

City of Milwaukee
Department of Public Works

Milwaukee Water Works

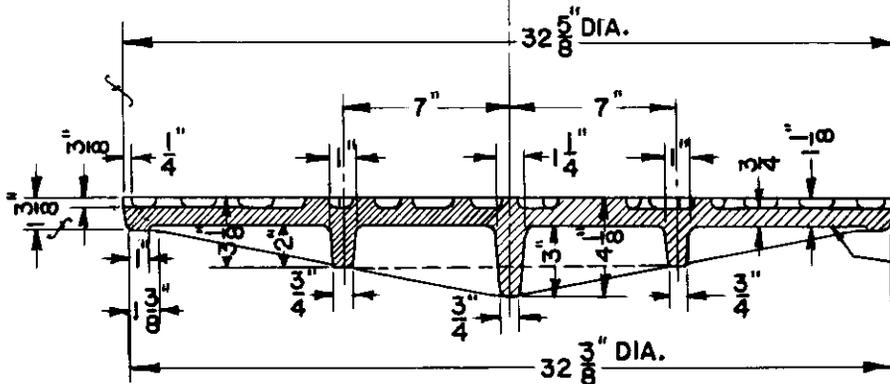
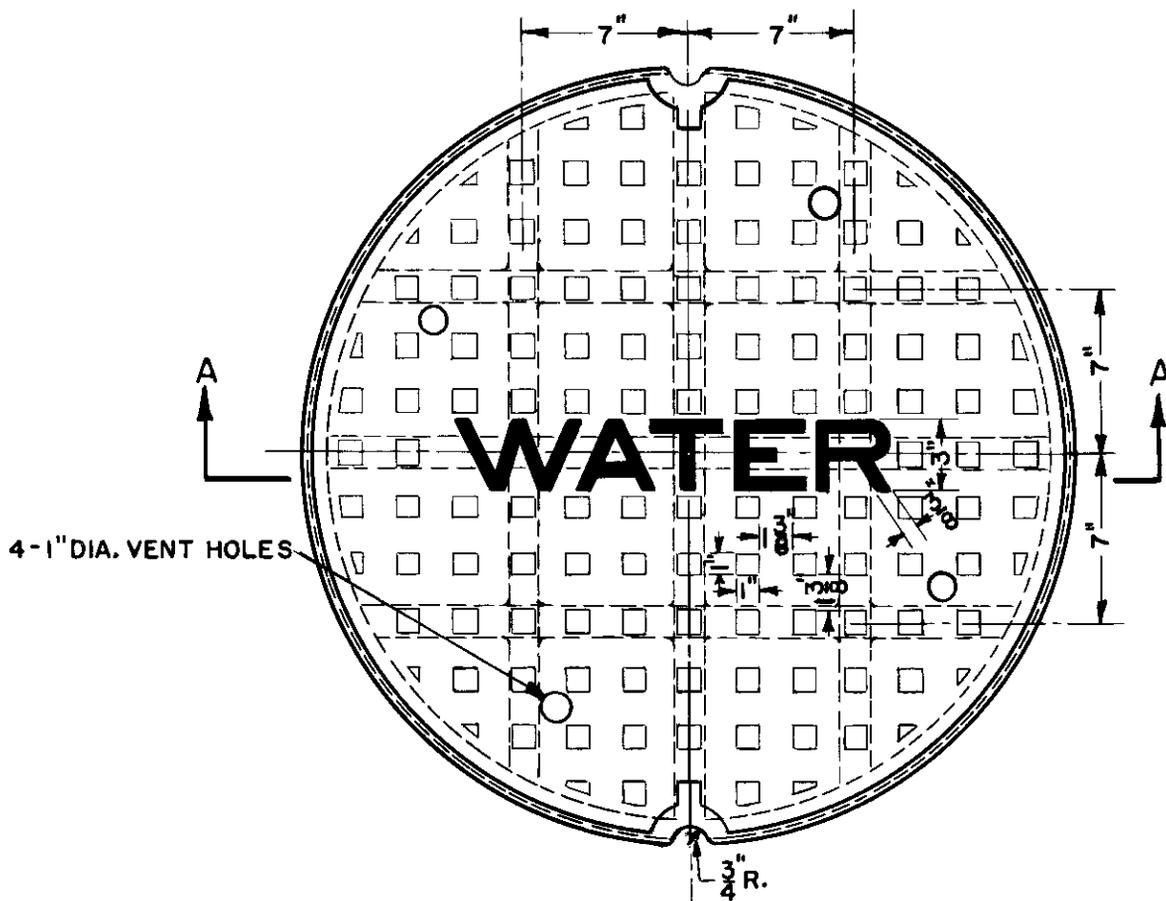
Material Specifications for
Cast Iron Manhole Frame and Cover



