

NOTE:
MATERIAL SUBSTITUTIONS OR DETERMINATION OF EQUAL ARE AT THE SOLE DISCRETION OF LAKE CHELAN RECLAMATION DISTRICT.

TYPE I MANHOLE SUPPLIED BY H2 PRE-CAST INC. OR EQUAL.

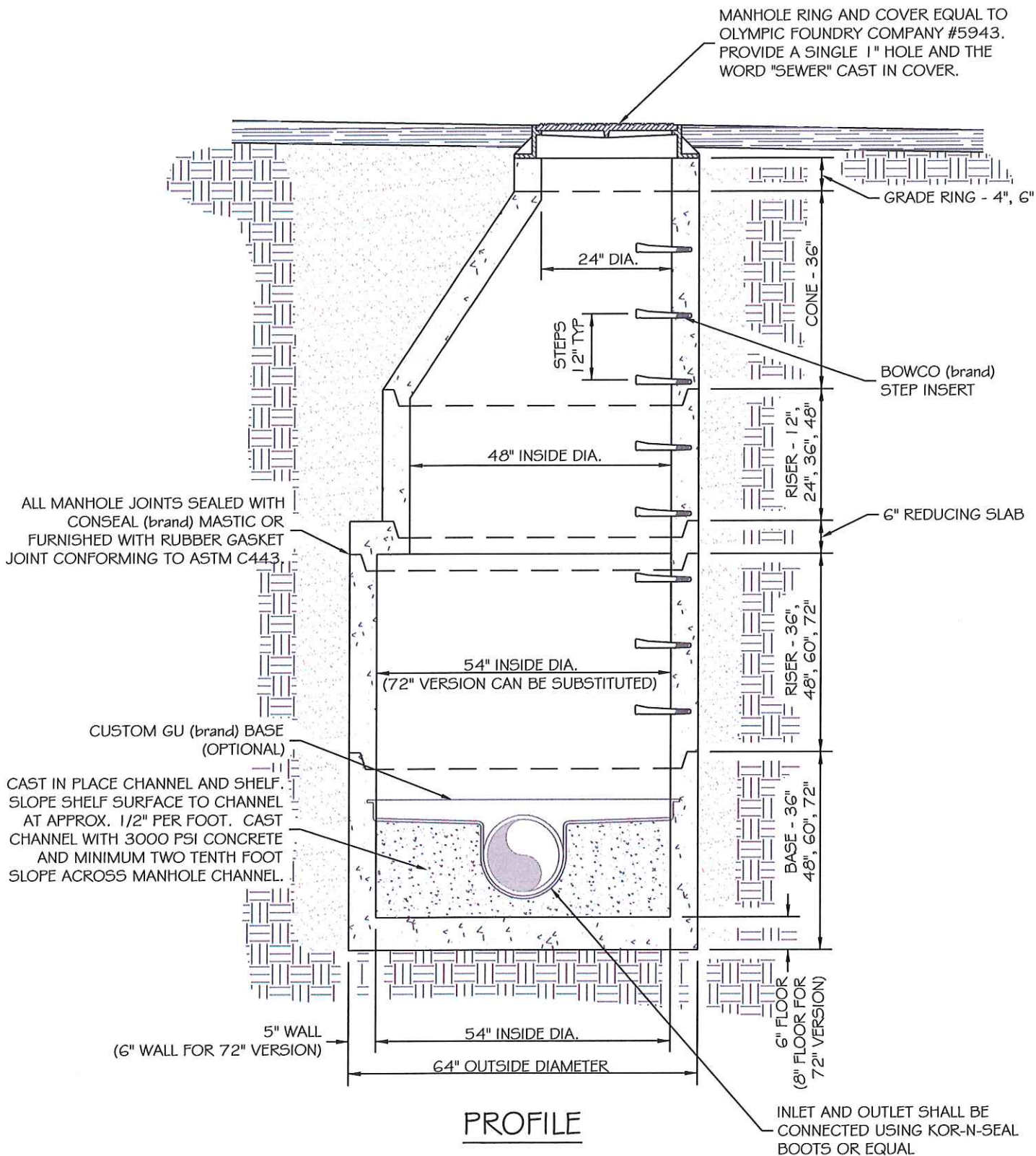
MANHOLE ASSEMBLY MUST CONFORM WITH WSDOT/APWA STANDARD SPECIFICATIONS.

BACKFILL AND SURFACE RESTORATION SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE ROAD RIGHT-OF-WAY.

TITLE	
TYPE I MANHOLE	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
1 OF SET	NO SCALE



DRAWN BY RIA




NOTE:
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TYPE II MANHOLE SUPPLIED BY H2 PRE-CAST INC. OR EQUAL.

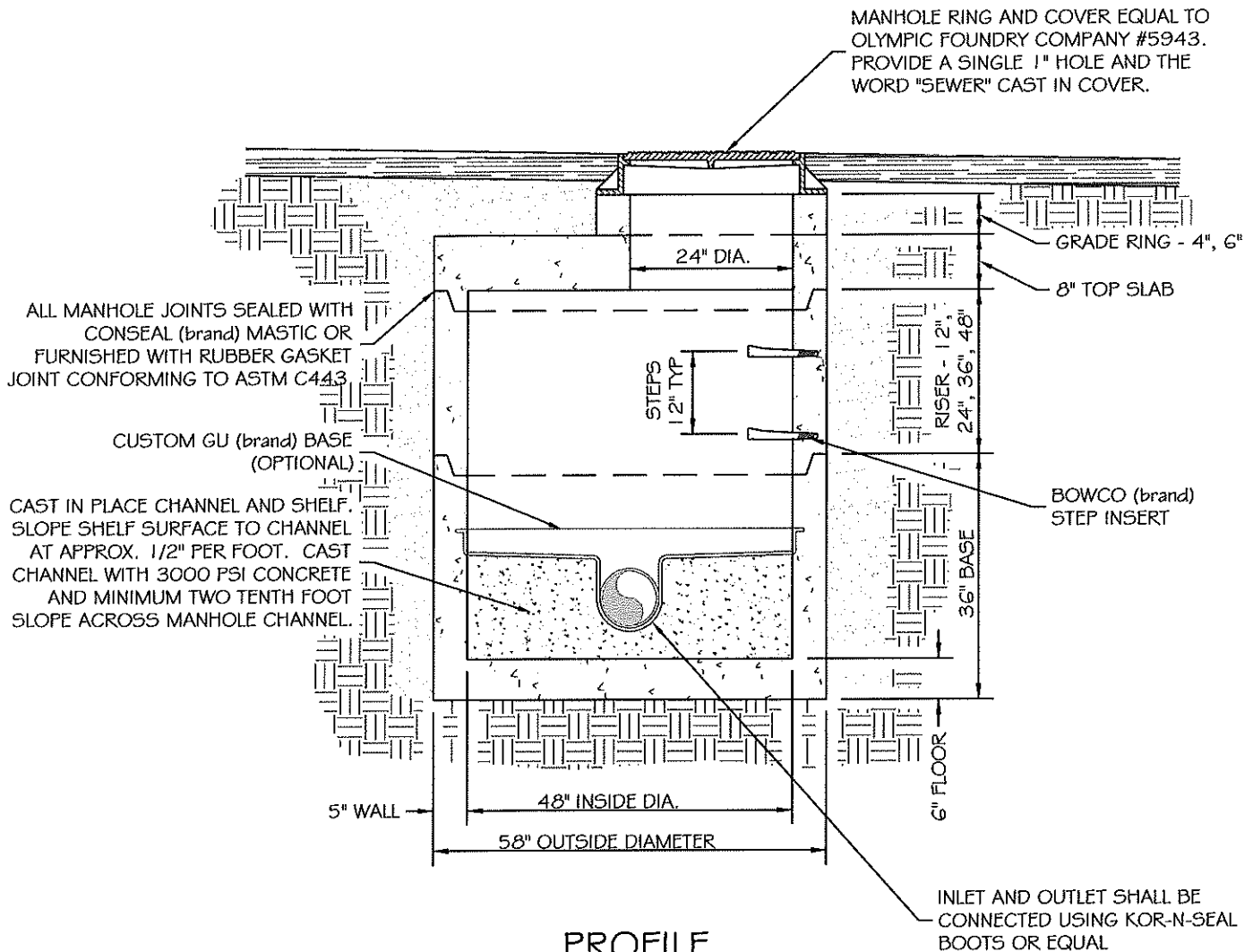
MANHOLE ASSEMBLY MUST CONFORM WITH WSDOT/APWA STANDARD SPECIFICATIONS.

BACKFILL AND SURFACE RESTORATION SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE ROAD RIGHT-OF-WAY.

TITLE		
TYPE II MANHOLE		
STANDARD SEWER DETAIL		
SHEET	DWG SCALE	
2 OF SET	NO SCALE	

DRAWN BY RIA

03.29.06 SewerDetailType II manhole.dwg (RPV R)



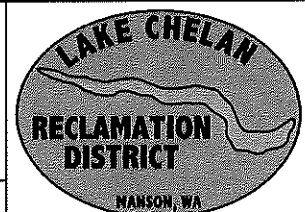
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TYPE III MANHOLE SUPPLIED BY H2 PRE-CAST INC. OR EQUAL.

