

**LEGEND**

SAN MH 1	PROPOSED SANITARY MANHOLE AND SEWER	EXISTING CONCRETE CURB	EXISTING CONCRETE CURB
CBMH 250	PROPOSED CATCH-BASIN MANHOLE	EXISTING SANITARY MANHOLE	EXISTING SANITARY MANHOLE
STMH 100	PROPOSED STORM MANHOLE AND SEWER	EXISTING CATCH-BASIN MANHOLE	EXISTING CATCH-BASIN MANHOLE
CB 200	PROPOSED CATCH-BASIN	EXISTING STORM MANHOLE	EXISTING STORM MANHOLE
LD 1	PROPOSED LANDSCAPE DRAIN	EXISTING CATCH-BASIN	EXISTING CATCH-BASIN
HYD	PROPOSED HYDRANT AND VALVE	EXISTING HYDRANT VALVE	EXISTING HYDRANT VALVE
VA	PROPOSED VALVE BOX	EXISTING TRENCH	EXISTING TRENCH
RED	PROPOSED REDUCER	EXISTING TRENCH - VEGETATION	EXISTING TRENCH - VEGETATION
DC	PROPOSED DECREASED CURB (PER S1.1)	EXISTING UTILITY POLE OR CULVERT	EXISTING UTILITY POLE OR CULVERT
CC	PROPOSED CURB CUT	EXISTING LIGHT STANDARD	EXISTING LIGHT STANDARD
ICD	PROPOSED INLET CONTROL DEVICE	REMOVALS	REMOVALS
FPE	PROPOSED FINISHED FLOOR ELEVATION		
USF	PROPOSED UNDERSEAL OF FOOTING ELEVATION		

- GENERAL NOTES:**
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
  - DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
  - OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
  - BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
  - RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CURBS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
  - REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
  - ALL ELEVATIONS ARE GEODETIC.
  - REFER TO GEOTECHNICAL REPORT (NO. P0300873.PT.1, DATED MARCH 1, 2024) AND RELIANCE LETTER (DATED SEPTEMBER 5, 2024) PREPARED BY GHD FOR SUBSISTENCE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
  - REFER TO ARCHITECTS AND LANDSCAPE ARCHITECTS' DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
  - REFER TO DEVELOPMENT SERVICES STUDY AND STORMWATER MANAGEMENT REPORT (P.0202482) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
  - SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
  - PROVIDE LINE/PARKING PAINTING.

- WATERMAIN NOTES:**
- SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND AS AMENDED; EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND COLORATION OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF CITY OF OTTAWA FORCES.
  - SPECIFICATIONS:  
ITEM: VALVE CHAMBER  
REF: W3  
ITEM: TRENCHING  
REF: W17  
ITEM: HYDRANT INSTALLATION  
REF: W19  
ITEM: TRENCHING IN SHALLOW TRENCHES  
REF: W22  
ITEM: INSULATION ADJACENT TO OPEN STRUCTURES  
REF: W24  
ITEM: VALVE BOX ASSEMBLY  
REF: W24  
ITEM: WATERMAIN CROSSING BELOW SEWER  
REF: W25  
ITEM: WATERMAIN CROSSING ABOVE SEWER  
REF: W25.2
  - WATERMAIN SHALL BE MINIMUM 2-INCH DEPTH BELOW GRADE, UNLESS OTHERWISE INDICATED.
  - PROVIDE MINIMUM 0.5% CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
  - WATER SERVICE TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED.

- SEWER NOTES:**
- SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND AS AMENDED.
  - SPECIFICATIONS:  
ITEM: CATCH-BASIN (600mm) x 300mm  
REF: S31  
ITEM: SANITARY MANHOLE (1200mm) x 600mm  
REF: S32  
ITEM: SANITARY MANHOLE FRAME AND COVER  
REF: S34  
ITEM: STORM MANHOLE FRAME AND COVER  
REF: S34.1  
ITEM: WATER TIGHT MH FRAME AND COVER  
REF: S34.2  
ITEM: LANDSCAPE DRAIN (ELBOW, COVER & PIPE)  
REF: S35  
ITEM: SEWER TRENCH  
REF: S35  
ITEM: SHALLOW SEWER  
REF: S35  
ITEM: STORM SEWER  
REF: PVC DR 35  
ITEM: CATCH-BASIN LEVER  
REF: PVC DR 35  
ITEM: CATCH-BASIN LEVER  
REF: PVC DR 35
  - ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARDS DETAILS S14 AND S14.1 OR S14.2.
  - INSULATE ALL PIPES (SANITARY) THAT HAVE LESS THAN 1-INCH COVER WITH H-40 INSULATION PER CITY OF OTTAWA STANDARD DETAIL S33. PROVIDE 100mm CLEARANCE BETWEEN PIPES AND INSULATION.
  - SEWERS ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
  - PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 90% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
  - FLEXIBLE CONNECTIONS ARE REQUIRED FOR CONNECTING PIPES TO MANHOLES (FOR EXAMPLE KORN-SEAL, POSITIVE SEAL AND DURASEAL). THE CONCRETE GRADE FOR THE PIPE CAN BE ELIMINATED.
  - THE OWNER SHALL REQUIRE THAT THE SITE SERVING CONTRACTOR FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPES 410.07.16, 410.07.16.8 AND 410.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SEWERS TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE REPORTED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
  - ALL STORM MANHOLES AND CATCH-BASIN MANHOLES ARE TO HAVE 300mm SLUMPS UNLESS OTHERWISE INDICATED. ALL CATCH-BASINS ARE TO HAVE 600mm SLUMPS.
  - ALL CATCH-BASINS, MANHOLES AND/OR CATCH-BASIN MANHOLES THAT ARE TO HAVE ICDS INSTALLED WITHIN THEM ARE TO HAVE 600mm SLUMPS.
  - ALL WEIRING TIE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
  - CONTRACTOR TO TELEVIEW (CCTV) ALL PROPOSED SEWERS, 200mm OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVING AS-BUILT INFORMATION SHOWN ON THIS PLAN AS-BUILT INFORMATION MUST INCLUDE PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIE ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TIE ELEVATIONS AND ANY ADJUSTMENT CHANGES, ETC.

**PROPOSED WATERMAIN TABLE**

Station	FIG. ELEVATION	TOP OF WATERMAIN	DESCRIPTION
0+00.00	79.46	77.59	300mm WM TIE CONNECTION TO EX. 600mm WM
0+00.04	79.62	78.44	45° VERTICAL BEND
0+07.17	79.72	78.52	45° VERTICAL BEND
0+05.00	79.78	78.57	45° VERTICAL BEND
0+05.45	79.63	77.31	45° VERTICAL BEND
0+00.70	80.53	78.86	BULK WATER METER IN R4 CHAMBER AT PROPERTY LINE
0+02.01	81.05	78.80	150mm HYDRANT TEE
0+100.78	81.17	79.17	22.5° VERTICAL BEND
0+115.96	81.89	79.55	150mm HYDRANT TEE
0+120.29	81.96	79.59	22.5° VERTICAL BEND
0+153.37	81.98	79.59	22.5° VERTICAL BEND
0+157.40	82.07	79.63	200mm WATER SERVICE TEE
0+158.58	82.17	79.62	VALVE AND VALVE CHAMBER
0+159.75	82.31	79.91	22.5° VERTICAL BEND
0+160.28	82.33	79.88	200mm WATER SERVICE TEE
0+162.40	82.40	79.99	300mm x 250mm REDUCER
0+225.37	82.11	79.71	45° VERTICAL BEND

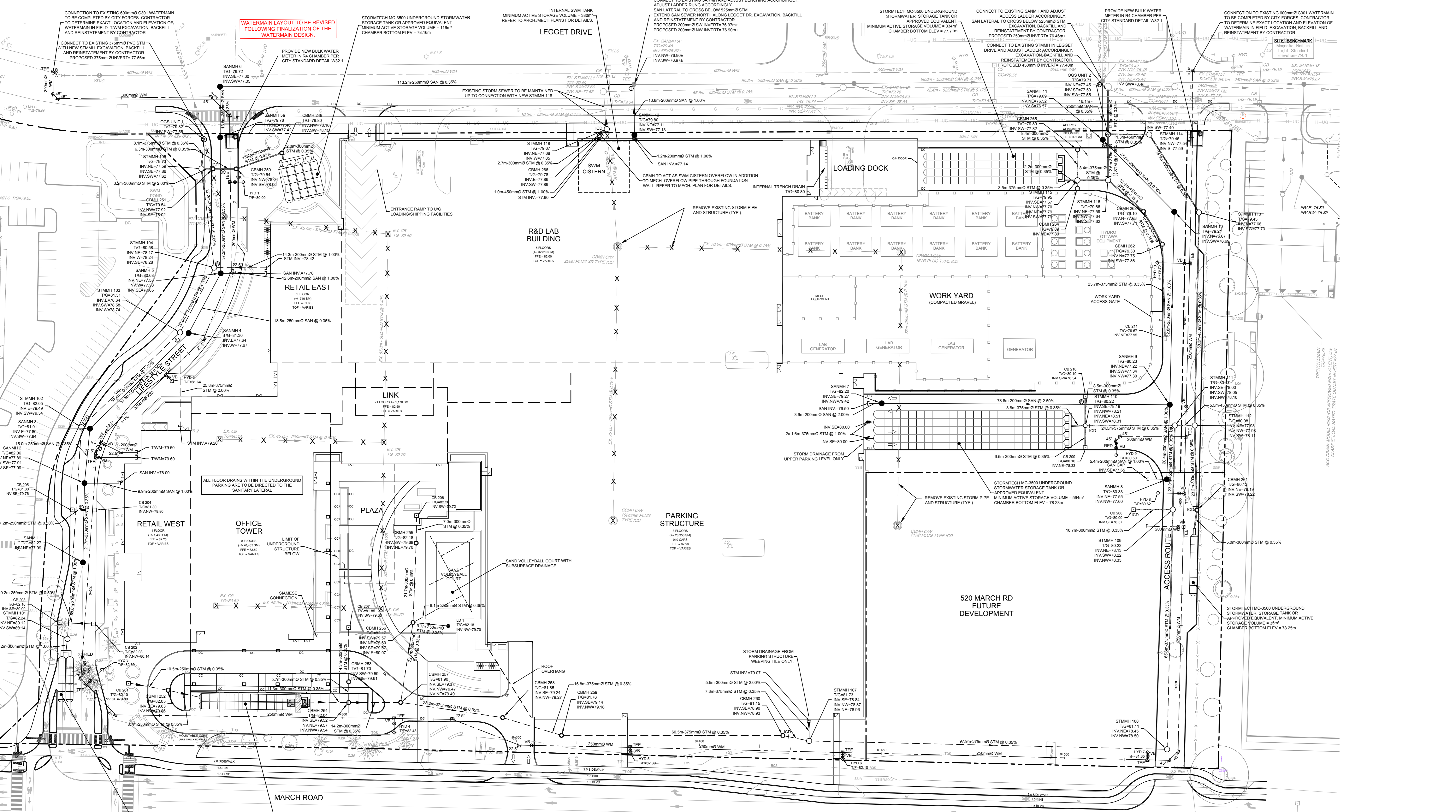
**PROPOSED WATERMAIN TABLE (Continued)**

