

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

**Klamath River Renewal Corporation
PacifiCorp**

**Project Nos. 14803-001;
2082-063**

**AMENDED APPLICATION FOR SURRENDER OF LICENSE
FOR MAJOR PROJECT AND REMOVAL OF PROJECT WORKS**

**EXHIBIT R
100% Design Report
(Part 7 of 12)**

**UNITED STATES OF AMERICA
BEFORE THE
FEDERAL ENERGY REGULATORY COMMISSION**

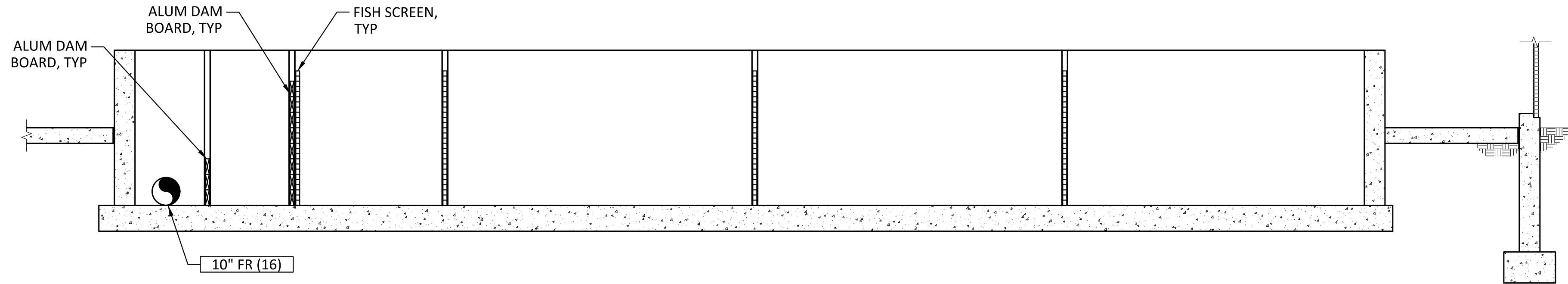
**Klamath River Renewal Corporation
PacifiCorp**

**Project Nos. 14803-001;
2082-063**

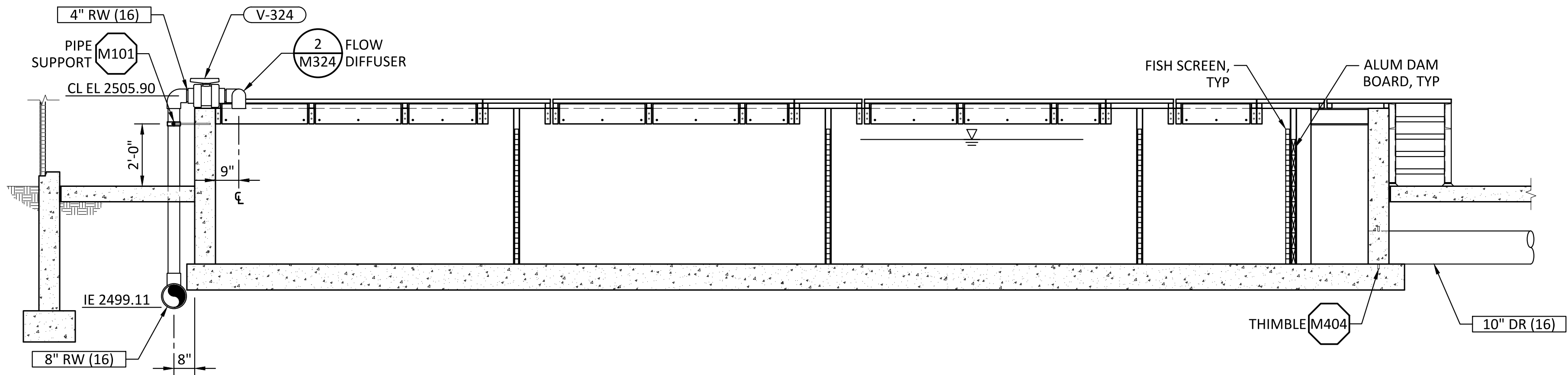
**AMENDED APPLICATION FOR SURRENDER OF LICENSE
FOR MAJOR PROJECT AND REMOVAL OF PROJECT WORKS**

**EXHIBIT R-5
Fall Creek Hatchery
(continued)**

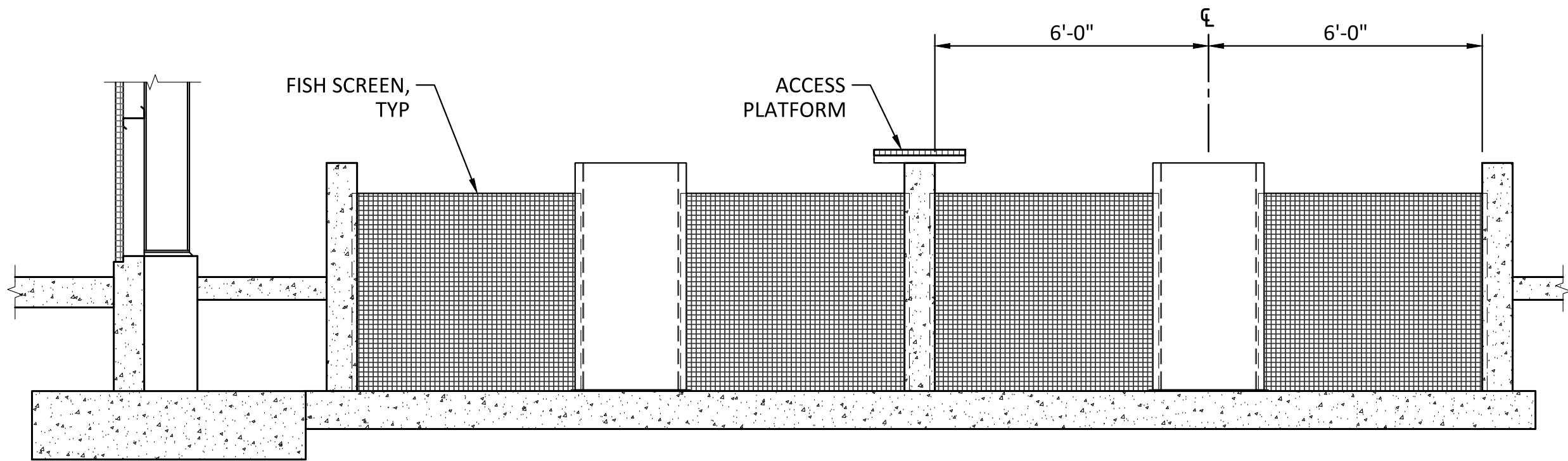
**Fall Creek Hatchery 100% Design Drawings
(continued)**



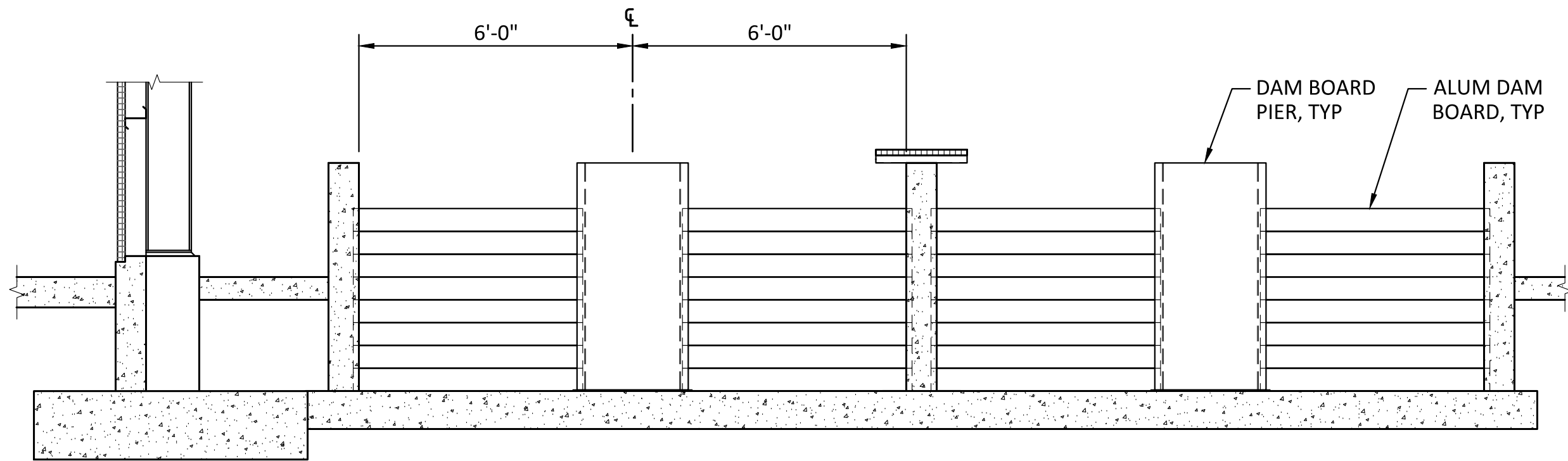
SECTION
SCALE: 3/8"= 1'-0"



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



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



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

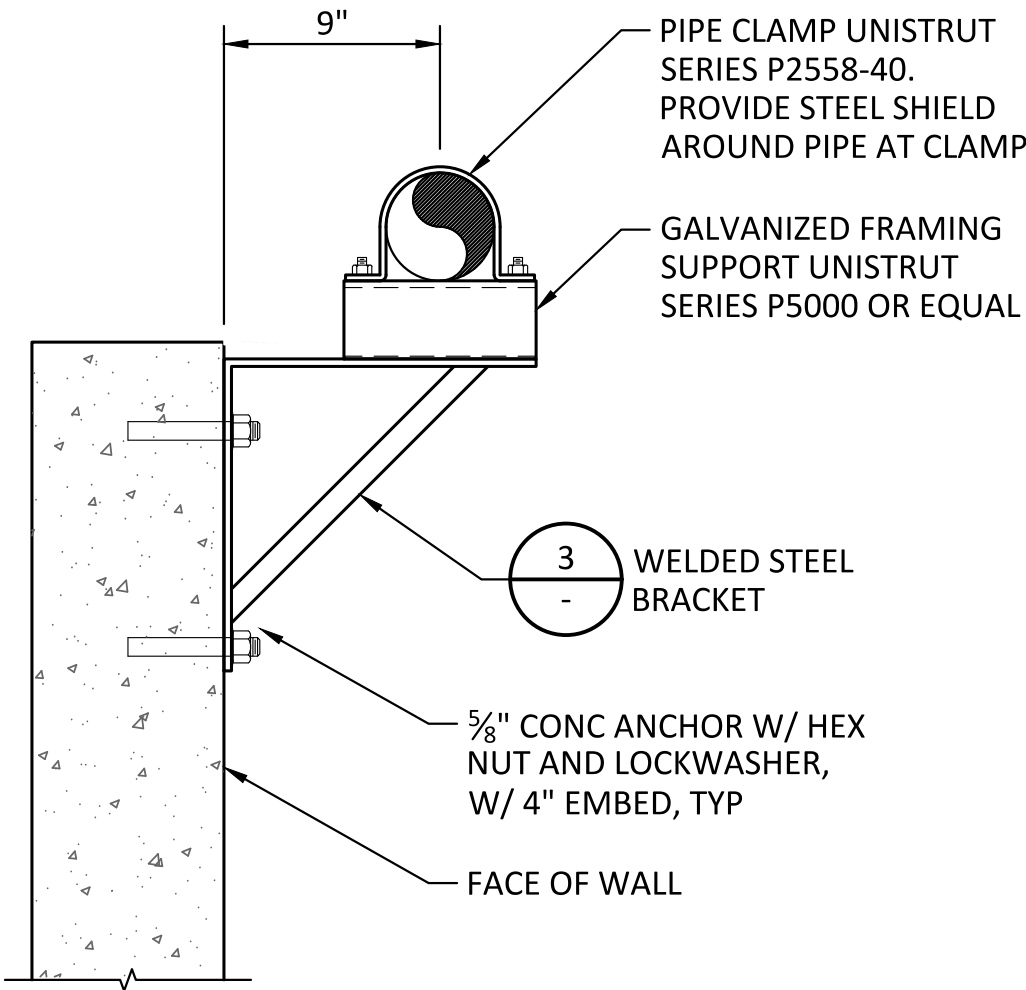
REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



WARNING
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IF THIS BAR DOES NOT
MEASURE 1" THEN
DRAWING IS NOT TO SCALE.

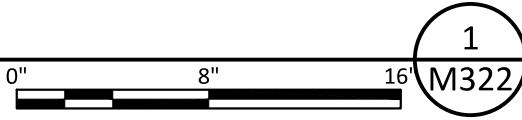


KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>S. ELLENSON</u>	DRAWING M323
FALL CREEK FISH HATCHERY	DRAWN <u>R. GUERRERO</u>	
COHO RACEWAY BANK 2	CHECKED <u>J. BOAG</u>	
SECTIONS AND DETAILS 1	PROJECT DATE <u>10/28/20</u>	

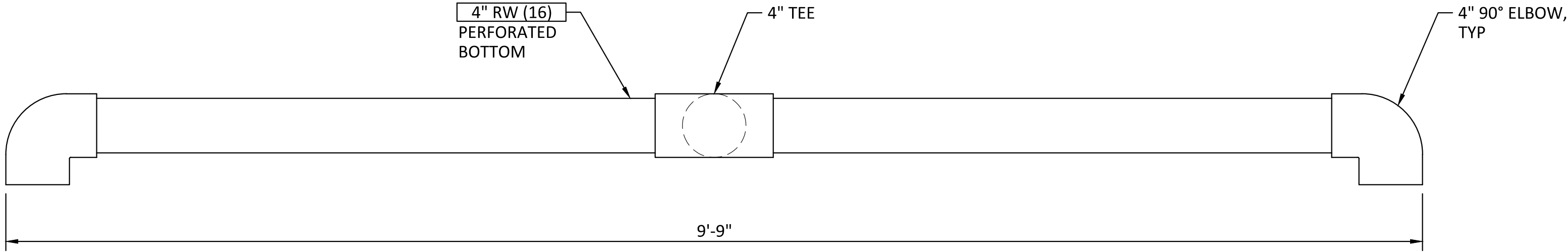


PIPE SUPPORT

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



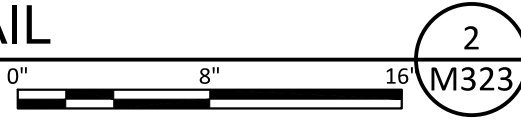
1
M322



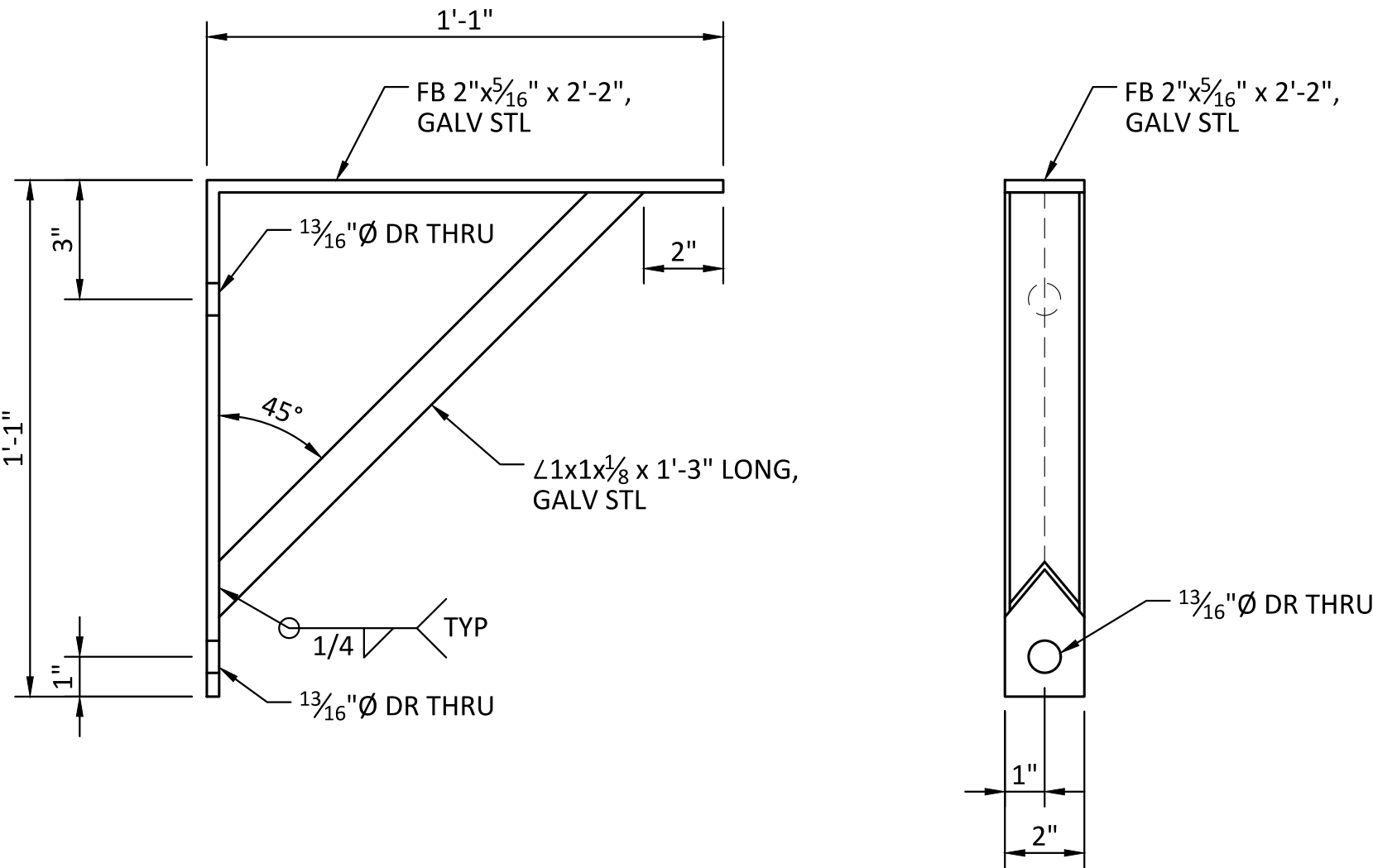
NOTE:
DRILL 1"Ø HOLES ALONG INVERT OF PIPE AND TEE AT 3" OC.

FLOW DIFFUSER - DETAIL

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

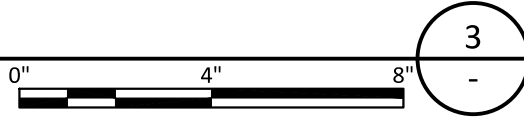


2
M323



WELDED STEEL BRACKET

SCALE: 3"= 1'-0"



3
-

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



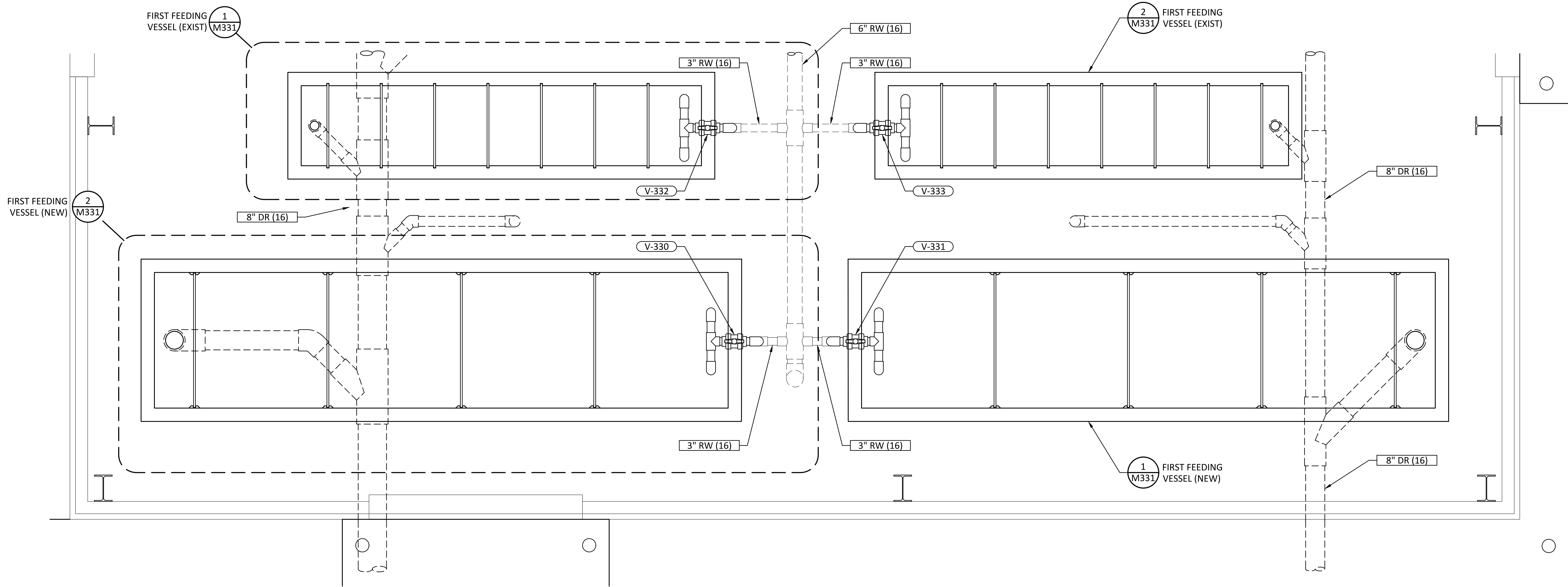
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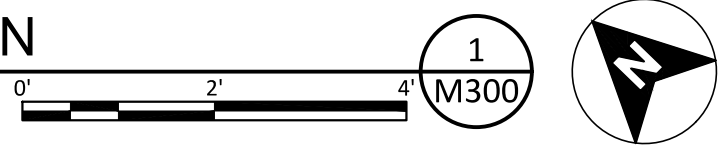


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M324
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
COHO RACEWAY BANK 2 SECTIONS AND DETAILS 2		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	JOB NO: 000000



FEEDING VESSELS PLAN

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



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
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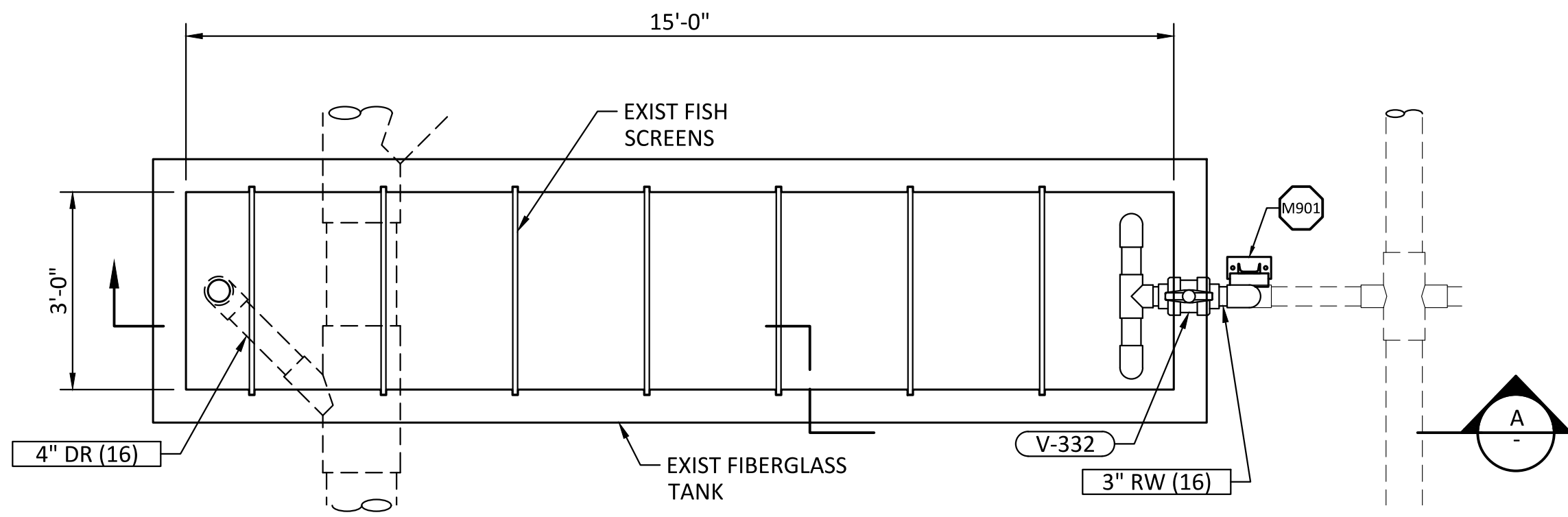
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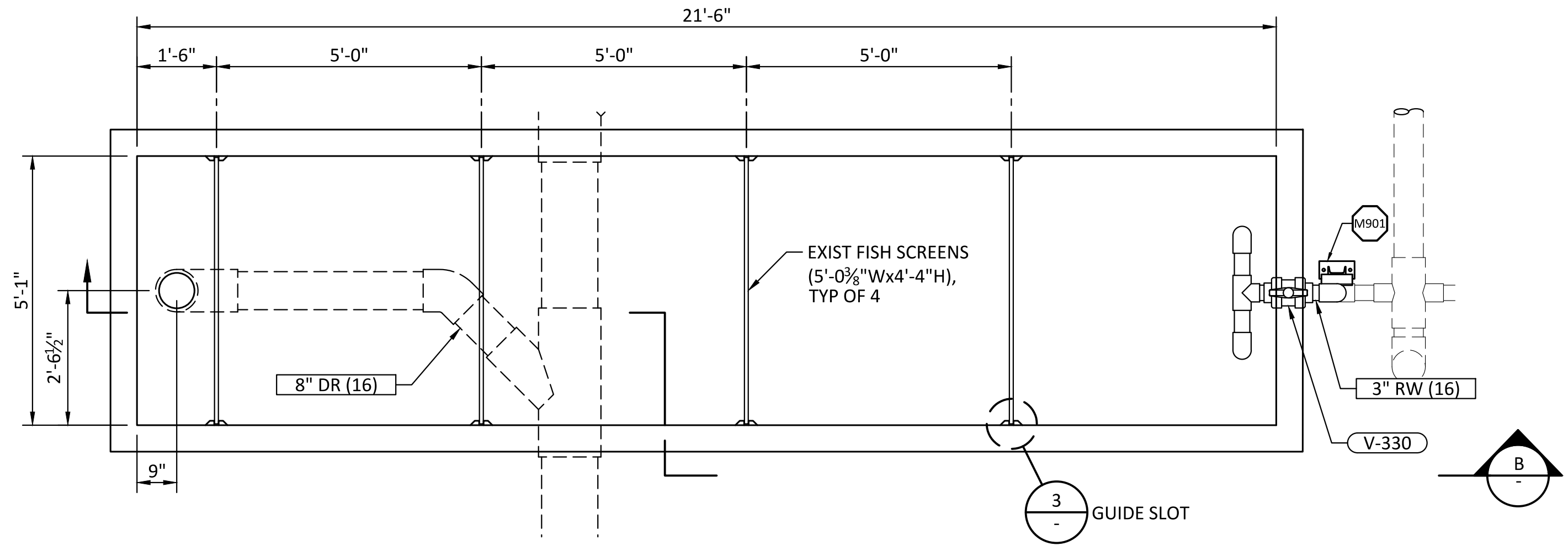
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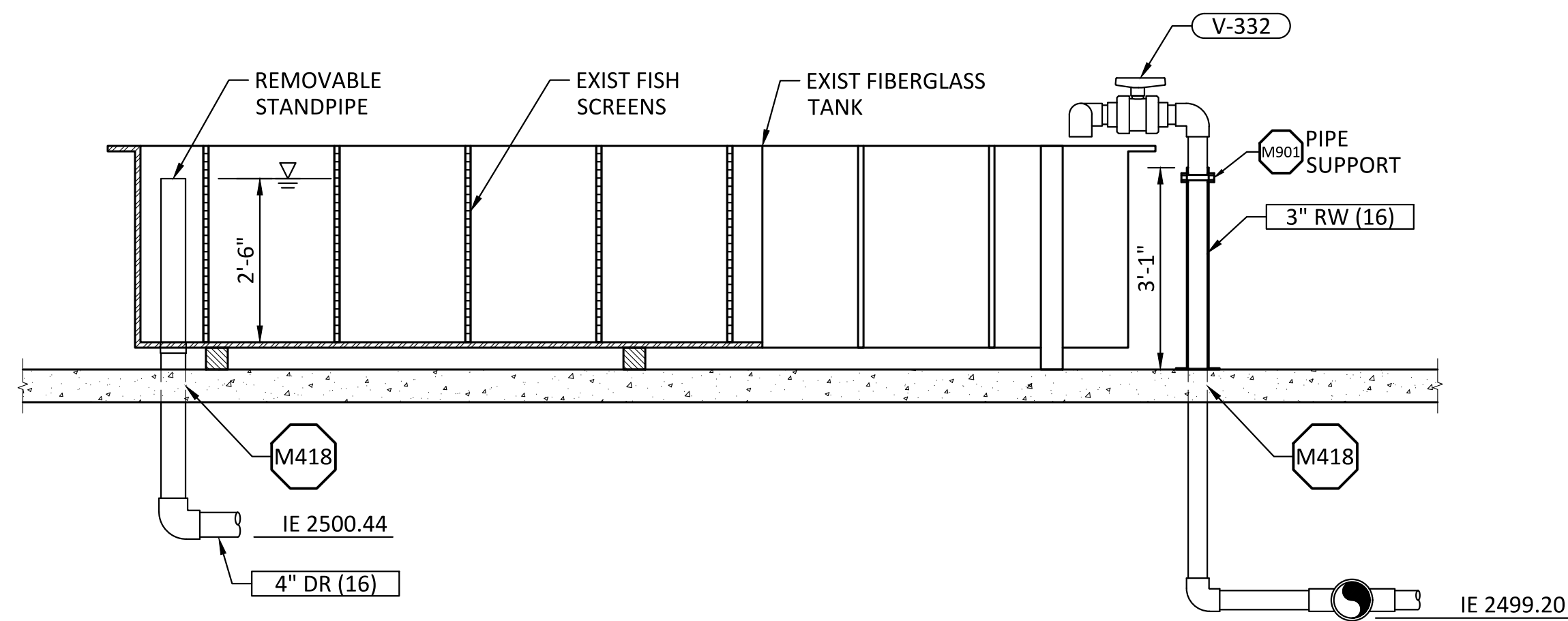
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M330
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
COHO BUILDING FEEDING VESSELS PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



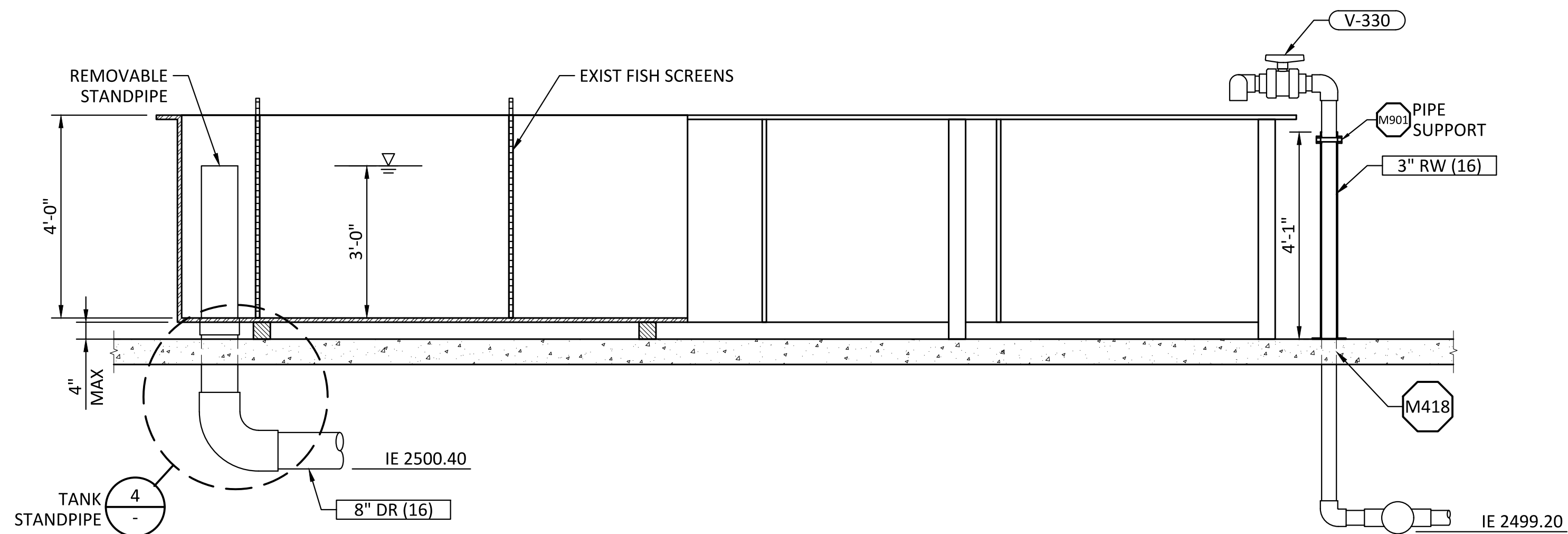
FIRST FEEDING VESSEL (EXISTING), TYP OF 2
SCALE: 1/2"= 1'-0"



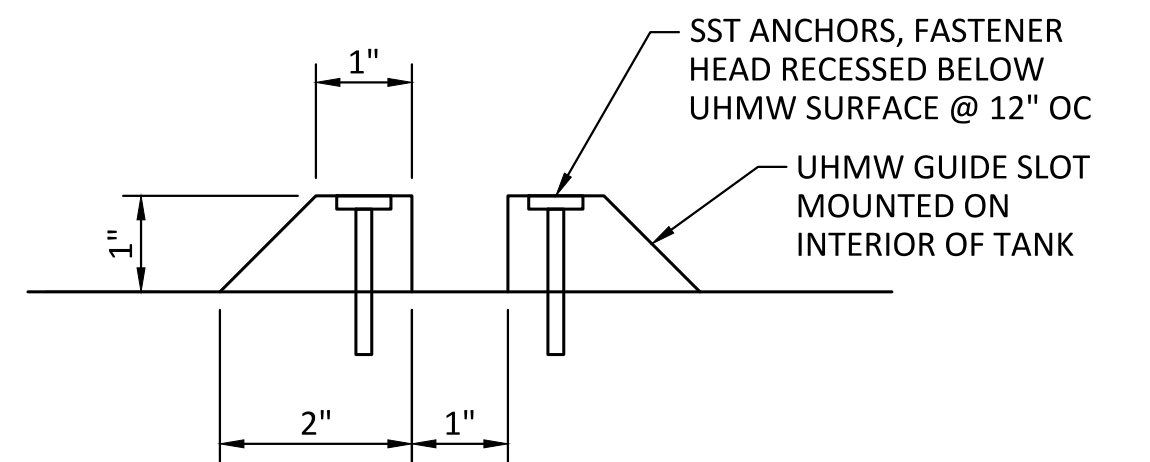
FIRST FEEDING VESSEL (NEW), TYP OF 2
SCALE: 1/2"= 1'-0"



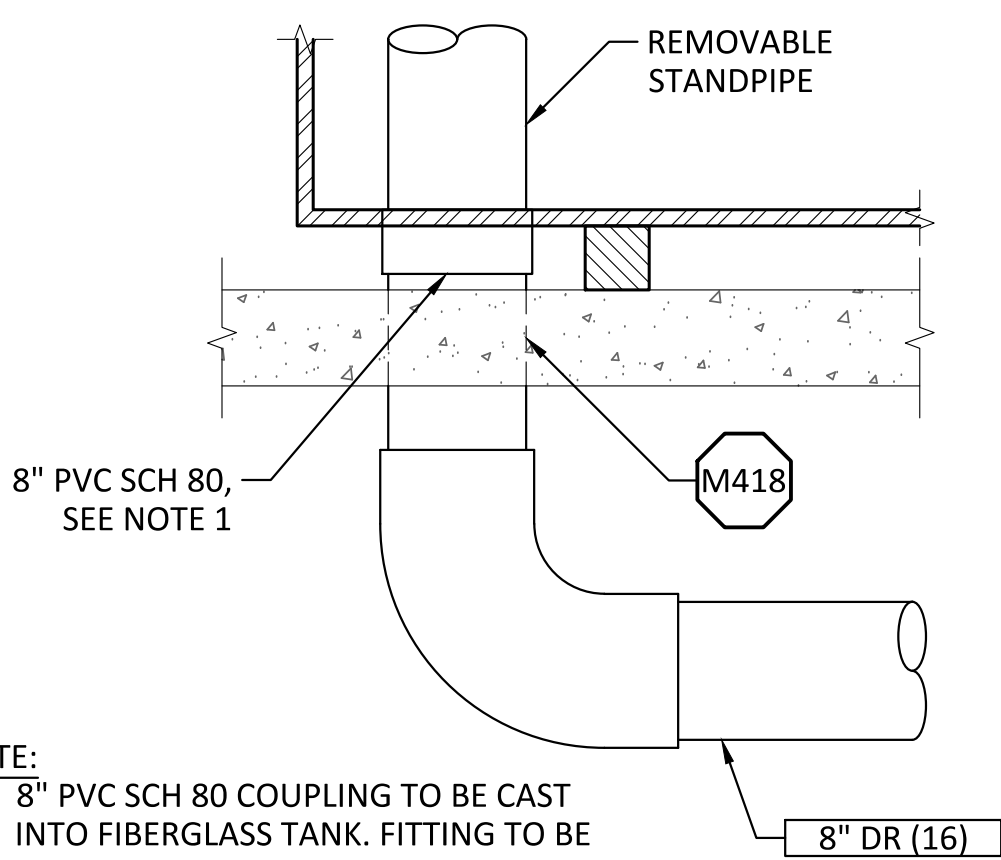
SECTION
SCALE: 1/2"= 1'-0"



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

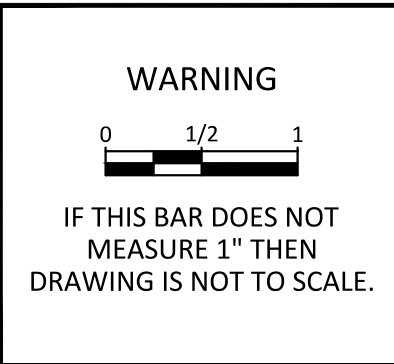


TANK GUIDE SLOT - DETAIL
SCALE: 6"= 1'-0"

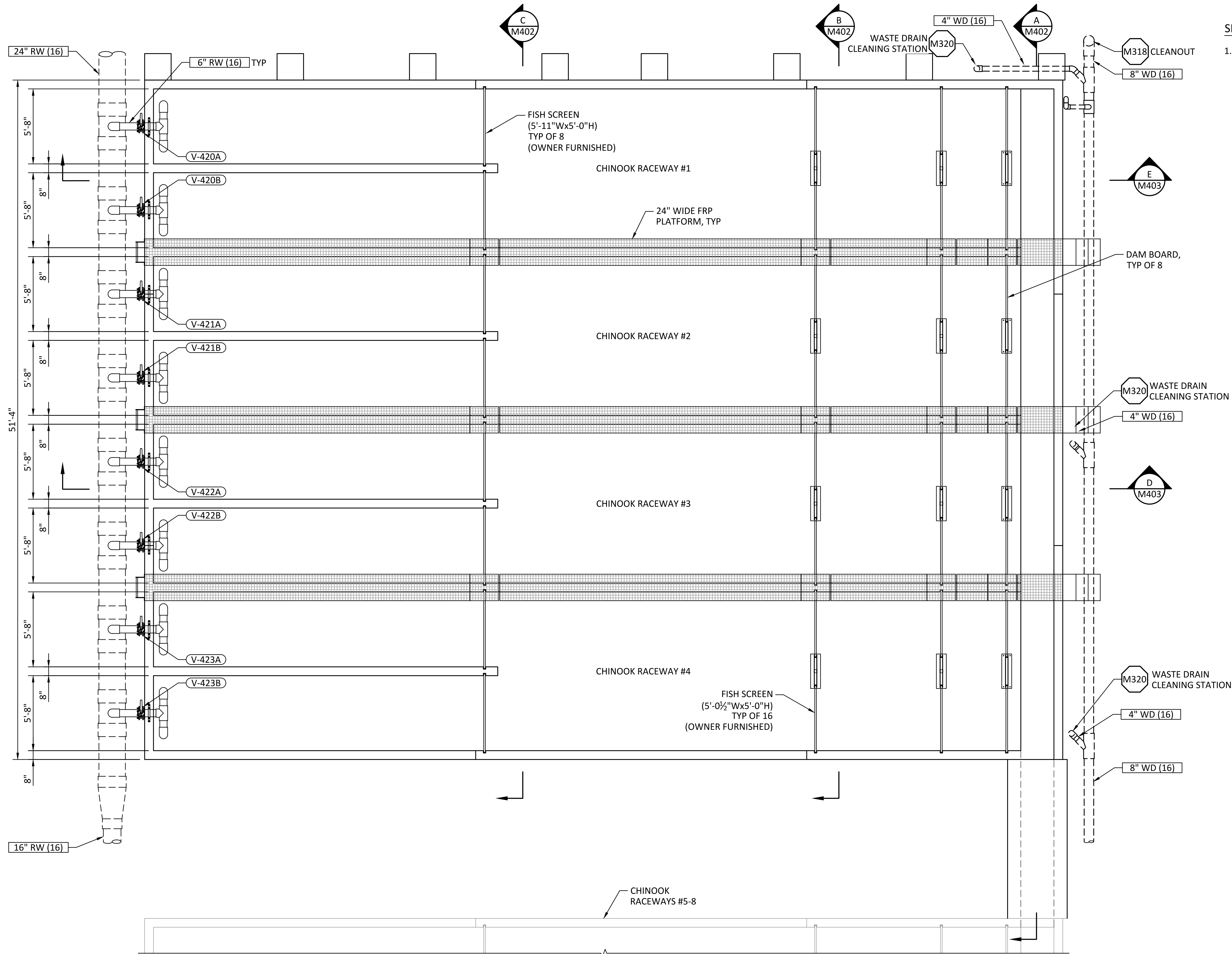


TANK STANDPIPE - DETAIL
SCALE: 1"= 1'-0"

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M331
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
COHO BUILDING FEEDING VESSELS SECTIONS AND DETAILS		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

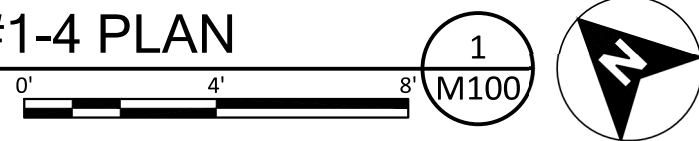


SHEET NOTES:

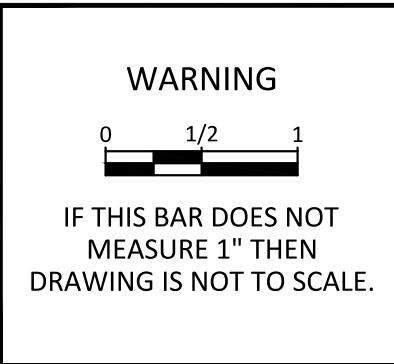
1. FOR YARD PIPING PLAN AND DETAILS SEE SHEET C400, C401, AND C402.

CHINOOK RACEWAYS #1-4 PLAN

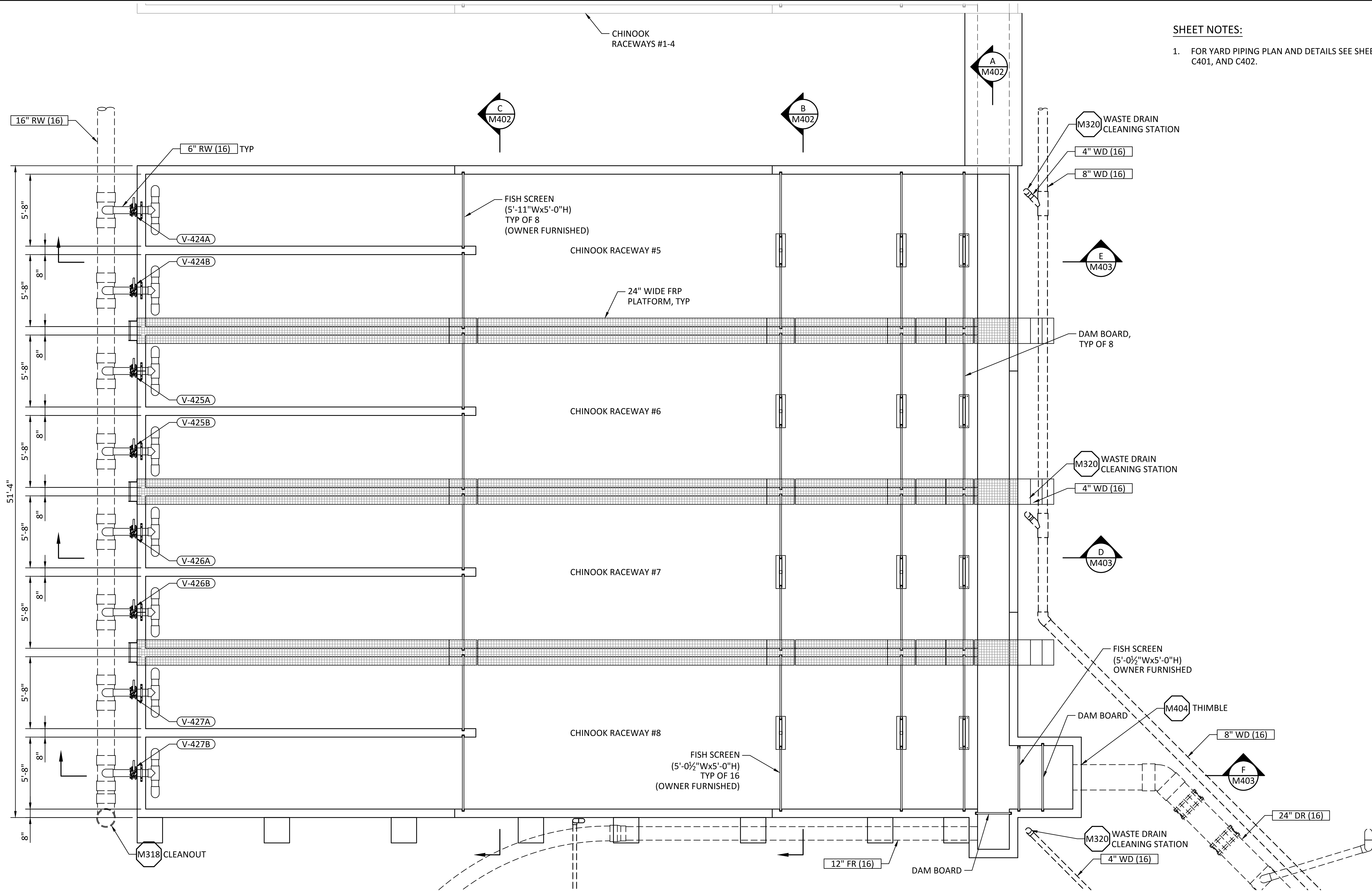
SCALE: 1/4" = 1'-0"



REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M400
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK RACEWAYS #1-4 PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
- FOR YARD PIPING PLAN AND DETAILS SEE SHEET C400, C401, AND C402.

CHINOOK RACEWAYS #5-8 PLAN
SCALE: 1/4" = 1'-0"

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



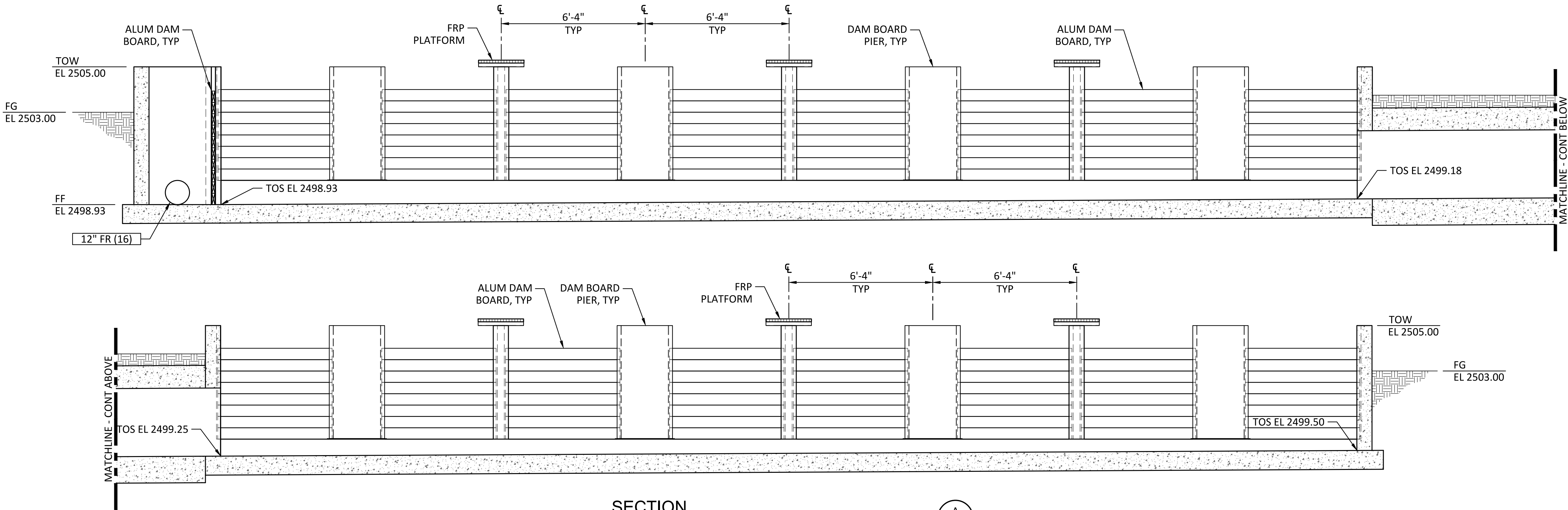
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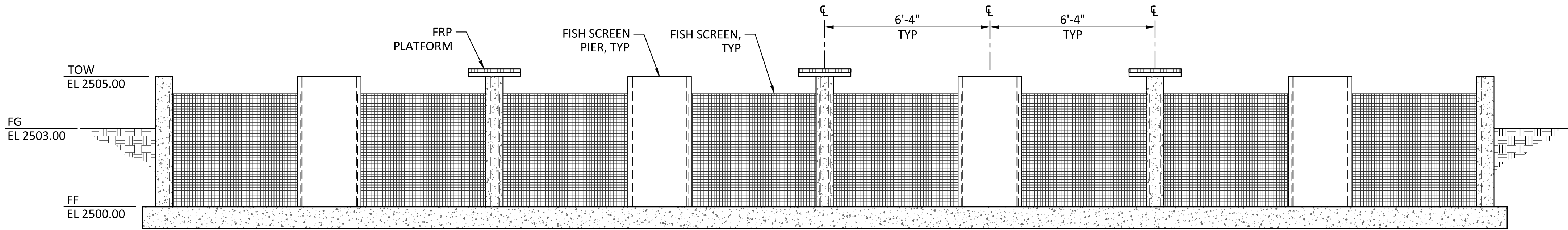
McMILLEN JACOBS ASSOCIATES

KLAMATH RIVER RENEWAL CORPORATION

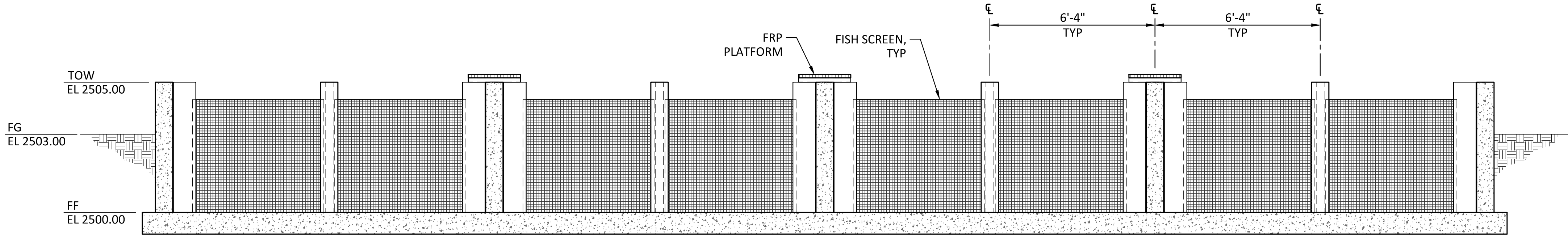
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M401
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK RACEWAYS #5-8 PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



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



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



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

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



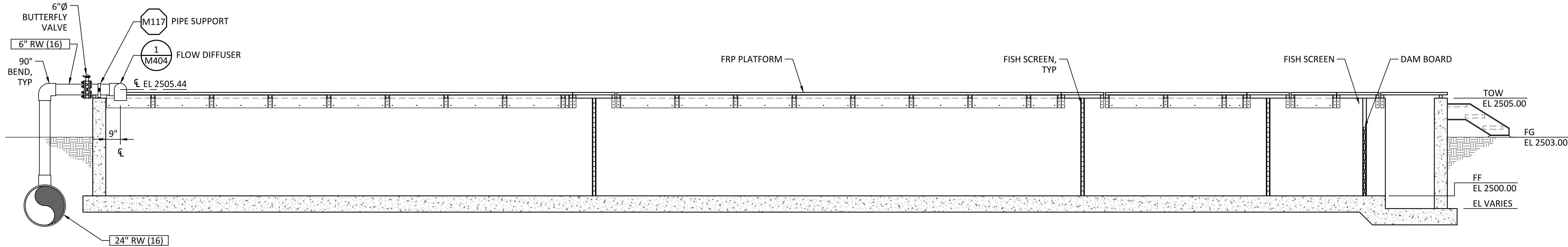
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

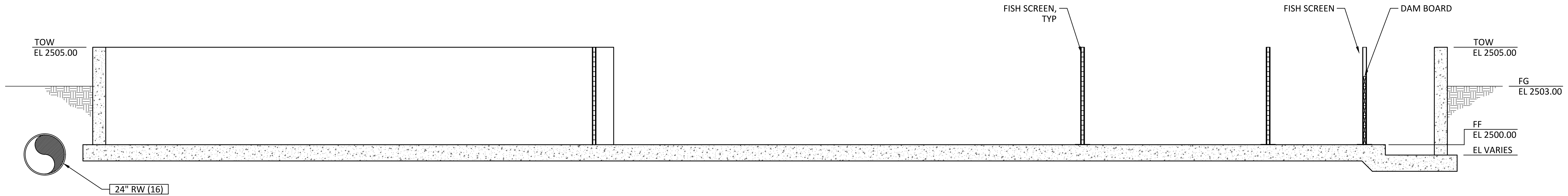


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M402
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK RACEWAYS SECTIONS 1		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



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

D
M400



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

E
M400



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

F
M401

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



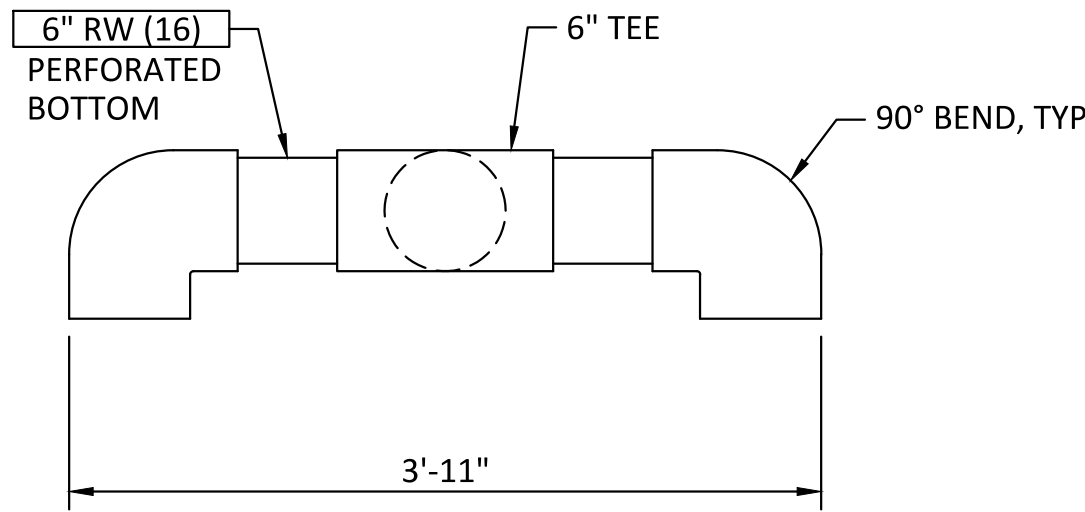
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



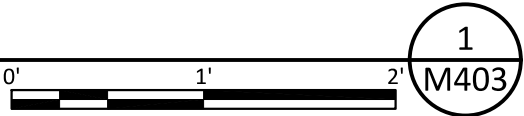
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M403
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK RACEWAYS SECTIONS 2		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



NOTE:
DRILL 1½"Ø HOLES ALONG INVERT OF PIPE AND TEE AT 12" OC.

