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October 25, 2021

SBM-21-3026

608 Commissioners Inc c/o Copia Developments
525 McGerrell Place
London, Ontario

Attn: Mr. Alex Hois

Re: Sanitary Servicing Feasibility Study
Proposed 6 Story Apartment Building
608 Commissioners Rd W & 591 Westmount Cres, London, ON

1. INTRODUCTION

This Sanitary Servicing Feasibility Study (Study) has been prepared by Strik, Baldinelli, Moniz Ltd. (SBM) for Copia Developments to address the sanitary servicing feasibility for the proposed 6 story apartment building development located at 608 Commissioners Road West and 591 Westmount Crescent in London, Ontario. The proposed development will have a combined site area of approximately 0.45 ha.

The subject lands consist of a single residential parcel (591 Westmount Crescent) on the northwest corner of Westmount Crescent and Commissioners Road West intersection and another single residential parcel (608 Commissioners Road West) immediately to the west. The parcels are proposed to be merged to form the 0.45 ha subject site for the proposed development. The subject site abuts the Commissioners Road West right-of-way (ROW) to the north, the Westmount Crescent ROW to the east, a residential lot to the west, and 2 residential lots to the south. The proposed development includes 95 apartment units and a 2-story parking garage. Please refer to the proposed Site Plan by Matter Architectural Inc. attached to this Study.

This Study is to determine the adequacy of the existing City sanitary sewer between Commissioners Road West and the downstream Rosecliffe Terrace sanitary sewer (MH WT1112 – WT1119) in support of a Zoning By-Law Amendment (ZBA) for the proposed development.

Design requirements have been based on the City of London Design Specifications & Requirements Manual (DS&RM), updated March 2021.

2. SANITARY SERVICING

As per the attached City of London Commissioners Road West Lateral Sanitary Sewer File No. 10587 Dated October 1989, the subject site has an existing sanitary private drain connection (PDC) of unknown size which connects to the 200mm sanitary sewer within the Commissioners Road West ROW. The attached City of London Jamaica St. & Westmount Cr. Sanitary Sewer Project File No. 3751 Dated March 20, 1972, appears to show three (3) existing 4" (100mm) PDC's connected to the 200mm sanitary sewer in the Westmount Crescent ROW. A new sanitary PDC shall be constructed to service the site via the Commissioners Road West sanitary sewer that meets the city standard for the proposed building type.

The purpose of this study is to determine the adequacy of the existing City sanitary sewer between Commissioners Road West (MH WT1593 – WT1591) and the downstream Rosecliffe Terrace sanitary sewer (MH WT1112 – WT1119) in support of a Zoning By-Law Amendment (ZBA) for the proposed development. For the purposes of this Study, the following assumptions have been made:

- The total site area is 0.45 ha and consists of a 95-unit, 6 story apartment building per the Site Plan prepared by Matter Architectural Inc.

- The site's occupancy load of 152 people has been calculated per the high density (High Density = 150-300 units/hectare at 1.6 people/unit per City of London DS&RM) site classification of 1.6 people/unit (95 units/0.45 ha = 211 units/ha).
- A population density of 3 people/unit was used for all residential units according to the City of London DS&RM section 3.8.1 Residential Commercial & Institutional Zoning density "Low Density = 30 units/hectare at 3 people/unit".
- The area considered in this Study is limited to the areas located in between sanitary MH's WT1593 – WT1591 on Commissioners Road West and sanitary manholes MH WT1112 – WT1119 located off of Rosecliffe Crescent.
- The Rosecliffe Garden Estates Sanitary Sewer Design Sheet by Delcan File No. 10003 Dated October 1983 and Rosecliffe Garden Estates Sanitary Drainage Areas by Delcan File No. 9993 Dated February 1988 drawings (attached) were used to determine the sanitary catchment areas and populations on Rosecliffe Terrace and Rosecliffe Crescent. The external drainage area shown on record drawing 9993 indicates an external drainage area on Commissioners Road West of 4.12 ha containing 273 persons. The sanitary design sheet shown on record drawing 10003 indicates an external drainage area and population on Commissioners Road West of 4.12 ha and 504 persons respectively. The record drawing 10589 sanitary sewer design sheet and drainage area plan was used to determine population and drainage areas as it was found to represent current sanitary drainage areas and population conditions more clearly and accurately.
- City of London record drawing Commissioners Road West Sanitary Sewer Design Sheet File No. 10589 Dated October 1989 (attached) was used to determine sanitary drainage areas and populations on Commissioners Road West. Commissioners Road West Sanitary Catchment Areas Markup by SBM (attached) indicates markups made by SBM to the File No. 10589 design drawing to reflect updated and current sanitary drainage areas and populations.
- As noted on the City of London's Planning Applications website (https://london.ca/business-development/planning-development-applications/planning-applications), there is a proposed medium-density development located at 584 Commissioners Road West (City of London File: Z-9357). The development is proposing 26 stacked townhouse dwelling units and was accounted for in this study.
- As noted on the City of London's Planning Applications website there are 21 proposed condominium units (2-42) at 567 Rosecliffe Terrace that appear to be under construction based on google maps imagery information. For the purposes of this study, these residential condominium units are assumed to be serviced by sanitary sewers outside of the scope of this study.
- A flow criterion of 230 L/capita/day has been used to quantity sewage flows for the proposed development within the subject site and the proposed development at 584 Commissioners Road West.
- A flow criterion of 350 L/capita/day has been assumed for previously developed lands per City of London record drawing 10589 and 9993/10003.
- An uncertainty factor of 1.1 has been applied to all sanitary sewage calculations in this study.
- An infiltration allowance of 8640 L/ha/day was included as per the DS&RM.
- Only dry weather flows were considered in this Study. Evaluation of wet weather flows was not included and is considered outside the scope of this Study.

The proposed flows from the subject site are shown on the Sanitary Sewer Design Sheet attached to this Study. Using a flow of 230 L/capita/day as per the DS&RM for the site's occupancy load of 152 people (95 units at 1.6 people/unit), the anticipated peak sanitary flow for the proposed development is 2.0 L/s. When combined with infiltration, this results in a total peak flow of 2.04 L/s. A 150 mm diameter sanitary PDC at 1.0% (minimum as per DS&RM) has capacity for these flows. A new sanitary PDC will be included as part of the detailed design for site plan approval.

As shown on the Sanitary Sewer Design Sheet, the sanitary main between Commissioners Road and Rosecliffe Crescent has capacity for the increase in sanitary flows associated with the proposed 6 story apartment building and the adjacent 26-unit townhouse development located at 584 Commissioners Road West. The sanitary sewer with the highest calculated percentage full is located within the storm and sanitary sewer easement between maintenance holes SA-11 (WT1111) and SA-MH (WT1119) with a flow of 10.303 L/s and a capacity of 23.21 L/s resulting in the sewer being calculated at 44.40% full.

Based on the above, the City's existing sanitary sewer infrastructure within the study area has sufficient capacity to accommodate the proposed development. Detailed design of the site's proposed servicing will take place at the time of Site Plan Approval application.

3. LIMITATIONS

This Study was prepared by SBM for 608 Commissioners Inc c/o Copia Developments and the City of London. Use of this Study by any third party, or any reliance upon its findings, is solely the responsibility of that party. SBM accepts no responsibility for damages, if any, suffered by a third party as a result of decisions made or actions undertaken as a result of this Study. Third party use of this Study, without the express written consent of the Consultant, denies any claims, whether in contract, tort, and/or any other cause of action in law, against the Consultant.

All findings and conclusions presented in this Study are based on site conditions as they appeared in the information presented to SBM and related to in this document. This Study is not intended to be exhaustive in scope, or to imply a risk-free development. It should be recognized that the passage of time may alter the opinions, conclusions, and recommendations provided herein, as well as any changes in the layout of the development.

The design was limited to the documents referenced herein and SBM accepts no responsibility for the accuracy of the information provided by others. All designs and recommendations presented in this Study are based on the information available at the time of the review.

This document is deemed to be the intellectual property of SBM in accordance with Canadian copyright law.

4. CLOSURE

We trust this Study meets your satisfaction. Should you have any questions or require further information, please do not hesitate to contact us.

Respectfully submitted,

Strik, Baldinelli, Moniz Ltd.

Planning • Civil • Structural • Mechanical • Electrical

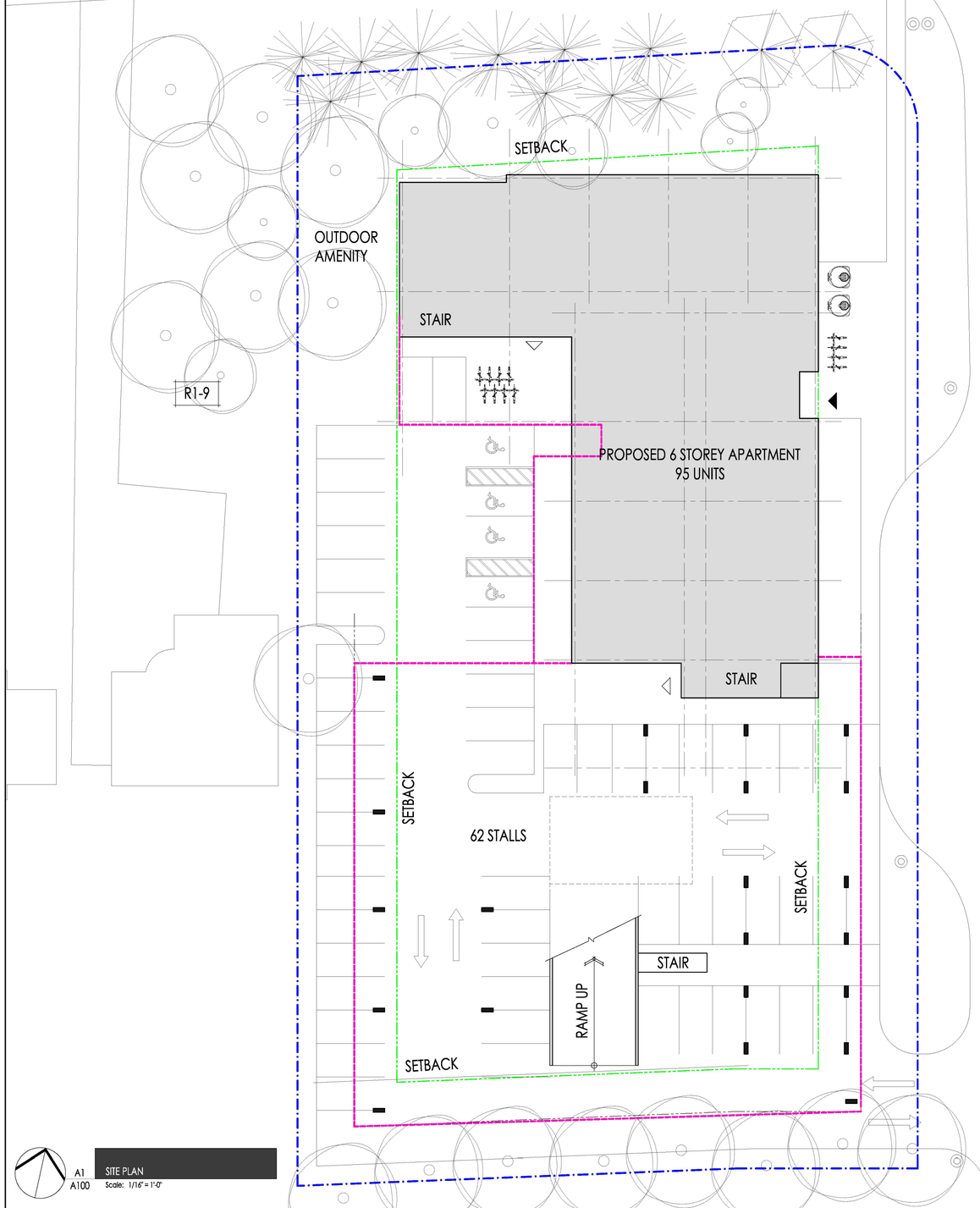
Ben Hyland, P.Eng., PMP
Eng. II, Associate I
Civil Engineering Team Lead & Project Lead

Kurtis Caron, EIT
Civil EIT II

Encl: Site Plan & Floor Plans prepared by Matter Architectural Studio Inc. Project No. 20-026.
City of London Commissioners Road West Sanitary Sewer Design Sheet File No. 10589 Dated October 1989.
Rosecliffe Garden Estates Sanitary Sewer Design Sheet by Delcan File No. 10003 Dated October 1983.
Rosecliffe Garden Estates Sanitary Drainage Areas by Delcan File No. 9993 Dated February 1988.
City of London Jamaica St. & Westmount Cr. Sanitary Sewer Project File No. 3751 Dated March 20, 1972.
City of London Commissioners Road West Lateral Sanitary Sewer File No. 10587 Dated October 1989.
Commissioners Road West Sanitary Catchment Areas City of London Located Map Markups by SBM.
Sanitary Service Design Sheet by SBM Dated October 2021.