Station	FIG. ELEVATION	TOP OF WATERMAIN	DESCRIPTION
0+230.04	82.11	79.71	150mm HYDRANT TEE
0+235.53	82.19	79.78	45° VERTICAL BEND
0+309.65	81.93	79.66	150mm HYDRANT TEE
0+326.60	81.93	79.53	45° VERTICAL BEND
0+332.36	81.72	79.32	45° VERTICAL BEND
0+355.68	81.84	79.44	VALVE AND VALVE BOX
0+375.77	81.86	79.46	150mm HYDRANT TEE
0+422.92	81.15	78.73	11.25° VERTICAL BEND
0+428.35	81.99	79.79	11.25° VERTICAL BEND
0+434.66	81.06	78.68	150mm HYDRANT TEE
0+521.12	80.31	77.91	150mm HYDRANT TEE
0+525.84	80.23	77.83	45° VERTICAL BEND
0+528.97	80.14	77.74	45° VERTICAL BEND
0+588.00	80.04	77.64	200mm WATER SERVICE TEE
0+603.40	79.91	77.61	150mm HYDRANT TEE
0+621.40	79.85	77.45	150mm HYDRANT TEE
0+626.40	79.75	77.35	VALVE & VALVE BOX
0+658.40	79.55	77.15	150mm HYDRANT TEE
0+702.40	79.45	77.05	BULK WATER METER IN R4 CHAMBER AT PROPERTY LINE
0+718.40	79.41	77.01	250mm WM TIE CONNECTION TO EX. 600mm WM

**CRITICAL SEWER PIPE CROSSING TABLE**

CROSSING	LOWER PIPE	HIGHER PIPE	MINIMUM CLEARANCE	SEWER SURFACE ELEVATION
1	250mm SAN T1P=77.71	300mm STM INV=78.02	+0.25m	79.58 m
2	250mm SAN T1P=77.71	300mm STM INV=79.29	+0.49m	80.50 m
3	250mm SAN T1P=77.41	375mm STM INV=79.73	+0.75m	81.30 m
4	250mm SAN T1P=78.01	300mm STM INV=79.78	+1.77m	81.94 m
5	250mm SAN T1P=78.01	300mm STM INV=80.73	+1.46m	80.13 m
6	250mm SAN T1P=77.81	375mm STM INV=78.10	+0.49m	80.19 m
7	250mm SAN T1P=77.81	375mm STM INV=77.48	+0.33m	79.65 m
8	250mm SAN T1P=78.21	325mm STM INV=77.35	+0.95m	79.92 m
9	250mm SAN T1P=77.21	325mm STM INV=77.47	+0.27m	79.44 m

- BENCHMARK NOTES:**
- IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THE DRAWING.
  - BENCHMARKS WERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK 6 AND PART OF BLOCK 1, REGISTERED PLAN 4M-442 AND PART OF LOTS 8 AND 9 CONCESSION 4.
  - BENCHMARKS WERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK 6 AND PART OF BLOCK 1, REGISTERED PLAN 4M-442 AND PART OF LOTS 8 AND 9 CONCESSION 4. GEOGRAPHIC TOWNSHIP OF DUNDAS, CITY OF OTTAWA, SURVEYED BY ANNE OSOULIAN AND VOLKERB LTD. SIGNED AND DATED FEBRUARY 26, 2002.



REFER TO ROADWAY MODIFICATIONS PLANS (BY OTHERS) FOR PROPOSED RMA WORKS WITHIN THE MARCH ROAD RIGHT-OF-WAY AND THE NEW SITE ACCESS ENTRIES.

STORMTECH MC-3500 UNDERGROUND STORMWATER STORAGE TANK  
MINIMUM ACTIVE STORAGE VOLUME = 50m³  
CHAMBER BOTTOM ELEV = 80.17m

STORMTECH MC-3500 UNDERGROUND STORMWATER STORAGE TANK  
MINIMUM ACTIVE STORAGE VOLUME = 120m³  
CHAMBER BOTTOM ELEV = 79.95m

STORMTECH MC-3500 UNDERGROUND STORMWATER STORAGE TANK OR APPROVED EQUIVALENT  
MINIMUM ACTIVE STORAGE VOLUME = 134m³  
CHAMBER BOTTOM ELEV = 78.25m

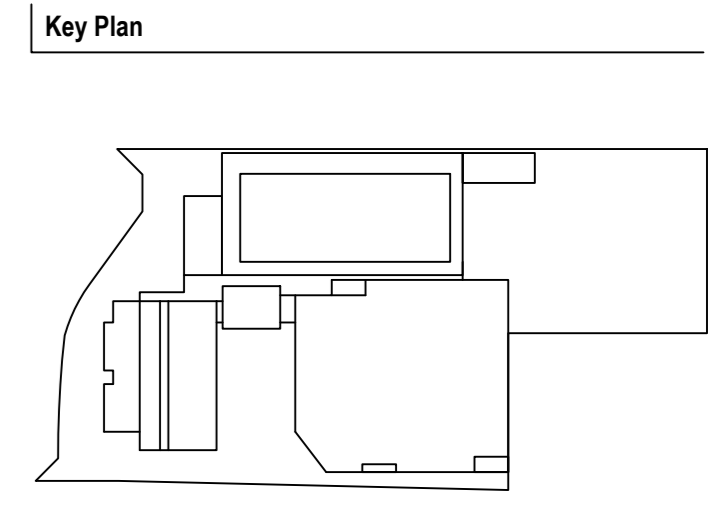
**NOKIA Ottawa Campus**  
570 March Rd, Kanata/Ottawa ON K2K 2T6

**Gensler**  
5005 Greenville Ave Dallas TX 75206  
Tel 214.273.1500

Supervisor: Anne Stasari, Viktoria Lisi  
Planning Consultant: Nicolaus  
Civil Engineering: C. Watters@novatech-eng.com  
Architectural Site Planning: G. Caruso@nov.ca  
Electrical Engineering: Brian Barry@gensler.com  
Mechanical Engineering: Andre acou@benhamanderson.com  
Structural Engineering: Elaine gunette@benhamanderson.com  
Geotechnical Engineering: GHD  
Landscape Planning: Karol osborne@ghd.com  
Civil Engineering: Gensler@nov.ca  
Structural Engineering: Gensler@nov.ca  
ASIS: Gensler@nov.ca  
Noise Report: Gensler@nov.ca  
Transportation Planning: Joshua Foster@ghdanderson.com  
Traffic Planning: Angelo veroni@starcac.com

Date	Description
SEP 12/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
NOV 15/24	REVISED PER CITY COMMENTS

**NOVATECH**  
Engineers, Planners & Landscape Architects  
Suite 200, 140 Michael Cowgill Drive  
Ottawa, Ontario, Canada K2M 1R6  
Telephone: (613) 254-9642  
Facsimile: (613) 254-5867  
Website: www.novatech-eng.com



Seal / Signature

**NOT FOR CONSTRUCTION**

Project Name  
**Nokia Ottawa Campus**

Project Number  
**027.7946.000**

Description  
**GENERAL PLAN OF SERVICES**

Scale

**C100**

- ### LEGEND
- PROPOSED FINISHED FLOOR ELEVATION
  - PROPOSED UNDERSIDE OF FOOTING ELEVATION
  - PROPOSED BUILDING ENTRANCE
  - PROPOSED SIEMSE CONNECTION
  - PROPOSED SILT FENCING (CSPD 216 110)
  - PROPOSED TRENCH DRAIN
  - PROPOSED MUD MAT / CONSTRUCTION ENTRANCE
  - PROPOSED FILTER BAG
  - EMERGENCY OVERLAND FLOW ROUTE
  - PROPOSED SANITARY MANHOLE
  - PROPOSED CATCH-BASIN MANHOLE
  - PROPOSED STORM MANHOLE
  - PROPOSED CATCH-BASIN
  - PROPOSED LANDSCAPE DRAIN
  - PROPOSED HYDRANT AND VALVE
  - PROPOSED VALVE CHAMBER
  - APPROXIMATE LIMIT OF REINSTATEMENT AREA
  - PROPOSED SWALE CENTRE LINE
  - PROPOSED BARRIER CURB (PER SC1.1)
  - PROPOSED DEPRESSIONED CURB (PER SC1.1)
  - PROPOSED CURB CUT
  - PROPOSED INLET CONTROL DEVICE

- ### PAVEMENT STRUCTURES:
- LIGHT DUTY (FOR PARKING AREAS): 150mm GRANULAR "A" / 150mm GRANULAR "B" TYPE I
  - HEAVY DUTY (ACCESS ROADS AND LOADING DOCKS): 150mm GRANULAR "A" / 150mm GRANULAR "B" TYPE I
  - HERRINGBONE PAVING (TRC) (LIFESTYLE STREET)

- ### GENERAL NOTES:
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
  - DETERMINE THE EXACT LOCATION, SIZE, MATERIAL, AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
  - OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
  - BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
  - COMPLETE ALL WORK IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BY-LAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DIMENSIONS AND ALL RELEVANT REFERENCES TO OPSB, OPSD & AWWA GUIDELINES - ALL CURRENT VERSIONS AND AS AMENDED.
  - RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ADJACENCIES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
  - REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
  - ALL ELEVATIONS ARE GEODETIC.
  - REFER TO GEOTECHNICAL REPORT (NO. PG120687-REP-1, DATED MARCH 6, 2024) AND RELIANCE LETTER (DATED SEPTEMBER 6, 2024), PREPARED BY GHD, FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL DESIGN REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
  - REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
  - REFER TO DEVELOPING SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2023-082) PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
  - SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).
  - PROVIDE LINE/PAVING PAINTING.

- ### GRADING NOTES:
- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BEHIND THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
  - EXPOSED SUBGRADE IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL ENGINEER PRIOR TO THE PLACEMENT OF GRANULARS.
  - ANY SOFT AREAS EVIDENT FROM THE PROOF ROLLING SHOULD BE SUB-EXCAVATED AND REPLACED WITH SUITABLE MATERIAL THAT IS FROST COMPATIBLE WITH THE EXISTING SOILS AS RECOMMENDED BY THE GEOTECHNICAL ENGINEER.
  - THE GRANULAR BASE SHOULD BE COMPACTED TO AT LEAST 100% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 90% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE.
  - MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
  - MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
  - ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
  - ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED PER CITY OF OTTAWA STANDARDS (SC1.1). MOUNTABLE CURBS ARE TO BE PER CITY OF OTTAWA STANDARD (SC1.3).
  - ALL RETAINING WALLS OF AT LEAST 0.6m IN HEIGHT SHALL HAVE FENCING/RAILING ALONG TOP SURFACE OF WALL PER OBC ARTICLE 9.8.8.1.
  - REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.

