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NOT USED

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XREFS: MHTN - 30x42, EXMA, EXPN, (PNOTES, EXIT, PRPN
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SEAL

REGISTERED PROFESSIONAL ENGINEER
No. 7899506
BRYAN W. CATHEY
10/17/13
STATE OF UTAH

MHTN PROJECT NO: 2012545.00

DRAWN BY: BP CHECKED BY: PF

ISSUED:

NO.	DATE	DESCRIPTION
1	1/28/2014	CONSTRUCTION DOCUMENTS

CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

NO.	DATE	DESCRIPTION

SHEET NAME

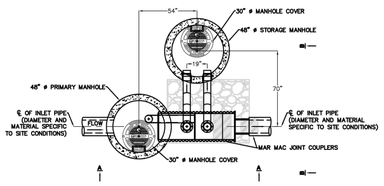
STORM DRAIN DETAILS

CONSTRUCTION DOCUMENTS

SHEET NUMBER

CE-604

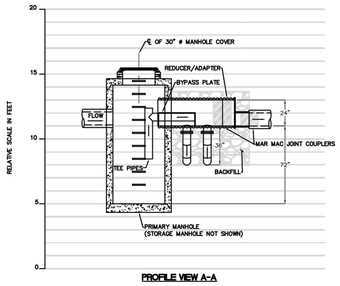
INLET PIPE INVERT:	XX.XX
INLET PIPE ID AND MATERIAL:	XX.XX
OUTLET PIPE INVERT:	XX.XX
OUTLET PIPE ID AND MATERIAL:	XX.XX
PRIMARY MANHOLE RIM ELEVATION:	XX.XX
STORAGE MANHOLE RIM ELEVATION:	XX.XX
ORIENTATION (RIGHT OR LEFT):	R L



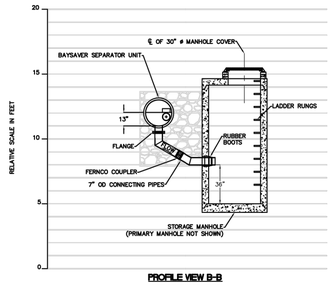
PLAN VIEW-BAYSAVER SEPARATION SYSTEM
(LEFT HAND ORIENTATION SHOWN)

GENERAL NOTES:

1. MANHOLES SHOWN REPRESENT STANDARD PRECAST STRUCTURES PROVIDED BY OTHERS.
2. SEAL THE CONNECTING PIPES INTO THE STORAGE MANHOLE USING RUBBER BOOTS/GASKETS.
3. THE BAYSAVER SEPARATION SYSTEM INCLUDES THE SEPARATOR UNIT, (2) CONNECTING PIPES, (2) FERNCO COUPLERS, (1) REDUCER ADAPTER, AND (2) MARMAC JOINT COUPLERS.
4. LEFT HAND ORIENTATION SHOWN. FOR RIGHT HAND ORIENTATION ROTATE STORAGE MANHOLE AND CONNECTING PIPES 180°.
5. SEE BAYSAVER SPECIFICATIONS AND INSTALLATION INSTRUCTIONS FOR FURTHER DETAIL.
6. USE NON-SHRINK GROUT TO SEAL THE INLET PIPE AND BAYSEPARATOR IN TO THE PRIMARY MANHOLE.
7. BACKFILL: CLASS I, II OR III BACKFILL SHOULD BE USED TO AN ELEVATION OF AT LEAST 6" OVER THE CROWN OF THE SEPARATOR UNIT.
8. 12" COVER REQUIRED FOR TRAFFIC RATED SURFACE.
9. BAYSEPARATOR IS PROTECTED BY US PATENT NO. 5,746,911



PROFILE VIEW A-A



PROFILE VIEW B-B

REV	DESCRIPTION	DATE	APPR

NOTES:

BAYSAVER TECHNOLOGIES
800-829-7283
WWW.BAYSAVER.COM

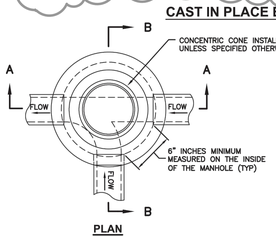
DESIGNED:	TEP	DATE:	7/15/13
DRAWN:	EKH	SCALE:	N.T.S.
CHECKED:	PR	DWG NO:	JK

JK BAYSEPARATOR™
GENERAL SYSTEM DETAILS

3 BAY SAVER-SEPARATOR

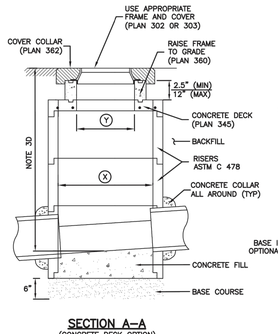
SCALE: N.T.S.

