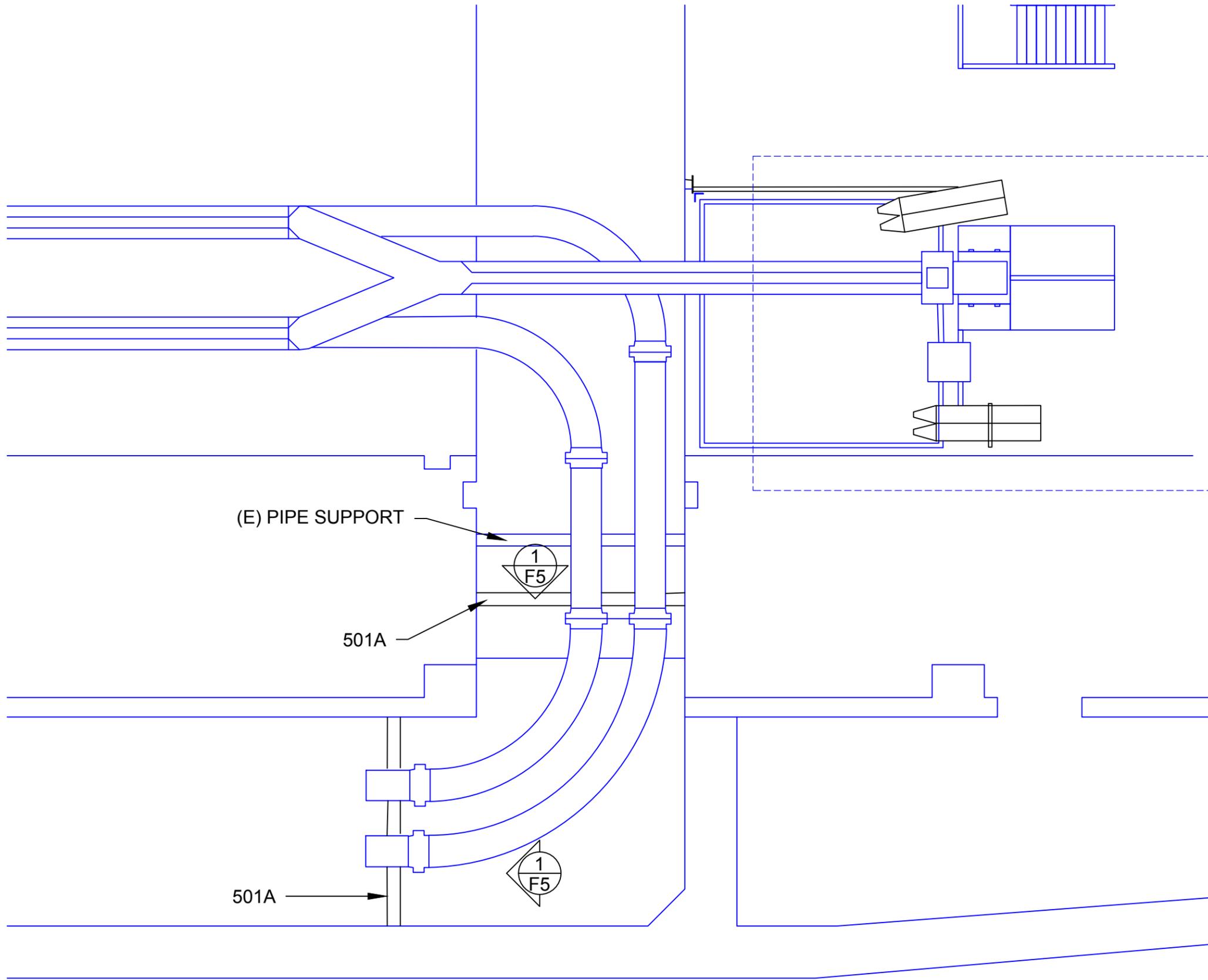


# BONNEVILLE LOCK AND DAM ADULT FISH FACILITY IMPROVEMENTS

## OBSERVATION BOXES

SUBMITTAL 01/28/13

 **W**RIGHT   
 **M**ANUFACTURING, LLC  
7474 S.E. Johnson Creek Blvd.  
Portland, OR 97206  
PH. 503-774-9689 FAX 503-774-9691



