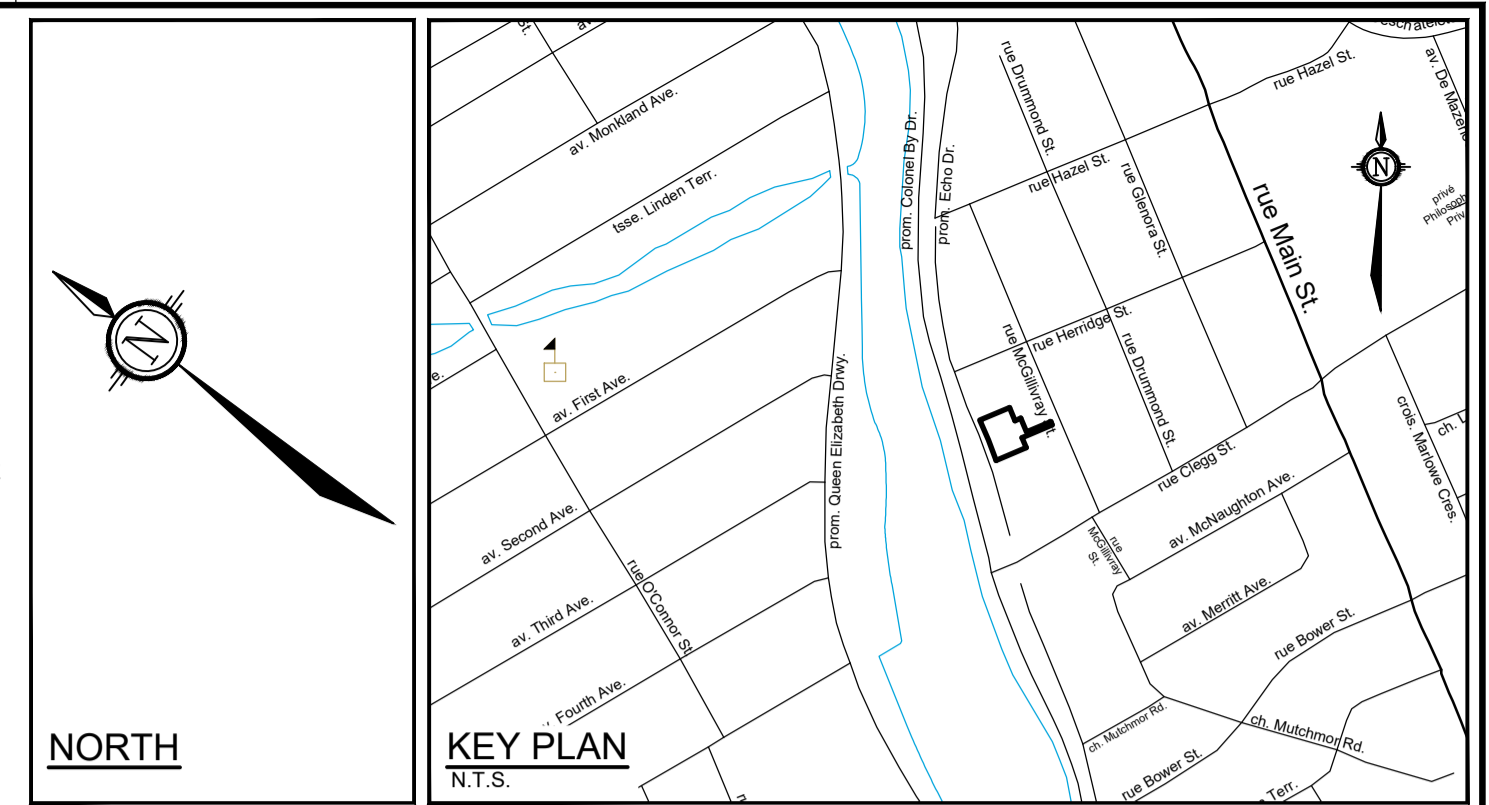


GENERAL NOTES:

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- 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.
- ALL ELEVATIONS ARE GEODETIC.

BENCHMARK NOTES:

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- BENCHMARK WAS PROVIDED ON TOPOGRAPHIC PLAN OF SURVEY OF LOTS 11 AND 12 AND PART OF LOTS 3 AND 4, BLOCK 'K', REGISTERED PLAN 102, CITY OF OTTAWA, SURVEYED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD, SIGNED AND DATED DECEMBER 10, 2025.

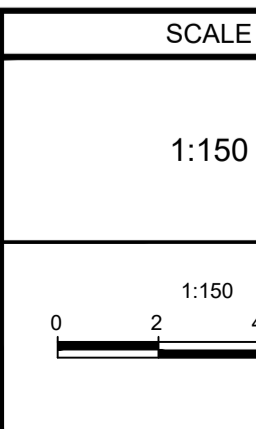


LEGEND

- PROPERTY LINE
- x REMOVALS
- x 64.85 EXISTING ELEVATION
- x 65.89 EXISTING RETAINING WALL ELEVATION
- ☀ EXISTING TREES / VEGETATION
- ☁ EXISTING HEDGE
- EX. CONCRETE CURB
- EX. CB □ EXISTING CATCHBASIN
- EX. MHSA ○ EXISTING SANITARY MANHOLE
- EX. MHST ○ EXISTING STORM MANHOLE
- EX. FH ○ VB EXISTING HYDRANT & VALVE
- OHW EXISTING OVERHEAD WIRES
- UP ○ EXISTING UTILITY POLE

