

[illegible]

GENERAL 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.

THE CONTRACTOR ACKNOWLEDGES THAT SURFACE EROSION AND SEDIMENT RUNOFF RESULTING FROM THEIR CONSTRUCTION OPERATIONS HAS POTENTIAL TO CAUSE A DETRIMENTAL IMPACT TO ANY DOWNSTREAM WATERCOURSE OR SEWER, AND THAT ALL CONSTRUCTION OPERATIONS THAT MAY IMPACT UPON WATER QUALITY SHALL BE CARRIED OUT IN A MANNER THAT STRICTLY MEETS THE REQUIREMENTS OF ALL APPLICABLE LEGISLATION AND REGULATIONS.

AS SUCH, THE CONTRACTOR SHALL BE RESPONSIBLE FOR CARRYING OUT THEIR OPERATIONS, AND SUPPLYING AND INSTALLING ANY APPROPRIATE CONTROL MEASURES, SO AS TO PREVENT SEDIMENT LADEN RUNOFF FROM ENTERING ANY SEWER OR WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA.

THE CONTRACTOR ACKNOWLEDGE THAT NO ONE MEASURE IS LIKELY TO BE 100% EFFECTIVE FOR EROSION PROTECTION AND CONTROLLING SEDIMENT RUNOFF AND DISCHARGES FROM THE SITE. THEREFORE, WHERE NECESSARY THE CONTRACTOR SHALL IMPLEMENT ADDITIONAL MEASURES ARRANGED IN SUCH A MANNER AS TO MITIGATE SEDIMENT RELEASE FROM THE CONSTRUCTION OPERATIONS AND ACHIEVE SPECIFIC MAXIMUM PERMITTED CRITERIA WHERE APPLICABLE. SUGGESTED ON-SITE MEASURES MAY INCLUDE, BUT SHALL NOT BE LIMITED TO, THE FOLLOWING METHODS: SEDIMENT PONS, FILTER BAGS, PUMP FILTERS, SETTLING TANKS, SILT FENCES, STRAW BALES, FILTER CLOTHS, CATCH BASIN FILTERS, CHECK DAMS AND/OR BERMS, OR OTHER RECOGNIZED TECHNOLOGIES AND METHODS AVAILABLE AT THE TIME OF CONSTRUCTION. SPECIFIC MEASURES SHALL BE INSTALLED IN ACCORDANCE WITH THE REQUIREMENTS OF OPSS 577 WHERE APPROPRIATE, OR IN ACCORDANCE WITH MANUFACTURER'S RECOMMENDATIONS.

WHERE, IN THE OPINION OF THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY, THE INSTALLED CONTROL MEASURES FAIL TO PERFORM ADEQUATELY, THE CONTRACTOR SHALL SUPPLY AND INSTALL ADDITIONAL OR ALTERNATIVE MEASURES AS DIRECTED BY THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY. AS SUCH, THE CONTRACTOR SHALL HAVE ADDITIONAL CONTROL MATERIALS ON SITE AT ALL TIMES WHICH ARE EASILY ACCESSIBLE AND MAY BE IMPLEMENTED BY HIM AT A MOMENT'S NOTICE.

PRIOR TO COMMENCING WORK, THE CONTRACTOR SHALL SUBMIT TO THE CONTRACT ADMINISTRATOR SIX COPIES OF A DETAILED EROSION AND SEDIMENT CONTROL PLAN (ESCP). THE ESCP WILL CONSIST OF A WRITTEN DESCRIPTION AND DETAILED DRAWINGS INDICATING THE ON-SITE ACTIVITIES AND MEASURES TO BE USED TO CONTROL EROSION AND SEDIMENT MOVEMENT FOR EACH STEP OF THE WORK.

CONTRACTOR'S RESPONSIBILITIES

THE CONTRACTOR SHALL ENSURE THAT ALL WORKERS, INCLUDING SUB-CONTRACTORS, IN THE WORKING AREA ARE AWARE OF THE IMPORTANCE OF THE EROSION AND SEDIMENT CONTROL MEASURES AND INFORMED OF THE CONSEQUENCES OF THE FAILURE TO COMPLY WITH THE REQUIREMENTS OF ALL REGULATORY AGENCIES.

THE CONTRACTOR SHALL PERIODICALLY, AND WHEN REQUESTED BY THE CONTRACT ADMINISTRATOR, CLEAN OUT ACCUMULATED SEDIMENT FROM ALL SEWER AND WATERCOURSE DEVICES, INCLUDING THOSE LOCATED AT THE SITE, THAT MAY OR MAY NOT BE OUTSIDE THE CONSTRUCTION AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED IN SUCH A MANNER THAT PREVENTS THE DEPOSITION OF THIS MATERIAL INTO ANY SEWER OR WATERCOURSE AND AVOIDS DAMAGE TO THE CONTROL MEASURE. THE SEDIMENT SHALL BE REMOVED FROM THE SITE AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL, AS SPECIFIED ELSEWHERE IN THE CONTRACT.

THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE CONTRACT ADMINISTRATOR ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO EITHER THE WATERCOURSE OR THE STORM SEWER SYSTEM. FAILURE TO REPORT WILL BE CONSTITUTE A BREACH OF THIS SPECIFICATION AND THE CONTRACTOR MAY ALSO BE SUBJECT TO THE PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY. APPROPRIATE RESPONSE MEASURES, INCLUDING ANY REPAIRS TO EXISTING CONTROL MEASURES OR THE IMPLEMENTATION OF ADDITIONAL CONTROL MEASURES, SHALL BE CARRIED OUT BY THE CONTRACTOR WITHOUT DELAY.

THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE CONTRACT ADMINISTRATOR, THE MEASURE OR MEASURES, IS NO LONGER REQUIRED. NO CONTROL MEASURE MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE CONTRACT ADMINISTRATOR. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE REMOVED IN A MANNER THAT AVOIDS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HELD EQUIPMENT, INTO ANY WATERCOURSE, AND PREVENTS THE ENTRY OF ANY EQUIPMENT, OTHER THAN HAND-HELD EQUIPMENT, INTO ANY WATERCOURSE WITHIN OR DOWNSTREAM OF THE WORKING AREA. ACCUMULATED SEDIMENT SHALL BE REMOVED FROM THE WORKING AREA AT THE CONTRACTOR'S EXPENSE AND MANAGED IN COMPLIANCE WITH THE REQUIREMENTS FOR EXCESS EARTH MATERIAL.

WHERE, IN THE OPINION OF EITHER THE CONTRACT ADMINISTRATOR OR A REGULATORY AGENCY, ANY OF THE TERMS SPECIFIED HEREIN HAVE NOT BEEN COMPLIED WITH OR PERFORMED IN A SUITABLE MANNER, OR AT ALL, THE CONTRACT ADMINISTRATOR OR REGULATORY AGENCY HAS THE RIGHT TO IMMEDIATELY WITHDRAW ITS PERMISSION TO CONTINUE THE WORK BUT MAY RENEW ITS PERMISSION UPON BEING SATISFIED THAT THE DEFAULTS OR DEFICIENCIES IN THE PERFORMANCE OF THIS SPECIFICATION BY THE CONTRACTOR HAVE BEEN REMEDIED.

GENERAL

1. LASER ALIGNMENT CONTROL TO BE UTILIZED ON ALL SEWER INSTALLATIONS.
2. CLAY SEALS TO BE INSTALLED PER CITY STANDARD DRAWING OF 58 . THE SEALS SHOULD BE AT LEAST 1.5m LONG (IN THE TRENCH DIRECTION) AND SHOULD EXTEND FROM TRENCH WALL TO TRENCH WALL. THE SEALS SHOULD EXTEND FROM THE FROST LINE DOWN TO THE BOTTOM OF THE TRENCH. BARRIERS SHALL BE PLACED IN THE TRENCHES TO BE FILLED WITH GRAVEL OR FINE COMPACTED BROWN SILTY CLAY PLACED IN MAXIMUM 225mm LIFTS AND COMPACTED TO A MINIMUM OF 90% SPD.
3. SERVICES TO BUILDINGS TO BE TERMINATED 10' FROM THE OUTSIDE FACE OF BUILDING UNLESS OTHERWISE NOTED.
4. ALL EXISTING STRUCTURES TO REMAIN SHALL BE REPAIRED TO ORIGINAL CONDITION AND PATCHING SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY, A MINIMUM OF 300mm AROUND STRUCTURES.
5. ALL NEW STRUCTURES SHALL BE CONSTRUCTED TO ORIGINAL DESIGN AND PATCHING SHALL BE COMPACTED TO 98% STANDARD PROCTOR DENSITY, A MINIMUM OF 300mm AROUND STRUCTURES.
6. SAFETY PLACEMENT SHALL BE PER OPRD 404.02C
7. DROP STRUCTURES SHALL BE IN ACCORDANCE WITH OPRD 1003.01 AND 1003.02, IF APPLICABLE.
8. THE CONTRACTOR IS TO PROVIDE CITY CAMERA INSPECTIONS OF ALL SEWERS, INCLUDING PICTORIAL REPORT, ONE (1) CD COPY AND VIDEO COPY FOR EACH INSPECTION. THE INSPECTIONS ARE TO BE FILMED BY THE CONTRACTOR TO BE SUBMITTED TO THE CITY ENGINEER. INSPECTIONS SHALL BE FILMED BY THE CONTRACTOR TO BE SUBMITTED TO THE CITY ENGINEER. INSPECTIONS SHALL BE FILMED BY THE CONTRACTOR TO BE SUBMITTED TO THE CITY ENGINEER. INSPECTIONS SHALL BE FILMED BY THE CONTRACTOR TO BE SUBMITTED TO THE CITY ENGINEER.
9. CONTRACTOR SHALL PERFORM LEAKAGE TESTING, IN THE PRESENCE OF THE CONSULTANT, FOR SANITARY SEWERS IN ACCORDANCE WITH THE CITY STANDARD SPECIFICATIONS. THE RESULTS OF THE TESTING SHALL BE SUBMITTED TO THE CONSULTANT FOR REVIEW AND APPROVAL PRIOR TO PLACEMENT OF WEAR COURSE.

10. ALL SANITARY SEWER INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE INTERNATIONAL STANDARD DRAWINGS (OSD) AND SPECIFICATIONS (OSS).
11. ALL SANITARY GRAVITY SEWER SHALL BE PVC SEWER (RPPX TONG-TEE) (OR APPROVED EQUIVALENT PER CSA STANDARD B182.2 OR LATEST AMENDMENT, UNLESS SPECIFIED OTHERWISE).
12. EXISTING MAINTENANCE STRUCTURES TO BE RE-BEDDING—WHERE A NEW CONNECTION IS MADE.
13. ALL EXISTING SEWER TRENCH AND BEDDING SHALL BE PER CITY OF OTTAWA STD. 58 AND 57, CLASS "B" BEDDING, UNLESS SPECIFIED OTHERWISE.
14. SANITARY MAINTENANCE STRUCTURE FRAME AND COVERS SHALL BE PER CITY OF OTTAWA STD. 524 AND 525.
15. SANITARY MAINTENANCE STRUCTURES SHALL BE BENCHMARK PER OSD 701.021.
16. 100mm THICK HIGH-DENSITY GRADE "X" POLYSTYRENE INSULATION TO BE INSTALLED IN ACCORDANCE WITH CITY STD W22 WHERE INDICATED ON DRAWING SPP-1.

