

PIPE SIZE (INCH)	BEND ANGLE (DEG)	LOW SIDE DEPTH	L1 UPPER BEND RESTRAINED LENGTH IN FEET WHEN TEST PRESSURE = 200 PSI	L2 LOWER BEND RESTRAINED LENGTH IN FEET WHEN TEST PRESSURE = 200 PSI
6	45	5	24	8
6	22.5	5	12	4
6	11.25	5	6	2
6	45	10	24	5
6	22.5	10	12	2
6	11.25	10	6	1
8	45	5	33	11
8	22.5	5	15	5
8	11.25	5	8	3
8	45	10	32	7
8	22.5	10	15	3
8	11.25	10	8	2
12	45	5	43	16
12	22.5	5	22	7
12	11.25	5	11	4
12	45	10	48	10
12	22.5	10	22	5
12	11.25	10	11	2

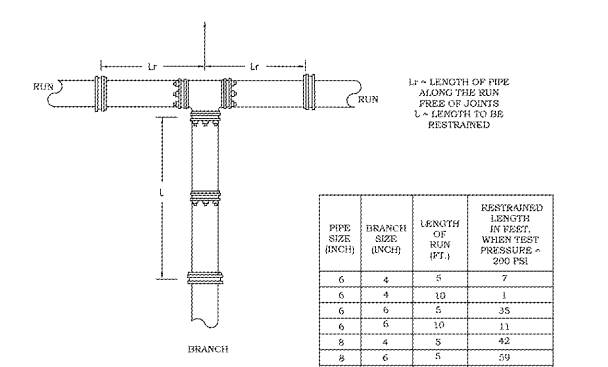
NOTES:  
 1. RESTRAINED LENGTH CALCULATIONS ARE FOR PVC PIPE BEDDED IN COMPACTED GRANULAR MATERIAL EXTENDING TO THE TOP OF THE PIPE.  
 2. THE NATIVE SOIL MATERIAL IS ASSUMED TO BE INORGANIC CLAY OF HIGH PLASTICITY.  
 3. DEPTH OF BURY IS ASSUMED TO BE 4 FEET.  
 4. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE. THE RESTRAINED LENGTH SHALL BE DESIGNED BASED UPON THE CONDITIONS ENCOUNTERED DURING THE INSTALLATION.

NO REVISION OR MODIFICATION OF THIS DETAIL SHALL BE MADE WITHOUT PRIOR WRITTEN APPROVAL FROM AUGUSTA UTILITIES DEPARTMENT. REVISED: JANUARY 2018

**RESTRAINED LENGTHS FOR VERTICAL BENDS**  
AUD DETAIL 3.2.2

AUGUSTA UTILITIES DEPARTMENT  
452 WALKER STREET, SUITE 200  
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PIPE SIZE (INCH)	BRANCH SIZE (INCH)	LENGTH OF RUN (FT.)	RESTRAINED LENGTH IN FEET WHEN TEST PRESSURE = 200 PSI
6	4	5	7
6	4	10	1
6	6	5	35
6	6	10	11
8	4	5	42
8	6	5	59
8	6	5	1
8	8	10	77
8	8	5	30
12	8	10	6
12	4	15	42
12	6	5	59
12	6	5	1
12	8	10	77
12	8	5	7
12	8	10	1
12	12	15	109
12	12	5	86
12	12	10	63
12	12	15	79

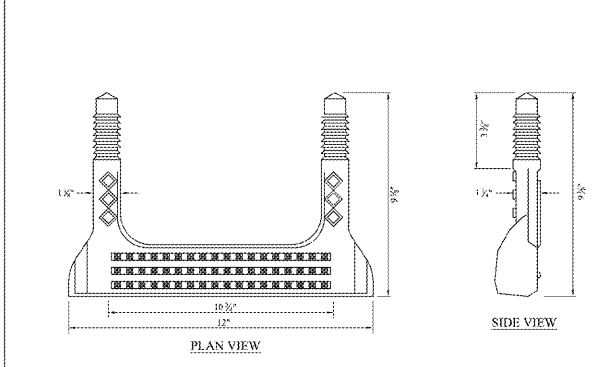
NOTES:  
 1. RESTRAINED LENGTH CALCULATIONS ARE FOR PVC AND DIP PIPE BEDDED IN COMPACTED GRANULAR MATERIAL EXTENDING TO THE TOP OF THE PIPE.  
 2. THE NATIVE SOIL MATERIAL IS ASSUMED TO BE INORGANIC CLAY OF HIGH PLASTICITY.  
 3. DEPTH OF BURY IS ASSUMED TO BE 4 FEET.  
 4. THESE CALCULATIONS ARE PROVIDED FOR REFERENCE. THE RESTRAINED LENGTH SHALL BE DESIGNED BASED UPON THE CONDITIONS ENCOUNTERED DURING THE INSTALLATION.

