

# COTTONWOOD IMPROVEMENT DISTRICT

## SERVICE LINE SPECIFICATION

COTTONWOOD IMPROVEMENT DISTRICT  
8620 SOUTH HIGHLAND DRIVE  
SANDY, UT 84093  
801-943-7671

JANUARY 1, 1989  
REVISED April 16, 2014

Regulations for the installation of Sewer Service lines from the property line to the house to be installed by the property owner or a bonded contractor:

(ALL REGULATIONS ISSUED PRIOR TO THIS DATE ARE VOID)

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RESPONSIBILITIES OF THE PROPERTY OWNER OR  
HIS CONTRACTOR

It is the responsibility of the property owner or contractor to see that all permits are obtained, including road cutting permits when excavation is made into the public street.

It is the responsibility of the property owner or contractor to obtain proper locations for existing lines and stubs and that the lateral from the main to the property line is free from any obstructions.

It is the responsibility of the property owner or contractor to see that all safety standards and laws pertaining to the Federal Government (OSHA); and local government (State, County, District) are observed.

All 4" diameter service laterals must be laid on no less than a 2% slope. All 6" service laterals must be laid on no less than 1% slope. If these requirements can not be met, the building must use a sewer ejection pump.

## PIPE SPECIFICATIONS

### VITRIFIED CLAY

A. All Vitrified Clay Pipe installed in the District shall be Extra Strength Rubber Gasket Pipe with a wall thickness of not less than .625 (5/8 in.) and shall not be in greater lengths than five (5) feet.

B. All jointing of the pipe shall be of a rubber seal capable of a compression to eliminate all infiltration and exfiltration.

### A.B.S. PLASTIC PIPE

A. All A.B.S. Plastic Pipe installed in the District shall have a wall thickness of not less than .240 inches and shall meet the A.S.T.M. requirements D2661 specifications for A.B.S. Plastic drain, waste and vent pipe and fittings.

B. The joint of the pipe shall be either a rubber gasket joint pipe or a solvent weld joint pipe.

C. All plastic pipe fittings shall be wiped clean and dry of all foreign materials before any jointing is made.

### P.V.C. PLASTIC PIPE

A. All P.V.C. Plastic pipe installed in the District shall have a wall thickness of not less than .125 (1/8" inch) and shall meet the A.S.T.M. requirements D 1784 for P.V.C. compounds and A.S.T.M. D 2241-67 (SDR 35) for P.V.C. pipe.

**PIPE SIZE**

All pipe shall be four (4") inches in diameter or greater.

**PIPE INSTALLATION**

**A. EXCAVATION**

The excavation of the trench shall be the responsibility of the property owner or his designated contractor.

**B. BEDDING**

Excavate four (4) inches below the bottom of the pipe and refill to grade with 3/4" crushed gravel, thoroughly compacted into place, all at the property owners or contractor's expense for labor and material.

3/4" Minus crushed gravel shall meet the following specifications:

3/4 INCH CRUSHED GRAVEL

<u>SIEVE SIZE</u>	<u>PERCENT PASSING</u>
3/4	90-100
3/8	20-55
#4	0-10
38	0-5

If any trench at the bottom of the excavation is of unfit material or through the neglect of the contractor, the trench is excavated below the bottom of the grade of the pipe to be installed, it shall be refilled to grade with 3/4" minus crushed gravel, thoroughly compacted into place, at the property owner or contractor's expense for labor and material.

### **C. BLINDING**

After the pipeline has been properly installed and inspected by the District, it shall then be the responsibility of the property owner or contractor to blind the pipe line with 3/4 inch crushed gravel to a point twelve (12) inches above the pipe, bank to bank, and thoroughly compacted in place at the property owner or contractor's expense for all labor and material.

### **D. BACKFILL**

Backfilling of trenches, after proper inspection and bedding and blinding, shall be done in such a manner as not to disturb the pipe that has been bedded and tested.

All material used for backfill shall be free of asphalt, lumber, trash, and any foreign material and brought to the level of the original surface.

