development engineering (London) Limited

CONSULTING CIVIL ENGINEERS

Preliminary Servicing and Stormwater Management Letter

Date: May 8, 2026 DevEng Project No.: DEL26-006

To: Housing and Community Growth Division, City of London

Subject: **Preliminary Servicing and Stormwater Management Letter for ZBA Application**
SPC-26006: Stacked Townhouse Development
725 Notre Dame Drive, London, Ontario

Introduction

Development Engineering (London) Limited (DevEng) has been retained by Wastell Homes (the Owner) to prepare preliminary site engineering design to support a Zoning By-Law Amendment (ZBA) Application for a proposed residential townhouse development at 725 Notre Dame Drive in London, Ontario. Currently, there are two commercial buildings located on the ±2.21 ha property that are proposed to remain; a shopping centre (±0.28 ha) and a Canada Post building (±0.10 ha). The remainder of the site area (±1.83 ha) currently consists of parking and landscaped areas.

The residential townhouse development is proposed on a ±0.67 ha portion within the northeast corner of the existing subject property. The current Concept Plan by Monteith Brown Planning Consultants (dated April 21, 2026) includes the development of three stacked townhouse blocks, drive aisles, and required surface parking. Refer to Appendix A for the Concept Plan.

The purpose of this report is to support the ZBA Application by demonstrating effective and viable solutions on a preliminary basis to provide servicing, grading, and stormwater management for the proposed development.

Existing Conditions

The ±2.21 ha subject site is bound by Viscount Road to the north, Notre Dame Drive to the east, and existing residential areas to the west and south. Record drawings were obtained from the City of London for the surrounding rights-of-way (ROW) and have been reviewed alongside the City of London Locates Map in preparation of the preliminary engineering design.

Water Servicing

Along the north side of Viscount Road, there is an existing 300 mm diameter ductile iron municipal watermain, and parallel to the 300 mm watermain is an existing 150 mm cast iron municipal watermain. There currently is a private 150 mm diameter cast iron watermain connected to the existing 150 mm municipal watermain along Viscount Road which services the existing shopping centre building on-site. Refer to the City of London record drawings 3494 and WD-424, and previously approved site plan drawing A-1031784 in Appendix A.

Along the west side of Notre Dame Drive, there is an existing 200 mm cast iron municipal watermain. There currently is a private 40 mm copper water service connected to the municipal watermain on Notre Dame Drive which services the existing Canada Post building on-site. Refer to the City of London record drawing 3502 and previously approved site plan drawing by Coletti and Associates Engineers in Appendix A.

All the existing municipal watermains adjacent to the site are part of the high-level distribution network with a Hydraulic Grade Line (HGL) of 335.0 m as outlined in the City of London Site Plan Consultation comments.

There are two existing municipal hydrants adjacent to the subject development; one located near the east development boundary along Notre Dame Drive and the second located near the north development boundary along Viscount Road.

Sanitary Servicing

There is an existing 200 mm municipal sanitary sewer along the north side of Viscount Road which conveys wastewater flows to the west. The intersection of Viscount Road and Notre Dame Drive acts as a high point in the existing sanitary network along Viscount Road, conveying flows to the west and east, both directions ultimately outlet at the Greenway Wastewater Treatment Centre. Refer to the City of London record drawings 3494 in Appendix A.

There is an existing 200 mm municipal sanitary sewer along the west side of Notre Dame Drive which conveys wastewater flows north to the intersection of Notre Dame Drive and Viscount Road, beyond the intersection flows continue east down Viscount Road. Refer to the City of London record drawings 3494 and 3502 in Appendix A.

In addition, there is an existing 200 mm municipal sanitary sewer along the north side of Ensign Drive. It appears that the flows within this sanitary sewer are conveyed to the Viscount Road sanitary sewer. Refer to the City of London record drawings 27719 and 27720 in Appendix A.

There are two private sanitary sewers extending into the subject site to service the existing buildings; one from Ensign Drive to service the shopping centre building and the second from Notre Dame Drive to service the Canada Post building. Refer to previously approved site plan drawing by Coletti and Associates Engineers and the A-1031784 drawing in Appendix A.

City of London Site Plan Consultation comments (dated February 20, 2026) outlined the existing sanitary sewer on Notre Dame Drive as being the allocated sanitary outlet for the subject development. A sanitary flow allocation was calculated utilizing the maximum density population of 100 p/ha in accordance with the current zoning (commercial density), resulting in an allocated peak flow of 0.91 L/s (utilizing the approximate proposed development area of ±0.67 ha). It was noted in the City's Consultation that the sewer appears to have sufficient residual capacity to support the development.

Storm Servicing

There are existing 300 to 450 mm diameter municipal storm sewers adjacent to the site along the south side of Viscount Road which conveys flows to the west. Similar to the existing sanitary sewer, the intersection of Viscount Road and Notre Dame Drive acts as a high point within the existing storm sewer along Viscount Road, conveying flows to the west and east. The existing storm sewer conveying flows west, ultimately outlet to the Pincombe Drain (Westmount) ±1.1 km to the south of the subject development. Flows to the east ultimately

outlet at *Southcrest Ravine* on the north side of Base Line Road West, ±1.2 km to the north of the subject development.

The existing 450 mm diameter municipal storm sewers adjacent to the subject development along Notre Dame Drive conveys flows north to the intersection of Notre Dame Drive and Viscount Road, beyond the intersection flows continue east down Viscount Road. Refer to the City of London record drawings 3494 and 3502 in Appendix A.

In addition, there is an existing 600 mm municipal storm sewer along the south side of Ensign Drive which appears to also convey stormwater flows to the *Pincombe Drain (Westmount).*

There are three private storm sewer networks within the site that service the existing buildings and parking areas. The first network services the existing surface parking in the northeast area of the subject site, which is connected to the existing storm sewer on Viscount Road. The second network services the shopping centre building and directly surrounding surface parking, which is connected to the existing storm sewer on Ensign Drive. The third network services the Canada Post building and the directly surrounding surface parking, which is connected to the existing storm sewer on Notre Dame Drive. Refer to previously approved site plan drawing by Coletti and Associates Engineers and the A-1031784 drawing in Appendix A.

Detailed topographic information was obtained by DevEng on March 10, 2026, indicating the approximate areas currently tributary to the above-noted private storm sewer networks. Approximately 0.86 ha, 0.96 ha, and 0.42 ha of the existing site is currently tributary to the private storm sewer networks outletting to Viscount Road, Ensign Drive, and Notre Dame Drive, respectively. Refer to the Existing Conditions Drainage Schematic in Appendix E.

The detailed topographic information also indicated that the major overland flow route for the entire subject site is currently directed to Ensign Drive, through the ±3.0 m wide easement between 202 Ensign Drive and the rear lot of 780 Viscount Road. Table A below summarizes the current flows outletting to the existing municipal sewers surrounding the site.

Table A: Existing Conditions Flows Summary

Design Storm Event	Peak Minor Flow to Notre Dame Drive (L/s)	Peak Minor Flow to Viscount Road (L/s)	Peak Minor Flow to Ensign Drive (L/s)	Peak Major Flow to Ensign Drive (L/s)
2-year	77	120	180	0
5-year	83	163	251	0
10-year	86	191	298	0
25-year	88	228	359	0
50-year	90	256	403	0
100-year	91	286	439	0

Proposed Conditions

The development concept for the subject site proposes three townhouse blocks, which are proposed to consist of individual stacked townhomes, each with two units on the ground floor and a single unit on the top floor, for a total of 54 units. Utilizing the City of London's density criterion of 2.4 people per unit (medium-density), results in an approximate population of 130 people. Preliminary servicing design has been completed and is outlined in the following sections.

Water Servicing

The water servicing is anticipated to connect to the existing 200 mm municipal watermain on Notre Dame Drive. At this stage of design, an assumed 200 mm private watermain is proposed to service the subject development for domestic and fire flow demands. It is also anticipated that each stacked townhouse, consisting of three units, requires only one external water service, while internal plumbing is anticipated to distribute flows to each unit. Water metering is anticipated to be provided by a bulk meter located near the proposed east entrance to the development.

Preliminary domestic demand calculations have been completed based on the City of London Design Specifications & Requirements Manual (DSRM) Section 7.3.2., which result in the following domestic demands:

Table B: Preliminary Domestic Demand Summary

Demand Scenario	Concept Plan Including all Townhouse Blocks (dated April 21, 2026)
Average Day	0.39 L/s
Peak Hour	1.37 L/s
Maximum Day	3.04 L/s

Additionally, one fire hydrant has been proposed and located in accordance with Ontario Building Code (OBC) section 3.10.3.4. Preliminary fire flow calculations were completed for the subject development, assuming the buildings are not sprinklered, in accordance with OBC A-3.2.5.7., resulting in an approximate worst-case fire flow demand of 90.0 L/s required to service the proposed residential buildings. Refer to Appendix C for water demand and fire flow calculations.

Given the City's watermain system is well-looped for redundancy and includes strategic boosting stations, the connection to the City's existing water to service the proposed private watermain network is expected to comply with the OBC and DSRM Chapter 7.0, while adequately accommodating the Average Day, Maximum Day, Peak Hour, and Fire Flow demands identified above.

As noted in the City of London DSRM and Site Plan Consultation comments, a detailed water analysis and model are to be provided during detailed design.

Sanitary Servicing

As noted in the City of London Site Plan Consultation comments, the sanitary servicing is anticipated to connect to the existing 200 mm municipal sanitary sewer on Notre Dame Drive. At this stage of design, an assumed 200 mm private sanitary sewer is proposed to service the site for peak wastewater flows. It is also anticipated

that each stacked townhouse, consisting of three units, requires one external sanitary service, while internal plumbing is anticipated to convey flows from each unit to the sanitary service.

Preliminary demand calculations were completed for the subject development based on the proposed population of 130 people, resulting in a total peak flow of 1.67 L/s; minimally exceeding the allocated flows (0.91 L/s) by 0.76 L/s. Refer to the Preliminary Sanitary Calculation Sheet in Appendix D

The City of London noted in the Site Plan Consultation comments that there should be sufficient surplus capacity to accommodate this population increase. However, as there are no area plans and design sheets for the receiving downstream sewer (confirmed with the City's Geomatics Division on April 28th, 2026) to confirm the surplus capacity, the uniform conveyance capacity of the immediate downstream sewer on Notre Dame Drive has been calculated to be on the order of ±22.00 L/s. The slight increase of 0.76 L/s from the allocated flow to the design flow represents an approximate increase of 3.4% in flow within the existing downstream pipe (refer to the Preliminary Sanitary Calculation Sheet in Appendix D).

Storm Servicing

The storm servicing is anticipated to consist of a private storm network with pipe diameters ranging from 300 mm to 450 mm, utilizing catchbasins and catchbasin maintenance holes to capture stormwater runoff. At this stage of design, it is anticipated that roof drainage from each of the buildings would be directed to grade via downspouts. In addition, the townhouse blocks are not proposed to have basements, so sump pumps are not expected; therefore, no storm services to the units are proposed at this time. Further details on addressing stormwater management (SWM) are outlined the following SWM Section.

Refer to the Preliminary Servicing and Grading Plans in Appendix B for the preliminary water, sanitary, and storm designs.

Stormwater Management

SWM Targets

In accordance with the DSRM Section 6.9, a Permanent Private Stormwater System (PPS) is mandatory for the subject development. As outlined in the Site Plan Consultation comments, the proposed development falls under Case #3a. This case outlines the following design criteria must be met:

i. the flows from a site being developed are to be restricted to those flows which were allowed for the site in the design of the receiving storm sewer;
ii. the major flows and site grading are to be controlled on site up to the major storm event; and,
iii. 100% of quality and erosion controls are to be provided for the lands to be developed, as per the applicable Subwatershed Study.

Allowable SWM Conditions

The City of London Site Plan Consultation comments outline that a portion of the subject site (±0.45 ha; as per approximate markup on the record drawing number 11993 in Appendix A) is allocated to the existing storm sewer on Notre Dame Drive. However, under the existing conditions, there is currently a ±0.42 ha area on the subject site that is tributary to the existing storm sewer on Notre Dame Drive (refer to the Existing Conditions Drainage Schematic in Appendix E). It is anticipated that this area is already utilizing the allocated flows to Notre Dame Drive.

As noted previously in the Existing Storm Sewer Section, there is currently a portion of the site (±0.86 ha) containing a private storm sewer network conveying minor flows to Viscount Road. It is anticipated that the existing Viscount Road storm sewer currently servicing the site can continue to service the proposed development with the understanding that the flows from the site are to be restricted to those flows which were allowed for the site in the design of the receiving storm sewer in accordance with PPS Case #3a (i).

In the absence of record drawings (confirmed with the City's Geomatics Division on April 28th, 2026), including area plans and design sheets for the Viscount Road storm sewer network, design calculations have been completed to establish target outflows to the existing Viscount Road storm sewer to align with the PPS Case #3a criterion.

Located adjacent to the site, the storm sewer between maintenance holes Ex. MH C-11 and Ex. MH C-10, is identified as a 450 mm diameter pipe at 0.36% (refer to the highlighted pipe on record drawing number 3494). A Manning's uniform pipe capacity calculation was completed to determine the existing storm pipe's maximum flow capacity of ±171 L/s for a 5-year design storm event. Refer to the Uniform Flow Capacity Calculation in Appendix E.

Currently, a total area of ±1.50 ha is tributary to the existing storm sewer. This area consists of the pipe's tributary area (A1) within the Viscount Road ROW (±0.20 ha), the tributary area (A2) within the existing residential area north of Viscount Road (±0.44 ha), and the existing tributary area (A3) of the subject site (±0.86 ha). Refer to the Viscount Storm Sewer Tributary Drainage Schematic in Appendix E. Utilizing the approximate tributary areas in comparison to the approximate uniform pipe capacity, an allocated flow for the existing site tributary area (±0.86 ha) was calculated to be on the order of ±97 L/s (assumed 5-year flow). Refer to the Allowable Flow Analysis Calculation sheet in Appendix E.

An allowable model of the existing site tributary area (±0.86 ha) was created using PCSWMM and calibrated to the calculated allowable flow of ±97 L/s to determine allowable outflows to Viscount Road in the 2-year to the 100-year design storm events. Refer to Table C below for a summary of calculated allowable outflows and the existing outflows to the Viscount Road:

Table C: Allowable (Target) and Existing Flows to Viscount Road from 725 Notre Dame Drive.

Design Storm Event	Allowable (Target) Outflow to Viscount Road (L/s)	Existing Outflow to Viscount Road (L/s)
2-year	63	120
5-year	97	163
10-year	123	191
25-year	155	228
50-year	180	256
100-year	205	286

As shown in Table C, the calculated allowable outflows for the 2-year to 100-year design storm events are less than those of the existing conditions to the existing Viscount Road storm sewer. It is of our opinion in the absence of area plans and design sheets that the calculated allowable outflows are a conservative SWM target satisfying the PPS minor flow criterion (i).