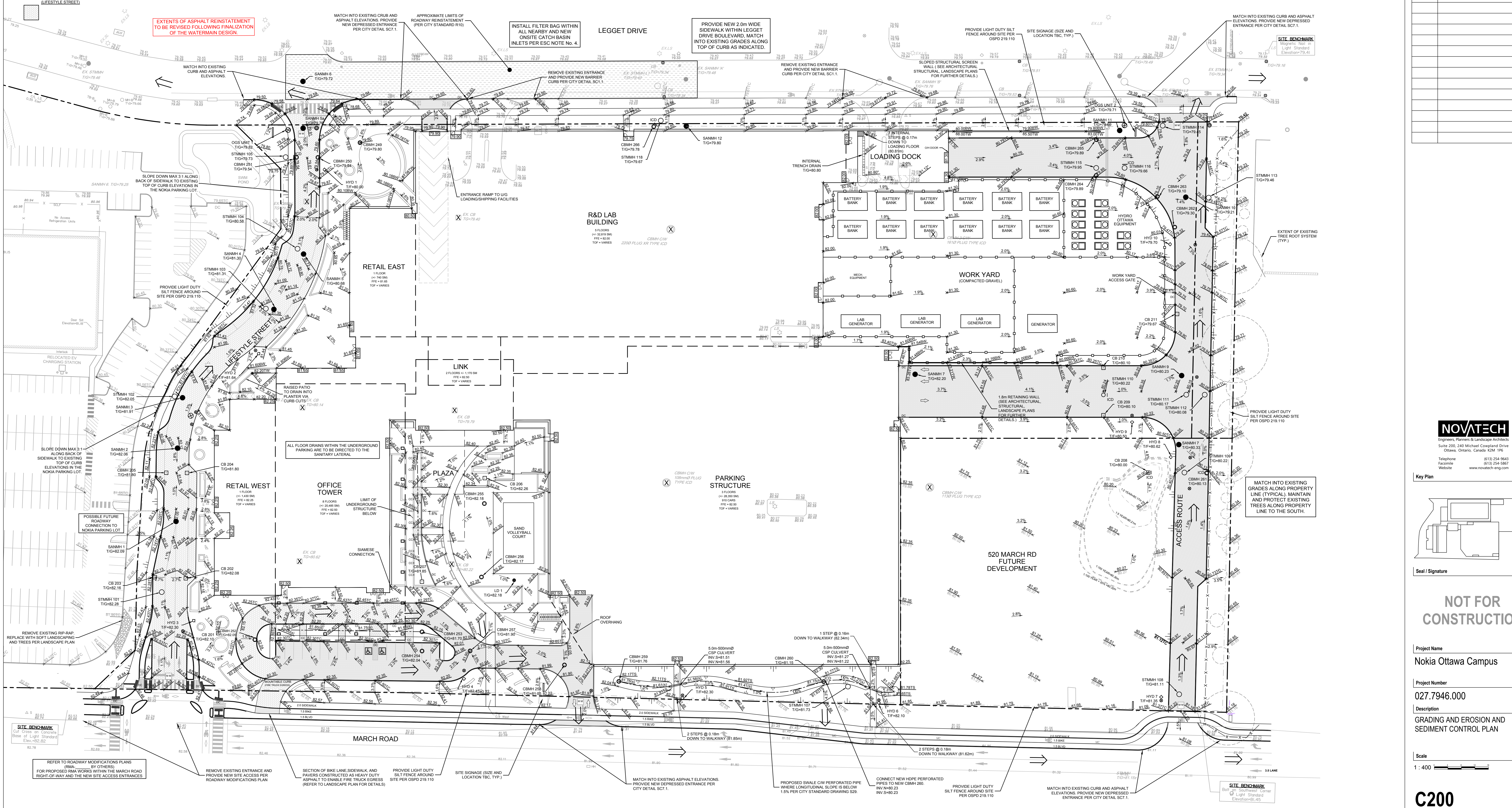
- ### EROSION AND SEDIMENT CONTROL NOTES:
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
  - ALL EROSION AND SEDIMENT CONTROLS ARE TO BE INSTALLED TO THE SATISFACTION OF THE ENGINEER AND THE CITY OF OTTAWA. THEY ARE TO BE APPROPRIATE TO THE SITE CONDITIONS PRIOR TO UNDERTAKING ANY SITE ALTERATION (FILLING, GRADING, REMOVAL OF VEGETATION, ETC) AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION. THESE PRACTICES ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL AND SHOULD INCLUDE A MINIMUM THOSE MEASURES INDICATED ON THE PLAN.
  - EROSION AND SEDIMENT CONTROL MEASURES WILL BE IMPLEMENTED DURING CONSTRUCTION IN ACCORDANCE WITH THE "GUIDELINES ON EROSION AND SEDIMENT CONTROL FOR URBAN CONSTRUCTION SITES" (GOVERNMENT OF ONTARIO, MAY 1987). THE CONTRACTOR SHALL BE SOLELY RESPONSIBLE FOR MEETING ALL REGULATORY AGENCY REQUIREMENTS.
  - TO PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER CLOTH WILL BE PLACED UNDER GRATES OF NEARBY CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED AROUND THE CONSTRUCTION AREA WHERE APPLICABLE. THESE CONTROLS MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
  - TO LIMIT EROSION MINIMIZE THE AMOUNT OF EXPOSED SOILS AT ANY GIVEN TIME. RE-VEGETATE EXPOSED AREAS AND SLOPES AS SOON AS POSSIBLE AND PROTECT EXPOSED SLOPES WITH NATURAL OR SYNTHETIC MULCHES.
  - FOR MATERIAL STOCKPILING MINIMIZE THE AMOUNT OF EXPOSED MATERIALS AT ANY GIVEN TIME. APPLY TEMPORARY SEEDING, TAPPS, COMPACTION AND/OR SURFACE ROUGHENING AS NECESSARY TO STABILIZE STOCKPILED MATERIALS THAT WILL NOT BE USED WITHIN 14 DAYS.
  - THE SEDIMENT CONTROL MEASURES SHALL ONLY BE REMOVED WHEN, IN THE OPINION OF THE ENGINEER, THE MEASURES ARE NO LONGER REQUIRED. NO CONTROL MEASURES MAY BE PERMANENTLY REMOVED WITHOUT PRIOR AUTHORIZATION FROM THE ENGINEER.
  - THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY STORM SEWER SYSTEM. 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 CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
  - ROADWAYS ARE TO BE SWEEP AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR THE MUNICIPALITY.
  - THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS. MONITOR DUST LEVELS DURING SITE PREPARATION, EXCAVATION, AND CONSTRUCTION ACTIVITIES, AND WHEN DUST LEVELS BECOME VISUALLY APPARENT SPRAY WATER TO MINIMIZE THE RELEASE OF DUST FROM GRAVEL, PAVED AREAS AND EXPOSED SOILS. USE CHEMICAL DUST SUPPRESSANTS ONLY WHERE NECESSARY ON PROBLEM AREAS.

- ### BENCHMARK NOTES:
- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CDVD88 GEODETIC DATUM.
  - IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
  - BENCHMARKS WERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK 4 AND PART OF BLOCK 1, REGISTERED IN RM 4M 442 AND PART OF LOTS 8 AND 9 CONFESSION 4, GEOGRAPHIC TOWNSHIP OF MARCH, CITY OF OTTAWA, SURVEYED BY ANNIS, O'SULLIVAN AND VOLKEBERG LTD., SIGNED AND DATED FEBRUARY 20, 2022.

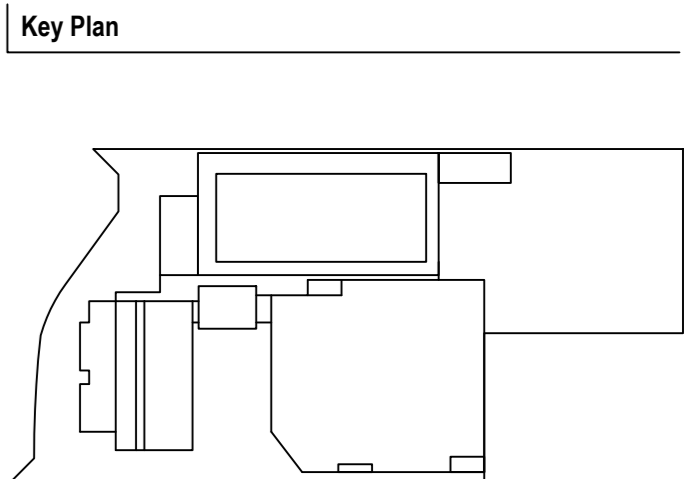
- ### LEGGET DRIVE DRIVE REINSTATEMENT:
- RESTORE ALL DISTURBED D.O.W. AREAS TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF MUNICIPAL AUTHORITIES. ASPHALT TO MEET PG 56-34 TRAFFIC LEVEL B STANDARDS FOR MINOR COLLECTOR ROADS AS PER CITY SPECIFICATION F-3106.
  - REINSTATE ALL DISTURBED ROADWAY AREAS AND SAW CUT & KEY GRIND ASPHALT AT ALL ROAD CUTS / ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARD R10.
  - REINSTATE LINE PAINTING AS REQUIRED TO THE SATISFACTION OF MUNICIPAL AUTHORITIES.

### Erosion and Sediment Control Responsibilities:

ESC Measure	Symbol	Description	During Construction	After Construction (Prior to Final Acceptance)	After Final Acceptance
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Filter Fabric	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Mud Mat	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Temporary Seeding	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Straw Bed	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Straw Roll	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Stabilized Soil	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor
Silt Fence	[Symbol]	CPSD 216 110	Developer/Contractor	Consultant	Developer/Contractor



Date	Description
SEP 12/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
NOV 15/24	REVISED PER CITY COMMENTS



NOT FOR CONSTRUCTION

**Project Name:** Nokia Ottawa Campus

**Project Number:** 027.7946.000

**Description:** GRADING AND EROSION AND SEDIMENT CONTROL PLAN

**Scale:** 1 : 400

**C200**

City Project no: C2023-0229

© 2021 Gensler

LEGEND

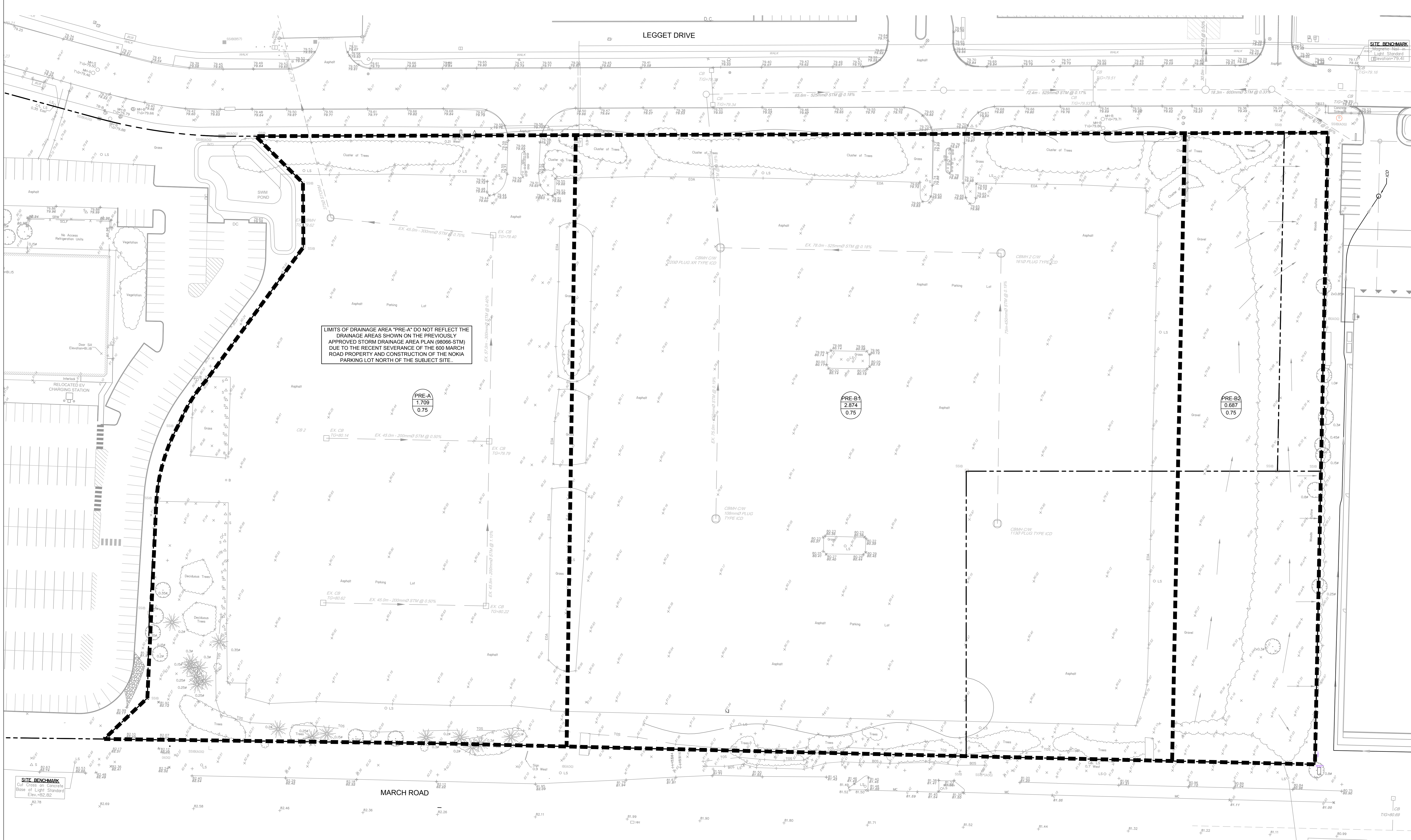
- DRAINAGE AREA LIMITS
PRE-DEVELOPMENT AREA ID
PRE-DEVELOPMENT DRAINAGE AREA (HA)
1.5 YEAR WEIGHTED RUNOFF COEFFICIENT
EXISTING CONCRETE CURB
EXISTING VALVE & VALVE BOX
EXISTING SERVICE POST
EXISTING HYDRANT
EXISTING CATCHBASIN
EXISTING CATCHBASIN IN
EXISTING UTILITY POLE
EXISTING OVERLAND FLOW

