

SUBMITTAL



Submittal number	006.0	Date	01/06/2021
Project	TRAILS AT CROWFOOT F9	6454 N. Crowfoot Valley Road Parker, CO	
Project number	202103		
Spec section			
Subsection		Status	Open
Current action	Submitted	Ball in court	
Topic	Storm Sewer Manholes		

Submitter	MICHAEL TOMAS SNYDER
Reviewer	
Cc	

Date submitted	01/06/2021	Submission due date	01/06/2021
Released for review	01/06/2021	Review due date	01/13/2021
Date returned		Required on site date	
Date closed			

Notes

Please see attached JBS Transmittal A-004 for Storm Sewer Manholes



LETTER OF TRANSMITTAL

JBS PIPELINE CONTRACTORS

8600 Verbena St.
Commerce City, CO 80022
Office 303-289-4355
Fax 303-289-4353

ISSUED TO:

Owner ATTN: Con Cockrum and Mike Snyder

DATE: 12/16/20

TRANSMITTAL NO.: A-004

REGARDING:

Project JBS Job No 0245

We are issuing you under separate cover the following (via):

Email

- Blue Prints
- Submittals
- Change Order
- Request for Information
- Copy of a letter
- Shop Drawings

#	Copies	Item Dated	Item #	Description
	1-Electronic		A-004	Storm Sewer Manholes

- For your bid
- For Approval
- As Requested
- Returned for Correction
- For Review and Comment
- For Pricing

Prints are loaned to you and are to be returned to us by: Date: _____

Bids are due on or before: Date: _____

COMMENTS

CC: _____

Amie Parent

Amie Parent
JBS Pipeline Contractors



303-618-9241 – pmartin@eagleprecastconcrete.com

Eagle Precast, Inc.

29378 Hwy 52, Keenesburg, CO 80643

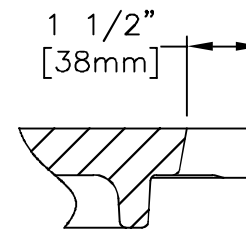
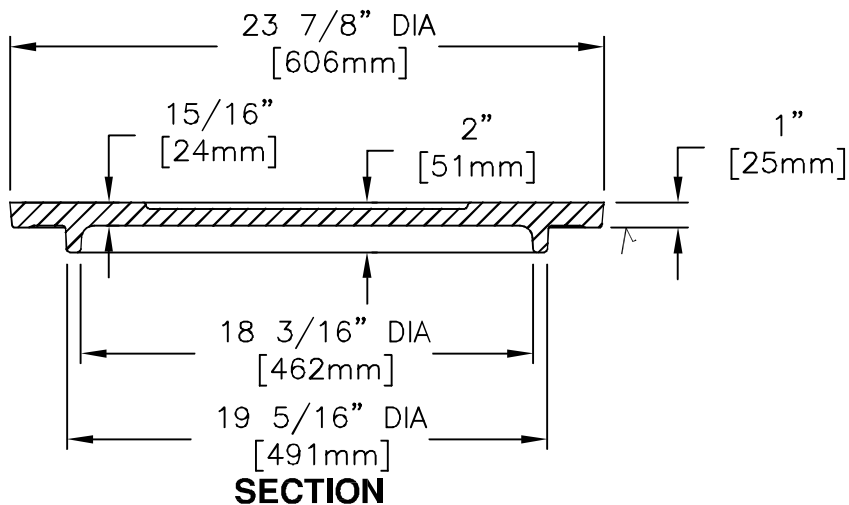
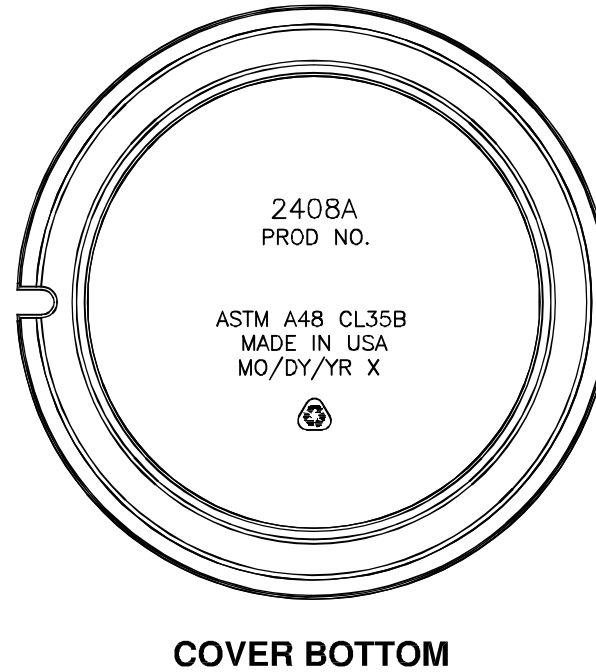
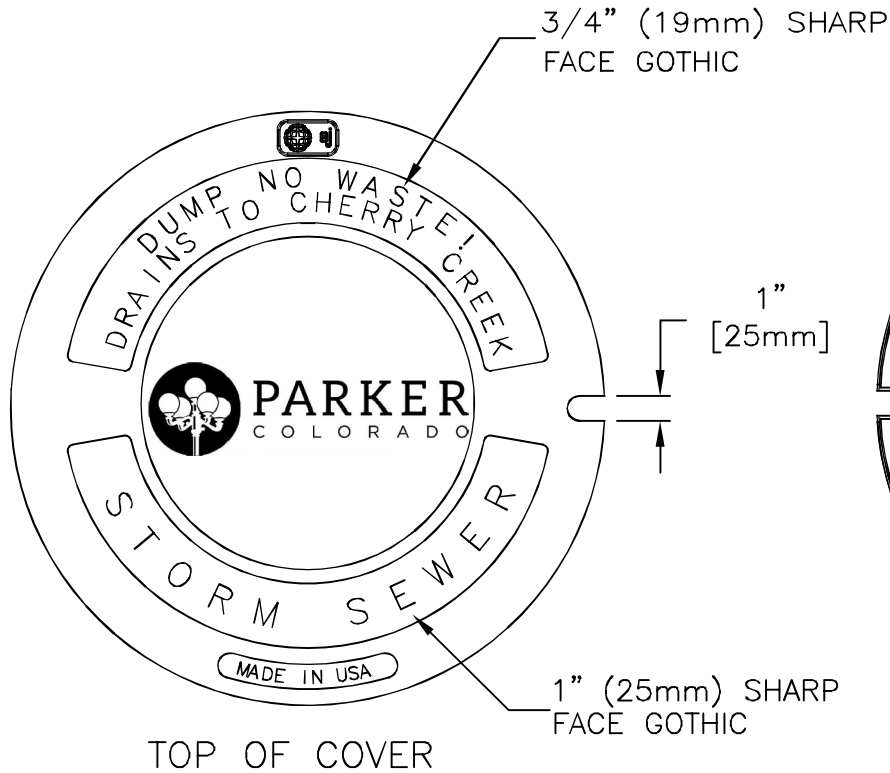
5,000 PSI CONCRETE MIX DESIGN

MIXTURE PROPORTIONS:

MATERIAL	WEIGHT	UNITS
Portland Cement	650	lbs./yd
Flyash	0	lbs./yd
Water	32	Gallons
Coarse Agg.	1445	lbs./yd
Fine Agg.	1510	lbs./yd
Fibers	0	lbs./yd
Color Pigments	0	lbs./yd

ADMIXTURES	DOSAGE		TRADE NAME
Air Entraining	6	oz/yd	AEA-92
High Range WR	45	oz/yd	Ultra 209
Accelerator	80	oz/yd	Accelguard G3

2408A Cover



Product Number

00240849

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- / Designates Machined Surface

Certification

- ASTM A48
-
-
- Country of Origin: USA

Drawing Revision

- 9/28/2016 Designer: MAH
- 9/29/2016 Revised By: MAH

Disclaimer

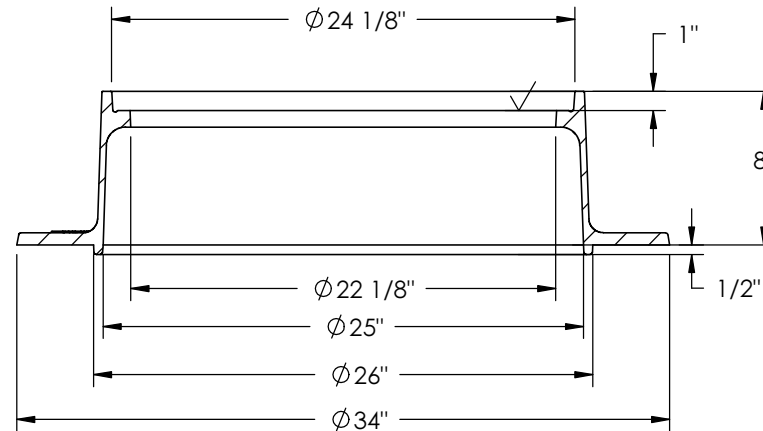
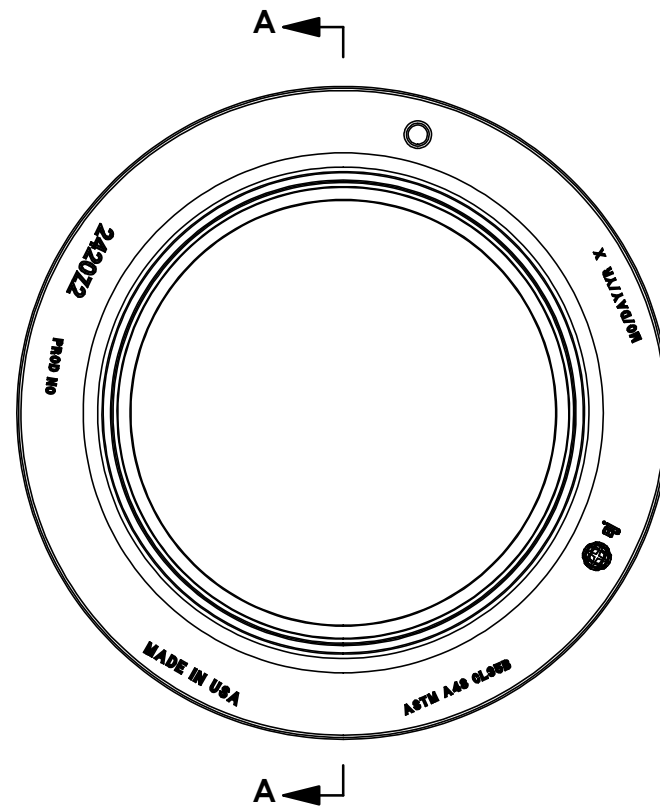
Weights (lbs./kg) dimensions (inches/mm) and drawings provided for your guidance. We reserve the right to modify specifications without prior notice.

