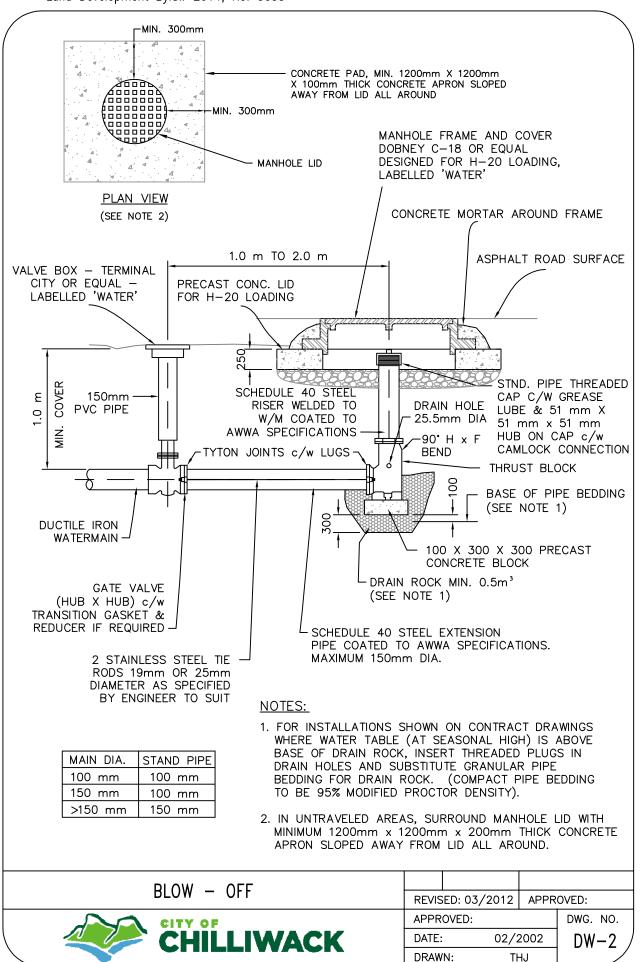
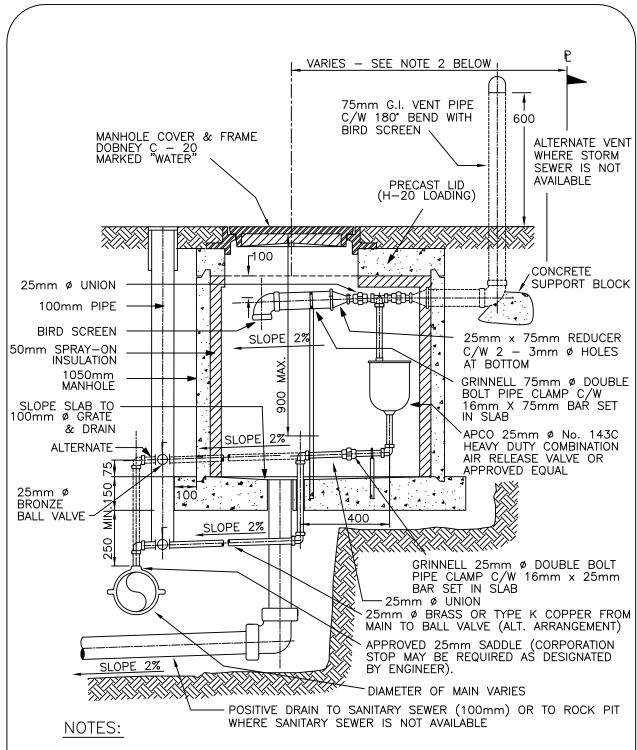


#### NOTES:

- 1 IN RURAL AREAS WHERE A DITCH IS REQUIRED IN A CUT, THE AREA AS SHOWN ABOVE SHALL BE RETAINED BY SUITABLE SIDESLOPES OR WALLS.
- 2. MINIMUM CULVERT LENGTH SHALL BE 4m. CULVERT TO BE SIZED TO ACCOMMODATE THE DESIGN FLOW OF THE DITCH/WATERCOURSE.
- 3. MAINTAIN MIN. 1.0m SEPARATION FROM WATERMAIN TO TOP OF CULVERT. IF NOT PRACTICAL, DIRECTION FOR ALTERNATE METHOD SHALL BE FROM THE ENGINEERING DIRECTOR.
- 4. NOTWITHSTANDING NOTE 3, AN "R10" INSULATION SHALL BE MAINTAINED FOR THE WATERMAIN TO PROTECT FROM FREEZING.

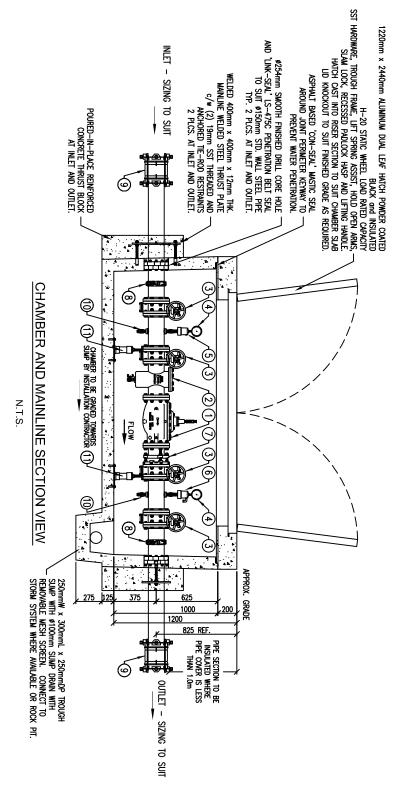
RURAL FIRE HYDRANT ASSEMBLY					
NONAL TINE TITUNANT ASSEMBLE	REVIS	ED:	11/09	APPR	OVED:
CITY OF	APPR	OVE	):		DWG. NO.
CHILLIWACK			06,	/94	DW-1 /
	DRAW	N:	SE	ΞH	

