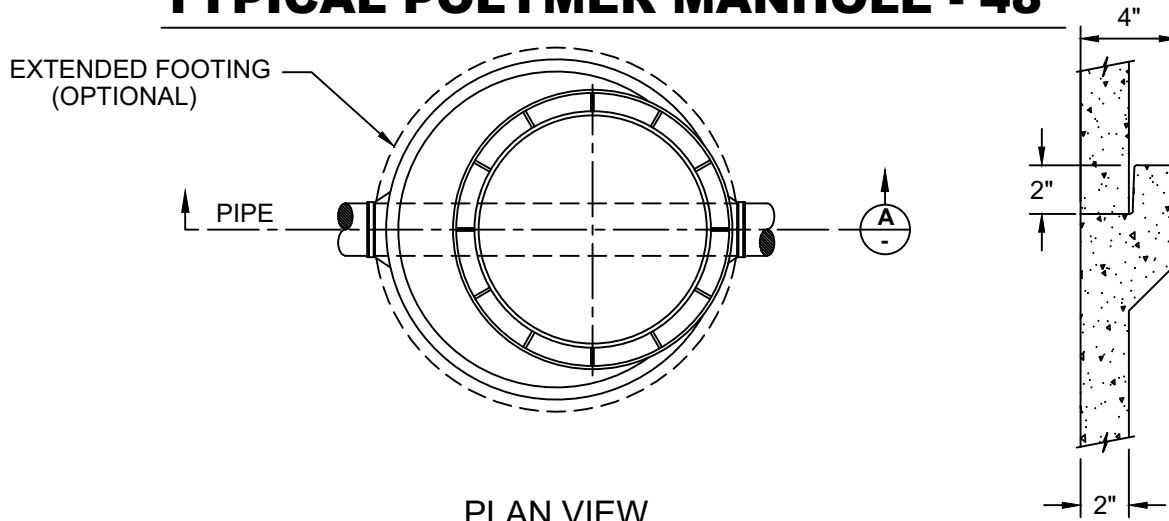


ROCKHARD POLYMER MANHOLES



ROCKHARD POLYMER MANHOLE SHOP
DRAWINGS

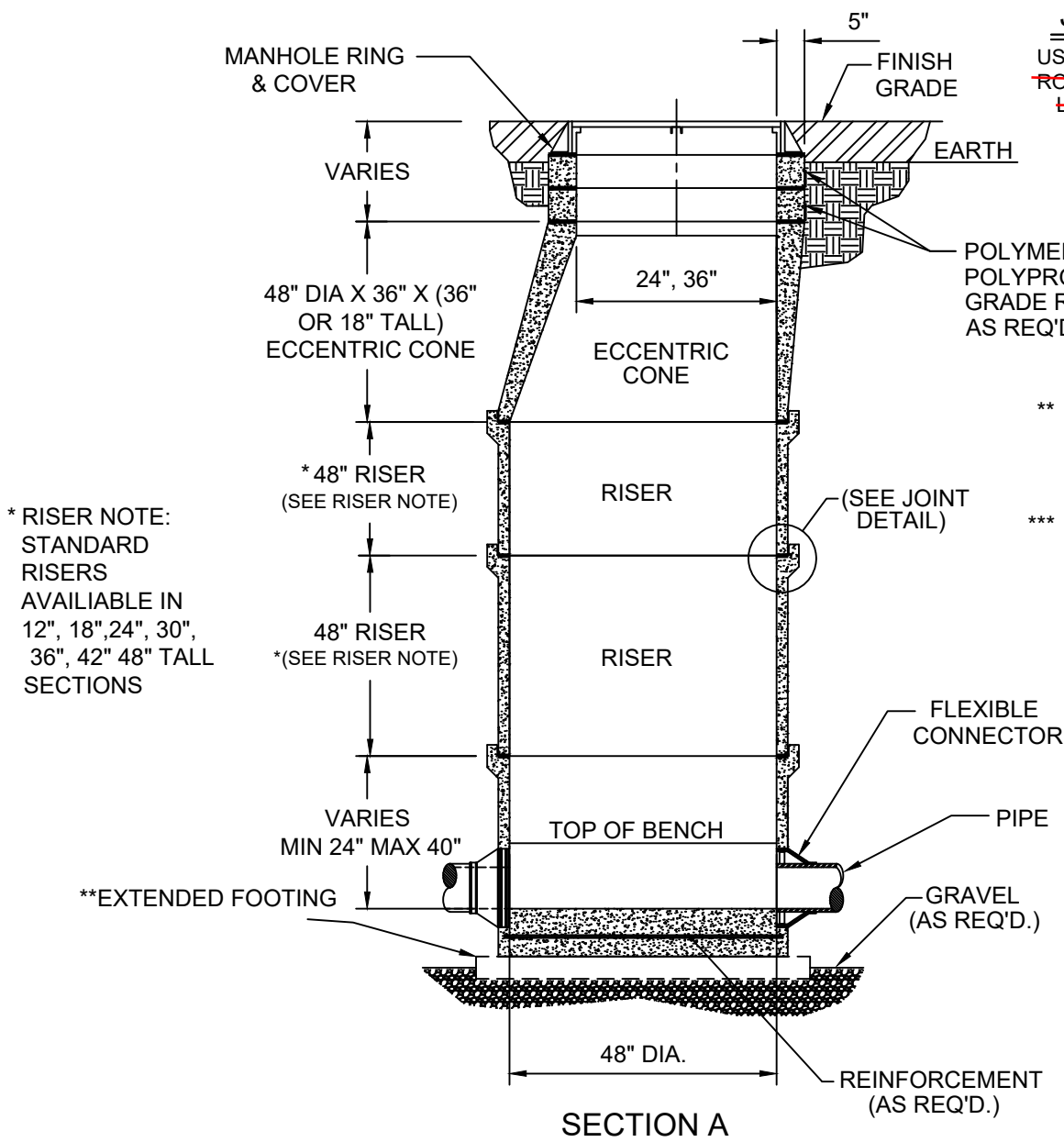
TYPICAL POLYMER MANHOLE - 48"



PLAN VIEW

JOINT DETAIL

USE BUTYL SEALANT ~~OR~~
~~ROCKHARD SCP® ULTRA~~
 LITE WEIGHT GROUT



SECTION A

* RISER NOTE:
 STANDARD
 RISERS
 AVAILABLE IN
 12", 18", 24", 30",
 36", 42" 48" TALL
 SECTIONS

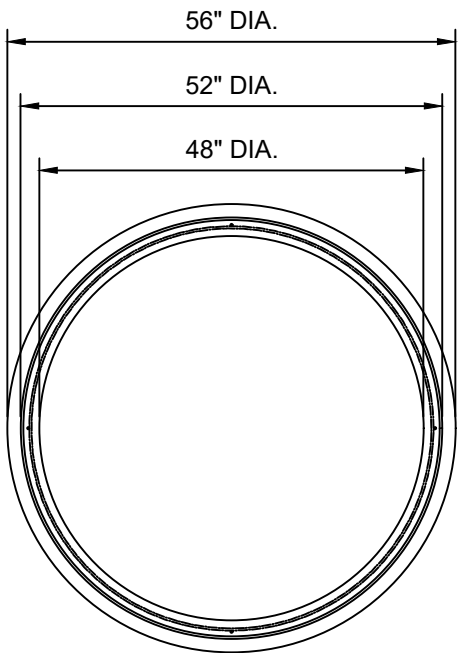
** NOTE: ROCKHARDSCP
 WILL PROVIDE A
 MONOLITHIC BASE.