FLOW DIFFUSER DETAIL

SCALE: 1"= 1'-0"



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



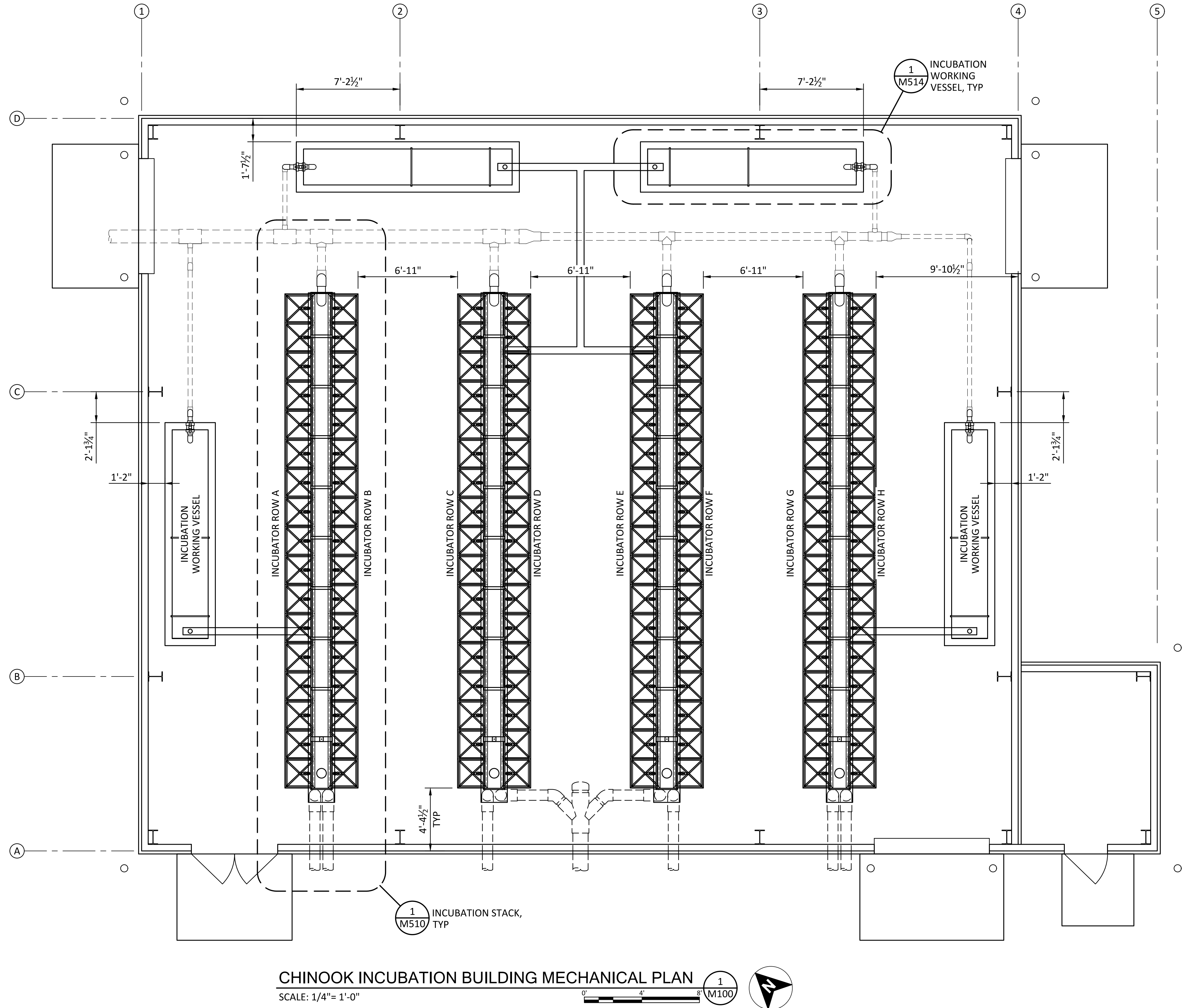
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M404
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK RACEWAYS SECTIONS AND DETAILS		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



CHINOOK INCUBATION BUILDING MECHANICAL PLAN
SCALE: 1/4" = 1'-0"

1
M100



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



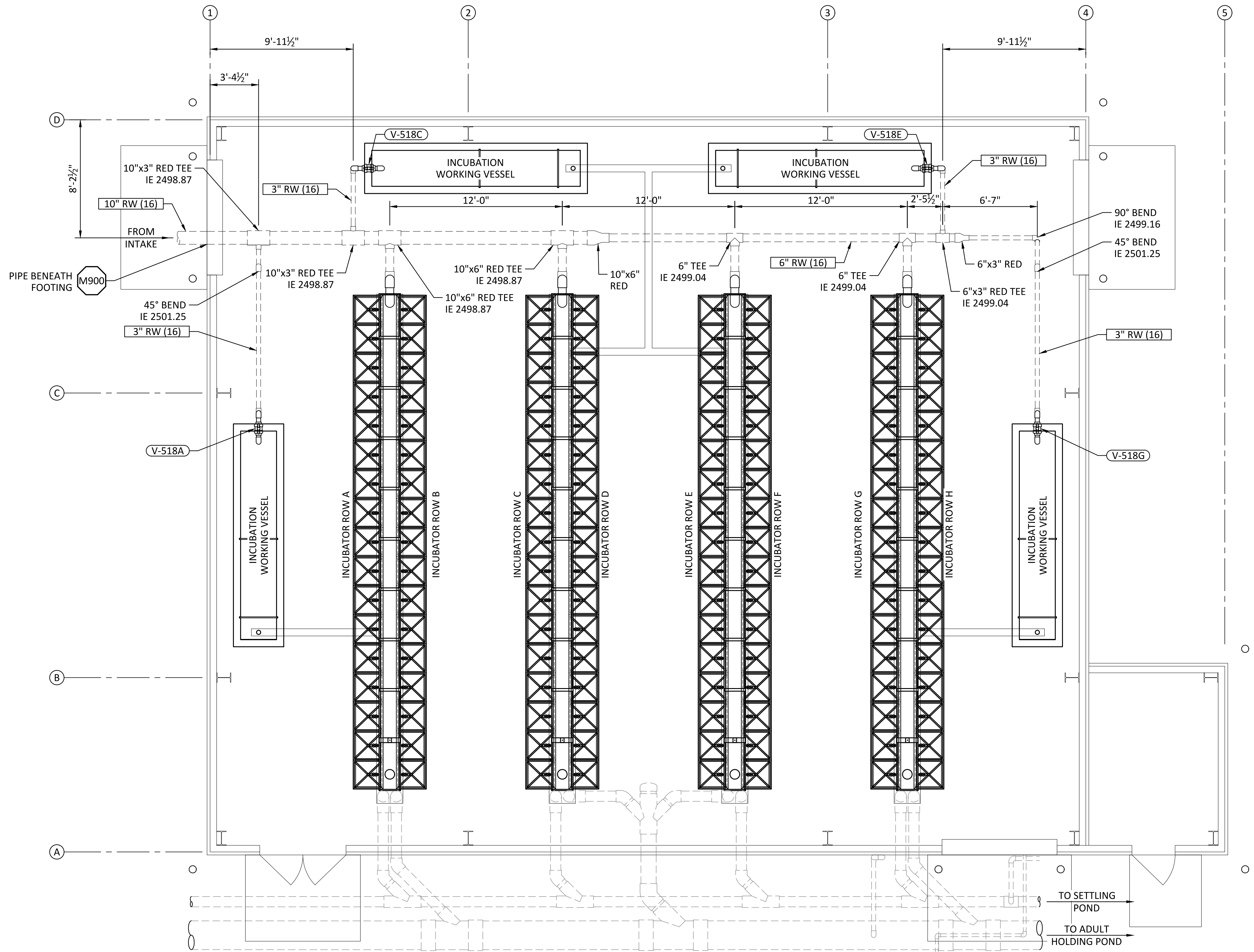
WARNING

0 1/2 1

IF THIS BAR DOES NOT
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DRAWING IS NOT TO SCALE.

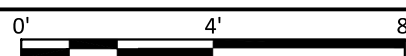


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M500
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK INCUBATION BUILDING MECHANICAL PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

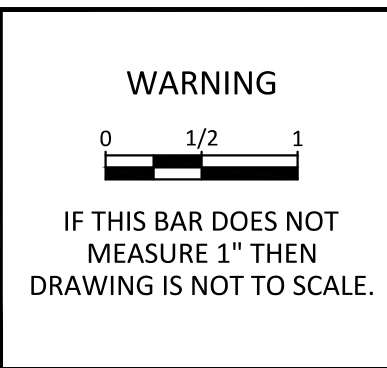


CHINOOK INCUBATION BUILDING SUPPLY PIPING PLAN

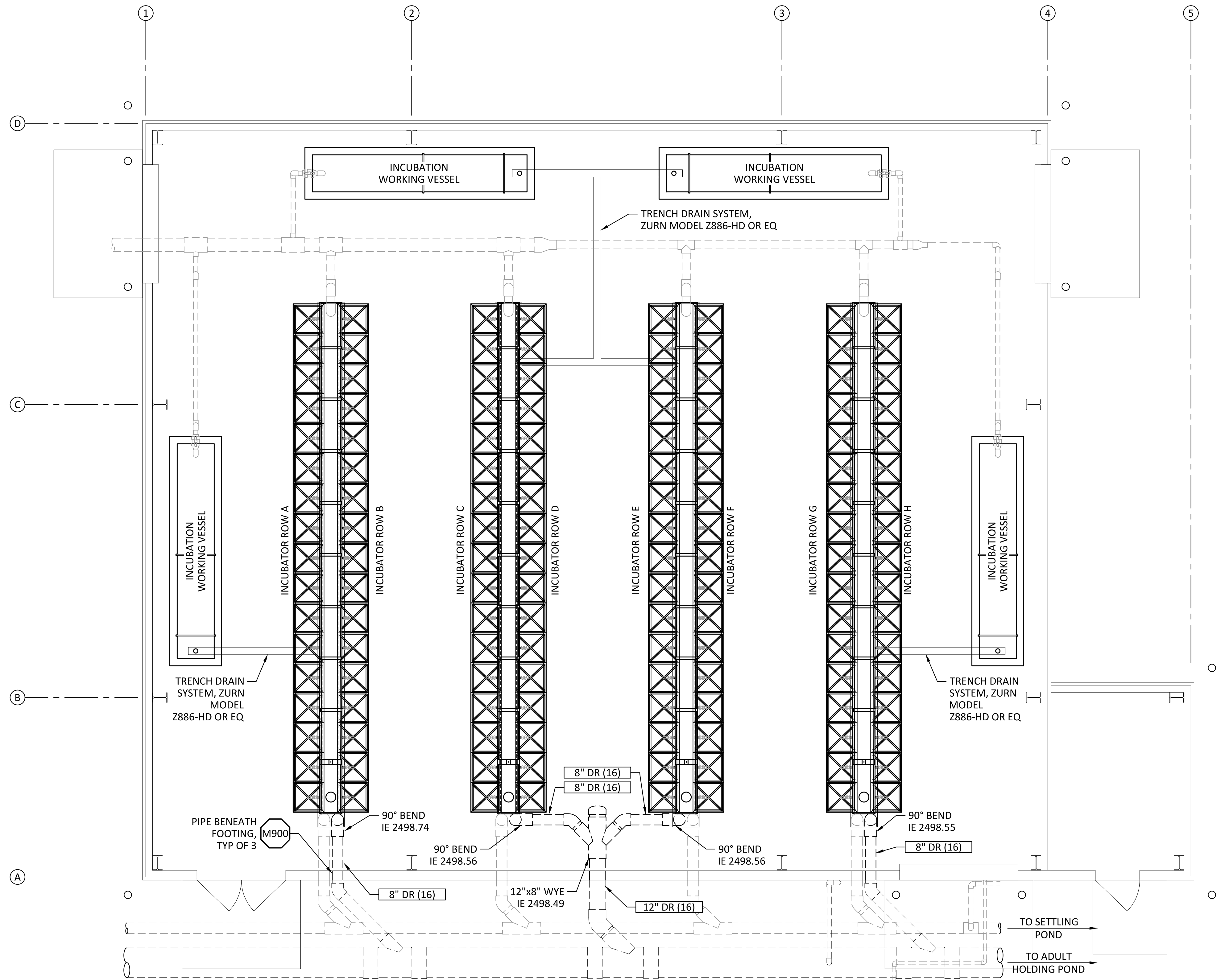
SCALE: 1/4"= 1'-0"



REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION

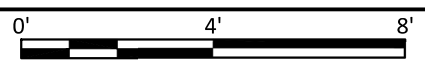


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M501
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK INCUBATION BUILDING SUPPLY PIPING PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



CHINOOK INCUBATION BUILDING DRAIN PIPING PLAN

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



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



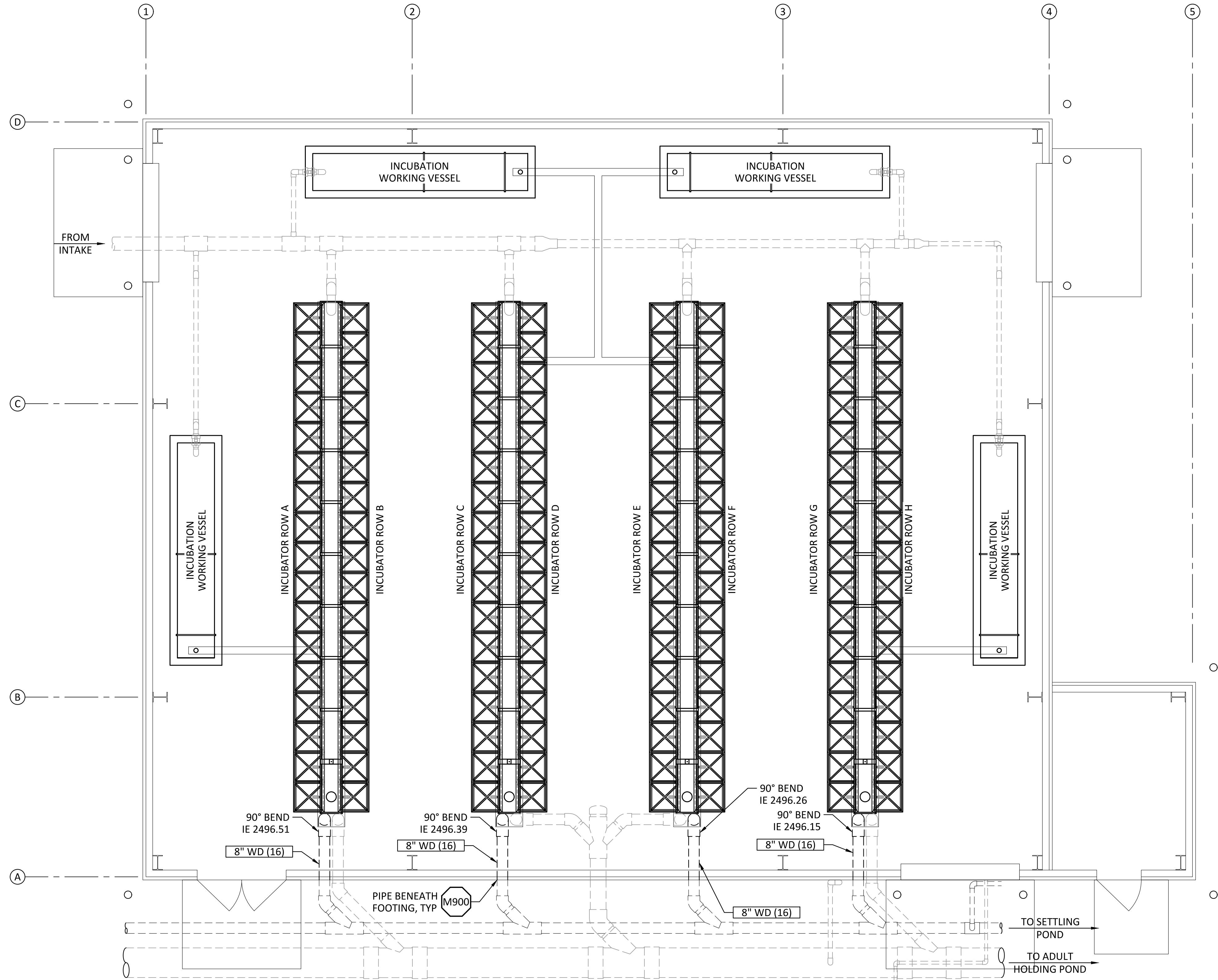
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

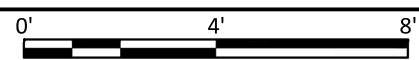


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M502
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK INCUBATION BUILDING DRAIN PIPING PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



CHINOOK INCUBATION BUILDING WASTE DRAIN PIPING PLAN

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



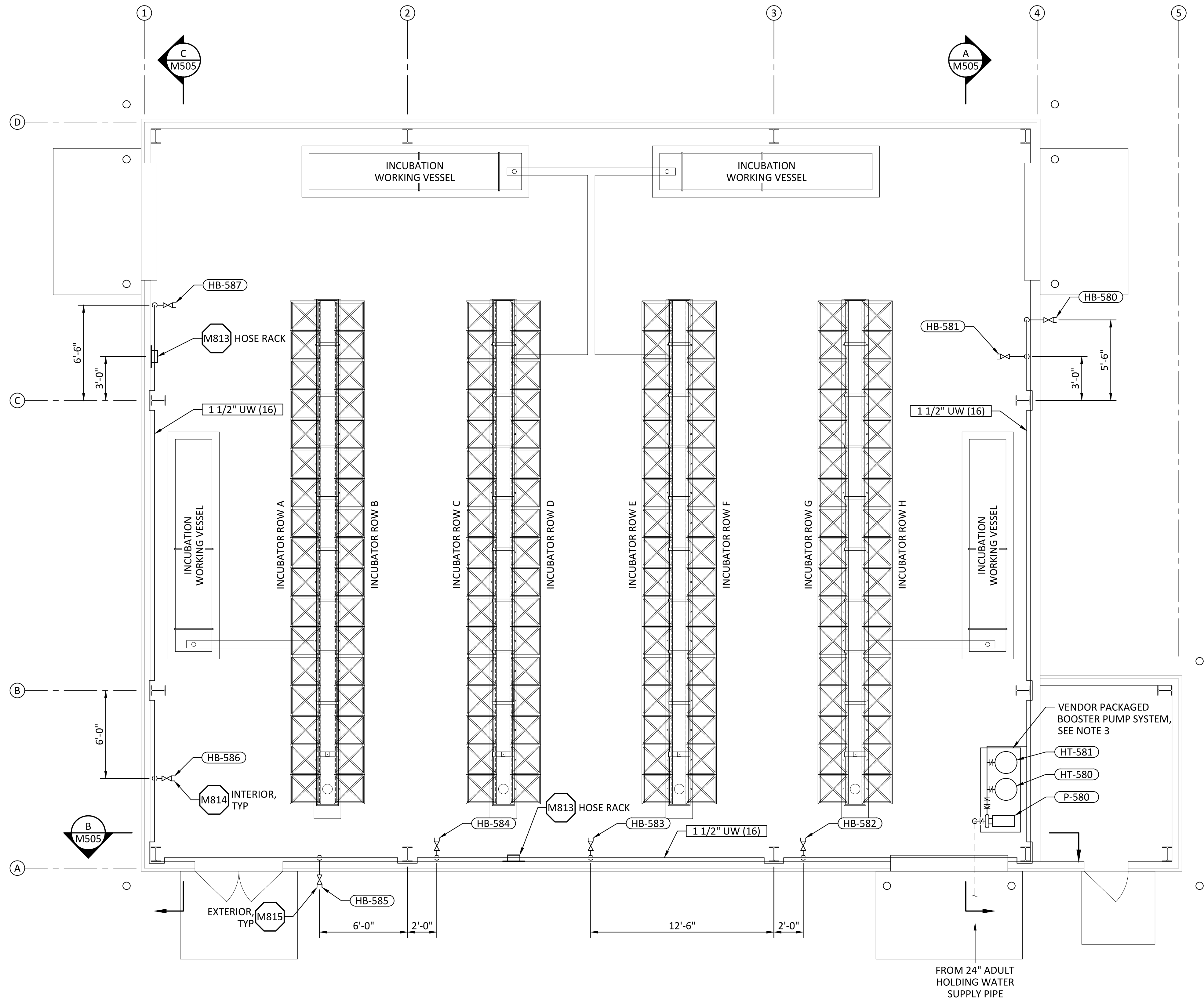
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



WARNING
0 1/2 1
IF THIS BAR DOES NOT
MEASURE 1" THEN
DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M503
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK INCUBATION BUILDING WASTE DRAIN PIPING PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



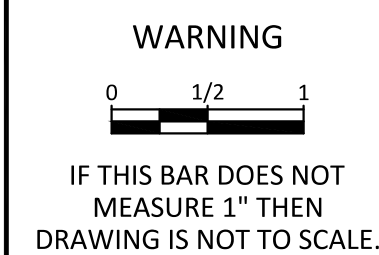
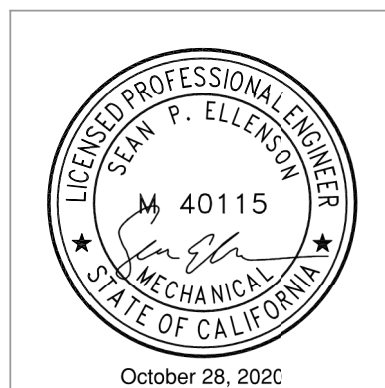
- SHEET NOTES:**
1. PROVIDE NON-POTABLE WARNING SIGN AT EACH HOSE-BIB, PER STANDARD DETAIL .
 2. MAINTAIN A MINIMUM 3" CLEAR BETWEEN UTILITY WATER PIPING AND ALL OTHER PIPING AND EQUIPMENT.
 3. VENDOR PACKAGED BOOSTER PUMP SKID PER SCHEMATIC ON SHEET GM010.

CHINOOK INCUBATION BUILDING UTILITY WATER PIPING PLAN
SCALE: 1/4" = 1'-0"

0' 4' 8'

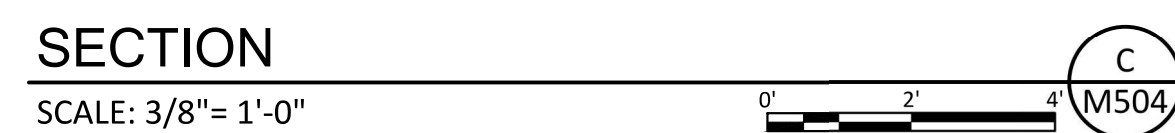
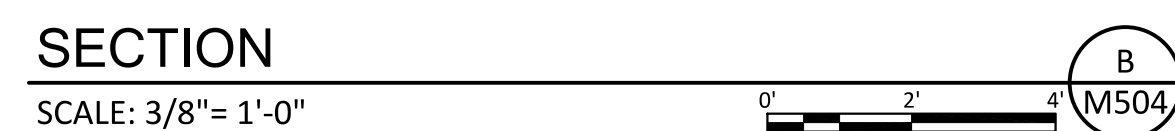
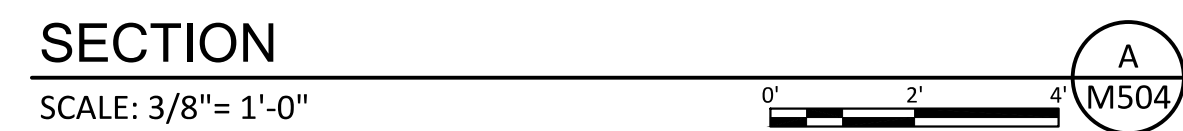


0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION

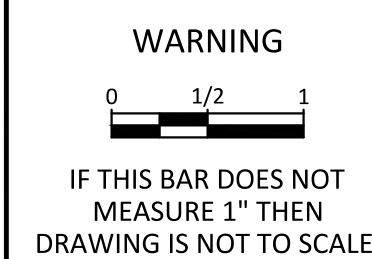
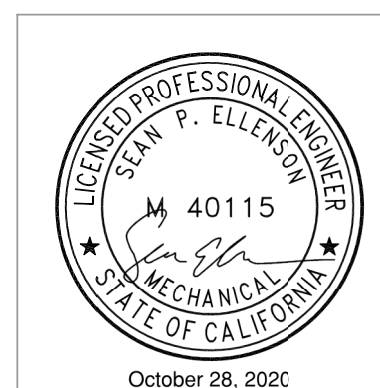


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M504
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK INCUBATION BUILDING UTILITY WATER PIPING PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

1. MOUNT UTILITY WATER PIPING TO CONCRETE BUILDING CURB. MAXIMUM SUPPORT SPACING 5'-0".

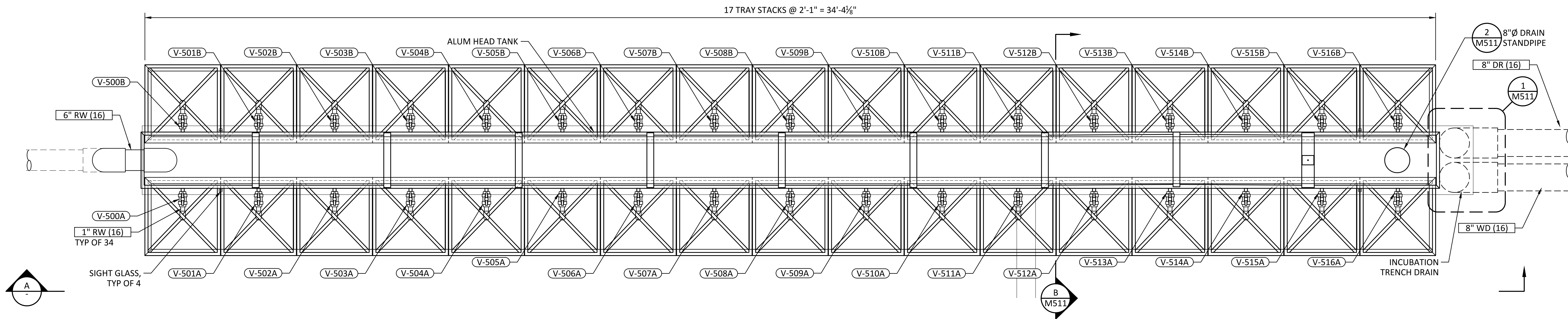


0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



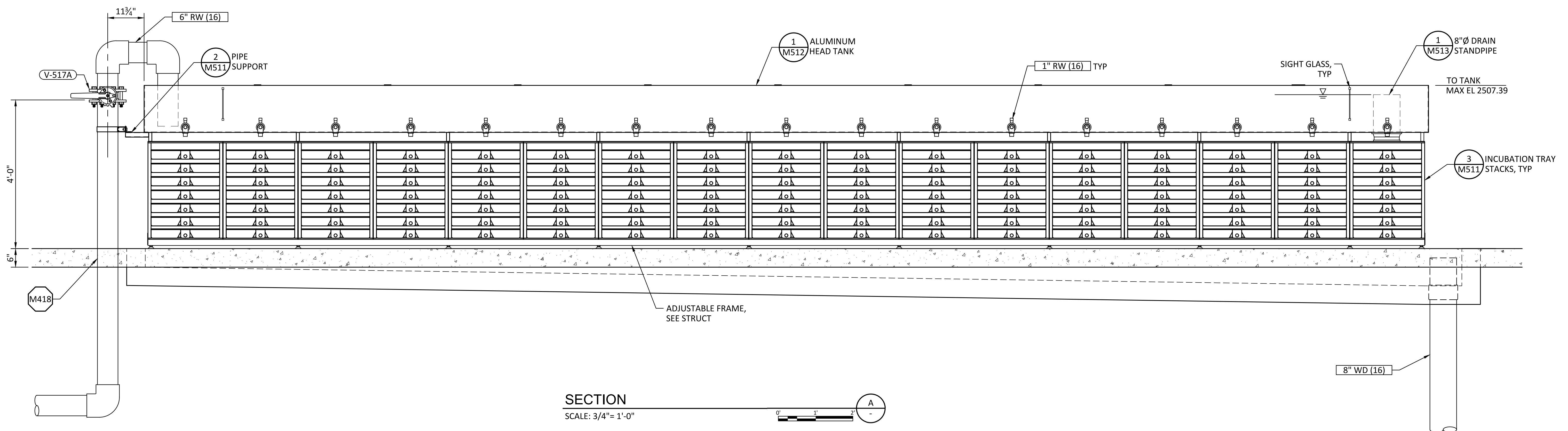
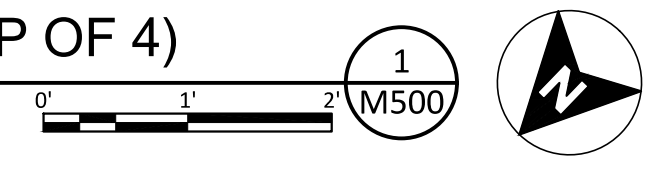
KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>S. ELLENSON</u>	DRAWING M505	JOB NO. 000000
FALL CREEK FISH HATCHERY	DRAWN <u>R. GUERRERO</u>		
CHINOOK INCUBATION BUILDING UTILITY WATER PIPING SECTIONS	CHECKED <u>J. BOAG</u>		
	PROJECT DATE <u>10/28/20</u>		

Path: C:\Vault20\Klamath River Renewal Corp\Fall Creek Facility\M505.dwg Plot date: Oct 27, 2020 01:23pm, CAD User: Guerrero



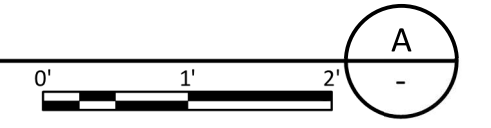
INCUBATION STACK PLAN (TYP OF 4)

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



SECTION

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



REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED S. ELLENSON	DRAWING M510
FALL CREEK FISH HATCHERY	DRAWN R. GUERRERO	
CHINOOK INCUBATION BLDG	CHECKED J. BOAG	
INCUBATION STACKS	PROJECT DATE 10/28/20	

SECTION

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

TRENCH DRAIN DETAIL

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

NOTE:

1. 8"Ø SCH 80 COUPLING TO BE CAST INTO CONCRETE. FITTING TO BE FLUSH W/ BOTTOM OF TRENCH TO ALLOW FOR COMPLETE DRAINAGE.

TRENCH DRAIN SECTION

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

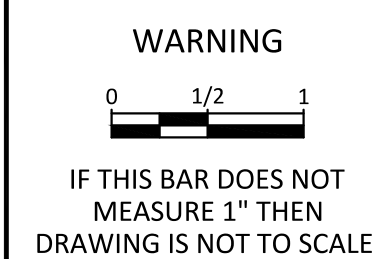
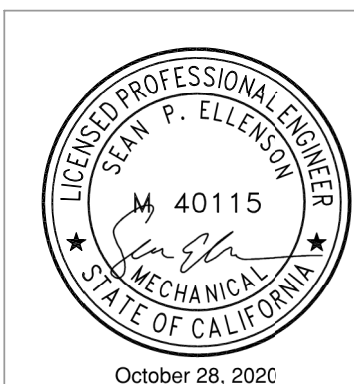
NOTE:

1. ALL FASTENERS SHALL BE ALUMINUM.

INCUBATION TRAY STACKS (TYP OF 136 - EXISTING)

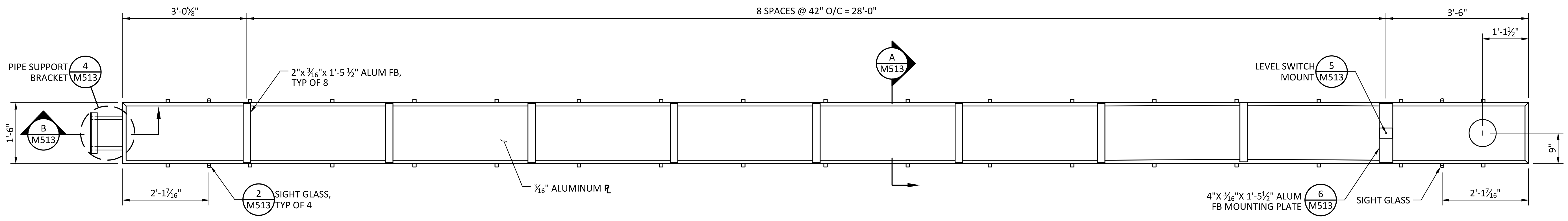
SCALE: 1 1/2" = 1'-0"

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION

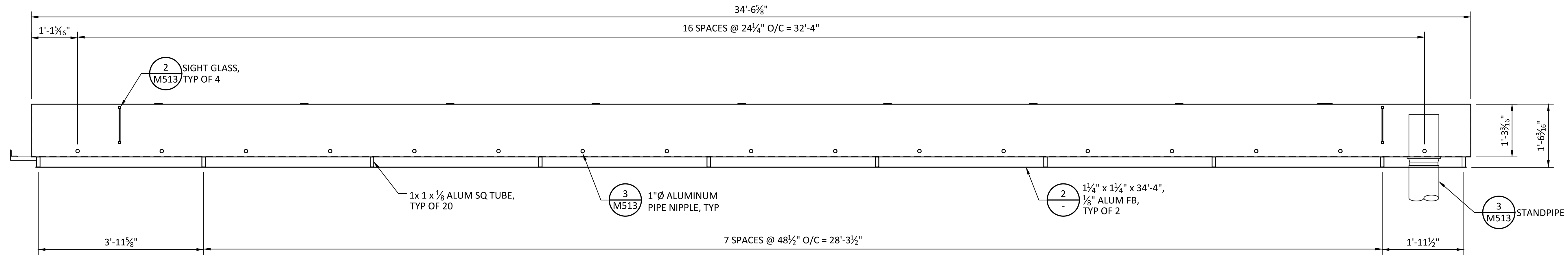


KLAMATH RIVER RENEWAL CORPORATION FALL CREEK FISH HATCHERY CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 1	DESIGNED <u>S. ELLENSON</u>	DRAWING M511 JOB NO. 000000
	DRAWN <u>R. GUERRERO</u>	
	CHECKED <u>J. BOAG</u>	
	PROJECT DATE <u>10/28/20</u>	

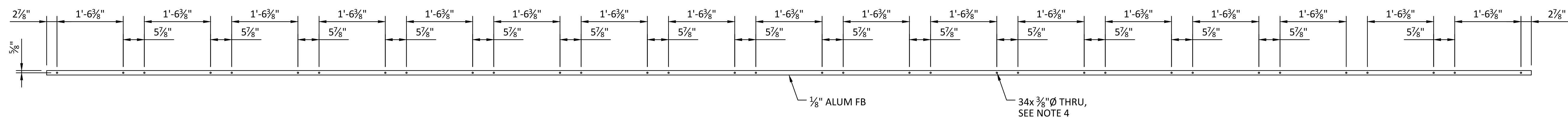
- SHEET NOTES:
- 1. ALUMINUM PLATE AND BAR SHALL BE 5052-H32.
 - 2. ALUMINUM TUBE AND ANGLE SHALL BE 6061-T6.
 - 3. HEAD TANK TO BE MOUNTED TO INCUBATION STACK FRAMES.
 - 4. INCUBATION HEAD TANK SHALL BE MOUNTED TO (17) EVENLY SPACES INCUBATION TRAY STACKS (EXIST) WITH ALUMINUM FASTENERS. CONTRACTOR SHALL FIELD VERIFY INCUBATION TRAY STACK FRAME BOLT HOLE PATTERN PRIOR TO DRILLING MOUNTING HOLES.



INCUBATION HEAD TANK PLAN (QTY = 4)
SCALE: 3/4" = 1'-0"



INCUBATION HEAD TANK ELEVATION
SCALE: 3/4" = 1'-0"



INCUBATION HEAD TANK SUPPORT - BOLTING DETAILS
SCALE: 3/4" = 1'-0"

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REV	DATE	BY	DESCRIPTION	



WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

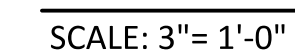
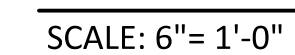
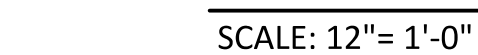
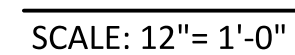
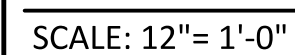
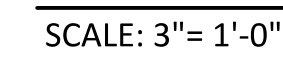
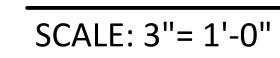
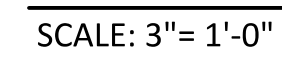


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M512
FALL CREEK FISH HATCHERY		DRAWN <u>T. CASTRICONE</u>	
CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 2		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

Path: C:\Vault20\Klamath River Renewal Corp\Fall Creek Facility\M512.dwg Plot date: Oct 27, 2020 01:23pm, CAD User: Guerrero

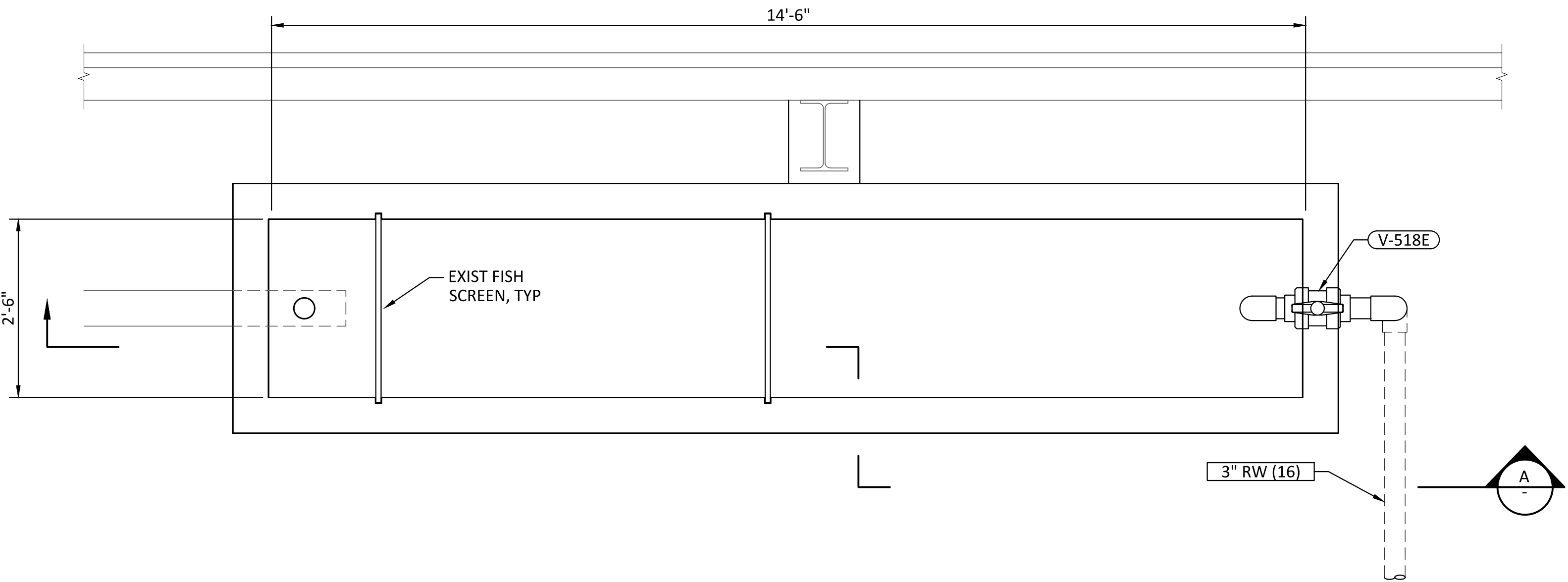
JOB NO: 000000

1. PROVIDE MOUNTING HOLES IN ACCORDANCE WITH MANUF. BOLTING PATTERN OF SELECTED TERMINAL BOX.

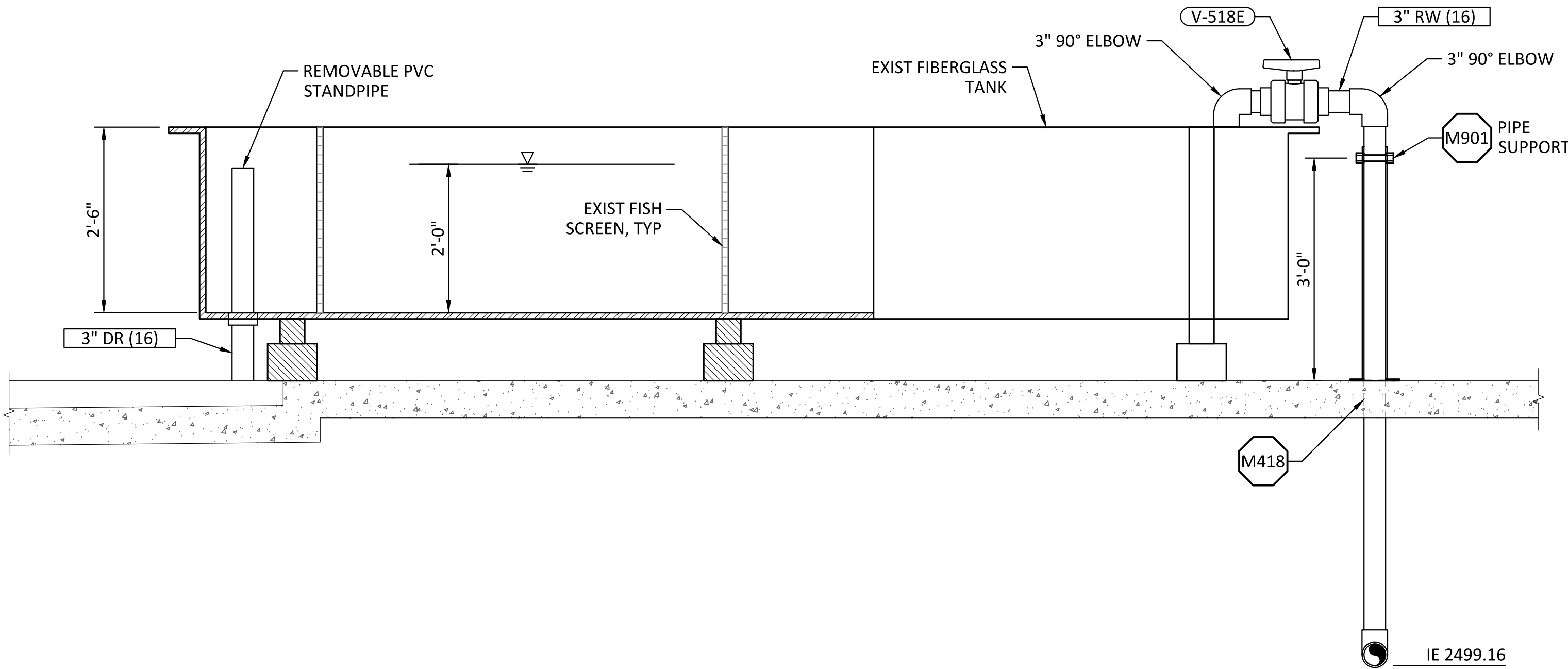


JOB NO: 000000 Path: C:\Vault20\Klamath River Renewal Corp\Fall Creek Facility\M513.dwg Plot date: Oct 27, 2020 01:23pm, CAD User: Guerrero

- SHEET NOTES:**
- THE FIBERGLASS TANK WORKING VESSELS ARE EXISTING AND SHALL BE RELOCATED FROM THE IRON GATE HATCHERY FOR USE IN THE CHINOOK INCUBATION BUILDING.



WORKING VESSELS PLAN
SCALE: 3/4" = 1'-0"



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

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



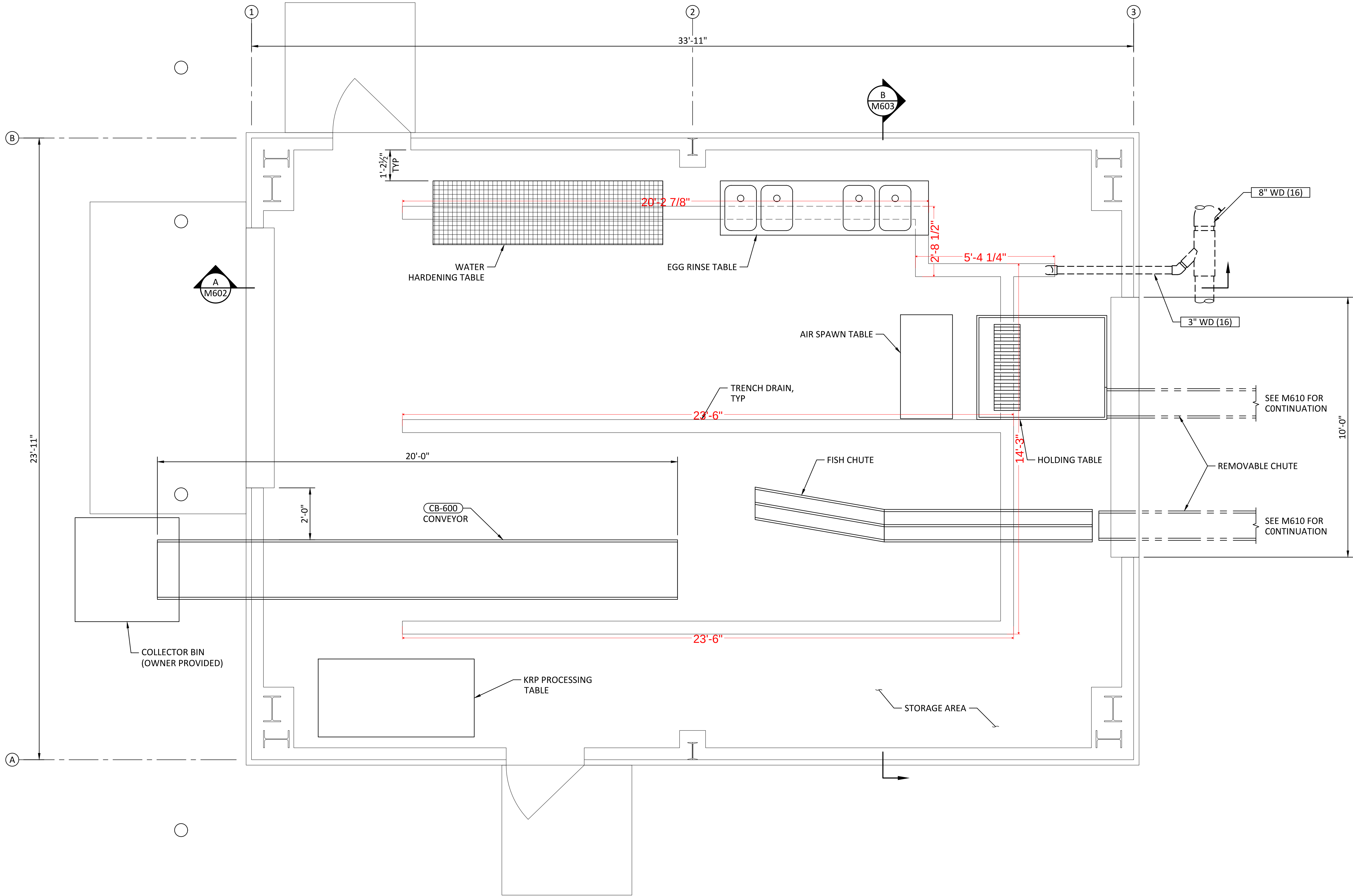
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M514
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
CHINOOK INCUBATION BLDG WORKING VESSELS PLAN AND SECTIONS		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



SPAWNING BUILDING MECHANICAL PLAN

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

0 1/2 1 4' M100



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



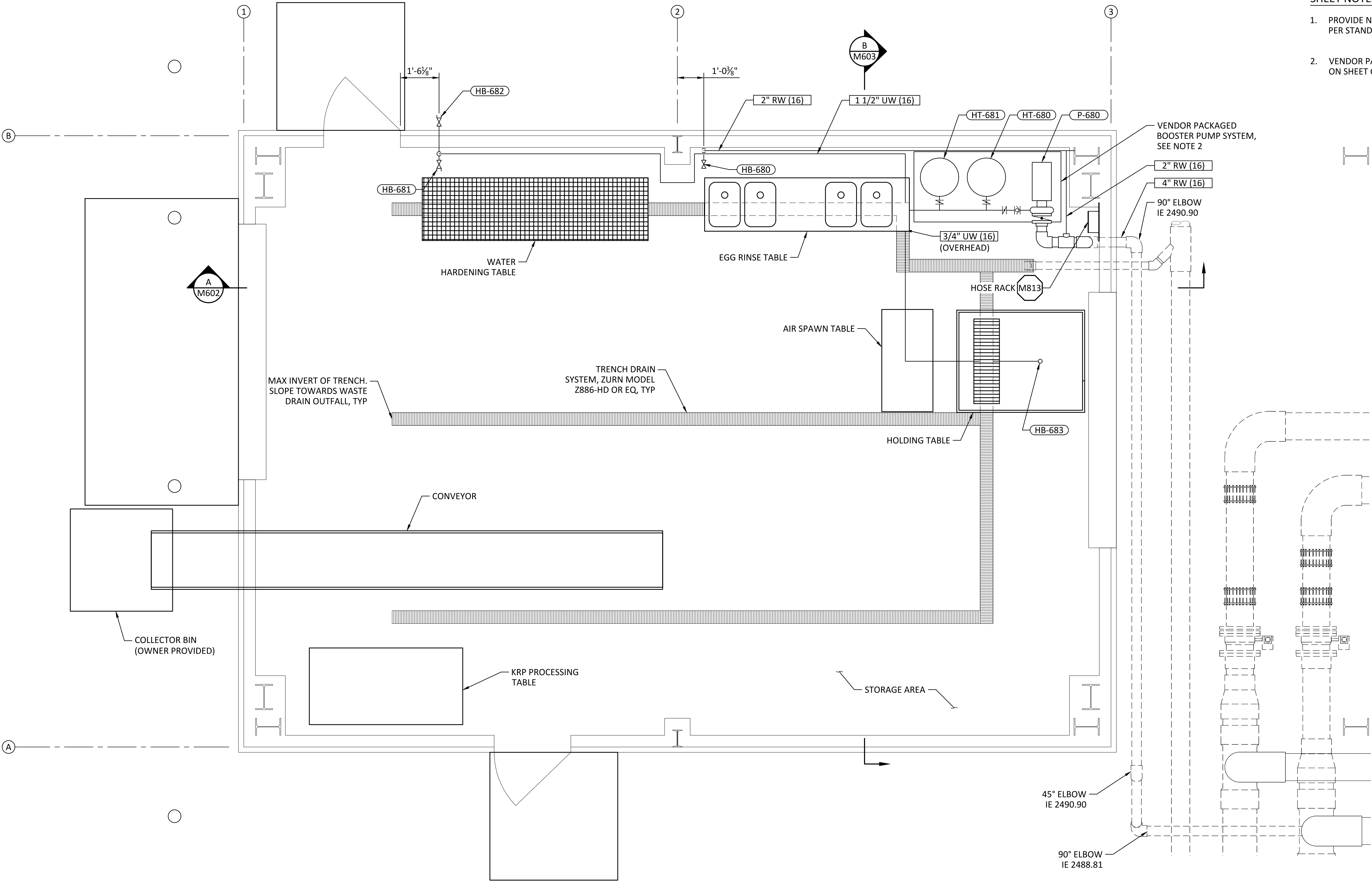
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



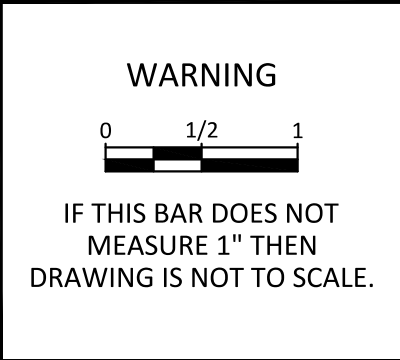
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M600
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SPAWNING BUILDING MECHANICAL PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
1. PROVIDE NON-POTABLE WARNING SIGN AT EACH HOSE-BIB, PER STANDARD DETAIL .
 2. VENDOR PACKAGED BOOSTER PUMP SKID PER SCHEMATIC ON SHEET GM010.

