

NOTES: GENERAL

- DRAWINGS TO BE READ IN CONJUNCTION WITH ARCHITECTURAL AND LANDSCAPE DRAWINGS
- 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 STANDARD SPECIFICATIONS, UNLESS OTHERWISE SPECIFIED, TO THE SATISFACTION OF THE CITY AND THE CONSULTANT
- THE POSITION OF EXISTING POLE LINES, CONDUITS, WATERMANS, 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.
- 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 FEBRUARY 9, 2021. CONTRACTOR TO VERIFY IN THE FIELD PRIOR TO CONSTRUCTION OF ANY WORK AND NOTIFY THE ENGINEER OF ANY DISCREPANCIES.
- ALL ELEVATIONS ARE GEODETIC AND UTILIZE METRIC UNITS. VERIFY THAT JOB BENCHMARKS HAVE NOT BEEN ALTERED OR DISTURBED.
- ALL GROUND SURFACES SHALL BE EVENLY GRADED WITHOUT PONDING AREAS AND WITHOUT LOW POINTS EXCEPT WHERE APPROVED SWALE OR CATCH BASIN OUTLETS ARE PROVIDED.
- 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.
- 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.
- ABUTTING PROPERTY GRADES TO BE MATCHED UNLESS OTHERWISE SHOWN.
- CONTRACTOR SHALL OBTAIN AND PAY FOR ALL NECESSARY PERMITS AND APPROVALS FROM THE MUNICIPAL AUTHORITIES PRIOR TO COMMENCING CONSTRUCTION.
- MINIMIZE DISTURBANCE TO EXISTING VEGETATION DURING THE EXECUTION OF ALL WORKS.
- 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.
- 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.
- CONTRACTOR TO OBTAIN POST-CONSTRUCTION TOPOGRAPHIC SURVEY, COMPLETED BY OLS OR P ENG CONFIRMING COMPLIANCE WITH DESIGN GRADING AND SERVICING. SURVEY IS TO INCLUDE LOCATION AND INVERTS FOR BURIED UTILITIES.
- ABIDE BY RECOMMENDATIONS OF GEOTECHNICAL REPORT. REPORT ANY VARIATIONS IN OBSERVED CONDITIONS FROM THOSE INCLUDED IN REPORT.
- CLAY SEALS SHALL BE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD DETAIL S8 AND SHALL BE INSTALLED AT 50m INTERVALS IN ALL PIPE TRENCHES. CLAY SEAL TO EXTEND FULL TRENCH WIDTH AND FROM BOTTOM OF TRENCH EXCAVATION TO UNDERSIDE OF ROAD STRUCTURE, WITH A MINIMUM THICKNESS OF 1m ALONG PIPE.
- REPORT REFERENCES
 - STORMWATER MANAGEMENT REPORT, PREPARED BY WSP CANADA INC, PROJ. NO. 20M-01534-00, APRIL 12, 2021
 - GEOTECHNICAL INVESTIGATION REPORT, PREPARED BY PATERSON GROUP, PROJ. NO. PG5283-1, APRIL, 2020

NOTES: EROSION AND SEDIMENT CONTROL

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

1. PRIOR TO START OF CONSTRUCTION:

- INSTALL SILT FENCE IN LOCATION SHOWN ON DWG C08 AND C09.
- INSTALL FILTER FABRIC OR SILT SACK FILTERS IN ALL THE CATCHBASINS AND MANHOLES TO REMAIN DURING CONSTRUCTION WITHIN THE SITE (SEE TYPICAL DETAIL).
- INSPECT MEASURES IMMEDIATELY AFTER INSTALLATION.

2. DURING CONSTRUCTION:

- MINIMIZE THE EXTENT OF DISTURBED AREAS AND THE DURATION OF EXPOSURE AND IMPACTS TO EXISTING GRADING.
- 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.
- PROTECT DISTURBED AREAS FROM OVERLAND FLOW BY PROVIDING TEMPORARY SWALES TO THE SATISFACTION OF THE FIELD ENGINEER. TIE-IN TEMPORARY SWALE TO EXISTING CBS 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).
- NO ALTERNATE METHODS OF EROSION PROTECTION SHALL BE PERMITTED UNLESS APPROVED BY THE FIELD ENGINEER.
- CITY ROADWAY AND SIDEWALK TO BE CLEANED OF ALL SEDIMENT FROM VEHICULAR TRACKING AS REQUIRED.
- DURING WET CONDITIONS, TIRES OF ALL VEHICLES/EQUIPMENT LEAVING THE SITE ARE TO BE SCRAPPED.
- ANY MUD/MATERIAL TRACKED ONTO THE ROAD SHALL BE REMOVED IMMEDIATELY BY HAND OR RUBBER TIRE LOADER.
- TAKE ALL NECESSARY STEPS TO PREVENT BUILDING MATERIAL, CONSTRUCTION DEBRIS OR WASTE BEING SPILLED OR TRACKED ONTO ADJUTING PROPERTIES OR PUBLIC STREETS DURING CONSTRUCTION AND PROCEED IMMEDIATELY TO CLEAN UP ANY AREAS SO AFFECTED.
- 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.
- 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.

NOTES: WATERMAIN

- 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.
- ALL WATERMAIN 300mm DIAMETER AND SMALLER TO BE POLY VINYL CHLORIDE (PVC) CLASS 150 DR 18 MEETING AWWA SPECIFICATION C900.
- ALL WATERMAIN TO BE INSTALLED AT MINIMUM COVER OF 2.4m BELOW FINISHED GRADE. WHERE WATERMANS CROSS OVER OTHER UTILITIES, A MINIMUM 0.30m 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 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.
- 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 W25.3 & W25.4.
- CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS AS PER CITY OF OTTAWA STANDARD W40 & W42.
- ALL VALVES AND VALVE BOXES AND CHAMBERS, HYDRANTS, AND HYDRANT VALVES AND ASSEMBLES SHALL BE INSTALLED AS PER CITY OF OTTAWA STANDARD
- 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.
- 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.

NOTES: SANITARY SEWER AND MANHOLES

- 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 SERVICES.
- 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-182.2-34.
- SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
- MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES AS PER THE OPSD 701.021
- ANY SANITARY SEWER WITH LESS THAN 2.5m COVER REQUIRES THERMAL INSULATION AS PER CITY OF OTTAWA STANDARD W22, OR APPROVED BY THE ENGINEER.

NOTES: PARKING LOT AND WORK IN PUBLIC RIGHTS OF WAY

- CONTRACTOR TO REINSTATE ROAD CUTS AS PER CITY OF OTTAWA DETAIL R10.
- CONTRACTOR TO PREPARE SUBGRADE, INCLUDING PROOFROLLING, TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT PRIOR TO THE COMMENCEMENT OF PLACEMENT OF GRANULAR B MATERIAL.
- FILL TO BE PLACED AND COMPACTED PER THE GEOTECHNICAL REPORT REQUIREMENTS.
- CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR B MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR B MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
- GRANULAR A MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR B PLACEMENT.
- CONTRACTOR TO SUPPLY, PLACE AND COMPACT GRANULAR A MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
- ASPHALT MATERIAL TO BE PLACED ONLY UPON APPROVAL BY THE GEOTECHNICAL CONSULTANT OF GRANULAR A PLACEMENT.
- CONTRACTOR TO SUPPLY, PLACE AND COMPACT ASPHALT MATERIAL IN ACCORDANCE WITH THE RECOMMENDATIONS OF THE GEOTECHNICAL CONSULTANT. CONTRACTOR TO PROVIDE CONSULTANT WITH SAMPLES OF GRANULAR A MATERIAL FOR TESTING AND CERTIFICATION FROM THE GEOTECHNICAL CONSULTANT THAT THE MATERIAL MEETS THE GRADATION REQUIREMENTS SPECIFIED IN THE GEOTECHNICAL REPORT.
- CONTRACTOR IS RESPONSIBLE FOR ESTABLISHING LINE AND GRADE IN ACCORDANCE WITH THE PLANS, AND FOR PROVIDING THE CONSULTANT WITH VERIFICATION PRIOR TO PLACEMENT.
- ALL EXCESS MATERIAL TO BE HAULED OFFSITE AND DISPOSED OF AT AN APPROVED DUMP SITE. SHOULD THE CONTRACTOR DISCOVER ANY HAZARDOUS MATERIAL, CONTRACTOR IS TO NOTIFY CONSULTANT. CONSULTANT TO DETERMINE APPROPRIATE DISPOSAL METHOD/LOCATION.
- PAVEMENT STRUCTURE (MATERIAL TYPES AND THICKNESS) FOR HEAVY DUTY AND LIGHT DUTY AREAS TO BE AS SPECIFIED IN THE GEOTECHNICAL REPORT AND SHOWN ON THE PLANS.

NOTES: STORM SEWERS AND STRUCTURES

- 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.
- STORM SEWERS 450mm DIAMETER AND SMALLER SHALL BE PVC SDR-35, WITH RUBBER GASKET PER CSA A-257.3.
- SEWER BEDDING AS PER CITY OF OTTAWA DETAIL S6.
- 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.
- 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.
- CB IN LANDSCAPE AREAS SHALL BE AS PER CITY OF OTTAWA STANDARD S31.
- ALL CATCHBASIN LEADS TO BE MINIMUM 200mm DIAMETER AT MINIMUM 1.0% SLOPE UNLESS OTHERWISE SPECIFIED.
- STORM CATCHBASINS AS PER OPSD 705.010 AND FRAME/COVER AS PER CITY STANDARD DRAWINGS S109. STORM CATCHBASIN AS INDICATED IN TABLE WITH SUMP AND FRAME/COVER AS PER OPSD 401.010 TYPE B. SANITARY MHS 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.
- INSTALLATION OF FLOW CONTROL ICDS TO BE VERIFIED BY QUALITY VERIFICATION ENGINEER RETAINED BY CONTRACTOR.
- NO SERVICE LATERLAS ARE TO BE DIRECTLY CONNECTED TO A MANHOLE.
- BACKWATER VALVES FOR FOUNDATION DRAINS ARE TO BE AS PER CITY OF OTTAWA STANDARD S14 AND SANITARY BACKWATER VALVES ARE TO BE AS PER S14.1 AND S14.2.
- SERVICE LATERLAS THAT HAVE INSUFFICIENT COVER ARE TO BE THERMAL INSULATED AS PER CITY OF OTTAWA STANDARD W22.
- REFER TO DRAWING C01 FOR TYPICAL SERVICE LATERAL LOCATION FOR TOWNHOUSE.

NOTES: SERVICES LATERALS

- NO SERVICE LATERLAS ARE TO BE DIRECTLY CONNECTED TO A MANHOLE.
- BACKWATER VALVES FOR FOUNDATION DRAINS ARE TO BE AS PER CITY OF OTTAWA STANDARD S14 AND SANITARY BACKWATER VALVES ARE TO BE AS PER S14.1 AND S14.2.
- SERVICE LATERLAS THAT HAVE INSUFFICIENT COVER ARE TO BE THERMAL INSULATED AS PER CITY OF OTTAWA STANDARD W22.
- REFER TO DRAWING C01 FOR TYPICAL SERVICE LATERAL LOCATION FOR TOWNHOUSE.