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**RESTRAINED LENGTHS FOR TEES**  
AUD DETAIL 3.2.3

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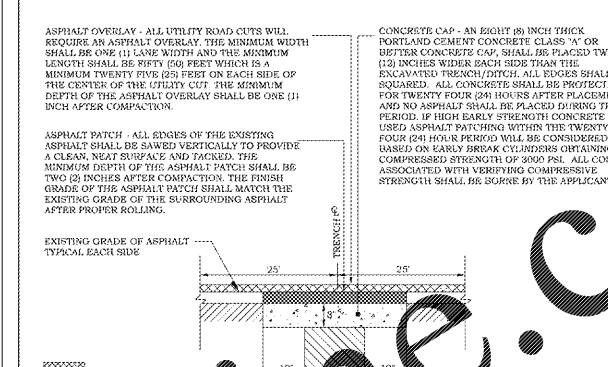
NOTE: STEP SHALL BE MANUFACTURED BY GUYTON PIPE AND RUBBER COMPANY OR APPROVED EQUAL

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**MANHOLE STEP**  
AUD DETAIL 3.5

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ASPHALT OVERLAY - ALL UTILITY ROAD CUTS WILL REQUIRE AN ASPHALT OVERLAY. THE MINIMUM WIDTH SHALL BE ONE (1) LANE WIDTH AND THE MINIMUM LENGTH SHALL BE FIFTY (50) FEET WHICH IS A MINIMUM TWENTY FIVE (25) FEET ON EACH SIDE OF THE CENTER OF THE UTILITY CUT. THE MINIMUM DEPTH OF THE ASPHALT OVERLAY SHALL BE ONE (1) INCH AFTER COMPACTION.

CONCRETE CAP - AN EIGHT (8) INCH THICK PORTLAND CEMENT CONCRETE CLASS "C" OR BETTER CONCRETE CAP, SHALL BE PLACED TWELVE (12) INCHES WIDER EACH SIDE THAN THE EXISTING TRENCH/OTCH. ALL EDGES SHALL BE SQUARED. ALL CONCRETE SHALL BE PROTECTED FOR TWENTY FOUR (24) HOURS AFTER PLACEMENT AND NO ASPHALT SHALL BE PLACED DURING THIS PERIOD. IF HIGH EARLY STRENGTH CONCRETE IS USED ASPHALT PATCHING WITHIN THE TWENTY FOUR (24) HOUR PERIOD WILL BE CONSIDERED BASED ON EARLY BREAK CYLINDERS OBTAINING A COMPRESSED STRENGTH OF 9000 PSI. ALL COSTS ASSOCIATED WITH VERIFYING COMPRESSIVE STRENGTH SHALL BE BORNE BY THE APPLICANT.

ASPHALT PATCH - ALL EDGES OF THE EXISTING ASPHALT SHALL BE SAWED VERTICALLY TO PROVIDE A CLEAN, NEAT SURFACE AND TACKED. THE MINIMUM DEPTH OF THE ASPHALT PATCH SHALL BE TWO (2) INCHES AFTER COMPACTION. THE FINISH GRADE OF THE ASPHALT PATCH SHALL MATCH THE EXISTING GRADE OF THE SURROUNDING ASPHALT AFTER PROPER ROLLING.

EXISTING GRADE OF ASPHALT TYPICAL EACH SIDE

ASPHALT OVERLAY  
 ASPHALT PATCH  
 CONCRETE CAP  
 SELECT BACKFILL MATERIAL  
 EXISTING ASPHALT  
 EXISTING BACKFILL OR BASE MATERIAL

