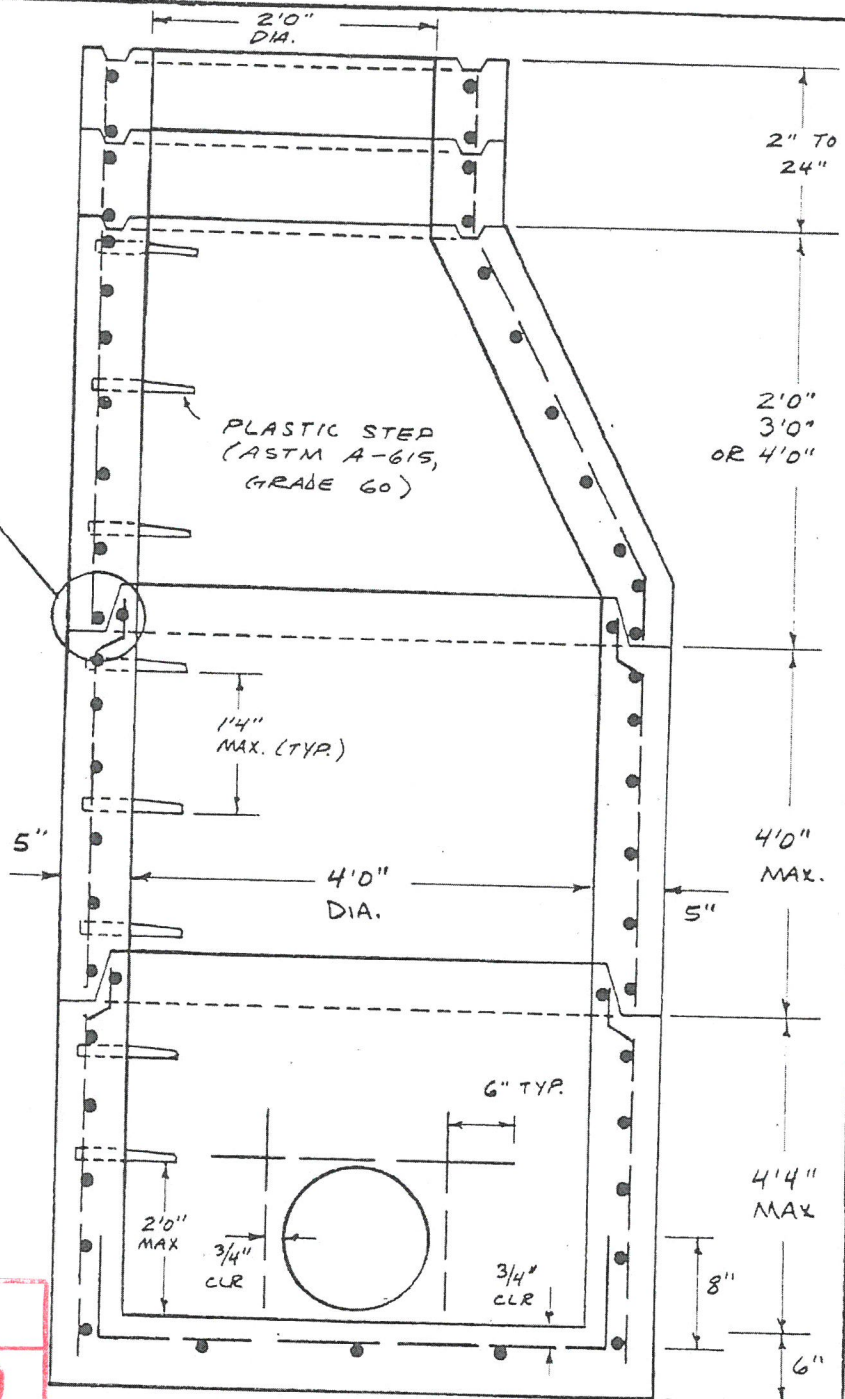


1. Concrete strength to be at least 4000 psi.
2. See plans for pipe alignment & elevations.
3. Opening size varies to accomodate 4" to 27" (maximum) dia. pipes.
4. Standard joint between sections composed of ConSeal CS-102 butyl rubber mastic.
5. Reinforcing to be in accordance with ASTM C478.
6. Steps (plastic) to be Grade 60 ASTM A-615.



