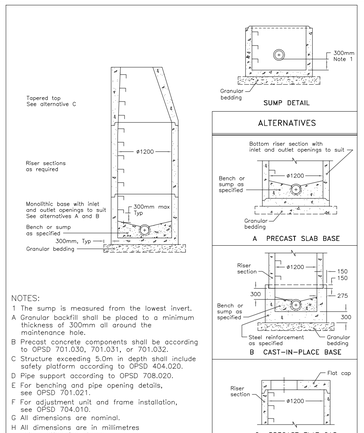
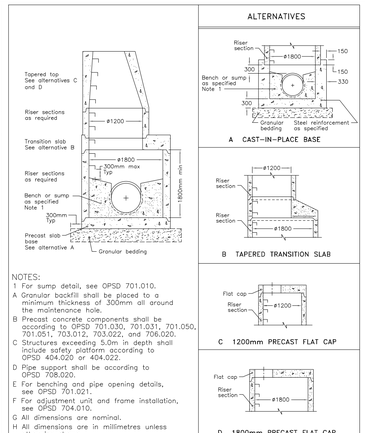


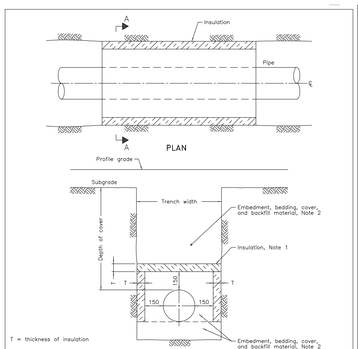
NOTES:
1 The sump is measured from the lowest invert.
A Granular backfill shall be placed to a minimum thickness of 300mm all around the maintenance hole.
B Precast concrete components shall be according to OPSD 701.030, 701.031, or 701.032.
C Structure exceeding 5.0m in depth shall include safety platform 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, 701.050, 701.051, 703.012, 703.022, and 706.020.
C Structures exceeding 5.0m in depth shall include safety platform according to OPSD 404.020 or 404.022.
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.

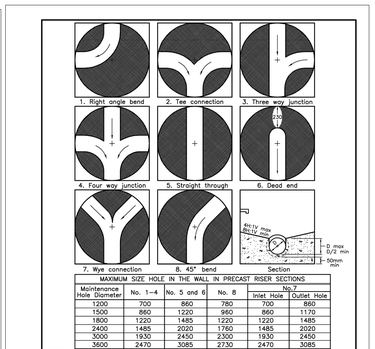
ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2014	Rev 5
PRECAST CONCRETE MAINTENANCE HOLE 1800mm DIAMETER		OPSD 701.012



TYPICAL PIPE INSULATION DETAIL

NOTES:
1 The insulation material shall be extruded polystyrene according to OPSS 1605 with a minimum compressive strength of 275 kPa.
2 Pipe embedment or bedding, cover, and backfill shall be according to:
a) Flexible OPSD 802.010, 802.013, 802.020, and 802.023.
b) Rigid – OPSD 802.030, 802.031, 802.032, 802.033, 802.050, 802.051, 802.052, and 802.053.
A Minimum insulation thickness shall be 50mm.
B Joints shall be staggered for multiple insulation sheets.
C This OPSD is to be read in conjunction with OPSD 3090.100 and 3090.101.
D All dimensions are in millimetres unless otherwise shown.