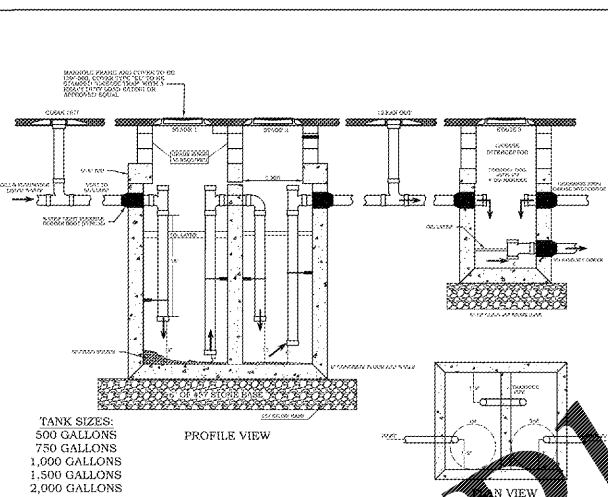
NOTES:  
 1. A MINIMUM ONE (1) HOUR ADVANCE NOTICE DURING REGULAR WORKING HOURS 8:00 A.M. TO 5:00 P.M., MONDAY THRU FRIDAY SHALL BE GIVEN TO AED INSPECTORS PRIOR TO BEGINNING ANY BACKFILL OPERATION OR ANY CONCRETE OR ASPHALT PAVING.  
 2. THE APPLICANT MUST OBTAIN PERMISSION FROM THE COUNTY ENGINEER BEFORE PLACING CONCRETE OR ASPHALT.  
 3. THIS DETAIL SUPERSEDES THE GEORGIA DEPARTMENT OF TRANSPORTATION STANDARD 1401 - "PAVEMENT PATCHING DETAIL".  
 4. IN WET AREAS, TYPE II FOUNDATION BACKFILL MATERIAL (657 STONE) WILL BE REQUIRED AS DIRECTED BY THE COUNTY ENGINEER.  
 5. ALL WORK SHALL BE IN ACCORDANCE WITH THE "AUGUSTA RICHMOND COUNTY RIGHTS-OF-WAY ENCROACHMENT FOR UTILITIES ORDINANCE".

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**AED UTILITY ROAD CUT DETAIL**  
AUD DETAIL 4.1.2

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TANK SIZES:  
 500 GALLONS  
 750 GALLONS  
 1,000 GALLONS  
 1,500 GALLONS  
 2,000 GALLONS

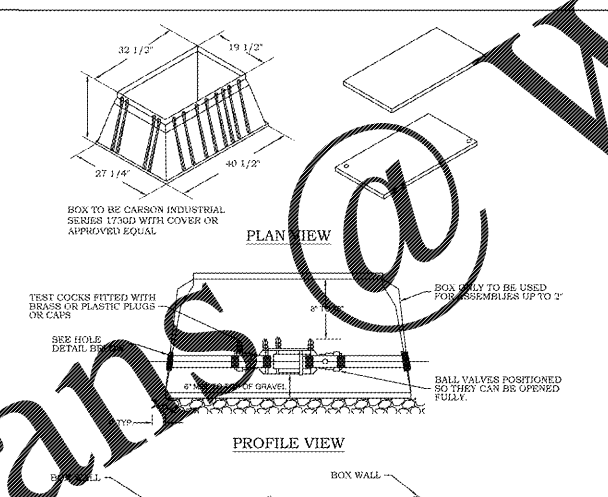
NOTES:  
 1. THERE SHALL BE A 2" DIFFERENCE IN THE INFLUENT AND EFFLUENT INVERT OF THE GREASE INTERCEPTOR.  
 2. REINFORCING SHALL BE PROVIDED AS REQUIRED FOR TOP, SIDES AND BOTTOM OF CONCRETE TANKS.  
 3. TANK AND MANHOLE ASSEMBLY SHALL BE CERTIFIED AS DESIGNED FOR BOTH PRESSURE, SURFACE OR IN-LOADING.  
 4. VALVE SHALL BE SET BEDDED WITH 457 STONE. (6" OF STONE WHEN PLACED ON HARD SURFACE, 12" OF STONE WHEN PLACED ON SANDY SURFACE).  
 5. THE MINIMUM COMPRESSIVE STRENGTH OF CONCRETE PRODUCTS SHALL BE 4000 PSI.  
 6. SWEET 60' BEHOLDERS ARE TO BE USED FOR THIS LARGEST SIZE TANKS.  
 7. TANK MUST BE COATED WITH CONSOL VULCAT L-1000 (1/2" THICKNESS INSIDE ONLY).  
 8. MUST BE PUMPED OUT EVERY 6 MONTHS.  
 9. IF CLEANOUT INSTALLED WITHIN TANK IT MUST BE OF THE PLUG TYPE.  
 10. MUST CONTACT SYSTEMS PROTECTION DIVISION 7211 BEFORE INSTALLATION.  
 11. ALL PIPING TO BE 4" UNLESS OTHERWISE NOTED.  
 12. THE FINISHING TANK THIRD STAGE OF A GREASE TRAP.

