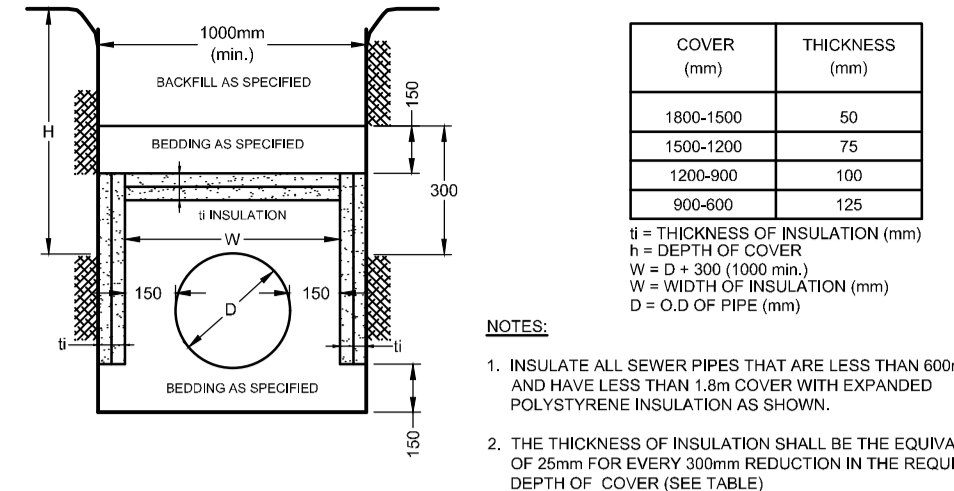
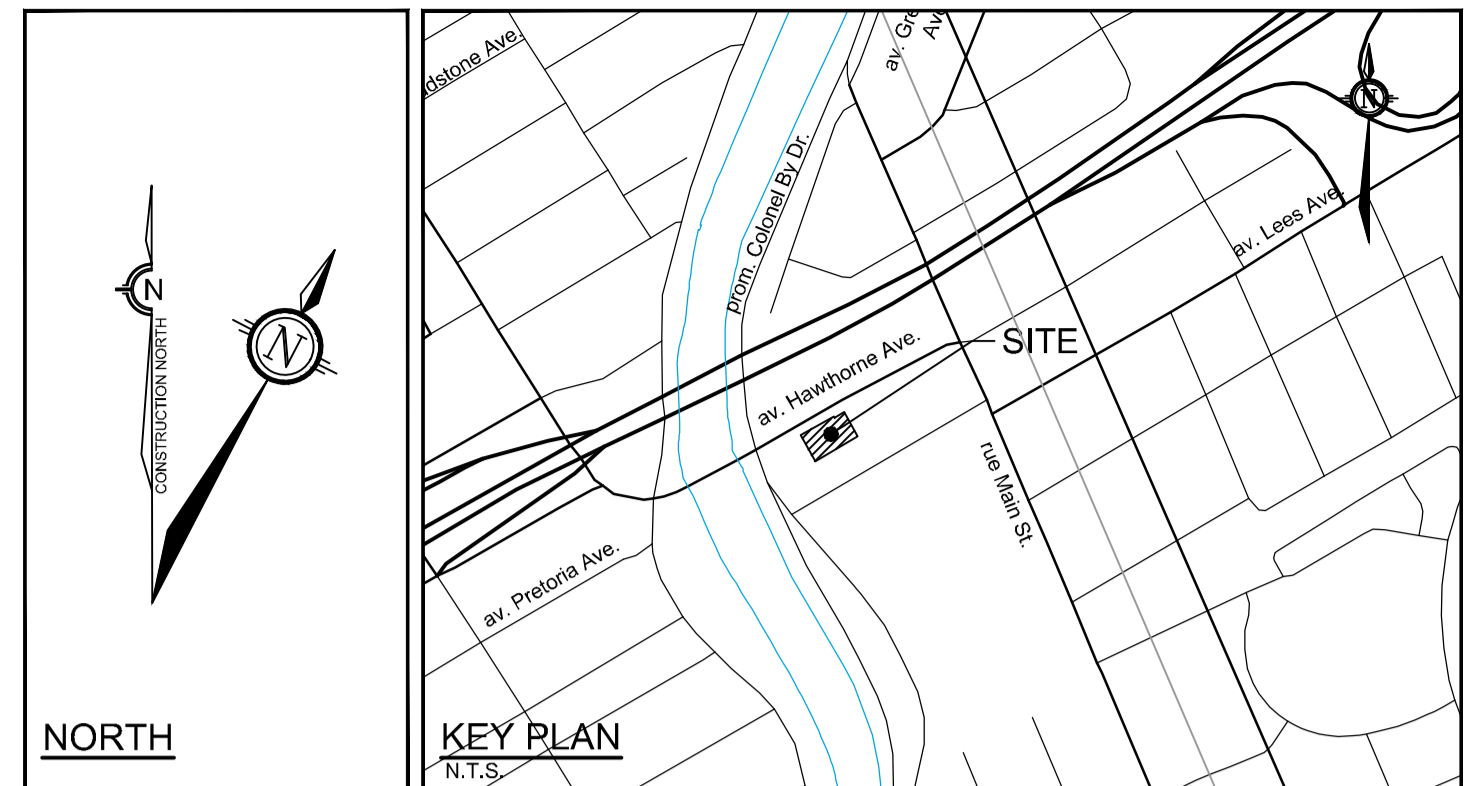


LEGEND

Legend table listing symbols for PROPERTY LINE, PROPOSED WATER SERVICE AND DIAMETER, PROPOSED VALVE & VALVE BOX, PROPOSED TEE C/W THRUSTBLOCK, PROPOSED CAP, PROPOSED BUILDING ENTRANCE, REMOVALS, PROPOSED SIAMESE CONNECTION, PROPOSED DEPRESSED CURB, FUTURE 103.9m-150mmØ PVC SAN @ 0.30%, FUTURE 103.2m-450mmØ CONC. STM @ 0.30%, HYD, FUTURE 203mmØ PVC WM, and PROPOSED HYDRO DUCTS (PER HAWTHORNE RECONSTRUCTION PROJECT).



NOTES: 1. INSULATE ALL SEWER PIPES THAT ARE LESS THAN 600mmØ AND HAVE LESS THAN 1.8m COVER WITH EXPANDED POLYSTYRENE INSULATION AS SHOWN. 2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 50mm REDUCTION IN THE REQUIRED DEPTH OF COVER (SEE TABLE).



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 OPSB, OPSD & AWWA 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 MUNICIPAL AUTHORITIES.
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 INVESTIGATION REPORT (56-IRP-04), DATED AUGUST 04, 2023, PREPARED BY YURI MENDEZ ENGINEERING, 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 HARD SURFACED AREAS AND DIMENSIONS.
11. REFER TO THE DEVELOPMENT SERVICES STUDY AND STORMWATER MANAGEMENT REPORT (R-2022-143) PREPARED BY NOVATECH.
12. SAW CUT AND KEYROAD ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE-IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10).

SEWER NOTES:

- 1. 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.
ITEM SPEC. NO. REFERENCE
STORM / SANITARY MANHOLE (12000) 701.010 OPSD
SANITARY MANHOLE FRAME AND COVER 401.010 TYPE 'A' OPSD
STORMCATCHBASIN MANHOLE (18000) 701.012 OPSD
STORMCATCHBASIN FRAME AND COVER 401.010 TYPE 'B' OPSD
WATERTIGHT MANHOLE FRAME AND COVER 401.030 OPSD
CATCHBASIN (6000/600) 705.010 OPSD
CATCHBASIN FRAME & COVER 819 CITY OF OTTAWA
SEWER TRENCH 56 CITY OF OTTAWA
STORM SEWER PVC DR 35 (450mm PIPE AND SMALLER) CITY OF OTTAWA
CONCRETE 65-D (600mm PIPE AND LARGER) CITY OF OTTAWA
SANITARY SEWER PVC DR 35
2. THE SANITARY SERVICE LATERAL SHALL BE EQUIPPED WITH A BACKFLOW PREVENTER WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAIL S14.1 OR S14.2. REFER TO MECHANICAL PLANS FOR DETAILS.
3. THE STORM SERVICE LATERAL SHALL BE EQUIPPED WITH A BACKFLOW PREVENTER WITHIN THE BUILDING FOOTPRINT AS PER CITY OF OTTAWA STANDARD DETAIL S14 TO PROTECT THE WEIRING TILE. FURTHERMORE, THE PUMP WITHIN THE INTERNAL SWM TANK WILL ACT AS A BACKFLOW PREVENTER FOR THE TANK ITSELF. REFER TO MECHANICAL PLANS FOR DETAILS.
4. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0%.
5. 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.
6. INSULATE ALL PIPES (SAN / STM) THAT HAVE LESS THAN 1.8m COVER WITH H-40 INSULATION PER INSULATION DETAIL FOR SHALLOW SEWERS. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
7. CONCRETE MANHOLES AND CATCHBASIN MANHOLES ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
8. THE CONTRACTOR IS TO TEST (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. PROVIDE A COPY OF ALL CCTV INSPECTION REPORTS TO THE ENGINEER FOR REVIEW.
9. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INCLUDING ALL APPLICABLE SERVICING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND TIE ELEVATIONS, STRUCTURE LOCATIONS AND ALIGNMENT CHANGES, ETC.
10. 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 OPSB 410.01.16, 410.01.18 AND 407.07.24. 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.

