

Submittal For Approval Sanitary Utility Sewerage Structures Concrete

Prepared by: Sandrema dba Eden Site
Development

Project: Lake Hills

Date: 7/22/2025

Source Data: 07/15/25 Sanitary Structure Tables

01-333900-01 Sanitary Utility Sewerage Structures Concrete.pdf

Reviewed for General Acceptance Only. We hereby certify that the material shown and marked in this submittal in that proposed to be incorporated in the work, in compliance with the contract documents, can be installed in the allocated spaces and is submitted for review by the Designer

Eden Site Development Inc
By: Javier Carulo
Date: 07/22/2025

APPROVED WITH NOTES

☒ Reviewed

☐ Rejected

☐

Revise and resubmit

☐

Furnish as corrected

Corrections or comments made on the shop drawings during this review do not relieve contractor from compliance with requirements of the drawings and specifications. This check is only for review of general conformance with the design concept of the project and general compliance with the information given in the contract documents. The contractor is responsible for continuing and correlating all quantities and dimension; selecting fabrication processes and techniques of construction; coordinating his work with that of all other trades; and performing his work in a safe and satisfactory manner. The contractor is responsible for providing copies of shop drawings to governing municipality and obtaining approval if necessary.

Date: 7/24/25 By: JAMES DOMBROWSKI
MADDEN, MOORHEAD & STOKES, LLC





MACK CONCRETE INDUSTRIES

SHOP DRAWING SUBMITTAL

Project #CF30265:

Lake Hills Main Boulevard & Mass Grading

Prepared for:

Eden Site Development

Sales:

SCOTT NEMCEK

Phone: 800.482.6225 6705/76706

email: snemcek@mackconcrete.com

Engineering:

DON WHITFORD

Phone: 800.482.6225 6705/76307

email: dwhitford@mackconcrete.com

NOTE: PLEASE VERIFY COVER LETTERING PRIOR TO ORDERING OF CASTINGS

2025-07-15 09:52:09



**MACK
CONCRETE
INDUSTRIES**

To whom it may concern:

Enclosed is our submittal package for the precast structures on this project. Please review the shop drawings and provided information to verify that the products we are proposing comply with the current plans and specifications for this project. Please also be sure to respond to any questions or concerns noted on the drawings.

After you have reviewed our entire submittal package, please stamp all shop drawings, and return the approved submittal package via email to the engineer and salesperson noted on the shop drawings.

We appreciate your assistance in this approval process, which helps us to meet your needs and demands correctly and in a timely fashion.

Sincerely,

Don Whitford

Engineering Department



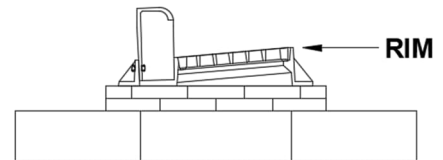
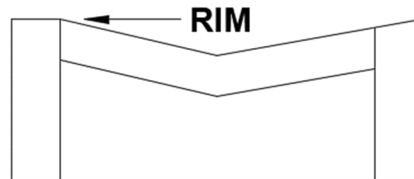
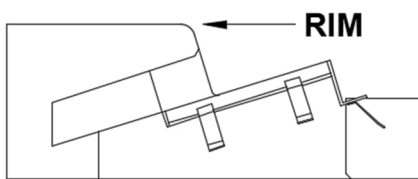
We generate our standard shop drawings using specialized software. Due to the way this software works, please keep in mind the following:

RIM is typically the highest point of the structure.

FDOT Type 1, 2, 3, 4, 5, & 6 curb inlets: RIM is the top of curb. If edge of pavement (EOP) is provided, we add 0.375' to get to RIM. If throat elevation is provided, we add 0.58' to get to RIM.

FDOT Type S, V, or J inlets, or other valley gutter inlets: RIM is not the gutter elevation. If gutter elevation is provided, for Type S we add 0.375' and for Type V or J we add 0.17'.

FDOT Type 9 & 10 curb inlets: RIM is equivalent to EOP, not top of curb. This is due to their adjustable hood.



Reducer elevation, if shown, can be disregarded.

For round structures, the outgoing (typically Invert 1) is always at zero degrees (0°). For rectangular structures, a short wall is always at zero degrees (0°). All other inverts are referenced from this.

Ext. (cw): The exterior horizontal measurement from a fixed point clockwise to the center of the hole. For round structures, the fixed point is 0°; for rectangular structures, the fixed point is the counterclockwise corner.

Int. (cw): Same as above but measured clockwise on the interior.

UP (): The distance from the interior top of floor (or, if not in P1, exterior joint) to the bottom of the hole.

Pipes are assumed (and submitted as such) to be centered in their respective holes, unless noted otherwise.

Overall Height is measured from RIM to the bottom of the base slab.

Weight is the total weight of the structure including the casting.

If multiple colors of paint are used, they are listed from first coat to last (for example, R/G/B would be red, then gray, then black).

Standard Abbreviations:

FT = flat top
FB = flat bottom
CIP = cast-in-place
CTR = centered
OS = offset
TS = top slab
BP / BS = bottom pad/slab
WWM / WWF = welded wire mesh/fabric
OC = on center
OCEW = on center each way
HS = hole size

Cover Lettering Abbreviations:

C/O = City of
SASE = Sanitary Sewer
STSE = Storm Sewer
CS = Confined Space
PRCS = Permit Required Confined Space
ARV = Air Release Vault
DNW = Dump No Waste
DTWWY = Drains to Waterway



Mack Concrete Industries, Inc.

23902 COUNTY ROAD 561, ASTATULA, FL 34705 800.482.6225

To Who It May Concern,

This letter is to certify that any and all precast reinforced concrete manhole sections, inlets, catch basins, wetwells, endwalls, etc. manufactured by Mack Concrete Industries, Inc., meet and/or exceed the current Florida Department of Transportation and ASTM C-478 specifications and type I/II cement meets ASTM C-33 and AST C-150.

Sincerely,

Ron Blanton
General Manager
Mack Industries, Inc.

23902 County Road 561 Astatula, FL 34705
Phone: 800.482.6225 76802 | Fax: 352.642.8203
Email: rblanton@mackconcrete.com
Web: www.mackconcrete.com

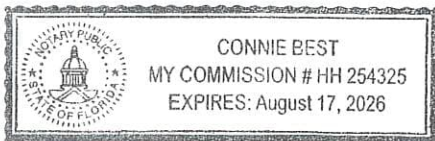
Notary:

STATE OF FLORIDA

COUNTY OF LAKE

Sworn to (or affirmed) and subscribed before me this 10th day of March, 2025, by Ronald Blanton, who is personally known.

(SEAL)



Notary Signature -

Printed Name of Notary -

Connie Best

Quality and Service Since 1932

Brunswick, OH – Valley City, OH – Akron, OH – White Lake, MI – Bowling Green, OH –
Vienna, OH – Sharpsburg, NC – Astatula, FL

www.mackconcrete.com

StudLiner is a high density polyethylene (HDPE) concrete protection product that protects against chemical and mechanical damage to concrete structures. StudLiner is manufactured with approximately 110 studs per square foot to guarantee high pullout strength and provide excellent stress distribution during temperature changes and pressure build-up. StudLiner can be installed over an exposed surface of a new or existing concrete structure, and it will provide a life expectancy that is five times greater than that of an unprotected structure. The product is also available in either a gray or black color, and in a variety of sizes to fit your specific application.

PRODUCT SPECIFICATIONS

TESTED PROPERTY	TEST METHOD	FREQUENCY	NOMINAL VALUE			
Thickness, mm	ASTM D 5199	Every 5th roll	2.00	3.00	4.00	5.00
Density, g/cm ³	ASTM D 1505	1/100,000 ft ²	0.94	0.94	0.94	0.94
Tensile Properties (each direction)	ASTM D 6693, Type IV	1/100,000 ft ²				
Strength at Yield, lb/in ²	Dumbbell		2,200	2,200	2,200	2,200
Elongation at Break, %	G.L. = 2.0 in		500	500	500	500
Stud Pull-Out Strength ⁽¹⁾ , lb/ft ²		1/product	>14,000	>14,000	>14,000	>14,000
Carbon Black Content/Pigment Content, %	ASTM D 1603*/4218	1/100,000 ft ²	2-3	2-3	2-3	2-3
Black (carbon)	ASTM D 5630,		1.5-2.5	1.5-2.5	1.5-2.5	1.5-2.5
Gray (pigment)	Modified					
Carbon Black Dispersion ²	ASTM D 5596	1/formulation	Note ⁽²⁾	Note ⁽²⁾	Note ⁽²⁾	Note ⁽²⁾
Notched Constant Tensile Load, hours	ASTM D 5397	1/product	400	400	400	400
Coefficient of Linear Thermal Expansion, per °C	ASTM D 696	1/product	1.20E-04	1.20E-04	1.20E-04	1.20E-04
Low Temperature Brittleness, °C	ASTM D 746	1/product	-77	-77	-77	-77
Dimensional Stability, % (each direction)	ASTM D 1204	1/product	±1.0	±1.0	±1.0	±1.0
Water Absorption, %	ASTM D 570	1/product	0.1	0.1	0.1	0.1
Water Vapor Transmission, (g/m ² /day)	ASTM E 96	1/product	<0.01	<0.01	<0.01	<0.01
TYPICAL ROLL DIMENSIONS						
Roll Width, ft			8	8	8	8
Roll Length, ft			246	213	196	196
Roll Area, ft ²			1,968	1,704	1,568	1,568

NOTES:

- ⁽¹⁾ Note: Concrete must have compressive strength of at least 5,000 lb/in².
- ⁽²⁾ Note: Dispersion only applies to near spherical agglomerates. 9 of 10 views shall be Category 1 or 2. No more than 1 view from category 3.
- * Modified.

Solmax is not a design professional and has not performed any design services to determine if Solmax's goods comply with any project plans or specifications, or with the application or use of Solmax's goods to any particular system, project, purpose, installation or specification. REV 01OCT2015

Low VOC, Waterborne Waterproof Coating

APPLICATIONS

Eco-friendly waterborne waterproof coating for most concrete structures. Safer alternative to coal-tar epoxy coatings.

COLORS

CS-1200 is available in Red, Gray, and Black. Custom colors are available upon request.

PERFORMANCE PROPERTIES

- Fast-drying, concrete waterproofing coating.
- High solids, tack-free surface in minutes.
- Freeze-thaw stable.
- Mildew resistant, bacterial stable.
- Polymer film protects against water intrusion.
- Indoor/outdoor application.
- Brush, roller, or spray applied.
- Flexible film with excellent impact resistance.
- Flexible film at low temperatures.
- Custom colors available upon request.

PHYSICAL PROPERTIES

Dry Time:	20-25 minutes
VOC content:	21 g/L
Viscosity:	15,000-21,000 CPS. (Brookfield Helipath)
% Solids	71.0-73.0
Coverage:	100-150 square feet per gallon
Thickness:	8-12 mils dry film thickness
Shelf Life:	One year min. Unopened can
Polymer:	Acrylic
Clean-up:	Warm soapy water while wet
ASTM G14 Impact Test:	Pass at 40°F



DO NOT SUBJECT CONBLOCK CS-1200 TO FREEZING TEMPERATURES BEFORE USE.

DIRECTIONS FOR USE

Surface Preparation: The concrete must be clean and free from dust, dirt, grease, laitance, and debris before application of CS-1200. Inspect surface for soundness. Repair or remove any surface irregularities and loose concrete, using an approved crack filling method on static hairline cracks. When the surface is clean, sound and dry, proceed with coating application.

Note: When using CS-1200 for the first time it is advisable to coat a small test patch on a representative section of concrete and verify adhesion before proceeding to large scale coating projects.

Mixing: Stir thoroughly prior to use. **DO NOT THIN OR DILUTE CS-1200.**

Priming: For applications with continuous water immersion ConSeal recommends using a surface primer. ConSeal CS-80 and ConSeal CS-85 are specifically designed for ConSeal's elastomeric sealants.

Application: Apply CS-1200 to concrete structures between 40°-120° F. Do not apply CS-1200 to frozen concrete. Apply CS-1200 using a roller, brush or spray gun. If applying with airless spray gun, a spray tip of 0.015"-0.021" is recommended. In order to avoid "cracking" do not allow product to pool and do not apply the coats too thick during application. When applying multiple coats of CS-1200, apply at right angles to maximize film integrity. When spraying, hold spray gun 12"-24" away from the surface; spray an even, light coat over the entire surface. When the surface becomes dry to the touch, subsequent coats may be applied.

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 **users' 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.

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VERSION: 6-JAN-2023

01-333900-01 Sanitary Utility Sewerage Structures Concrete Sealant

CONCRETE SEALANTS, INC.
ISO 9001:2015 REGISTERED





CONSEAL™
CONCRETE SEALANTS INC.

Don't Just Seal It. ConSeal It!

ConSeal™ CS-85

WATERBORNE CONCRETE PRIMER
FOR ELASTOMERIC SEALANTS



Certified to
NSF/ANSI/CAN 61



Waterborne Concrete Surface Preparation Coating for Bonding Elastomeric Sealants

APPLICATIONS

For use on concrete surfaces for elastomeric sealants immersed in water or subgrade applications.

PERFORMANCE PROPERTIES

Dry Time @ 77° F (25° C) F: 10 minutes

Dry Time @ 40° F (4° C): 60 minutes

Coverage per Gallon: 250-300 square feet

Min. Storage Temperature: 40° F (4° C)

Min. Application Temperature: 40° F (4° C)

PHYSICAL PROPERTIES AND CHEMICAL COMPOSITION

Color: Green

Solvent: Water

Flash Point: > 200° F

Dried Surface: Green, non-tacky

Shelf Life: 12 months after manufacture date

DIRECTIONS FOR USE

Surface Preparation: The concrete must be clean and free from dust, dirt, grease and debris before application of CS-85. Inspect surface for soundness. Repair or remove any surface irregularities and loose concrete, using an approved crack filling method on static hairline cracks. When the surface is clean, sound and dry, proceed with sealant application.

Application: Apply an even coating of the primer to the desired concrete surface and allow it to dry. A second coat may be needed if there are any surface voids noticed or the concrete surface appears to have any sections that are uncoated. Once the surface is dry, apply the elastomeric sealant to the primed surface and allow the sealant to completely cure before putting into service. Replace the lid on the primer immediately after use if the container is not empty.

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 **users' 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.

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VERSION: 7-APR-2022

01-333900-01 Sanitary Utility Sewerage Structures Concrete Sealant
CONCRETE SEALANTS, INC.
ISO 9001:2015 REGISTERED





Kor-N-Seal® I

106/406 Series Pipe-to-Manhole Connector



Most widely used flexible connector in sanitary sewer applications throughout the world

Easy-to-Install

Meets the specifications of ASTM C923

PATENT

Patented Waveband technology creates a more effective seal by concentrating the compressive force of the expansion band. The rubber is "captured" between the band and the concrete.



ORDERING INFORMATION

Kor-N-Seal I: 106/406 Series Pipe-to-Manhole Connector.

The 106 Series connector is 8 inches long, the 406 Series connector is 6 inches long. The number following the hyphen in our model numbers is the required hole size.

RECOMMENDED TORQUE VALUES

Connectors with 8" hole size and smaller: Steel Wedge - 1/2" Socket Wrench - 8 ft. lbs.

Connectors with 10-20" hole sizes:

Ex Series - 1/2" Socket Wrench - 12 - 20 ft. lbs.

Steel Wedge - 1/2" Socket Wrench - 12 ft. lbs.

Preset torque limiters are available. Contact Customer Service at 1-800-626-2180 for more information.