NOT APPROVED

54

DSG

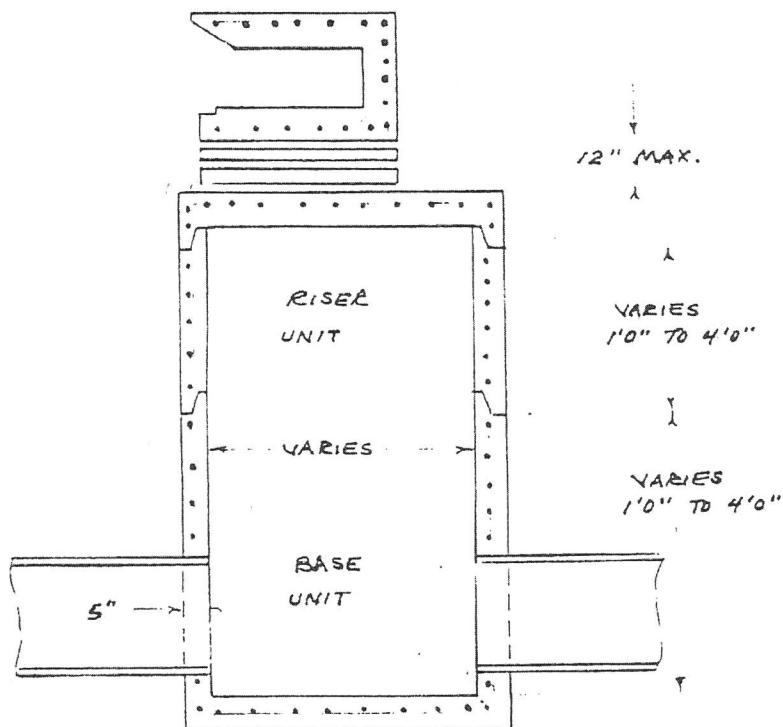
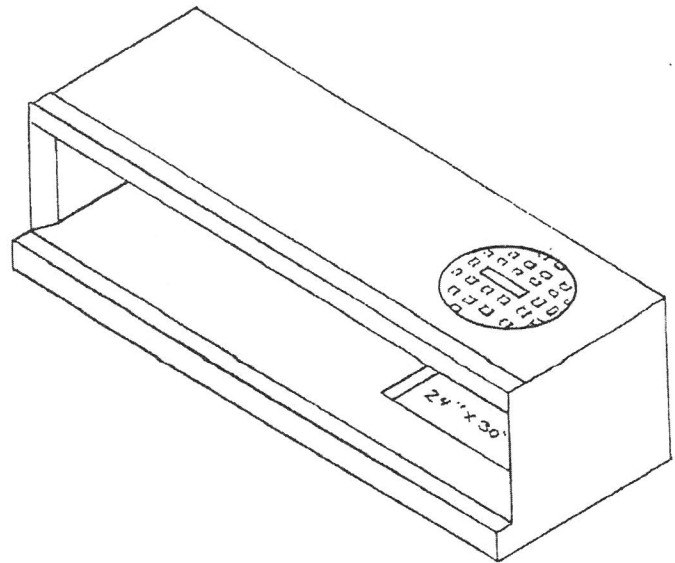
DATE:

12/1/14

ECCENTRIC MANHOLE (with Monolithic Base)



