CONSTRUCTION NOTES :

1. GENERAL

1.1. THE CONTRACTOR SHALL BE RESPONSIBLE FOR THE DETAILED LAYOUT OF THE WORK. THE ENGINEER WILL CONFIRM ALL BENCH MARK ELEVATIONS AND THE CONTRACTOR SHALL PROVIDE SUITABLE CONTROL POINTS.

1.2. ALL PROPERTY BARS TO BE PRESERVED AND REPLACED BY O.L.S. AT CONTRACTOR EXPENSE IF REMOVED OR ALTERED DURING CONSTRUCTION.

1.3. THE CONTRACTOR SHALL MAKE HIS OWN ARRANGEMENTS FOR THE SUPPLY OF TEMPORARY POWER AND WATER.

1.4. DEWATERING IF NECESSARY TO BE CARRIED OUT IN ACCORDANCE WITH OPSS-517 & 518 TO MAINTAIN ALL TRENCHES IN A DRY CONDITION. CONTRACTOR RESPONSIBLE FOR OBTAINING M.O.E PERMIT TO TAKE WATER IF REQUIRED. ALL ENGINE DRIVEN PUMPS TO BE ADEQUATELY SILENCED, SUITABLE FOR OPERATION IN A RESIDENTIAL DISTRICT.

1.5. ALL PRIVATE LANDS ADJACENT TO THE SITE TO BE PROTECTED FROM DISTURBANCE. AREAS OUTSIDE THE DEVELOPABLE LANDS THAT HAVE BEEN DISTURBED TO BE REINSTATED TO PREVIOUS CONDITION OR BETTER, INCLUDING MUNICIPAL RIGHT OF WAYS.

1.6. THE EXISTING ABOVE AND BELOW GROUND UTILITIES SHOWN ON PLANS ARE APPROXIMATE ONLY & CONTRACTOR TO CONFIRM LOCATION (HORIZONTAL AND VERTICAL) OF UTILITIES IN ADVANCE OF CONSTRUCTION. THE CONTRACTOR IS RESPONSIBLE TO NOTIFY ALL UTILITY COMPANIES PRIOR TO COMMENCING WORK & CO-ORDINATE CONSTRUCTION ACCORDINGLY.

1.7. ALL CONSTRUCTION SIGNING MUST CONFORM TO THE M.T.O. MANUAL OF "UNIFORM TRAFFIC CONTROL DEVICES".

1.8. ALL WORK SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED TO BE THE CONSTRUCTOR AS DEFINED IN THE ACT.

1.9. ALL DIMENSIONS SHALL BE CHECKED AND VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO START OF THE CONSTRUCTION AND ANY DISCREPANCIES SHALL BE REPORTED IMMEDIATELY TO THE ENGINEER.

2. STORM SEWER

2.1. REFER TO TOWN OF CALEDON STD. DRAWING No. 101

2.2. BEDDING & EMBEDMENT MATERIAL TO BE COMPACTED TO A DRY DENSITY OF AT LEAST 95% OF THE MATERIAL'S SPMDD. BEDDING & EMBEDMENT TO OPSD 802.010 (FLEXIBLE PIPE) GRANULAR 'A' OR OPSD 802.030 FOR RIGID PIPE UNLESS APPROVED OTHERWISE BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.

2.3. MAIN SEWERS LESS THAN 450mmø SHALL BE PVC PIPE (OPSS 410), MIN. PIPE STIFFNESS SHALL BE 320kPa. MAIN SEWERS 450mmø OR GREATER SHALL BE CONCRETE CLASS-65D UNLESS NOTED OTHERWISE. ALL PIPE TO BE JOINED WITH A GASKETTED BELL AND SPIGOT SYSTEM.

2.4. STORM SEWER TO BE INSULATED WHEN COVER IS LESS THAN 1.2m.

2.5. PRECAST CATCHBASINS ARE TO BE OPSD 705.010 (SINGLE) OR 705.020 (DOUBLE) WITH FRAME AND GRATE OPSD 400.100, UNLESS SPECIFIED OTHERWISE. ALL CATCHBASIN AND CATCHBASIN MANHOLES SHALL HAVE SUMPS.

2.6. SINGLE CATCHBASIN LEADS TO BE 250mm. DOUBLE CATCHBASIN LEADS TO BE 300mm UNLESS OTHERWISE NOTED. ALL CATCHBASIN LEADS TO BE EITHER C-14-ES MINIMUM OR P.V.C. TYPE S.D.R. 28 WITH A MIN. GRADE OF 2%.

2.7. PRECAST STORM MANHOLES SHALL BE PER OPSD AS NOTED WITH FRAME AND GRATE PER OPSD 401.010 TYPE 'A' AND HOLLOW RECTANGULAR LADDER RUNGS OPSD 405.010. BENCHING SHALL BE PROVIDED IN ALL MANHOLES PER OPSD 701.021.

