TOWN OF CALEDON

GENERAL NOTES

GENERAL

1. CONSTRUCTION OF THIS PROJECT TO COMPLY WITH THE MOST CURRENT VERSION OF THE DEVELOPMENT STANDARDS, POLICIES AND GUIDELINES, PREPARED BY THE TOWN OF CALEDON AND THE ONTARIO PROVINCIAL STANDARDS AND SPECIFICATIONS.

2. ALL CONSTRUCTION SHALL BE CARRIED OUT IN ACCORDANCE WITH THE REQUIREMENTS OF THE OCCUPATIONAL HEALTH AND SAFETY ACT AND REGULATIONS FOR CONSTRUCTION PROJECTS.

3. A MINIMUM OF FORTY-EIGHT (48) HOURS PRIOR TO COMMENCING CONSTRUCTION WITHIN MUNICIPAL RIGHT OF WAY THE CONTRACTOR MUST CONTACT THE FOLLOWING:

THE TOWN OF CALEDON (905-584-2272), THE REGION OF PEEL, HYDRO ONE, ROGERS CABLE, ENBRIDGE CONSUMER GAS, BELL CANADA, FIRE AND EMERGENCY SERVICES.

4. A RIGHT OF WAY OCCUPANCY PERMIT MUST BE OBTAINED FROM THE TOWN OF CALEDON A MINIMUM 48 HOURS PRIOR TO COMMENCING ANY WORKS WITHIN THE MUNICIPAL ALLOWANCE.

5. ALL DRAINAGE TO BE SELF-CONTAINED AND DISCHARGED TO A LOCATION APPROVED BY THE TOWN OF CALEDON AND CONSERVATION AUTHORITY PRIOR TO THE ISSUANCE OF BUILDING PERMIT.

6. SEDIMENT CONTROL DEVICES ARE TO BE INSTALLED PRIOR TO ANY CONSTRUCTION ON THE SITE AND SHALL BE MAINTAINED THROUGHOUT THE CONSTRUCTION PERIOD TO THE SATISFACTION OF THE TOWN AND THE APPLICABLE CONSERVATION AUTHORITY.

7. ANY CHANGES TO GRADES OR SERVICING FORM THE ORIGINAL APPROVED SITE PLAN MUST BE SUBMITTED BY THE ENGINEER TO THE TOWN FOR APPROVAL PRIOR TO CONSTRUCTION.

8. A MINIMUM OF 1.5m CLEARANCE IS TO BE PROVIDED FROM THE LIMITS OF SIDEWALKS AND DRIVEWAYS TO THE EXISTING UTILITY STRUCTURES WITHIN THE MUNICIPAL RIGHT OF WAY. IF THIS CLEARANCE IS NOT MAINTAINED, THEY SHALL BE RELOCATED AT THE APPLICANT'S EXPENSE.

9. STREET CURBS ARE TO BE CONTINUOUS THROUGH THE PROPOSED ENTRANCE.

10. MUNICIPAL SIDEWALKS SHALL BE CONTINUOUS THROUGH ALL ENTRANCES TO THE SITE AND THE CURB SHALL BE TAPERED BACK 600mm. SIDEWALKS SHALL BE COMPLETELY REMOVED AND REPLACED WITH A MINIMUM CONCRETE THICKNESS, 32MPa AND 5% TO 7% AIR ENTRAINMENT AT ALL PROPOSED INDUSTRIAL, COMMERCIAL AND INSTITUTIONAL ENTRANCES.

11. ALL BOULEVARDS TO BE RESTORED WITH 300mm MINIMUM TOPSOIL AND SOD TO THE SATISFACTION OF THE TOWN.

12. THE MINIMUM PAVEMENT DESIGN FOR THE ASPHALT DRIVEWAY APRON WITHIN THE MUNICIPAL ROAD ALLOWANCE SHALL BE AS FOLLOWS:
    - 40mm HL3 ASPHALT
    - 65mm HL8 ASPHALT
    - 150mm GRANULAR 'A'
    - 300mm GRANULAR 'B'

THE CONSULTANT SHOULD REVIEW THE ABOVE WITH RESPECT TO THE EXPECTED USAGE.

13. STRUCTURAL DESIGN OF THE FIRE ROUTE IS REQUIRED TO SUPPORT AN 18 TON VEHICLE.

14. SERVICE CONNECTION BACKFILL TO BE DISCUSSED WITH THE TOWN.

STORM SEWERS

A. STORM SEWER TO BE PROVIDED ON ALL ROADS WITH CURB AND GUTTER.

B. PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED. PIPE SIZE MINIMUM 250mm DIA. SINGLE, 300mm DIA. DOUBLE.

C. STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD 802.030 FOR RIGID PIPE OR OPSD 802.010 WITH GRANULAR 'A' FOR FLEXIBLE PIPE UNLESS APPROVED OTHERWISE BY THE GENERAL MANAGER OF FINANCE & INFRASTRUCTURE SERVICES.

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

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

F. ALL CONNECTIONS TO THE STORM MAIN SHALL BE MADE WITH A STORM MANHOLE OR APPROVED FACTORY TEE CONNECTION AS PER OPSD 708.01 OR 708.03.

G. PIPE MATERIAL TO BE REINFORCED CONCRETE WITH A STRENGTH OF 50 N/m/mm CERTIFIED TO C.S.A. STANDARD A247.2-1982, CLASS 50-D (PREVIOUSLY C.S.A. STANDARD A257.2-1974
CLASS II) OR PVC CERTIFIED TO C.S.A. STANDARDS 182.2 AND 182.4 MAX. PVC PIPE DIA. IS
600mm BIG O BOSS 2000 POLYETHYLENE PIPE WITH GASKETED BELL AND SPIGOT JOINTS CERTIFIED C.S.A. B182.6 FOR STORM SEWERS UP TO 900mm DIA. WHERE ONLY CONNECTION STD CATCHBASINS ARE CONSIDERED.

H. STORM SEWER TO BE MINIMUM 300mm DIA. WITH JOINTS CONFORMING TO C.S.A. STANDARD A257.3

I. 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.

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

ROADWORKS

ROADS

A. SINGLE - STAGE CURB & GUTTER TO COMPLY WITH OPSD 600.040

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

C. 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)

D. 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 GENERAL MANAGER OF FINANCE & INFRASTRUCTURE SERVICES.

E. THE ROAD BASE SHALL INCORPORATE 100mm DIAMETER SUBDRAIN WITH FACTORY INSTALLED FILTER FABRIC AS PER TOWN OF CALEDON STANDARD No. 218.

F. ALL CURB RADII TO BE MINIMUM OF 10.0 METRES RESIDENTIAL AND 15.0 METRES INDUSTRIAL AT THE EDGE OF ASPHALT.

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

H. GRADE 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.

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

J. CURB AND SIDEWALK CONCRETE SHALL BE 32MPa AT 28 DAYS WITH 7% +/- 1.5% ENTRAINED AIR AND NOT LESS THAN 355 kg/m3 OF CEMENT. (PER OPSS 315 AND 353)

PAVEMENT DESIGN AS PER
TOWN OF CALEDON GUIDELINES FOR
RIGHT-OF-WAY RESTORATIONS AND DRIVEWAY APRONS:

PAVEMENT LAYER	COMPACTION REQUIREMENTS	DRIVEWAY
ASPHALTIC CONCRETE (OPSS 310)	MINIMUM 92% MRD	40mm HL3 65mm HL8
OPSS GRANULAR A BASE (OPSS 1010)	100% SPMDD*	150mm
OPSS GRANULAR B BASE (OPSS 1010)	100% SPMDD*	300mm

* DENOTES STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM-D698

PAVEMENT DESIGN WITHIN PRIVATE SITE
AS PER CMT ENGINEERING INC.
GEOTECHNICAL INVESTIGATION REPORT DATED JUN. 2021

PAVEMENT LAYER	LIGHT-DUTY PARKING	HEAVY-DUTY
ASPHALTIC CONCRETE (OPSS 310)	40mm HL3 50mm HL8 or HL4	40mm HL3 70mm HL8 or HL4
OPSS GRANULAR A BASE (OPSS 1010)	150mm	150mm
OPSS GRANULAR B BASE (OPSS 1010)	400mm	450mm

* DENOTES STANDARD PROCTOR MAXIMUM DRY DENSITY, ASTM-D698

REGION OF PEEL

GENERAL NOTES

GENERAL

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.

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.

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

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.

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.

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

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

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

9. ALL DIMENSIONS ARE IN METRES UNLESS OTHERWISE SPECIFIED.

WATERMAINS

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

2. CONTRACTOR MUST USE BATTER OR ROD-AND-LEVEL METHOD FOR WATERMAIN INSTALLATION.

3. ALL WATERMAINS SHALL HAVE 1.70m MINIMUM COVER FOR URBAN ROAD DESIGN AND 2.1m MINIMUM COVER FOR RURAL ROAD DESIGN.

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

5. FOR WATERMAINS CROSSING OVER OR UNDER SEWERS A MINIMUM 0.5m VERTICAL CLEARANCE SHALL BE PROVIDED.

6. 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.

7. WATERMAIN BEDDING SHOULD BE AS PER DWG 1-5-1.

8. 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.

9. ANY JOINT DEFLECTION SHALL BE 50% OF MANUFACTURER'S SPECIFICATIONS. PIPE BARREL DEFLECTION IS PROHIBITED.

10. 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.

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

12. 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 DRAWING 1-5-9.

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

14. 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.

15. WHERE PLASTIC PIPE IS USED, INSTALL A 12 GAUGE TWU 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.

16. 50mm DIAMETER WATERMAIN SHALL BE TYPE K SOFT COPPER. WATERMAIN INSTALLATION IN CUL-DE-SACS AS PER REGION STD. DWG. 1-7-4.

17. 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.

18. 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.

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

20. ALL WATER SERVICES 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.

21. THE MINIMUM LATERAL DISTANCE BETWEEN WATER SERVICES AND OTHER UTILITIES SHALL BE 1.2m.

22. 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.

23. 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).

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

25. 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.

26. 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.

27. ALL WATERMAIN PIPE DELIVERED ON SITE SHALL HAVE MANUFACTURER'S PLUGS AND STORED SO THAT NO DEBRIS ENTERS THE PIPE. NO WATERMAIN IS TO BE INSTALLED UNTIL NIGHT PLUG IS ON SITE. NIGHT PLUG TO BE USED EVERY TIME WORK IS STOPPED.

WATERMAIN IN FILL AREA

1. 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.

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

3. JOINTS SHALL BE MECHANICALLY RESTRAINED THE WHOLE LENGTH.

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

5. 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.

SANITARY SEWERS

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

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.

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

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.

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

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

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

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

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.

TRAFFIC SIGNS AND SIGNALS ON REGIONAL ROADS

1. ALL REQUIRED TRAFFIC SIGNS, WHETHER REGULATORY, WARNING, TEMPORARY OR GUIDE/DIRECTIONAL IN NATURE SHALL BE INSTALLED IN ACCORDANCE WITH THE STANDARDS SPECIFICATIONS AND LEGISLATION CONTAINED IN THE OTM MANUALS, THE HTA AND REGION OF PEEL TRAFFIC BY-LAW.

2. ELECTRICAL WORKS SHALL CONFORM TO THE ONTARIO PROVINCIAL STANDARD (OPS) DRAWINGS AND REGION OF PEEL STANDARD DRAWINGS AND SPECIFICATIONS.

3. TRAFFIC CONTROLLERS MUST BE INSTALLED AS PER APPROVED LOCATIONS. EQUIPMENT MUST NOT ENCROACH ON PRIVATE PROPERTY WITHOUT PERMISSION TO ENTER, EASEMENT, PERMANENT OR TEMPORARY UNDERTAKINGS.

TOWN OF CALEDON
PLANNING
RECEIVED
March 4, 2025

NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REGISTERED PROFESSIONAL ENGINEER
H.SARKISSIAN
FEB 28/25
PROVINCE OF ONTARIO

Town of Caledon
APPROVED AS NOTED
This approval constitutes a general review and does not certify dimensional accuracy.
This approval is subject to further certification of the "as constructed" works by a registered Professional Engineer of the Province of Ontario.
Date: _____
Approved By: _____

13656 -13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

Region of Peel
Working for you

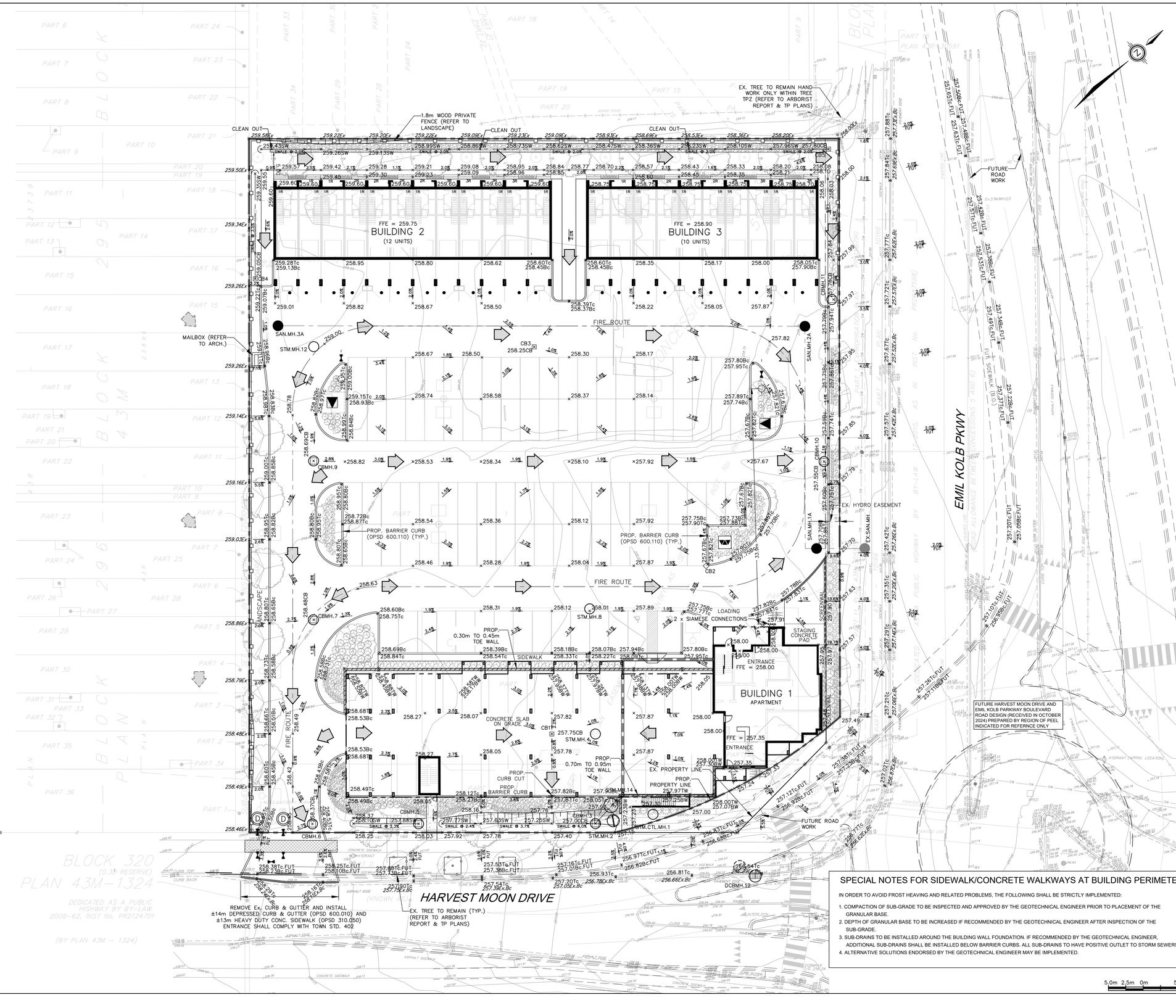
TOWN OF CALEDON

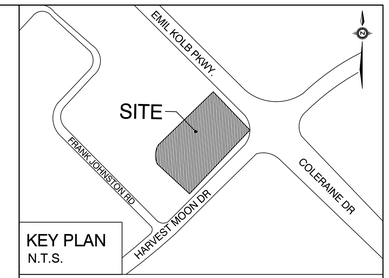
GENERAL NOTES

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: N.T.S.			PROJECT No. 2024-5440
DESIGNED BY: C.D./C.M.	DRAWN BY: M.P./V.H.		
CHECKED BY: H.S./C.M.	DATE: JUNE 2024		DRAWING No. GN-1

F:\5440\5440-DRAWINGS\5440-GN-1.DWG | 2025-03-03 2:19:33 PM | mpoisson





KEY PLAN
N.T.S.

NOTES

1. THE LOCATION OF ALL UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON CONTRACT DRAWINGS, AND WHERE SHOWN THE ACCURACY OF THE LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITIES OF DAMAGE.
2. ALL AREAS DISTURBED DURING CONSTRUCTION OF SEWERS AND WATERMAINS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF CALEDON.

LEGEND

- DENOTES VALVE AND CHAMBER
- DENOTES VALVE AND BOX
- DENOTES HYDRANTS
- AD — DENOTES AREA DRAINS
- CB — DENOTES CATCHBASINS
- DENOTES STORM MANHOLE
- DENOTES SANITARY MANHOLE
- DENOTES PROPOSED PROPERTY LINE
- DENOTES EXISTING PROPERTY LINE
- DENOTES LINE OF U/G
- OH — DENOTES EXISTING OVERHEAD WIRE
- 131.48 — DENOTES PROPOSED ELEVATION
- 131.48Tc — DENOTES PROPOSED TOP OF CURB
- 131.48Bc — DENOTES PROPOSED BOTTOM OF CURB
- 131.48SW — DENOTES PROPOSED SWALE
- 130.29Ex — DENOTES EXISTING ELEVATION
- DENOTES OVERLAND FLOW ARROW
- DENOTES HYDRO TRANSFORMER (REFER TO SITE LIGHTING PLAN PREPARED BY RTG SYSTEM INC. DATED FEB. 2025)

NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCH MARK:

BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REGISTERED PROFESSIONAL ENGINEER H.SARKISSIAN FEB. 28/25 PROVINCE OF ONTARIO

Town of Caledon
APPROVED AS NOTED
This approval constitutes a general review and does not certify dimensional accuracy.
This approval is subject to further certification of the "as constructed" works by a registered Professional Engineer of the Province of Ontario.
Date: _____
Approved By: _____

13656 - 13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

Region of Peel
Working for you.

TOWN OF CALEDON

SPECIAL NOTES FOR SIDEWALK/CONCRETE WALKWAYS AT BUILDING PERIMETER

IN ORDER TO AVOID FROST HEAVING AND RELATED PROBLEMS, THE FOLLOWING SHALL BE STRICTLY IMPLEMENTED:

1. COMPACTION OF SUB-GRADE TO BE INSPECTED AND APPROVED BY THE GEOTECHNICAL ENGINEER PRIOR TO PLACEMENT OF THE GRANULAR BASE.
2. DEPTH OF GRANULAR BASE TO BE INCREASED IF RECOMMENDED BY THE GEOTECHNICAL ENGINEER AFTER INSPECTION OF THE SUB-GRADE.
3. SUB-DRAINS TO BE INSTALLED AROUND THE BUILDING WALL FOUNDATION. IF RECOMMENDED BY THE GEOTECHNICAL ENGINEER, ADDITIONAL SUB-DRAINS SHALL BE INSTALLED BELOW BARRIER CURBS. ALL SUB-DRAINS TO HAVE POSITIVE OUTLET TO STORM SEWERS.
4. ALTERNATIVE SOLUTIONS ENDORSED BY THE GEOTECHNICAL ENGINEER MAY BE IMPLEMENTED.