REF. DRAWING F2

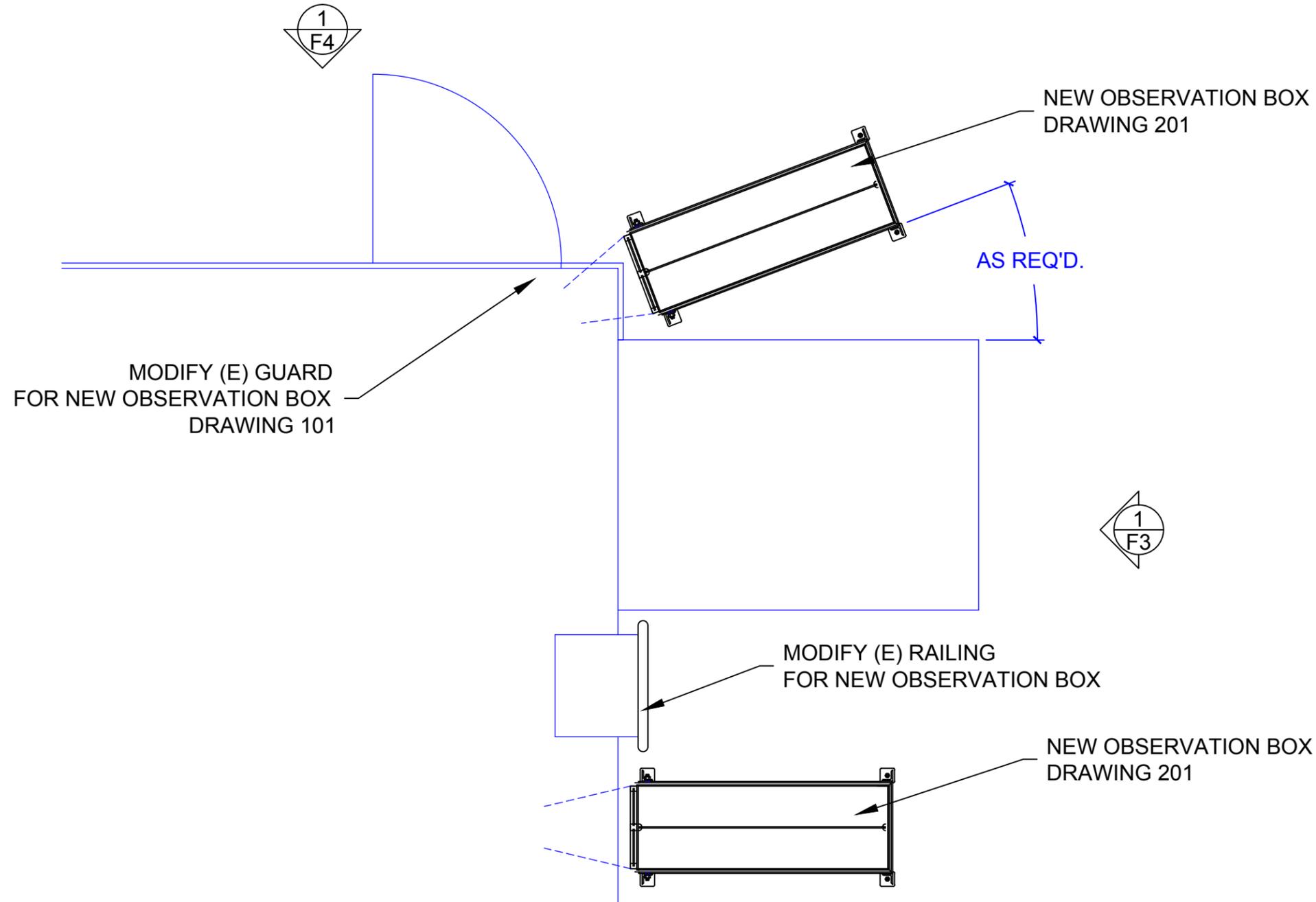
(E) PIPE SUPPORT

501A

501A

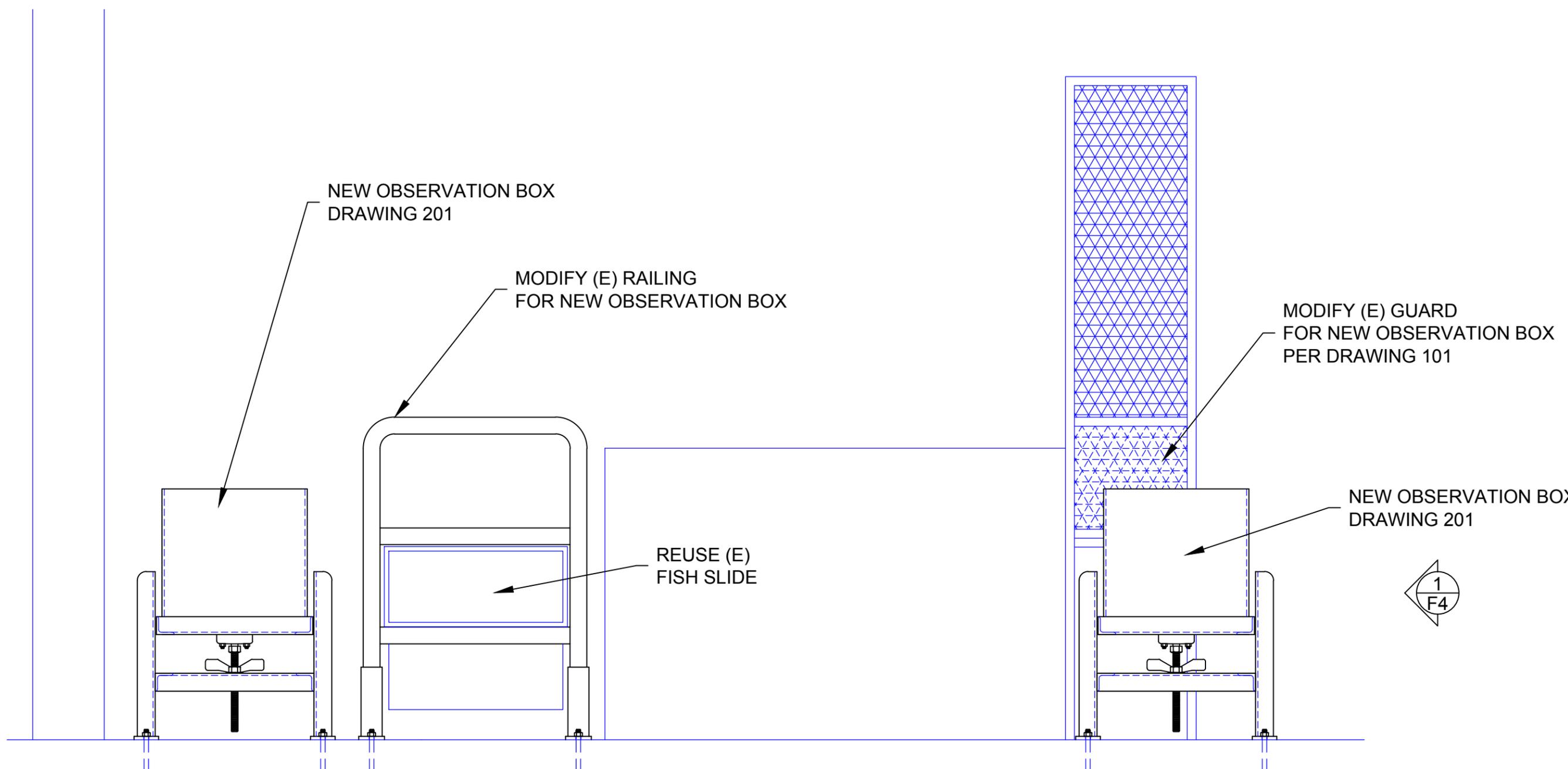
**1** MECHANICAL PLAN  
**F1** Scale 1/2" = 1' 0"

REVISION	DATE	DESCRIPTION
	01-28-13	ISSUED FOR APPROVAL
WRIGHT MANUFACTURING, LLC 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM:	PLAN	REF. M-001
PROJECT:	BONNEVILLE DAM ADULT FISH FACILITY	JOB NO. XXX-13 DRAWING NO. <b>F1</b> REV NO.



1
F2
**ENLARGED PLAN**  
 Scale 1/2" = 1' 0"

▲	01-28-13	ISSUED FOR APPROVAL
REVISION	DATE	DESCRIPTION
<b>WRIGHT MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM: OBSERVATION BOXES		REF. M-001
PROJECT: BONNEVILLE DAM ADULT FISH FACILITY	JOB NO. XXX-13 DRAWING NO. <b>F2</b>	REV NO. <span style="border: 1px solid black; border-radius: 50%; padding: 2px;">0</span>



1 ELEVATION  
F3 Scale 1" = 1' 0"

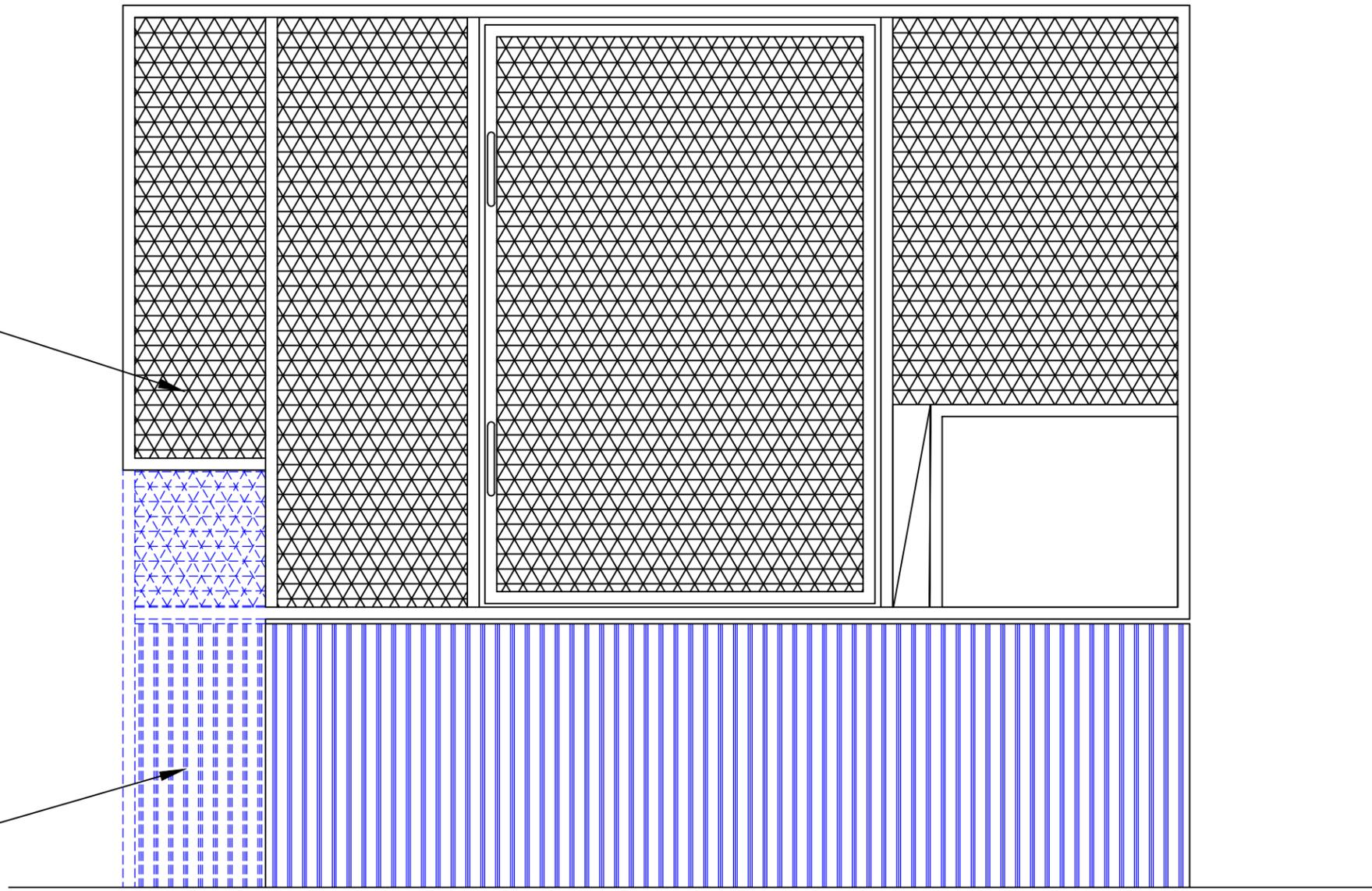
INSTALL OBSERVATION BOX WITH (4) 1/2" Ø SIMPSON TITEN-HD X 0' 4" LONG

REVISION	DATE	DESCRIPTION
1	01-28-13	ISSUED FOR APPROVAL
 <b>WRIGHT MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE CONTRACTOR: CLOUD		
ITEM:	OBSERVATION BOXES	REF. M-001
PROJECT:	BONNEVILLE DAM ADULT FISH FACILITY	JOB NO. XXX-13 DRAWING NO. <b>F3</b> REV NO.