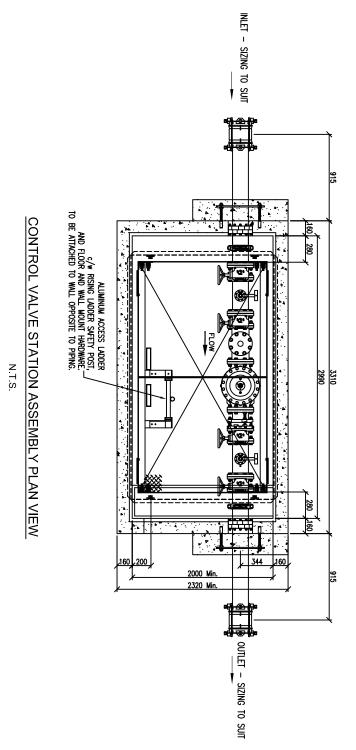




- SPECIAL DESIGN REQUIRED WHEN DISTANCE FROM TOP OF MAIN TO MANHOLE COVER IS LESS THAN 1.2m.
- 2. MANHOLE LID TO BE CENTERED IN SIDEWALK WHERE SIDEWALK IS ON THE SAME SIDE OF ROAD AS WATERMAIN. OTHERWISE LOCATE IN BOULEVARD CENTRED AT 3m FROM PROPERTY LINE IN URBAN AREAS OR 4m FROM PROPERTY LINE IN RURAL AREAS. C/W ACCESS PAD AND APPROVED CULVERT WHERE REQUIRED.
- 50mm SPRAY-ON INSULATION (ALL INSIDE SURFACES).
- 4. CHAMBER IS NOT TO BE INSTALLED IN ROAD SURFACE.

AIR AND VACUUM VALVE CHAMBER				
AIR AIND VACOUM VALVE CHAMDER	REVIS	SED: 12/13	APPR	OVED:
CITY OF	APPR	OVED:		DWG. NO.
CHILLIWACK	DATE:	: 06,	/94	DW-3 /
	DRAW	/N: SI	ΞH	





NOTES:

1. ALL FABRICATED PIPE SECTIONS, FITTINGS, PIPE STANDS AND VENT PIPES SHALL BE SANDBLASTED, LINED AND COATED WITH FUSION BONDED EPOXY IN CONFORMANCE WITH AWWA C-213 STANDARDS, MEETING NSF-61 APPROVAL. ENAMEL BLUE COLOR.

2. ALL PIPE USED FOR FABRICATION SECTIONS SHALL CONFORM TO AWWA C200 STANDARD, ALL FABRICATED PIPE SECTIONS SHALL CONFORM TO ASTM A-53GRADE B STANDARD ALL FABRICATED PIPE SECTIONS SHALL CONFORM TO ASTM B-63GRADE B STANDARD WALL PIPE ANSI STANDARD B16.9.

3. ALL STEEL FITTINGS SHALL CONFORM TO ASTM A-234 GRADE WPB, ANSI B16.28.

4. STAINLESS STEEL F-599 HEX BOLTS AND F-574 HEX NUTS c/w SAE STAINLESS STEEL WASHERS USED THROUGHOUT ASSEMBLY.

5. FULL FACE 3mm THK. RED RUBBER GASKETS USED THROUGHOUT ASSEMBLY.

AE CONCRETE PRE-CAST CONCRETE #3151 FIRELINE METER CHAMBER INSIDE DIMENSIONS: 3000mm L x 1500mm W x 1100mm H.
DESIGNED TO MEET AASHTO H20-44 DESIGN LOADING.

CONCRETE - 35MPa @ 28 DAYS.
 STEEL REBAR - CSA G-30.18-M92 GRADE 400.
 APPROXIMATE WEIGHT:

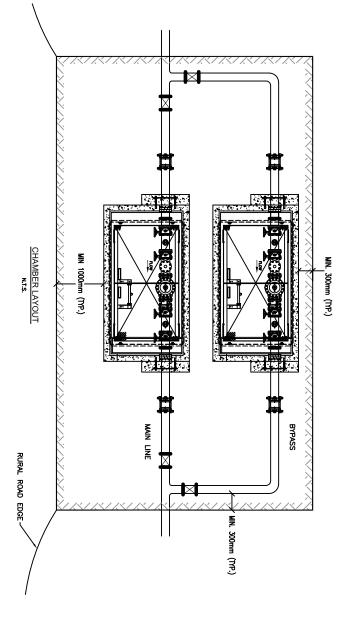
SLAB SECTION /w LID 5,500 lb.
CHAMBER SECTION 12,000 lb
4. CS-55 CONSEAL OR APPROVED EQUAL BLACK DAMP-PROOF COATING ON ALL