COMMISSIONERS ROAD WEST

WESTMOUNT CRESCENT



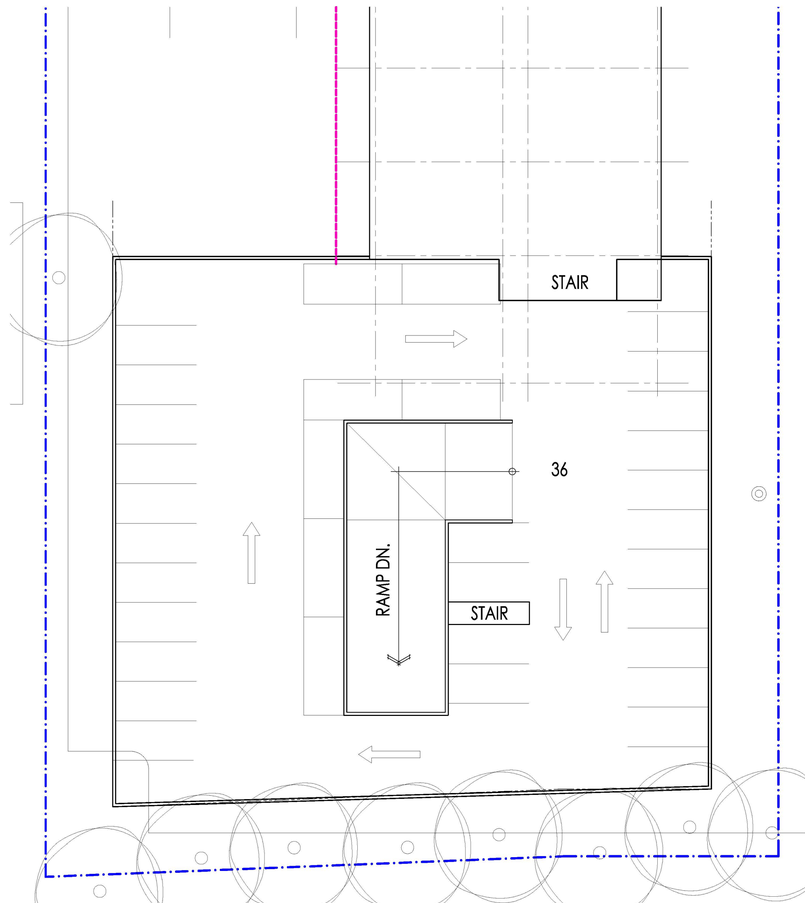
A1
A100

SITE PLAN

Scale: 1/16" = 1'-0"

SITE DATA: EXISTING RESIDENTIAL R1-9 ZONE
PROPOSED RESIDENTIAL R8-4 ZONE

	REQ'D. / MAX. / MIN.	PROPOSED
PROPOSED USE	APARTMENT	APARTMENT
LOT AREA	1000 SM	4,470 SM ±
LOT FRONTAGE	30M MIN.	163 M ±
FRONT & EXTERIOR SIDE YARD DEPTH MIN. 6M PLUS 1M PER 10M OF MAIN BUILDING HEIGHT OR FRACTION THEREOF ABOVE THE FIRST 3M	8 M MAIN BUILDING 6 M PARKING STRUCTURE	8 M 4.6 M (PARKING STRUCTURE EAST SIDE)
INTERIOR SIDE & REAR YARD DEPTH MIN. 1.2M PER 3M OF MAIN BUILDING HEIGHT OR FRACTION THEREOF ABOVE 3M, BUT IN NO CASE LESS THEN 4.5M	8.4 M MAIN BUILDING 4.5 M PARKING STRUCTURE	8.4 M (INTERIOR SIDE) 38.6 M (REAR) 4.5M PARKING STRUCTURE
LANDSCAPED OPEN SPACE (%) MIN.	30 %	32%
LOT COVERAGE (%) MAX.	40 %	48 %
BUILDING HEIGHT (MAX.)	13 M	20 M
DENSITY - UNITS PER HECTARE MAX.	33 UNITS MAX. (75X.447HA=33)	95
PARKING		98



Key Plan:

COPIA DEVELOPMENTS

NO.	DATE:	ISSUED FOR:	BY:

THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS, DATUMS AND LEVELS PRIOR TO COMMENCEMENT OF WORK. ALL ERRORS AND OMISSIONS TO BE REPORTED TO THE ARCHITECT BEFORE PROCEEDING.

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matter.

Matter Architectural Studio Inc.
1106 Dundas Street, #300
London, Ontario, N5W 3A7

p: 519.601.6274

www.matterinc.ca

Project Title:
608 COMMISSIONERS RD. W

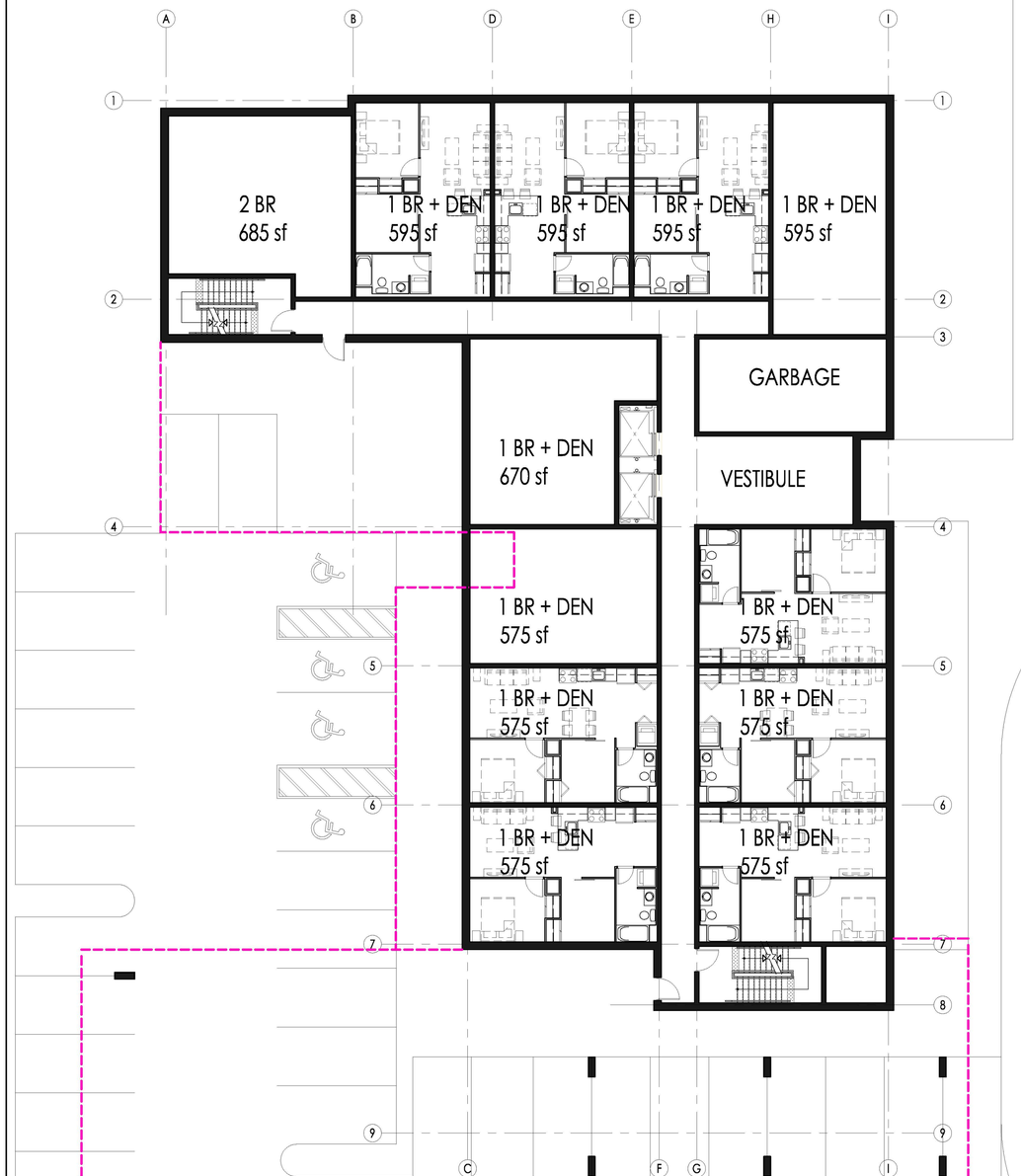
608 Commissioners Rd. W — London, ON.