*** INVERT OF BASE TO A MIN.
 OF 8" THICK MEASURED
 FROM BOTTOM OF
 EXTENDED FOOTING
 UPTO THE BOTTOM OF
 THE LOWEST PIPE.

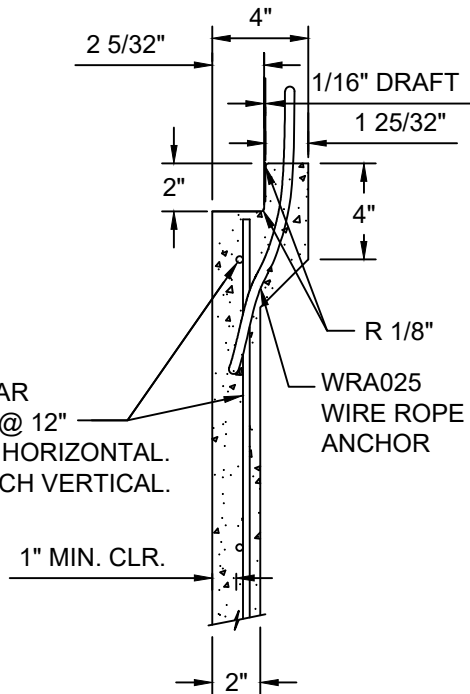
DRAWN BY:	D. MACKAY	06/24/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-4800	



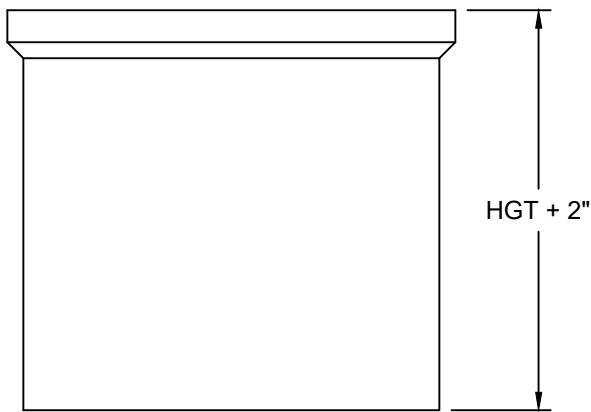
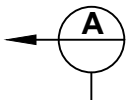
DATE:	02/12/2021
PART NO:	P4848
DESCRIPTION:	48 x 48 SHAFT
WEIGHT:	1,395 LBS



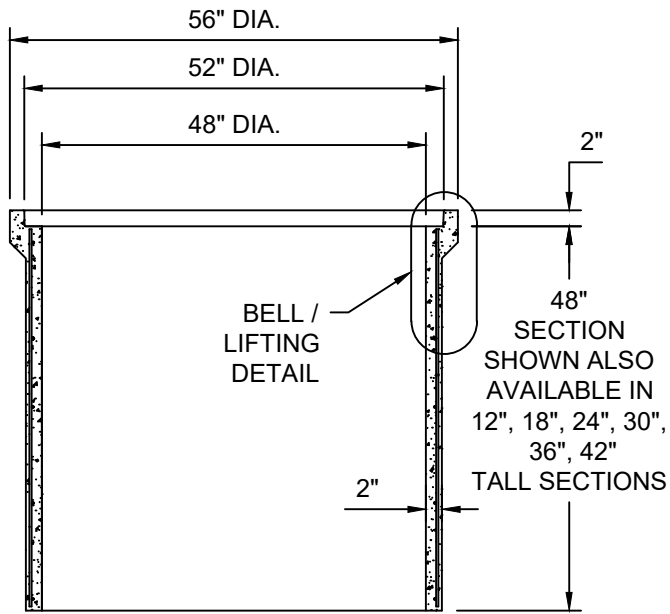
PLAN VIEW



48" BELL / LIFTING DETAIL



ELEVATION VIEW



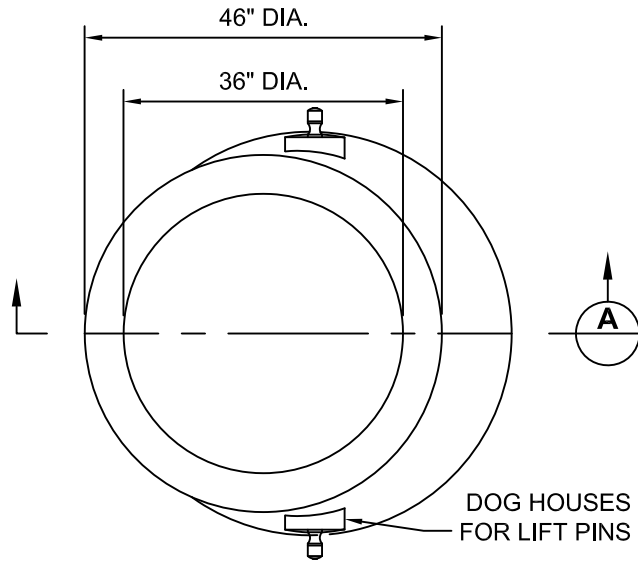
SECTION A

BILL OF MATERIALS	
POLYMER CONCRETE	- 1,395 LBS
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 942")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 184")
LIFTING - WIRE ROPE ANCHORS - WRA025	= 2EA.

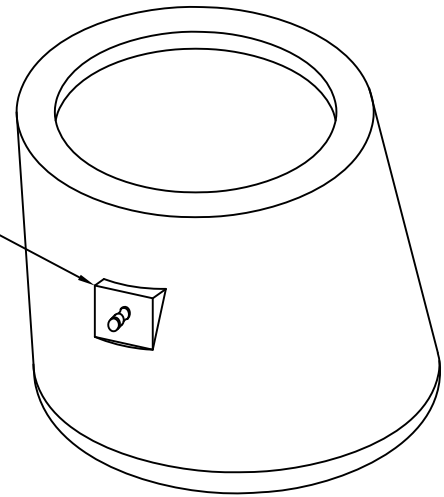
DRAWN BY:	D. MACKAY	07/15/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-4811	



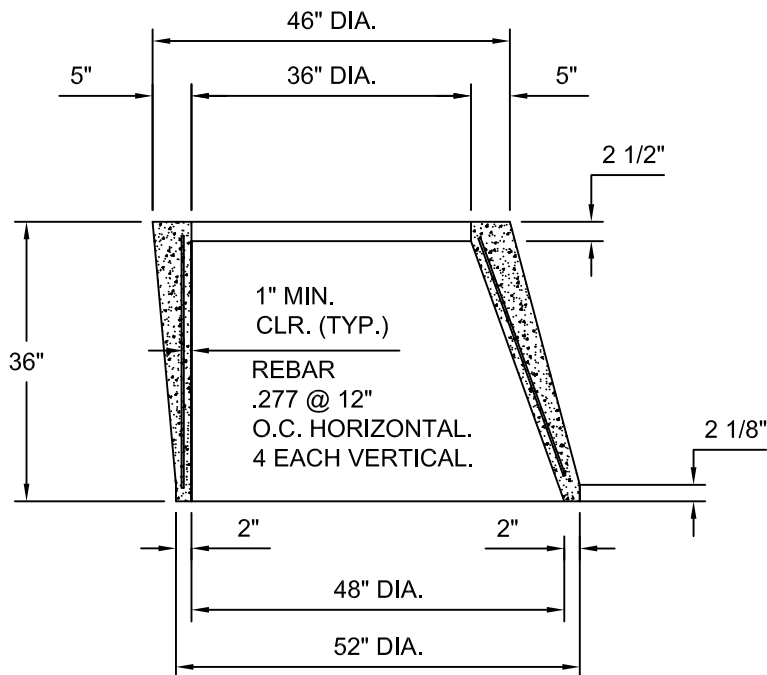
DATE:	03/1/2021
PART NO:	P483636
DESCRIPTION:	48 X 36 CONE 36 OPENING
WEIGHT:	1,629 LBS



