

- GENERAL NOTES:**
1. THESE PLANS (S) ARE NOT TO BE USED FOR CONSTRUCTION UNLESS SEALED BY THE ENGINEER AND INDICATED ISSUED FOR CONSTRUCTION ON THE DRAWING.
 2. THESE PLANS (S) ARE NOT TO BE REPRODUCED IN WHOLE OR IN PART WITHOUT THE WRITTEN PERMISSION OF S. LLEWELLYN AND ASSOCIATES LIMITED.
 3. INFORMATION REGARDING ANY EXISTING SERVICES AND/OR UTILITIES SHOWN ON THE APPROVED SET OF CONSTRUCTION DRAWINGS ARE FURNISHED AS THE BEST AVAILABLE INFORMATION. THE CONTRACTOR SHALL INTERPRET THIS INFORMATION AS HE SEES FIT WITH THE UNDERSTANDING THAT THE OWNER AND HIS AGENTS DISCLAIM ALL RESPONSIBILITY FOR ITS ACCURACY AND/OR SUFFICIENCY. THE CONTRACTOR SHALL ASSUME LIABILITY FOR ANY DAMAGE TO EXISTING WORKS.
 4. EXISTING TOPOGRAPHIC AND LEGAL INFORMATION TAKEN FROM PLANS PREPARED BY A. T. McLEAREN LTD., DATED OCTOBER 15, 2020.
 5. SITE PLAN INFORMATION TAKEN FROM PLANS PREPARED BY KOTVM INC., DATED APRIL 20, 2021.
 6. THESE PLANS (S) TO BE READ IN CONJUNCTION WITH THE STORM WATER MANAGEMENT (SWM) REPORT PREPARED BY S. LLEWELLYN AND ASSOCIATES LIMITED, DATED.
 7. THIS (THESE) PLANS (S) TO BE USED FOR SERVING AND GRADING ONLY, FOR BUILDING LOCATION REFER TO THE SITE PLAN.
 8. ALL UTILITIES SHALL BE LOCATED, SUPPORTED, AND PROTECTED TO THE SATISFACTION OF THE UTILITY COMPANY.
 9. ALL SERVICES AND/OR UTILITIES LOCATED ON CONCRETE SIDEWALKS OR CURBS SHALL BE ISOLATED FROM THE SIDEWALK OR CURB AS PER OPSD 310.040.
 10. PRECAST MANHOLES TO BE MANUFACTURED TO REQUIREMENTS OF CSA & ASTM STANDARDS. 1200mm MANHOLES AS PER OPSD 701.010. MANHOLE FRAMES AS PER OPSD 401.010 TYPE 'B'.
 11. MINIMUM OF 0.25m SHALL BE PROVIDED BETWEEN OUTSIDE OF PIPE BARRELS AT THE POINT OF CROSSING OF STORM AND SANITARY SEWERS.
 12. MINIMUM CLEARANCE OF 0.5m SHALL BE PROVIDED AT THE POINT OF CROSSING WHERE STORM AND SANITARY SEWER(S) PASSES UNDER WATERMAIN.
 13. ANY UTILITY RELOCATION DUE TO THIS DEVELOPMENT TO BE UNDERTAKEN AT THE EXPENSE OF THE OWNER.
 14. ALL CONSTRUCTION WORK IS TO BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT, AND ALL REGULATIONS FOR CONSTRUCTION PROJECTS.
 15. ANY CONFLICTS WITH EXISTING SERVICES SHALL BE RECTIFIED AT THE OWNER'S EXPENSE.
 16. THE GENERAL CONTRACTOR IS RESPONSIBLE FOR CONTACTING THE TOWN OF LINCOLN AND CONSULTING ENGINEER FOR THE COMPLETION OF ALL REQUIRED SITE INSPECTIONS.