NOTE:
THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

OWNER INFORMATION:
JBPA DEVELOPMENTS INC.
107 PRETORIA AVE.
OTTAWA, ON, K1S 1W8
PHONE: (613) 793 6322
anthony@jbpa.ca



DESIGN	BN/KD
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APPROVED	FST

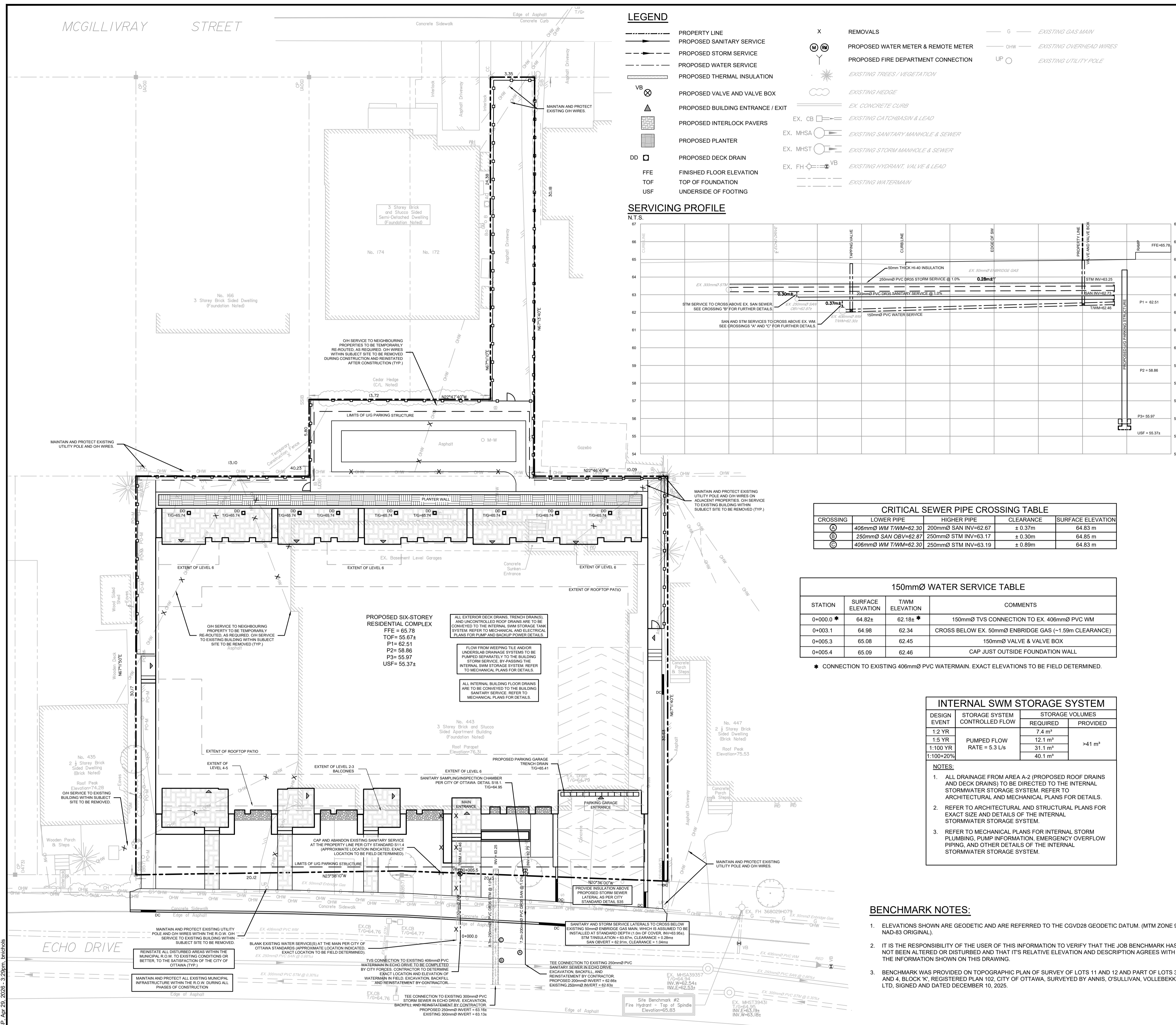
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LOCATION CITY OF OTTAWA 441 ECHO DRIVE		PROJECT No. 126003
DRAWING NAME EXISTING CONDITIONS & REMOVALS PLAN		REV REV # 1
		DRAWING No. 126003-REM

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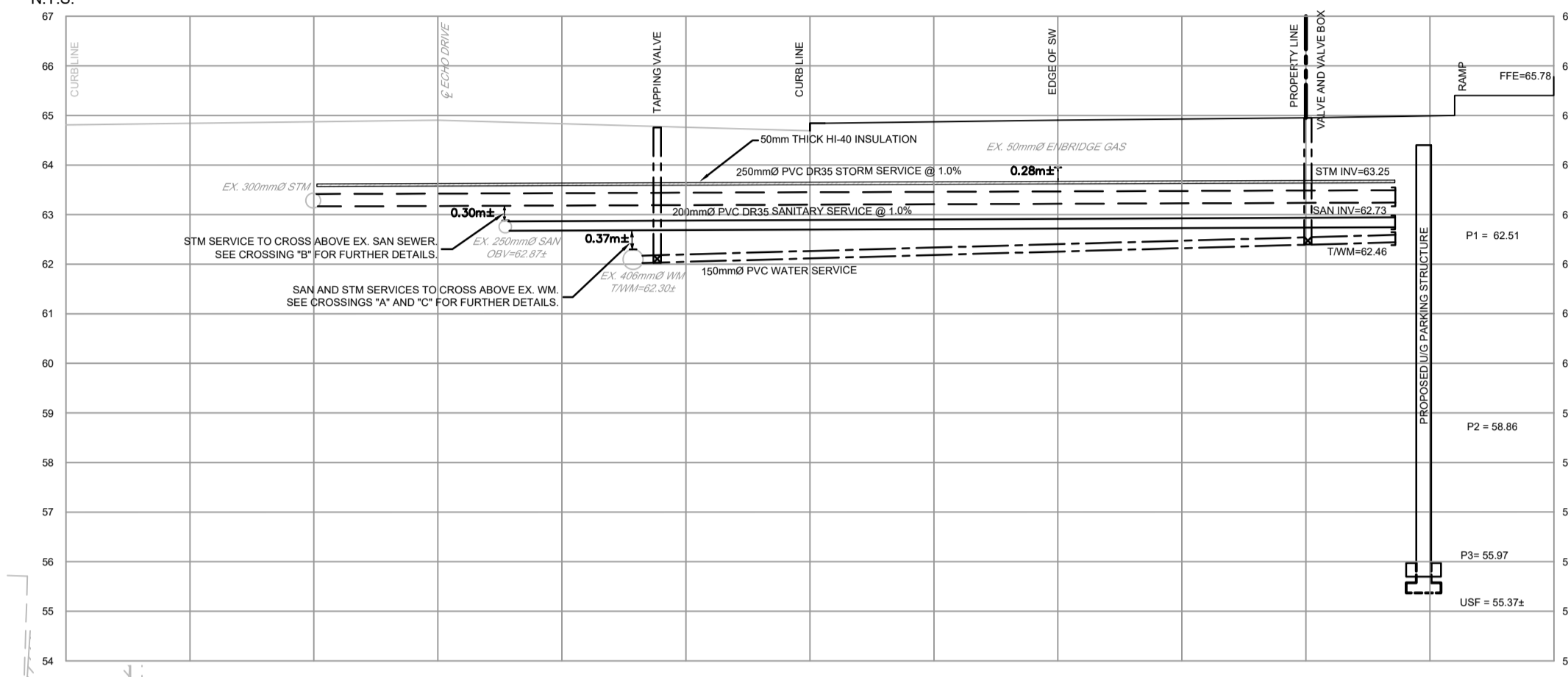
LEGEND

