

# STANDARD SANITARY SEWER DETAILS

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### NOTE:

REFER TO TIMPANOGOS SPECIAL SERVICE DISTRICT FOR  
GREASE TRAP DETAIL

**SANITARY SEWER  
DETAILS**

DATE:  
**JANUARY 2015**

DRAWING NAME:  
**SS-0**

DRAWN BY:  
**ETL**

CHECKED: APPROVED:

#### REVISIONS

REV	DATE	BY	COMMENTS
1	6-25-15	JW	MAKING PRE-CAST AND CAST IN PLACE DETAILS

**SARATOGA  
SPRINGS CITY**

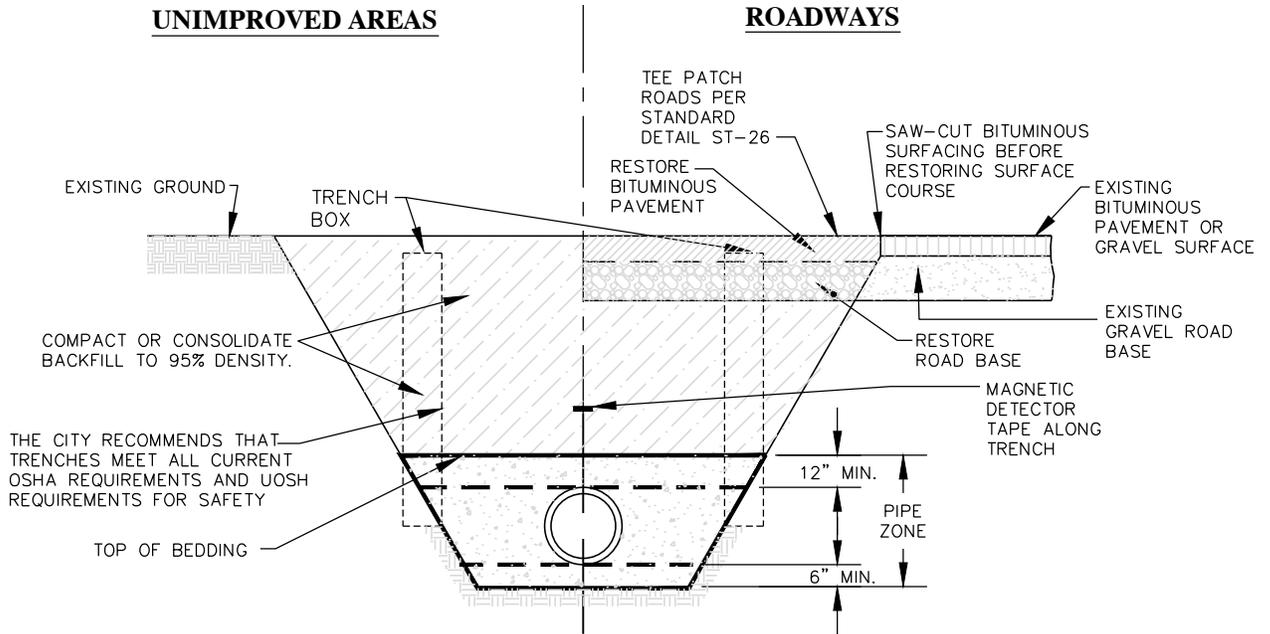
1307 N. COMMERCE DR.  
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UT 84045  
PHONE: 801-766-9793  
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STANDARD DETAILS

