



**Chandler • Arizona**  
*Where Values Make The Difference*

**MEMORANDUM**

**Case # 16-14**

**DATE:** September 7, 2016

**TO:** MAG Specifications and Details Committee Members

**FROM:** Warren White, City of Chandler Representative

**SUBJECT:** Proposed Revisions to Water Meter Box and Cover Details

Purpose: Revise water meter box and cover detail no's 310-314 and 320 based on current practice and agency needs. Remove cast iron covers.

Revisions (update):

Detail No. 310 Steel Water Meter Box Cover

- Added paint requirements to note no. 2, oil based alkali resin per Section 790.
- Added note no. 6, refer to Detail 320 for vertical load rating.
- Other minor revisions to notes and text for consistency.

Detail No. 315 Polymer Concrete Water Meter Box Cover

- Added note no. 4 and 5 for consistency with other details.
- Added note no. 6, refer to Detail 320 for vertical load rating.
- Other minor revisions to notes and text for consistency.

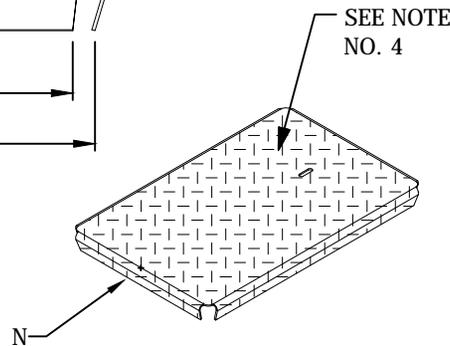
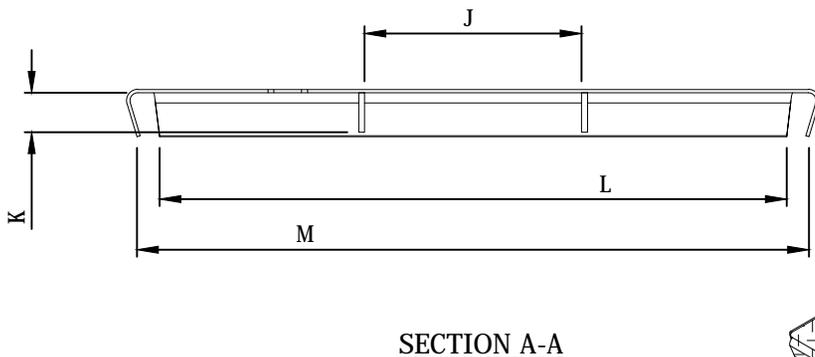
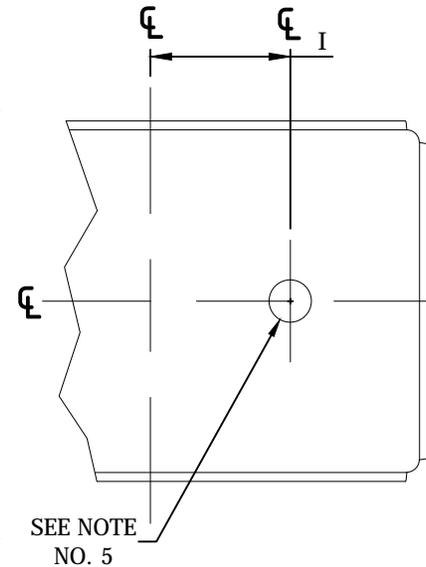
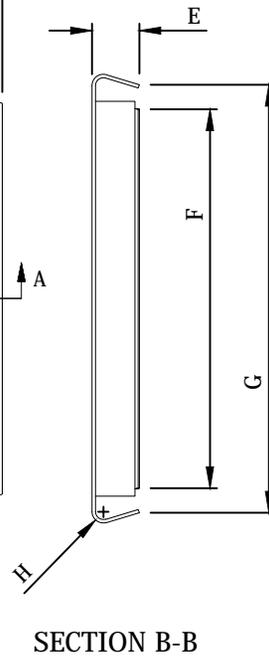
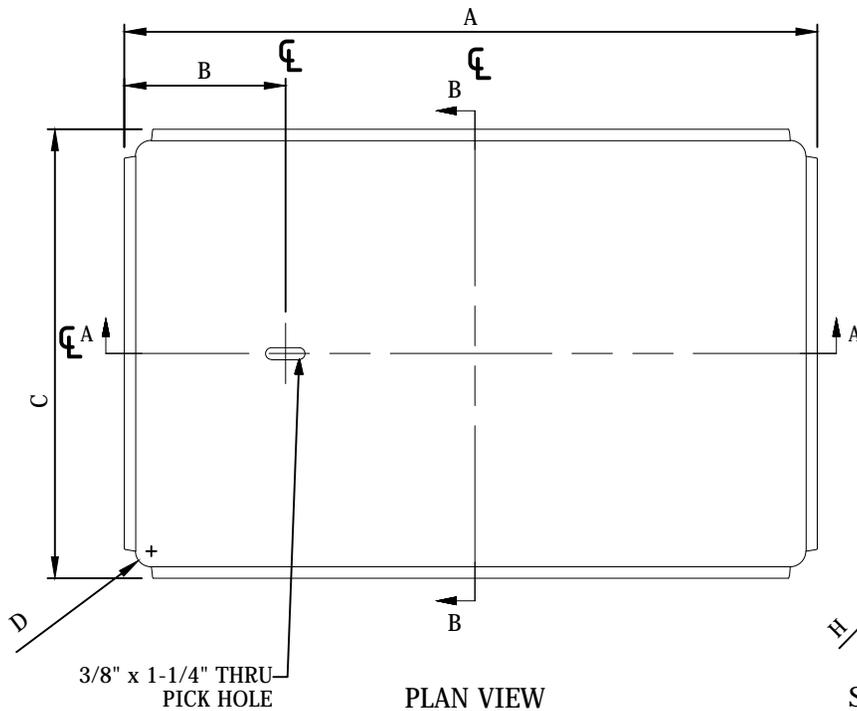
Detail No. 320 Water Meter Boxes