GENERAL NOTES:

- 1. COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
2. DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION.
3. OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
4. BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$5,000,000.00.
5. COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DISINFECTION AND ALL RELEVANT REFERENCES TO OPS, OPSD & HWMA GUIDELINES - ALL CURRENT VERSIONS AND AS AMENDED.
6. RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
7. REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
8. ALL ELEVATIONS ARE GEODETIC.
9. REFER TO GEOTECHNICAL REPORT No. P10286873-RPT-1, DATED MARCH 6, 2024 AND RELIANCE LETTER (DATED SEPTEMBER 5, 2024), PREPARED BY GHJ, FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS, AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
11. REFER TO THE DEVELOPMENT SERVICES STUDY AND STORMWATER MANAGEMENT REPORT (R-2023-082) PREPARED BY NOVATECH.
12. PROVIDE LINE PARKING PAINTING.

BENCHMARK NOTES:

- 1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
3. BENCHMARKS WERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK 6 AND PART OF BLOCK 1 REGISTERED PLAN 8M-62 AND PART OF LOTS 1 AND 2 CONVEYED ON A GEOGRAPHIC TOWNSHIP OF MARCH, CITY OF OTTAWA, SURVEYED BY ARNOLD O'SULLIVAN AND VOLEBEK LTD, SIGNED AND DATED FEBRUARY 20, 2022.



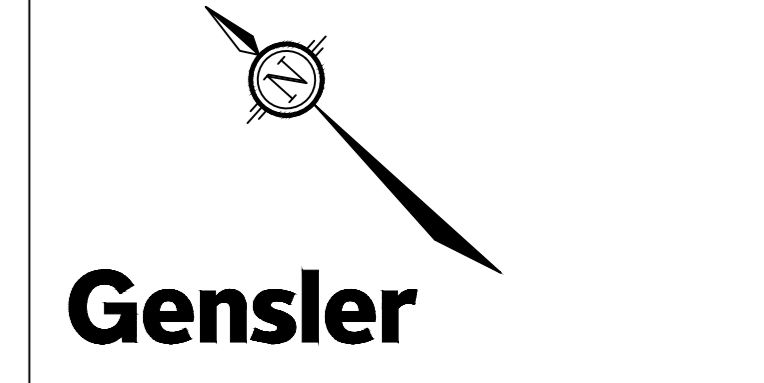
LIMITS OF DRAINAGE AREA 'PRE-A' DO NOT REFLECT THE DRAINAGE AREAS SHOWN ON THE PREVIOUSLY APPROVED STORM DRAINAGE AREA PLAN (88066-STM) DUE TO THE RECENT SEVERANCE OF THE 600 MARCH ROAD PROPERTY AND CONSTRUCTION OF THE NOKIA PARKING LOT NORTH OF THE SUBJECT SITE.

PRE-A 1.709 0.75

PRE-B1 2.874 0.75

PRE-B2 0.687 0.75

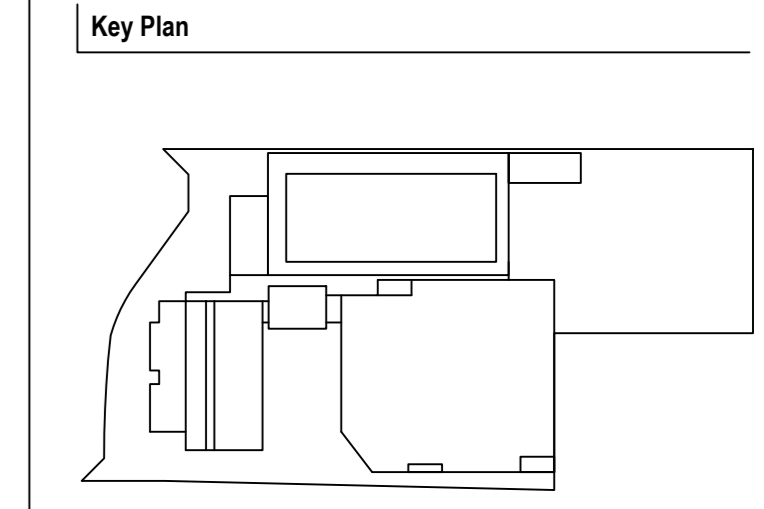
NOKIA Ottawa Campus
570 March Rd, Kanata Ottawa ON K2K 2T6



5005 Greenville Ave Dallas TX 75206
Tel 214.273.1500
Survevor Arnie O'Sullivan Volobek Ltd
Planning Consultant O.Waters@novatech-eng.com
Civil Engineering Novatech F.Pourdeh@novatech-eng.com
Architectural Site Planning Novatech F.Pourdeh@novatech-eng.com
Civil Engineering Gensler Barry.Sha@gensler.com
Mechanical Engineering Smith and Anderson Andre.dou@smithandanderson.com
Mechanical Engineering Study Smith and Anderson Elaine.guerra@smithandanderson.com
Geotechnical Engineering GHJ Karl.roberts@ghj.com
Landscape Planning GHJ Gordon@ghj.ca
Structural Engineering A&S Jaraman@jar.ca
Noise Report Graham West Joshua.foster@grahamwest.com
Transportation Planners Starlec Arango.ronon@starlec.com

Table with 2 columns: Date, Description. Row 1: NOV 15/24 ISSUED FOR SITE PLAN CONTROL APPROVAL.

NOVATECH Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Campbell Drive
Ottawa, Ontario, Canada K2M 1R6
Telephone (613) 254-9643
Facsimile (613) 254-5867
Website www.novatech-eng.com



Seal / Signature

NOT FOR CONSTRUCTION

Project Name Nokia Ottawa Campus
Project Number 027.7946.000
Description PRE-DEVELOPMENT STORM DRAINAGE PLAN

Scale 1: 400

C300

- ### LEGEND
- PROPOSED BARRIER CURB
  - DC PROPOSED DEPRESSED CURB
  - CC PROPOSED CURB CUT
  - DRAINAGE AREA LIMITS
  - APPROXIMATE PONDING LIMITS
  - A.2 0.129 0.82 POST-DEVELOPMENT AREA ID
  - POST-DEVELOPMENT DRAINAGE AREA (HA)
  - 1.5 YEAR WEIGHTED RUNOFF COEFFICIENT
  - STMBH PROPOSED STORM MANHOLE
  - CBMH PROPOSED CATCHBASIN MANHOLE
  - CB PROPOSED CATCHBASIN
  - RO CONTROLLED FLOW ROOF DRAIN
  - LD 1 PROPOSED LANDSCAPE DRAIN
  - ICD PROPOSED INLET CONTROL DEVICE
  - EMERGENCY OVERLAND FLOW ROUTE
  - PROPOSED TRENCH DRAIN
  - MAXIMUM 3:1 SLOPE
  - FINISHED FLOOR ELEVATION
  - UNDERSIDE OF FOOTING ELEVATION
  - EXISTING STORM MAIN & SEWER
  - EXISTING CATCHBASIN
  - EXISTING CONCRETE CURB
  - EXISTING VALVE & VALVE BOX
  - EXISTING SERVICE POAT
  - EXISTING HYDRANT
  - EXISTING CATCHBASIN
  - EXISTING CATCHBASIN
  - EXISTING UTILITY POLE
  - EXISTING 150mm

### GENERAL NOTES:

- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS
- DETERMINE THE EXACT LOCATION, SIZE, MATERIAL AND ELEVATION OF ALL EXISTING UTILITIES PRIOR TO COMMENCING CONSTRUCTION. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
- OBTAIN ALL NECESSARY PERMITS AND APPROVALS FROM THE CITY OF OTTAWA BEFORE COMMENCING CONSTRUCTION.
- BEFORE COMMENCING CONSTRUCTION OBTAIN AND PROVIDE PROOF OF COMPREHENSIVE, ALL RISK AND OPERATIONAL LIABILITY INSURANCE FOR \$1,000,000.00. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS CO-INSURED.
- COMPLETE ALL WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION, DIMENSION AND ALL RELEVANT REFERENCES TO OPSIS, OPSD, AWWA GUIDELINES - ALL CURRENT VERSIONS AND 'AS AMENDED'.
- RESTORE ALL DISTURBED AREAS ON-SITE AND OFF-SITE, INCLUDING TRENCHES AND SURFACES ON PUBLIC ROAD ALLOWANCES TO EXISTING CONDITIONS OR BETTER TO THE SATISFACTION OF THE CITY OF OTTAWA AND ENGINEER.
- REMOVE FROM SITE ALL EXCESS EXCAVATED MATERIAL, ORGANIC MATERIAL AND DEBRIS UNLESS OTHERWISE INSTRUCTED BY ENGINEER. EXCAVATE AND REMOVE FROM SITE ANY CONTAMINATED MATERIAL. ALL CONTAMINATED MATERIAL SHALL BE DISPOSED OF AT A LICENSED LANDFILL FACILITY.
- ALL ELEVATIONS ARE GEODETIC.
- REFER TO GEOTECHNICAL REPORT (NO. PG 2006873-RPT-1, DATED MARCH 6, 2024) AND RELIANCE LETTER (DATED SEPTEMBER 5, 2024) PREPARED BY GNS FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
- REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARDSURFACE AREAS AND DIMENSIONS.
- REFER TO THE DEVELOPMENT SERVING STUDY AND STORMWATER MANAGEMENT REPORT (R-2023-062) PREPARED BY NOVATECH.
- SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (S-101).
- PROVIDE LINE PARKING PAINTING.

### BENCHMARK NOTES:

- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
- IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
- BENCHMARKS WERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK AND PART OF BLOCK 1 REGISTERED PLAN 404-02 AND PART OF LOTS 8 AND 9 AND CONCRESSION 4, GEOGRAPHIC TOWNSHIP OF MARCH, CITY OF OTTAWA, SURVEYED BY ANNIS, O'SULLIVAN AND VOLBECK LTD.

