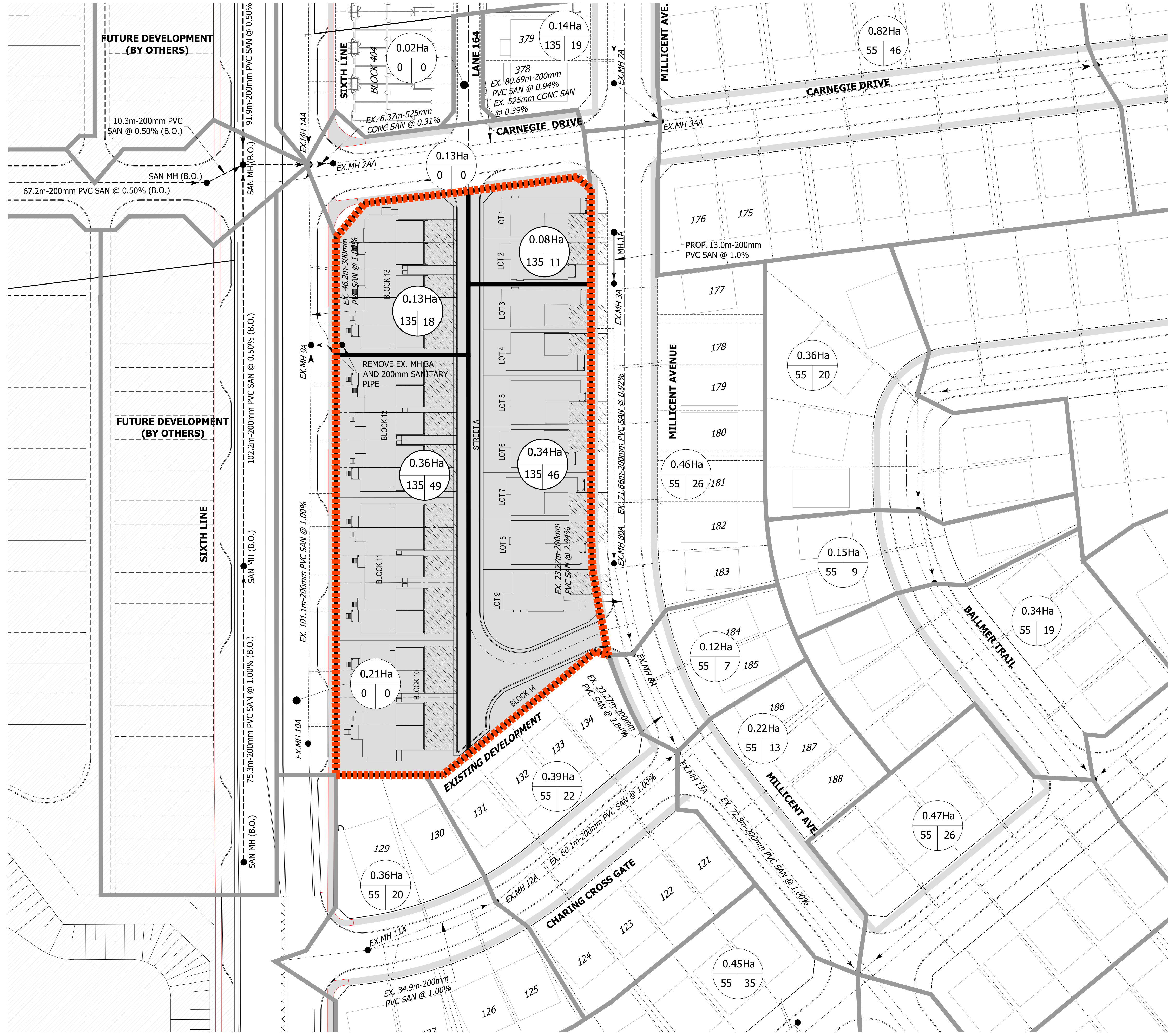
TOWN FILE No. _____	REGION FILE No. _____
MUNICIPAL	REGIONAL
APPROVED IN PRINCIPAL SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO TOWN STANDARDS AND SPECIFICATIONS.	DESIGN OF SANITARY, WATER SERVICES, AND REGIONAL ROAD WORKS APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO HALTON REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.
SIGNED _____ DATE _____ MANAGER OF DEVELOPMENT ENGINEERING	SIGNED _____ DATE _____ LEGISLATIVE AND PLANNING SERVICES