SANITARY SEWER

**SS-0**



**CROSS-SECTION: TYPICAL TRENCH**

**RECOMMENDED TRENCH QUANTITIES**

PIPE DIAMETER (INCHES)		RECOMMENDED MAXIMUM TRENCH WIDTH FOR FILL IN PIPE ZONE		RECOMMENDED MAXIMUM WIDTH FOR FILL & SURFACING ABOVE PIPE ZONE MEASURED AT TOP OF TRENCH CENTERED ON PIPE	
inches	mm	inches	mm	inches	mm
4	101.6	72	1828.8	96	2438.4
6	152.4	72	1828.8	96	2438.4
8	203.2	72	1828.8	96	2438.4
10	254.0	72	1828.8	96	2438.4
12	304.8	72	1828.8	96	2438.4
15	381.0	72	1828.8	96	2438.4
18	457.2	72	1828.8	96	2438.4
21	533.4	72	1828.8	96	2438.4
24	609.6	72	1828.8	96	2438.4
30	762.0	84	2133.6	108	2743.2
36	914.4	84	2133.6	108	2743.2
42	1066.8	96	2438.4	120	3048.0
48	1219.2	96	2438.4	120	3048.0
54	1371.6	108	2743.2	132	3352.8
60	1524.0	120	3048.0	144	3657.6

**NOTES:**

1. THE CITY RECOMMENDS CONTRACTOR MEET ALL OF THE REQUIREMENTS ESTABLISHED FOR SAFE TRENCHING. (SEE OSHA AND UOSH REQUIREMENTS, LATEST EDITIONS).
2. CONTRACTOR SHALL LOCATE ALL UNDERGROUND UTILITIES BEFORE LAYING PIPE WITHIN 50' OF SAID UTILITIES WHICH MAY BE EXPOSED, DAMAGED OR CROSSED AS SHOWN ON THE DRAWINGS OR AS "BLUE STAKED". THE CONTRACTOR WILL MAKE ARRANGEMENTS WITH THE UTILITY COMPANY TO MOVE THE UTILITY IF NECESSARY OR OBTAIN PERMISSION FROM THE CITY ENGINEER TO MODIFY GRADE OF PIPELINE IN ORDER TO GO AROUND UTILITIES.
3. TESTING: ALL NEW SANITARY SEWERS TO BE "TELEVISED" AND NECESSARY REPAIRS MADE BEFORE ACCEPTANCE. ALL LINES SHALL BE PRESSURE TESTED TO 3.5 psi MIN. FOR 5 MINUTES. A MANDRAL OR BALL CAN BE USED TO VERIFY DEFORMATION OF A PIPE AS DETERMINED FROM THE VIDEO UNLESS SPECIFIED OTHERWISE. MANHOLES SHALL BE TESTED AS PER CITY STANDARDS.

4. ALL SEWER LINES TO BE INSTALLED IN PUBLIC RIGHT-OF-WAY OR RECORDED SEWER EASEMENT UNLESS OTHERWISE APPROVED BY THE CITY ENGINEER.
5. WHERE COLLAPSIBLE SOILS ARE ENCOUNTERED, FURNISH, PLACE AND COMPACT IMPORTED BACKFILL MATERIALS AS REQUIRED AND AS DIRECTED.
6. MIN. DEPTH SHALL BE 4' TO TOP OF PIPE. A 2' SPACING MUST BE MAINTAINED BETWEEN ALL WATER LINE PIPE CROSSINGS AND THE TOP OF THE SEWER PIPE.
7. IF THE SEWER LINE IS NOT 13' DEEP A NOTE MUST BE PLACED ON THE PLAT "SHALLOW SEWER DEPTHS. BEFORE EXCAVATING BASEMENTS, CONTRACTOR MUST VERIFY SEWER DEPTH"
8. MAX. DEPTH SHALL BE 20' TO THE TOP OF PIPE UNLESS APPROVED OTHERWISE BY THE CITY ENGINEER.
9. INSTALL MAGNETIC DETECTOR TAPE 3' ABOVE PIPE.
10. IN ROCKY SUB-GRADES A MINIMUM OF 18" CLEARANCE ON ALL SIDES OF THE PIPE SHALL BE PROVIDED.