2.8. FROST STRAPS REQUIRED ON ALL MANHOLES AS PER OPSD 701.100.

2.9. STORM SEWERS TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER

2.10. MAINTENANCE HOLE TOPS (FRAMES) AND CATCHBASINS ARE TO BE SET TO BASE COURSE ASPHALT AND THEN ADJUSTED TO FINAL GRADE WHEN TOP LIFT OF ASPHALT IS PLACED

2.11. STORM SEWER TO BE LOCATED OFFSET 1.5m SOUTH OR WEST OF CENTERLINE UNLESS OTHERWISE SPECIFIED

2.12. STORM SEWER TO BE MINIMUM 300mm DIA. WITH JOINTS CONFORMING TO C.S.A. STANDARD A 257.3.

2.13. ALL PIPE BEDDING MUST CONFORM TO OPSD MAXIMUM COVER TABLE. NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH COVER GREATER THAN 6m UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.

2.14. ALL PIPE HANDLING INSTRUCTIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURERS INSTALLATION GUIDES AND THE OCPA OR UNIBELL GUIDELINES.

3. GRADING

3.1. ALL LOT GRADING MUST COMPLY WITH THE TOWN OF CALEDON STANDARDS UNLESS OTHERWISE NOTED.

4. ROADS

4.1. REFER TO TOWN OF CALEDON STD. DRAWINGS No. 102

4.2. ALL EXCAVATION SHALL CONFORM TO THE CURRENT ONTARIO PROVINCIAL SPECIFICATION FOR GRADING OPSS 206.

4.3. THE OWNER SHALL RETAIN A QUALIFIED SOILS CONSULTANT TO CARRY OUT COMPACTION TESTS ON THE COMPLETED SUBGRADE AND SUBSEQUENT LIFTS OF GRANULAR BASE MATERIAL BEFORE PLACEMENT OF NEXT GRANULAR OR ASPHALT LIFT.

4.4. ALL VEGETATION, BOULDERS OVER 150mmø, TOPSOIL AND ORGANIC OR FROST-SUSCEPTIBLE MATERIALS SHALL BE REMOVED FROM THE ROAD BASE TO A DEPTH OF AT LEAST 1.20m BELOW FINISHED GRADE AND REPLACED WITH SUITABLE MATERIAL.

4.5. ALL UNSUITABLE EXCAVATED MATERIAL SHALL BE REMOVED FROM THE ENTIRE "ROAD CORRIDOR" AND DEPOSITED OFF THE SITE TO A DISPOSAL AREA APPROVED BY THE SITE ENGINEER.

4.6. THE SUB-GRADE SHALL BE SHAPED TO CONFORM TO THE REQUIRED LONGITUDINAL GRADE AND CROSS-SECTION AND SHALL HAVE A CROSSFALL OF 3% FROM THE CENTERLINE OF THE ROADWAY TO EACH SIDE. NATIVE SUB-GRADE TO BE GRADED, COMPACTED AND PROOF-ROLLED PRIOR TO PLACEMENT OF GRANULARS. COMPACTION TO BE MINIMUM 98% STANDARD PROCTOR MAXIMUM DRY DENSITY (SPMDD). ALL IDENTIFIED SOFT AND WEAK SPOTS SHALL BE EXCAVATED AND BACKFILLED WITH A GRANULAR BASE MATERIAL.

4.7. CRUSHED LIMESTONE SHALL BE SPREAD IN LAYERS OF 150mm MAXIMUM COMPACTED DEPTHS, AND SHALL BE COMPACTED TO 98% OF THE MATERIAL'S RESPECTIVE SPMDD.

4.8. ALL GRANULAR AND ASPHALT CONSTRUCTION SHALL CONFORM IN ALL RESPECTS TO ONTARIO PROVINCIAL STANDARD SPECIFICATION OPSS 314 AND 310.

4.9. NO GRANULAR BASE SHALL BE PLACED UNTIL THE GRADE ON WHICH IT IS TO BE LAID HAS BEEN INSPECTED AND APPROVED BY THE SOILS CONSULTANT.

4.10. JOINTS WITHIN EXISTING ASPHALT TO BE SAW CUT STRAIGHT PRIOR TO PLACING NEW ASPHALT & TACK COAT APPLIED TO EXISTING ASPHALT.

4.11. THE ASPHALT COMPONENTS SHOULD BE COMPACTED AS SPECIFIED BY THE GEOTECHNICAL ENGINEER.

4.12. ALL DRIVEWAYS TO BE PAVED WITH TWO (2) LIFTS TO A MINIMUM 40mm HL3 AND MINIMUM 40mm HL8 FROM THE CURB TO THE PROPERTY LINE ON A BASE OF A MINIMUM OF 150mm GRANULAR 'A' OR 150mm OF 19mm CRUSHER RUN LIMESTONE.

