



Weaver

CONSTRUCTION MANAGEMENT

3679 S Huron Street, Suite 404 Englewood, Colorado 80110

Phone: (303) 789-4111 FAX: (303) 789-4310

SUBMITTAL TRANSMITTAL

February 15, 2012
Submittal #: 02709-004

PROJECT: **Harold Thompson Regional WRF**
Birdsall Rd.
Fountain, CO 80817
Job No. 2908

ENGINEER: **GMS, Inc.**
611 No. Weber St., #300
Colorado Springs, CO 80903
719-475-2935 Roger Sams

OWNER: **Lower Fountain Metropolitan
Sewage Disposal District**
901 S. Santa Fe Ave.
Fountain, CO 80817
719-382-5303 James Heckman

CONTRACTOR: **Firebaugh Precast, Inc.**
719-392-9036
mheim@firebaughprecast.com

SUBJECT: Submittal for Valve Access Manholes (MH-1 & MH-6)

SPEC SECTION: 02709

PREVIOUS SUBMISSION DATES: none

DEVIATIONS FROM SPEC: ___ YES x NO

CONTRACTOR'S STAMP: This submittal has been reviewed by Weaver Construction Management and, unless indicated otherwise, has been found to be in conformance with the intent of the contract documents.

Contractor's Stamp:

Engineer's Stamp:

Date:

Reviewed by: Jeff Burst

(X) Reviewed Without Comments

() Reviewed With Comments

ENGINEER'S
COMMENTS: _____



A Lindsay Concrete Company

REVISED QUOTATION (2/8/2012)

TO: Weaver Construction Mgt.

ATTN: Jeff

PHONE: 303-503-1877

Bid Number:	8804	Bid Date:	1/9/2012
<i>Quote subject to change after 30 days</i>			
Job Location: Fountain, CO			
Harold Thompson			
Water Reclamation Facility			

Quantity	DESCRIPTION	DELIVERY	PER UNIT	AMOUNT
		Type		
2	6' Diameter VALVE ACCESS MANHOLE (for Cast-In-Place base); consisting of 8 VF of 72" ID manhole riser material with two 14-M Pres-Seal brand boots for 10" DIP penetrations and one cast out skewed hole, a 72" to 48" transition lid, 12 VF of 4' ID manhole riser material, and appropriate single joint sealant plus 12" Joint Wrap. Any coatings/linings (if required) are by others.	C	\$ 2,359.00	\$ 4,718.00
2	48" Aluminum checker plate lid - attached in the field by others.	C	\$ 1,316.00	\$ 2,632.00
1	6' Diameter MH-06 for Cast-In-Place base slab (9.92' Rim to Invert); consisting of manhole riser material (no steps) with preformed holes and Pres-Seal brand boots for 14" C900, separate 14" HS20 rated flat lid, a Castings Inc. model MH-550-31AL (30") aluminum ring and cover, and appropriate single joint sealant. Any internal or external coatings are by others.	C	\$ 2,157.00	\$ 2,157.00
1	6' Diameter MH-01 (7.28' Rim to Invert); consisting of precast base with invert channel, manhole riser material (no steps), preformed holes and two Pres-Seal brand boots for 30" DIP, 24" COMPOSITE ring and cover, and appropriate single joint sealant plus 12" Joint Wrap. Interior liner (T-Lock) or any external coatings by others.	C	\$ 1,828.00	\$ 1,828.00
3	34-B Press-Seal brand boots for 30" DIP penetrations (for separate structure to be Cast-In-Place).	C	\$ 233.00	\$ 699.00
				Total: \$ 12,034.00
				Add Applicable Taxes to Prices

Pricing is based on information from supplied plans which may be incomplete, unapproved and/or incorrect. Prices are subject to change pending receipt of signed shop drawings which may reflect corrected or revised plans as well as any changes to details, elevations and/or

DELIVERY OPTIONS:

- A. Delivered to job site and set in customer's excavation, by Firebaugh, provided our crane truck can get to within setting distance under it's own power. Customer to furnish labor to assist our crane truck operator.
- B. Delivered to job site and unloaded by Firebaugh. Customer to set product. Site must be accessible to our crane truck under its own power. Customer to furnish labor to assist with unloading.
- C. Delivered to job site. Customer to unload. Site must be accessible to our truck under its own power.
- D. Loaded on customer's truck at our plant.
- E. Other options agreed to by customer.
- F. Crane required by contractor.

No sales tax is included in the above prices. Terms: Net 30 Days

Respectfully submitted by,
Mark Heim
Regional Sales Representative

COLORADO SPRINGS:
P.O. Box 5440
Colorado Springs, CO 80931-5440
719-392-9036
1-888-685-7595
FAX: 719-392-0066

www.firebaughprecast.com



**DENVER METRO/
DACONO OFFICE:**
P.O. Box 520
Dacono, CO 80514-0520
303-833-7057
FAX: 303-833-7076

Firebaugh Precast, Inc. General Quote and Delivery Provisions

A production schedule of structures will be provided after receipt of purchase order and approved shop drawings. Production schedules vary. Please contact Project Manager for lead time estimates.

Prices based on contractor information, incomplete or unsigned plans subject to change with approved shop drawings.

Quote subject to change after 30 days. Quoted prices do not include applicable sales tax.

ALL DELIVERIES ARE SUBJECT TO GENERAL DELIVERY CONDITIONS WHICH INCLUDE:

- 1) Standard delivery charges are assessed as follows, unless specifically outlined in separate quote:
 - * Delivery charge for 25 to 65 miles from plant: \$3.50 per mile after first 25 miles.
 - * All deliveries over 65 miles from plant: \$4.00 per mile.
 - * Small order or short load deliveries: add \$150.00.
 - * Truck time beyond 1 hour per truck per delivery is billed at \$150 an hour per a truck.
- 2) There must be clear and free access for the vehicle to the job site and unloading point. Obstructions such as low limbs and branches, wires, etc. must be removed. If the roadway is too narrow for the delivery vehicle to make the necessary turn, the contractor must either widen the roadway or find another means of ingress and egress including permission of the appropriate property owners in the event our vehicle is to encroach upon another property. We will not be responsible for damage to yards, sidewalks, driveways, landscaping sprinklers, etc. which are in the paths we are directed to take.
- 3) Trucks must be able to enter, drive through and exit job sites under their own power. Vehicles may not be pulled or pushed into job sites.
- 4) If a vehicle becomes stuck, it is the contractor's or job site owner's responsibility to have the vehicle towed to a public road so the vehicle can operate under it's own power.
- 5) When conditions require, the contractor must supply a spotter and or traffic control person to assist and direct the delivery vehicle driver.
- 6) Our truck drivers may be held personally liable for damage to their vehicles. As such, the driver makes the final decision as to where the vehicle goes and what it will unload under given conditions.

To accept this quote, please sign and send back to Mark Heim. Upon receipt, Firebaugh Precast will provide submittal drawings to be approved for production. The customer may be charged \$175.00 per submittal drawing completed for structures later cancelled or modified by the customer.

Company Purchasing Product: _____

Authorized by: _____

P.O. or Job#: _____

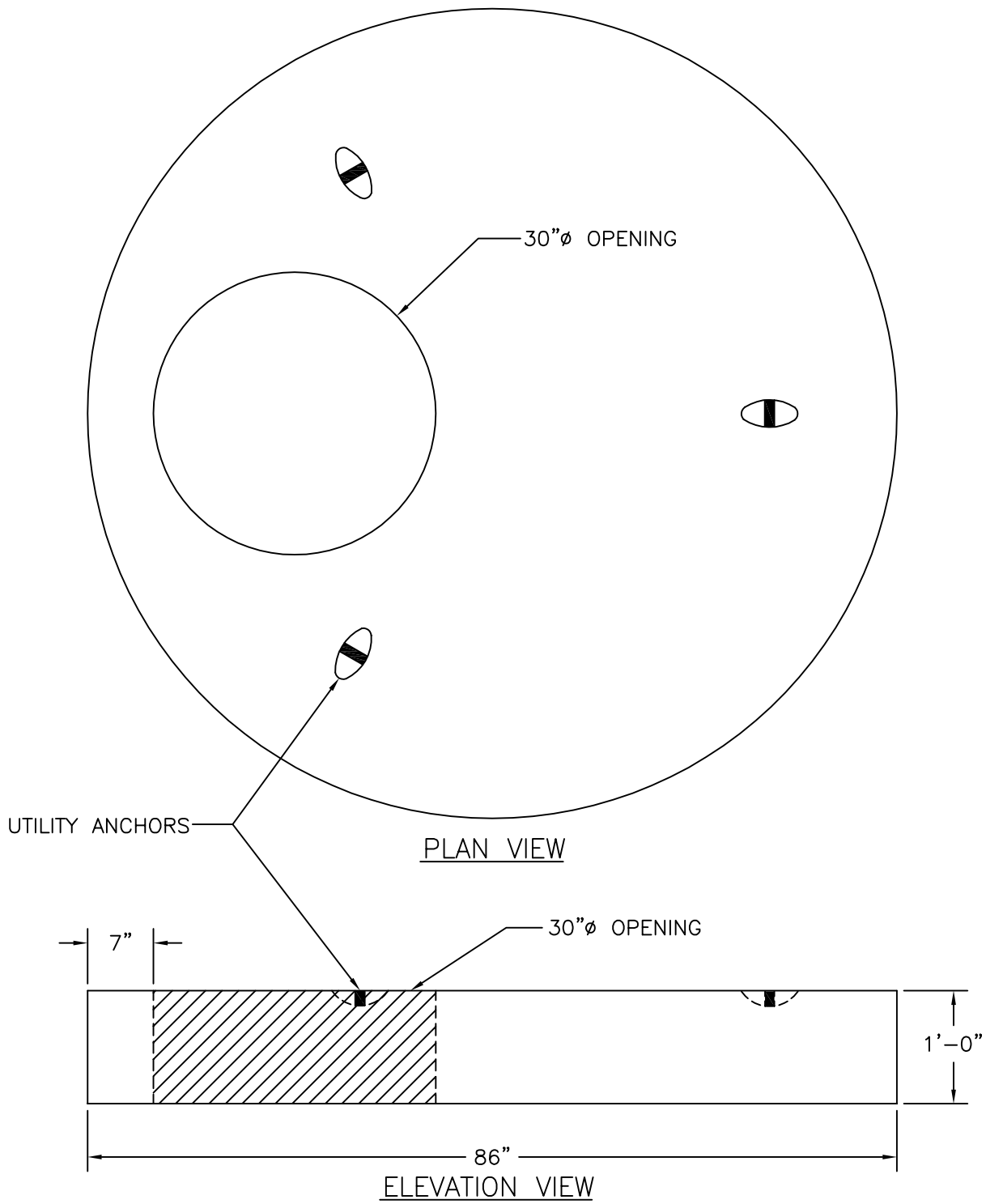
Contact Information of Project Manager: Name: _____

