

NOTES

- 1 - CONCRETE for poured units shall be 560-D-3250.
- 2 - JOINTS shall be filled with cement mortar and neatly pointed or wiped on inside of shaft.
- 3 - COLLAR of cement mortar around cover frame shall be omitted in rock and oil streets and in paved streets.
- 4 - CONCRETE RINGS shall be of the dimensions shown and reinforced as shown hereon.
- 5 - STEPS shall be 3/4" round galvanized steel. Top step shall be placed directly beneath the manhole cover from with legs extending into wall of shaft on radial lines. Width of all steps shall be 1'-2" between leg centers. Except where shown otherwise, spacing of steps in shaft shall be 1'-5" between centers. (Alhambra Foundry A-3320 or equal approved by City.
- 6 - CENTRIFUGALLY SPUN UNITS may be used at the option of the contractor, conforming to specifications for Centrifugal Concrete Pipe and to Detail C on Sheet 2.
- 7 - LENGTH of sections of 36" R.C.P. for manhole shaft may be 1'-0", 2'-0", 3'-0" or 4'-0" at the option of the Contractor.
- 8 - COVER shall have letter D in center.

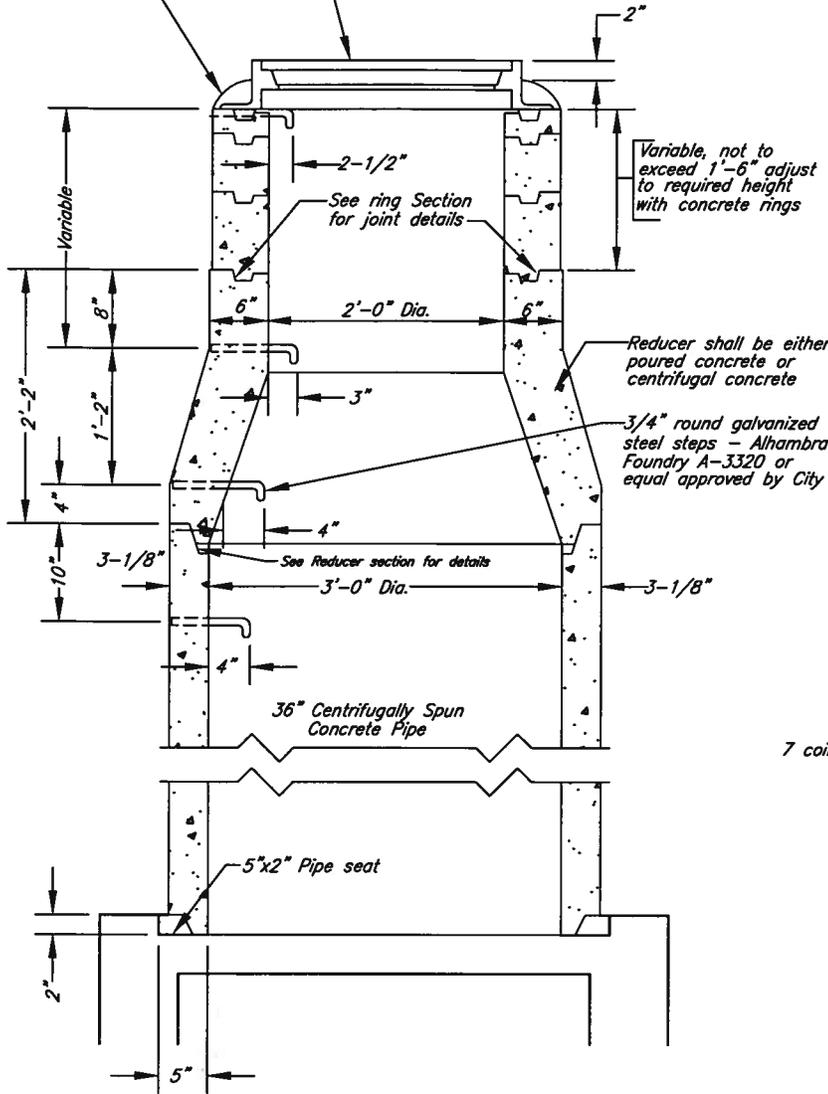
APPROVED BY		5/18/11	
		DATE	
CITY ENGINEER			
MARK	REVISIONS	APPR.	DATE

CITY OF RIVERSIDE
 PUBLIC WORKS DEPARTMENT
**CONCRETE RINGS, REDUCER,
 & PIPE FOR MANHOLE SHAFT**
 STANDARD DRAWING NO. 451
 Sheet 1 of 2