- Revised note no. 2 to include polyethylene with polymer concrete frame as an acceptable alternative material. Meets stated vertical loading requirements.
- Revised note no. 3 adding the appropriate ANSI/SCTE77 testing standard and setting Tier 5 as minimum vertical load rating.
- Revised note no. 4 - - load requirements above 5000 pounds to use traffic rated box and cover (Detail 319). Consistent with Tier 5 load rating.
- Other minor revisions to notes and text for consistency.

**DRAFT**  
**8-22-2016**

**NOTES:**

1. STEEL COVER MATERIAL TO BE PER ASTM A786
2. POTABLE WATER COVER PAINTED BLACK AND RECLAIMED WATER COVER PAINTED PANTONE PURPLE 512. USE OIL BASED PAINT ALKALI RESIN PER SECTION 790
3. DIMENSIONS SHOWN SHALL NOT VARY MORE THAN A 1/16 OF AN INCH
4. ALL COVERS MADE OUT OF DIAMOND CHECKER PLATE
5. STANDARD AUTOMATIC METER READER (AMR) HOLE 2" PER AGENCY OR STANDARD SPECIFICATION
6. REFER TO DETAIL 320 FOR VERTICAL LOAD RATING



STEEL WATER METER COVER DIMENSIONS				
DIMS	COVER NUMBER			
	1	2	3	4
A	15-3/4"	21-7/8"	26"	30-3/8"
B	3-7/8"	4-1/2"	2-1/8"	4-5/8"
C	9"	14"	15"	19-1/2"
D	1/2"	1/2"	1/2"	1/2"
E	1-1/2"	1-1/2"	2-1/4"	1-1/2"
F	7-1/8"	12"	13"	17-3/4"
G	8-1/4"	13-12"	14-1/8"	19-1/4"
H	1/8"	1/4"	1/8"	1/4"
I	3-3/4"	6-5/8"	9"	12-1/4"
J	NA	6-7/8"	8-1/2"	7-3/8"
K	NA	1-1/4"	1-1/4"	1-1/4"
L	13-7/8"	19-7/8"	24"	28-1/8"
M	15"	21-1/4"	25-1/8"	29-3/4"
N	14 GAUGE	12 GAUGE	12 GAUGE	12 GAUGE