Post-Development SWM Strategy

Post-Development SWM Conditions

A preliminary post-development model was created using PCSWMM, which consisted of the total proposed tributary area (±0.83 ha) to the minor storm outlet to the existing Viscount Road storm sewer. Refer to the Post-Development Drainage Figure in Appendix E. The modeling indicated that the stormwater runoff produced from this area would exceed the allowable target outflows; therefore, it is anticipated that on-site storage would be required.

Quantity Control

Utilizing PCSWMM, modeling results indicated that approximately 167 m^3 of on-site storage would be required to control 100-year design storm event flow to the target outflow. The table below summarizes the approximate storage volumes required to meet the target outflows for all design storm events:

Table D: Approximate Storage Requirements to meet Target Outflows

Design Storm Event	Approximate On-Site Storage Volume Required to meet Allowable Minor Flows to Viscount Drive (m^3)
2-year	78
5-year	103
10-year	120
25-year	139
50-year	153
100-year	167

Refer to the SWM calculation summary tables in Appendix E.

To achieve the SWM target outflows to the existing Viscount Road storm sewer as well as controlling the major flows on site (PPS Case #3a (i) and (ii)), underground and surface storage are anticipated to be utilized to restrict and detain stormwater flows. It is anticipated that underground storage is to be utilized for all design storm events, with the addition of surface storage for the less frequent storm events (10-year and above).

Quality Control

Quality control for the proposed development is anticipated to be provided by an Oil-Grit Separator (OGS) installed downstream of the underground storage system. The OGS will be designed and sized to provide the 'Enhanced' level of protection (80% Total Suspended Solids (TSS) removal) in accordance with the MOE's Stormwater Management Planning and Design Manual; therefore, satisfying the quality control target outlined in the PPS criterion (iii).

Erosion and Sediment Control

ESC measures are to be used throughout construction to help stabilize the site and prevent migration of soil particles to neighboring parcels. ESC measures and details are to be proposed and submitted as part of the Site Plan Approval Application.

Conclusion

We trust this Preliminary Servicing and SWM Letter and supporting appended documents address the servicing and stormwater management strategies to support the Zoning By-Law Amendment Application for the proposed townhouse development at 725 Notre Dame Drive. If there are any questions or comments, please do not hesitate to contact our firm.

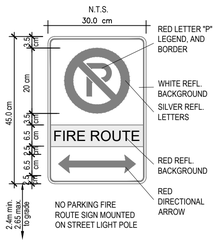
Shannon Palmer
Designer

Troy Winger, P.Eng.
Design Engineer

Appendix A: Background Information

- Concept Plan by MBPC
- City of London Record Drawings
    - Notre Dame Drive
    - Viscount Road
    - Ensign Drive
- Previous Site Plan Drawings

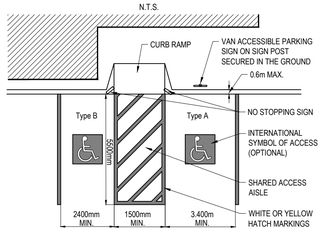
FIRE ROUTE SIGNAGE



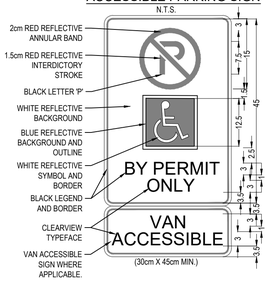
NO PARKING FIRE ROUTE SIGN DETAILS ACCORDING TO CITY OF LONDON STANDARDS (MAXIMUM 30m SPACING)
ALL SIGNAGE SHALL CONFORM TO BY-LAW NO. 06-243

FIRE ROUTE WILL NOT HAVE ANY CENTRE LINE TURNING RADII OF LESS THAN 12m OR A CHANGE OF GRADIENT NOT MORE THAN 1 IN 12.5 OVER A MINIMUM DISTANCE OF 15m.

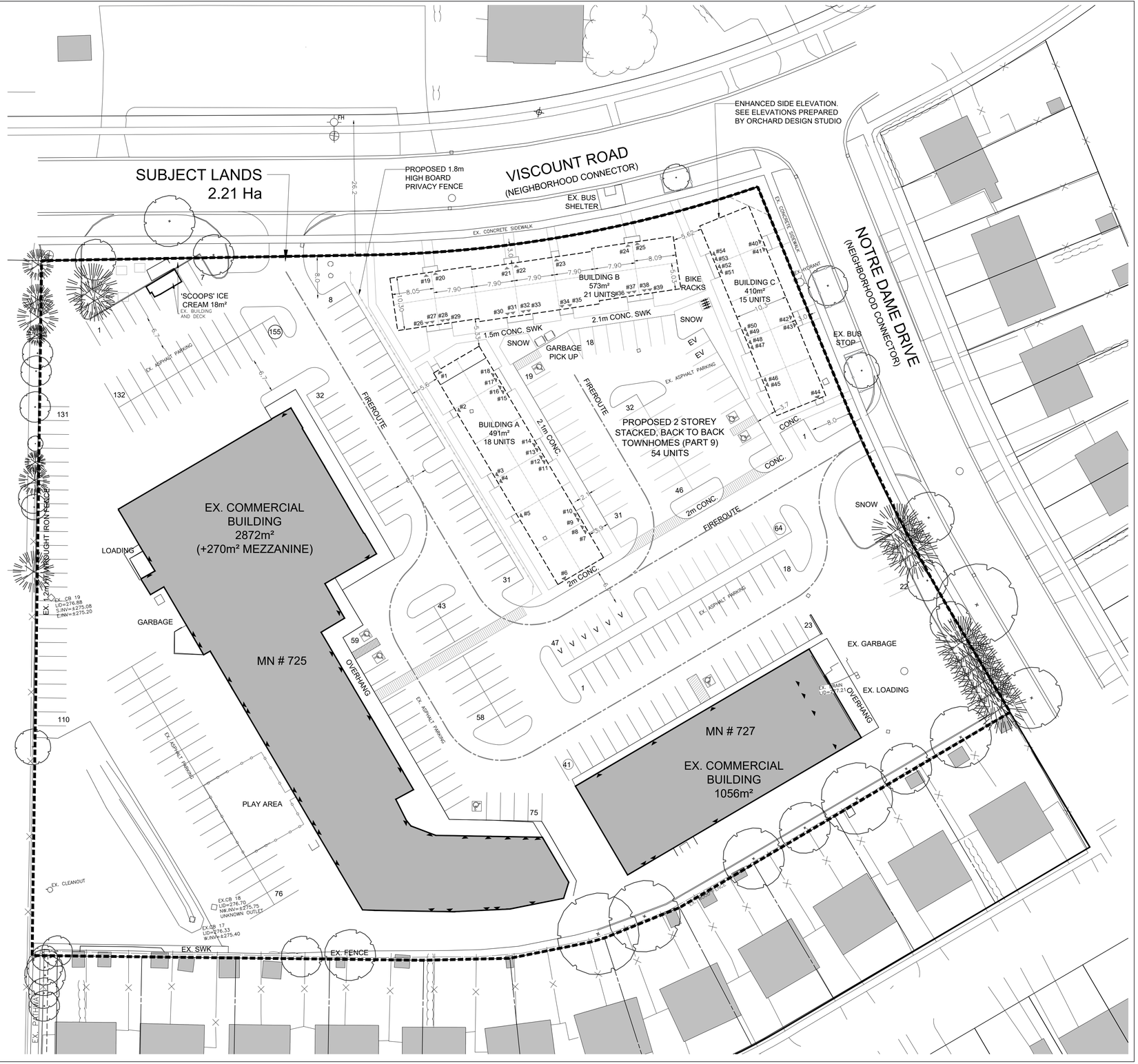
PARKING SPACE FOR PERSONS WITH DISABILITIES



ACCESSIBLE PARKING SIGN



NOTE: SIGN ON A POST TO BE AT LEAST 1.5m ABOVE GRADE AND NOT MORE THAN 2.5m WHEN MEASURING FROM GRADE TO THE CENTRE OF THE SIGN.



WASTELL HOMES

PAGE SP

Notre Dame Drive Site Plan Amendment

725 Notre Dame Drive
London, Ontario

KEY MAP

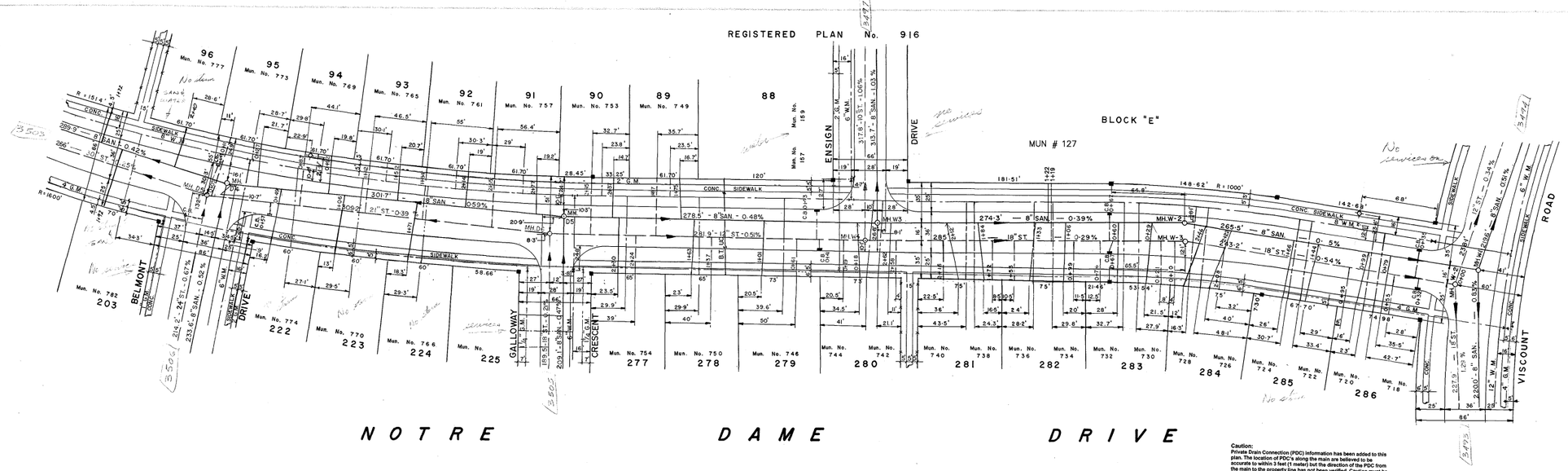
CITY OF LONDON ZONING BY-LAW			
REGULATION	EX. NSA2	ADD R5-7	SITE
PERMITTED USES	commercial	towns	residential
LOT AREA (Min.)	n/a	1000m²	2.21 Ha
LOT FRONTAGE (Min.)	30m		113m
LOT DEPTH (Min.)	40m	n/a	160m
FRONT & EXTERIOR YARD (Min.)	0m	8m	3m *
INTERIOR SIDE & REAR YARD (Min.)	8m adjacent to residential zone	3m & 6m	<8
LANDSCAPE OPEN SPACE (Min.)	15%	30%	%
COVERAGE (Max.)	30%	45%	24%
HEIGHT (Max.)	8m	12m	7.5m
PARKING (Min.)	See chart to left	0.5/ Unit	1 / Unit
ACCESSIBLE PARKING	Same as existing	4% of required spaces = 2 min	3
ELECTRIC VEHICLES		5% of required spaces = 2 min	2
VISITOR PARKING		1 / 10 units = 6 min	6
BICYCLE PARKING		7% of required vehicle = 2 min	4
* REQUIRES SPECIAL PROVISION			

SCALE 1:400

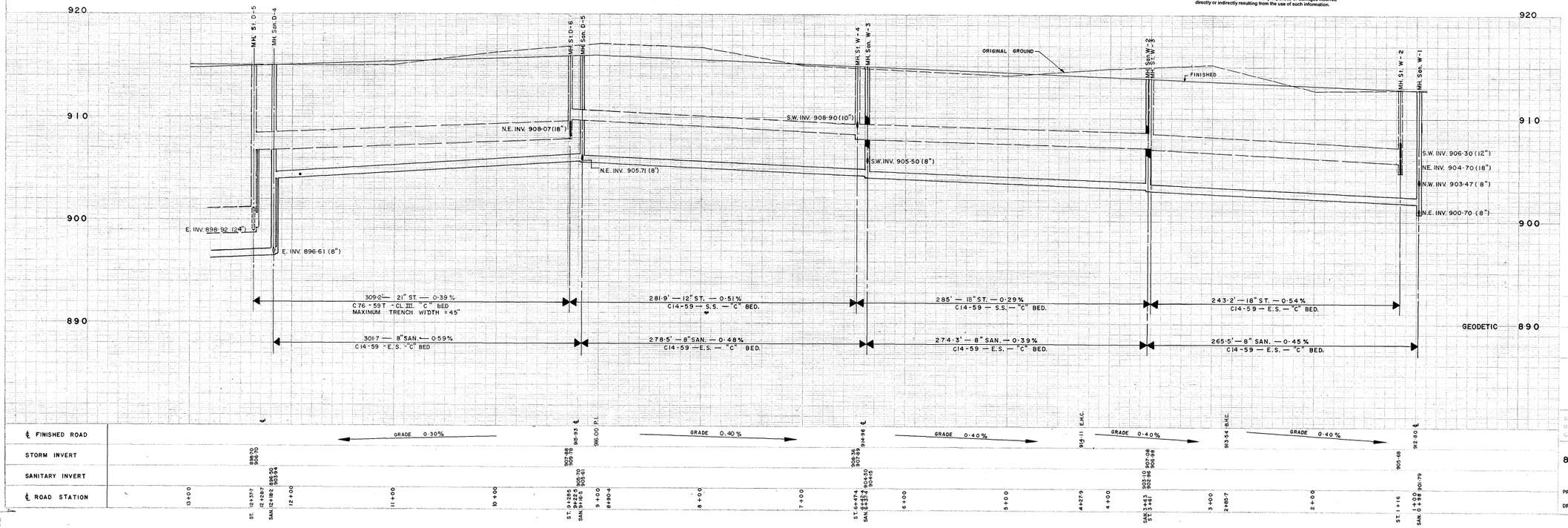
0 5 10 20m

MONTEITH BROWN PLANNING CONSULTANTS
302-219 OXFORD ST W
LONDON, ON N6H 1S5
519.686.1300
WWW.MBPC.CA

Date Jun 10, 2026
File no. 07-940



Caution:
Private Drain Connection (PDC) information has been added to this plan. The location of PDC's along the main are believed to be accurate to within 3 feet (1 meter) but the direction of the PDC from the main to the property line has not been verified. Caution must be exercised when using this information to locate PDC's. The City of London does not accept any responsibility for the information on this plan, and is not responsible for any expenses or damages incurred directly or indirectly resulting from the use of such information.



NOTE: MANHOLE AND WATER VALVE LOCATIONS HAVE BEEN VERIFIED IN THE FIELD BUT ALL ELEVATIONS ON THE PROFILE ARE DESIGN ONLY AND MUST BE VERIFIED.

