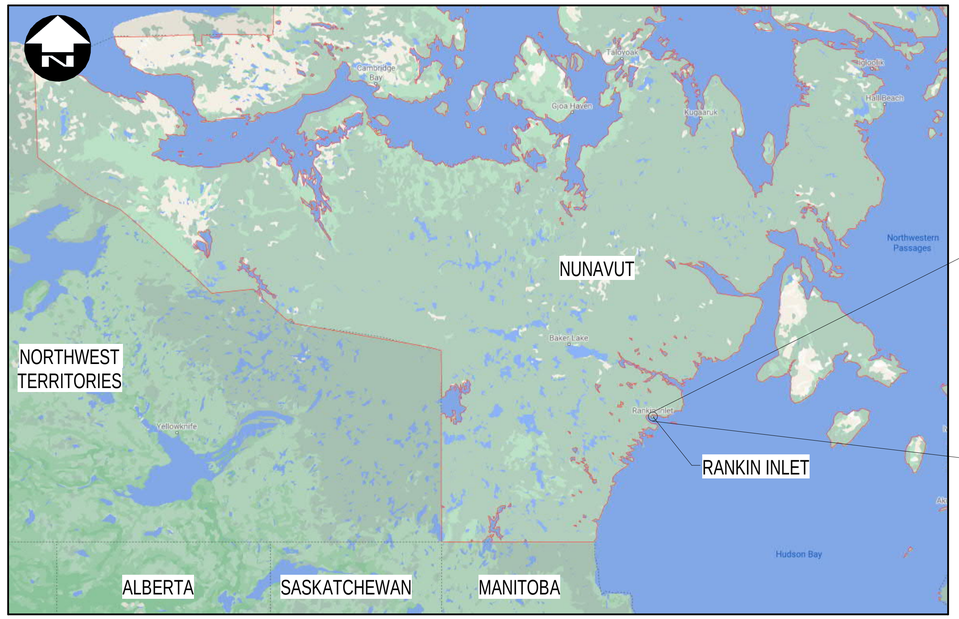


KEY PLAN

Canada

Nunavut

DRAWING INDEX

RANKIN INLET UTILIDOR REPLACEMENT

GOVERNMENT OF NUNAVUT

JOHNSTON COVE LIFT STATION

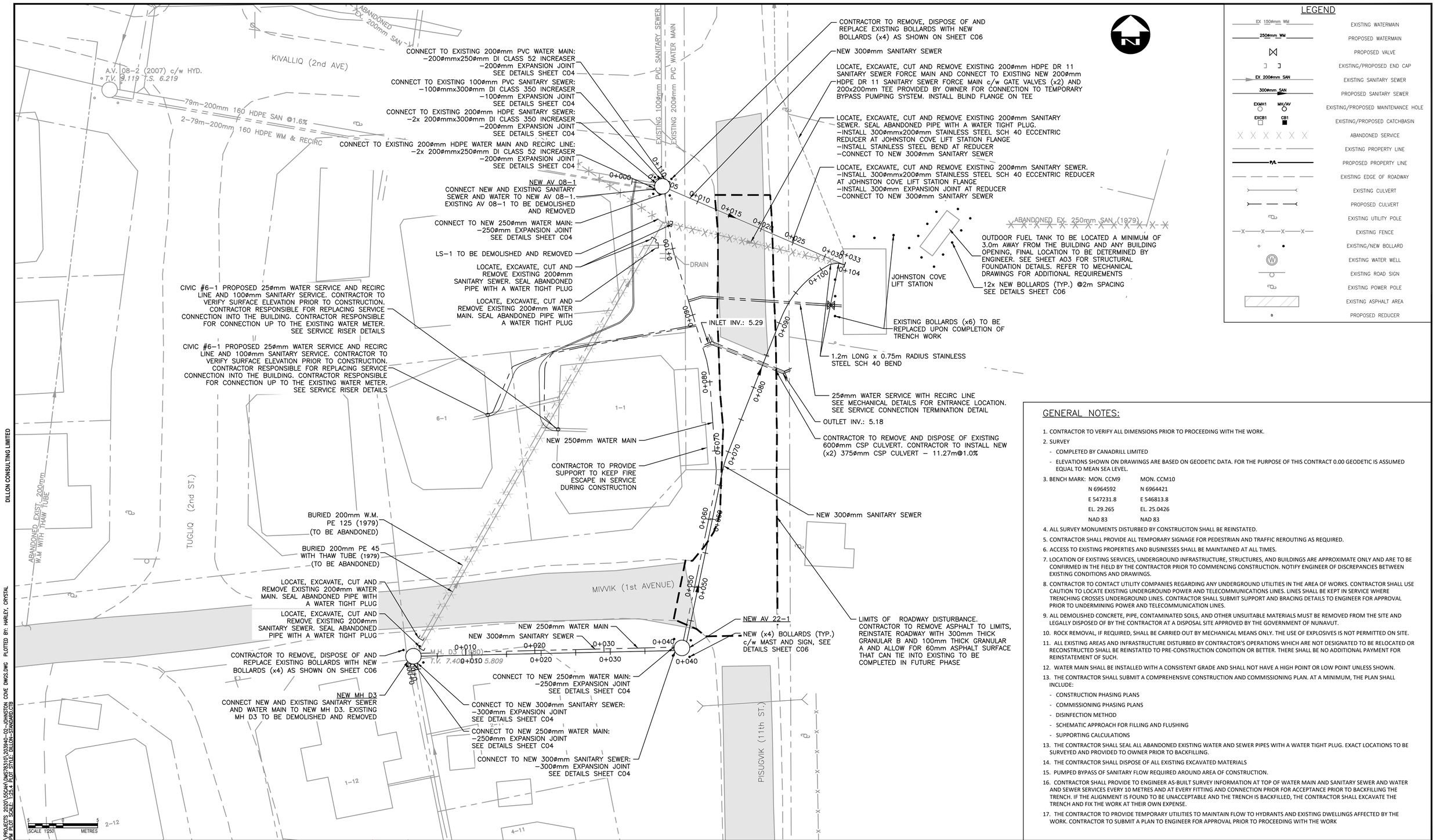
PROJECT NO. 20-3940

CONSTRUCTION

DILLON CONSULTING

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT
NOVEMBER 2021
Project No. 20-3940

PLOT DATE: 2021-11-03 2:16:35 PM FILE NAME: U:\dms7744\8\203940-10-WPMV-CON.rvt



LEGEND

- EX 150ømm WM — EXISTING WATERMAIN
- 250ømm WM — PROPOSED WATERMAIN
- PROPOSED VALVE
- EXISTING/PROPOSED END CAP
- EX 200ømm SAN — EXISTING SANITARY SEWER
- 300ømm SAN — PROPOSED SANITARY SEWER
- EXMH1 / MH/AV — EXISTING/PROPOSED MAINTENANCE HOLE
- EXCB1 / CB1 — EXISTING/PROPOSED CATCHBASIN
- ABANDONED SERVICE
- EXISTING PROPERTY LINE
- P/L — PROPOSED PROPERTY LINE
- EXISTING EDGE OF ROADWAY
- EXISTING CULVERT
- PROPOSED CULVERT
- EXISTING UTILITY POLE
- EXISTING FENCE
- EXISTING/NEW BOLLARD
- EXISTING WATER WELL
- EXISTING ROAD SIGN
- EXISTING POWER POLE
- EXISTING ASPHALT AREA
- PROPOSED REDUCER

GENERAL NOTES:

1. CONTRACTOR TO VERIFY ALL DIMENSIONS PRIOR TO PROCEEDING WITH THE WORK.
2. SURVEY
   - COMPLETED BY CANADRILL LIMITED
   - ELEVATIONS SHOWN ON DRAWINGS ARE BASED ON GEODETIC DATA. FOR THE PURPOSE OF THIS CONTRACT 0.00 GEODETIC IS ASSUMED EQUAL TO MEAN SEA LEVEL.
3. BENCH MARK:

	MON. CCM9	MON. CCM10
	N 6964592	N 6964421
	E 547231.8	E 546813.8
	EL. 29.265	EL. 25.0426
	NAD 83	NAD 83

4. ALL SURVEY MONUMENTS DISTURBED BY CONSTRUCITON SHALL BE REINSTATED.
5. CONTRACTOR SHALL PROVIDE ALL TEMPORARY SIGNAGE FOR PEDESTRIAN AND TRAFFIC REROUTING AS REQUIRED.
6. ACCESS TO EXISTING PROPERTIES AND BUSINESSES SHALL BE MAINTAINED AT ALL TIMES.
7. LOCATION OF EXISTING SERVICES, UNDERGROUND INFRASTRUCTURE, STRUCTURES, AND BUILDINGS ARE APPROXIMATE ONLY AND ARE TO BE CONFIRMED IN THE FIELD BY THE CONTRACTOR PRIOR TO COMMENCING CONSTRUCTION. NOTIFY ENGINEER OF DISCREPANCIES BETWEEN EXISTING CONDITIONS AND DRAWINGS.
8. CONTRACTOR TO CONTACT UTILITY COMPANIES REGARDING ANY UNDERGROUND UTILITIES IN THE AREA OF WORKS. CONTRACTOR SHALL USE CAUTION TO LOCATE EXISTING UNDERGROUND POWER AND TELECOMMUNICATIONS LINES. LINES SHALL BE KEPT IN SERVICE WHERE TRENCHING CROSSES UNDERGROUND LINES. CONTRACTOR SHALL SUBMIT SUPPORT AND BRACING DETAILS TO ENGINEER FOR APPROVAL PRIOR TO UNDERMINING POWER AND TELECOMMUNICATION LINES.
9. ALL DEMOLISHED CONCRETE, PIPE, CONTAMINATED SOILS, AND OTHER UNSUITABLE MATERIALS MUST BE REMOVED FROM THE SITE AND LEGALLY DISPOSED OF BY THE CONTRACTOR AT A DISPOSAL SITE APPROVED BY THE GOVERNMENT OF NUNAVUT.
10. ROCK REMOVAL, IF REQUIRED, SHALL BE CARRIED OUT BY MECHANICAL MEANS ONLY. THE USE OF EXPLOSIVES IS NOT PERMITTED ON SITE.
11. ALL EXISTING AREAS AND INFRASTRUCTURE DISTURBED BY CONTRACTOR'S OPERATIONS WHICH ARE NOT DESIGNATED TO BE RELOCATED OR RECONSTRUCTED SHALL BE REINSTATED TO PRE-CONSTRUCTION CONDITION OR BETTER. THERE SHALL BE NO ADDITIONAL PAYMENT FOR REINSTATEMENT OF SUCH.
12. WATER MAIN SHALL BE INSTALLED WITH A CONSISTENT GRADE AND SHALL NOT HAVE A HIGH POINT OR LOW POINT UNLESS SHOWN.
13. THE CONTRACTOR SHALL SUBMIT A COMPREHENSIVE CONSTRUCTION AND COMMISSIONING PLAN. AT A MINIMUM, THE PLAN SHALL INCLUDE:
   - CONSTRUCTION PHASING PLANS
   - COMMISSIONING PHASING PLANS
   - DISINFECTION METHOD
   - SCHEMATIC APPROACH FOR FILLING AND FLUSHING
   - SUPPORTING CALCULATIONS
13. THE CONTRACTOR SHALL SEAL ALL ABANDONED EXISTING WATER AND SEWER PIPES WITH A WATER TIGHT PLUG. EXACT LOCATIONS TO BE SURVEYED AND PROVIDED TO OWNER PRIOR TO BACKFILLING.
14. THE CONTRACTOR SHALL DISPOSE OF ALL EXISTING EXCAVATED MATERIALS
15. PUMPED BYPASS OF SANITARY FLOW REQUIRED AROUND AREA OF CONSTRUCTION.
16. CONTRACTOR SHALL PROVIDE TO ENGINEER AS-BUILT SURVEY INFORMATION AT TOP OF WATER MAIN AND SANITARY SEWER AND WATER AND SEWER SERVICES EVERY 10 METRES AND AT EVERY FITTING AND CONNECTION PRIOR FOR ACCEPTANCE PRIOR TO BACKFILLING THE TRENCH. IF THE ALIGNMENT IS FOUND TO BE UNACCEPTABLE AND THE TRENCH IS BACKFILLED, THE CONTRACTOR SHALL EXCAVATE THE TRENCH AND FIX THE WORK AT THEIR OWN EXPENSE.
17. THE CONTRACTOR TO PROVIDE TEMPORARY UTILITIES TO MAINTAIN FLOW TO HYDRANTS AND EXISTING DWELLINGS AFFECTED BY THE WORK. CONTRACTOR TO SUBMIT A PLAN TO ENGINEER FOR APPROVAL PRIOR TO PROCEEDING WITH THE WORK

REGISTERED PROFESSIONAL ENGINEERS — A.S. WILLIAMS — LICENSEE — 2021-11-08 — NT/NU

CONSTRUCTION

Canada — Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

DESIGN: JAA	REVIEWED BY: ASW
DRAWN: CAH	CHECKED BY: JAA
DATE: NOVEMBER 2021	
SCALE: 1:250	

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

JOHNSTON COVE LIFT STATION
MH D3 THRU JOHNSTON COVE LIFT STATION
WATER MAIN AND SANITARY SEWER
PLANS

PROJECT NO. 20-3940

SHEET NO. C01

FILENAME: C:\PW WORKING DIRECTORY\PROJECTS 2020\55CHA\DMS7831\01\203940-02-JOHNSTON COVE DWGS.DWG PLOTTED BY: HARLEY, CRYSTAL
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SANITARY SEWER PROFILE – MH D3 THRU JOHNSTON COVE LIFT STATION

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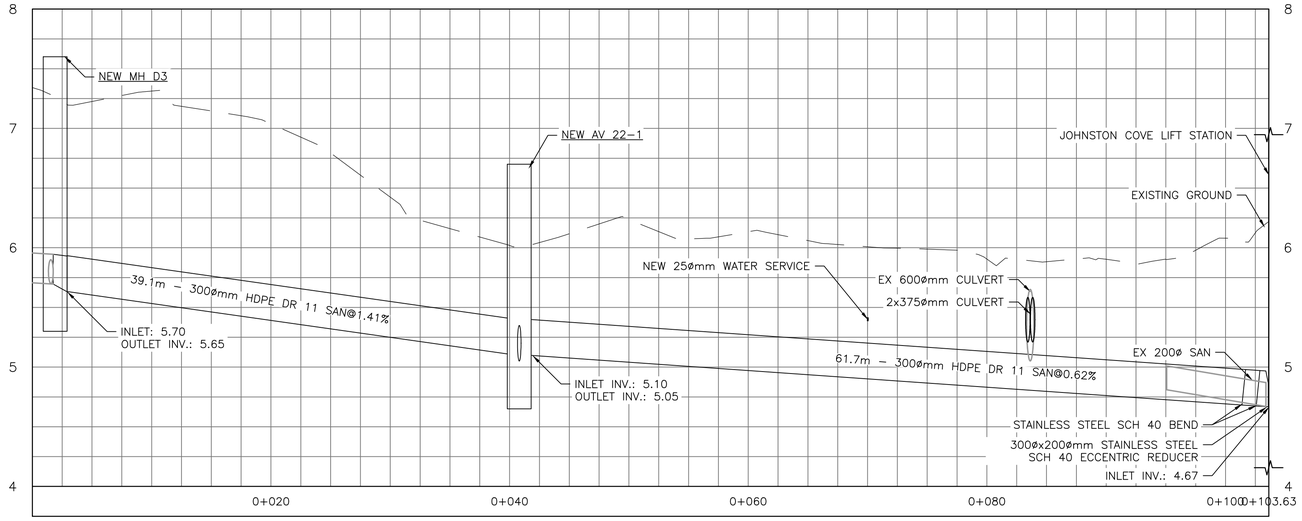
VERT: 1:25



SANITARY SEWER PROFILE – AV 08-1 THRU JOHNSTON COVE LIFT STATION

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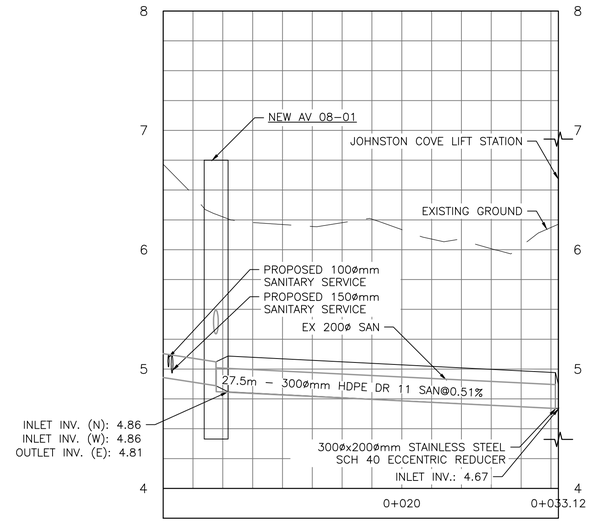

WATER MAIN PROFILE – MH D3 THRU AV 08-1

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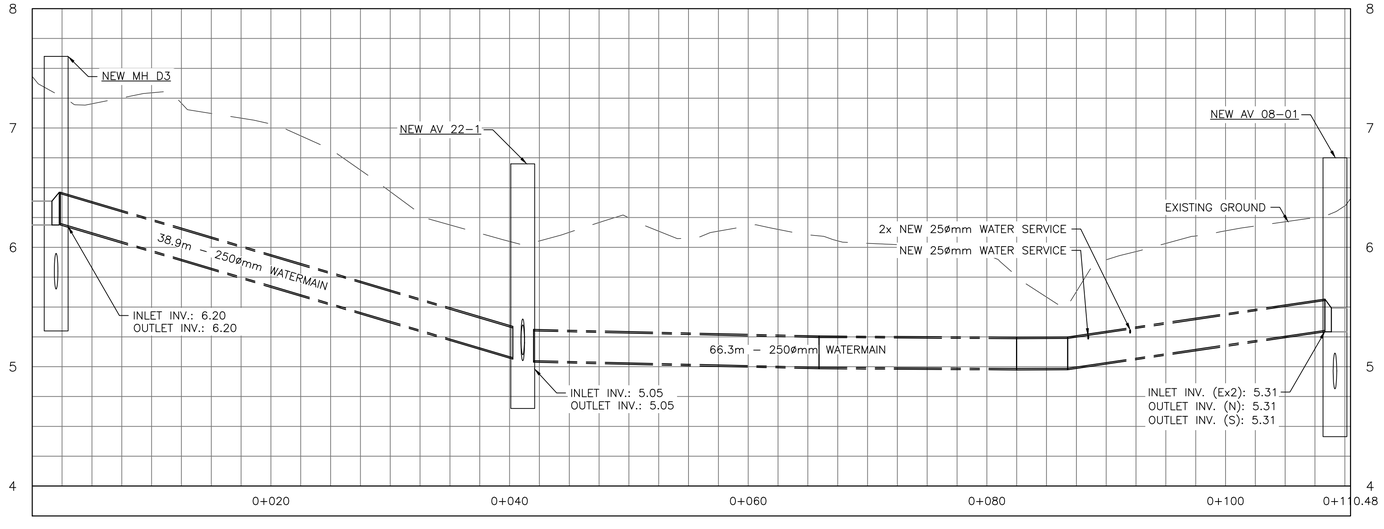

