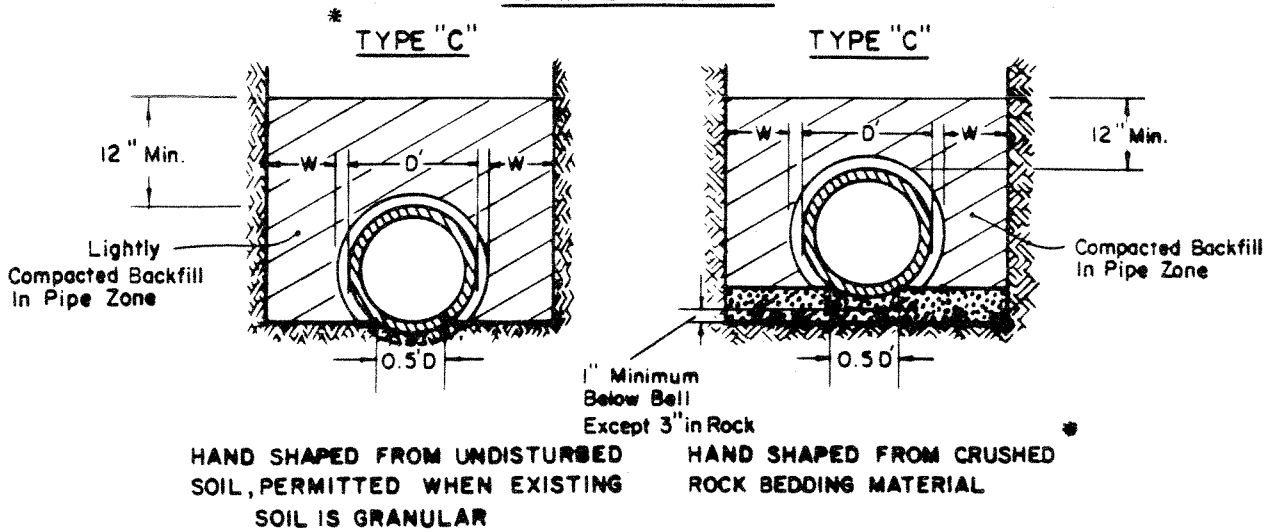


**TYPE "A" - UNPREPARED BEDDING**

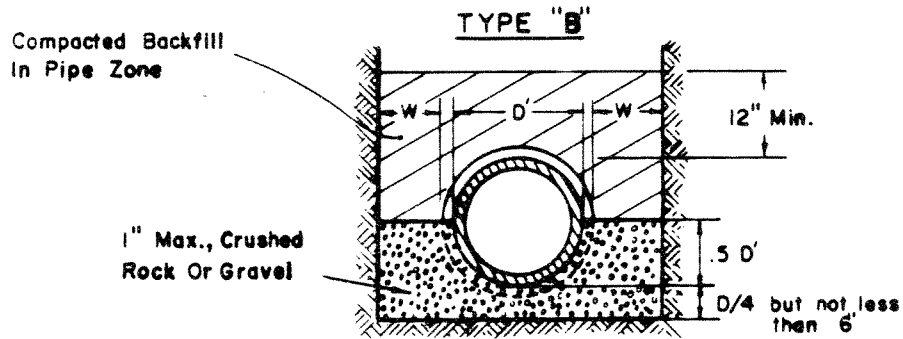
This type of bedding will not be permitted.

**NORMAL BEDDING**



**LOAD FACTOR 1.5**

**\* ANGULAR MATERIAL - BEDDING AND CRADLE**



**LOAD FACTOR 1.9**

D=OUTSIDE DIAMETER  
 W=(SEE STANDARD SPECIFICATIONS FOR EARTHWORK)

**LAS VIRGENES MUNICIPAL WATER DISTRICT**

PREPARED BY  
 BOYLE  
 ENGINEERING

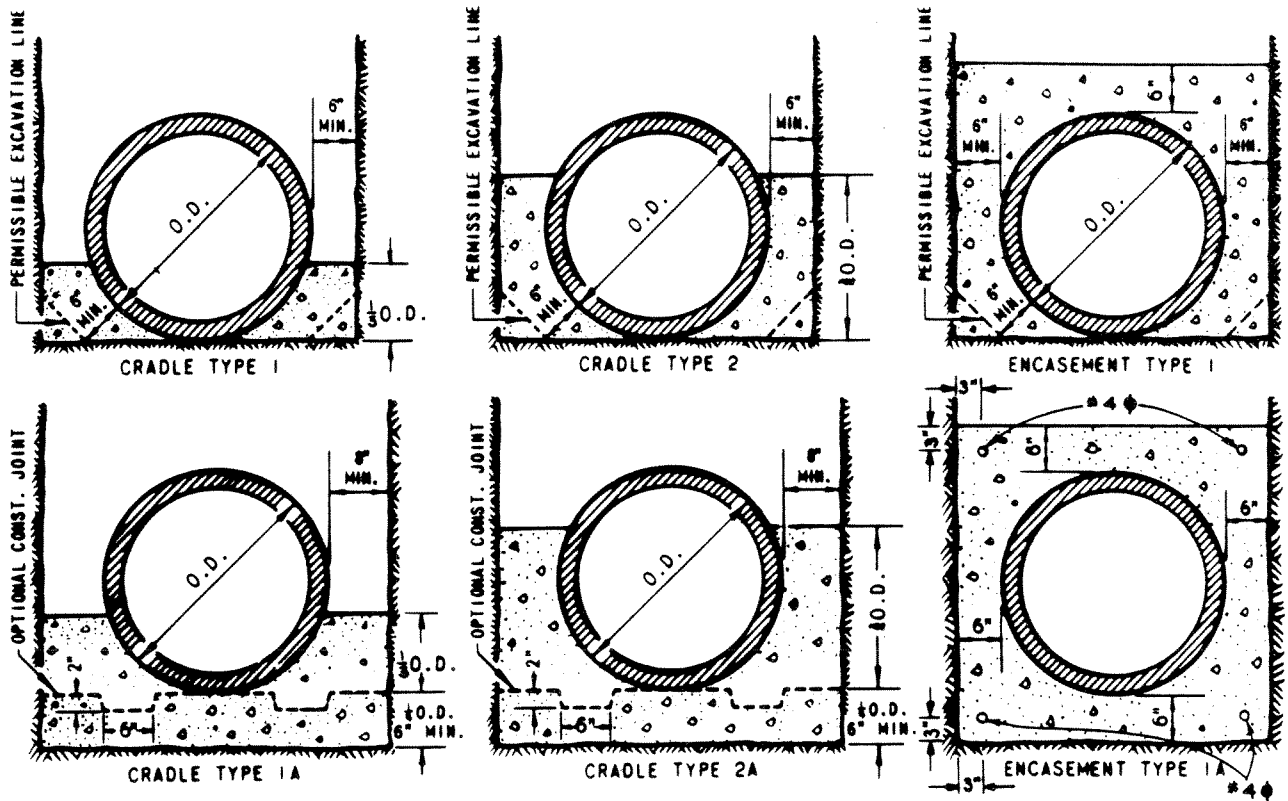
**PIPE BEDDING**

STD. DWG. NO.

IS

DATE: APRIL, 1966

\*REVISED 4-8-71



NOTES

1. All concrete for cradles and encasements shall be Class "B".
2. The concrete for Cradles Type 1 and 2 and Encasement Type 1 shall not be poured against trench sheeting or forms or on loose material in the trench bottom but shall be poured against and on the undisturbed trench walls and bottom.
3. The concrete for Cradles Type 1A and 2A and Encasement Type 1A may be poured against trench sheeting or forms or against the trench walls but shall not be poured on loose material in the trench bottom.
4. When the maximum allowable trench width has been exceeded and a cradle is required by THE EARTHWORK SECTION OF Standard Specifications, the pipe shall be cradled with Type 1 or Type 2 if the trench is in firm ground, or Type 1A or Type 2A if the trench is in yielding ground. If the trench width is less than one and one half times the maximum allowed by the specifications without cradle or if the cover on the pipe is less than ten feet Type 1 or 1A shall be used. If the trench width is more than one and one half times the maximum allowed by the specifications without cradle and the cover is ten feet or more Type 2 or 2A shall be used.

