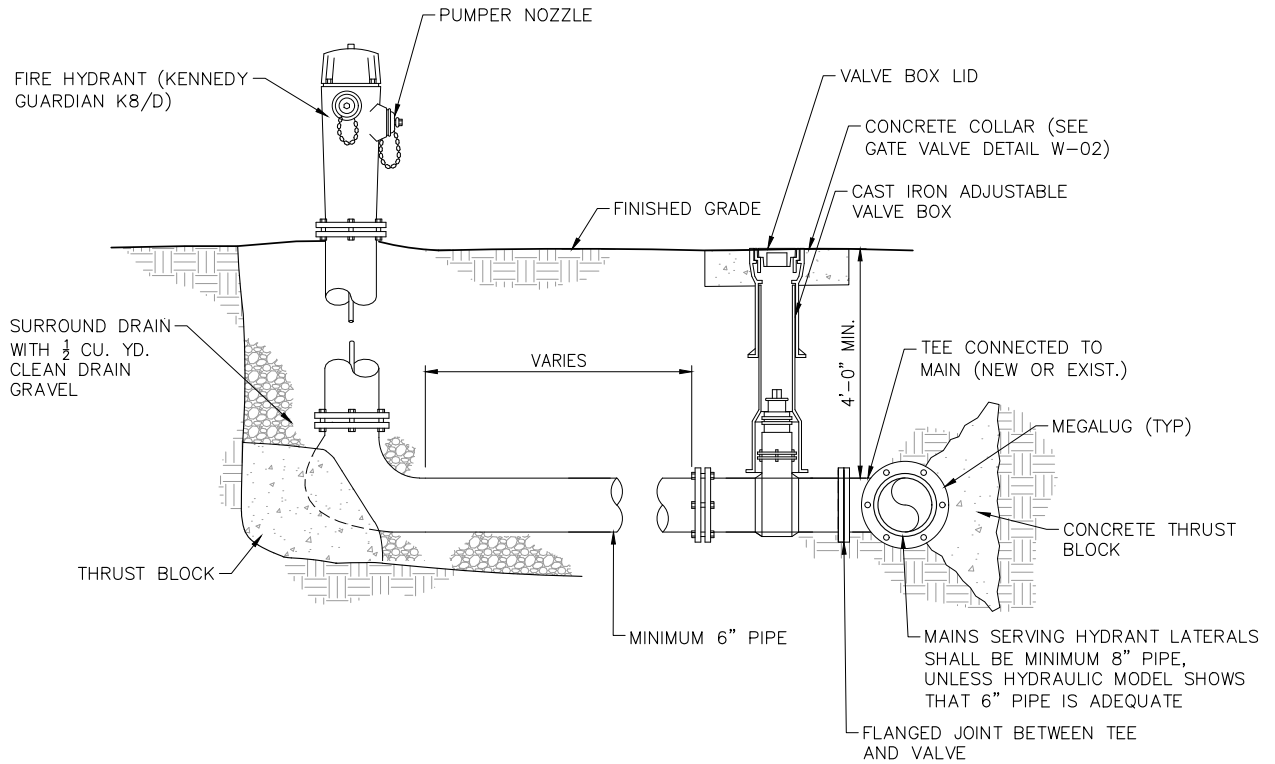


P:\Fillmore City\Standard Drawings April 2020.dwg Sep 06, 2022 4:56pm mitchell.heap



NOTES:

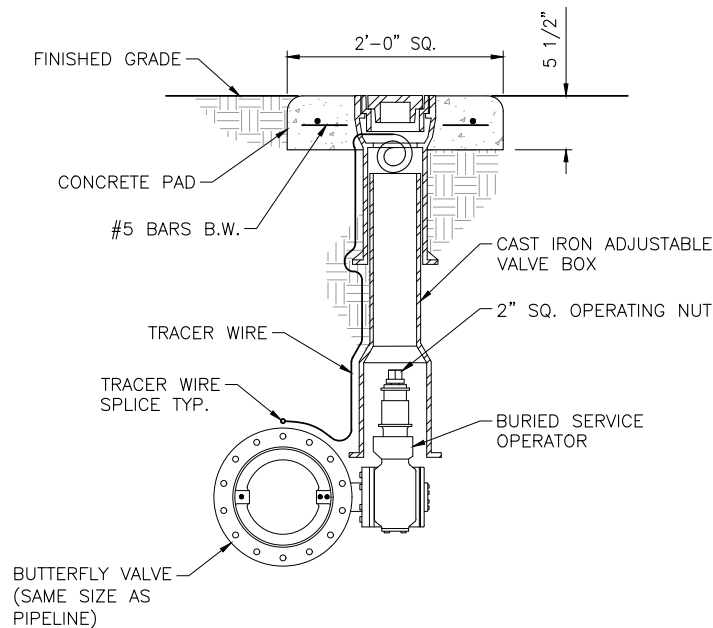
1. FIRE HYDRANT BREAKAWAY FLANGE SHALL BE NO GREATER THAN 5in. ABOVE FINISHED GRADE OR 1in. BELOW FINISHED GRADE
2. PIPE, JOINTS, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL CONFORM TO ANSI/NSF STANDARD 61 AND APPLICABLE SECTIONS OF AWWA STANDARDS.
3. HYDRANT DRAINS SHALL NOT BE LOCATED WITHIN 10 FEET OF SANITARY SEWERS.
4. ALL NEW MAINS SHALL BE DIP SPECIAL CLASS 50 PIPE UNLESS OTHERWISE APPROVED.
5. HYDRANTS SHALL BE FURNISHED WITH A 5 1/4-INCH VALVE OPENING.
6. HYDRANTS SHALL BE FURNISHED WITH ONE 4 1/2-INCH PUMPER CONNECTION AND TWO 2 1/2-INCH HOSE CONNECTIONS

DETAIL - FIRE HYDRANT

N.T.S.

REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	FILLMORE CITY					
				STANDARD DETAILS 2022					
				WATER - FIRE HYDRANT					
				DATE 08/2022	DESIGNED DS	DRAWN MH	CHECKED RW	SHEET NO. 1	W-01

REV. NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	FILLMORE CITY STANDARD DETAILS 2022 WATER - GATE VALVE					
				DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	W-02
				08/2022	DS	MH	RW	2	



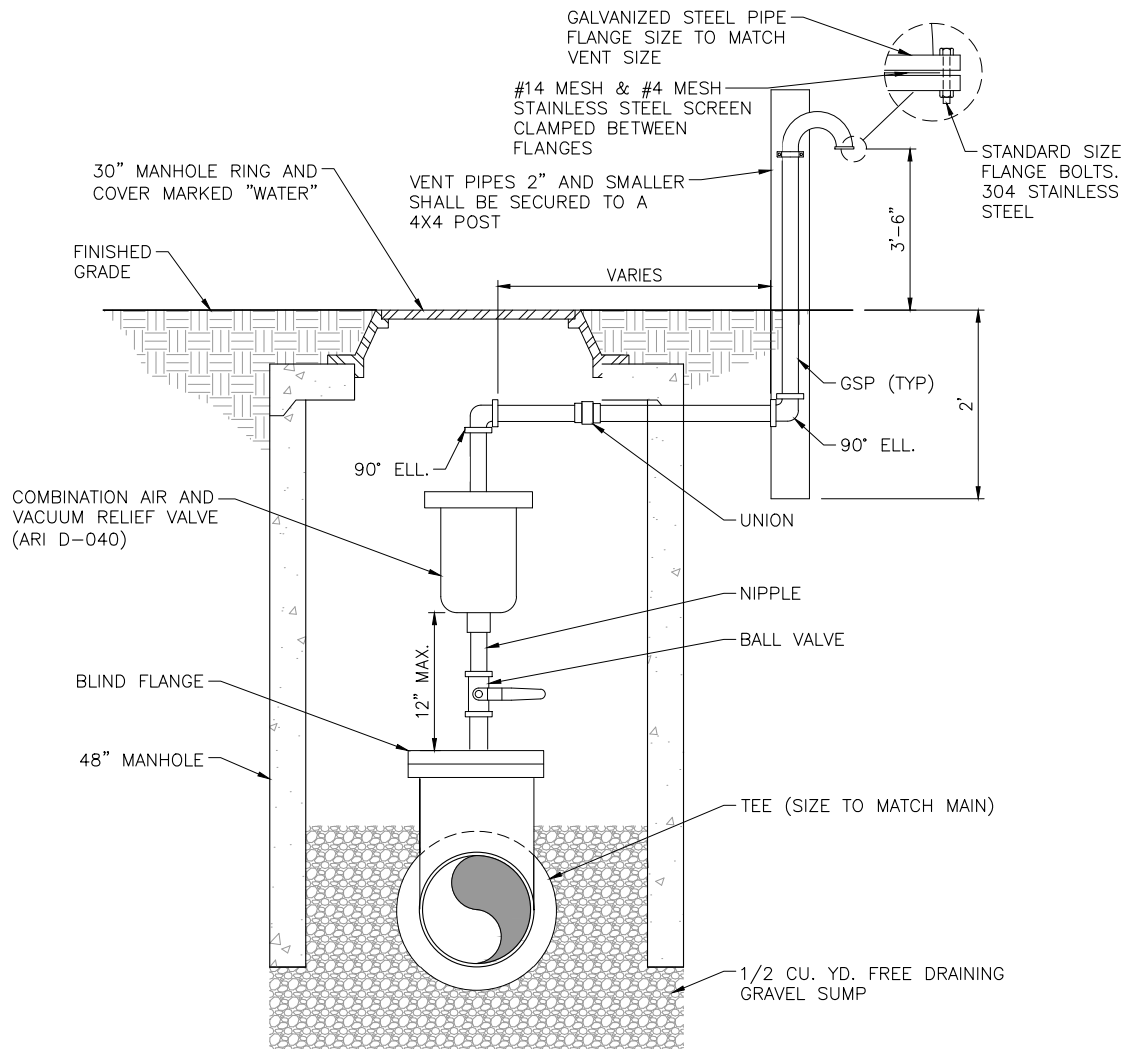
NOTES:

