

INSERT A



CONTRACTOR MUST ASSUME THAT CLEARING AND GRUBBING OF SITE WILL BE PERFORMED BY OTHERS AS PART OF A SEPERATE CONTRACT.

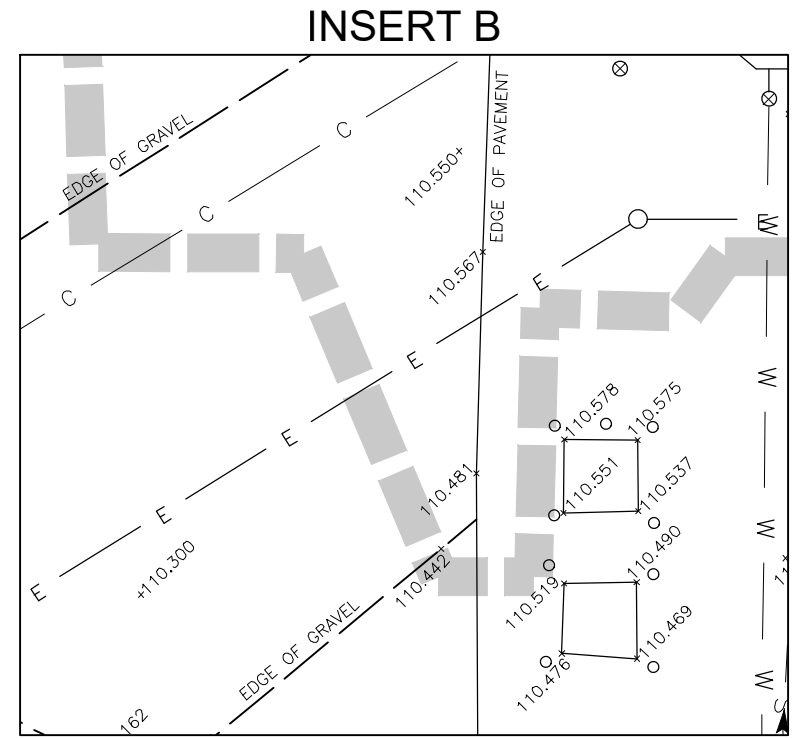
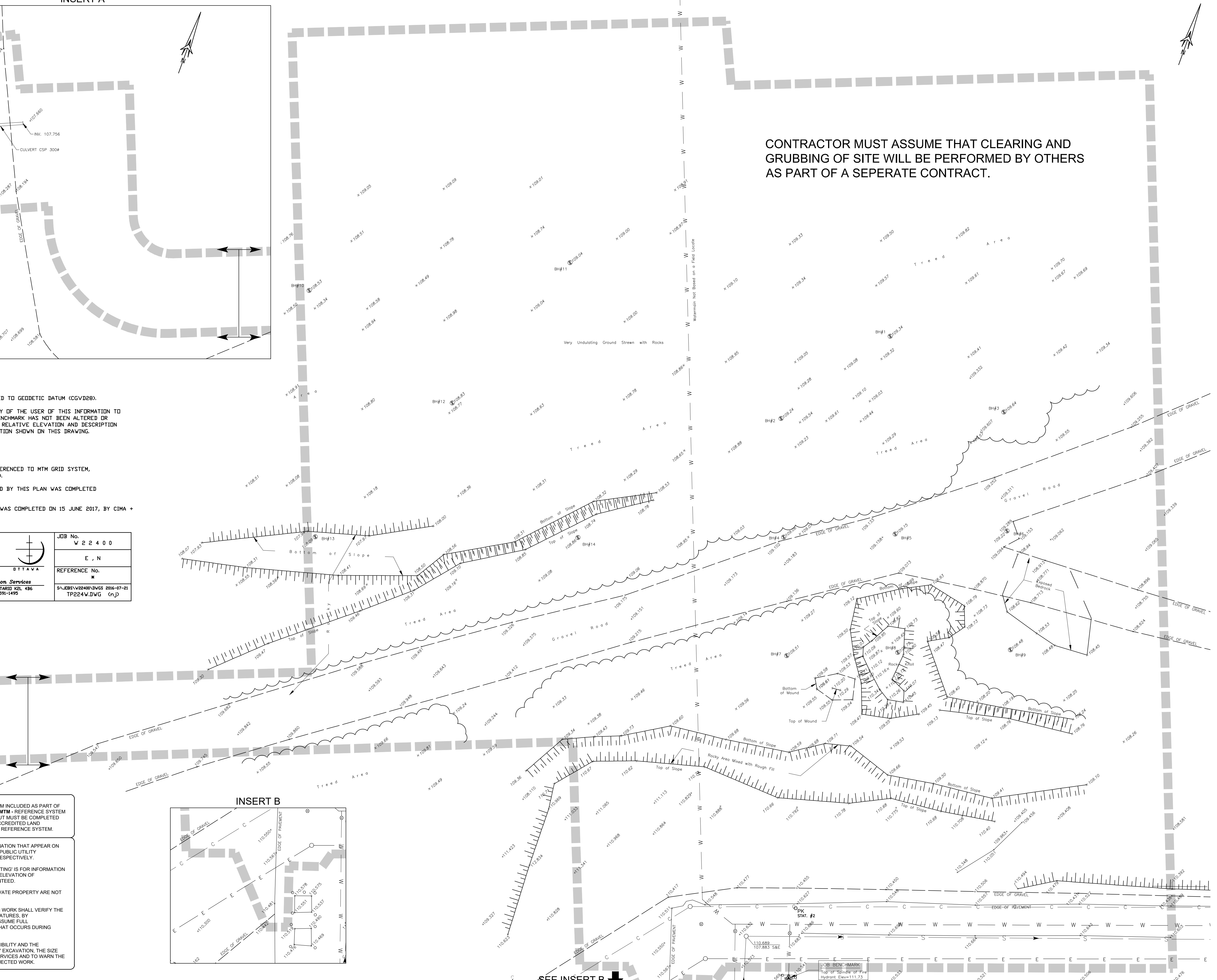
ELEVATION NOTES

1. ELEVATIONS ARE REFERRED TO GEODETIC DATUM (CGVD28).
2. IT IS THE RESPONSIBILITY OF THE USER OF THIS INFORMATION TO VERIFY THAT THE JOB BENCHMARK HAS NOT BEEN ALTERED OR DISTURBED AND THAT ITS RELATIVE ELEVATION AND DESCRIPTION AGREE WITH THE INFORMATION SHOWN ON THIS DRAWING.

NOTES

1. THE CAD DRAWING IS REFERENCED TO MTM GRID SYSTEM, ZONE 9, NAD83 (ORIGINAL).
2. THE SURVEY REPRESENTED BY THIS PLAN WAS COMPLETED ON 07 JUNE 2016.
3. SUPPLEMENTARY SURVEY WAS COMPLETED ON 15 JUNE 2017, BY CIMA +

Fairhall Moffatt & Woodland ONTARIO LAND SURVEYORS Surveying and Land Information Services 100-600 TERRY FOX DRIVE, KANATA, ONTARIO K2L 4R6 TEL: (613) 591-2590 FAX: (613) 591-1495 www.fmw.on.ca	JOB No. V 2 2 4 0 0
	REFERENCE No. #
S:\JOBS\162400\DWG 2016-07-21 TP224V.DWG (r.j)	E, N



NOTE OF CAUTION

THE GEODETIC COORDINATES OF EVERY ITEM INCLUDED AS PART OF THIS DOCUMENT ARE IN NAD83 - ORIGINAL / MTM - REFERENCE SYSTEM AND HAVE NO LEGAL VALUE. THE SITE LAYOUT MUST BE COMPLETED USING THE ORIGINAL BENCHMARKS OF AN ACCREDITED LAND SURVEYOR IN THE NAD83 - ORIGINAL / MTM - REFERENCE SYSTEM.

THE UNDERGROUND FEATURES AND INFORMATION THAT APPEAR ON THE DRAWINGS WERE OBTAINED FROM THE PUBLIC UTILITY COMPANIES AND/OR FROM THE CITY EACH RESPECTIVELY.

ALL INFORMATION UNDER THE LEGEND 'EXISTING' IS FOR INFORMATION ONLY. COMPLETE OR EXACT LOCATION AND ELEVATION OF UNDERGROUND SERVICES ARE NOT GUARANTEED.

CERTAIN UNDERGROUND FEATURES ON PRIVATE PROPERTY ARE NOT SHOWN ON THE CURRENT DRAWING.

ANYONE WHO PROCEEDS WITH EXCAVATION WORK SHALL VERIFY THE EXACT LOCATION OF ALL UNDERGROUND FEATURES, BY EXPLORATORY EXCAVATIONS, AND SHALL ASSUME FULL RESPONSIBILITY IF THERE IS ANY DAMAGE THAT OCCURS DURING WORK.

THE CONTRACTOR WILL HAVE THE RESPONSIBILITY AND THE OBLIGATION TO VALIDATE, BY EXPLORATORY EXCAVATION, THE SIZE OF THE PUBLIC UTILITIES UNDERGROUND SERVICES AND TO WARN THE ENGINEER OF ANY CONFLICT WITH THE PROJECTED WORK.

CE DESSIN N'EST PAS A L'ECHELLE SI LES MARQUEURS NE SONT PAS ALIGNES AVEC LA REGLE

THIS DRAWING IS NOT TO SCALE IF THIS RULER DOES NOT MEASURE CORRECTLY

DFS INC.
architecture & design

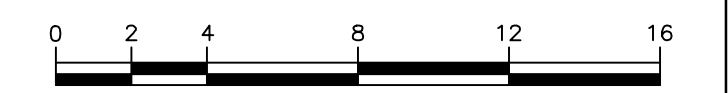
Montréal, QC 400 boul. de Maisonneuve O. Bur. 500
Saint John, NB Montréal (Québec) H3A 1L4
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Dans la province de Québec, les services architecturaux de DFS sont fournis par Fish Pellicier Todd architectes.

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CIMA
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Partenaire de génie

110-240 Catherine Street
Ottawa ON K2P 2G8
Phone: 613 860-2462
Fax: 613 860-1870
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plan-référence key plan
sceau stamp

no.	description	date
1	ISSUED FOR TENDER	JUNE 12, 2018

REVISION

projet project

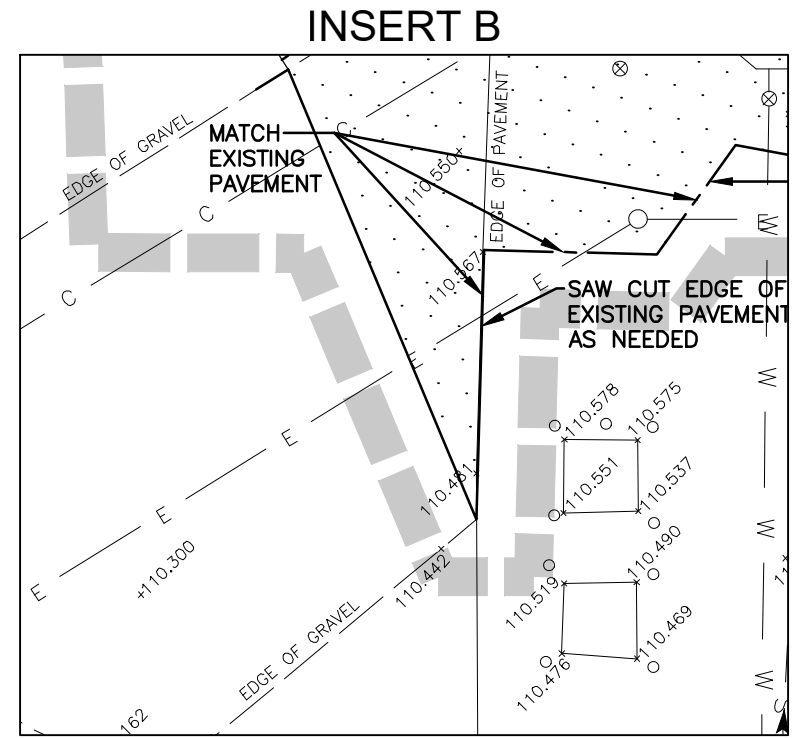
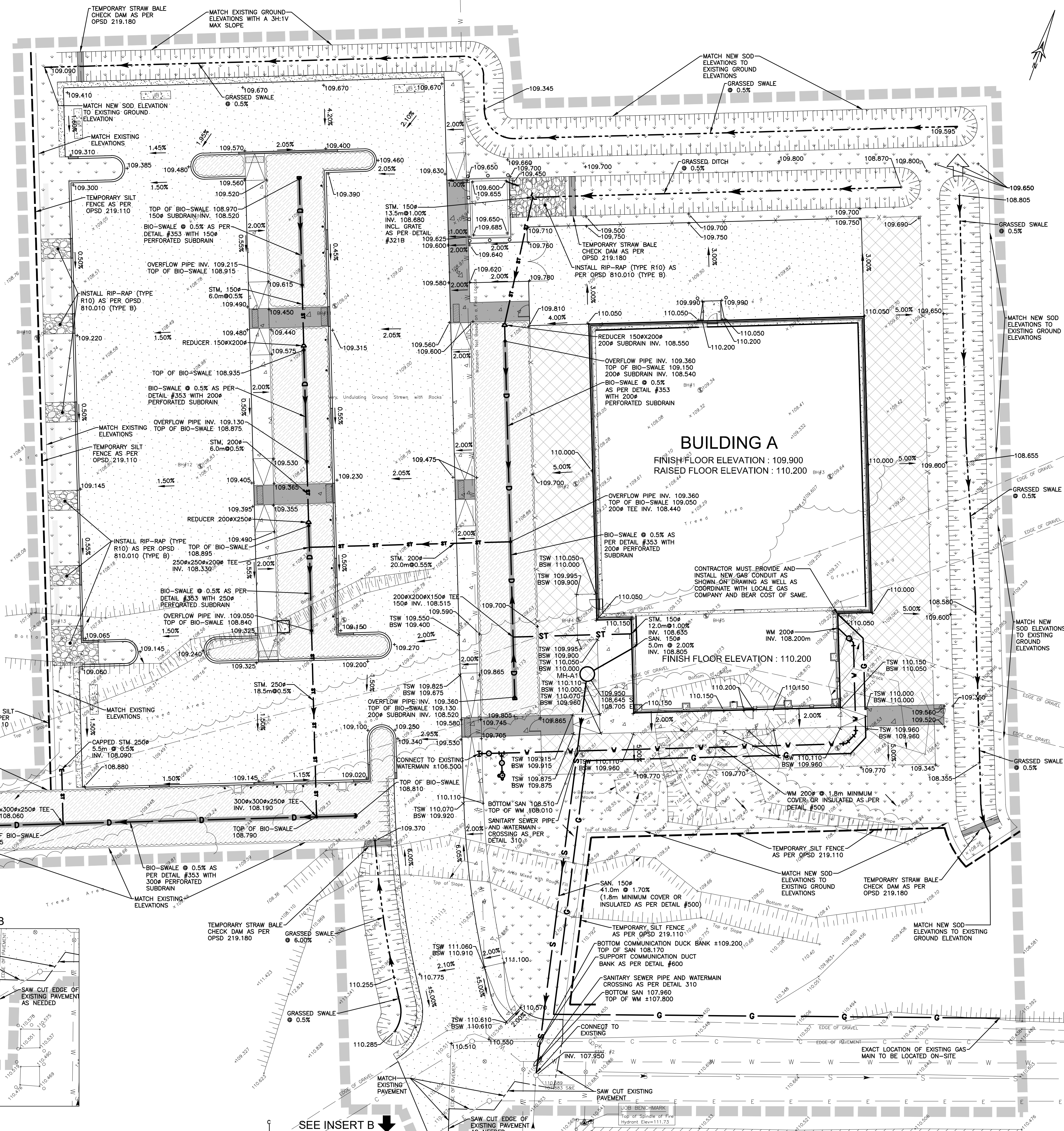
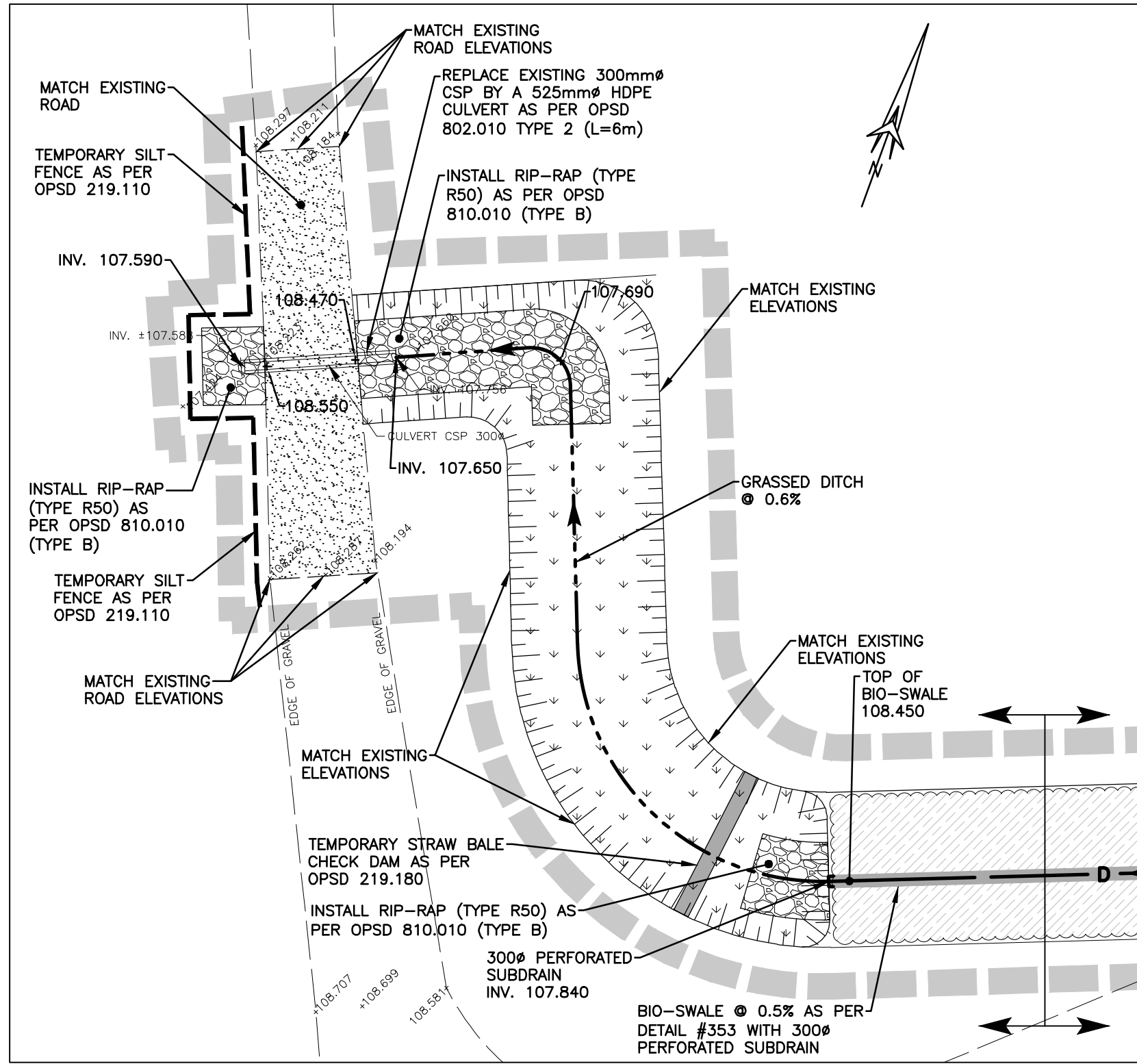
BUILDING A