IBER FLOOR TO BE GRADED TOWARDS SUMP BY INSTALLATION

6. SCADA CONNECTION, REQUIRED FOR PRESSURE MONITORING.

7. FRESH AIR FACILITY WHEN WORKING INSIDE.
8. EXTERNAL KIOSK TO HOUSE ELECTRICAL AND ELECTRONIC EQUIPMENT.
9. FROST PROTECTION REQUIRED WHERE DEPTH FROM TOP OF PIPE TO
UNDERSIDE OF LID IS LESS THAN 1.2m.
10. MAINLINE SIZING TO BE CONSISTENT WITH WATERMAIN. BYPASS ASSEMBLY
MAY BE REDUCED SIZE WITH APPROVAL OF CITY ENGINEER.
11. INCORPORATE CHAMBER LID INTO SIDEWALK WHERE AVAILABLE. EXTEND
CONCRETE SURFACE 500mm (MIN.) BEYOND THE EDGE OF THE LID. PROVIDE
POSITIVE DRAINAGE AWAY FROM THE CHAMBER.
12. IN RURAL AREAS OR ADJACENT TO ROADWAYS WITHOUT CURB AND GUTTER,
CHAMBER IS TO BE INSTALLED WITH THE LID 100mm (MIN.) ABOVE THE ROAD EDGE.
PROVIDE 50mm THICK ASPHALT APRON (TO ROADWAY STANDARD) FLUSH TO TOP OF
LID WITH POSITIVE DRAINAGE AWAY FROM CHAMBER AND TIE INTO ROADWAY EDGE.
EXTEND APRON A MINIMUM OF 1000mm BEYOND THE CHAMBER TO THE ROAD AND A
MINIMUM OF 300mm IN ALL OTHER DIRECTIONS, PROVIDE GRAVEL PARKING SPACE
OFF ROADWAY ADJACENT TO CHAMBER FOR A MINIMUM OF ONE SERVICE VEHICLE.
13. ISOLATION VALVES ASSOCIATED WITH THE PRY CHAMBER OUTSIDE OF ROADWAY
ARE TO HAVE ASPHALT APRON EXTENDING A MINIMUM OF 300mm AROUND (CAN BE
INCORPORATED INTO CHAMBER APRON) AND 50mm THICK.

	PROVISIONS FOR A SINGLE PHASE 30AMP 240V HYDRO SERVICE C/W (2)-27mm CONDUITS TO PRV CHAMBERS FOR FUTURE SCADA MONITORING.	_	12
	ADJUSTABLE 50mm SCH. 40 PIPE FLANGE OR SADDLE SUPPORT STANDS OF RATED LOAD CAPACITY. TO BE ANCHORED IN PLACE TO VAULT BASE SECTION. FUSION EPOXY COATED WITH SST THREADED ROD AND HARDWARE.	2	=======================================
	19mm BALL VALVE OR HOSE BIB ASSEMBLY $\alpha$ WACUUM BREAKER FOR TEST, SAMPLE OR WASHDOWN.	2	10
	EBAA IRON SERIES 3800 MEGA COUPLING RESTRAINED SLEEVE TRANSITION COUPLING, STEEL X DIPYC CONNECTION, EBAA IRON MODEL #R53806 OR EQUAL.	2	9
	SHURJOINT MODEL 207 GROOVED RIGID COUPLING. FUSION EPOXY COATED.	2	8
	ROMAC DJ-400 ANSI CLASS 150# FLANGED RESTRAINED DISMANTLING JOINT C'W EPOXY COATING.	1	7
	A.R.I. D-040-C COMBINATION AIR RELEASE & VACUUM VALVE ow 25mm ISOLATION BALL VALVE AND 180° VENT PIPE RETURN.	1	6
	A.R.I. S-050-C AUTOMATIC AIR RELEASE VALVE $_{\rm CW}$ $25\rm mm$ ISOLATION BALL VALVE AND $180^\circ$ VENT PIPE RETURN.	1	5
	PRESSURE GAUGE ASSEMBLY. ENFM ps/kPa DUAL SCALE, OIL FILLED, 0100mm FACE, c/w ISOLATION VALVE FOR PRESSURE TRANSMITTERS.	2	4
ANSI 150	VAL-MATIC AWWA C504 CLASS 150B FLANGED BUTTERFLY VALVE OW GEAR OPERATOR, HANDWHEEL AND POSITION INDICATOR.	4	ω
ANSI 125	SURE FLOW BF125C CAST IRON FLANGED BASKET STRAINER, MESH BASKET CW FUSION BONDED EPOXY LINED AND COATED.	1	2
ANSI 150	SINGER MODEL 106-PR-48 FULL PORT PRESSURE REDUCING CONTROL VALVE WITH LOW FLOW BYPASS, ANSI CLASS 150# FLANGED BODY CW X107 SIGHT CLASS ALVE STEM POSITION INDICATOR ASSEMBLY, STRAINER, (3) ISOLATION BALL VALVES, MODEL 26 FLOW STABILIZER, MODEL 160 PILOT ASSEMBLY, SPRING RANGE AND LOW PRESSURE SET POINT TO BE DETERMINED.	1	1
FLANGE RATING	DESCRIPTION	QTY	TEM
	MATERIAL LIST (per Chamber)		

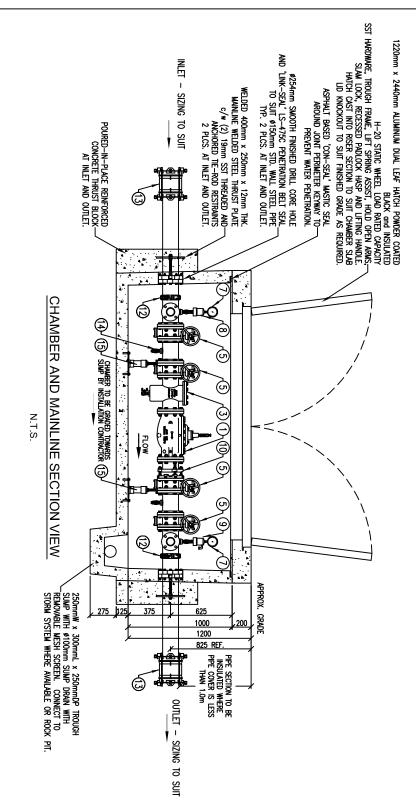


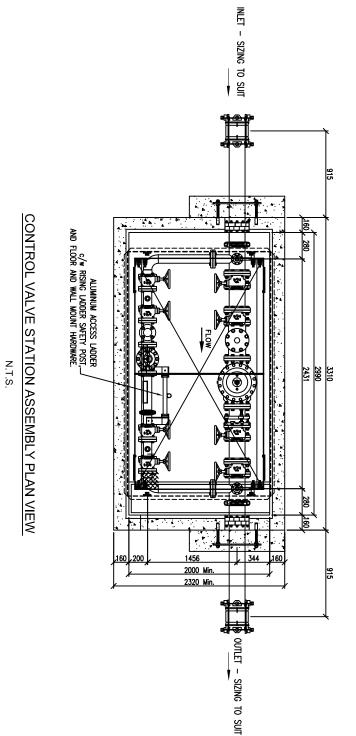


S REVISIONS PER C.O.C.
PREVISIONS PER C.O.C.
REVISIONS PER C.O.C.



