# J. HOWARD ENGINEERING

# 8105 Edgewater Drive, #209 Oakland, CA 94621

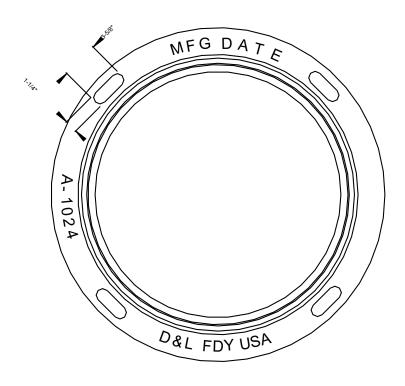
Contrs. Lic. No. 503495

# SUBMITTAL TRANSMITTAL

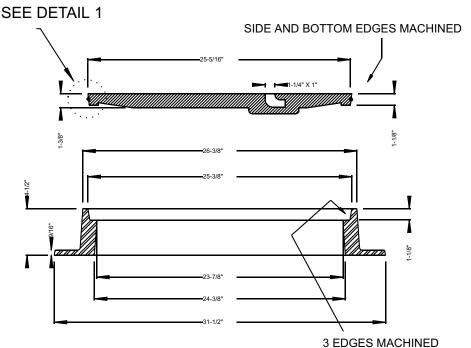
TO:	City of O	<b>akland</b> k H Ogawa Plaza	Cto 4214	Date:	October 26, 2	2015	
		CA 94612	, Sie 4314	Job No.:	OAK05	Submittal #:	8.0
Attn:	Wezlon N	Miles					
Tel:	(510) 238			Project:		, 21st, 27th St, Inyo St, 8	& 25th Ave
Fax:	(510) 238	3-6633		Subject:	Manhole Matl	S	
			<u> </u>				
Gentle	emen,						
			bmittal information for rev approved/marked sets fo			ance with the conf	ract
No.	Copies	Ref Spec/Dwg	De	scription		Source	е
1	1	201-8	Manhole Matls			Oldcast	le
<u></u>							
Note	s:			Review A	ction (check on	e):	
				[ ] 1-No	Exceptions No	oted	
					ake Corections		
					evise & Resubn ot Acceptable -F		
					•		
		PLEASE DIRE	<b>CT ANY QUESTIONS RE</b> Ron H. Zelay		HIS SUBMITT	AL TO:	
			Phone (510) 3	03-9591			
			ronzelaya@sbc	global.net			
Cc:				J. HOW	ARD ENGINEE	ERING	
				Ву:	R. Zelaya		

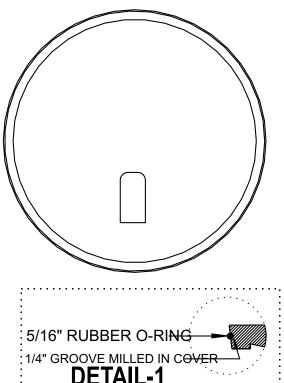
# A-1024

# Manhole Ring & Cover









# CAST IRON conforms to ASTM A-48-93 Class 35B

Meets H-20 Wheel Loading

Designation:
A-1024

January 2002

# D&L model No.A-1024 Estimated Weight of A-1024

Estimated Weight of A-102-Cover 140 lbs Ring 130 lbs Total 270 lbs

Prepared by: Jesse Walker D&L Supply (not to scale)

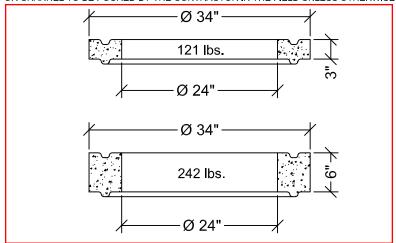
# & Foundry & Supply

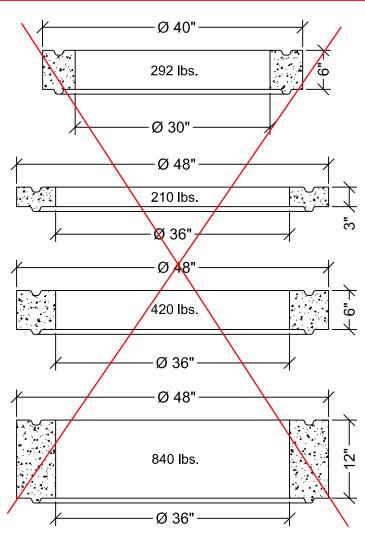
CA Sales: (707) 557-4525 fax: (707) 557-4655 UT Sales: (801) 785-5015 fax: (801) 785-0835 WA Sales: (509) 765-7952 fax: (509) 765-8124

