DESCRIPTION	EXISTING	PROPOSED	DESCRIPTION	EXISTING	PROPOSED
SITE FEATURES			SERVICES AND STRUCTURES		
PROPERTY LINE			SANITARY SEWER	SEX.250mmø SAN	250mmø_SAN
TOP OF SLOPE			COMBINATION SEWER	SA SA EX.300mmø COMB	300mmø COMB
TERRACING (3:1 TYPICAL)			STORM SEWER		375mmø STM
© DITCH/SWALE AND DIRECTION OF FLOW			STORM SUBDRAIN	ST	150mmø SUBDRAIN
EDGE OF SHOULDER			STORM CULVERT		600mmø CULVERT
EDGE OF PAVEMENT			SANITARY MANHOLE	○ EX. SAN	SANMH 100
© ROAD/ALIGNMENT			COMBINATION MANHOLE	○ EX. COMB	О сомвин 100
CHAINLINK FENCE	XX	xx	STORM MANHOLE	○ EX.STM	O STMMH 200
LANDSCAPE FENCE		- ◇◇	CATCHBASIN MANHOLE	○EX.CBMH	■ CBMH 100
SIDEWALK (TYPE AS NOTED ON DRAWINGS)			CATCHBASIN	□ EX.CB	■ CB1
BARRIER CURB (SC1.1)			DOUBLE CATCHBASIN	□□□ EX.DCB	■■ DCB1
MOUNTABLE CURB (SC1.3)			CATCHBASIN ELBOW (S30)	O EX.CBE	O CBE
DEPRESSED CURB		DC	CATCHBASIN TEE (S31)	○ EX.CBT	O CBT
TACTILE WALKING SURFACE INDICATOR "TWSI" (SC7.3)			CURB INLET CATCHBASIN	□ EX.CICB	■ CICB 1
GUARDRAIL		II II	DITCH INLET CATCHBASIN	₪ EX.DICB	■ DICB 1
JERSEY BARRIERS			WATERMAIN	200mmø WATERMAIN	000mmø WATERMAIN
BUILDING ENTRY/EXIT WITH RISERS	▼xR	▼xR	IRRIGATION	IR IR	IR IR
BUILDING ENTRY/EXIT BARRIER FREE	▼ BF	▼ BF	VALVE AND VALVE BOX	⊗ V&VB	⊗ V&VB
BUILDING ENTRY/EXIT OVERHEAD DOOR	∇	∇	VALVE AND VALVE CHAMBER	⊗ V&VC	⊗ V&VC
POST	⊚ POST	⊚ POST	FIRE HYDRANT	- 	- Ó -FH
SIGN	SIGN	> SIGN	SIAMESE CONNECTION	Y sc	Ƴsc
BOLLARD	⊚ BOLL	⊚ BOLL	WATER METER	(M)	M
VEGETATION	() * mm	() * mm	REMOTE WATER METER	RM	RM
		////	45° BEND	√ ₁ 45°	⁴₁ 45°
			22.5° BEND	⊱ ₁ 22°	~ 22°
			11.25* BEND	⊢ 11°	H11°
UTILITY AND STRUCTURES			TEE	д 200X150 TEE	т 200X150 TEE
JOINT UTILITY OVERHEAD LINE			REDUCER	> 200X100 RED	D 200X100 RED
HYDRO (OVERHEAD)			CROSS	⊕300X200 CROSS	⊕300X200 CROSS
HYDRO		U	CURB STOP	⊗ cs	• CS
POWER			WATER WELL	(®
ELECTRICAL		— r — r —	INSULATION FOR PIPE		
BELL (OVERHEAD)	E	E			
BELL (OVERNIEAD)					
CABLE (OVERHEAD)		В	GRADING		
·	0C	0	GROUND ELEVATION	X 100.00	X 100.00
CABLE TV	C		SWALE ELEVATION	X 100.00(S)	X 100.00(S)
FIBRE OPTIC	F0	F0	TOP OF GRATE ELEVATION	T/G=100.00	T/G=100.00
STREETLIGHT	——— SL ———— SL ———	SL	TOP OF WALL ELEVATION	X 100.00 T/W	X 100.00 T/W
GASMAIN	GG	G	BOTTOM OF WALL ELEVATION	X 100.00 B/W	X 100.00 B/W
JOINT USE TRENCH - BELL/CABLE TV	BC	BC	FINISHED FLOOR ELEVATION	FF=100.00	FF=100.00
JOINT USE TRENCH - HYDRO/CABLE TV	HC	———НС———	TOP OF FOUNDATION ELEVATION	TF=100.00	TF=100.00
JOINT USE TRENCH - HYDRO/BELL/CABLE TV		HBC	BASEMENT FLOOR ELEVATION	<i>BF=100.00</i>	BF=100.00
JOINT USE TRENCH - HYDRO/BELL/CABLE TV/GAS	HBCG	HBCG	PARKING LEVEL ELEVATION	P1=100.00	P1=100.00
JOINT USE TRENCH - BELL/CABLE TV/GAS	BCG	BCG	UNDERSIDE OF FOOTING ELEVATION	USF=100.00	USF=100.00
