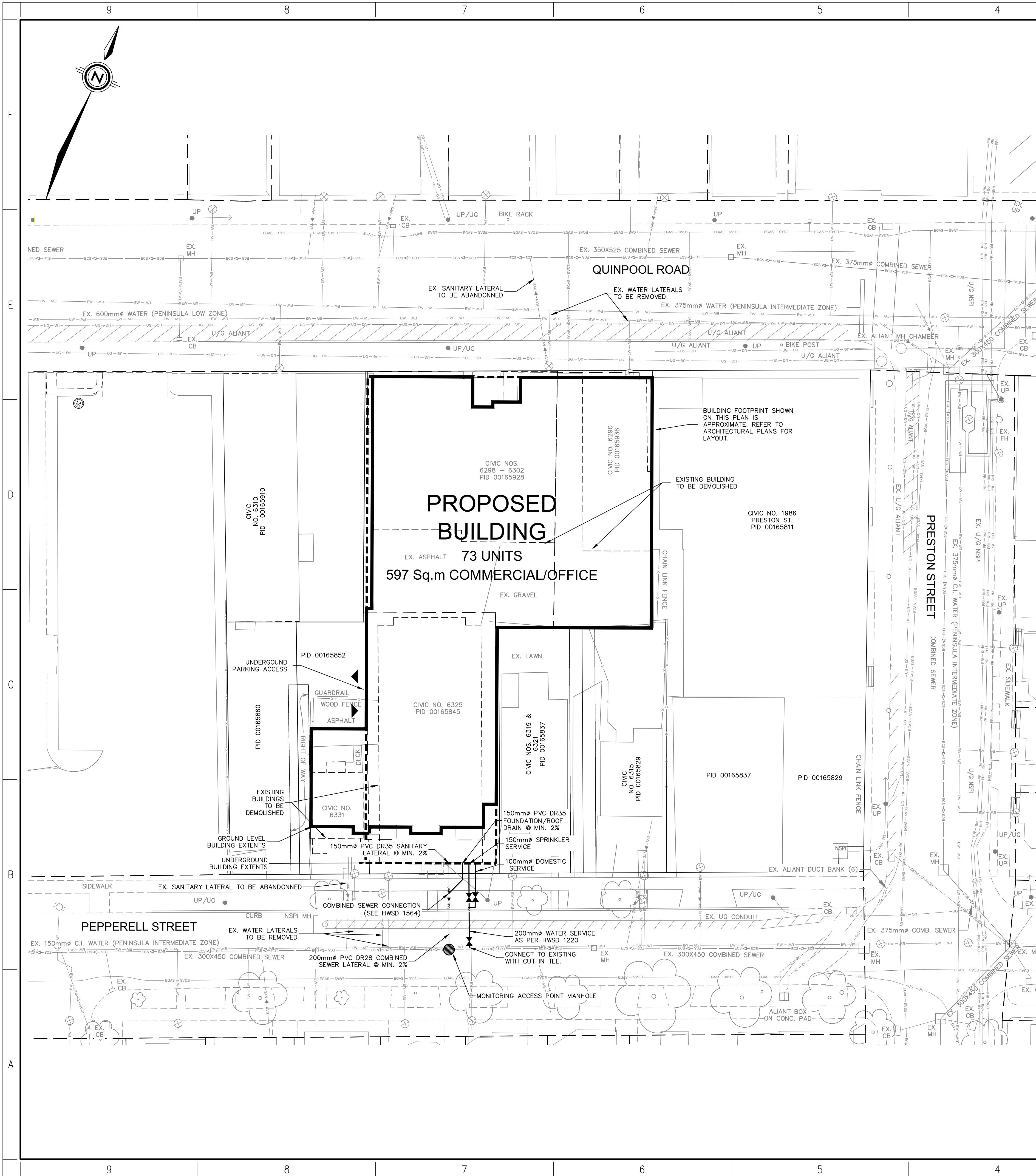




PRELIMINARY WASTEWATER CALCULATIONS

PRELIMINARY RESIDENTIAL WASTEWATER CALCULATIONS
PROPOSED MULTI-UNIT BUILDING - 73 UNITS
DENSITY = 2.25 PERSONS/UNIT
POPULATION(P) = 165 PEOPLE
 $Q(PEAK) = [1.25 * (g * M)] + b$
 $M = [1 + (14 / (4 + (P / 1000)^{0.5}))] = 4.18$
 $b = A * 24000 \text{ L/HQ/DAY} = 0.1805 \text{ HQ} * 24000 = 4332 \text{ L/DAY}$
 $Q(PEAK) = [1.25 * (300 \text{ L/PERSON/DAY} * 165 \text{ PEOPLE} * 4.18)] + 4332 \text{ L/DAY}$
 $Q(PEAK) = 3.04 \text{ L/s}$