## **E. CLEANOUTS**

Cleanouts shall be installed on undisturbed ground or engineered fill only.

Cleanouts shall be installed on the property line, at all angles and changes of grade in excess of 45° and at every ninety (90) feet of pipeline extending into the property.

All cleanouts shall be installed in accordance with the attached detail drawings.

## **F. COUPLINGS**

All fittings and pipe shall be connected with the proper adapters. Fernco type couplers with stainless steel shear bands shall be used at all connections in the trench. 1-1/2" hold is required on all couplings. No hub couplings may be used on clean-out cap or plug only.

## G. INSPECTIONS AND TESTING

Installation of all sewer service lines from the property lines to the house (or unit) shall be inspected by the District Inspector.

It is the responsibility of the property owner or the contractor to notify the District before construction begins and to notify them when the line is ready for inspection twenty-four (24) hours prior to the inspection. Any line backfilled without inspection or proper permits will not be accepted for service.

All pipelines will be tested at the time of inspection with one of the following methods:

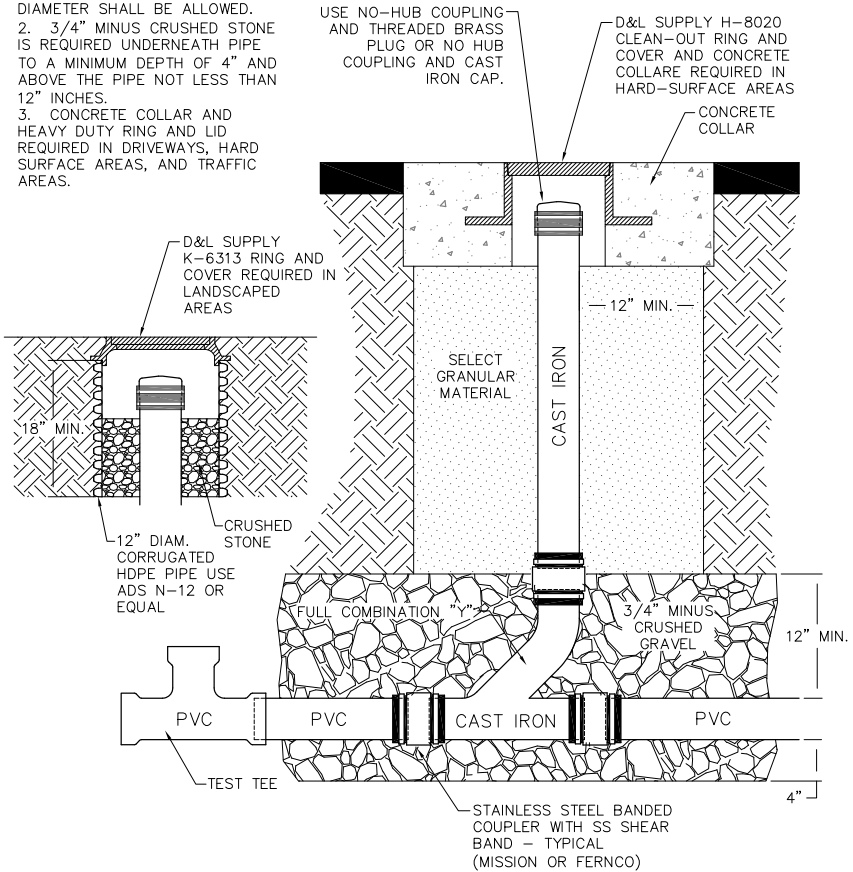
1. The line may be filled with water to an elevation of at least ten (10) feet above the flow of the pipe. There shall be no visual signs of leakage and the elevation of the water shall not drop.

2. The line may be tested by air-test as outlined in the District Specifications titled "Sanitary Sewer Pipeline Construction and Repair".



