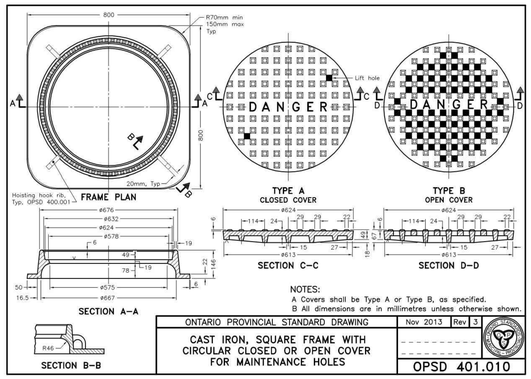
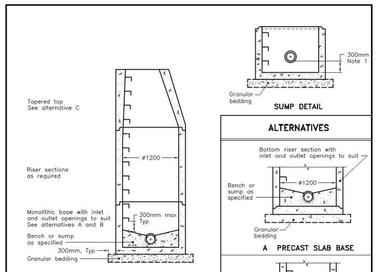


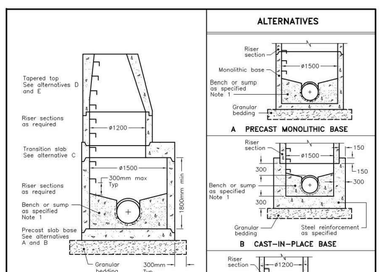
NOTES:
A Covers shall be Type A or Type B, as specified.
B All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 3
CAST IRON, SQUARE FRAME WITH CIRCULAR CLOSED OR OPEN COVER FOR MAINTENANCE HOLES		
		OPSD 401.010



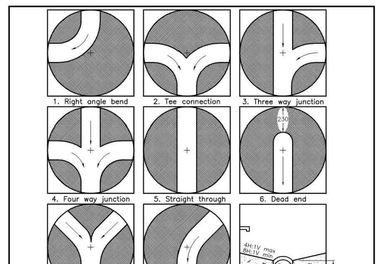
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform 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.

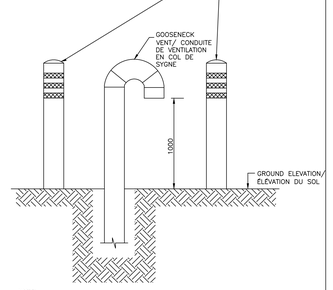
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1500mm DIAMETER		
		OPSD 701.011



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	980	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:
A 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 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.

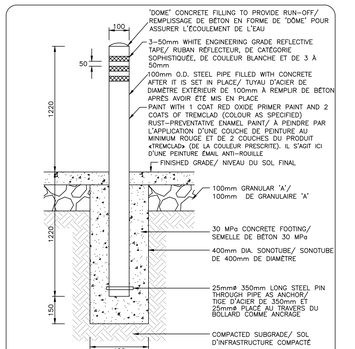
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 4
MAINTENANCE HOLE BENCHING AND PIPE OPENING ALTERNATIVES		
		OPSD 701.021



NOTE:
– ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED/
TOUTES LES MESURES SONT EN MILLIMÈTRES, À MOINS D'INDICATION CONTRAIRE

GOOSENECK VENT DETAIL/
CONDUITE DE VENTILATION
EN COL DE SIGNE

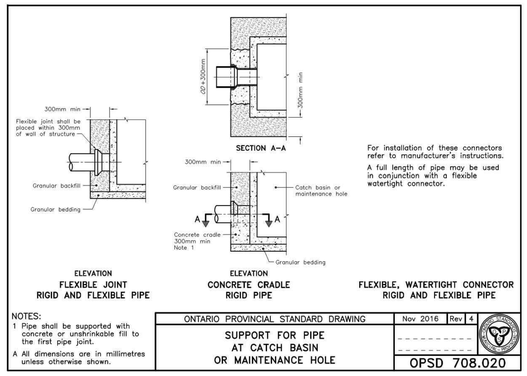
PARSONS D8



NOTES:
– ALL MEASUREMENTS ARE IN MILLIMETRES UNLESS OTHERWISE NOTED, TOUTES LES DIMENSIONS SONT EN MILLIMETRES, À MOINS D'INDICATION CONTRAIRE
– SEE ARCHITECTURAL PLANS FOR LOCATION/ VOIR LES PLANS ARCHITECTURAUX POUR LA LOCALISATION