#### INLET CONTROL DEVICE DATA TABLE: AREA A-1

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 102	300mm P/C	27.5	0.28	80.17	27.9	64.9 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 102	300mm P/C	27.5	0.28	80.17	27.9	64.9 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 102	300mm P/C	27.5	0.28	80.17	27.9	64.9 m³

#### INLET CONTROL DEVICE DATA TABLE: AREA A-2

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 203	300mm P/C	18.2	0.39	78.96	15.7	123.8 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 203	300mm P/C	18.2	0.39	78.96	15.7	123.8 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 203	300mm P/C	18.2	0.39	78.96	15.7	123.8 m³

#### INLET CONTROL DEVICE DATA TABLE: AREA B-1

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 110	375mm P/C	27.5	0.28	78.26	15.7	400 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 110	375mm P/C	27.5	0.28	78.26	15.7	400 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 110	375mm P/C	27.5	0.28	78.26	15.7	400 m³

#### INLET CONTROL DEVICE DATA TABLE: AREA B-2

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 116	375mm P/C	27.5	0.28	78.26	15.7	400 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 116	375mm P/C	27.5	0.28	78.26	15.7	400 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 116	375mm P/C	27.5	0.28	78.26	15.7	400 m³

#### INLET CONTROL DEVICE DATA TABLE: AREA C-1

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 110	375mm P/C	27.5	0.28	78.26	15.7	400 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 110	375mm P/C	27.5	0.28	78.26	15.7	400 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 110	375mm P/C	27.5	0.28	78.26	15.7	400 m³

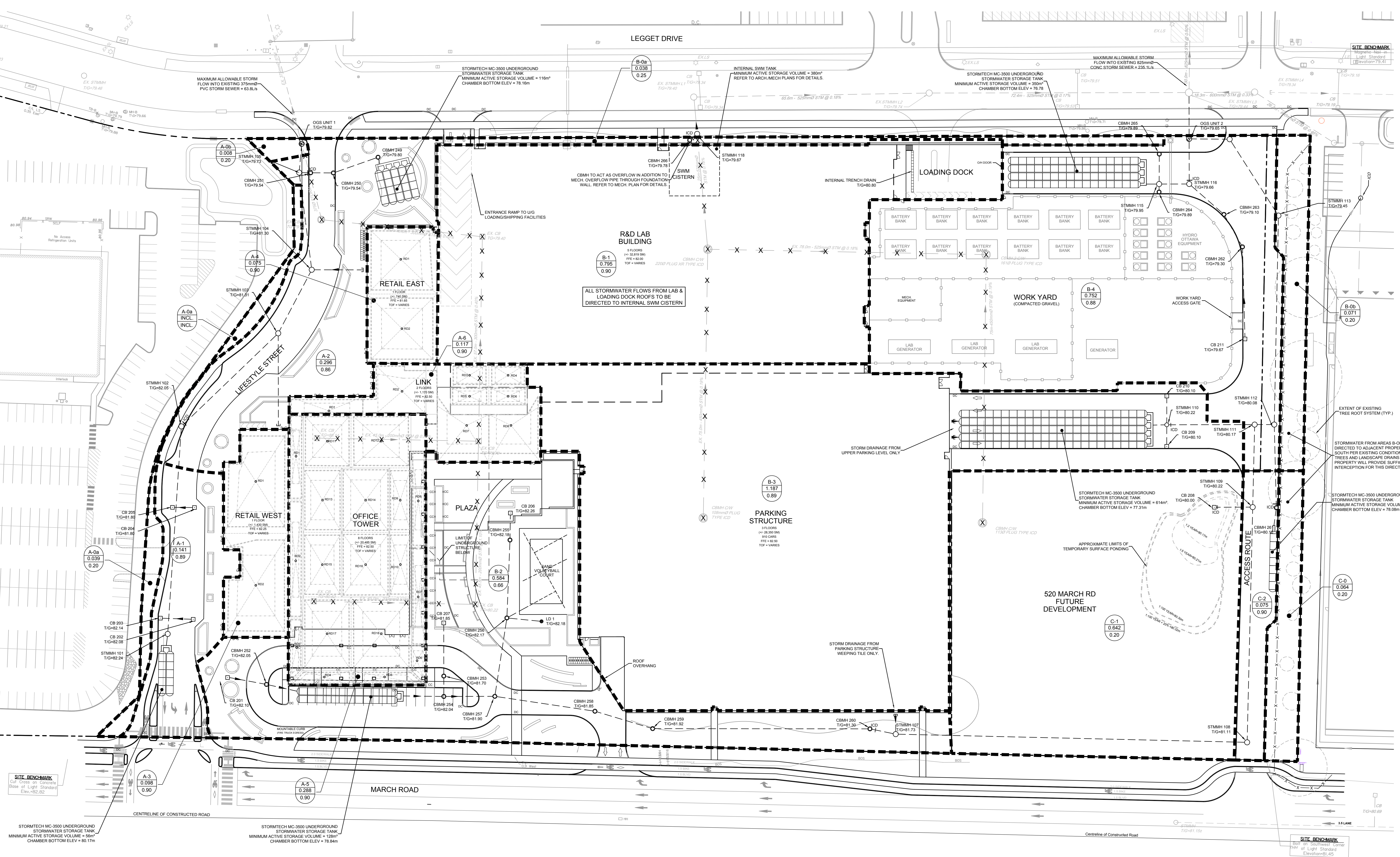
#### INLET CONTROL DEVICE DATA TABLE: AREA C-2

DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 116	375mm P/C	27.5	0.28	78.26	15.7	41.6 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 116	375mm P/C	27.5	0.28	78.26	15.7	41.6 m³
T3 YR	PEX TEMPEST HP TYPE 8	STMBH 116	375mm P/C	27.5	0.28	78.26	15.7	41.6 m³

#### ROOF DRAIN TABLE

AREA ID	BUILDING	ROOF DRAIN (W/ITS MODEL)	ROOF OPENING SETTING	2 YEAR PONDING DEPTH		5 YEAR PONDING DEPTH		100 YEAR PONDING DEPTH	
				RELEASE RATE	RELIABLE RATE	RELEASE RATE	RELIABLE RATE	RELEASE RATE	RELIABLE RATE
A-3	RETAIL WEST	RD 1 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
		RD 2 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
		RD 3 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
		RD 4 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
		RD 5 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
		RD 6 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
		RD 7 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm	1.89 L/s	15 cm
A-5	OFFICE TOWER	RD 8 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 9 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 10 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 11 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 12 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 13 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 14 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 15 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 16 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 17 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 18 (RD-100-A-ADJ)	1/2 OPEN	0.79 L/s	8 cm	0.95 L/s	10 cm	1.26 L/s	15 cm
		RD 19 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 20 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 21 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
A-6	LINK	RD 2 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm	0.32 L/s	15 cm
		RD 7 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm
		RD 8 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm	0.95 L/s	15 cm

\*REFER TO THE DEVELOPMENT SERVING STUDY AND STORMWATER MANAGEMENT REPORT (R-2023-062) PREPARED BY NOVATECH FOR DRAINAGE AREA IDENTIFIERS AND STORMWATER MANAGEMENT DETAILS.  
 \*\*ALL CONTROLLED FLOW ROOF DRAINS FOR THE PROPOSED BUILDING TO BE WATTS ADJUSTABLE ACCUTROL ROOF DRAINS.



# NOKIA Ottawa Campus

570 March Rd, Kanata/Ottawa ON K2K 2T6

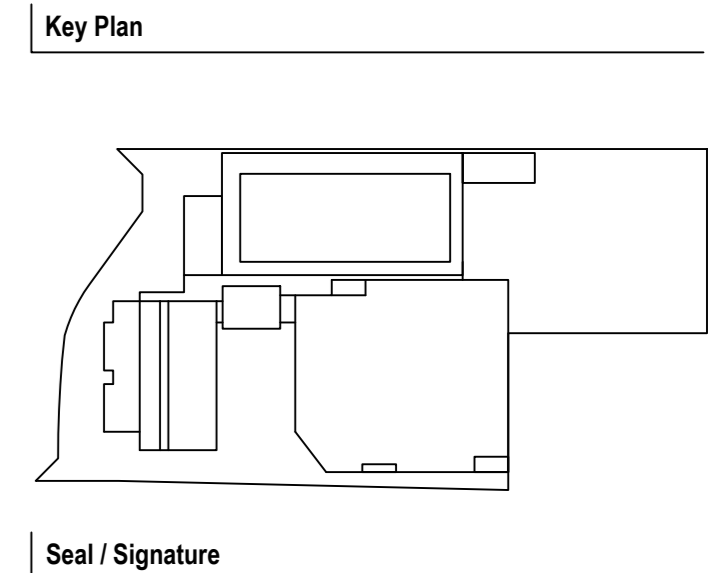
**Genster**  
 5505 Greenville Ave Dallas TX 75206  
 Tel 214.273.1500

5005 Greenville Ave  
 Dallas TX 75206  
 Tel 214.273.1500

Project Manager: Victoria Lutz  
 Senior Consultant: Genster  
 Civil Engineering: F. Ruppel@genster.com  
 Architectural Site Planning: Barry Bary@genster.com  
 Electrical Engineering: Andre doucet@genster.com  
 Mechanical Engineering: Barry Bary@genster.com  
 Structural Engineering: Elaine guenette@genster.com  
 Geotechnical Engineering: Genster  
 Landscaping: Genster  
 Structural Engineering: Genster  
 Noise Report: Jucha.hoson@genster.com  
 Construction Management: Genster  
 Transportation Planning: Genster  
 Stormwater Management: Angelo.veron@genster.com

△ Date	Description
SEP 12/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
NOV 15/24	REVISED PER CITY COMMENTS

**NOVATECH**  
 Engineers, Planners & Landscape Architects  
 Suite 200, 140 Michael Cowpland Drive  
 Ottawa, Ontario, Canada K2M 1R6  
 Telephone: (613) 254-9642  
 Facsimile: (613) 254-5667  
 Website: www.novatech-eng.com



