- . DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND LANDSCAPE DRAWINGS
- 2. ALL SERVICES, MATERIALS, CONSTRUCTION METHODS AND INSTALLATIONS SHALL BE IN ACCORDANCE WITH THE LATEST STANDARDS AND REGULATIONS OF THE: CITY OF OTTAWA STANDARD SPECIFICATIONS AND DRAWINGS, ONTARIO PROVINCIAL SPECIFICATION STANDARD SPECIFICATION (OPSS) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD), UNLESS OTHERWISE SPECIFIED. TO THE SATISFACTION OF THE CITY AND THE CONSULTANT
- THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES, STRUCTURES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWING. AND WHERE SHOWN. THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL SATISFY HIMSELF OF THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES, AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM DURING THE COURSE OF CONSTRUCTION. ANY RELOCATION OF EXISTING UTILITIES REQUIRED BY THE DEVELOPMENT OF SUBJECT LANDS IS TO BE UNDERTAKEN AT CONTRACTOR'S EXPENSE.
- 4. THE CONTRACTOR MUST NOTIFY ALL EXISTING UTILITY COMPANY OFFICIALS FIVE (5) BUSINESS DAYS PRIOR TO START OF CONSTRUCTION AND HAVE ALL EXISTING UTILITIES AND SERVICES LOCATED IN THE FIELD OR EXPOSED PRIOR TO THE START OF CONSTRUCTION, INCLUDING BUT NOT LIMITED TO HYDRO, BELL. CABLE TV. AND CONSUMERS GAS LINES.
- . ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS AND AS PER THE RECOMMENDATIONS INCLUDED IN THE GEOTECHNICAL REPORT.
- . REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS, LAYOUT AND REMOVALS. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
- TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD. DATED ON JULY 31, 2018. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- 8. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. VERIFY THAT JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED.
- 9. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
- 10. ALL EDGES OF DISTURBED PAVEMENT SHALL BE SAW CUT TO FORM A NEAT AND STRAIGHT LINE PRIOR TO PLACING NEW PAVEMENT. PAVEMENT REINSTATEMENT SHALL BE WITH STEP JOINTS OF 500mm WIDTH MINIMUM.
- 11. ALL DISTURBED AREAS OUTSIDE PROPOSED GRADING LIMITS TO BE RESTORED TO ORIGINAL ELEVATIONS AND CONDITIONS UNLESS OTHERWISE SPECIFIED. ALL RESTORATION SHALL BE COMPLETED WITH THE GEOTECHNICAL REQUIREMENTS FOR BACKFILL AND COMPACTION.
- 12. ABUTTING PROPERTY GRADES TO BE MATCHED UNLESS OTHERWISE SHOWN.
- 13. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING
- 14. MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
- 15. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL UNLESS OTHERWISE DIRECTED FROM THE ENGINEER. EXCAVATE AND REMOVE ALL ORGANIC MATERIAL AND DEBRIS LOCATED WITHIN THE PROPOSED BUILDING, PARKING AND ROADWAY LOCATIONS.
- 16. AT PROPOSED UTILITY CONNECTION POINTS AND CROSSINGS (I.E. STORM SEWER, SANITARY SEWER, WATER, ETC.) THE CONTRACTOR SHALL DETERMINE THE PRECISE LOCATION AND DEPTH OF EXISTING UTILITIES AND REPORT ANY DISCREPANCIES OR CONFLICTS TO THE ENGINEER BEFORE COMMENCING
- 17. CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY, COMPLETED BY OLS OR PLENG CONFIRMING COMPLIANCE WITH DESIG GRADING AND SERVICING. SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.
- 18. ABIDE BY RECOMMENDATIONS OF GEOTECHNICAL REPORT. REPORT ANY VARIATIONS IN OBSERVED CONATIONS FROM THOSE INCLUDED IN REPORT.
- i. STORMWATER MANAGEMENT REPORT, PREPARED BY WSP CANADA INC, PROJ. NO. 191-01517-00, JUNE 24, 2019 ii. GEOTECHNICAL INVESTIGATION, PREPARED BY PATERSON GROUP, PROJ. NO. PG4624-1, JUNE 03, 2019

