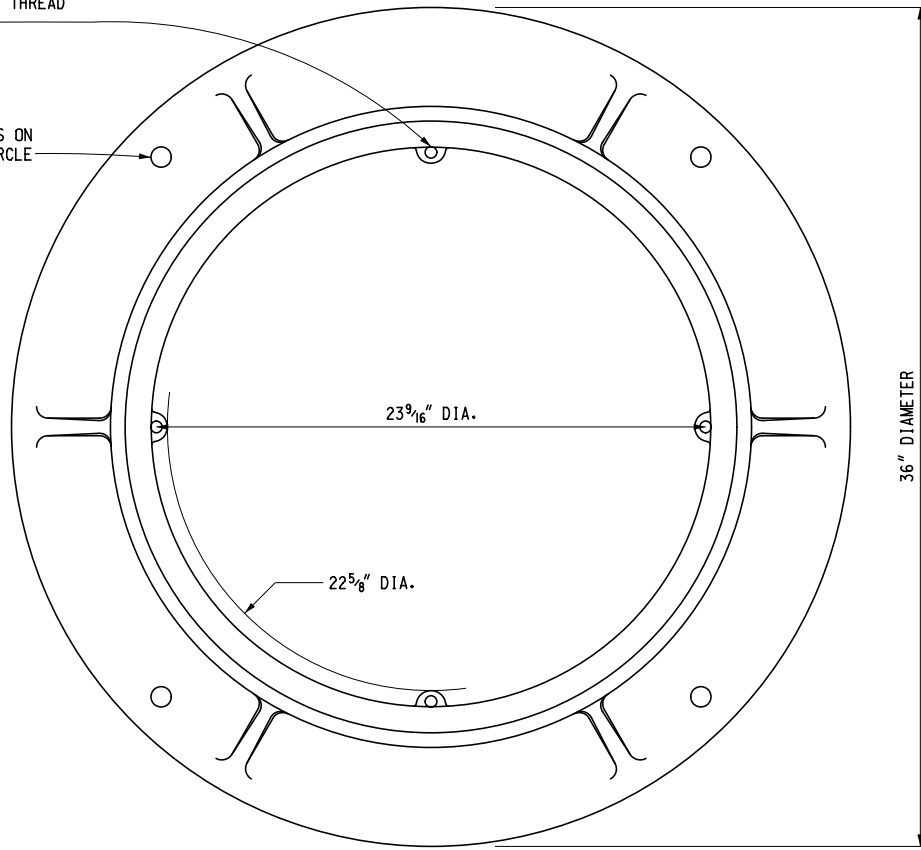
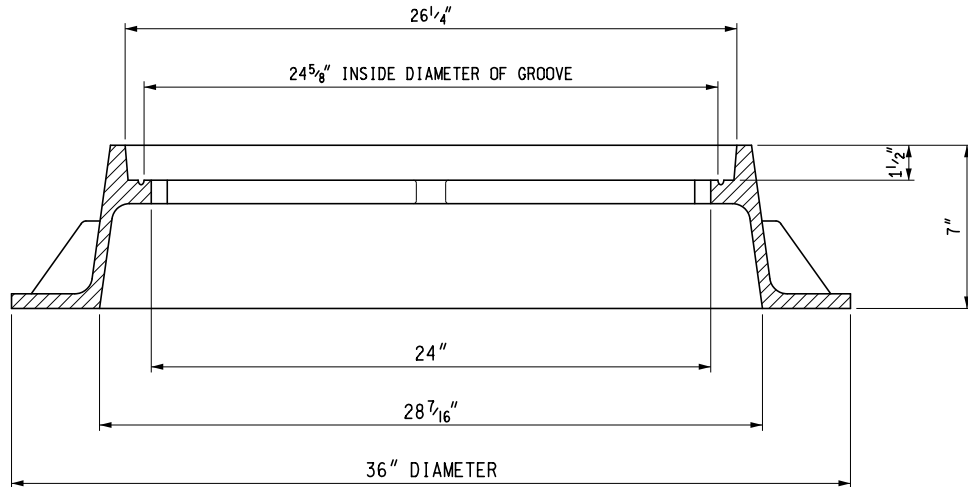


DRILL AND TAP FOR 1/2" - 13 BOLTS
ON DRILL DIMPLES PROVIDED. TYP.
OR PROVIDE REPLACEABLE THREAD
OPTION

FOUR 7/8" DIAMETER HOLES ON
3 3/4" DIAMETER BOLT CIRCLE



TOP VIEW OF FRAME



FRAME SECTION



PREPARED
BY
DESIGN DIVISION

DRAWN BY: B.L.T.

CHECKED BY: W.K.P.

