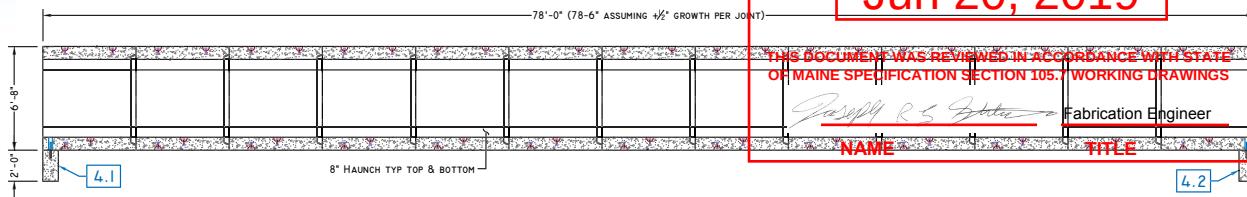


PLAN VIEW



SECTION A-A

STATE OF MAINE
DEPARTMENT OF TRANSPORTATION

☐ REVIEWED ☒ REVIEWED WITH COMMENTS
☐ REJECTED ☐ RETURNED FOR CORRECTIONS

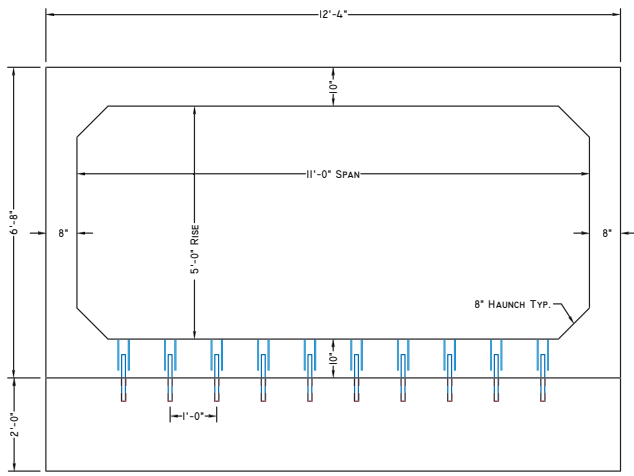
Jun 20, 2019

THIS DOCUMENT WAS REVIEWED IN ACCORDANCE WITH STATE OF MAINE SPECIFICATION SECTION 105.1 WORKING DRAWINGS

Joseph R. S. [Signature] Fabrication Engineer

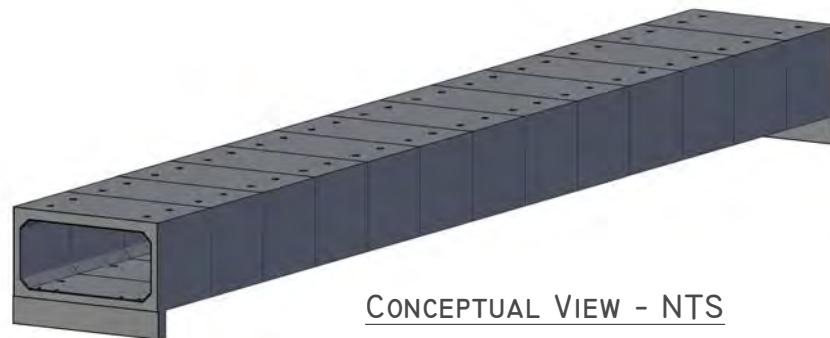
NAME _____ TITLE _____

add haunch bars



END VIEW

SCALE: 3/8" = 1'-0"



CONCEPTUAL VIEW - NTS



American Concrete Industries

1717 STILLWATER AVE. VEAZIE, ME. 04401

TEL: 207-947-8334

FAX: 207-947-3580

WWW.AMERICANCONCRETE.COM

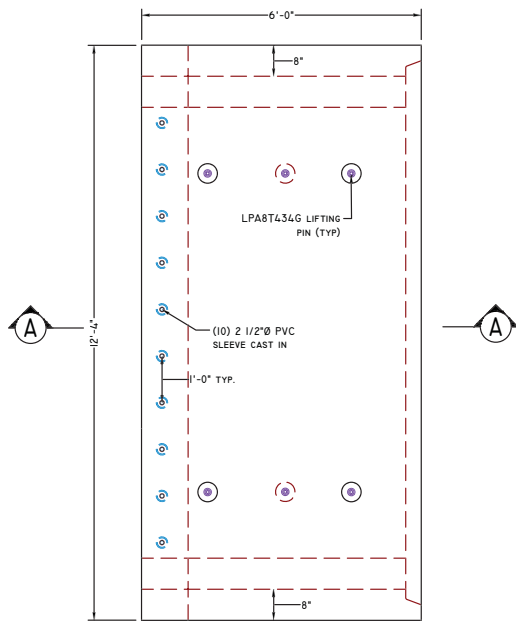
ITEM	QTY	BILL OF MATERIALS
1	(1)	6'-0" DOWNSTREAM END (16,545 #)
2	(11)	6'-0" MID SECTION (15,615 # EA)
3	(1)	6'-0" UPSTREAM END (17,160 #)
4	(2)	1' x 2' x 12'-4" TOEWALL (4,000 # EA)
	(20)	#8 x 26" @ 12" O.C. TOEWALL PIN

DESIGN NOTES:

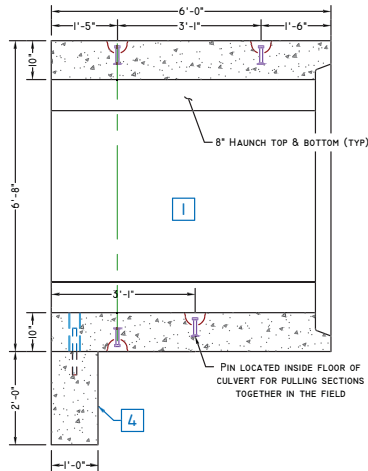
- Concrete
 - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
 - 1.2. AIR-ENTRAINMENT: MIN. 5.5%
- Structural Reinforcement:
 - 2.1. BAR PER ASTM A615, GRADE 60
 - 2.2. WWF PER ASTM A1064, GRADE 70
 - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
 - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
 - 2.5. DESIGNED FOR 125% HL-93 WHEEL LOAD RATING
 - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
- Manufacturing / Installation:
 - 3.1. JOINTS SEALED WITH BUTYL RUBBER SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
 - 3.2. EACH EXTERIOR JOINT TO BE WRAPPED IN MIN. 12" WIDE MEMBRANE FROM MDOT OPL PER 534.20 BY CONTRACTOR
 - 3.3. MINIMUM ALLOWABLE SOIL COVER = 1.5'
 - 3.4. MAXIMUM ALLOWABLE SOIL COVER = 3'