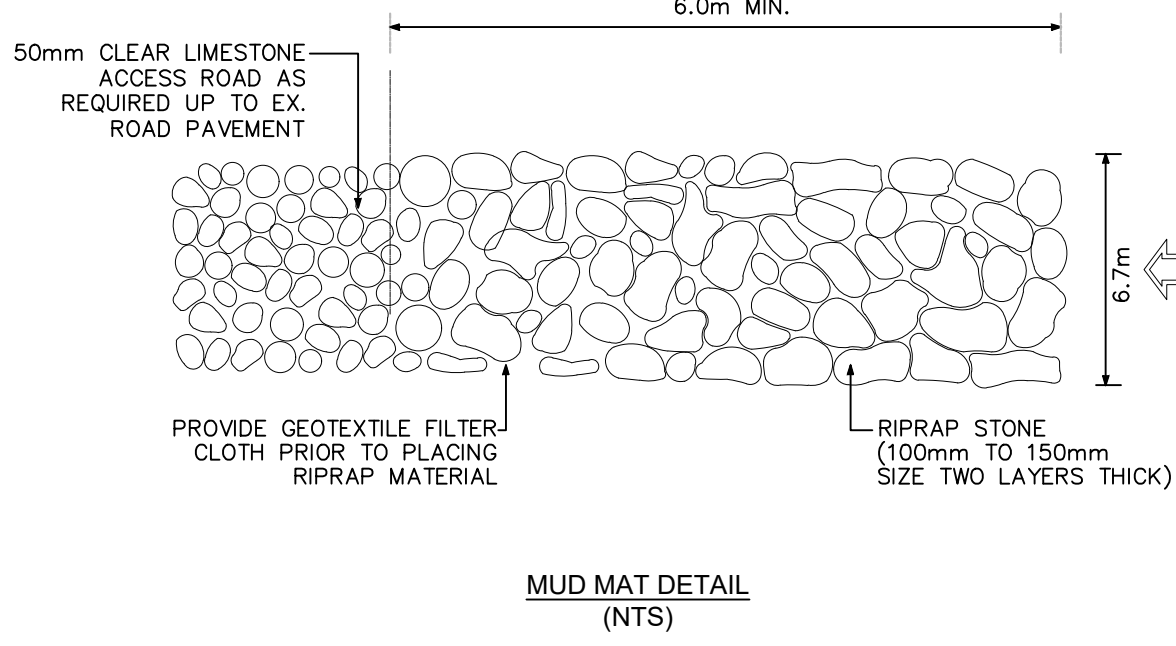
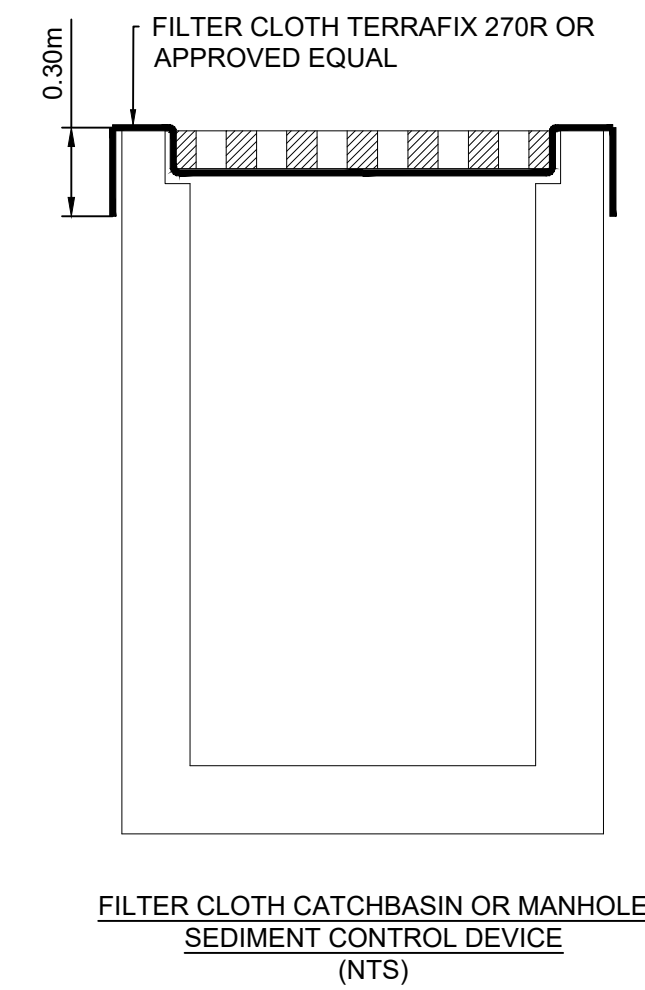
PAVEMENT STRUCTURE - ACCESS LANES AND HEAVY LOADING		
COURSE	MATERIAL	THICKNESS
WEAR COURSE	HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE	40mm
BINDER COURSE	HL-4 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE	50mm
BASE	OPSS GRANULAR A CRUSHED STONE	150 mm
SUBBASE	OPSS GRANULAR B TYPE II	400 mm

PAVEMENT STRUCTURE - CAR AND PARKING AREAS		
COURSE	MATERIAL	THICKNESS
WEAR COURSE	HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE	50 mm
BASE	OPSS GRANULAR A CRUSHED STONE	150 mm
SUBBASE	OPSS GRANULAR B TYPE II	300 mm

WATERMAIN SCHEDULE				
STATION	DESCRIPTION	FINISHED GRADE	TOP OF WATERMAIN	AS-BUILT WATERMAIN
250mm W/M Looping - Steacie Drive Connection				
0+000	Connect to Ex. 305mm W/M WITH 305x250 TEE connection	89.913		87.330
0+001.7	250mm DMA CHAMBER	89.920	87.310	
0+003.4	45° Bend	89.930	87.290	
0+005.0	45° Bend	89.930	87.280	
0+010.6	Crossing existing 605mmØ W/M	89.770	87.220	
0+013.1	45° Bend/Crossing existing 300mmØ STM	89.694	87.200	
0+014.6	45° Bend	89.669	87.180	
0+070.0	Crossing 305mmØ PVC STM	90.300	87.390	
0+098.3	45° Bend	90.690	88.250	
0+099.5	45° Bend	90.790	88.320	
0+100.8	250mm VB	90.810	88.390	
0+101.4	250mm W/M STUB (BLDG)	90.840	88.420	

150mm W/M Looping - Teron Road Connection				
0+000	Connect to Ex. 150mm Existing Hydrant	90.482		88.631
0+003.0	Crossing existing 300mmØ PVC STM	90.586	88.188	
0+004.1	150mm VB	90.619	88.219	
0+007.3	150mm W/M STUB	90.640	88.240	

Relocate Public Fire Hydrant				
0+000	Connect to Ex. 150mm Existing Hydrant	90.456		88.374
0+010.8	150mm VB	90.544	88.144	
0+012.1	Proposed F/HYD	90.556	88.156	



LEGEND:



CATCHBASIN/CATCHBASIN MANHOLE AND ICD DATA TABLE														
STRUCTURE ID	AREA ID	STRUCTURE	COVER	TOP OF GRATE	INVERT				DIAMETER		TYPE	HEAD (m)	FLOW (l/s)	ICD TYPE
					INLET	INLET	INLET	OUTLET	(mm)					
PARCEL 1														
CB101	A-101	OPSD 705.010	S19.1	89.62		88.720	88.720	88.700	200	PVC SDR-35	1.216	9.1	HYDROVEX 100-VHV-1	
CB102	A-102	OPSD 705.010	S19.1	89.62		88.720	88.720	88.641	200	PVC SDR-35	1.29	9.9	HYDROVEX 100-VHV-1	
CB103	A-103	OPSD 705.010	S19.1	89.62		88.720	88.720	88.555	200	PVC SDR-35	1.397	18.8	HYDROVEX 100-VHV-2	
CBMH201		OPSD 701.010	S28.1	90.55			88.455	88.435	300	PVC SDR-35	0.765	8.9	HYDROVEX 100-VHV-1	

STORM STRUCTURE TABLE						
STRUCTURE ID	TOP OF GRATE	INLET	INLET	OUTLET	SIZE	DESCRIPTION
STMH101	90.16		88.596	88.421	1200mm DIA.	OPSD 701.010 S24.1
STMH102	90.22		88.232	88.202	1200mm DIA.	OPSD 701.010 S24.1
CBMH201	90.74		88.455	88.435	1200mm DIA.	OPSD 701.010 S28.1
STMH203	90.91		88.424	88.364	1200mm DIA.	OPSD 701.010 S24.1
STMH202	89.75	88.316	88.256	88.256	1200mm DIA.	OPSD 701.010 S24.1
STMH204	90.60	88.725	88.700	88.700	1200mm DIA.	OPSD 701.010 S24.1
CB101	89.62	88.720	88.720	88.700	600X600mm	OPSD 705.010 S19.1
CB102	89.62	88.720	88.720	88.641	600X600mm	OPSD 705.010 S19.1
CB103	89.62	88.720	88.720	88.555	600X600mm	OPSD 705.010 S19.1

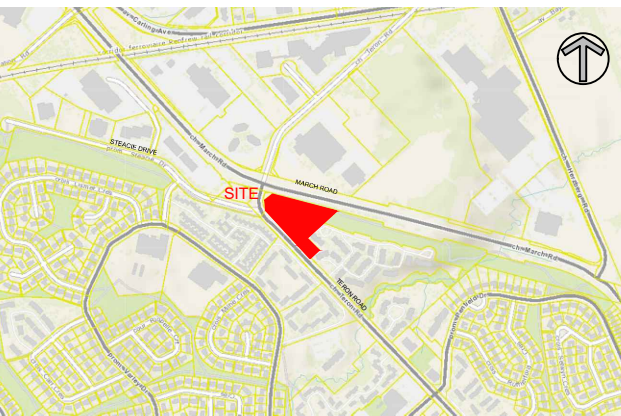
SAN STRUCTURE TABLE						
STRUCTURE ID	TOP OF GRATE ELEVATION	INLET	INLET	OUTLET	SIZE	DESCRIPTION
SAMH101	90.61		86.193	86.173	1200mm DIA.	OPSD-701.010 S24
SAMH102	90.00		85.946	72.590	1200mm DIA.	OPSD-701.010 S24
SAMH103	89.7	72.440	72.380	72.380	1200mm DIA.	OPSD-701.010 S24

PIPE CROSSING TABLE						
	Invert	Obvert		Invert	Obvert	
1	250mmØ W/M	86.970 87.220	0.350	Clearance Above	86.015 86.620	EXISTING 605mmØ DI W/M
2	250mmØ W/M	86.950 87.200	0.500	Clearance Under	87.700 88.000	EXISTING 300mmØ CONC STM
3	250mmØ W/M	87.140 87.390	0.943	Clearance Under	88.333 88.633	300mmØ PVC STM
4	200mmØ PVC SAN	86.158 86.358	2.312	Clearance Under	88.670 88.970	EXISTING 300mmØ CONC STM
5	200mmØ PVC SAN	86.107 86.307	2.028	Clearance Under	88.335 88.940	EXISTING 605mmØ DI W/M
6	150mmØ W/M	88.038 88.188	0.492	Clearance Under	88.680 88.980	EXISTING 300mmØ CONC STM
7	200mmØ PVC SAN	72.400 72.600	0.400	Clearance Under	73.00* 73.20*	EXISTING 200mmØ STM*

*Note: Inverts and size to be confirmed

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 ENGINEERS GUIDANCE WITH RESPECT TO ANY ERRORS, OMISSIONS, INCONSISTENCIES AMBIGUITIES OR CONFLICTS WHICH ARE ALLEGED.