---	PROPERTY LINE
---	PROPOSED SANITARY SERVICE
---	PROPOSED STORM SERVICE
---	PROPOSED WATER SERVICE
---	PROPOSED THERMAL INSULATION
⊗	PROPOSED VALVE AND VALVE BOX
▴	PROPOSED BUILDING ENTRANCE / EXIT
▣	PROPOSED INTERLOCK PAVERS
▣	PROPOSED PLANTER
▣	PROPOSED DECK DRAIN
FFE	FINISHED FLOOR ELEVATION
TOF	TOP OF FOUNDATION
USF	UNDERSIDE OF FOOTING

REMOVALS

---	EXISTING GAS MAIN
---	EXISTING OVERHEAD WIRES
---	EXISTING UTILITY POLE
---	EXISTING TREES / VEGETATION
---	EXISTING HEDGE
---	EXISTING CONCRETE CURB
---	EXISTING CATCHBASIN & LEAD
---	EXISTING SANITARY MANHOLE & SEWER
---	EXISTING STORM MANHOLE & SEWER
---	EXISTING HYDRANT, VALVE & LEAD
---	EXISTING WATERMAIN

SERVICING PROFILE



CRITICAL SEWER PIPE CROSSING TABLE

CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE	SURFACE ELEVATION
1	400mm Ø WM T/WM=62.30	200mm Ø SAN INV=62.67	± 0.37m	64.83 m
2	250mm Ø SAN OBV=62.87	250mm Ø STM INV=63.17	± 0.30m	64.85 m
3	400mm Ø WM T/WM=62.30	250mm Ø STM INV=63.19	± 0.89m	64.83 m

150mm Ø WATER SERVICE TABLE

STATION	SURFACE ELEVATION	T/WM ELEVATION	COMMENTS
0+00.0 *	64.82±	62.18± *	150mm Ø TVS CONNECTION TO EX. 400mm Ø PVC WM
0+003.1	64.98	62.34	CROSS BELOW EX. 50mm Ø ENBRIDGE GAS (~1.59m CLEARANCE)
0+005.3	65.08	62.45	150mm Ø VALVE & VALVE BOX
0+005.4	65.09	62.46	CAP JUST OUTSIDE FOUNDATION WALL

* CONNECTION TO EXISTING 400mm Ø PVC WATERMAIN. EXACT ELEVATIONS TO BE FIELD DETERMINED.

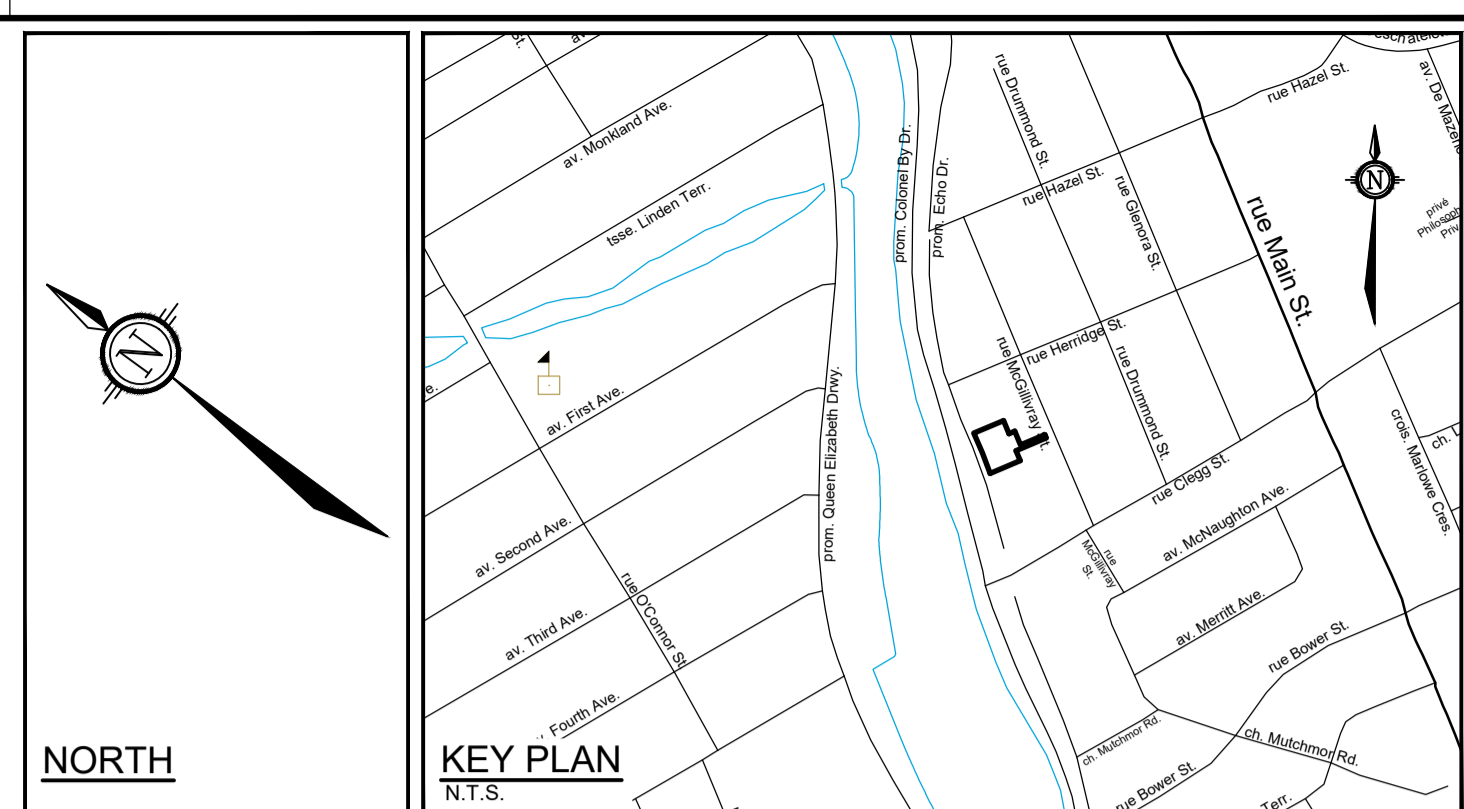
INTERNAL SWM STORAGE SYSTEM

DESIGN EVENT	STORAGE SYSTEM CONTROLLED FLOW	STORAGE VOLUMES	
		REQUIRED	PROVIDED
1.2 YR		7.4 m³	
1.5 YR	PUMPED FLOW	12.1 m³	>41 m³
1:100 YR	RATE = 5.3 L/s	31.1 m³	
1:100+20% 1:100		40.1 m³	

- NOTES:**
- ALL DRAINAGE FROM AREA A.2 (PROPOSED ROOF DRAINS AND DECK DRAINS) TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE SYSTEM. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
 - REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM.
 - REFER TO MECHANICAL PLANS FOR INTERNAL STORM PLUMBING, PUMP INFORMATION, EMERGENCY OVERFLOW PIPING, AND OTHER DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM.

