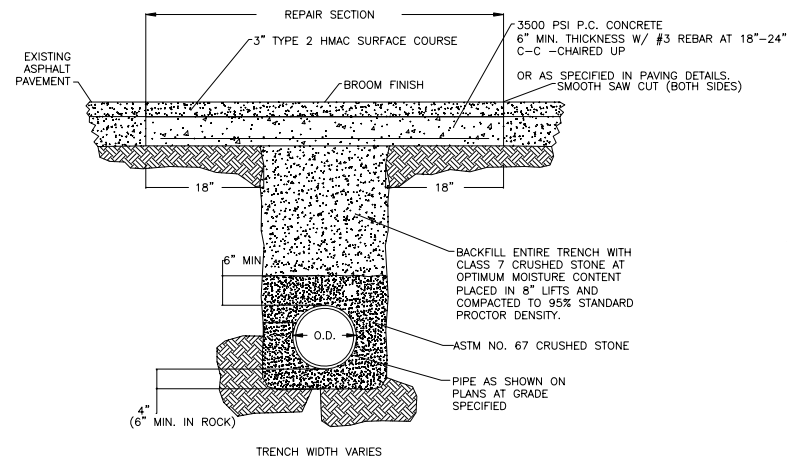




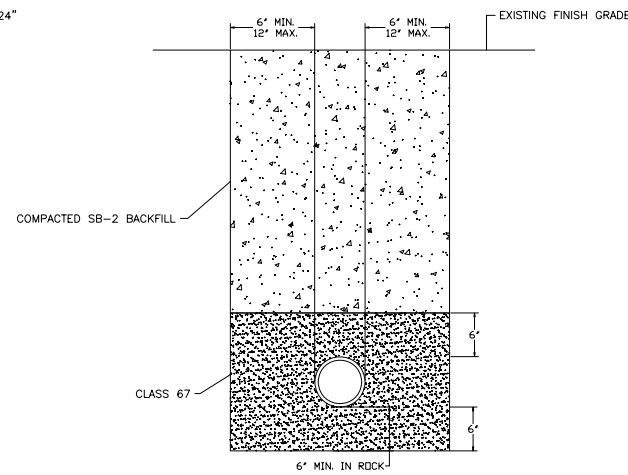
501 SE 3rd Steet
 Bentonville, AR 72712
 Ph: (479) 271-3140
 www.bentonvillear.com