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SCALE 1:250 METRES (5 0 5)

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Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

REGISTERED PROFESSIONAL ENGINEER — A.S. WILLIAMS — LICENSEE — 2021-11-08 — NT/NU

CONSTRUCTION

Canada — Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

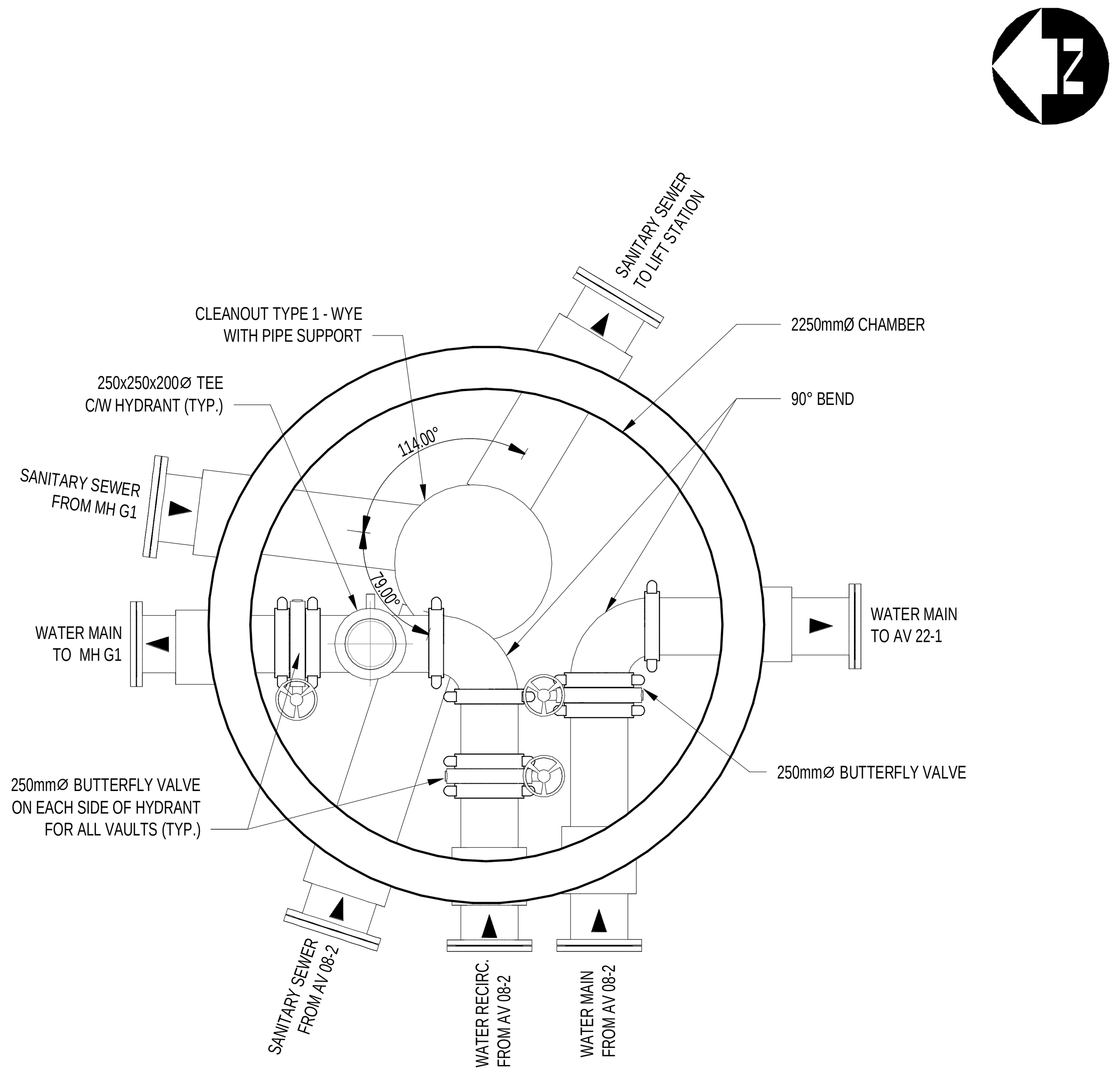
DESIGN: JAA | REVIEWED BY: ASW
DRAWN: CAH | CHECKED BY: JAA
DATE: NOVEMBER 2021
SCALE: H 1:250 V 1:25

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

JOHNSTON COVE LIFT STATION
MH D3 THRU JOHNSTON COVE LIFT STATION
WATER MAIN AND SANITARY SEWER
PROFILES

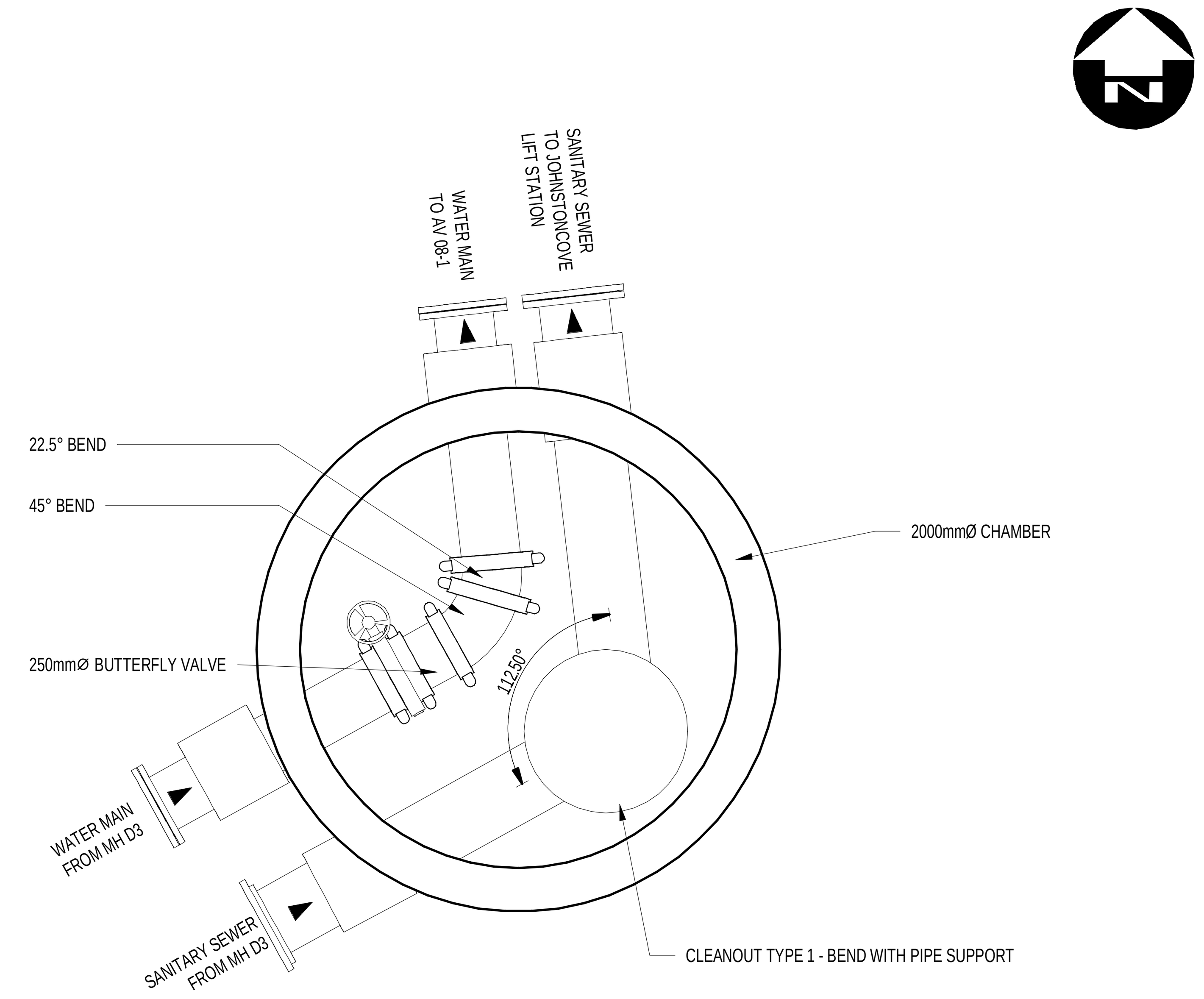
PROJECT NO. 20-3940

SHEET NO. C02



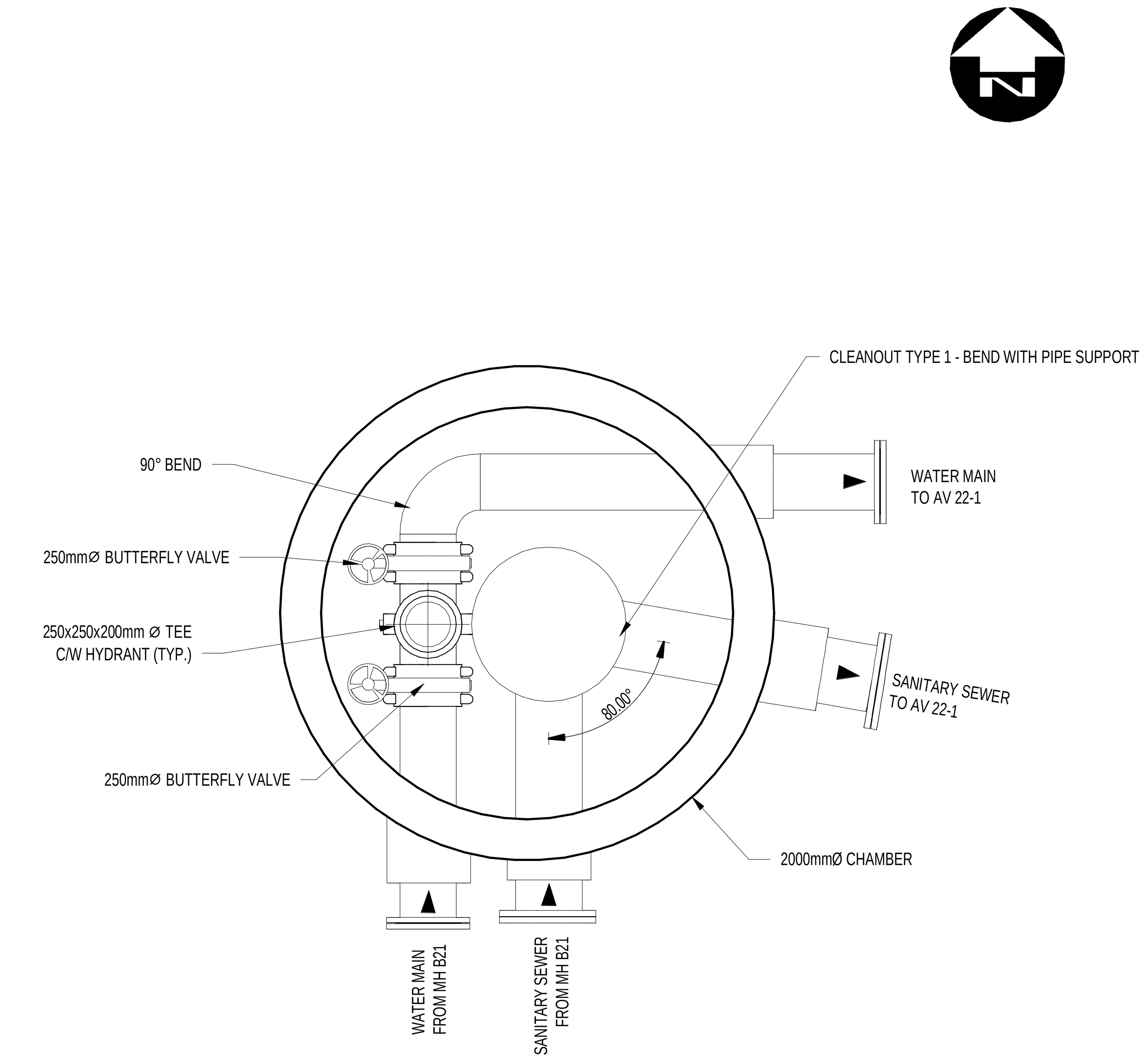
AV 08-01 PLAN BELOW GRADE

SCALE: 1 : 25



AV 22-1 PLAN BELOW GRADE

SCALE: 1 : 25



MH D3 PLAN BELOW GRADE

SCALE: 1 : 25

AV08-1

ACCESS VAULT			WATER MAIN DIAMETERS (mm) / INVERTS (m)				SANITARY SEWER DIAMETERS (mm) / INVERTS (m)		
TOP (m)	SUMP INVERT (m)	DIAMETER (mm)	AV08-2 INLET	MH G1 OUTLET	AV08-02 INLET	AV22 OUTLET	AV08-2 INLET	MH G1 INLET	JCLS OUTLET
6.75	4.51	2250	250 / 5.31	250 / 5.31	250 / 5.31	250 / 5.31	300 / 4.86	300 / 4.86	300 / 4.81

AV22-1

ACCESS VAULT			WATER MAIN DIAMETERS (mm) / INVERTS (m)		SANITARY SEWER DIAMETERS (mm) / INVERTS (m)	
TOP (m)	SUMP INVERT (m)	DIAMETER (mm)	MH D3 INLET	JCLS OUTLET	MH D3 INLET	JCLS OUTLET
6.40	4.75	2000	250 / 5.05	250 / 5.05	300 / 5.10	300 / 5.05

MH D3

ACCESS VAULT			WATER MAIN DIAMETERS (mm) / INVERTS (m)		SANITARY SEWER DIAMETERS (mm) / INVERTS (m)	
TOP (m)	SUMP INVERT (m)	DIAMETER (mm)	MH B21 INLET	AV22-1 OUTLET	MH B21 INLET	AV22-1 OULET
7.70	5.35	2000	250 / 6.20	250 / 6.20	300 / 5.70	300 / 5.65

PLOT DATE: 2021-11-03 2:31:39 PM
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REGISTERED PROFESSIONAL ENGINEER
A.S. WILLIAMS
LICENSEE
2021-11-08
NT/NU

CONSTRUCTION

Canada

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2	CONSTRUCTION	11/03/2021	ASW
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DESIGN: INV
REVIEWED BY: INV
DRAWN: SCC
CHECKED BY: ASW
DATE: NOVEMBER 2021
SCALE: As indicated

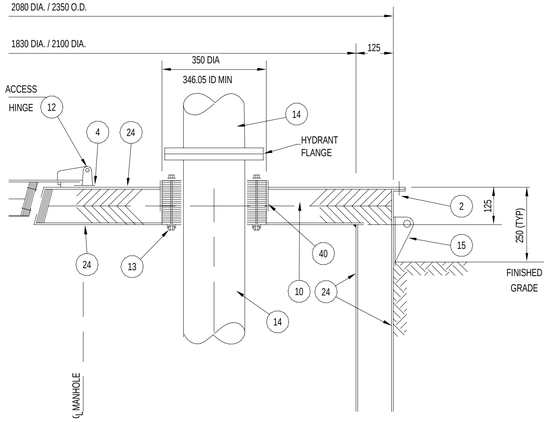
GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

JOHNSTON COVE LIFT STATION

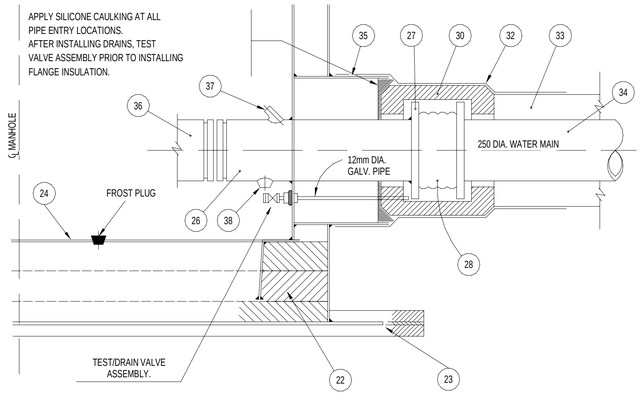
ACCESS VAULT PLANS AND SECTIONS

PROJECT NO. 20-3940

SHEET NO. C03



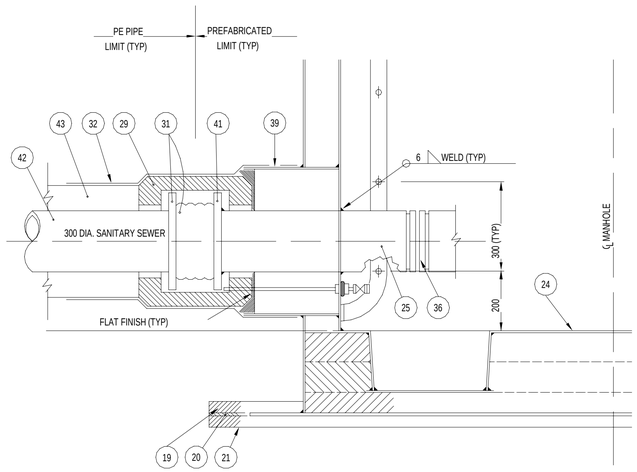
1 TYPICAL HYDRANT ACCESS VAULT PENETRATION
SCALE: NTS



2 TYPICAL WATER MAIN ACCESS VAULT PENETRATION
SCALE: NTS

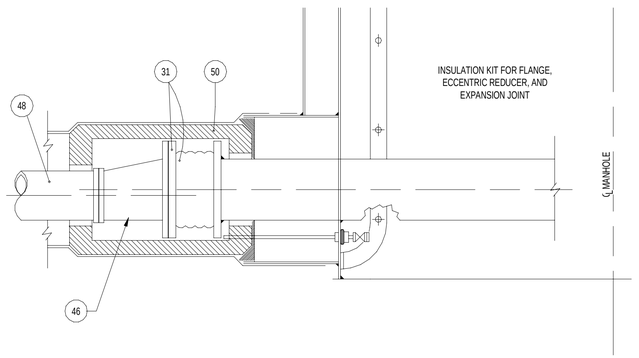
GENERAL NOTES:

1. CONSTRUCT ACCESS VAULTS FROM 6mm STEEL PLATE WITH CONTINUOUS (FULLY) WELDED CONSTRUCTION. FABRICATE COMPLETELY PRIOR TO EPOXY COATING. WELDING & FABRICATION TO CSA W59-1977 & W47-1-1973.
2. ALL STEEL TO BE CASA G40-21 /TYPE 260W, OR ASTM A36-62T.
3. ALL PIPING INSIDE THE ACCESS VAULTS IS TO BE PREFABRICATED TO THE LIMITS SHOWN ON THE TYPICAL SECTION AND AS SHOWN ON THE PLANS. PROVIDE PIPE ENTRY SPOOL PIECES, LADDER MOUNTING STUDS & ALL OTHER ACCESS VAULT HARDWARE, ETC., AS REQUIRED, PRE-WELDED IN PLACE PRIOR TO SANDBLASTING AND EPOXY COATING.
4. ALL PREFABRICATED STEEL PARTS OF ACCESS VAULT (EXCEPT TOP PLATE, HATCH AND LADDER) INCLUDING PIPE ENTRY SPOOL PIECES, SHALL BE SANDBLASTED AND EPOXY COATED INSIDE AND OUTSIDE.
5. TOP PLATE, HATCH, HINGES & LADDER, SHALL BE HOT DIPPED GALVANIZED TO CSA G164 MINIMUM 610 G/M2.
6. ALL NUTS, BOLTS, WASHERS, SCREW ETC., HOT DIPPED OR CADMIUM PLATED.
7. FLANGE INSULATION KITS AND STYROFOAM ACCESS VAULT BASE INSULATION SUPPLIED AS PART OF ACCESS VAULTS.
8. ALL DIMENSIONS ARE IN MILLIMETRES (mm) UNLESS OTHERWISE NOTED.