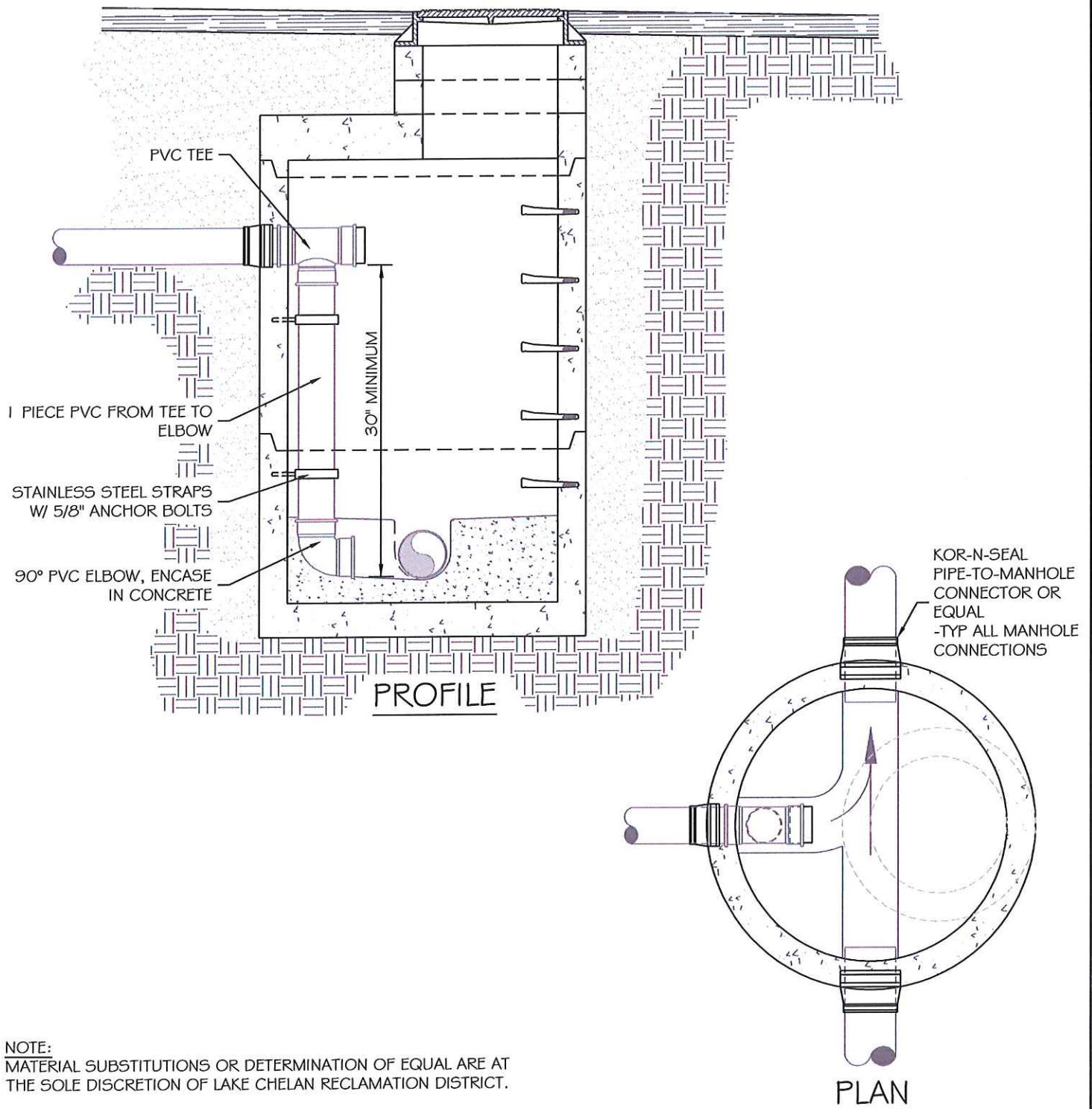
MANHOLE ASSEMBLY MUST CONFORM WITH WSDOT/APWA STANDARD SPECIFICATIONS.

BACKFILL AND SURFACE RESTORATION SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE ROAD RIGHT-OF-WAY.

TITLE	
TYPE III MANHOLE	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
3 OF SET	NO SCALE



DRAWN BY R1A



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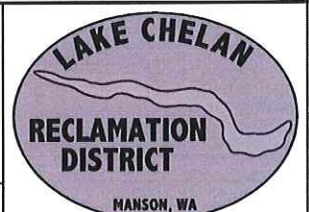
ALL PIPE AND FITTINGS TO BE D3034 GASKETTED SEWER PIPE.

TYPE III MANHOLE SUPPLIED BY H2 PRE-CAST INC. OR EQUAL.

MANHOLE ASSEMBLY MUST CONFORM WITH WSDOT/APWA STANDARD SPECIFICATIONS.

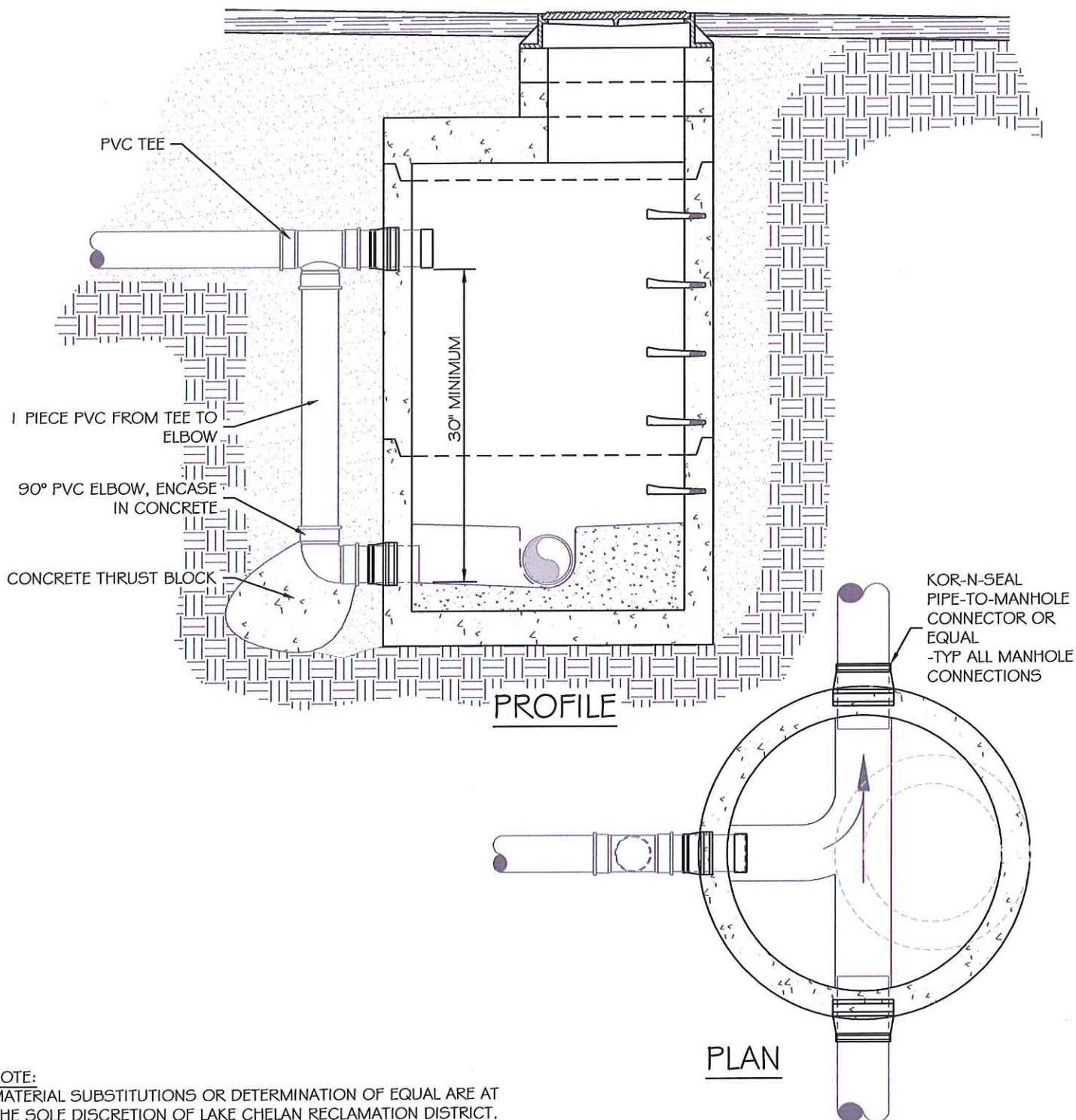
BACKFILL AND SURFACE RESTORATION SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE ROAD RIGHT-OF-WAY.

TITLE	
INSIDE DROP MANHOLE	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
4 OF SET	NO SCALE



DRAWN BY R1A

03.28.05 SewerDetailsinside drop manhole.dwg (REV F)



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ALL PIPE AND FITTINGS TO BE D3034 GASKETTED SEWER PIPE.

TYPE III MANHOLE SUPPLIED BY H2 PRE-CAST INC. OR EQUAL.

MANHOLE ASSEMBLY MUST CONFORM WITH WSDOT/APWA
STANDARD SPECIFICATIONS.

BACKFILL AND SURFACE RESTORATION SHALL CONFORM TO THE
REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE
ROAD RIGHT-OF-WAY.

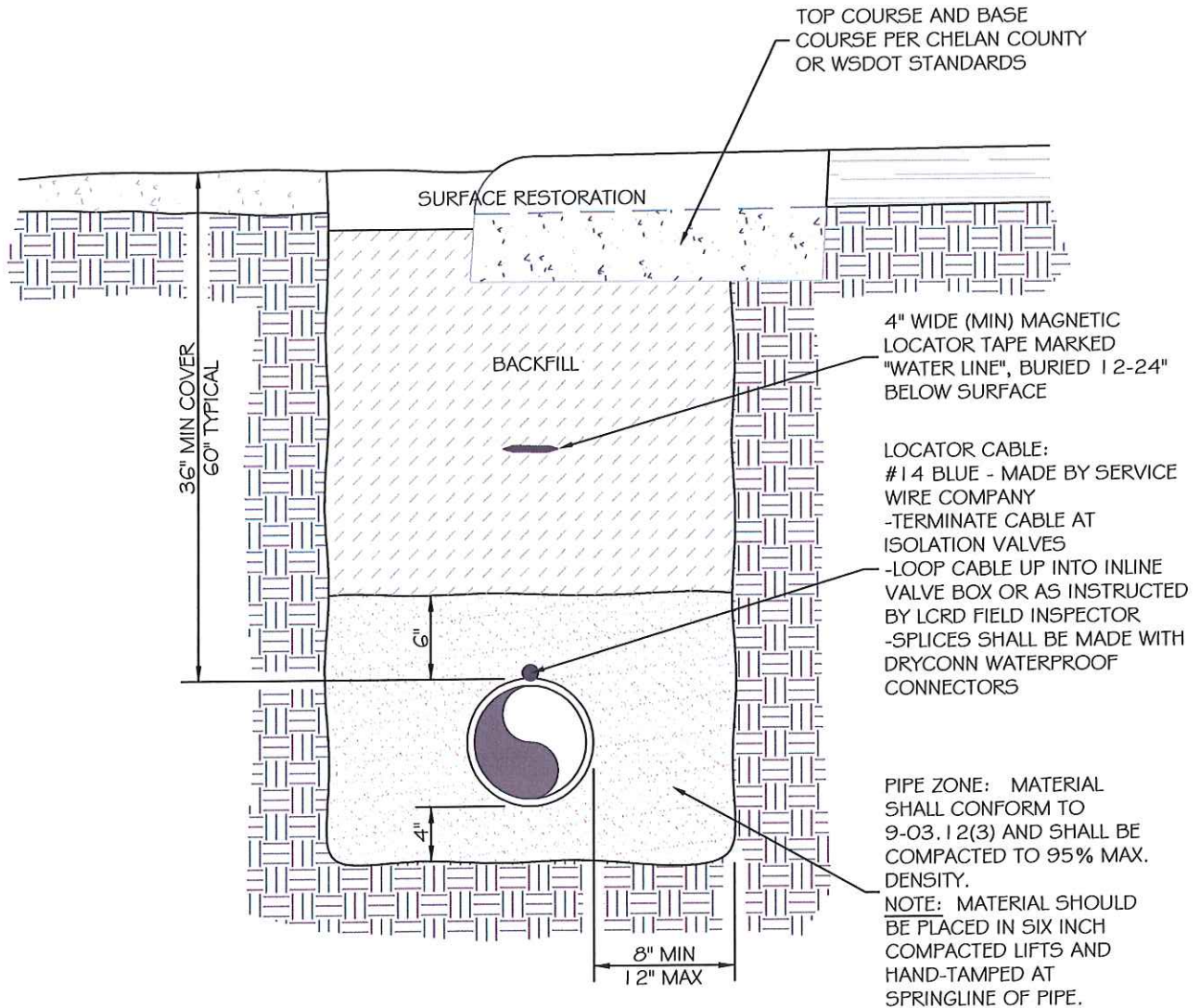
TITLE	
OUTSIDE DROP MANHOLE	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
5 OF SET	NO SCALE



