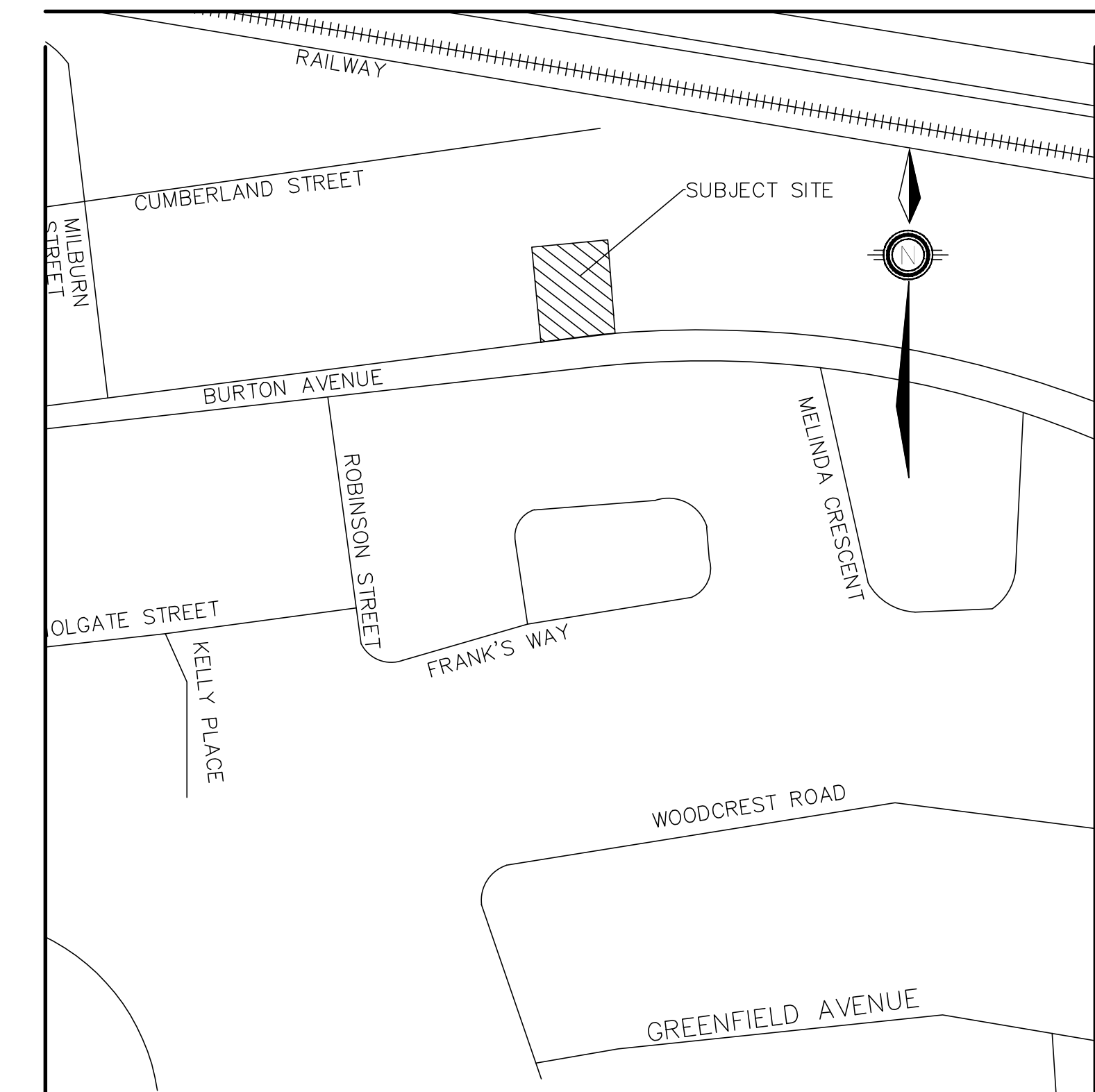


APARTMENT DEVELOPMENT 181-185 BURTON AVENUE BARRIE ON.

DRAWING LIST

ND-1	NOTES AND DETAILS
ND-2	NOTES AND DETAILS
SG-1	SITE GRADING PLAN
SS-1	SITE SERVICING PLAN
STM-1	PRE-DEVELOPMENT STORM CATCHMENT PLAN
STM-2	POST DEVELOPMENT STORM CATCHMENT PLAN
PM-2	PAVEMENT MARKING AND SIGNAGE PLAN
EPR-1	EROSION PROTECTION & REMOVALS PLAN



CITY OF BARRIE
70 COLLIER STREET
(BOX 400)
BARRIE, ON
L4M 4T5

MONOLITE HOLDINGS
1410 MAJOR MACKENZIE DR.
UNIT C8
VAUGHAN, ON
L6A4H6



PEARSON
ENGINEERING
PEARSONENG.COM PH. 705.719.4785

GENERAL NOTES

1. DRAWINGS

A. ALL DRAWINGS SHALL BE PRODUCED IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARDS & SYMBOLS FOR PLAN & PROFILE DRAWINGS, GENERAL SERVICE PLANS AND LOT GRADING PLANS.

2. MEASUREMENTS

A. ALL DIMENSIONS ARE IN METRES, EXCEPT PIPE DIAMETERS, WHICH ARE IN MILLIMETRES, UNLESS SPECIFIED OTHERWISE.

3. GENERAL

- A. ALL WORK SHALL BE IN ACCORDANCE WITH CURRENT CITY OF BARRIE STANDARD DRAWINGS (BSD) AND ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).
- B. ORDER OF PRECEDENCE OF STANDARD DRAWINGS IS FIRSTLY CITY OF BARRIE STANDARD DRAWINGS (BSD) AND SECONDLY ONTARIO PROVINCIAL STANDARD DRAWINGS (OPSD).
- C. TREE REMOVALS TO TAKE PLACE WITHIN THE APRIL 1 TO AUGUST 31 WINDOW.
- D. LOCATION OF EXISTING SERVICES ARE NOT GUARANTEED. THE CONTRACTOR IS REQUIRED TO NOTIFY THE VARIOUS UTILITY COMPANIES 48 HOURS PRIOR TO THE COMMENCEMENT OF ANY WORK.
- E. A RIGHT-OF-WAY ACTIVITY PERMIT IS REQUIRED FROM THE ENGINEERING DEPARTMENT (OPERATIONS CENTER, 165 FERNDALE DR. NORTH) PRIOR TO THE COMMENCEMENT OF WORK WITHIN ANY CITY RIGHT-OF-WAY.
- F. A SITE ALTERATION PERMIT IS REQUIRED FROM THE ENGINEERING DEPARTMENT PRIOR TO THE COMMENCEMENT OF ANY EARTH WORKS ON THE SITE.
- G. NATIVE MATERIAL, SUITABLE FOR BACKFILL, SHALL BE COMPACTED TO 95% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- H. GRANULAR MATERIAL , USED FOR BACKFILL , SHALL BE PLACED IN LAYERS 150mm IN DEPTH MAXIMUM AND COMPACTED TO 100% STANDARD PROCTOR MAXIMUM DRY DENSITY.
- I. ALL DISTURBED AREAS ARE TO BE REINSTATED TO THEIR ORIGINAL CONDITION OR BETTER, AS DETERMINED BY THE CITY ENGINEERING DEPARTMENT.
- J. ALL SILT CONTROL AND EROSION PROTECTION DEVICES ARE TO BE IN PLACE PRIOR TO THE COMMENCEMENT OF CONSTRUCTION AND SHALL REMAIN IN PLACE AND BE MAINTAINED BY THE CONTRACTOR UNTIL CONSTRUCTION IS COMPLETE AND THE GRASS HAS ESTABLISHED GROWTH, SUBJECT TO APPROVAL BY THE CITY ENGINEERING DEPARTMENT.
- K. FILL REQUIREMENTS TO FOLLOW THE PROCEDURES OUTLINED BY WSP IN THE GEOTECHNICAL REPORT PROVIDED.

SANITARY SEWERS

- A. SEWERS SHALL BE CONSTRUCTED WITH BEDDINGS AS PER OPSD-802.010, (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.
- B. MAXIMUM DEFLECTION FROM COMBINED LIVE AND DEAD LOADING SHALL NOT EXCEED ANY C.S.A., O.P.S. OR MANUFACTURERS RECOMMENDED SPECIFICATIONS.
- C. PVC, CONCRETE AND PROFILE WALL PVC SEWERS SHALL HAVE RUBBER GASKET TYPE JOINTS AND SHALL BE CERTIFIED TO CONFORM TO ALL APPLICABLE CURRENT C.S.A. SPECIFICATIONS.
- D. CONCRETE SANITARY SEWERS SHALL HAVE A MINIMUM STRENGTH OF 50 N/M/MM CONFORMING TO CSA STANDARD A257.2-1982, CLASS 50-D (PREVIOUSLY C.S.A. STANDARD A257.2-1974, CLASS II).
- E. MAINTENANCE HOLE TOPS (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACED. ALL ADJUSTMENT WILL BE ACCORDANCE WITH BSD-N2.
- F. ALL CONNECTIONS TO NEW SANITARY MAINS SHALL BE PRE-MANUFACTURED, FABRICATED TEES. CONNECTIONS TO EXISTING SANITARY SEWER SHALL BE MADE WITH APPROVED FACTORY MADE TEES OR INSERTA-TEES IN STRICT ACCORDANCE TO MANUFACTURES GUIDELINES.
- G. PIPE TO BE MINIMUM 100 mm DIA. PVC SDR28, RUBBER GASKET TYPE JOINTS AND SHALL CONFORM TO C.S.A. (B-182.2.3.4) (COLOURED) FOR A RESIDENTIAL HOUSE AND 150mm MINIMUM DIA. PVC SDR28 FOR INDUSTRIAL/COMMERCIAL DEVELOPMENT.

WATERMAIN

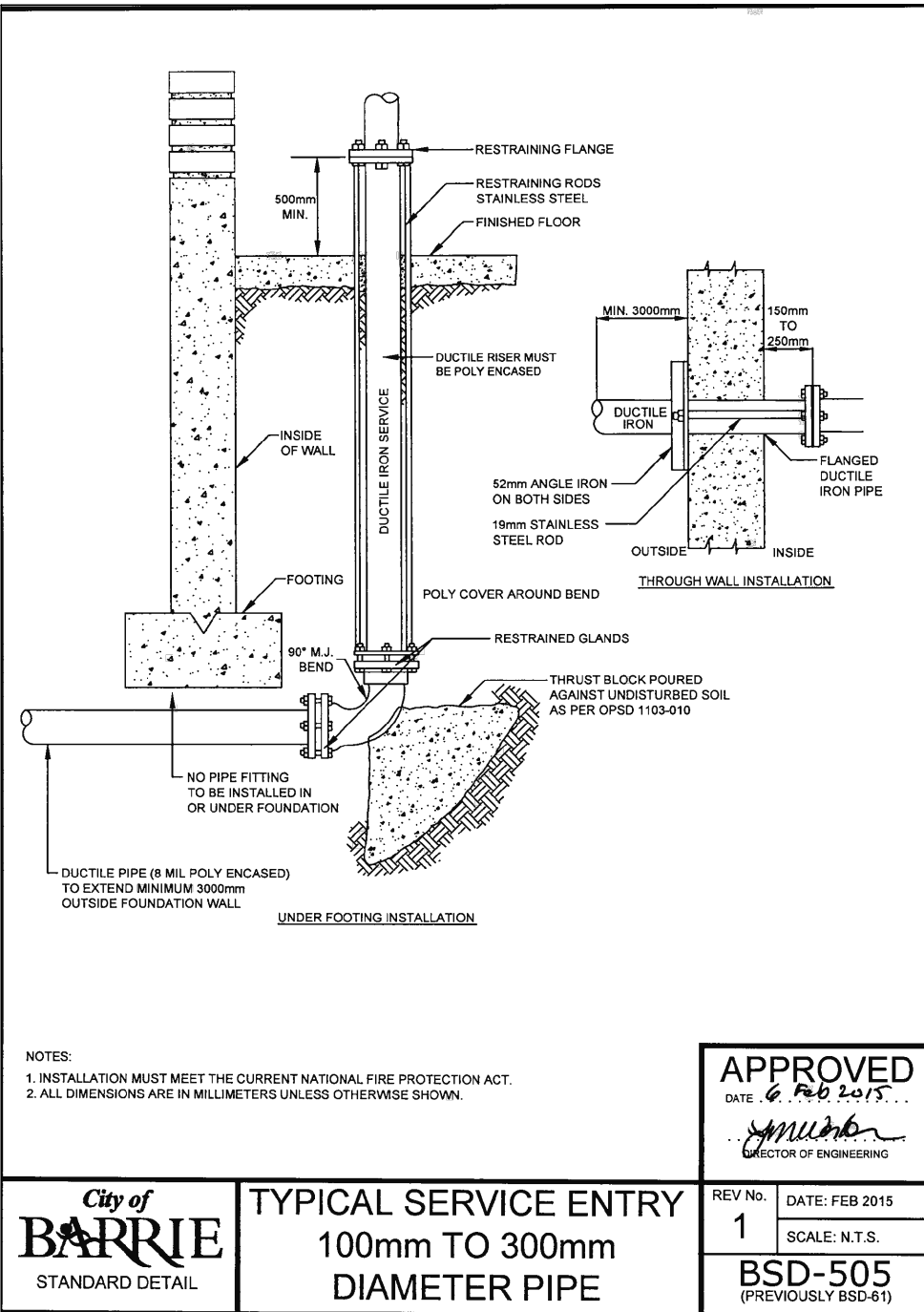
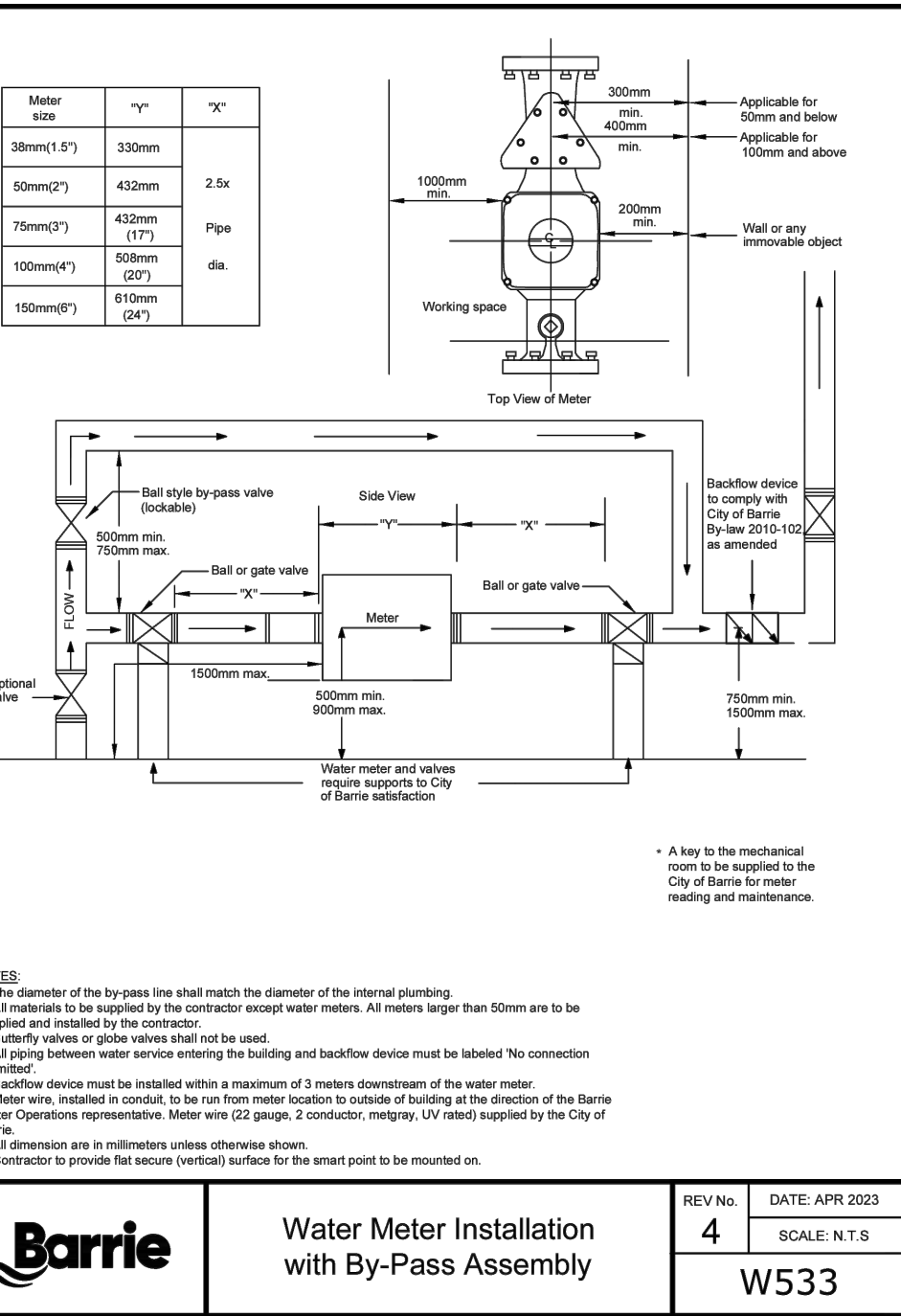
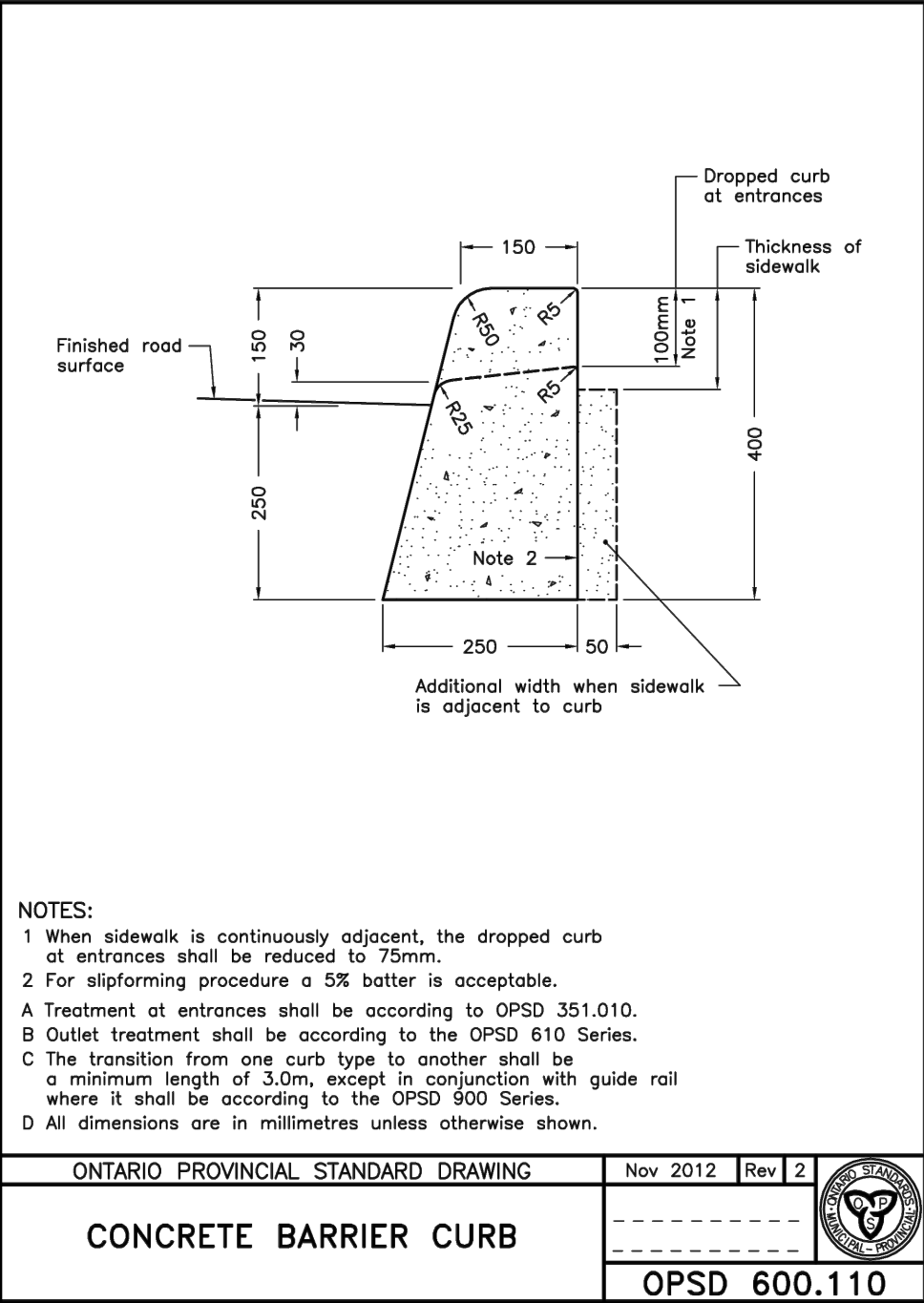
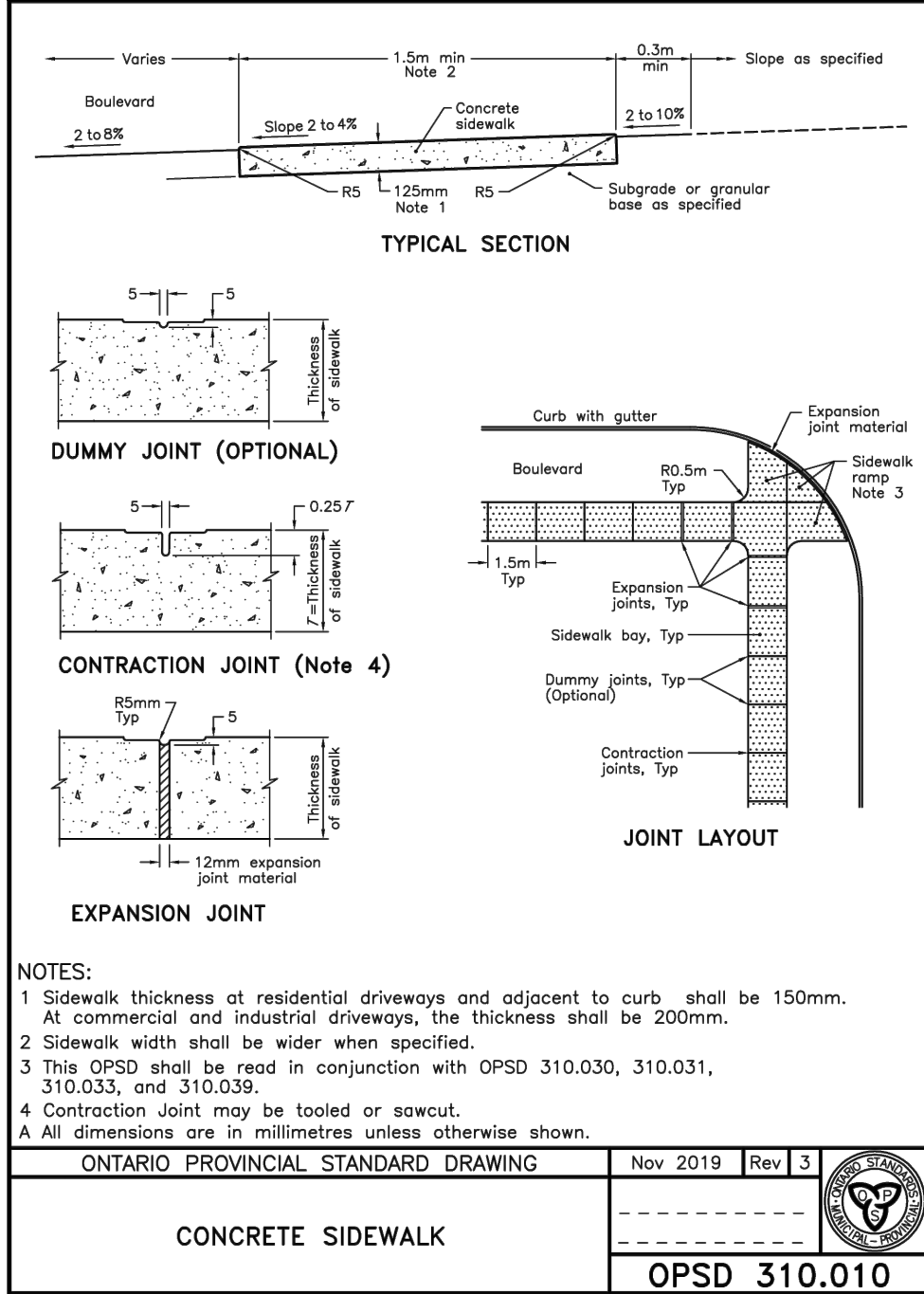
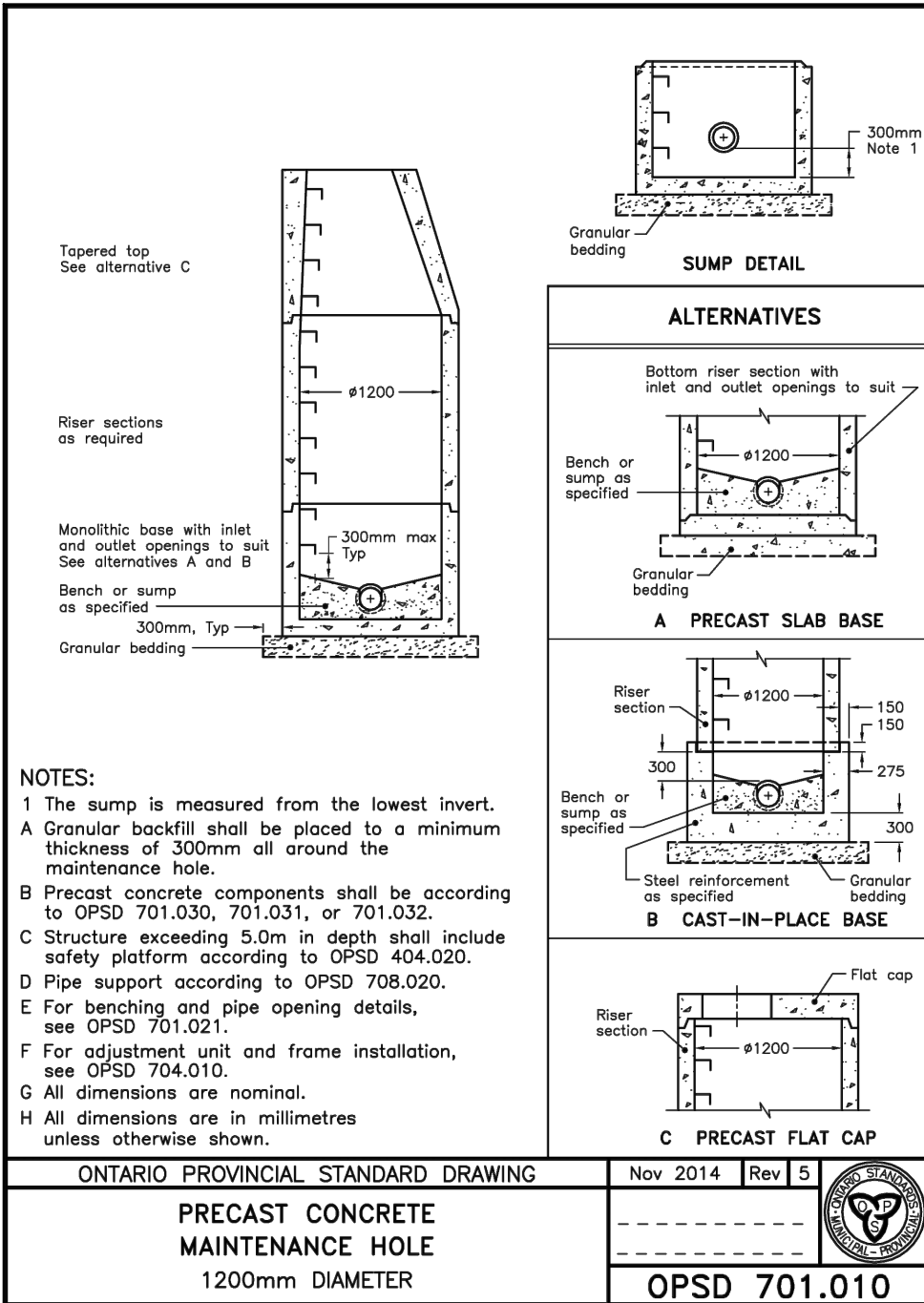
- A. CONTRACTOR SHALL INFORM THE CITY OF BARRIE ENGINEERING DEPARTMENT A MINIMUM OF 48 HOURS IN ADVANCE OF THEIR INTENTIONS TO WORK.
- B. OPERATION OF FIRE HYDRANTS AND VALVES ON POTABLE WATER BY OTHER THAN ENGINEERING DEPARTMENT IS PROHIBITED BY BY-LAW 1-88 AS AMENDED BY BY-LAW 99-290. THE CITY WILL SWAB, PRESSURE TEST, CHLORINATE AND FLUSH ALL NEW WATERMAINS.
- C. MINIMUM COVER OVER WATERMAIN TO BE 1.7m. THE MINIMUM HORIZONTAL SEPARATION BETWEEN WATERMAIN AND SEWERS TO BE 2.5M. WHERE WATERMAIN CONFLICTS WITH SEWER PIPES, DEFLECT WATERMAIN HORIZONTALLY OR VERTICALLY WHILE PROVIDING A MINIMUM OF 0.5M CLEARANCE BETWEEN WATERMAIN AND SEWERS. MAINTAIN MINIMUM DEPTH OF COVER AT ALL TIMES.
- D. WATERMAIN SHALL BE CONSTRUCTED WITH BEDDINGS AS PER OPSD 802.010 (GRANULAR 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD 802.030 OR 802.031 CLASS 'B' (GRANULAR 'A' BEDDING MATERIAL, GRANULAR 'A' OR SELECT NATIVE COVER MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING, OR * ALTERNATIVE * ALTERNATIVE EMBEDMENT MATERIAL - SAND MEETING GRADATION REQUIREMENTS OF OPS 1004.05.05 COMPACTED TO 95% PROCTOR DENSITY. GEOTECHNICAL CERTIFICATION OF MATERIAL AND COMPACTION TESTING MUST BE PROVIDED EVERY 150 METRES. THE COMPACTION TESTING MUST INCLUDE THE ENTIRE EMBEDMENT ENVELOPE (HAUNCHES, BEDDING AND TOP OF PIPE).
- E. COPPER WATER MAINS AND SERVICES 25mm TO 50mm IN DIAMETER SHALL BE EMBEDDED IN SAND 100mm ABOVE AND BELOW TO CONFORM TO OPS 1004.05.07.
- F. CONCRETE THRUST BLOCKS ARE TO BE INSTALLED AT ALL TEES, BENDS, HYDRANTS, END OF MAINS AND CONNECTIONS 100mm AND LARGER AS PER OPSD 1103.010 AND 1103.020. RESTRAINING DEVICES MAY BE REQUIRED IN ADDITION TO STANDARD CONCRETE THRUST BLOCKING WHERE SOIL CONDITIONS WARRANT.
- G. RESTRAINING WILL BE REQUIRED ON ALL FIRE HYDRANTS
- H. NEW WATERMAINS TO BE PVC DR18 CL150, OR DUCTILE IRON CL52
- I. TRACING WIRE (#12 TWJ STRANDED COPPER) TO BE INSTALLED ON THE TOTAL LENGTH OF ALL NON-METALLIC WATERMAIN AND BROUGHT UP AT EACH HYDRANT AND CONNECTED TO FLANGE BOLT.
- J. ALL WATER SERVICES SHALL BE MINIMUM 25MM TYPE 'K' COPPER UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING. WATER SERVICE SADDLES SHALL BE USED WHEN TAPPING INTO PVC WATERMAIN.
- K. RISER PIPES ARE TO BE INSTALLED AS PER BSD-505, AND REMOVED AS DIRECTED. SWABBING SCHEDULE TO BE SUPPLIED BY A CITY OF BARRIE FIELD REPRESENTATIVE.
- L. SERVICE TAPPINGS SHALL BE PLACED AT A MINIMUM SEPARATION OF 1.0M AND A MINIMUM OF 0.6M FROM JOINTS. (ENDS OF PIPE)
- M. ALL NEW CURB STOPS AND BOXES TO BE LOCATED OUT OF DRIVEWAYS AND SIDEWALKS.
- N. ALL WATER SERVICES TO HAVE BACKFLOW PREVENTION DEVICES INSTALLED AS PER CITY OF BARRIE BYLAW 2017-121