KEY PLAN (NTS)

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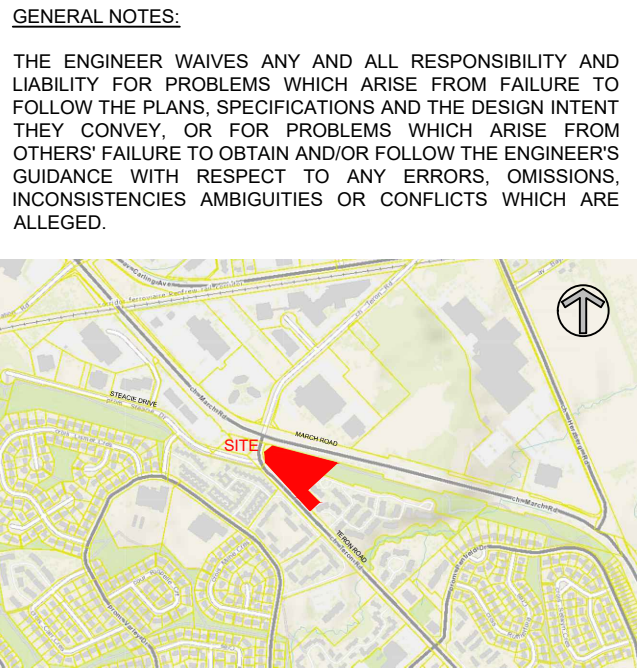
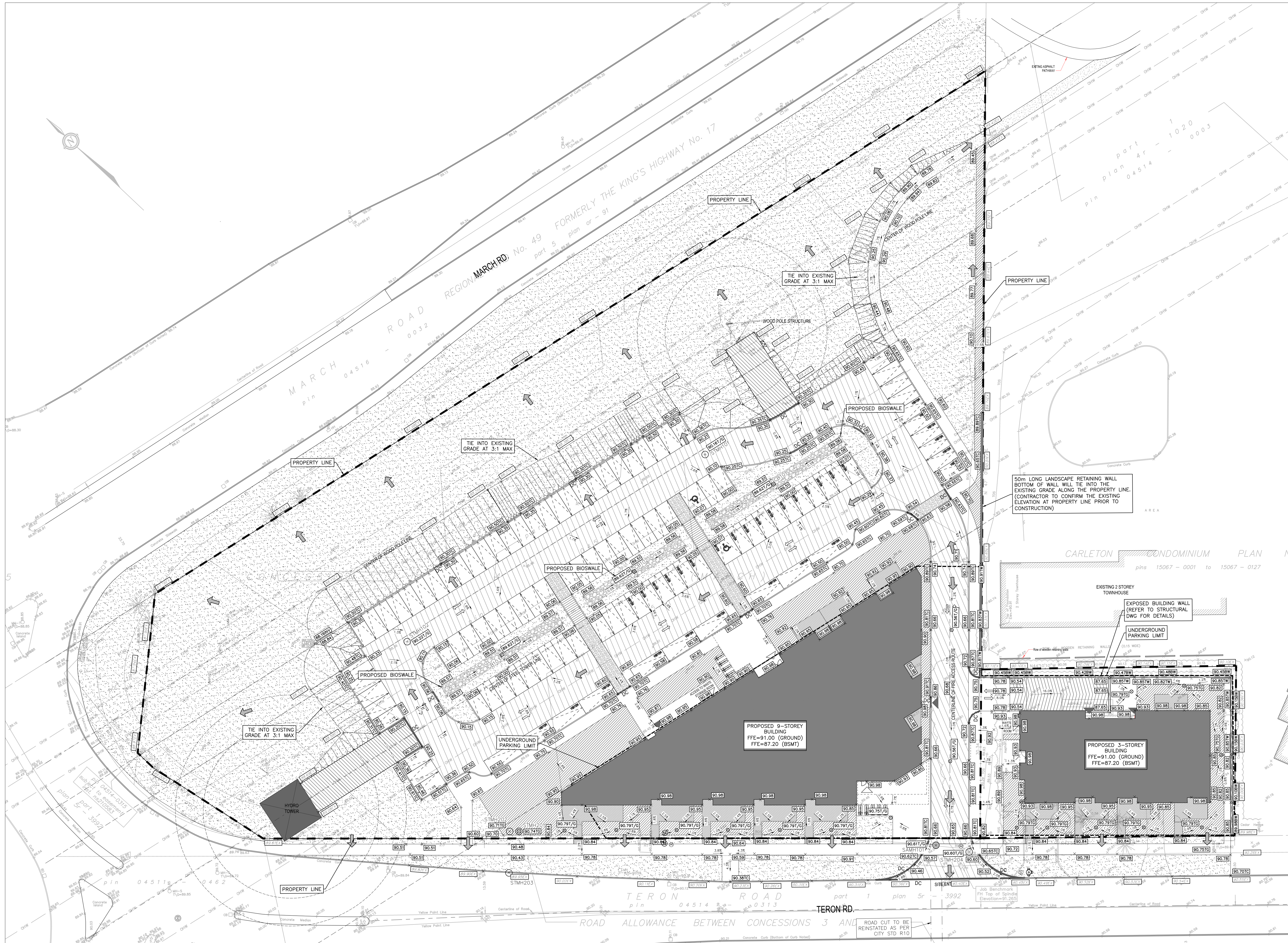
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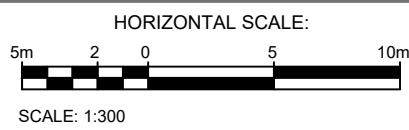
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KEY PLAN
(NTS)

02	REVISED AS PER CITY COMMENTS	D.Y.	2021-10-04
01	ISSUED FOR SPC	D.Y.	2021-04-16
No.	REVISIONS	BY	DATE



DISTANCES SHOWN ON THIS PLAN ARE IN METRES AND CAN BE CONVERTED TO FEET BY DIVIDING BY 0.3048



NOT VALID UNLESS SIGNED AND DATED



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MANOR PARK MANAGEMENT
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OTTAWA, ON K1K 0R8

project1
studio

ANNIS, O'SULLIVAN, VOLLEBEKK
Ontario Land Surveyors
114 CONQUEST GATE, SUITE 500, NEPEAN, ONTARIO, K2E 7S6
TEL: (613) 727-0850 FAX: (613) 727-1079

DESIGNED BY: D.Y. DRAWN BY: D.Y. APPROVED BY: D.Y./J.J.

PROJECT

1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

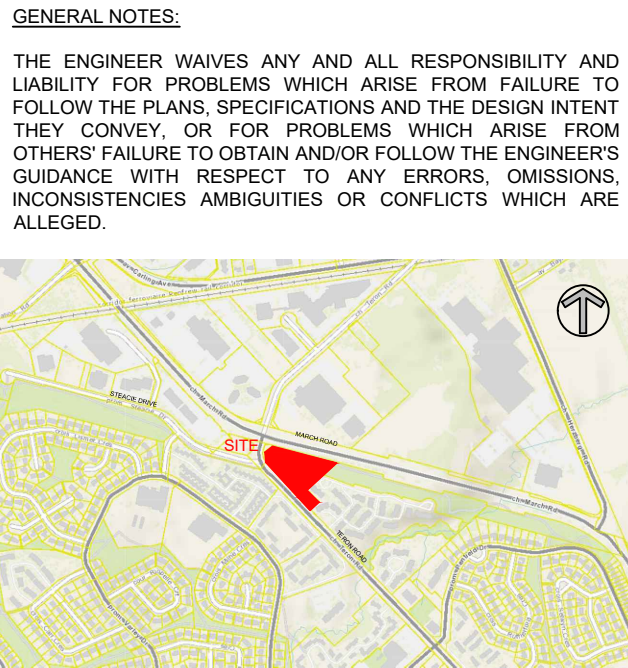
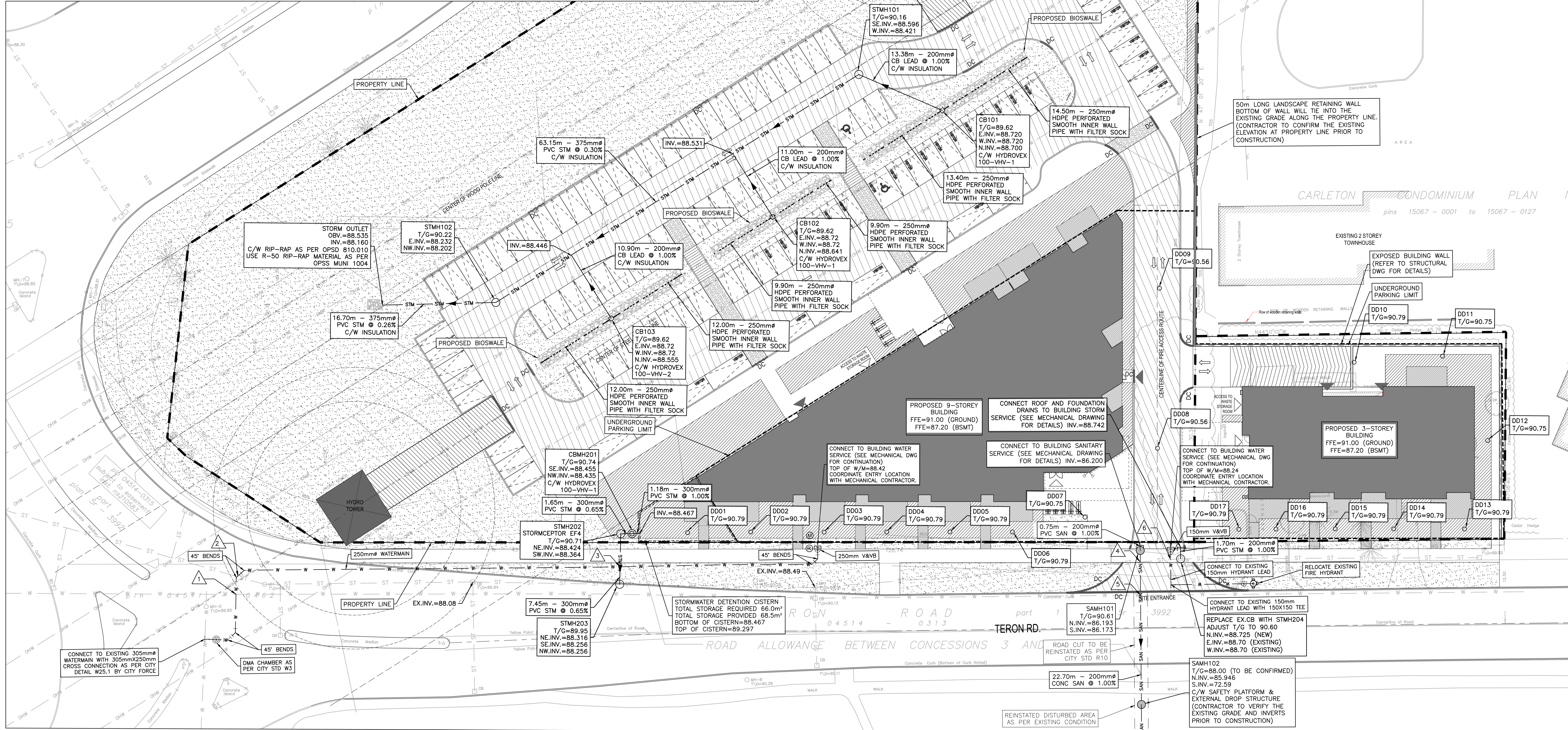
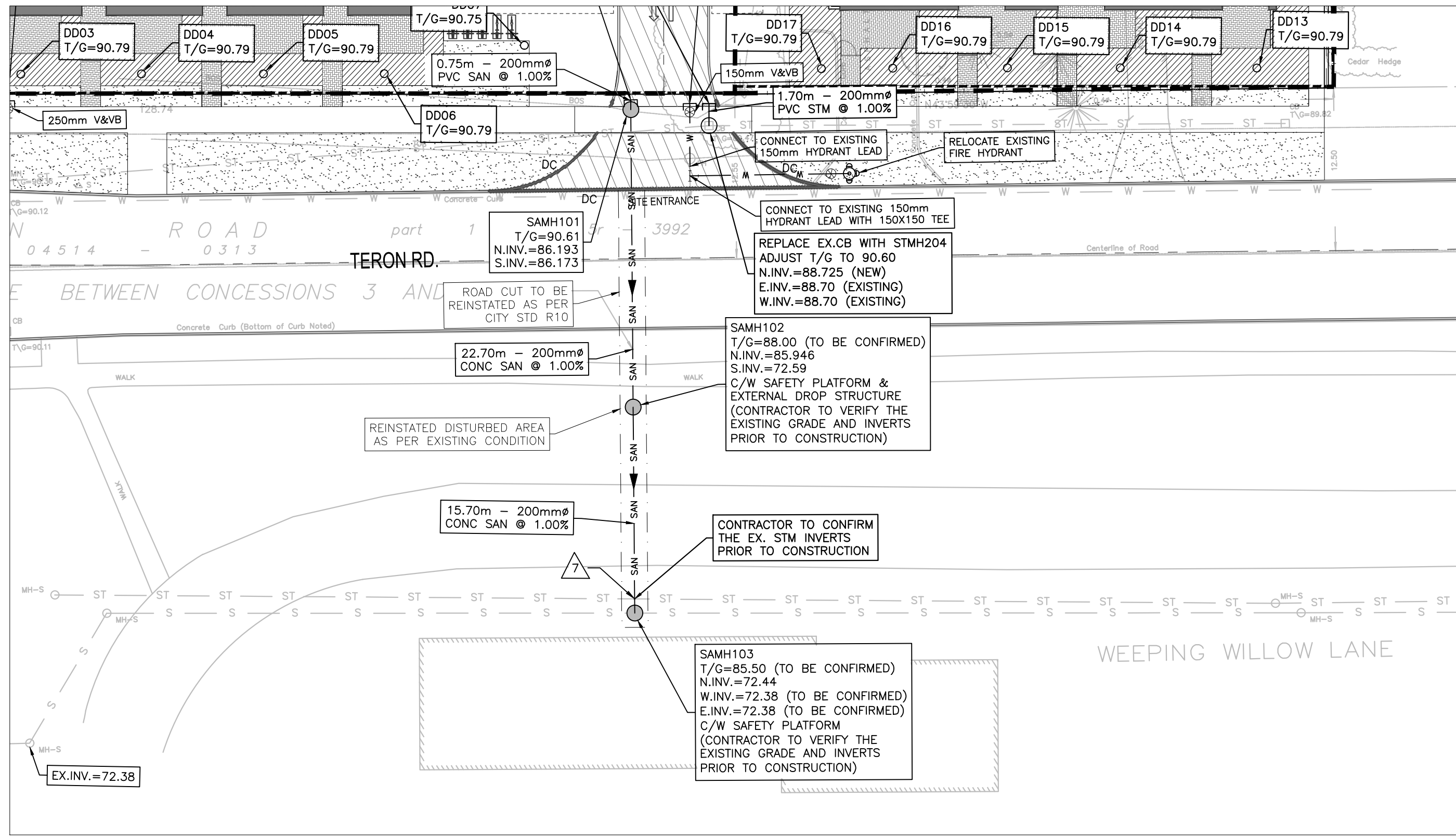
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PROJECT NO.
20M-01534-00