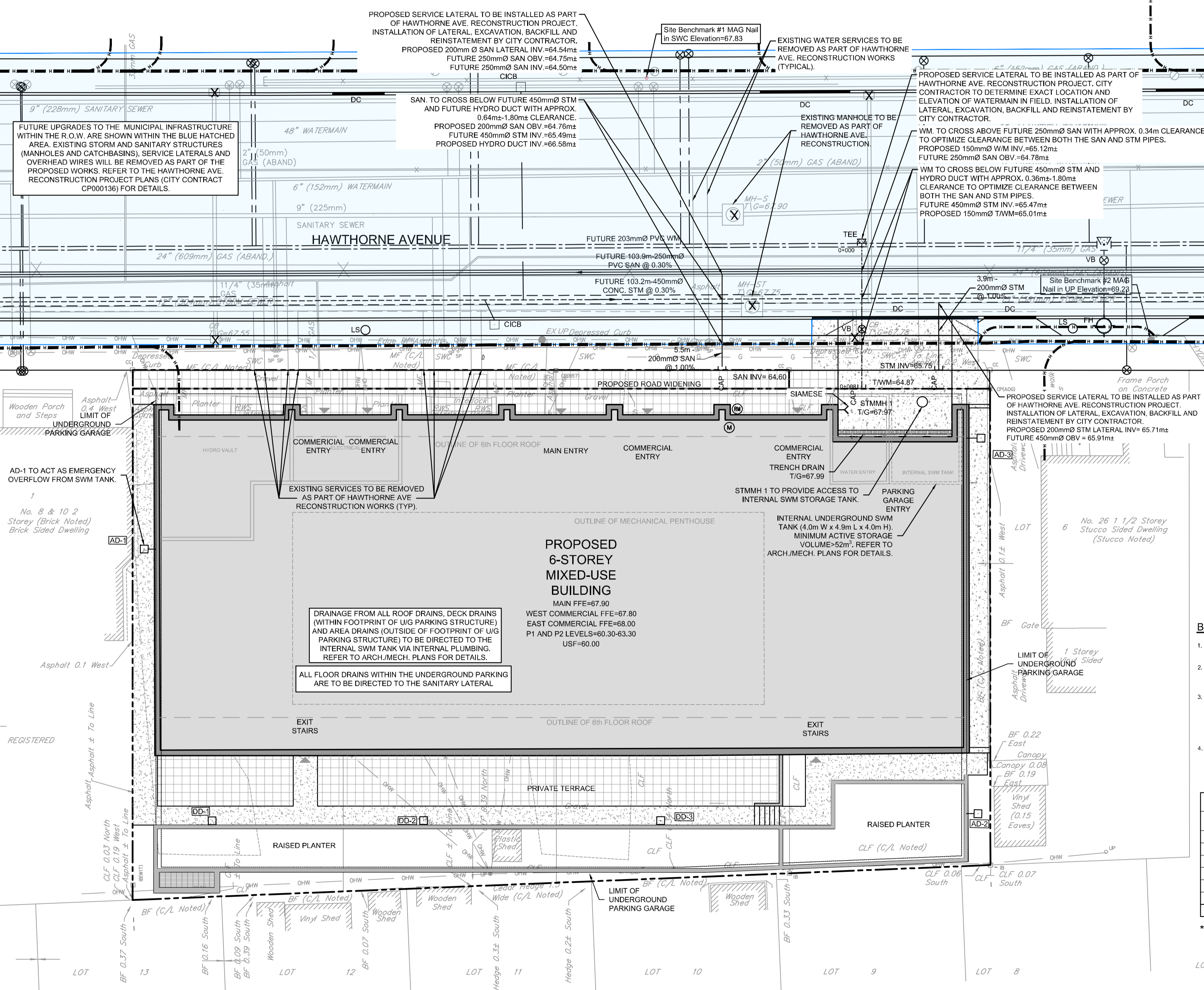
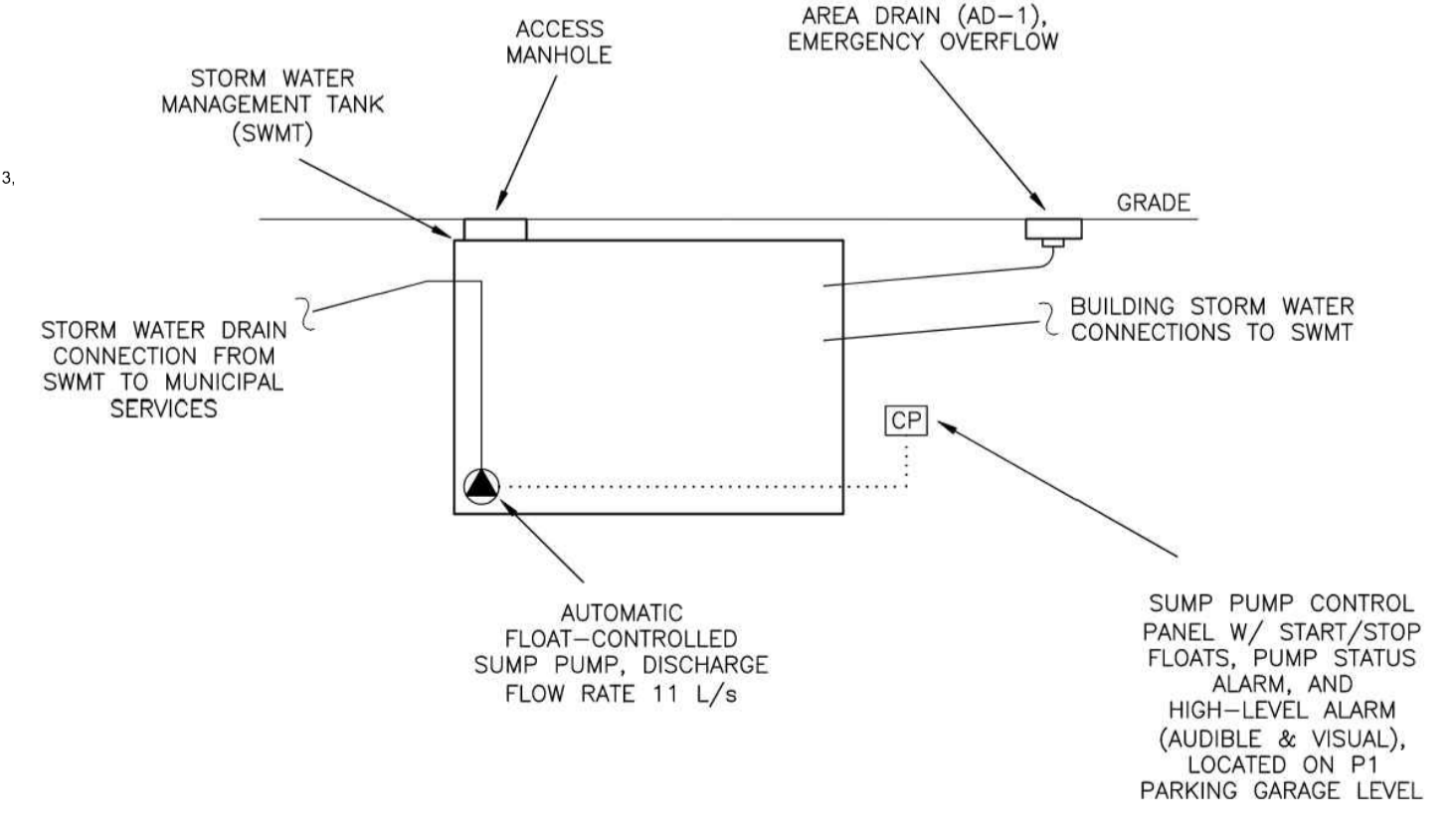
WATERMAIN NOTES:

- 1. SUPPLY AND CONSTRUCT ALL WATERMANS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS - ALL CURRENT VERSIONS AND AS AMENDED.
ITEM SPEC. NO. REFERENCE
WATERMAIN TRENCHING W17 CITY OF OTTAWA
HYDRANT INSTALLATION W19 CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES W22 CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES W23 CITY OF OTTAWA
VALVE BOX ASSEMBLY W24 CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWERS W25.2 CITY OF OTTAWA
WATERMAIN CROSSING ABOVE SEWERS W25.2 CITY OF OTTAWA
CATHODIC PROTECTION FOR PVC WATERMANS W40 CITY OF OTTAWA
WATERMAIN MATERIAL PVC DR 18 (110mm AND LARGER) CITY OF OTTAWA
2. EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMANS BY THE CONTRACTOR. CONNECTIONS AND SHUT-OFFS AT THE MAIN AND CHLORINATION OF THE WATER SYSTEM SHALL BE PERFORMED BY CITY OFFICIALS.
3. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED.
4. PROVIDE MINIMUM 0.5m CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL CROSSINGS, UNLESS OTHERWISE INDICATED.
5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

BENCHMARK NOTES:

- 1. ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM AND ARE REFERRED TO CITY OF OTTAWA BENCHMARK OTT 25, HAVING AN ELEVATION OF 69.613.
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 AGREE WITH THE INFORMATION SHOWN ON THIS DRAWING.
3. TEMPORARY JOB BENCHMARK #1 DESCRIPTION IS LOCATED ON MAG NAIL IN CONCRETE SIDEWALK LOCATED APPROXIMATELY 15m NORTH OF THE NORTH PROPERTY BOUNDARY ALONG HAWTHORNE AVE. TEMPORARY BENCHMARK #2 DESCRIPTION IS MAG NAIL IN UTILITY POLE LOCATED ON BOULEVARD APPROXIMATELY 10m EAST FROM EAST PROPERTY BOUNDARY ALONG HAWTHORNE AVE. SEE TOPOGRAPHICAL PLAN OF SURVEY OF LOTS 2, 3, 4, 9 AND PART OF LOT 6, REGISTERED PLAN 220, CITY OF OTTAWA, SURVEYED BY ANNIS, O'SULLIVAN, VOLLEBEK LTD.
4. A NEW TEMPORARY BENCHMARK MAY BE REQUIRED IF EXISTING BENCHMARKS ARE DISTURBED DURING THE HAWTHORNE AVE. RECONSTRUCTION PROJECT. ALTERNATIVELY, CONTRACTOR MAY NEED TO USE HAWTHORNE AVENUE RECONSTRUCTION PROJECT BENCHMARKS.