STORM SEWER

- A. PLACE ALL CATCH BASIN LATERALS AT 2% GRADE UNLESS OTHERWISE NOTED. PIPE SIZE MINIMUM 250mm DIA. SINGLE, 300mm DIA. DOUBLE.
- B. STORM SEWERS SHALL BE CONSTRUCTED WITH BEDDING AS PER OPSD-802.010 (GRAN. 'A' EMBEDMENT MATERIAL) FOR FLEXIBLE PIPES AND OPSD-802.030 OR 802.031 CLASS B (GRAN. 'A' BEDDING MATERIAL) FOR RIGID PIPE UNLESS OTHERWISE APPROVED BY THE DIRECTOR OF ENGINEERING.
- C. MAINTENANCE HOLE TOPS (FRAMES) AND CATCH BASIN (FRAMES) ARE TO BE SET TO BASE COURSE ASPHALT GRADE AND THEN ADJUSTED TO FINAL GRADE WHEN THE TOP LIFT OF ASPHALT IS PLACED. ALL ADJUSTMENT WILL BE ACCORDANCE WITH BSD-N2.
- D. 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.
- E. PIPE MATERIAL TO BE REINFORCED CONCRETE WITH A MINIMUM 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.
- F. STORM SEWER TO BE MINIMUM 300mm DIAMETER WITH JOINTS CONFORMING TO C.S.A. STANDARD A257.3.
- G. ALL PIPE BEDDING MUST CONFORM TO OPSD, MAXIMUM COVER TABLE. NO FLEXIBLE PIPE SEWERS WILL BE INSTALLED WITH A DEPTH OF COVER GREATER THAN 6 METRES UNLESS SPECIFICALLY APPROVED BY THE DIRECTOR OF ENGINEERING.
- H. ALL PIPE HANDLING INSTALLATIONS MUST BE IN STRICT COMPLIANCE WITH MANUFACTURES INSTALLATION GUIDES AND THE O.C.P.A. OR UNIBELL GUIDELINES.

ROADS & PARKING

- A. BARRIER CURB TO COMPLY WITH OPSD 600.110
- B. NATIVE SUBGRADE TO BE COMPACTED TO MINIMUM 95% STANDARD PROCTOR MAXIMUM DRY DENSITY AND SHALL BE PROOF ROLLED.
- C. GRADE AND CROSS FALL ADJUSTMENT OF MAINTENANCE HOLE AND CATCH BASIN FRAMES WILL BE MADE USING PRODUCTS SPECIFICALLY MANUFACTURED FOR THAT PURPOSE. THE TOP ADJUSTMENT UNIT OF ALL CATCH BASIN AND MAINTENANCE HOLES SHALL BE RUBBER.
- D. ADJUSTMENT UNITS MUST BE CERTIFIED TO MEET ALL PERTINENT OPS, CSA, ASTM AND MTO-DSM LIST, OR OTHER INDUSTRY GUIDELINES FOR MATERIALS, PERFORMANCE AND USE AS APPLICABLE.
- E. ADJUSTMENT UNITS AND JOINTS WILL BE SEALED AND OR PARGED IN COMPLIANCE WITH MANUFACTURERS SPECIFICATIONS AND GUIDELINES.
- F. MORTAR IS USED FOR LEVELING OF PRECAST UNITS ONLY. THE THICKNESS OF MORTAR WILL BE 10MM TO FILL ALL VOIDS CREATED BY IRREGULARITIES IN THE PRECAST UNITS TO ENSURE AN EVEN SURFACE ONLY.
- G. NON-COMPRESSIBLE BACK FILL WILL BE USED DURING REBUILDING, ADJUSTING, OR ANY OTHER APPLICABLE CATCH BASIN OR MAINTENANCE HOLE WORKS.
- H. THE PAVEMENT STRUCTURE SHALL CONSIST OF A MINIMUM OF THE FOLLOWING, AS PER THE GEOTECHNICAL REPORT BY WSP DATED FEBRUARY 23, 2021
- HEAVY DUTY PAVEMENT (DRIVEWAY):
- 40mm HL3
 - 50mm HL4/HL8
 - 150mm GRANULAR 'A'
 - 300mm GRANULAR 'B'
- I. MEDIUM DUTY (PARKING):
- 50mm HL8
 - 150mm GRANULAR 'A'
 - 300mm GRANULAR 'B'



CDS ESTIMATED NET ANNUAL SOLIDS LOAD REDUCTION
BASED ON THE RATIONAL RAINFALL METHOD
BASED ON ETV PARTICLE SIZE DISTRIBUTION

Project: 181 Burton Avenue
Location: Barrie, ON
OSS ID: CDS

Area: 0.14 ha
C: 0.83
CDS Model: 4

Treatment Capacity: 27.2 l/s
Particle Size Distribution: ETV

Engineer: Pearson Engineering
Contact: Mac Pinkey, P. Eng
Report Date: 21-Aug-23

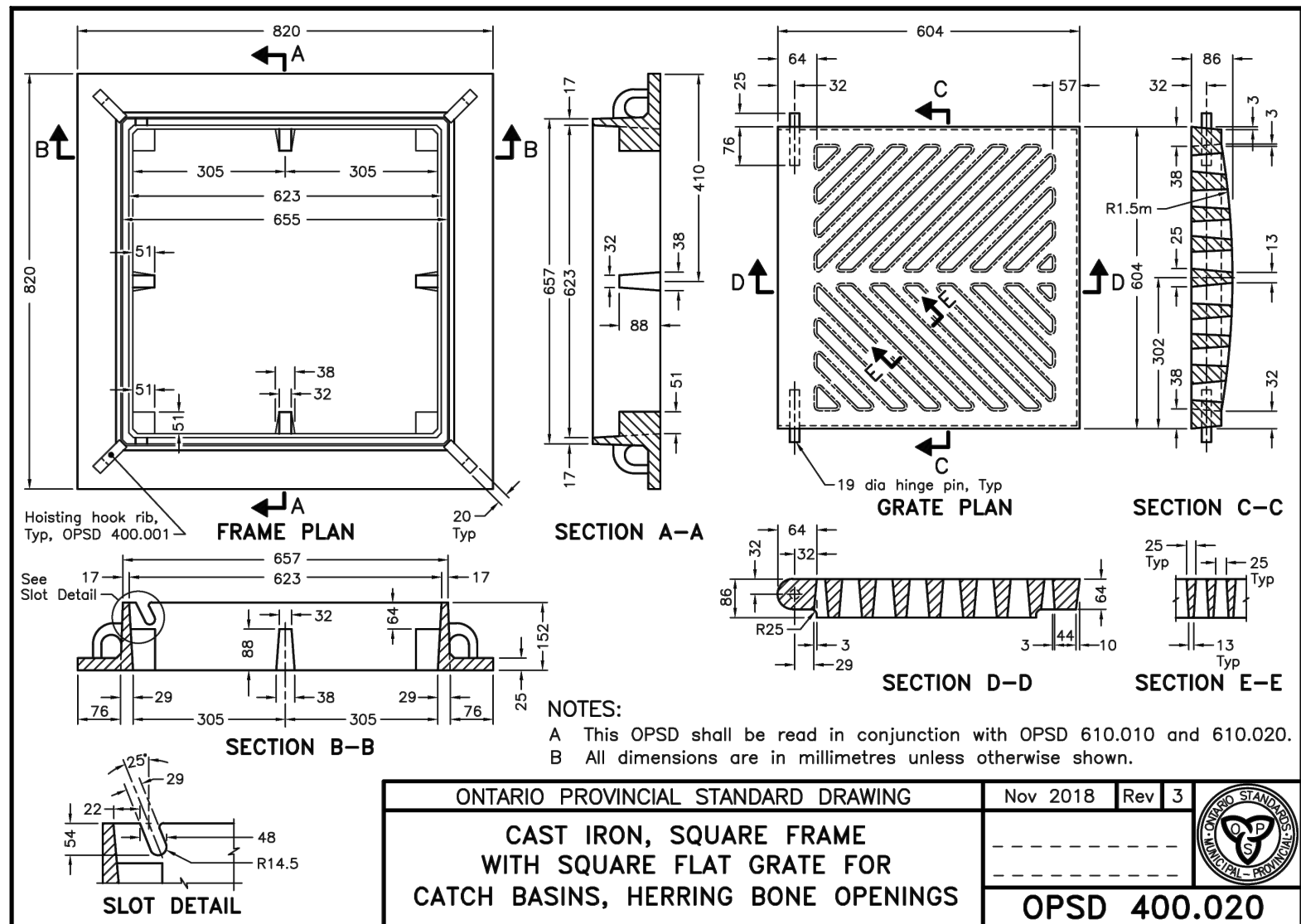
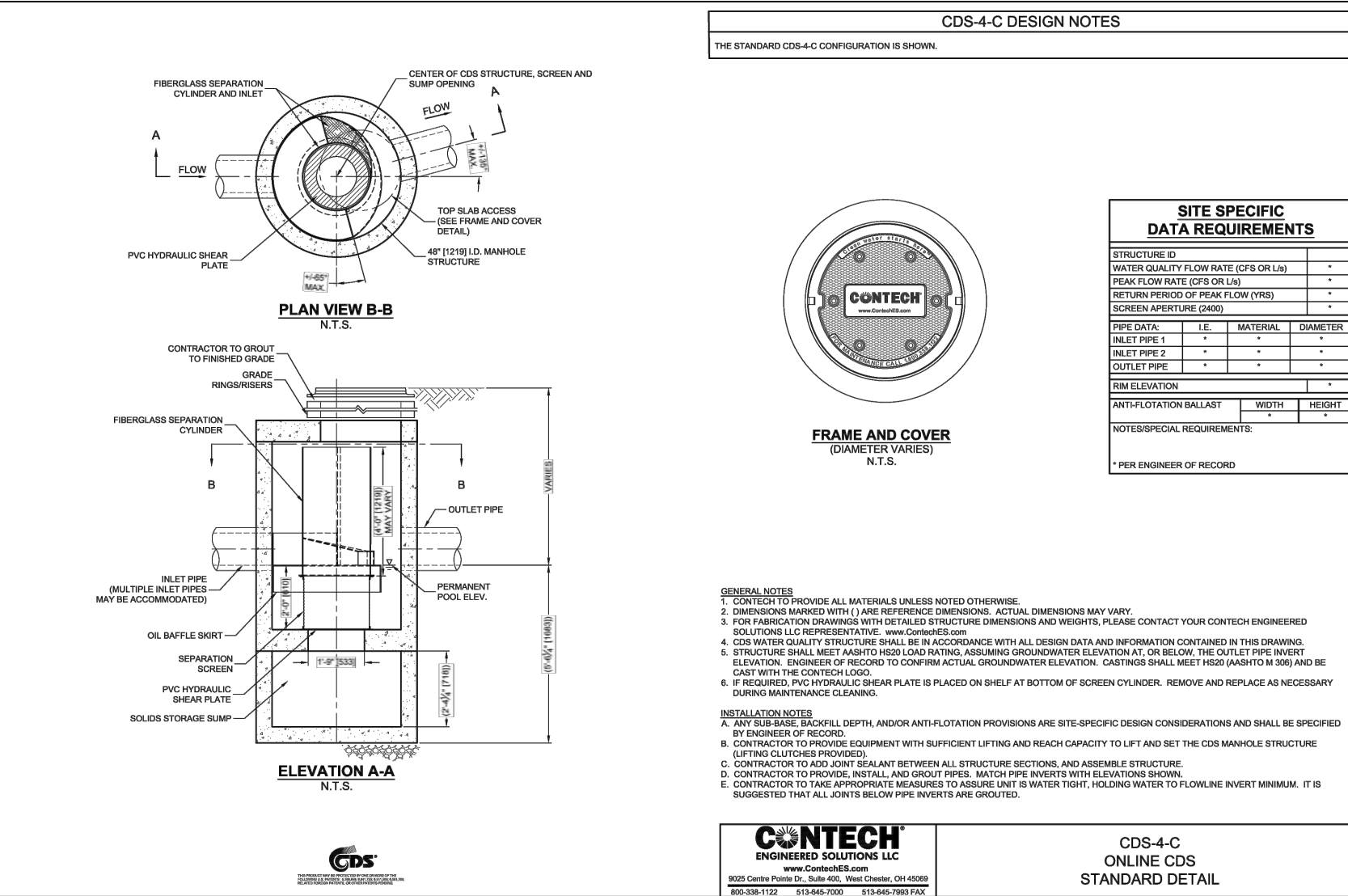
Rainfall Intensity (mm/hr)	Percent Rainfall Volume	Cumulative Rainfall Volume (l/s)	Total Flowrate (l/s)	Treated Flowrate (l/s)	Operating Rate (%)	Removal Efficiency (%)	Incremental Removal (%)
0.5	0.7%	0.7%	0.2	0.2	0.6	78.8	8.7
1.0	10.8%	10.8%	0.3	0.3	1.2	76.0	8.2
1.5	8.5%	29.0%	0.5	0.5	1.8	75.3	7.1
2.0	8.4%	37.4%	0.6	0.6	2.4	74.5	6.5
2.5	6.8%	44.2%	0.8	0.8	3.0	73.8	5.0
3.0	5.8%	49.8%	1.0	1.0	3.6	73.1	4.1
3.5	5.1%	54.9%	1.1	1.1	4.2	72.5	3.1
4.0	4.8%	59.8%	1.3	1.3	4.8	71.7	3.5
4.5	4.1%	63.9%	1.5	1.5	5.3	71.0	2.6
5.0	3.5%	67.4%	1.6	1.6	5.9	70.4	2.5
6.0	4.9%	72.3%	1.9	1.9	7.1	69.1	3.4
7.0	4.0%	76.3%	2.3	2.3	8.3	67.8	2.7
8.0	3.2%	79.5%	2.6	2.6	9.7	66.5	2.2
9.0	2.2%	81.7%	2.9	2.9	10.7	65.4	1.5
10.0	2.0%	83.7%	3.2	3.2	11.9	64.3	1.3
15.0	0.2%	91.6%	4.8	4.8	17.6	59.2	4.8
20.0	0.4%	95.2%	6.5	6.5	23.9	55.1	1.9
25.0	0.2%	97.7%	8.1	8.1	29.7	51.1	1.3
30.0	1.4%	99.1%	9.7	9.7	35.6	48.0	0.7
35.0	0.3%	99.4%	11.3	11.3	41.6	46.9	0.1
40.0	0.0%	100.0%	12.9	12.9	47.5	45.7	0.3
45.0	0.0%	100.0%	14.9	14.9	53.9	43.9	0.0
50.0	0.0%	100.0%	16.2	16.2	60.4	42.6	0.0