4.13. DRIVEWAY ENTRANCES AND DROP CURBS SHALL BE IN ACCORDANCE WITH THE TOWN OF CALEDON STANDARD DRAWING 402 AND THE MOST RECENT STANDARD DRAWINGS FOR THIS PURPOSE. TOWN POLICY WILL DICTATE THE WIDTH OF CURB DEPRESSION FOR DRIVEWAYS.

4.14. TWO-STAGE CURB & GUTTER TO COMPLY WITH OPSD 600.070

4.15. SIDEWALKS TO COMPLY WITH OPSD-310.010 AND ARE TO BE 1.5 METRES WIDE ON A 150mm COMPACTED GRANULA "A" BASE. MINIMUM THICKNESS AS FOLLOWS:
- NORMAL THICKNESS 125mm
- RESIDENTIAL DRIVEWAY 150mm

4.16. THE ROAD BASE SHALL INCORPORATE 100mm DIAMETER SUBDRAIN WITH FACTORY INSTALLED FILTER FABRIC AS PER TOWN OF CALEDON STANDARD NO. 240.

4.17. ALL CURB RADII TO BE MINIMUM OF 10.0 METRES RESIDENTIAL

4.18. RISE AND CROSS FALL ADJUSTMENT OF MAINTENANCE HOLE AND CATCH BASIN FRAMES WILL BE MADE USING PRODUCTS SPECIFICALLY MANUFACTURED FOR THAT PURPOSE AS PER OPSD 704.010.

4.19. NON-COMPRESSIBLE BACK FILL WILL BE USED DURING REBUILDING, ADJUSTING, OR ANY OTHER APPLICABLE CATCH BASIN OR MAINTENANCE HOLE WORKS.

4.20. CURB AND SIDEWALK CONCRETE SHALL BE 30MPa AT 28 DAYS WITH +/- 1.5% ENTRAINED AIR AND NOT LESS THAN 355 kg/m3 OF CEMENT (PER OPSS 315 AND 353).

4.21. PAVEMENT STRUCTURE AS PER GEOTECHNICAL REPORT PREAPRED BY SOIL ENGINEERS LTD. DATED APRIL 2022:

ASPHALT SURFACE - 40mm THICK (HL-3)
ASPHALT BINDER - 65mm THICK (HL-8)
GRANULAR BASE - 150mm THICK (GRANULAR 'A')
GRANULAR SUB-BASE - 300mm THICK (GRANULAR 'B')

5. SIDEWALKS AND CURBS

5.1. ALL SIDEWALKS ARE TO BE CONSTRUCTED AS PER OPSD 310.010. ALL INTERSECTIONS OF ROAD AND SIDEWALK SHALL BE AS PER OPSD 310.030.

5.2. TWO - STAGE CURB AND GUTTER TO COMPLY WITH OPSD 600.700

5.3. SIDEWALKS TO COMPLY WITH OPSD-310.010 AND ARE TO BE 1.5 METRES WIDE ON A 150MM COMPACTED GRANULAR "A" BASE. MINIMUM THICKNESS AS FOLLOWS:NORMAL THICKNESS 125mm, RESIDENTIAL DRIVEWAY 150mm, COMMERCIAL/INDUSTRIAL DRIVEWAY 200mm, (REINFORCEMENT AS PER OPSS IF REQUIRED)

5.4. SIDEWALKS NATIVE SUBGRADE SHALL HAVE A CROSSFALL OF 3% AND THE MATERIAL SHALL BE APPROVED BY A SOILS CONSULTANT AND IS SUBJECT TO APPROVAL BY THE DIRECTOR OF PUBLIC WORKS AND ENGINEERING.

5.5. THE ROAD BASE SHALL INCORPORATE 100mm DIAMETER SUBDRAIN WITH FACTORY INSTALLED FILTER FABRIC AS PER TOWN OF CALEDON STANDARD NO. 219.

5.6. NATIVE SUBGRADE TO BE COMPACTED TO A MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PROOF ROLLED.

5.7. CURB AND SIDEWALK CONCRETE SHALL BE 30 MPA AT 28 DAYS WITH 7% +/- 1.5% ENTRAINED AIR AND NOT LESS THAN 355 KG/M³ OF CEMENT. (PER OPSS 315 AND 353).