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**PRELIMINARY  
 SERVICING PLAN**

DESIGNED: D.Z.	CHECKED: D.Z.	PROJECT No.: 21-703
DRAWN: J.B.	DATE: DECEMBER 2021	SHEET No.:
SCALE: H 1:500		DRAWING No.: <b>2</b>



- LEGEND**
- PROPOSED DEVELOPMENT
  - SANITARY MANHOLE AND FLOW DIRECTION ARROW
  - EXISTING SANITARY MANHOLE AND FLOW DIRECTION ARROW
  - FUTURE SANITARY MANHOLE AND FLOW DIRECTION ARROW
  - PROPOSED DRAINAGE AREA (ha)
  - PROPOSED POPULATION
  - PROPOSED POPULATION PER Ha (P/Ha)
  - EXISTING DRAINAGE AREA (ha)
  - EXISTING POPULATION
  - EXISTING POPULATION PER Ha (P/Ha)
  - PROPOSED SITE DRAINAGE AREA BOUNDARY
  - APPROVED DRAINAGE AREA BOUNDARY TO MH 9A (REFER TO SIXTH LINE CORPORATION, TOWN FILE No. SD 599.0; REGION FILE No. 24T-12009 DO 1014)
  - EXTERNAL DRAINAGE AREA BOUNDARY
  - DOUBLE HOUSE SERVICING CONNECTION
  - SINGLE HOUSE SERVICING CONNECTION

**BENCHMARK NOTE**  
 ELEVATION IS REFERRED TO TOWN OF OAKVILLE BENCHMARK No. 145, LOCATED AT THE NORTHEAST CORNER OF CONCRETE BOX CULVERT UNDER SIXTH LINE 0.70 km NORTH OF DUNDAS STREET WEST. ELEVATION 173.3334

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1	FIRST SUBMISSION	JAN 2022	D.Z.	D.Z.
No.	REVISION	DATE	BY	APPD

**FUNCTIONAL SERVICING REPORT  
 FERNBROOK HOMES  
 (SEVEN OAKS 2021) LIMITED**



TOWN FILE No. \_\_\_\_\_ REGION FILE No. \_\_\_\_\_

MUNICIPAL APPROVED IN PRINCIPAL SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO TOWN STANDARDS AND SPECIFICATIONS.

REGIONAL DESIGN OF SANITARY, WATER SERVICES, AND REGIONAL ROAD WORKS APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO HALTON REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MANAGER OF DEVELOPMENT ENGINEERING