Predicted Net Annual Load Removal Efficiency = 70.0%

Predicted % Annual Rainfall Treated = 100.0%

1. Based on 27 years of hourly rainfall data from Canadian Station 6110057, Barrie ON

2. TSS Removal Rate Based on ETV Testing



BENCHMARK:

EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35



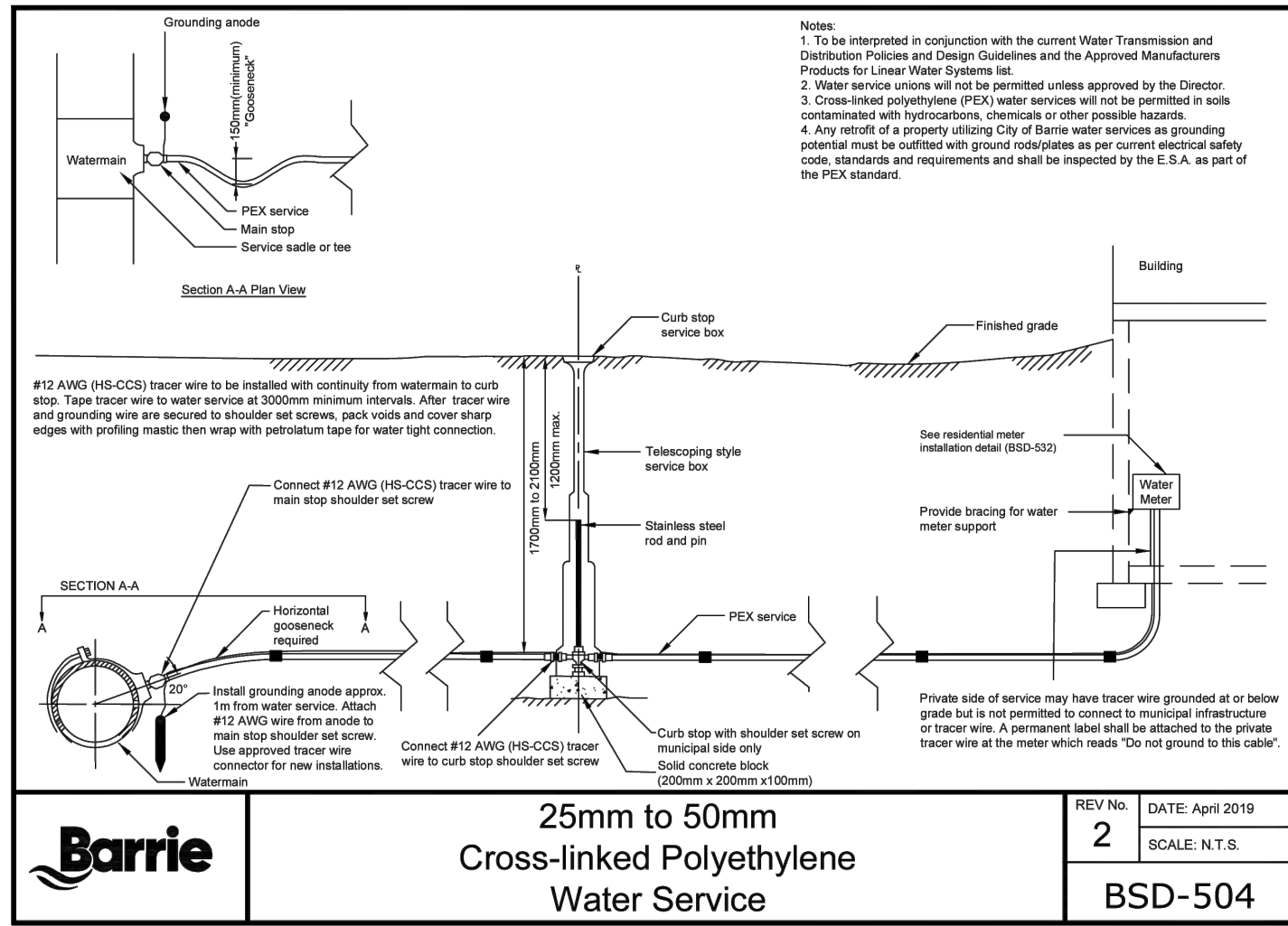
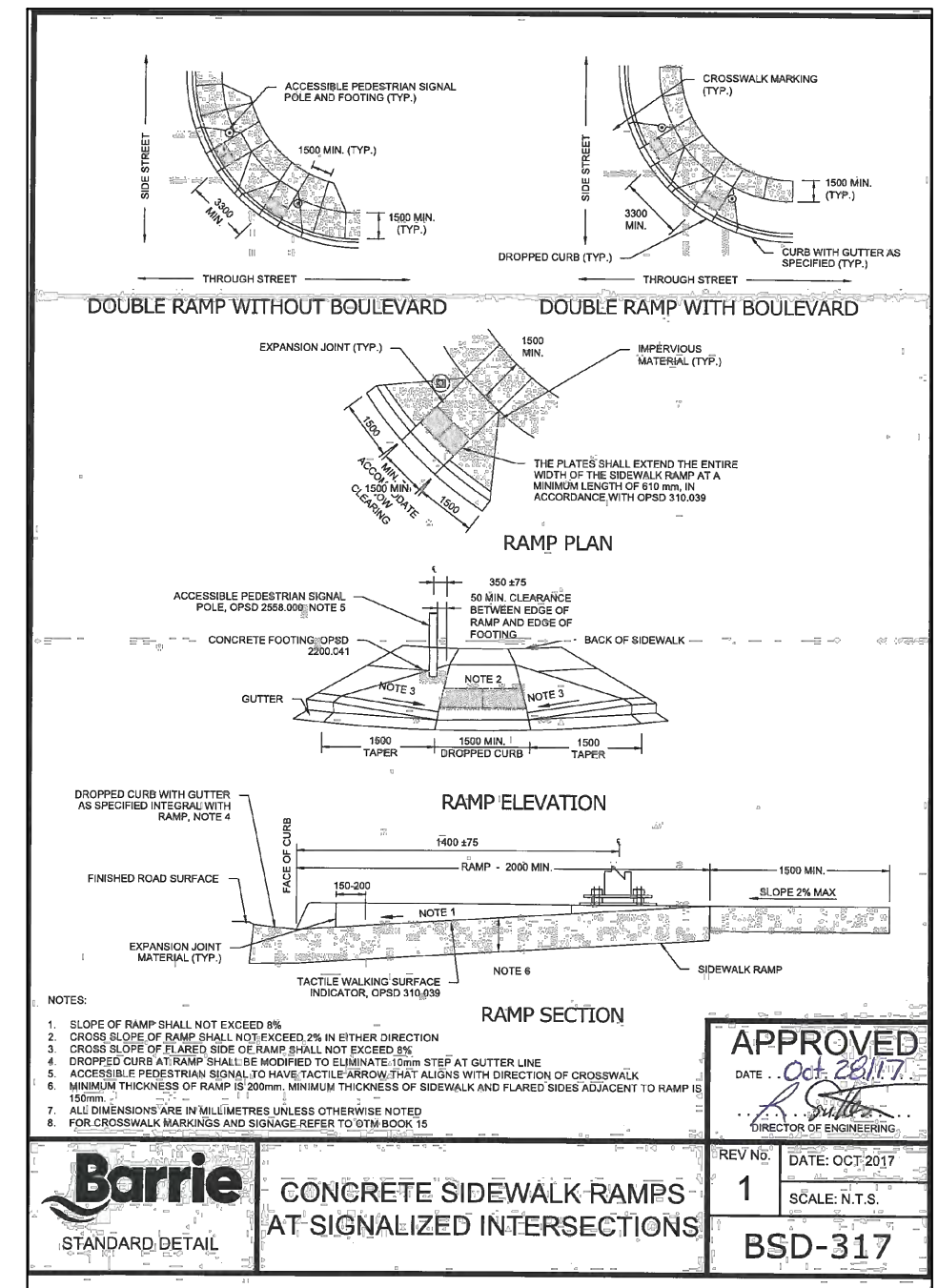