Office# _____

Cell# _____

Fax# _____

Email address: _____




**72" ID X 12" NON-TRAFFIC
FLAT LID W/30" OPENING**

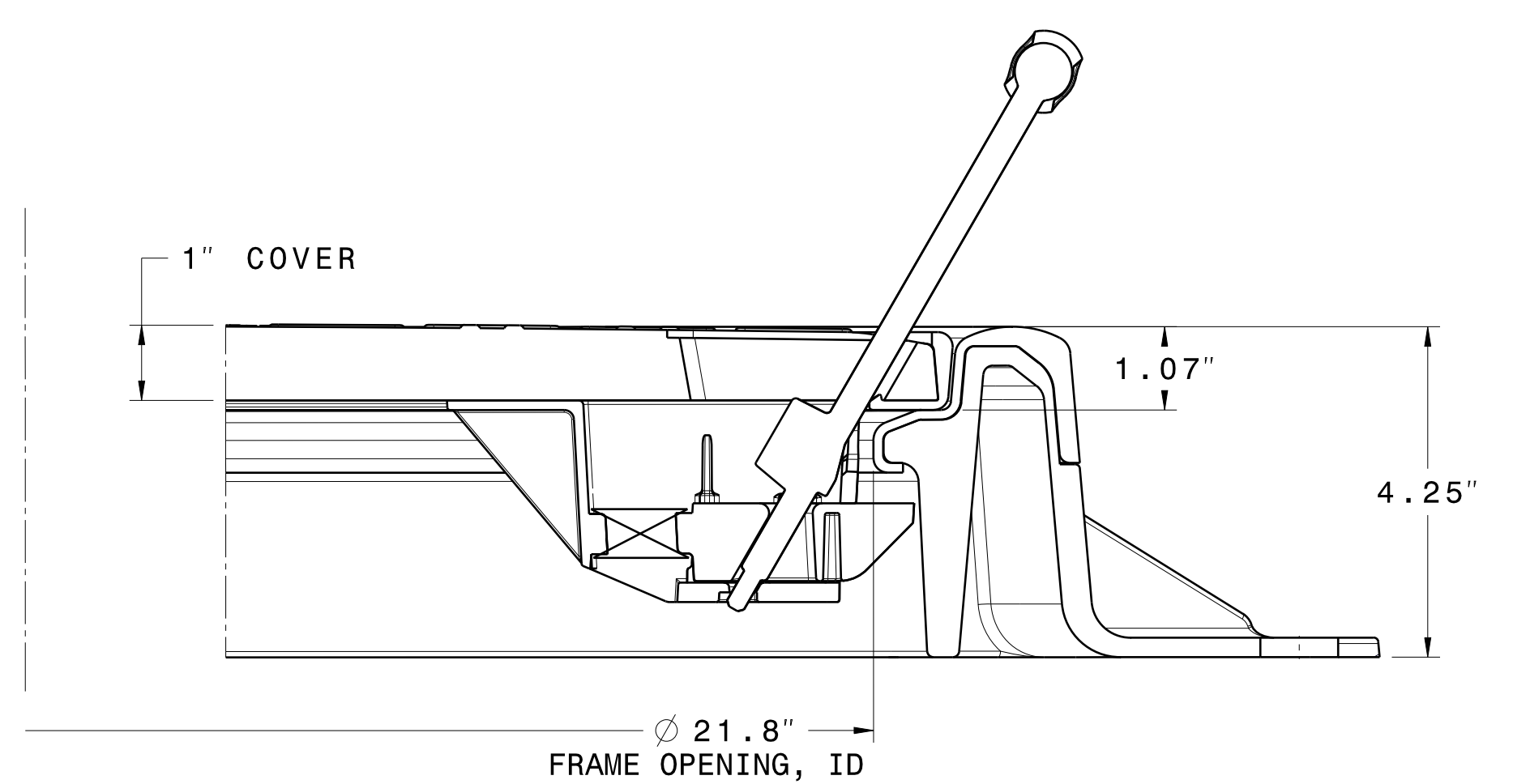
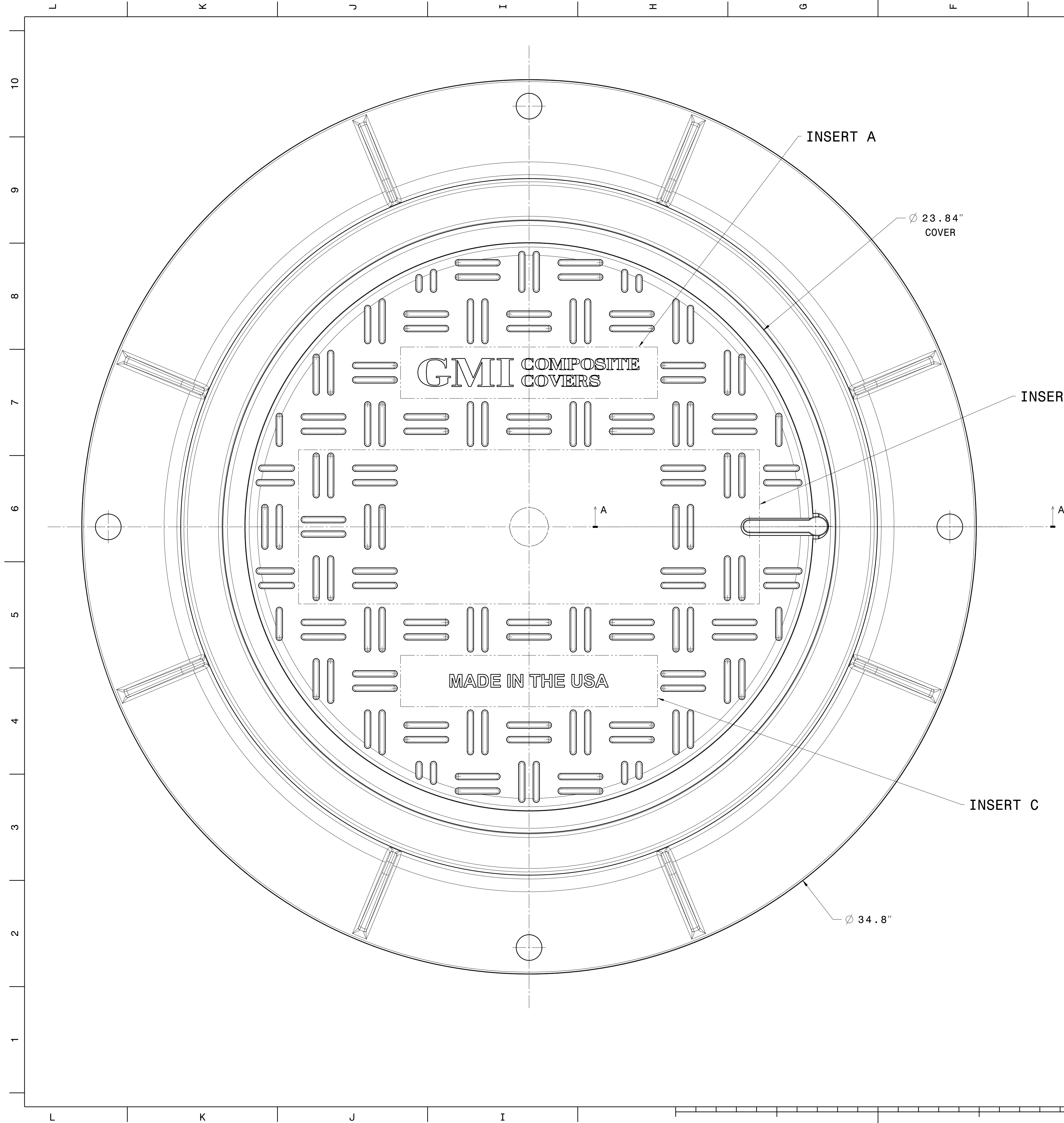
Legend:

Type I/II cement with fly ash. 4000 psi concrete at 28 days.
Reinforcing per ASTM C478.
Weight: 5,250 lbs.

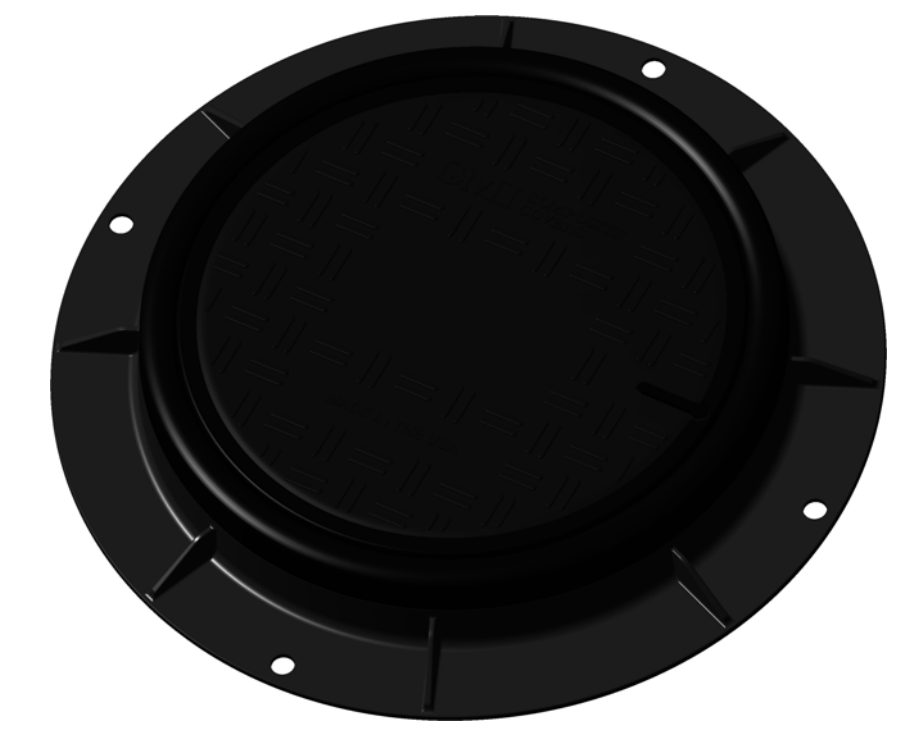
THIS DRAWING IS THE PROPRIETARY PROPERTY OF FIREBAUGH PRECAST. REPRODUCTION, DISCLOSURE OR USE OF ANY PART OF THIS DRAWING OR ANY INFORMATION THEREIN IS EXPRESSLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF FIREBAUGH PRECAST.

 FIREBAUGH PRECAST INC.	DWG. NO.	 CERTIFIED NATIONAL PRECAST CONCRETE ASSOCIATION PLANT
	REVISED:	
PRODUCT:		
72" ID MANHOLE LID		
DRAWN BY:	CHECKED BY:	SCALE:
KAE	FPC	1-1
DATE:		11-17-11

REV	DATE	DESCRIPTION	INIT
p01	08/31/08	PRELIMINARY	XXX



Section view A-A
Scale: 1:2

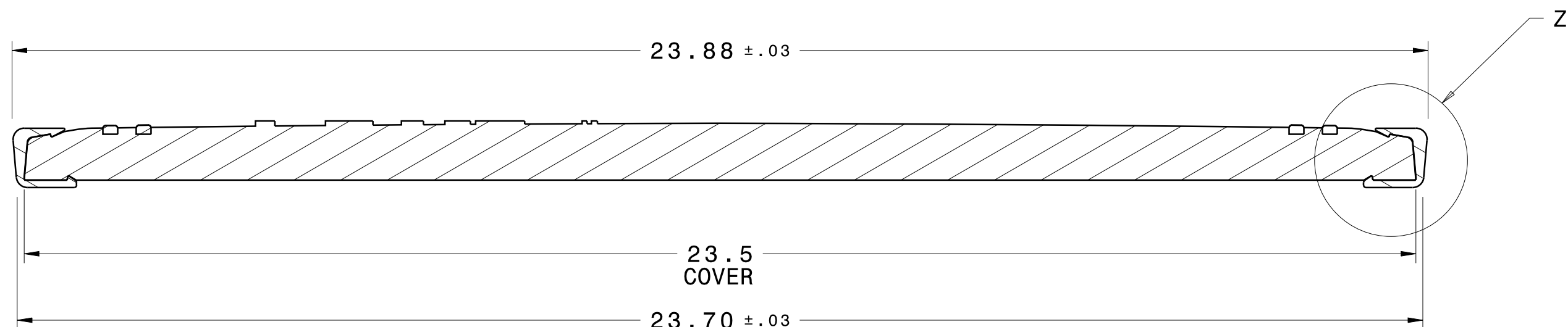
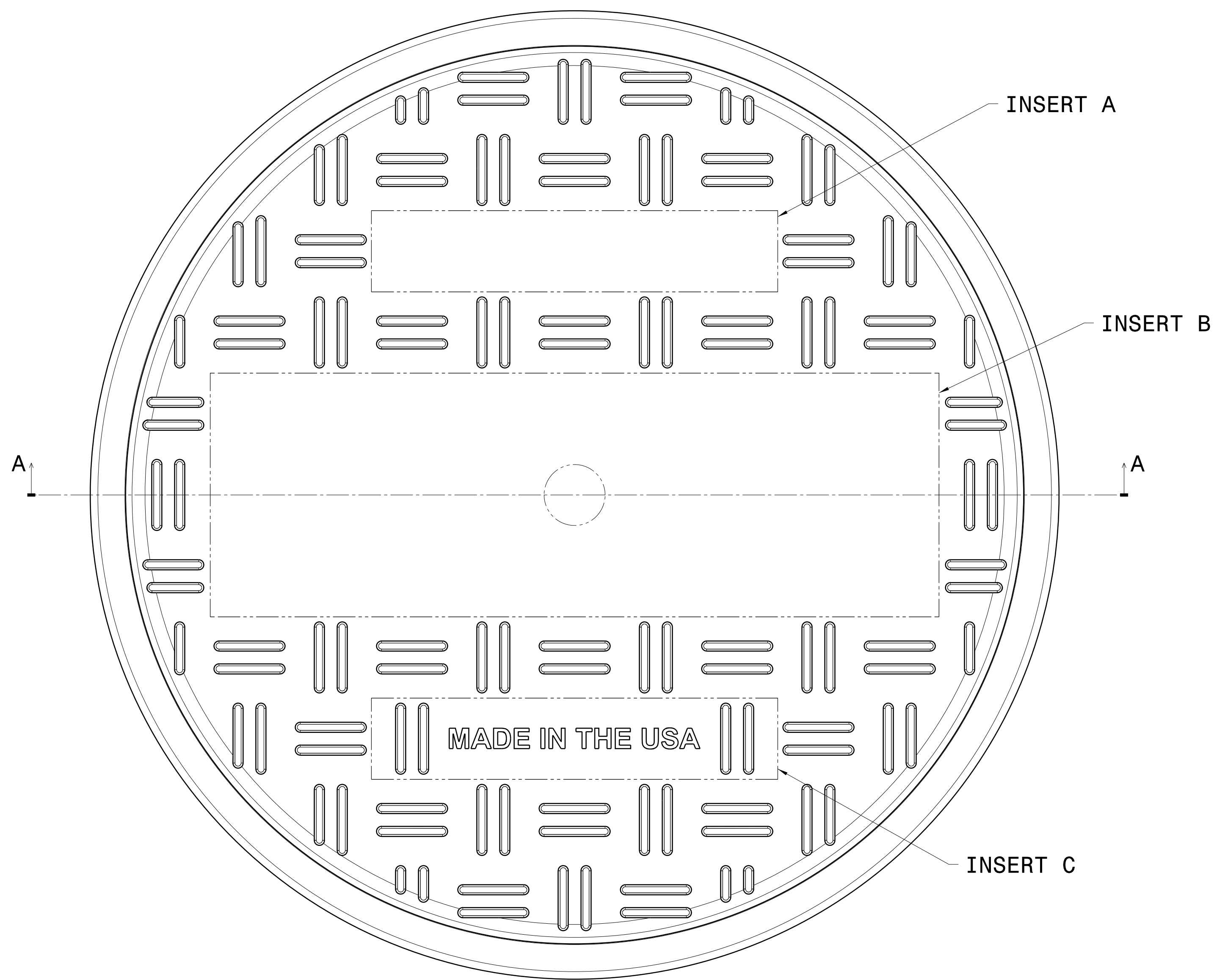