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Contact

800 626 4653
ejco.com

2420Z2 Frame



SECTION A-A
SCALE 1 : 10

Product Number

00242013

Design Features

- Materials
Gray Iron (CL35B)
- Design Load
Heavy Duty
- Open Area
n/a
- Coating
Undipped
- √ Designates Machined Surface

Certification

- ASTM A48
-
-
- Country of Origin: USA

Drawing Revision

09/09/2008 Designer: DEW
10/29/2014 Revised By: DJH

Disclaimer

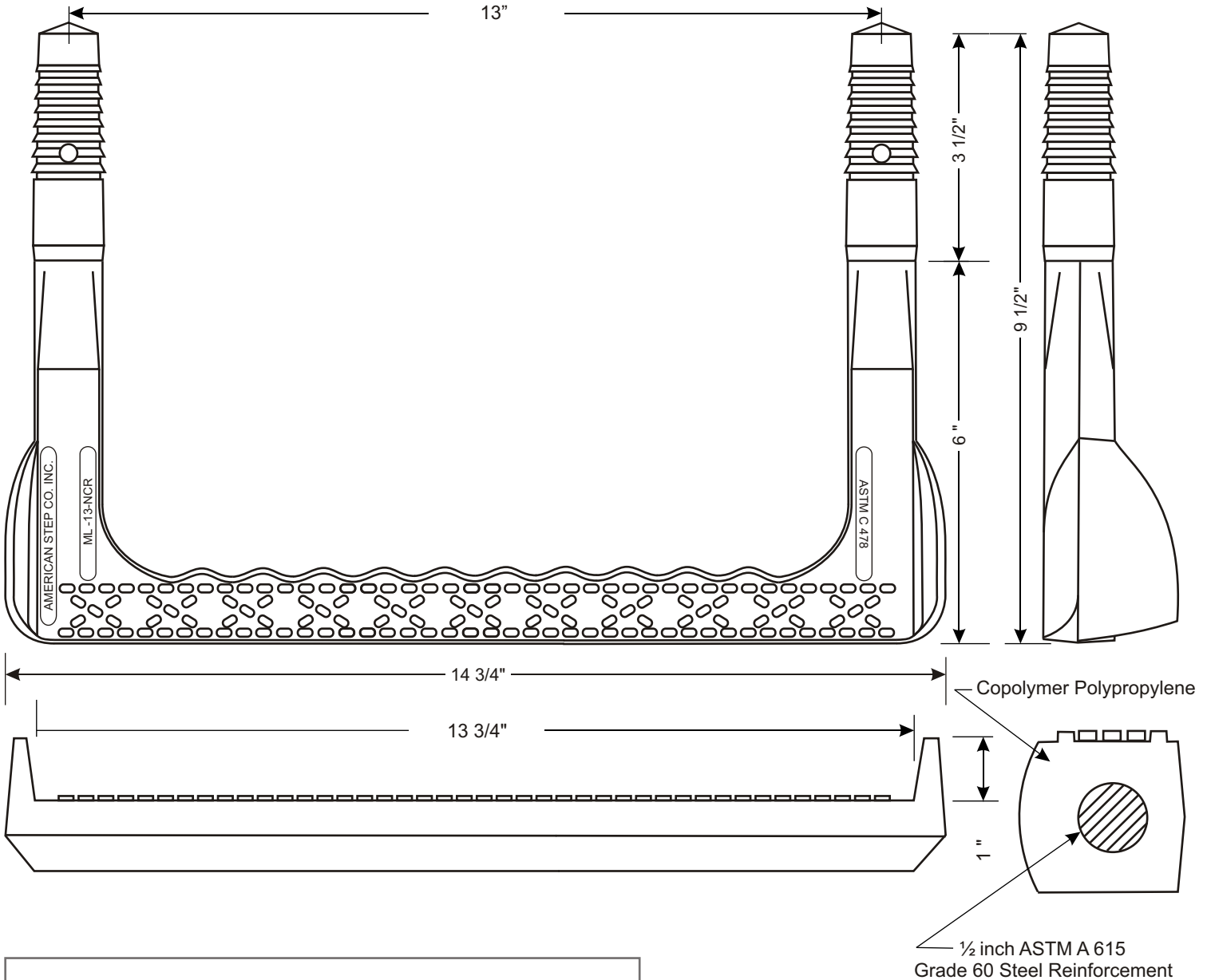
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Contact

800 626 4653
ejco.com

ML-13-NCR



ML-13-NCR

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

Preformed Holes

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

Drilled Holes

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

Drive step with sledge hammer until both legs are completely seated

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



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

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

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

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!

© 2013 Concrete Sealants, Inc.

Concrete Sealants, Inc. 9325 State Route 201 ■ Tipp City, OH 45371 ■ P.O. Box 176 ■ New Carlisle, OH 45344
P. 937.845.8776 **F.** 937.845.3587 **Toll Free** 800.332.7325 ■ www.conseal.com



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.

Don't Just Seal It, ConSeal It!

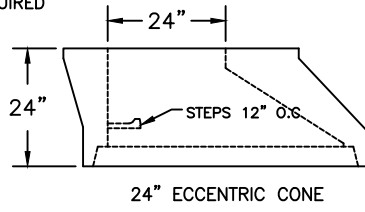
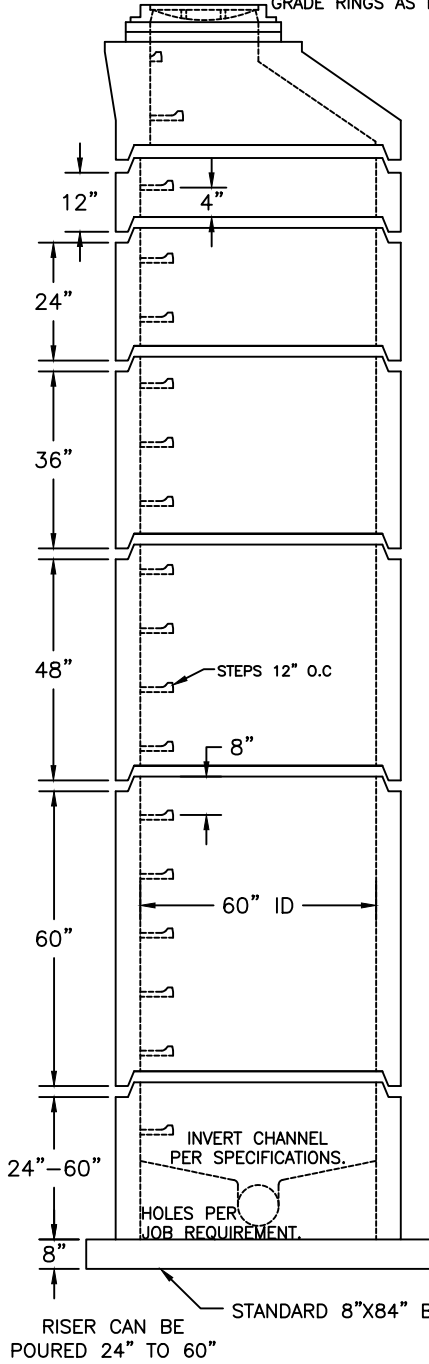
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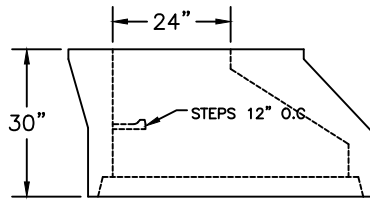


CAST IRON RING AND COVER

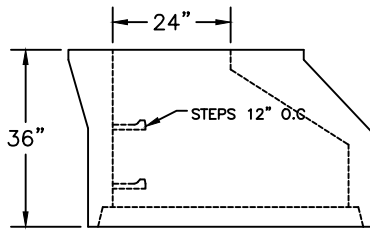
GRADE RINGS AS REQUIRED



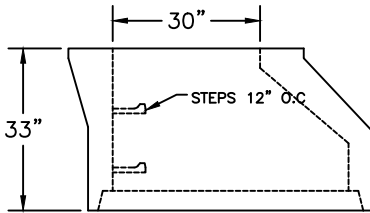
24" ECCENTRIC CONE



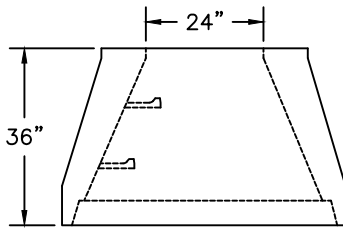
30" ECCENTRIC CONE



36" ECCENTRIC CONE



33" ECCENTRIC CONE

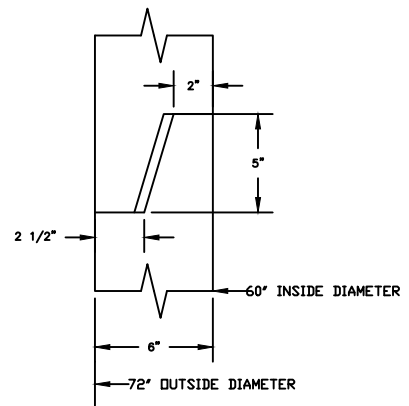
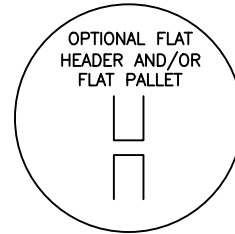


36" CONCENTRIC CONE

SUBMITTAL DATA:

MEETS ASTM C478
MEETS AASHTO H-20 LOADING

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



JOINT DETAIL

STANDARD SUBMITTAL SHEET
60" ID MANHOLE, 6" WALLS

NOTES:
TYPE I/II CEMENT. $f'_c = 4,500$ psi
MANUFACTURED per ASTM C478.

