NOTES: GENERAL

1. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.
2. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
3. ALL SIDEWALK TO HAVE 1% SLOPE AWAY FROM BUILDINGS WHERE APPLICABLE.
4. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCHBASIN OUTLETS ARE PROVIDED.
5. STRIP AND REMOVE ALL TOPSOIL FROM IMPROVED AREAS.
6. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
7. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAWCUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT.
8. CURBS TO BE AS PER CITY OF OTTAWA STANDARD SC1.1
9. CONTRACTOR IS TO COMPLY WITH CITY OF OTTAWA REQUIREMENTS FOR TRAFFIC CONTROL WHEN WORKING WITHIN MUNICIPAL RIGHT OF WAYS.
10. RESTORE PAVEMENT STRUCTURE AND SURFACES ON EXISTING ROADS TO A CONDITION AT LEAST EQUAL TO ORIGINAL AND TO THE SATISFACTION OF THE MUNICIPAL AUTHORITIES.
11. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED. (CONSTRUCTION OPSS 206, 310 & 314 MATERIALS OPSS 1001, 1003 & 1010).
12. REFER TO ARCHITECTS SITE PLAN FOR BUILDING DIMENSIONS AND SITE LAYOUT. DIMENSIONS AND LAYOUT INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
13. REFER TO LANDSCAPE ARCHITECTS PLAN FOR SIDEWALK, PATHWAYS, CONCRETE MEDIAN, PLANTING AND OTHER LANDSCAPE FEATURE MATERIALS AND LOCATIONS.
14. ALL CURB TO BE 150mm ABOVE FINISHED ASPHALT GRADE UNLESS OTHERWISE NOTED.
15. FOR DETAILS OF SOIL CONDITIONS, REFERENCE SHOULD BE MADE TO GEOTECHNICAL REPORT PREPARED BY exp Services INC July 2017.
16. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES FOR THE PROTECTION OF THE AREA'S DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THIS INCLUDES LIMITING THE AMOUNT OF EXPOSED SOIL, USING FILTER CLOTH UNDER THE GRATES OF CATCHBASINS AND MANHOLES AND INSTALLING SILT FENCES AND OTHER EFFECTIVE SEDIMENT TRAPS. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE AGENCY.
17. THE CONTRACTOR SHALL CONFIRM LOCATION AND ELEVATION OF EXISTING INFRASTRUCTURE TO PREVENT ANY DAMAGE AND IDENTIFY CONFLICTS WITH PROPOSED INFRASTRUCTURE PRIOR TO COMMENCEMENT OF CONSTRUCTION. THE ENGINEER SHALL BE INFORMED IMMEDIATELY OF ANY DISCREPANCIES, OMISSIONS OR CONFLICTS THAT ARE FOUND.
18. DESIGN INFORMATION GIVEN ON THIS PLAN SHALL BE ADHERED TO WITH NO CHANGES WITHOUT PRIOR WRITTEN APPROVAL BY exp SERVICES INC.
19. REFER TO TOPOGRAPHIC PLAN PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. FOR LEGAL PROPERTY LINE DESCRIPTIONS.