1. ALL VALVES SHALL BE RESTRAINED ACCORDING TO DETAILS W-06 AND W-07 AND SHALL BE TREATED AS A DEAD END IN BOTH DIRECTIONS.
2. PIPE, JOINTS, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL CONFORM TO ANSI/NSF STANDARD 61 AND AND APPLICABLE SECTIONS OF AWWA STANDARDS.
3. FOR VALVES OVER 48\"
4. TRACER WIRE SHALL BE BROUGHT INTO THE VALVE BOX THROUGH HOLE AT BELL. COIL 12\"
5. VALVES SMALLER THAN 16\"
6. ALL NEW MAINS SHALL BE DIP SPECIAL CLASS 50 PIPE UNLESS OTHERWISE APPROVED.

DETAIL - BURIED BUTTERFLY VALVE

N.T.S.

REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING				FILLMORE CITY			
							STANDARD DETAILS			
			25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com				2022			
							WATER - BUTTERFLY VALVE			
			DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	W-03		
			08/2022	DS	MH	RW	3			



NOTES:

1. COMBINATION AIR VALVES SHALL BE NO LESS THAN 1/8" THE SIZE OF THE MAIN.
2. PIPE, JOINTS, FITTINGS, VALVES, AND FIRE HYDRANTS SHALL CONFORM TO ANSI/NSF STANDARD 61 AND APPLICABLE SECTIONS OF AWWA STANDARDS.
3. ALL PIPE FITTINGS SHALL BE GALVANIZED STEEL 300lb. CLASS THREADED.
4. ALL AIR VALVE COMPONENT CONNECTING NIPPLES SHALL BE GSP SCHEDULE 40.
5. ALL PIPE PENETRATIONS SHALL BE SEALED WITH PORTLAND CEMENT GROUT.
6. PIPE NIPPLES, FITTINGS, GOOSENECK, & BALL VALVE SHALL BE SIZED TO MATCH SIZE OF AIR VALVE.
7. ALL NEW MAINS SHALL BE DIP SPECIAL CLASS 50 PIPE UNLESS OTHERWISE APPROVED.

DETAIL - COMBINATION AIR VALVE

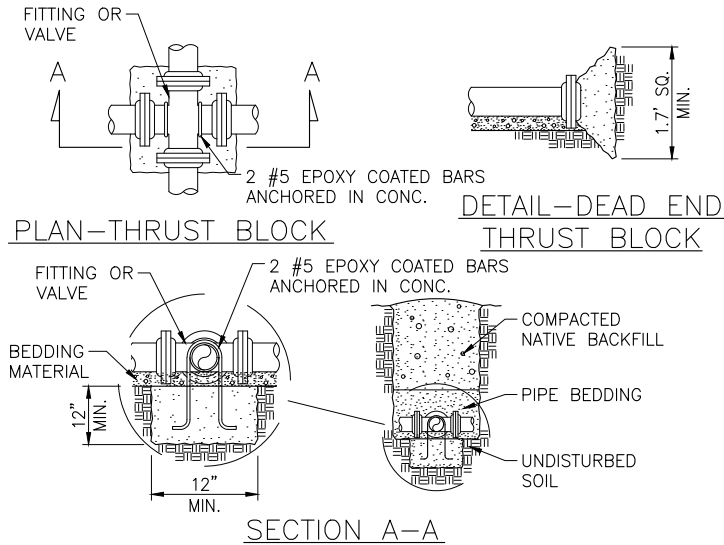
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REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING				FILLMORE CITY			
							STANDARD DETAILS			
			25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com				2022			
							WATER - COMBINATION AIR VALVE			
			DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	W-04		
			08/2022	DS	MH	RW	4			

REV. NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	FILLMORE CITY STANDARD DETAILS 2022 WATER - NEW WATER SERVICE CONNECTION					
				DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	W-05
				08/2022	DS	MH	RW	5	

CONCRETE THRUST BLOCK RESTRAINING SYSTEM DETAILS

NOTE:
CONTRACTOR SHALL USE EITHER MECHANICAL
RESTRAINTS OR CONCRETE THRUST RESTRAINING
SYSTEM FOR WATERLINE INSTALLATION.



THRUST BLOCK BEARING AREA IN SQ. FT.									
PIPE SIZE	CROSS	TEE	WYE	DEAD END	VALVE	90° BEND	45° BEND	22.5° BEND	11.25° BEND
4	2.4	1.7	1.7	1.7	—	2.4	1.3	1.0	1.0
6	5.4	3.8	3.8	3.8	—	5.4	2.9	1.5	1.0
8	9.6	6.8	6.8	6.8	—	9.6	5.2	2.7	1.4
10	15.0	10.6	10.6	10.6	—	15.0	8.1	4.2	2.1
12	21.5	15.2	15.2	15.2	15.2	21.5	11.7	6.0	3.0
14	29.3	20.7	20.7	20.7	20.7	29.3	15.9	8.1	4.1
16	38.2	27.0	27.0	27.0	27.0	38.2	20.7	10.6	5.3
18	48.4	34.2	34.2	34.2	34.2	48.4	26.2	13.4	6.7
20	59.7	42.2	42.2	42.2	42.2	59.7	32.3	16.5	8.3
24	85.9	60.8	60.8	60.8	60.8	85.9	46.5	23.7	11.9
REDUCER									
D1 \ D2	6	8	10	12	14	16	18	20	24
4	2.1	5.1	8.8	13.4	—	—	—	—	—
6	—	3.0	6.7	11.3	16.8	23.1	—	—	—
8	—	—	3.8	8.4	13.8	20.1	27.2	—	—
10	—	—	—	4.6	10.1	16.3	23.5	31.4	—
12	—	—	—	—	5.5	11.7	18.8	26.8	45.2
14	—	—	—	—	—	6.3	13.4	21.3	39.8
16	—	—	—	—	—	—	7.1	15.1	33.5
18	—	—	—	—	—	—	—	8.0	26.3
20	—	—	—	—	—	—	—	—	18.4

NOTES:

1. ALL THRUST BLOCK BEARING FACES SHALL BE PLACED AGAINST UNDIS-
TURBED SOIL OR APPROVED COMPACTED BACKFILL.
2. SQUARE ALL EDGES TO RECEIVE CONCRETE.
3. CONCRETE SHALL BE CLASS C.
4. CALCULATED ON 200 PSI TEST PRESSURE AND ALLOWABLE BEARING
PRESSURE OF 1500 LBS. PER SQ. FT.
5. IN POORER SOILS SPECIAL DESIGN IS REQUIRED.
6. ALL FITTINGS AND VALVES SHALL BE ANCHORED WITH TWO EPOXY COATED
#5 REBAR. ONLY ONE REQ'D FOR REDUCER
7. CENTER ALL FITTINGS OVER THRUST BLOCKS.

REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	FILLMORE CITY					
				STANDARD DETAILS 2022					
				WATER - CONCRETE THRUST BLOCKS					
				DATE 08/2022	DESIGNED DS	DRAWN MH	CHECKED RW	SHEET NO. 6	W-06

MECHANICAL

THRUST RESTRAINING SYSTEM DETAILS

* CALCULATIONS DERIVED FROM EBAA IRON SALES

DIP VERTICLE BEND RESTRAINED LENGTHS IN FT. (L ₁ , BEFORE CONNECTION/L ₂ —AFTER CONNECTION)										
BEND ANGLE	PIPE SIZE									
	4	6	8	10	12	14	16	18	20	24
11.25	2/1	4/2	5/2	6/2	7/3	8/3	8/4	9/4	10/4	12/5
22.5	5/2	7/3	9/4	11/5	13/6	15/6	17/7	19/8	21/9	24/10
45	11/5	15/6	20/8	23/10	28/12	32/13	36/15	40/17	43/18	51/21

CALCULATIONS BASED ON THE ELEVATION OF THE PIPE REMAINING CONSTANT WITH THE CONTOUR OF THE GROUND.

DIP HORIZONTAL BEND RESTRAINED LENGTHS L, IN FT.										
BEND ANGLE	PIPE SIZE									
	4	6	8	10	12	14	16	18	20	24
11.25	1	2	2	2	3	3	4	4	4	5
22.5	2	3	4	5	6	6	7	8	9	10
45	5	6	8	10	12	13	15	17	18	21
90	11	15	20	24	28	32	36	40	44	51

1. ALL JOINTS WITHIN THE "L" DISTANCE SHALL BE RESTRAINED

DIP TEE RESTRAINED LENGTHS L, IN FT.										
BRANCH SIZE DIA.	RUN SIZE DIAMETER									
	4	6	8	10	12	14	16	18	20	24
4	*	*	*	*	*	*	*	*	*	*
6	—	*	*	*	*	*	*	*	*	*
8	—	—	*	*	*	*	*	*	*	*
10	—	—	—	*	*	*	*	*	*	*
12	—	—	—	—	*	*	*	*	*	*
14	—	—	—	—	—	*	*	*	*	*
16	—	—	—	—	—	—	12	2	*	*
18	—	—	—	—	—	—	—	21	12	*
20	—	—	—	—	—	—	—	—	30	12
24	—	—	—	—	—	—	—	—	—	47

* = FOR THIS CONDITION NEED ONLY RESTRAIN THE OUTLETS OF TEE
NOTES:

1. RESTRAIN THE THREE MECHANICAL JOINTS ON THE TEE.
2. ALL JOINTS WITHIN THE "L" DISTANCE ON THE BRANCH SIDE OF TEE SHALL BE RESTRAINED AND ALL JOINTS WITHIN 18' ON THE RUN SIDE OF THE TEE SHALL BE RESTRAINED.

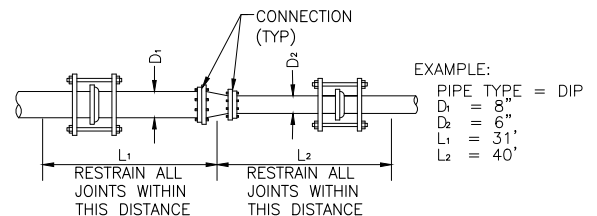
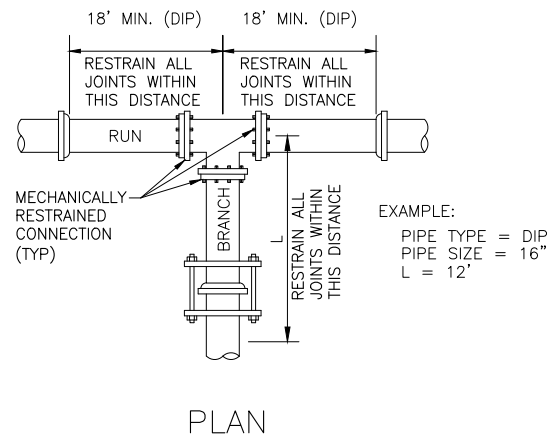
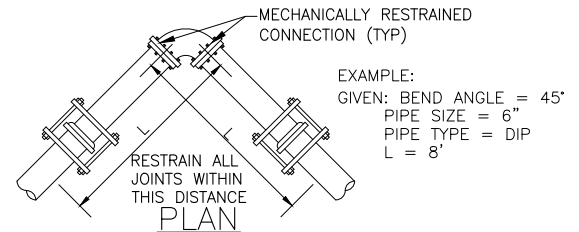
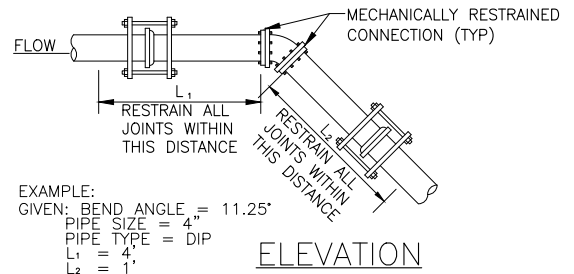
DIP REDUCER RESTRAINED LENGTHS L, IN FT. (SMALL SIDE/LARGE SIDE)										
D1 D2	6	8	10	12	14	16	18	20	24	
4	27/18	65/34	110/46	166/58	—	—	—	—	—	—
6	—	26/20	57/35	95/48	140/61	192/73	—	—	—	—
8	—	—	24/19	53/35	87/50	127/63	171/75	—	—	—
10	—	—	—	23/20	51/36	82/51	118/64	158/77	—	—
12	—	—	—	—	23/20	49/37	79/52	112/66	188/91	—
14	—	—	—	—	—	22/20	48/37	76/52	141/80	—
16	—	—	—	—	—	—	22/19	47/37	103/67	—
18	—	—	—	—	—	—	—	22/19	72/53	—
20	—	—	—	—	—	—	—	—	45/37	—

1. ALL JOINTS WITHIN THE "L" DISTANCE SHALL BE RESTRAINED

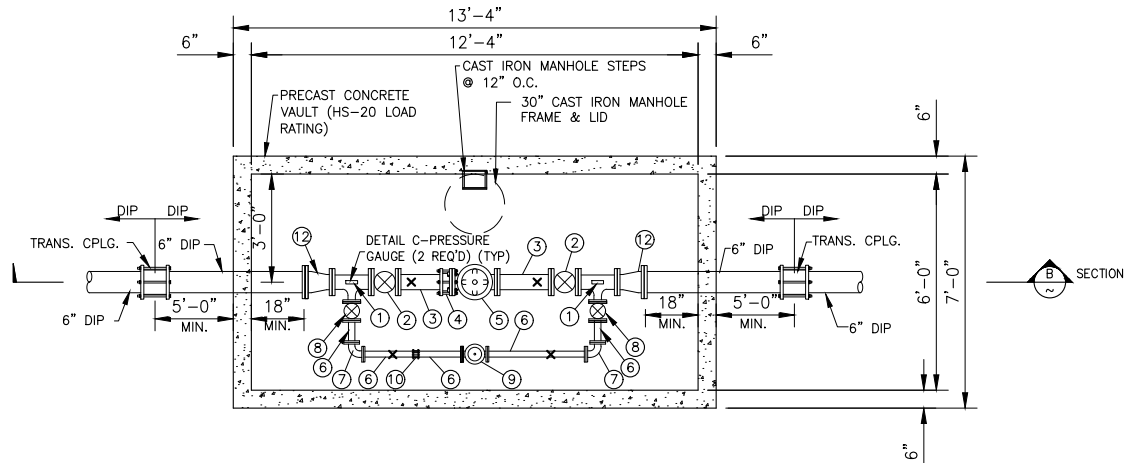
DIP DEAD END RESTRAINED LENGTHS L, IN FT.										
PIPE SIZE										
	4	6	8	10	12	14	16	18	20	24
25	36	47	57	67	76	86	95	105	123	