**STANDARD SEWER TRENCH**

DATE:  
**JANUARY 2015**

DRAWING NAME:  
**SS-1**

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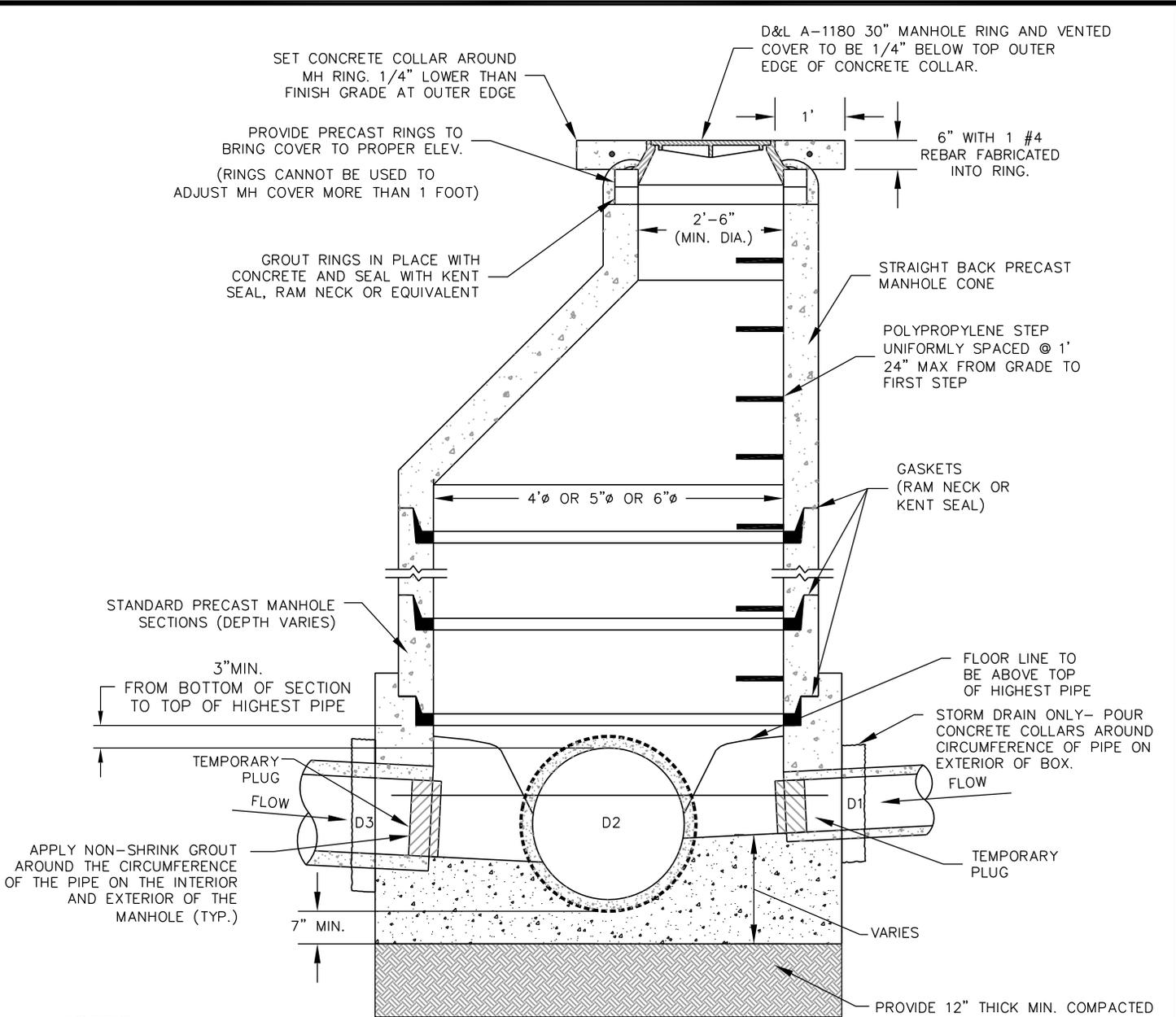
**SARATOGA SPRINGS CITY**