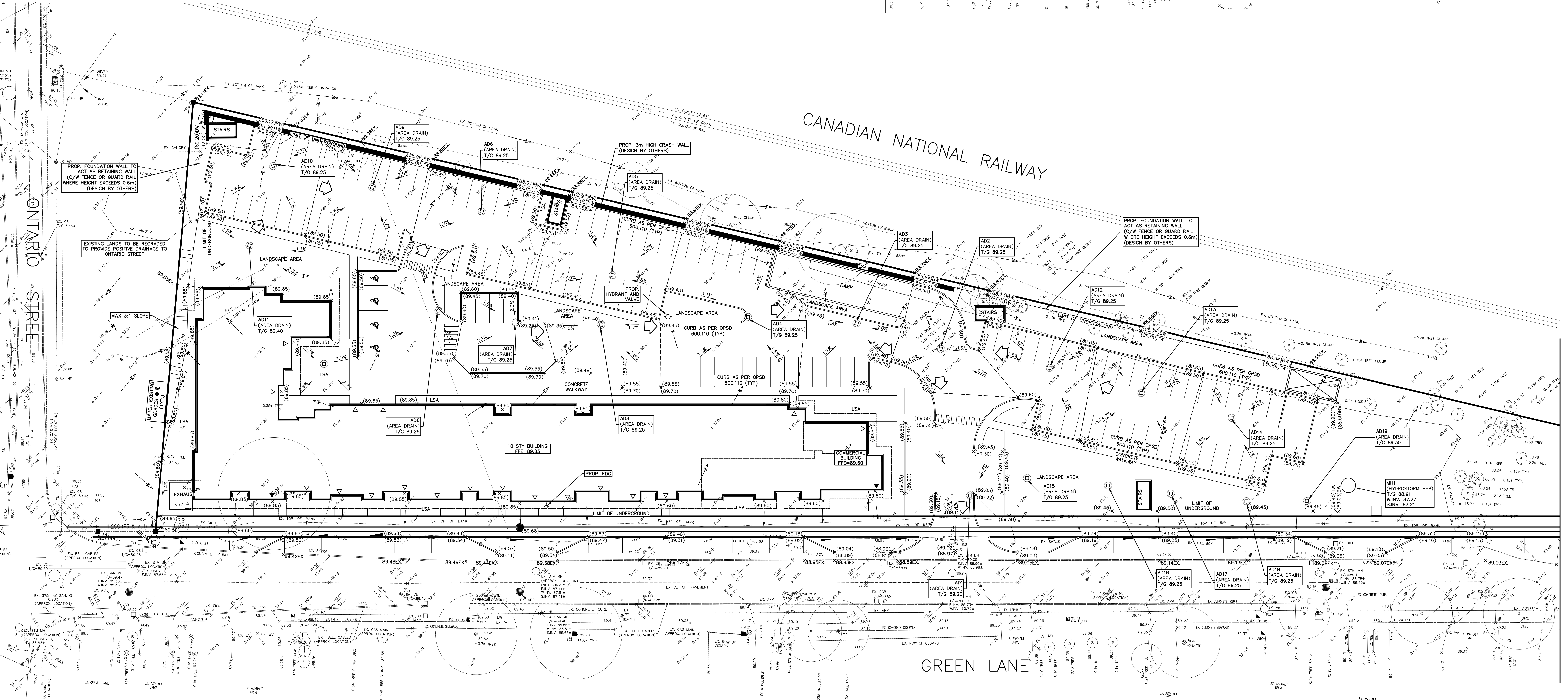
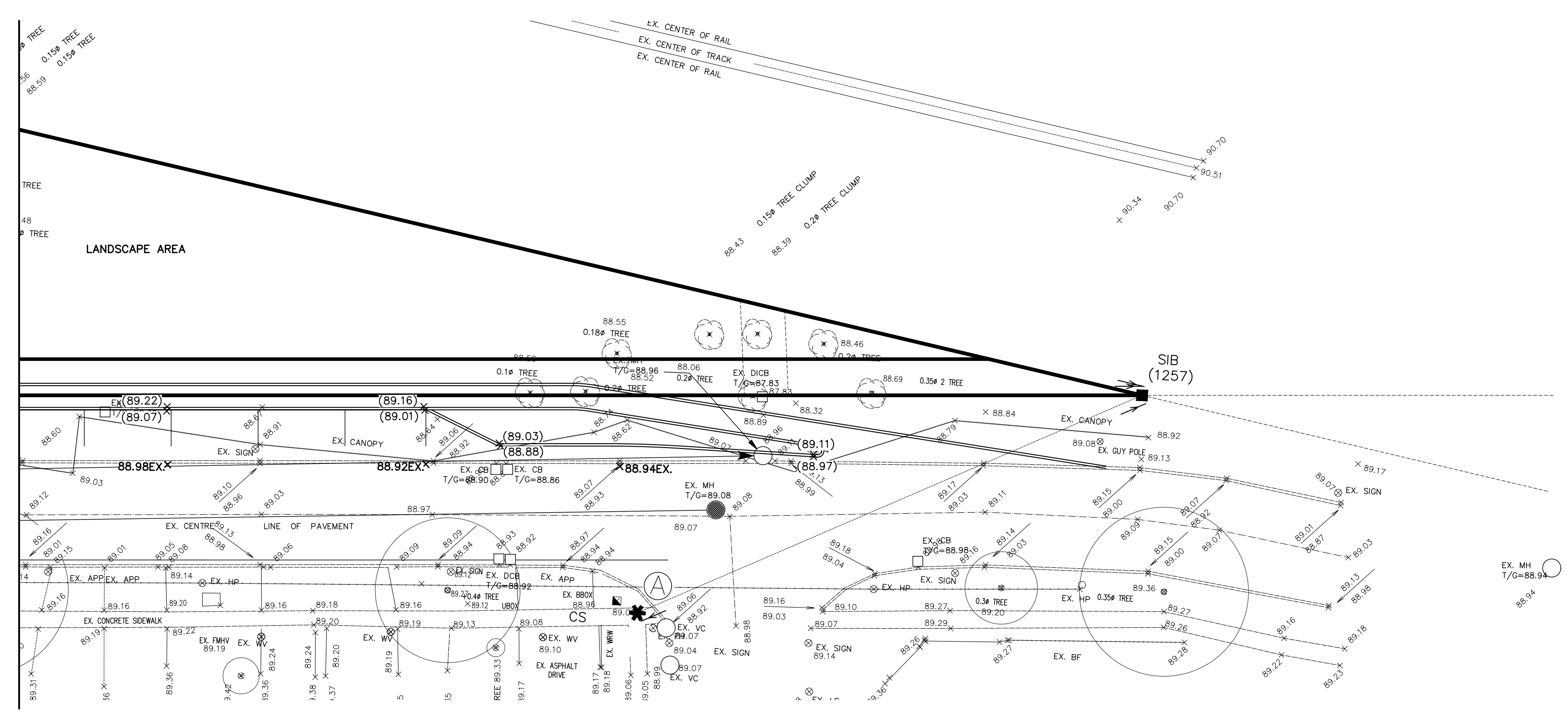
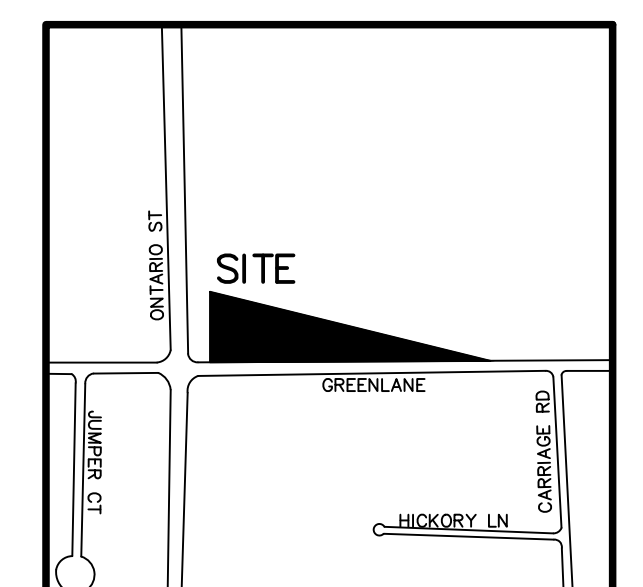
- GRADING NOTES:**
1. ALL DISTURBED AREAS SHALL BE RESTORED TO ORIGINAL CONDITION OR BETTER.
 2. GRASED AREAS SHALL RECEIVE 100mm TOPSOIL & 500.
 3. CONTRACTOR RESPONSIBLE FOR CONTROLLING MUD & DUST ON ALL PUBLIC ROADS TO THE SATISFACTION OF THE TOWN OF LINCOLN AND NIAGARA REGION.
 4. ALONG ADJOINING PROPERTIES, GRADE TO MEET EXISTING ELEVATIONS.
 5. DRIVEWAY ENTRANCES WITHIN ROAD ALLOWANCE AS PER DPW-302.
 6. INTERNAL CURBS AS PER OPSD 600.110. EXTERNAL CURBS AS PER OPSD 600.040.
 7. EXTERNAL SIDEWALKS AS PER OPSD 310.010. INTERNAL SIDEWALKS AS SHOWN ON DRAWINGS. SIDEWALK RAMP AS PER OPSD 310.030.
- EROSION & SEDIMENT CONTROL NOTES:**
1. EROSION AND SEDIMENTATION FACILITIES TO BE INSTALLED PRIOR TO ANY AREA GRADING OPERATIONS.
 2. ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSTALLED PRIOR TO DEVELOPMENT AND MAINTAINED THROUGHOUT THE CONSTRUCTION PROCESS. UNTIL ALL DISTURBED AREAS HAVE BEEN REVEGETATED, ALL EROSION AND SEDIMENT CONTROL MEASURES SHALL BE INSPECTED AFTER EACH RAINFALL TO THE SATISFACTION OF AUTHORITY STAFF.
 3. ANY DISTURBED AREA NOT SCHEDULED FOR FURTHER CONSTRUCTION WITHIN 45 DAYS WILL BE PROVIDED WITH A SUITABLE TEMPORARY MULCH AND SEED COVER WITHIN 7 DAYS OF THE COMPLETION OF THAT PARTICULAR PHASE OF CONSTRUCTION.
 4. ALL DISTURBED AREAS SHALL BE REVEGETATED WITH PERMANENT COVER IMMEDIATELY FOLLOWING COMPLETION OF CONSTRUCTION.