CAST IN PLACE BASE

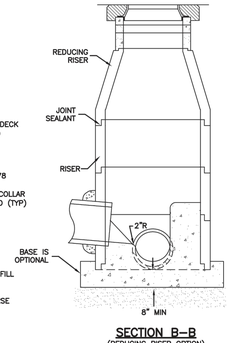


PLAN

TABLE OF DIMENSIONS	
MANHOLE STYLE	DIMENSION
A	X=48" Y=30"
B	X=60" Y=44"
C	X=60" Y=30"



SECTION A–A
(CONCRETE DECK OPTION)

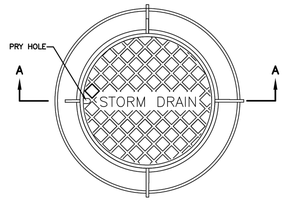


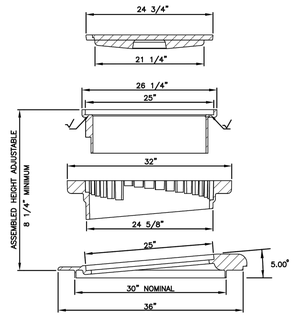
SECTION B–B
(REDUCING RISER OPTION)

1 MANHOLE STYLE A

SCALE: N.T.S. APWA 341

TYPE B





SECTION A–A

2 30" FRAME AND COVER

SCALE: N.T.S.

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SEAL

REGISTERED PROFESSIONAL ENGINEER No. 7899506 RYAN M. CATHEY 2/10/14 STATE OF UTAH

MHTN PROJECT NO: 2012545.00

DRAWN BY: BP CHECKED BY: PF

ISSUED:

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NO.	DATE	DESCRIPTION

SHEET NAME

STORM DRAIN DETAILS

CONSTRUCTION DOCUMENTS

SHEET NUMBER

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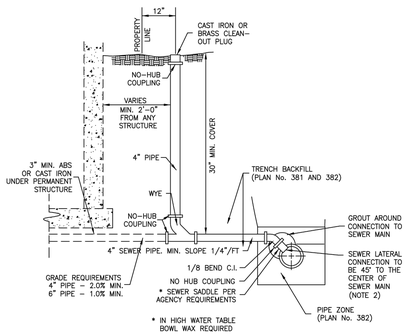
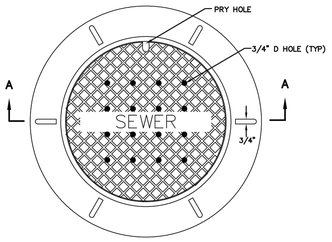


SECTION

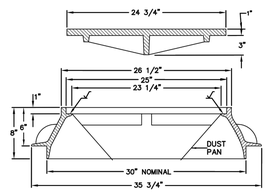
1 CLEAN OUT

SCALE: N.T.S. APWA PLAN NO. 431

TYPE A



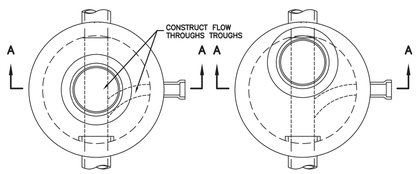
PLAN



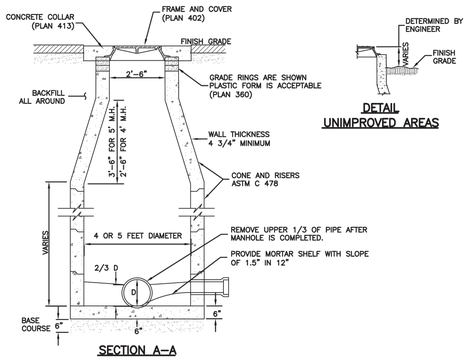
SECTION A–A

1 MANHOLE LID AND FRAME

SCALE: N.T.S. APWA PLAN NO. 402



PLAN (CONCENTRIC RISER) **PLAN** (ECCENTRIC RISER)



DETAIL UNIMPROVED AREAS

SECTION A–A

April 2011

Sanitary sewer manhole

Plan **411**

2 SANITARY SEWER MANHOLE 48"

SCALE: N.T.S. APWA PLAN NO. 411

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MHTN PROJECT NO: 2012545.00

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ISSUED:

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1	1/28/2014	CONSTRUCTION DOCUMENTS

CONTRACTOR TO VERIFY DRAWINGS IN FIELD USE REFLECT LAST REVISION DATE.