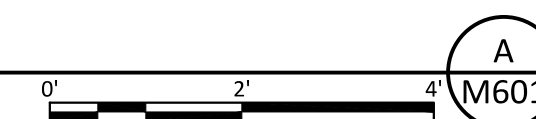
SPAWNING BUILDING UTILITY WATER PIPING PLAN
SCALE: 1/2" = 1'-0"

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	

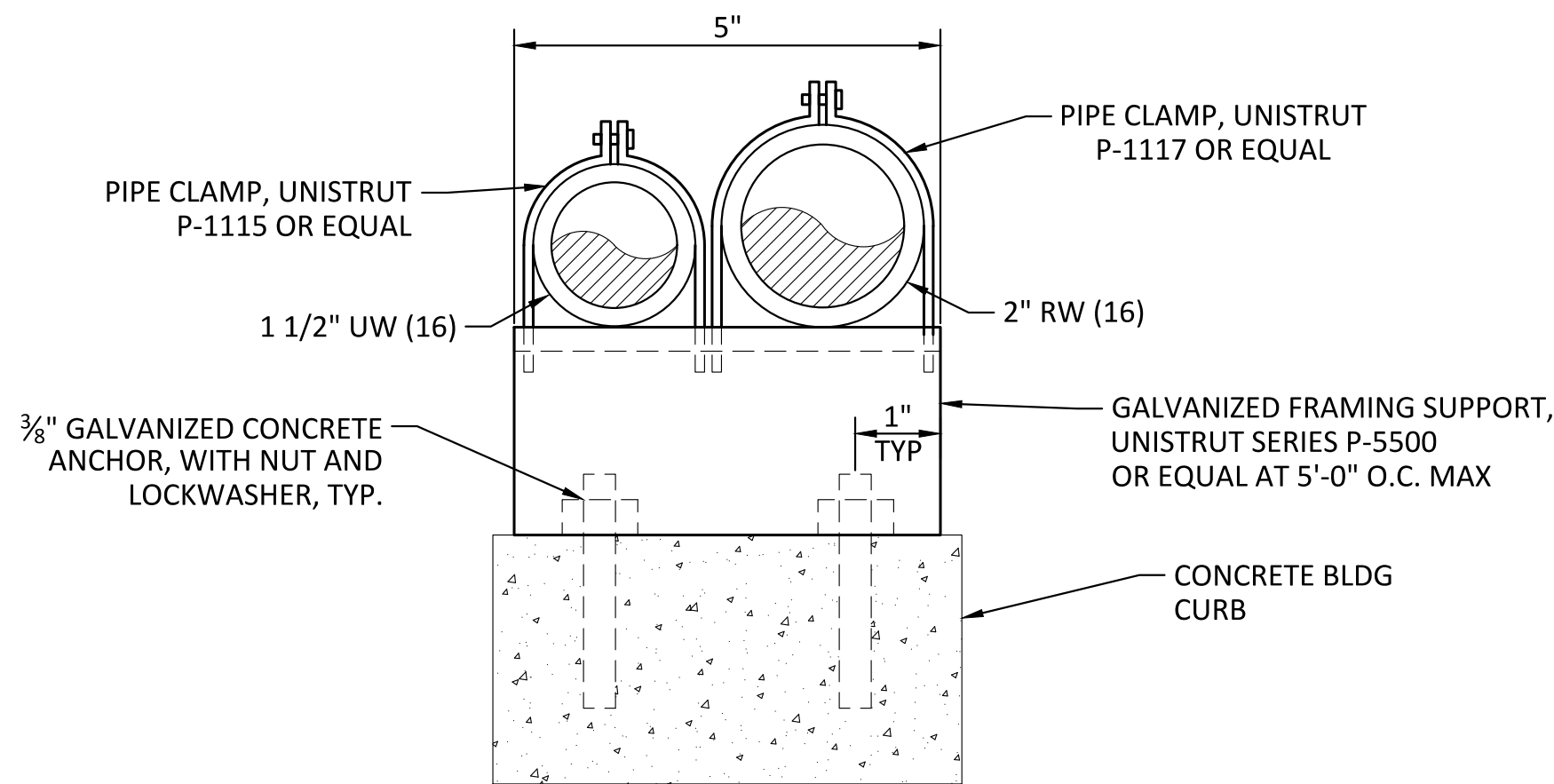
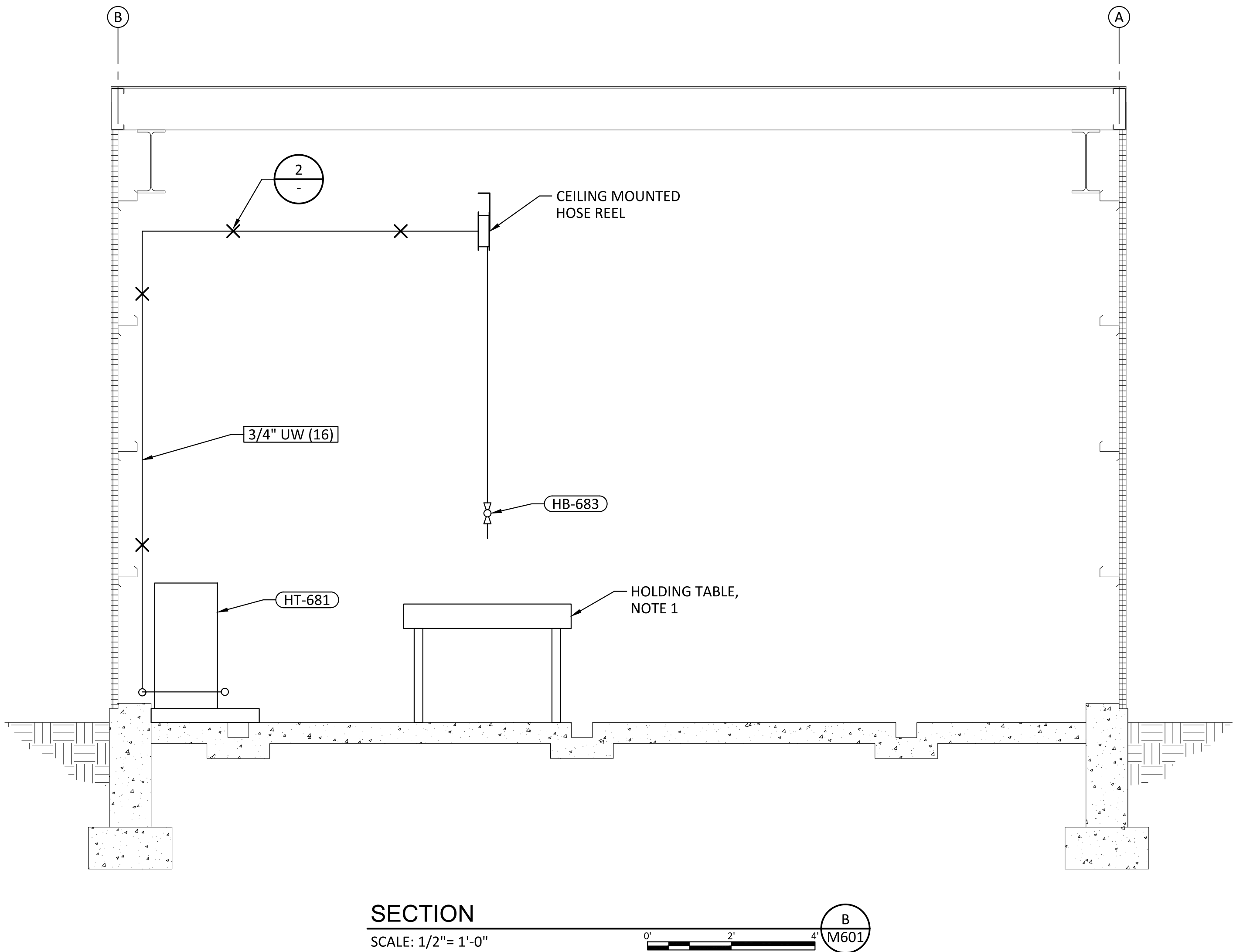


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M601
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SPAWNING BUILDING UTILITY WATER PIPING PLAN		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

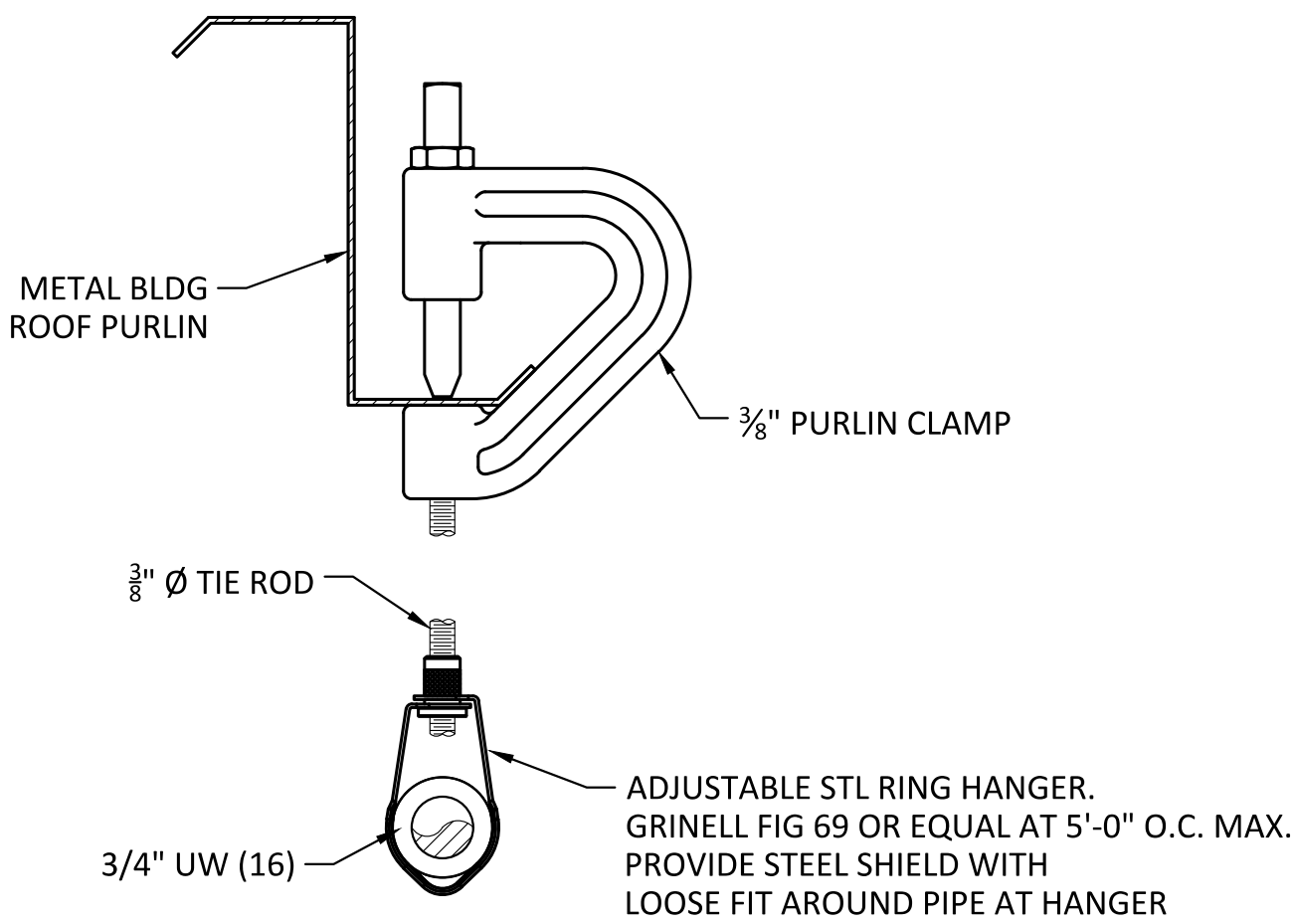
1. WATER HARDENING TABLE, EGG RINSE TABLE, AND HOLDING TABLE ARE EXISTING AND SHALL BE RELOCATED FROM THE IRON GATE HATCHERY.
2. PROVIDE NEW UV DISINFECTION UNIT FOR WATER HARDENING TABLE SUPPLY MANIFOLD, VITAPUR MODEL VUV-H645B OR ENGINEER APPROVED EQUAL.

M602

- SHEET NOTES:**
1. WATER HARDENING TABLE, EGG RINSE TABLE, AND HOLDING TABLE ARE EXISTING AND SHALL BE RELOCATED FROM THE IRON GATE HATCHERY.



NOTES:
1. BASE CHANNEL SHALL BE CUT TO FIT AS REQUIRED FOR FRAMING SUPPORT ANCHORAGE TO TOP OF CURB.



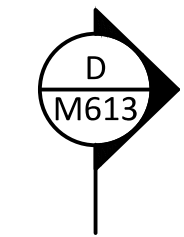
REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



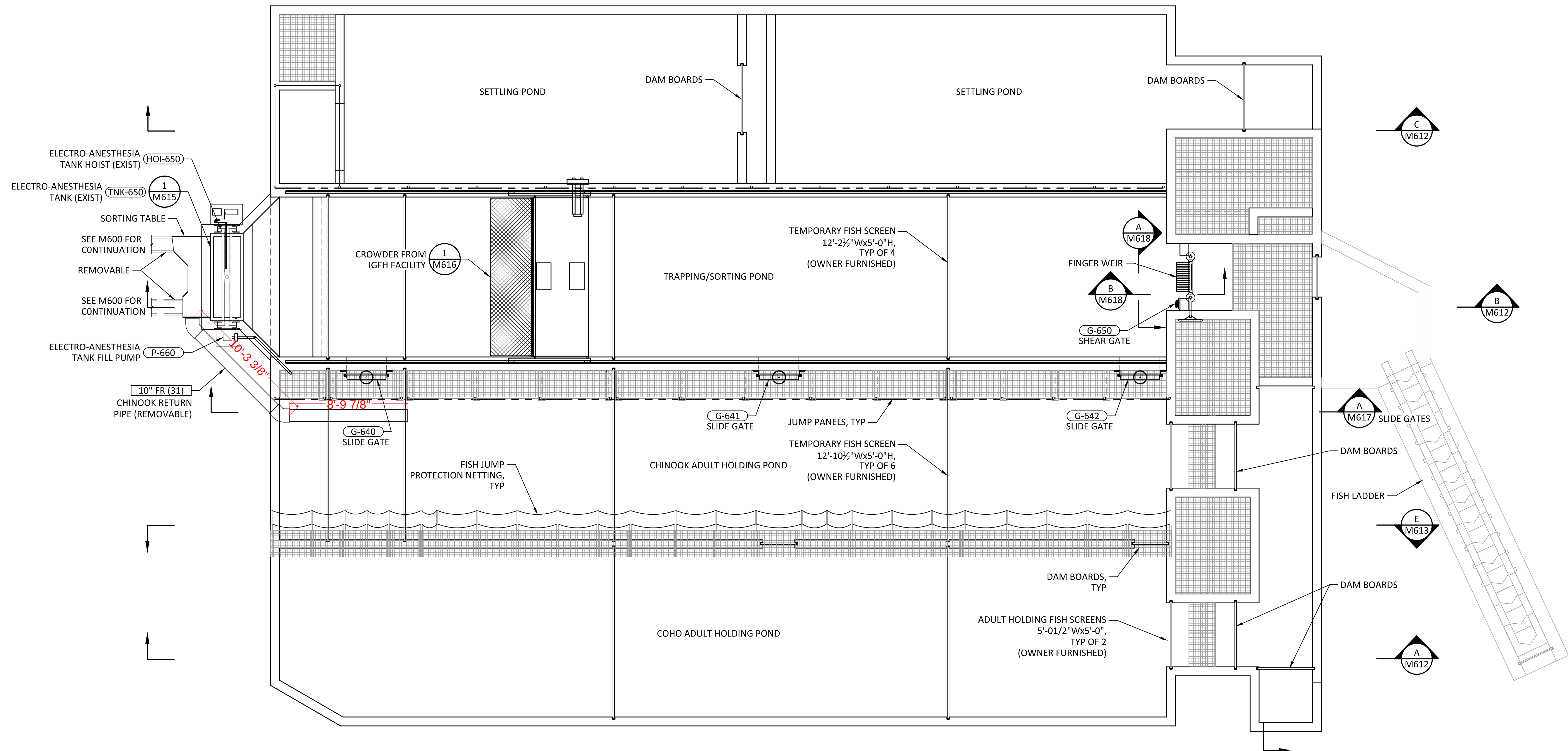
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	S. ELLENSON	DRAWING M603
FALL CREEK FISH HATCHERY		DRAWN	R. GUERRERO	
SPAWNING BUILDING UTILITY WATER PIPING SECTIONS AND DETAILS 2		CHECKED	J. BOAG	
		PROJECT DATE	10/28/20	



SHEET NOTES:
1. FOR YARD PIPING PLAN AND DETAILS SEE CIVIL.



SETTLING PONDS AND ADULT HOLDING PONDS MECHANICAL PLAN

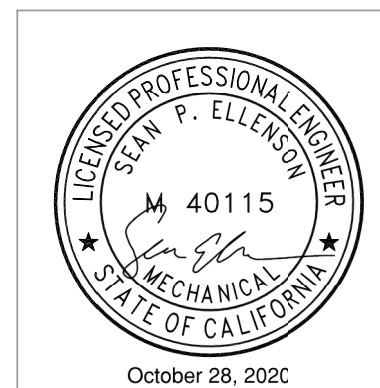
SCALE: 1/4" = 1'-0"

0' 4' 8'

1 M100



REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION

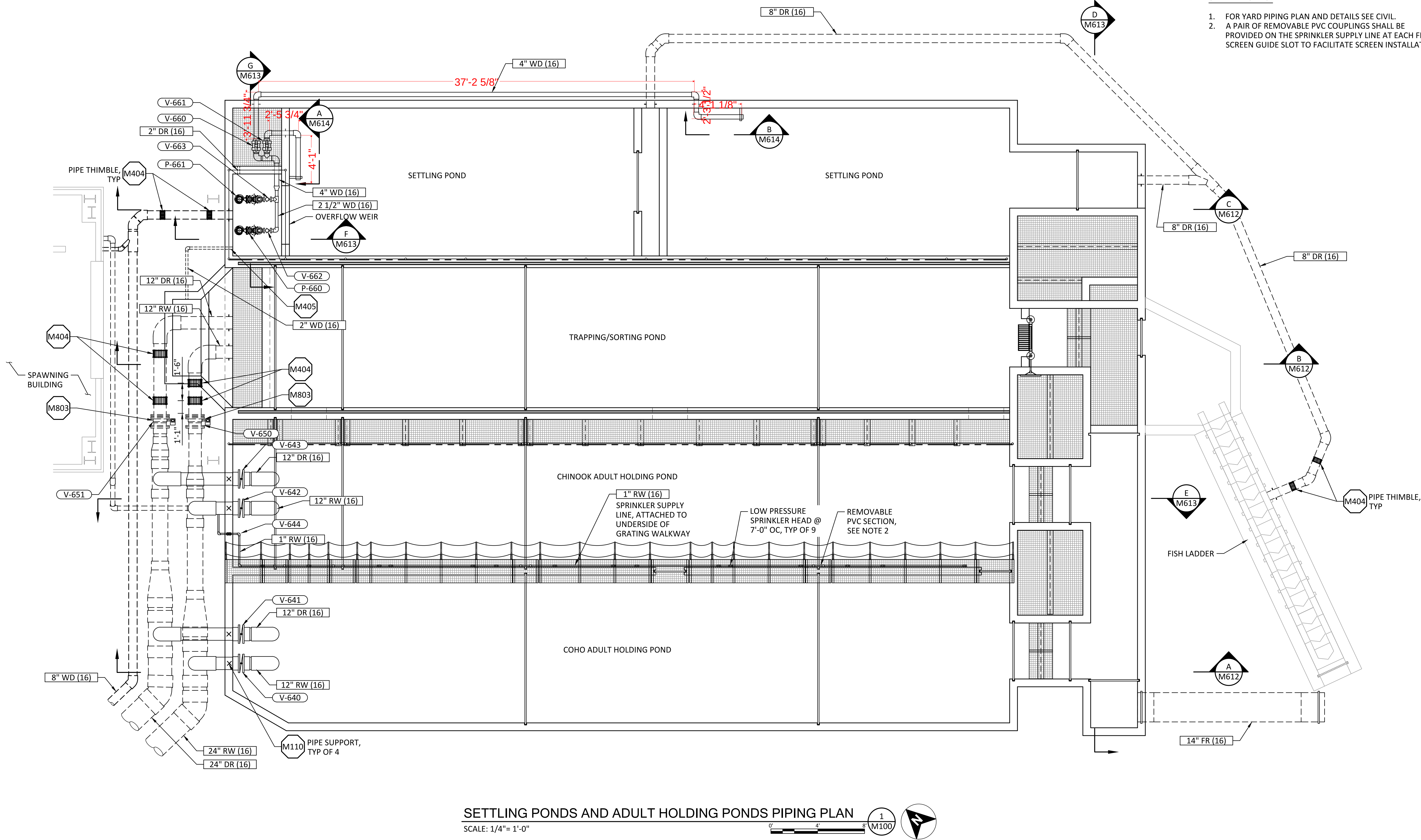


WARNING
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED S. ELLENSON	DRAWING M610
FALL CREEK FISH HATCHERY	DRAWN R. GUERRERO	
SETTLING PONDS AND ADULT HOLDING PONDS MECHANICAL PLAN	CHECKED J. BOAG	
	PROJECT DATE 10/28/20	

- SHEET NOTES:
- FOR YARD PIPING PLAN AND DETAILS SEE CIVIL.
 - A PAIR OF REMOVABLE PVC COUPLINGS SHALL BE PROVIDED ON THE SPRINKLER SUPPLY LINE AT EACH FISH SCREEN GUIDE SLOT TO FACILITATE SCREEN INSTALLATION.



SETTLING PONDS AND ADULT HOLDING PONDS PIPING PLAN

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

1
M100

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION

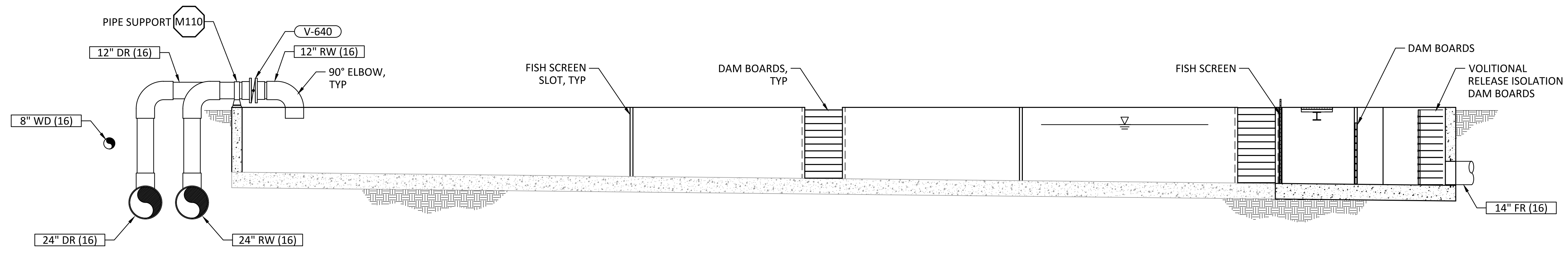


WARNING

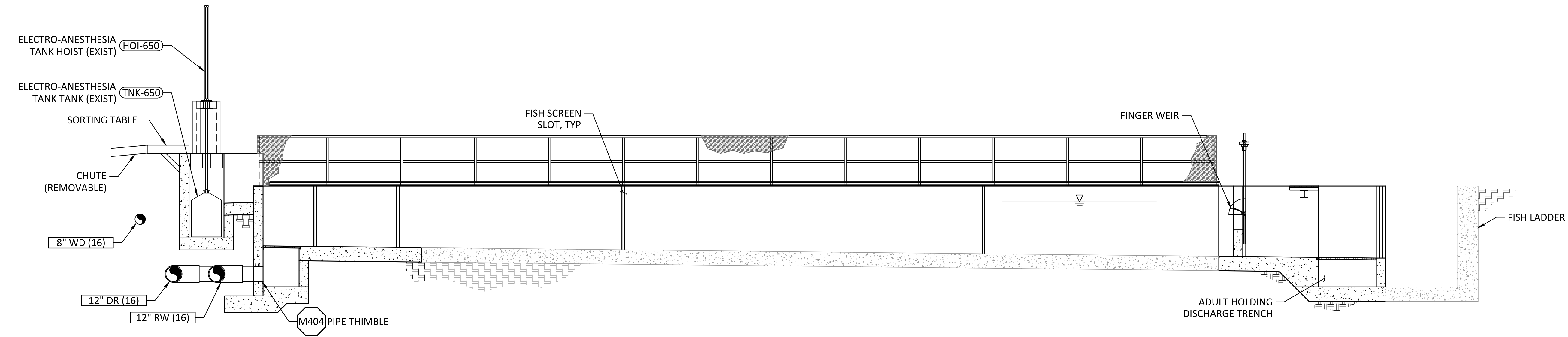
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



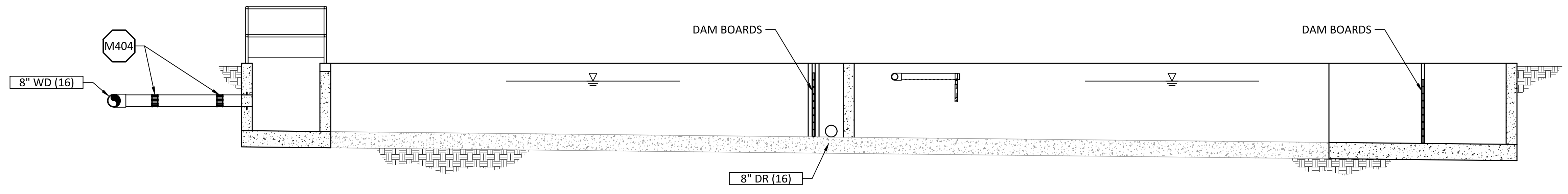
KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>S. ELLENSON</u>	DRAWING M611
FALL CREEK FISH HATCHERY	DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS PIPING PLAN	CHECKED <u>J. BOAG</u>	
	PROJECT DATE <u>10/28/20</u>	



SECTION A
SCALE: 1/4"= 1'-0"



SECTION B
SCALE: 1/4"= 1'-0"



SECTION C
SCALE: 1/4"= 1'-0"

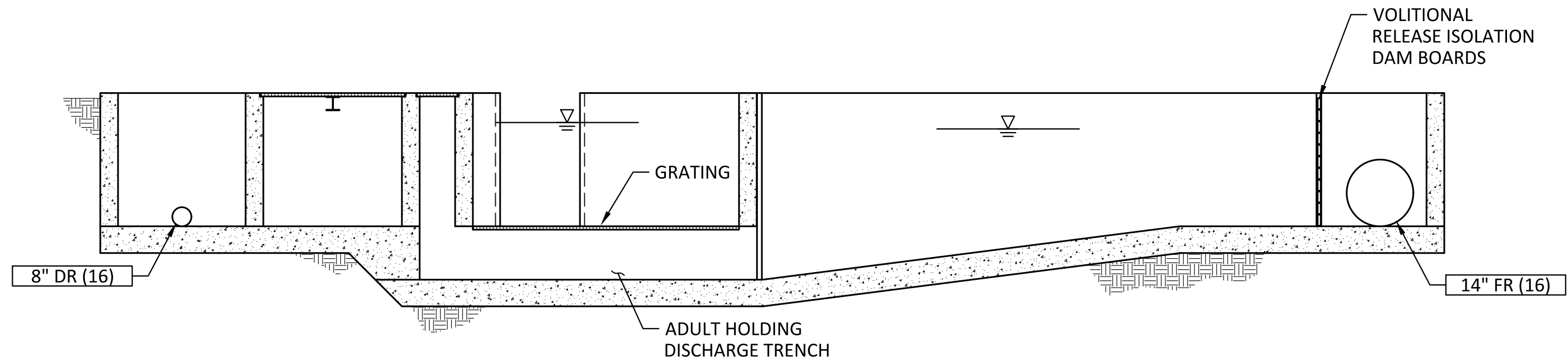
REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



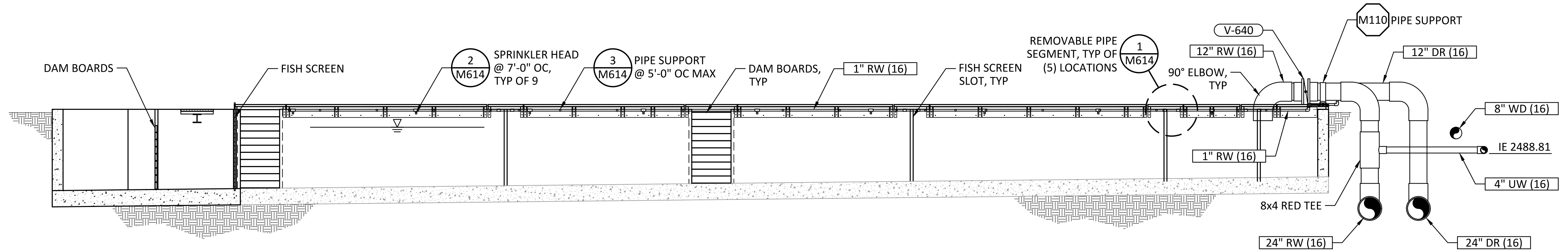
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



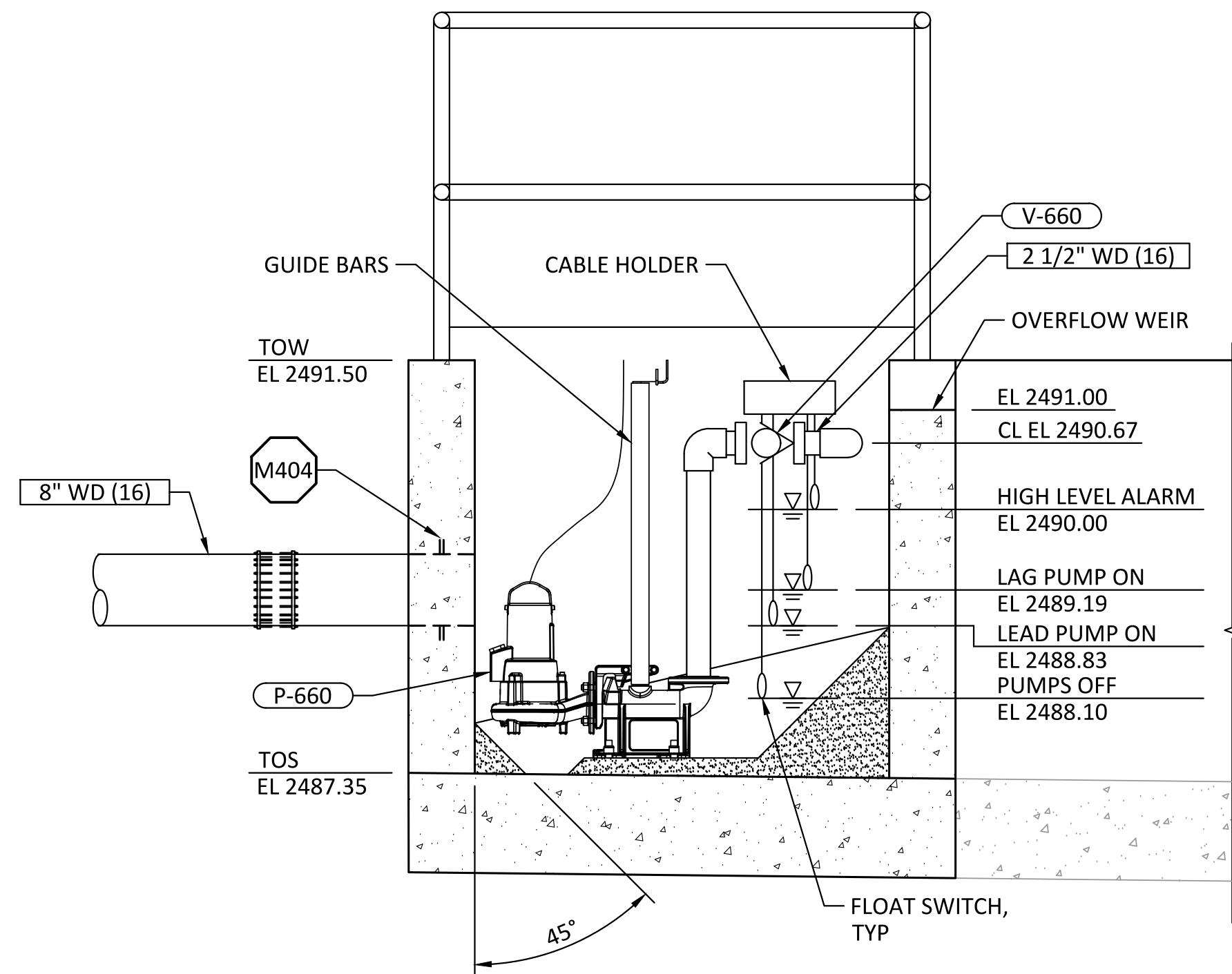
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M612
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 1		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



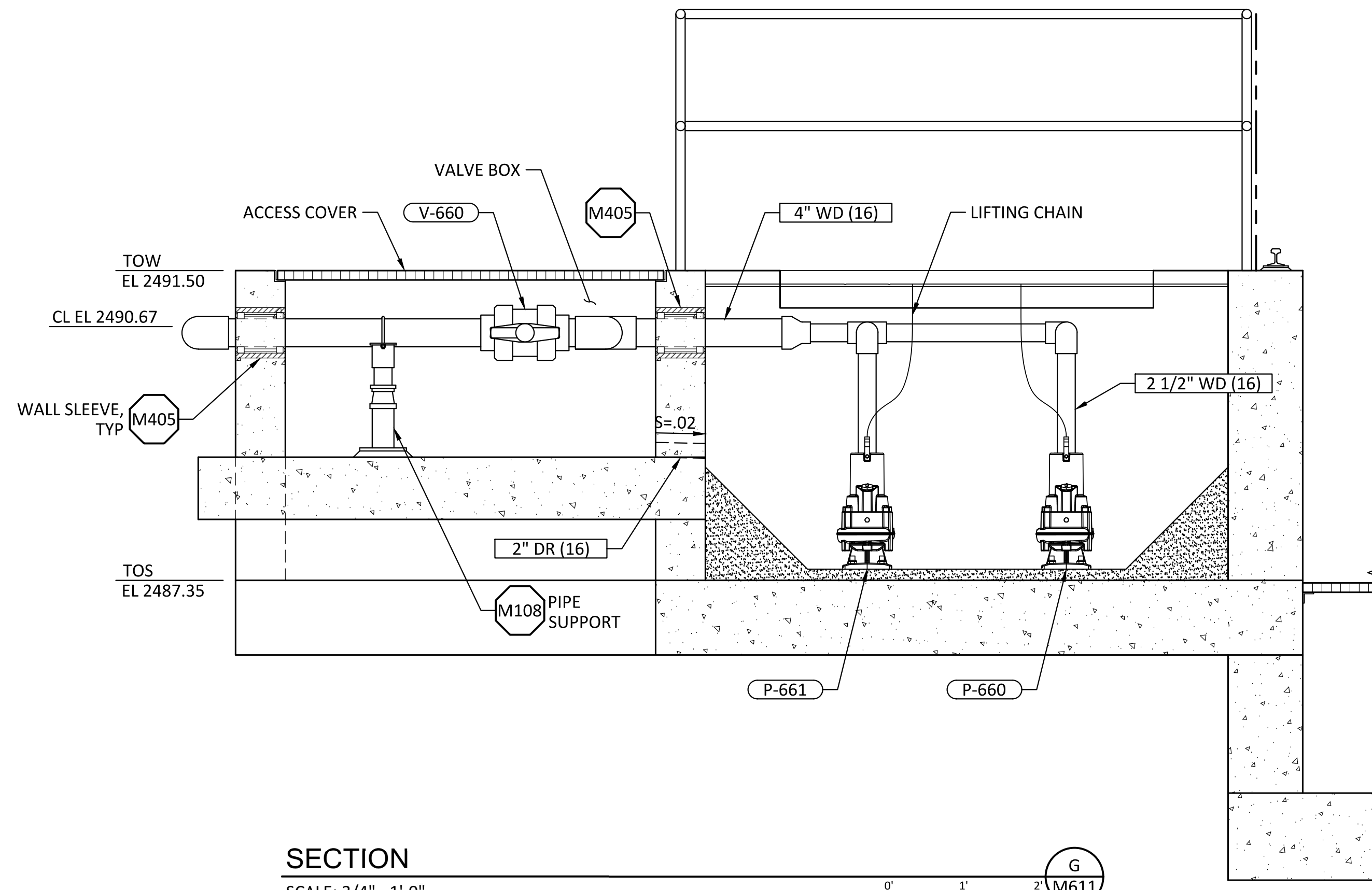
SECTION D
SCALE: 1/4"= 1'-0"



SECTION E
SCALE: 1/4"= 1'-0"

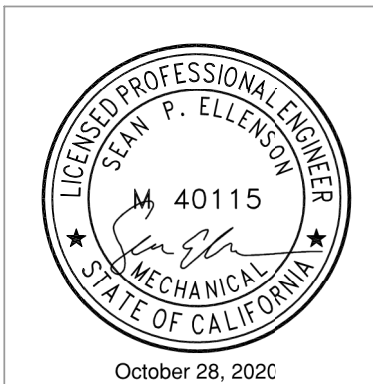


SECTION F
SCALE: 3/4"= 1'-0"



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

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



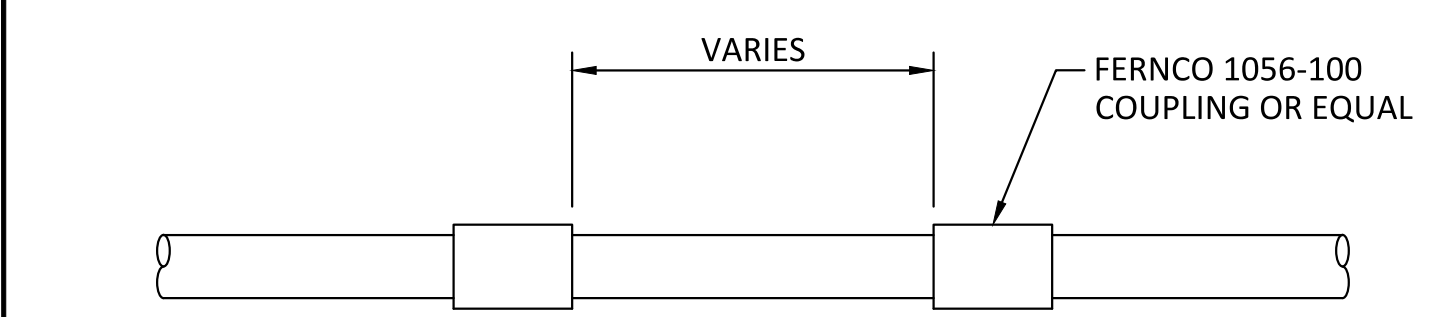
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

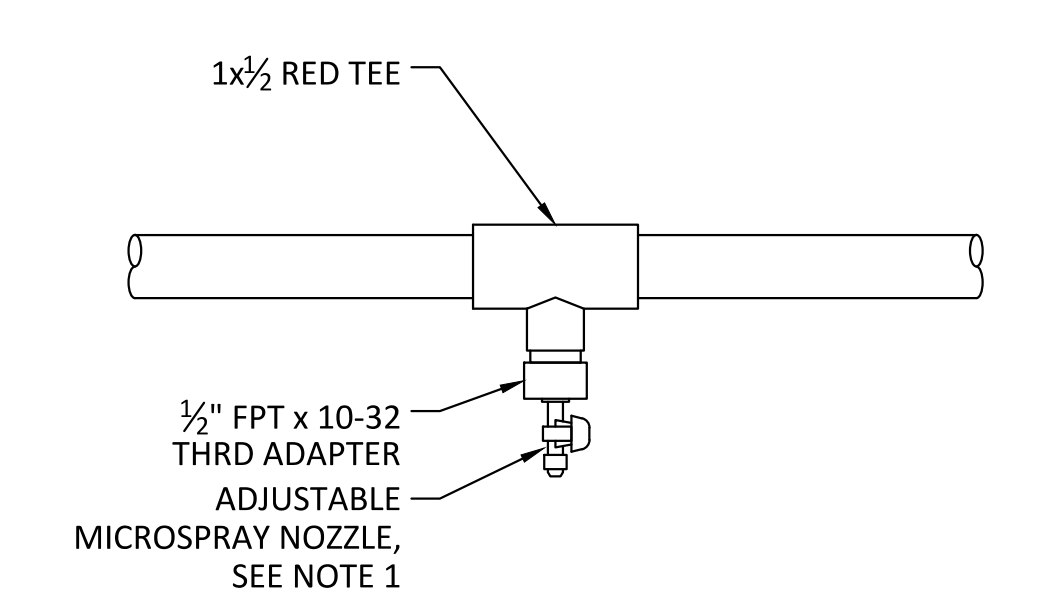


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M613
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS		CHECKED <u>J. BOAG</u>	
SECTIONS AND DETAILS 2		PROJECT DATE <u>10/28/20</u>	



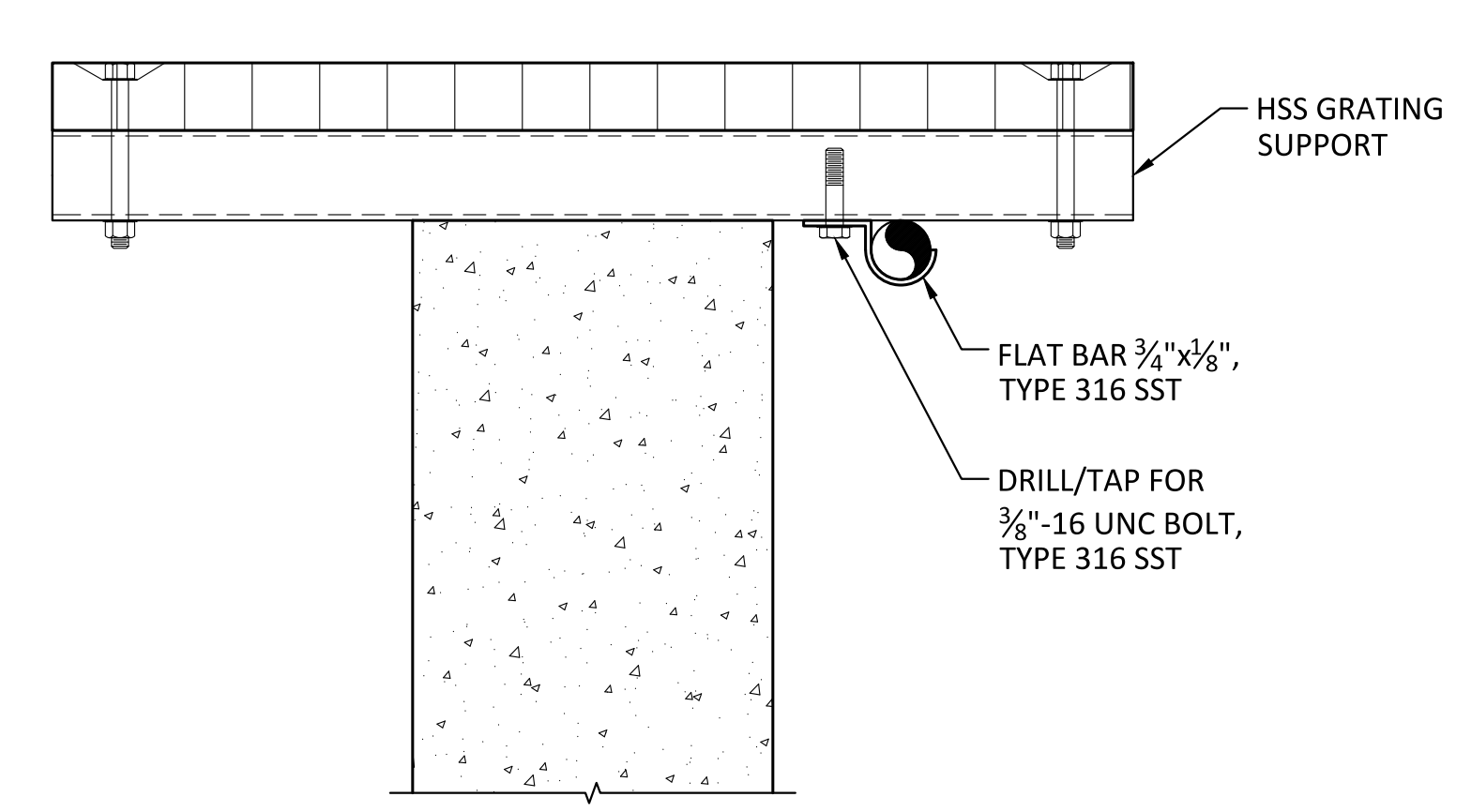
DETAIL
SCALE: 3"= 1'-0"

1
M613



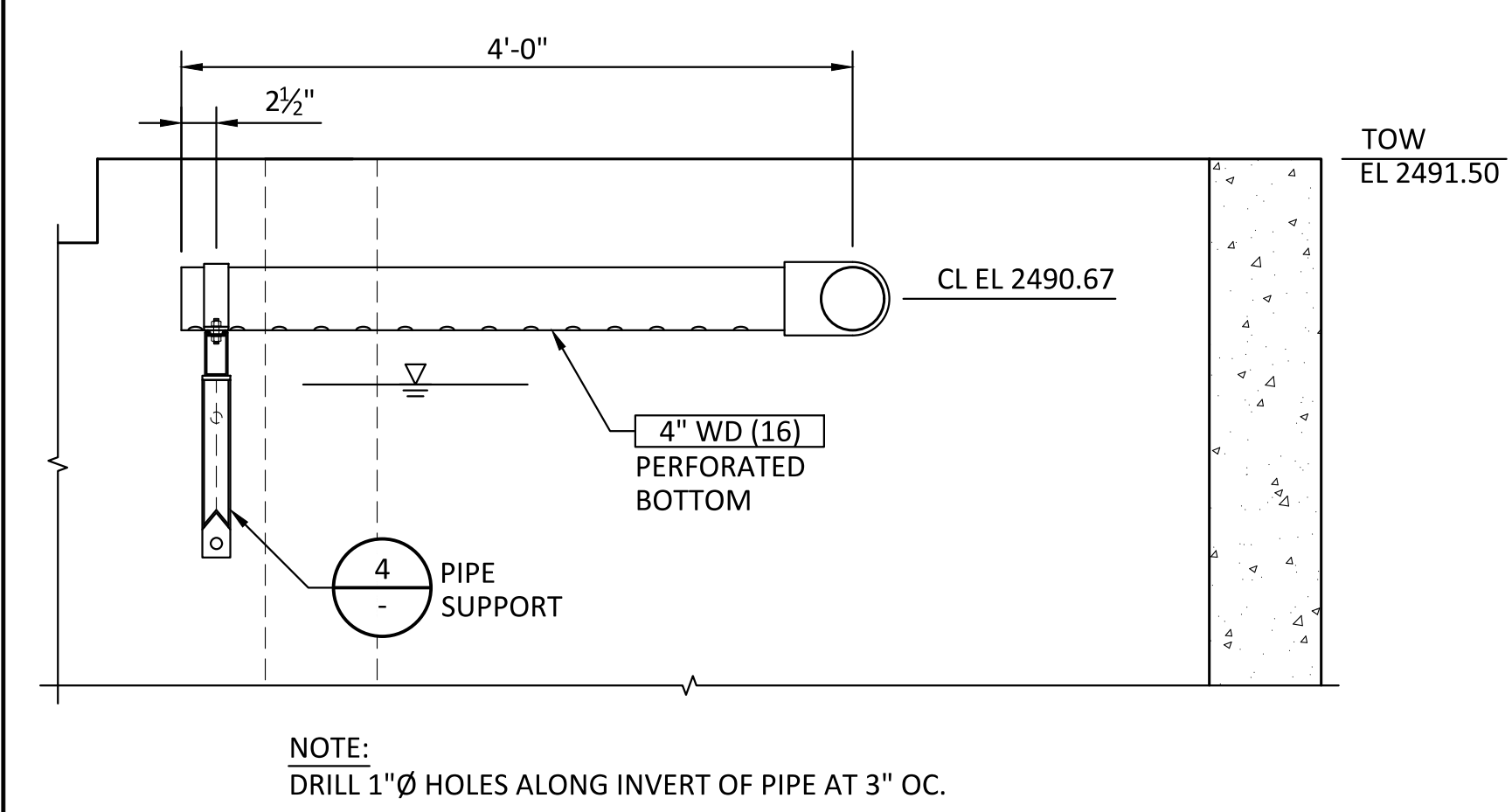
DETAIL
SCALE: 3"= 1'-0"

2
M613



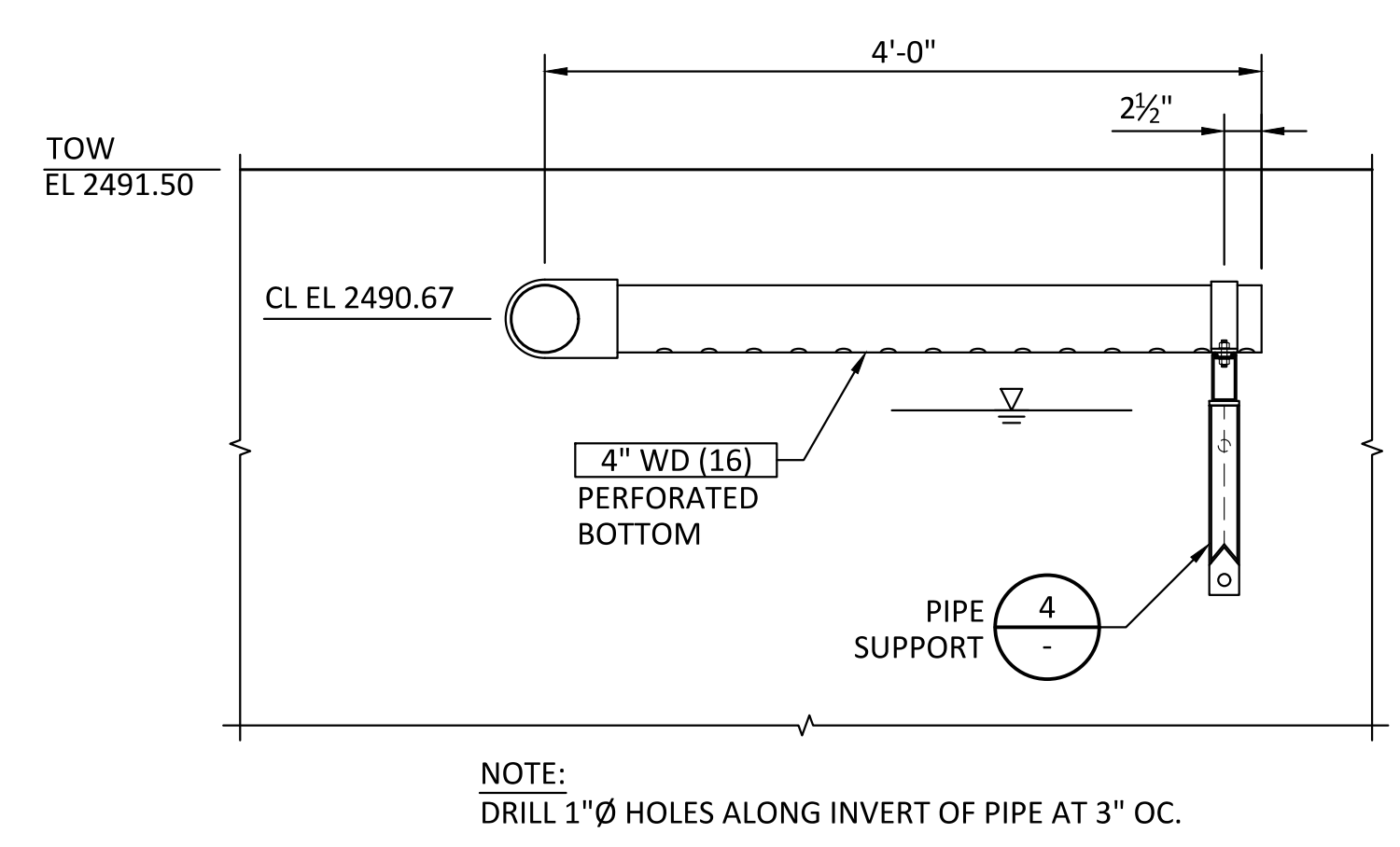
DETAIL
SCALE: 3"= 1'-0"

3
M613



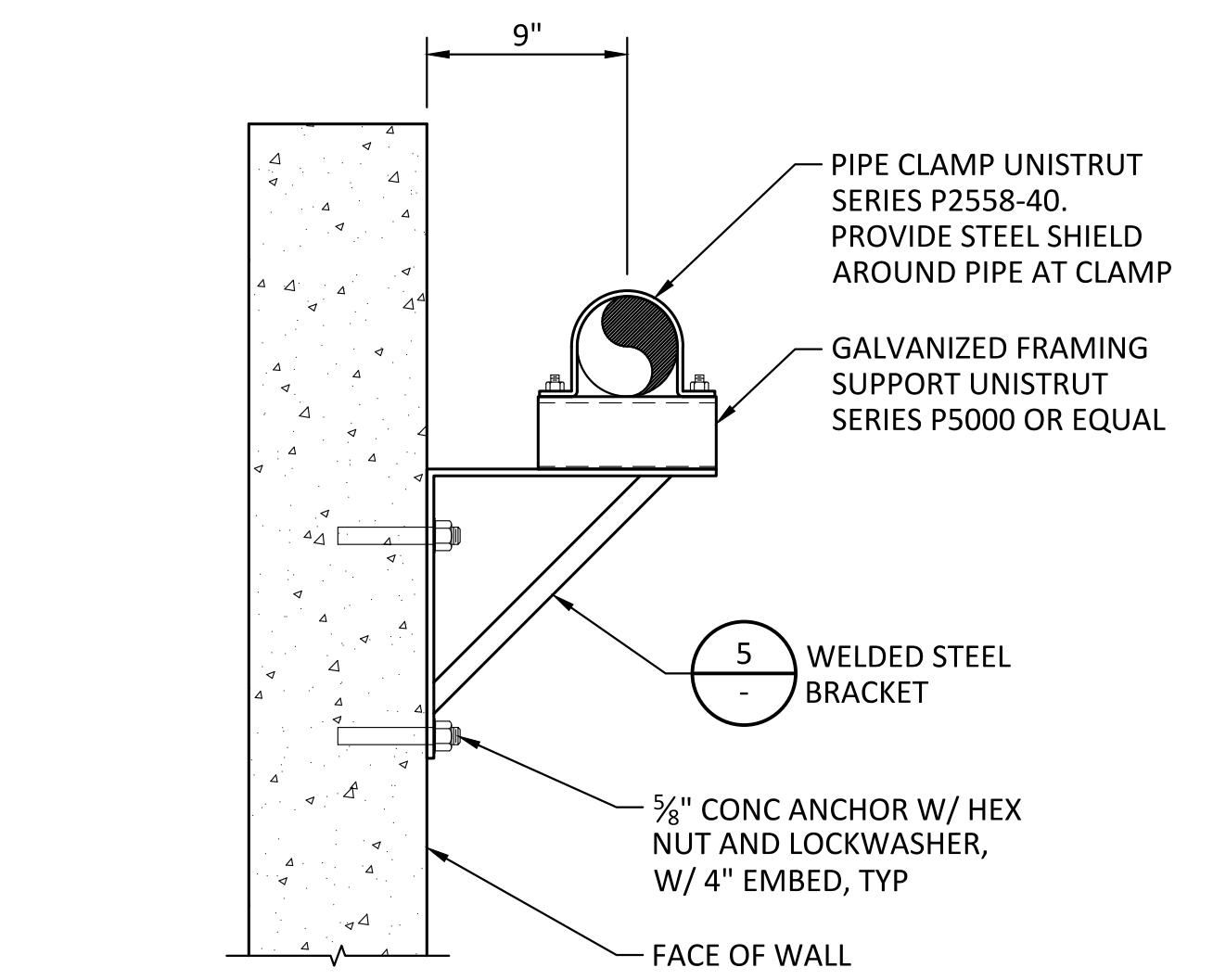
SECTION
SCALE: 1"= 1'-0"

A
M611



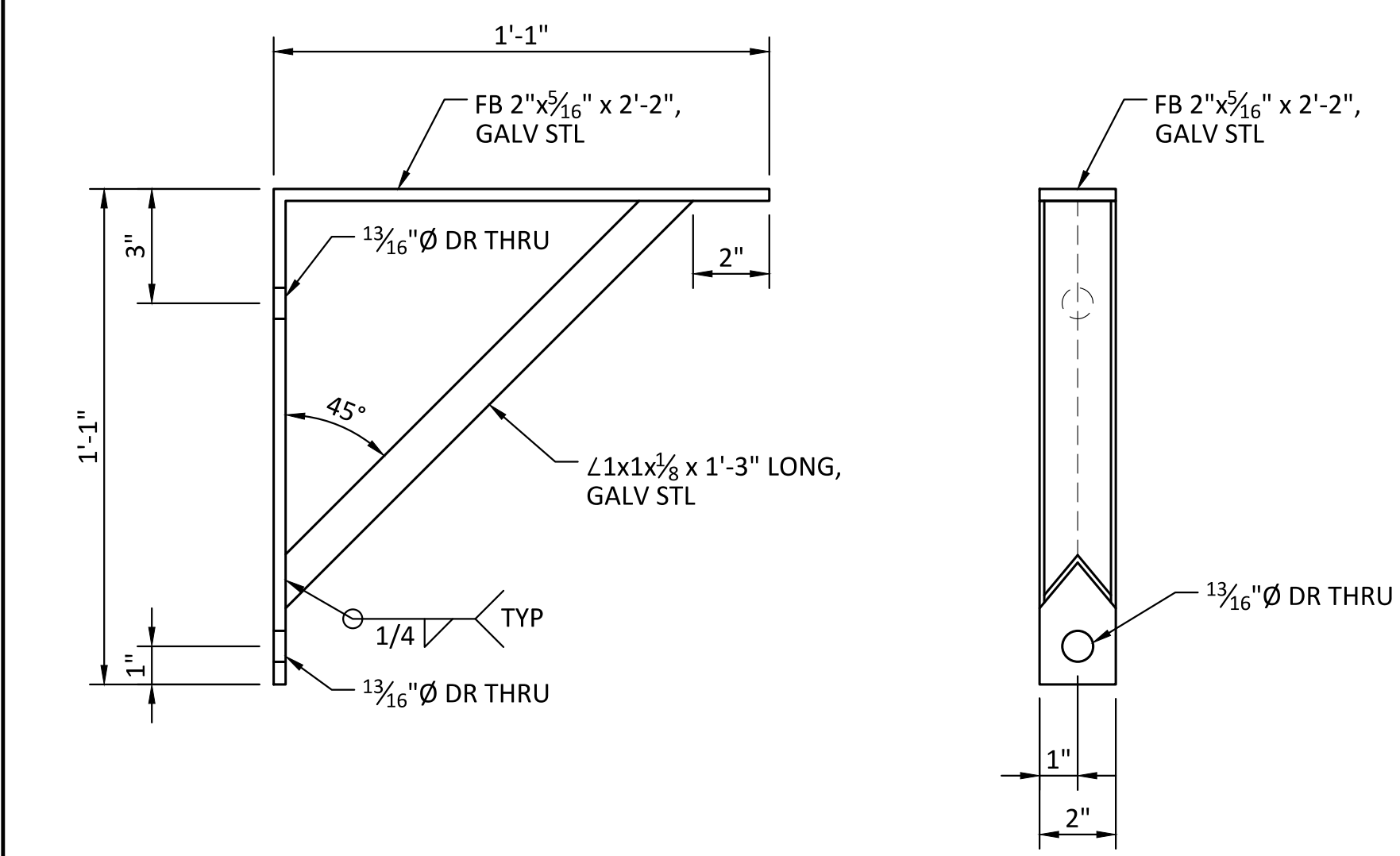
SECTION
SCALE: 1"= 1'-0"

B
M611



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

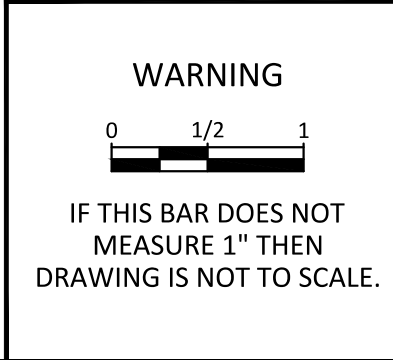
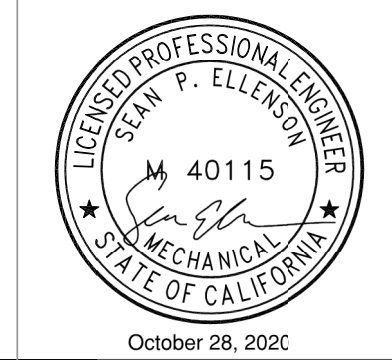
4
-



WELDED STEEL BRACKET
SCALE: 3"= 1'-0"

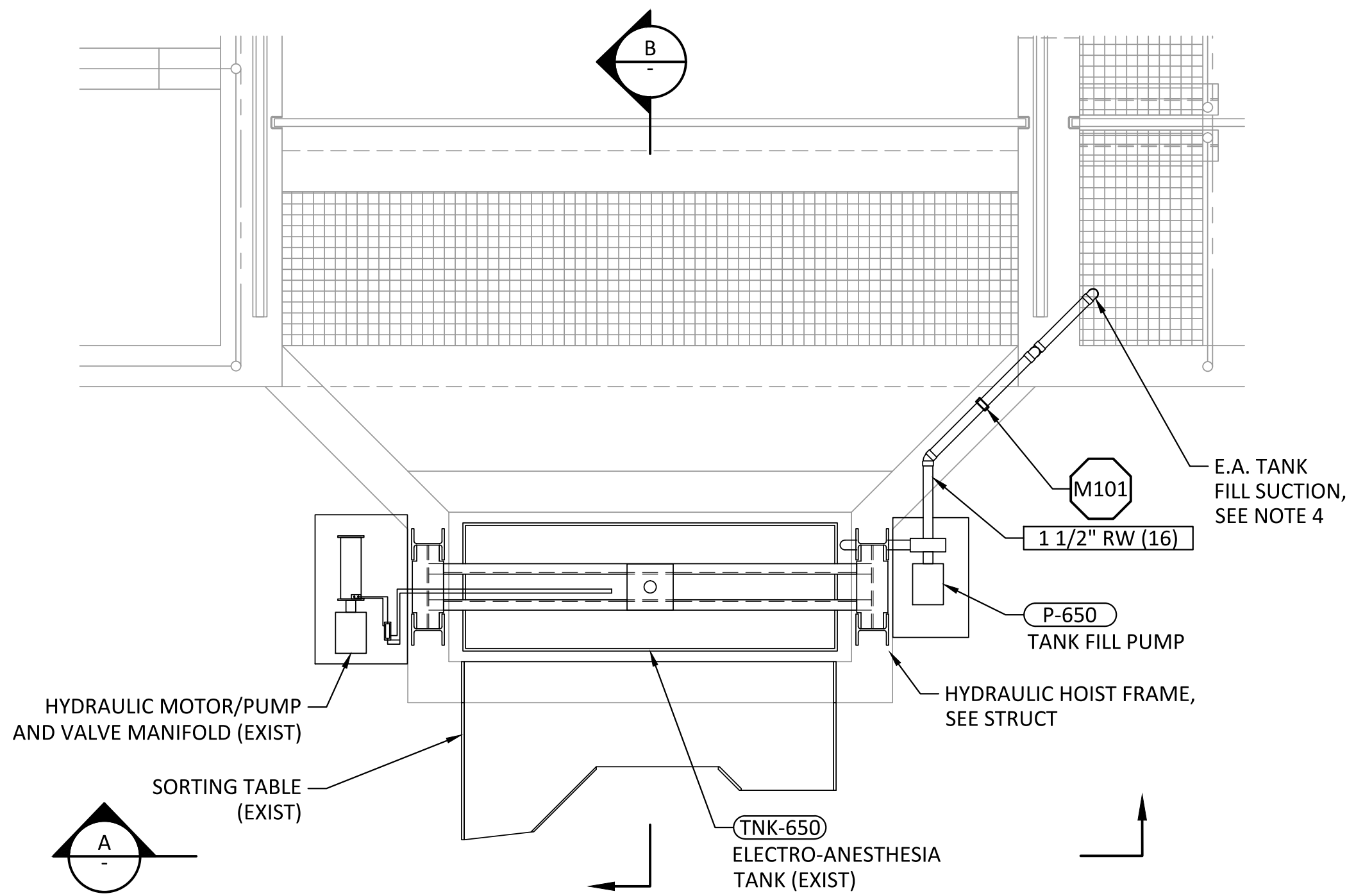
5
-

REV	DATE	BY	DESCRIPTION
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KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	S. ELLENSON	DRAWING M614
FALL CREEK FISH HATCHERY		DRAWN	R. GUERRERO	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 3		CHECKED	J. BOAG	
		PROJECT DATE	10/28/20	

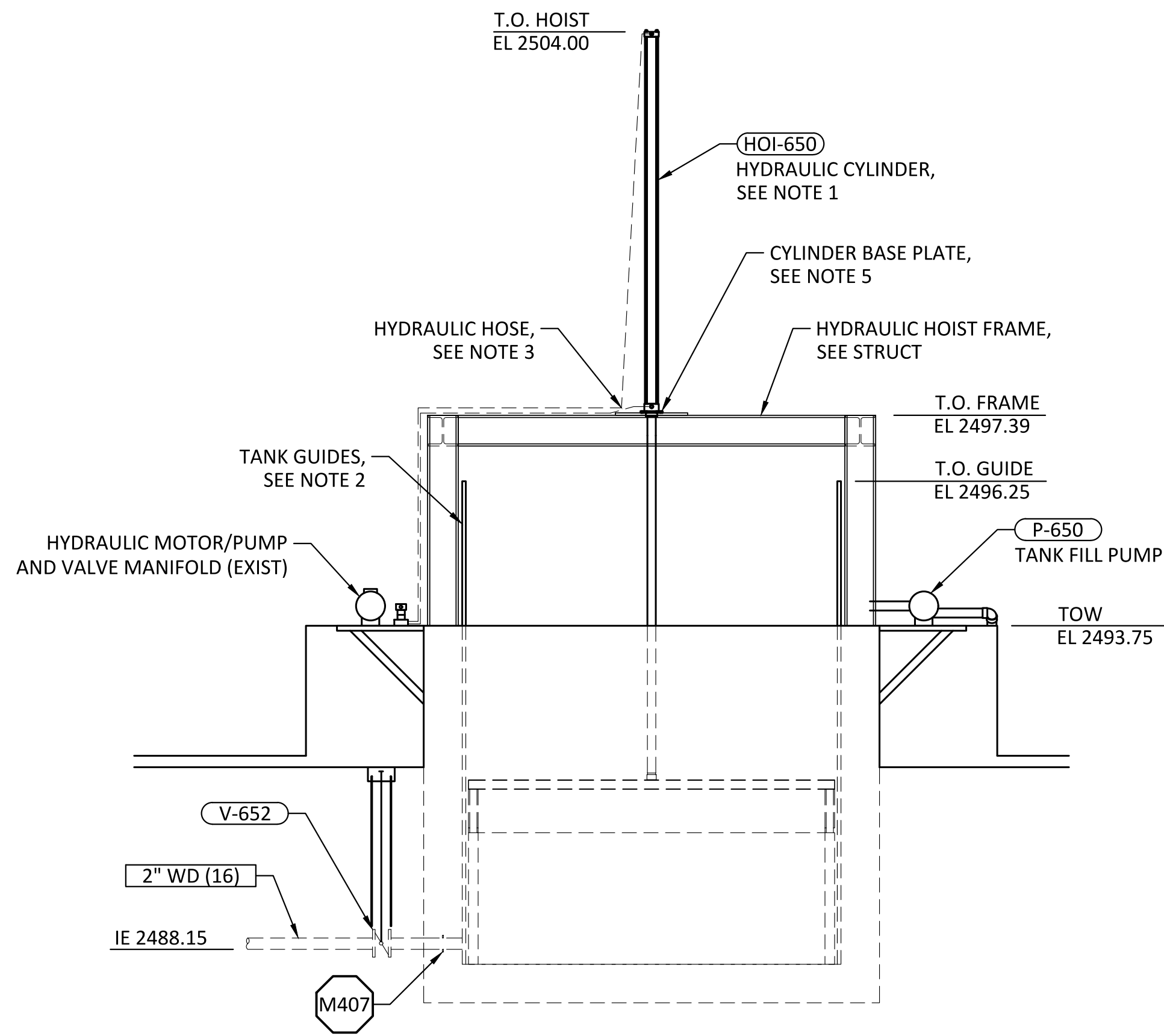
- SHEET NOTES:
1. CONTRACTOR SHALL FURNISH NEW HYDRAULIC CYLINDER TO HOIST ELECTRO-ANESTHESIA TANK PER SPECIFICATION 40 05 57.
 2. CONTRACTOR SHALL FURNISH NEW E.A. TANK GUIDES TO THE HEIGHT SHOWN. FIELD VERIFY WIDTH AND DEPTH OF EXISTING GUIDES.
 3. ROUTE NEW 3/8" DIA HYDRAULIC HOSE FROM EXISTING MANIFOLD TO HYDRAULIC CYLINDER CONNECTIONS, SECURE HOSE TO HOIST FRAME.
 4. ROUTE E.A. TANK SUCTION PUMP TO CHINOOK ADULT RACEWAY.
 5. CONTRACTOR SHALL MATCH E.A. FRAME BASE PLATE BOLT HOLE PATTERN WITH HYDRAULIC CYLINDER FLANGE BOLT PATTERN. MOUNT WITH SST FASTENERS PER MFR INSTALLATION REQUIREMENTS.