Sheet Name:
SITE PLAN - PARKING

Scale: AS SHOWN

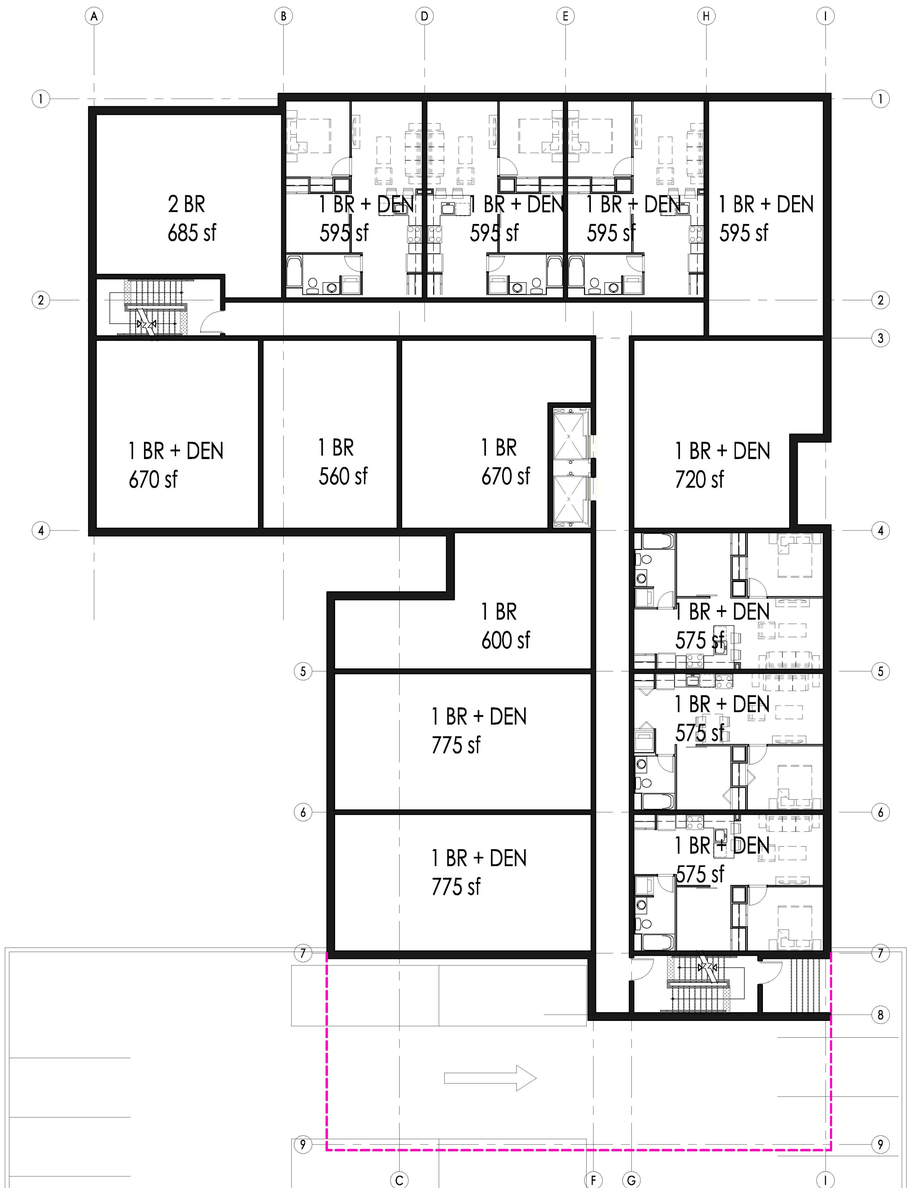
Project No: 20-026

Sheet No: A100



LEVEL 1
12 UNITS

A1 A200 LEVEL 1
Scale: 3/32" = 1'-0"



LEVEL 2
15 UNITS

A2 A200 LEVEL 2
Scale: 3/32" = 1'-0"

Key Plan:

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NO. DATE: ISSUED FOR: BY:

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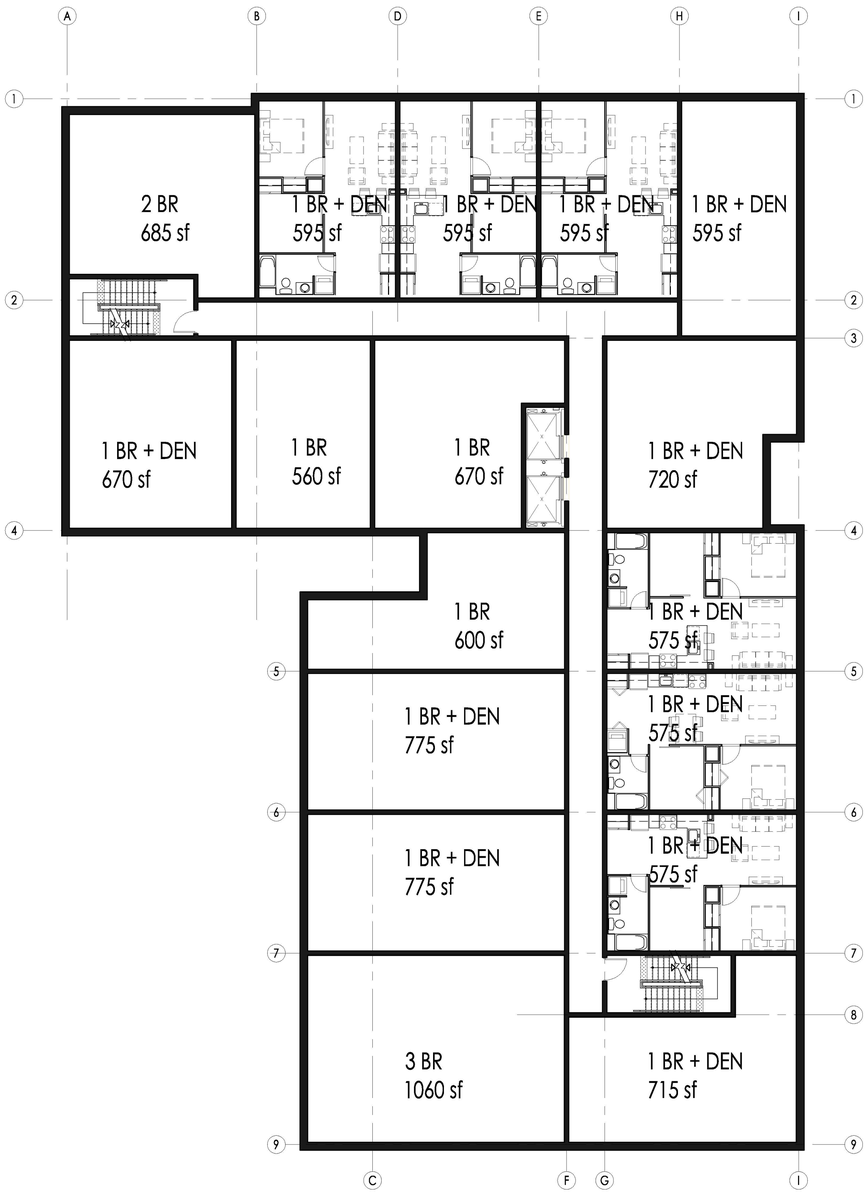
Project Title:
608 COMMISSIONERS RD. W

608 Commissioners Rd. W London, ON.

Sheet Name:
LEVEL 1 AND LEVEL 2

Scale: AS SHOWN
Project No: 20-026
Sheet No: A200



LEVEL 3-6

68 UNITS (17x4)

A1
A200

LEVEL 1
Scale: 3/32" = 1'-0"

Key Plan:

COPIA DEVELOPMENTS

NO.	DATE:	ISSUED FOR:	BY:

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matter.

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London, Ontario, N5W 3A7

p: 519.601.6274

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Project Title:
608 COMMISSIONERS RD. W

608 Commissioners Rd. W — London, ON.

Sheet Name:
LEVEL 3-6

Scale: AS SHOWN
Project No: 20-026

Sheet No:
A201

B1 A300 **EAST ELEVATION**
Scale: 3/32" = 1'-0"

A1 A300 **NORTH ELEVATION**
Scale: 3/32" = 1'-0"

Key Plan:

COPIA DEVELOPMENTS

NO.	DATE:	ISSUED FOR:	BY:

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p: 519.601.6274

www.matterinc.ca

Project Title:
608 COMMISSIONERS RD. W

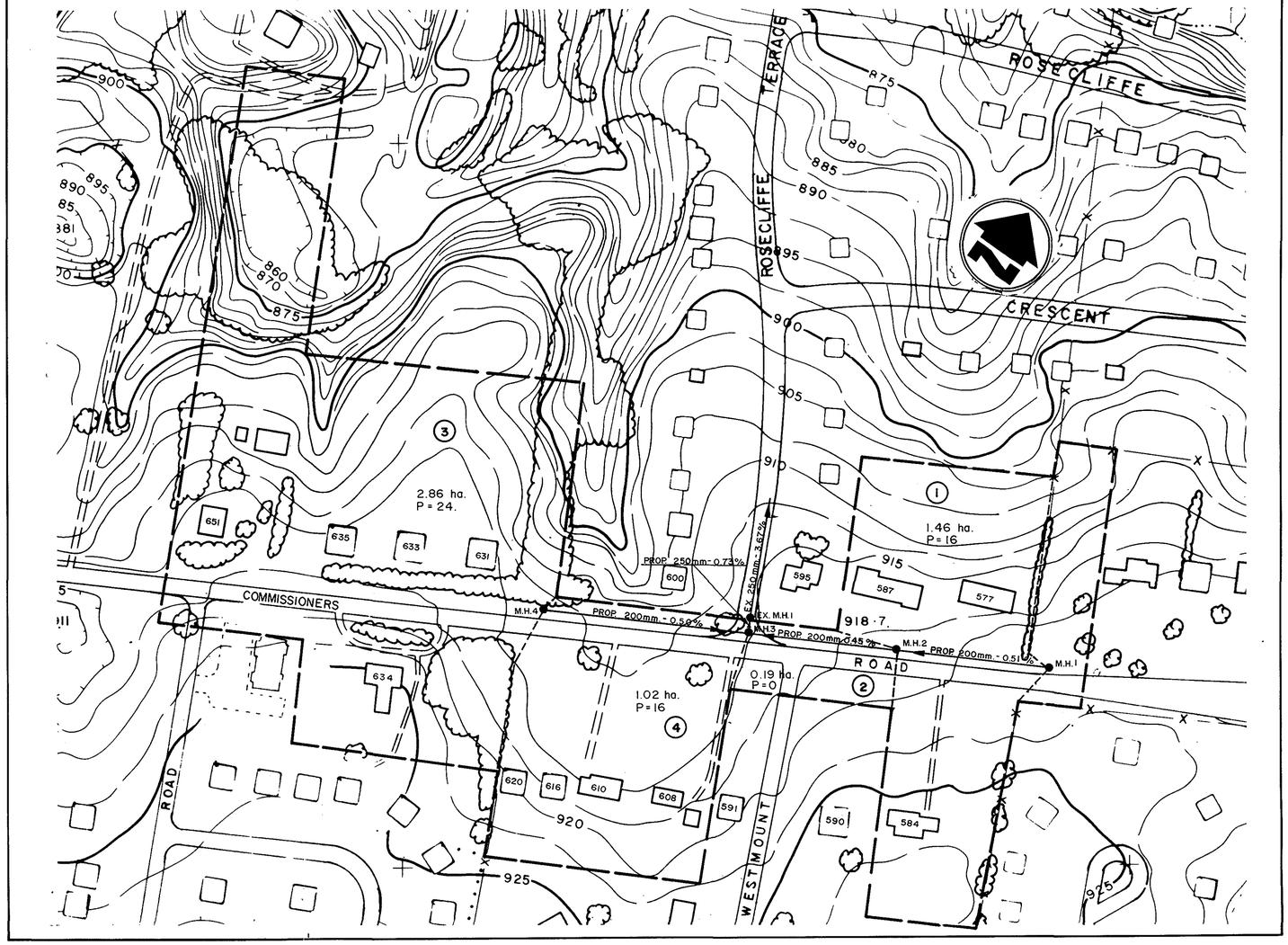
608 Commissioners Rd. W London, ON.