ONTARIO PROVINCIAL STANDARD DRAWING	Nov 2020	Rev 1
INSULATION FOR SEWERS AND WATERMAINS IN SHALLOW TRENCHES		OPSD 1109.030

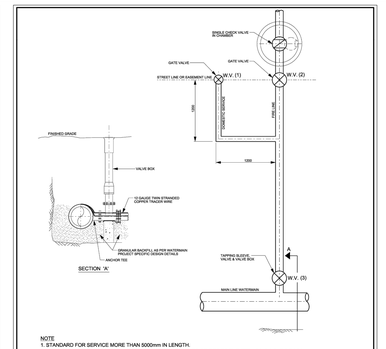


MAXIMUM SIZE HOLE IN THE WALL IN PRECAST RISER SECTIONS

Maintenance Hole Diameter	No. 1–4	No. 5 and 6	No. 8	No.7 Inlet Hole	No.7 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

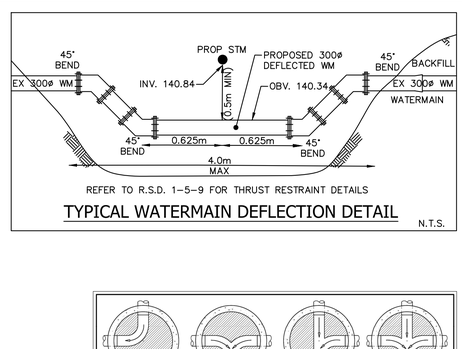
NOTES:
1. Slopes shall be maintained from the outlet hole opening for top of benching.
A Concrete for benching shall be 30MPa.
B When benching is hand-finished, it shall be given wood float finish, channel shall be given steel trowel finish.
C Benching slope and height shall be as specified.
D When specified, maintenance holes that are 1200mm in diameter with a uniform channel for 200 or 250mm pipe may be prebenched at the manufacturer or building, and 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
1. STANDARD FOR SERVICE MORE THAN 5000mm IN LENGTH.
2. SERVICES LESS THAN 13000mm IN LENGTH MAIN VALVE (3) TO BE TIES TO THE TEE USING S.S. TIE RODS.
3. WHERE NO METALLIC PIPE IS USED A 12 GAUGE TRACER WIRE TO BE INSTALLED WITH THE PIPE AND BE BROUGHT TO THE SURFACE AT ALL VALVE BOX BOXES.
4. BACKFILL TRENCH WITH GRANULAR 'B' COMPACTED TO 100% STD. PROCTOR DENSITY.
5. REFER TO D. REG. 3860E - PART - PLUMBING SECTION 7.6.2.4 FOR TYPE OF BLACKFLOW PREVENTER REQUIRED.
6. ALL PIPING, FITTINGS, VALVES, APPURTENANCES AND MECHANICAL RESTRAINTS TO BE c/w DENSO PASTE, DENSO MASTIC AND DENSO TAPE OR APPROVED EQUAL, APPLIED TO MANUFACTURER'S RECOMMENDATIONS.

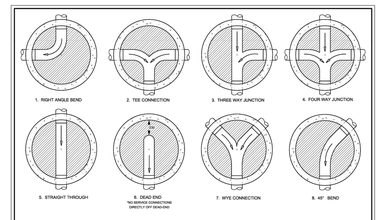
Region of Peel Working for you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: APRIL 2014
FIRE LINE AND DOMESTIC CONNECTION		APPROVED BY: D.L.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 1-6-4
		SCALE: N.T.S.



REFER TO R.S.D. 1–5–9 FOR THRUST RESTRAINT DETAILS

TYPICAL WATERMAIN DEFLECTION DETAIL

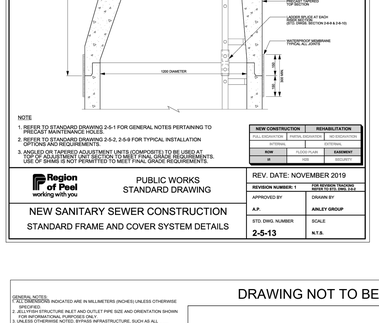
N.T.S.