100mm DIAMETER STEEL BOLLARD/
BOLLARD D'ACIER DE 100mm DE
DIAMÈTRE

PARSONS D6



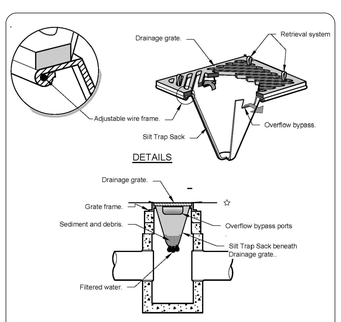
For installation of these connectors refer to manufacturer's instructions.

A full length of pipe may be used in conjunction with a flexible watertight connector.

FLEXIBLE, WATERTIGHT CONNECTOR
RIGID AND FLEXIBLE PIPE

NOTES:
1 Pipe shall be supported with concrete or unshrinkable fill to the first pipe joint.
A All dimensions are in millimetres unless otherwise shown.

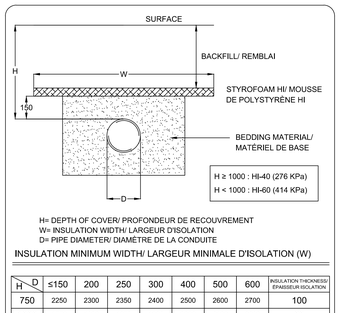
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2016	Rev 4
SUPPORT FOR PIPE AT CATCH BASIN OR MAINTENANCE HOLE		
		OPSD 708.020



NOTES
1. Size and shape of the silt trap sack to fit the storm structure it will service. (rectangular or round).
2. The silt trap sack shall have a built–in high–flow relief system (overflow bypass).
3. The silt trap sack assembly must allow removal without spilling the collected material.
4. Empty silt trap sack and dispose of sediment and debris before the sack is half–full.
5. Ensure the silt trap sack assembly does not spill or fall into the storm structure. If sediment is spilled into the storm structure, remove the spilled material by suction hose or other approved method.
6. Provide protection for catch basin hoods (Wattles, 2x4 lumber, and so forth)

SILT SACK DETAIL/ DÉTAIL DE SAC DE BOUE

PARSONS D3



H= DEPTH OF COVER/ PROFONDEUR DE RECOUVREMENT
W= INSULATION WIDTH/ LARGEUR D'ISOLATION
D= PIPE DIAMETER/ DIAMÈTRE DE LA CONDUITE

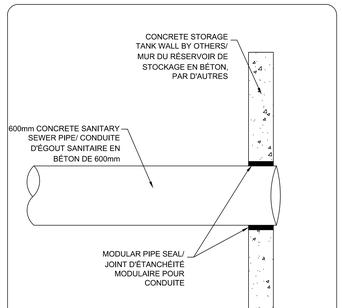
INSULATION MINIMUM WIDTH/ LARGEUR MINIMALE D'ISOLATION (W)

H \ D	≤150	200	250	300	400	500	600	INSULATION THICKNESS/ ÉPAISSEUR ISOLATION
750	2250	2300	2350	2400	2500	2600	2700	100
1000	1750	1800	1850	1900	2000	2100	2200	90
1250	1250	1300	1350	1400	1500	1600	1700	80
1500	750	800	850	900	1000	1100	1200	70
1750	600	600	600	600	600	600	700	60

