

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. PROTECT AND ASSUME RESPONSIBILITY FOR ALL EXISTING UTILITIES WHETHER OR NOT SHOWN ON THIS DRAWING.
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 CO-INSURED.
5. 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 DIMENSIONS AND INVERTS MUST BE VERIFIED PRIOR TO CONSTRUCTION. IF THERE IS ANY DISCREPANCY THE CONTRACTOR IS TO NOTIFY THE ENGINEER PROMPTLY.
8. ALL ELEVATIONS ARE GEODETIC AND ARE REFERRED TO THE CGVD28 GEODETIC DATUM. BEARINGS ARE DERIVED FROM MTL ZONE 9 (NAD-83, ORIGINAL) PRIOR TO CONSTRUCTION, THE CONTRACTOR IS TO RETAIN A SURVEYOR TO PROVIDE A LOCAL SITE BENCHMARK.
9. REFER TO GEOTECHNICAL INVESTIGATION REPORT PROPOSED RESIDENTIAL DEVELOPMENT, COPPERWOOD FLATS BLOCK 127, 1075 MARCH ROAD, OTTAWA ONTARIO, PG6613-1, REVISION 4 (DATED AUGUST 1, 2025), PREPARED BY PATERSON GROUP FOR SUBSURFACE CONDITIONS, CONSTRUCTION RECOMMENDATIONS AND GEOTECHNICAL INSPECTION REQUIREMENTS. THE GEOTECHNICAL CONSULTANT IS TO REVIEW ON-SITE CONDITIONS AFTER EXCAVATION PRIOR TO PLACEMENT OF THE GRANULAR MATERIAL.
10. REFER TO ARCHITECT'S AND LANDSCAPE ARCHITECT'S DRAWINGS FOR BUILDING AND HARD SURFACE AREAS AND DIMENSIONS.
11. REFER TO THE STORMWATER MANAGEMENT REPORT No. R-2025-009, DATED August 19<sup>th</sup>, 2025 PREPARED BY NOVATECH.
12. SAW CUT AND KEYGRIND ASPHALT AT ALL ROAD CUTS AND ASPHALT TIE IN POINTS AS PER CITY OF OTTAWA STANDARDS (R10 AND R25).
13. PROVIDE LINE/PARKING PAINTING.
14. 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 TIG ELEVATIONS, STRUCTURE LOCATIONS, VALVE AND HYDRANT LOCATIONS, TWM ELEVATIONS AND ANY ALIGNMENT CHANGES, ETC.
15. CONTRACTOR IS RESPONSIBLE FOR ALL LAYOUT FOR CONSTRUCTION PURPOSES.

1. SUPPLY AND CONSTRUCT ALL SEWERS AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.		
2. SPECIFICATIONS:		
<u>ITEM</u>	<u>SPEC. No.</u>	<u>REFERENCE</u>
SANITARY/STORM/CATCHBASIN MANHOLE (12000)	701.011	OPSD
STORM MANHOLE (15000)	701.011	OPSD
CATCHBASIN (600x600)	705.010	OPSD
CATCH-BASIN FRAME AND COVER	400.020	OPSD
STORM/SANITARY MH FRAME	\$25	CITY OF OTTAWA
SANITARY COVER	\$24	CITY OF OTTAWA
STORM COVER (CLOSED)	\$24.1	CITY OF OTTAWA
STORM COVER (OPEN)	\$26.1	CITY OF OTTAWA
SEWER TRENCH	\$56 & \$7	CITY OF OTTAWA
STORM SEWER < 450mm OD	PVC DR 35 (UNLESS SPECIFIED OTHERWISE)	
STORM SEWER >= 450mm OD	CONC 850 (UNLESS SPECIFIED OTHERWISE)	
SANITARY SEWER LESS THAN 2.5M CLEAR TO WTM)	PVC DR 20	
SANITARY SEWER (MORE THAN 2.5M CLEAR TO WTM)	PVC DR 35	
CATCHBASIN LEAD	PVC DR 35	
CATCHBASIN COVER	\$19	CITY OF OTTAWA
WATERTIGHT FRAME & COVER (SANMH105 & SANMH110)	401.030	OPSD
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 (REFER TO DETAIL).		
3. SERVICES ARE TO BE CONSTRUCTED TO 1.0m FROM FACE OF BUILDING AT A MINIMUM SLOPE OF 1.0% (2.0% PREFERRED)		
4. ALL STORM AND SANITARY LATERALS SHALL BE EQUIPPED WITH BACKFLOW PREVENTION DEVICES AS PER THE CITY OF OTTAWA STANDARD DETAILS S14 AND S14.1 OR S14.2		