NOTES:
COVER OVER WATERMAINS, TOP OF MAIN TO ROAD CENTRE LINE IS APPROXIMATELY 5'-0".
SANITARY AND STORM P.D.C.'s — 4" A.C., CL. 1500, RUBBER GASKET, "C" BEDDING.
CATCH BASIN LEADS — 6" E.S. CONC. PIPE, MORTAR JOINT, "C" BEDDING.
CURB AND GUTTER RADII AT STREET INTERSECTIONS IS 30', UNLESS OTHERWISE NOTED.
MANHOLE CHAINAGES ARE 0+00. CHAINAGES FOR P.D.C.'s INCREASE FOLLOWING THE SEWERS UPSTREAM.
FOR BEDDING DETAILS AND GENERAL NOTES REFER TO DWG. No. 9 OF VISCOUNT ROAD.

SERVICES	COMPLETION DATE
SANITARY SEWERS, P.D.C.'s & MH.'s	JUNE 1965
STORM SEWERS, P.D.C.'s, C.B.'s & MH.'s	SEPT. "
WATERMAINS & W.S.C.'s	OCT. "
GRANULAR BASE	JULY 1967
CURB & GUTTER	" "
SIDEWALKS	" "
PAVING	AUG. "

"AS CONSTRUCTED"

REGISTERED PROFESSIONAL ENGINEER
C. G. FORBERG
CIVIL
PROVINCE OF ONTARIO

NO.	REVISIONS	DATE	BY

CITY OF LONDON

NORTON ESTATES SUBDIVISION — PHASE 2
FELLNER CONSTRUCTION LTD. — SUBDIVIDER

NOTRE DAME DRIVE
FROM VISCOUNT ROAD TO BELMONT DRIVE

DESIGN BY C.G. FORBERG
DRAWN BY A.DOBRENTEY & E.V.H.
CHECKED BY R.W. LEE
FIELD BOOK
SCALE HOR. 1" = 40' VERT. 1" = 4'
DATE FEB. 1971

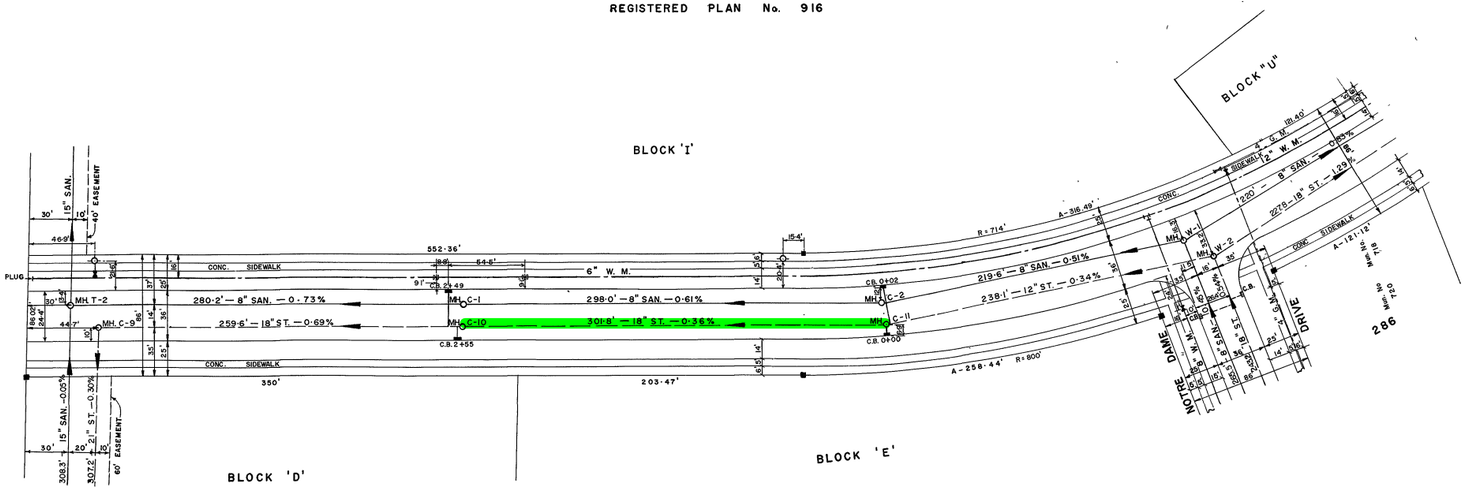
R.C. DUNN & ASSOCIATES LTD.
CONSULTING ENGINEERS
LONDON ONTARIO
PROJECT NO. 62-117
DRAWING NO. 20

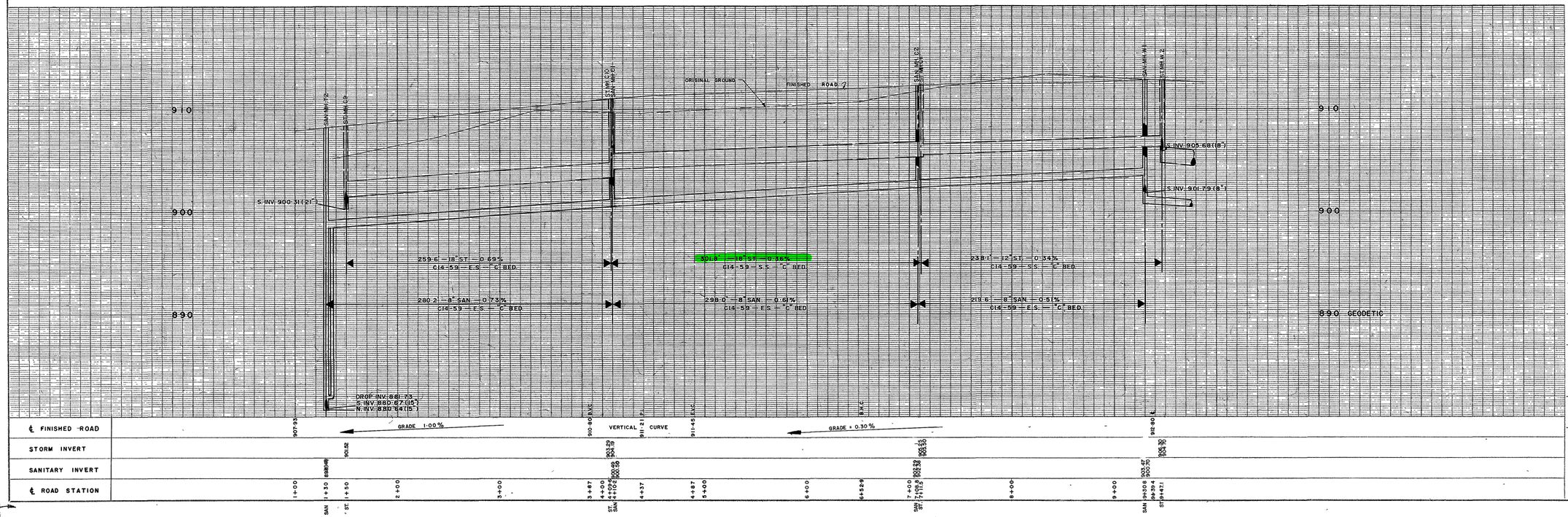
APPROVED BY
CITY ENGINEER'S DEPARTMENT
PROJECT NO.
DRAWING NO. 3502

3502

3502-281

REGISTERED PLAN No. 916





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SANITARY AND STORM P.D.C's — 4" A.C., CL.1500, RUBBER GASKET, "c" BEDDING.
CATCH BASIN LEADS — 8" E.S. CONC. PIPE, MORTAR JOINT, "c" BEDDING.
CURB AND GUTTER RADII AT STREET INTERSECTIONS IS 30', UNLESS OTHERWISE NOTED.
MANHOLE CHAINAGES ARE 0+00. CHAINAGES FOR P.D.C's INCREASE FOLLOWING THE SEWERS UPSTREAM.
FOR BEDDING DETAILS AND GENERAL NOTES REFER TO DWG. No. 9 OF VISCOUNT ROAD.

SERVICES	COMPLETION DATE
SANITARY SEWERS, P.D.C's & M H's	SEPT 1963
STORM SEWERS, P.D.C's, C.B.'s & M.H.'s	" "
WATERMAINS & W.S.C's	JULY 1964
GRANULAR BASE	MAY 1965
CURB & GUTTER	" "
SIDEWALKS	" "
PAVING	JUNE "

"AS CONSTRUCTED"

REGISTERED PROFESSIONAL ENGINEER CIVIL C. G. FORBERG PROVINCE OF ONTARIO

NO.	REVISIONS	DATE	BY

CITY OF LONDON

NORTON ESTATES SUBDIVISION — PHASE 2
FELLNER CONSTRUCTION LTD. — SUBDIVIDER

VISCOUNT ROAD

FROM NOTRE DAME DRIVE TO WEST LIMIT

DESIGN BY C.G.FORBERG
DRAWN BY A.DOBRENTEY
CHECKED BY R.W.LEE

FIELD BOOK
SCALE : HOR. 1"= 40' VERT. 1"=4'
DATE . FEB. 1971

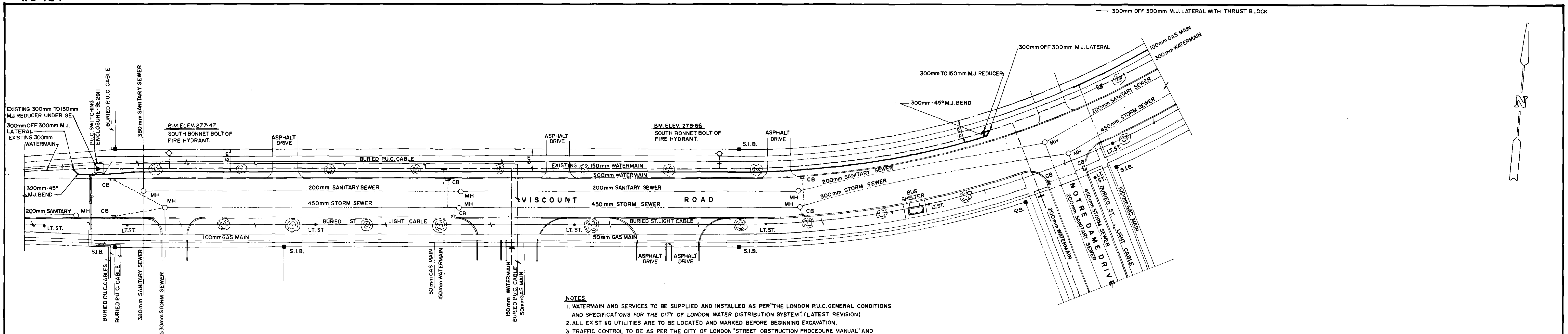
R.C. DUNN & ASSOCIATES LTD.
CONSULTING ENGINEERS
LONDON ONTARIO

PROJECT NO. 62-117
DRAWING NO. 12

APPROVED BY :
SECTION HEAD
CITY ENGINEER

CITY ENGINEER'S DEPARTMENT
PROJECT NO. :
DRAWING NO. 3494

3494



NOTES

1. WATERMAIN AND SERVICES TO BE SUPPLIED AND INSTALLED AS PER "THE LONDON P.U.C. GENERAL CONDITIONS AND SPECIFICATIONS FOR THE CITY OF LONDON WATER DISTRIBUTION SYSTEM". (LATEST REVISION)
2. ALL EXISTING UTILITIES ARE TO BE LOCATED AND MARKED BEFORE BEGINNING EXCAVATION.
3. TRAFFIC CONTROL TO BE AS PER THE CITY OF LONDON "STREET OBSTRUCTION PROCEDURE MANUAL" AND CO-ORDINATED WITH THE TRAFFIC DIVISION.
4. EXISTING PAVEMENT AND CONCRETE WORK IS TO BE SAWCUT ALONG PERIMETER OR REMOVED TO NEAREST JOINT.
5. ALL PAVEMENT, CONCRETE AND OTHER MATERIALS NOT REQUIRED OR SUITABLE FOR BACKFILL IS TO BE REMOVED FROM SITE.
6. IF EXISTING SEWER SERVICES OBSTRUCT LAYING LINE, ADJUST GRADE TO GO OVER OR UNDER SERVICES WITH A MINIMUM OF 1·5m OF COVER AND RECORD ANY CHANGES ON THIS DRAWING.
7. BEDDING TO BE CLEAN SAND FROM 100mm BELOW PIPE TO TOP OF PIPE, COMPACTED TO 90% OF MAXIMUM STANDARD PROCTOR DENSITY.
8. TRENCH TO BE BACKFILLED WITH TOP 150mm GRANULAR 'A' GRAVEL. REMAINDER OF TRENCH TO BE BACKFILLED WITH EXCAVATED MATERIAL IF SUITABLE OR GRANULAR 'B' GRAVEL. MATERIAL IS TO BE PLACED IN LAYERS OF SUITABLE THICKNESS TO BE COMPACTED TO 95% OF MAXIMUM STANDARD PROCTOR DRY DENSITY FOR GRANULAR 'B' AND 100% FOR GRANULAR 'A' GRAVEL.
9. ROADWAY PAVEMENT CUTS TO BE RESTORED WITH 50mm HL3 AND 50mm HL6 HOT MIX ASPHALT. ALL DRIVEWAY CUTS ARE TO BE RESTORED WITH 50mm HL3 HOT MIX ASPHALT.
10. THE WATERMAIN SHALL BE CLEANED WITH A FOAM SWAB INSTALLED AT ONE END OF THE PIPE AND BLOWN THROUGH THE MAIN AND REMOVED AT THE OTHER END.
11. THE WATERMAIN SHALL BE PRESSURE TESTED, STERILIZED AND FLUSHED OUT PRIOR TO BEING CONNECTED TO THE EXISTING WATER DISTRIBUTION SYSTEM.

12. ALL GRASSED AREAS ARE TO BE RESTORED BY SODDING.

REV.	DATE	ORDER	DESCRIPTION	BY	CHK'D.	APP'D.
Ⓜ 1.	AUG. 1985	5-8822	AS-BUILT	DRH	L.C.	E.D.