NOTES: SEWER

1. CATCHBASINS SHALL BE PRECAST 600mm x 600mm AS PER OPSD STANDARD 705.01. FRAMES AND COVERS TO BE AS PER CITY OF OTTAWA STANDARDS.
2. SEWER BEDDING AS PER OPSD STANDARD 802.03 WITH MINIMUM 150mm GRANULAR 'A' BEDDING COMPACTED TO 95% STANDARD PROCTOR DENSITY.
3. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH CITY OF OTTAWA STANDARD SPECIFICATIONS AND IN PARTICULAR WITH OPSS 407 AND 410.
4. ALL SANITARY SEWERS ARE TO BE THE SIZES INDICATED AND THE MATERIAL SHALL BE PVC SDR 35.
5. ALL STORM SEWER TO BE PVC SDR 35 OR REINFORCED CONCRETE IN ACCORDANCE WITH CSA STANDARDS A257.2 AND A257.3 (JOINTS).
6. ALL MANHOLES, CATCHBASINS, AND CATCHBASIN MANHOLES TO BE BACKFILLED WITH MIN. 0.3m HORIZONTAL THICKNESS OF GRANULAR 'A'.
7. ALL MANHOLES AND CATCHBASIN MANHOLES TO BE PER OPSD 701.010. FRAMES AND COVERS TO BE PER CITY OF OTTAWA STANDARDS.
8. SUPPLY AND INSTALL ALL PIPING AND APPURTENANCES AS SHOWN TO WITHIN 1.0m OF BUILDING WALLS AND PROVIDE TEMPORARY CAPS.
9. ADJUST ALL EXISTING AND PROPOSED MANHOLES TO FINISHED GRADE.
10. ALL MANHOLES ARE 1200mm DIA. UNLESS NOTED OTHERWISE
11. CONTRACTOR TO INSULATE ALL STORM SEWER LEADS, SERVICES AND MAINS WHICH HAVE A DEPTH OF COVER LESS THAN 2.0m WITH 75mm RIGID HIGH DENSITY STYROFOAM INSULATION DOW CHEMICAL HI 40 OR APPROVED EQUAL.
12. SEWER CONNECTIONS TO BE ABOVE THE SPRING LINE OF THE SEWERMAIN AS PER CITY OF OTTAWA STANDARDS S11, S11.1, S11.2.
13. BACKWATER VALVES TO BE INSTALLED ON SERVICES AS PER CITY OF OTTAWA STANDARD S14, S14.1, S14.2.
13. ALL CATCH BASIN LEADS TO BE 200mmØ UNLESS OTHERWISE NOTED ON PLAN.

NOTES: WATERMAIN

1. ALL WATERMAIN WORK AND MATERIAL SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS. NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE.
2. INSTALLATION OF WATER METER AND REMOTE RECEPTACLE SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m UNLESS OTHERWISE NOTED IN THE WATERMAIN TABLE. WATERMAIN WITH LESS THAN 2.4m COVER SHALL BE CONSTRUCTED PER CITY OF OTTAWA DETAIL W-22. WATERMAIN TO BE INSULATED PER CITY OF OTTAWA DETAIL W23. WHERE WATERMAIN IS LESS THAN 2.4m FROM ADJACENT OPEN STRUCTURES
4. WATERMAIN BEDDING IS TO BE AS PER CITY OF OTTAWA DETAIL W-17.
5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS PER CITY OF OTTAWA DETAILS W-40 AND W-42.
6. UNLESS OTHERWISE NOTED WATER SERVICE LATERALS TO BUILDING SHALL BE PVC DR 18 AT SIZES INDICATED.
7. WATERMAIN CONNECTIONS, TO THE EXISTING PRIVATE WATERMAIN SHALL BE BY CONTRACTOR. CITY TO INSPECT AND DISINFECT.
8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS NO GREATER THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
9. HYDRANT LOCATION AND INSTALLATION AS PER STD DWG W18 & W19.
10. WATERMAIN CROSSING OVER SEWER AS PER CITY STANDARD 25.2

ICD Location	ICD Hydrovex	100 YEAR HEAD (m)	100 YEAR Flow Rate (L/s)
CB101	75 VHV-1	2.40	5.5
CB102	75 VHV-1	2.40	4.5
CB103	75 VHV-1	2.40	7.0
CB104	75 VHV-1	2.40	5.5
CB105	50 VHV-1	2.40	4.0
CB106	50 VHV-1	2.40	4.0
CB107	50 VHV-1	2.40	4.0
CB108	75 VHV-1	2.40	5.0
CB109	75 VHV-1	2.90	5.0