3 TYPICAL SANITARY ACCESS VAULT PENETRATION
SCALE: NTS

4 TYPICAL WATER MAIN ACCESS VAULT PENETRATION WITH INCREASER/REDUCER
SCALE: NTS



5 TYPICAL SANITARY SEWER ACCESS VAULT PENETRATION WITH ECCENTRIC INCREASER/REDUCER
SCALE: NTS

KEY TO NUMBERED PARTS:

1. GASKET 50 mm X 3 mm, COMPRESSIBLE NEOPRENE RUBBER.
2. 12 mm Ø GALVANIZED STEEL BOLTS, NUTS AND WASHERS @ 210 mm EQUAL SPACING.
3. HASP ASSEMBLY.
4. 50 mm X 60 mm X 12 mm STEEL HINGE BASE PLATE WELDED TO ACCESS VAULT TOP.
5. 19 mm X 38 mm 35 DUROMETER SOFT NATURAL RUBBER STRIP (REVERSIBLE) GASKET TO ACHIEVE AIRTIGHT & WATERPROOF SEAL ALL AROUND.
6. 50 mm X 4 mm STEEL BAR WELDED TO LID.
7. LIFTING EYE 12 mm Ø STEEL DIA. STEEL X 40 mm INSIDE LOOP.
8. 6 mm GALVANIZED STEEL NUT, COUNTERSUNK BOLT & WASHER @ 100 mm CENTERS.
9. 6 mm X 19 mm GALVANIZED STEEL COUNTERSUNK SHEET METAL SCREWS @ 100 mm CENTRES.
10. POLYURETHANE SHEET INSULATION, 240 KPA CUT TO SIZE.
11. 20 mm THICK HIGH DENSITY POLYETHYLENE.
12. HINGES SPACED AT 400 mm APART.
13. THUNDER-LINE CORP. LINK-SEAL MODEL LS-500-C (200X350) OR APPROVED EQUAL TO FIT ITEMS 14 & 40.
14. 200 mm CRANE MCAVITY M-67 "IN-LINE" FIRE HYDRANT.
15. LIFTING LUGS - TWO PER ACCESS VAULT. 150 mm X 75 mm X 12 mm THK. WITH 38 mm Ø LIFTING EYE, C/W 200 X 200 X 12 STEEL REINFORCING PLATE CURVED TO RADIUS, CONTINUOUSLY WELDED. CAPACITY OF LIFTING LUGS TO BE CONFIRMED BY MANUFACTURER.
16. 65 mm Ø THREADED STEEL HALF NIPPLE CONDUIT SLEEVE (FOR EXTENSION CORD OR SUMP PUMP DISCHARGE) IN APPROPRIATE LOCATION, C/W THREADED GALV. STEEL CAPS.
17. SPRAYED POLYURETHANE INSULATION, 240 KPA.
18. LADDER. LENGTH AS REQUIRED. 450 mm WIDE MADE FROM 65 mm X 12 mm FLAT BAR VERTICALS & SUPPORTS WITH 20 mm DIA. RUNGS. WELDED CONSTRUCTION THROUGHOUT. ALL EDGES TO BE GROUND SMOOTH. GALVANIZE AFTER FABRICATION. FASTEN WITH STUDS WELDED TO INNER WALL. FALL ARREST TIE OFF POINT TO BE SUPPLIED. CAPACITY AND DESIGN TO BE COMPLETED BY MANUFACTURER.
19. 38 mm THK STYROFOAM, 4 PCS, OUTER EDGE TO MATCH ITEM 21 - DOW CHEMICAL HI 60, 410 KPA COMPRESSIVE STRENGTH.
20. FILLER PIECE. 10 mm THICK STYROFOAM INSULATION DOW CHEMICAL HI 60.
21. 38 mm THICK X 2438 X 2438 STYROFOAM INSULATION DOW CHEMICAL HI 60.
22. POLYURETHANE SHEET INSULATION CUT TO SIZE, 240 KPA.
23. 10 mm THICK X 2438 X 2438 SQUARE STEEL BASE PLATE.
24. 6 mm THICK STEEL PLATE ACCESS VAULT CONSTRUCTION.
25. 300 mm Ø/250 mm Ø SANITARY SEWER ENTRY. SCHEDULE 80 STEEL PIPE SPOOL PIECE.
26. 250 mm Ø WATER MAIN ENTRY. SCHEDULE 80 STEEL PIPE SPOOL PIECE.
27. 250 mm Ø/300 mm Ø WELDED STEEL SLIP-ON FLANGE. FLANGE DIAMETER TO MATCH EXPANSION JOINT FLANGE DIAMETER.
28. 250 mm Ø EXPANSION JOINT, MERCER STYLE 454E OR APPROVED EQUAL. REFER TO SPECIFICATIONS..
29. INSULATION KIT FOR 200mmØ / 300Ø FLANGE + EXPANSION JOINT, (MASTIC COAT INNER SURFACES) AND FRP COATING.
30. INSULATION KIT FOR 250mmØ FLANGE + EXPANSION JOINT, (MASTIC COAT INNER SURFACAES) AND FRP COATING.
31. 300 mm Ø EXPANSION JOINT, MERCER STYLE 454NI OR APPROVED EQUAL. REFER TO SPECIFICATIONS..
32. RAYCHEM THERMACLAD HEAT SHRINK TAPE, 2 LAYER, MIN. 50% OVERLAP EACH WRAP.
33. 50 mm THICK POLYURETHANE INSULATION HALVES OR PE PIPE PRE-INSULATION TO SUIT PIPE SIZES.
34. 250 mm (IP SIZE) DR 11 HDPE WATER MAIN.
35. STEEL RING SECTION WELDED TO ACCESS VAULT OUTER WALL.
36. HOT DIPPED GALVANIZED STEEL PIPING.
37. 50 mm Ø LATROLET.
38. 25 mm Ø THREADOLET.
39. STEEL RING SECTION WELDED TO ACCESS VAULT OUTER WALL..
40. 350 mm Ø SCHEDULE 10 (346 mm ID) STEEL PIPE X 100 M LONG WELDED TO ACCESS VAULT TOP PLATE.
41. 300 mm Ø WELDED STEEL SLIP-ON FLANGE. FLANGE DIAMETER TO MATCH EXPANSION JOINT FLANGE DIAMETER.
42. 300 mm Ø (IP SIZE) DR 11 HDPE SEWER MAIN.
43. 50 mm THICK POLYURETHANE INSULATION HALVES OR PE PIPE PRE-INSULATION TO SUIT PIPE SIZES.
44. POLYETHYLENE LINER TUBE, PACK WITH STYROFOAM INSULATION.
45. 250 X 200 mm DIA. OR 250 X 150 mm DIA D.I. INCREASER/REDUCER TO MATCH EXTERIOR PIPE SIZE.
46. 300 X 200 mm DIA. OR 300 X 150 mm DIA. D.I. INCREASER/REDUCER TO MATCH EXTERIOR PIPE SIZE.
47. 150 mm DIA. OR 200 mm DIA. PE OR HDPE WATER MAIN.
48. 150 mm DIA. OR 200 mm DIA. PE OR HDPE SANITARY SEWER.
49. INSULATION KIT FOR FLANGE, CONCENTRIC REDUCER AND EXPANSION JOINT, (MASTIC COAT INNER SURFACES) AND FRP COATING.
50. INSULATION KIT FOR FLANGE, ECCENTRIC REDUCER AND EXPANSION JOINT, (MASTIC COAT INNER SURFACES) AND FRP COATING.

REGISTERED PROFESSIONAL ENGINEER
A.S. WILLIAMS
LICENSEE
2021-11-08
NT/NU

CONSTRUCTION

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DRAWN: SMZ	CHECKED BY: ASW
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SCALE: As indicated	

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

PROJECT NO. 20-3940

WATER AND SANITARY VAULT PENETRATION DETAILS

SHEET NO. C04

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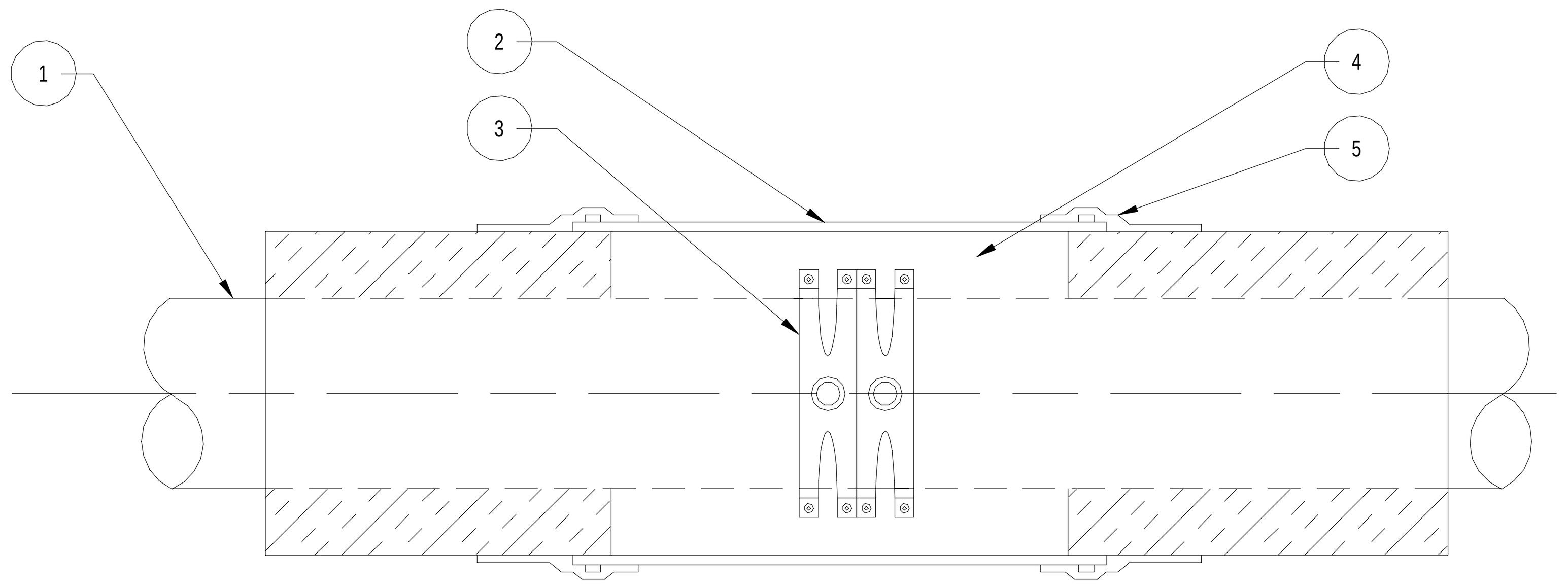


KEY TO NUMBERED PARTS:

1. WATER MAIN - DR 11 HDPE PIPE c/w 75mm APPLIED POLYURETHANE INSULATION & FRP JACKET.
2. INSULATION FORM (SEE DETAIL), SIZED TO FIT WATER MAIN O.D. AND SERVICE LATERAL O.D., 25mm LAP REQUIRED ON EACH SIDE.
3. 2x ROBAR 2706 TAPPING SADDLE, DOUBLE STRAP OR EQUAL.
4. FIELD POURED POLYURETHANE INSULATION FOAM (207 kPa COMPRESSIVE STRENGTH).
5. HEAT SHRINK SLEEVE, MIN. 100mm LAP ON BLACK JACKET.

NOTES:

1. ALL EXPOSED SURFACES OF POLYURETHANE TO BE FIELD COATED WITH MASTIC.
2. METAL SURFACES IN CONTACT WITH FIELD POURED POLYURETHANE INSULATION SHALL BE COATED WITH OIL SEPARATING AGENT.

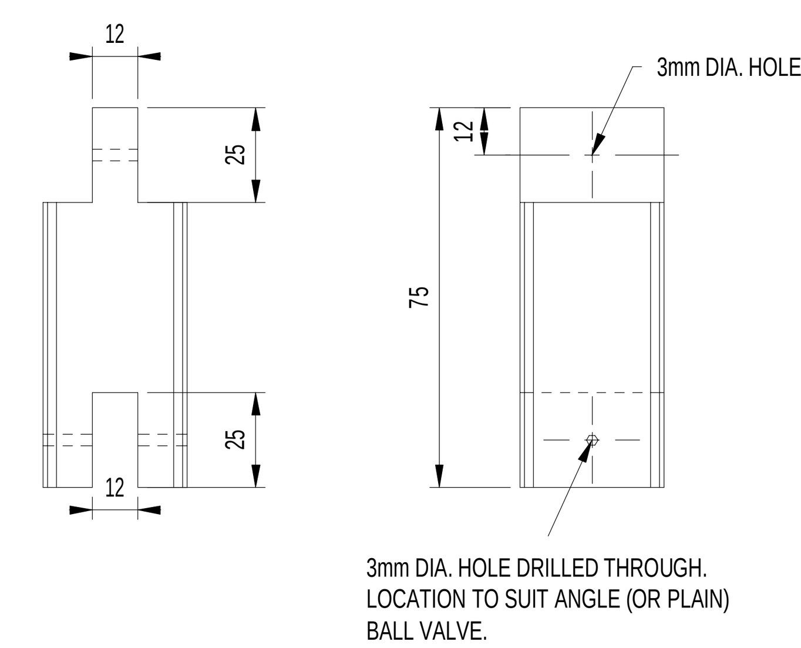
1 TYPICAL WATER SERVICE AT MAIN (PLAN VIEW)

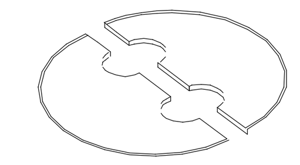
SCALE: NTS

SERVICE SIZING TABLE

Building Type	Water Supply	Water Return	Sanitary Sewer	Carrier Pipe
Single family	25 mm	25 mm	100 mm	100 mm
2-plex	25 mm	25 mm	100 mm	100 mm
3-plex	25 mm	25 mm	100 mm	100 mm
4-plex	25 mm	25 mm	100 mm	100 mm
6-plex	38 mm	25 mm	150 mm	150 mm
8-plex	38 mm	25 mm	150 mm	150 mm
10-plex	38 mm	25 mm	150 mm	150 mm

TYPICAL WATER SERVICE SIZING TABLE ONLY

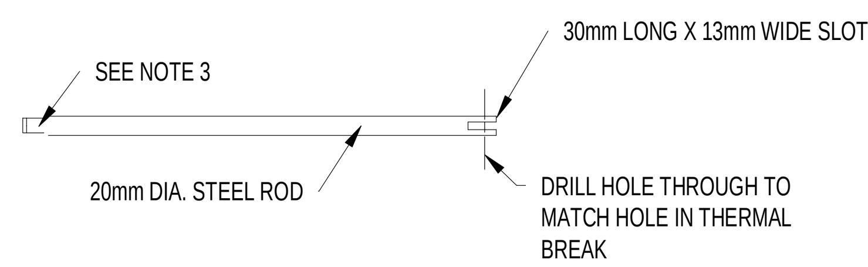




SECURITY CAP

NOTE
1. MADE FROM 38mm DIA. ROUND HDPE BAR STOCK

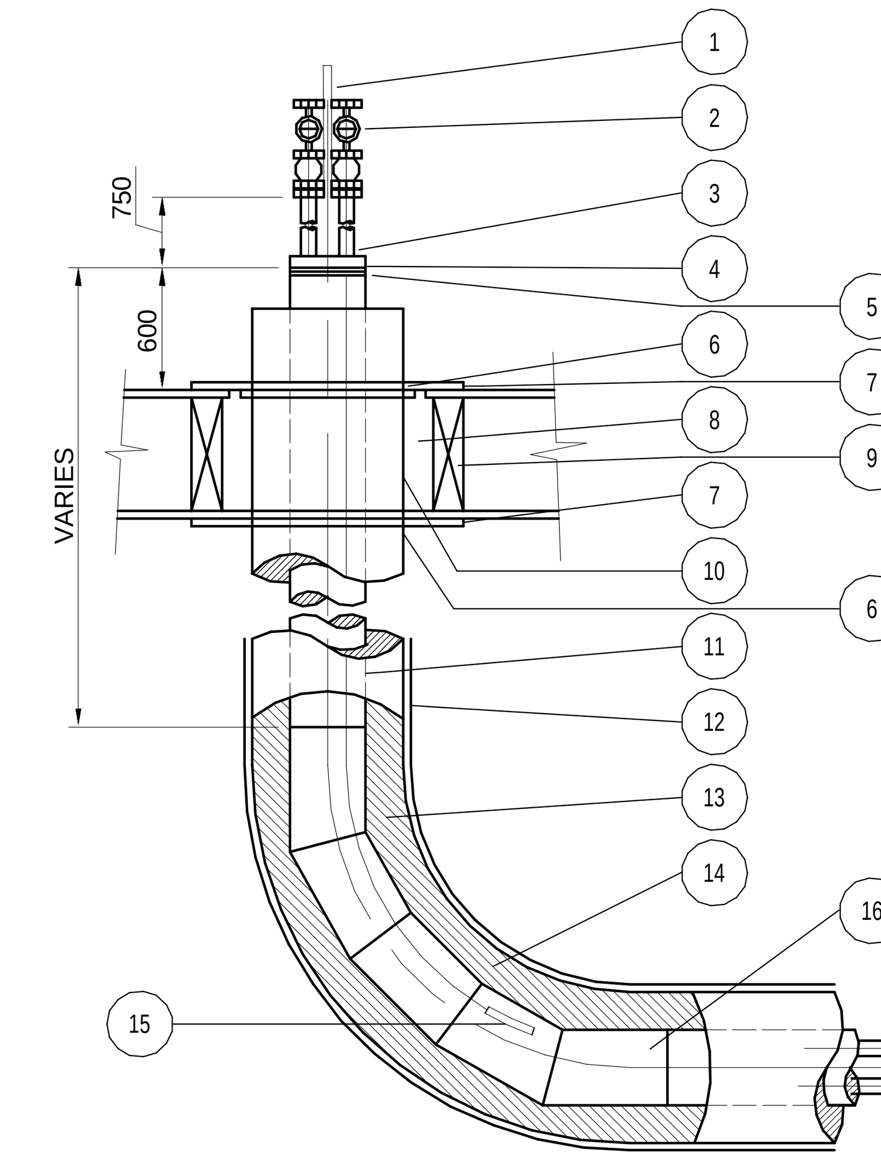
HDPE THERMAL BREAK



NOTES:
1. ROD SHALL BE FIELD FABRICATED. ZINC RICH PAINT COATED AFTER FABRICATION.
2. ROD SHALL BE SUFFICIENT LENGTH TO EXTEND FROM THERMAL BREAK TO TOP OF HDPE PIPE (ITEM 18) BUT SHALL NOT EXTEND ABOVE EXISTING GROUND SURFACE.
3. TOP SECTION OF ROD TO BE 32mm LONG X 19mm WIDE X 6mm THICK WITH 5mm LONG TOP BEVEL (SIMILAR TO TOP OF CRANE McAVITY W-6221 ROD).

