

### LEGEND

	PROPOSED SANITARY MANHOLE AND SEWER
	PROPOSED CATCHBASIN MANHOLE
	PROPOSED STORM MANHOLE AND SEWER
	PROPOSED CATCHBASIN
	PROPOSED LANDSCAPE DRAIN
	THERMAL INSULATION FOR SHALLOW SEWERS
	PROPOSED WATERMAIN/WATER SERVICE
	PROPOSED HYDRANT AND VALVE
	PROPOSED WATER METER AND REMOTE METER
	PROPOSED VALVE BOX
	PROPOSED VALVE CHAMBER
	PROPOSED REDUCER
	PROPOSED SIMMENSE CONNECTION
	PROPOSED BARRIER CURB (PER SCL 1)
	PROPOSED DEPRESSED CURB (PER SCL 1)
	PROPOSED CURB CUT
	PROPOSED INLET CONTROL DEVICE
	PROPOSED FINISHED FLOOR ELEVATION
	PROPOSED UNDERSIDE OF FOOTING ELEVATION
	PROPOSED TRENCH DRAIN
	PROPOSED BUILDING ENTRANCE

- ### 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 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. PG1204021-RPT-1, DATED MARCH 06, 2024 PREPARED BY GHD, FOR SUBSURFACE CONDITIONS, CONSTRUCTION REQUIREMENTS, AND 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 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 LINEPARKING PAINTING.

- ### WATERMAIN NOTES:
- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS. ALL CURRENT VERSIONS AND AS AMENDED.
  - ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MANHOLE AND CLOSURE OF THE WATER SYSTEM SHALL BE PERFORMED BY THE CONTRACTOR IN THE PRESENCE OF THE CITY OF OTTAWA FORCES.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICES, VALVE LOCATIONS, SHOWN AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

- ### 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: CATCHBASIN (600x600mm)
    - ITEM: STORM/SANITARY MANHOLE (1200mm) CB, FRAME & COVER
    - ITEM: SANITARY MH FRAME & COVER
    - ITEM: STORM/CB MANHOLE FRAME AND COVER
    - ITEM: WATER TIGHT MH FRAME AND COVER
    - ITEM: LANDSCAPE DRAIN (LEAD, COVER & PIPE)
    - ITEM: SEWER TRENCH INSULATION FOR SHALLOW SEWERS
    - ITEM: STORM SEWER SANITARY SEWER CATCHBASIN LEAD
  - ALL STORM AND SANITARY SERVICE LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2.
  - INSULATE ALL PIPES (SANITARY) THAT HAVE LESS THAN 1.5m COVER WITH HI-40 INSULATION PER CITY OF OTTAWA STANDARD DETAIL S35. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
  - SEWER SERVICES TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
  - ALL SEWERS AND WATERMANS LOCATED PARALLEL TO EACH OTHER ARE TO BE CONSTRUCTED IN SEPARATE TRENCHES MAINTAINING A CLEAR HORIZONTAL SEPARATION DISTANCE OF 2.5 METRES, AS PER MECP F-6.1 STANDARDS.
  - PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 95% 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 KOR-N SEAL, PSX POSITIVE SEAL AND DURASEAL) AND THE CONCRETE CRADLE FOR THE PIPE CAN BE ELIMINATED.
  - THE OWNER SHALL REQUIRE THAT THE SITE SERVICING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPS 41027.16, 410.07, 16.04 AND 407.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE SANITARY SEWER MAIN. THE FIELD TESTS SHALL BE PERFORMED IN THE PRESENCE OF A CERTIFIED PROFESSIONAL ENGINEER WHO SHALL SUBMIT A CERTIFIED COPY OF THE TEST RESULTS.
  - ALL STORM MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMP UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS.
  - ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE ICDS INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
  - ALL WEeping TIE CONNECTIONS TO BE MADE TO THE PROPOSED STORM SEWER SYSTEM DOWNSTREAM OF ANY INLET CONTROL DEVICES.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICES, VALVE LOCATIONS, SHOWN AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
  - CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL SERVICES, VALVE LOCATIONS, SHOWN AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

- ### BENCHMARK NOTES:
- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE COVD28 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 NERE PROVIDED ON THE TOPOGRAPHIC PLAN OF SURVEY OF BLOCK 1 AND PART OF BLOCK 1 REGISTERED PLAN 4M442 AND PART OF LOTS B AND C AND 9 CONGRESSIONAL TOWNSHIP OF MARON, CITY OF OTTAWA, SURVEYED BY ANNIS, OSULLIVAN AND VOLBECK LTD. SIGNED AND DATED FEBRUARY 20, 2022.