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STANDARD DETAILS

SANITARY SEWER

**SS-1**



**NOTES:**

1. PRE-CAST BASES ARE REQUIRED. POURED-IN-PLACE BASES ARE ALLOWED ONLY ON EXISTING SEWER. SEE SS-2A FOR CAST IN PLACE BASE
2. AFTER ALL GRADING AROUND MANHOLE HAS BEEN COMPLETED AND FINAL SURFACING IS IN PLACE REMOVE TEMPORARY PLUGS, DEBRIS AND PLYWOOD FROM INSIDE OF MANHOLES.
3. MANHOLES DEEPER THAN 20 FEET SHALL HAVE AN 18" THICK CONCRETE BASE.
4. CONE AND WALL SECTIONS SHALL CONFORM WITH ASTM C-478 STANDARD
5. ALL MANHOLES TO BE HS-20 RATED
6. MANHOLES WITH SOLID LIDS MUST BE EPOXY LINED.
7. MANHOLES OUTSIDE OF ROW SHALL HAVE SOLID LOCKING LIDS.
8. FLAT CAST RINGS ARE NOT PERMITTED
9. LID SHALL BE VENTED AND MARKED SS SEWER

**PRE-CAST  
SANITARY SEWER  
MANHOLE**

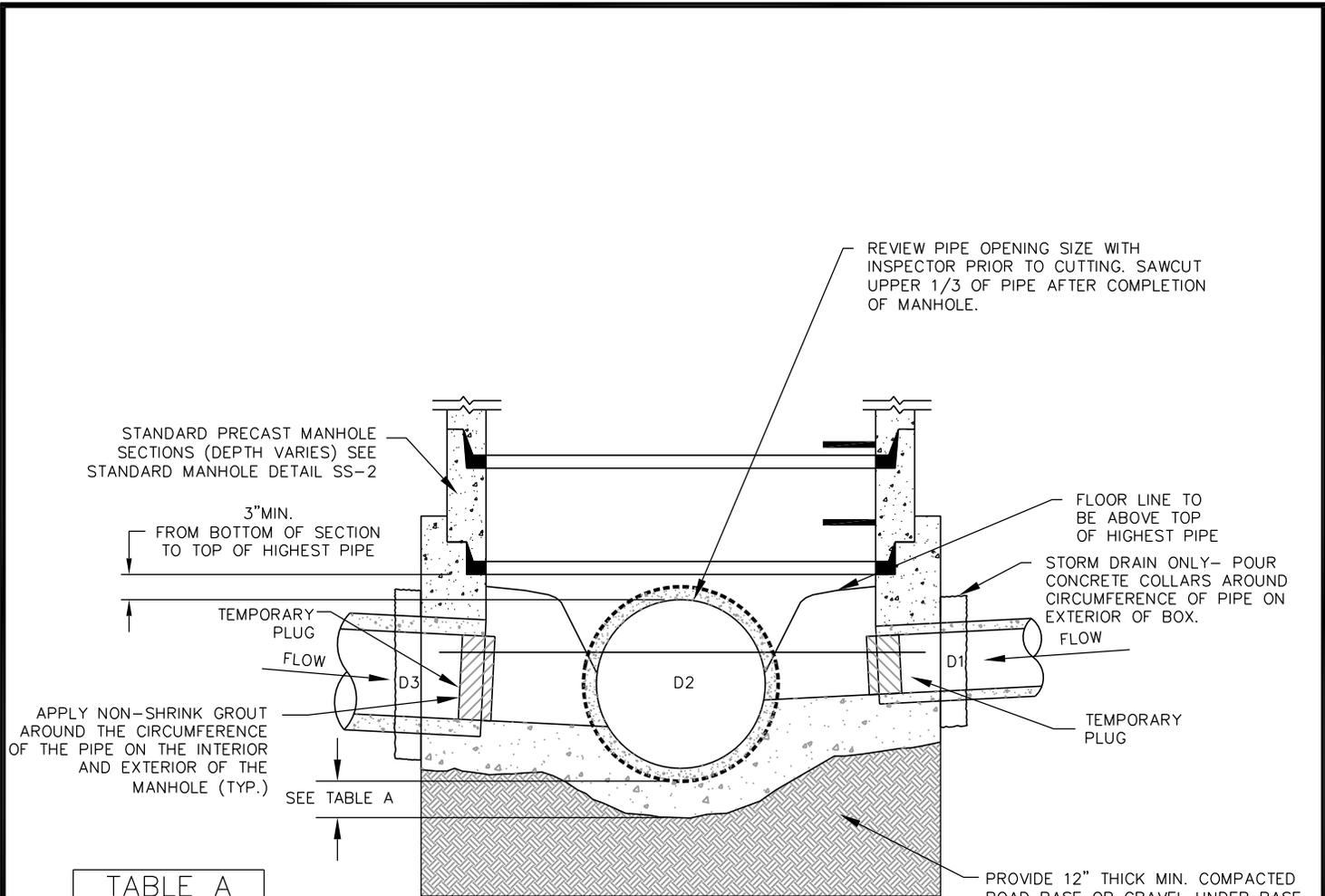
DATE: <b>JANUARY 2015</b>		REVISIONS	
DRAWING NAME: <b>SS-2</b>		REV. DATE BY	COMMENTS
DRAWN BY: <b>ETL</b>		1 6-25-15 JW	MAKING PRE-CAST AND CAST IN PLACE DETAILS
CHECKED: APPROVED:		SARATOGA SPRINGS CITY	
		1307 N. COMMERCE DR. #200, SARATOGA SPRINGS, UT 84045 PHONE: 801-766-9793 FAX: 801-766-9794	