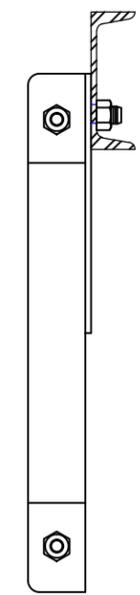
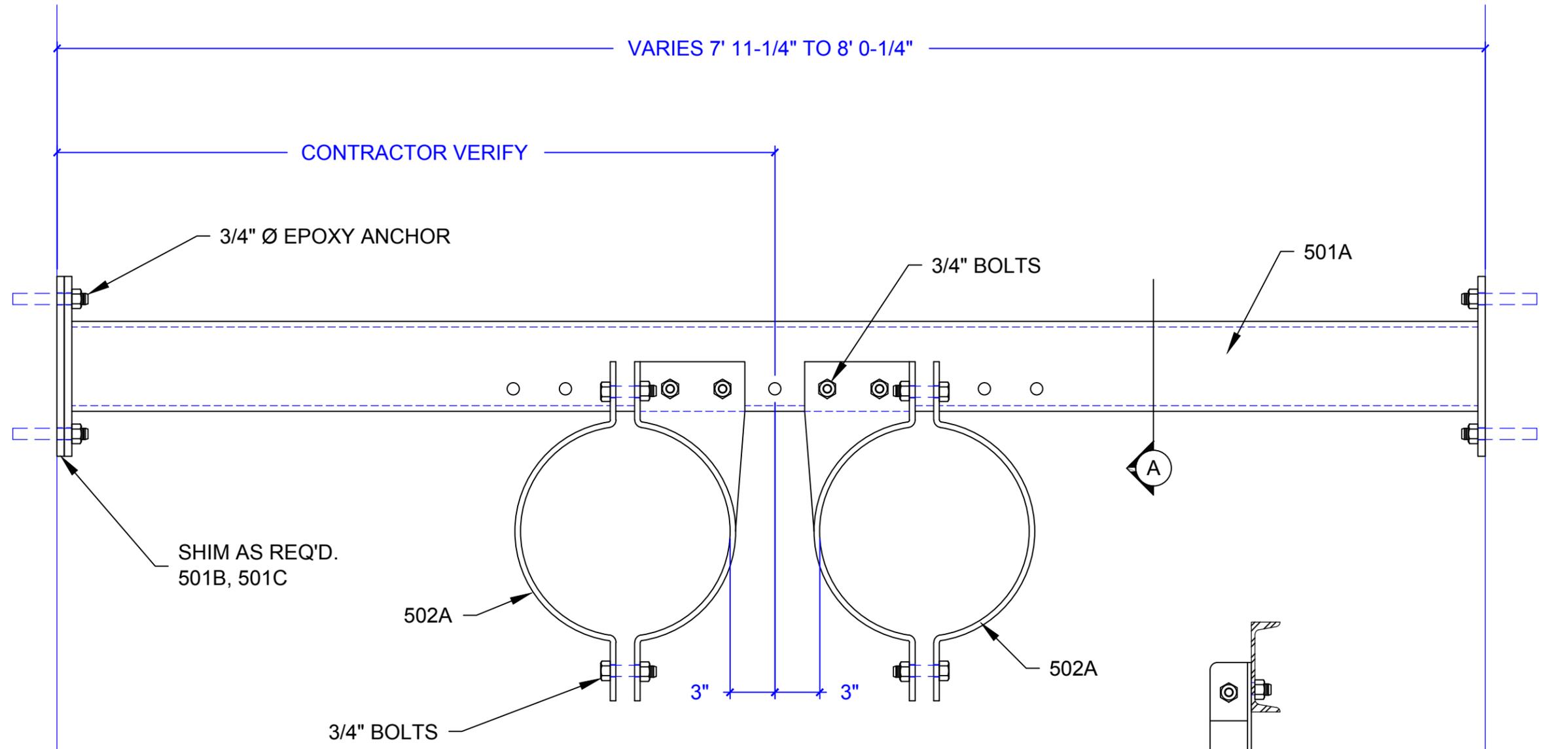
REWORK (E) GUARD  
PER DRAWING 101

REMOVE SECTION  
OF (E) BAR GRATE



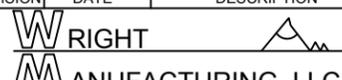
1 ELEVATION  
F4 Scale 1" = 1' 0"

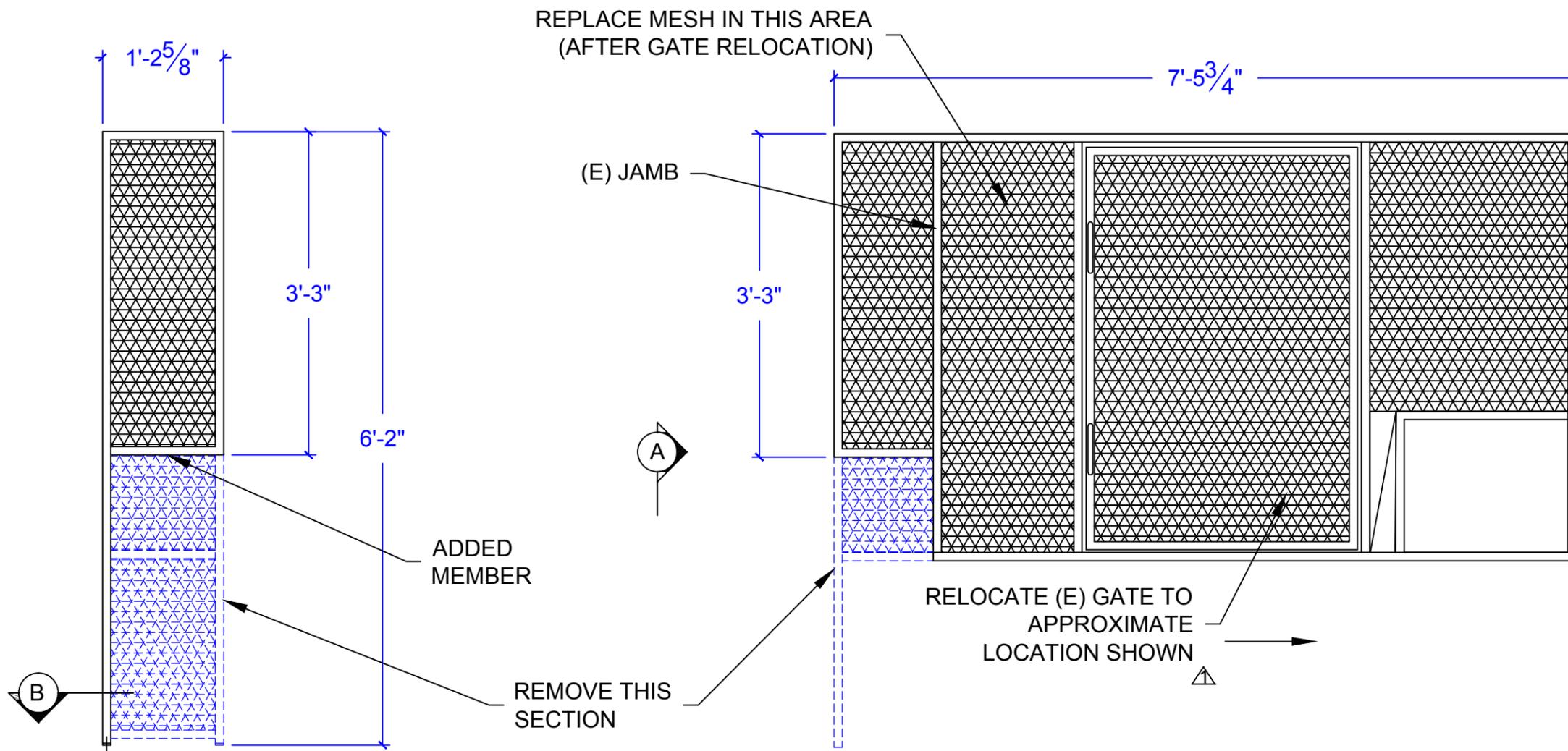
▲	01-29-13	GATE MODIFICATION
▲	01-28-13	ISSUED FOR APPROVAL
REVISION	DATE	DESCRIPTION
<b>WRIGHT</b> <b>MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM: GUARD		REF. M-001
PROJECT: BONNEVILLE DAM ADULT FISH FACILITY	JOB NO. XXX-13	DRAWING NO. <b>F4</b> REV NO. 



SECTION "A"

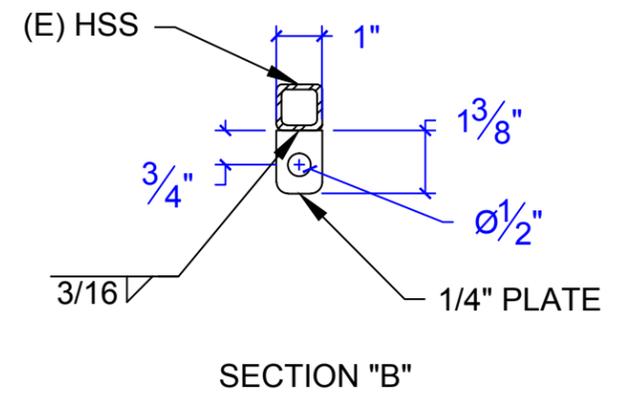
**1** PIPE SUPPORT  
**F5** Scale 1-1/2" = 1' 0"

REVISION	DATE	DESCRIPTION
△	01-28-13	ISSUED FOR APPROVAL
 <b>WRIGHT</b> <b>MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE CONTRACTOR: CLOUD		
ITEM: PIPE SUPPORT		REF. M-001
PROJECT: BONNEVILLE DAM ADULT FISH FACILITY	JOB NO. XXX-13 <b>F5</b>	DRAWING NO. <b>F5</b>
		REV NO. 0



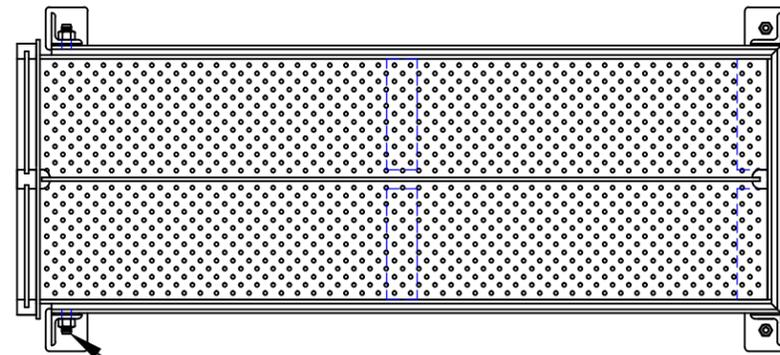
**GUARD MODIFICATION**  
Scale 3/4" = 1' 0"

SECTION "A"