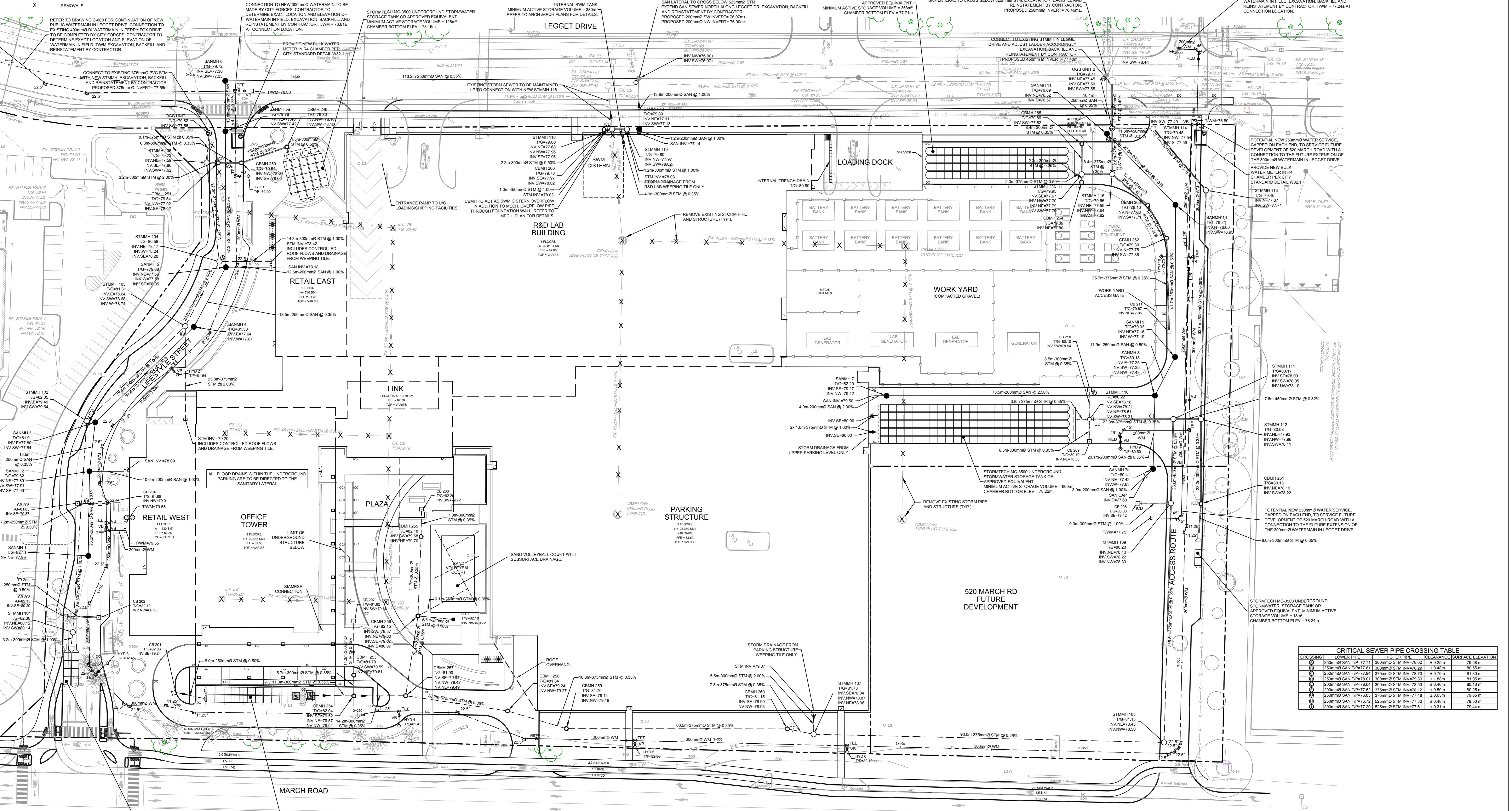
### PROPOSED WATERMAIN TABLE

Station	RIG ELEVATION	TOP OF WATERMAIN	DESCRIPTION
3+000.00	78.65	78.81	300mm Ø WM TEE CONNECTION TO NEW 300mm Ø WM
3+002.50	78.60	78.84	CROSS UNDER EX. 100mm GAS LINE
3+006.25	78.67	78.89	CROSS UNDER EX. ROGERS LINE
3+007.50	78.70	78.90	CROSS UNDER EX. HYDRO LINE
3+010.00	78.80	78.94	VALVE AT PROPERTY LINE
3+019.00	78.77	78.95	BULK WATER METER IN RA CHAMBER
3+023.25	78.73	77.11	150mm HYDRANT 1 TEE
3+026.65	79.00	77.40	CROSS UNDER NEW STORM SERVICE LATERAL. INV = 78.32
3+047.65	80.52	77.41	22.5° HORIZONTAL BEND
3+048.25	80.54	77.42	CROSS UNDER NEW SANITARY SERVICE LATERAL. INV = 78.07
3+052.55	80.78	77.48	11.25° VERTICAL BEND
3+057.05	80.89	78.52	11.25° VERTICAL BEND
3+057.60	81.28	78.32	22.5° HORIZONTAL BEND
3+078.60	81.35	78.32	CROSS UNDER NEW STORM SERVICE LATERAL. INV = 78.84
3+080.45	81.39	78.32	22.5° VERTICAL BEND
3+081.75	81.40	78.86	150mm HYDRANT 2 TEE
3+083.05	81.41	79.30*	22.5° VERTICAL BEND
3+104.10	81.81	79.46	22.5° HORIZONTAL BEND
3+110.40	81.95	79.46	22.5° HORIZONTAL BEND
3+117.40	81.90	79.46	CROSS OVER NEW SANITARY SERVICE LATERAL. INV = 78.03
3+120.70	81.93	79.46	22.5° HORIZONTAL BEND
3+126.20	81.90	79.46	22.5° HORIZONTAL BEND
3+131.75	82.02	79.49	200mm WATER SERVICE TEE
3+132.75	82.03	79.49	VALVE & VALVE BOX
3+133.75	82.04	79.49	200mm WATER SERVICE TEE
3+143.00	82.09	79.54	22.5° HORIZONTAL BEND
3+154.50	82.11	79.66	22.5° HORIZONTAL BEND
3+158.50	82.15	79.70	CROSS UNDER NEW CB 202 LEAD. INV = 80.24

Station	RIG ELEVATION	TOP OF WATERMAIN	DESCRIPTION
3+171.40	82.28	79.84	22.5° HORIZONTAL BEND
3+172.95	82.30	79.84	22.5° HORIZONTAL BEND
3+185.00	82.37	79.84	22.5° HORIZONTAL BEND
3+187.40	82.34	79.84	22.5° HORIZONTAL BEND
3+191.25	82.15	79.73	11.25° HORIZONTAL BEND
3+205.30	82.27	79.71	11.25° HORIZONTAL BEND
3+225.00	82.28	79.65	-
3+251.50	82.14	79.57	11.25° HORIZONTAL BEND
3+255.40	82.19	79.58	11.25° HORIZONTAL BEND
3+261.40	82.04	79.55	150mm HYDRANT 4 TEE
3+277.45	82.07	79.51	22.5° HORIZONTAL BEND
3+291.00	81.92	79.51	22.5° HORIZONTAL BEND
3+300.30	81.94	79.50	VALVE & VALVE BOX
3+325.00	82.25	79.46	-
3+327.21	82.15	79.46	150mm HYDRANT 5 TEE
3+350.00	82.03	79.40	-
3+375.00	81.70	79.35	-
3+385.40	81.90	79.33	150mm HYDRANT 6 TEE
3+400.00	81.80	79.30	-
3+425.00	81.70	79.25	-
3+444.40	81.60	79.21	11.25° VERTICAL BEND
3+448.40	81.30	78.61	11.25° VERTICAL BEND
3+475.00	81.20	78.61	22.5° HORIZONTAL BEND
3+475.00	81.18	78.60	22.5° HORIZONTAL BEND
3+476.50	81.15	78.59	11.25° HORIZONTAL BEND
3+478.00	81.11	78.58	11.25° HORIZONTAL BEND
3+500.00	80.75	78.20	-
3+525.00	80.40	77.85	-

