# GLENCOE WASTEWATER SYSTEM UPGRADES - NEW FORCEMAIN



# SOUTHWEST MIDDLESEX TENDER No. RFT-SM-010-24 ISSUED FOR TENDER

DRAWING NO.	DESCRIPTION
1	GENERAL NOTES
2	EASEMENT CROSS SECTION & SOIL HORIZONS
3	CROSS SECTIONS
4	FORCEMAIN EASEMENT STA 0+000 - 0+160
5	FORCEMAIN EASEMENT STA 0+160 - 0+340
6	FORCEMAIN EASEMENT STA 0+340 - 0+520
7	FORCEMAIN EASEMENT STA 0+520 - 0+700
8	FORCEMAIN EASEMENT STA 0+700 - 0+880
9	FORCEMAIN EASEMENT STA 0+880 - 1+060
10	FORCEMAIN EASEMENT STA 1+060 - 1+240
11	FORCEMAIN EASEMENT STA 1+240 - 1+420
12	FORCEMAIN EASEMENT STA 1+420 - 1+600
13	FORCEMAIN EASEMENT STA 1+600 - 1+700
14	FORCEMAIN EASEMENT STA 10+000 - 10+025





# Stantec Consulting Ltd.

400- 1305 Riverbend Road London ON Canada N6K 0J5 Tel. 519.645.2007 www.stantec.com

## **GENERAL NOTES:**

- 1. ALL WORK SHALL BE PERFORMED IN ACCORDANCE WITH AND MEET THE MINIMUM STANDARDS AND FULL SPECIFICATIONS OF THE MUNICIPALITY OF SOUTHWEST MIDDLESEX ENGINEERING SERVICES DEPARTMENT, THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS AND OTM TRAFFIC MANUALS. ALL PROPOSED SANITARY FORCEMAIN SHALL CONFORM WITH THE STANDARDS AND FULL SPECIFICATIONS OF THE OPS FOR PIPE MATERIAL CLASS AND BEDDING, AND THE MUNICIPALITY OF SOUTHWEST MIDDLESEX DESIGN AND CONSTRUCTION STANDARDS (2021).
- 2. PRIOR TO CONSTRUCTION, THE CONTRACTOR SHALL VERIFY ALL BENCHMARKS, ELEVATIONS AND DIMENSIONS AND REPORT ANY DISCREPANCIES IMMEDIATELY TO THE CONTRACT ADMINISTRATOR.
- 3. THE POSITION OF ALL POLE LINES, CONDUIT, WATERMAIN, SEWERS AND OTHER UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES ARE 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, THE CONTRACTOR SHALL VERIFY AND LOCATE FOR THEIRSELF THE EXACT LOCATION OF ALL SUCH STRUCTURES AND SHALL ASSUME ALL LIABILITY FOR DAMAGE TO THEM.
- 4. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITY COMPANIES TO FACILITATE UTILITY RELOCATIONS AND UTILITY SUPPORT MEASURES. UTILITIES DAMAGED OR DISTURBED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED AS DIRECTED BY THE ENGINEER AT THE CONTRACTOR'S EXPENSE.
- 5. ALL SUBSTITUTIONS MUST BE APPROVED BY THE CONTRACT ADMINISTRATOR.
- 6. AREAS SHOWN FOR RESTORATION ARE APPROXIMATE ONLY AND WILL DEPEND ON THE EXISTING CONDITIONS AND ACTUAL LOCATION OF THE SERVICES. EXISTING SURFACES WHICH ARE DISTURBED DURING CONSTRUCTION SHALL BE RESTORED TO ORIGINAL OR BETTER CONDITION.
- 7. SAFE PEDESTRIAN ACCESS MUST BE MAINTAINED AT ALL TIMES IN RESIDENTIAL AREAS.
- 8. THE CONTRACTOR SHALL COORDINATE ALL CHANGES IN TRAFFIC MOVEMENT WITH THE CONTRACT ADMINISTRATOR IN CONJUNCTION WITH TRANSPORTATION PLANNING AND DESIGN DIVISION AND SHALL FOLLOW OTM TRAFFIC CONTROL MANUAL (BOOK 7) AS A MINIMUM FOR ROADWAY WORK
- 9. SURFACE AND UNDERGROUND DRAINAGE TO BE MAINTAINED DURING CONSTRUCTION IN ACCORDANCE WITH MUNICIPALITY OF SOUTHWEST MIDDLESEX SPECIFICATIONS. THE CONTRACTOR IS RESPONSIBLE FOR THE CONTROL OF SURFACE AND SUBSURFACE WATER.