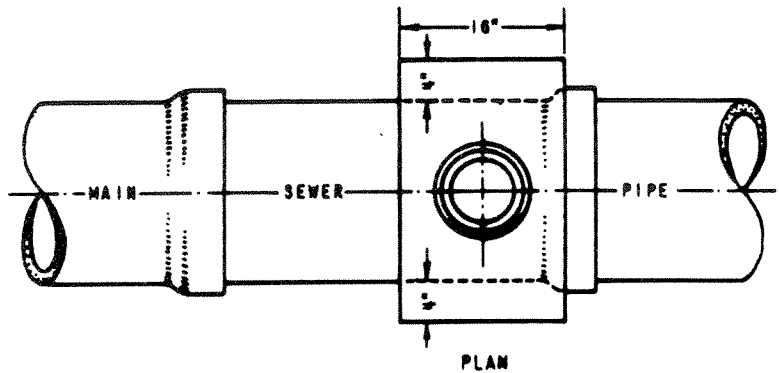
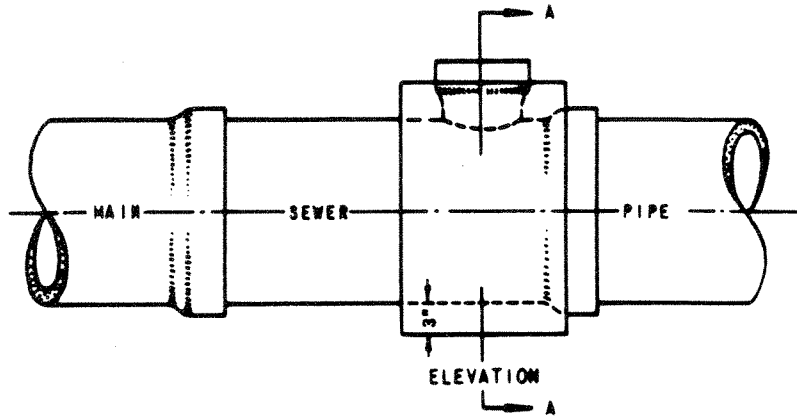
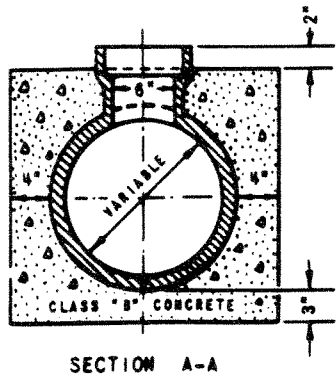
LAS VIRGENES MUNICIPAL WATER DISTRICT

PREPARED BY  
BOYLE  
ENGINEERING

STD. CONCRETE CRADLES  
& ENCASEMENTS

STD. DWG. NO.  
2 S

DATE JUNE 67



LAS VIRGENES MUNICIPAL WATER DISTRICT

PREPARED BY  
BOYLE  
ENGINEERING

STANDARD "T" FOUNDATION

STD. DWG. NO.

3 S

DATE: APRIL, 1966

This Standard Drawing is per County Engineer Standard S-27, Department of County Engineer, Los Angeles County. (October 23, 1964)

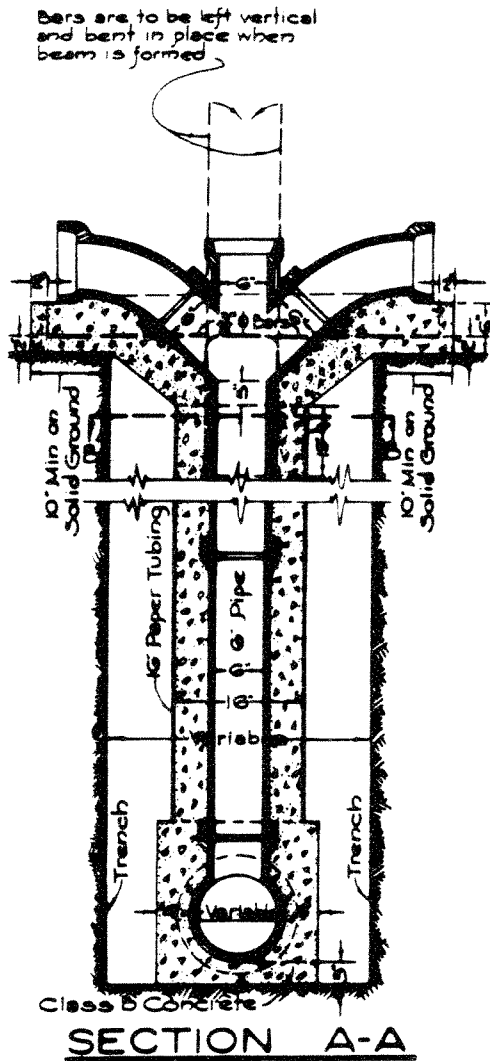
**NOTES**

1. THE UPPER END OF THE CHIMNEY PIPE SHALL BE 8 FEET BELOW THE GRADE OF THE LOWER CURB UNLESS OTHERWISE SPECIFIED.
2. THE CHIMNEY PIPE SHALL BE VITRIFIED CLAY PIPE WITH MECHANICAL COMPRESSION JOINTS UNLESS OTHERWISE SPECIFIED ON PLANS
3. NO CONNECTION IS PERMITTED DIRECTLY TO TOP OF CHIMNEY PIPE.
4. WHERE ONE HOUSE LATERAL IS TO BE JOINED TO THE CHIMNEY PIPE, USE A SINGLE "Y" AND FACE "Y" TOWARDS PROPERTY TO BE SERVED.
5. WHERE TWO OR MORE HOUSE LATERALS ARE TO BE JOINED TO THE CHIMNEY PIPE, INSTALL "Y" BRANCHES AS FOLLOWS:

FOR TWO HOUSE LATERALS WITH ONE FACING EACH SIDE OF STREET, USE A DOUBLE "Y" BRANCH.

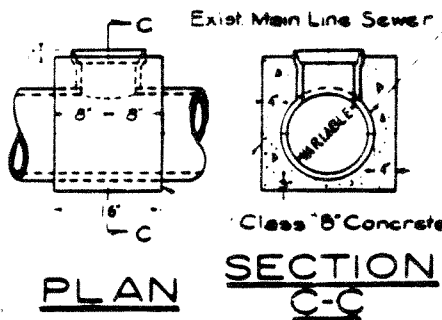
FOR TWO HOUSE LATERALS FACING THE SAME SIDE OF THE STREET, USE TWO SINGLE "Y" BRANCHES FACING THE PROPERTY SERVED.

FOR THREE OR FOUR HOUSE LATERALS, USE TWO DOUBLE "Y" BRANCHES PLACED AT 30° WITH EACH OTHER.