PLAN VIEW



ISOMETRIC



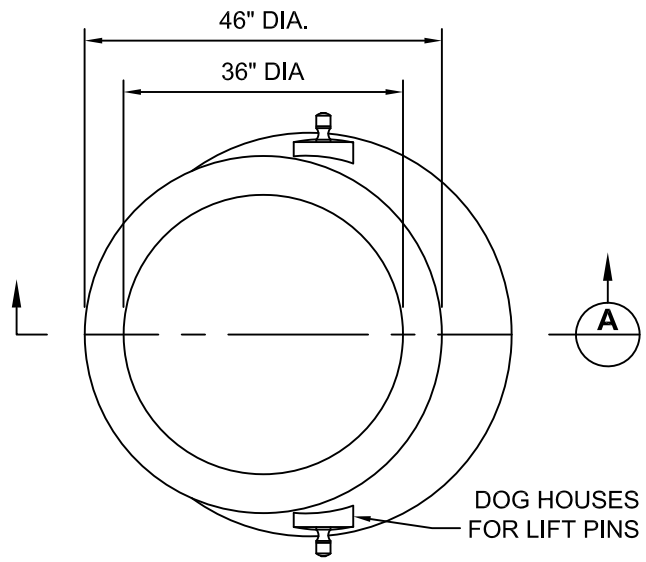
SECTION A

BILL OF MATERIALS	
POLYMER CONCRETE -	1,629 LBS
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 710")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 144")
LIFTING - LANE THREADED LIFT PIN INSERT	= 2EA.
LANE EZ LIFT PIN	= 2EA.

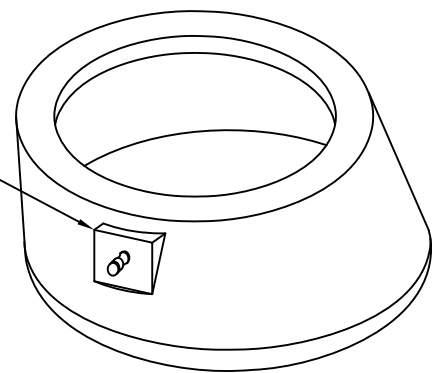
DRAWN BY:	D. MACKAY	07/15/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-4810	



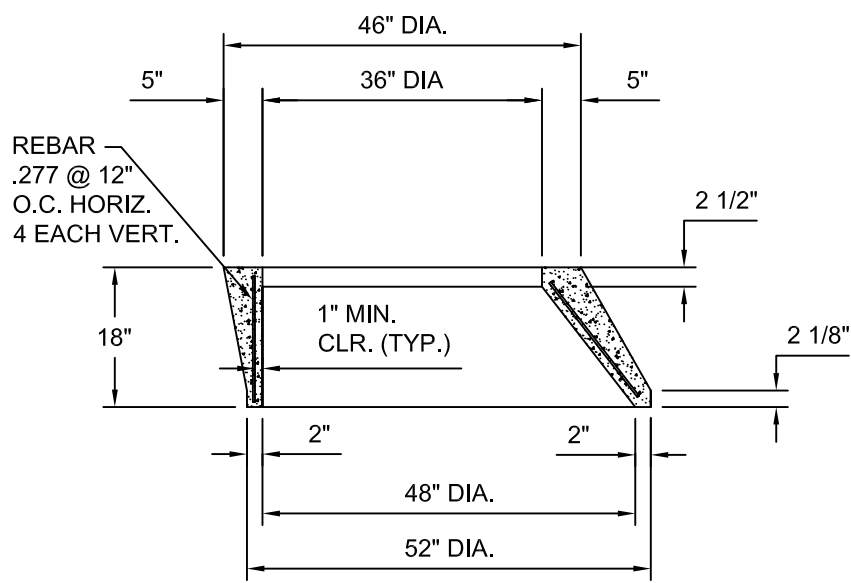
DATE:	03/1/2021
PART NO:	P483618
DESCRIPTION:	48 X 18 CONE 36 OPENING
WEIGHT:	888 LBS



PLAN VIEW



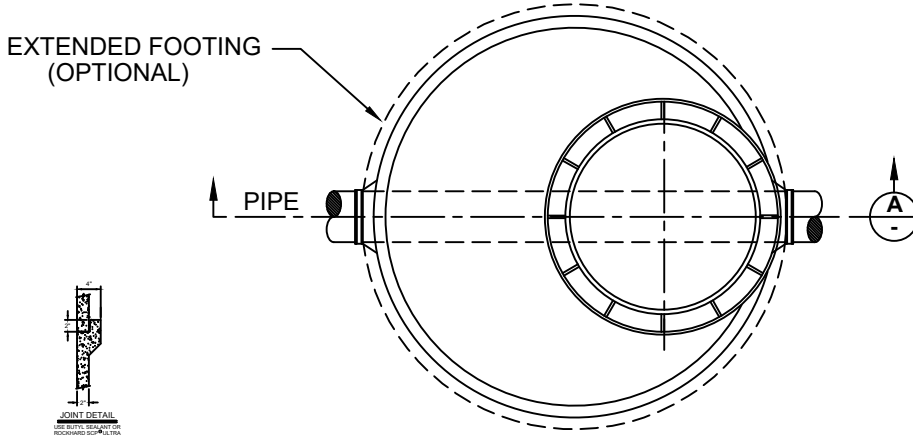
ISOMETRIC



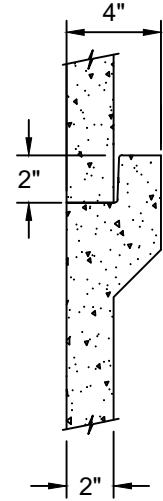
SECTION A

BILL OF MATERIALS	
POLYMER CONCRETE - 888 LBS	
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 705")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 72")
LIFTING - LANE THREADED LIFT PIN INSERT	= 2EA.
LANE EZ LIFT PIN	= 2EA.

TYPICAL POLYMER MANHOLE - 60"