Station	RIG ELEVATION	TOP OF WATERMAIN	DESCRIPTION
3+535.50	80.30	77.85	11.25° HORIZONTAL BEND
3+537.40	80.25	77.64	11.25° HORIZONTAL BEND
3+550.00	80.20	77.55	-
3+563.50	80.13	77.45	200mm TEE CONNECTED TO HYDRANT 9
3+566.60	80.10	77.43	CROSS UNDER NEW STORM SEWER. INV = 77.99
3+571.90	80.08	77.39	VALVE & VALVE BOX
3+600.00	79.71	77.19	-
3+611.00	79.50	77.10	150mm HYDRANT 10 TEE
3+625.00	79.28	76.94	-
3+641.60	79.34	76.88	BULK WATER METER IN RA CHAMBER
3+647.40	79.41	76.83	VALVE & VALVE BOX AT PROPERTY LINE
3+649.40	79.36	76.80	22.5° VERTICAL BEND
3+650.40	79.34	76.48	CROSS UNDER EX. BELL LINE
3+651.10	79.33	76.05	CROSS UNDER EX. ROGERS LINE
3+652.00	79.32	75.65	CROSS UNDER EX. TELUS LINE
3+653.00	79.31	75.25	CROSS UNDER EX. 100mm GAS LINE
3+654.00	79.28	74.82	22.5° VERTICAL BEND
3+656.10	79.28	74.82	CROSS UNDER EX. 600mm STORM SEWER. INV = 77.28
3+659.25	79.33	74.82	CROSS UNDER EX. 750mm STORM SEWER. INV = 77.20
3+660.50	79.32	74.82	CROSS UNDER EX. 250mm SANITARY SEWER. INV = 76.54
3+663.50	79.26	74.82	CROSS UNDER EX. 600mm WATERMAIN. INV = 75.42
3+666.00	79.32	74.82	REDUCER TO 200mm WATERMAIN
3+667.00	79.31	74.82	45° HORIZONTAL BEND
3+668.00	79.31	74.82	45° HORIZONTAL BEND
3+669.20	79.32	74.82	45° VERTICAL BEND
3+671.00	79.33	77.32*	45° VERTICAL BEND
3+672.00	79.33	77.32*	200mm WM TEE CONNECTION TO EX. 200mm WM

\*INSULATION REQUIRED PER CITY DETAIL S35.



### CRITICAL SEWER PIPE CROSSING TABLE

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE	SURFACE ELEVATION
1	250mm Ø SAN T1577.71	300mm Ø STM NV77.02	+ 0.250	78.58
2	250mm Ø SAN T1577.81	300mm Ø STM NV78.29	+ 0.480	80.56
3	250mm Ø SAN T1577.81	300mm Ø STM NV78.73	+ 0.700	81.30
4	250mm Ø SAN T1578.01	300mm Ø STM NV78.89	+ 1.880	81.85
5	300mm Ø SAN T1578.04	300mm Ø STM NV77.53	+ 0.460	80.13
6	250mm Ø SAN T1578.12	300mm Ø STM NV77.12	+ 0.250	82.25
7	250mm Ø SAN T1578.23	300mm Ø STM NV77.48	+ 0.650	79.65
8	200mm Ø SAN T1578.23	225mm Ø STM NV77.81	+ 0.480	79.00
9	200mm Ø SAN T1577.20	225mm Ø STM NV77.81	+ 0.310	78.44

## NOKIA Ottawa Campus

570 March Rd, Kanata/Ottawa ON K2K 2T6

BLOCK 1 AND PART OF BLOCK 1 REGISTERED PLAN 4M442 AND PART OF LOTS B AND C CONVESSION 4

## GenSLER

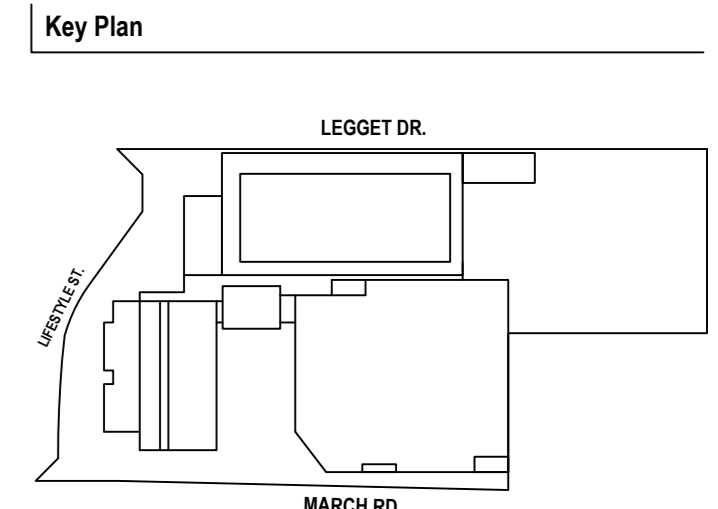
5005 Greenview Ave Dallas TX 75206 Tel 214.273.1500

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 Civil Engineering: S. Prasad@genSLER-eng.com  
 Architectural Site Planning: Mechanical Engineering: S. Smith and J. Anderson  
 Electrical Engineering: S. Smith and J. Anderson  
 Geotechnical Engineering: K. G. Gnanapavan  
 Geotechnical Engineering: K. G. Gnanapavan  
 Structural Engineering: C. Gnanapavan  
 ASIS: C. Gnanapavan  
 Noise Report: J. Gnanapavan  
 Gradient Lines: J. Gnanapavan  
 Transportation Parameters: A. Gnanapavan  
 Scales: A. Gnanapavan

Date	Description
SEP 12/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
NOV 15/24	REVISED PER CITY COMMENTS
NOV 07/25	REVISED PER CITY COMMENTS