6. FENCE AND GATES

6.1. ALL CHAINLINK FENCE TO BE 1.50m HIGH BLACK VINYL COATED AS PER TOWN STD. 600.

6.2. ALL DECORATIVE FENCE TO BE AS PER LANDSCAPE ARCHITECT.

STANDARD NOTES:

1. AS-BUILT SURVEY

1.1- THE CONTRACTOR IS TO SUPPLY ALL AS-BUILT INFORMATION TO THE ENGINEER UPON COMPLETION OF WORKS. AS-BUILT INFORMATION TO INCLUDE A FULL TOPOGRAPHIC SURVEY OF THE SITE. THE AS-BUILT TO ALSO INCLUDE BUT NOT LIMITED TO: LAYOUT OF ALL SEWERS AND WATERMAIN, INVERTS AND TOP OF COVER/GRATES AT STRUCTURES, HEADWALLS AND ANY STORM WATER MANAGEMENT FEATURES.

1.2- THE AS-BUILT TO ALSO INCLUDE BUT NOT LIMITED TO CURBS, SIDEWALKS LONGITUDINAL AND CROSSFALL SLOPES, CENTER LINE OF ROADS AND EDGE OF PAVEMENT TO CHECK CROSS FALLS AND ROAD/PARKING LOT GRADES, HANDICAP RAMPS , ETC.. ANY DEVIATIONS FROM THE ORIGINAL DESIGN ARE TO BE INCLUDED IN THE AS-BUILT DRAWINGS. INFORMATION IS TO BE SUPPLIED TO THE CONTRACT ADMINISTRATOR IN BOTH CAD & PDF FORMATS.

1.3- THE AS-BUILT INFORMATION WILL BE REQUIRED ONCE AT BASE ASPHALT PLACEMENT COMPLETION AND AGAIN AFTER THE COMPLETION OF TOP ASPHALT & LANDSCAPING. ADDITIONAL SURVEY'S AS REQUIRED IN THE CONTRACT DRAWINGS

1.4- THE CONTRACTOR TO INCLUDE IN THEIR SCOPE TO CONFIRM CONDITIONS OF ANY WATERMAIN ELEMENTS (HYDRANTS, VALVE BOXES, WATER CHAMBERS, ETC) A MINIMUM THREE TIES IN TO EXISTING ABOVE GROUND VISIBLE PERMANENT REPERS (I.E. EXISTING POLES, CATCHBASINS, ETC.).

2. PERMITS

2.1 THE CONTRACTOR IS RESPONSIBLE FOR APPLYING, RECEIVING AND PAYING FOR ALL PERMITS REQUIRED TO CONSTRUCT THE WORKS INCLUDED IN CONTRACT. THE CONTRACTOR SHALL ALSO COMPLY WITH ALL CONDITIONS DICTATED BY SUCH PERMITS AT NO EXTRA COST TO THE OWNER.

2.2 CONTRACTOR SHALL OBTAIN ALL NECESSARY PERMITS AND APPROVALS PRIOR TO COMMENCING CONSTRUCTION. ALL PERMITS AND ASSOCIATED DRAWINGS AND CONDITIONS MUST BE ON-SITE AND AVAILABLE UPON REQUEST.

3. STORM AND SANITARY SEWERS

3.1 THE CONTRACTOR IS RESPONSIBLE FOR ALL REQUIRED TESTING BY THE MUNICIPALITY AND/OR ENGINEER AS APPLICABLE WHICH INCLUDES BUT NOT LIMITED TO:

3.2 PRECONSTRUCTION FLUSH & VIDEO OF EXISTING PRIVATE OR MUNICIPAL SEWERS TO CONFIRM CONDITIONS OF ANY SEWER TIES IN, TO THE SATISFACTION OF THE ENGINEER/MUNICIPALITY AS APPLICABLE.

3.3 FLUSH & VIDEO ALL STORM AND SANITARY SEWERS AND PROVIDE THREE PHYSICAL COPIES OF REPORTS AND VIDEOS. THIS INCLUDES MAINLINE SEWERS, LATERALS, LEADS & SERVICES UP TO THE STUB. THE CCTV INSPECTION, INCLUDING FLUSHING AND CLEANING, IS TO BE CARRIED OUT AS DETAILED IN OPSS 409. ONE FLUSH & CCTV VIDEO ROUND IS TO BE COMPLETED AFTER THE PLACEMENT OF BASE ASPHALT. SECOND ROUND OF FLUSH & CCTV TO BE COMPLETED AFTER THE PLACEMENT OF TOP ASPHALT AND COMPLETION OF ALL LANDSCAPING. THIS ITEM TO ALSO INCLUDE THE CLEANING OF ALL STRUCTURES.

3.4 MANDREL TESTING PER THE OPSS FOR ALL FLEXIBLE SANITARY AND STORM PIPES AFTER INSTALLATION, PRIOR BASE ASPHALT PLACEMENT.