Note: Some details not shown for clarity
SCALE: 1/8" = 1'-0" Unless otherwise noted

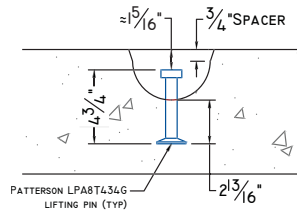
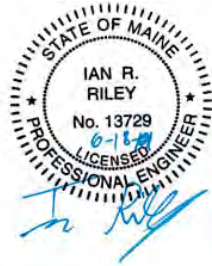
STRUCTURE NAME: 5' x 11' x 78' BOX CULVERT		
JOB NAME: MONSON BOX CULVERT (WIN: 22930.00)		
LOCATION: MONSON, ME		
CONTRACTOR: MDOT		
DRAWN BY: AAG	DATE: 05/13/2019	CI.0
REV. #: 0.01	DATE: 06/06/2019	



PLAN VIEW

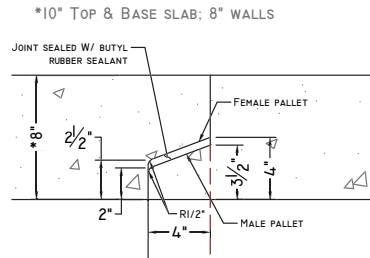


SECTION A-A



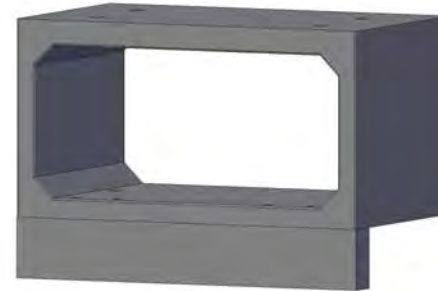
LIFTING PIN DETAIL

SCALE: 1 1/2" = 1'-0"

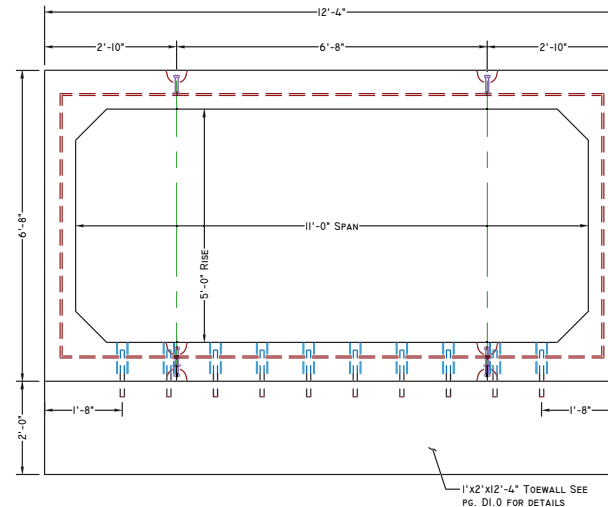


CULVERT JOINT DETAIL

SCALE: 1 1/2" = 1'-0"



CONCEPTUAL VIEW - NTS



END VIEW



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FAX: 207-947-3580

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ITEM	QTY	BILL OF MATERIALS
1	(1)	6'-0" DOWNSTREAM END (16,545 #)
4	(1)	1' x 2' x 12'-4" TOEWALL (4,000 # EA)
	(10)	#8 x 26" @ 12" O.C. TOEWALL PIN

DESIGN NOTES:

- Concrete
 - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
 - 1.2. AIR-EXTRACTION: MIN. 5.5%
- Structural Reinforcement:
 - 2.1. BAR PER ASTM A615, GRADE 60
 - 2.2. WWF PER ASTM A1064, GRADE 70
 - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
 - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
 - 2.5. DESIGNED FOR 125% HL-93 WHEEL LOAD RATING
 - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
- Manufacturing / Installation:
 - 3.1. JOINTS SEALED WITH BUTYL RUBBER SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
 - 3.2. EACH EXTERIOR JOINT TO BE WRAPPED IN MIN. 12" WIDE MEMBRANE FROM MDOT OPL PER S34.20 BY CONTRACTOR
 - 3.3. MINIMUM ALLOWABLE SOIL COVER = 1.5'
 - 3.4. MAXIMUM ALLOWABLE SOIL COVER = 3'

Note: Some details not shown for clarity
SCALE: 3/8" = 1'-0" Unless otherwise noted

STRUCTURE NAME:
5' x 11' x 78' Box CULVERT

JOB NAME:
MONSON BOX CULVERT (WIN: 22930.00)

LOCATION:
MONSON, ME

CONTRACTOR:
MDOT

DRAWN BY:
AAG

DATE:
05/13/2019

REV. #:
0.01

DATE:
06/06/2019

CI.I



American Concrete Industries

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FAX: 207-947-3580

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BILL OF MATERIALS

ITEM	QTY	
2	(11)	6'-0" MID SECTION (15,615 # EA)

DESIGN NOTES:

- Concrete
 - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
 - 1.2. AIR-ENTRAIMENT: MIN. 5.5%
- Structural Reinforcement:
 - 2.1. BAR PER ASTM A615, GRADE 60
 - 2.2. WWF PER ASTM A1064, GRADE 70
 - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
 - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
 - 2.5. DESIGNED FOR 125% HL-93 WHEEL LOAD RATING
 - 2.6. 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
- Manufacturing / Installation:
 - 3.1. JOINTS SEALED WITH BUTYL RUBBER SEALANT (JOINT GROWTH OF 1/2" IS EXPECTED PER JOINT)
 - 3.2. EACH EXTERIOR JOINT TO BE WRAPPED IN MIN. 12" WIDE MEMBRANE FROM MDOT QPL PER 534.20 BY CONTRACTOR
 - 3.3. MINIMUM ALLOWABLE SOIL COVER = 1.5'
 - 3.4. MAXIMUM ALLOWABLE SOIL COVER = 3'

Note: Some details not shown for clarity
SCALE: 3/8" = 1'-0" Unless otherwise noted

STRUCTURE NAME:
5' x 11' x 78' Box CULVERT

JOB NAME:
MONSON Box CULVERT (WIN: 22930.00)

