GENERAL NOTES

- 1. 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
- 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. INSURANCE POLICY TO NAME OWNERS, ENGINEERS AND ARCHITECTS AS
- 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.
- 6. 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.
- 7. ALL ELEVATIONS ARE GEODETIC AND ARE REFERRED TO THE CGVD28 DATUM AND REFERENCES OLRT MONUMENT 20110154. BEARINGS ARE GRID AND ARE REFFERED TO MTM ZONE (76°30' WEST LONGITUDE) NAD-83 (ORIGINAL). THE SITE BENCHMARK IS A MAG NAIL IN AN EXISTING UTILITY POLE, AT THE WEST CORNER OF THE SUBJECT SITE, WITH AN ELEVATION OF 69.81. REFER TO ANNIS, O'SULIVAN, VOLLEBEKK TOPOGRAPHICAL PLAN OF SURVEY, LOT 16 (SOUTH ARGYLE AVENUE) REGISTERED
- 8. IF THE SITE BENCHMARK IS TO BE DISTURBED DURING CONSTRUCTION, THE LEGAL SURVEYOR FOR THIS PROJECT (AOV) IS TO BE RETAINED TO ESTABLISH A NEW SITE BENCHMARK.
- 9. REFER TO GEOTECHNICAL REPORT (ONCE AVAILABLE) 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 HYDROGEOLOGICAL ASSESSMENT REPORT (ONCE AVAILABLE) FOR HYDROGEOLOGICAL ASPECTS OF THE SUBSURFACE CONDITIONS OF THE SITE.
- 11. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND
- 12. REFER TO SERVICING AND STORMWATER MANAGEMENT BRIEF (R-2024-031), DATED SEPTEMBER 06, 2024, PREPARED BY NOVATECH ENGINEERING CONSULTANTS LTD.
- 13. SAW CUT AND KEY GRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS. REFER TO CITY OF OTTAWA DRAWING R10 FOR DETAILS.
- 14. PROVIDE LINE/PARKING PAINTING.
- 15. 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, SLOPES, INVERT AND T/G ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, T/WM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC

SEWER NOTES:

1.	SPECIFICATIONS:

ITEM	SPEC. No.	REFERENCE
STORM / SANITARY MH FRAME & COVER SEWER TRENCH - BEDDING (GRANULAR A)	R 401.010	OPSD
- COVER (GRANULAR A OR GRANULAR I	B TYPE I, WITH MAXIMU	M PARTICLE SIZE=25mm)
STORM SEWER	PVC DR 35	
SANITARY SEWER	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	

- 2. INSULATE ALL PIPES (SAN/STM) THAT HAVE LESS THAN 2.0m COVER WITH 50mmX1200mm HI-40 INSULATION. PROVIDE 150mm CLEARANCE BETWEEN PIPE AND INSULATION.
- 3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% (2.0% PREFERRED).
- 4. PIPE BEDDING, COVER AND BACKFILL ARE TO BE COMPACTED AS PER GEOTECHNICAL CONSULTANT RECOMMENDATIONS; WE ARE CURRENTLY AWAITING THE GEOTECHNICAL REPORT. THE USE OF CLEAR CRUSHED STONE AS A BEDDING LAYER SHALL NOT BE PERMITTED.
- 5. 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.
- 6. 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 410.07.16, 410.07.16.04 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.
- 7. STORM MANHOLES AND CBMHS ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
- 8. A PRE-DEVELOPMENT CCTV INSPECTION WILL BE COMPLETED PRIOR TO CONSTRUCTION ACTIVITIES.
- 9. CONTRACTOR TO TELEVISE (CCTV) ALL PROPOSED SEWERS, 200mmØ OR GREATER PRIOR TO BASE COURSE ASPHALT. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES.

WATERMAIN NOTES:

1. SPECIFICATIONS:

SPEC. No.	REFERENCE
W17	CITY OF OTTAWA
W22	CITY OF OTTAWA
W25 / W25.2	CITY OF OTTAWA
PVC DR 18	
W18 / W19	CITY OF OTTAWA
W24	CITY OF OTTAWA
	W17 W22 W25 / W25.2 PVC DR 18 W18 / W19

- 2. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARDS AND SPECIFICATIONS, EXCAVATION, INSTALLATION, BACKFILL AND RESTORATION OF ALL WATERMAINS 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 0.25m ABOVE, 0.50m IF BELOW, CLEARANCE BETWEEN OUTSIDE OF PIPES AT ALL WATERMAIN CROSSINGS.
- 5. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.
- 6. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS, CITY OF OTTAWA STANDARD DETAILS W-39, W40, W41, W42, W43, AND W44.
- 7. PROVIDE THERMAL INSULATION FOR WATERMAIN AT OPEN STRUCTURES PER CITY OF OTTAWA STANDARD DETAIL W-23