DRAWN BY RIA

03.29.05 SewerDetails\outside drop manhole.dwg (REV F)

CALL 48 HOURS
BEFORE YOU DIG:
Northwest Utility Notification Center
1-800-553-4344

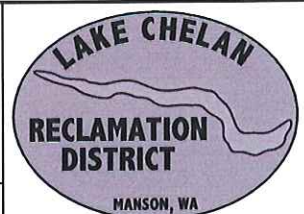


PROFILE

NOTES:
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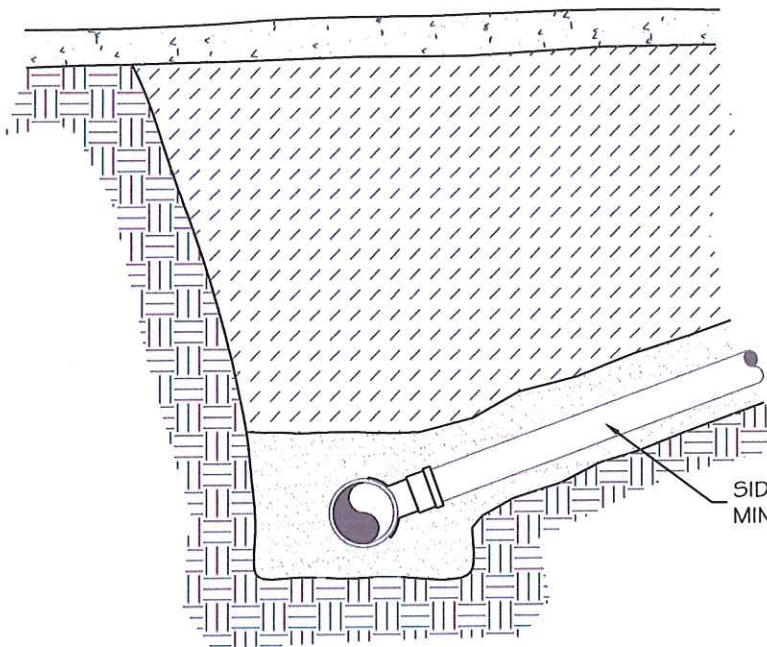
BACKFILL, SURFACE RESTORATION, AND MINIMUM PIPE DEPTH SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE ROAD RIGHT-OF-WAY.

TITLE	
TYPICAL TRENCH SECTION	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
6 OF SET	NO SCALE

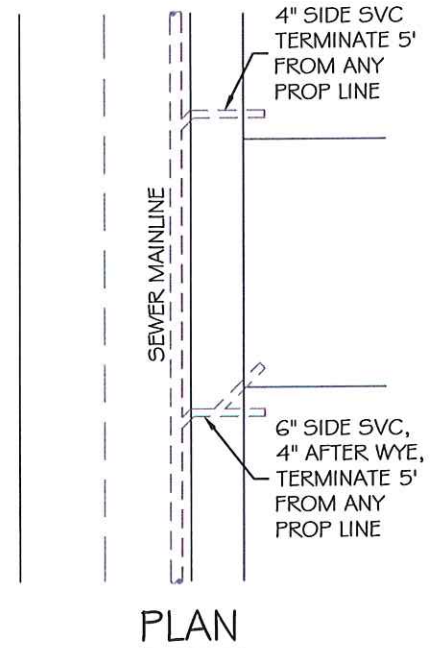


DRAWN BY R1A

03.27.06 Domestic\Details\sewer\section.dwg (RFV B)

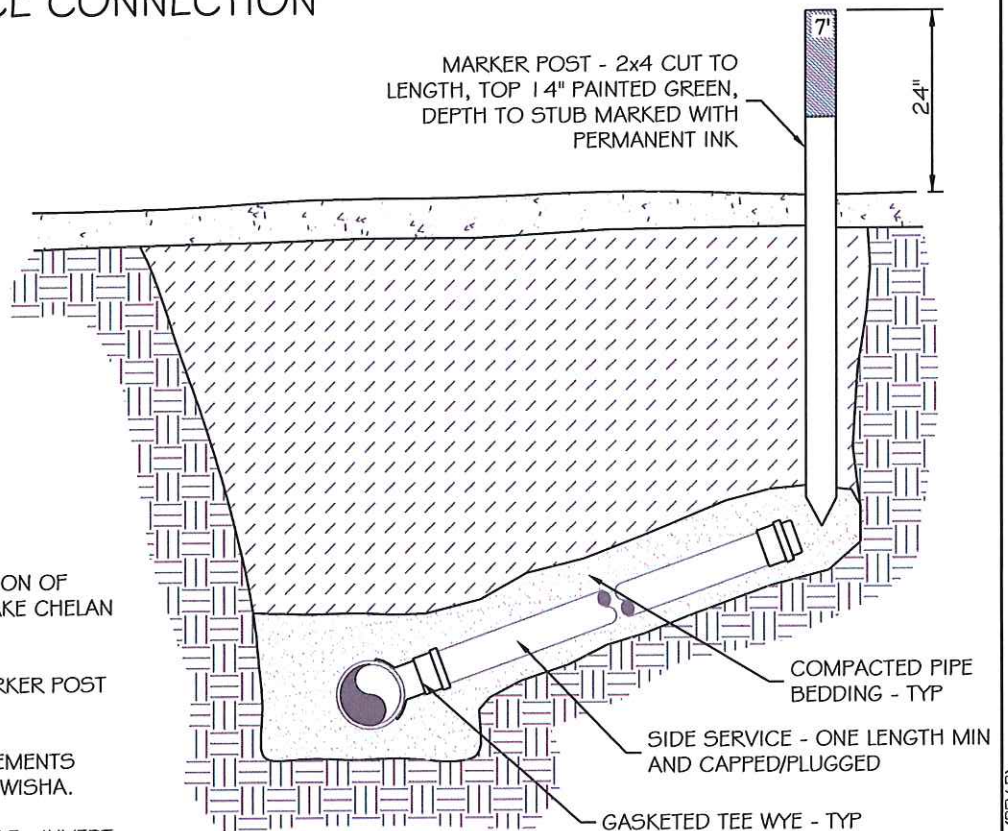


PROFILE - SERVICE CONNECTION



PLAN

MARKER POST - 2x4 CUT TO LENGTH, TOP 14" PAINTED GREEN, DEPTH TO STUB MARKED WITH PERMANENT INK



PROFILE - SERVICE STUBOUT

NOTES:

MATERIAL SUBSTITUTIONS OR DETERMINATION OF EQUAL ARE AT THE SOLE DISCRETION OF LAKE CHELAN RECLAMATION DISTRICT.

4" PVC MAY BE SUBSTITUTED FOR 2x4 MARKER POST AND PAINTED AS INDICATED.

DITCH SIDE SLOPES AND SHORING REQUIREMENTS SHALL BE IN COMPLIANCE WITH OSHA AND WISHA.

WHERE SIDE SEWER CONNECTS TO MANHOLE: INVERT OF SIDE SEWER SHALL BE EQUAL TO OR ABOVE MAIN SEWER CROWN, BUT NOT TO EXCEED 18" ABOVE INVERT OF MAIN SEWER.

UNLESS OTHERWISE INDICATED ON PLAN, SIDE SEWER SHALL BE MIN. OF 6' DEEP AT PROPERTY LINE, OR 5' LOWER THAN THE LOWEST HOUSE ELEVATION, WHICHEVER IS LOWER.

BACKFILL, SURFACE RESTORATION, AND MINIMUM PIPE DEPTH SHALL CONFORM TO THE REQUIREMENTS OF THE AGENCY HAVING JURISDICTION OVER THE ROAD RIGHT-OF-WAY.

TITLE

SIDE SEWERS

STANDARD SEWER DETAIL

SHEET

7 OF SET

DWG SCALE

NO SCALE

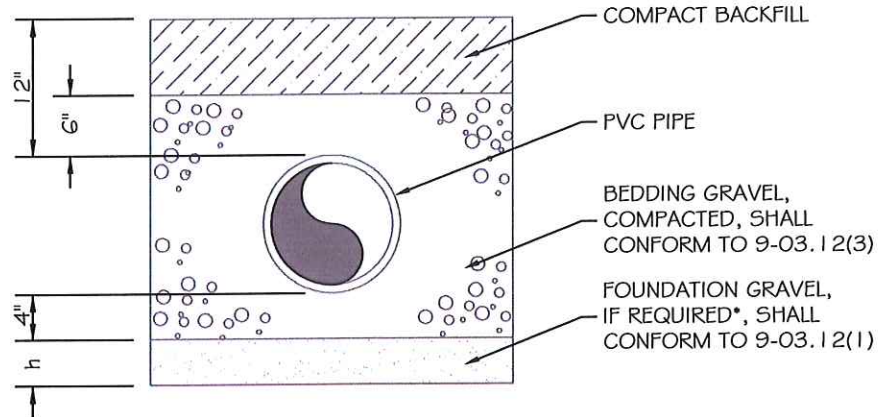


DRAWN BY RJA

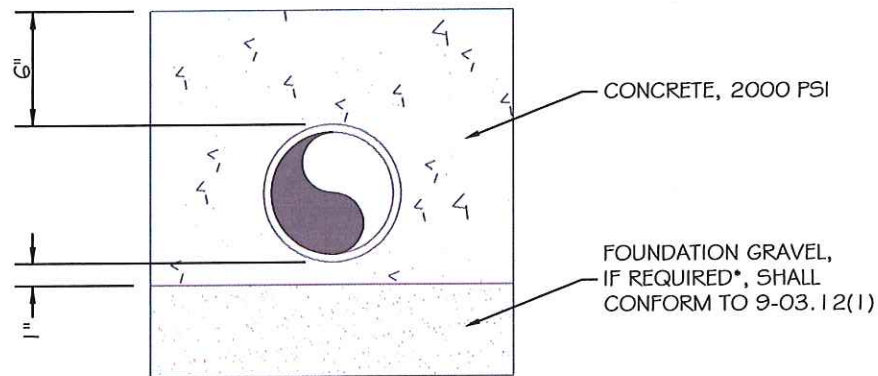
03.29.06 US:\SewerDetail\side sewers.dwg (REV B)

PIPE BEDDING CLASSES

ORDINARY PIPE BEDDING



CONCRETE ENCASEMENT



NOTES:

- * - EXCAVATE UNSUITABLE MATERIAL DOWN TO FIRM SOIL AND REPLACE WITH TYPE A BACKFILL.