LOCATION:
MONSON, ME

CONTRACTOR:
MDOT

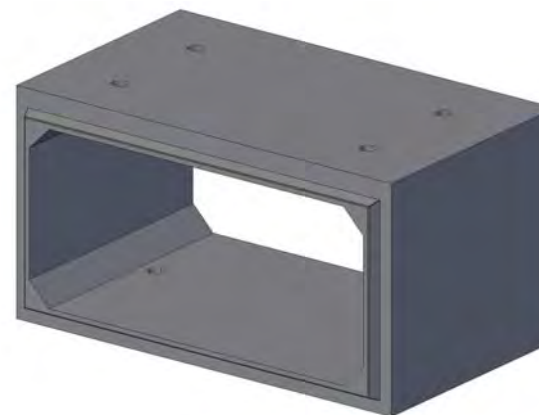
DRAWN BY:
AAG

REV.#:
0.01

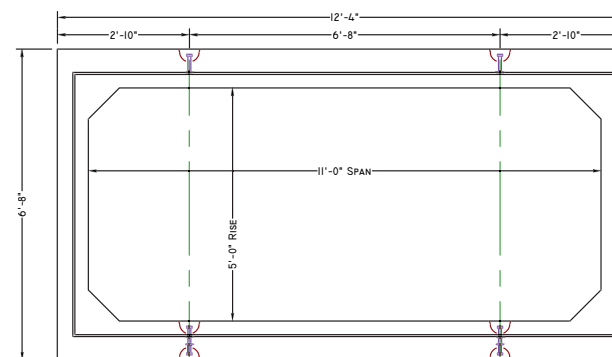
DATE:
05/13/2019

DATE:
06/06/2019

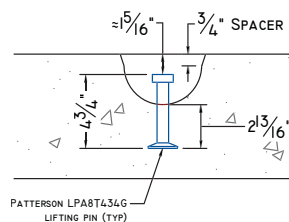
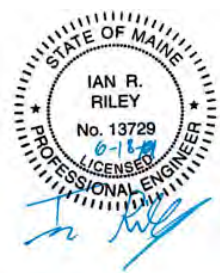
CI.2



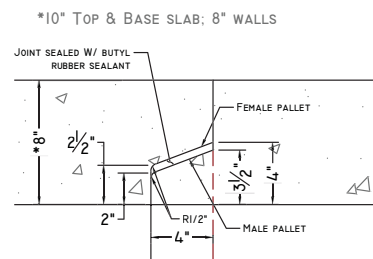
CONCEPTUAL VIEW - NTS



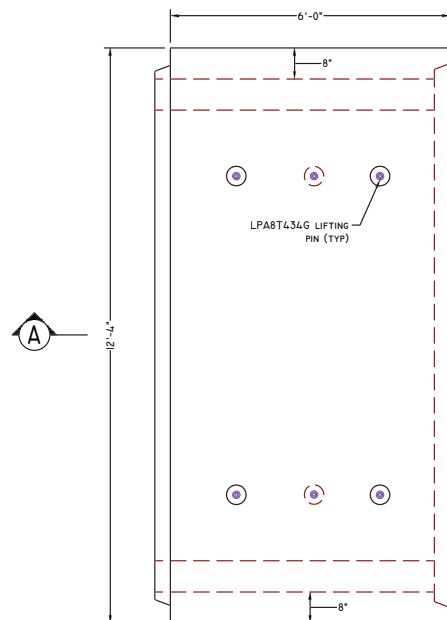
END VIEW



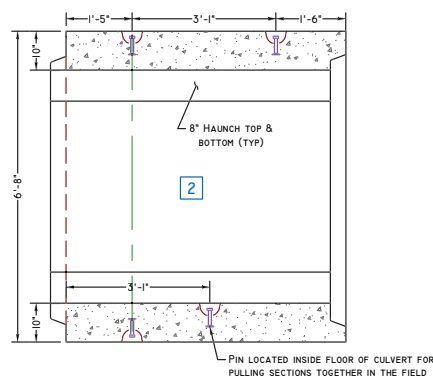
LIFTING PIN DETAIL
SCALE: 1 1/2" = 1'-0"



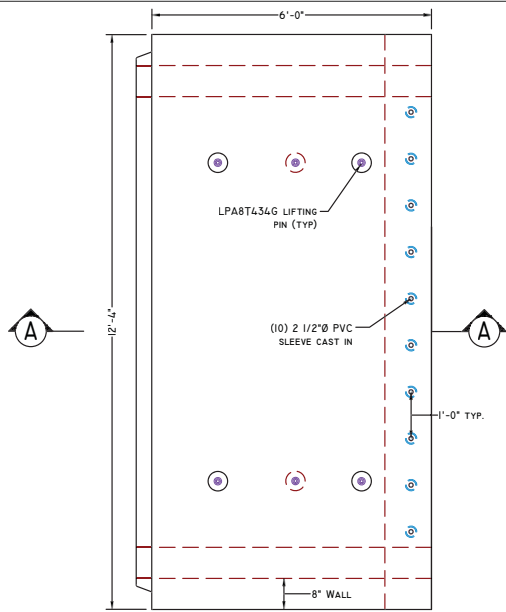
CULVERT JOINT DETAIL
SCALE: 1 1/2" = 1'-0"



