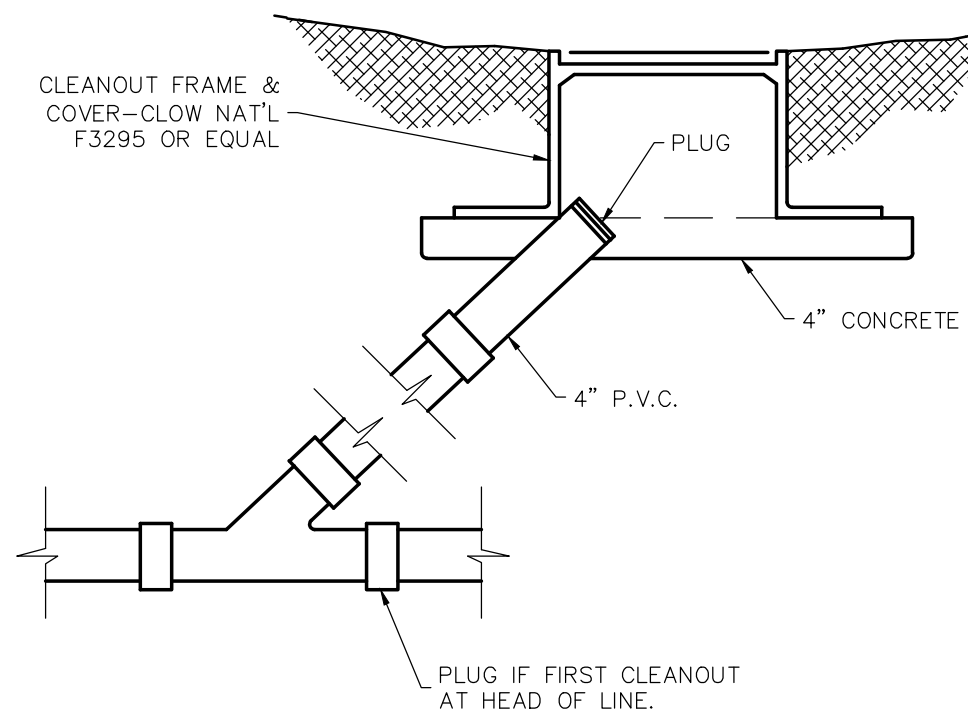
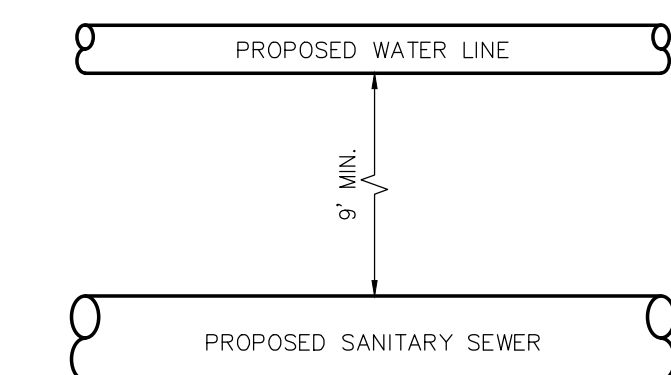


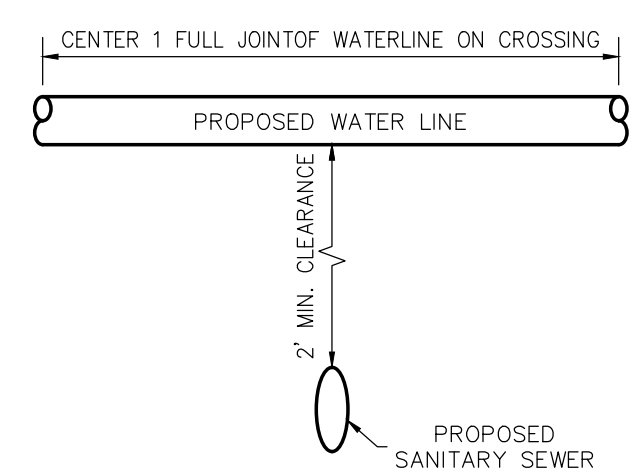
**DETAIL
SANITARY SEWER
BEDDING AND BACKFILL**
N.T.S.