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TITLE

PIPE BEDDING AND
CLEANOUTS

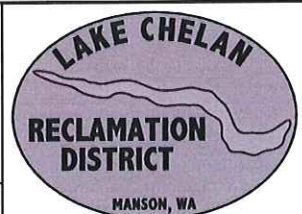
STANDARD SEWER DETAIL

SHEET

8 OF SET

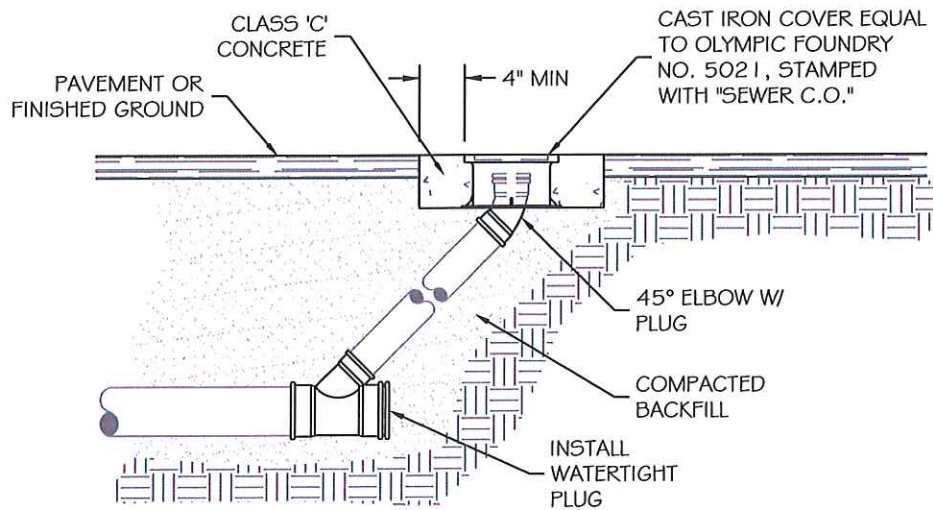
DWG SCALE

NO SCALE

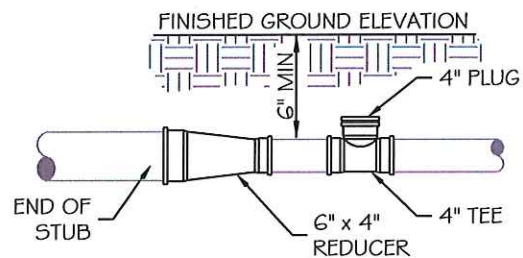


DRAWN BY RJA

03.29.06 SewerDetailPipe bedding and cleanouts.dwg (RFV F)



CLEANOUT



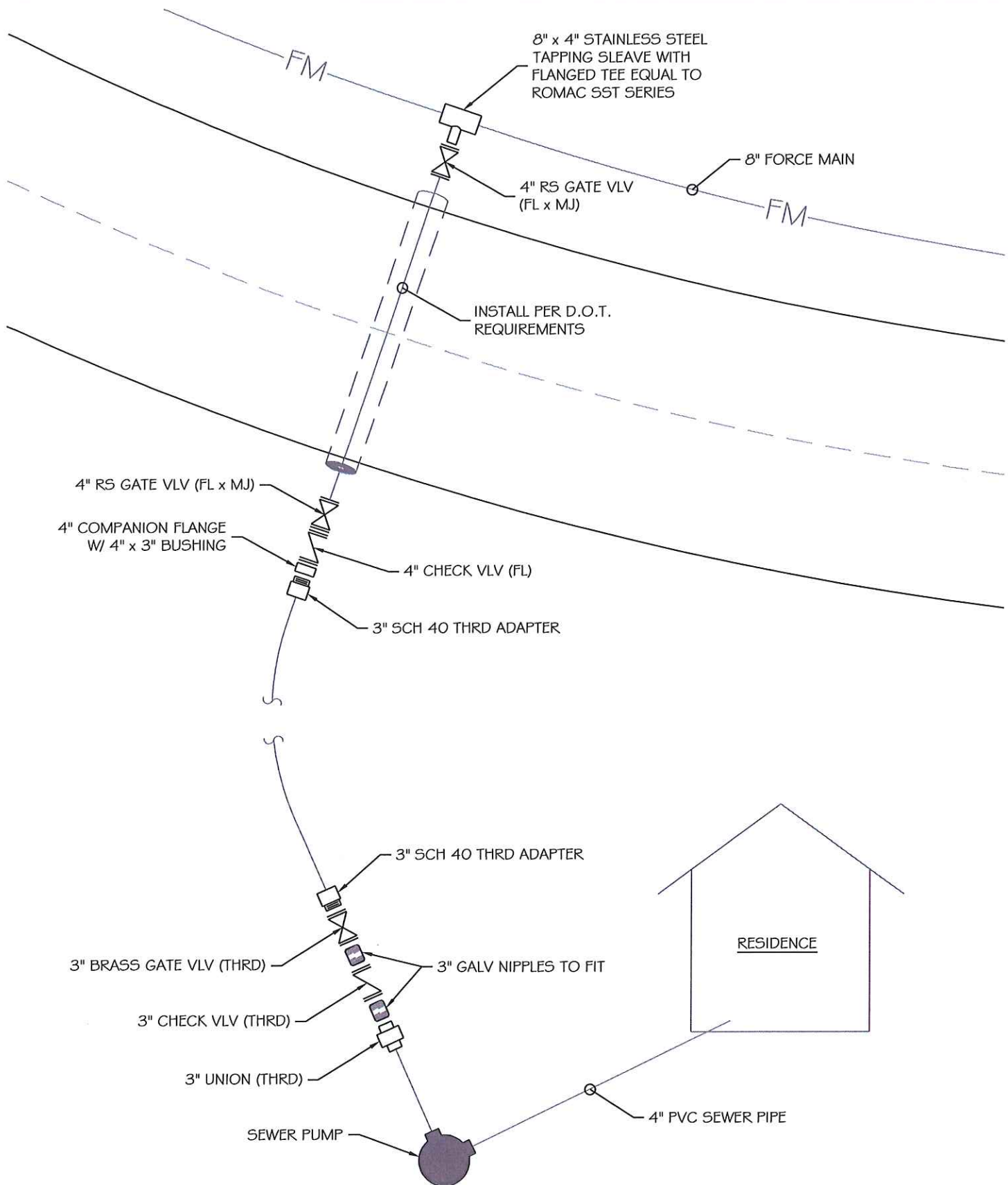
TESTING TEE

NOTES:
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TITLE	
CLEANOUT AND TESTING TEE	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
9 OF SET	NO SCALE



DRAWN BY R1A



NOTES:
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ALL 3" PIPE AND FITTINGS MAY BE SUBSTITUTED WITH 2" IF A GRINDER PUMP IS TO BE USED.

TITLE FORCEMAIN SEWER CONNECTION I

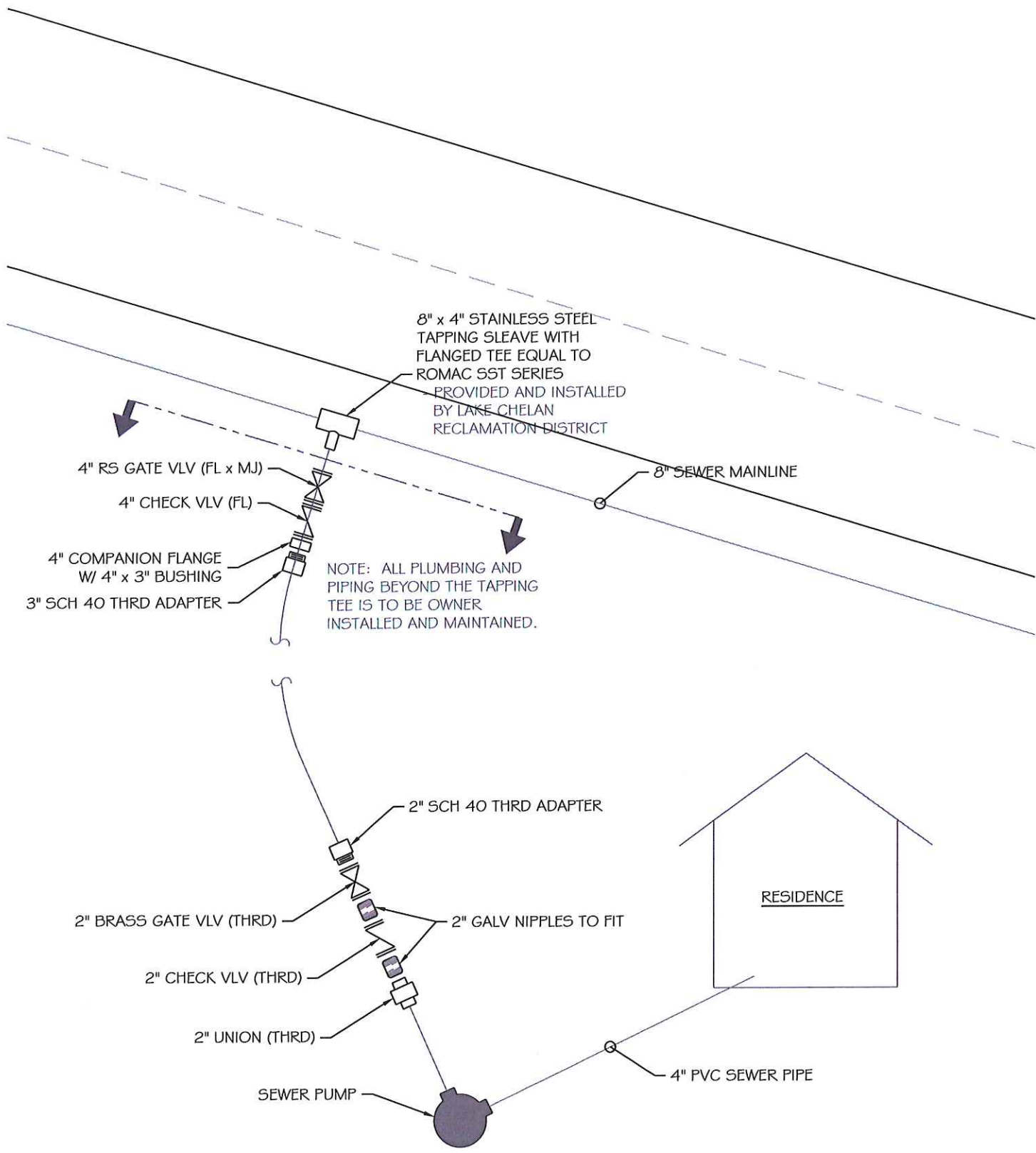
STANDARD SEWER DETAIL

SHEET
10 OF SET

DWG SCALE
NO SCALE

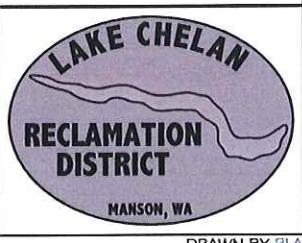


DRAWN BY R1 A



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TITLE FORCEMAIN SEWER CONNECTION II	
STANDARD SEWER DETAIL	
SHEET 11 OF SET	DWG SCALE NO SCALE