SITE GRADING PLAN

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: 1:250		PROJECT No.	2024-5440
DESIGNED BY: C.D.	DRAWN BY: M.P./V.H.	DRAWING No.	SG-1
CHECKED BY: H.S.	DATE: JUNE 2024		

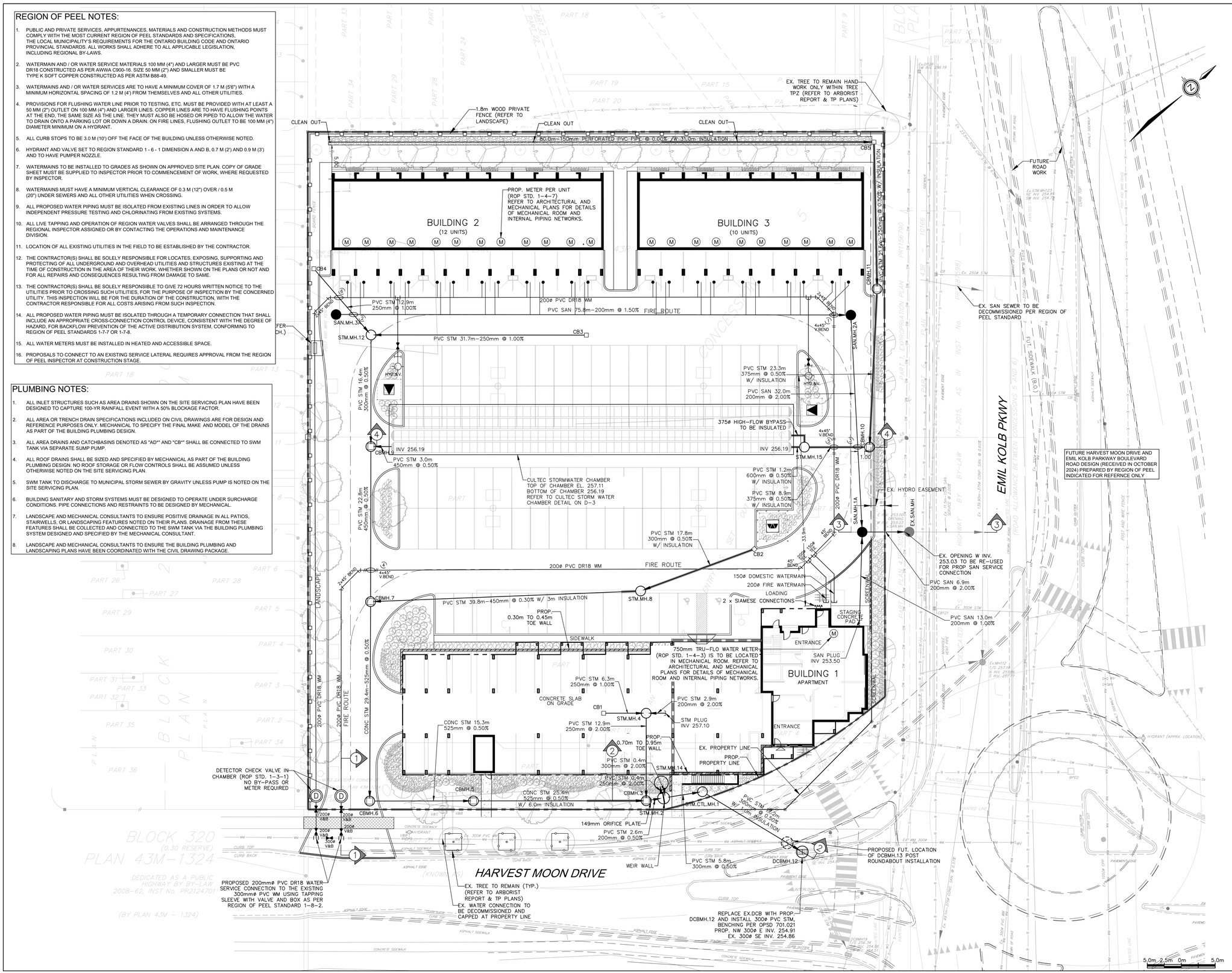
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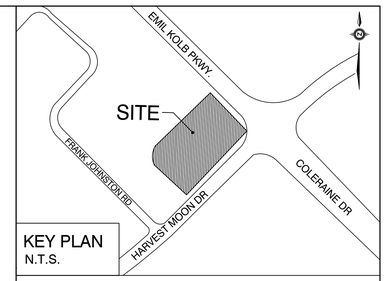
REGION OF PEEL NOTES:

1. PUBLIC AND PRIVATE SERVICES, APPURTENANCES, MATERIALS AND CONSTRUCTION METHODS MUST COMPLY WITH THE MOST CURRENT REGION OF PEEL STANDARDS AND SPECIFICATIONS, THE LOCAL MUNICIPALITY'S REQUIREMENTS FOR THE ONTARIO BUILDING CODE AND ONTARIO PROVINCIAL STANDARDS. ALL WORKS SHALL ADHERE TO ALL APPLICABLE LEGISLATION, INCLUDING REGIONAL BY-LAWS.
2. WATERMAIN AND / OR WATER SERVICE MATERIALS 100 MM (4") AND LARGER MUST BE PVC DR18 CONSTRUCTED AS PER AWWA C900-16. SIZE 50 MM (2") AND SMALLER MUST BE TYPE K SOFT COPPER CONSTRUCTED AS PER ASTM B88-49.
3. WATERMAINS AND / OR WATER SERVICES ARE TO HAVE A MINIMUM COVER OF 1.7 M (5'6") WITH A MINIMUM HORIZONTAL SPACING OF 1.2 M (4') FROM THEMSELVES AND ALL OTHER UTILITIES.
4. PROVISIONS FOR FLUSHING WATER LINE PRIOR TO TESTING, ETC. MUST BE PROVIDED WITH AT LEAST A 50 MM (2") OUTLET ON 100 MM (4") AND LARGER LINES. COPPER LINES ARE TO HAVE FLUSHING POINTS AT THE END, THE SAME SIZE AS THE LINE. THEY MUST ALSO BE HOSED OR PIPED TO ALLOW THE WATER TO DRAIN ONTO A PARKING LOT OR DOWN A DRAIN. ON FIRE LINES, FLUSHING OUTLET TO BE 100 MM (4") DIAMETER MINIMUM ON A HYDRANT.
5. ALL CURB STOPS TO BE 3.0 M (10') OFF THE FACE OF THE BUILDING UNLESS OTHERWISE NOTED.
6. HYDRANT AND VALVE SET TO REGION STANDARD 1 - 6 - 1 DIMENSION A AND B, 0.7 M (2') AND 0.9 M (3') AND TO HAVE PUMPER NOZZLE.
7. WATERMAINS TO BE INSTALLED TO GRADES AS SHOWN ON APPROVED SITE PLAN. COPY OF GRADE SHEET MUST BE SUPPLIED TO INSPECTOR PRIOR TO COMMENCEMENT OF WORK, WHERE REQUESTED BY INSPECTOR.
8. WATERMAINS MUST HAVE A MINIMUM VERTICAL CLEARANCE OF 0.3 M (12") OVER / 0.5 M (20") UNDER SEWERS AND ALL OTHER UTILITIES WHEN CROSSING.
9. ALL PROPOSED WATER PIPING MUST BE ISOLATED FROM EXISTING LINES IN ORDER TO ALLOW INDEPENDENT PRESSURE TESTING AND CHLORINATING FROM EXISTING SYSTEMS.
10. ALL LIVE TAPPING AND OPERATION OF REGION WATER VALVES SHALL BE ARRANGED THROUGH THE REGIONAL INSPECTOR ASSIGNED OR BY CONTACTING THE OPERATIONS AND MAINTENANCE DIVISION.
11. LOCATION OF ALL EXISTING UTILITIES IN THE FIELD TO BE ESTABLISHED BY THE CONTRACTOR.
12. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE FOR LOCATES, EXPOSING, SUPPORTING AND PROTECTING OF ALL UNDERGROUND AND OVERHEAD UTILITIES AND STRUCTURES EXISTING AT THE TIME OF CONSTRUCTION IN THE AREA OF THEIR WORK. WHETHER SHOWN ON THE PLANS OR NOT AND FOR ALL REPAIRS AND CONSEQUENCES RESULTING FROM DAMAGE TO SAME.
13. THE CONTRACTOR(S) SHALL BE SOLELY RESPONSIBLE TO GIVE 72 HOURS WRITTEN NOTICE TO THE UTILITIES PRIOR TO CROSSING SUCH UTILITIES, FOR THE PURPOSE OF INSPECTION BY THE CONCERNED UTILITY. THIS INSPECTION WILL BE FOR THE DURATION OF THE CONSTRUCTION, WITH THE CONTRACTOR RESPONSIBLE FOR ALL COSTS ARISING FROM SUCH INSPECTION.
14. ALL PROPOSED WATER PIPING MUST BE ISOLATED THROUGH A TEMPORARY CONNECTION THAT SHALL INCLUDE AN APPROPRIATE CROSS-CONNECTION CONTROL DEVICE, CONSISTENT WITH THE DEGREE OF HAZARD, FOR BACKFLOW PREVENTION OF THE ACTIVE DISTRIBUTION SYSTEM, CONFORMING TO REGION OF PEEL STANDARDS 1-7-7 OR 1-7-8.
15. ALL WATER METERS MUST BE INSTALLED IN HEATED AND ACCESSIBLE SPACE.
16. PROPOSALS TO CONNECT TO AN EXISTING SERVICE LATERAL REQUIRES APPROVAL FROM THE REGION OF PEEL INSPECTOR AT CONSTRUCTION STAGE.

PLUMBING NOTES:

1. ALL INLET STRUCTURES SUCH AS AREA DRAINS SHOWN ON THE SITE SERVICING PLAN HAVE BEEN DESIGNED TO CAPTURE 100-YR RAINFALL EVENT WITH A 50% BLOCKAGE FACTOR.
2. ALL AREA OR TRENCH DRAIN SPECIFICATIONS INCLUDED ON CIVIL DRAWINGS ARE FOR DESIGN AND REFERENCE PURPOSES ONLY. MECHANICAL TO SPECIFY THE FINAL MAKE AND MODEL OF THE DRAINS AS PART OF THE BUILDING PLUMBING DESIGN.
3. ALL AREA DRAINS AND CATCHBASINS DENOTED AS "AD"' AND "CB"' SHALL BE CONNECTED TO SWM TANK VIA SEPARATE SUMP PUMP.
4. ALL ROOF DRAINS SHALL BE SIZED AND SPECIFIED BY MECHANICAL AS PART OF THE BUILDING PLUMBING DESIGN. NO ROOF STORAGE OR FLOW CONTROLS SHALL BE ASSUMED UNLESS OTHERWISE NOTED ON THE SITE SERVICING PLAN.
5. SWM TANK TO DISCHARGE TO MUNICIPAL STORM SEWER BY GRAVITY UNLESS PUMP IS NOTED ON THE SITE SERVICING PLAN.
6. BUILDING SANITARY AND STORM SYSTEMS MUST BE DESIGNED TO OPERATE UNDER SURCHARGE CONDITIONS. PIPE CONNECTIONS AND RESTRAINTS TO BE DESIGNED BY MECHANICAL.
7. LANDSCAPE AND MECHANICAL CONSULTANTS TO ENSURE POSITIVE DRAINAGE IN ALL PATIOS, STAIRWELLS, OR LANDSCAPING FEATURES NOTED ON THEIR PLANS. DRAINAGE FROM THESE FEATURES SHALL BE COLLECTED AND CONNECTED TO THE SWM TANK VIA THE BUILDING PLUMBING SYSTEM DESIGNED AND SPECIFIED BY THE MECHANICAL CONSULTANT.
8. LANDSCAPE AND MECHANICAL CONSULTANTS TO ENSURE THE BUILDING PLUMBING AND LANDSCAPING PLANS HAVE BEEN COORDINATED WITH THE CIVIL DRAWING PACKAGE.





KEY PLAN
N.T.S.

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LEGEND

- DENOTES Ex. HYDRANT
- DENOTES Ex. SANITARY MANHOLE
- DENOTES Ex. STORM MANHOLE
- CB DENOTES CATCHBASIN
- DCB DENOTES DOUBLE CATCHBASIN
- DENOTES STORM MANHOLE
- DENOTES SANITARY MANHOLE
- DENOTES VALVE & BOX
- DENOTES PROPOSED PROPERTY LINE
- DENOTES EXISTING PROPERTY LINE
- (1) DENOTES UTILITIES CROSSING (SEE SS-2. DWG)
- (M) DENOTES METER PER UNIT
- DENOTES WATERMAIN SERVICE CONN. (REFER TO ROP STD. 1-8-2)
- DENOTES SAN SERVICE CONN. (REFER TO ROP STD. 1-8-2)

NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCH MARK:

BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REGISTERED PROFESSIONAL ENGINEER H. SARKISSIAN FEB. 28/25 PROVINCE OF ONTARIO

Town of Caledon
APPROVED AS NOTED
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Approved By: _____

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E-mail: design@schaeffers.com

Region of Peel
Working for you.

TOWN OF CALEDON

SITE SERVICING PLAN

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: 1:250			PROJECT No. 2024-5440
DESIGNED BY: C.D.	DRAWN BY: M.P./V.H.		DRAWING No. SS-1
CHECKED BY: H.S.	DATE: JUNE 2024		

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STORM MANHOLES

NAME	ELEVATION	SIZE	SPECIFICATION
STM.CTL.MH.1	T/G = 257.13 SW INV IN = 255.03 E INV OUT = 255.00	1200mm	OPSD 701.010 C/W TYPE A COVER OPSD 401.010
STM.MH.2	T/G = 257.37 SW INV IN = 255.42 NW INV IN = 255.15 NE INV OUT = 255.05 NW INV OUT = 255.32	1500mm	OPSD 701.011 DIVERSION MANHOLE
STM.MH.4	T/G = 257.82 NE INV IN = 257.04 SW INV IN = 255.89 SE INV OUT = 255.79	1200mm	OPSD 701.010 C/W TYPE A COVER OPSD 401.010 DROP STRUCTURE PER 1003.010
STM.MH.8	T/G = 258.01 NE INV IN = 256.38 SW INV OUT = 256.13	1200mm	OPSD 701.010 C/W TYPE A COVER OPSD 401.010
STM.MH.12	T/G = 258.98 NE INV IN = 256.44 W INV IN = 256.44 SE INV OUT = 256.39	1200mm	OPSD 701.010 C/W TYPE A COVER OPSD 401.010
STM.MH.14	T/G = 257.96 SE INV IN = 255.31 SE INV OUT = 255.16	1800mm	OPSD 701.012 JF UNIT 6-5-1
STM.MH.15	T/G = 257.66 NE INV IN = 256.23 SW INV OUT = 256.20	1200mm	OPSD 701.010

STORM MANHOLES WITH CATCHBASIN

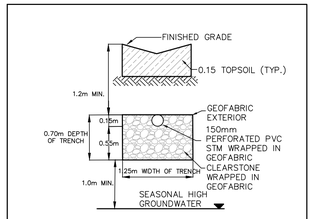
NAME	ELEVATION	SIZE	SPECIFICATION
CBMH.3	T/G = 257.00 SW INV IN = 255.46 NW INV IN = 255.53 NE INV OUT = 255.43	1200mm	OPSD 701.010 C/W CB GRATE OPSD 400.010
CBMH.5	T/G = 257.88 SW INV IN = 255.61 NE INV OUT = 255.59	1200mm	OPSD 701.010 C/W CB GRATE OPSD 400.010
CBMH.6	T/G = 258.37 NW INV IN = 255.76 NE INV OUT = 255.69	1200mm	OPSD 701.010 C/W CB GRATE OPSD 400.010
CBMH.7	T/G = 258.48 NW INV IN = 255.94 NE INV IN = 256.01 SE INV OUT = 255.91	1200mm	OPSD 701.010 C/W CB GRATE OPSD 400.010
CBMH.9	T/G = 258.69 NW INV IN = 256.30 NE INV IN = 256.18 SE INV OUT = 256.05	1200mm	OPSD 701.010 C/W CB GRATE OPSD 400.010
CBMH.10	T/G = 257.55 NW INV IN = 256.37 SW INV OUT = 256.27	1200mm	OPSD 701.010 C/W CB GRATE OPSD 400.010
CBMH.11	T/G = 257.78 NW INV IN = 256.71 SE INV OUT = 256.49	1200mm	OPSD 701.010 C/W HONEYCOMB GRATE PER OPSD 403.010
DCBMH.12	T/G = 256.39 W INV IN = 254.91 E INV OUT = 254.86	1500mm	OPSD 701.011 C/W CB GRATE OPSD 400.010

SANITARY MANHOLES

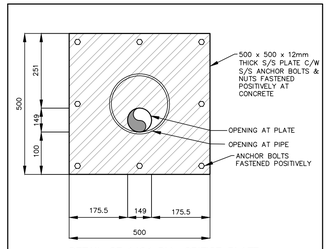
NAME	ELEVATION	SIZE	SPECIFICATION
EX.SAN.MH	T/G = 257.51 SW INV IN = 253.03		
SAN.MH.1A	T/G = 257.69 NW INV IN = 255.30 SE INV IN = 253.37 NE INV OUT = 253.17	1200mm	ROP STD. 2-5-3 DROP STRUCTURE PER ROP STD. 2-5-26
SAN.MH.2A	T/G = 257.79 SW INV IN = 256.06 SE INV OUT = 255.94	1200mm	ROP STD. 2-5-3
SAN.MH.3A	T/G = 258.97 NE INV OUT = 257.20	1200mm	ROP STD. 2-5-3

CATCHBASINS

NAME	ELEVATION	SIZE	SPECIFICATION
CB1	T/G = 257.75 NE INV OUT = 255.95	600x600mm	OPSD 705.010 C/W CB GRATE OPSD 400.010
CB2	T/G = 257.67 SW INV OUT = 256.47	600x600mm	OPSD 705.010 C/W CB GRATE OPSD 400.010
CB3	T/G = 258.25 SW INV OUT = 256.75	600x600mm	OPSD 705.010 C/W CB GRATE OPSD 400.010
CB4	T/G = 259.05 E INV OUT = 256.56	600x600mm	OPSD 705.010 C/W HONEYCOMB GRATE PER OPSD 403.010
CB5	T/G = 257.80 SW INV IN = 257.07 SE INV OUT = 256.82	600x600mm	OPSD 705.010 C/W HONEYCOMB GRATE PER OPSD 403.010



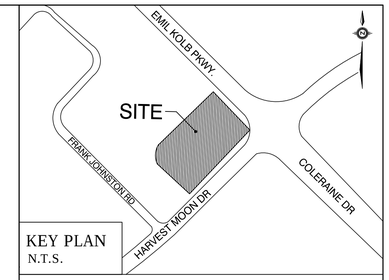
INFILTRATION GALLERY DETAIL



DETAIL OF 149ø DIA. ORIFICE PLATE AT CBMH.3
N.T.S.