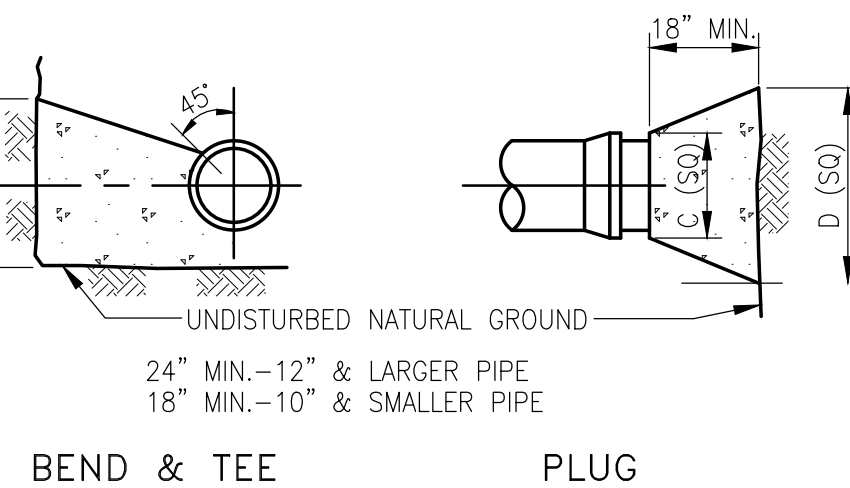
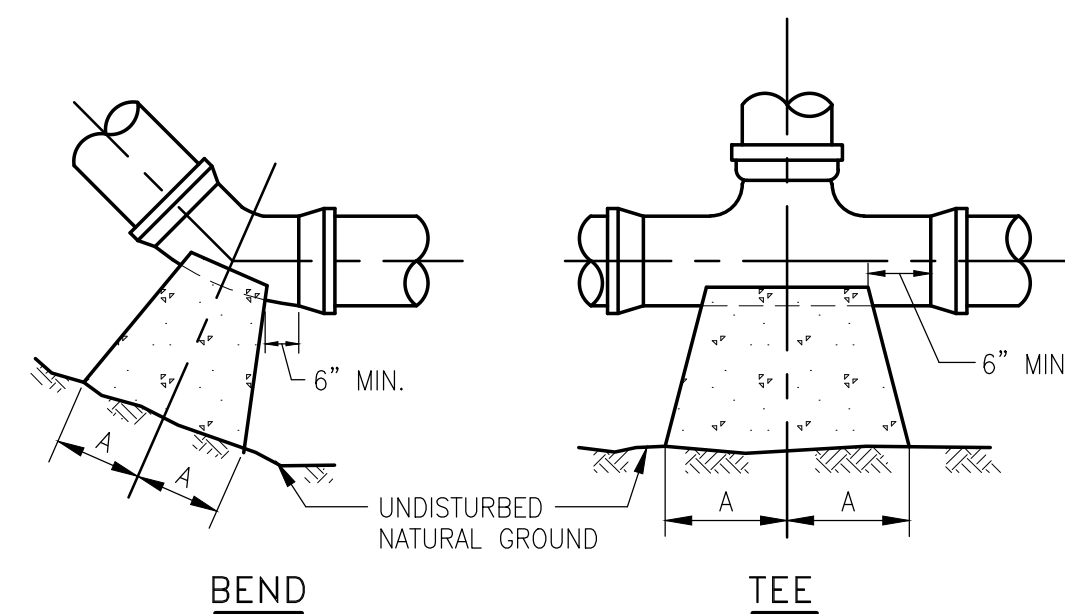
**DETAIL
CLEANOUT**
N.T.S.