Sheet Name:
ELEVATIONS

Scale: AS SHOWN

Project No: 20-026

Sheet No: A300



RESIDENTIAL POPULATION DENSITIES

(A) · AREA BASIS
60 PERSONS PER GROSS HECTARE
82 PERSONS PER NET HECTARE

(B)- LOT BASIS
SINGLE FAMILY - 4 PEOPLE
DUPLEX - 8 PEOPLE
MULTI-FAMILY - BACHELOR - 1½ PEOPLE
-1 BEDROOM - 2½ PEOPLE
-2 BEDROOM - 3½ PEOPLE

SANITARY SEWER DESIGN SHEET

CITY OF LONDON

CITY ENGINEER'S DEPARTMENT

PROJECT NAME COMMISSIONERS RD. W. LATERAL SANITARY SEWER
80m. W. ROSECLIFFE TER. TO 130m. E. ROSECLIFFE TER.

DATE OCT. /89
DESIGNED BY Leo Kent
CHECKED BY A. Flynn
FILE No 610/C/64
SHEET 1 OF 1

LOCATION				AREA (HECTARES)				POPULATION					SEWAGE FLOW			SEWER DESIGN					PROFILE				
AREA No.	STREET	FROM MANHOLE	TO MANHOLE	NET OR GROSS	DIMENSIONS	Δ ha	TOTAL ha	PER ha	No. OF LOTS	PER LOT	Δ POP.	TOTAL POP.	INFILT. l/s	SEWAGE l/s	TOTAL l/s	SIZE mm	SLOPE %	n	VELOCITY m/s	CAP. l/s	LOSSES IN M.H.	FALL IN SEWER	LENGTH metres	INVERT U.S.	ELEV. D.S.
A1	COMM. RD. W.	1	2	GROSS		1.46	1.46	60	4	4	16	16	0.171	0.312	0.483	200	0.50	0.013	0.738	23.97		0.317	62.80	277.110	276.793
A2	COMM. RD. W.	2	3	GROSS		0.19	1.65	60	-	-	-	16	0.193	0.312	0.505	200	0.44	0.013	0.692	22.44	0.018	0.279	63.80	276.775	276.496
A3	COMM. RD. W.	POSS. FUTURE	4	GROSS		2.86	2.86	60	6	4	24	24	0.335	0.468	0.803	200	0.50	0.013	0.739	23.19					
A4	COMM. RD. W.	4	3	GROSS		1.02	3.88	60	4	4	16	40	0.454	0.782	1.236	200	0.49	0.013	0.731	23.70		0.340	69.60	276.690	276.350
—	ROSECLIFFE TER.	3	EX. MH	—		—	3.88	—	—	—	—	56	0.454	1.096	1.550	250	0.57	0.013	0.915	46.33	0.028	0.032	5.60	276.322	276.290

AS CONSTRUCTED NOTES
1 SEE DRAWING No FOR FURTHER DETAIL
2 SEWER DESIGN TRANSITION WIDTH OR AS NOTED
3 REFERENCE B.M. No S-80 ELEVATION 234.400 m BEING TOP OF CUT CROSS ON SOUTH EAST CORNER OF THE CHAMBER OF THE PUMPING STATION ON THE WEST SIDE OF WONDERLAND ROAD AT THE RIVER THAMES.

AS CONSTRUCTED SERVICES
SANITARY SEWER, M.H'S AND P.D.C'S
CUT RESTORATION AS NOTED
UNDER ROAD RESTORATIONS ON THIS DRAWING — MAY/1988

DESIGN L.K
DRAWN E.J.H
CHECKED L.K.
APPROVED A.W.F
DATE SEPT. 17, 1987

No	REVISIONS	DATE	BY
1	"AS CONSTRUCTED" DRAWING	OCT./89	J.J.S.

CONSULTANT OR DIVISION

PROJECT ENGINEER

ENGR'S STAMP

CORPORATION OF THE CITY OF LONDON

DIVISION HEAD

CITY ENGINEER

SCALE
m 0 m Horizontal
m 0 m Vertical

TITLE
COMMISSIONERS ROAD WEST LATERAL SANITARY SEWER
SANITARY SEWER DESIGN SHEET & DRAINAGE AREAS PLAN

PROJECT No 87-610/C/64
SHEET No 3
PLAN FILE No 10,589

RUNOFF COEFFICIENT "C"
PARKS AND PLAYGROUNDS (·20 MIN.)
RESIDENTIAL - SINGLE AND DUPLEX (·50 @ ·55 MIN.)
- ROW HOUSING (·65 MIN.)
APARTMENTS (·65 - ·70 MIN.)
COMMERCIAL AND INDUSTRIAL (·90 @ ·70 MIN.)
DENSELY BUILT, PAVED (·90 MIN.)

PEAK DESIGN FLOW Q = 2·78 ACI
WHERE Q = PEAK FLOW IN LITRES PER SECOND (l/s)
A = AREA IN HECTARES (ha)
C = RUNOFF COEFFICIENT
I = RAINFALL INTENSITY IN MILLIMETRES PER HOUR (mm/hr)

METRIC

STORM SEWER DESIGN SHEET
R. P. No. M - 119

PROJECT ROSECLIFFE GARDEN ESTATES
FILE No. 07-1417 SHEET 1 OF 1
DRAINAGE AREA D-38
DESIGNED BY D.A.R. CHECKED BY
DATE OCTOBER 1983

REGISTERED PROFESSIONAL ENGINEER K. W. HODGES PROVINCE OF ONTARIO

DeLCan DE LEUW CATHER CANADA LTD. CONSULTING ENGINEERS AND PLANNERS

AREA No.	STREET	FROM	TO	DESCRIPTION OF LAND USE	AREA HECTARES (ha)	TOTAL AREA HECTARES	A x C: RUNOFF COEFF. C	INCR. A x C	TOTAL SECT. A x C	TOTAL LAT. A x C	TOTAL SEWER A x C	TOTAL 2·78 A x C	RAINFALL INTENSITY: TIME ENTRY mm SECT.	TIME ENTRY mm ACCUM.	I INTENSITY (mm/hr)	PEAK DESIGN FLOW Q (l/s)	SEWER DESIGN: DIA. PIPE (mm)	SLOPE %	n	ACTUAL CAP. (l/s)	FULL FLOW VELOCITY (m/s)	LENGTH (metres)	TIME OF FLOW min	PROFILE (METRES): LOSSES IN M.H.	FALL IN SEWER	INVERT ELEV. U.S.	INVERT ELEV. D.S.	ADDITIONAL INFORMATION REQUIRED BY MINISTRY OF THE ENVIRONMENT: DESCRIPTION OF MANHOLE LOCATIONS FROM M.H.	TO M.H.	AVG. DEPTH CUT TO INV. (m)	APPURTENANCES: MANHOLES	CATCHBASINS	OTHERS
EXT. A1	COMMISSIONERS RD.				3.582		0.65	2.328																											
A1	"	"	1	2		0.067	3.649	0.42	0.028	2.356	-	2.356	6.550		19.0	76.0	497.80	525	1.38	0.013	506.075	2.343	345.0	2.45		0.475	276.945	275.420	355 m W. of ROSECLIFFE TRCE.	ROSECLIFFE TERRACE	3.6	2	1	-
EXT. A2 & A2	ROSECLIFFE TRCE.	2	3		0.545 / 0.215	5.088	0.42 / 0.65	0.342 / 0.314	3.092	-	3.092	8.596	0.245	19.245	75.0	644.68	525	2.95	0.013	739.923	3.425	78.70	0.383	0.260	2.320	275.230	272.910	COMMISSIONERS ROAD	LOTS 59/60	4.2	1	2	-
A3	"	"	3	4		0.710	5.798	0.42	0.298	3.390	-	3.390	9.424	0.383	19.628	74.5	702.09	525	4.96	0.013	959.437	4.442	53.30	0.200	0.025	2.645	272.885	270.240	LOTS 59/60	ROSECLIFFE CRES. S.	4.0	1	2	-
A44A5	ROSECLIFFE CRES.				1.419		0.42	-	-	0.596	-	-																						
A7	ROSECLIFFE TRCE.	4	5		0.564	7.781	0.42	0.237	3.627	0.596	4.223	11.740	0.200	19.828	74.0	868.76	525	4.13	0.013	875.489	4.053	63.00	0.259	0.450	2.603	268.790	266.187	ROSECLIFFE CRES. S.	LOTS 36/37	4.1	1	1	-
A8	"	"	5	6		0.580	8.361	0.42	0.244	4.467	-	4.467	12.418	0.259	20.087	73.0	906.51	525	4.93	0.013	956.531	4.428	65.40	0.246	0.091	3.223	267.096	263.873	LOTS 36/37	ROSECLIFFE CRES. N.	3.3	1	1	-
A9, A13 & A14	"	"	6	7	A13 & A14 (1.523)	0.448	10.332	0.42	0.188	4.655	0.640	5.295	14.720	0.246	20.333	72.5	1067.20	600	4.37	0.013	1286.406	4.546	57.60	0.211	0.825	2.516	262.973	260.457	ROSECLIFFE CRES N.	N. LIMIT PLAN	2.8	1	3	-
		7	JUNCT. OF EXIST. STRUCT.		-	10.332		-	5.295	-	5.295	14.720	0.211	20.544	72.0	1067.20	600	12.99	0.024	1153.333	4.075	37.20	0.152	0.022	4.831	260.436	255.604	N. LIMIT PLAN	TEMPORARY OUTLET STRUCTURE	1.0	-	-	-
		9A	9	POT'L SEWER	0.777	0.777	0.42	0.326	0.326	—	0.326	0.906		19.00	76.0	68.877	300	1.69	.015	112.710	1.587	77.00	0.808		1.301	271.701	270.400	LOTS 44/52	LOTS 49/48	2.3		—	
A10	ROSECLIFFE CR.S.	9	10	" "	—	0.777	0.42	-	-	—	0.326	0.906	0.808	19.808	73.5	68.877	300	3.41	.015	160.102	2.255	20.50	0.151	0.10	0.700	270.300	269.100	LOTS 49/48	BLOCK 64	2.8	1	—	
A11	"	"	10	11		0.507	1.284	0.65	0.330	0.655	—	0.655	1.824		19.00	76.0	138.62	300	4.11	.015	175.768	2.476	26.10	0.176	0.900	1.074	269.500	268.426	BLOCK 64	BLOCK 64/63	1.9	2	2	—
A12	"	"	11	12		0.677	1.961	0.65	0.440	1.099	—	1.099	3.044	0.176	19.176	76.0	231.344	375	4.55	.015	327.000	2.973	48.70	0.273	2.328	2.246	266.098	263.852	BLOCK 64/63	EASEMENT	4.0	1	—	—
A4	"	"	9A	8B	POT'L SEWER	1.077	1.077	0.42	0.452	0.452	-	0.452	1.256		19.00	76.0	95.454	300	1.26	.015	97.320	1.371	47.00	0.571		0.155	270.905	270.750	LOTS 40/56	LOTS 44/52	2.1	1	—	
A5	"	"	8A	8		0.262	1.339	0.42	0.110	0.562	—	0.562	1.562	0.547	20.119	73.0	114.026	375	0.61	.015	119.731	1.088	37.70	0.577		0.230	270.750	270.520	FLANKAGE LOTS 38/58	LOT 40/56	2.6	1	4	—
A6		8	4		0.080	1.419	0.42	0.034	0.596	—	0.596	1.657	0.577	20.696	72.5	120.132	375	0.57	.015	115.739	1.052	46.20	0.732		0.263	270.520	270.257	ROSECLIFFE TERRACE	FLANKAGE LOTS 38/58	3.5	1	—	
A14	ROSECLIFFE CR.N.	14	13	POT'L SEWER	0.935	0.935	0.42	0.393	0.393	—	0.393	1.092		19.0	76.0	83.03	375	0.43	.015	100.519	0.914	79.00	1.441		0.340	263.987	263.647	ROSECLIFFE TERRACE	LOTS 17/18	2.8	1	4	—
A13	"	"	13	6		0.588	1.523	0.42	0.247	0.640	—	0.640	1.778	1.441	20.441	72.0	128.016	450	0.32	.015	139.558	0.878	81.00	1.538	0.045	0.262	263.572	263.310	LOT 17/18	LOT 21	2.1	—	—	—
A15	"	"	14	12		0.926	0.926	0.42	0.389	0.389	—	0.389	1.081		19.0	76.0	82.171	375	0.43	.015	100.519	0.914	103.30	1.884		0.447	264.156	263.709	LOT 21	EASEMENT	2.3	1	4	—
A15A12	EASEMENT	12	15	A15(0.926) A12(1.961)	—	2.887		—	—	—	1.484	4.125	1.884	20.884	71.6	295.35	525	0.50	.013	304.619	1.410	30.10	0.356		0.150	263.426	263.476	ROSECLIFFE CRES. N.	EASEMENT	2.1	1	—	—
	"	15	16	EXISTING STUB	—	2.887		—	—	—	1.484	4.125	0.356	21.240	71.6	295.35	525	0.47	.013	295.342	1.367	67.00	0.817	0.150	0.313	263.326	263.003	EASEMENT	WONDERLAND ROAD	2.2	1	—	—
																										262.900							
A4	EASEMENT	8B	8A	POT'L SEWER	—	1.077	0.42	—	—	0.452	0.452	1.256	0.571	19.571	75.0	94.20	375	0.49	.015	107.310	0.975	32.00	0.547		0.155	270.905	270.750						

