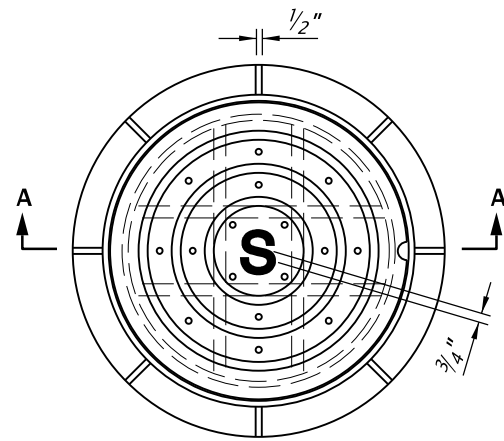
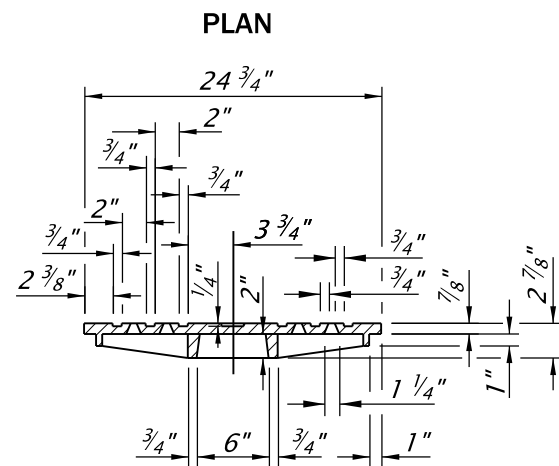
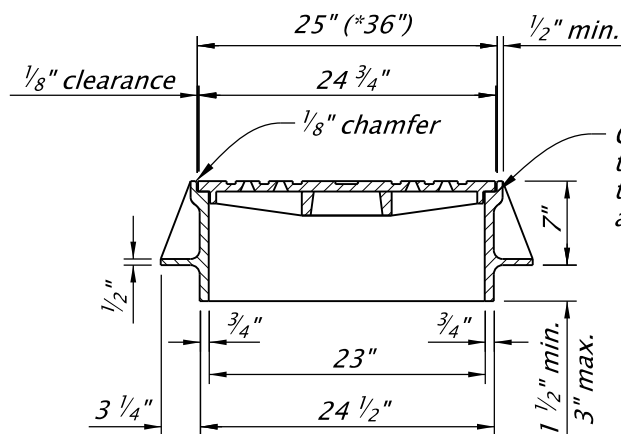




NOTE:
Coat outside of frame with asphalt where frame is to be placed in concrete, pavement, concrete gutter or walk.



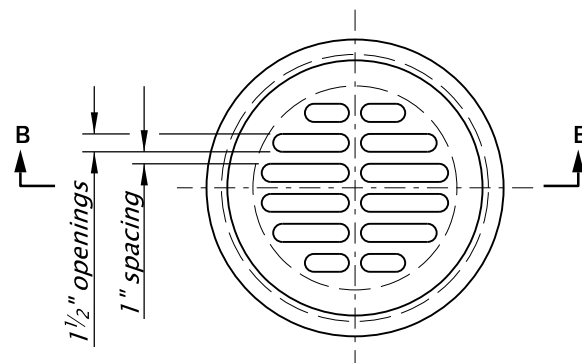
COVER SECTION A-A



*36 inch minimum diameter cover is required for manholes with depths of 20 feet or greater. See general note 4.

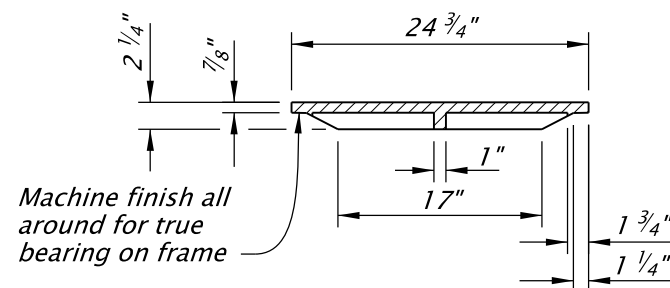
FRAME SECTION A-A

STANDARD MANHOLE COVER AND FRAME



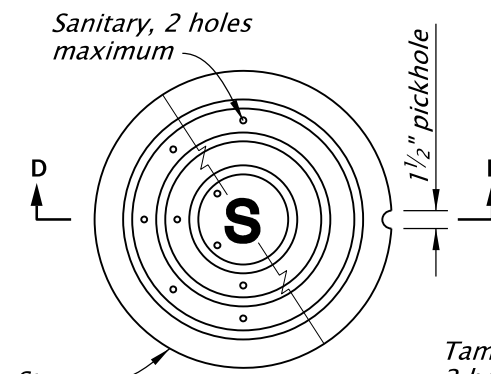
NOTE:
For use with standard manhole frame. See general note 7.