## NOVATECH

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



### Seal/Signature

### Project Information

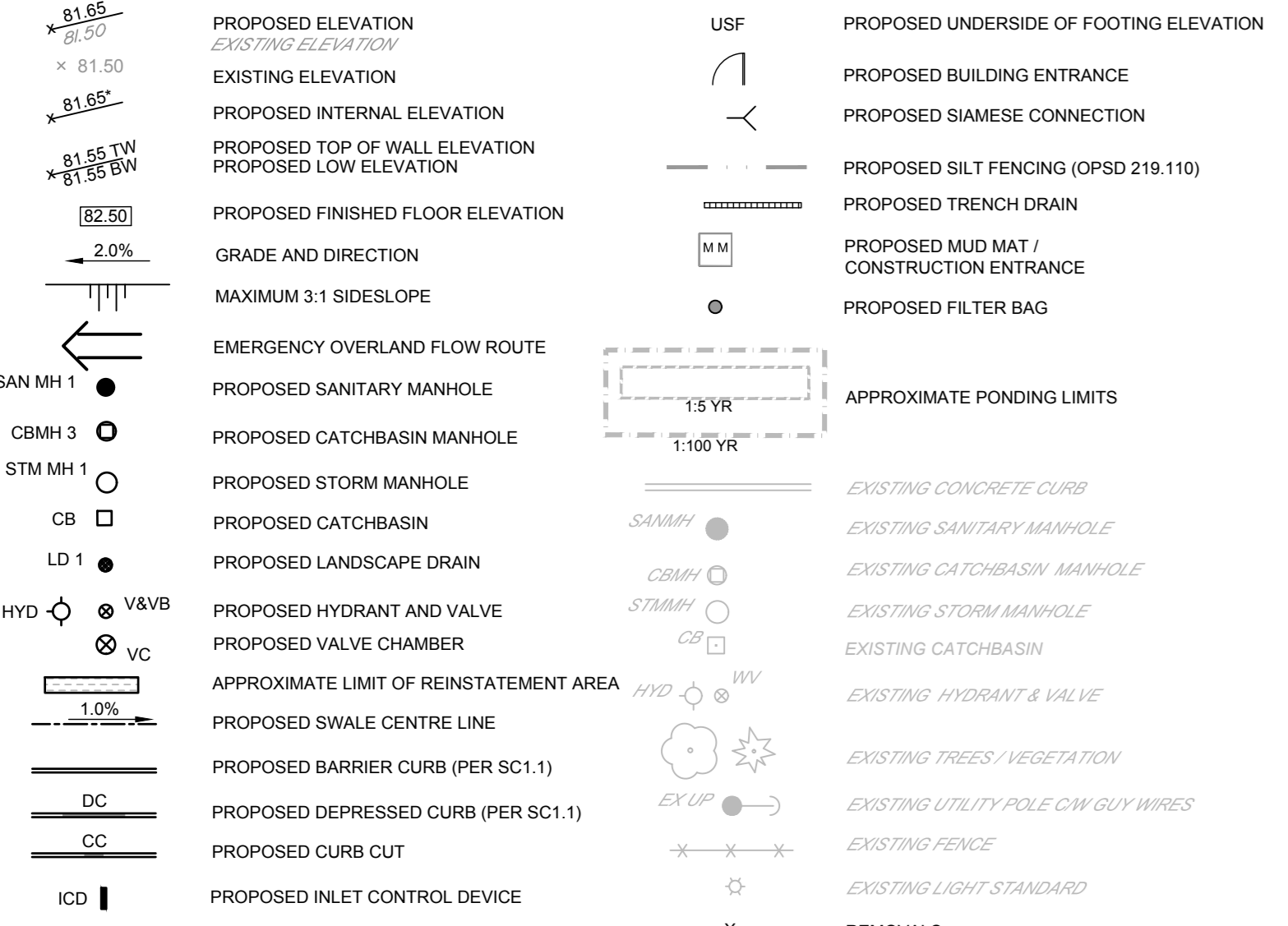
Project Name: **Nokia Ottawa Campus**  
 Project Number: **027.7946.000**  
 Description: **GENERAL PLAN OF SERVICES**

Scale: 1:400

## C100

City Project no: D07-12-24-0149  
 © 2021 GenSLER  
 Plan #19202

LEGEND



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...

GRADING NOTES

- 1. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
2. 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...

EROSION AND SEDIMENT CONTROL NOTES

- 1. THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE DURING CONSTRUCTION ACTIVITIES.
2. 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 INCLUDING GRADING, REMOVAL OF VEGETATION, ETC. AND DURING ALL PHASES OF SITE PREPARATION AND CONSTRUCTION...

BENCHMARK NOTES

- 1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CDVD82 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.

LEGGET DRIVE REINSTATEMENT

- 1. RESTORE ALL DISTURBED ROAD 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.
2. REINSTATE ALL DISTURBED ROADWAY AREAS AND SAW CUTS TO EXISTING ASPHALT AT ALL ROAD CUTS / ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARD R10.

PAVEMENT STRUCTURES

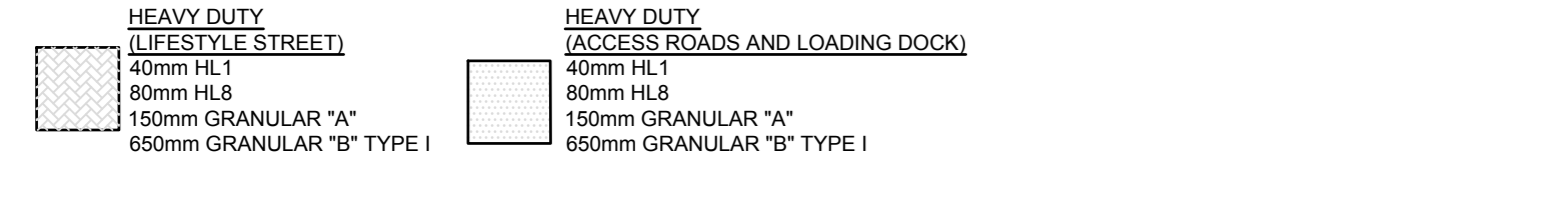
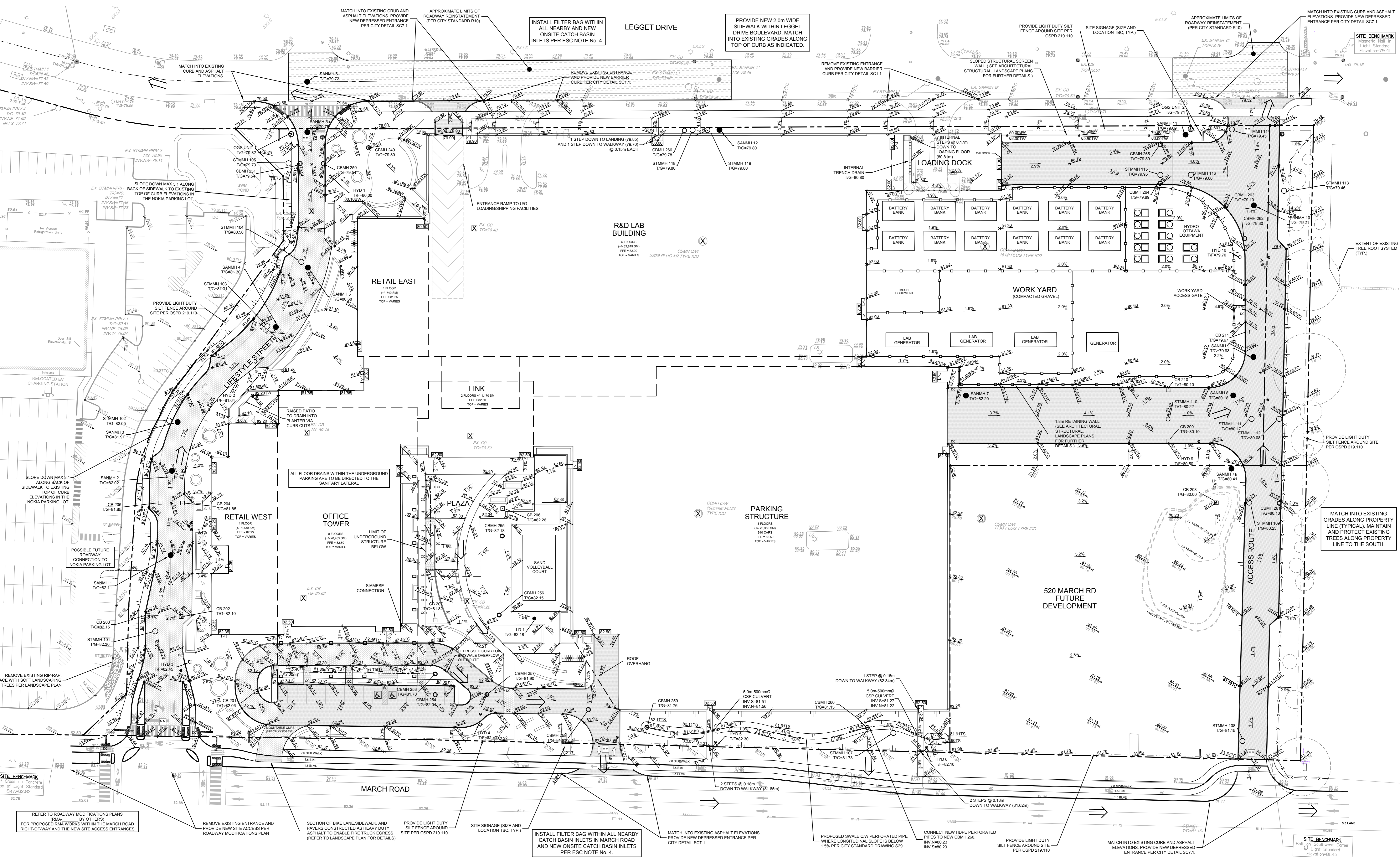


