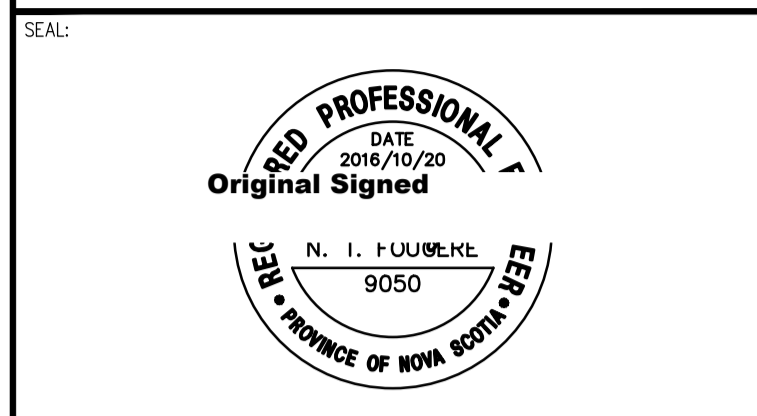




WSP Canada Inc.
 1 Spectacle Lake Drive
 Dartmouth, Nova Scotia, Canada B3B 1X7
 T 902-835-9955 F 902-835-1645 www.wspgroup.com



LEGEND:		PROPOSED	EXISTING
EDGE OF PAVEMENT	LOTLINE	---	---
WATERMAIN & GATE VALVE	SANITARY PIPE & MANHOLE	---	---
SANITARY PIPE & MANHOLE	STORM PIPE & MANHOLE	---	---
STORM PIPE & MANHOLE	UTILITY LINES & POLE	---	---
UTILITY LINES & POLE	STREET BOUNDARY	---	---
STREET BOUNDARY	PROPERTY BOUNDARY	---	---
PROPERTY BOUNDARY	EASEMENT	---	---
EASEMENT	CURB & DRIVEWAY CUT	---	---
CURB & DRIVEWAY CUT	CATCH BASIN	---	---
CATCH BASIN	FIRE HYDRANT	---	---
FIRE HYDRANT	STREET TREE	---	---
STREET TREE	ROAD SIGN	---	---
ROAD SIGN	SANITARY LATERAL	---	---
SANITARY LATERAL	STORM LATERAL	---	---
STORM LATERAL	WATER LATERAL	---	---
WATER LATERAL	CATCH BASIN LEAD	---	---
CATCH BASIN LEAD	ENDCAP	---	---
ENDCAP	CULVERT	---	---
CULVERT	HEADWALL	---	---
HEADWALL	SIDEWALK	---	---
SIDEWALK	FENCE	---	---
FENCE			

DISCLAIMER:
 DRAWINGS SUBJECT TO APPROVAL PRIOR TO CONSTRUCTION. THIS DRAWING AND DESIGN IS COPYRIGHT PROTECTED WHICH SHALL NOT BE USED, REPRODUCED OR REISED WITHOUT WRITTEN PERMISSION BY WSP CANADA INC. THE CONTRACTOR SHALL CHECK AND VERIFY ALL DIMENSIONS AND UTILITY LOCATIONS AND REPORT ALL ERRORS AND OMISSIONS PRIOR TO COMMENCING WORK.

NO.	DATE	DESCRIPTION
0	2016/10/20	ISSUED FOR REVIEW

PROJECT NO:	161-11800	DATE:	2016/10/20
ORIGINAL SCALE:	HORIZONTAL: 1:200	VERTICAL: N/A	IF THIS BAR IS NOT 25mm LONG, ADJUST YOUR PLOTTING SCALE.
DESIGNED BY:	N. FOUGERE, P.ENG.		
DRAWN BY:	J. MORSE, C.E.T.		
CHECKED BY:	N. FOUGERE, P.ENG.		



CLIENT:
PRINCIPAL DEVELOPMENTS LTD.

CLIENT REF. #
 PROJECT:

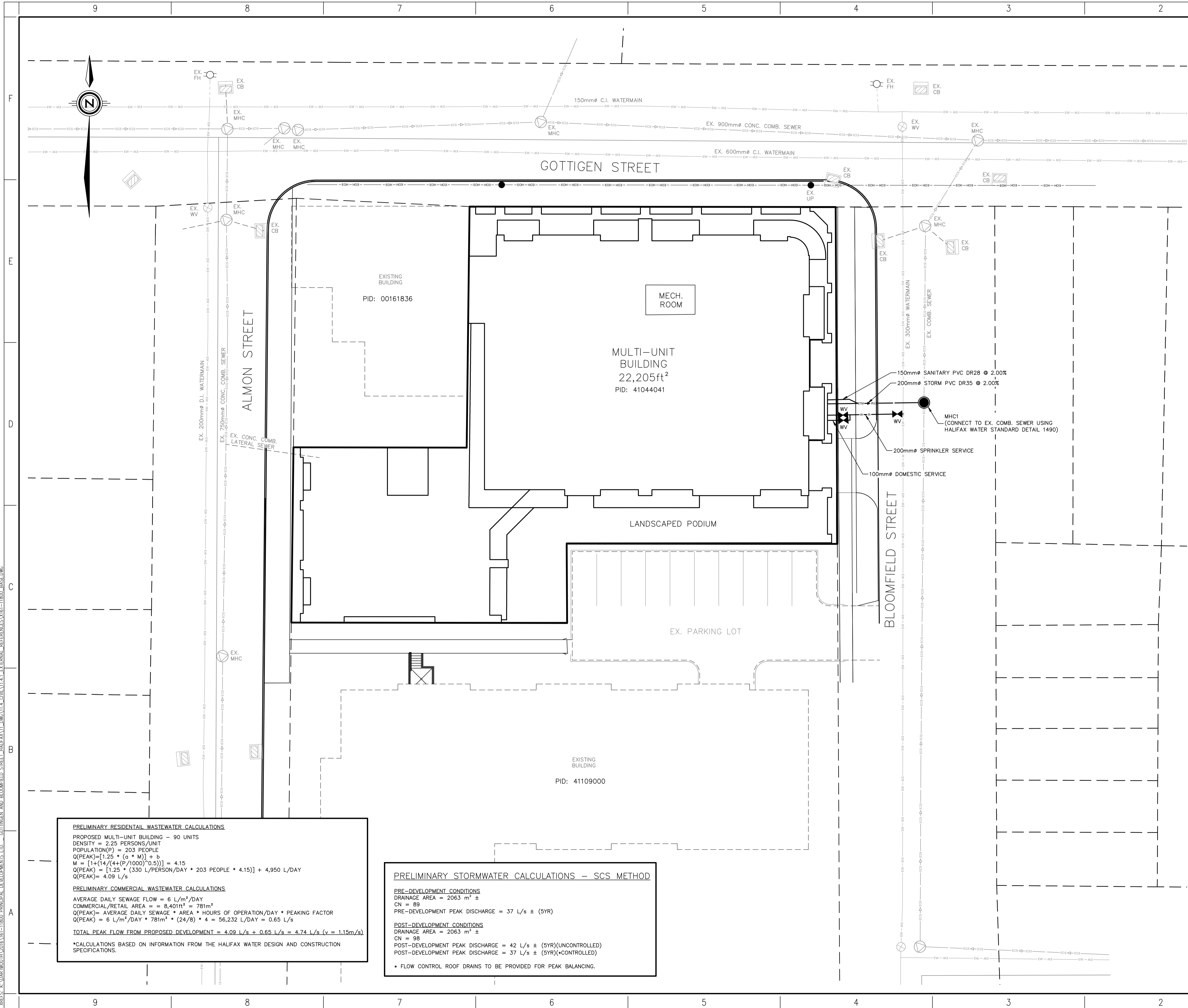
MULTI-USE DEVELOPMENT
 HALIFAX, NOVA SCOTIA

TITLE:
SERVICING SCHEMATIC

SHEET NUMBER:
1

ISSUE:
ISSUED FOR REVIEW
 DATE OF: 2016/10/20

WSP REF. NO.: 161-11800 K:\DARTMOUTH\2016\161-11800\PRINCIPAL DEVELOPMENTS LTD. - GOTTINGEN AND BLOOMFIELD STREET-HALIFAX\1-DWG\11-4.2-PRODUCTION DRAWINGS\161-11800_SERVICING SCHEMATIC.DWG BY: AARON THIBault PRINTED: 10:13 AM 2016/10/20



PRELIMINARY RESIDENTIAL WASTEWATER CALCULATIONS
 PROPOSED MULTI-UNIT BUILDING - 90 UNITS
 DENSITY = 2.25 PERSONS/UNIT
 POPULATION(P) = 203 PEOPLE
 $Q(PEAK) = [1.25 * (a * M)] + b$
 $M = [1 + (14 / (4 + (P / 1000)^{0.5}))] = 4.15$
 $Q(PEAK) = [1.25 * (330 \text{ L/PERSON/DAY} * 203 \text{ PEOPLE} * 4.15)] + 4,950 \text{ L/DAY}$
 $Q(PEAK) = 4.09 \text{ L/s}$
PRELIMINARY COMMERCIAL WASTEWATER CALCULATIONS
 AVERAGE DAILY SEWAGE FLOW = 6 L/m²/DAY
 COMMERCIAL/RETAIL AREA = 8,401m² = 781m²
 $Q(PEAK) = \text{AVERAGE DAILY SEWAGE} * \text{AREA} * \text{HOURS OF OPERATION/DAY} * \text{PEAKING FACTOR}$
 $Q(PEAK) = 6 \text{ L/m}^2/\text{DAY} * 781 \text{m}^2 * (24/8) * 4 = 56,232 \text{ L/DAY} = 0.65 \text{ L/s}$
TOTAL PEAK FLOW FROM PROPOSED DEVELOPMENT = 4.09 L/s + 0.65 L/s = 4.74 L/s (v = 1.15m/s)
 *CALCULATIONS BASED ON INFORMATION FROM THE HALIFAX WATER DESIGN AND CONSTRUCTION SPECIFICATIONS.

PRELIMINARY STORMWATER CALCULATIONS - SCS METHOD
PRE-DEVELOPMENT CONDITIONS
 DRAINAGE AREA = 2063 m² ±
 CN = 89
 PRE-DEVELOPMENT PEAK DISCHARGE = 37 L/s ± (5YR)
POST-DEVELOPMENT CONDITIONS
 DRAINAGE AREA = 2063 m² ±
 CN = 98
 POST-DEVELOPMENT PEAK DISCHARGE = 42 L/s ± (5YR)(UNCONTROLLED)
 POST-DEVELOPMENT PEAK DISCHARGE = 37 L/s ± (5YR)(CONTROLLED)
 • FLOW CONTROL ROOF DRAINS TO BE PROVIDED FOR PEAK BALANCING.