DUCT CROSSING WITH NUMBER AND TYPE OF DUCTS	2H,2C,2B	2H,2C,2B	ORIGINAL GROUND ELEVATION	<i>OG=100.00</i>	OG=100.00
STREETLIGHT (c/w GROUND ROD WHERE REQUIRED)	×—⊗ ρ ιs	————————————————————————————————————	TOP OF ROCK ELEVATION	T/ROCK=100.00	T/ROCK=100.00
STREETLIGHT DISCONNECT	SD N	<u>SD</u>	CONTOUR LINES	100.00	
HYDRO TRANSFORMER			SLOPE AND DIRECTION OF FLOW	2.0%	2.0%
HYDRO SWITCHING KIOSK			OVERLAND FLOW ROUTE ONSITE		
HYDRO MANHOLE	$oxin{matrix} oxin{matrix} & \dot{ & & & & & \dot{ & & & & & & $	Θ	OVERLAND FLOW ROUTE EXTERNAL		
HYDRO METER	⊕	⊕	THE TOTAL PARTIES		7—
UTILITY POLE AND GUY WIRE	(—oup	(—oup [○]			
CABLE PEDESTAL BELL PEDESTAL	© B	C B	STORMWATER MANAGEMENT		
BELL MANHOLE	B	B	STORM DRAINAGE AREA BOUNDARY		
BELL GROUND LEVEL BOX	GLB	GLB	STORM DRAINAGE AREA NUMBER	1	1
ENDWALL		OLD S	STORM DRAINAGE AREA IN HECTARES RUN-OFF COEFFICENT	0.06 0.75	0.06 0.75
COMMUNITY MAILBOX	CMB	<u>CMB</u>			
GAS VALVE	⊗ GV	V ⊗ GV			
GAS METER	\$\psi\$	⋄			
TRAFFIC MANHOLE	Ŭ TMH	→ TMH			
TRAFFIC HAND HOLE	□ HH	□ HH	MICOELLANGOUG		DAVENELIT COMPOSITION MOTOR
TRAFFIC JOINT USE POLE	⊚ JUP	⊚ JUP	MISCELLANEOUS		PAVEMENT COMPOSITION NOTES LIGHT DUTY PAVEMENT STRUCTURE
TRAFFIC MAST ARM	=○= MAF	=O= MAF	REMOVED	X X X REM	(PARKING STALLS) 65mm HL3 (PG58-34)
TRAFFIC CONDUIT	т т	т т	RELOCATED	REL	150mm GRANULAR 'A' 300mm GRANULAR 'B' TYPE II (OVERBURDEN)
			ADJUSTED	ADJ	OR 200mm GRANULAR 'B' TYPE II (BEDROCK)
			LIGHT DUTY PAVEMENT REFER TO NOTES FOR COMPOSITION		HEAVY DUTY PAVEMENT STRUCTURE
			HEAVY DUTY PAVEMENT		(ROADWAY)
GEOTECHNICAL			REFER TO NOTES FOR COMPOSITION ROAD REINSTATEMENT AS PER CITY STANDARI	D	40mm SP12.5mm ASPHALT (PG58-34) 50mm SP19.0mm ASPHALT (PG58-34)
BOREHOLE	- ВН	ф ⊕ ВН	ROAD REINSTATEMENT AS PER CITY STANDART		150mm GRANULAR 'A' 400mm GRANULAR 'B' TYPE II (OVERBURDEN)
MONITORING WELL	₩W	- ф - MW	SIDEWALK REINSTATEMENT AS PER CITY STANDARD SC4		OR 300mm GRANULAR 'B' TYPE II (BEDROCK)
	(64.76) [63.46]	GROUND ELEVATION BEDROCK ELEVATION AUGER REFUSAL ELEVATION		(XXXXAAAAAA	
	<i>{63.18}</i>	AUGER REFUSAL ELEVATION			
AUTION BEN	CHMARKING NOTES FOR SIT	<u>E</u>			
ONDUITS, WATERMAINS, SEWERS AND OTHER SURVE	REFER TO LEGAL SURVEY PLAN PREPARE YING INC. DATED APRIL 22,2022.	·		5	ISSUED FOR SPC RESPONSE 15/12/23 AC
ND STRUCTURES IS NOT NECESSARILY CGVD-	ELEVATIONS SHOWN ARE GEODETIC AND A -1928 :1978.			4	REVISED AS PER NEW SITE PLAN 17/11/23 AKJ
HERE SHOWN, THE ACCURACY OF THE PUBLIS	ELEVATIONS DERIVED FROM MONUMENT N SHED ELEVATION OF 84.092 METRES. LO INADE ROAD. +15.3 METRES FAST OF T	CATION: ±340 METRES NORTH OF		3	REVISED AS PER CITY COMMENTS 29/06/23 SAB