METRIC

SANITARY SEWER DESIGN SHEET
R. P. No M - 119

PROJECT ROSECLIFFE GARDEN ESTATES
FILE No. 07-1417 SHEET 1 OF 1
DRAINAGE AREA 3-29
DESIGNED BY D.A.R. CHECKED BY
DATE OCTOBER 1983

REGISTERED PROFESSIONAL ENGINEER K. W. HODGES PROVINCE OF ONTARIO PROFESSIONAL ENGINEER'S STAMP

DeLCan DE LEUW CATHER CANADA LTD. CONSULTING ENGINEERS AND PLANNERS

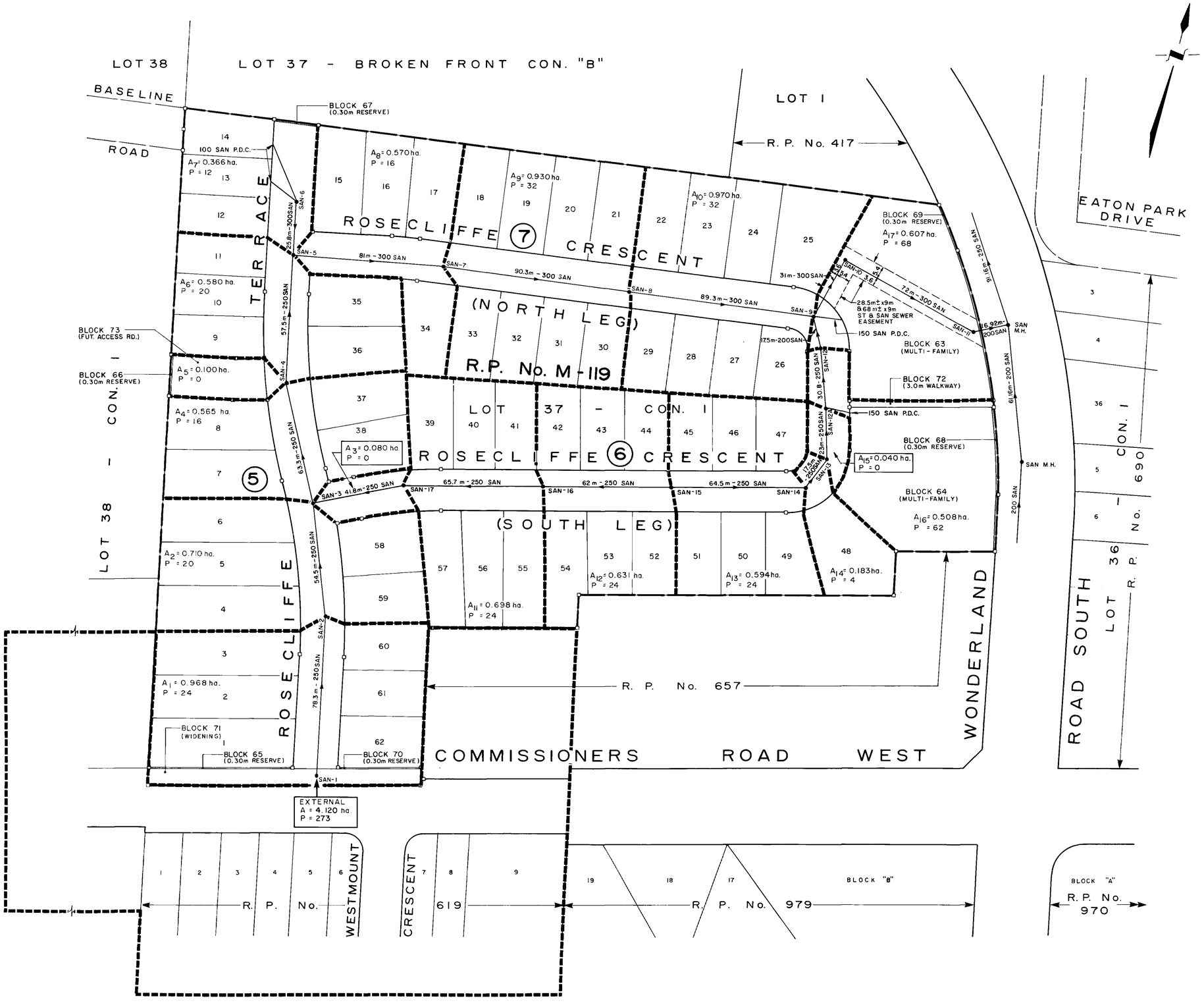
AREA No.	STREET	FROM	TO	GROSS TRIBUTARY AREA (HECTARES): RESIDENTIAL INCR.	RESIDENTIAL ACCUM.	COMMERCIAL INCR.	COMMERCIAL ACCUM.	INDUSTRIAL INCR.	INDUSTRIAL ACCUM.	TOTAL AREA	POPULATION: PER HECTARES (ha)	No. OF LOTS	PER LOT	INCR. POP.	TOTAL POP.	ACCUMULATED SEWAGE FLOW (l/s): RESIDENTIAL AREA	RESIDENTIAL POP.	COMM.	IND.	INFILTRATION	PEAK DESIGN FLOW l/s	SEWER DESIGN: DIA. (mm)	SLOPE %	n	FULL FLOW VEL (m/s)	CAP. (l/s)	LENGTH (metres)	PROFILE (METRES): LOSSES UPPER M.H.	FALL IN SEWER	INVERT ELEV. U.S.	INVERT ELEV. D.S.	GROUND ELEV. U.S.	GROUND ELEV. D.S.	ADDITIONAL INFORMATION REQUIRED BY MINISTRY OF THE ENVIRONMENT: DESCRIPTION OF MANHOLE LOCATIONS FROM M.H.	TO M.H.	AVG. DEPTH CUT TO INV. (m)	APPURTENANCES: MANHOLES	OTHER
A1	ROSECLIFFE TRCE.	SA-1	SA-2	0.968	5.088					5.088		6	4	24	528		9.4			12	10.6	200	3.63	.013	1.893	58.682	78.30		2.845	276.245	273.400			COMMISSIONERS ROAD	730 m N. of COMMISSIONERS ROAD	3.3	2	6 PDC.'S
A2	"	"	SA-2	SA-3	0.710	5.798					5.798		5	4	20	548		9.5			12	10.7	200	6.61	.013	2.554	79.186	54.50	0.099	3.600	273.301	269.701			730 m N. of COMMISSIONERS ROAD	ROSECLIFFE CRES. SOUTH	3.8	1	5 PDC.'S
A3 & A12A13	ROSECLIFFE TRCE.	SA-3	SA-4	1.409								12	4	48																						
A4	"	"	SA-3	SA-4	0.545	7.772					7.772		4	4	16	612		10.4			12	10.6	200	2.98	.013	1.715	53.169	63.30		1.885	268.776	266.891			ROSECLIFFE CRES. SOUTH	LOTS 36/37	5.2	1	4 PDC.'S
A5	"	"	SA-4	SA-5	0.100								—	—	—	612		10.4			12	10.6														
A6	"	"	SA-4	SA-5	0.580	8.452					8.452		5	4	20	632		10.8			12	11.0	200	6.38	"	2.509	77.797	57.50	0.015	3.653	266.374	262.723			LOTS 36/37	ROSECLIFFE CRES. NORTH	4.1	1	5 PDC.'S
A7	"	"	SA-6	SA-5	0.346	0.346							3	4	12	12		2.0			12	3.2	250	0.29	"	0.676	33.119	25.80	0.028	0.075	262.801	262.726			ROSECLIFFE CRES. NORTH	LOTS 12/13	3.1	1	1 PDC.'S
A8	ROSECLIFFE CR.N.	SA-5	SA-7	0.570	9.388					9.388		4	4	16	660		11.2			12	12.4	250	0.34	.013	0.732	35.861	73.20	0.024	0.246	262.702	262.456			ROSECLIFFE TERRACE	LOTS 17/18	3.4	1	4 PDC.'S
A9	"	"	SA-7	SA-8	0.930	10.318					10.318		8	4	32	692		11.8			12	13.0	250	0.31	"	0.699	34.243	90.30		0.280	262.456	262.176			LOTS 17/18	LOTS 21/22	3.5	1	8 PDC.'S
A10	"	"	SA-8	SA-9	0.970	11.288					11.288		8	4	32	724		12.2			12	13.5	250	0.37	"	0.763	37.410	89.30		0.328	262.176	261.848			LOTS 21/22	LOT 25/EASEMENT	4.4	1	8 PDC.'S
A12	ROSECLIFFE CR.S.	SA-15	SA-16	0.631	10.631							6	4	24	24		2.0			12	3.2	200	1.55	.013	1.237	38.346	62.00		0.960	270.795	269.835			LOTS 44/45	LOTS 41/42	3.1	1	6 PDC.'S
A11	"	"	SA-16	SA-17	0.488	1.329							6	4	24	48		2.0			12	3.2	200	0.81	"	0.894	27.720	65.70		0.535	269.835	269.300			LOTS 41/42	LOTS 38/39	3.2	1	6 PDC.'S
A3	"	"	SA-17	SA-3	0.08	1.409					1.409		—		—	48		2.0			12	3.2	200	0.79	"	0.883	27.375	41.80	0.075	0.330	269.225	268.895			LOTS 38/39	ROSECLIFFE TERRACE	4.6	—	—
A13	ROSECLIFFE CR.S.	SA-15	SA-14	0.594	0.594					0.594		6	4	24	24		2.0			12	3.2	200	1.50	"	1.018	31.561	64.50		0.968	270.673	269.705			LOTS 44/45	LOTS 48/49	3.1	1	6 PDC.'S
A14	"	"	SA-14	SA-13	0.183	0.777					0.777		1	4	4	28		2.0			12	3.2	200	4.44	"	2.093	64.900	17.50	0.028	0.777	269.677	268.900			LOTS 48/49	BLK. 64	2.8	1	1 PDC.'S
A15	"	"	SA-13	SA-12A	0.040	0.817					0.817		—	—	—	28		2.0			12	3.2	200	4.76	"	2.168	67.198	23.00	0.065	1.095	268.835	267.740			BLK. 64	BLK. 64/63	2.8	1	—
A16	"	"	SA-12A	SA-12	0.508	1.325					1.325		—	1	62	90		2.0			12	3.2	200	4.67	"	2.147	66.588	30.80	2.673	1.440	265.061	263.621			BLK. 64/63	BLK. 63	5.2	1	1 PDC.'S
A17	"	"	SA-12	SA-9	0.607	1.932					1.932		—	1	68	158		3.0			12	4.2	200	6.46	"	2.525	78.283	17.50	0.110	1.130	263.517	262.387			BLK. 63	EASEMENT	4.9	1	1 PDC.'S
	EASEMENT	SA-9	SA-10	—	13.220					13.220		—	—	—	882		14.8			16	16.4	250	0.24	.013	0.615	30.129	31.00		0.074	261.831	261.757			ROSECLIFFE CRES. NORTH	315 m N of ROSECLIFFE CRES. N.	4.1	1	—
	EASEMENT	SA-10	SA-11	—	13.220					13.220		—	—	—	882		14.8			16	16.4	250	0.38	"	0.774	37.909	72.00	0.006	0.271	261.751	261.480			31.5 m N. ROSECLIFFE CRES. N.	STUB - WONDERLAND RD	3.9	1	—
																						200	0.50	"	0.703	21.779		0.014		261.466							

