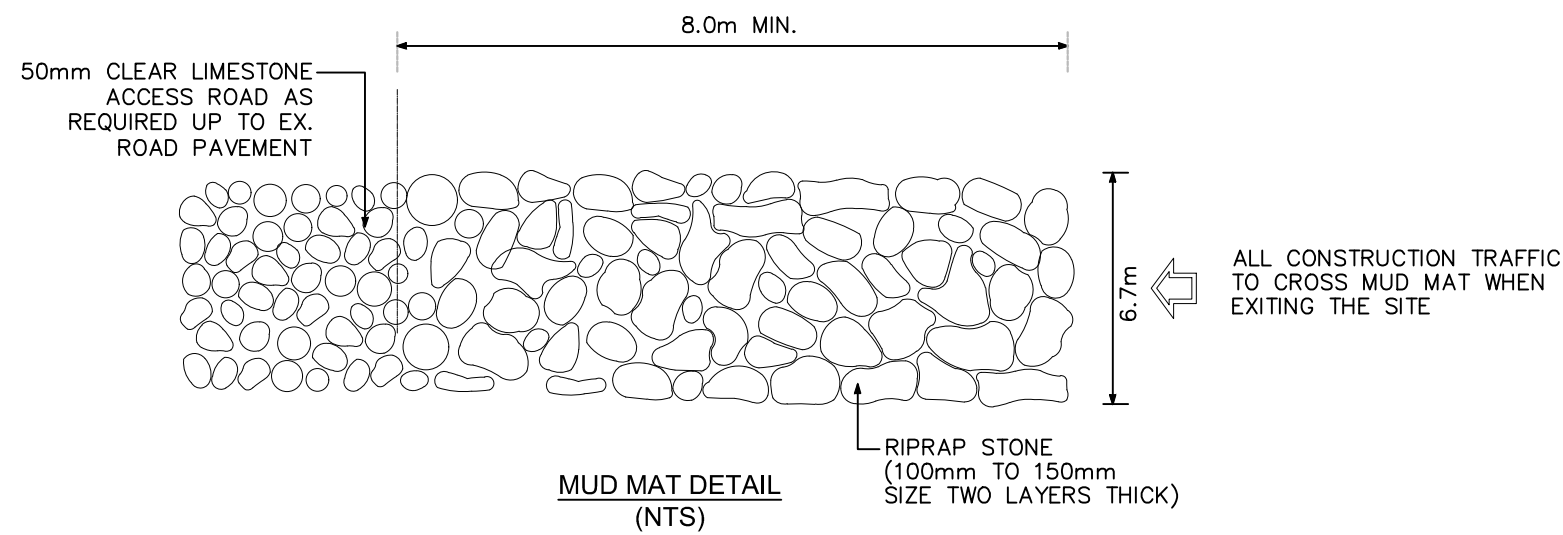


NOTES: GENERAL

1. 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).
2. THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND ABOVEGROUND UTILITIES AND APPURTENANCES IS NOT NECESSARILY SHOWN ON 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.
3. 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.
4. ALL TRENCHING AND EXCAVATIONS TO BE IN ACCORDANCE WITH THE LATEST REVISIONS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.
5. REFER TO ARCHITECTS PLANS FOR BUILDING DIMENSIONS, ELEVATIONS, LAYOUT AND DECK STRUCTURE. REFER TO LANDSCAPE PLAN FOR LANDSCAPED DETAILS AND OTHER RELEVANT INFORMATION. ALL INFORMATION SHALL BE CONFIRMED PRIOR TO COMMENCEMENT OF CONSTRUCTION.
6. TOPOGRAPHIC SURVEY COMPLETED AND PROVIDED BY FAIRHALL MORTFATT & WOODLAND DATED JULY 16, 2014. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
7. ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS.
8. ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR DRAIN OUTLETS ARE PROVIDED.
9. 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.
10. 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.