NOTES TO CONTRACTOR:

1. **INSPECTION**
CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION ENGINEER TO DETERMINE SCOPE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C PART 7. SECTION 7.2.2. GENERAL. REVENUE FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.

2. **CONFIRMATION OF EXISTING INVERTS**
72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING SEWERS AT CONNECTION POINTS. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATES, EXTRA COSTS RESULTING FROM DELAYS AND STAYBE TIME WILL NOT BE CONSIDERED.

NOTE:
FROM THE START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL CONNECTION POINTS TO THE EXISTING SEWER AND WATERMAIN SYSTEMS AND REPORT ALL FINDINGS TO THE ENGINEER.



- LEGEND:**
- EXISTING GROUND ELEVATION
 - PROPOSED GROUND ELEVATION
 - PROPOSED ELEVATION TO MATCH EXISTING
 - PROPOSED SWALE ELEVATION
 - PROPOSED TOP OF WALL ELEVATION
 - PROPOSED BOTTOM OF WALL ELEVATION
 - PROPOSED DIRECTION OF SHEET FLOW
 - EXISTING CATCHBASIN
 - EXISTING STORM/SANITARY MANHOLE
 - PROPOSED DOUBLE CATCHBASIN
 - PROPOSED CATCHBASIN/AREA DRAIN
 - PROPOSED STORM/SANITARY MANHOLE
 - PROPOSED CATCHBASIN MANHOLE
 - PROPOSED SILTATION CONTROL FENCE
 - PROPOSED CATCHBASIN SILT SACK
 - EMERGENCY OVERLAND FLOW ROUTE
 - PROPOSED CURB STOP/GATE VALVE
 - PROPOSED DRAINAGE BREAK LINE

NOTES TO CONTRACTOR:

1. CONTRACTORS AND SUBCONTRACTORS SHALL NOT SCALE FROM THIS DRAWING.
2. ANY INCONSISTENCIES AND OMISSIONS FOUND IN THE DRAWINGS MUST BE REPORTED TO THE ENGINEER FOR CLARIFICATION BEFORE COMMENCING THE WORK.
3. PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR MUST CHECK AND VERIFY ALL DIMENSIONS AND ELEVATIONS AND REPORT ALL FINDINGS TO THE ENGINEER. ONCE CONSTRUCTION HAS COMMENCED, THE CONTRACTOR ACCEPTS RESPONSIBILITY FOR ALL DIMENSIONS, ELEVATIONS AND SITE CONDITIONS.
4. THE POSITIONS OF POLE LINES, CONDUITS, WATERMAIN, SEWERS AND OTHER UNDERGROUND AND OVERGROUND UTILITIES AND STRUCTURES ARE NOT NECESSARILY SHOWN ON THE DRAWINGS. WHERE SHOWN ON THE DRAWINGS, THE ACCURACY OF THE POSITIONS OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. BEFORE STARTING WORK, THE CONTRACTOR SHALL VERIFY DIMENSIONS OF THE EXISTING UTILITIES. BEFORE STARTING WORK, THE CONTRACTOR SHALL VERIFY DIMENSIONS OF THE EXISTING UTILITIES.
5. ALL DIMENSIONS SHOWN ARE THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, REUSED, OR REVERSED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN AND ASSOCIATES LIMITED.