ELECTRO-ANESTHESIA TANK - DETAIL

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

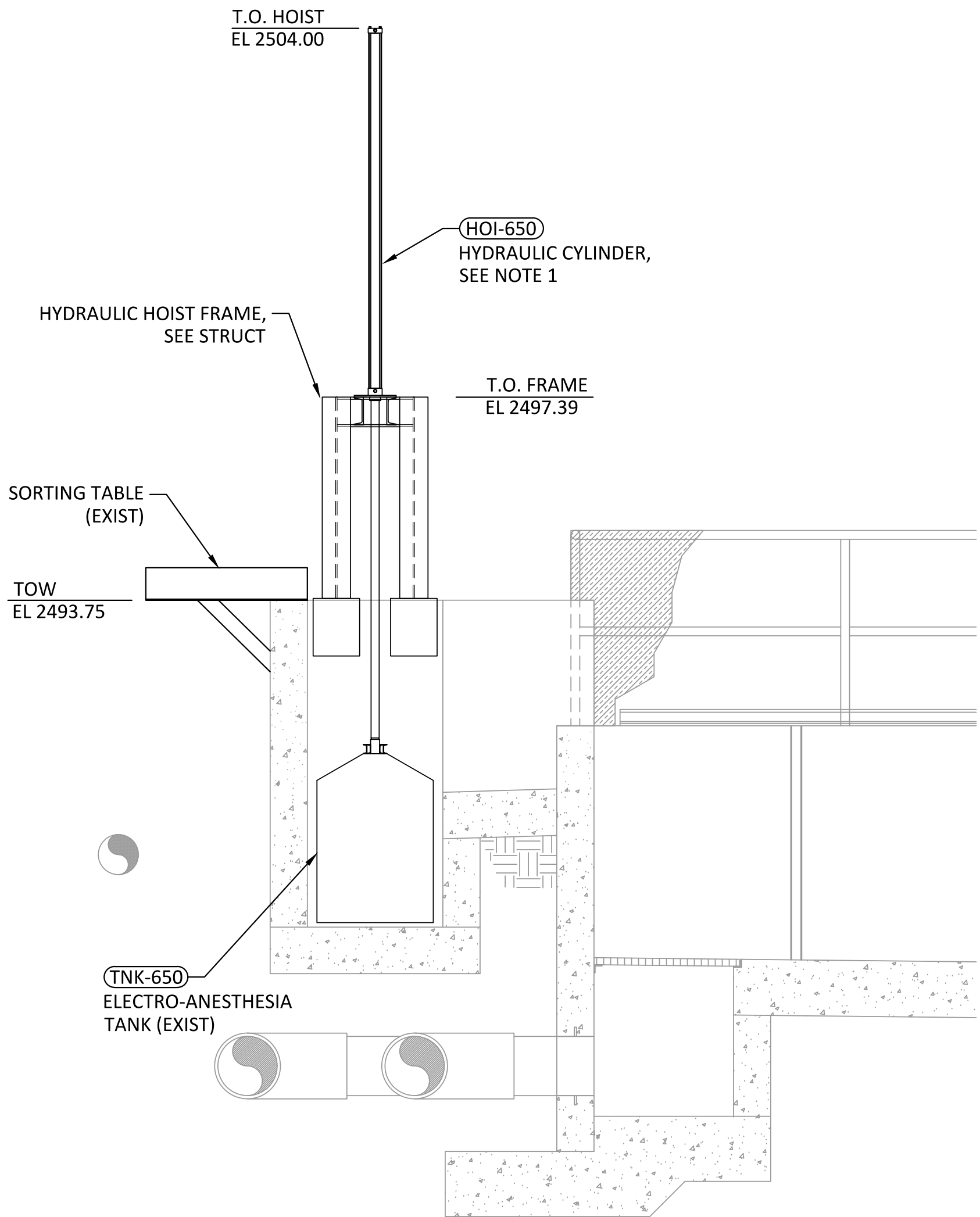
1
M610



ELECTRO-ANESTHESIA TANK - SECTION

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

A
-

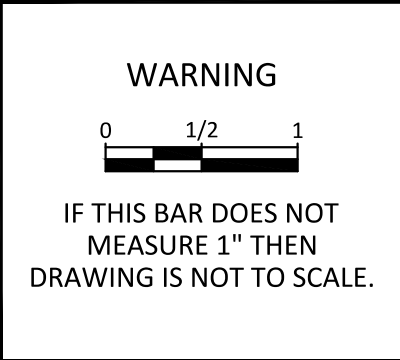


ELECTRO-ANESTHESIA TANK - SECTION

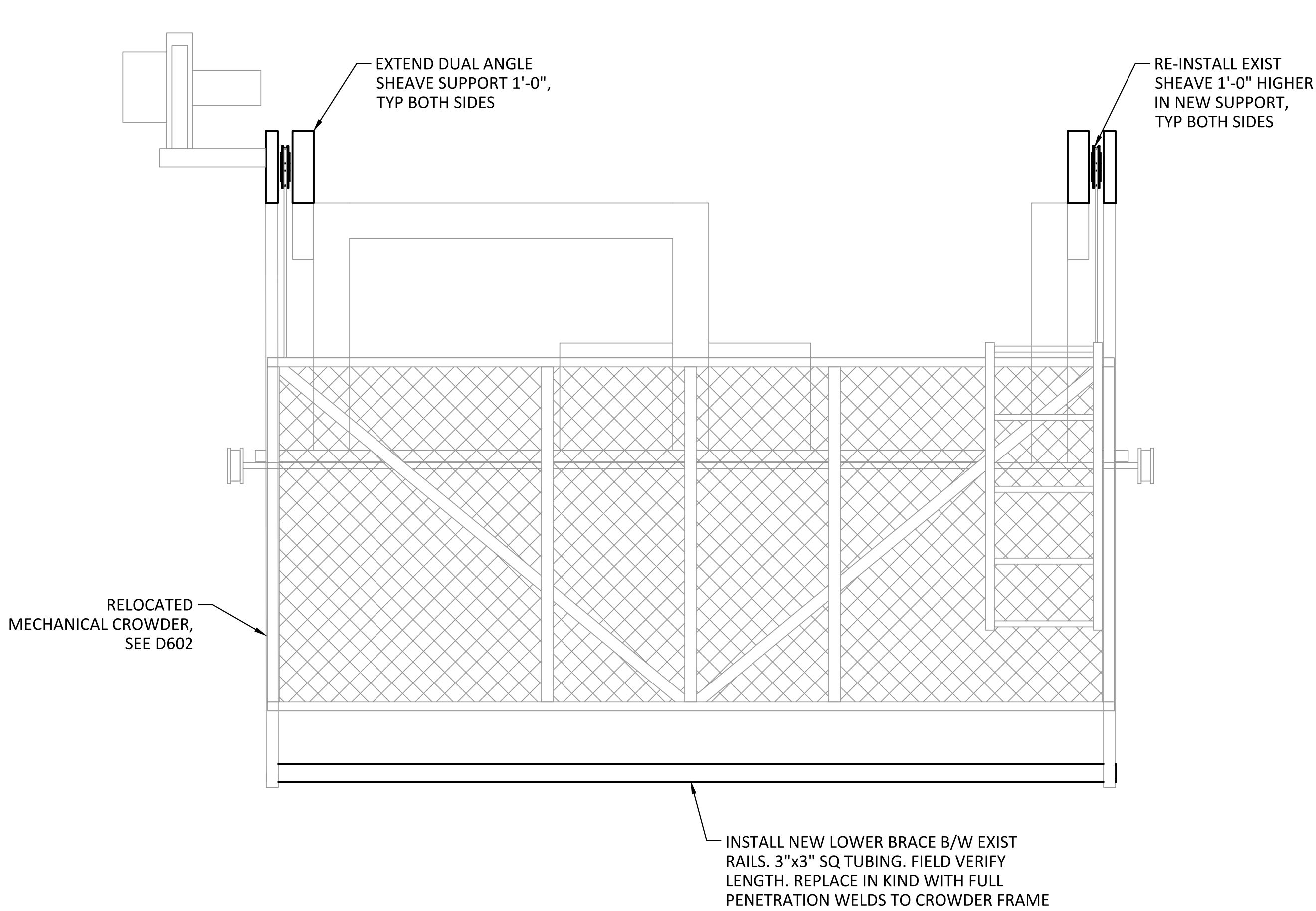
SCALE: 1/2"= 1'-0"

B
-

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION

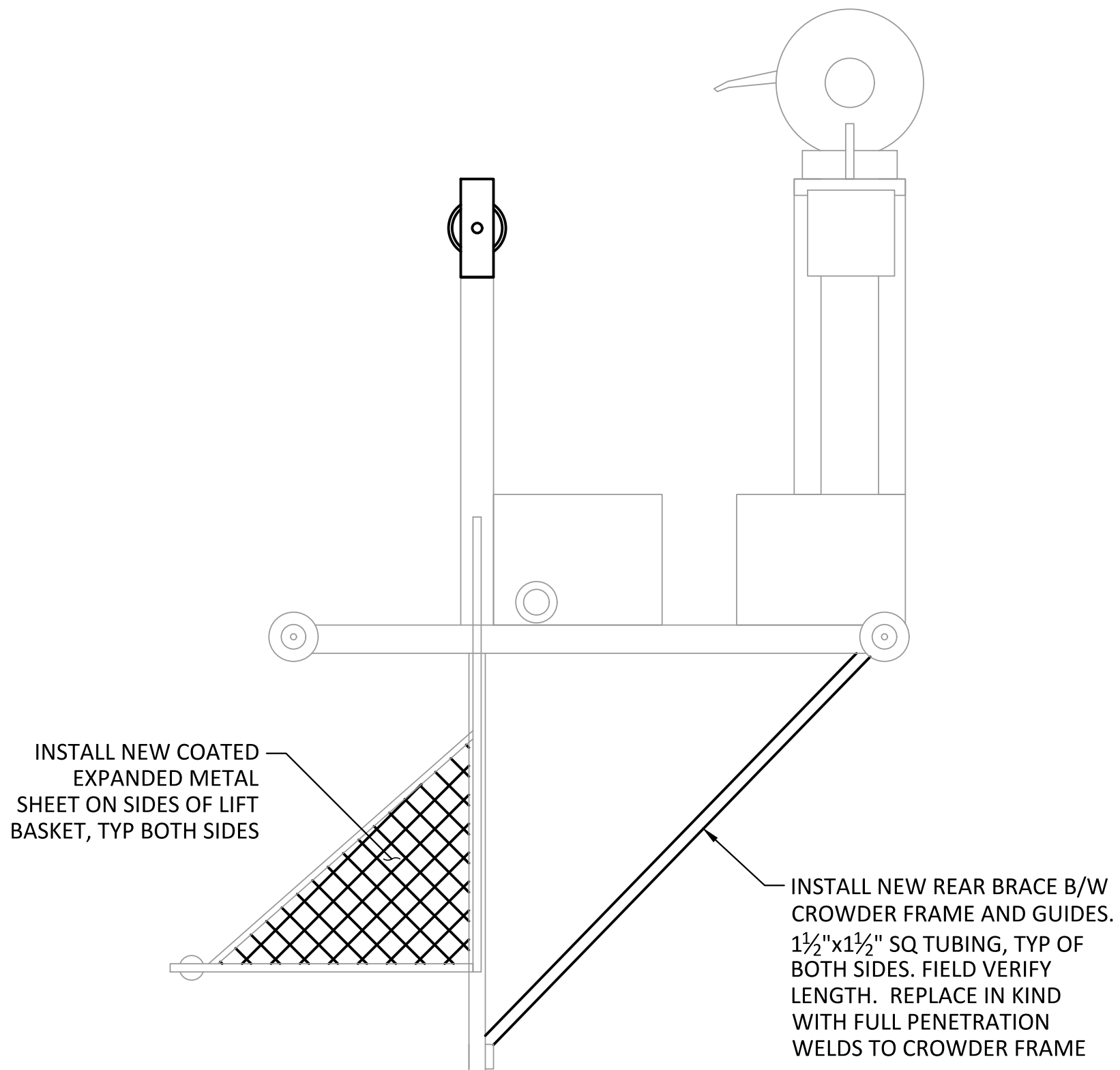
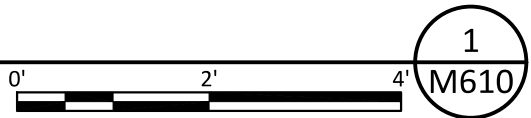


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M615
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 4		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



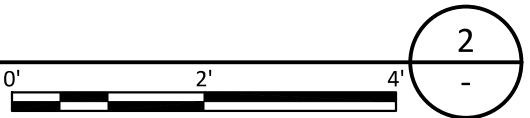
CROWDER MODIFICATIONS - FRONT VIEW

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



CROWDER MODIFICATIONS - SIDE VIEW

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



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



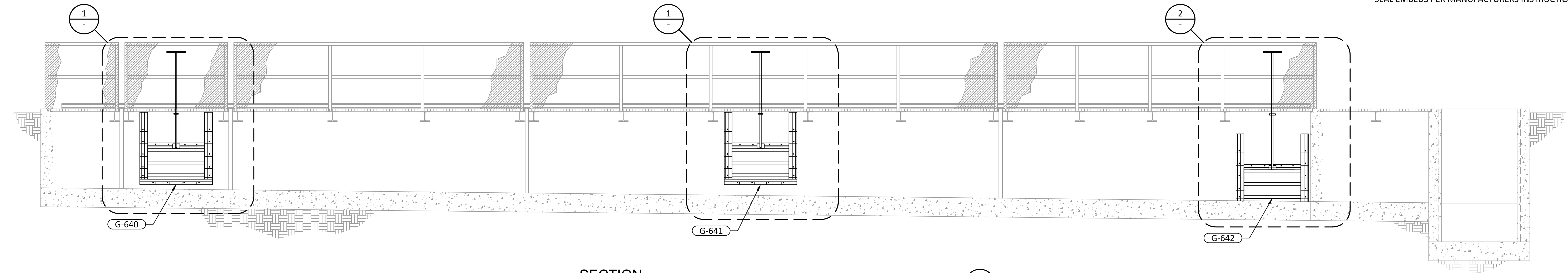
WARNING

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

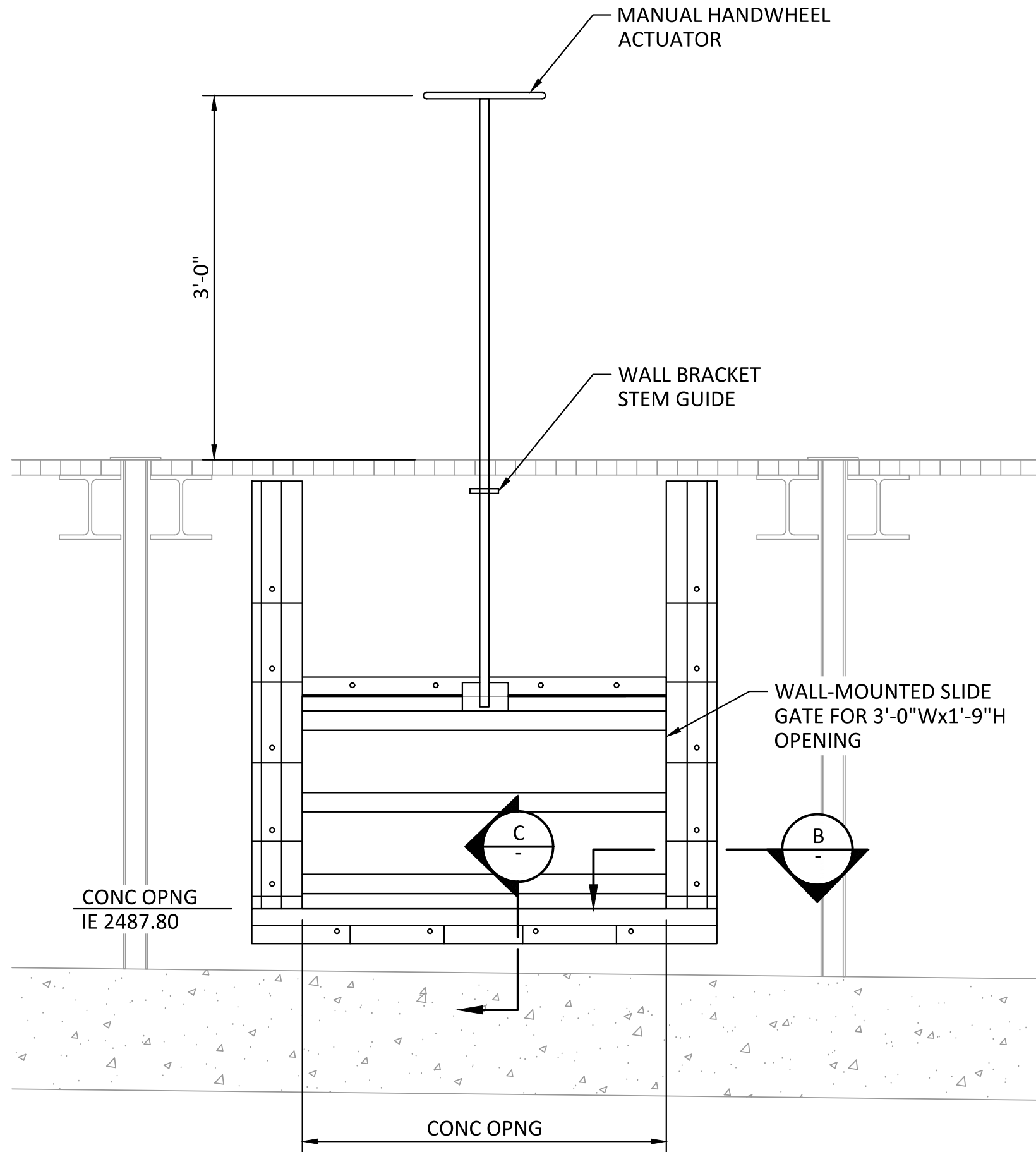
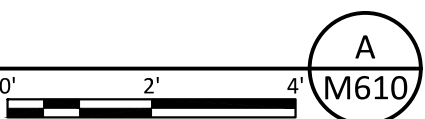


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M616
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 5		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

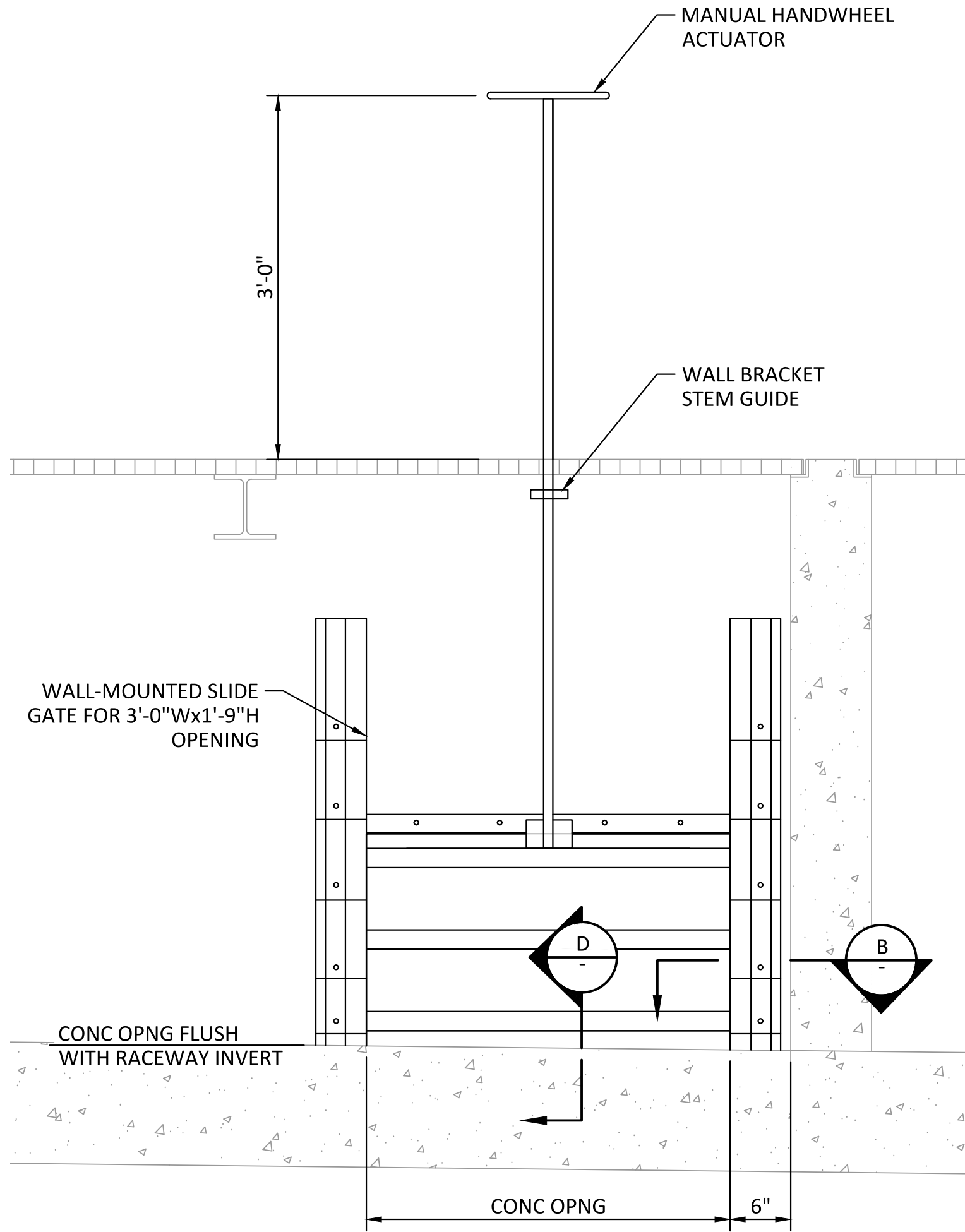
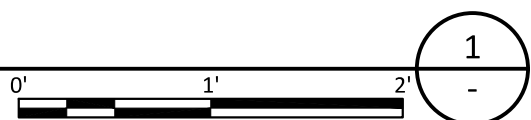
- SHEET NOTES:**
1. INSTALL GATE FRAME AND SEALS PER MANUFACTURERS INSTRUCTIONS
 2. CONCRETE CUT-OUT DIMENSIONS FOR BOTTOM SEAL EMBEDS PER MANUFACTURERS INSTRUCTIONS.



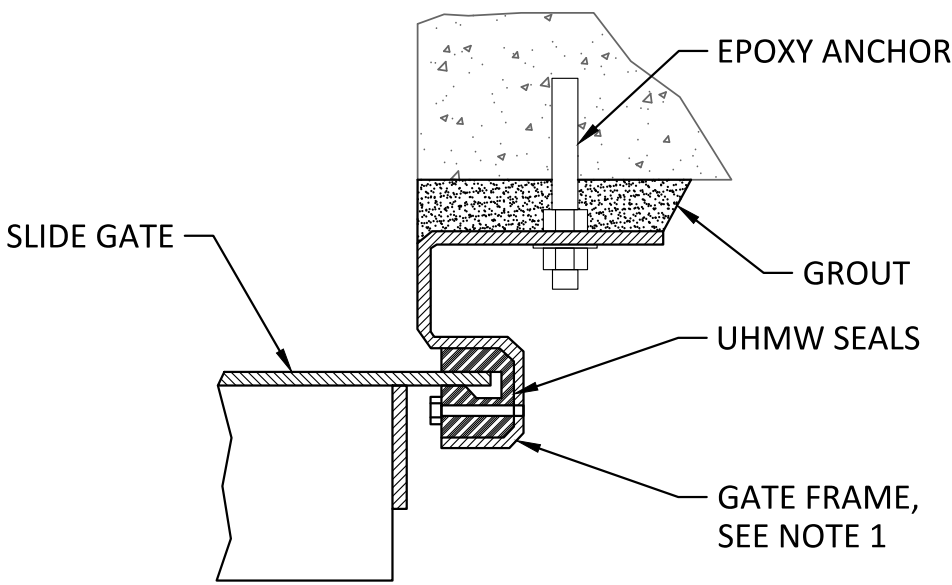
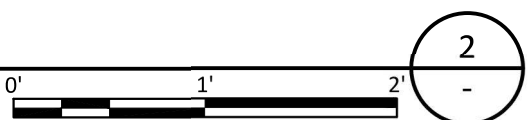
SECTION
SCALE: 3/8" = 1'-0"



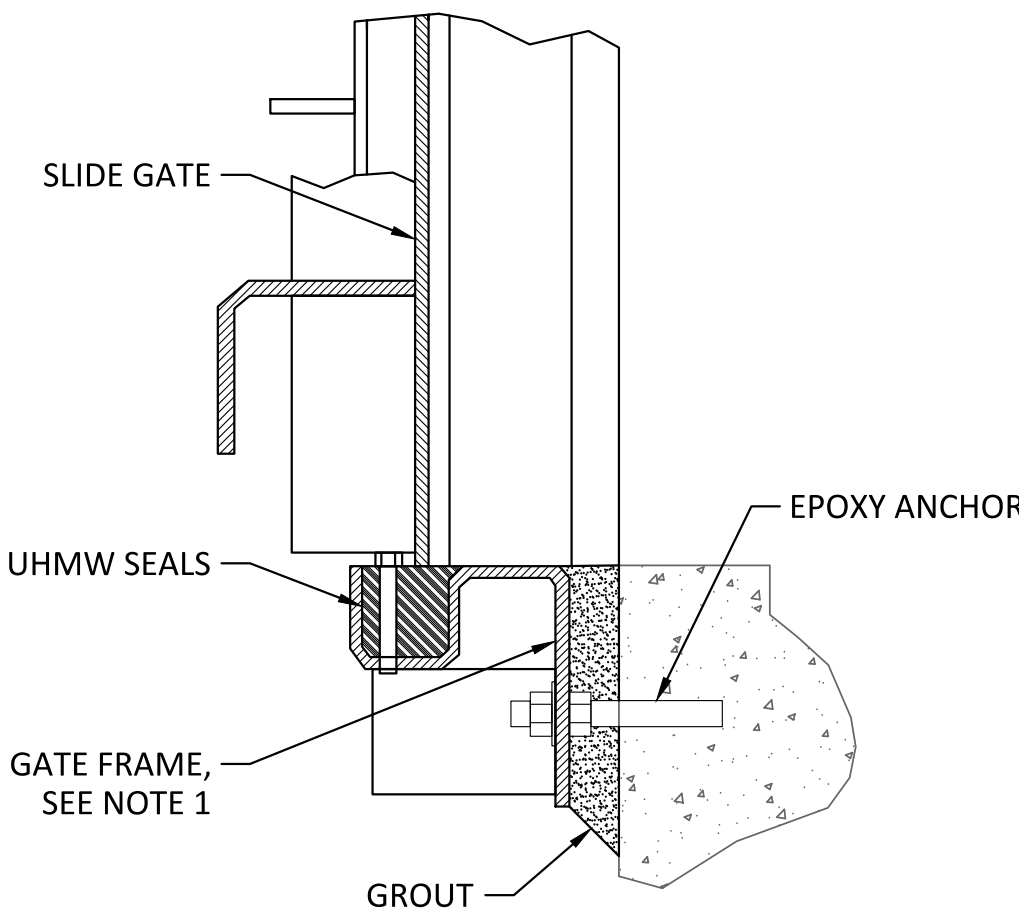
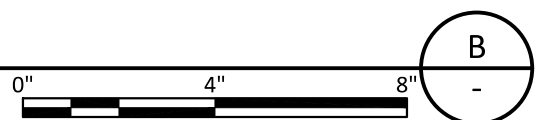
SLIDE GATE - DETAIL
SCALE: 1" = 1'-0"



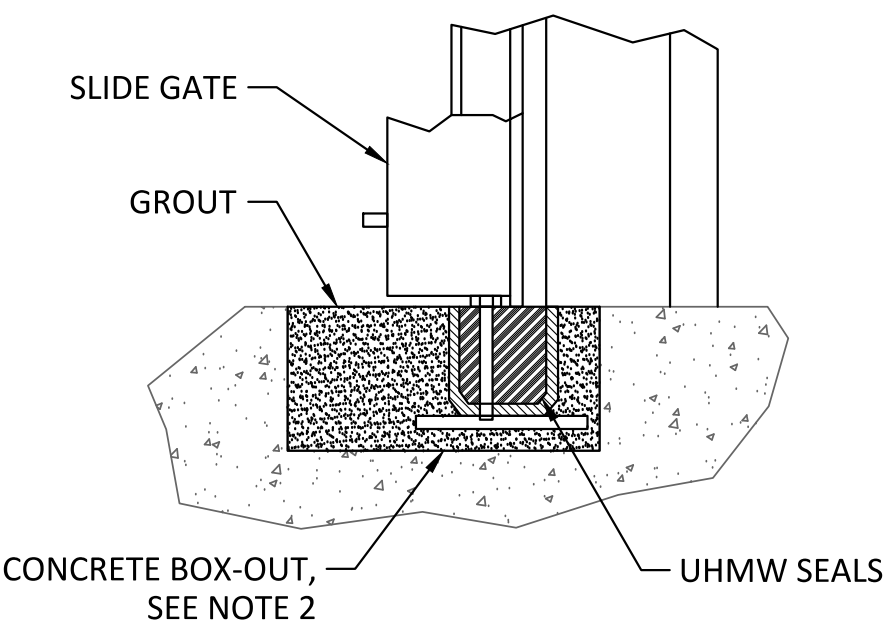
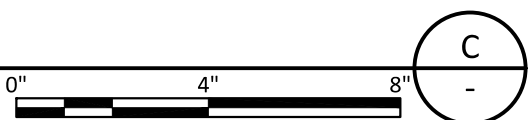
SLIDE GATE - DETAIL
SCALE: 1" = 1'-0"



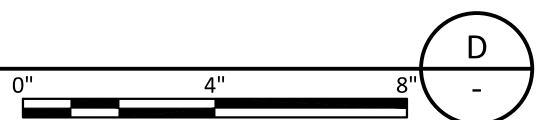
SECTION
SCALE: 3" = 1'-0"



SECTION
SCALE: 3" = 1'-0"



SECTION
SCALE: 3" = 1'-0"



REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



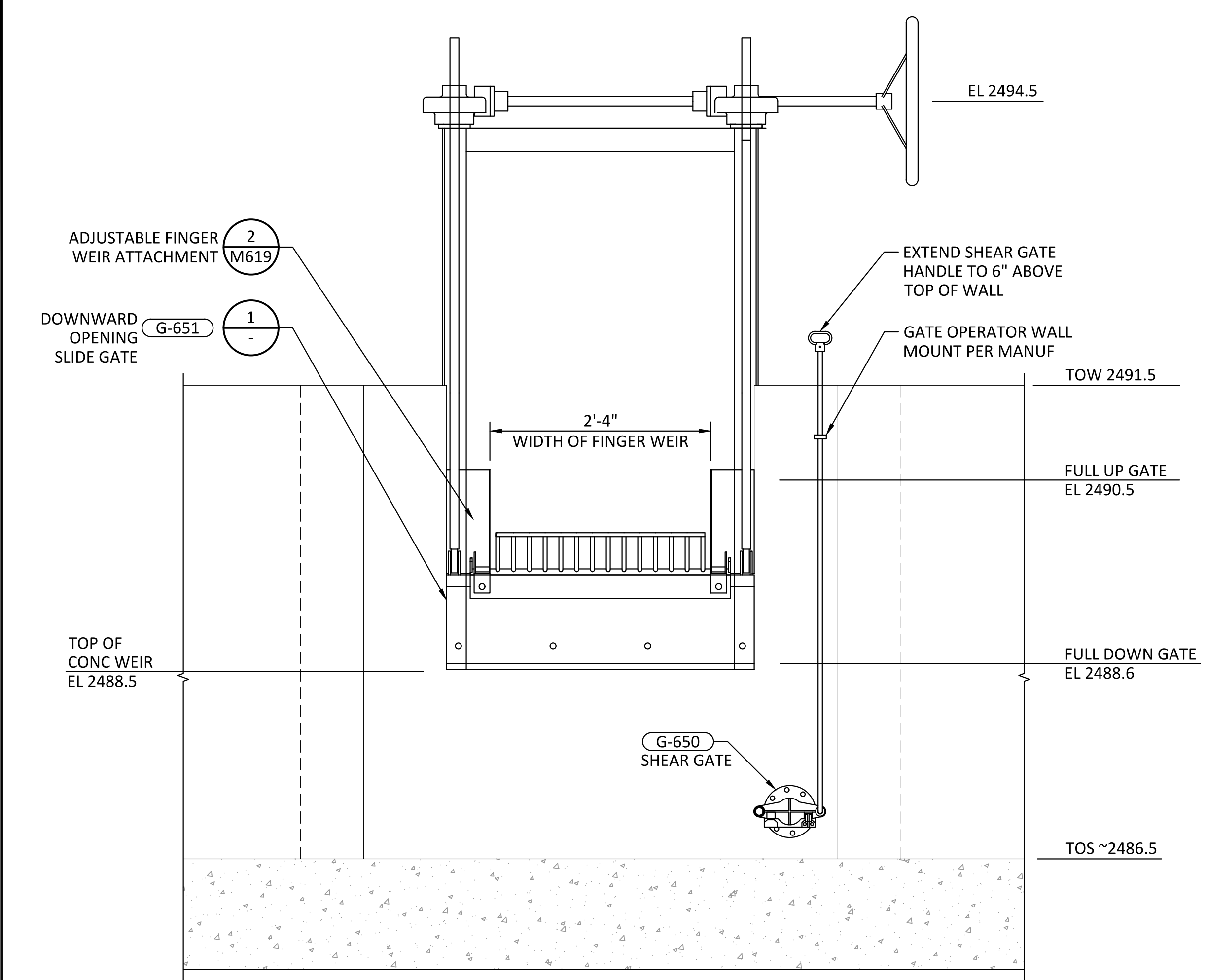
WARNING
0 1/2 1
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY
SETTLING PONDS AND ADULT HOLDING PONDS
SECTIONS AND DETAILS 6

DESIGNED S. ELLENSON
DRAWN R. GUERRERO
CHECKED J. BOAG
PROJECT DATE 10/28/20

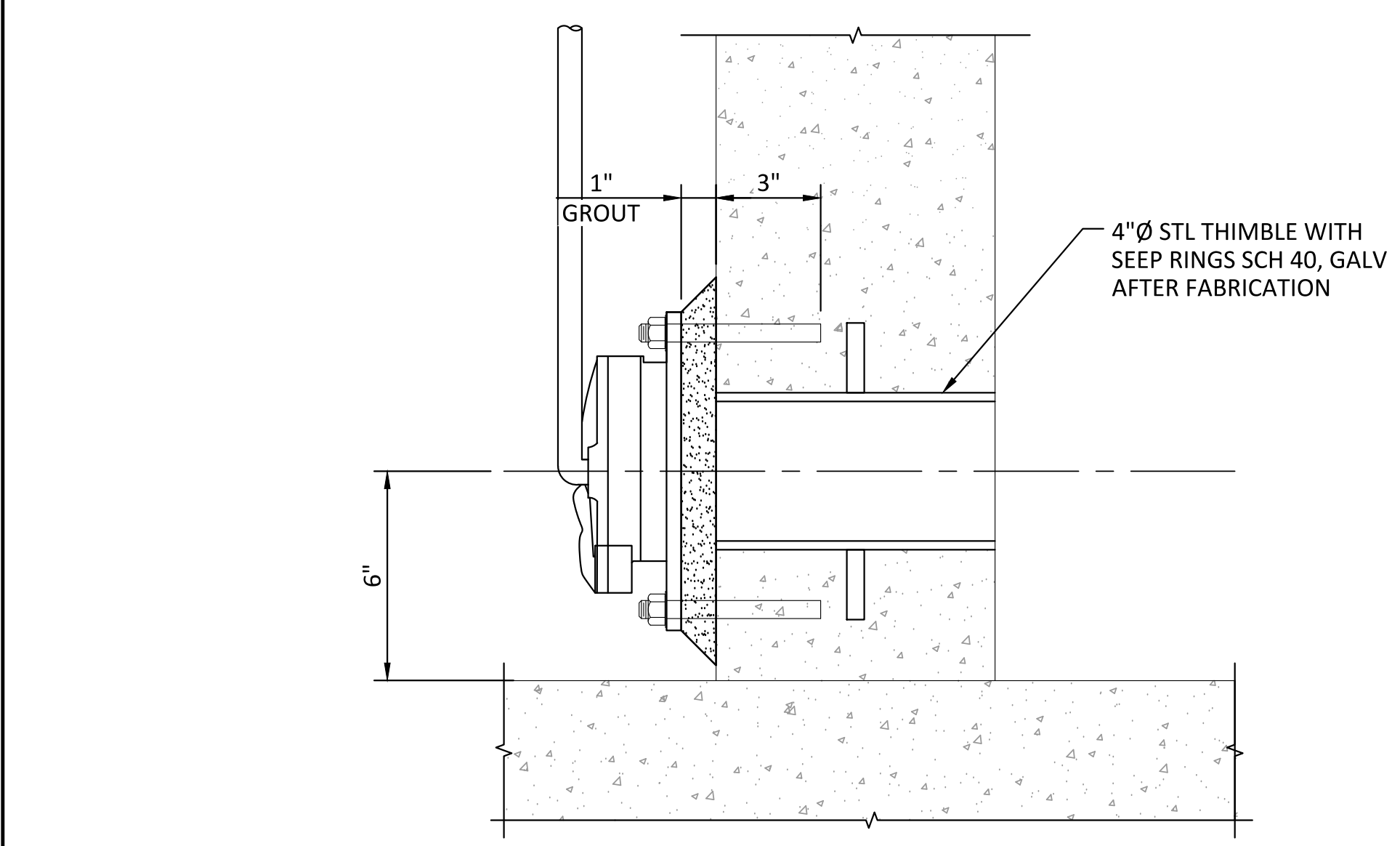
DRAWING
M617



SECTION

SCALE: 1"= 1'-0"

A
M610

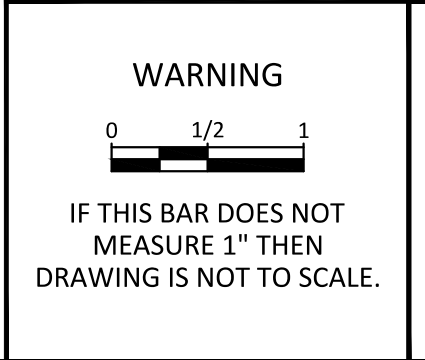


DETAIL

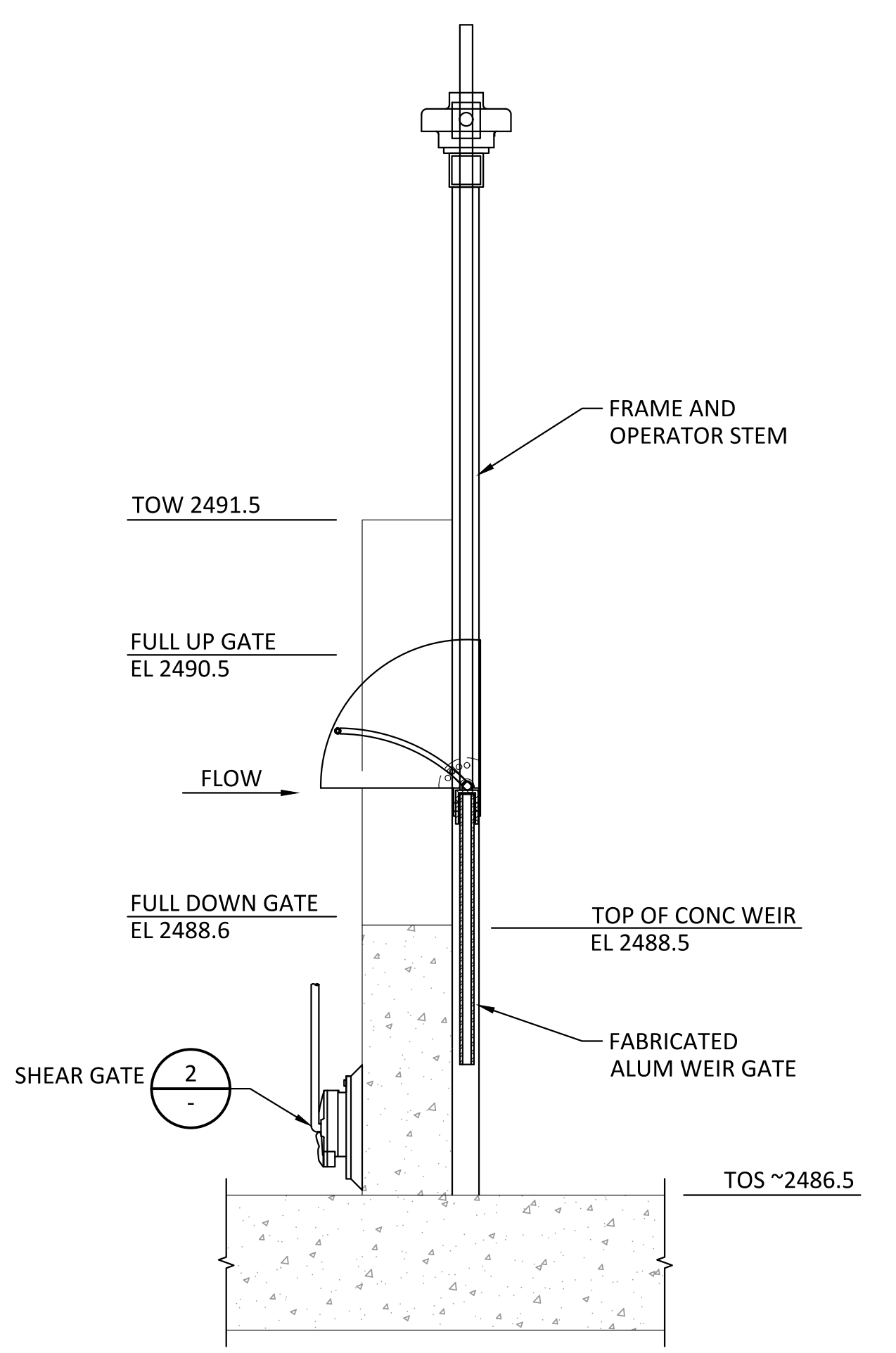
SCALE: 3"= 1'-0"

2
M610

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



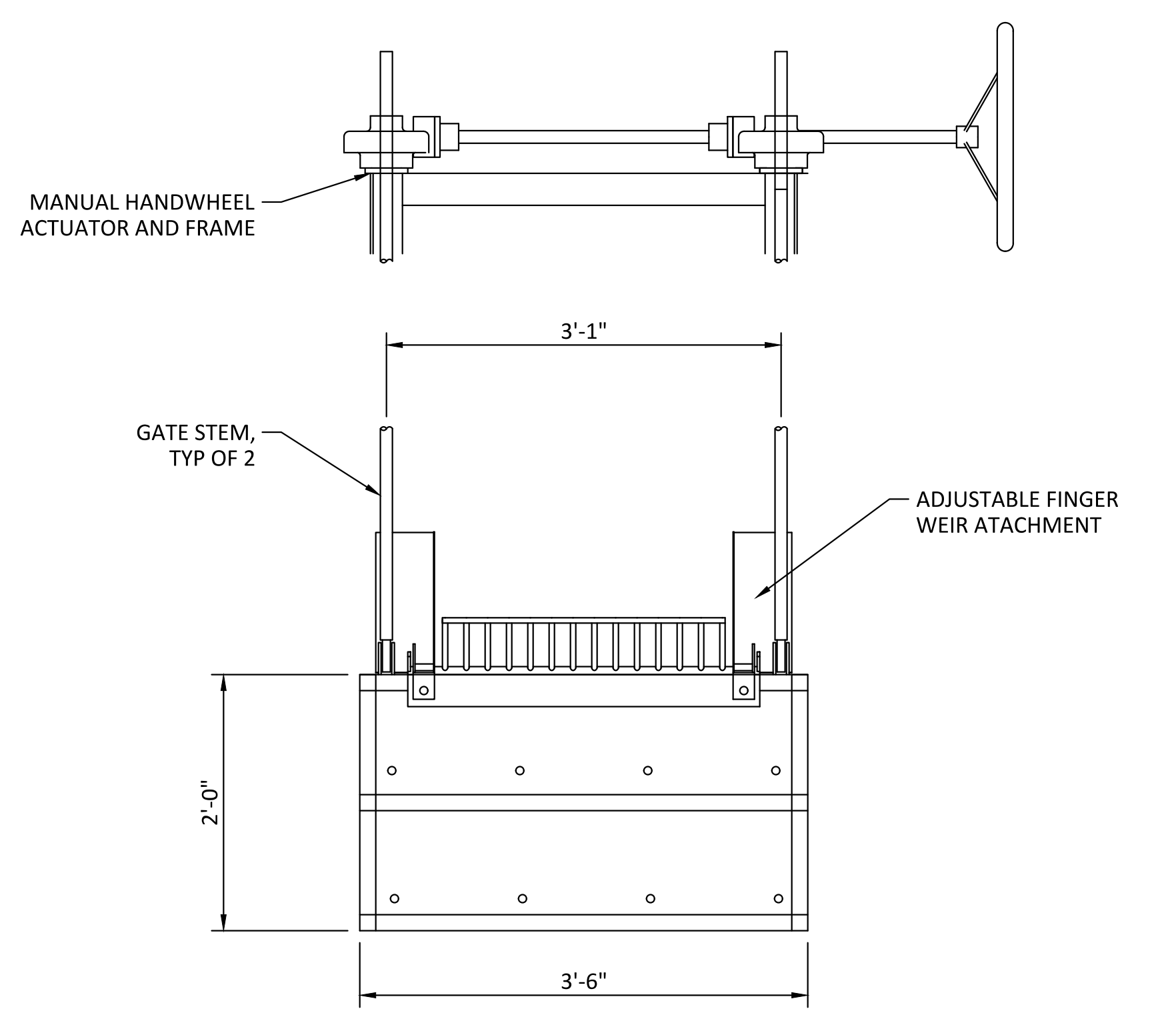
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M618
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 7		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



SECTION

SCALE: 1"= 1'-0"

B
M610

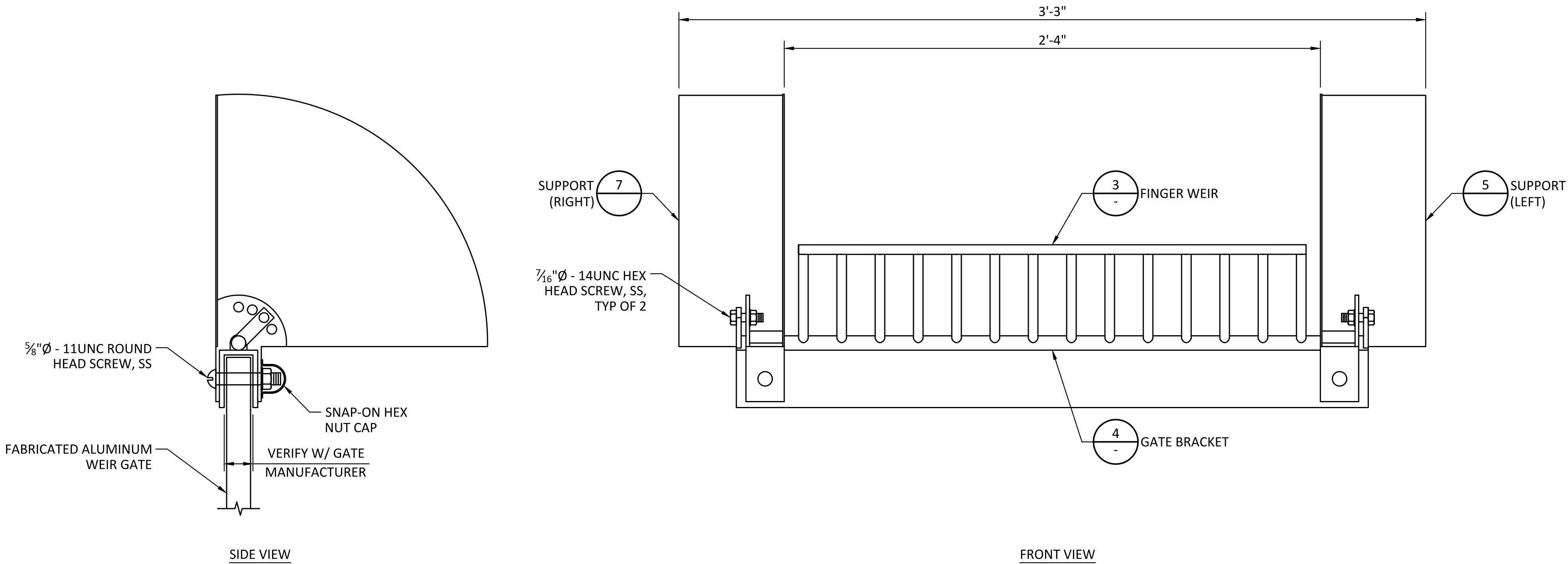


DETAIL

SCALE: 1"= 1'-0"

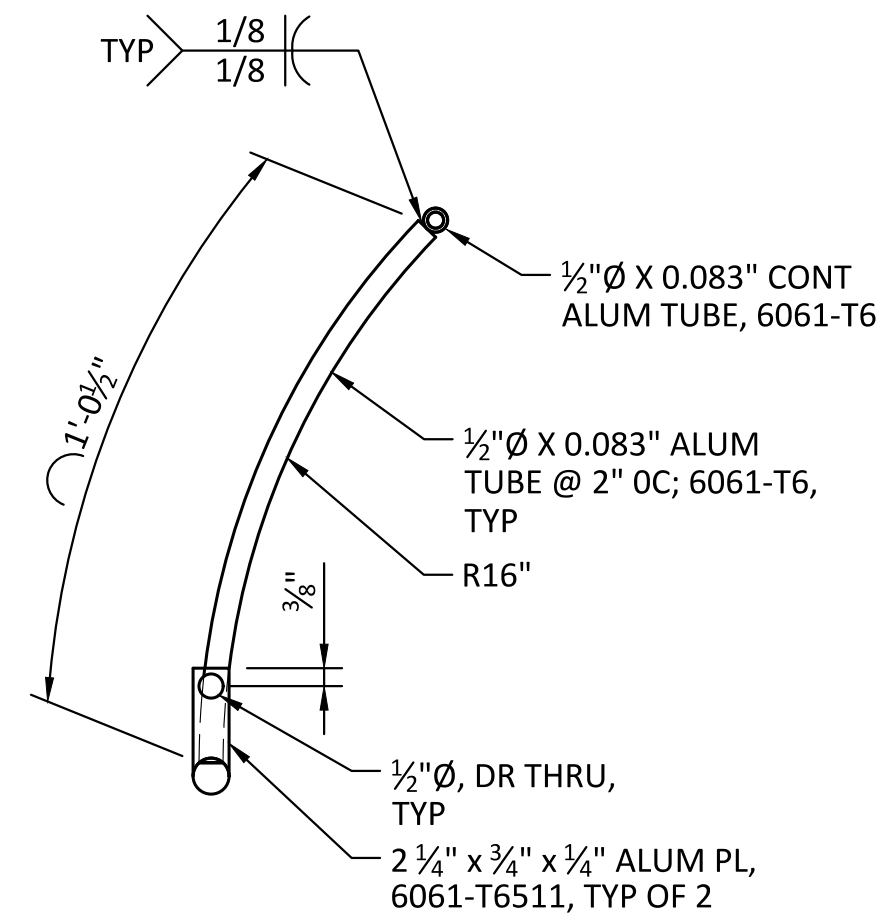
1
M610

NOTE: ALUMINUM SLIDE GATE, FRAME, AND ACTUATOR TO BE SUPPLIED BY GATE MANUFACTURER.