7. THE PIPE BEDDING FOR THE SEWER AND WATER PIPES SHOULD CONSIST OF AT LEAST 150 MM OF OPSS GRANULAR. THE BEDDING SHOULD EXTEND TO THE SPRING LINE OF THE PIPE. COVER MATERIAL FROM THE SPRING LINE TO AT LEAST 300mm ABOVE OVERT OF THE PIPE, SHOULD CONSIST OF OPSS GRANULAR A OR GRANULAR B TYPE II WITH MAXIMUM SIZE OF 20mm. BEDDING MATERIAL FOR THE SPRING LINE TO THE SPRING LINE OF 300mm WHERE SUBGRADE CONSISTS OF GREY SILT ROCK. THE BEDDING AND COVER MATERIAL SHOULD BE PLACED IN MAXIMUM 225mm THICK LIFTS COMPACTED TO 95% OF THE MATERIALS STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMD).
8. THE BACKFILL MATERIAL WITHIN THE FROST ZONE (ABOUT 1.8m BELOW FINISHED GRADE) SHOULD MATCH THE SOILS EXPOSED AT THE TRENCH WALLS TO REDUCE POTENTIAL DIFFERENTIAL FROST HEAVING. THE BACKFILL SHOULD BE PLACED IN MAXIMUM 300mm THICK LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 95% OF THE MATERIALS SPMD.
9. 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.
10. ALL STORM MANHOLES WITH PIPE SIZES LESS THAN 900mm ARE TO HAVE 300mm SUMPS UNLESS OTHERWISE INDICATED.
11. CONTRACTOR TO TELETYPE (CCTV) ALL PROPOSED SEWERS 200mm OR GREATER IN DIAMETER PRIOR TO BASE COURSE ASPHALT TO ENSURE THAT THEY ARE CLEAN AND OPERATIONAL. UPON COMPLETION OF CONTRACT, THE CONTRACTOR IS RESPONSIBLE TO FLUSH AND CLEAN ALL SEWERS & APPURTENANCES AND RE CCTV PRIOR TO ACCEPTANCE. OBTAIN APPROVAL FROM THE CITY'S SEWER OPERATIONS. PROVIDE THE CCTV INSPECTION AND REPORT TO THE ENGINEER FOR REVIEW AND APPROVAL.
12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GENERAL PLAN OF SERVICES INDICATING ALL APPLICABLE SERVING AS-BUILT INFORMATION SHOWN ON THIS PLAN. AS-BUILT INFORMATION MUST INCLUDE: PIPE MATERIAL, SIZES, LENGTHS, SLOPES, INVERT AND T/O ELEVATIONS, STRUCTURE LOCATIONS AND ANY ALIGNMENT CHANGES, ETC.
13. THE OWNER SHALL REQUIRE THAT THE SITE SERVING CONTRACTOR PERFORM FIELD TESTS FOR QUALITY CONTROL OF ALL SANITARY SEWERS. LEAKAGE TESTING SHALL BE COMPLETED IN ACCORDANCE WITH OPSS 4107.16, 41.07, 16.04 AND 41.07.24. DYE TESTING IS TO BE COMPLETED ON ALL SANITARY SERVICES TO CONFIRM PROPER CONNECTION TO THE EXISTING 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.
14. ALL CATCHBASINS AND CATCH-BASIN MANHOLES TO BE PROVIDED WITH MINIMUM 3 METER LONG PERFORATED SUBDRAINS EXTENDING IN TWO DIRECTIONS 300mm BELOW THE SUBGRADE LEVEL. SUBDRAIN IS TO BE PROVIDED AT THE TRANSITIONS BETWEEN DIFFERENT PAVEMENT COMPOSITIONS. THE SUBGRADE SURFACE SHOULD BE SHAPED TO PROMOTE WATER FLOW TO THE DRAINAGE LINES.
15. ALL WORKS SHALL BE PERFORMED AS APPLICABLE IN ACCORDANCE WITH CITY OF OTTAWA STANDARD SPECIFICATIONS, AND IN PARTICULAR O.P.S.S. 407 AND 410.

- ACCESS LANES AND HEAVY-TRUCK PARKING AREAS	
40mm	WEAR COURSE - HL-3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE
50mm	BINDER COURSE - HL-8 OR SUPERPAVE 19.0 ASPHALTIC CONCRETE
150mm	BASE - OPSS GRANULAR A CRUSHED STONE
400mm	SUBBASE - OPSS GRANULAR B TYPE II

- CAR ONLY PARKING AREAS
- |       |  |
|-------|--|
| 50mm  | WEAR COURSE - HL3 OR SUPERPAVE 12.5 ASPHALTIC CONCRETE |
| 150mm | BASE - OPSS GRAN "A" CRUSHED STONE                     |
| 300mm | SUBBASE - OPSS GRAN "B" TYPE II                        |

- MINIMUM PERFORMANCE GRADED (PG) 58-34 ASPHALT CEMENT.
- SUBGRADE - EITHER FILL, IN SITU SOIL OR BEDROCK OR OPSS GRANULAR TYPE I OR II MATERIAL PLACED OVER IN SITU SOIL, BEDROCK OR FILL.