1. ALL JOINTS WITHIN THE "L" DISTANCE SHALL BE RESTRAINED

BASED ON:
TEST PRESSURE 200 PSI
SOIL TYPE: GM - SILTY GRAVEL, GRAVEL-SAND-SILT MIXTURE
BURIAL DEPTH: 4 FT.
TRENCH TYPE: 5 - PIPE BEDDED IN COMPACTED GRANULAR MATERIAL TO THE CENTER LINE OF PIPE, 4" MIN. UNDER PIPE.
COMPACTED GRANULAR OR SELECT MATERIAL TO TOP OF PIPE.
(APPROX. 90% STANDARD PROCTOR, AASHTO T-99)
SAFETY FACTOR: 1.5

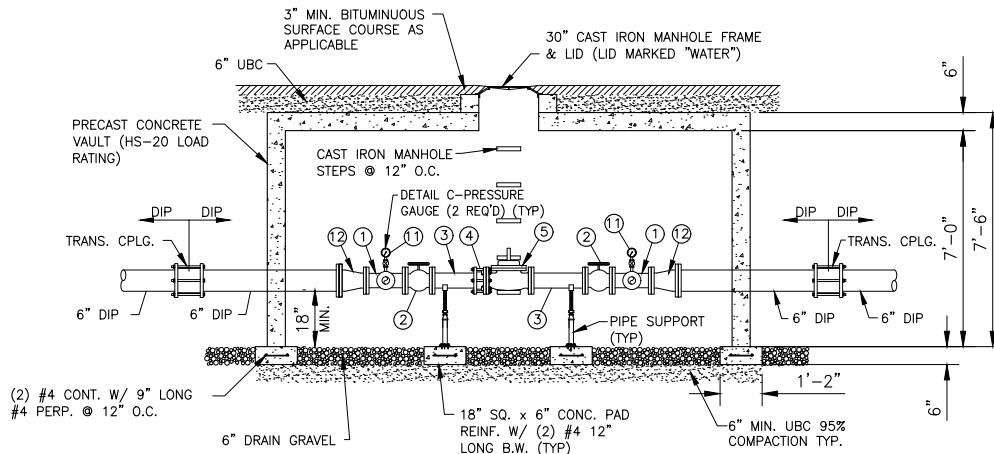


REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING		FILLMORE CITY				
					STANDARD DETAILS 2022				
			25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com		WATER - MECHANICAL RESTRAINING SYSTEM				
					DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.
					08/2022	DS	MH	RW	7
									W-07



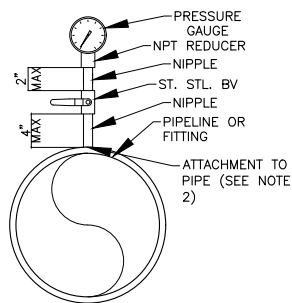
NOTE:
ALL PIPING PENETRATIONS SHALL BE
SEALED WITH PORTLAND CEMENT GROUT.

(A) PLAN - 6" PRV STATION
1/4" = 1'-0"



NOTE:
ALL PIPING PENETRATIONS SHALL BE SEALED
WITH PORTLAND CEMENT GROUT.

(B) SECTION - 6" PRV STATION
1/4" = 1'-0"



- NOTES:
1. GAUGE FACE ORIENTATION SHALL BE AS DIRECTED BY THE OWNER.
2. PIPING ATTACHMENT TO DUCTILE IRON PIPE SHALL BE BY PIPE SADDLE OR BY DIRECT THREADING INTO THE PIPE.
3. FITTINGS AND NIPPLES ARE BRASS.

(C) TYP DETAIL - PRESSURE GAUGE
N.T.S.

EQUIPMENT SCHEDULE

NUMBER	DESCRIPTION	SIZE	REMARKS
1	TEE	4"x 2"	
2	GATE VALVE	4"	
3	SPOOL	4"	2 REQ'D. 2' LONG (1 CUT INTO TWO PIECES)
4	FLNG. CPLG. ADAPTER	4"	
5	PRESSURE REDUCING VALVE	4"	CLA-VAL MODEL 90-01YBCSKC OR APPD. EQ., S.S. TUBING, FITTINGS, AND TRIM, 15-75 PSI SPRING RANGE REQ'D
6	SPOOL	2"	2 REQ'D. LENGTH AS REQ'D. (1 CUT INTO TWO PIECES)
7	90° ELL.	2"	
8	GATE VALVE	2"	
9	PRESSURE REDUCING VALVE	2"	CLA-VAL MODEL 90-01ASVKC OR APPD. EQ., S.S. TUBING, FITTINGS, AND TRIM, 15-75 PSI SPRING RANGE REQ'D
10	COUPLING	2"	
11	PRESSURE GAUGE		2 REQ'D. LIQUID FILLED (1 UPSTREAM RANGE 0-150 PSI) (1 DOWNSTREAM RANGE 0-60 PSI)
12	REDUCER	6"x 4"	
X	LOCATION OF PIPE SUPPORT		

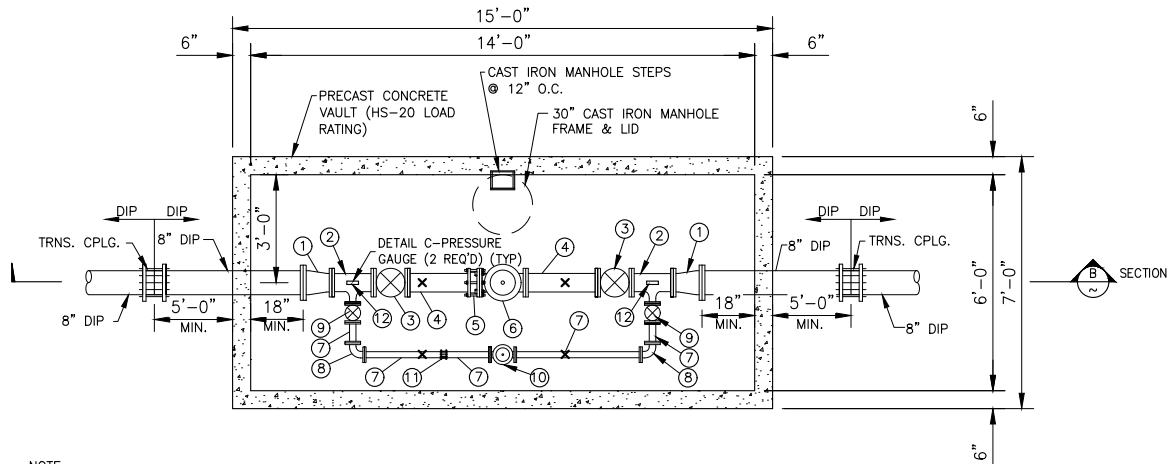
REV NO.	COMMENT	DATE



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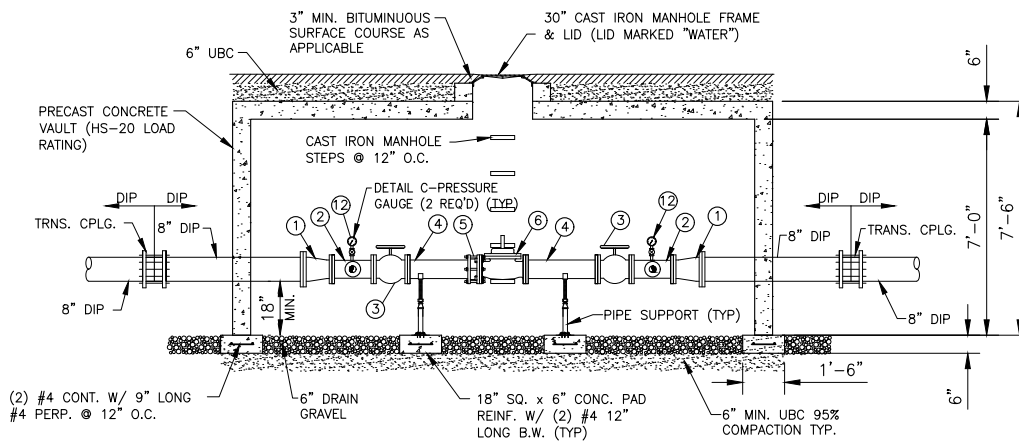
FILLMORE CITY
STANDARD DETAILS
2022
WATER - 6" PRV STATION

DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	
08/2022	DS	MH	RW	8	W-08



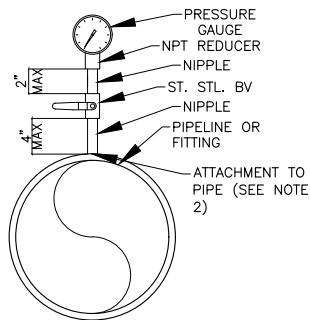
NOTE:
ALL PIPING PENETRATIONS SHALL BE
SEALED WITH PORTLAND CEMENT GROUT.