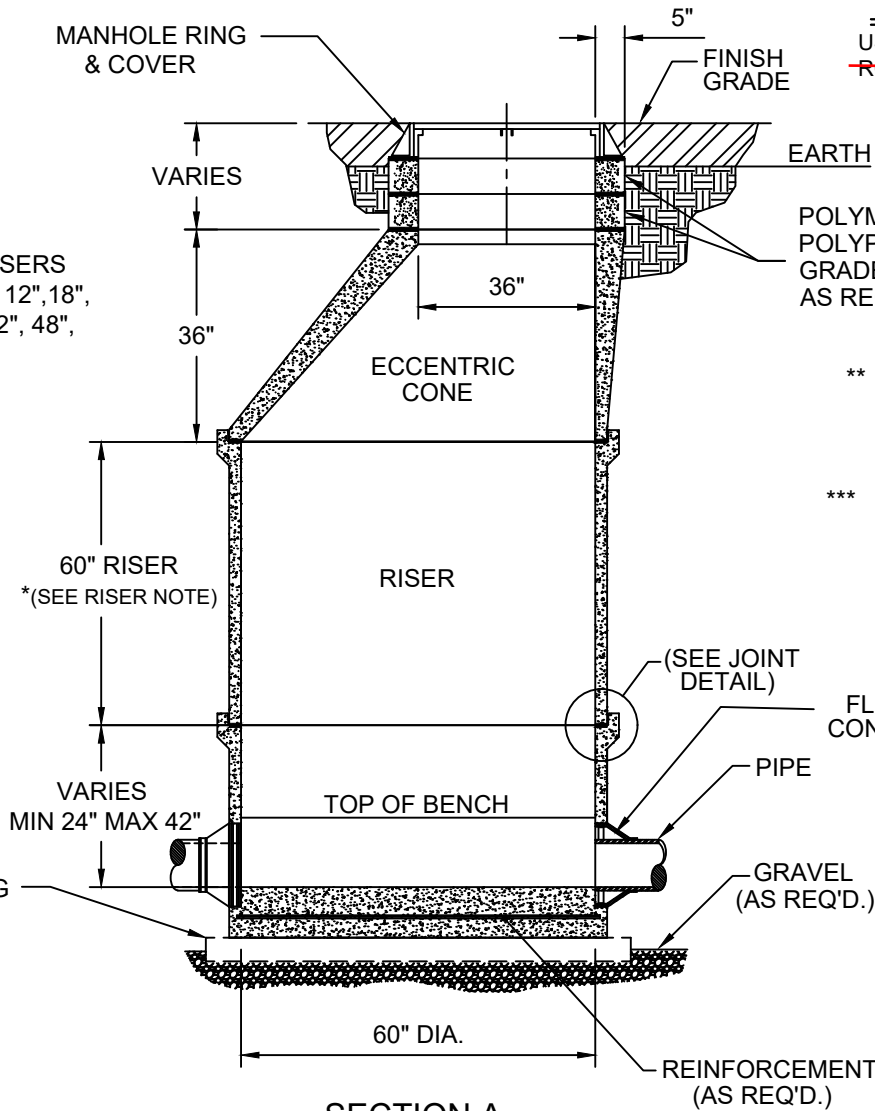
PLAN VIEW



JOINT DETAIL

USE BUTYL SEALANT OR
~~ROCKHARD SCP® ULTRA~~
~~LITE WEIGHT GROUT~~

*RISER NOTE:
 STANDARD RISERS
 AVAILABLE IN 12", 18",
 24", 30", 36", 42", 48",
 54", 60" TALL
 SECTIONS



** NOTE: ROCKHARDSCP
 WILL PROVIDE A
 MONOLITHIC BASE.

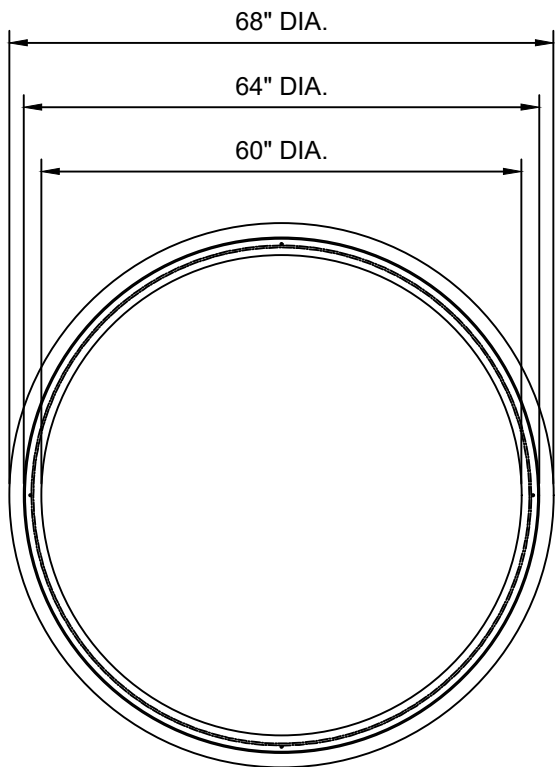
*** INVERT OF BASE TO A MIN.
 OF 8" THICK MEASURED
 FROM BOTTOM OF
 EXTENDED FOOTING
 UPTO THE BOTTOM OF
 THE LOWEST PIPE.

SECTION A

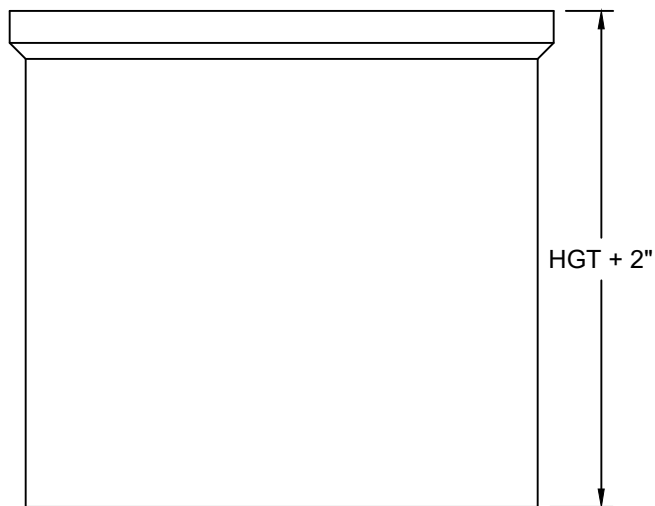
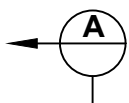
DRAWN BY:	D. MACKAY	07/13/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-6001	



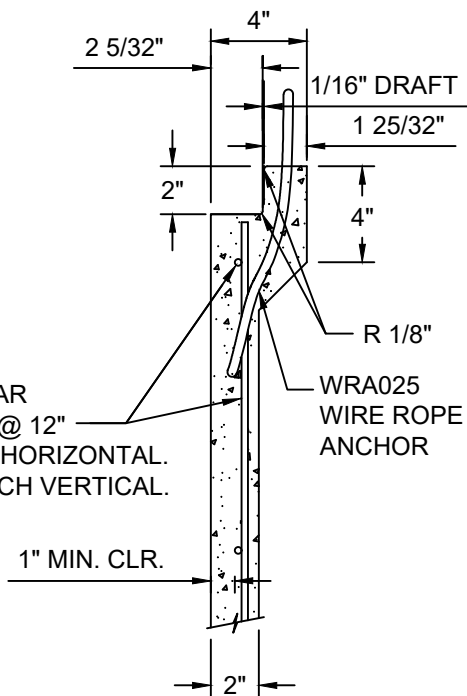
DATE:	02/17/2021
PART NO:	P6060
DESCRIPTION:	60 x 60 SHAFT
WEIGHT:	2,506 LBS