540-982-0777

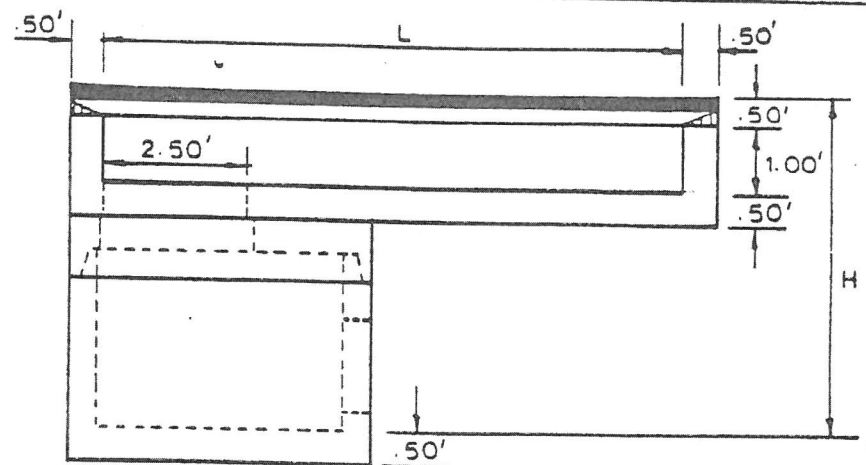


STANDARD CURB INLET

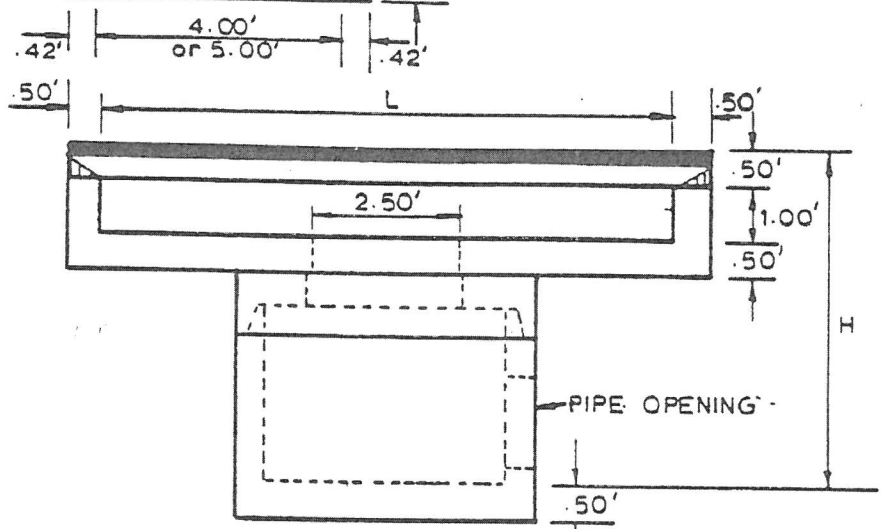
Not Reviewed

CSI

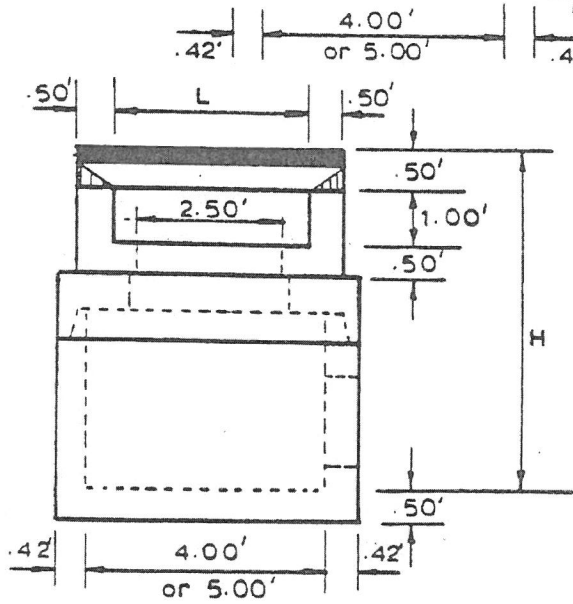
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Roanoke, Virginia 24027
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DI-3B RIGHT