10. ALL CHAINAGES REFER TO CENTERLINE OF EASEMENT.

# THE FOLLOWING OPSS STANDARDS SHALL BE USED ON THIS CONTRACT:

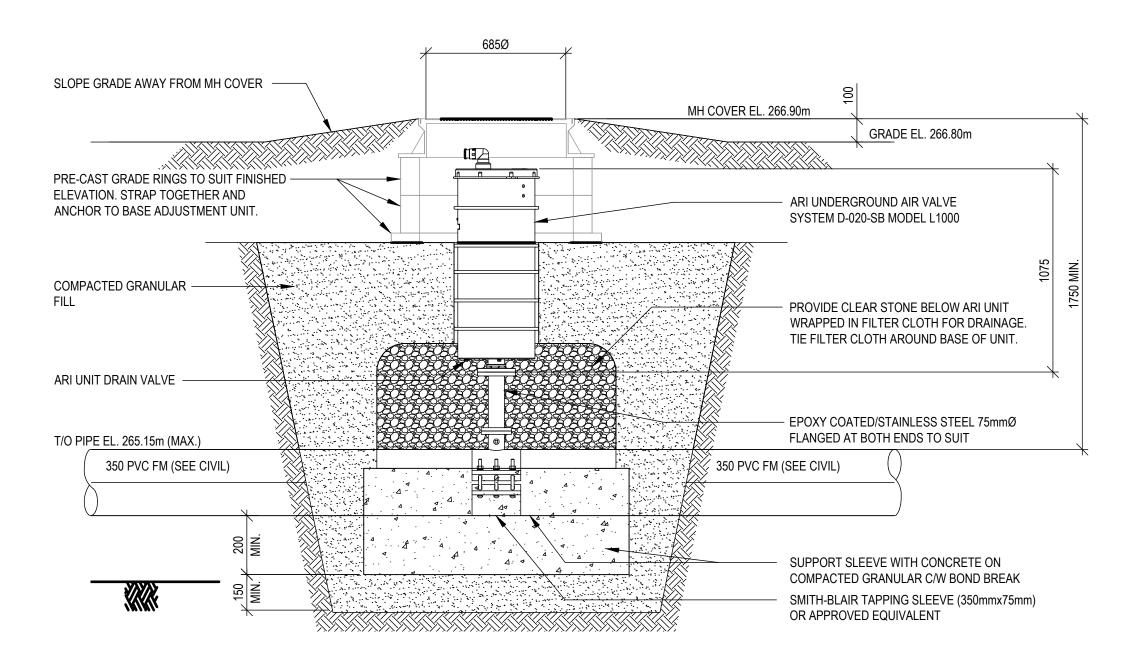
- OPSS 180 MANAGEMENT OF EXCESS MATERIAL
- OPSS 206 GRADING OPSS 314 GRANULAR
- OPSS 401
- TRENCH BACKFILLING & COMPACTION EXCAVATING, BACKFILLING, AND COMPACTING FOR MAINTENANCE HOLE, OPSS 402
- CATCH BASINS, DITCH INLETS, AND VALVE CHAMBERS OPSS 801 THE PROTECTION OF TREES
- OPSS 802 TOPSOIL
- SEED AND COVER OPSS 805 OPSS 805
- TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES OPSS 902 EXCAVATING AND BACKFILLING - STRUCTURES
- AGGREGATES, CONCRETE
- AGGREGATES BASE, SUB-BASE, SELECT SUB-GRADE, AND BACKFILL MATERIAL
- OPSS 1860 GEOTEXTILES

# **SEDIMENT AND EROSION CONTROL NOTES:**

- 1. MINIMIZE ALL AREA(S) TO BE DISTURBED DURING CONSTRUCTION.
- 2. PROTECT ALL EXPOSED SURFACES FROM EROSION.
- 3. CONTROL RUNOFF DURING CONSTRUCTION.

WITH OPSS MUNI 804.

