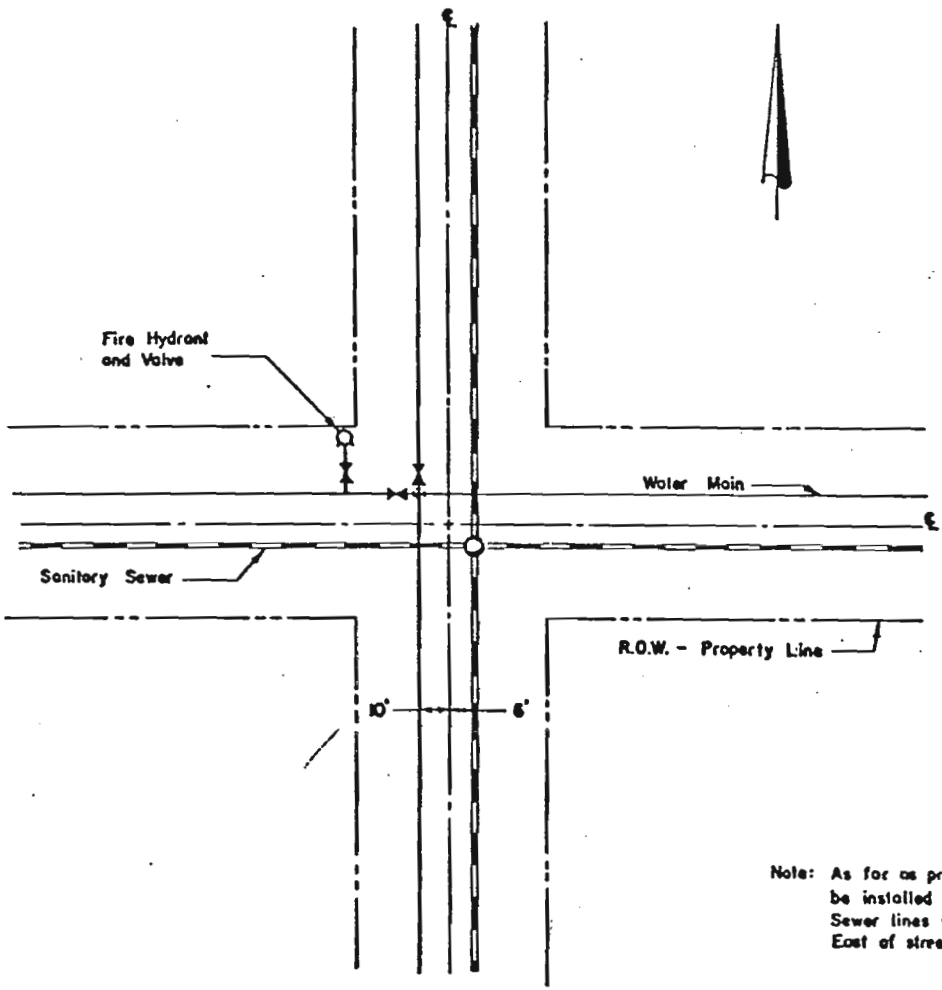
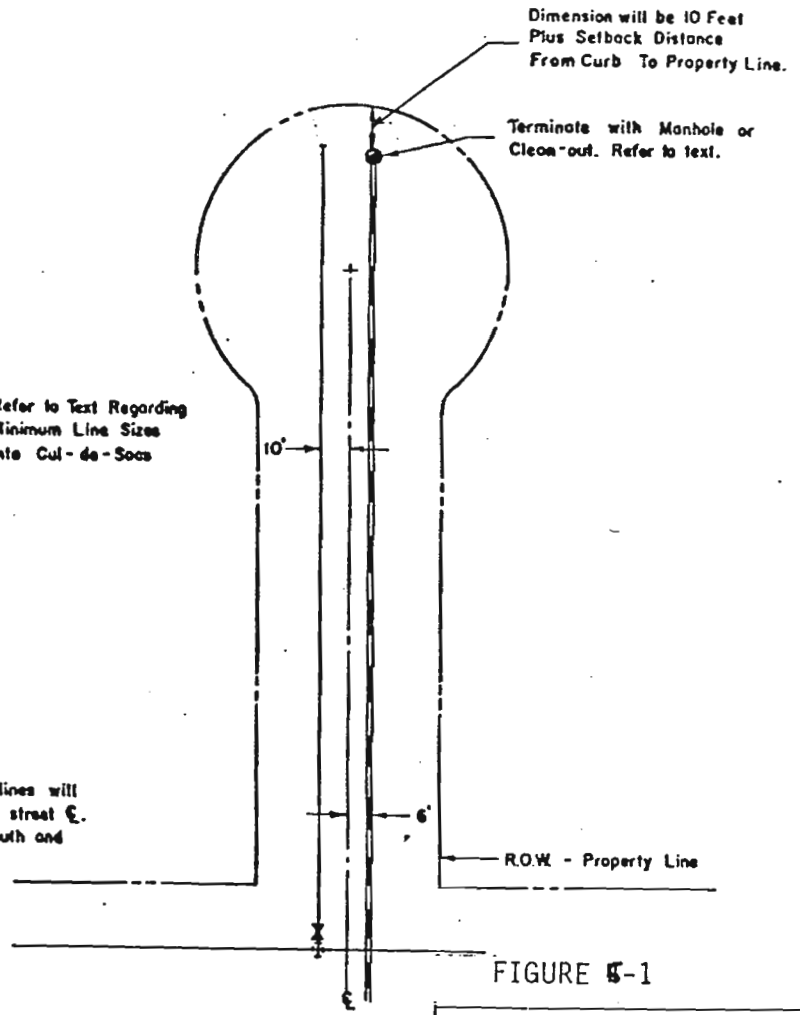