PROPOSED 150mmØ WATER SERVICE TABLE. Table with columns: Station, RIG ELEVATION, TOP OF WATERMAIN, DESCRIPTION. Includes entries for connections to future 200mmØ WM, watermain crossings above and under various utilities, and a cap.



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 Avenue, Ottawa, ON, K1S 1W8. CONTACT: KEVIN FAGAN, Tel: (613) 695-6767, EMAIL: kfagan@jbpa.ca. Includes a revision table with columns for No., REVISION, DATE, and BY.

SCALE: 1:150. DESIGN: CV/ZA. CHECKED: FST. DRAWN: ZA. APPROVED: FST. FOR REVIEW ONLY. Includes a professional engineer seal for F.S. THAUETTE, 100041299, JULY 26, 2023, PROVINCE OF ONTARIO.

NOVATECH Engineers, Planners & Landscape Architects. Suite 200, 240 Michael Cowpland Drive, Ottawa, Ontario, Canada K2M 1P6. Telephone: (613) 254-9643. Website: www.novatech-eng.com. LOCATION: CITY OF OTTAWA, 12-24 HAWTHORNE AVENUE. DRAWING NAME: GENERAL PLAN OF SERVICES. PROJECT No.: 122152. REV # 2. DRAWING No.: 122152-GP. PLAN #:

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**LEGEND**

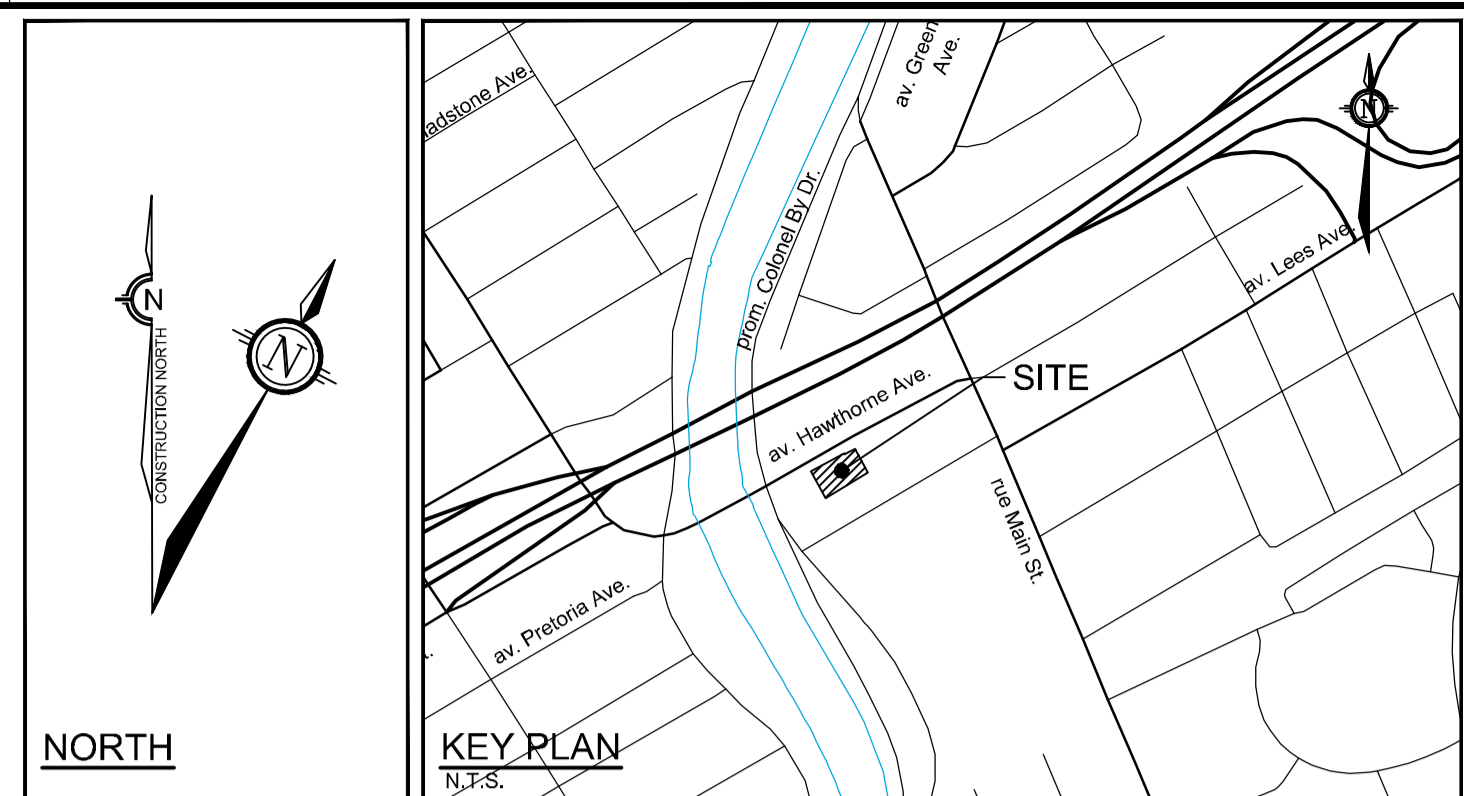
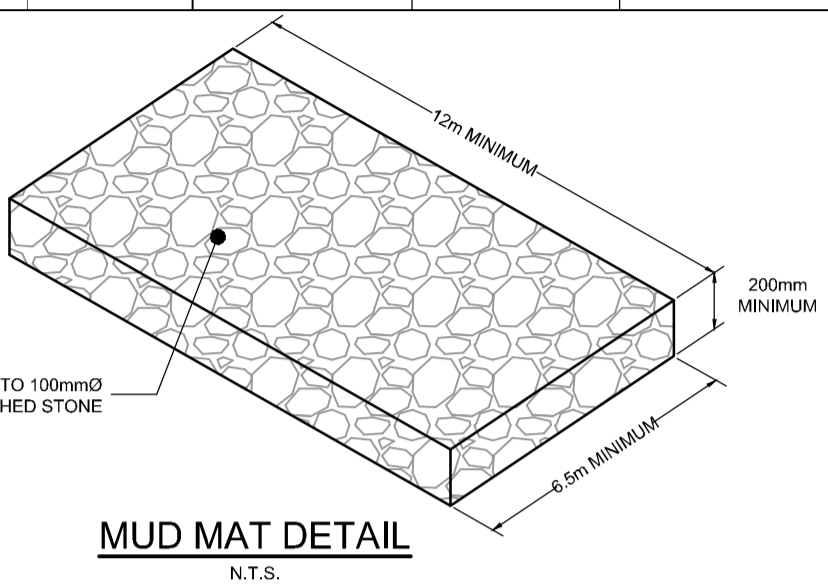
- PROPOSED ELEVATION
- EXISTING ELEVATION
- PROPOSED HAWTHORNE AVENUE RE-CONSTRUCTION DESIGN ELEVATION
- PROPOSED TOP OF RETAINING WALL ELEVATION
- PROPOSED TERRACE/FLOOR ELEVATION
- GRADE AND DIRECTION
- MAXIMUM 3:1 SIDESLOPE
- EMERGENCY OVERLAND FLOW ROUTE
- PROPOSED CATCHBASIN MANHOLE
- PROPOSED VALVE & VALVE BOX
- PROPOSED BARRIER CURB (PER SC1.1)
- PROPOSED DERESSED CURB (PER SC1.1)
- PROPOSED CURB INLET CATCHBASIN (PER HAWTHORNE RECONSTRUCTION PROJECT)
- PROPOSED HYDRANT c/w VALVE & VALVE BOX (PER HAWTHORNE RECONSTRUCTION PROJECT)
- MECHANICAL DECK DRAIN ABOVE U/G PARKING
- AREA DRAIN OUTSIDE OF U/G PARKING LIMITS
- PROPOSED FINISHED FLOOR ELEVATION
- PROPOSED UNDERSIDE OF FOOTING ELEVATION
- BUILDING ENTRANCE / EXIT
- REMOVALS
- PROPOSED SILT FENCING (OPSD 219.110)
- PROPOSED MUD MAT / CONSTRUCTION ENTRANCE
- PROPOSED STREET LIGHT

**PAVEMENT STRUCTURE:**

- NEW LIGHT DUTY PAVEMENT
  - 60mm SUPERPAVE LEVEL D 12.5mm
  - 150mm GRANULAR "A"
  - 300mm GRANULAR "B" TYPE II
  - ASPHALT GRADE PG 58-34
- NEW HEAVY DUTY PAVEMENT (PER HAWTHORNE RECONSTRUCTION PROJECT)
  - 60mm SUPERPAVE LEVEL D 12.5mm
  - 60mm SUPERPAVE LEVEL D 19mm
  - 150mm GRANULAR "A"
  - 300mm GRANULAR "B" TYPE II
  - ASPHALT GRADE PG 64-34

**Erosion and Sediment Control Responsibilities:**

ESC Measure	Symbol	Specification	Installation Responsibility	During Construction		After Construction Prior to Final Acceptance		After Final Acceptance
				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	■	Erosion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Mud Mat	■	Drawing Details	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Dust Control	■	Erosion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Consultant	Developer's Contractor	N/A
Stabilized Material Stockpiling	■	Erosion and Sediment Control Notes	Developer's Contractor	Developer's Contractor	Weekly (as a minimum)	Developer's Contractor	Developer's Contractor	N/A
Sediment Basin (for flows being pumped out of excavations)	■	...	Developer's Contractor	Developer's Contractor	After Every Rainstorm	Developer's Contractor	Developer's Contractor	N/A



**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 COINSURED.
- 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 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 THE 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 INVESTIGATION REPORT (58-IBPAR.0, DATED AUGUST 04, 2022), PREPARED BY YURI MENDEZ ENGINEERING, 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 SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2022-143) 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).