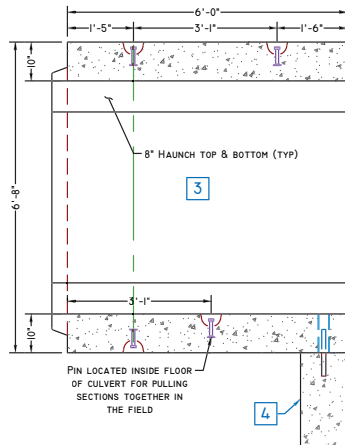
PLAN VIEW



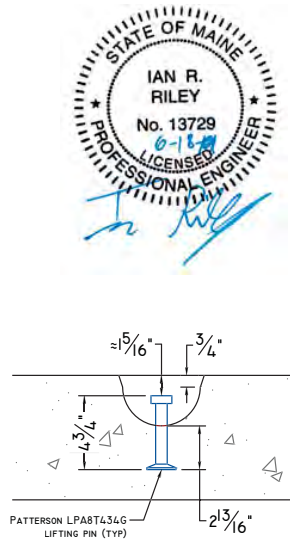
SECTION A-A



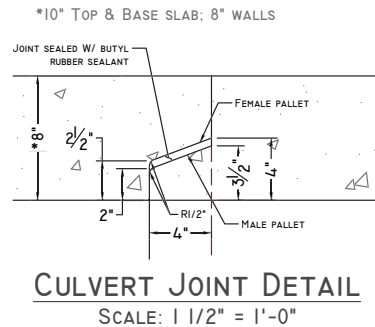
PLAN VIEW



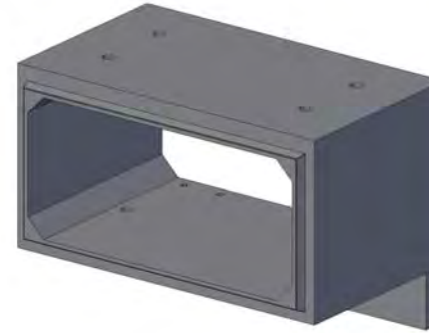
SECTION A-A



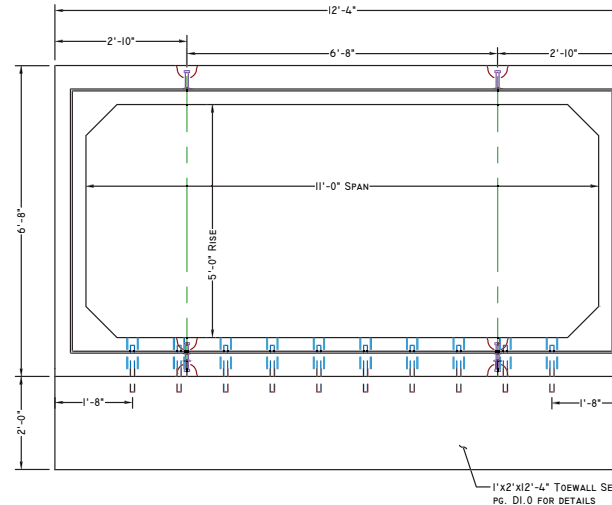
LIFTING PIN DETAIL
SCALE: 1 1/2" = 1'-0"



CULVERT JOINT DETAIL
SCALE: 1 1/2" = 1'-0"



CONCEPTUAL VIEW - NTS



END VIEW



American Concrete Industries
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FAX: 207-947-3580
WWW.AMERICANCONCRETE.COM

ITEM	QTY	BILL OF MATERIALS
3	(1)	6'-0" UPSTREAM END (17,160 #)
4	(1)	1' x 2' x 12'-4" TOEWALL (4,000 # EA)
	(10)	#8 x 26" @ 12" O.C. TOEWALL PIN

- DESIGN NOTES:
- Concrete
 - COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
 - AIR-ENTRAINMENT: MIN. 5.5%
 - Structural Reinforcement:
 - BAR PER ASTM A615, GRADE 60
 - WWF PER ASTM A1064, GRADE 70
 - INTEGRATE REBAR WITH LIFTING INSERT(S)
 - INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
 - DESIGNED FOR 125% HL-93 WHEEL LOAD RATING
 - 2" CLR EXTERIOR, 1 1/2" CLR INTERIOR
 - Manufacturing / Installation:
 - JOINTS SEALED WITH BUTYL RUBBER SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
 - EACH EXTERIOR JOINT TO BE WRAPPED IN MIN. 12" WIDE MEMBRANE FROM MDOT QPL PER 534.20 BY CONTRACTOR
 - MINIMUM ALLOWABLE SOIL COVER = 1.5'
 - MAXIMUM ALLOWABLE SOIL COVER = 3'

Note: Some details not shown for clarity
SCALE: 3/8" = 1'-0" Unless otherwise noted

STRUCTURE NAME: 5' x 11' x 78" BOX CULVERT		
JOB NAME: MONSON BOX CULVERT (WIN: 22930.00)		
LOCATION: MONSON, ME		
CONTRACTOR: MDOT		
DRAWN BY: AAG	DATE: 05/13/2019	CI.3
REV. #: 0.01	DATE: 06/06/2019	



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FAX: 207-947-3580

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[illegible]

DESIGN NOTES:
1. Concrete

1. **Concrete**
 - 1.1. COMP. STRENGTH MIN. 5,000PSI @ 28 DAYS
 - 1.2. AIR-ENTRAIMENT: MIN. 5.5%
2. **Structural Reinforcement**
 - 2.1. BAR PER ASTM A615, GRADE 60
 - 2.2. WWF PER ASTM A1064, GRADE 70
 - 2.3. INTEGRATE REBAR WITH LIFTING INSERT(S)
 - 2.4. INTERRUPTED BAR AREAS WILL BE REPLACED EACH SIDE WITH HALF THE AFFECTED AREA
 - 2.5. DESIGNED FOR 125% HL-93 WHEEL LOAD RATING
 - 2.6. 2" CLR EXTERIOR, 1/2" CLR INTERIOR
3. **Manufacturing / Installation:**
 - 3.1. JOINTS SEALED WITH JOINTLY RUBBER SEALANT (JOINT GROWTH OF 1/2"± IS EXPECTED PER JOINT)
 - 3.2. EACH EXTERIOR JOINT TO BE WRAPPED IN MIN. 12" WIDE MEMBRANE FROM MDOT GFL PER 534.20 BY CONTRACTOR
 - 3.3. MINIMUM ALLOWABLE SOLID COVER = 1 1/2"
 - 3.4. MAXIMUM ALLOWABLE SOLID COVER = 3"

*ACI RECOMMENDS DEWALT/POWERS AC100+ GOLD EPOXY WITH AN EMBEDMENT DEPTH OF 6" (4" MIN. / 12" MAX) INTO TOE WALL, PER PRODUCT MANUFACTURER'S GUIDELINES FOR #8 REBAR

Note: Some details not shown for clarity
SCALE: 1" = 1'-0" Unless otherwise noted

STRUCTURE NAME:
5' x 11' x 78' Box CULVERT

JOB NAME:
MONSON BOX CULVERT (WIN: 22930.00)