- 4. ALL EROSION CONTROL MEASURES ARE TO BE IN PLACE AND INSPECTED BY A QUALIFIED PERSON BEFORE STARTING CONSTRUCTION AND REMAIN IN PLACE UNTIL RESTORATION IS COMPLETE.
- 5. THE CONTRACTOR SHALL BE RESPONSIBLE FOR CONSTRUCTING AND MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES. ANY FAILURES OF THE IMPLEMENTED ESC PLAN WILL BE THE RESPONSIBILITY OF THE CONTRACTOR AND NOT THE CONTRACT ADMINISTRATOR.
- 6. THE CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING ALL EROSION AND SEDIMENT CONTROL MEASURES, INCLUDING BUT NOT LIMITED TO, MAINTAINING FENCING, DIVERSION SWALES, CATCHBASIN SILT SACKS, TEMPORARY SEDIMENTATION BASINS, AND REMOVING ALL ACCUMULATED SEDIMENT FROM THESE CONTROLS WHEN WARRANTED.
- 7. ALL DISTURBED AREAS WHERE WORK WILL NOT OCCUR FOR 30 DAYS OR MORE SHALL BE STABILIZED IN ACCORDANCE WITH OPSS MUNI 804. IF GRADING IS COMPLETED DURING OFF-SEASON CONSTRUCTION MONTHS, THE SLOPES WILL BE STABILIZED, AS PER OPSS MUNI 804, WHEN WEATHER PERMITS.
- 8. ANY SOIL STOCKPILES SHALL BE SURROUNDED WITH HEAVY DUTY SILT FENCE AND STABILIZED IN ACCORDANCE
- 9. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE UNTIL SITE RESTORATION IS COMPLETE.
- 10. UNLESS OTHERWISE SPECIFIED, GEOTEXTILE (TERRAFIX 270R OR APPROVED EQUIVALENT) SHALL BE INSTALLED IN ALL MAINTENANCE HOLES AND PIPE ENDS TO PROTECT THE STORM SEWER SYSTEM FROM SEDIMENT
- 11. ALL ACCUMULATED SEDIMENT SHALL BE DISPOSED OF AT AN APPROVED LOCATION, IN ACCORDANCE WITH ALL APPLICABLE LAWS AND REGULATIONS.
- 12. ALL DEWATERING MUST BE CONDUCTED USING AN APPROVED OUTLET CONTROL METHOD SUCH AS A SEDIMENTATION BASIN OR FILTER BAG. EFFLUENT MONITORING SHALL BE CONDUCTED IN ACCORDANCE WITH THE ACCEPTED E&SC MONITORING PROGRAM REQUIREMENTS AND TO ENSURE DISCHARGE IS CONSISTENT WITH THE RECEIVER'S BACKGROUND WATER QUALITY REQUIREMENTS.
- 13. PROTECT ALL CATCHBASINS FROM SEDIMENT INTRUSION USING CATCHBASIN FILTER SACKS OR EQUIVALENT.
- 14. PROTECT ALL CURB INLET CATCHBASINS FROM SEDIMENT INTRUSION USING CATCHBASIN FILTER SACKS AND PROTECT THE CURB INLET PORTION WITH THE USE OF SECTIONS OF LINEAR FILTER SOCKS OR EQUIVALENT.
- 15. KEEP ALL SUMPS CLEAN DURING CONSTRUCTION AND IDENTIFY A REGULAR MAINTENANCE PROGRAM TO DO SO.
- 16. HAVE A PLAN TO MINIMIZE/PREVENT WIND-BLOWN DUST SUCH AS SPRAYING CALCIUM CHLORIDE, WATER AND APPLYING GROUND SOIL TACKIFIERS (PAM) VIA HYDROSEED OR STRAW AND REGULAR STREET SCRAPING/SWEEPING TO REMOVE DEBRIS.
- 17. STRAW BALES AND/OR WATTLES TO BE USED IN LOCALIZED OVERLAND FLOW AREAS AS SHOWN AND AS DIRECTED BY THE ENGINEER DURING CONSTRUCTION FOR WORKS.
- 18. STRAW BALES, WATTLES AND SILT FENCE ARE TO BE TERMINATED BY ROUNDING THE ENDS (J- HOOKING) TO CONTAIN AND FILTER RUNOFF.
- 19. ALL REFUELING AND MAINTENANCE OF EQUIPMENT SHOULD BE AT A MINIMUM OF 30 METERS AWAY FROM ANY SURFACE WATER FEATURE. WHERE SITE CONSTRAINTS CANNOT ACCOMMODATE THIS SEPARATION ALL FUEL AND EQUIPMENT SHALL BE PLACED WITHIN AN APPROVED SPILL CONTAINMENT KIT.



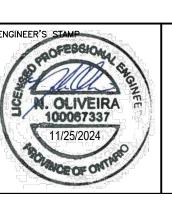
# UNDERGROUND AIR RELEASE VALVE CHAMBER (TYPICAL DETAIL)

SCALE 1:20 (STA 0+955)

### DRAWING #, SOURCE DATE CONSTRUCTED SERVICES COMPLETION EXISTING SERVICES DETAILS REVISIONS DATE CONSULTANT ESIGN MK ISSUED FOR 100% DESIGN REVIEW AUG. 23, 2024 DRAWN BY MK ISSUED FOR MEETING OCT. 31, 2024 CHECKED SJ ISSUED FOR TENDER NOV. 21, 2024 APPROVED --DATE JAN, 2024 ondon, ON. N6K 0J5 www.stantec.com The Contractor shall verify and be responsible for all dimensions, DO NOT scale the drawing - any errors or omissions shall be reported to Stantec without delay. The Copyrights to all designs and drawings are the property of Stantec, Reproduction or use for any purpose other than that authorized by Stantiec is forbidden. 1656 30252