(A) PLAN - 8" PRV STATION
1/4" = 1'-0"



NOTE:
ALL PIPING PENETRATIONS SHALL BE SEALED
WITH PORTLAND CEMENT GROUT.

(B) SECTION - 8" PRV STATION
1/4" = 1'-0"



NOTES:
1. GAUGE FACE ORIENTATION SHALL BE AS DIRECTED BY
THE OWNER.
2. PIPING ATTACHMENT TO DUCTILE IRON PIPE SHALL BE
BY PIPE SADDLE OR BY DIRECT THREADING INTO THE
PIPE.
3. FITTINGS AND NIPPLES ARE BRASS.

(C) DETAIL - PRESSURE GAUGE
TYP N.T.S.

EQUIPMENT SCHEDULE

NUMBER	DESCRIPTION	SIZE	REMARKS
1	8"x6" REDUCER		
2	6"x6"x2" TEE		
3	GATE VALVE	6"	
4	SPOOL	6"	LENGTH AS REQ'D (2 REQ'D)
5	FLNG. CPLG. ADAPTER	6"	
6	PRESSURE REDUCING VALVE	6"	CLA-VAL MODEL 90-01YBCKC OR APPD. EQ., S.S. TUBING, FITTINGS, AND TRIM, 15-75 PSI SPRING RANGE REQ'D
7	SPOOL	2"	(GSP) LENGTH AS REQ'D
8	90° ELL.	2"	
9	GATE VALVE	2"	
10	PRESSURE REDUCING VALVE	2"	CLA-VAL MODEL 90-01ASVKC APPD. EQ., S.S. TUBING, FITTINGS, AND TRIM, 15-75 PSI SPRING RANGE REQ'D
11	COUPLING	2"	
12	PRESSURE GAUGE		2 REQ'D. LIQUID FILLED (1 UPSTREAM RANGE 0-150 PSI) (1 DOWNSTREAM RANGE 0-60 PSI)
X	LOCATION OF PIPE SUPPORT		

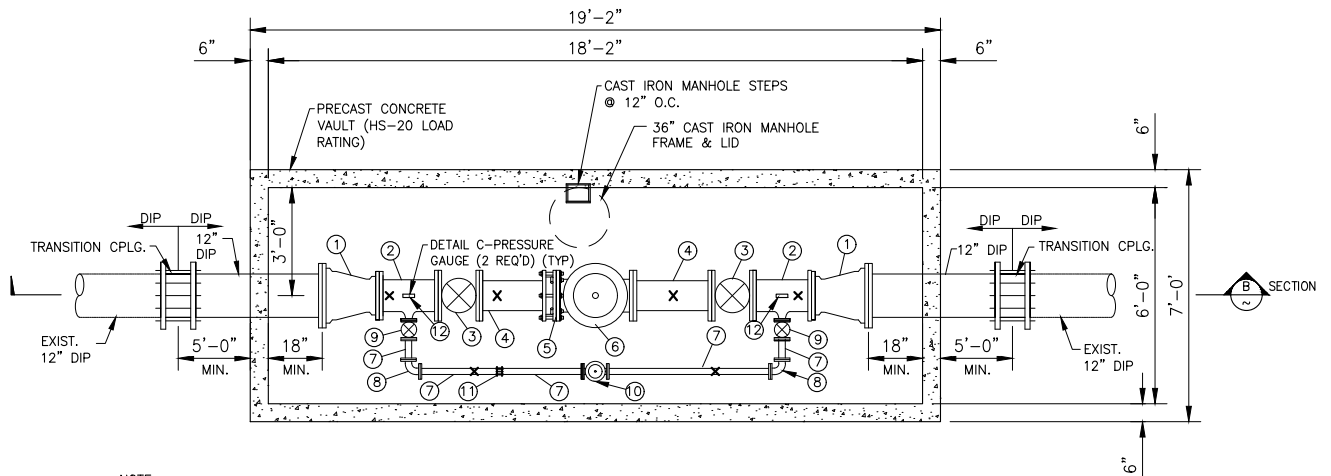
REV NO.	COMMENT	DATE



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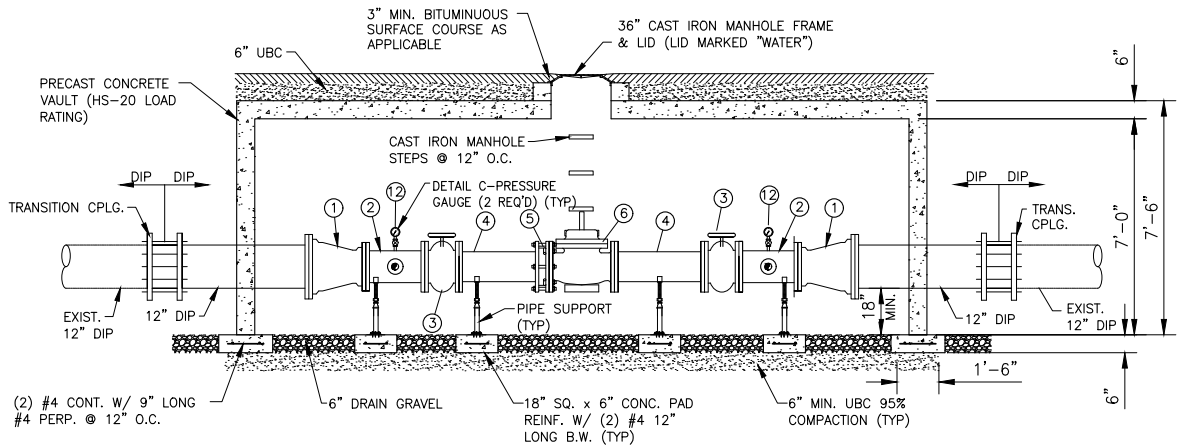
FILLMORE CITY
STANDARD DETAILS
2022
WATER - 8" PRV STATION

DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	
08/2022	DS	MH	RW	9	W-09



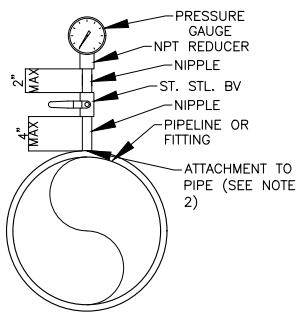
NOTE:
ALL PIPING PENETRATIONS SHALL BE
SEALED WITH PORTLAND CEMENT GROUT.

PLAN - 12" PRV STATION
1/4" = 1'-0"



NOTE:
ALL PIPING PENETRATIONS SHALL BE SEALED
WITH PORTLAND CEMENT GROUT.

SECTION - 12" PRV STATION
1/4" = 1'-0"



NOTES:
1. GAUGE FACE ORIENTATION SHALL BE AS DIRECTED BY
THE OWNER.
2. PIPING ATTACHMENT TO DUCTILE IRON PIPE SHALL BE
BY PIPE SADDLE OR BY DIRECT THREADING INTO THE
PIPE.
3. FITTINGS AND NIPPLES ARE BRASS.

DETAIL - PRESSURE GAUGE
TYP. N.T.S.

