SANITARY CALCULATIONS (NEW BUILDING):

RESIDENTIAL SANITARY CALCULATIONS

$Q = (1.25 \times (a \times M)) + b$

$M = 1 + (14/(4+P^{0.5}))$

Where:
Density = 2.25 per/unit
P= (2.25per/unit x 90 units)/1000 = 0.203
a = $0.33m^3$/per/day x 203 per = 66.99 m^3/day *
b = $24m^3$/gross Hectare x 0.16 Hectares = 3.84 m^3/day

$M = 1 + (14/(4+0.203^{0.5}))=4.14$

Q = (1.25 ((4.14 x 66.99m^3/day))+3.84m^3/day) = 351.47m^3/day = 0.0041 m^3/s

COMMERCIAL SANITARY CALCULATIONS

Average Daily Flow = 6 L/m^2/day (Stores, Shopping Centres & Office)*
Floor Area = 244m^2
Peak Factor = 24/8 = 3

Q = (1.25 (244m^2 X 6 L/m^2/day X 3))/1000 = 5.49m^3/day = 0.0001 m^3/s

Q Total = 0.0042m^3/day

PIPE CAPACITY FOR 150mm PVC DR35 @ 1.0% SLOPE = 0.020 m^3/s
PIPE PERCENT FULL = 21%

PIPE CAPACITY FOR EX. 225mm CONC. @ 0.5% SLOPE = 0.032 m^3/s

NOTE:

WASTEWATER FLOW CALCULATIONS ARE BASED ON CONCEPTUAL PLAN ONLY AND ARE SUBJECT TO CHANGE FOLLOWING NEGOTIATION OF THE DEVELOPMENT AGREEMENT FOR THIS SITE.