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SITE BENCHMARKS:

CUT CROSS ON WALL

ELEV: 218.94m

TOP OF SIB

TOP OF SIB

ELEV: 218.21m

TOP OF SSIB

TOP OF SIB

ELEV: 217.50m

ELEV: 217.51m

ELEV: 217.76m

CORNER OF CONCRETE

ELEV: 218.03m

CUT TEE IN SIDEWALK

ELEV: 219.08m

TOP OF SIB

TOP OF SIB

ELEV: 218.67m

ELEV: 218.96m

TOP OF SIB

TOP OF SIB

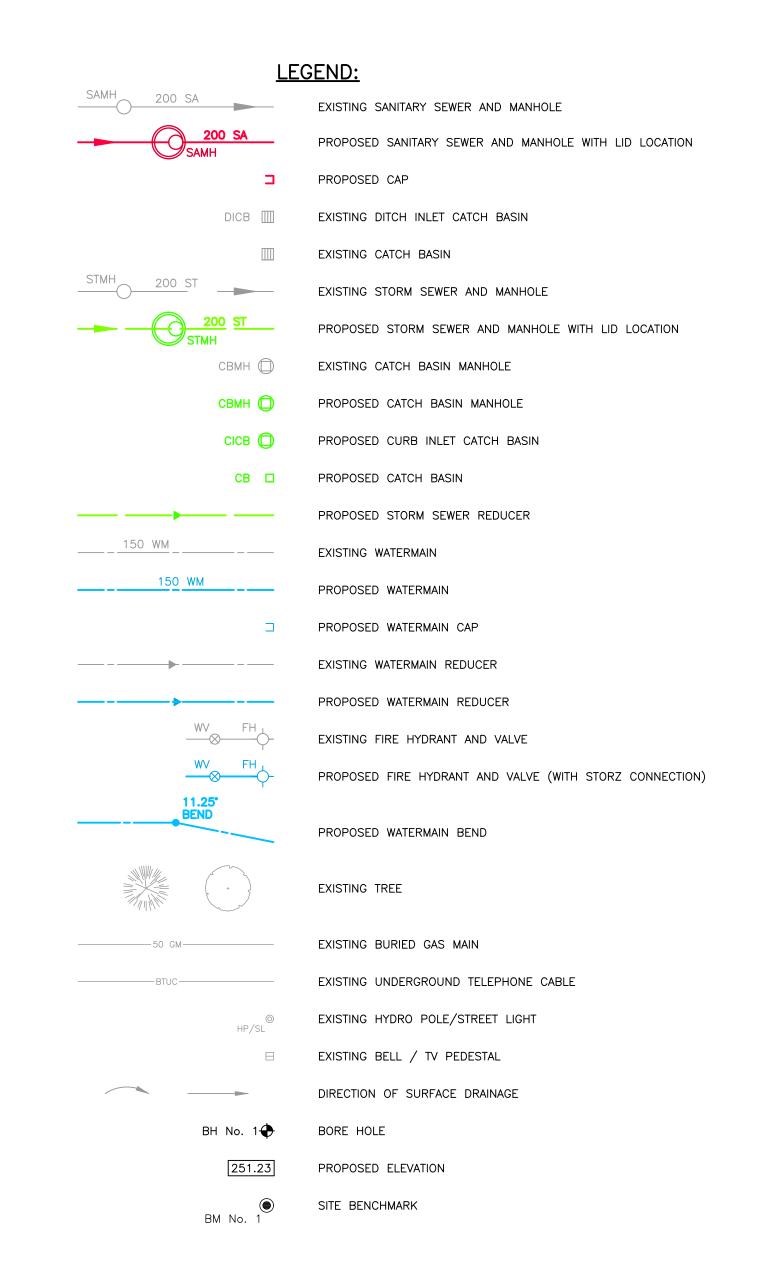
PK NAIL

ELEV: 218.94m

ELEV: 219.44m

ELEV: 219.56m

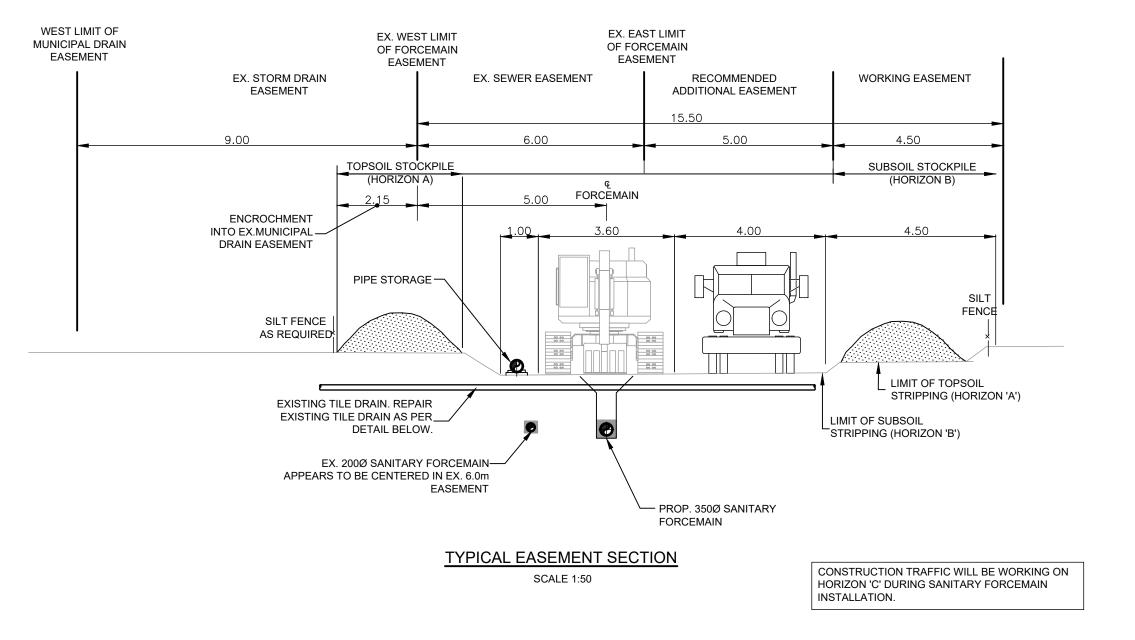




THE DRAWINGS SHOULD BE REVIEWED WITH REFERENCE TO COMPLETE CONTRACT DOCUMENTS

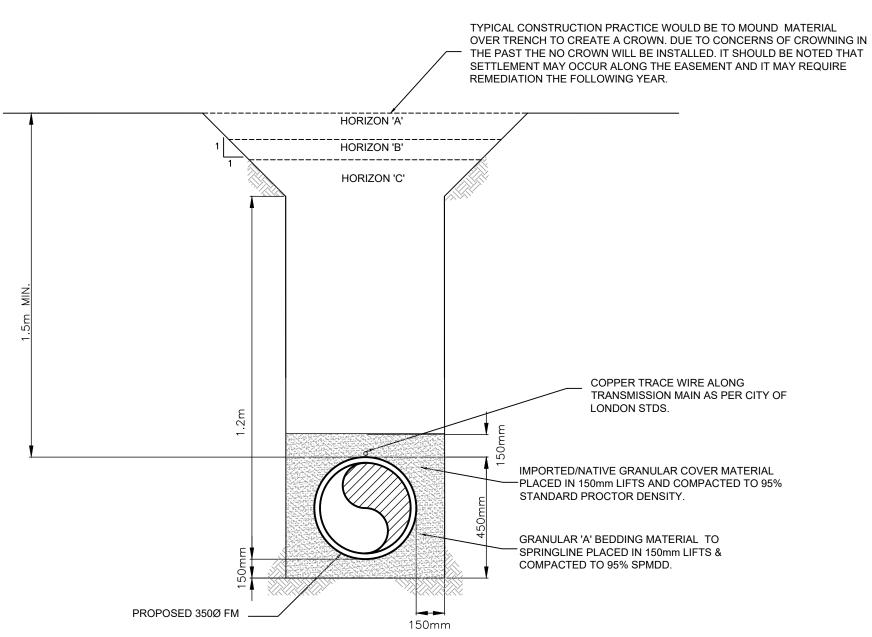
"GLENCOE WASTEWATER SYSTEM UPGRADES RFT-SM-010-24 NEW FORCEMAIN GENERAL NOTES

1 OF 14 GEODETIC BENCHMARKS PLAN FILE No.



### **BACK-FILLING**

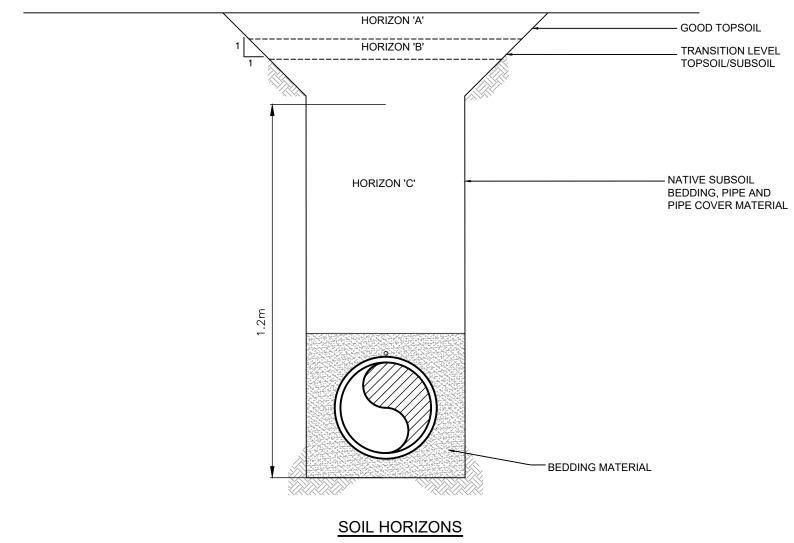