DRAWING NO.

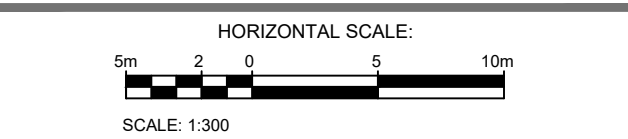
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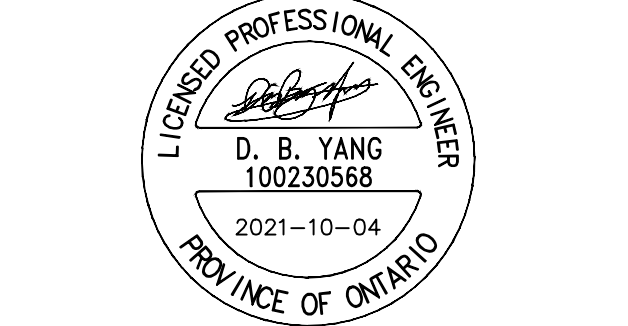


KEY PLAN (NTS)

No.	REVISIONS	BY	DATE
02	REVISED AS PER CITY COMMENTS	D.Y.	2021-10-04
01	ISSUED FOR SPC	D.Y.	2021-04-16



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C/O ANAND AGGARWAL
MANOR PARK MANAGEMENT
231 BRITANNY DRIVE, SUITE D
OTTAWA, ON K1K 0R8



DESIGNED BY: D.Y. DRAWN BY: D.Y. APPROVED BY: D.Y./J.J.

PROJECT
1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

SERVICING PLAN

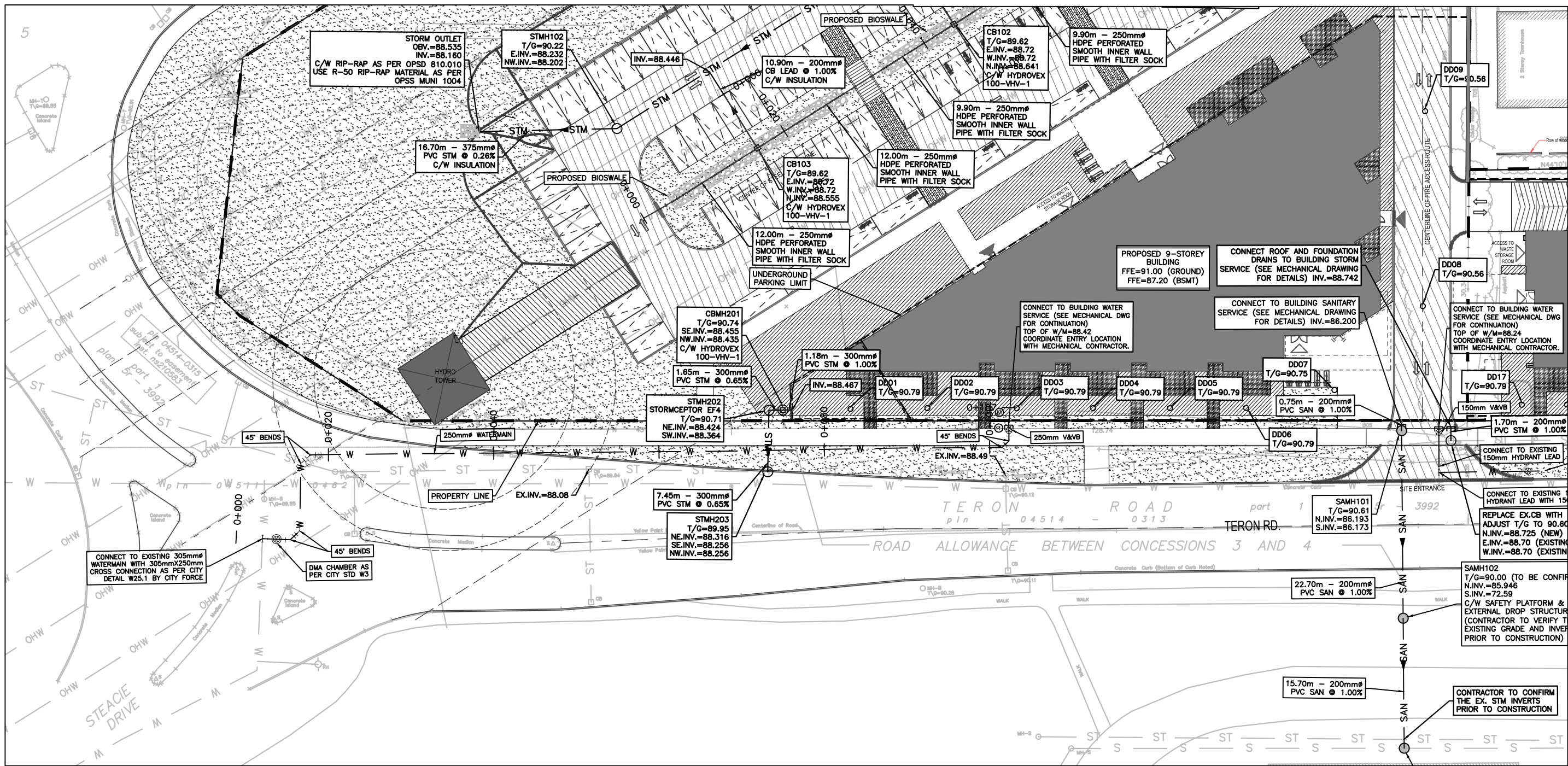
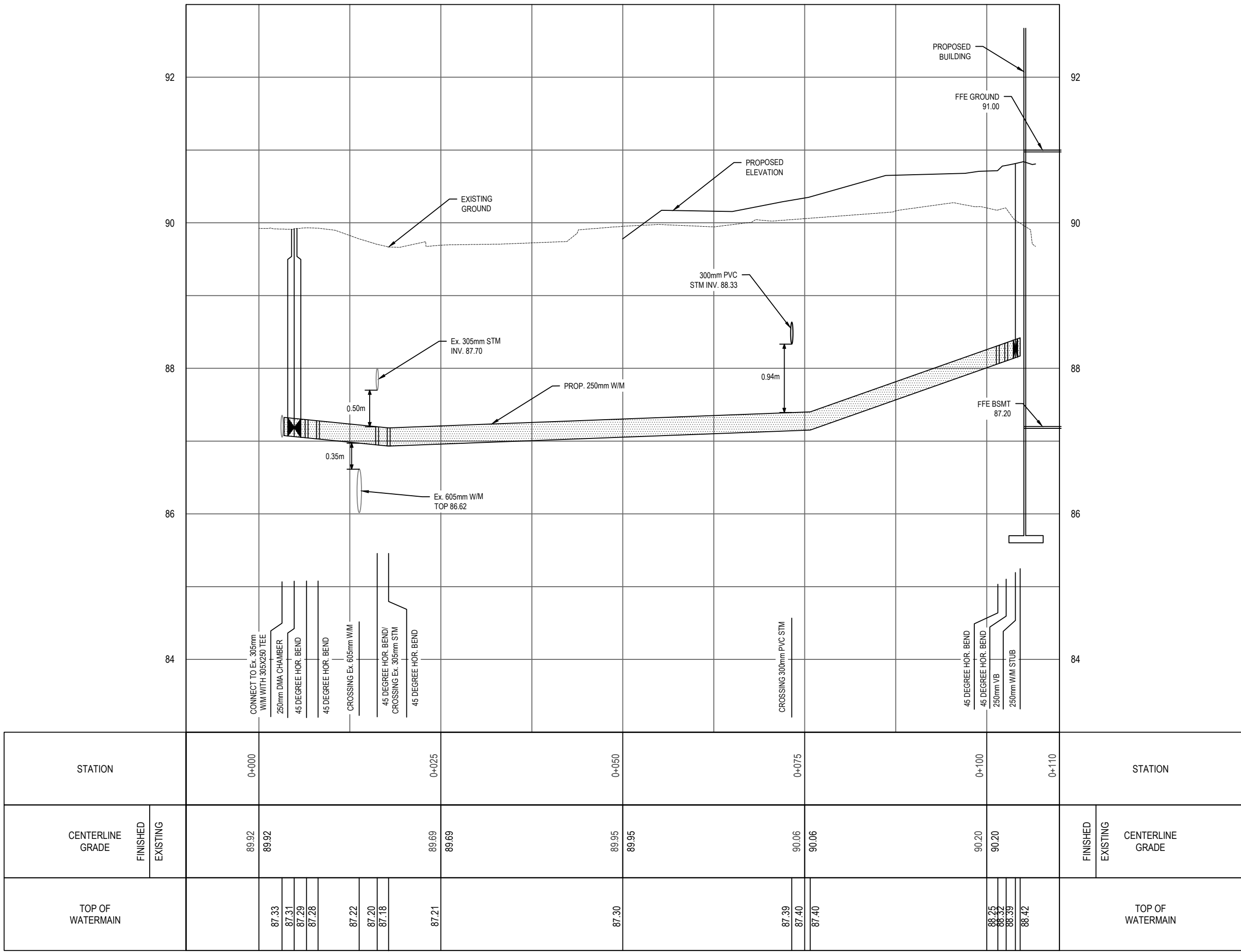
PROJECT NO. 20M-01534-00 DRAWING NO.