3.5 AIR TESTING FOR SANITARY SEWERS & STRUCTURES PRIOR BASE ASPHALT PLACEMENT, IF REQUESTED BY MUNICIPALITY.

4. WATERMAIN:

4.1 THE CONTRACTOR TO INCLUDE IN THEIR SCOPE, THIRD PARTY TESTING INCLUDING REPORTS FOR ALL APPLICABLE WATERMAIN TESTING INCLUDING BUT NOT LIMITED TO FLUSHING, SWABBING, PRESSURE TESTING, CHLORINATION, BACKFLOW PREVENTOR TESTING, CONTINUITY TESTING & HYDRANT FLOW TESTING.

REGION OF PEEL GENERAL NOTES :

1. GENERAL

1.1. THE APPLICANT, APPLICANT'S REPRESENTATIVE, CONSULTANT, CONTRACTOR AND SUB CONTRACTORS ARE RESPONSIBLE TO ENSURE THAT THEIR DESIGN MATERIALS AND CONSTRUCTION PRACTICES CONFORM TO THE LATEST REGION OF PEEL STANDARDS, SPECIFICATIONS, MATERIALS AND DESIGN CRITERIA, POSTED ON REGION OF PEEL'S WEBSITE (WWW.PEELREGION.CA/PW/STANDARDS). IN THE ABSENCE OF REGION SPECIFICATIONS, THE ONTARIO PROVINCIAL STANDARD SPECIFICATIONS (OPSS) SHALL APPLY.

1.2. ALL WORKS SHALL BE COMPLETED IN ACCORDANCE WITH THE "OCCUPATIONAL HEALTH AND SAFETY ACT". THE GENERAL CONTRACTOR SHALL BE DEEMED THE CONSTRUCTOR AS DEFINED IN THE ACT.

1.3. THE CONTRACTOR AT THEIR EXPENSE SHALL VERIFY THE LOCATION, DIMENSION AND ELEVATION OF ALL EXISTING SERVICES AND UTILITIES INTHE FIELD.

1.4. PRIOR TO EXCAVATION OR BORING CONTRACTOR AT THEIR EXPENSE SHALL EXPOSE AND VERIFY THE LOCATION AND ELEVATION OF ALL EXISTING UTILITIES AND SERVICES TO BE CROSSED AND MUST NOTIFY THE DESIGN ENGINEER AND THE AGENCY FIELD INSPECTOR AND/OR PROJECT MANAGER IMMEDIATELY, IN WRITING, OF ANY CONFLICTS OR DISCREPANCIES. CONTRACTOR SHALL BE RESPONSIBLE FOR EXPOSING THE EXISTING UTILITIES FAR ENOUGH IN ADVANCE OF CONSTRUCTION TO MAKE NECESSARY DESIGN MODIFICATIONS FOR REVIEW AND APPROVAL, IF REQUIRED, WITHOUT DELAYING THE WORK.

1.5. THE CONTRACTOR, AT THEIR EXPENSE AND TO THE SATISFACTION OF THE REGION OF PEEL, SHALL BE RESPONSIBLE FOR THE RESTORATION AND THE REPAIR OF THE EXISTING UTILITIES AND ALL AREAS BEYOND THE PLAN OF SUBDIVISION DISTURBED DURING CONSTRUCTION.

1.6. THE SUPPORT OF ALL UTILITIES SHALL BE IN ACCORDANCE WITH THE REQUIREMENTS OF THE AUTHORITY HAVING JURISDICTION.

1.7. ALL BACKFILL FOR SEWERS, WATERMAINS AND UTILITIES ON THE ROAD ALLOWANCE MUST BE MECHANICALLY COMPACTED.

1.8. ALL BOREHOLES SHOWN ON DRAWING ARE FOR INFORMATION ONLY. REFER TO GEOTECHNICAL REPORT.

1.9. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.

2. WATERMAINS

2.1. THE REGION OF PEEL SHALL CONDUCT THE OPERATION OF EXISTING VALVES AND HYDRANTS IF REQUIRED.

2.2. ALL WATERMAINS SHALL HAVE 1.70M MINIMUM COVER FOR URBAN ROAD DESIGN AND 2.1M MINIMUM COVER FOR RURAL ROAD DESIGN.

2.3. ALL WATERMAINS SHALL MAINTAIN A MINIMUM 1.5M CLEARANCE FROM ALL MANHOLES AND CATCH BASINS, WHERE APPLICABLE.

2.4. FOR WATERMAINS CROSSING UNDER SEWERS A MINIMUM 0.5M VERTICAL CLEARANCE SHALL BE PROVIDED. FOR WATERMAINS CROSSING OVER SEWERS A MINIMUM 0.3M VERTICAL CLEARANCE SHALL BE PROVIDED.

2.5. FOR WATERMAIN CROSSING A SANITARY SEWER, WATERMAIN JOINTS ARE TO BE OFFSET A MINIMUM OF 2.5M HORIZONTALLY FROM THE CENTERLINE OF THE SANITARY SEWER.