FOR LARGER PIPE SIZES REFER TO KOR-N-SEAL II SERIES CONNECTORS

206 Series - For pipe sizes 15" - 51" in diameter. Larger sizes available- contact Customer Service.

306 Series - To fit larger pipe into smaller diameter manholes.

506 Series - Designed specifically for stormwater applications

USING CORRUGATED PIPE

Adapters are required when using Corrugated Pipe.

Refer to the Corrugated Pipe Adapter Data Sheet for

WEDGE STYLE CONNECTORS EX SERIES PLASTIC OR STAINLESS STEEL

Installation requires a 1/2" socket
wrench & preset torque limiter.



PIPE O.D. RANGE	MODEL NUMBER	NOMINAL HOLE SIZE
1.50-4.80	S106-7MWS	7"
3.50-4.50	S106-7WS	7"
4.20-6.40	S106-8SRWS	8"
1.50-4.80	S106-8MWP-EX	8"
5.10-5.90	S106-8WS	8"
*6.00-6.75	S406-10AW	10"
*7.50-8.20	S406-10W	10"
*6.00-6.75	S406-10.5AW	10 ^{1/2} "
*7.50-8.70	S406-10.5W	10 ^{1/2} "
*6.00-7.00	S406-11BW	11"
*7.50-9.00	S406-11AW	11"
*3.50-6.90	S106-12M	12"
*6.00-7.00	S406-12CW	12"
*6.25-7.50	S406-12BW	12"
*7.50-9.00	S406-12AW	12"
*9.00-10.20	S406-12W	12"
*5.75-7.00	S106-12BW	12"
*7.00-8.50	S106-12AW	12"
*8.25-9.75	S106-12W	12"
*9.50-11.25	S106-14AW	14"
*9.50-11.25	S106-16BW	16"
*11.25-13.00	S106-16AW	16"
*13.00-14.20	S106-16W	16"
*14.00-15.50	S106-20BW	20"
*15.50-17.00	S106-20AW	20"
*17.00-18.15	S106-20W	20"

Refer to Recommended Installation Instructions.

*These sizes available in Plastic "EX" Wedge or Steel Wedge.

Covered under U.S. Patent No. 5,738,359



WWW.TRELLEBORG.COM/PIPE-SEALS

ConSeal™ CS-102

Butyl Rubber Sealant



Butyl Rubber Sealant for All Precast Concrete Structures - Meets ASTM C-990

Applications

For concrete joints in: Manholes, Concrete Pipe, Vaults, Box Culverts, Septic Tanks, and Vertical Panel Structures. **Not intended for use in expansion joints or joints that move.**

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.
- Greater cohesive and adhesive strengths.
- Sealed joints will not shrink, harden or oxidize upon aging.
- Controlled flow resistance for application ease.
- 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 all of the requirements of Federal Specification SS-S-210 (210-A), AASHTO M-198B, and ASTM C-990-91.

Physical Properties

Description	Spec	Required	CS-102
Color			Black
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 (25°C), 150 gm, 5 sec.	ASTM D217	50-100 mm	55-60 mm
Penetration, cone 32°F (0°C), 150 gm, 5 sec.	ASTM D217	40 mm min.	40-65 mm
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

Don't Just Seal It, ConSeal It!

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ConSeal™ CS-102

Butyl Rubber Sealant



Butyl Rubber Sealant for All Precast Concrete Structures - Meets ASTM C-990



Chemical Composition

Description

	Spec	Required	CS-102
Hydrocarbon plastic content % by weight	ASTM D297	50% min.	51%
Inert mineral filler % by weight	AASHTO T111	30% min.	35%
Volatile Mater % by weight	ASTM D6	2% max.	1.2%
Non-extractable, carbon-based material			12.8%
Recycled Content, % by weight			
Post Consumer:			8.41%
Post Industrial:			10.85%

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.

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 manufactures 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 **users' 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.

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ConSeal™ CS-212

Polyolefin Backed Exterior Joint Wrap



Membrane Waterproofing and Exterior Joint Wrap for Precast Concrete Joints

Applications

For joints in: Box Culverts, Underground Concrete Vaults, Segmented Bridge Structures, Wastewater Structures and Arched Bridge Structures, Manholes. **Not intended for use in expansion joints or joints that move.**

Sealing Properties

- Excellent resistance to puncture, tear and abrasions.
- Aggressively bonds to concrete and metal structures.
- Provides a permanent flexible water and soil barrier.
- Will not shrink, harden or oxide upon aging.
- Available in numerous standard sizes.
 - Standard thicknesses: 0.065" and 0.100"
 - Standard widths: 4", 6", 8", 12", 24", 36" and 48"
- Custom widths and lengths available upon request.
- 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.

Specifications

ConSeal CS-212 meets ASTM E-1745, C-877, C-990 Specifications, and AASHTO M198 Type B.

Technical Data

ASTM E-1745: Standard specification for plastic water vapor retarders used in contact with soil or granular fill under concrete slabs.

Class C. Specification	Test Method	E-1745 Requirement	CS-212
Water Vapor Permeance	ASTM F-1249	0.30 perms, max.	0.045 perms, max.
Tensile Strength	ASTM E-154	13.6 lbs./ inch, min.	21.0 lbs./ inch, min.
Puncture Resistance	ASTM D-1709	475 grams, min.	864 grams, min.

ASTM C-877: Standard specification for external sealing bands for non-circular concrete sewer, storm drain and culvert pipe.

Type III, Specification	E-1745 Requirement	CS-212
Backing Bond Element	4 Mil, min. thickness	4 Mil
Butyl Rubber Adhesive	0.03 inch, min. thickness	0.065, min.

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ConSeal™ CS-212

Polyolefin Backed Exterior Joint Wrap



Membrane Waterproofing and Exterior Joint Wrap for Precast Concrete Joints

Technical Data Continued

ASTM C-990: Standard specification for joints for concrete pipe, manholes and precast box sections using preformed flexible joint sealants.

Section 6, Specification	Test Method	C-990 Requirements	CS-212
Hydrocarbon blend content % by weight	ASTM D-4	50-70%	52, min.
Inert mineral filler % by weight	ASTM C-990	30% min.	45, min.
Volatile Matter % by weight	ASTM C-990	2.0 max.	1.20
Specific Gravity	ASTM C-990	1.15-1.50	1.20-1.25
Ductility, 7°F	ASTM D-113	5.0, min.	12, min.
Penetration, cone 77°F, 150 gm. 5 sec.	ASTM D-217	50-120 mm	70-80 mm
Softening point, °F	ASTM D-36	320°F, min.	335°F, min.

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 manufactures 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 **users' 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.

Don't Just Seal It, ConSeal It!

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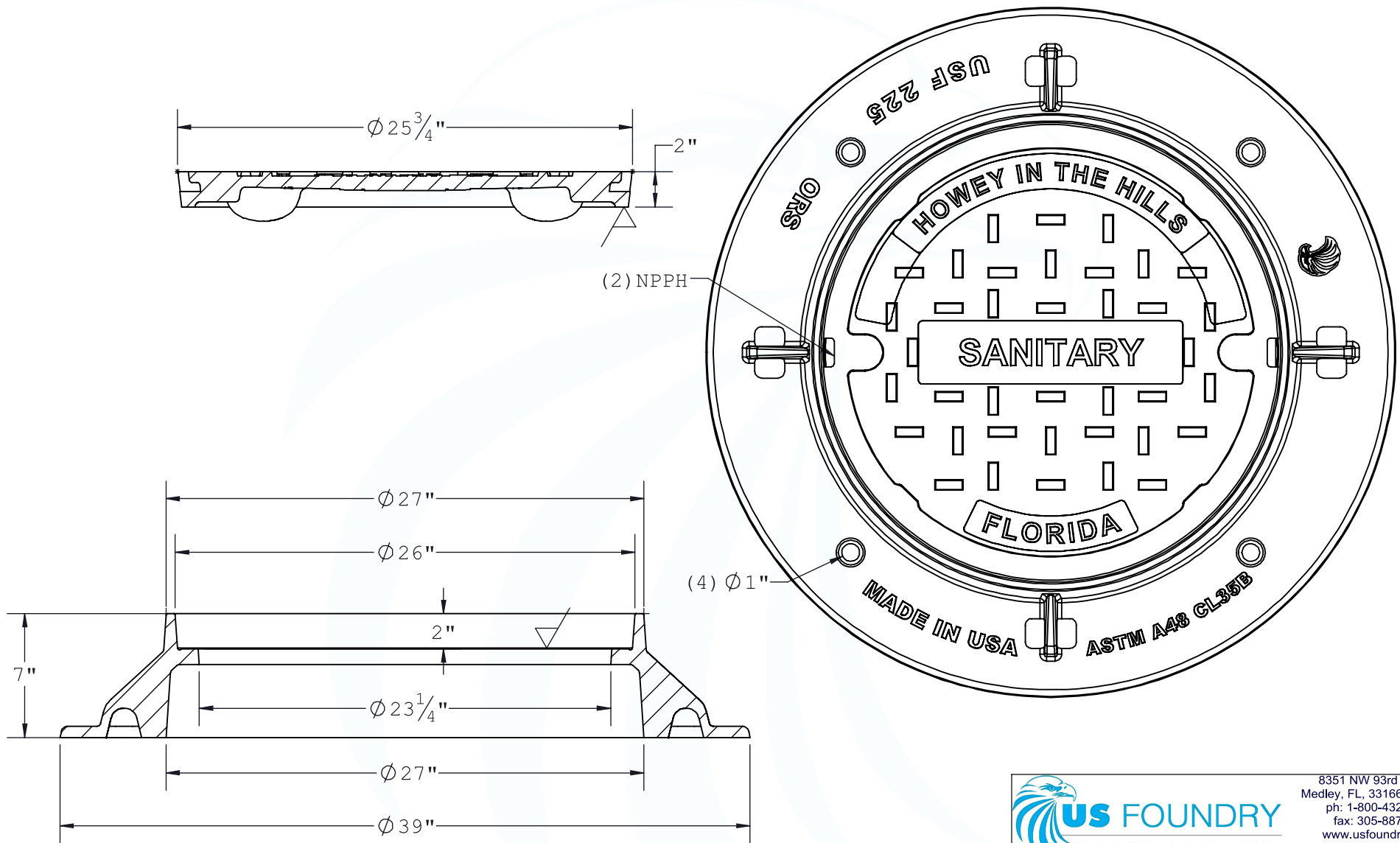
Concrete Sealants, Inc. 9325 State Route 201 ■ Tipp City, OH 45371 ■ Toll Free 800.332.7325

P. 937.845.8776 F. 937.845.3587 ■ www.conseal.com

01-333900-01 Sanitary Utility Sewerage Structures Concrete.pdf

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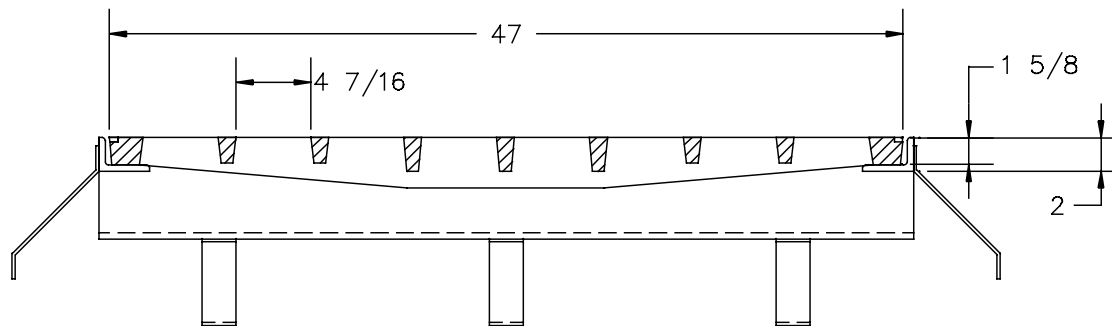
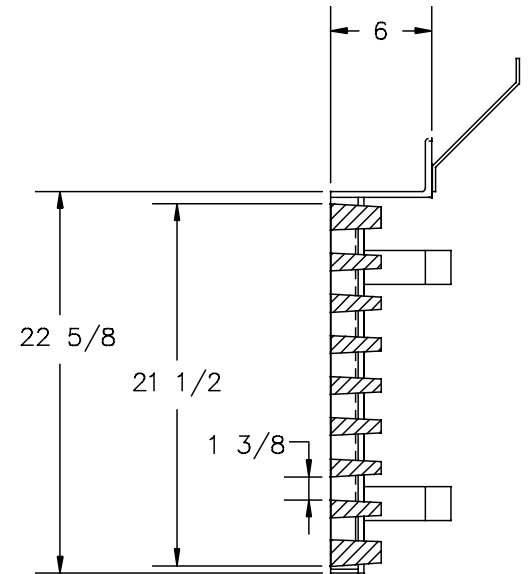
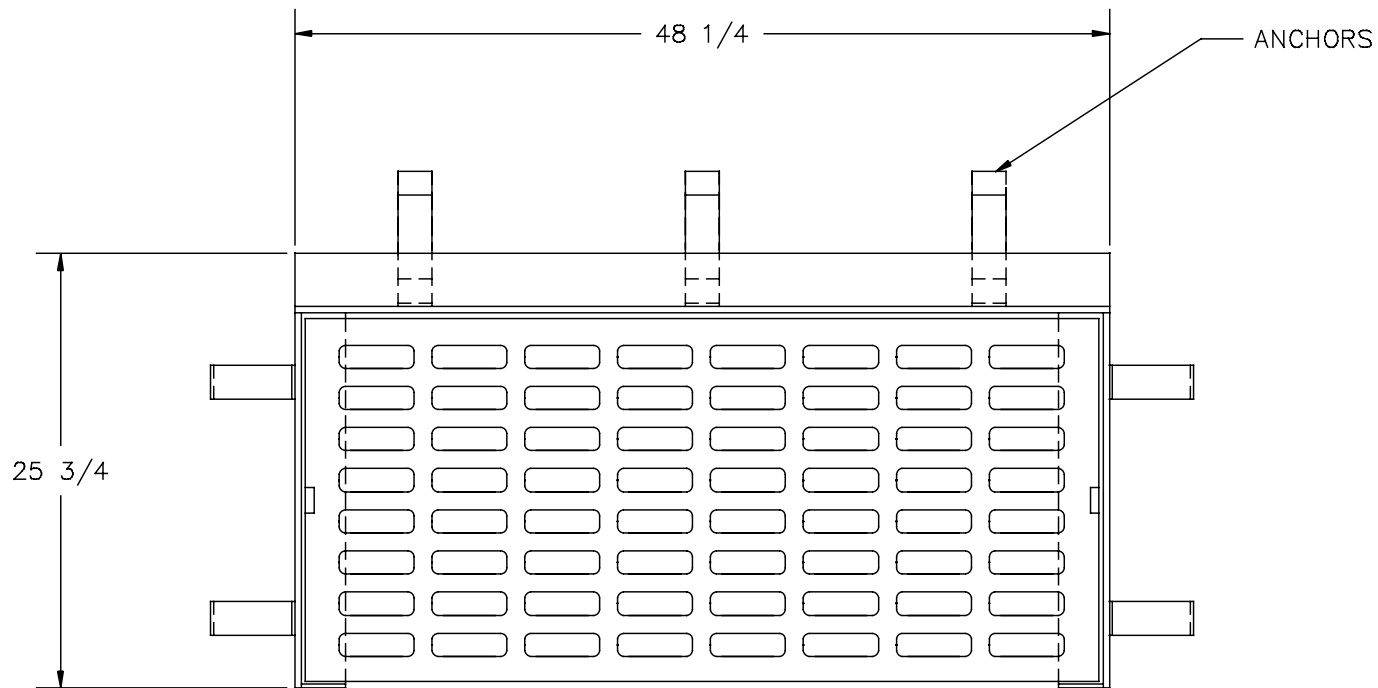