REFER TO GEOTECHNICAL REPORT FOR SUBSURFACE CONDITIONS AND CONSTRUCTION RECOMMENDATIONS

1. SUPPLY AND CONSTRUCT ALL WATERMAIN AND APPURTENANCES IN ACCORDANCE WITH THE MOST CURRENT CITY OF OTTAWA STANDARDS AND SPECIFICATIONS.

2. SPECIFICATIONS:

<u>ITEM</u>	<u>SPEC. No.</u>	<u>REFERENCE</u>
WATERMAIN TRENCHING	W17	CITY OF OTTAWA
THERMAL INSULATION IN SHALLOW TRENCHES	W22	CITY OF OTTAWA
THERMAL INSULATION BY OPEN STRUCTURES	W23	CITY OF OTTAWA
WATERMAIN CROSSING BELOW SEWER	W25	CITY OF OTTAWA
WATERMAIN CROSSING ABOVE SEWER	W25.2	CITY OF OTTAWA
HYDRANT	WSD-24	CITY OF OTTAWA
VALVE AND VALVE BOX	WSD-19	CITY OF OTTAWA
WATERMAIN	PVC-DR 18	

3. SUPPLY AND CONSTRUCT ALL WATERMAINS AND APPURTENANCES IN ACCORDANCE WITH THE CITY OF OTTAWA STANDARD 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.

4. WATERMAIN SHALL BE MINIMUM 2.4m DEPTH BELOW GRADE UNLESS OTHERWISE INDICATED. ANY WATERMAIN WITH LESS THAN 2.4m COVER TO BE INSULATED PER THE SEWER AND WATERMAIN NOTES AND DETAIL.

5. PROVIDE MINIMUM CLEARANCE, BETWEEN OUTSIDE OF PIPES, AT ALL CROSSINGS AS PER CITY DETAILS W25 AND W25.2. WATERMAIN MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.25m OVER AND 0.50m UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.

6. WATER SERVICE IS TO BE CONSTRUCTED TO WITHIN 1.0m OF FOUNDATION WALL AND CAPPED, UNLESS OTHERWISE INDICATED.

7. CATHODIC PROTECTION REQUIRED FOR ALL IRON FITTINGS CITY OF OTTAWA STANDARD DETAILS WSD-39, 40, 41, 42, 43 AND 44.

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.