Pipe Interference Table

Crossing No.	PIPE 1	PIPE 2	Clearance	VERTICLE OFFSET
1	SAN Bottom 256.09	WTR Top 255.59	0.50	YES
2	SAN Bottom 257.15	STM Top 256.73	0.42	NO
3	STM Bottom 256.26	SAN Top 255.76	0.50	NO
4	STM Bottom 255.97	WTR Top 255.47	0.50	YES
5	STM Bottom 256.24	WTR Top 255.74	0.50	YES
6	WTR Bottom 257.10	STM Top 256.76	0.33	NO



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Town of Caledon
APPROVED AS NOTED
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Date: _____
Approved By: _____

13656 - 13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

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SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
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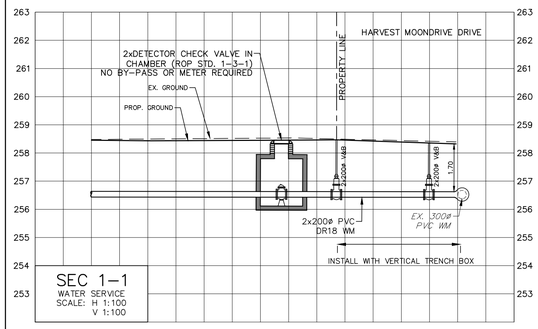
TOWN OF CALEDON

SITE SERVICING PLAN

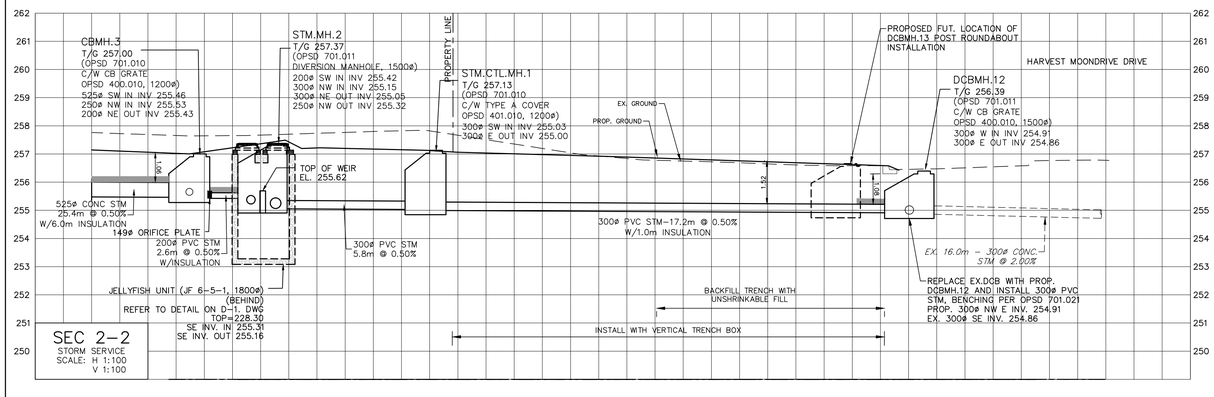
REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: N.T.S.			PROJECT No. 2024-5440
DESIGNED BY: C.D.	DRAWN BY: M.P./V.H.		
CHECKED BY: H.S.	DATE: JUNE 2024		DRAWING No. SS-2

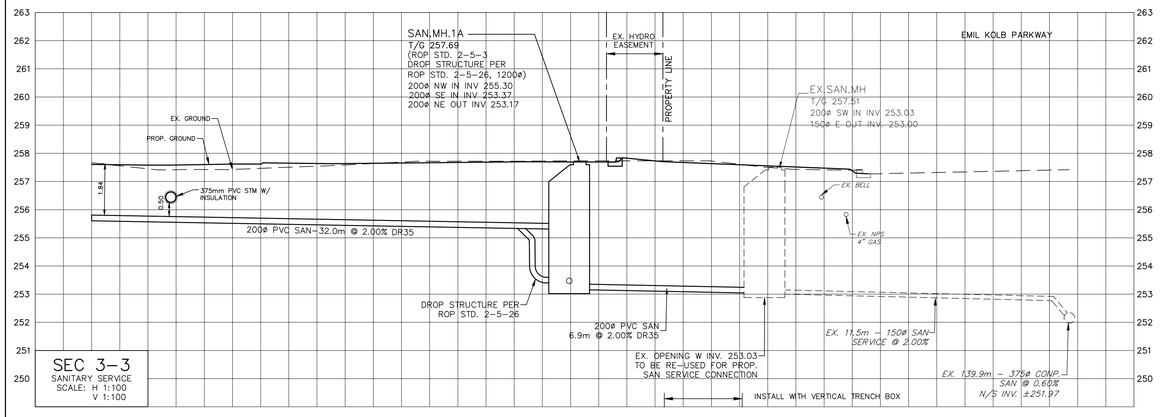
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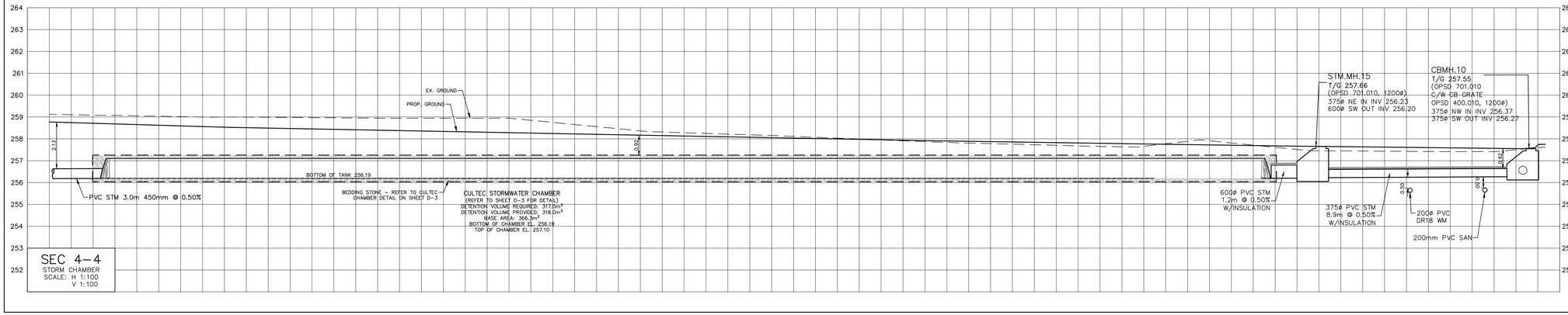
SEC 1-1
WATER SERVICE
SCALE: H 1:100
V 1:100



SEC 2-2
STORM SERVICE
SCALE: H 1:100
V 1:100

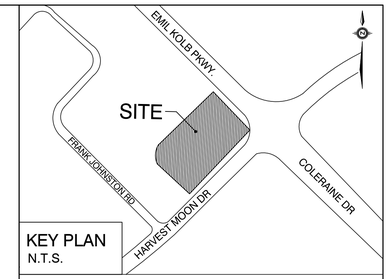


SEC 3-3
SANITARY SERVICE
SCALE: H 1:100
V 1:100



SEC 4-4
STORM CHAMBER
SCALE: H 1:100
V 1:100

FUTURE HARVEST MOON DRIVE AND EMIL KBOB PARKWAY BOULEVARD ROAD DESIGN (RECEIVED IN OCTOBER 2024) PREPARED BY REGION OF PEEL INDICATED FOR REFERENCE ONLY



KEY PLAN
N.T.S.

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REGISTERED PROFESSIONAL ENGINEER
H.SARKISSIAN
FEB. 28/25
PROVINCE OF ONTARIO

Town of Caledon
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Approved By: _____

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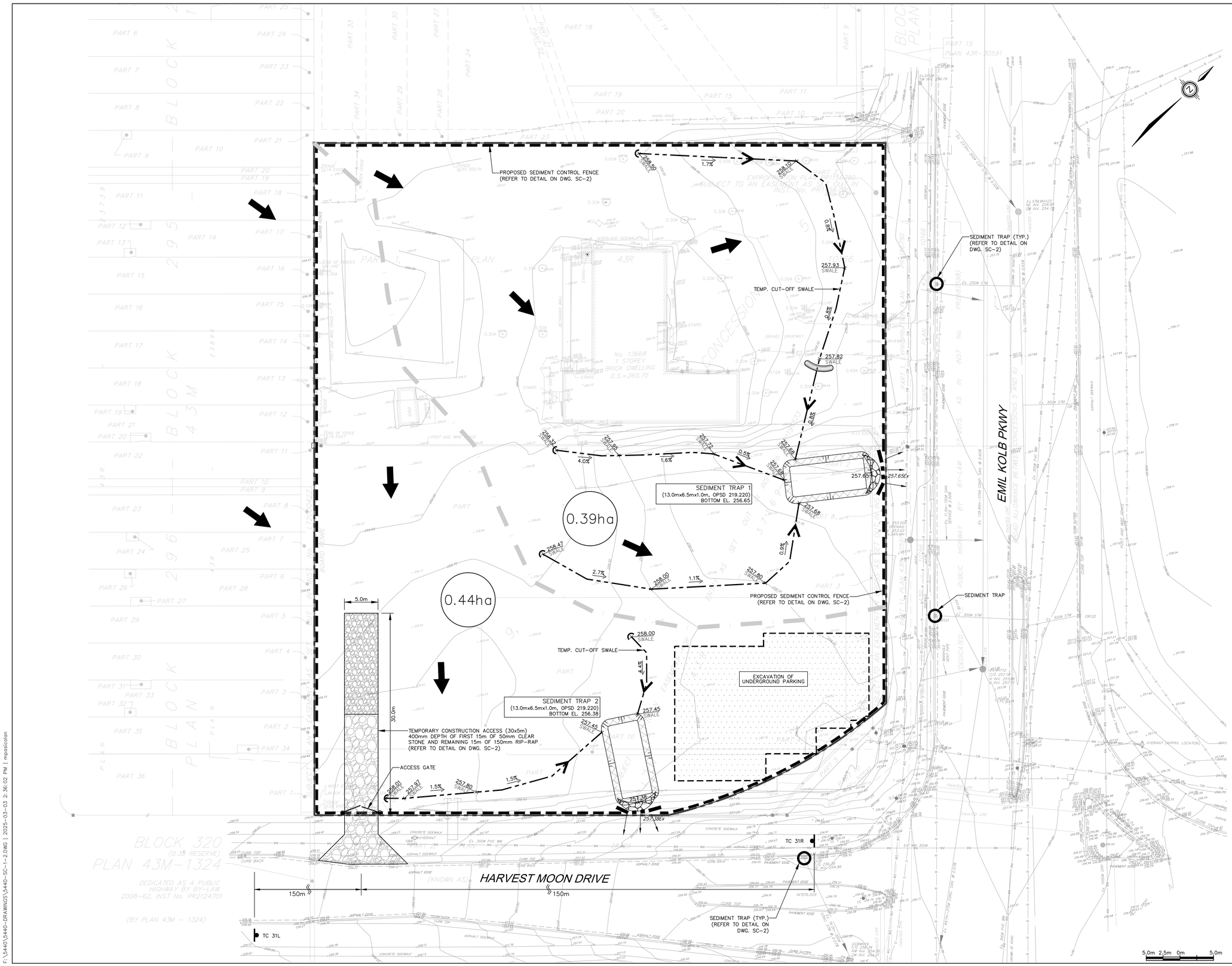
TOWN OF CALEDON

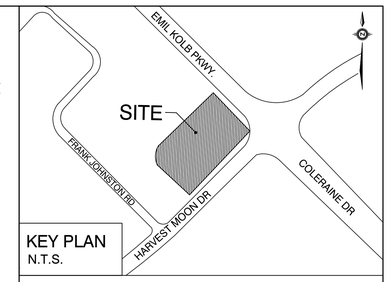
SECTIONS

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: AS SHOWN		PROJECT No. 2024-5440
DESIGNED BY: C.D.	DRAWN BY: M.P./V.H.	
CHECKED BY: H.S.	DATE: JUNE 2024	DRAWING No. SEC-1

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KEY PLAN
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LEGEND

- DENOTES PROPERTY LIMIT
- DENOTES DRAINAGE LIMIT
- DENOTES SILT FENCE (SEE DETAIL ON DWG.SC-2)
- DENOTES MUD MAT (TEMP. CONSTRUCTION ACCESS ROAD)
- DENOTES CATCHBASIN SEDIMENT TRAP
- DENOTES FILTREXX CHECK DAM (SEE DETAIL ON DWG. SC-2)
- DENOTES FILTREXX SILTSOXX (SEE DETAIL ON DWG. SC-2)
- DENOTES TEMP. CUT-OFF-SWALE
- DENOTES FLOW ARROWS
- DENOTES UNDERGROUND EXCAVATION
- 0.50ha — DENOTES DRAINAGE AREA (IN HA)

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Region of Peel
Working for you.

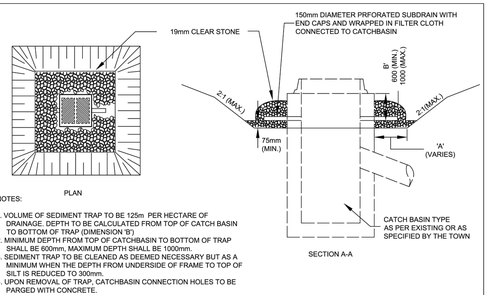
TOWN OF CALEDON

EROSION AND SEDIMENT CONTROL PLAN

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: 1:250		PROJECT No. 2024-5440
DESIGNED BY: C.D.	DRAWN BY: M.P./V.H.	
CHECKED BY: H.S.	DATE: JUNE 2024	DRAWING No. SC-1

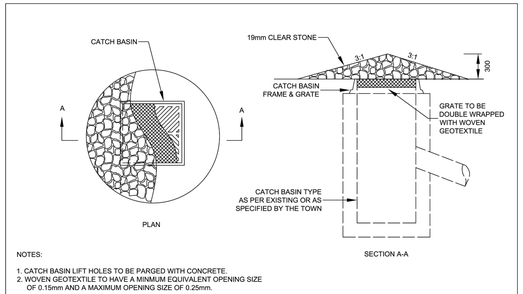
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NOTES:

1. VOLUME OF SEDIMENT TRAP TO BE 125m PER HECTARE OF DRAINAGE. DEPTH TO BE CALCULATED FROM TOP OF CATCH BASIN TO BOTTOM OF TRAP (DIMENSION 'B')
2. MINIMUM DEPTH FROM TOP OF CATCHBASIN TO BOTTOM OF TRAP SHALL BE 600mm, MAXIMUM DEPTH SHALL BE 1000mm.
3. SEDIMENT TRAP TO BE CLEANED AS DEEMED NECESSARY BUT AS A MINIMUM WHEN THE DEPTH FROM UNDERSIDE OF FRAME TO TOP OF SILT IS REDUCED TO 300mm.
4. UPON REMOVAL OF TRAP, CATCHBASIN CONNECTION HOLES TO BE PARGED WITH CONCRETE.

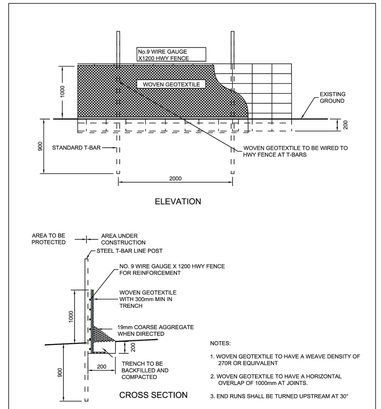
TOWN OF CALEDON							
CATCH BASIN SEDIMENT TRAP					APR'D: C.C.	DATE: APRIL 00	
					DRAWN: BJM	SCALE: NTS	
	1	STANDARD No. 320.01 NOW 302		JUNE 08	STANDARD No. 302		
	NO.	REVISION	APR'D	DATE			



NOTES:

1. CATCH BASIN LIFT HOLES TO BE PARGED WITH CONCRETE.
2. WOVEN GEOTEXTILE TO HAVE A MINIMUM EQUIVALENT OPENING SIZE OF 0.15mm AND A MAXIMUM OPENING SIZE OF 0.25mm.

TOWN OF CALEDON							
CATCH BASIN SEDIMENT BARRIER					APR'D: C.C.	DATE: APRIL 00	
					DRAWN: BJM	SCALE: NTS	
	1	STANDARD No. 320.02 NOW 303		JUNE 08	STANDARD No. 303		
	NO.	REVISION	APR'D	DATE			

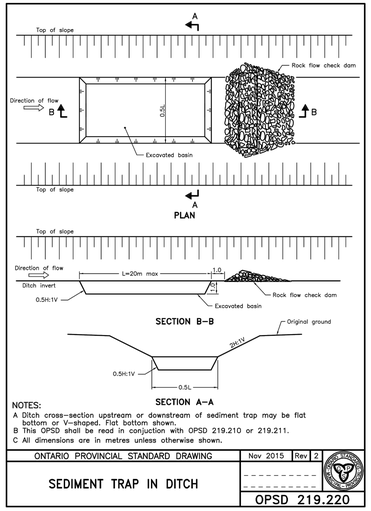


NOTES:

1. WOVEN GEOTEXTILE TO HAVE A WEAVE DENSITY OF 270R OR EQUIVALENT
2. WOVEN GEOTEXTILE TO HAVE A HORIZONTAL OVERLAP OF 1000mm AT JOINTS.
3. END RUNS SHALL BE TURNED UPSTREAM AT 30°

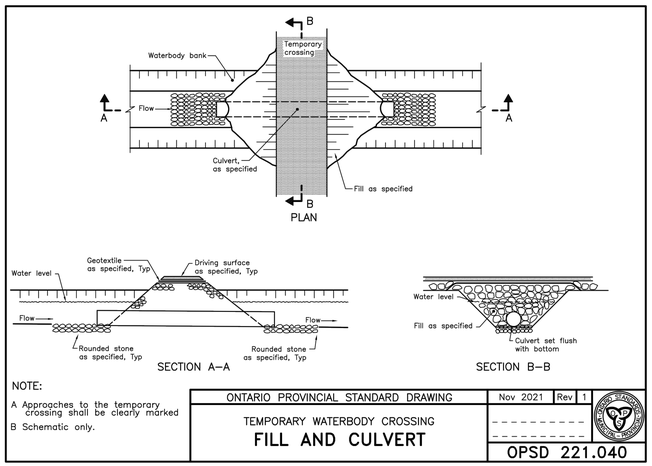
NO.	REVISION	APR'D	DATE
2	NAME CHANGED, STANDARD No. 325.01 NOW 304		JUNE 08
1	SUPPORT FENCING CHANGED TO HWY FENCE		Oct 02

TOWN OF CALEDON			
SEDIMENT CONTROL FENCE	APR'D: C.C.	DATE: APRIL 2000	
	DRAWN: BJM	SCALE: N.T.S.	
	STANDARD No. 304		



NOTES:
A Ditch cross-section upstream or downstream of sediment trap may be flat bottom or V-shaped. Flat bottom shown.
B This OPSD shall be read in conjuction with OPSD 219.210 or 219.211.
C All dimensions are in metres unless otherwise shown.

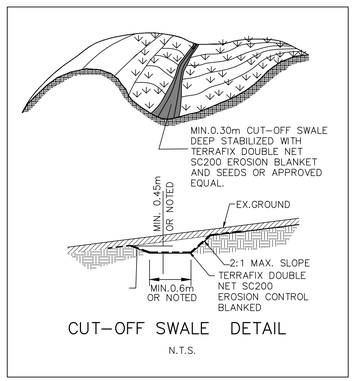
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2015	Rev 2
SEDIMENT TRAP IN DITCH		
		OPSD 219.220



NOTE:

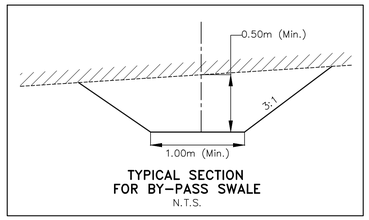
A Approaches to the temporary crossing shall be clearly marked
B Schematic only.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2021	Rev 1
TEMPORARY WATERBODY CROSSING FILL AND CULVERT		
		OPSD 221.040



CUT-OFF SWALE DETAIL

N.T.S.



TYPICAL SECTION FOR BY-PASS SWALE

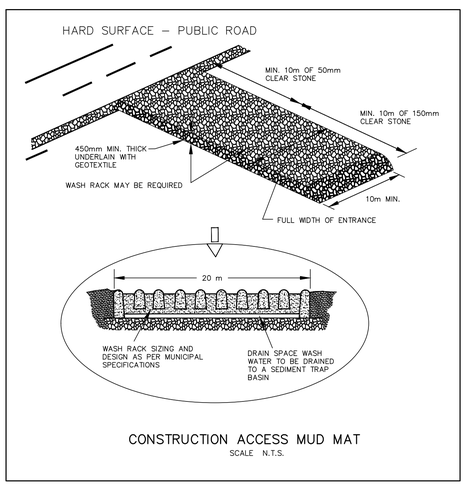
N.T.S.

TOWN OF CALEDON EROSION AND SEDIMENT CONTROL NOTES

1. ALL EROSION AND SEDIMENT CONTROL (ESC) MEASURES MUST BE INSTALLED PRIOR TO THE COMMENCEMENT OF WORKS ON SITE AND SHALL BE MAINTAINED DURING ALL CONSTRUCTION PHASES OF THE WORKS.
2. THE ESC STRATEGIES OUTLINED ON THIS PLAN ARE NOT STATIC AND MAY NEED TO BE UPGRADED/AMENDED AS SITE CONDITIONS CHANGE TO PREVENT SEDIMENT RELEASE OUTSIDE THE WORK AREA. THE TOWN IS TO BE ADVISED OF ANY CHANGES TO ESC MEASURES, AND AT THE DISCRETION OF THE TOWN, UPDATED PLANS MAY BE REQUIRED.
3. THE CONTRACTOR IS TO ASSIGN AN ENVIRONMENTAL MONITOR (EM) TO ASSURE CONSTRUCTION ACTIVITIES COMPLY WITH THE ENVIRONMENTAL PROVISIONS AND AGENCY PERMITS. THE EM WILL BE A QUALIFIED PERSON AS DETERMINED BY THE TOWN AND/OR CONSERVATION AUTHORITY. THE EM SHOULD SUBMIT INSPECTION FORMS ELECTRONICALLY TO THE TOWN AND CONSERVATION AUTHORITY UPON REQUEST.
4. THE CONTRACTOR IS RESPONSIBLE FOR MAINTAINING ALL ESC MEASURES IN WORKING CONDITION AT ALL TIMES TO THE SATISFACTION OF THE TOWN AND/OR CONSERVATION AUTHORITY. ALL DAMAGED ESC MEASURES SHOULD BE REPAIRED AND/OR REPLACED WITHIN 48 HOURS OF THE INSPECTION.
5. THE CONTRACTOR SHALL ROUTINELY INSPECT ALL ESC DEVICES TO ENSURE PROPERTY WORKING ORDER. FREQUENCY OF INSPECTIONS OF ESC MEASURES IS AS FOLLOWS:

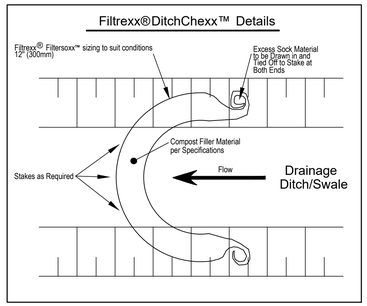
   DURING EARTHWORKS ACTIVITIES:
   - ON A WEEKLY BASIS;
   - PRIOR TO PREDICTED RAINFALL EVENTS;
   - AFTER EVERY RAINFALL EVENT;
   - AFTER SIGNIFICANT SNOWMELT EVENT; AND
   - DAILY DURING EXTENDED RAIN OR SNOWMELT PERIODS.