Roof Drains: Watts RD-200-A-ADJ 1/4 Weir Opening

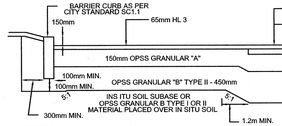
Building	#Roof Drains	5 year release rate per drain (L/s)	Total 5 year release rate (L/s)	5 year storage required (m³)	5 year storage Provided (m³)
#1	5	0.79	3.95	19.8	24
#2	4	0.79	3.16	15.6	19

*Maximum Ponding depth of 100mm on roofs during 5 year event

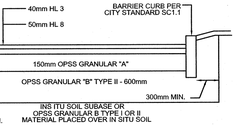
Building	#Roof Drains	100 year release rate per drain (L/s)	Total 100 year release rate (L/s)	100 year storage required (m³)	100 year storage Provided (m³)
#1	5	0.95	4.75	44.6	55
#2	4	0.95	3.8	35.1	43.5

*Maximum Ponding depth of 150mm on roofs during 100 year event

PARKING AREAS (LIGHT DUTY)



FIRE ROUTE (HEAVY DUTY)



NOTES:

REMOVE ALL ORGANICS AND DELETERIOUS MATERIALS UNDERLYING PAVEMENT CONSTRUCTION. SUPPLY AND INSTALL SUBGRADE FILL THAT HAS PRIOR APPROVAL BY GEOTECHNICAL CONSULTANT. PLACE AND COMPACT SUBGRADE FILL IN MAX 300mm LIFTS. COMPACT TO MIN. 98% SPMDD.

PROOF ROLL SUBGRADE IN PRESENCE OF GEOTECHNICAL CONSULTANT. EXCAVATE SOFT AREAS AND REPLACE WITH APPROVED NATIVE OR GRANULAR MATERIAL AS DIRECTED BY GEOTECHNICAL CONSULTANT.

COMPACT GRANULARS TO MIN. 100% SPMDD. SUPPLY AND PLACE WATER NECESSARY TO ACHIEVE SPECIFIED COMPACTION. INSTALLED GRANULAR "B" TO BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO INSTALLATION OF GRANULAR 'A'.

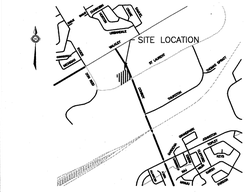
MINIMUM PERFORMANCE GRADED 58-34 ASPHALT CEMENT TO BE USED. INSTALLED GRANULAR "A" SHALL BE APPROVED BY GEOTECHNICAL CONSULTANT PRIOR TO INSTALLATION OF ASPHALT.

PAVEMENT MAKE-UP AND INSTALLATION TO COMPLY WITH THE GEOTECHNICAL REPORT REPORT PREPARED BY EXP, DATED JULY 5 2017

PAVEMENT DETAIL

N.T.S.

KEY PLAN



LEGEND

- SIB – STANDARD IRON BAR
- IB – IRON BAR
- CB – CATCH BASIN
- MH – MANHOLE
- WV – WATER ISOLATION VALVE
- LS – LAMP STANDARD
- UP – UTILITY POLE
- FH – FIRE HYDRANT VALVE
- FH – FIRE HYDRANT
- WELL – WELL
- GUY WIRE AND ANCHOR
- W – WATERMAIN
- OHW – OVERHEAD UTILITY WIRES
- UGH – UNDERGROUND HYDRO
- UGB – UNDERGROUND BELL
- GAS – GAS MAIN
- CABLE (ROGERS) – CABLE (ROGERS)
- SL – STREET LIGHT
- ST – STORM SEWER
- S – SANITARY SEWER
- CURB – CURB
- PROPOSED CURB
- PROPOSED WATERMAIN
- PROPOSED STORM SEWER
- PROPOSED SANITARY SEWER
- PROPOSED SANITARY MANHOLE
- PROPOSED STORM MANHOLE
- PROPOSED STORM CATCHBASIN MANHOLE
- PROPOSED STORM CATCHBASIN
- PROPOSED FIRE HYDRANT
- PROPOSED VALVE & VALVE BOX
- PROPOSED SIAMESE CONNECTION
- PROPOSED WATER METER
- PROPOSED REMOTE WATER METER
- 76.40 – PROPOSED ELEVATION
- 85.03X – EXISTING ELEVATION
- PROPOSED HEAVY DUTY PAVEMENT
- PROPOSED LIGHT DUTY PAVEMENT
- OVERLAND FLOW DIRECTION
- 150mmø SUBDRAIN
- •RD – ROOF DRAIN
- DC – DEPRESSED CURB
- 3:1 – 3:1 TERRACING

