STRIK BALDINELLI MONIZ
PLANNING • CIVIL • STRUCTURAL • MECHANICAL • ELECTRICAL

LONDON LOCATION
1599 Adelaide St. N., Unit 301
London, ON N5X 4E8
P: 519-471-6667

KITCHENER LOCATION
132 Queen St. S. Unit 4
Kitchener, ON N2G 1V9
P: 519-725-8093

www.sbmltd.ca
sbm@sbmltd.ca

Bakker Design & Build
6591 Sextion Rd 8
Watford ON, N0M 2S0

July 16, 2025
SBM-24-2208

Attn: Kent Bakker

Re: Servicing Feasibility Study
Proposed 6-unit Stacked Townhouse Development
25 Head Street North, Strathroy, Ontario

1. INTRODUCTION

This Servicing Feasibility Study (Study) has been prepared by Strik, Baldinelli, Moniz Ltd. (SBM) for Kent Bakker to address the servicing feasibility for the proposed 6-unit stacked townhouse development located at 25 Head Street North, Strathroy, ON.

The 0.131 ha site is currently occupied by a single-family dwelling and a driveway with access from Head Street North. The site abuts low-density residential dwellings to the northwest and southeast, the Head Street North Right-Of-Way (ROW) to the southwest, and the Mill Lane ROW to the northeast. It is our understanding that the proposed development is to include one (1) two-storey stacked townhouse block (6 units total) with associated parking areas, vehicle access from both Head Street North and Mills Lane, and common amenity spaces. It is proposed to demolish the existing house and associated structures to accommodate the proposed development. Please refer to the Site Plan and Zoning Chart, provided in Appendix A, for more information.

This Study is to determine the adequacy of the existing Municipality of Strathroy-Caradoc services in support of the Zoning By-Law Amendment (ZBA) application for the proposed development.

Design requirements have been based on the Municipality of Strathroy-Caradoc Servicing Standards (MSCSS) dated October 2021, the Ministry of Environment, Conservation of Parks Design and Guidelines for Drinking Water Systems (MECP DGDWS, 2008), and the current edition of the Ontario Building Code (OBC).

2. WATER SERVICING

According to the Municipality's record drawing "Head Street Storm and Sanitary Sewers from Front St. to Metcalfe St.", revision 1 "as constructed'" dated November 1994, provided in Appendix A, there is a 350 mm diameter ductile iron watermain in the Head Street North ROW. The size and location of the existing private water line servicing the existing house is currently unknown. The water servicing calculations, provided in Appendix B, indicate that a 100mm diameter private water service is sufficient to convey required flows for the proposed development and will be determined during the detailed design phase.

2.1 Domestic Water Supply

The maximum hour domestic demand for a population of 15 people (6 units at 2.4 people per unit per Section 4.3.2 of the MSCSS) is calculated to be 0.34 L/s. Refer to the domestic water demand calculations provided in Appendix B. As per the engineering comments from the Pre-Consultation Meeting Minutes (PC23-2024) with the Municipality, there are no known capacity concerns with the increased water demand created by the proposed development.

2.2 Water Supply for Fire Protection

Since the proposed townhome is Part 9 per the OBC, a sprinkler system is not required for the proposed townhome and therefore fire-fighting demand is determined as per OBC Vol-2, Section A-3.2.5.7. The calculations, provided in Appendix B, were based on a 6-unit townhome and result in a required fire flow rate of 2700 L/min which was combined with the maximum day domestic demand of 9.00 L/min to obtain the required supply fire flow + maximum day demand of 2709 L/min.

According to the Municipality's record drawing "Head Street Storm and Sanitary Sewers from Front St. to Metcalfe St.", revision 1 "as constructed'" dated November 1994, provided in Appendix A, there is an existing fire hydrant to the north on the southwest side of Head Street North. Based on the record drawing and the Site Plan and Zoning Chart provided in Appendix A, this fire hydrant is approximately 85 m from the furthest unit entrance and is therefore available to provide fire flows to the proposed development.

At the time of this study, there was no hydrant flow test information available for the municipal hydrant in the Head Street North ROW, therefore a flow test will be required during the detailed design phase to further estimate the adequacy of water pressure in the system for fire protection.

3. SANITARY SERVICING

According to the Municipality's record drawing "Head Street Storm and Sanitary Sewers from Front St. to Metcalfe St.", revision 1 "as constructed'" dated November 1994, provided in Appendix A, there is an existing 375 mm diameter sanitary sewer in the Head Street North ROW with one (1) sanitary private drain connection (PDC) of unknown size currently servicing the existing house.