USF 225 Ring & AS-1 Cover
2npph

ITEM	BAAN #	MATERIAL:
Ring	8021590	Gray Cast Iron
Cover		ASTM-A48 Class 35B
Assembly		LOAD CLASSIFICATION:
REV 0		M306

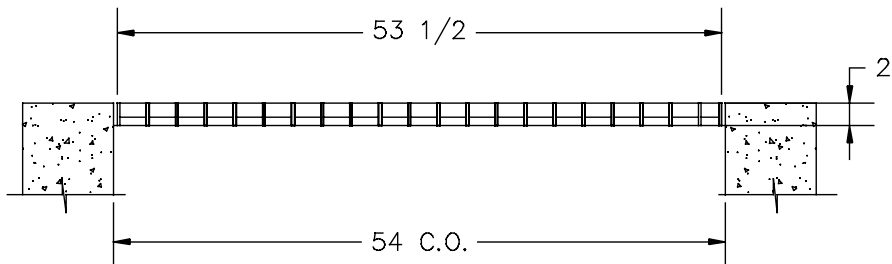
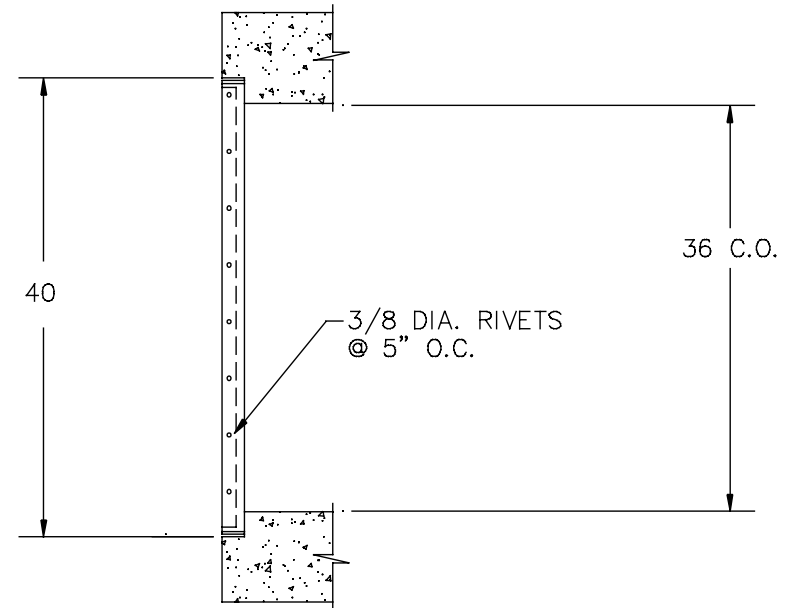
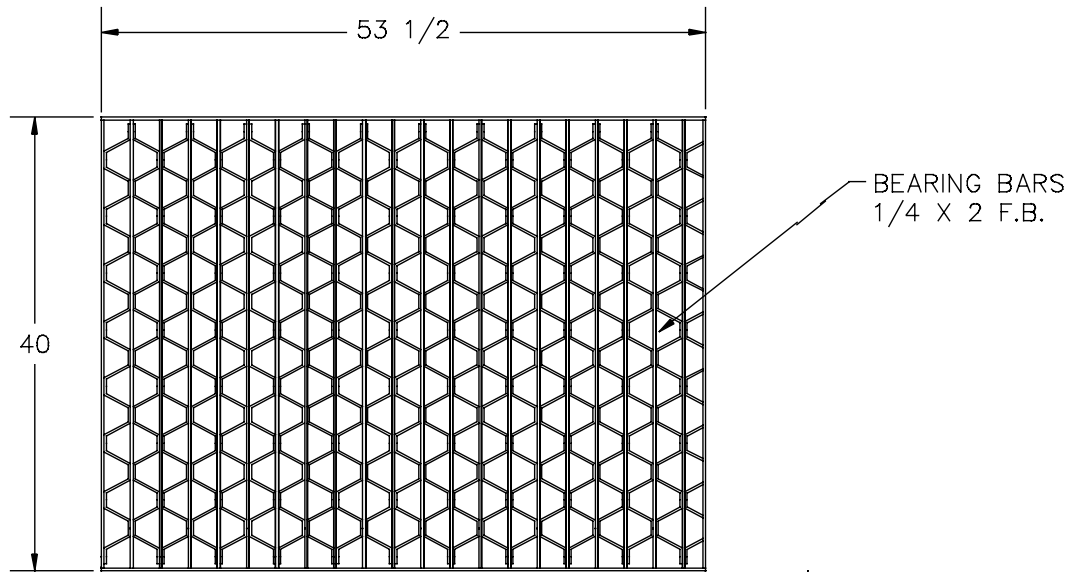
01-333900-01 Sanitary Sewer Structures Concrete.pdf



NOTES:

- 1- FRAME MATERIAL: STEEL, PAINTED TO F.D.O.T. SPECIFICATIONS.
- 2- GRATE MATERIAL: ASTM-A48 CLASS 35B GRAY IRON.
- 3- FRAME WT: 75 LBS. APP.
- 4- GRATE WT: 315 LBS. APP.

U.S. FOUNDRY & MFG. CORP. MIAMI, FLORIDA	
USF 5160 FRAME & 6310 GRATE	
DWN. BY:	DATE: 10/19/90
CHK. BY:	DWG. NO: A2409



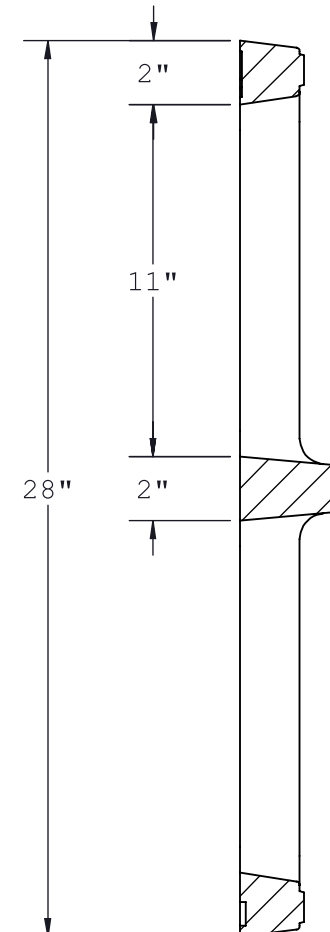
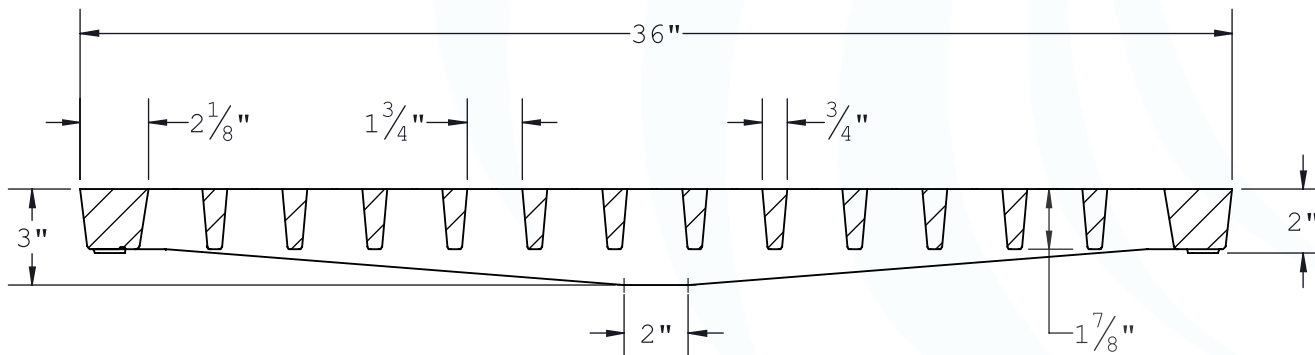
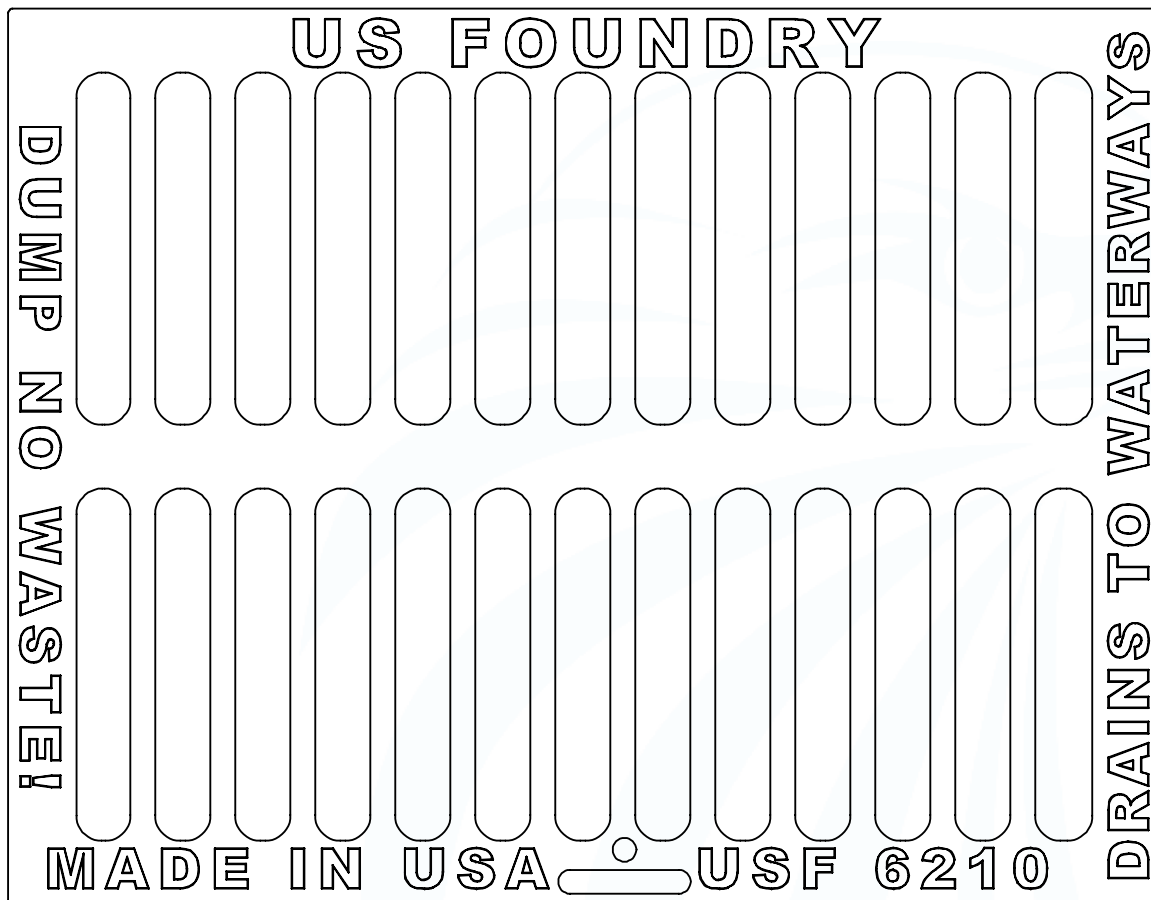
NOTES:

- 1- MATERIAL: STEEL, PAINTED TO F.D.O.T. SPECIFICATIONS.
- ~~2- GALVANIZED UPON REQUEST.~~
- 3- WEIGHT: 215 LBS. APP.
- 4- LOADING: NON-TRAFFIC.
- 5- F.D.O.T. INDEX 232 TYPE 'E' DITCH BOTTOM INLET.

U.S. FOUNDRY & MFG. CORP.
MEDLEY, FLORIDA

USF 6608 STEEL GRATE

DWN. BY: D.B.	SCALE: 1"=12"	QUOTE#	DATE: 5/27/97
CHK. BY:	DWG. NO: 11103	SHEET	REV:



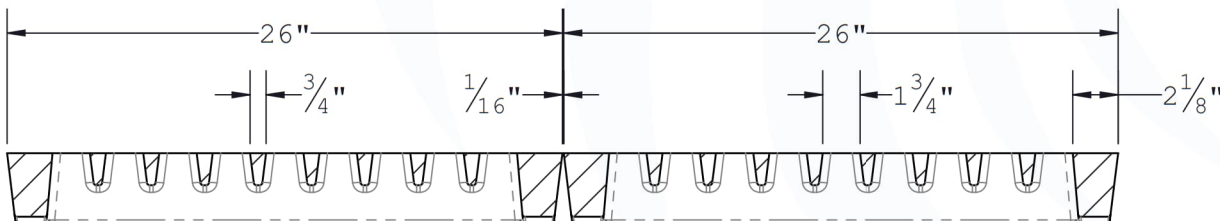
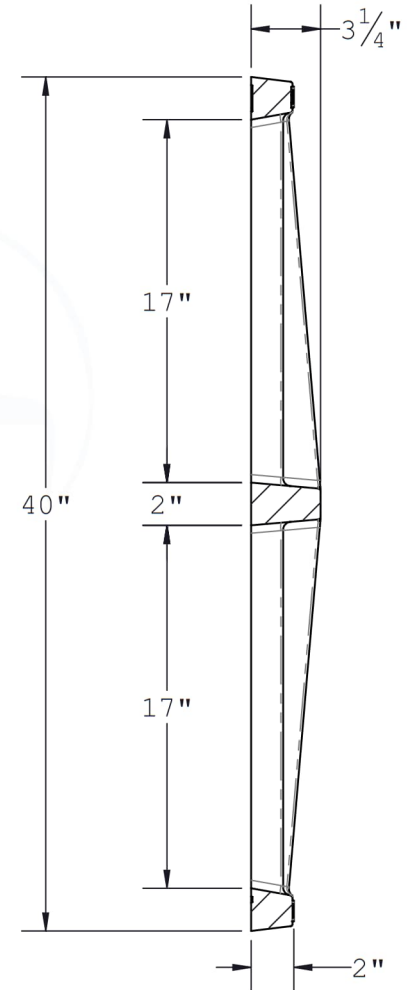
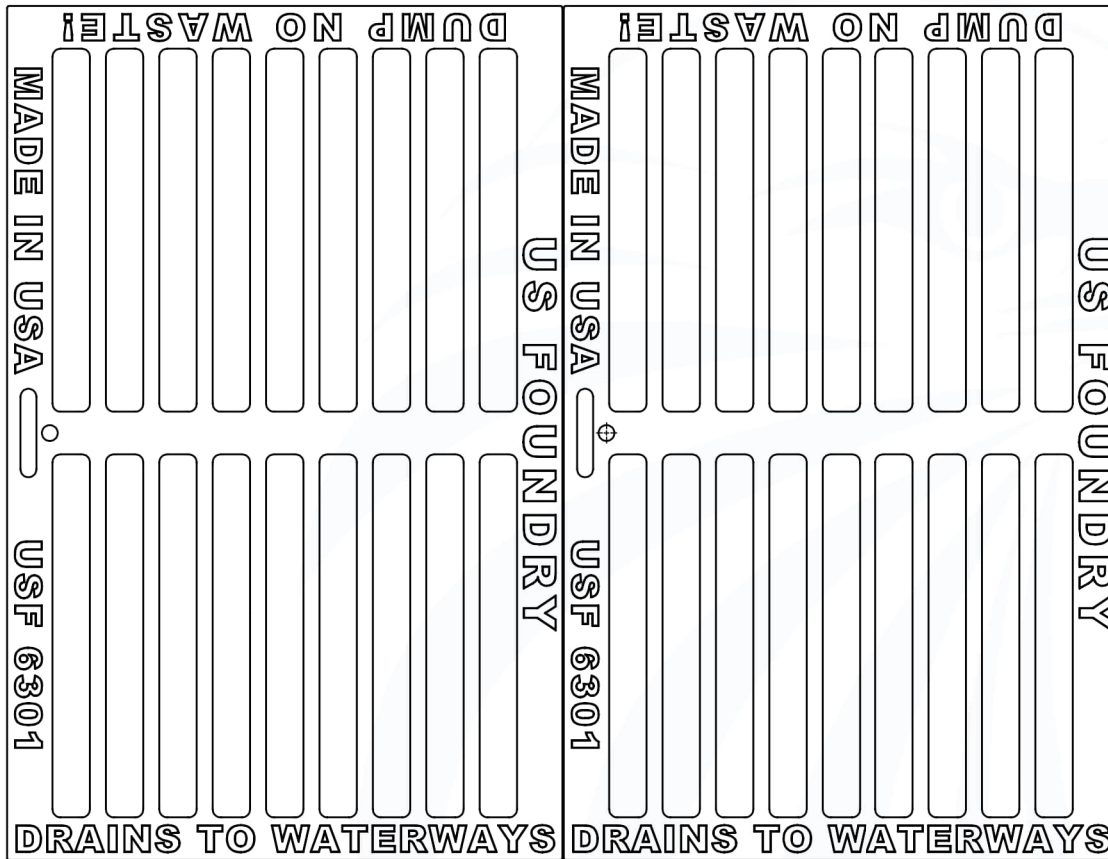
FDOT Design Standard, Index 425-052, Rev 11/01/17, Ditch Bottom Inlet Type C
Cast Iron Grate Not permitted on Inlet Type D
Non Traffic (2 Sided Bearing)