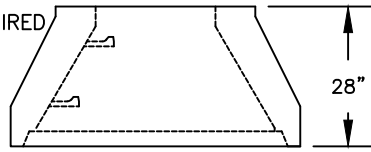
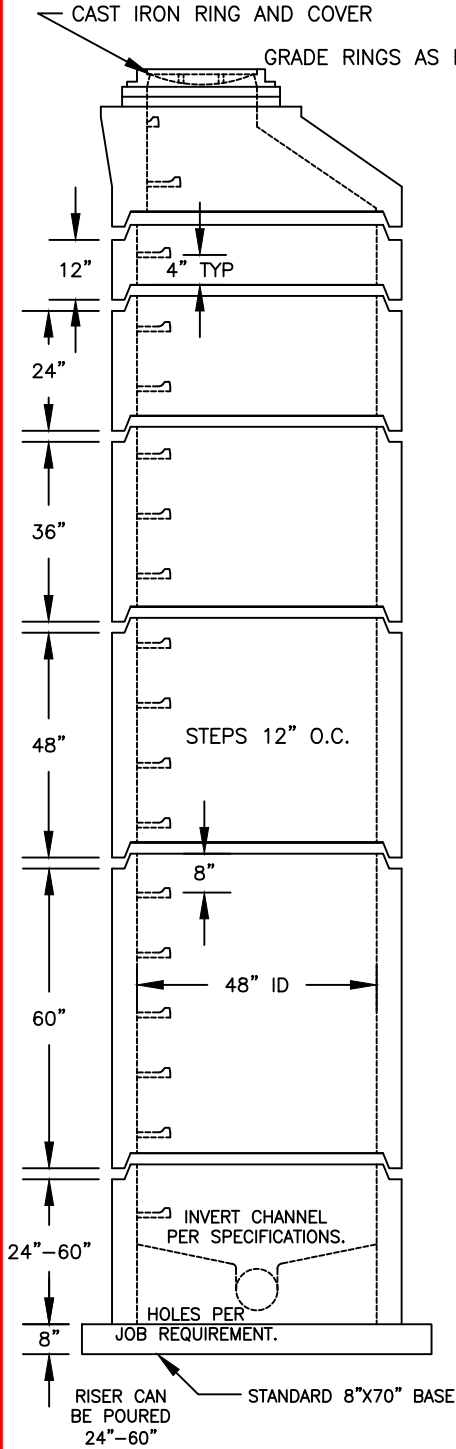


PROJECT:		DATE:	10/1/16
DWG#:		REVISED:	
DRAWN BY:		REVISED:	
CHECKED BY:		REVISED:	
PRODUCT:	60" ID SUBMITTAL SHEET		

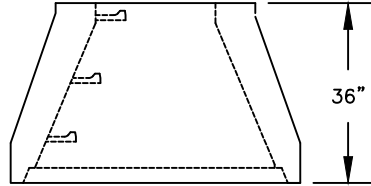
SUBMITTAL DATA:

MEETS ASTM C478
MEETS AASHTO H-20 LOADING

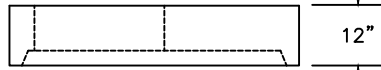
- STORM MANHOLE
- SANITARY MANHOLE
- BASE SIZE
- CAST INVERT CHANNEL
- CONE
- FLAT TOP
- RING & COVER
- DAMP PROOF
- PRIMED JOINTS
- JOINT SEALER
- JOINT WRAP



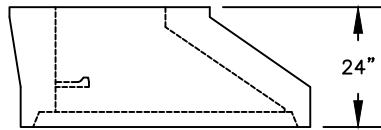
28" CONCENTRIC CONE



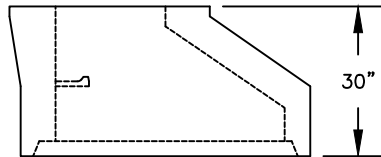
36" CONCENTRIC CONE



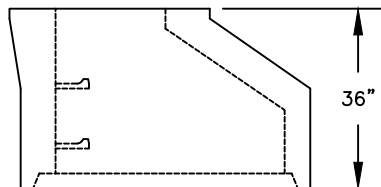
H-20 FLAT LID



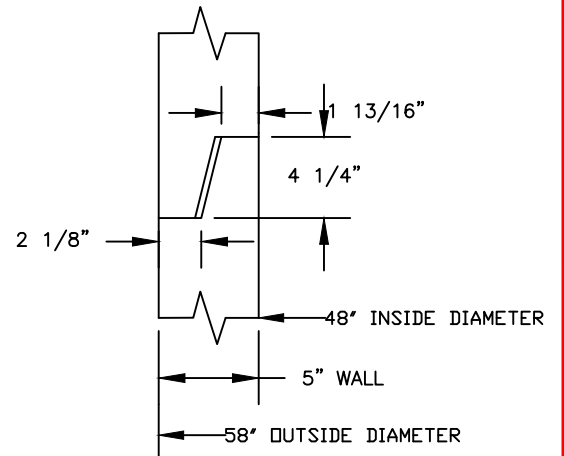
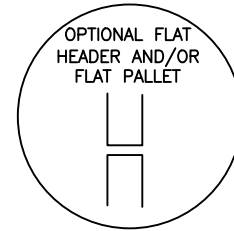
24" ECCENTRIC CONE



30" ECCENTRIC CONE



36" ECCENTRIC CONE



JOINT DETAIL

STANDARD SUBMITTAL SHEET
48" ID, 5" WALL

NOTES:
TYPE I/II CEMENT. $f'c = 4,500$ psi.
MANUFACTURED per ASTM C478.



PROJECT:		DATE:	10/1/16
DWG#:		REVISED:	
DRAWN BY:		REVISED:	
CHECKED BY:		REVISED:	
PRODUCT:	48"ID SUBMITTAL SHEET		



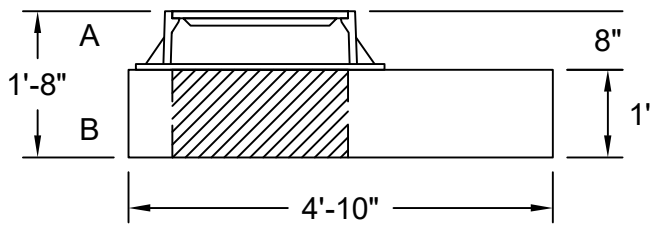
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 40
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	31.08	CASTING:	+ 0.67
INVERT IN:	- 26.52	ADJUSTMENT:	+ 1.00
PIPE SIZE:	- 2.00	CONE/LID:	+ 1.00
PIPE WALL:	- 0.25	RISERS:	+ 1.00
POURING RING:	- 0.33	DESIGN DEPTH:	= 1.67
PRECAST HT:	= 1.98		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

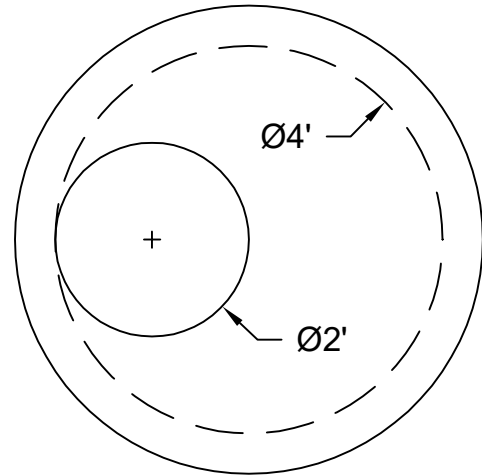
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



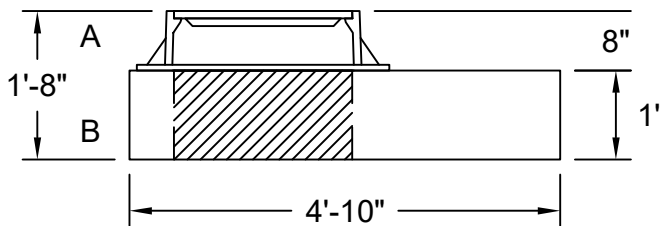
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 41
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	18.88	CASTING:	+ 0.67
INVERT IN:	- 14.58	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 2.00	CONE/LID:	+ 1.00
PIPE WALL:	- 0.25	RISERS:	+ 0.00
POURING RING:	- 0.33		
PRECAST HT:	= 1.72	DESIGN DEPTH:	= 1.67

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

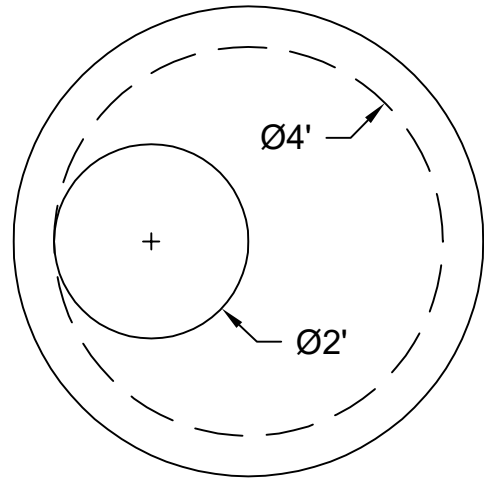
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



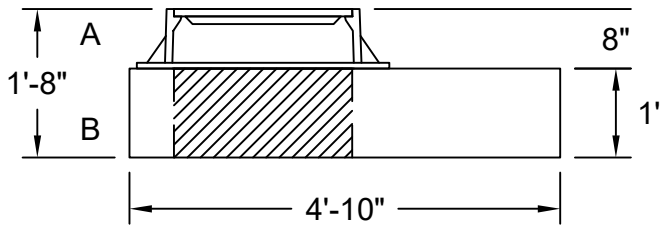
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 42
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	6001.13	CASTING:	+ 0.67
INVERT IN:	- 5996.41	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 2.00	CONE/LID:	+ 1.00
PIPE WALL:	- 0.25	RISERS:	+ 0.00
POURING RING:	- 0.33		
PRECAST HT:	= 2.14	DESIGN DEPTH:	= 1.67

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

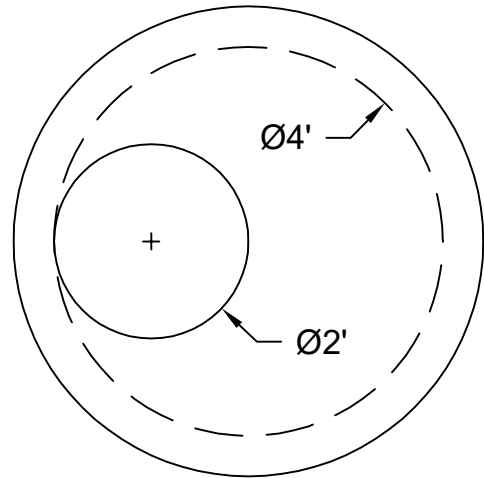
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



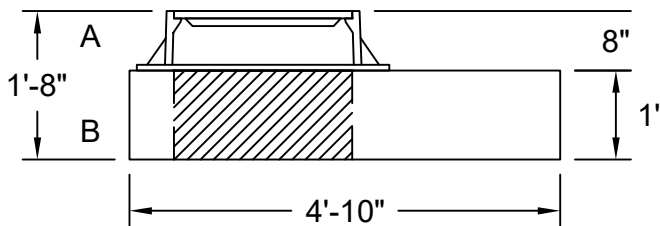
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 43
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	93.65	CASTING:	+ 0.67
INVERT IN:	- 89.58	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 2.00	CONE/LID:	+ 1.00
PIPE WALL:	- 0.25	RISERS:	+ 0.00
POURING RING:	- 0.33		
PRECAST HT:	= 1.49	DESIGN DEPTH:	= 1.67

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

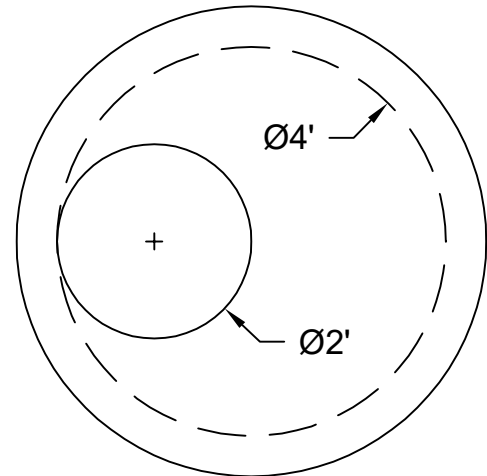
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 44
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	91.38	CASTING:	+ 0.67
INVERT IN: -	87.92	ADJUSTMENT:	+ 0.67
PIPE SIZE: -	2.00	CONE/LID:	+ 0.00
PIPE WALL: -	0.25	RISERS:	+ 0.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.34
PRECAST HT: =	0.88		

