DESCRIPTION	EXISTING	PROPOSED
SITE FEATURES		
PROPERTY LINE		
TOP OF SLOPE		
TERRACING (3:1 TYPICAL)		
℄ DITCH/SWALE AND DIRECTION OF FLOW		
EDGE OF SHOULDER		
EDGE OF PAVEMENT		
℄ ROAD/ALIGNMENT		
CHAINLINK FENCE	X X	X X
POST AND RAIL FENCE		
SIDEWALK (TYPE AS NOTED ON DRAWINGS)		
BARRIER CURB (SC1.1)		
MOUNTABLE CURB (SC1.3)		
DEPRESSED CURB	DC	DC
TACTILE WALKING SURFACE INDICATOR "TWSI" (SC7.3)		
GUARDRAIL		
JERSEY BARRIERS		
BUILDING ENTRY/EXIT WITH RISERS	xR	xR
BUILDING ENTRY/EXIT BARRIER FREE	BF	BF
BUILDING ENTRY/EXIT OVERHEAD DOOR		
POST	POST	POST
SIGN	SIGN	SIGN
BOLLARD	BOLL	BOLL
VEGETATION		
UTILITY AND STRUCTURES		
HYDRO (OVERHEAD)	OH	OH
HYDRO	H	H
POWER	P P	P P
ELECTRICAL	E	E
BELL (OVERHEAD)	OB	OB
BELL	B	B
CABLE (OVERHEAD)	OC	OC
CABLE TV	C	C
FIBRE OPTIC	FO	FO
STREETLIGHT	SL SL	SL SL
GASMAIN	G G	G G
JOINT USE TRENCH – BELL/CABLE TV	BC	BC
JOINT USE TRENCH – HYDRO/BELL/CABLE TV	HBC	HBC
JOINT USE TRENCH – HYDRO/BELL/CABLE TV/GAS	HBCG	HBCG
JOINT USE TRENCH – BELL/CABLE TV/GAS	BCG	BCG
DUCT CROSSING WITH NUMBER AND TYPE OF DUCTS	2H,2C,2B	2H,2C,2B
STREETLIGHT	LS	LS
STREETLIGHT DISCONNECT	SD	SD
HYDRO TRANSFORMER		
HYDRO SWITCHING KIOSK		
HYDRO MANHOLE	H	H
HYDRO METER		
UTILITY POLE AND GUY WIRE	UP	UP
CABLE PEDESTAL	C	C
BELL PEDESTAL	B	B
BELL MANHOLE	B	B
BELL GROUND LEVEL BOX	GLB	GLB
ENDWALL		
COMMUNITY MAILBOX	CMB	CMB
GAS VALVE	GV	GV
GAS METER		
TRAFFIC MANHOLE	TMH	TMH
TRAFFIC HAND HOLE	HH	HH
TRAFFIC JOINT USE POLE	JUP	JUP
TRAFFIC MAST ARM	MAF	MAF
TRAFFIC CONDUIT	T T	T T

