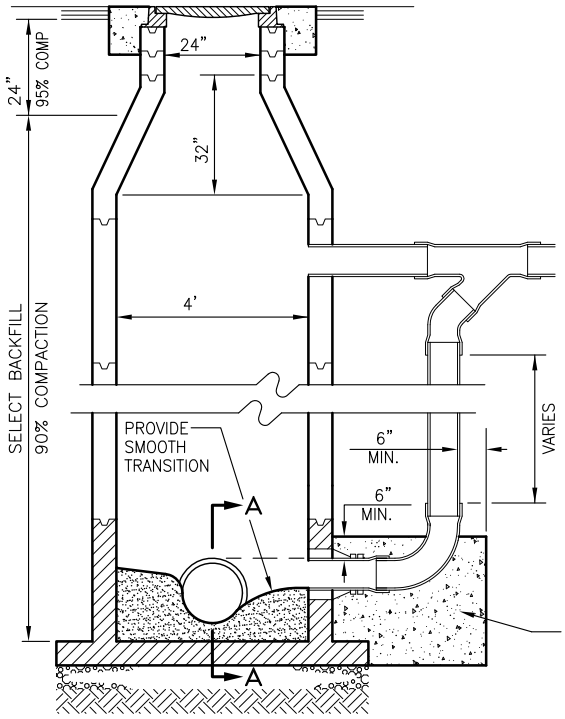
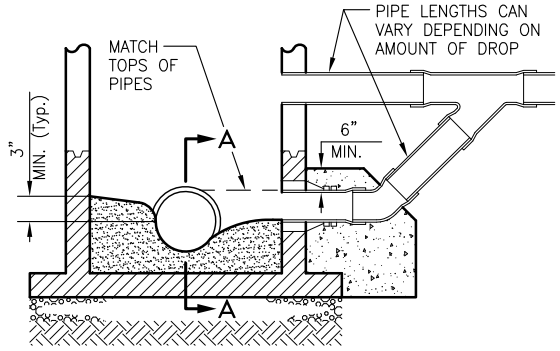
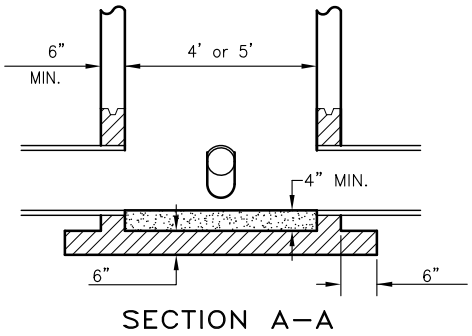


TYPE 'A' DROP INLET



TYPE 'B' DROP INLET



SECTION A-A

COVER:
Manhole frame and cover shall have a 24" clear opening and a sealed blind pickhole (SBF-1900 or approved equal). The cover shall be lettered "SANITARY SEWER". The inside of the frame shall be grouted with non-shrink grout.

ADJUSTMENT TO GRADE:
Adjust to grade per Engineering Standard #6040.

COLLAR:
Collar shall be constructed per Engineering Standard #6040.

CONE:
Cone shall be concentric and conform to the requirements for risers. Eccentric cones may be used only in special cases with the prior written approval of the Utilities Department.

MANHOLE RISERS:
Manhole risers shall be precast concrete conforming to ASTM C-478, and shall have a 6" wall thickness with minimal reinforcements. Manholes shall be 4' in diameter unless the size and/or number of inlet(s) and outlet(s) warrants the use of a 5' diameter manhole.

JOINTS:
Joints shall be set with butyl rubber sealant (RUB-R-NEK). Inside of joints shall be grouted with non-shrink grout.

BASE:
Manhole base shall be precast reinforced Class 3 concrete with extended base and conform to the requirements for manhole risers. All pipe connections shall be cored to fit flexible connectors (KOR-N-SEAL or equal) either by manufacturer or contractor using approved equipment. The precast base shall be bedded on a minimum of 6" of well graded crushed rock over native material that is either undisturbed or compacted to 95%.

Crushed Rock Sieve Analysis	
100% Passing	1"
90-100% Passing	¾"
20-55% Passing	⅜"
0-10% Passing	3/16"
0-5% Passing	3/32"

INVERT:
Invert shall be completed in a single pour using Class 3 concrete with steel trowel finish. Any change in direction shall be a fixed radius curve extending from the inlet wall to the outlet wall. Inside surface of invert and area between pipe connection and channel shall be free from gaps, holes and sharp edges. All inlets shall be designed and installed such that the top of pipe elevations match as much as possible.

TESTING:
The manhole shall be inspected and the contractor shall vacuum-test the manhole prior to placement of backfill, and again after backfill is completed and cover is set at grade.

The Contractor shall give the City 48 hours notice prior to testing the manhole.

The Contractor shall block the flexible connectors against the manhole walls during the vacuum test.

Should the manhole fail the test, it will be the Contractor's responsibility to make whatever repairs are necessary to make the manhole pass the vacuum test.

The Contractor shall perform the test as follows:
All inlets to the manhole will be plugged, a test head will be placed in the top of the manhole and a seal inflated to seal off the manhole. A vacuum of 10" of mercury will be drawn on the manhole, and a time measured for the vacuum to drop to 9" of mercury. The manhole shall pass the test if the time for the vacuum drop meets or exceeds the value (in seconds) from the following table:

Manhole Depth	Diameter 4'	5'
4'	10 sec.	13 sec.
6'	15	20
8'	20	26
10'	25	33
12'	30	39
14'	35	46
16'	40	52
18'	45	59
20'	50	65

TYPE "B" SHALL BE USED ONLY WHEN AMOUNT OF DROP IS TOO LITTLE FOR TYPE "A"

REVISIONS	BY	APP	DATE
New border	*JDL*	*WAP*	*9-97*
Contractor Vac Test	*SR*	*WAP*	*10-96*
Conc. Slurry note added	*JDL*	*JDW*	*5-02*
STANDARD CURRENT AS OF:	January 2010		

city of san luis obispo

SEWER DROP MANHOLE

6620