ALL DIMENSIONS IN MILLIMETERS/ TOUTES DIMENSIONS SONT EN MILLIMÈTRES

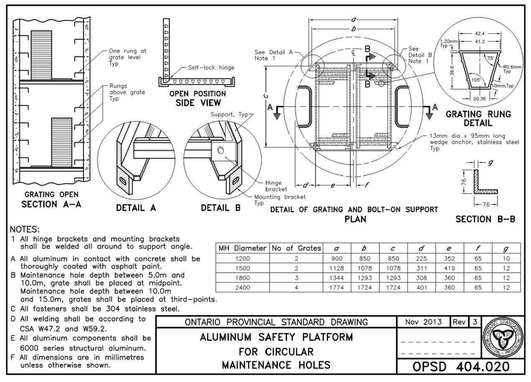
THERMAL INSULATION FOR SEWER IN SHALLOW TRENCHES/ ISOLATION THERMIQUE POUR CONDUITES PEU PROFONDES

PARSONS D4



SANITARY SEWER AND TANK CONNECTION/
CONNEXION DE L'ÉGOUT SANITAIRE AU
RÉSERVOIR
N.T.S./ NON À L'ÉCHELLE

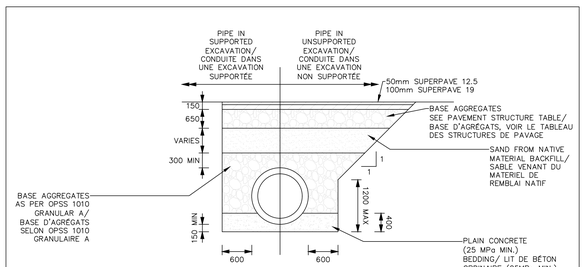
PARSONS D5



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.

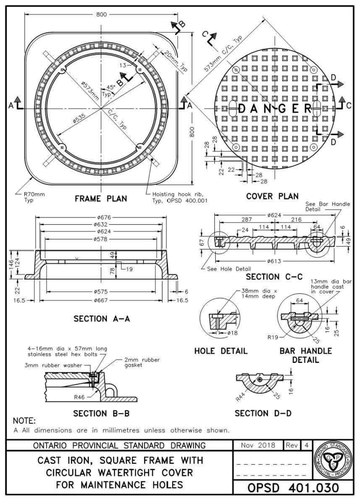
MH Diameter	No of Grates	a	b	c	d	e	f	g
1200	2	900	850	850	225	352	65	10
1500	2	1128	1078	1078	311	419	65	12
1800	3	1344	1293	1293	308	360	65	12
2400	4	1774	1724	1724	401	360	65	12

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2013	Rev 3
ALUMINUM SAFETY PLATFORM FOR CIRCULAR MAINTENANCE HOLES		
		OPSD 404.020



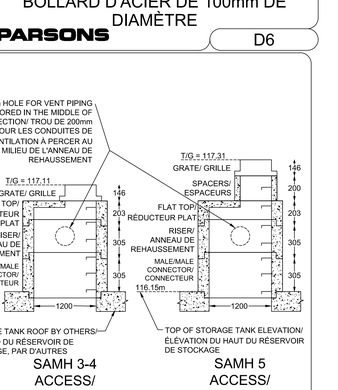
D2 SP-1 SANITARY SEWER TRENCH/ TRANCHÉE D'ÉGOUT SANITAIRE

N.T.S.
NON À L'ÉCHELLE



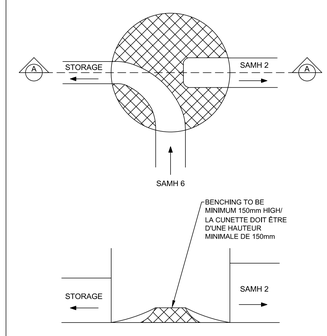
NOTE:
A All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2018	Rev 4
CAST IRON, SQUARE FRAME WITH CIRCULAR WATERTIGHT COVER FOR MAINTENANCE HOLES		
		OPSD 401.030