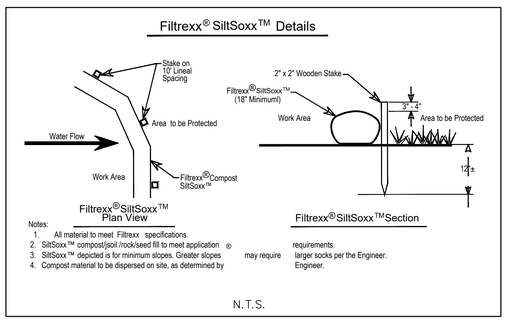
   DURING TIMES OF NO EARTHWORKS ACTIVITY:
   - ONCE EVERY 2 WEEKS;
   - AFTER SIGNIFICANT SNOWMELT EVENTS;
   - AFTER SIGNIFICANT RAINFALL EVENTS (MORE THAN 25MM OF RAINFALL IN A 24 HOUR PERIOD).
6. ALL CONSTRUCTION VEHICLES MUST ENTER AND EXIT THE SITE ONLY FROM THE APPROVED ACCESS ROUTE(S) AS SHOWN ON THE PLANS. CONSTRUCTION ACCESS WILL BE MAINTAINED TO THE SATISFACTION OF THE TOWN/REGION. STREET SWEEPING IS REQUIRED AS NEEDED.
7. NO CONSTRUCTION ACTIVITY OR MACHINERY SHALL BE ALLOWED BEYOND THE SILT FENCE OR LIMITS OF THE SITE WORKS.
8. THE CONTRACTOR IS RESPONSIBLE TO IMPLEMENT DUST CONTROL MEASURES AND CONSTRUCTION BEST PRACTICE GUIDELINES AS APPROVED BY THE TOWN AND/OR CONSERVATION AUTHORITY.
9. ALL DISTURBED GROUND LEFT INACTIVE FOR 30 DAYS SHALL BE VEGETATED, SUBJECT TO WEATHER CONDITIONS. DISTURBED AREAS ARE TO BE HYDROSEEDED (OR APPROVED EQUIVALENT) TO THE SATISFACTION OF THE TOWN.
10. ALL TOPSOIL STOCKPILES SHALL BE SURROUNDED WITH SEDIMENT CONTROL FENCE. THE MAXIMUM SIDE SLOPE SHALL BE 2:1 (H:V). ONCE TOPSOIL STRIPPING IS COMPLETED THE STOCKPILE SHALL BE VEGETATED, SUBJECT TO WEATHER CONDITIONS, BY HYDROSEEDED, OR AN APPROVED EQUIVALENT, TO THE SATISFACTION OF THE TOWN.
11. CONTRACTOR SHALL TAKE CARE AND CONTROL SPILLS, FLUIDS AND MATERIALS DURING CONSTRUCTION TO MINIMIZE RISK TO THE ENVIRONMENT.



CONSTRUCTION ACCESS MUD MAT

SCALE N.T.S.



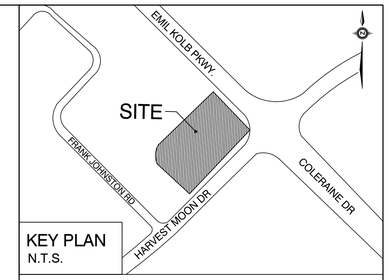


N.T.S.

Sediment Trap Table (OPSD 219.220, ESC guidelines by GGHA CAs - Pg. C-40)

Min. 125m³/ha water volume, and to be stabilized by seeding immediately after construction.

Sed. Basin No.	Drainage Area (ha)	Required Volume (m³/ha)	Bottom Length (m)	Bottom Width (m)	Top Length (m)	Top Width (m)	Side Slope (x:1)	Depth (m)	Provided Volume (m³)
1	0.4	49	12.00	5.50	13.00	6.50	0.5	1.00	75
2	0.4	55	12.00	5.50	13.00	6.50	0.5	1.00	75



KEY PLAN
N.T.S.

NOTES

1. THE LOCATION OF ALL UNDERGROUND AND ABOVE GROUND UTILITIES AND STRUCTURES IS NOT NECESSARILY SHOWN ON CONTRACT DRAWINGS, AND WHERE SHOWN THE ACCURACY OF THE LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES IS NOT GUARANTEED. PRIOR TO COMMENCING CONSTRUCTION, THE CONTRACTOR SHALL VERIFY EXACT LOCATION AND ELEVATION OF SUCH UTILITIES AND STRUCTURES AND SHALL ASSUME ALL LIABILITIES OF DAMAGE.
2. ALL AREAS DISTURBED DURING CONSTRUCTION OF SEWERS AND WATERMAINS TO BE RESTORED TO ORIGINAL CONDITION OR BETTER, TO THE SATISFACTION OF THE TOWN OF CALEDON.

NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCH MARK:
BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REGISTERED PROFESSIONAL ENGINEER H.SARKISSIAN FEB. 28/25 PROVINCE OF ONTARIO

Town of Caledon
APPROVED AS NOTED
This approval constitutes a general review and does not certify dimensional accuracy.
This approval is subject to further certification of the "as constructed" works by a registered Professional Engineer of the Province of Ontario.
Date: _____
Approved By: _____

13656 - 13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

Region of Peel
Working for you.

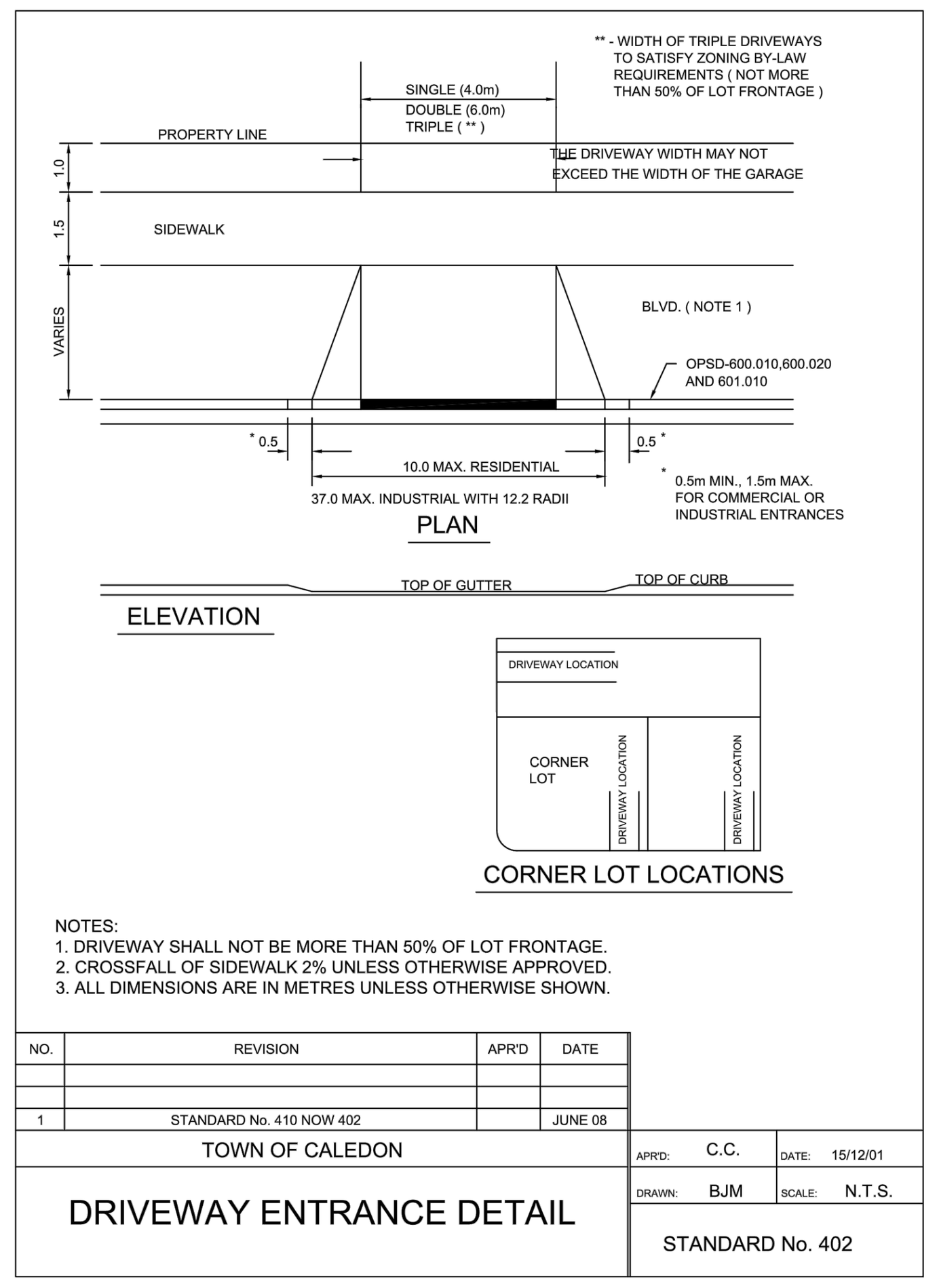
TOWN OF CALEDON

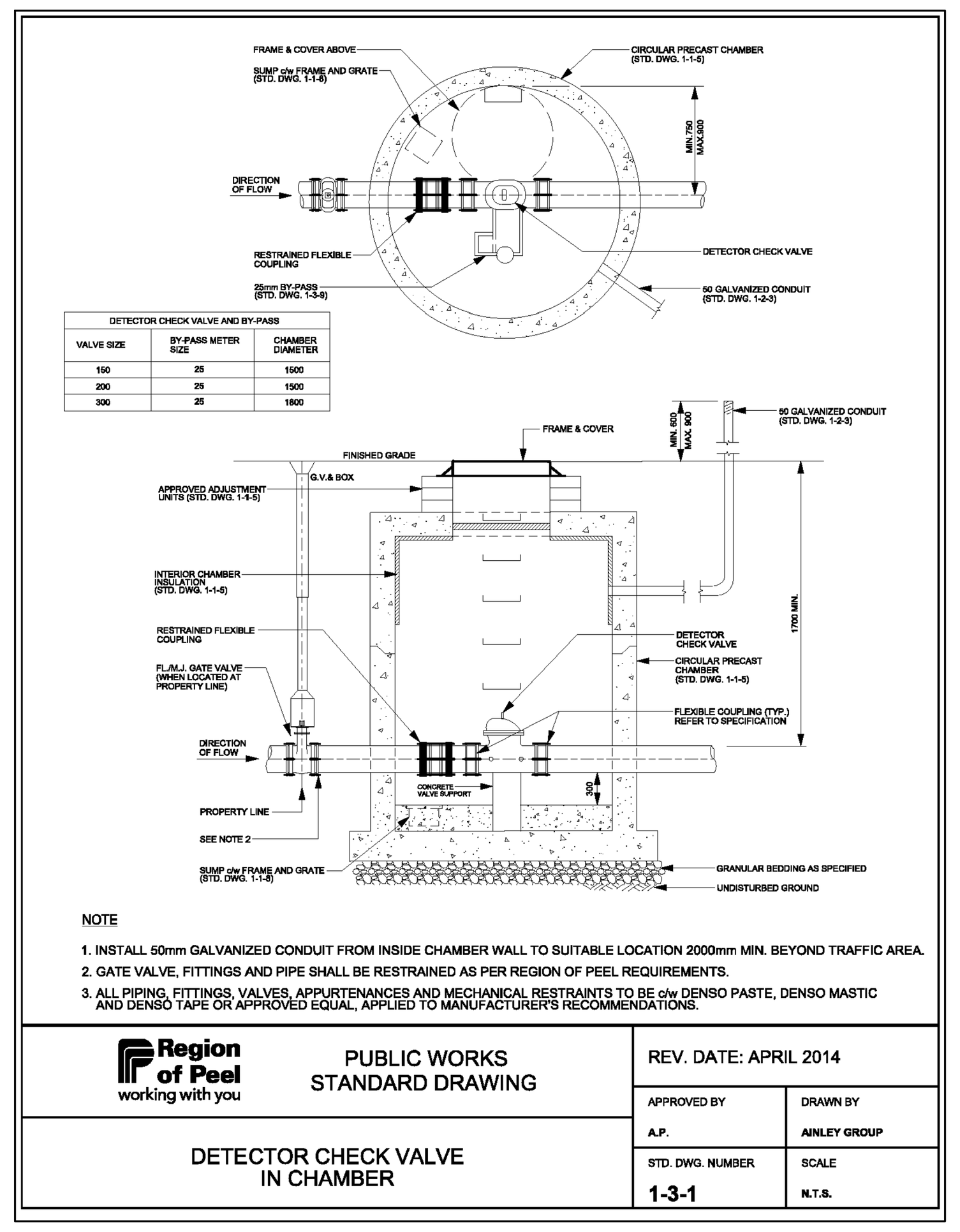
EROSION AND SEDIMENT CONTROL DETAILS

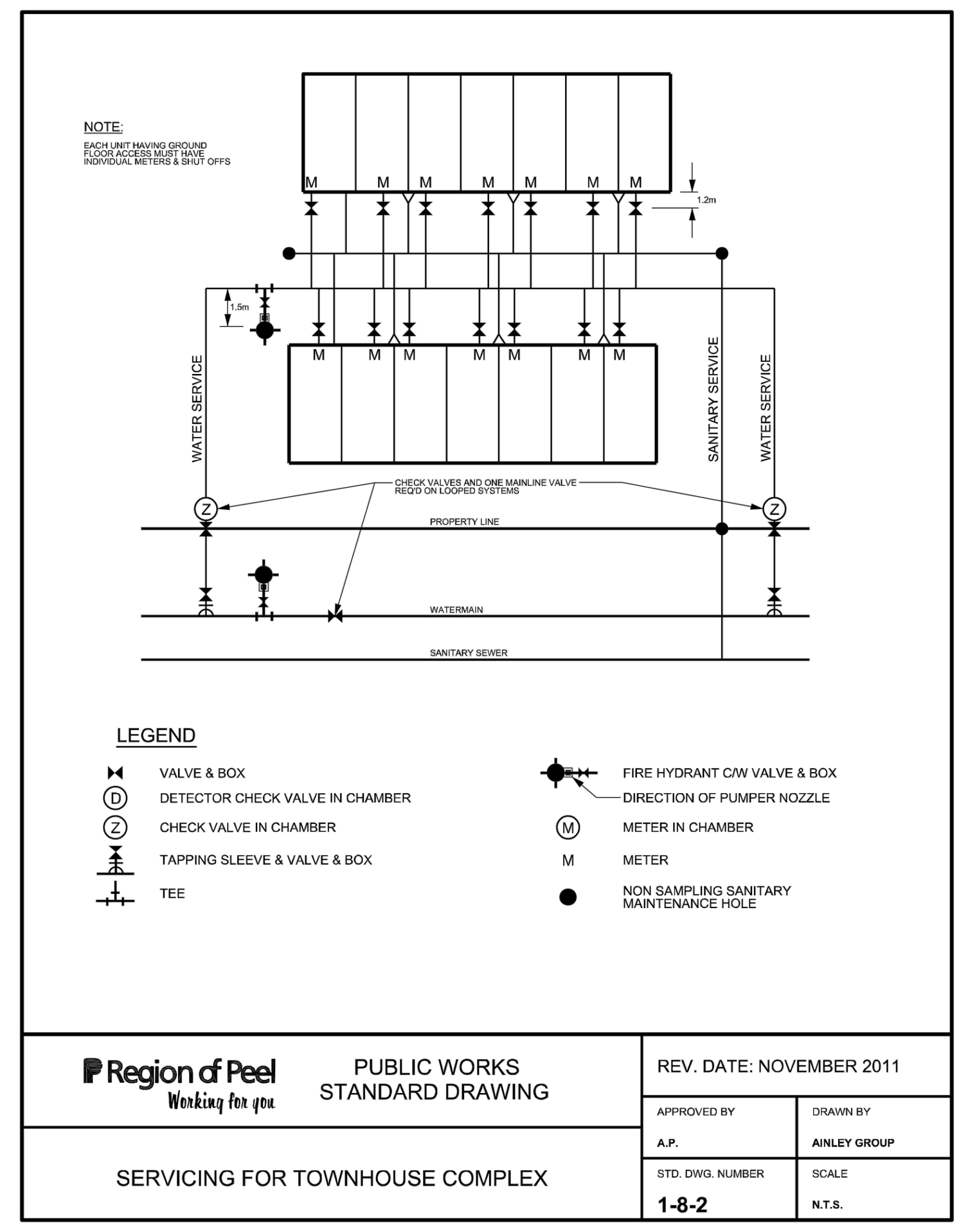
REGION OF PEEL CONNECTION FILE NO. C602880

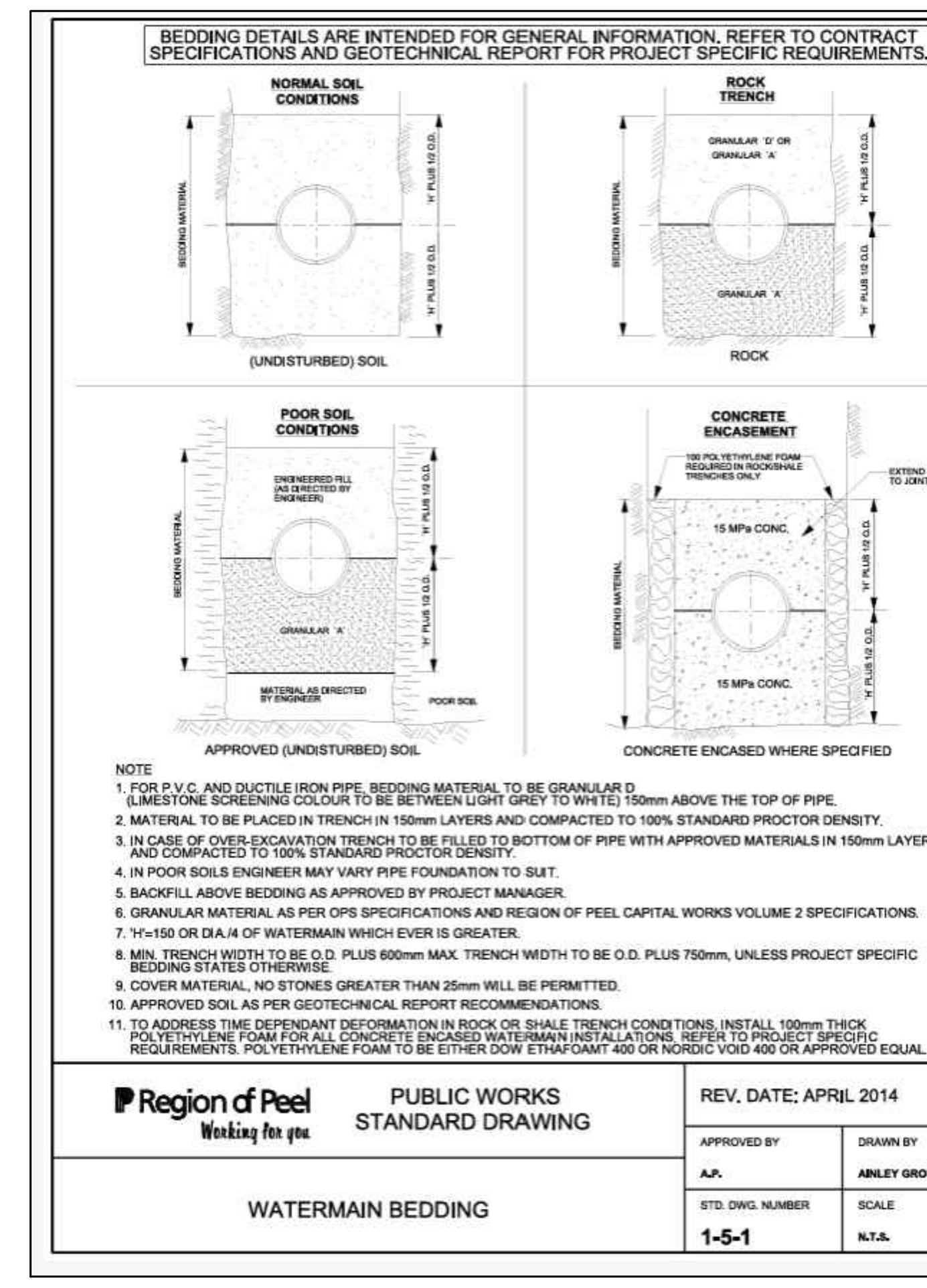
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CHECKED BY: H.S.	DATE: JUNE 2024	