dessin drawing

TOPOGRAPHIC SURVEY PLAN

conception	no. dossier	project no.
E. Potvin	A000566B	
dessiné	drawn	client file
J.-P. Pharend	C2_Plan topographique	
approuvé	approved	client file
H. Bisson	7207528	
échelle	scale	plot date
1 : 200		
no. page	sheet number	rev
C2		1

INSERT A



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0 2 4 8 12 16

plan-repère	key plan	
scaleau	stamp	
1	ISSUED FOR TENDER	June 12, 2018
no.	description	date
RÉVISION		

projet

BUILDING A

projet

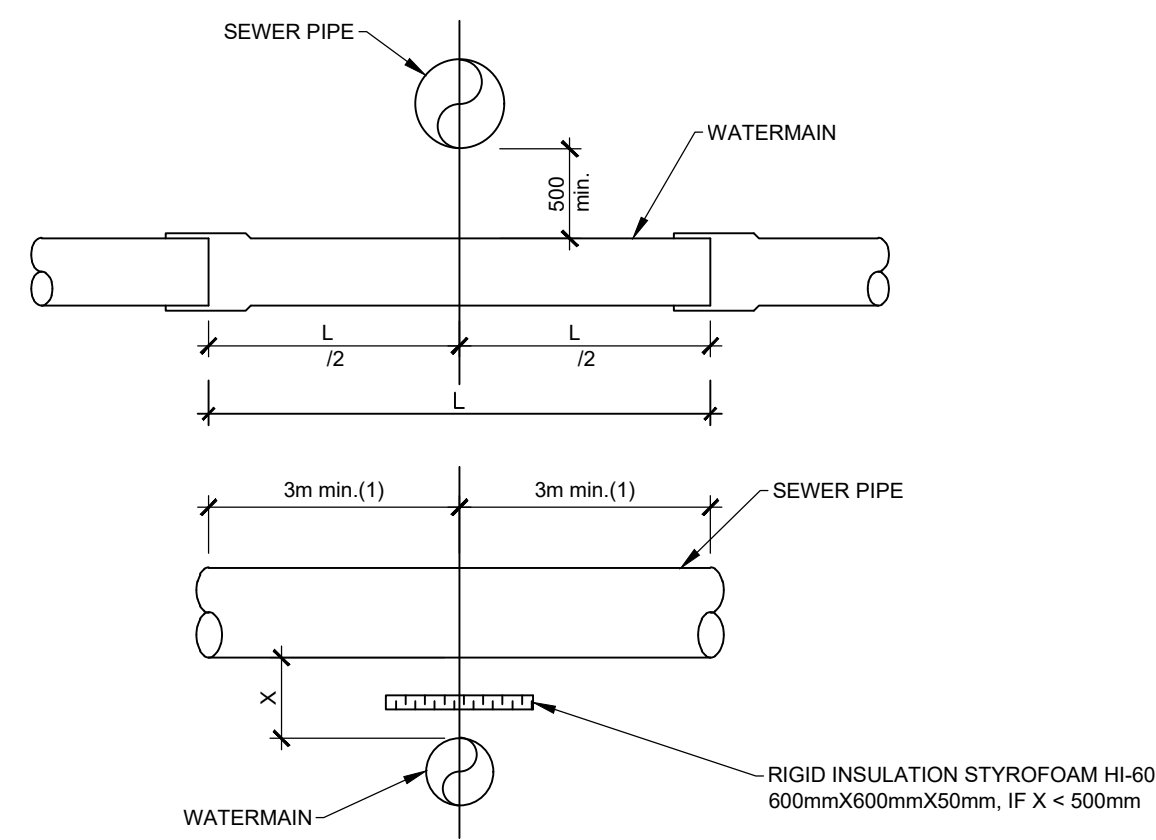
dessin

MUNICIPAL SERVICES AND GRADING PLAN

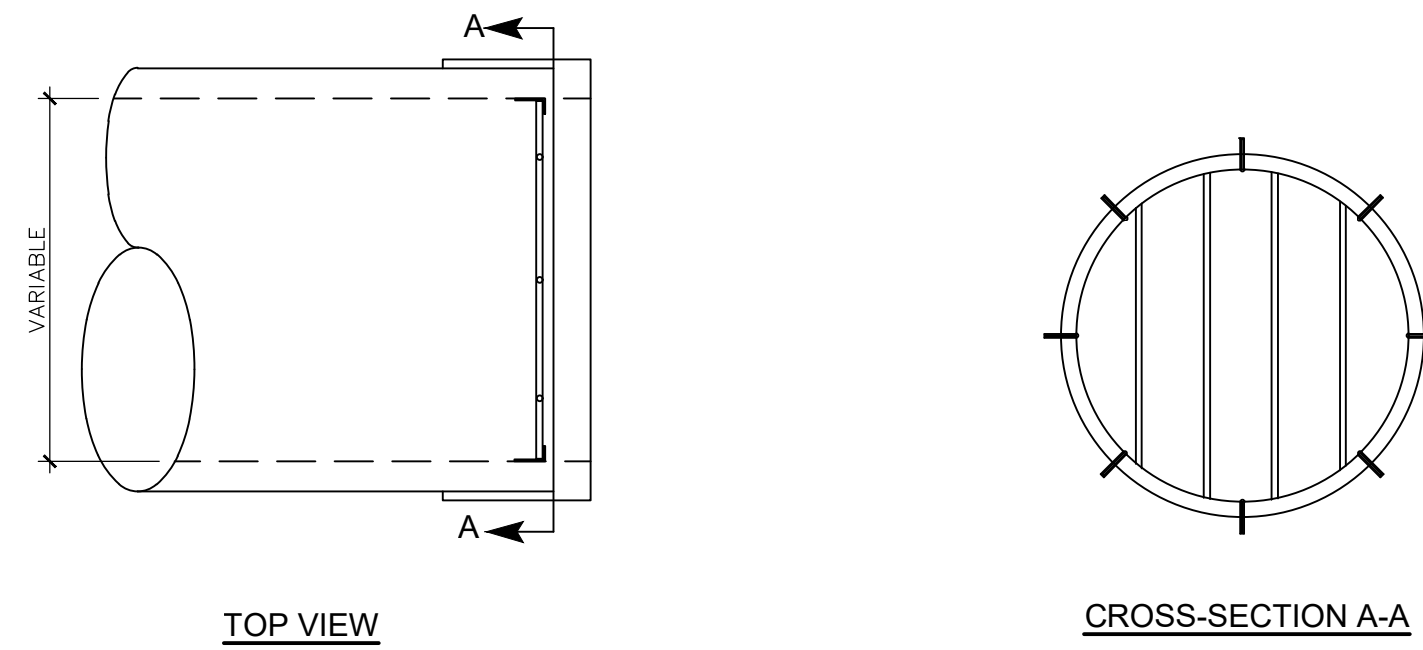
dessin

conception	conception	no. dossier	project no.
E. Potvin		A000566B	
dessiné	drawn	feuille DAO	CAD file
J.-P. Pharand		C4_Plan des services	
approuvé	approved	dossier client	client file
H. Bisson		7207528	
échelle	scale	imprimé	plot date
1 : 200			
no. page	sheet number	rev	
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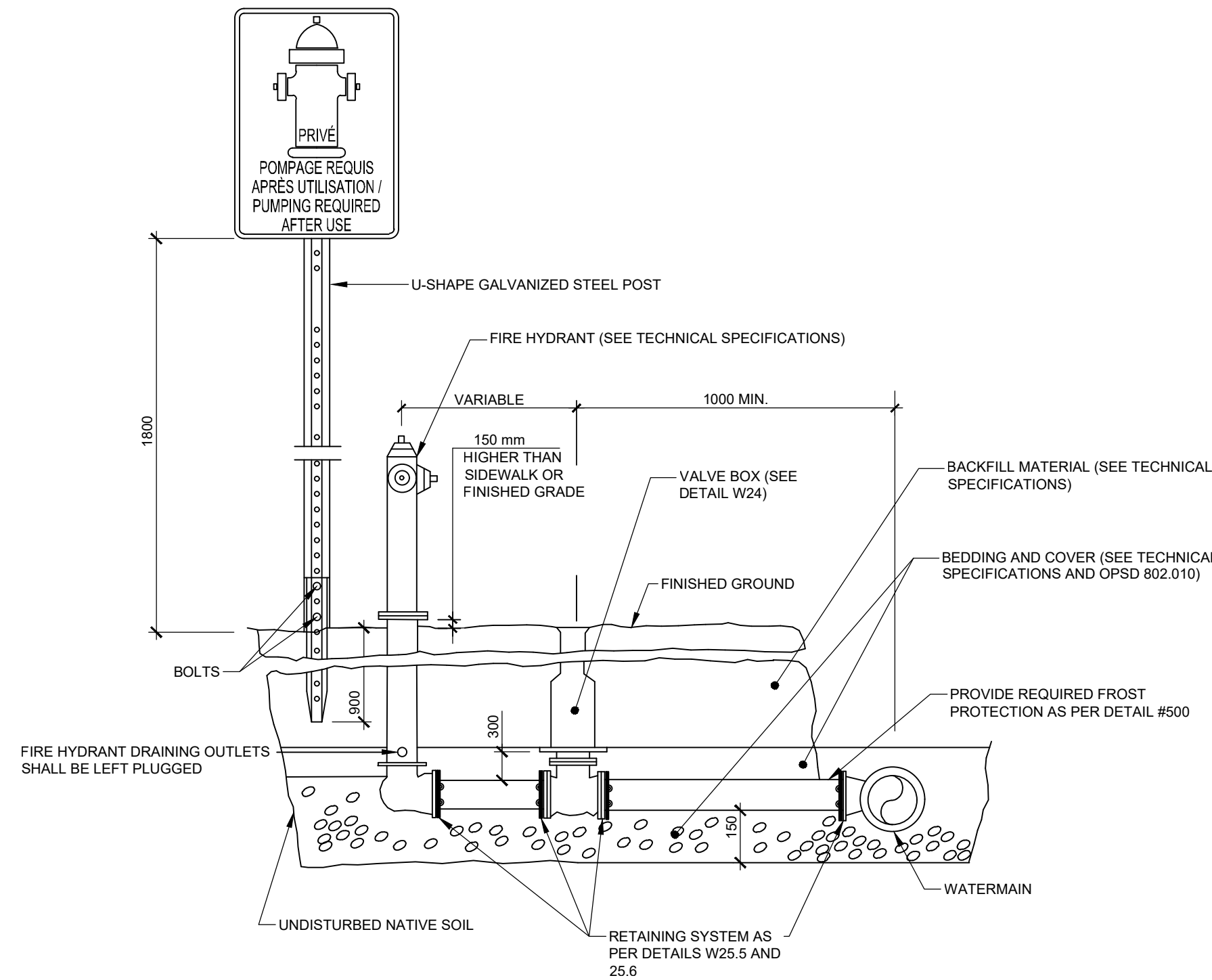
Drawing name: \\c:\cma\plus\cma\cma\C401_01_Plan des services municipaux et de nivellement.dwg Jun 11, 2018 - 10:22am



310 TYPICAL SECTION CROSSING SEWER PIPE AND WATERMAIN DETAIL

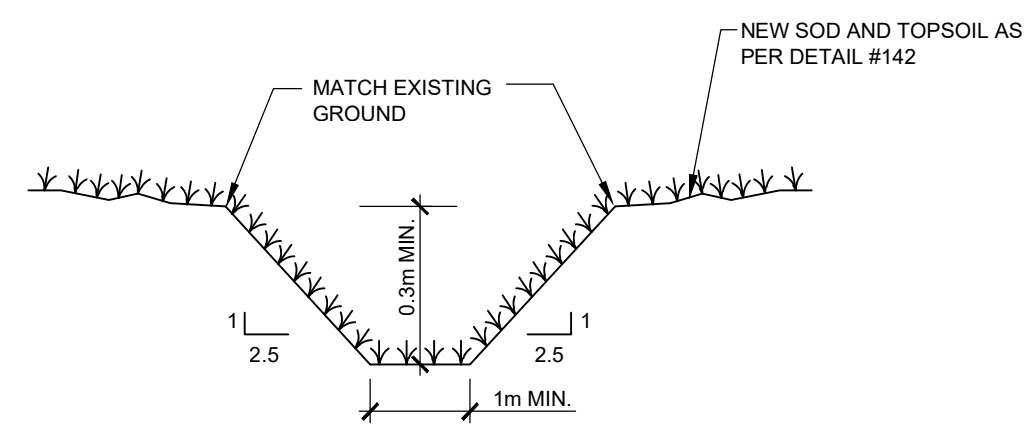


321B STAINLESS STEEL SECURITY GRATE AT PIPE EXIT FOR PVC/HDPE PIPES

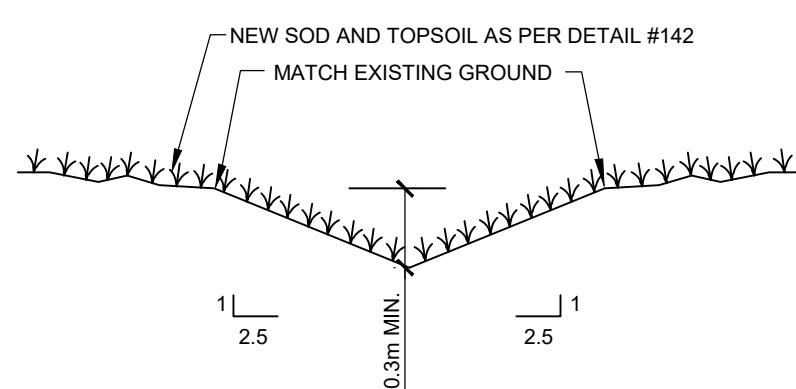


NOTES:
 1 - SEE WATERMAIN SECTION OF THE TECHNICAL SPECIFICATIONS
 2 - ALUMINIUM SIGN WITH BLACK PICTOGRAM ON YELLOW BACKGROUND (20mm HIGH LETTERING)
 3 - CATHODIC PROTECTION AS PER DETAILS W40 AND W42
 4 - MESURES ARE IN MILLIMETRES