GRANULAR B TYPE II COMPACT IN 12" (305mm)

### **NOTES: WATERMAIN**

- CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
- 2. ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE 16. STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
- 3. ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW 17. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL \$6. FINISHED GRADE. WHERE WATERMAINS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m CLEARANCE SHALL BE MAINTAINED: WHERE WATERMAINS CROSS UNDER OTHER UTILITIES. A MINIMUM 0.50m CLEARANCE SHALL BE MAINTAINED. WHERE THE MINIMUM SEPARATION CANNOT BE ACHIEVED, THE WATERMAIN SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARDS W25 AND W25.2. WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22. WHERE A WATERMAIN IS IN CLOSE PROXIMITY TO AN OPEN STRUCTURE. THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W23.
- 4. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND 21. ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W25.3 & W25.4.
- 5. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
- 6. ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS. AND HYDRANT VALVES AND ASSEMBLES SHALL BE INSTALLED AS PER CITY OF OTTAWA
- 7. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 & W19. CONTRACTOR TO PROVIDE FLOW TEST AND PAINTING OF NEW HYDRANT IN ACCORDANCE WITH CITY STANDARDS.
- 8. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY

## NOTES: SANITARY SEWER AND MANHOLES

- 9. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW SANITARY PIPING. PROVIDE DYE TESTING FOR NEW
- 10. SANITARY SEWER PIPE SIZE 150mm DIAMETER AND GREATER TO BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
- 11. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
- 12. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
- 13. MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER THE
- 14. ANY SANITARY SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE

## NOTES: STORM SEWERS AND STRUCTURES

- 1. ALL WATERMAIN AND WATERMAIN APPURTANANCES, MATERIALS, 15. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. PROVIDE CCTV INSPECTION REPORTS FOR ALL NEW STORM SEWERS, SERVICES AND CB LEADS.
  - RUBBER GASKET PER CSA A-257.3.

  - 18. ALL STORM MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSD 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.1.
  - 19. ANY NEW OR EXISTING STORM SEWER WITH LESS THAN 2.0m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER. ADD INSULATION ABOVE EXISTING STORM SEWER BETWEEN EXISTING CBMH101 AND CB1
  - 20. CB IN LANDSCAPE AREAS SHALL BE AS PER CITY OF OTTAWA STANDARD S31.
  - SLOPE UNLESS OTHERWISE SPECIFIED.
  - 22. STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWINGS S19. STORM CBMH'S AS INDICATED IN TABLE WITH SUMP AND FRAME/COVER AS PER OPSD 401.010 TYPE B. SANITARY MH'S AS PER OPSD 701.010 TYPE A BASE WITH BENCHING, AND FRAME/COVER AS PER OPSD 401.010 TYPE A. ADJUSTMENT SECTIONS SHALL BE AS PER OPSD 704.010.
  - 23. INSTALLATION OF FLOW CONTROL ICD'S TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.

# NOTES: EROSION AND SEDIMENT CONTROL

\*\* CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES, AND MEETING

### PRIOR TO START OF CONSTRUCTION:

ASSOCIATED LEED REQUIREMENT \*\*

- INSTALL SILT FENCE IN LOCATION SHOWN ON DWG C06.
- INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL
- 1.3. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