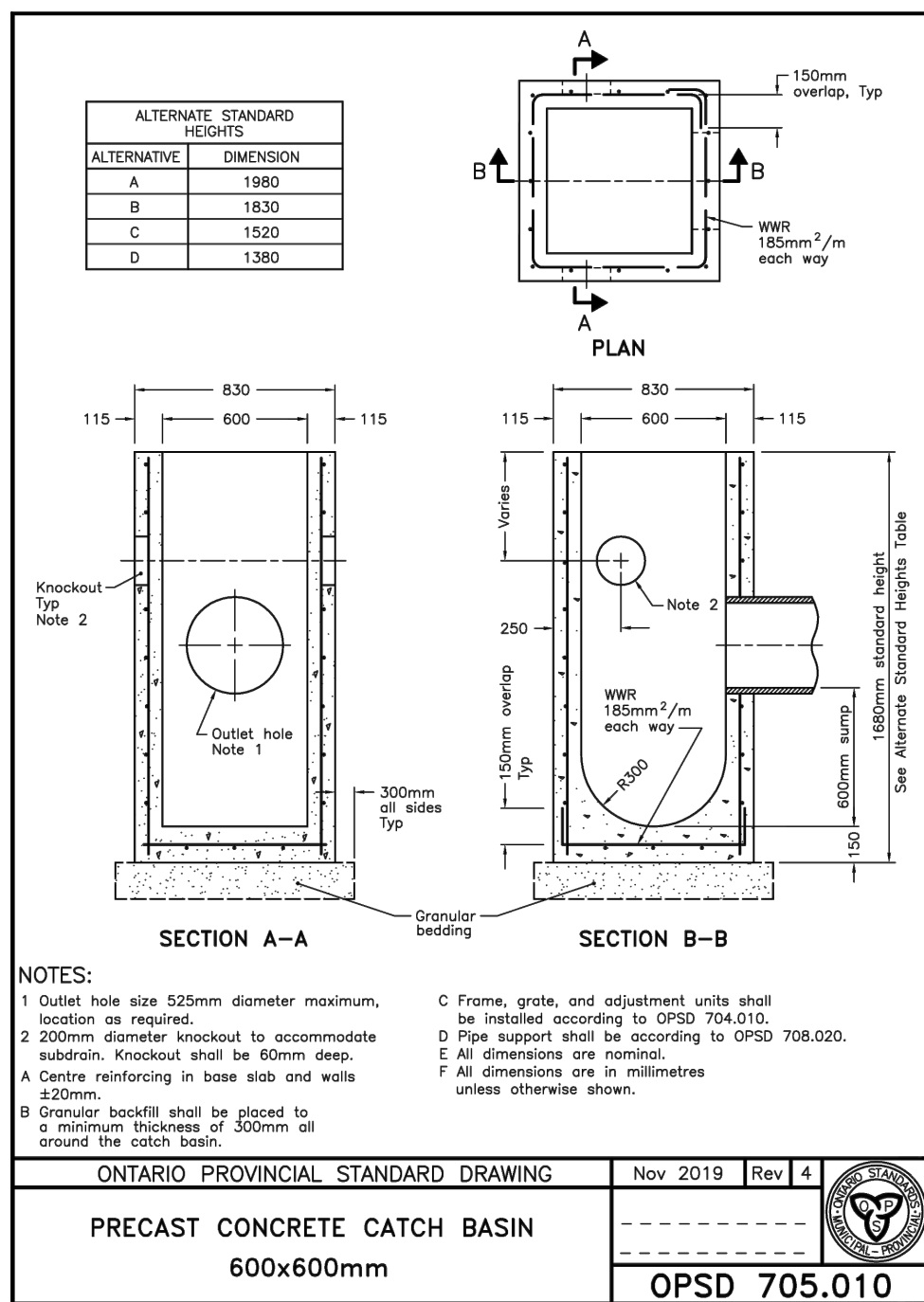
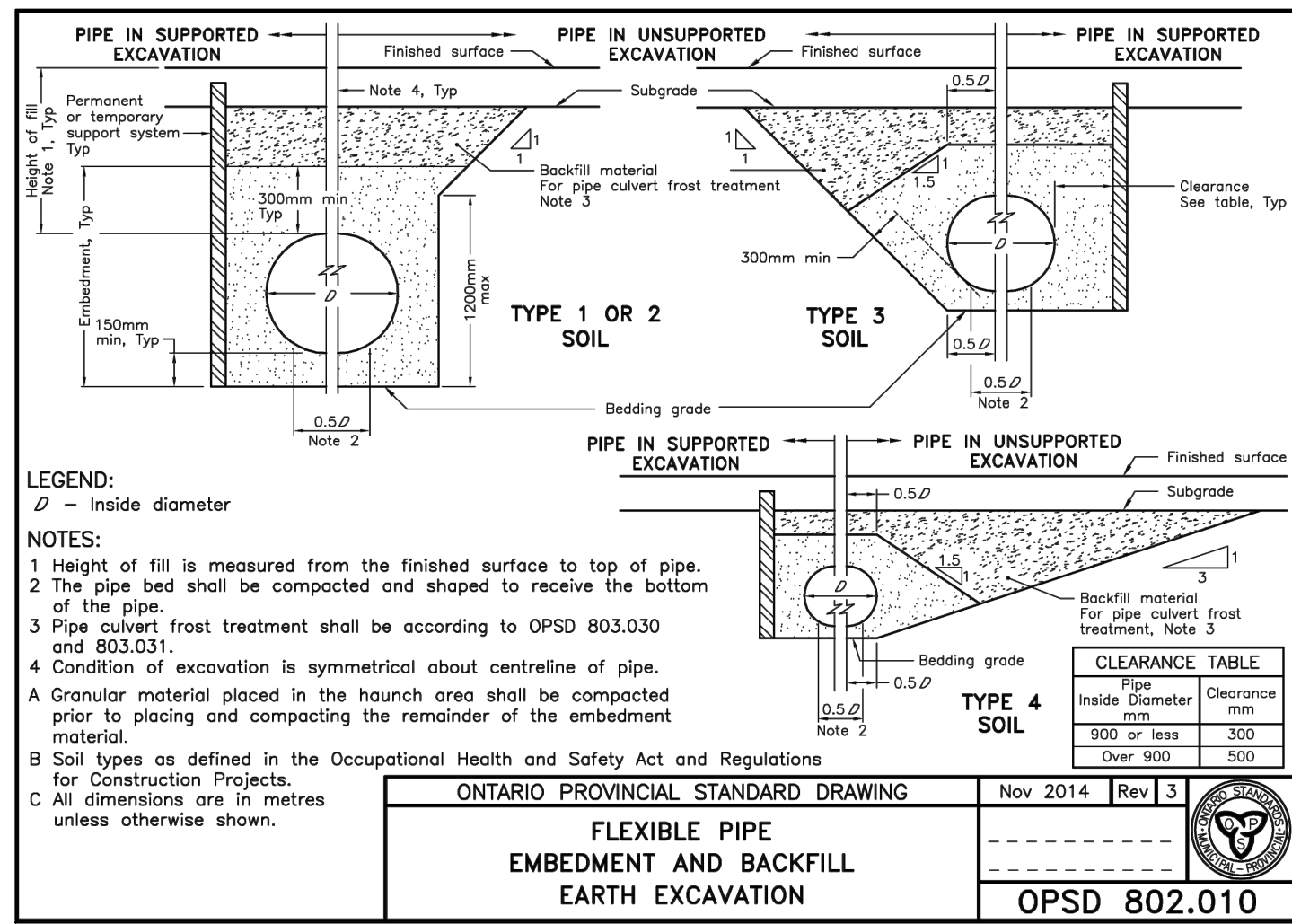
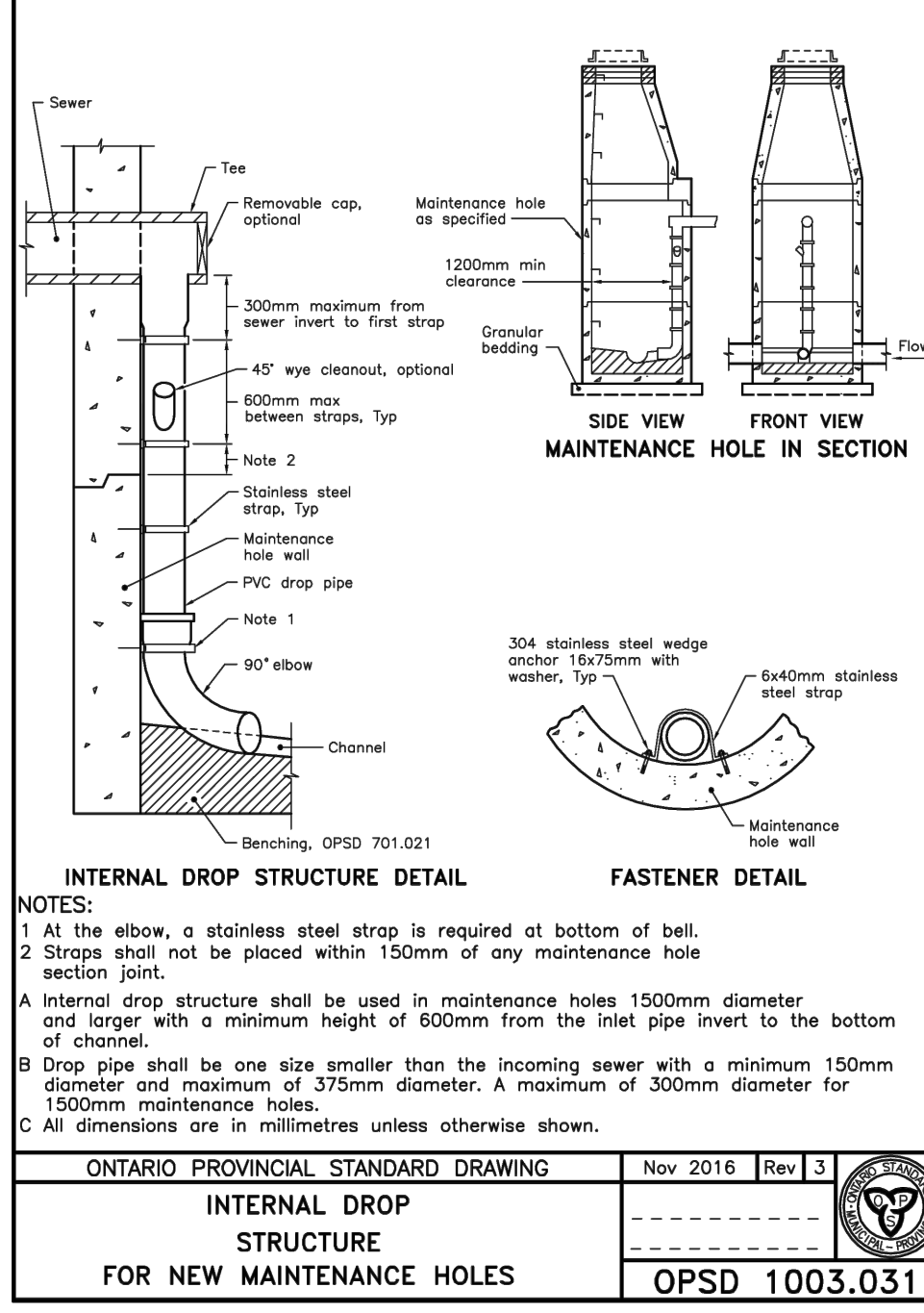
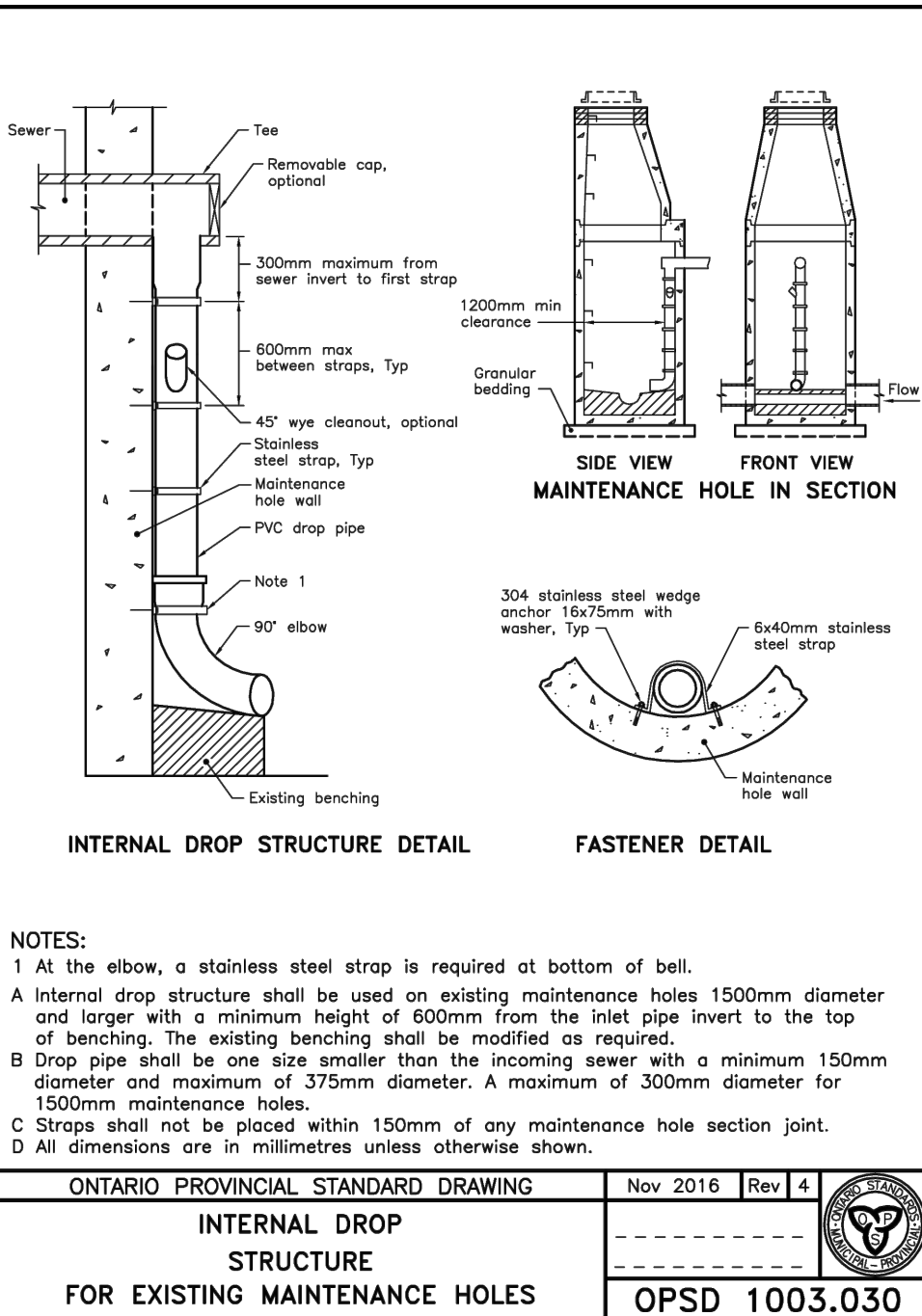
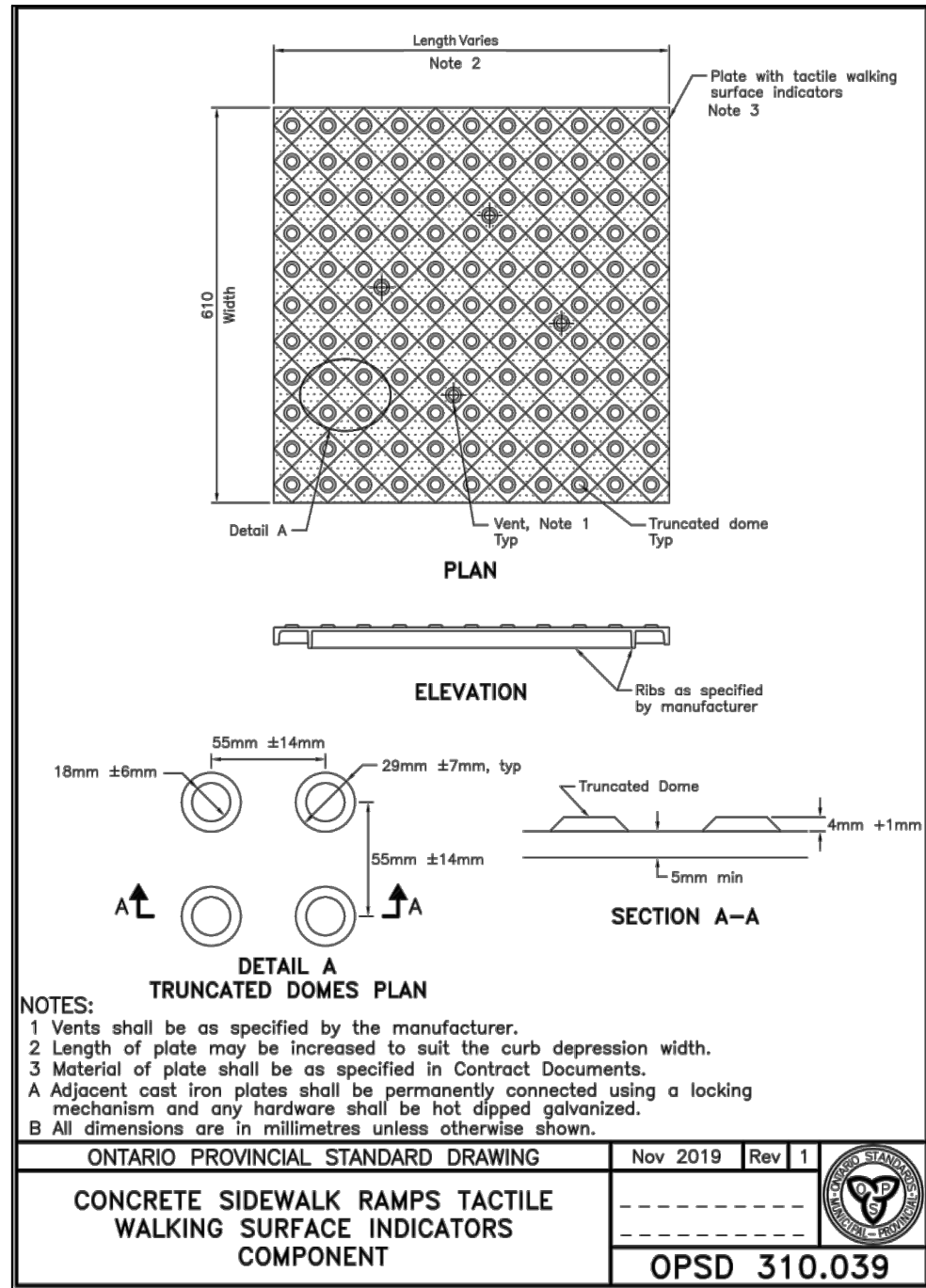
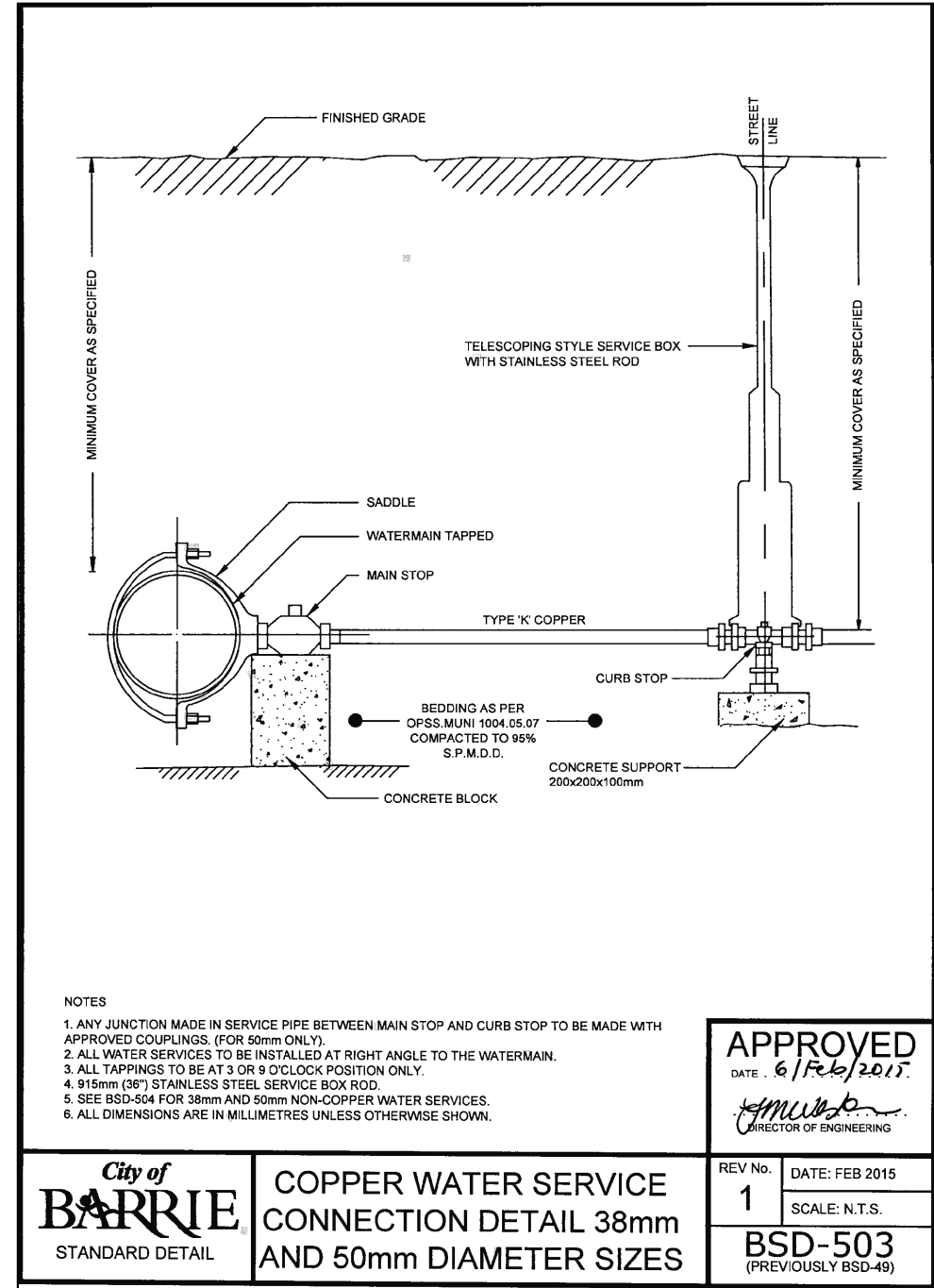
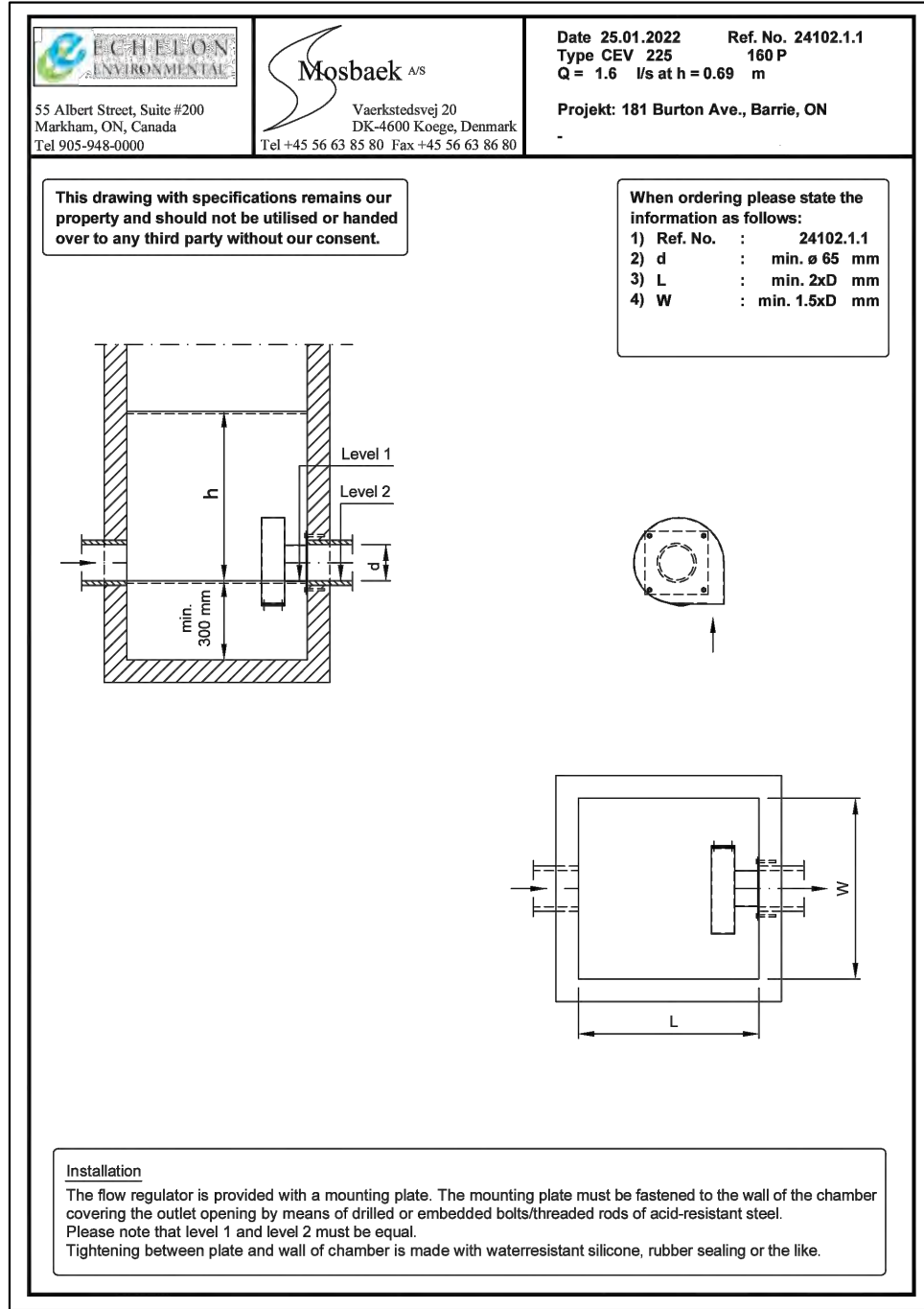
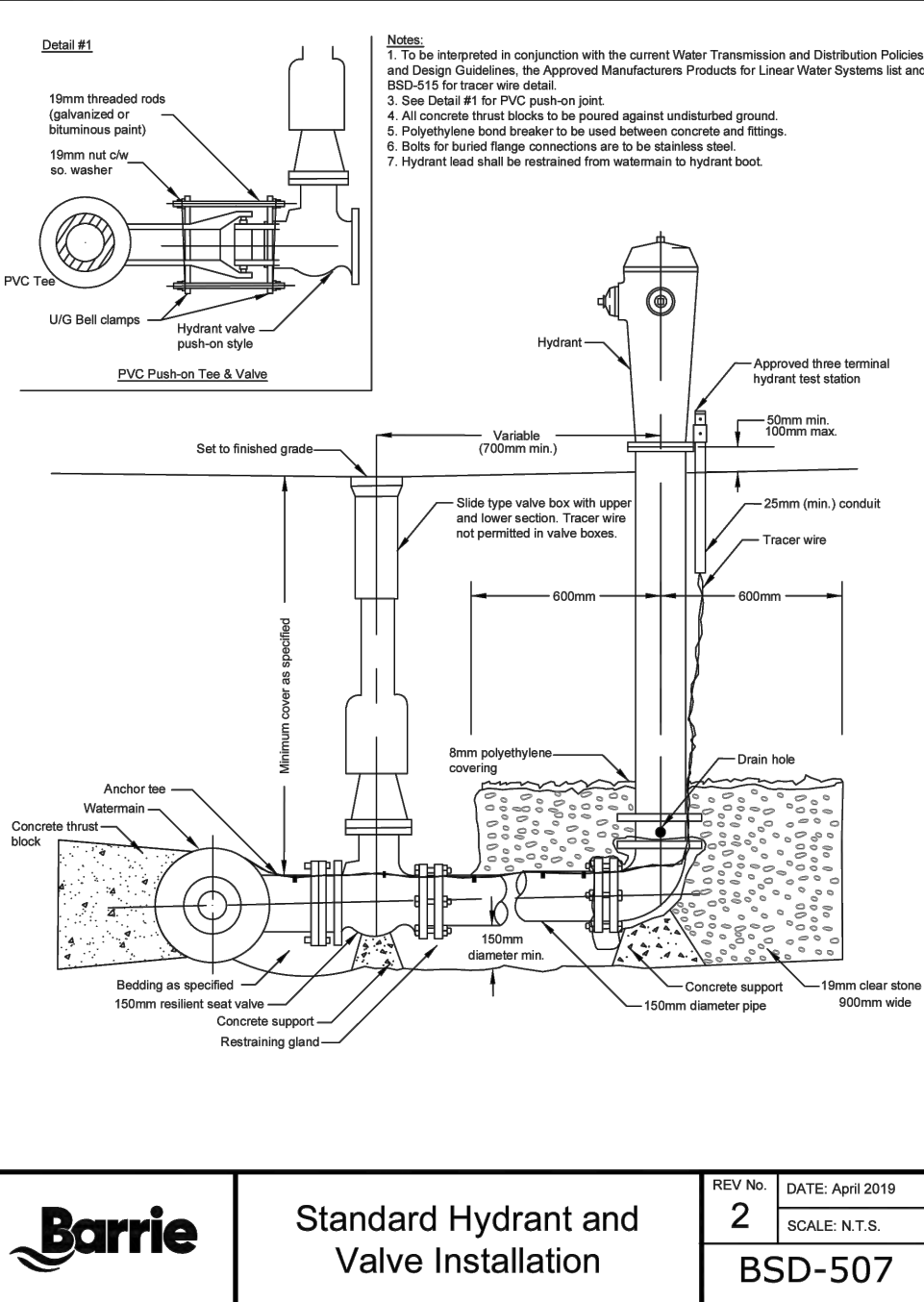
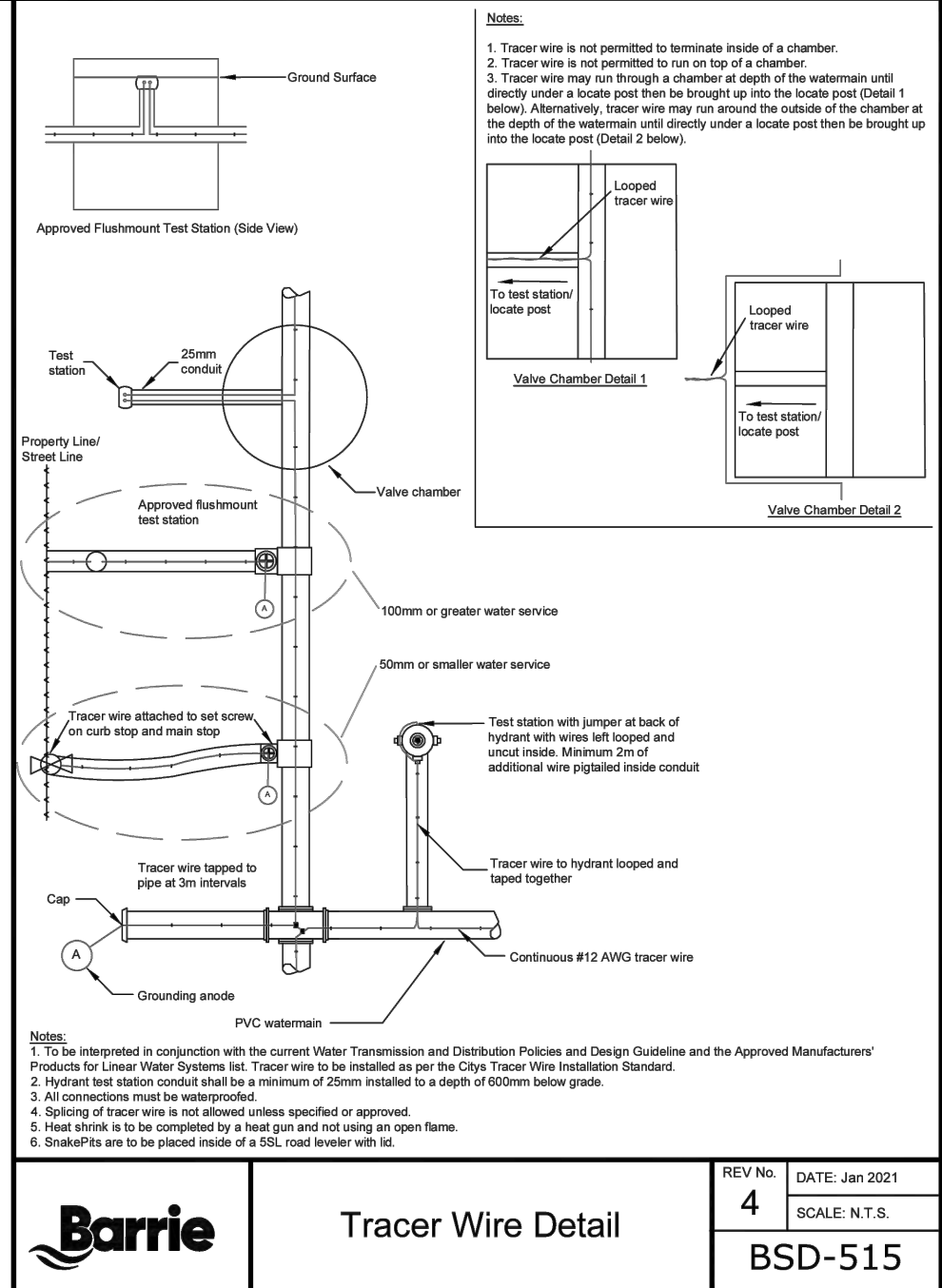
APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