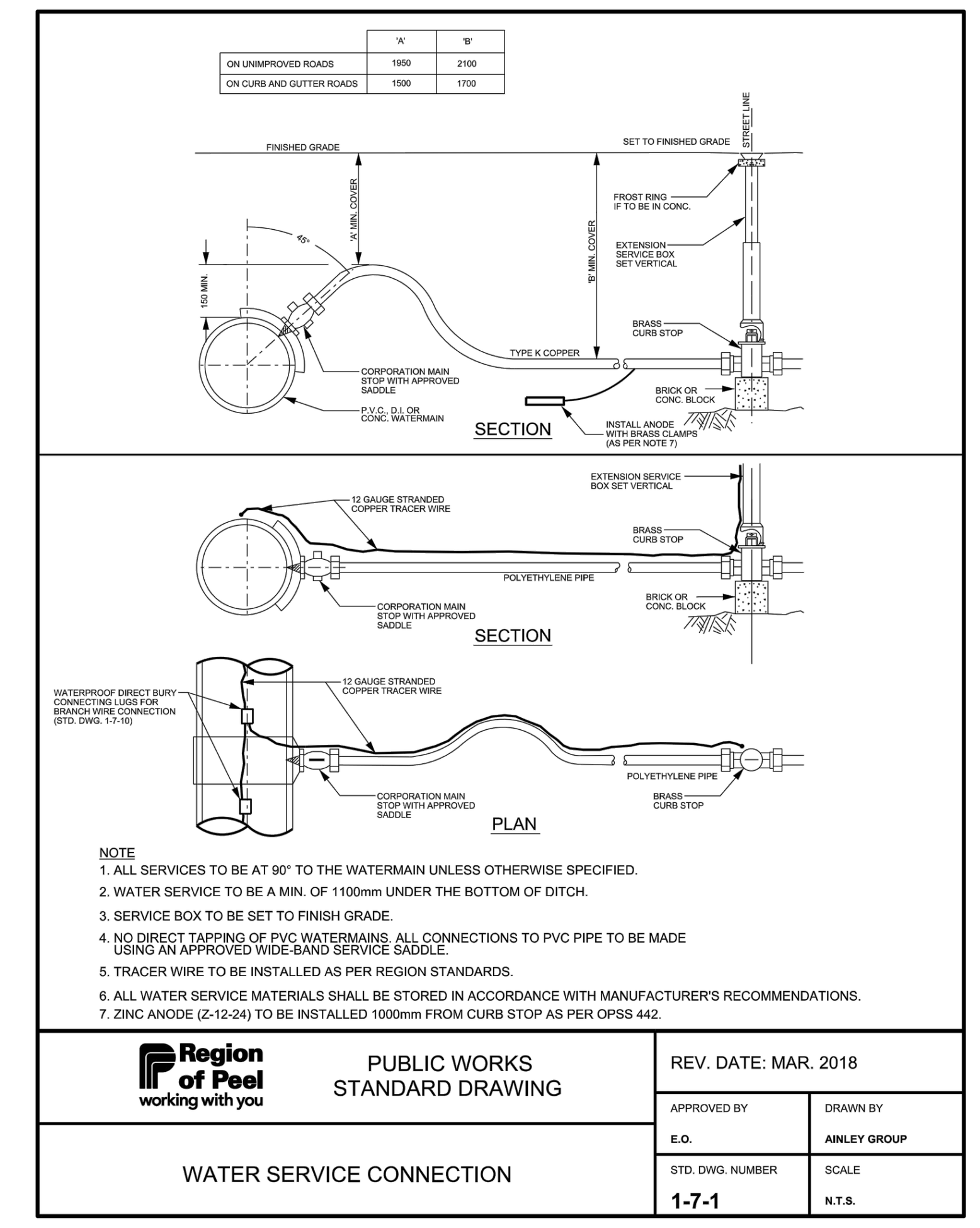
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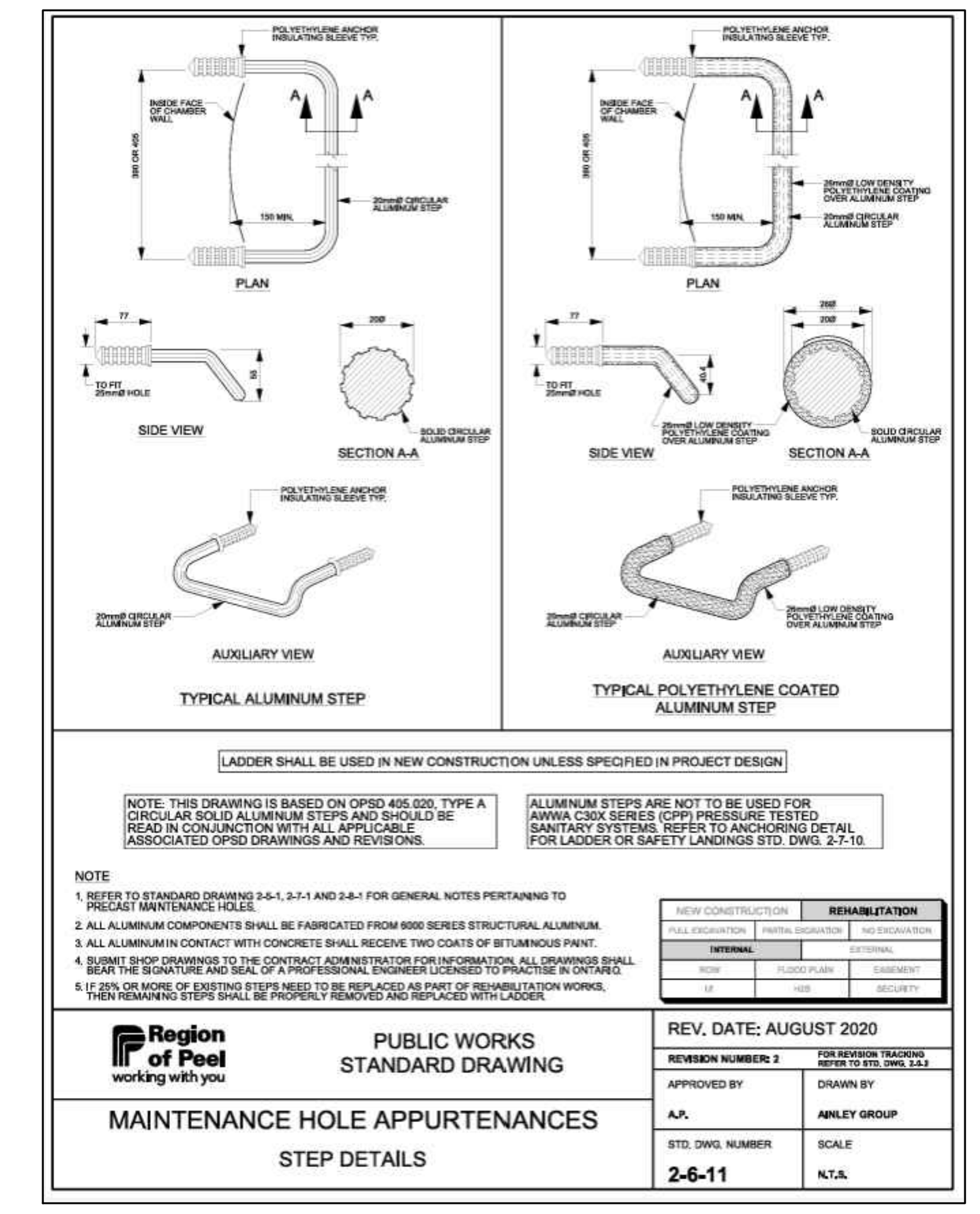