**NOT FOR CONSTRUCTION**

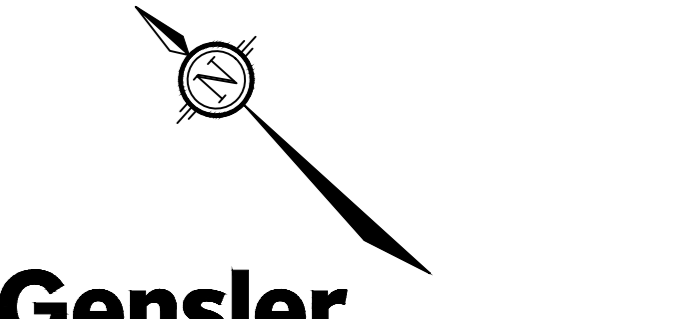
Project Name  
**Nokia Ottawa Campus**

Project Number  
**027.7946.000**

Description  
**POST-DEVELOPMENT STORMWATER MANAGEMENT PLAN**

Scale  
1:400

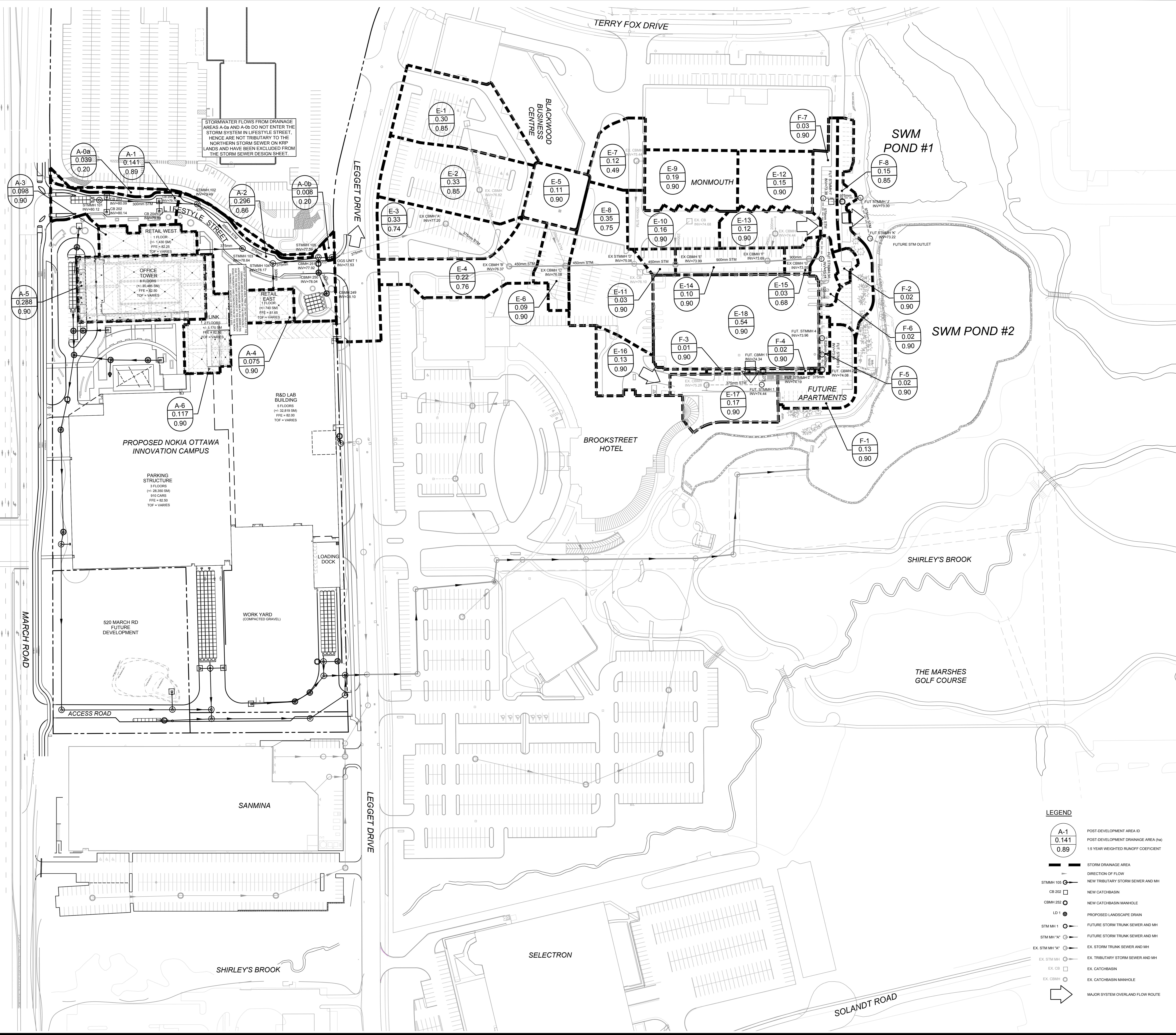
**C301**



**Gensler**

5005 Greenville Ave Dallas TX 75206 Tel: 214.273.1500  
 Supervisor: James Foster  
 Anna O'Sullivan, Victoria Liu  
 Planning Consultant: Victoria Liu  
 Civil Engineering: Victoria Liu  
 Architectural Site Planning: Victoria Liu  
 Mechanical Engineering: Victoria Liu  
 Structural Engineering: Victoria Liu  
 Landscape Planning: Victoria Liu  
 Geotechnical Engineering: Victoria Liu  
 Electrical Engineering: Victoria Liu  
 Noise Report: Victoria Liu  
 Construction Management: Victoria Liu  
 Transportation Planning: Victoria Liu  
 Stormwater Management: Victoria Liu

Date	Description
NOV 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL



STORMWATER FLOWS FROM DRAINAGE AREAS A-0a AND A-0b DO NOT ENTER THE STORM SYSTEM IN LIFESTYLE STREET. HENCE ARE NOT TRIBUTARY TO THE NORTHERN STORM SEWER ON KRP LANDS AND HAVE BEEN EXCLUDED FROM THE STORM SEWER DESIGN SHEET.

A-3  
0.098  
0.90

A-0a  
0.039  
0.20

A-1  
0.141  
0.89

A-2  
0.296  
0.86

A-0b  
0.008  
0.20

A-5  
0.288  
0.90

A-4  
0.075  
0.90

A-6  
0.117  
0.90

E-1  
0.30  
0.85

E-2  
0.33  
0.85

E-3  
0.33  
0.74

E-4  
0.22  
0.76

E-5  
0.11  
0.90

E-6  
0.09  
0.90

E-7  
0.12  
0.49

E-8  
0.35  
0.75

E-9  
0.19  
0.90

E-10  
0.16  
0.90

E-11  
0.03  
0.90

E-12  
0.15  
0.90

E-13  
0.12  
0.90

E-14  
0.10  
0.90

E-15  
0.03  
0.68

E-16  
0.13  
0.90

E-17  
0.17  
0.90

F-7  
0.03  
0.90

F-8  
0.15  
0.85

F-2  
0.02  
0.90

F-6  
0.02  
0.90

F-5  
0.02  
0.90

F-3  
0.01  
0.90

F-4  
0.02  
0.90

F-1  
0.13  
0.90

**PROPOSED NOKIA OTTAWA INNOVATION CAMPUS**

**PARKING STRUCTURE**  
3 FLOORS  
(+/- 28,350 SM)  
910 CARS  
FFE = 82.00  
TOP = VARIES

**520 MARCH RD FUTURE DEVELOPMENT**

**WORK YARD**  
(COMPACTED GRAVEL)

**LOADING DOCK**

**SANMINA**

**SELECTRON**

**BROOKSTREET HOTEL**

**BLACKWOOD BUSINESS CENTRE**

**MONMOUTH**

**SWM POND #1**

**SWM POND #2**

**FUTURE APARTMENTS**

**SHIRLEY'S BROOK**

**THE MARSHES GOLF COURSE**

**SOLANDT ROAD**

**LEGGETT DRIVE**

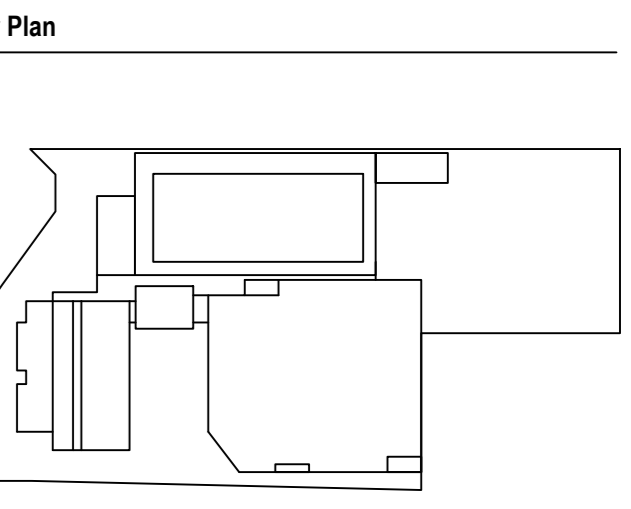
**MARCH ROAD**

**ACCESS ROAD**

**LEGEND**

- A-1  
0.141  
0.89
- POST-DEVELOPMENT AREA ID
- POST-DEVELOPMENT DRAINAGE AREA (HA)
- 15 YEAR WEIGHTED RUNOFF COEFFICIENT
- STMM 100
- NEW TRIBUTARY STORM SEWER AND MH
- CB 202
- NEW CATCHBASIN
- CBM 250
- NEW CATCHBASIN MANHOLE
- LD 1
- PROPOSED LANDSCAPE DRAIN
- STM MH 1
- FUTURE STORM TRUNK SEWER AND MH
- STM MH 'X'
- FUTURE STORM TRUNK SEWER AND MH
- EX STM MH 'X'
- EX STORM TRUNK SEWER AND MH
- EX STM MH
- EX STORM TRUNK SEWER AND MH
- EX CB
- EX CATCHBASIN
- EX CBM
- EX CATCHBASIN MANHOLE
- MAJOR SYSTEM OVERLAND FLOW ROUTE

**NOVATECH**  
Engineers, Planners & Landscape Architects  
Suite 200, 240 Michael Compton Drive  
Ottawa, Ontario, Canada K2M 1R6  
Telephone: (613) 254-5827  
Facsimile: (613) 254-5827  
Website: www.novatech-eng.com



Seal / Signature

**NOT FOR CONSTRUCTION**

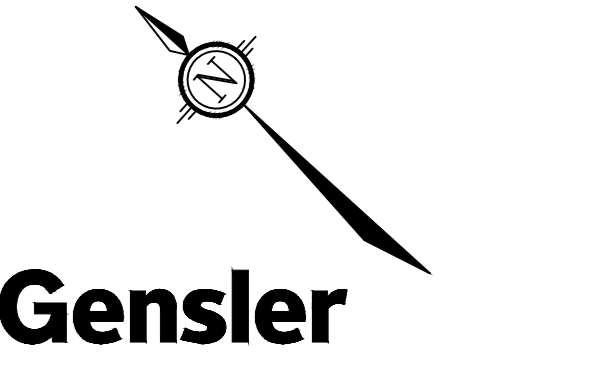
**Project Name**  
Nokia Ottawa Campus

**Project Number**  
027.7946.000

**Description**  
STORM DRAINAGE AREA PLAN - NORTH OUTLET

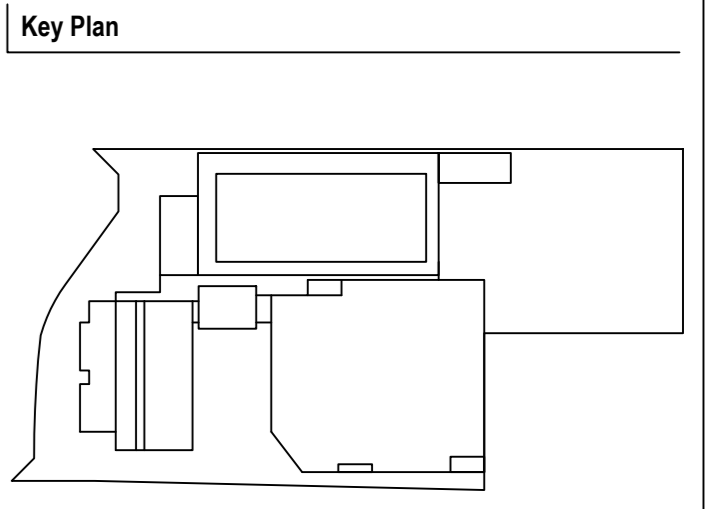
**Scale**  
1 : 750

**C500**



5005 Greenville Ave Dallas TX 75206  
Tel 214.273.1500  
Surveyor: Anita O'Sullivan  
Planning Consultant: O. Winters  
Civil Engineering: J. Havel  
Architectural Site Planning: G. Winters  
Mechanical Engineering: B. Smith  
Mechanical Engineering Study: A. Smith  
Geotechnical Engineering: E. Smith  
Landscape Planning: C. Smith  
Structural Engineering: J. Smith  
Noise Report: J. Smith  
Construction: J. Smith  
Transportation Planning: J. Smith