THE SANITARY SEWER SIZES SHOWN ON THE DESIGN SHEETS ARE ONE SIZE SMALLER THAN THOSE SHOWN ON THE PLANS & PROFILES IN ACCORDANCE WITH INSTRUCTIONS RECEIVED FROM THE CITY ENGINEER IN A LETTER DATED MARCH 20, 1984.

DRAWING No.: 20

10003

10,003



LEGEND:

- SANITARY SEWER
- SANITARY MANHOLE
- 25 mm SQUARE IRON BAR
- (7) REFERENCE NUMBER FOR PLAN & PROFILE DRAWING
- SUBDIVISION BOUNDARY

THE SANITARY SEWER SIZES SHOWN ON THE DESIGN SHEETS ARE ONE SIZE SMALLER THAN THOSE SHOWN ON THE PLANS & PROFILES IN ACCORDANCE WITH INSTRUCTIONS RECEIVED FROM THE CITY ENGINEER IN A LETTER DATED MARCH 20, 1984.

9993

SAN SEWERS, P.D.C's & M.H's AUG. 1984

D.R.
C.A.B.
H.K.G.
K.W.H.
DEC. '83

DeLCan PROJECT No. 07-1417

1. "AS-CONSTRUCTED" DRAWING BY KWH FEB. '88

DeLCan DE LEUW CATHER, CANADA LTD.
CONSULTING ENGINEERS AND PLANNERS

REGISTERED PROFESSIONAL ENGINEER K. W. HODGES PROVINCE OF ONTARIO

CORPORATION OF THE CITY OF LONDON

10m 0 20
1:1000

R.P. No. M-119

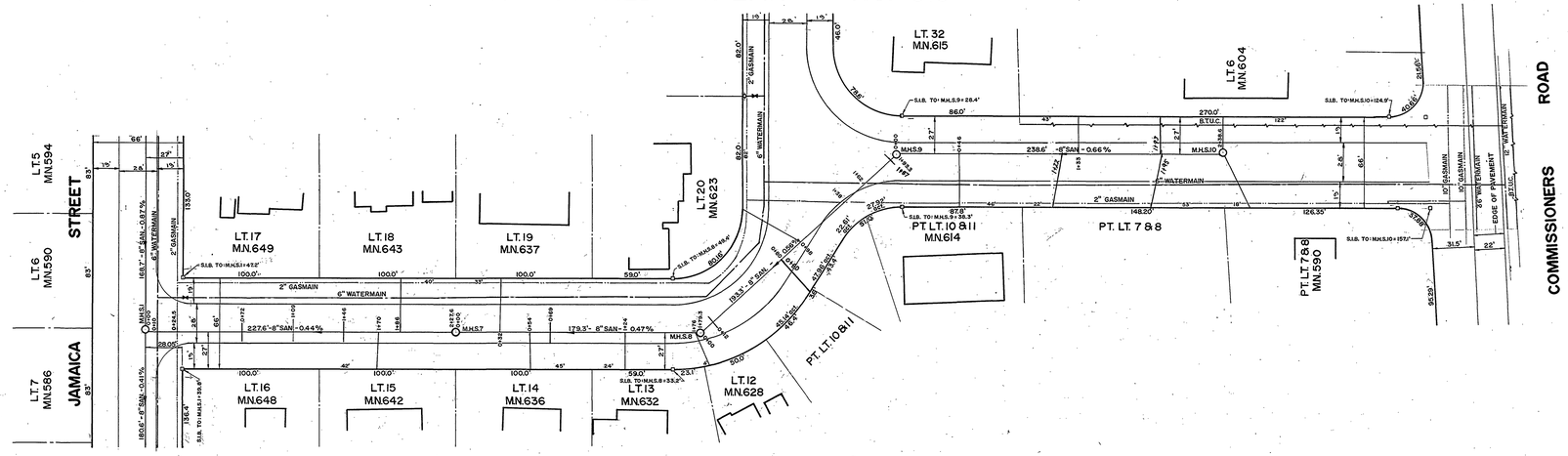
ROSECLIFFE GARDEN ESTATES
ARDSHELL DEVELOPMENTS LIMITED - LONDON, ONT.

SANITARY DRAINAGE AREAS

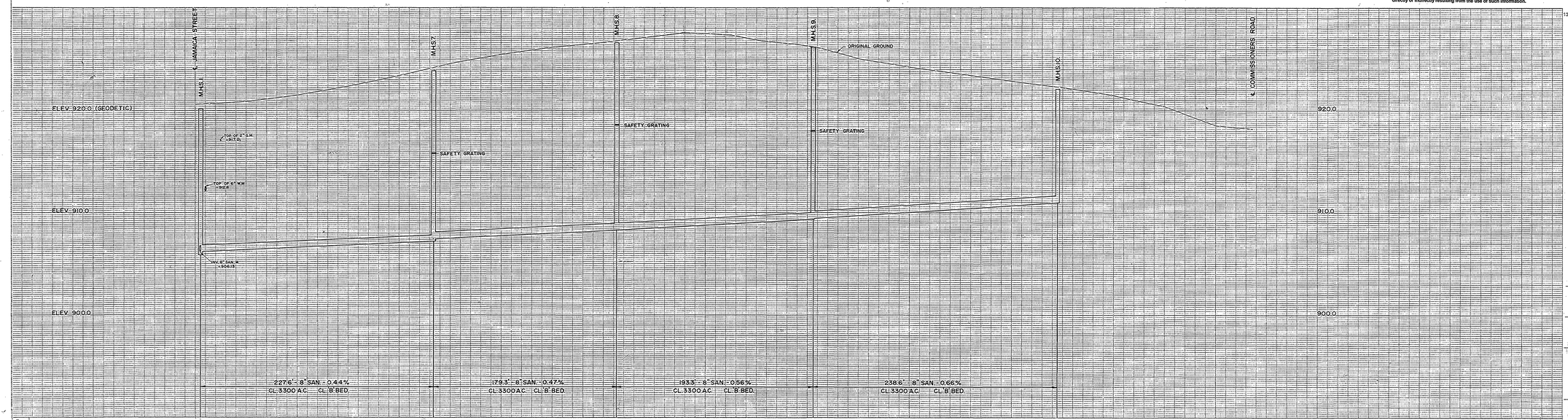
DRAWING No.: 3

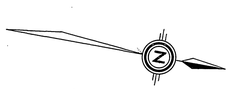
9993

REGISTERED PLAN NO. 619



WESTMOUNT CRESCENT



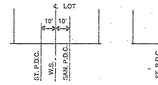


CLASS B BEDDING DETAIL
N.T.S.

NOTES

1. COVER OVER WATERMAIN TOP OF MAIN TO ROAD CENTRELINE, IS 5'-5" TO 6'-0" UNLESS OTHERWISE NOTED.
2. ALL CURB AND GUTTER RADII 25' UNLESS OTHERWISE NOTED.
3. CATCH BASINS AT INTERSECTIONS ARE LOCATED 2 FT. FROM B.H.C. OR E.H.C. CURVES UNLESS OTHERWISE SHOWN.
4. FOR NOTES AND DETAILS APPLICABLE TO THIS DRAWING SEE DRAWING No.
5. P.D.C. AND C.B. CONNECTIONS AT MAINS ARE MEASURED FROM ℄ OF MANHOLE FRAME AND COVER.
6. STRUCTURAL DESIGN OF THE SEWERS ARE BASED ON THE TRANSITION WIDTH UNLESS OTHERWISE NOTED ON PROFILE
7. ALL ELEVATIONS RELATED TO CITY OF LONDON BENCH MARK No. **S.86** ELEVATION= **907.606**
8. TYPE OF SUBSOIL IN THIS AREA IS **CLAY.**
9. DEGREE OF COMPACTION IN THE TRENCH BACKFILL **95** % STANDARD PROCTOR (CAPITAL WORKS & ASSUMED STREETS)
10. METHOD OF COMPACTION IN THE TRENCH BACKFILL — (SUBDIVISIONS) — **VIBRATORY ROLLER**

11.



P.D.C.'s AND WATER SERVICES ARE INSTALLED IN STANDARD LOCATIONS AS ABOVE UNLESS OTHERWISE SHOWN AND NOTED.

12

	SIZE	STRENGTH	MAT'L	JOINT	BEDDING	MANUFACTURER
SAN. P.D.C's	4"	1500	A.C.	R.G.	C	ATLAS
ST. P.D.C.'s	4"	1500	A.C.	R.G.	C	
C.B. CONNECTIONS	8"	E.S.	CONC.	R.G.	C	
PRE-CAST CONC. M.H.'s	48"	3000	CONC.	R.G.	N/A	J.D. OAKS

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.