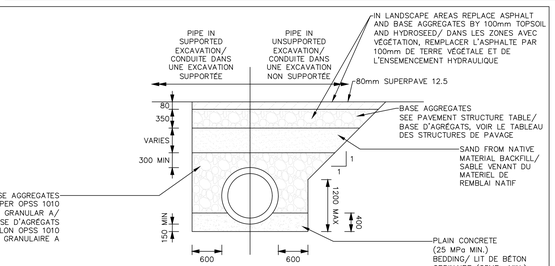
STORAGE TANK MAINTENANCE ACCESSES/ ACCÈS D'ENTRETIEN DU RÉSERVOIR DE STOCKAGE
N.T.S./ NON À L'ÉCHELLE

PARSONS D7



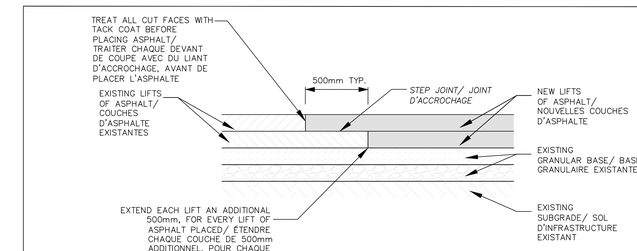
SAMH 1 CUSTOM NON-STANDARD BENCHING/
CUNETTE PERSONNALISÉE NON-STANDARD
N.T.S.
NON À L'ÉCHELLE

PARSONS D10



D9 SP-1 STORM SEWER TRENCH/ TRANCHÉE D'ÉGOUT PLUVIAL

N.T.S.
NON À L'ÉCHELLE

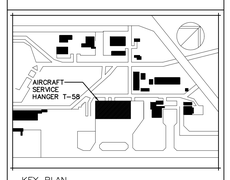


PARSONS

TIE IN TO EXISTING PAVEMENT/
RACCORDEMENT AU PAVAGE EXISTANT
N.T.S./ NON À L'ÉCHELLE

DETAIL DWG. NO.
D1

Public Services and Procurement Canada / Services publics et Approvisionnement Canada



KEY PLAN
PLAN CLÉ

revision / révision		date
08	ISSUED FOR TENDER/ ÉMIS POUR APPEL D'OFFRES	JAN. 07/2021
07	ISSUED FOR 100% REVIEW/ ÉMIS POUR RÉVISION 100%	JUNE/JUIN 05/2020
06	RE–ISSUED FOR 99% REVIEW/ RÉÉMIS POUR RÉVISION 99%	MAY/MAI 28/2020
05	ISSUED FOR 99% REVIEW/ ÉMIS POUR RÉVISION 99%	APR./AVR. 30/2020
04	ISSUED FOR 66% REVIEW/ ÉMIS POUR RÉVISION 66%	FEB./FÉV. 14/2020
03	RE–ISSUED FOR 66% REVIEW/ RÉÉMIS POUR RÉVISION 66%	SEPT. 03/2019
02	ISSUED FOR 66% REVIEW/ ÉMIS POUR RÉVISION 66%	JAN. 19/2018
01	ISSUED FOR 33% REVIEW/ ÉMIS POUR RÉVISION 33%	DEC./DÉC. 01/2017

A detail no. no. du détail
B location drawing no. no. de localisation
C drawing no. no. du dessin

project / projet
PSPC#R.038348.011 HANGAR T–58 200 COMET PRIVATE, OTTAWA, ONT.
FIRE SUPPRESSION SYSTEM / SYSTÈME DE SUPPRESSION D'INCENDIE

drawing / dessin
CIVIL DETAILS/
DÉTAILS CIVIL

designed	M. Theiner	conçu
date	01 Dec 2017	
drawn	J. Nobert	dessins
date	01 Dec 2017	
revised	B. Villeneuve	revisé
date	07 Jan 2021	
approved		approuvé
date		
tender	KAILIE DUNN	soumission
PWC Project Manager		Administrateur de projets TPC
project no.	R.038348.011	no. du projet
drawing no.	C.004	no. du dessin

\\XCAN57FS01\Data\SO\476608\1000\DWGS\WORKING DWG\476608 CIVIL R1.24_bil.dwg

PWGSC / TPSGC AO

0mm 10 20 40 60 80 100 120 140 160 180 200 mm