EQUIPMENT SCHEDULE

NUMBER	DESCRIPTION	SIZE	REMARKS
1	12"x 10" REDUCER	-	
2	10"x 10"x 3" TEE	-	
3	GATE VALVE	10"	
4	SPOOL	10"	LENGTH AS REQ'D (2 REQ'D)
5	RESTRAINED FLNG. CPLG. ADAPTER	10"	
6	PRESSURE REDUCING VALVE	10"	CLA-VAL MODEL 90-01YBCKC OR APPD. EQ., S.S. TUBING, FITTINGS, AND TRIM, 15-75 PSI SPRING RANGE REQ'D
7	SPOOL	3"	(GSP) LENGTH AS REQ'D
8	90° ELL.	3"	
9	GATE VALVE	3"	
10	PRESSURE REDUCING VALVE	3"	CLA-VAL MODEL 90-01ASVKC OR APPD. EQ., S.S. TUBING, FITTINGS, AND TRIM, 15-75 PSI SPRING RANGE REQ'D
11	RESTRAINED COUPLING	3"	
12	PRESSURE GAUGE	-	2 REQ'D. LIQUID FILLED (1 UPSTREAM RANGE 0-150 PSI) (1 DOWNSTREAM RANGE 0-100 PSI)
X	LOCATION OF PIPE SUPPORT	-	

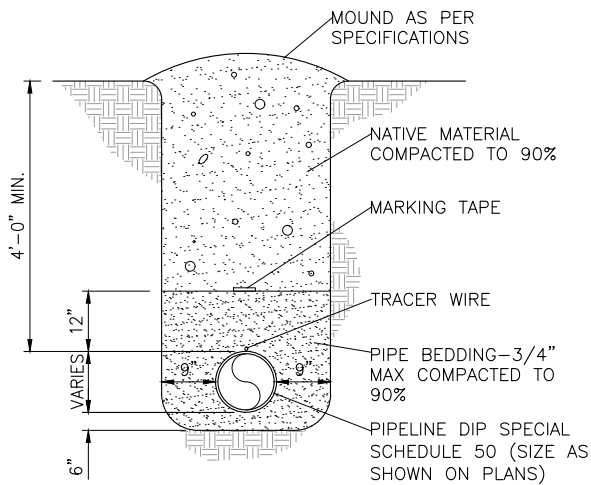
REV NO.	COMMENT	DATE



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FILLMORE CITY
STANDARD DETAILS
2022
WATER - 12" PRV STATION

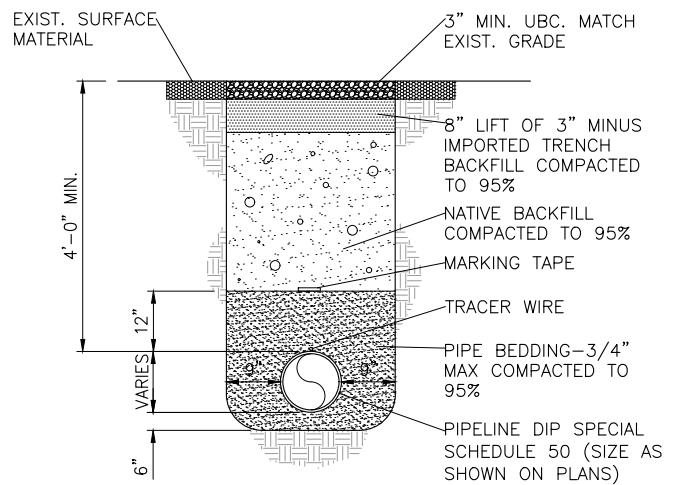
DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	
08/2022	DS	MH	RW	11	W-11



NOTE:
TRENCH DETAIL OUTSIDE OF TRAVELED ROADWAY
OR DESIGNATED ROAD RIGHT-OF-WAY.

DETAIL - TYPICAL TRENCH

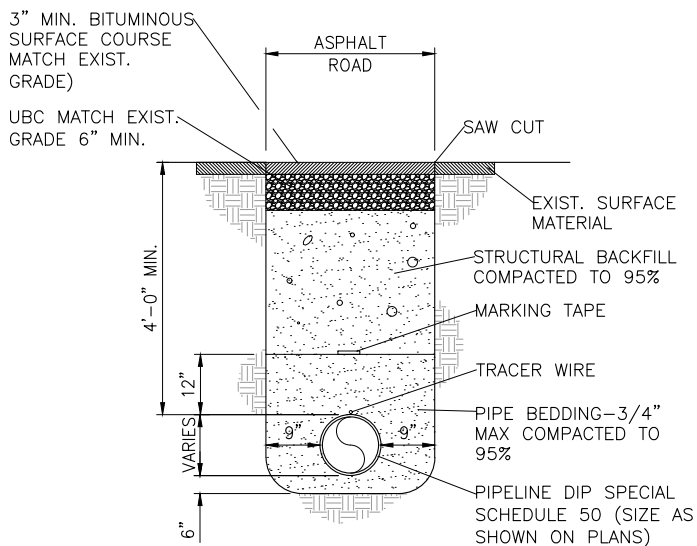
N.T.S.



NOTE:
TRENCH DETAIL INSIDE OF GRAVEL ROADWAYS.

DETAIL - UNPAVED ROADWAY TRENCH

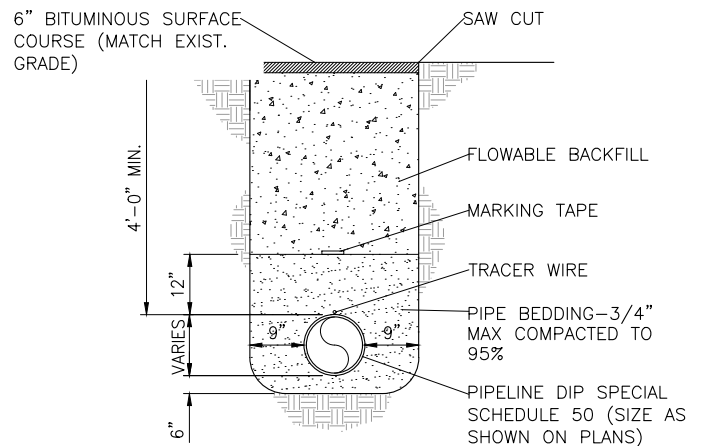
N.T.S.



- NOTES:
1. TRENCH DETAILS INSIDE OF ROADWAYS ASPHALT/GRAVEL ROADS.
 2. ASPHALT ROADS SHALL BE SAW CUT.
 3. MAX PAY WIDTH SHALL BE 5'-0".

DETAIL - PAVED ROADWAY TRENCH

N.T.S.



NOTE:
THIS SHALL BE USED WHEN COUNTY OR STATE ROAD DEPARTMENTS REQUIRE. CONTRACTOR SHALL OBTAIN PERMIT FROM UDOT OR COUNTY PRIOR TO CONSTRUCTION

DETAIL - TRENCH W/ FLOWABLE BACKFILL

N.T.S.