**DETAIL
HORIZONTAL CLEARANCE**
N.T.S.



**DETAIL
VERTICAL CLEARANCE**
N.T.S.



BEND & TEE PLUG
N.T.S.
NOTE:
THRUST BLOCKS AT TRENCH FACE MUST HAVE A MINIMUM BEARING SURFACE OF 10 SQ. FEET AND SHALL BE NO SMALLER THAN 1.5 TIMES PIPE DIAMETER. ALL CONCRETE SHALL BE 5.5 SACK MIN., 3500 P.S.I. AND SHALL CURE 24 HOURS BEFORE BACKFILL.

SIZE	90° BEND		45° BEND		22 1/2° BEND		TEES		PLUGS	
	A	B	A	B	A	B	A	B	A	B
2 1/2"	12"	7"	6"	7"	6"	6"	7"	8"	8"	14"
6"	16"	10"	9"	10"	6"	12"	10"	12"	10"	21"
8"	22"	13"	12"	13"	8"	10"	13"	16"	12"	29"
10"	26"	17"	14"	17"	10"	13"	16"	20"	14"	36"
12"	29"	21"	16"	21"	11"	16"	18"	24"	16"	41"
14"	35"	24"	19"	24"	12"	20"	22"	27"	18"	48"
16"	38"	27"	21"	27"	12"	24"	24"	30"	20"	54"

**DETAIL
WATER LINE THRUST BLOCKING**
N.T.S.

MODEL	SIZE	L1	WT	HT	WEIGHT LBS.
DBBP3	3"	6'-0"	3'-6"	4'-6"	2,700
DBBP4	4"	6'-0"	3'-6"	4'-6"	2,900
DBBP6	6"	7'-10"	4'-4"	6'-0"	9,000
DBBP8	8"	7'-10"	4'-4"	6'-0"	15,000
DBBP10	10"	9'-0"	6'-0"	7'-0"	18,000
DBBP12	12"	9'-0"	6'-0"	7'-0"	18,000

Specifications
CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days. Unit is of monolithic construction of floor and first step of wall with sectional riser to required depth.
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.
HATCHWAY: Aluminum diamond plate cover with extruded aluminum frame furnished with drop handle, open door support and slam lock. (300 P.S.F. live load)

Engineering Data
The backflow assembly shall be factory assembled in vault & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

PROJECT: 888.611.PARK
LOCATION: 888-611-PARK
ORDER #: DBBP-1
DATE: 01/17

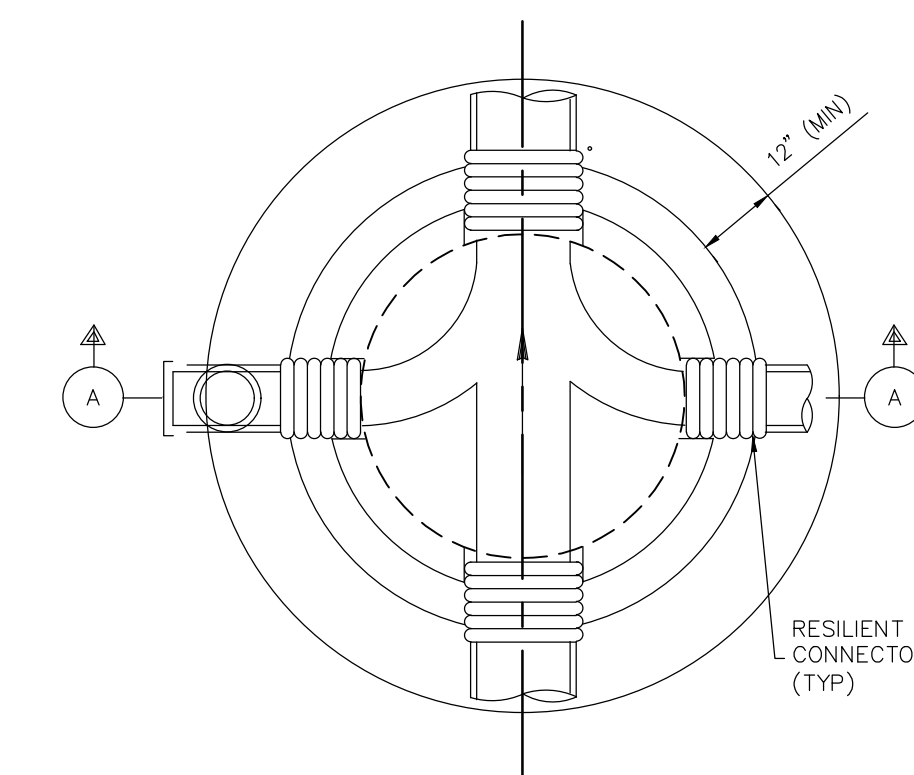
MODEL NO.	BFP SIZE	BACKFLOW DIMENSIONS				ENCLOSURE DIMENSIONS				PAD DIMENSIONS			
		A	B	C	D	E	EL	EW	EH	PL	PW		
RPBPAE3/4	3/4"	12 1/4"	7 1/4"	4 1/8"	3 1/4"	28"	27"	13"	35"	54"	30"		
RPBPAE1	1"	13 1/4"	7 3/4"	4 1/8"	3 1/4"	28"	27"	13"	35"	54"	30"		
RPBPAE1 1/4	1 1/4"	14 1/4"	7 3/4"	4 1/8"	3 1/4"	28"	27"	13"	35"	54"	30"		
RPBPAE1 1/2	1 1/2"	15 1/4"	7 3/4"	4 1/8"	3 1/4"	28"	27"	13"	35"	54"	30"		
RPBPAE2	2"	17 1/4"	10 1/4"	5 1/8"	3 1/4"	28"	27"	13"	35"	54"	30"		