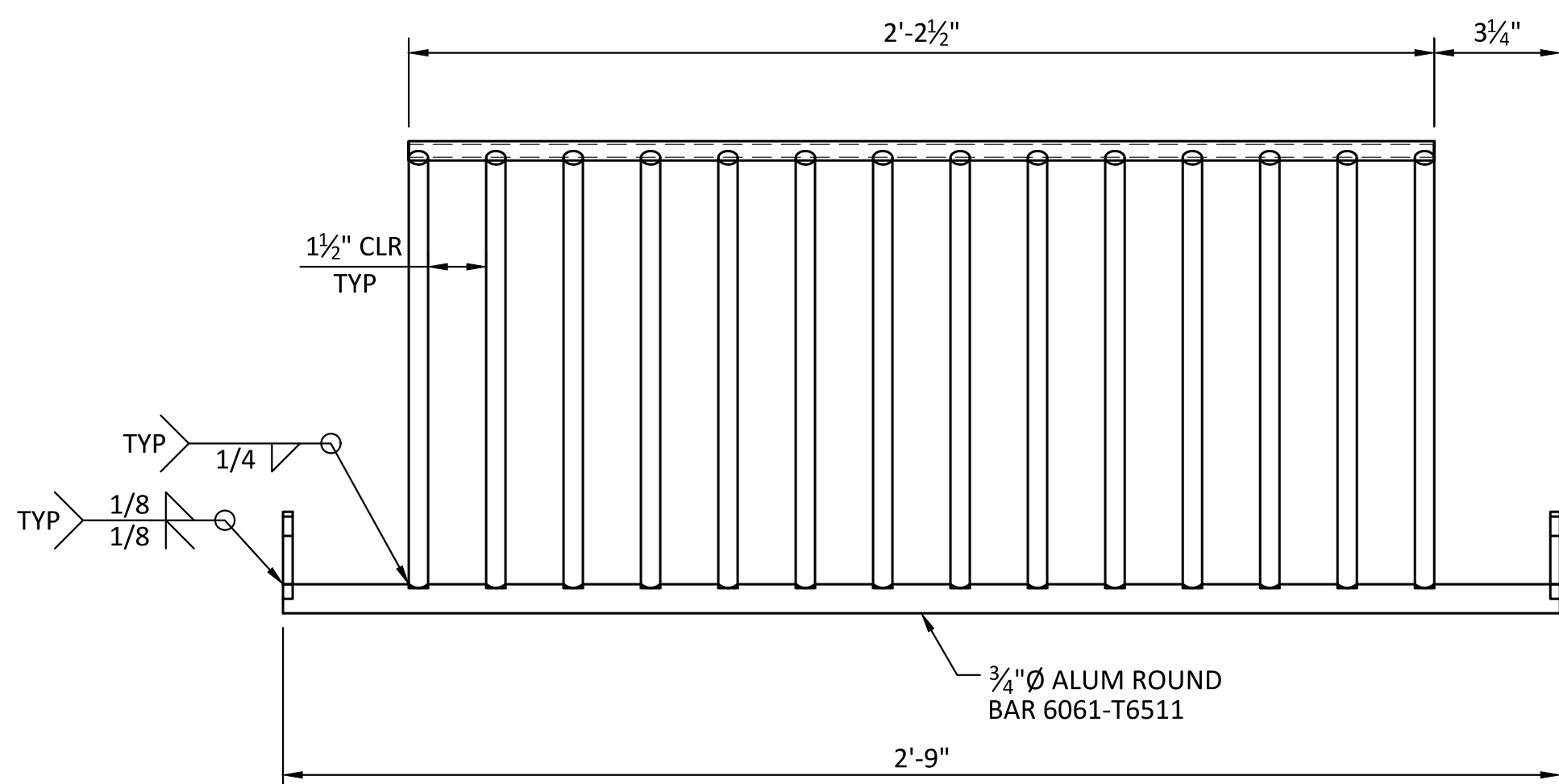


FINGER WEIR ATTACHMENT ASSEMBLY

SCALE: 3"= 1'-0"



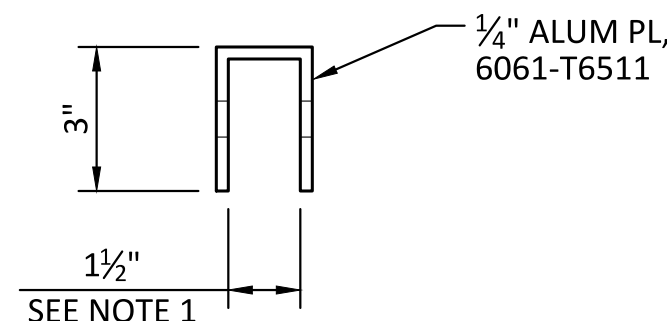
SIDE VIEW



FRONT VIEW

FINGER WEIR

SCALE: 3"= 1'-0"



SIDE VIEW



FRONT VIEW

GATE BRACKET

SCALE: 3"= 1'-0"

SHEET NOTES:

- BRACKET WIDTH BASED ON AN ESTIMATED GATE THICKNESS OF 1 1/4". CONFIRM DIMENSIONS WITH GATE MANUFACTURER.

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



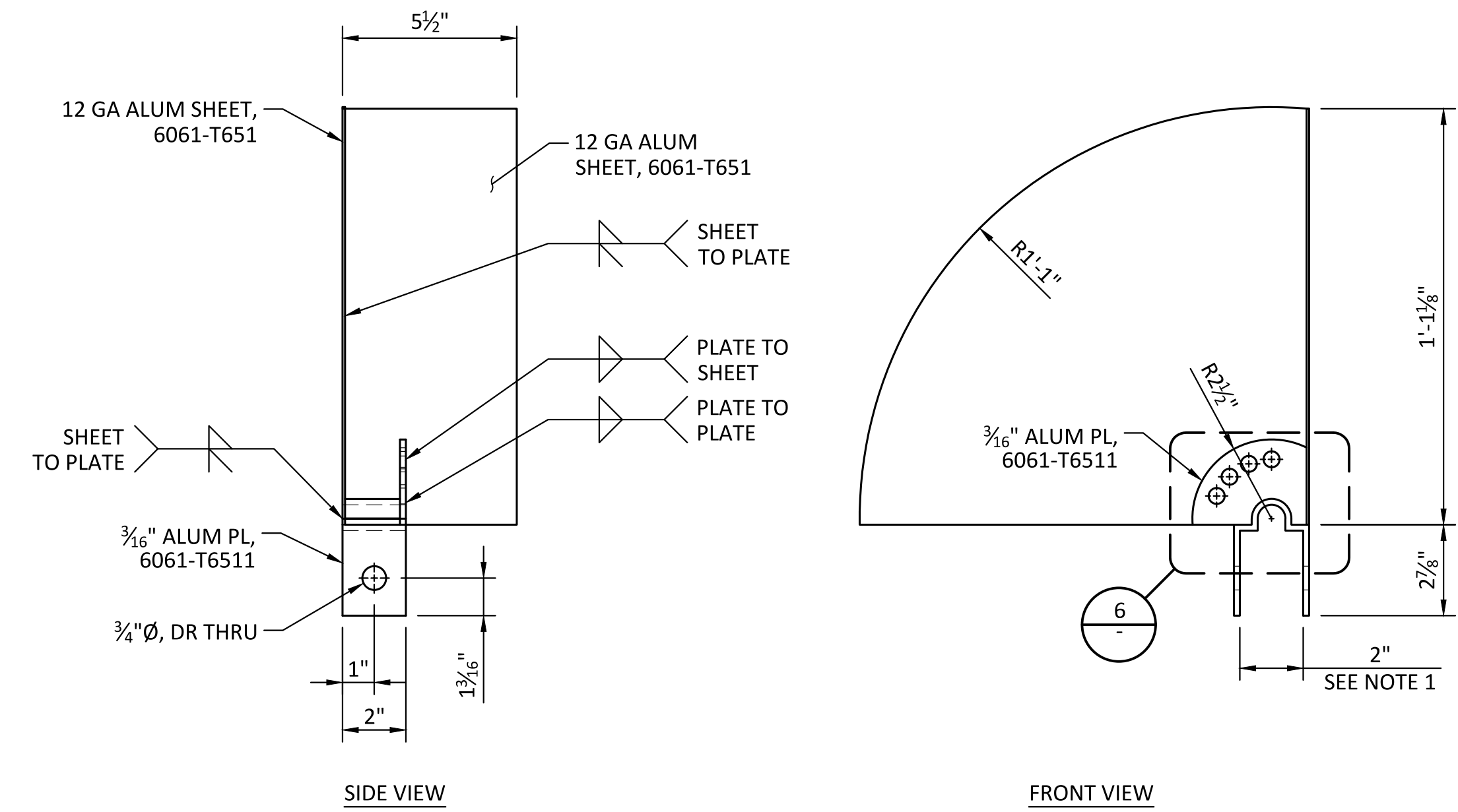
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

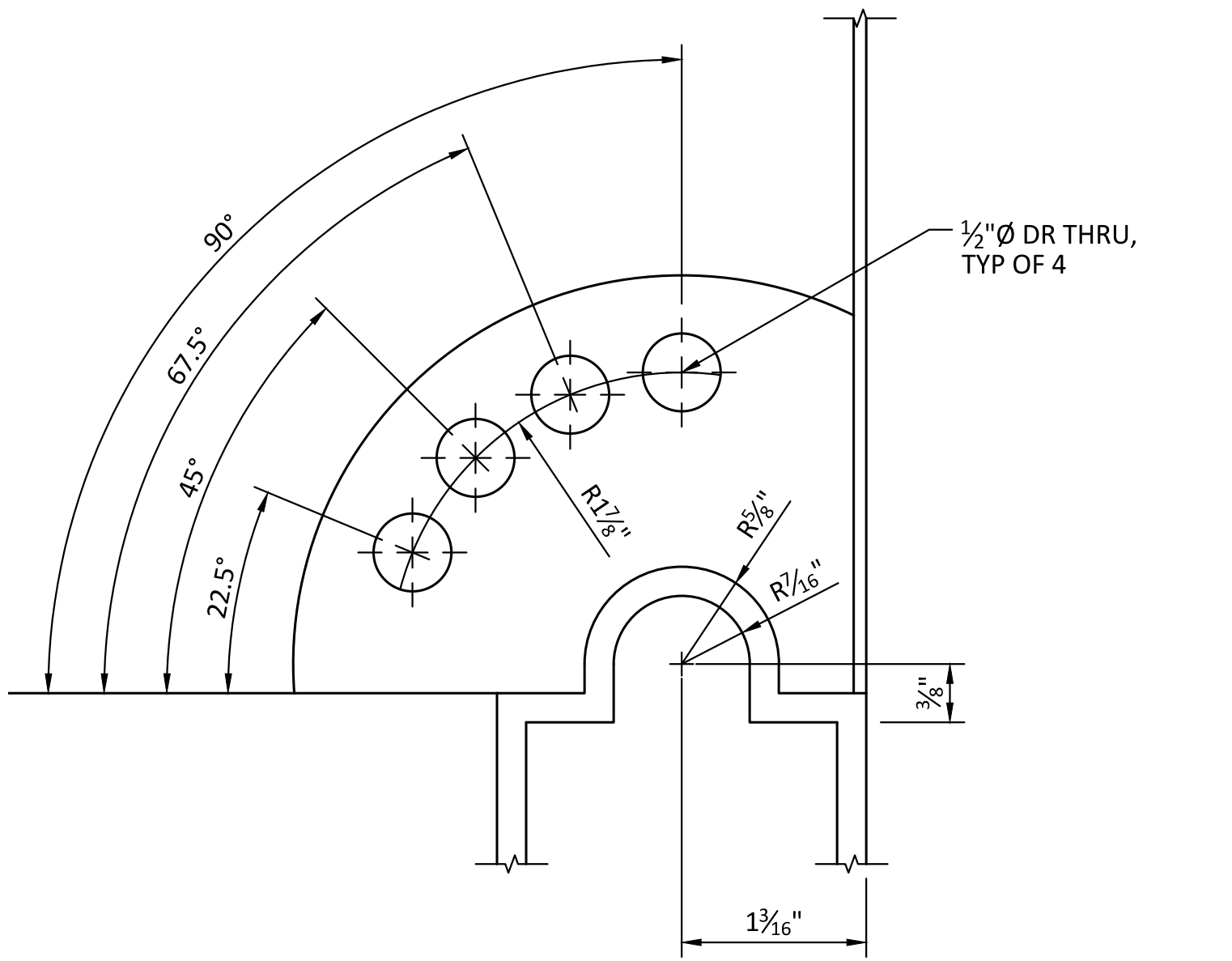


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M619
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 8		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	



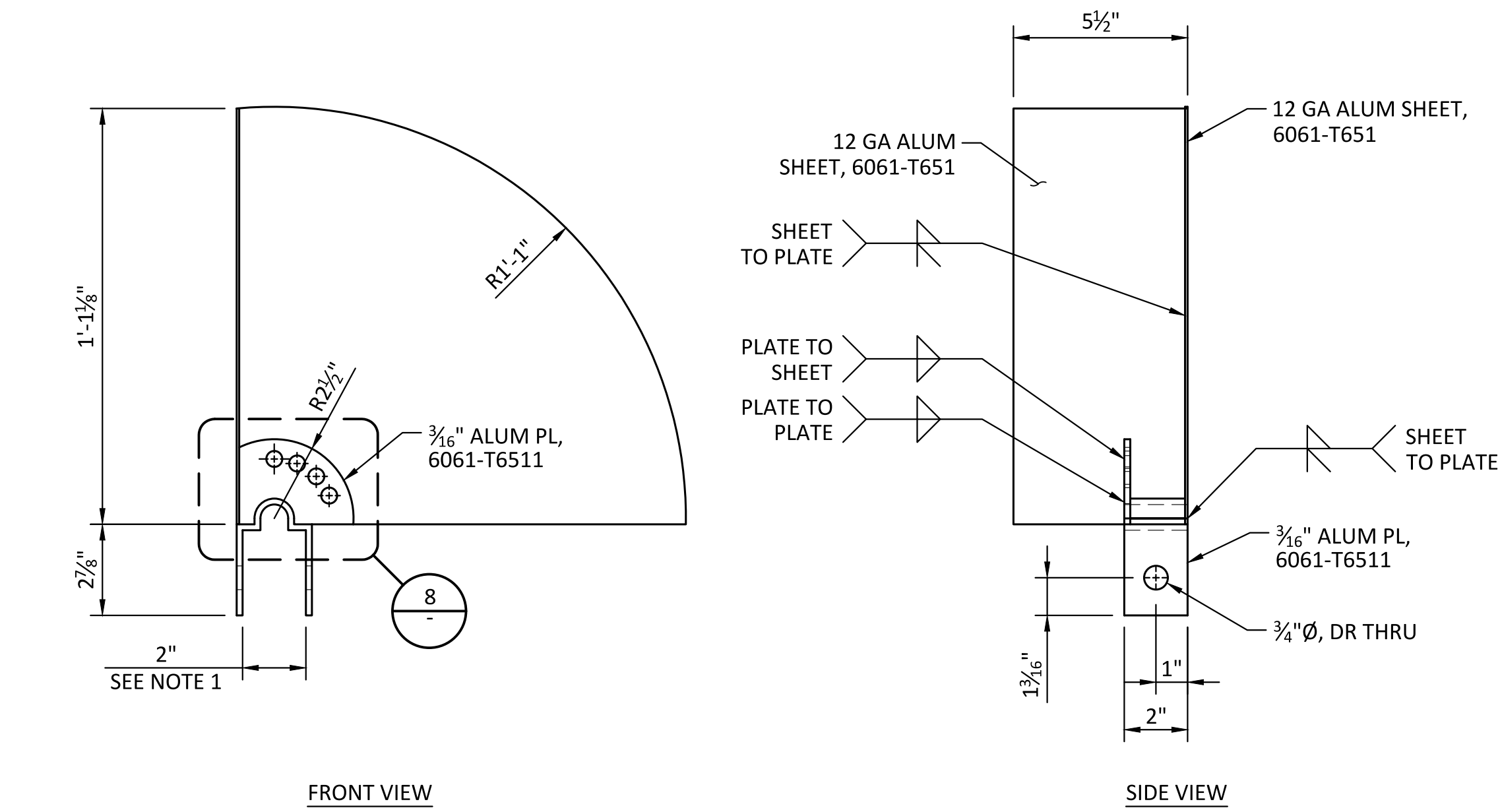
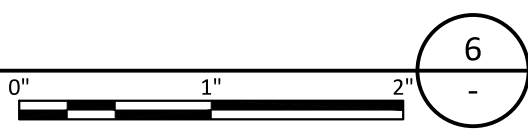
LEFT SUPPORT

SCALE: 3"= 1'-0"



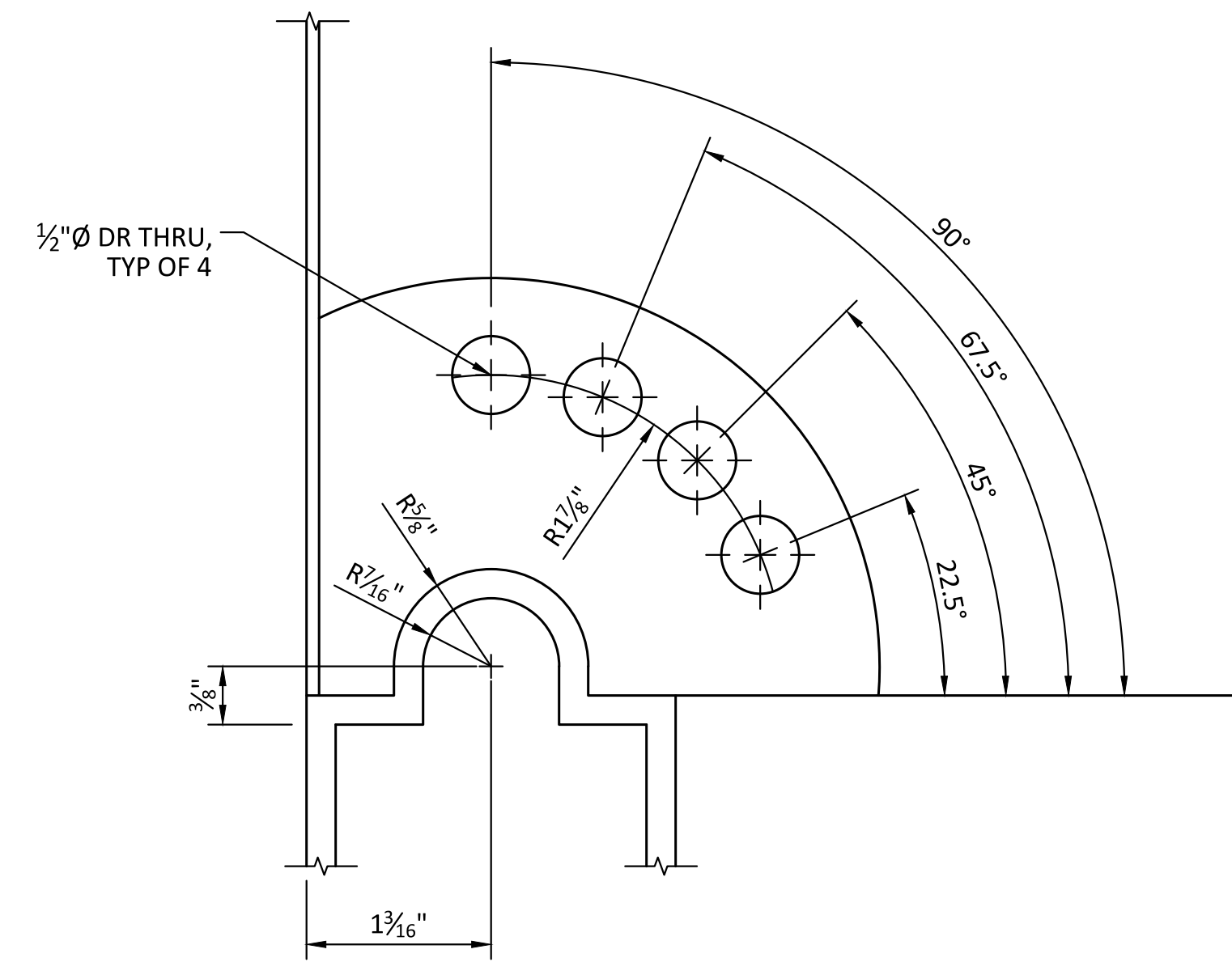
POSITION LOCK

SCALE: 12"= 1'-0"



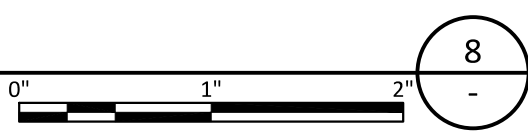
RIGHT SUPPORT

SCALE: 3"= 1'-0"



POSITION LOCK

SCALE: 12"= 1'-0"



SHEET NOTES:

1. SUPPORT BRACKET WIDTH BASED ON AN ESTIMATED GATE THICKNESS OF 1 1/4". CONFIRM DIMENSIONS WITH GATE MANUFACTURER.

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING M620
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 9		CHECKED <u>J. BOAG</u>	
		PROJECT DATE <u>10/28/20</u>	

EXHAUST FAN SCHEDULE												EF-	
EQUIPMENT NO.	LOCATION	CFM	STATIC PRESSURE (IN H2O)	SCONES	HP	RPM	VOLT-PH-CY	FLA	WEIGHT (LBS)	MANUFACTURER & MODEL	CONTROL	OPTIONS- ACCESSORIES	
EF-200	METER VAULT	290	0.20	---	---	2890	120-1-60	1.2	---	S&P PRF SERIES	ON/OFF SWITCH	MOUNTING BRACKET FOR CONCRETE, WATER PROOF ELECTRICAL ENCLOSURE, PVC TO STEEL PIPE FITTINGS AS NEEDED	
EF-301	COHO BUILDING	3200	0.25	16.4	0.567	1625	115-1-60	13.8	30	PENN BARRY P16Q1A	LEK TROI SS SPEED CTRLR	WALL-MOUNT, ALUMINUM PROPELLER, DISCONNECT, 115V MOTORIZED BACKDRAFT DAMPER, WIRE GUARD, INTERLOCK WITH L-301	
EF-302	COHO BUILDING	3200	0.25	16.4	0.567	1625	115-1-60	13.8	30	PENN BARRY P16Q1A	LEK TROI SS SPEED CTRLR	WALL-MOUNT, ALUMINUM PROPELLER, DISCONNECT, 115V MOTORIZED BACKDRAFT DAMPER, WIRE GUARD, INTERLOCK WITH L-302	
EF-303	COHO BUILDING	400	0.50	7.1	0.185	1454	115-1-60	--	N/A	PENN BARRY Z10HTDA	OCCUPANCY SENSOR	INLINE FAN WITH DUCT MOUNTED GRILLE AND BACKDRAFT DAMPER AND OCCUPANCY SENSOR	
EF-501	CHINOOK INCUBATION BUILDING	1800	0.25	12.3	0.209	1211	115-1-60	9.8	30	PENN BARRY P16SA	LEK TROI SS SPEED CTRLR	WALL-MOUNT, ALUMINUM PROPELLER, DISCONNECT, 115V MOTORIZED BACKDRAFT DAMPER, WIRE GUARD, WEATHER HOOD, INTERLOCK WITH L-501	
EF-502	CHINOOK INCUBATION BUILDING	1800	0.25	12.3	0.209	1211	115-1-60	9.8	30	PENN BARRY P16SA	LEK TROI SS SPEED CTRLR	WALL-MOUNT, ALUMINUM PROPELLER, DISCONNECT, 115V MOTORIZED BACKDRAFT DAMPER, WIRE GUARD, WEATHER HOOD, INTERLOCK WITH L-502	
EF-503	CHINOOK INCUBATION BUILDING	350	0.50	6.3	0.150	1357	115-1-60	--	N/A	PENN BARRY Z10HTDA	OCCUPANCY SENSOR	INLINE FAN WITH DUCT MOUNTED GRILLE AND BACKDRAFT DAMPER AND OCCUPANCY SENSOR	
EF-601	SPAWNING BUILDING	2000	0.25	13.5	0.243	1269	115-1-60	9.8	30	PENN BARRY P16SA	LEK TROI SS SPEED CTRLR	WALL-MOUNT, ALUMINUM PROPELLER, DISCONNECT, 115V MOTORIZED BACKDRAFT DAMPER, WIRE GUARD, WEATHER HOOD, INTERLOCK WITH L-601	
EF-602	SPAWNING BUILDING	100	0.50	3.2	0.040	1288	115-1-60	--	N/A	PENN BARRY Z8HTDA	OCCUPANCY SENSOR	INLINE FAN WITH DUCT MOUNTED GRILLE AND BACKDRAFT DAMPER AND OCCUPANCY SENSOR	
MANUFACTURERS: PENN BARRY, COOK, SOLER & PALAU (USA), GREENHECK, OR APPROVED EQUAL													
NOTE: CONTRACTOR SHALL COORDINATE ALL CONTROLS WITH ELECTRICAL CONTRACTOR													

ELECTRIC HEATER SCHEDULE												UH-
EQUIPMENT NO.	LOCATION	CFM	kW	RPM	AMPS	VOLT-PH-CY	WEIGHT	THROW	CONTROL	MANUFACTURER & MODEL	OPTIONS-ACCESSORIES	
UH-301	COHO BUILDING	490	5	--	6.02	480-3-60	75	25	TEMP SWITCH	TPI 2600 DOWNFLOW SERIES	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, THERMOSTAT, AND VERTICAL RADIAL LOUVERED CONE DIFFUSER MODEL D1600, AND TIME DELAY RELAY	
UH-302	COHO BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-303	COHO BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-304	COHO BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-305	COHO BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-501	CHINOOK INCUBATION BUILDING	490	5	--	6.02	480-3-60	75	25	TEMP SWITCH	TPI 2600 DOWNFLOW SERIES	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, THERMOSTAT, AND VERTICAL RADIAL LOUVERED CONE DIFFUSER MODEL D1600, AND TIME DELAY RELAY	
UH-502	CHINOOK INCUBATION BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-503	CHINOOK INCUBATION BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-504	CHINOOK INCUBATION BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-505	CHINOOK INCUBATION BUILDING	400	5	--	6.10	480-3-60	36	26	TEMP SWITCH	TPI UH SERIES	PROVIDE WITH MANUF WALL MOUNT HANGING KIT, FACTORY DISCONNECT SWITCH, AND WALL MOUNT THERMOSTAT, AND TIME DELAY RELAY	
UH-601	SPAWNING BUILDING	1200	10	--	12.04	480-3-60	75	40	TEMP SWITCH	TPI 2600 DOWNFLOW SERIES	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, THERMOSTAT, AND 45 DEGREE RADIAL LOUVERED CONE DIFFUSER MODEL NUMBER D1600, AND TIME DELAY RELAY	
MANUFACTURERS: TPI, INDEECO, TRANE, Q-MARK, OR APPROVED EQUAL												

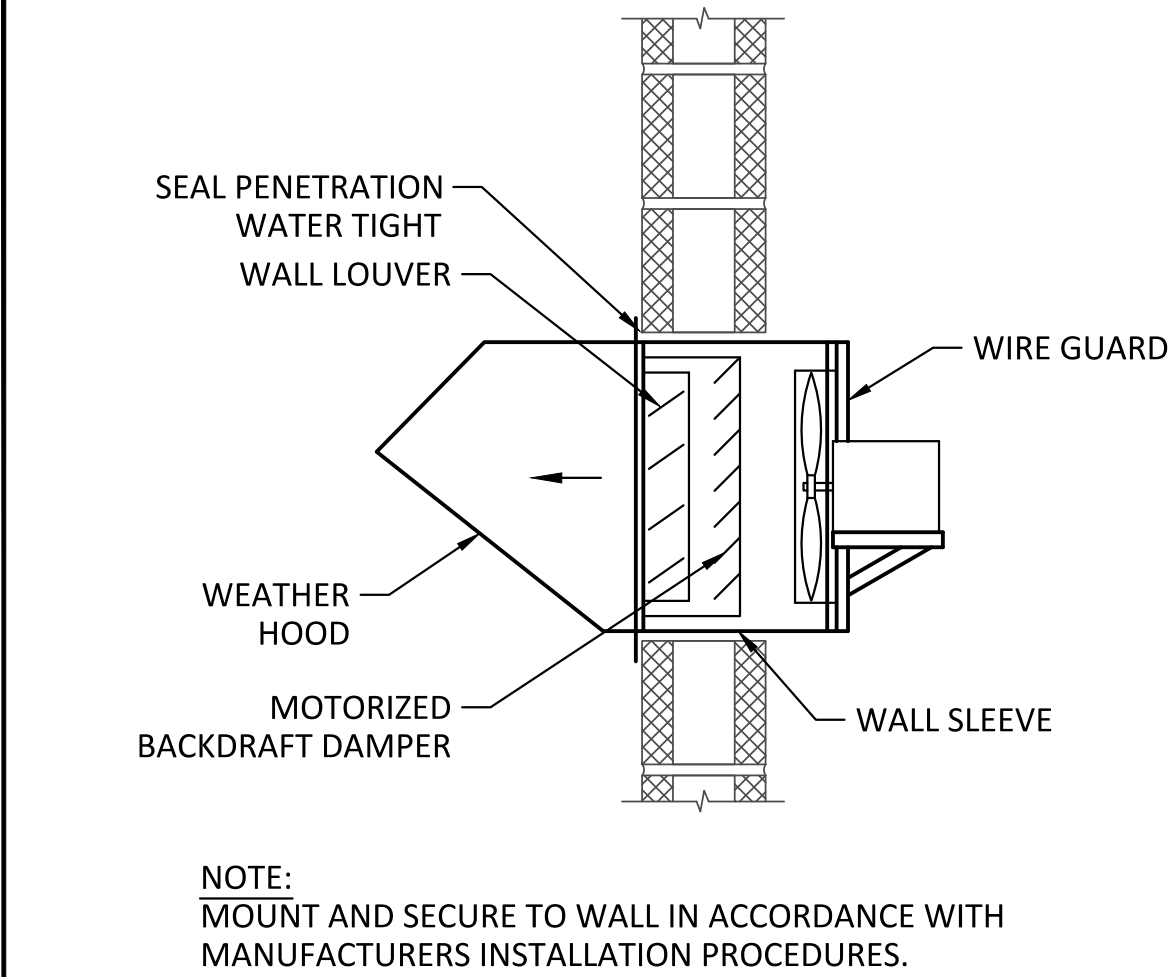
LOUVER SCHEDULE										L-	
EQUIPMENT NO.	LOCATION	WIDTH	HEIGHT	FREE AREA (SF)	FRAME THICKNESS	MATERIAL	SCREEN	MANUFACTURER & MODEL	OPTIONS-ACCESSORIES		
L-301	COHO BUILDING	54"	30"	5.80	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-301, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-302	COHO BUILDING	54"	30"	0.31	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-302, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-303	COHO BUILDING	16"	16"	0.80	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-303, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-304	COHO BUILDING	16"	16"	0.80	6"	ALUMINUM	1/2" THICK	UNITED ENERTECH FL-D-4	SECURITY BARS, BARAMETRIC RELIEF AIR DAMPER, BIRD SCREEN, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-501	CHINOOK INCUBATION BUILDING	30"	30"	2.84	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-501, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-502	CHINOOK INCUBATION BUILDING	30"	30"	2.84	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-502, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-503	CHINOOK INCUBATION BUILDING	16"	16"	0.80	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-503, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-504	CHINOOK INCUBATION BUILDING	16"	16"	0.80	6"	ALUMINUM	1/2" THICK	UNITED ENERTECH FL-D-4	SECURITY BARS, BARAMETRIC RELIEF AIR DAMPER, BIRD SCREEN, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-601	SPAWNING BUILDING	30"	30"	2.84	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-601, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-602	SPAWNING BUILDING	12"	12"	0.32	6"	ALUMINUM	1/2" THICK	RUSKIN ELC6375DAX	SECURITY BARS, FILTER RACKS, BIRD SCREEN, 110 V ELECTRIC MOTORIZED LOUVER BLADE ACTUATOR INTERLOCKED W/ EF-602, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
L-603	SPAWNING BUILDING	12"	12"	0.32	6"	ALUMINUM	1/2" THICK	UNITED ENERTECH FL-D-4	SECURITY BARS, BARAMETRIC RELIEF AIR DAMPER, BIRD SCREEN, 70% PVDF COATED. FINISH COLOR TO BE SELECTED BY ARCHITECT		
MANUFACTURERS: RUSKIN, NCA MANUFACTURING, OR APPROVED EQUAL											
1. CONTRACTOR TO VERIFY ALL OPENING SIZES, WALL THICKNESSES, AND MOUNTING HEIGHTS PRIOR TO INSTALLATION. COORDINATE INSTALLATION LOCATIONS WITH BUILDING STRUCTURE AND ELECTRICAL CONTRACTORS.											

MINI SPLIT UNIT SCHEDULE												AC-	HC-
EQUIPMENT NO.	LOCATION	CFM	NOM COOLING CAPACITY (BTU/H)	COP	SEER	VOLT-PH-CY	MCA	WEIGHT (LBS)	MANUFACTURER & MODEL	CONTROL	OPTIONS- ACCESSORIES		
AC-501	ELECTRICAL ROOM	300	12,000	2.44	18	208-1-60	10.7	16.76	SAMSUNG AC012MNADCH/AA	WALL MOUNTED T-STAT	WALL MOUNT UNIT. PROVIDE WITH REFRIGERANT PIPPING KIT, CONDENSATE PUMP KIT, AND DDC INTERFACE CONNECTION KIT		
HC-501	ELECTRICAL ROOM	300	12,000	2.44	18	208-1-60	8.1	79.81	SAMSUNG AC012KXADCH/AA	WALL MOUNTED T-STAT	PROVIDE WITH BIGFOOT SUPPORT STAND OR EQUAL, LOW AMBIENT KIT, AND WIND BAFFLE.		
MANUFACTURERS: SAMSUNG, MITSUBISHI, OR APPROVED EQUAL													
1. CONTRACTOR SHALL COORDINATE ALL CONTROLS WITH ELECTRICAL CONTRACTOR													
2. CONTRACTOR TO PROVIDE ALL REFRIGERANT PIPING, FITTINGS, AND CONDENSATE DRAIN PIPING NECESSARY FOR A COMPLETE SYSTEM.													

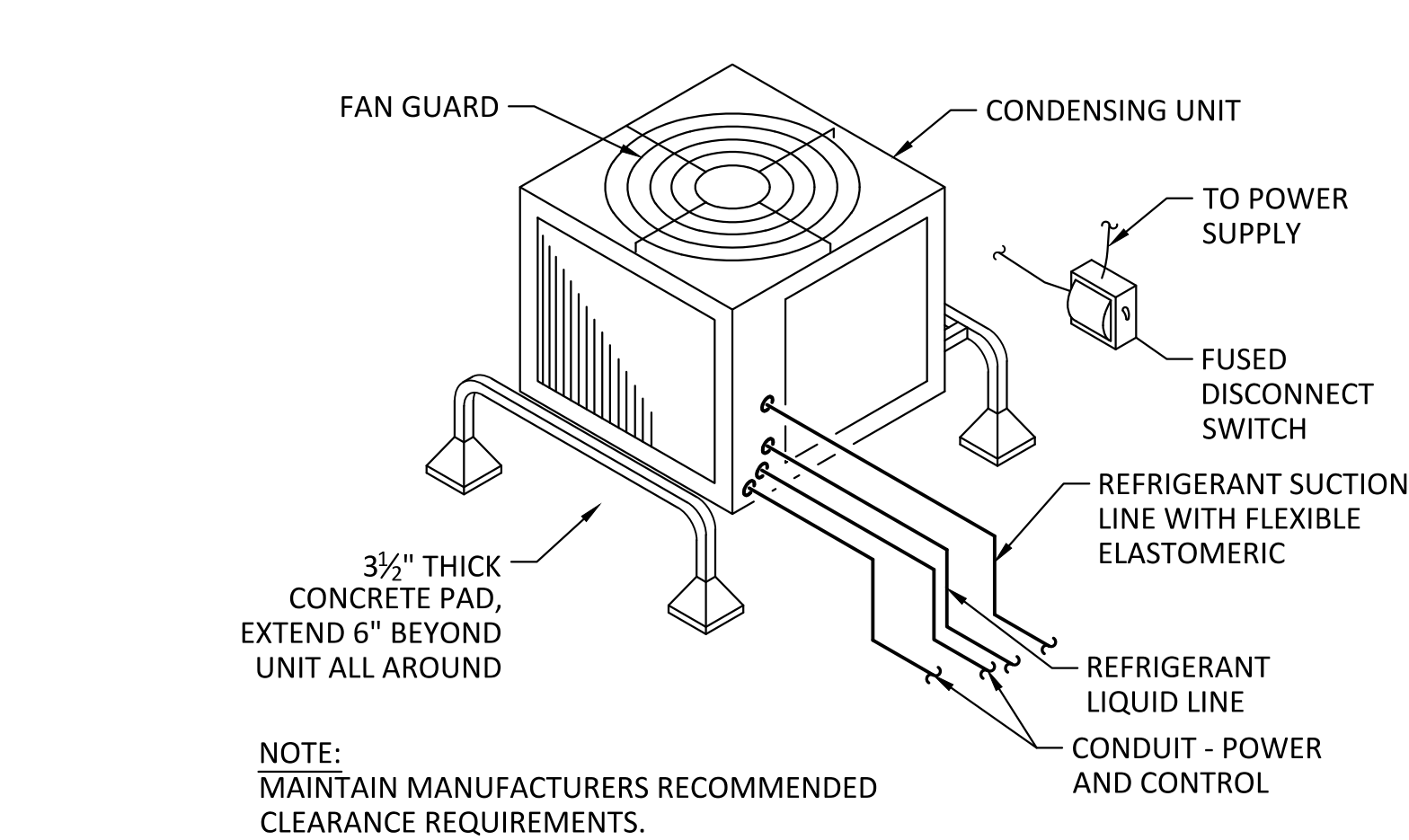
ELECTRIC DOWNFLOW HEATER SCHEDULE										RH-		
EQUIP NO	LOCATION	KW	AMPS	VOLT-PH-CY	WEIGHT (LBS)	CONTROL	MANUFTURER & MODEL	OPTIONS-ACCESSORIES				
RH-301	COHO BUILDING	3	8.3	208-3-60	27.6	TEMP SWITCH	SRP EW30L20Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
RH-302	COHO BUILDING	3	8.3	208-3-60	27.6	TEMP SWITCH	SRP EW30L20Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
RH-501	CHINOOK INCUBATION BUILDING	3	8.3	208-3-60	27.6	TEMP SWITCH	SRP EW30L20Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
RH-502	CHINOOK INCUBATION BUILDING	3	8.3	208-3-60	27.6	TEMP SWITCH	SRP EW30L20Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
RH-601	SPAWNING BUILDING	3	8.3	208-3-60	27.6	TEMP SWITCH	SRP EW30L20Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
RH-602	SPAWNING BUILDING	3	8.3	208-3-60	27.6	TEMP SWITCH	SRP EW30L20Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
RH-603	SPAWNING BUILDING	4.5	5.4	480-3-60	35.9	TEMP SWITCH	SRP EW45L48Y	PROVIDE WITH MANUF CEILING HUNG KIT, FACTORY DISCONNECT SWITCH, AND THERMOSTAT				
MANUFACTURERS: SRP, INDEECO, TRANE, Q-MARK, OR APPROVED EQUAL												

AIR DISTRIBUTION DEVICES												SD-	
SIZE			MOUNTING					MATERIAL		ACCESSORIES			
SYMBOL	WIDTH	HEIGHT	SIDEWALL	LAY-IN CEILING	HARD CEILING	DUCT	FLOOR	STEEL	ALUM	FACE DAMPER	LAY-IN PANEL	MANUFACTURE & MODEL	NOTES
SD-301	12"	12"	X			X		X				METALAIRE H402-AF	
SD-501	12"	12"	X			X		X				METALAIRE H402-AF	
SD-601	10"	10"	X			X		X				METALAIRE H402-AF	
MANUFACTURERS: METALAIRE, CARNES, TUTTLE & BAILEY, KRUEGER, TITUS, OR APPROVED EQUAL													
1. CONTRACTOR TO VERIFY FRAME STYLES WITH CEILING TYPES													
2. FINISH TO BE MODEL'S STANDARD FINISH UNLESS DIRECTED OTHERWISE BY ARCHITECT													

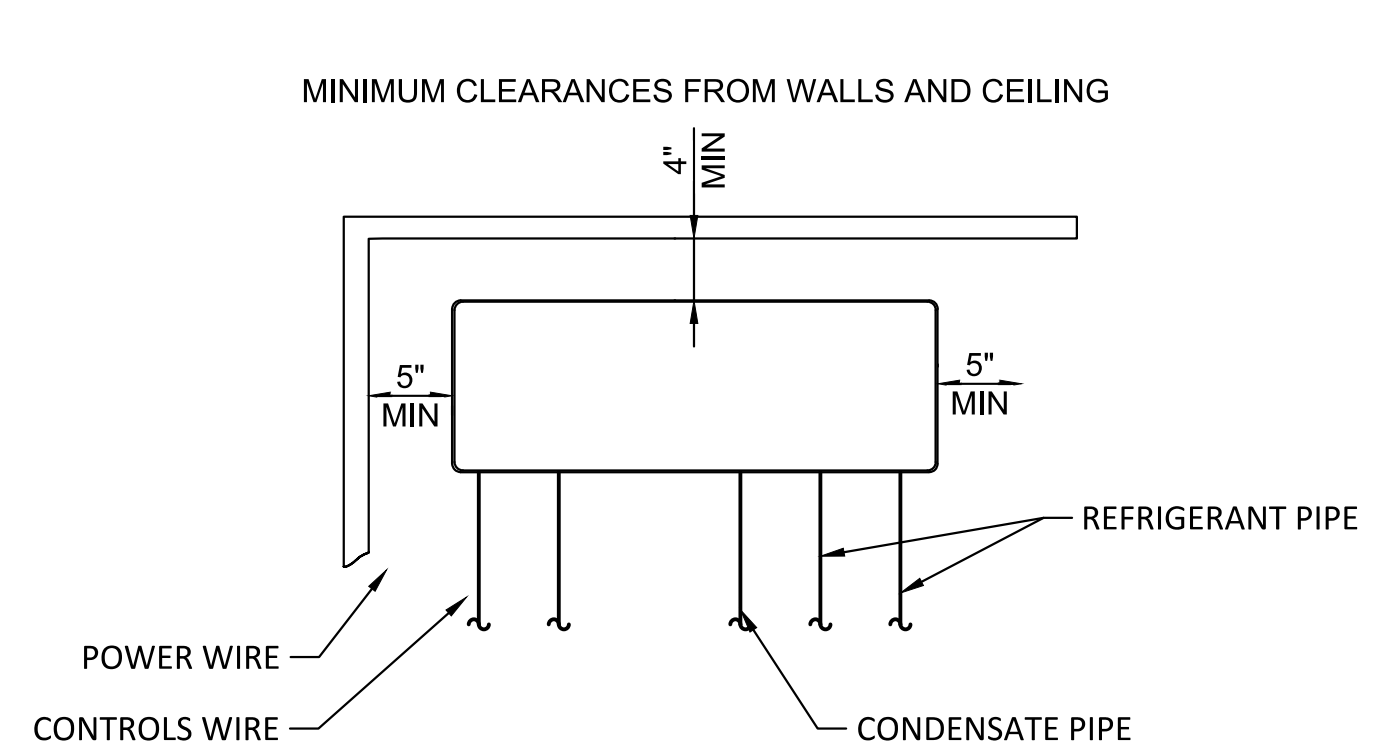
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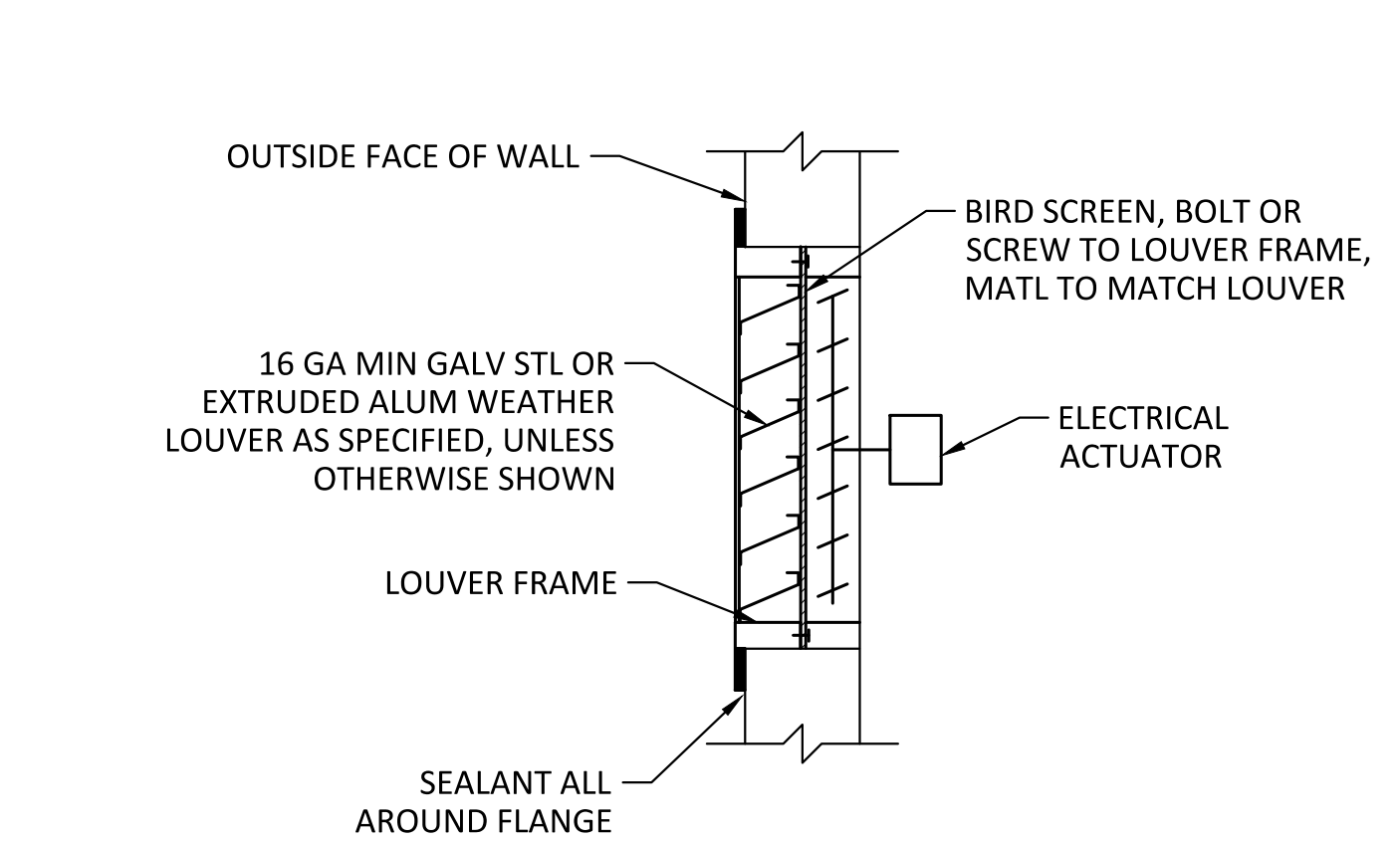
SIDEWALL EXHAUST FAN DETAIL
SCALE: NTS



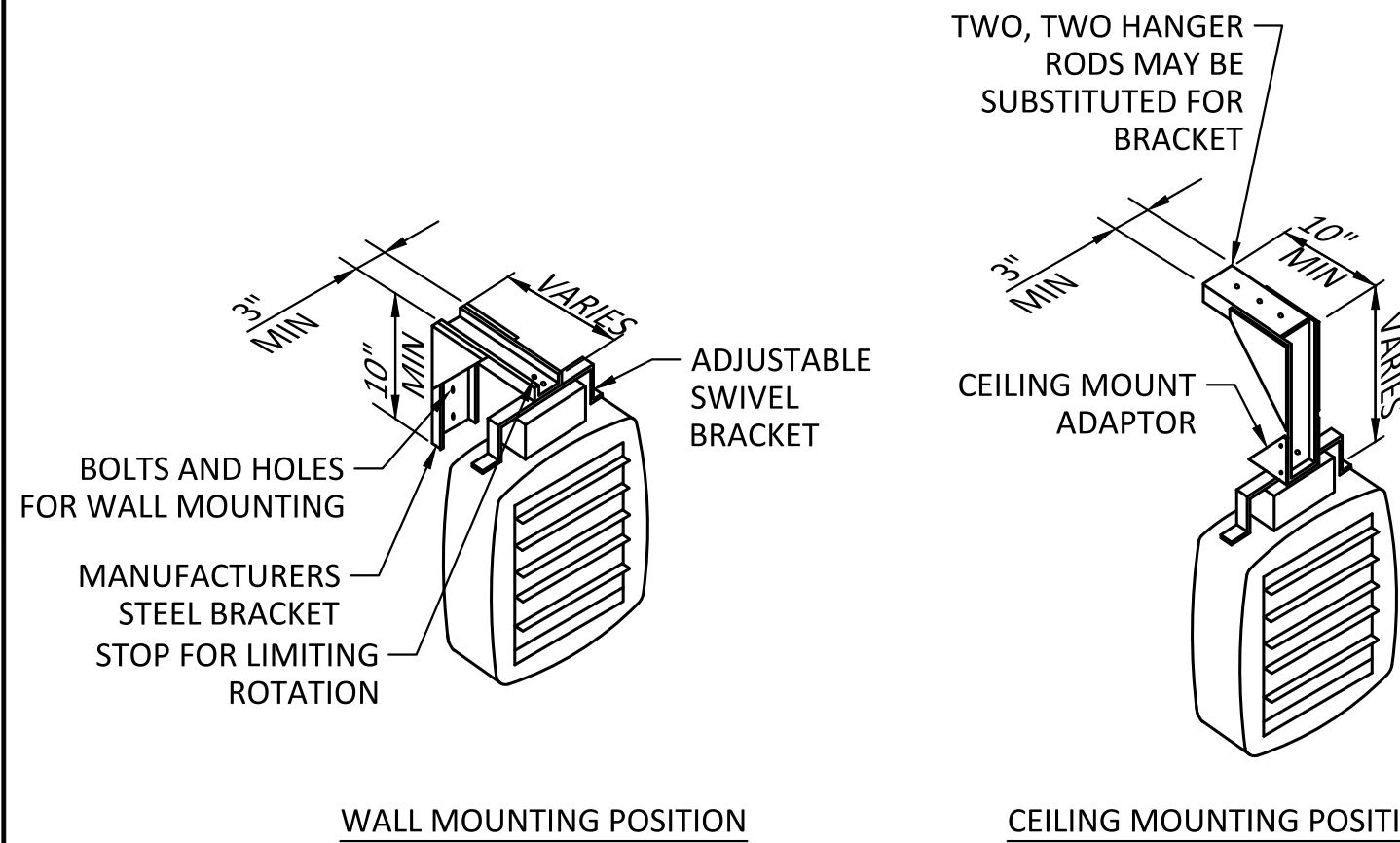
OUTDOOR CONDENSING UNIT
SCALE: NTS



AC UNIT DETAIL
SCALE: NTS

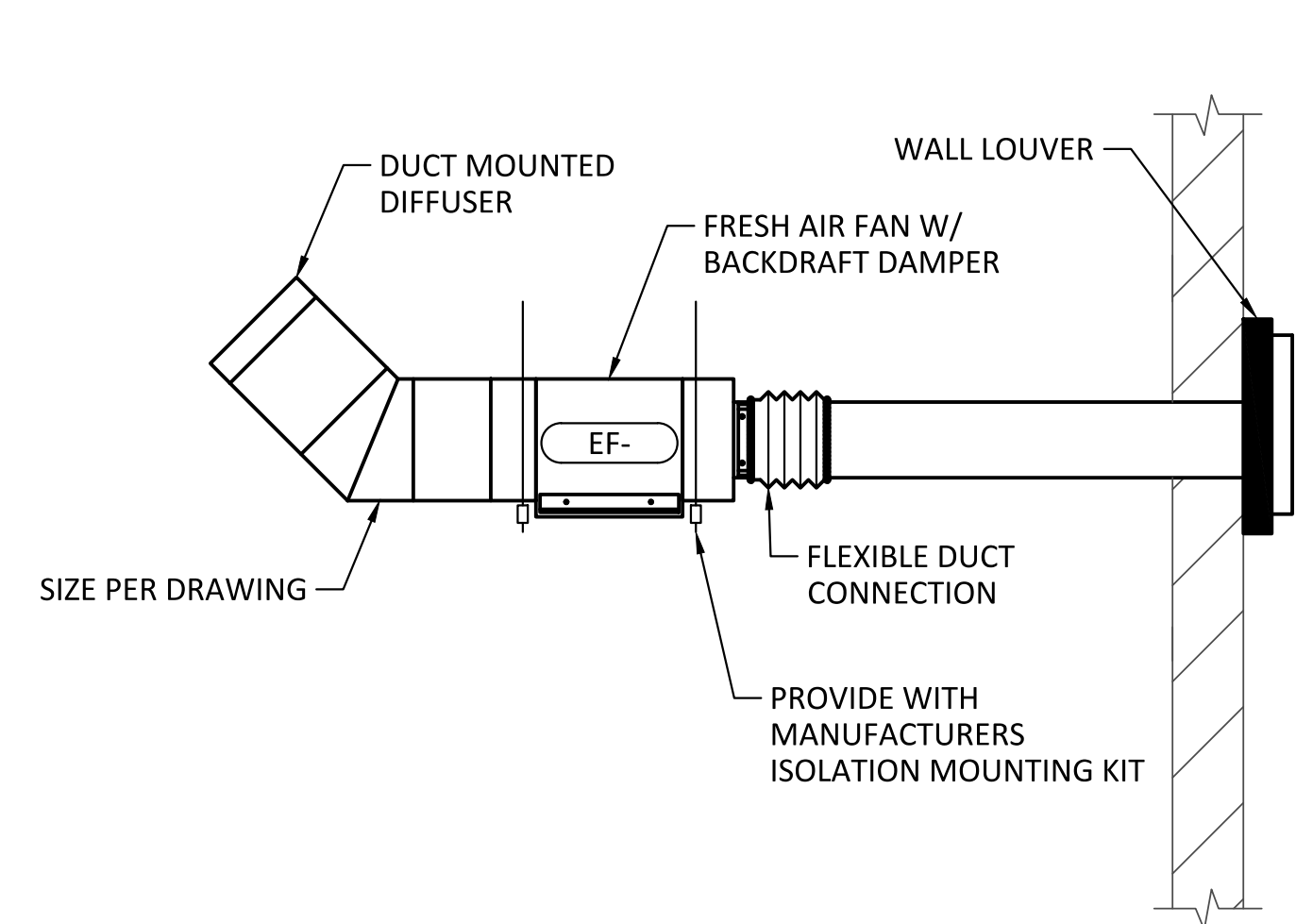


COMBINATION WEATHER LOUVER
SCALE: NTS

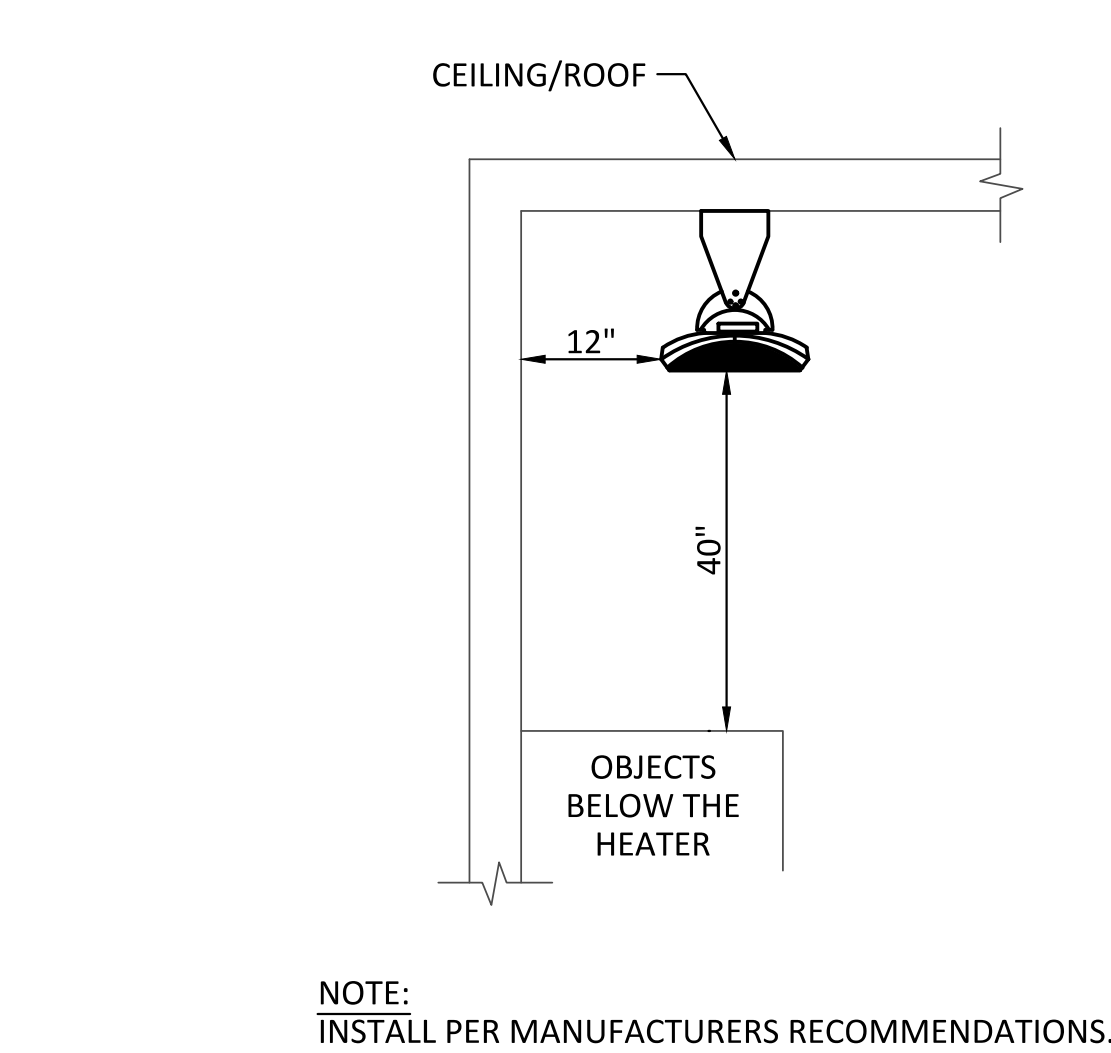


NOTE:
1. HEATER TO BE CONTROLLED FROM WALL-MOUNTED THERMOSTAT, UNO.
2. ELECTRIC UNIT HEATER AS SPECIFIED.