NO.	DATE	BY	REVISIONS
01	OCT 13/2021	S.L.D.	REVISED AS PER TOWN COMMENTS
DESIGN	SF	CHK'D	DATE
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APPROVALS

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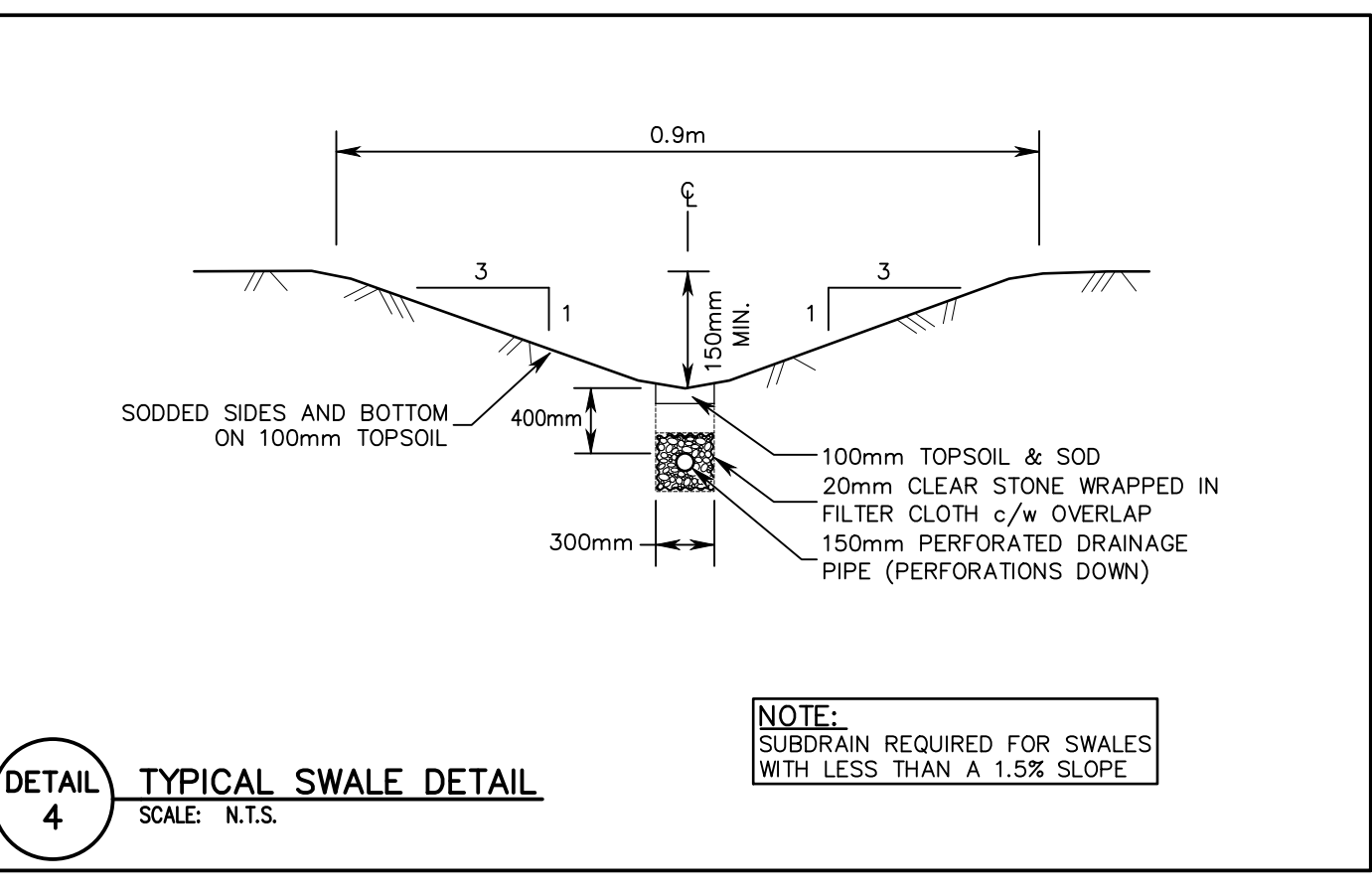