2 VALVE OPERATING ROD

SCALE: NTS



NOTES:

1. ALL EXPOSED SURFACES OF POLYURETHANE TO BE FIELD COATED WITH MASTIC.
2. THE INSIDE SURFACES OF METAL TO BE IN CONTACT WITH FIELD POURED POLYURETHANE INSULATION SHALL BE COATED WITH OIL SEPARATING AGENT.
3. INSULATION FORMS AND METAL COVER PARTS, TO BE 1.6mm THICK STEEL, CONTINUOUS WELDED SEAMS, HOT DIPPED GALVANIZED AFTER FABRICATION.

3 TYPICAL WATER SERVICE RISER AT HOUSE

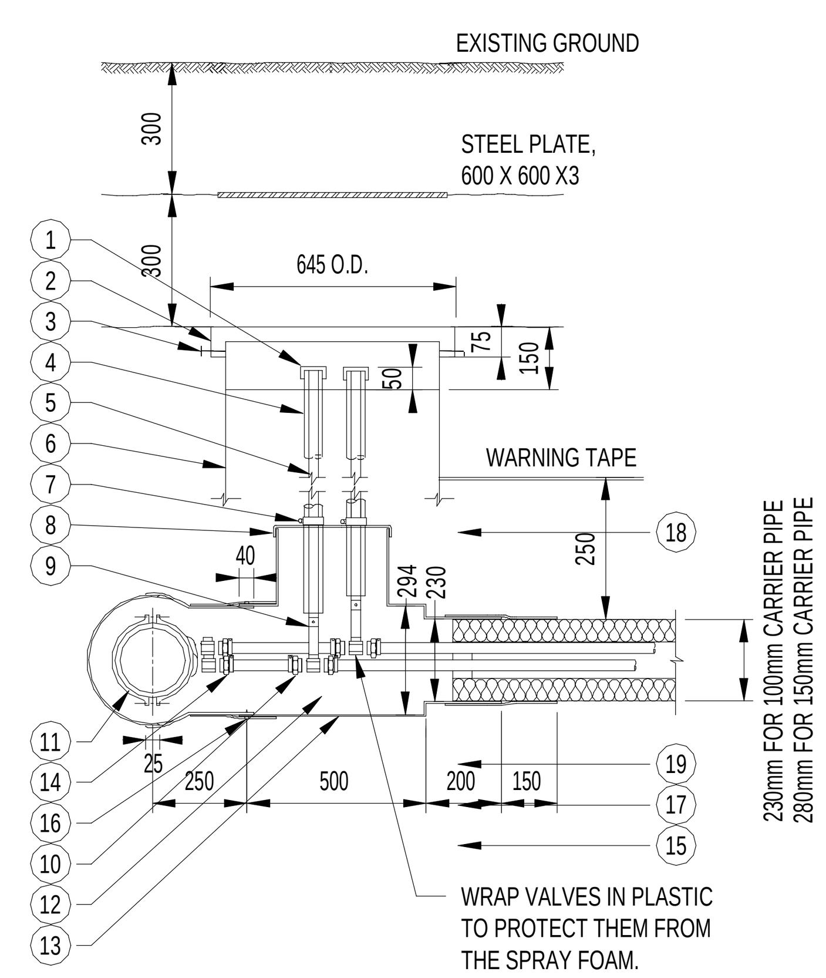
SCALE: NTS

KEY TO NUMBERED PARTS:

1. 2,000 mm EXCESS HEATING CABLE TO BE LEFT AT BOTH ENDS.
2. 25 mm BALL VALVES, COMPRESSION WITH SEAMLESS STAINLESS STEEL INSERT (MUELLER H-15219 OR EQUAL).
3. FIELD INSTALLED 25 mm OR 38 mm CTS HDPE DR 11 (1,100 KPA) SUPPLY & RETURN WATER SERVICE PIPE - CONTINUOUS LENGTH FROM COIL STOCK.
4. SECURITY CAP.
5. STAINLESS STEEL GEAR CLAMP HOLDING SECURITY CLAMP IN PLACE.
6. CAULK WITH SILICON ALL AROUND.
7. 20 mm PLYWOOD GLUED AND SCREWED TO JOIST/STUDS AND HEADERS.
8. POLYURETHANE INSULATION FROM PORTABLE FOAM PACK TO FILL VOID.
9. FLOOR JOIST.
10. FIBERGLASS REINFORCED PLASTIC THIMBLE.
11. 100 mm OR 150 mm ∅ HDPE DR 17 (690 KPA) CARRIER PIPE BUTT FUSED IN FIELD WITH BLIND FLANGE INSTALLED 1 M INSIDE PROPERTY LINE.
12. HEAT SHRINK TO SUIT.
13. POLYURETHANE HALF SHELL CUT TO LENGTH AND COATED WITH ASPHALT MASTIC.
14. LONG RADIUS 90° ELBOW REINFORCED PLASTIC JACKET.
15. THERMOSTAT BULB.
16. BUTT FUSION JOINT MADE BY A QUALIFIED AND LICENSED JOINING TECHNICIAN.
17. HOLES TO FIT 25 mm HDPE LINES.
18. 20 mm PLYWOOD TO FIT PIPE O. D..
19. 22 GA. SHEET METAL GALVANIZED.
20. HOLE FOR THERMOSTAT BULB AND HOLE FOR HEAT TRACE CABLE.
21. 50 mm NOMINAL THICKNESS SHOP CAST POLYURETHANE INSULATION AND BLACK JACKET.
22. TWO FULL TURNS OF POLYESTER PACKAGING TAPE APPLIED EVERY 2 M MIN..
23. 100 mm OR 150 mm ∅ HDPE DR 17 (690 KPA) CARRIER PIPE BUTT FUSED IN FIELD WITH BLIND FLANGE INSTALLED 1 M INSIDE PROPERTY LINE.
24. 250mm ∅ HDPE WATER MAIN WITH 50 mm POLYURETHANE INSULATION.
25. HEAT SHRINK SLEEVE MIN. 100 mm LAP ON BLACK JACKET AFTER SHRINKAGE.
26. FIELD COAT ALL EXPOSED POLYURETHANE WITH MASTIC.
27. DIA. TO SUIT INSULATED MAIN PIPE O. D. AND REQUIREMENT OF 25 mm LAP ON EACH SIDE.
28. STAINLESS STEEL GEAR CLAMPS.
29. HOLES TO BE DRILLED IN FIELD TO SUIT, FOR GALVANIZED SHEET METAL SCREWS.
30. DIA. TO SUIT INSULATED MAIN PIPE O. D. AND REQUIREMENT OF 25 mm LAP ON EACH SIDE.
31. ROBAR 2706 TAPPING SADDLE, DOUBLE STRAP - SUPPLY AND INSTALL.
32. POLYURETHANE FOAM PLUG - SUPPLY AND INSTALL.
33. PVC TAPE WRAPPED OVER ALL HEAT TRACE CABLE AND OVER PIPE/FITTINGS, ETC., WITHIN INSULATION FORM. (TO KEEP FIELD POURED URETHANE OUT FROM BETWEEN HEAT TRACING AND PIPING).
34. FIELD POURED POLYURETHANE INSULATION FOAM INSULATION 207 KPA COMPRESSIVE STRENGTH -SUPPLY AND INSTALL WATER SERVICE INSULATION FORMS.
35. 150 mm WIDE PE WARNING TAPE.
36. FIELD CUT HOLES (IF REQ'D FOR FOAM INJECTION) TO BE MASTIC COATED AFTER FOAM INJECTION.
37. 100mm ∅ OR 150 mm ∅ FACTORY FABRICATED DR 17 HDPE 45° BEND WITH FACTORY APPLIED POLYURETHANE INSULATION/FRP JACKET COVER AND PLAIN ENDS.
38. 25mm OR 38 mm BRONZE BALL CORPORATION STOP - 25mm ∅ MIPT INLET X 25mm ∅ CTS HDPE DR 11 OR 38∅ MIPT X 38∅ CTS HDPE DR 11 - JOINT OUTLET C/W STAINLESS STL. INSERT STIFFENERS - FORD BALL CORP. FB SERIES 1000 OR EQUAL. (2 REQUIRED PER SERVICE).
39. 100 X 100 WOODEN MARKER STAKE.

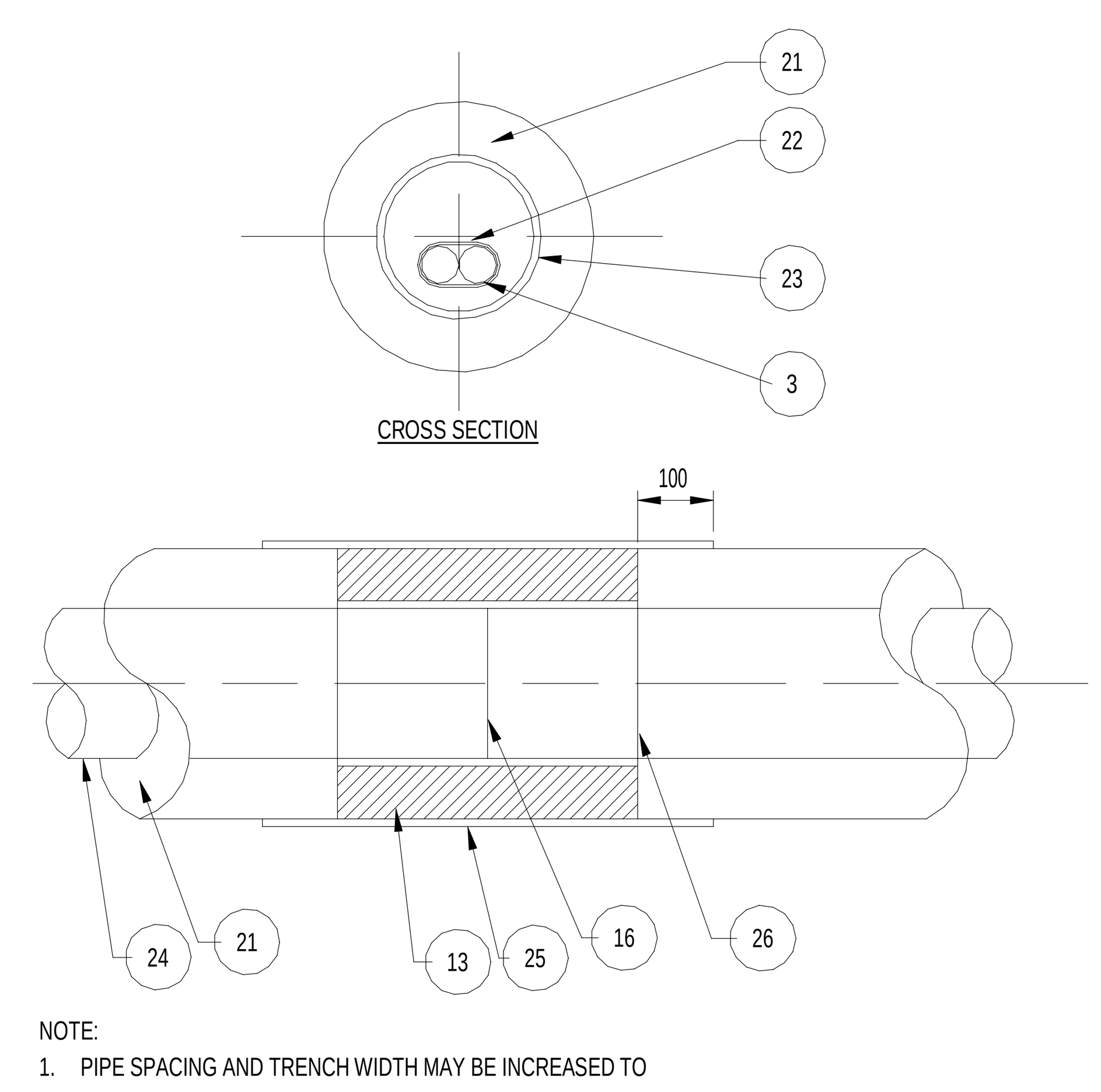
WATER NUMBERED PARTS LIST

KEY TO NUMBERED PARTS:
1. SNUG FITTING PLASTIC CAP.
2. STEEL LID MADE FROM 2.7mm THICK SHEET STEEL GALVANIZED AFTER FABRICATION.
3. 12mm DIA. SCREW BOLT WITH WELDED NUT, GALVANIZED (FOUR PER LID)
4. 50 DIA. DR 9 HDPE PIPE VALVE EXTENSION FIELD CUT TO LENGTH AND FILLED WITH ESSO EPIC-102 GREASE.
5. VALVE OPERATING ROD CONNECT TO ITEM 45 WITH BRASS COTTER PIN.
6. 600mm DIA. 68 X 13 X 1.6mm THICK GALVANIZED STEEL CULVERT.
7. STAINLESS STEEL WORM GEAR HOSE CLAMP TO PREVENT MOVEMENT OF VALVE EXTENSION PIPE. CAULK WITH SILICON ALL AROUND.
8. 296mm INSIDE DIA. REMOVABLE GALVANIZED SHEET METAL CAP WITH FIELD CUT HOLES.
9. HDPE THERMAL BREAK CONNECT TO ITEM 2 WITH BRASS COTTER PIN.
10. BALL VALVES SHALL BE FORD B44-444 (25mm LINE) OR B66-777 (50mm LINE) WITH PACK JOINT FOR HDPE INCLUDING INSERT STIFFENER AND FOR COPPER PIPE ON END IN BUILDING.
11. HDPE IPS DR 11 WATER MAIN WITH 75mm POLYURETHANE INSULATION.
12. POLYURETHAN INSULATION FROM PORTABLE FOAM PACK TO FILL VOID.
13. BOTTOM INSULATION FORM OF GALVANIZED SHEET STEEL.
14. MAIN STOP SHALL BE FORD F1100 OR EQUAL WITH PACK JOINT AND SEAMLESS INSERT STIFFENER FOR HDPE IPS PIPE - 25mm DIA. OR 50mm DIA. AS REQUIRED.
15. HDPE DR11 SUPPLY AND RECIRCULATION PIPE - FIELD INSTALLED CONTINUOUS LENGTH FROM COIL STOCK. 25mm CTS (BOTH) OR 50mm IPS WITH 25mm CTS RETURN.
16. No. 8 X 13mm CADMIUM PLATED SHEET METAL SCREWS.
17. HEAT SHRINK TO BE MIN. 100mm LAP ON BLACK JACKET AFTER SHRINKAGE.
18. POLYURETHANE OR FIBRE REINFORCED PLASTIC (FRP) FOAM PLUG. (MINIMUM 50mm THICK)
19. SHOP CAST 75mm (SEE SPECS) THICK POLYRETHANE INSULATION WITH BLACK JACKET PROTECTIVE COATING.



4 TYPICAL WATER SERVICE CONNECTION AT MAIN SIDE (SECTION) VIEW

SCALE: NTS

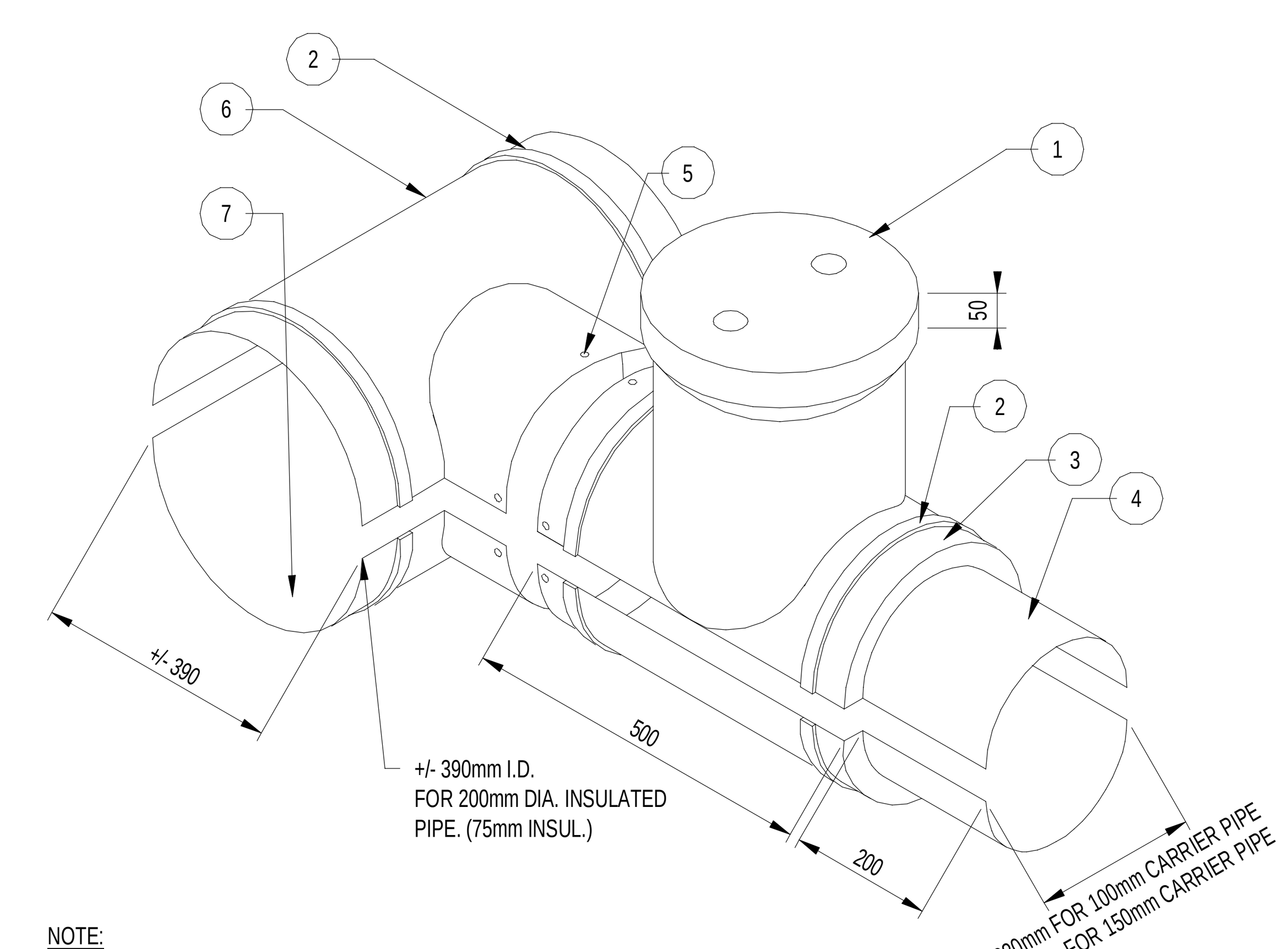


NOTE:
1. PIPE SPACING AND TRENCH WIDTH MAY BE INCREASED TO

WATER SERVICE CONNECTION PLAN

5 TYPICAL WATER SERVICE JOINT CONNECTION PLAN & CROSS SECTION

SCALE: NTS



NOTE:
STEEL FORM TO SUIT O.D.
OF INSULATED MAIN PIPE PLUS 25mm LAP
REQUIRED ON EACH SIDE. SEE DETAIL

KEY TO NUMBERED PARTS:

1. 296mm INSIDE DIA. REMOVABLE GALVANIZED SHEET METAL CAP WITH FIELD CUT HOLES.
2. STAINLESS STEEL BAND-IT CLIPS #M211.
3. 294mm OUTSIDE DIA. X 50mm LONG.
4. 200mm LONG, 230mm INSIDE DIA. FOR 100 DIA. CARRIER PIPE, 280mm INSIDE DIA FOR 150mm DIA. CARRIER PIPE.
5. HOLES TO BE DRILLED IN FIELD TO SUIT.
6. 390mm INSIDE DIA. X 560mm LONG FOR 200mm DIA. MAIN.
7. BOTTOM INSULATION FORM OF GALVANIZED SHEET STEEL.