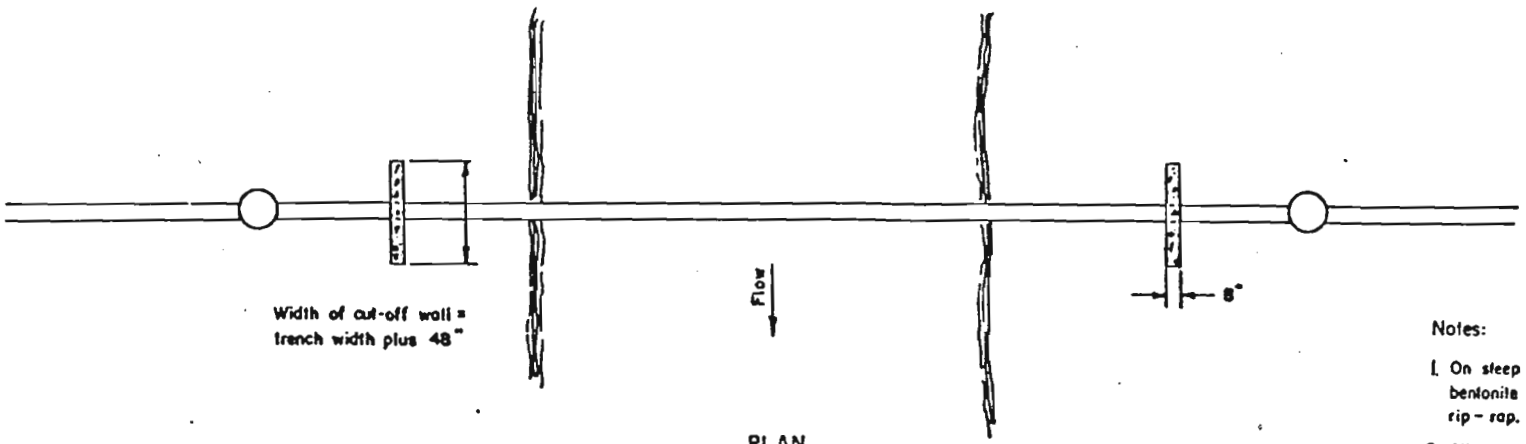