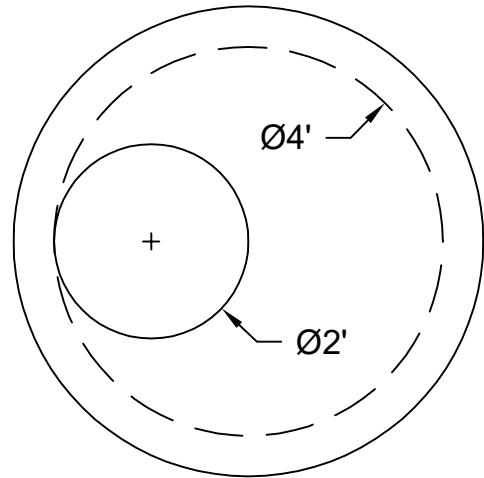
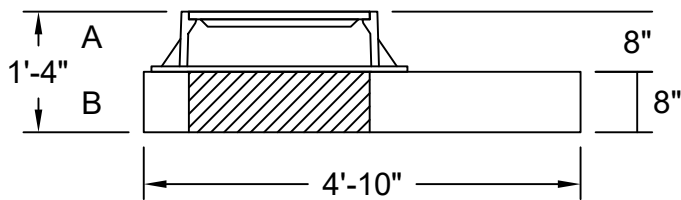
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 45
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	89.97	CASTING:	+ 0.67
INVERT IN: -	85.95	ADJUSTMENT:	+ 0.67
PIPE SIZE: -	2.00	CONE/LID:	+ 0.00
PIPE WALL: -	0.25	RISERS:	+ 0.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.34
PRECAST HT: =	1.44		

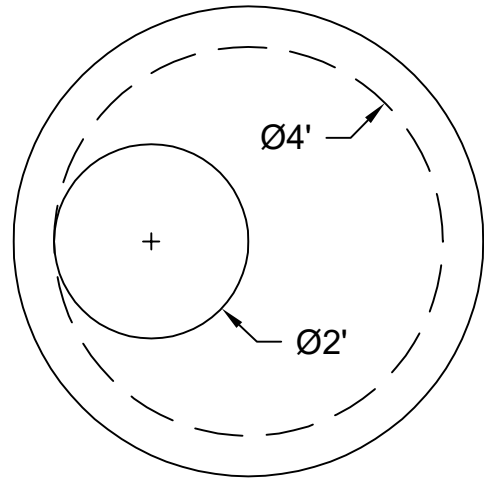
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

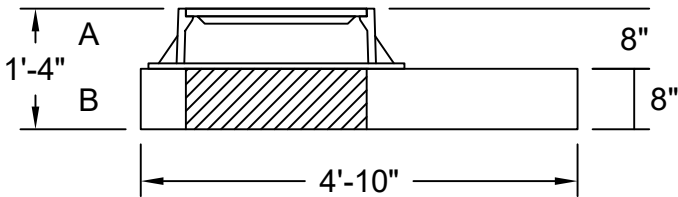
I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS





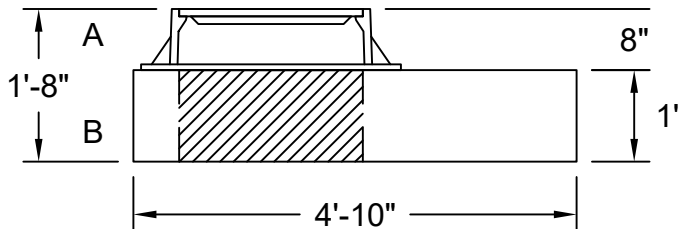
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 46
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	88.63	CASTING:	+ 0.67
INVERT IN: -	83.60	ADJUSTMENT:	+ 1.00
PIPE SIZE: -	2.00	RISERS:	+ 1.67
PIPE WALL: -	0.25	DESIGN DEPTH: =	1.67
POURING RING: -	0.33		
PRECAST HT: =	2.45		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

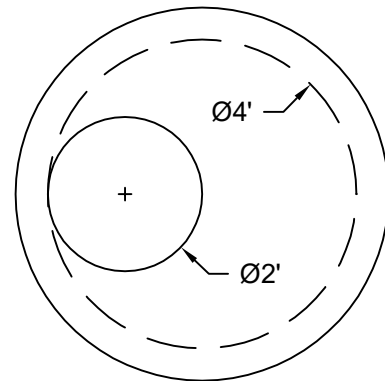
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 47
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	88.63	CASTING:	+ 0.67
INVERT IN: -	83.60	ADJUSTMENT:	+ 1.00
PIPE SIZE: -	2.00	CONE/LID:	+ 1.00
PIPE WALL: -	0.25	RISERS:	+ 1.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.67
PRECAST HT: =	2.45		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

NO PROFILE INFO
 PROVIDED.

OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:

BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



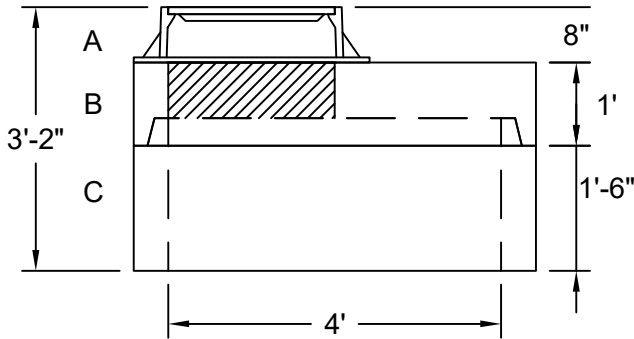
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 48
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	86.93	CASTING:	+ 0.67
INVERT IN: -	80.71	ADJUSTMENT:	+ 1.00
PIPE SIZE: -	2.00	RISERS:	+ 1.50
PIPE WALL: -	0.25	DESIGN DEPTH:	= 3.17
POURING RING: -	0.33		
PRECAST HT: =	3.64		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

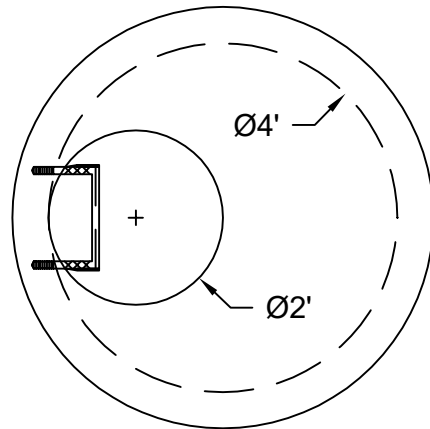
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID FLAT-TOP LID	1,660	LBS
C	48" ID X 18" FB RISER	1,305	LBS
D			LBS
E			LBS
F			LBS
		2,965	LBS



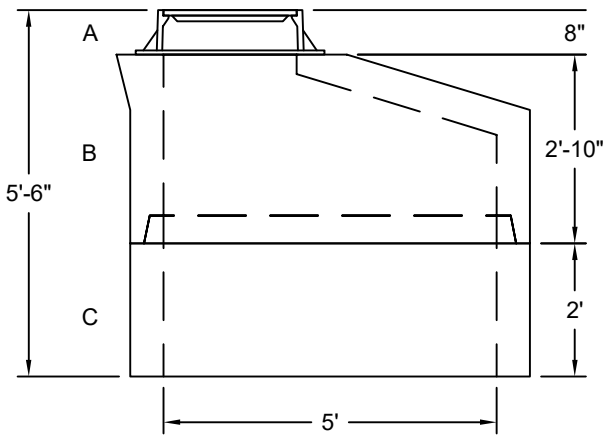
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 49
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	85.27	CASTING:	+ 0.67
INVERT IN: -	77.17	ADJUSTMENT:	+ 2.83
PIPE SIZE: -	2.00	RISERS:	+ 2.00
PIPE WALL: -	0.25	DESIGN DEPTH: =	5.50
POURING RING: -	0.33		
PRECAST HT: =	5.52		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

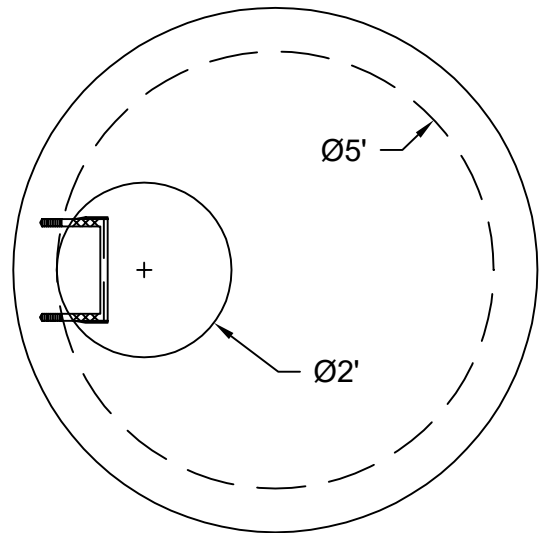
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 34" ECC CONE	2,600	LBS
C	60" ID X 24" FB RISER	2,595	LBS
D			LBS
E			LBS
F			LBS
		5,195	LBS



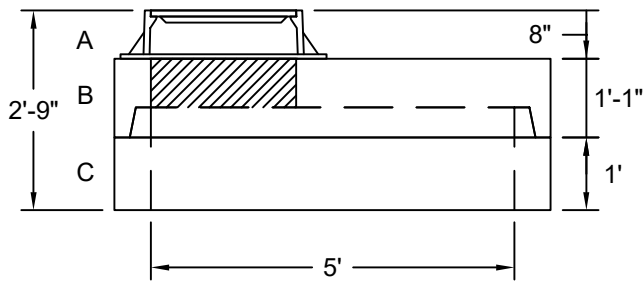
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 52
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	88.38	CASTING:	+ 0.67
INVERT IN: -	82.01	ADJUSTMENT:	+ 1.08
PIPE SIZE: -	3.00	RISERS:	+ 1.00
PIPE WALL: -	0.33	DESIGN DEPTH: =	2.75
POURING RING: -	0.33		
PRECAST HT: =	2.71		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

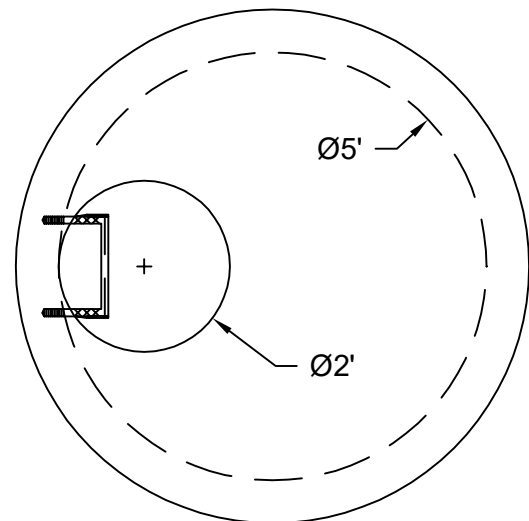
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID FLAT-TOP LID	2,765	LBS
C	60" ID X 12" FB RISER	1,300	LBS
D			LBS
E			LBS
F			LBS
		4,065	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 53
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	89.19	CASTING:	+ 0.67
INVERT IN: -	83.16	ADJUSTMENT:	+ 0.00
PIPE SIZE: -	3.00	CONE/LID:	+ 1.00
PIPE WALL: -	0.33	RISERS:	+ 0.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.67
PRECAST HT: =	2.37		