6 STEEL WATER SERVICE FORM

SCALE: NTS

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REGISTERED PROFESSIONAL ENGINEER
A.S. WILLIAMS
LICENSEE
2021-11-08
NT/NU

CONSTRUCTION

Canada

Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

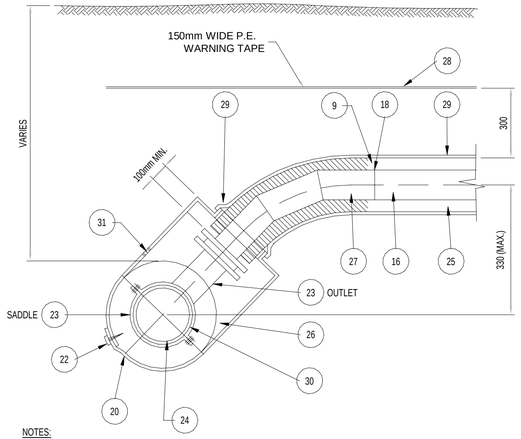
DESIGN: INV	REVIEWED BY: INV
DRAWN: SMZ	CHECKED BY: ASW
DATE: NOVEMBER 2021	
SCALE: As indicated	

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

WATER SERVICE DETAILS

PROJECT NO. 20-3940

SHEET NO. C05

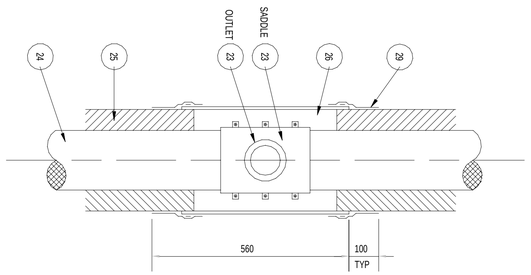


NOTES:

1. ALL EXPOSED SURFACES OF POLYURETHANE TO BE FIELD COATED WITH MASTIC.
2. THE INSIDE SURFACES OF METAL TO BE IN CONTACT WITH FIELD POURED POLYURETHANE INSULATION SHALL BE COATED WITH OIL SEPARATING AGENT.
3. INSULATION FORMS AND METAL COVER PARTS, TO BE 1.6mm THICK STEEL, CONTINUOUS WELDED SEAMS, HOT DIPPED GALVANIZED AFTER FABRICATION.

1 TYPICAL SANITARY SERVICE CONNECTION AT MAIN1

SCALE: NTS



SERVICE CONNECTION PLAN

SERVICE SIZING TABLE

Building Type	Water Supply	Water Return	Sanitary Sewer	Carrier Pipe
Single family	25 mm	25 mm	100 mm	100 mm
2-plex	25 mm	25 mm	100 mm	100 mm
3-plex	25 mm	25 mm	100 mm	100 mm
4-plex	25 mm	25 mm	100 mm	100 mm
6-plex	38 mm	25 mm	150 mm	150 mm
8-plex	38 mm	25 mm	150 mm	150 mm
10-plex	38 mm	25 mm	150 mm	150 mm

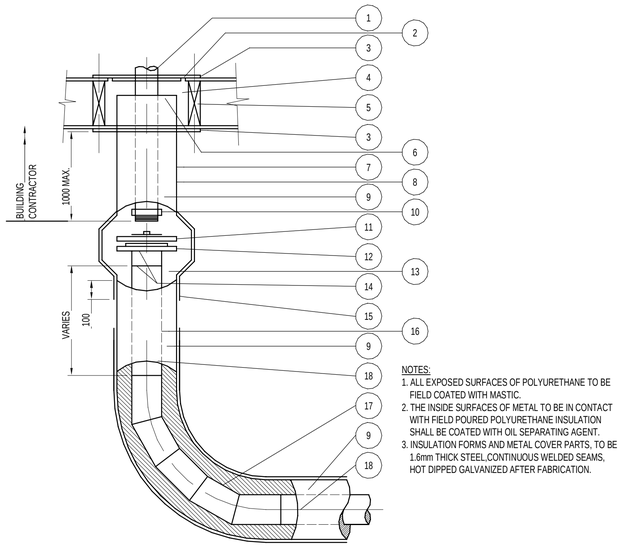
2 TYPICAL SANITARY SERVICE CONNECTION AT MAIN AND SIZING TABLE

SCALE: NTS

KEY TO NUMBERED PARTS:

1. 75 mm DIA. PVC OR ABS.
2. 200 mm CHIMNEY CLEAN OUT PLUG. CUT HOE TO FIT O. D. OF PIPE.
3. 20 mm PLYWOOD GLUED AND SCREWED TO JOIST/STUDS AND HEADERS.
4. POLYURETHANE INSULATION FROM PORTABLE FOAM PACK TO FILL VOID.
5. FLOOR JOIST.
6. SILICON SEALER APPLIED TO THIS SECTION BEFORE INSERTING INSULATED PIPE INTO OPENING.
7. 290 mm GALVANIZED THIMBLE 22 GA. TOP AND BOTTOM SCREWED TO PLYWOOD.
8. HEAT SHRINK TO SUIT.
9. POLYURETHANE HALF SHELLS CUT TO LENGTH COATED WITH FIELD APPLIED MASTIC.
10. 100mm OR 150mm∅ ADAPTER SOCKETS X MPT TO SUIT BUILDING PLUMBING MATERIALS-BY OTHERS.
11. 100 mm OR 150mm ∅ COMPANION FLANGE WITH RUBBER GASKET AND BOLTS DRILLED AND TAPPED, WITH 100mm OR 150mm ∅ PVC TEMPORARY PLUG.
12. BACKUP RING FOR FLANGE ASSEMBLY.
13. INSULATION FIT FOR FLANGE ASSEMBLY.
14. STUB END BUTT FUSED TO 100 mm PE PIPE.
15. HEAT SHRINK TO FIT OVER INSULATION KIT ASSEMBLY.
16. SANITARY SERVICE 100mm OR 150mm DIA. WITH 50mm NOMINAL POLYURETHANE AND FACTORY INSTALLED. JACKET INSTALLED TO 1m INSIDE PROPERTY LINE AND TERMINATED WITH A BLIND FLANGE.
17. LONG RADIUS 90° ELBOW WITH FACTORY APPLIED POLYURETHANE INSULATION AND FIBERGLASS REINFORCED PLASTIC JACKET.
18. FIELD BUTT FUSION JOINT MADE BY A QUALIFIED AND LICENSED JOINING TECHNICIAN.
19. HOLES TO BE DRILLED IN FIELD TO SUIT.
20. DIA. TO SUIT INSULATED MAIN PIPE O. D. AND REQUIREMENT OF 25 mm LAP ON EACH SIDE.
21. STAINLESS STEEL GEAR CLAMPS.
22. GALVANIZED HEX HEAD METAL SCREWS.
23. ROBAR NO. 6626 OUTLET SLEEVE SADDLE (SIZE OF MAIN X 2100 mm DIA. OUTLET).
24. 300mm ∅ HDPE SANITARY SEWER MAIN.
25. 25 mm NOMINAL THICKNESS SHOP CAST POLYURETHANE INSULATION AND BLACK JACKET.
26. FIELD POURED POLYURETHANE INSULATION FOAM INSULATION 207 KPA COMPRESSIVE STRENGTH.
27. 100 mm OR 150 mm ∅ FACTORY FABRICATED DR 17 HDPE 45° BEND WITH FACTORY APPLIED POLYURETHANE JACKET INSULATION/FRP JACKET COVER, HDPE STUB END, DUCTILE IRON BACKUP RING, FULL FACE REINFORCED RUBBER GASKET AND FLANGE BOLTS ONE END AND PLAIN OTHER END.
28. 150 mm WIDE PE WARNING TAPE.
29. MASTIC LINED HEAT SHRINK TAPE 100 mm OVERLAP ON SHELLS AND PIPE JACKET.
30. HOLE DRILLED IN MAIN FOR SERVICE WITH HOLE SAW.
31. FIELD CUT HOLES (IF REQ'D FOR FOAM INJECTION) TO BE MASTIC COATED AFTER FOAM INJECTION.

SANITARY SERVICE NUMBERED PARTS LIST

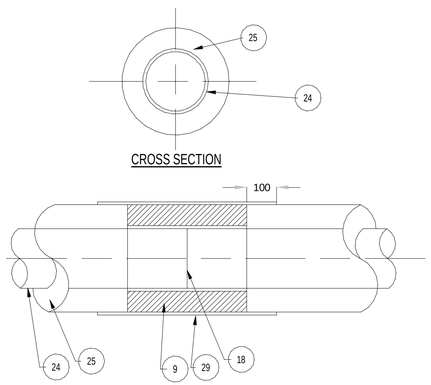


NOTES:

1. ALL EXPOSED SURFACES OF POLYURETHANE TO BE FIELD COATED WITH MASTIC.
2. THE INSIDE SURFACES OF METAL TO BE IN CONTACT WITH FIELD POURED POLYURETHANE INSULATION SHALL BE COATED WITH OIL SEPARATING AGENT.
3. INSULATION FORMS AND METAL COVER PARTS, TO BE 1.6mm THICK STEEL,CONTINUOUS WELDED SEAMS, HOT DIPPED GALVANIZED AFTER FABRICATION.

3 TYPICAL SANITARY SERVICE RISER AT HOUSE

SCALE: 1 : 1



CROSS SECTION

NOTE:

1. PIPE SPACING AND TRENCH WIDTH MAY BE INCREASED TO

SANITARY SERVICE CONNECTION PLAN

4 TYPICAL SANITARY SERVICE JOINT CONNECTION PLAN AND CROSS SECTION

SCALE: NTS

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REGISTERED PROFESSIONAL ENGINEER
A.S. WILLIAMS
LICENSEE
2021-11-08
NT/NU

CONSTRUCTION

Canada
Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

DESIGN	INV
REVIEWED BY	INV
DRAWN	SCC
CHECKED BY	ASW
DATE	NOVEMBER 2021
SCALE	NTS

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

SANITARY SERVICE DETAILS

PROJECT NO. 20-3940

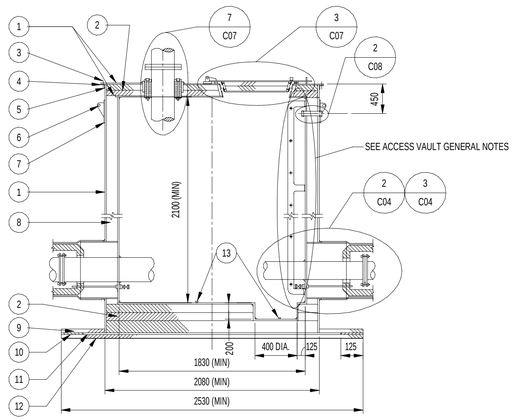
SHEET NO. C06

KEY TO NUMBERED PARTS:

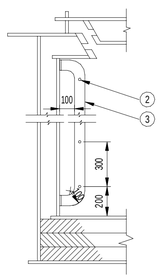
1. 6 mm THICK STEEL PLATE ACCESS VAULT CONSTRUCTION
2. URETHANE SHEET INSULATION CUT TO SIZE
3. 12 mm CAD. PLATED STEEL BOLT, NUT, WASHER 32 mm MIN AT EQUAL SPACING
4. 3 mm x 5 mm COMPRESSIBLE NEOPRENE RUBBER GASKET
5. 10 mm THICK 50 mm x 50 mm MIN. ANGLE WELDED FULL LENGTH
6. LIFTING LUGS - TWO PER ACCESS VAULT, 150 mm x 75 mm x 12 mm THICK WITH 38 DIA. LIFTING EYE. CAPACITY OF LIFTING LUGS TO BE CONFIRMED BY MANUFACTURER.
7. REINFORCING PLATE 200 mm x 200 mm x 12 mm CURVED TO EXTERIOR WALL RADIUS
8. FORMED IN PLACE INSULATION (URETHANE)
9. 38 mm THICK STYROFOAM CUT TO MATCH EXTERIOR WALL RADIUS
10. FILLER PIECE - 10 mm THICK INSULATION
11. 10 mm THICK STEEL BASE PLATE
12. 38 mm THICK INSULATION
13. FROST PLUG

ACCESS VAULT - GENERAL NOTES:

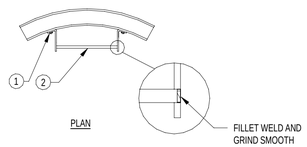
1. CONSTRUCT ACCESS VAULTS FROM 6mm STEEL PLATE WITH CONTINUOUS (FULLY) WELDED CONSTRUCTION. FABRICATE COMPLETELY PRIOR TO EPOXY COATING. WELDING AND FABRICATION TO CSA W59-1977 % W47-1-1973.
2. ALL STEEL TO BE CSA G40.21 TYPE 260W OR ASTM A36-62T.
3. ALL PIPING INSIDE THE ACCESS VAULT TO BE PREFABRICATED TO THE LIMITS SHOWN ON THE TYPICAL SECTION AND SHOWN ON THE LAYOUT PLANS.
4. PROVIDE PIPE ENTRY SPOOL PIECES, LADDER MOUNTING STUDS & ALL OTHER ACCESS VAULT PARTS, ETC. AS REQUIRED, PRE-WELDED IN PLACE PRIOR TO SANDBLASTING AND EPOXY COATING.
5. ALL PREFABRICATED STEEL PARTS OF THE ACCESS VAULT (EXCEPT TOP PLATE HATCH AND LADDER) SHALL BE SANDBLASTED AND EPOXY COATED INSIDE AND OUTSIDE AS PER SPECIFICATIONS.
6. TOP PLATE, HATCH, HINGE, & LADDER SHALL BE HOT DIPPED GALVANIZED TO CSA G164 MINIMUM 610g/m2.
7. ALL NUTS, BOLTS, WASHERS, SCREWS ETC. SHALL BE ZINC PLATED OR CAMIUM PLATED.
8. FLANGE INSULATION KITS AND STYROFOAM ACCESS VAULT BASE INSULATION SUPPLIED AS PART OF THE ACCESS VAULT.
9. HYDRANT, AND LINK SEAL JOINT TO BE SHIPPED SEPARATELY (INSIDE ACCESS VAULT).
10. PRIOR TO SHIPPING, ALL FACES OF FLANGES PROJECTING OUTSIDE THE ACCESS VAULT SHALL PROTECTED BY 5/8" THICK PLYWOOD COVER BY 4 BOLTS.
11. PROVIDED WITH EACH ACCESS VAULT SHALL BE FOUR 200mm DIA. STEEL BUMPER POST, ONE TO INCLUDE SIGN.
12. PAINT SPECIFICATIONS:
    A. SANDBLAST SSPC SP10
    B. 2 COATS OF INTEGARD EX HB FROM INTERNATIONAL, 16 MILS DRY THICKNESS
    C. COLOURS: OUTSIDE - GREY , INSIDE - BEIGE



1 ACCESS VAULT DETAIL
SCALE: NTS



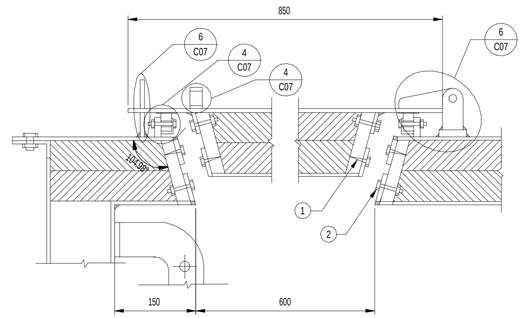
NOTE:
1. LADDER TO BE HOT DIPPED GALVANIZED AFTER FABRICATION



KEY TO NUMBERED PARTS:

1. 12 mm DIA. STUD WELDED TO INNER WALL C/W FASTENING NUTS
2. 20 mm DIA. RUNGS INSERTED HALFWAY THROUGH HOLES IN STRINGER, FILLET WELD REMAINDER OF HOLE AND GRIND SMOOTH - SEE DETAIL PLAN VIEW
3. 63.5 mm x 9.5 mm FLAT BAR STRINGER, BENT TO MAKE SUPPORTS AND DRILLED THROUGH FOR RUNGS

2 LADDER DETAIL
SCALE: NTS

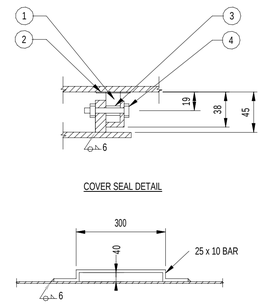


ACCESS VAULT COVER

KEY TO NUMBERED PARTS:

1. #12-30 PAN HEAD SHEET METAL SCREWS AT 100 SPACING
2. 6 mm GALVANIZED BOLTS, NUT, & WASHER AT 100 mm SPACING

3 ACCESS VAULT COVER DETAIL
SCALE: NTS



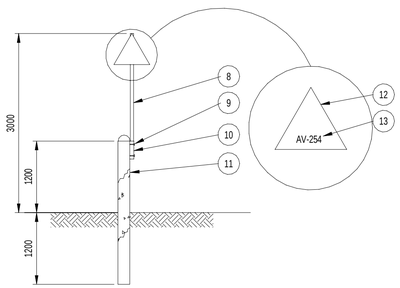
COVER SEAL DETAIL

COVER HANDLE DETAIL

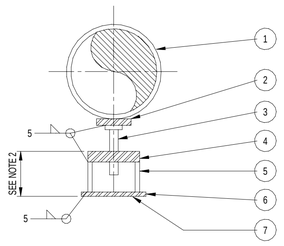
KEY TO NUMBERED PARTS:

1. 37mm DIA. METKA IND. TG-155 GASKET
2. 25mm WIDE TEFLON TAPE APPLIED TO DOOR
3. 6.5mm X 17 mm SPACER
4. 6mm X 31mm CAD. PLATED STEEL BOLT 150mm SPACING

4 ACCESS VAULT MIISCELLANEOUS DETAILS 1
SCALE: NTS



BUMPER POST DETAIL



PIPE SUPPORT DETAIL

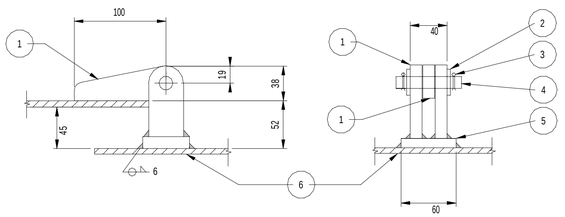
NOTES:

1. SEE DETAIL 1 ON THIS SHEET FOR GENERAL ACCESS VAULT NOTES.
2. HEIGHT TO BE 100 mm FOR SANITARY OR WATER IN SEPARATE AV, 500mm FOR WATER IN COMMON AV.
3. POST, SLEEVE AND MAST TO BE PAINTED RED AFTER FABRICATION.
4. 4 BOLLARDS REQUIRED PER ACCESS VAULT. ONE BOLLARD PER ACCESS VAULT TO INCLUDE MAST AND SIGN.
5. BACKFILL WITH MODIFIED GRANULAR 'B'

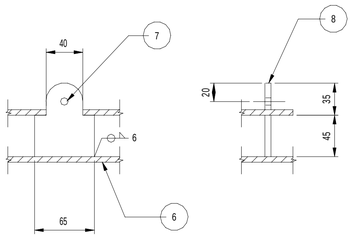
KEY TO NUMBERED PARTS:

1. WATER MAIN - HOT DIPPED GALV. STEEL PIPING
2. 75 mm DIA. x 12 THICK PLATE
3. 20 mm x 15 '0' BOLT
4. 20 THICK PLATE DRILLED AND TAPPED
5. 100 mm DIA. SCHEDULE 40 STEEL PIPE
6. 150 mm x 150 mm x 12 mm THICK PLATE
7. 2 - 15mm DIA. HOLES
8. 50mm DIA. GALV. STEEL PIPE MAST - 4 - 11mm DIA. BOLT HOLES
9. 2 - 9mm DIA. x 89 mm LONG GALV. BOLTS THROUGH SLEEVE AND MAST.
10. 65 mm DIA. STEEL SLEEVE WELDED TO POST, c/w 2 - 11 mm DIA. DRILLED HOLES
11. 200 mm DIA. STEEL PIPE POST EPOXY COATED AND FILLED WITH CONCRETE
12. 3 mm THICK STEEL PLATE SIGN PAINTED RED c/w 2 - 11mm DIA. DRILLED BOLT HOLES. SIGN SECURED TO MAST WITH 2 - 9mm DIA x 76 LG. GALV. BOLTS
13. WHITE LETTERING, 100mm HIGH. LETTERING TO MATCH ACTUAL ACCESS VAULT NUMBERING.

5 ACCESS VAULT MISCELLANEAOUS DETAILS 2
SCALE: NTS



COVER HINGE DETAIL



LOCK HASP DETAIL

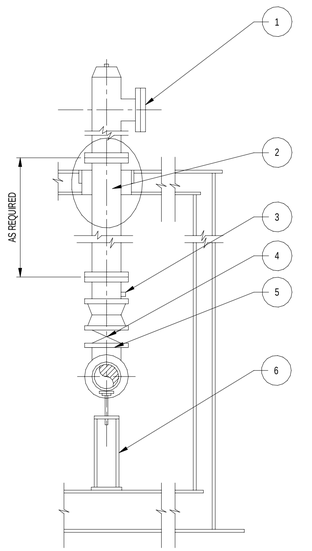
KEY TO NUMBERED PARTS:

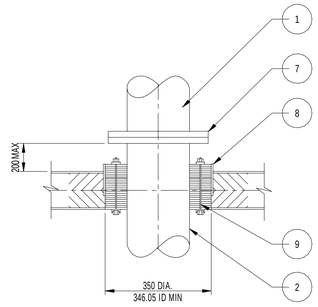
1. 13 mm HOT DIPPED GALV. STEEL PLATE
2. CAD. PLATED WASHER (TYP.)
3. COLLAR PIN (TYP.)
4. 12.7 mm DIA. CAD. PLATED PIN
5. 12 mm THICK STEEL BAR UNDER HINGES
6. 6 mm THICK STEEL PLATE ACCESS VAULT CONSTRUCTION
7. 8 mm DIA. HOLE DRILLED FOR PADLOCK
8. 6 mm THICK GALV. STEEL STAPLE

NOTES:

1. TWO HINGES ARE REQUIRED PER COVER
2. HINGES TO BE SPACED AT 400mm APART

6 ACCESS VAULT COVER MISCELLANEOUS DETAILS
SCALE: NTS





KEY TO NUMBERED PARTS:

1. 200mm CRANE McAVITY M-67 "IN-LINE" FIRE HYDRANT.
2. FIRE HYDRANT BARREL.
3. VALVE & CAP TO MATCH HYDRANT DRAIN PORT.
4. 200mm LUG TYPE BUTTERFLY VALVE COMPLETE WITH OPERATOR.
5. FLANGE TEE 1080 kPA - DIA. TO MATCH MAIN AND HYDRANT SIZE.
6. PIPE SUPPORT.
7. HYDRANT FLANGE.
8. 350 DIA. SCHEDULE 10 (364 I.D.) STEEL PIPE x 100 LONG WELDED TO ACCESS VAULT TOP PLATE.
9. THUNDER-LINE CORP LINK-DEAL MODEL LS-500-C (200X350) OR APPROVED EQUAL

7 FIRE HYDRANT DETAILS
SCALE: NTS

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

REGISTERED PROFESSIONAL ENGINEER — A.S. WILLIAMS — LICENSEE — 2021-11-08 — NT/NU

CONSTRUCTION

Canada — Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

DESIGN: INV	REVIEWED BY: INV
DRAWN: SCC	CHECKED BY: ASW
DATE: NOVEMBER 2021	
SCALE: As indicated	

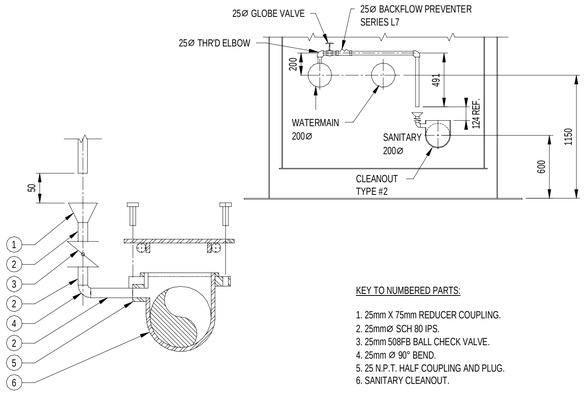
GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

ACCESS VAULT DETAILS 1 OF 4

PROJECT NO. 20-3940

SHEET NO. C07

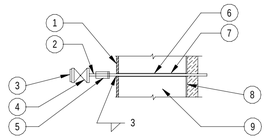
PLOT DATE: 2021-11-03 2:05:58 PM
FILE NAME: U:\dms7\445\203940-10-VAULTS-CON.vwt



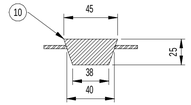
KEY TO NUMBERED PARTS:

1. 25mm X 75mm REDUCER COUPLING.
2. 25mmØ SCH 80 IPS.
3. 25mm 508FB BALL CHECK VALVE.
4. 25mm Ø 90° BEND.
5. 25 N.P.T. HALF COUPLING AND PLUG.
6. SANITARY CLEANOUT.

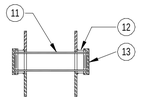
1 WATERMAIN BLEED DETAIL
SCALE: NTS



TEST/DRAIN VALVE DETAIL



FROST PLUG DETAIL



WALL SLEEVE DETAIL

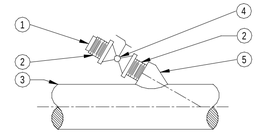
KEY TO NUMBERED PARTS:

1. 6 mm THICK STEEL PLATE ACCESS VAULT WALL
2. 12 mm DIA. GALV. ST. NIPPLE
3. 12 mm DIA. PLUG
4. 12 mm DIA. SCREWED BALL VALVE
5. 12 mm DIA. GALV. ST. COUPLING
6. 12 mm DIA. GALV. ST. PIPE
7. DRILL THROUGH SHOP CAST POLYURETHANE INSULATION
8. FLANGE INSULATION KIT BY OTHERS
9. SHOP CAST POLYURETHANE INSULATION
10. FROST PLUG TO BE MADE FROM SOLID BLACK RUBBER DRIVER TIGHTLY INTO HOLE
11. 37 mm DIA. RIGID PVC - OIL COAT SURFACE PRIOR TO INSULATING
12. 50 mm DIA. SCHEDULE 40 NIPPLE
13. 50 mm DIA. CAP

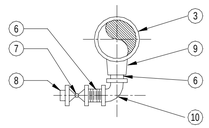
NOTES:

1. PROVIDE FROST PLUG IN FLOOR PLATE AND SUMP HOLE.
2. PLUG TO HAVE A 10mm PROJECTION ABOVE FLOOR AFTER BEING PLACED TIGHTLY INTO HOLE.
3. 2 WALL SLEEVES REQUIRED PER ACCESS VAULT.

2 MISCELLANEOUS VAULT DETAILS
SCALE: NTS



LATEROLET CONNECTION

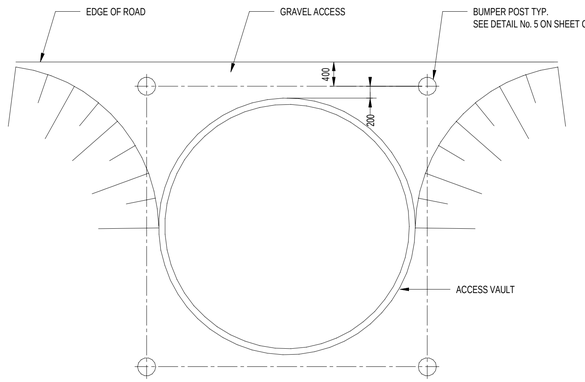


WATER MAIN DRAIN

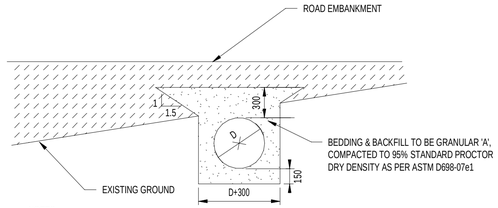
KEY TO NUMBERED PARTS:

1. 50mm DIA. N.P.T. PLUG
2. 50mm DIA. N.P.T. NIPPLE
3. WATER MAIN - HOT DIPPED GALV. STEEL PIPING
4. 50mm DIA. BALL VALVE
5. 50mm DIA. LATEROLET
6. 25mm DIA. N.P.T. SHORT NIPPLE
7. 25mm DIA. BALL VALVE
8. 25mm DIA. N.P.T. PLUG
9. 25mm DIA. N.P.T. THEODOLET
10. 25mm DIA. 90 DEGREE ELBOW N.P.T. FEMALE

3 LATEROLET AND DRAIN DETAILS
SCALE: NTS



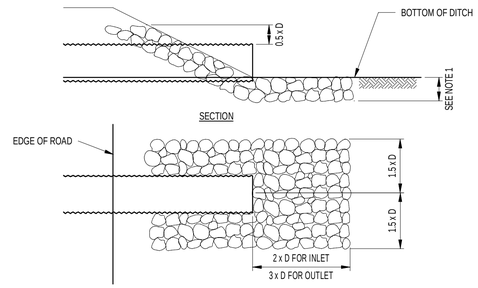
4 ACCESS VAULT BUMPER POST DETAIL
SCALE: NTS



NOTES:

1. MINIMUM COVER TO BE 450mm IN ROADS AND 300mm IN DRIVEWAYS.
2. INVERT OF CULVERT TO BE 0.1D BELOW EXISTING GROUND.

5 PIPE CULVERT IN A TRENCH
SCALE: NTS



NOTES:

1. RIP-RAP THICKNESS TO BE 300mm FOR DIA. LESS THAN 1400mm, AND 600mm FOR DIA. GREATER THAN 1400mm.
2. RIP-RAP TO BE HAND PLACED.
3. MINIMUM CULVERT DIA. TO BE 400mm.
4. NOMINAL SIZE OR RIP-RAP TO BE 0.5 THICKNESS
5. FILTER CLOTH TO BE INSTALL UNDER ENTIRE RIP-RAP APRON.

6 CULVERT APRON DETAIL
SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER — A.S. WILLIAMS — LICENSEE — 2021-11-08 — NT/NU

CONSTRUCTION

Canada — Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

DESIGN: INV | REVIEWED BY: INV
DRAWN: SCC | CHECKED BY: ASW
DATE: NOVEMBER 2021
SCALE: As indicated

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

ACCESS VAULT DETAILS 2 OF 4

PROJECT NO. 20-3940

SHEET NO. C08

PLOT DATE: 2021-11-03 2:05:57 PM
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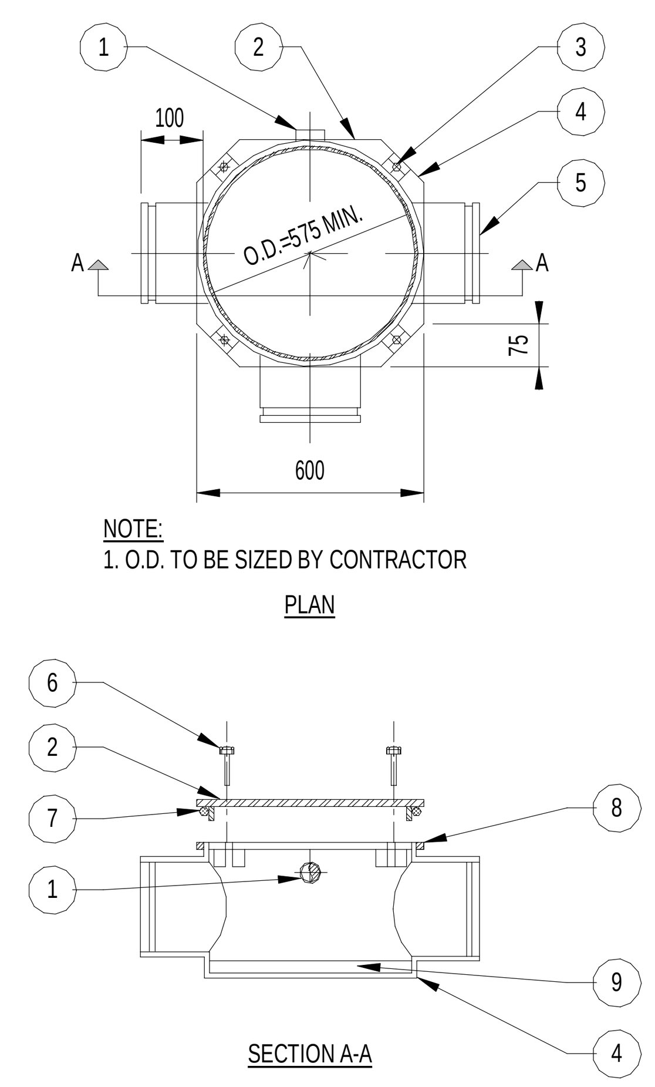


NOTE:
1. O.D. TO BE SIZED BY CONTRACTOR

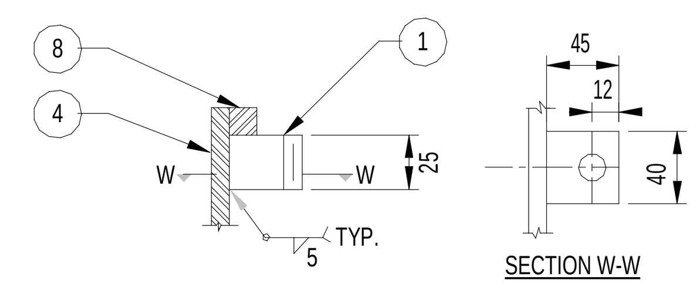
PLAN

SECTION A-A

TYPE 1 CLEANOUT - TEE

KEY TO NUMBERED PARTS:

1. 25 N.P.T. HALF COUPLING AND PLUG
2. FABRICATED CLEANOUT COVER FROM 6 THICK PLATE CONTINUOUS BUTT WELDED AND HOT DIPPED GALV. AFTER FABRICATION
3. BOLT LUGS TAPPED 12 NC
4. FABRICATED CLEAOUT BODY FROM 6 THICK PLATE CONTINUOUS BUTT WELD AND HOT DIPPED GALV. AFTER FABRICATION
5. SCHEDULE 40 STEEL - NIPPLE VICTAULIC GROOVED (SIZE TO MATCH PIPE SIZE)
6. 12 NC X 73 LONG CAD PLATED HEX HEAD SCREW AND WASHER
7. 20k ONE PIECE SOFT RUBBER GASKET O RING STRETCH TO FIT COVER
8. 12 SQ. ROD RIM
9. CEMENT MORTAR BENCHING SUPPLIED AND INSTALLED BY INSTALLING CONTRACTOR