DWG. NO.





NOTES:

1. ALL FABRICATED PIPE SECTIONS, FITTINGS, PIPE STANDS AND VENT PIPES SHALL
BE SANDBLASTED, LINED AND COATED WITH FUSION BONDED EPOXY IN
CONFORMANCE WITH AWWA C-213 STANDARDS, MEETING NSF-61 APPROVAL.

ENAMEL BLUE COLOR.

2. ALL PIPE USED FOR FABRICATION SECTIONS SHALL CONFORM TO AWWA C200

STANDARD ALL FABRICATED PIPE SECTIONS SHALL CONFROM TO ASTM A53GRADE

STANDARD. ALL FABRICATED PIPE SECTIONS SHALL CONFROM TO ASTM A-53GRAI B STANDARD WALL PIPE ANSI STANDARD B16.9.

3. ALL STEEL FITTINGS SHALL CONFORM TO ASTM A-234 GRADE WPB, ANSI B16.28.

4. STANNLESS STEEL F-599 HEX BOLTS AND F-574 HEX NUTS c/w SAE STAINLESS STEEL WASHERS USED THROUGHOUT ASSEMBLY.

5. FULL FACE 3mm THK. RED RUBBER GASKETS USED THROUGHOUT ASSEMBLY.

AE CONCRETE PRE-CAST CONCRETE #3151 FIRELINE METER CHAMBER INSIDE DIMENSIONS: 3000mm L x 1500mm W x 1100mm H.
DESIGNED TO MEET AASHTO H20-44 DESIGN LOADING.

CONCRETE - 35MPa @ 28 DAYS.
 STEEL REBAR - CSA G-30.18-M92 GRADE 400.
 APPROXIMATE WEIGHT:

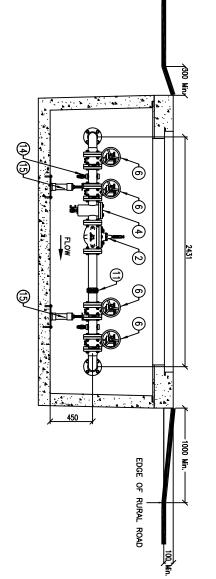
SLAB SECTION /w LID 5,500 lb. CHAMBER SECTION 12,

EXTERIOR SURFACES 4. CS-55 CONSEAL OR APPROVED EQUAL BLACK DAMP-PROOF COATING ON ALL

5. CHAMBER FLOOR TO BE GRADED TOWARDS SUMP BY INSTALLATION

6. SCADA CONNECTION. REQUIRED FOR PRESSURE MONITORING.
7. FRESH AIR FACILITY WHEN WORKING INSIDE.
8. EXTERNAL KIOSK TO HOUSE ELECTRICAL AND ELECTRONIC EQUIPMENT.
9. FROST PROTECTION REQUIRED WHERE DEPTH FROM TOP OF PIPE TO
UNDERSIDE OF LID IS LESS THAN 1.2m.
10. MAINLINE SIZING TO BE CONSISTENT WITH WATERMAIN. BYPASS ASSEMBLY
MAY BE REDUCED SIZE WITH APPROVAL OF CITY ENGINEER.
11. INCORPORATE CHAMBER LID INTO SIDEWALK WHERE AVAILABLE. EXTEND
CONCRETE SURFACE 500mm (MIN.) BEYOND THE EDGE OF THE LID. PROVIDE
POSITIVE DRAINAGE AWAY FROM THE CHAMBER.
12. IN RURAL AREAS OR ADJACENT TO ROADWAYS WITHOUT CURB AND GUTTER,
CHAMBER IS TO BE INSTALLED WITH THE LID 100mm (MIN.) ABOVE THE ROAD EDGE.
PROVIDE 50mm THICK ASPHALT APRON (TO ROADWAY STANDARD) FLUSH TO TOP OF
LID WITH POSITIVE DRAINAGE AWAY FROM CHAMBER AND TIE INTO ROADWAY EDGE.
EXTEND APRON A MINIMUM OF 1000mm BEYOND THE CHAMBER TO THE ROAD AND A
MINIMUM OF 300mm IN ALL OTHER DIRECTIONS, PROVIDE GRAVEL PARKING SPACE
OFF ROADWAY ADJACENT TO CHAMBER FOR A MINIMUM OF ONE SERVICE VEHICLE.
13. ISOLATION VALUES ASSOCIATED WITH THE PRV CHAMBER OUTSIDE OF ROADWAY
ARE TO HAVE ASPHALT APRON EXTENDING A MINIMUM OF 300mm AROUND (CAN BE
INCORPORATED INTO CHAMBER APRON) AND 50mm THICK.