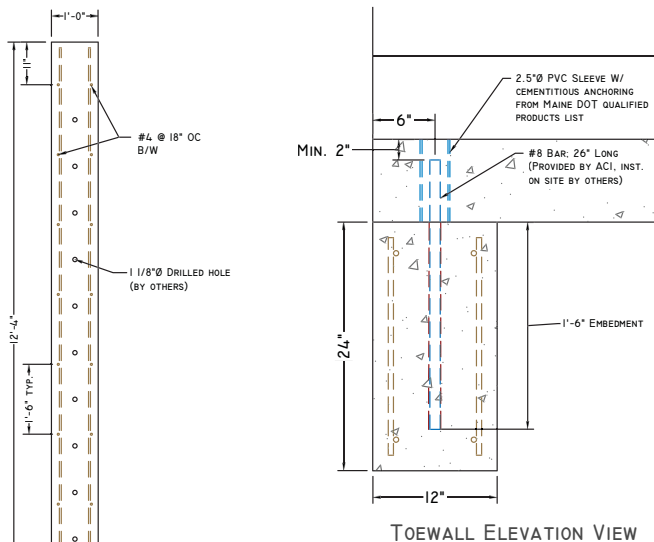
LOCATION: MONSON, ME

CONTRACTOR:	MDOT
-------------	------

DRAWN BY:	DATE:
AAG	05/13/2019

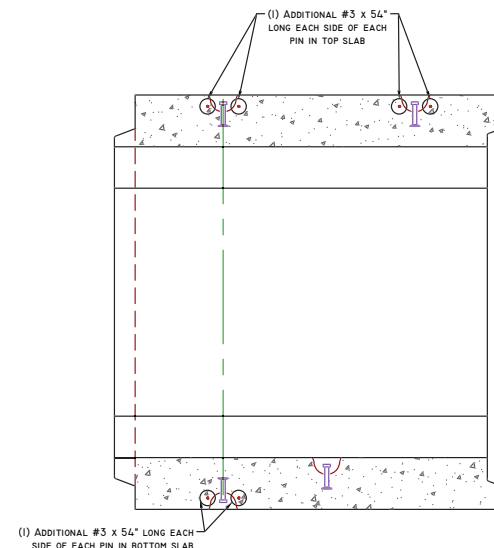
REV.#:	DATE:
0.01	06/06/2019

DI.0



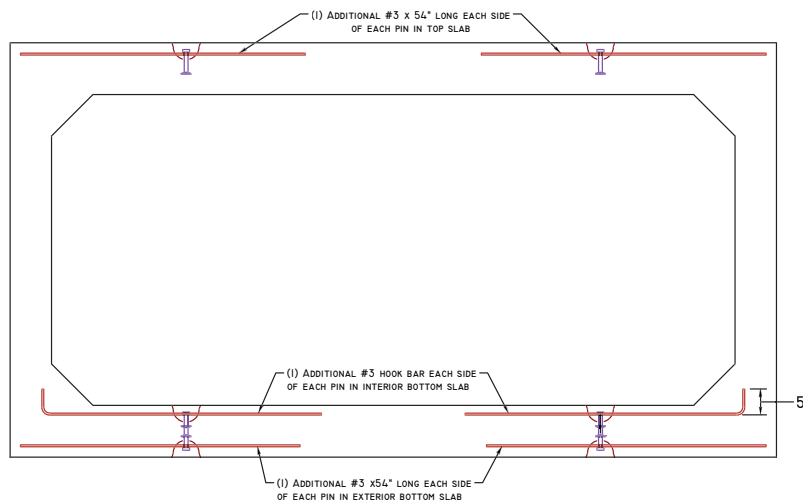
TOEWALL PLAN VIEW

SCALE: 1/2" = 1'-0"



ADDITIONAL REINFORCING @ LIFT POINTS
ELEVATION VIEW

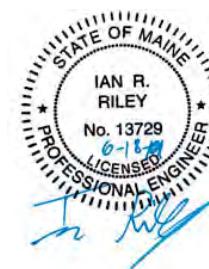
SCALE: 1/2" = 1'-0"

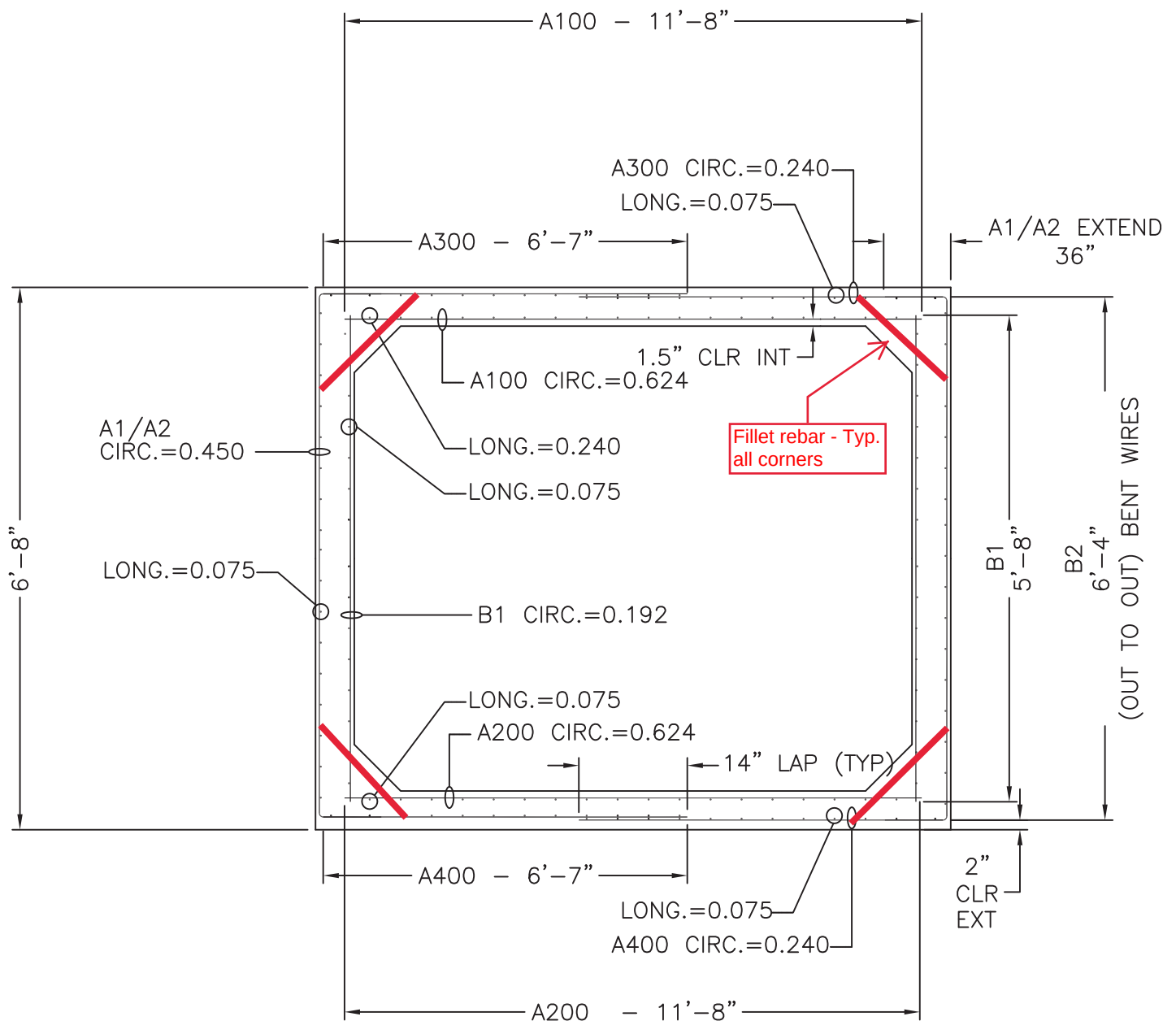


ADDITIONAL REINFORCING @ LIFT POINTS

PLAN VIEW

SCALE: 3/4" = 1'-0"