13

SERVICES	COMPLETION	CONTRACTOR
SANITARY SEWERS P.D.C.'s & M.H.'s	JUNE, 1971	ELGIN CONST.
STORM SEWERS, P.D.C.'s, M.H.'s & C.B.'s		
WATERMAINS & WATER SERVICES		
GRANULAR ROAD BASE	JUNE, 1971	ELGIN CONST.
CURB & GUTTER		
SIDEWALKS		
PAVING		

REGISTERED PROFESSIONAL ENGINEER
R. F. FELLNER
PROVINCE OF ONTARIO

"AS CONSTRUCTED DRAWING"

NO.	REVISIONS	DATE	BY

CITY OF LONDON

JAMAICA ST. & WESTMOUNT CR. SANITARY SEWERS
SEWER PROJECT NO. 70-S.C.10-5

WESTMOUNT CRESCENT (EAST LEG)

JAMAICA STREET TO COMMISSIONERS ROAD WEST

DESIGN BY : W.E. FELLNER
DRAWN BY : L.G.W. SMITH
CHECKED BY : W.E. FELLNER

FIELD BOOKS : 40,60,63,64
SCALES : HORIZ.-1"=40', VERT.-1"=4'
DATE : MARCH 20, 1972

DEVELOPMENT ENGINEERING (LONDON) LIMITED
650 WATERLOO ST., SUITE 'A'
LONDON ONTARIO

PROJECT NO. : L7050
DRAWING NO. : 1

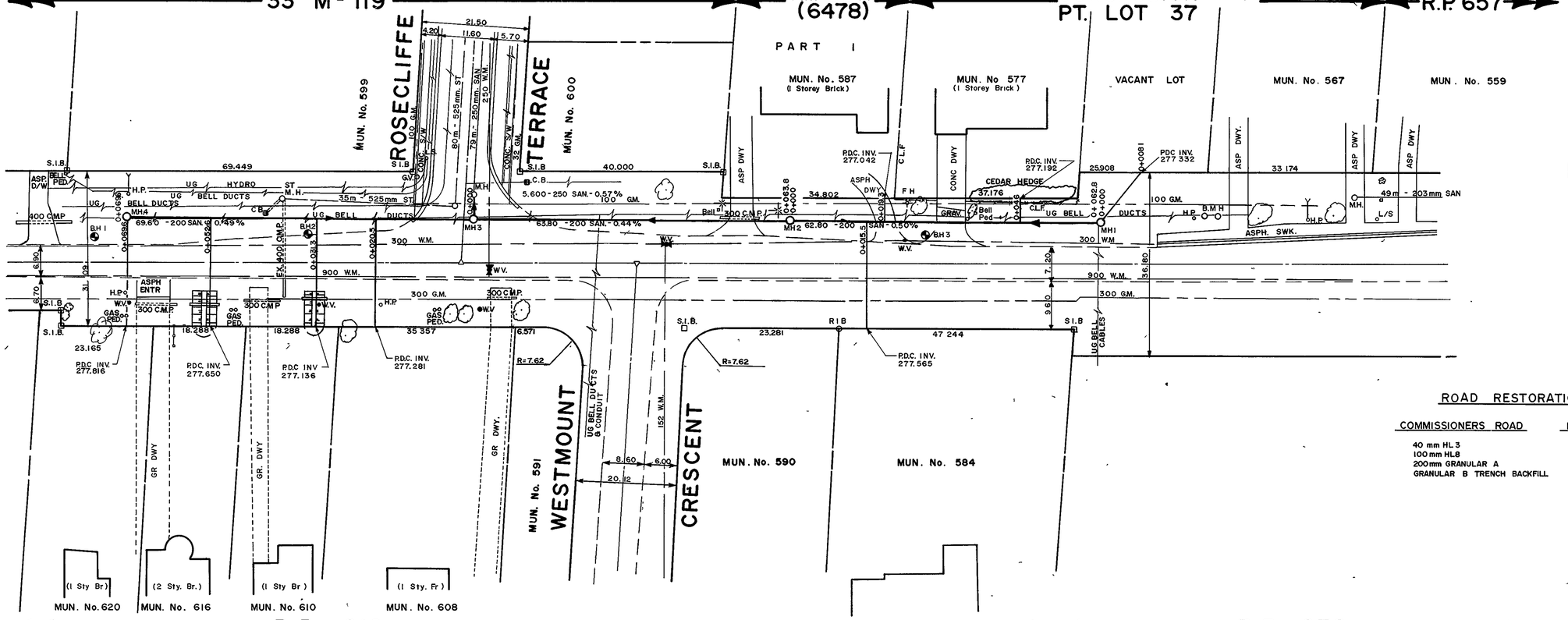
APPROVED BY :

SECTION HEAD

CITY ENGINEER

CITY ENGINEER'S DEPARTMENT
PROJECT NO. 70-S.C.10-5
DRAWING NO. 1
3751

33 M - 119 — R.P. 33R (6478) — CONCESSION I PT. LOT 37 — R.P. 657



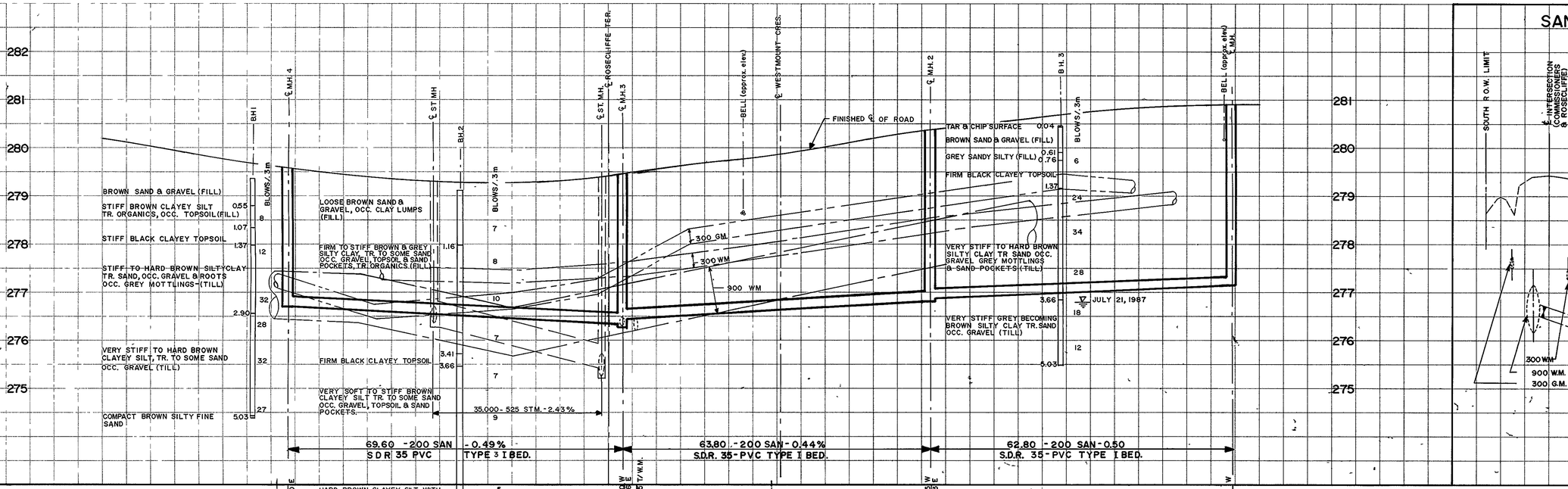
R.P. 619 — COMMISSIONERS ROAD WEST — R.P. 979

BENCHMARKS

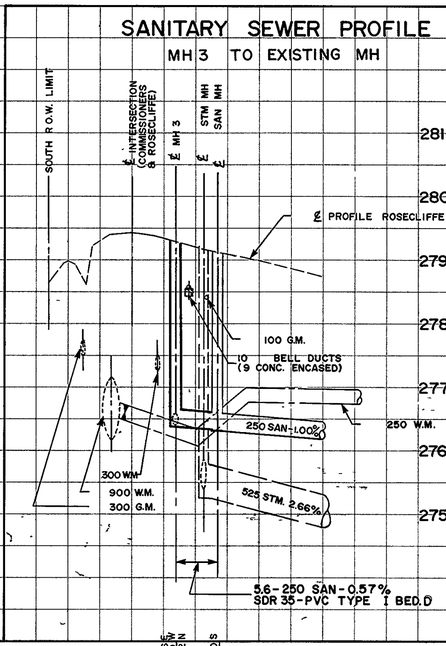
1. TOP OF SOUTH BONNET BOLT OF THE FIRE HYDRANT ON THE NORTH SIDE OF COMMISSIONERS ROAD OPPOSITE MUNICIPAL NUMBER 577 *ELEV. 280.827m*
2. TOP OF NORTH LIMIT OF CONCRETE CURB AT SOUTH FACE OF BRICK PILLAR EAST OF GRAVEL DRIVE MUNICIPAL NUMBER 616 COMMISSIONERS ROAD *ELEV. 279.061m*

ROAD RESTORATION SPECIFICATIONS

COMMISSIONERS ROAD	ROSECLIFFE TERRACE
40 mm HL 3	40 mm HL 3C
100 mm HL8	50 mm HL 8
200mm GRANULAR A	150mm GRANULAR A
GRANULAR B TRENCH BACKFILL	GRANULAR B TRENCH BACKFILL



SANITARY SEWER PROFILE
MH 3 TO EXISTING MH



AS CONSTRUCTED NOTES	AS CONSTRUCTED SERVICES	COMPLETION
1 SEE DRAWING No FOR FURTHER DETAIL	SANITARY SEWER, M.H'S AND	MAY, 1988
2 SEWER DESIGN. TRANSITION WIDTH OR AS NOTED	P.D.C'S	MAY, 1988
3 REFERENCE B.M. No S-80 ELEVATION 284.400 m BEING TOP OF CUT CROSS ON SOUTH EAST CORNER OF THE CHAMBER OF THE PUMPING STATION ON THE WEST SIDE OF WONDERLAND ROAD AT THE RIVER THAMES.	CUT RESTORATION AS NOTED	
	UNDER ROAD RESTORATIONS ON	
	THIS DRAWING	MAY/1988

DESIGN	L.K.
DRAWN	B.E.I.
CHECKED	L.K.
APPROVED	A.W.F.
DATE	SEPT. 17, 1987

No	REVISIONS	DATE	BY
1	"AS CONSTRUCTED" DRAWING	OCT./89	J.J.S.