3. ALL TOPSOIL, ORGANIC OR DELETERIOUS MATERIAL MUST BE ENTIRELY REMOVED FROM BENEATH THE PROPOSED BUILDING AND PAVED AREAS.
2. EXPOSED SUB-GRADES 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. NON-SPECIFIED EXISTING FILL ALONG WITH SITE-EXCAVATED SOIL, COULD BE PLACED AS GENERAL LANDSCAPING FILL WHERE SETTLEMENT OF THE GROUND SURFACE IS OF MINOR CONSEQUENCE. THESE MATERIALS SHOULD BE SPREAD IN LIFTS WITH A MAXIMUM THICKNESS OF 300 mm AND COMPACTED BY THE TRACKS OF THE SPREADING EQUIPMENT TO MINIMIZE VOIDS. IF THIS MATERIAL IS TO BE USED TO BUILD UP THE SUBGRADE LEVEL FOR AREAS TO BE PAVED, IT SHOULD BE COMPACTED IN THIN LIFTS TO AT LEAST 95% OF THE MATERIAL'S SPMD.
4. THE PAVEMENT GRANULAR BASE AND SUBBASE SHOULD BE PLACED IN MAXIMUM 300 mm THICK LIFTS AND COMPACTED TO A MINIMUM OF 100% OF THE MATERIAL'S SPMD USING SUITABLE COMPACTION EQUIPMENT. IF BEDROCK IS ENCOUNTERED AT THE SUBGRADE LEVEL, THE TOTAL THICKNESS OF THE PAVEMENT GRANULAR MATERIALS (BASE AND SUBBASE) COULD BE REDUCED TO 300 mm FOR THE NOTED PAVEMENT STRUCTURES. THE UPPER 300 mm OF THE BEDROCK SURFACE SHOULD BE REVIEWED AND APPROVED BY PATERSON PRIOR TO PLACING THE BASE AND SUBBASE MATERIALS. CARE SHOULD BE EXERCISED TO ENSURE THAT THE BEDROCK SUBGRADE DOES NOT HAVE DEPRESSIONS THAT WILL TRAP THE WATER.
5. BACKFILL MATERIAL BELOW SIDEWALKS AND WALKWAY SUBGRADE AREAS THROUGHOUT THE SUBJECT SITE, INCLUDING ALONG THE BUILDINGS, SHOULD BE PROVIDED WITH A MINIMUM 300 mm THICK LAYER OF OPSS GRANULAR A OR OPSS GRANULAR B TYPE II CRUSHED STONE. THIS MATERIAL SHOULD BE PLACED IN MAXIMUM 300 mm THICK LOOSE LIFTS AND COMPACTED TO A MINIMUM OF 98% OF THE MATERIALS SPMD.
6. IF SOFT SPOTS DEVELOP IN THE SUBGRADE DURING COMPACTION OR DUE TO CONSTRUCTION TRAFFIC, THE AFFECTED AREAS SHOULD BE EXCAVATED AND REPLACED WITH OPSS GRANULAR B TYPE I OR II MATERIAL. THE PAVEMENT GRANULAR BASE AND SUBBASE SHOULD BE PLACED IN MAXIMUM 300 mm THICK LIFTS AND COMPACTED TO A MINIMUM OF 100% OF THE MATERIAL'S SPMD USING SUITABLE VIBRATORY EQUIPMENT.
7. ALL CURBS SHALL BE BARRIER CURB (150mm) UNLESS OTHERWISE NOTED. REFER TO CITY OF OTTAWA DETAIL SC1.1.
8. GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE.
9. MINIMUM OF 2% GRADE FOR ALL GRASS AREAS UNLESS OTHERWISE NOTED
10. ALL GRADES BY CURBS ARE EDGE OF PAVEMENT GRADES UNLESS OTHERWISE INDICATED.
11. REFER TO LANDSCAPE PLAN FOR PLANTING AND OTHER LANDSCAPE FEATURE DETAILS.
12. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING THE AS-BUILT ELEVATION OF EVERY DESIGN GRADE SHOWN ON THIS PLAN.
13. AGENITIVE MARINE CLAY IS TO BE REMOVED AND REPLACED WITH ENGINEERING FILL AS DIRECTED GEOTECHNICAL CONSULTANT.

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.

- 1) THE OWNER AGREES TO PREPARE AND IMPLEMENT AN EROSION AND SEDIMENT CONTROL PLAN TO THE SATISFACTION OF THE CITY OF OTTAWA, 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 IN ACCORDANCE WITH THE CURRENT BEST MANAGEMENT PRACTICES FOR EROSION AND SEDIMENT CONTROL, SUCH AS BUT NOT LIMITED TO INSTALLING FILTER CLOTHS ACROSS MANHOLE/CATCHBASIN LIDS TO PREVENT SEDIMENTS FROM ENTERING STRUCTURES AND INSTALL AND MAINTAIN A LIGHT DUTY SILT FENCE BARRIER AS REQUIRED.
- 2) THE CONTRACTOR SHALL PLACE FILTER BAGS UNDER THE CATCHBASIN AND MANHOLE GRATES FOR THE DURATION OF CONSTRUCTION AND WILL REMAIN IN PLACE DURING ALL PHASES OF CONSTRUCTION.
- 3) SILT FENCING FOR ENTIRE PERIMETER OF SITE, SHALL BE UTILIZED TO CONTROL EROSION FROM THE SITE DURING CONSTRUCTION.
- 4) THE CONTRACTOR ACKNOWLEDGES THAT FAILURE TO IMPLEMENT EROSION AND SEDIMENT CONTROL MEASURES MAY BE SUBJECT TO PENALTIES IMPOSED BY ANY APPLICABLE REGULATORY AGENCY.
- 5) PROVIDE MUD MATS AT ALL CONSTRUCTION ACCESS POINTS TO MINIMIZE SEDIMENT TRANSPORT OFFSITE.
- 6) EROSION AND SEDIMENT CONTROL MEASURES MAY BE MODIFIED IN THE FIELD AT THE DISCRETION OF THE CITY OF OTTAWA SITE INSPECTOR OR CONSERVATION AUTHORITY.