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1. ALL WATERMAIN INSTALLATION SHALL CONFORM TO THE LATEST REVISIONS OF THE CITY OF OTTAWA AND THE ONTARIO PROVINCIAL STANDARD DRAWINGS (SPSD) AND SPECIFICATIONS (SPSS).
2. ALL WATERMAIN MATERIALS SHALL BE ANWW C-900 CLASS, SDR 18 OR APPROVED EQUIVALENT.
3. ALL WATER SERVICES LESS THAN OR EQUAL TO 50mm IN DIAMETER TO BE OF TYPE K-COPPER.
4. ALL WATER SERVICES GREATER THAN 50mm IN DIAMETER TO BE OF TYPE K-COPPER OR 150mm OR GREATER TO BE OF TYPE 150mm WIRE, UNLESS SPECIFICALLY ORDERING, BEDDING AND COVER MATERIAL SHALL BE SPECIFIED BY THE PROJECT GEOTECHNICAL ENGINEER.
5. ALL WATER MAINS SHALL BE INSTALLED IN ACCORDANCE WITH THE CITY OF OTTAWA STD. W17, UNLESS SPECIFICALLY ORDERING.
6. ALL WATER MAINS SHALL BE INSTALLED ON ALL METALLIC FITTINGS PER THE CITY OF OTTAWA STD. W40 AND W42.
7. VALVE BOXES SHALL BE U.S.36 IN. PER CITY OF OTTAWA STD. W3.
8. WATERMAIN IN FIELD AREAS TO BE INSTALLED WITH RESTRAINED JOINTS PER CITY OF OTTAWA STD. W25.5 AND W25.6.
9. THURST SHALL BE PROVIDED TO BE INSTALLED PER CITY OF OTTAWA STD. W25.5 AND W25.6.
10. THE CONTRACTOR SHALL PROVIDE ALL TEMPORARY COPS, PLUGS, BLOW-OFFS, AND NOZZLES REQUIRED FOR TESTING AND TESTING PURPOSES.
11. WATERMAIN CROSSING OVER AND BELOW SEWERS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. W25.2 AND W25.5.
12. WATER SERVICES ARE TO BE INSULATED PER CITY STD. W23 WHERE SEPARATION BETWEEN SERVICES AND MAINTENANCE HOLES.
13. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY IS 0.50m PER MOE GUIDELINES. FOR CROSSING UNDER SERVICES, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS.
14. THE MINIMUM VERTICAL CLEARANCE BETWEEN WATERMAIN AND SEWER / UTILITY SHALL BE 0.50m PER MOE GUIDELINES. FOR CROSSING UNDER SERVICES, ADEQUATE STRUCTURAL SUPPORT FOR THE SEWERS IS REQUIRED TO PREVENT EXCESSIVE DEFLECTION OF JOINTS.
15. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD. W26 R20.
16. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD. W26 R20.
17. GENERAL WATER PLANT TO UTILITY CLEARANCE AS PER STD. W26 R20.
18. ALL WATER MAINS SHALL BE HYDROSTATICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES.
19. ALL WATER MAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES.
20. WATER MAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES.
21. WATER MAINS SHALL BE BACTERIOLOGICALLY TESTED IN ACCORDANCE WITH THE CITY OF OTTAWA AND ONTARIO GUIDELINES.
22. ALL WATER MAIN STUBS SHALL BE TREATED WITH A PLUG AND 50mm BLOW OFF UNLESS OTHERWISE NOTED.

2. PRIOR TO THE COMMENCEMENT OF THE SITE GRADING WORKS, ALL SILTATION CONTROL DEVICES SHALL BE INSTALLED AND MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD.
3. ALL GRANULAR AND PAVEMENT FOR ROADS/PARKING AREAS SHALL BE CONSTRUCTED IN ACCORDANCE WITH GEOTECHNICAL ENGINEER'S RECOMMENDATIONS.
4. ALL EXISTING CURB MATERIAL SHALL BE STRIPPED WITHIN THE ROAD AND PARKING AREAS ALLOWANCE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION.
5. ALL CURB SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF OTTAWA STD. SC1.1. PROVISION SHALL BE MADE FOR CURB DEPRESSIONS AS INDICATED ON ARCHITECTURAL SITE PLAN. CONCRETE SIDEWALK SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. SC1.1.1. CURB SHALL BE CONSTRUCTED TO THE FINISHED GRADE OF THE SITE, OR THE PRECIPITATION PORTION OF THE CONTRACT.
6. ALL SIDEWALKS FOR SERVICE AND UTILITY CUTOFFS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STD. STD. 010 AND OPS5 000, AND OPS5 310.
7. GRANULAR 'A' SHALL BE PLACED TO A MINIMUM THICKNESS OF 300mm around ALL STRUCTURES WITHIN THE PAVEMENT AREA. GRANULAR 'B' SHALL BE FILLED WITH GRANULAR 'C' COMPACTED IN MAXIMUM 300mm LIFTS.
8. ALL WORK ON THE MUNICIPAL RIGHT OF WAY AND EASEMENTS TO BE INSPECTED BY THE MUNICIPALITY PRIOR TO BACKFILLING.
9. ALL SIDEWALKS SHALL BE CONSTRUCTED IN ACCORDANCE WITH CITY OF OTTAWA STD. SC1.1.1. THE MUNICIPAL ROAD ALLOWANCE, IF REQUIRED BY THE MUNICIPALITY.
10. ALL SIDEWALKS SHALL BE CONSTRUCTED TO THE FINISHED GRADE. SIDEWALK SHALL BE PLACED PER ARCHITECTURAL SITE PLAN. LINE PAINTING AND DIRECTIONAL SYMBOLS SHALL BE APPLIED WITH A MINIMUM OF TWO COATS OF ORGANIC SOLVENT SITE PAINT.
11. REFER TO ARCHITECTURAL SITE PLAN FOR DIMENSIONS AND SITE DETAILS.
12. ALL SIDEWALKS SHALL BE CONSTRUCTED PER ARCHITECTURAL SITE PLAN. ALL JOINTS MUST BE SEALED.
13. SIDEWALKS TO BE 15mm & BEVELLED AT 2:1 OR 6mm with NO BEVEL REQUIRED BELOW THE FINISHED FLOOR SLAB ELEVATION AT CURB. SIDEWALKS SHALL BE CONSTRUCTED TO THE FINISHED GRADE OF THE SITE, OR THE PRECIPITATION PORTION OF THE CONTRACT.
14. ACCESSIBILITY DESIGN STANDARDS:
 - a. THE CONTRACTOR IS TO SUBMIT SHOP DRAWINGS FOR RETAINING WALL (INCLUDE FINISHED FLAT APPLICABLE TO THE LICENSED APPROVAL PRIOR TO CONSTRUCTION. SHOP DRAWINGS MUST BE SITE SPECIFIC, SIGNED AND SEALED BY A REGISTERED STRUCTURAL ENGINEER. THE CONTRACTOR WILL ALSO BE REQUIRED TO SUPPLY STRUCTURAL AND GEOTECHNICAL CALCULATIONS FOR ALL RETAINING WALLS.