BENCHMARK NOTES:

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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 WORKS IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS USING THE CURRENT GUIDELINES, BYLAWS AND STANDARDS INCLUDING MATERIALS OF CONSTRUCTION AND DISINFECTION AND ALL RELEVANT REFERENCES TO OPSS, 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 SITE INVESTIGATION (PROJECT NO. 20152064, DATED APRIL 28, 2026), PREPARED BY GEOTERRA, 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 ARCHITECTS AND LANDSCAPE ARCHITECTS DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
- REFER TO DEVELOPMENT SERVICING STUDY & STORMWATER MANAGEMENT REPORT (R-2026-010) 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 AS REQUIRED PER THE ARCHITECTURAL SITE PLAN.

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	SPEC. No.	REFERENCE
STORM / CBMH MANHOLE FRAME AND COVER	401 010 - TYPE "B"	OPSD
WATERTIGHT MH FRAME AND COVER	401 030	OPSD
SEWER TRENCH	S8	CITY OF OTTAWA
EXISTING UTILITY CROSSING	S10	CITY OF OTTAWA
WASTEWATER SAMPLING/INSPECTION CHAMBER	S18.1	CITY OF OTTAWA
INSULATION FOR SHALLOW SEWERS	S35	CITY OF OTTAWA
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
- 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 (SAN/STM) THAT HAVE LESS THAN 1.8m COVER WITH HI-40 INSULATION PER CITY OF OTTAWA STANDARD DETAIL S35. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- SERVICES ARE TO BE CONSTRUCTED TO 1.0m OF THE FOUNDATION WALL OR JUST OUTSIDE AND CAPPED AT A MINIMUM SLOPE OF 1.0%, UNLESS OTHERWISE INDICATED.
- PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED TO AT LEAST 98% 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). 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 OPSS 410.07.18, 410.07.16, 410.04 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 SUMPS UNLESS OTHERWISE INDICATED. ALL CATCHBASINS ARE TO HAVE 600mm SUMPS.
- ALL CATCHBASINS, MANHOLES AND/OR CATCHBASIN MANHOLES THAT ARE TO HAVE AN ICD INSTALLED WITHIN THEM ARE TO HAVE 600mm SUMPS.
- ALL WEAVING TILE SYSTEMS ARE TO BE PUMPED SEPARATELY TO THE BUILDING SERVICE AS INDICATED ON THE GENERAL PLAN OF SERVICES DRAWING. REFER TO MECHANICAL PLANS FOR DETAILS.
- CONTRACTOR TO TELEVISION (CCTV) ALL PROPOSED SEWERS, 200mm Ø 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 SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPE, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.

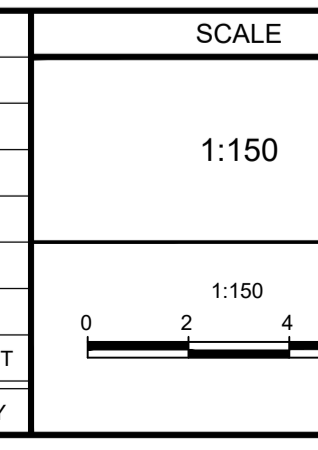
WATERMAIN NOTES:

- SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND 'AS AMENDED'. EXCAVATION, INSTALLATION, TESTING, BACKFILL AND REINSTATEMENT FOR ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS, SHUT-OFFS AT THE MAIN, FLUSHING, AND DISINFECTION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY FORCES.
- SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
VALVE BOX ASSEMBLY	W24	CITY OF OTTAWA
WATERMAIN	PVC DR 18	
 - WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE, UNLESS OTHERWISE INDICATED.
 - PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
 - WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF THE FOUNDATION WALL OR JUST OUTSIDE AND CAPPED.
 - DUE TO SITE-SPECIFIC CONDITIONS, THE USE OF POLYETHYLENE ENCASEMENT AND OTHER CORROSION PROTECTION MEASURES SHOULD BE EVALUATED (IN ACCORDANCE WITH AWWA C105 AND THE PIPE SUPPLIER'S RECOMMENDATIONS) FOR DUCTILE IRON AND SIMILAR FERROUS FITTINGS, AS DESCRIBED IN THE GEOTECHNICAL REPORT.

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OWNER INFORMATION:
JBPA DEVELOPMENTS INC.
107 PRETORIA AVE.
OTTAWA, ON, K1S 1W8
PHONE: (613) 793 6322
anthony@jbpa.ca



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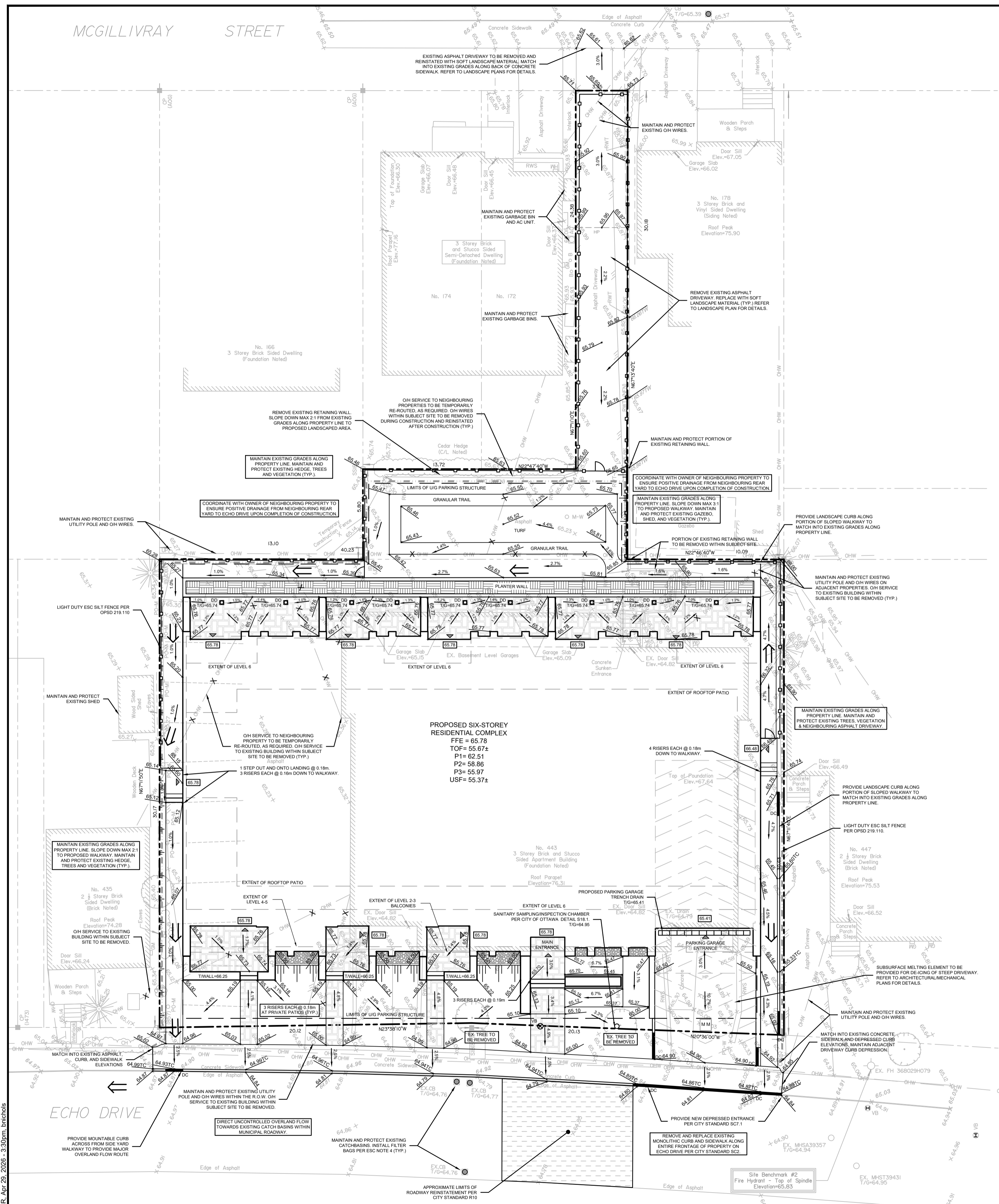
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APPROVED	FST