STANDARD DETAILS

SANITARY SEWER

**SS-2**



REVIEW PIPE OPENING SIZE WITH INSPECTOR PRIOR TO CUTTING. SAWCUT UPPER 1/3 OF PIPE AFTER COMPLETION OF MANHOLE.

STANDARD PRECAST MANHOLE SECTIONS (DEPTH VARIES) SEE STANDARD MANHOLE DETAIL SS-2

3" MIN. FROM BOTTOM OF SECTION TO TOP OF HIGHEST PIPE

FLOOR LINE TO BE ABOVE TOP OF HIGHEST PIPE

STORM DRAIN ONLY- POUR CONCRETE COLLARS AROUND CIRCUMFERENCE OF PIPE ON EXTERIOR OF BOX.

TEMPORARY PLUG

TEMPORARY PLUG

APPLY NON-SHRINK GROUT AROUND THE CIRCUMFERENCE OF THE PIPE ON THE INTERIOR AND EXTERIOR OF THE MANHOLE (TYP.)

SEE TABLE A

PROVIDE 12" THICK MIN. COMPACTED ROAD BASE OR GRAVEL UNDER BASE.

TABLE A	
DEPTH	FLOOR THICKNESS
0-20'	10"
20' OR MORE	18"

**NOTES:**

- POURED-IN-PLACE BASES ARE ALLOWED ONLY ON EXISTING SEWER MAINS, WHEN ACCEPTED BY ENGINEER.
- AFTER ALL GRADING AROUND MANHOLE HAS BEEN COMPLETED AND FINAL SURFACING IS IN PLACE REMOVE TEMPORARY PLUGS, DEBRIS AND PLYWOOD FROM INSIDE OF MANHOLES.
- CONE AND WALL SECTIONS SHALL CONFORM WITH ASTM C-478 STANDARD
- ALL MANHOLES TO BE HS-20 RATED
- MANHOLES WITH SOLID LIDS MUST BE EPOXY LINED.
- MANHOLES OUTSIDE OF ROW SHALL HAVE SOLID LOCKING LIDS.
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**CAST IN PLACE  
SANITARY SEWER  
MANHOLE**