The proposed flows from the subject property are shown on the Sanitary Sewer Design Sheet provided in Appendix C. Using a flow of 300 L/capita/day as per the Section 2.3 of the MSCSS dated October 2021, and a population of 15 people (6 units at 2.4 people/unit) results in an anticipated peak sanitary flow of 0.25 L/s. When combined with infiltration, this results in a total peak flow of 0.26 L/s. A PDC with a minimum diameter of 125 mm and a minimum slope of 2.0% is calculated to provide sufficient capacity (13.25 L/s) to convey the proposed flows. As per the engineering comments from the Pre-Consultation Meeting Minutes (PC23-2024) with the Municipality, there are no known sanitary capacity concerns for the increased flows downstream of the proposed development. Further information will be provided during the detailed design phase.

4. STORM SERVICING AND STORMWATER MANAGEMENT

According to the Municipality's record drawing "Head Street Storm and Sanitary Sewers from Front St. to Metcalfe St.", revision 1 "as constructed'" dated November 1994, provided in Appendix A, the site is tributary to a 825 mm diameter storm sewer at a slope of 0.45% in the Head Street North ROW.

As outlined in the attached imperviousness calculations, provided in Appendix D, the proposed development, with a calculated post-development C-value of 0.71, is expected to experience an increase in stormwater runoff compared to pre-development conditions with a C-value of 0.34. This is due to the increase in impervious surfaces, primarily from the larger post-development footprint. Pre-development area parameters were approximated using the Topographic Plan of Survey dated March 21, 2024, provided in Appendix A. Post-development area parameters were approximated using the Site Plan and Zoning Chart, provided in Appendix A.

Stormwater quantity control measures will be implemented on-site to restrict flows to the 825 mm diameter storm sewer in the Head Street North ROW to a maximum flow rate less than or equal to pre-development conditions. Detailed stormwater management calculations and grading design will be prepared during the detailed design phase of the project.

Stormwater quality controls will be designed to meet the SWM criteria and environmental targets identified for the site. These controls will comply with the standards set by the Ministry of the Environment, Conservation and Parks (MECP) and will be assessed at the detailed design phase of the project.

5. SUMMARY

A maximum hour domestic water demand of 0.34 L/s was calculated as per the appended water servicing calculations. A new 100 mm diameter water service is sufficient to provide the required water demand for the proposed 6-unit stacked townhouse development via the existing 350 mm diameter watermain located in the Head Street North ROW.

A sanitary design flow of 0.26 L/s was calculated as per the appended sanitary servicing calculations. A new 125 mm diameter sanitary service with a minimum slope of 2% is sufficient to convey sanitary flows from the proposed 6-unit stacked townhouse development to the existing 375 mm diameter sanitary sewer in the Head Street North ROW.

The site's stormwater runoff will be conveyed to the 825 mm diameter storm sewer in the Head Street North ROW at flow rates less than or equal to pre-development conditions. Detailed stormwater management calculations will be prepared during the detailed design phase of the project.

Based on the above, the existing municipal infrastructure and proposed site services have sufficient capacity to accommodate the proposed 6-unit stacked townhouse development within the 0.131 ha subject site located at 25 Head Street North, Strathroy, Ontario.

6. LIMITATIONS

This Study was prepared by SBM for Kent Bakker (owner), the Municipality of Strathroy-Caradoc, and the County of Middlesex. 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.

7. 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

Murali Gnanasekar, P. Eng
Civil Project Lead, Eng I

Samuel Noble
Civil Intern

List of Appendices

Appendix A: Site Plan and Zoning Chart

Municipality's record drawing "Head Street Storm and Sanitary Sewers from Front St. to Metcalfe St.", revision 1, dated November 1994

Topographic Plan of Survey of Part of Lot 7 East of Head Street Registered Plan No. 93, dated March 2024

Appendix B: Domestic Water Demand Calculations by SBM

Fire Flow Calculations (as per OBC Div. B A-3.2.5.7.) by SBM

Appendix C: Sanitary Service Design Sheet by SBM

Appendix D: Stormwater Management Imperviousness Calculations by SBM

APPENDIX A

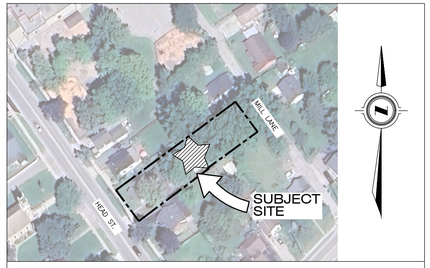
Site Plan and Zoning Chart

Municipality's record drawing "Head Street Storm and Sanitary Sewers from Front St. to Metcalfe St.", revision 1, dated November 1994

Topographic Plan of Survey of Part of Lot 7 East of Head Street Registered Plan No. 93, dated March 2024

LEGAL INFORMATION

PART OF
LOT 7
IN THE
CITY OF STRATHROY
COUNTY OF MIDDLESEX



KEY PLAN
N.T.S.