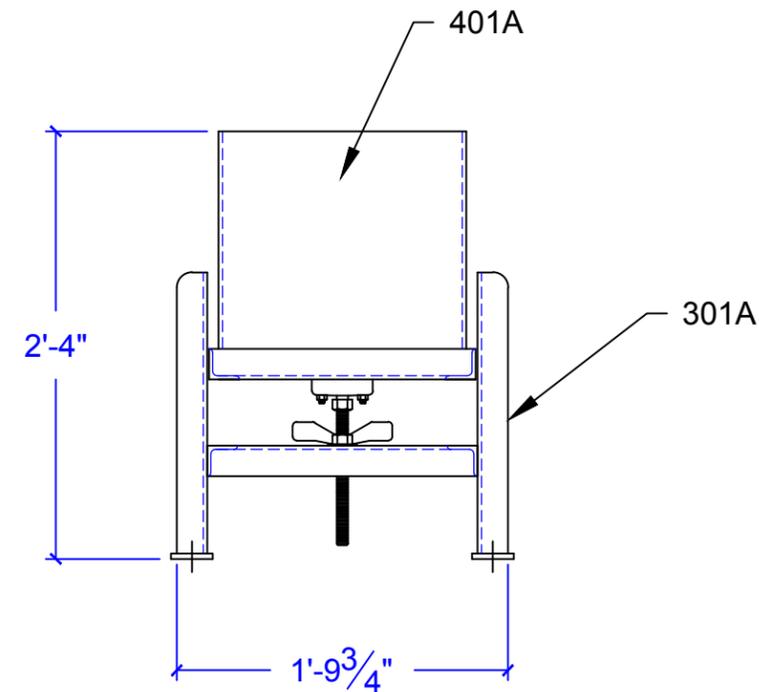
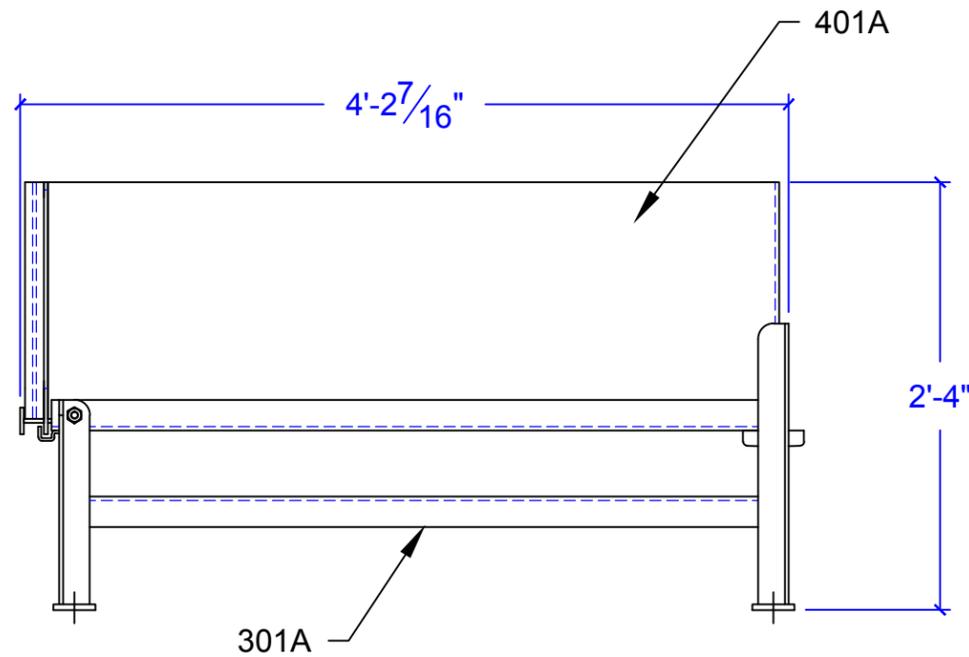


SECTION "B"

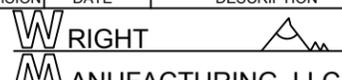
HOLES	1/2" Ø (U.O.N.)	WELDS	E70XX
FINISH:			
MATERIAL:	A36 (U.O.N.), HSS=A500 GR. B		
REVISION	DATE	DESCRIPTION	
△	01-29-13	GATE MODIFICATION	
△	01-28-13	ISSUED FOR APPROVAL	
7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD			
ITEM:	GUARD MODIFICATIONS	REF. M-001	
PROJECT:	BONNEVILLE DAM ADULT FISH FACILITY	DRAWING NO.	101
JOB NO. XXX-13		REV NO.	1



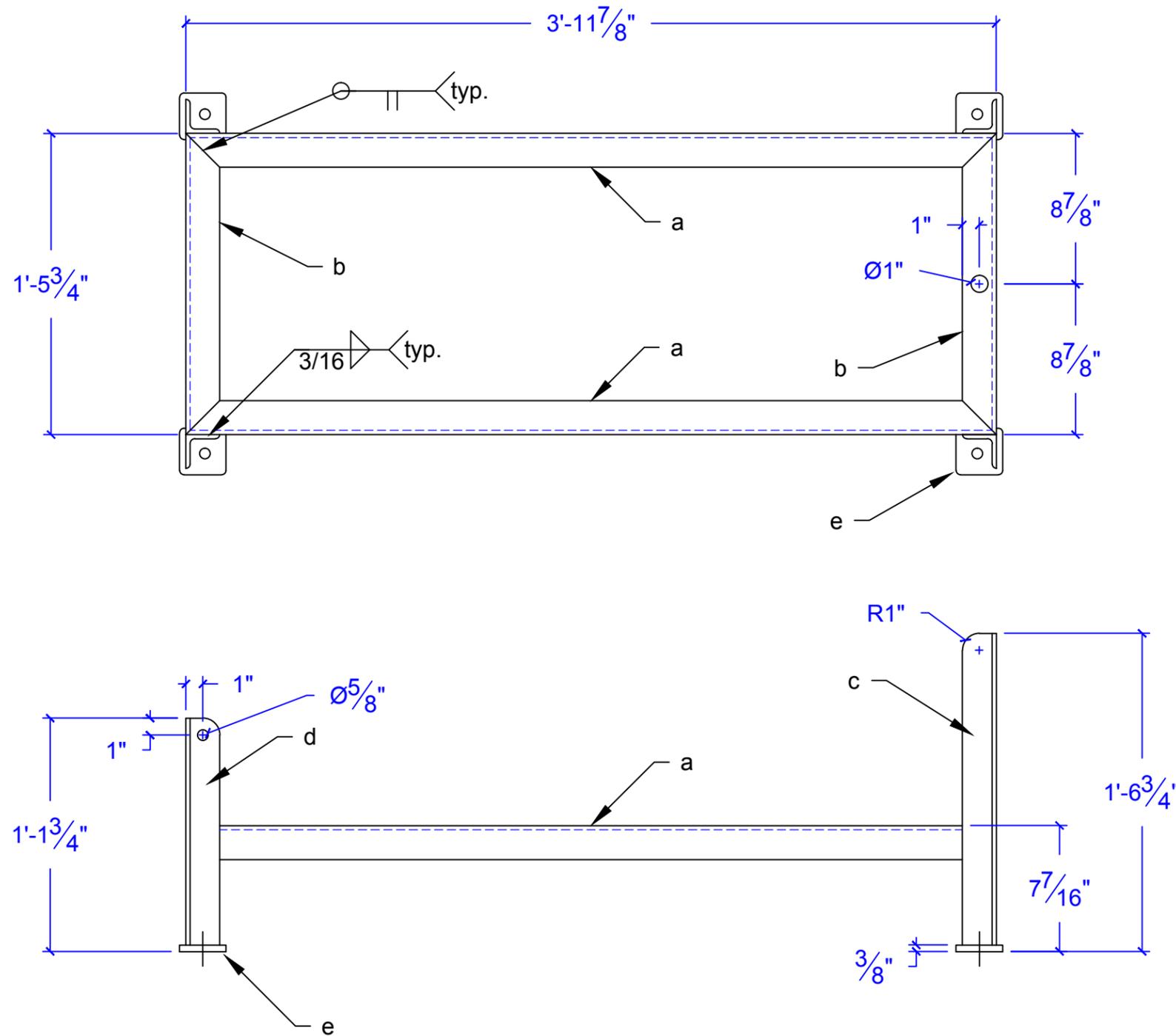
303B,C,D



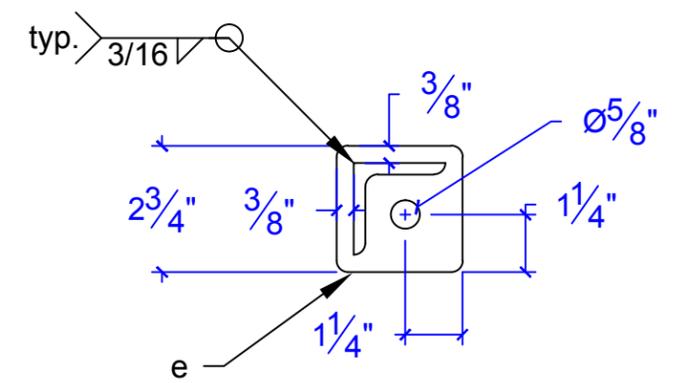
**TWO OBSERVATION BOXES**  
Scale 1-1/2" = 1' 0"

REVISION	DATE	DESCRIPTION
	01-28-13	ISSUED FOR APPROVAL
 <b>WRIGHT</b> <b>MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM: OBSERVATION BOXES		REF. M-001
PROJECT:	JOB NO. XXX-13	DRAWING NO.
BONNEVILLE DAM		201
ADULT FISH FACILITY		