WATER/SEWER DETAILS

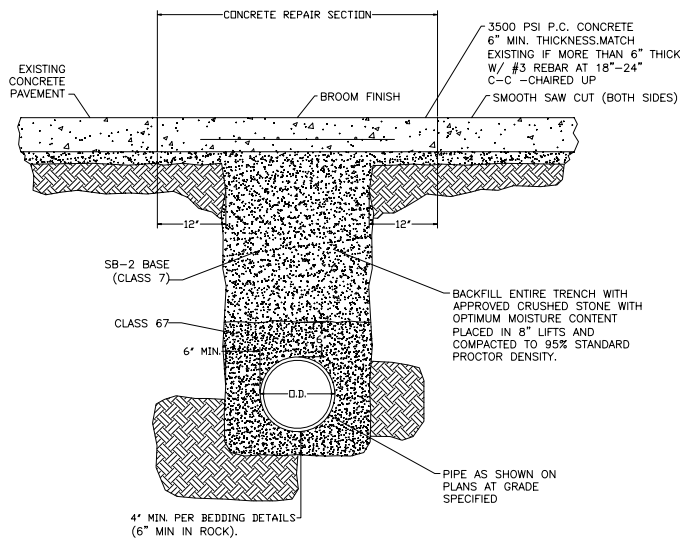
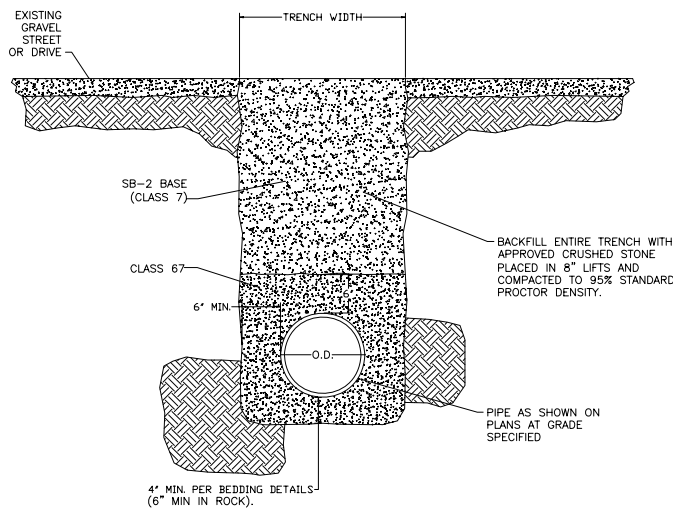
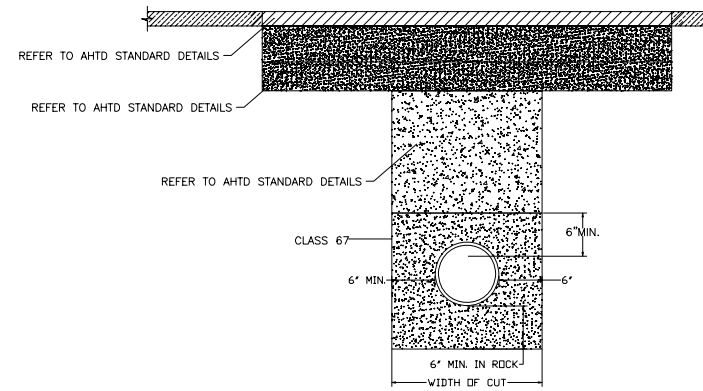


NOTE: FLOWABLE FILL MAY BE USED IN LIEU OF CLASS 7 CRUSHED STONE
 IF APPROVED BY CITY ENGINEER

NOTE: IF A FINAL REPAIR CANNOT BE STARTED WITH IN 24 HOURS OF AN OPEN CUT, THEN THE TRENCH SHALL BE BACKFILLED PER DETAIL WITH IN A 1" MIN OF EXISTING SURFACE, THEN APPLY TEMPORARY COMPACTED COLD ASPHALT PATCH AND MAINTAIN UNTIL THE PERMINENT REPAIR IS MADE.

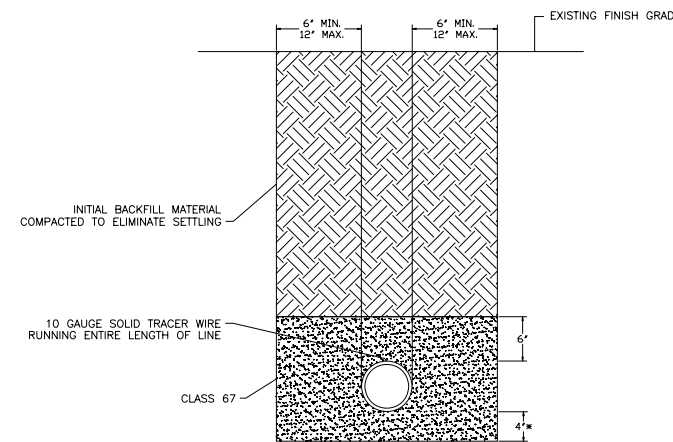


NOTE: IMPROVED PRIVATE DRIVEWAYS AND PARKING AREAS BACKFILLED AS SHOWN ABOVE.
 SUBSURFACE MATERIAL TO EQUAL OR EXCEED EXISTING SURFACE.
 ASPHALTIC CONCRETE WALKS - MINIMUM THICKNESS 4"
 CONCRETE DRIVES OR PARKING AREAS - MINIMUM THICKNESS 6".