Isometric view

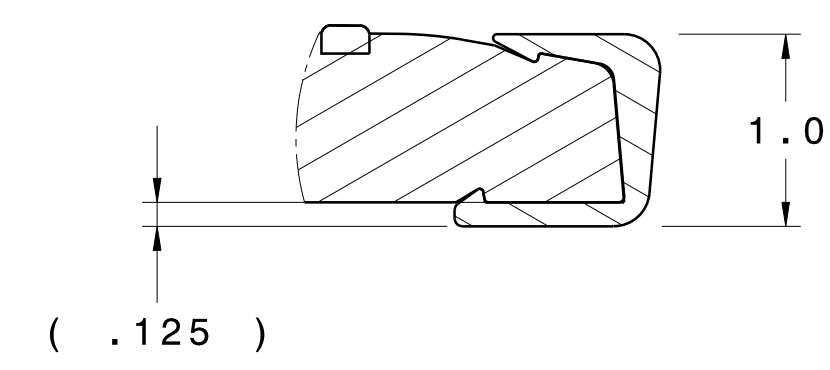
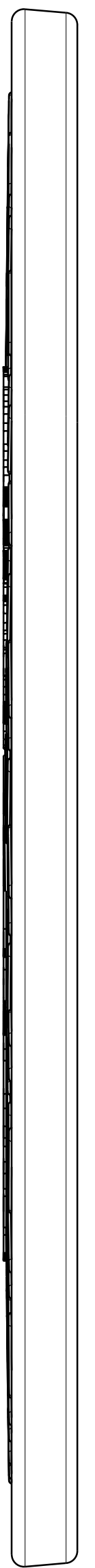
TOLERANCE UNLESS OTHERWISE SPECIFIED ONE PLACE ±0.03 TWO PLACE ±0.015 THREE PLACE ±0.005 ANGLE ±1.0° DRAFT ANGLE 3.0°	This drawing is the property of GMI Composites. It can't be reproduced or communicated without our written agreement.		GMI COMPOSITES, INC. 1355 W. SHERMAN BLVD. MUSKEGON, MI 49441	
	DRAWN BY B. BUXTON	DATE 08/31/08	DRAWING TITLE 24" COVER ASSEMBLY LAYOUT	
CHECKED BY XXX	DATE XXX	SIZE D	DRAWING NUMBER 2400-L01	REV p01
DESIGNED BY XXX	DATE XXX	SCALE 1:2	VOLUME XXX.Xin3	SHEET 1/2

PART NUMBER	TYPE	LOADING	MATERIAL	COLOR	INSERTS	INSERT QTY.	LOCK	INSERT 'A'	INSERT 'B'	INSERT 'C'
2400-101	MHC	HWY	RTM	GRAY	8-32	3			BROOKLINE WW	MADE IN USA
2400-102	MHC	HWY	RTM	GRAY	8-32	3	MCG		BROOKLINE WW	MADE IN USA
2404-001	MHC	SHD	RTM	BLACK			MAG			MADE IN USA
2404-002	MHC	SHD	RTM	BLACK						MADE IN USA
2404-003	MHC	SHD	RTM	BLACK			MAG			MADE IN USA
2404-004	MHC	SHD	RTM	BLACK						MADE IN USA
2404-005	MHC	SHD	RTM	BLACK			MAG			MADE IN USA
2404-202	MHC	SHD	RTM	BLUE			MAG	RECLAIMED	BROOMFIELD	MADE IN USA
2404-302	MHC	SHD	RTM	LAVENDER			MAG	RECLAIMED	BROOMFIELD	MADE IN USA
2404-303	MHC	SHD	RTM	LAVENDER			MAG		TREAD PATTERN	MADE IN USA
2404-009	MHC	HWY	RTM	BLACK				WATER	CITY OF FARMINGTON	MADE IN USA

REV	DATE	DESCRIPTION	INIT
01	06/10/08	INITIAL RELEASE	XXX
02	12/19/08	ADDED PN# 2404-009	XXX

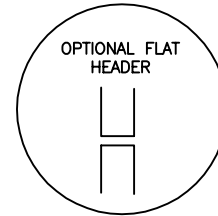
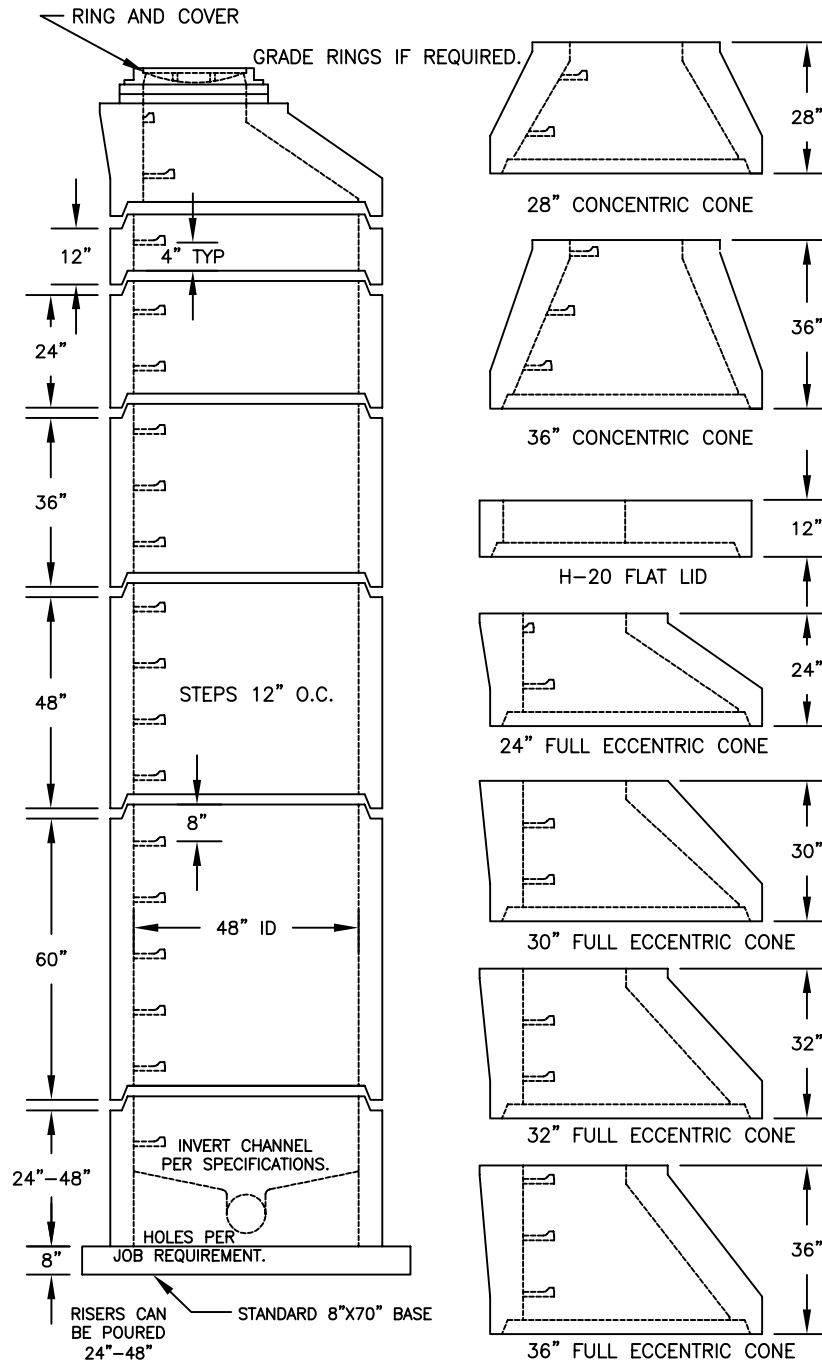


Section cut A-A



Detail Z
Scale: 1:1

TOLERANCE UNLESS OTHERWISE SPECIFIED ONE PLACE ±0.03 TWO PLACE ±0.015 THREE PLACE ±0.005 ANGLE ±1.0° DRAFT ANGLE 3.0°		This drawing is the property of GMI Composites. It can't be reproduced or communicated without our written agreement.		GMI COMPOSITES, INC. 1355 W. SHERMAN BLVD. MUSKEGON, MI 49441	
DRAWN BY B. BUXTON		DATE 06/10/08		DRAWING TITLE 24" COVER	
CHECKED BY XXX		DATE xxx		SIZE D	
DESIGNED BY XXX		DATE xxx		DRAWING NUMBER 2400	
				SCALE 1:2 VOLUME: 386.4in3	
				SHEET 1/2	
				REV 01	

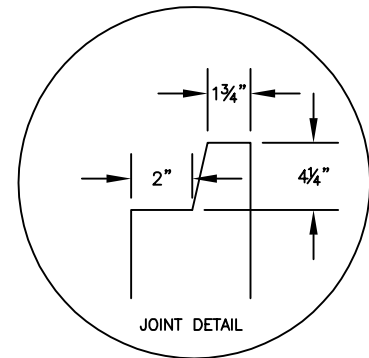


CUSTOMER:
PROJECT:

SUBMITTAL DATA:

MEETS ASTM C478
MEETS AASHTO H-20 LOADING

- STORM MANHOLE
- SANITARY MANHOLE
- BASE SIZE
- CAST INVERT CHANNEL
- CONE
- FLAT TOP
- RING & COVER
- DAMP PROOF
- PRIMED JOINTS
- JOINT SEALER
- JOINT WRAP

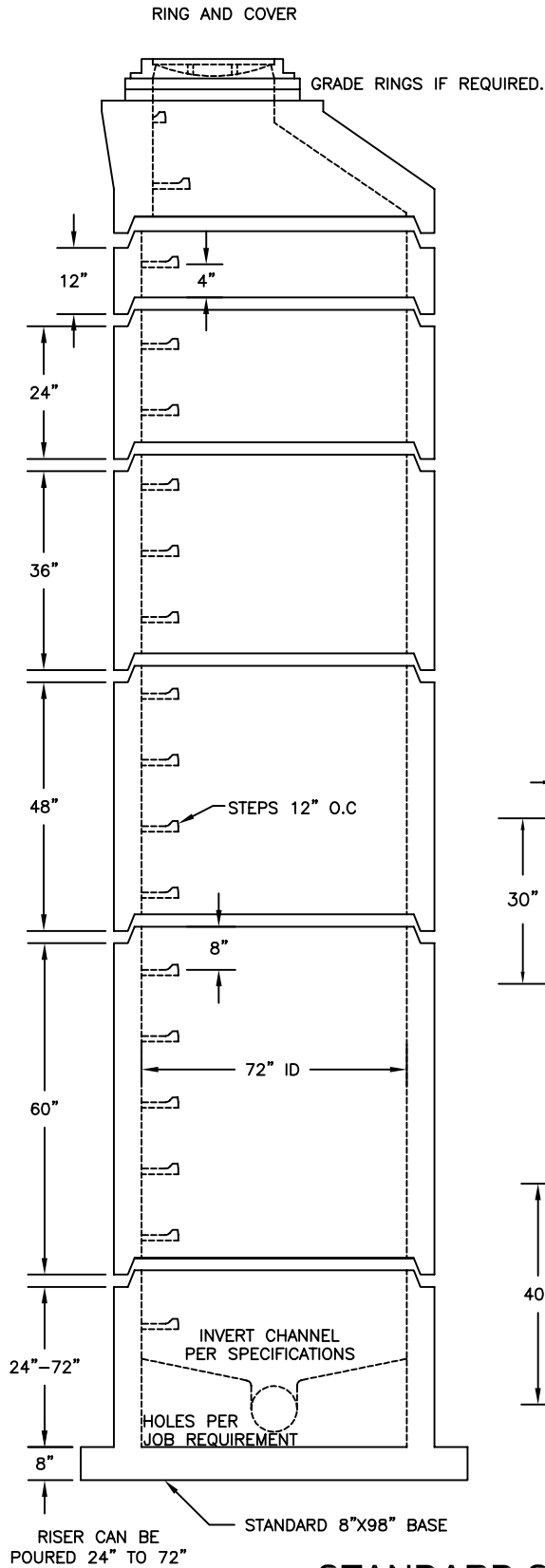


STANDARD SUBMITTAL SHEET 48" ID, 5" WALL

LEGEND:

Type I/II cement with fly ash. 4000 psi concrete at 28 days.
Reinforcing per ASTM C478.