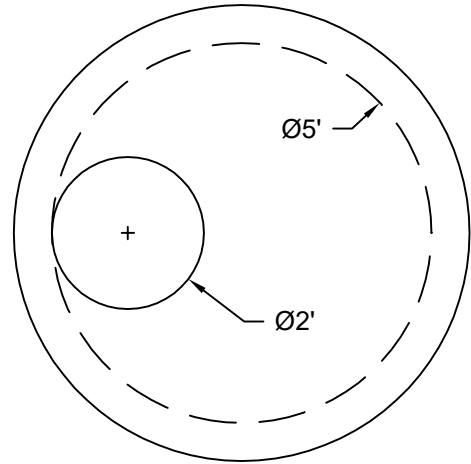
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

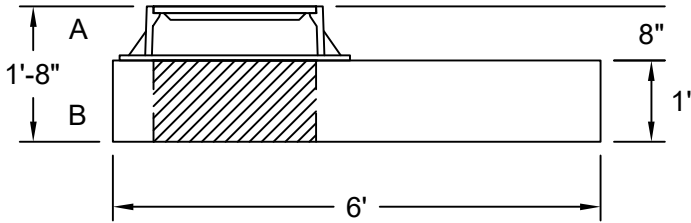
I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 12" FB LID	3,775	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		3,775	LBS





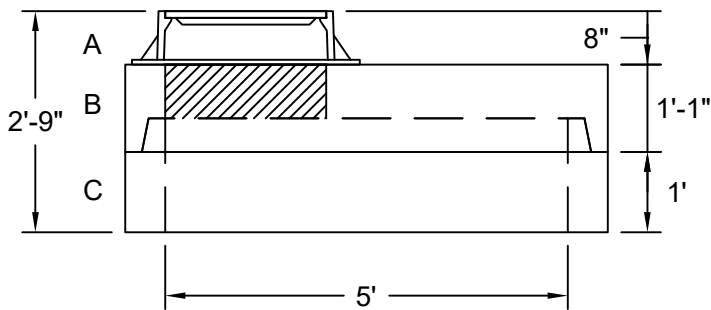
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 54
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	94.93	CASTING:	+ 0.67
INVERT IN:	- 88.45	ADJUSTMENT:	+ 1.08
PIPE SIZE:	- 3.00	RISERS:	+ 1.00
PIPE WALL:	- 0.33	DESIGN DEPTH:	= 2.75
POURING RING:	- 0.33		
PRECAST HT:	= 2.82		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

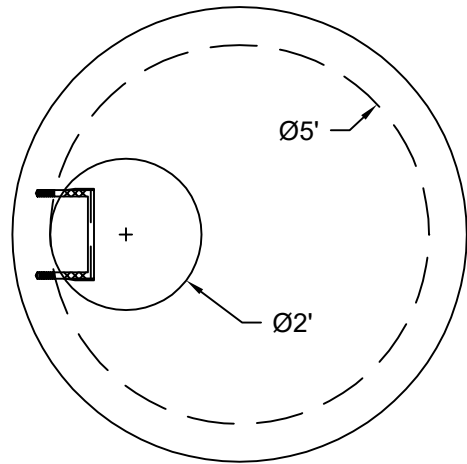
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID FLAT-TOP LID	2,765	LBS
C	60" ID X 12" FB RISER	1,300	LBS
D			LBS
E			LBS
F			LBS
		4,065	LBS



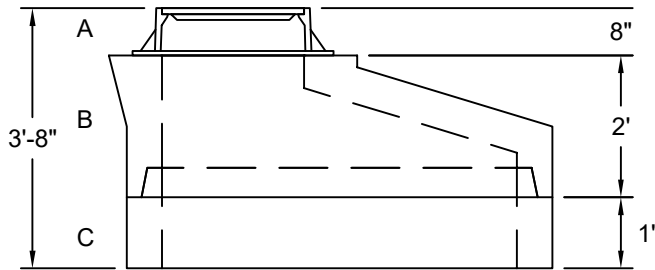
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 55
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/10/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	6006.09	CASTING:	+ 0.67
INVERT IN:	- 5998.50	ADJUSTMENT:	+ 2.00
PIPE SIZE:	- 3.00	RISERS:	+ 1.00
PIPE WALL:	- 0.33	DESIGN DEPTH:	= 3.67
POURING RING:	- 0.33		
PRECAST HT:	= 3.93		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

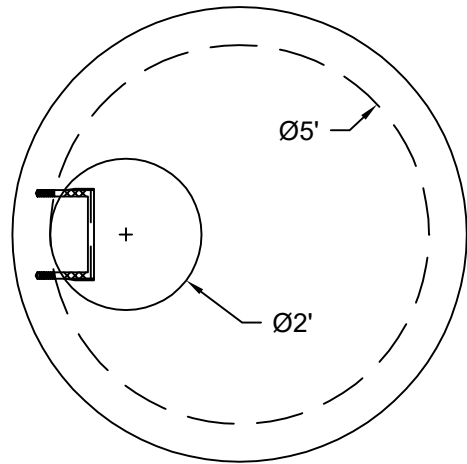
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 24" ECC CONE	2,400	LBS
C	60" ID X 12" FB RISER	1,300	LBS
D			LBS
E			LBS
F			LBS
		3,700	LBS



STRUCTURE ID: 56
JOB NAME: CROWFOOT
CONTRACTOR: JBS
JOB LOCATION: PARKER
SPECIFICATION: PARKER
DATE: 2/10/2020

29378 HWY 52, KEENESBURG, CO 80634

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	12.30	CASTING:	+ 0.67
INVERT IN:	- 2.91	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 3.00	CONE/LID:	+ 3.00
PIPE WALL:	- 0.33	RISERS:	+ 2.00
POURING RING:	- 0.33		
PRECAST HT:	= 5.73	DESIGN DEPTH:	= 5.67

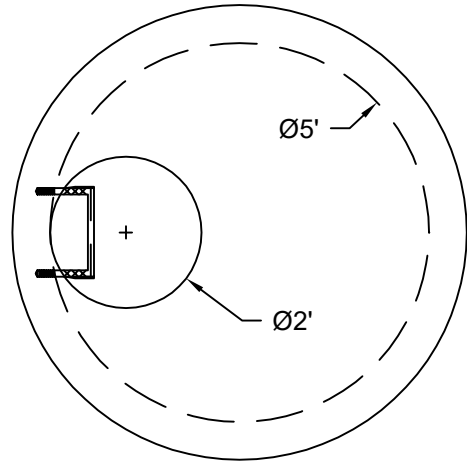
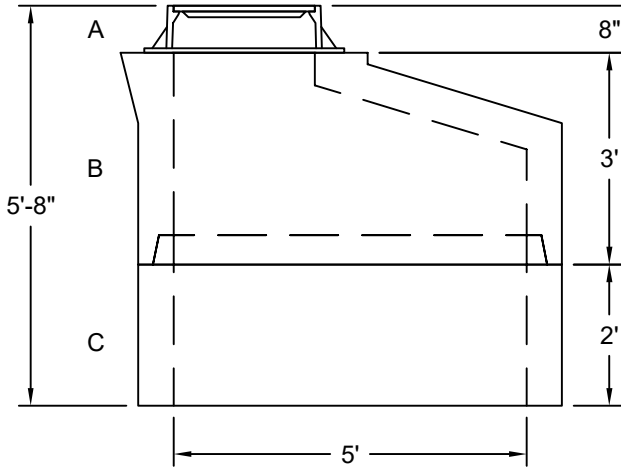
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 36" ECC CONE	3,700	LBS
C	60" ID X 24" FB RISER	2,595	LBS
D			LBS
E			LBS
F			LBS
		6,295	LBS



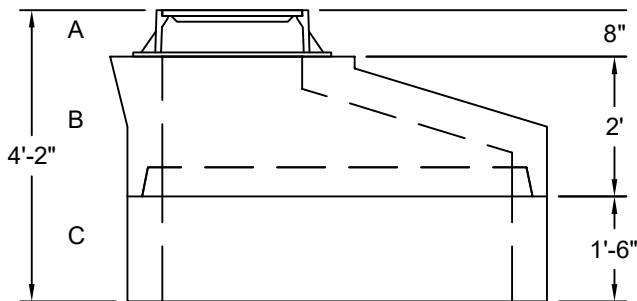
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 57
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/10/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	12.17	CASTING:	+ 0.67
INVERT IN:	- 3.87	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 3.00	CONE/LID:	+ 2.00
PIPE WALL:	- 0.33	RISERS:	+ 1.50
POURING RING:	- 0.33	DESIGN DEPTH:	= 4.17
PRECAST HT:	= 4.64		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

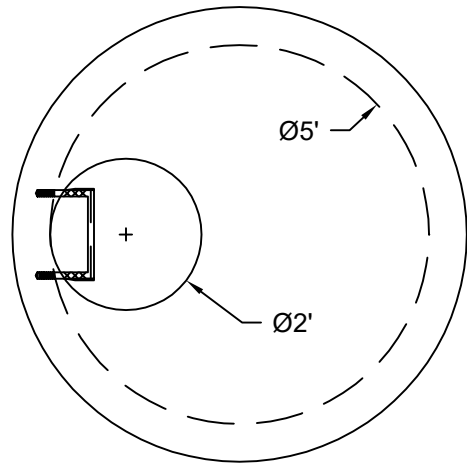
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 24" ECC CONE	2,400	LBS
C	60" ID X 18" FB RISER	1,950	LBS
D			LBS
E			LBS
F			LBS
		4,350	LBS



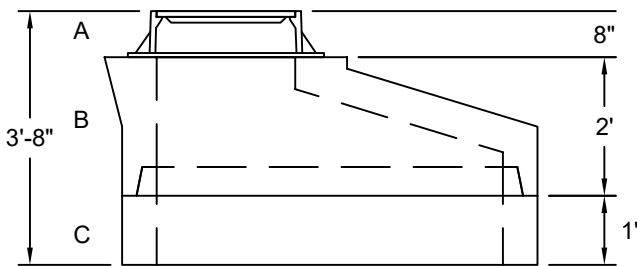
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 58
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/10/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	16.86	CASTING:	+ 0.67
INVERT IN:	- 9.32	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 3.00	CONE/LID:	+ 2.00
PIPE WALL:	- 0.33	RISERS:	+ 1.00
POURING RING:	- 0.33		
PRECAST HT:	= 3.88	DESIGN DEPTH:	= 3.67