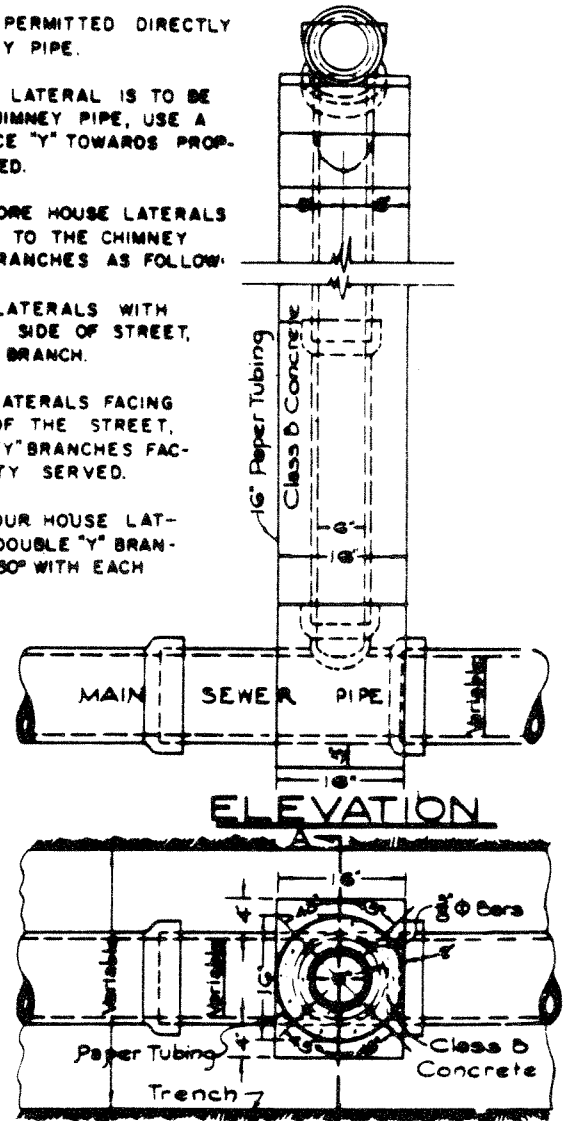
**SECTION A-A**

**CHIMNEY BASE**



**PLAN**

**SECTION C-C**



**ELEVATION**

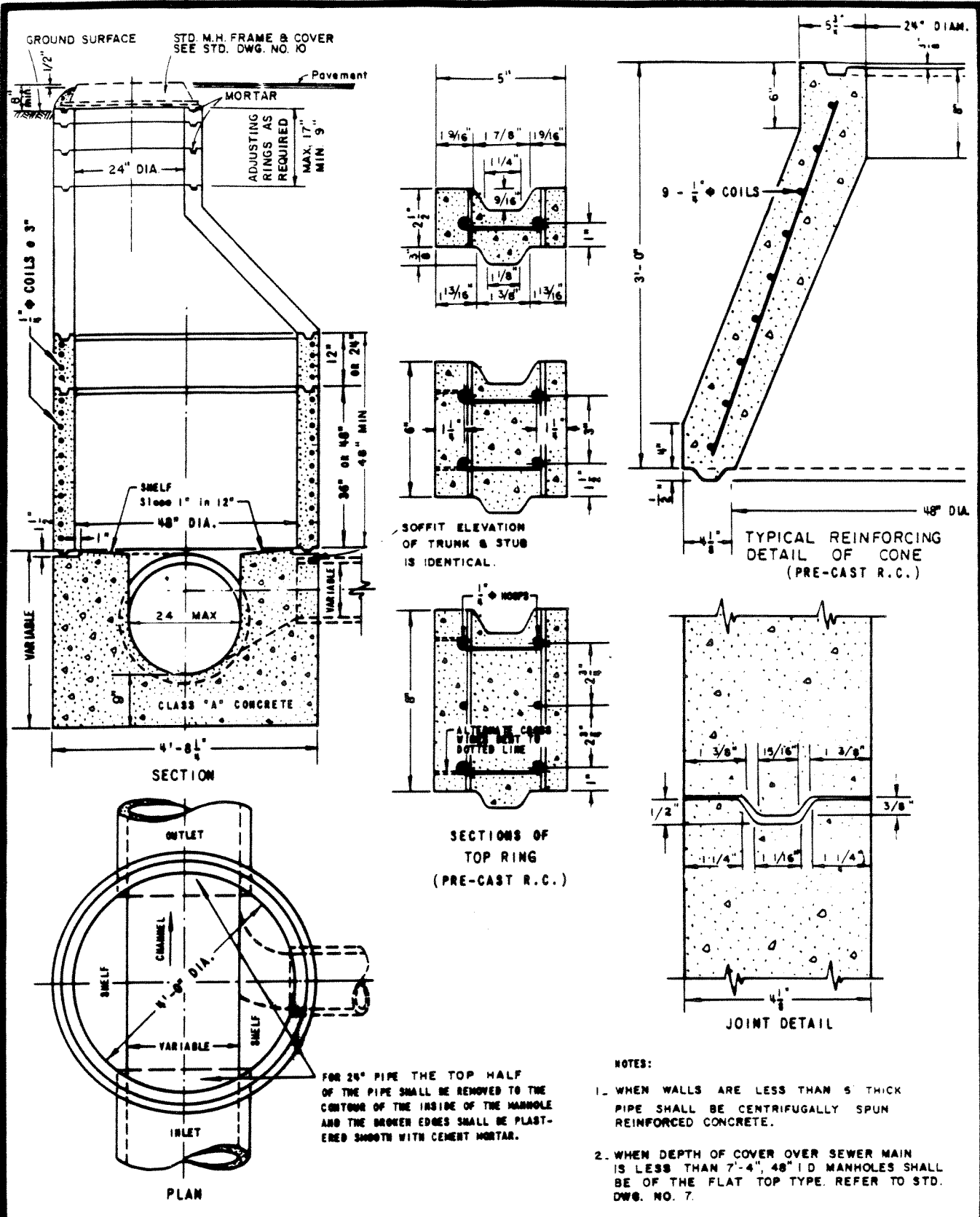
**SECTION B-B**

**LAS VIRGENES MUNICIPAL WATER DISTRICT**

PREPARED BY  
**BOYLE  
ENGINEERING**

**STANDARD CHIMNEY PIPE**

STD. DWG. NO.  
**4 S**  
DATE: FEB, 1968

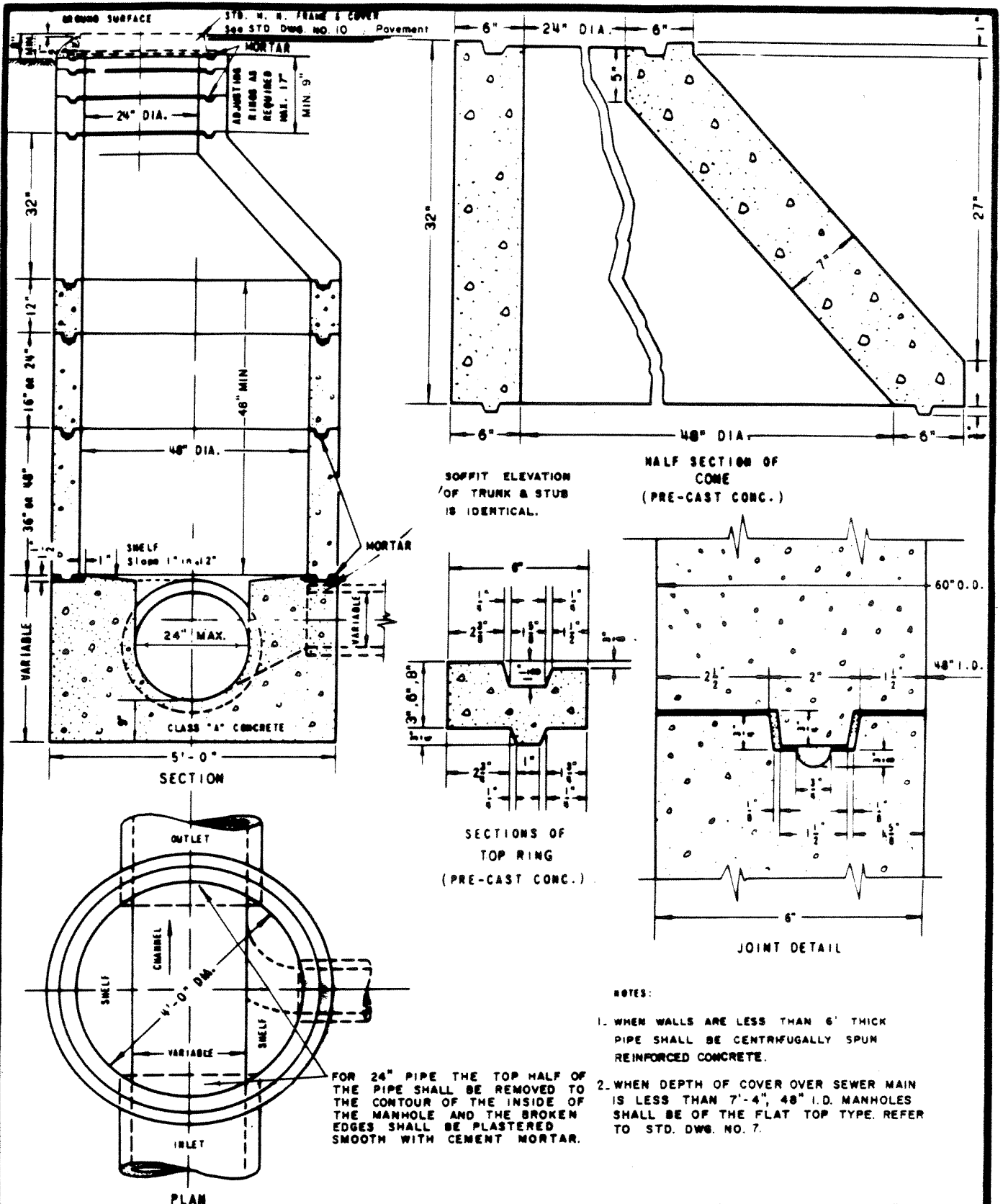


**LAS VIRGENES MUNICIPAL WATER DISTRICT**

PREPARED BY  
**BOYLE ENGINEERING**

**STD. MANHOLE & JUNCTION CHAMBER, TYPE "D"**  
FOR 8" TO 24" PIPE  
(Reinforced)

STD. DWG. NO.  
**5 S**  
DATE: JUNE, 1967

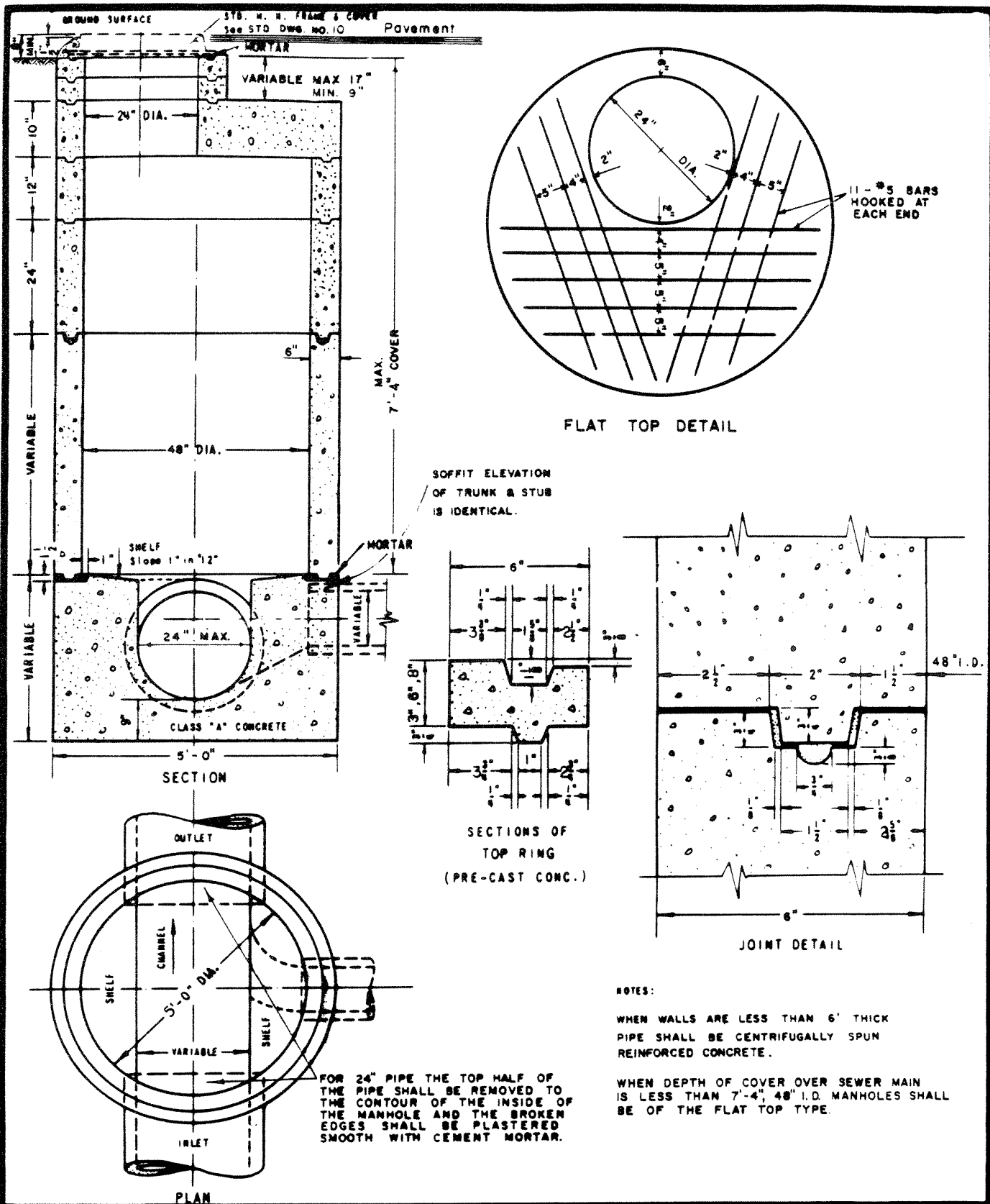


**LAS VIRGENES MUNICIPAL WATER DISTRICT**

PREPARED BY  
**BOYLE  
ENGINEERING**

**STD. MANHOLE & JUNCTION  
CHAMBER, TYPE "D"**  
FOR 8" TO 24" PIPE  
(Eccentric Non-reinforced)

STD. DWG. NO.  
**6 S**  
DATE: JUNE, 1967

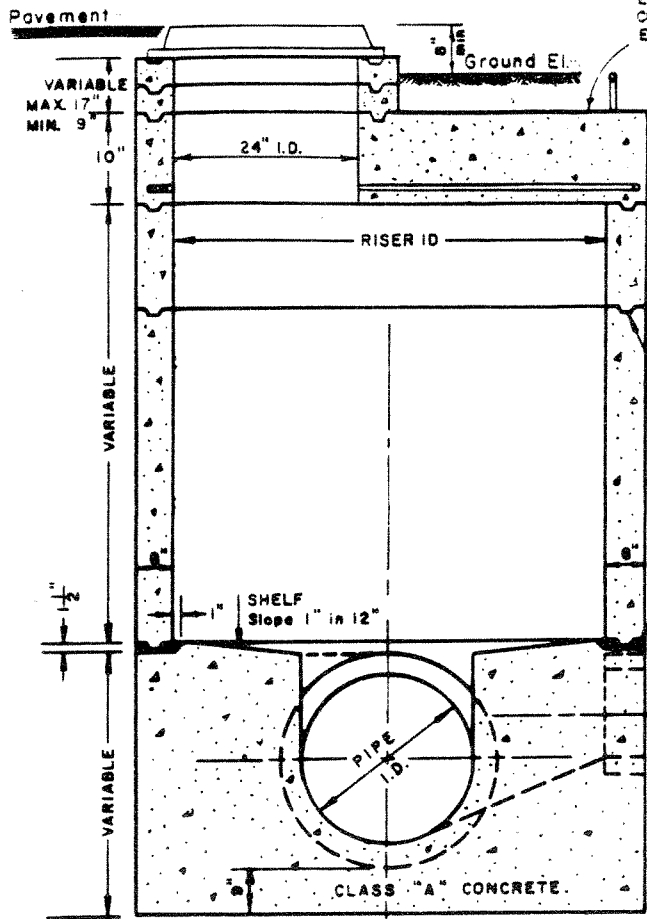


LAS VIRGENES MUNICIPAL WATER DISTRICT

PREPARED BY  
 BOYLE  
 ENGINEERING

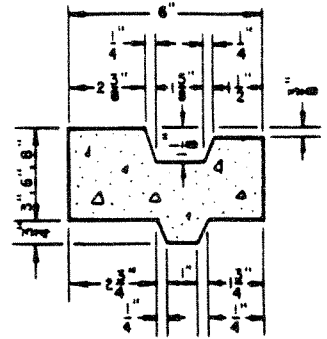