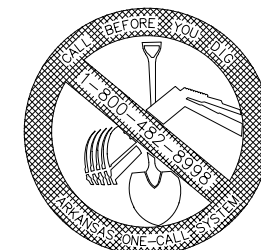


NOTE: FLOWABLE FILL MAY BE USED IN LIEU OF CLASS 7 CRUSHED STONE
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NOTE: IF A FINAL REPAIR CANNOT BE STARTED WITH IN 24 HOURS OF AN OPEN CUT, THEN THE TRENCH SHALL BE BACKFILLED PER DETAIL WITH IN A 1" MIN OF EXISTING SURFACE, THEN APPLY TEMPORARY COMPACTED COLD ASPHALT PATCH AND MAINTAIN UNTIL THE PERMINENT REPAIR IS MADE.



* IF IN ROCK 6" MIN. CLASS #67 STONE REQUIRED.



REVISIONS:
 Adopted by City Council 1/14/2003
 Ordinance Number: 2003-18

Changes Proposed by Water Dept.
 4/10/2007

Changes Proposed by Water Dept.
 10/10/2007

Changes Approved by Health Dept.
 05/08/2007

NOTES:

DRAWN BY: CAO DATE: 10/10/2007

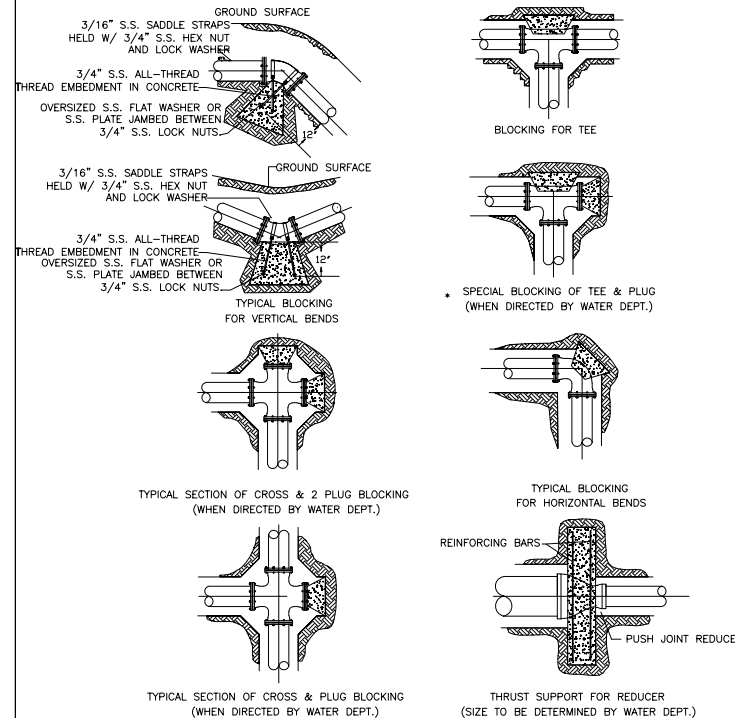
APPROVED BY: XXX DATE: XX/XX/XXXX

SHEET NUMBER: 1 OF 2



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WATER/SEWER DETAILS

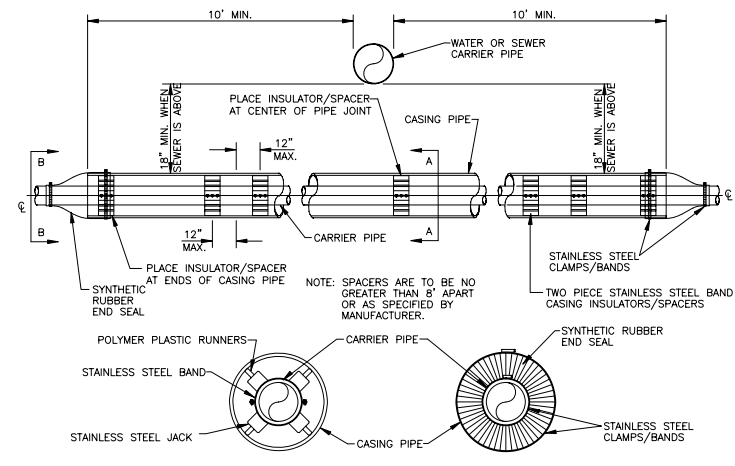
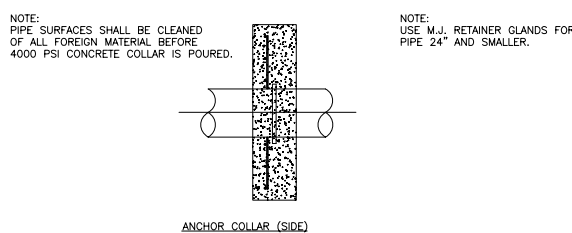