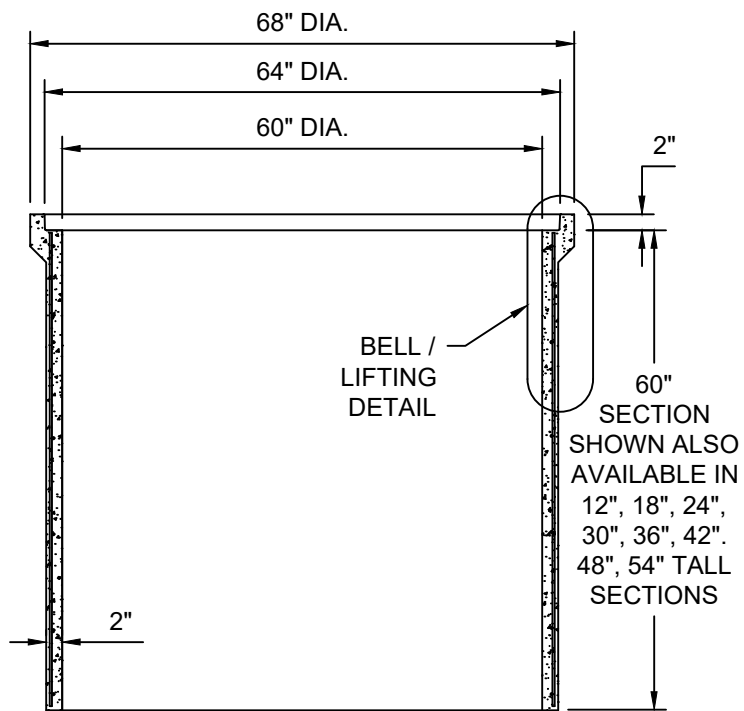
PLAN VIEW



ELEVATION VIEW



60" BELL / LIFTING DETAIL



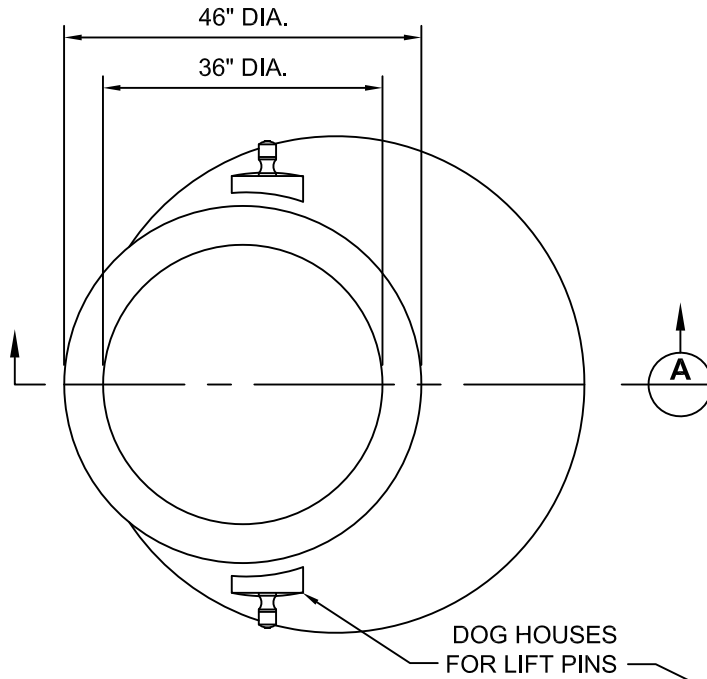
SECTION A

BILL OF MATERIALS	
POLYMER CONCRETE -	2,506 LBS
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 1,455")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 236")
LIFTING - WIRE ROPE ANCHORS - WRA025	= 2EA.

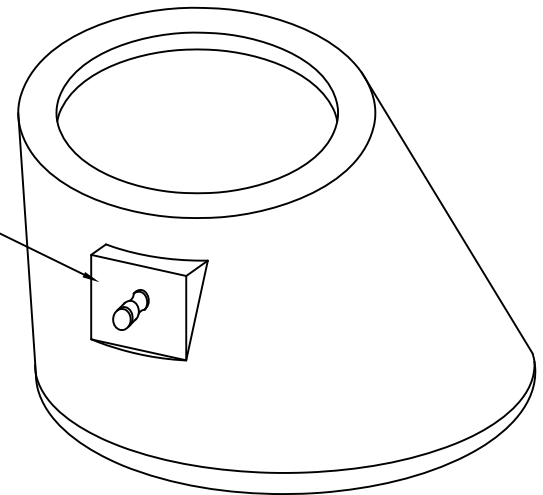
DRAWN BY:	D. MACKAY	07/15/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-6010	



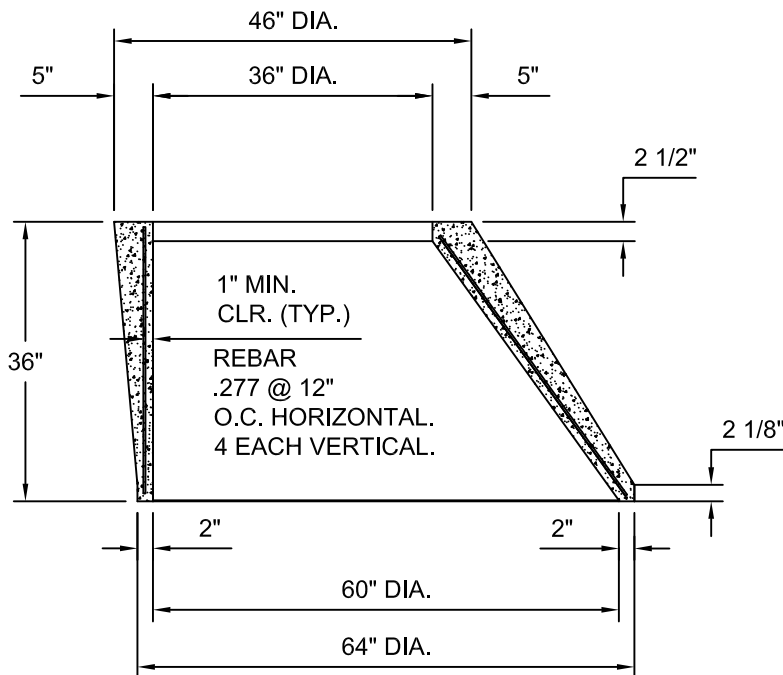
DATE:	03/1/2021
PART NO:	P603636
DESCRIPTION:	60 X 36 CONE 36 OPENING
WEIGHT:	1,946 LBS