**STD. MANHOLE & JUNCTION  
 CHAMBER - FLAT TOP TYPE**  
 FOR 8" TO 24" PIPE

STD. DWG. NO.  
 7 S  
 DATE: JUNE, 1967

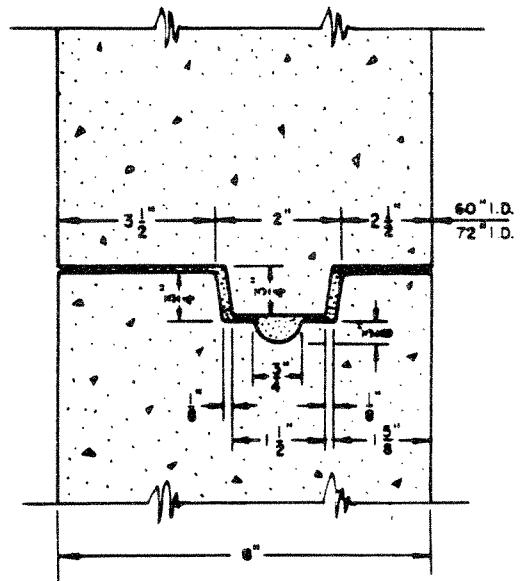


EITHER FLAT TOP OR ECCENTRIC CONE MAY BE USED  
 CONE SHALL BE AS SHOWN IN STD. DWGS. NOS. 5 & 6  
 EXCEPT THAT BOTTOM DIAMETER SHALL MATCH RISER.

STYLE	DIAMETERS (I.D.)		PIPE (I.D.)
	RISER	GRADE RING	
Eccentric or Concentric, 60" x 24"	60"	24"	27" to 36"
Eccentric or Concentric, 72" x 24"	72"	24"	39" to 48"



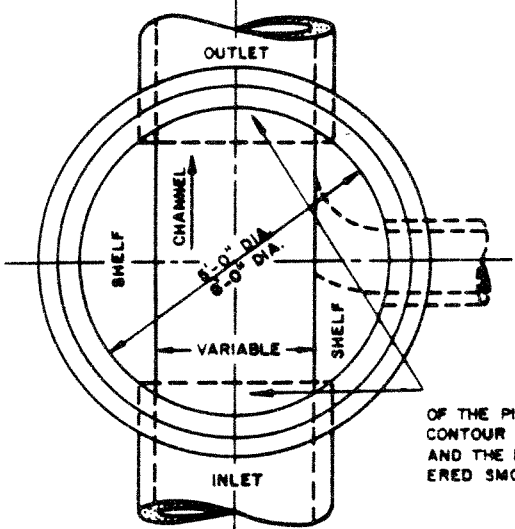
SECTIONS OF  
 TOP RING  
 (PRE-CAST CONC.)



JOINT DETAIL

- NOTES:
1. WHEN PIPE WALLS ARE LESS THAN 8" THICK REINFORCING IN ADDITION TO THAT REQUIRED FOR PIPE HANDLING SHALL BE PROVIDED.
  2. WHEN DEPTH OF COVER OVER SEWER MAIN IS LESS THAN 7'-4", MANHOLES SHALL BE OF THE FLAT TOP TYPE. REFER TO STD. DWG. NO. 7.

THE TOP HALF OF THE PIPE SHALL BE REMOVED TO THE CONTOUR OF THE INSIDE OF THE MANHOLE AND THE BROKEN EDGES SHALL BE PLASTERED SMOOTH WITH CEMENT MORTAR.