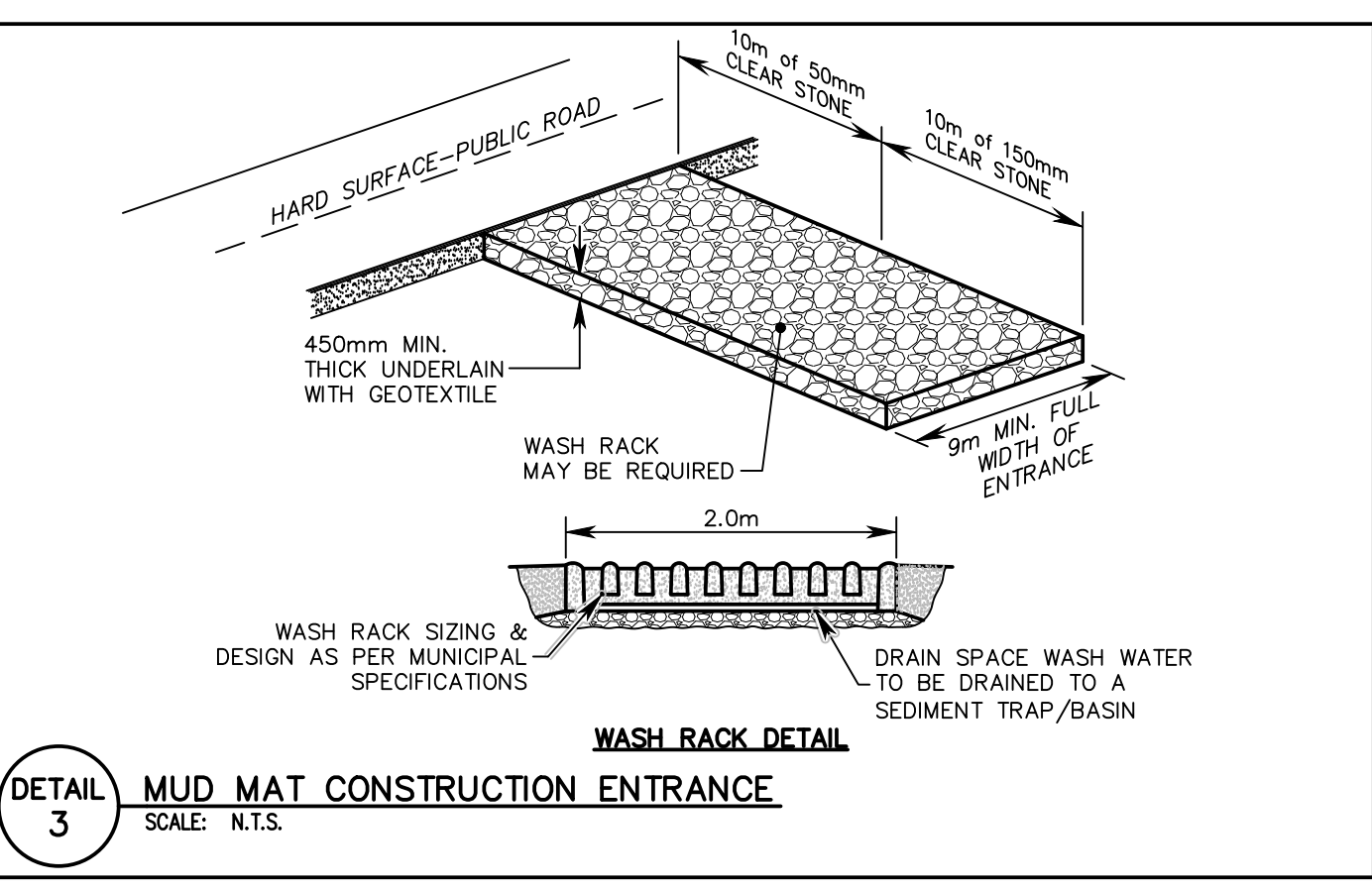
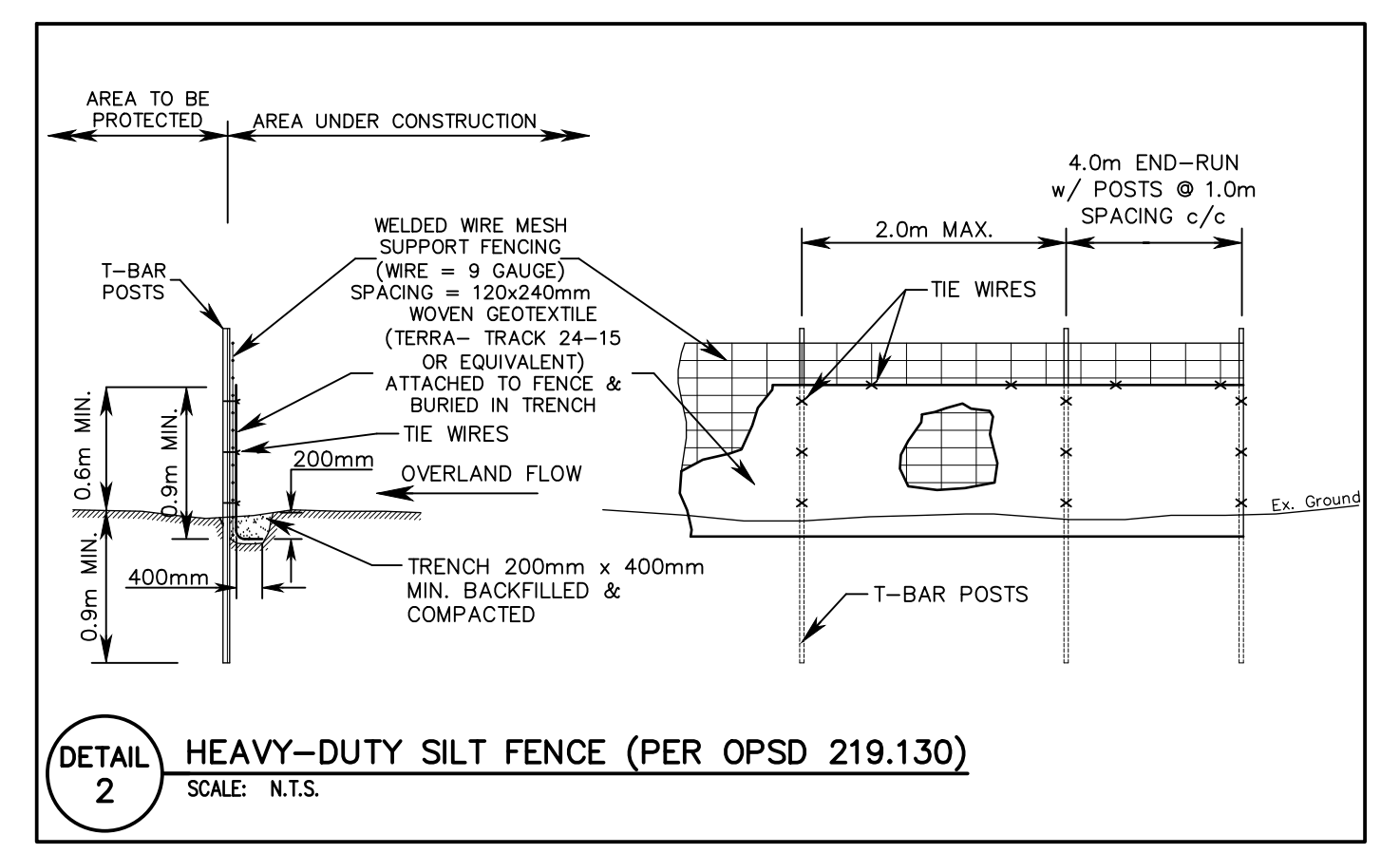
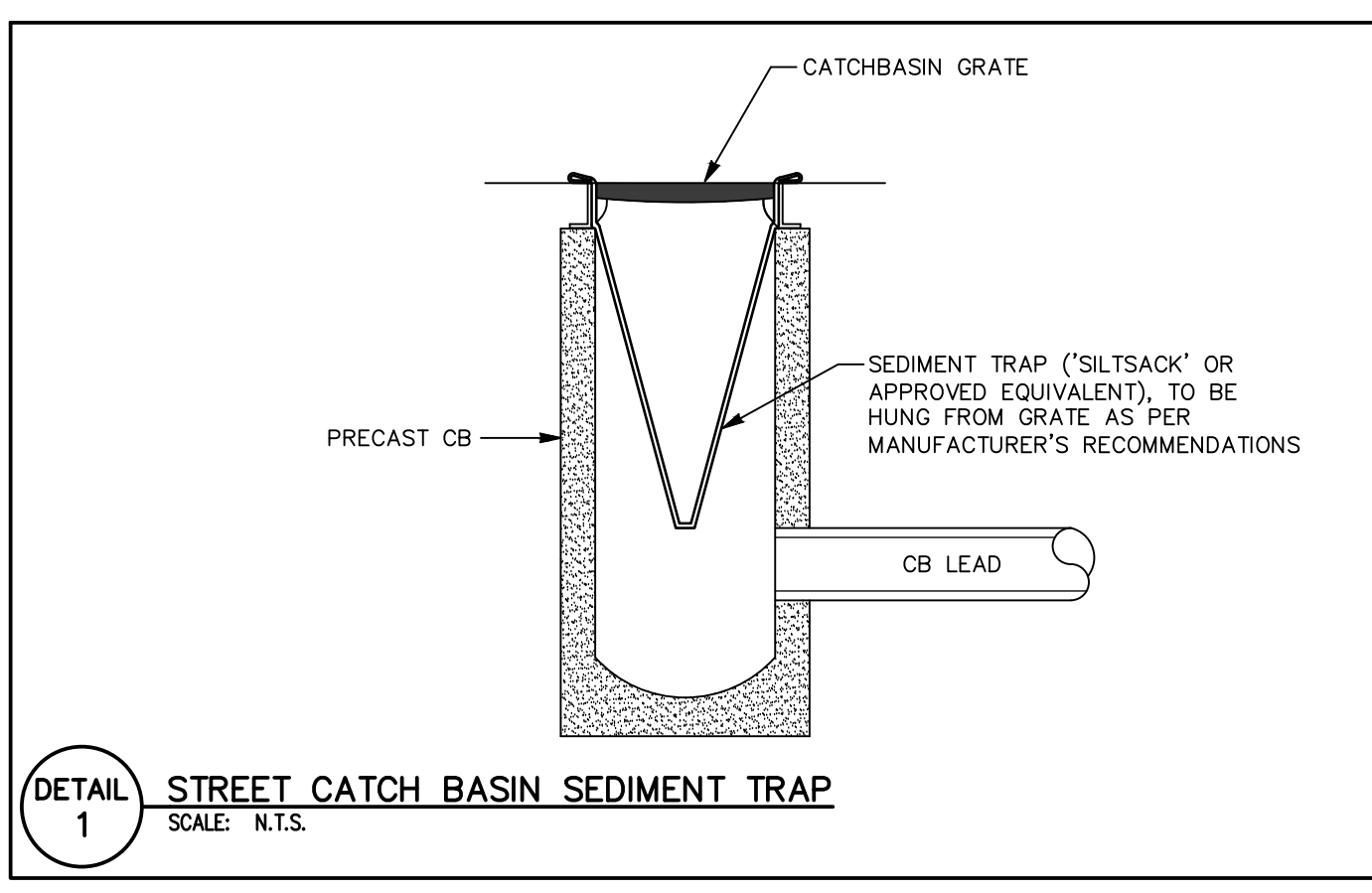
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CLIENT
GREENLANE JOINT VENTURE INC.
13 WINDWARD DRIVE, GRIMSBY