1. NO HORIZONTAL BENDS IN RIGHT-OF-WAY UNLESS OTHERWISE APPROVED BY THE CITY. MAXIMUM OF TWO 22.5° HORIZONTAL BENDS FOR SANITARY AND STORM SERVICES.
2. 1.0 % MINIMUM SANITARY AND STORM SERVICE GRADIENT WITH 2% PREFERRED.
3. SEE S7 FOR PIPE FOUNDATION, EMBEDMENT AND FINAL BACKFILL REQUIREMENTS.
4. MULTIPLE TAPS WITH SADDLES IN PVC WATERMAIN SHALL BE STAGGERED AND MINIMUM 600mm APART.
5. ELEVATION OF SERVICES VARIABLE DEPENDING ON GRADIENT AND/OR DEPTH OF COVER.
6. ALL DIMENSIONS ARE IN MILLIMETERS.
7. CONTRACTOR TO PROVIDE THE CONSULTANT WITH A GRADING PLAN INDICATING AS-BUILT ELEVATIONS OF ALL GRADES SHOWN ON THIS PLAN.
8. GRADE AND/OR FILL BEHIND PROPOSED CURB AND BETWEEN BUILDINGS AND CURBS, WHERE REQUIRED TO PROVIDE POSITIVE DRAINAGE.
9. REFER TO ELECTRICAL DESIGN FOR UTILITY LOCATIONS.