ZONING DATA CHART

GROSS LOT AREA: 1307.0m² BUILDING AREA: 291.8m²

ASPHALT: 484.8m² LANDSCAPE AREA: 534.46m²

No.	ITEM	REQUIRED	PROPOSED
1	ZONES	MED. DENSITY RESIDENTIAL (R2)	
2	LOT AREA (m² MIN.)	130.0	1307.0
2	LOT FRONTAGE (m MIN)	20.0	18.59*
3	FRONT YARD DEPTH (m) MIN.	5.00	5.00
5	EXTERIOR YARD DEPTH (m) MIN.	5.00	N/A
6	INTERIOR SIDE YARD SETBACK (m) MIN.	2.00	NORTH: 8.90
			SOUTH: 2.06
7	REAR YARD SETBACK (m) MIN.	8.00	22.22
9	LANDSCAPE OPEN SPACE (% MIN.)	30.0	40.6
10	LOT COVERAGE (% MAX.)	40%	22.3
11	PARKING LOT COVERAGE (MAX. %)	20.0	37.1*
12	PARKING SETBACK (m MIN.)	2.00	NORTH: 1.15*
			SOUTH: 0.44*
			EAST: 2.17
13	AMENITY AREA (m² MIN.)	20/UNIT (120.0m²)	290.73m²/6 UNITS TOTAL: ~48.5m²/UNIT

*ZONING DEFICIENCY

PERMITTED USES

MEDIUM DENSITY RESIDENTIAL (R2) ZONE:

- DWELLING, LINKED
- **DWELLING, MULTIPLE–UNIT (MAXIMUM 6 UNIT)**
- DWELLING, SEMI–DETACHED
- DWELLING, SINGLE DETACHED
- GROUP HOME – TYPE I (IN A SINGLE–DETACHED DWELLING ONLY)

WASTE REMOVAL

GARBAGE TO BE STORED INTERNALLY AND PLACED ON THE CURB FOR MUNICIPAL PICK–UP.

BUILDING CLASS.

RESIDENTIAL – GROUP C OCCUPANCY, PART 9 OF THE ONTARIO BUILDING CODE

CANADA POST

THIS DEVELOPMENT WILL RECEIVE MAIL TO A NEAR–BY SUPERBOX AS LOCATED BY CANADA POST.

PARKING DATA CHART

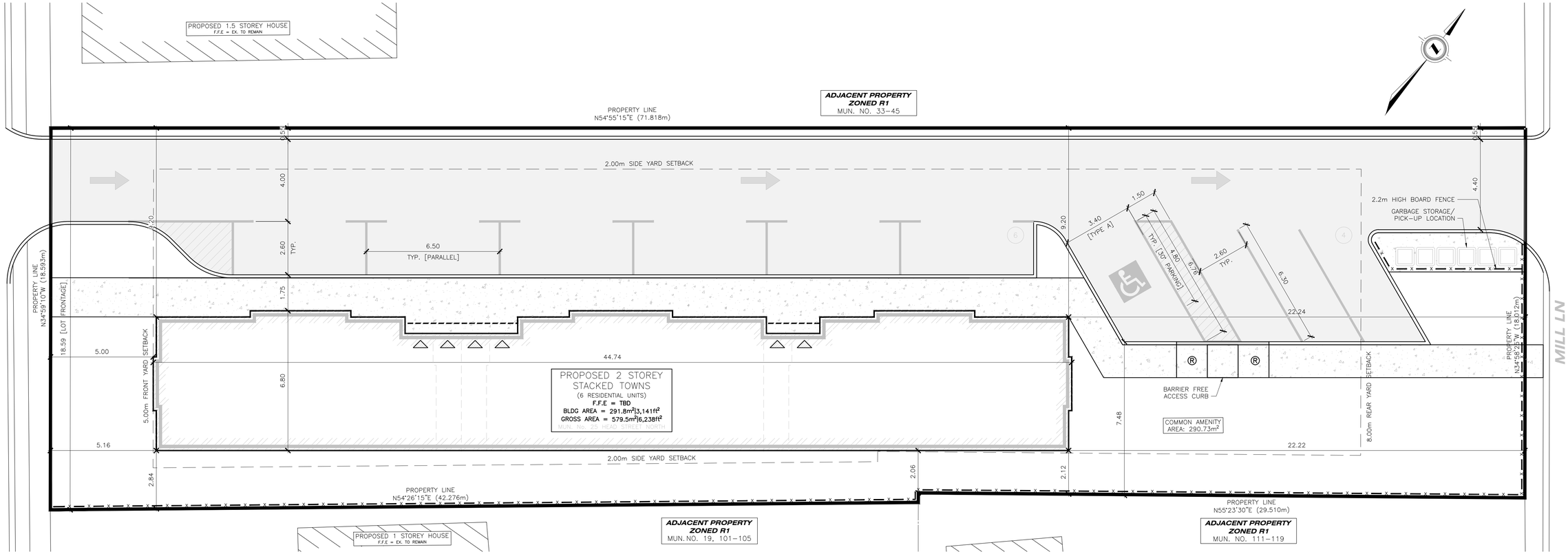
OFF–STREET VEHICLE PARKING

No.	ITEM	REQUIREMENT	REQUIRED	PROPOSED
1	DWELLING (MULTI–UNIT)	1.5 PER UNIT (6 UNITS)	9 SPACES	10 SPACES
2	TOTAL PARKING	SEE ABOVE	9 SPACES	10 SPACES
3	B.F. PARKING	1–50 TOTAL REQUIRED SPACES (20 SPACES)	2 SPACES	1 SPACE* (TYPE A)