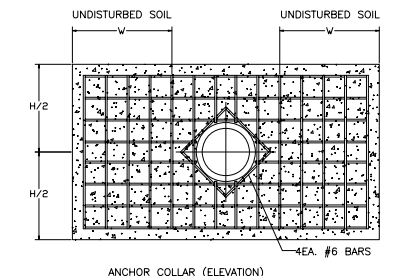


SIZE	REQUIRED SQ. FT. OF UNDISTURBED EARTH/WALL FOR REACTION BACKING					
	TYPE OF FITTINGS					
	TEE	90°	45°	22 1/2'	11 1/4'	PLUG
2"	1	1	1	1	1	1
3"	1	1	1	1	1	1
4"	1	2	1	1	1	2
6"	3	3	2	1	1	3
8"	4	6	3	2	1	4
10"	6	8	5	3	1	6
12"	8	12	6	3	2	8
14"	11	16	9	4	2	11
16"	14	20	11	6	3	14
18"	18	25	14	7	4	18
20"	22	31	17	9	4	22
24"	32	45	24	12	6	32
30"	48	68	37	19	10	48
36"	69	98	53	27	14	69

- NOTES:
1. ALL FITTINGS SHALL BE MECHANICAL JOINTS.
 2. DO NOT COVER BELLS OR FLANGES WITH CONCRETE.
 3. WRAP ALL FITTINGS WITH POLY WRAP.
 4. BACK ALL TEES ACCORDING TO SIZE OF BRANCH.
 5. BACKING FUTURE LINE EXTENSIONS SHALL BE SUCH THAT LATER REMOVAL IS POSSIBLE.
 6. ALL BENDS WHERE FITTINGS ARE USED, BOTH HORIZONTAL OR VERTICAL, SHALL BE BACKED WITH CONCRETE.
 7. REACTION BACKING TABLE IS BASED ON 150 PSI AND SOIL BEARING PRESSURE OF 2,000 LB/SQ. FT. ADDITIONAL BACKING MAY BE REQUIRED IN SOME AREAS AS REQUIRED BY CITY WATER DEPARTMENT.