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**THREE STAGE OIL TRAP IN RECEPTOR**  
AUD DETAIL 5.5

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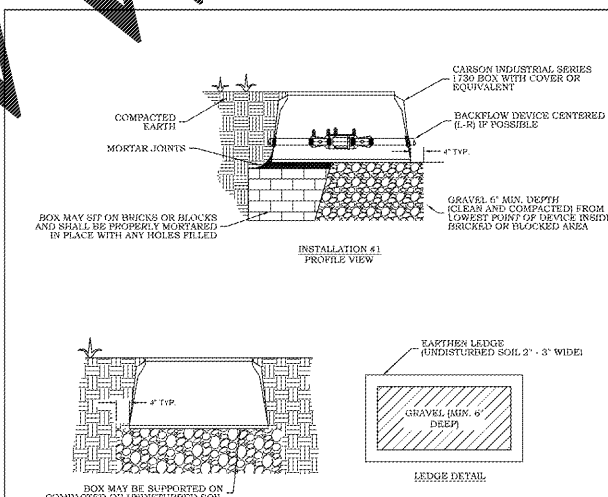
NOTE: PIPE CUTOUT HOLES MUST BE LARGER THAN WATER LINE AND SEALED WITH EXPANSION FOAM OR SILICONE CAULK INSIDE AND OUTSIDE THE BOX TO PREVENT DIRT AND WATER FROM ENTERING.

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**DOUBLE CHECK VALVE ASSEMBLY BELOW GROUND (2" AND SMALLER)**  
AUD DETAIL 5.2.1

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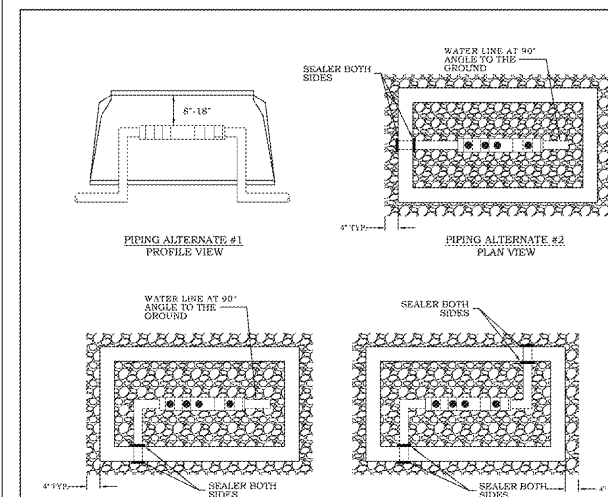
NOTE: OTHER TYPES OF INSTALLATION MAY BE NECESSARY DUE TO VARYING FIELD CONDITIONS. CONSULT WITH INSPECTOR BEFORE INSTALLING.

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**DOUBLE CHECK VALVE FOUNDATION VARIATIONS (2" AND SMALLER)**  
AUD DETAIL 5.4

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NOTES:  
 1. ASSEMBLY SHOULD BE CENTERED IN BOX TO ALLOW ACCESS FOR TESTING AND REPAIR.  
 2. BOX SHALL NOT REST ON WATER LINE.  
 3. ENTRY AND EXIT POINTS OF WATER LINE AND BOX MUST BE SEALED ON BOTH SIDES TO PREVENT ENTRY OF WATER AND DIRT. (REFERENCE DETAIL 5.1).  
 4. MINIMUM CLEARANCE TO BE MAINTAINED: 8" TO 18" FROM ASSEMBLY TO TOP OF BOX, 6" FROM BOTTOM OF ASSEMBLY TO TOP OF GRAVEL.

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**DOUBLE CHECK VALVE ASSEMBLY VARIATIONS (2" AND SMALLER)**  
AUD DETAIL 5.3

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 FAX (706) 724-3955  
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CLIENT: AUGUSTA, GA  
 555 TELFAIR STREET, AUGUSTA, GA 30901

PROJECT NAME: FIRE STATION #3

PROJECT LOCATION: 2646 GORDON HWY., AUGUSTA, GA 30909

PROJECT NO. 3042.1604  
 DRAWN BY: DRWN  
 CHECKED BY: CHK  
 DATE: 10/18/17  
 SHEET TITLE: CONSTRUCTION DETAILS 6 OF 7

SCALE: 1" = 20'

DRAWING NO. C-606  
 REV. 0

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