*ZONING DEFICIENCY

LEGEND:

- FR–2 — PROPOSED SIGN, TYPE OF SIGN
- PROPOSED BARRIER FREE ROUTE
- PROPOSED FIRE ROUTE (6.0m WIDE, 12.0m ℄ RADIUS)
- PROPOSED SNOW STORAGE
- PROPOSED RAMP (SEE DETAIL ON SP2)
- EXISTING FIRE HYDRANT
- PROPOSED FIRE HYDRANT
- PROPOSED FIRE DEPARTMENT CONNECTION
- PRINCIPAL BARRIER FREE ENTRANCE & FIRE FIGHTER ACCESS ENTRANCE
- BUILDING ENTRANCE
- PROPOSED LIGHT–DUTY ASPHALT
- PROPOSED HEAVY–DUTY ASPHALT
- PROPOSED CONCRETE
- PROPOSED RETAINING WALL (DESIGNED BY OTHERS)
- EXISTING BUILDING
- PROPOSED BUILDING
- LIMITS OF SUBJECT PROPERTY
- DECIDUOUS/CONIFEROUS TREE
- LIGHTS, DESIGN BY OTHERS



SITE BENCHMARK:

MONUMENT TYPE:

LOCATION:

GEODETIC ELEVATION:

(CONTRACTOR TO CONFIRM BENCHMARK ELEVATIONS)

REFERENCE DOCUMENTS:

1. LEGAL INFO OBTAINED FROM PLAN OF SURVEY BY JEREMY MATTHEWS, MTE ONTARIO LAND SURVEYORS LTD. PLAN NO: 54740–100–T1 (L). DATED FEBRUARY 22 2024

PARCELS, BUILDINGS AND EXISTING INFORMATION ARE APPROXIMATE AND FOR REFERENCE ONLY.

CONCEPT IS PRELIMINARY AND HAS NOT BEEN REVIEWED BY THE CITY.

THE PLAN IS COMPILED AND SHOULD NOT BE CONSIDERED A PLAN OF SURVEY.

AS CONSTRUCTED SERVICES | COMPLETION

DESIGN	RM	
DRAWN	RM	
CHECKED	JRC	
APPROVED	JRC	
DATE	18/03/2025	
CAD	24–2208	

No.	REVISIONS	D/M/Y	BY
01	ISSUED FOR CLIENT REVIEW	23/10/24	RM
02	ISSUED FOR CLIENT REVIEW	21/11/24	OMP
03	ISSUED FOR CLIENT REVIEW	19/12/24	OMP
04	ISSUED FOR CLIENT REVIEW	22/01/25	OMP
05	ISSUED FOR CLIENT REVIEW	19/03/25	OMP