Table with columns: ESC Measure, Symbol, Specification, Installation, Inspection/Verification, Approval to Proceed, Final Acceptance. Lists various erosion and sediment control measures like silt fences, filter fabric, etc.



NOKIA Ottawa Campus

570 March Rd, Kanata Ottawa ON K2K 2T6

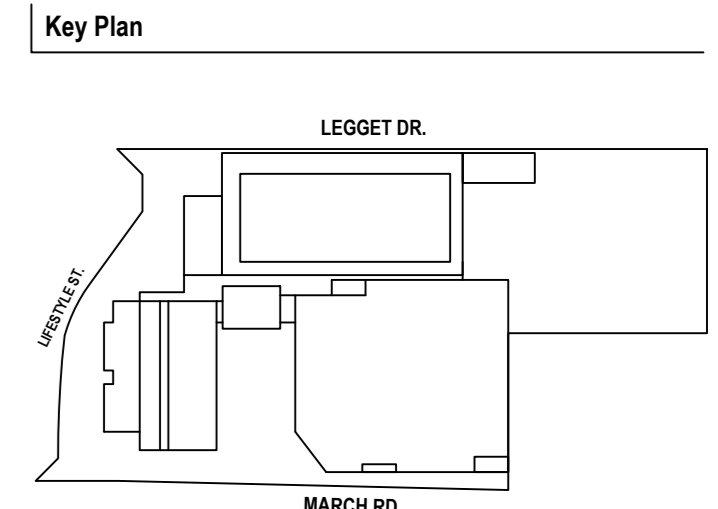
BLOCK 1 AND PART OF BLOCK 2 REGISTERED IN 4M 48-42 AND PART OF LOTS 8 AND 9 CONVESSION 4

Gensler

5005 Greenville Ave Dallas TX 75206 Tel 214.273.1500
Project Manager: Vikramjit Liso
Senior Consultant: G.Waters@gensler.com

Table with columns: Date, Description. Shows revision history for the plan.

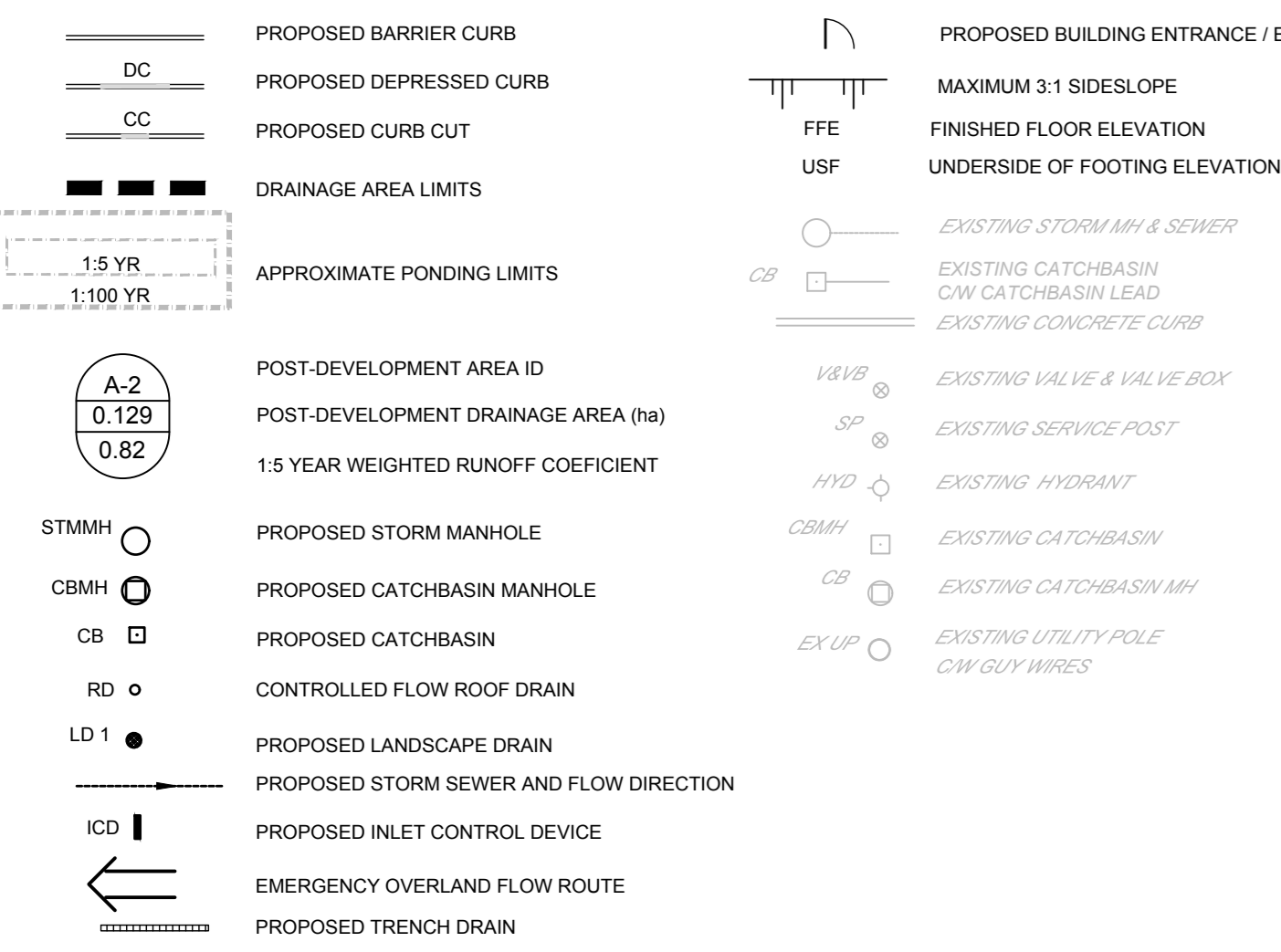
NOVATECH logo and contact information: Engineers, Planners & Landscape Architects, Suite 200, 140 Michael Cowland Drive, Ottawa, Ontario, Canada K2M 1R6.