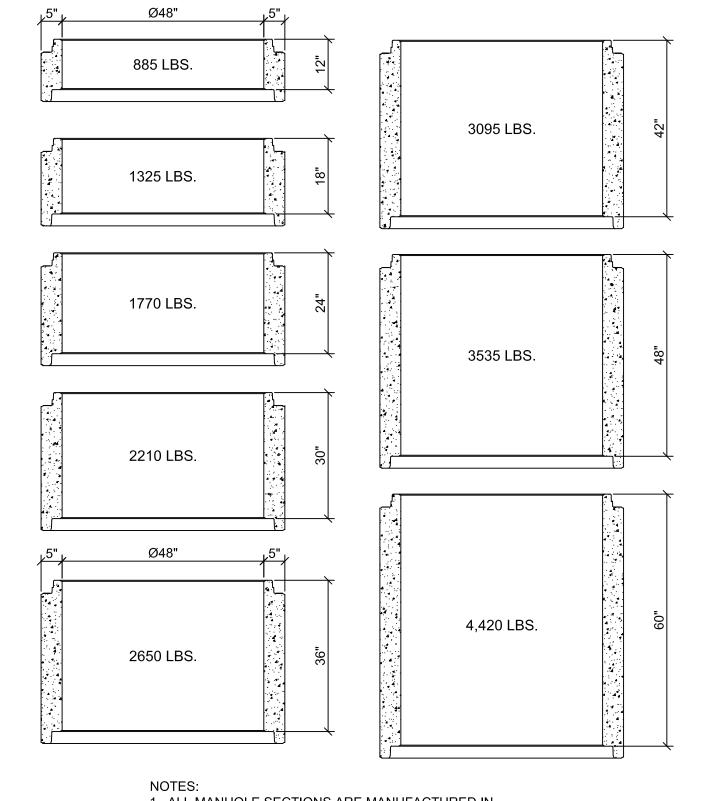


Varies I.D. Grade Rings <sub>Model:</sub> MH-GradeRings

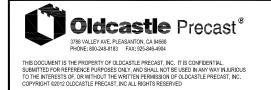
NOTE: SLOPED FLOOR FOR CHANNEL TO BE POURED BY THE CONTRACTOR IN THE FIELD UNLESS OTHERWISE CONTRACTED TO USCPG







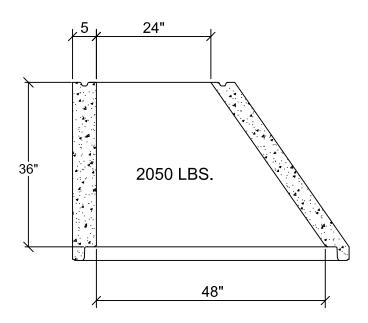
- 1. ALL MANHOLE SECTIONS ARE MANUFACTURED IN ACCORDANCE WITH THE LATEST REVISIONS OF ASTM C-478.
- 2. MANHOLES MAY BE SUPPLIED WITH OR WITHOUT STEPS.
- 3. ALL 48"Ø MANHOLE SECTIONS HAVE 5" WALL THICKNESS.
- 4. T&G JOINTS: OPTIONAL GASKET OR SEALANT

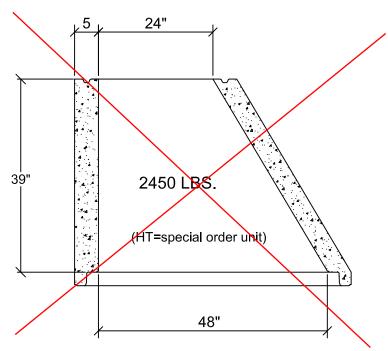


Date:	3/6/2013
Scale:	N.T.S.
Rev.:	1
DWG:	9-29.dwg

48" DIA MH VERTICAL BARRELS PRECAST MANHOLES

PAGE: 9-29





## NOTES:

- 1. ALL MANHOLE SECTIONS ARE MANUFACTURED IN ACCORDANCE WITH THE LATEST REVISIONS OF ASTM C-478.
- 2. MANHOLES MAY BE SUPPLIED WITH OR WITHOUT STEPS.
- 3. ALL 48"Ø MANHOLE SECTIONS HAVE 5" WALL THICKNESS.
- 4. JOINT: OPTIONAL GASKET OR SEALANT



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Date:	3/7/2013
Scale:	N.T.S.
Rev.:	1
DWG:	9-34.dwa