#### 2. DURING CONSTRUCTION:

- MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE 2.1. AND IMPACTS TO EXISTING GRADING.
- PERIMETER VEGETATION TO REMAIN IN PLACE UNTIL PERMANENT STORM WATER MANAGEMENT IS IN PLACE. OTHERWISE, IMMEDIATELY INSTALL SILT FENCE WHEN THE EXISTING SITE IS DISTURBED AT THE PERIMETER.
- PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CB'S AS REQUIRED.
- PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCH BASIN SUMPS WEEKLY
- AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN **NECESSARY**
- DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES.
- DO NOT LOCATE TOPSOIL PILES AND EXCAVATION MATERIAL CLOSER THAN 2.5m FROM ANY PAVED SURFACE, OR ONE WHICH IS TO BE PAVED BEFORE THE PILE IS REMOVED. ALL TOPSOIL PILES ARE TO BE SEEDED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
- CONTROL WIND-BLOWN DUST OFF SITE BY SEEDING TOPSOIL PILES AND OTHER AREAS TEMPORARILY (PROVIDE WATERING AS REQUIRED AND TO THE SATISFACTION OF THE ENGINEER) 2.10. NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS
- APPROVED BY THE FIELD ENGINEER. 2.11. CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
- 2.12. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPED.
- 2.13. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER. 2.14. TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ABUTTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN
- UP ANY AREAS SO AFFECTED. 2.15. ALL EROSION CONTROL STRUCTURE TO REMAIN IN PLACE UNTIL ALL DISTURBED GROUND SURFACES HAVE BEEN STABILIZED EITHER BY PAVING OR RESTORATION
- OF VEGETATIVE GROUND COVER. 2.16. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.

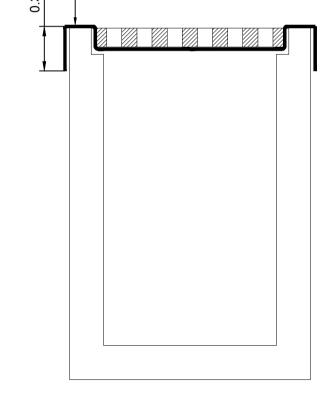
	WATERMAIN S	CHEDULE for	200mm W/	'M				
CTATION	DESCRIPTION	FINISHED	EXISTING	PROP. TOP OF	AS-BUILT			
STATION	DESCRIPTION	GRADE	GRADE	WATERMAIN	WATERMAIN			
0+000	Connect to Ex. 200mm W/M		86.550		84.150			
0+010.1	200mm V&VB	86.560		84.160				
0+014.2	Crossing the Ex. 600mm STM	86.600		84.200				
0+017.2	Cap to Building water service	86.840		84.440				
WATERMAIN SCHEDULE for 150mm W/M								
0+000	Connect to Ex. 200mm W/M		85.520		83.120			
0+011.6	150mm V&VB	85.330		82.930				
0+013.9	Crossing the Ex. 600mm STM	85.340		82.940				
0+015.3	Crossing the Ex. 250mm SAN	85.350		82.950				
0+034.1	Crossing the 450mm STM	85.240		82.840				
0+037.4	Crossing the 200mm STM	85.190		82.350				
0+092.0	Crossing the 375mm STM	85.240		82.700				
0+096.1	45 degree bend	85.240		82.840				
0+098.3	45 degree bend	85.250		82.850				
0+187.5	45 degree bend	86.610		84.210				
0+189.0	45 degree bend	86.660		84.260				
0+189.4	Connect to Ex. 150mm W/M	86.670	86.910		84.510			

		PIP	E CROSSIN	IG TABLE		
		Obvert			Invert	
1.	600mm. Dia. Ex. STM	83.478	0.522	Clearance Under	84.000	200mm. Dia. WM
2.	600mm. Dia. Ex. STM	81.680	1.110	Clearance Under	82.790	150mm. Dia. WM
3.	250mm. Dia. Ex. SAN	79.257	3.543	Clearance Under	82.800	150mm. Dia. WM
4.	450mm. Dia. STM	82.313	0.377	Clearance Under	82.690	150mm. Dia. WM
5.	150mm. Dia. WM	82.350	0.344	Clearance Under	82.694	200mm. Dia. STM
6.	150mm. Dia. WM	82.700	0.307	Clearance Under	83.007	375mm. Dia. STM