NOTES:

1. ONLY SELECT GRANULAR MATERIAL SHALL BE PLACED AROUND RISER PIPE TO A THICKNESS OF 12". NO PARTICLES LARGER THAN 1.5" IN DIAMETER SHALL BE ALLOWED.
2. 3/4" MINUS CRUSHED STONE IS REQUIRED UNDERNEATH PIPE TO A MINIMUM DEPTH OF 4" AND ABOVE THE PIPE NOT LESS THAN 12" INCHES.
3. CONCRETE COLLAR AND HEAVY DUTY RING AND LID REQUIRED IN DRIVEWAYS, HARD SURFACE AREAS, AND TRAFFIC AREAS.

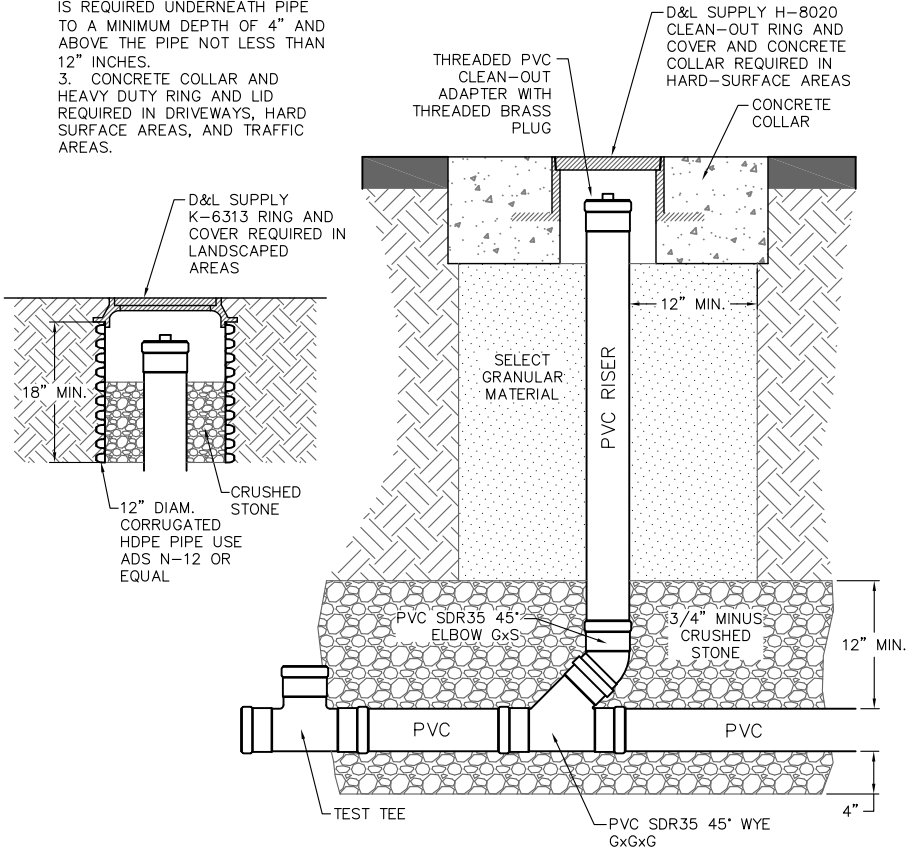


**DETAIL – CAST IRON  
CLEAN-OUT**

<b>COTTONWOOD IMPROVEMENT DISTRICT</b>	DATE: 2/23/99	<b>DWG. NO.</b>
	REVISIONS:	
<b>CAST IRON CLEAN-OUT</b>	11/12/2002, 6/26/2008,	<b>D4</b>
	4/22/2009	
	SCALE: NO SCALE	

NOTES:

1. ONLY SELECT GRANULAR MATERIAL SHALL BE PLACED AROUND RISER PIPE TO A THICKNESS OF 12". NO PARTICLES LARGER THAN 1.5" IN DIAMETER SHALL BE ALLOWED.
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3. CONCRETE COLLAR AND HEAVY DUTY RING AND LID REQUIRED IN DRIVEWAYS, HARD SURFACE AREAS, AND TRAFFIC AREAS.