**GRADING NOTES:**

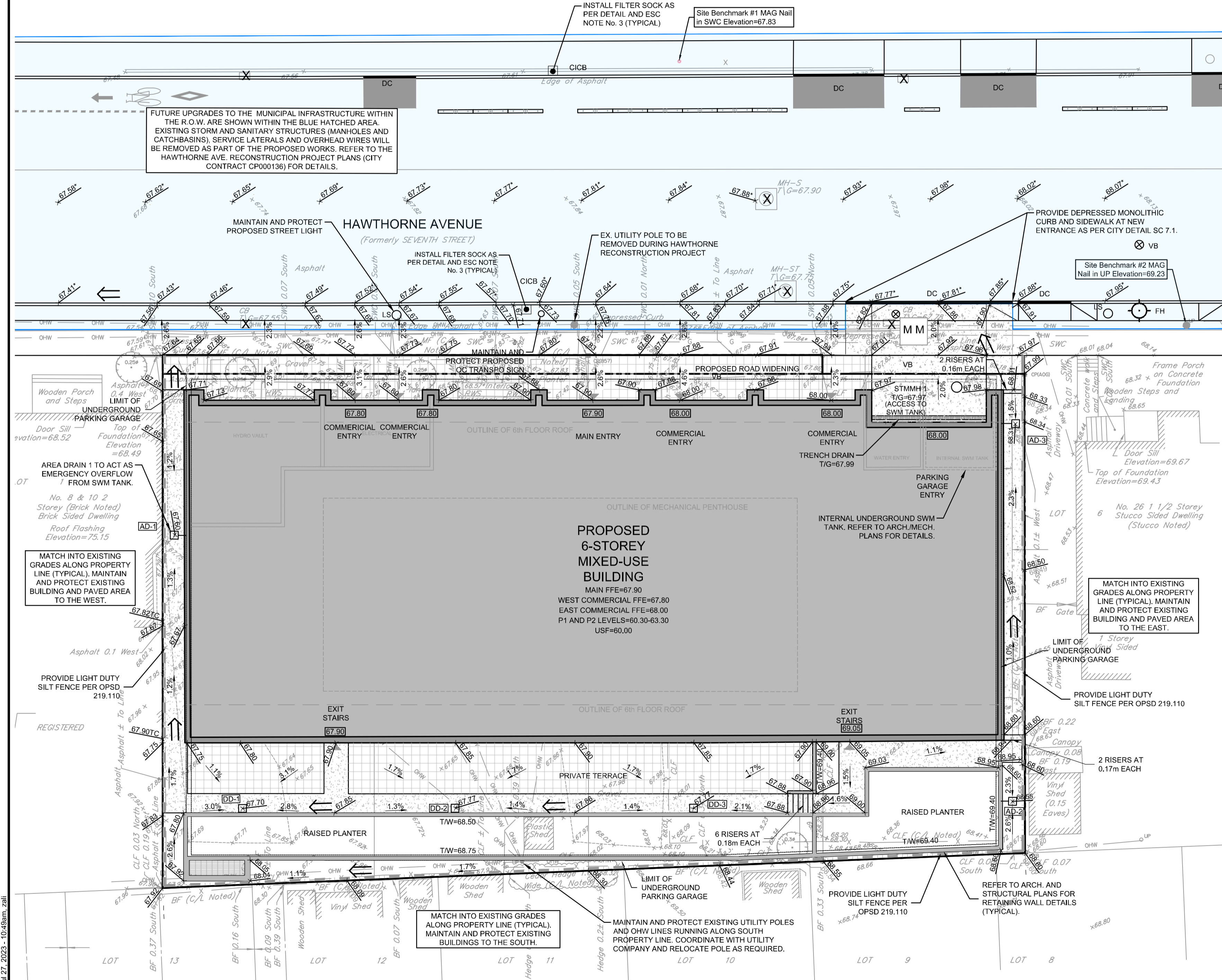
- ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED PAVED AREAS AS DIRECTED BY THE SITE ENGINEER OR GEOTECHNICAL ENGINEER.
- EXPOSED SUBGRADES IN PROPOSED PAVED AREAS SHOULD BE PROOF ROLLED WITH A LARGE STEEL DRUM ROLLER AND INSPECTED BY THE GEOTECHNICAL 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 95% 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 (130mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER CITY OF OTTAWA STANDARDS (SC1.1).
- REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING THE AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON THIS PLAN.

**EROSION AND SEDIMENT CONTROL NOTES:**

- 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.
- 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 PREVENT SURFACE EROSION FROM ENTERING ANY STORM SEWER SYSTEM DURING CONSTRUCTION, FILTER BAGS WILL BE PLACED UNDER GRATES OF NEARBY SURFACE CATCHBASINS AND MANHOLE STRUCTURES. TERRAFIX® ULTRA SILT SOCK (FILTER SOCK) IS TO BE USED AT THE OPENING OF ALL CURB INLET CATCHBASINS. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED (PER OPSD 219.110) AROUND THE CONSTRUCTION AREA (WHERE APPLICABLE). IN AREAS WHERE SILT FENCING CANNOT BE INSTALLED PER OPSD 219.110 (i.e. HARD SURFACES), A FILTER SOCK SHALL BE SUBSTITUTED. THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL CONSTRUCTION IS COMPLETE.
- 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 SWEEPED AS REQUIRED OR AS DIRECTED BY THE ENGINEER AND/OR MUNICIPALITY.
- THE CONTRACTOR SHALL ENSURE PROPER DUST CONTROL IS PROVIDED WITH THE APPLICATION OF WATER (AND IF REQUIRED, CALCIUM CHLORIDE) DURING DRY PERIODS.

**BENCHMARK NOTES:**

- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM, AND ARE REFERRED TO CITY OF OTTAWA BENCHMARK OTT 25, HAVING AN ELEVATION OF 69.613.
- 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.
- TEMPORARY JOB BENCHMARK #1 DESCRIPTION IS LOCATED ON MAG NAIL IN CONCRETE SIDEWALK LOCATED APPROXIMATELY 18m NORTH OF THE NORTH PROPERTY BOUNDARY ALONG HAWTHORNE AVE. TEMPORARY BENCHMARK #2 DESCRIPTION IS MAG NAIL IN UTILITY POLE LOCATED ON BOULEVARD APPROXIMATELY 10m EAST FROM EAST PROPERTY BOUNDARY ALONG HAWTHORNE AVE. SEE TOPOGRAPHICAL PLAN OF SURVEY OF LOTS 2, 3, 4, 5 AND PART OF LOT 6, REGISTERED PLAN 220, CITY OF OTTAWA, SURVEYED BY ANNIS, O'SULLIVAN, VOLLEBEKK LTD.
- A NEW TEMPORARY BENCHMARK MAY BE REQUIRED IF EXISTING BENCHMARKS ARE DISTURBED DURING THE HAWTHORNE AVE. RECONSTRUCTION PROJECT. ALTERNATIVELY, CONTRACTOR MAY NEED TO USE HAWTHORNE AVENUE RECONSTRUCTION PROJECT BENCHMARKS.



**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 Avenue  
 Ottawa, ON, K1S 1W8

**CONTACT: KEVIN FAGAN**  
 Tel: (613) 695-6767  
 EMAIL: kfagan@jbpa.ca

No.	REVISION	DATE	BY
2.	REVISED PER CITY COMMENTS	JULY 26/23	FST
1.	ISSUED FOR SITE PLAN CONTROL APPROVAL	APRIL 12/23	FST