0+189.4	Connect to Ex. 150mm	W/M	86.670	86.910		84.510
		PIF	PE CROSSING	TABLE		
		Obvert			Invert	
1.	600mm. Dia. Ex. STM	83.478	0.522	Clearance Un	nder 84.000	200mm. Dia. WM
2.	600mm. Dia. Ex. STM	81.680	1.110	Clearance Un	der 82.790	150mm. Dia. WM
3.	250mm. Dia. Ex. SAN	79.257	3.543	Clearance Un	der 82.800	150mm. Dia. WM
4.	450mm. Dia. STM	82.313	0.377	Clearance Un	der 82.690	150mm. Dia. WM
5.	150mm. Dia. WM	82.350	0.344	Clearance Un	nder 82.694	200mm. Dia. STM
6.	150mm. Dia. WM	82.700	0.307	Clearance Un	der 83.007	375mm. Dia. STM

PAVEMENT STRUCTURE - BUS ACCESS LANES								
COURSE	MATERIAL	THICKNESS						
SURFACE	HL3 OR SUPERPAVE 12.5 AC	40 mm						
BINDER	HL8 OR SUPERPAVE 19.0 AC	50 mm						
BASECOURSE	OPSS GRANULAR 'A'	150 mm						
SUBBASE	OPSS GRANULAR 'B' TYPE II	450 mm						

PAVEMENT STRUCTURE - PARKING AREAS								
COURSE	MATERIAL	THICKNESS						
SURFACE	HL3 OR SUPERPAVE 12.5 AC	50 mm						
BASECOURSE	OPSS GRANULAR 'A'	150 mm						
SUBBASE	OPSS GRANULAR 'B' TYPE II	300 mm						



FILTER CLOTH TERRAFIX 270R OR

APPROVED EQUAL

FILTER CLOTH CATCHBASIN OR MANHOL	<u>.E</u>
SEDIMENT CONTROL DEVICE	_
(NTS)	

	SAN STRUCTURE TABLE											
SAMH1	TOP OF GRATE	INVERT IN		INVERT OUT		DESCRIPTION						
	ELEVATION			INVERTOOT	SIZE	OPSD	COVER					
SAMH1	85.57		79.747	79.687	1200mm DIA.	OPSD-701.010	S24					
SAMH2	86.72		82.624	82.564	1200mm DIA.	OPSD-701.010	S24					
SAMH3	85.23		81.587	81.527	1200mm DIA.	OPSD-701.010	S24					
SAMH4	85.34	80.684	78.975	78.975	1200mm DIA.	OPSD-701.010	S24					
	CATCH BASIN AND ICD DATA TABLE											

STRUCTURE	ADEAID	STRUCTURE	COVER	TOP OF GRATE		INVERT		DIAMTER	TVDE	LIEAD	EL OVA	ICE TYPE
ID	AREA ID	STRUCTURE	COVER	ELEVATION	INLET	INLET	OUTLET	(mm)	TYPE	HEAD	FLOW	ICE TYPE
CB1	A-1	OPSD 705.010	S19.1	85.13			83.600	200	PVC SDR-35			
CB2	A-2	OPSD 705.010	S19.1	85.76			83.600	200	PVC SDR-35			
CB3	A-3	OPSD 705.010	S19.1	86.25			84.050	200	PVC SDR-35			
CB4	A-5	OPSD 705.010	S19.1	86.40			84.200	200	PVC SDR-35			
CB16	A-7	OPSD 705.010	S19.1	86.48			84.281	200	PVC SDR-35			
CB6	A-9	OPSD 705.010	S19.1	84.93			82.730	200	PVC SDR-35			
CB7	A-11	OPSD 705.010	S19.1	85.35			83.221	200	PVC SDR-35			
CB8	A-12	OPSD 705.010	S19.1	86.45			84.250	200	PVC SDR-35			
CB9	A-13	OPSD 705.010	S19.1	86.49			84.290	200	PVC SDR-35			
СВМН8	EXT1	OPSD 701.010	S28.1	86.67	84.111		84.091	200	PVC SDR-35			
CB11	A-8	OPSD 705.010	S19.1	85.05			83.795	200	PVC SDR-35			
CB14	A-21	OPSD 705.010	S19.1	85.91			83.706	200	PVC SDR-35			
CB15	A-20	OPSD 705.010	S19.1	85.91			83.706	200	PVC SDR-35			
CB12	A-4	OPSD 705.010	S19.1	86.33			84.130	200	PVC SDR-35			
CB13	A-6	OPSD 705.010	S19.1	86.50			84.300	200	PVC SDR-35			
CB5	A-22	OPSD 705.010	S19.1	86.53			84.331	200	PVC SDR-35			
СВМН3		OPSD 701.010	S28.1	85.19	83.156		83.136	375	PVC SDR-35	1.8	35	HYDROVEX 150VHV-2
СВМН6		OPSD 701.010	S28.1	84.96	82.082		82.052	450	EXISTING			
CBMH7	A-10	OPSD 701.010	S28.1	85.13	82.990		82.930	200	PVC SDR-35			

