SEE DRAWING No. 15 FOR GENERAL NOTES

LEGEND

SAN	PROPOSED SANITARY SEWER	W	PROPOSED WATERMAIN
SAN	EXISTING SANITARY SEWER	W	EXISTING WATERMAIN
SAN	FUTURE SANITARY SEWER	W	FUTURE WATERMAIN
ST	PROPOSED STORM SEWER		SUBDIVISION LIMITS
ST	EXISTING STORM SEWER		
ST	FUTURE STORM SEWER		

- MH — MAINTENANCE HOLE
- CB — CATCH BASIN
- WATER VALVE
- BO — WATER SERVICE CURB STOP
- HYDRANT

CONSULTANT:
CJDL Consulting Engineers
Cyril J. Demeyere Limited
P.O. Box 460, 261 Broadway
Tillsonburg, Ontario. N4G 4H8
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866-302-9886
Fax: 519-842-3235
cjdl@cjdleng.com

STAMP:
PRELIMINARY 10 FEB 2025

REVISION			
#	DESCRIPTION	DD/MM/YYYY	BY

GENERAL PLAN OF SERVICES

CONTRACT #: 24055
SCALE: 1:1000
PROJECT NAME: SHEDDEN SANITARY SERVICING
COUNTY OF ELGIN
TOWNSHIP OF SOUTHWOLD
DRAWING #: 2

2025 EDITION

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SEE DRAWING No. 15 FOR GENERAL NOTES

LEGEND

SAN	PROPOSED SANITARY SEWER
SAN	EXISTING SANITARY SEWER
SAN	FUTURE SANITARY SEWER
	PROPOSED MANHOLE, EXISTING/FUTURE
	LIMIT OF DRAINAGE AREA
233.0	METRIC CONTOUR ELEVATIONS IN METRES (BY CJDL SITE SURVEY)
	SUBDIVISION PHASE LIMIT
A1	AREA NUMBER
18 P 0.42 ha	AREA IN HECTARES
	POPULATION

CONSULTANT:

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PRELIMINARY
10 FEB 2025

LICENSED PROFESSIONAL ENGINEER
PROVINCE OF ONTARIO

REVISION			
#	DESCRIPTION	DD/MM/YYYY	BY

SANITARY DRAINAGE SYSTEM AND AREAS

CONTRACT #: 24055
SCALE: 1:1000
PROJECT NAME: SHEDDEN SANITARY SERVICING
COUNTY OF ELGIN
TOWNSHIP OF SOUTHWOLD
DRAWING #: 3

2025 EDITION

SANITARY SEWER DESIGN SHEET

CJDL Consulting Engineers

PROJECT: 4431 UNION ROAD SANITARY PUMPING STATION

MUNICIPALITY: TOWNSHIP OF SOUTHWOLD (NORTH PORT STANLEY)

DATE: 2025-02-14
DESIGNED BY: RJH
CHECKED BY: DJL
JOB No.: 24055
SHEET: 1 of 1

CENTRAL ELGIN WWTP CLASS EA DESIGN CRITERIA

POPULATION: 2.6 Persons/UNIT
LOW DENSITY: 44 Persons/ha (i.e. 22 UNIT/ha)
MEDIUM DENSITY: 65 Persons/ha (ie. 35 UNIT/ha)
HIGH DENSITY: 130 Persons/ha (ie. 50 UNIT/ha)
INFILTRATION: 0.100 l/s/ha
SEWAGE: 300 l/Person/Day
COMMERCIAL: 0.32 l/s/ha (28 m^3/ha/d)
Uncertainty Factor: 1.1

$M=1+14(4+P^{0.5})^{-1}$ (l/s)
P=Population in thousands

$Cap=1000n^{-1}A*R^{0.667}s^{0.5}$ (l/s)
R=Hydraulic radius (=∅/4) (m)
A=Pipe cross-sectional area (m^2)
s=Slope of pipe