01-333900-01 Sanitary Utility Sewerage Structures Concrete pdf

For a complete product offering please visit us at www.usfoundry.com

 US FOUNDRY AN EAGLE MANUFACTURING COMPANY© 2019 All Rights Reserved		8351 NW 93rd Street Medley, FL, 33166-2025 ph: 1-800-432-9709 fax: 305-887-9429 www.usfoundry.com	
USF 6210 Grate			
ITEM	BAAN #	MATERIAL:	
Grate	8070112	Gray Cast Iron ASTM-A48 Class 35B	
		LOAD CLASSIFICATION:	
		Heavy Duty	
		FLOW AREA:	
		482.5	
Utility Sewerage Structures		Concrete pdf	
REV	REV DATE	REV BY	REV DATE
	4-14-15	OD	12-14-15
		13114982 of 51 ULS	

Customer Drawing



FDOT Design Standard, Index 425-052, Rev 11/01/17, Ditch Bottom Inlet Type E
 Cast Iron Grate Not permitted on Inlet Type D
 Non Traffic (2 Sided Bearing)

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For a complete product offering please visit us at www.usfoundry.com

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8351 NW 93rd Street Medley, FL, 33166-2025 ph: 1-800-432-9709 fax: 305-887-9429 www.usfoundry.com		
USF 6300 Grate [Two USF 6301 Grates]		
ITEM	BAAN #	MATERIAL:
Grate	8070266	Gray Cast Iron ASTM A48 Class 35B
		LOAD CLASSIFICATION:
		Heavy Duty
		FLOW AREA:
		1067 in ²
REV	REV DATE	REV BY
0		
DRAWN BY		QUOTE #
JWS		1067

Customer Drawing

MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:19 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

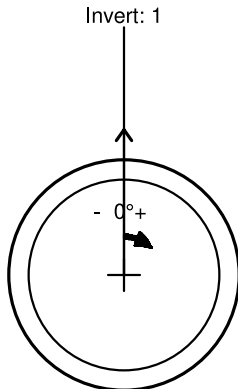
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 9"	628 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 72"	5203 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	146.74 SqFt) Paint,CS1200,Black [INT]	0 lb
	175.81 SqFt) Paint,CS1200,Black [EXT]	0 lb



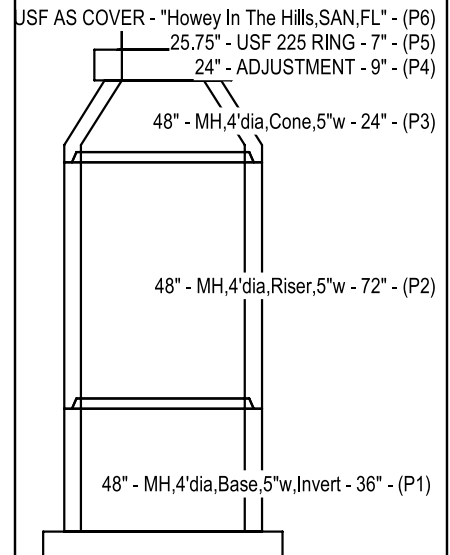
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	80.96'	✓						
Reducer								
Invert 1	68.95'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS1**
Spec: **FLORIDA**
Type: **SANITARY**
Size: **48"**

Rim: 80.96'
Invert: 68.95'
Floor (Top): 68.617'

Rim to Invert: 12.01'
Overall Height: 156"
Weight: 12838 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:20 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

INSIDE DROP

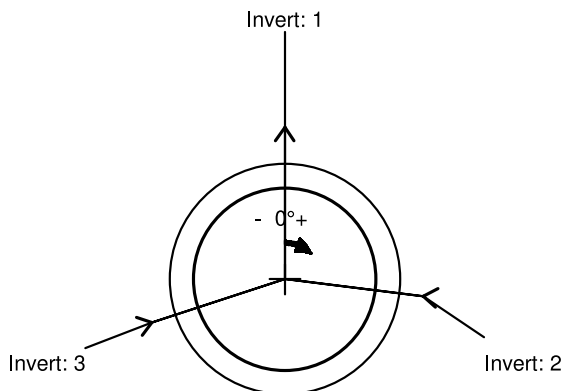
- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL" 190 lb
- 1) 25.75" - USF 225 RING - 7" 260 lb
- 1) 24" - ADJUSTMENT - 6" 419 lb
- 1) 60" - MH,5'dia,Cone,8"w - 36" 3927 lb
- 1) 60" - MH,5'dia,Riser,8"w - 72" 10681 lb
- 1) 60" - MH,5'dia,Riser,8"w - 72" 10681 lb
- 1) 60" - MH,5'dia,Base,8"w,Invert - 27" 8229 lb
- 3) 60" - JOINT SEALANT - 238"/JOINT 0 lb
- 3) HDPE Sleeve W/ S406-12AWP -180 lb
- 280.35 SqFt) Liner,Solmax,2mm [INT] 0 lb
- 349.82 SqFt) Paint,CS1200,Black [EXT] 0 lb

SOLMAX
LINER 2MM



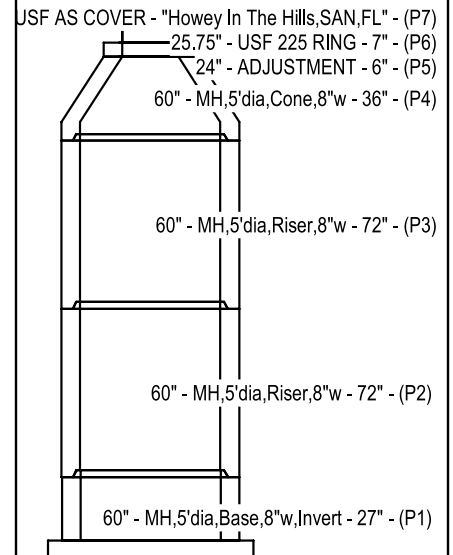
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	80.56'	✓						
Reducer								
Invert 1	62.52'	✓ 0°	8" PVC	0"	0"	2"	HDPE Sleeve W/ S406-12AWP	P1
Invert 2	68'	✓ 97°	8" PVC	64"	51"	41"	HDPE Sleeve W/ S406-12AWP	P2
Invert 3	63.1'	✓ 252°	8" PVC	-72"	-57"	9"	HDPE Sleeve W/ S406-12AWP	P1
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS2**
 Spec: FLORIDA
 Type: SANITARY
 Size: 60"

Rim: 80.56'
 Invert: 62.52'
 Floor (Top): 62.187'

Rim to Invert: 18.04'
 Overall Height: 228"
 Weight: 34208 lb



MACK CONCRETE INDUSTRIES, INC.
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CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

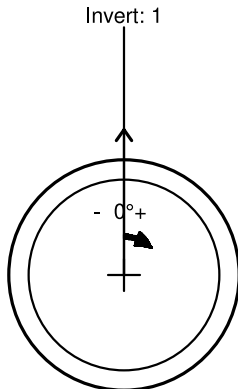
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 9"	628 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
2)	48" - MH,4'dia,Riser,5"w - 72"	10407 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 24"	4407 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	209.57 SqFt) Paint,CS1200,Black [INT]	0 lb
	251.73 SqFt) Paint,CS1200,Black [EXT]	0 lb



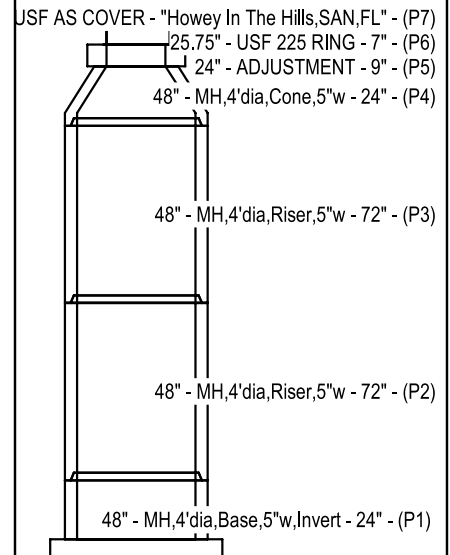
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	80.33'							
Reducer								
Invert 1	63.3'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS3**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 80.33'
Invert: 63.3'
Floor (Top): 62.967'

Rim to Invert: 17.03'
Overall Height: 216"
Weight: 17175 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:21 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

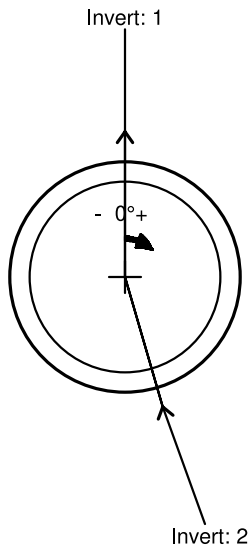
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 9"	628 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Riser,5"w - 72"	5203 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S406-12AWP	-118 lb
197.	SqFt) Paint,CS1200,Black [INT]	0 lb
236.54	SqFt) Paint,CS1200,Black [EXT]	0 lb



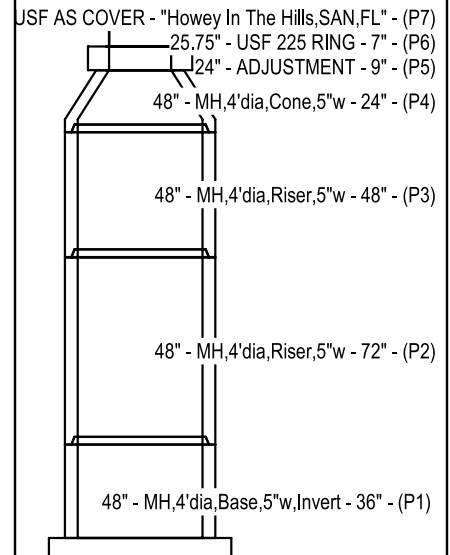
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	77.2'							
Reducer								
Invert 1	61.17'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	61.27'	164°	8" PVC	83"	69"	3"	S406-12AWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS4**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 77.2'
 Invert: 61.17'
 Floor (Top): 60.837'

Rim to Invert: 16.03'
 Overall Height: 204"
 Weight: 16248 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:22 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

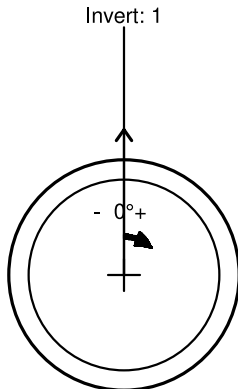
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 6"	419 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	121.61 SqFt) Paint,CS1200,Black [INT]	0 lb
	145.44 SqFt) Paint,CS1200,Black [EXT]	0 lb



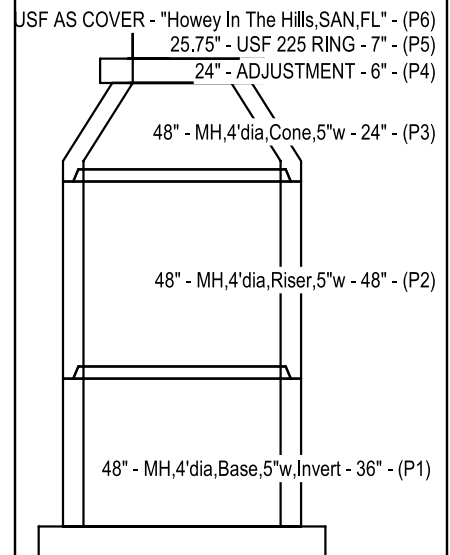
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	73.46'							
Reducer								
Invert 1	63.7'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS5**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 73.46'
 Invert: 63.7'
 Floor (Top): 63.367'

Rim to Invert: 9.76'
 Overall Height: 129"
 Weight: 10895 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:23 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

INSIDE DROP

- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"
- 1) 25.75" - USF 225 RING - 7"
- 1) 24" - ADJUSTMENT - 9"
- 1) 60" - MH,5'dia,Cone,8"w - 36"
- 1) 60" - MH,5'dia,Riser,8"w - 96"
- 1) 60" - MH,5'dia,Base,8"w,Invert - 36"
- 2) 60" - JOINT SEALANT - 238"/JOINT
- 4) HDPE Sleeve W/ S406-12AWP
- 229.3 SqFt) Liner,Solmax,2mm [INT]
- 285.15 SqFt) Paint,CS1200,Black [EXT]

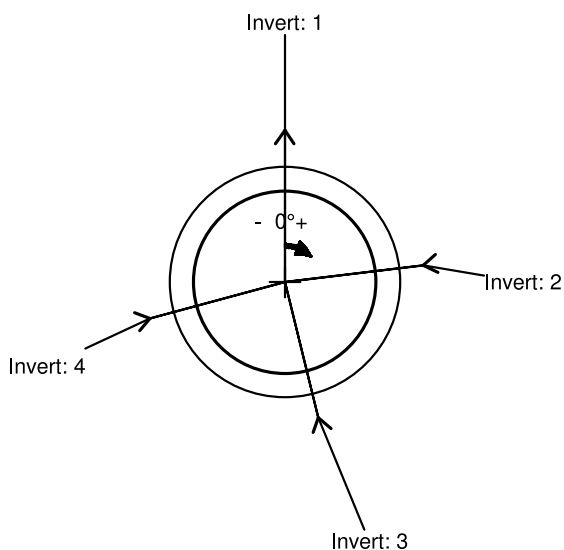
190 lb
 260 lb
 628 lb
 3927 lb
 14242 lb
 9564 lb
 0 lb
 -240 lb
 0 lb
 0 lb