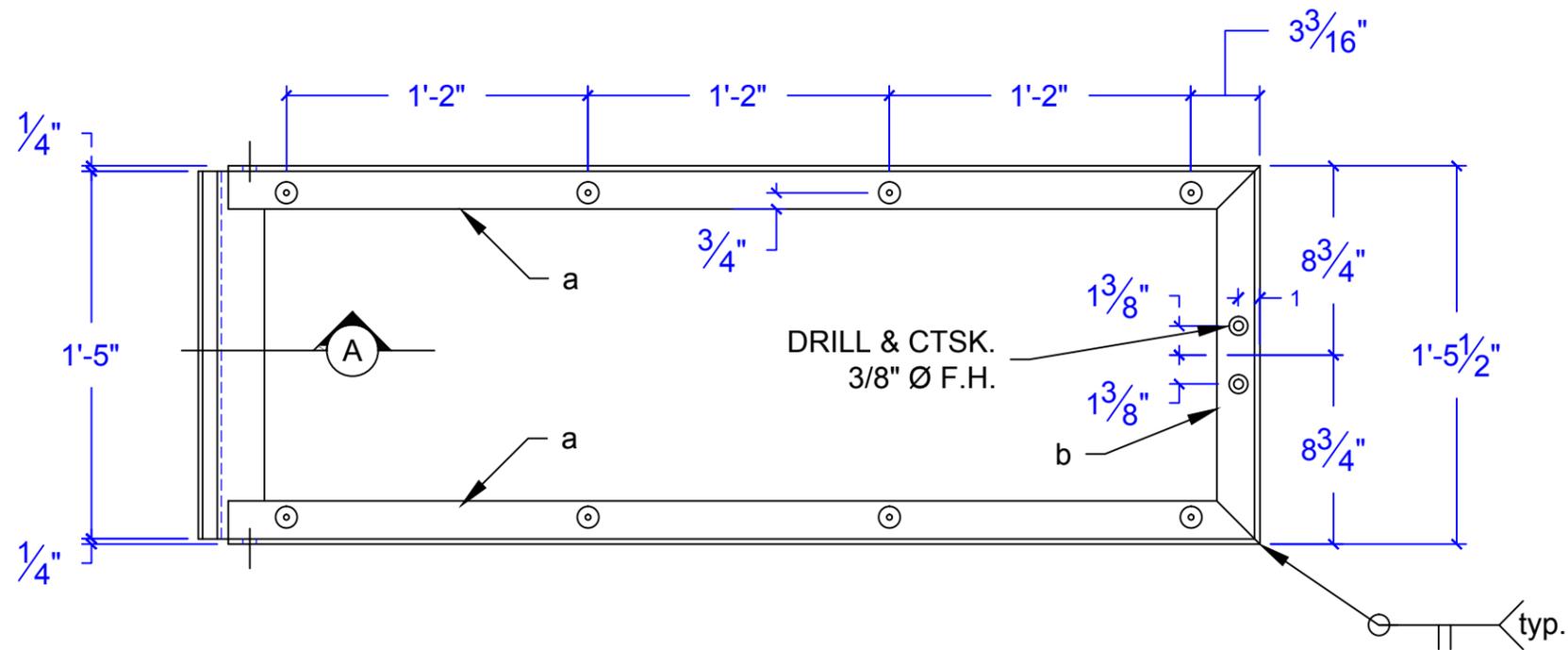


BILL OF MATERIAL					
Mark	Qty.	Description	Feet	Inches	Remarks
ALUMINUM					
302A					
a	4	L 2 x 2 x 1/4	3	11-7/8	
b	4	L 2 x 2 x 1/4	1	5-3/4	
c	4	L 2 x 2 x 1/4	1	6-1/4	
d	4	L 2 x 2 x 1/4	1	1-1/4	5/8" hole
e	8	PL 1/2 x 2-3/4	0	2-3/4	5/8" hole
302B	8	1/2" TITEN-HD	0	4	

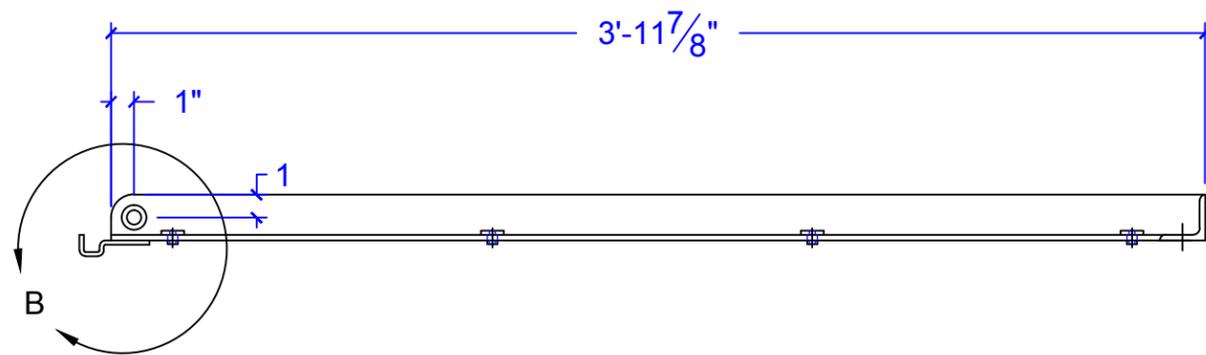


**TWO STANDS 302A**  
Scale 1-1/2" = 1' 0"

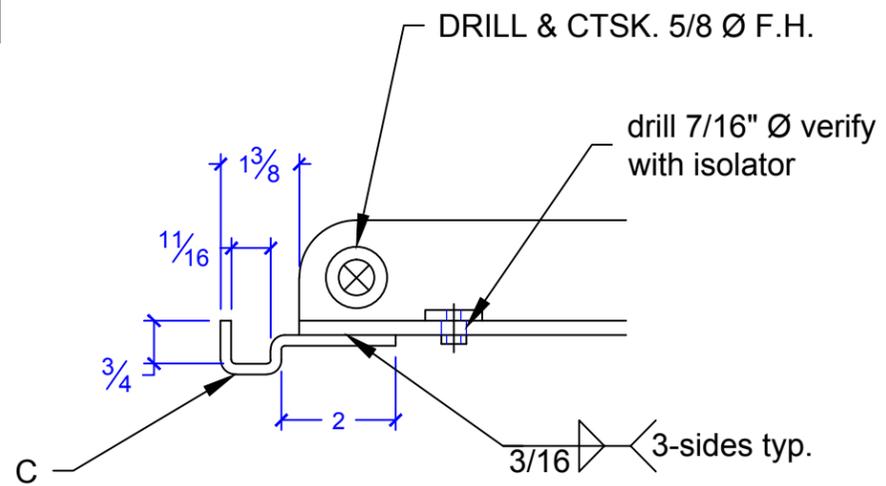
HOLES		WELDS	
FINISH:	BARE		
MATERIAL:	ALUMINUM		
REVISION	DATE	DESCRIPTION	
▲	01-28-13	ISSUED FOR APPROVAL	
<b>WRIGHT MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD			
ITEM:	OBSERVATION BOX STANDS	REF. M-002	
PROJECT:	BONNEVILLE DAM	JOB NO. XXX-13	DRAWING NO. 302
	ADULT FISH FACILITY		REV NO. 0



**TWO FRAMES 303A**  
Scale 1-1/2" = 1' 0"



SECTION "A"

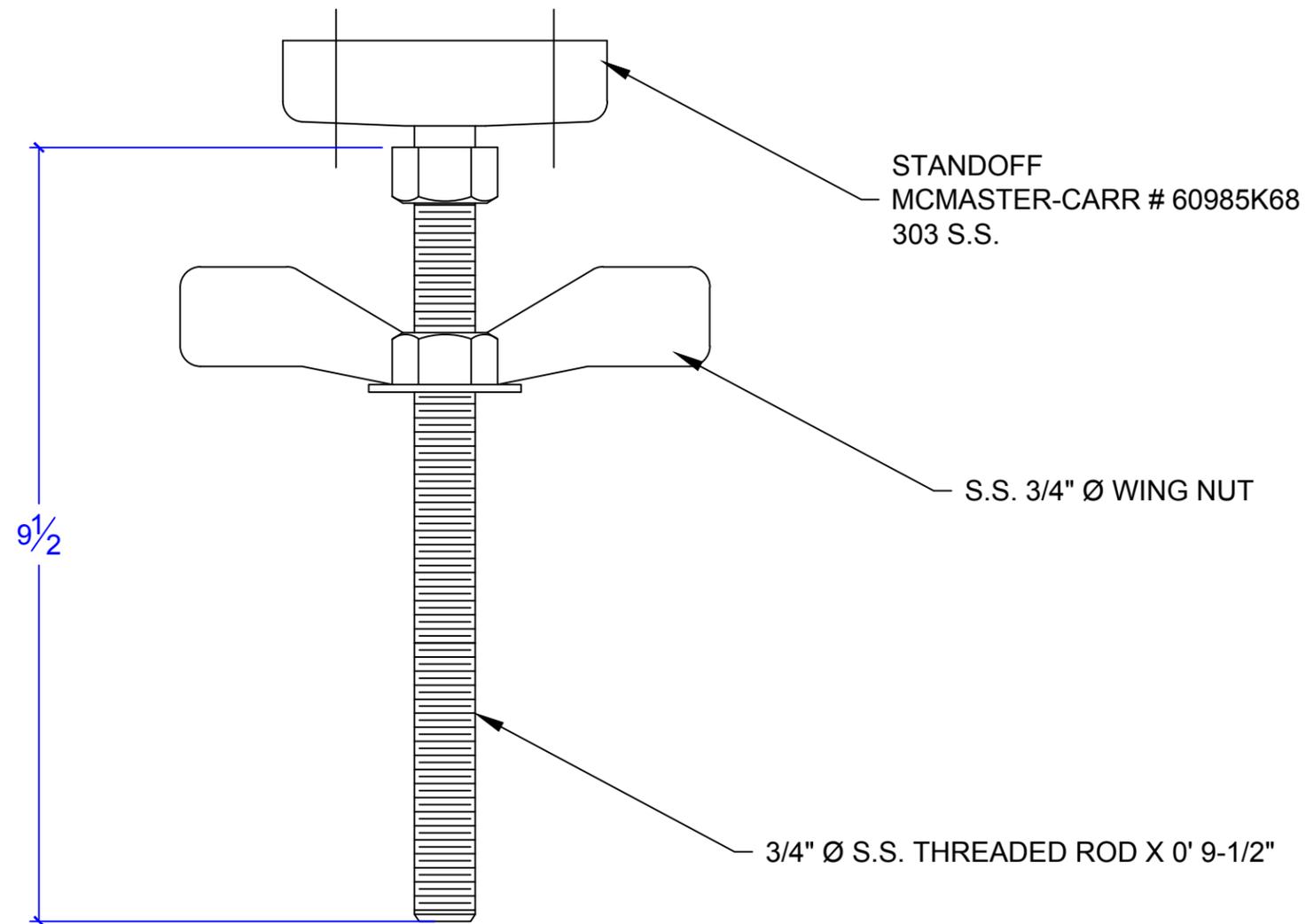


DETAIL "B"