CONSULTANT OR DIVISION
ENGINEERING DEPARTMENT
DESIGN and CONSTRUCTION DIVISION
PROJECT ENGINEER

ENGR'S STAMP
REGISTERED PROFESSIONAL ENGINEER — CIVIL — A W FLYNN — PROVINCE OF ONTARIO

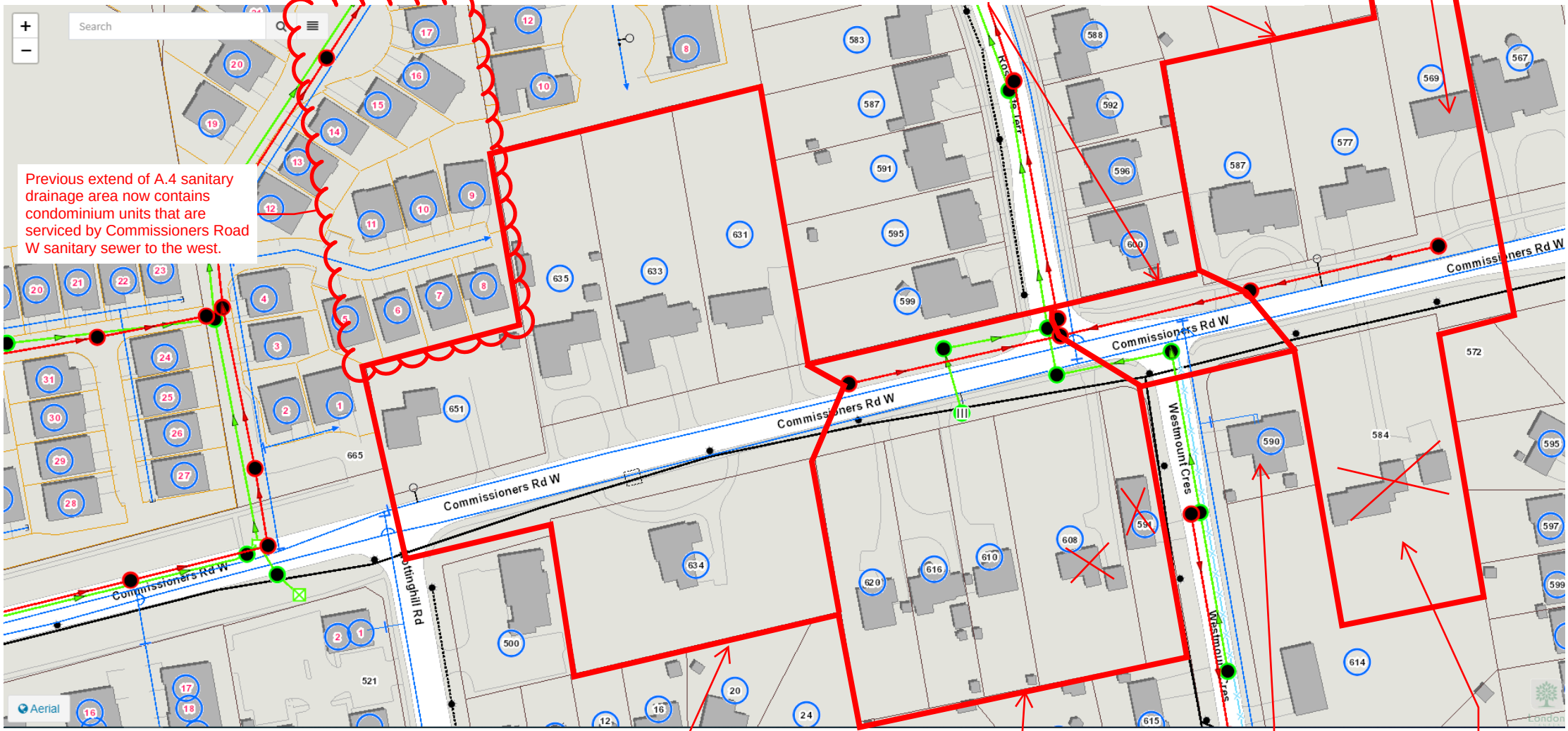
CORPORATION OF THE CITY OF LONDON
DIVISION HEAD
CITY ENGINEER

SCALE
Hor. 1 : 500
Vert 1 : 50
5 m 0 10 m Horizontal
0.5 m 0 1.0 m Vertical

TITLE
COMMISSIONERS ROAD WEST LATERAL SANITARY SEWER
130 m. EAST OF ROSECLIFFE TERRACE
80 m. WEST OF ROSECLIFFE TERRACE

PROJECT No 87-610/C/64
SHEET No 1
PLAN FILE No 10,587

Commissioners Road West Sanitary Catchment Areas Markup



Previous extend of A.4 sanitary drainage area now contains condominium units that are serviced by Commissioners Road W sanitary sewer to the west.

Drainage Area A2 (Refer to File No. 10589). Population = 0. Area = 0.19 ha.

Drainage Area A1 (Refer to File No. 10589). Area = 1.46 ha. Population = 3 low density Residential Units and 26 Medium Density Units

Existing residential dwelling serviced by SAN MH WT1591 (Refer to File No. 10587)

Drainage Area A3 (Refer to File No. 10589). Area is less than 2.86 ha noted in File No. 10589, however, for the purposes of this study, 2.86 Ha will be carried through the calculations. A population of 6 low density residential units will also be carried through the calculations as per the original design sheet. Area = 2.86 ha. Population = 6 low density residential units.

Drainage Area A4 (Refer to File No. 10589). Population = 3 low density residential units, 95 high density units. Area of 0.13 ha from 591 Westmount Crescent added to the A4 drainage area. Area = 1.15 ha.

Existing residential dwelling serviced by SAN MH WT980 on Westmount Crescent (Refer to File No. 3751)

Proposed 26 Unit Development at 584 Commissioners Road West. Subtraction of 1 low density residential unit.

*Background mapping from City of London Utility Located Map https://maps.london.ca/LocatesMap/LocatesMap/Map#

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Sanitary Service Design Sheet

City of London

Residential Population Densities

(A) Area Basis

Low Density Residential (Single Family/Semi-Detached) = 30 Units/hectare @ 3 people/unit
Medium Density Residential (Multi-Family/Townhouse) =75 Units/hectare @ 2.4 people/unit
High Density Residential (Apartment Buildings) =150-300 Units/hectare @ 1.6 people/unit
Commercial = 100 people/hectare

Design Parameters	
Daily Flow (L/cap/day)	350
Daily Flow (L/cap/day)	230
Sewage Infiltration (Litres/hectare/day)	8640
Harmon Formula (Peaking Factor), M = (1 + 14/(4+P^0.5))	
Uncertainty Factor	1.1

Date: October 25, 2021
Job Number: SBM-21-3026
Client: 608 Commissioners Inc c/o Copia Developments
Project: Proposed 6 Story Apartment Building
Location: 608 Commissioners Rd W & 591 Westmount Cres, London, ON
Designed By: KJC
Reviewed By: BH

Location			Area		Population						Sewage Flows				Sewer Design					
Area No.	From MH	To MH	Delta Hectare	Total Hectare	No. of Units/Lots	People Per Unit/Lots	People Per Hectare	Delta Pop.	Total Pop. (350 L/day)	Total Pop. (230 L/day)	Harmon Peaking Factor	Infilt L/S	Sewage L/S	Total L/S	n	Pipe Slope %	Dia. mm	Capacity L/S	Percentage Full %	Velocity m/s
Proposed Development																				
608 Commissioners Rd W			0.447	0.447	95	1.6	-	152	0	152	4.19	0.040	1.86	1.90	0.013	1.00%	150	15.24	12.50	0.86
A1 (DWG 10589)	1	2	1.460	1.460	4-1+26 = 29	3 & 2.4	-	72	12	63	4.28	0.171	1.02	1.188	0.013	0.50%	200	23.21	5.12	0.74
A2 (DWG 10589)	2	3	0.190	1.650	-	-	-	-	12	63	4.28	0.193	1.02	0.505	0.013	0.44%	200	21.77	2.32	0.69
A3 (DWG 10589)	POSS. FUTURE	4	2.860	2.860	6.0	3.0	-	24	24	0	4.37	0.335	0.47	0.803	0.013	0.50%	200	23.21	3.46	0.74
A4 (DWG 10589)	4	3	1.02+0.13=1.15	4.010	4-1+95 = 98	3 & 1.6	-	161	33	152	4.16	0.400	2.46	2.863	0.013	0.49%	200	22.97	12.46	0.73
-	3	Ex. MH	-	5.660	-	-	-	-	45	215	4.10	0.570	3.41	3.977	0.013	0.57%	250	44.92	8.85	0.92
A1 (DWG 10003)	SA-1	SA-2	0.968	6.628	6.0	3.0	-	18	63	215	4.09	0.660	3.73	4.385	0.013	3.63%	200	62.53	7.01	1.99
A2 (DWG 10003)	SA-2	SA-3	0.710	7.338	5.0	3.0	-	15	78	215	4.08	0.730	3.99	4.719	0.013	6.61%	200	84.37	5.59	2.69
A12 (DWG 10003)	SA-15	SA-16	0.631	0.631	6.0	3.0	-	18	18	0	4.39	0.060	0.35	0.412	0.013	1.55%	200	40.86	1.01	1.30
A11 (DWG 10003)	SA-16	SA-17	0.698	1.329	6.0	3.0	-	18	36	0	4.34	0.130	0.70	0.826	0.013	0.81%	200	29.54	2.80	0.94
A3 (DWG 10003)	SA-17	SA-3	0.080	1.409	-	-	-	-	36	0	4.34	0.140	0.70	0.836	0.013	0.79%	200	29.17	2.87	0.93
A4 (DWG 10003)	SA-3	SA-4	0.565	9.312	4.0	3.0	-	12	126	215	4.05	0.930	4.83	5.759	0.013	2.98%	200	56.65	10.16	1.80
A5 (DWG 10003)	SA-4	SA-5	0.100	0.100	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
A6 (DWG 10003)	SA-4	SA-5	0.580	9.992	5.0	3.0	-	15	141	215	4.05	1.000	5.09	6.089	0.013	6.38%	200	82.89	7.35	2.64
A7 (DWG 10003)	SA-6	SA-5	0.366	0.366	3.0	3.0	-	9	9	0	4.42	0.040	0.18	0.217	0.013	0.29%	250	32.04	0.68	0.65
A8 (DWG 10003)	SA-5	SA-7	0.570	10.928	4.0	3.0	-	12	162	215	4.03	1.090	5.45	6.542	0.013	0.34%	250	34.70	18.86	0.71
A9 (DWG 10003)	SA-7	SA-8	0.930	11.858	8.0	3.0	-	24	186	215	4.02	1.190	5.87	7.055	0.013	0.31%	250	33.13	21.30	0.67
A10 (DWG 10003)	SA-8	SA-9	0.970	12.828	8.0	3.0	-	24	210	215	4.01	1.280	6.28	7.556	0.013	0.37%	250	36.19	20.88	0.74
A13 (DWG 10003)	SA-15	SA-14	0.594	0.594	6.0	3.0	-	18	18	0	4.39	0.060	0.35	0.412	0.013	1.50%	200	40.19	1.02	1.28
A14 (DWG 10003)	SA-14	SA-13	0.183	0.777	1.0	3.0	-	3	21	0	4.38	0.080	0.41	0.490	0.013	4.44%	200	69.15	0.71	2.20
A15 (DWG 10003)	SA-13	SA-12A	0.040	0.817	-	-	-	-	21	0	4.38	0.080	0.41	0.490	0.013	4.76%	200	71.60	0.68	2.28
A16 (DWG 10003)	SA-12A	SA-12	0.508	1.325	-	-	-	62	83	0	4.26	0.130	1.58	1.707	0.013	4.67%	200	70.92	2.41	2.26
A17 (DWG 10003)	SA-12	SA-9	0.607	1.932	-	-	-	68	151	0	4.19	0.190	2.82	3.009	0.013	6.46%	200	83.41	3.61	2.66

EASEMENT (DWG 10003)	SA-9 (WT1110)	SA-10 (WT1111)	-	14.760	-	-	-	-	361	215	3.94	1.480	8.82	10.303	0.013	0.24%	250	29.15	35.34	0.59
EASEMENT (DWG 10003)	SA-10 (WT1111)	SA-11 (WT1112)	-	14.760	-	-	-	-	361	215	3.94	1.480	8.82	10.303	0.013	0.38%	250	36.68	28.09	0.75
EASEMENT (DWG 10003)	SA-11 (WT1111)	SA-MH (WT1119)	-	14.760	-	-	-	-	361	215	3.94	1.480	8.82	10.303	0.013	0.50%	200	23.21	44.40	0.74

Refer to Site Plan prepared by Matter Architectural Studio Inc.
Design Parameters obtained from Section 3.8 in the City of London DS&RM
Refer to City of London Commissioners Road West Sanitary Sewer Design Sheet File No. 10589 Dated October 1989
Refer to Rosecliffe Garden Estates Sanitary Sewer Design Sheet by Delcan File No. 10003 Dated October 1983
Refer to Rosecliffe Garden Estates Sanitary Drainage Areas by Delcan File No. 9993 Dated February 1988
As noted in record drawing No. 9993, the sanitary sewer sizes shown on the design sheet are one size smaller than those shown on the plans & profiles in accordance with instructions received from the city engineer in a letter dated March 20, 1984