REV NO.	COMMENT	DATE

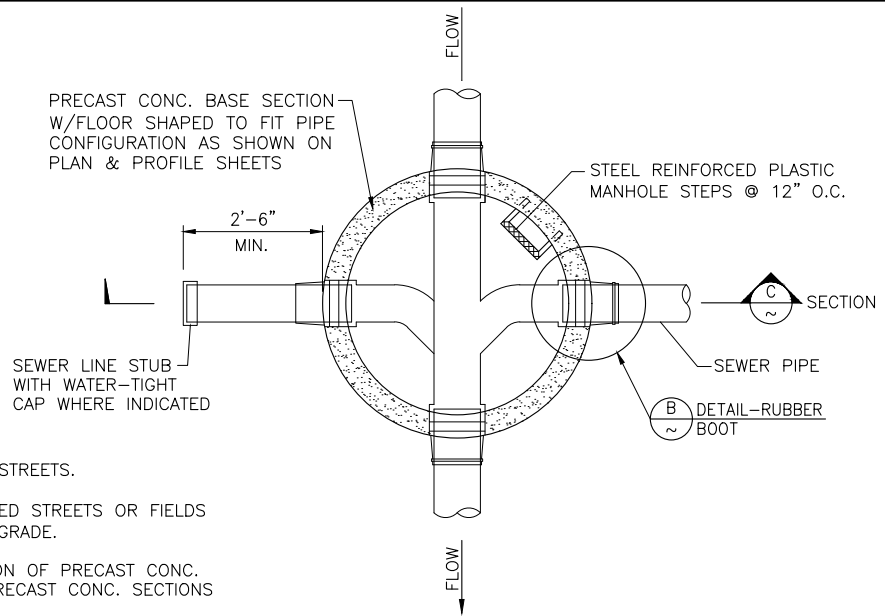


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FILLMORE CITY
STANDARD DETAILS
2022
ROADWAY - TRENCH

DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	R-01
08/2022	DS	MH	RW	12	

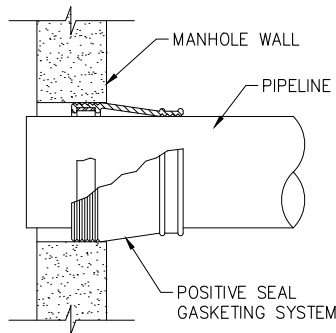
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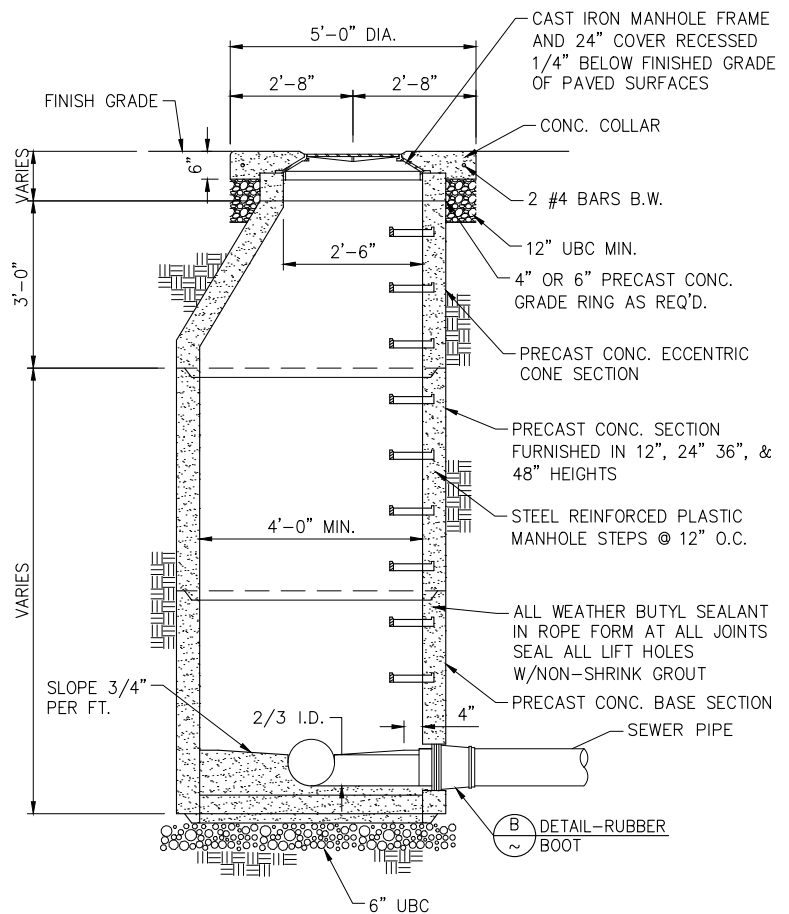
NOTES:

1. VENTED LIDS SHALL BE REQ'D. IN ALL PAVED STREETS.
2. NON-VENTED LIDS SHALL BE REQ'D. IN UNPAVED STREETS OR FIELDS WHERE RIM ELEVATION IS 6" OR LESS ABOVE GRADE.
3. WHERE FIELD CONDITIONS PROHIBIT COMBINATION OF PRECAST CONC. SECTIONS SHOWN, OTHER COMBINATIONS OF PRECAST CONC. SECTIONS MAY BE USED AS PER ENGINEER'S APPROVAL.
4. CONCRETE COLLAR REQ'D IN ASPHALT FINISH ROADS. THEY ARE NOT REQ'D. ON GRAVEL FINISH ROADS.
5. PATCH ALL MANHOLE SECTION JOINTS, OPENINGS AROUND PIPES, AND OTHER VOIDS WITH NON-SHRINK GROUT.

A PLAN - MANHOLE
TYP N.T.S.



B PLAN - RUBBER BOOT
TYP N.T.S.



C SECTION - MANHOLE
TYP N.T.S.

REV NO.	COMMENT	DATE

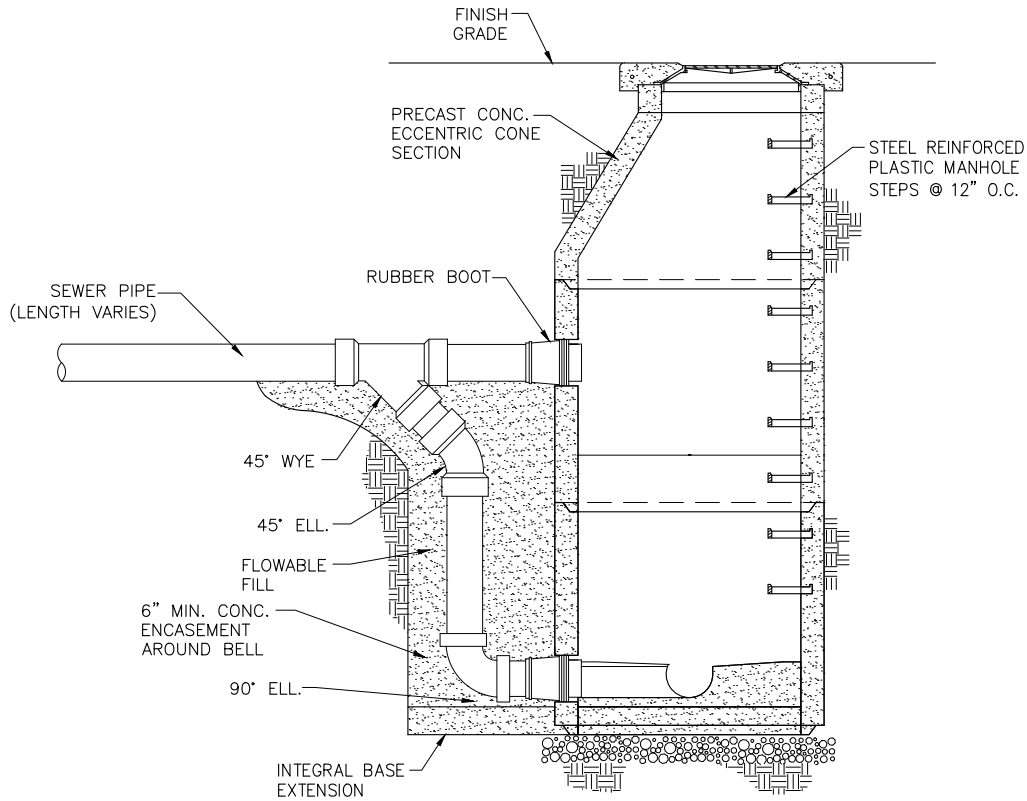


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FILLMORE CITY
STANDARD DETAILS
2022
SEWER - MANHOLE

DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	
08/2022	DS	MH	RW	13	S-01

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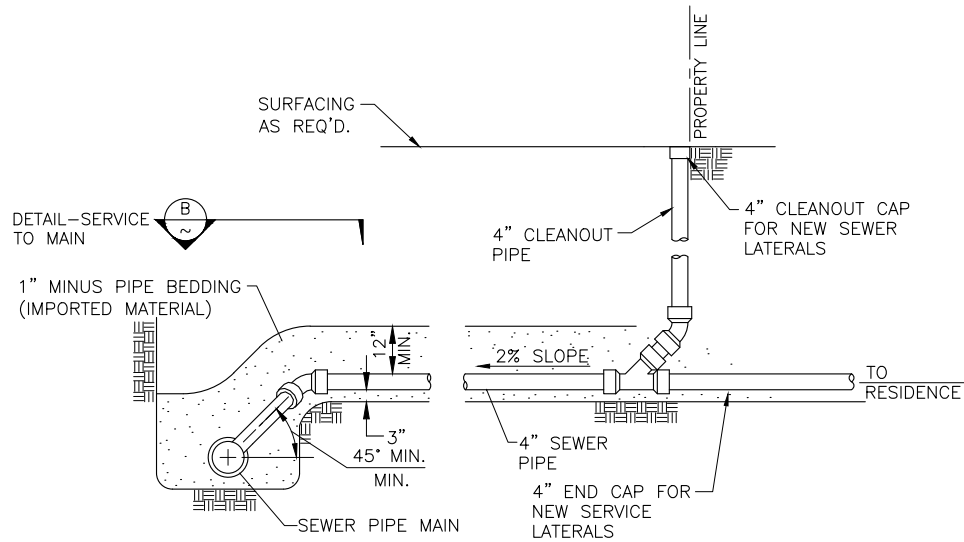


SECTION - DROP MANHOLE
N.T.S.