SOLMAX
LINER 2MM



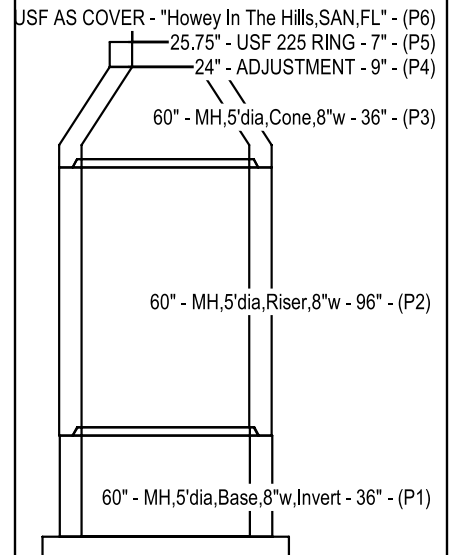
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	73.67'	✓						
Reducer								
Invert 1	58.59'	✓ 0°	8" PVC	0"	0"	2"	HDPE Sleeve W/ S406-12AWP	P1
Invert 2	63'	✓ 83°	8" PVC	55"	43"	19"	HDPE Sleeve W/ S406-12AWP	P2
Invert 3	59.88'	✓ 166°	8" PVC	110"	87"	17"	HDPE Sleeve W/ S406-12AWP	P1
Invert 4	59.8'	✓ 255°	8" PVC	-70"	-55"	17"	HDPE Sleeve W/ S406-12AWP	P1
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
 - 2) Grade 60 Rebar
 - 3) Type I/II Cement
 - 4) 4000 P.S.I. @ 28 Days
 - 5) Conforms To F.D.O.T.
 - 6) Manufactured Per A.S.T.M.
- C-478 Latest Revision**



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS6**
 Spec: FLORIDA
 Type: SANITARY
 Size: 60"

Rim: 73.67'
 Invert: 58.59'
 Floor (Top): 58.257'

Rim to Invert: 15.08'
 Overall Height: 192"
 Weight: 28572 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:24 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

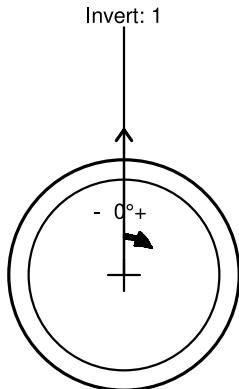
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 4"	279 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
2)	48" - MH,4'dia,Riser,5"w - 48"	6938 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	167.79 SqFt) Paint,CS1200,Black [INT]	0 lb
	200.96 SqFt) Paint,CS1200,Black [EXT]	0 lb



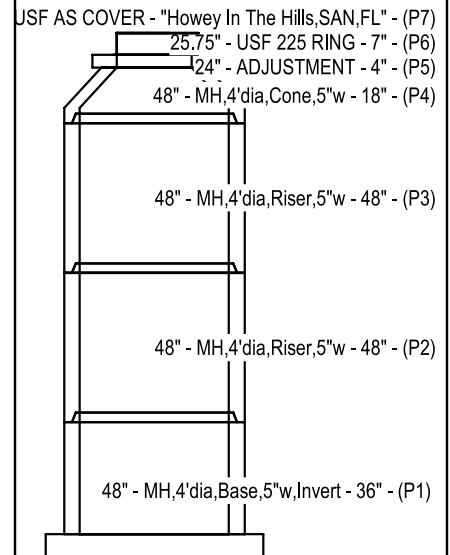
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	73.18'	✓						
Reducer								
Invert 1	60.02'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS7**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 73.18'
 Invert: 60.02'
 Floor (Top): 59.687'

Rim to Invert: 13.16'
 Overall Height: 169"
 Weight: 13888 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:25 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

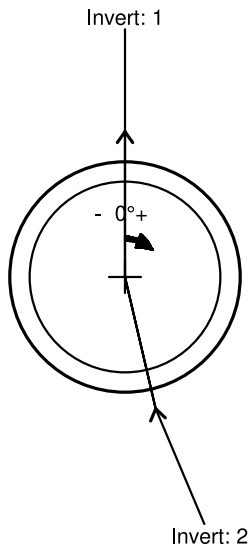
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 9"	628 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
2)	48" - MH,4'dia,Riser,5"w - 48"	6938 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 24"	4407 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S406-12AWP	-118 lb
	155.22 SqFt) Paint,CS1200,Black [INT]	0 lb
	185.77 SqFt) Paint,CS1200,Black [EXT]	0 lb



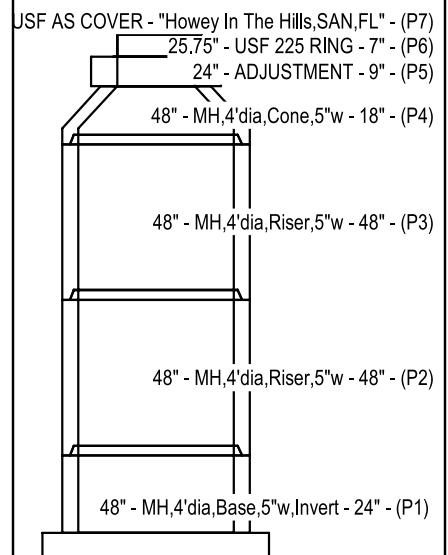
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	70.06'							
Reducer								
Invert 1	57.49'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	57.59'	167°	8" PVC	85"	70"	3"	S406-12AWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS8**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 70.06'
 Invert: 57.49'
 Floor (Top): 57.157'

Rim to Invert: 12.57'
 Overall Height: 162"
 Weight: 13311 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:26 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

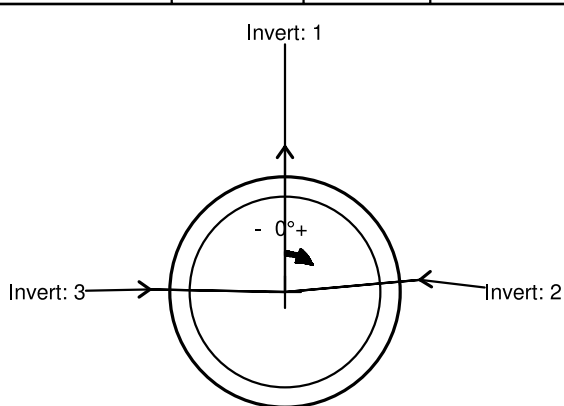
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 8"	559 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Riser,5"w - 72"	5203 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S106-16BWP	-276 lb
1)	S406-12AWP	-59 lb
	192.92 SqFt) Paint,CS1200,Black [INT]	0 lb
	231.32 SqFt) Paint,CS1200,Black [EXT]	0 lb



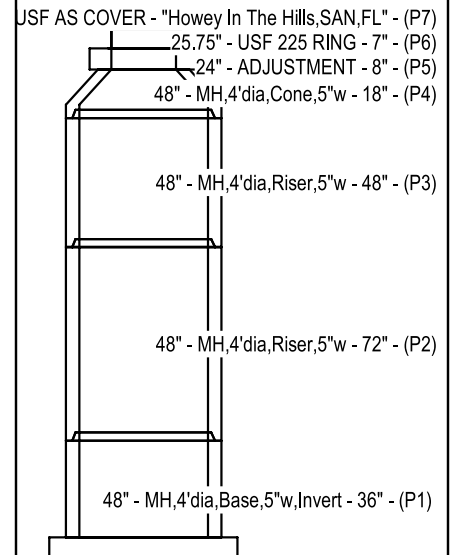
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	71.31'							
Reducer								
Invert 1	55.95'	0°	10" PVC	0"	0"	2"	S106-16BWP	P1
Invert 2	56.13'	85°	8" PVC	43"	36"	5"	S406-12AWP	P1
Invert 3	56.05'	271°	10" PVC	-45"	-37"	3"	S106-16BWP	P1
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS9**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 71.31'
 Invert: 55.95'
 Floor (Top): 55.533'

Rim to Invert: 15.36'
 Overall Height: 197"
 Weight: 15626 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 10:37:32 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=#6@12" OCEW (TOP & BOTTOM)
 SOG JOINT HEIGHT = 5.25"

INVERT 1 & 2: FORCE MAINS
 INVERT 3: VALVE BOX DRAIN
 INVERT 4: BYPASS PUMP
 INVERT 5: ELECTRICAL CONDUIT
 INVERT 6: INCOMING PIPE

PLEASE VERIFY ALL PIPE SIZES, INVERTS, &
 DIRECTIONS
 PLEASE CONFIRM STRUCTURE DIAMETER
 PLEASE CONFIRM FLOOR ELEVATION

- 1) 24" - CUSTOMER HATCH - CAST-IN
 - 1) 72" - TS,88"dia,CAST-IN,LINED - 8"
 - 1) 72" - MH,6'dia,Riser,8"w,SOG,FT - 62"
 - 1) 72" - MH,6'dia,Riser,8"w,SOG - 96"
 - 1) 72" - MH,6'dia,Riser,8"w,SOG - 96"
 - 1) 72" - MH,6'dia,Base,8"w,SOG,124x12"BS - 22
 - 3) 72" - Joint Sealant + 6" Conwrap - 276"/JOINT
 - 2) HDPE Sleeve W/ PSX DD 8QRS
 - 2) CAST-IN w/ COUPLER
 - 1) HDPE Sleeve W/ S406-12CWP
 - 1) HDPE Sleeve W/ S106-16BWP
- 494.28 SqFt) Liner,Solmax,2mm [INT]
 619.94 SqFt) Paint,CS1200,Black [EXT]

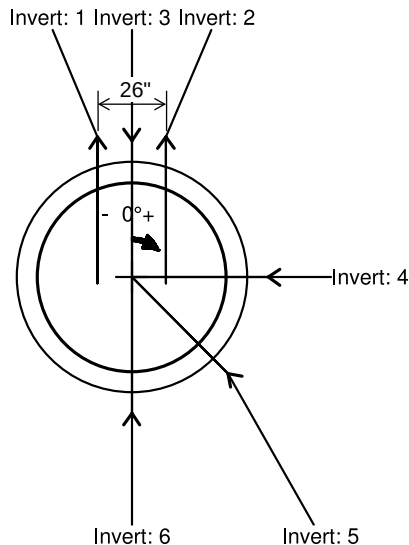
SOLMAX
LINER 2MM



NEED CS-85 (PRIMER 1 COATS)

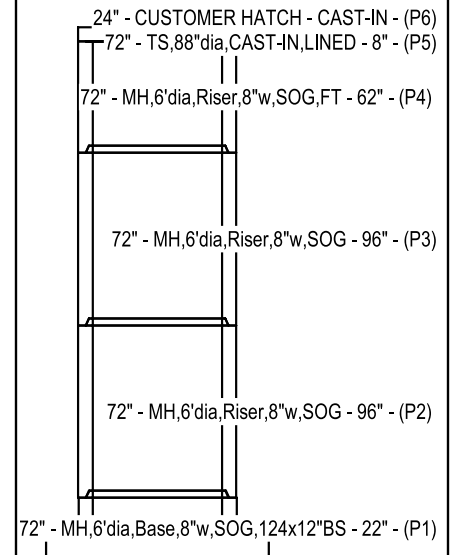
0 lb
 3910 lb
 10821 lb
 16755 lb
 16755 lb
 16419 lb
 0 lb
 -120 lb
 -12 lb
 -60 lb
 -60 lb
 0 lb
 0 lb

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	73.28'							
Reducer								
Invert 1	70.44'	0°	4" D.I.P.	-13"	-13"	34"	HDPE Sleeve W/ PSX DD 8QRS	P4
Invert 2	70.44'	0°	4" D.I.P.	13"	13"	34"	HDPE Sleeve W/ PSX DD 8QRS	P4
Invert 3	68.98'	0°	2" PVC	0"	0"	18"	CAST-IN w/ COUPLER	P4
Invert 4	71.28'	90°	6" PVC	69"	57"	43"	HDPE Sleeve W/ S406-12CWP	P4
Invert 5	71.28'	135°	2" PVC SCH 80 (3)	104"	85"	46"	CAST-IN w/ COUPLER	P4
Invert 6	55.6'	180°	10" PVC	138"	113"	47"	HDPE Sleeve W/ S106-16BWP	P2
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS10-LS**
 Spec: FLORIDA
 Type: WETWELL
 Size: 72"

Rim: 73.28'
 Invert: 55.6'
 Floor (Top): 49.6'

Rim to Invert: 17.68'
 Overall Height: 296"
 Weight: 64408 lb



Structure Notes: BP MAT: 4X3 D6.9XD11.4 WWR
 WALLS: DBL CAGE 4X4 D5.7XD5.7 WWR, ADD
 #5@8"OC HORZ
 (2) #4 ABOVE HOLES (3" MIN SPACING;
 LENGTH=HS+12")
 (1) #4 EACH SIDE OF HOLES (LENGTH=HS+6")
 2" INNER/OUTER CAGE CLEARANCE
 MAX DEPTH 20'

PLEASE VERIFY FORCE MAIN SIZE
 PLEASE VERIFY INVERT 3 (BYPASS PUMP)
 PIPE SIZE, LOCATION, & INVERT

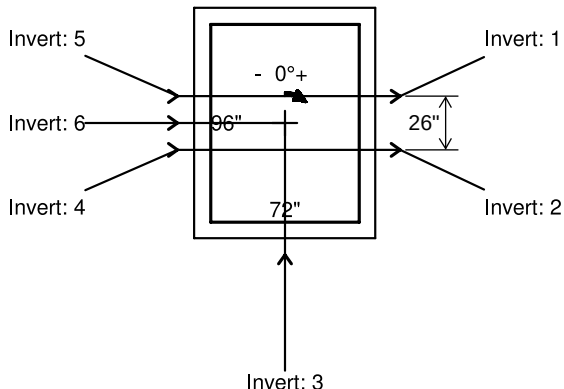
- 1) 24" - CUSTOMER HATCH - CAST-IN
- 1) 72" x 96" - TS,88x112",CAST-IN - 8"
- 1) 72" x 96" - 6x8',Base,8"w,FT - 40"
- 5) HOLE 12"
- 1) HOLE 7"
- 192.01 SqFt) Paint,CS1200,Black [INT]
- 225.33 SqFt) Paint,CS1200,Black [EXT]

0 lb
 6530 lb
 17925 lb
 -295 lb
 -46 lb
 0 lb
 0 lb



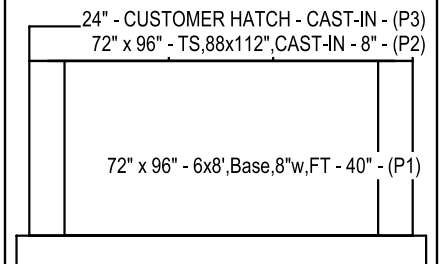
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	73.28'							
Reducer								
Invert 1	70.44'	90°	4" D.I.P.	43"	35"	10"	HOLE 12"	P1
Invert 2	70.44'	90°	4" D.I.P.	69"	61"	10"	HOLE 12"	P1
Invert 3	70.44'	180°	6" PVC	44"	36"	11"	HOLE 12"	P1
Invert 4	70.44'	270°	4" D.I.P.	43"	35"	10"	HOLE 12"	P1
Invert 5	70.44'	270°	4" D.I.P.	69"	61"	10"	HOLE 12"	P1
Invert 6	69.48'	270°	2" PVC	56"	48"	0"	HOLE 7"	P1
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
 - 2) Grade 60 Rebar
 - 3) Type I/II Cement
 - 4) 4000 P.S.I. @ 28 Days
 - 5) Conforms To F.D.O.T.
 - 6) Manufactured Per A.S.T.M.
- C-478 Latest Revision**



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS10-VB**
 Spec: FLORIDA
 Type: Valve Box
 Size: 72" x 96"

Rim: 73.28'
 Invert: 69.48'
 Floor (Top): 69.272'

Rim to Invert: 3.8'
 Overall Height: 56"
 Weight: 24114 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:27 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

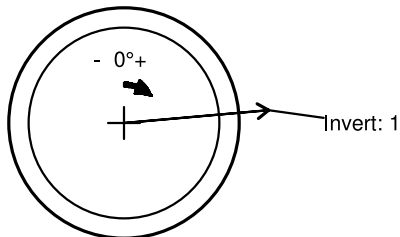
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 4"	279 lb
1)	48" - MH,4'dia,Cone,5"w - 36"	2013 lb
2)	48" - MH,4'dia,Riser,5"w - 48"	6938 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
180.6	SqFt) Paint,CS1200,Black [INT]	0 lb
217.33	SqFt) Paint,CS1200,Black [EXT]	0 lb



NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	71.32'	✓						
Reducer								
Invert 1	56.72'	✓ 85°	8" PVC	43"	36"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								

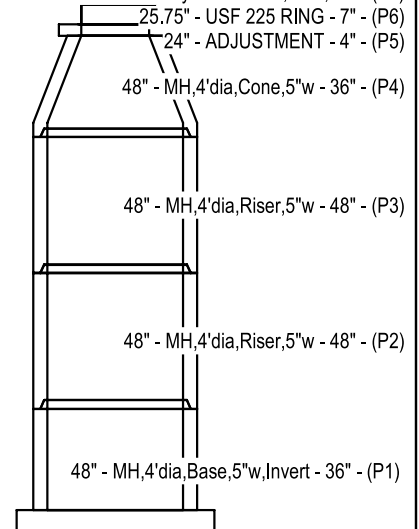


SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



USF AS COVER - "Howey In The Hills,SAN,FL" - (P7)



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS11**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 71.32'
Invert: 56.72'
Floor (Top): 56.387'

Rim to Invert: 14.6'
Overall Height: 187"
Weight: 14895 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:28 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

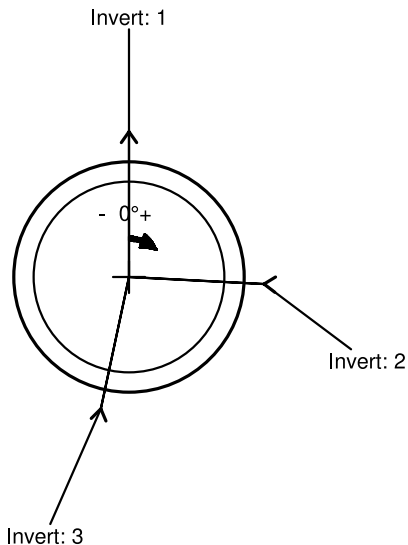
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 7"	489 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Riser,5"w - 72"	5203 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S106-16BWP	-276 lb
1)	S406-12AWP	-59 lb
	192.92 SqFt) Paint,CS1200,Black [INT]	0 lb
	231.32 SqFt) Paint,CS1200,Black [EXT]	0 lb



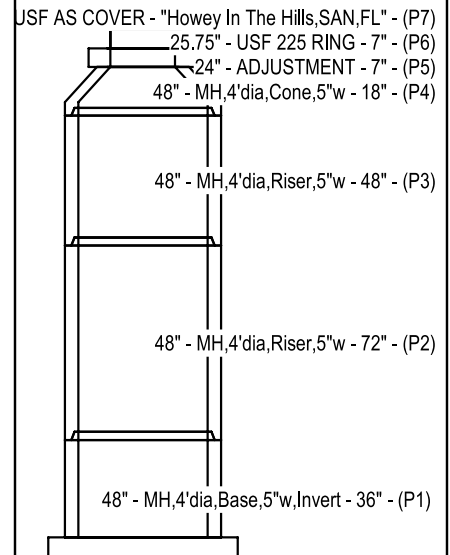
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	71.67'							
Reducer								
Invert 1	56.42'	0°	10" PVC	0"	0"	2"	S106-16BWP	P1
Invert 2	56.52'	93°	8" PVC	47"	39"	4"	S406-12AWP	P1
Invert 3	56.56'	192°	10" PVC	-85"	-70"	4"	S106-16BWP	P1
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS12**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 71.67'
 Invert: 56.42'
 Floor (Top): 56.003'

Rim to Invert: 15.25'
 Overall Height: 196"
 Weight: 15556 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:29 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

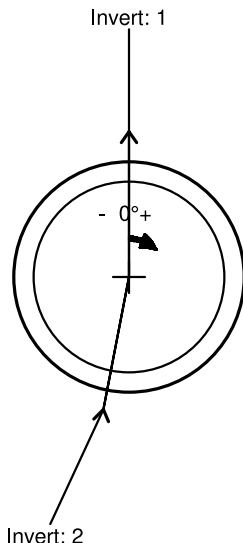
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 8"	559 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Riser,5"w - 72"	5203 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S106-16BWP	-276 lb
197.	SqFt) Paint,CS1200,Black [INT]	0 lb
236.54	SqFt) Paint,CS1200,Black [EXT]	0 lb



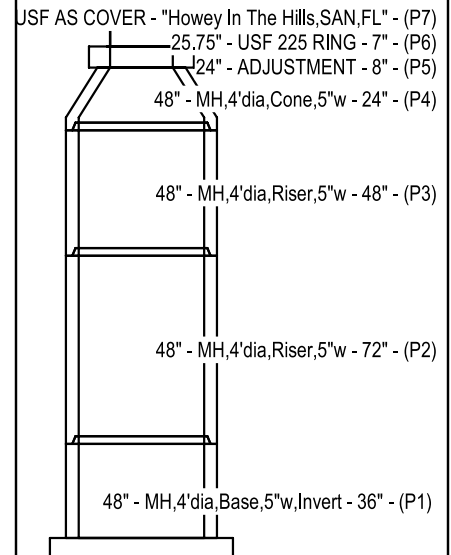
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	73.61							
Reducer								
Invert 1	57.7'	0°	10" PVC	0"	0"	2"	S106-16BWP	P1
Invert 2	57.8'	191°	10" PVC	-86"	-71"	3"	S106-16BWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS13**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 73.61'
 Invert: 57.7'
 Floor (Top): 57.283'

Rim to Invert: 15.91'
 Overall Height: 203"
 Weight: 16020 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:30 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

INSIDE DROP

- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"
- 1) 25.75" - USF 225 RING - 7"
- 1) 24" - ADJUSTMENT - 4"
- 1) 60" - MH,5'dia,Cone,8"w - 36"
- 1) 60" - MH,5'dia,Riser,8"w - 54"
- 1) 60" - MH,5'dia,Riser,8"w - 72"
- 1) 60" - MH,5'dia,Base,8"w,Invert - 36"
- 3) 60" - JOINT SEALANT - 238"/JOINT
- 1) HDPE Sleeve W/ S106-16BWP
- 3) HDPE Sleeve W/ S406-12AWP
- 268.57 SqFt) Liner,Solmax,2mm [INT]
- 334.89 SqFt) Paint,CS1200,Black [EXT]

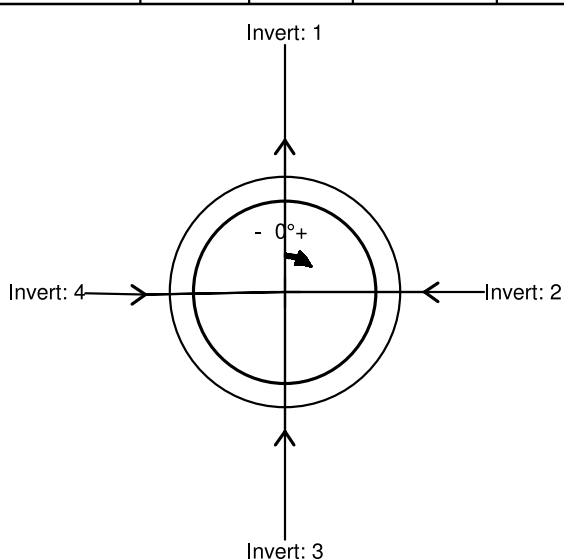
190 lb
 260 lb
 279 lb
 3927 lb
 8011 lb
 10681 lb
 9564 lb
 0 lb
 -60 lb
 -180 lb
 0 lb
 0 lb

SOLMAX
LINER 2MM



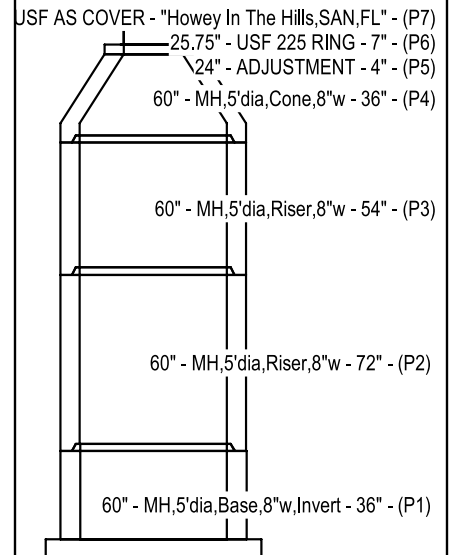
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	76.64'	✓						
Reducer								
Invert 1	59.58'	✓ 0°	10" PVC	0"	0"	2"	HDPE Sleeve W/ S106-16BWP	P1
Invert 2	60.95'	✓ 90°	8" PVC	60"	47"	19"	HDPE Sleeve W/ S406-12AWP	P1
55.58 Invert 3	59.68'	✓ 180°	8" PVC	119"	94"	4"	HDPE Sleeve W/ S406-12AWP	P1
Invert 4	66.9'	✓ 269°	8" PVC	-60"	-48"	55"	HDPE Sleeve W/ S406-12AWP	P2
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS14**
 Spec: FLORIDA
 Type: SANITARY
 Size: 60"

Rim: 76.64'
 Invert: 59.58'
 Floor (Top): 59.163'

Rim to Invert: 17.06'
 Overall Height: 217"
 Weight: 32673 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:31 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

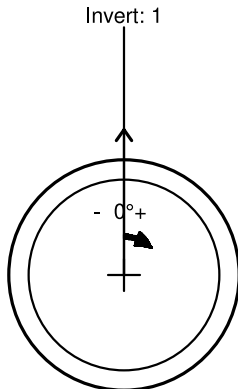
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 5"	349 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
2)	48" - MH,4'dia,Riser,5"w - 48"	6938 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	171.87 SqFt) Paint,CS1200,Black [INT]	0 lb
	206.17 SqFt) Paint,CS1200,Black [EXT]	0 lb



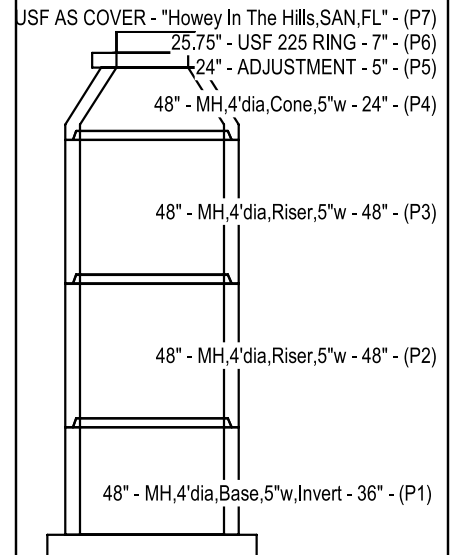
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	76.22'	✓						
Reducer								
Invert 1	62.52'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS15**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 76.22'
Invert: 62.52'
Floor (Top): 62.187'

Rim to Invert: 13.7'
Overall Height: 176"
Weight: 14294 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:33 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

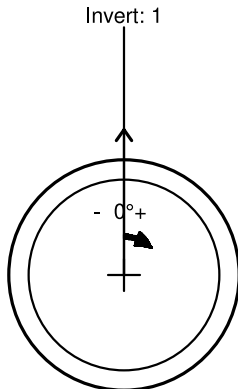
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 7"	489 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	121.61 SqFt) Paint,CS1200,Black [INT]	0 lb
	145.44 SqFt) Paint,CS1200,Black [EXT]	0 lb



NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	76.98'	✓						
Reducer		✓						
Invert 1	67.1'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								

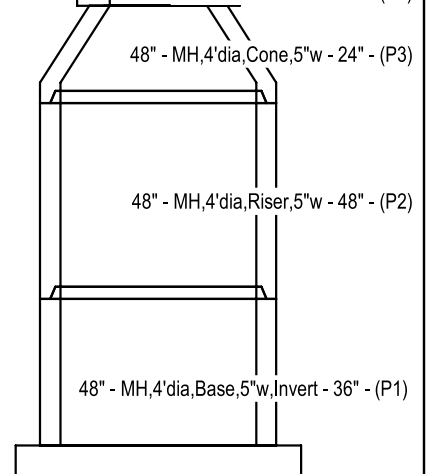


SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



USF AS COVER - "Howey In The Hills,SAN,FL" - (P6)
25.75" - USF 225 RING - 7" - (P5)
24" - ADJUSTMENT - 7" - (P4)



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS16**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 76.98'
Invert: 67.1'
Floor (Top): 66.767'

Rim to Invert: 9.88'
Overall Height: 130"
Weight: 10964 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:34 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

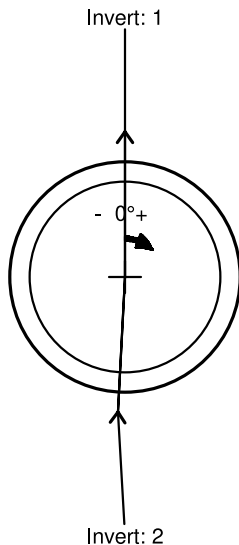
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 5"	349 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
2)	48" - MH,4'dia,Riser,5"w - 72"	10407 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S406-12AWP	-118 lb
	218.05 SqFt) Paint,CS1200,Black [INT]	0 lb
	261.69 SqFt) Paint,CS1200,Black [EXT]	0 lb



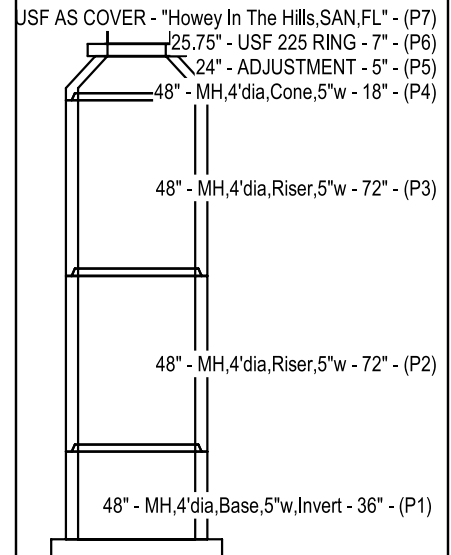
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	77.89'							
Reducer								
Invert 1	60.67'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	60.77'	183°	8" PVC	-90"	-74"	3"	S406-12AWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS17**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 77.89'
Invert: 60.67'
Floor (Top): 60.337'

Rim to Invert: 17.22'
Overall Height: 218"
Weight: 17368 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:35 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

INSIDE DROP

- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"
- 1) 25.75" - USF 225 RING - 7"
- 1) 24" - ADJUSTMENT - 6"
- 1) 60" - MH,5'dia,Cone,8"w - 36"
- 1) 60" - MH,5'dia,Riser,8"w - 60"
- 1) 60" - MH,5'dia,Riser,8"w - 72"
- 1) 60" - MH,5'dia,Base,8"w,Invert - 30"
- 3) 60" - JOINT SEALANT - 238"/JOINT
- 3) HDPE Sleeve W/ S406-12AWP
- 268.57 SqFt) Liner,Solmax,2mm [INT]
- 334.89 SqFt) Paint,CS1200,Black [EXT]

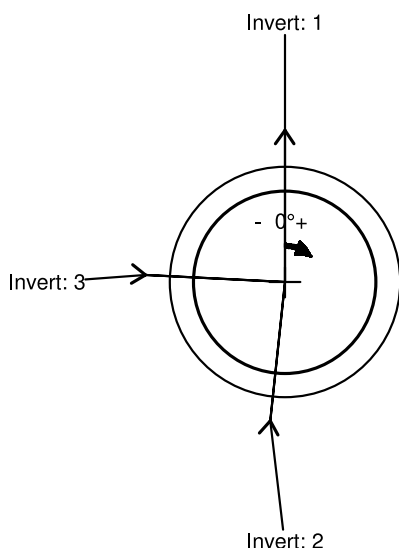
190 lb
 260 lb
 419 lb
 3927 lb
 8901 lb
 10681 lb
 8674 lb
 0 lb
 -180 lb
 0 lb
 0 lb