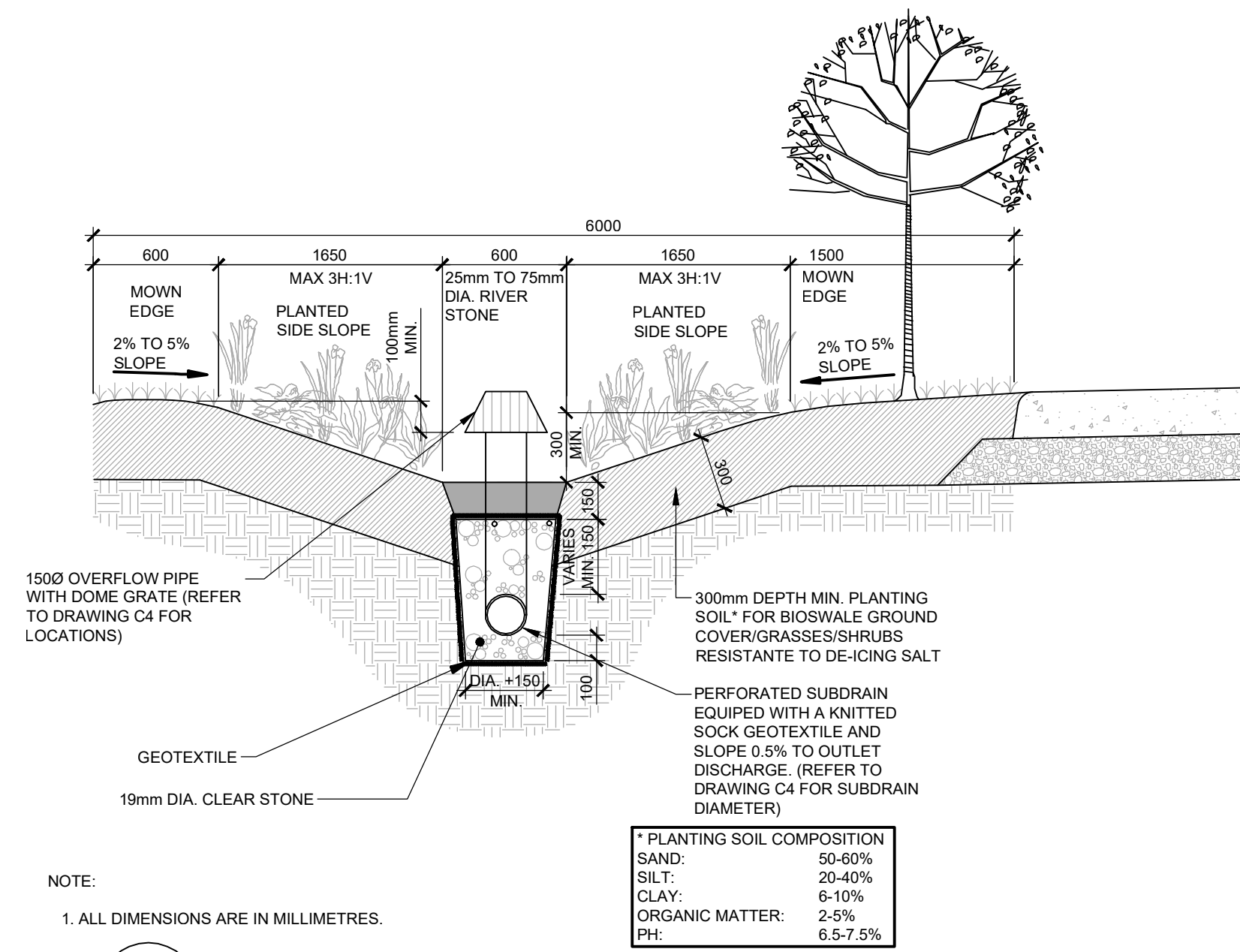
311B PRIVATE FIRE HYDRANT & VALVE INSTALLATION



318 DITCH (TYPICAL)



333 SWALE (TYPICAL)



NOTE:
 1. ALL DIMENSIONS ARE IN MILLIMETRES.

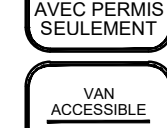
353 BIO-SWALE, RIVER STONE AND PERFORATED SUBDRAIN

* PLANTING SOIL COMPOSITION	
SAND:	50-60%
SILT:	20-40%
CLAY:	6-10%
ORGANIC MATTER:	2-5%
pH:	6.5-7.5%

VAN ACCESSIBLE PARKING SIGN (AODA COMPLIANT)



BY PERMIT ONLY
 AVEC PERMIS SEULEMENT



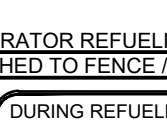
VAN ACCESSIBLE FOURGONNETTE ACCESSIBLE

ACCESSIBLE PARKING SIGN (AODA COMPLIANT)



BY PERMIT ONLY
 AVEC PERMIS SEULEMENT

GENERATOR REFUELLING SIGN (ATTACHED TO FENCE / NO POST)



DURING REFUELLING OF GENERATOR, A SPILL CONTAINMENT KIT MUST BE USED
 LORS DU RAVITAILLEMENT DE LA GENERATRICE, UNE TROUSSE POUR CONTRÔLE DES DÉVERSEMENTS DOIT ÊTRE UTILISÉE.

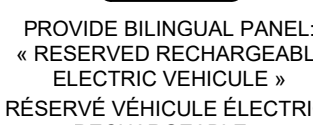


STOP
 RA-1

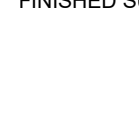
ELECTRICAL VEHICLE SIGN



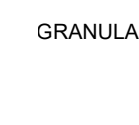
RESERVE RECHARGEABLE ELECTRIC VEHICLE
 RÉSERVÉ VÉHICULE ÉLECTRIQUE RECHARGEABLE



PROVIDE BILINGUAL PANEL:
 « RESERVED RECHARGEABLE ELECTRIC VEHICLE »
 « RÉSERVÉ VÉHICULE ÉLECTRIQUE RECHARGEABLE »

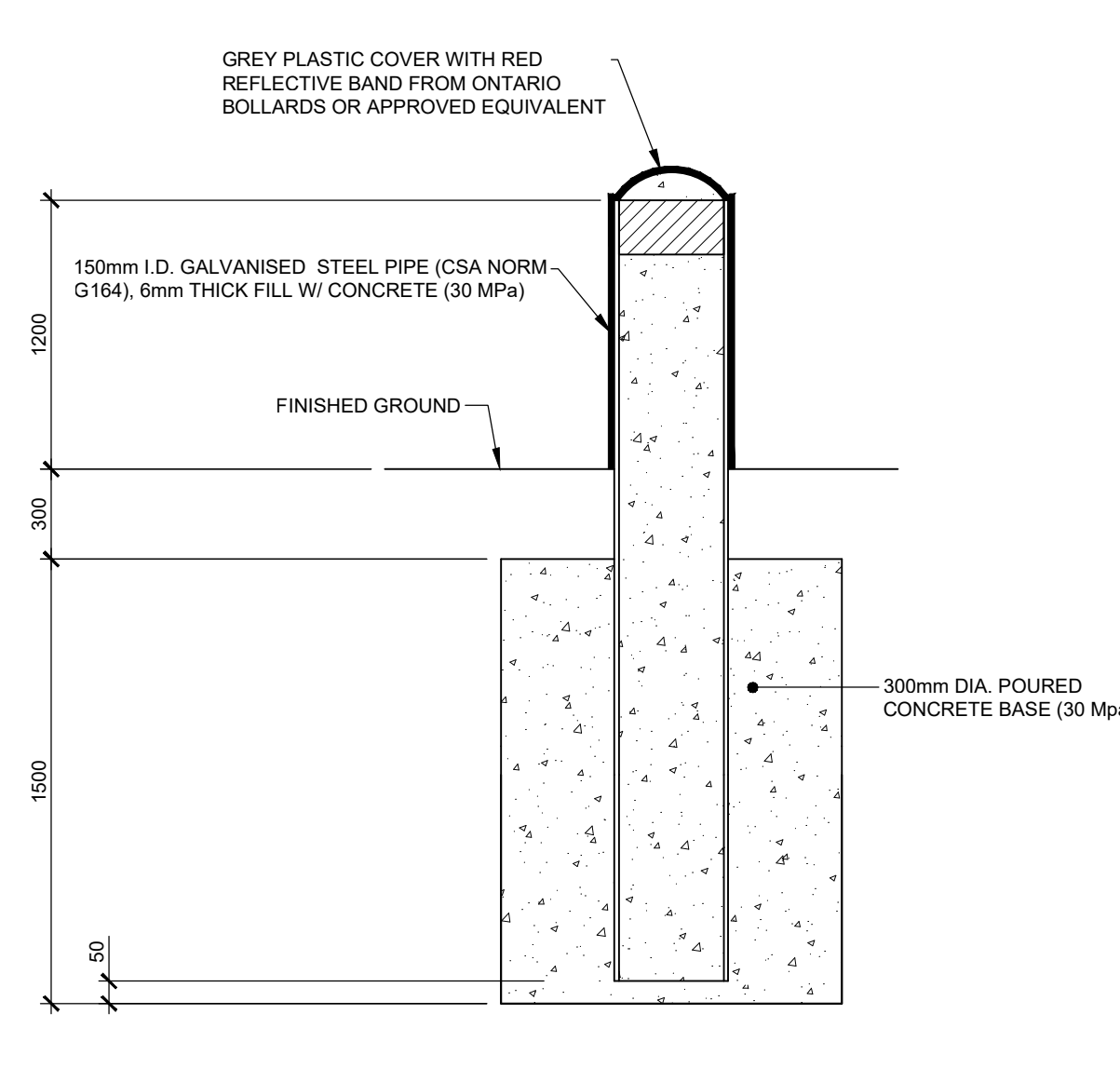
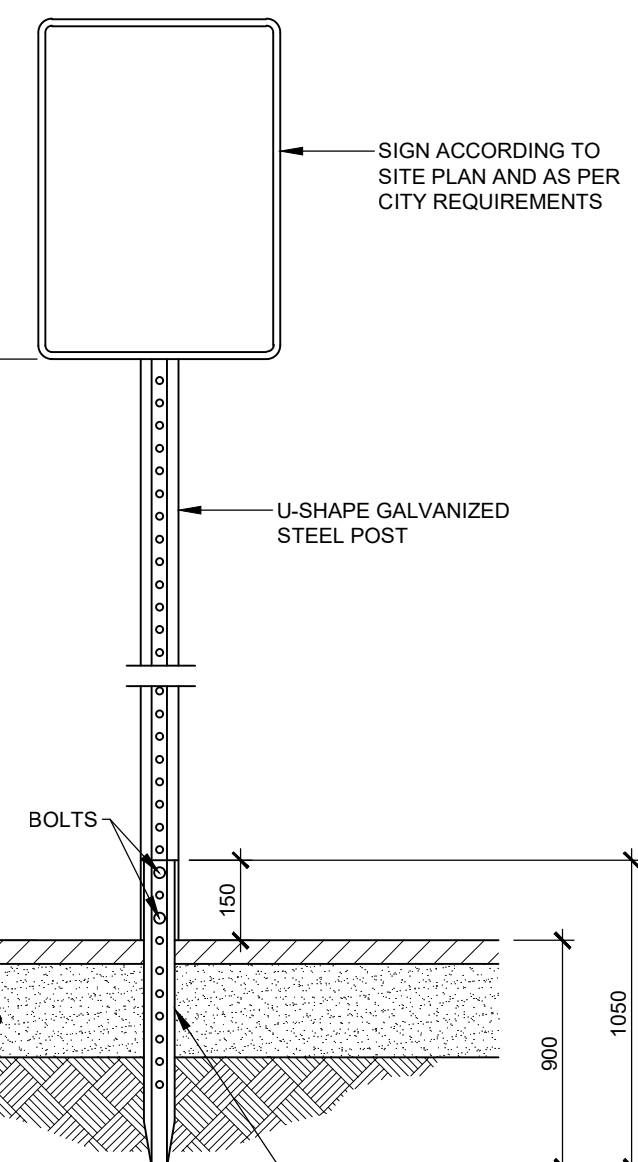


PAVEMENT OR FINISHED SURFACE



GRANULAR BASE

401 FREE STANDING SIGN



403 SECURITY BOLLARD

plan-repère key plan

no. description date

no.	description	date
1	ISSUED FOR TENDER	June 12, 2018

no.	description	date
1	ISSUED FOR TENDER	June 12, 2018

REVISION

projet project

BUILDING A

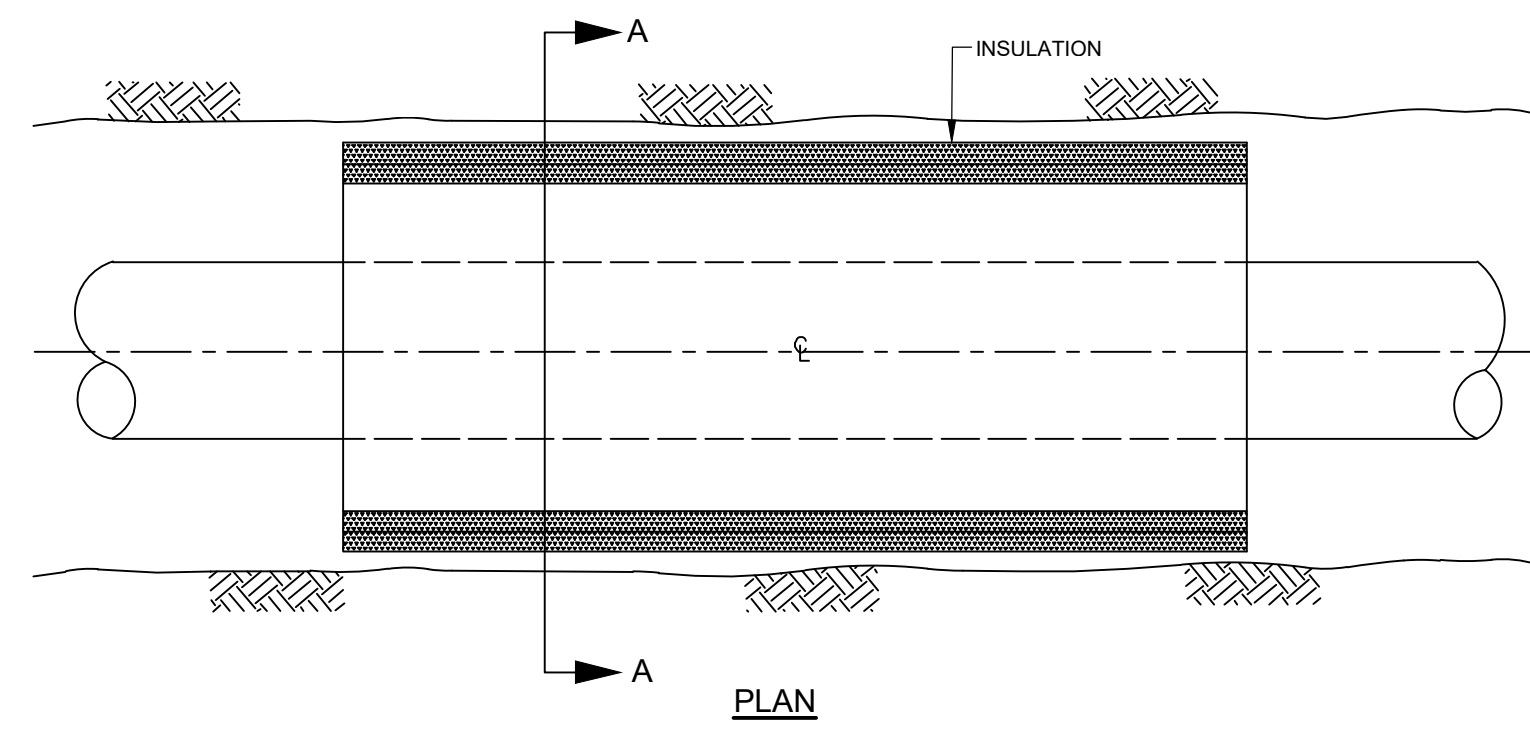
dessin drawing

CIVIL DETAILS

conception	conception	no. dossier	project no.
E. Potvin	A000566B		
dessiné	drawn	fichier DAO	CAD file
J.-P. Pharend	C5_Details		
approuvé	approved	dossier client	client file
H. Bisson	7207528		
échelle	scale	imprimé	plot date
N/A			
no. page	sheet number	rev	