C03

D07-12-19-0187

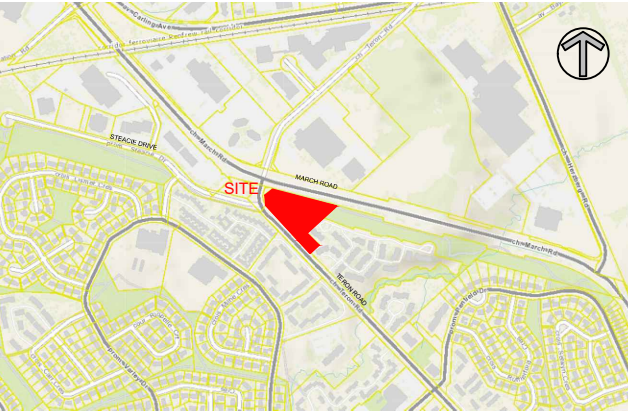
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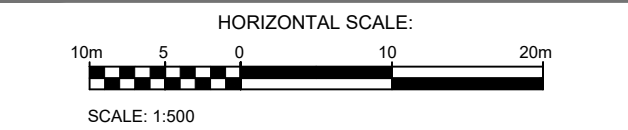
GENERAL NOTES:

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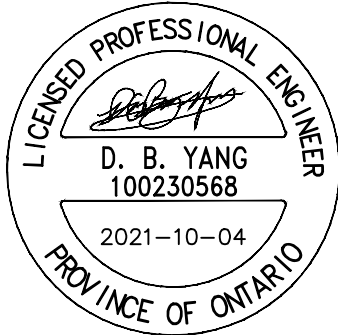


KEY PLAN
(NTS)

01	ISSUED FOR SPC	D.Y.	2021-10-04
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project1
studio

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DRAWN BY: D.Y.
APPROVED BY: D.Y./I.J.

PROJECT

1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

PROPOSED 250mm W/M
EXTENSION IN TERON ROAD

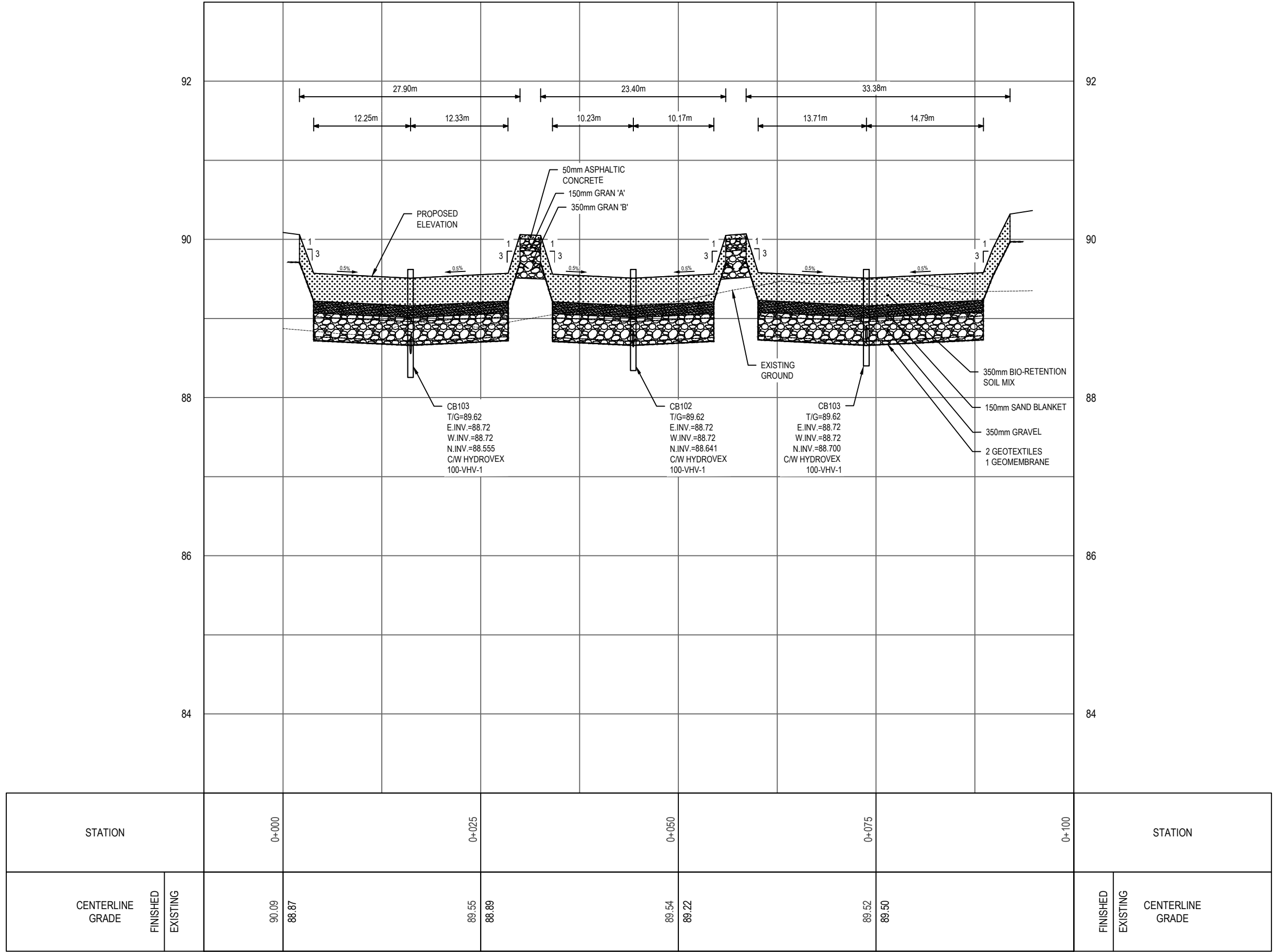
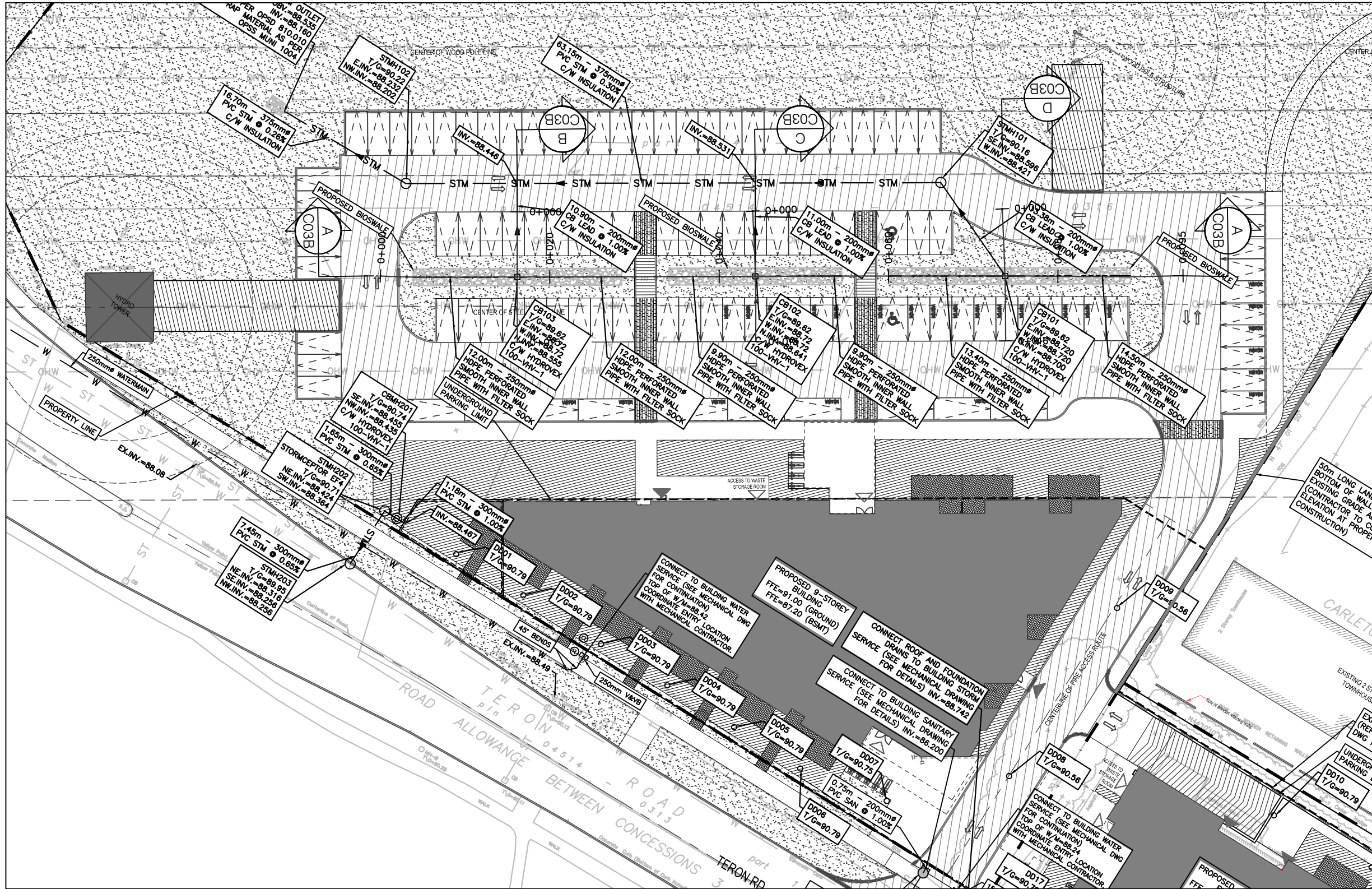
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20M-01534-00