11. ALL MATERIAL SUPPLIED AND PLACED FOR PARKING LOT AND ACCESS ROAD CONSTRUCTION SHALL BE TO OPSS STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE NOTED. CONSTRUCTION TO OPSS 206, 310 & 314. MATERIALS TO OPSS 1001, 1003 & 1010.
12. ABUTTING PROPERTY GRADES TO BE MATCHED.
13. CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
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 WORK.
17. SERVICE TRENCHES ON MUNICIPAL RIGHT OF WAY TO BE REINSTATED AS PER CITY OF OTTAWA DETAIL R10.
18. PRIOR TO CONSTRUCTION, A GEOTECHNICAL ENGINEER REGISTERED IN THE PROVINCE OF ONTARIO IS TO INSPECT ALL SUB-SURFACES FOR FOOTINGS, SERVICES AND PAVEMENT STRUCTURES.
19. FOR ANY SOILS RELATED INFORMATION, REFER TO THE GEOTECHNICAL INVESTIGATION REPORT BY EXP SERVICES INC. LTD.
20. SPECIFICATION FOR PAVEMENT DEPTH OVER STRUCTURAL PARKING DECK SHALL BE AS PER THE RECOMMENDATION FROM STRUCTURAL ENGINEER.
21. CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY, COMPLETED BY OLS OR P/NO CONFIRMING COMPLIANCE WITH DESIGN GRADING AND SERVING SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.



Technical Specification

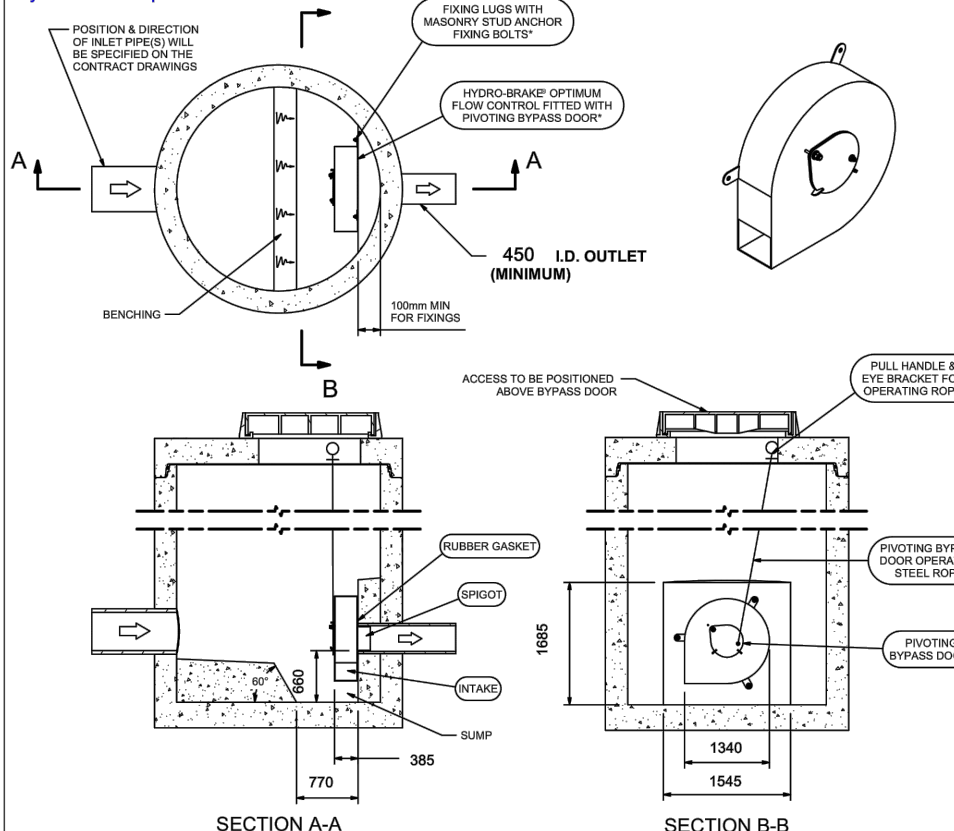
Control Point	Head (m)	Flow (l/s)
Primary Design	2.000	98.000
Flush-Flo™	0.671	97.653
Kick-Flo®	1.418	82.712
Mean Flow		82.694