PROFESSIONAL ENGINEER
F.S.T. UVETTE
100041399
April 30, 2026
PROVINCE OF ONTARIO

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Facsimile: (613) 254-5867
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LOCATION CITY OF OTTAWA 441 ECHO DRIVE	PROJECT No. 126003
DRAWING NAME GENERAL PLAN OF SERVICES	REV #1
DRAWING No. 126003-GP	

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- PROVIDE LINE / PARKING PAINTING AS REQUIRED PER THE ARCHITECTURAL SITE PLAN.

GRADING NOTES:

- 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.
- EXPOSED SUBGRADES 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 98% OF THE STANDARD PROCTOR MAXIMUM DRY DENSITY VALUE. ANY ADDITIONAL GRANULAR FILL USED BELOW THE PROPOSED PAVEMENT SHOULD BE COMPACTED TO AT LEAST 98% 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 AS 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:

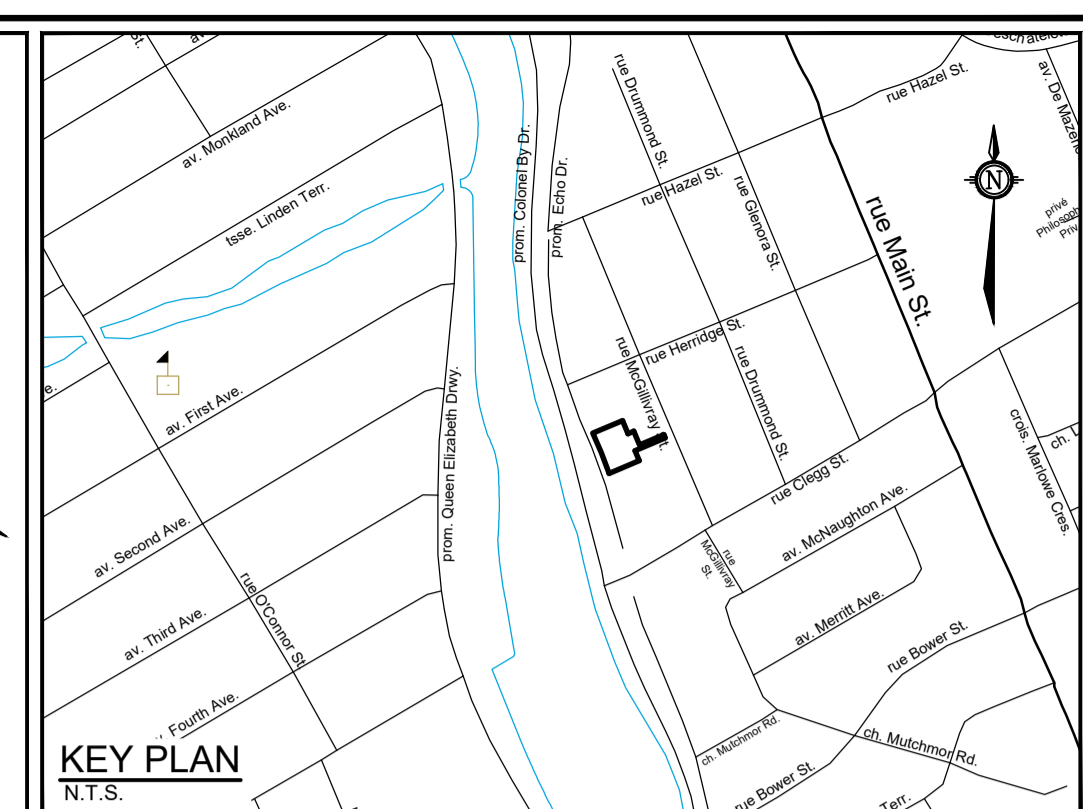
- THE CONTRACTOR SHALL IMPLEMENT BEST MANAGEMENT PRACTICES, TO PROVIDE FOR PROTECTION OF THE AREA DRAINAGE SYSTEM AND THE RECEIVING WATERCOURSE, DURING CONSTRUCTION ACTIVITIES. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT APPROPRIATE EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 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 ALTERATIONS (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 AS 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 CONTROL 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, TARP, COMPACTION AND/OR SURFACE ROUGHENING AS REQUIRED 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:

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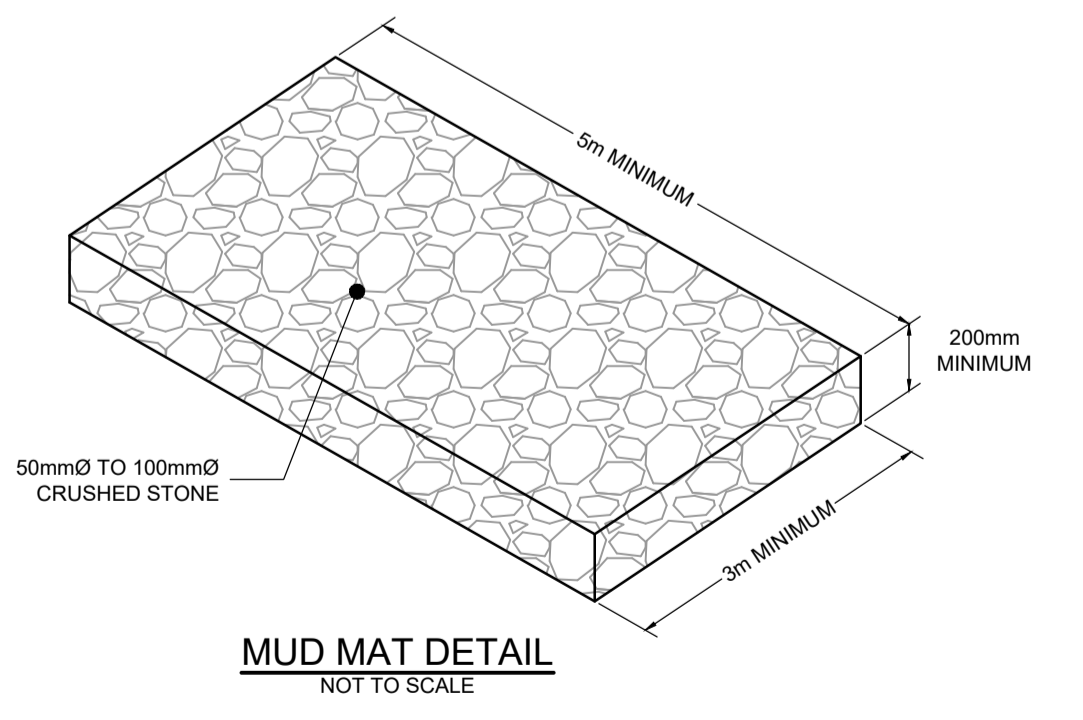
Erosion and Sediment Control Responsibilities:

ESC Measure	Symbol	Specification	Installation Responsibility	Inspection/Maintenance Responsibility	Inspection Frequency	Approval to Remove	Removal Responsibility	Inspection/Maintenance Responsibility
Silt Fence	---	OPSD 219.110	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Filter Fabric	Location as Indicated on ESC Note #3	Emulsion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Mud Mat	[M M]	Drawing Details	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Dust Control	Location as Required Around Site	Emulsion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Stabilized Material Stockpiling	Location as Required by Contractor	Emulsion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Sediment Basin (to flow being pumped out of excavations)	Location as Required by Contractor	...	Developer's Contractor	Developer's Contractor	After Every Rainstorm	Developer's Contractor	Developer's Contractor	N/A



LEGEND

- PROPERTY LINE
- PROPOSED ELEVATION
- EXISTING ELEVATION
- PROPOSED TOP OF CURB ELEVATION
- SLOPE AND DIRECTION
- MAXIMUM 3:1 SIDESLOPE (UNLESS OTHERWISE INDICATED)
- DIRECTION OF MAJOR OVERLAND FLOW ROUTE
- PROPOSED HIGH POINT
- PROPOSED ENTRANCE/EXIT ELEVATION
- PROPOSED BUILDING ENTRANCE / EXIT
- PROPOSED CURB
- PROPOSED DEPRESSED CURB
- FULL ASPHALT OVERLAY PER CITY STANDARD R10
- PROPOSED INTERLOCK PAVERS
- PROPOSED PLANTER
- PROPOSED RIVERWASH STONE
- PROPOSED LANDSCAPE FENCE
- PROPOSED SILT FENCING (OPSD 219.110)
- PROPOSED FILTER BAG
- FINISHED FLOOR ELEVATION
- TOP OF FOUNDATION
- UNDERSIDE OF FOOTING
- REMOVALS
- EXISTING ELEVATION
- EXISTING RETAINING WALL ELEVATION
- EXISTING TREES / VEGETATION
- EXISTING HEDGE
- EXISTING CONCRETE CURB
- EXISTING CATCHBASIN
- EXISTING SANITARY MANHOLE
- EXISTING STORM MANHOLE
- EXISTING HYDRANT & VALVE
- EXISTING OVERHEAD WIRES
- EXISTING UTILITY POLE



NOTE: THE POSITION OF ALL POLE LINES, CONDUITS, WATERMANS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS, AND WHERE SHOWN, THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE THE EXACT LOCATION OF ALL SUCH UTILITIES AND STRUCTURES AND ASSUME ALL LIABILITY FOR DAMAGE TO THEM.

OWNER INFORMATION:
 JBPA DEVELOPMENTS INC.
 107 PRETORIA AVE.
 OTTAWA, ON, K1S 1W8
 PHONE: (613) 793 6322
 anthony@jbpa.ca

SCALE	DESIGN
1:150	BN/KD
	CHECKED
	FST
	DRAWN
	BN/KD
	CHECKED
	FST
	APPROVED
	FST

FOR REVIEW ONLY

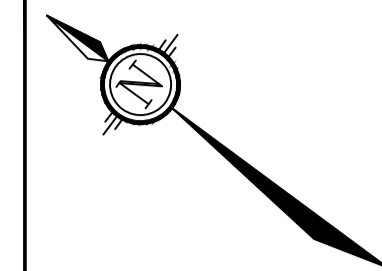
NOVATECH
 Engineers, Planners & Landscape Architects
 Suite 200, 240 Michael Cowpland Drive
 Ottawa, Ontario, Canada K2M 1P6
 Telephone: (613) 254-9643
 Facsimile: (613) 254-5867
 Website: www.novatech-eng.com

LOCATION		DRAWING NAME		PROJECT No.	
CITY OF OTTAWA 441 ECHO DRIVE		GRADING AND EROSION & SEDIMENT CONTROL PLAN		126003	
DRAWING No.		REV #		REV #	
126003-GR		1		1	