DESCRIPTION	EXISTING	PROPOSED
SERVICES AND STRUCTURES		
SANITARY SEWER	SA EX.250mmø SAN ST	250mmø SAN
COMBINATION SEWER	EX.300mmø COMB	300mmø COMB
STORM SEWER	ST EX.375mmø STM ST	375mmø STM
STORM SUBDRAIN	EX.150mmø SUBDRAIN	150mmø SUBDRAIN
STORM CULVERT	EX.600mmø CULVERT	600mmø CULVERT
SANITARY MANHOLE	EX.SAN	SANMH 100
COMBINATION MANHOLE	EX.COMB	COMBMH 100
STORM MANHOLE	EX.STM	STMMH 200
CATCHBASIN MANHOLE	EX.CBMH	CBMH 100
CATCHBASIN	EX.CB	CB1
DOUBLE CATCHBASIN	EX.DCB	DCB1
AREA DRAINS		AD
ROOF DRAINS		RD
CURB INLET CATCHBASIN	EX.CICB	CICB 1
DITCH INLET CATCHBASIN	EX.DICB	DICB 1
WATERMAIN	200mmø WATERMAIN	200mmø WATERMAIN
IRRIGATION	IR IR	IR IR
VALVE AND VALVE BOX	V&VB	V&VB
VALVE AND VALVE CHAMBER	V&VC	V&VC
FIRE HYDRANT	FH	FH
SIAMESE CONNECTION	SC	SC
WATER METER	M	M
REMOTE WATER METER	RM	RM
45° BEND	45°	45°
22.5° BEND	22°	22°
11.25° BEND	11°	11°
TEE	200X150 TEE	200X150 TEE
REDUCER	200X100 RED	200X100 RED
CROSS	300X200 CROSS	300X200 CROSS
CURB STOP	CS	CS
WATER WELL		
GRADING		
GROUND ELEVATION	X 100.00	X 100.00
SWALE ELEVATION	X 100.00(S)	X 100.00(S)
TOP OF GRATE ELEVATION	T/G=100.00	T/G=100.00
TOP OF WALL ELEVATION	X 100.00 T/W	X 100.00 T/W
BOTTOM OF WALL ELEVATION	X 100.00 B/W	X 100.00 B/W
FINISHED FLOOR ELEVATION	FF=100.00	FF=100.00
TOP OF FOUNDATION ELEVATION	TF=100.00	TF=100.00
BASEMENT FLOOR ELEVATION	BF=100.00	BF=100.00
PARKING LEVEL ELEVATION	P1=100.00	P1=100.00
UNDERSIDE OF FOOTING ELEVATION	USF=100.00	USF=100.00
ORIGINAL GROUND ELEVATION	OG=100.00	OG=100.00
TOP OF ROCK ELEVATION	T/ROCK=100.00	T/ROCK=100.00
CONTOUR LINES	100.00	100.00
SLOPE AND DIRECTION OF FLOW	2.0%	2.0%
OVERLAND FLOW ROUTE ONSITE		
OVERLAND FLOW ROUTE EXTERNAL		
STORMWATER MANAGEMENT		
STORM DRAINAGE AREA BOUNDARY		
STORM DRAINAGE AREA NUMBER STORM DRAINAGE AREA IN HECTARES RUN-OFF COEFFICENT	1 0.06 0.75	1 0.06 0.75
5 YEAR PONDING AREA	5 YR	5 YR
100 YEAR PONDING AREA	100 YR	100 YR
GEOTECHNICAL		
BOREHOLE	BH	BH
TEST PIT	TP	TP
COREHOLE	CH	CH
PIEZOMETER	PIZ	PIZ
MONITORING WELL	MW	MW

DESCRIPTION	
MISCELLANEOUS	
REMOVED	X X X
RELOCATED	REM / REL / ADJ
ADJUSTED	
LIGHT DUTY PAVEMENT REFER TO NOTES FOR COMPOSITION	
HEAVY DUTY PAVEMENT REFER TO NOTES FOR COMPOSITION	
ROAD REINSTATEMENT AS PER CITY STANDARD R10	
RIP-RAP AS PER OPSD 810.010	
LANDSCAPE REINSTATEMENT	
MONOLITHIC CURB INSTALLATION	