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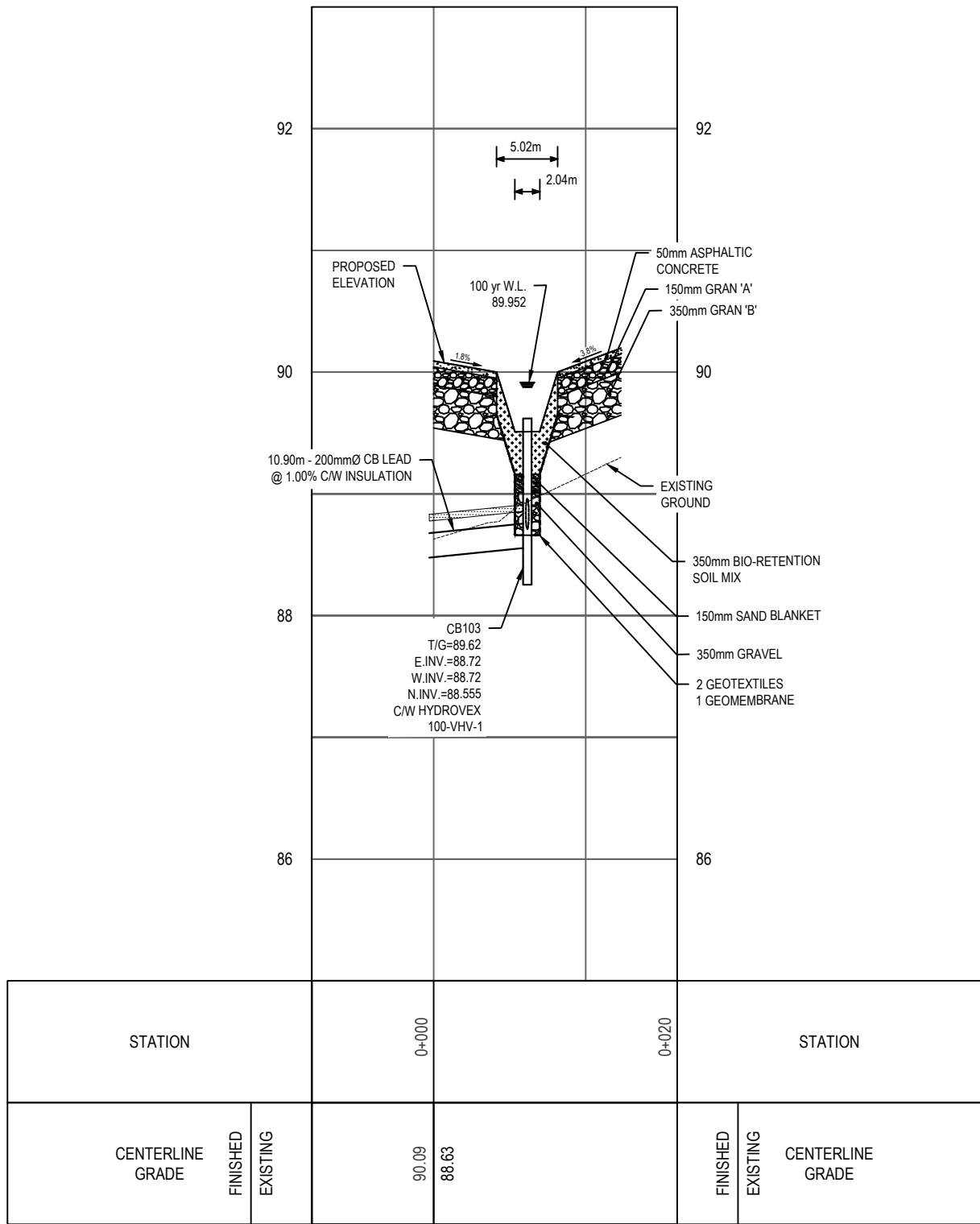
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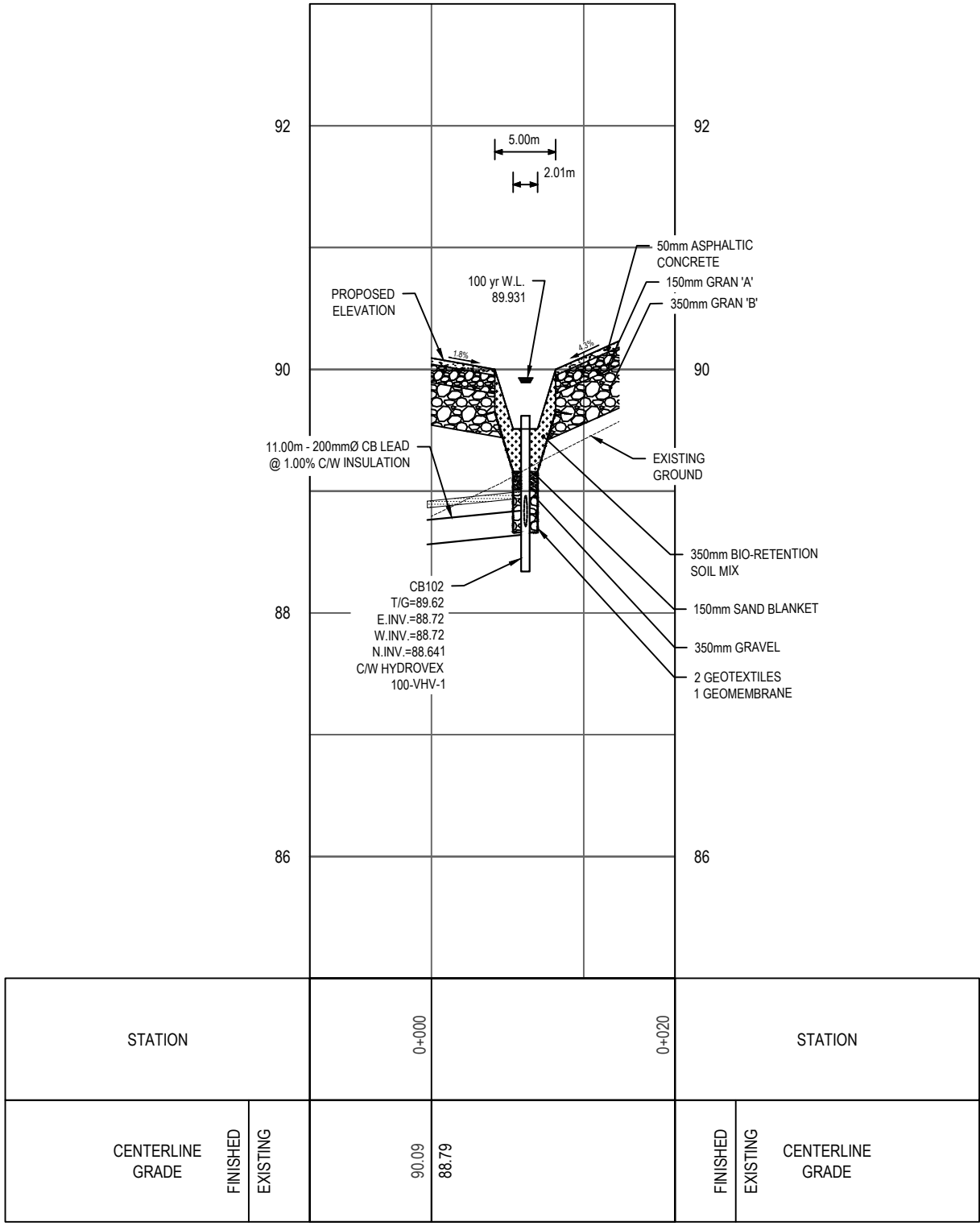
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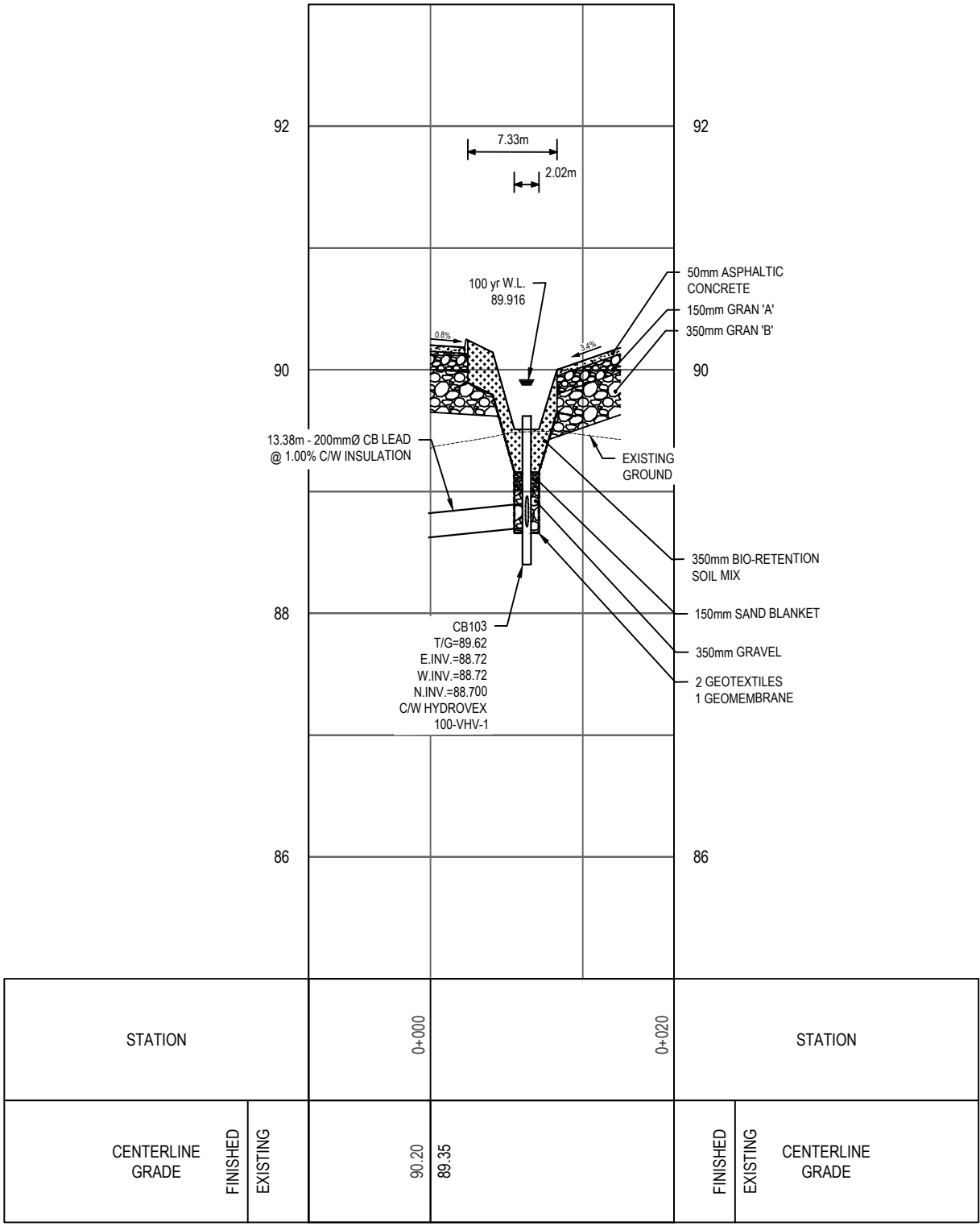
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VER 1:50