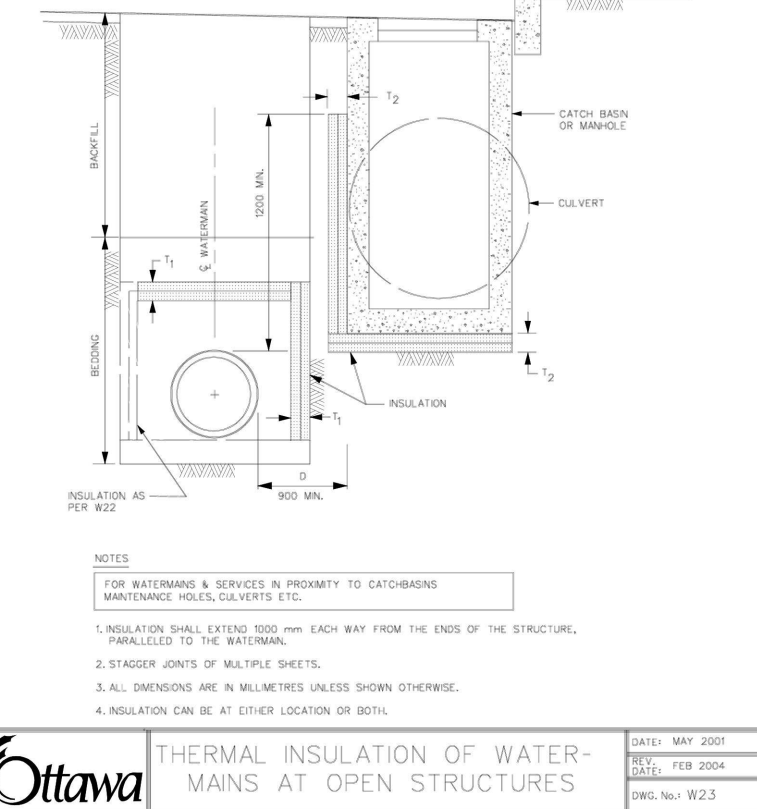
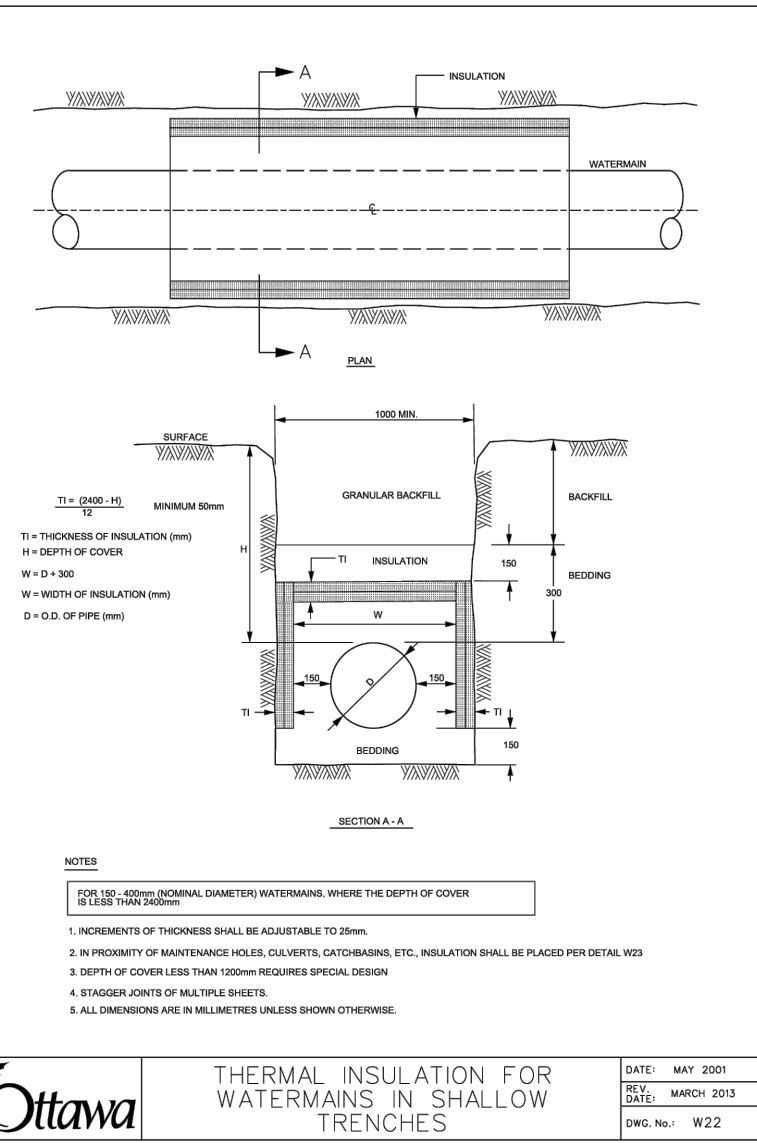
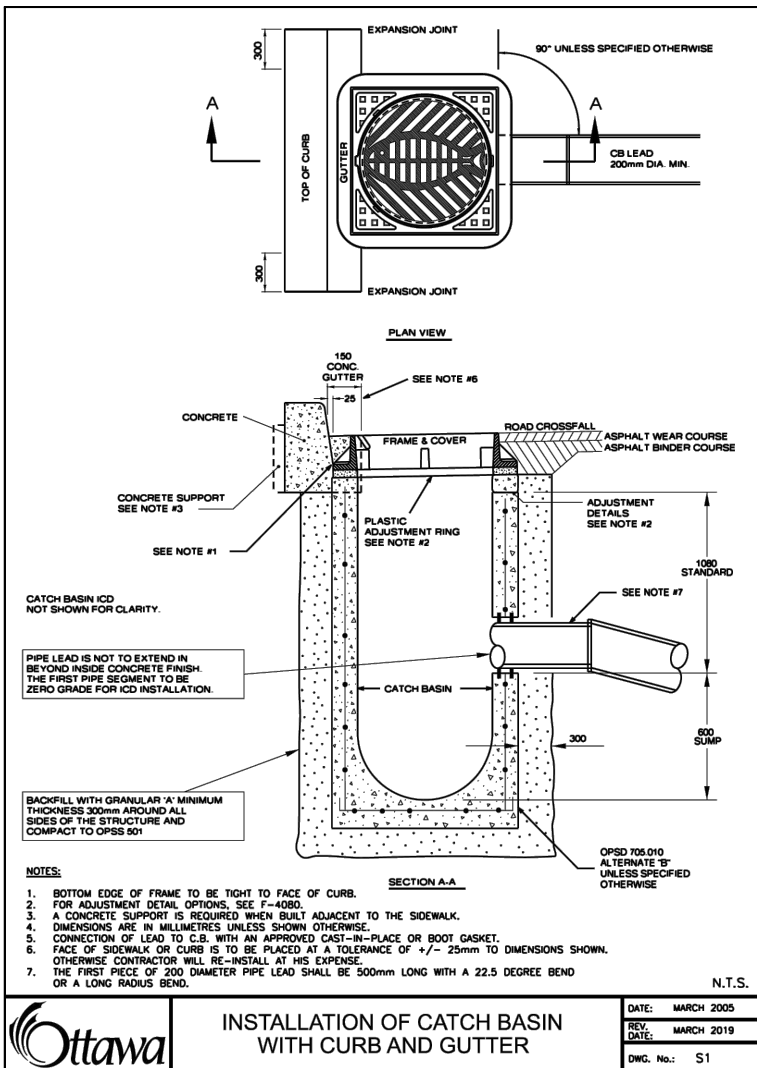
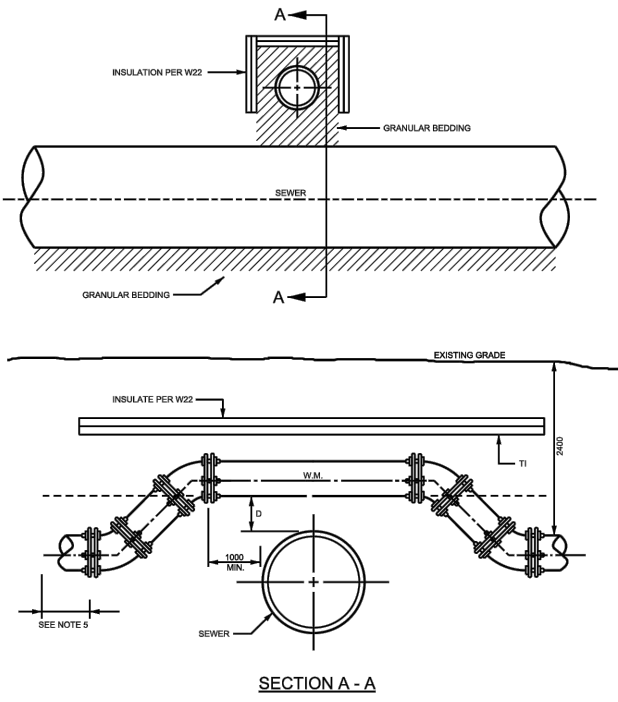
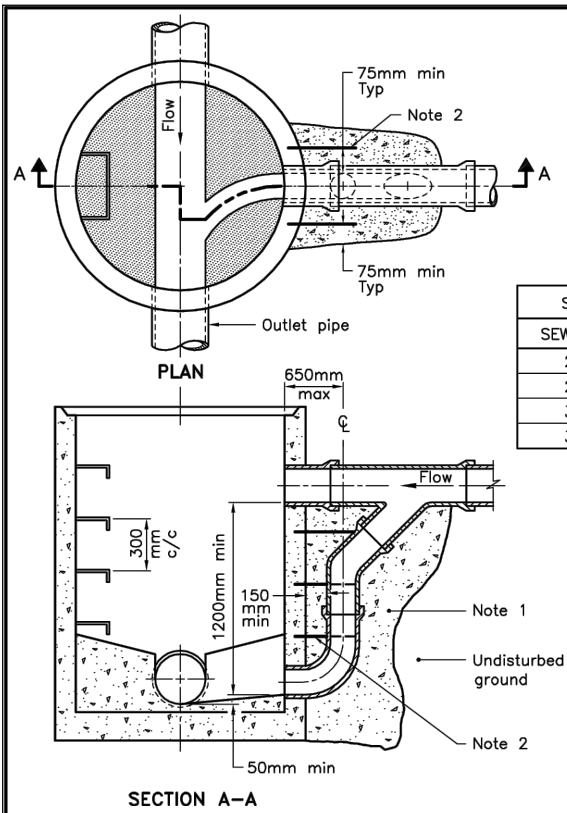
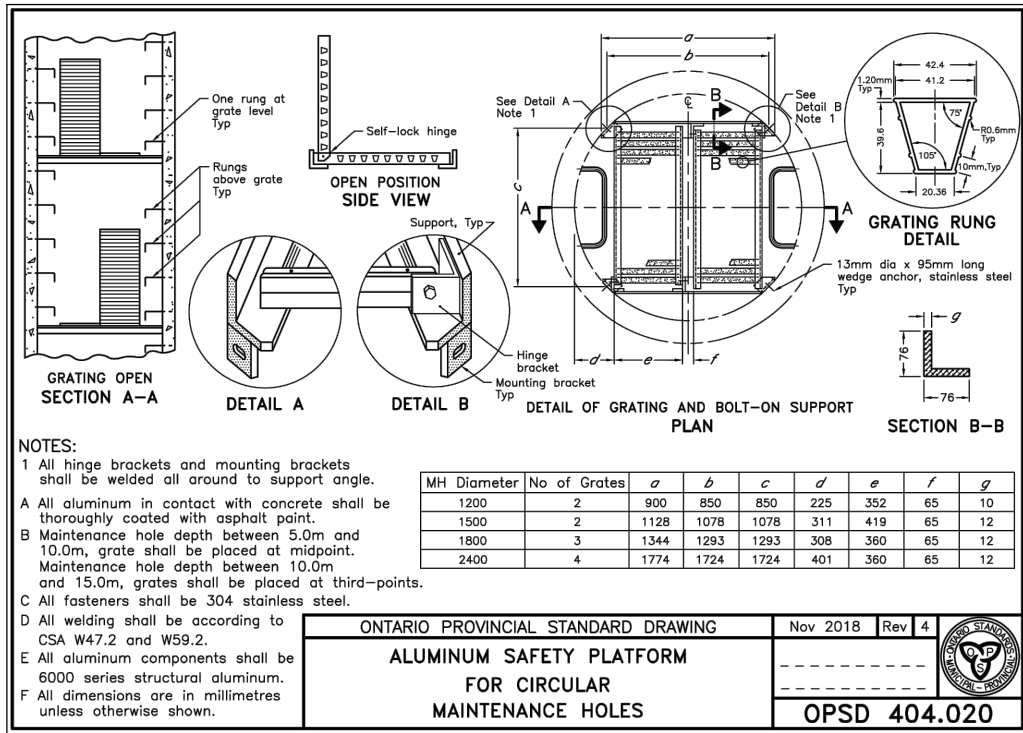
1. INSULATE ALL SEWER PIPES THAT HAVE LESS THAN 2.0m COVER AND ALL WATERMAIN WITH LESS THAN 2.4m OF COVER WITH EXPANDED POLYSTYRENE INSULATION AS PER OPSP 1109.030.	COVER SEWER / WATER (mm)	INSULATION THICKNESS (mm)
2. THE THICKNESS OF INSULATION SHALL BE THE EQUIVALENT OF 25mm FOR EVERY 300mm REDUCTION IN THE REQUIRED DEPTH OF COVER WITH 50mm MINIMUM (SEE TABLE)	2000-1700 / 2400-2100	50
	1700-1400 / 2100-1800	75
	1400-1100 / 1800-1500	100