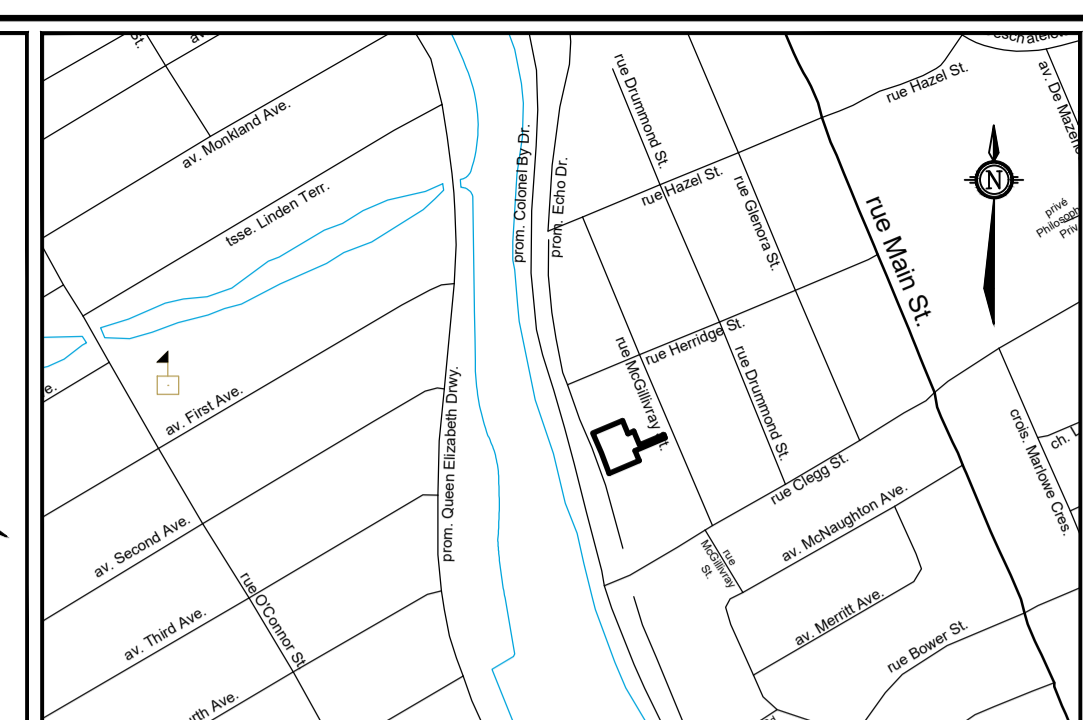
M:\2026\126003\CAD\Civil\126003-GR.dwg, GR, Apr 29, 2026, 3:30pm, hmbchols

LEGEND

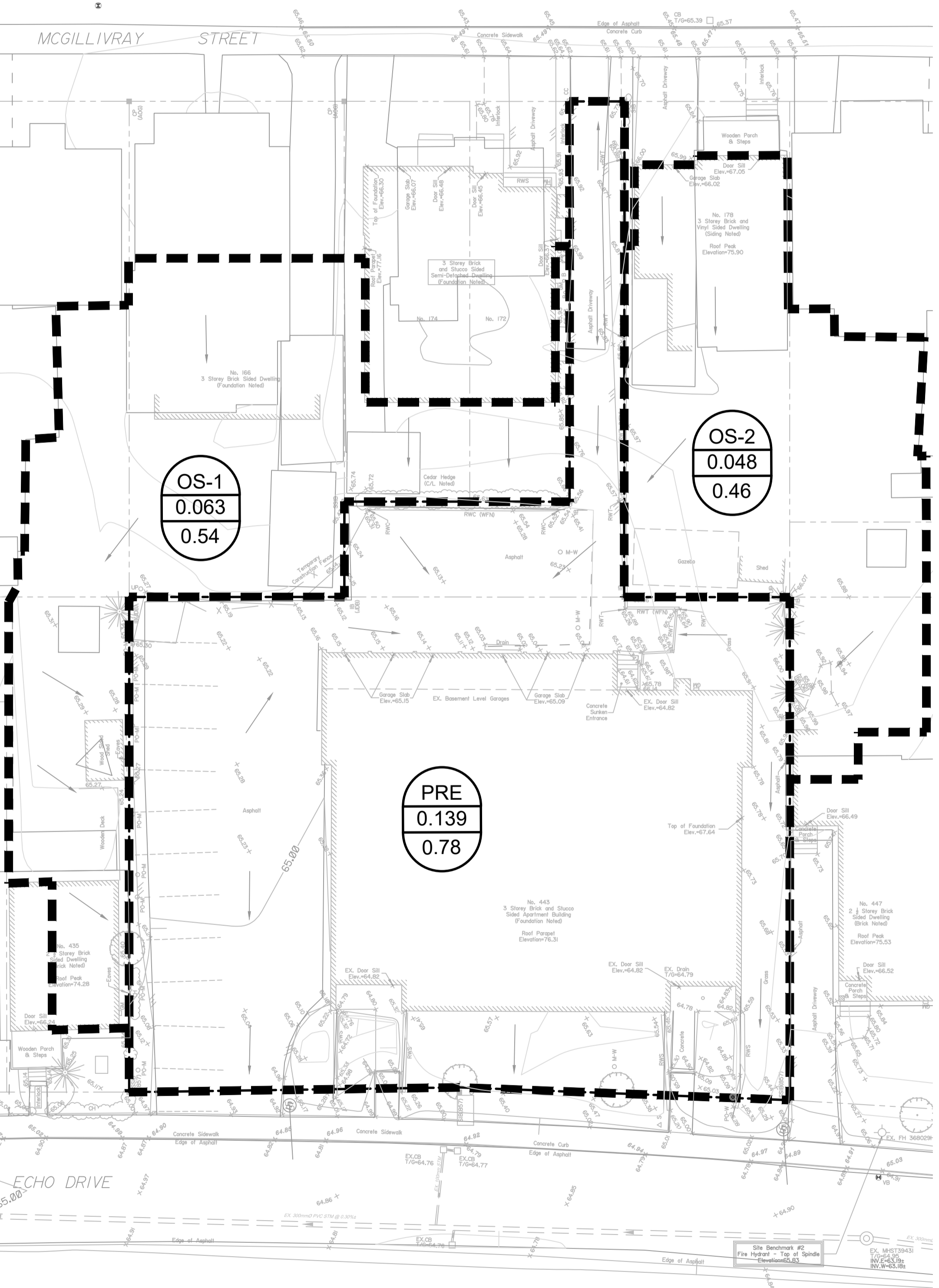
	PROPOSED BARRIER CURB		PROPOSED DRAINAGE DIRECTION		PROPOSED PLANTER		EXISTING DRAINAGE DIRECTION ARROWS
	PROPOSED DEPRESSED CURB		DIRECTION OF MAJOR OVERLAND FLOW ROUTE		PROPOSED RIVERWASH STONE		EXISTING CONCRETE CURB
	DRAINAGE AREA LIMITS		PROPOSED STORM SERVICE		PROPOSED INTERLOCK PAVERS		EXISTING CATCHBASIN & LEAD
	DECK DRAIN		MAXIMUM 3:1 SIDESLOPE (UNLESS OTHERWISE INDICATED)				EXISTING STORM MANHOLE & SEWER
	PRE-DEVELOPMENT AREA ID		POST-DEVELOPMENT AREA ID				
	PRE-DEVELOPMENT DRAINAGE AREA (ha)		POST-DEVELOPMENT DRAINAGE AREA (ha)				
	1.5 YEAR WEIGHTED RUNOFF COEFFICIENT		1.5 YEAR WEIGHTED RUNOFF COEFFICIENT				