**DETAIL – PVC SDR35  
CLEAN-OUT**

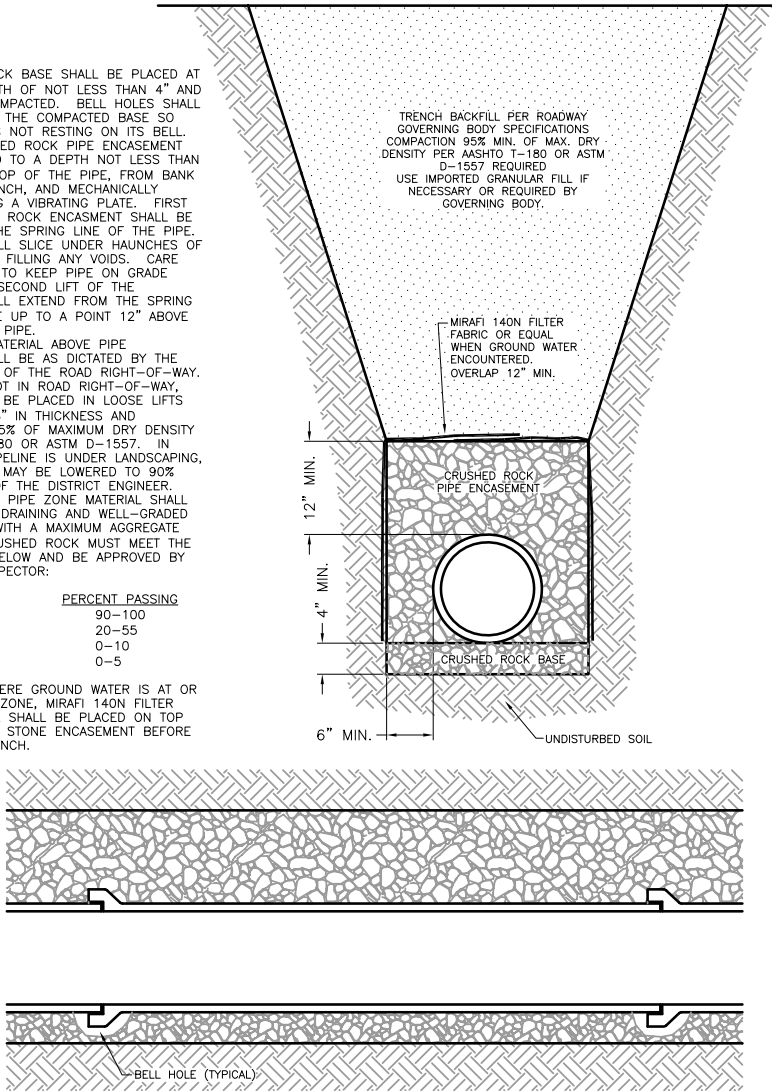
COTTONWOOD IMPROVEMENT DISTRICT	DATE: 2/3/2014	DWG. NO.
	REVISIONS:	
PVC SDR35 CLEAN-OUT	SCALE: NO SCALE	D4A