PROJECT NAME
GREENLANE & ONTARIO STREET
LINCOLN, ONTARIO

TITLE
PRELIMINARY GRADING PLAN

PROJECT No. 21021 DRAWING No. C101
SCALE 1:300



1. STORM SEWERS TO BE PVC DR-35 IN ACCORDANCE WITH CSA B182.2-M WITH CLASS 'B' BEDDING AS PER DPW-500 WITH A MINIMUM COVER OF 1.0m.
2. STORM SEWER LATERALS TO BE 150mm DIA. PVC DR-28 AND INSTALLED AS PER DPW-501. BEDDING FOR STORM SEWERS AS PER OPSD 802.010. GRANULAR 'A', COMPACTED TO 95% OR BETTER. STORM LATERALS TO BE THE COLOUR GREEN.
3. ALL CONNECTIONS TO STORM MANHOLES TO BE MADE WITH A KOR-N-SEAL ADAPTER.
4. ALL CATCHBASINS SHALL BE INSTALLED IN ACCORDANCE WITH OPSD 705.010 AND CATCHBASIN FRAMES & COVERS AS PER OPSD 400.020, UNLESS OTHERWISE INDICATED.
5. ALL STORM REQUIRES FIELD INSPECTION BY THE SITE SERVICING ENGINEER DURING INSTALLATION. INSPECTION SERVICES REQUIRE A MINIMUM OF 48 HOURS NOTICE.
6. TOWN OF LINCOLN PERMIT TO BE OBTAINED/APPROVED PRIOR TO WORKS.
7. ALL STORM SEWERS ARE TO BE FLUSHED AND CCTV INSPECTED.
8. PVC STORM SEWERS ARE TO BE TESTED FOR DEFLECTION (MANDREL PASSAGE) AFTER INSTALLATION.
9. MANHOLES TO BE BENEATH AS PER OPSD 1004.01.
10. ALL ROOFWATER LEADERS SHALL DISCHARGE ONTO SPLASH PADS THEN TO GRASSED OR LANDSCAPED AREAS A MIN. OF 0.6m FROM BUILDING FACE.