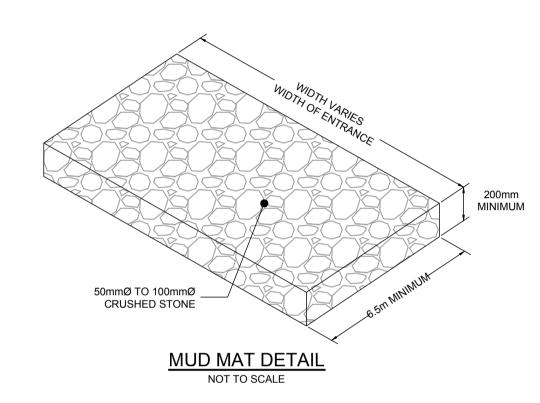
8. IF WATERMAIN MUST BE DEFLECTED TO MEET ALIGNMENT, ENSURE THAT THE AMOUNT OF DEFLECTION USED IS LESS THAN HALF THAT RECOMMENDED BY THE MANUFACTURER.

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 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.
- 3. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED.
- 4. MAXIMUM TERRACING GRADE TO BE 3:1 UNLESS OTHERWISE NOTED.
- 5. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
- 6. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED AND CONSTRUCTED AS PER OPSD 600.040.
- 7. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
- 13. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL DESIGN GRADES SHOWN ON 123062-GR.

EROSION AND SEDIMENT CONTROL NOTES:

- 1. ALL EROSION AND SEDIMENT CONTROLS SHALL BE INSTALLED TO THE SATISFACTION OF THE ENGINEER, THE CITY OF OTTAWA AND THE CONSERVATION AUTHORITY. THEY SHALL 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 SHALL 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 THIS PLAN AND IN THE NOVATECH SERVICEABILITY AND STORMWATER MANAGEMENT BRIEF. R-2024-031, DATED SEPTEMBER 06, 2024.
- 2. TO PREVENT SURFACE EROSION FROM ENTERING THE DITCH OR STORM SYSTEM DURING CONSTRUCTION, FILTER SOCKS WILL BE PLACED UNDER GRATES OF ALL PROPOSED AND EXISTING CATCHBASINS AND STRUCTURES. A LIGHT DUTY SILT FENCE BARRIER WILL ALSO BE INSTALLED IN SELECTED LOCATIONS, AND STRAW BALE BARRIERS WILL BE INSTALLED WITHIN THE OUTLET DITCHES. THESE CONTROL MEASURES WILL REMAIN IN PLACE UNTIL VEGETATION HAS BEEN ESTABLISHED AND CONSTRUCTION COMPLETE.
- 3. 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.
- 4. THE CONTRACTOR SHALL IMMEDIATELY REPORT TO THE ENGINEER ANY ACCIDENTAL DISCHARGES OF SEDIMENT MATERIAL INTO ANY DITCH OR 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.
- 5. THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 6. THE CONTRACTOR SHALL PROVIDE DUST CONTROL WITH THE APPLICATION OF WATER AND/OR CALCIUM CHLORIDE AS REQUIRED.



SEWER & WATERMAIN INSULATION NOTES:

INSULATION

THICKNESS

50

75

100

SEWER / WATER

2000-1700 / 2400-210

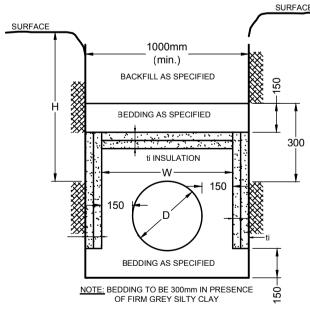
1700-1400 / 2100-1800

1400-1100 / 1800-1500

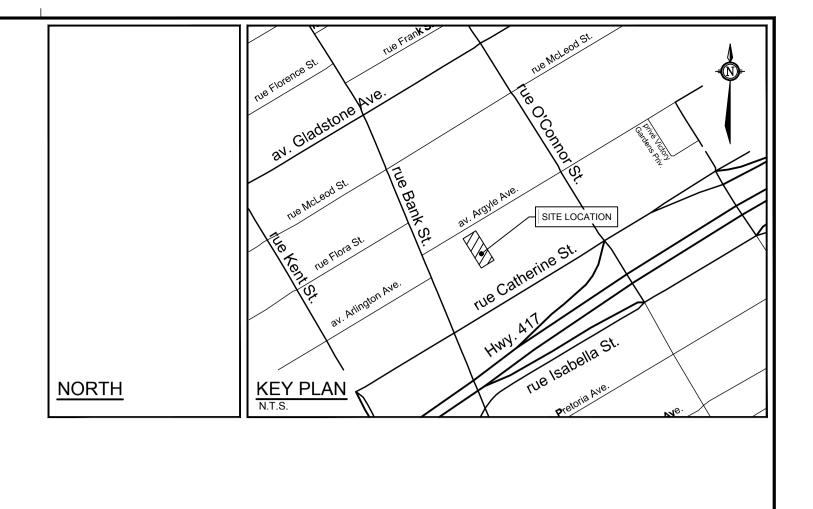
- 1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSD
- 2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF

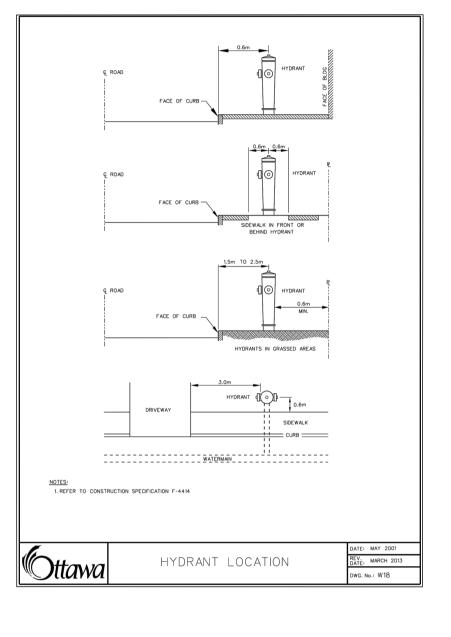
COVER WITH 50mm MINIMUM (SEE TABLE)

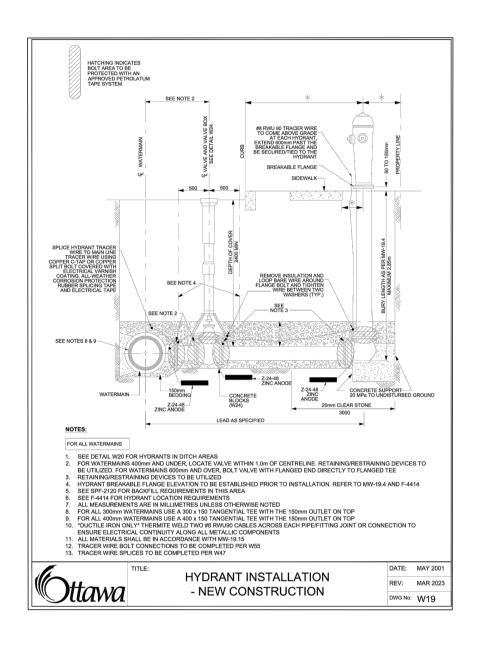
- T = THICKNESS OF INSULATION (mm) W = WIDTH OF INSULATION (mm) W = D + 300 (1000 min.)
- D = O.D OF PIPE (mm)