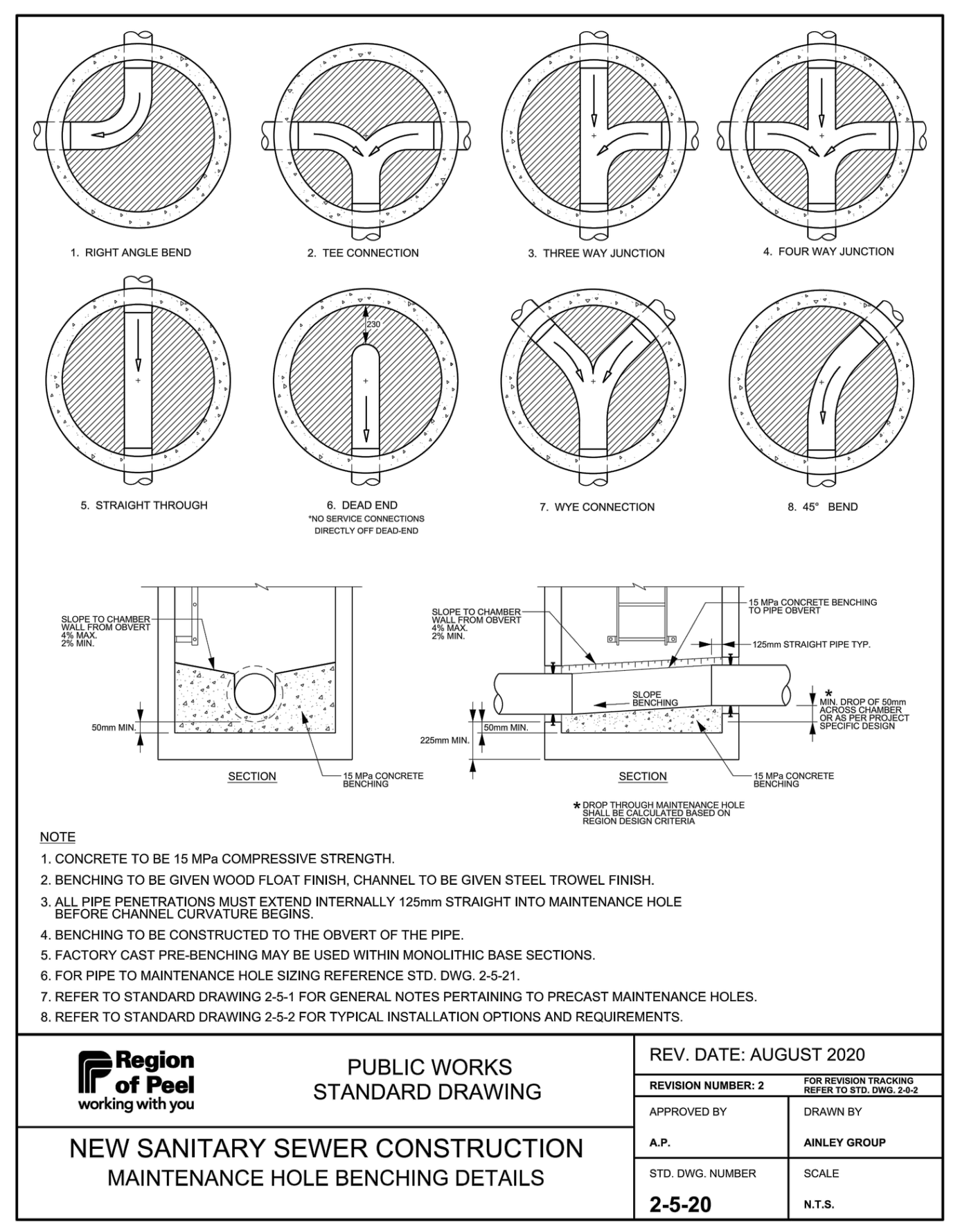


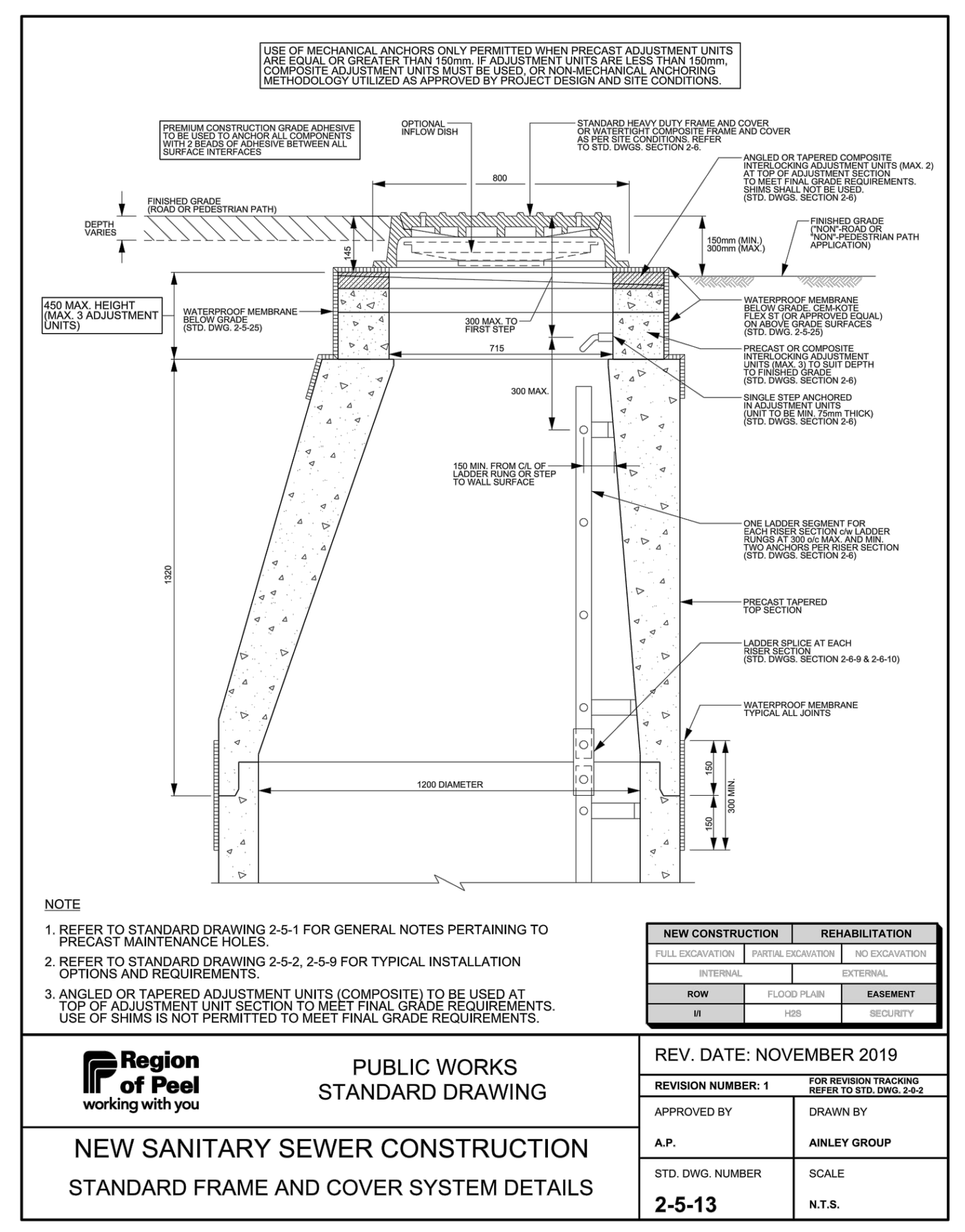


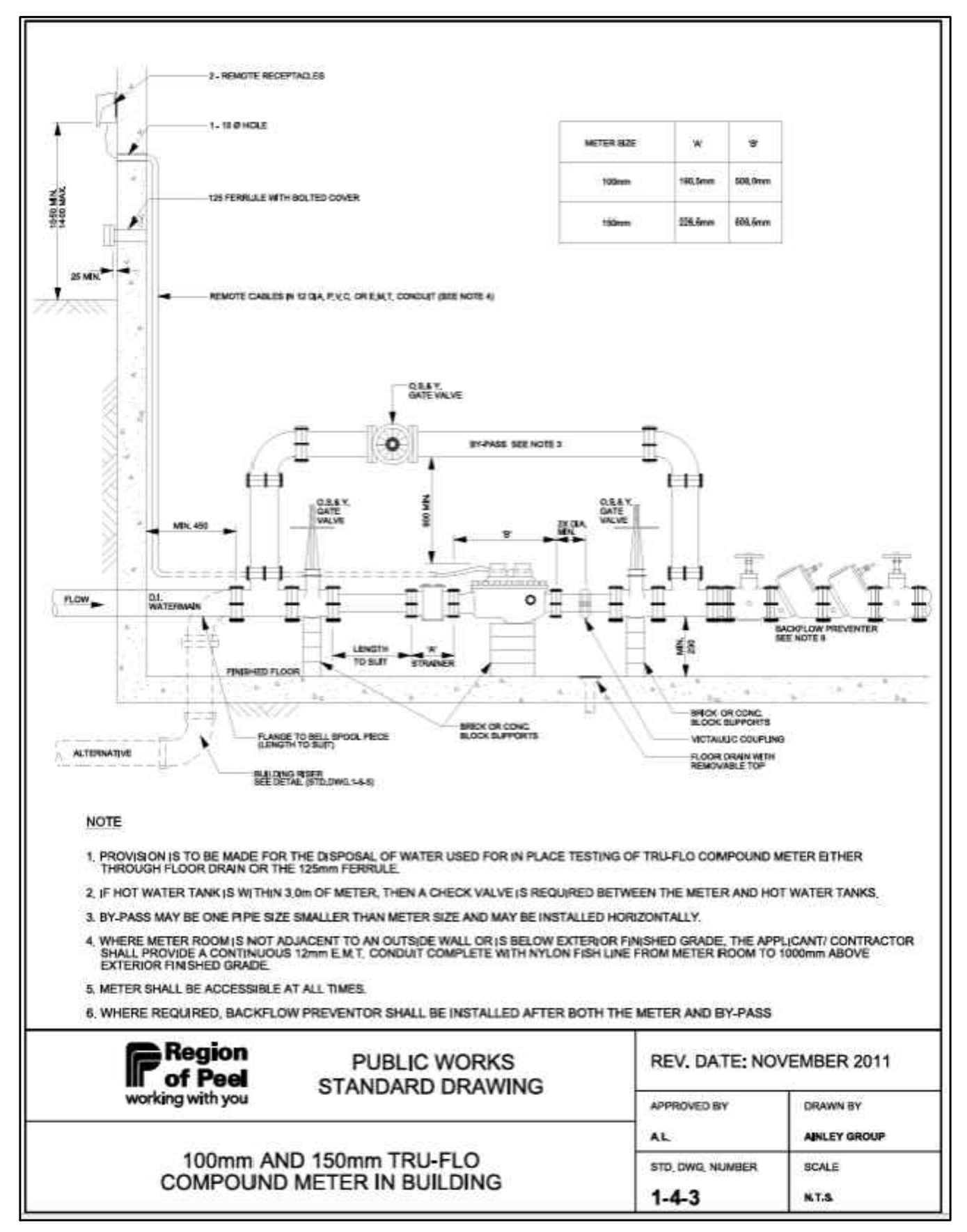


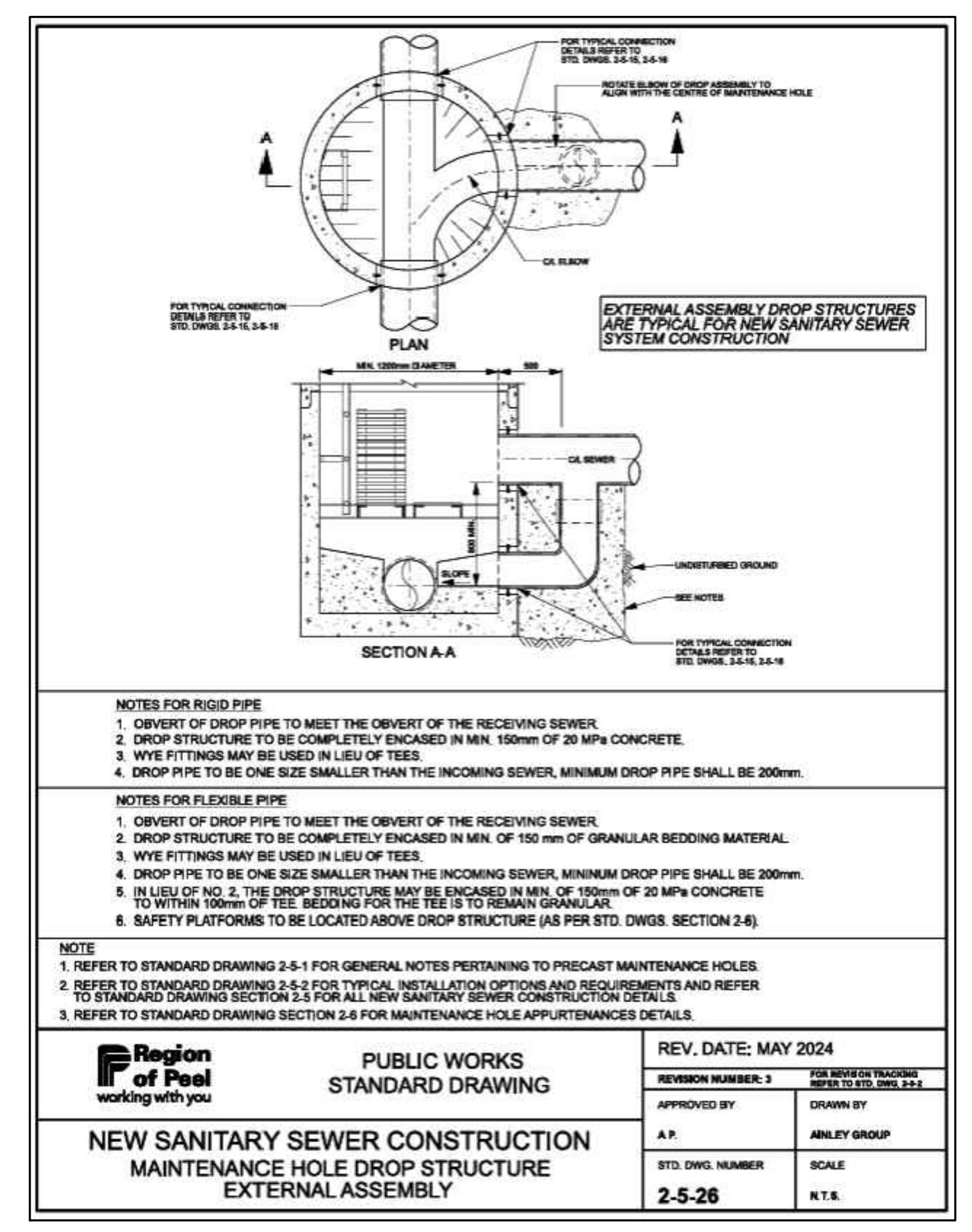


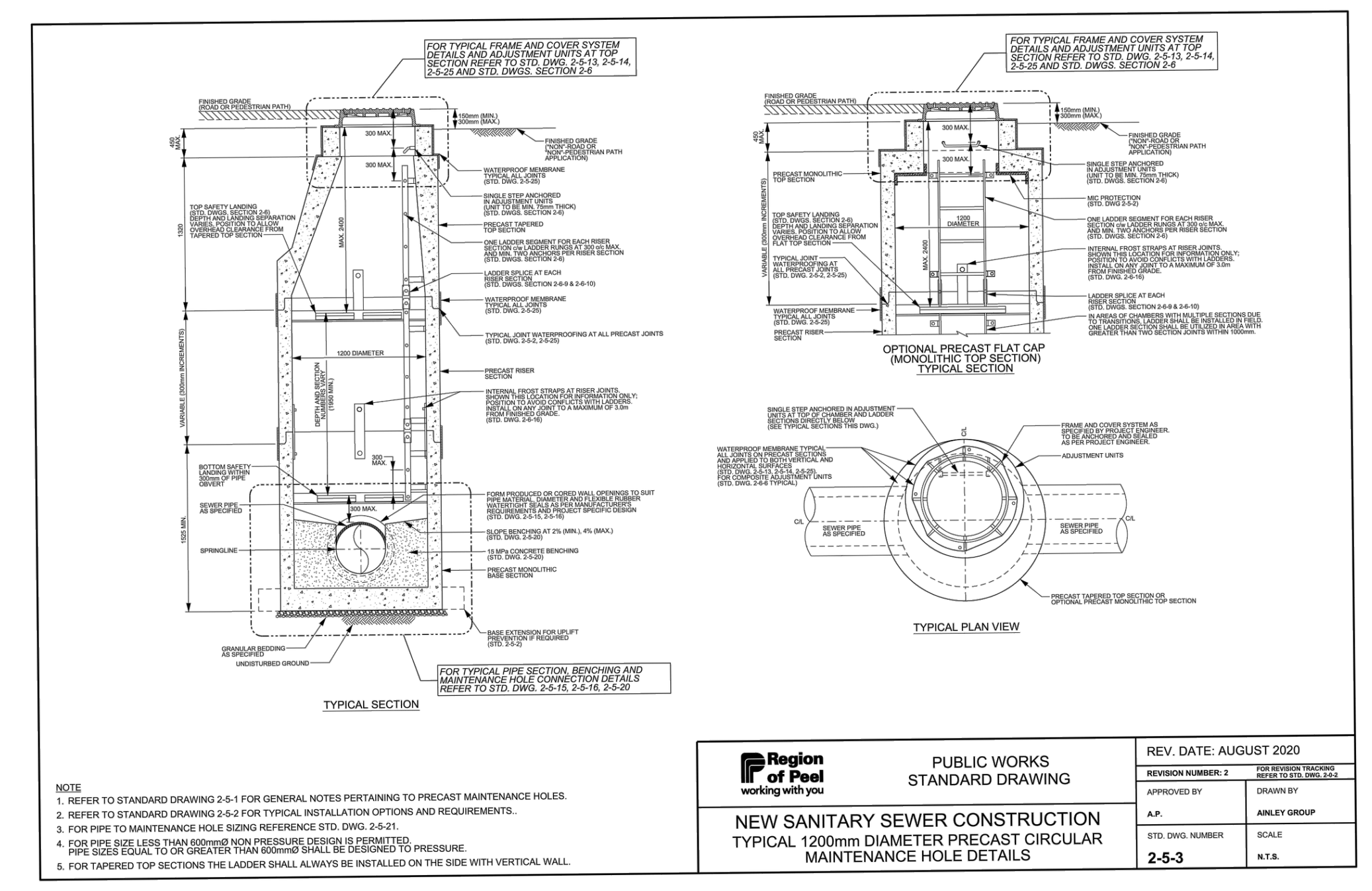


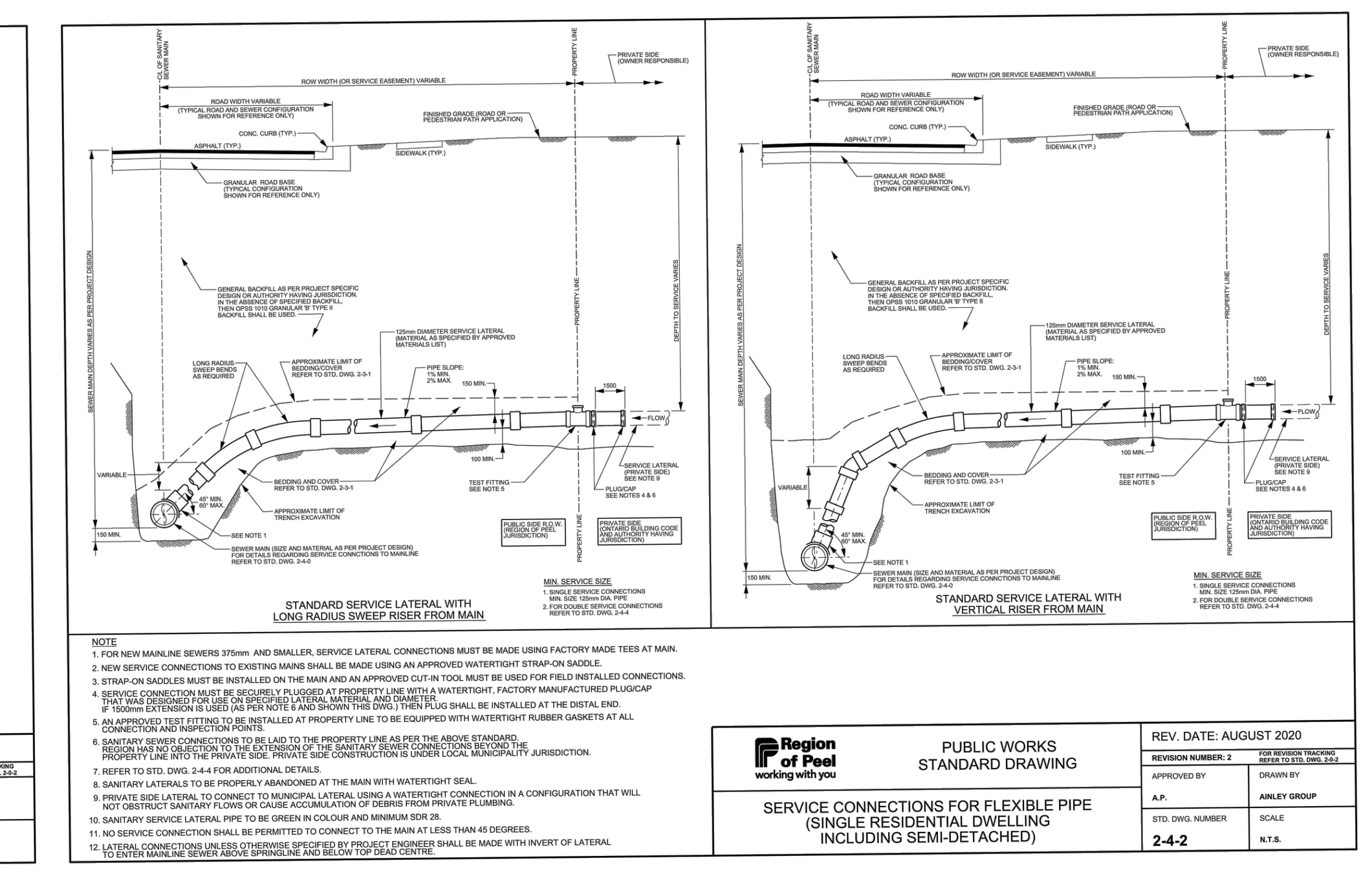


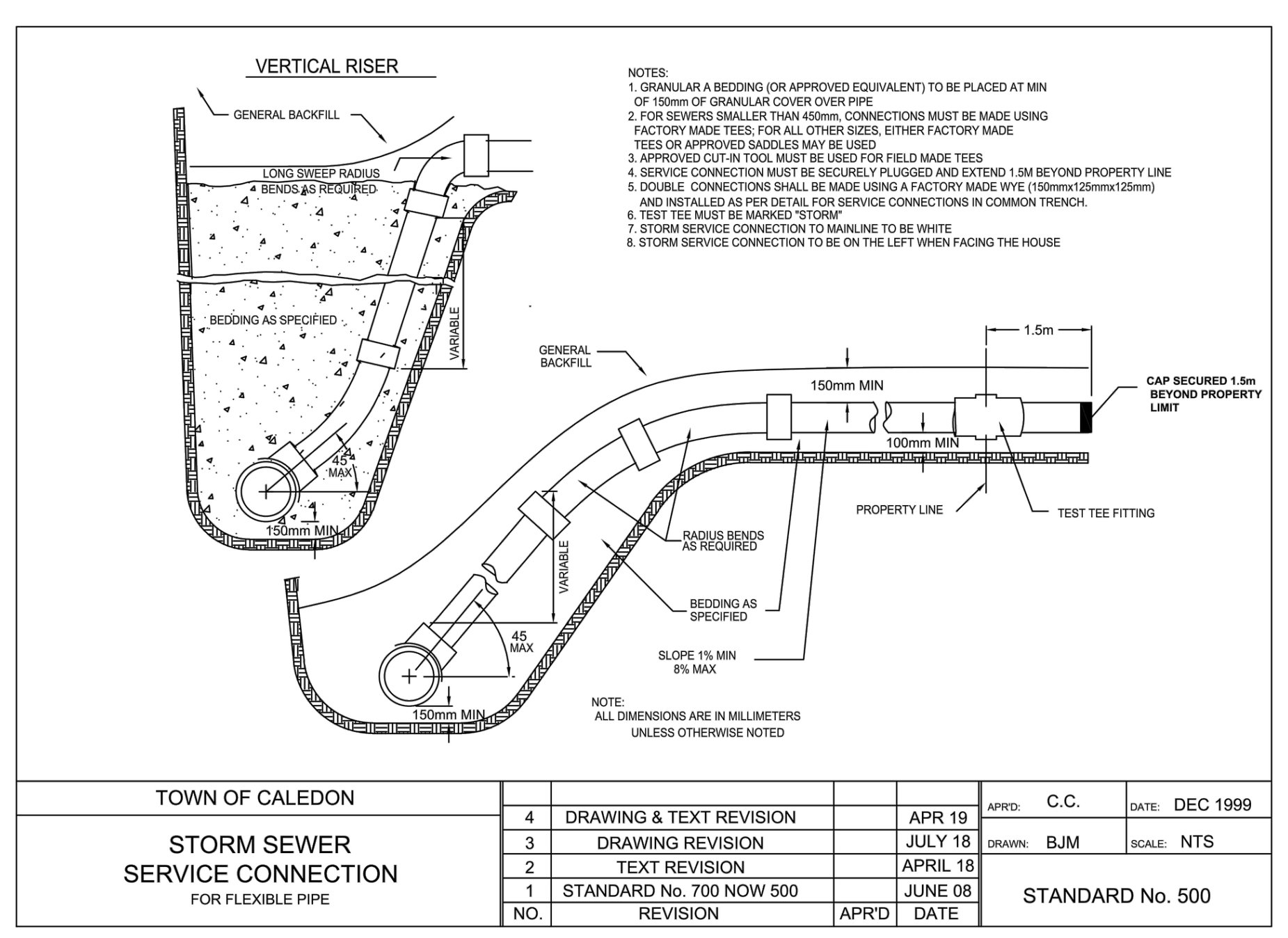


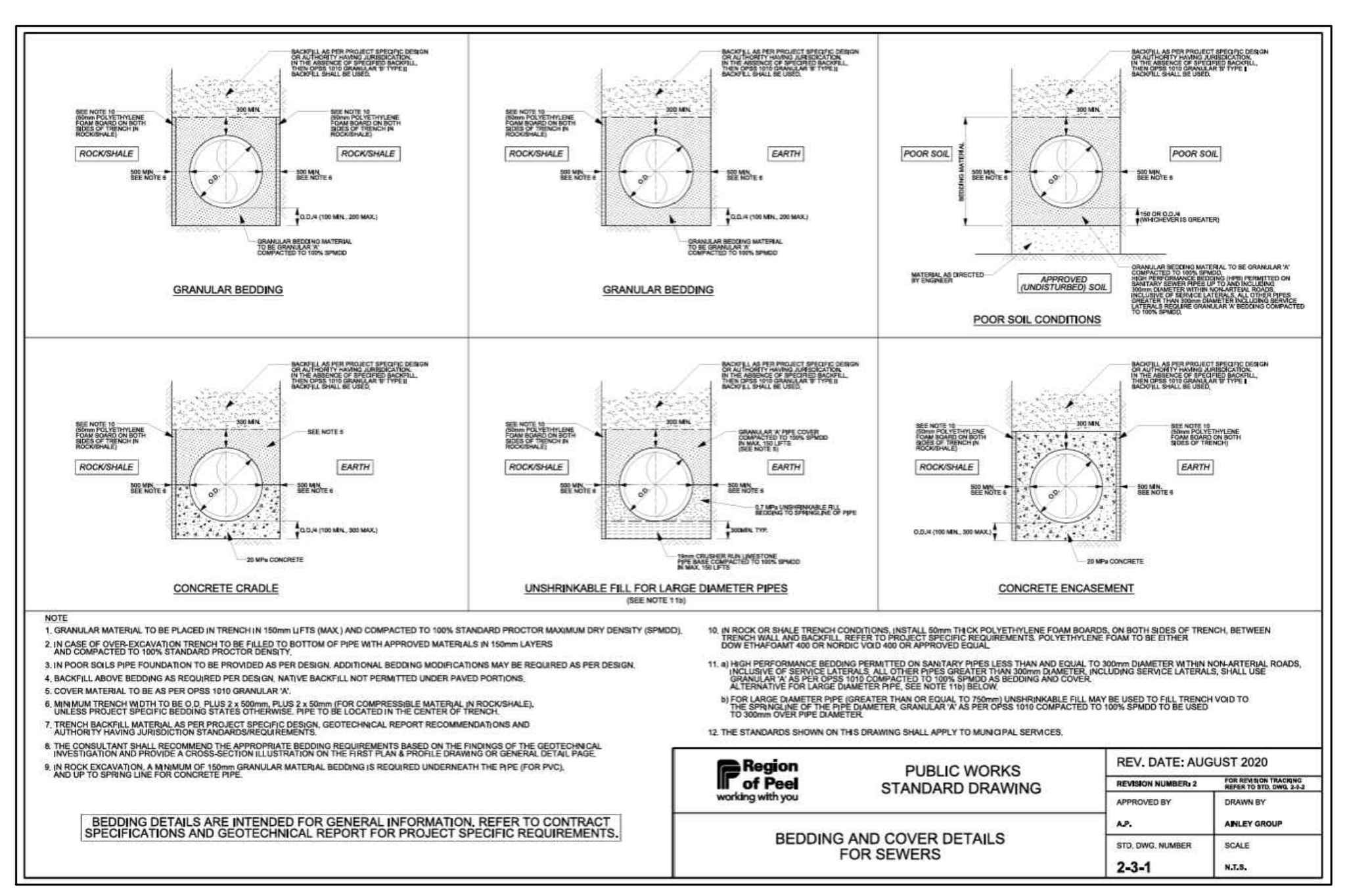


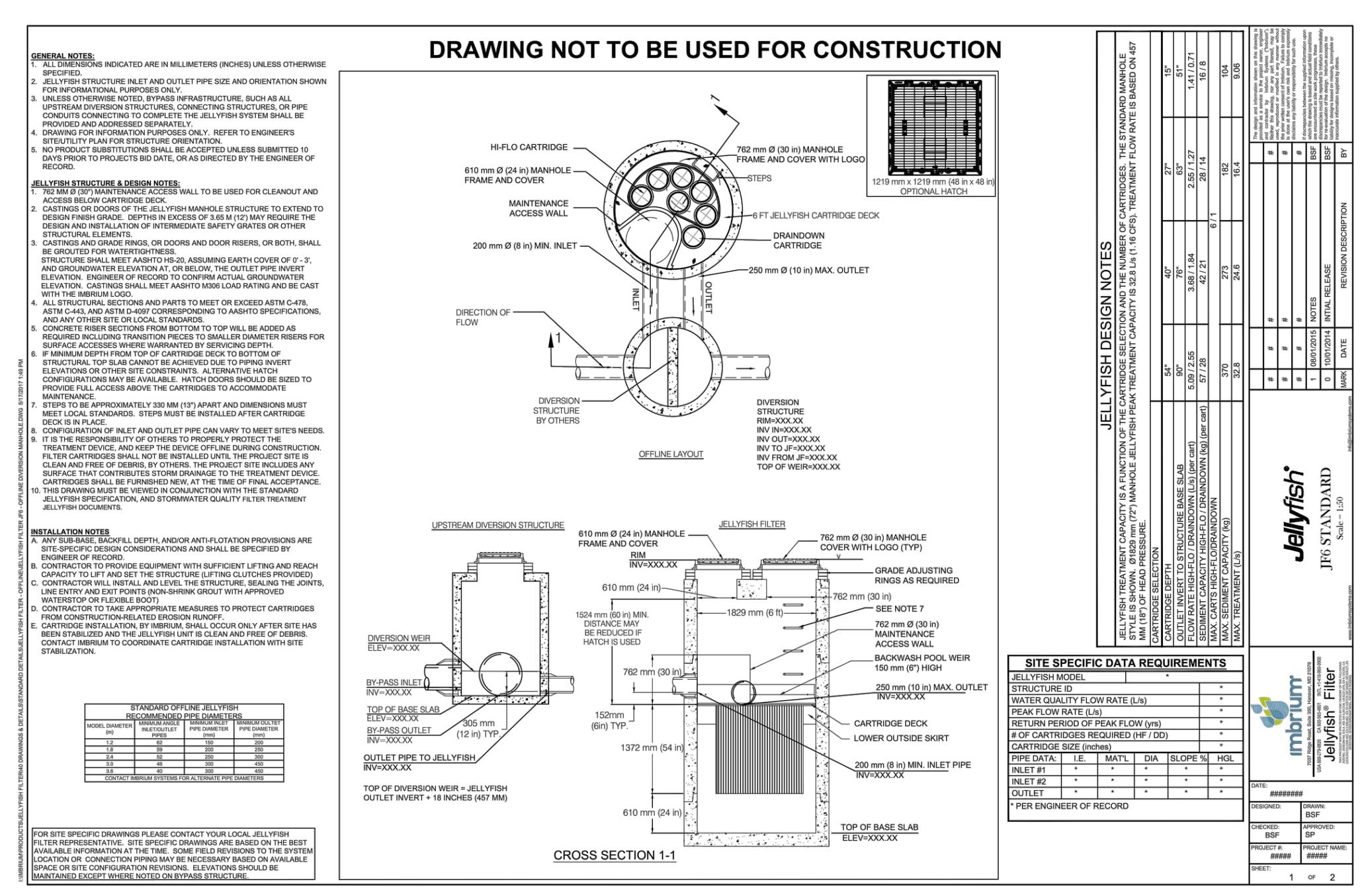


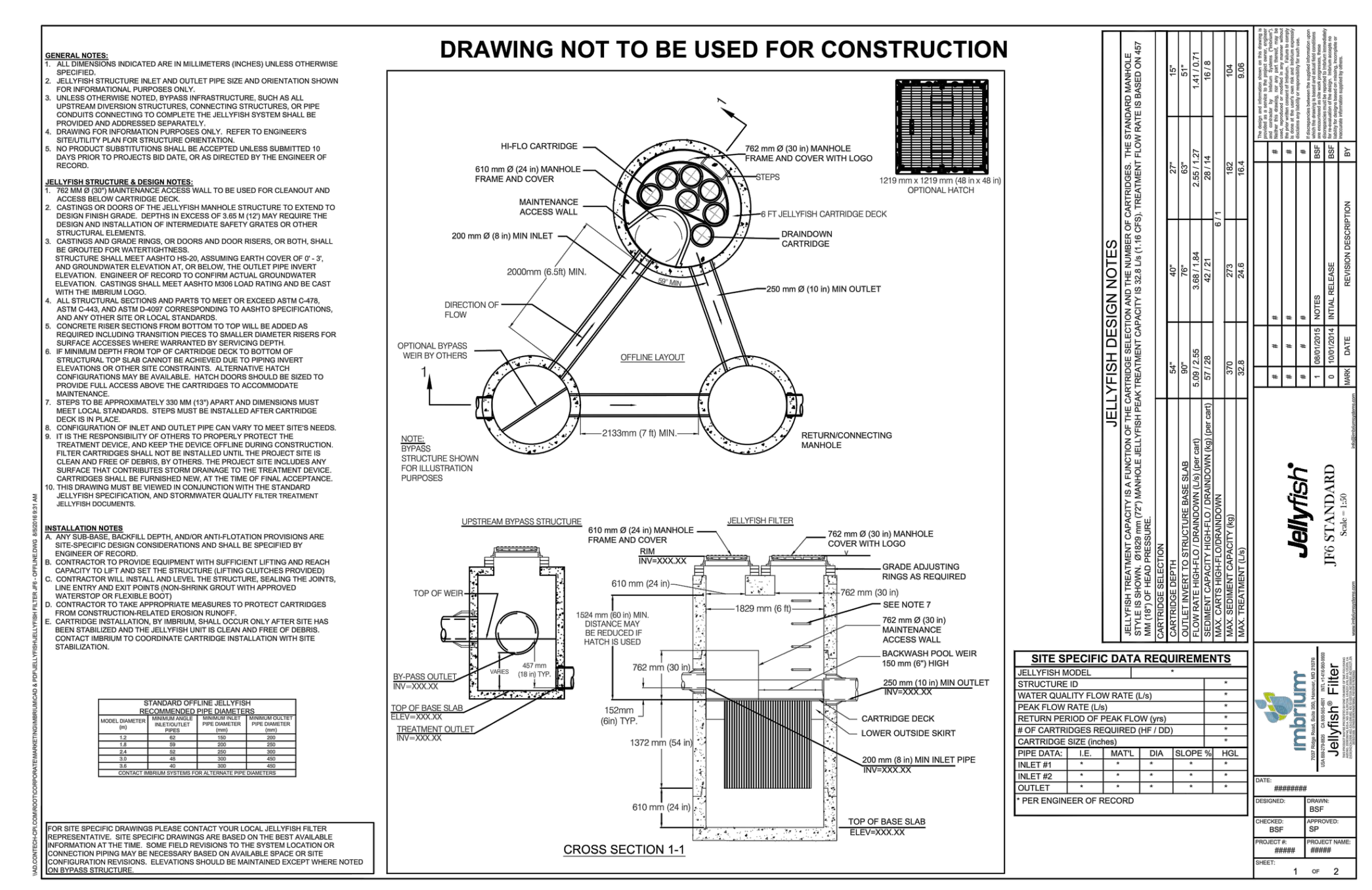












NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REGISTERED PROFESSIONAL ENGINEER
H.SARKISSIAN
FEB. 28/25
PROVINCE OF ONTARIO

Town of Caledon
APPROVED AS NOTED
This approval constitutes a general review and does not certify dimensional accuracy.
This approval is subject to further certification of the "as constructed" works by a registered Professional Engineer of the Province of Ontario.

Date: _______________
Approved By: _______________

13656 -13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

Region of Peel
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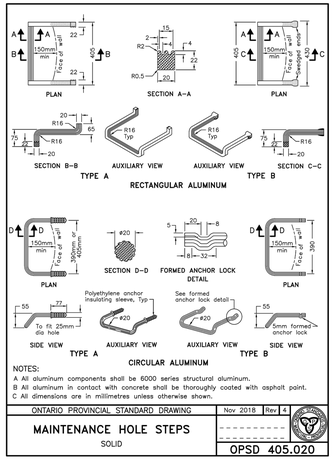
TOWN OF CALEDON

DETAILS

REGION OF PEEL CONNECTION FILE NO. C602880

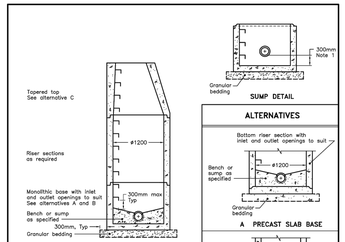
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DESIGNED BY: C.D./C.M.	DRAWN BY: M.P./V.H.	DRAWING No. D-1
CHECKED BY: H.S./C.M.	DATE: JUNE 2024	

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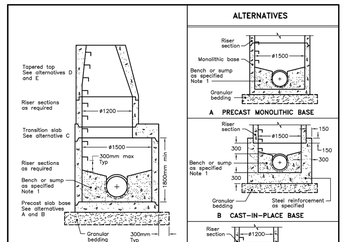
NOTES:
A All aluminum components shall be 6000 series structural aluminum.
B All aluminum in contact with concrete shall be thoroughly coated with asphalt paint.
C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
MAINTENANCE HOLE STEPS SOLID		OPSD 405.020



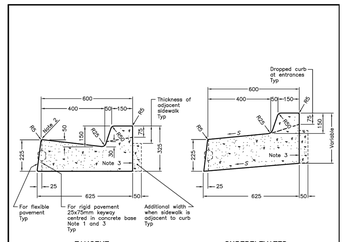
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform according to OPSD 404.020.
D Pipe support according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1200mm DIAMETER		OPSD 701.010



NOTES:
1 For sump detail, see OPSD 701.010.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, 701.040, 701.041, 703.011, 703.021, and 706.010.
C Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.021.
D Pipe support shall be according to OPSD 708.020.
E For benching and pipe opening details, see OPSD 701.021.
F For adjustment unit and frame installation, see OPSD 704.010.
G All dimensions are nominal.
H All dimensions are in millimetres unless otherwise shown.

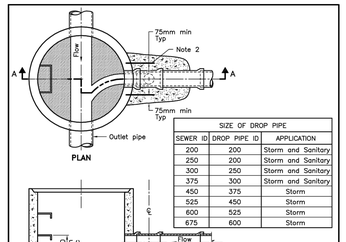
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1500mm DIAMETER		OPSD 701.011



LEGEND:
S = Rate of pavement superelevation in percent, %.

NOTES:
1 When curb and gutter is adjacent to concrete pavement or base, this drawing shall be used in conjunction with OPSD 552.010 and 552.020.
2 Flexible and composite pavement shall be placed 5mm above the adjacent edge of gutter.
3 For slipforming procedure a 5% batter is acceptable.
A Treatment at entrances shall be according to OPSD 351.010.
B Outlet treatment shall be according to the OPSD 610 Series.
C The transition from one curb type to another shall be a minimum length of 3.0m, except in conjunction with guide rail where it shall be according to the OPSD 900 Series.
D All dimensions are in millimetres unless otherwise shown.

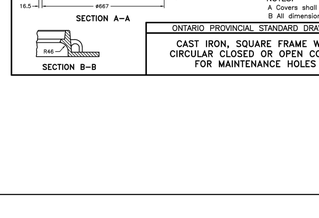
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2012	Rev 2
CONCRETE BARRIER CURB WITH WIDE GUTTER		OPSD 600.010



SIZE OF DROP PIPE		
SEWER ID	DROP PIPE ID	APPLICATION
200	200	Storm and Sanitary
250	200	Storm and Sanitary
300	250	Storm and Sanitary
375	300	Storm and Sanitary
450	375	Storm
525	450	Storm
600	525	Storm
675	600	Storm

NOTES:
1 Concrete shall be placed to undisturbed ground and the outside face of the maintenance hole, but there shall be a minimum of 15MPa concrete around the drop pipe.
2 Concrete shall be secured to the maintenance hole with 450mm long, 13mm diameter threaded rods and drilled expansion anchors down either side of the drop pipe at 300mm centres.
A All dimensions are in millimetres unless otherwise shown.

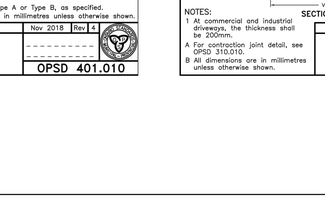
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2016	Rev 3
CAST-IN-PLACE MAINTENANCE HOLE DROP STRUCTURE TEE		OPSD 1003.010



MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS					
Maintenance Hole Diameter	No. 1–4	No. 5 and 6	No. 8	No. 7	
				Inlet Hole	Outlet Hole
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

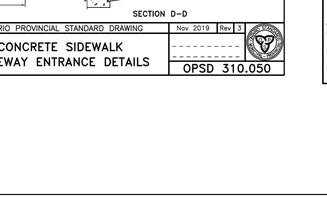
NOTES:
1 Stone shall be maintained from the outlet hole opening for top of benching.
A Concrete for benching shall be 30MPa.
B When benching is hand-finished, it shall be given wood float finish, channel shall be given steel trowel finish.
C Benching slope and height shall be as specified.
D When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be prebenched at the manufacturer with standardized benching slope and channel orientation.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 4
MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES		OPSD 701.021



NOTES:
1 Outlet hole size 525mm diameter maximum, location as required.
2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
A Centre reinforcing in base slab and walls 620mm.
B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
D Pipe support shall be according to OPSD 708.020.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

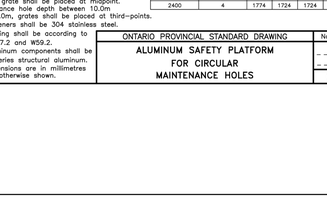
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 4
PRECAST CONCRETE CATCH BASIN 600x600mm		OPSD 705.010



NOTES:
1 Outlet hole size 525mm diameter maximum, location as required.
2 200mm diameter knockout to accommodate subdrain. Knockout shall be 60mm deep.
3 Minimum clearance between beam recess and hole for pipe shall be 300mm or maximum pipe diameter can be 150mm with addition of two 15M size rebar on 45 degree diagonal.
A Centre reinforcing in base slab and walls 620mm.
B Granular backfill shall be placed to a minimum thickness of 300mm all around the catch basin.