NOTE:
FOR DROP DISTANCES LESS THAN 24" NO DROP
MANHOLE SHALL BE USED. THE CONTRACTOR
SHALL SLOPE THE TROUGHS IN THE BASE OF
THE MANHOLE TO ACCOMMODATE THE DROP
DISTANCES.

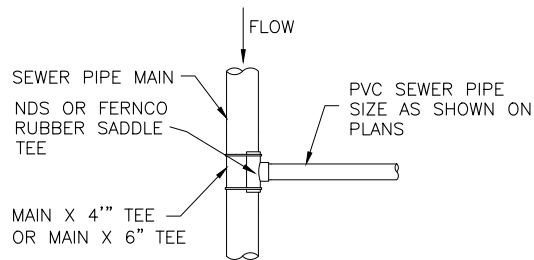
REV NO.	COMMENT	DATE	SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	FILLMORE CITY					
				STANDARD DETAILS					
				2022					
				SEWER - MANHOLE					
				DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	S-02
				08/2022	DS	MH	RW	14	

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NOTE:
SEWER LATERALS ARE GENERALLY LOCATED ON THE LOW SIDE
OF THE PROPERTY 5 FEET FROM THE LOT CENTERLINE.
BACKFLOW PREVENTER REQUIRED IF LOWEST DRAIN IS LOWER
THAN UPSTREAM MANHOLE

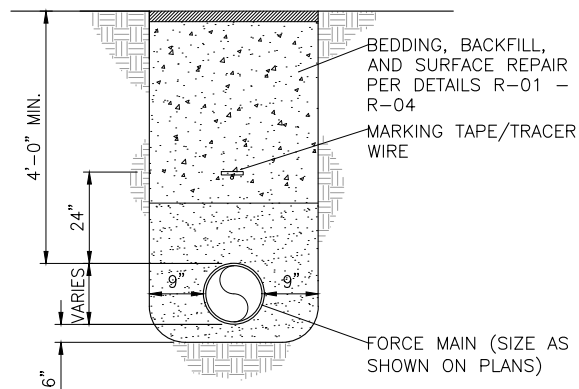
A
TYP **DETAIL - SEWER SERVICE LATERAL**
N.T.S.



B
TYP **DETAIL - SERVICE TO MAIN**
N.T.S.

REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com				FILLMORE CITY				
							STANDARD DETAILS				
							2022				
							SEWER - SERVICE				
			DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	S-03			
			08/2022	DS	MH	RW	15				

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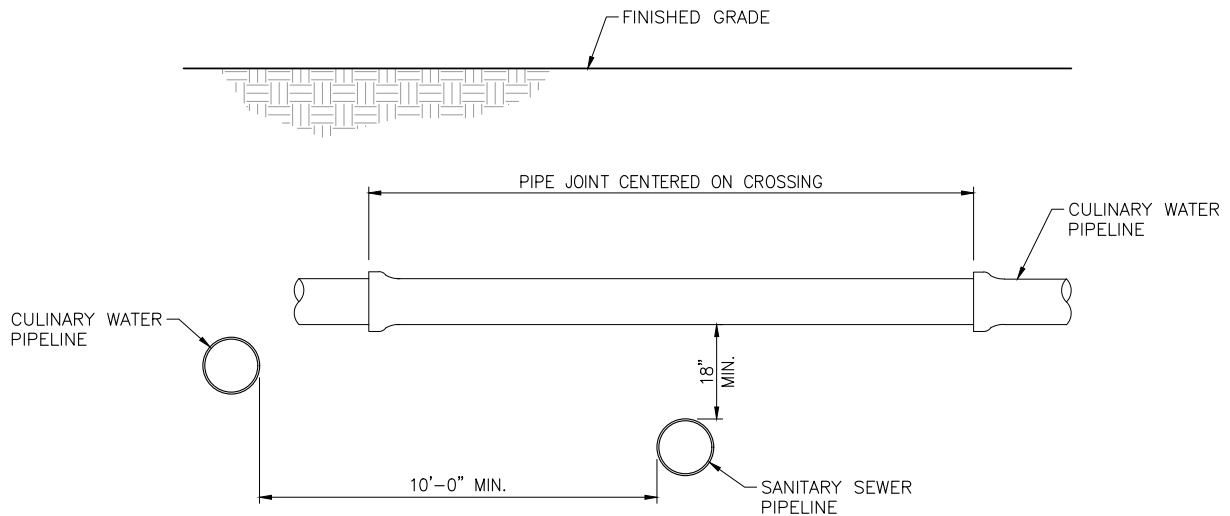
NOTES:

1. UNLESS GRINDER PUMPS ARE UTILIZED, FORCE MAINS SHALL BE A MINIMUM 4" HDPE.
2. FORCE MAINS SHALL ENTER THE GRAVITY SEWER SYSTEM AT A POINT NOT MORE THAN 24" ABOVE THE FLOWLINE OF THE RECEIVING MANHOLE.
3. AUTOMATIC AIR RELIEF VALVES SHALL BE PLACED AT HIGH POINTS IN THE FORCE MAIN TO PREVENT AIR LOCKING.
4. JOINT RESTRAINT MUST BE PROVIDED PER DETAILS W-06 AND W-07. JOINTS MAY ALSO BE FUSED.

DETAIL - FORCE MAIN CONSTRUCTION

N.T.S.

REV NO.	COMMENT	DATE	 SUNRISE ENGINEERING 25 EAST 500 NORTH FILLMORE, UTAH 84631 TEL 435.743.6151 • FAX 435.743.7900 www.sunrise-eng.com	FILLMORE CITY					
				STANDARD DETAILS					
				2022					
				SEWER - FORCE MAIN					
				DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	S-04
			08/2022	DS	MH	RW	16		



NOTES:

1. IF THE MINIMUM SEPARATION SHOWN HERE CANNOT BE MET, ADDITIONAL COORDINATION WITH FILLMORE CITY AND DIVISION OF DRINKING WATER APPROVAL ARE REQUIRED.
2. WATER TRANSMISSION LINES THAT MAY BECOME UNPRESSURIZED SHALL NOT BE INSTALLED WITHIN 20 FEET OF SEWER LINES.
3. WHEN A NEW SEWER FORCE MAIN CROSSES UNDER AN EXISTING WATER MAIN, ALL PORTIONS OF THE SEWER FORCE MAIN WITHIN 10 FEET (HORIZONTALLY) OF THE WATER MAIN SHALL BE ENCLOSED IN A CONTINUOUS SLEEVE.
4. WHEN A NEW WATER MAIN CROSSES OVER AN EXISTING SEWER FORCE MAIN, THE WATER MAIN SHALL BE CONSTRUCTED OF PIPE MATERIALS WITH A MINIMUM RATED WORKING PRESSURE OF 200 PSI OR EQUIVALENT PRESSURE RATING.
5. THE SEPARATION STANDARDS SHOWN ALSO APPLY TO SERVICE LATERALS.

DETAIL - WATER AND SEWER SEPARATION

N.T.S.

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							STANDARD DETAILS 2022			
							WATER AND SEWER SEPARATION			
			DATE	DESIGNED	DRAWN	CHECKED	SHEET NO.	M-01		
			08/2022	DS	MH	RW	17			