DESIGN	CV/ZA
CHECKED	FST
DRAWN	ZA
CHECKED	FST
APPROVED	FST

**SCALE**  
 1:150

**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

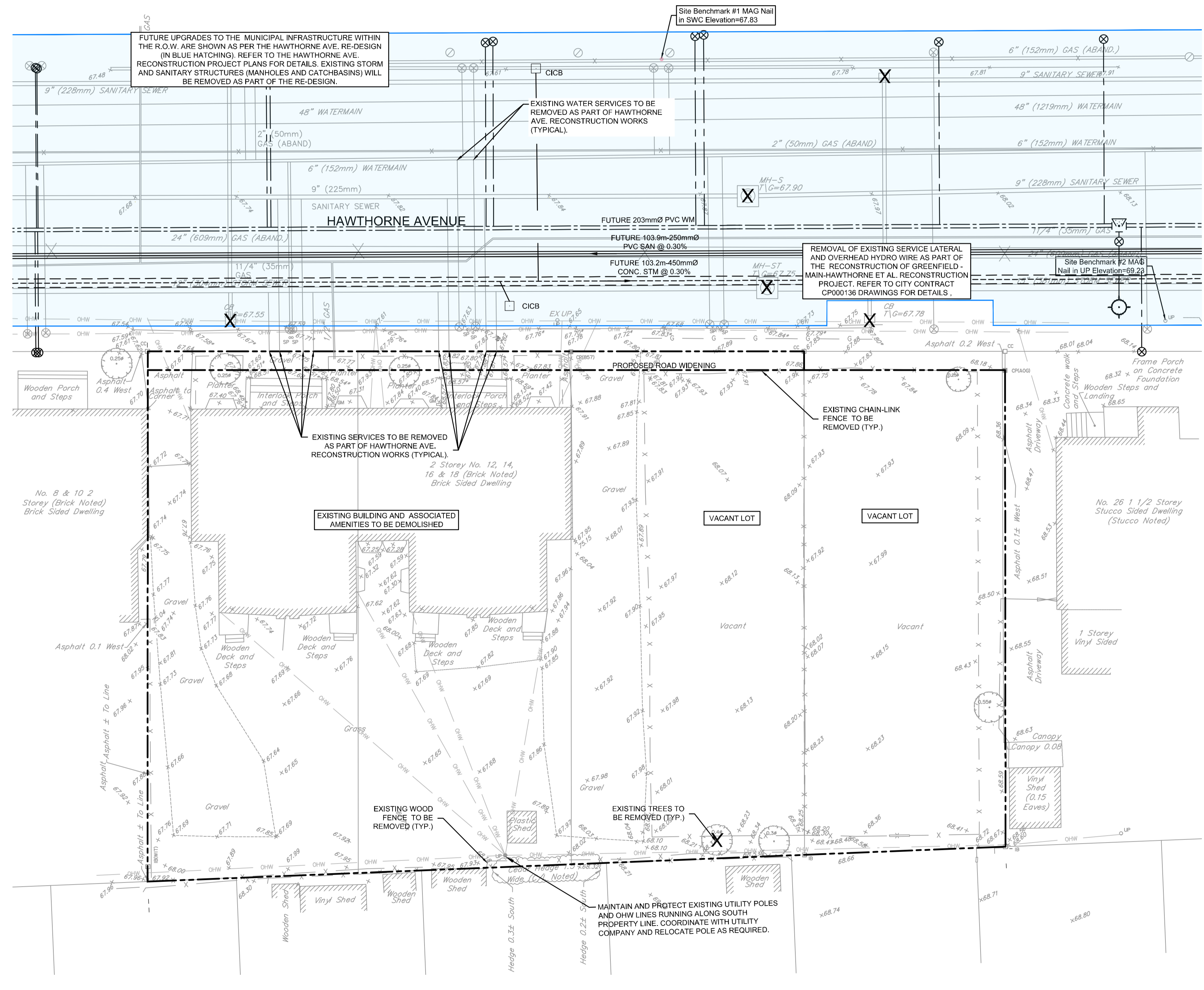
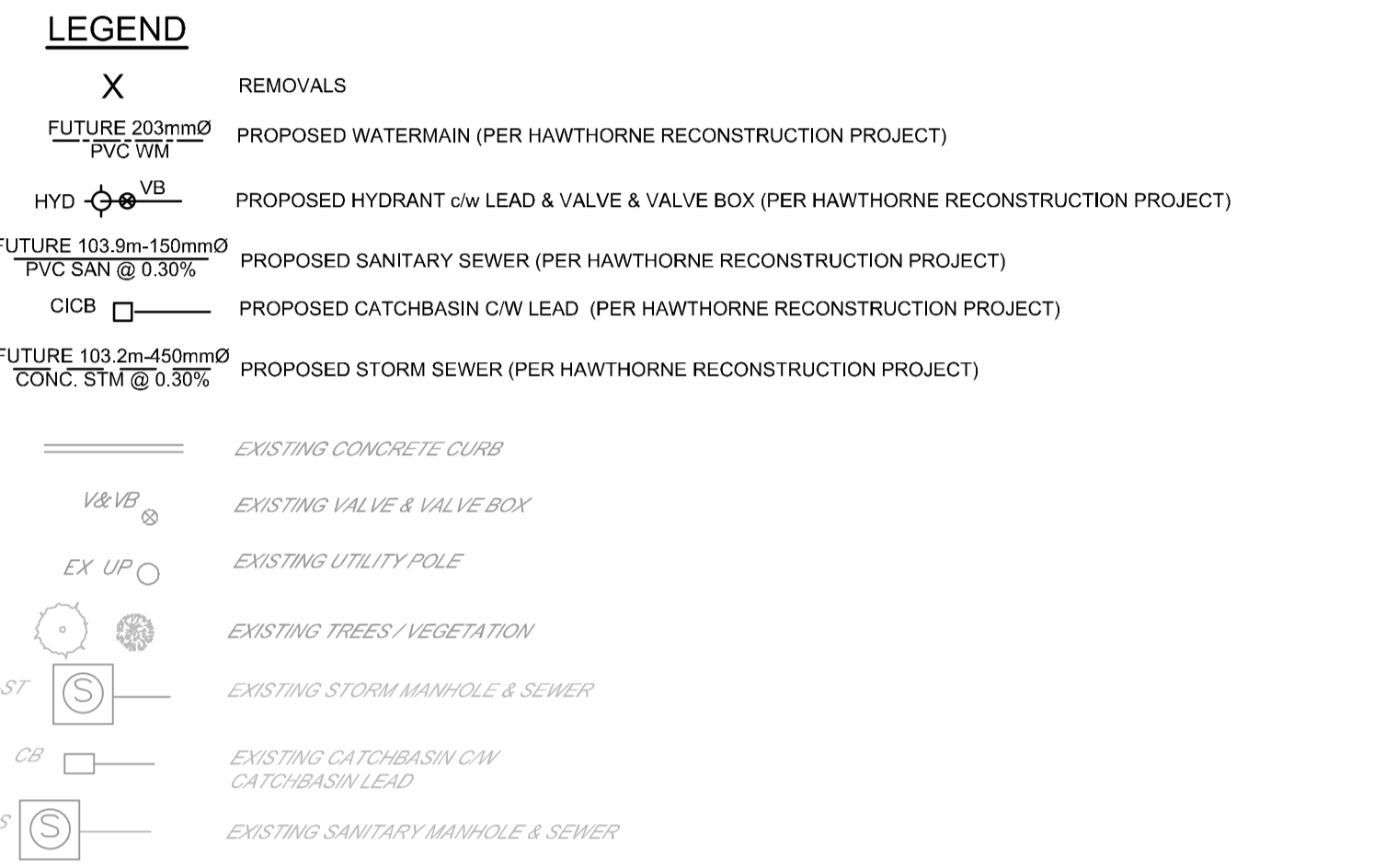
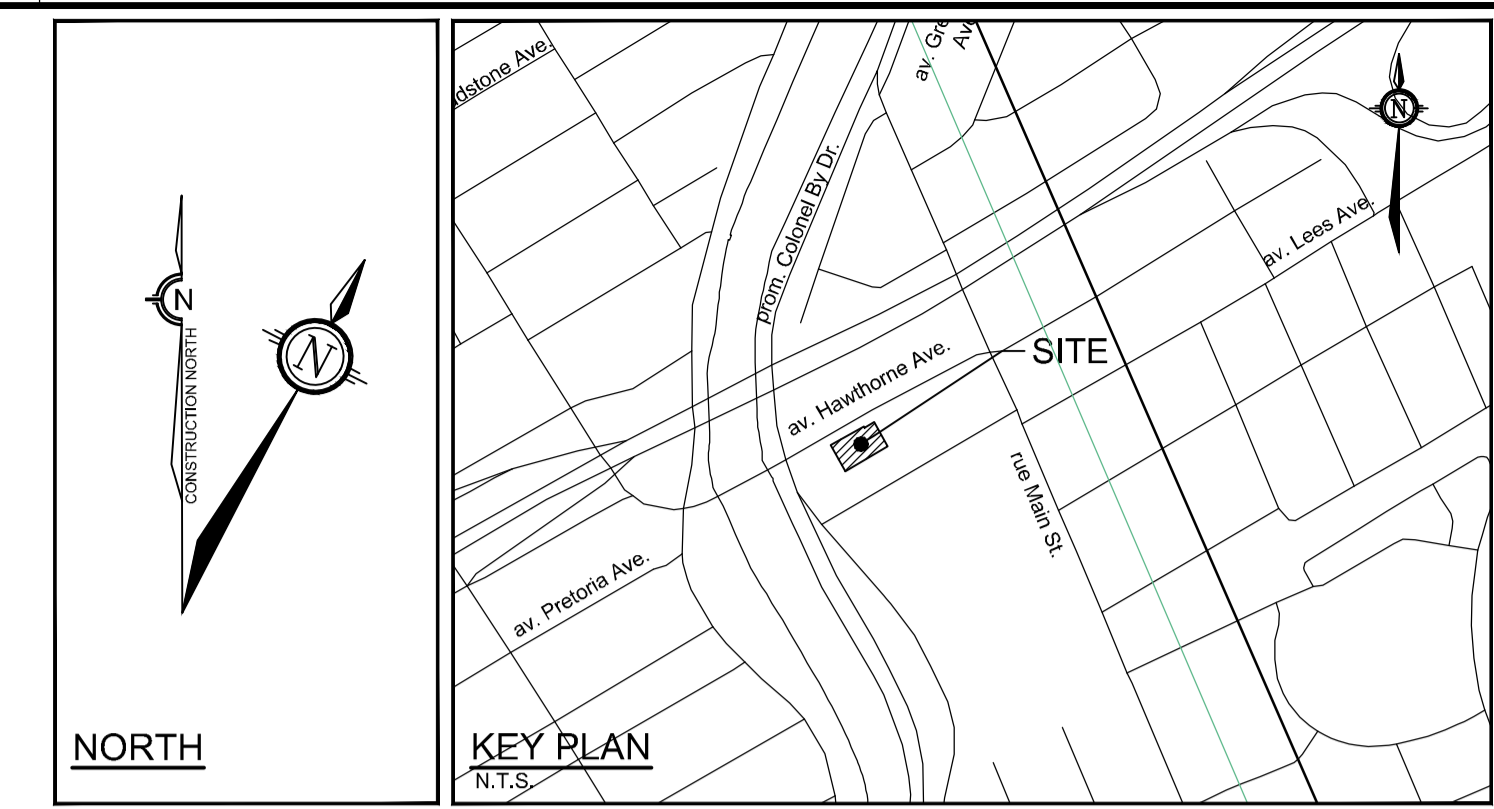
**LOCATION**  
 CITY OF OTTAWA  
 12-24 HAWTHORNE AVENUE

**DRAWING NAME**  
 GRADING AND EROSION & SEDIMENT CONTROL PLAN

PROJECT No. 122152  
 REV # 2  
 DRAWING No. 122152-GR  
 PLAN #

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- GENERAL NOTES:**
- COORDINATE AND SCHEDULE ALL WORK WITH OTHER TRADES AND CONTRACTORS.
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  - ALL ELEVATIONS ARE GEODETIC.

