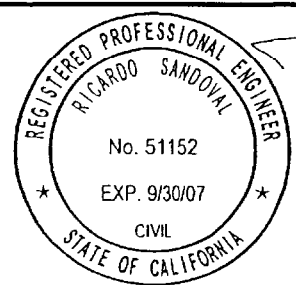


TABLE OF VALUES FOR M (SEE NOTE 1)

SECTION	PAVED STREET		UNPAVED STREET	
	MAX.	MIN.	MAX.	MIN.
A-A		2'-10 1/2"		3'-6"
C-C	11"	8 1/2"	16"	15"

NOT TO SCALE



APPROVED BY: *Ricardo Sandoval* 10-18-06
 CITY ENGINEER DATE
RICARDO SANDOVAL
 REVIEWED BY: *[Signature]*
 DATE OF LAST REVISION: _____

CITY OF FONTANA

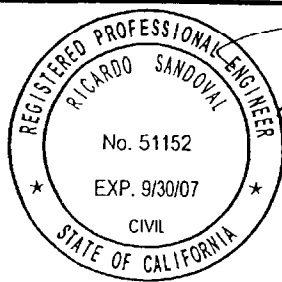
MANHOLE PIPE TO PIPE
(ONE OR BOTH MAIN LINE
ID'S 33" OR SMALLER)

07/10/06

STD. PLAN NO. 3013 SHT 1 OF 3

NOTES

1. WHEN DEPTH M FROM STREET GRADE TO THE TOP OF THE BOX IS LESS THAN 2'-10 1/2" FOR PAVED STREETS OR 3'-6" FOR UNPAVED STREETS, CONSTRUCT SHAFT PER SECTION C-C AND DETAIL "N". DEPTH M MAY BE REDUCED TO AN ABSOLUTE LIMIT OF 6" WHEN LARGER VALUES OF M WOULD REDUCE H IN SECTION C-C TO 3'-6" OR LESS.
2. H (IN SECTION A-A AND B-B) SHALL NOT BE LESS THAN 4'-0", BUT MAY BE INCREASED PROVIDED THAT THE VALUE OF M SHALL NOT BE LESS THAN THE MINIMUM SPECIFIED AND THAT THE REDUCER SHALL BE USED. FOR H (IN SECTION C-C) SEE NOTE 1.
3. L SHALL BE 4'-0" UNLESS OTHERWISE SHOWN. L MAY BE INCREASED OR LOCATION OF MANHOLE SHIFTED TO MEET PIPE ENDS, BUT ANY CHANGE IN LOCATION OF THE SPUR MUST BE APPROVED BY THE ENGINEER.
4. T SHALL BE 8" FOR VALUES OF H UP TO AND INCLUDING 8'-0" AND 10" FOR VALUES OF H OVER 8'-0".
5. STATIONS OF MANHOLES SHOWN ON PROJECT DRAWINGS APPLY AT CENTER LINE OF SHAFT. ELEVATIONS ARE SHOWN AT THE CENTER LINE OF SHAFT AND REFER TO THE PROLONGED INVERT GRADE LINES. SEE NOTE 3.
6. REINFORCEMENT SHALL CONFORM TO ASTM A 615, GRADE 40 AND SHALL TERMINATE 1 1/2" CLEAR OF CONCRETE SURFACES UNLESS OTHERWISE SHOWN.
7. FLOOR OF MANHOLE SHALL BE STEEL TROWELED TO SPRING LINE.
8. BODY OF MANHOLE SHALL BE POURED IN ONE CONTINUOUS OPERATION EXCEPT THAT A CONSTRUCTION JOINT WITH A LONGITUDINAL KEYWAY MAY BE PLACED AT THE SPRING LINE.
9. THICKNESS OF THE DECK SHALL VARY WHEN NECESSARY TO PROVIDE A LEVEL SEAT BUT SHALL NOT BE LESS THAN 8".
10. STEPS SHALL CONFORM TO STANDARD PLAN 3042. UNLESS OTHERWISE SHOWN, STEPS SHALL BE UNIFORMLY SPACED 14" TO 15" OC. THE LOWEST STEP SHALL NOT BE MORE THAN 24" ABOVE THE LEDGE AT THE SIDE OF THE MANHOLE.
11. THE FOLLOWING CRITERIA SHALL BE USED FOR THIS MANHOLE:
 - A. MAIN LINE = 33" INSIDE DIAMETER OR LESS. (EXCEPTION - IF THE MAIN LINE RCP DOWNSTREAM OF THE MANHOLE IS 36" TO 42" INSIDE DIAMETER AND THE MAIN LINE RCP UPSTREAM IS 33" OR LESS.
 - B. SEE SECTION A-A. THE MAXIMUM SIZE LATERAL THAT MAY BE CONNECTED TO THIS MANHOLE IS SUCH THAT THE DISTANCE FROM THE OUTSIDE (TOP) OF THE LATERAL TO THE BOTTOM OF THE 8" THICK TOP OF THE MANHOLE CHAMBER, MEASURED VERTICALLY FROM THE END OF THE RCP, SHALL BE A MINIMUM OF 6".
 - C. IF THE SIZE OF THE LATERAL IS SUCH THAT THE ABOVE-SPECIFIED MINIMUM DISTANCES CANNOT BE MAINTAINED. THEN ONE OF THE FOLLOWING ALTERNATE SOLUTIONS MUST BE USED:
 1. PROVIDE A SPECIAL STRUCTURE.
 2. PROVIDE TWO STANDARD STRUCTURES, CONSISTING OF THIS MANHOLE PLACED UPSTREAM OR DOWNSTREAM FROM THE APPLICABLE JUNCTION STRUCTURE OR TRANSITION STRUCTURE.