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	FIREBAUGH PRECAST INC.	DWG. NO.	
	PRODUCT:	REVISED:	
48" ID SUBMITTAL SHEET			
DRAWN BY: BER	CHECKED BY: FPC	SCALE: 1-1	

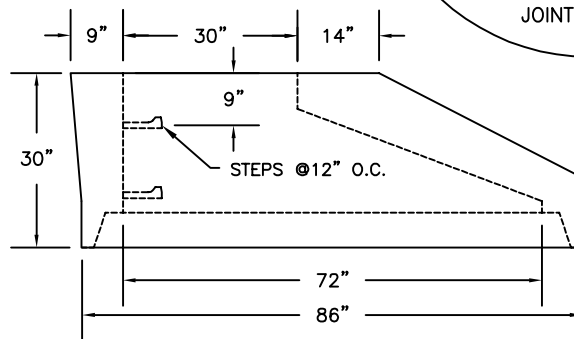
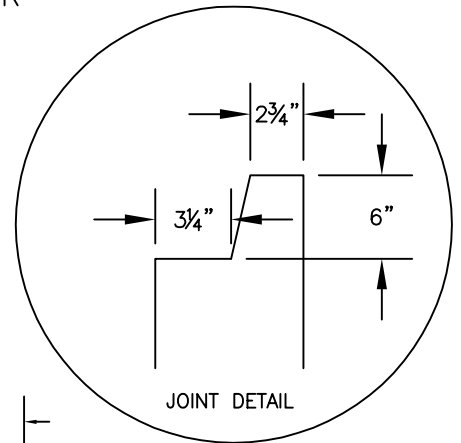


SUBMITTAL DATA:

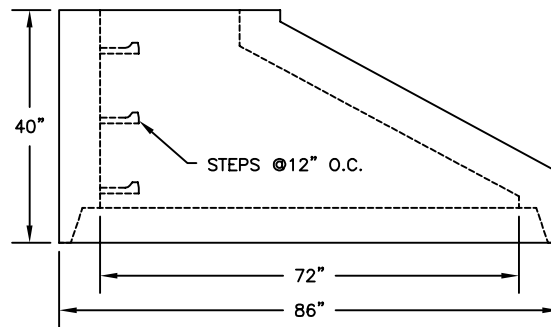
MEETS ASTM C478

MEETS AASHTO H-20 LOADING

- STORM MANHOLE
- SANITARY MANHOLE
- BASE SIZE
- CAST INVERT CHANNEL Y N
- CONE
- FLAT TOP
- RING & COVER
- DAMP PROOF Y N
- PRIMED JOINTS Y N
- JOINT SEALER
- JOINT WRAP



**72"ID X 30" ECC. CONE
W/30" OPENING**



72"ID X 40" CONE

**STANDARD SUBMITTAL SHEET
72" ID, 7" WALL**

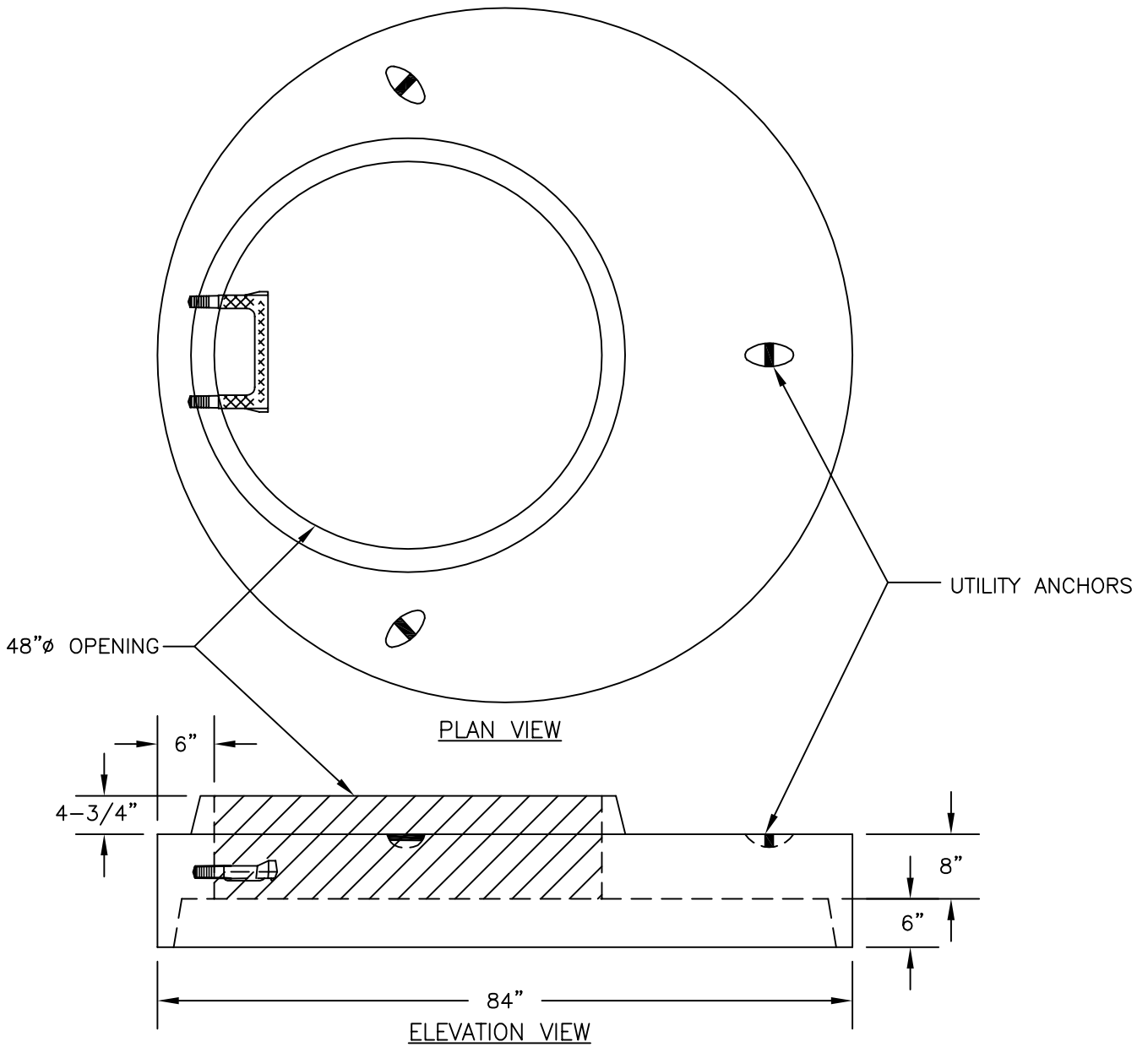
LEGEND:

Type I/II cement with fly ash. 4000 psi concrete at 28 days.
Reinforcing per ASTM C478.

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	FIREBAUGH PRECAST INC.	DWG. NO.	
		REVISED:	
PRODUCT: 72"ID MANHOLE SUBMITTAL SHEET			
DRAWN BY: BER	CHECKED BY: FPC	SCALE: 1-1	DATE: 8-22-07


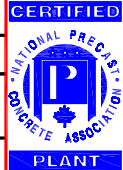
PLANT



72" ID TO 48" ID
TRANSITION LID

LEGEND:
 Type I/II cement with fly ash. 4000 psi concrete at 28 days.
 Reinforcing per ASTM C478.
 Weight: 3,415 lbs.

THIS DRAWING IS THE PROPRIETARY PROPERTY OF FIREBAUGH PRECAST. REPRODUCTION, DISCLOSURE OR USE OF ANY PART OF THIS DRAWING OR ANY INFORMATION THEREIN IS EXPRESSLY PROHIBITED WITHOUT PRIOR WRITTEN CONSENT OF FIREBAUGH PRECAST.

 FIREBAUGH PRECAST INC.	DWG. NO.	 CERTIFIED PLANT
	REVISED:	
PRODUCT: 72"ID TO 48"ID TRANSITION LID		
DRAWN BY: BER	CHECKED BY: FPC	SCALE: 1-1 DATE: 8-22-07

**CONCRETE
SEALANTS INC.**

PO Box 176 - New Carlisle, Ohio 45344
Telephone (937) 845-8776 - 1-800-332-SEAL(7325) - Fax (937) 845-3587
Internet Site: <http://www.conseal.com>
E-Mail: hello@conseal.com

Certificate of Conformance

Date: September 26, 2008

Firebaugh Precast, Inc.
3330 East Las Vegas St.
Colorado Springs, CO 80906
Attention: Joshua Temple

Dear Joshua Temple:

This is to certify that the material listed below conforms to the following specification. The material meets or exceeds the listed performance requirements.

Product: ConSeal CS-102 Butyl Sealant

Performance: Testing of this product meets the requirements set forth in ASTM C-990 section 10.1.

Specifications: This product meets or exceeds the requirements of Federal Specification SS-S-210 (210A), AASHTO M198B, and ASTM C-990-91

Chemical Composition and Properties:

Hydrocarbon blends % by weight(ASTM D4):	50% min.
Inert mineral filler % by weight (SS-S-210A):	30% min.
Volatile matter % by weight (ASTM D6):	0% - 2%
Specific Gravity (ASTM D71)	1.15 - 1.40
Ductility (ASTM D113)	5.0 min.
Softening point (ASTM D36)	320° min.
Penetration @ 77° (ASTM D217)	50 - 120 dmm

Sincerely,

Tim Frazier

Tim Frazier
Technical Director



CONSEAL™
Concrete Sealants INC.

CS102

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

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.



CONSEAL™
Concrete Sealants INC.

CS102

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

PHYSICAL PROPERTIES

	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 or 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.



-  ADVANCED ERGONOMICS
-  PEDESTRIAN SAFE
-  H-20 STRENGTH & DURABILITY
-  SECURITY & THEFT AVERSION
-  AUTOMATION FRIENDLY
-  SIMPLE LOGISTICS

COMPOSITE UTILITY ACCESS COVERS & FRAMES

GMI Composites Inc. excels in the manufacture of top quality composite access cover and frame systems for utility use.

GMI has been proudly manufacturing top quality composite access covers in the U.S.A. for the last 15 years. Field performance has proven that GMI composite manhole covers and frames are ideal for the most challenging environment.

ADVANCED ERGONOMICS

GMI composite manhole covers and frames are characterized by their lightweight, and ease of handling.



Ergonomic products prevent injuries and contribute to a safer job site - decreasing lost-time accidents, overall workman's compensation expense, and insurance premiums.

SIMPLE LOGISTICS

Installation and maintenance of GMI composite manhole cover systems is easy, safe, and fast. A complete composite frame and cover system can be safely deployed by

one individual - with no need for specialized lifting or transportation equipment.

Routine and emergency maintenance of the underground infrastructure is completed with a minimal work crew, light vehicle and rapid response time.

PEDESTRIAN SAFETY

GMI products protect pedestrians from the hazardous environments within utility vaults.

Block Stray Voltage - GMI composite products act as electrical insulators protecting pedestrians and their pets from the possibility of accidental electrical shock. Urban streets and sidewalks are shielded against stray voltage within an underground electrical vault.

Insulate Extreme Heat - GMI composite manhole systems do not conduct heat. In the event that the environment beneath a manhole cover becomes super heated - steam tunnels for example - the composite manhole cover will not allow that heat to transfer to the surface of the cover. The composite manhole cover acts as an insulator; protecting pedestrians from the possibility of severe burns.

Non-Slip - GMI Covers feature a slip resistant, nonskid surface pattern that protects pedestrians from accidental slip and fall events.

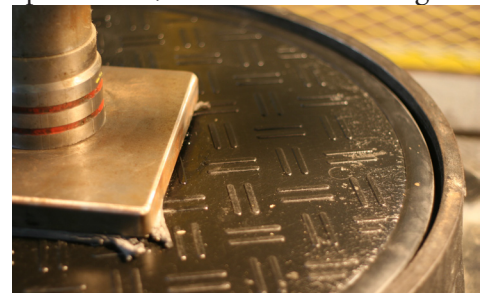
SECURITY & THEFT AVERSION

GMI composite manhole cover systems have zero theft value and are unattractive to thieves. There is no secondary illicit market for covers made from our unique composite material. GMI products cannot be melted and reformed into other goods.

Unauthorized access to critical infrastructure is a present and increasing problem. GMI covers are compatible with a variety of retention and locking solutions designed to protect infrastructure at all levels of security.

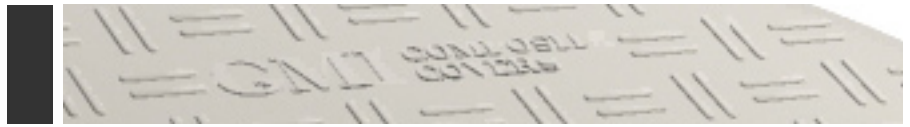
STRENGTH & DURABILITY

Rigorous testing is the foundation of the GMI composite manhole cover and frame system. The GMI load testing regimen demands ultimate performance in cyclical fatigue, proof-load, & destructive testing.



Load Testing - GMI composite manhole cover and frames have an average proof load in excess of 100,000 lbs – more than five times the H-20 loading standard as

GMI COMPOSITE UTILITY ACCESS COVERS & FRAMES



called out in AASHTO (American Association of State Highway and Transportation Officials) *Standard Specifications for Highway Bridges*.

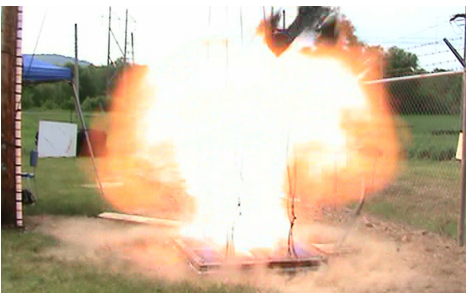
GMI maintains a world class testing lab on premises - production is randomly sampled and tested during the manufacturing process. Independent certification and test witnessing is available for the following internationally accepted test standards:

United States Standard - AASHTO M 306 Standard Specification for Drainage, Sewer, Utility, and Related Castings, described as:

H-20 & HS-20: A 40,000 pound proof load concentrated on a nine inch by nine inch square area and held for one minute.

H-25 & HS-25: A 50,000 pound proof load concentrated on a nine inch by nine inch square area and held for one minute.

European Standard - EN-124 for Gully Tops and Manhole Tops for Vehicular and Pedestrian Areas. Proof load & permanent set testing for classes: A 15kN - D400 kN.



Environmental Exposure- GMI composite manhole cover systems withstand the harshest corrosive environments, including exposure to; water, waste-water, chemicals, gasoline, diesel fuel and de-icing solutions.

GMI products have been tested to destruction at temperature extremes

of -60 degrees Fahrenheit and 160 degrees Fahrenheit. There was no loss in performance when tested at both the extreme heat and extreme cold temperatures.

Ultraviolet radiation will not affect the long term performance of GMI composite manhole cover systems.

CREATE MORE ATTRACTIVE CITYSCAPES

Reduce Noise Pollution - The clanging of incorrectly set metallic covers is silenced by the use of GMI composite manhole covers. Severe problem areas can be silenced by incorporating an elastomeric spacer into the composite manhole cover.