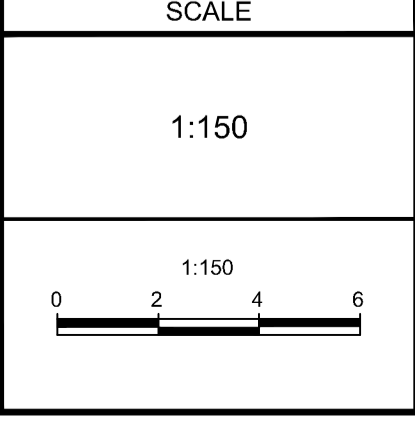
- BENCHMARK NOTES:**
- ELEVATIONS SHOWN ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM, AND ARE REFERRED TO CITY OF OTTAWA BENCHMARK OTT 25, HAVING AN ELEVATION OF 69.613.
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**OWNER INFORMATION**  
 JBPA Developments Inc.  
 107 Pretoria Avenue  
 Ottawa, ON, K1S 1W8

**CONTACT: KEVIN FAGAN**  
 Tel: (613) 695-6767  
 EMAIL: kfagan@jbpa.ca

No.	REVISION	DATE	BY
2.	REVISED PER CITY COMMENTS	JULY 26/23	FST
1.	ISSUED FOR SITE PLAN CONTROL APPROVAL	MAR 31/23	FST



DESIGN	CVZA
CHECKED	FST
DRAWN	ZA
CHECKED	FST
APPROVED	FST



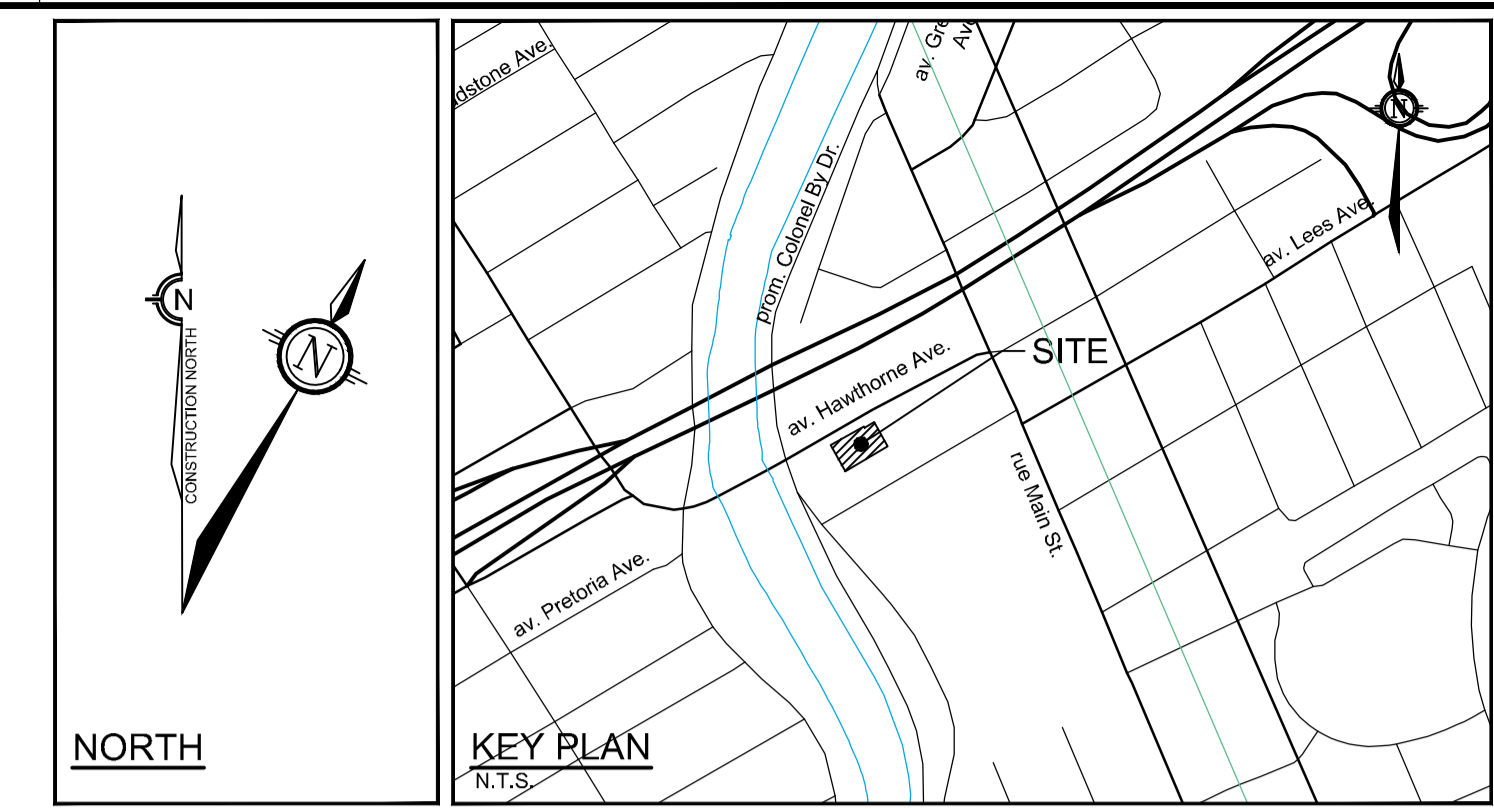
**NOVATECH**  
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 Ottawa, Ontario, Canada K2M 1P6

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 Facsimile: (613) 254-5867  
 Website: www.novatech-eng.com

<b>LOCATION</b> CITY OF OTTAWA 12-24 HAWTHORNE AVENUE		PROJECT No. 122152
<b>DRAWING NAME</b> EXISTING CONDITIONS AND REMOVALS PLAN		REV # REV # 2
		DRAWING No. 122152-REM
		PLAN #

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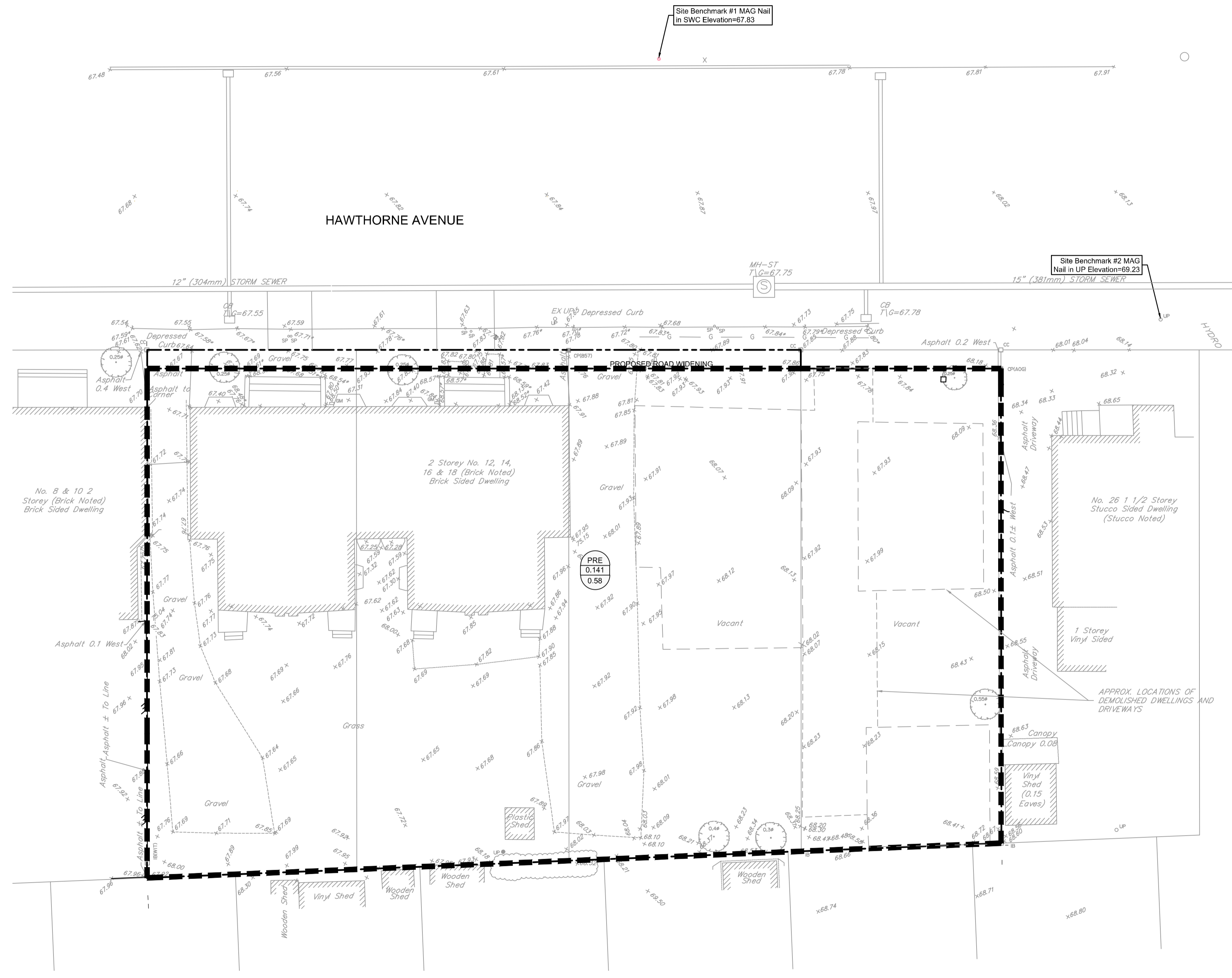


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- REFER TO THE DEVELOPMENT SERVICING STUDY AND STORMWATER MANAGEMENT REPORT (R-2022-143) PREPARED BY NOVATECH.