Date	Description
NOV 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL



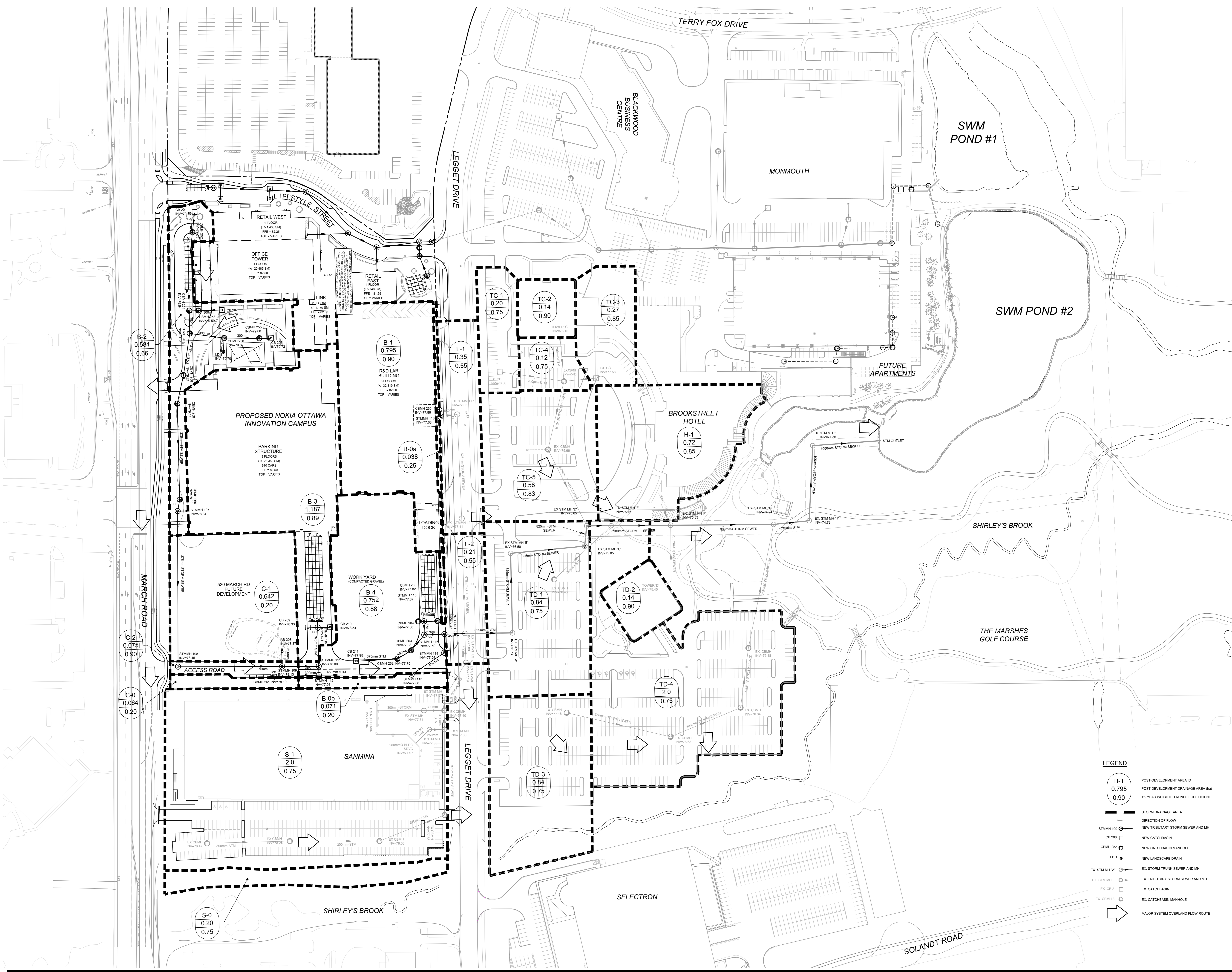
Seal / Signature

NOT FOR CONSTRUCTION

Project Name: Nokia Ottawa Campus  
Project Number: 027.7946.000  
Description: STORM DRAINAGE AREA PLAN - SOUTH OUTLET

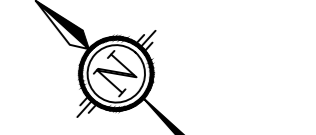
Scale: 1 : 750

C501  
© 2021 Gensler



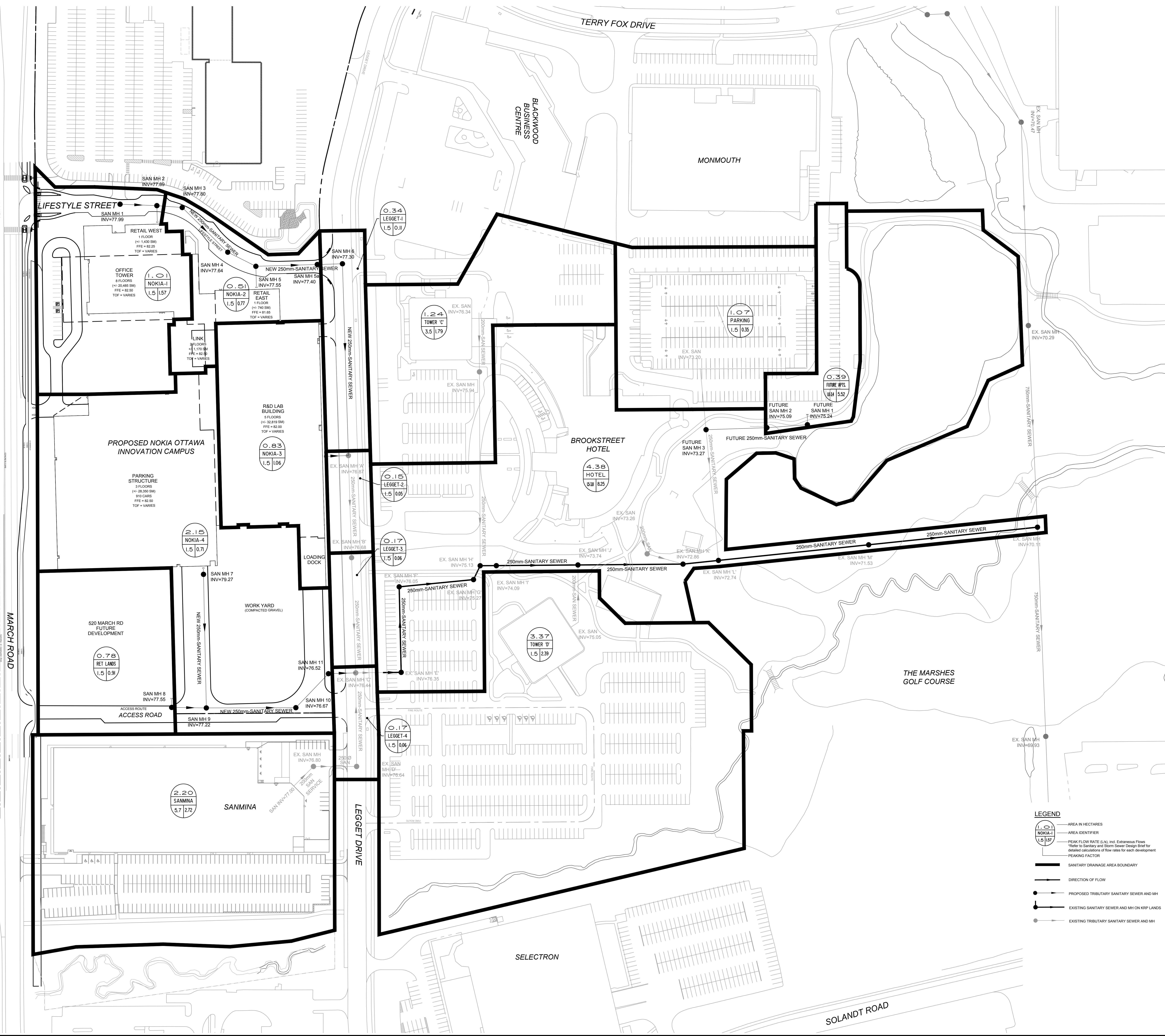
**LEGEND**

- B-1**  
0.795  
0.90  
POST-DEVELOPMENT AREA ID  
POST-DEVELOPMENT DRAINAGE AREA (m²)  
15 YEAR WEIGHTED RUNOFF COEFFICIENT
- STORM DRAINAGE AREA**
- DIRECTION OF FLOW**
- STMMH 100**  
NEW TRIBUTARY STORM SEWER AND MH
- CB 200**  
NEW CATCHBASIN
- CBMH 250**  
NEW CATCHBASIN MANHOLE
- LD 1**  
NEW LANDSCAPE DRAIN
- EX STM MH "A"**  
EX STORM TRUNK SEWER AND MH
- EX STM MH "E"**  
EX TRIBUTARY STORM SEWER AND MH
- EX CB 2**  
EX CATCHBASIN
- EX CBMH 3**  
EX CATCHBASIN MANHOLE
- MAJOR SYSTEM OVERLAND FLOW ROUTE**



Surveyor: Arnie O'Sullivan, Victoria Ltd.  
 Planning Consultant: Novatech  
 Civil Engineering: Novatech  
 Architectural Site Planning: Novatech  
 Geotechnical Engineering: Smith and Anderson  
 Mechanical Engineering: Smith and Anderson  
 Structural Engineering: Smith and Anderson  
 Landscape Planning: Gensler  
 Civil: Gensler  
 Noise Report: Gensler  
 Custom Work: Gensler  
 Transportation Planners: Gensler  
 Starline: Gensler

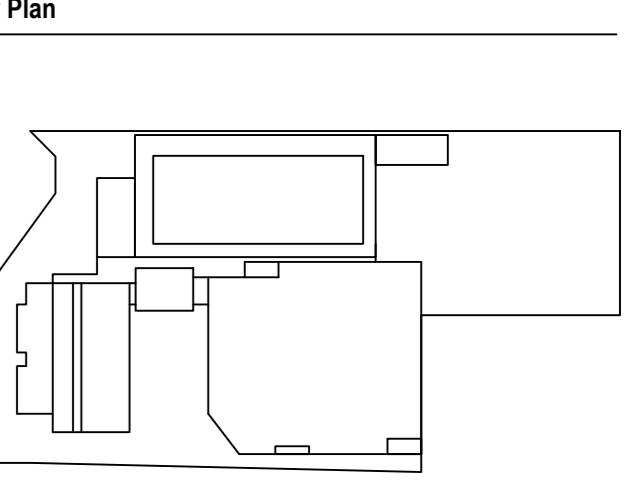
Date	Description
NOV 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL



**LEGEND**

- (0.34) AREA IN HECTARES
- (NOKIA-1) AREA IDENTIFIER
- (1.5 | 1.57) PEAK FLOW RATE (L/s) incl. Extraneous Flows  
\*Refer to Sanitary and Storm Sewer Design Brief for detailed calculations of flow rates for each development
- (1.5 | 1.57) PEAKING FACTOR
- SANITARY DRAINAGE AREA BOUNDARY
- DIRECTION OF FLOW
- PROPOSED TRIBUTARY SANITARY SEWER AND MH
- EXISTING SANITARY SEWER AND MH ON KRP LANDS
- EXISTING TRIBUTARY SANITARY SEWER AND MH

**NOVATECH**  
Engineers, Planners & Landscape Architects  
Suite 200, 240 Michael Complex Drive  
Ottawa, Ontario, Canada K2M 1R6  
Telephone: (613) 254-9643  
Facsimile: (613) 254-9687  
Website: www.novatech-eng.com



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**Project Name**  
Nokia Ottawa Campus