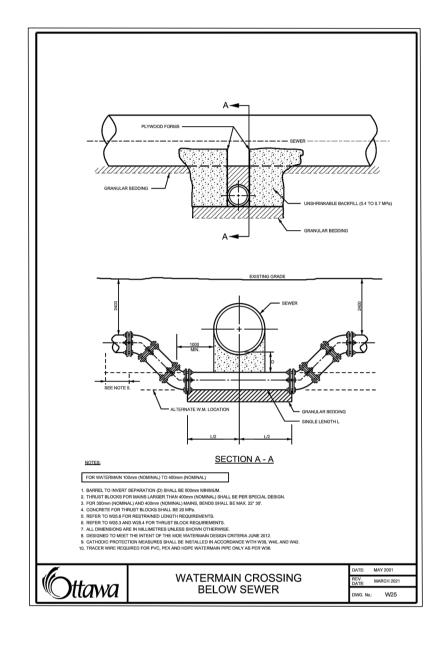


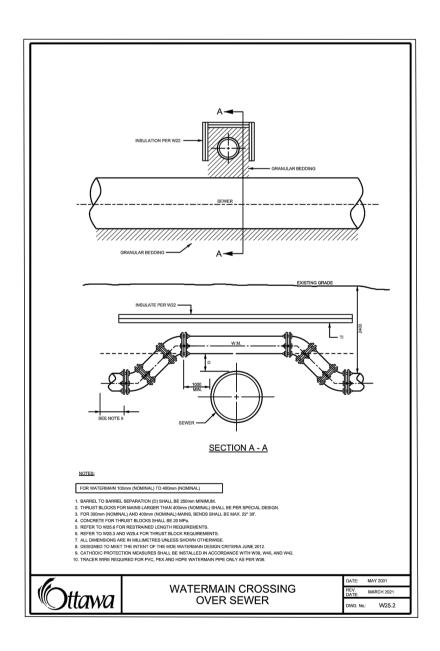
INSULATION DETAIL FOR SHALLOW SEWERS & WATERMAIN

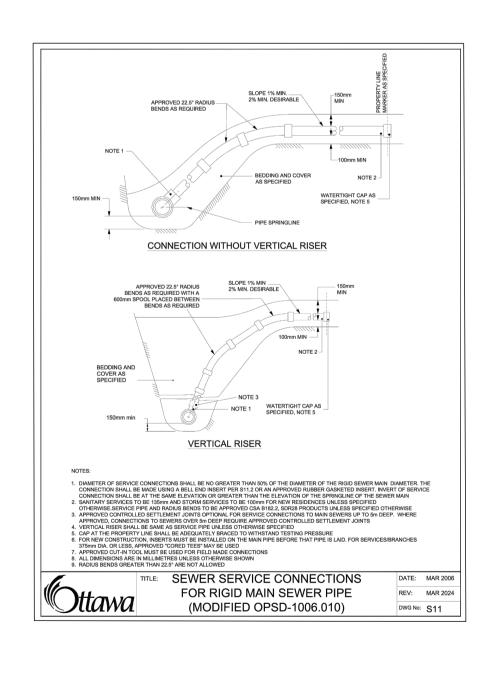


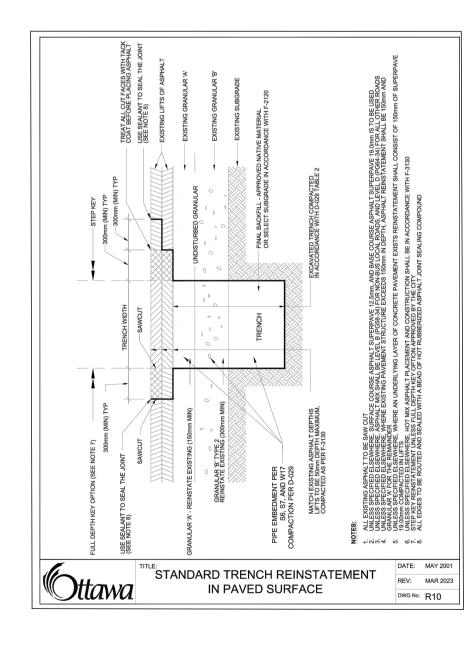






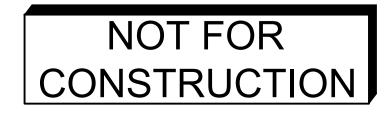




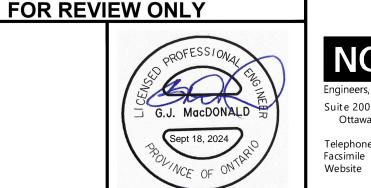


THE POSITION OF ALL POLE LINES, CONDUITS, WATERMAINS, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON THE CONTRACT DRAWINGS. AND WHERE SHOWN. THE ACCURACY OF THE POSITION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, DETERMINE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

DAMAGE TO THEM.



				SCALE	DESIGN		
						RJG	
					CHECKED		
				AS SHOWN		ARM	
					DRAWN		
						RJG	
2.	ISSUED TO ADDRESS CITY COMMENTS	SEP 06, 2024	GJM		CHECKED		
	ISSUED FOR PHASE 2 PRECONSULT	MAY 17, 2024	GJM		APPROVED	ARM	
''	ICCOED FORTHWISE 21 RECORDOLL	W/ 17, 2024			APPROVED		
No.	REVISION	DATE	BY			GJM	



Suite 200, 240 Michael Cowpland Drive Ottawa, Ontario, Canada K2M 1P6 Telephone (613) 254-9643

CITY OF OTTAWA 254 ARGYLE AVENUE DRAWING NAME

(613) 254-5867

www.novatech-eng.com

NOTES AND DETAILS PLAN

REV # 2

123062-ND