DEPARTMENT DIRECTOR
Kirk T. Steudle

APPROVED BY: Randy V. [Signature]
DIRECTOR, BUREAU OF FIELD SERVICES

APPROVED BY: Mark A. Van [Signature]
DIRECTOR, BUREAU OF HIGHWAY DEVELOPMENT

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

COVER Q

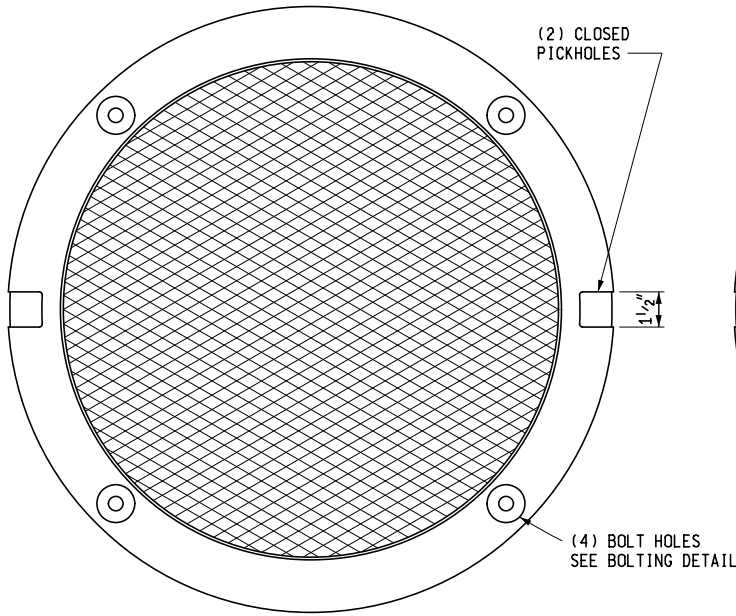
FOR USE ON MANHOLES OR SANITARY SEWERS
WHERE VENT HOLES ARE NOT DESIRED

9-30-2014
F.H.W.A. APPROVAL

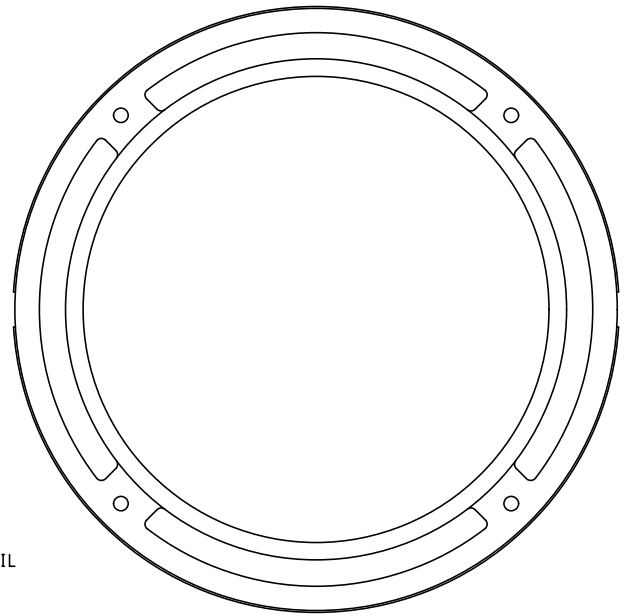
3-12-2014
PLAN DATE

R-18-F

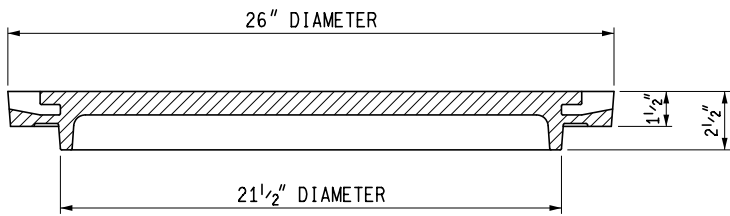
SHEET
1 OF 2



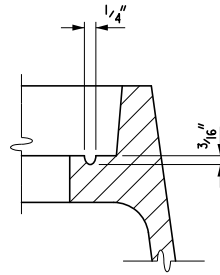
TOP VIEW OF COVER



BOTTOM VIEW OF COVER

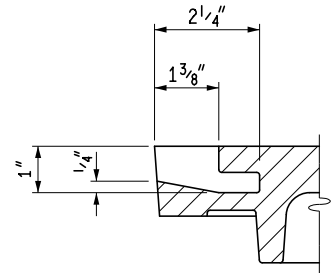


COVER SECTION



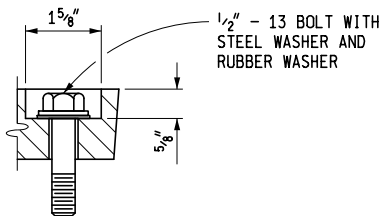
GROOVE DETAIL

1/4" DIA. NEOPRENE GASKET
PLACED IN GROOVE



PICKHOLE DETAIL

ALTERNATE CLOSED
PICKHOLES ALLOWED



BOLTING DETAIL

1/2" - 13 BOLT WITH
STEEL WASHER AND
RUBBER WASHER

NOTES:

THE CASTINGS SHALL MEET THE REQUIREMENTS OF THE CURRENT STANDARD SPECIFICATION FOR GRAY IRON CASTINGS.

ALL CASTINGS SHALL BE CLEANED BY CURRENT APPROVED BLASTING METHODS.

THE SEATING FACE OF THE LID AND THE SEAT FOR THE SAME ON THE FRAME SHALL BE GROUNDED OR MACHINED SO THAT THE LID WILL HAVE AN EVEN BEARING ON ITS SEAT TO PREVENT ROCKING OR TILTING.

THE CASTINGS SHALL BE FREE OF POURING FAULTS, BLOW HOLES, CRACKS AND OTHER IMPERFECTIONS. THEY SHALL BE SOUND, TRUE TO FORM AND THICKNESS, CLEAN AND NEATLY FINISHED, AND SHALL BE COATED WITH COAL TAR PITCH VARNISH.

THIS COVER IS DESIGNED TO FIT ON ANY MANHOLE OR ON ANY EXISTING SIMILAR STRUCTURE WHEN SO DESIGNATED ON THE PLANS.

A NON-LOCKING COVER MAY BE USED WHEN APPROVED BY THE ENGINEER

MICHIGAN DEPARTMENT OF TRANSPORTATION
BUREAU OF HIGHWAY DEVELOPMENT STANDARD PLAN FOR

COVER Q

FOR USE ON MANHOLES OR SANITARY SEWERS
WHERE VENT HOLES ARE NOT DESIRED

9-30-2014
F.H.W.A. APPROVAL

3-12-2014
PLAN DATE

R-18-F

SHEET
2 OF 2