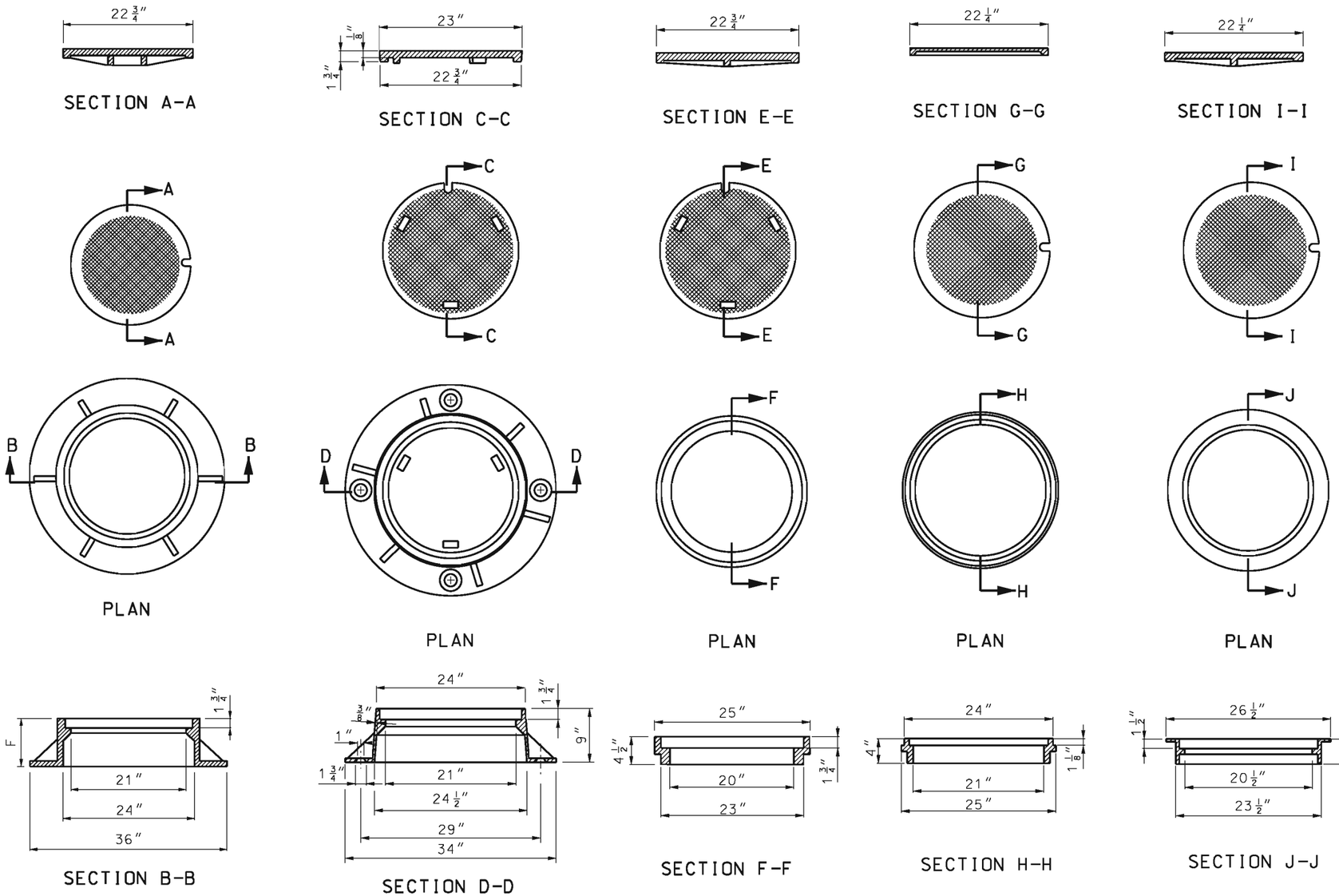
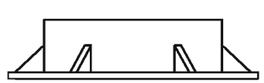
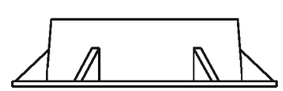




ELEVATION

TYPE 1A AND 1B

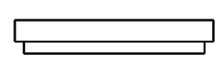
APPROXIMATE WEIGHT OF
FRAME AND COVER
TYPE 1A 540 LBS.
TYPE 1B 570 LBS.