CONSULTANT

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ENGINEER'S STAMP

PRELIMINARY NOT FOR CONSTRUCTION

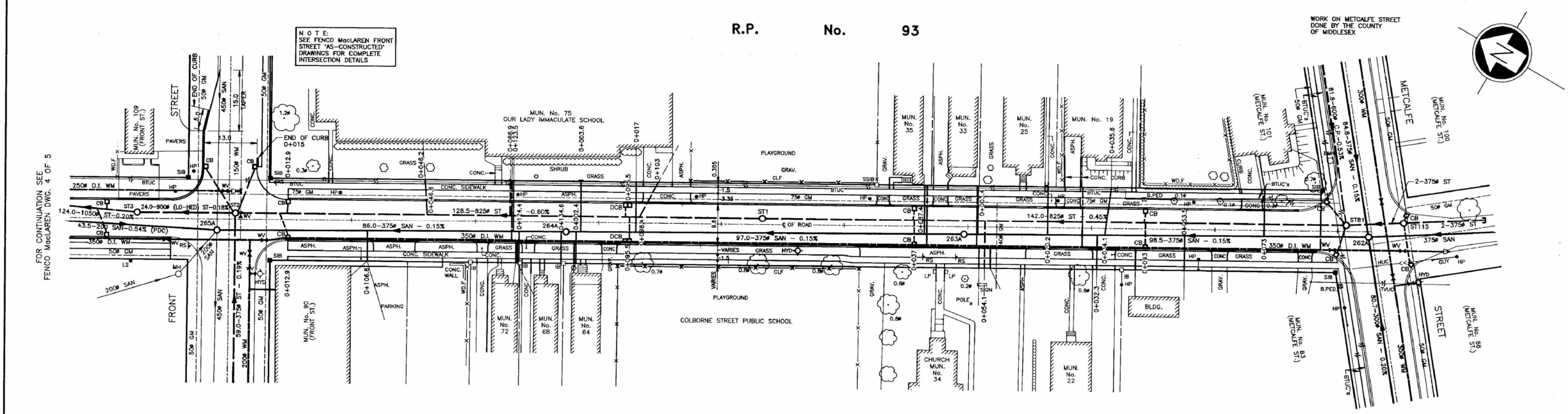
ENGINEER'S STAMP

CLIENT
BAKKER DESIGN & BUILD
6591 SEXTION RD 8
WATFORD, ON
NOM 2S0
P: 519–551–5219
E: BAKKERKENT@GMAIL.COM

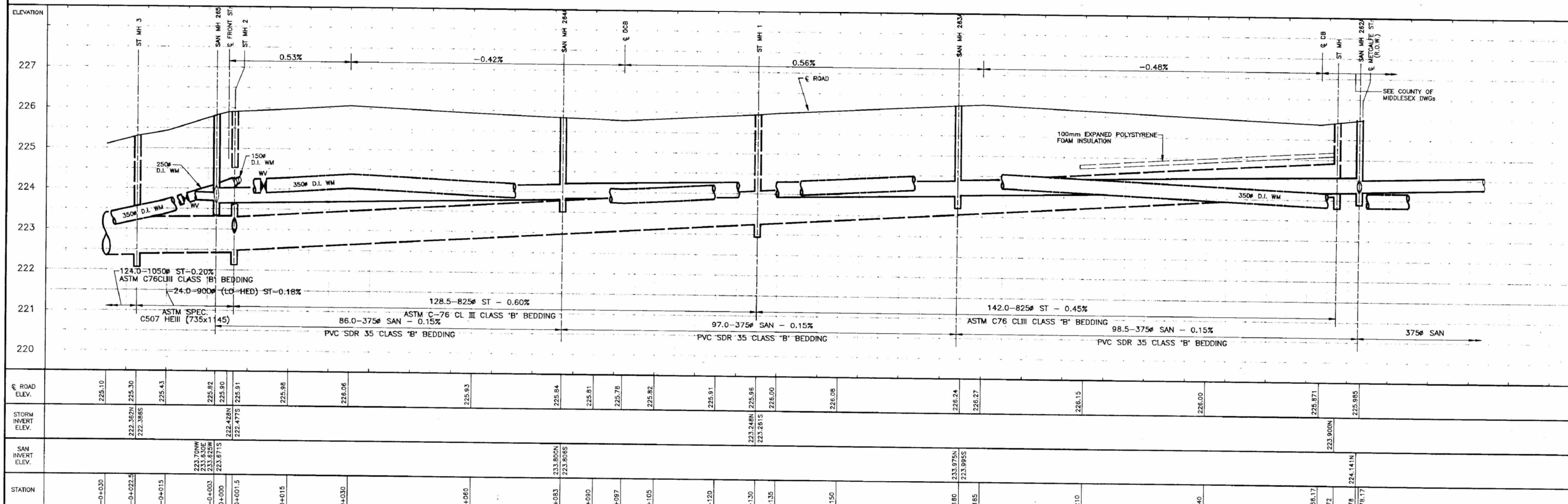
SCALE
SCALE – 1:100
1.0 0 2.0m

TITLE
SITE PLAN & ZONING CHART
PROPOSED DEVELOPMENT
25 HEAD ST N
STRATHROY, ON

PROJECT No. SBM–24–2208
SHEET No. SP1
REVISION No. 05



HEAD STREET



REV.	DATE	ISSUE RECORD
1	94.11.15	AS-CONSTRUCTED
0	94.05.25	ISSUE FOR TENDER

REV.	DATE	REVISION	APP'VD.

SEAL: DRAWING ISSUED FOR CONSTRUCTION STAMPED W.D. WISHART, P.ENG. 94/05/25

CLIENT: TOWN OF STRATHROY

PROJECT: HEAD STREET RECONSTRUCTION

DRAWN BY: R.A. TURGEON
CHECKED BY: T.A. COPELAND
DESIGNED BY: A.J. SLABON
LEAD ENGINEER: T.A. COPELAND
PROJ. MANAGER: W.D. WISHART

TITLE: CIVIL
HEAD STREET
STORM AND SANITARY SEWERS
(FROM FRONT ST. TO METCALFE ST.)