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

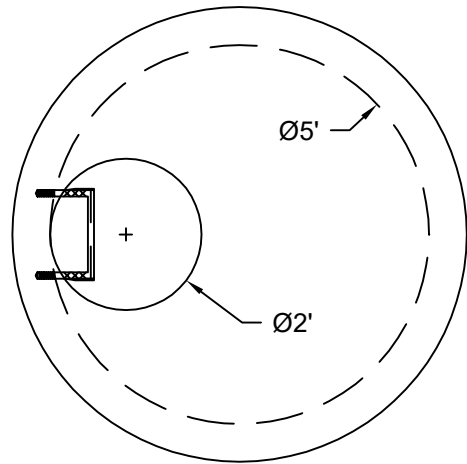
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 24" ECC CONE	2,400	LBS
C	60" ID X 12" FB RISER	1,300	LBS
D			LBS
E			LBS
F			LBS
		3,700	LBS



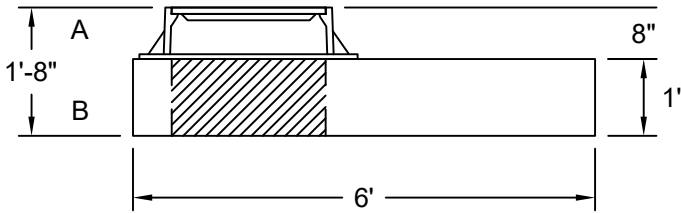
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 59
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/10/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	17.40	CASTING:	+ 0.67
INVERT IN: -	11.41	ADJUSTMENT:	+ 0.00
PIPE SIZE: -	3.00	CONE/LID:	+ 1.00
PIPE WALL: -	0.33	RISERS:	+ 0.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.67
PRECAST HT: =	2.33		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

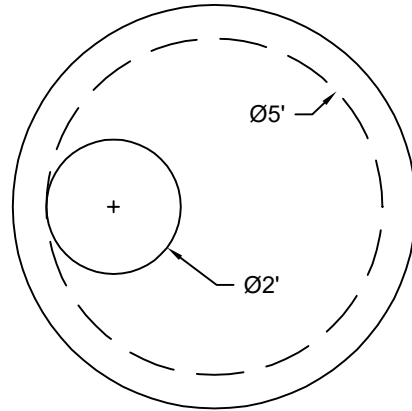
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 12" FB LID	3,775	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		3,775	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 62
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/9/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	28.21	CASTING:	+ 0.67
INVERT IN: -	22.44	ADJUSTMENT:	+ 0.00
PIPE SIZE: -	3.00	CONE/LID:	+ 1.00
PIPE WALL: -	0.33	RISERS:	+ 0.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.67
PRECAST HT: =	2.11		

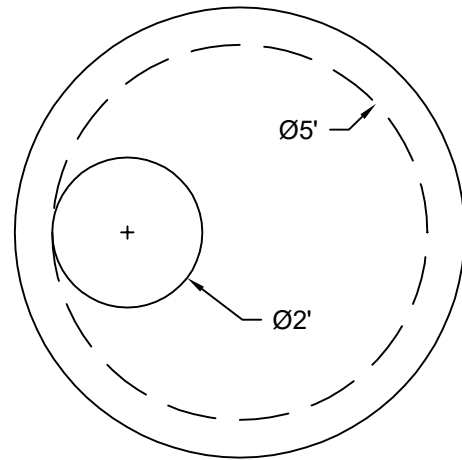
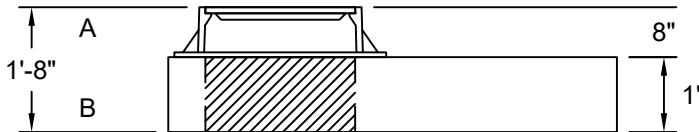
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 12" FB LID	3,775	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		3,775	LBS



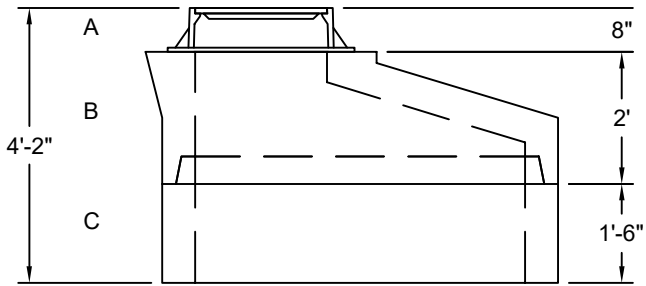
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 63
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/9/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	39.11	CASTING:	+ 0.67
INVERT IN: -	31.10	ADJUSTMENT:	+ 2.00
PIPE SIZE: -	3.00	RISERS:	+ 1.50
PIPE WALL: -	0.33	DESIGN DEPTH: =	4.17
POURING RING: -	0.33		
PRECAST HT: =	4.35		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

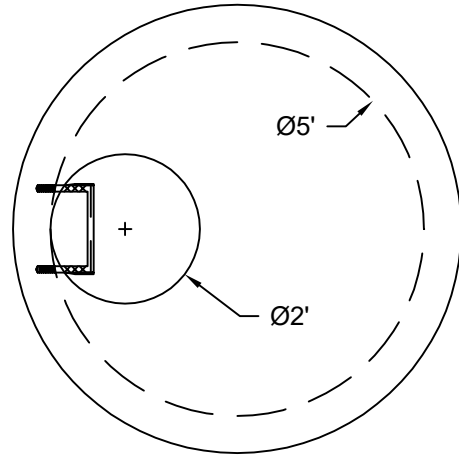
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 24" ECC CONE	2,400	LBS
C	60" ID X 18" FB RISER	1,950	LBS
D			LBS
E			LBS
F			LBS
		4,350	LBS



STRUCTURE ID: 70
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

29378 HWY 52, KEENESBURG, CO 80634

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	79.11	CASTING:	+ 0.67
INVERT IN:	- 75.99	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 1.50	CONE/LID:	+ 0.67
PIPE WALL:	- 0.21	RISERS:	+ 0.00
POURING RING:	- 0.33		
PRECAST HT:	= 1.08	DESIGN DEPTH:	= 1.34

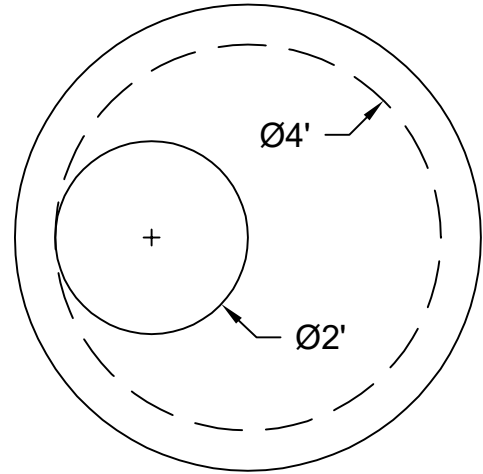
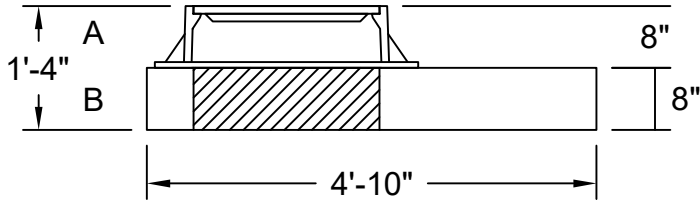
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,524	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,524	LBS



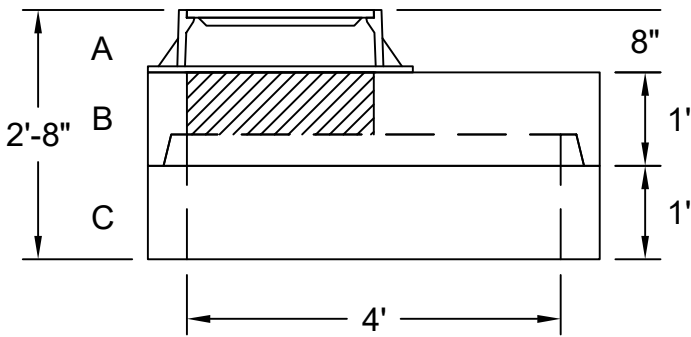
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 71
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	75.57	CASTING:	+ 0.67
INVERT IN: -	70.87	ADJUSTMENT:	+ 1.00
PIPE SIZE: -	1.50	CONE/LID:	+ 1.00
PIPE WALL: -	0.21	RISERS:	+ 1.00
POURING RING: -	0.33	DESIGN DEPTH: =	2.67
PRECAST HT: =	2.66		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

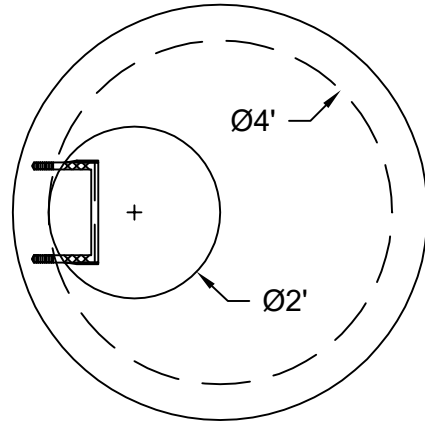
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID FLAT-TOP LID	1,660	LBS
C	48" ID X 12" FB RISER	870	LBS
D			LBS
E			LBS
F			LBS
		2,530	LBS



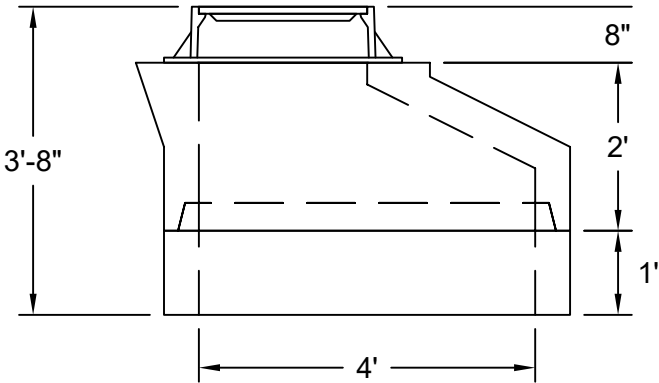
STRUCTURE ID: 79
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/10/2020

29378 HWY 52, KEENESBURG, CO 80634

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	40.73	CASTING:	+ 0.67
INVERT IN:	- 34.83	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 1.50	CONE/LID:	+ 2.00
PIPE WALL:	- 0.21	RISERS:	+ 1.00
POURING RING:	- 0.33		
PRECAST HT:	= 3.86	DESIGN DEPTH:	= 3.67

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

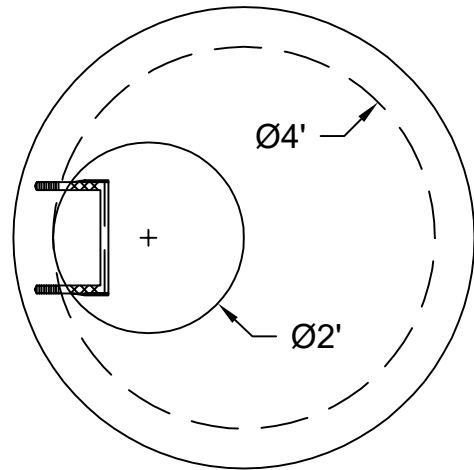
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 24" ECC CONE	1,970	LBS
C	48" ID X 12" FB RISER	870	LBS
D			LBS
E			LBS
F			LBS
		2,840	LBS