C Frame, grate, and adjustment units shall be installed according to OPSD 704.010.
D Pipe support shall be according to OPSD 708.020.
E All dimensions are nominal.
F All dimensions are in millimetres unless otherwise shown.

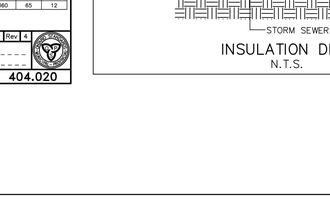
ALTERNATE STANDARD HEIGHTS	
ALTERNATIVE	DIMENSION
A	1980
B	1830
C	1680

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 4
PRECAST CONCRETE TWIN INLET CATCH BASIN 600 x 1450mm		OPSD 705.020



NOTES:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 5
CAST IRON, RAISED SQUARE FRAME WITH CIRCULAR WATERTIGHT COVER FOR MAINTENANCE HOLES		OPSD 401.050



NOTES:
1 Equivalent (13x100mm Galvanized J-Bolt) cast-in-place anchor may be used.
A Fastener shall be inserted to maintain minimum concrete cover requirements.
B All steel components and rivets shall be galvanized.
C All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2017	Rev 3
GALVANIZED STEEL HONEYCOMB GRATING FOR DITCH INLETS		OPSD 403.010

NOTES:
A Covers shall be Type A or Type B, as specified.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES		OPSD 401.010

NOTES:
1 At commercial and industrial driveways, the thickness shall be 200mm.
A For contraction joint detail, see OPSD 310.010.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2019	Rev 3
CONCRETE SIDEWALK DRIVEWAY ENTRANCE DETAILS		OPSD 310.050

NOTES:
1 All hinge brackets and mounting brackets shall be welded all around to support angle.
A All aluminum in contact with concrete shall be thoroughly coated with asphalt paint.
B Maintenance hole depth between 5.0m and 10.0m, grate shall be placed at midpoint. Maintenance hole depth between 10.0m and 15.0m, grates shall be placed at third-points.
C All fasteners shall be 304 stainless steel.
D All welding shall be according to CSA W47.2 and W59.2.
E All aluminum components shall be 6000 series structural aluminum.
F All dimensions are in millimetres unless otherwise shown.

MH Diameter	No of Grates	a	b	c	d	e	f	g
1200	2	900	850	850	225	352	65	10
1500	2	1128	1078	1078	311	419	65	12
1800	3	1344	1293	1293	308	360	65	12
2400	4	1774	1724	1724	401	360	65	12

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
ALUMINUM SAFETY PLATFORM FOR CIRCULAR MAINTENANCE HOLES		OPSD 404.020

INSULATION DETAIL
N.T.S.

NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REGISTERED PROFESSIONAL ENGINEER
H.SARKISSIAN
FEB. 28/25
PROVINCE OF ONTARIO

Town of Caledon
APPROVED AS NOTED
This approval constitutes a general review and does not certify dimensional accuracy.
This approval is subject to further certification of the "as constructed" works by a registered Professional Engineer of the Province of Ontario.

Date: _____
Approved By: _____

13656 -13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

Region of Peel
Working for you.

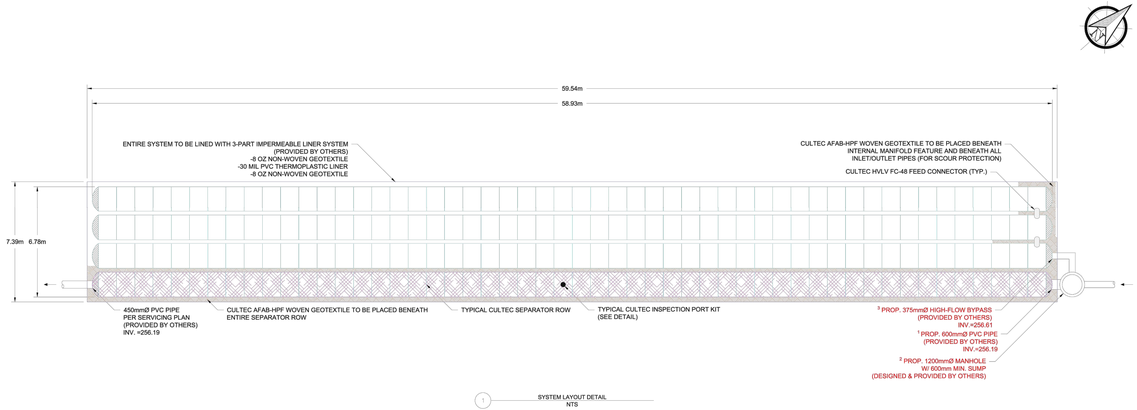
TOWN OF CALEDON

DETAILS

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: N.T.S.		PROJECT No. 2024-5440
DESIGNED BY: C.D./C.M.	DRAWN BY: M.P./V.H.	
CHECKED BY: H.S./C.M.	DATE: JUNE 2024	DRAWING No. D-2

F:\5440\5440-DRAWINGS\5440-D-1-2-3.DWG | 2025-03-03 2.38.21 PM | mpascolon



1 SYSTEM LAYOUT DETAIL
NTS

NOTE: ALL EXTERNAL SYSTEM STRUCTURES, INLET/OUTLET PIPES AND PROPOSED ELEVATIONS MUST BE DESIGNED AND APPROVED BY THE ENGINEER OF RECORD. ALL PROPOSED SYSTEM ELEVATIONS PROVIDED MUST BE VERIFIED BY THE ENGINEER OF RECORD AND THE ENGINEER OF RECORD MUST ENSURE CHAMBER BURIAL REQUIREMENTS ARE MET

MATERIALS LIST SUPPLIED BY CULTEC

PRODUCT DESCRIPTION	SKU	QUANTITY	UNIT OF MEASURE
CULTEC RECHARGER 360HD CHAMBER	360HD	208	PIECES
CULTEC RECHARGER 360HD END CAP	360HD EC	8	PIECES
CULTEC HVLV FEED CONNECTORS	FC-48	2	PIECES
CULTEC NO. 410 NON-WOVEN GEOTEXTILE	70WWG410	16	SQ. METERS
CULTEC AFAB-HPF WOVEN GEOTEXTILE	70WGHPF	73	METERS
CULTEC INSPECTION PORT KIT	1299CGC	1	PIECES

MATERIALS LIST NOT SUPPLIED BY CULTEC

1-2 INCH WASHED, CRUSHED STONE	---	319	CUBIC METERS
8 OZ. NON-WOVEN GEOTEXTILE	---	2502	SQ. METERS
30 MIL. PVC THERMOPLASTIC LINER	---	1251	SQ. METERS

CULTEC RECHARGER® 360HD LEGEND

- RECHARGER 360HD CHAMBER
- RECHARGER 360HD END CAP
- FEED CONNECTORS
- SEPARATOR ROW
- WOVEN GEOTEXTILE
- STONE BORDER

PROPOSED SYSTEM ALTERATION TABLE

1	PROPOSED SEPARATOR ROW ACCESS PIPE
2	PROPOSED SEPARATOR ROW ACCESS MANHOLE
3	PROPOSED SEPARATOR ROW HIGH-FLOW BYPASS PIPE

PROPOSED STORMWATER MANAGEMENT SYSTEM ELEVATIONS
(TO BE APPROVED BY ENGINEER OF RECORD)
*ENGINEER OF RECORD TO CONFIRM MINIMUM AND MAXIMUM BURIAL REQUIREMENTS ARE MET)

MAXIMUM ALLOWABLE GRADE (TOP OF PAVEMENT OR UNPAVED)	260.76
MINIMUM ALLOWABLE GRADE (UNPAVED TRAFFIC)	257.70
MINIMUM ALLOWABLE GRADE (BASE OF FLEXIBLE PAVEMENT)	257.55
MINIMUM ALLOWABLE GRADE (TOP OF RIGID PAVEMENT)	257.55
TOP OF STONE ELEVATION	257.26
TOP OF CHAMBER ELEVATION	257.10
375mm HIGH-FLOW BYPASS PIPE INVERT	256.61
450mm OUTLET PIPE INVERT	256.19
600mm INLET PIPE INVERT	256.19
BOTTOM OF CHAMBER ELEVATION	256.19
BOTTOM OF STONE ELEVATION	256.04

CULTEC STORMWATER MANAGEMENT SYSTEM SUMMARY

TOTAL STORAGE REQUIRED (m^3)	317
TOTAL STORAGE PROVIDED (m^3)	318
BEDDING STONE DISCOUNTED FROM TOTAL STORAGE PROVIDED	
% STONE POROSITY	40
SYSTEM AREA (m^2)	439.68
DEPTH OF EMBEDMENT STONE (mm)	152
DEPTH OF BEDDING STONE (mm)	152
STONE PERIMETER (mm)	305
SPACING BETWEEN CHAMBER ROWS (mm)	229

CULTEC STORMWATER CHAMBER
PROJECT NO: 25-0122.00 | DATE: 2/3/2025
DESIGNED BY: SRA | CHECKED BY: TNB
SCALE: N.T.S | SHEET NO: 2 OF 5

13656 EMIL KOLB PKWY TOWNHOUSES
13656 EMIL KOLB PARKWAY
BOLTON, ON
SYSTEM LAYOUT SHEET

CULTEC
Subsurface Stormwater Systems
878 Federal Road
Brookfield, CT 06804
www.cultec.com
CULTEC

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CULTEC RECHARGER® 360HD PRODUCT SPECIFICATIONS

GENERAL
CULTEC RECHARGER® 360HD CHAMBERS ARE DESIGNED FOR UNDERGROUND STORMWATER MANAGEMENT. THE CHAMBERS MAY BE USED FOR RETENTION, INFILTRATION OR DETENTION OR CONTROLLING THE FLOW OF ON-SITE STORMWATER RUNOFF.