NOTES AND DETAILS



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DESIGNED BY	PG/MWD	HORIZ SCALE	PROJECT #	19100
DRAWN BY	PG	VERT SCALE	DRAWING #	ND-1
CHECKED BY	GMP	DATE	REVISION #	2



BENCHMARK:
EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35

NO.	REVISION NOTE	DATE	BY
2	AS PER CITY OF BARRIE COMMENTS	08/29/23	JP
1	AS PER CITY OF BARRIE COMMENTS	05/12/23	JP



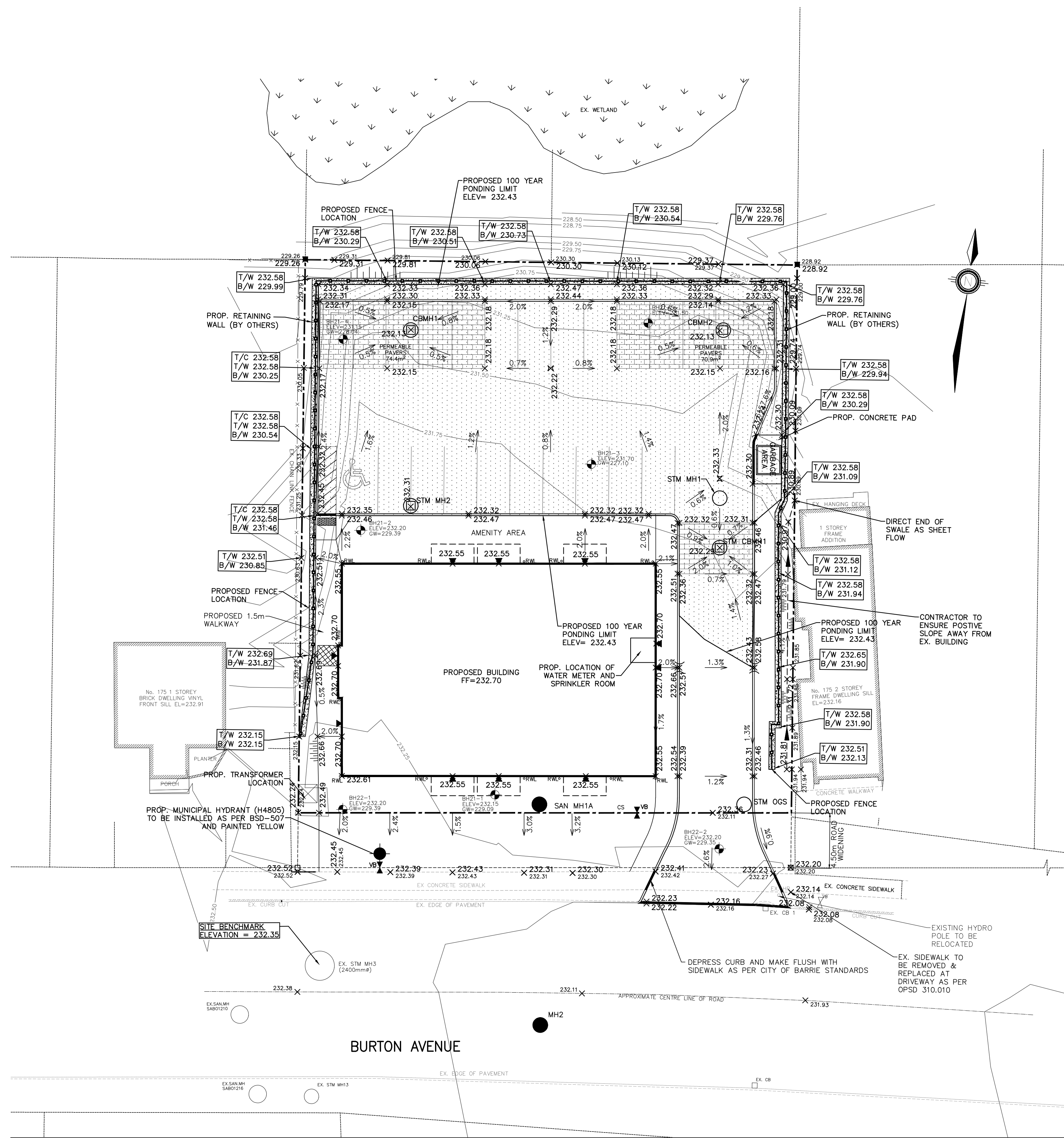
APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

NOTES AND DETAILS

PEARSON ENGINEERING
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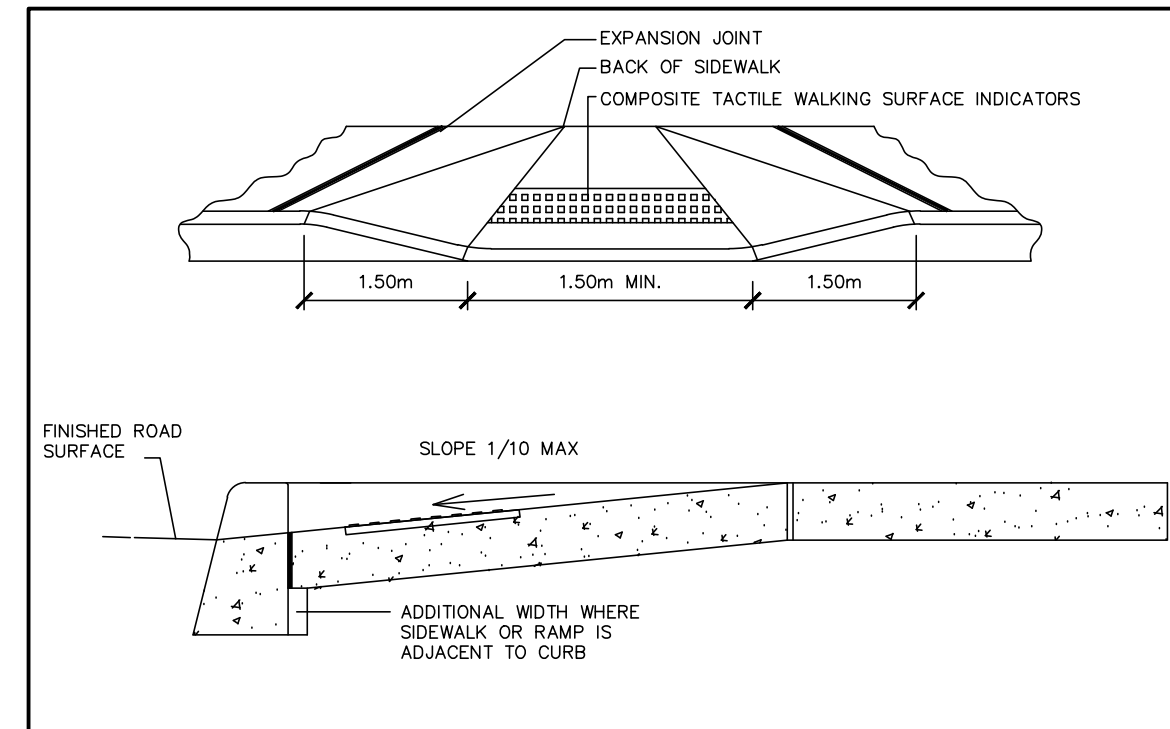
DESIGNED BY	PG/MWD	HORIZ SCALE	PROJECT #
DRAWN BY	PG	VERT SCALE	ND-2
CHECKED BY	GMP	DATE	REVISION #
		OCTOBER 2021	2

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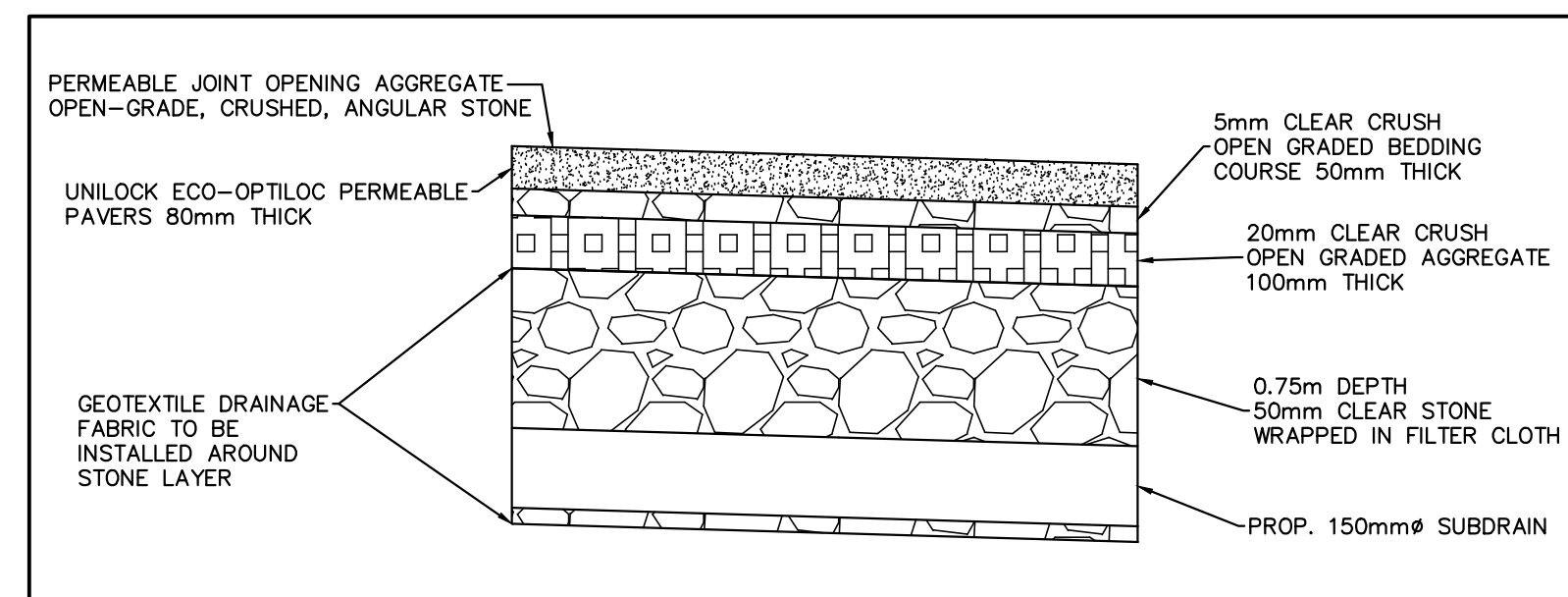


ALL PROPOSED RETAINING WALLS TO BE DESIGNED BY OTHERS.
ALL T/W AND B/W REPRESENTS TOP OF WALL AND BOTTOM OF WALL RESPECTIVELY. THIS DOES NOT INCLUDE BURIED DEPTH.

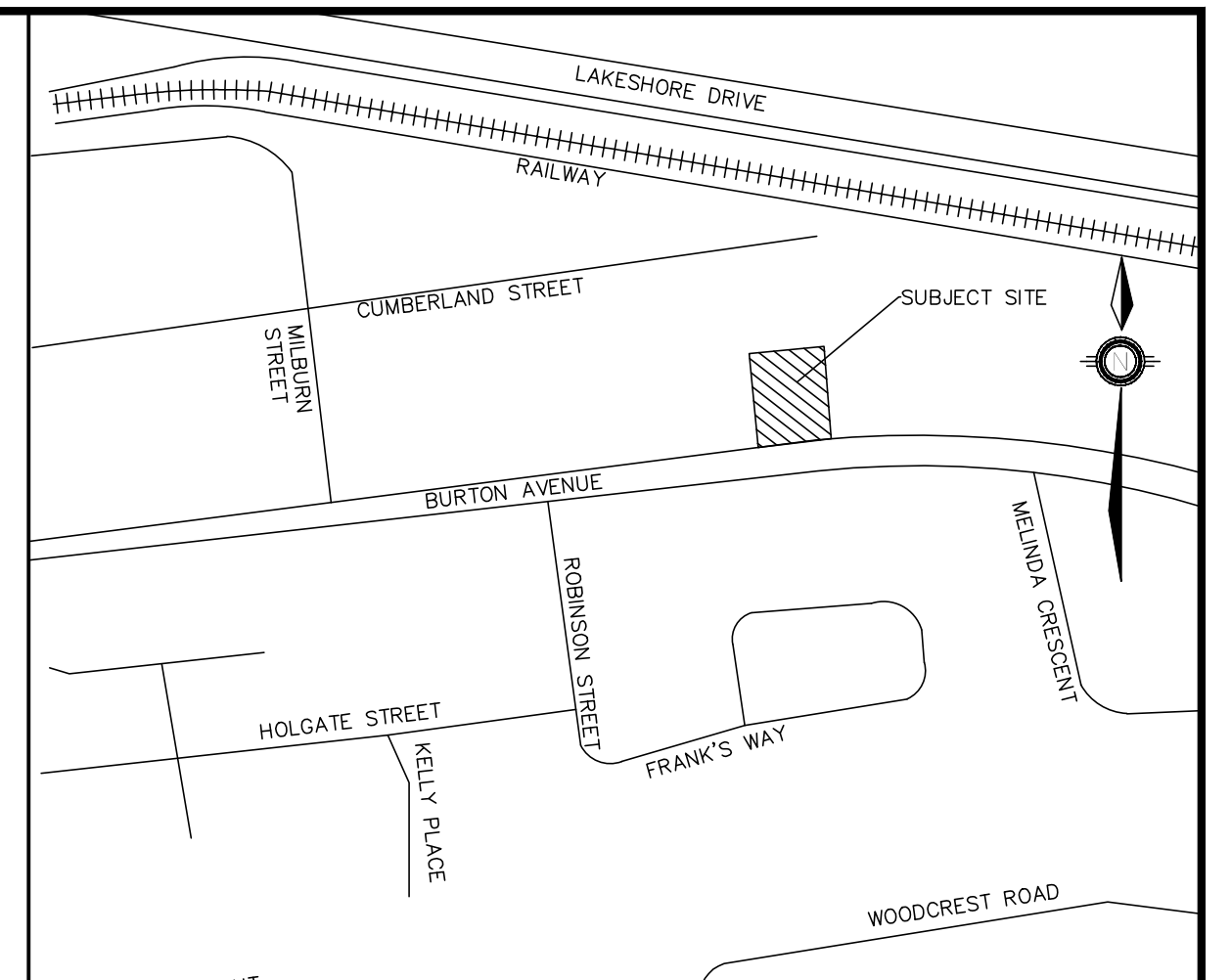
SUB-EXCAVATION NOTES:
1. CONTRACTOR TO STRIP TOPSOIL AND SUB-EXCAVATE POOR SOILS TO THE SATISFACTION OF THE GEOTECHNICAL CONSULTANT.
2. BACKFILL WITH SUITABLE FILL AS PER OPS ENGINEERED FILL STANDARDS
3. SOIL AND COMPACTION REPORT TO BE PROVIDED TO LAND OWNER.



DEPRESSED CURB & TACTILE RAMP DETAIL
N.T.S.



TYPICAL PERMEABLE PAVER DETAIL
N.T.S.

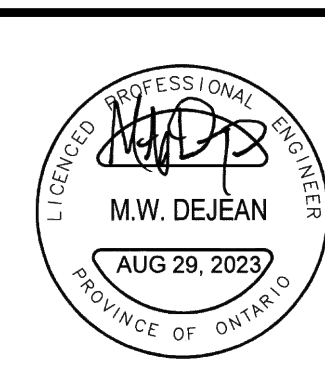


KEYPLAN
N.T.S.
LEGEND

- CB □ CATCH BASIN
- DCB □ DOUBLE CATCH BASIN
- CBMH ⊕ CATCH BASIN
- MH ○ STORM MANHOLE
- MH ● SANITARY MANHOLE
- SERVICE CAP
- HYD. ♦ FIRE HYDRANT
- VB ▲ WATER VALVE
- × 254.63 PROPOSED ELEVATION
- 254.09 EXISTING ELEVATION
- 1.5% PROPOSED DIRECTION AND GRADE
- ← BACK OF CURB
- EDGE OF PAVEMENT
- CURB CUT LOCATION
-) (HIGH POINT
- ±RWL PROP. RAINWATER LEADER
- ▼ MANDOOR
- PROP. RETAINING WALL (BY OTHERS)
- PROP. PERMEABLE PAVERS
- PROP. FENCE LOCATION
- 100 YEARS PONDING LIMITS
ELEV. 232.43
- BH20-1
ELEV. 232.20
OP=238.10 BOREHOLE NUMBER
EXISTING GRADE ELEVATION
GROUNDWATER ELEVATION
GROUNDWATER ELEVATIONS AS PER AZIMUTH
HYDRO G REPORT DATED JUNE 2022

NO.	REVISION	NOTE	DATE	BY
2		AS PER CITY OF BARRIE COMMENTS	08/29/23	JP
1		AS PER CITY OF BARRIE COMMENTS	05/12/23	JP

BENCHMARK:
EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35



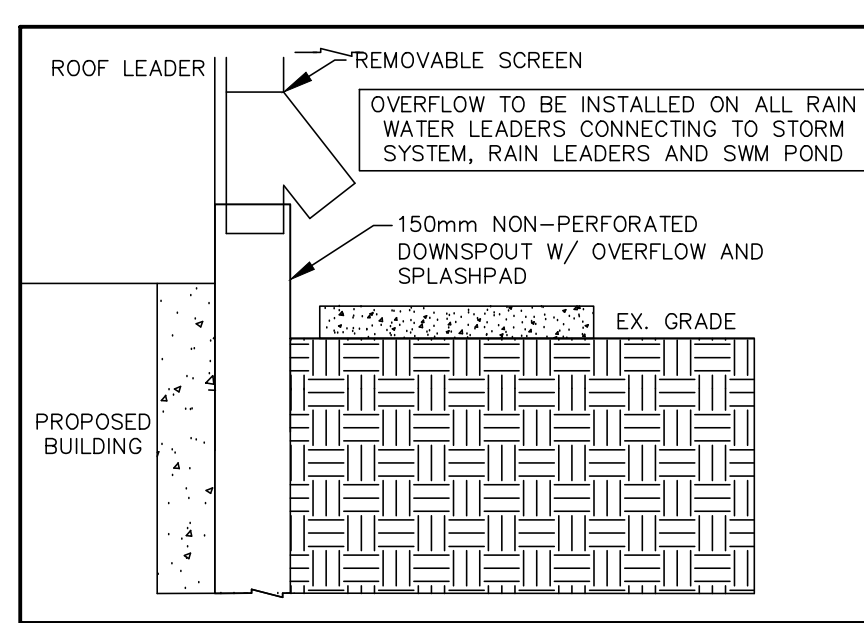
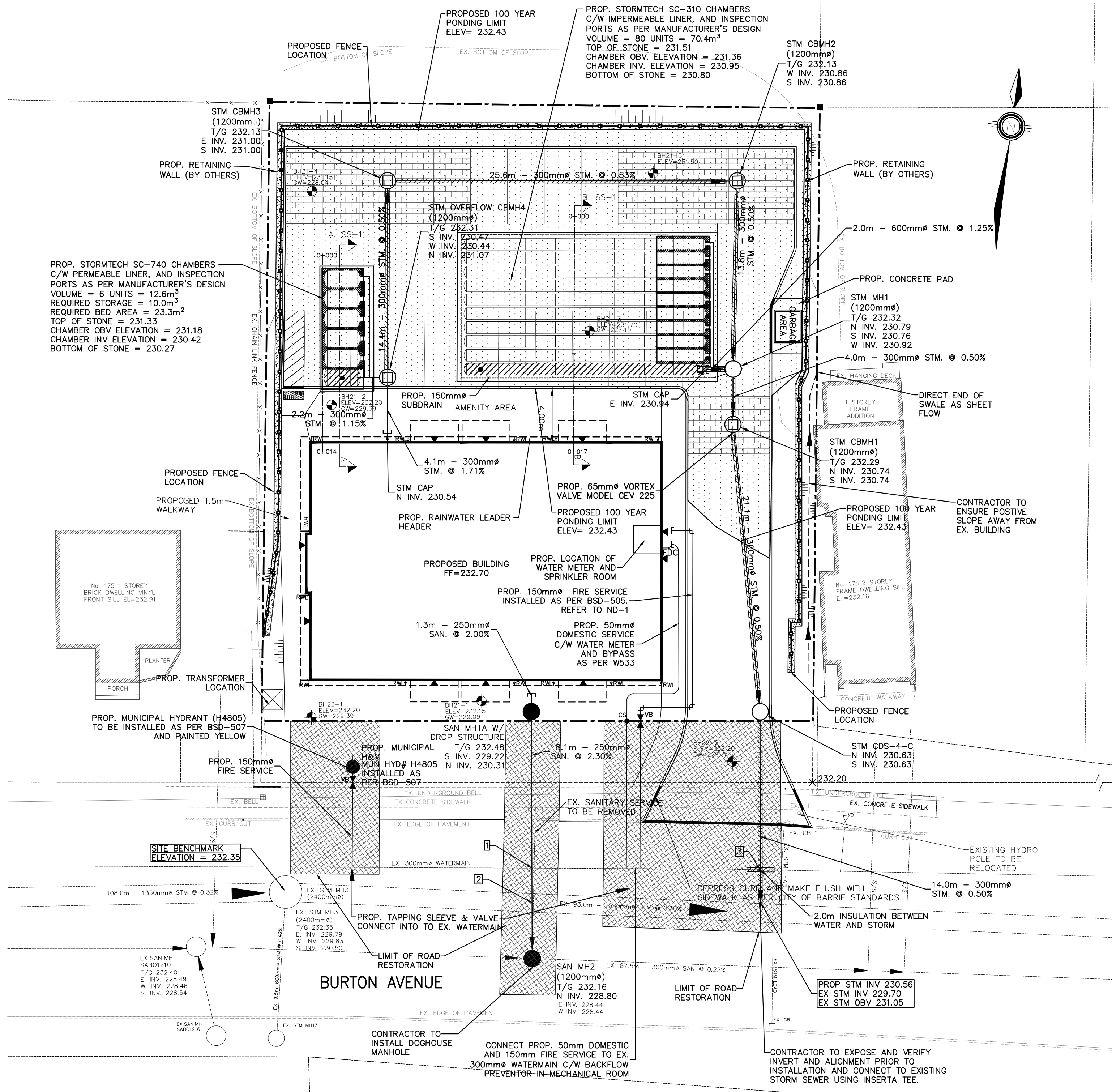
APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

SITE GRADING PLAN



DESIGNED BY	PG/MWD	HORIZ SCALE	1:200	PROJECT #	19100
DRAWN BY	PG	VERT SCALE		DRAWING #	SG-1
CHECKED BY	GMP	DATE	OCTOBER 2021	REVISION #	2

C:\Users\pearce\AppData\Local\Temp\Asphubian_3852\19100-BASE.dwg Layout:SS-1 Plotted Aug 30, 2023 @ 10:06am by pearce @ PEARSON ENGINEERING LTD.