Reduction of Odors - Utilizing a clamping manhole cover retention system GMI seals unpleasant sewer odors beneath street level and away from pedestrians.

Create a Civic Identity - Custom logos, lettering, and crests can be incorporated into GMI products. Color matching of local university and high school spirit colors is also available.

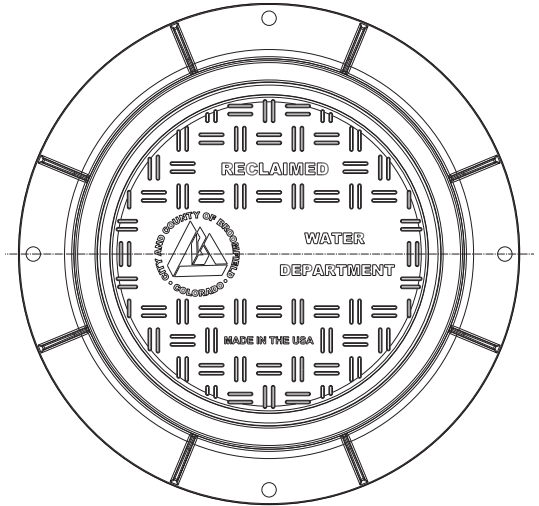
AUTOMATION FRIENDLY

GMI composite covers are constructed of advanced materials that offer little interference with the radio frequency signals associated with modern utility automation, remote switching, and event detection systems. GMI composite manhole covers and meter pit lids have been tested by the leading manufacturers of automation systems.

Sensitive electronics can be housed entirely within the utility vault protected from abusive environment, theft, and vandalism.

GMI Covers incorporate design

attributes that offer ease of installation and maintenance to utilities and contractors. These include customized attachment points and brackets for leading automation systems.



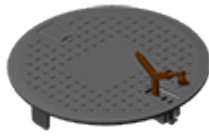
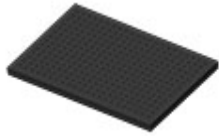
Please Contact GMI Composites, Inc. for additional information:

Address: P.O. Box 4303
Muskegon, MI 49444

Toll Free: (800) 330 4045

email: info@gmi-covers.com

Website: www.gmi-covers.com



GMI COMPOSITE
COVERS

www.gmi-covers.com

Ergonomically Advanced

Structurally Superior

Zero Theft Value

AMR Optimized

Fully Customizable

GMI

Headquartered in Muskegon Michigan, GMI Composites Incorporated specializes in manufacturing structural composite products. Products produced by GMI include electrical insulators, composite springs, office furniture products and a highly successful line of composite manhole covers for the petrochemical industry. The composite manhole covers have a fifteen year proven field history.

GMI Composite Covers has been instituted in order to apply this technology to the utility and telecommunication marketplaces. GMI Composite Covers specializes in providing world-class composites technology to infrastructure applications.

Modern infrastructure and utility applications are unique, ever-evolving, and complex - the access covers used to protect the installation need to be of the newest technology and highest quality.

GMI products excel in all aspects of performance and safety.

ERGONOMICS & SAFETY

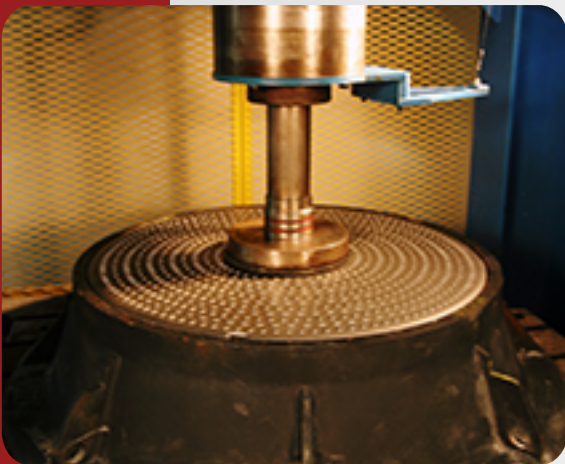


GMI composite covers are characterized by their lightweight, and ease of handling. Advanced design, and composite technology, allows GMI to eliminate the incredible weight that renders concrete, cast-iron, steel and aluminum manhole covers prohibitively heavy and dangerous to work with.

80 % - GMI covers have an average weight reduction of 80% over cast iron. This weight reduction allows GMI covers to safeguard against injury to personnel in the field. In addition to a safer workplace, injuries prevented by ergonomic covers will decrease lost-time accidents and overall workman's compensation expense.

The weight savings also facilitate easier transportation and installation of GMI products - often eliminating the need for specialized equipment and additional manpower.

STRENGTH & DURABILITY



Rigorous testing is the foundation of the GMI product line. Composite covers are subjected to a testing regimen that demands ultimate performance in fatigue, proof-load, and full destructive testing. GMI maintains a testing lab on premises, and regular production is randomly sampled and tested during the manufacturing process.

GMI Composite Covers perform in excess of the H-20 loading standard as called out in AASHTO (American Association of State Highway and Transportation Officials) Standard Specifications for Highway Bridges.

Independent certification is available for the following internationally accepted test standards:

United States standard: *AASHTO M 306 Standard Specification for Drainage, Sewer, Utility, and Related Castings*: Described as a 40,000 pound proof load concentrated on a nine inch by nine inch square area and held for one minute.

European Standard: *EN-124 for Gully Tops and Manhole Tops for Vehicular and Pedestrian Areas*: Classes A-D.

Proof-load testing in excess of 100,000 lbs.

THEFT DETERRENCE & SECURITY

The worldwide price of scrap metal has increased rapidly and is forecasted to remain at a high level. Metal products used in infrastructure applications are disappearing all over the world. Theft challenges utilities and municipalities; open access vaults and sewers are a public danger, exposed infrastructure is vulnerable to damage, and it is costly to replace the stolen equipment.

The weight once thought to be a theft deterrent has become the principle factor attracting thieves to infrastructure. The tremendous bulk of current access covers offers only false security.

GMI Composite Covers have zero theft value. There is no secondary illicit market for covers made from our unique composite material. GMI Covers can not be melted and reformed into other goods.

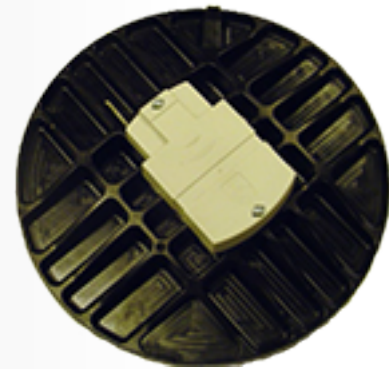
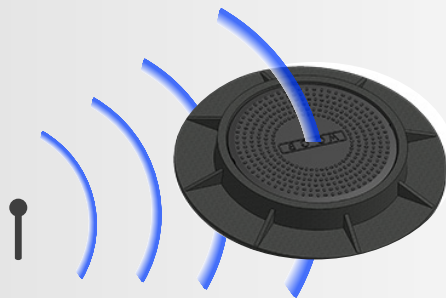
Unauthorized access to critical infrastructure is a present and increasing problem. GMI covers are compatible with a variety of retention and locking solutions that will protect infrastructure at all levels of security.

OPTIMIZED FOR AUTOMATED METER READING

Rapid advancement in technology has put the modern utility on the leading edge of resource management and automation technology. Unfortunately the aging infrastructure and physical installations of utility products have not kept pace with advancing technology. GMI products are the solution.

GMI Covers are constructed of advanced materials that offer little interference with the radio frequency signals associated with modern Automated Meter Reading Systems. Sensitive electronics can be housed entirely within the utility vault protected from abusive environment, theft, and vandalism.

GMI Covers incorporate design attributes that offer ease of installation and maintenance to utilities and contractors. These include customized attachment points and brackets for leading AMR systems.



ADDITIONAL BENEFITS

Non-Corrosive: In addition to the structural attributes of GMI covers, advanced composite materials are corrosion resistant. The materials withstand the harshest corrosive environments fostered by exposure to water, waste-water, chemicals, and de-icing solutions.

Non-Conductive: Our manhole covers will transmit neither heat, nor electrical current making GMI-Covers the safest solution for pedestrians and pets in urban areas.

Highly Customizable: The inherent characteristics of composite materials offer great flexibility in design. GMI Composite Covers can incorporate; custom logos and crests, any desired color, and value added features. GMI also has the ability to construct single custom covers, in any size or shape, to accommodate hard to fit utility vaults and access points.

SUGGESTED SPECIFICATION:

General:

This specification is applicable to composite manhole covers and access lids manufactured by GMI Composite Covers or similar approved manhole cover or access cover.

Materials:

Manhole covers and access lids shall be nonmetallic in nature. All covers should be of fiber reinforced polymer construction.

Proof Load Testing:

Manhole Covers:

Testing will be performed on samples selected randomly from every production run. Covers shall be tested according to the procedure outlined in *AASHTO M306*. Covers will be tested on a calibrated load testing press. Covers will be tested to a 40,000 pound proof load applied with a 9 in. by 9 in. test foot print, and held for 1 minute. At the test conclusion the covers will be examined for any damage, or permanent deformation.

Access Lids:

Testing will be performed on samples selected randomly from every production run. Access Lids shall be on a calibrated load testing press. Access Lids will be tested using a 6 in. by 8 in. test footprint. Access lids will be tested according to their manufacturers certified load level. Access lids certified to H-20 will be tested at a load no less than 20,000 lbs. At the test conclusion the covers will be examined for any damage, or permanent deformation.

CONTACT INFO

Thank You for your interest in GMI Composite covers. Please feel free to contact us with any questions you may have. For more information on GMI products, pricing, and availability please contact us at the following information:

GMI COMPOSITE COVERS

13355 West Sherman Blvd.
Muskegon, MI 49441
(800) 330-4045
info@gmi-covers.com
www.gmi-covers.com

Job Name: Harold Thompson
 Quote ID: 2012010027

Full 01

Structure ID: **MH-01**

Spec: General
 Type: Sanitary Sewer w/invert
 Size: 60"

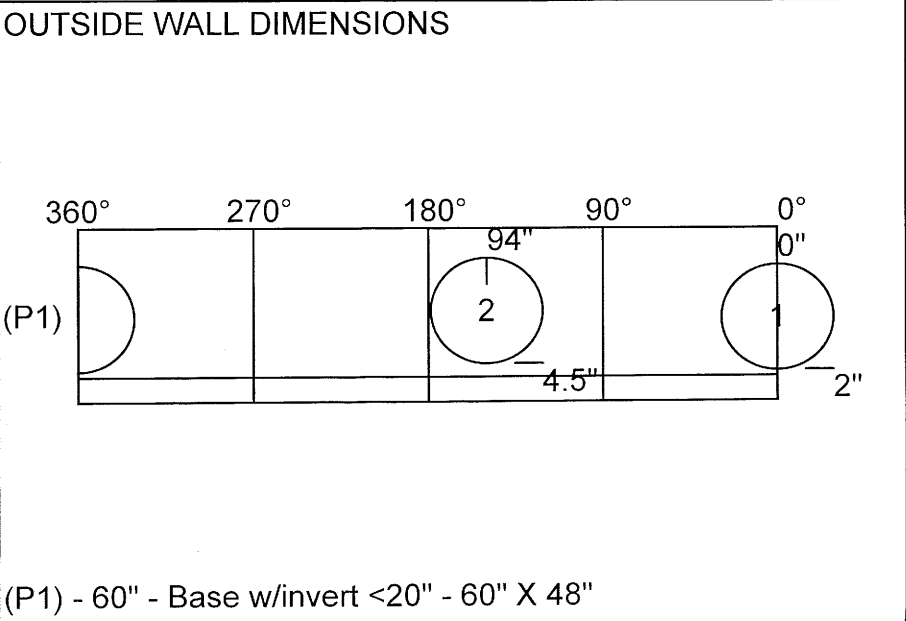
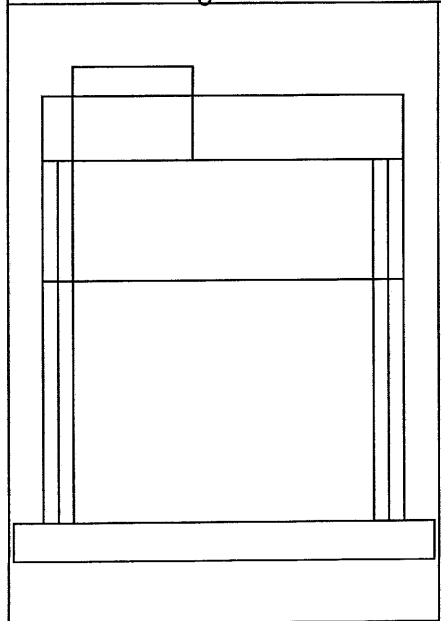
Rim: 24.83'
 Invert: 17.55'
 Catch: 2.004"

Rim to Invert: 7.28'
 Overall Height: 8.25'

- 1) 24" - Ring & Cover - 4" sewer *COMPOSITE*
- 1) 60" - H20-Eccentric - H20 w/24" opening
- 1) 60" - Riser - 60"X24"
- 1) 60" - Base w/invert <20" - 60" X 48"
- 2) 60" - 1 1/2" CS-102 - Sealant
- 2) 30" - PSX - 34B

NO STEPS

	Position	Elev	Angle	Pipe	Connector
	Rim	24.83'			
	Reducer				
	Invert 1	17.55'	0°	30" CI/DI	30" PSX 34B
	Invert 2	17.75'	150°	30" CI/DI	30" PSX 34B
	Invert 3				
	Invert 4				
	Invert 5				
	Invert 6				
Invert 7					
Invert 8					