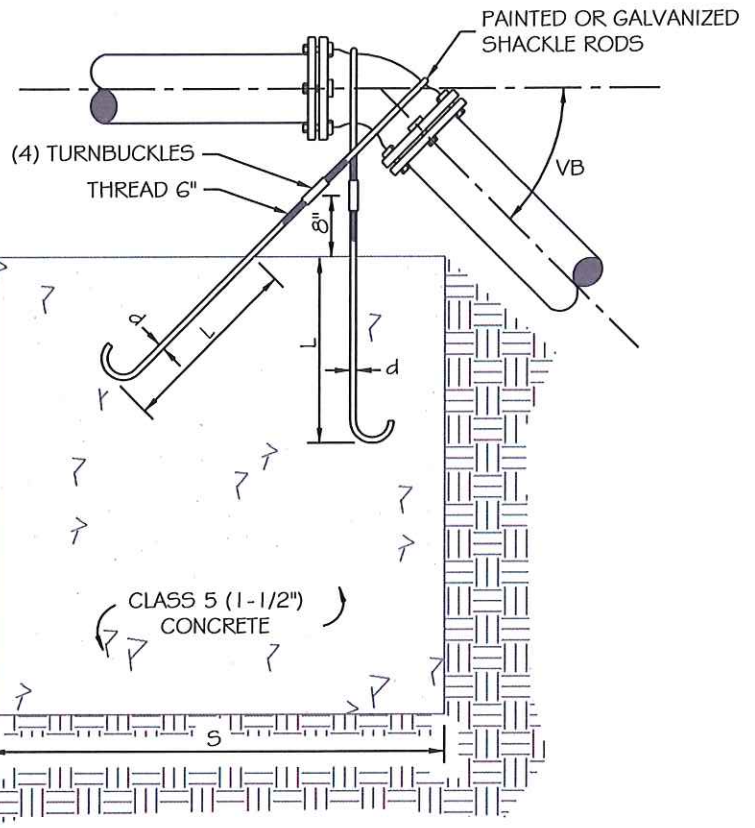


DRAWN BY R1A

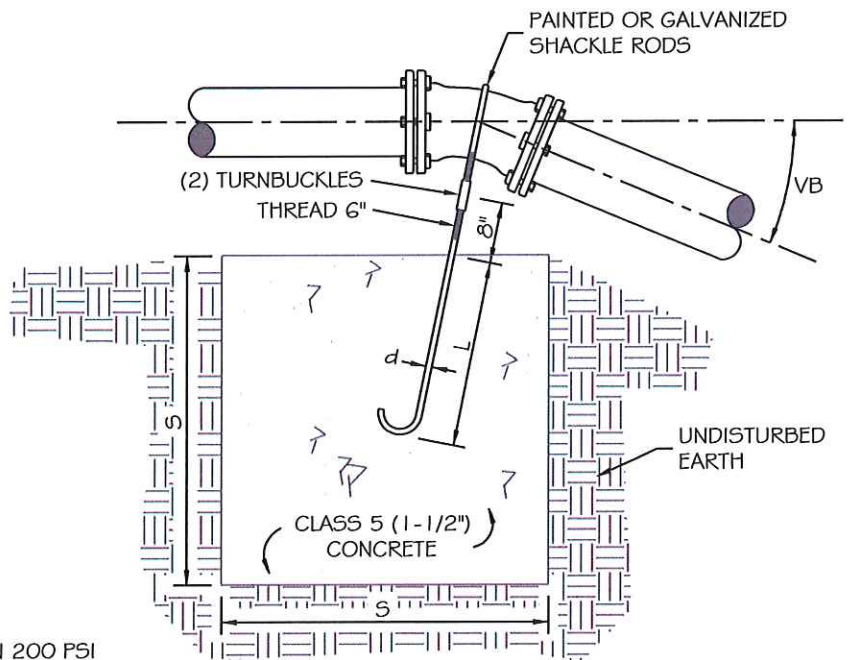
03.28.06 SewerDetailLakeChelan sewer connection - alt 1.dwg (RFV R)

VERTICAL BLOCKING
FOR 11-1/4°, 22-1/2°, 45° BENDS

PIPE SIZE	VB	CU FT	S	d	L
4"	11-1/4°	8	2.0'	3/4"	1.5'
	22-1/2°	11	2.2'	3/4"	2.0'
	45°	30	3.1'	3/4"	2.0'
6"	11-1/4°	11	2.2'	3/4"	2.0'
	22-1/2°	25	2.9'	3/4"	2.0'
	45°	68	4.1'	3/4"	2.5'
8"	11-1/4°	16	2.5'	3/4"	2.0'
	22-1/2°	47	3.6'	3/4"	2.0'
	45°	123	5.0'	3/4"	2.0'
12"	11-1/4°	32	3.2'	3/4"	3.0'
	22-1/2°	88	4.5'	7/8"	3.0'
	45°	232	6.1'	3/4"	2.5'
16"	11-1/4°	70	4.1'	7/8"	3.0'
	22-1/2°	184	5.7'	1-1/8"	4.0'
	45°	478	7.8'	1-1/8"	4.0'
20"	11-1/4°	91	4.5'	7/8"	3.0'
	22-1/2°	225	6.1'	1-1/4"	4.0'
	45°	560	8.2'	1-1/4"	4.0'
24"	11-1/4°	128	5.0'	1"	3.5'
	22-1/2°	320	6.8'	1-3/8"	5.5'
	45°	820	9.4'	1-3/8"	4.5'



TYPE B BLOCKING - FOR
45° BENDS



TYPE A BLOCKING - FOR
11-1/4°, 22-1/2° BENDS

NOTES:

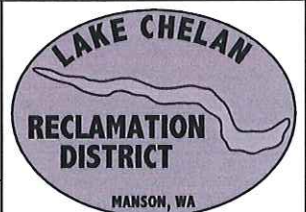
BEARING AREA OF CONCRETE THRUST-BLOCK BASED ON 200 PSI MAINLINE PRESSURE AND SAFE SOIL BEARING LOAD OF 2,500 POUNDS PER SQUARE FOOT.

AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.

CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATION PRESSURE UNDER ALL CONDITIONS OF SERVICE.

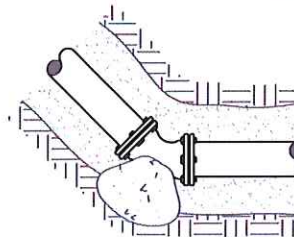
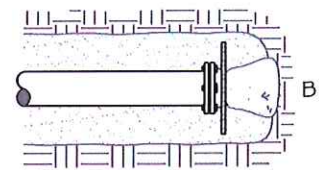
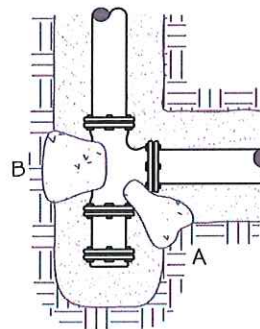
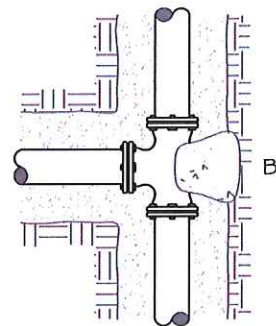
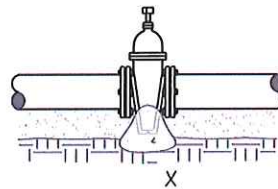
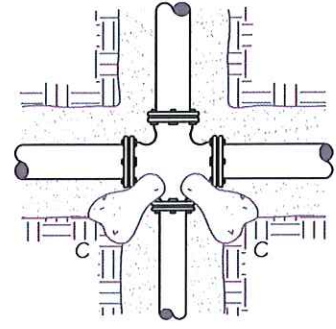
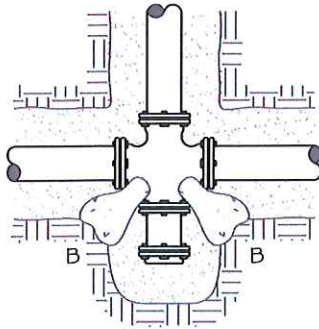
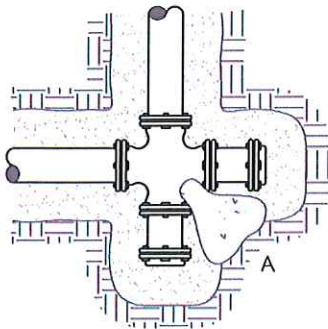
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TITLE	
CONCRETE BLOCKING FOR VERTICAL BENDS	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
12 OF SET	NO SCALE



DRAWN BY R1A

04.09.01 SewerDetailConcreteBlockingForVerticalBends.dwg (REV A)



A FOR 90° BEND
C FOR 45° BEND
D FOR 22-1/2° BEND
E FOR 11-1/4° BEND

THRUST BLOCK TABLE
MIN. BEARING AREA AGAINST UNDISTURBED SOIL
(FT²)

PIPE SIZE	A	B	C	D	E	X
4"	3	1	1	1	1	NONE
6"	4	4	2	1	1	NONE
8"	7	6	4	2	1	4
10"	11	10	6	3	2	6
12"	16	14	9	5	3	9
14"	22	19	12	6	3	12
16"	29	25	16	8	4	16
18"	36	31	20	10	5	20
20"	45	39	24	13	6	24
22"	54	47	29	15	8	29
24"	64	56	35	18	9	35
28"	87	76	48	24	12	48
30"	101	87	55	28	14	55
36"	145	125	78	40	20	78
42"	197	171	107	55	27	107
48"	257	223	140	71	36	140

NOTES:

BEARING AREA OF CONCRETE THRUST-BLOCK BASED ON 200 PSI PRESSURE AND SAFE SOIL BEARING LOAD OF 2,000 POUNDS PER SQUARE FOOT.

AREAS MUST BE ADJUSTED FOR OTHER PIPE SIZES, PRESSURES AND SOIL CONDITIONS.

CONCRETE BLOCKING SHALL BE CAST IN PLACE AND HAVE A MINIMUM OF 1/4 SQUARE FOOT BEARING AGAINST THE FITTING.

BLOCK SHALL BEAR AGAINST FITTINGS ONLY AND SHALL BE CLEAR OF JOINTS TO PERMIT TAKING UP OR DISMANTLING OF JOINT.

CONTRACTOR SHALL INSTALL BLOCKING ADEQUATE TO WITHSTAND FULL TEST PRESSURE AS WELL AS TO CONTINUOUSLY WITHSTAND OPERATION PRESSURE UNDER ALL CONDITIONS OF SERVICE.