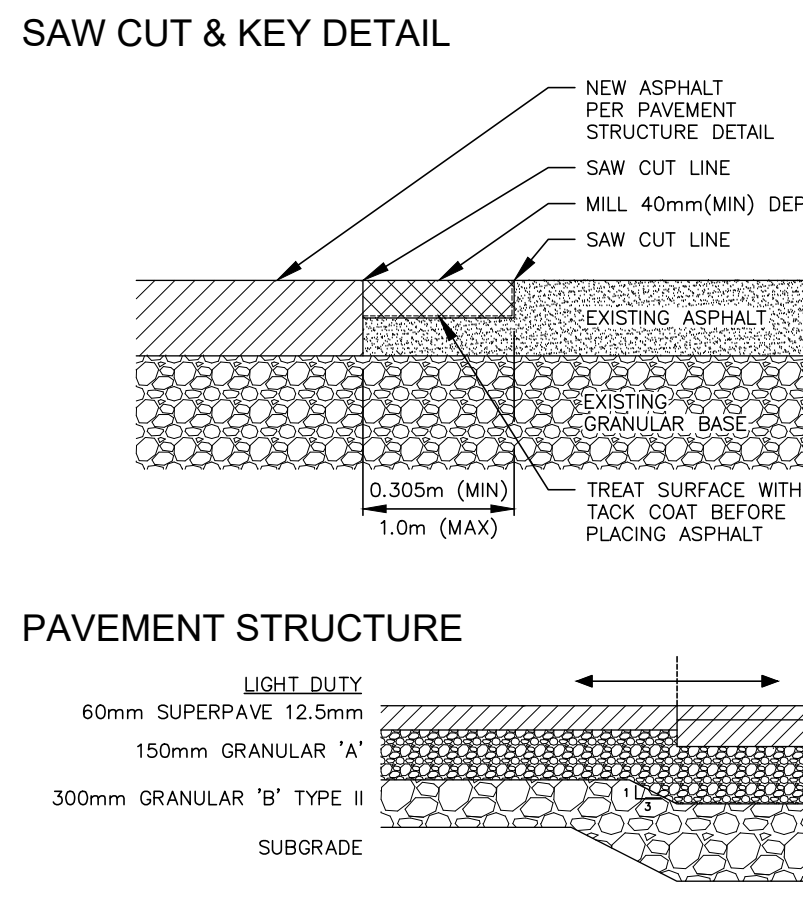
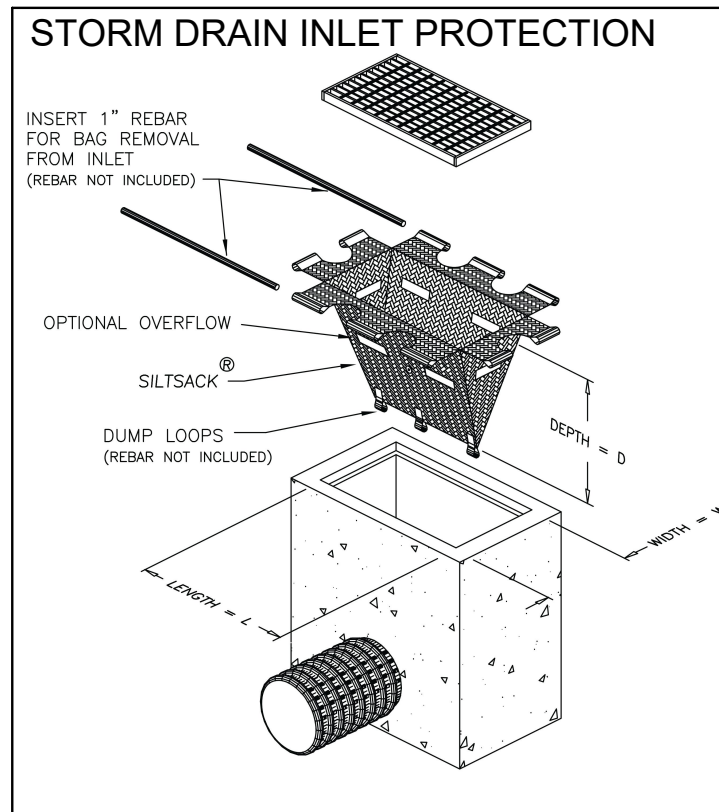
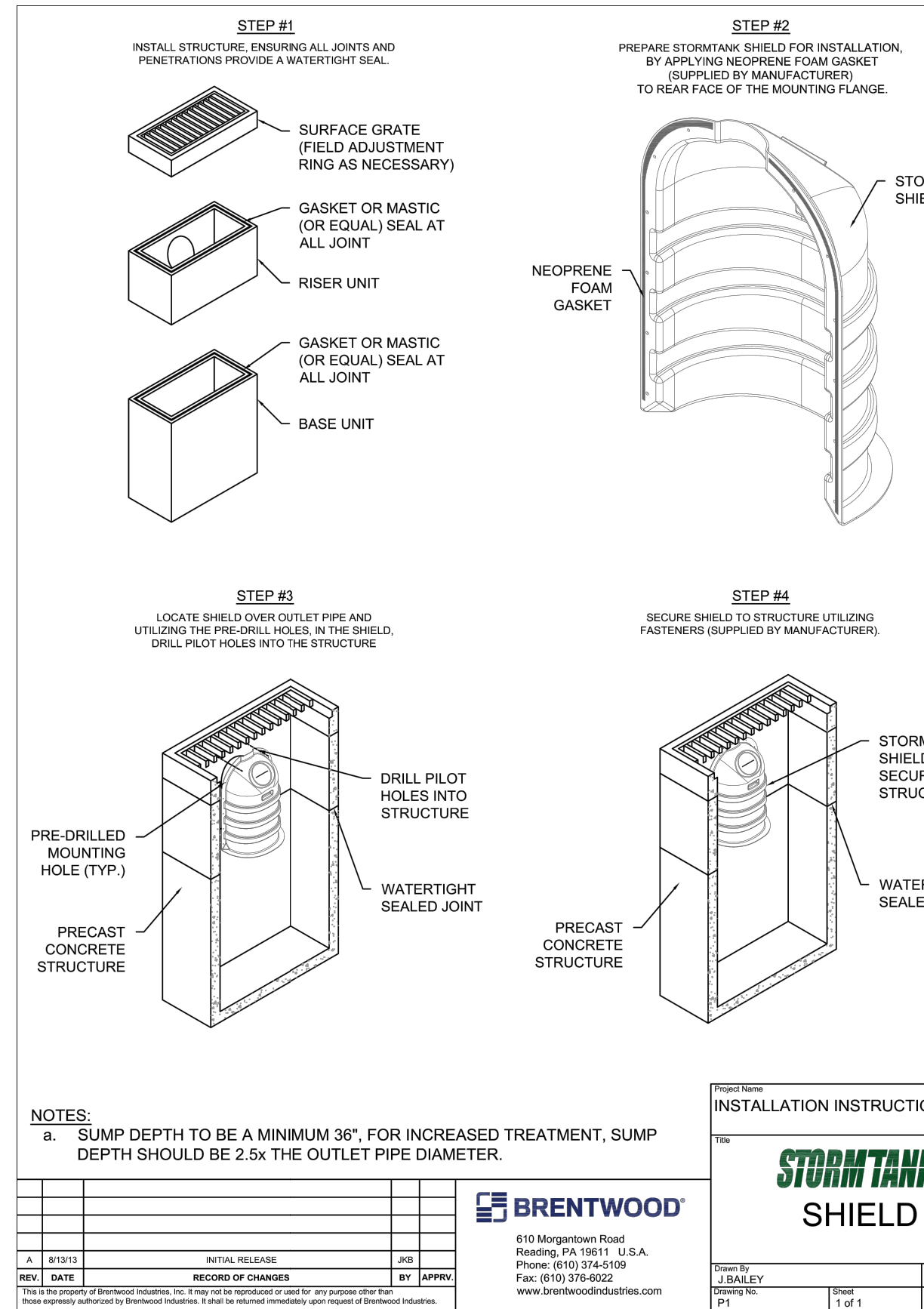
2. ALL CONSTRUCTION EQUIPMENT SHALL BE RE-FUELED, MAINTAINED, AND STORED NO LESS THAN 30 METERS FROM WATERCOURSES, DRAINAGE CANALS, OR OTHER SENSITIVE AREAS. THE CONTRACTOR SHALL MAINTAIN ADEQUATE RECORDS OF ALL SUCH ACTIVITIES.
3. THE CONTRACTOR MUST IMPLEMENT ALL NECESSARY MEASURES IN ORDER TO PREVENT LEAKS, DISCHARGES OR SPILLS OF POLLUTANTS, DELETERIOUS MATERIALS, OR OTHER SUCH MATERIALS OR SUBSTANCES WHICH WOULD OR COULD CAUSE AN ADVERSE EFFECT ON THE ENVIRONMENT. IN THE EVENT OF A LEAK, DISCHARGE OR SPILL OF A POLLUTANT, DELETERIOUS MATERIAL OR OTHER SUCH MATERIAL OR SUBSTANCE, THE CONTRACTOR SHALL IMMEDIATELY NOTIFY THE APPROPRIATE FEDERAL, PROVINCIAL, AND LOCAL GOVERNMENT MINISTRIES, DEPARTMENTS, AGENCIES, AND AGENCIES OF THE ENVIRONMENT, AND SHALL TAKE ALL NECESSARY MEASURES TO CONTAIN THE MATERIAL, SUBSTANCE, OR SPILL, AND TO TAKE SUCH MEASURES TO MITIGATE AGAINST ANY ADVERSE IMPACTS TO THE NATURAL ENVIRONMENT.
4. RESTORE THE AFFECTED AREA TO THE ORIGINAL CONDITION OR BETTER TO THE SATISFACTION OF THE AUTHORITIES HAVING JURISDICTION.