PLAN

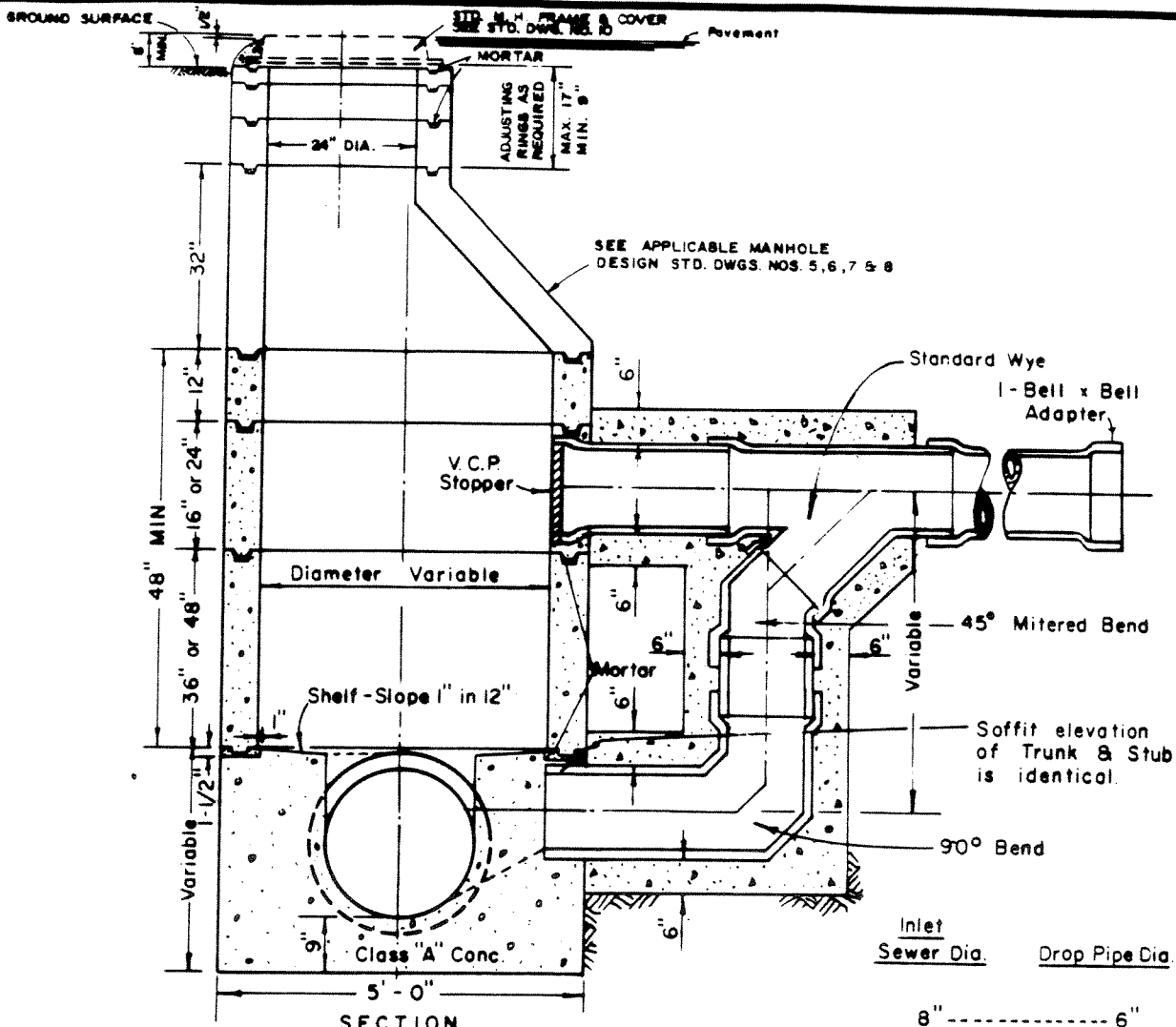
LAS VIRGENES MUNICIPAL WATER DISTRICT

PREPARED BY  
 BOYLE  
 ENGINEERING

**STD. MANHOLE & JUNCTION  
 CHAMBER, FLAT TOP TYPE**  
 FOR 27" TO 36" & 39" TO 48" PIPE

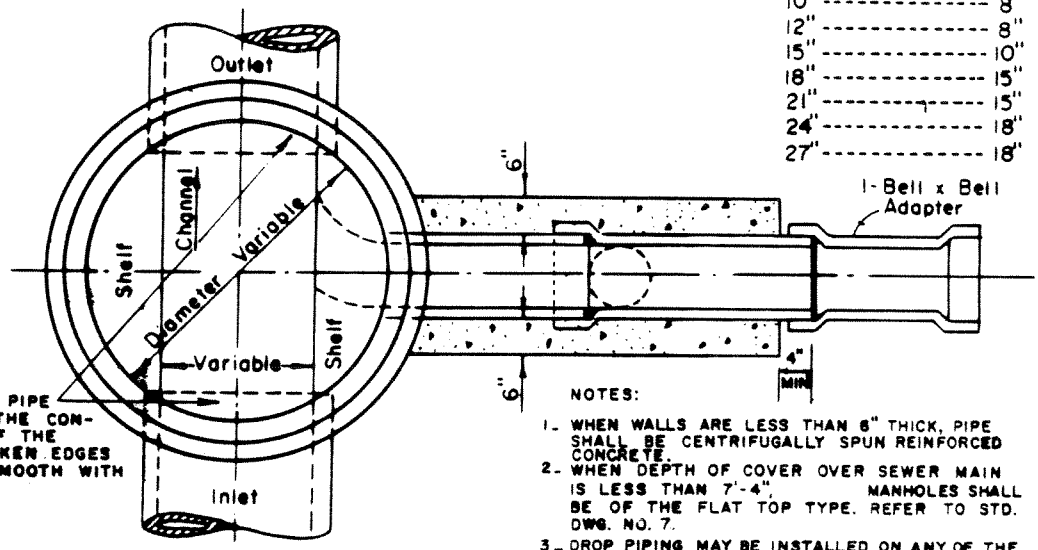
STD. DWG. NO.  
 8 S  
 DATE, JUNE, 1967





SECTION

Inlet Sewer Dia.	Drop Pipe Dia.
8"	6"
10"	8"
12"	8"
15"	10"
18"	15"
21"	15"
24"	18"
27"	18"



PLAN

THE TOP HALF OF THE PIPE SHALL BE REMOVED TO THE CONTOUR OF THE INSIDE OF THE MANHOLE AND THE BROKEN EDGES SHALL BE PLASTERED SMOOTH WITH CEMENT MORTAR.

NOTES:

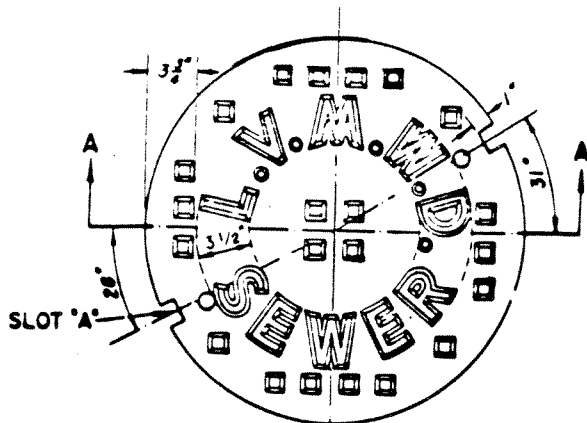
1. WHEN WALLS ARE LESS THAN 6" THICK, PIPE SHALL BE CENTRIFUGALLY SPUN REINFORCED CONCRETE.
2. WHEN DEPTH OF COVER OVER SEWER MAIN IS LESS THAN 7'-4", MANHOLES SHALL BE OF THE FLAT TOP TYPE. REFER TO STD. DWG. NO. 7.
3. DROP PIPING MAY BE INSTALLED ON ANY OF THE MANHOLES SHOWN IN STD. DWGS. NOS. 5, 6, 7 & 8.