Hydro-Brake® Optimum Flow Control including:

- 5 mm grade 304L stainless steel
- Integral stainless steel pivoting bypass door allowing clear line of sight through to outlet
- Bead blasted finish to maximise corrosion resistance
- Stainless steel flange
- Rubber gasket to seal outlet



hydro-int.com/patents



THIS DESIGN LAYOUT IS FOR ILLUSTRATIVE PURPOSES ONLY. NOT TO SCALE.

DESIGN ADVICE	The headflow characteristics of this SHE-0379-9800-2000-9800 Hydro-Brake® Optimum Flow Control are unique. Dynamic hydraulic modelling evaluates the full headflow characteristic curve. The use of any other flow control will invalidate any design based on this data and could constitute a flood risk.	Hydro-Brake® Optimum Flow Control
DATE	3/3/2020 9:29 PM	SHE-0379-9800-2000-9800
SITE		
DESIGNER	Michael Stewart	
REF		

22. ALL WATERMAIN AND WATERMAIN APPURTENANCES, MATERIALS, CONSTRUCTION AND TESTING METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA AND MINISTRY OF ENVIRONMENT STANDARDS AND SPECIFICATIONS.
23. ALL EXISTING WATERMAIN AND SERVICES SHALL BE ABANDONED AND SHALL BE PERFORMED BY THE CITY OF OTTAWA FORCES.
24. ALL WATERMAIN SHALL BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
25. ALL WATER MAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMANS CROSS OVER OTHER UTILITIES, A MINIMUM 0.25m CLEARANCE SHALL BE MAINTAINED; WHERE WATERMANS 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 W23 AND W25.2, WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22.
26. WATER MAIN BEDDING TO BE AS PER CITY OF OTTAWA STANDARD W17.
27. VALVE AND VALVE BOX TO BE AS PER CITY OF OTTAWA STANDARD W24.
28. VALVE AND VALVE CHAMBER TO BE AS PER CITY OF OTTAWA STANDARD W3.
29. FIRE HYDRANT LOCATION AND INSTALLATION AS PER CITY OF OTTAWA STANDARD W18 & W19.
30. CONCRETE THRUST BLOCKS AND MECHANICAL RESTRAINTS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, REDUCERS, ENDS OF MAINS AND CONNECTIONS 100mm AND LARGER, IN ACCORDANCE WITH CITY OF OTTAWA STANDARDS W23.3 & W25.4.
31. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
32. IF WATER MAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.
33. ALL CONNECTIONS OF NEW WATERMAIN TO EXISTING WATERMAIN SHALL BE PERFORMED BY CITY OF OTTAWA FORCES. THE CONTRACTOR SHALL PROVIDE EXCAVATION, BACKFILL AND REINSTATEMENT. THE CONTRACTOR SHALL CONSTRUCT WATER SERVICES APPURTENANCES AS PER CITY OF OTTAWA STANDARDS W23 & W25.2, WHERE 2.4m MINIMUM DEPTH CANNOT BE ACHIEVED, THERMAL INSULATION SHALL BE PROVIDED AS PER CITY OF OTTAWA STANDARD W22.
34. EXISTING SANITARY SEWER UTILITIES SHALL BE ABANDONED; FILL WITH GROUT AND CAP, OR REMOVE COMPLETELY. THE SEWER SERVICE ABANDONMENT BEYOND THE PROPERTY LINE SHALL BE DONE AS PER THE CITY STANDARDS S11.4.
35. PROPOSED SANITARY SEWER PIPE SHALL BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
36. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
37. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.
38. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSS 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.