ELEVATION

TYPE 1C

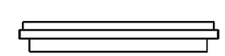
APPROXIMATE WEIGHT OF
FRAME AND COVER 290 LBS.



ELEVATION

TYPE 2

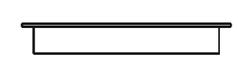
APPROXIMATE WEIGHT OF
FRAME AND COVER 250 LBS.



ELEVATION

TYPE 3

APPROXIMATE WEIGHT OF
FRAME AND COVER 115 LBS.



ELEVATION

TYPE 4

APPROXIMATE WEIGHT OF
FRAME AND COVER 160 LBS.

GENERAL NOTES:

TYPE 1A:
WHEN "P" (PAVEMENT THICKNESS) IS 8" USE MANHOLE FRAME WITH 9" HEIGHT (F) APPROXIMATE WEIGHT OF FRAME AND COVER, 540 LBS., CLASS 35 CASTING.

TYPE 1B:
WHEN "P" (PAVEMENT THICKNESS) IS 9" OR 10", USE MANHOLE FRAME WITH 10" HEIGHT (F) APPROXIMATE WEIGHT OF FRAME AND COVER, 570 LBS., CLASS 35 CASTING.

TYPE1C:
TYPE 1C MANHOLE FRAME AND COVER WILL BE ACCEPTED AS AN ALTERNATE TO TYPE 1A OR TYPE 1B. APPROXIMATE WEIGHT OF FRAME AND COVER, 290 LBS..

FOR "P" GREATER THAN 10" ADJUSTING RINGS COMBINED WITH MANHOLE FRAMES WITH "F" EQUAL TO 9" OR 10" SHALL BE USED TO MATCH THE PAVEMENT THICKNESS.

THE PRICE BID FOR MANHOLE FRAME AND COVER SHALL INCLUDE THE NUMBER OF ADJUSTING RINGS REQUIRED TO MATCH PAVEMENT THICKNESS.

WHEN SPECIFIED, USE A LOCK TYPE FRAME AND COVER WITH A MINIMUM OF 3 LOCK BLOCKS AND BOLTS.

MANHOLE ADJUSTING RINGS SHALL BE SECURED TO EITHER THE FRAME OR PAVEMENT TO PREVENT MOVEMENT UNDER TRAFFIC.

A CHECKERED DESIGN TOP SHALL BE FURNISHED.

MISSOURI HIGHWAYS AND TRANSPORTATION COMMISSION
105 WEST CAPITOL
JEFFERSON CITY, MO 65102
1-888-ASK-MODOT (1-888-275-6636)

STATE OF MISSOURI
KATHRYN PHILLIPS HARVEY
NUMBER PE-23751
PROFESSIONAL ENGINEER
THIS SHEET HAS BEEN SIGNED, SEALED AND DATED ELECTRONICALLY.

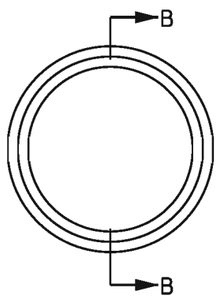
MANHOLE FRAMES AND COVERS

DATE EFFECTIVE: 03/01/1996
DATE PREPARED: 8/21/2009

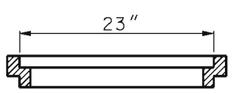
614.30E

SHEET NO. 1 OF 2

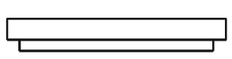
IF A SEAL IS PRESENT ON THIS SHEET IT HAS BEEN ELECTRONICALLY SEALED AND DATED.



PLAN

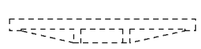


SECTION B-B

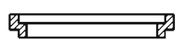


ELEVATION

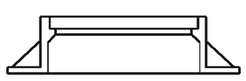
ADJUSTING RING
SOLID OR ADJUSTABLE



COVER

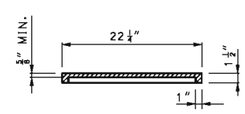


ADJUSTING RING

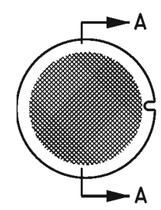


FRAME

INSTALLATION DETAILS



SECTION A-A



APPROXIMATE WEIGHT OF FRAME AND COVER 150 LBS.

ALTERNATE TYPE 4 COVER

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STATE OF MISSOURI
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MANHOLE FRAMES AND COVERS

DATE EFFECTIVE: 03/01/1996
DATE PREPARED: 8/21/2009

614.30E