CHAMBER PARAMETERS
1. THE CHAMBERS SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTOR CHAMBERS.
3. THE CHAMBER SHALL BE DESIGNED TO WITHSTAND THE AASHTO DESIGN TRUCK WITH 12 INCHES OF COVER IN ACCORDANCE WITH AASHTO LRFD SECTION 12.12 AND SECTION 12.12.4 WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
4. THE CHAMBER SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN POLYPROPYLENE, RESIN IMPACT-MODIFIED POLYPROPYLENE.
5. THE CHAMBER SHALL BE ARCHED IN SHAPE.
6. THE CHAMBER SHALL BE OPEN-BOTTOMED.
7. THE CHAMBER SHALL BE JOINED USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
8. THE NOMINAL CHAMBER DIMENSIONS OF THE CULTEC RECHARGER® 360HD SHALL BE 51.0 INCHES (1295 MM) WIDE, 20.0 INCHES (510 MM) HIGH AND 90.0 INCHES (2286 MM) LONG. THE INSTALLED LENGTH OF A JOINED RECHARGER® 360HD SHALL BE 3.67 FEET (1.12 M).
9. MULTIPLE CHAMBERS MAY BE CONNECTED TO FORM DIFFERENT LENGTH ROWS. EACH ROW SHALL BEGIN AND END WITH A SEPARATELY FORMED CULTEC RECHARGER® 360HD END CAP. THE CHAMBER END CAP OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750mm) PVC.
10. THE CHAMBER SHALL HAVE TWO SIDE PORTALS TO ACCEPT CULTEC HVLV® FC-48 FEED CONNECTORS TO CREATE AN INTERNAL MANIFOLD. MAXIMUM ALLOWABLE PIPE SIZE IN THE SIDE PORTAL IS 12 INCH (315mm) HDPE OR 12 INCH (300mm) PVC.
11. THE NOMINAL CHAMBER VOLUME OF THE RECHARGER® 360HD CHAMBER (CHAMBER SHALL BE 10 INCHES (305 mm) ALL THE WAY DOWN THE VALLEYS AND 40 INCHES (1245 mm) LONG.
12. THE NOMINAL STORAGE VOLUME OF THE RECHARGER® 360HD CHAMBER SHALL BE 53.2 FT³ / FT (.808 m^3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF A INSTALLED RECHARGER® 360HD SHALL BE 39.88 FT³ / UNIT (1.038 m^3 / UNIT) - WITHOUT STONE.
13. THE NOMINAL STORAGE VOLUME OF THE HVLV® FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m^3 / m) - WITHOUT STONE.
14. THE RECHARGER® 360HD CHAMBER SHALL HAVE 7 CORRUGATIONS.
15. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES.
16. THE MINIMUM ALLOWABLE COVER OVER THE TOP OF THE CHAMBER SHALL BE 12.0 INCHES (305 mm).

END CAP PARAMETERS
1. THE CULTEC RECHARGER® 360HD END CAP (REFERRED TO AS "END CAP") SHALL BE MANUFACTURED IN THE U.S.A. OR CANADA BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
4. THE END CAP SHALL BE STRUCTURAL FOAM INJECTION MOLDED OF BLUE VIRGIN HIGH MOLECULAR WEIGHT IMPACT-MODIFIED POLYPROPYLENE.
5. THE END CAP SHALL BE ARCHED IN SHAPE.
6. THE END CAP SHALL BE OPEN-BOTTOMED.
7. THE END CAP SHALL BE JOINED AT THE BEGINNING AND END OF EACH ROW OF CHAMBERS USING AN INTERLOCKING OVERLAPPING RIB METHOD. CONNECTIONS MUST BE FULLY SHOULDERED OVERLAPPING RIBS, HAVING NO SEPARATE COUPLINGS.
8. THE END CAP SHALL HAVE 5 CORRUGATIONS.
9. THE NOMINAL DIMENSIONS OF THE END CAP SHALL BE 38.8 INCHES (827 mm) TALL, 51.0 INCHES (1295 mm) WIDE AND 20.0 INCHES (510 mm) HIGH AT THE JUNCTION OF THE RECHARGER 360HD CHAMBER. THE INSTALLED LENGTH OF THE END CAP SHALL BE 15 INCHES (381 mm).
10. THE NOMINAL STORAGE VOLUME OF THE END CAP SHALL BE 5.17 FT³ / FT (0.48 m^3 / m) - WITHOUT STONE. THE NOMINAL STORAGE VOLUME OF AN INTERLOCKED END CAP SHALL BE 6.46 FT³ / UNIT (0.183 m^3 / UNIT) - WITHOUT STONE.
11.MAXIMUM INLET OPENING ON THE END CAP IS 24 INCH (600 mm) HDPE OR 30 INCH (750 mm) SMOOTH-WALL PVC.
12. THE CHAMBER SHALL BE MANUFACTURED IN A FACILITY EMPLOYING CULTEC'S QUALITY CONTROL AND ASSURANCE PROCEDURES
13.THE END CAP SHALL PROVIDE RESISTANCE TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12.

CULTEC HVLV FC-48 FEED CONNECTOR PRODUCT SPECIFICATIONS

GENERAL
CULTEC HVLV FC-48 FEED CONNECTORS ARE DESIGNED TO CREATE AN INTERNAL MANIFOLD FOR CULTEC RECHARGER® MODEL SERIES STORMWATER CHAMBERS.

FEED CONNECTOR PARAMETERS
1. THE FEED CONNECTOR SHALL BE MANUFACTURED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE FEED CONNECTOR SHALL BE VACUUM THERMOFORMED OF BLACK HIGH MOLECULAR WEIGHT HIGH DENSITY POLYETHYLENE (HMWHDPE).
3. THE FEED CONNECTOR SHALL BE ARCHED IN SHAPE.
4. THE FEED CONNECTOR SHALL BE OPEN-BOTTOMED.
5. THE NOMINAL DIMENSIONS OF THE CULTEC HVLV FC-48 FEED CONNECTOR SHALL BE 12 INCHES (305 mm) TALL, 16 INCHES (406 mm) WIDE AND 48 INCHES (1245 mm) LONG.
6. THE NOMINAL STORAGE VOLUME OF THE HVLV FC-48 FEED CONNECTOR SHALL BE 0.913 FT³ / FT (0.085 m^3 / m) - WITHOUT STONE.
7. THE HVLV FC-48 FEED CONNECTOR SHALL HAVE 4 CORRUGATIONS.
8. THE HVLV FC-48 FEED CONNECTOR MUST BE EITHER (1) A WHOLE UNIT HAVING TWO OPEN SIDE PORTALS TO ACCEPT CULTEC RECHARGER® 360HD CHAMBERS OR (2) TWO HALVES THE UNIT SHALL FIT INTO THE SIDE PORTALS OF THE CULTEC RECHARGER® STORMWATER CHAMBER AND NOT AS CROSS FEED CONNECTIONS CREATING AN INTERNAL MANIFOLD.
9. THE FEED CONNECTOR SHALL BE DESIGNED TO WITHSTAND AASHTO HS-20 DEPRED LOADS WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS.
10. THE FEED CONNECTOR SHALL BE MANUFACTURED IN AN ISO 9001:2008 CERTIFIED FACILITY.

CULTEC NO. 410™ NON-WOVEN GEOTEXTILE
CULTEC NO. 410™ NON-WOVEN GEOTEXTILE MAY BE USED WITH CULTEC CONTRACTOR® STONE ANCHORS TO SECURE THE GEOTEXTILE TO THE SUBGRADE AND TO PROVIDE A BARRIER THAT PREVENTS SOIL INTRUSION INTO THE STONE.

GEOTEXTILE PARAMETERS
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC, INC. OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK AND WHITE IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TYPICAL WEIGHT OF 4.5 OZ/SY (142 G/M).
4. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH VALUE OF 120 LBS (533 N) PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE AN ELONGATION @ BREAK VALUE OF 50% PER ASTM D4632 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A MULLEN BURST VALUE OF 225 PSI (1551 KPA) PER ASTM D3786 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A PUNCTURE STRENGTH VALUE OF 65 LBS (289 N) PER ASTM D4833 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE VALUE OF 340 LBS (1513 N) PER ASTM D6241 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A TRAPEZOID TEAR VALUE OF 50 LBS (222 N) PER ASTM D4533 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A AOS VALUE OF 70 U.S. SIEVE (0.212 MM) PER ASTM D4751 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY VALUE OF 1.7 SEC-1 PER ASTM D4491 TESTING METHOD.
12. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATE VALUE OF 135 GAL/MIN/SF (5500 L/MIN/M) PER ASTM D4491 TESTING METHOD.
13. THE GEOTEXTILE SHALL HAVE A UV STABILITY @ 500 HOURS VALUE OF 70% PER ASTM D4355 TESTING METHOD.

CULTEC AFAB-HPF™ WOVEN GEOTEXTILE
CULTEC AFAB-HPF WOVEN GEOTEXTILE IS DESIGNED AS A UNDERLAYMENT TO PREVENT SOIL INTRUSION INTO THE STONE FOUNDATION AND TO PROVIDE SCOUR PROTECTION AT CONNECTIONS UTILIZING THE CULTEC RHINOFLO FACTORY. IT MAY ALSO BE USED AS A COMPONENT OF THE CULTEC SEPARATOR ROW TO ACT AS A BARRIER TO PREVENT SOIL/GRAVEL/VEHICLE INTRUSION INTO THE STONE WHILE ALLOWING FOR MAINTENANCE.

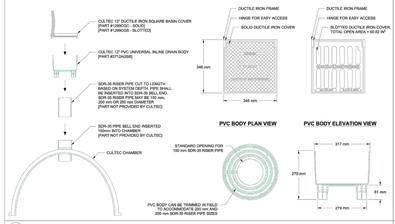
GEOTEXTILE PARAMETERS
1. THE GEOTEXTILE SHALL BE PROVIDED BY CULTEC OF BROOKFIELD, CT. (203-775-4416 OR 1-800-428-5832)
2. THE GEOTEXTILE SHALL BE BLACK IN APPEARANCE.
3. THE GEOTEXTILE SHALL HAVE A TENSILE STRENGTH OF 320 X 320 LBS (1,420 X 1,420 N) PER ASTM D4632 TESTING METHOD.
4. THE GEOTEXTILE SHALL HAVE A ELONGATION @ BREAK RESISTANCE OF 15 X 15% PER ASTM D4632 TESTING METHOD.
5. THE GEOTEXTILE SHALL HAVE A SEAM WIDTH TENSILE RESISTANCE OF 3,563 X 3,563 LBS/FT (52 X 52 KN/M) PER ASTM D4595 TESTING METHOD.
6. THE GEOTEXTILE SHALL HAVE A CBR PUNCTURE RESISTANCE OF 1,500 LBS (6,670 N) PER ASTM D6241 TESTING METHOD.
7. THE GEOTEXTILE SHALL HAVE A TRAPEZOIDAL TEAR RESISTANCE OF 120 X 120 LBS (534 N) PER ASTM D4533 TESTING METHOD.
8. THE GEOTEXTILE SHALL HAVE AN APPARENT OPENING SIZE OF 30 US STD. SIEVE (0.60 MM) PER ASTM D4751 TESTING METHOD.
9. THE GEOTEXTILE SHALL HAVE A PERMITTIVITY RATING OF 0.2 SEC-1 PER ASTM D4491 TESTING METHOD.
10. THE GEOTEXTILE SHALL HAVE A WATER FLOW RATING OF 22 GPM/FT2 (900 LPM/M2) PER ASTM D4491 TESTING METHOD.
11. THE GEOTEXTILE SHALL HAVE A UV RESISTANCE OF 70% @ 500 HRS. PER ASTM D4355 TESTING METHOD.

GENERAL NOTES

PIPE	A	B
6" (150 mm)	26.00" (660 mm)	0.75" (20 mm)
8" (200 mm)	24.00" (600 mm)	1.00" (25 mm)
10" (250 mm)	21.00" (525 mm)	1.25" (32 mm)
12" (300 mm)	18.00" (450 mm)	1.75" (45 mm)
15" (375 mm)	15.00" (375 mm)	2.00" (50 mm)
18" (450 mm)	12.00" (300 mm)	2.25" (58 mm)
24" (600 mm)	9.00" (150 mm)	2.50" (64 mm)

THE TYPICAL INVERT TABLE ABOVE IS BASED ON THE INSIDE DIAMETER OF STANDARD CORRUGATED PLASTIC PIPE. THE ACTUAL INVERT ELEVATIONS WILL VARY DEPENDING ON THE ACTUAL INSIDE DIAMETER OF THE PIPE USED (600mm), PIPES OF ANY SIZE AND MATERIAL UP TO 24" (600mm) MAY BE PLACED AT CUSTOM LOCATIONS AND ELEVATIONS INVERTS. 30" (750 mm) BWDITH WALL SDR-35 PVC PIPE MAY BE USED AT THE BOTTOM OF THE END CAP. THE CROWN OF THE PIPE MUST REMAIN A MINIMUM OF 3" (75mm) FROM THE EDGE OF THE HEAVY DUTY END CAP.

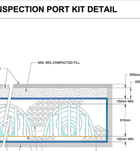
FINAL ASSEMBLY



SOLID COVER OPTION

SLOTTED COVER OPTION

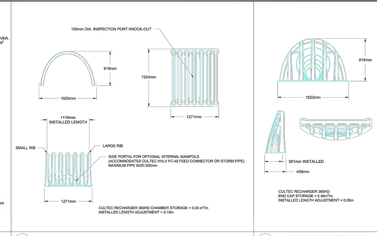
PVC BODY PLAN VIEW



PVC BODY ELEVATION VIEW



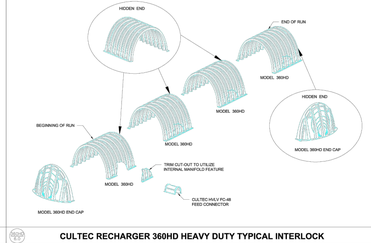
CULTEC UNIVERSAL INSPECTION PORT KIT DETAIL



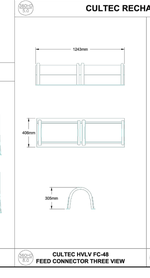
CULTEC RECHARGER 360HD HEAVY DUTY THREE VIEW

CULTEC RECHARGER 360HD HEAVY DUTY END CAP THREE VIEW

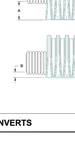
CULTEC RECHARGER 360HD HEAVY DUTY CROSS SECTION



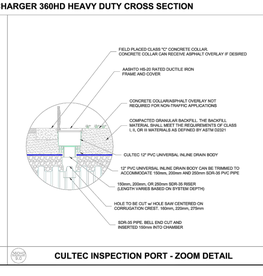
CULTEC RECHARGER 360HD HEAVY DUTY TYPICAL INTERLOCK



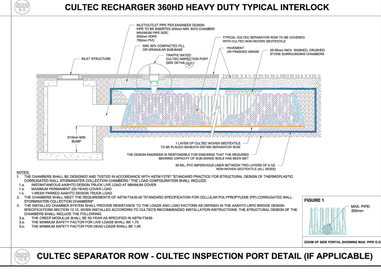
CULTEC RECHARGER 360HD TYPICAL PIPE INVERTS



CULTEC HVLV FC-48 FEED CONNECTOR THREE VIEW



CULTEC INSPECTION PORT - ZOOM DETAIL



CULTEC SEPARATOR ROW - CULTEC INSPECTION PORT DETAIL (IF APPLICABLE)

NOTES:
1. THE CHAMBERS SHALL BE DESIGNED AND TESTED IN ACCORDANCE WITH ASTM F2787 "STANDARD PRACTICE FOR STRUCTURAL DESIGN OF THERMOPLASTIC CORRUGATED WALL STORMWATER COLLECTOR CHAMBERS"
1.a. - WEITHERTHEESE AASHTO DESIGN TRUCK LIVE LOAD AT MINIMUM COVER
1.b. - MAXIMUM PERMANENT (SOIL) DEAD LOAD
1.c. - LIVE LOAD SURCHARGE
2. THE CHAMBERS SHALL MEET THE REQUIREMENTS OF ASTM F2418-05 "STANDARD SPECIFICATION FOR CELLULAR POLYPROPYLENE (PP) CORRUGATED WALL STORMWATER COLLECTION CHAMBERS" AND BE DESIGNED TO THE LOADS AND LOAD FACTORS AS DEFINED IN THE AASHTO LRFD BRIDGE DESIGN SPECIFICATIONS SECTION 12.12, WHEN INSTALLED ACCORDING TO CULTEC'S RECOMMENDED INSTALLATION INSTRUCTIONS. THE STRUCTURAL DESIGN OF THE CHAMBERS SHALL INCLUDE THE FOLLOWING:
3.a. THE CREEP MODULUS SHALL BE 50 YEAR AS SPECIFIED IN ASTM F2418
3.b. THE MINIMUM SAFETY FACTOR FOR LOAD FACTOR DESIGN IS 1.95
3.c. THE MINIMUM SAFETY FACTOR FOR DEAD LOADS SHALL BE 1.35

FIGURE 1
MAX. PIPE: 300mm
ZOOM OF SIDE PORTAL SHOWING MAX. PIPE O.D.

NO.	DATE	ISSUED FOR
1.	FEB. 28/25	ISSUED FOR ZBA & SPA SUBMISSION

BENCHMARK LOCATED ON THE BUILDING (ELLWOOD MEMORIAL PUBLIC SCHOLL) ON EAS TSIDE OF HIGHWAY 50, 0.8KMM SOUTH OF JUNCTION OF HWY 50 AND KING ST IN THE TOWN OF CALEDON (BOLTON), 55.2 METRES NORTH OF ELLWOOD DR AND 104 METRES EAST OF CENTRELINE OF HWY 50.

REG'D STEPHEN H. SARKISSIAN — PROFESSIONAL ENGINEER — PROVINCE OF ONTARIO — FEB. 28/25

Town of Caledon
APPROVED AS NOTED
This approval constitutes a general review and does not certify dimensional accuracy.
This approval is subject to further certification of the "as constructed" works by a registered Professional Engineer of the Province of Ontario.
Date: _____
Approved By: _____

13656 -13668 EMIL KOLB PARKWAY
BOLTON VILLAGE - CAMCOS LIVING

SCHAEFFERS
CONSULTING ENGINEERS
SCHAEFFER & ASSOCIATES LTD.
6 Ronrose Drive, Concord, Ontario L4K 4R3
Tel: (905) 738-6100
Fax: (905) 738-6875
E-mail: design@schaeffers.com

Region of Peel
Working for you.

TOWN OF CALEDON

DETAILS

REGION OF PEEL CONNECTION FILE NO. C602880

SCALE: N.T.S.
DESIGNED BY: C.D./C.M.
DRAWN BY: M.P./V.H.
CHECKED BY: H.S./C.M.
DATE: JUNE 2024
PROJECT No. 2024-5440
DRAWING No. D-3

F:\5440\5440-DRAWINGS\5440-D-1-2-3.DWG | 2025-03-03 2:38:45 PM | mpascolon