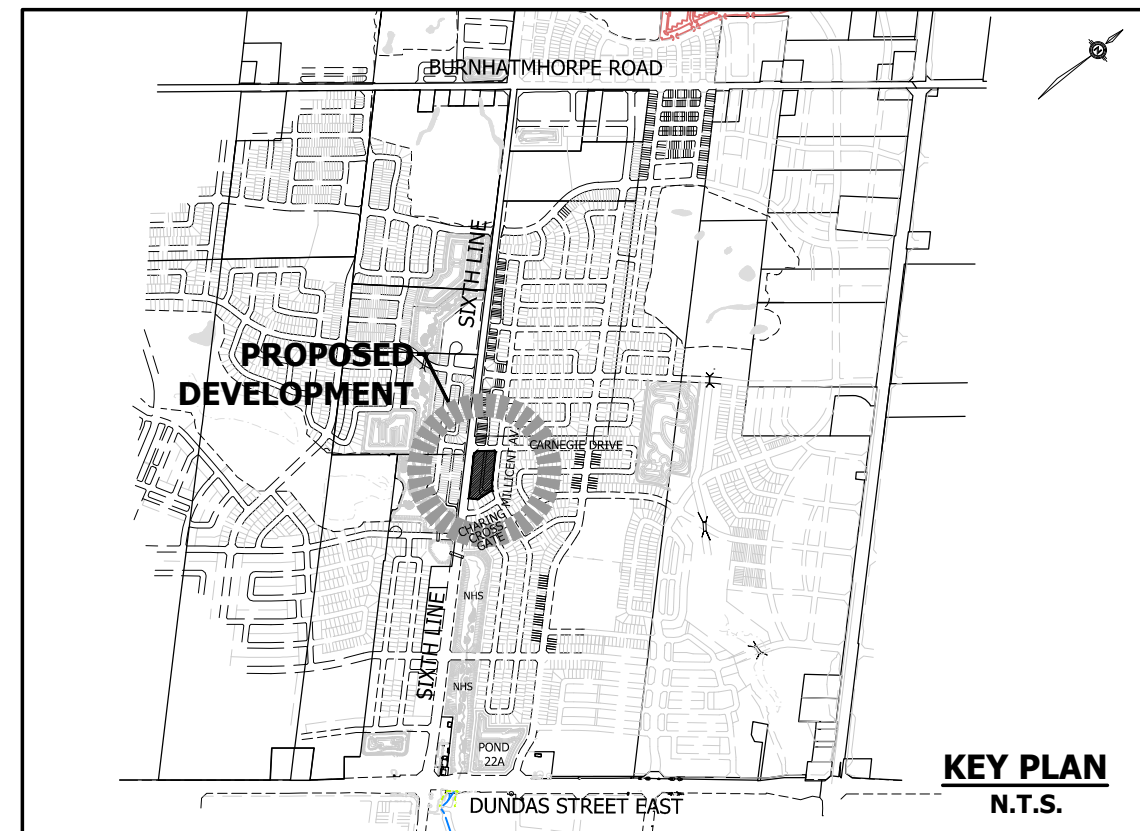
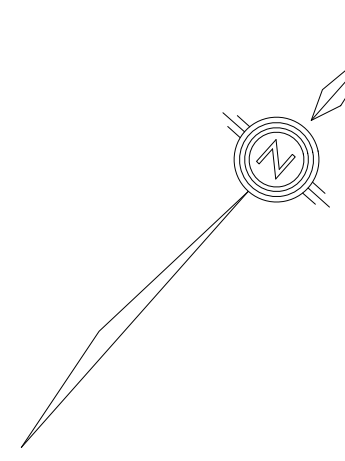
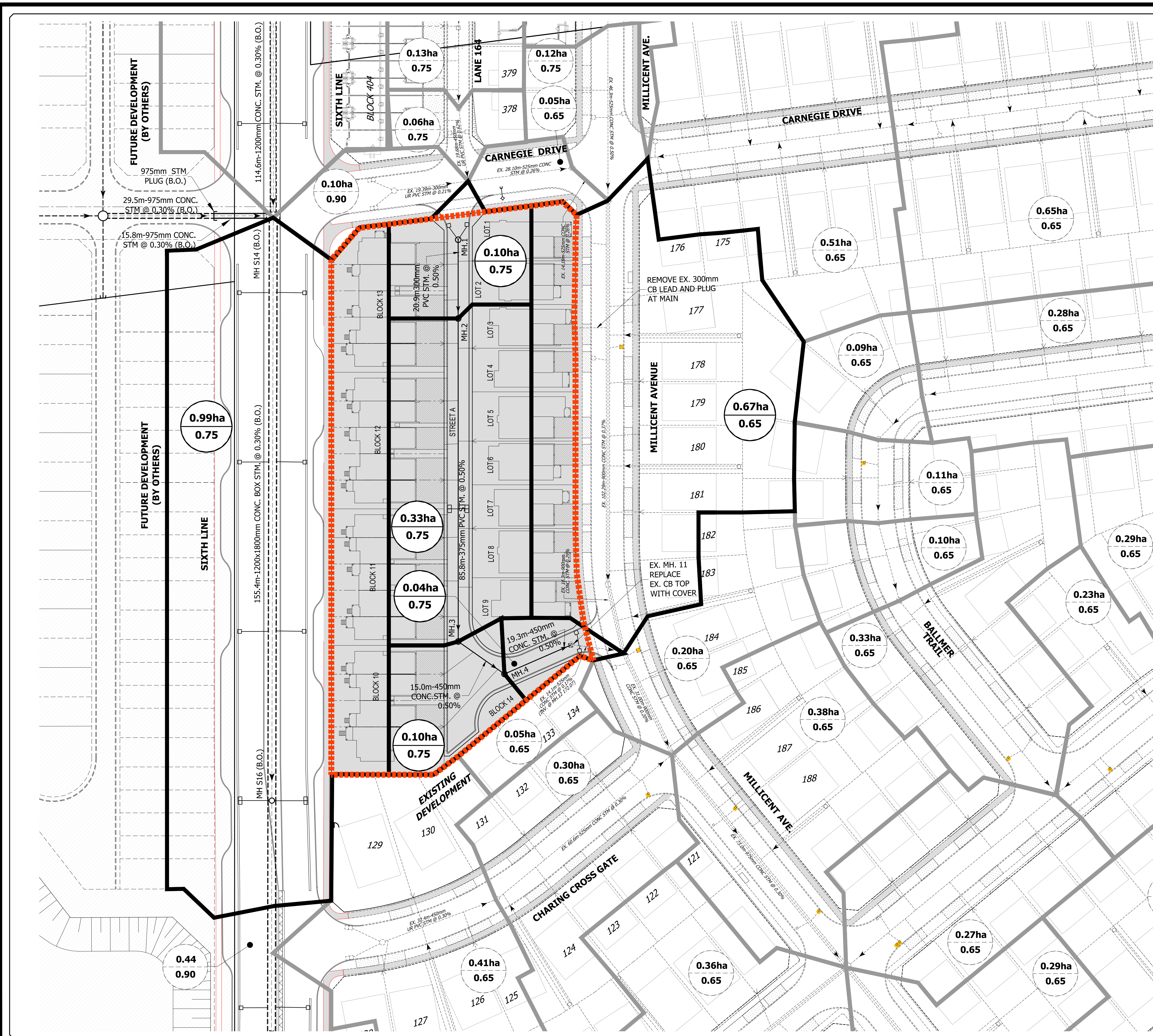
SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_  
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**PRELIMINARY SANITARY  
 DRAINAGE PLAN**