48" DIA MH ECCENTRIC CONES
PRECAST MANHOLES

PAGE: 9-34

2709 SW Stanley Ct., Portland, OR 97219 ● Office: 503-892-4575 Fax: 503-715-4403 ● www.precastconcretebc.com

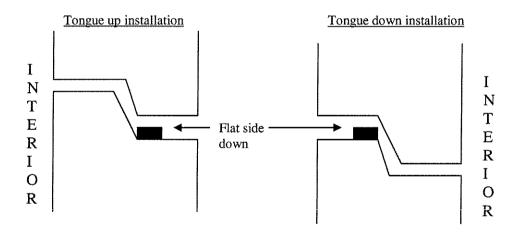


### **CS-102 Installation Advantages**

- Fewer seams per joint (ie. a 48" manhole is going to have 1 seam vs. 4 with strips)
  - Less seams = fewer possibilities for a leaking joint
  - Less seams = faster installation times for contractor

## CS-102 contains ZERO asphalt

- Asphalt is a filler which gets hard (making it more difficult to compress and thus increasing the likelihood of leaks) in the cooler weather and gooey (making it over compress = leaks) in the warmer weather.
- o If you take a hold of CS-102 you will see no oily residue on your hands
- o Remains workable from 30F up to 120F





**SPLICING** – when splicing joints together, cut each end at a 45 degree angle and knead together to create a tight joint. WARNING: overlapping is a potential for leaking.

## PRODUCT SPECIFICATIONS



### **APPLICATIONS**

For self-sealing joints in: Manholes, Concrete Vaults, Septic Tanks, Concrete Pipe, Box Culverts, Utility Vaults, Burial Vaults, and Vertical Panel Structures.

#### **SEALING PROPERTIES**

- Provides permanently flexible watertight joints.
- Low to high temperature workability: 30°F to 120°F (-1°C to 48°C)
- Rugged service temperature: -30°F to +200°F (-34°C to +93°C)
- Excellent chemical and mechanical adhesion to clean, dry surfaces.
- · Sealed Joints will not shrink, harden or oxide upon aging.
- No priming normally necessary. When confronted with difficult installation conditions, such as wet concrete or temperatures below 40°F (4°C), priming the concrete will improve the bonding action. Consult Concrete Sealants for the proper primer to meet your application.

#### HYDROSTATIC STRENGTH

ConSeal CS-102 meets the hydrostatic performance requirement as set forth In ASTM C-990 section 10.1 (Performance requirement: 10psi for 10 minutes in straight alignment – in plant, quality control test for joint materials.)

#### **SPECIFICATIONS**

ConSeal CS-102 meets or exceeds the requirements of Federal Specification SS-S-210 (210-A), AASHTO M-198B, and ASTM C-990-91.

## PRODUCT SPECIFICATIONS

**Butyl Rubber Sealant For All Precast Structures; Meets Specs.** 

#### PHYSICAL PROPERTIES

Concrete Sealants INC.

	Spec	Required*	CS 102
Hydrocarbon blend content % by weight	ASTM D4 (mod.)	50% min.	51%
Inert mineral filler % by weight	AASHTO T111	30% min.	35%
Volatile Matter % by weight	ASTM D6	2% max.	1.2
Specific Gravity, 77°F	ASTM D71	1.15-1.50	1.25
Ductility, 77°F	ASTM D113	5.0 min.	10
Penetration, cone 77°F, 150 gm. 5 sec.	ASTM D217	50-100	55-60
Penetration, cone 32°F, 150 gm. 5 sec.	ASTM D217	40 mm	40-65
Flash Point, C.O.C., °F	ASTM D92	350°F min.	450°F
Fire point, C.O.C., °F	ASTM D92	375°F min.	475°F

#### **IMMERSION TESTING**

- 30-Day Immersion Testing: No visible deterioration when tested in 5% Caustic Potash, 5% Hydrochloric Acid, 5% Sulfuric Acid, and 5% saturated Hydrogen Sulfide. \*
- One Year Immersion Testing: No visible deterioration when tested in 5% Formaldehyde, 5% Formic Acid, 5% Sulfuric Acid, 5% Hydrochloric Acid, 5% Sodium Hydroxide, 5% Hydrogen Sulfide and 5% Potassium Hydroxide.
- Requirements of ASTM C-990 Standard Specification for Joints for Concrete Pipe, Manholes, and Precast Box Sections Using Preformed Flexible Joint Sealants.

#### LIMITED WARRANTY

This information is presented in good faith, but we cannot anticipate all conditions under which this information and our products, or the products of other manufacturers in combination with our products, may be used. We accept no responsibility for results obtained by the application of this information or the safety and suitability of our products, either alone or in combination with other products. Users are advised to make their own tests to determine the safety and suitability of each such product combinations for their own purposes. It is the user's responsibility to satisfy himself as to the suitability and completeness of such information for this own particular use. We sell this product without warranty, and buyers and users assume all responsibility and liability for loss or damage arising from the handling and use of this product, whether used alone or in combination with other products.