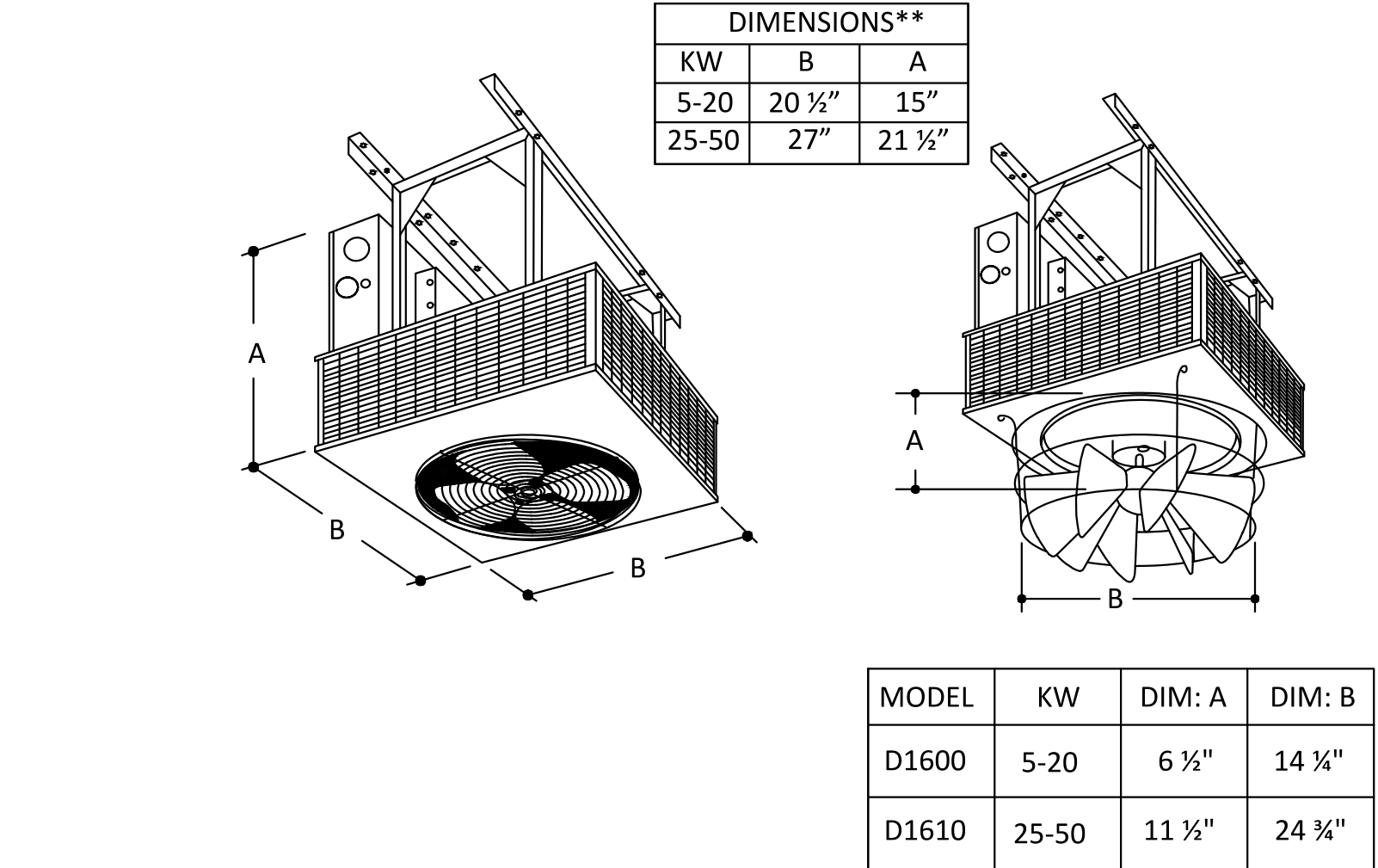
ELECTRIC UNIT HEATER
SCALE: NTS



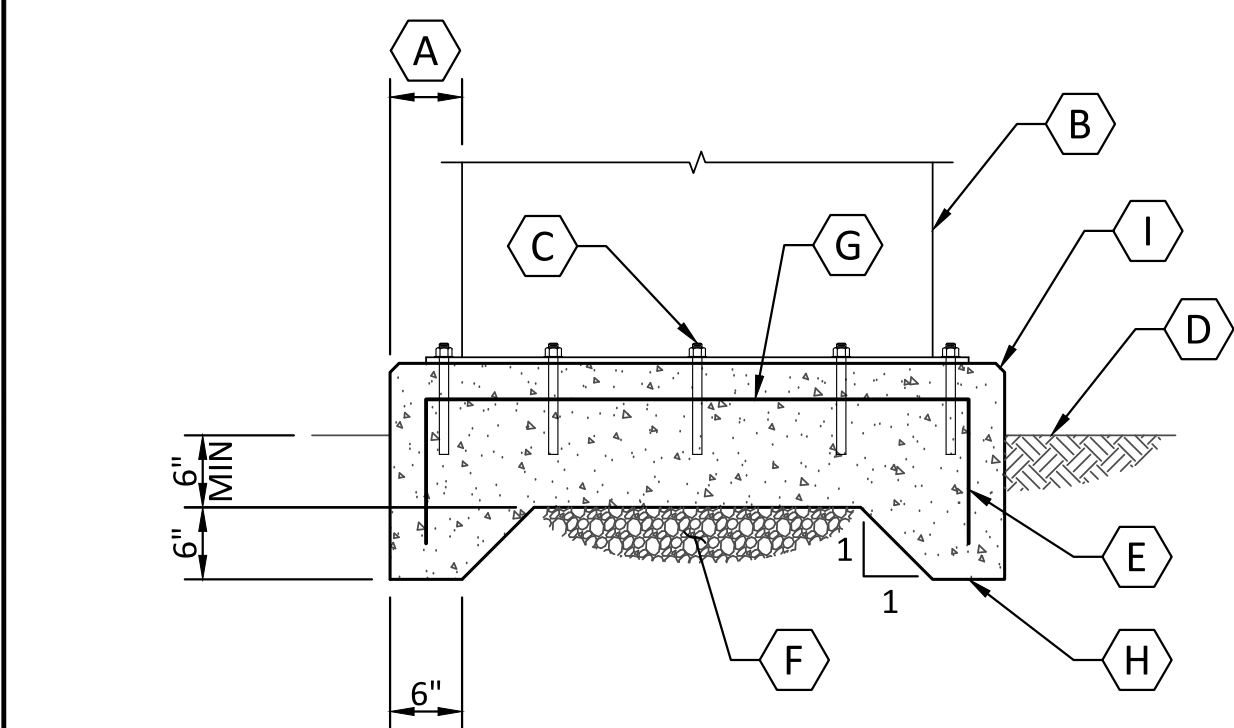
EXPLOSION-PROOF EXHAUST FAN
SCALE: NTS



RADIANT HEATER
SCALE: NTS



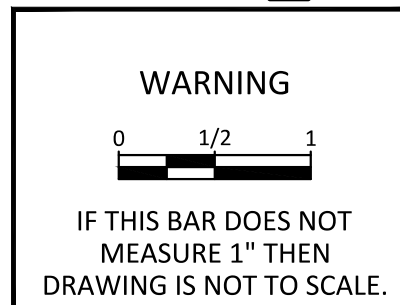
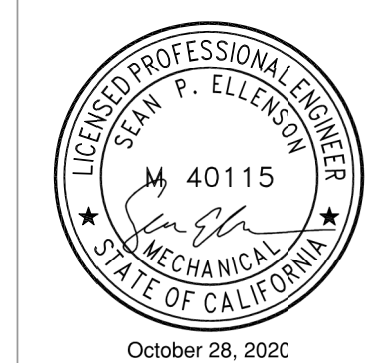
CEILING MOUNT ELECTRIC HEATER
SCALE: NTS



NOTES:
1. COORDINATE SIZE AND LOCATION OF CONCRETE EQUIPMENT PAD WITH EQUIPMENT LAYOUT PRIOR TO FABRICATION AND PLACEMENT.
2. CONCRETE EQUIPMENT PADS SHALL BE INSTALLED FLAT AND LEVEL.

EXTERIOR CONCRETE EQUIPMENT PAD
SCALE: NTS

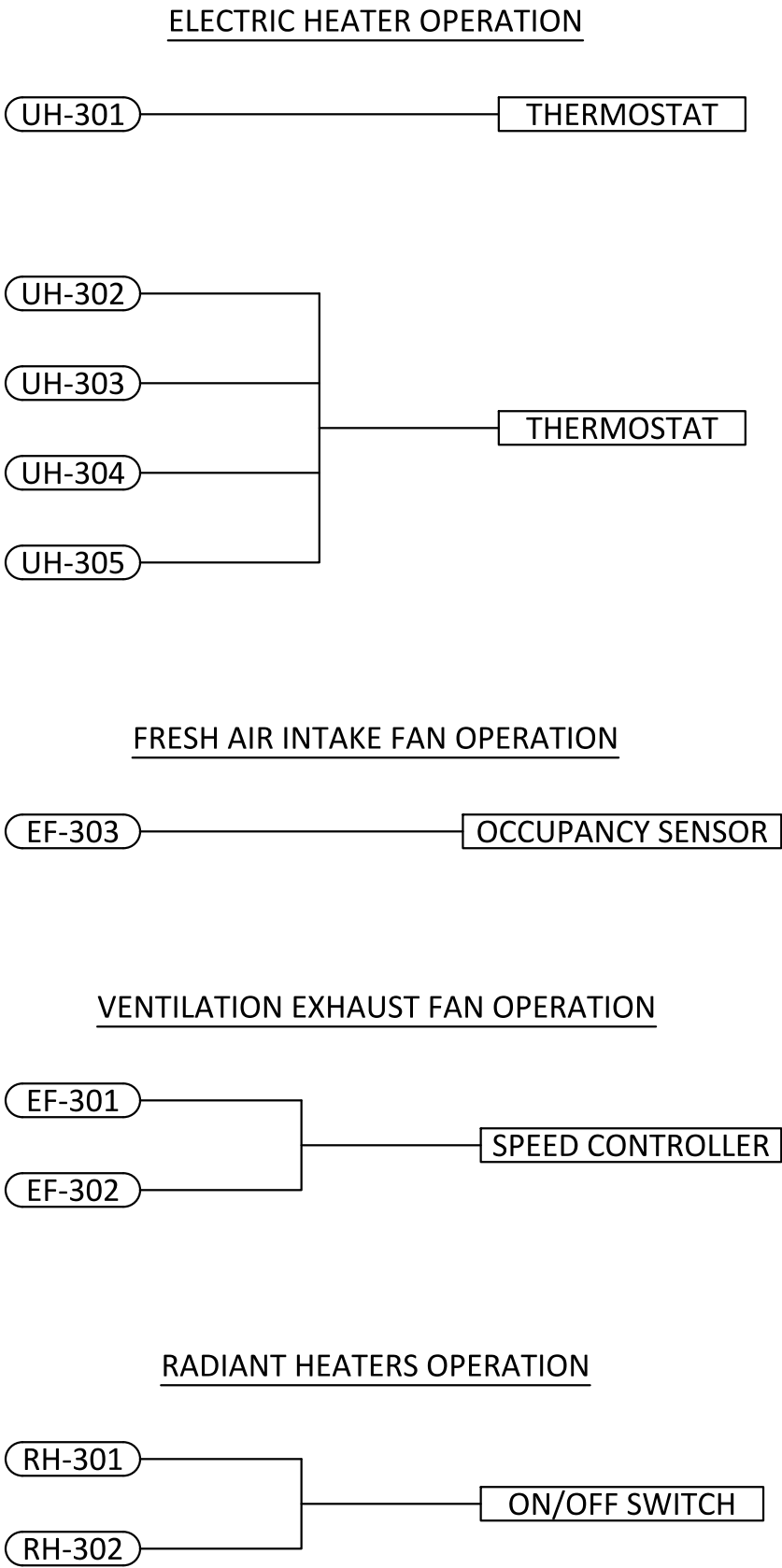
KEY NOTES:
A 6" MIN, TYP UNO.
B EQUIPMENT.
C CONCRETE ANCHOR, TYP.
D FINISH GRADE OR PAVEMENT.
E #5 CONT AROUND PERIMETER.
F PROVIDE MIN 12" COMPACTED GRANULAR FILL, EXTEND MIN 12" BEYOND PAD, TYP ALL AROUND.
G #5@12 EW AT MID-DEPTH OF SLAB.
H THICKENED EDGE ALL AROUND.
I 3/4" CHAMFER, TYP



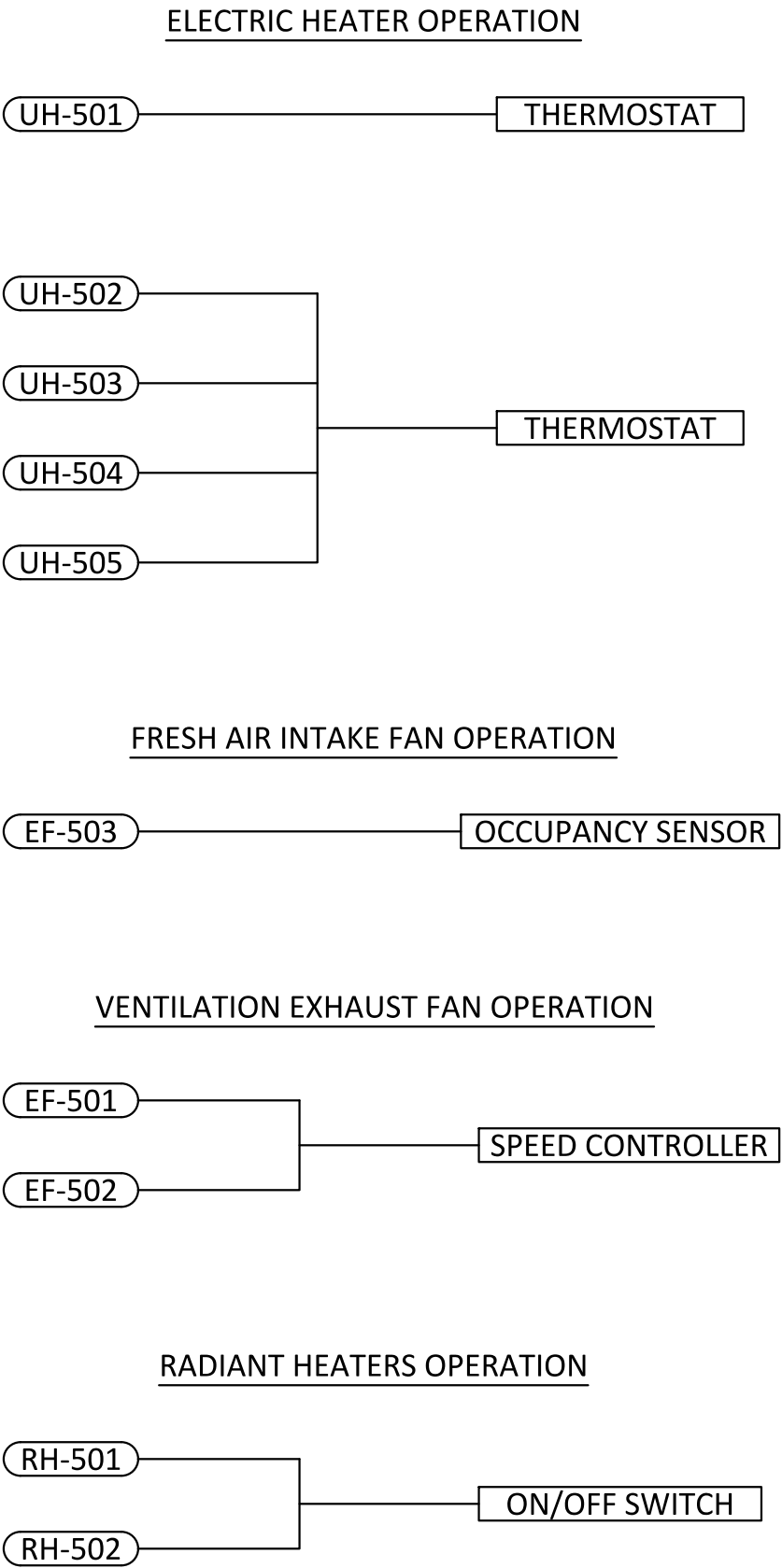
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING GH002
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
HVAC STANDARD DETAILS		CHECKED <u>K. DeSOMBER</u>	
		PROJECT DATE <u>10/28/20</u>	

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION

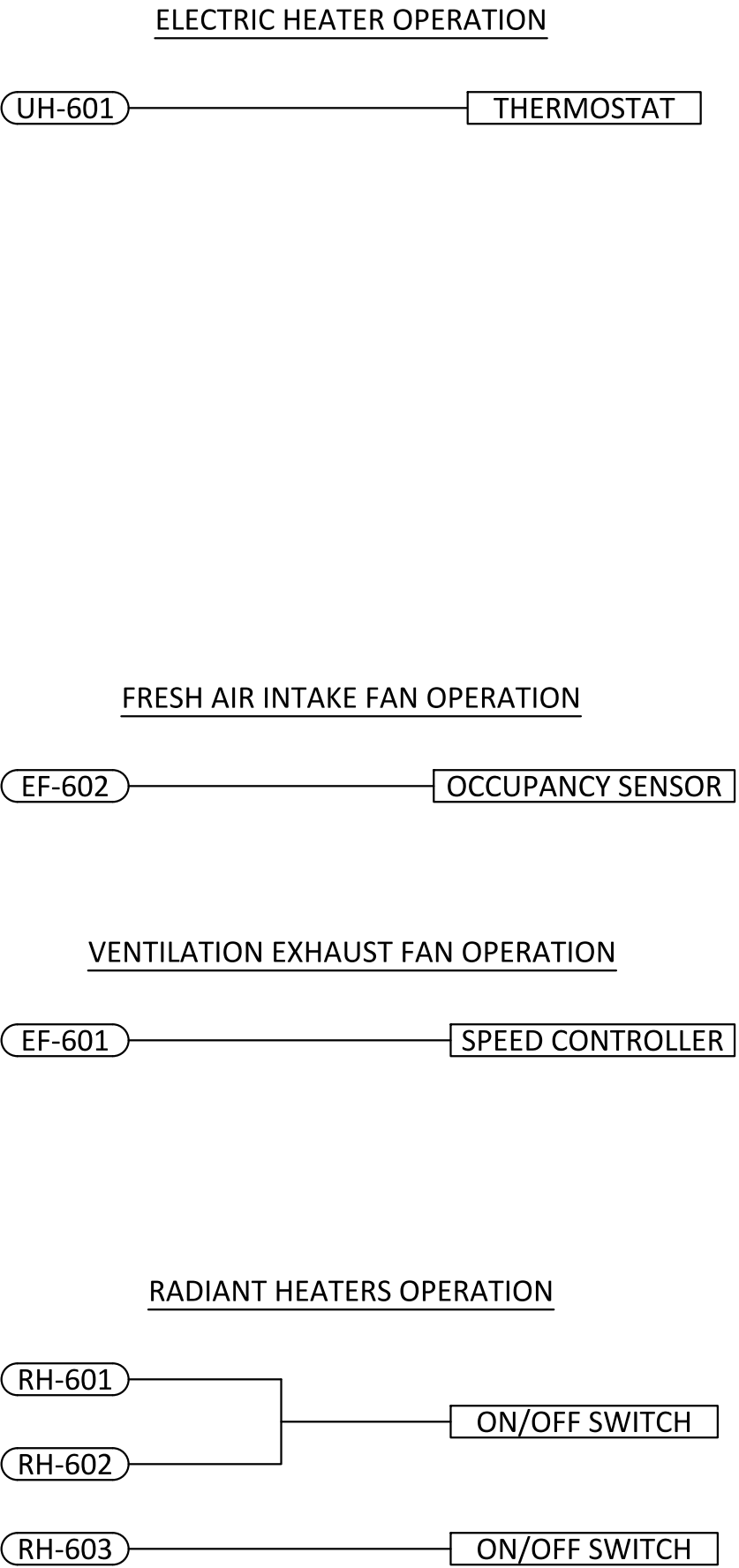
COHO BUILDING



CHINOOK INCUBATION BUILDING



SPAWNING BUILDING



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



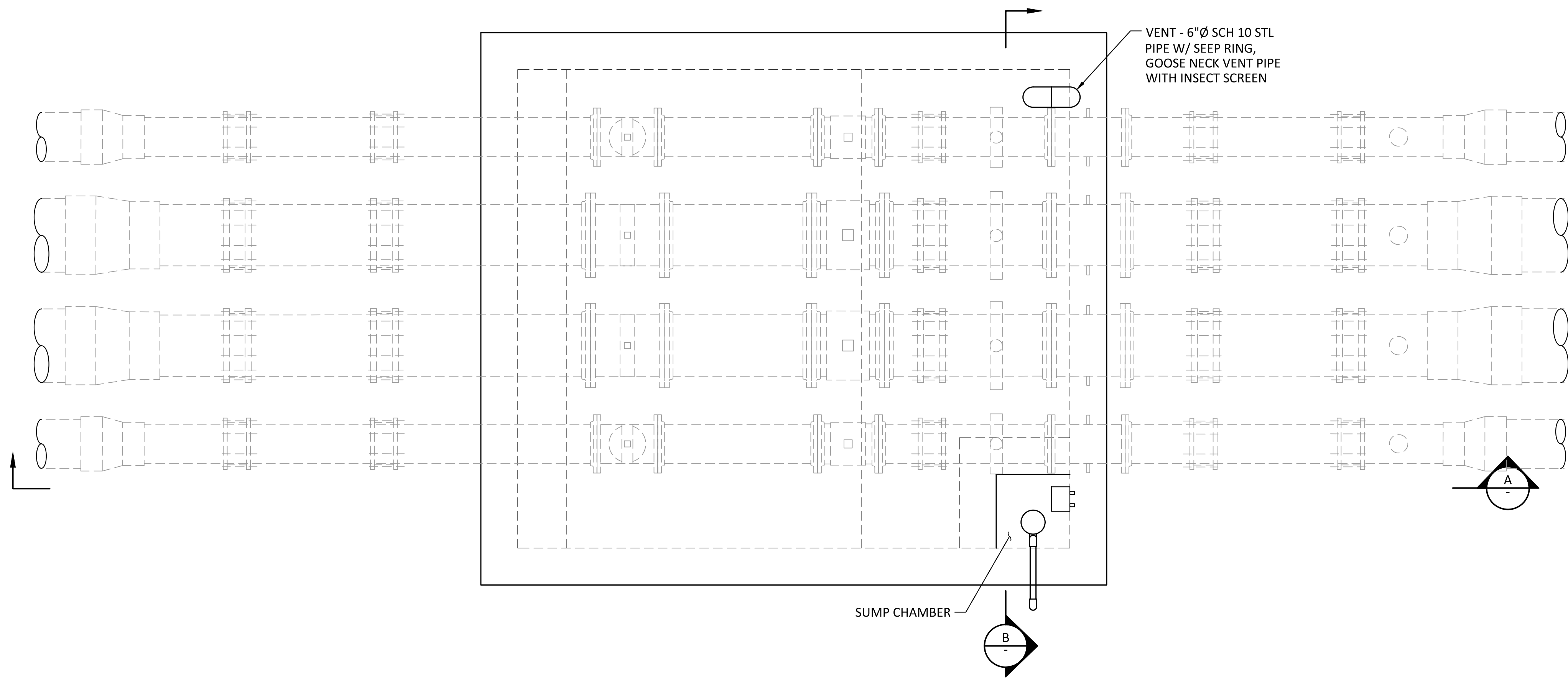
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

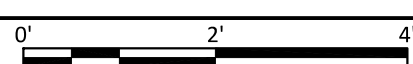


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>C. GREGORY</u>	DRAWING GH003
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
HVAC & CONTROLS OPERATIONS DIAGRAM		CHECKED <u>K. DeSOMBER</u>	
		PROJECT DATE <u>10/28/20</u>	

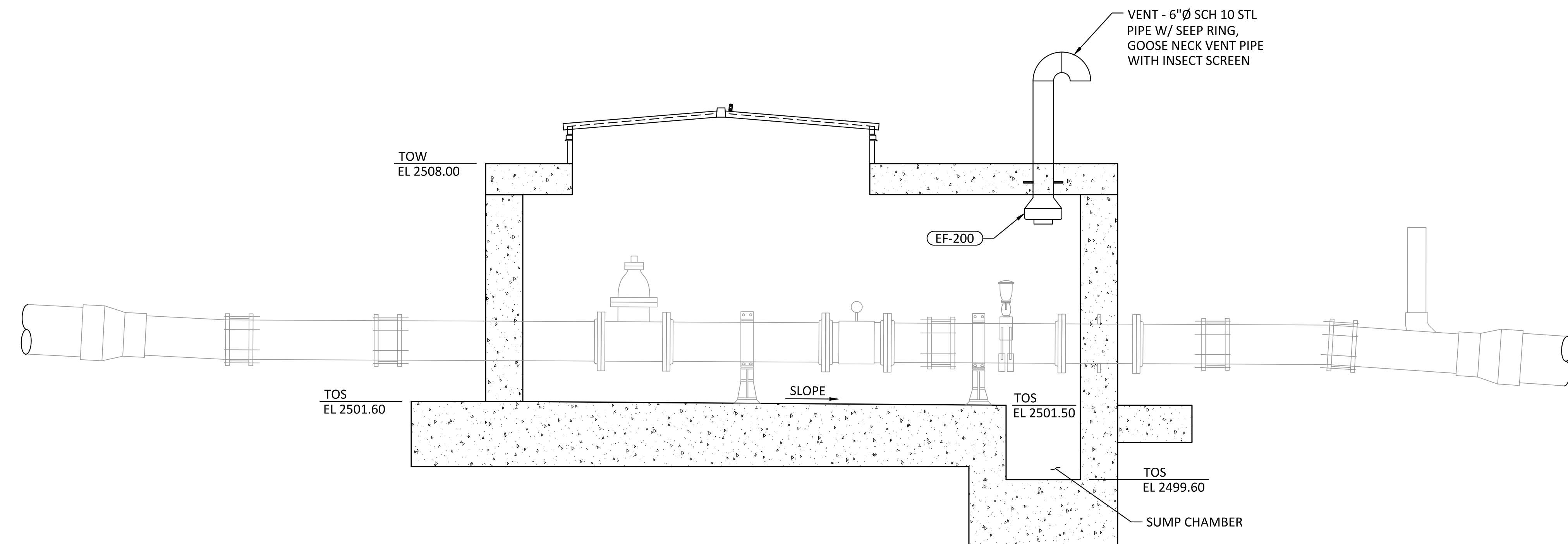


METER VAULT PLAN

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

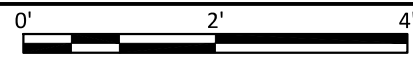


1
M100

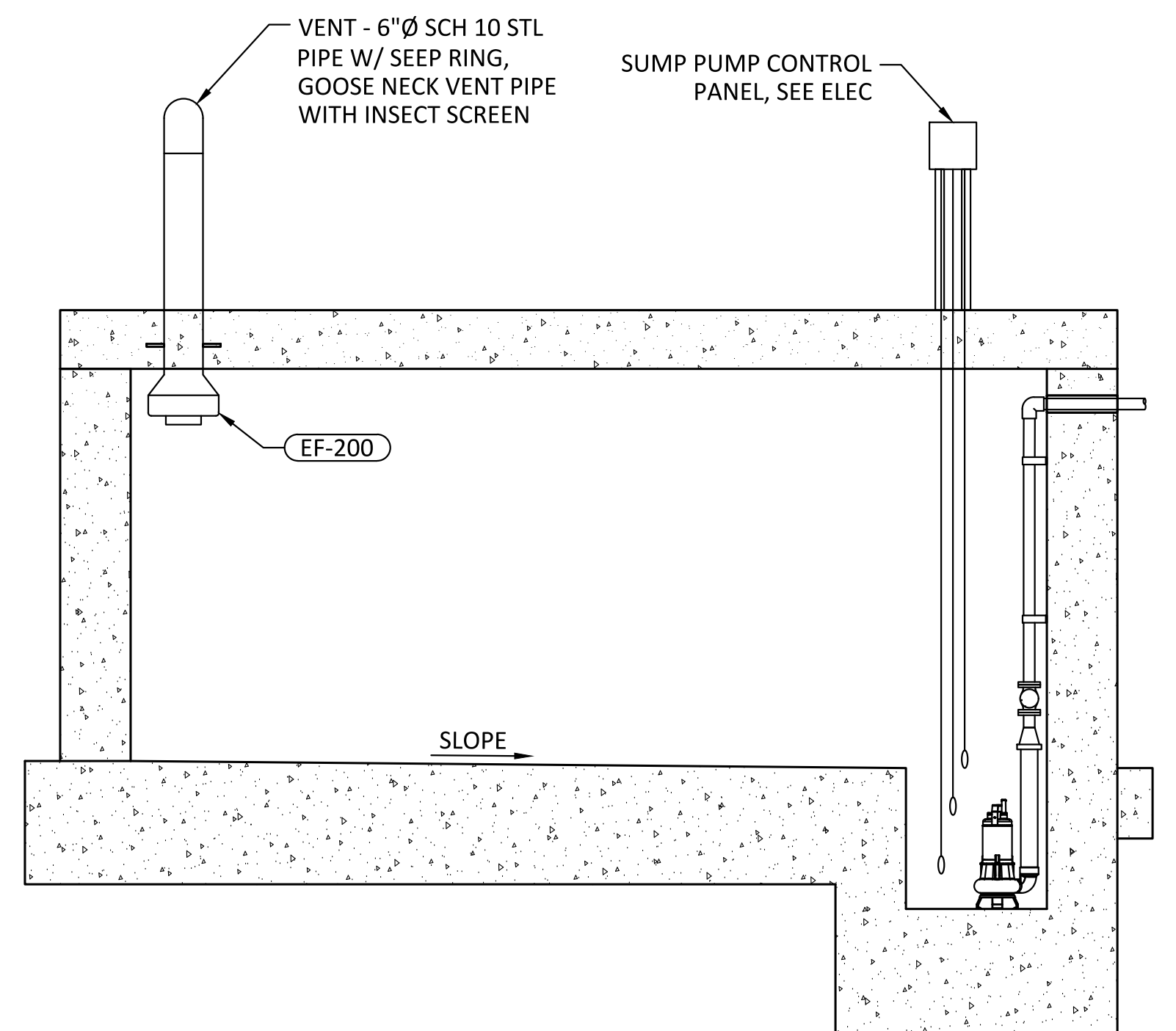


SECTION

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

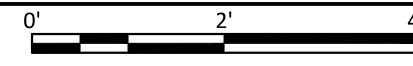


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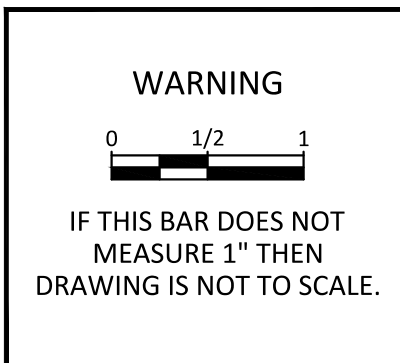
SECTION

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

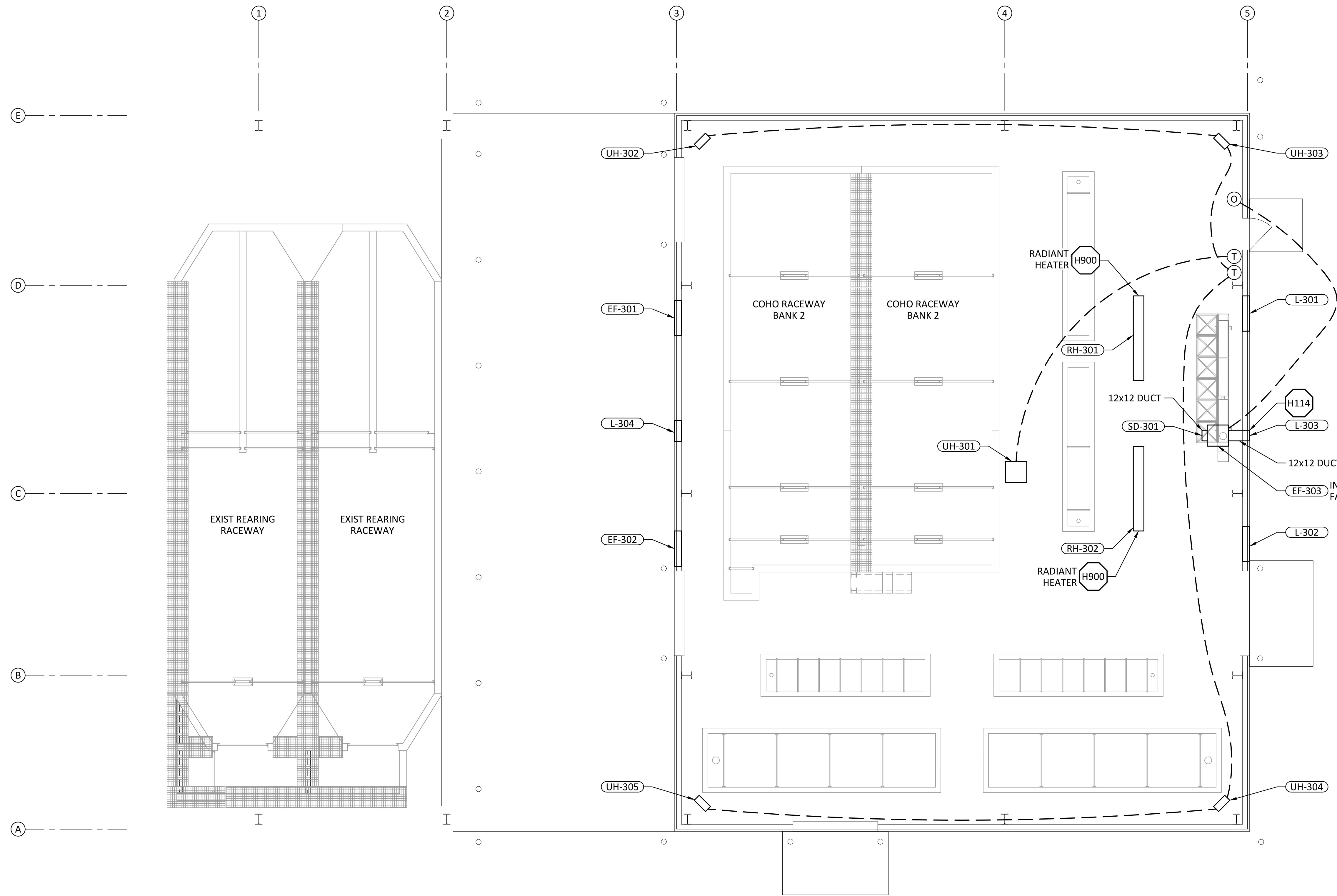


B
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REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>C. GREGORY</u>	DRAWING H215
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
METER VAULT HVAC PLAN AND SECTIONS		CHECKED <u>K. DeSOMBER</u>	
		PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
1. TOP OF ALL LOUVERS TO BE LOCATED AT 12'-6" AFF.
 2. CONTRACTOR SHALL COORDINATE ALL FINAL EQUIPMENT LOCATIONS AND PENETRATIONS WITHIN THE SCOPE OF THIS PROJECT. EXHAUST AIR OUTLETS MUST BE A MINIMUM OF 15'-0" AWAY FROM OUTSIDE AIR INTAKE LOCATIONS.
 3. ALL SUPPLY, RETURN, AND OUTSIDE AIR DUCTS TO BE INSULATED PER CALIFORNIA MECHANICAL AND ENERGY CODE REQUIREMENTS.
 4. ALL DUCTING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED.
 5. ALL DUCT SIZES SHOWN SHALL BE THE NET INSIDE CLEAR DIMENSION.
 6. ALL THERMOSTATS SHALL HAVE A DIGITAL DISPLAY AND CODED ACCESS.
 7. PROVIDE A MANUAL STARTER WITH ON/OFF AND TIMER CONTROLS. PROVIDE AN INDICATING LIGHT THAT WILL ILLUMINATE WHEN FAN IS ON.

- LEGEND:**
- T THERMOSTAT LOCATION
 - O OCCUPANCY SENSOR LOCATION

COHO BUILDING HVAC PLAN
SCALE: 3/16"= 1'-0"

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



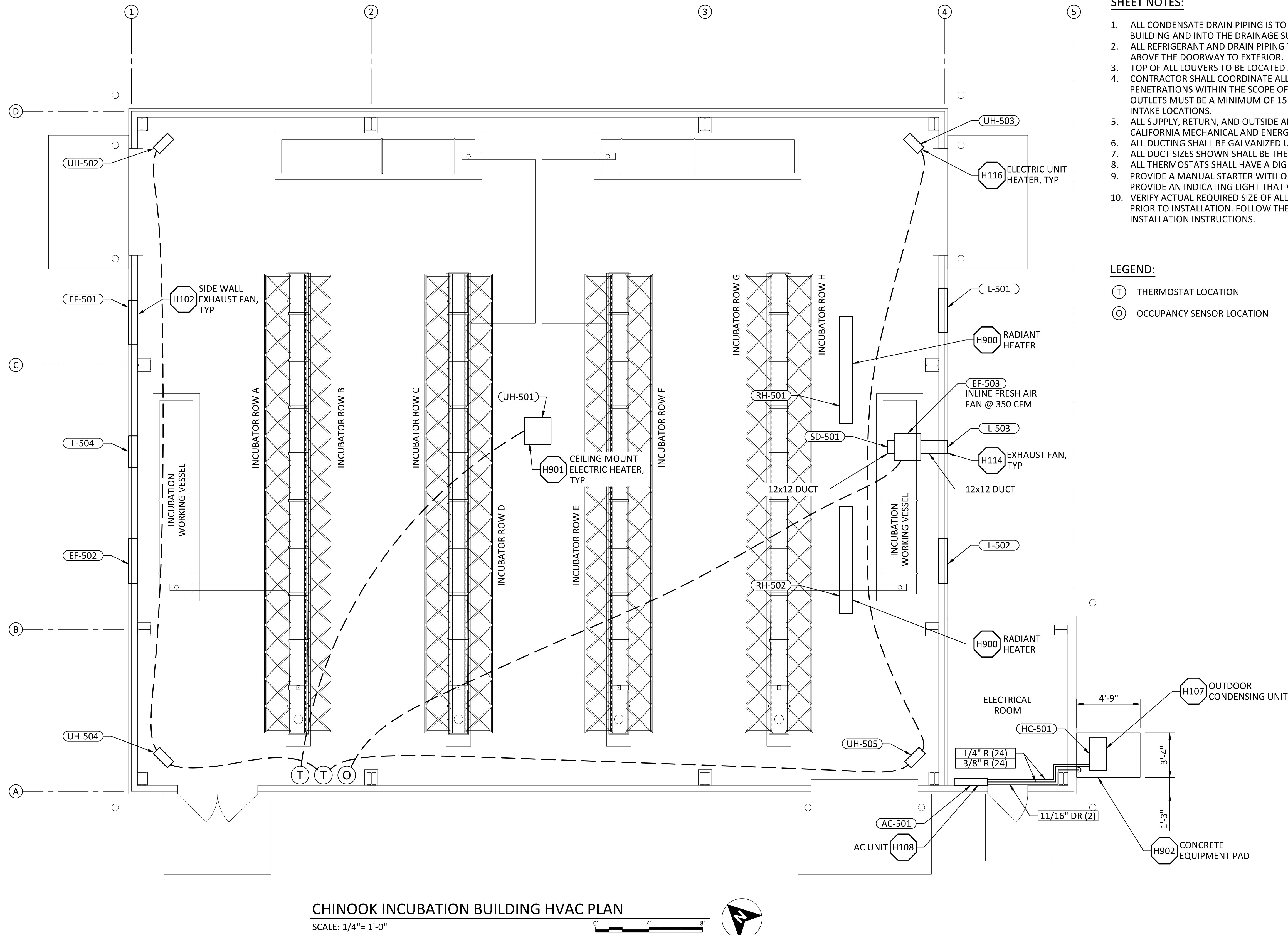
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



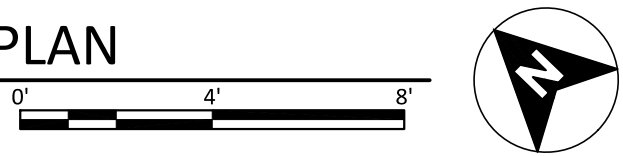
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>C. GREGORY</u>	DRAWING H300
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
COHO BUILDING HVAC PLAN		CHECKED <u>K. DeSOMBER</u>	
		PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
1. ALL CONDENSATE DRAIN PIPING IS TO BE PIPED TO EXTERIOR OF THE BUILDING AND INTO THE DRAINAGE SUMP NEXT TO THE CONDENSER UNIT.
 2. ALL REFRIGERANT AND DRAIN PIPING TO BE PIPED ALONG THE WALL ABOVE THE DOORWAY TO EXTERIOR.
 3. TOP OF ALL LOUVERS TO BE LOCATED AT 12'-6" AFF.
 4. CONTRACTOR SHALL COORDINATE ALL FINAL EQUIPMENT LOCATIONS AND PENETRATIONS WITHIN THE SCOPE OF THIS PROJECT. EXHAUST AIR OUTLETS MUST BE A MINIMUM OF 15'-0" AWAY FROM OUTSIDE AIR INTAKE LOCATIONS.
 5. ALL SUPPLY, RETURN, AND OUTSIDE AIR DUCTS TO BE INSULATED PER CALIFORNIA MECHANICAL AND ENERGY CODE REQUIREMENTS.
 6. ALL DUCTING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED.
 7. ALL DUCT SIZES SHOWN SHALL BE THE NET INSIDE CLEAR DIMENSION.
 8. ALL THERMOSTATS SHALL HAVE A DIGITAL DISPLAY AND CODED ACCESS.
 9. PROVIDE A MANUAL STARTER WITH ON/OFF AND TIMER CONTROLS. PROVIDE AN INDICATING LIGHT THAT WILL ILLUMINATE WHEN FAN IS ON.
 10. VERIFY ACTUAL REQUIRED SIZE OF ALL DRAIN AND REFRIGERANT PIPING PRIOR TO INSTALLATION. FOLLOW THE MANUFACTURER'S RECOMMENDED INSTALLATION INSTRUCTIONS.

- LEGEND:**
- ① THERMOSTAT LOCATION
 - ② OCCUPANCY SENSOR LOCATION

CHINOOK INCUBATION BUILDING HVAC PLAN
SCALE: 1/4" = 1'-0"



0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



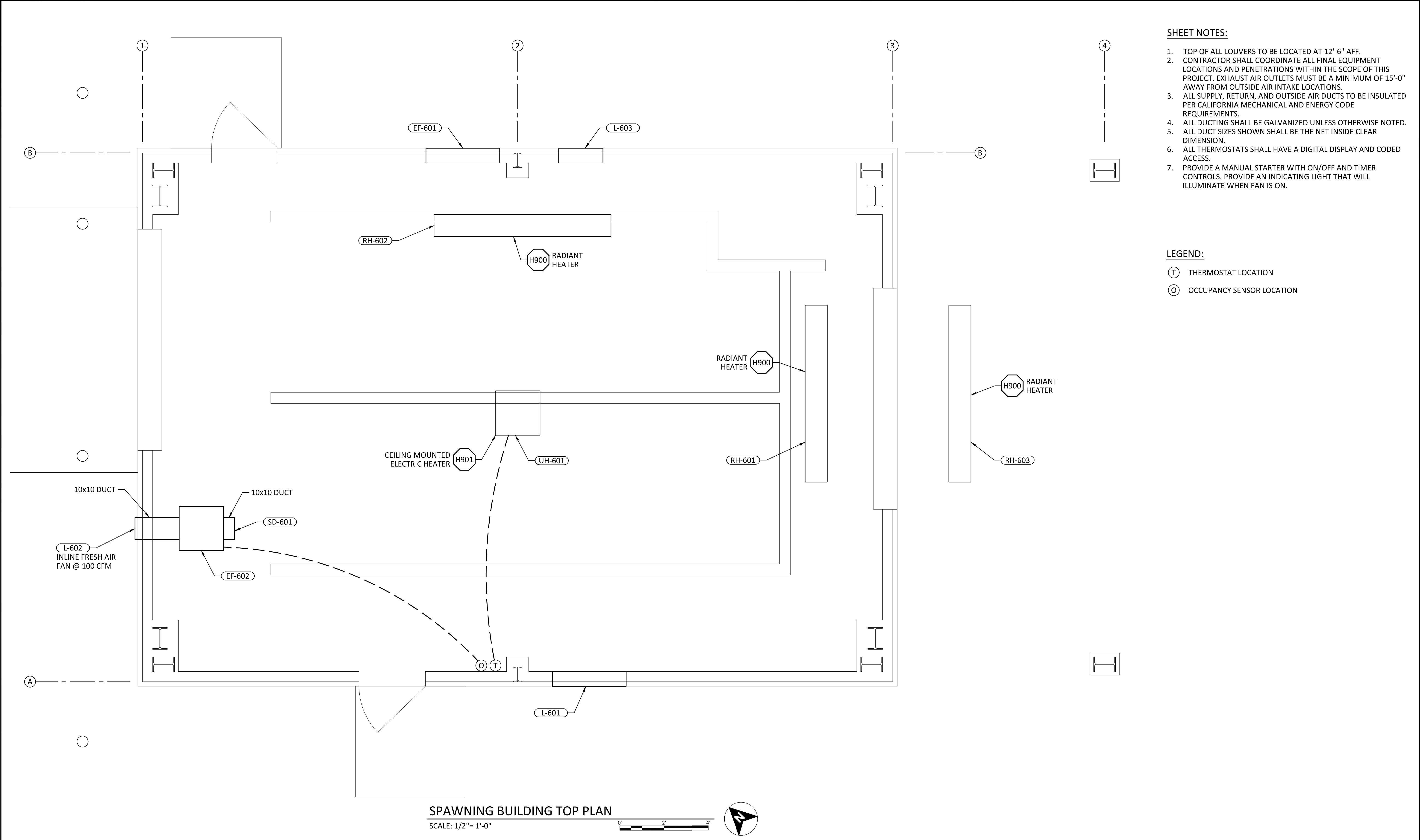
WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION			DESIGNED <u>C. GREGORY</u>	DRAWING H500
FALL CREEK FISH HATCHERY			DRAWN <u>D. JOHNSTON</u>	
CHINOOK INCUBATION BUILDING HVAC PLAN			CHECKED <u>K. DeSOMBER</u>	
			PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
1. TOP OF ALL LOUVERS TO BE LOCATED AT 12'-6" AFF.
 2. CONTRACTOR SHALL COORDINATE ALL FINAL EQUIPMENT LOCATIONS AND PENETRATIONS WITHIN THE SCOPE OF THIS PROJECT. EXHAUST AIR OUTLETS MUST BE A MINIMUM OF 15'-0" AWAY FROM OUTSIDE AIR INTAKE LOCATIONS.
 3. ALL SUPPLY, RETURN, AND OUTSIDE AIR DUCTS TO BE INSULATED PER CALIFORNIA MECHANICAL AND ENERGY CODE REQUIREMENTS.
 4. ALL DUCTING SHALL BE GALVANIZED UNLESS OTHERWISE NOTED.
 5. ALL DUCT SIZES SHOWN SHALL BE THE NET INSIDE CLEAR DIMENSION.
 6. ALL THERMOSTATS SHALL HAVE A DIGITAL DISPLAY AND CODED ACCESS.
 7. PROVIDE A MANUAL STARTER WITH ON/OFF AND TIMER CONTROLS. PROVIDE AN INDICATING LIGHT THAT WILL ILLUMINATE WHEN FAN IS ON.