LAS VIRGENES MUNICIPAL WATER DISTRICT

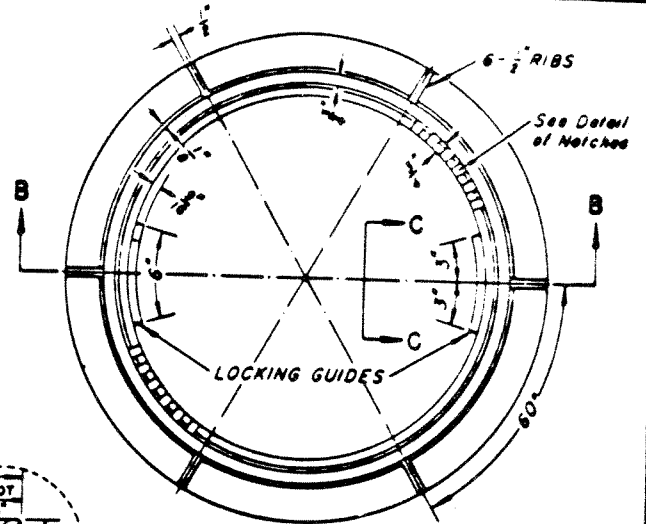
PREPARED BY  
BOYLE  
ENGINEERING

STD. DROP MANHOLE

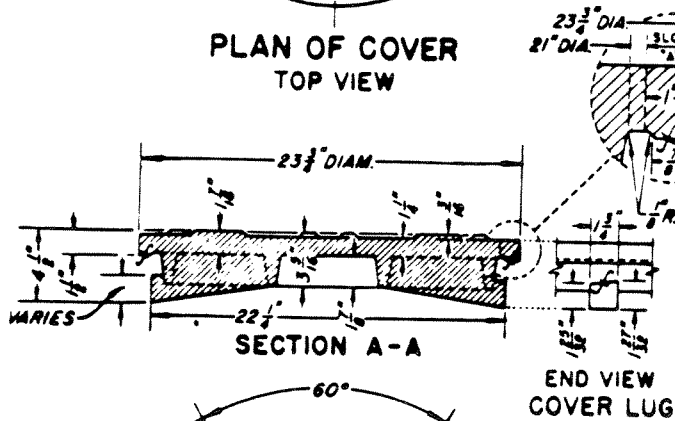
STD. DWG. NO.  
9S  
DATE: JUNE, 1967



PLAN OF COVER  
TOP VIEW

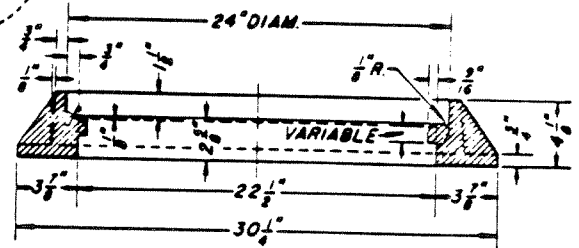


PLAN OF FRAME

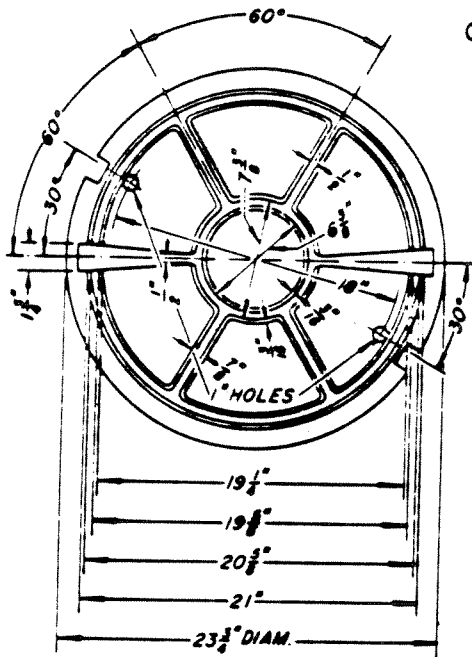


SECTION A-A

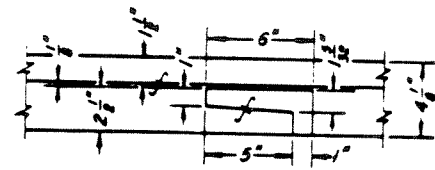
END VIEW  
COVER LUG



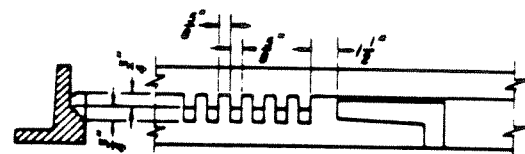
SECTION B-B



PLAN OF COVER  
BOTTOM VIEW



LOCKING GUIDE  
SIDE VIEW C-C



DETAIL OF NOTCHES

- NOTES:
1. The cast iron used shall conform with A.S.T.M. A-48 Class 30.
  2. The Frame & Cover shall be coated with asphalt or coal tar as specified in the specifications.