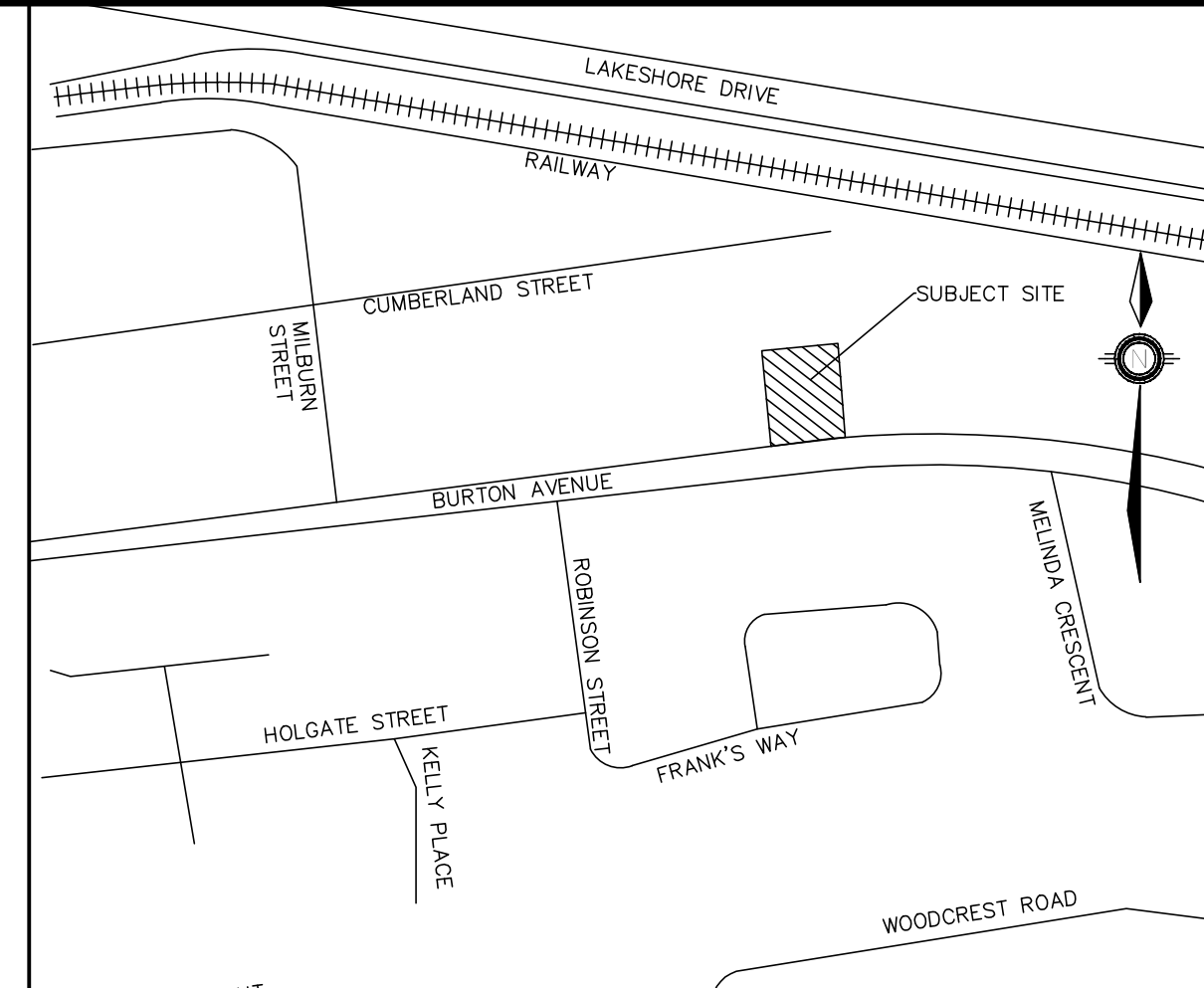
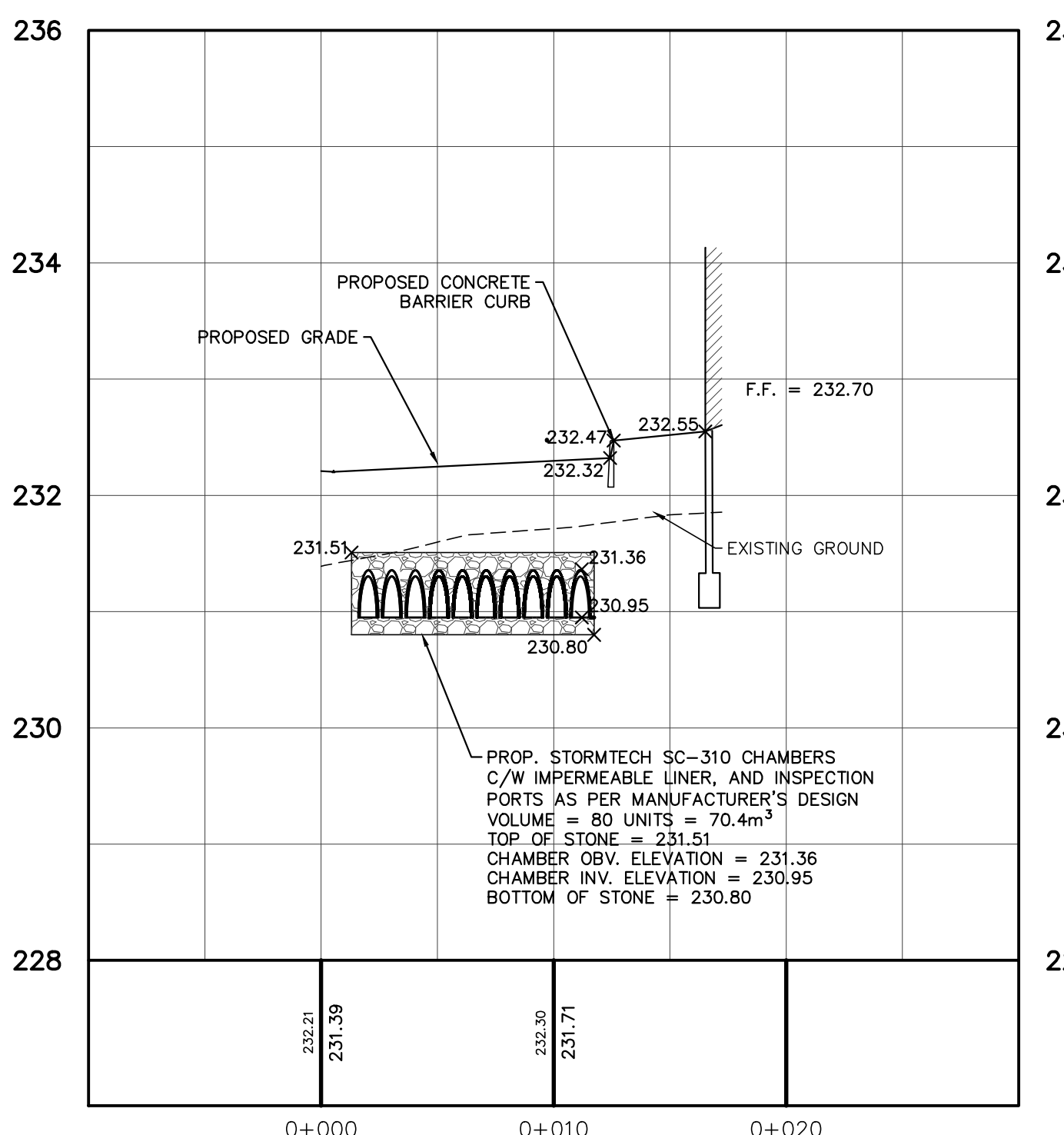
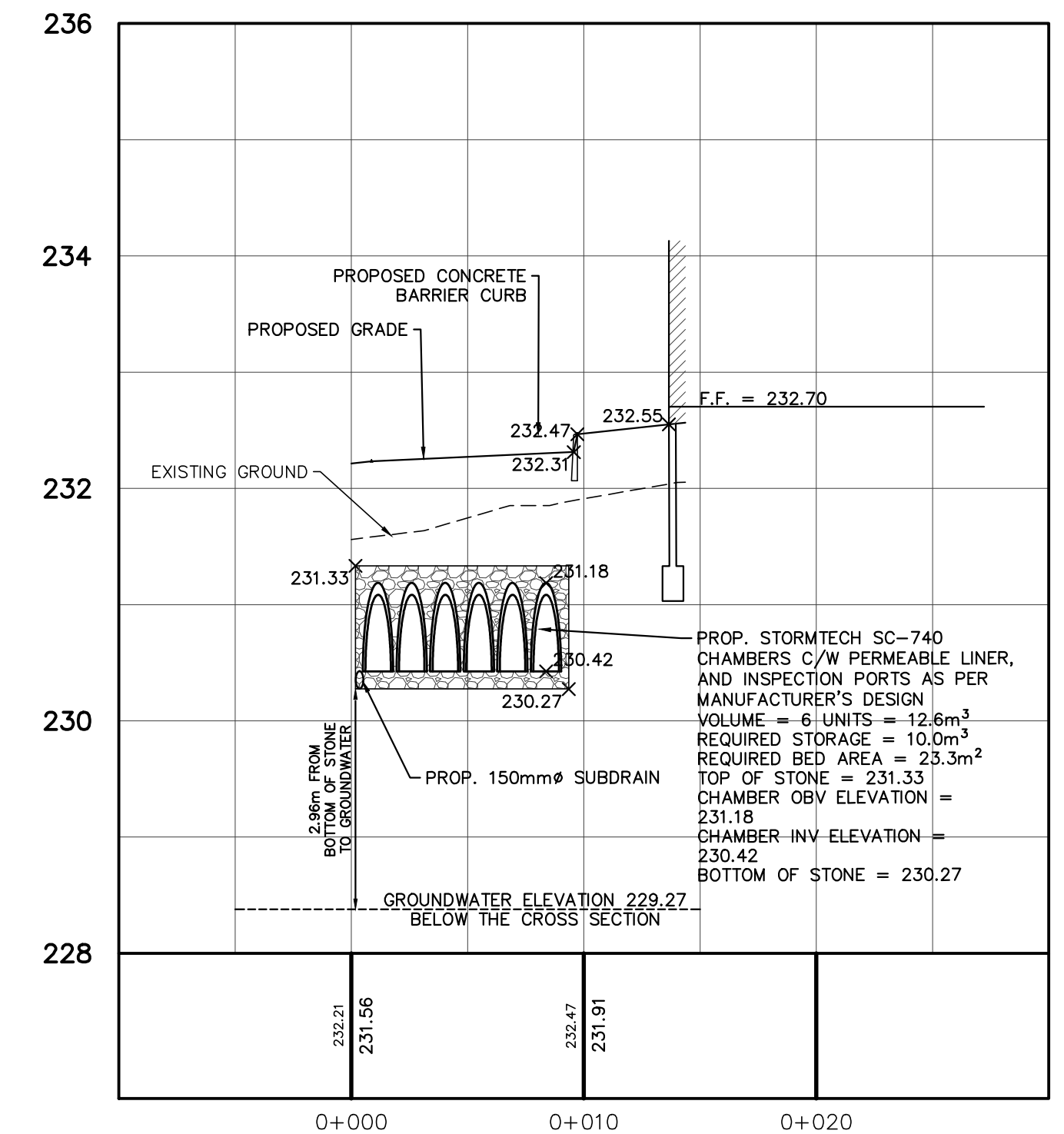
CONTRACTOR TO LOCATE AND DECOMMISSION EX. WATER SERVICE AS PER CITY STANDARDS.

CONTRACTOR TO CONFIRM ADEQUATE SEPARATION BETWEEN ANY APPLICABLE HYDRO, GAS, AND BELL UTILITIES PRIOR TO ORDERING STORM, SANITARY AND WATERMAIN MATERIALS.

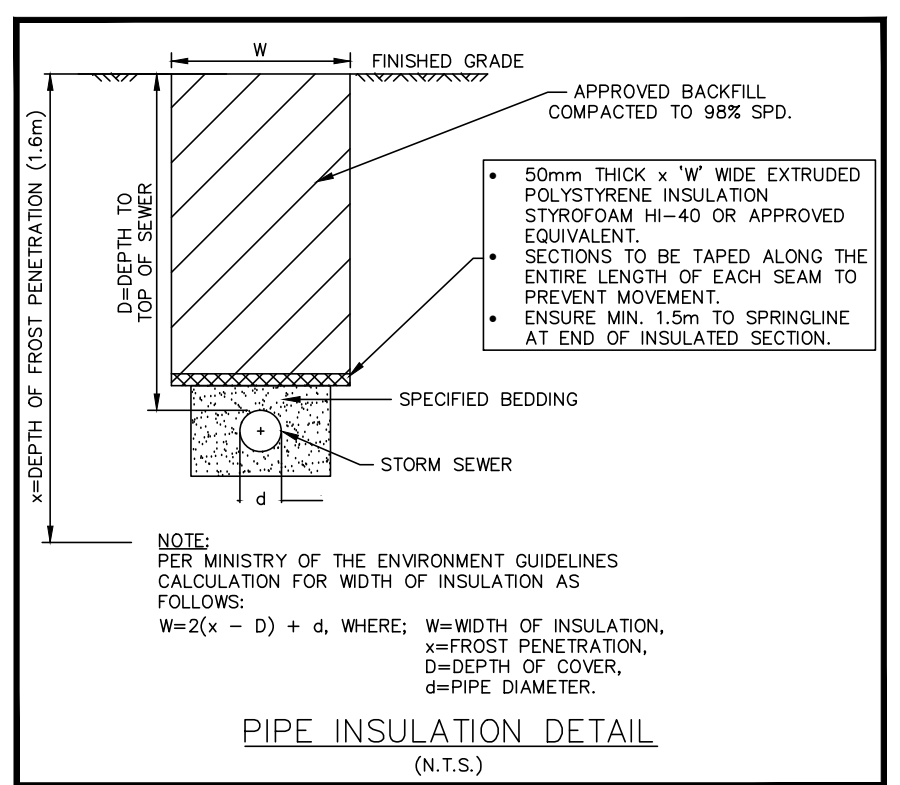
PIPE CROSSING			
LOCATION	INV.	OBV.	SEPARATION
1	W/M 230.22	SAN 229.13	1.09m
2	STM 229.74	SAN 229.08	0.50m
3	STM 230.57	W/M 230.27	0.30m

BENCHMARK:
EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35

NO.	REVISION NOTE	DATE	BY
2	AS PER CITY OF BARRIE COMMENTS	08/29/23	JP
1	AS PER CITY OF BARRIE COMMENTS	05/12/23	JP



- KEYPLAN**
N.T.S.
- LEGEND**
- CB □ CATCH BASIN
 - DCB □ DOUBLE CATCH BASIN
 - CBMH □ CATCH BASIN
 - MH ○ STORM MANHOLE
 - MH ● SANITARY MANHOLE
 - SERVICE CAP
 - HYD. FIRE HYDRANT
 - VB WATER VALVE
 - × 254.63 PROPOSED ELEVATION
 - 254.09 EXISTING ELEVATION
 - 1.5% PROPOSED DIRECTION AND GRADE
 - BACK OF CURB
 - EDGE OF PAVEMENT
 - CURB CUT LOCATION
 -) (HIGH POINT
 - R.W. PROP. RAINWATER LEADER
 - MANDOOK
 - PROP. RETAINING WALL (BY OTHERS)
 - PROP. PERMEABLE PAVERS
 - LIMIT OF ROAD & BOULEVARD RESTORATION
 - 100 YEARS PONDING LIMITS
 - PIPE INSULATION AS PER DETAIL ON SS-1
 - FDC FIRE DEPARTMENT CONNECTION