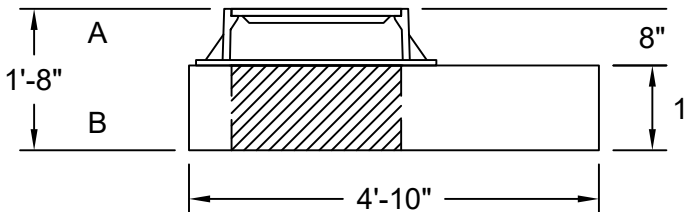
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 90
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/9/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	28.63	CASTING:	+ 0.67
INVERT IN: -	23.84	ADJUSTMENT:	+ 1.00
PIPE SIZE: -	2.00	RISERS:	+ 0.00
PIPE WALL: -	0.25	DESIGN DEPTH: =	1.67
POURING RING: -	0.33		
PRECAST HT: =	2.21		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

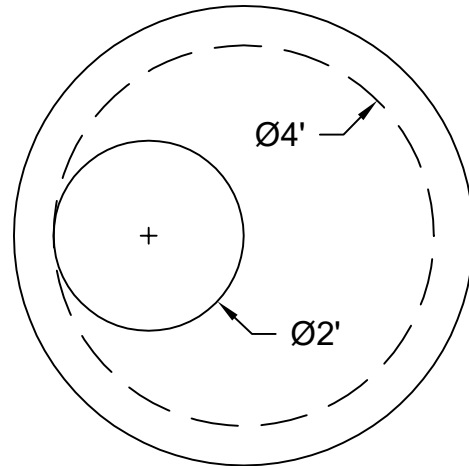
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 96
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	72.13	CASTING:	+ 0.67
INVERT OUT: -	67.29	ADJUSTMENT:	+
PIPE SIZE: -	2.00	CONE/LID:	+
PIPE WALL: -	0.25	RISERS:	+ 1.00
POURING RING: -	0.33	DESIGN DEPTH: =	1.67
PRECAST HT: =	2.26		

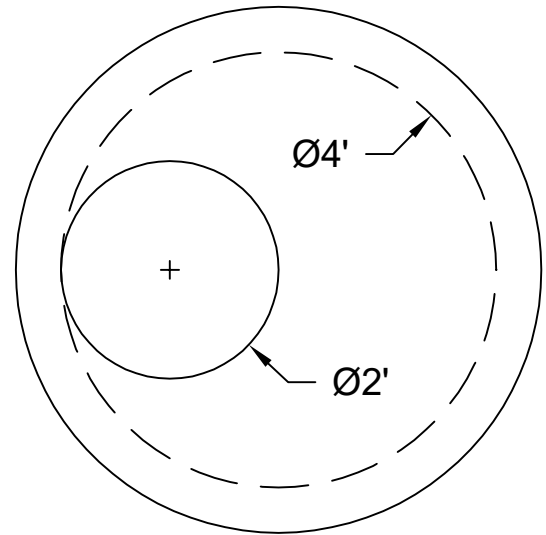
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

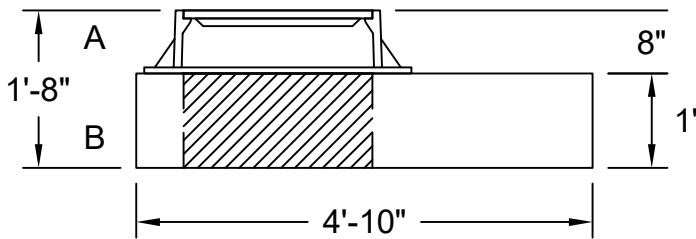
I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS





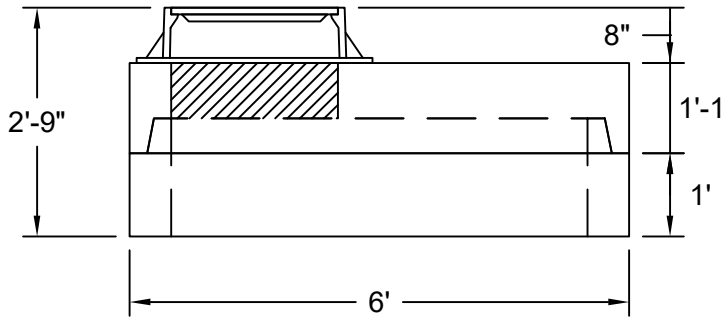
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 105
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/9/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	28.02	CASTING:	+ 0.67
INVERT IN:	- 22.65	ADJUSTMENT:	+ 1.08
PIPE SIZE:	- 2.00	RISERS:	+ 1.00
PIPE WALL:	- 0.25	DESIGN DEPTH:	= 2.75
POURING RING:	- 0.33		
PRECAST HT:	= 2.79		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

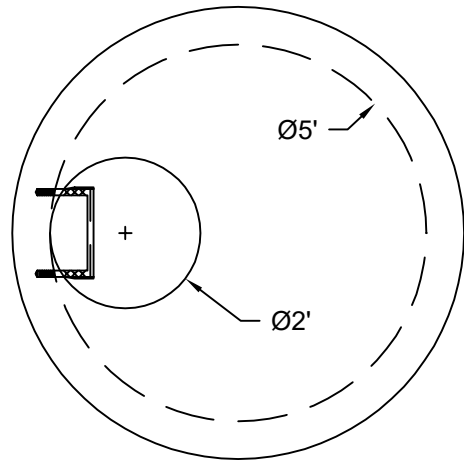
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID FLAT-TOP LID	2,765	LBS
C	60" ID X 12" FB RISER	1,300	LBS
D			LBS
E			LBS
F			LBS
		4,065	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 106
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/9/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	27.26	CASTING:	+ 0.67
INVERT IN:	- 23.07	ADJUSTMENT:	+ 0.67
PIPE SIZE:	- 2.00	CONE/LID:	+ 0.00
PIPE WALL:	- 0.25	RISERS:	+ 0.00
POURING RING:	- 0.33	DESIGN DEPTH:	= 1.34
PRECAST HT:	= 1.61		

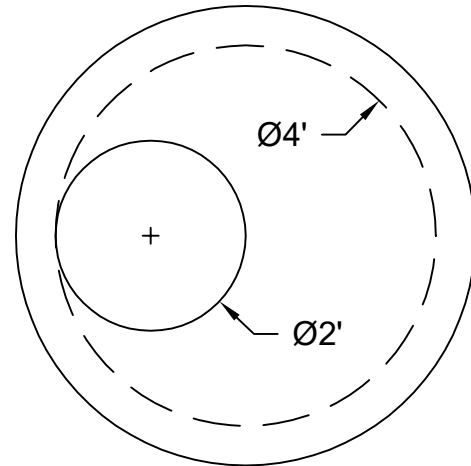
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

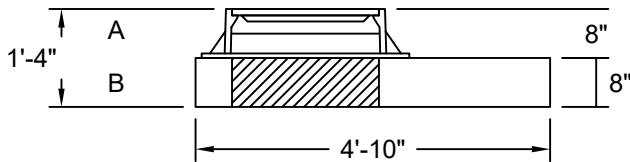
I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS





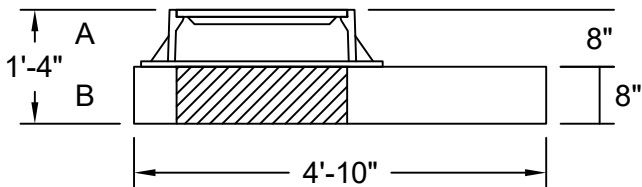
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 153
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	45.71	CASTING:	+ 0.67
INVERT OUT: -	42.58	ADJUSTMENT:	+ 0.67
PIPE SIZE: -	1.50	CONE/LID:	+ 0.67
PIPE WALL: -	0.21	RISERS:	+ 0.67
POURING RING: -	0.33	DESIGN DEPTH: =	1.34
PRECAST HT: =	1.09		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

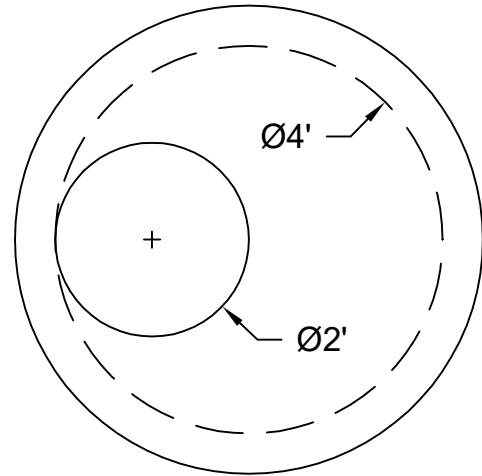
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS



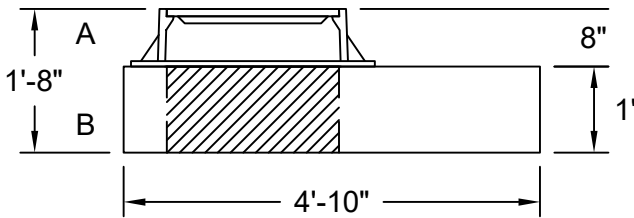
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 154
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	44.01	CASTING:	+ 0.67
INVERT IN:	- 39.56	ADJUSTMENT:	+ 1.00
PIPE SIZE:	- 1.50	RISERS:	+ 1.67
PIPE WALL:	- 0.21	DESIGN DEPTH:	= 1.67
POURING RING:	- 0.33		
PRECAST HT:	= 2.41		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

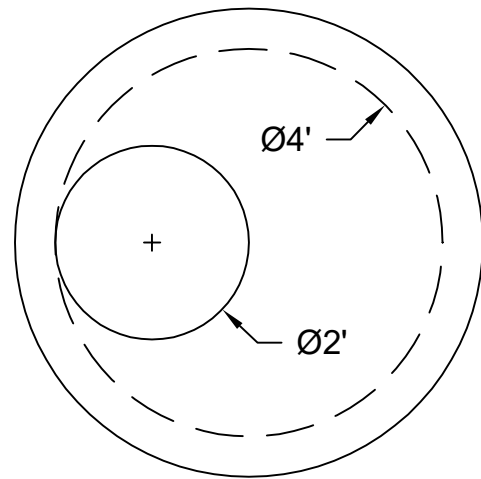
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 12" FB LID	2,035	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,035	LBS



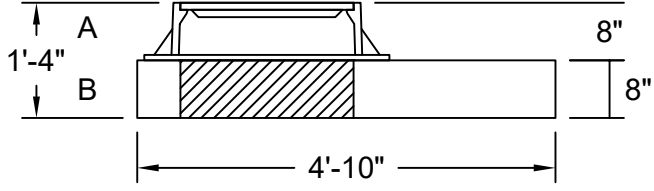
STRUCTURE ID: 155
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