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

Diagram of Section A-A showing a cross-section of a road and drainage system. The diagram includes dimensions: 1200mm min for the road width, 150mm for the drainage depth, 300mm for the drainage width, and 50mm min for the drainage width. It also shows a 100mm min dimension for the drainage width. The diagram is labeled "SECTION A-A" and includes notes for "Undisturbed ground" and "Note 1" and "Note 2".

PIPE CROSSING TABLE			
CROSSING	LOWER PIPE	HIGHER PIPE	CLEARANCE
①	375mm SAN OBV = 81.48	450mm STM INV = 83.14*	±1.67m
②	450mm STM OBV = 83.79*	300mm WTM INV = 84.90	±1.11m
③	200mm SAN OBV = 81.56	300mm WTM INV = 84.80	±3.24m
④	250mm STM OBV = 83.89	150mm WTM INV = 85.14	±1.25m
⑤	450mm STM OBV = 83.86*	150mm WTM INV = 85.12	±1.26m
⑥	200mm SAN OBV = 83.17	150mm WTM INV = 85.30	±2.13m
⑦	150mm WTM OBV = 84.97	200mm STM INV = 86.13	±1.16m
⑧	200mm SAN OBV = 83.33	450mm STM INV = 83.50*	±0.17m
⑨	250mm STM OBV = 83.88	150mm WTM INV = 84.71	±0.83m
⑩	200mm STM OBV = 84.09	200mm SAN INV = 84.69	±0.60m
⑪	150mm WTM OBV = 84.63	200mm SAN OBV = 85.13	±0.50m
⑫	200mm SAN OBV = 83.69	250mm STM INV = 83.89	±0.20m
⑬	200mm SAN OBV = 83.44	150mm WTM INV = 84.68	±1.22m
⑭	200mm SAN OBV = 83.83	150mm WTM INV = 84.08	±0.25m
⑮	200mm SAN OBV = 84.32	150mm WTM INV = 84.57	±0.25m
⑯	750mm STM OBV = 85.12*	150mm WTM INV = 85.37	±0.25m
⑰	750mm STM OBV = 84.81*	150mm WTM INV = 85.06	±0.25m
⑱	200mm SAN OBV = 83.69	750mm STM INV = 84.13	±0.44m
⑲	200mm SAN OBV = 83.56	300mm wtm inv = 84.41	±0.85m

\* INV/OBV INDICATED FOR CONCRETE PIPES ARE OUTER DIAMETER



NOTE: 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.

NOT FOR  
CONSTRUCTION

						SCALE	DESIGN
						AS SHOWN	ARM/AM
							CHECKED
							DRAWN
							ARM
							ARM/CJF/AM
							CHECKED
4.	ADDITION OF GEOTECHNICAL RECOMMENDATIONS	AUG 19/25	GJM				ARM
3.	REVISED PER CITY COMMENTS	AUG 12/25	GJM				ARM
2.	REVISED PER COMPLETENESS REVIEW COMMENTS	MAY 09/25	GJM				ARM
1.	ISSUED FOR SITE PLAN APPLICATION	MARCH 21/25	GJM				ARM
No.	REVISION	DATE	BY				GJM

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LOCATION  
1101 SPOOR STREET, CITY OF OTTAWA  
COPPERWOOD FLATS - BLOCK 125

DRAWING NAME

NOTES AND DETAILS

PROJECT No. \_\_\_\_\_

100411

122144

REV

REV#4

DRAWING No. \_\_\_\_\_

100414 ND

122144-ND