SANITARY SEWER NOTES:

1. MIN. SANITARY DEPTH IS 2.75 m.
2. SANITARY SEWERS TO BE PVC DR-35 IN ACCORDANCE WITH CSA B182.2-M WITH CLASS 'B' BEDDING AS PER DPW-500.
3. SANITARY SEWER LATERALS TO BE 100mm DIA. PVC DR-28 AND INSTALLED AS PER DPW-501. BEDDING FOR PVC SEWERS AS PER OPSD 802.010. GRANULAR 'A' COMPACTED TO 95% OR BETTER. SANITARY LATERALS TO BE THE COLOUR GREEN.
4. ALL CONNECTIONS TO SANITARY MANHOLES TO BE MADE WITH A KOR-N-SEAL ADAPTER.
5. ALL SANITARY REQUIRES FIELD INSPECTION BY THE SITE SERVICING ENGINEER DURING INSTALLATION. INSPECTION SERVICES REQUIRE A MINIMUM OF 48 HOURS NOTICE.
6. TOWN OF LINCOLN PERMIT TO BE OBTAINED/APPROVED PRIOR TO WORKS.
7. ALL SANITARY SEWERS ARE TO BE FLUSHED AND CCTV INSPECTED.
8. PVC SANITARY SEWERS ARE TO BE TESTED FOR DEFLECTION (MANDREL PASSAGE) AFTER INSTALLATION AND TESTED FOR LEAKAGE (LOW AIR PRESSURE).
9. MANHOLES TO BE BENEATH AS PER OPSD 1004.01.

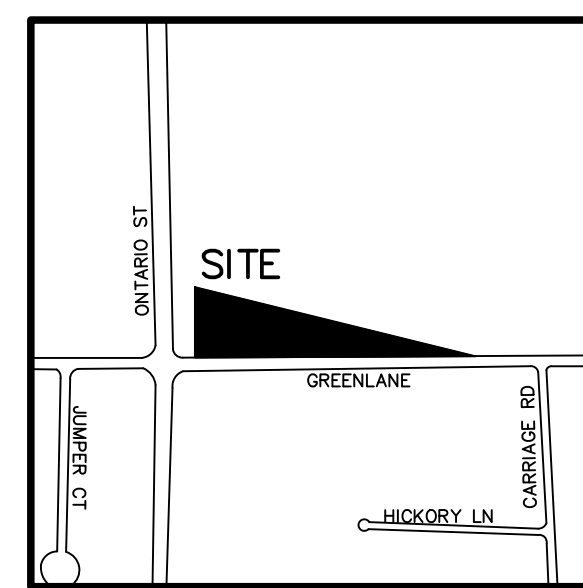
WATERMAIN NOTES:

1. WATERMAIN TO BE PVC DR18 CONFORMING TO ANWA C900, INSTALLED WITH MINIMUM 1.70 COVER WITH GRANULAR A BEDDING AS PER OPSD 802.010.
2. WATERMAIN BEDDING AS PER OPSD 802.010, TYPE 1 & 2 GRANULAR 'A', COMPACTED TO 98% SPMDI.
3. TRACER WIRE TO BE INSTALLED ALONG TOP OF PVC WATERMAIN, WRAPPED AROUND PIPE AT 8.0m INTERVALS, AND BROUGHT TO SURFACE AT VALVE & HYDRANT. TRACER WIRE TO BE TO GAUGE.
4. CATHODIC PROTECTION TO BE PROVIDED AS FOLLOWS:
 - DCP 1100-24 (2-11kg) HYDRANTS & VALVES
 - DCP 1100-12 (2.7kg) SERVICES & FITTINGS
5. HYDRANT INSTALLATION AS PER DPW 600.
6. HYDRANTS TO BE CANADA VALVE CENTURY, CONCORD, OR APPROVED EQUIVALENT. (TO BE APPROVED BY THE TOWN OF LINCOLN).
7. ALL WATER FITTINGS AND VALVES TO BE "MUELLER" OR APPROVED EQUIVALENT (TO BE APPROVED BY THE TOWN OF LINCOLN).
8. FLUSHING, SWABING AND TESTING OF WATERMAIN AS PER THE TOWN PROCEDURE DPMQ SOP 12 AND QMS FORM 61. NO WATERMAIN TO BE CONSTRUCTED UNTIL QMS FORM 61 IS APPROVED BY TOWN OF LINCOLN WATER AND WASTEWATER MANAGER. FOR TEMPORARY CONNECTIONS, AND FOR TESTING PURPOSES, A BACKFLOW DEVICE (TO BE APPROVED BY THE TOWN OF LINCOLN) IS TO BE INSTALLED AND TESTED BY A LICENSED TESTER, INCLUDING A METER FOR CONSUMPTION.
9. WATER COMMISSIONING PROCEDURE/PLAN TO BE APPROVED PRIOR TO WATERMAIN INSTALLATION.
10. SITE SERVICING ENGINEER TO BE ON SITE FOR ALL TESTING AND SWABING OF NEW WATERMANS. INSPECTION SERVICES REQUIRE A MINIMUM OF 48 HOURS NOTICE.
11. THE MUNICIPALITY MUST APPROVE ALL TESTING AND TEST RESULTS PRIOR TO PERMITTING FINAL CONNECTION TO THE MUNICIPAL WATER SYSTEMS. TOWN OF LINCOLN TO WITNESS CONNECTION ONCE TESTING HAS PASSED.
12. WATER SERVICES TO BE INSTALLED AS PER DPW 600.
13. MECHANICAL THRUST RESTRAINTS TO BE USED.
14. MECHANICAL THRUST RESTRAINT DEVICES SHALL BE USED IN LIEU OF CONCRETE THRUST BLOCKS AT ELBOWS, BENDS & FITTINGS JOINT RESTRAINT DEVICES FOR PVC PIPE TO BE UN-FLANGE TYPE.
15. ALL WATERMAIN REQUIRES FIELD INSPECTION BY THE SITE SERVICING ENGINEER DURING INSTALLATION. INSPECTION SERVICES REQUIRE A MINIMUM OF 48 HOURS NOTICE.
16. TOWN OF LINCOLN PERMIT TO BE OBTAINED/APPROVED PRIOR TO WORKS.

