

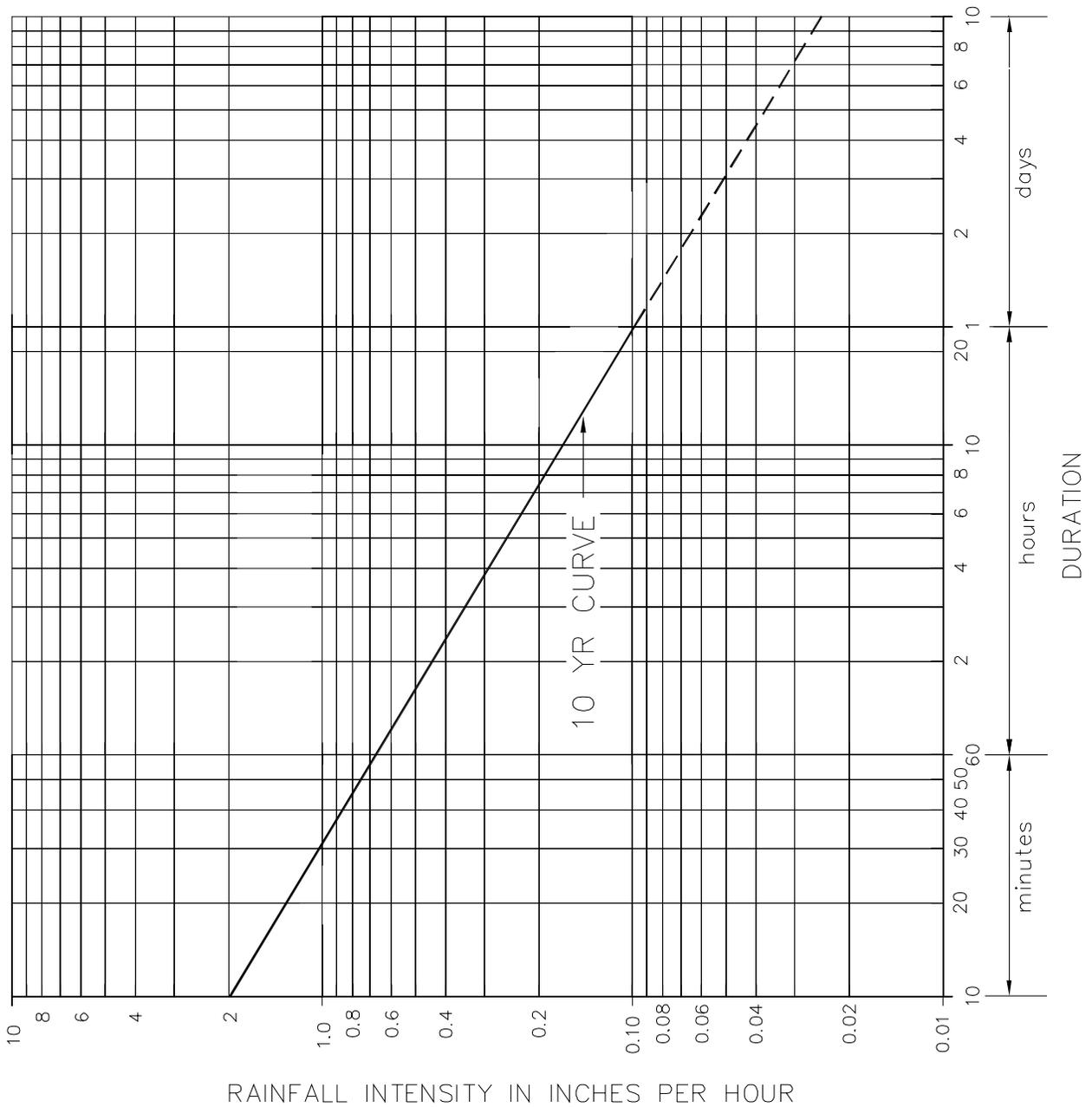
MAXIMUM LENGTH OF SINGLE CATCHBASIN RUN (ABSOLUTE MAXIMUM 700')