DESIGNED: D.Z.	CHECKED: D.Z.	PROJECT No.: 21-703
DRAWN: J.B.	DATE: DECEMBER 2021	SHEET No.:
SCALE: H 1:500		DRAWING No.: <b>3</b>



- LEGEND**
- PROPOSED DEVELOPMENT
  - PROPOSED STORM SEWER & FLOW DIRECTION ARROW
  - EXISTING STORM SEWER & FLOW DIRECTION ARROW
  - FUTURE STORM SEWER & FLOW DIRECTION ARROW
  - DOUBLE STM SERVICING CONNECTION
  - SINGLE STM SERVICING CONNECTION
  - SINGLE/REARLOT CATCHBASIN
  - DOUBLE CATCHBASIN
  - PROPOSED OVERLAND FLOW DIRECTION
  - EXISTING CONTOUR AND ELEVATION
  - PROPOSED DRAINAGE AREA (ha) FOR MINOR SYSTEM (5 YEAR) FLOW
  - PROPOSED RUNOFF COEFFICIENT
  - EXISTING DRAINAGE AREA (ha) FOR MINOR SYSTEM (5 YEAR) FLOW
  - EXISTING RUNOFF COEFFICIENT
  - PROPOSED MINOR SYSTEM DRAINAGE AREA BOUNDARY
  - APPROVED MINOR SYSTEM DRAINAGE AREA BOUNDARY (REFER TO SIXTH LINE CORPORATION, TOWN FILE No. SD 599.0; REGION FILE No. 24T-12009 DO 1014)
  - EXTERNAL DRAINAGE AREA BOUNDARY