PUBLISHED ELEVATION OF 84.092 METRES. LOCATION: ±340 METRES NORTH OF COLONNADE ROAD, ±15.3 METRES EAST OF THE EASTERLY FOG LINE ON PRINCE

4. It is the responsibility of the user of this information to verify

THAT THE BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT IT'S

RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN

- 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
- 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 BFFORF 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

- 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
- 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. BOOK 7 AND T.A.C 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
- 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.

ARE TO BE CONFIRMED WITH THE ENGINEER IN WRITING.

- 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. THE CONTRACTOR WILL BE RESPONSIBLE FOR ADDITIONAL BEDDING OR ADDITIONAL STRENGTH PIPE IF THE MAXIMUM TRENCH WIDTH, AS SPECIFIED BY OPSD, IS EXCEEDED
- 15. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED AY THE CONTRACTOR. REVIEW WITH ENGINEER AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING.
- 16. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW
- 17. ALL BOREHOLES SHOWN ON THE DRAWINGS ARE FOR INFORMATION ONLY. FOR GEOTECHNICAL INFORMATION REFER TO GEOTECHNICAL INVESTIGATION REPORT PREPARED BY EXP. SERVICES INC. DATED NOVEMBER 5, 2019.
- 18. 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.
- 19. DO NOT CONSTRUCT USING DRAWINGS THAT ARE NOT MARKED "ISSUED FOR CONSTRUCTION".
- 20. FOR TOPOGRAPHICAL INFORMATION REFER TO PLAN PREPARED BY FARLEY, SMITH & DENIS LTD. DATED APRIL 18, 2022.
- 21. CIVIL DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL, LANDSCAPE AND LEGAL DRAWINGS.
- 22. ALL NECESSARY CLEARING AND GRUBBING SHALL BE COMPLETED BY THE CONTRACTOR. REVIEW WITH CONTRACT ADMINISTRATOR AND THE CITY OF OTTAWA PRIOR TO ANY TREE CUTTING.
- 23. THE CONTRACTOR IS REPSONSIBLE TO KEEP ROADS CLEAR OF MUDAND DEBRIS.

SANITARY SEWER NOTES

ARE BELOW THE GROUNDWATER TABLE.

- 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
- 2. ALL SANITARY SEWERS SHALL BE PVC SDR 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.
- 4. ALL SANITARY LATERALS ARE TO BE PVC SDR 28, IPEX "RING-TITE" (OR EQUIVALENT), ANY COLOR EXCEPT WHITE AND
- MARKED WITH A 50mm X 100mm WOODEN MARKER, EXTENDING FROM THE INVERT TO 1.0m ABOVE GRADE PAINTED RED. 5. SEWER BEDDING AS PER CITY STANDARD S6 & S7. GRANULAR 'A' BEDDING TO BE INCREASED TO 300mm WHERE SEWERS
- 6. SANITARY SEWER MANHOLES SHALL BE BENCHED AS PER OPSD 701.021. SANITARY MANHOLE FRAME AND COVERS SHALL
- BE AS PER CITY OF OTTAWA STD. S24 AND S25. SAFETY PLATFORMS SHALL BE AS PER OPSD 404.02. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01. 7. THE CONTRACTOR SHALL CONDUCT INFILTRATION/EXFILTRATION (AS PER CURRENT OPSS) TESTING ON ALL NEWLY
- INSTALLED SANITARY SEWERS. THE TEST SHALL BE PERFORMED IMMEDIATELY AFTER SEWER INSTALLATION AND VIEWED
- 8. 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.
- 9. ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 & S11.1.

BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.

- 10. 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
- 11. ALL SANITARY BUILDING DRAINS TO BE EQUIPPED WITH SANITARY BACKWATER VALVES INSTALLED PER CITY OF OTTAWA STANDARD DRAWING S14.1.
- 12. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE
- 13. MINIMUM SOIL COVER TO BE 2.5m TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE FROST
- COVER CANNOT BE ACHIEVED, EQUIVALENT THERMAL INSULATION TO BE INSTALLED AS PER CITY STANDARD S35.
- 14. CCTV OF THE EXISTING SANITARY LATERAL FOR 268 CARRUTHERS AVE IS REQUIRED TO ACCESS EXISTING CONDITION THE CCTV REPORT WILL BE SUBMITTED TO THE ENGINEER FOR REVIEW TO DETERMINE IF LATERAL IS ACCEPTABLE FOR RE-USE OR WILL REQUIRE REPLACEMENT TO THE SEWER MAIN.

STORM SEWER NOTES

REVISED AS PER CITY COMMENTS | 21/03/23 | SAB | BM

ISSUED FOR SITE PLAN APPROVAL | 09/11/22 | SAB | BM

DATE

REVISION DESCRIPTION

- 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
- 2. ALL REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.2 (LATEST AMENDMENT), ALL NON-REINFORCED CONCRETE STORM SEWER PIPE SHALL BE IN ACCORDANCE WITH CSA A257.L (LATEST AMENDMENT). PIPE SHALL BE JOINTED WITH STD. RUBBER GASKETS AS PER CSA A257.3 (LATEST AMENDMENT).
- 3. ALL PVC STORM SEWERS ARE TO BE SDR 35 APPROVED PER C.S.A. B182.2 OR LATEST AMENDMENT, UNLESS OTHERWISE
- 4. THE CONTRACTOR SHALL CONSTRUCT FLEXIBLE STORM SEWERS IN ACCORDANCE WITH OPSD 802.010 AND 802.013. RIGID STORM PIPE SHALL BE CONSTRUCTED IN ACCORDANCE WITH OPSD 802,030, DURING CONSTRUCTION THE CONTRACTOR SHALL PROTECT THE PIPES FROM HEAVY CONSTRUCTION EQUIPMENT. BEDDING AND BACKFILL SHALL BE COMPACTED TO A MINIMUM OF 95% SPMDD.
- 5. SEWER BEDDING AS PER CITY STANDARD S6 & S7.
- 6. ALL STORM LATERALS SHALL BE PVC SDR 28, WHITE IN COLOR AND MARKED WITH A 50mm X IOOmm WOODEN MARKER EXTENDING FROM THE INVERT TO 1.0M ABOVE GRADE PAINTED GREEN.
- 7. ALL SERVICE CONNECTIONS TO BE CONSTRUCTED AS PER CITY STANDARD S11 & S11.1.
- 8. WITHIN THE FROST ZONE, THE BACKFILL IN THE SERVICE TRENCHES SHOULD MATCH THE SOIL ON SIDES TO MINIMIZE DIFFERENTIAL FROST HEAVING IN THE SUBGRADE

- 9. MINIMUM SOIL COVER TO BE 2.5m TO PROTECT SEWERS FROM FROST DAMAGE. IN AREAS WHERE ADEQUATE FROST COVER CANNOT BE ACHIEVED, EQUIVALENT THERMAL INSULATION TO BE INSTALLED AS PER CITY STANDARD S35.
- 10. ALL STORM SERVICES TO BE EQUIPPED WITH APPROVED BACKWATER VALVES.
- 11. STORM MANHOLE FRAME AND COVERS SHALL BE AS PER CITY OF OTTAWA STD. S24, S24.1 AND S25.
- 12. SAFETY PLATFORMS SHALL BE IN ACCORDANCE WITH OPSD 404.02.
- 13. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA SPECIFICATIONS AND OPSD 1003.01.

FOR STORM SEWERS 900mm AND OVER USE BENCHING IN ACCORDANCE WITH OPSD 701 .021.