2.6. WATERMAIN BEDDING SHOULD BE AS PER TRENCH DETAIL ON THE PLAN AND PROFILE DRAWING AND COMPACTED TO 100% SPD.

2.7. WATERMAINS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED PLANS, COPY OF GRADE SHEET MUST BE SUPPLIED TO THE REGION OF PEEL INSPECTOR PRIOR TO COMMENCEMENT OF WORK.

2.8. ANY JOINT DEFLECTION SHALL NOT EXCEED 50% OF MANUFACTURER'S SPECIFICATIONS. PIPE BARREL DEFLECTION IS PROHIBITED.

2.9. FIRE HYDRANTS SHALL BE INSTALLED AS PER REGION STD. DWG. 1-6-1 OR 1-6-2 WITH FLANGE SET BETWEEN 50MM AND 150MM ABOVE FINISHED GRADE.

2.10. ALL HYDRANTS SHALL HAVE 1.2M MINIMUM HORIZONTAL CLEARANCE FROM ALL OTHER UTILITIES AND STRUCTURES MEASURED FROM THE NEAREST POINT OF THE STRUCTURE.

2.11. MECHANICAL RESTRAINERS ARE REQUIRED FOR ALL FITTINGS, VALVES, DEAD ENDS, CAPS AND HYDRANTS ON ALL PVC WATERMAINS; MINIMUM RESTRAINED PIPE LENGTH AS PER REGION'S STANDARD PER REGION OF PEEL STANDARD 1-5-9.

2.12. STAINLESS STEEL NUTS AND BOLTS ARE TO BE USED ON ALL METALLIC FITTINGS AND JOINT RESTRAINTS.

2.13. ALL METALLIC VALVES, FITTINGS, THROUGH WALL METAL PIPING AND JOINT RESTRAINTS TO BE C/W DENSO PASTE, DENSO MASTIC & DENSO TAPE OR APPROVED EQUAL APPLIED TO MANUFACTURER'S RECOMMENDATIONS.

2.14. WHERE PLASTIC PIPE IS USED, INSTALL A 12 GAUGE TWJ STRANDED COPPER, LIGHT COLOURED, PLASTIC COATED TRACER WIRE ATTACHED TO THE PIPE WITH APPROVED WIRE SPLICE. THE WIRE SHOULD BE BROUGHT TO THE SURFACE AT EACH SERVICE & VALVE BOX AND HYDRANT VALVES.

2.15. A PHYSICAL SEPARATION MUST BE MAINTAINED AT ALL CONNECTION POINTS OF NEW WATERMAIN TO THE EXISTING SYSTEM UNTIL BACTERIOLOGICAL TESTS HAVE PASSED, AS PER STD. DWG 1-7-7 AND 1-7-8.

2.16. PROVISION FOR FLUSHING OF NEW WATERMAINS PRIOR TO TESTING MUST BE PROVIDED WITH AT LEAST 50MM OUTLET ON WATERMAINS SMALLER THAN 300MM IN DIAMETER, AND MINIMUM 100MM OUTLET ON WATERMAINS 300MM AND LARGER. COPPER WATERMAINS ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE WATERMAIN, AS PER STD. DWG. 1-7-7 AND 1-7-8.

2.17. ALL SERVICE CONNECTIONS TO PVC PIPES ARE TO BE MADE USING APPROVED WIDE BAND SERVICE SADDLE. DIRECT TAPPING IS NOT ALLOWED.

2.18. ALL WATER SEVICES SHALL BE MINIMUM 25MM DIA NOMINAL COPPER PIPE SIZE OR 32MM DIA POLYETHYLENE PIPE. IN GENERAL, NON METALLIC SERVICES SHALL BE ONE SIZE LARGER THAN THE NOMINAL COPPER PIPE SIZE AS PER LATEST APPROVED REGIONAL PRODUCT LIST AND SIZES C/W TRACER WIRE.

2.19. THE MINIMUM LATERAL DISTANCE BETWEEN WATER SERVICES AND OTHER UTILITIES SHALL BE 1.2M.

2.20. ALL RESIDENTIAL WATER SERVICE BOXES/CURB STOPS SHALL BE INSTALLED WITHIN SODDED AREAS WITH MINIMUM DISTANCE OF 1.0 METRE FROM THE EDGE OF THE DRIVEWAY, BE FLUSH WITH GRADE AND ACCESSIBLE AT ALL TIME.

2.21. VALVE AND BOXES SHALL BE CAST IRON SLIDING TYPE, COMPLETED WITH VALVE GUIDE PLATES AND INSTALLED AS PER REGION STD. 1-3-8. MAINLINE VALVES TO BE RESTRAINED AS PER REGION STD. 1-3-3A. VALVES SHALL OPEN TO THE LEFT (COUNTER-CLOCKWISE)

2.22. ALL WATER SERVICES BOXES SHOULD BE "LEAD FREE" AS PER REGION'S MATERIAL SPECIFICATIONS.

2.23. THE REGION WILL COMPLETE THE NECESSARY WATER TESTING (PRESSURE TEST, FLUSHING, CHLORINATION AND SAMPLING). CONTRACTOR MAY PROCEED WITH HIS OWN PRESSURE TEST AND FLUSHING PRIOR TO REGION'S TESTING.