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SANITARY SEWER DETAILS

CONSTRUCTION DOCUMENTS

SHEET NUMBER

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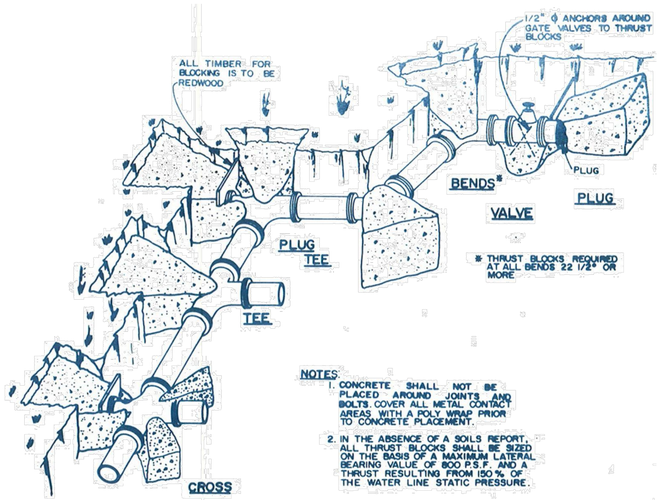
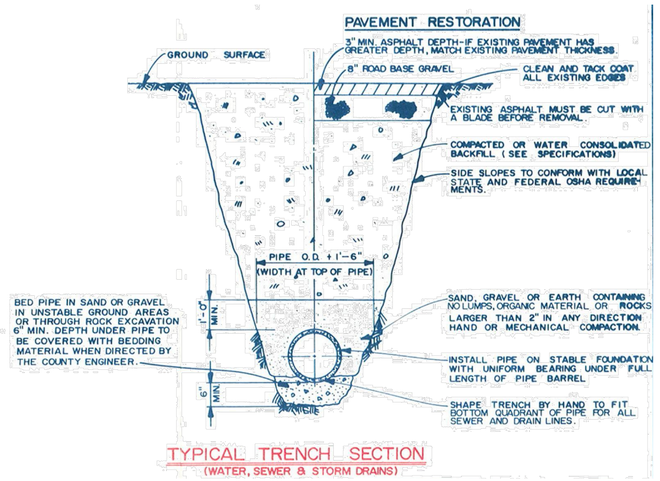


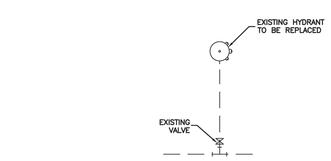
5 THRUST BLOCKS

SCALE: N.T.S. APWA PLAN NO. 561

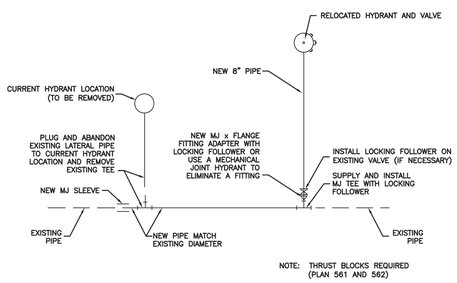


6 TRENCH SECTION

SCALE: N.T.S. APWA PLAN NO. 561



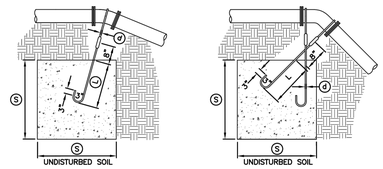
REPLACEMENT OF FIRE HYDRANT



RELOCATION OF FIRE HYDRANT

7 RELOCATE FIRE HYDRANT

SCALE: N.T.S. APWA PLAN NO. 546



TYPE A RESTRAINT
FOR 11 1/4° – 22 1/2° VERTICAL BENDS

TABLE OF DIMENSIONS

PIPE SIZE NOMINAL DIAMETER – INCH	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	(S) SIDE OF CUBE – FEET	(d) DIAMETER OF SHANK OR REBAR RODS – INCH	(L) DEPTH OF ROD CONCRETE – FEET
4"	11 1/4°	8	2.0	5/8"	1.5
	22 1/2°	15.6	2.5	5/8"	2.0
6"	11 1/4°	15.6	2.5	5/8"	2.0
	22 1/2°	34.3	3.25	5/8"	2.0
8"	11 1/4°	27	3.0	5/8"	2.0
	22 1/2°	64	4.0	5/8"	2.0
12"	11 1/4°	64	4.0	5/8"	2.0
	22 1/2°	125	5.0	3/4"	3.0
16"	11 1/4°	107	4.25	7/8"	3.0
	22 1/2°	216	6.0	7/8"	3.0
20"	11 1/4°	138	5.17	1"	3.5
	22 1/2°	334	6.94	1"	4.0
24"	11 1/4°	240	6.22	1"	4.0
	22 1/2°	476	7.81	1"	4.0
30"	11 1/4°	369	7.17	1"	4.0
	22 1/2°	733	9.02	1"	4.0