MAX LIFTS TO 95% STANDARD PROCTOR DENSITY	
NOMINAL (19mm - 51mm) CLEAN, CRUSHED, ————————————————————————————————————	CHAMBERS SHALL BE DESIGNED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTION CHAMBERS".
ALL AROUND CLEAN, CRUSHED ANGULAR STONE	PAVEMENT DESIGN (PER GEOTECHNICAL RECOMMENDATIONS)
CONNECTION PIPES AS PER SUPPLIER'S DESIGN RECOMMENDATIONS.	610mm MIN.
	305mm MIN.
305mm MIN. 1956mm 4700mm	1143mm OUTLET INV. 83.50 INV. 82.729 BOTTOM OF CHAMBERS  1NV. 82.500 DEPTH OF STONE 229mm
IN THE AASHTO LRFD BRIDGE SPECIFICA LOADS, WITH CONSIDERATION FOR IMP PROVIDE TWO ROWS OF CHAMBERS WITH MC-3500 EN TOTAL CHAMBER RETENTION VOLUME = 3	LL PROVIDE THE LOAD FACTORS SPECIFIED TIONS SECTION 12.12 FOR EARTH AND LIVE ACT AND MULTIPLE VEHICLE PRESENCES. , ONE ROW OF 54 AND ONE ROW OF 51, D CAP AT EACH END. 25.0m³ (BELOW LEVEL OF CHAMBER OUTLET) VITHIN CHAMBERS = 525.0m³ MINIMUM.
	MC-3500 CHAMBER CROSS SECTION

STORM STRUCTURE TABLE									
STRUCTURE	TOP OF GRATE	INVERT IN		INVERT OUT	DESCRIPTION				
ID	ELEVATION	IIVLI	VI IIV	INVERTIOUT	SIZE	OPSD	COVER		
CB1	85.13			83.600	600X600mm	OPSD 705.010	S19.1		
CB2	85.76			83.600	600X600mm	OPSD 705.010	S19.1		
CB3	86.25			84.050	600X600mm	OPSD 705.010	S19.1		
CB4	86.40			84.200	600X600mm	OPSD 705.010	S19.1		
CB5	86.53			84.331	600X600mm	OPSD 705.010	S19.1		
CB6	84.93			82.730	600X600mm	OPSD 705.010	S19.1		
CB7	85.37			83.221	600X600mm	OPSD 705.010	S19.1		
CB8	86.45			84.250	600X600mm	OPSD 705.010	S19.1		
CB9	86.49			84.290	600X600mm	OPSD 705.010	S19.1		
CB11	85.05			83.795	600X600mm	OPSD 705.010	S19.1		
CB12	86.33			84.130	600X600mm	OPSD 705.010	S19.1		
CB13	86.50			84.300	600X600mm	OPSD 705.010	S19.1		
CB14	85.91			83.706	600X600mm	OPSD 705.010	S19.1		
CB15	85.91			83.706	600X600mm	OPSD 705.010	S19.1		
CB16	86.48			84.281	600X600mm	OPSD 705.010	S19.1		
STMH1	86.63	84.185	85.195	83.780	1200mm DIA.	OPSD 701.010	S24.1		
STMH2	86.54	83.629		83.609	1200mm DIA.	OPSD 701.010	S24.1		
СВМН3	85.19	83.455		83.136	1200mm DIA.	OPSD 701.010	S28.1		
STMH4	85.24	83.070		83.050	3000mm DIA.	OPSD 701.014	S24.1		
STMH5	85.21	82.958	83.032	82.883	1200mm DIA.	OPSD 701.010	S24.1		
СВМН6	84.96	82.082		82.052	1200mm DIA.	OPSD 701.010	S28.1		
CBMH7	85.13	82.990		82.930	1200mm DIA.	OPSD 701.010	S28.1		
СВМН8	86.67	84.111		84.091	1200mm DIA.	OPSD 701.010	S24.1		