**BILL OF MATERIAL**

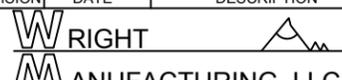
Mark	Qty.	Description	Feet	Inches	Remarks
<b>ALUMINUM</b>					
303A					
a	4	L 2 x 2 x 1/4	4	0-3/8	
b	2	L 2 x 2 x 1/4	1	5-1/2	
c	2	3/16" plate	1	5	formed
d	16	isolator McMaster-Carr # 8638T21			
303B	4	5/8" Ø FHMB	0	1-1/2	stainless
303C	4	5/8-11 nylock nut			stainless
303D	8	5/8" flat washer			stainless
303E	4	3/8" Ø FHMB	0	1-1/2	stainless
303F	4	3/8-16 nylock nut			stainless
303G	4	3/8" flat washer			stainless

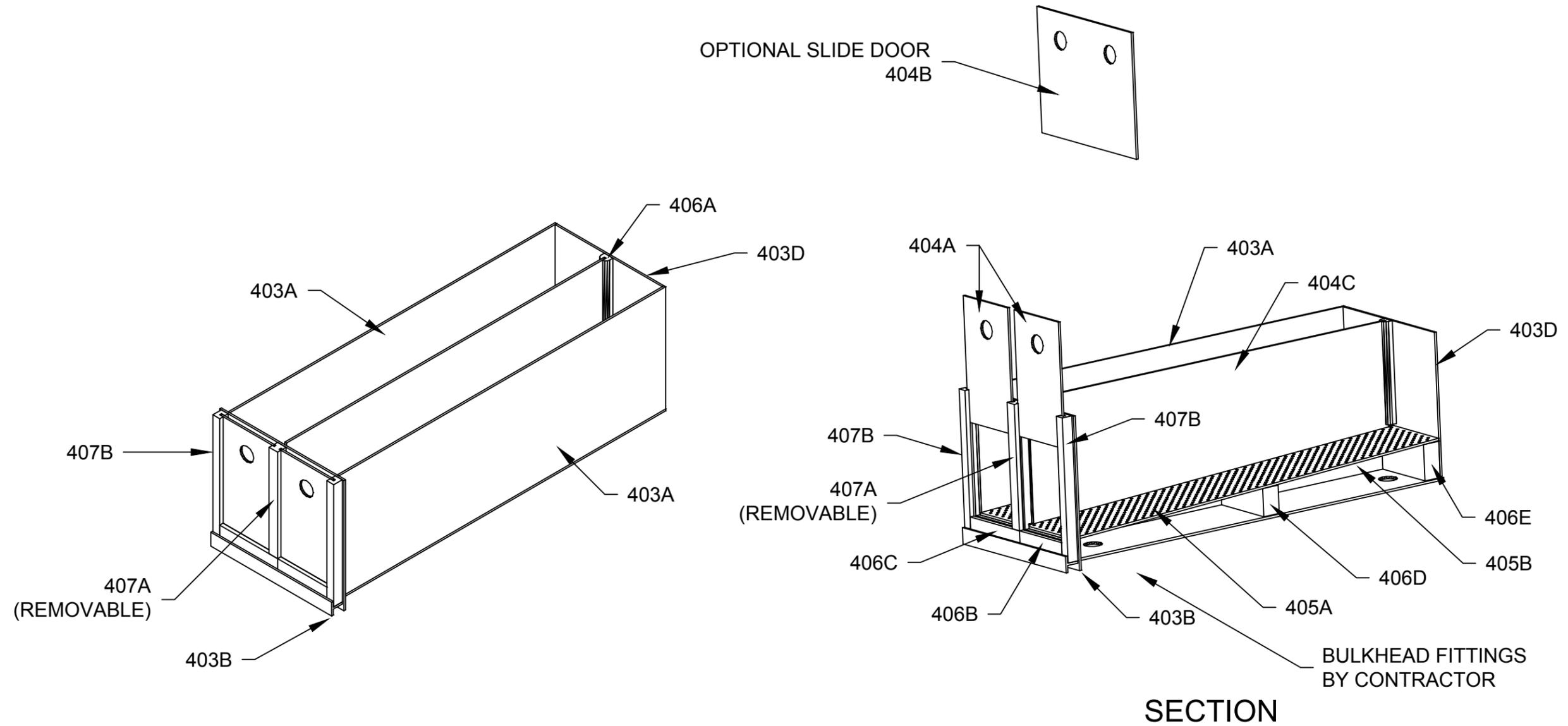
HOLES		WELDS	
FINISH:	BARE		
MATERIAL:	ALUMINUM		
REVISION	DATE	DESCRIPTION	
▲	01-28-13	ISSUED FOR APPROVAL	
7474 S.E. Johnson Creek Blvd. Portland, OR 97206			
PH. 503-774-9689 FAX 503-774-9691			
DETAILER: SCOTT WHITE CONTRACTOR: CLOUD			
ITEM:	OBSERVATION BOX STANDS	REF. M-002	
PROJECT:	BONNEVILLE DAM	JOB NO. XXX-13	DRAWING NO. 303
ADULT FISH FACILITY			REV NO.



**TWO REQ'D. 304A**

Scale 6" = 1' 0"

REVISION	DATE	DESCRIPTION
▲	01-28-13	ISSUED FOR APPROVAL
 <b>WRIGHT</b> <b>MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE CONTRACTOR: CLOUD		
ITEM:	ADJUSTER	REF. M-002
PROJECT:	BONNEVILLE DAM ADULT FISH FACILITY	DRAWING NO. <b>304</b> REV NO. 

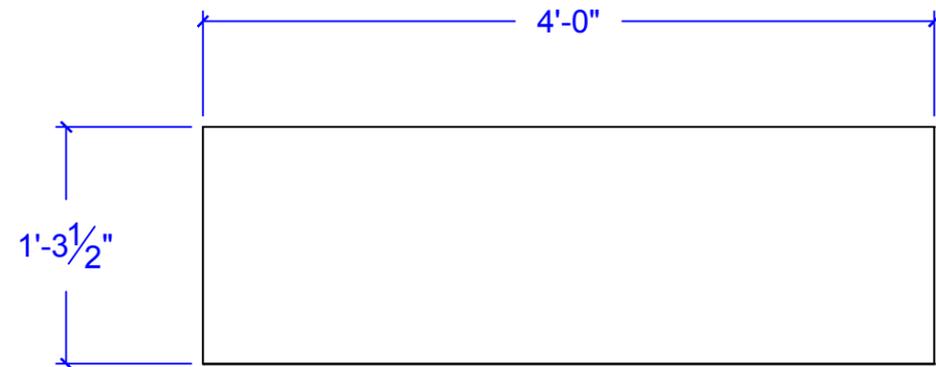


**TWO OBSERVATION BOXES 401A**  
Scale 1" = 1' 0"

SEE DRAWING 402 FOR  
INFORMATION NOT SHOWN

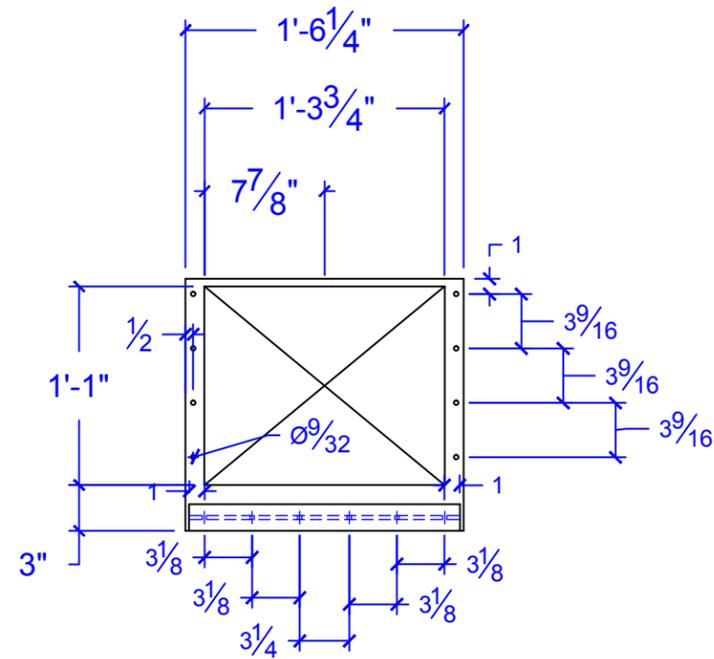
REVISION	DATE	DESCRIPTION
	01-28-13	ISSUED FOR APPROVAL
<b>WRIGHT</b> <b>MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM: OBSERVATION BOXES		REF. M-002
PROJECT:	JOB NO. XXX-13	DRAWING NO.
BONNEVILLE DAM		401
ADULT FISH FACILITY		