																-	_
16	15	14	13	12	11	10	9	8	7	6	55	4	ω	N		MEM	
	4	4	2	2	1	1	1	1	2	4	4	1	_		_	QTY	
PROVISIONS FOR A SINGLE PHASE 30AMP 240V HYDRO SERVICE C/W (2)- 27mm CONDUITS TO PRV CHAMBERS FOR FUTURE SCADA MONITORING.	ADJUSTABLE 50mm SGH. 40 PIPE FLANGE OR SADDIE SUPPORT STANDS OF RATED LOAD CAPACITY. TO BE ANCHORED IN PLACE TO VAULT BASE SECTION. FUSION EPOXY COATED WITH SST THREADED ROD AND HARDWARE.	19mm BALL VALVE OR HOSE BIB ASSEMBLY OW VACUUM BREAKER FOR TEST, SAMPLE OR WASHDOWN.	EBAA IRON SERIES 3800 MEGA COUPLING' RESTRAINED SLEEVE TRANSITION COUPLING, STEEL X DI/PVC CONNECTION, EBAA IRON MODEL #RS3806 OR EQUAL.	SHURJOINT MODEL 207 GROOVED RIGID COUPLING, FUSION EPOXY COATED.	SHURJOINT MODEL 207 GROOVED RIGID COUPLING. FUSION EPOXY COATED.	ROMAC DJ-400 ANSI CLASS 150# FLANGED RESTRAINED DISMANTLING JOINT CW EPOXY COATING.	A.R.I. D-040-C COMBINATION AIR RELEASE & VACUUM VALVE c/w 25mm ISOLATION BALL VALVE AND 180° VENT PIPE RETURN.	A.R.I. S-050-C AUTOMATIC AIR RELEASE VALVE c/w 25mm ISOLATION BALL VALVE AND 180° VENT PIPE RETURN.	PRESSURE GAUGE ASSEMBLY. ENFM ps/kPa DUAL SCALE, OIL FILLED, Ø100mm FACE, c/w ISOLATION VALVE FOR PRESSURE TRANSMITTERS.	VAL-MATIC AWWA C504 CLASS 150B FLANGED BUTTERFLY VALVE c/w GEAR OPERATOR, HANDWHEEL AND POSITION INDICATOR.	VAL-MATIC AWWA C504 CLASS 150B FLANGED BUTTERFLY VALVE c/w GEAR OPERATOR, HANDWHEEL AND POSITION INDICATOR.	SURE FLOW BF125 CAST IRON FLANGED BASKET STRAINER, MESH BASKET	SURE FLOW BF125C CAST IRON FLANGED BASKET STRAINER, MESH BASKET 6/W FUSION BONDED EPOXY LINED AND COATED.	SINGER MODEL 106-PR FULL PORT PRESSURE REDUCING CONTROL VALVE, ANSI CLASS 150# FLANGED BODY ow X107 SIGHT GLASS VALVE STEM POSITION INDICATOR ASSEMBLY, STRAINER, (3) ISOLATION BALL VALVES, MODEL 26 FLOW STABILIZER, MODEL 160 PILOT ASSEMBLY, SPRING RANGE AND LOW PRESSURE SET POINT TO BE DETERMINED.	SINGER MODEL 106-PR-48 FULL PORT PRESSURE REDUCING CONTROL VALVE WITH LOW FLOW BYPASS, ANSI CLASS 156H FLANCED BODY cw. X107 VALVE WITH LOW STEM POSTITION NIDICATOR ASSEMBLY, STRANKER, (3) ISOLATION BALL VALVES, MODEL 26 FLOW STABILIZER, MODEL 160 PILOT ASSEMBLY, SPRING RANGE AND LOW PRESSURE SET POINT TO BE DETERMINED.	DESCRIPTION	MATERIAL LIST
										ANSI 150	ANSI 150	ANSI 125	ANSI 125	ANSI 150	ANSI 150	FLANGE RATING	

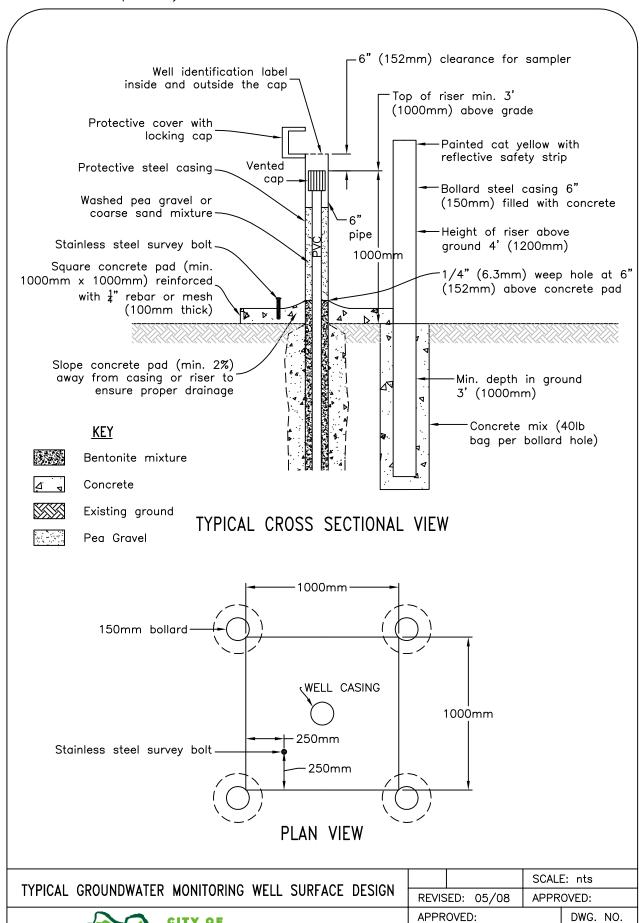


BYPASS SECTION VIEW

£	SEH	SEH	SEH	뜐	뜐	ВҮ
CN/WW	Q	Q	£	BK/JB	BK/JB	APPR.
						LEGEND
VEDT.	HORIZ	DATE	CHECKED	DRAWN	DESIGNED	
1 : 20	1 : 20	APR.9/08				

REVISIONS PER C.O.C. REVISIONS PER C.O.C.