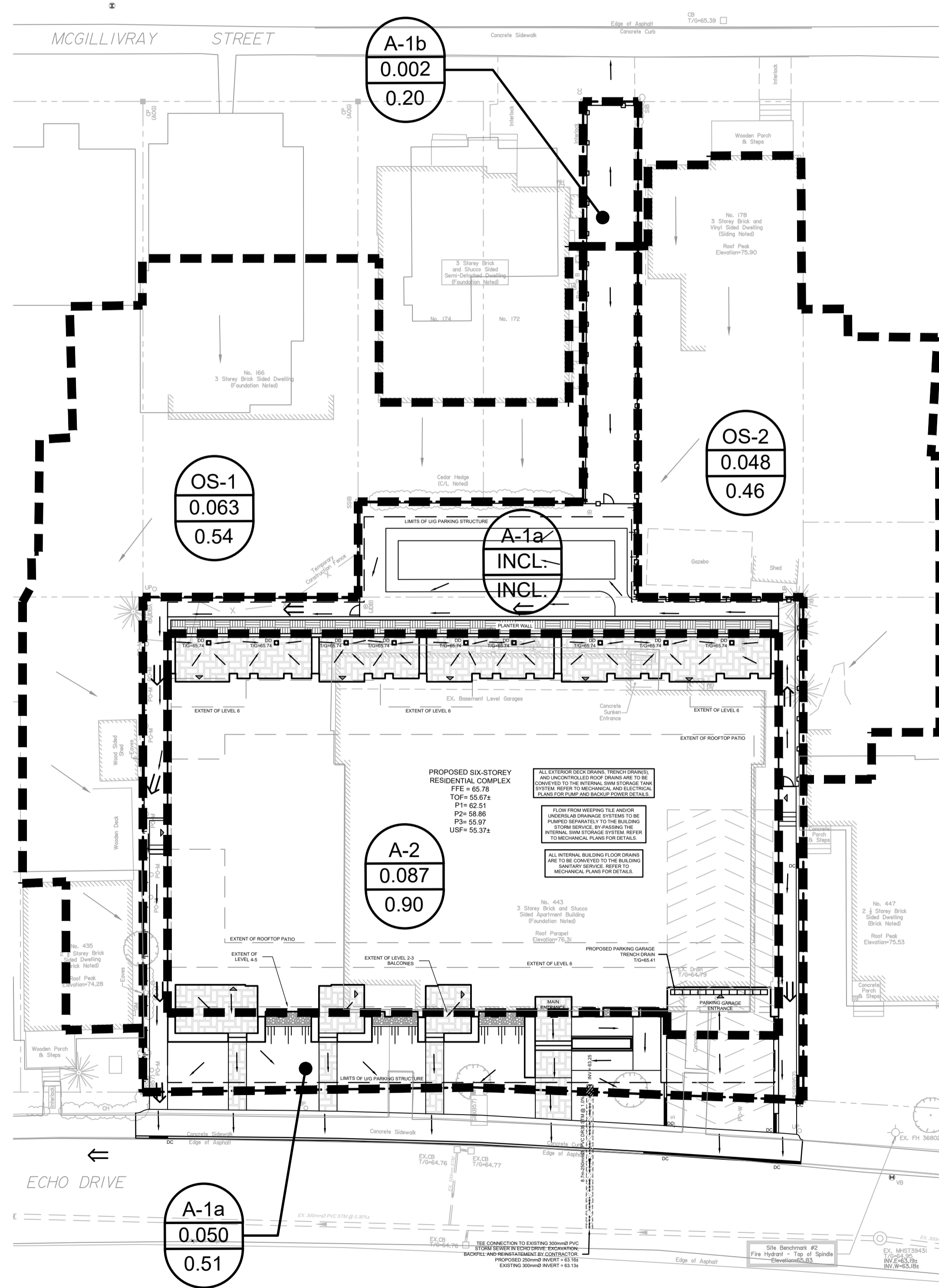
KEY PLAN
N.T.S.



PRE-DEVELOPMENT CONDITIONS



POST-DEVELOPMENT CONDITIONS



NORTH

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 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 & AWMA 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 SITE INVESTIGATION (PROJECT NO. 2512064, DATED APRIL 28, 2026), PREPARED BY GEOTERRA, 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 HARD SURFACE AREAS AND DIMENSIONS.
- REFER TO DEVELOPMENT SERVICING STUDY & STORMWATER MANAGEMENT REPORT (R-2026-010) 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 AS REQUIRED PER THE ARCHITECTURAL SITE PLAN.

BENCHMARK NOTES:

- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM. (MTM ZONE 9, NAD-83 ORIGINAL).
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INTERNAL SWM STORAGE SYSTEM

DESIGN EVENT	STORAGE SYSTEM CONTROLLED FLOW	STORAGE VOLUMES	
		REQUIRED	PROVIDED
1.2 YR	PUMPED FLOW RATE = 5.3 L/s	7.4 m ³	>41 m ³
1.5 YR		12.1 m ³	
1:100 YR		31.1 m ³	
1:100+20%		40.1 m ³	

- NOTES:**
- ALL DRAINAGE FROM AREA A-2 (PROPOSED ROOF DRAINS AND DECK DRAINS) TO BE DIRECTED TO THE INTERNAL STORMWATER STORAGE SYSTEM. REFER TO ARCHITECTURAL AND MECHANICAL PLANS FOR DETAILS.
 - REFER TO ARCHITECTURAL AND STRUCTURAL PLANS FOR EXACT SIZE AND DETAILS OF INTERNAL STORMWATER STORAGE SYSTEM.
 - REFER TO MECHANICAL PLANS FOR INTERNAL STORM PLUMBING, PUMP INFORMATION, EMERGENCY OVERFLOW PIPING, AND OTHER DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM.

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JBPA DEVELOPMENTS INC.
107 PRETORIA AVE.
OTTAWA, ON, K1S 1W8
PHONE: (613) 793 6322
anthony@jbpa.ca

No.	REVISION	DATE	BY
1.	ISSUED FOR SITE PLAN CONTROL APPROVAL	APR 30/26	FST

SCALE

1:200

DESIGN	BN/KD
CHECKED	FST
DRAWN	BN/KD
CHECKED	FST
APPROVED	FST

FOR REVIEW ONLY

NOVATECH
Engineers, Planners & Landscape Architects
Suite 200, 240 Michael Cowpland Drive
Ottawa, Ontario, Canada K2M 1P6
Telephone: (613) 254-9643
Facsimile: (613) 254-5867
Website: www.novatech-eng.com

LOCATION
CITY OF OTTAWA
441 ECHO DRIVE

DRAWING NAME
STORMWATER MANAGEMENT PLAN

PROJECT No. 126003
REV REV #1
DRAWING No. 126003-SWM

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