Project Name: Nokia Ottawa Campus
Project Number: 027.7946.000
Description: GRADING AND EROSION AND SEDIMENT CONTROL PLAN
Scale: 1:400



**LEGEND**



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- 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 \$8,000,000.00. 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, DIMENSIONS 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.
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- 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 (R10).
- PROVIDE LINE-PARKING PAINTING.

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**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
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 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
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 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
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 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
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³

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

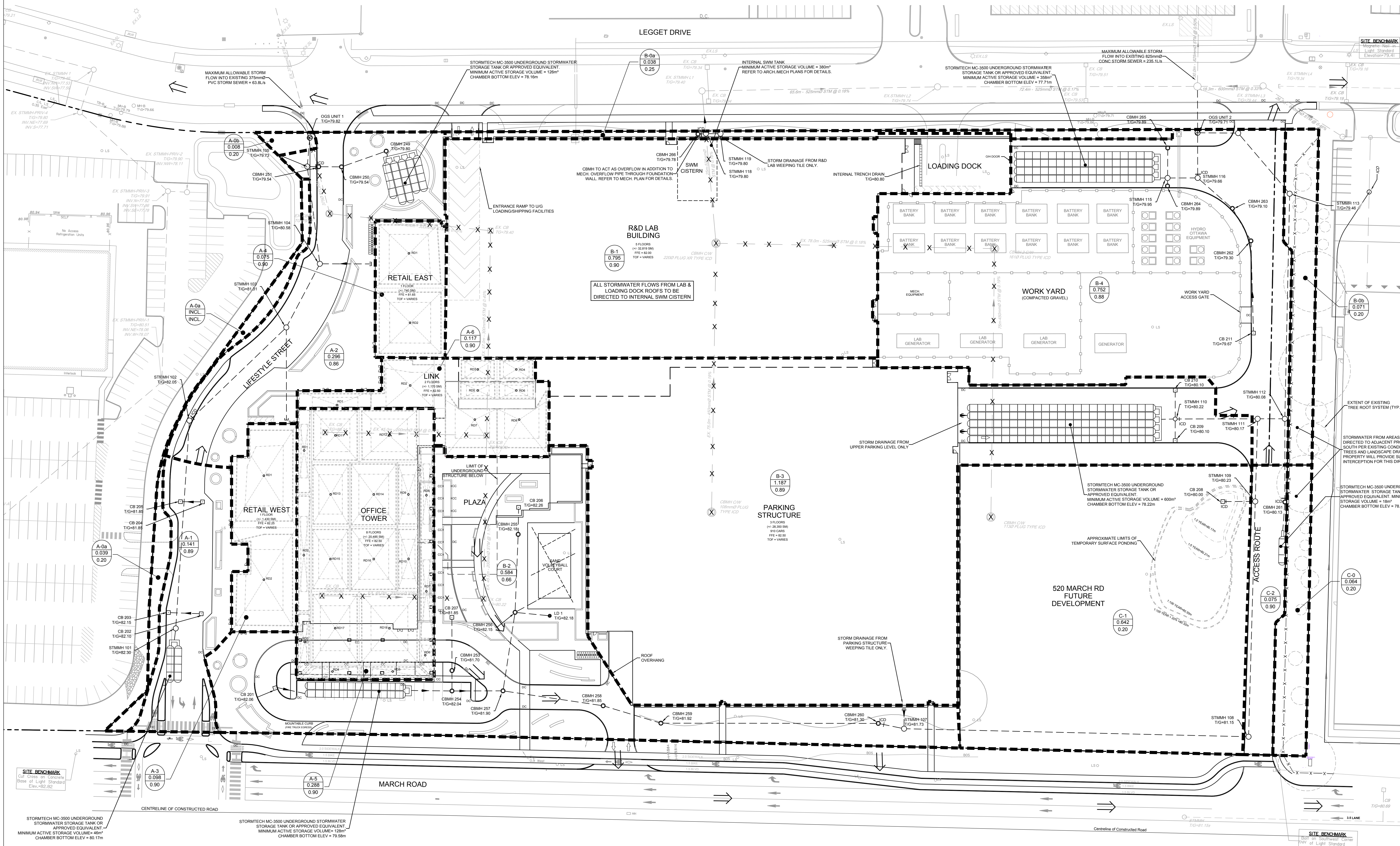
DESIGN EVENT	ICD TYPE (PLUG TYPE)	OUTLET STRUCTURE	DIAMETER OF OUTLET PIPE (mm)	PEAK DESIGN FLOW (L/s)	DESIGN HEAD (m)	WATER ELEVATION (m)	VOLUME (m³)	AVAILABLE STORAGE
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 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
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³
T3.5YR	IFX TEMPEST HF TYPE A	STBMH 102	300mm	10.2	0.25	80.25	21.7	54.4 m³

**ROOF DRAIN TABLE**

AREA ID	BUILDING	ROOF DRAIN (MATERIALS MODEL)	ROOF DRAIN OPENING SETTING	ROOF DRAIN TABLE			
				2 YEAR RELEASE RATE	APPROX 2 YR PONDING DEPTH	5-YEAR RELEASE RATE	APPROX 5-YEAR PONDING DEPTH
A-3	RETAIL WEST	RD 1 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
		RD 2 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
		RD 3 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
		RD 4 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
A-4	RETAIL EAST	RD 1 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
		RD 2 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
		RD 3 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
		RD 4 (RD-100-A-ADJ)	FULLY EXPOSED	0.95 L/s	8 cm	1.26 L/s	10 cm
A-5	OFFICE TOWER	RD 1 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 2 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 7 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 8 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 9 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 10 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 11 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm
		RD 12 (RD-100-A-ADJ)	1/4 OPEN	0.71 L/s	8 cm	0.79 L/s	10 cm
A-6	LINK	RD 1 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 2 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 3 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 4 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 5 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm
		RD 6 (RD-100-A-ADJ)	CLOSED	0.32 L/s	8 cm	0.32 L/s	10 cm