PLAN VIEW



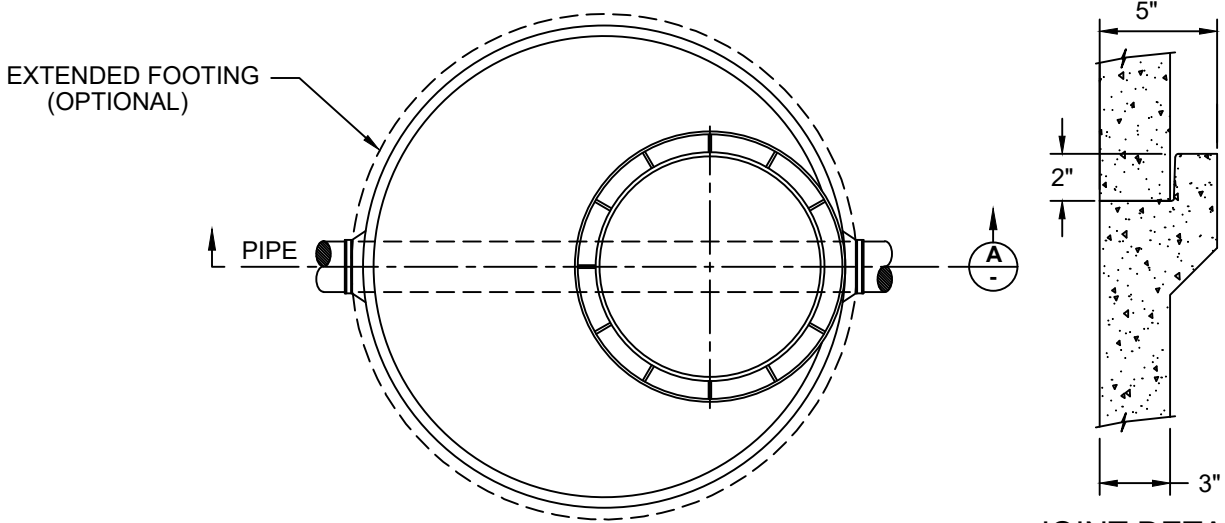
ISOMETRIC



SECTION A

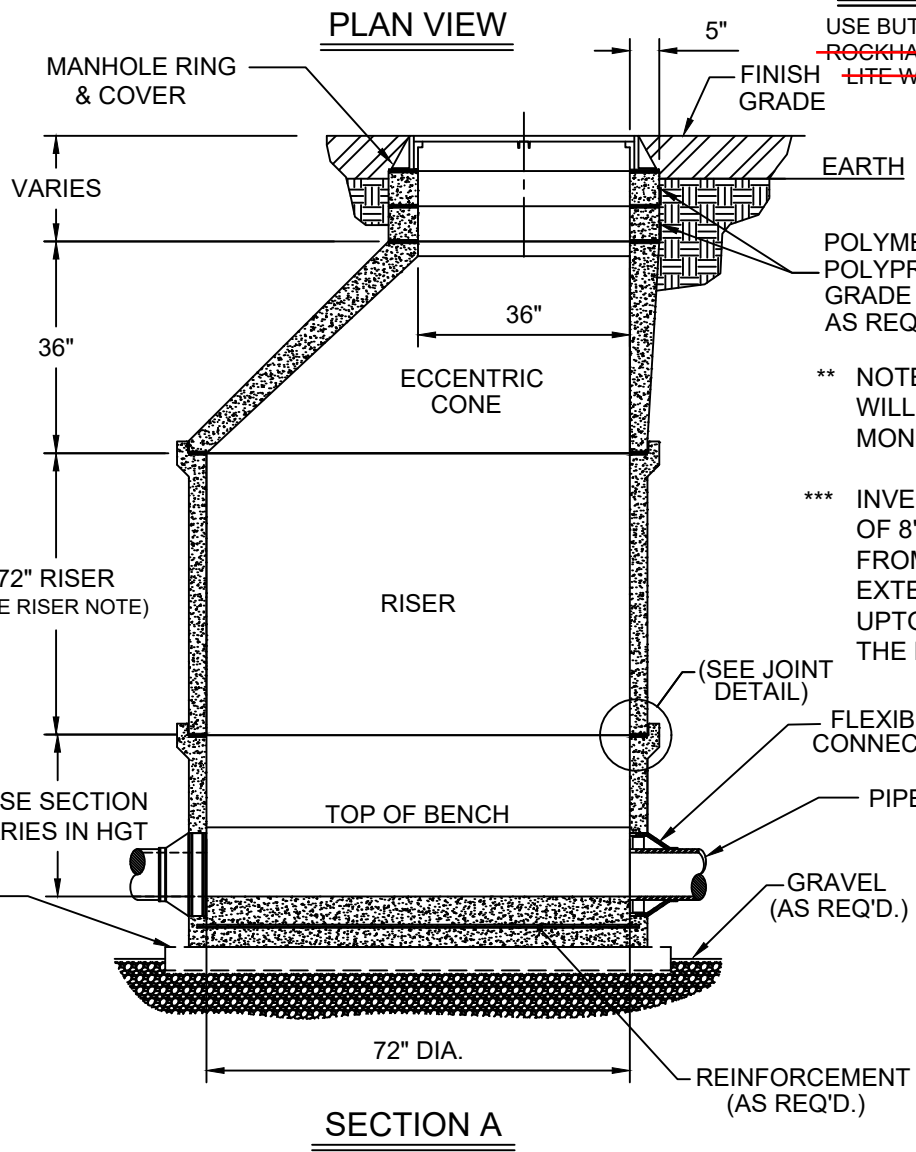
BILL OF MATERIALS	
POLYMER CONCRETE -	1,946 LBS
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 873")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 160")
LIFTING - LANE THREADED LIFT PIN INSERT	= 2EA.
LANE EZ LIFT PIN	= 2EA.

TYPICAL POLYMER MANHOLE - 72"



JOINT DETAIL

~~USE BUTYL SEALANT OR
 ROCKHARD SCP® ULTRA
 LITE WEIGHT GROUT~~



* RISER NOTE:
 STANDARD
 RISERS
 AVAILABLE IN
 12", 18", 24", 30",
 36", 42", 48", 54",
 66", 72" TALL
 SECTIONS

** NOTE: ROCKHARDSCP
 WILL PROVIDE A
 MONOLITHIC BASE.

*** INVERT OF BASE TO A MIN.
 OF 8" THICK MEASURED
 FROM BOTTOM OF
 EXTENDED FOOTING
 UPTO THE BOTTOM OF
 THE LOWEST PIPE.

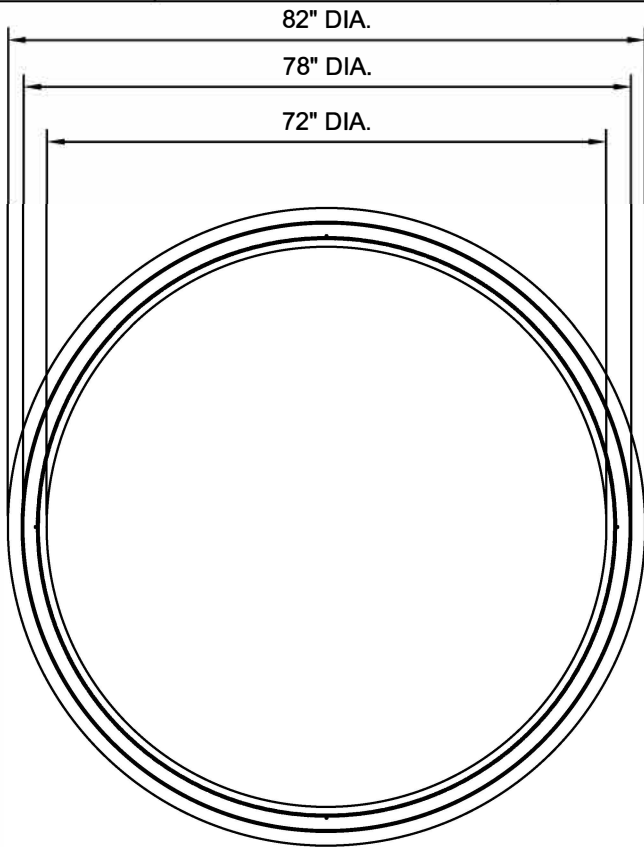
** EXTENDED FOOTING

SECTION A

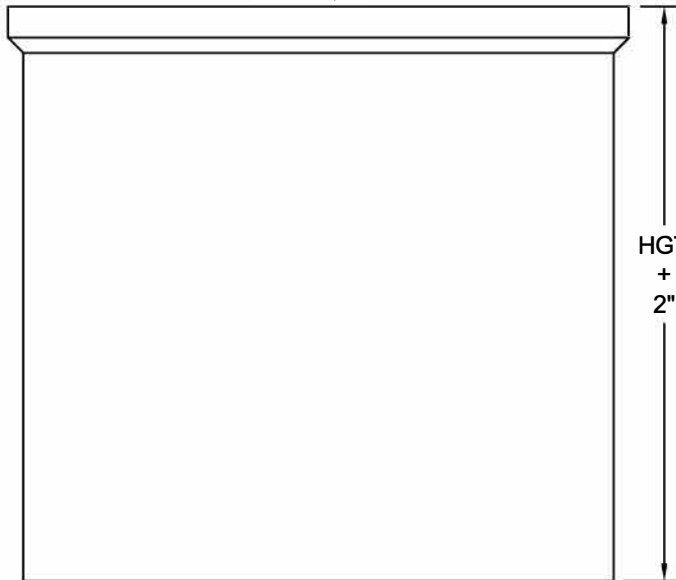
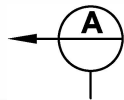
DRAWN BY:	D. MACKAY	07/13/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-7202	