SOLMAX
LINER 2MM



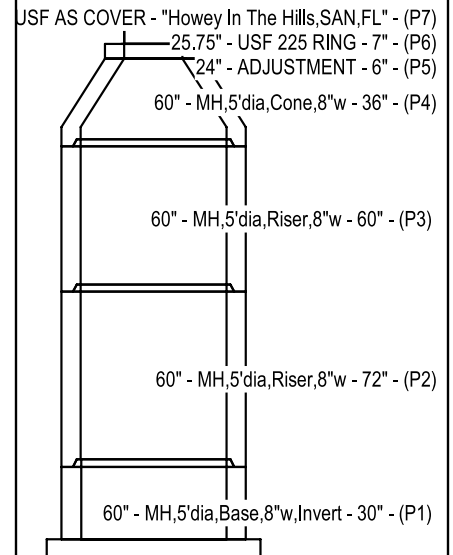
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	79.17	✓						
Reducer								
Invert 1	61.85'	✓ 0°	8" PVC	0"	0"	2"	HDPE Sleeve W/ S406-12AWP	P1
Invert 2	61.95'	✓ 186°	8" PVC	-115"	-91"	3"	HDPE Sleeve W/ S406-12AWP	P1
Invert 3	73.83'	✓ 273°	8" PVC	-58"	-46"	44"	HDPE Sleeve W/ S406-12AWP	P3
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS18**
 Spec: FLORIDA
 Type: SANITARY
 Size: 60"

Rim: 79.17'
 Invert: 61.85'
 Floor (Top): 61.517'

Rim to Invert: 17.32'
 Overall Height: 219"
 Weight: 32873 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:35 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

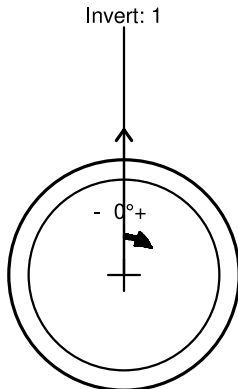
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1) 25.75" - USF 225 RING - 7"	260 lb
1) 24" - ADJUSTMENT - 5"	349 lb
1) 48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1) 48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
1) 48" - JOINT SEALANT - 170"/JOINT	0 lb
1) S406-12AWP	-59 lb
71.34 SqFt) Paint,CS1200,Black [INT]	0 lb
84.7 SqFt) Paint,CS1200,Black [EXT]	0 lb



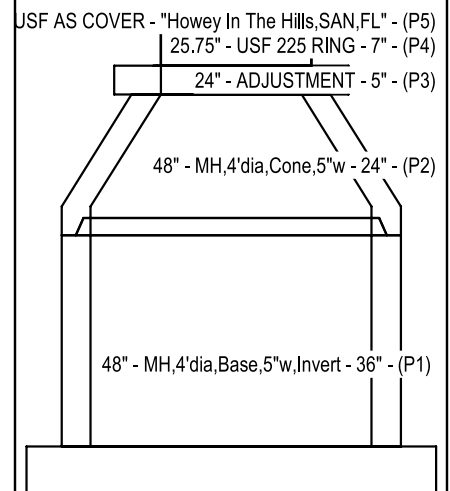
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	79.71	✓						
Reducer								
Invert 1	73.99	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS19**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 79.71'
Invert: 73.99'
Floor (Top): 73.657'

Rim to Invert: 5.72'
Overall Height: 80"
Weight: 7356 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:36 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

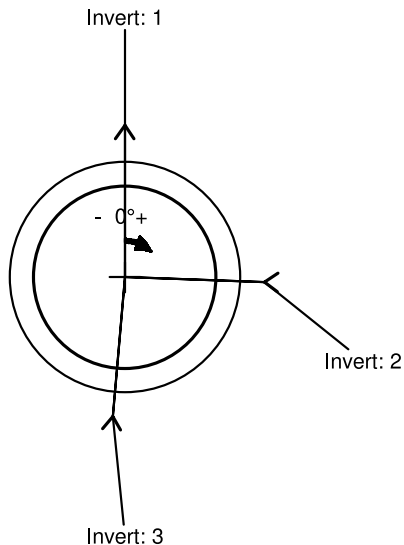
INSIDE DROP

- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL" 190 lb
- 1) 25.75" - USF 225 RING - 7" 260 lb
- 1) 24" - ADJUSTMENT - 5" 349 lb
- 1) 60" - MH,5'dia,Cone,8"w - 36" 3927 lb
- 1) 60" - MH,5'dia,Riser,8"w - 72" 10681 lb
- 1) 60" - MH,5'dia,Riser,8"w - 72" 10681 lb
- 1) 60" - MH,5'dia,Base,8"w,Invert - 36" 9564 lb
- 3) 60" - JOINT SEALANT - 238"/JOINT 0 lb
- 3) HDPE Sleeve W/ S406-12AWP -180 lb
- 292.13 SqFt) Liner,Solmax,2mm [INT] 0 lb
- 364.74 SqFt) Paint,CS1200,Black [EXT] 0 lb



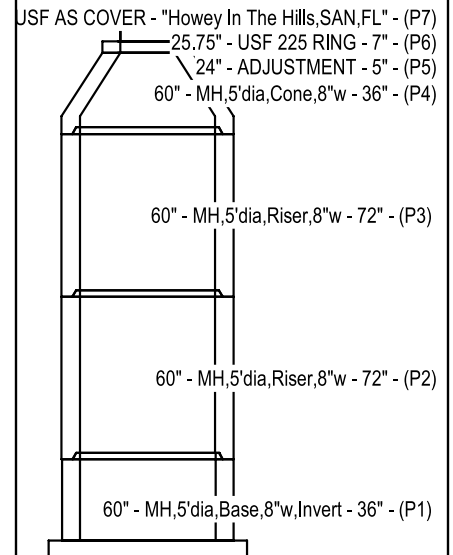
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	81.63'	✓						
Reducer		✓						
Invert 1	62.91'	✓ 0°	8" PVC	0"	0"	2"	HDPE Sleeve W/ S406-12AWP	P1
Invert 2	63.01'	✓ 92°	8" PVC	61"	48"	3"	HDPE Sleeve W/ S406-12AWP	P1
Invert 3	74.97'	✓ 185°	8" PVC	-116"	-92"	39"	HDPE Sleeve W/ S406-12AWP	P3
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS20**
 Spec: FLORIDA
 Type: SANITARY
 Size: 60"

Rim: 81.63'
 Invert: 62.91'
 Floor (Top): 62.577'

Rim to Invert: 18.72'
 Overall Height: 236"
 Weight: 35473 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:37 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

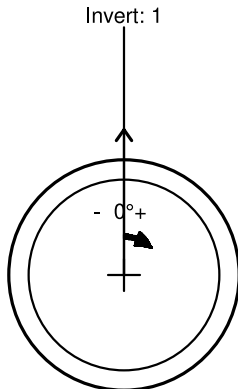
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 8"	559 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
2)	48" - MH,4'dia,Riser,5"w - 72"	10407 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
3)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	218.05 SqFt) Paint,CS1200,Black [INT]	0 lb
	261.69 SqFt) Paint,CS1200,Black [EXT]	0 lb



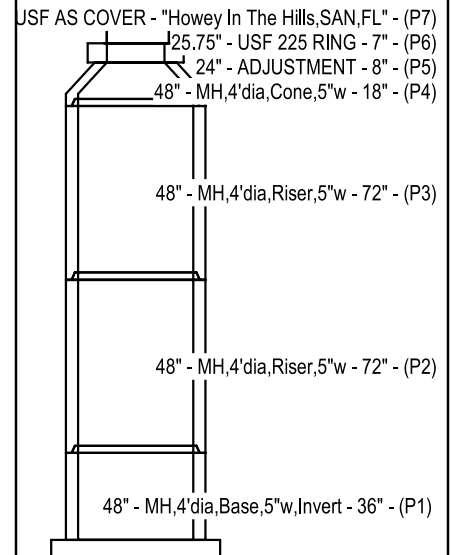
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	80.62'	✓						
Reducer								
Invert 1	63.2'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS21**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 80.62'
Invert: 63.2'
Floor (Top): 62.867'

Rim to Invert: 17.42'
Overall Height: 221"
Weight: 17636 lb



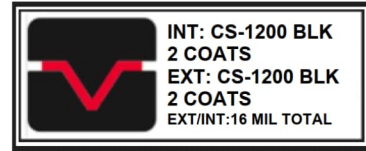
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2025-07-15 9:42:38 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

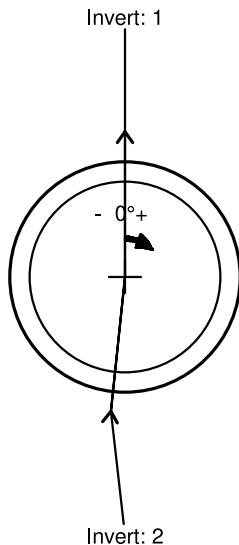
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 10"	698 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 32"	2313 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S406-12AWP	-118 lb
	104.85 SqFt) Paint,CS1200,Black [INT]	0 lb
	125.19 SqFt) Paint,CS1200,Black [EXT]	0 lb



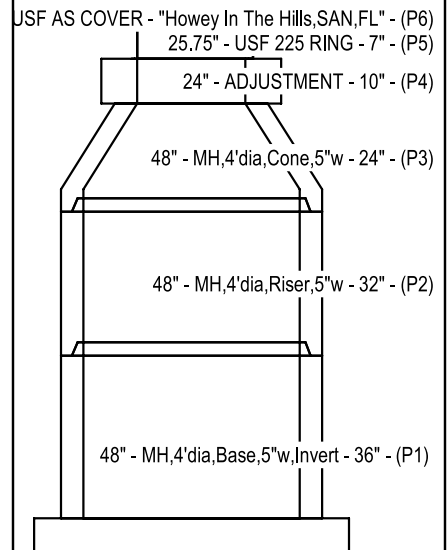
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	85.21							
Reducer								
Invert 1	76.4'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	76.5'	186°	8" PVC	-88"	-73"	3"	S406-12AWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS22**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 85.21'
 Invert: 76.4'
 Floor (Top): 76.067'

Rim to Invert: 8.81'
 Overall Height: 117"
 Weight: 9959 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:39 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

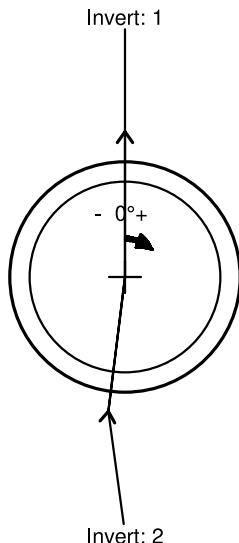
**BASE HEIGHT TOO TALL TO ALLOW
 FLOWLINE/INVERT**

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 9"	628 lb
1)	48" - MH,4'dia,Cone,5"w - 30"	1677 lb
1)	48" - MH,4'dia,Base,5"w - 48"	6141 lb
1)	48" - JOINT SEALANT - 170"/JOINT	0 lb
2)	S406-12AWP	-118 lb
88.21	SqFt) Paint,CS1200,Black [INT]	0 lb
105.38	SqFt) Paint,CS1200,Black [EXT]	0 lb



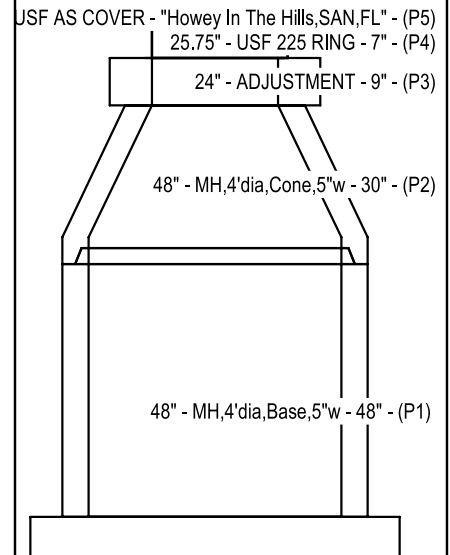
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	86.4'							
Reducer								
Invert 1	78.87'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	80.67'	187°	8" PVC	-88"	-72"	24"	S406-12AWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS23**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 86.4'
 Invert: 78.87'
 Floor (Top): 78.537'

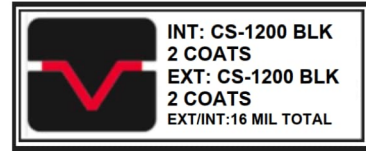
Rim to Invert: 7.53'
 Overall Height: 102"
 Weight: 8779 lb



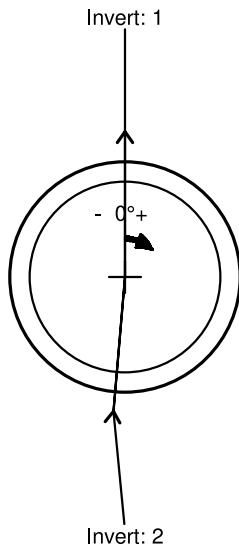
MACK CONCRETE INDUSTRIES, INC.**2025-07-15 9:42:40 AM****CF30265****2025050234****Engineer: Don Whitford****Salesperson: Scott Nemcek**

Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1) 25.75" - USF 225 RING - 7"	260 lb
1) 24" - ADJUSTMENT - 6"	419 lb
1) 48" - MH,4'dia,Cone,5"w - 30"	1677 lb
1) 48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
1) 48" - JOINT SEALANT - 170"/JOINT	0 lb
2) S406-12AWP	-118 lb
75.64 SqFt) Paint,CS1200,Black [INT]	0 lb
90.2 SqFt) Paint,CS1200,Black [EXT]	0 lb

**NEED CS-85 (PRIMER 1 COATS)**

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	90.86'							
Reducer								
Invert 1	84.6'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	84.7'	185°	8" PVC	-89"	-73"	3"	S406-12AWP	P1
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								

**SPECIFICATIONS:**

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



USF AS COVER - "Howey In The Hills,SAN,FL" - (P5)
25.75" - USF 225 RING - 7" - (P4)
24" - ADJUSTMENT - 6" - (P3)
48" - MH,4'dia,Cone,5"w - 30" - (P2)
48" - MH,4'dia,Base,5"w,Invert - 36" - (P1)

CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS26**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 90.86'
 Invert: 84.6'
 Floor (Top): 84.267'

Rim to Invert: 6.26'
 Overall Height: 87"
 Weight: 7702 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:41 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 9"	628 lb
1)	48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
3)	S406-12AWP	-177 lb
	121.61 SqFt) Paint,CS1200,Black [INT]	0 lb
	145.44 SqFt) Paint,CS1200,Black [EXT]	0 lb



NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	95.98'							
Reducer								
Invert 1	85.94'	0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2	86.04'	179°	8" PVC	91"	75"	3"	S406-12AWP	P1
Invert 3	86.04'	272°	8" PVC	-45"	-37"	3"	S406-12AWP	P1
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								

SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision

USF AS COVER - "Howey In The Hills,SAN,FL" - (P6)

25.75" - USF 225 RING - 7" - (P5)

24" - ADJUSTMENT - 9" - (P4)

48" - MH,4'dia,Cone,5"w - 24" - (P3)

48" - MH,4'dia,Riser,5"w - 48" - (P2)

48" - MH,4'dia,Base,5"w,Invert - 36" - (P1)

CF30265 **Eden Site Development**
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS27**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 95.98'
 Invert: 85.94'
 Floor (Top): 85.607'