- 14. STORM SEWER MANHOLES SERVING LOCAL SEWERS LESS THAN 900mm SHALL BE CONSTRUCTED WITH A 300mm SUMP.
- 15. SINGLE AND DOUBLE CATCHBASINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S1. AND OPSD 705.020, RESPECTIVELY. FRAMES AND GRATE SHALL BE AS PER CITY OF OTTAWA STD. S19 FOR REAR LOT CATCHBASINS, AND STREET CATCHBASINS.
- 16. CURB INLET TYPE CATCH BASIN (CICB) SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. S3. AND GRATE SHALL BE AS PER CITY OF OTTAWA STD. S22 AND S23, UNLESS OTHERWISE NOTED.
- 17. SINGLE AND DOUBLE CATCHBASIN LEADS SHALL BE 200mmØ AND 250mmØ (MIN) RESPECTIVELY, 1.0% SLOPE (MIN.) UNLESS OTHERWISE NOTED.
- 18. ALL CATCHBASINS AND CATCHBASIN MANHOLES SHALL HAVE SUMPS WITH 300mm DEPTH, UNLESS OTHERWISE NOTED.
- 19. CONTRACTOR SHALL ENSURE THAT CATCHBASINS ARE INSTALLED AT THE LOW POINT OF SAG CURB WORKS.
- 20. THE STORM SEWER CLASSES HAVE BEEN DESIGNED BASED ON BEDDING CONDITIONS SPECIFIED. WHERE THE SPECIFIED TRENCH WIDTH IS EXCEEDED, THE CONTRACTOR SHALL BE REQUIRED TO PROVIDE ADDITIONAL BEDDING, A DIFFERENT TYPE OF BEDDING OR A HIGHER PIPE STRENGTH AT HIS OWN EXPENSE AND SHALL ALSO BE RESPONSIBLE FOR EXTRA TEMPORARY AND/OR PERMANENT REPAIRS MADE NECESSARY BY THE WIDENED TRENCH.
- 21. 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.

WATERMAIN NOTES

- ALL WATERMAIN 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
- 2. NO WORK SHALL COMMENCE UNLESS A CITY WATER WORKS INSPECTOR IS ON SITE. WATERMAIN CONNECTIONS BY CITY
- 3. ALL PVC WATERMAINS SHALL BE EQUAL TO AWWA C-900 CLASS 150, SDR 18, OR APPROVED EQUAL.

OF OTTAWA FORCES WITH ALL EXCAVATION BACKFILL AND ROAD REINSTATEMENT BY CONTRACTOR.

- 4. 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.
- 5. ALL PVC WATERMAINS SHALL BE INSTALLED WITH A 10 GAUGE STRANDED COPPER TWU OR RWU TRACER WIRE IN
- ACCORDANCE WITH CITY OF OTTAWA STD. W36. 6. WATER SERVICES ARE TO BE TYPE K SOFT COPPER AS PER CITY OF OTTAWA STD. W26 UNLESS OTHERWISE SPECIFIED. ALL WATER SERVICES CROSSING SEWERS ARE TO BE INSTALLED AS PER CITY OF OTTAWA STD. W38. WATER SERVICES
- POSTS/SHUT-OFFS SHALL BE INSTALLED AT THE PROPERTY LINE. 7. CATHODIC PROTECTION IS REQUIRED ON ALL METALLIC FITTINGS AS PER CITY OF OTTAWA STD. W40 AND W42.
- 8. VALVE BOXES SHALL BE INSTALLED AS PER CITY OF OTTAWA DETAIL W24.
- 9. ALL FIRE HYDRANTS TO BE INSTALLED AS PER CITY STANDARD W19 AND LOCATED AS PER CITY STANDARD W18 AND/OR CITY STANDARD CROSS SECTIONS.