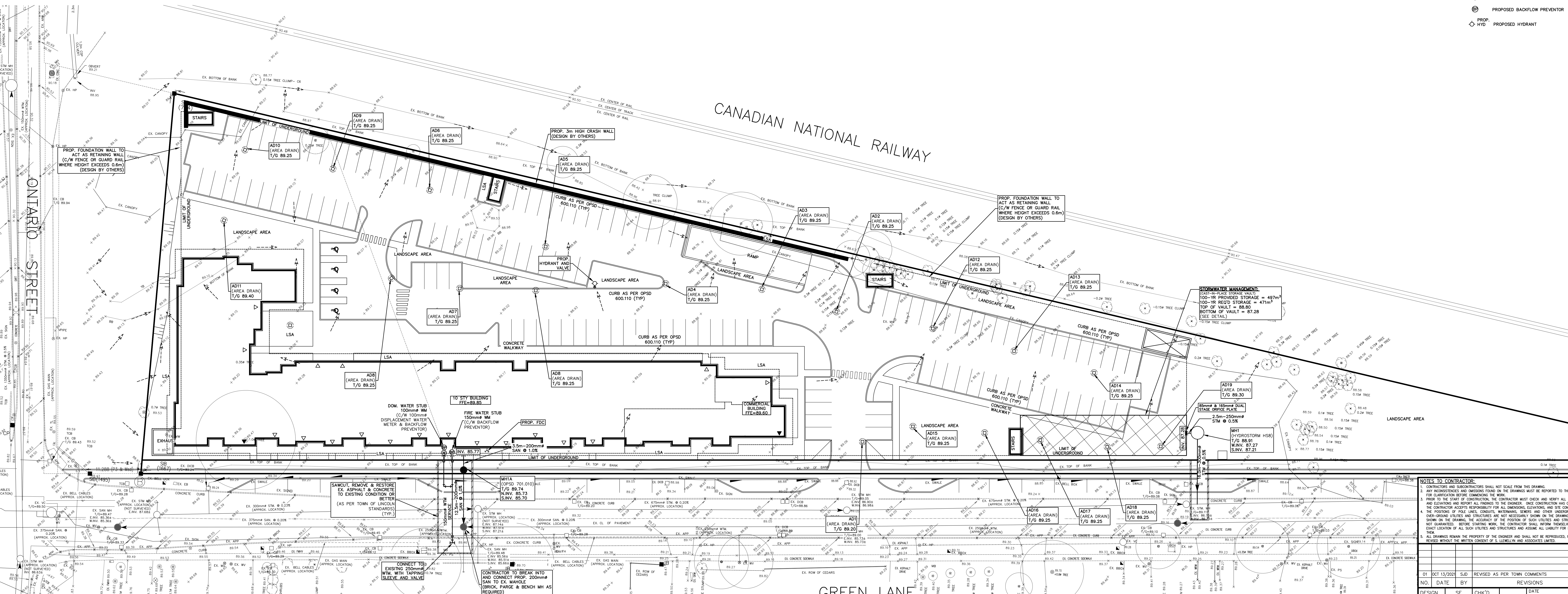
NOTES TO CONTRACTOR:

1. INSPECTION: CONTRACTOR IS RESPONSIBLE FOR CONTACTING ENGINEER 48 HRS PRIOR TO COMMENCING WORK TO ARRANGE FOR INSPECTION. ENGINEER TO DETERMINE SCOPE OF INSPECTION AND TESTING REQUIRED FOR CERTIFICATION OF UNDERGROUND SERVICE INSTALLATION AS MANDATED BY ONTARIO BUILDING CODE DIVISION C, PART 1, SECTION 1.2.2. GENERAL REVIEW FAILURE TO NOTIFY ENGINEER WILL RESULT IN EXTENSIVE POST CONSTRUCTION INSPECTION AT CONTRACTORS EXPENSE.
2. CONFIRMATION OF EXISTING INVERTS: 72 HOURS PRIOR TO THE START OF CONSTRUCTION, THE CONTRACTOR IS TO LOCATE, EXPOSE AND VERIFY INVERTS OF EXISTING SEWERS AT CONNECTION POINTS. SHOULD THE CONTRACTOR PROCEED WITHOUT COMPLETING THESE LOCATES, EXTRA COSTS RESULTING FROM DELAYS AND STANDBY TIME WILL NOT BE CONSIDERED.

NOTE: PRIOR TO THE START OF CONSTRUCTION THE CONTRACTOR SHALL VERIFY THE ELEVATION OF ALL CONNECTION POINTS TO THE EXISTING SEWER AND WATERMAIN SYSTEMS AND REPORT ALL FINDINGS TO THE ENGINEER.



- LEGEND:
- EXISTING CATCHBASIN
 - EXISTING STORM/SANITARY MANHOLE
 - PROPOSED DOUBLE CATCHBASIN
 - PROPOSED CATCHBASIN/AREA DRAIN
 - PROPOSED STORM/SANITARY MANHOLE
 - PROPOSED CATCHBASIN MANHOLE
 - PROPOSED CURB STOP/GATE VALVE
 - PROPOSED WATER METER
 - PROPOSED BACKFLOW PREVENTOR
 - PROF. HYDRANT



DETAIL 5: ASPHALT LAP JOINT
SCALE: N.T.S.

CONTRACTOR TO REFER TO GEOTECHNICAL RECOMMENDATIONS FOR PAVEMENT STRUCTURES. IN THE EVENT NO GEOTECHNICAL REPORT IS AVAILABLE, CONTRACTOR TO MATCH EXISTING STRUCTURE.

NOTES TO CONTRACTOR:

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4. ALL DRAWINGS REMAIN THE PROPERTY OF THE ENGINEER AND SHALL NOT BE REPRODUCED, COPIED, OR ALTERED WITHOUT THE WRITTEN CONSENT OF S. LLEWELLYN & ASSOCIATES LIMITED.

NO.	DATE	BY	REVISIONS
01	03/13/2021	SJD	REVISED AS PER TOWN COMMENTS

DESIGN: SF CHK'D: DATE: Oct.13/21
DRAWN: SF CHK'D: DATE: Oct.13/21

APPROVALS

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CLIENT: GREENLANE JOINT VENTURE INC.
13 WINDWARD DRIVE, GRIMSBY

PROJECT NAME: GREENLANE & ONTARIO STREET
LINCOLN, ONTARIO

TITLE: PRELIMINARY SITE SERVICING PLAN

PROJECT No: 21021 DRAWING No: C102

SCALE: 1:300