PRELIMINARY COMMERCIAL WASTEWATER CALCULATIONS
AVERAGE DAILY SEWAGE FLOW = $6 \text{ L/m}^2/\text{DAY}$
COMMERCIAL/RETAIL/OFFICE AREA = 597 m^2
 $Q(PEAK) = \text{AVERAGE DAILY SEWAGE} * \text{AREA} * \text{HOURS OF OPERATION/DAY} * \text{PEAKING FACTOR}$
 $Q(PEAK) = 6 \text{ L/m}^2/\text{DAY} * 597 * (24/8) * 4 = 0.50 \text{ L/s}$

TOTAL PEAK FLOW FROM PROPOSED DEVELOPMENT = $3.04 \text{ L/s} + 0.50 \text{ L/s} = 3.54 \text{ L/s}$

*CALCULATIONS BASED ON INFORMATION FROM THE HALIFAX WATER DESIGN AND CONSTRUCTION SPECIFICATIONS, 2016 EDITION.

COMBINED LATERAL PIPE - 200mm @ 2% Q(FULL) = $60 \text{ L/s} > Q(PEAK) = 3.54 \text{ L/s}$

PRELIMINARY STORMWATER CALCULATIONS - SCS METHOD

PBE-DEVELOPMENT CONDITIONS
DRAINAGE AREA = $1805 \text{ m}^2 \pm$
CN = 97
PRE-DEVELOPMENT PEAK DISCHARGE = $38 \text{ L/s} \pm (5\text{YR})$

POST-DEVELOPMENT CONDITIONS
DRAINAGE AREA = $1805 \text{ m}^2 \pm$
CN = 98
POST-DEVELOPMENT PEAK DISCHARGE = $38 \text{ L/s} \pm (5\text{YR})$

ROOF STORAGE TO BE PROVIDED IF REQUIRED.

COMBINED LATERAL PIPE - 200mm @ 2% Q(FULL) = $60 > Q(PEAK) = 38 \text{ L/s}$

TOTAL COMBINED LATERAL PIPE (SAN + STORM) - 200mm @ 2% Q(FULL) = $60 > Q(PEAK) = 38 + 3.54 \text{ L/s} = 41.54 \text{ L/s}$

WSP Canada Inc.
1 Spectacle Lake Drive
Dartmouth, Nova Scotia, Canada B3B 1X7
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SEAL:

KEY PLAN:

**PRELIMINARY ONLY
NOT FOR
CONSTRUCTION**

LEGEND:	PROPOSED	EXISTING
EDGE OF PAVEMENT		
LOTLINE		
WATERMAIN & GATE VALVE		
SANITARY PIPE & MANHOLE		
STORM PIPE & MANHOLE		
UTILITY LINES & POLE		
STREET BOUNDARY		
PROPERTY BOUNDARY		
EASEMENT		
CURB & DRIVEWAY CUT		
CATCH BASIN		
FIRE HYDRANT		
STREET TREE		
ROAD SIGN		

DISCLAIMER:

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REVISION:	DATE	DESCRIPTION
0	2018/04/09	RE-ISSUED FOR REVIEW

PROJECT NO:	DATE: (YYYY/MM/DD)
161-02304	2018/04/02

ORIGINAL SCALE:
HORIZONTAL: 1:250 VERTICAL: N/A

DESIGNED BY:
S. LEWIS

DRAWN BY:
D. BELL

CHECKED BY:
N. FOUGERE

SCALE: 1:250 METRIC

CLIENT:

FAÇADE INVESTMENTS LTD.

CLIENT REF. #:

PROJECT:

**6290 & 6298
QUINPOOL ROAD
HALIFAX, NS**

TITLE:

**PRELIMINARY
SERVICING SCHEMATIC**

SHEET NUMBER:

1

SHEET # 1 OF 1

ISSUE:

RE-ISSUED FOR REVIEW

DATE OF: 2018/04/09

REV #

0