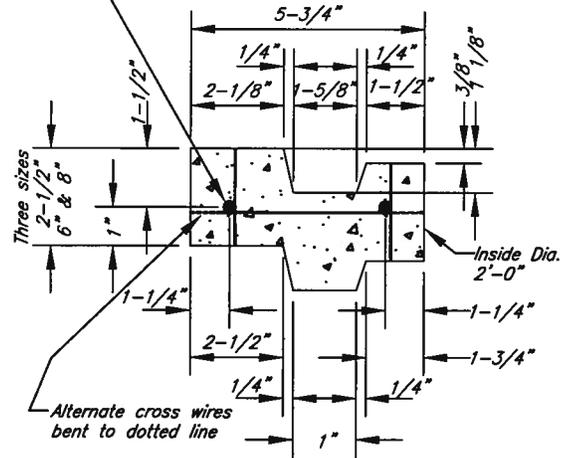
Cement mortar
Omit under Note 3
on Sheet 1.

Manhole frame and cover to be
Alhambra Foundry: A-1495 or
equal approved by City.

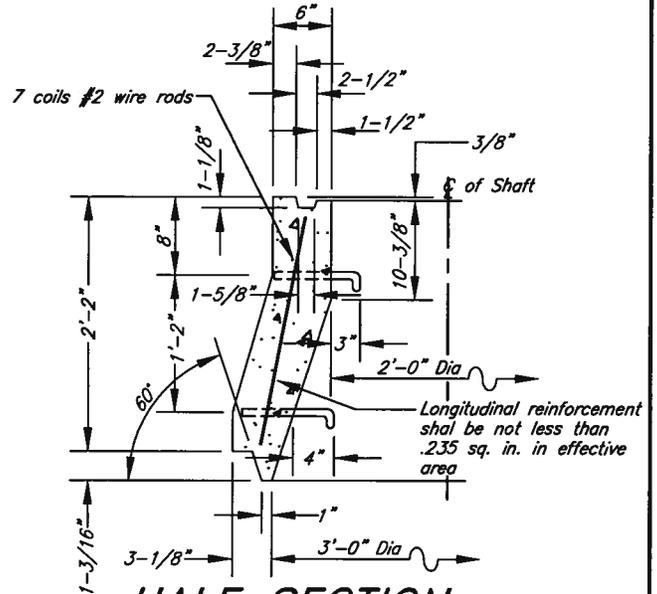
2 1/2" rings shall be reinforced with two No. 2
steel hoops, 6" & 8" rings shall be reinforced
with four and six hoops tied with No. 14 A.S. & W
gage wire 8" o.c.



DETAIL C
VERTICAL SECTION
of
MANHOLE SHAFT



CROSS SECTION
of
CONCRETE RING



HALF SECTION
of REDUCER

(For use with Centrifugally Spun Concrete Pipe)

NOTES

- DETAIL C shall apply when centrifugally spun concrete pipe and rings are used in manhole shaft, as per Note 6 on Sheet 1.
- TRANSVERSE REINFORCING STEEL for 36" centrifugally spun concrete pipe shall consist of coils of No. 2 rods spaced 4" c.c. or closer.
- LOADING TEST is not required for centrifugally spun concrete pipe used for manhole shaft.
- LENGTH of pipe sections for manhole shaft may be 1'-2", 2'-6", or 3'-10 3/4" at the option of the Contractor.
- ADDITIONAL NOTES for Detail C are shown on sheet 1 of 2.
- COVER shall have letter D in Center.

APPROVED BY
[Signature]
CITY ENGINEER

5/18/11
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PUBLIC WORKS DEPARTMENT

CONCRETE RINGS, REDUCER,
& PIPE FOR MANHOLE SHAFT

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Sheet 2 of 2

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