C5.2

1

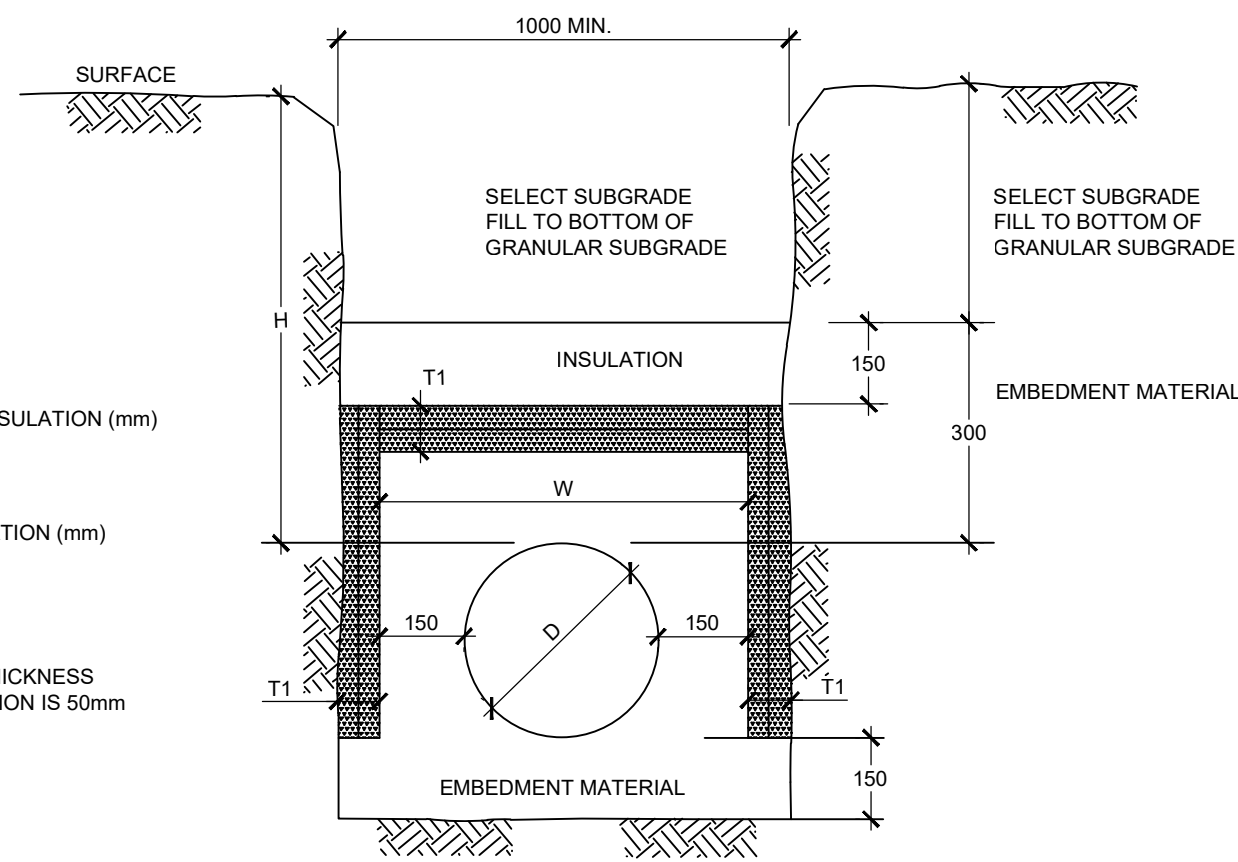


SANITARY SEWER:
T1 = (1800 - H)
12

WATERMAIN:
T1 = (2400 - H)
12

T1 = THICKNESS OF INSULATION (mm)
H = DEPTH OF COVER
W = D + 300
W = WIDTH OF INSULATION (mm)
D = O.D. OF PIPE (mm)

NOTE: MINIMUM THICKNESS OF INSULATION IS 50mm



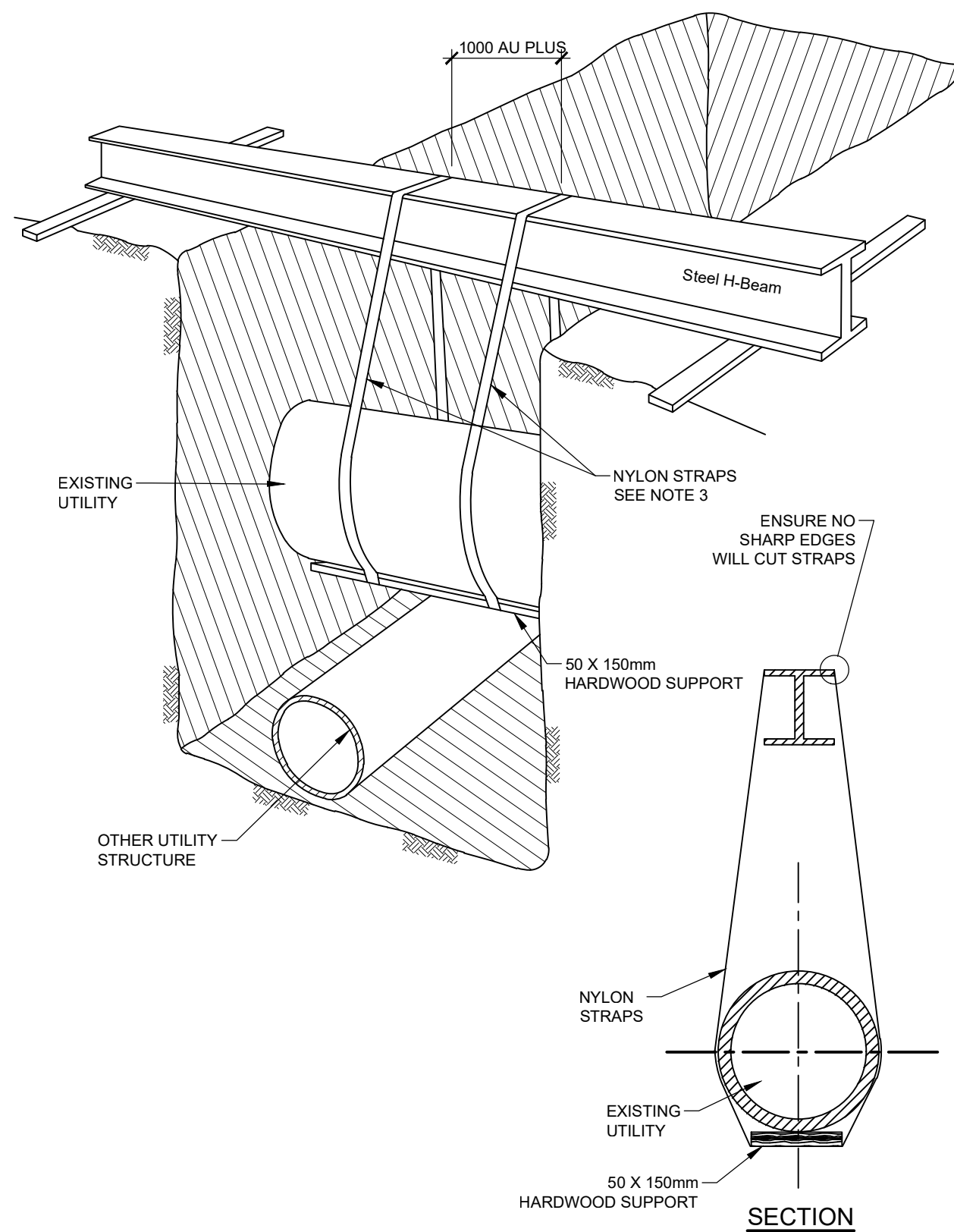
NOTES:

FOR SANITARY SEWER, WHERE THE DEPTH OF COVER IS LESS THAN 1800mm AND FOR WATERMAIN WHERE THE DEPTH OF COVER IS LESS THAN 2400mm

1. RIGID INSULATION SHEETS TO BE HI-40 EXTRUDED POLYSTYRENE
2. INCREMENTS OF THICKNESS SHALL BE ADJUSTABLE TO 25mm.
3. STAGGER JOINTS OF MULTIPLE SHEETS.
4. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

500

THERMAL INSULATION FOR WATERMAINS AND SANITARY SEWER PIPES IN SHALLOW TRENCHES

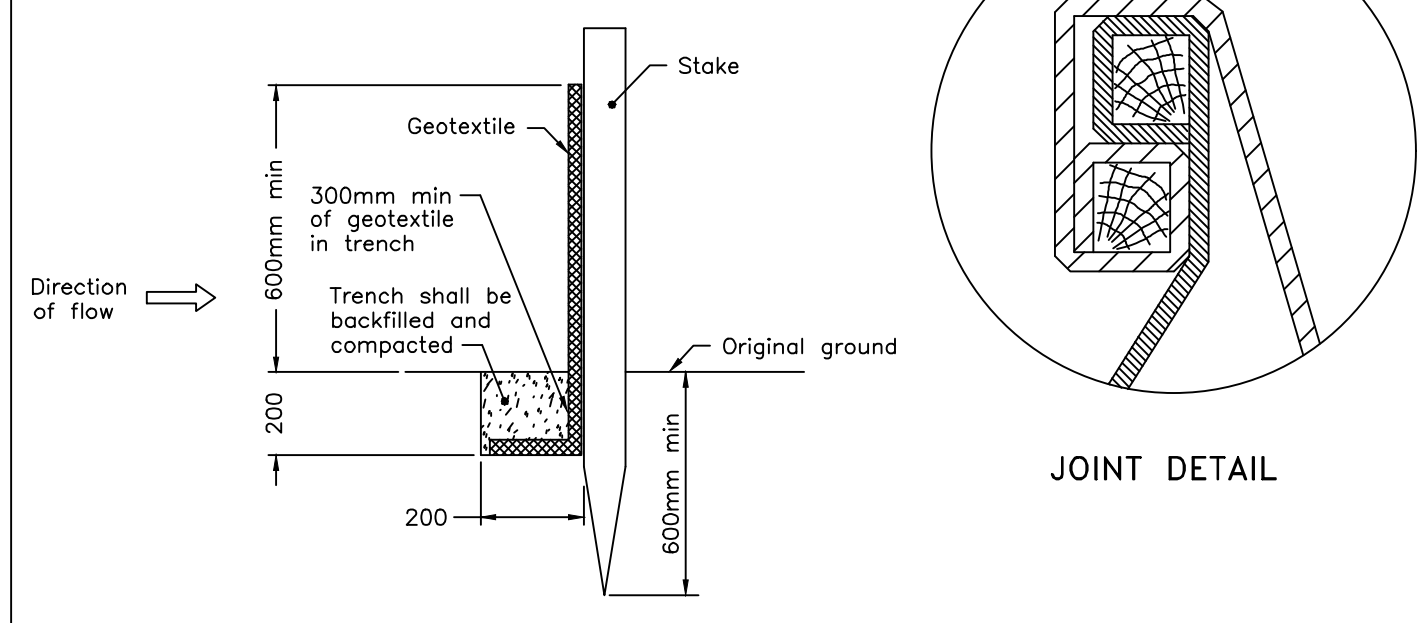
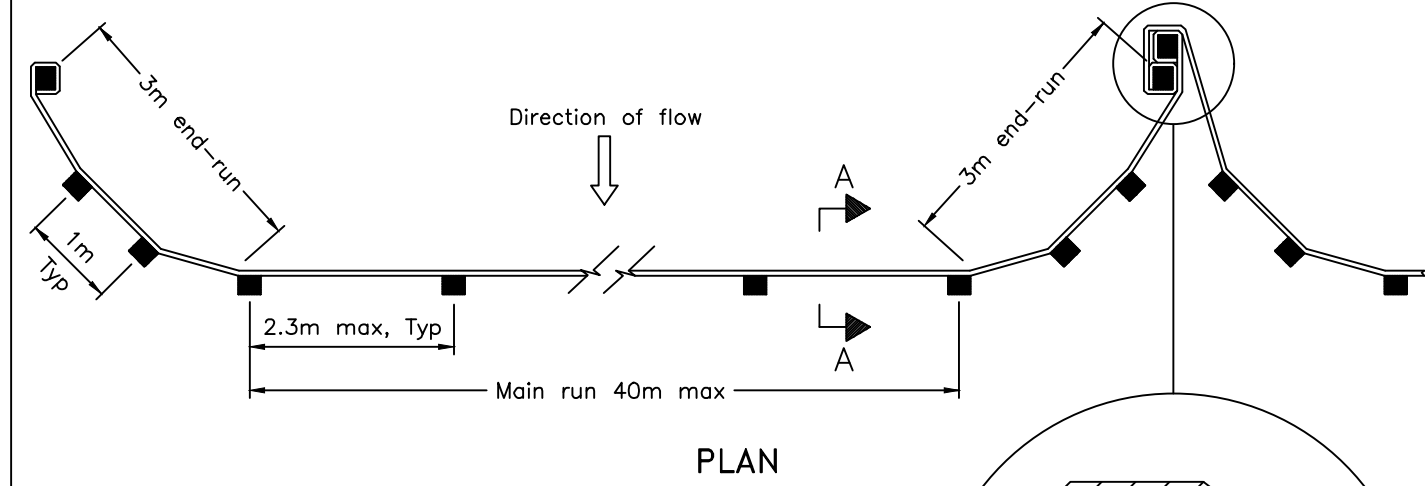
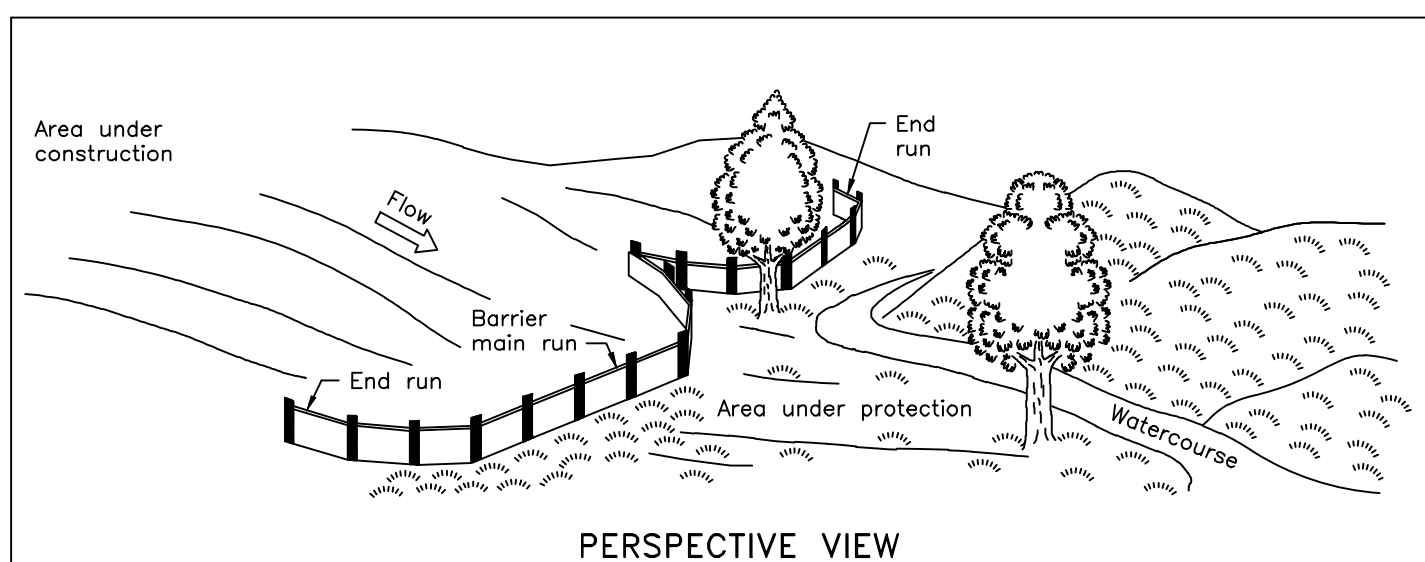


NOTES:

1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE
2. THE UNSUPPORTED LENGTH OF THE EXISTING UTILITY SHALL NOT EXCEED 1000mm.
3. STRAPS MUST MEET THE REQUIREMENTS OF THE O.H.S.A. CHAINS ARE NOT PERMITTED.