PLAN



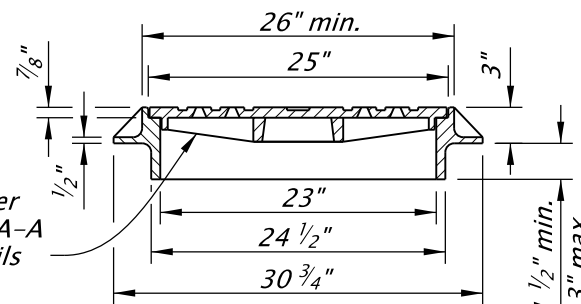
SECTION B-B

STANDARD MANHOLE GRATE



PLAN

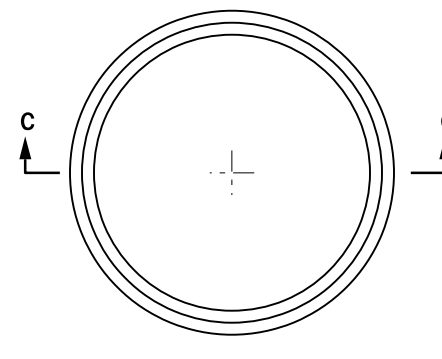
Tamperproof,
2 holes maximum
for sanitary covers



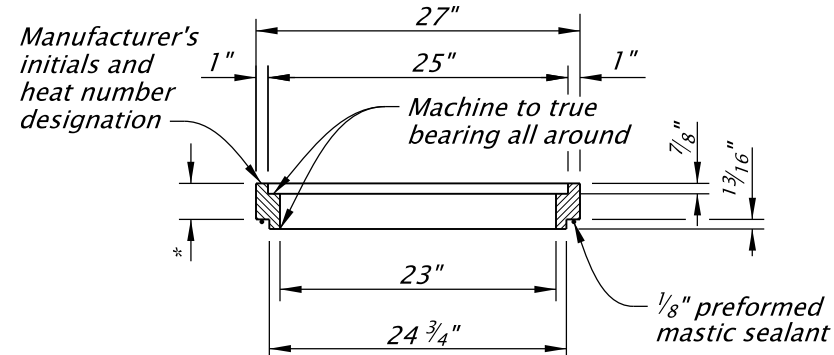
SECTION D-D

CAST IRON SUBURBAN MANHOLE COVER AND FRAME

For use on local streets only, as specified



PLAN

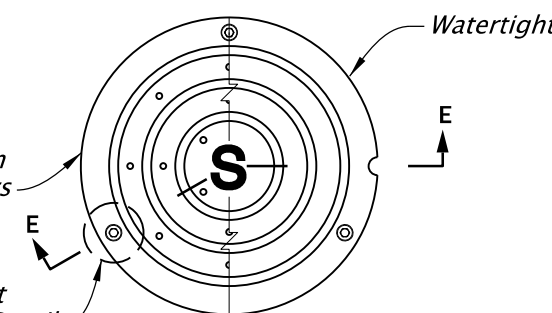


SECTION C-C

* Standard depths 1 1/2", 2", 2 1/2" and 3". Material to be grey cast iron ASTM A48, Class 35B. Tolerance on non-machined surfaces to be $\pm 0.06"$. See general note 6

MANHOLE ADJUSTMENT RING

For use with Standard Manhole Frame



PLAN

CAST IRON TAMPERPROOF AND WATERTIGHT COVER

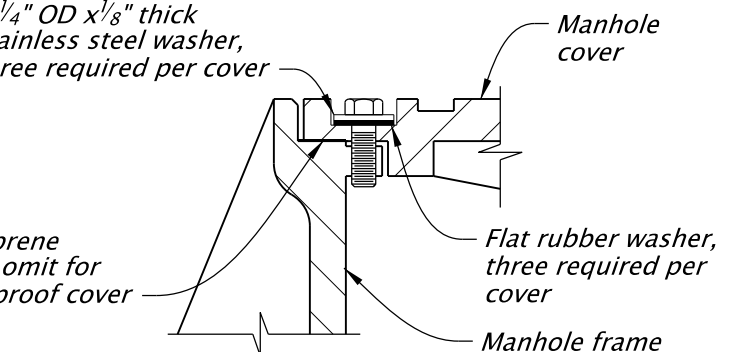
Frames available in standard or suburban pattern

GENERAL NOTES FOR ALL DETAILS ON THIS SHEET:

1. Tamperproof covers required on sanitary or storm drain manhole where located in pedestrian ways or easement areas. Covers for sanitary manholes shall have two holes maximum.
2. Watertight covers required if located where cover may be submerged (no holes).
3. Covers and frames shall be stamped with manufacturer's initials, heat number and point of origin.
4. See Std. Dwg. RD336 for manhole steps.
5. See Std. Dwg. RD360 for manhole frame adjustment.
6. See ODOT's QPL for alternate manhole adjustment rings.
7. Manhole grate allowed only in locations not subject to bicycle or pedestrian use.
8. See ODOT's QPL for alternate bolt-down products.

1 1/4" OD x 1/8" thick
stainless steel washer,
three required per cover

1/4" neoprene
gasket, omit for
tamperproof cover



NOTE:
Three required, equally spaced, 1/2" x 1 1/2" pentagonal or hexagonal head, bronze or stainless steel. Install frame so that one bolt boss is located over the manhole steps. See general note 8

BOLT DOWN DETAIL

For tamperproof and watertight covers

The selection and use of this Standard Drawing, while designed in accordance with generally accepted engineering principles and practices, is the sole responsibility of the user and should not be used without first consulting a Registered Professional Engineer.

All materials shall be in accordance with the current Oregon Standard Specifications.

OREGON STANDARD DRAWINGS

MANHOLE COVERS AND FRAMES

2024

DATE	REVISION	DESCRIPTION
07-2022	REVISED DETAILS AND NOTES	
CALC. BOOK NO.	N/A	SDR DATE
		15-JUL-2022

RD356

Effective Date: June 1, 2026 – November 30, 2026