DETAIL NO.  
**310**



STANDARD DETAIL  
ENGLISH

STEEL WATER METER BOX COVER

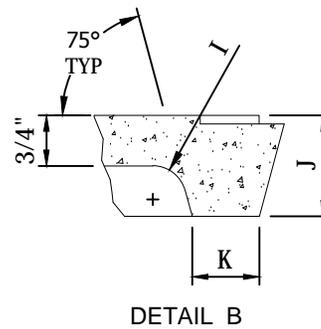
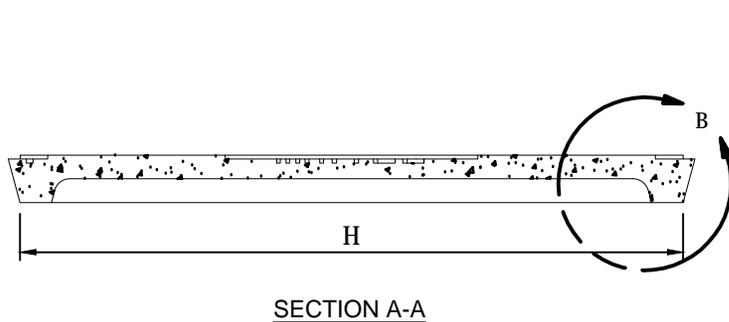
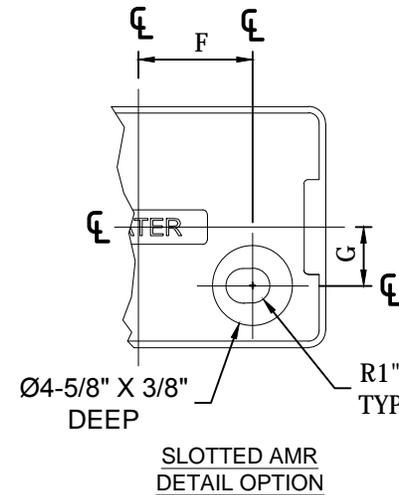
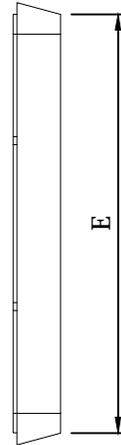
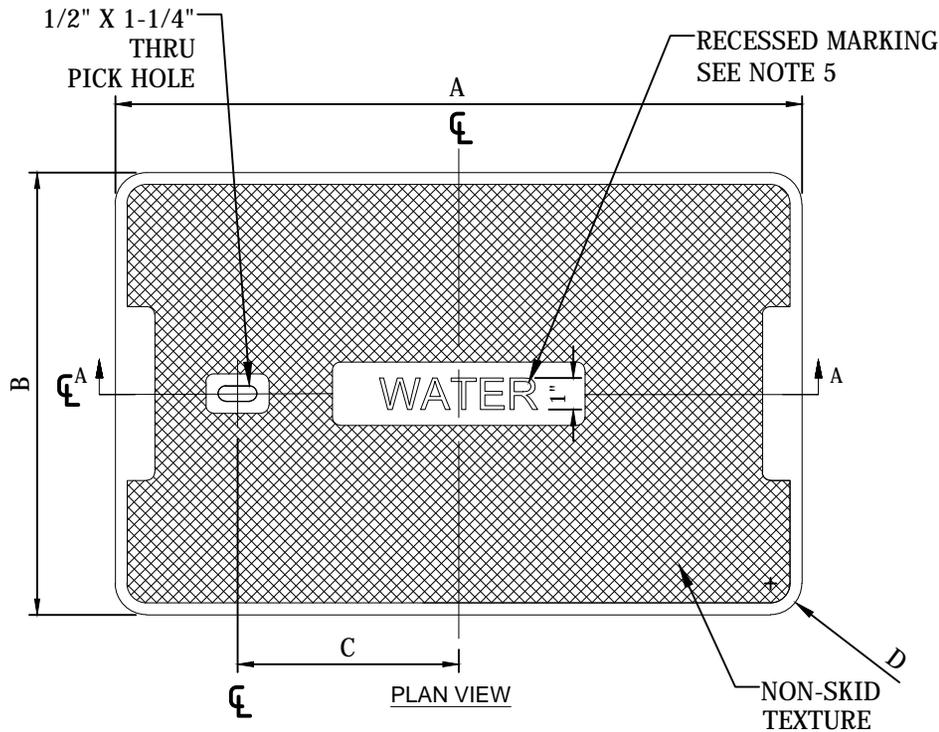
REVISED  
1-1-2017