**NOTES:**

1. INITIAL RAINFALL INTENSITY = 1.30 IN./HR. (10-YRS. STORM)  
 INITIAL TIME OF CONCENTRATION = 20 MINUTES  
 RUNOFF COEFFICIENTS: PARK=15%, LOT=35%, RESIDENTIAL=35%, PARKWAY=60%, HIGH DENSITY RESIDENTIAL=65%, COMMERCIAL=75%-90%, INDUSTRIAL AND PAVED AREA=90%.
2. STORM SYSTEMS SHALL HAVE A MINIMUM DESIGN USING THE CITY OF STOCKTON 10-YEARS RAINFALL CURVE.
3. THE ABOVE FIGURES MAY BE ADJUSTED FOR THE INDIVIDUAL DEVELOPMENTS UPON PRESENTATION BY THE DEVELOPER OF A DETAILED RUNOFF ANALYSIS.
4. PIPE SLOPES AS PER STANDARD DRAWING NO. 77. MANNING "N" SHALL BE 0.011 FOR PVC AND HDPE PIPE AND SHALL BE 0.013 FOR OTHER PIPE MATERIALS.
5. MAIN STORM TRUNKS SHALL BE 12" DIAMETER MINIMUM AND HAVE 3'-0" MINIMUM OF COVER FROM SUBGRADE.
6. THE SANITARY EXTENSION MUST BE LOCATED ON-SITE WITHIN 20'-0" OF THE LOCATION WHERE A PORTABLE SUBMERSIBLE PUMP CAN BE DROPPED INTO THE LOWEST AREA OF THE WET WELL. THE END OF THIS EXTENSION SHALL BE PROVIDED WITH A 4" CAMLOCK COUPLING AND ENDCAP.
7. THE SANITARY LINE EXTENDED INTO THE PUMP STATION SHALL BE DESIGNED TO CARRY AT LEAST 600 GPM WITH THE HYDRAULIC GRADE LINE BELOW GRADE.
8. AT THE LOCATION WHERE THE SUBMERSIBLE PUMP CAN BE LOWERED INTO THE LOWEST AREA OF THE WET WELL, A 30 AMP FUSIBLE DISCONNECT SHALL BE AT THE MOTOR CONTROL CENTER (MCC) WHICH OPERATES THE LOW FLOW PUMP. THIS CONNECTION SHALL HAVE APPROPRIATELY SIZED WIRE ENCLOSED IN CONDUIT BELOW GRADE. THE WIRES SHALL BE PROPERLY TERMINATED AT THE REMOTE FUSIBLE DISCONNECT AT THE MCC, THE WIRES SHALL NOT BE TERMINATED. INSTEAD, SUFFICIENT WIRE SHALL BE COILED IN THE CONTROL CUBICLE FOR THE LOW FLOW PUMP TO ALLOW THE CITY TO DISCONNECT THE INPLACE PUMP AND CONNECT THE FUSIBLE DISCONNECT.
9. SANITARY SEWER LINE SHALL BE EXTENDED TO ALL FUTURE STORM WATER PUMP STATIONS (SEE DWG. NO. 45A).

REV. NO.	REV. DATE	REV. BY	<b>STORM RUNOFF DATA</b>	REVISION APPROVED BY CITY ENGINEER		
2	6/1/2000	HLE/RH		Finbar J. O'Regan		
DIGITIZED		1/1/92	<b>CITY OF STOCKTON</b> DEPARTMENT OF PUBLIC WORKS	DATE: 01/09/02		
DWG. BY	RC	SCALE		SUPERCEDES DWG. DATED	DRAWING NO. <b>76</b>	
CK. BY		NONE		6/1/94		