1. THE GRANULAR MATERIAL WILL REQUIRE PERIODIC REPLACEMENT AS IT BECOMES CONTAMINATED BY VEHICLE TRAFFIC.
2. SEDIMENT SHALL BE CLEANED FROM PUBLIC ROADS AT THE END OF EACH DAY.
3. SEDIMENT SHALL BE REMOVED FROM PUBLIC ROADS BY SHOVELING OR SWEEPING AND DISPOSED OF PROPERLY IN A CONTROLLED SEDIMENT DISPOSAL AREA.

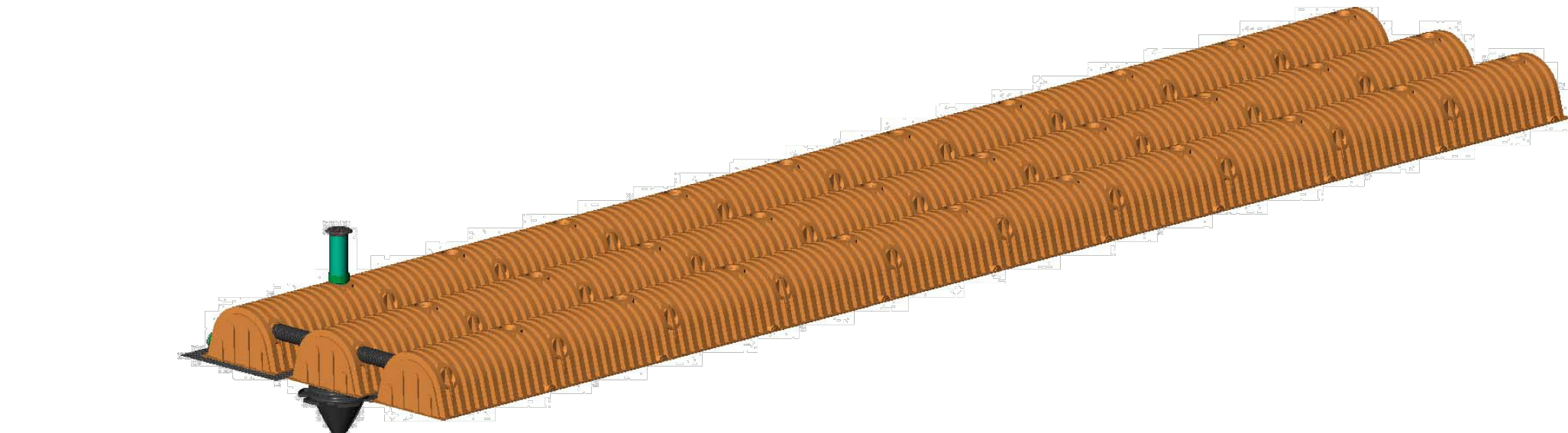
Diagram illustrating the components of a storm maintenance structure:

- INLET CONTROL DEVICE PLASTIC CAP TO BE INSTALLED IN DOWNSTREAM END OF STORM MAINTENANCE STRUCTURE**: Points to the top circular cap of the structure.
- CIRCULAR OPENING AS SPECIFIED TO BE SITUATED AT INVERT OF OUTLET SEWER**: Points to the circular opening at the bottom of the structure.
- DIAMETER TO SUIT OUTLET SEWER**: Indicates the diameter of the structure, which should match the diameter of the outlet sewer.

NOT TO SCALE



*PER GEOTECHNICAL INVESTIGATION (18106595-100) PREPARED BY GOLDER ASSOCIATES LTD.



1. INSTALLMENT MUST BE MADE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDATIONS.
2. SYSTEM IS DESIGNED TO WITHSTAND TRAFFIC LOAD CLASS C-62 AND AASHTO H-20.
3. SYSTEM MUST BE MINIMALLY BACKFILLED WITH 10mm (3/8") OF CRUSHED STONE AND 300 mm (12") OF GRANULAR MATERIAL COMPACTED AT 80% P.M.
4. STORMCHAMBER GEOTGRID FOR FOUNDATION STABILIZATION IS CONSIDERED UNDER ALL THE CHAMBERS. HEAVY DUTY GEOTGRID IS ONLY LOCATED UNDER THE CHAMBERS WITH WATER INTAKE AND THOSE WITH SEDIMENT TRAP.
5. STONE IN BASE COURSE NOT COVERED.
6. THIS SYSTEM STORAGE VOLUME IS DISTRIBUTED AS FOLLOW: 6m³ RETENTION AND 104m³ DETENTION FOR A TOTAL OF 110m³ OF STORAGE.