NO	REVISION	DATE	BY

LOCATION				AREA			POPULATION				Peaking Factor, M	Sewage (l/s)	Infiltration (l/s)	Design Flow (l/s)	PROPOSED SEWER							UPSTREAM INVERT (m)	DOWN STREAM INVERT (m)	FALL (m)	DROP ACROSS LOWER MANHOLE (m)
AREA #	STREET	FROM MH	TO MH	Net or Gross	∆ Area (ha)	Total Area (ha)	PER ha.	NO. LOTS	∆ Pop	Total Pop.					Length (m)	Pipe Size (mm)	Type of Pipe	n	Min Slope (%)	Capacity (l/s)	Full Flow Velocity (m/s)				
INTERIM FLOW																									
A8a	35556 UNION ROAD SUBDIVISION			GROSS	10.38	10.38			512	512	3.969	7.761	1.038	8.80											
A8f	EXISTING LOW DENSITY RESIDENTIAL			GROSS	8.63	8.63			180	180	4.164	2.863	0.863	3.73											
A8g	UNION ROAD			GROSS	4.37	4.37			130	130	4.211	2.091	0.437	2.53											
TOTAL FLOW				GROSS		23.38				822	3.853	12.098	2.338	14.44		200	PVC	0.013	0.40	20.74	0.66				
													AVG.	5.48	Pump Station Q_{out} = 15.0 l/s										
ULTIMATE FLOW																									
A8b	EXISTING LOW DENSITY RESIDENTIAL			GROSS	9.19	9.19			82	82	4.266	1.336	0.919	2.26											
A8h	ORCHARD LANDS			GROSS	10.90	10.90			585	585	3.938	8.799	1.090	9.89											
A8e	FUTURE RESIDENTIAL			GROSS	4.81	4.81			240	240	4.118	3.775	0.481	4.26											
A8d	EXISTING RESIDENTIAL			GROSS	6.57	6.57			69	69	4.284	1.129	0.657	1.79											
A8c	UNION ROAD			GROSS	4.43	4.43			33	33	4.348	0.548	0.443	0.99											
A8F1	FUTURE MIXED DENSITY RESIDENTIAL			GROSS	7.50	7.50			768	768	3.871	11.355	0.750	12.10											
A8F2	FUTURE MIXED DENSITY RESIDENTIAL			GROSS	28.13	28.13			1386	1386	3.704	19.609	2.813	22.42											
TOTAL FLOW				GROSS		94.91				3985	3.335	50.757	9.491	60.25		200	PVC	0.013	0.40	20.74	0.66				
													AVG.	24.71	Pump Station Q_{out} = 61.0 l/s										

LEGEND

- PROPOSED SANITARY
- EXISTING SANITARY
- FUTURE EXTERNAL SANITARY
- CRITICAL FLOW PATH
- PROPOSED FORCEMAIN
- DESIGNATION LIMIT (SOUTHWOLD OP, 2021)
- SANITARY TRIBUTARY
- POSSIBLE FUTURE DEVELOPMENT AREA
- METRIC CONTOUR ELEVATIONS IN METRES (BY CJDL SITE SURVEY)
- SANITARY TRIBUTARY FLOW
- 02 — AREA NUMBER
- 1.02 ha — AREA IN HECTARES
- 62 P — POPULATION

CONSULTANT:

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Township of Southwold

STAMP:

PROFESSIONAL ENGINEER
LICENSED
D. J. LYLE
100174172
PROVINCE OF ONTARIO

PRELIMINARY
19 DEC 2024

REVISION			
#	DESCRIPTION	DD/MM/YYYY	BY

SHEDDEN SANITARY TRIBUTARY AREAS

CONTRACT #: 24055

SCALE: 1:5000

PROJECT NAME: NORTH SHEDDEN SANITARY SERVICING TOWNSHIP OF SOUTHWOLD

DRAWING #: FIG

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