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TITLE

CONCRETE
BLOCKING

STANDARD SEWER DETAIL

SHEET
13 OF SET

DWG SCALE
NO SCALE



DRAWN BY R1A

04.09.01 15sewerDetailConcreteBlocking.dwg (REV A)

ALUMINUM ACCESS HATCH, 4'-0"W x 5'-0"L WITH SPRING ASSISTED DOUBLE LEAF H-20 LOAD RATED DOORS THAT LOCK IN THE VERTICAL POSITION, PROVIDE REMOVABLE SAFETY CHAINS, LADDER RUNGS ON UNDERSIDE OF DOOR WITH PIN LOCK, RECESSED LOCKING HASP COVERED WITH HINGED LID, 1-1/2"Ø FRAME.
DRAIN ROUTED TO SUMP.
IF VAULT IS WITHIN TRAVELED ROADWAY, PROVIDE (2) 30"Ø MANHOLE COVERS IN LIEU OF HATCH.

ALUMINUM ACCESS LADDER WITH 3/4"Ø LADDER RUNGS AT 12" O.C., 2"x1/2" STRINGERS, AND SUPPORTS AT TOP AND BASE

ADJUSTABLE PIPE SUPPORT, AQUAL TO STANDON PIPE SUPPORT MODEL S-89 WITH 2-1/2"Ø STEEL PIPE, LENGTH TO FIT

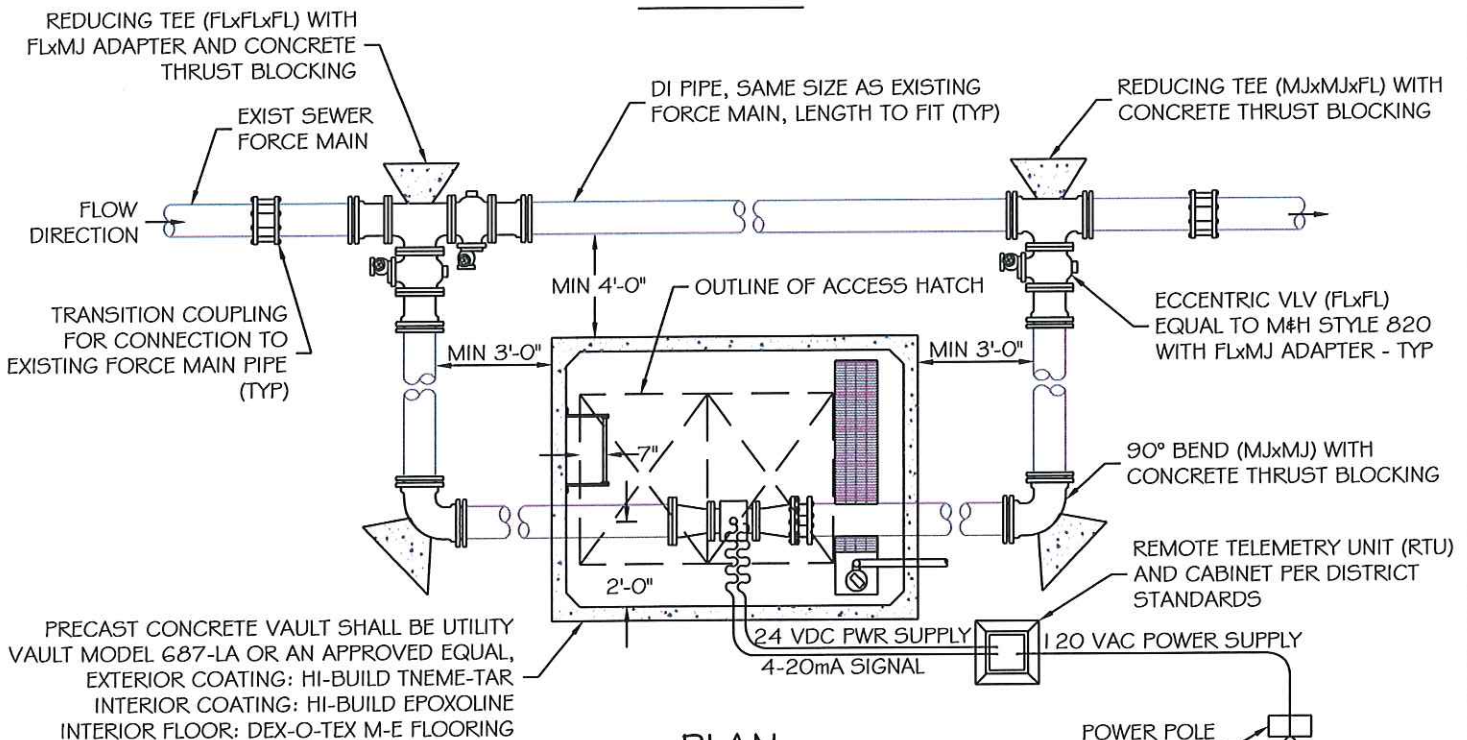
ELECTROMAGNETIC FLOW METER (FLxFL) WITH TRANSMITTER AND REMOTE INDICATOR, SPARKING TIGERMAG MODEL 655 OR APPROVED EQUAL, REDUCE FORCE MAIN SIZE AT METER AS SHOWN

ROTATE BEND AND DEFLECT PIPE AS NECESSARY TO KEEP TOP OF METER ELEVATION BELOW INVERT OF FORCE MAIN

SUMP PUMP IF REQUIRED, PROVIDE ISOLATION VALVE AND (2) SWING CHECKS ON DISCHARGE PIPE

MIN 6" COMPACTED CRUSHED ROCK ON FIRM SUBGRADE

PROFILE



PLAN

FLOW RATE RANGE (gpm)	MAG-METER DIA. (inches)
25-175	3
50-300	4
125-700	6
250-1250	8
* IF FLOW RATE IS NOT WITHIN RANGES SHOWN, CONSULT ENGINEER	

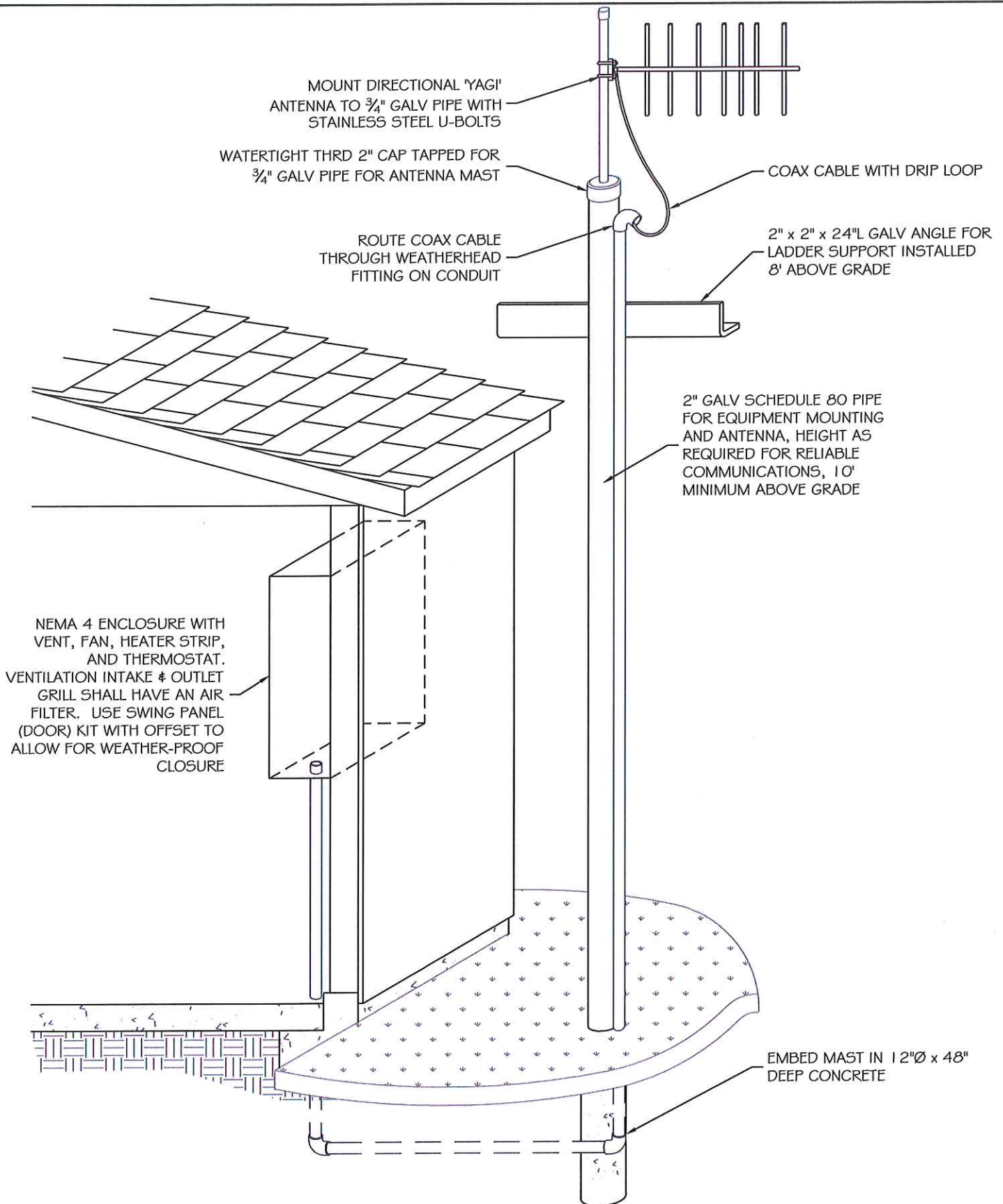
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TITLE	
FLOW METER VAULT	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
14 OF SET	NO SCALE