NOTE
1. CONCRETE TO BE 15 MPa COMPRESSIVE STRENGTH.
2. BENCHING TO BE GIVEN WOOD FLOAT FINISH, CHANNEL TO BE GIVEN STEEL TROWEL FINISH.
3. ALL PIPE PENETRATIONS MUST EXTEND INTERNALLY 125mm STRAIGHT INTO MAINTENANCE HOLE BEFORE CHANNEL CURVATURE BEGINS.
4. BENCHING TO BE CONSTRUCTED TO THE OBVERT OF THE PIPE.
5. FACTORY CAST PRE-BENCHING MAY BE USED WITHIN MONOLITHIC BASE SECTIONS.
6. FOR PIPE TO MAINTENANCE HOLE SIZING REFERENCE STD. DWG. 2-5-21.
7. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
8. REFER TO STANDARD DRAWING 2-5-2 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: AUGUST 2020
NEW SANITARY SEWER CONSTRUCTION MAINTENANCE HOLE BENCHING DETAILS		REVISION NUMBER: 3
		APPROVED BY: A.P.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 2-5-20
		SCALE: N.T.S.

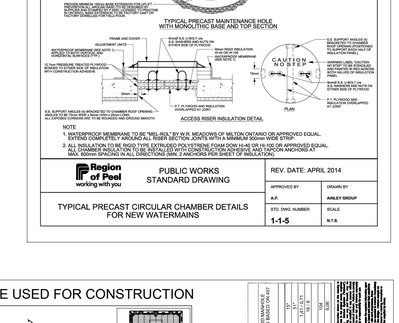
USE OF MECHANICAL ANCHORS ONLY PERMITTED WHEN PRECAST ADJUSTMENT UNITS ARE INSTALLED ON CAST-IN-PLACE BASE. CONTRACTOR TO SUBMIT SHOP DRAWINGS, COMPONENTS, ADJUSTMENT UNITS MUST BE ADDED OR REMOVED MECHANICALLY. ANCHORING METHODOLOGY UTILIZED AS APPROVED BY PROJECT DESIGN AND SITE CONDITIONS.



NOTE
1. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
2. REFER TO STANDARD DRAWING 2-5-2, 2-5-9 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.
3. ANGLE OR TAPERED ADJUSTMENT UNITS (COMPOSITES) TO BE USED AT CONTRACTOR'S DISCRETION TO MEET FINAL GRADE REQUIREMENTS. USE OF SHIMS IS NOT PERMITTED TO MEET FINAL GRADE REQUIREMENTS.

NEW CONSTRUCTION		REHABILITATION	
FINAL ADJUSTMENT	PARTIAL ADJUSTMENT	RE-CONSTRUCTION	
INTERNAL		EXTERNAL	
NONE	FLEX	GASKET	
M	MMA	MASTIC	

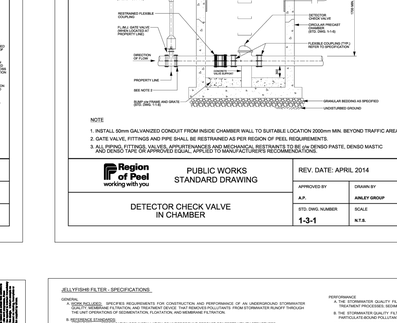
Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: NOVEMBER 2019
NEW SANITARY SEWER CONSTRUCTION STANDARD FRAME AND COVER SYSTEM DETAILS		REVISION NUMBER: 1
		APPROVED BY: A.P.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 2-5-13
		SCALE: N.T.S.



NOTE
1. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
2. REFER TO STANDARD DRAWING 2-5-2, 2-5-9 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.
3. ANGLE OR TAPERED ADJUSTMENT UNITS (COMPOSITES) TO BE USED AT CONTRACTOR'S DISCRETION TO MEET FINAL GRADE REQUIREMENTS. USE OF SHIMS IS NOT PERMITTED TO MEET FINAL GRADE REQUIREMENTS.

NEW CONSTRUCTION		REHABILITATION	
FINAL ADJUSTMENT	PARTIAL ADJUSTMENT	RE-CONSTRUCTION	
INTERNAL		EXTERNAL	
NONE	FLEX	GASKET	
M	MMA	MASTIC	

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: NOVEMBER 2019
NEW SANITARY SEWER CONSTRUCTION STANDARD FRAME AND COVER SYSTEM DETAILS		REVISION NUMBER: 1
		APPROVED BY: A.P.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 2-5-13
		SCALE: N.T.S.