29378 HWY 52, KEENESBURG, CO 80634

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	35.77	CASTING:	+ 0.67
INVERT OUT: -	32.60	ADJUSTMENT:	+ 0.67
PIPE SIZE: -	2.00	CONE/LID:	+ 0.67
PIPE WALL: -	0.25	RISERS:	+ 0.67
POURING RING: -	0.33	DESIGN DEPTH: =	1.34
PRECAST HT: =	0.59		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

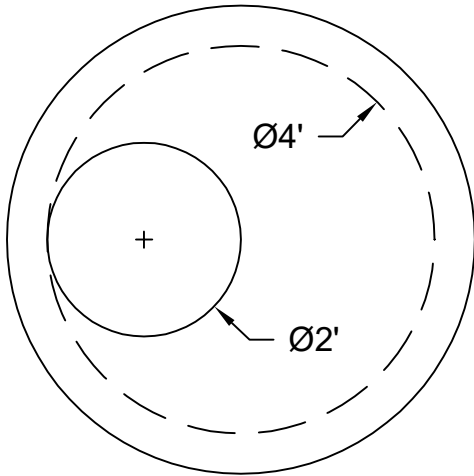
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS



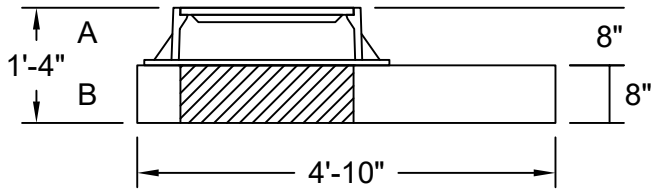
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 156
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	31.76	CASTING:	+ 0.67
INVERT IN: -	27.70	ADJUSTMENT:	+ 0.67
PIPE SIZE: -	2.00	CONE/LID:	+ 0.67
PIPE WALL: -	0.25	RISERS:	+ 0.67
POURING RING: -	0.33	DESIGN DEPTH: =	1.34
PRECAST HT: =	1.48		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

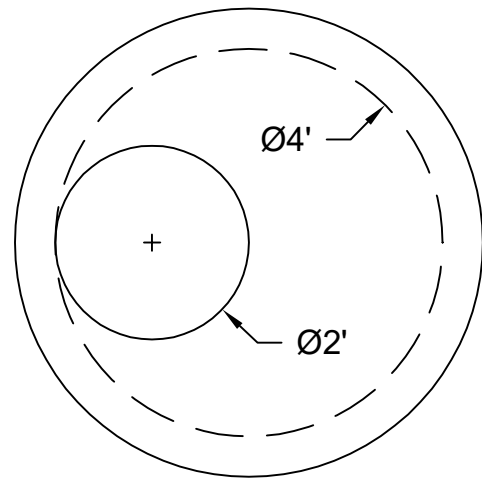
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS



STRUCTURE ID: 157
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

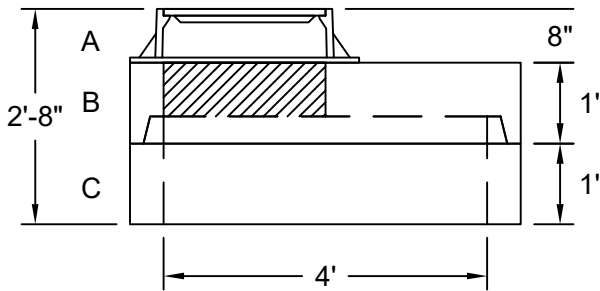
29378 HWY 52, KEENESBURG, CO 80634

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	90.48	CASTING:	+ 0.67
INVERT IN: -	84.80	ADJUSTMENT:	+ 1.00
PIPE SIZE: -	2.00	CONE/LID:	+ 1.00
PIPE WALL: -	0.25	RISERS:	+ 1.00
POURING RING: -	0.33	DESIGN DEPTH: =	2.67
PRECAST HT: =	3.10		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

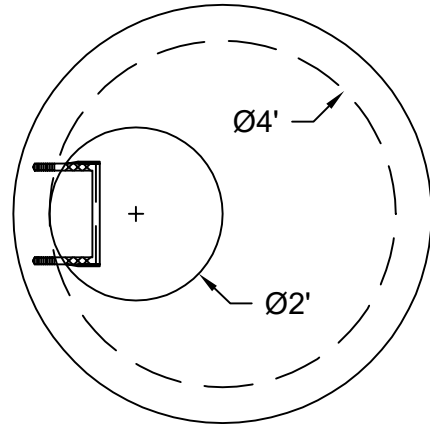
RIM ELEVATION
 APPEARS TO BE
 APPROXIMATELY
 1' ABOVE THE
 PROPOSED GRADE.
 PLEASE VERIFY.



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID FLAT-TOP LID	1,660	LBS
C	48" ID X 12" FB RISER	870	LBS
D			LBS
E			LBS
F			LBS
		2,530	LBS



29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 158
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	90.68	CASTING:	+ 0.67
INVERT IN:	- 86.82	ADJUSTMENT:	+ 0.67
PIPE SIZE:	- 2.00	CONE/LID:	+ 0.67
PIPE WALL:	- 0.25	RISERS:	+ 0.00
POURING RING:	- 0.33		
PRECAST HT:	= 1.28	DESIGN DEPTH:	= 1.34

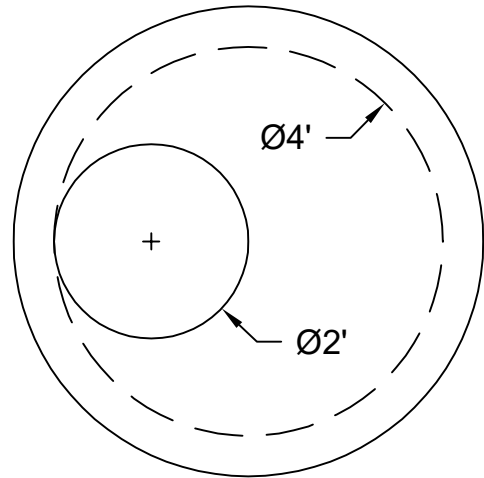
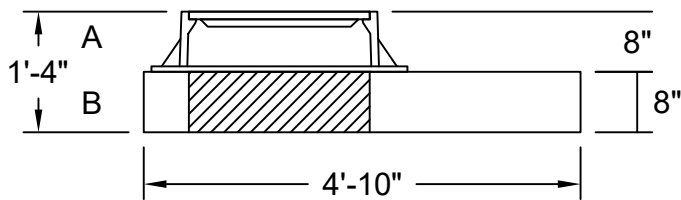
FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

ELEVATION VIEW:

OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 8" FB LID	1,525	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		1,525	LBS



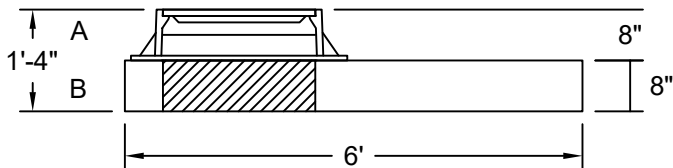
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 171
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/10/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	20.00	CASTING:	+ 0.67
INVERT IN:	- 16.50	ADJUSTMENT:	+ 0.00
PIPE SIZE:	- 2.00	CONE/LID:	+ 0.67
PIPE WALL:	- 0.25	RISERS:	+ 0.00
POURING RING:	- 0.33		
PRECAST HT:	= 0.92	DESIGN DEPTH:	= 1.34

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

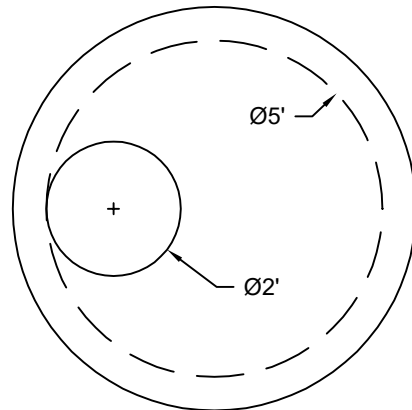
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	60" ID X 8" FB LID	2,515	LBS
C			LBS
D			LBS
E			LBS
F			LBS
		2,515	LBS



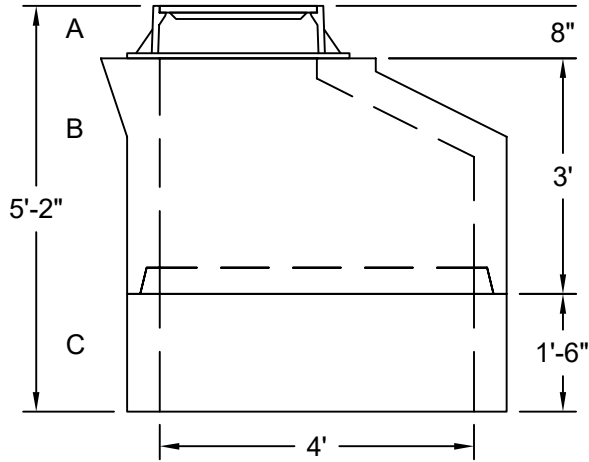
29378 HWY 52, KEENESBURG, CO 80634

STRUCTURE ID: 542
 JOB NAME: CROWFOOT
 CONTRACTOR: JBS
 JOB LOCATION: PARKER
 SPECIFICATION: PARKER
 DATE: 2/11/2020

DESIGN BUILD HEIGHT:		PRODUCTION BUILD DEPTH:	
RIM ELEVATION:	28.21	CASTING:	+ 0.67
INVERT IN: -	20.15	ADJUSTMENT:	+ 3.00
PIPE SIZE: -	2.00	RISERS:	+ 1.50
PIPE WALL: -	0.25	DESIGN DEPTH: =	5.17
POURING RING: -	0.33		
PRECAST HT: =	5.48		

FRAME/RING:	24" X 8" C.I.
GRATE/COVER:	24" "STORM"
INVERT CHANNEL:	BY OTHERS
INTERNAL COATING:	N/A
EXTERNAL COATING:	N/A
NOTES:	

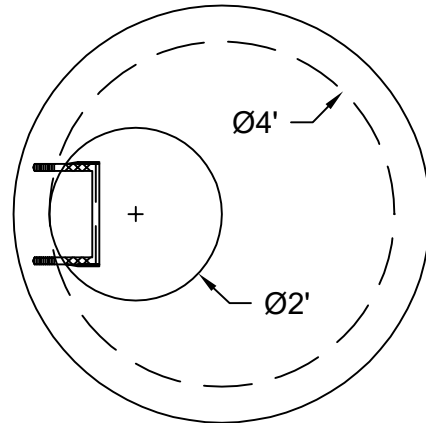
ELEVATION VIEW:



OPENING SCHEDULE

I.D.	INVERT	PIPE SIZE	HOLE SIZE	CONNECTOR	ANGLE
#1					°
#2					°
#3					°
#4					°

PLAN VIEW:



BILL OF MATERIALS:

A	24" X 8" CASTING		LBS
B	48" ID X 36" ECC CONE	2,840	LBS
C	48" ID X 18" FB RISER	1,305	LBS
D			LBS
E			LBS
F			LBS
		4,145	LBS