City of Milwaukee Specification No. 4-C-1

Revised March 20, 2009

- I. **GENERAL REQUIREMENTS:** Vendors providing materials shall comply with the latest version of City of Milwaukee Specification No. 70b-D-7, except as modified herein. **MATERIALS FURNISHED UNDER THIS SPECIFICATION SHALL BE MANUFACTURED IN THE UNITED STATES.**
- II. **TECHNICAL REQUIREMENTS**
- A. **Description:** Manhole frames and covers, specified herein, shall consist of two parts. The frame is a metal ring placed on the manhole to provide access to the inside of a manhole from surface elevation. The frame shall be cast with a ledge to accommodate the manhole cover. The cover is a removable plate which forms a lid for the access opening provided by the manhole and frame.
- B. **Material:** The manhole frame and cover shall be cast iron in accordance with ASTM-A48 class 30 or approved equal.
- C. **Manhole Frame and Cover Design:** The manhole frame and cover shall be made from the patterns as furnished by the City of Milwaukee and in substantial accordance with drawings MH-1 and MH-2 provided by the City.
- D. **Patterns:** Metal patterns will be furnished by the City of Milwaukee. All transportation costs shall be the responsibility of the vendor. The vendor will be required to return all patterns intact in the case, not later than five days after completion of contract. The patterns and case will be inspected on their return to the City of Milwaukee. If found damaged in any way through abuse or improper preparation for shipment, the vendor will be held liable for any and all costs necessary for the complete reconditioning or the replacement of the patterns and case, or any part thereof. Such liability costs shall be deducted from the contract cost of the manhole frame and covers.
- E. **Workmanship and Finish:** The cast iron manhole frame and cover shall be free from blowholes, porosity, cold shots, shrinkage defects, cracks or other injurious defects and shall have a normal smooth casting finish.
- F. **Markings:** Markings on the manhole frame and cover shall show the manufacturer's name or mark, the year made, and the letters "M.W.W.". The markings shall be a minimum 1" in height and 1/8" in relief. All markings shall be distinctly cast on the upper surface of the base of the frame and the lower inside surface of the cover.
- G. **Inspection by City:**
- a. The Superintendent of Milwaukee Water Works or a duly authorized representative will inspect all materials furnished.
 - b. Any materials found not conforming to the specifications will be rejected.
 - c. Replacement of materials that failed under warranty shall conform to all the requirements of the applicable specifications.
 - d. The City reserves the right to inspect materials at the factory, at which time the manufacturer shall provide, at their own expense, such facilities and assistance as may be necessary in carrying out the required inspection.



MFR. NAME
YEAR
M. W. W.