NOTES: SANITARY SEWER AND MANHOLES

39. ALL SANITARY SEWER, SANITARY SEWER APPURTENANCES AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
40. ALL EXISTING SANITARY SEWER UTILITIES SHALL BE ABANDONED; FILL WITH GROUT AND CAP, OR REMOVE COMPLETELY. THE SEWER SERVICE ABANDONMENT BEYOND THE PROPERTY LINE SHALL BE DONE AS PER THE CITY STANDARDS S11.4.
41. PROPOSED SANITARY SEWER PIPE SHALL BE PVC SDR-35 (UNLESS SPECIFIED OTHERWISE) WITH RUBBER GASKET TYPE JOINTS IN CONFORMANCE WITH CSA B-182.2,3,4.
42. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
43. ALL WORK SHALL BE PERFORMED, AS APPLICABLE IN ACCORDANCE WITH OPSS 407, AND 410.
44. ALL SANITARY MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSS 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.
45. STORM SEWERS SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3. STORM SEWERS 525mm DIAMETER AND LARGER SHALL BE CONCRETE CLASS CL-1000.
46. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
47. ALL STORM MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSS 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.1.
48. CATCH BASINS TO BE AS PER OPSS 705.010 WITH FRAME AND COVERS TO OPSS 400.020. ALL CATCH BASIN MANHOLES TO BE OPSS 701.010 WITH FRAME AND COVER TO CITY OF OTTAWA STANDARD S25 AND S28.1.
49. ROOF DRAINS AND DECK DRAINS SHALL BE BY WATTS DRAINAGE. DRAINS SHALL BE SELECTED BASED ON THE RELEASE RATES.
50. ALL CATCH-BASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.

NOTES: STORM SEWERS AND STRUCTURES

51. ALL STORM SEWER MATERIALS AND CONSTRUCTION METHODS SHALL CONFORM TO THE CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.
52. ALL EXISTING STORM SEWER UTILITIES SHALL BE ABANDONED; FILL WITH GROUT AND CAP, OR REMOVE COMPLETELY. THE SEWER SERVICE ABANDONMENT BEYOND THE PROPERTY LINE SHALL BE DONE AS PER THE CITY STANDARD S11.4.
53. STORM SEWERS SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3. STORM SEWERS 525mm DIAMETER AND LARGER SHALL BE CONCRETE CLASS CL-1000.
54. SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
55. ALL STORM MANHOLES 1200mm IN DIAMETER TO BE AS PER OPSS 701.01. FRAME AND COVER TO BE AS PER CITY OF OTTAWA STANDARD S25 AND S24.1.
56. CATCH BASINS TO BE AS PER OPSS 705.010 WITH FRAME AND COVERS TO OPSS 400.020. ALL CATCH BASIN MANHOLES TO BE OPSS 701.010 WITH FRAME AND COVER TO CITY OF OTTAWA STANDARD S25 AND S28.1.
57. ROOF DRAINS AND DECK DRAINS SHALL BE BY WATTS DRAINAGE. DRAINS SHALL BE SELECTED BASED ON THE RELEASE RATES.
58. ALL CATCH-BASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.