600

TEMPORARY SUPPORT FOR EXISTING UTILITY



NOTE:

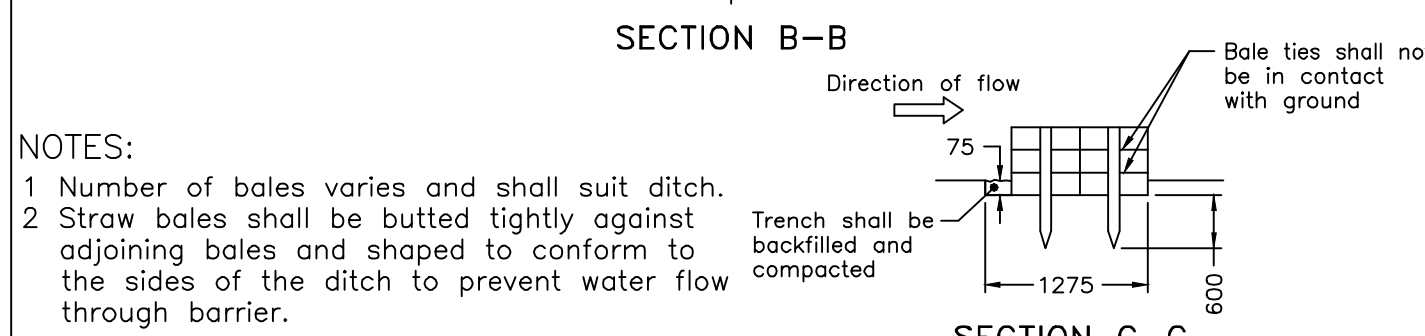
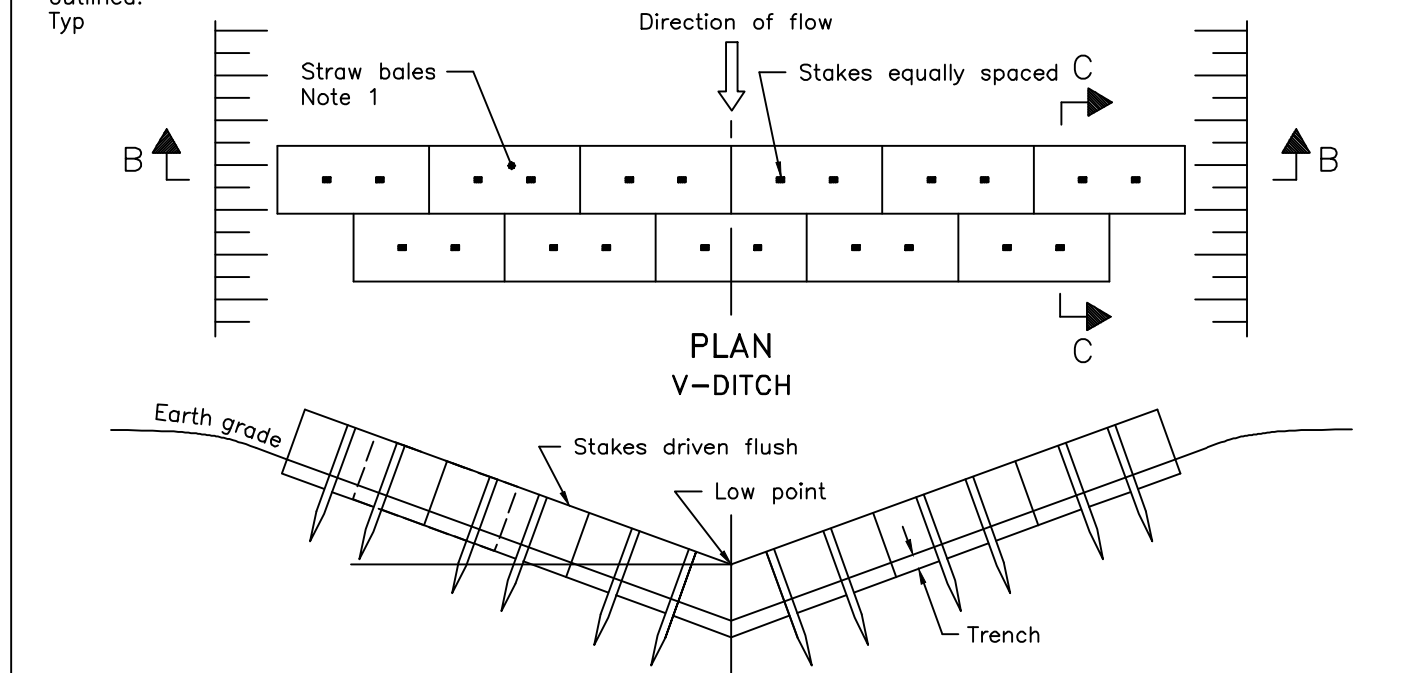
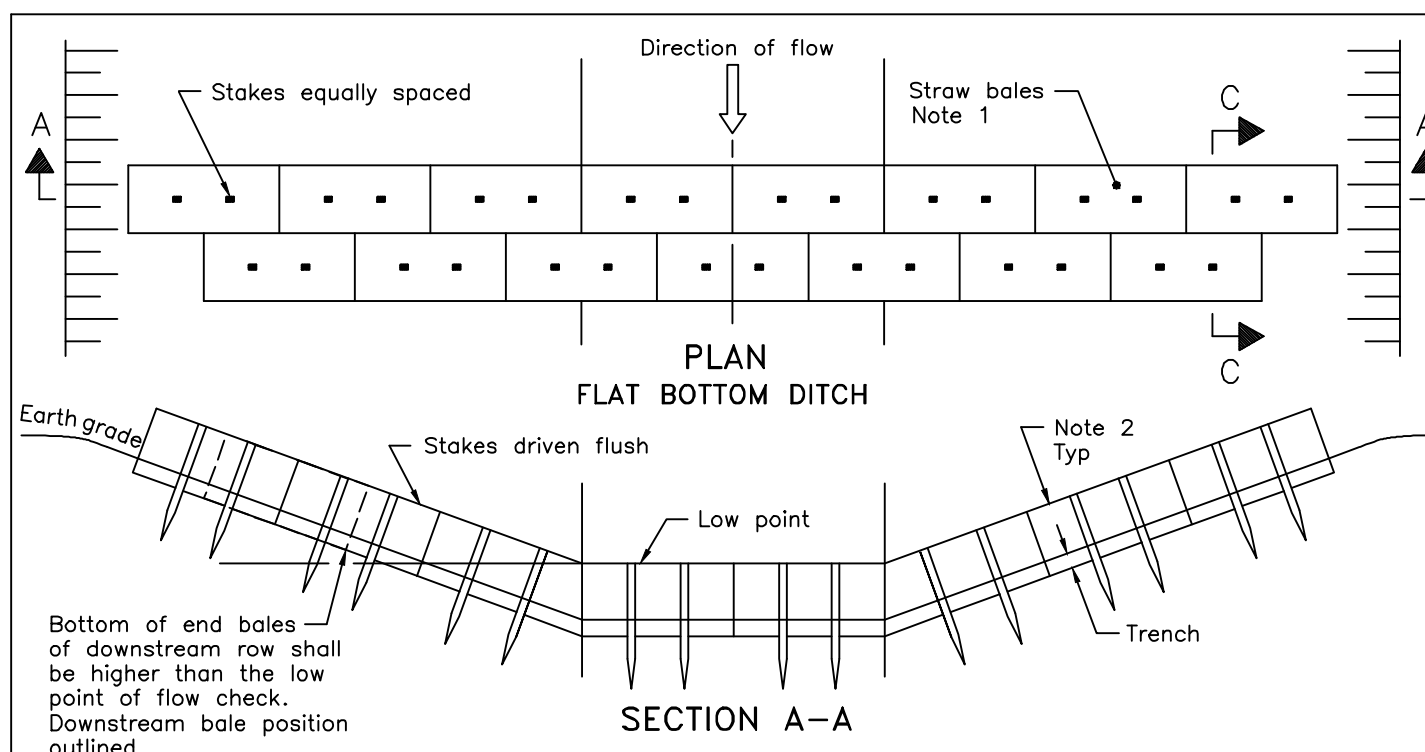
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2015 Rev 2

LIGHT-DUTY SILT FENCE BARRIER

OPSD 219.110



NOTES:

- 1 Number of bales varies and shall suit ditch.
- 2 Straw bales shall be butted tightly against adjoining bales and shaped to conform to the sides of the ditch to prevent water flow through barrier.

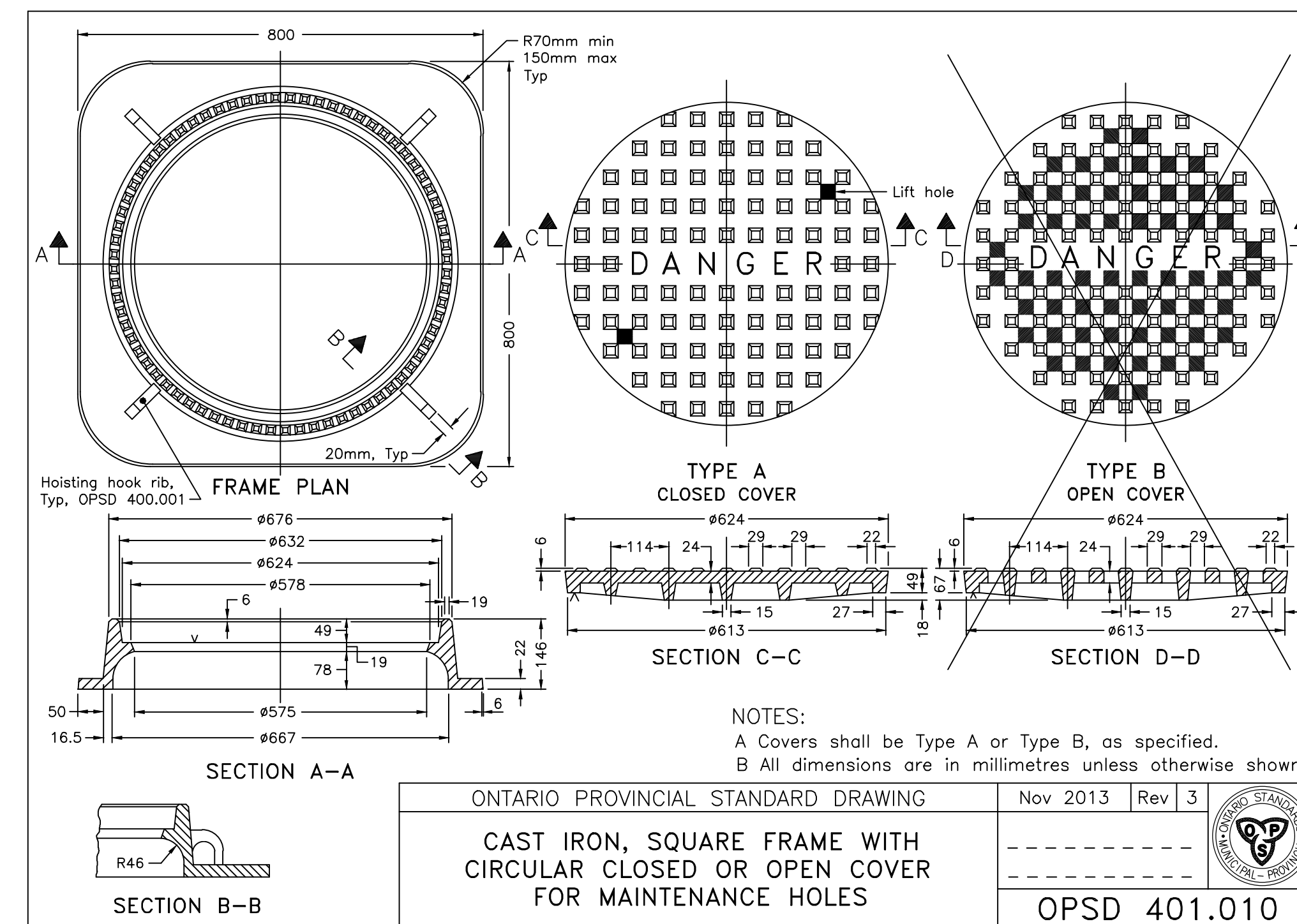
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2015 Rev 2

STRAW BALE FLOW CHECK DAM

OPSD 219.180



NOTES:

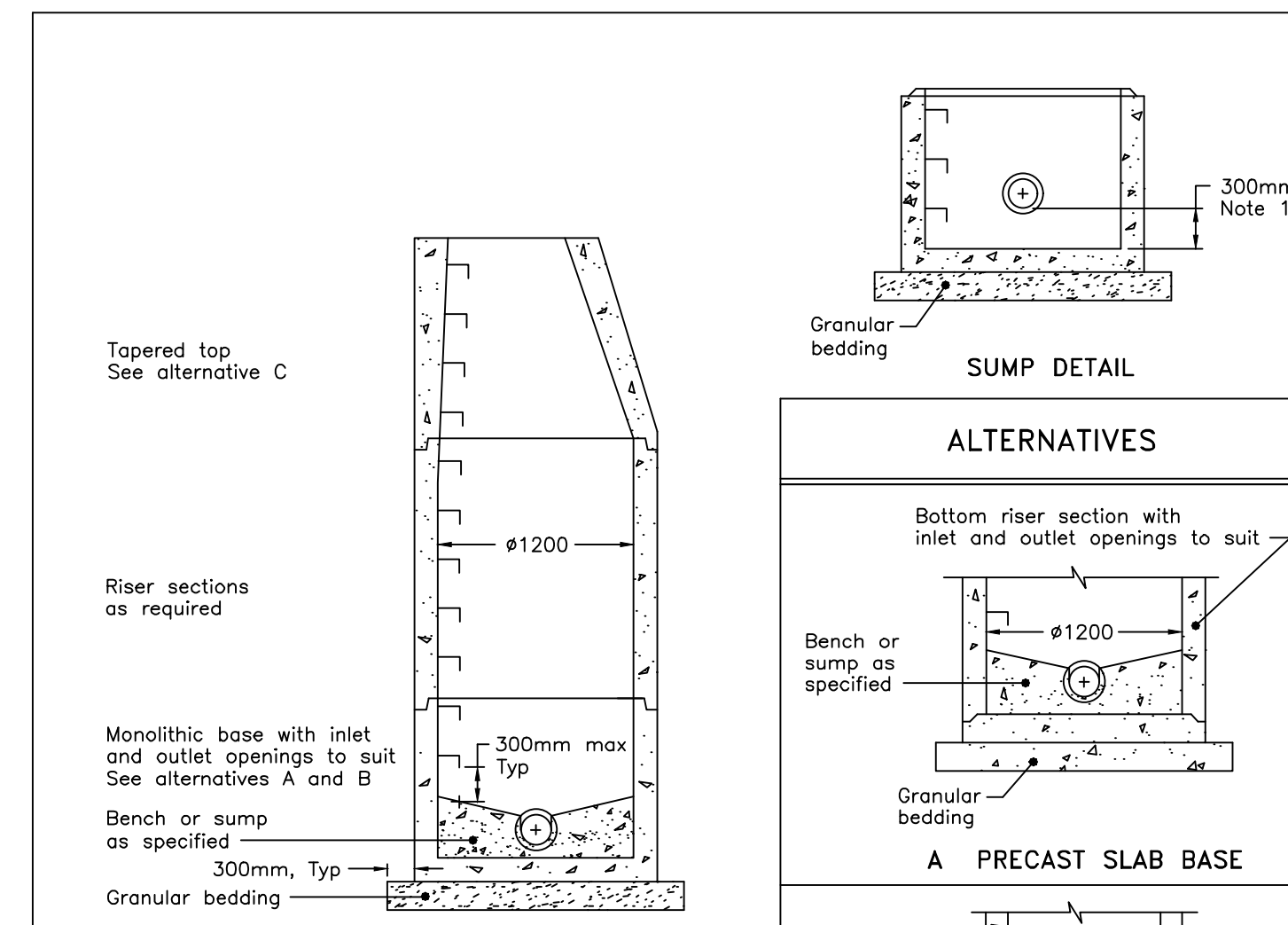
- A Covers shall be Type A or Type B, as specified.
- B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING

Nov 2013 Rev 3

CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES

OPSD 401.010



NOTES:

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

plan-référence key plan

seceau stamp



1 ISSUED FOR TENDER June 12, 2018

no.	description	date
RÉVISION		

project project

BUILDING A

dessin drawing

CIVIL DETAILS

conception conception no. dossier project no.