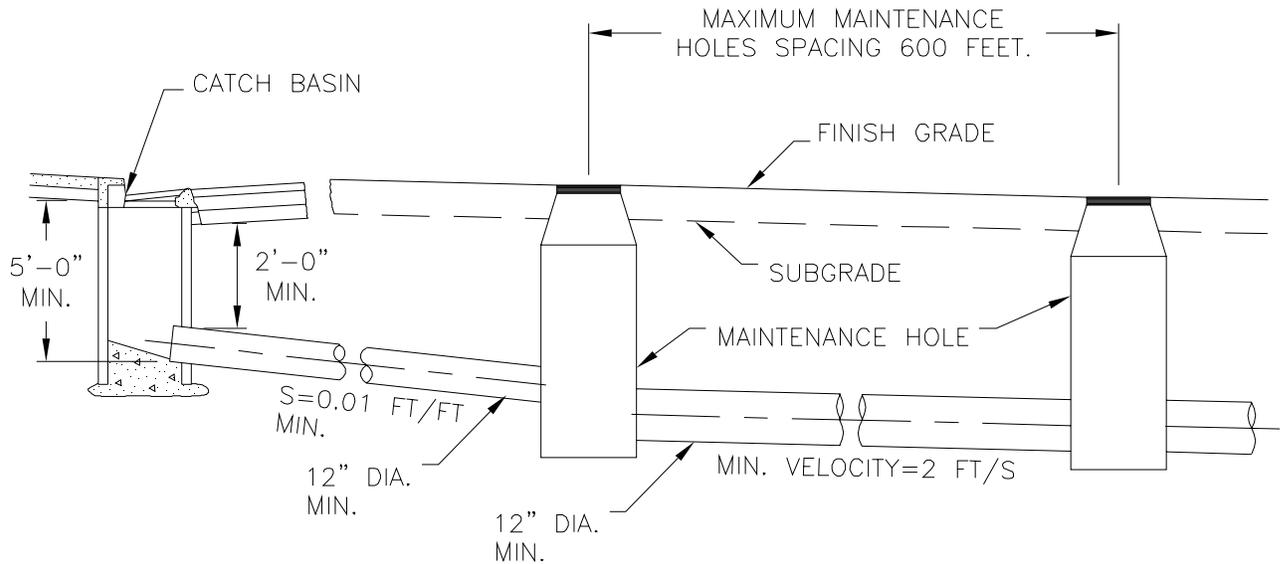
# Intensity-Duration-Frequency Curve (Stockton, California)



EQUATION:  $I = (7.9659) \times (D)^{-0.604}$   
 I is in inches/hour  
 D is in minutes

REV. NO.	REV. DATE	REV. BY	CITY OF STOCKTON 10-YR. RAINFALL INTENSITY CURVE		DIGITIZED VERSION APPROVED BY CITY ENGINEER		
2	6/15/00	BB			Finbar J. O'Regan		
DIGITIZED 1/1/92			CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS		DATE: 01/09/02		
DWG. BY	RC	SCALE			SUPERCEDES DWG. DATED	DRAWING NO.	
CK. BY		NONE			11/8/80	75	





CAST IN PLACE (C.I.P.) CONCRETE PIPE SHALL MEET THE FOLLOWING MIN. STRENGTH REQUIREMENTS:

1400 PSI ..... 3 DAYS  
 2100 PSI ..... 7 DAYS  
 3500 PSI ..... 28 DAYS

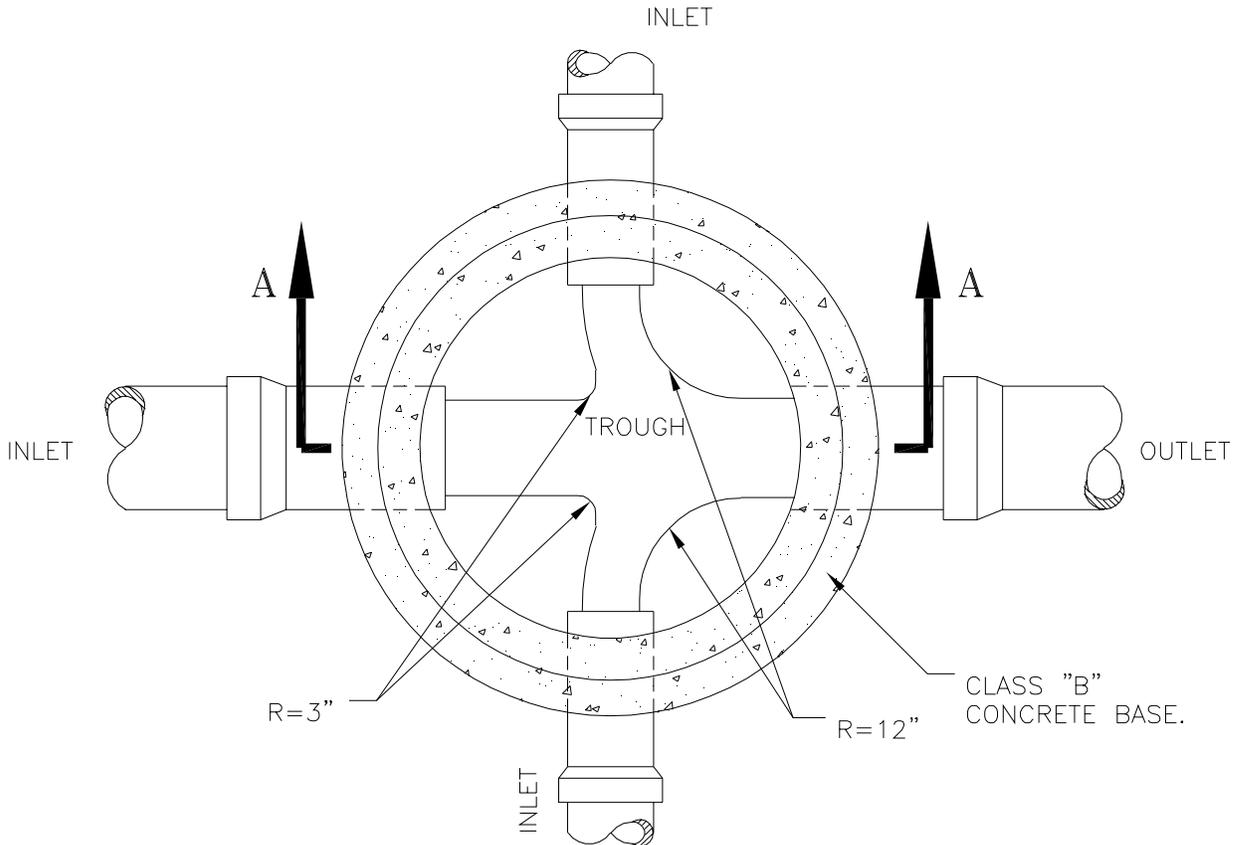
CONCRETE SHALL BE CLASS A

PIPE SIZE	MIN. SLOPE (N=0.013)	MIN. SLOPE (N=0.011)
12" DIA.	.0020 FT/FT	.0014 FT/FT
15" DIA.	.0015 FT/FT	.0010 FT/FT
18" DIA.	.0012 FT/FT	.0009 FT/FT
24" DIA.	.0008 FT/FT	.0006 FT/FT
30" DIA.	.0006 FT/FT	.0001 FT/FT