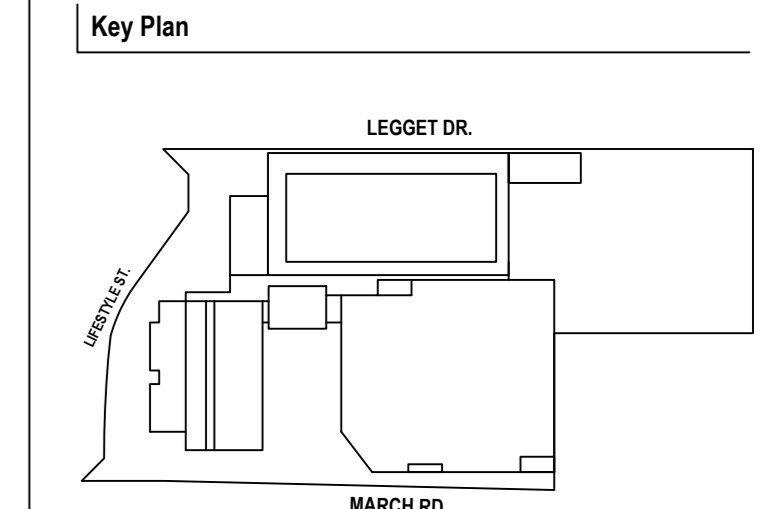
**NOKIA Ottawa Campus**  
 570 March Rd, Kanata/Ottawa ON K2K 2T6

**GenSLER**  
 5505 Greenville Ave, Dallas TX 75206  
 Tel: 214.273.1500

Surveyor: Annis, O'Sullivan, Volebek Ltd  
 Planner: Novatech  
 Civil Engineering: Novatech  
 Architectural Site Planning: Novatech  
 Electrical Engineering: GenSLER  
 Mechanical Engineering: GenSLER  
 Geotechnical Engineering: GenSLER  
 Landscaping: GenSLER  
 Structural Engineering: GenSLER  
 Noise Report: GenSLER  
 Transportation Planning: GenSLER  
 Stormwater Management: GenSLER

Date	Description
SEP 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
NOV 15/24	REVISED PER CITY COMMENTS
FEB 07/25	REVISED PER CITY COMMENTS

**NOVATECH**  
 Engineers, Planners & Landscape Architects  
 Suite 200, 140 Michael Cowpland Drive  
 Ottawa, Ontario, Canada K2M 1R6  
 Telephone: (613) 254-9642  
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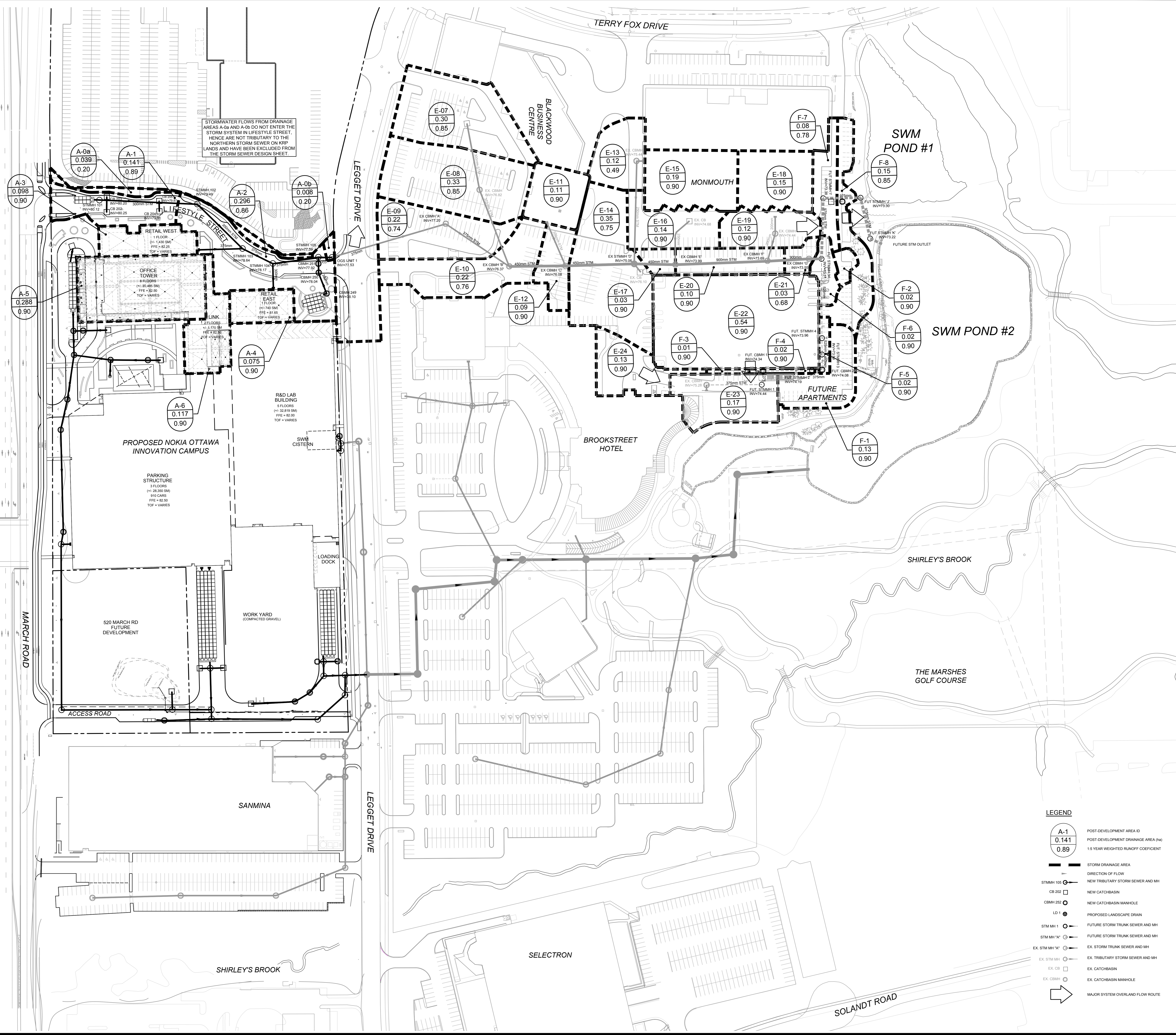


**GOVERNMENT OF ONTARIO**  
 PROFESSIONAL ENGINEER  
 License No. 100041390  
 Date of Issue: 07/11/2017

Project Name: **Nokia Ottawa Campus**  
 Project Number: **027.7946.000**  
 Description: **POST-DEVELOPMENT STORMWATER MANAGEMENT PLAN**  
 Scale: **1:400**