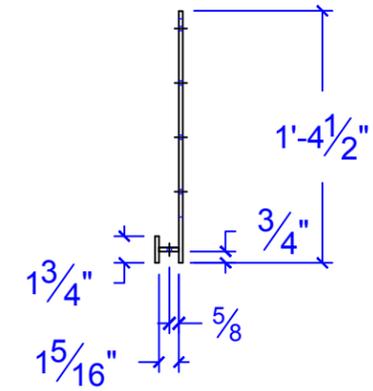
**TWO REQ'D. 403A**

Scale 1" = 1' 0"  
(1/4" ALUMINUM)

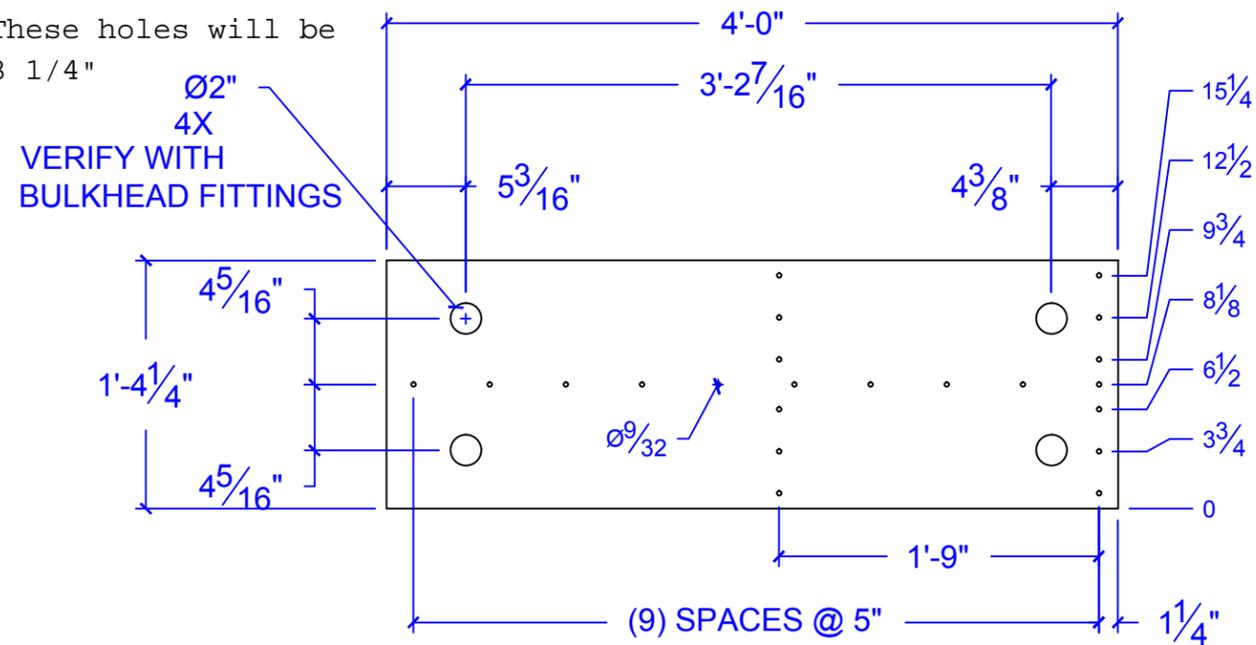


**TWO REQ'D. 403B**

Scale 1" = 1' 0"  
(1/4" ALUMINUM)

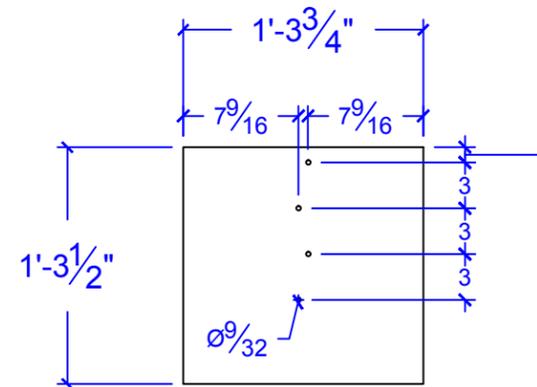


Per RFI 002  
These holes will be  
3 1/4"



**TWO REQ'D. 403C**

Scale 1" = 1' 0"  
(1/4" ALUMINUM)



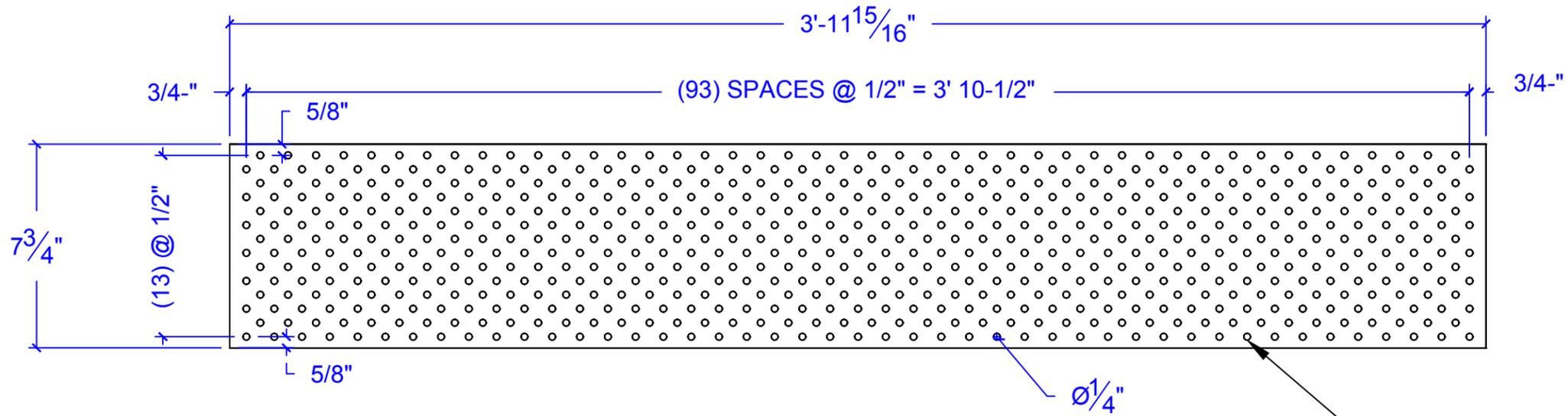
**TWO REQ'D. 403D**

Scale 1" = 1' 0"  
(1/4" ALUMINUM)

WELD ALL SEAMS SOLID

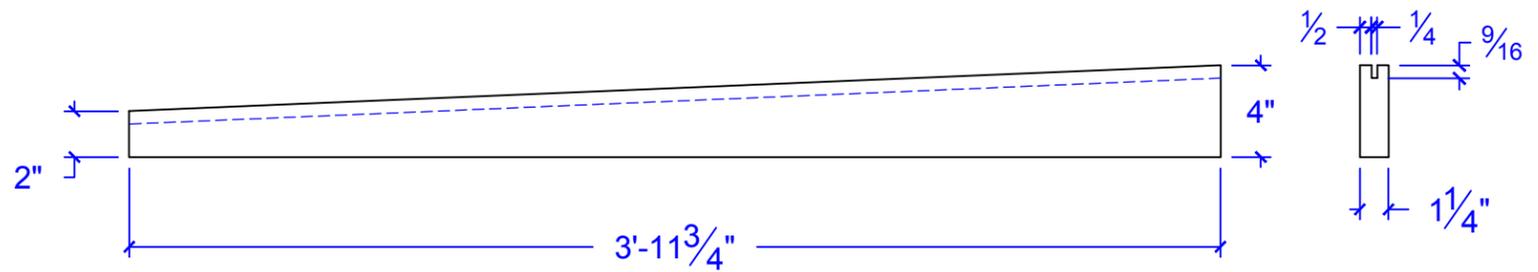
HOLES	2" Ø (U.O.N.)	WELDS
FINISH:	BARE	
MATERIAL:	1/4" ALUMINUM	
REVISION	DATE	DESCRIPTION
▲	01-28-13	ISSUED FOR APPROVAL
7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM:	OBSERVATION BOXES	REF. M-002
PROJECT:	BONNEVILLE DAM	ADULT FISH FACILITY
JOB NO. XXX-13	DRAWING NO.	REV NO.
	403	0