**BENCHMARK NOTE**  
 ELEVATION IS REFERRED TO TOWN OF OAKVILLE BENCHMARK No. 145, LOCATED AT THE NORTHEAST CORNER OF CONCRETE BOX CULVERT UNDER SIXTH LINE 0.70 km NORTH OF DUNDAS STREET WEST. ELEVATION 173.3334

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1	FIRST SUBMISSION	JAN 2022	D.Z.	D.Z.
No.	REVISION	DATE	BY	APPD

**FUNCTIONAL SERVICING REPORT  
 FERNBROOK HOMES  
 (SEVEN OAKS 2021) LIMITED**



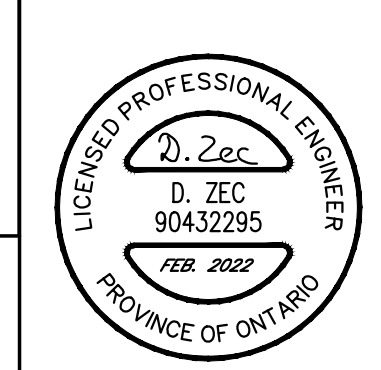
TOWN FILE No. \_\_\_\_\_ REGION FILE No. \_\_\_\_\_

MUNICIPAL APPROVED IN PRINCIPAL SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO TOWN STANDARDS AND SPECIFICATIONS.

REGIONAL DESIGN OF SANITARY, WATER SERVICES, AND REGIONAL ROAD WORKS APPROVED SUBJECT TO DETAIL CONSTRUCTION CONFORMING TO HALTON REGION STANDARDS AND SPECIFICATIONS AND LOCATION APPROVAL FROM AREA MUNICIPALITY.

SIGNED: \_\_\_\_\_ DATE: \_\_\_\_\_  
 MANAGER OF DEVELOPMENT ENGINEERING LEGISLATIVE AND PLANNING SERVICES

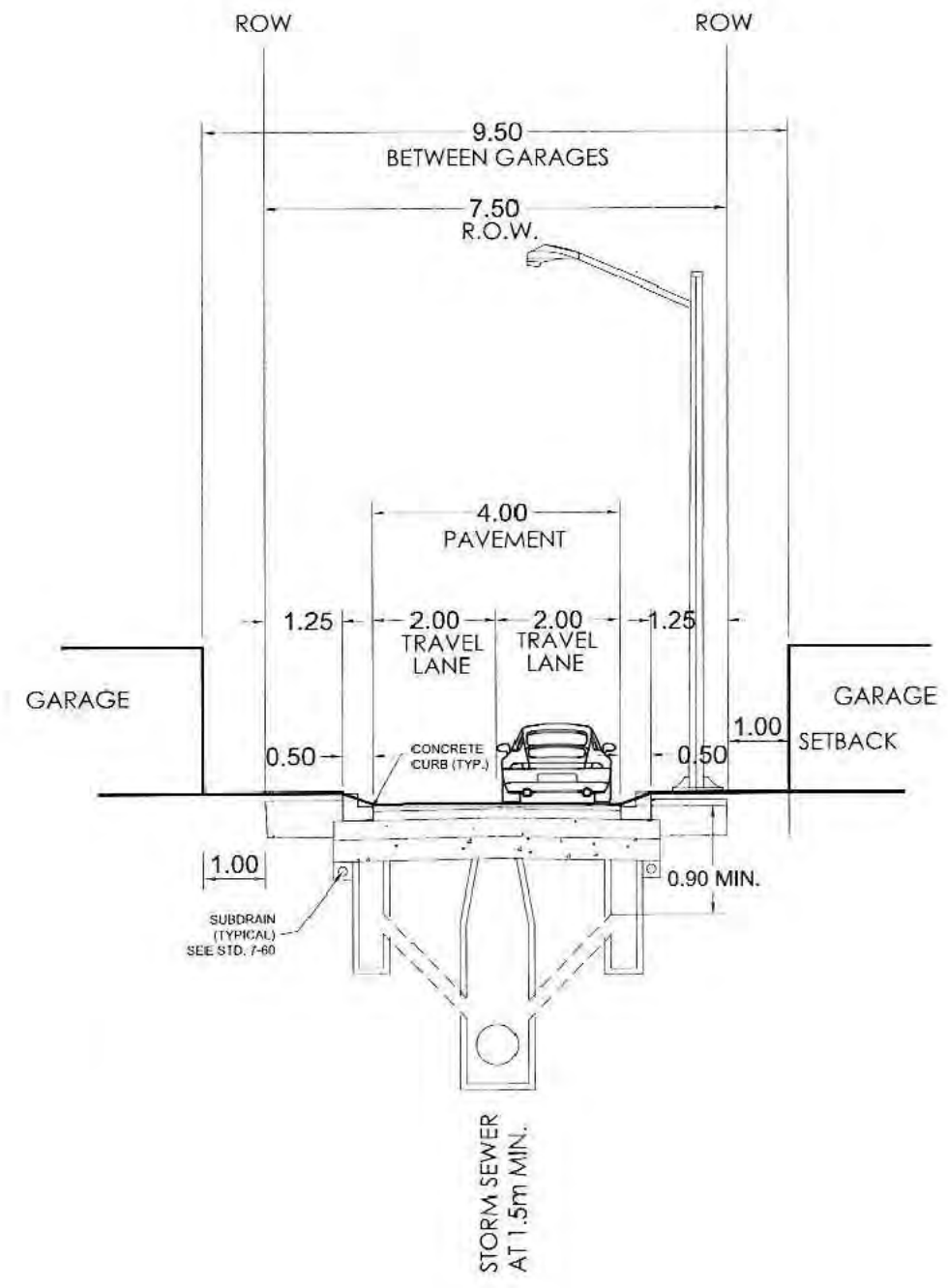
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**PRELIMINARY STORM  
 DRAINAGE PLAN**