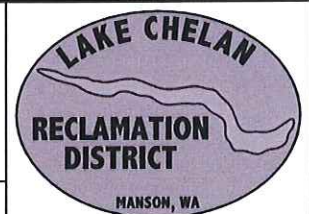
DRAWN BY RIA

01.15.02 SewerDetailFlow meter vault.dwg (RFV A)



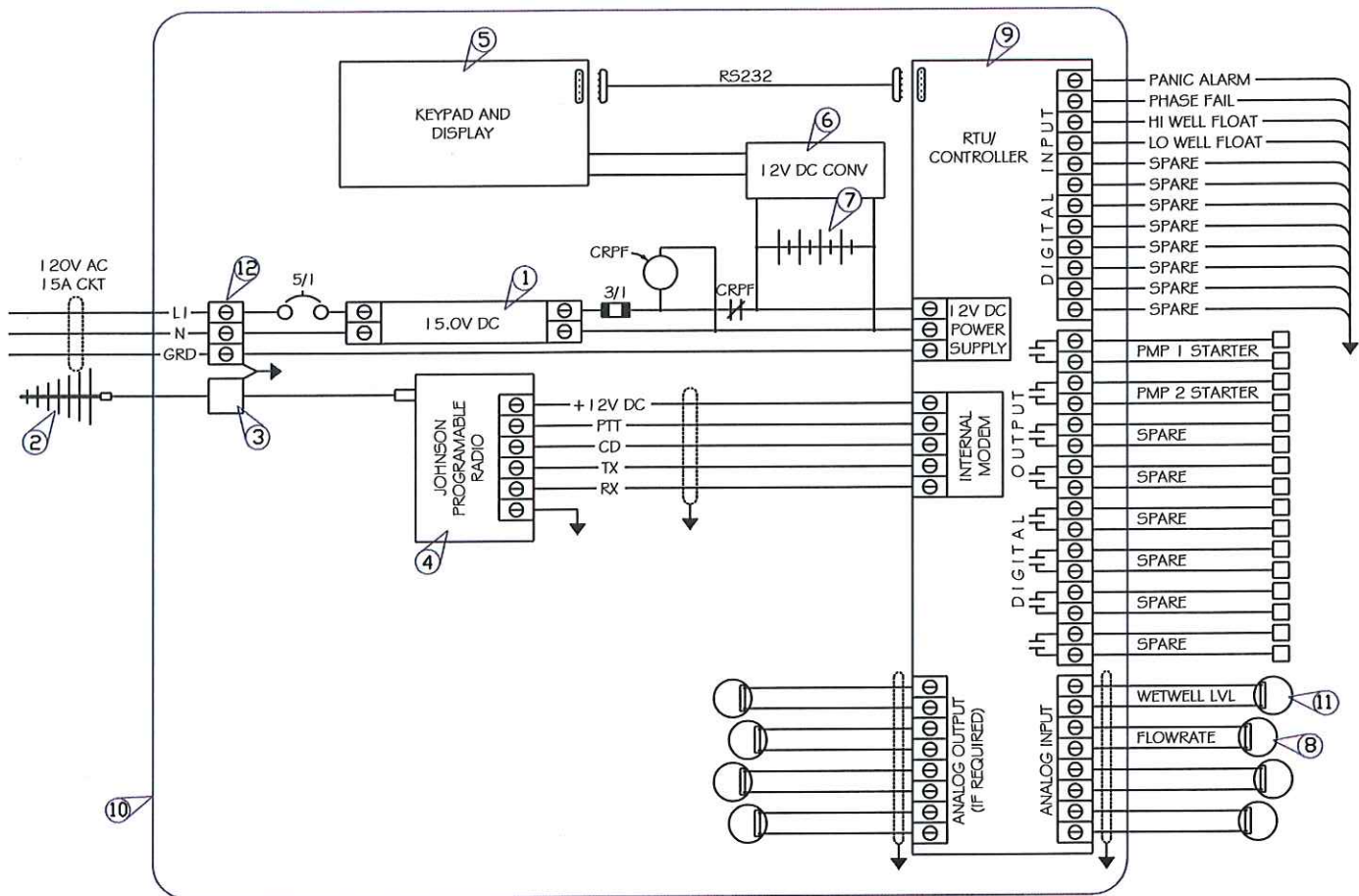
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TITLE	
TELEMETRY EQUIPMENT	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
15 OF SET	NO SCALE



DRAWN BY RIA

05.29.02 G:\water\details\telemetry\equipment.dwg (RFV A)



- ① 15V REGULATED POWER SUPPLY EQUAL TO 'POWER ONE' MODEL HN28-3-A.
- ② YAGI ANTENNA EQUAL TO 'LARSEN' YA-2, WITH DRIP LOOP AND MAST.
- ③ LINE PROTECTION UNIT - 'POLYPHASE' MODEL B50LNC-2 (BULKHEAD MOUNT).
- ④ R/F TRANSCEIVER EQUAL TO EF JOHNSON PROGRAMMABLE RADIO MODEL DL 3472, TWO CHANNEL, FREQUENCIES 453.1875 & 458.1875.

NOTES:

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POSITION ENCLOSURE FACING NORTHERLY DIRECTION AND PROVIDE EITHER AN EXTERIOR SUN SHIELD OR INTERIOR FAN UNIT TO VENTILATE.

COMPLETE PANEL SHALL BE UL-913 APPROVED.

WETWELL LEVEL TRANSDUCER AND FLOATS SHALL BE CONNECTED WITH INTRINSICALLY SAFE RELAY BARRIERS.

ALL WIRES BETWEEN PANEL-MOUNTED EQUIPMENT AND OTHER FIELD EQUIPMENT SHALL BE TERMINATED AT TERMINAL BLOCKS.

ALL FIELD WIRE CONNECTING INSTRUMENTATION LOCATED IN THE FIELD TO THE RTU SHALL HAVE A LINE PROTECTION UNIT EQUAL TO 'MCG' MODEL DLP-20-25VZ.

OPERATOR INTERFACE DEVICES (SWITCHES, LIGHTS, BUTTONS, ETC.) ARE NOT SHOWN ON RTU DETAIL. SEE LOGIC DIAGRAM FOR REQUIRED DEVICES. OPERATOR INTERFACE DEVICES SHALL BE MOUNTED ON THE SWING PANEL.

- ⑤ FRONT PANEL OPERATOR INTERFACE WITH KEYPAD AND LCD DISPLAY. PART OF 'RUGID' RUG-9 UNIT - MOUNT TO SWING PANEL.
- ⑥ 12V REGULATED POWER SUPPLY EQUAL TO 'CDI' MODEL 512524, 12V DC OUTPUT.
- ⑦ SEALED BATTERY, 12V DC NOMINAL, SERIES CONNECTED, EQUAL TO MAGNUM CFM 12V6.2L.
- ⑧ ELECTRO-MAGNETIC FLOWMETER EQUAL TO FOXBORO, RANGE 0 TO _____ GPM, _____ DIA PIPE.
- ⑨ REMOTE TELEMETRY UNIT (RTU) EQUAL TO 'RUGID', RUG-9, MODBUS COMPATIBLE - I/O AS SHOWN.
- ⑩ NEMA 4X GASKETED ENCLOSURE 'HOFFMAN' SIZE 24L x 24W x 21D W/ BACK PANEL (SHOWN) SIZE 21" x 21" WHITE ENAMEL FINISH, ENCLOSURE HEATER, COOLING FAN.
- ⑪ WETWELL LEVEL TRANSMITTER EQUAL TO 'CONSOLIDATED' A-1200, RANGE: _____.
- ⑫ SURGE SUPPRESSOR - 'EFI ELECTRONICS CORP.' MODEL HWM 120.

TITLE

LIFT STATION RTU DETAIL

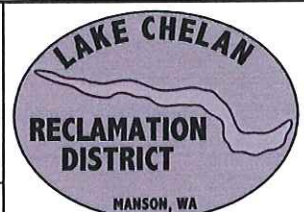
STANDARD SEWER DETAIL

SHEET

16 OF SET

DWG SCALE

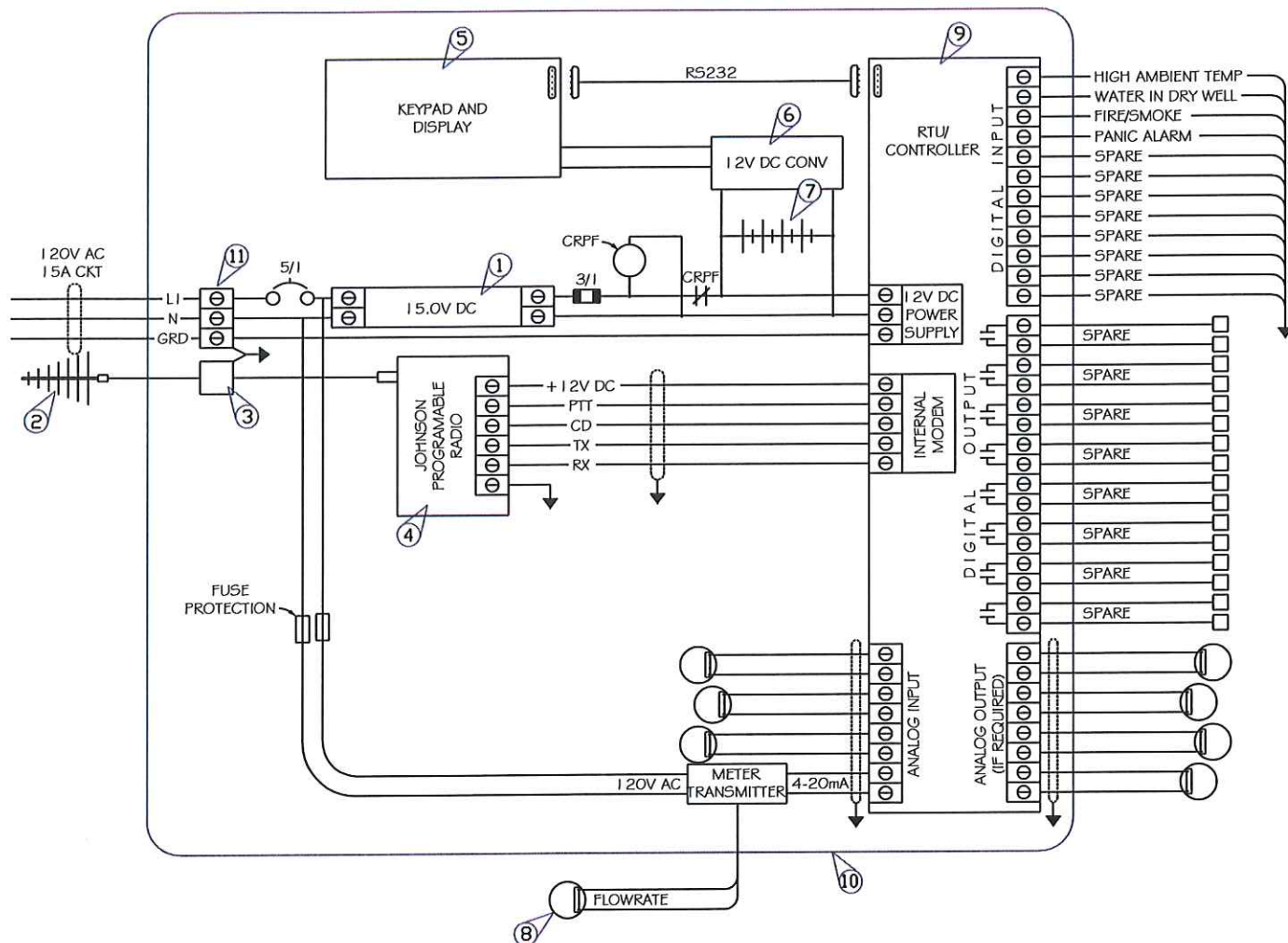
NO SCALE



DRAWN BY R1A

SewerDetailLiftStation.rvt detail.dwg (REV A)

05.29.02



① 15V REGULATED POWER SUPPLY EQUAL TO 'POWER ONE' MODEL HN28-3-A.

② YAGI ANTENNA EQUAL TO 'LARSEN' YA-2, WITH DRIP LOOP AND MAST.