2.24. ALL METALLIC WATER PIPES INCLUDING K' COPPER WATER SERVICES, INSTALLED OR REPAIRED, SHALL HAVE ZINC ANODE AS PER REGION OF PEEL STANDARD 1-7-1, OPSS422 AND OPSD 1109.011 AND TO CONFORM TO ASTM B-418 TYPE.

2.25. WATERMAIN PIPES SHALL BE BROUGHT ON SITE WITH MANUFACTURER'S PLUGS AND STORED SO NO DEBRIS ENTER THE PIPE.
- o THE CONTRACTOR IS NOT ALLOWED TO INSTALL ANY WATERMAIN UNTIL HE HAS A NIGHT PLUG ON SITE.
- o THE NIGHT PLUG IS TO BE USED EVERY TIME WHEN THE WORK IS STOPPED.

2.26. DRIVEWAY RESTORATIONS TO BE COMPLETED PER TOWN STANDARD 402 (150 mm GRANULAR A, 40mm HL8 ASPHALT, and 40mm HL3 ASPHALT)

2.27. BOULEVARD RESTORATION TO BE COMPLETED WITH TOPSOIL AND SOD PER TOWN STANDARDS

2.28. LOCATE EXISTING WATER SERVICES AND TAP INTO NEW 200mm DIA. WATERMAIN COMPLETE WITH APPURTENANCES AND BOULEVARD/DRIVEWAY RESTORATION.

2.29. CONNECT NEW 200mm DIA. WATERMAIN INTO EXISTING WATERMAIN COMPLETE WITH APPURTENANCES AND RESTORATION

2.30. CONNECT EXISTING FIRE HYDRANT AND SECONDARY VALVE TO NEW 200MM DIA. WATERMAIN CIOMPLETE WITH APPURTENANCES AND RESTORATION

2.31. LOCATE EXISTING WATERMAIN AND SUPPLY AND INSTALL TEMPORARY CONNECTION. FINALIZED CONNECTION UPON COMPLETION OF TESTING ACCEPTANCE. (ALLAN DRIVE, RIVERWOOD TERRACE, NUNNVILLE ROAD, BATEMAN LANE)

3. WATERMAIN IN FILL AREA

3.25. NO WATERMAIN TO BE LAID ON FILL UNTIL THE FIELD DENSITY TEST REPORTS HAVE BEEN SUBMITTED TO AND APPROVED BY THE REGION OF PEEL OR THE CONSULTING ENGINEER.

3.26. PIPE JOINTS DEFLECTIONS ARE NOT ALLOWED IN FILL AREA.

3.27. JOINTS SHALL BE MECHANICALLY RESTRAINED THE WHOLE LENGTH.

3.28. ALL HYDRANTS, TEE BRANCH VALVES AND HORIZONTAL BENDS ARE TO BE MECHANICALLY RESTRAINED WITH TIE RODS.

3.29. IN EXISTING MUNICIPAL RIGHT-OF-WAY OR EASEMENT, FILL TO BE PLACED TO 600MM MINIMUM ABOVE THE OBVERT OF THE WATERMAIN AND TO 300MM EITHER SIDE, COMPACTED TO MINIMUM 100% STANDARD PROCTOR DENSITY IN 300MM LIFTS; AND THEREAFTER, FOR EVERY 300MM LIFT ALONG THE CENTERLINE, AND 1.5M TO EITHER SIDE, OF WATERMAIN AT MAXIMUM INTERVAL OF 30.0M. TEST RESULTS MUST BE SUBMITTED TO AND APPROVED BY THE CONSULTANT OR AGENCY.

4.0 SANITARY SEWERS

4.1 ALL SANITARY SEWER BEDDING AS PER STD. 2-3-1.

4.2 MAINLINE SANITARY SEWER PIPE SIZE SHALL BE MINIMUM 250mm IN DIAMETER INSTALLED AT THE APPROVED DESIGN GRADE. PIPE CLASS AND APPURTENANCES AS PER REGION'S SPECIFICATIONS.

4.3 ALL SEWERS CONSTRUCTED WITH GRADES 0.5% OR LESS SHALL BE APPROVED BY THE ENGINEER AND THE AGENCY PROJECT MANAGER OR DESIGNATE AND BE INSTALLED WITH LASER AND CHECKED PRIOR TO BACKFILL.