STRUCTURE TABLE

STRUCTURE LABEL	SIZE	STRUCTURE OPSD No. OR CITY STD DWG	FRAME OPSD No. OR CITY STD DWG
SANMH 301	1200mmØ	701.010	401.010-A
SANMH 302	1200mmØ	701.010	401.010-A
SANMH 303	1200mmØ	701.010	401.010-A
SANMH 304	1200mmØ	701.010	401.010-A
CBs 101 TO 109	600mm x 600mm	705.010	400.020
STMMH 201	1200mmØ	701.010	401.010-B
STMMH 202	1200mmØ	701.010	401.010-B
CBMH 203	1200mmØ	701.010	401.010-B
CBMH 204	1200mmØ	701.010	401.010-B
STMMH 205	1200mmØ	701.010	401.010-B

CROSSING INFO:

- ① CROSSING #1: WM INV=82.75, SAN OBV=81.87
- ② CROSSING #2: WM INV=82.75, STM OBV=81.10
- ③ CROSSING #3: SAN INV=81.70, STM OBV=81.10
- ④ CROSSING #4: SAN INV=82.80, STM OBV=82.23
- ⑤ CROSSING #5: WM INV=82.80, SAN OBV=82.25
- ⑥ CROSSING #6: STM INV=83.37, WM OBV=83.00
- ⑦ CROSSING #7: STM INV=83.34, SAN OBV=82.25
- ⑧ CROSSING #8: STM INV=82.75, SAN OBV=82.45
- ⑨ CROSSING #9: STM INV=82.75, SAN OBV=82.50
- ⑩ CROSSING #10: WM INV=82.85, SAN OBV=82.45
- ⑪ CROSSING #11**: WM INV=83.20, STM OBV=82.90
- ⑫ CROSSING #12: WM INV=82.90, SAN OBV=82.65
- ⑬ CROSSING #713: WM INV=82.80, SAN OBV=82.08
- ⑭ CROSSING #14: WM INV=82.85, STM OBV=82.18

**WATERMAIN CROSSING OVER SEWER AS PER CITY STANDARD 25.2
WATERMAIN WITH LESS THAN 2.4m COVER SHALL BE CONSTRUCTED PER CITY OF OTTAWA DETAIL W-22.

WATERMAIN TABLE

STATION	FIN/GRADE	T/W GRADE	COMMENT
0+000	85.35	82.95	TIE INTO EXISTING 300mmØ WATERMAIN ON ST LAURENT BLVD
0+014.7	85.50	83.10	VALVE AND VALVE BOX
0+017.1	85.45	83.05	THRUST BLOCK AND 11.25° BEND
0+020	85.40	83.00	TOP OF WATERMAIN
0+040	85.40	83.00	TOP OF WATERMAIN
0+041.5	85.38	82.98	TVS CONNECTION FOR BUILDING 200X50
0+043.5	85.35	82.95	THRUST BLOCK AND 45° BEND
0+046	85.40	83.00	THRUST BLOCK AND 22.5° BEND
0+048.2	85.45	83.05	THRUST BLOCK AND 11.25° BEND
0+060	85.25	82.85	TOP OF WATERMAIN
0+062.7	85.35	82.95	STM & SAN CROSSING (STM OBV=82.50 & SAN OBV=82.20)
0+080	85.25	82.85	TOP OF WATERMAIN
0+089	85.50	83.10	TVS CONNECTION FOR BUILDING 200X50
0+090.7	85.45	83.05	THRUST BLOCK AND 45° BEND
0+093.6	85.45	83.05	SAN CROSSING (SAN OBV=82.45)
0+093.6	85.45	83.05	200X200 HYDRANT TEE AND VALVE
0+096.3	85.35	83.35	STM CROSSING (STM OBV=82.90)
0+096.3	85.35	83.35	THRUST BLOCK AND 22.5° BEND
0+119.5	85.40	83.00	THRUST BLOCK AND 45° BEND
0+120	85.35	83.10	SAN CROSSING (SAN OBV=82.65)
0+125	85.55	83.15	TVS CONNECTION FOR BUILDING 200X50
0+126	85.60	83.20	200mm WATERMAIN CAP