E. Potvin conception A000566B

dessiné drawn fichier DAO CAD file

J.-P. Pharend drawn C5_Details

approuvé approved dossier client client file

H. Bisson approved 7207528

échelle scale imprimé plot date

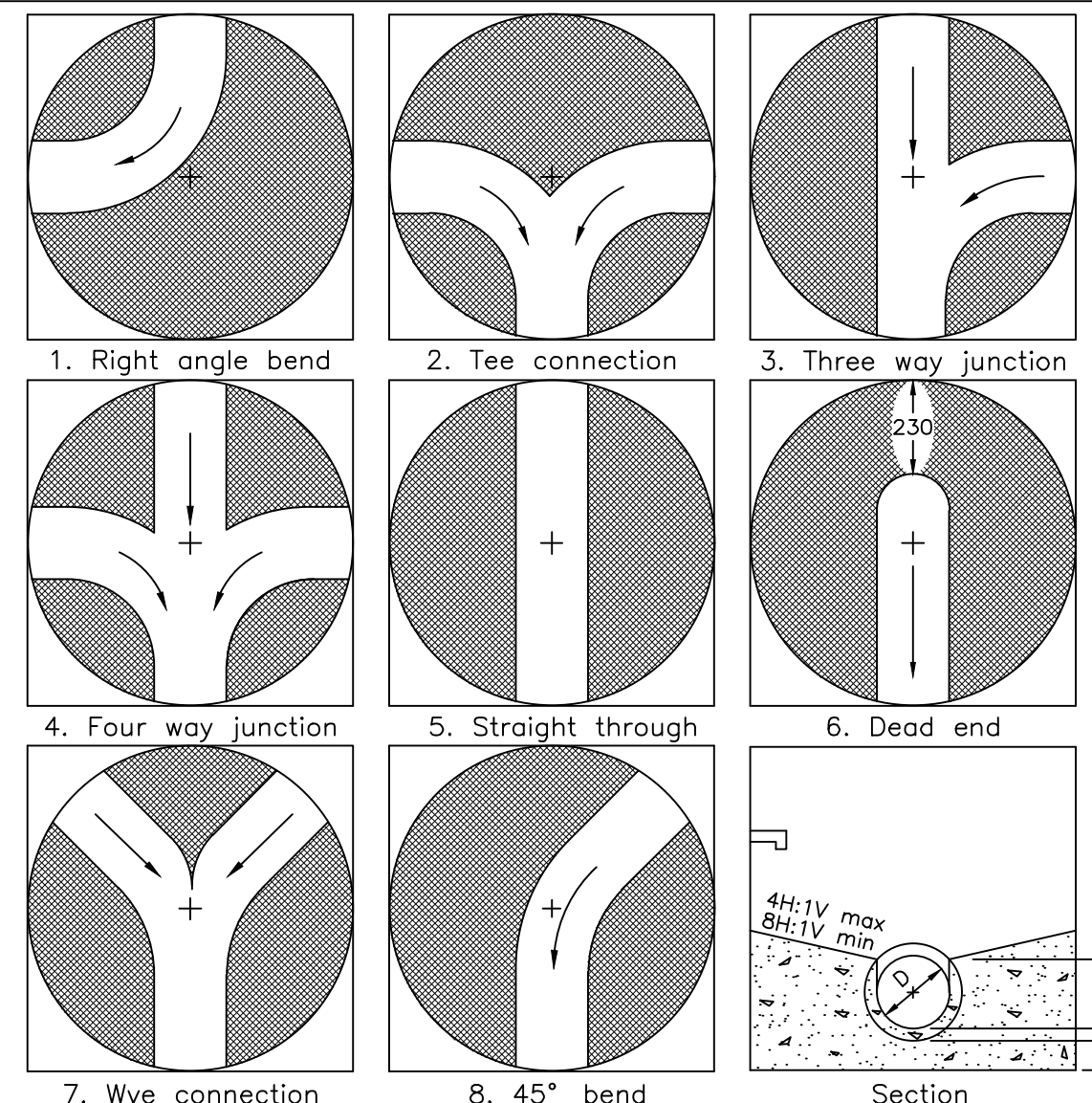
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C5.3

1

Drawing name: \\c:\cma\plus\cma\cma-c10\01_projects\A\000566B_Building_A\001_460\C5_Details.dwg Jun. 11, 2018 - 10:14am



MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS

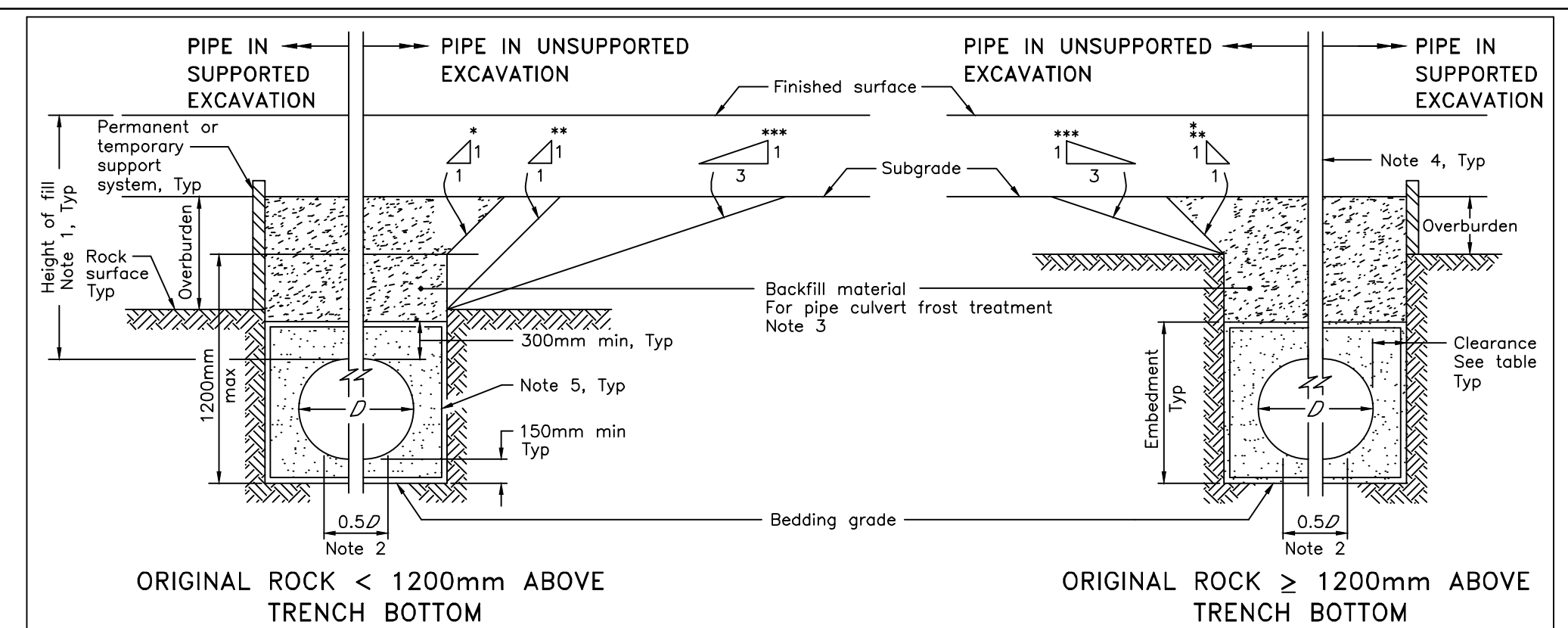
Maintenance Hole Diameter	No. 1-4	No. 5 and 6	No. 8	No. 7	
	Inlet Hole	Outlet Hole			
1200	700	860	780	700	860
1500	860	1220	960	860	1170
1800	1220	1485	1220	1220	1485
2400	1485	2020	1760	1485	2020
3000	1930	2450	2300	1930	2450
3600	2470	3085	2730	2470	3085

NOTES:
 1 Slopes 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 Benchings 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 pre-benching 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



ORIGINAL ROCK < 1200mm ABOVE TRENCH BOTTOM

ORIGINAL ROCK ≥ 1200mm ABOVE TRENCH BOTTOM

NOTES:
 1 Height of fill is measured from the finished surface to top of pipe.
 2 The pipe bed shall be compacted and shaped to receive the bottom of the pipe.
 3 Pipe culvert frost treatment shall be according to OPSD 803.030 and 803.031.
 4 Condition of excavation is symmetrical about centreline of pipe.
 5 Embedment material shall be wrapped in non-woven geotextile when specified.
 A Granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
 B Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
 C Fractured rock shall be treated as Type 1 soil.
 D All dimensions are in metres unless otherwise shown.

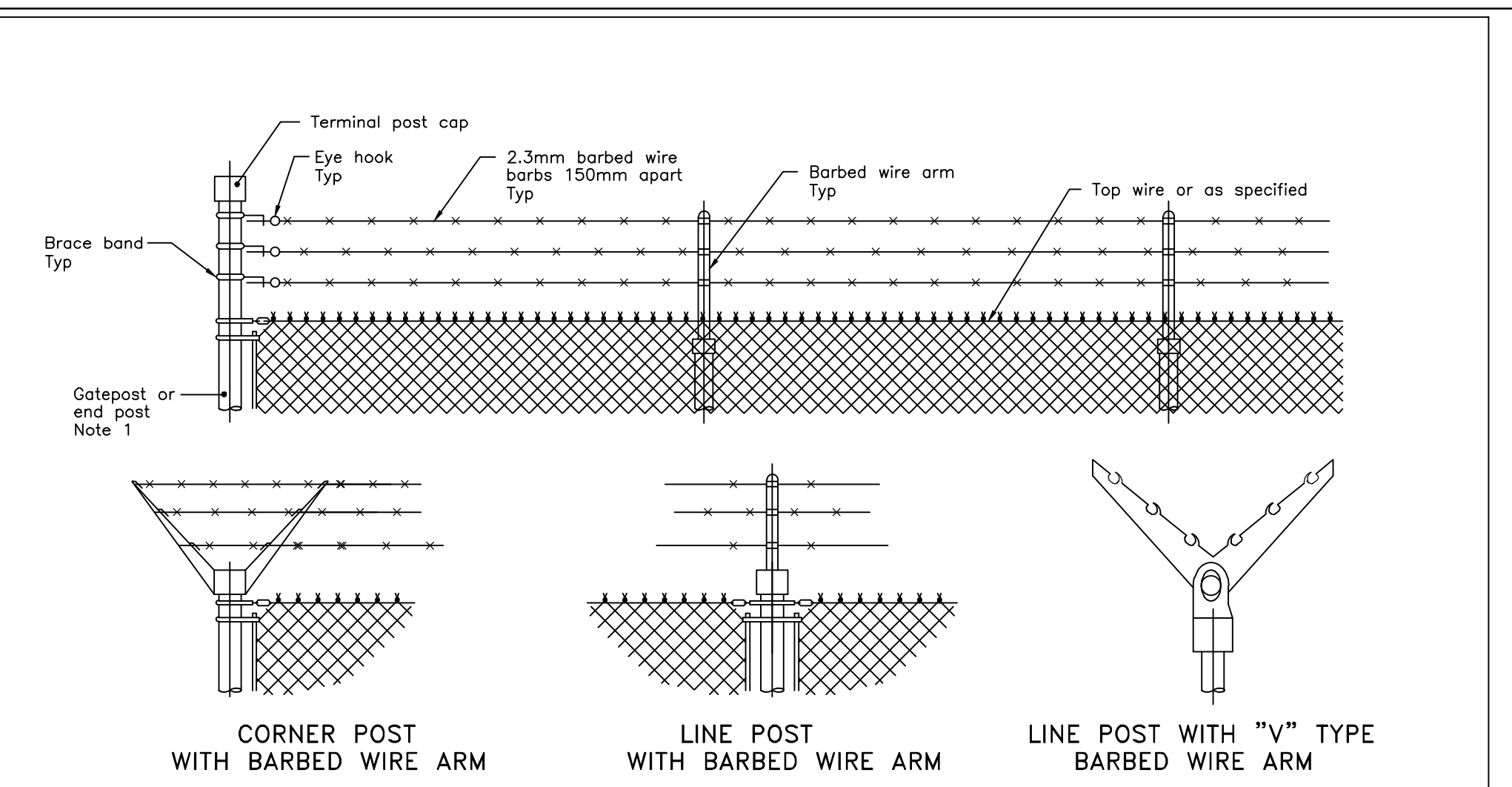
LEGEND:
 ∅ - Inside diameter
 * - Type 1 or 2 soil
 ** - Type 3 soil
 *** - Type 4 soil

Pipe Inside Diameter mm	Clearance mm
900 or less	300
Over 900	500

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3

FLEXIBLE PIPE EMBEDMENT AND BACKFILL ROCK EXCAVATION

OPSD 802.013



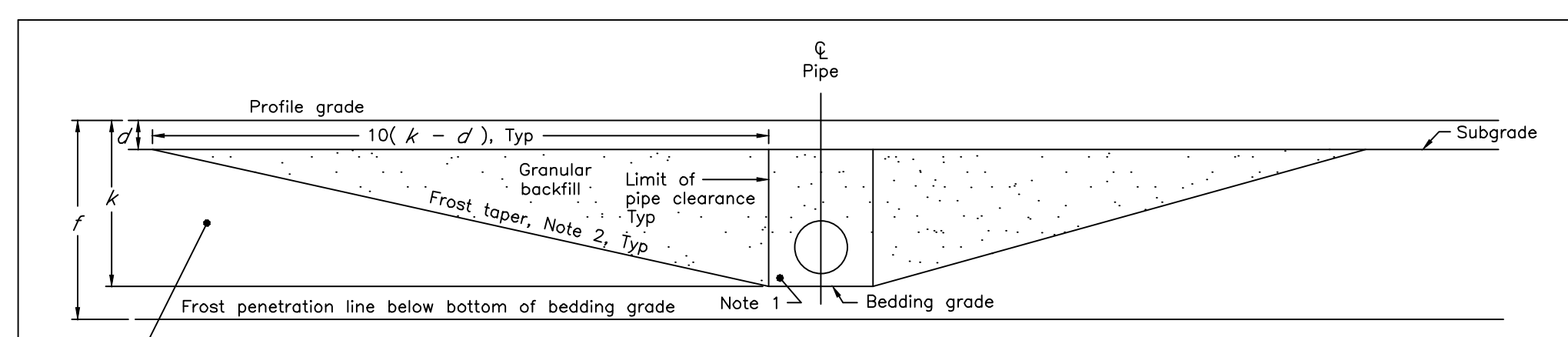
NOTES:
 1 Terminal post shall be lengthened when barbed wire is specified, except when barbed wire arms are used.
 A Installation as viewed from the roadway.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2

Modified by Cima + Nov 2017

FENCE, CHAIN-LINK COMPONENT - BARBED WIRE

OPSD 972.101



FROST TREATMENT RIGID AND FLEXIBLE PIPE

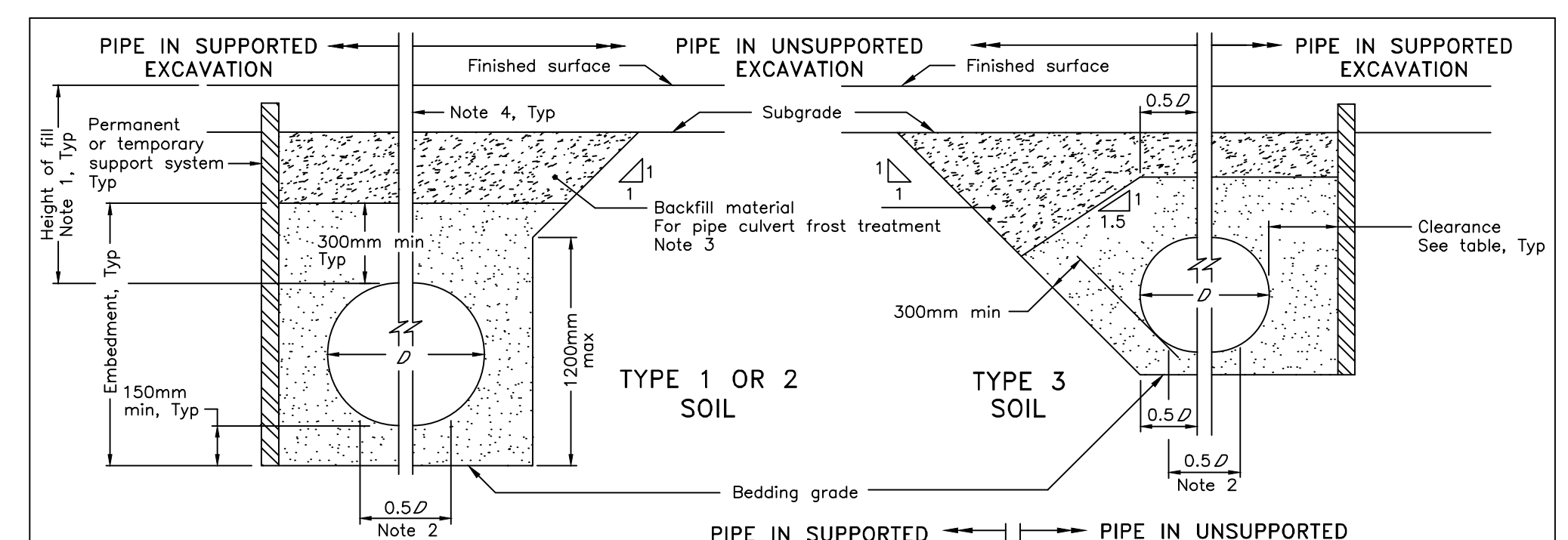
NOTES:
 1 Pipe embedment or bedding, cover, and backfill shall be according to:
 a) Flexible OPSD 802.010, 802.013, 802.014, 802.020, 802.023, and 802.024.
 b) Rigid - OPSD 802.030, 802.031, 802.032, 802.033, 802.034, 802.050, 802.051, 802.052, 802.053, and 802.054.
 2 Frost tapers shall start at bedding grade.