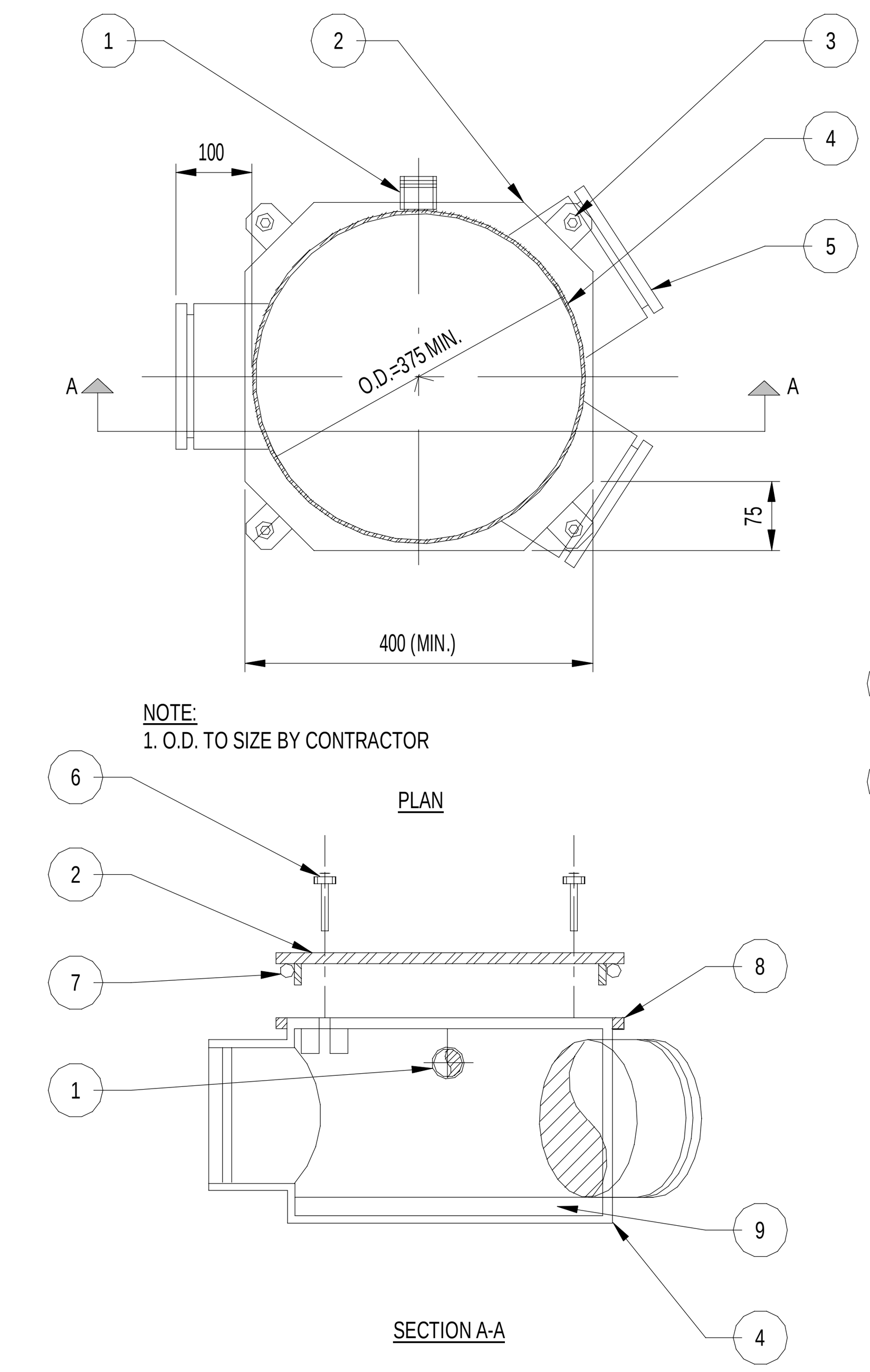


BOLT & LUG DETAIL

SECTION W-W

NOTE:
1. SEE DETAIL 1 ON SHEET C07 FOR GENERAL ACCESS VAULT NOTES.

1 CLEANOUT TYPE 1 - TEE
SCALE: NTS



NOTE:
1. O.D. TO SIZE BY CONTRACTOR

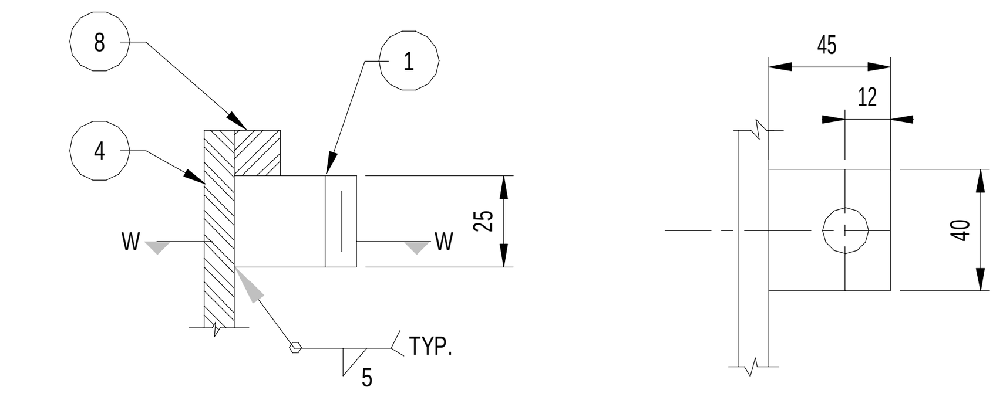
PLAN

SECTION A-A

TYPE 1 CLEANOUT - WYE

KEY TO NUMBERED PARTS:

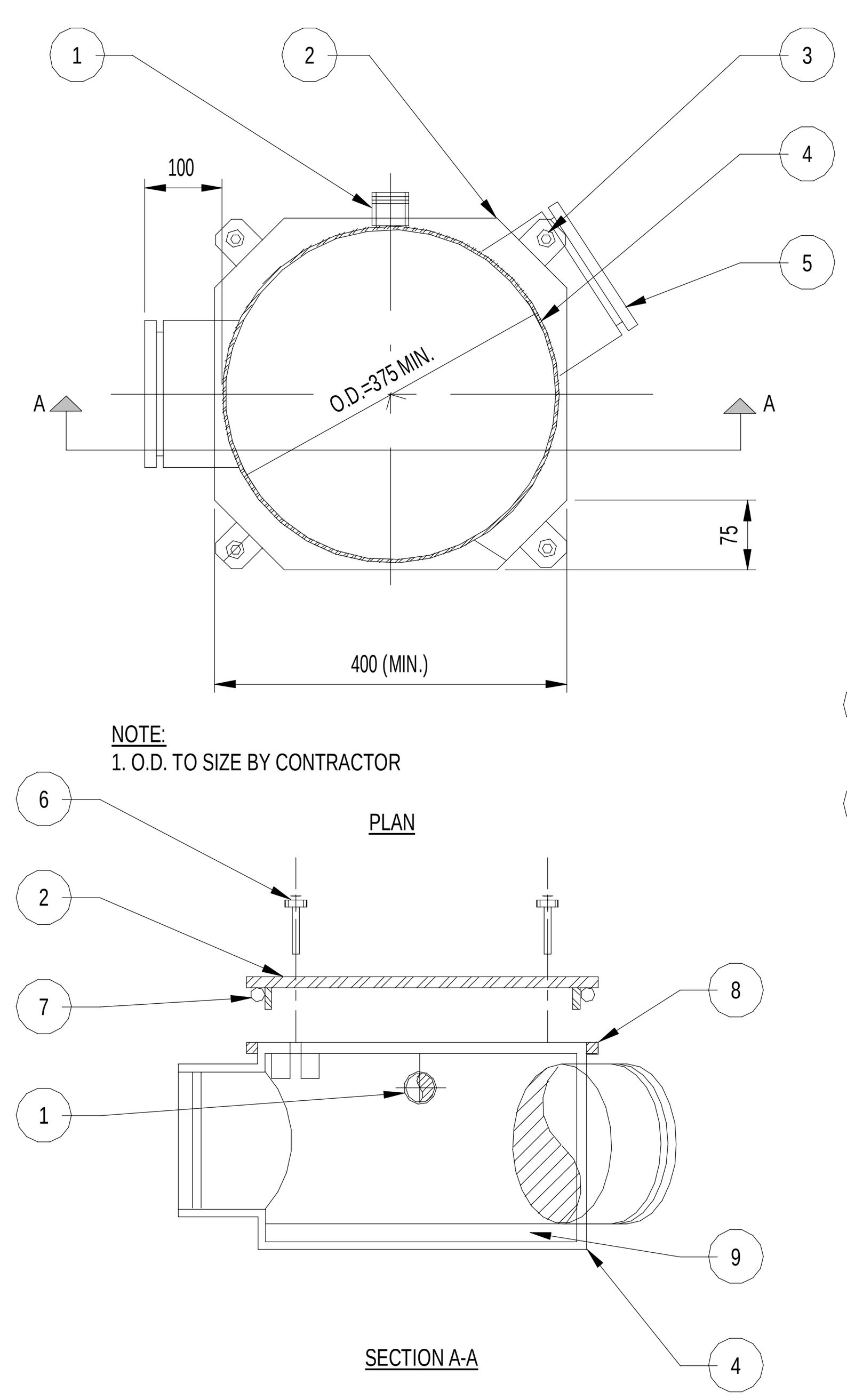
1. 25 N.P.T. HALF COUPLING AND PLUG
2. FABRICATED CLEANOUT COVER FROM 6 THICK PLATE CONTINUOUS BUTT WELDED AND HOT DIPPED GALV. AFTER FABRICATION
3. BOLT LUGS TAPPED 12 NC
4. FABRICATED CLEAOUT BODY FROM 6 THICK PLATE CONTINUOUS BUTT WELD AND HOT DIPPED GALV. AFTER FABRICATION
5. SCHEDULE 40 STEEL - NIPPLE VICTAULIC GROOVED (SIZE TO MATCH PIPE SIZE)
6. 12 NC X 73 LONG CAD PLATED HEX HEAD SCREW AND WASHER
7. 20k ONE PIECE SOFT RUBBER GASKET O RING STRETCH TO FIT COVER
8. 12 SQ. ROD RIM
9. CEMENT MORTAR BENCHING SUPPLIED AND INSTALLED BY INSTALLING CONTRACTOR



BOLT & LUG DETAIL

SECTION W-W

3 CLEANOUT TYPE 1 - WYE
SCALE: 1 : 2



NOTE:
1. O.D. TO SIZE BY CONTRACTOR

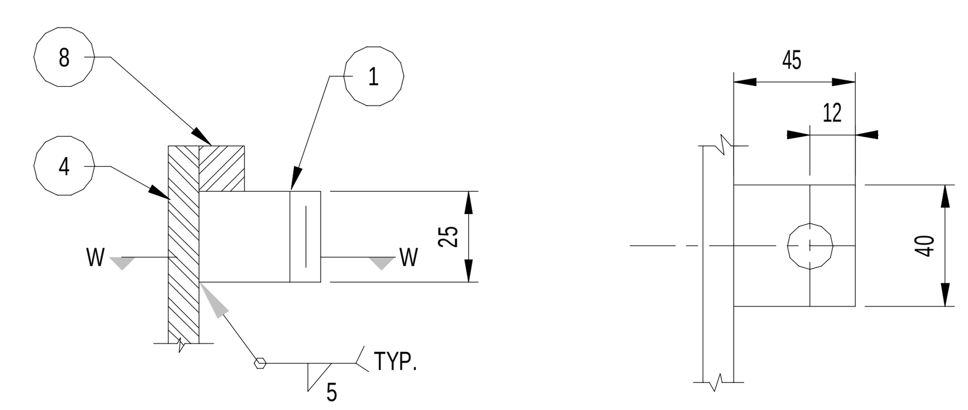
PLAN

SECTION A-A

TYPE 1 CLEANOUT - BEND

KEY TO NUMBERED PARTS:

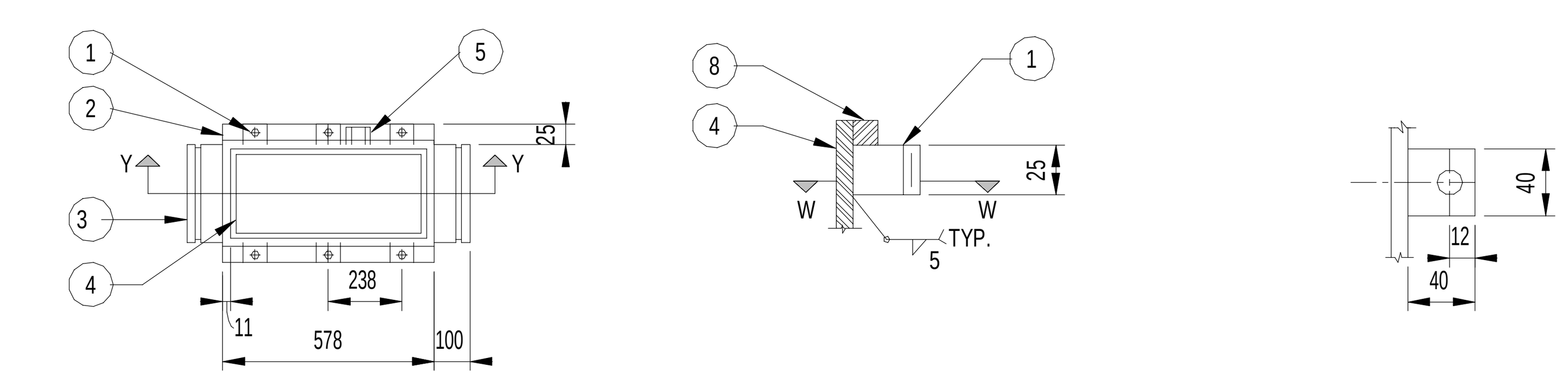
1. 25 N.P.T. HALF COUPLING AND PLUG
2. FABRICATED CLEANOUT COVER FROM 6 THICK PLATE CONTINUOUS BUTT WELDED AND HOT DIPPED GALV. AFTER FABRICATION
3. BOLT LUGS TAPPED 12 NC
4. FABRICATED CLEAOUT BODY FROM 6 THICK PLATE CONTINUOUS BUTT WELD AND HOT DIPPED GALV. AFTER FABRICATION
5. SCHEDULE 40 STEEL - NIPPLE VICTAULIC GROOVED (SIZE TO MATCH PIPE SIZE)
6. 12 NC X 73 LONG CAD PLATED HEX HEAD SCREW AND WASHER
7. 20k ONE PIECE SOFT RUBBER GASKET O RING STRETCH TO FIT COVER
8. 12 SQ. ROD RIM
9. CEMENT MORTAR BENCHING SUPPLIED AND INSTALLED BY INSTALLING CONTRACTOR



BOLT & LUG DETAIL

SECTION W-W

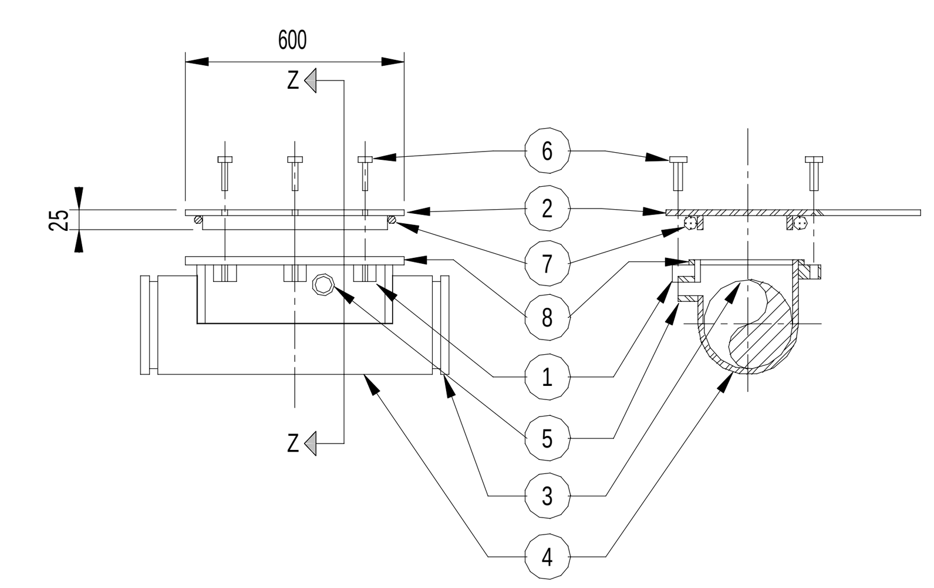
4 CLEANOUT TYPE 1 - BEND
SCALE: 1 : 2



PLAN

BOLT & LUG DETAIL

SECTION W-W



TYPE 2 CLEANOUT

KEY TO NUMBERED PARTS:

1. BOLT LUGS TAPPED 12 NC
2. FABRICATED CLEANOUT COVER FROM 6 TH PLATE CONTINUOUS BUTT WELDED AND HOT DIPPED GALV. AFTER FABRICATION.
3. SCHEDULE 40 STEEL - NIPPLE VICTAULIC GROOVED (SIZE TO MATCH PIPE SIZE).
4. FABRICATED CLEANOUT BODY FROM 6 TH PLATE CONTINUOUS BUTT WELD AND HOT DIPPED GALV. AFTER FABRICATION.
5. 25 mm N.P.T. HALF COUPLING AND PLUG.
6. 12 mm NC x 73 mm LONG CAD PLATED HEX HEAD SCREW AND WASHER.
7. 20k ONE PIECE SOFT RUBBER GASKET O RING STRETCH TO FIT COVER.
8. 12 SQ. ROD RIM.