Date	Description
NOV 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
FEB 07/25	REVISED PER CITY COMMENTS



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-07  
0.30  
0.85

E-08  
0.33  
0.85

E-09  
0.22  
0.74

E-10  
0.22  
0.76

E-12  
0.09  
0.90

E-17  
0.03  
0.90

E-13  
0.12  
0.49

E-15  
0.19  
0.90

E-18  
0.15  
0.90

E-19  
0.12  
0.90

E-20  
0.10  
0.90

E-21  
0.03  
0.68

E-22  
0.54  
0.90

F-3  
0.01  
0.90

F-4  
0.02  
0.90

F-1  
0.13  
0.90

F-7  
0.08  
0.78

F-8  
0.15  
0.85

F-2  
0.02  
0.90

F-6  
0.02  
0.90

F-5  
0.02  
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)

SANMINA

BROOKSTREET HOTEL

SELECTRON

MONMOUTH

FUTURE APARTMENTS

SWM POND #1

SWM POND #2

SHIRLEY'S BROOK

THE MARSHES GOLF COURSE

MARCH ROAD

LEGGET DRIVE

LEGGET DRIVE

TERRY FOX DRIVE

SOLANDT ROAD

**LEGEND**

A-1  
0.141  
0.89

POST-DEVELOPMENT AREA ID  
POST-DEVELOPMENT DRAINAGE AREA (HA)  
15 YEAR WEIGHTED RUNOFF COEFFICIENT

STMMH 100  
NEW TRIBUTARY STORM SEWER AND MH

CB 202  
NEW CATCHBASIN

CBMH 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 'A'  
EX TRIBUTARY STORM SEWER AND MH

EX STM MH  
EX CATCHBASIN

EX CB  
EX CATCHBASIN

EX CBMH  
EX CATCHBASIN MANHOLE

MAJOR SYSTEM OVERLAND FLOW ROUTE

**NOVATECH**  
Engineers, Planners & Landscape Architects  
Suite 200, 240 Michael Coleplane Drive  
Ottawa, Ontario, Canada K2M 1R6  
Telephone: (613) 254-9643  
Facsimile: (613) 254-5827  
Website: www.novatech-eng.com

Key Plan

Seal / Signature

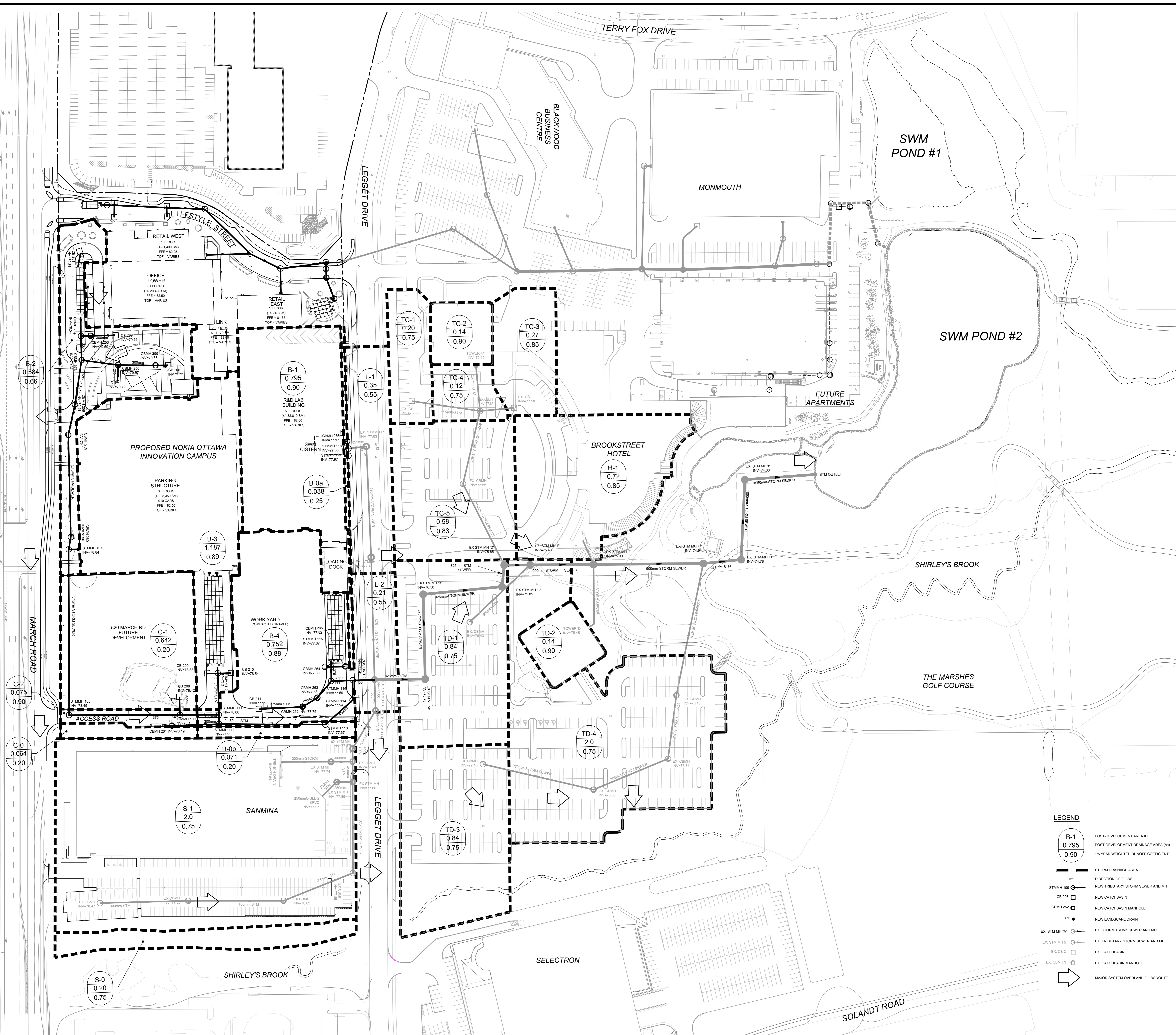
Professional Engineer Seal for CONRAD J. O'NEILL, License No. 100041509, Province of Ontario.

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

Scale: 1 : 750

**C500**  
© 2021 Gensler  
City Project no: D07-12-24-0149  
Plan #19022

Date	Description
NOV 15/24	ISSUED FOR SITE PLAN CONTROL APPROVAL
FEB 07/25	REVISED PER CITY COMMENTS



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Facsimile: (613) 254-5627  
Website: www.novatech-eng.com

Key Plan  
LEGGET DR.  
MARCH RD.  
Seal / Signature

Professional Engineer Seal  
COI  
ON

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

Scale: 1 : 750  
**C501**  
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Plan #19022