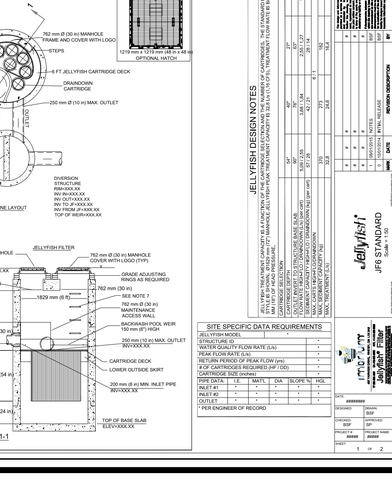
NOTE
1. REFER TO STANDARD DRAWING 2-5-1 FOR GENERAL NOTES PERTAINING TO PRECAST MAINTENANCE HOLES.
2. REFER TO STANDARD DRAWING 2-5-2, 2-5-9 FOR TYPICAL INSTALLATION OPTIONS AND REQUIREMENTS.
3. ANGLE OR TAPERED ADJUSTMENT UNITS (COMPOSITES) TO BE USED AT CONTRACTOR'S DISCRETION TO MEET FINAL GRADE REQUIREMENTS. USE OF SHIMS IS NOT PERMITTED TO MEET FINAL GRADE REQUIREMENTS.

NEW CONSTRUCTION		REHABILITATION	
FINAL ADJUSTMENT	PARTIAL ADJUSTMENT	RE-CONSTRUCTION	
INTERNAL		EXTERNAL	
NONE	FLEX	GASKET	
M	MMA	MASTIC	

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: NOVEMBER 2019
NEW SANITARY SEWER CONSTRUCTION STANDARD FRAME AND COVER SYSTEM DETAILS		REVISION NUMBER: 1
		APPROVED BY: A.P.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 2-5-13
		SCALE: N.T.S.

STANDARD OFFLINE JELLYFISH RECOMMENDED PIPE DIAMETERS			
MODEL DIAMETER (mm)	MINIMUM INLET PIPE DIAMETER (mm)	MAXIMUM INLET PIPE DIAMETER (mm)	MAXIMUM OUTLET PIPE DIAMETER (mm)
1	150	300	300
2	150	375	375
3	150	450	450
4	150	600	600
5	150	750	750
6	150	900	900
Custom	Please Contact Us For a Solution		

FOR SITE SPECIFIC DRAWINGS PLEASE CONTACT YOUR LOCAL JELLYFISH SUPPLIER/DISTRIBUTOR. NOTE THESE DRAWINGS ARE BASED ON THE BEST AVAILABLE INFORMATION AT THE TIME. SOME FIELD RESIZING TO THE SYSTEM LOCATION OR CONNECTION PIPING MAY BE NECESSARY BASED ON AVAILABLE SPACE OR SITE CONFIGURATION REVISIONS. ELEVATIONS SHOULD BE MAINTAINED, EXCEPT WHERE NOTED ON BYPASS STRUCTURE.

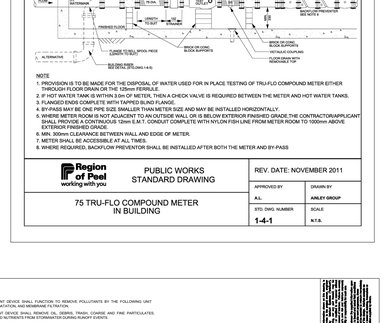


NOTE
1. INSTALL 50mm GALVANIZED CONDUIT FROM INSIDE CHAMBER WALL TO SUITABLE LOCATION 2000mm MIN. BEYOND TRAFFIC AREA.
2. GATE VALVE, FITTINGS AND PIPE SHALL BE RESTRAINED AS PER REGION OF PEEL REQUIREMENTS.
3. ALL PIPING, FITTINGS, VALVES, APPURTENANCES AND MECHANICALS, RESTRAINTS TO BE c/w DENSO PASTE, DENSO MASTIC AND DENSO TAPE OR APPROVED EQUAL, APPLIED TO MANUFACTURER'S RECOMMENDATIONS.