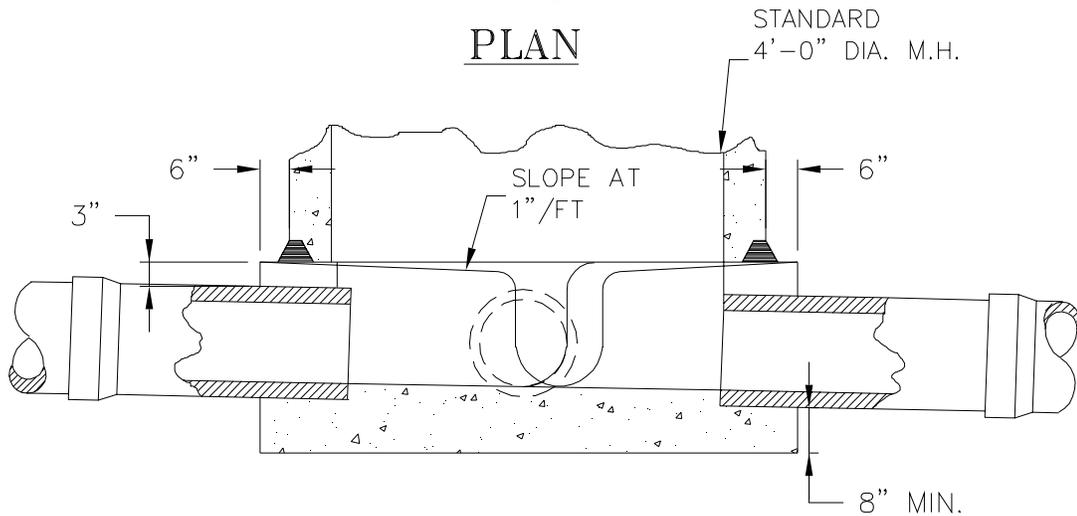
NOTES:

- CATCH BASINS SHALL BE INSTALLED AT ALL INTERSECTIONS AND AT ENDS OF ALL CUL-DE-SACS WHERE THE SLOPE AROUND THE CUL-DE-SAC IS LESS THAN 0.0035 FT/FT. SLOPE SHALL BE A MINIMUM OF .01 FT/FT ALONG THE ARC LENGTH OF CORNERS.
- ALL CATCH BASIN LATERALS SHALL BE CONNECTED AT MAINTENANCE HOLES AND NOT DIRECTLY INTO TRUNK LINES.
- MAXIMUM RUNS BETWEEN CATCH BASINS SHALL BE IN ACCORDANCE WITH STANDARD DRAWING NO. 76.
- ALL STORM DRAINS TO BE DESIGNED FOR GRAVITY FLOW (MATCHING OF PIPE CROWNS - NOT INVERT ELEVATIONS).
- RUBBER GASKETED PIPE REQUIRED WHEN LINES ARE SURCHARGED.
- 12" THROUGH 36" PIPE SHALL BE CLASS III MIN. R.C.P.; OR NON-REINFORCED CONCRETE PIPE MEETING CAL-TRANS SPECIFICATIONS AND A "D" LOADING EQUIVALENT TO CLASS III R.C.P., 34" AND LARGER PIPE SHALL BE CLASS III R.C.P. ONLY. FOR C.I.P. PIPE, SEE NOTE NO. 7 BELOW.
- C.I.P. PIPE ALLOWED FOR 24" AND LARGER PIPES WITH APPROVAL OF THE CITY ENGINEER.
- FOR 12" THROUGH 15" PLASTIC PIPE, SDR 35 PVC. MEETING ASTM 3034 STANDARDS MAY BE USED.

REV. NO.	REV. DATE	REV. BY	STORM DRAIN DATA	REVISION APPROVED BY CITY ENGINEER	
3	6/1/2000	HLE/RH		Finbar J. O'Regan DATE: 01/09/02	
DIGITIZED 7/1/91			CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	DRAWING NO.	
DWG. BY	RC	SCALE		77	
CK. BY		NONE		SUPERCEDES DWG. DATED 2/23/95	