Fenco MacLaren SNC·LAVALIN

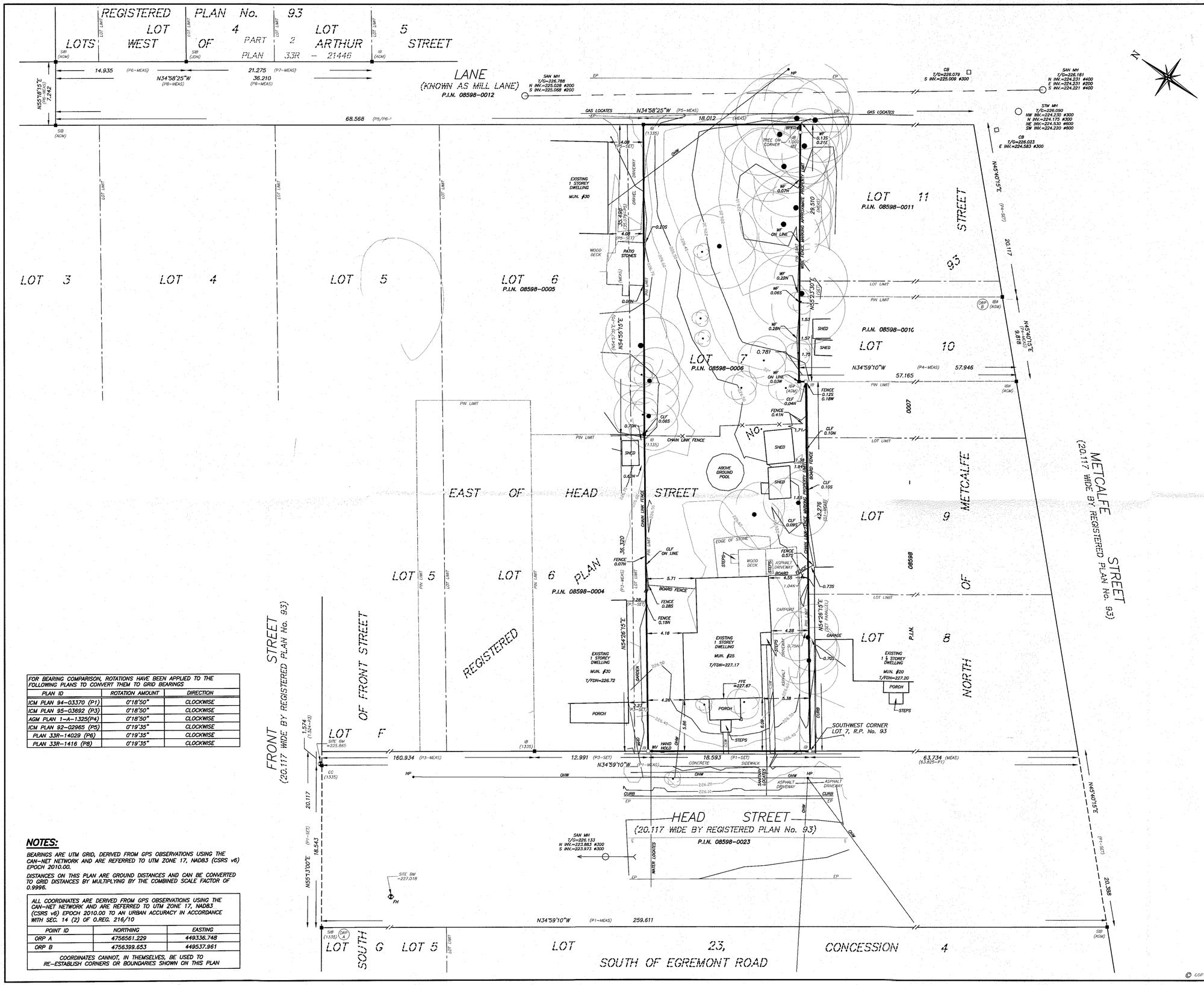
SCALE: 1:500 H, 1:50 V
DATE: MAY 1994
CLIENT'S DRAWING NUMBER:
F.M.L. DRAWING NUMBER: 3 OF 5

TOPOGRAPHIC PLAN OF SURVEY
OF PART OF
LOT 7
EAST OF HEAD STREET
REGISTERED PLAN No. 93
(FORMERLY TOWN OF STRATHROY)
IN THE
MUNICIPALITY OF STRATHROY–CARADOC
COUNTY OF MIDDLESEX

SCALE 1:200

0 1 2 3 4 6 12 METRES

MTE OLS LTD.
ONTARIO LAND SURVEYORS



METRIC:

DISTANCES AND CO–ORDINATES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048.

AREAS SHOWN ON THIS PLAN ARE IN SQUARE METRES AND CAN BE CONVERTED TO SQUARE FEET BY MULTIPLYING BY 10.7639.