SCALE

HORIZONTAL 1:500
VERTICAL 1:50

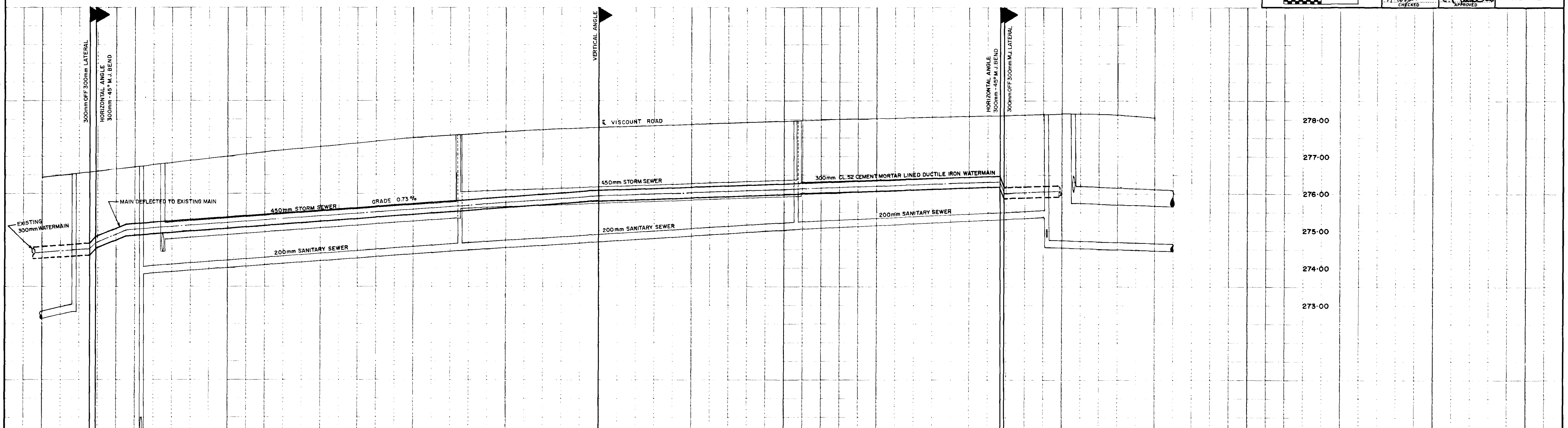
HORIZONTAL 10m 0 10m
VERTICAL 1m 0 1m

THE PUBLIC UTILITIES COMMISSION
CITY OF LONDON

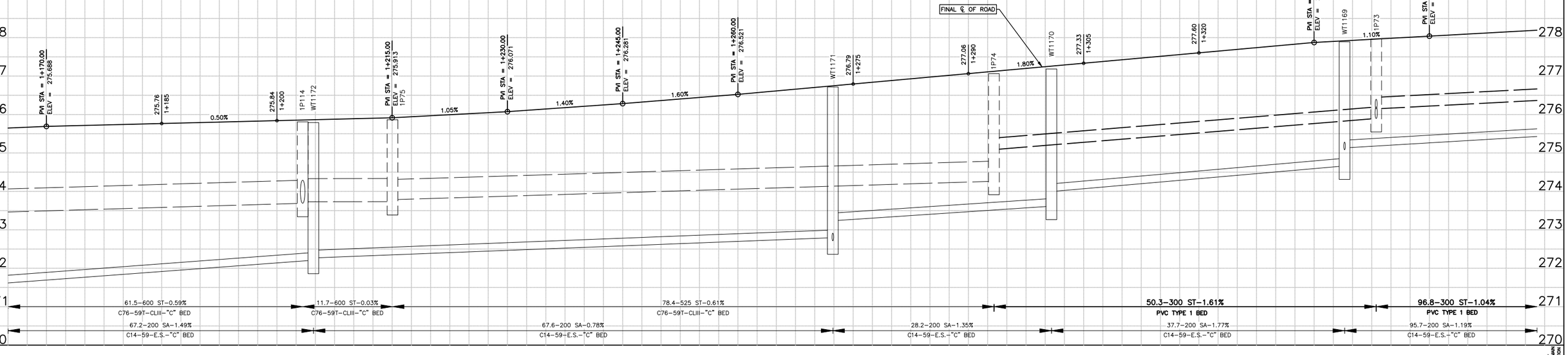
300mm WATERMAIN-VISCOUNT ROAD NOTRE DAME DRIVE TO 300m WESTERLY

DESIGN	DRAWN	DATE	ORDER	SCALE
R.E.C.	R.W.M.	10 DEC. 84	5-8822	AS SHOWN

L. Cooper CHECKED — E. Dinelle APPROVED — DWG. WD-424



	3+00	2+87	2+85.5	2+75	2+50	2+25	2+00	1+50	1+25	1+00	0+75	0+50	0+41.8	0+40.8	0+25	0+00
℄ ROAD ELEVATION	276.43			276.72	277.00	277.27	277.50	277.78	277.85	277.94	278.03	278.09			278.17	278.04
℄ WATERMAIN ELEVATION		274.52	274.68					275.95					276.29	276.03		
CHAINAGE	3+00	2+87	2+85.5	2+75	2+50	2+25	2+00	1+50	1+25	1+00	0+75	0+50	0+41.8	0+40.8	0+25	0+00



STATION	1+165	1+170	1+185	1+200	1+215	1+230	1+245	1+260	1+275	1+290	1+305	1+320	1+335	1+350	STATION
C/L WATERMAIN ELEVATION															C/L WATERMAIN ELEVATION
STORM SEWER INVERT				273.69W 273.73E	273.73W 273.78E					274.26W 275.08NE			275.69SW 275.74E 276.14NE		STORM SEWER INVERT
SANITARY SEWER INVERT				272.21W 272.27E				272.70W 273.23E 272.71S			273.61W 273.99NE		274.66SW 275.08SE 275.13NE		SANITARY SEWER INVERT

EXISTING SERVICES	DRAWING #, SOURCE	CONSTRUCTION DATE
SANITARY SEWER	3497	APRIL 1964
STORM SEWER	3497	MAY 1964
WATERMAIN	3497	JUNE 1964

CONSTRUCTED SERVICES	COMPLETION
GRANULAR BASE	2016
CB'S	2016
CURB & GUTTER	2016
SIDEWALK	2016
PAVING–BASE	2016
PAVING–TOP	2016
STM SEWERS & PDCs	2016

DETAILS	
DESIGN	VS
DRAWN BY	DB
CHECKED	PDC
APPROVED	PDC
DATE	2020/08/26

No.	REVISIONS	DATE	CONSULTANT
1	AS CONSTRUCTED	FEB 2018	GEOMATICS(AW)

CONSULTANT OR SERVICE AREA

ENVIRONMENTAL & ENGINEERING SERVICES

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER
P.D. CHOMA
Feb 1/21
PROVINCE OF ONTARIO

CORPORATION OF THE CITY OF LONDON
London CANADA

SCALE
HORIZONTAL–1:250
2.5 0 5m
VERTICAL–1:50
0.5 0 1m

TITLE
2016 ANNUAL ROAD RECONSTRUCTION PROGRAM
AS CONSTRUCTED

ENSIGN DRIVE
30m EAST OF WESTBURY AVE TO WESTBURY CRES

PROJECT No. 2016 LOCAL
SHEET No. 2 OF 5
PLAN FILE No. 27719

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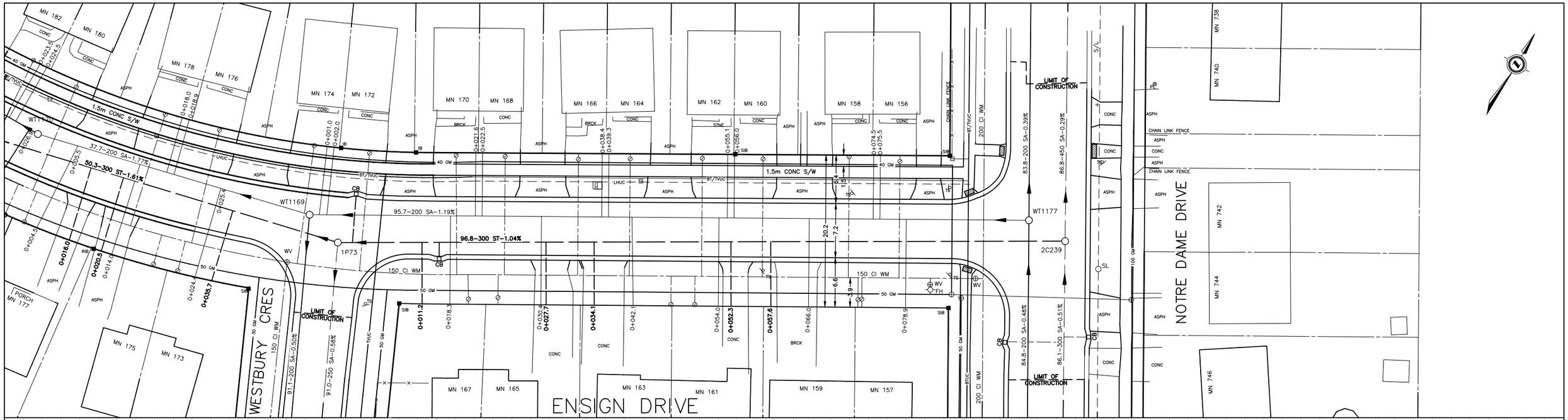
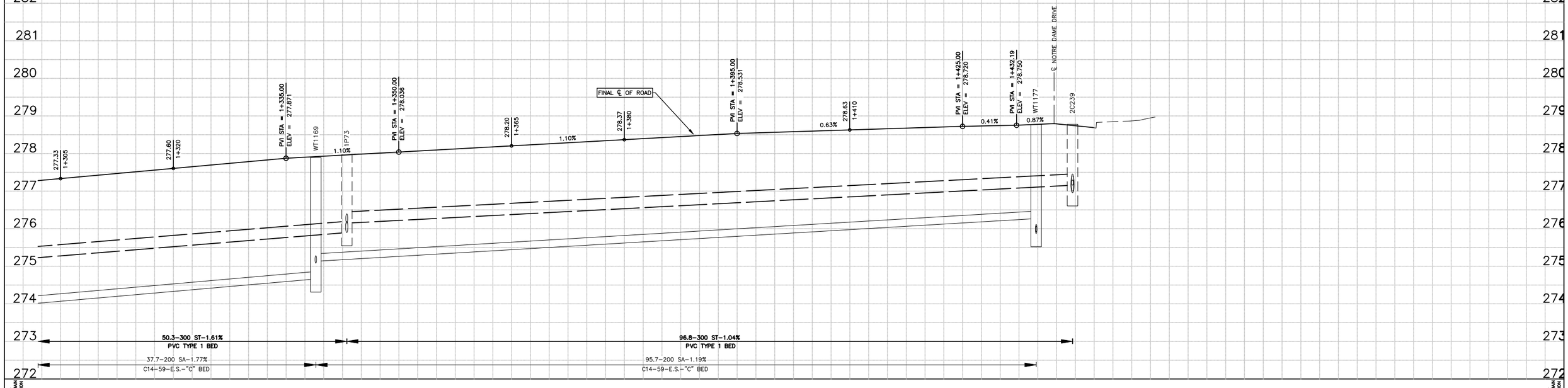




STATION	1+302	1+305	1+320	1+335	1+350	1+365	1+380	1+395	1+410	1+425	1+440	1+455	1+470	1+485	1+500	STATION
SANITARY SEWER INVERT																SANITARY SEWER INVERT
STORM SEWER INVERT																STORM SEWER INVERT
C/L WATERMAIN ELEVATION																C/L WATERMAIN ELEVATION

EXISTING SERVICES	DRAWING #, SOURCE	CONSTRUCTION DATE
SANITARY SEWER	3497/3502	APR.64/JUNE.65
STORM SEWER	3497/3502	MAY.64/SEPT.65
WATERMAIN	3497/3502	JUNE.64/OCT.65

CONSTRUCTED SERVICES	COMPLETION
GRANULAR BASE	2016
CB'S	2016
CURB & GUTTER	2016
SIDEWALK	2016
PAVING–BASE	2016
PAVING–TOP	2016
STORM SEWERS & PDCs	2016

DETAILS	
DESIGN	VS
DRAWN BY	DB
CHECKED	PDC
APPROVED	PDC
DATE	2020/08/26

No.	REVISIONS	DATE	CONSULTANT
1	AS CONSTRUCTED	FEB 2018	GEOMATICS(AW)

CONSULTANT OR SERVICE AREA

ENVIRONMENTAL & ENGINEERING SERVICES

ENGINEER'S STAMP

LICENSED PROFESSIONAL ENGINEER
P.D. CHOMA
Feb 1/21
PROVINCE OF ONTARIO

London CANADA

CORPORATION OF THE CITY OF LONDON

SCALE
HORIZONTAL–1:250
2,5 0 5m
VERTICAL–1:50
0,5 0 1m

TITLE
2016 ANNUAL ROAD RECONSTRUCTION PROGRAM
AS CONSTRUCTED

ENSIGN DRIVE
FROM 45m WEST OF WESTBURY CRES TO NOTRE DAME DR

PROJECT No.
2016 LOCAL

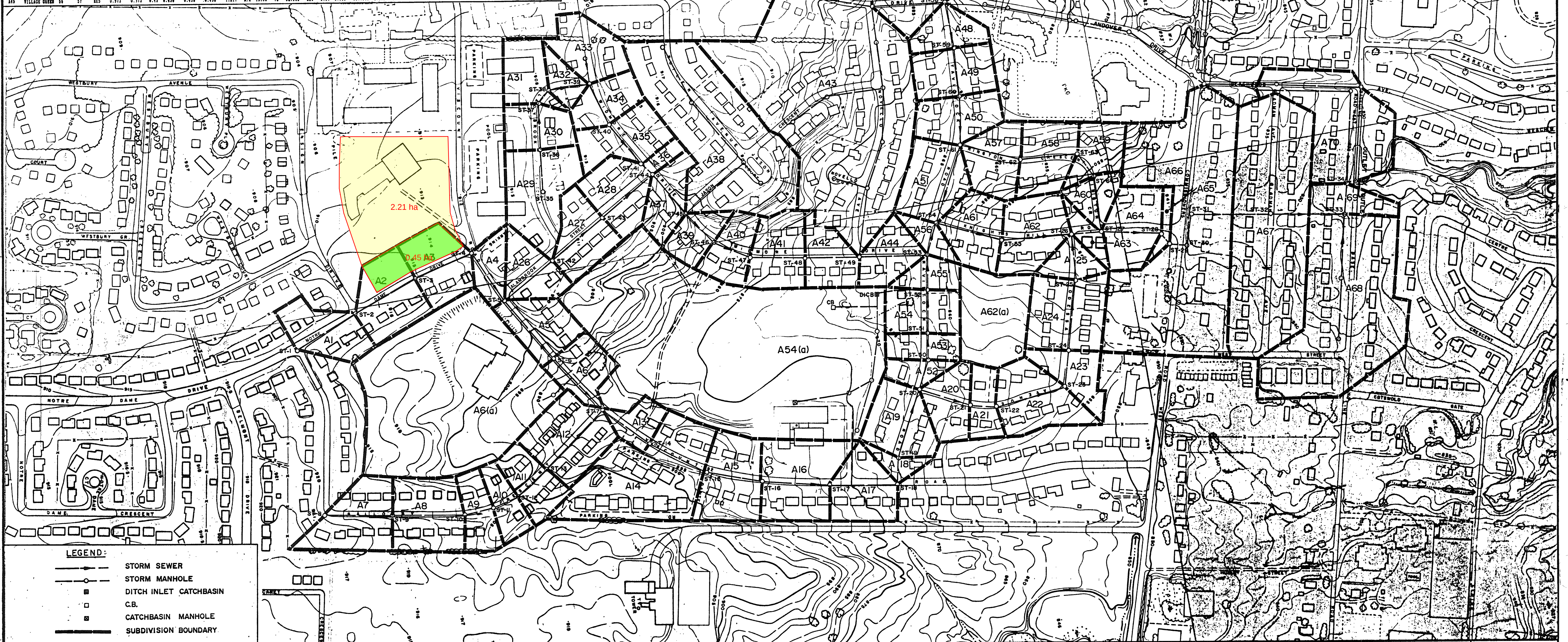
SHEET No.
3 OF 5

PLAN FILE No.
27720

###

: LONDON 2 YEAR CURVE RES C=0.45 Delcan - London STORM SEWER DESIGN SHEET metric ##