Note: As far as practible, all water lines will be installed North and West of street ℄. Sewer lines will be installed South and East of street ℄.

FIGURE 5-1

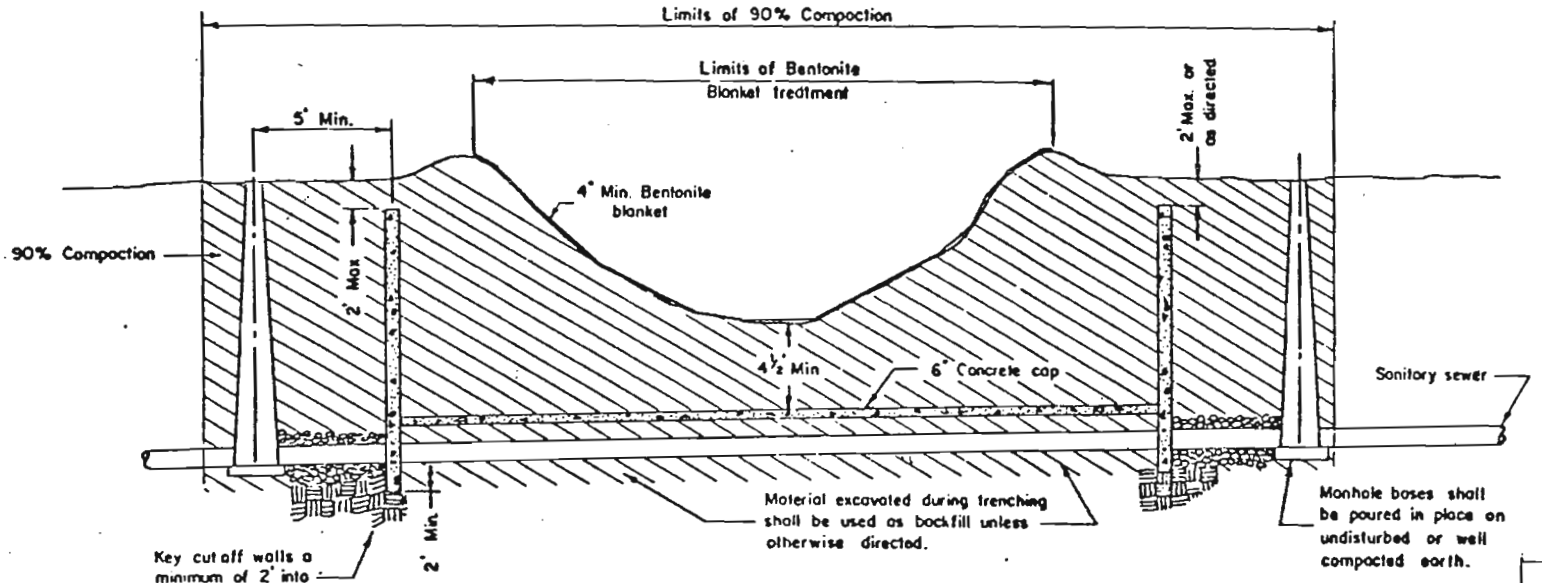
MAIN LOCATIONS IN THRU STREETS & CUL-DE-SACS



PLAN
Concrete cap not shown

Notes:

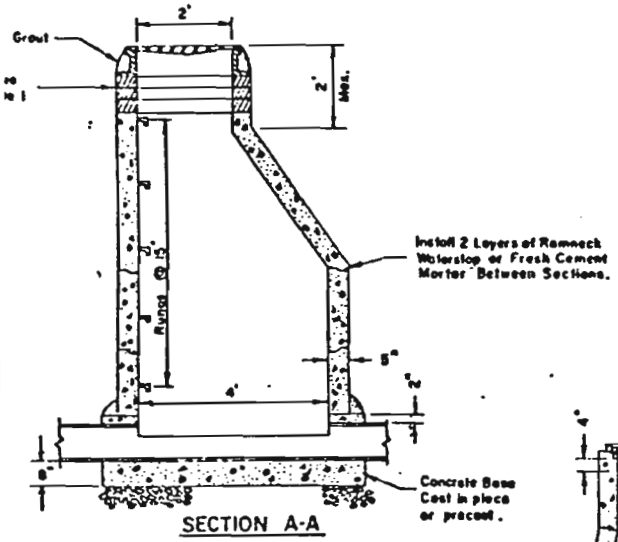
1. On steep slopes or as required by ditch company, bentonite blanket shall be protected by 1'-0" min. rip - rap.
2. All open cut crossings shall conform explicitly to these specifications or those of the ditch company, whichever is the more stringent.