SECTION B-B
SCALE: HOR 1:500
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SECTION C-C
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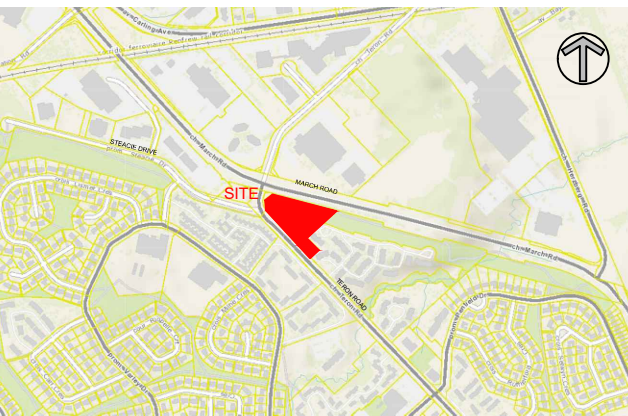


SECTION D-D
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VER 1:50

Bio-Swale Storage Provided				
Cross Section Area m ²	L1 m	L2 m	L3 m	Volume m ³
4.498	24.6	20.4	28.5	330.603

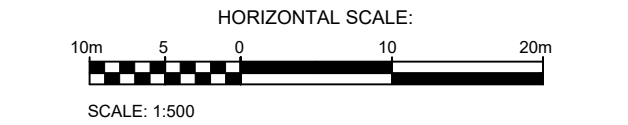
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project1 studio

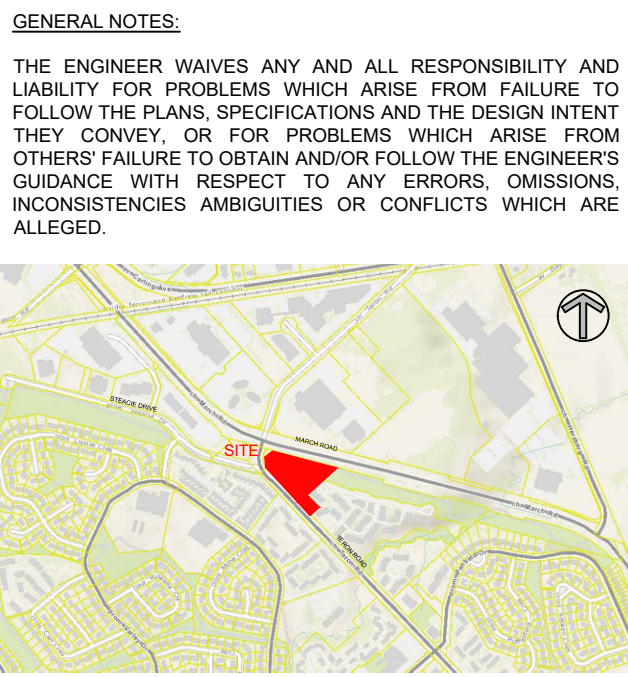
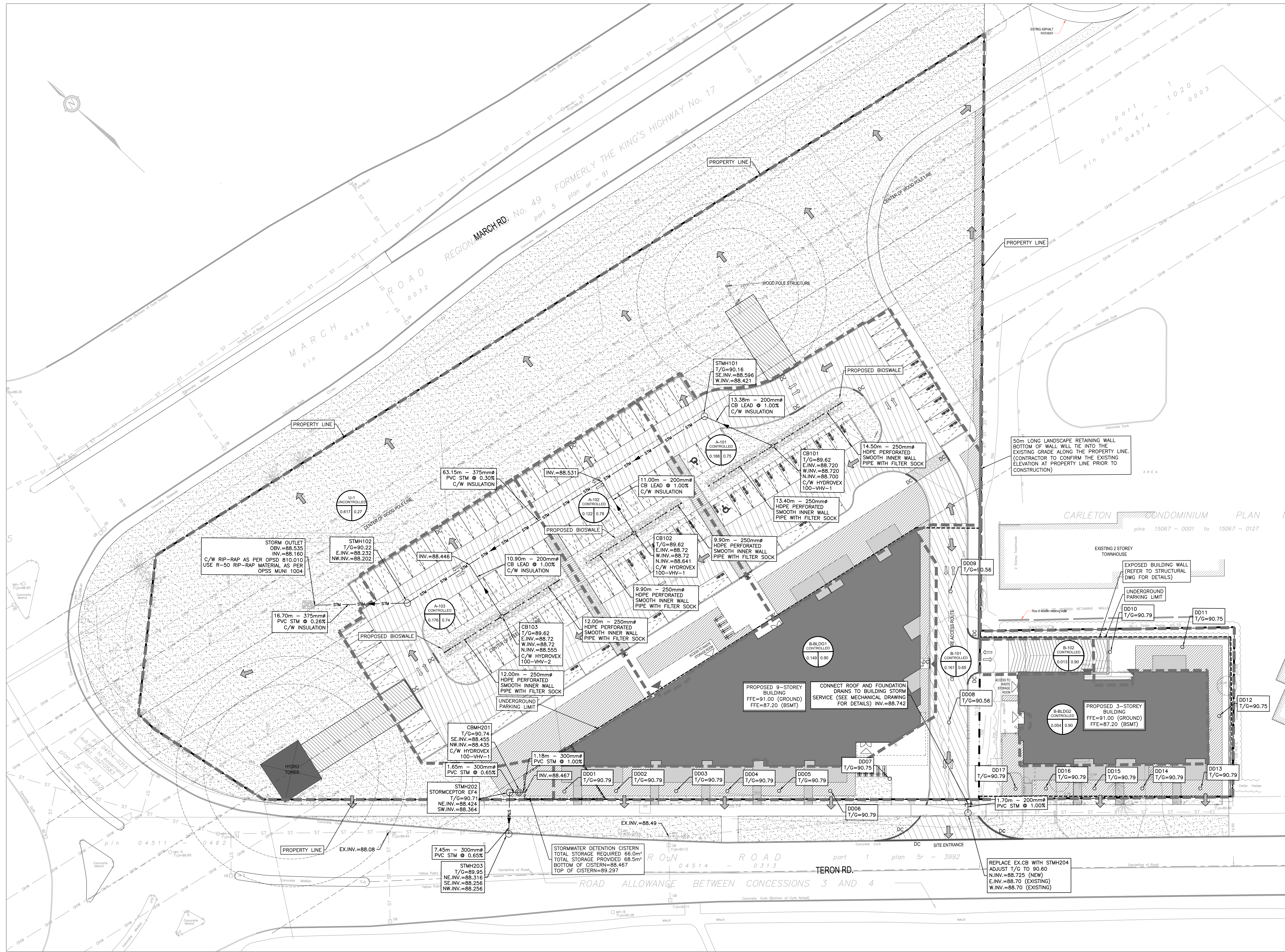
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Ontario Land Surveyors
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TEL: (613) 727-0850 FAX: (613) 727-1079

DESIGNED BY: D.Y. DRAWN BY: D.Y. APPROVED BY: D.Y./J.J.

PROJECT
1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE
BIO-SWALE
PROFILE AND SECTIONS

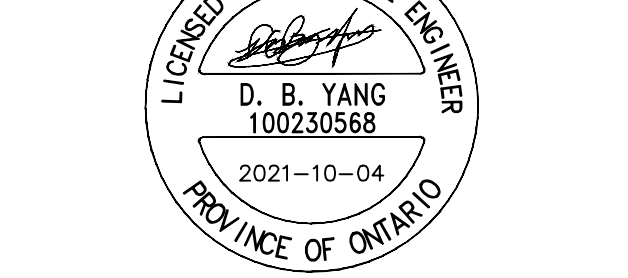
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KEY PLAN (NTS)

No.	REVISIONS	BY	DATE
02	REVISED AS PER CITY COMMENTS	D.Y.	2021-10-04
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PROJECT