GENERAL NOTES

1. ALL WORKS AND MATERIALS SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS), WHERE APPLICABLE.
2. THE LOCATION OF UTILITIES IS APPROXIMATE ONLY, AND THE EXACT LOCATION SHOULD BE DETERMINED BY CONSULTING THE MUNICIPAL AUTHORITIES AND UTILITY COMPANIES CONCERNED. THE CONTRACTOR IS RESPONSIBLE TO PROVIDE THE LOCATION AND STATUS OF UTILITIES AND SHALL BE RESPONSIBLE FOR ADEQUATE PROTECTION OF PLANT AND EQUIPMENT FROM DAMAGE. THE CONTRACTOR SHALL BE RESPONSIBLE FOR REPAIR OR REPLACEMENT OF ANY SERVICES OR UTILITIES DISTURBED DURING CONSTRUCTION, TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION.
3. THE CONTRACTOR SHALL VERIFY THE LOCATION AND ELEVATION OF EXISTING SERVICES PRIOR TO ANY CONSTRUCTION. THE CONTRACTOR SHALL CONFIRM LOCATIONS AND ELEVATIONS OF EXISTING SERVICES AND STRUCTURES TO BE CONNECTED TO AND EXISTING SERVICES THAT MAY BE DAMAGED OR CAUSE CONFLICTS PRIOR TO CONSTRUCTION OF ANY NEW SEWER, WATER AND/OR STORM WATER WORKS. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO THE START OF CONSTRUCTION. ANY DISCREPANCIES, INTERPRETATIONS, CHANGES AND ADDITIONS TO THESE DRAWINGS MUST BE BROUGHT TO THE ATTENTION OF THE ENGINEER, WHEN NOTED AND BEFORE PROCEEDING WITH CONSTRUCTION WORKS. DO NOT CONTINUE CONSTRUCTION IN AREAS WHERE DISCREPANCIES APPEAR UNTIL SUCH DISCREPANCIES HAVE BEEN RESOLVED.
4. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED. ALL DRAWINGS SHOULD NOT BE SCALED BY THE CONTRACTOR. ANY MISSING OR QUESTIONABLE DIMENSIONS ARE TO BE CONFIRMED WITH THE ENGINEER IN WRITING.
5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR OBTAINING ALL PERMITS REQUIRED AND BEAR COST OF THE SAME.
6. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS", THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.
7. CONTRACTOR SHALL BE RESPONSIBLE FOR ALL EXCAVATION, BACKFILL AND REINSTATEMENT OF ALL AREAS DISTURBED DURING CONSTRUCTION TO THE SATISFACTION OF THE ENGINEER, THE CITY OF OTTAWA AND THE AUTHORITY HAVING JURISDICTION.
8. ANY AREAS BEYOND THE LIMIT OF THE SITE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITY HAVING JURISDICTION AT THE CONTRACTOR'S EXPENSE.
9. THE CONTRACTOR SHALL COMPLY WITH THE CITY OF OTTAWA REQUIREMENTS FOR TRAFFIC CONTROL WHEN WORKING ON CITY STREETS. ALL CONSTRUCTION SIGNAGE MUST CONFORM TO THE M.T.O. MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES (LATEST AMENDMENT).
10. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.
11. THERE WILL BE NO SUBSTITUTION OF MATERIALS UNLESS WRITTEN APPROVAL BY THE ENGINEER HAS BEEN OBTAINED.
12. EXCESS EXCAVATED MATERIAL SHALL BE REMOVED FROM THE SITE.
13. THE SITE LAYOUT IS THE RESPONSIBILITY OF THE CONTRACTOR. AS-BUILT SITE SERVICING & GRADING DRAWINGS SHALL BE MAINTAINED ON SITE BY THE CONTRACTOR.
14. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT.
15. FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY EXP SERVICES INC DATED MARCH, 2022, PROJECT NO. OTT-00238207-C0
16. THE CONTRACTOR SHALL APPRAISE HIS/HER SELF OF ALL SURFACE AND SUBSURFACE CONDITIONS TO BE ENCOUNTERED AND SHALL CARRY OUT THEIR OWN TEST PITS AS REQUIRED TO MAKE THEIR OWN INDEPENDENT ASSESSMENT OF GROUND CONDITIONS. THE CONTRACTOR SHALL NOT MAKE ANY CLAIM FOR ANY EXTRA COST DUE TO ANY SUCH GROUND CONDITIONS VARYING FROM THOSE ANTICIPATED BY THE CONTRACTOR.
17. DO NOT CONSTRUCT USING DRAWINGS THAT ARE NOT MARKED "ISSUED FOR CONSTRUCTION".
18. FOR TOPOGRAPHICAL INFORMATION REFER TO PLAN PREPARED BY ANIS, O'SULLIVAN, VOLLEBEKK SURVEYING LTD. DATED JUNE 16, 2017.
19. CIVIL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, MECHANICAL, ELECTRICAL, STRUCTURAL, LANDSCAPE AND LEGAL DRAWINGS.
20. A SCHEMATIC DIAGRAM INCLUDING PROPOSED ELEVATIONS, DETAILS OF PROPOSED FOUNDATION DRAINS, STORM LATERAL, AND INTERNAL MECHANICAL PIPING WILL BE PREPARED BY THE MECHANICAL CONSULTANT PRIOR TO REGISTRATION.
21. THE SIDES OF THE EXCAVATION FOR UTILITY TRENCHES AND SUBSURFACE BASEMENT WALLS THAT EXTEND INTO THE SHALE BEDROCK BELOW THE GROUND WATER SHOULD BE SPRAYED WITH GUNNITE TO PREVENT DETERIORATION AND HEAVE OF THE SHALE BEDROCK. FOR UNDERGROUND SERVICE, AN ALTERNATIVE TO GUNNITE IS TO BACKFILL THE PORTION OF THE TRENCHES IN BEDROCK BELOW THE GROUNDWATER LEVEL USING CLAY OR CONCRETE.

SANITARY SEWER NOTES:

1. ALL SANITARY SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
2. ALL SANITARY SEWERS SHALL BE PVC DR 35, IPEX "RING-TITE" (OR EQUIVALENT), AS PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE NOTED.
3. SANITARY SEWER TRENCH AND BEDDING SHALL BE AS PER CITY OF OTTAWA STD. S6 AND S7, CLASS 'B BEDDING UNLESS OTHERWISE NOTED. BEDDING DEPTH AS PER GEOTECHNICAL STUDY.
4. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED SANITARY SEWERS AND EXISTING SEWERS CONNECTED TO. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.
5. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE SANITARY SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. DURING CONSTRUCTION, THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
6. ALL ABANDONED EXISTING SEWERS TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.
7. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE.