Job Name: Harold Thompson
 Quote ID: 2012010027

Full 01

Structure ID: **MH-06**

Spec: General
 Type: FLAT Bottom
 Size: 72"

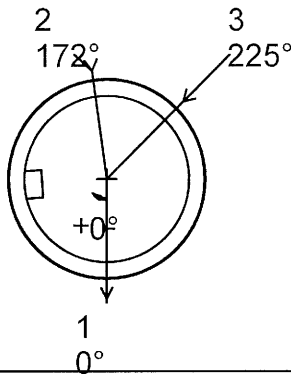
Rim: 106.92'
 Invert: 97'
 Catch: 6"

Rim to Invert: 9.92'
 Overall Height: 10.167'

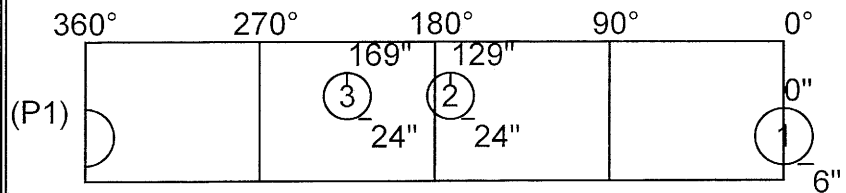
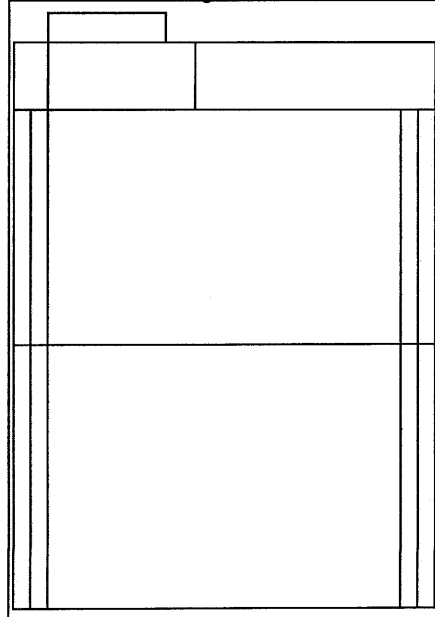
- 1) 30" - Ring & Cover - 4" sewer *ALUMINUM*
- 1) 72" - H2O-Eccentric - H2O w/30" opening
- 1) 72" - Riser - 72"X48"
- 1) 72" - Flat Bottom Riser - 72"X54"
- 2) 72" - 1 1/2" CS-102 - Sealant
- 1) 16" - PSX - 22L
- 2) 15" - PSX - 18M

No STEPS

Position	Elev	Angle	Pipe	Connector
Rim	106.92'			
Reducer				
Invert 1	97'	0°	18" CI/DI	16" PSX 22L
Invert 2	98.5'	172°	14" CI/DI	15" PSX 18M
Invert 3	98.5'	225°	14" CI/DI	15" PSX 18M
Invert 4				
Invert 5				
Invert 6				
Invert 7				
Invert 8				

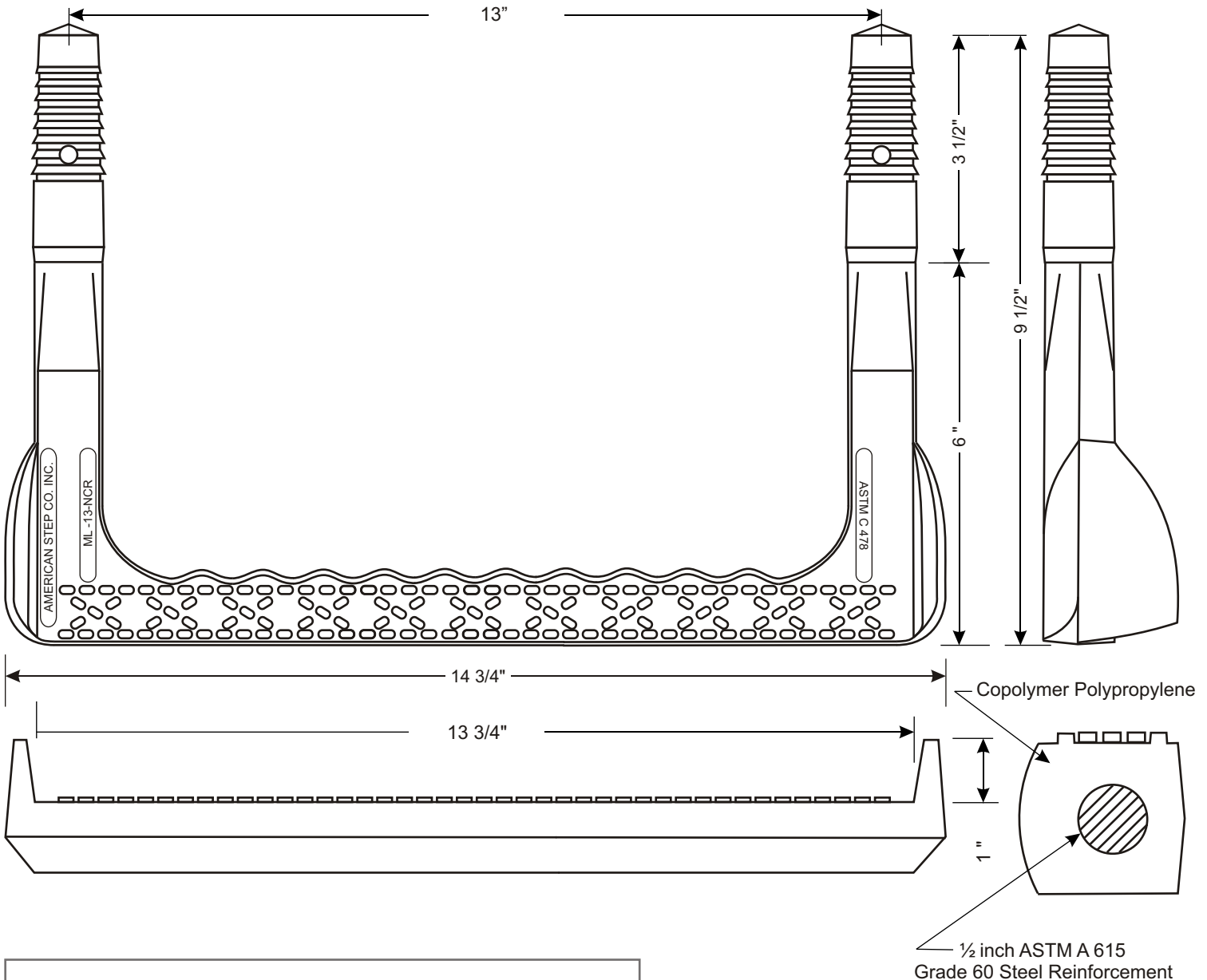


OUTSIDE WALL DIMENSIONS



(P1) - 72" - Flat Bottom Riser - 72"X54"

ML-13-NCR



ML-13-NCR

Mechanical Lock Installation Methods
Minimum Concrete Strength Must Be 3000 psi.

Preformed Holes

Two preformed holes on 13" centers
Holes must be parallel
Diameter of holes are 1.1" tapering to 7/8" in 3 1/2" of depth

Drilled Holes

Drill two 1" holes on 13" centers with a minimum depth of 3 3/4"
Use 1" masonry bit for drilling.
Holes must be parallel.