AREA NO	STREET	FROM	TO	LAND USE	AREA ha.	TOTAL AREA	COEF. C	INCR. AxC	TOT.SECT AxC	TOT.SUB AxC	TOTAL ACx2.78	TIME SECT.	TIME ACCUM.	INTEN I	PEAK FLOW	PIPE DIA.	SLOPE %	n	ACTUAL CAPACITY	VEL. m/s	LENGTH m	FLOW TIME	LOSSES MH	PIPE DIF.	FALL IN SEWER	CAP	% CAP USED	REQ'D SLOPE (%)	REQ'D VEL m/s
A1	NOTRE DAME DR	1	2	RES	0.604	0.604	0.45	0.272	0.272	0.272	0.756	N/A	19.00	76	57.426	300	0.50	0.015	59.497	0.842	85.92	1.70	0.000	0.000	0.433		97%	0.470	0.812
A2	NOTRE DAME DR	2	3	RES	0.740	1.344	0.45	0.333	0.605	0.605	1.681	1.70	20.70	72	121.057	450	0.28	0.015	131.080	0.828	86.87	1.75	0.000	0.150	0.247		92%	0.240	0.761
A3	NOTRE DAME DR	3	4	RES	0.613	1.357	0.45	0.276	0.881	0.881	2.448	1.75	22.45	68	166.478	450	0.54	0.015	180.732	1.136	74.13	1.09	0.000	0.000	0.397		92%	0.454	1.047
A4	VISCOUNT RD	4	5	RES	0.316	2.273	0.45	0.142	1.023	1.023	2.844	1.09	23.54	66	187.673	450	1.27	0.015	276.459	1.751	69.43	0.66	0.000	0.000	0.882		67%	0.577	1.180
A5	VISCOUNT RD	5	6	RES	0.560	1.346	0.45	0.252	0.605	0.605	1.683	0.66	24.20	65	109.409	250	4.51	0.015	109.415	2.229	95.55	0.71	0.000	-0.200	4.306		100%	4.507	2.229
A6a	SCHOOL FIELD	6	7	PK	4.038	5.384	0.30	1.211	1.817	1.817	5.051	0.71	24.91	63	318.207	450	3.08	0.015	433.645	2.727	0.00	0.00	0.000	0.200	0.000		73%	1.658	2.001
A6	VISCOUNT RD	6	7	RES	0.329	5.713	0.45	0.148	1.965	1.965	5.462	0.00	24.91	63	344.137	450	3.08	0.015	433.645	2.727	85.37	0.52	0.000	0.000	2.629		79%	1.940	2.164
A7	GALLOWAY CRES	8	9	RES	0.756	0.756	0.45	0.340	0.340	0.340	0.946	N/A	19.00	76	71.877	250	2.37	0.015	79.343	1.616	86.44	0.89	0.000	0.000	2.049		91%	1.945	1.464
A8	GALLOWAY CRES	9	10	RES	0.804	1.560	0.45	0.362	0.702	0.702	1.952	0.89	19.89	74	144.415	375	1.47	0.015	184.233	1.668	88.18	0.88	0.000	0.125	1.296		78%	0.903	1.308
A9	GALLOWAY CRES	10	11	RES	0.382	1.942	0.45	0.172	0.874	0.874	2.429	0.88	20.77	72	174.920	375	1.89	0.015	208.901	1.891	35.08	0.31	0.000	0.000	0.663		84%	1.325	1.684
A10	GALLOWAY CRES	11	12	RES	0.331	2.273	0.45	0.149	1.023	1.023	2.844	0.31	21.08	71	201.890	375	3.63	0.015	289.509	2.621	34.26	0.22	0.000	0.000	1.244		70%	1.765	1.828
A11	GALLOWAY CRES	12	13	RES	0.460	2.733	0.45	0.207	1.230	1.230	3.419	0.22	21.30	71	242.748	375	3.99	0.015	303.526	2.748	47.00	0.29	0.000	0.000	1.875		80%	2.552	2.198
A12	GALLOWAY CRES	13	7	RES	0.809	3.542	0.45	0.364	1.594	1.594	4.431	0.29	21.58	70	310.173	450	2.60	0.015	398.425	2.505	99.43	0.66	0.000	0.075	2.585		78%	1.576	1.950
	PARK	7	14	PK	0.000	9.255	0.30	0.000	3.559	3.559	9.894	ADJ	23.922	65	643.080	825	0.38	0.013	888.350	1.662	0.00	0.00	0.000	0.375	0.000		72%	0.201	1.203
A13	VISCOUNT RD	7	14	RES	0.287	9.542	0.45	0.129	3.688	3.688	10.253	0.00	23.92	65	666.417	825	0.38	0.013	888.350	1.662	73.27	0.73	0.000	0.008	0.281		75%	0.216	1.247
A14	VISCOUNT RD	14	15	RES	1.637	11.179	0.45	0.737	4.425	4.425	12.300	0.73	24.66	64	787.229	825	0.25	0.013	717.719	1.343	78.03	0.97	0.000	0.000	0.195	##	110%	0.301	1.473
A15	VISCOUNT RD	15	16	RES	0.753	11.932	0.45	0.339	4.763	4.763	13.242	0.97	25.63	62	821.033	825	0.54	0.013	1055.804	1.975	78.93	0.60	0.000	0.000	0.384		78%	0.327	1.536
A16	VISCOUNT RD	16	17	RES	0.956	12.888	0.45	0.430	5.194	5.194	14.438	0.60	26.22	61	880.743	675	1.57	0.013	1053.256	2.943	82.48	0.47	0.000	-0.150	1.295		84%	1.098	2.461
A17	VISCOUNT RD	17	18	RES	0.624	13.512	0.45	0.281	5.474	5.474	15.219	0.47	26.69	60	913.142	675	1.50	0.013	1029.508	2.877	81.96	0.47	0.000	0.000	1.229		89%	1.180	2.552
A18	TAVISTOCK RD	18	19	RES	0.161	13.673	0.45	0.072	5.547	5.547	15.420	0.47	27.17	59	909.807	750	0.66	0.013	900.312	2.038	33.07	0.27	0.000	0.075	0.216	##	101%	0.668	2.059
A19	TAVISTOCK RD	19	20	RES	0.656	14.329	0.45	0.295	5.842	5.842	16.241	0.27	27.44	59	958.225	750	0.90	0.013	1056.149	2.391	87.29	0.61	0.000	0.000	0.786		91%	0.741	2.169
A20	ODESSA AVE	20	21	RES	0.464	14.793	0.45	0.209	6.051	6.051	16.822	0.61	28.05	58	975.651	825	0.67	0.013	1170.564	2.190	66.42	0.51	0.000	0.075	0.442		83%	0.462	1.825
A21	ODESSA AVE	21	22	RES	0.327	15.120	0.45	0.147	6.198	6.198	17.231	0.51	28.55	56	964.916	825	0.75	0.013	1243.126	2.326	35.36	0.25	0.000	0.000	0.265		78%	0.452	1.805
A22	ODESSA AVE	22	23	RES	0.756	15.876	0.45	0.340	6.538	6.538	18.176	0.25	28.80	56	1017.879	750	0.97	0.013	1094.756	2.478	86.38	0.58	0.000	-0.075	0.835		93%	0.836	2.304
A23	ODESSA AVE	23	24	RES	0.445	16.321	0.45	0.200	6.739	6.739	18.733	0.58	29.39	55	1030.320	675	1.95	0.013	1173.820	3.280	44.74	0.23	0.000	-0.075	0.872		88%	1.502	2.879
A24	ODESSA AVE	24	25	RES	0.863	17.184	0.45	0.388	7.127	7.127	19.813	0.23	29.61	55	1089.699	825	1.50	0.013	1758.046	3.289	86.87	0.44	0.000	0.150	1.303		62%	0.576	2.038
A25	ODESSA AVE	25	26	RES	0.249	17.433	0.45	0.112	7.239	7.239	20.124	0.44	30.05	55	1106.832	825	1.00	0.013	1435.438	2.685	55.47	0.34	0.000	0.000	0.555		77%	0.595	2.071
A26	ALANBROOK ST	5	42	RES	0.493	1.981	0.45	0.222	0.891	0.891	2.478	N/A	24.20	65	161.044	525	0.33	0.013	245.551	1.134	78.52	1.15	0.000	0.000	0.256		66%	0.140	0.744
A27	ALANBROOK ST	42	43	RES	0.570	2.551	0.45	0.257	1.148	1.148	3.191	1.15	25.35	63	201.013	600	0.24	0.013	303.300	1.073	79.86	1.24	0.000	0.075	0.195		66%	0.107	0.711
A28	ALANBROOK ST	43	44	RES	0.605	3.156	0.45	0.272	1.420	1.420	3.948	1.24	26.59	60	236.852	525	0.67	0.013	353.071	1.631	84.12	0.86	0.000	-0.075	0.567		67%	0.303	1.094
A29	LADYBROOK	35	36	RES	0.917	0.917	0.45	0.413	0.413	0.413	1.147	N/A	19.00	76	87.185	375	0.62	0.015	119.937	1.086	51.82	0.80	0.000	0.000	0.323		73%	0.329	0.789
A30	LADYBROOK	36	37	RES	0.454	1.371	0.45	0.204	0.617	0.617	1.715	0.80	19.80	75	128.634	375	0.62	0.015	119.646	1.083	57.00	0.88	0.000	0.000	0.353	##	108%	0.717	1.165
A31	LADYBROOK	37	38	RES	0.437	1.808	0.45	0.197	0.814	0.814	2.262	0.88	20.67	72	162.850	450	0.44	0.015	162.969	1.025	21.03	0.34	0.000	0.075	0.091		100%	0.434	1.024
A32	LADYBROOK	38	39	RES	0.238	2.046	0.45	0.107	0.921	0.921	2.560	0.34	21.01	71	181.728	450	0.44	0.015	163.716	1.029	49.99	0.81	0.000	0.000	0.219	##	111%	0.541	1.143
A33	RES AREA	39	40	RES	0.546	2.592	0.45	0.246	1.166	1.166	3.243	0.81	21.82	70	226.981	450	0.43	0.015	162.594	1.022	0.00	0.00	0.000	0.000	0.000	##	140%	0.844	1.427
A34	WIDMORE DR	39	40	RES	0.415	3.007	0.45	0.187	1.353	1.353	3.762	0.00	21.82	70	263.323	450	0.43	0.015	162.594	1.022	57.00	0.93	0.000	0.000	0.247	##	162%	1.136	1.656
A35	WIDMORE DR	40	41	RES	0.589	3.596	0.45	0.265	1.618	1.618	4.499	0.93	22.75	67	301.406	450	0.86	0.015	229.144	1.441	63.09	0.73	0.000	0.000	0.543	##	132%	1.488	1.895
A36	WIDMORE DR	41	44	RES	0.107	3.703	0.45	0.048	1.666	1.666	4.632	0.73	23.48	66	305.742	450	1.65	0.015	317.396	1.996	19.20	0.16	0.000	0.000	0.317		96%	1.531	1.922
A37	WIDMORE DR	44	45	RES	0.407	7.266	0.45	0.183	3.269	3.269	9.089	ADJ	25.305	63	572.616	450	4.67	0.015	533.971	3.357	62.03	0.31	0.000	0.000	2.897	##	107%	5.370	3.600
A38	RES AREA	45	46	RES	2.624	9.890	0.45	1.181	4.450	4.450	12.372	0.31	25.61	62	767.049	525	2.35	0.013	738.657	3.412	0.00	0.00	0.000	0.075	0.000	##	104%	3.181	3.543
A39	WIDMORE DR	45	46	RES	0.380	10.270	0.45	0.171	4.621	4.621	12.847	0.00	25.61	62	796.523	525	2.35	0.013	738.657	3.412	49.99	0.24	0.000	0.000	1.475	##	108%	3.430	3.679
A40	WIDMORE DR	46	47	RES	0.435	10.705	0.45	0.196	4.817	4.817	13.391	0.24	25.86	62	830.262	525	2.67	0.013	702.729	3.246	50.75	0.26	0.000	0.000	1.355	##	118%	3.727	3.835
A41	WIDMORE DR	47	48	RES	0.615	11.320	0.45	0.277	5.094	5.094	14.161	0.26	26.12	61	863.802	525	3.54	0.013	808.159	3.738	66.90	0.30	0.000	0.000	2.368	##	107%	4.034	3.990
A42	WIDMORE DR	48	49	RES	0.472	11.792	0.45	0.212	5.306	5.306	14.751	0.30	26.42	60	885.070	600	2.10	0.013	889.789	3.147	65.53	0.35	0.000	0.075	1.376		99%	2.078	3.130
A43	RES AREA	49	53	RES	5.327	17.119	0.45	2.397	7.703	7.703	21.415	0.35	26.76	60	1284.315	900	1.22	0.013	1999.558	3.143	0.00	0.00	0.000	0.300	0.000		64%	0.504	1.980
A44	WIDMORE DR	49	53	RES	0.442	17.561	0.45	0.199	7.902	7.902	21.968	0.00	26.76	60	1318.091	900	1.22	0.013	1999.558	3.143	85.00	0.45	0.000	0.000	1.037		66%	0.530	2.072
A45	VILLAGE GREEN	56	57	RES	0.973	0.973	0.45	0.438	0.438	0.438	1.217	N/A	19.00	76	92.509	250	5.50	0.015	126.869	2.462	88.70	0.60	0.000	0.000	4.873		77%	3.222	1.885
A46	VILLAGE GREEN	57	58	RES	0.226	1.199	0.45	0.102	0.540	0.540	1.500	0.60	19.60	75	112.496	300	2.77	0.015	139.483	1.973	66.75	0.56	0.000	0.050	1.849		81%	1.802	1.591
A47	RES AREA	58	59	RES	0.525	1.724	0.45	0.236	0.776	0.776	2.157	0.56	20.16	74	159.598	375	4.54	0.015	323.770	2.931	0.00	0.00	0.000	0.075	0.000		49%	1.103	1.445
A48	TAVISTOCK RD	58	59	RES	0.369	2.093	0.45	0.166	0.942	0.942	2.618	0.00	20.16	74	193.757	375	4.54	0.015	323.770	2.931	59.56	0.34	0.000	0.000	2.704		60%	1.626	1.754
A49	TAVISTOCK RD	59	60	RES	0.610	2.703	0.45	0.275	1.216	1.216	3.381	0.34	20.50	72	243.465	375	2.50	0.015	240.259	2.175	61.87	0.47	0.000	0.000	1.547	##	101%	2.567	2.204
A50	TAVISTOCK RD	60	61	RES	0.548	3.251	0.45	0.247	1.463	1.463	4.067	0.47	20.98	71	288.757	375	2.50	0.015	240.259	2.175	61.26	0.47	0.000	0.000	1.531	##	120%	3.611	2.614
A51	TAVISTOCK RD	61	54	RES	0.679	3.930	0.45	0.306	1.769	1.769	4.916	0.47	21.45	70	344.150	450	1.30	0.015	281.729	1.771	103.94	0.98	0.000	0.075	1.351	##	122%	1.940	2.164
A52	TAVISTOCK RD	20	50	RES	0.225	0.225	0.45	0.101	0.101	0.101	0.281	N/A	19.00	76	21.392	250	2.03	0.015	73.431	1.496	38.83	0.43	0.000	0.000	0.788		29%	0.172	0.436
A53	TAVISTOCK RD	50	51	RES	0.309	0.534	0.45	0.139	0.240	0.240	0.668	0.43	19.43	75	50.103	450	0.50	0.015	174.721	1.099	32.61	0.49	0.000	0.200	0.163		29%	0.041	0.315
A54	TAVISTOCK RD	51	52	RES	0.495	1.029	0.45	0.223	0.463	0.463	1.287	0.49	19.93	74	95.259	450	0.71	0.015	208.204	1.309	52.03	0.66	0.000	0.000	0.369		46%	0.149	0.599
A54a	SCHOOL FIELD	52	53	RES	6.803	7.832	0.30	2.041	2.504	2.504	6.961	0.66	20.59	72	501.191	675	0.45	0.013	563.885	1.576	0.00	0.00	0.000	0.225	0.000		89%	0.355	1.401
	SCHOOL FIELD	52	53	RES	0.000	7.832	0.30	0.000	2.504	2.504	6.961	0.00	20.59	72	501.191	675	0.65	0.013	677.705	1.894	3.15	0.03	0.000	0.000	0.060		74%	0.355	1.401
	SCHOOL FIELD	52	53	RES	0.000	7.832	0.30	0.000	2.504	2.504	6.961	0.03	20.62	72	501.191	675	0.99	0.013	836.376	2.337	40.72	0.29	0.000	0.000	0.570		60%	0.355	1.401
A55	TAVISTOCK RD	52	53	RES	0.264	8.096	0.45	0.119	2.623	2.623	7.291	0.00	20.59	72	524.970	675	0.45	0.013	563.885	1.576	5.00	0.05	0.000	0.000	0.150		93%	0.390	1.467
A56	TAVISTOCK RD	53	54	RES	0.197	25.854	0.45	0.089	10.614	10.614	29.506	0.05	27.21	59	1740.847	1050	0.74	0.013	2349.063	2.713	41.15	0.25	0.000	0.375	0.305		74%	0.406	2.010
A57	RINGTON CRES	61	62	RES	0.556	0.556	0.45	0.250	0.250	0.250	0.696	N/A	19.00	76	52.862	375	1.50	0.015	186.104	1.685	76.50	0.76	0.000	0.000	1.148		28%	0.121	0.479
A58	RINGTON CRES	62	63	RES	0.610	1.166	0.45	0.275	0.525	0.525	1.459	0.76	19.76	75	109.400	375	1.50	0.015	186.104	1.685	74.37	0.74	0.000	0.000	1.116		59%	0.518	0.991
A59	RINGTON CRES	63	64	RES	0.406	1.572	0.45	0.183	0.707	0.707	1.967	0.74	20.49	72	141.593	450	0.61	0.015	192.985	1.213	39.01	0.54	0.000	0.075	0.238		73%	0.328	0.890
A60	RINGTON CRES	64	27	RES	0.311	1.883	0.45	0.140	0.847	0.847	2.356	0.54	21.03	71	167.250	450	1.76	0.015	327.805	2.061	88.58	0.55	0.000	0.000	1.207		51%	0.458	1.052
A61	KNIGHTS HILL	54	55	RES	0.598	30.382	0.45	0.269	12.651	12.651	35.170		27.47	59	2075.054	1200	2.00	0.013	5513.648	4.875	81.38	0.28	0.000	0.300	1.628		38%	0.283	1.835
A62a	PARK	55	26	RES	0.973	31.355	0.45	0.438	13.089	13.089	36.388	0.28	27.75	58	2110.482	1500	0.50	0.013	4998.455	2.829	0.00	0.00	0.000	0.300	0.000		42%	0.089	1.194
A62	KNIGHTS HILL	55	26	RES	0.708	32.063	0.45	0.319	13.408	13.408	37.273	0.00	27.75	58	2161.854	1500	0.50	0.013	4998.455	2.829	87.17	0.51	0.000	0.000	0.436		43%	0.094	1.223
A63	KNIGHTS HILL	26	27	RES	0.187	49.682	0.45	0.084	20.731	20.731	57.631	0.51	28.26	58	3342.626	1500	0.50	0.013	4998.455	2.829	36.58	0.22	0.000	0.000	0.183		67%	0.224	1.892
A64	KNIGHTS HILL	27	28	RES	0.633	52.198	0.70	0.443	22.021	22.021	61.219	0.22	28.47	57	3489.479	1500	0.50	0.013	4998.455	2.829	74.68	0.44	0.000	0.000	0.373		70%	0.244	1.975
A65	KNIGHTS HILL	28	29	RE/COM	0.123	52.321	0.70	0.086	22.107	22.107	61.458	0.44	28.91	56	3441.664	1500	0.82	0.013	6401.145	3.622	14.90	0.07	0.000	0.000	0.122		54%	0.237	1.948
A66	KNIGHTS HILL	29	30	RE/COM	3.743	56.064	0.70	2.620	24.727	24.727	68.742	0.07	28.98	56	3849.562	1500	0.61	0.013	5048.192	2.857	20.51	0.12	0.000	0.000	0.370		76%	0.297	2.178
	COMMISSIONERS	30	31	RE/COM	0.000	56.064	0.70	0.000	24.727	24.727	68.742	0.12	29.10	55	3780.819	1500	0.59	0.013	5429.712	3.073	39.01	0.21	0.000	0.000	0.820		70%	0.286	2.140
	EASEMENT	31	32	RES	0.000	56.064	0.50	0.000	24.727	24.727	68.742	0.21	29.31	55	3780.819	1200	1.57	0.013	4880.435	4.315	98.00	0.38	0.000	-0.300	1.536		77%	0.940	3.343
A67	EASEMENT	32	33	RES	2.941	59.005	0.50	1.471	26.198	26.198	72.830	0.38	29.69	55	4005.659	1200	1.99	0.013	5498.464	4.862	91.49	0.31	0.000	0.000	1.820		73%	1.056	3.542
A68	RES AREA	33	34	RES	2.757	61.762	0.50	1.379	27.576	27.576	76.662	0.31	30.01	55	4216.432	1500	0.50	0.013	4998.455	2.829	0.00	0.00	0.000	0.300	0.000		84%	0.356	2.386
A69	BASELINE	33	34	RES	0.356	62.118	0.50	0.178	27.754	27.754	77.157	0.00	30.01	55	4243.648	1500	0.91	0.013	6743.284	3.816	35.96	0.16	0.000	0.000	0.308		63%	0.360	2.401
A70	EASEMENT	34	OUTLET	RES	1.453	63.571	0.50	0.727	28.481	28.481	79.177	0.16	30.16	55	4354.730	1500	1.98	0.013	9946.799	5.629	18.35	0.05	0.000	0.000	0.343		44%	0.380	2.464