**PLAN**

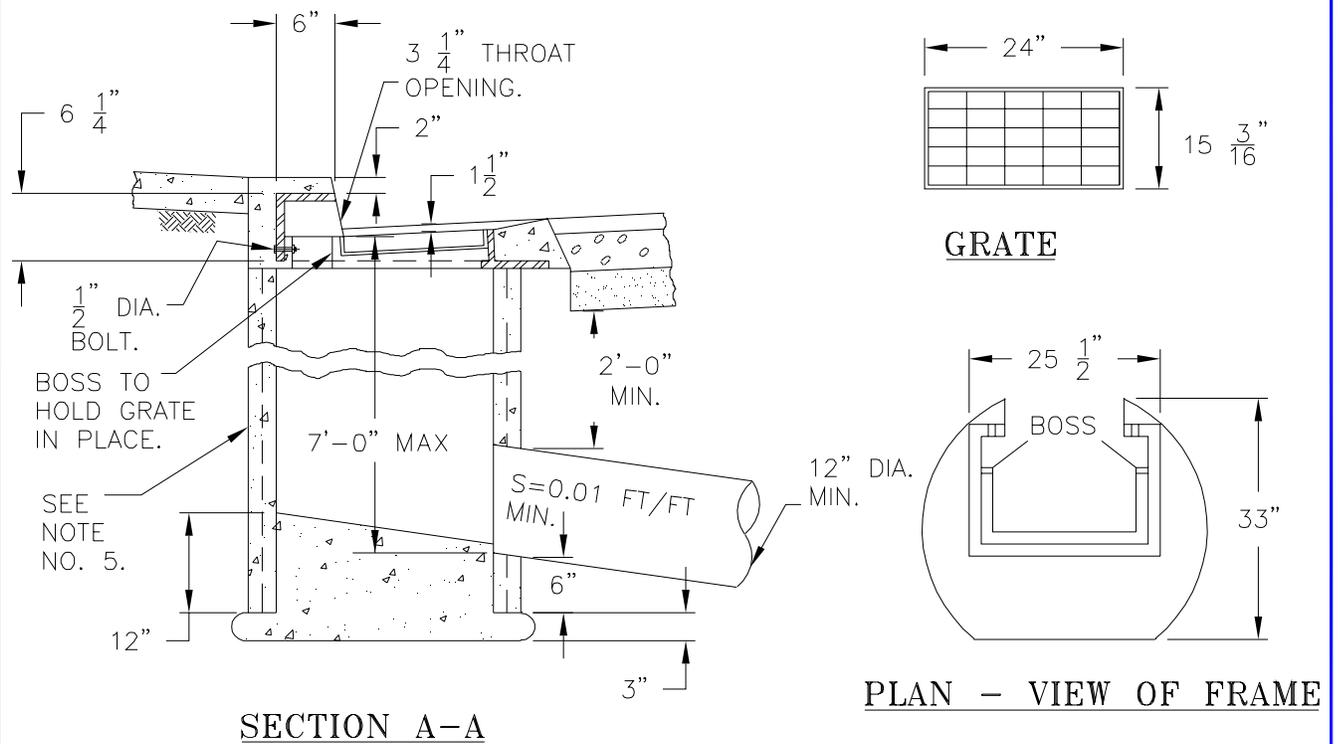
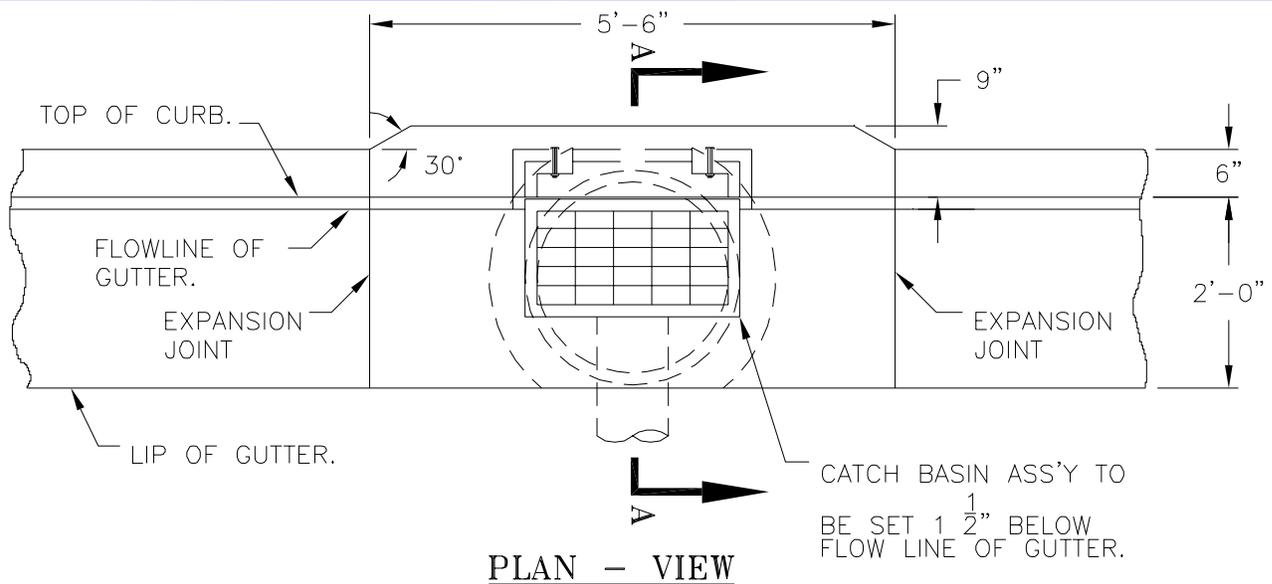