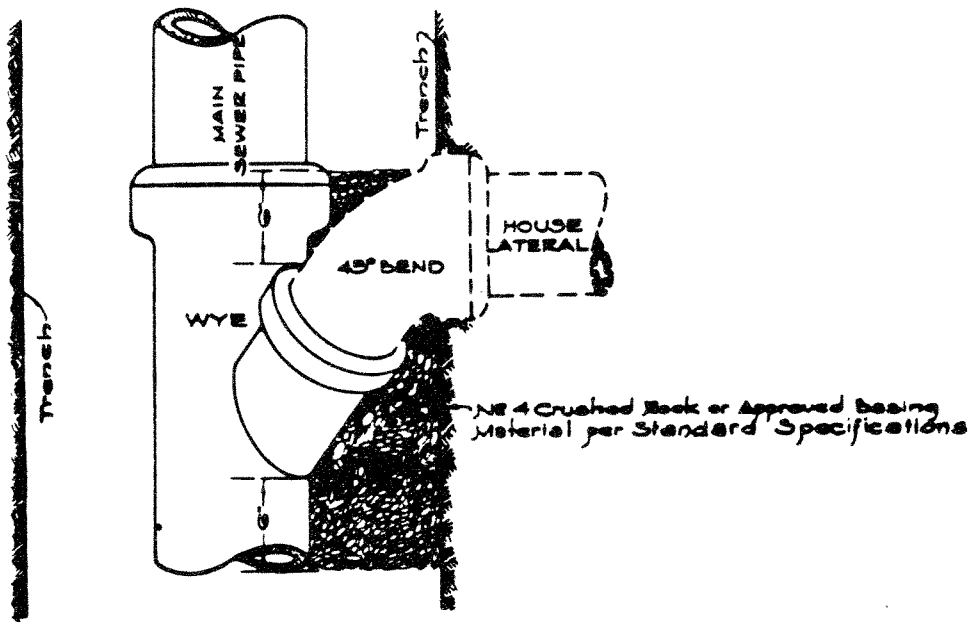
LAS VIRGENES MUNICIPAL WATER DISTRICT

PREPARED BY  
BOYLE  
ENGINEERING

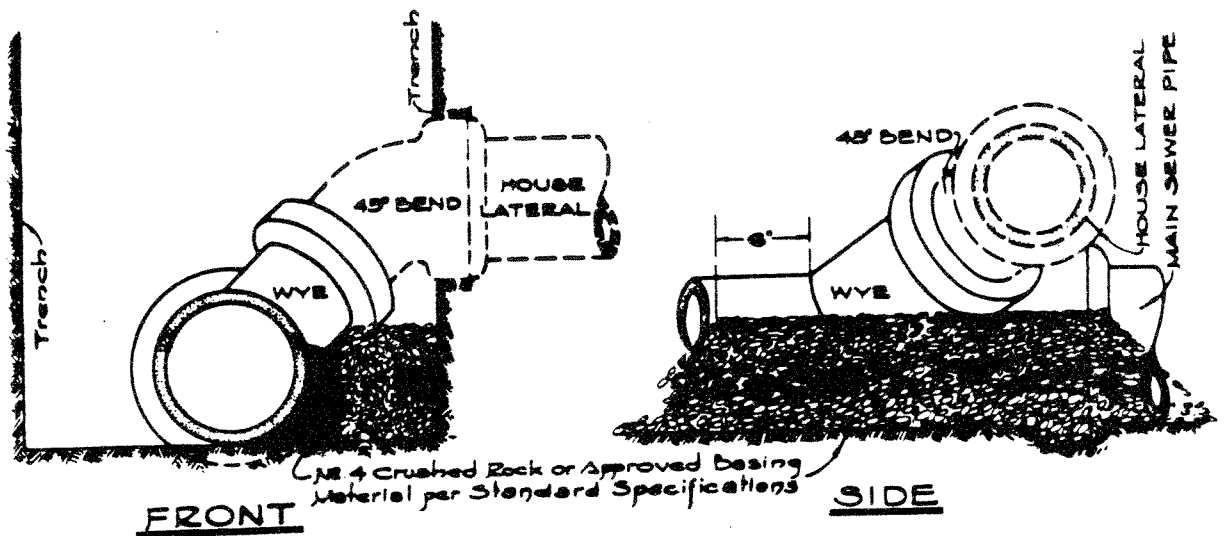
STANDARD MANHOLE  
FRAME & COVER

STD. DWG. NO.  
10S  
DATE JUNE, 1964





TOP



FRONT

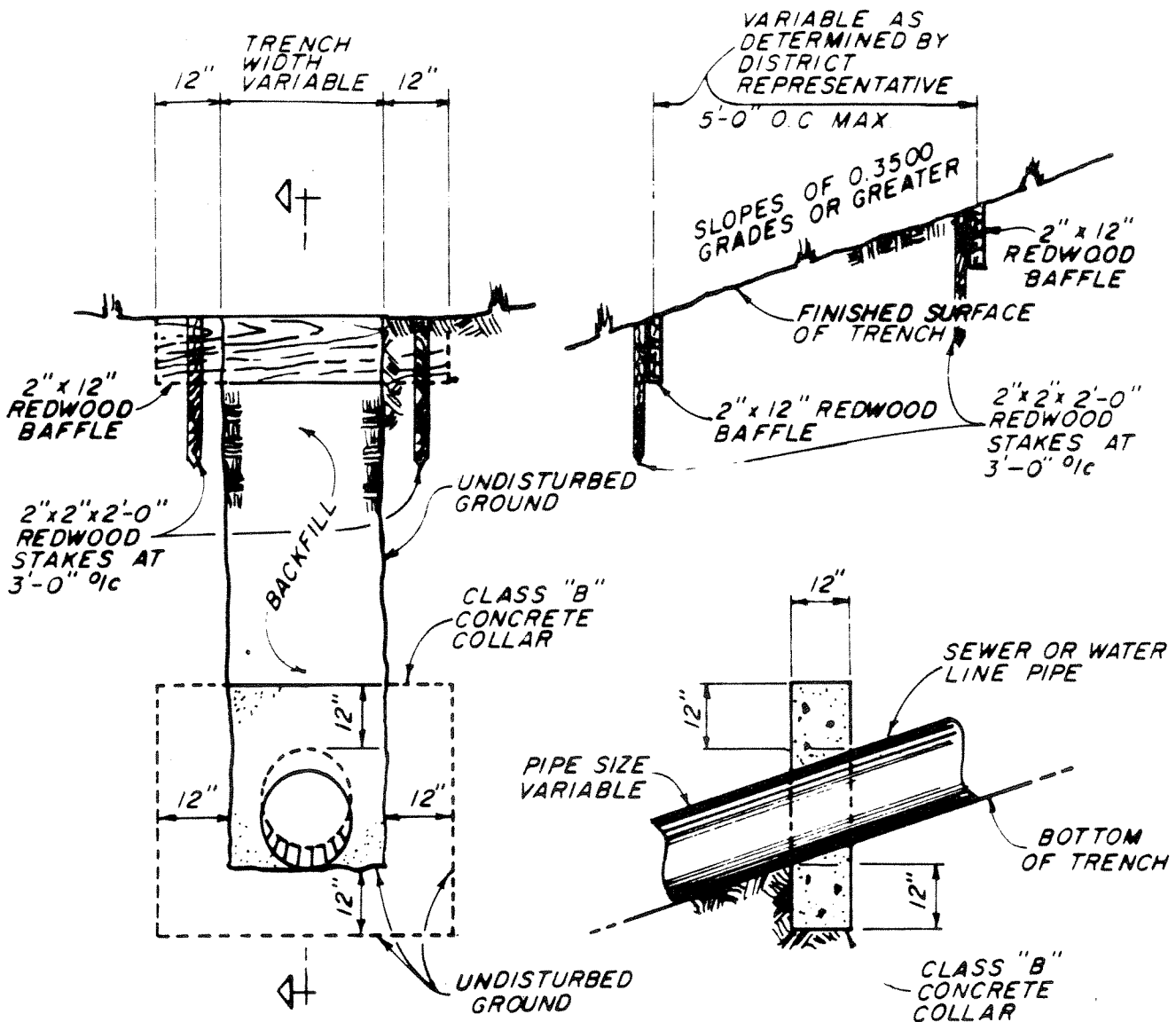
SIDE

LAS VIRGENES MUNICIPAL WATER DISTRICT

PREPARED BY  
BOYLE  
ENGINEERING

WYE SUPPORT

STD.DWG.NO.  
12 S  
DATE: APRIL, 1966



**ELEVATION**

**SECTION**

**NOTES:**

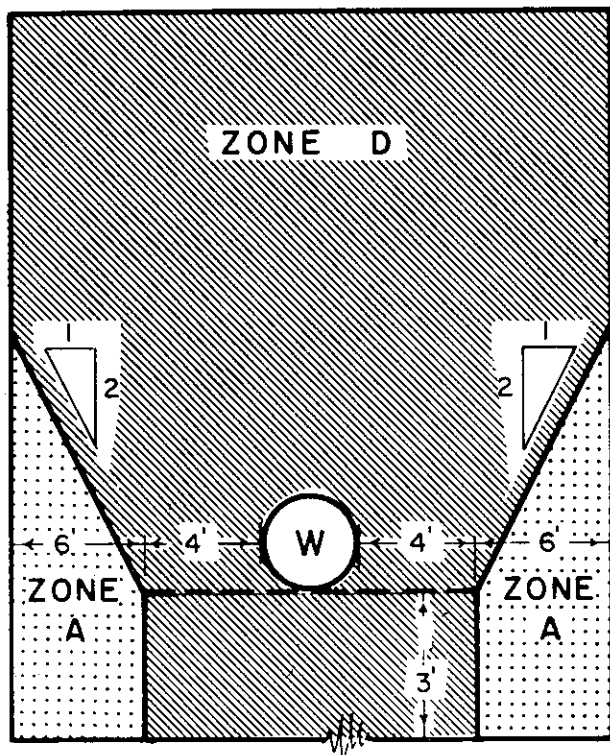
1. Baffles of 2"x12" Redwood lumber shall be placed flush with the finished ground over all trenches whose slope is 0.3500 or greater. Used or second hand Redwood lumber if of sound structure may be used upon approval of the Engineer.
2. Class "B" concrete collars shall be placed on sanitary sewer and water line pipes at 5' o.c. maximum whose slope is 0.3500 or greater where designated on project plans.
3. Collars and baffles shall extend a minimum of 12" into undisturbed earth beyond the limits of actual trench excavation

**LAS VIRGENES MUNICIPAL WATER DISTRICT**

PREPARED BY  
BOYLE  
ENGINEERING  
Ventura Division

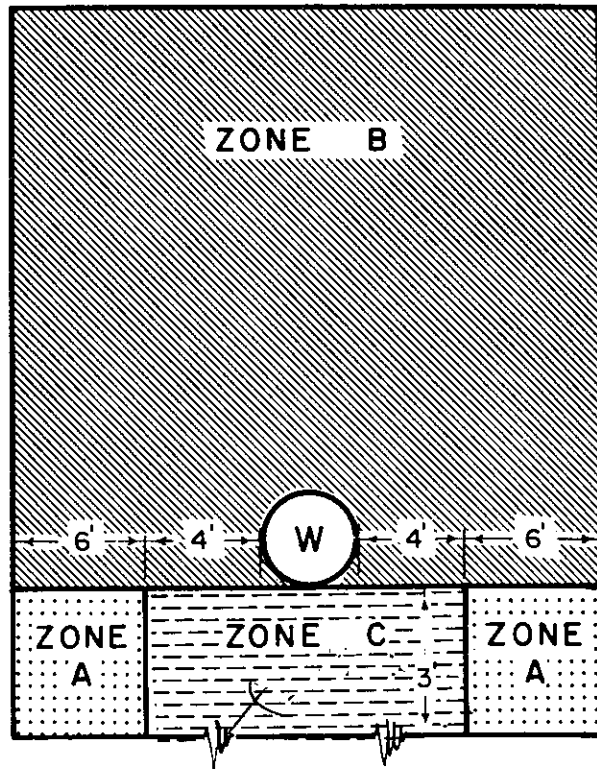
**REDWOOD BAFFLES &  
CONCRETE COLLARS**

STD. DWG. NO.  
13 S  