**BENCHMARK NOTES:**

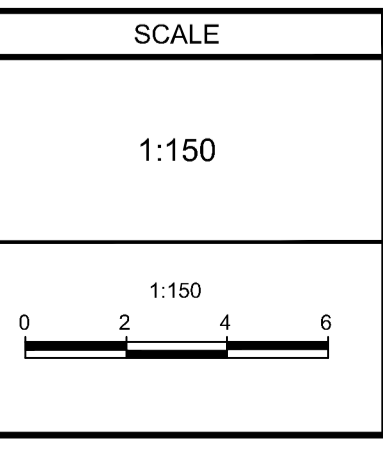
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CONTACT: KEVIN FAGAN  
Tel: (613) 695-6767  
EMAIL: kfagan@jbpa.ca

No.	REVISION	DATE	BY
2.	RE-ISSUED WITH REVISED SWM REPORT	JULY 26/23	FST
1.	ISSUED FOR SITE PLAN CONTROL APPROVAL	APRIL 12/23	FST



DESIGN	CV/ZA
CHECKED	FST
DRAWN	ZA
CHECKED	FST
APPROVED	FST



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LOCATION CITY OF OTTAWA 12-24 HAWTHORNE AVENUE	
DRAWING NAME PRE-DEVELOPMENT STORM DRAINAGE PLAN	
PROJECT No.	122152
REV	REV # 2
DRAWING No.	122152-STM1
PLAN #	