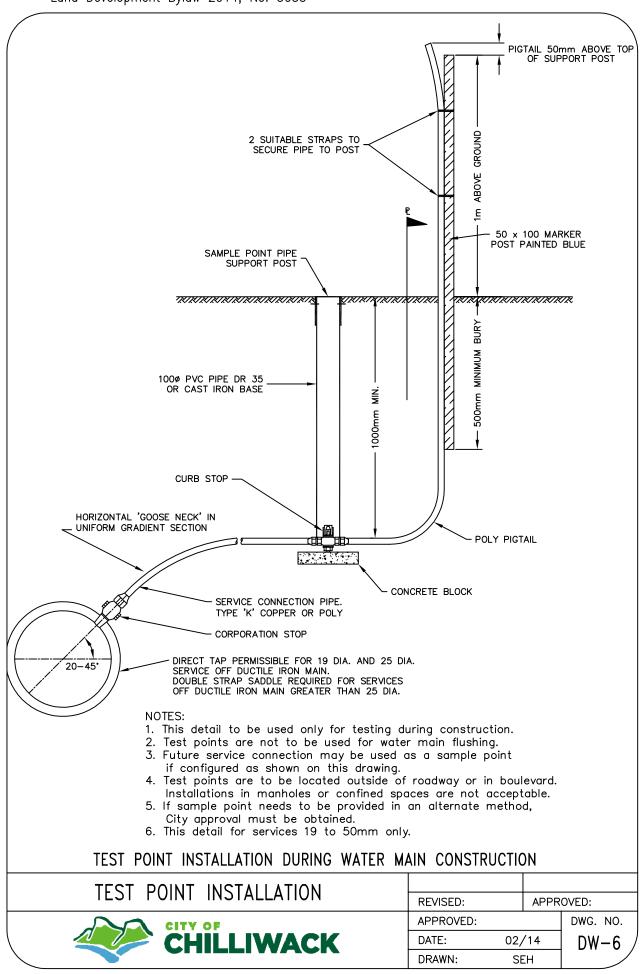
02/01

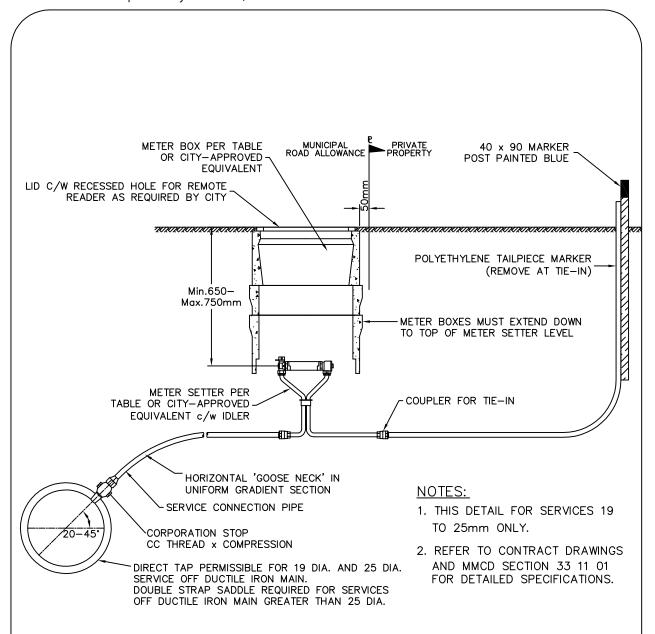
SEH

DW-5

DATE:

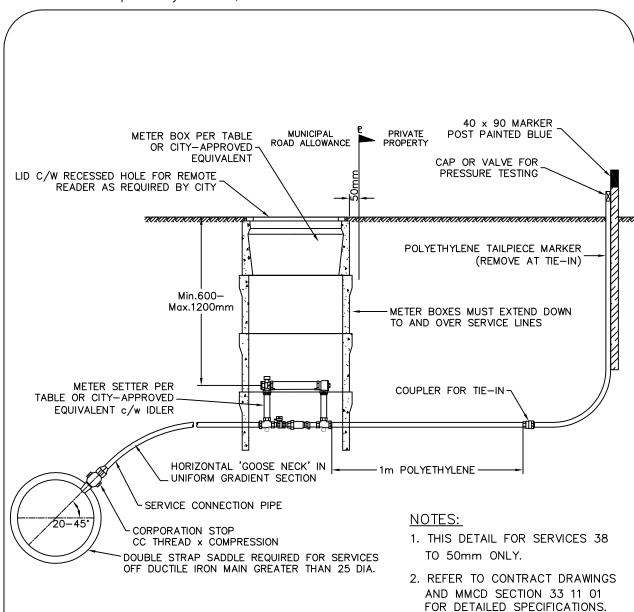
DRAWN:





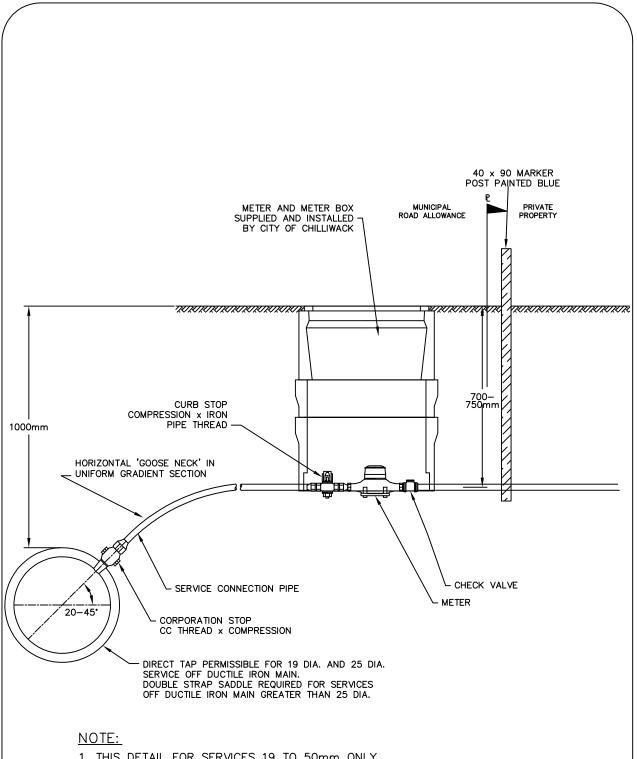
SIZE	A.E. CONCRETE METER BOX/CHAMBER MODEL	METER SETTER MODEL
19mm (3/4")	B-937	Ford VBHH92-15W-44-33A-Q
25mm (1")	T266	Ford VBHH92-15W-44-44A-Q

19mm/25mm WATER PRE-SERVICE CONNECTION			
19mm/25mm WATER PRE-SERVICE CONNECTION	REVISED: 12/01	APPR	OVED:
CITY OF	APPROVED:		DWG. NO.
CHILLIWACK	DATE: 09	/12	DW-7A
	DRAWN: S	EH	



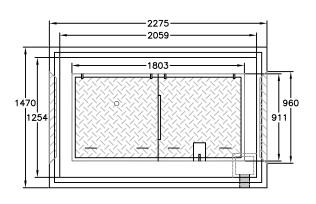
SIZE	A.E. CONCRETE METER BOX/CHAMBER MODEL	METER SETTER MODEL
38mm (1-1/2")	T266	Ford VBHH76-86-12BHC-1166 c/w #6 idler (13") and two (2) Ford model C84-66 pack joint couplers
50mm (2")	5686	Ford VBHH77-87-12BHC-1177 c/w #7 idler (17") and two (2) Ford model C87-77 pack joint couplers

	38mm/50mm WATER PRE-SERVICE CONNECTION			
	Sommy Summ WATER PRE-SERVICE CONNECTION	REVISED: 13/09	APPR	OVED:
	CITY OF	APPROVED:		DWG. NO.
١	CHILLIWACK	DATE: 11	/10	DW-7В /
	- Cilled WAOK	DRAWN: S	EH	

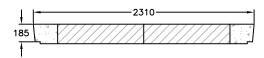


- 1. THIS DETAIL FOR SERVICES 19 TO 50mm ONLY.
- 2. REFER TO CONTRACT DRAWINGS AND MMCD SECTION 331101 FOR DETAILED SPECIFICATIONS.

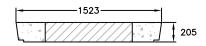
WATER SERVICE CONNECTION	REVISED:	10/10	APPR	OVED:
CITY OF	APPROVED	:		DWG. NO.
CHILLIWACK	DATE:	05/	/08	DW-8 /
S S S S S S S S S S S S S S S S S S S	DRAWN:	SE	ΞH	



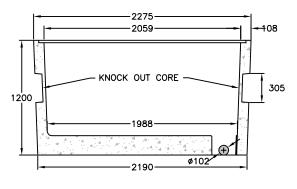
PLAN VIEW - VAULT



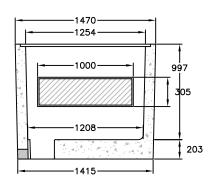
SIDE VIEW - LID



END VIEW - LID



SIDE VIEW - VAULT



END VIEW - VAULT

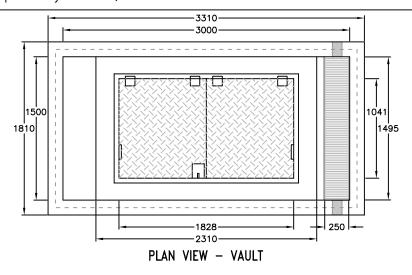
### **NOTES:**

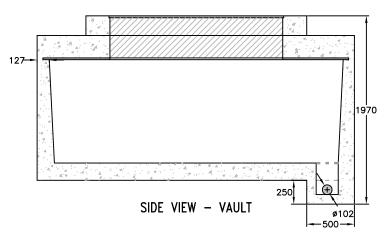
1. EXAMPLE ONLY. TO BE DISCUSSED WITH CITY OF CHILLIWACK MUNICIPAL DEVELOPMENT STAFF.