DESIGNED: D.Z.	CHECKED: D.Z.	PROJECT No.: 21-703
DRAWN: J.B.	DATE: DECEMBER 2021	SHEET No.:
SCALE: H 1:500		DRAWING No.: <b>4</b>





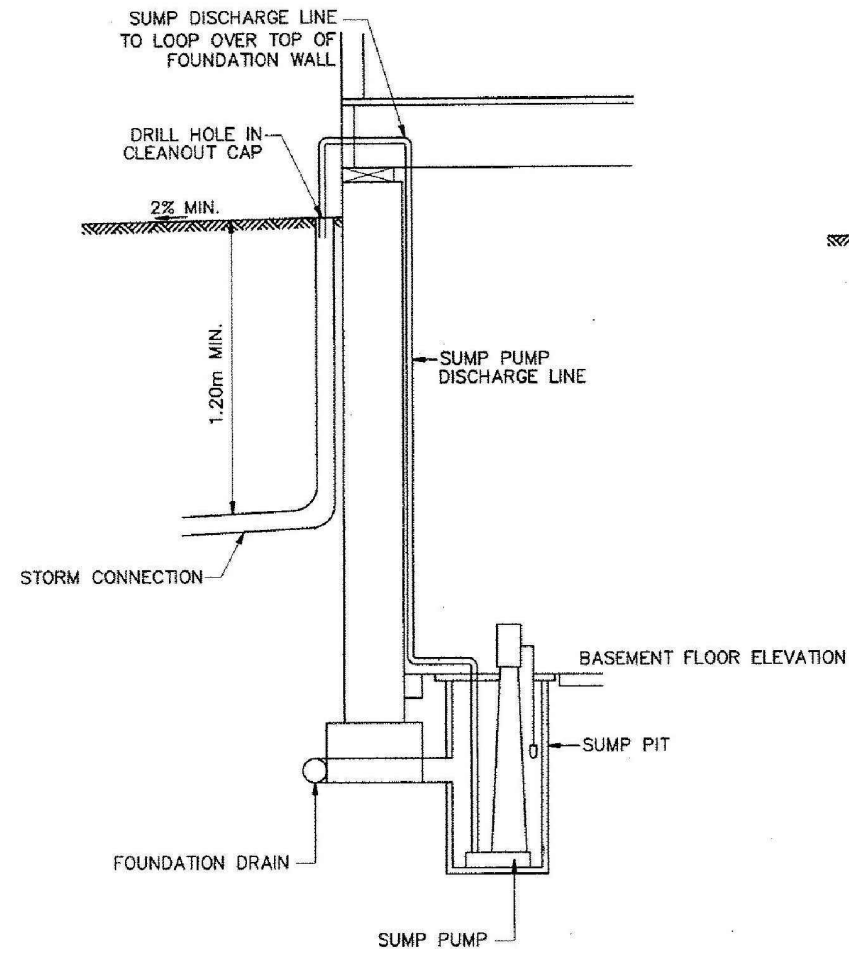
Note:  
 1. FOR GENERAL NOTES AND ASPHALT REQUIREMENTS  
 REFER TO STD. 7-20