LEGEND:
 ∅ - depth of roadbed granular
 k - depth of frost treatment below profile grade
 f - depth of frost penetration below profile grade

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2015 Rev 3

FROST TREATMENT - PIPE CULVERTS FROST PENETRATION LINE BELOW BEDDING GRADE

OPSD 803.030



LEGEND:
 ∅ - Inside diameter

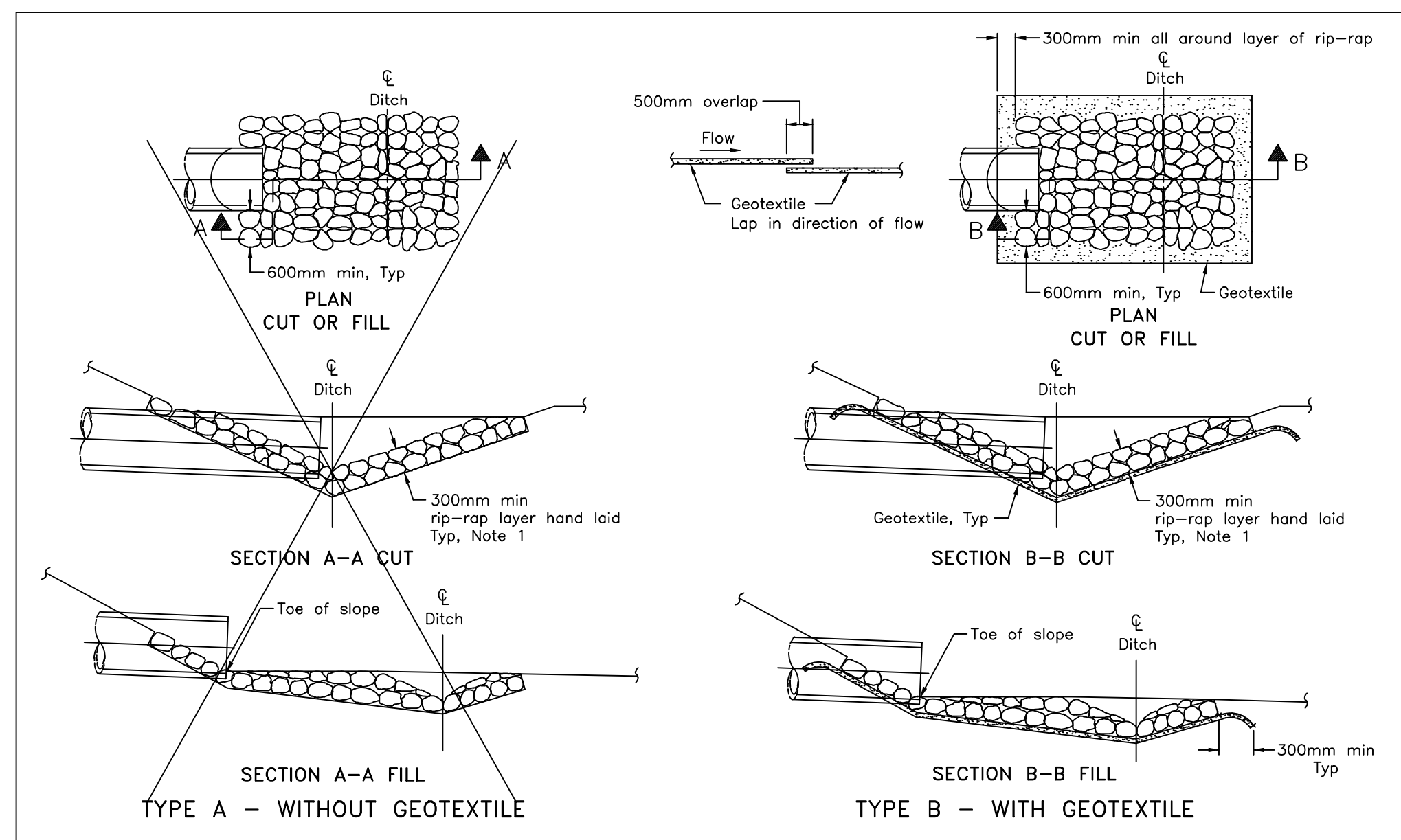
NOTES:
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 3 Pipe culvert frost treatment shall be according to OPSD 803.030 and 803.031.
 4 Condition of excavation is symmetrical about centreline of pipe.
 A Granular material placed in the haunch area shall be compacted prior to placing and compacting the remainder of the embedment material.
 B Soil types as defined in the Occupational Health and Safety Act and Regulations for Construction Projects.
 C All dimensions are in metres unless otherwise shown.

Pipe Inside Diameter mm	Clearance mm
900 or less	300
Over 900	500

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2014 Rev 3

FLEXIBLE PIPE EMBEDMENT AND BACKFILL EARTH EXCAVATION

OPSD 802.010

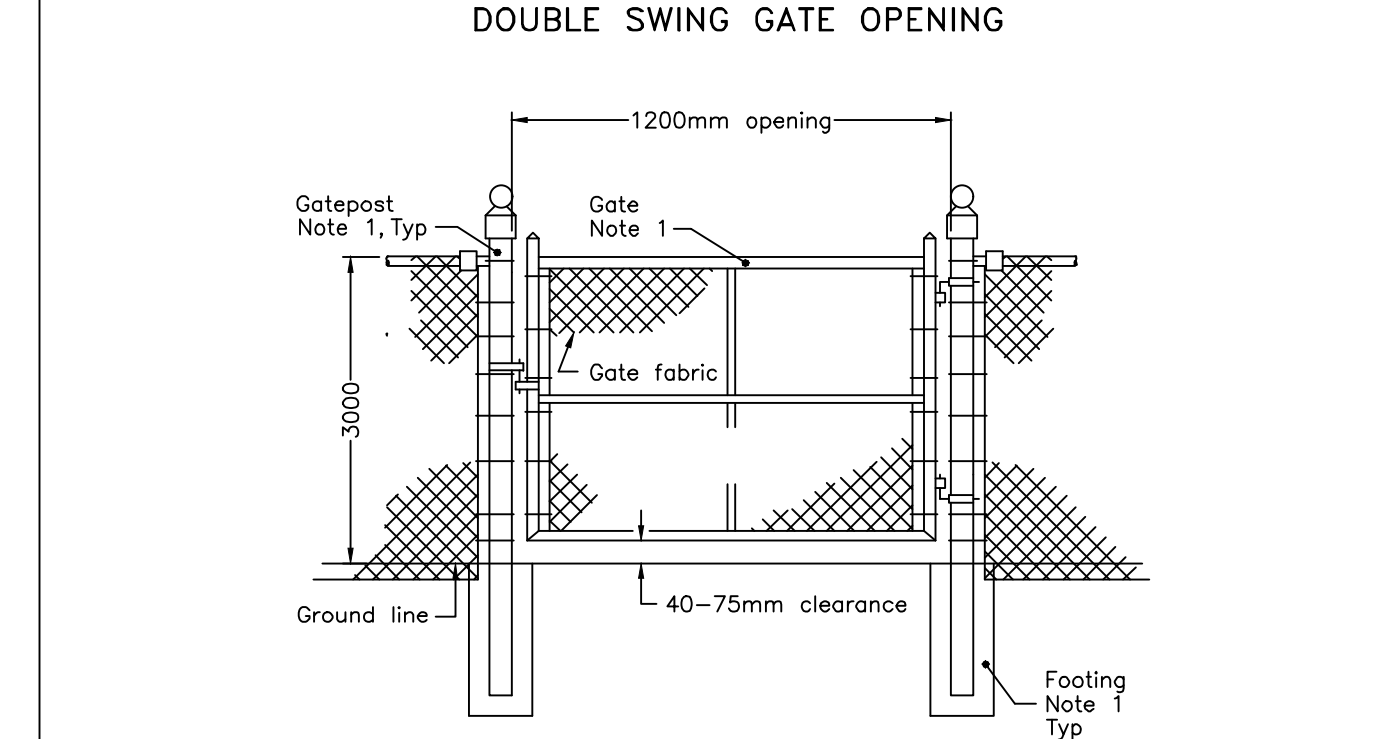
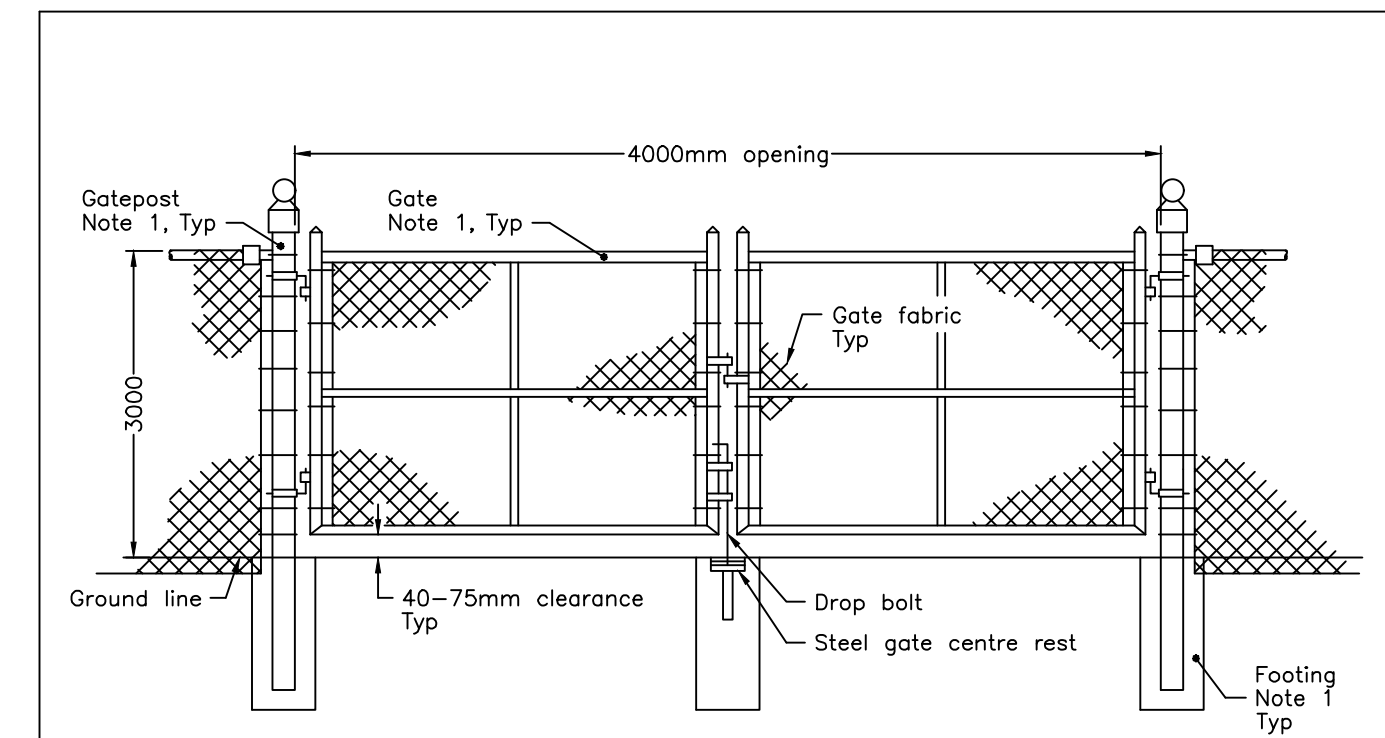


NOTES:
 1 The thickness of the rip-rap layer shall be at least 1.5 times the rip-rap mean diameter.
 A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2013 Rev 2

GENERAL RIP-RAP LAYOUT FOR SEWER AND CULVERT OUTLETS

OPSD 810.010



NOTES:
 1 For footing details and Gate and Gatepost Details Table refer to OPSD modified 972.132.
 A Gates as viewed from the roadway.
 B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING Nov 2012 Rev 2

Modified by Cima + Nov 2017

FENCE, CHAIN-LINK COMPONENT - GATE

OPSD 972.102

ADDITIONAL NOTES:
 2 Single gate must be equipped with an electronic access control. Refer to electrical and architectural drawings and specifications.
 3 Double gate must be equipped with a locking hardware suitable for a pad lock. Refer to electrical and architectural drawings and specifications.
 4 Double gate must swing open into the new building compound and be equipped with a hold open device.
 5 Barbed wire to be install as per OPSD modified 972.101

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plan-repère key plan
 sceau stamp