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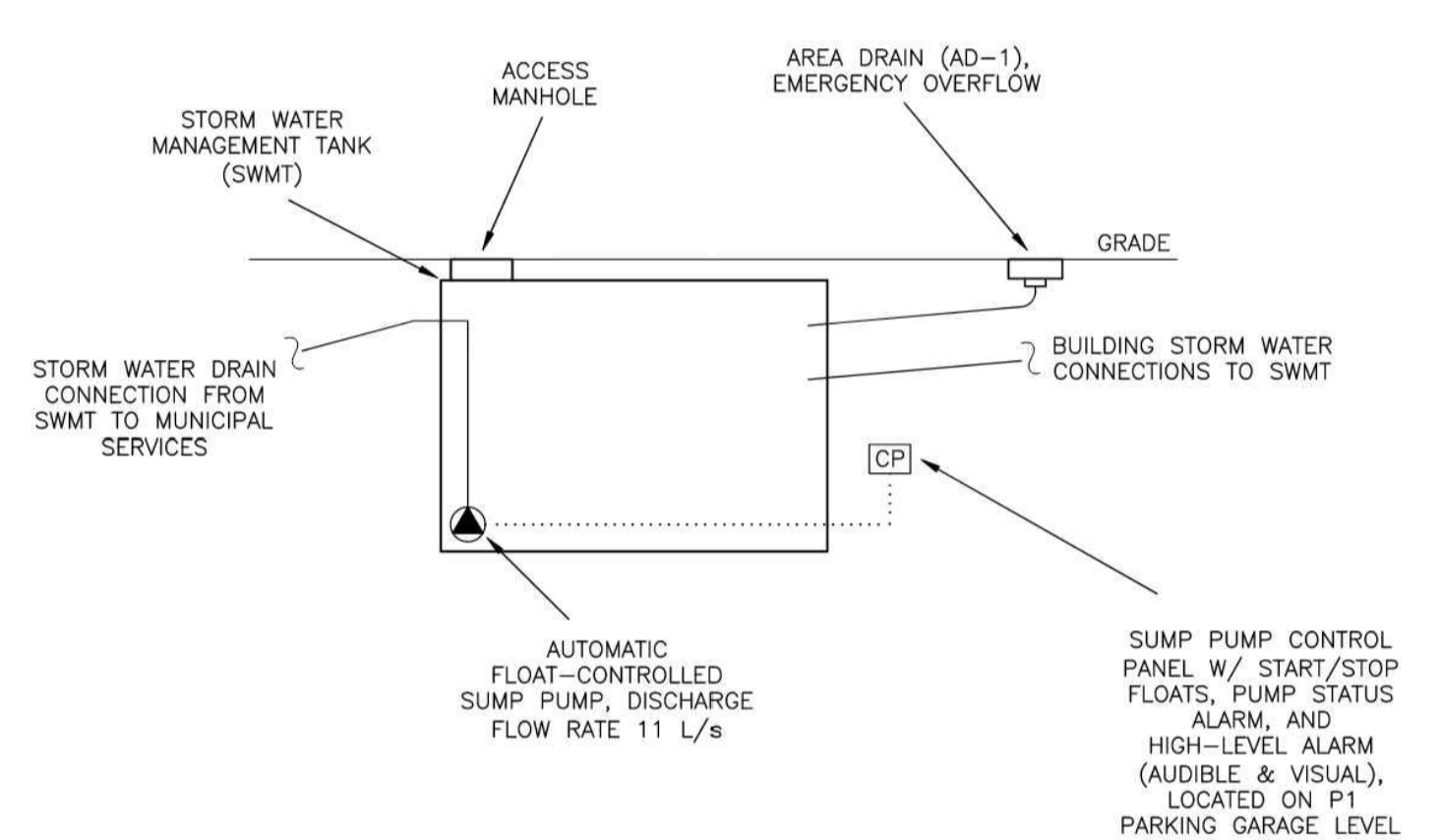
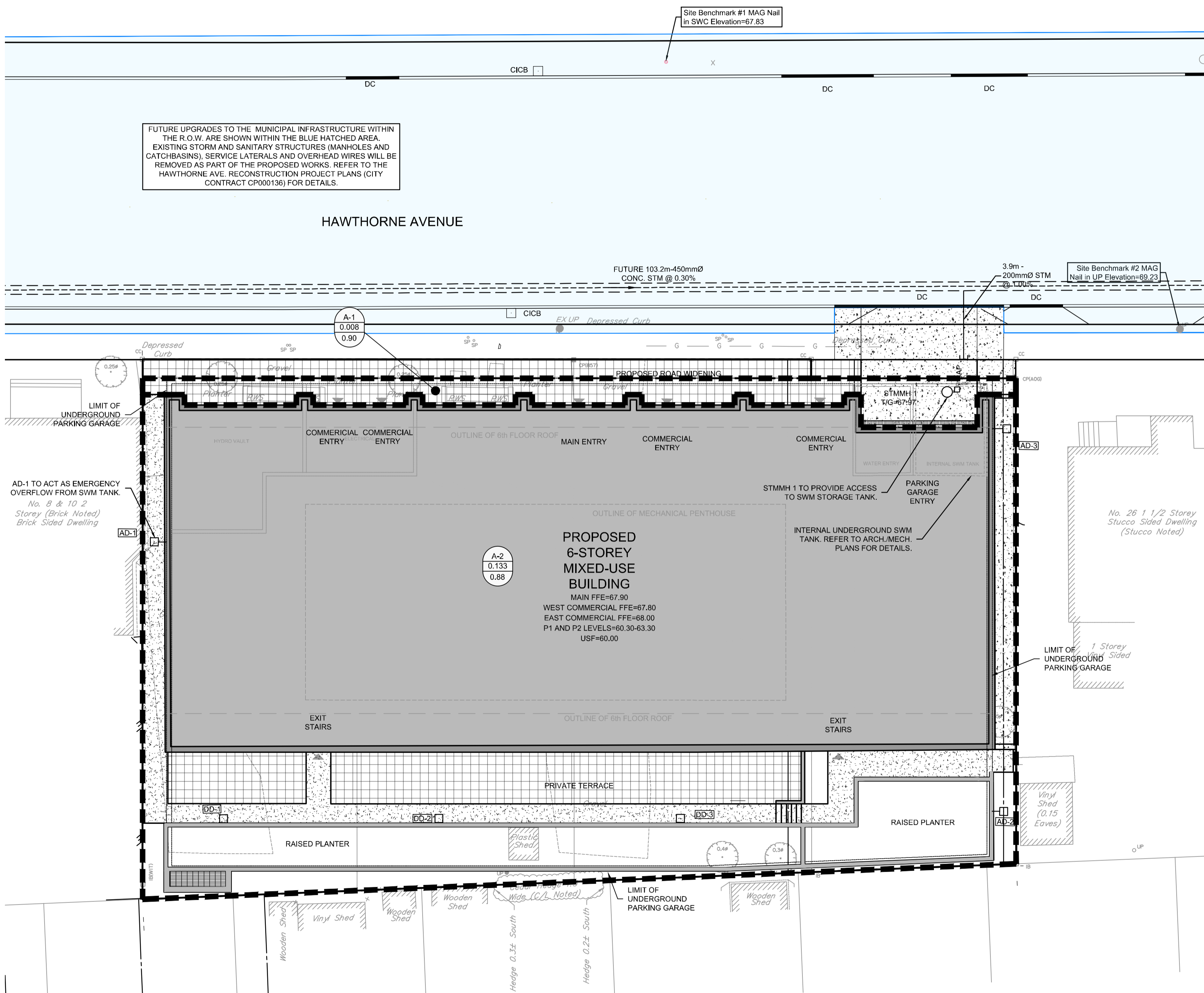
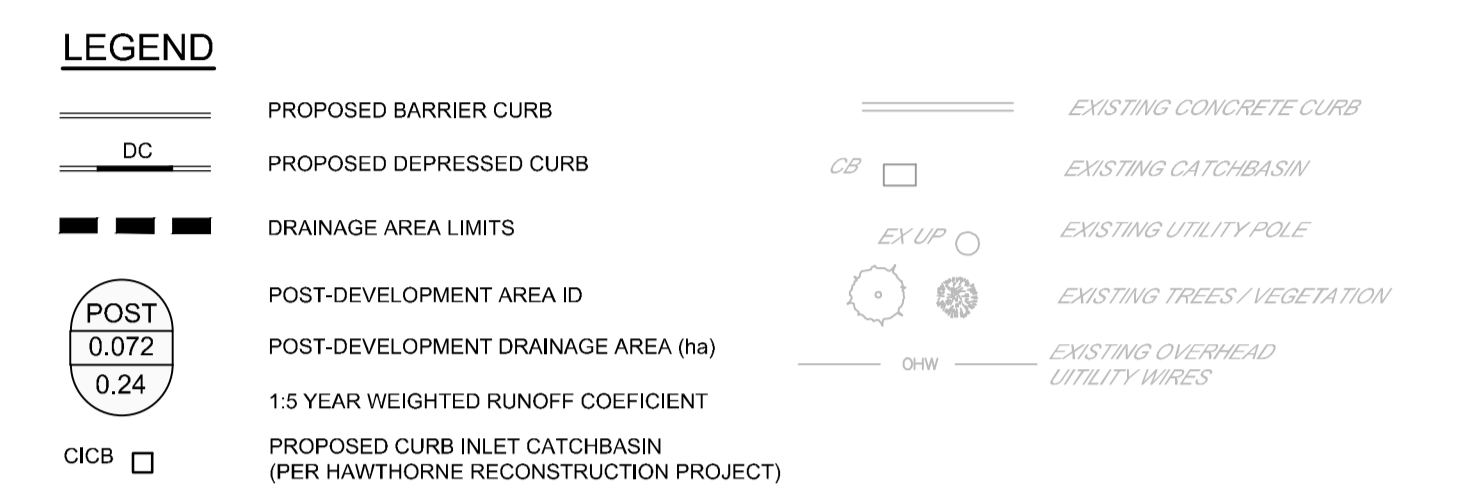
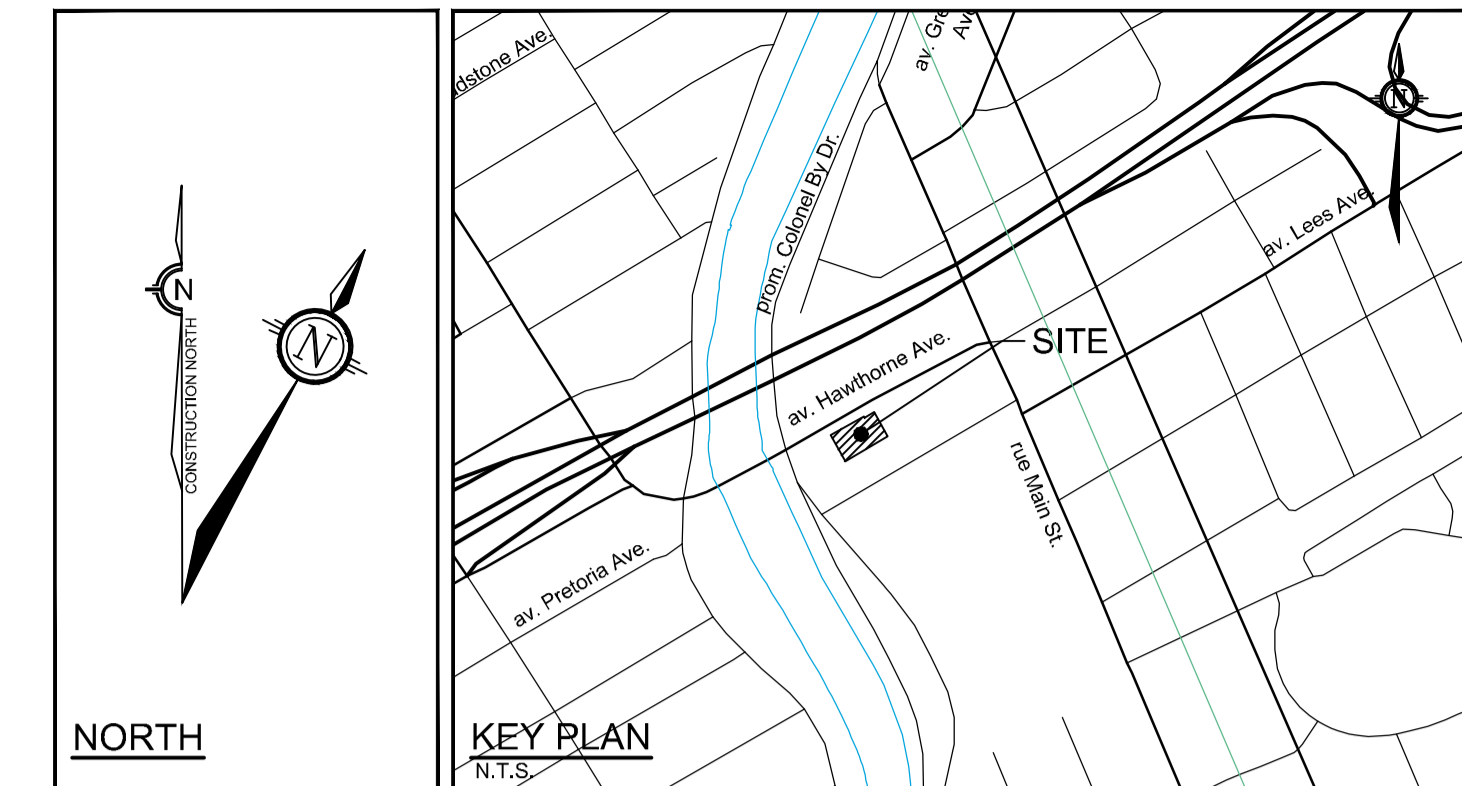
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**BENCHMARK NOTES:**

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**STORMWATER MANAGEMENT TANK SCHEMATIC**  
NOT TO SCALE  
(REFER TO ARCH./MECH. PLANS FOR DETAILS)

INTERNAL SWM STORAGE TANK			
DESIGN EVENT	STORAGE SYSTEM CONTROLLED FLOW	REQUIRED STORAGE VOLUMES	PROVIDED
1:2 YR		8.4 m <sup>3</sup>	
1:5 YR		14.5 m <sup>3</sup>	
1:100 YR	PUMPED FLOW RATE = 11.0 L/s	40.0 m <sup>3</sup>	>52 m <sup>3</sup>
1:100+20%		52.1 m <sup>3</sup>	

- NOTES:**
- ALL DRAINAGE FROM AREA A-2 (PROPOSED AMENITY AREA DECK DRAINS/AREA DRAINS AND ALL ROOF 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 ARCHITECTURAL AND MECHANICAL PLANS FOR LOCATION AND CONNECTIONS AND DETAILS OF THE INTERNAL STORMWATER STORAGE SYSTEM.

DESIGN EVENT	PRE-DEVELOPMENT CONDITIONS		POST-DEVELOPMENT CONDITIONS				
	UNCONTROLLED FLOWS (L/s)	ALLOWABLE RELEASE RATE (L/s)	A-1 FLOW (L/s)	A-2 FLOW (L/s)	TOTAL FLOW (L/s)	TOTAL REQUIRED STORAGE (m <sup>3</sup> )	REDUCTION IN FLOW (L/s or %)*
	1:2 YR	17.3	15.1	1.5	11.0	12.5	8.4
1:5 YR	23.5	2.1		13.1		14.5	10.4 or 44 %
1:100 YR	46.4	4.0		15.0		40.8	31.4 or 88 %

\*REDUCED FLOW COMPARED TO UNCONTROLLED PRE-DEVELOPMENT CONDITIONS FROM THE CURRENT 0.141 HA SITE AREA.

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2.	REVISED PER CITY COMMENTS	JULY 26/23	FST
1.	ISSUED FOR SITE PLAN CONTROL APPROVAL	APRIL 12/23	FST

**SCALE**  
1:150

**DESIGN**  
CV/ZA  
CHECKED FST  
DRAWN ZA  
CHECKED FST  
APPROVED FST

**FOR REVIEW ONLY**

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**LOCATION**  
CITY OF OTTAWA  
12-24 HAWTHORNE AVENUE

**DRAWING NAME**  
POST-DEVELOPMENT  
STORM DRAINAGE PLAN

**PROJECT No.** 122152  
**REV #** 2  
**DRAWING No.** 122152-STM2  
**PLAN #**

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