DATE: 4 8-71



PARALLEL CONSTRUCTION

If a sanitary sewer is to be located within ten feet of a pressure water main within any of the above indicated zones, special construction will be required as shown below.



PERPENDICULAR CONSTRUCTION

If a sanitary sewer or house lateral crosses a pressure water main within any of the above indicated zones, special construction will be required as shown below.

ZONE	SEWER CONSTRUCTION REQUIREMENTS
A	V.C.P. with Mechanical Compression Joints.
B	C.I.P. with Lead or approved Mechanical Joints or V.C.P. in Steel Casing.
C	V.C.P. Encased in Concrete or any of Zone B Construction Methods.
D	Do not locate any Parallel Sewer in this Area without Section Head approval.
W	Indicates Pressure Water Main.

Asbestos Cement Pipe with Rubber Ring Joints approved for Force Mains may be placed in Zone A.

This Standard Drawing is per Sanitation Division Chart S-C1, Department of County Engineer, Los Angeles County. For additional information refer to Sanitary Division Instruction 60-9.

**LAS VIRGENES MUNICIPAL WATER DISTRICT**

PREPARED BY BOYLE ENGINEERING Ventura Division	- DESIGN REQUIREMENTS FOR - <b>SANITARY SEWERS NEAR          PRESSURE WATER MAINS</b>	STD. DWG. NO. <b>14S</b> DATE 4-8-71
---	--	--