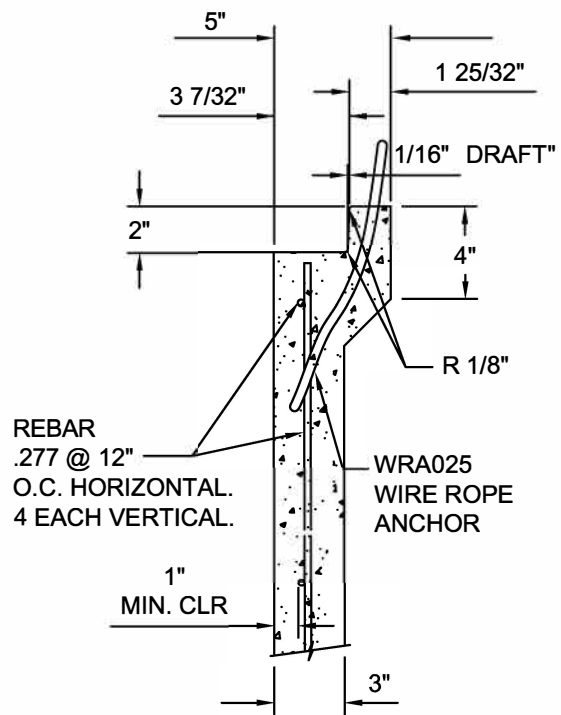
DATE:	03/1/2021
PART NO:	P7272
DESCRIPTION:	72 x 72 SHAFT
WEIGHT:	4,383 LBS



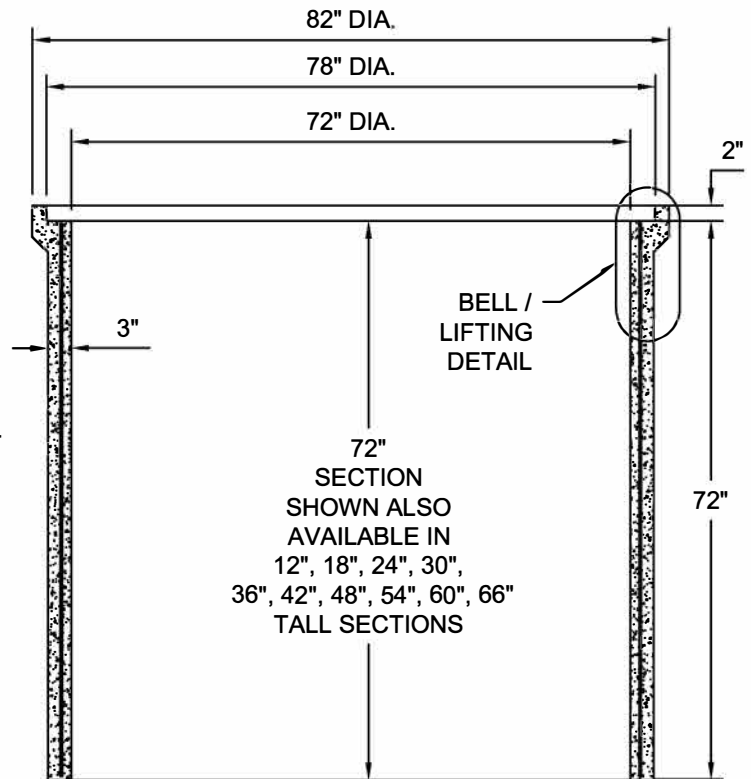
PLAN VIEW



ELEVATION VIEW



72" BELL / LIFTING DETAIL



72" SECTION
 SHOWN ALSO
 AVAILABLE IN
 12", 18", 24", 30",
 36", 42", 48", 54", 60", 66"
 TALL SECTIONS

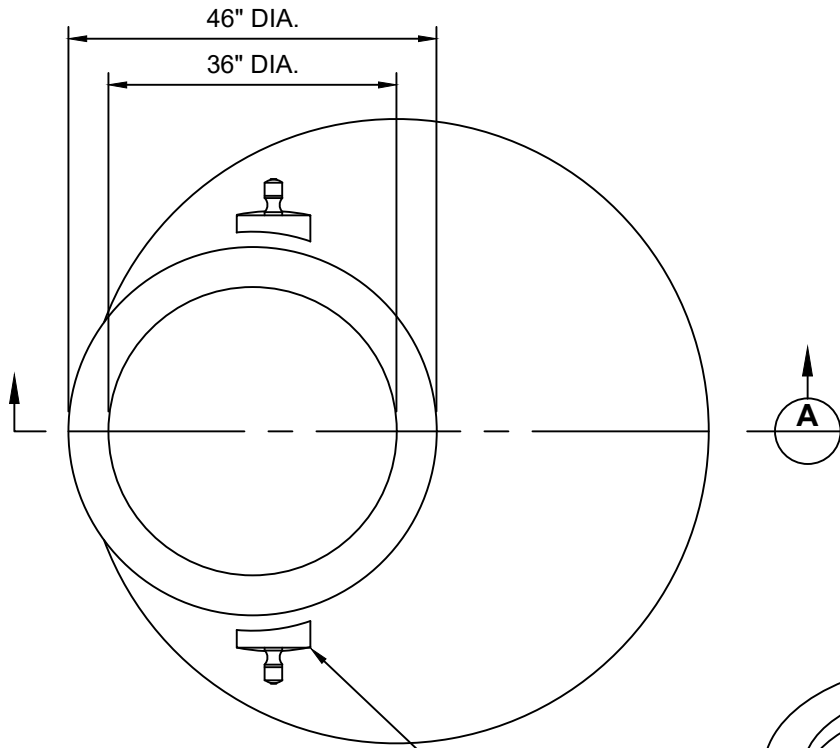
SECTION A

BILL OF MATERIALS	
POLYMER CONCRETE -	4,383 LBS
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 2,088")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 284")
LIFTING - WIRE ROPE ANCHORS - WRA025	= 2EA.

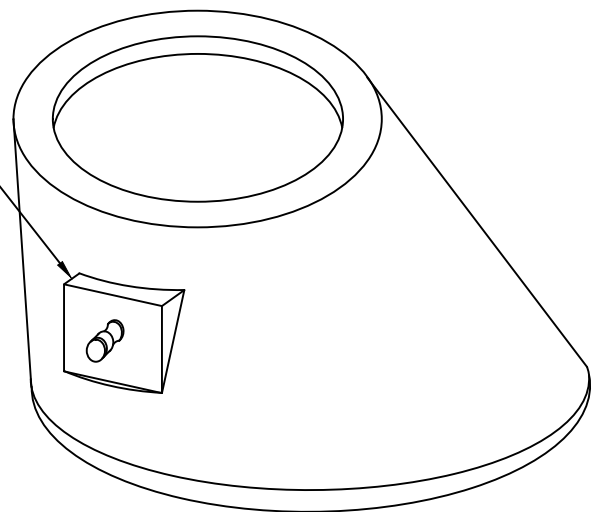
DRAWN BY:	D. MACKAY	07/15/20
APPROVED BY:	D. McLAUGHLIN	
DRAWING NO:	RH-SD-7210	