11' x 5' x 6'
CROSS SECTION WITH AREAS OF STEEL

SLAB THICKNESS	
TOP	10"
BOTTOM	10"
WALLS	8"

CAGE WEIGHT PER 6'-0" JOINT = 776.6 lbs

MECHANICAL DIMENSIONS			
DIM. 'L'	=	N/A	
DIM. 'M'	=	N/A	
DIM. 'R'	=	N/A	
DIM. 'S'	=	N/A	

BOX SIZE:	ASTM:	TABLE:	FILL:
11' X 5' X 6'	ETCUL		1.5'-4'



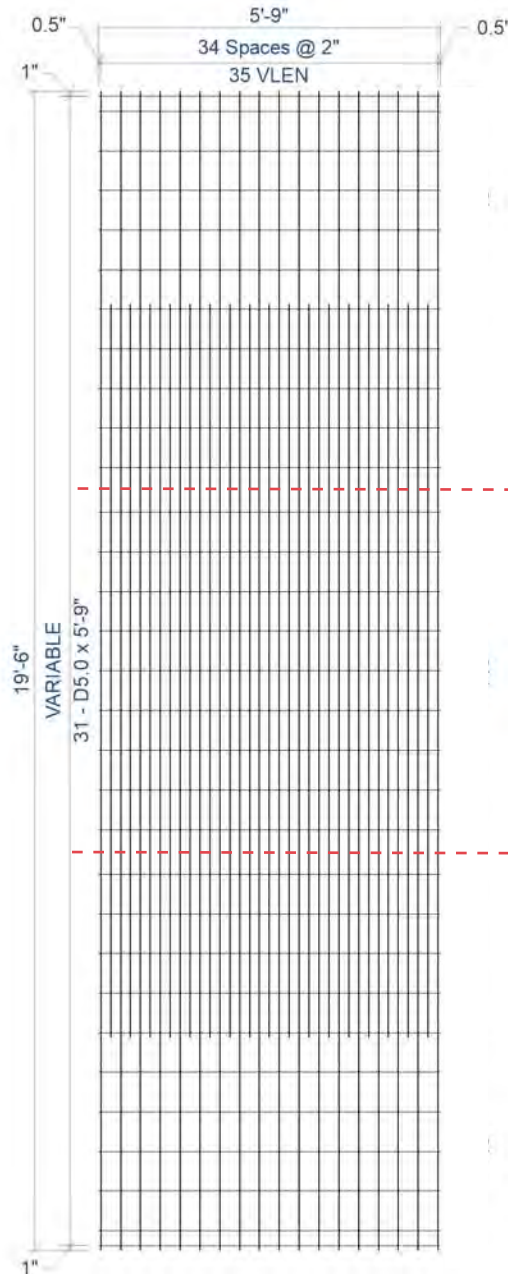
Concrete Reinforcements, Inc.
3830 Presidents Way
Jacksonville, FL 32220
PH. 904-520-7100 FAX. 904-520-7101

CUSTOMER:	DRAWN BY:	REVISION:	SHEET DESCRIPTION:
AMERICAN CONCRETE	BWA	5/28/2019	COVER
PROJECT:	DATE:	REVISION DATE:	FILE NAME:
11' X 5' X 6'	5/28/2019	R1	94280
MONSON	CHECKED BY:	SCALE:	PROJECT #:
	BWA	NTS	94280
			SHEET #:
			1 OF 5

SHEET DESIGN



Concrete Reinforcements, Inc.
3830 Presidents Way • Jacksonville, FL 32220
Phone: 904-520-7100 • Fax: 904-520-7101



BEND
LINE

BEND
LINE

CUSTOMER American Concrete

PROJECT 94280 - Drawings - 11x5 Monson - American Concrete - 5-28-2019

LOCATION Veazie, ME

DATE 05-28-2019 MARK NUMBER A1/A2/A300/A400(-01)

L.W.SPACE 2

C.W.SPACE VAR

L.W.1 SIZE D8.0

L.W.2 SIZE D7.0

C.W.SIZE D5.0

WIDTH 5'-9"

LENGTH 19'-6"

OH.LEFT 0.5"

OH.RIGHT 0.5"

OH.TOP 1"

OH.BOTTOM 1"

YIELD 70,000psi

BENT -

CUT -

ROLL -

W I R E S	LINE WIRE 1	LINE WIRE 2	CROSS WIRE
NO. PER SHEET	18	17	31
SIZE	D8.0	D7.0	D5.0
LENGTH	19'-6"	12'-4"	5'-9"
W.T./SHEET			
SHEET W.T.	175.70#		
QUANTITY	26		
SUB TOTAL WEIGHT			
TOTAL WEIGHT			
S.F./SHEET			
LBS./CSF			
Ast/LF			
ST.DENSITY			

SPECIAL REMARKS:
BEND DIMS: WALL=76", SLABS=79"

2 x VAR D8.0 / D7.0 / D5.0 (GRADE 70) 68"(+0.5", +0.5") x VLEN(1", 1")

VLEN = ALTERNATING LENGTH 12'-4" & 19'-6" WITH 19'-6" @ LHS & RHS

VAR = 1" OH, 1@3", 9@8", 1@9", 8@8", 1@9", 9@8", 1@3", 1" OH

APPROVED _____

SHEET DESIGN



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Phone: 904-520-7100 • Fax: 904-520-7101

CUSTOMER American Concrete

PROJECT 94280 - Drawings - 11x5 Monson - American Concrete - 5-28-2019

LOCATION Veazie, ME

DATE 05-28-2019 MARK NUMBER B1 (-02)