Specifications
CONCRETE: Class I/II concrete with design strength of 4500 PSI at 28 days.
REINFORCEMENT: Grade 60 reinforced. Steel rebar conforming to ASTM A615 on required centers or equal.

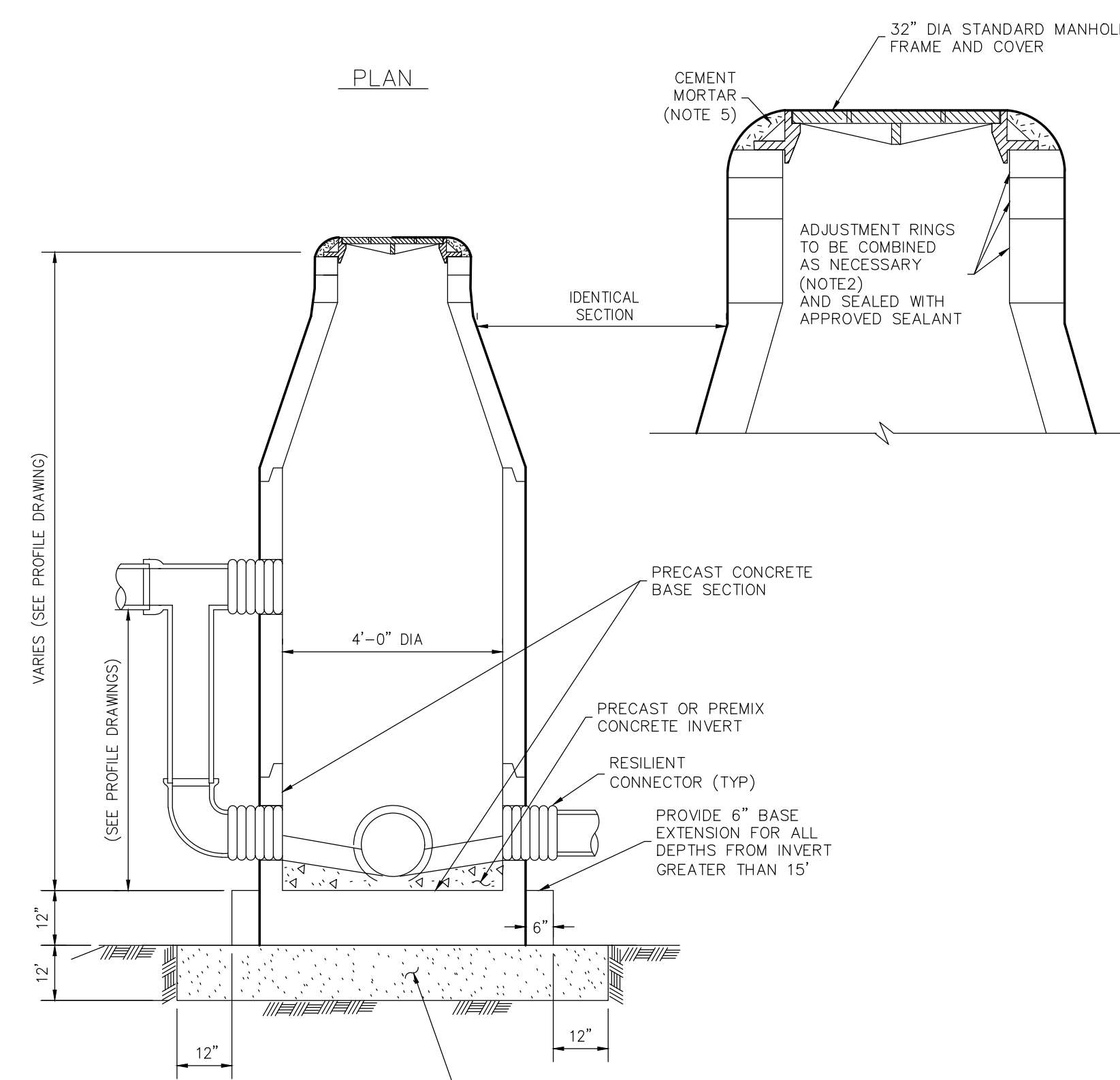
Typical Applications
RP devices are used to protect against high hazard (toxic) fluids in water services to industrial plants, hospital facilities, morgues, mortuaries, and chemical plants. They are also used in irrigation systems, boiler feed, water lines and other installations requiring maximum protection.