DI-3C



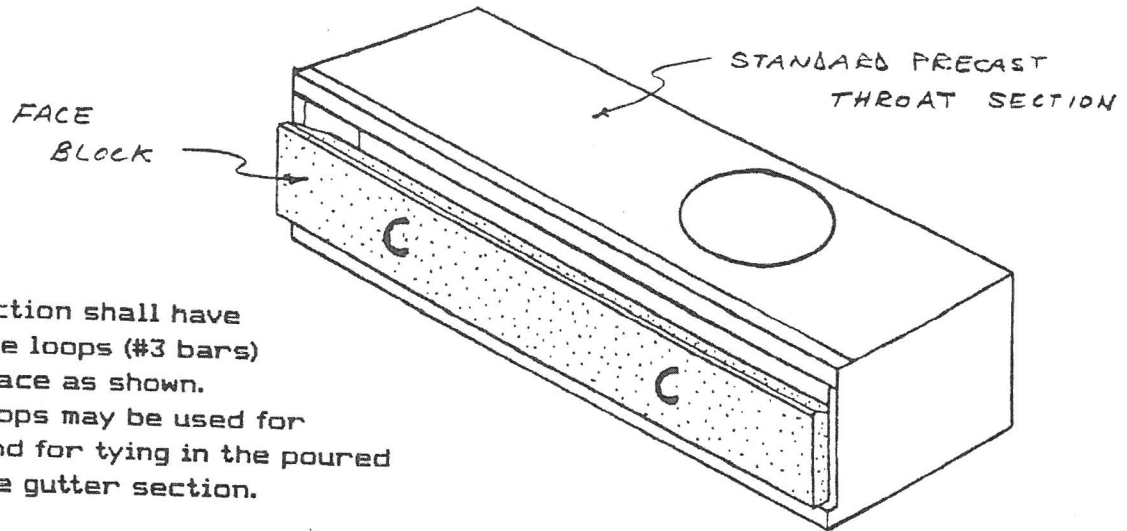
DI-3A

N/A

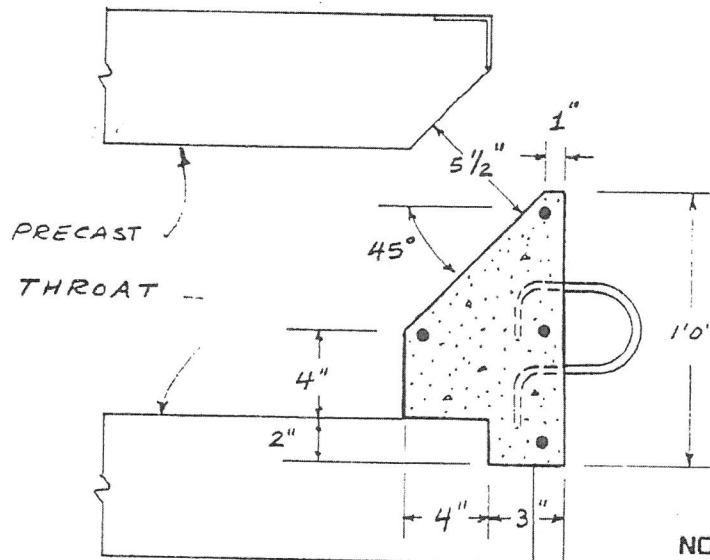


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540-982-0777

PRECAST THROAT FACE BLOCK



Each section shall have 2 or more loops (#3 bars) cast in face as shown. These loops may be used for lifting and for tying in the poured-in-place gutter section.



NOTES:

1. Concrete strength to be 4000 psi minimum.
2. Dowel holes to be provided 12" o.c. for anchorage.
3. Throat face weights:

DI-3A 335 #

DI-3B, L = 4 ... 420 #

L = 6 ... 590 #

L = 8 ... 755 #

L = 10 ... 925 #

L = 12 ... 1090 #

L = 14 ... 1260 #

L = 16 ... 1430 #

L = 18 ... 1610 #

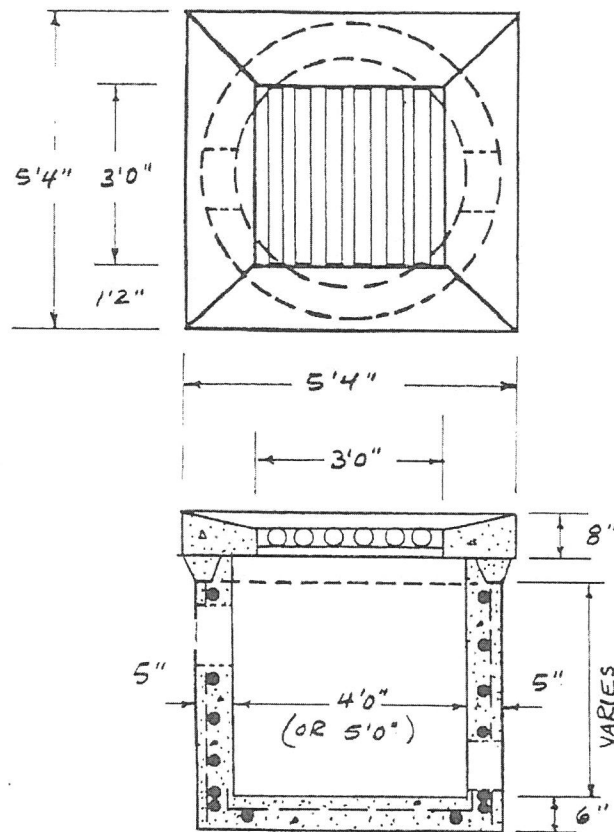
L = 20 ... 1765 #



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DI-7A

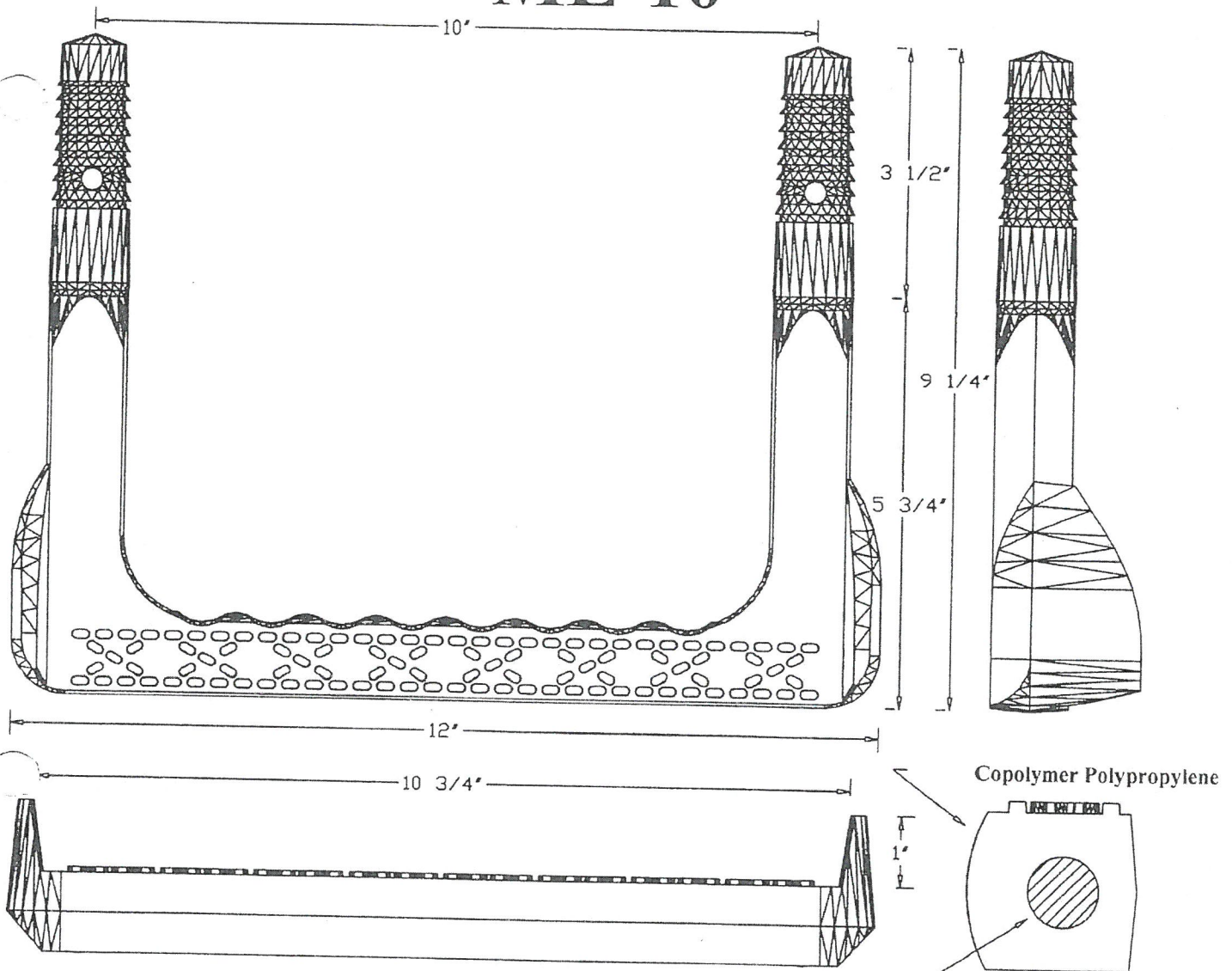
Notes:

1. Concrete strength to be at least 4000 psi.
2. See plans for pipe alignment & elevations.
3. Opening size varies to accomodate 4" to 36" (maximum) diameter pipes.
4. Standard joint between sections composed of ConSeal CS-102 butyl rubber mastic.
5. Reinforcing to be in accordance with ASTM C478.



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ML-10



ML-10

Mechanical Lock Installation Methods:
Minimum Concrete Strength Must Be 3000 PSI

Preformed Holes:

Two preformed holes on 10" centers.
Holes must be parallel.
Diameter of holes are 1.1" tapering to 7/8" in 3 1/2 " of depth.

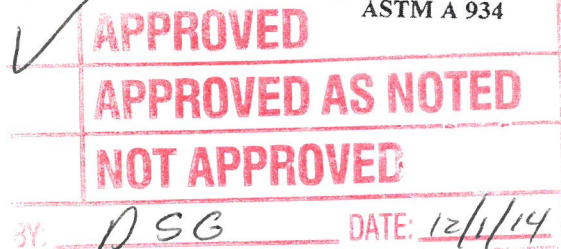
Drilled Holes:

Drill two 1" holes on 10" 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.*

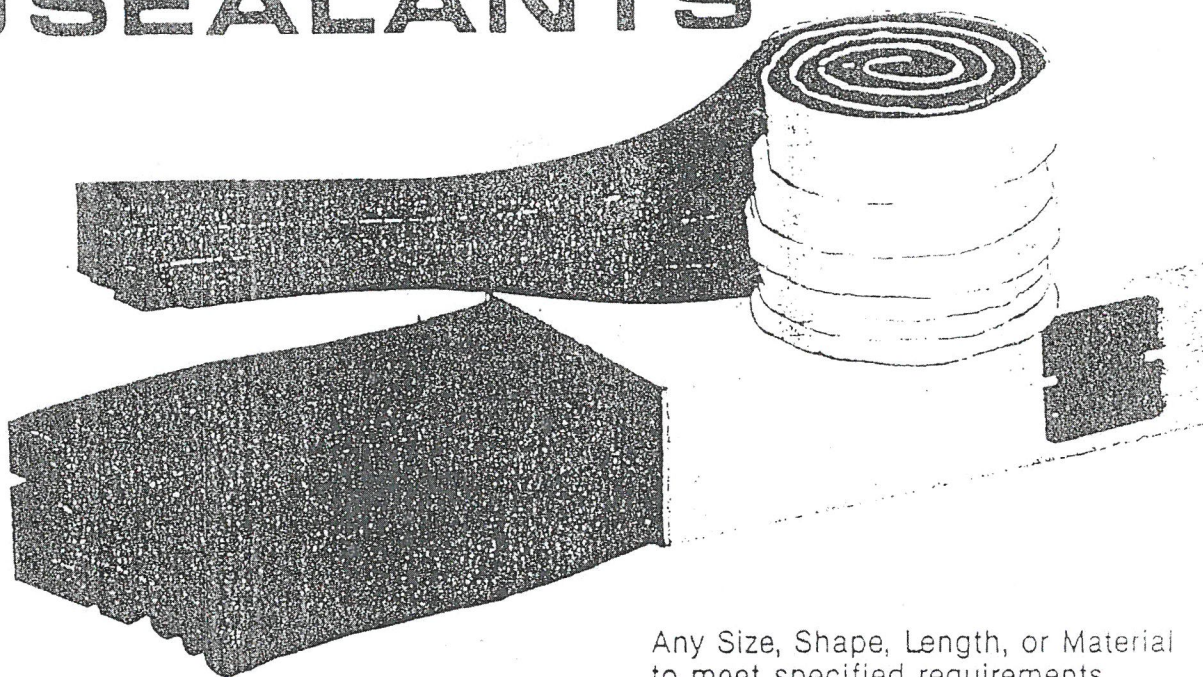
1/2 inch ASTM A 615
Grade 60 Steel Reinforcement
Powder Epoxy Coated per
ASTM A 934