③ LINE PROTECTION UNIT EQUAL TO 'POLYPHASE' MODEL B50LNC-2 (BULKHEAD MOUNT).

④ R/F TRANSCEIVER EQUAL TO EF JOHNSON PROGRAMMABLE RADIO MODEL DL 3472, TWO CHANNEL, FREQUENCIES 453.1875 & 458.1875.

⑤ FRONT PANEL OPERATOR INTERFACE WITH KEYPAD AND LCD DISPLAY - PART OF 'RUGID' RUG-9 UNIT MOUNTED ON SWING PANEL.

⑥ 12V REGULATED POWER SUPPLY EQUAL TO 'CDI' MODEL 512524, 12V DC OUTPUT.

⑦ SEALED BATTERY, 12V DC NOMINAL, SERIES CONNECTED, EQUAL TO MAGNUM CFM12V6.2L.

⑧ ELECTRO-MAGNETIC FLOWMETER EQUAL TO FOXBORO, RANGE 0 TO _____ GPM, _____ DIA PIPE.

⑨ REMOTE TELEMETRY UNIT (RTU) EQUAL TO 'RUGID', RUG-9, MODBUS COMPATIBLE - I/O AS SHOWN.

⑩ NEMA 4X GASKETED ENCLOSURE 'HOFFMAN' SIZE 24L x 24W x 21D W/ BACK PANEL (SHOWN) SIZE 21" x 21" WHITE ENAMEL FINISH, ENCLOSURE HEATER, COOLING FAN.

⑪ SURGE SUPPRESSOR - 'EFI ELECTRONICS CORP.' MODEL HWM120.

NOTES:

MATERIAL SUBSTITUTIONS OR DETERMINATION OF EQUAL ARE AT THE SOLE DISCRETION OF LAKE CHELAN RECLAMATION DISTRICT.

POSITION ENCLOSURE FACING NORTHERLY DIRECTION AND PROVIDE EITHER AN EXTERIOR SUN SHIELD OR INTERIOR FAN UNIT TO VENTILATE.

COMPLETE PANEL SHALL BE UL-508 APPROVED.

ALL WIRES BETWEEN PANEL-MOUNTED EQUIPMENT AND OTHER FIELD EQUIPMENT SHALL BE TERMINATED AT TERMINAL BLOCKS.

ALL FIELD WIRE CONNECTING INSTRUMENTATION LOCATED IN THE FIELD TO THE RTU SHALL HAVE LINE PROTECTION UNIT EQUAL TO 'MCG' MODEL DLP-20-25VZ.

TITLE

FLOW STATION RTU DETAIL

STANDARD SEWER DETAIL

SHEET

17 OF SET

DWG SCALE

NO SCALE



DRAWN BY RJA

PRIMARY LEVEL CONTROLS

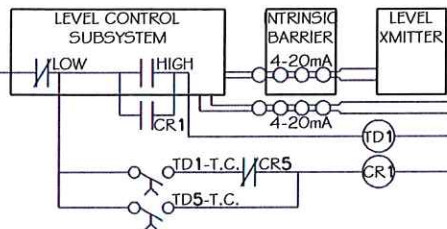
BACKUP FLOAT CONTROLS

CONTROL MODE

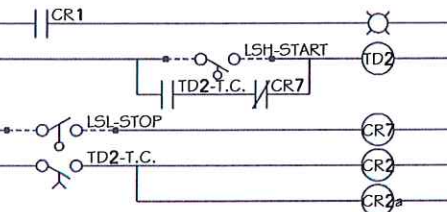
ALTERNATOR CONTROL

PUMP REQUIRE & FAIL CONTROL

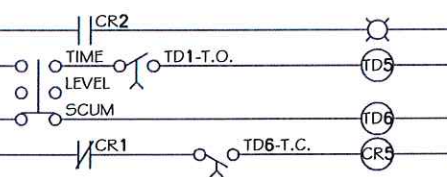
120V AC FROM DEDICATED BREAKER



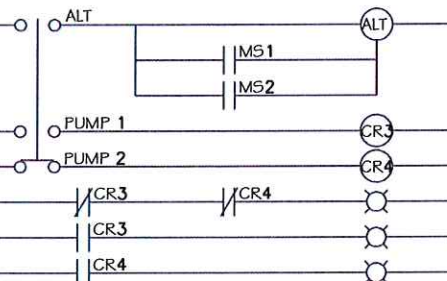
LEVEL TO DISPLAY
PUMP RUN LATCH TIMER
PUMP RUN LOCAL AUTO



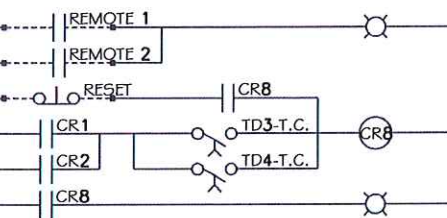
PUMP REQUIRED
EMERGENCY START FLOAT
EMERGENCY STOP FLOAT
LOCAL EMERGENCY PUMP REQ'D
REMOTE EMERGENCY PUMP REQ'D



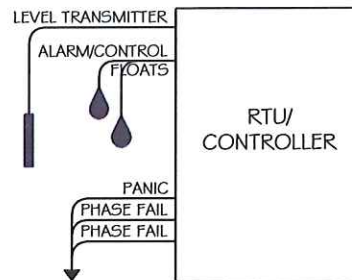
EMERGENCY PUMP REQ'D
TIME CONTROL
SCUM CONTROL REPEAT TIMER
SCUM CONTROL RELAY



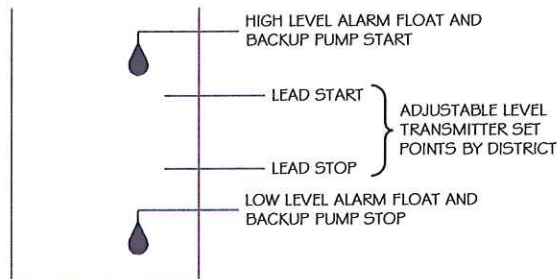
ALTERNATE PUMPS
PUMP 1 LOCKED ON
PUMP 2 LOCKED ON
ALTERNATOR ACTIVE
PUMP 1 LOCKED
PUMP 2 LOCKED



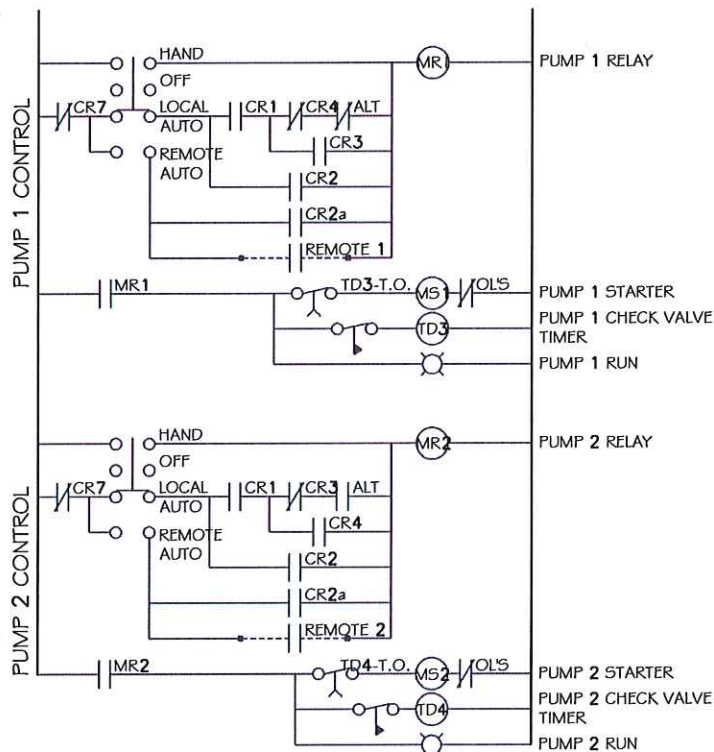
LEAD PUMP REQUEST FROM REMOTE CONTROL
PUMP FAILED RELAY
PUMP FAILED



I/O REQUIREMENTS



WET WELL LEVEL SETTINGS



LOGIC DIAGRAM

NOTES:

TITLE

TYPICAL LIFT STATION LOGIC DIAGRAM

STANDARD SEWER DETAIL

SHEET 18 OF SET

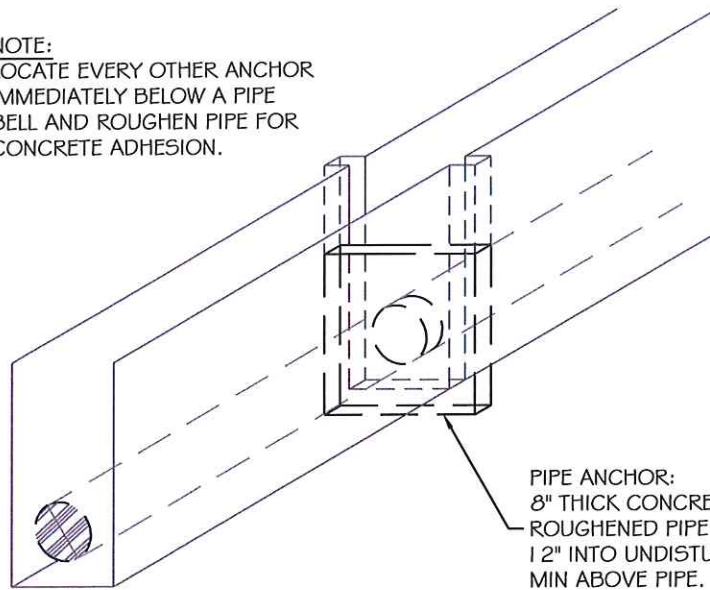
DWG SCALE NO SCALE



DRAWN BY R1A

05.28.02 SewerDetail.sht: station logic diagram.dwg (R1A)

NOTE:
LOCATE EVERY OTHER ANCHOR
IMMEDIATELY BELOW A PIPE
BELL AND ROUGHEN PIPE FOR
CONCRETE ADHESION.

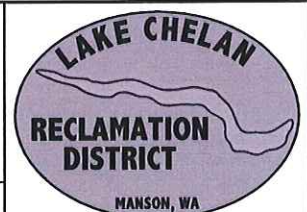


PIPE ANCHOR:
8" THICK CONCRETE FORMED AROUND
ROUGHENED PIPE AND EMBEDDED MIN
12" INTO UNDISTURBED SOIL WITH 12"
MIN ABOVE PIPE.

PIPE ANCHOR

NOTES:
MATERIAL SUBSTITUTIONS OR DETERMINATION OF EQUAL ARE AT
THE SOLE DISCRETION OF LAKE CHELAN RECLAMATION DISTRICT.

TITLE	
PIPE ANCHOR	
STANDARD SEWER DETAIL	
SHEET	DWG SCALE
19 OF SET	NO SCALE



DRAWN BY R1 A

09.12.02 SewerDetail\pipe_anchor.dwg (REV A)