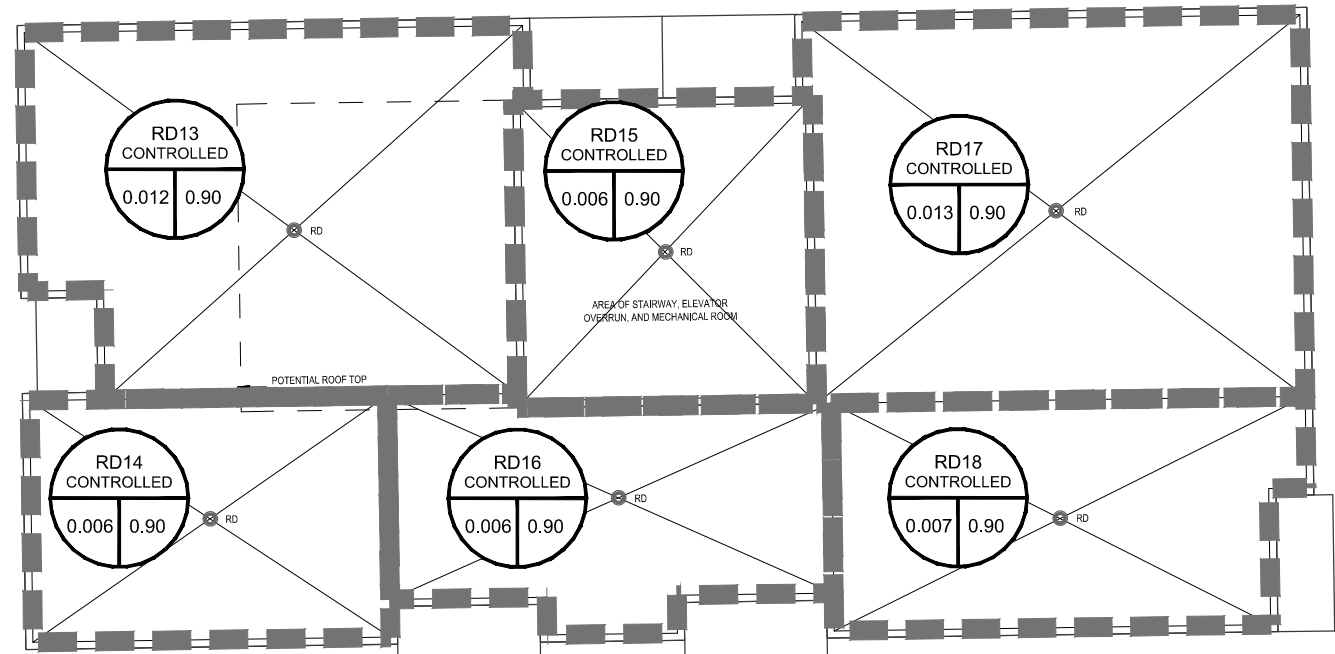
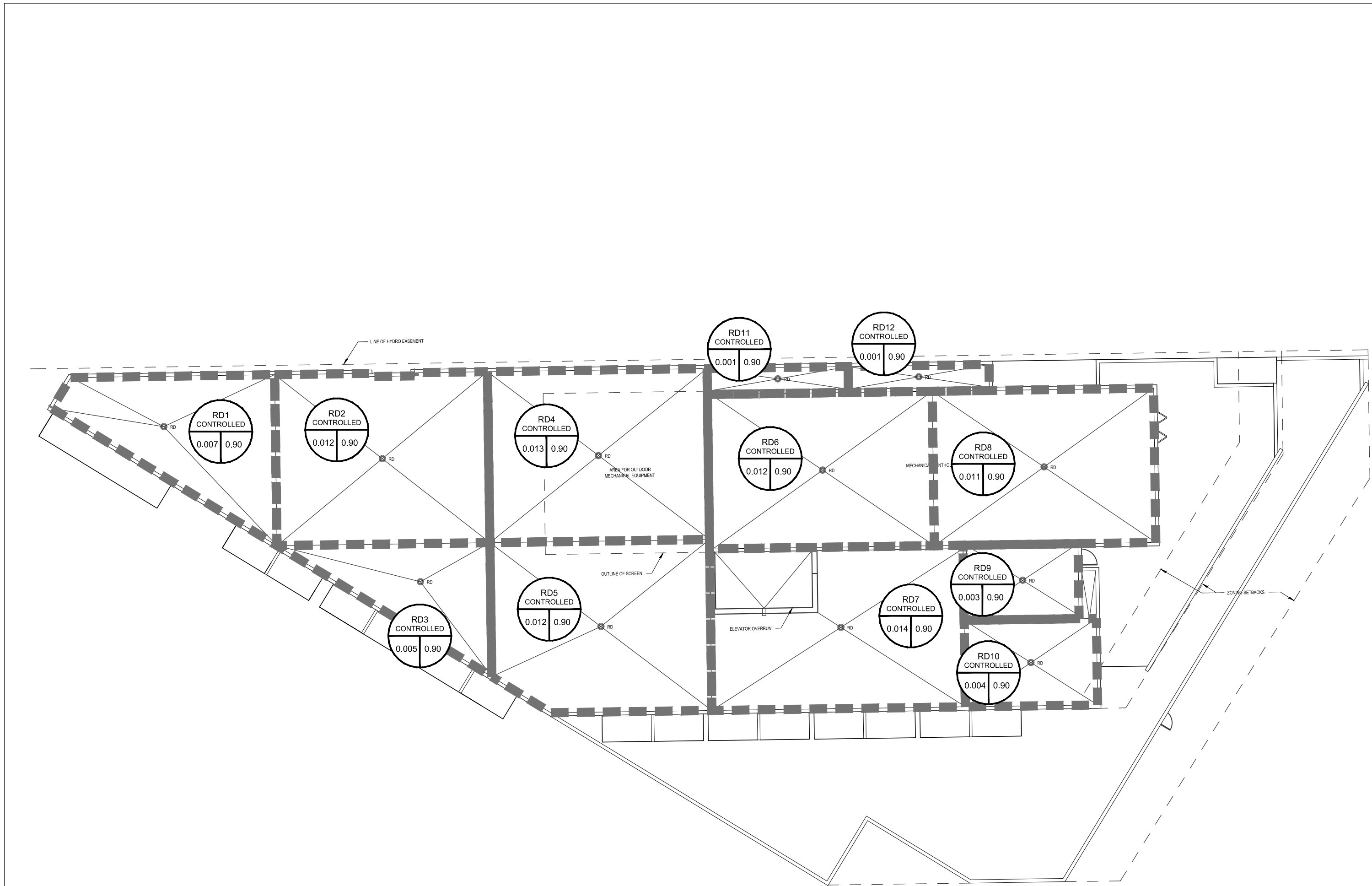
1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAINAGE AREA PLAN

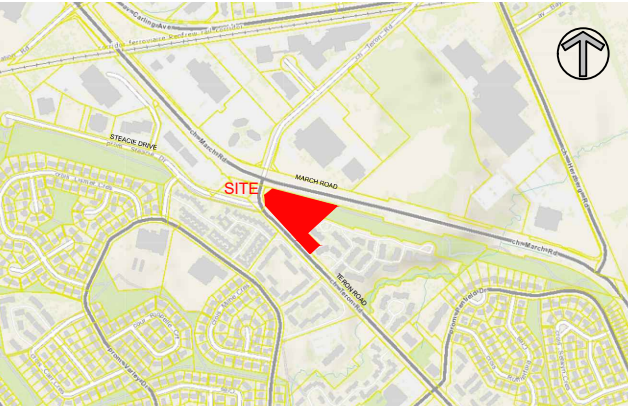
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D07-12-19-0187

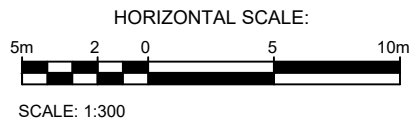


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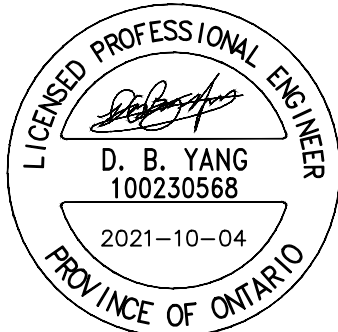


KEY PLAN
(NTS)

02	REVISED AS PER CITY COMMENTS	D.Y.	2021-10-04
01	ISSUED FOR SPC	D.Y.	2021-04-16
No.	REVISIONS	BY	DATE



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DESIGNED BY: D.Y. DRAWN BY: D.Y. APPROVED BY: D.Y./J.J.

PROJECT

1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

ROOF DRAINAGE PLAN

PROJECT NO.

20M-01534-00

DRAWING NO.

C04A

Adjustable Accutrol Weir

Tag:

Adjustable Flow Control for Roof Drains

ADJUSTABLE ACCUTROL (for Large Sump Roof Drains only)

For more flexibility in controlling flow with heads deeper than 2", Watts Drainage offers the Adjustable Accutrol. The Adjustable Accutrol Weir is designed with a single parabolic opening that can be covered to restrict flow above 2" of head to less than 5 gpm per inch, up to 6" of head. To adjust the flow rate for depths over 2" of head, set the slot in the adjustable upper cone according to the flow rate required. Refer to Table 1 below.

Note: Flow rates are directly proportional to the amount of weir opening that is exposed.

EXAMPLE:

For example, if the adjustable upper cone is set to cover 1/2 of the weir opening, flow rates above 2" of head will be restricted to 2 1/2 gpm per inch of head.

Therefore, at 3" of head, the flow rate through the Accutrol Weir that has 1/2 the slot exposed will be:
[5 gpm (per inch of head) x 2 inches of head] + 2 1/2 gpm (for the third inch of head) = 12 1/2 gpm.

Weir Opening Exposed	1"	2"	3"	4"	5"	6"
Fully Exposed	5	10	15	20	25	30
3/4	5	10	13.75	17.5	21.25	25
1/2	5	10	10	12.5	15	17.5
1/4	5	10	11.25	12.5	13.75	15
Closed	5	5	5	5	5	5

Roof Drains Areas and Storage Volume Table						
Roof Drainage #	Roof Area m ²	Ponding Area m ²	Ponding Depth m	Ponding Volume m ³	Release Rate L/s	
RD1	74.0	74.0	0.090	2.22	1.10	
RD2	121.0	121.0	0.150	6.05	1.58	
RD3	48.0	48.0	0.070	1.12	0.87	
RD4	126.0	126.0	0.150	6.30	1.58	
RD5	122.0	122.0	0.150	6.10	1.58	
RD6	116.0	116.0	0.150	5.80	1.58	
RD7	137.0	116.5	0.150	5.82	1.58	
RD8	114.0	114.0	0.150	5.70	1.58	
RD9	91.0	91.0	0.115	3.49	1.34	
RD10	38.0	38.0	0.070	0.89	0.87	
RD11	12.0	12.0	N/A	N/A	0.32	
RD12	12.0	12.0	N/A	N/A	0.32	
RD13	120.0	120.0	0.150	6.00	1.58	
RD14	61.0	61.0	0.090	1.83	1.34	
RD15	65.0	65.0	0.090	1.95	1.34	
RD16	64.0	64.0	0.090	1.92	1.34	
RD17	131.0	131.0	0.150	6.55	1.58	
RD18	72.0	72.0	0.090	2.16	0.87	
Total	1524.0	1503.5		63.9	22.4	

Job Name

Job Location

Engineer

Contractor

Contractor's P.O. No.

Representative

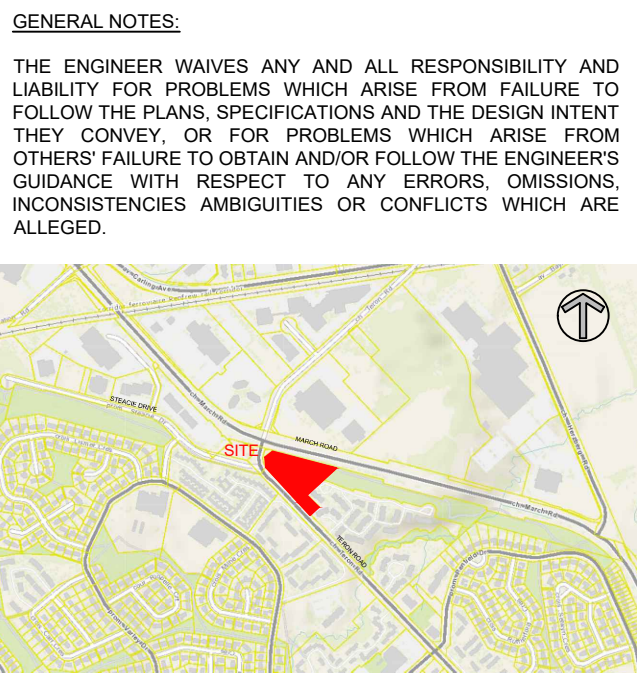
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02	REVISED AS PER CITY COMMENTS	D.Y.	2021-10-04
01	ISSUED FOR SPC	D.Y.	2021-04-16
No.	REVISIONS	BY	DATE

HORIZONTAL SCALE:

A horizontal scale bar with a total length of 10m. It is divided into segments of 2m, 0m, 5m, and 10m. The scale is 1:300.

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1151 AND 1131 TERON ROAD
RESIDENTIAL DEVELOPMENT

DRAWING TITLE

EROSION AND SEDIMENTATION
CONTROL PLAN

PROJECT NO. 20M-01534-00

C05

#1846

FILENAME: V:\10-13 Mill-LD - 2020 Project\20M-01534-00 - 1151 Teron Road\3. Drawings\Working drawings\20M-01534-00_Civil.dwg
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