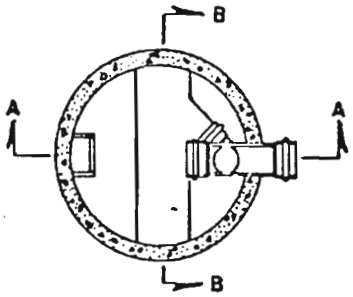
PROFILE
No Scale

FIGURE 5-2

CUT-OFF WALL DETAILS
for OPEN CUT DITCH and
RIVER CROSSINGS

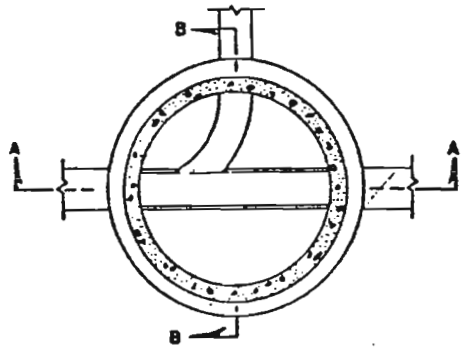


SECTION A-A

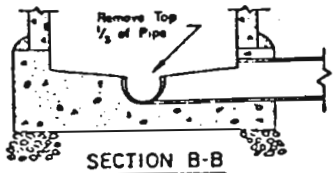


SECTION C-C

NOTES:
1. Plaster outside all brickwork when brick is used to raise manhole to final grade.
2. Maximum pipe size for inside drop manholes shall not exceed 8". Drop pipe and elbow shall be Johns-Manville Ring Tite sewer pipe only.
3. Inside drop pipe shall be secured to wall with aluminum strap and expansion bolts.
4. All manhole bases shall have a troweled finish.
5. All manhole bases shall be set on a minimum of 12" of approved trench gravel. Continuity with pipe bedding shall be assured.
6. Provide Flexible Joints A Maximum of 18" from manhole walls.