- LEGEND:**
- Ⓣ THERMOSTAT LOCATION
 - Ⓞ OCCUPANCY SENSOR LOCATION

SPAWNING BUILDING TOP PLAN
SCALE: 1/2"= 1'-0"

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>Z. AUTIN</u>	DRAWING H600
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
SPAWNING BUILDING HVAC PLAN		CHECKED <u>T. BOWEN</u>	
		PROJECT DATE <u>10/28/20</u>	

ABBREVIATIONS				CONTROL RELAY AND DEVICES INDEX				METERING SYSTEMS AND DEVICES INDEX												
2TSP	MULTI-TWISTED TWO PAIR, OVERALL SHIELDED	LP	LIGHTING PANEL	3	CHECKING OR INTERLOCKING RELAY	A	AMMETER													
A, AMP	AMP AMPERE	LTG	LIGHTING	4	MASTER CONTACTOR	AHr	AMPERE HOUR METER													
AAAC	ALL ALUMINUM ALLOY CONDUCTOR	LV	LOW VOLTAGE	5	STOPPING DEVICE	AS	AMMETER SELECTOR SWITCH													
AF	AMPERE FRAME SIZE	mA	MILLIAMPERES	12	OVER-SPEED DEVICE	C	COUNTER													
AFF	ABOVE FINISHED FLOOR	M	MOTOR MAN MANUAL	13	SYNCHRONOUS-SPEED DEVICE	CMC	CONTACT MAKING CLOCK													
AH	AMPERE HOURS	MAN	MANUAL	14	UNDER-SPEED DEVICE	D	DEMAND METER													
AHJ	AUTHORITY HAVING JURISDICTION	MCC	MOTOR CONTROL CENTER	15	SPEED/FREQUENCY MATCHING DEVICE	DPM	DIGITAL POWER METER													
AHU	AIR HANDLING UNIT	MDP	MAIN DISTRIBUTION PANEL	20	ELECTRIC OPERATED VALVE	ET	ELAPSE TIME METER													
AL	ALUMINUM	MFM	MULTIFUNCTIONAL METER	21	DISTANCE RELAY	F	FREQUENCY METER													
A/R	AS REQUIRED	MH	MAN HOLE	23T	THERMOSTAT	G	GALVANOMETER													
AT	AMPERE TRIP, AUTO, AUTOMATIC	MTS	MANUAL TRANSFER SWITCH	24	VOLT/HERTZ RELAY	GFD	GROUND FAULT DETECTOR													
ATS	AUTOMATIC TRANSFER SWITCH	mV	MILLIVOLTS	25	SYNCHRONOUS CHECK DEVICE	Hz	FREQUENCY METER													
AUX	AUXILIARY	NC	NORMALLY CLOSED	25A	AUTOMATIC SYNCHRONIZATION DEVICE	KV	KILO-VOLTMETER													
AVR	AUTOMATIC VOLTAGE REGULATOR	NGR	NEUTRAL GROUNDING RESISTOR	26	APPARATUS THERMAL DEVICE	KW	KILO-WATTMETER													
AWG	AMERICAN WIRE GAUGE	NO	NORMALLY OPEN, NUMBER	27	UNDERVOLTAGE RELAY	KWH	KILO-WATT HOUR METER													
BLDG	BUILDING	NP	NAMEPLATE	30	ANNUNCIATOR RELAY	mA	MILLI-AMMETER (TRANSDUCER)													
C	CONDUIT	NTS	NOT TO SCALE	32	REVERSE POWER RELAY	OHM	OHMMETER													
CB	CIRCUIT BREAKER	OL	OVERLOAD	33	POSITION SWITCH	OSC	OSCILLOGRAPH													
CKT	CIRCUIT	PB	PULLBOX, PUSH BUTTON	34	MASTER SEQUENCE DEVICE	PH	PHASE METER													
CLF	CURRENT LIMITING FUSE	PC	PHOTOELECTRIC CONTROL UNIT	37	UNDERCURRENT/UNDERPOWER RELAY	PI	POSITION INDICATOR													
CTRL	CONTROL	PCC	POINT OF COMMON CONNECTION	38	BEARING PROTECTION DEVICE	PF	POWER FACTOR METER													
CO	CONDUIT ONLY	PH Ø	PHASE	39	VIBRATION DETECTOR	REC	RECORDER													
CONTD	CONTINUED	PNL	PANEL	40	FIELD RELAY	RF	REACTIVE FACTOR METER													
CP	CONTROL PANEL	PLC	PROGRAMMABLE LOGIC CONTROLLER	41	FIELD CURRENT BREAKER	SYN	SYNCHROSCOPE													
CR	CONTROL RELAY	POI	POINT OF INTER-CONNECTION	43	MANUAL TRANSFER/SELECTOR DEVICE	T	TEMPERATURE METER													
CR	CONTROL RELAY	PTT	PUSH-TO-TEST	46	REVERSE PHASE/PHASE BALANCE RELAY	TLM	TELEMETER													
CS	CONTROL SWITCH	PVC	POLYVINYL CHLORIDE	48	INCOMPLETE SEQUENCE RELAY	V	VOLTMETER													
CT	CURRENT TRANSFORMER	RCP	RECEPTACLE	49	MACHINE/TRANSFORMER THERMAL RELAY	VAR	VARMETER													
CU	COPPER	REF	REFERENCE	50	INSTANTANEOUS OVERCURRENT RELAY	VRHr	VAR HOUR METER													
DB	DUCT BANK	RGS	RIGID GALVANIZED STEEL CONDUIT	51	AC TIME OVERCURRENT RELAY	VS	VOLTMETER SELECTOR SWITCH													
DET	DETAIL	RIO	REMOTE I/O	51C	VOLTAGE-CONTROLLED TIME OVERCURRENT RELAY	W	WATTMETER													
DIAG	DIAGRAM	RTD	RESISTANCE TEMPERATURE DETECTOR	50/51	TIME AND INSTANTANEOUS OVERCURRENT RELAY	WHr	WATT HOUR METER													
DISC	DISCONNECT	S	SYNC SCOPE	52	AC CIRCUIT BREAKER	PILOT - INDICATOR LIGHT INDEX														
DP	DISTRIBUTION PANEL	SA	SURGE ARRESTER	52G	GENERATOR CIRCUIT BREAKER	A	AMBER													
DSL	MANUAL DISCONNECT SWITCH, 3-POLE, GANG OPERATED	SC	SURGE CAPACITOR	52L	LINE CIRCUIT BREAKER	B	BLUE													
DWG(S)	DRAWING(S)	SDP	STANDBY DISTRIBUTION PANEL	53	EXCITER/DC GENERATOR RELAY	C	CLEAR													
EL	ELEVATION	SEC	SECOND	54	HIGH SPEED DC CIRCUIT BREAKER	G	GREEN													
EMER	EMERGENCY	SEL	SELECTOR, SCHWEITZER ENGINEERING LABORATORIES	55	POWERFACTOR RELAY	NE	NEON													
EPT	EXCITATION POWER TRANSFORMER	SPD	SURGE PROTECTIVE DEVICE	57	GROUND SWITCH	O	ORANGE													
EV	ELECTRICAL VAULT	SPEC	SPECIFICATION	59	OVERVOLTAGE RELAY	OP	OPALESCENT													
EQUIP	EQUIPMENT	SS	STAINLESS STEEL	59N	NEUTRAL OVERVOLTAGE RELAY	P	PURPLE													
FDR	FEEDER	S/S	STATION SERVICE	60	VOLTAGE BALANCE RELAY	R	RED													
GEN	GENERATOR	STA	STATION	61	CURRENT BALANCE RELAY	W	WHITE													
GFCI	GROUND-FAULT CIRCUIT INTERRUPTER	SW	SWITCH	62	TIME DELAY RELAY	Y	YELLOW													
GFI	GROUND-FAULT INTERRUPTION	SWGR	SWITCHGEAR	63	LIQUID OR GAS PRESSURE LEVEL/FLOW RELAY	GENERAL NOTES: 1. THESE ABBREVIATIONS APPLY TO THE ELECTRICAL DISCIPLINE OF CONTRACT DRAWINGS ONLY. 2. LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS. 3. ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "AT" MAY MEAN AMPERE TRIP OR AUTO; "NO" MAY MEAN NORMALLY OPEN OR NUMBER; "PB" MAY MEAN EITHER PULLBOX OR PUSH BUTTON. 4. SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.														
GFP	GROUND-FAULT PROTECTION	TB	TERMINAL BLOCK, TERMINAL BOX	64	GROUND PROTECTIVE RELAY															
GND	GROUND	TS	THERMOSTAT	65	GOVERNOR															
GRS	GALVANIZED RIGID STEEL	TSP	TWISTED SHIELDED PAIR	67	AC DIRECTIONAL OVERCURRENT RELAY															
GSU	GENERATOR STEP-UP TRANSFORMER	TST	TWISTED SHIELDED TRIAD	70	ELECTRIC OPERATED RHEOSTAT															
HH	HAND HOLE	TX	TRANSMITTER	71	TRANSFORMER OIL LEVEL TRIP/ALARM DEVICE															
HMI	HUMAN-MACHINE INTERFACE	TYP	TYPICAL	72	DC CIRCUIT BREAKER															
HOA	HAND-OFF-AUTO	UP	UTILITY POWER	74	ALARM RELAY															
HPU	HYDRAULIC POWER UNIT	UPS	UNINTERRUPTIBLE POWER SUPPLY	76	DC OVERCURRENT RELAY															
HTR	HEATER	V	VOLTS	79	AUTOMATIC RECLOSING RELAY															
HZ	HERTZ (CYCLES PER SECOND)	VAC	VOLTS ALTERNATING CURRENT	81	FREQUENCY RELAY															
I/O	INPUT/OUTPUT	VC	VIDEO CAMERA	81O/U	OVER/UNDER FREQUENCY RELAY															
INST	INSTANTANEOUS	VDC	VOLTS DIRECT CURRENT	83	AUTOMATIC SELECTIVE CONTROL/TRANSFER RELAY															
INTLK	INTERLOCK	VFD	VARIABLE FREQUENCY DRIVE	85	CARRIER/PILOT WIRE RECEIVER RELAY															
IP	INTERNET PROTOCOL	W	WIRE	86	LOCKOUT RELAY															
IPB	ILLUMINATED PUSH BUTTON	W/	WITH	87	DIFFERENTIAL PROTECTIVE RELAY															
JB	JUNCTION BOX	W/O	WITHOUT	87G	GENERATOR DIFFERENTIAL RELAY															
JCRN	JIB CRANE	WP	WEATHER PROOF (NEMA 4)	87T	TRANSFORMER DIFFERENTIAL RELAY															
KCMIL	THOUSAND CIRCULAR MILLS	XFMR	TRANSFORMER	89	LINE ISOLATING SWITCH															
kV	KILOVOLTS	XLP	CROSS LINKED POLYETHYLENE	90	REGULATING DEVICE															
kVA	KILOVOLT AMPERES (APPARENT POWER)	XP	EXPLOSION PROOF	94	TRIPPING RELAY															
kVAR	KILOVAR (REACTIVE POWER)	YL	YARD LIGHT	95	SUPERVISION ALARM															
kW	KILOWATTS (REAL POWER)																			
kWH	KILOWATT HOUR																			

0

10/28/20

MDM

ISSUED FOR CONSTRUCTION

REV

DATE

BY

DESCRIPTION

REGISTERED PROFESSIONAL ENGINEER

JOHN ARNE BAKKEN

No. E-16301

John A. Bakken

ELECTRICAL

STATE OF CALIFORNIA

October 28, 2020

WARNING

0

1/2

1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMILLEN

JACOBS

ASSOCIATES

KLAMATH

RIVER RENEWAL

CORPORATION

KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

STANDARD ELECTRICAL ABBREVIATIONS AND DEVICE INDEXES

DESIGNED M. SKELTON

DRAWN B. ROONEY

CHECKED J. BAKKEN

PROJECT DATE 10/28/20

DRAWING

GE001

CIR BKR HIGH VOLT DRAWOUT ELEC OPER	CIR BKR DRAWOUT ELEC OPER	CIR BKR THERM O/L DRAWOUT ELEC OPER	CIR BKR MAG O/L DRAWOUT ELEC OPER	CIR BKR THERM/MAG O/L DRAWOUT ELEC OPER

CIRCUIT BREAKER SYMBOLS

ISOLATING SWITCH MOTOR OPERATED	INTERRUPTER SWITCH FUSED	CENTER-BREAK SWITCH MOTOR OPERATED	DUAL-BREAK SWITCH MOTOR OPERATED	LOAD-BREAK SWITCH MOTOR OPERATED	HORN GAP SWITCH

H.V. ISOLATING SWITCHES

TRANSFORMER POWER	TRANSFORMER MAG CORE	TRANSFORMER LOAD TAP CHANGING	TRANSFORMER SPLIT SECONDARY	AUTO- TRANSFORMER

POWER TRANSFORMER SYMBOLS

DELTA 3P3W	DELTA GRD'D 3P4W	DELTA GRD'D 3P3W	BROKEN DELTA	WYE 3POLE	WYE GRD'D 3P4W	ZIG-ZAG 3POLE	ZIG-ZAG GRD'D 3POLE

TRANSFORMER WINDING CONNECTIONS

POTENTIAL TRANSFORMER	POTENTIAL TRANSFORMER DUAL SECONDARY	CURRENT TRANSFORMER	CURRENT TRANSFORMER CORE BALANCE	CURRENT TRANSFORMER BUSHING

POTENTIAL/CURRENT TRANSFORMER SYMBOLS

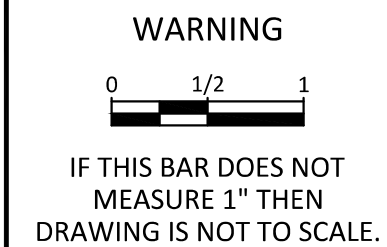
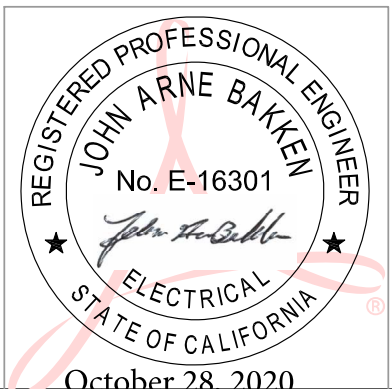
HIGH VOLTAGE POWER		CONDUCTOR, CROSSING OF PATHS OR CONDUCTORS NOT CONNECTED	
LOW VOLTAGE POWER			
CONTROL			
ENCLOSURE		CONDUCTOR, JUNCTION OF CONNECTED PATHS, CONDUCTORS OR WIRES	
OH POWER SCHEMATIC			
EXIST POWER SCHEMATIC			

LINETYPE AND CONNECTION SYMBOLS

WAVE TRAP SMALL	WAVE TRAP LARGE	LIGHTNING ARRESTER	GROUND SW MOTOR OPER	ISOL PH BUS FLEX CONN	ISOL PH BUS REMOVEABLE LINK	HEATER	ELECTRICAL POINT OF CONNECTION
WELDING OUTLET	NEUTRAL CONNECTION	LINE	CABLE-1 CABLE TERMINATION STRESS CONE	CABLE-2 CABLE POTHEAD OIL-FILLED	TEST SWITCH	TEST SWITCH, CURRENT SHORTING	
RELAY-1 XX/XX RELAY SINGLE TEXT	RELAY-2 XX/XX XX/XX RELAY DOUBLE TEXT	DEVICE-1 XX CONTROL DEVICE	TRANSD XX mA TRANSDUCER	INSTR-1 XX INSTRUMENT SEL SW	METER-1 XX ANALOG METER	METER-2 XX XXX ANALOG METER	METER-3 XXXX DIGITAL METER
PL-TEST PUSH-TO-TEST LIGHT	PL-1 PILOT/INDIC LIGHT	CONT-NO CONTACT NORM OPEN	CONT-NC CONTACT NORM CLOSED	FLOW-NO FLOW OPER NORM OPEN	FLOW-NC FLOW OPER NORM CLOSED	LVL-NO LEVEL OPER NORM OPEN	LVL-NC LEVEL OPER NORM CLOSED
SW-NO SWITCH NORM OPEN	SW-NC SWITCH NORM CLOSED	TEMP-NO TEMP ACT SW N.O.	TEMP-NC TEMP ACT SW N.C.	FOOT-NO FOOT OPER NORM OPEN	FOOT-NC FOOT OPER NORM CLOSED	PRES-NO PRESS OPER NORM OPEN	PRES-NC PRESS OPER NORM CLOSED
PBSW-NO PB SWITCH NORM OPEN	PBSW-NC PB SWITCH NORM CLOSED	SSW-1 OFF MAN AUTO SELECTOR SWITCH	LIM-NO LIMIT SW NORM OPEN	LIM-NC LIMIT SW NORM CLOSED	LIM-NOHC LIMIT SW NORM OPEN HELD CLOSED	LIM-NCHO LIMIT SW NORM CLOSED HELD OPEN	SOL SOLENOID
FUSE-1 FUSE	FUSE-2 FUSE DUMMY	DS-FUSE DISC SW FUSED	FUSE-LNK FUSIBLE LINK	CAP CAPACITOR	RES-1 RESISTOR	RES-2 RESISTOR ADJUSTABLE	HTR-E HEATER ELEMENT
BATT BATTERY	RECT-1 RECTIFIER SOLID STATE	RECT-2 PDS AC NEG AC RECTIFIER FULLWAVE	BRAKE DC BRAKE	GRD-1 GROUND	GRD-2 CHASIS GROUND	SHUNT CURRENT SHUNT	DD-1 DISCONNECTING DEVICE
CIR-BKR1 CIRC BKR	CIR-BKR2 CIRC BKR W. OL'S	OLS-1 OVERLOAD POWER	OLS-2 OVERLOAD CONTROL	R-COIL RELAY COIL	MOTOR-DC MOTOR-DC	MOTOR-AC MOTOR-AC	GEN-1 GENERATOR

DISCONNECT	CIRCUIT INTERRUPTER	CIRCUIT BREAKER W/ THERMAL OL	CIRCUIT BREAKER W/ MAGNETIC OL	CIRCUIT BREAKER W/ THERMAL OL AND MAGNETIC OL			
SELECTOR							
TWO-POSITION		THREE-POSITION	TWO-POSITION SELECTOR PUSHBUTTON				
X-CONTACT CLOSED		X-CONTACT CLOSED	X-CONTACT CLOSED				
PUSHBUTTONS							
MOMENTARY CONTACTS							
SINGLE CIRCUIT	DOUBLE CIRCUIT	MUSHROOM HEAD	WOBBLE STICK	TWO SINGLE CIRCUIT	ONE DOUBLE CIRCUIT	ILLUMINATED	
NO	NO & NC						
NC							
CONTACTS					OVERLOAD RELAYS		
INSTANT OPERATING			TIMED CONTACTS - CONTACT ACTION RETARDED AFTER COIL IS:			THERMAL	MAGNETIC
WITH BLOWOUT		WITHOUT BLOWOUT		ENERGIZED		DE-ENERGIZED	
NO	NC	NO	NC	NOTC	NCTO	NOTO	NCTC
SUPPLEMENTARY CONTACTS SYMBOLS							
SPST NO		SPST NC		SPDT		TERMS	
SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	SPST SINGLE-POLE, SINGLE-THROW	
DPST, 2NO		DPST, 2NC		DPDT		SPDT SINGLE-POLE, DOUBLE-THROW	
SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK	SINGLE BREAK	DOUBLE BREAK		
						DPST DOUBLE-POLE, SINGLE-THROW	
						DPDT DOUBLE-POLE, DOUBLE-THROW	
						NO NORMALLY OPEN	
						NC NORMALLY CLOSED	
METER (INSTRUMENT)				PILOT LIGHTS			
INDICATE TYPE BY LETTER	TO INDICATE FUNCTION OF METER OR INSTRUMENT, PLACE SPECIFIED LETTER OR LETTERS WITHIN SYMBOL			INDICATE COLOR BY LETTER			
				NON PUSH-TO-TEST			
	AM or A AH AM or A mA PF V	AMMETER AMPERE HOUR MICROAMMETER MILLIAMMETER POWER FACTOR VOLT METER	VA VAR VARH W WH	VOLTMETER VARMETER VARHOUR METER WATTMETER WATTHOUR METER			
					A-AMBER, B-BLUE, C-CLEAR, G-GREEN, NE-NEON, R-RED, W-WHITE, Y-YELLOW		

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>M. SKELTON</u>	DRAWING GE003
FALL CREEK FISH HATCHERY		DRAWN <u>B. ROONEY</u>	
ELECTRICAL STANDARD SYMBOLS 2		CHECKED <u>J. BAKKEN</u>	
		PROJECT DATE <u>10/28/20</u>	

PANELBOARD SCHEDULE															
PANEL:		PB-300		PROJECT:		FALL CREEK HATCHERY									
VOLTAGE (L-L):		480		PHASE:		3		WIRE:		3		AMPERE RATING:		125A	
ENTRY:		BOTTOM		MOUNTING:		SURFACE		MCB:		125AT/125AF					
LOADS:	PHASE A:		22722		LOAD TYPES:		1 = LIGHTING		MIN. CALCULATED O.C.P. SIZE:		101.3		REMARKS: *** INDICATES GFCI CIRCUIT BREAKER.		
	PHASE B:		22722				2 = RECEPTACLES								
	PHASE C:		22722				3 = MISC								
	TOTAL:		68166				4 = MOTOR								
LOAD (VA)						LOAD TYPE		AMPS/ POLES	CKT NO	PHASE	CKT NO	AMPS/ POLES	LOAD TYPE	LOAD SERVED	LOAD (VA)
1330						BOOSTER PUMP SKID P-380		4 15 3 1	A 2	50 3	3			DISTRIBUTION XFMR XFR-300	10000
1330						-		4 - - 3	B 4	- -	3	-		-	10000
1330						-		4 - - 5	C 6	- -	3	-		-	10000
1667						ELECTRIC UNIT HEATER UH-301		3 15 3 7	A 8	20 3	4			INTAKE TRAVELING SCREEN CONTROL PANEL	3056
1667						-		3 - - 9	B 10	- -	4			VCP-200	3056
1667						-		3 - - 11	C 12	- -	4	-		-	3056
1667						ELECTRIC UNIT HEATER UH-302		3 15 3 13	A 14					SPACE	
1667						-		3 - - 15	B 16					SPACE	
1667						-		3 - - 17	C 18					SPACE	
1667						ELECTRIC UNIT HEATER UH-303		3 15 3 19	A 20					SPACE	
1667						-		3 - - 21	B 22					SPACE	
1667						-		3 - - 23	C 24					SPACE	
1667						ELECTRIC UNIT HEATER UH-304		3 15 3 25	A 26					SPACE	
1667						-		3 - - 27	B 28					SPACE	
1667						-		3 - - 29	C 30					SPACE	
1667						ELECTRIC UNIT HEATER UH-305		3 15 3 31	A 32					SPACE	
1667						-		3 - - 33	B 34					SPACE	
1667						-		3 - - 35	C 36					SPACE	
1						SURGE PROTECTIVE DEVICE - TYPE 2		3 30 3 37	A 38					SPACE	
1						-		3 - - 39	B 40					SPACE	
1						-		3 - - 41	C 42					SPACE	
CONNECTED VA		LIGHTING		RECPT		MISC.		MOTOR		TOTAL LOAD		NOTES 1. DEMAND FACTOR: 1ST 10kVA AT 100%; OVER 10kVA AT 50%. 2. LARGEST MOTOR LOAD AT 125%; ALL OTHERS AT 100%.			
DEMAND FACTOR		0		0		55,008		13,158		68,166					
DEMAND VA		1.00		SEE NOTE 1		1.00		SEE NOTE 2							
LOADING FOR O.C.P.		0		0		55,008		15,450		70,458					
		0		0		68,760		15,450		84,210					

PANELBOARD SCHEDULE														
PANEL:		PB-500		PROJECT:		FALL CREEK HATCHERY								
VOLTAGE (L-L):		480		PHASE:		3		WIRE:		3		AMPERE RATING: 400A		
ENTRY:		TOP/BOTTOM		MOUNTING:		SURFACE		MCB:		MAIN LUG ONLY				
LOADS:	PHASE A:		79906		LOAD TYPES:		1 = LIGHTING		MIN. CALCULATED O.C.P. SIZE: 330.8					
	PHASE B:		79906				2 = RECEPTACLES		REMARKS: *** INDICATES GFCI CIRCUIT BREAKER.					
	PHASE C:		63106				3 = MISC							
	TOTAL:		222918				4 = MOTOR							
LOAD (VA)					LOAD TYPE		AMPS/ POLES	CKT NO	PHASE	CKT NO	AMPS/ POLES	LOAD TYPE	LOAD SERVED	LOAD (VA)
1330					BOOSTER PUMP SKID P-580		4 15 3 1	A 2	50 3	3			DISTRIBUTION XFMR XFR-501	10000
1330					-		4 - - 3	B 4	- -	3	-		-	10000
1330					-		4 - - 5	C 6	- -	3	-		-	10000
1667					ELECTRIC UNIT HEATER UH-501		3 15 3 7	A 8	125 2	3			TAGGING TRAILER XMFR XFR-502	15361
1667					-		3 - - 9	B 10	- -	3	-		-	15361
1667					-		3 - - 11	C 12					SPACE	
1667					ELECTRIC UNIT HEATER UH-502		3 15 3 13	A 14	125 3	3			COHO BLDG PANELBOARD PB-300	22722
1667					-		3 - - 15	B 16	- -	3	-		-	22722
1667					-		3 - - 17	C 18	- -	3	-		-	22722
1667					ELECTRIC UNIT HEATER UH-503		3 15 3 19	A 20	100 3	3			SPAWNING BLDG PANELBOARD PB-600	20718
1667					-		3 - - 21	B 22	- -	3	-		-	20718
1667					-		3 - - 23	C 24	- -	3	-		-	20718
1667					ELECTRIC UNIT HEATER UH-504		3 15 3 25	A 26					SPACE	
1667					-		3 - - 27	B 28					SPACE	
1667					-		3 - - 29	C 30					SPACE	
1667					ELECTRIC UNIT HEATER UH-505		3 15 3 31	A 32					SPACE	
1667					-		3 - - 33	B 34					SPACE	
1667					-		3 - - 35	C 36					SPACE	
1					SURGE PROTECTIVE DEVICE - TYPE 2		3 30 3 37	A 38					SPACE	
1					-		3 - - 39	B 40					SPACE	
1					-		3 - - 41	C 42					SPACE	
CONNECTED VA		LIGHTING		RECPT		MISC.		MOTOR		TOTAL LOAD		NOTES 1. DEMAND FACTOR: 1ST 10kVA AT 100%; OVER 10kVA AT 50%. 2. LARGEST MOTOR LOAD AT 125%; ALL OTHERS AT 100%.		
DEMAND FACTOR		0		0		216,050		3,990		220,040				
DEMAND VA		1.00		SEE NOTE 1		1.00		SEE NOTE 2						
DEMAND VA		0		0		216,050		4,988		221,038				
LOADING FOR O.C.P.		0		0		270,063		4,988		275,050				

PANELBOARD SCHEDULE																													
PANEL:		PB-301		PROJECT:		FALL CREEK HATCHERY																							
VOLTAGE (L-L):		208		PHASE: 3		WIRE:		4		AMPERE RATING:		100A																	
ENTRY:		BOTTOM		MOUNTING:		SURFACE		MCB:		100AT																			
LOADS:		PHASE A:		7417		LOAD TYPES:		1 = LIGHTING		MIN. CALCULATED O.C.P. SIZE: 72.7																			
		PHASE B:		8159				2 = RECEPTACLES																					
		PHASE C:		7205				3 = MISC																					
		TOTAL:		22781				4 = MOTOR																					
REMARKS:		*** INDICATES GFCI CIRCUIT BREAKER.																											
LOAD (VA)						LOAD TYPE		AMPS/ POLES		CKT NO		PHASE		CKT NO		AMPS/ POLES		LOAD TYPE		LOAD SERVED		LOAD (VA)							
1690						COHO BUILDING LIGHTING		1		20		1		1		A		2		15		3		3		RADIANT HEATER RH-301		1000	
94						INTAKE LIGHTING		1		20		1		3		B		4		-		-		3		-		1000	
100						SKYLIGHT DIMMER CIRCUIT		3		15		1		5		C		6		-		-		3		-		1000	
						SPARE				20		1		7		A		8		15		3		3		RADIANT HEATER RH-302		1000	
1080						COHO BUILDING RECEPTACLES - 1		2		20		1		9		B		10		-		-		3		-		1000	
1080						COHO BUILDING RECEPTACLES - 2		2		20		1		11		C		12		-		-		3		-		1000	
1880						SUMP PUMP RECEPTACLE P-200		4		20		1		13		A		14		20		1		4		EXHAUST FAN EF-301		1656	
1664						INDOOR WASTE DRAIN PUMP RECEPTACLE L6-20R		4		20		1		15		B		16		20		1		4		EXHAUST FAN EF-302		1656	
1664						SEE NOTE 3		4		-		-		17		C		18		15		1		4		EXHAUST FAN EF-303		696	
100						CONTROL PANEL POWER VCP-280		3		15		1		19		A		20		15		1		4		METER VAULT EXHAUST FAN EF-200		170	
1664						OUTDOOR WASTE DRAIN PUMP RECEPTACLE L6-20R		4		20		1		21		B		22		20		1				SPARE			
1664						SEE NOTE 3		4		-		-		23		C		24		20		1				SPARE			
										20		1		25		A		26		20		1				SPARE			
						SPARE				20		1		27		B		28		20		1				SPARE			
						SPARE				20		1		29		C		30		20		1				SPARE			
										20		1		31		A		32		20		1				SPARE			
						SPARE				20		1		33		B		34		20		1				SPARE			
						SPARE				20		1		35		C		36		20		1				SPARE			
1						SURGE PROTECTIVE DEVICE - TYPE 2		3		30		3		37		A		38		20		1				SPARE			
1						-		3		-		-		39		B		40		20		1				SPARE			
1						-		3		-		-		41		C		42		20		1				SPARE			

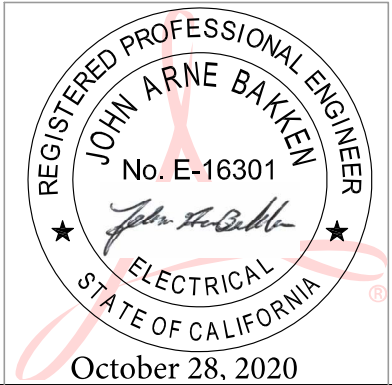
PANELBOARD SCHEDULE																		
PANEL: PB-502			PROJECT: FALL CREEK HATCHERY															
VOLTAGE: 240		PHASE: 1	WIRE: 3		AMPERE RATING: 200A													
ENTRY: TOP/BOTTOM			MOUNTING: SURFACE			MCB:		175AT/200AF										
LOADS:	LINE 1: 15361		LOAD TYPES: 1 = LIGHTING 2 = RECEPTACLES 3 = MISC 4 = MOTOR				MIN. CALCULATED O.C.P. SIZE: 160.0											
	LINE 2: 15361						REMARKS: **** INDICATES GFCI CIRCUIT BREAKER.											
	TOTAL: 30722																	
LOAD (VA)					LOAD TYPE	AMPS/ POLES	CKT NO	LINE	CKT NO	AMPS/ POLES	LOAD TYPE	LOAD SERVED				LOAD (VA)		
9600	TAGGING TRAILER RECEPTACLE - 100A				3	100	2	1	1	2	100	2	3	TAGGING TRAILER RECEPTACLE - 100A				0
9600	SEE NOTE 3				3	-	-	3	2	4	-	-	3	SEE NOTE 3				0
5760	TAGGING TRAILER FISH PUMP RECEPTACLE - 60A				3	60	2	5	1	6	60	2	3	TAGGING TRAILER FISH PUMP RECEPTACLE - 60A				0
5760	SEE NOTE 3				3	-	-	7	2	8	-	-	3	SEE NOTE 3				0
	SPACE					20	1	9	1	10				SPACE				
1	SURGE PROTECTIVE DEVICE - TYPE 3				3	30	2	11	2	12				SPACE				
1	-				3	-	-	13	1	14				SPACE				
		LIGHTING	RECPT	MISC.	MOTOR		TOTAL LOAD		NOTES 1. DEMAND FACTOR: 1ST 10kVA AT 100%; OVER 10KVA AT 50%. 2. LARGEST MOTOR LOAD AT 125%; ALL OTHERS AT 100%. 3. ASSUMING NO MORE THAN ONE TAGGING TRAILER AND ONE FISH PUMP ACTIVE AT A TIME.									
CONNECTED VA		0	0	30,722	0		30,722											
DEMAND FACTOR		1.00	SEE NOTE 1	1.00	SEE NOTE 2													
DEMAND VA		0	0	30,722	0		30,722											
LOADING FOR O.C.P.		0	0	38,403	0		38,403											

PANELBOARD SCHEDULE																
PANEL: PB-600			PROJECT: FALL CREEK HATCHERY													
VOLTAGE (L-L): 480		PHASE: 3	WIRE: 3		AMPERE RATING: 100A											
ENTRY: BOTTOM		MOUNTING: SURFACE		MCB: 100AT												
LOADS:	PHASE A:	20718	LOAD TYPES: 1 = LIGHTING 2 = RECEPTACLES 3 = MISC 4 = MOTOR				MIN. CALCULATED O.C.P. SIZE: 89.9									
	PHASE B:	20718					REMARKS:									
	PHASE C:	20718														
	TOTAL:	62154														
LOAD (VA)				LOAD TYPE	AMPS/ POLES	CKT NO	PHASE	CKT NO	AMPS/ POLES	LOAD TYPE	LOAD SERVED			LOAD (VA)		
1330	BOOSTER PUMP SKID P-680			4	15	3	1	A	2	50	3	3	DISTRIBUTION XMFR XFR-600			10000
1330	-			4	-	-	3	B	4	-	-	3	-			10000
1330	-			4	-	-	5	C	6	-	-	3	-			10000
3333	ELECTRIC UNIT HEATER UH-601			3	15	3	7	A	8	15	3	3	RADIANT HEATER RH-603			1500
3333	-			3	-	-	9	B	10	-	-	3	-			1500
3333	-			3	-	-	11	C	12	-	-	3	-			1500
942	ELECTRO-ANESTHESIA TANK FILL PUMP P-650			4	15	3	13	A	14	15	3	3	WET WELL PUMP CONTROL PANEL LCP-660			1950
942	-			4	-	-	15	B	16	-	-	3	-			1950
942	-			4	-	-	17	C	18	-	-	3	-			1950
831	CROWDER DRIVE MOTOR DRV-651			4	15	3	19	A	20				SPACE			
831	-			4	-	-	21	B	22				SPACE			
831	-			4	-	-	23	C	24				SPACE			
831	CROWDER LIFT MOTOR HOI-651			4	15	3	25	A	26				SPACE			
831	-			4	-	-	27	B	28				SPACE			
831	-			4	-	-	29	C	30				SPACE			
	SPACE						31	A	32				SPACE			
	SPACE						33	B	34				SPACE			
	SPACE						35	C	36				SPACE			
1	SURGE PROTECTIVE DEVICE - TYPE 2			3	30	3	37	A	38				SPACE			
1	-			3	-	-	39	B	40				SPACE			
1	-			3	-	-	41	C	42				SPACE			
		LIGHTING	RECPT	MISC.	MOTOR		TOTAL LOAD		NOTES 1. DEMAND FACTOR: 1ST 10kVA AT 100%; OVER 10KVA AT 50%. 2. LARGEST MOTOR LOAD AT 125%; ALL OTHERS AT 100%.							
CONNECTED VA		0	0	44,502	17,652		62,154									
DEMAND FACTOR		1.00	SEE NOTE 1	1.00	SEE NOTE 2											
DEMAND VA		0	0	44,502	19,115		63,617									
LOADING FOR O.C.P.		0	0	55,628	19,115		74,742									

PANELBOARD SCHEDULE															
PANEL: PB-601			PROJECT: FALL CREEK HATCHERY												
VOLTAGE (L-L): 208		PHASE: 3	WIRE: 4		AMPERE RATING: 100A										
ENTRY: BOTTOM		MOUNTING: SURFACE			MCB: 100AT										
LOADS:	PHASE A:	9276	LOAD TYPES: 1 = LIGHTING 2 = RECEPTACLES 3 = MISC 4 = MOTOR			MIN. CALCULATED O.C.P. SIZE: 84.8									
	PHASE B:	8602				REMARKS: *** INDICATES GFCI CIRCUIT BREAKER.									
	PHASE C:	5849													
	TOTAL:	23727													
LOAD (VA)					LOAD TYPE	AMPS/ POLES	CKT NO	PHASE	CKT NO	AMPS/ POLES	LOAD TYPE	LOAD SERVED		LOAD (VA)	
100	SKYLIGHT DIMMER CIRCUIT				3	15	1	1	A	2	15	3	3	RADIANT HEATER RH-601	1000
647	SPAWNING BUILDING LIGHTING				1	20	1	3	B	4	-	-	3	-	1000
	SPARE					20	1	5	C	6	-	-	3	-	1000
900	SPAWNING BUILDING RECEPTACLE - 1				2	20	1	7	A	8	15	3	3	RADIANT HEATER RH-602	1000
720	SPAWNING BUILDING RECEPTACLE - 2				2	20	1	9	B	10	-	-	3	-	1000
540	HOLDING POND RECEPTACLES				2	20	1	11	C	12	-	-	3	-	1000
75	UV LAMP BALLAST RECEPTACLE				3	20	1	13	A	14	15	1	4	EXHAUST FAN EF-601	150
1144	CONVEYOR BELT CB-600				4	15	2	15	B	16	15	1	4	EXHAUST FAN EF-602	1176
1144	-				4	-	-	17	C	18	15	1	3	STANDBY GENERATOR GEN-100 BATTERY CHARGER	100
1920	ELECTRO-ANESTHESIA CONTROL PANEL VCP-650				3	20	1	19	A	20	15	2	3	STANDBY GENERATOR GEN-100 BLOCK HEATER	1250
1664	HOLDING PONDS WASTE DRAIN PUMP L6-20R				4	20	1	21	B	22	-	-	3	-	1250
1664	SEE NOTE 3				4	-	-	23	C	24	15	1	3	STANDBY GENERATOR GEN-100 BATTERY HEATER	400
2880	ELECTRO-ANESTHESIA TANK HOIST HOI-650				4	30	1	25	A	26	20	1		SPARE	
	SPARE					20	1	27	B	28	20	1		SPARE	
	SPARE					20	1	29	C	30	20	1		SPARE	
	SPARE					20	1	31	A	32	20	1		SPARE	
	SPARE					20	1	33	B	34	20	1		SPARE	
	SPARE					20	1	35	C	36	20	1		SPARE	
1	SURGE PROTECTIVE DEVICE - TYPE 3				3	30	3	37	A	38	20	1		SPARE	
1	-				3	-	-	39	B	40	20	1		SPARE	
1	-				3	-	-	41	C	42	20	1		SPARE	
		LIGHTING	RECPT	MISC.	MOTOR		TOTAL LOAD		NOTES						
CONNECTED VA		647	2,160	11,098	11,742		25,647		1. DEMAND FACTOR: 1ST 10KVA AT 100%; OVER 10KVA AT 50%.						
DEMAND FACTOR		1.00	SEE NOTE 1	1.00	SEE NOTE 2				2. LARGEST MOTOR LOAD AT 125%; ALL OTHERS AT 100%.						
DEMAND VA		647	2160	11,098	13,182		27,087		3. ASSUMING NO MORE THAN TWO WASTE DRAIN PUMPS ACTIVE AT A TIME.						
LOADING FOR O.C.P.		809	2700	13,873	13,182		30,563								

DUCT BANK SCHEDULE				
DUCT BANK ID	FROM	TO	CONDUITS	TYPE
DB-100a	P-HH-100	FLOWMETER VAULT	K75, K108, K119	120V POWER, CONTROL
DB-100b	P-HH-100	INTAKE STRUCTURE	K18, K72, K109	480V POWER, 120V POWER, CONTROL
DB-100b	S-HH-100	INTAKE STRUCTURE	K137, K142	SIGNAL
DB-100c	FLOWMETER VAULT	INTAKE STRUCTURE	K138, K139, K140, K141	SIGNAL
DB-101	COHO BUILDING	P-HH-100	K18, K72, K75	480V POWER, 120V POWER
DB-102	P-HH-101	P-HH-100	K108, K109, K119	CONTROL
DB-102	S-HH-101	S-HH-100	K137, K142	SIGNAL
DB-103	P-HH-101	COHO BUILDING	K9, K58, K59, K60, K61, K110, K120, K121, K122, K123, K145	480V POWER, 240V POWER, CONTROL
DB-104a	P-HH-103	HH-102	K54, K177, K178, K179, K180	208V POWER, 120V POWER
DB-104b	P-HH-103	P-HH-101	K9, K58, K59, K60, K61, K108, K109, K110, K119, K120, K121, K122, K123, K145	480V POWER, 240V POWER, CONTROL
DB-104b	S-HH-103	S-HH-101	K137, K142	SIGNAL
DB-105	ELECTRICAL ROOM	P-HH-103	K9, K54, K58, K59, K60, K61, K108, K109, K110, K119, K120, K121, K122, K123, K145, K177, K178, K179, K180	480V POWER, 240V POWER, 208V POWER, 120V POWER, CONTROL
DB-105	ELECTRICAL ROOM	S-HH-103	K137, K142	SIGNAL
DB-106	ELECTRICAL ROOM	P-HH-104	K4, K10, K90, K91, K92, K116, K117, K129, K130, K131, K132, K160	480V POWER, 208V POWER, 120V POWER, CONTROL
DB-106	ELECTRICAL ROOM	C-HH-104	K143	COMM
DB-107	P-HH-104	GEN-100	K4, K90, K91, K92, K160	480V POWER, 208V POWER, 120V POWER, CONTROL
DB-107	C-HH-104	GEN-100	K143	COMM
DB-108	P-HH-104	SPAWNING BUILDING	K10	480V POWER
DB-109	P-HH-104	SPAWNING BUILDING/ HOLDING PONDS	K116, K117, K129, K130, K131, K132	CONTROL
DB-110	XFR-100	ELECTRICAL ROOM	K1	480V POWER
DB-111	GEN-100	REMOTE E-STOP	K1	CONTROL

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



WARNING

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IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



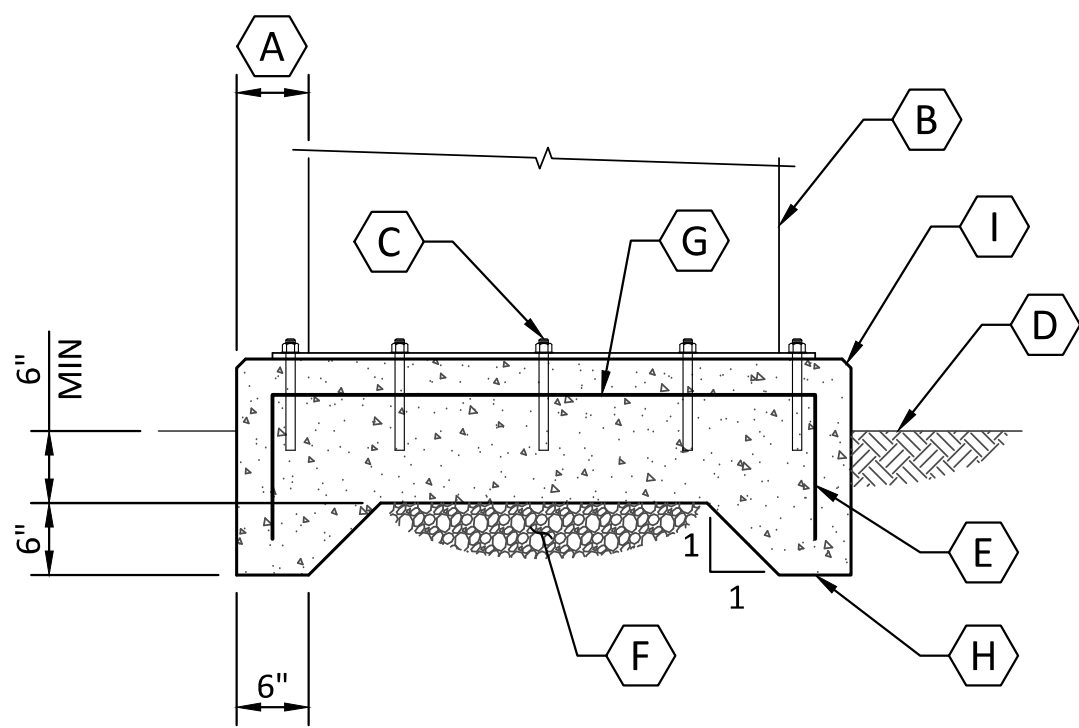
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>M. SKELTON</u>	DRAWING GE006
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
ELECTRICAL DUCT BANK SCHEDULE		CHECKED <u>J. BAKKEN</u>	
		PROJECT DATE <u>10/28/20</u>	

CONDUIT SCHEDULE						
CONDUIT ID	SIZE	FROM	TO	CABLE(S)	DUCT BANK(S)	DESCRIPTION
K1	4"	XFR-100	UTL-500	C1	DB-110	SERVICE TO CT CABINET
K2	(2) 2"	UTL-500	DSC-500	C2	-	SERVICE CONDUCTORS TO SERVICE EQUIPMENT
K3	(2) 2"	DSC-500	MTS-500	C3	-	NORMAL FEEDER TO TRANSFER SWITCH
K4	2"	GEN-100	MTS-500	C4	DB-106, DB-107	STANDBY FEEDER TO TRANSFER SWITCH
K5	1"	UTL-500	UTL-501	C5	-	SPARE BETWEEN CT CABINET AND UTILITY METER
K6	(2) 2"	MTS-500	PB-500	C6	-	MAIN FEEDER TO MAIN FACILITY 480V PANEL IN CHINOOK BLDG
K7	1"	PB-500	XFR-501	C7	-	DISTRIBUTION TRANSFORMER FEEDER - CHINOOK BLDG
K8	1-1/2"	PB-500	XFR-502	C8	-	TAGGING TRAILER TRANSFORMER FEEDER
K9	1-1/2"	PB-500	PB-300	C9	DB-103, DB-104b, DB-105	COHO BLDG PANEL FEEDER
K10	1-1/4"	PB-500	PB-600	C10	DB-106, DB-108	SPAWNING BLDG PANEL FEEDER
K11	3/4"	PB-500	P-580	C11	-	CHINOOK BOOSTER PUMP SKID FEEDER
K12	3/4"	PB-500	UH-501	C12	-	UNIT HEATER BRANCH
K13	3/4"	PB-500	UH-502	C13	-	UNIT HEATER BRANCH
K14	3/4"	PB-500	UH-503	C14	-	UNIT HEATER BRANCH
K15	3/4"	PB-500	UH-504	C15	-	UNIT HEATER BRANCH
K16	3/4"	PB-500	UH-505	C16	-	UNIT HEATER BRANCH
K17	1"	PB-300	XFR-200	C17	-	DISTRIBUTION TRANSFORMER FEEDER - COHO BLDG
K18	3/4"	PB-300	VCP-200	C18	DB-100b, DB-101	INTAKE TRAVELING SCREEN CONTROL PANEL FEEDER
K19	3/4"	VCP-200	TRS-200	C19	-	INTAKE TRAVELING SCREEN 1 BRANCH
K20	3/4"	VCP-200	TRS-201	C20	-	INTAKE TRAVELING SCREEN 2 BRANCH
K21	3/4"	VCP-200	P-200	C21	-	INTAKE SCREEN SPRAY PUMP 1 BRANCH
K22	3/4"	VCP-200	P-201	C22	-	INTAKE SCREEN SPRAY PUMP 2 BRANCH
K23	3/4"	PB-300	P-380	C23	-	COHO BOOSTER PUMP SKID FEEDER
K24	3/4"	PB-300	UH-301	C24	-	UNIT HEATER BRANCH
K25	3/4"	PB-300	UH-302	C25	-	UNIT HEATER BRANCH
K26	3/4"	PB-300	UH-303	C26	-	UNIT HEATER BRANCH
K27	3/4"	PB-300	UH-304	C27	-	UNIT HEATER BRANCH
K28	3/4"	PB-300	UH-305	C28	-	UNIT HEATER BRANCH
K29	1"	PB-600	XFR-600	C29	-	DISTRIBUTION TRANSFORMER FEEDER - SPAWNING BLDG
K30	3/4"	PB-600	P-680	C30	-	SPAWNING BLDG BOOSTER PUMP SKID FEEDER
K31	3/4"	PB-600	UH-601	C31	-	UNIT HEATER BRANCH
K32	3/4"	PB-600	RH-603	C32	-	RADIANT HEATER BRANCH
K33	3/4"	PB-600	MS-652	C33	-	ELECTRO-ANESTHESIA TANK FILL PUMP STARTER FEEDER
K34	3/4"	MS-652	P-650	C34	-	ELECTRO-ANESTHESIA TANK FILL PUMP BRANCH
K35	3/4"	PB-600	LCP-660	C35	-	WET WELL PUMP CONTROL PANEL FEEDER
K36	1"	LCP-660	P-660	C36	-	WET WELL SUMP PUMP 1 POWER, OVERTEMP, AND LEAK
K37	1"	LCP-660	P-661	C37	-	WET WELL SUMP PUMP 2 POWER, OVERTEMP, AND LEAK
K38	1-1/4"	XFR-501	PB-501	C38	-	CHINOOK BLDG LV PANEL FEEDER
K39	3/4"	PB-501	RH-501	C39	-	RADIANT HEATER BRANCH
K40	3/4"	PB-501	RH-502	C40	-	RADIANT HEATER BRANCH
K41	3/4"	PB-501	HC-501	C41	-	ELECTRICAL ROOM SPLIT UNIT CONDENSER FEEDER
K42	3/4"	HC-501	AC-501	C42	-	ELECTRICAL ROOM SPLIT UNIT FAN COIL FEEDER
K43	3/4"	PB-501	MS-501	C43	-	EXHAUST FAN 1 MOTOR STARTER FEEDER
K44	3/4"	MS-501	EF-501	C44	-	EXHAUST FAN 1 BRANCH
K45	3/4"	PB-501	MS-502	C45	-	EXHAUST FAN 2 MOTOR STARTER FEEDER
K46	3/4"	MS-502	EF-502	C46	-	EXHAUST FAN 2 BRANCH
K47	3/4"	PB-501	MS-503	C47	-	INLINE DUCT EXHAUST FAN STARTER
K48	3/4"	MS-503	MD-503	C48	-	DUCT MOTORIZED DAMPER BRANCH
K49	3/4"	PB-501	LTS	C49	-	CHINOOK BLDG LIGHTING CKT
K50	3/4"	PB-501	LTS	C50	-	CHINOOK BLDG ELECTRICAL ROOM LIGHTING CKT
K51	3/4"	PB-501	RCP	C51	-	CHINOOK BLDG RECEPTACLE CKT 1
K52	3/4"	PB-501	RCP	C52	-	CHINOOK BLDG RECEPTACLE CKT 2
K53	3/4"	PB-501	RCP	C53	-	CHINOOK BLDG ELECTRICAL ROOM RECEPTACLE CKT
K54	3/4"	PB-501	RCP	C54	DB-104a, DB-105	CHINOOK RACEWAY RECEPTACLE CKT
K55	3/4"	PB-501	LCP-090	C55	-	SCADA CABINET FEEDER
K56	3/4"	PB-501	TEL-090	C56	-	AUTODIALER BRANCH
K57	(2) 1-1/2"	XFR-502	PB-502	C57	-	TAGGING TRAILER 240V PANEL FEEDER
K58	1-1/2"	PB-502	RCP	C58	DB-103, DB-104b, DB-105	TAGGING TRAILER 240V, 100A RECEPTACLE - COHO
K59	1-1/4"	PB-502	RCP	C59	DB-103, DB-104b, DB-105	TAGGING TRAILER 240V, 60A FISH PUMP RECEPTACLE - COHO
K60	1-1/2"	PB-502	RCP	C60	DB-103, DB-104b, DB-105	TAGGING TRAILER 240V, 100A RECEPTACLE - CHINOOK
K61	1-1/4"	PB-502	RCP	C61	DB-103, DB-104b, DB-105	TAGGING TRAILER 240V, 60A FISH PUMP RECEPTACLE - CHINOOK
K62	1-1/2"	XFR-300	PB-301	C62	-	COHO BLDG LV PANEL FEEDER
K63	3/4"	PB-301	RH-301	C63	-	RADIANT HEATER BRANCH
K64	3/4"	PB-301	RH-302	C64	-	RADIANT HEATER BRANCH
K65	3/4"	PB-301	MS-301	C65	-	EXHAUST FAN 1 MOTOR STARTER FEEDER
K66	3/4"	MS-301	EF-301	C66	-	EXHAUST FAN 1 BRANCH
K67	3/4"	PB-301	MS-302	C67	-	EXHAUST FAN 2 MOTOR STARTER FEEDER
K68	3/4"	MS-302	EF-302	C68	-	EXHAUST FAN 2 BRANCH
K69	3/4"	PB-301	MS-303	C69	-	INLINE DUCT EXHAUST FAN STARTER
K70	3/4"	MS-303	MD-303	C70	-	DUCT MOTORIZED DAMPER BRANCH
K71	3/4"	PB-301	LTS	C71	-	COHO BLDG LIGHTING CKT
K72	3/4"	PB-301	LTS	C72	DB-100b, DB-101	INTAKE LIGHTING CKT
K73	3/4"	PB-301	RCP	C73	-	COHO BLDG RECEPTACLE CKT 1
K74	3/4"	PB-301	RCP	C74	-	COHO BLDG RECEPTACLE CKT 2
K75	3/4"	PB-301	VCP-280	C75	DB-100a, DB-101	METER VAULT SUMP PUMP AND CONTROL POWER
K76	1-1/2"	XFR-600	PB-601	C76	-	SPAWNING BLDG LV PANEL FEEDER
K77	3/4"	PB-601	RH-601	C77	-	RADIANT HEATER BRANCH
K78	3/4"	PB-601	RH-602	C78	-	RADIANT HEATER BRANCH
K79	3/4"	PB-601	EF-601	C79	-	INLINE DUCT EXHAUST FAN BRANCH
K80	3/4"	EF-601	MD-601	C80	-	DUCT MOTORIZED DAMPER BRANCH
K81	3/4"	PB-601	MS-602	C81	-	EXHAUST FAN MOTOR STARTER FEEDER
K82	3/4"	MS-602	EF-602	C82	-	EXHAUST FAN BRANCH
K83	3/4"	PB-601	MS-600	C83	-	CONVEYOR BELT STARTER FEEDER
K84	3/4"	MS-600	CB-600	C84	-	CONVEYOR BELT BRANCH
K85	3/4"	PB-601	VCP-650	C85	-	ELECTRO-ANESTHESIA TANK CONTROL PANEL FEEDER
K86	1"	VCP-650	TNK-650	C86	-	ELECTRO-ANESTHESIA TANK ELECTRODE CKT
K87	1"	MS-653	HOI-650	C87	-	ELECTRO-ANESTHESIA HYDRAULIC HOIST PUMP BRANCH
K88	1-1/4"	PB-601	VCP-650	C88	-	CROWDER AND FISH LIFT CONTROL PANEL FEEDER
K89	1-1/4"	VCP-650	HOI-650	C89	-	CROWDER AND FISH LIFT CABLE REEL CKT
K90	3/4"	PB-601	GEN-100	C90	DB-106, DB-107	STANDBY GENERATOR BATTERY CHARGER BRANCH
K91	3/4"	PB-601	GEN-100	C91	DB-106, DB-107	STANDBY GENERATOR BLOCK HEATER BRANCH
K92	3/4"	PB-601	GEN-100	C92	DB-106, DB-107	STANDBY GENERATOR BATTERY HEATER BRANCH

CONDUIT SCHEDULE						
CONDUIT ID	SIZE	FROM	TO	CABLE(S)	DUCT BANK(S)	DESCRIPTION
K93	3/4"	PB-601	LTS	C93	-	SPAWNING BLDG LIGHTING CKT
K94	3/4"	PB-601	RCP	C94	-	SPAWNING BLDG RECEPTACLE CKT 1
K95	3/4"	PB-601	RCP	C95	-	SPAWNING BLDG RECEPTACLE CKT 2
K96	3/4"	PB-601	RCP	C96	-	UV LAMP BALLAST RECEPTACLE
K97	3/4"	PB-601	RCP	C97	-	ADULT HOLDING PONDS RECEPTACLE CKT
K98	3/4"	MS-301	MD-301	C98	-	COHO BLDG FAN 1 STARTER DAMPER CONTROL
K99	3/4"	UH-301	TSTAT1	C99	-	COHO BLDG UNIT HEATER TSTAT 1 CONTROL
K100	3/4"	MS-302	MD-302	C100	-	COHO BLDG FAN 2 STARTER DAMPER CONTROL
K101	3/4"	UH COHO	TSTAT2	C101	-	COHO BLDG UNIT HEATER TSTAT 2 CONTROL LOOP
K102	3/4"	MS-501	MD-501	C102	-	CHINOOK BLDG FAN 1 STARTER DAMPER CONTROL
K103	3/4"	UH-501	TSTAT1	C103	-	CHINOOK BLDG UNIT HEATER TSTAT 1 CONTROL
K104	3/4"	MS-502	MD-502	C104	-	CHINOOK BLDG FAN 2 STARTER DAMPER CONTROL
K105	3/4"	UH CHIN	TSTAT2	C105	-	CHINOOK BLDG UNIT HEATER TSTAT 2 CONTROL LOOP
K106	3/4"	MS-602	MD-602	C106	-	SPAWNING BLDG FAN STARTER DAMPER CONTROL
K107	3/4"	UH-601	TSTAT	C107	-	SPAWNING BLDG UNIT HEATER TSTAT CONTROL
K108	3/4"	LCP-090	LSH-201	C108	DB-100a, DB-102, DB-104b, DB-105	METER VAULT FLOOD LEVEL ALARM SWITCH
K109	3/4"	LCP-090	VCP-200	C109	DB-100b, DB-102, DB-104b, DB-105	TRAVELING SCREEN CONTROL PANEL FAULT
K110	3/4"	LCP-090	LSL-300	C110	DB-103, DB-104b, DB-105	COHO INCUBATOR HEAD TANK LOW LEVEL SWITCH
K111	3/4"	LCP-090	LSL-500	C111	-	CHINOOK INCUBATOR HEAD TANK A LOW LEVEL SWITCH
K112	3/4"	LCP-090	LSL-501	C112	-	CHINOOK INCUBATOR HEAD TANK B LOW LEVEL SWITCH
K113	3/4"	LCP-090	LSL-502	C113	-	CHINOOK INCUBATOR HEAD TANK C LOW LEVEL SWITCH
K114	3/4"	LCP-090	LSL-503	C114	-	CHINOOK INCUBATOR HEAD TANK D LOW LEVEL SWITCH
K115	3/4"	LCP-660	LSL-660, LSH-660, LSH-661	C115, C116, C117	-	WET WELL PUMP CONTROL LEVEL SWITCHES
K116	3/4"	LCP-090	LSH-662	C118	DB-106, DB-109	WET WELL ALARM HIGH LEVEL SWITCH
K117	3/4"	LCP-090	LCP-660	C119, C120	DB-106, DB-109	WET WELL PUMP FAULTS
K118	3/4"	VCP-650	HSS-651	C121	-	ELECTRO-ANESTHESIA FOOT PEDAL SAFETY SWITCH
K119	3/4"	LCP-090	ZS-200	C122	DB-100a, DB-102, DB-104b, DB-105	METER VAULT INTRUSION SWITCH
K120	3/4"	LCP-090	ZS-300	C123	DB-103, DB-104b, DB-105	COHO BLDG ENTRY DOOR INTRUSION SWITCH
K121	3/4"	LCP-090	ZS-301	C124	DB-103, DB-104b, DB-105	COHO BLDG SOUTH OVERHEAD DOOR INTRUSION SWITCH
K122	3/4"	LCP-090	ZS-302	C125	DB-103, DB-104b, DB-105	COHO BLDG NORTHWEST OVERHEAD DOOR INTRUSION SWITCH
K123	3/4"	LCP-090	ZS-303	C126	DB-103, DB-104b, DB-105	COHO BLDG NORTHEAST OVERHEAD DOOR INTRUSION SWITCH
K124	3/4"	LCP-090	ZS-500	C127	-	ELECTRICAL ROOM DOOR INTRUSION SWITCH
K125	3/4"	LCP-090	ZS-501	C128	-	CHINOOK BLDG ENTRY DOORS INTRUSION SWITCH
K126	3/4"	LCP-090	ZS-502	C129	-	CHINOOK BLDG SOUTHWEST OVERHEAD DOOR INTRUSION SWITCH
K127	3/4"	LCP-090	ZS-503	C130	-	CHINOOK BLDG NORTHEAST OVERHEAD DOOR INTRUSION SWITCH
K128	3/4"	LCP-090	ZS-504	C131	-	CHINOOK BLDG SOUTHEAST OVERHEAD DOOR INTRUSION SWITCH
K129	3/4"	LCP-090	ZS-600	C132	DB-106, DB-109	SPAWNING BLDG EAST ENTRY DOOR INTRUSION SWITCH
K130	3/4"	LCP-090	ZS-601	C133	DB-106, DB-109	SPAWNING BLDG WEST ENTRY DOOR INTRUSION SWITCH
K131	3/4"	LCP-090	ZS-602	C134	DB-106, DB-109	SPAWNING BLDG NORTH OVERHEAD DOOR INTRUSION SWITCH
K132	3/4"	LCP-090	ZS-603	C135	DB-106, DB-109	SPAWNING BLDG SOUTH OVERHEAD DOOR INTRUSION SWITCH
K133	1-1/4"	LCP-090	TEL-090	C136	-	DIALER ALARM CKTS
K134	3/4"	LCP-090	LCS-090	C142	-	ALARM SIREN CONTROL STATION SILENCE/ANNUNCIATE CONTROL
K135	3/4"	VCP-200	LE-200 J-BOX	C143	-	FALL CREEK HEAD LEVEL PRESSURE TRANSDUCER
K136	3/4"	VCP-200	LE-201 J-BOX	C144	-	INTAKE LEVEL BEHIND TRAVELING SCREEN PRESSURE TRANSDUCER
K137	1"	LCP-090	VCP-200	C145, C146	DB-100b, DB-102, DB-104b, DB-105	FALL CREEK LEVEL SIGNALS
K138	1"	FIT-200	FE-200	C147	DB-100c	COHO BLDG RW SUPPLY FLOWMETER
K139	1"	FIT-201	FE-201	C148	DB-100c	ADULT HOLDING PONDS RW SUPPLY FLOWMETER
K140	1"	FIT-202	FE-202	C149	DB-100c	CHINOOK RACEWAYS RW SUPPLY FLOWMETER
K141	1"	FIT-203	FE-203	C150	DB-100c	CHINOOK BLDG RW SUPPLY FLOWMETER
K142	1-1/4"	LCP-090	FLOW TRANSMITTER RACK	C151, C152, C153, C154	DB-100b, DB-102, DB-104b, DB-105	RW SUPPLY TO HATCHERY FLOW SIGNALS
K143	1"	LCP-090	GEN-100	C155	DB-106, DB-107	GENSET COMM CKT
K144	1"	LCP-090	MTS-500	C156	-	TRANSFER SWITCH COMM CKT
K145	3/4"	LCP-090	ZS-303	C157	DB-103, DB-104b, DB-105	COHO BLDG WEST OVERHEAD DOOR INTRUSION SWITCH
K146	(2) 1-1/4"	LCP-090	CONTROLS J-BOX	-	-	SPARE CONDUITS FOR FUTURE CONNECTION TO SCADA BY CDFW
K147	1-1/4"	TEL-090	ANTENNA	C158	-	AUTODIALER ANTENNA
K148	3/4"	MS-303	EF-303	C159	-	COHO INLINE DUCT EXHAUST FAN BRANCH
K149	3/4"	MS-303	OS-303	C160	-	COHO DUCT FAN OCCUPANCY SENSOR CIRCUIT
K150	3/4"	MS-503	EF-503	C161	-	CHINOOK INLINE DUCT EXHAUST FAN BRANCH
K151	3/4"	MS-503	OS-503	C162	-	CHINOOK DUCT FAN OCCUPANCY SENSOR CIRCUIT
K152	3/4"	MS-601	EF-601	C163	-	SPAWNING BLDG INLINE DUCT EXHAUST FAN BRANCH
K153	3/4"	MS-601	OS-601	C164	-	SPAWNING BLDG DUCT FAN OCCUPANCY SENSOR CIRCUIT
K154	3/4"	PB-301	EF-200	C165	-	METER VAULT EXHAUST FAN POWER
K155	3/4"	VCP-280	P-280	C166	-	METER VAULT SUMP PUMP BRANCH CIRCUIT AND PROTECTION
K156	1-1/4"	VCP-280	METER VAULT	C167, C168, C169	-	METER VAULT SUMP LEVEL SWITCHES
K157	3/4"	PB-301	CO-DIM	C170	-	COHO BLDG SKY LIGHT DIMMER CIRCUIT
K158	3/4"	PB-501	CH-DIM	C171	-	CHINOOK BLDG SKY LIGHT DIMMER CIRCUIT
K159	3/4"	PB-601	SP-DIM	C172	-	SPAWNING BLDG SKY LIGHT DIMMER CIRCUIT
K160	3/4"	MTS-500	GEN-100	C173	DB-106, DB-107	GENSET ENGINE START CIRCUIT
K161	3/4"	GEN-100	E-STOP	C174	DB-111	GENSET REMOTE E-STOP CIRCUIT
K162	3/4"	MS-650	TB-651	C176	-	CROWDER LIFT BRANCH
K163	3/4"	MS-651	TB-651	C177	-	CROWDER DRIVE BRANCH
K164	3/4"	PB-600	MS-650	C178	-	CROWDER LIFT FEEDER
K165	3/4"	PB-600	MS-651	C179	-	CROWDER DRIVE FEEDER
K166	3/4"	MS-650	CS-650	C180	-	CROWDER LIFT CONTROL INTERCONNECTION
K167	3/4"	MS-651	CS-650	C181	-	CROWDER DRIVE CONTROL INTERCONNECTION
K168	3/4"	MS-650	TB-651	C182	-	CROWDER LOWER LIMIT SWITCH
K169	3/4"	MS-650	TB-651	C183	-	CROWDER UPPER LIMIT SWITCH
K170	3/4"	MS-651	ZS-652	C184	-	CROWDER DOWNSTREAM LIMIT SWITCH
K171	3/4"	MS-651	ZS-653	C185	-	CROWDER UPSTREAM LIMIT SWITCH
K172	3/4"	MS-652	CS-650	C186	-	FILL PUMP CONTROL INTERCONNECTION
K173	1"	PB-601	MS-653	C187	-	ELECTRO-ANESTHESIA TANK HOIST STARTER FEEDER
K174	3/4"	MS-653	CS-650	C188	-	ELECTRO-ANESTHESIA TANK HOIST CONTROL INTERCONNECTION
K175	3/4"	PB-301	CO RCP 1	C189	-	COHO WASTE DRAIN PUMP L6-20R RECEPTACLE - INDOOR
K176	3/4"	PB-301	CO RCP 2	C190	-	COHO WASTE DRAIN PUMP L6-20R RECEPTACLE - OUTDOOR
K177	3/4"	PB-501	CH RCP 1	C191	DB-104a, DB-105	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 1 & 2
K178	3/4"	PB-501	CH RCP 2	C192	DB-104a, DB-105	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 3 & 4
K179	3/4"	PB-501	CH RCP 3	C193	DB-104a, DB-105	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 5 & 6
K180	3/4"	PB-501	CH RCP 4	C194	DB-104a, DB-105	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 7 & 8
K181	3/4"	PB-601	SP RCP 1	C195	-	HOLDING PONDS WASTE DRAIN PUMP L6-20R RECEPTACLE