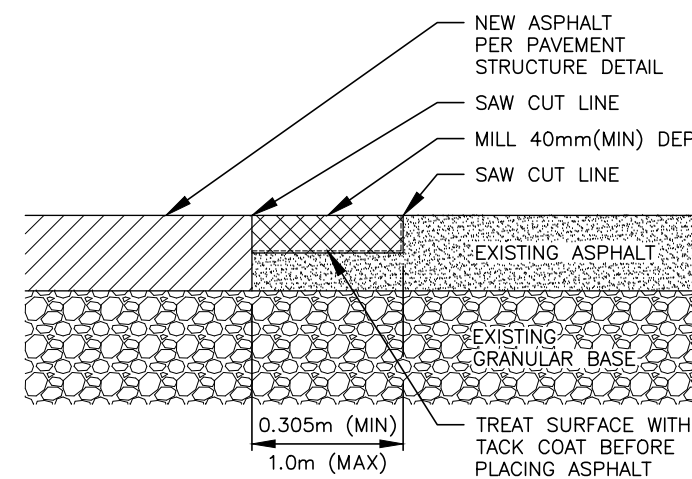
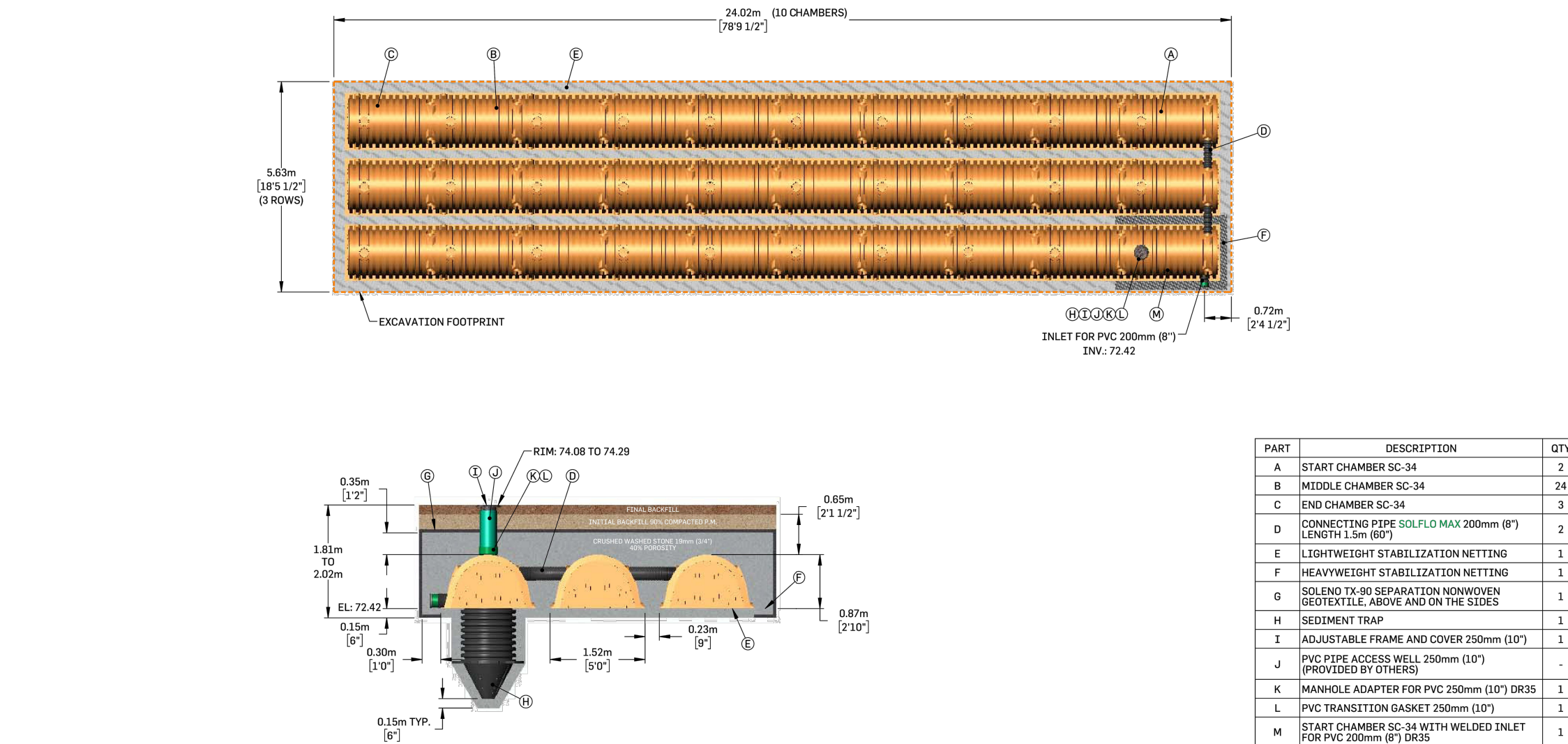
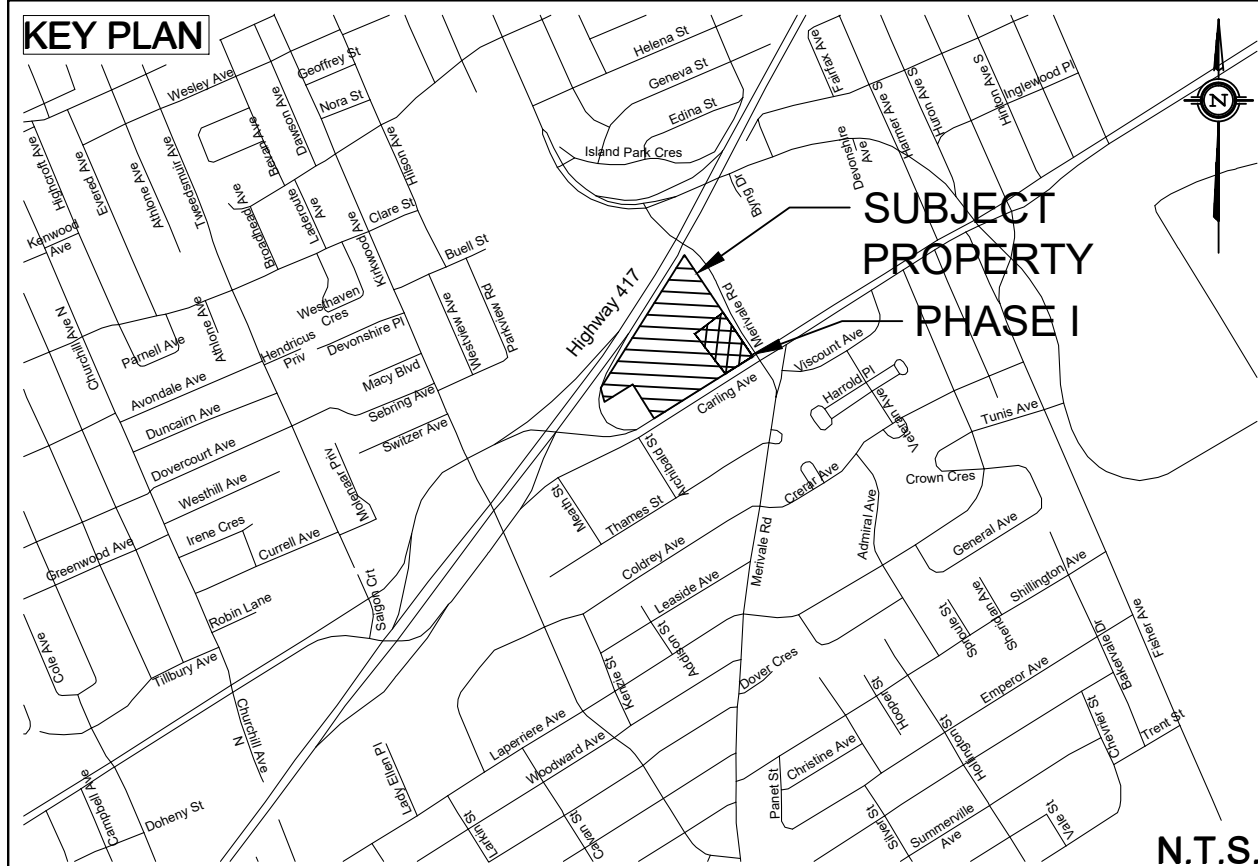