4.4 MINIMUM SANITARY SEWER PIPE SLOPE FOR LAST LEG SHALL BE 1% AND DESIRABLE SLOPE 2%

4.5 ALL MANHOLES SHALL BE AS PER REGION STD. DWG. 2-5-2, 2-5-3, 2-5-4, 2-5-5 AND 2-5-6 AND BENCHING AS PER STD 2-5-20.

4.6 FRAME AND COVERS SHALL BE AS PER REGION STD. DWG. 2-5-13, 2-6-1 to 2-6-8.

4.7 MANHOLE STEPS OR LADDERS SHALL BE AS PER REGION STD. DWG. 2-6-9 to 2-6-11.

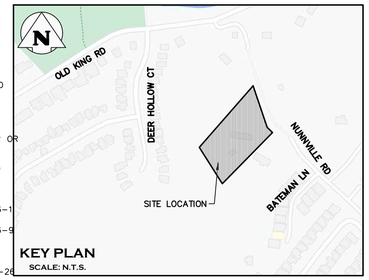
4.8 MANHOLES DEEPER THAN 5.0m MUST BE EQUIPPED WITH SAFETY PLATFORMS, AS PER STD 2-6-13 and 2-6-14.

4.9 MANHOLE DROP STRUCTURES SHALL BE AS PER REGION STD. DWG. 2-5-26 AND 2-5-27.

4.10 SANITARY SERVICE LATERALS SHALL BE MINIMUM 125mm DIAMETER.

A. SANITARY SERVICE SHALL BE LOWER THAN AND TO THE RIGHT OF THE STORM SERVICE AT THE PROPERTY LINE WHEN FACING THE LOT FROM THE STREET.

B. CONNECTIONS TO SEWERS SHALL BE MADE WITH MANUFACTURED TEES OR WYES WHERE APPLICABLE AND SHALL BE COLOUR CODED AS NON-WHITE, AS PER STD. DWG. 2-4-1 to 2-4-7.



KEY PLAN
SCALE: N.T.S.

TOWN OF CALEDON
PLANNING
RECEIVED
Dec 22, 2023

No.	ISSUE / REVISION	YYYY/MMM/DD
4	ISSUED FOR SECOND SUBMISSION SPA	2023/DEC/19
3	ISSUED FOR FIRST SUBMISSION SPA	2023/APR/25
2	ISSUED FOR PRE-DART SUBMISSION	2023/APR/05
1	ISSUED FOR SECOND SUBMISSION ZBA	2023/MAR/06
0	ISSUED FOR FIRST SUBMISSION ZBA	2022/APR/13

ELEVATION NOTE:

ELEVATIONS ARE GEODETIC IN ORIGIN AND ARE REFERRED TO FIRST ORDER BENCHMARK No.00819758057 HAVING AN ORTHOMETRIC ELEVATION OF 251.929 METRES. ELEVATIONS ARE REFERENCED TO THE CANADIAN GEODETIC VERTICAL DATUM OF 1928, 1978 ADJUSTMENT (CGVD-1928:1978)

SURVEY NOTES:

SKETCH FOR ENGINEER'S USE COMPLETED BY R-PE SURVEYING LTD. ON THE 23RD DAY OF FEBRUARY, 2022.
JOB No. 21-434

SITE PLAN NOTES:

DESIGN ELEMENTS SHOWN ARE BASED ON SITE PLAN PREPARED BY VA3 DESIGN.
PROJECT NUMBER: 22008 (2023/NOV/23)

DRAWING NOTES:

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THE CONTRACTOR SHALL VERIFY ALL DIMENSIONS, LEVELS, AND DATUMS ON SITE AND REPORT ANY DISCREPANCIES OR OMISSIONS TO THIS OFFICE PRIOR TO CONSTRUCTION.

THIS DRAWING IS TO BE READ AND UNDERSTOOD IN CONJUNCTION WITH ALL OTHER PLANS AND DOCUMENTS APPLICABLE TO THIS PROJECT. DO NOT SCALE THIS DRAWING.

ALL EXISTING UNDERGROUND UTILITIES TO BE VERIFIED IN THE FIELD BY THE CONTRACTOR PRIOR TO CONSTRUCTION.

Project
13290 NUNNVILLE RD
TOWN OF CALEDON

Drawing
STANDARD NOTES

Engineer
LICENSED PROFESSIONAL ENGINEER
P.SMUCZAK
100519964
2023.12.19
649-6278
PROVINCE OF ONTARIO

Engineer

CROZIER
CONSULTING ENGINEERS
2800 HIGH POINT DRIVE
SUITE 100
MILTON, ON L9T 6P4
905 875 0026 T
905 875 4915 F
WWW.CFCROZIER.CA

Drawn	P.S./J.B.	Design	P.S./J.B.	Project No.	649-6278
Check	P.S.	Check	P.S./N.C.	Scale	1:300
				Dwg.	C105