LEGEND:

- STORM SEWER
- STORM MANHOLE
- DITCH INLET CATCHBASIN
- C.B.
- CATCHBASIN MANHOLE
- SUBDIVISION BOUNDARY

11,993

AS CONSTRUCTED NOTES	AS CONSTRUCTED SERVICES	COMPLETION
1 SEE DRAWING No. FOR FURTHER DETAIL	ST. SEWERS	AUG, 1991
2 SEWER DESIGN; TRANSITION WIDTH OR AS NOTED		
3 REFERENCE B.M. No. ELEVATION		
4		
5		

DESIGN M.R.L./K.G.
DRAWN S.M./R.P.
CHECKED R.P.
APPROVED S.A.H.
DATE
DELCAN
PROJECT No. 07-1797

NO	REVISIONS	DATE	BY
	AS CONSTRUCTED	APRIL, 1992	

CONSULTANT OR DIVISION: DELCAN ENGINEERS PLANNERS ARCHITECTS

ENGR'S STAMP: LICENSED PROFESSIONAL ENGINEER K.P. GRABOWSKI PROVINCE OF ONTARIO

CORPORATION OF THE CITY OF LONDON

DIVISION HEAD

CITY ENGINEER

SCALE 1" = 200'

KNIGHTSHILL-TAVISTOCK AREA STORM SEWERS

STORM DRAINAGE PLAN & DESIGN SHEET

PROJECT No.

SHEET No. 1

PLAN FILE No. 11,993

EXISTING SERVICES ON SITE
21" STORM LINE
6" SANITARY LINE
4" WATER LINE
2" GAS LINE

LANDSCAPE SCHEDULE

1. 50 - 5'-6' AMUR MAPLE (6' APART)
2. 5 NORWAY MAPLES
3. 6 CRIMSON KING
4. 4 - 3'-4' MALUS
5. 49 EVERGREEN (6' o/c)
6. 34 SYRINGA VULGARIS (6' o/c)

SYMBOLS REPRESENTING SPIECES OF LANDSCAPE

1. ○
2. ◯
3. ⊕
4. ⊗
5. ◉
6. ◎

SITE STATISTICS

AREA OF SITE	238,552 S.F.
AREA OF EXISTING BLDG.	16,000 S.F.
AREA OF PHASE ONE	16,893 S.F.
FUTURE PHASES	S.F.
TOTAL AREA	S.F.
PARKING PROVIDED [EXISTING / PHASE ONE]	248 CARS
AREA OF LAND FOR HOUSING	68,546± S.F.
FUTURE PARKING	

LONDON COMMITTEE OF ADJUSTMENT APPLICATION DRAWINGS
DATE REC'D MAY 19 1978
SUBMISSION NO. A 103/78
DRAWING NO. A 103/78-1 SHEET NO. 1

ISSUED
APR 28 1978
CLOVERLAWN INVESTMENTS LTD.

No.	REVISIONS	CH'D	DATE
6	PROPOSED NURSERY SCHOOL LOCATION		27/4/78
5	FUTURE PHASE		11/2/77
4	AREA S-14 & S-15 ALTERED		24/1/77
	RELOCATION OF TENANTS		14/10/76
	ALTERED BLDG DIMEN.S		22/6/76
1	LANDSCAPE ON PROP. LINE		15/6/76

CLOVERLAWN INVESTMENTS LIMITED

725 NOTRE DAME

THE GENERAL CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND REPORT ALL ERRORS AND OMISSIONS TO THE ARCHITECTS. DO NOT SCALE THE DRAWINGS.

JOB TITLE
LONDON NORTON ESTATES LONDON ONTARIO

SHEET TITLE
SITE PLAN
SITE SERVICES

SCALE 1" = 30'
JOB No. 3205
DRAWN
CHECKED
DATE 8/6/76
SHEET No. A 1

100-48 BRUNING 44-132 12-75

SEDIMENT CONTROL MEASURES

1. Protect all exposed surfaces and control all runoff during construction.
2. All erosion control measures to be in place before starting construction and remain in place until restoration is complete.
3. Maintain erosion control measures during construction.
4. All collected sediment to be disposed of at an approved location.
5. Minimize area disturbed during construction.
6. All dewatering to be disposed of in an approved sediment basin.
7. Protect all catchbasins, manholes and pipe ends from sediment intrusion.
8. Keep all sumps clean during construction.
9. Prevent wind blown dust.
10. Straw bales to be used in localized areas as shown and as directed by the Engineer during construction.

PUMPED MANHOLE DETAIL

NOTE SUBMERSIBLE PUMP —

CITY OF LONDON
ENGINEER'S DEPARTMENT
ACCEPTED
MAY 7 1990

APPROVED
CITY OF LONDON
pursuant to
SITE PLAN CONTROL AREA
BY-LAW C.P. 1213-340 as amended

City of London
Date

VISCOUNT RD

NOTRE DAME DRIVE

EXISTING BUILDING

PROPOSED ADDITION

Transformer Schematic

KEY PLAN

LAND USE DATA

EXISTING BUILDING AREA	30,393 sf
PROPOSED ADDITION AREA	12,000 sf
TOTAL BUILDING AREA	42,393 sf
SITE AREA	370,206 sf
BUILDING COVERAGE	11.45 %
PARKING	
REQUIRED RATIO	1/40 BEDS / 1000 SF = 53 SPACES
REQUIRED SPACES	53
PROVIDED RATIO	
PROVIDED SPACES	268
EXISTING GRADES	100.0
PROPOSED GRADES	100.0

STANDARD WATER SERVICE CONNECTION
FOR 38mm to 50mm Dia.