TOWN OF OAKVILLE	
STANDARD STREET SECTION RESIDENTIAL LANEWAY 7.5m RIGHT OF WAY	
APPROVED  DIRECTOR OF ENGINEERING AND CONSTRUCTION	STD 7-21A REVISION DATE August 2009

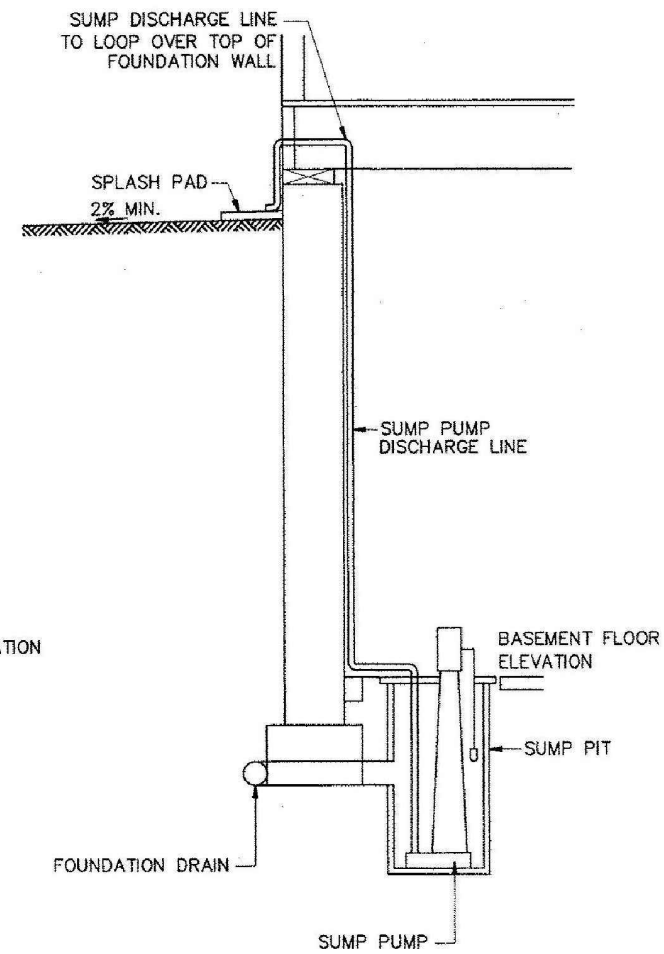


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FUNCTIONAL SERVICING REPORT  
**FERNBROOK HOMES  
 (SEVEN OAKS 2021) LIMITED**  
 PROJECT No. 21-703  
**FIGURE 5**  
**TYPICAL LANEWAY**  
**CROSS SECTION 7.5m R.O.W.**  
 FEBRUARY 2022 SCALE: N.T.S.



TYPICAL SUMP PUMP DETAIL  
(TO STORM SEWER)  
N.T.S.



TYPICAL SUMP PUMP DETAIL  
(TO GROUND)  
N.T.S.