STORM SEWER NOTES:

1. ALL STORM SEWER MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
2. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE SPECIFIED.
3. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE STORM SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
4. SEWER BEDDING DEPTH AS PER GEOTECHINCAL STUDY.
5. ALL ABANDONED EXISTING SEWERS TO BE CAPPED AT THE PROPERTY LINE TO THE SATISFACTION OF THE CITY OF OTTAWA'S SEWER OPERATIONS.
6. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE.
7. ALL STORM SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES. REFER TO MECHANICAL DRAWINGS.
8. THE CONTRACTOR SHALL CONDUCT CCTV INSPECTION OF ALL NEWLY INSTALLED STORM SEWERS AND EXISTING SEWERS CONNECTED TO. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWERS INSTALLED.
9. CONTRACTOR TO PROVIDE SHOP DRAWINGS FOR ALL STORMTECH CHAMBERS.

WATERMAIN NOTES:

1. ALL WATERMAIN MATERIALS AND INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE STANDARDS AND SPECIFICATIONS OF THE CITY OF OTTAWA, ONTARIO PROVICIAL STANDARD DRAWINGS (OPSD) AND SPECIFICATIONS (OPSS).
2. NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE. WATERMAIN CONNECTIONS BY CITY OF OTTAWA FORCES WITH ALL EXCAVATION BACKFILL AND ROAD REINSTATEMENT BY CONTRACTOR.
3. WATERMAINS TRENCH AND BEDDING SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD W17, UNLESS OTHERWISE SPECIFIED. BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY PROJECT GEOTECHNICAL ENGINEER.
4. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W40. ALL ANODES SHALL BE A Z-24-48 AS PER CITY OF OTTAWA STD. W44.
5. ALL WATERMAINS TO BE INSTALLED AT MINIMUM COVER OF 2.4m.
6. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
7. DISINFECTION AND TESTING OF WATERMAIN TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
8. WATER METER TO BE INSTALL TO BE COORDINATED WITH MECHANICAL.
9. INSULATION FOR WATERMAIN CROSSING OVER AND BELOW SEWER SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25, RESPECTIVELY, WHERE WATERMAN COVER IS LESS THAN 2.4m.
10. PRESSURE REDUCING MEASURES REQUIRED FOR INTERNAL WATER SYSTEMS.

ROAD NOTES:

1. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R10 AND OPSD 509.010, OPSS 310.
2. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm AROUND ALL STRUCTURES WITHIN PAVEMENT AREA.
3. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
4. PAVEMENT STRUCTURE:
   SITE ACCESS DRIVEWAYS:
   - 40mm SUPERPAVE 12.5 ASPHALTIC CONCRETE
   - 50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
   - 150mm GRANULAR "A" CRUSHED LIMESTONE (OPSS 1010)
   - 400mm GRANULAR "B" TYPE II (OPSS 1010)

   BEECHWOOD AVENUE:
   - 40mm SUPERPAVE 12.5 ASPHALTIC CONCRETE
   - 50mm SUPERPAVE 19.0 ASPHALTIC CONCRETE
   - 150mm GRANULAR "A" CRUSHED LIMESTONE (OPSS 1010)
   - 400mm GRANULAR "B" TYPE II (OPSS 1010)

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.

REV	REVISION DESCRIPTION	DATE	BY	APPD
3	ISSUED FOR APPROVAL	28/07/23	SAB	BMT
2	ISSUED FOR CITY REVIEW	22/03/22	AC	BMT
1	ISSUED FOR SITE PLAN CONTROL	15/12/20	SK	BMT

SCALE

NORTH

DESIGNED BY

LICENSED PROFESSIONAL ENGINEER
Z. D. PAN
100118205
2023/07/28
PROVINCE OF ONTARIO

REVIEWED BY

CLIENT
229 BEECHWOOD HOLDINGS INC.
AND 241 BEECHWOOD HOLDINGS INC.
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BASEPLAN: SK
DESIGN: JLF/ARO
CHECKED: BMT
CAD: SK
PROJECT MANAGER: BMT
APPROVED: BMT

PROJECT
229-247 BEECHWOOD
OTTAWA, ON

TITLE
NOTES AND LEGEND SHEET

PROJECT No.: OTT-238207-C0
SURVEY: AOV
DATE: DEC 2020
DRAWING No.: C001

DOT-12-21-0001

#18403

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References: xref-TBlock.dwg