* FROM ATLANTIC CANADA WASTEWATER GUIDELINES MANUAL

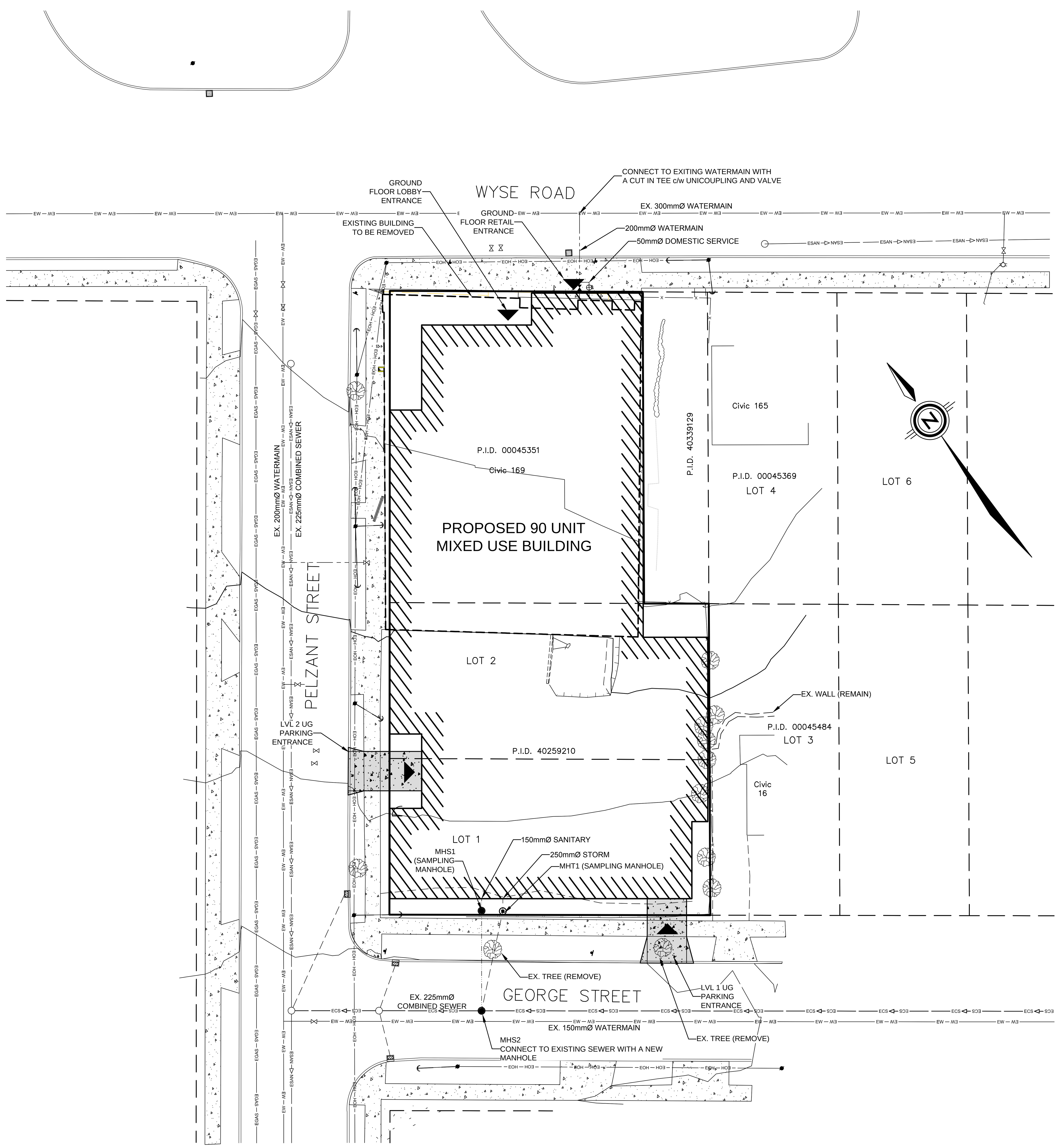
SUBCATCHMENT AREAS & CURVE NUMBERS

	SUBCATCHMENT AREA		SCS CURVE NUMBER	DESCRIPTION
SITE AREA	PRE-DEVELOPMENT	0.16± Ha	98	ASPAHLT/ROOF
	POST DEVELOPMENT	0.16± Ha	92	COMPOSITE CN BASED ON 74% ASPHALT/ROOF (CN=98), 26% WOOD/GRASS (CN=76).

STORM DRAINAGE ANALYSIS SCS METHOD

SITE AREA	Tc (min)	5 YEAR FLOW (L/s)	100 YEAR FLOW (L/s)
PRE DEVELOPED	5.0	33	53
FULLY DEVELOPED UNCONTROLLED FLOW	5.0	31	51
POST DEVELOPMENT	5.0	23	51

* ASSUMED ROOFTOP STORAGE USED IN CALCULATION OF POST DEVELOPMENT FLOW.
SYNTHETIC DESIGN STORM DISTRIBUTION ASSUMES ANNUAL HALIFAX STORM OF 24 HOUR DURATION, 5 MINUTE INCREMENT.
5 YEAR RAINFALL AMOUNT = 4.9in (123mm).
100 YEAR RAINFALL AMOUNT = 9.5in (241mm).



GENIVAR
1 SPECTACLE LAKE DRIVE
DARTMOUTH, NOVA SCOTIA
CANADA, B3B 1X7
PHONE: 902 835-9955 ~ FAX: 902 835-1645
WWW.GENIVAR.COM

SEAL:

REGISTERED PROFESSIONAL ENGINEER
DATE 2013/12/17
Originally Signed
N. T. FOUGERE
9050
PROVINCE OF NOVA SCOTIA

KEY PLAN:

LEGEND:		PROPOSED		EXISTING	
EDGE OF PAVEMENT					
LOTLINE					
WATERMAIN & GATE VALVE		W		EW	
SANITARY PIPE & MANHOLE		SAN		ESAN	
STORM PIPE & MANHOLE		STM		ESTM	
UTILITY LINES & POLE		OH		EOH	
STREET BOUNDARY			SANITARY LATERAL		
PROPERTY BOUNDARY			STORM LATERAL		
EASEMENT			WATER LATERAL		
CURB & DRIVEWAY CUT			CATCH BASIN LEAD		
CATCH BASIN		ENDCAP		CULVERT	
FIRE HYDRANT		LIGHT STANDARD		HEADWALL	
STREET TREE		PHONE PEDESTAL		SIDEWALK	
ROAD SIGN		URD BOX		FENCE	x

REVISION:

NO.	DATE YYYY/MM/DD	DESCRIPTION
1	2014/06/13	REVISED UNIT COUNT
0	2013/12/17	ISSUED FOR REVIEW

PROJECT NO: 131-23735
DATE: (YYYY/MM/DD) 2013/12/17
ORIGINAL SCALE: HORIZONTAL: 1:250 VERTICAL: N/A
DESIGNED BY: N. FOUGERE
DRAWN BY: N. FOUGERE
CHECKED BY: N. FOUGERE
IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
25mm
SCALE: 1:250 METRIC
5 4 3 2 1 0 5 10 15

CLIENT:

3021386 NS LTD.
DARTMOUTH, NS

CLIENT REF. # #

PROJECT:

MIXED USE BUILDING
169 WYSE ROAD
DARTMOUTH, NS

TITLE:

PRELIMINARY SERVICING PLAN

SHEET NUMBER: 1
SHEET # 1 OF 1

ISSUE: REVISED UNIT COUNT
REV # 1
DATE OF: 2014/06/13

GENIVAR REF. NO.: ---- K:\DARTMOUTH\2013\131-23735 WYSE RD_DARTMOUTH\1_DWG\11_CIVIL\11.4_2_PRODUCTION_DRAWINGS\111-24965-BASE_VERSION 1.1.DWG LAYOUT1 PRINTED: 4:18 PM 2014/06/16 BY: NEIL.FOUGERE
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