DETAIL NO.  
**310**

**DRAFT**  
**8-22-2016**

**NOTES:**

1. POTABLE WATER COVER TINTED GRAY AND RECLAIMED WATER COVER TINTED PANTONE PURPLE 512
2. DIMENSIONS SHOWN SHALL NOT VARY MORE THAN A 1/16 OF AN INCH
3. ACCEPTABLE ALTERNATIVES INCLUDE "SHEET MOLDED COMPOUND" (SMC), AND "BULK MOLDED COMPOUND" (BMC). PLASTICS ARE NOT ACCEPTABLE MATERIALS
4. SLOTTED AUTOMATIC METER READING (AMR) HOLE PER AGENCY OR STANDARD SPECIFICATION
5. MARKING PER AGENCY AND/OR UTILITY
6. REFER TO DETAIL 320 FOR VERTICAL LOAD RATING



POLYMER CONCRETE COVER DIMENSIONS				
DIMS	COVER NUMBER			
	1	2	3	4
A	15-3/4"	21-7/8"	26"	30-3/8"
B	9"	14"	15"	19-1/2"
C	5"	7"	9"	10"
D	3/4"	1"	3/8"	3/8"
E	8-1/2"	13-1/4"	14-1/8"	19"
F	4-3/8"	6-5/8"	8"	10-3/4"
G	3/4"	3-3/8"	3-3/4"	6-1/4"
H	15-3/8"	21"	25-1/8"	29-1/2"
I	3/8"	1/2"	1"	1/4"
J	1-1/2"	1-1/2"	2-1/4"	1-1/2"
K	3/4"	1"	1"	1"

DETAIL NO.  
**315**



STANDARD DETAIL  
ENGLISH

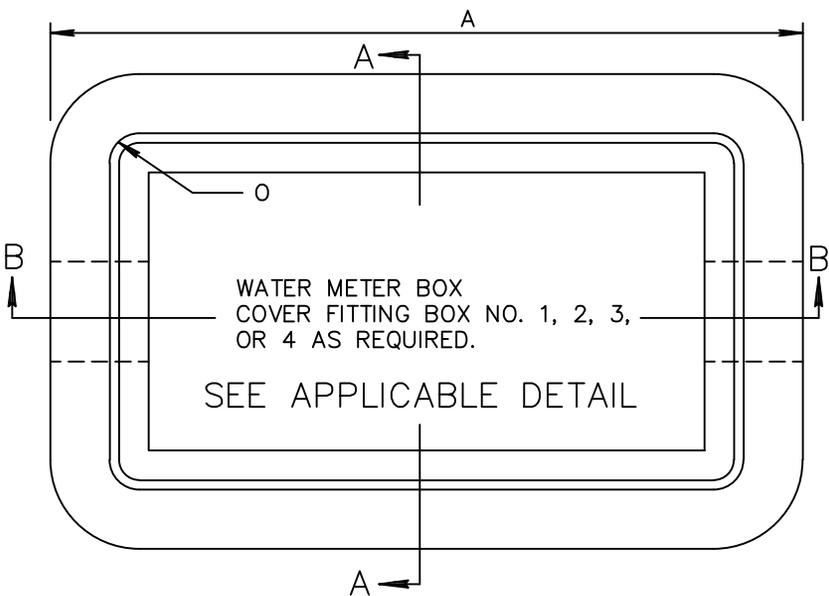
POLYMER CONCRETE  
WATER METER BOX COVER