NO.	DATE	DESCRIPTION	BY
11			
10			
9			
8			
7			
6			
5			
4			
3			
2			
1			

DESTROY ALL PRINTS PREVIOUS TO LAST REVISION

REVISIONS

COLETTI & ASSOCIATES
ENGINEERS
(519) 652-9915 or 652-9949
105 MEADOWBROOKE DRIVE SUITE 208
LONDON, Ontario. N6E 1G4

PROJECT:
Proposed New Building
727 Notre Dame Drive
London Ontario

SHEET TITLE:
SITE PLAN
SERVICING/GRADING PLAN

DATE: MAY 90 DRAWN:

REGISTERED PROFESSIONAL ENGINEER
D. A. COLETTI
PROVINCE OF ONTARIO
SP 1

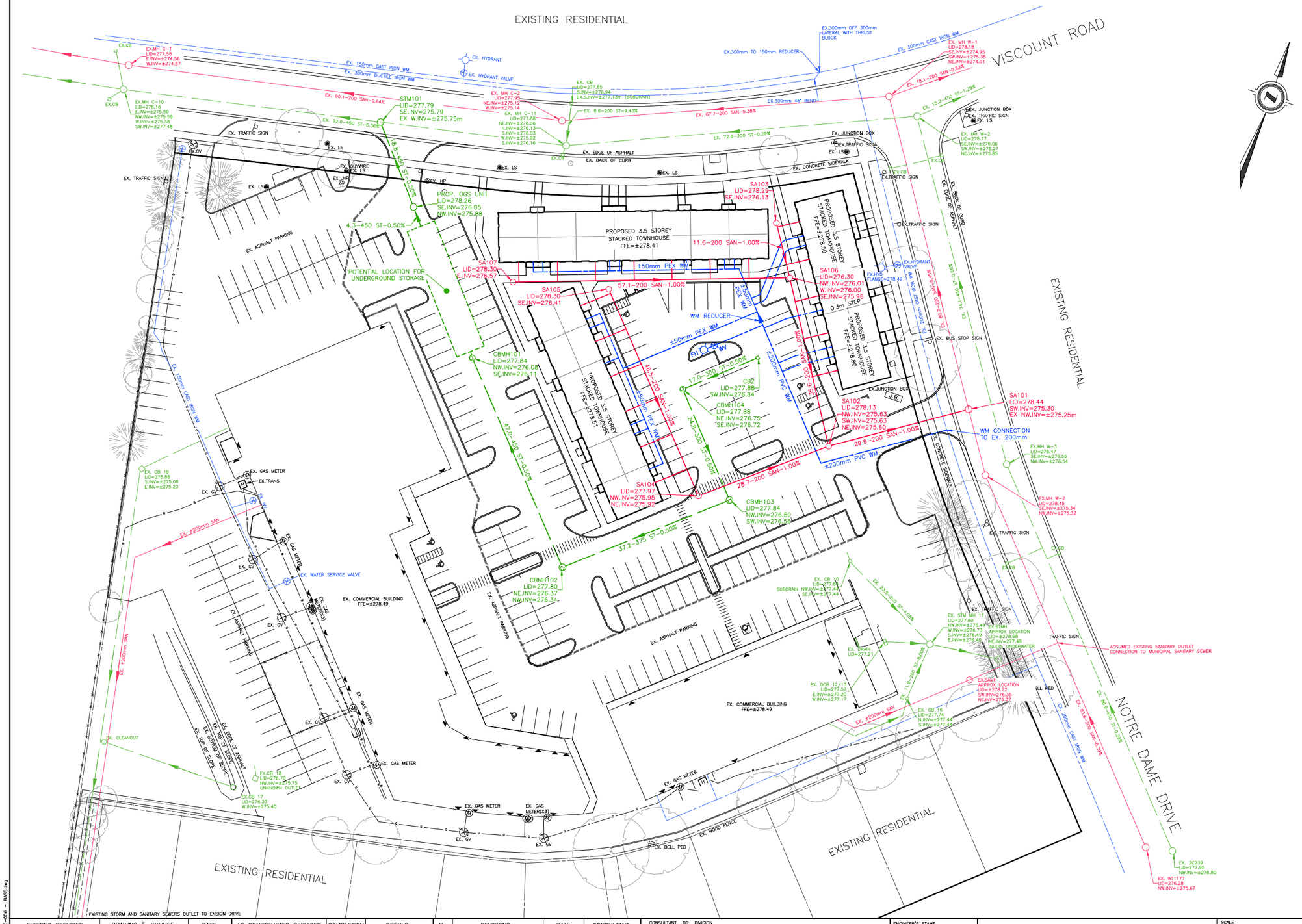
SHEET No. 1

SCALE: 1" = 30'-0" CHECKED

90029 / 727 NOTRE DAME. SCHEDULE 'C' 1 OF 1

Appendix B: Preliminary Engineering Drawings

- Preliminary Servicing Plan
- Preliminary Grading Plan



LEGEND

- EX. STMH — EXISTING STORM MAINTENANCE HOLE
- EX. SANMH — EXISTING SANITARY MAINTENANCE HOLE
- EX. CBMH — EXISTING CATCHBASIN MAINTENANCE HOLE
- EX. CB — EXISTING CATCHBASIN
- EX. DCB — EXISTING DOUBLE CATCHBASIN
- EX. 50.0–200 SAN–1.0% — EXISTING SANITARY SEWER
- EX. 50.0–600 ST–0.5% — EXISTING STORM SEWER
- EX. FH — EXISTING HYDRANT
- EX. WV — EXISTING WATER VALVE
- EX. 150ø WM — EXISTING WATERMAIN
- EXISTING FENCE
- EXISTING HYDRO
- J.B. — EXISTING JUNCTION BOX
- EX. HP/LS — EXISTING HYDRO POLE/LIGHT STANDARD
- EXISTING HYDRO TRANSFORMER
- EXISTING SIGN
- EXISTING P.U.C MAIN
- LIMIT OF SITE
- EXISTING UNDERGROUND BELL
- EXISTING GAS MAIN
- EXISTING GAS VALVE
- EXISTING GAS METER
- EXISTING BUILDING ACCESS POINT
- EXISTING BOLLARD
- EXISTING STREET LIGHT
- EXISTING CONIFEROUS TREE
- EXISTING DECIDUOUS TREE
- SA1 — PROPOSED SANITARY MAINTENANCE HOLE
- 50.0–200 SAN–1.0% — PROPOSED SANITARY SEWER
- ST1 — PROPOSED STORM MAINTENANCE HOLE
- CBMH1 — PROPOSED CATCHBASIN MAINTENANCE HOLE
- CB1 — PROPOSED STANDARD CATCHBASIN c/w FRAME AND GRATE PER OPSD 400.020
- 50.0–600 ST–0.5% — PROPOSED STORM SEWER
- FH — PROPOSED HYDRANT
- WV — PROPOSED WATER VALVE
- PROPOSED REDUCER
- 150ø PVC WM — PROPOSED WATERMAIN
- APPROXIMATE GRADING LIMITS

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION

DETAILS	No.	REVISIONS	DATE	CONSULTANT
DESIGN BY SP & TW	1	ISSUED FOR ZBA APPLICATION	MAY 08/26	DEVENG
DRAWN BY SP				
CHECKED BY TW				
F.BK. P29				
FILE: DEL26–006 – BASE.DWG				

CONSULTANT OR DIVISION

London Office
41 Adelaide St. N., Unit 71
(519) 672-8310

Paris Office
31 Mechanic St., Unit 301
(519) 442-1441

development engineering (London) Limited
CONSULTING CIVIL ENGINEERS

ENGINEER'S STAMP

WASTELL HOMES

SCALE — SCALE – 1:400 (4 0 8m)

TITLE: 725 NOTRE DAME DRIVE, LONDON, ONTARIO

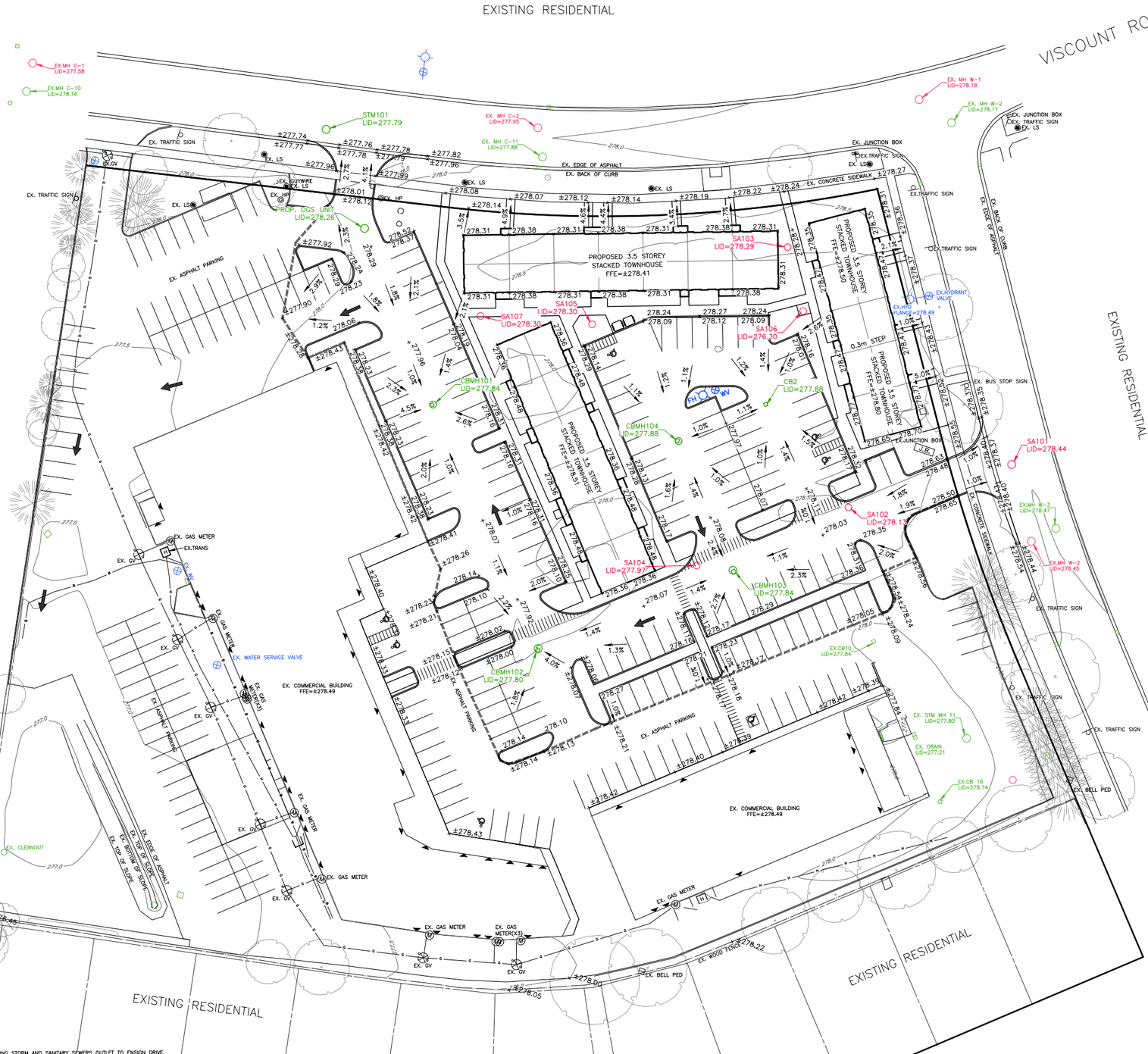
PRELIMINARY SERVICING PLAN

PROJECT No. DEL26–006

SHEET No. 1

PLAN FILE No.

twinger May/08/26–2:35pm DEL26–006 – BASE.dwg



LEGEND

- EX. STMH — EXISTING STORM MAINTENANCE HOLE
- EX. SANMH — EXISTING SANITARY MAINTENANCE HOLE
- EX. CBMH — EXISTING CATCHBASIN MAINTENANCE HOLE
- EX. CB — EXISTING CATCHBASIN
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- EX. FH — EXISTING HYDRANT
- EX. WV — EXISTING WATER VALVE
- EX. 150ø WM — EXISTING WATERMAIN
- EXISTING FENCE
- EXISTING HYDRO
- J.B. — EXISTING JUNCTION BOX
- EX. HP/LS — EXISTING HYDRO POLE/LIGHT STANDARD
- EXISTING HYDRO TRANSFORMER
- EXISTING SIGN
- LIMIT OF SITE
- EXISTING BUILDING ACCESS POINT
- SA1 — PROPOSED SANITARY MAINTENANCE HOLE
- ST1 — PROPOSED STORM MAINTENANCE HOLE
- CBMH1 — PROPOSED CATCHBASIN MAINTENANCE HOLE
- CB1 — PROPOSED STANDARD CATCHBASIN c/w FRAME AND GRATE PER OPSD 400.020
- FH — PROPOSED HYDRANT
- WV — PROPOSED WATER VALVE
- 255 — EXISTING GROUND CONTOUR
- 78.65x — PROPOSED GRADE
- ±78.65x — EXISTING GRADE TO BE MATCHED
- OVERLAND FLOW DIRECTION
- APPROXIMATE GRADING LIMITS

PRELIMINARY

DO NOT USE FOR CONSTRUCTION

EXISTING SERVICES	DRAWING #, SOURCE	DATE	AS CONSTRUCTED SERVICES	COMPLETION

DETAILS	No.	REVISIONS	DATE	CONSULTANT
DESIGN BY SP & TW	1	ISSUED FOR ZBA APPLICATION	MAY 08/26	DEVENG
DRAWN BY SP				
CHECKED BY TW				
F.BK. P29				
FILE: DEL26-006 - BASE.DWG				

CONSULTANT OR DIVISION

London Office
41 Adelaide St. N., Unit 71
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31 Mechanic St., Unit 301
(519) 442-1441

development engineering (London) Limited
CONSULTING CIVIL ENGINEERS

ENGINEER'S STAMP

WASTELL HOMES

SCALE — 1:400
4 0 8m

TITLE
725 NOTRE DAME DRIVE
LONDON, ONTARIO

PRELIMINARY GRADING PLAN

PROJECT No. DEL26-006

SHEET No. 2

PLAN FILE No.

Spotmer May.07/26-4:46pm DEL26-006 - BASE.dwg

Appendix C: Water Calculations

- Water Demand Calculations
- Fire Flow Calculations

development engineering (London) Limited
CONSULTING CIVIL ENGINEERS

DEL26-006 - Notre Dame Residential
Preliminary Water Demand Calculations

Date: May 2026
Prepared by: Shannon Palmer
Checked by: Troy Winger, P.Eng.

Proposed Development Demands							
Land Use Deisgnation	Area (m^2)	People Per Unit[1]	No. of Units	Population	Average Day Demand (L/s)	Max Day Demand (L/s)	Peak Hour Demand (L/s)
Building A	567	2.4	21	51	0.15	0.53	1.17
Building B	486	2.4	18	44	0.13	0.45	1.01
Building C	406	2.4	15	36	0.11	0.37	0.83
Proposed Totals	**1459**		**54**	**130**	**0.39**	**1.37**	**3.04**

Notes:

[1.] Obtained from City of London Design Specifications and Requirements Manual - Section 7 table 7-1 (January, 2026)

Design Criteria:

Low Density Residential	3	p/unit
Medium Density Residential	2.4	p/unit
High Density Residential	1.6	p/unit
Average Day Domestic Demand =	255	L/person/day
ADD=	Pop x Avg Day Domestic Demand	

Peaking Factors:

Max Day	3.5
Peak Hour	7.8

FIRE FLOW WATERMAIN DEMAND CALCULATIONS - UNSPRINKLERED BUILDING
DEL26-006 Notre Dame Residential

development engineering (London) Limited
CONSULTING CIVIL ENGINEERS

Date: May 2026
By: Shannon Palmer Checked: Troy Winger, P.Eng

CALCULATE FIRE FLOW DEMAND:

Water supply for fire fighting of an unsprinklered building is determined using OBC A-3.2.5.7.

Occupancy Classification = Group C- Residential Occupancy
Type of Construction = combustible construction. Floor assemblies are fire separations but with no fire-resistance rating. Roof assemblies, mezzanines, load bearing walls, columns and arches do not have a fire-resistance rating.