- SAND AND GRAVEL BACKFILL WILL BE USED FOR ROADWAY CROSSINGS. EXCAVATED MATERIAL WILL BE USED FOR BACK-FILL ALONG THE EASEMENT OUTSIDE OF MUNICIPAL AND COUNTY ROADWAYS.
- 2. ALL BACKFILLING MATERIAL SHALL BE FREE FROM FOREIGN MATERIALS SUCH AS REFUSE, CINDERS, WOOD, VEGETABLE OR ORGANIC MATERIAL, BOULDERS, ROCKS, STONES OR OTHER MATERIAL WHICH, IN THE OPINION OF THE ENGINEER, SHOULD NOT BE USED FOR BACKFILLING.
- 3. FROM THE CENTERLINE OF THE PIPE, FITTING OR APPURTENANCES TO A DEPTH OF 0.3m ABOVE THE PIPE, THE TRENCH SHALL BE BACKFILLED BY HAND OR OTHER METHODS APPROVED BY THE INSPECTOR. THE TYPE OF BACKFILL MATERIAL SHALL BE SAND, GRAVEL OR APPROVED EXCAVATED MATERIAL. THE CONTRACTOR SHALL TAKE SPECIAL CARE IN PLACING AND COMPACTING THIS PORTION OF BACKFILLING SO AS TO AVOID DAMAGING OR MOVING THE PIPE.



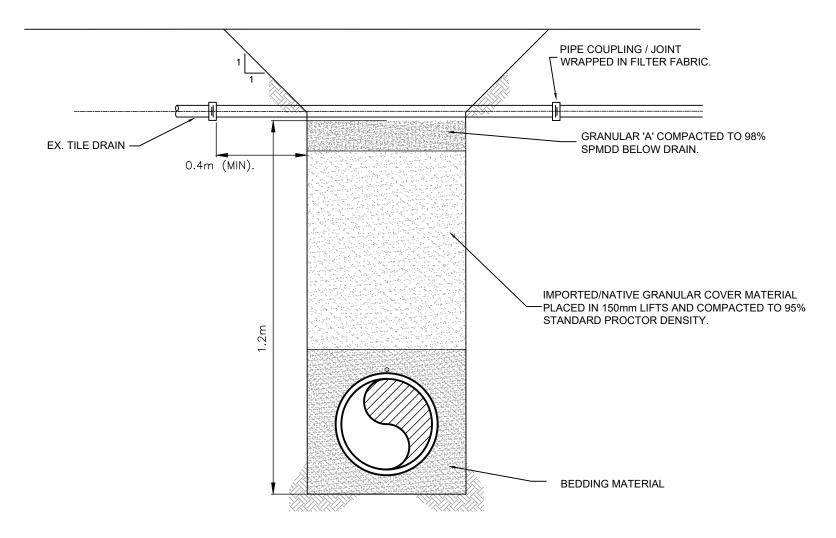
TRENCH BEDDING & BACKFILLING TYPICAL DETAIL

NOT TO SCALE

NOTE:
HORIZON 'C' MATERIAL SHALL BE PLACED AND
COMPACTED TO 95% SPMDD TO WITHIN 1.0m OF
FINISHED TOPSOIL ELEVATION AND TO EXISTING
COMPACTION LEVELS FOR THE REMAINDER.



NOT TO SCALE



# TILE DRAIN REPAIR TYPICAL DETAIL

NOT TO SCALE

# NOTES

- DRAINAGE TILE DAMAGED BY ANY CONSTRUCTION OPERATION WITHIN THE WORK SHALL BE IMMEDIATELY MARKED AT THE LOCATION OF THE DAMAGE TILE. TILE MARKERS SHALL BE MAINTAINED UNTIL THE TILE IS PERMANENTLY REPAIRED.
- REPLACEMENT PIPE TO BE NON-PERFORATED POLYETHYLENE PIPE SAME SIZE AS EXISTING CLAY TILE, CONCRETE DRAINAGE TILE, OR CORRUGATED PERFORATED DRAINAGE TUBING THAT IS BEING REPLACED.
- 3. EXISTING DRAINAGE TILE IS TO BE JOINED BY MEANS OF ADAPTERS OR COUPLERS MANUFACTURED FOR THAT PURPOSE. THE JOINTS SHALL BE WRAPPED WITH FILTER FABRIC. FILTER FABRIC USED FOR JOINT WRAPPING SHALL BE IN ACCORDANCE WITH THE APPROPRIATE GOVERNMENT STANDARDS.