NOTES: EROSION AND SEDIMENT CONTROL

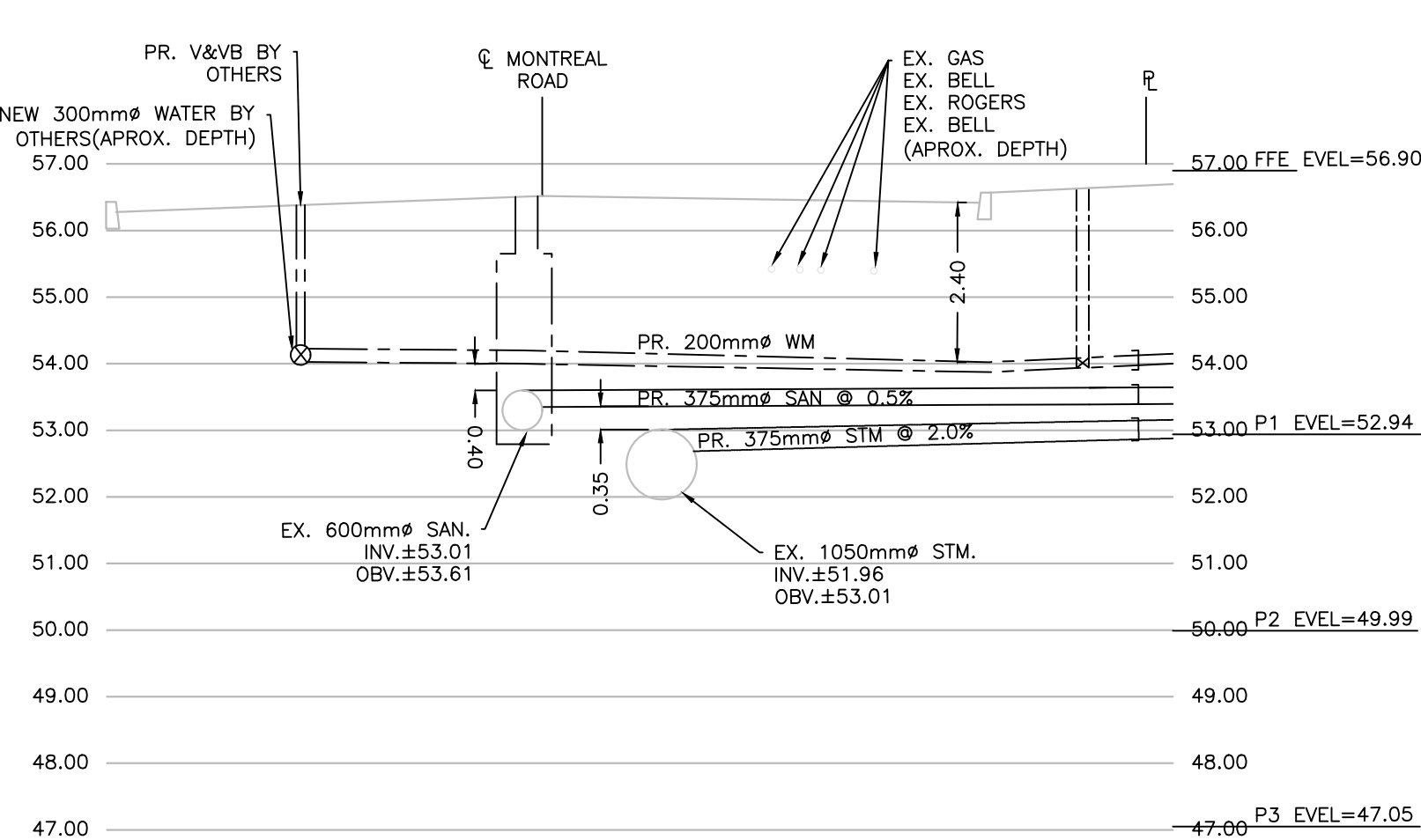
** CONTRACTOR IS RESPONSIBLE FOR ALL INSTALLATION, MONITORING, REPAIR AND REMOVAL OF ALL EROSION AND SEDIMENT CONTROL FEATURES **

1. PRIOR TO START OF CONSTRUCTION:

- 1.1. INSTALL SILT FENCE ALONG THE PERIMETER OF THE PROPERTY LINE (SEE PLAN FOR LOCATION).
- 1.2. INSTALL STRAW BALE FLOW CHECK DAM AND SILT FENCES ALONG DITCHES IMMEDIATELY DOWNSTREAM OF AREAS TO BE DISTURBED.
- 1.3. INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL DETAIL).
- 1.4. INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