L.W.SPACE 4

C.W.SPACE VAR

L.W.1 SIZE D6.4

L.W.2 SIZE N/A

C.W.SIZE D5.0

WIDTH 5'-9"

LENGTH 5'-8"

OH.LEFT 0.5"

OH.RIGHT 0.5"

OH.TOP 4"

OH.BOTTOM 4"

YIELD 70,000psi

BENT -

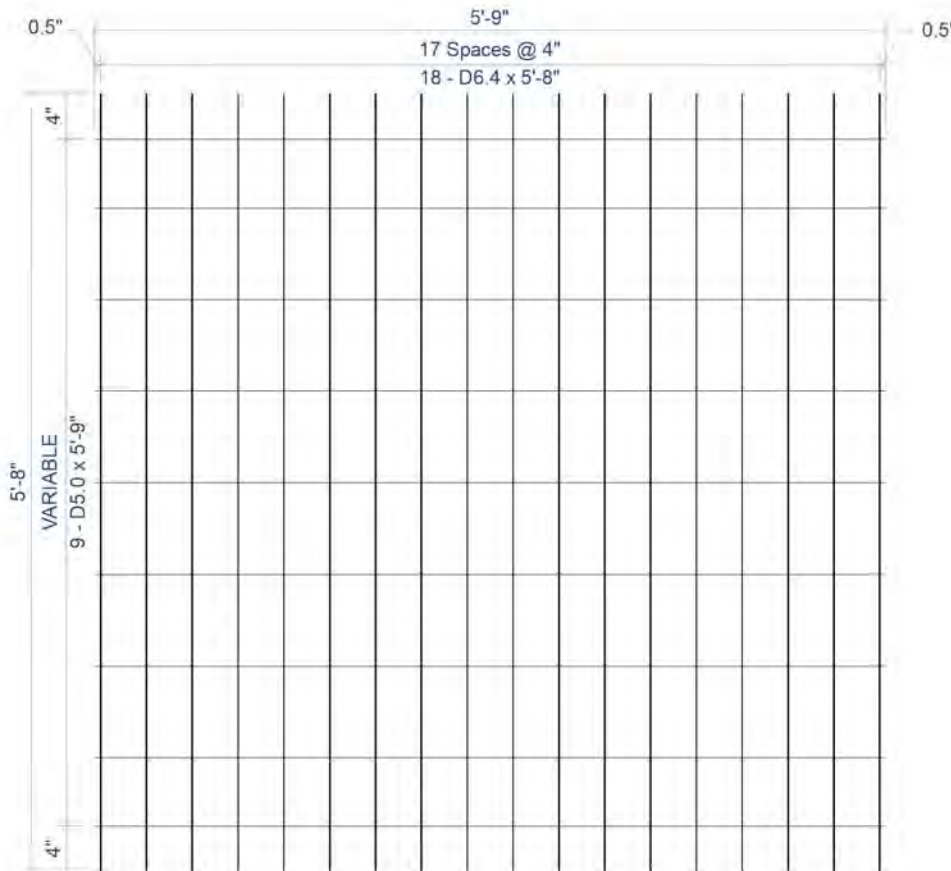
CUT -

ROLL -

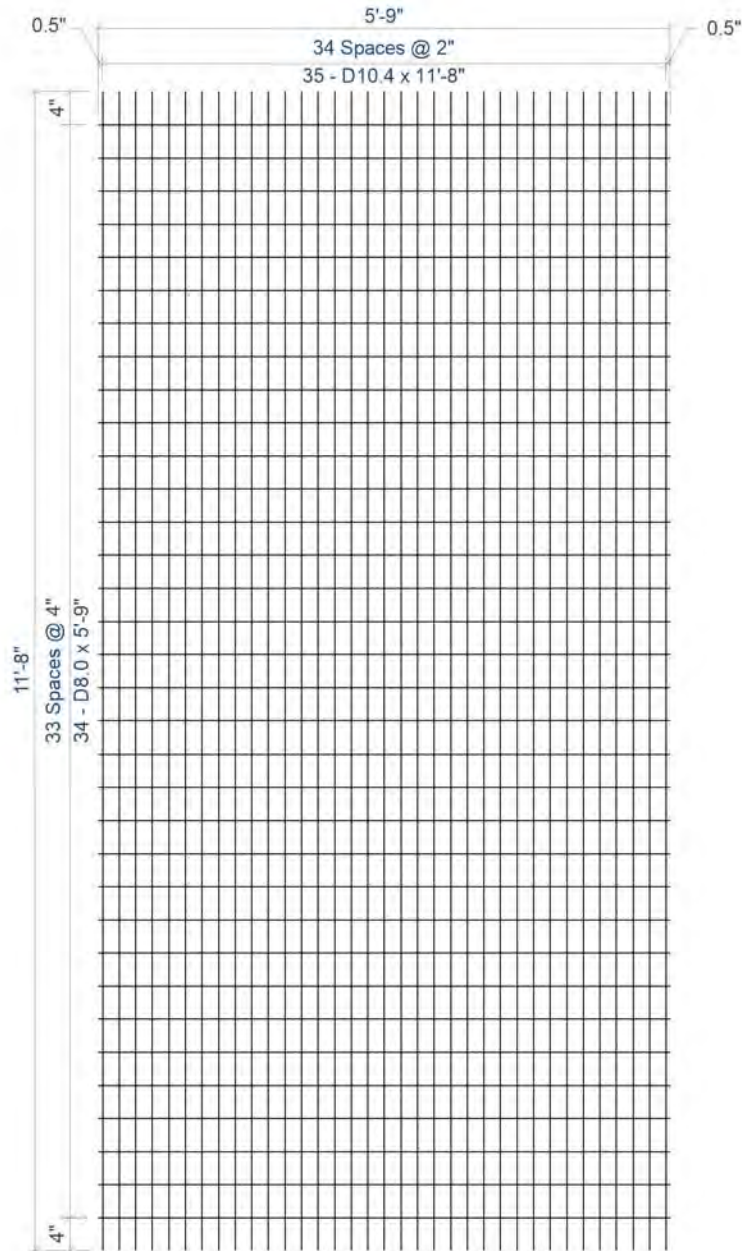
W I R E S	LINE WIRE 1	LINE WIRE 2	CROSS WIRE
NO. PER SHEET	18	N/A	9
SIZE	D6.4	N/A	D5.0
LENGTH	5'-8"	-	5'-9"
W.T./SHEET			
SHEET W.T.	31.40#		
QUANTITY	26		
SUB TOTAL WEIGHT			
TOTAL WEIGHT			
S.F./SHEET			
LBS./CSF			
Ast/LF			
ST.DENSITY			