REVISED  
1-1-2017

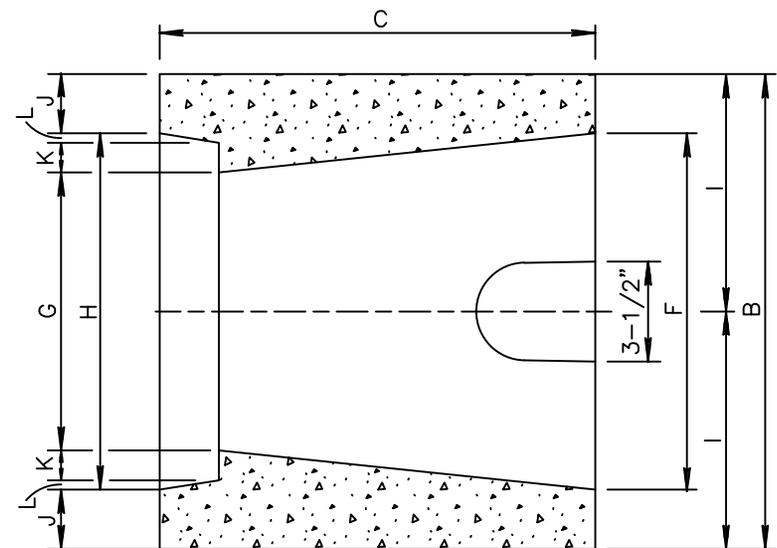
DETAIL NO.  
**315**

**NOTES:**

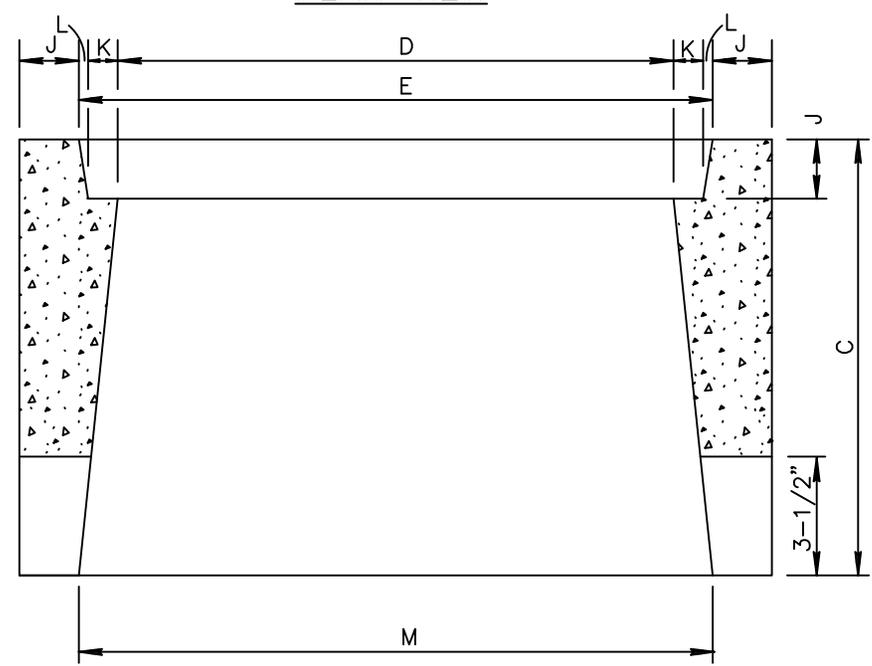
1. THE METER BOXES SHALL CONFORM TO DIMENSIONS AS SHOWN AND SHALL NOT VARY MORE THAN A 1/16 OF AN INCH
2. THE METER BOXES SHALL BE MADE OF CLASS 'AA' CONCRETE PER SECT. 725. ACCEPTABLE ALTERNATIVE MATERIALS INCLUDE "POLYMER CONCRETE", "SHEET MOLDED COMPOUND" (SMC), "BULK MOLDED COMPOUND" (BMC), AND POLYETHYLENE WITH POLYMER CONCRETE FRAME
3. MINIMUM VERTICAL LOAD RATING PER TIER 5 ANSI/SCTE77 TESTING STANDARD FOR GRADE LEVEL ENCLOSURES AND COVERS
4. FOR LOAD REQUIREMENTS ABOVE 5,000 POUNDS USE DETAIL 319, TRAFFIC RATED BOX AND COVER



PLAN VIEW



SECTION A-A



SECTION B-B

METER BOX DIMENSIONS				
DIMS	BOX NUMBER			
	1	2	3	4
A	18-1/2"	25"	28-3/8"	33-1/8"
B	11-3/4"	17-1/4"	17-5/8"	22-3/8"
C	12"	12"	12"	12"
D	14"	20"	24"	27-3/4"
E	16"	22-1/8"	26-1/4"	30-5/8"
F	9-1/4"	14-1/2"	15-1/8"	19-3/4"
G	7"	12-1/2"	13"	17"
H	9-1/4"	14-1/4"	15-1/4"	19-3/4"
I	5-7/8"	8-5/8"	8-7/8"	11-1/8"
J	1-1/2"	1-1/2"	2-1/4"	1-1/2"
K	3/4"	1/2"	3/4"	5/8"
L	1/4"	1/2"	1/2"	5/8"
M	16"	21-7/8"	26"	30-1/2"
O	1/2"	1/2"	1/2"	5/8"
	5/8" OR 3/4" METER	1" METER	1-1/2" METER	2" METER

DETAIL NO.  
320



STANDARD DETAIL  
ENGLISH

NON TRAFFIC RATED  
WATER METER BOXES

REVISED  
1-1-2017

DETAIL NO.  
320