SITE INFORMATION DERIVED FROM SURVEYOR'S REAL PROPERTY REPORT PART 1 PLAN OF PART OF LOT 1 CONCESSION 4 (RIDEAU FRONT) GEOGRAPHIC TOWNSHIP OF GLOUCESTER CITY OF OTTAWA. PREPARED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. ONTARIO LAND SURVEYORS 14 CONCOURSE GATE, SUITE 500 NEPEAN, ONTARIO K2E 7S6

-ARCHITECTURAL PLANS PREPARED BY:
M. DAVID BLAKELY ARCHITECT INC.
2200 PRINCE OF WHALES DR. SUITE 101
OTTAWA, ONTARIO K2E 6Z9

- LANDSCAPE PLAN PREPARED BY:
JAMES B. LENNOX AND ASSOCIATES INC.
3332 Carling Ave.
Ottawa, Ontario K2H 5A8

APPROVED ☐ REFUSED ☐
THIS _____ DAY OF _____, 20____

DON HERWEYER, MCIP, RPP,
MANAGER, DEVELOPMENT REVIEW - SOUTH
PLANNING, INFRASTRUCTURE AND ECONOMIC
DEVELOPMENT DEPARTMENT, CITY OF OTTAWA

SITE BENCHMARK
Top of Spindle on Fire Hydrant Elevn 86.26

CAUTION

THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

NO.	REVISION DESCRIPTION	DATE	BY	APPD
5	REVISED AS PER NEW SITE PLAN	06/06/18	ML	AA
4	ISSUED FOR SITE PLAN APPROVAL	10/05/18	ML	AA
3	REVISED PER CITY COMMENTS	26/04/18	ML	AA
2	REVISED AS PER CITY COMMENTS	22/02/18	ML	AA
1	ISSUED FOR SITE PLAN APPROVAL	19/09/17	ML	AA

SCALE: 0 4m 8m 16m — HORIZONTAL 1:400

NORTH

DESIGNED BY

REVIEWED BY: LICENSED PROFESSIONAL ENGINEER M.A. ANSARI June 6, 2018 PROVINCE OF ONTARIO

CLIENT: CONROY BUSINESS PARK INC
1890 BROADMOOR AVE.
OTTAWA, ONTARIO K1H 5B4
(613)-799-5565

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Ottawa, ON K2B 8H6
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www.exp.com
• BUILDINGS • EARTH & ENVIRONMENT • ENERGY •
• INDUSTRIAL • INFRASTRUCTURE • SUSTAINABILITY •

BASEPLAN: ML
DESIGN: ML
CHECKED: AA
CAD: ML
PROJECT MANAGER: AA
APPROVED: AA

PROJECT: CONROY BUSINESS PARK
2500 ST. LAURENT BLVD., OTTAWA, ON

TITLE: SITE SERVICING AND GRADING PLAN

PROJECT No.: OTT-00238830-A0
SURVEY: AOS
DATE: ---
DRAWING No.: SSGP-1

D07-12-17-0127

PLAN #17523

Pen Tables: exp-std.ctb
References: ref topo.dwg ref ENTR PLAN - 17-04-3x_Revit.dwg