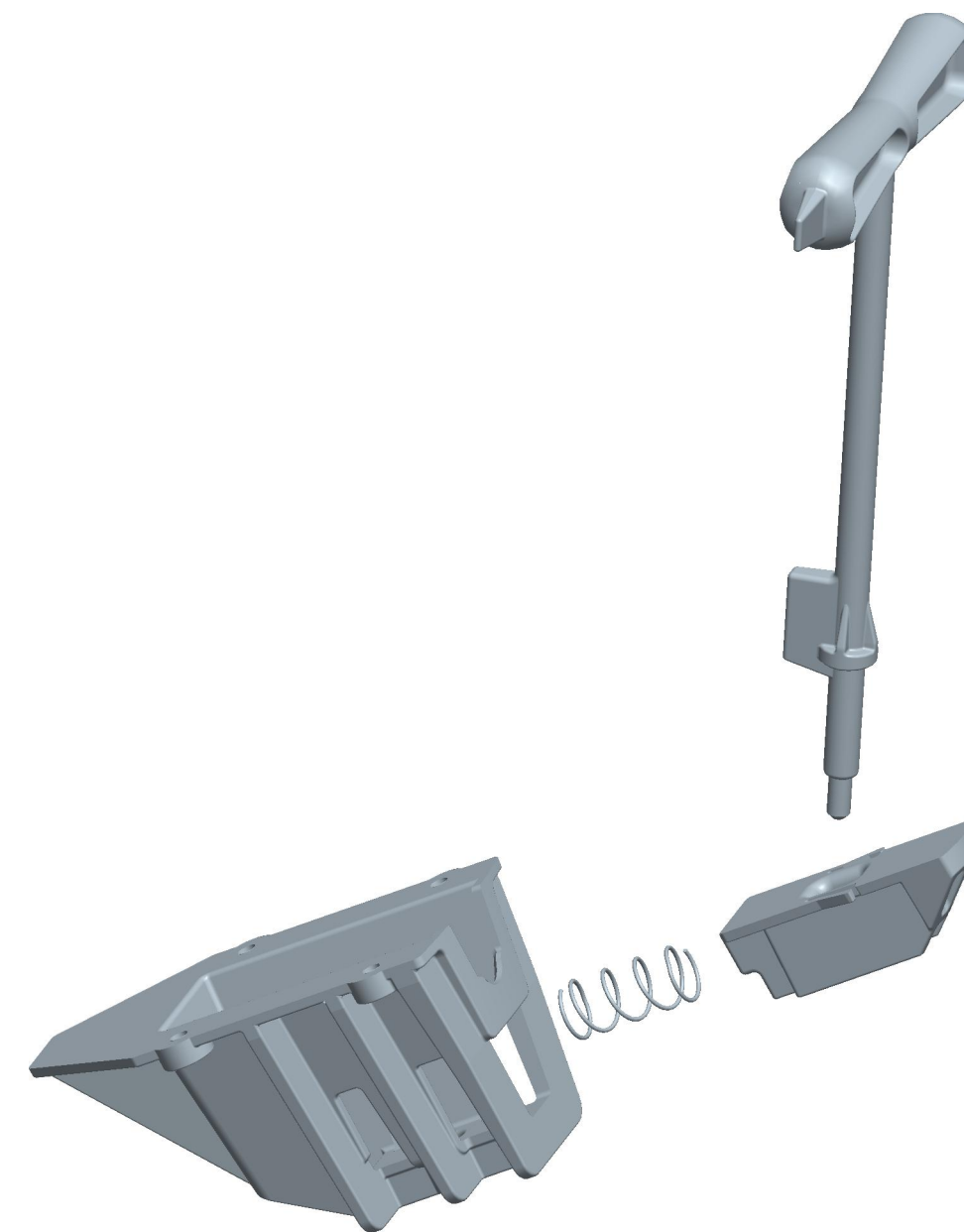
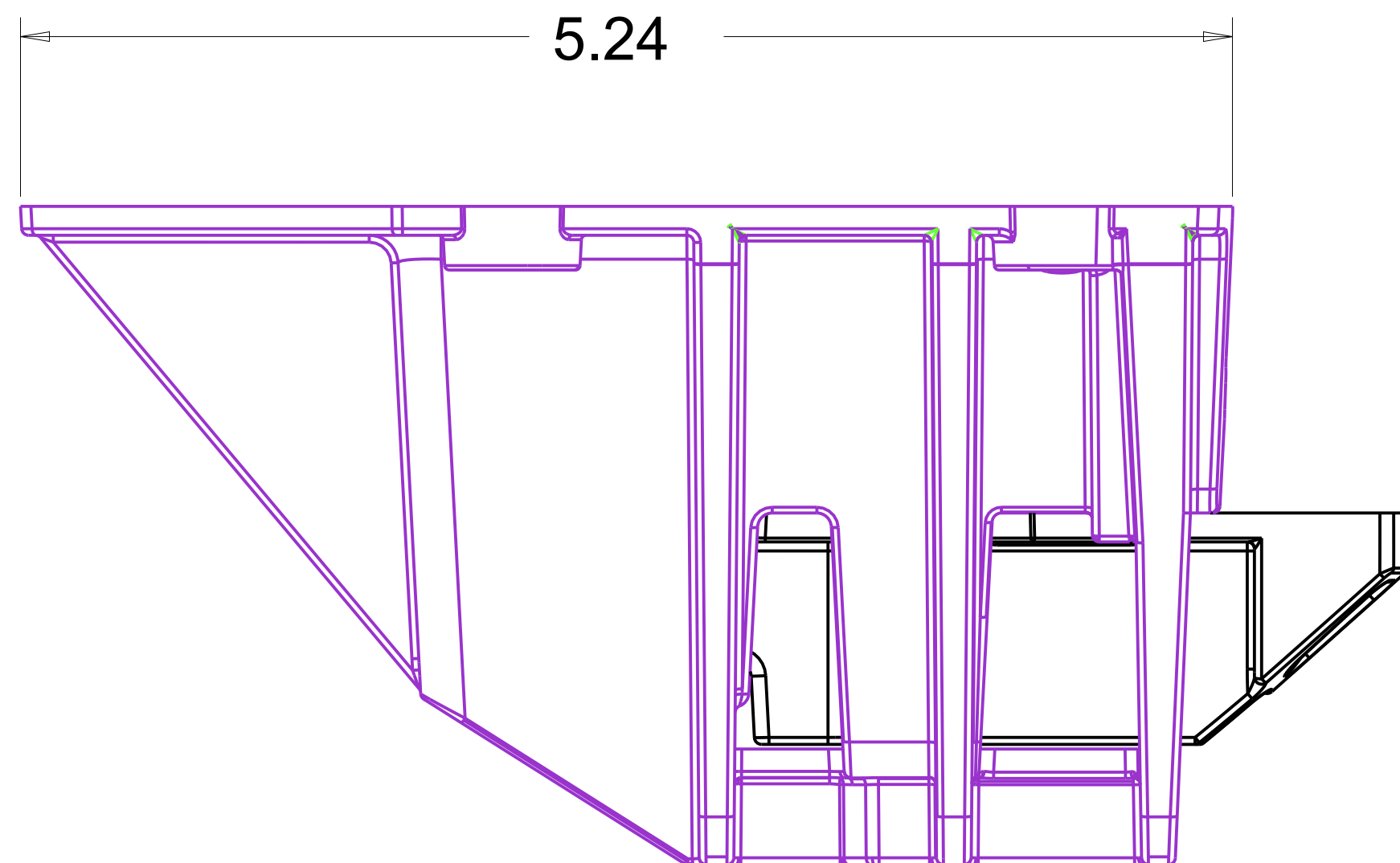
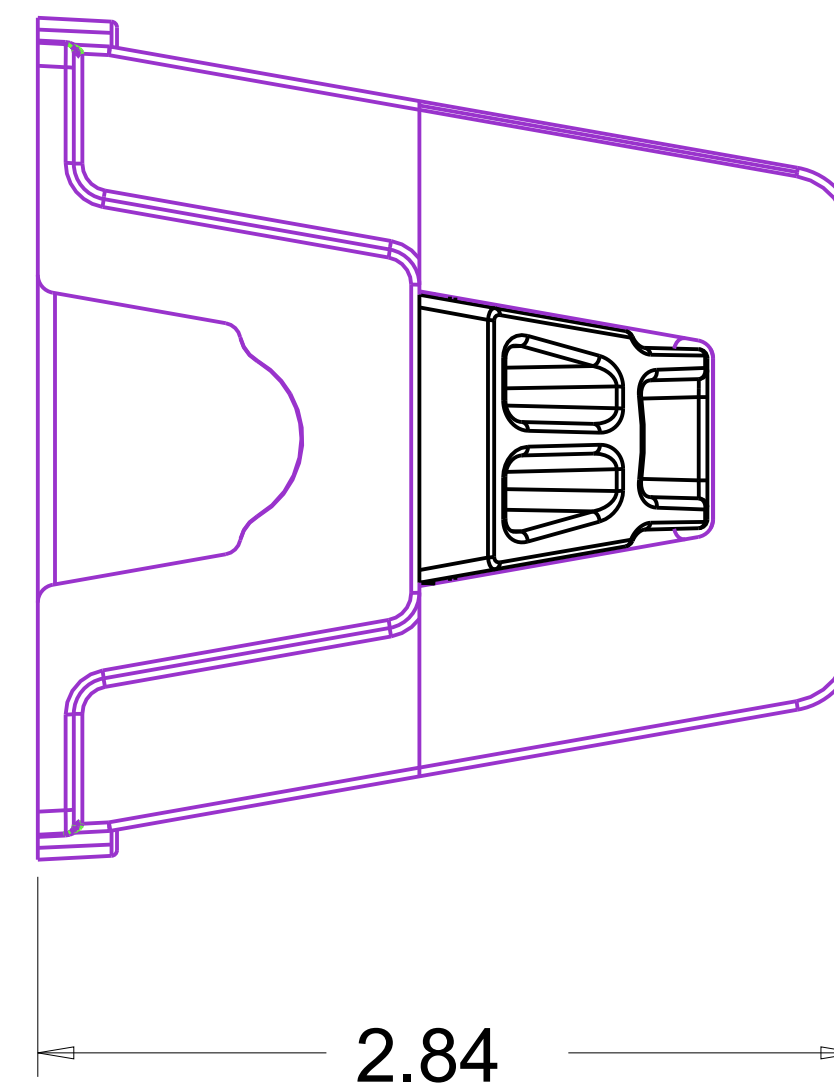
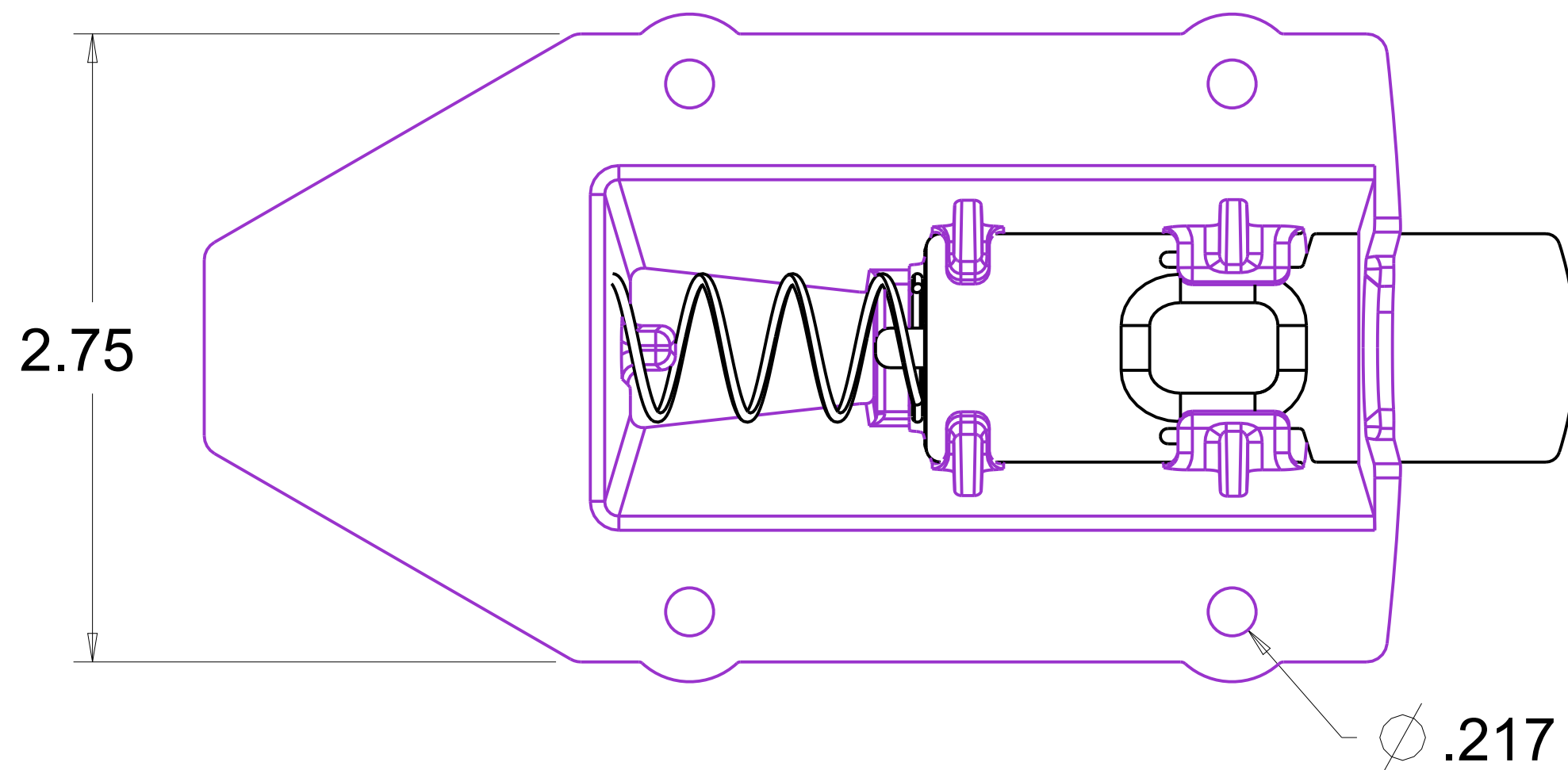
Drive step with sledge hammer until both legs are completely seated

This step meets or exceeds ASTM C 478 and OSHA Standards when properly installed.



American Step Company, Inc.
P.O. Box 137
830 East Broadway
Griffin, GA 30224-0137

800-988-STEP
770-467-9844 (OFFICE)
770-467-8011 (FAX)



Product/ Drawing Number

GMILD80

Product Attributes

Materials:

Fiber Reinforced
Polymer

Load Rating:

750 lbs of pull force

Weight = 0.5 lbs

Drawing shown in inches

MADE IN USA

This drawing is the property of GMI Composites, INC. and includes confidential information, trade secret information, and/or know how that is the property of GMI Composites, INC. Copyright 2010 GMI Composites, INC.



PSX: DIRECT DRIVE

Providing products and services that protect our planet's clean water supply.

PSX has always set the standard for watertight pipe-to-structure connections. **PSX: Direct Drive™** offers all of the sealing and durability advantages of PSX, combined with easy installation and adjustability. Using all stainless-steel components and polyisoprene rubber, PSX: Direct Drive is stronger than ever, and the unique adjusting mechanism makes installation simple.



The PSX: Direct Drive Difference

PSX: Direct Drive uses a simple all stainless steel adjuster. From outside the manhole, a small, pre-set torque wrench ratchets around the adjuster nut, opening both sides of the sleeve quickly and evenly. The breakover design wrench signals when the proper torque is reached, fully compressing the rubber against the manhole opening. Both cored and cast holes can now have the benefit of PSX sealing with the ease of wrench adjustability; the best of both worlds.

PSX: Direct Drive Advantages:

- * Installs quickly and easily from outside the manhole
- * Requires no retightening or adjustment before shipment/installation
- * All stainless-steel components - No plastic wedges to crack or break
- * Easily accommodates hole size variation



PRESS-SEAL GASKET CORPORATION

P.O. Box 10482, Fort Wayne, Indiana 46852

Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

PRODUCT SPECIFICATIONS

PSX: Direct Drive meets and/or exceeds all requirements of ASTM C-923, including physical properties of materials and performance testing. Performance testing includes:

- * 13 psi in straight alignment
- * 10 psi at minimum 7° angle
- * 10 psi under shear load of 150 lbs/in. pipe diameter

PSX: Direct Drive meets and/or exceeds the following specifications:

- * ASTM C-923 Standard Specification for Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals.
- * ASTM C-1478 Standard Specification for Storm Drain Resilient Connectors Between Reinforced Concrete Storm Sewer Structures, Pipes and Laterals.
- * ASTM C-1244 Standard Test Method for Concrete Sewer Manholes by the Negative Air Pressure (Vacuum) Test.

APPLICATIONS

- * Sanitary sewers
- * Storm sewers
- * Septic tanks
- * Valve vaults
- * Lift and pump stations
- * Commercial vaults
- * Circular or straight-wall structures

PIPE INSTALLATION

1. Clean pipe and boot to ensure no dirt or foreign materials are present.
2. Clamping surface on pipe must be clean and smooth.
3. Center pipe in opening and insert until pipe breaks the inside plane of manhole.
4. Attach take-up clamp(s) and stagger screw(s) of clamp(s) around the groove of the gasket so that take-up pressure will be equalized. Make sure each clamp is completely in the correct groove.
5. Using a torque ratchet or torque wrench, gradually tighten all screw(s) of clamp(s) in an alternating pattern to 60 lbs/in. torque.
6. After reaching 60 lbs/in. torque on final screw, check all screws again to ensure compression of all clamps.
7. Vacuum testing shall be conducted in accordance with ASTM C-1244-02.
8. Adjust pipe to line and grade. Use proper bedding, backfill materials, and techniques so that pipe deflection and deformation are minimized. Installation of the concrete structure shall be such that differential settlement between the structure and the pipeline shall be less than 10% of pipe diameter for pipes less than 20" and shall be less than 5% of pipe diameter for pipes between 20 and 60 inches in diameter.
9. Any pipe stubs installed in the manhole must be positively restrained from movement per ASTM-C923. Press-Seal Gasket is not responsible for failure due to unrestrained pipe stubs for future connections.

Why Specify PSX: Direct Drive

PSX: Direct Drive is the pipe-to-structure connector that finally satisfies all critical design and performance requirements: rugged construction of the adjuster and band; superior strength and toughness of polyisoprene rubber; and the proven sealing performance of PSX. It's the one adjustable connector that doesn't make you compromise sealing for convenience or price: **PSX: Direct Drive**.