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ski, Mc	EXISTING SERVICES	DRAWING #, SOURCE	DATE	CONSTRUCTED SERVICES	COMPLETION	DETAILS	No.	REVISIONS	DATE	CONSULTANT	CONSULTANT OR
pins						DESIGN MK	1.	ISSUED FOR 100% DESIGN REVIEW	AUG. 23, 2024	STANTEC	
y:Kı						DRAWN BY MK	2.	ISSUED FOR MEETING	OCT. 31, 2024	STANTEC	
M.						CHECKED SJ	3.	ISSUED FOR TENDER	NOV. 21, 2024	STANTEC	
딥						APPROVED	4.				
3:10						DATE AUG 2023	5.				
2:1							6.				400-1305 Riverbend Road London, ON, N6K 0J5
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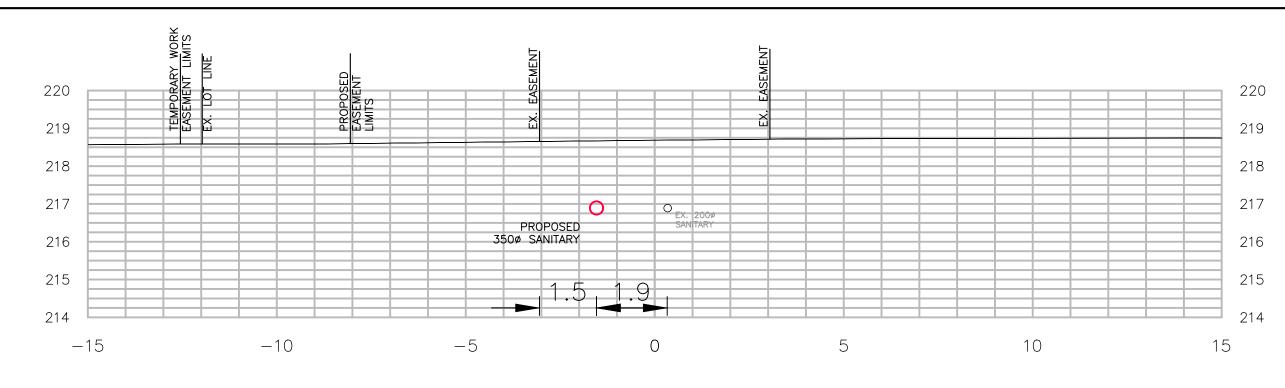
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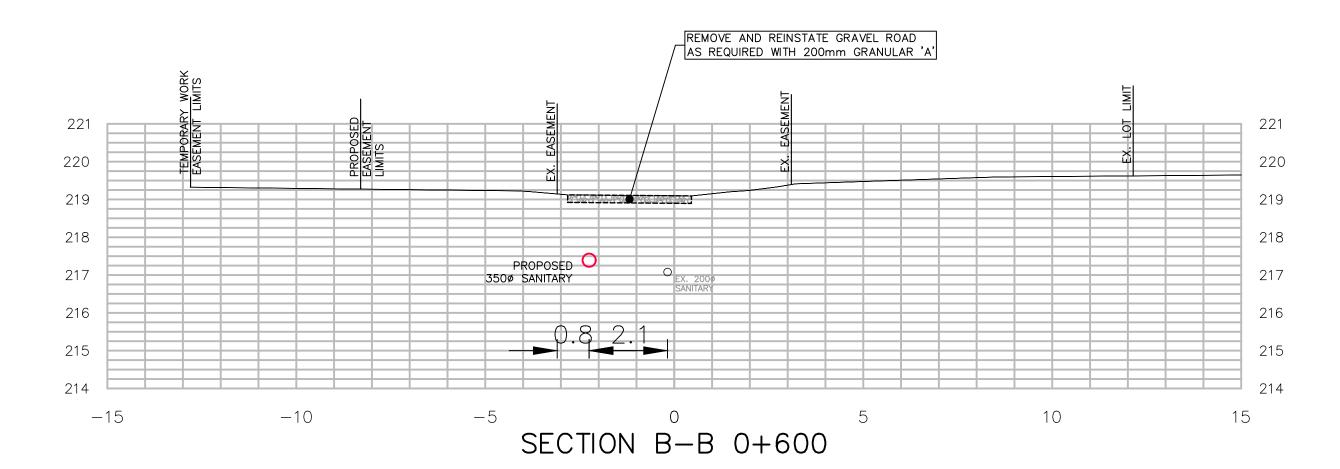