CTORNA CTRUICTURE TARLE

	SURFACE PONDING TABLE											
			Top of CB		100-YEAR				100-YEAR+20% Stress Test			
POND#	AREA ID	LOCATION	ELEV. (m)	CB PONDING	CB PONDING	PONDING	PONDING	CB PONDING	CB PONDING	PONDING	PONDING	
			LLLV. (III)	ELEV. (m)	DEPTH (m)	AREA (m²)	VOL. (m³)	ELEV. (m)	DEPTH (m)	AREA (m²)	VOL. (m³)	
1	A-1	CB1	85.13	85.220	0.090	38.093	1.143	85.227	0.097	44.245	1.431	
2	A-2	CB2	85.76	85.842	0.082	18.486	0.505	85.848	0.088	21.305	0.625	
3	A-3	CB3	86.25	86.340	0.090	17.888	0.537	86.348	0.098	21.216	0.693	
4	A-4	CB12	86.33	86.362	0.032	104.246	1.112	86.364	0.034	105.877	1.200	
5	A-5	CB4	86.4	86.472	0.072	13.513	0.324	86.478	0.078	16.778	0.436	
6	A-6	CB13	86.5	86.532	0.032	147.691	1.575	86.534	0.034	150.130	1.701	
7	A-7	CB16	86.48	86.550	0.070	12.325	0.288	86.556	0.076	12.325	0.312	
8	A-8	CB11	85.05	85.106	0.056	16.181	0.302	85.111	0.061	19.195	0.390	
9	A-9	CB6	84.93	84.957	0.027	1.099	0.010	84.960	0.030	1.368	0.014	
10	A-10	СВМН7	85.13	85.162	0.032	1.999	0.021	85.164	0.034	2.258	0.026	
11	A-11	CB7	85.35	85.418	0.068	21.128	0.479	85.424	0.074	24.905	0.614	
12	A-12	CB8	86.45	86.460	0.010	50.896	0.170	86.470	0.020	52.412	0.349	
13	A-13	CB9	86.49	86.513	0.023	70.485	0.540	86.515	0.025	71.336	0.594	
14	A-20	CB15	85.91	85.951	0.041	23.659	0.323	85.954	0.044	24.385	0.358	
15	A-21	CB14	85.91	85.959	0.049	50.772	0.829	85.963	0.053	51.858	0.916	
16	A-22	CB5	86.53	86.550	0.020	55.210	0.368	86.552	0.022	55.629	0.408	

\*Ponding Volume is calculated using ponding area mulitplied by the maximum ponding depth, and divided by 3 for a conical pond.

ATHLETICS AND RECREATION CENTRE (ARC)

Prepared For

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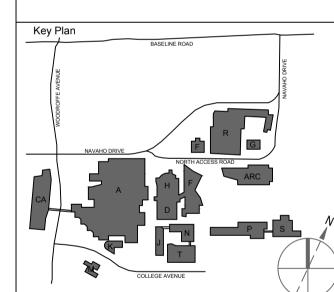
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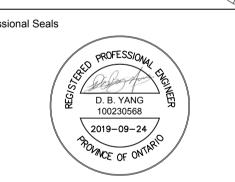
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No. Description 1 SITE PLAN APPROVAL 2019-06-24 ISSUED FOR PERMIT/TENDER 2019-08-20 RESPONSE TO SPA COMMENTS

Drawn by: D.B.Y.

Project No: 191-01517-00

Sheet Title

Reviewed by: J.J.

Original drawing is A1. Do not scale contents of this drawing.

NOTES AND DETAILS

Sheet Number