U.S. Patent No. 6805359
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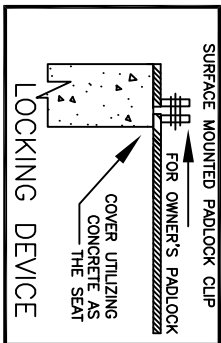
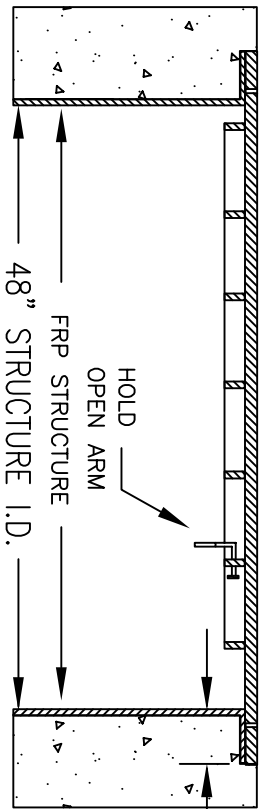
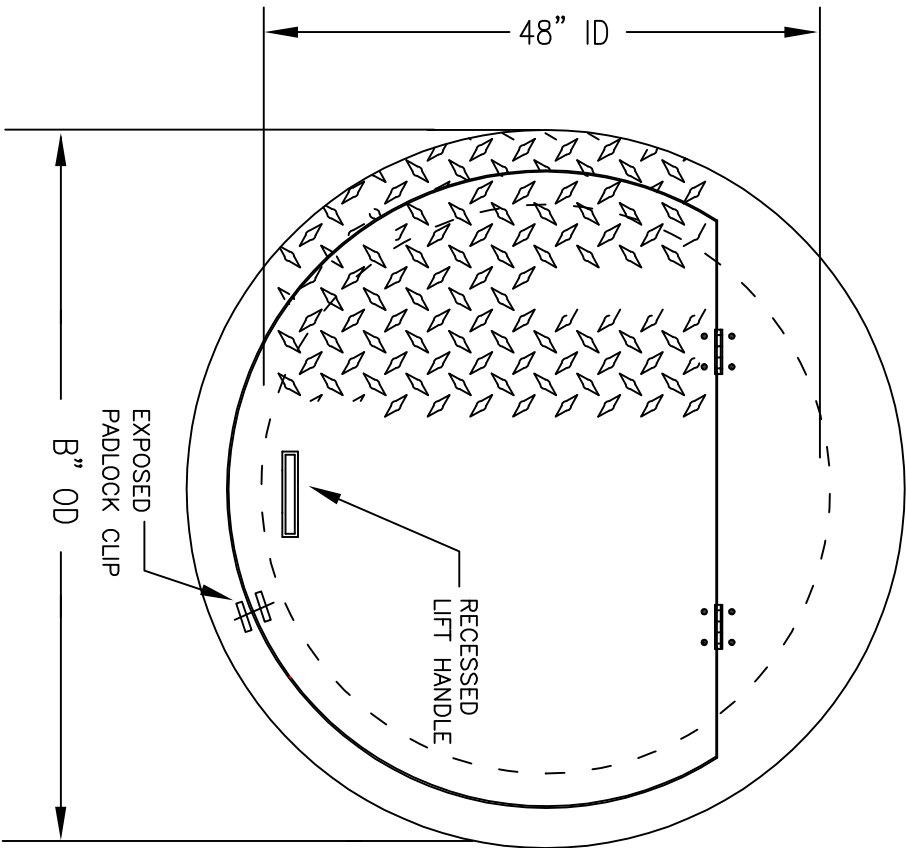
PRESS-SEAL GASKET CORPORATION

P.O. Box 10482, Fort Wayne, Indiana 46852

Phone: (260) 436-0521 (800) 348-7325 Fax: (260) 436-1908 E-mail: sales@press-seal.com Web: www.press-seal.com

NOTES:

- 1.) STYLE "TB" ACCESS HATCH, AS MANUFACTURED BY SYRACUSE CASTINGS WEST
- 2.) UNIT PEDESTRIAN RATED, FOR 300 PSF LOADS.
- 3.) UNIT SUPPLIED WITH AN EXPOSED PADLOCK CLIP (SEE DETAIL THIS PAGE)
- 4.) COVER EQUIPPED WITH A HOLD OPEN ARM TO LOCK COVER OPEN IN THE 90 DEGREE POSITION.
- 5.) MATERIAL SHALL BE ALUMINIUM.
- 6.) UNIT UTILIZES TOP LIP OF FRP STRUCTURE AS SEAT FOR COVER.
- 7.) DEPENDENT UPON OVERALL OD OF COVER, SOME UNITS MAY BE MANUFACTURED BY SPLICING 2 PIECES OF PLATE TOGETHER. HOWEVER, THE FINAL PRODUCT WILL BE ONE SINGLE UNIT.



DRAWING NOT TO SCALE

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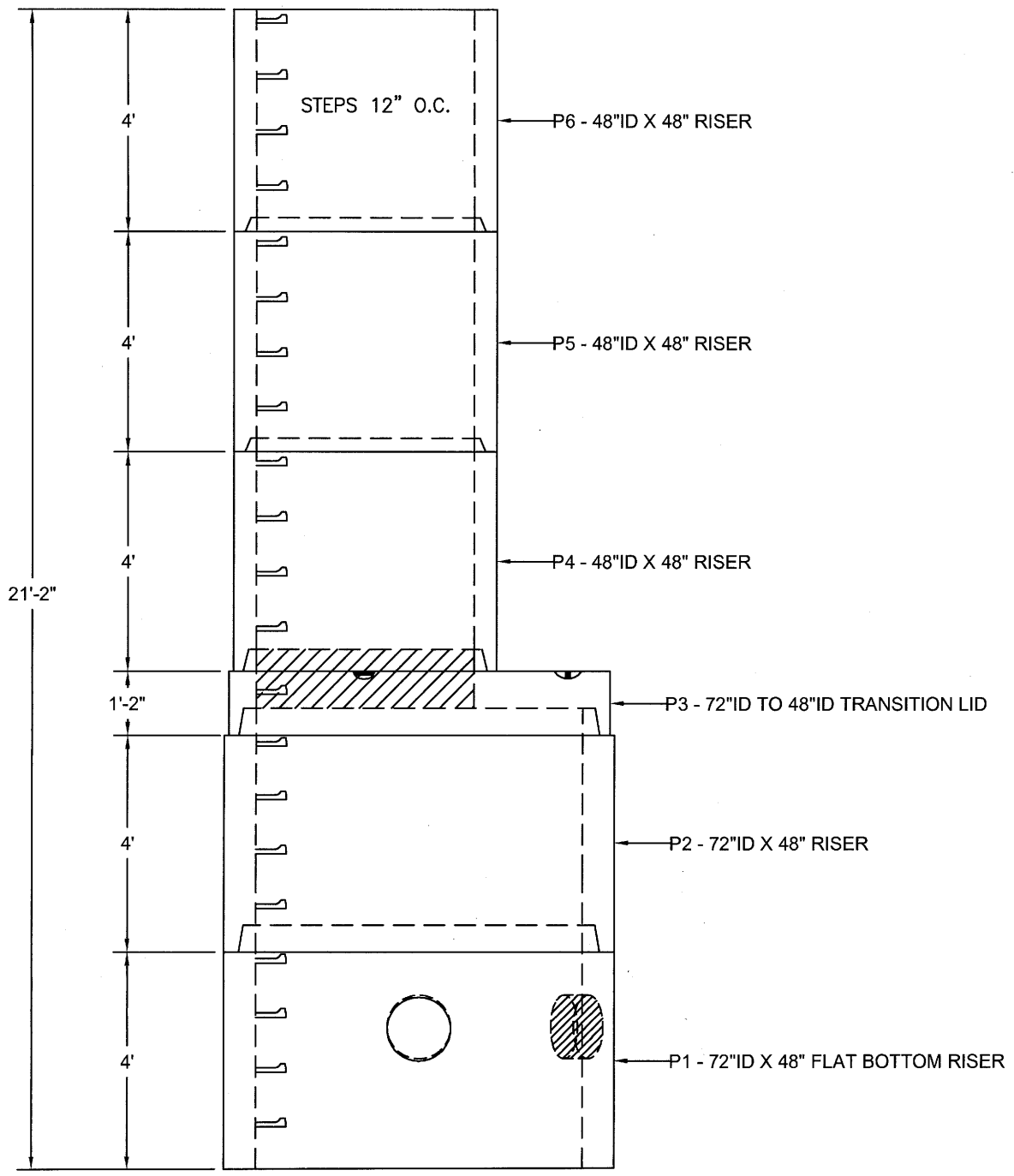
"B" DIMENSION
SPECIFY WALL THICKNESS
INCHES

"TB" STYLE PEDESTRIAN RATED ALUMINIUM
COVER FOR 48" ID STRUCTURE

DRAWN BY: ROBYN DATE: 1-5-12 DRAW # TB-48 ID



Syracuse Castings West
Better By Design
58 SOUTH 1200 WEST
P.O. BOX 488
TOOELE, UT 84074-0488
TEL: 801-544-5728 FAX: 801-544-9571
WWW.SYRCAST.COM



ELEVATION VIEW
VALVE ACCESS MH 2

CUSTOMER	WEAVER GENERAL
PROJECT	HAROLD THOMPSON WATER RECLAIM.
PRODUCT	VALVE ACCESS MH 2
PROJECT MANAGER:	MH
PRODUCTION DATE:	
SHIP DATE:	

	SLAB	WALL	LID
WEIGHT:			
YARDS:			

TOTAL WEIGHT: 28058 LB

	SLAB	WALL	LID
WEIGHT:			
YARDS:			

TOTAL WEIGHT:

QC	PREPOUR	POSTPOUR
SLAB		
L. WALL		
U. WALL		
LID		

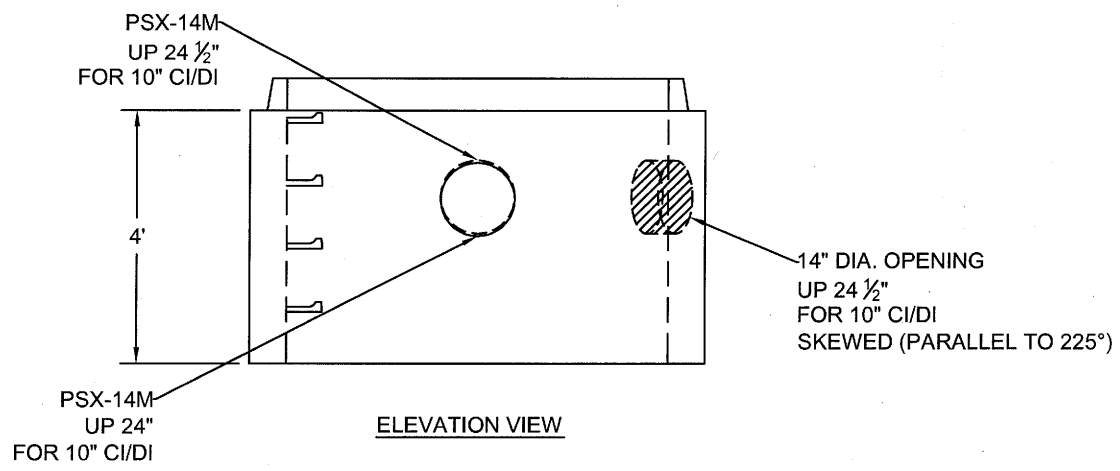
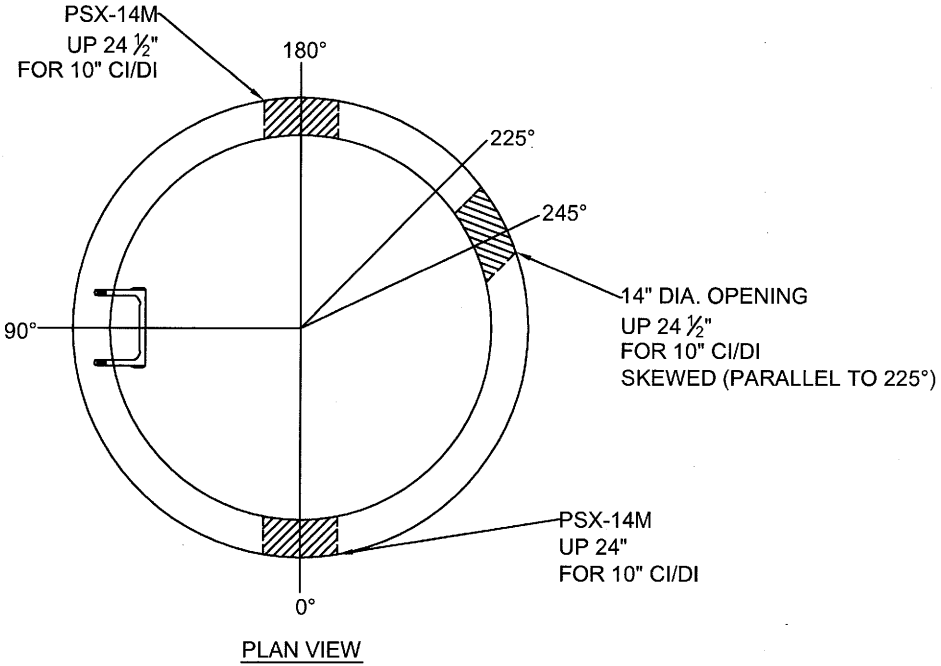
Type 1/II cement with fly ash.
4000 psi concrete at 28 days.

2/8/12	DATE REVISED:
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TJC	CHECKED BY:	SCALE:
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REFER TO STANDARD SUBMITTAL INFO FOR 72" ID AND 48" ID MANHOLE MATERIAL



**P1 - 72" ID X 48" FLAT BOTTOM RISER
(FOR VALVE ACCESS MH 2)**

CUSTOMER	WEAVER GENERAL
PROJECT	HAROLD THOMPSON WATER RECLAIM.
PRODUCT	VALVE ACCESS MH 2 (P1)
PROJECT MANAGER:	MH
PRODUCTION DATE:	
SHIP DATE:	

	SLAB	WALL	LID
WEIGHT:			
YARDS:			

TOTAL WEIGHT: 6963 LB

	SLAB	WALL	LID
WEIGHT:			
YARDS:			

TOTAL WEIGHT:


QC	PREPOUR	POSTPOUR
SLAB		
L. WALL		
U. WALL		
LID		

Type 1/II cement with fly ash.
4000 psi concrete at 28 days.

2/8/12 DATE REVISED:

TJC CHECKED BY: SCALE:

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REFER TO STANDARD SUBMITTAL INFO FOR 72" ID MANHOLE MATERIAL