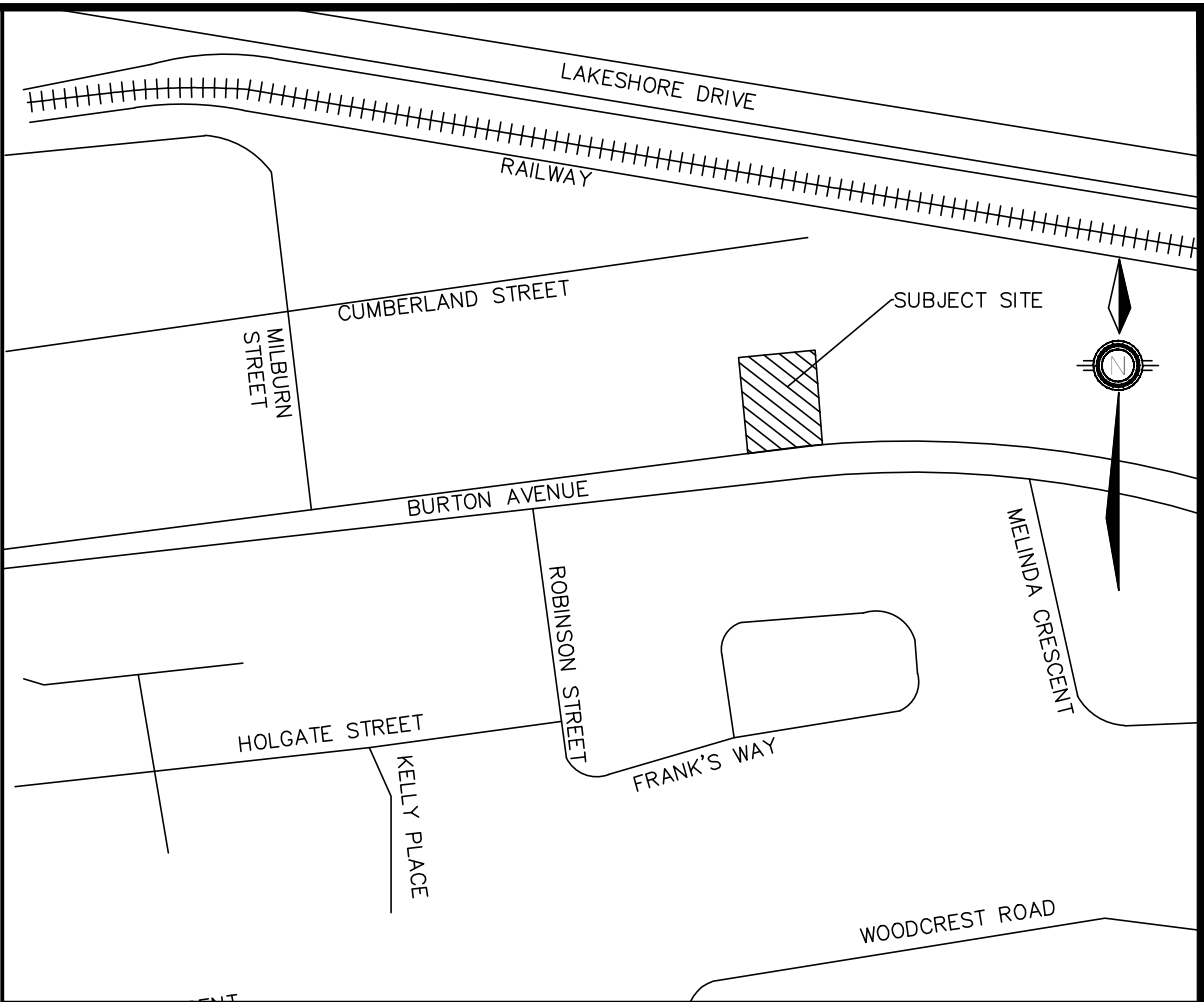
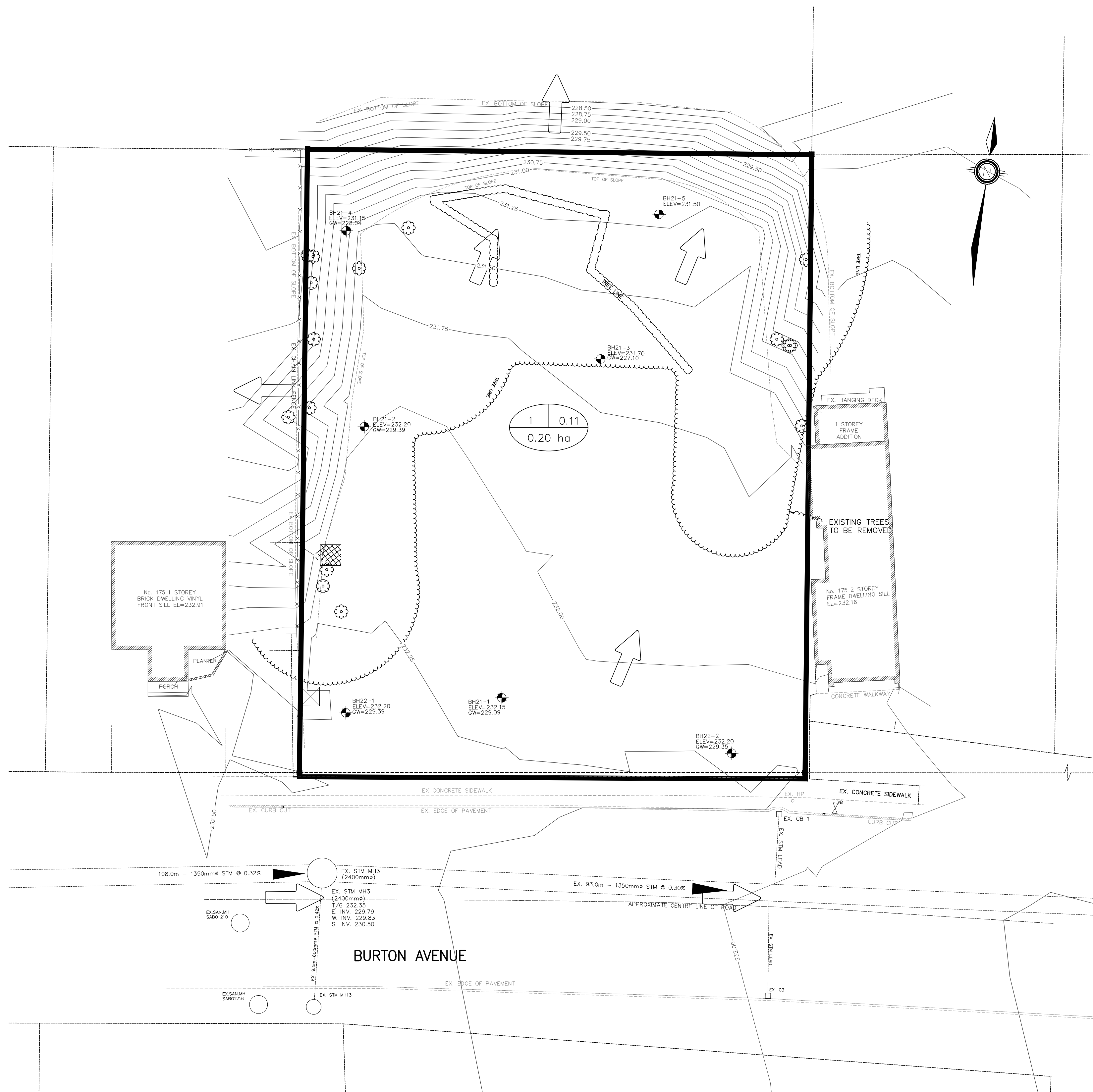
APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

SITE SERVICING PLAN



DESIGNED BY	PG/MWD	HORIZ SCALE	1:200	PROJECT #	19100
DRAWN BY	PG	VERT SCALE		DRAWING #	SS-1
CHECKED BY	GMP	DATE	OCTOBER 2021	REVISION #	2

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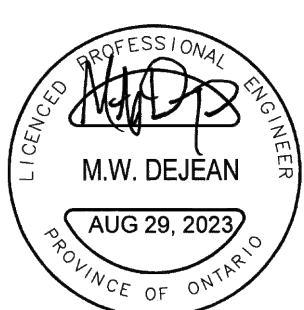
KEYPLAN
N.T.S.