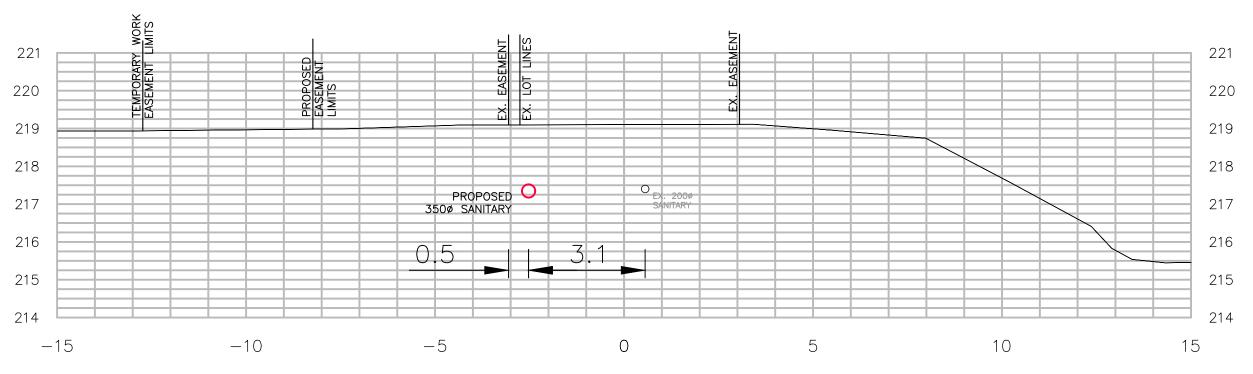
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GLENCOE WASTEWATER SYSTEM UPGRADES	PROJECT No.  RFT-SM-010-24
NEW FORCEMAIN	SHEET No.
	2 OF 14
EASEMENT CROSS SECTION & SOIL HORIZONS	PLAN FILE No.

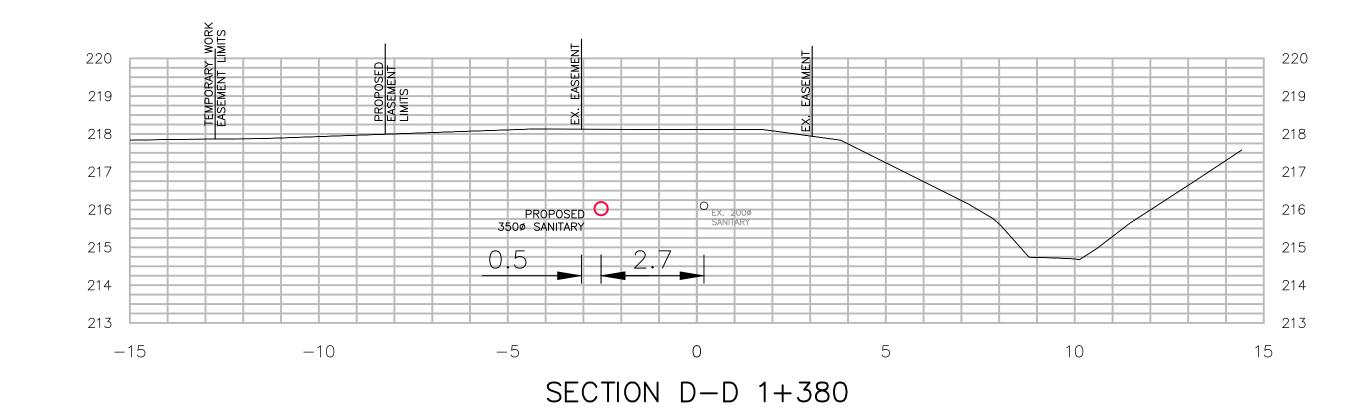


SECTION A-A 0+120





SECTION C-C 1+020



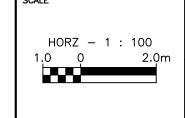
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DRAWING #, SOURCE CONSTRUCTED SERVICES COMPLETION EXISTING SERVICES DETAILS REVISIONS DATE CONSULTANT 3. ISSUED FOR TENDER DATE AUG 2023









SECTION E-E 1+540

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GLENCOE WASTEWATER SYSTEM UPGRADES	PROJECT No.  RFT-SM-010-24
NEW FORCEMAIN	SHEET No.
	3 OF 14

FORCEMAIN EASEMENT

PLAN FILE No. CROSS SECTIONS

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