2. DURING CONSTRUCTION:

- 2.1. MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
- 2.2. PERMITTER 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.
- 2.3. 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.
- 2.4. PROVIDE TEMPORARY COVER SUCH AS SEEDING OR MULCHING IF DISTURBED AREA WILL NOT BE REHABILITATED WITHIN 30 DAYS.
- 2.5. INSPECT SILT FENCES, FILTER FABRIC FILTERS AND CATCH BASIN SLUMPS WEEKLY AND WITHIN 24 HOURS AFTER A STORM EVENT. CLEAN AND REPAIR WHEN NECESSARY.
- 2.6. DRAWING TO BE REVIEWED AND REVISED AS REQUIRED DURING CONSTRUCTION.
- 2.7. EROSION CONTROL FENCING TO BE ALSO INSTALLED AROUND THE BASE OF ALL STOCKPILES AS SHOWN.
- 2.8. 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 SEED IF THEY ARE TO REMAIN ON SITE LONG ENOUGH FOR SEEDS TO GROW (LONGER THAN 30 DAYS).
- 2.9. 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. PROVIDE GRAVEL ENTRANCE (MUD MAT) WHEREVER EQUIPMENT LEAVES THE SITE TO PROVIDE MUD TRACKING ONTO PAVED SURFACES. IN THE EVENT ADDITIONAL GRESS POINTS ARE REQUIRED THEY SHOULD BE CONSTRUCTED IN ACCORDANCE WITH THE MUD MAT DETAIL (SEE TYPICAL DETAIL).
- 2.13. DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPPED.
- 2.14. ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
- 2.15. 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.
- 2.16. 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.
- 2.17. 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.



PAVEMENT STRUCTURE - HEAVY DUTY		
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

SAN STRUCTURE TABLE						
STRUCTURE ID	TOP OF GRATE ELEVATION	INVERT IN	INVERT OUT	DESCRIPTION		
				SIZE	OPSD	COVER
SAMH1	57.05		53.31	53.29	1200mm DIA.	OPSD-701.010 \$24
SAMH2	56.48	53.01	53.23	53.01	1200mm DIA.	OPSD-701.010 \$24
SAMH3	57.04			55.38	1200mm DIA.	OPSD-701.010 \$24

STORM STRUCTURE TABLE						
STRUCTURE ID	TOP OF GRATE	INVERT IN	INVERT OUT	DESCRIPTION		
				SIZE	OPSD	COVER
CB1	57.14		55.140	600X600mm	OPSD 705.010	\$19.1
CB2	57.14		55.010	600X600mm	OPSD 705.010	\$19.1
CB3	56.84	55.070	55.010	600X600mm	OPSD 705.010	\$19.1
CB4	56.84		55.080	600X600mm	OPSD 705.010	\$19.1
DICB5	56.60		55.470	600X600mm	OPSD 705.010	OPSD 403.010
STMH1	56.65	52.900	52.840	1200mm DIA.	OPSD 701.010	\$24.1
STMH2	56.99	54.330	54.310	1200mm DIA.	OPSD 701.010	\$24.1
STMH3	56.50	53.020	53.000	1200mm DIA.	OPSD 701.010	\$24.1

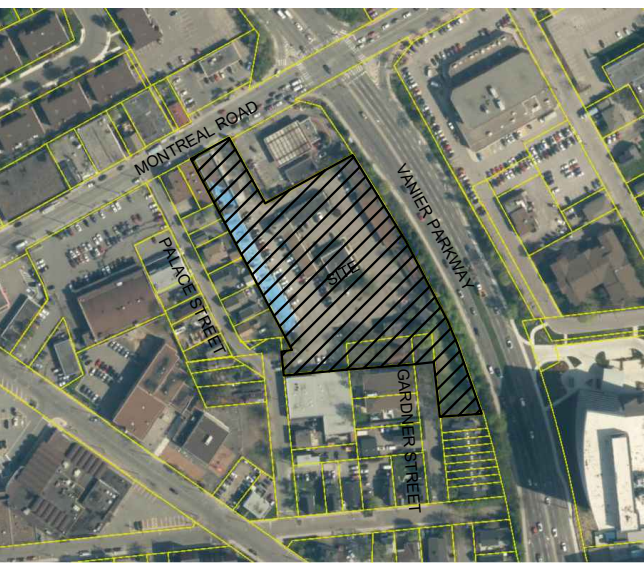
WATERMAIN SCHEDULE					
STATION	DESCRIPTION	FINISHED GRADE	EXISTING GRADE	PROP. TOP OF W/M	AS-BUILT TOP OF W/M
0+00.0	Connect to Ex. 305mm W/M with 300x200 TEE		56.380		54.280
0+003.3	Crossing Existing 600mm Sanitary Sewer		56.500		54.100
0.005.4	Crossing Existing 1050mm Storm Sewer		56.500		54.100
0+012.1	200mm V&V	56.570		54.170	
0+013.7	Cap by City	57.300		54.900	
0+018.8	200x200 TEE	57.300		54.900	
0+025.4	200x200 TEE	56.650		54.250	
0+144.8	200x200 TEE	56.620		54.220	
0+146.2	45 degree bend	56.620		54.220	
0+147.8	45 degree bend	56.650		54.250	
0+149.2	200x150 TEE	56.690		54.290	
0+158.4	200mm V&V	56.870		54.470	
0+162.1	200x150 Reducer	56.750		54.350	
0+163.5	22.25 degree bend	56.630		54.230	
0+167.2	Connect to Ex. 150mm W/M with 150x150 TEE		56.700		54.300