LEGEND:

□	DENOTES PLANTED MONUMENT
■	DENOTES FOUND MONUMENT
SIB	DENOTES STANDARD IRON BAR
IB	DENOTES IRON BAR
IB#	DENOTES ROUND IRON BAR
OU	DENOTES ORIGIN UNKNOWN
WIT	DENOTES WITNESS
MEAS	DENOTES MEASURED
CALC	DENOTES CALCULATED
1335	DENOTES I.C. McLAREN LTD., O.L.S.
ICM	DENOTES I.C. McLAREN LTD., O.L.S.
AGM	DENOTES ARCHIBALD, GRAY & McKAY, O.L.S.'s
JDN	DENOTES J.D. NISBET, O.L.S.
RP	DENOTES REGISTERED PLAN
P1	DENOTES ICM PLAN 94–03370
P2	DENOTES ICM NOTES 95–03692
P3	DENOTES ICM PLAN 95–03692
P4	DENOTES AGM PLAN 1–A–1325
P5	DENOTES ICM PLAN 92–02965
P6	DENOTES PLAN 33R–14029
P7	DENOTES PLAN 33R–21446
P8	DENOTES PLAN 34R–1416
D1	DENOTES INST. No. 945526
CLF	DENOTES CHAIN LINK FENCE
CSW	DENOTES CONCRETE SIDEWALK
EP	DENOTES EDGE OF PAVEMENT
CL	DENOTES CENTRELINE OF ROAD
HP	DENOTES HYDRO POLE
OHW	DENOTES OVERHEAD WIRE
BPED	DENOTES BELL PEDESTAL
WF	DENOTES WIRE FENCE
CB	DENOTES CATCH BASIN
	DENOTES CONIFEROUS TREE
	DENOTES DECIDUOUS TREE
253.33	DENOTES EXISTING ELEVATION

FOR BEARING COMPARISON, ROTATIONS HAVE BEEN APPLIED TO THE FOLLOWING PLANS TO CONVERT THEM TO GRID BEARINGS		
PLAN ID	ROTATION AMOUNT	DIRECTION
ICM PLAN 94–03370 (P1)	0°18'50"	CLOCKWISE
ICM PLAN 95–03692 (P3)	0°18'50"	CLOCKWISE
AGM PLAN 1–A–1325(P4)	0°18'50"	CLOCKWISE
ICM PLAN 92–02965 (P5)	0°19'35"	CLOCKWISE
PLAN 33R–14029 (P6)	0°19'35"	CLOCKWISE
PLAN 33R–1416 (P8)	0°19'35"	CLOCKWISE

NOTES:

BEARINGS ARE UTM GRID, DERIVED FROM GPS OBSERVATIONS USING THE CAN–NET NETWORK AND ARE REFERRED TO UTM ZONE 17, NAD83 (CSRS v6) EPOCH 2010.00.

DISTANCES ON THIS PLAN ARE GROUND DISTANCES AND CAN BE CONVERTED TO GRID DISTANCES BY MULTIPLYING BY THE COMBINED SCALE FACTOR OF 0.9996.

ALL COORDINATES ARE DERIVED FROM GPS OBSERVATIONS USING THE CAN–NET NETWORK AND ARE REFERRED TO UTM ZONE 17, NAD83 (CSRS v6) EPOCH 2010.00 TO AN URBAN ACCURACY IN ACCORDANCE WITH SEC. 14 (2) OF O.REG. 216/10

POINT ID	NORTHING	EASTING
ORP A	4756561.229	449336.748
ORP B	4756399.653	449537.961

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

SURVEYOR'S CERTIFICATE:

I CERTIFY THAT:

1. THIS SURVEY AND PLAN ARE CORRECT AND IN ACCORDANCE WITH THE SURVEYS ACT, THE SURVEYORS ACT AND THE REGULATIONS MADE UNDER THEM.
2. THE SURVEY WAS COMPLETED ON THE 22ND DAY OF FEBRUARY, 2024.

MARCH 21, 2024
DATE

JEREMY C.E. MATTHEWS
ONTARIO LAND SURVEYOR

THIS PLAN OF SURVEY RELATES TO AOLS PLAN SUBMISSION FORM NUMBER:
2215231

MTE ONTARIO LAND SURVEYORS LTD.
365 HOME STREET
STRATFORD, ONTARIO, N5A 2A5
TEL: 519–271–7952

Cad File: P:\P\54740\100\54740–100–T1.DWG | COGO : 54740–100–UTMGROUND.ASC
Drawn By : C. JANSSEN | Checked By : J. MATTHEWS, OLS | File No : 54740–100–T1 (L)

APPENDIX B

Domestic Water Demand Calculations

Fire Flow Calculations (as per OBC Div. B A-3.2.5.7.)

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DOMESTIC WATER DEMAND, AND VELOCITY CALCULATION

DATE:	June 24, 2025
JOB No.:	SBM-24-2208
Client:	**Kent Bakker**
Project:	**Proposed 6-unit Stacked Townhouse Development**
Location:	**25 Head Street North, Strathroy, ON**

DEMAND CALCULATION

Avg. Day Demand =	250	L/day/cap
Avg. Day Demand =	0.002893519	L/s/cap
Max. Day Peaking Factor =	3.5	
Max. Hour Peaking Factor =	7.8	
Medium Density Residential =	2.4	p/unit

	Units	Population	Avg. Day (L/s)	Max. Hour (L/s)	Max. Day (L/s)
Medium Density Residential	6	15	0.04	0.34	0.15
Total			**0.04**	**0.34**	**0.15**

VELOCITY CALCULATION

Diameter (mm)	Demand (L/s)	Velocity (m/s)
100	0.34	0.043

Maximum allowable velocity of 1.5 m/s under maximum hour domestic flow conditions as per Section 4.3.2 of the Municipality of Strathroy-Caradoc Servicing Standards.