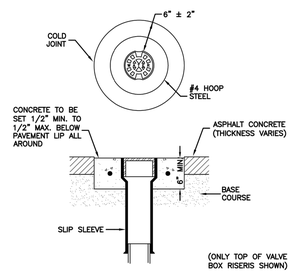
TYPE B RESTRAINT
FOR 45° VERTICAL BENDS

TABLE OF DIMENSIONS

PIPE SIZE NOMINAL DIAMETER – INCH	VERTICAL BEND IN DEGREES	CONCRETE BLOCKING IN CUBIC FEET	(S) SIDE OF CUBE – FEET	(d) DIAMETER OF SHANK OR REBAR RODS – INCH	(L) DEPTH OF ROD CONCRETE – FEET
4"	45°	1	3.0	5/8"	2.0
				5/8"	
6"		2.37	4.0	5/8"	2.5
				5/8"	
8"		3.97	4.75	5/8"	3.0
				5/8"	
12"		9.04	6.25	5/8"	4.0
				5/8"	
16"		17.24	7.75	3/4"	4.0
				3/4"	
20"		26.52	92.17	3/4"	4.0
				3/4"	
24"		37.82	10.07	3/4"	4.0
				3/4"	
30"		58.26	11.63	3/4"	4.0
				3/4"	

3 TIE DOWN THRUST RESTRAINTS

SCALE: N.T.S. APWA PLAN NO. 562



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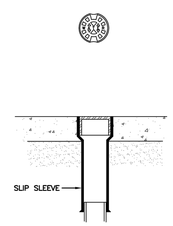
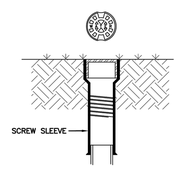


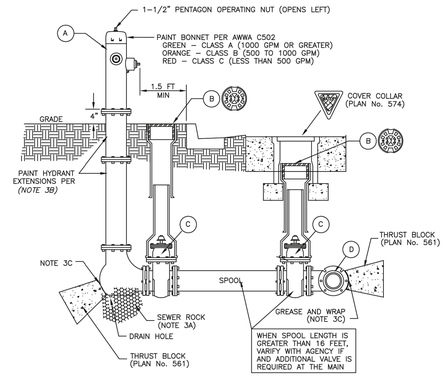
CONCRETE PAVEMENT



LANDSCAPED AREA

4 WATER VALVE BOX

SCALE: N.T.S. APWA PLAN NO. 574



LEGEND

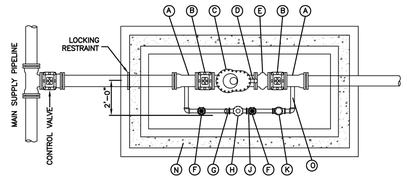
No.	*	ITEM	DESCRIPTION
A		FIRE HYDRANT	AWWA C502
B		VALVE BOX WITH LID	2 PIECE CAST IRON
C		GATE VALVE WITH 2"x2" NUT	AWWA C509
D		TEE WITH 125 # FLANGE	AWWA C110

* FURNISHED BY UTILITY AGENCY

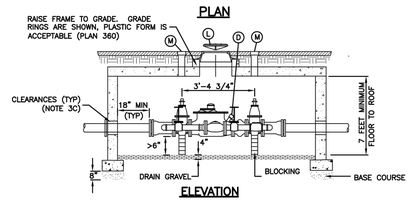
SECTION

1 FIRE HYDRANT ASSEMBLY

SCALE: N.T.S. APWA PLAN NO. 511



PLAN



ELEVATION

LEGEND

No.	*	ITEM	DESCRIPTION
A		3" OR 4" FLANGE x M.J. ADAPTER	
B		3" OR 4" GATE VALVE WITH 2"x2" OPERATING NUT	
C		3" OR 4" COMPOUND METER	
D		2" TEST ASSEMBLY	
E		3" OR 4" CHECK VALVE	
F		2" GATE VALVE	
G		2" METER FLANGE	
H		2" DISPLACEMENT METER	
J		2" MALE METER FLANGE	
K		2" CHECK VALVE	
L		27" FRAME AND COVER	PLAN 502
M		TOP SECTION OF VALVE BOX WITH LID	PLAN 574
N		CONCRETE BOX	PLAN 505
O		COPPER PIPING	

* FURNISHED BY AGENCY

2 WATER VALVE

SCALE: N.T.S. APWA PLAN NO. 523

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WATER DETAILS

CONSTRUCTION DOCUMENTS

SHEET NUMBER

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