Engineering Data
The backflow assembly shall be factory assembled on pad & hydrostatically tested prior to delivery. Field excavation & preparation shall be complete prior to delivery. Pipe, valves and fittings of the assembly shall be approved by one or more of the following associations:

PROJECT: 888.611.PARK
LOCATION: 888-611-PARK
ORDER #: RPBPAE-1
DATE: 02/19



- NOTES:**
- DEPTH OF MANHOLE DETERMINES SECTIONS REQUIRED
 - PRECAST CONCRETE RING SHALL BE PROVIDED FOR A COMBINED ADJUSTMENT HEIGHT OF AT LEAST 12". THE TOTAL HEIGHT OF THE ADJUSTMENT RINGS SHALL NOT EXCEED 1'-6".
 - MANHOLE WALL THICKNESS FOR DEPTH EXCEEDING 12'-0" SHALL BE DETERMINED TO MEET LOADING CONDITIONS, MIN. THICKNESS 5".
 - ECCENTRIC PRECAST CONCRETE MANHOLE MAY BE USED.
 - OMIT CEMENT MORTAR WHEN MANHOLE IS LOCATED IN PAVED AREAS.
 - MIN. REINFORCING IN THE PRECAST CONCRETE BASE SHALL BE # 5 @ 8 EW.
 - PROVIDE BACKFILL TO MATCH ADJACENT PIPE TRENCH BACKFILL.



**DETAIL
SANITARY MANHOLE
(PRECAST)**
N.T.S.

NO.	DATE	REVISIONS	APP.

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THE MONTESSORIUM AT BELLA TERRA
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WATER LINE SANITARY SEWER DETAILS

FBC Engineering Approval

DAVID L. RANDOLPH
93813
PROFESSIONAL ENGINEER

STATE OF TEXAS

DAVID L. RANDOLPH
93813
PROFESSIONAL ENGINEER

APPROVED: R.D.H. **DATE:** MAY, 2019
DESIGNED BY: D.L.R. **SCALE:** N/A

JOB NO.: LE-19006

C-12