SPECIAL REMARKS:

APPROVED _____



4 x VAR D6.4 / D5.0 (GRADE 70) 68(+0.5, +0.5) x 5'-8"(4, 4)
VAR = 4" OH, 1@6", 6@8", 1@6", 4" OH



2 x 4 D10.4 / D8.0 (GRADE 70) 68(+0.5, +0.5) x 11'-8"(4, 4)

SHEET DESIGN



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3830 Presidents Way • Jacksonville, FL 32220
Phone: 904-520-7100 • Fax: 904-520-7101

CUSTOMER American Concrete

PROJECT 94280 - Drawings - 11x5 Monson - American Concrete - 5-28-2019

LOCATION Veazie, ME

DATE 05-28-2019 MARK NUMBER A100/C100 (-03)

L.W.SPACE 2

C.W.SPACE 4

L.W.1 SIZE D10.4

L.W.2 SIZE N/A

C.W.SIZE D8.0

WIDTH 5'-9"

LENGTH 11'-8"

OH.LEFT 0.5"

OH.RIGHT 0.5"

OH.TOP 4"

OH.BOTTOM 4"

YIELD 70,000psi

BENT -

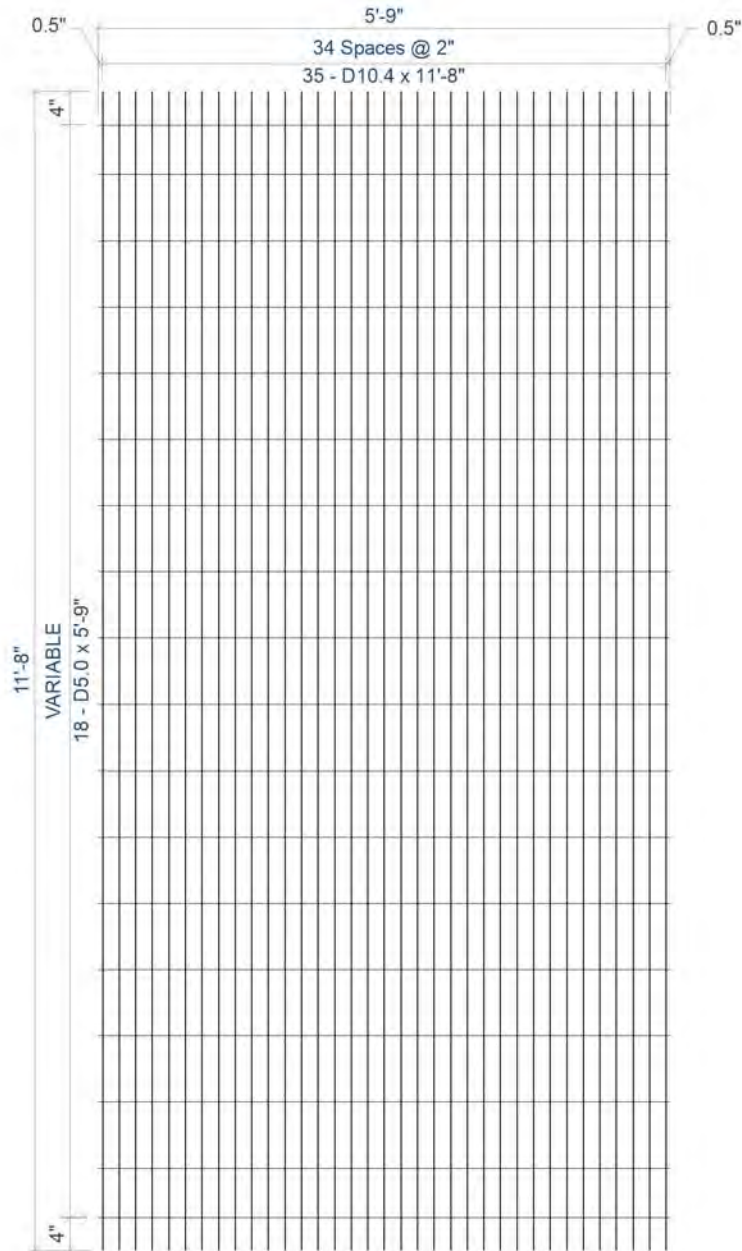
CUT -

ROLL -

W I R E S	LINE WIRE 1	LINE WIRE 2	CROSS WIRE
NO. PER SHEET	35	N/A	34
SIZE	D10.4	N/A	D8.0
LENGTH	11'-8"	-	5'-9"
W.T./SHEET			
SHEET W.T.	199.00#		
QUANTITY	13		
SUB TOTAL WEIGHT			
TOTAL WEIGHT			
S.F./SHEET			
LBS./CSF			
Ast/LF			
ST.DENSITY			

SPECIAL REMARKS:

APPROVED _____



2 x VAR D10.4 / D5.0 (GRADE 70) 68(+0.5, +0.5) x 11'-8"(4, 4)
 VAR = 4" OH, 1@6", 15@8", 1@6", 4" OH

SHEET DESIGN



Concrete Reinforcements, Inc.
 3830 Presidents Way • Jacksonville, FL 32220
 Phone: 904-520-7100 • Fax: 904-520-7101

CUSTOMER American Concrete

PROJECT 94280 - Drawings - 11x5 Monson - American Concrete - 5-28-2019

LOCATION Veazie, ME

DATE 05-28-2019 MARK NUMBER A200/C200 (-04)

L.W.SPACE 2

C.W.SPACE VAR

L.W.1 SIZE D10.4

L.W.2 SIZE N/A

C.W.SIZE D5.0

WIDTH 5'-9"

LENGTH 11'-8"

OH.LEFT 0.5"

OH.RIGHT 0.5"

OH.TOP 4"

OH.BOTTOM 4"

YIELD 70,000psi

BENT -

CUT -

ROLL -

W I R E S	LINE WIRE 1	LINE WIRE 2	CROSS WIRE
NO. PER SHEET	35	N/A	18
SIZE	D10.4	N/A	D5.0
LENGTH	11'-8"	-	5'-9"
W.T./SHEET			
SHEET W.T.	163.40#		
QUANTITY	13		
SUB TOTAL WEIGHT			
TOTAL WEIGHT			
S.F./SHEET			
LBS./CSF			
Ast/LF			
ST.DENSITY			

SPECIAL REMARKS:

APPROVED _____