**NOTES:**

1. CRUSHED ROCK BASE SHALL BE PLACED AT GRADE TO A DEPTH OF NOT LESS THAN 4" AND MECHANICALLY COMPACTED. BELL HOLES SHALL BE EXCAVATED IN THE COMPACTED BASE SO THAT THE PIPE IS NOT RESTING ON ITS BELL.
2. TOTAL CRUSHED ROCK PIPE ENCASEMENT SHALL BE PLACED TO A DEPTH NOT LESS THAN 12" ABOVE THE TOP OF THE PIPE, FROM BANK TO BANK OF TRENCH, AND MECHANICALLY COMPACTED USING A VIBRATING PLATE. FIRST LIFT OF CRUSHED ROCK ENCASMENT SHALL BE PLACED UP TO THE SPRING LINE OF THE PIPE. CONTRACTOR SHALL SLICE UNDER HAUNCHES OF PIPE COMPLETELY FILLING ANY VOIDS. CARE SHALL BE TAKEN TO KEEP PIPE ON GRADE WHILE SLICING. SECOND LIFT OF THE ENCASMENT SHALL EXTEND FROM THE SPRING LINE OF THE PIPE UP TO A POINT 12" ABOVE THE TOP OF THE PIPE.
3. BACK FILL MATERIAL ABOVE PIPE ENCASEMENT SHALL BE AS DICTATED BY THE GOVERNING BODY OF THE ROAD RIGHT-OF-WAY. IF PIPELINE IS NOT IN ROAD RIGHT-OF-WAY, BACK FILL SHALL BE PLACED IN LOOSE LIFTS NOT EXCEEDING 8" IN THICKNESS AND COMPACTED TO 95% OF MAXIMUM DRY DENSITY PER AASHTO T-180 OR ASTM D-1557. IN AREAS WHERE PIPELINE IS UNDER LANDSCAPING, THE COMPACTION MAY BE LOWERED TO 90% WITH APPROVAL OF THE DISTRICT ENGINEER.
4. BEDDING AND PIPE ZONE MATERIAL SHALL BE CLEAN, FREE-DRAINING AND WELL-GRADED CRUSHED ROCK WITH A MAXIMUM AGGREGATE SIZE OF 1". CRUSHED ROCK MUST MEET THE SPECIFICATIONS BELOW AND BE APPROVED BY THE DISTRICT INSPECTOR:

SIEVE	PERCENT PASSING
3/4	90-100
3/8	20-55
#4	0-10
#8	0-5

5. IN AREAS WHERE GROUND WATER IS AT OR ABOVE THE PIPE ZONE, MIRAFI 140N FILTER FABRIC OR EQUAL SHALL BE PLACED ON TOP OF THE CRUSHED STONE ENCASMENT BEFORE BACK FILLING TRENCH.



COTTONWOOD IMPROVEMENT DISTRICT

**TYPICAL TRENCH SECTION**

DATE: 4/2/99

REVISIONS:

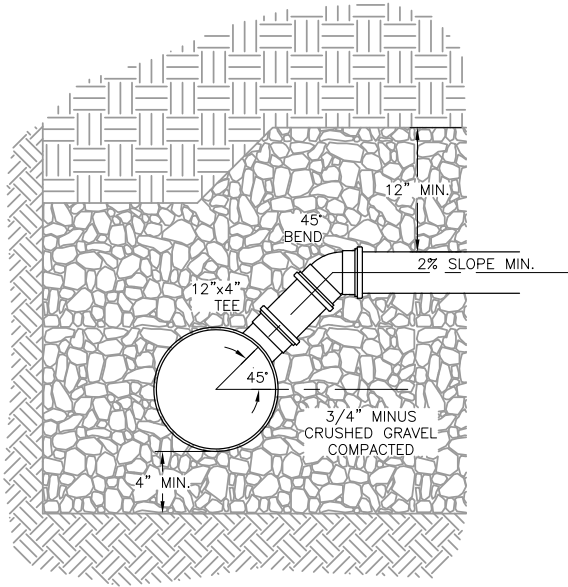
SCALE: NO SCALE

DWG. NO.

**D7**

NOTES:

1. "INSERTA-TEE" MAY BE USED FOR CONNECTION OF NEW SERVICE LINE TO EXISTING MAIN EXCEPT IN CASE WHERE A 6" SERVICE LINE IS TO BE CONNECTED TO AN 8" MAIN. A FACTORY TEE MUST BE USED IN ALL OTHER CASES.
2. IF SPECIAL CIRCUMSTANCES SUGGEST DEVIATING FROM THIS DETAIL, THE DISTRICT INSPECTOR OR ENGINEER MUST APPROVE CHANGES.
3. SLICE UNDER HAUNCHES OF PIPE TO FILL VOIDS. MECHANICALLY COMPACT GRAVEL.