SHALL BE MARKED WITH A "50mm X 100mm", EXTENDING FROM THE INVERT TO 1.0m ABOVE GRADE PAINTED BLUE. STAND

- 10. ALL WATERMAINS TO BE INSTALLED AT MINIMUM COVER OF 2.4m.
- 11. THRUST BLOCKS AND RESTRAINT AS PER CITY OF OTTAWA DWGS: W25.3 AND W25.4, W25.5 AND W25.6.
- 12. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
- 13. DISINFECTION AND TESTING OF WATERMAIN TO BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS.
- 14. WATER METERS TO BE INSTALLED AS PER W30 FOR WATER SERVICES.
- 15. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY CAPS, PLUGS AND BLOW-OFFS AND NOZZLES REQUIRED FOR TESTING AND DISINFECTION OF THE WATERMAN.
- 16. 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.
- 17. WHERE THE SEPARATION BETWEEN SERVICES AND MANHOLES IS LESS THAN 1.2m, WATER SERVICES ARE TO BE
- INSULATED AS PER CITY OF OTTAWA STD. W23.
- 18. AS PER CITY GUIDELINE, THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / LITHLITY IS 0.25m FOR CROSSING OVER THE SEWER, AS PER CITY STD W25.2. FOR CROSSING UNDER SEWER, THE MINIMUM VERTICAL CLEARANCE IS 0.50m AS PER CITY STD. W25. FOR CROSSING UNDER SEWER, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS AND SETTLING. THE LENGTH OF WATER PIPE SHALL BE CENTERED AT THE POINT OF CROSSING SO THAT THE JOINTS WILL BE EQUIDISTANT AND AS FAR AS POSSIBLE FROM THE SEWER

ROADWAY SPECIFICATIONS

- ALL TOPSOIL AND ORGANIC MATERIAL SHALL BE STRIPPED WITHIN THE ROAD ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
- 2. CONCRETE CURB SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SCI.1.1(BARRIER CURB) AND SC1.3 (MOUNTABLE CURB), AS NOTED. PROVISION SHALL BE MADE FOR CURB DEPRESSIONS AT SIDEWALKS AND DRIVEWAYS.
- 3. DEPRESSED SIDEWALK REINSTATEMENT SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL DRAWING
- 4. ROAD SUBDRAINS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R1. SUBDRAINS SHALL BE 6m IN LENGTH AT CATCHBASINS. SUBDRAINS SHALL BE INSTALLED BOTH SIDES AT LOWPOINTS AND ON THE HIGH SIDE AT FLOWBY
- 5. PAVEMENT REINSTATEMENT FOR SERVICE AND UTILITY CUTS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. R10 AND OPSD 509.010, OPSS 310.
- 6. GRANULAR "A" SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm AROUND ALL STRUCTURES WITHIN PAVEMENT
- 7. ALL GRANULAR FOR ROADS SHALL BE COMPACTED TO A MINIMUM OF 98% STANDARD PROCTOR DENSITY.
- 8. ASPHALT WEAR COURSE SHALL NOT BE PLACED UNTIL THE VIDEO INSPECTION OF SEWERS & NECESSARY REPAIRS HAVE BEEN CARRIED OUT TO THE SATISFACTION OF THE ENGINEER.
- 9. SUB- EXCAVATE SOFT AREAS AND FILL WITH GRANULAR 'B' COMPACTED IN MAXIMUM 300mm LIFTS.
- 10. PAVEMENT STRUCTURE: REFER TO LEGEND

- 1. IT SHALL BE THE BUILDER'S RESPONSIBILITY TO ENSURE THAT GRADING AROUND HYDRANTS, TRANSFORMERS, AND UTILITY PEDESTALS, ETC., MEET CURRENT CITY OF OTTAWA, HYDRO AND UTILITY COMPANY REQUIREMENTS.
- 2. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED
- 3. CONTRACTOR TO ADJUST EXISTING CATCH BASINS, MANHOLES, FIRE HYDRANTS, VALVE CHAMBERS AND VALVE BOXES TO FINAL GRADE AS REQUIRED.
- 4. CONTRACTOR SHALL TAKE ALL NECESSARY PRECAUTIONS TO PROTECT EXISTING FOUNDATIONS OF ADJACENT BUILDINGS DURING EXCAVATION AND CONSTRUCTION PERIOD.
- 5. GRADING IN GRASSED AREAS WILL BE BETWEEN 2% TO 7%. GRADES IN EXCESS OF 7% WILL REQUIRE A MAXIMUM 3:1
- 6. NO EXCESS DRAINAGE, DURING OR AFTER CONSTRUCTION, TO BE DIRECTED TOWARDS NEIGHBORING PROPERTIES.
- 7. EXISTING DRAINAGE PATTERNS TO BE MAINTAINED.
- 8. ENSURE POSITIVE DRAINAGE AWAY FROM FOUNDATION.

FOUNDATION TO BE MAINTAINED 0.15m ABOVE FINISHED GRADE.

9. NO ALTERATION TO EXISTING GRADES ON THE PROPERTY LINES. 10. UNDERSIDE OF FOOTING TO BE MINIMUM 1.5m BELOW FINISHED GRADE OR INSULATION TO BE PROVIDED. TOP OF

CARRUTHERS AVENUE DEVELOPMENT