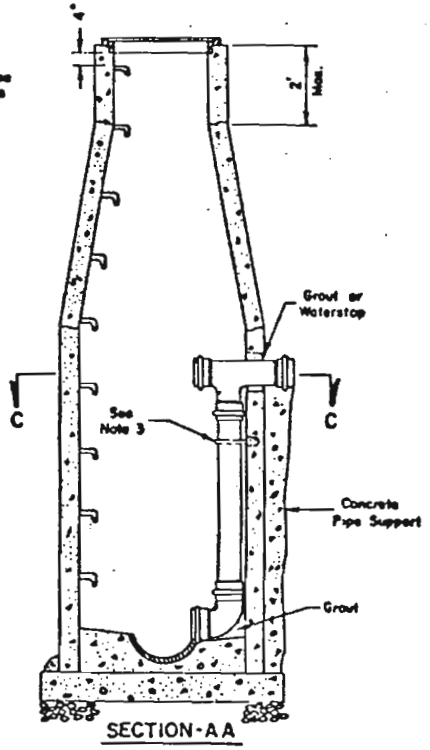


BASE PLAN

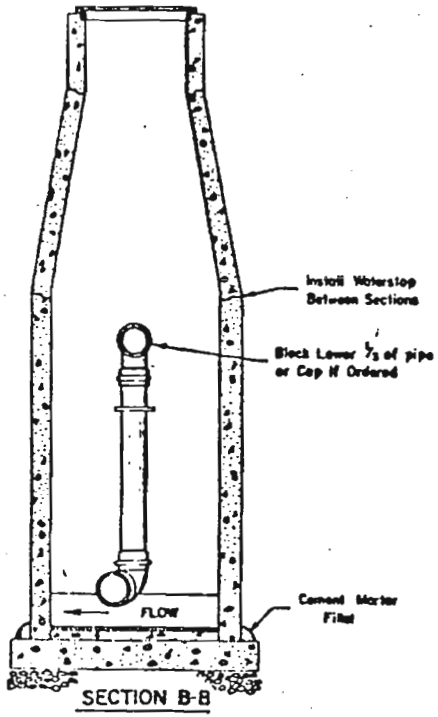


SECTION B-B

FLOW-THROUGH MANHOLE with LATERAL

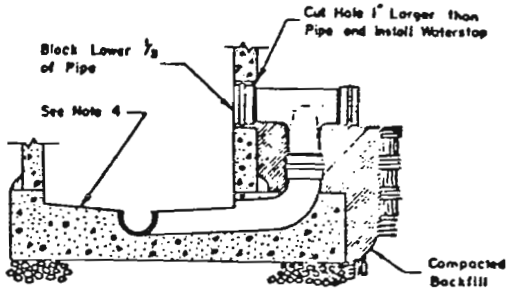


SECTION-AA



SECTION B-B

INSIDE DROP MANHOLES



OUTSIDE DROP MANHOLES

FIGURE 5-3

STANDARD MANHOLE DETAILS

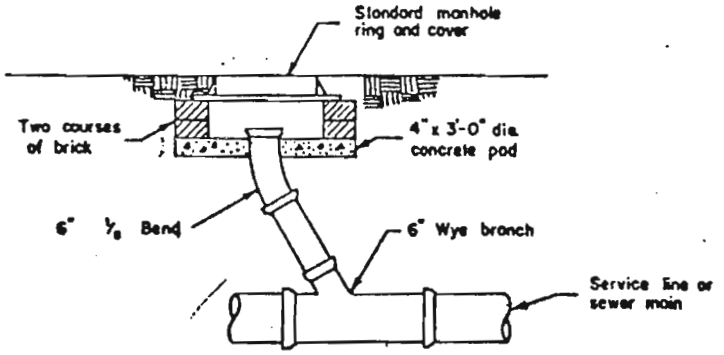
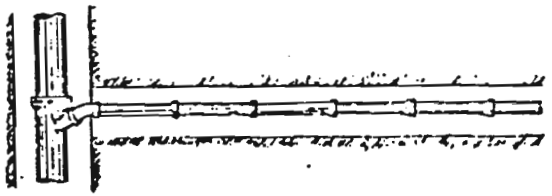
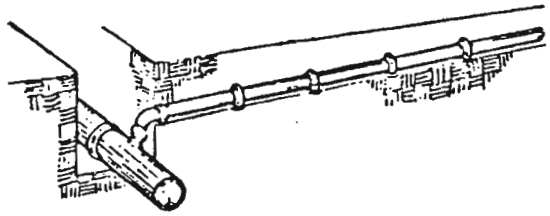


FIGURE 5-4

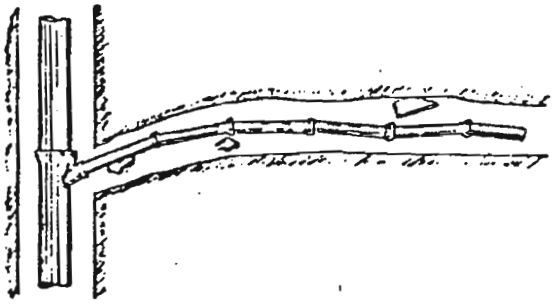
SEWER CLEAN-OUT DETAILS

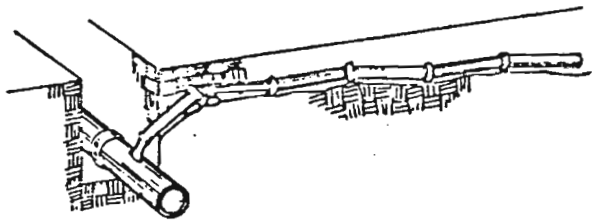




CORRECT

Straight alignment and proper fitting give tight joints and maximum strength. Bell holes allow pipe to be uniformly supported on barrel. Uniform grade of not less than $\frac{1}{8}$" drop per foot of run





INCORRECT

Unnecessary curves and improper fitting impedes flow and reduces carrying capacity. Uneven bedding, lack of bell holes and rocks or debris in trench ma couse shifting of pipe during backfilling or inadequate support of the pipe.

FIGURE 5-5

TYPICAL SEWER SERVICE LINE INSTALLATION

General Notes:

1. No vent terminal with Return Bend shall be located directly beneath any floor, window, or other ventilating opening of the building or adjacent building nor shall any vent terminal be within 12 feet horizontally of such an opening unless it is at least 3 feet above the top of such opening. Any vent terminal which may, at any time, vent flammable or toxic gas, shall terminate not less than 10 feet above grade. Vent terminals extending through a wall shall be at least 12 feet horizontally from any building line and shall be turned to provide a downward opening. Vent terminals shall be screened.