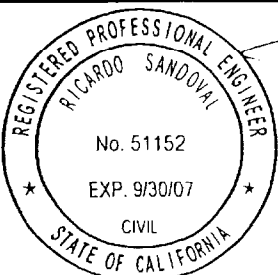
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CITY OF FONTANA	
MANHOLE PIPE TO PIPE (ONE OR BOTH MAIN LINE ID'S 33" OR SMALLER)	
07/10/06	
STD. PLAN NO. 3013	SHT 2 OF 3

- 12. MANHOLE FRAME AND COVER SHALL CONFORM TO STANDARD PLAN 3018 UNLESS OTHERWISE SHOWN.
- 13. MANHOLE SHAFT SHALL CONFORM TO STANDARD PLAN 3014 UNLESS OTHERWISE SHOWN.
- 14. WHERE A PRESSURE MANHOLE SHAFT - WITH ECCENTRIC REDUCER IS SPECIFIED REFER TO STANDARD PLAN 3016.
- 15. WHERE A PRESSURE MANHOLE SHAFT - 36" WITHOUT REDUCER IS SPECIFIED REFER TO STANDARD PLAN 3017 AND 3018.
- 16. DIMENSIONS SHOWN ON THIS PLAN ARE NOT EXACT EQUAL VALUES.

THE FOLLOWING STANDARD PLANS ARE INCORPORATED HEREIN:

- 3014 MANHOLE SHAFT - WITH ECCENTRIC REDUCER
- 3015 MANHOLE SHAFT - 36" WITHOUT REDUCER
- 3016 PRESSURE MANHOLE SHAFT - WITH ECCENTRIC REDUCER
- 3017 PRESSURE MANHOLE SHAFT - 36" WITHOUT REDUCER
- 3018 MANHOLE FRAME AND COVER
- 3023 36" MANHOLE FRAME AND COVER
- 3024 STEEL STEP



APPROVED BY: *Ricardo Sandoval* 10.18.06
 CITY ENGINEER DATE
RICARDO SANDOVAL
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CITY OF FONTANA

MANHOLE PIPE TO PIPE
 (ONE OR BOTH MAIN LINE
 ID'S 33" OR SMALLER)

07/10/06

STD. PLAN NO. 3013

SHT 3 OF 3