2 CLEANOUT TYPE 2
SCALE: NTS

REGISTERED PROFESSIONAL ENGINEER
A.S. WILLIAMS
LICENSEE
2021-11-08
NT/NU

CONSTRUCTION

Canada

Nunavut

DILLON CONSULTING

No.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

DESIGN: INV	REVIEWED BY: INV
DRAWN: SCC	CHECKED BY: ASW
DATE: NOVEMBER 2021	
SCALE: As indicated	

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

ACCESS VAULT DETAILS 3 OF 4

PROJECT NO. 20-3940

SHEET NO. C09

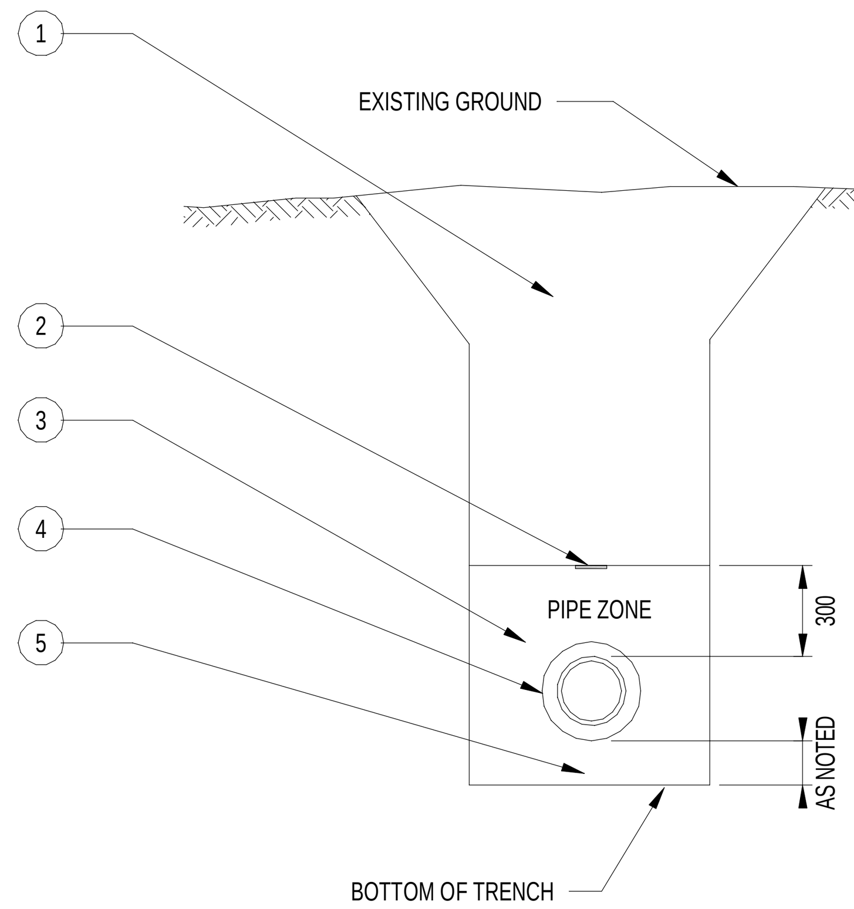
PLOT DATE: 2021-11-03 2:05:57 PM
FILE NAME: U:\Wo\774\\8203940-10-VAULTS-CON.rvt

KEY TO NUMBERED PARTS:

1. SELECT NATIVE BACKFILL MATERIAL, OR ENGINEERED BACKFILL WHERE DIRECTED BY ENGINEER.
2. WARNING TAPE.
3. SAND BACKFILL, COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1, MINIMUM 300 mm COVER OVER PIPES.
4. WATER MAIN OR SANITARY SEWER - DR11 HDPE PIPE c/w 75 mm SHOP APPLIED POLYURETHANE INSULATION FRP JACKET.
5. SAND BEDDING COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1, 150 mm (230 mm IN ROCK).

NOTES:

1. PIPES TO BE SPACED 230 mm, OR GREATER, FROM TRENCH WALL AND OTHER PIPES TO ALLOW COMPACTION.
2. TEST PITS TO BE DUG EVERY 15m TO A DEPTH OF 500mm BELOW PIPE INVERT TO CHECK FOR PRESENCE OF SILT. SUBEXCAVATE AS REQUIRED, TO A DEPTH OF 450 mm BELOW PIPE INVERT AND BACKFILLED WITH GRANULAR B COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1.
3. SANITARY SEWER TO HAVE A MINIMUM 3.0m COVER. IF COVER IS LESS THAN 3.0m, THE THICKNESS OF THE TRENCH INSULATION TO BE INCREASED.



REINSTATEMENT NOTE

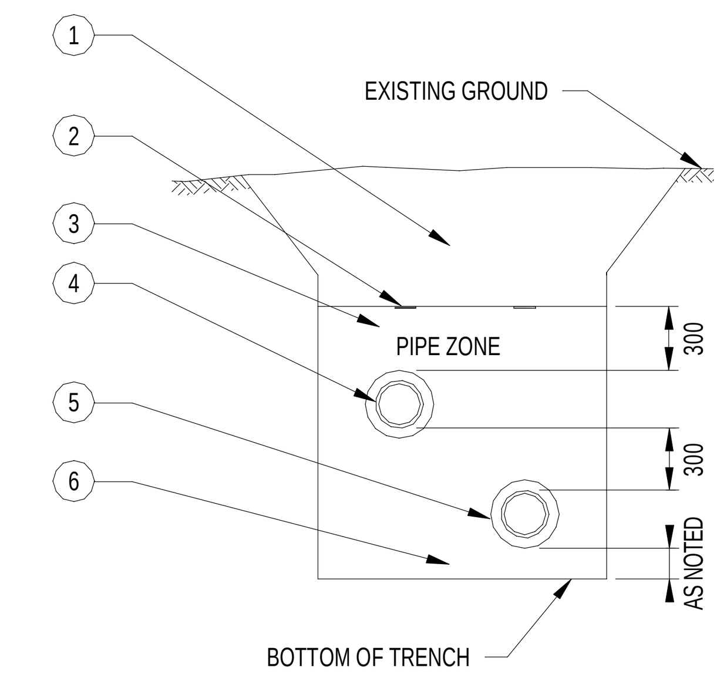
PAVED ROAD	60mm ASPHALT 100mm GRANULAR 'A' 300mm GRANULAR 'B'
GRAVEL ROAD	100mm GRANULAR 'A' 300mm GRANULAR 'B'

KEY TO NUMBERED PARTS:

1. SELECT NATIVE BACKFILL MATERIAL, OR ENGINEERED BACKFILL WHERE DIRECTED BY ENGINEER.
2. WARNING TAPE.
3. SAND BACKFILL, COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1, MINIMUM 300 mm COVER OVER PIPES.
4. WATER MAIN - DR11 HDPE PIPE c/w 75 mm SHOP APPLIED POLYURETHANE INSULATION FRP JACKET.
5. SANITARY SERVICE - DR11 HDPE PIPE c/w 75 mm SHOP APPLIED POLYURETHANE INSULATION FRP JACKET.
6. SAND BEDDING COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1, 150 mm (230 mm IN ROCK).

NOTES:

1. PIPES TO BE SPACED 230 mm, OR GREATER, FROM TRENCH WALL AND OTHER PIPES TO ALLOW COMPACTION.
2. TEST PITS TO BE DUG EVERY 15m TO A DEPTH OF 500mm BELOW PIPE INVERT TO CHECK FOR PRESENCE OF SILT. SUBEXCAVATE AS REQUIRED, TO A DEPTH OF 450 mm BELOW PIPE INVERT AND BACKFILLED WITH GRANULAR B COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1.
3. SANITARY SEWER TO HAVE A MINIMUM 3.0m COVER. IF COVER IS LESS THAN 3.0m, THE THICKNESS OF THE TRENCH INSULATION TO BE INCREASED.



REINSTATEMENT

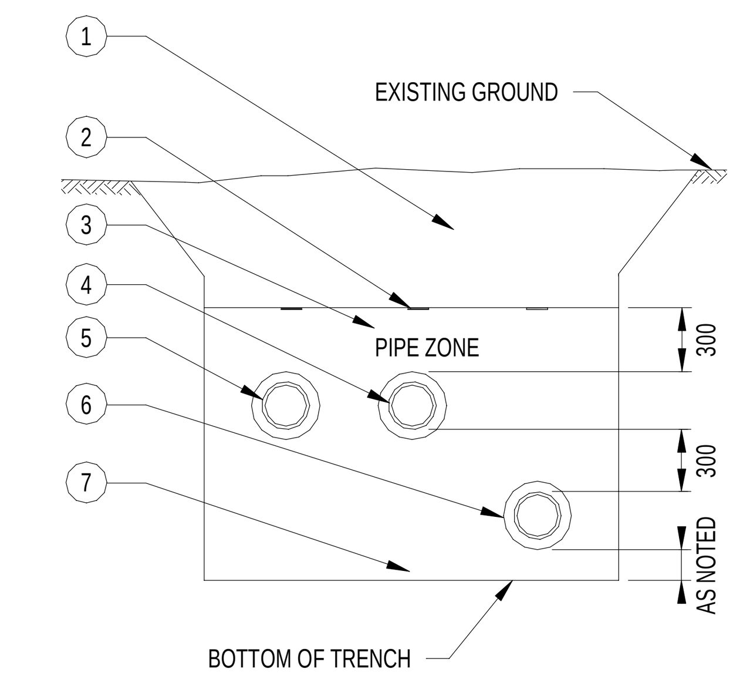
PAVED ROAD	60mm ASPHALT 100mm GRANULAR 'A' 300mm GRANULAR 'B'
GRAVEL ROAD	100mm GRANULAR 'A' 300mm GRANULAR 'B'

KEY TO NUMBERED PARTS:

1. SELECT NATIVE BACKFILL MATERIAL, OR ENGINEERED BACKFILL WHERE DIRECTED BY ENGINEER.
2. WARNING TAPE.
3. SAND BACKFILL, COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1, MINIMUM 300 mm COVER OVER PIPES.
4. WATER MAIN - DR11 HDPE PIPE c/w 75 mm SHOP APPLIED POLYURETHANE INSULATION FRP JACKET.
5. RECIRCULATION LINE - DR11 HDPE PIPE c/w 75 mm SHOP APPLIED POLYURETHANE INSULATION FRP JACKET.
6. SANITARY SERVICE - DR11 HDPE PIPE c/w 75 mm SHOP APPLIED POLYURETHANE INSULATION FRP JACKET.
7. SAND BEDDING COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1, 150 mm (230 mm IN ROCK).

NOTES:

1. PIPES TO BE SPACED 230 mm, OR GREATER, FROM TRENCH WALL AND OTHER PIPES TO ALLOW COMPACTION.
2. TEST PITS TO BE DUG EVERY 15m TO A DEPTH OF 500mm BELOW PIPE INVERT TO CHECK FOR PRESENCE OF SILT. SUBEXCAVATE AS REQUIRED, TO A DEPTH OF 450 mm BELOW PIPE INVERT AND BACKFILLED WITH GRANULAR B COMPACTED TO 95% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1.
3. SANITARY SEWER TO HAVE A MINIMUM 3.0m COVER. IF COVER IS LESS THAN 3.0m, THE THICKNESS OF THE TRENCH INSULATION TO BE INCREASED.



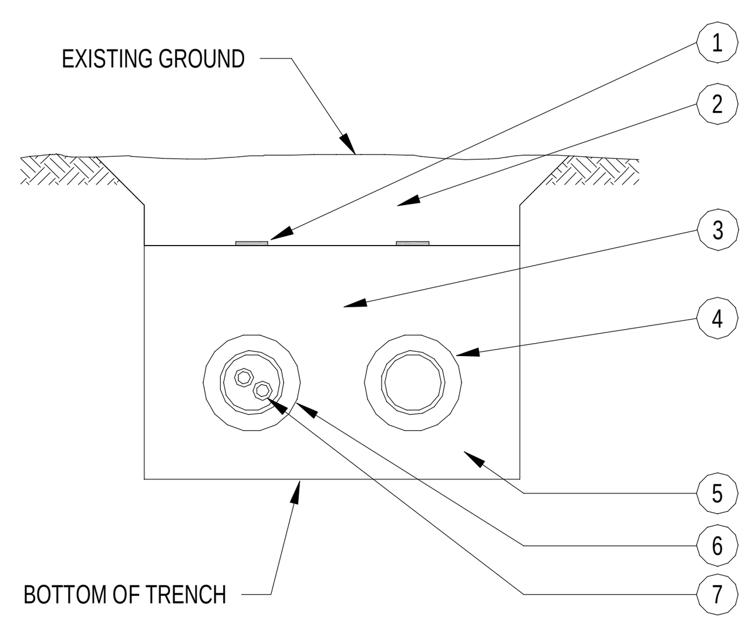
REINSTATEMENT

PAVED ROAD	60mm ASPHALT 100mm GRANULAR 'A' 300mm GRANULAR 'B'
GRAVEL ROAD	100mm GRANULAR 'A' 300mm GRANULAR 'B'

1 TYPICAL TRENCH DETAIL
SCALE: NTS

2 TYPICAL TRENCH DETAIL WATERMAIN, AND SANITARY
SCALE: NTS

3 TYPICAL TRENCH DETAIL WATERMAIN, RECIRCULATION AND SANITARY1
SCALE: NTS

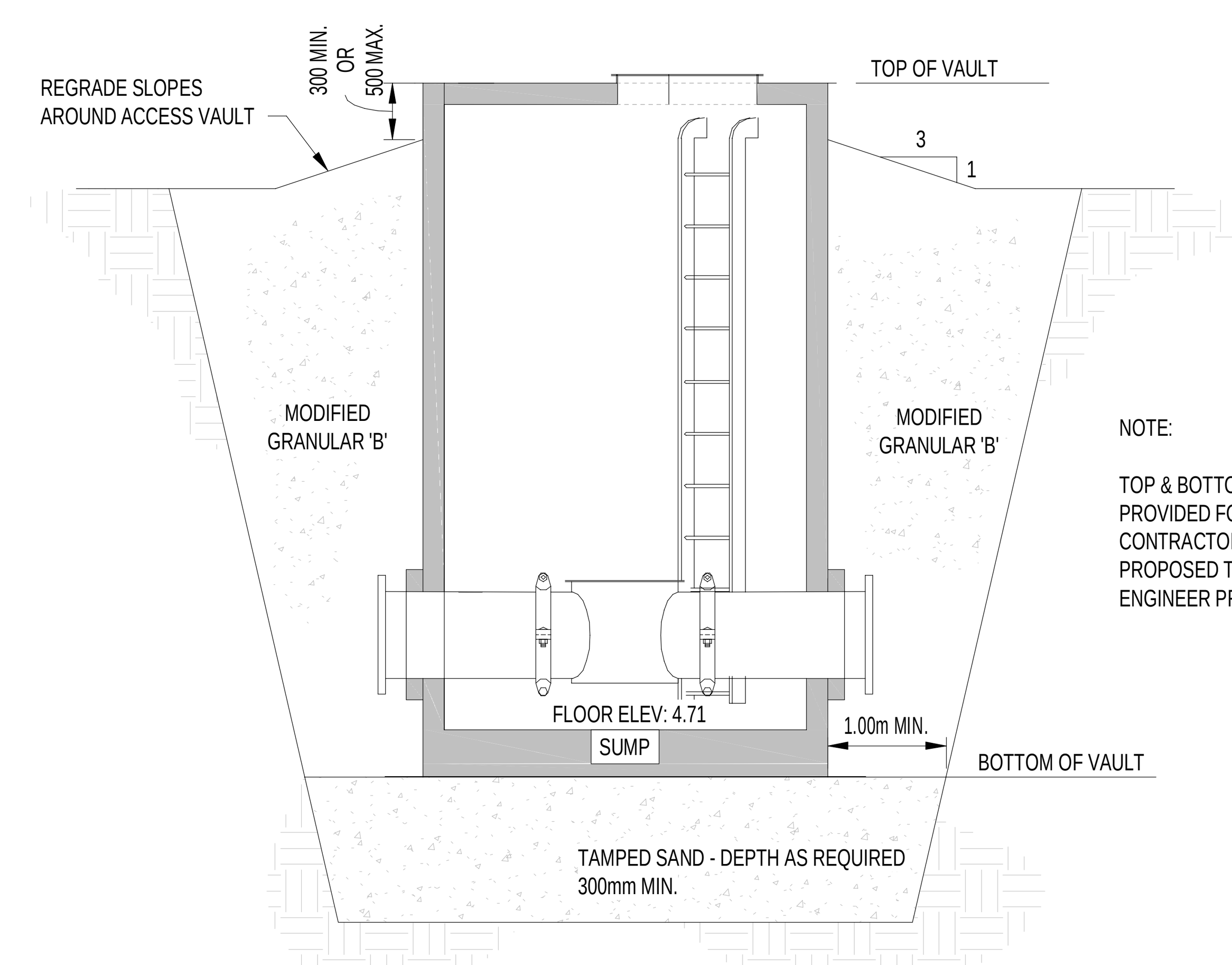


KEY TO NUMBERED PARTS:

1. WARNING TAPE
2. SELECT NATIVE BACKFILL MATERIAL, OR ENGINEERED BACKFILL WHERE DIRECTED BY ENGINEER.
3. SAND BACKFILL, COMPACTED TO 90% STANDARD PROCTOR, MINIMUM 300mm COVER OVER SERVICES PIPES.
4. 100mm DIA. SANITARY SERVICE - DR11 HDPE PIPE c/w 75mm APPLIED POLYURETHANE INSULATION & FRP JACKET.
5. SAND BEDDING COMPACTED TO 90% STANDARD PROCTOR, 150mm (230mm IN ROCK) DEEP.
6. 100mm DIA. CARRIER PIPE- DR11 HDPE PIPE c/w 75mm POLYURETHANE INSULATION & FRP JACKET.
7. SUPPLY AND RECIRCULATION WATER SERVICE, COILED DR11 HDPE PIPE INSIDE CARRIER PIPE.

NOTES:

1. PIPES TO BE SPACED AT 230mm, OR GREATER, FROM TRENCH WALL AND OTHER PIPES TO ALLOW COMPACTION.
2. TEST PITS TO BE DUG EVERY 15m TO DEPTH OF 500mm BELOW PIPE INVERT TO CHECK FOR PRESENCE OF SILT. SUBEXCAVATE TO A DEPTH OF 450mm BELOW PIPE INVERT AND BACKFILLED WITH GRANULAR B COMPACTED TO 90% STANDARD PROCTOR DRY DENSITY AS PER ASTM D698-07e1.
3. SERVICE PIPES TO HAVE A MINIMUM OF 600mm OF COVER TO TOP OF INSULATION.



NOTE:

TOP & BOTTOM OF VAULT ELEVATIONS PROVIDED FOR REFERENCE ONLY. CONTRACTOR TO VERIFY EXISTING GROUND AND PROPOSED TOP OF VAULT ELEVATIONS WITH ENGINEER PRIOR TO CONSTRUCTION OF VAULT.

4 TYPICAL SERVICE TRENCH DETAIL
SCALE: NTS

5 TYPICAL ACCESS VAULT DETAIL
SCALE: NTS

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FILE NAME: U:\Ws\77448\203940-10-VAULTS-CON.rvt

Conditions of Use

Verify elevations and/or dimensions on drawing prior to use. Report any discrepancies to Dillon Consulting Limited.

Do not scale dimensions from drawing.

Do not modify drawing, re-use it, or use it for purposes other than those intended at the time of its preparation without prior written permission from Dillon Consulting Limited.

REGISTERED PROFESSIONAL ENGINEER
A.S. WILLIAMS
LICENSEE
2021-11-08
NT/NU

CONSTRUCTION

Canada

Nunavut

DILLON CONSULTING

NO.	ISSUED FOR	DATE	BY
2	CONSTRUCTION	11/03/2021	ASW
1	TENDER	07/16/2021	ASW

DESIGN: INV	REVIEWED BY: INV
DRAWN: SCC	CHECKED BY: ASW
DATE: NOVEMBER 2021	
SCALE: As indicated	

GOVERNMENT OF NUNAVUT
RANKIN INLET UTILIDOR REPLACEMENT

ACCESS VAULT DETAILS 4 OF 4

PROJECT NO. 20-3940

SHEET NO. C10