AMERICAN
STEP COMPANY, INC.

800-988-STEP 770-467-9844 OFFICE 770-467-8011 FAX
830 EAST BROADWAY P. O. BOX 137 GRIFFIN, GA 30224-0137

CONCRETE SEALANTS



Any Size, Shape, Length, or Material
to meet specified requirements.

Butyl Resin CONSEAL CS-102 & CS-202

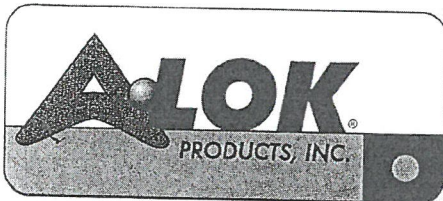
APPLICATION AND SEALING PROPERTIES

- Provides permanently flexible watertight joints.
- Low to high temperature workability:
 - ☐ CS-102 . . . 30°F to 130°F
 - ☐ CS-202 . . . 10°F to 130°F
- Rugged service temperature resistance of -30°F to +200°F.
- Excellent chemical and mechanical adhesion to clean and dry surfaces.
- Greater cohesive and adhesive strengths.
- Sealed joints will not shrink, harden or oxidize upon aging.
- Available in numerous standard sizes:
 - ☐ Specific area cross sections designed for specific joint requirements.
 - ☐ Lengths from 36-inch strips to 21-foot rolls.
 - ☐ Custom cut lengths at minimum costs.
 - ☐ Lower sealing costs resulting from use of proper sizes.
- Controlled flow resistance for application ease.
- Primer is not usually required, however, if temperature is below 40°F, or installation is in a wet hole, or a dust condition exists, apply Concrete Sealants Primer CS-100 to joint.
- Meets Federal Specification SS-S-00210 (210-A) and AASHTO M-198B.

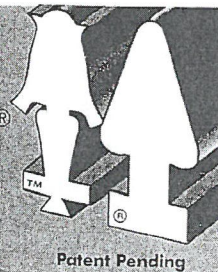
✓	APPROVED
	APPROVED AS NOTED
	NOT APPROVED
BY: <u>DSG</u>	DATE: <u>12/1/14</u>

For self-sealing joints in:

CONCRETE MANHOLES • CONCRETE PIPES • VAULTS
UTILITY BOXES • SEWER CONSTRUCTION • SEPTIC TANKS
BOX CULVERTS • VERTICAL PANEL STRUCTURES



The Company With Connections®

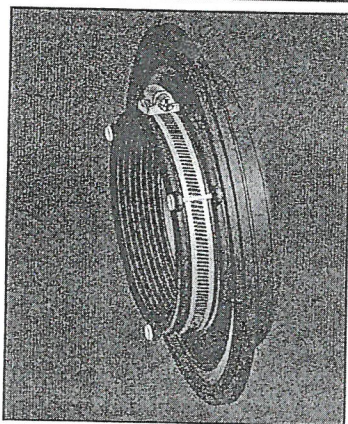


PIPE TO MANHOLE BOOT CONNECTOR FOR SANITARY SYSTEMS

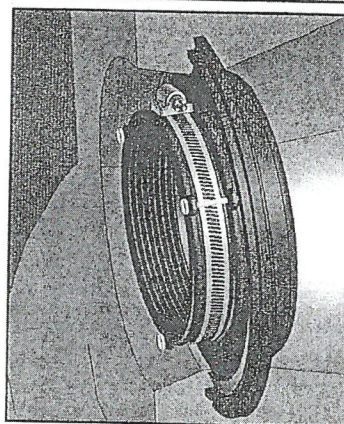
QUIK•LOK "The Boot with the Built-in Clamp"