2. Location of trap and piping depends on fire regulations. If a gas tight cover is provided, trap may be installed inside. Extra heavy cast iron soil pipe is required if inside or within 5 feet of building.

3. Dimension 'B' is a minimum of 24" for sand traps only.

4. Dimension 'C' is a maximum of 18" for combination oil and sand traps.

5. Minimum capacity of oil and sand traps shall be 6 cubic feet plus 1 cubic foot for each 300 gallons used during a 24 hour period. Flow rate shall not exceed the rated capacity and shall operate at a minimum overall efficiency of 90%.

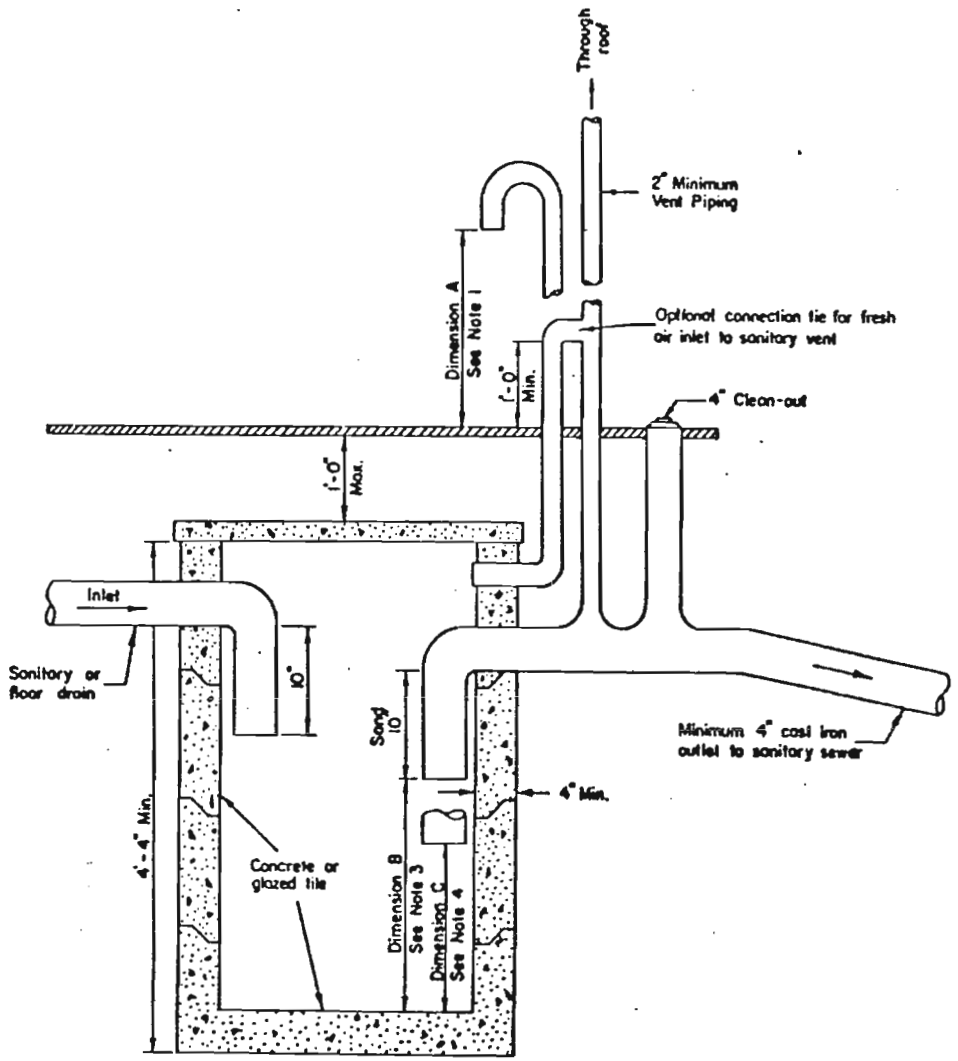


FIGURE 5-6

COMBINATION OIL, GREASE AND SAND INTERCEPTOR