DATE: **JANUARY 2015**

DRAWING NAME: **SS-2**

DRAWN BY: **ETL**

CHECKED: \_\_\_\_\_ APPROVED: \_\_\_\_\_

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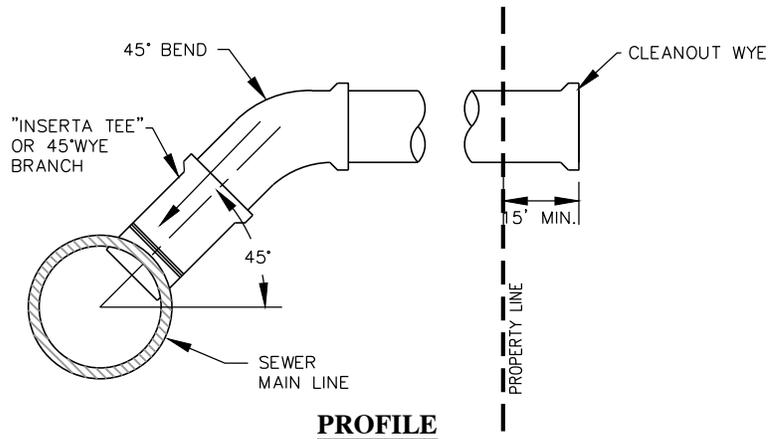
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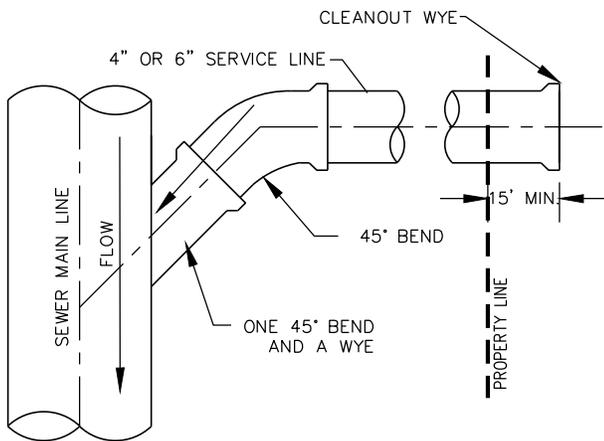
STANDARD DETAILS

SANITARY SEWER

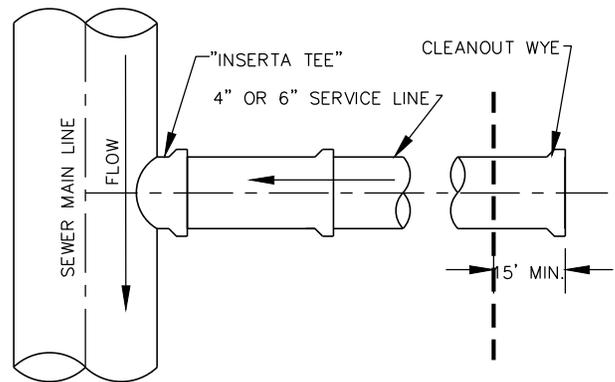
**SS-2A**



**PROFILE**



**PLAN VIEW- 45° WYE BRANCH**



**PLAN VIEW- "INSERTA TEE"**

**NOTES:**

1. ALL RESIDENTIAL SERVICES SHALL BE 4" DIAMETER. NON-RESIDENTIAL SHALL BE 6" DIAMETER UNLESS DIRECTED OTHERWISE AND SHALL BE EXTENDED FROM MAIN LINES TO PROPERTY LINES.
2. EVERY RESIDENTIAL UNIT SHALL HAVE A SEPARATE SEWER LATERAL.
3. MINIMUM GRADE SHALL BE 2% FOR SERVICE LINES.
4. ALL 90° BENDS AT CONNECTION TO MAIN MUST BE CONSTRUCTED WITH ONE 45° BEND AND A WYE.
5. DIRECT NOSE ON IS ALLOWED WHEN CONNECTING TO EXISTING MAIN LINE. USE RUBBER BOOT AS PER CITY WITH STAINLESS STEEL STRAPS, IF REQUIRED. CORE CUT EXISTING PIPE, DO NOT BREAK OUT WITH A HAMMER.
6. NOTIFY CITY 24 HOURS IN ADVANCE OF ANY CONNECTION. EVERY CONNECTION TO BE INSPECTED BY CITY.
7. CONNECTION TO USERS TO BE DONE BY OTHERS.
8. CAST IRON WYE'S ARE REQUIRED FOR ALL NON-RESIDENTIAL CONNECTIONS.

**SEWER SERVICE CONNECTION**

DATE: <b>JANUARY 2015</b>	REVISIONS	
DRAWING NAME: <b>SS-3</b>	REV	DATE BY COMMENTS
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STANDARD DETAILS

SANITARY SEWER

**SS-3**