**Project Number**  
027.7946.000

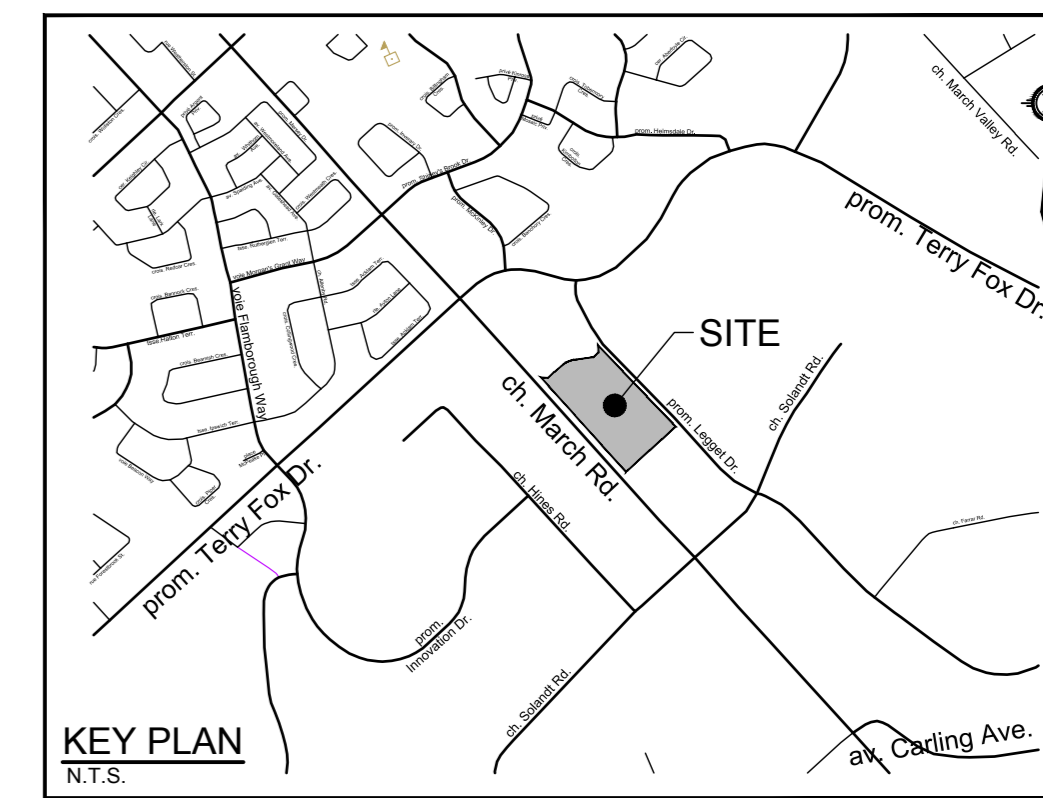
**Description**  
SANITARY DRAINAGE AREA PLAN

**Scale**  
1 : 750

**C400**

LEGEND	
SAN MH 1	PROPOSED SANITARY MANHOLE AND SEWER
CBMH 250	PROPOSED CATCHBASIN MANHOLE
STMH 100	PROPOSED STORM MANHOLE AND SEWER
CS 200	PROPOSED CATCHBASIN
LD 1	PROPOSED LANDSCAPE DRAIN
	THERMAL INSULATION FOR SHALLOW SEWERS
HYD	PROPOSED HYDRANT AND VALVE
V&V	PROPOSED VALVE BOX
VC	PROPOSED VALVE CHAMBER
RED	PROPOSED REDUCER
	PROPOSED BARRIER CURB (PER SC1-1)
DC	PROPOSED DEPRESSED CURB (PER SC1-1)
CC	PROPOSED CURB CUT
ICD	PROPOSED INLET CONTROL DEVICE
	PROPOSED BUILDING ENTRANCE
	EXISTING CONCRETE CURB
	EXISTING SANITARY MANHOLE
	EXISTING STORM MANHOLE
	EXISTING CATCHBASIN
	EXISTING HYDRANT & VALVE
	EXISTING TREES / VEGETATION
	EXISTING UTILITY POLE / CM / GUY / MANS
	EXISTING FENCE
	EXISTING LIGHT STANDARD
X	REMOVALS
	FULL ASPHALT OVERLAY PER CITY STANDARD R10

- BENCHMARK NOTES:**
- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM.
  - IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREES WITH THE INFORMATION SHOWN ON THIS DRAWING.
  - BENCHMARKS WERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK 6 AND PART OF BLOCK 1 REGISTERED PLAN 4842 AND PART OF LOTS 8 AND 9 CONCESSION 4 GEOGRAPHIC TOWNSHIP OF MARCH, CITY OF OTTAWA, SURVEYED BY ANNS, O'SULLIVAN AND VOLEBERK LTD, SIGNED AND DATED FEBRUARY 20, 2022.



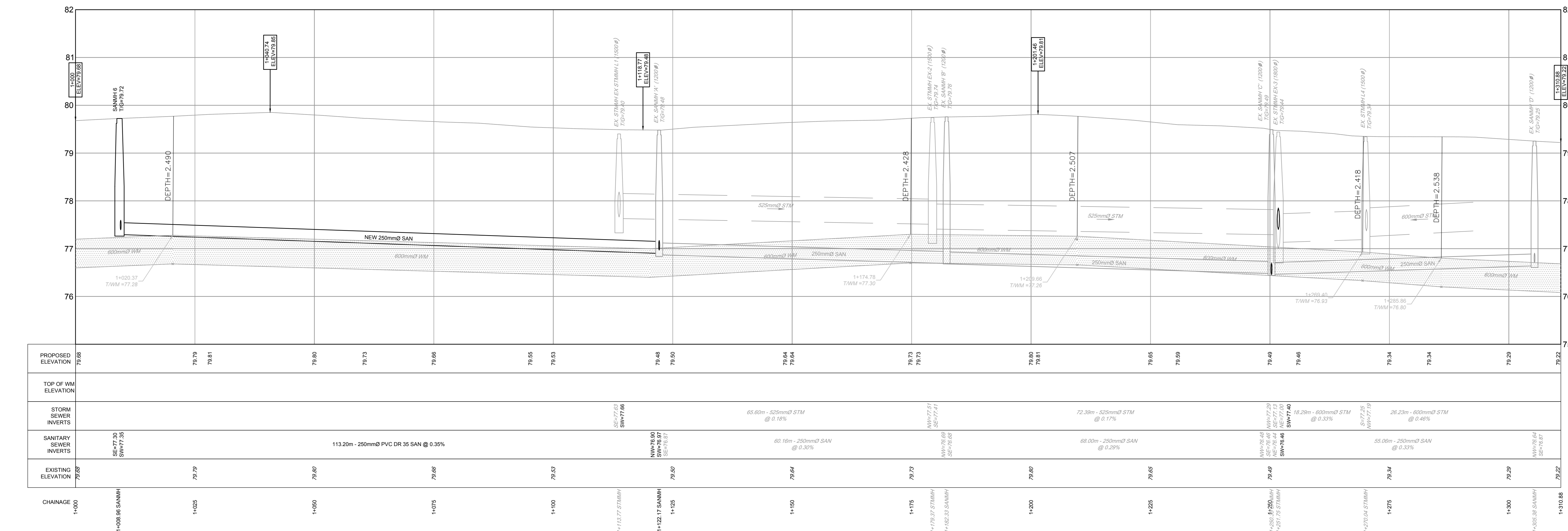
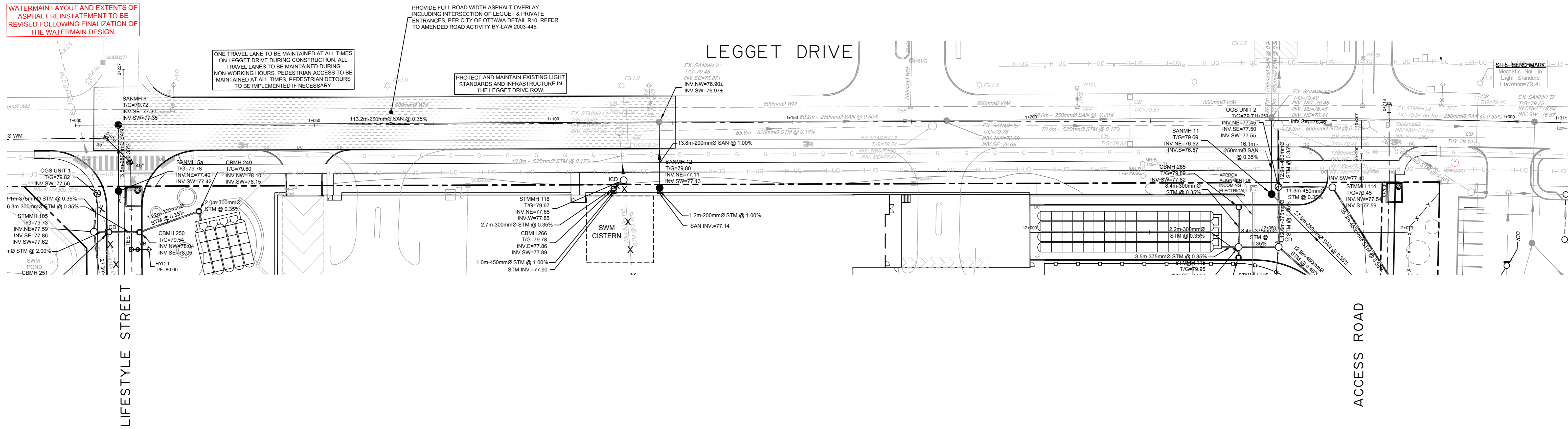
**NOKIA Ottawa Campus**  
 570 March Rd, Kanata Ottawa ON K2K 2T6

**GENSLER**  
 5005 Greenville Ave, Dallas TX 75206  
 Tel: 214.273.1500

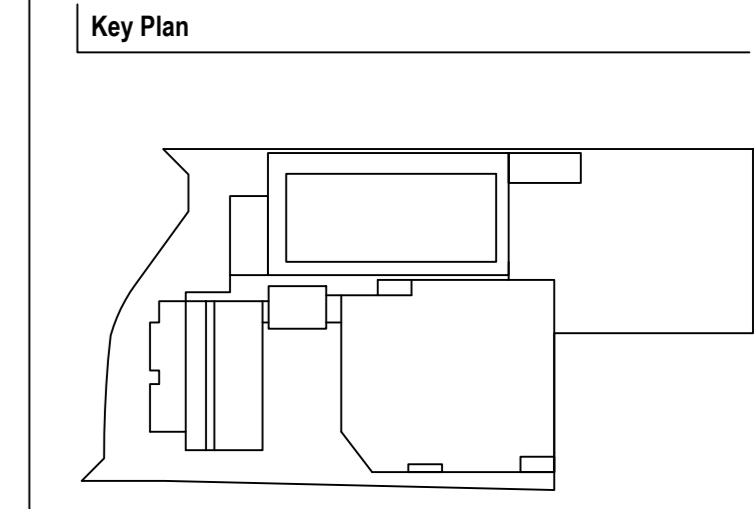
Surveyor: Anns, O'Sullivan, Voleberk Ltd  
 Planning Consultant: Novatech  
 Civil Engineering: Novatech  
 Architectural Site Planning: Novatech  
 Geotechnical Engineering: Novatech  
 Mechanical Engineering: Novatech  
 Structural Engineering: Novatech  
 Landscape Architecture: Novatech  
 Electrical Engineering: Novatech  
 Environmental Engineering: Novatech  
 Transportation Planning: Novatech

Date	Description
NOV 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL

WATERMAIN LAYOUT AND EXTENTS OF ASPHALT REINSTATEMENT TO BE REVISED FOLLOWING FINALIZATION OF THE WATERMAIN DESIGN.



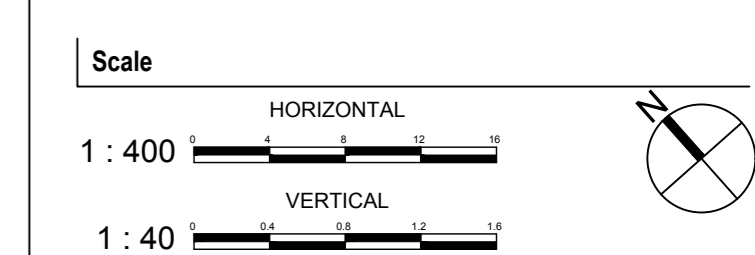
**NOVATECH**  
 Engineers, Planners & Landscape Architects  
 Suite 200, 140 Michael Cowpland Drive  
 Ottawa, Ontario, Canada K2M 1P6  
 Telephone: (613) 254-9643  
 Facsimile: (613) 254-5867  
 Website: www.novatech-eng.com



Seal / Signature

**NOT FOR CONSTRUCTION**

Project Name: Nokia Ottawa Campus  
 Project Number: 027.7946.000  
 Description: PLAN AND PROFILE LEGGET DRIVE STATION 1+000 TO 1+310



**C601**  
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REFER TO DRAWING C-100 FOR ADDITIONAL NOTES

City Project no: PC2023-0229