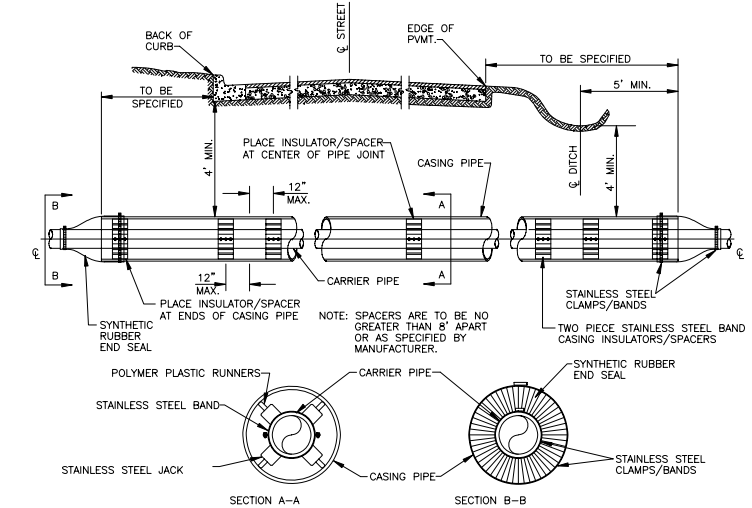
- NOTES:
1. ALL BLOCKING SHALL BE AGAINST UNDISTURBED SOIL USING 4,000 PSI CONCRETE.
 2. WHERE SOIL CONDITIONS MAKE IT NECESSARY TO POUR CONCRETE OVER JOINTS, THE ENDS OF THE ADJACENT PIPES MUST HAVE A THRUST BLOCK TO RESIST MOVEMENT OF THESE JOINTS.
 3. WEIGHT CALCULATIONS TO BE BASED ON REACTION BACKING TABLE (SEE GWS03).
 4. WHEN BLOCKING AGAINST FITTINGS, FITTINGS SHALL BE COVERED WITH POLYETHYLENE WRAP TO PREVENT BONDING OF CONCRETE.
 5. WHERE SHEAR BECOMES A PROBLEM PROPER REINFORCING MUST BE INSTALLED INTO THE BLOCKING.
 6. CLEARANCE SHALL BE A MINIMUM OF 6" BETWEEN PIPE AND OBSTRUCTIONS.
 7. CLEARANCE ON PIPES BELONGING TO OIL/GAS COMPANIES SHALL BE 18" UNLESS SPECIAL PERMISSION IS GIVEN BY THESE COMPANIES.
 8. 12" OF ALL THREAD EMBEDDED IN CONCRETE

PIPE SIZE	ANCHOR COLLAR SCHEDULE				REINFORCING BARS	
	W	H	T	M	"A" BARS	"B" BARS
6"	1.5'	2.0'	1.0'	M.J. RETAINER GLAND	#606"	#606"
8"	1.5'	2.5'	1.0'	M.J. RETAINER GLAND	#606"	#606"
12"	2.0'	4.0'	1.5'	M.J. RETAINER GLAND	#606"	#606"
16"	3.0'	4.5'	1.5'	M.J. RETAINER GLAND	#606"	#606"
20"	3.0'	5.0'	2.0'	M.J. RETAINER GLAND	#606"	#606"
24"	3.5'	5.5'	2.0'	M.J. RETAINER GLAND	#706"	#6010"
30"	6.5'	6.0'	2.5'	4"	#806"	#7010"
36"	7.0'	7.0'	2.5'	4"	#806"	#7010"



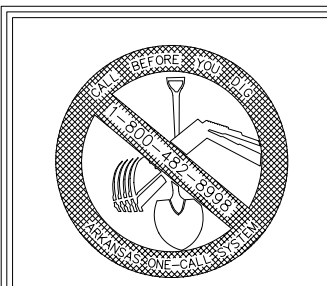
CARRIER & CASING SIZES										
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
CARRIER	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
CASING	16"	16"	16"	18"	20"	24"	30"	30"	36"	36"
CASING/WALL THICKNESS	.219	.219	.219	.250	.281	.344	.406	.406	.500	.500

NOTE: DUCTILE IRON, OR PVC PIPE REQUIRED FOR WATER, OR SEWER.



CARRIER & CASING SIZES										
	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
CARRIER	4"	6"	8"	10"	12"	14"	16"	18"	20"	24"
CASING	16"	16"	16"	18"	20"	24"	30"	30"	36"	36"
CASING/WALL THICKNESS	.219	.219	.219	.250	.281	.344	.406	.406	.500	.500

NOTE: DUCTILE IRON, OR PVC PIPE REQUIRED FOR WATER, OR SEWER.



- REVISIONS:
- Adopted by City Council 1/14/2003 Ordinance Number: 2003-18
 - Changes Proposed by Water Dept. 4/10/2007
 - Changes Proposed by Water Dept. 10/10/2007
 - Changes Proposed by Water Dept. 02/11/2008

NOTES:

DRAWN BY: CAO DATE: 10/10/2007
 APPROVED BY: XXX DATE: XX/XX/XXXX
 SHEET NUMBER: 2 OF 2