Figure 1: Typical cross-section of a road pavement structure. The diagram shows a cross-section of a road with a central lane and two shoulders. The central lane is labeled "LIGHT DUTY" and has a total thickness of 60mm, consisting of 12.5mm SUPERPAVE and 150mm GRANULAR 'A'. The shoulders are labeled "FIRE ROUTE / HEAVY DUTY" and have a total thickness of 450mm, consisting of 12.5mm SUPERPAVE, 50mm SUPERPAVE, and 19.0mm GRANULAR 'A'. Below the pavement is a SUBGRADE. A double-headed arrow indicates the width of the central lane.



PROPOSED 200mmØ WATERMAIN				
STATION	FINISHED GROUND	TOP WATERMAIN	DESCRIPTION	
0+000.00	74.74	72.34	200# V&B / CONNECT TO Ex. 200# WM	
0+000.90	74.76	72.36	45° HORIZONTAL BEND	
0+001.80	74.78	72.36	45° HORIZONTAL BEND	
0+002.00	74.50	72.10		
0+040.00	74.25	71.85		
0+049.70	73.85	71.45		
0+051.80	73.90	71.50		
0+053.30	73.92	71.52		
0+060.00	74.05	71.65	STM INV=72.65 1/0" WM = 71.65 1.0m SEPARATION	
0+060.60	74.05	71.65		
0+080.00	74.20	71.80	STM INV = 72.84 1/0" WM = 71.85 0.8m SEPARATION	
0+087.10	74.25	71.85		
0+098.30	74.34	71.91	DEFLECT WTR PER CITY STD W25 STM INV = 72.11 1/0" WM = 71.61 0.50m SEPARATION	
0+099.30	74.34	71.94	200# WTR SERVICE	
0+100.00	74.35	71.95		
0+120.00	74.28	71.88		
0+124.00	74.24	71.84		
0+131.20	74.14	71.74	200# HYDRANT LEAD	
0+132.20	74.14	71.74	45° HORIZONTAL BEND	
0+134.40	74.14	71.74	45° HORIZONTAL BEND	
0+140.00	74.10	71.70		
0+157.60	74.10	71.70	STM INV = 72.54 1/0" WM = 71.70 0.8m SEPARATION	
0+160.00	74.10	71.70		
0+178.20	74.15	72.50	DEFLECT WTR PER CITY STD.W25.2 STM DBV=72.00 WTR INV=72.30 0.30m SEPARATION	
0+180.00	74.11	71.71		
0+181.40	74.12	71.72	200# V&B	
0+182.40	74.12	71.72	45° HORIZONTAL BEND	
0+186.00	74.27	73.06	DEFLECT WTR PER CITY STD.W25.2 STM DBV=72.54 WTR INV=72.86 0.30m SEPARATION	
0+188.00	74.28	71.88	CONNECT TO Ex. 200# WM	

TOPOGRAPHIC INFORMATION PROVIDED BY STANTEC
PROJ. NO. 161613355-114
DATED AUGUST 8, 2015

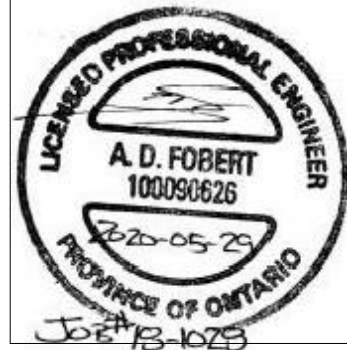
SITE PLAN PROVIDED BY RLA ARCHITECTURE
PROJ. NO. 1807
DATED MAY 21, 2020

GEOTECHNICAL STUDY
GEOTECHNICAL RECOMMENDATIONS PROVIDED BY GOLDER ASSOCIATES LTD.
PRJ. NO. 18106595-1000
DATED NOVEMBER 2018

SITE SERVICING AND STORMWATER MANAGEMENT STUDY
SERVICING AND STORMWATER MANAGEMENT RECOMMENDATIONS PROVIDED BY DSEL
PROJ. NO.18-1028
DATED JULY 2019

BENCH MARK
LOCATED MONUMENT 01919680315
ELEV=83.635

7	C.M.K.	20.05.29	REVISED PER SITE PLAN
6	C.M.K.	20.05.11	ISSUED FOR CONTRACTOR COORDINATION
5	B.N.C.	20.03.20	ISSUED FOR CONSTRUCTION
4	A.A.S.	20.03.09	ISSUED FOR CONSTRUCTION
3	B.N.C.	19.07.19	ISSUED FOR MUNICIPAL REVIEW
2	B.N.C.	19.04.03	ISSUED FOR MUNICIPAL REVIEW
1	C.M.K.	18.11.06	ISSUED FOR MUNICIPAL REVIEW
No.	BY	YY.MM.DD	DESCRIPTION



PROJECT No.18-1028

DETAIL SHEET
1309 CARLING AVENUE - PHASE I © DSEI

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Toronto, Ontario, M4P 1E4
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DSEL
david schaeffer engineering ltd
SMART SUBDIVISIONS™

DRAWN BY:	C.M.K.	CHECKED BY:	R.D.F.	DRAWING NO.	SHEET NO.
DESIGNED BY:	A.J.G.	CHECKED BY:	A.D.F.	DS-1	5 of 6
SCALE:	NTS	DATE:	NOVEMBER 2018		