**SECTION A-A**

**NOTES:**

1. TROUGH WITHIN M.H. TO BE FULLY ACCESSIBLE.
2. INLET PIPES NOT TO EXTEND MORE THAN 3" INTO M.H.
3. OUTLET PIPE TO BE FLUSH AND ALL EDGES SMOOTH WITH M.H. WALL.
4. CONSTRUCT PIPE STUB JOINTS, 2'-0" MINIMUM TO 12'-0" MAXIMUM FOR PVC PIPE AND 2'-0" MAXIMUM FOR RIGID PIPE FROM BASE OF M.H.
5. M.H. BOTTOM SHALL BE HYDRAULICALLY SHAPED IN THE FIELD AS DIRECTED.

REV. NO.	REV. DATE	REV. BY	TYPICAL INTERSECTION FOR TYPE 1 MAINTENANCE HOLE	REVISION APPROVED BY CITY ENGINEER	
4	6/1/2003	HL/EA		Finbar J. O'Regan DATE: 11/25/03	
DIGITIZED		1/1/92	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	SUPERCEDES DWG. DATED	DRAWING NO.
DWG. BY	RC	SCALE		01/09/02	78
CK. BY		NONE			



**NOTES:**

1. ALL EXPOSED STEEL SHALL BE COATED WITH 2 COATS OF COAL TAR PITCH HEATED TO A MINIMUM OF 180°F OR GALVANIZED.
2. GRATE, FRAME AND MODIFIED SIDE INLET SHALL CONFORM TO PINKERTON A-645 FRAME WITH EITHER A-390 RIVETED OR A-390-M FABRICATED STEEL GRATE.
3. GRATE SHALL BE CHAINED TO FRAME.
4. GRATE SHALL BE DEPRESSED 1 1/2" BELOW GUTTER PROFILE GRADE.
5. 24" DIA. PIPE BARREL SHALL BE CLASS II R.C.P., OR CLASS 2 OR 3 NON-REINFORCED CONCRETE PIPE.
6. TOP OF CURB SHALL BE STAMPED PER DWG. NO. 201H.

REV. NO.	REV. DATE	REV. BY	TYPE 1 CURB INLET CATCH BASIN	REVISION APPROVED BY CITY ENGINEER	
7	6/1/2003	HL/EA		Finbar J. O'Regan	
DIGITIZED				DATE: 11/25/03	
DWG. BY	RC	SCALE	CITY OF STOCKTON DEPARTMENT OF PUBLIC WORKS	SUPERCEDES DWG. DATED	DRAWING NO.
CK. BY		NONE		01/09/02	79