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Fire-Fighting Flow (OBC A-3.2.5.7.)

DATE:	June 24, 2025
JOB N0.:	SBM-24-2208

Client:	**Kent Bakker**
Project:	**Proposed 6-unit Stacked Townhouse Development**
Location:	**25 Head Street North, Strathroy, ON**

$Q=K*V*S_{Tot}$

Building Classification (3.1.2.1):	C	
Type of Construction:	Combustible	
K (Table 1):	**23**	
Building Area, m^2:	291.80	
Building Height, m:	6.80	
Building Volume, m^3:	**1984.24**	

$S_{Tot} = 1.0 + (S_{side1} + S_{side2} + S_{side3} + S_{side4})$

S_{side1} (Figure 1) =	0.10	(North)
S_{side2} (Figure 1) =	0.00	(East)
S_{side3} (Figure 1) =	0.50	(South)
S_{side4} (Figure 1) =	0.50	(West)
S_{Tot} =	2.10	
S_{Tot} > or = 2, therefore S_{Tot} =	**2.00**	
Q, L =	**91275**	

Required Supply Flow Rate, L/min (Table 2) =	2700	
Maximum day domestic demand (as per separate calculation sheet)	0.15	L/s
	9.00	L/min
Required Supply Fire Flow + Maximum Day Demand, L/min =	**2709**	

APPENDIX C

Sanitary Service Design Sheet

STRIK BALDINELLI MONIZ
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KITCHENER LOCATION
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P: 519-725-8093

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sbm@sbmltd.ca

Sanitary Service Design Sheet

Residential Population Densities

(A) Area Basis

Low Density Residential	= 30 Units/hectare @ 2.4 people/unit
Medium Density Residential	**=75 Units/hectare @ 2.4 people/unit**
High Density Residential	=150-300 Units/hectare @ 1.6 people/unit

Design Parameters*

Daily Flow (L/cap/day) =	300
Sewage Infiltration (Litres/hectare/day) =	6740
Harmon Formula (Peaking Factor)	
M = (1 + 14/(4+P^0.5))	
Uncertainty Factor	1.1

Date: June 24, 2025
Job Number: SBM-24-2208
Client: Kent Bakker
Project: Proposed 6-unit Stacked Townhouse Development
Location: 25 Head Street North, Strathroy, ON
Designed By: SN
Reviewed By: MGn

Location			Area						Sewage Flows				Sewer design				
Area No.	From MH	To MH	Delta Hectare	Total Hectare	People Per Unit	No. of Units	*Delta Pop.	Total Pop.	Harmon Peaking Factor	Infilt L/S	Sewage L/S	Total L/S	n	Pipe Slope %	Dia. mm	Capacity L/S	Velocity m/s
Proposed Conditions																	
25 Head Street North, Strathroy, ON	Site	Ex. Sewer	0.131	0.131	2.4	6	15	15	4.84	0.01	0.25	0.26	0.013	2.00%	125	13.25	1.08

*Design Parameters per the Municipality of Strathroy-Caradoc Servicing Standards Section 2.3 dated October 2021

APPENDIX D

Stormwater Management Imperviousness Calculations

STRIK BALDINELLI MONIZ
PLANNING · CIVIL · STRUCTURAL · MECHANICAL · ELECTRICAL

LONDON LOCATION
1599 Adelaide St. N., Unit 301
London, ON N5X 4E8
P: 519-471-6667

KITCHENER LOCATION
132 Queen St. S. Unit 4
Kitchener, ON N2G 1V9
P: 519-725-8093

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sbm@sbmltd.ca

IMPERVIOUSNESS CALCULATIONS

DATE: June 24, 2025
JOB N0.: SBM-24-2208

Client: **Kent Bakker**
Project: **Proposed 6-unit Stacked Townhouse Development**
Location: **25 Head Street North, Strathroy, ON**

PRE-DEVELOPMENT

	Area (m2)	C	A*C
Total Area:	1307.00		
Building Area:	166.08	0.9	149.47
Concrete/Asphalt:	98.58	0.9	88.72
Gravel:	0.00	0.7	0.00
Landscaped/Open:	1042.34	0.2	208.47
Totals:	1307.00		446.66
Ceq = Sum(A*C)/Sum(A) =	0.34		
Imperviousness (%)	20.3		

POST-DEVELOPMENT

	Area (m2)	C	A*C
Total Area:	1307.00		
Building Area:	291.80	0.9	262.62
Concrete/Asphalt:	657.02	0.9	591.32
Gravel:	0.00	0.9	0.00
Landscaped/Open:	358.18	0.2	71.64
Totals:	1307.00		925.57
Ceq = Sum(A*C)/Sum(A) =	0.71		
Imperviousness (%)	72.6		