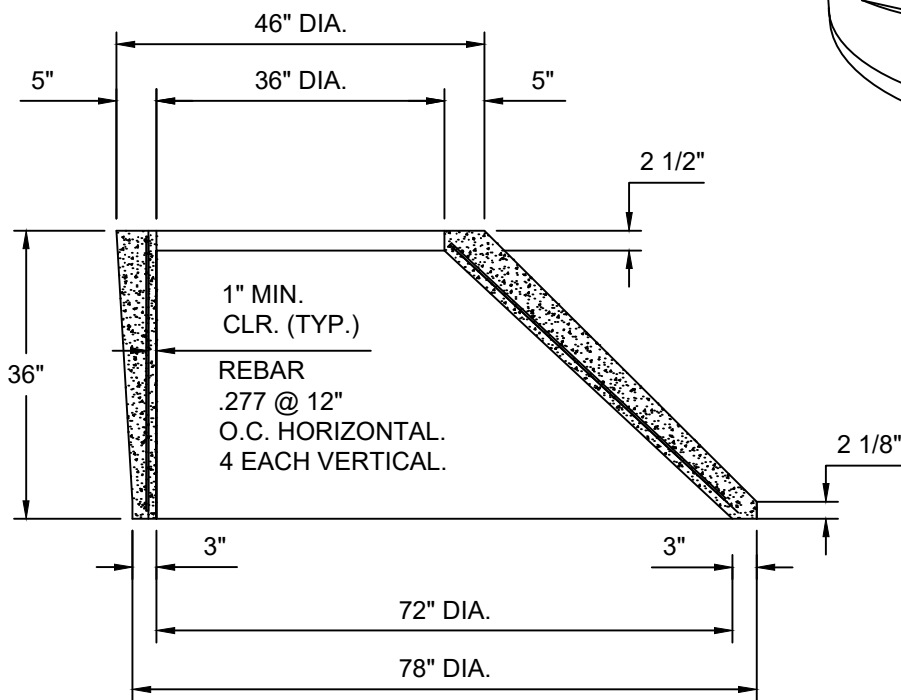
DATE:	03/1/2021
PART NO:	P723636
DESCRIPTION:	72 X 36 CONE 36 OPENING
WEIGHT:	2,596 LBS



PLAN VIEW



ISOMETRIC



SECTION A

BILL OF MATERIALS	
POLYMER CONCRETE -	2,596 LBS
REBAR - HORIZONTAL - .277 - SPIRAL	= (TOTAL - 1,044")
VERTICAL - .277 - 4EA. @ 46"	= (TOTAL - 156")
LIFTING - LANE THREADED LIFT PIN INSERT	= 2EA.
LANE EZ LIFT PIN	= 2EA.

**ROCKHARD POLYMER MANHOLE 50
YEAR CORROSION RESISTANT
WARRANTY**



50 YEAR CORROSION RESISTANT WARRANTY

1. **Warranty:** RockHardscP International, LLC ("RockHardscP") and its licensees warrant that if any RockHardscP® Polymer concrete or Polymer composite product corrodes due to H₂S exposure within a fifty (50) year period, it is subject to warranty review. For purposes of the Warranty, "RockHardscP Polymer Product" shall mean any product provided by RockHardscP containing polymer, having a resin aggregate matrix and installed under normal operating conditions found in residential and commercial sanitary sewers.

RockHardscP or its licensees further warrants that its RockHardscP Polymer Products will be free from defects in material or workmanship. This warranty is limited to twelve (12) months from the date of original installation, whether or not actual use begins on that date, or twelve (12) months from the date of shipment by SCP or its licensees, whichever occurs first.

"RockHardscP Product" shall mean any precast polymer composite or polymer concrete product, or any New Structure.

2. **Claim Notice:** All claims under the warranty provided herein shall be made in writing to RockHardscP or its licensees within sixty (60) days from the date of discovery of the defect or condition. With its written claim, Customer shall include, if possible, photos of the RockHardscP Product, showing in as much detail as possible, any product failure or covered condition, as well as a copy of this Warranty. Failure to notify RockHardscP or its licensees in writing within sixty (60) days from the date of discovery of the failure or covered condition voids RockHardscP's or licensee's obligations hereunder.

3. **Inspection:** RockHardscP or its licensees shall have the right to inspect, at its own expense, any RockHardscP Product upon which a written claim against this warranty is made on site within sixty (60) days of receiving the written claim. RockHardscP or its licensees shall have the right to verify, at its own expense, the failure or covered condition identified in the written notification. This warranty shall be void if RockHardscP or its licensees is not provided with the opportunity to inspect and verify the RockHardscP Product within the time frame established herein. Owner shall answer, in full, any questions asked by RockHardscP or its licensees, and shall reveal without prompting whether any use of the RockHardscP Product beyond Normal Operating Conditions has occurred.

4. **Remedies:** At its sole discretion, RockHardscP or its licensees will repair or replace any RockHardscP Product covered under this warranty at no cost to customer. At its sole discretion, RockHardscP or its licensees will also (a) pay up to \$2,500 towards labor and materials for re-installing a repaired or replacement RockHardscP Product; or (b) re-install a repaired or replacement RockHardscP Product at its own expense.

5. **Exclusions:** RockHardscP or its licensees' obligations under this warranty and the sole remedy for its breach are limited to the remedies set forth above. This warranty does not apply to failures or covered conditions caused by anything other than what is explicitly set forth above, and any basis for any claim under this warranty is hereby excluded from coverage except as provided above, and the following specific

exclusions set forth below are included by way of example and not by way of limitation.

This warranty does not cover damage to any RockHardscP Product caused by leaks, infiltration, or exfiltration.

This warranty does not cover product failure of any RockHardscP Product for any wrongly installed, or failed, joint attachments (or joint wrap), or backfill.

This warranty does not cover damage to any RockHardscP Product that occurs during installation, improper installation, handling, transportation, backfilling, mishandling, misuse, accident, neglect, improper care, intentional acts, etc. For example, and not by way of limitation, any lifting or handling of the RockHardscP Product that is not performed in accordance with RockHardscP lifting and handling procedures, is not covered under this warranty. Improper lifting or handling can cause injury or death.

This warranty does not cover any RockHardscP Product subject to unauthorized modifications. This warranty does not cover any RockHardscP Product installed or used outside of the product specifications as established by RockHardscP or its licensees.

This warranty does not cover any RockHardscP Product that is not installed. Customer shall include, if possible, photos of the RockHardscP Product.

This warranty does not cover damage to RockHardscP Product caused by fire, flood, earthquake, natural disasters, or other acts of God, defective subsurface (ground shifting or collapse) or engineering.

RockHardscP or its licensees shall not be liable for any loss, cost, damage, or expense of any kind arising out of a breach of the warranty.

This warranty does not cover any RockHardscP Product subject to any loading applied to the product beyond Normal Operating Conditions, nor shall this warranty cover any RockHardscP Product subject to any treatment in excess of Initial Engineering Parameters.

RockHardscP or its licensees shall not be liable for any incidental, consequential, exemplary, special, or punitive damages, nor for any loss of revenue, profit or use, arising out of a breach of this warranty or in connection with the sale, maintenance, use, installation, operation or repair of any RockHardscP Product. RockHardscP or its licensees shall not be liable for any incidental, consequential, exemplary, special, or punitive damages that are allegedly caused, or caused in fact, by any failure of any RockHardscP Product.

In no event will RockHardscP or its licensees be liable for any amount greater than the purchase price of a RockHardscP Product.

Exclusive Warranty: THIS WARRANTY IS THE SOLE AND EXCLUSIVE WARRANTY FOR ANY ROCKHARDSCP PRODUCT, AND IS IN LIEU OF ALL OTHER EXPRESS AND IMPLIED WARRANTIES. SCP SPECIFICALLY DISCLAIM ALL OTHER EXPRESS AND IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, ALL IMPLIED

WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. No person or entity is authorized to bind RockHardscP to any other warranty, obligations, or liability for any RockHardscP Product. Installation, operation, or use of the RockHardscP Product for which this warranty is issued shall constitute acceptance of the terms hereof.