SECTION A-A

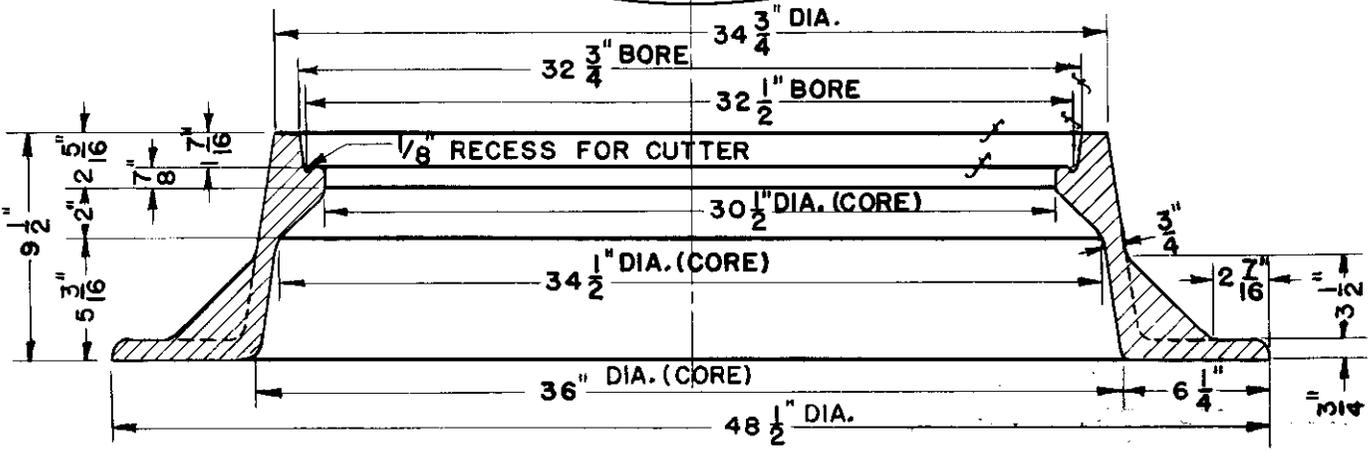
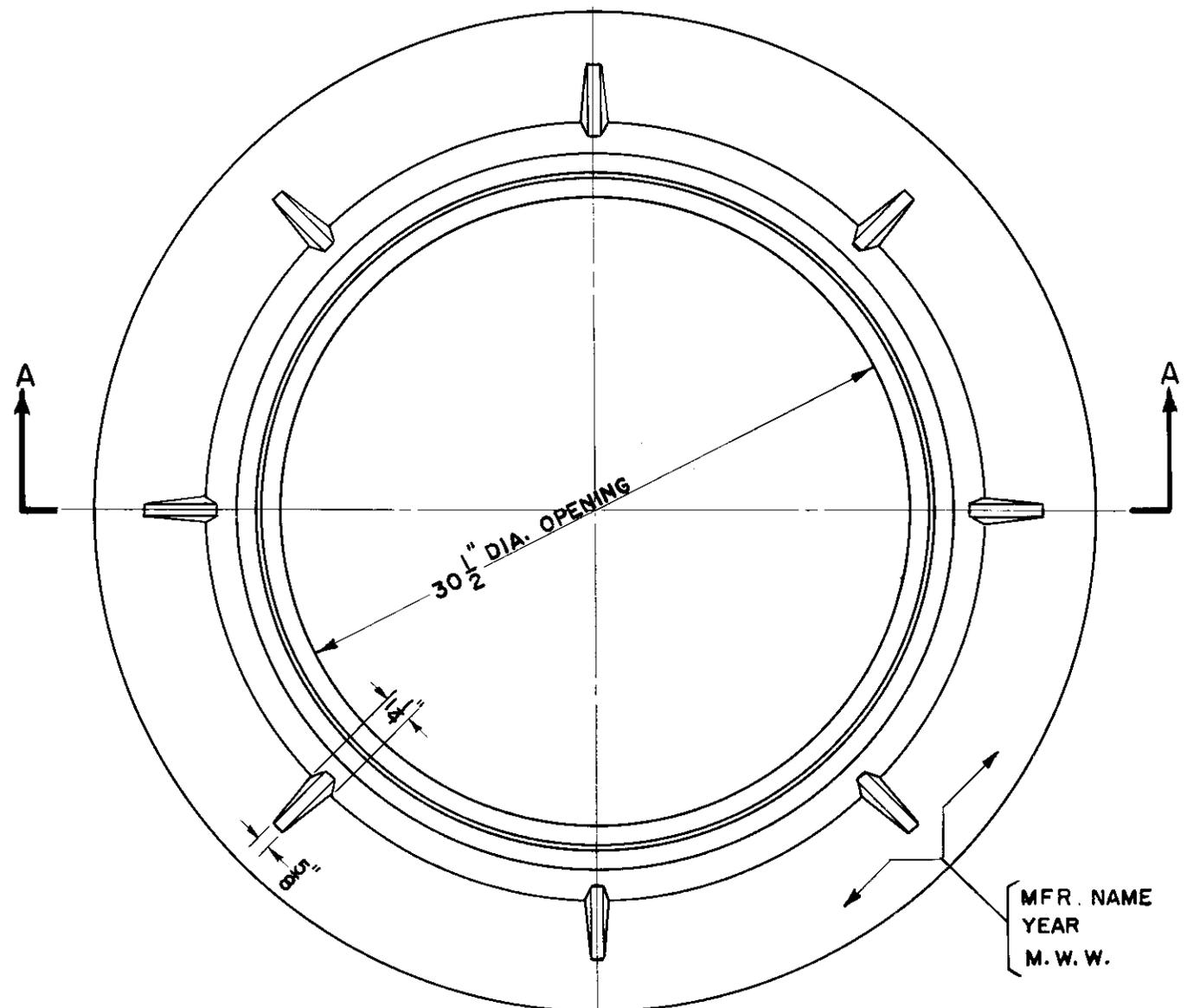
LID

2 SPECIFIED WEIGHT 270 LBS.

M. W. W. STANDARD
MANHOLE LID 2

MATERIAL - CAST IRON
A.S.T.M. A 48-CLASS NO. 30
REV. 2-15-89 2
REV. 6-24-70 1 GEN REISSUED 4-28-88

Walter E. Bauer ENGINEER IN CHARGE
John A. Erickson CITY ENGINEER
DRAWN J.R.S. DATE 12-16-52
CHECKED O.A.H. SCALE 1/8"=1"
FILE 3-5-38 DWG. MH-1



SECTION A-A

FRAME

2 SPECIFIED WEIGHT 490 LBS.

M. W. W. STANDARD
MANHOLE FRAME

MATERIAL-CAST IRON
 A.S.T.M. A48-CLASS NO. 30
 REV. 2-15-89
 REV. 6-24-70 **2** GEN. REISSUED 4-28-88

Walter E. Powers
 ENGINEER IN CHARGE
 DRAWN J.R.S.
 CHECKED O.A.H.
 FILE 3-5-38

John A. Erickson
 CITY ENGINEER
 DATE 12-16-52
 SCALE 1/8"=1"
 DWG. MH-2