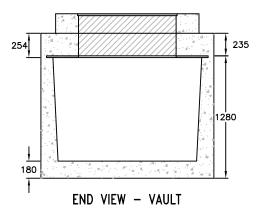
100mm, 150mm & 200mm WATER METER VAULT



REVISED:		APPR	OVED:
APPROVED:			DWG. NO.
DATE:	02,	/10	DW-9
DRAWN:	SF	- -	







### **NOTES:**

1. EXAMPLE ONLY. TO BE DISCUSSED WITH CITY OF CHILLIWACK MUNICIPAL DEVELOPMENT STAFF.

## 250mm WATER METER VAULT



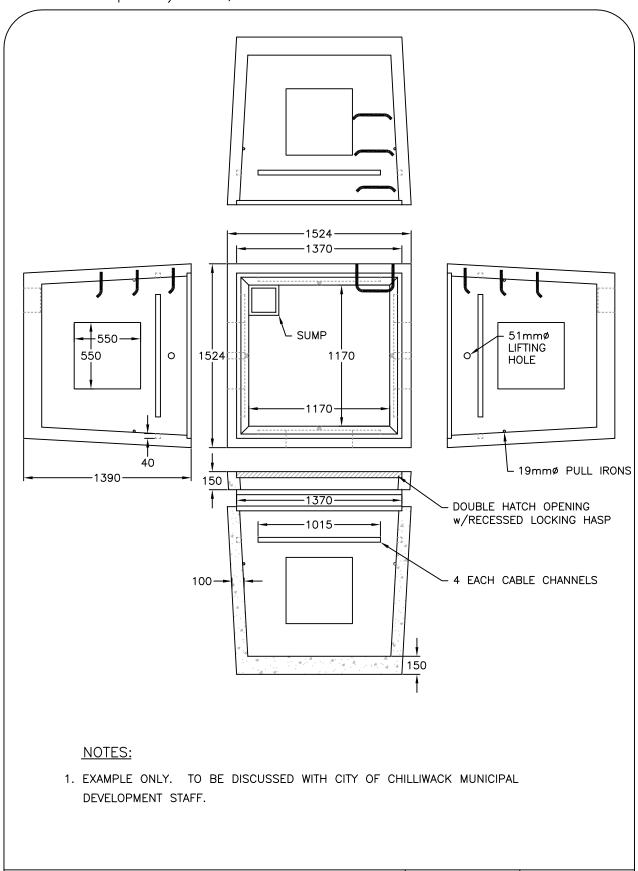
REVISED:	11/13	APPR	OVED:	

APPROVED:

DATE: 02/10

DRAWN: SEH

DWG. NO.



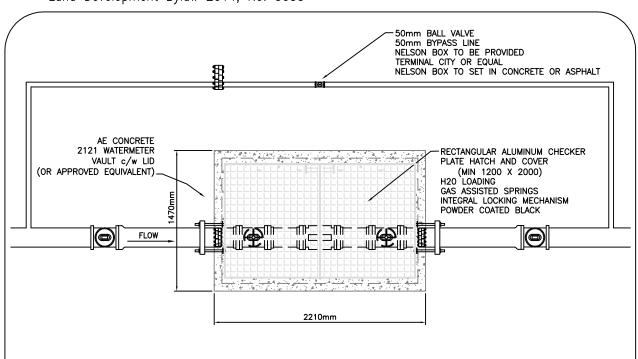
# DETECTOR CHECK VAULT

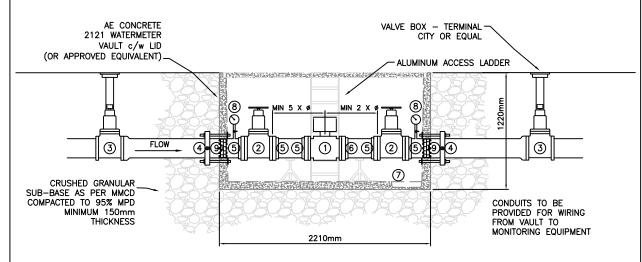


REVISED: 11/13	APPROVED:
APPROVED:	DWG. NO.

DATE: 02/10
DRAWN: SEH

DW-11





SPOOL PIECE

FOR METER REMOVAL

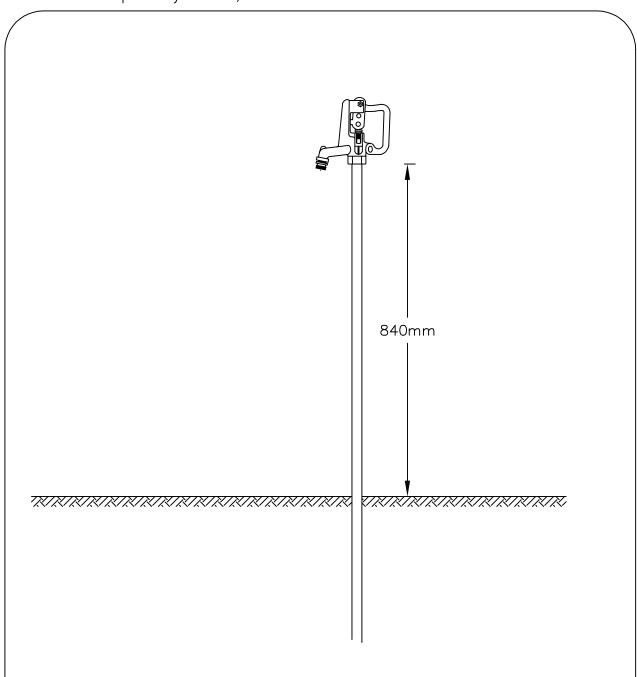
TO BE PROVIDED

#### **LEGEND**

- 1. ABB Magnetic Flow Meter with Remote Display. Factory sealed and potted cables to be provided.
- 2. Resilient Seated Wedge Gate Valve NRS c/w Handwheel.
- 3. Resilient Seated Wedge Gate Valve NRS.
- 4. Restrainment Coupling c/w Tie Down to vault.
- 5. Adapter Flange / Uni-Flange Series 200.
- 6. Dismantling Joint "Victolic Coupling".
- 7. Sump to be connected to sanitary system or rockpit via a 100mm diameter connection.
- 8. Pressure Gauge c/w Ball Shut Off Valve.
- 9. Link Seal or approved equal.

NOTE: All fitting and pipe work is to conform to Schedule 'A' of the Subdivision and Land Development Bylaw and/or MMCD.





### NOTE:

1. MERRILL C-1000 SERIES YARD HYDRANT OR APPROVED EQUIVALENT.

YARD HYDRANT			
TAKU HIUKANI	REVISED: APPRO		OVED:
CITY OF	APPROVED:		DWG. NO.
CHILLIWACK	DATE: 09,	/12	DW-13 /
	DRAWN: SI	EH	