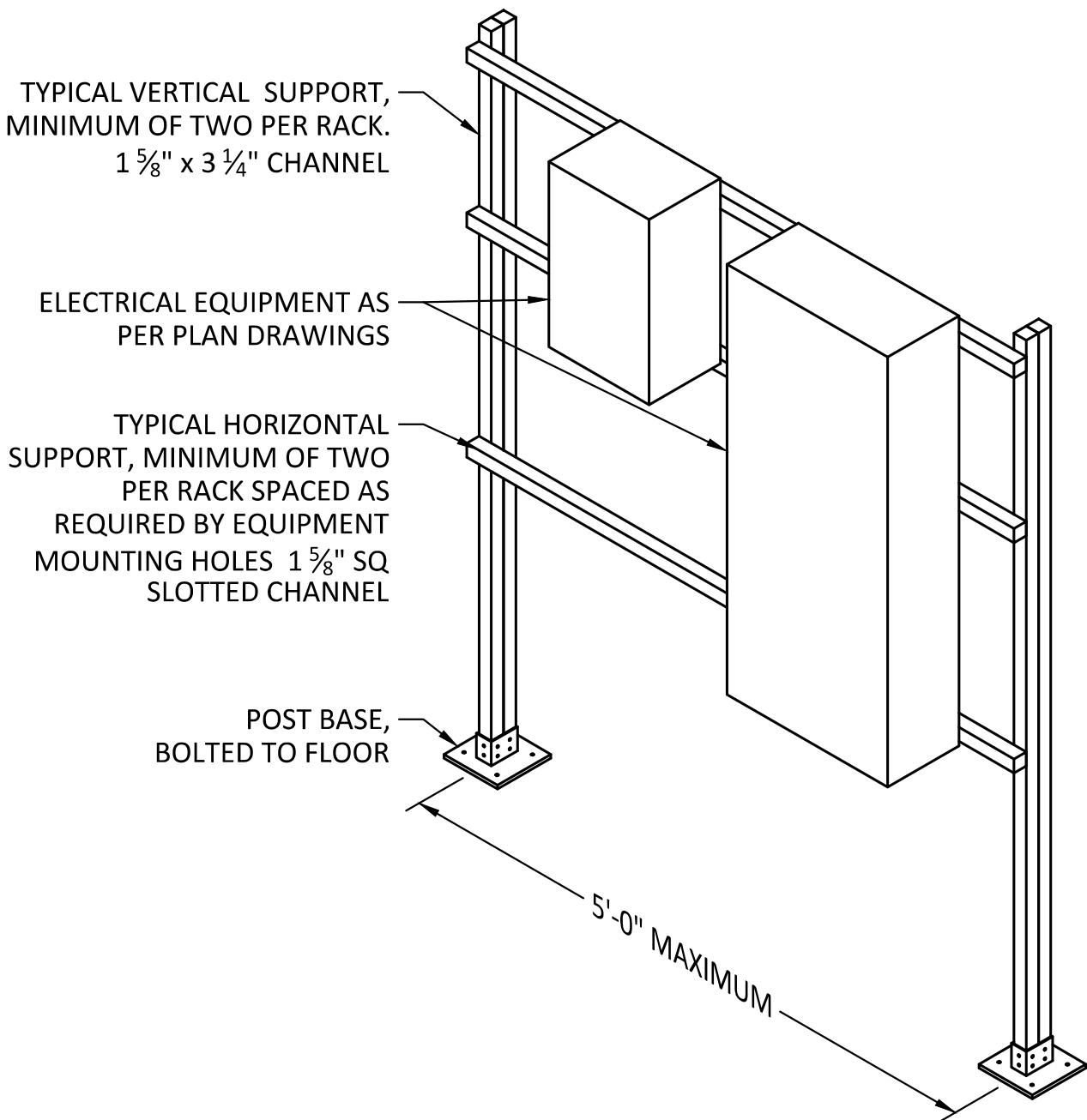
CABLE SCHEDULE							
CABLE INDEX ID	CABLE FIELD ID	SIZE/TYPE	VOLTAGE	FROM	TO	CONDUIT	DESCRIPTION
C1	P-UT_XFR	1,000-LB PULL LINE	480V	XFR-100	UTL-500	K1	SERVICE TO CT CABINET
C2	P-SVC	(2) 4#2/0 XHHW	480V	UTL-500	DSC-500	K2	SERVICE CONDUCTORS TO SERVICE EQUIPMENT
C3	P-TS_NORM	(2) 3#2/0, 1#3G XHHW	480V	DSC-500	MTS-500	K3	NORMAL FEEDER TO TRANSFER SWITCH
C4	P-TS_STAN	3#2/0, 1#6G XHHW	480V	GEN-100	MTS-500	K4	STANDBY FEEDER TO TRANSFER SWITCH
C5	P-UT_MTR	PULL CORD	480V	UTL-500	UTL-501	K5	SPARE BETWEEN CT CABINET AND UTILITY METER
C6	P-MAIN	(2) 3#2/0, 1#3G XHHW	480V	MTS-500	PB-500	K6	MAIN FEEDER TO MAIN FACILITY 480V PANEL IN CHINOOK BLDG
C7	P-XFR501	3#8, 1#10G THWN	480V	PB-500	XFR-501	K7	DISTRIBUTION TRANSFORMER FEEDER - CHINOOK BLDG
C8	P-XFR502	3#1 XHHW, 1#6G XHHW	480V	PB-500	XFR-502	K8	TAGGING TRAILER TRANSFORMER FEEDER
C9	P-PB300	3#1 XHHW, 1#6G XHHW	480V	PB-500	PB-300	K9	COHO BLDG PANEL FEEDER
C10	P-PB600	3#3 XHHW, 1#8G THWN	480V	PB-500	PB-600	K10	SPAWNING BLDG PANEL FEEDER
C11	P-P580	3#12, 1#12G THWN	480V	PB-500	P-580	K11	CHINOOK BOOSTER PUMP SKID FEEDER
C12	P-UH501	3#12, 1#12G THWN	480V	PB-500	UH-501	K12	UNIT HEATER BRANCH
C13	P-UH502	3#12, 1#12G THWN	480V	PB-500	UH-502	K13	UNIT HEATER BRANCH
C14	P-UH503	3#12, 1#12G THWN	480V	PB-500	UH-503	K14	UNIT HEATER BRANCH
C15	P-UH504	3#12, 1#12G THWN	480V	PB-500	UH-504	K15	UNIT HEATER BRANCH
C16	P-UH505	3#12, 1#12G THWN	480V	PB-500	UH-505	K16	UNIT HEATER BRANCH
C17	P-XFR300	3#8, 1#10G THWN	480V	PB-300	XFR-300	K17	DISTRIBUTION TRANSFORMER FEEDER - COHO BLDG
C18	P-VCP200	3#12, 1#12G THWN	480V	PB-300	VCP-200	K18	INTAKE TRAVELING SCREEN CONTROL PANEL FEEDER
C19	P-TRS200	3#12, 1#12G THWN	480V	VCP-200	TRS-200	K19	INTAKE TRAVELING SCREEN 1 BRANCH
C20	P-TRS201	3#12, 1#12G THWN	480V	VCP-200	TRS-201	K20	INTAKE TRAVELING SCREEN 2 BRANCH
C21	P-P200	3#12, 1#12G THWN	480V	VCP-200	P-200	K21	INTAKE SCREEN SPRAY PUMP 1 BRANCH
C22	P-P201	3#12, 1#12G THWN	480V	VCP-200	P-201	K22	INTAKE SCREEN SPRAY PUMP 2 BRANCH
C23	P-P380	3#12, 1#12G THWN	480V	PB-300	P-380	K23	COHO BOOSTER PUMP SKID FEEDER
C24	P-UH301	3#12, 1#12G THWN	480V	PB-300	UH-301	K24	UNIT HEATER BRANCH
C25	P-UH302	3#12, 1#12G THWN	480V	PB-300	UH-302	K25	UNIT HEATER BRANCH
C26	P-UH303	3#12, 1#12G THWN	480V	PB-300	UH-303	K26	UNIT HEATER BRANCH
C27	P-UH304	3#12, 1#12G THWN	480V	PB-300	UH-304	K27	UNIT HEATER BRANCH
C28	P-UH305	3#12, 1#12G THWN	480V	PB-300	UH-305	K28	UNIT HEATER BRANCH
C29	P-XFR600	3#8, 1#10G THWN	480V	PB-600	XFR-600	K29	DISTRIBUTION TRANSFORMER FEEDER - SPAWNING BLDG
C30	P-P680	3#12, 1#12G THWN	480V	PB-600	P-680	K30	SPAWNING BLDG BOOSTER PUMP SKID FEEDER
C31	P-UH601	3#12, 1#12G THWN	480V	PB-600	UH-601	K31	UNIT HEATER BRANCH
C32	P-RH603	4#12, 1#12G THWN	480V+N	PB-600	RH-603	K32	RADIANT HEATER BRANCH
C33	P-MS652	3#12, 1#12G THWN	480V	PB-600	MS-652	K33	ELECTRO-ANESTHESIA TANK FILL PUMP STARTER FEEDER
C34	P-P650	3#12, 1#12G THWN	480V	MS-652	P-650	K34	ELECTRO-ANESTHESIA TANK FILL PUMP BRANCH
C35	P-LCP660	3#12, 1#12G THWN	480V	PB-600	LCP-660	K35	WET WELL PUMP CONTROL PANEL FEEDER
C36	P-P660	1 MSC (8#12)	480V	LCP-660	P-660	K36	WET WELL SUMP PUMP 1 POWER, OVERTEMP, AND LEAK
C37	P-P661	1 MSC (8#12)	480V	LCP-660	P-661	K37	WET WELL SUMP PUMP 2 POWER, OVERTEMP, AND LEAK
C38	P-PB501	4#2, 1#6G XHHW	208V	XFR-501	PB-501	K38	CHINOOK BLDG LV PANEL FEEDER
C39	P-RH501	4#12, 1#12G THWN	208V+N	PB-501	RH-501	K39	RADIANT HEATER BRANCH
C40	P-RH502	4#12, 1#12G THWN	208V+N	PB-501	RH-502	K40	RADIANT HEATER BRANCH
C41	P-CU500	2#12, 1#12G THWN	208V	PB-501	HC-501	K41	ELECTRICAL ROOM SPLIT UNIT CONDENSER FEEDER
C42	P-FCU500	2#12, 1#12G THWN	208V	HC-501	AC-501	K42	ELECTRICAL ROOM SPLIT UNIT FAN COIL FEEDER
C43	P-MS501	2#12, 1#12G THWN	120V	PB-501	MS-501	K43	EXHAUST FAN 1 MOTOR STARTER FEEDER
C44	P-EF501	2#12, 1#12G THWN	120V	MS-501	EF-501	K44	EXHAUST FAN 1 BRANCH
C45	P-MS502	2#12, 1#12G THWN	120V	PB-501	MS-502	K45	EXHAUST FAN 2 MOTOR STARTER FEEDER
C46	P-EF502	2#12, 1#12G THWN	120V	MS-502	EF-502	K46	EXHAUST FAN 2 BRANCH
C47	P-MS503	2#12, 1#12G THWN	120V	PB-501	MS-503	K47	INLINE DUCT EXHAUST FAN STARTER
C48	P-MD503	2#12, 1#12G THWN	120V	MS-503	MD-503	K48	DUCT MOTORIZED DAMPER BRANCH
C49	P-CH_LTS	2#12, 1#12G THWN	120V	PB-501	LTS	K49	CHINOOK BLDG LIGHTING CKT
C50	P-EL_LTS	2#12, 1#12G THWN	120V	PB-501	LTS	K50	CHINOOK BLDG ELECTRICAL ROOM LIGHTING CKT
C51	P-CH_RCP1	2#12, 1#12G THWN	120V	PB-501	RCP	K51	CHINOOK BLDG RECEPTACLE CKT 1
C52	P-CH_RCP2	2#12, 1#12G THWN	120V	PB-501	RCP	K52	CHINOOK BLDG RECEPTACLE CKT 2
C53	P-EL_RCP	2#12, 1#12G THWN	120V	PB-501	RCP	K53	CHINOOK BLDG ELECTRICAL ROOM RECEPTACLE CKT
C54	P-CR_RCP	2#12, 1#12G THWN	120V	PB-501	RCP	K54	CHINOOK RACEWAY RECEPTACLE CKT
C55	P-SCADA	2#12, 1#12G THWN	120V	PB-501	LCP-090	K55	SCADA CABINET FEEDER
C56	P-DIAL	2#12, 1#12G THWN	120V	PB-501	TEL-090	K56	AUTODIALER BRANCH
C57	P-PB502	(2) 3#1, 1#6G XHHW	240V	XFR-502	PB-502	K57	TAGGING TRAILER 240V PANEL FEEDER
C58	P-TAG1	4#3 XHHW	240V	PB-502	RCP	K58	TAGGING TRAILER 240V, 100A RECEPTACLE - COHO
C59	P-FISHP1	4#6 XHHW	240V	PB-502	RCP	K59	TAGGING TRAILER 240V, 60A FISH PUMP RECEPTACLE - COHO
C60	P-TAG2	4#3 XHHW	240V	PB-502	RCP	K60	TAGGING TRAILER 240V, 100A RECEPTACLE - CHINOOK
C61	P-FISHP2	4#6 XHHW	240V	PB-502	RCP	K61	TAGGING TRAILER 240V, 60A FISH PUMP RECEPTACLE - CHINOOK
C62	P-PB301	4#2, 1#6G XHHW	208V	XFR-300	PB-301	K62	COHO BLDG LV PANEL FEEDER
C63	P-RH301	4#12, 1#12G THWN	208V+N	PB-301	RH-301	K63	RADIANT HEATER BRANCH
C64	P-RH302	4#12, 1#12G THWN	208V+N	PB-301	RH-302	K64	RADIANT HEATER BRANCH
C65	P-MS301	2#12, 1#12G THWN	120V	PB-301	MS-301	K65	EXHAUST FAN 1 MOTOR STARTER FEEDER
C66	P-EF301	2#12, 1#12G THWN	120V	MS-301	EF-301	K66	EXHAUST FAN 1 BRANCH
C67	P-MS302	2#12, 1#12G THWN	120V	PB-301	MS-302	K67	EXHAUST FAN 2 MOTOR STARTER FEEDER
C68	P-EF302	2#12, 1#12G THWN	120V	MS-302	EF-302	K68	EXHAUST FAN 2 BRANCH
C69	P-MS303	2#12, 1#12G THWN	120V	PB-301	MS-303	K69	INLINE DUCT EXHAUST FAN STARTER
C70	P-MD303	2#12, 1#12G THWN	120V	MS-303	MD-303	K70	DUCT MOTORIZED DAMPER BRANCH
C71	P-CO_LTS	2#12, 1#12G THWN	120V	PB-301	LTS	K71	COHO BLDG LIGHTING CKT
C72	P-INT_LT	2#12, 1#12G THWN	120V	PB-301	LTS	K72	INTAKE LIGHTING CKT
C73	P-CO_RCP1	2#12, 1#12G THWN	120V	PB-301	RCP	K73	COHO BLDG RECEPTACLE CKT 1
C74	P-CO_RCP2	2#12, 1#12G THWN	120V	PB-301	RCP	K74	COHO BLDG RECEPTACLE CKT 2
C75	P-VCP280	4#12, 1#12G THWN	120V	PB-301	VCP-280	K75	METER VAULT SUMP PUMP AND CONTROL POWER
C76	P-PB601	4#2, 1#6G XHHW	208V	XFR-600	PB-601	K76	SPAWNING BLDG LV PANEL FEEDER
C77	P-RH601	4#12, 1#12G THWN	208V+N	PB-601	RH-601	K77	RADIANT HEATER BRANCH
C78	P-RH602	4#12, 1#12G THWN	208V+N	PB-601	RH-602	K78	RADIANT HEATER BRANCH
C79	P-MS601	2#12, 1#12G THWN	120V	PB-601	MS-601	K79	INLINE DUCT EXHAUST FAN STARTER
C80	P-MD601	2#12, 1#12G THWN	120V	MS-601	MD-601	K80	DUCT MOTORIZED DAMPER BRANCH
C81	P-MS602	2#12, 1#12G THWN	120V	PB-601	MS-602	K81	EXHAUST FAN MOTOR STARTER FEEDER
C82	P-EF602	2#12, 1#12G THWN	120V	MS-602	EF-602	K82	EXHAUST FAN BRANCH
C83	P-MS600	2#12, 1#12G THWN	208V	PB-601	MS-600	K83	CONVEYOR BELT STARTER FEEDER
C84	P-CB600	2#12, 1#12G THWN	208V	MS-600	CB-600	K84	CONVEYOR BELT BRANCH
C85	P-VCP650	2#12, 1#12G THWN	120V	PB-601	VCP-650	K85	ELECTRO-ANESTHESIA TANK CONTROL PANEL FEEDER
C86	P-TNK650	1 MSC	120V	VCP-650	TNK-650	K86	ELECTRO-ANESTHESIA TANK ELECTRODE CKT
C87	P-HOI650	3#8, 1#10G THWN	120V	MS-653	HOI-650	K87	ELECTRO-ANESTHESIA HYDRAULIC HOIST PUMP BRANCH
C90	P-BATTCH	2#12, 1#12G THWN	120V	PB-601	GEN-100	K90	STANDBY GENERATOR BATTERY CHARGER BRANCH
C91	P-BLKTHR	2#12, 1#12G THWN	208V	PB-601	GEN-100	K91	STANDBY GENERATOR BLOCK HEATER BRANCH
C92	P-BATTHR	2#12, 1#12G THWN	120V	PB-601	GEN-100	K92	STANDBY GENERATOR BATTERY HEATER BRANCH
C93	P-SP_LTS	2#12, 1#12G THWN	120V	PB-601	LTS	K93	SPAWNING BLDG LIGHTING CKT
C94	P-SP_RCP1	2#12, 1#12G THWN	120V	PB-601	RCP	K94	SPAWNING BLDG RECEPTACLE CKT 1
C95	P-SP_RCP2	2#12, 1#12G THWN	120V	PB-601	RCP	K95	SPAWNING BLDG RECEPTACLE CKT 2
C96	P-UVLMP	2#12, 1#12G THWN	120V	PB-601	RCP	K96	UV LAMP BALLAST RECEPTACLE
C97	P-HP_RCP	2#12, 1#12G THWN	120V	PB-601	RCP	K97	ADULT HOLDING PONDS RECEPTACLE CKT

CABLE SCHEDULE							
CABLE INDEX ID	CABLE FIELD ID	SIZE/TYPE	VOLTAGE	FROM	TO	CONDUIT	DESCRIPTION
C98	P-MD301	2#14, 1#14G THWN	120V	MS-301	MD-301	K98	COHO BLDG FAN 1 STARTER DAMPER CONTROL
C99	C-CO_T51	2#14, 1#14G THWN	120V	UH-301	TSTAT1	K99	COHO BLDG UNIT HEATER TSTAT 1 CONTROL
C100	P-MD302	2#14, 1#14G THWN	120V	MS-302	MD-302	K100	COHO BLDG FAN 2 STARTER DAMPER CONTROL
C101	C-CO_T52	2#14, 1#14G THWN	120V	UH COHO	TSTAT2	K101	COHO BLDG UNIT HEATER TSTAT 2 CONTROL LOOP
C102	P-MD501	2#14, 1#14G THWN	120V	MS-501	MD-501	K102	CHINOOK BLDG FAN 1 STARTER DAMPER CONTROL
C103	C-CH_T51	2#14, 1#14G THWN	120V	UH-501	TSTAT1	K103	CHINOOK BLDG UNIT HEATER TSTAT 1 CONTROL
C104	P-MD502	2#14, 1#14G THWN	120V	MS-502	MD-502	K104	CHINOOK BLDG FAN 2 STARTER DAMPER CONTROL
C105	C-CH_T51	2#14, 1#14G THWN	120V	UH CHIN	TSTAT2	K105	CHINOOK BLDG UNIT HEATER TSTAT 2 CONTROL LOOP
C106	P-MD602	2#14, 1#14G THWN	120V	MS-602	MD-602	K106	SPAWNING BLDG FAN STARTER DAMPER CONTROL
C107	C-SP_T51	2#14, 1#14G THWN	120V	UH-601	TSTAT	K107	SPAWNING BLDG UNIT HEATER TSTAT CONTROL
C108	C-LSH201	2#14, 1#14G THWN	24 VDC	LCP-090	LSH-201	K108	METER VAULT FLOOD LEVEL ALARM SWITCH
C109	C-VCP200	2#14, 1#14G THWN	24 VDC	LCP-090	VCP-200	K109	TRAVELING SCREEN CONTROL PANEL FAULT
C110	C-LSL300	2#14, 1#14G THWN	24 VDC	LCP-090	LSL-300	K110	COHO INCUBATOR HEAD TANK LOW LEVEL SWITCH
C111	C-LSL500	2#14, 1#14G THWN	24 VDC	LCP-090	LSL-500	K111	CHINOOK INCUBATOR HEAD TANK A LOW LEVEL SWITCH
C112	C-LSL501	2#14, 1#14G THWN	24 VDC	LCP-090	LSL-501	K112	CHINOOK INCUBATOR HEAD TANK B LOW LEVEL SWITCH
C113	C-LSL502	2#14, 1#14G THWN	24 VDC	LCP-090	LSL-502	K113	CHINOOK INCUBATOR HEAD TANK C LOW LEVEL SWITCH
C114	C-LSL503	2#14, 1#14G THWN	24 VDC	LCP-090	LSL-503	K114	CHINOOK INCUBATOR HEAD TANK D LOW LEVEL SWITCH
C115	C-LSL660	2#14, 1#14G THWN	120V	LCP-660	LSL-660	K115	WET WELL PUMPS OFF LEVEL SWITCH
C116	C-LSH660	2#14, 1#14G THWN	120V	LCP-660	LSH-660	K115	WET WELL LEAD PUMP LEVEL SWITCH
C117	C-LSH661	2#14, 1#14G THWN	120V	LCP-660	LSH-661	K115	WET WELL LAG PUMP LEVEL SWITCH
C118	C-LSH662	2#14, 1#14G THWN	120V	LCP-090	LSH-662	K116	WET WELL ALARM HIGH LEVEL SWITCH
C119	C-P660FL	2#14, 1#14G THWN	24 VDC	LCP-090	LCP-660	K117	WET WELL PUMP 1 FAULT
C120	C-P661FL	2#14 THWN	24 VDC	LCP-090	LCP-660	K117	WET WELL PUMP 2 FAULT
C121	C-HSS651	1 MSC	24 VDC	VCP-650	HSS-651	K118	ELECTRO-ANESTHESIA FOOT PEDAL SAFETY SWITCH
C122	C-ZS200	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-200	K119	METER VAULT INTRUSION SWITCH
C123	C-ZS300	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-300	K120	COHO BLDG ENTRY DOOR INTRUSION SWITCH
C124	C-ZS301	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-301	K121	COHO BLDG SOUTH OVERHEAD DOOR INTRUSION SWITCH
C125	C-ZS302	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-302	K122	COHO BLDG NORTHWEST OVERHEAD DOOR INTRUSION SWITCH
C126	C-ZS303	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-303	K123	COHO BLDG NORTHEAST OVERHEAD DOOR INTRUSION SWITCH
C127	C-ZS500	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-500	K124	ELECTRICAL ROOM DOOR INTRUSION SWITCH
C128	C-ZS501	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-501	K125	CHINOOK BLDG ENTRY DOORS INTRUSION SWITCH
C129	C-ZS502	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-502	K126	CHINOOK BLDG SOUTHWEST OVERHEAD DOOR INTRUSION SWITCH
C130	C-ZS503	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-503	K127	CHINOOK BLDG NORTHEAST OVERHEAD DOOR INTRUSION SWITCH
C131	C-ZS504	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-504	K128	CHINOOK BLDG SOUTEAST OVERHEAD DOOR INTRUSION SWITCH
C132	C-ZS600	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-600	K129	SPAWNING BLDG EAST ENTRY DOOR INTRUSION SWITCH
C133	C-ZS601	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-601	K130	SPAWNING BLDG WEST ENTRY DOOR INTRUSION SWITCH
C134	C-ZS602	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-602	K131	SPAWNING BLDG NORTH OVERHEAD DOOR INTRUSION SWITCH
C135	C-ZS603	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-603	K132	SPAWNING BLDG SOUTH OVERHEAD DOOR INTRUSION SWITCH
C136	C-DIAL	1-13#14 CONTROL CABLE	24 VDC	LCP-090	TEL-090	K133	AUTODIALER ALARM CKTS
C142	C-SIREN	4#14, 1#14G THWN	24 VDC	LCP-090	LCS-090	K134	ALARM SIREN CONTROL STATION SILENCE/ANNUNCIATE CONTROL
C143	S-LE200	1-TSP#16	4-20 mA DC	VCP-200	LE-200	K135	FALL CREEK HEAD LEVEL PRESSURE TRANSDUCER
C144	S-LE201	1-TSP#16	4-20 mA DC	VCP-200	LE-201	K136	INTAKE LEVEL BEHIND TRAVELING SCREEN PRESSURE TRANSDUCER
C145	S-CRKLVL	1-TSP#16	4-20 mA DC	LCP-090	VCP-200	K137	FALL CREEK HEAD LEVEL
C146	S-SCRLVL	1-TSP#16	4-20 mA DC	LCP-090	VCP-200	K137	INTAKE LEVEL BEHIND TRAVELING SCREEN
C147	S-FE200	1 MSC	4-20 mA DC	FIT-200	FE-200	K138	COHO BLDG RW SUPPLY FLOWMETER
C148	S-FE201	1 MSC	4-20 mA DC	FIT-201	FE-201	K139	ADULT HOLDING PONDS RW SUPPLY FLOWMETER
C149	S-FE202	1 MSC	4-20 mA DC	FIT-202	FE-202	K140	CHINOOK RACEWAYS RW SUPPLY FLOWMETER
C150	S-FE203	1 MSC	4-20 mA DC	FIT-203	FE-203	K141	CHINOOK BLDG RW SUPPLY FLOWMETER
C151	S-FIT200	1-TSP#16	4-20 mA DC	LCP-090	FIT-200	K142	COHO BLDG RW SUPPLY FLOW
C152	S-FIT201	1-TSP#16	4-20 mA DC	LCP-090	FIT-201	K142	ADULT HOLDING PONDS RW SUPPLY FLOW
C153	S-FIT202	1-TSP#16	4-20 mA DC	LCP-090	FIT-202	K142	CHINOOK RACEWAYS RW SUPPLY FLOW
C154	S-FIT203	1-TSP#16	4-20 mA DC	LCP-090	FIT-203	K142	CHINOOK BLDG RW SUPPLY FLOW
C155	ETH-GEN	1-CAT6 ETHERNET	COMM	LCP-090	GEN-100	K143	GENSET COMM CKT
C156	ETH-MTS	1-CAT6 ETHERNET	COMM	LCP-090	MTS-500	K144	TRANSFER SWITCH COMM CKT
C157	C-ZS304	2#14, 1#14G THWN	24 VDC	LCP-090	ZS-304	K145	COHO BLDG WEST OVERHEAD DOOR INTRUSION SWITCH
C158	COAX-ANT	1 MSC (COAX)	COMM	TEL-090	ANTENNA	K147	AUTODIALER COAX ANTENNA CIRCUIT
C159	P-EF303	2#12, 1#12G THWN	120V	MS-303	EF-303	K148	COHO INLINE DUCT EXHAUST FAN BRANCH
C160	C-OS303	2#12, 1#12G THWN	120V	MS-303	OS-303	K149	COHO DUCT FAN OCCUPANCY SENSOR CIRCUIT
C161	P-EF503	2#12, 1#12G THWN	120V	MS-503	EF-503	K150	CHINOOK INLINE DUCT EXHAUST FAN BRANCH
C162	C-OS503	2#12, 1#12G THWN	120V	MS-503	OS-503	K151	CHINOOK DUCT FAN OCCUPANCY SENSOR CIRCUIT
C163	P-EF601	2#12, 1#12G THWN	120V	MS-601	EF-601	K152	SPAWNING BLDG INLINE DUCT EXHAUST FAN BRANCH
C164	C-OS601	2#12, 1#12G THWN	120V	MS-601	OS-601	K153	SPAWNING BLDG DUCT FAN OCCUPANCY SENSOR CIRCUIT
C165	P-EF200	2#12, 1#12G THWN	120V	PB-301	EF-200	K154	METER VAULT EXHAUST FAN POWER
C166	P-P280	1 MSC	120V	VCP-280	P-280	K155	METER VAULT SUMP PUMP BRANCH CIRCUIT AND PROTECTION
C167	C-LSL280	1 MSC	120V	VCP-280	LSL-280	K156	METER VAULT SUMP LOW LEVEL SWITCH
C168	C-LSH280	1 MSC	120V	VCP-280	LSH-280	K156	METER VAULT SUMP HIGH LEVEL SWITCH
C169	C-LSH281	1 MSC	120V	VCP-280	LSH-281	K156	METER VAULT FLOOD LEVEL SWITCH
C170	C-CODIM	2#14, 1#14 THWN	120V	PB-301	CO-DIM	K157	COHO BLDG SKY LIGHT DIMMER CIRCUIT
C171	C-CHDIM	2#14, 1#14 THWN	120V	PB-501	CH-DIM	K158	CHINOOK BLDG SKY LIGHT DIMMER CIRCUIT
C172	C-SPDIM	2#14, 1#14 THWN	120V	PB-601	SP-DIM	K159	SPAWNING BLDG SKY LIGHT DIMMER CIRCUIT
C173	C-GEN	2#14, 1#14 THWN	24 VDC	MTS-500	GEN-100	K160	GENSET ENGINE START CIRCUIT
C174	C-ESTOP	2#14, 1#14 THWN	24 VDC	GEN-100	E-STOP	K161	GENSET REMOTE E-STOP CIRCUIT
C175	P-CRW651	1 MSC (12#16)	480V	TB-651	CRW-651	-	CROWDER CABLE REEL TO TERMINAL BOX
C176	P-HOI651	3#12, 1#12G THWN	480V	MS-650	TB-651	K162	CROWDER LIFT BRANCH
C177	P-DRV651	3#12, 1#12G THWN	480V	MS-651	TB-651	K163	CROWDER DRIVE BRANCH
C178	P-MS650	3#12, 1#12G THWN	480V	PB-600	MS-650	K164	CROWDER LIFT FEEDER
C179	P-MS651	3#12, 1#12G THWN	480V	PB-600	MS-651	K165	CROWDER DRIVE FEEDER
C180	C-HOI651	1-7#14 CONTROL CABLE	120V	MS-650	CS-650	K166	CROWDER LIFT CONTROL INTERCONNECTION
C181	C-DRV651	1-7#14 CONTROL CABLE	120V	MS-651	CS-650	K167	CROWDER DRIVE CONTROL INTERCONNECTION
C182	C-ZS650	2#14, 1#14 THWN	120V	MS-650	TB-651	K168	CROWDER LOWER LIMIT SWITCH
C183	C-ZS651	2#14, 1#14 THWN	120V	MS-650	TB-651	K169	CROWDER UPPER LIMIT SWITCH
C184	C-ZS652	2#14, 1#14 THWN	120V	MS-651	ZS-652	K170	CROWDER DOWNSTREAM LIMIT SWITCH
C185	C-ZS653	2#14, 1#14 THWN	120V	MS-651	ZS-653	K171	CROWDER UPSTREAM LIMIT SWITCH
C186	C-MS652	4#14, 1#14 THWN	120V	MS-652	CS-650	K172	FILL PUMP CONTROL INTERCONNECTION
C187	P-MS653	3#8, 1#10G THWN	120V	PB-601	MS-653	K173	ELECTRO-ANESTHESIA TANK HOIST STARTER FEEDER
C188	C-MS653	4#14, 1#14 THWN	120V	MS-653	CS-650	K174	ELECTRO-ANESTHESIA TANK HOIST CONTROL INTERCONNECTION
C189	P-L620C1	2#12, 1#12G THWN	208V	PB-301	CO RCP 1	K175	COHO WASTE DRAIN PUMP L6-20R RECEPTACLE - INDOOR
C190	P-L620C2	2#12, 1#12G THWN	208V	PB-301	CO RCP 2	K176	COHO WASTE DRAIN PUMP L6-20R RECEPTACLE - OUTDOOR
C191	P-L620H1	2#10, 1#10G THWN	208V	PB-501	CH RCP 1	K177	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 1 & 2
C192	P-L620H2	2#10, 1#10G THWN	208V	PB-501	CH RCP 2	K178	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 3 & 4
C193	P-L620H3	2#10, 1#10G THWN	208V	PB-501	CH RCP 3	K179	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 5 & 6
C194	P-L620H4	2#10, 1#10G THWN	208V	PB-501	CH RCP 4	K180	CHINOOK WASTE DRAIN PUMP L6-20R RECEPTACLE - RACEWAYS 7 & 8
C195	P-L620S1	2#12, 1#12G THWN	208V	PB-601	SP RCP 1	K181	HOLDING PONDS WASTE DRAIN PUMP L6-20R RECEPTACLE

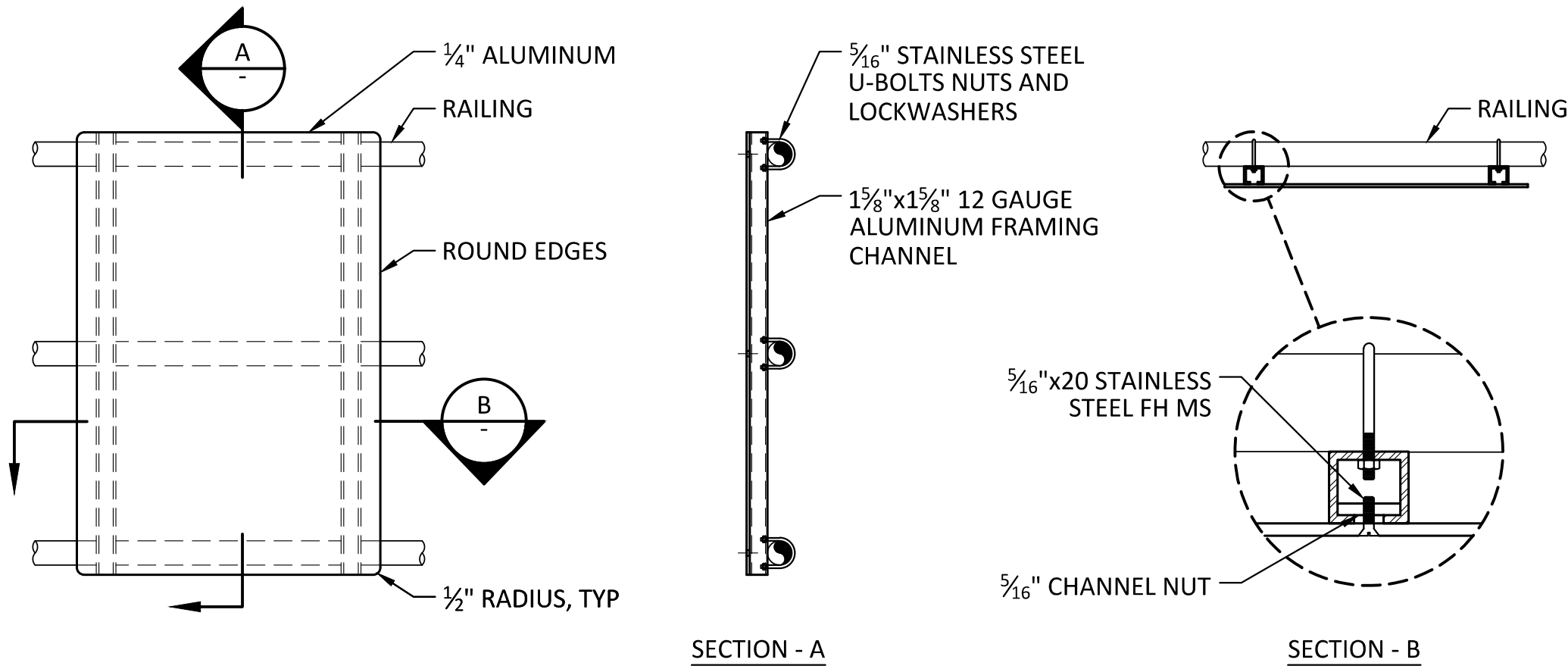


- NOTES:
- COORDINATE SIZE AND LOCATION OF CONCRETE EQUIPMENT PAD WITH EQUIPMENT LAYOUT PRIOR TO FABRICATION AND PLACEMENT.
 - CONCRETE EQUIPMENT PADS SHALL BE INSTALLED FLAT AND LEVEL.

- KEY NOTES:
- A 6" MIN, TYP UNO.
 - B EQUIPMENT.
 - C CONCRETE ANCHOR, TYP.
 - D FINISH GRADE OR PAVEMENT.
 - E #5 CONT AROUND PERIMETER.
 - F PROVIDE MIN 12" COMPACTED GRANULAR FILL, EXTEND MIN 12" BEYOND PAD, TYP ALL AROUND.
 - G #5@12" EW AT MID-DEPTH OF SLAB.
 - H THICKENED EDGE ALL AROUND.
 - I 3/4" CHAMFER, TYP



- NOTES:
- A. ALL CHANNEL CONNECTIONS SHALL BE SECURED USING CHANNEL NUTS AND HARDWARE BY CHANNEL MANUFACTURER.



- NOTES:
- ALL HARDWARE SHALL BE STAINLESS STEEL. USE WASHERS AND SPLIT-LOCK WASHERS ON ALL NUTS AND BOLTS.
 - DIMENSIONS SHALL BE AS REQUIRED FOR EQUIPMENT TO BE MOUNTED. EDGE OF MOUNTING PLATE SHALL EXTEND A MINIMUM OF 2 INCHES EACH SIDE OF THE MOUNTED EQUIPMENT.
 - THIS DETAIL SHALL BE USED FOR MOUNTING EQUIPMENT AND JUNCTION BOXES WEIGHING LESS THAN 50 LBS ON RAILING WHETHER DETAIL IS CALLED OUT OR NOT. EQUIPMENT MOUNTING SHALL NOT REDUCE THE WIDTH OF A WALKWAY TO LESS THAN 3 FT.

EXTERIOR CONCRETE EQUIPMENT PAD

SCALE: NTS

E003

FREE STANDING EQUIPMENT RACK CONSTRUCTION

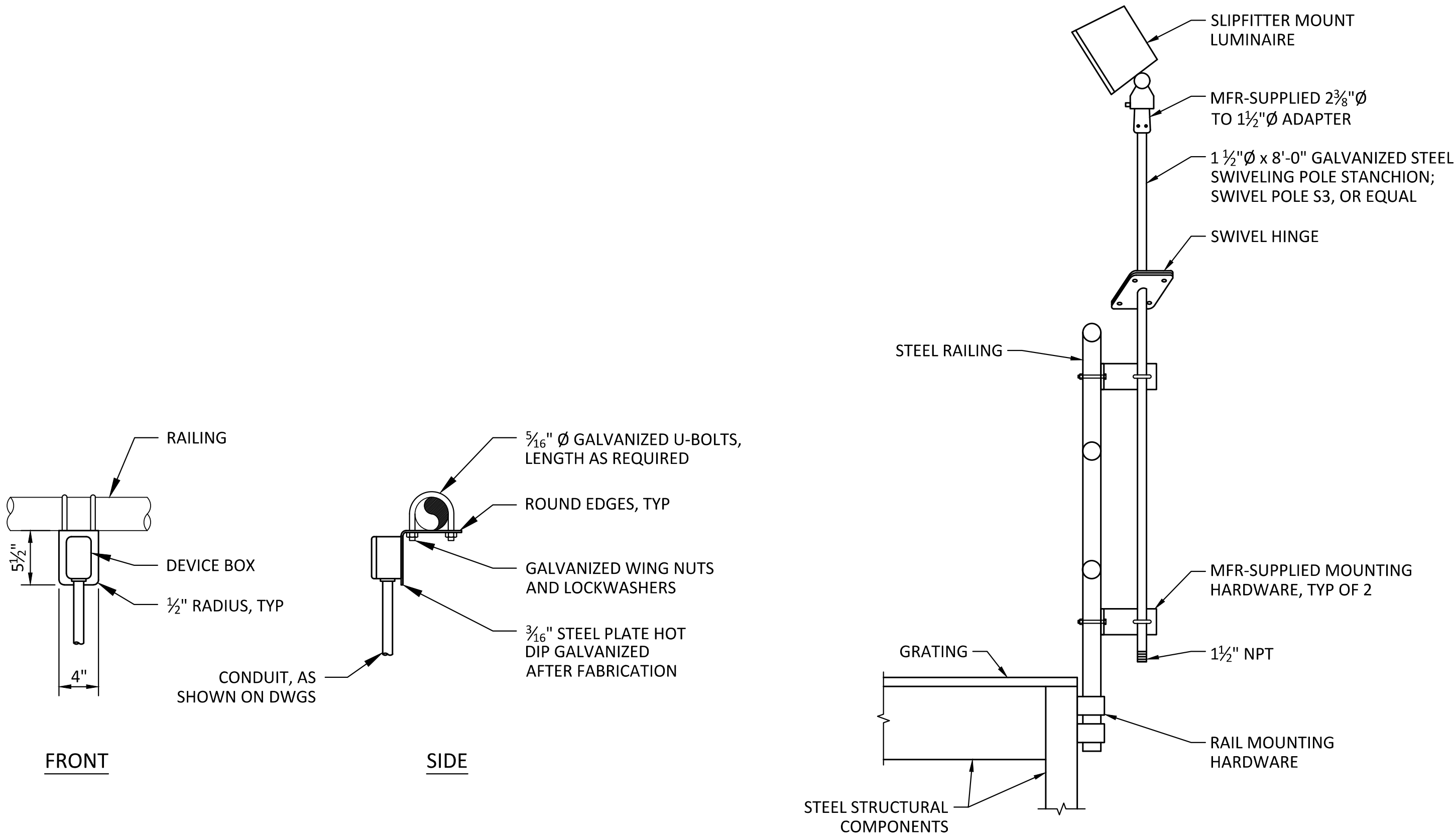
SCALE: NTS

E006

DEVICE MOUNTING, RAILING MOUNTED EQUIP SUPPORT

SCALE: NTS

E016



DEVICE MOUNTING, AT RAILING; UNDERHUNG-FORWARD

SCALE: NTS

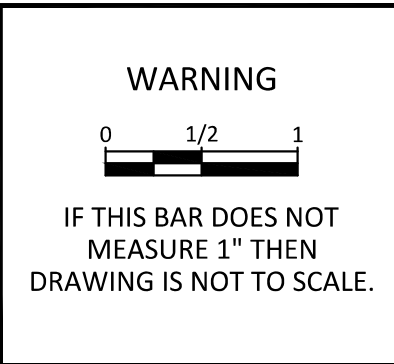
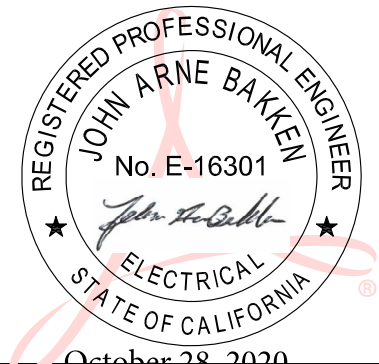
E019

STANCHION MOUNTED LUMINAIRE; AFFIXED TO RAILING

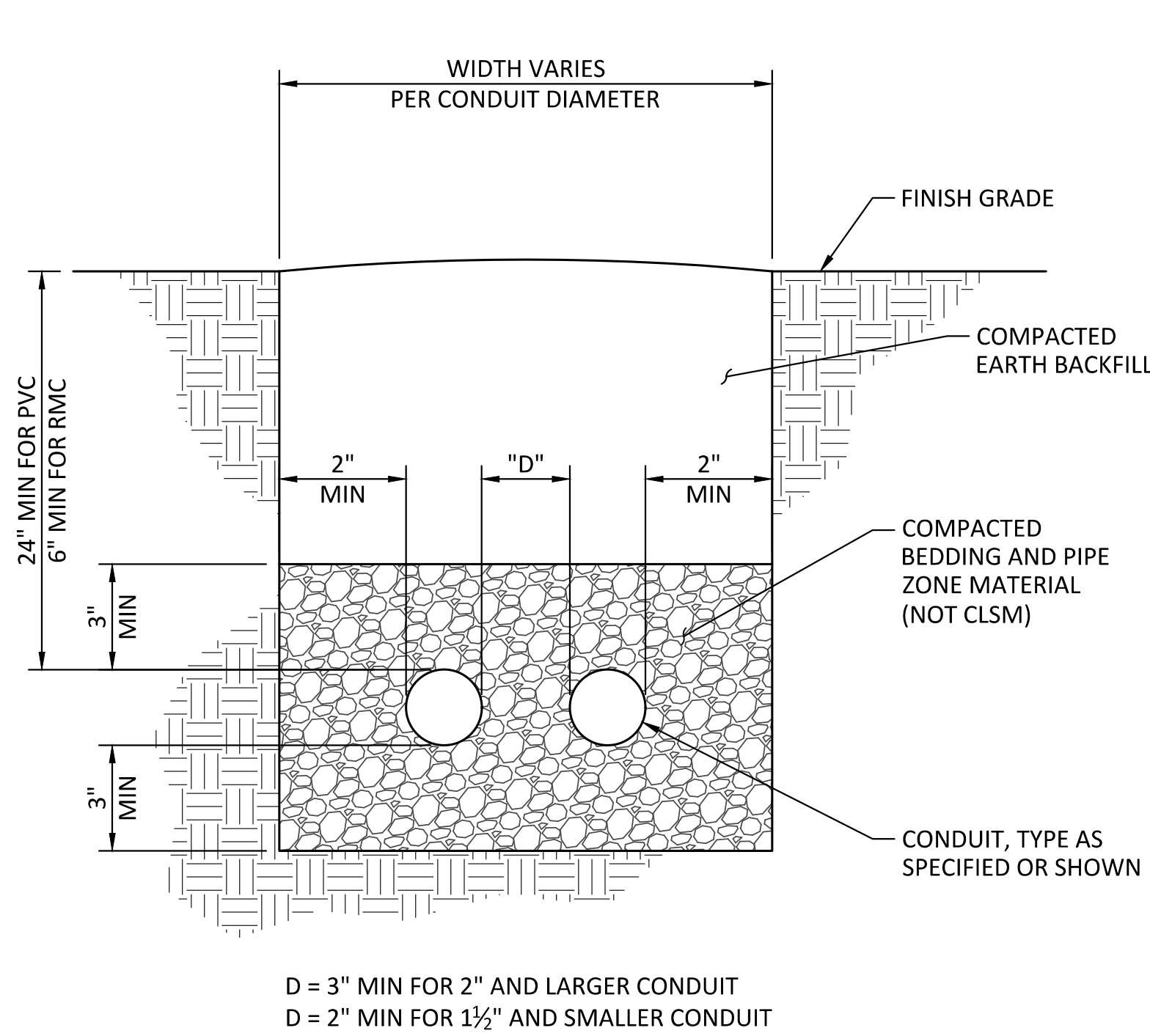
SCALE: NTS

E147

REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



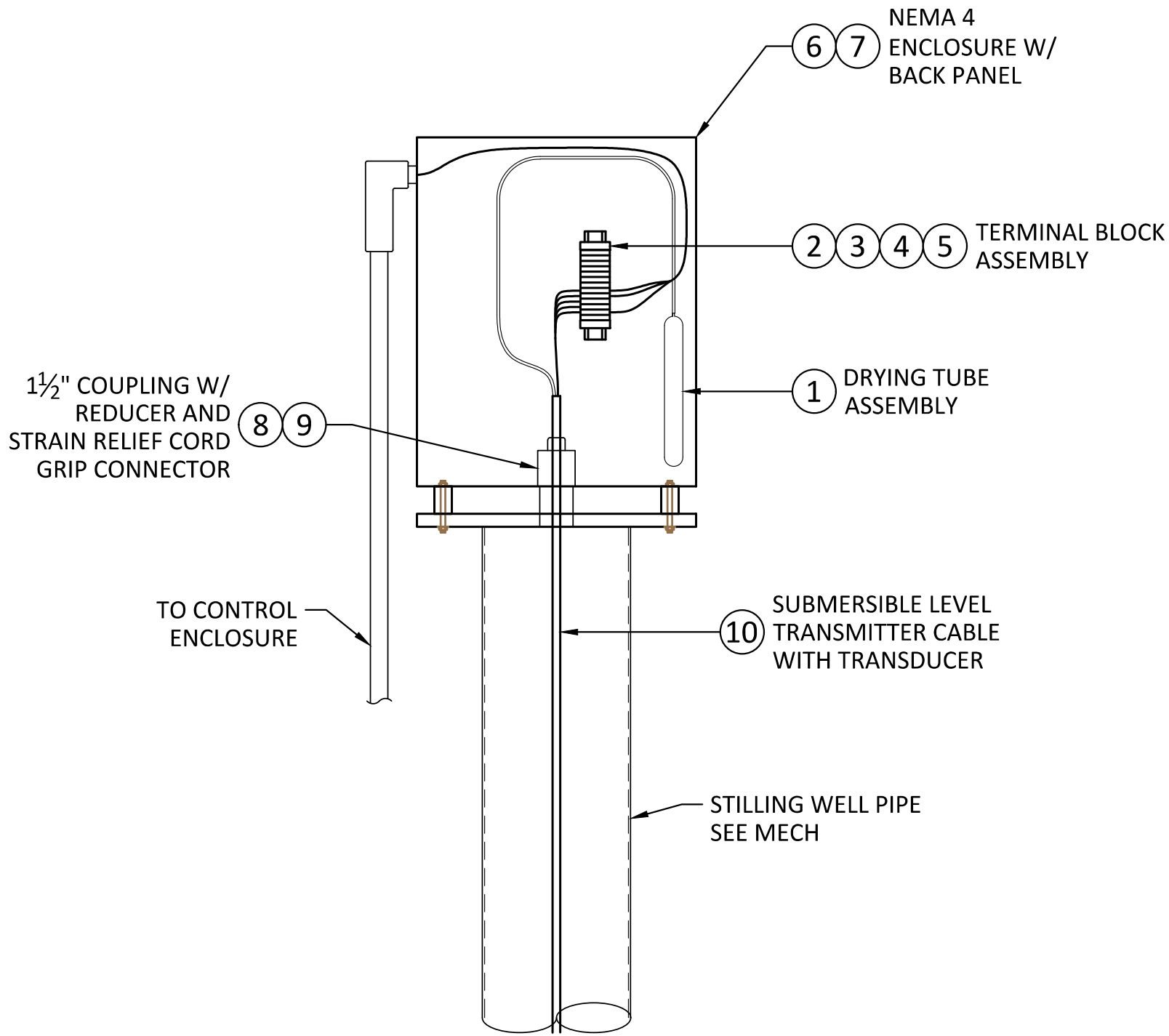
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>M. SKELTON</u>	DRAWING GE009
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
ELECTRICAL STANDARD DETAILS 1		CHECKED <u>J. BAKKEN</u>	
		PROJECT DATE <u>10/28/20</u>	



TRENCH AND CONDUIT PLACEMENT; DIRECT-BURY

SCALE: NTS

E118



NOTES:

- SEE MECHANICAL FOR STILLING WELL PIPE INSTALLATION AND DETAILS.
- SUPPORT LEVEL SENSOR CABLES WITH MANUFACTURER PROVIDED STRAIN RELIEF/PRESSURE CONNECTORS.
- COIL EXTRA CABLE FOR SENSOR IN ENCLOSURE.
- ENSURE STILLING WELL, ENCLOSURE, AND CONDUITS ARE BONDED TO GROUND ACCORDING TO NEC. USE GROUNDING BUSHINGS ON CONDUIT ENTRY TO ENCLOSURE.
- ATTACH DRYING TUBE ASSEMBLY TO LEVEL SENSOR CABLE VENT TUBE.
- PROVIDE MATERIALS FROM LIST BELOW, OR APPROVED EQUAL.

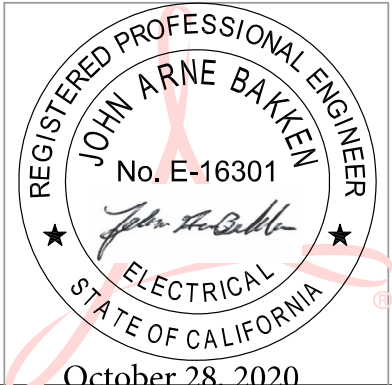
MATERIAL LIST				
ITEM	QTY	DESCRIPTION	MANUFACTURER	PART NO.
1	1	DRYING TUBE ASSEMBLY	KELLER AMERICA	N.A.
2	8	UNIVERSAL TERMINAL BLOCKS, UKFN, 30A	PHOENIX	3004362
3	2	END COVER FOR UK4	PHOENIX	3003020
4	2	END BRACKETS, TYPE E/UK	PHOENIX	1201442
5	1	DIN RAIL STYLE MOUNTING TRACK	PHOENIX	1201730
6	1	NEMA 4 ENCLOSURE 10"H x 6"W x 8" D	HOFFMAN	
7	1	BACK PANEL FOR 10"H x 6"W	HOFFMAN	
8	1	1/2" NPT PIPE CONDUIT FITTING/PRESSURE RELIEF CORD GRIP CONNECTOR	KELLER AMERICA	N.A.
9	1	1-1/2" COUPLING WITH 1-1/2" TO 1/2" REDUCER		
10	1	SUBMERSIBLE LEVEL TRANSMITTER CABLE WITH TRANSDUCER	KELLER AMERICA	0507.02007.050110.54

SUBMERSIBLE LEVEL SENSOR TERMINAL BOX - DETAIL

SCALE: NTS

E900

0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



WARNING

0 1/2 1

IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>M. SKELTON</u>	DRAWING GE010
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
ELECTRICAL STANDARD DETAILS 2		CHECKED <u>J. BAKKEN</u>	
		PROJECT DATE <u>10/28/20</u>	