QUIK•LOK

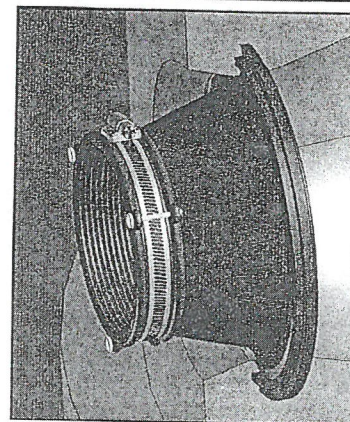
The QUIK•LOK Pipe to Manhole Boot Connector is a flexible connector specifically engineered to produce a positive watertight seal for pipes entering precast concrete structures and the structure itself. The QUIK•LOK CONNECTOR is manufactured to meet or exceed all material and test requirements set forth in ASTM C-923-00 titled "Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals".



QUIK-LOK boot as it will arrive with clamp attached ready to be placed in a mandrel.



QUIK-LOK boot cast into structure in shipping position.



QUIK-LOK boot extended at job site ready for pipe.

MATERIAL

The QUIK•LOK Connector is molded from an EPDM compound engineered to conform with the requirements of section 4.1.1 of ASTM C-923-00. Alternative compounds are available for unusual applications upon special order.

All stainless steel hardware is in compliance with section 4.2, "Mechanical Devices" of ASTM C-923-00.

KEY ADVANTAGES

The QUIK•LOK CONNECTOR assures a positive watertight connection and provides up to 20° degrees omni-directional deflection and 1.00" of vertical or horizontal movement without loss of seal. This deflection permits pipe to structure settling without damage to the pipe or loss of the watertight seal and will also allow for many angles of incoming pipe.

The QUIK•LOK cast in Boot Connector is manufactured with the stainless steel takedown clamp as an integral part of the rubber connector.

The correct takedown clamp travels in the installation position from the time it leaves A-LOK, while it is cast in the structure and until it arrives at the job site. After pulling out the connector it's in position ready to be tightened down around the pipe on the outside of the structure.

Immediate backfilling is then possible, enhancing project safety and overcomes the problems encountered with water, running sand and other unstable trench conditions.

The QUIK•LOK Connector can be installed into concrete structures in the plant or with a field sleeve for cast-in-place, at the job site. Once installed in the concrete structure and ready to ship, the QUIK•LOK Connector travels in the cast in position to prevent damage during shipping and handling.

PERFORMANCE STANDARD

The QUIK•LOK CONNECTOR meets or exceeds all material and test requirements of ASTM C-923-00 titled "Resilient Connectors Between Reinforced Concrete Manhole Structures, Pipes, and Laterals".

See following chart:

RESILIENT MATERIAL TEST OF ASTM C-923-00

TEST	RESULTS	ASTM METHOD
Chemical resistance 1 N Sulfuric acid 1 N Hydrochloric Acid	no weight loss no weight loss	D 543 at 22°C for 48h
Tensile strength	1200 psi or 8.5 MPa, min	D 412
Elongation at break	350% min.	
Hardness	± 5 from mfg's. specified hardness	D 2240 (Shore A durometer)
Accelerated over-aging	decr. of 15% max. of original tensile strength, decr. of 20% max. of elongation	D 573, 70±1°C for 7 days
Compression set	decr. of 25% max. of original deflection	D 395, Method B, at 70°C for 22h
Water absorption	increase of 10% max. of original by weight	D 471, immerse 0.75 by 2-in. or 19 by 25 mm specimen in distilled water at 70°C for 48h
Ozone resistance	rating 0	D 1171
Low-temp brittle point	no fracture at -40°C	D 746
Tear resistance	200 lbf/in. or 34 kn/m	D 624, Method B

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