LICENCED PROFESSIONAL ENGINEER
 J. M. E. POTVIN
 100208480
 2018-06-11
 PROVINCE OF ONTARIO

no.	description	date
1	ISSUED FOR TENDER	June 12, 2018

RÉVISION

projet project

BUILDING A

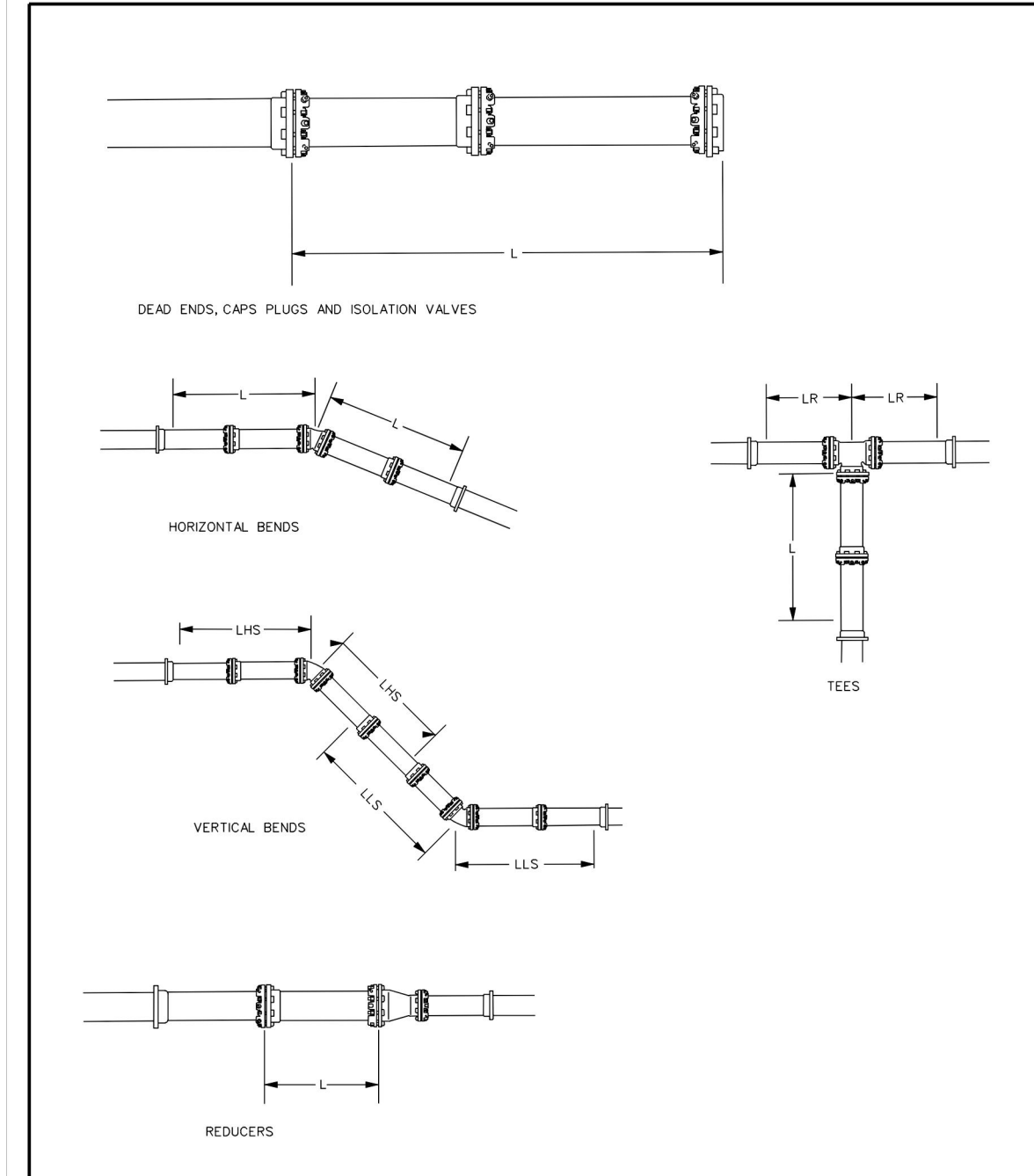
dessin drawing

CIVIL DETAILS

conception	conception	no. dossier	project no.
E. Potvin		A000566B	
dessins	drawn	fichier DAO	CAD file
J.-P. Pharend		C5_Détails	
approuvé	approved	dossier client	client file
H. Bisson		7207528	
échelle	scale	imprimé	plot date
N/A			
no. page	sheet number	rev	
		1	

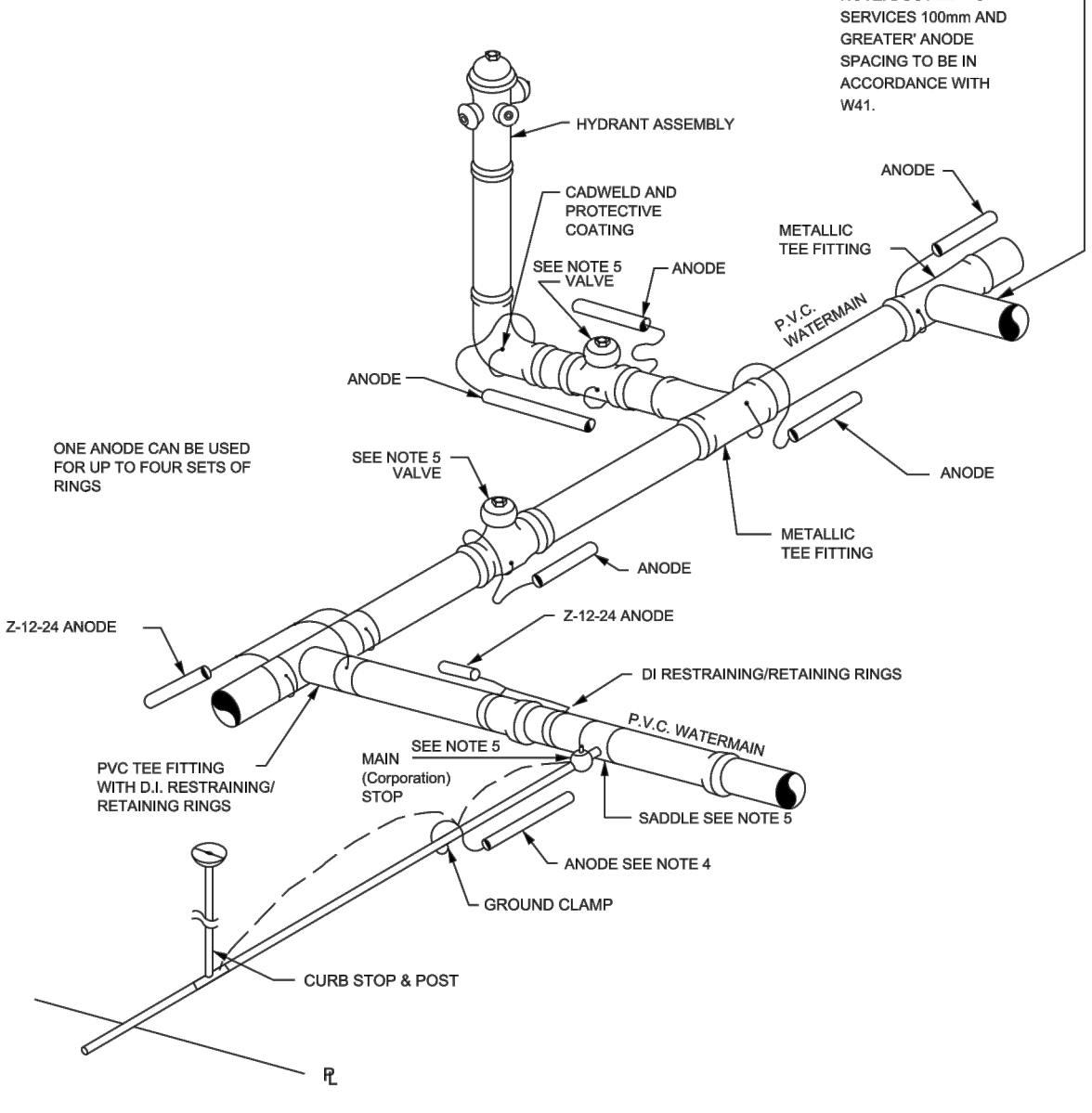
C5.4

Drawing name: \\c:\cma\plus\cma\cma-c10\01-Projects\A\000566B_Building_A\000566B_Building_A.dwg Jun 11, 2018 - 10:14am



NOTES:
 1. ANY JOINT THAT FALLS WITHIN THE RECOMMENDED LENGTH (L) SHALL BE RESTRAINED, SEE DRAWING W25.6
 2. TO REDUCE THE NUMBER OF RESTRAINERS REQUIRED THE USE OF FULL PIPE LENGTHS IS RECOMMENDED IN THESE AREAS.

Ottawa RESTRAINING AND RETAINING RINGS FOR PVC AND DI PIPE 400mm AND UNDER
 DATE: MAY 2001
 REV. DATE: NONE
 DWG. No.: W25.5



NOTE: DUCTILE IRON SERVICES 100mm AND GREATER ANODE SPACING TO BE IN ACCORDANCE WITH W41.
 ONE ANODE CAN BE USED FOR UP TO FOUR SETS OF RINGS
 SEE NOTE 5 VALVE
 Z-12-24 ANODE
 DI RESTRAINING/RETAINING RINGS
 PVC TEE FITTING WITH DI RESTRAINING/RETAINING RINGS
 MAIN (CORROSION) STOP
 ANODE SEE NOTE 4
 GROUND CLAMP
 CURB STOP & POST
 R

Ottawa CATHODIC PROTECTION FOR PVC WATERMAIN SYSTEMS
 DATE: MAY 2001
 REV. DATE: MARCH 2013
 DWG. No.: W40

TABLE OF RESTRAINED LENGTHS FOR DI AND PVC WATERMAIN PIPE IN STANDARD GRANULAR 'A' EMBEDMENT IN SOILS OF BEARING CAPACITY OF 100 kPa AND OVER

REDUCERS SMALLER DIAMETER (UNRESTRAINED)	LARGER DIAMETER SIDE (TO BE RESTRAINED)					
	100mm	150mm	200mm	250mm	300mm	400mm
100mm	N/A	3	6	8	10	14
150mm	N/A	N/A	4	6	9	13
200mm	N/A	N/A	N/A	3	6	11
250mm	N/A	N/A	N/A	N/A	4	9
300mm	N/A	N/A	N/A	N/A	N/A	7
400mm	N/A	N/A	N/A	N/A	N/A	N/A

DEAD ENDS, CAPS, PLUGS, VALVES BEFORE CAPS AND EITHER SIDE OF VALVES - L	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
	5	6	9	10	12	16

VERTICAL BENDS LENGTH HIGH SIDE - LHS	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
	3	4	5	6	7	9
LENGTH LOW SIDE - LLS	1.5	2	2.5	3	3.5	4.5

TEES LENGTH ALONG THE BRANCH - L	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
	1	1	1	1	1	1
LENGTH ALONG THE RUN - LR	3	3	3	3	3	3

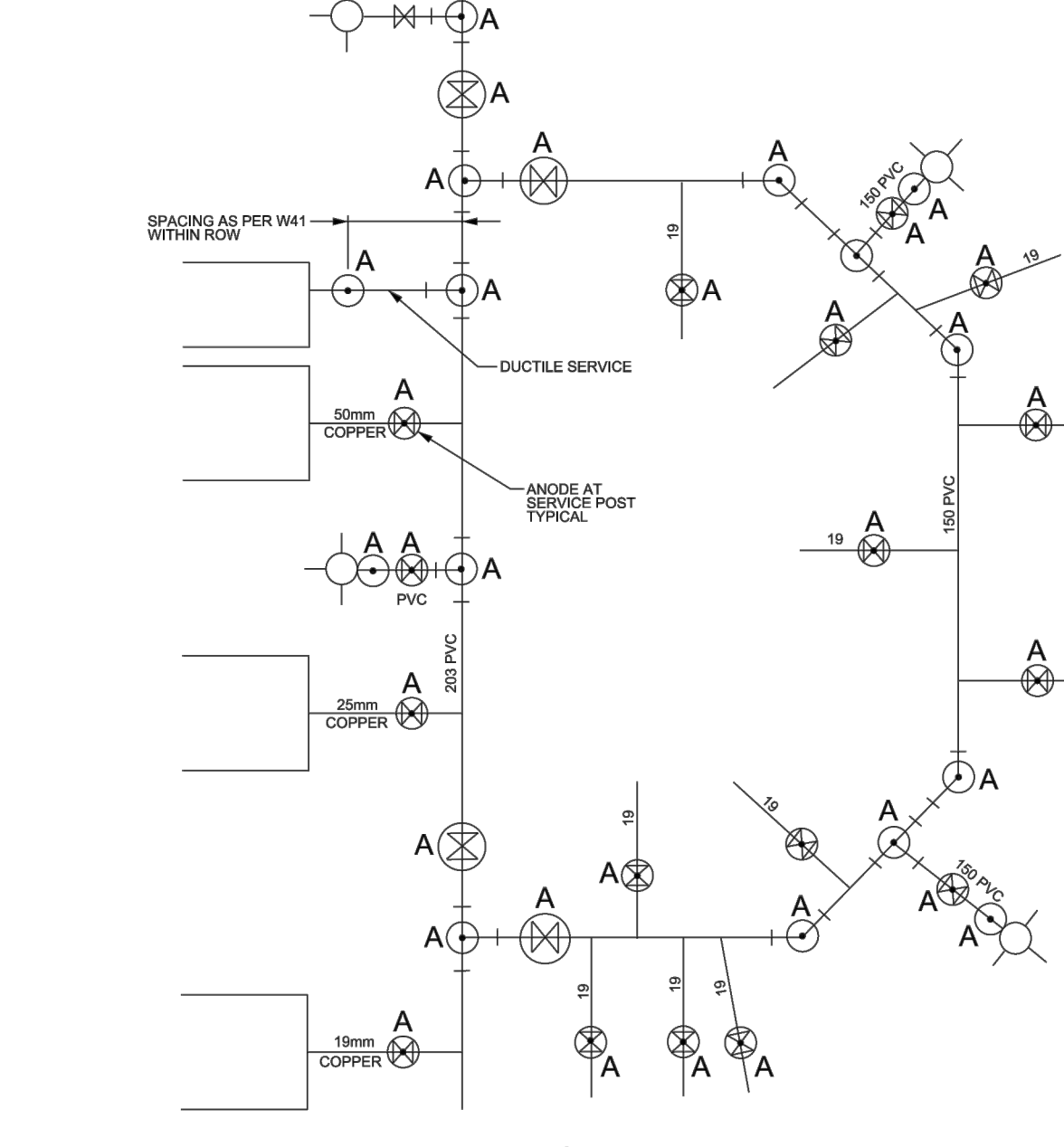
HORIZONTAL BENDS 11.25, 22.5, AND 45 DEGREE BENDS	PIPE DIAMETER					
	100mm	150mm	200mm	250mm	300mm	400mm
	1	1.5	1.5	2	2	2.5

NOTES:
 1. THE ABOVE RESTRAINED LENGTHS MEET OR EXCEED THE WATERMAIN DESIGN CRITERIA FOR FUTURE ALTERATIONS AUTHORIZED UNDER A DRINKING WATER WORKS PERMIT.
 2. THE ASSUMPTIONS MADE FOR THE ABOVE CALCULATIONS ARE AS FOLLOWS:
 a) MAXIMUM OPERATING PRESSURE OF 100 psi
 b) MAXIMUM BURGE PRESSURE WITH A FLOW VELOCITY CHANGE OF 0.8 m/s OF 115 psi (115 psi FOR CLASS 52 DI AND FOR PVC MAX. BURGE IS 35 psi)
 3. FOR SOFTWARE CALCULATIONS A TEST PRESSURE OF 150 psi AND A SAFETY FACTOR OF 1.5 WAS USED WHICH RESULTS IN 225 psi MAXIMUM PRESSURE.
 4. TYPE 5 TRENCH BEDDING.
 5. DEPTH TO BURY 2.4 METRES EXCEPT FOR VERTICAL BENDS WHERE THE HIGH SIDE IS AT 1.8 METRES.
 6. EMBEDMENT MATERIAL GRANULAR 'A' WITH CHARACTERISTICS OF ASTM D2487 GP.
 7. OF SOILS ARE DESCRIBED AS POORLY GRADED GRAVEL AND SAND-GRAVEL MIXES WITH LITTLE OR NO FINES.
 8. (L) MUST BE OF SOLID PIPE WITHOUT JOINTS, FITTINGS, ETC.
 9. THE TABLES APPLY TO BOTH DUCTILE IRON AND PVC. WHERE ONE LENGTH EXCEEDED THE OTHER THE LONGER LENGTH WAS USED.
 10. RESTRAINED LENGTHS ARE IN METRES.

Ottawa TABLES OF RESTRAINED LENGTHS FOR PVC AND DI PIPE 400mm AND UNDER
 DATE: MAY 2001
 REV. DATE: MARCH 2011
 DWG. No.: W25.6

TABLE OF ANODE TYPES AND WEIGHTS

SIZE (mm)	ANODE TYPE	WEIGHT (KG)
19 TO 50 COPPER SERVICE	Z-12-24	5.4
38 TO 50 PEX SERVICE	Z-12-24	5.4
100 TO 300 DI SERVICE	Z-24-48	10.9
100 TO 300 DI FITTINGS	Z-12-24	5.4
100 TO 250 VALVES	Z-12-24	5.4
HYDRANT ASSEMBLY	Z-24-48	10.9
400 DI SERVICE/FITTINGS/VALVES	Z-24-48	10.9



NOTES:
 1. ALL DIMENSIONS ARE IN MILLIMETRES UNLESS SHOWN OTHERWISE.

Ottawa TYPICAL ANODE INSTALLATION PVC WATERMAIN
 DATE: MAY 2001
 REV. DATE: MARCH 2014
 DWG. No.: W42

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plan-référence key plan
 sceau stamp



no.	description	date
1	ISSUED FOR TENDER	June 12, 2018

projet projet
BUILDING A

dessin drawing
CIVIL DETAILS
 conception conception no. dossier project no.
 E. Potvin A000566B
 dessin drawn fichier DAO CAD file
 J.-P. Pharand C5_Details
 approuvé approved dossier client client file
 H. Bisson 7207528
 échelle scale imprimé plot date
 N/A
 no. page sheet number rev
C5.6 **1**

Drawing name: \\c:\cma\plus\cma\cma-c101\01-Projects\A\A000566B_Building_A\400_460\C5_Details.dwg Jun. 11. 2018 - 10:13am