LEGEND

- CB □ CATCH BASIN
- DCB □ DOUBLE CATCH BASIN
- CBMH ⊕ CATCH BASIN
- MH ○ STORM MANHOLE
- MH ● SANITARY MANHOLE
- ➔ OVERLAND FLOW DIRECTION
- CATCHMENT AREA (1 | 0.75) RUNOFF COEFFICIENT
1.00 ha
AREA IN HECTARES
- CATCHMENT BOUNDARY
- ~~~~~ EX. TREE LINE

BENCHMARK:

EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35



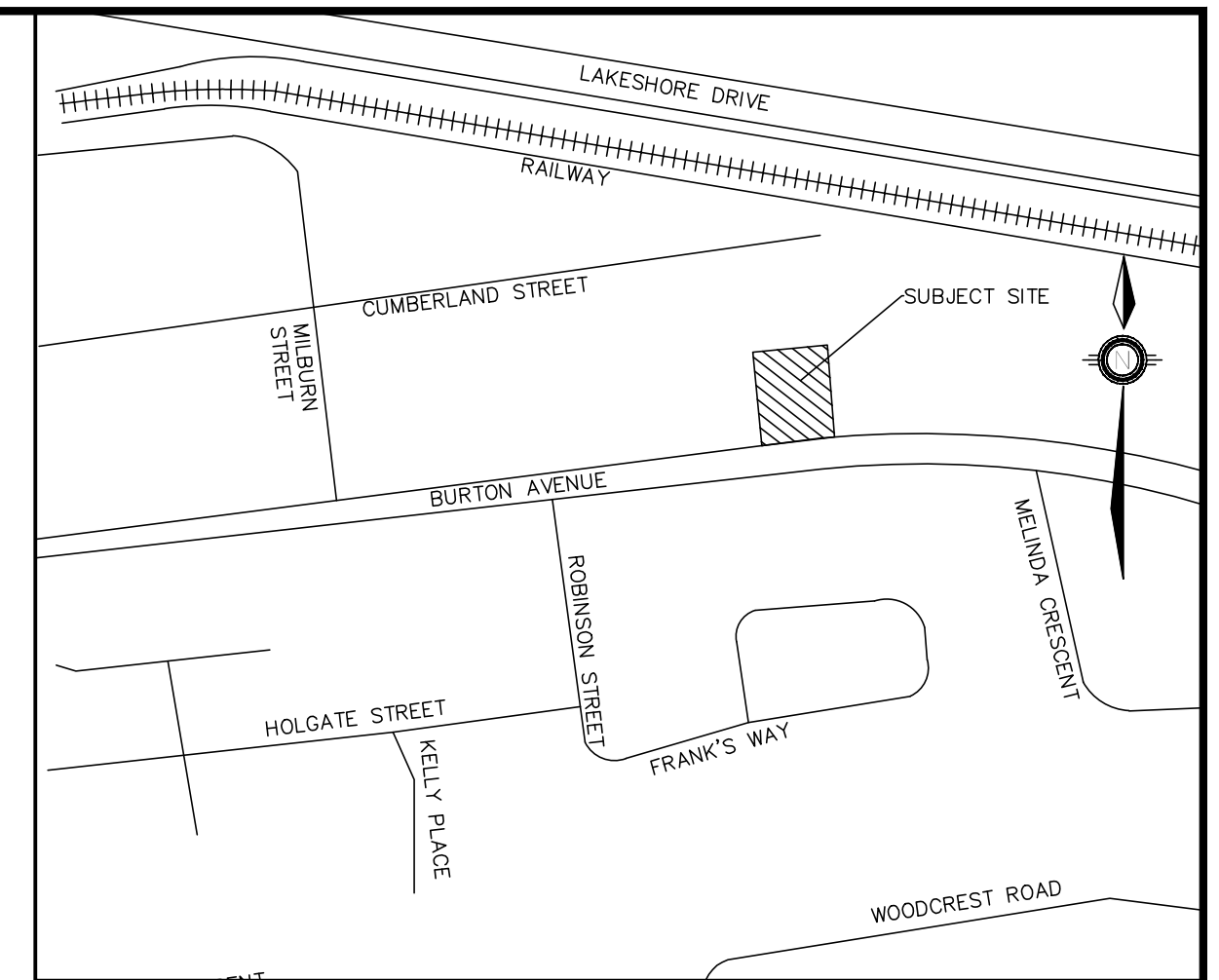
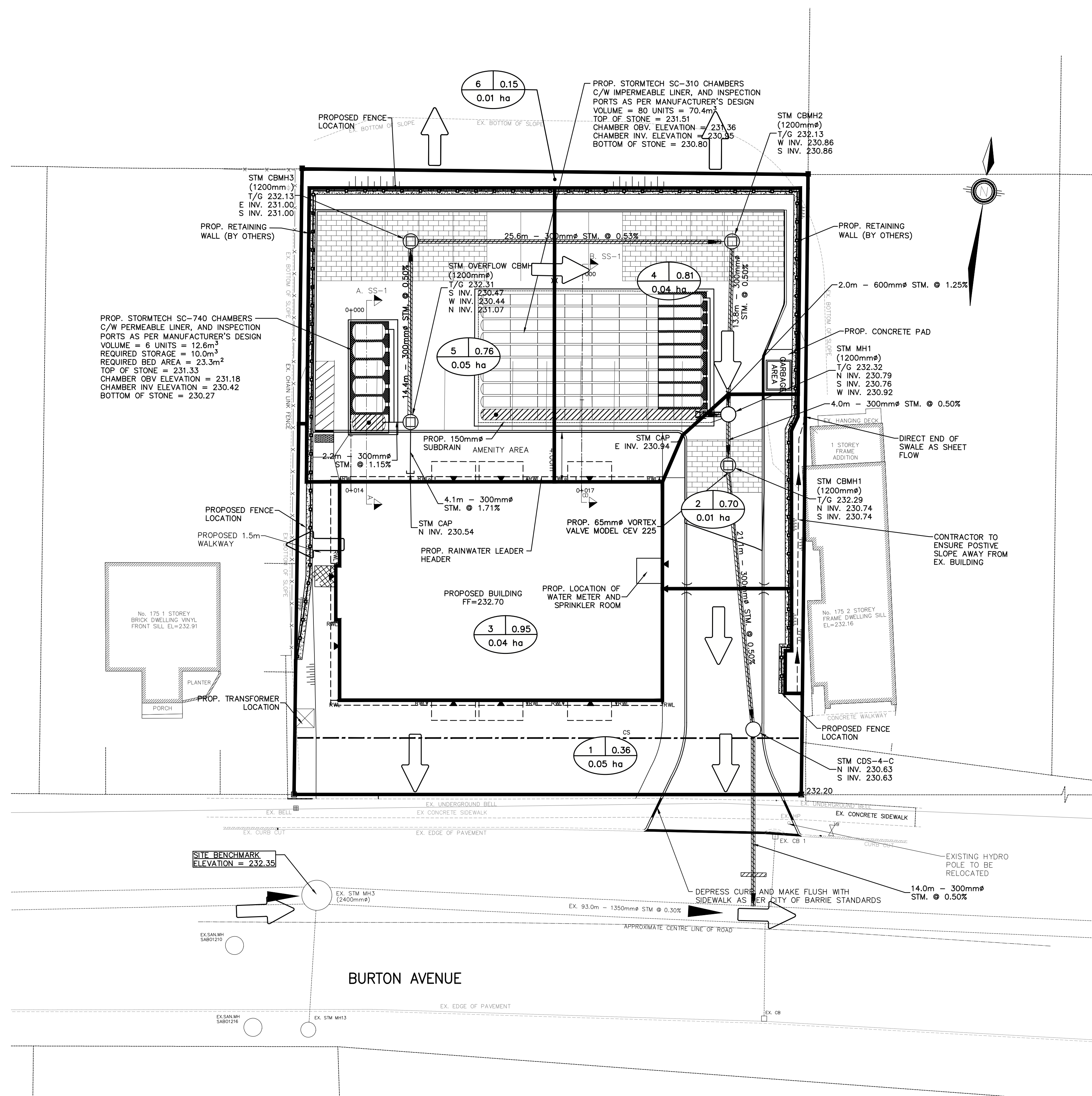
APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

PRE-DEVELOPMENT STORM
CATCHMENT PLAN



DESIGNED BY	PG/MWD	HORIZ SCALE	1:200	PROJECT #	19100
DRAWN BY	PG	VERT SCALE		DRAWING #	STM-1
CHECKED BY	GMP	DATE	OCTOBER 2021	REVISION #	2

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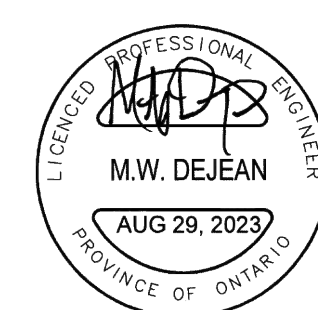
KEYPLAN
N.T.S.

LEGEND

- CB □ CATCH BASIN
- DCB □ DOUBLE CATCH BASIN
- CBMH □ CATCH BASIN
- MH ○ STORM MANHOLE
- MH ● SANITARY MANHOLE
- ➔ OVERLAND FLOW DIRECTION
- CATCHMENT AREA (1 0.75 1.00 ha) RUNOFF COEFFICIENT
AREA IN HECTARES
- CATCHMENT BOUNDARY
- ▒ PROP. PERMEABLE PAVERS

BENCHMARK:

EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35



APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

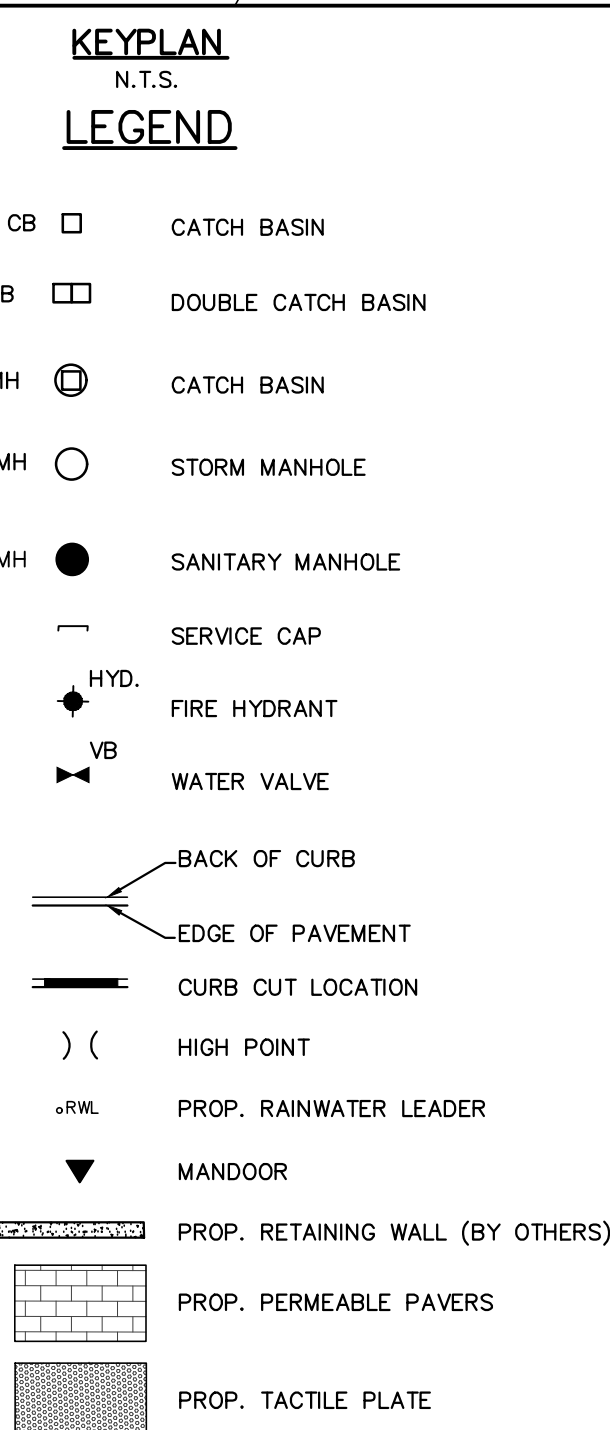
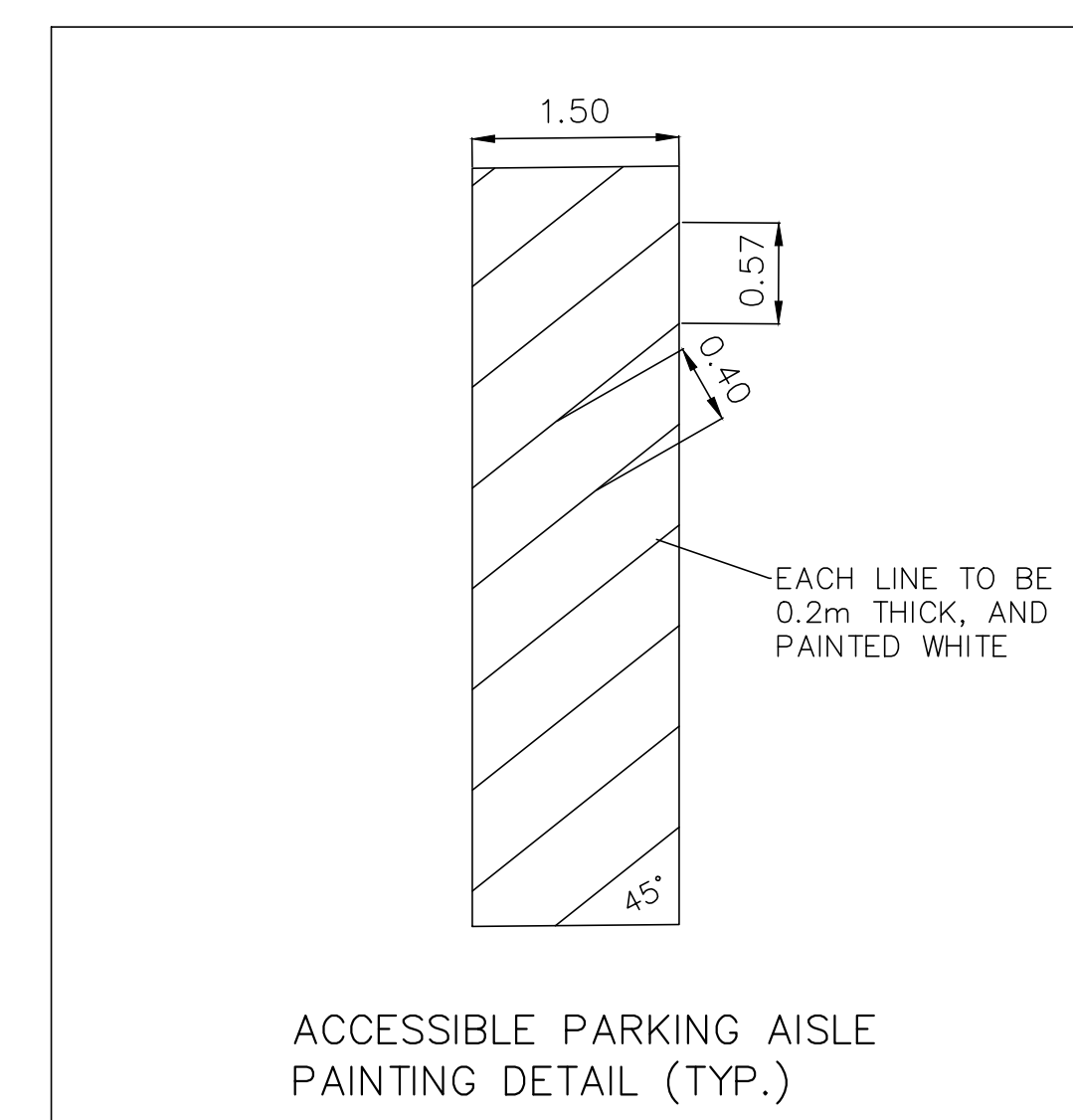
POST DEVELOPMENT STORM
CATCHMENT PLAN



**PEARSON
ENGINEERING**
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	PG/MWD	HORIZ SCALE	1:200	PROJECT #	19100
DRAWN BY	PG	VERT SCALE		DRAWING #	STM-2
CHECKED BY	GMP	DATE	OCTOBER 2021	REVISION #	1

NO.	REVISION NOTE	DATE	BY
2	AS PER CITY OF BARRIE COMMENTS	08/29/23	JP
1	AS PER CITY OF BARRIE COMMENTS	05/12/23	JP



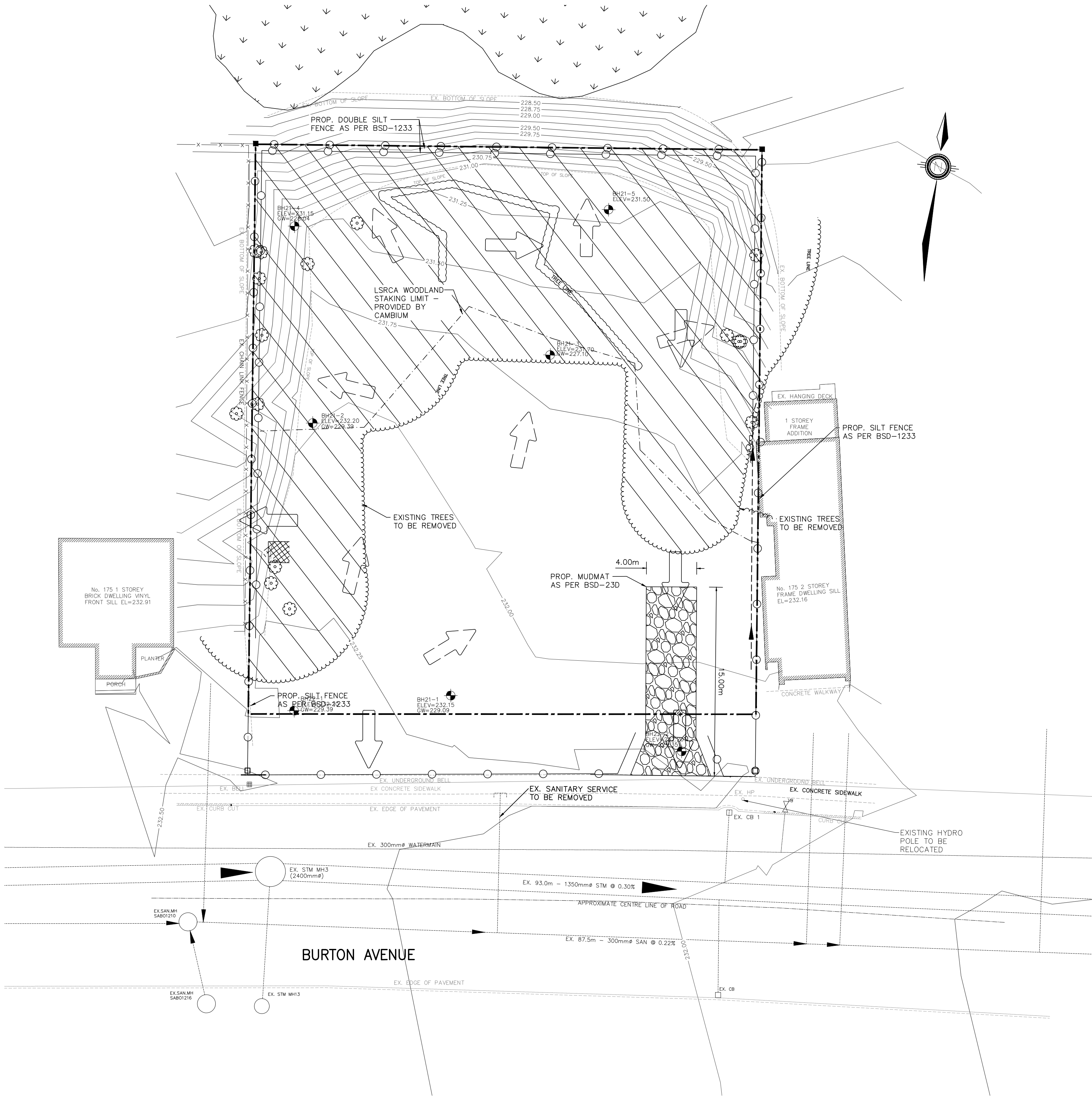
2	AS PER CITY OF BARRIE COMMENTS	08/29/23	JP
1	AS PER CITY OF BARRIE COMMENTS	05/12/23	JP
NO	REVISION NOTE	DATE	RY



**PEARSON
ENGINEERING**
PEARSONENG.COM PH. 705.719.4785

DESIGNED BY	PG/MWD	HORIZ SCALE	1:200	PROJECT #	19100
DRAWN BY	PG	VERT SCALE		DRAWING #	PM-1
CHECKED BY	GMP	DATE	OCTOBER 2021	REVISION #	2

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NOTES FOR SEDIMENT & EROSION CONTROL

1. DISTURBED AREAS THAT HAVE FAILED TO HAVE STABLE GROUND COVER ESTABLISHED BY OCTOBER 30TH SHALL BE PROTECTED WITH A SILTATION CONTROL FENCE OR STRAW MULCH ETC. AND MAINTAINED BY THE CONTRACTOR UNTIL VEGETATION BECOMES ESTABLISHED IN THE SUBSEQUENT GROWING SEASON.
2. ANY DEWATERING WASTE SHALL BE DISCHARGED TO A VEGETATED AREA AT LEAST 30m FROM ANY WATERCOURSE AND FILTERED. FILTERING METHODS MUST BE APPROVED BY THE SITE ADMINISTRATOR. DISCHARGE TO MUNICIPAL SERVICES MUST BE APPROVED BY THE CITY OF BARRIE PRIOR TO STARTING WORK AND ADHERE TO CITY OF BARRIE STANDARDS.
3. SILT FENCE SHALL BE PUT IN PLACE PRIOR TO AND MAINTAINED DURING ALL GRADING. SILT FENCE TO BE INSPECTED PRIOR TO COMMENCEMENT OF EARTH GRADING ACTIVITIES. SILT FENCE TO BE INSPECTED AND REPAIRED OR REPLACED IF DAMAGED AS DIRECTED BY THE SITE ADMINISTRATOR. SILT CONTROLS TO BE INSPECTED ON A REGULAR BASIS AND AFTER EVERY RAIN EVENT. INSTALLATION SHALL BE TO THE MANUFACTURER'S SUGGESTED SPECIFICATIONS.
4. THE CONTRACTOR SHALL BE PREPARED FOR UNEXPECTED CONDITIONS AND ACCORDINGLY HAVE STOCKPILED MATERIALS ON SITE FOR NECESSARY REPAIRS AS A RESULT OF FAILED OR INADEQUATE CONTROL MEASURES. ALL SEDIMENT AND EROSION CONTROL MEASURES SHALL BE INSPECTED AT LEAST ONCE A WEEK, AND AFTER EVERY RAINFALL EVENT.
5. CONTRACTOR SHALL OBTAIN A CURRENT COPY AND BECOME FAMILIAR WITH OPSS 577, CONSTRUCTION SPECIFICATION FOR TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES AS WELL AS ALL APPLICABLE MUNICIPAL STANDARDS.
6. THE CONTRACTOR MAY CONSIDER ALTERNATIVE SEDIMENT AND EROSION CONTROL MEASURES. SUCH MEASURES SHOULD BE PRESENTED IN WRITING FOR APPROVAL OF THE SITE ADMINISTRATOR AND MUST BE APPROVED IN WRITING BY THE MUNICIPALITY AND CONSERVATION AUTHORITY.
7. THE TOPS OF ALL FILTER FABRIC MUST BE A MINIMUM OF 1.0 METRES ABOVE THE GROUND LEVEL AND ATTACHED TO THE FENCE WITH A CONTINUOUS STEEL WIRE. ALTERNATIVELY, THE FILTER FABRIC MUST BE FOLDED OVER THE TOP OF THE FENCE AND ATTACHED TO THE FENCE WITH WIRE LOOPED THROUGH THE FABRIC ON BOTH SIDES OF THE FENCE. FILTER FABRIC IS TO BE TERRAFIX 270R OR EQUIVALENT.
8. ALL DISTURBED GROUND LEFT INACTIVE SHALL BE STABILIZED BY SEEDING, SODDING, MULCHING, OR COVERING OR OTHER EQUIVALENT CONTROL MEASURES. THIS PERIOD OF INACTIVITY SHALL BE AT THE DISCRETION OF THE CITY OF BARRIE MANAGER OF ENGINEERING BUT SHALL NOT EXCEED THIRTY DAYS.
9. CONTRACTOR SHALL INSTALL AND MAINTAIN CATCHBASIN SEDIMENT BARRIERS THROUGHOUT THE SITE DURING ALL CONSTRUCTION ACTIVITIES IN ORDER TO TRAP SEDIMENT. REFER TO DETAIL.

SITE DATA

1. OVERALL SITE AREA - 0.18ha
2. EXISTING LAND USE - VACANT
3. PREDOMINATE SOIL - SITE GENERALLY INCLUDED FILL AND PEAT OVERLAYING AN ORIGINAL DEPOSIT OF SAND & SILT TILL

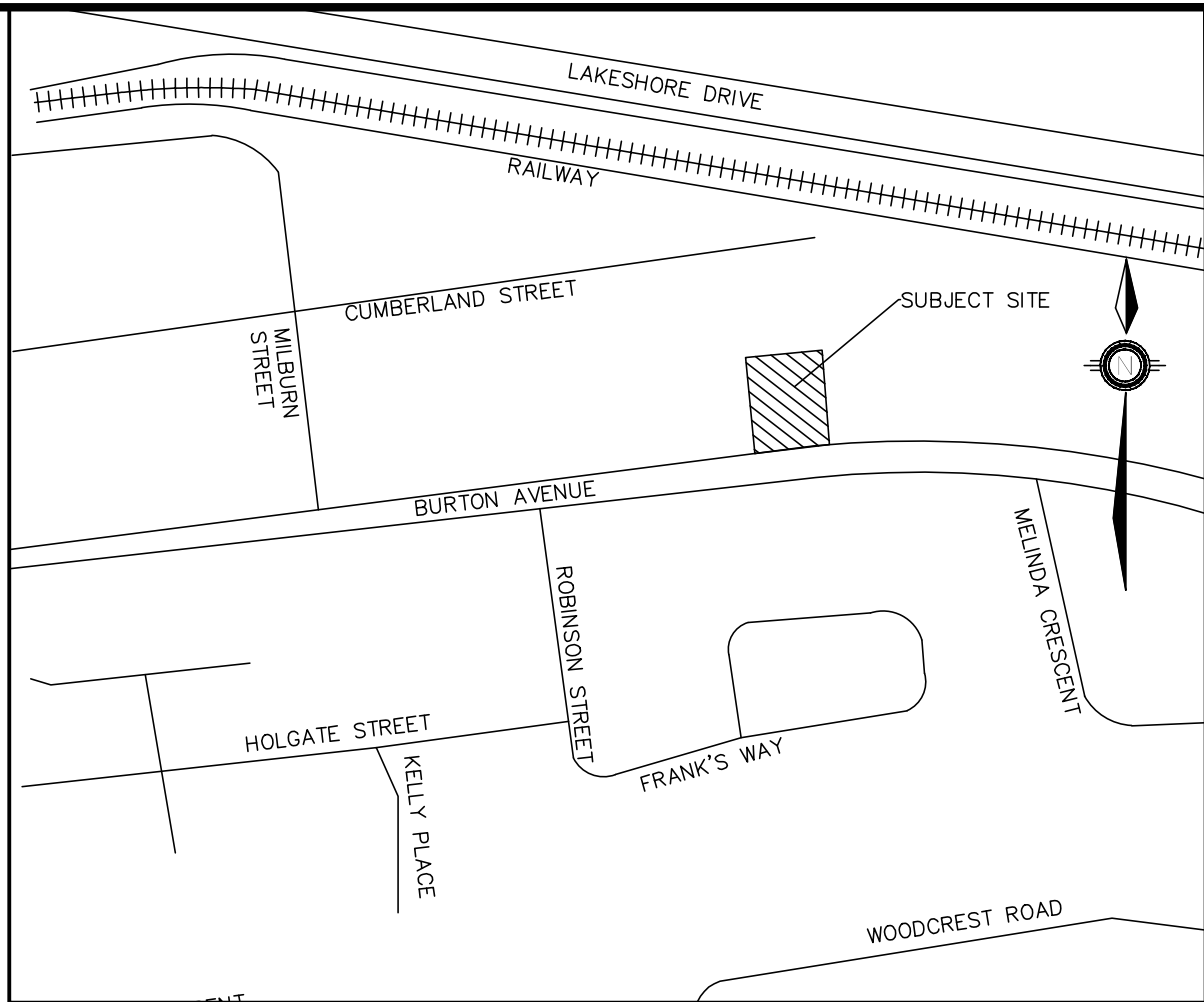
SEQUENCE OF CONSTRUCTION

1. ENGINEER TO BE NOTIFIED PRIOR TO INITIATION OF ANY ON SITE WORKS.
2. SILT FENCE AND CONSTRUCTION ACCESS MATS TO BE INSTALLED PRIOR TO THE COMMENCEMENT OF ANY WORKS ON SITE.
3. VEGETATION REMOVAL MAY COMMENCE AFTER ALL SILT FENCE IS INSTALLED AND APPROVED BY THE ENGINEER.
4. COMMENCE WITH EARTH EXCAVATION AND SITE SERVICING (TO BE REMOVED FROM SITE - NO STOCKPILE).
5. EROSION CONTROL MEASURES TO BE MAINTAINED AS DIRECTED BY THE ENGINEER DURING THE CONSTRUCTION PERIOD. ADDITIONAL CONTROL MEASURES MAY BE REQUIRED AT THE DISCRETION OF THE ENGINEER.
6. ALL DISTURBED GROUND LEFT INACTIVE FOR MORE THAN 30 DAYS SHALL BE STABILIZED WITH SEED, SOD, MULCH OR OTHER ADEQUATE COVERING, AS INSTRUCTED BY THE ENGINEER.

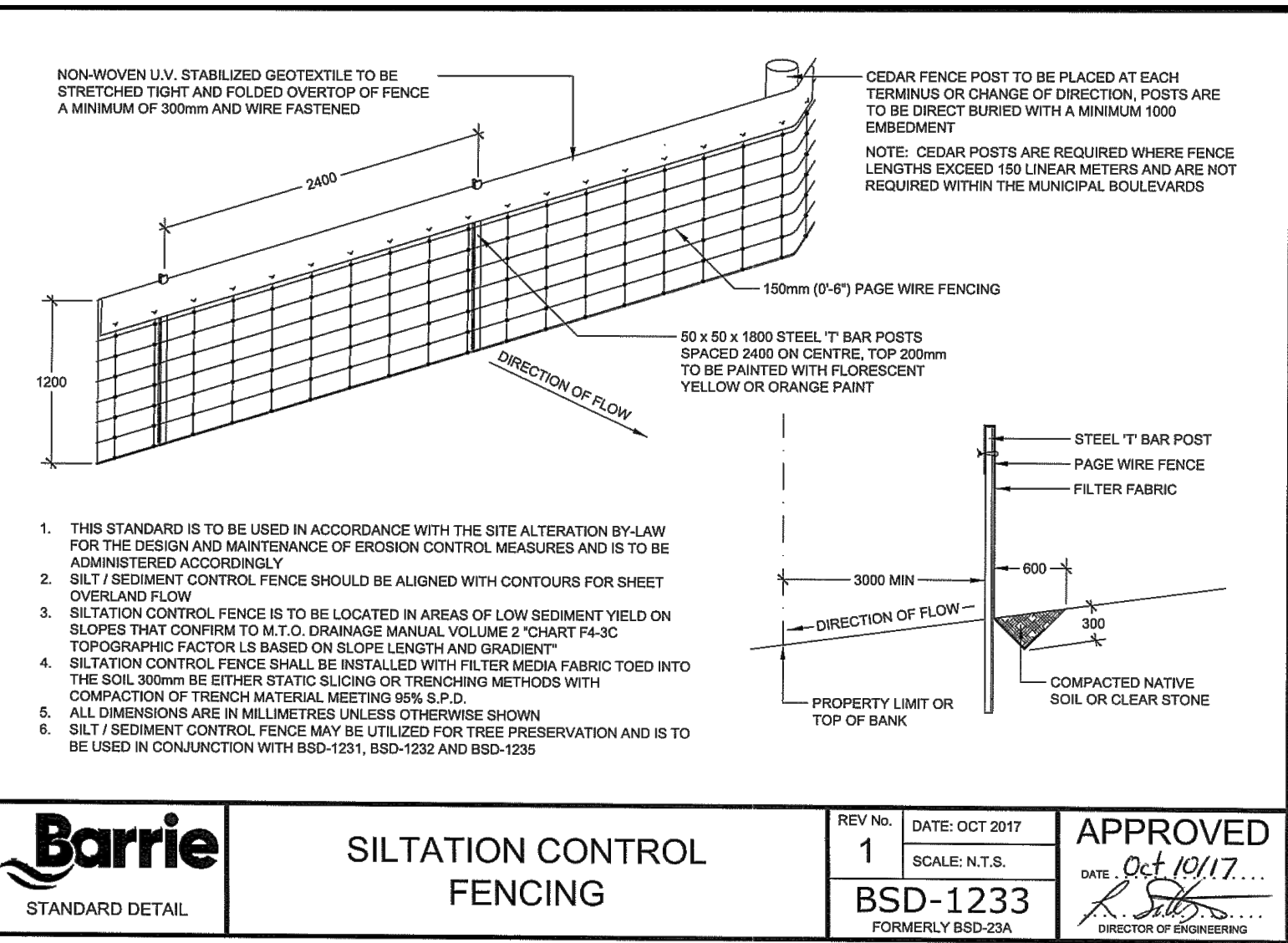
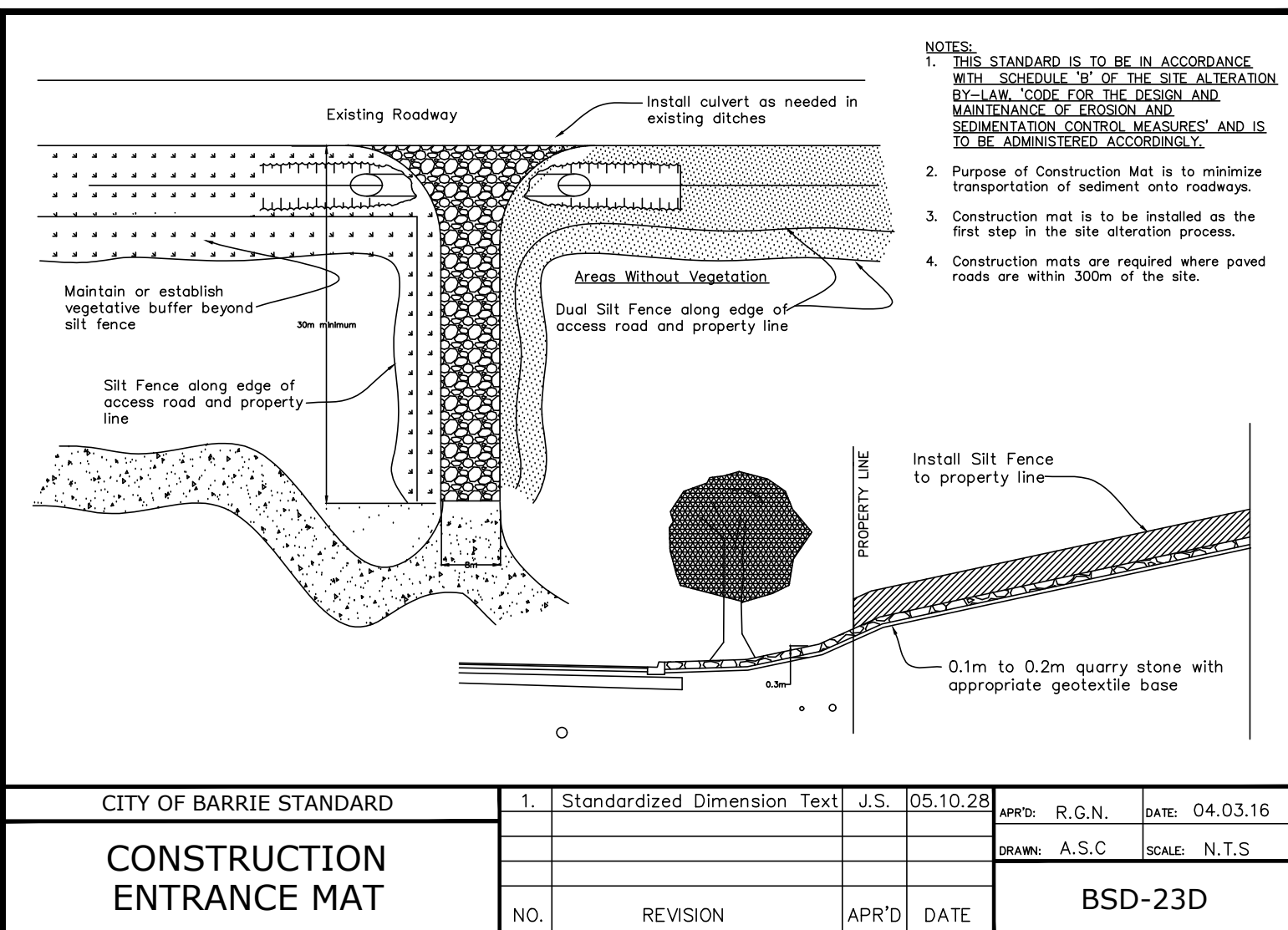
CONTRACTOR TO LOCATE AND DECOMMISSION EX. WATER SERVICE AS PER CITY STANDARDS.

LEGEND

- CB □ CATCH BASIN
- DCB □ DOUBLE CATCH BASIN
- CBMH ○ CATCH BASIN
- MH ○ STORM MANHOLE
- MH ● SANITARY MANHOLE
- SERVICE CAP
- HYD. FIRE HYDRANT
- VB WATER VALVE
- SILT FENCE
- ▨ LIMIT OF INTERNAL TREE REMOVAL
- PRE DEVELOPMENT OVERLAND FLOW DIRECTION
- POST DEVELOPMENT OVERLAND FLOW DIRECTION



KEYPLAN
N.T.S.



NO.	REVISION NOTE	DATE	BY
2	AS PER CITY OF BARRIE COMMENTS	08/29/23	JP
1	AS PER CITY OF BARRIE COMMENTS	05/12/23	JP

BENCHMARK:
EXISTING STORM MANHOLE 3 ON BURTON AVENUE LOCATED SOUTH OF THE SOUTH WESTERN PROPERTY CORNER.
ELEVATION = 232.35



APARTMENT DEVELOPMENT
181 BURTON AVENUE
BARRIE, ON

EROSION PROTECTION &
REMOVALS PLAN



DESIGNED BY	PG/MWD	HORIZ SCALE	1:200	PROJECT #	19100
DRAWN BY	PG	VERT SCALE		DRAWING #	EPR-1
CHECKED BY	GM	DATE	OCTOBER 2021	REVISION #	2