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: APRIL 2014
TYPICAL PRECAST CIRCULAR CHAMBER DETAILS FOR NEW WATERMAINS		APPROVED BY: A.P.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 1-1-5
		SCALE: N.T.S.

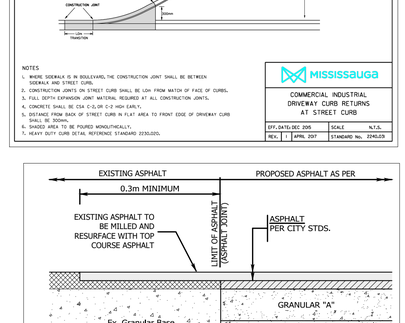
NOTE
1. INSTALL 50mm GALVANIZED CONDUIT FROM INSIDE CHAMBER WALL TO SUITABLE LOCATION 2000mm MIN. BEYOND TRAFFIC AREA.
2. GATE VALVE, FITTINGS AND PIPE SHALL BE RESTRAINED AS PER REGION OF PEEL REQUIREMENTS.
3. ALL PIPING, FITTINGS, VALVES, APPURTENANCES AND MECHANICALS, RESTRAINTS TO BE c/w DENSO PASTE, DENSO MASTIC AND DENSO TAPE OR APPROVED EQUAL, APPLIED TO MANUFACTURER'S RECOMMENDATIONS.

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: APRIL 2014
DETECTOR CHECK VALVE IN CHAMBER		APPROVED BY: A.P.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 1-3-1
		SCALE: N.T.S.



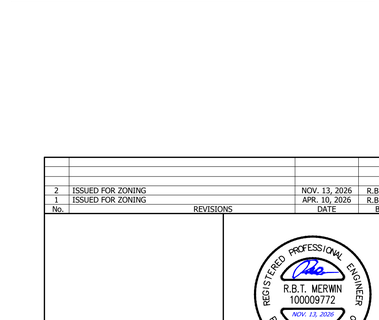
NOTE
1. PROVISION IS TO BE MADE FOR THE DISPOSAL OF WATER USED FOR IN PLACE TESTING OF TRU-FLO COMPOUND METER EITHER THROUGH FLOOR DRAIN OR THE 125mm FERRULE.
2. IF HOT WATER TANK IS WITHIN 2.0m OF METER, THEN A CHECK VALVE IS REQUIRED BETWEEN THE METER AND HOT WATER TANKS.
3. FLANGED ENDS COMPLETE WITH TAPPED BLIND FLANGE.
4. BY-PASS MAY BE ONE PIPE SIZE SMALLER THAN METER SIZE AND MAY BE INSTALLED HORIZONTALLY.
5. WHERE METER ROOM IS NOT ADJACENT TO AN OUTSIDE WALL OR IS BELOW EXTERIOR FINISHED GRADE,THE CONTRACTOR/APPLICANT SHALL PROVIDE A CONCRETE ENCASED CONDUIT 125mm DIA.T. CONDUIT COMPLETE WITH NYLON PISH LINE FROM METER ROOM TO 1000mm ABOVE EXTERIOR FINISHED GRADE.
6. MIN. 300mm CLEARANCE BETWEEN WALL AND EDGE OF METER.
7. METER SHALL BE ACCESSIBLE AT ALL TIMES.
8. WHERE REQUIRED, BACKFLOW PREVENTOR SHALL BE INSTALLED AFTER BOTH THE METER AND BY-PASS.