PIPE CROSSING TABLE					
Obvert			Invert		
1.	600mm. Dia. Ex. SAN	53.600	0.400	Clearance Under	54.000 200mm. Dia. WM
2.	600mm. Dia. Ex. SAN	53.620	0.400	Clearance Under	54.020 200mm. Dia. WM
3.	1050mm. Dia. Ex. STM	52.910	0.450	Clearance Under	53.360 375mm. Dia. SAN
4.	1050mm. Dia. Ex. STM	52.910	1.050	Clearance Under	53.960 200mm. Dia. WM
5.	1050mm. Dia. Ex. STM	52.910	1.040	Clearance Under	53.950 200mm. Dia. WM
6.	200mm. Dia. CB LEAD	55.050	0.300	Clearance Under	55.350 250mm. Dia. Ex. SAN
7.	150mm. Dia. Ex. WM	54.670	0.390	Clearance Under	55.060 200mm. Dia. CB LEAD

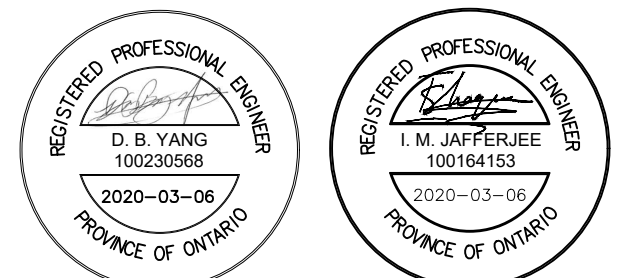
GENERAL NOTES:

THE ENGINEER WAIVES ANY AND ALL RESPONSIBILITY AND LIABILITY FOR PROBLEMS WHICH ARISE FROM FAILURE TO FOLLOW THE PLANS, SPECIFICATIONS AND THE DESIGN INTENT THEY CONVEY, OR FOR PROBLEMS WHICH ARISE FROM OTHERS' FAILURE TO OBTAIN AND/OR FOLLOW THE ENGINEER'S GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES, AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.

CONTRACTOR TO VERIFY ALL DIMENSIONS AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES BEFORE WORK COMMENCES. DO NOT SCALE DRAWINGS.



KEY PLAN (N.T.S.)



NOT VALID UNLESS SIGNED AND DATED



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MANOR PARK MANAGEMENT
231 BRITANNY DRIVE, SUITE D
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& ASSOCIATES LTD.

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ANNIS, O'SULLIVAN, VOLLEBEKK
Ontario Land Surveyors
114 CONQUEST GATE, SUITE 100, NEPEAN, ONTARIO, K2E 7S6
TEL: (613) 727-0850 FAX: (613) 727-1079

DESIGNED BY: D.Y. DRAWN BY: D.Y. APPROVED BY: I.J.
PROJECT

112 MONTREAL ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

NOTES AND DETAILS

PROJECT NO. 19M-01935-00 DRAWING NO.

C01

#XXXX