Rim to Invert: 10.04'
 Overall Height: 132"
 Weight: 10986 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:42 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

INSIDE DROPS

PLEASE CONFIRM STRUCTURE DIAMETER;
HOWEY CONSTRUCTION SPECIFICATION
MANUAL SAYS MANHOLES WITH DOUBLE
INSIDE DROPS SHALL BE 72" DIAMETER

ACKNOWLEDGED

- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"
 - 1) 25.75" - USF 225 RING - 7"
 - 1) 24" - ADJUSTMENT - 2"
 - 1) 60" - MH,5'dia,Cone,8"w - 36"
 - 1) 60" - MH,5'dia,Riser,8"w - 96"
 - 1) 60" - MH,5'dia,Base,8"w,Invert - 24"
 - 2) 60" - JOINT SEALANT - 238"/JOINT
 - 3) HDPE Sleeve W/ S406-12AWP
- 213.59 SqFt) Liner,Solmax,2mm [INT]
265.26 SqFt) Paint,CS1200,Black [EXT]

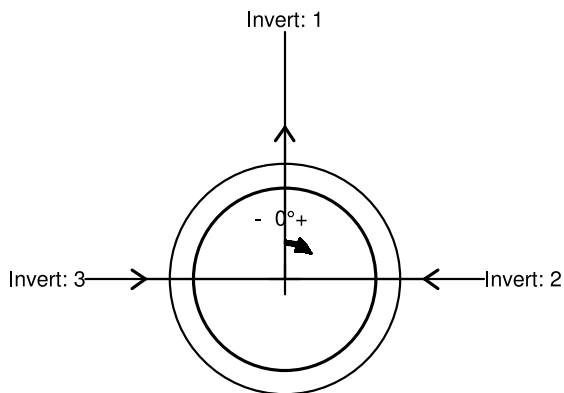
190 lb
260 lb
140 lb
3927 lb
14242 lb
7784 lb
0 lb
-180 lb
0 lb
0 lb

SOLMAX
LINER 2MM



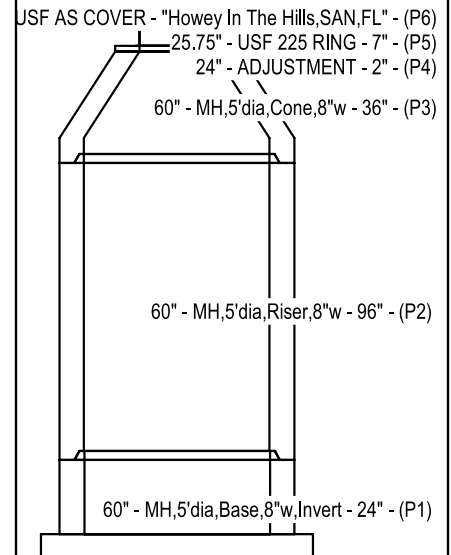
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	104.48'							
Reducer								
Invert 1	91'	0°	8" PVC	0"	0"	2"	HDPE Sleeve W/ S406-12AWP	P1
Invert 2	95.5'	90°	8" PVC	60"	47"	32"	HDPE Sleeve W/ S406-12AWP	P2
Invert 3	99.5'	270°	8" PVC	-60"	-47"	80"	HDPE Sleeve W/ S406-12AWP	P2
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
 - 2) Grade 60 Rebar
 - 3) Type I/II Cement
 - 4) 4000 P.S.I. @ 28 Days
 - 5) Conforms To F.D.O.T.
 - 6) Manufactured Per A.S.T.M.
- C-478 Latest Revision**



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS28**
Spec: **FLORIDA**
Type: **SANITARY**
Size: **60"**

Rim: 104.48'
Invert: 91'
Floor (Top): 90.667'

Rim to Invert: 13.48'
Overall Height: 173"
Weight: 26363 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:43 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

Structure Notes: WALLS=3"x8" W4.5/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

INSIDE DROPS

PLEASE CONFIRM STRUCTURE DIAMETER;
 HOWEY CONSTRUCTION SPECIFICATION
 MANUAL SAYS MANHOLES WITH DOUBLE
 INSIDE DROPS SHALL BE 72" DIAMETER

ACKNOWLEDGED

- 1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"
 - 1) 25.75" - USF 225 RING - 7"
 - 1) 24" - ADJUSTMENT - 8"
 - 1) 60" - MH,5'dia,Cone,8"w - 36"
 - 1) 60" - MH,5'dia,Riser,8"w - 60"
 - 1) 60" - MH,5'dia,Riser,8"w - 72"
 - 1) 60" - MH,5'dia,Base,8"w,Invert - 24"
 - 3) 60" - JOINT SEALANT - 238"/JOINT
 - 3) HDPE Sleeve W/ S406-12AWP
- 260.72 SqFt) Liner,Solmax,2mm [INT]
 324.95 SqFt) Paint,CS1200,Black [EXT]

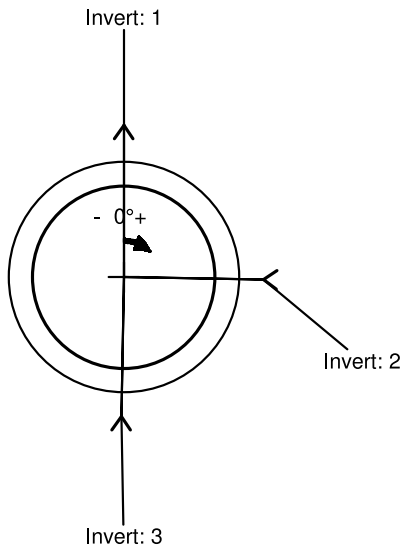
190 lb
 260 lb
 559 lb
 3927 lb
 8901 lb
 10681 lb
 7784 lb
 0 lb
 -180 lb
 0 lb
 0 lb

SOLMAX
LINER 2MM



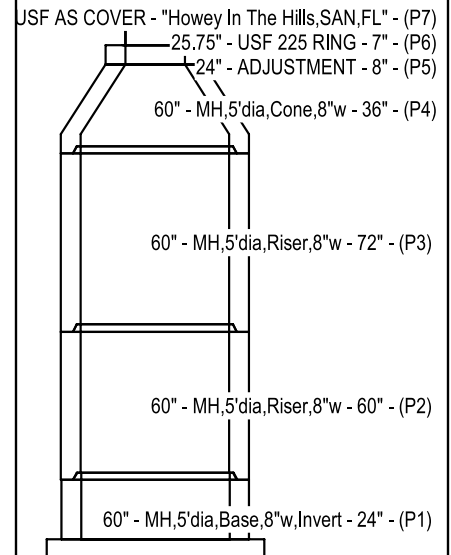
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	104.3'							
Reducer								
Invert 1	87.35'	0°	8" PVC	0"	0"	2"	HDPE Sleeve W/ S406-12AWP	P1
Invert 2	95.5'	91°	8" PVC	60"	48"	16"	HDPE Sleeve W/ S406-12AWP	P3
Invert 3	90'	181°	8" PVC	-119"	-94"	10"	HDPE Sleeve W/ S406-12AWP	P2
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS30**
 Spec: FLORIDA
 Type: SANITARY
 Size: 60"

Rim: 104.3'
 Invert: 87.35'
 Floor (Top): 87.017'

Rim to Invert: 16.95'
 Overall Height: 215"
 Weight: 32122 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:43 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

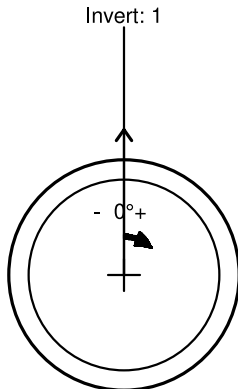
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 8"	559 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
1)	48" - MH,4'dia,Riser,5"w - 48"	3469 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	117.52 SqFt) Paint,CS1200,Black [INT]	0 lb
	140.22 SqFt) Paint,CS1200,Black [EXT]	0 lb



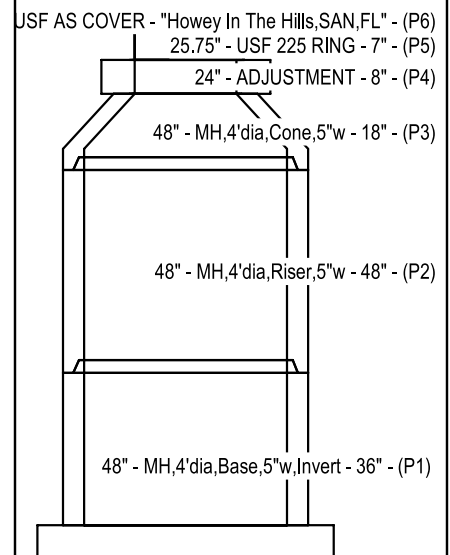
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	96.15'	✓						
Reducer								
Invert 1	86.73'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS31**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 96.15'
Invert: 86.73'
Floor (Top): 86.397'

Rim to Invert: 9.42'
Overall Height: 125"
Weight: 10699 lb



MACK CONCRETE INDUSTRIES, INC.
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CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

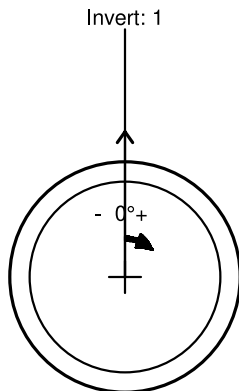
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
 BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 7"	489 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
1)	48" - MH,4'dia,Riser,5"w - 32"	2313 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	100.77 SqFt) Paint,CS1200,Black [INT]	0 lb
	119.97 SqFt) Paint,CS1200,Black [EXT]	0 lb



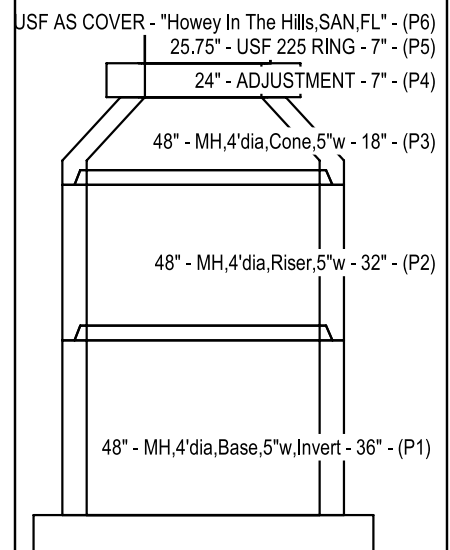
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	104'	✓						
Reducer								
Invert 1	96'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS32**
 Spec: FLORIDA
 Type: SANITARY
 Size: 48"

Rim: 104'
 Invert: 96'
 Floor (Top): 95.667'

Rim to Invert: 8'
 Overall Height: 108"
 Weight: 9473 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:45 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

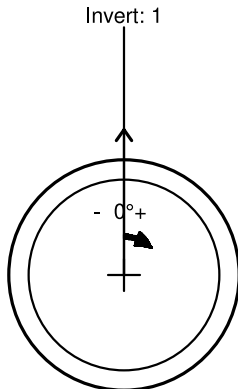
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1)	25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1)	25.75" - USF 225 RING - 7"	260 lb
1)	24" - ADJUSTMENT - 7"	489 lb
1)	48" - MH,4'dia,Cone,5"w - 18"	1006 lb
1)	48" - MH,4'dia,Riser,5"w - 32"	2313 lb
1)	48" - MH,4'dia,Base,5"w,Invert - 36"	5274 lb
2)	48" - JOINT SEALANT - 170"/JOINT	0 lb
1)	S406-12AWP	-59 lb
	100.77 SqFt) Paint,CS1200,Black [INT]	0 lb
	119.97 SqFt) Paint,CS1200,Black [EXT]	0 lb



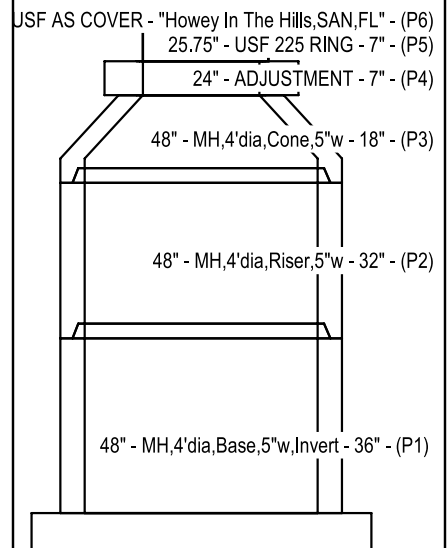
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	104'	✓						
Reducer								
Invert 1	96'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS33**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 104'
Invert: 96'
Floor (Top): 95.667'

Rim to Invert: 8'
Overall Height: 108"
Weight: 9473 lb



MACK CONCRETE INDUSTRIES, INC.
2025-07-15 9:42:46 AM

CF30265
2025050234

Engineer: Don Whitford
Salesperson: Scott Nemcek

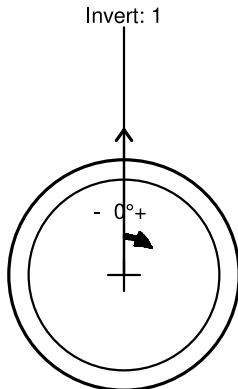
Structure Notes: WALLS=3"x8" W3.0/W2.1 WWM
BASE SLAB=8x8-D15/D15 WWM

1) 25.75" - USF AS COVER - "Howey In The Hills,SAN,FL"	190 lb
1) 25.75" - USF 225 RING - 7"	260 lb
1) 24" - ADJUSTMENT - 7"	489 lb
1) 48" - MH,4'dia,Cone,5"w - 24"	1342 lb
1) 48" - MH,4'dia,Base,5"w,Invert - 24"	4407 lb
1) 48" - JOINT SEALANT - 170"/JOINT	0 lb
1) S406-12AWP	-59 lb
58.77 SqFt) Paint,CS1200,Black [INT]	0 lb
69.51 SqFt) Paint,CS1200,Black [EXT]	0 lb



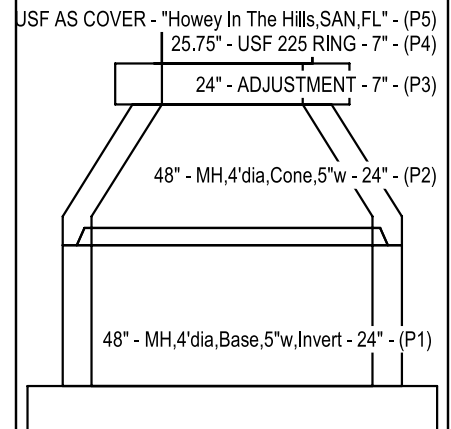
NEED CS-85 (PRIMER 1 COATS)

Position	Elev	Angle	Pipe	Ext. (cw)	Int. (cw)	Up ()	Connector	Ref
Rim	104.88'	✓						
Reducer								
Invert 1	100'	✓ 0°	8" PVC	0"	0"	2"	S406-12AWP	P1
Invert 2								
Invert 3								
Invert 4								
Invert 5								
Invert 6								
Invert 7								
Invert 8								



SPECIFICATIONS:

- 1) 70 K.S.I. Wire Mesh
- 2) Grade 60 Rebar
- 3) Type I/II Cement
- 4) 4000 P.S.I. @ 28 Days
- 5) Conforms To F.D.O.T.
- 6) Manufactured Per A.S.T.M. C-478 Latest Revision



CF30265

Eden Site Development
Lake Hills Main Boulevard & Mass Grading

Structure ID: **SS34**
Spec: FLORIDA
Type: SANITARY
Size: 48"

Rim: 104.88'
Invert: 100'
Floor (Top): 99.667'

Rim to Invert: 4.88'
Overall Height: 70"
Weight: 6628 lb