Region of Peel working with you	PUBLIC WORKS STANDARD DRAWING	REV. DATE: NOVEMBER 2011
75 TRU-FLO COMPOUND METER IN BUILDING		APPROVED BY: A.L.
		DRAWN BY: ASHLEY GROUP
		STD. DWG. NUMBER: 1-4-1
		SCALE: N.T.S.



NOTES
1. WHERE SIDEWALK IS IN BOULEVARD, THE CONSTRUCTION JOINT SHALL BE BETWEEN SIDEWALK AND STREET LINE.
2. CONSTRUCTION JOINTS ON STREET CURB SHALL BE 10m FROM MATCH OF FACE OF CURBS.
3. FULL DEPTH EXPANSION JOINT MATERIAL REQUIRED AT ALL CONSTRUCTION JOINTS.
4. CONCRETE SHALL BE CSA C-2L OR C-2 HIGH EARLY.
5. DISTANCE FROM BACK OF STREET CURB IN FLAT AREA TO FRONT EDGE OF DRIVEWAY CURB SHALL BE 500mm.
6. SHADED AREA TO BE POURED MONOLITHICALLY.
7. HEAVY DUTY CURB DETAIL REFERENCE STANDARD 2230.020.

MISSISSAUGA		
COMMERCIAL / INDUSTRIAL DRIVEWAY CURB RETURNS AT STREET CURB		
EFF. DATE: DEC 2005	SCALE:	N.T.S.
REV.: 1	APRIL 2017	STANDARD No.: 2240.03



ASPHALT LAP JOINT DETAIL

N.T.S.

2	ISSUED FOR ZONING	NOV. 13, 2026	R.B.T.M.
1	ISSUED FOR ZONING	APR. 10, 2026	R.B.T.M.
No.	REVISIONS	DATE	BY

REGISTERED PROFESSIONAL ENGINEER
R.B.T. MERWIN
100009772
NOV. 13, 2026
PROVINCE OF ONTARIO

Urbanetic® Consulting
A Division of Leighton-Zec Ltd.
2030 Bristol Circle, Suite 105
Oakville, ON. L6H 0H2
TEL 905.829.8818 • urbantech.com

2233 & 2235 HURONTARIO LTD.

Region of Peel working with you

MISSISSAUGA

DETAILS

REGION FILE No. C-XXXXXX			CITY FILE No. OZ 26-8 W7
SCALE:	N.T.S	PROJECT No.	24-326
DRAWN BY:	R.B.	CHECKED BY: R.M./R.B.T.M	PLAN No. C401
DATE:	MARCH, 2026	SHEET OF	C-XXXXXX

File: C:\USERS\RBABAR\DOCACCDOCS\URBANTECH\24-326 2233 HURONTARIO ST\PROJECT FILES\700 - DETAILS\401-DETAILS.DWG

PLOT DATE:November 13, 2026 11:33:14 AM

DRAWING NOT TO BE USED FOR CONSTRUCTION

JELLYFISH DESIGN NOTES

JELLYFISH TREATMENT CAPACITY IS A FUNCTION OF THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES. THE STANDARD MARKING AT MH TOP INDICATES THE CARTRIDGE SELECTION AND THE NUMBER OF CARTRIDGES INSTALLED IN THE DEVICE. (EXAMPLE: 3-27 = 3 CARTRIDGES, 27 GPM EACH)

CARTRIDGE HEIGHT	27"	18"	9"	PERFORMANCE
CARTRIDGE FLOW RATE	27 gpm (6.1 l/s)	18 gpm (4.1 l/s)	9 gpm (2.0 l/s)	
TREATMENT FLOW RATE	27 gpm (6.1 l/s)	18 gpm (4.1 l/s)	9 gpm (2.0 l/s)	
MAX. CARTRIDGES PER STANDARD CONFIGURATION	8	12	24	
MAX. CARTRIDGES PER CUSTOM CONFIGURATION	10	16	30	
MAX. TREATMENT FLOW	216 gpm (49.0 l/s)	288 gpm (65.3 l/s)	216 gpm (49.0 l/s)	