SECTION

COTTONWOOD IMPROVEMENT DISTRICT

SERVICE LINE CONNCTION

DATE: 2/17/2000

REVISIONS:

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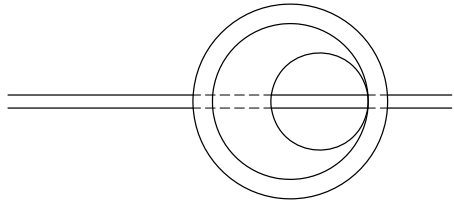
SCALE: 1"=1'

DWG. NO.

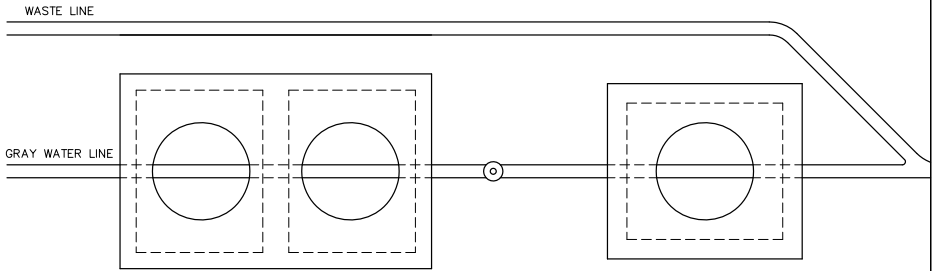
D8

**NOTES:**

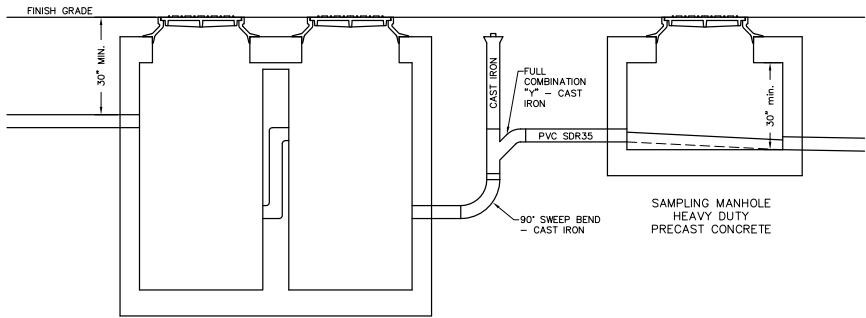
1. GREASE TRAP AND SAMPLING MANHOLE MUST BE TRAFFIC RATED WITH HEAVY DUTY CAST-IRON RING & COVER.
2. CAPACITY AND SIZE OF GREASE TRAP MUST BE PRE-APPROVED BY DISTRICT ENGINEER. CAPACITY SHALL BE LARGE ENOUGH TO LIMIT MAINTENANCE AND CLEANING TO ONCE PER MONTH. MINIMUM SIZE IS 1000 GAL.
3. ALL BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH DISTRICT STANDARDS AND SPECIFICATIONS.
4. ALL BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH DISTRICT STANDARDS AND SPECIFICATIONS.
5. CLEAN-OUT SHALL BE CAST IRON FROM TOP TO BOTTOM INCLUDING "Y" AND 90° BEND.
6. SAMPLING MANHOLE MAY BE 4' DIAMETER CIRCULAR MANHOLE OR 3.5'x3.5' MIN. INSIDE DIMENSIONS SQUARE BOX.
7. WASTE LINE AND GRAY WATER LINE CONVERGE DOWNSTREAM OF SAMPLING MANHOLE.



ALTERNATE 4' DIAM.  
HD CONCRETE  
SAMPLING MANHOLE



**PLAN**



GREASE INTERCEPTOR  
HEAVY DUTY  
PRECAST CONCRETE

SAMPLING MANHOLE  
HEAVY DUTY  
PRECAST CONCRETE

**SECTION**

**GREASE INTERCEPTOR AND SAMPLING MANHOLE**

COTTONWOOD IMPROVEMENT DISTRICT

DATE: 9/23/1999

DWG. NO.

**GREASE TRAP & SAMPLING MH**

REVISIONS:

1/27/2006 Min. Trap Size

**D10**

SCALE: 1/3"=1'