BUILDING A

Minimum supply of water = $Q = K \cdot V \cdot S_{TOT}$

K = water supply coefficient = see Table 1 = 23
V = total volume of building in m^3 = 3988.2
S_{TOT} = spatial coefficient of all sides = $1.0 + [S_{side\ 1} + S_{side\ 2} + S_{side\ 3} + \ldots \text{etc.}]$

Building Footprint = 567.0 m^2
Average Height = 5.9 m

Roof Footprint= 567.0 m^2
Average Height = 2.8 m

	Separation Distance	Spatial Coeff.
N Side	>10	0.00
E Side	5.6	0.44
S Side	5.3	0.47
W Side	>10	0.00

Stot = 1.0 + [0 + 0.44 + 0.47 + 0] = 1.91

Q = 175203.4 L

In Table 2, required minimum water supply flow rate = **5400 L/min = 90 L/s = 1427 USGPM**

BUILDING B

Minimum supply of water = $Q = K \cdot V \cdot S_{TOT}$

K = water supply coefficient = see Table 1 = 23
V = total volume of building in m^3 = 3626.8
S_{TOT} = spatial coefficient of all sides = $1.0 + [S_{side\ 1} + S_{side\ 2} + S_{side\ 3} + \ldots \text{etc.}]$

Building Footprint = 486.0 m^2
Average Height = 5.9 m

Roof Footprint= 486.0 m^2
Average Height = 2.8 m

	Separation Distance	Spatial Coeff.
N Side	5.3	0.47
E Side	>10	0.00
S Side	>10	0.00
W Side	>10	0.00

Stot = 1.0 + [0.47 + 0 + 0 + 0] = 1.47

Q = 122622.6 L

In Table 2, required minimum water supply flow rate = **3600 L/min = 60 L/s = 951 USGPM**

BUILDING C

Minimum supply of water = $Q = K \cdot V \cdot S_{TOT}$

K = water supply coefficient = see Table 1 = 23
V = total volume of building in m^3 = 2925.2
S_{TOT} = spatial coefficient of all sides = $1.0 + [S_{side\ 1} + S_{side\ 2} + S_{side\ 3} + \ldots \text{etc.}]$

Building Footprint = 406.0 m^2
Average Height = 5.9 m

Roof Footprint= 406.0 m^2
Average Height = 2.8 m

	Separation Distance	Spatial Coeff.
N Side	>10	0.00
E Side	>10	0.00
S Side	>10	0.00
W Side	5.6	0.44

Stot = 1.0 + [0 + 0 + 0 + 0.44] = 1.44

Q = 96883.9 L

In Table 2, required minimum water supply flow rate = **2700 L/min = 45 L/s = 713 USGPM**

TABLE 2 - OBC Div. B - A-3.2.5.7

Q ≤ 108,000L	2700
108,000L ≤ Q ≤ 135,000L	3600
135,000L ≤ Q ≤ 162,000L	4500
162,000L ≤ Q ≤ 190,000L	5400
190,000L ≤ Q ≤ 270,000L	6300
270,000L ≤ Q	9000

Appendix D: Sanitary Calculations

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DEL26-006 - Notre Dame Residential
Preliminary Sanitary Servicing Calculations

Date: May 2026
Prepared by: Shannon Palmer
Checked by: Troy Winger, P.Eng.

Existing Notre Dame Drive 200mm Municipal Sanitary Service Capacity				
Pipe Size (mm)	Roughness (n)	Pipe Slope (%)	Velocity (m/s)	Flow Cap. (l/s)
200	0.013	0.45	0.700	22.00

Allocated Flows per Current Zoning (Commercial)					
Area (Ha)	Population[1]	Average Daily Flows (L/s)	Infiltration (L/s)	Peaking Factor (M)	Total Peak Flows (L/s)
0.67	67	0.18	0.07	4.29	0.91

Proposed Flows								
Land Use Deisgnation	Area (Ha)	People Per Unit[2]	No. of Units	Population	Average Daily Flows (L/s)	Infiltration (L/s)	Peaking Factor (M)	Total Peak Flows (L/s)
Proposed Development	0.67	2.4	54	130	0.35	0.07	4.21	1.67
Proposed Totals	**0.67**		**54**	**130**				**1.67**

Notes:

1. Following maximum population density allowed for current zoning (Commercial)

2. Taken from City of London Design Specifications and Requirements Manual- Section 3 (January 2026).

Additional Flow Conveyed to Existing Municipal 200 mm Sewer		
Flow (L/s)		**% of pipe capacity**
Allocated Flow	0.91	4.13%
Proposed Flow	1.67	7.57%
Additional Flow	**0.76**	**3.44%**

Design Criteria:

Low Density Residential	3	p/unit
Medium Density Residential	2.4	p/unit
High Density Residential	1.6	p/unit
Commercial	100	p/Ha
Residential Design Flow =	230	L/person/day
Res. Peaking Factor (M) =	1 + 14 / (4 + √P)	
Infiltraton Rate =	0.100	L/ha/second
Uncertain Development Factor =	1.100	

Proposed Private Sanitary Service Capacity				
Pipe Size (mm)	Roughness (n)	Pipe Slope (%)	Velocity (m/s)	Flow Cap. (l/s)
200	0.013	1.00	1.044	32.80

Additional Flow Conveyed to Proposed 200 mm Private Sewer		
Flow (L/s)		**% of pipe capacity**
Allocated Flow	0.91	2.77%
Proposed Flow	1.67	5.08%
Additional Flow	**0.76**	**2.31%**

Appendix E: SWM Figures and Calculations

- Existing Conditions Drainage Figure
- Allowable Drainage Figure
- Uniform Pipe Capacity
- Summary of Flows
- Post-Development Drainage Figure

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DEL26-006: NOTRE DAME RESIDENTIAL

EXISTING CONDITIONS DRAINAGE SCHEMATIC

DATE: MAY 2026

SCALE: 1:750

LEGEND:

CATCHMENT AREA ID → P1 / 6.65 Ha / 0% ← AREA (HECTARES)

IMPERVIOUSNESS →

DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF THE MINOR FLOWS DIRECTED TO ENSIGN DRIVE

DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF THE MINOR FLOWS DIRECTED TO VISCOUNT ROAD

DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF THE MINOR FLOWS DIRECTED TO NOTRE DAME DRIVE

DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF UNCONTROLLED FLOWS DIRECTED TO VISCOUNT ROAD

DENOTES THE MAXIMUM PONDING LIMITS OF EXISTING SITE GRADING

DENOTES MINOR FLOW DIRECTION

DENOTES MAJOR FLOW DIRECTION

EXISTING RESIDENTIAL

VISCOUNT ROAD

EXISTING RESIDENTIAL

NOTRE DAME DRIVE

EXISTING RESIDENTIAL

ENSIGN DRIVE

E1 0.28 Ha 94%

E2 0.33 Ha 80%

E3 0.06 Ha 8%

E4 0.29 Ha 100%

E5 0.15 Ha 83%

E6 0.21 Ha 78%

E7 0.22 Ha 89%

E8 0.22 Ha 91%

E9 0.15 Ha 80%

E10 0.10 Ha 100%

E11 0.08 Ha 89%

E12 0.09 Ha 80%

E13 0.06 Ha 0%

EX. EDGE OF ASPHALT
EX. BACK OF CURB
EX. CONCRETE SIDEWALK
EX. ASPHALT PARKING
EX. COMMERCIAL BUILDING FFE=±278.49
EX. WOOD FENCE

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DEL26-006: NOTRE DAME RESIDENTIAL

VISCOUNT STORM SEWER TRIBUTARY DRAINAGE SCHEMATIC

DATE: MAY 2026
SCALE: 1:750

CATCHMENT AREA ID → P1 6.65 Ha ← AREA (HECTARES)

DENOTES LIMIT OF CATCHMENT AREA TRIBUTARY TO THE EX. 92.0m SEWER BETWEEN EX.MH C-11 TO EX.MH C-10 ON VISCOUNT ROAD

DENOTES MINOR FLOW DIRECTION

DENOTES MAJOR FLOW DIRECTION

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DEL26-006: Notre Dame Residential
Prepared By: Shannon Palmer
Checked By: Troy Winger
Date: May 2026

Allowable Flow Analysis to Existing Sewer with Viscount Road				
Uniform Flow Capacity - Existing Storm Pipe from Ex. MH C-11 to Ex. MH C-10 on Viscount Road				
Pipe Diameter (mm)	Roughness (n)	Pipe Slope (%)	Velocity (m/s)	Flow Capacity (L/s)
450	0.013	0.36	1.076	171.06

Note: Mannings Equation (City of London's DSRM Section 5.10) was utilized to calculate the Uniform Flow Capacity.

Total Area of flows				
Subcatchment	Appox. Tributary Area (m^2)	Appox. Tributary Area (Ha)	Allocation of Total Tributary Area	Allowable Flow (L/s)
A1 - Ex. ROW	2,043	0.20	14%	23.23
A2 - Ex. Residential	4,435	0.44	29%	50.44
A3 - Ex. 725 Notre Dame Drive Site	8,563	0.86	57%	97.39
Total	**15,041**	**1.50**	**100%**	**171.06**

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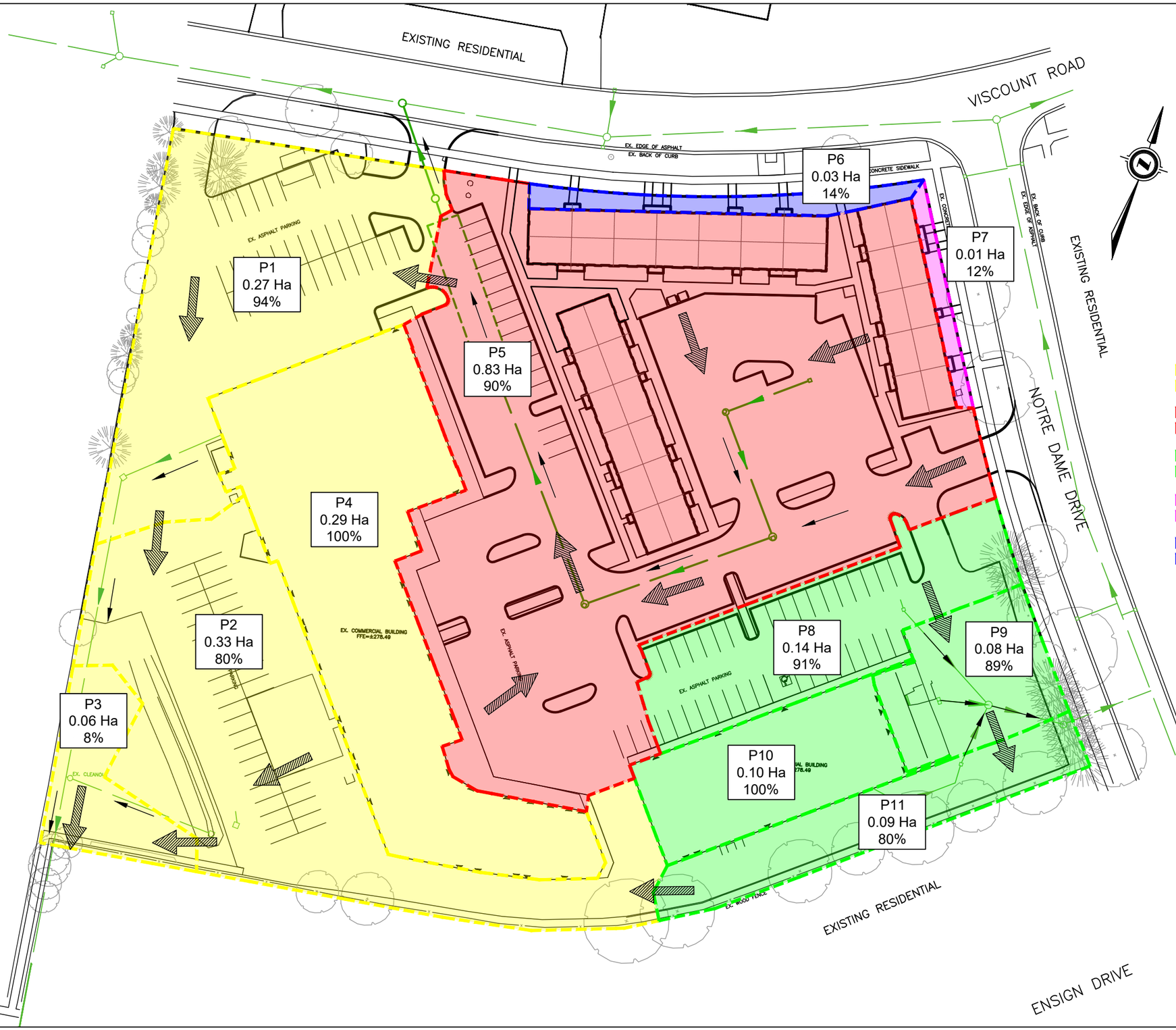
DEL26-006: Notre Dame Residential
Prepared By: Shannon Palmer
Checked By: Troy Winger
Date: May 2026

SUMMARY OF FLOWS

Existing Conditions =	2.21	Ha	Proposed Conditions =	2.21	Ha
Runoff Coefficient =	0.78	C	Runoff Coefficient =	0.81	C
% Imperviousness =	83%	%	% Imperviousness =	87%	%

Storm Event	Existing Conditions				Allowable Conditions	Post Development	
	Peak Minor Flow to Notre Dame Drive (L/s)	Peak Minor Flow to Viscount Road (L/s)	Peak Minor Flow to Ensign Drive(L/s)	Peak Major Flow to Ensign Drive (L/s)	Allowable Minor Flows to Viscount Drive (L/s)	Post Development Area Peak Runoff (L/s)	Approx. On-Site Storage Volume Required to meet Allowable Minor Flows to Viscount Drive (m^3)
2 year	77	120	180	0	63	153	78
5 year	83	163	251	0	97	218	103
10 year	86	191	298	0	123	262	120
25 year	88	228	359	0	155	322	139
50 year	90	256	403	0	180	366	153
100 year	91	286	439	0	205	410	167

*Allocated Outflow as per the Allowable Flow Analysis to Existing Sewer with Viscount Road



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DEL26-006: NOTRE DAME RESIDENTIAL

POST DEVELOPMENT DRAINAGE SCHEMATIC

DATE: MAY 2026
SCALE: 1:750

LEGEND:

CATCHMENT AREA ID → P1 (6.65 Ha, 0%) ← AREA (HECTARES)
IMPERVIOUSNESS →

- DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF THE MINOR FLOWS DIRECTED TO ENSIGN DRIVE
- DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF THE MINOR FLOWS DIRECTED TO VISCOUNT ROAD
- DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF THE MINOR FLOWS DIRECTED TO NOTRE DAME DRIVE
- DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF UNCONTROLLED FLOWS DIRECTED TO NOTRE DAME DRIVE
- DENOTES LIMIT OF EXISTING TRIBUTARY AREA OF UNCONTROLLED FLOWS DIRECTED TO VISCOUNT ROAD
- DENOTES MINOR FLOW DIRECTION
- DENOTES MAJOR FLOW DIRECTION