SITE SPECIFIC DATA REQUIREMENTS	
JELLYFISH MODEL	*
STRUCTURE ID	*
WATER QUALITY FLOW RATE (L/s)	*
PEAK FLOW RATE (L/s)	*
RETURN PERIOD OF PEAK FLOW (yrs)	*
# OF CARTRIDGES REQUIRED (#F / DD)	*
CARTRIDGE SIZE (inches)	*

PIPE DATA	I.E.	MAT'L	DIA	SLOPE %	HGL
INLET #1	*	*	*	*	*
INLET #2	*	*	*	*	*
OUTLET	*	*	*	*	*

* PER ENGINEER OF RECORD

DATE: ########
DESIGNED: BSP
DRAWN: BSP
CHECKED: BSP
APPROVED: DP
PROJECT #: ######
PROJECT NAME: ######
SHEET: 1 OF 2

JELLYFISH FILTER - SPECIFICATIONS

GENERAL

1. ALL DIMENSIONS INDICATED ARE IN MILLIMETERS (INCHES) UNLESS OTHERWISE SPECIFIED.
2. JELLYFISH STRUCTURE INLET AND OUTLET PIPE SIZE AND ORIENTATION SHOWN ARE FOR REFERENCE ONLY. SEE SITE PLANS.
3. UNLESS OTHERWISE NOTED, BYPASS INFRASTRUCTURE, SUCH AS ALL UPSTREAM DIVERSION STRUCTURES, CONNECTING STRUCTURES, OR PIPE CONNECTIONS BETWEEN THE BYPASS AND THE JELLYFISH SYSTEM SHALL BE PROVIDED AND ADDRESSED SEPARATELY.
4. DRAWING FOR INFORMATION PURPOSES ONLY. REFER TO ENGINEER'S CONSTRUCTION DRAWINGS FOR FINAL DESIGN.
5. NO PRODUCT SUBSTITUTIONS SHALL BE ACCEPTED UNLESS SUBMITTED 10 DAYS PRIOR TO PROJECTS BID DATE, OR AS DIRECTED BY THE ENGINEER OF RECORD.

JELLYFISH STRUCTURE & DESIGN NOTES

1. ACCESS TO THE JELLYFISH SHALL TO BE USED FOR CLEANOUT AND ACCESS BELOW CARTRIDGE DECK.
2. CARTRIDGE DECK DOORS OF THE JELLYFISH MANHOLE STRUCTURE TO EXTEND TO THE PERIMETER WALL OF THE STRUCTURE TO ALLOW FOR THE SAFE DESIGN AND INSTALLATION OF INTERMEDIATE SAFETY GRATING OR OTHER STRUCTURAL ELEMENTS.
3. ALL JELLYFISH STRUCTURE, TOP DOORS AND DOOR FRAMES, OR BOTH, SHALL BE GROUTED FOR WATERTIGHTNESS.
4. STRUCTURE SHALL MEET AASHTO HS-20, ASSUMING EARTH COVER OF 0' - 3', AND GROUNDWATER ELEVATION AT, OR BELOW, THE INLET PIPE INVERT ELEVATION. ENGINEER OF RECORD TO CONFIRM ACTUAL GROUNDWATER ELEVATION. STRUCTURE SHALL ALSO MEET ANY LOCAL LOADING CRITERIA AND BE CAST WITH THE MANHOLE LOGO.
5. ALL STRUCTURAL SECTIONS AND PARTS TO MEET OR EXCEED ASTM C-478.
6. ALL PIPE SEALS TO BE WATERTIGHT AS PER ASTM C-443 REQUIREMENTS, AND ANY OTHER SITE OR LOCAL STANDARDS.
7. CONCRETE RISER SECTIONS FROM BOTTOM TO TOP WILL BE ADDED AS REQUIRED TO MEET GRADE. RISERS ARE TO BE CUT TO MATCH GRADE WHERE FOUND. S