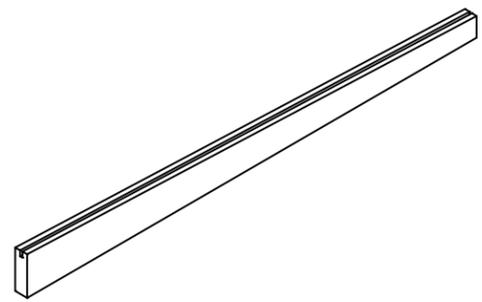


**FOUR REQ'D. 405A**  
 Scale 2-1/4" = 1' 0"  
 ( 1/4" UV RESISTANT UHMW )

CTSK. BOTH SIDES 1/16"  
 SMOOTH ALL EDGES



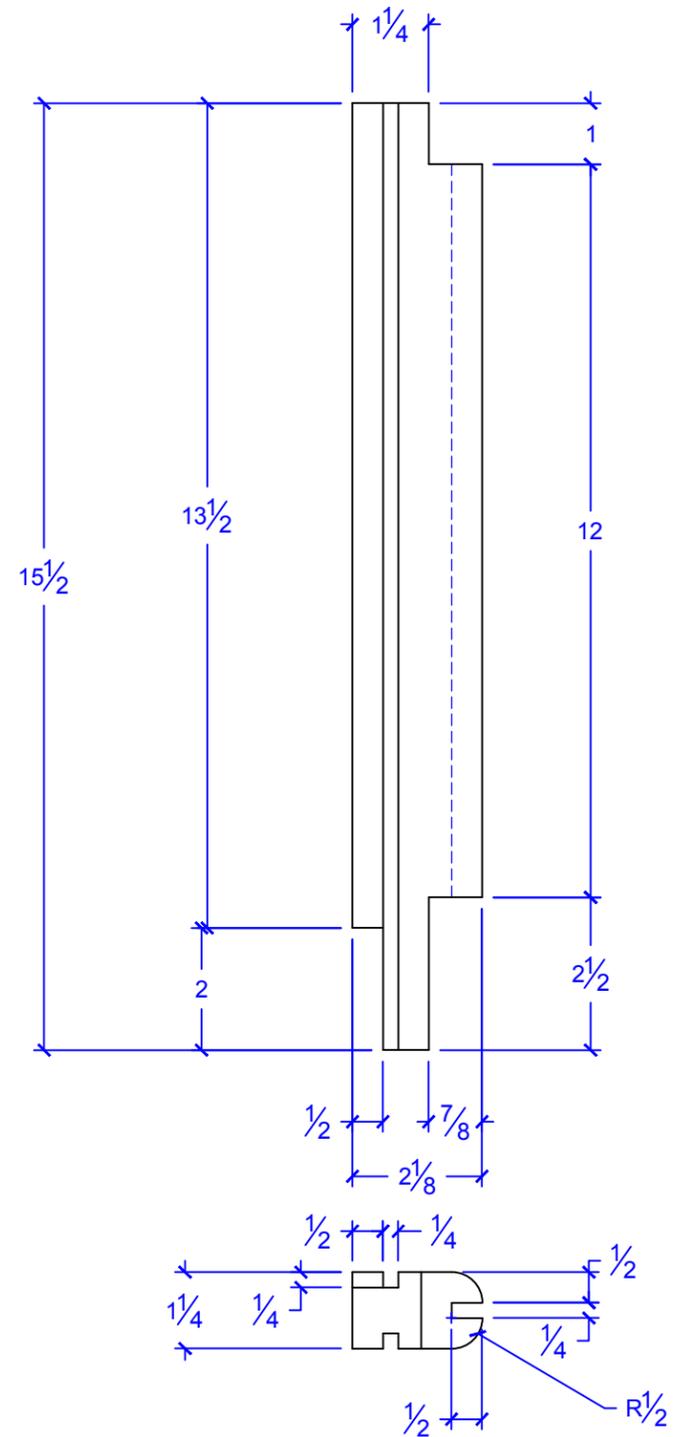
**TWO REQ'D. 405B**  
 Scale 1-1/2" = 1' 0"  
 ( UV RESISTANT UHMW )



ISOMETRIC

HOLES	1/4" Ø	WELDS	
FINISH:	BARE		
MATERIAL:	UV RESISTANT UHMW		
REVISION	DATE	DESCRIPTION	
	01-28-13	ISSUED FOR APPROVAL	
<b>WRIGHT MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE CONTRACTOR: CLOUD			
ITEM:	OBSERVATION BOXES	REF. M-002	
PROJECT:	BONNEVILLE DAM	DRAWING NO.	405
	ADULT FISH FACILITY		

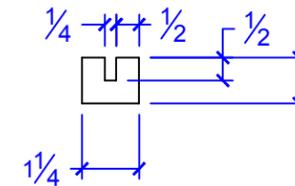
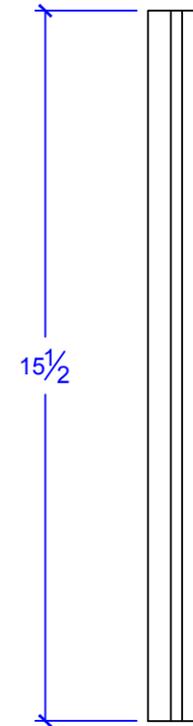




**TWO REQ'D. 407A**

Scale 4" = 1' 0"

( UV RESISTANT UHMW )

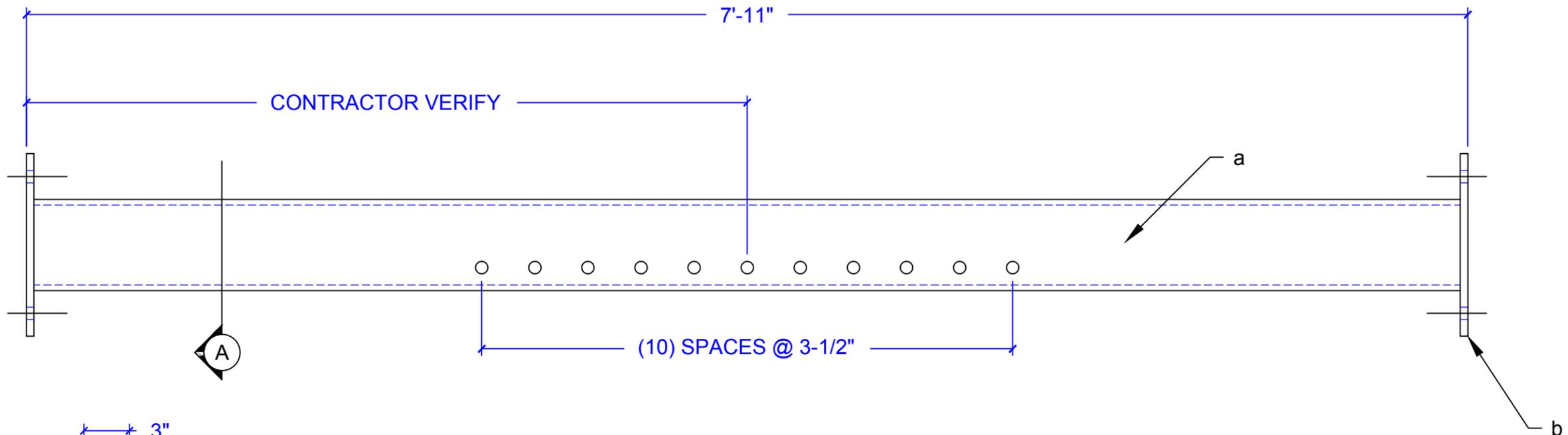


**FOUR REQ'D. 407B**

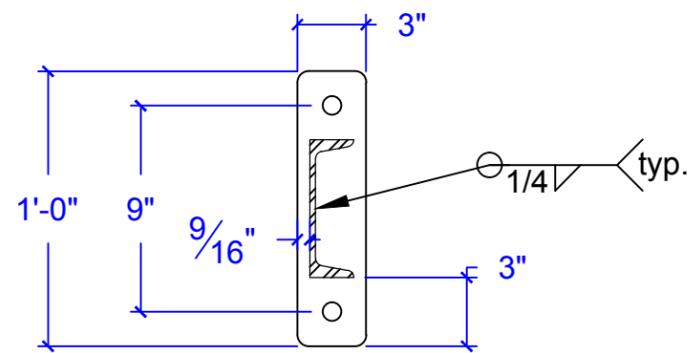
Scale 3" = 1' 0"

( UV RESISTANT UHMW )

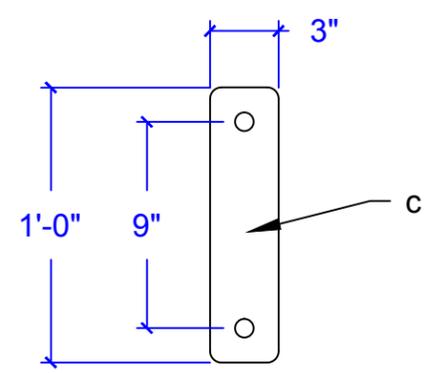
HOLES			WELDS
FINISH:	BARE		
MATERIAL:	UV RESISTANT UHMW		
REVISION	DATE	DESCRIPTION	
	01-28-13	ISSUED FOR APPROVAL	
<b>WRIGHT</b> <b>MANUFACTURING, LLC</b> 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD			
ITEM:	OBSERVATION BOXES	REF.	M-002
PROJECT:	BONNEVILLE DAM	JOB NO. XXX-13	DRAWING NO. 407
	ADULT FISH FACILITY		REV NO.



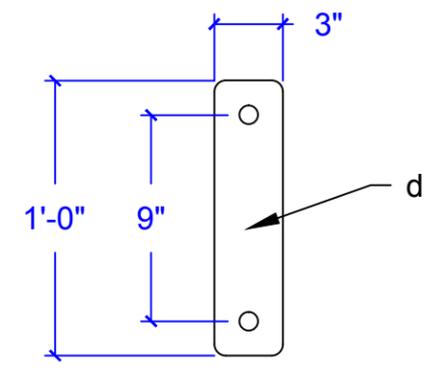
**THREE REQ'D. 501A**  
Scale 1-1/2" = 1' 0"



SECTION "A"



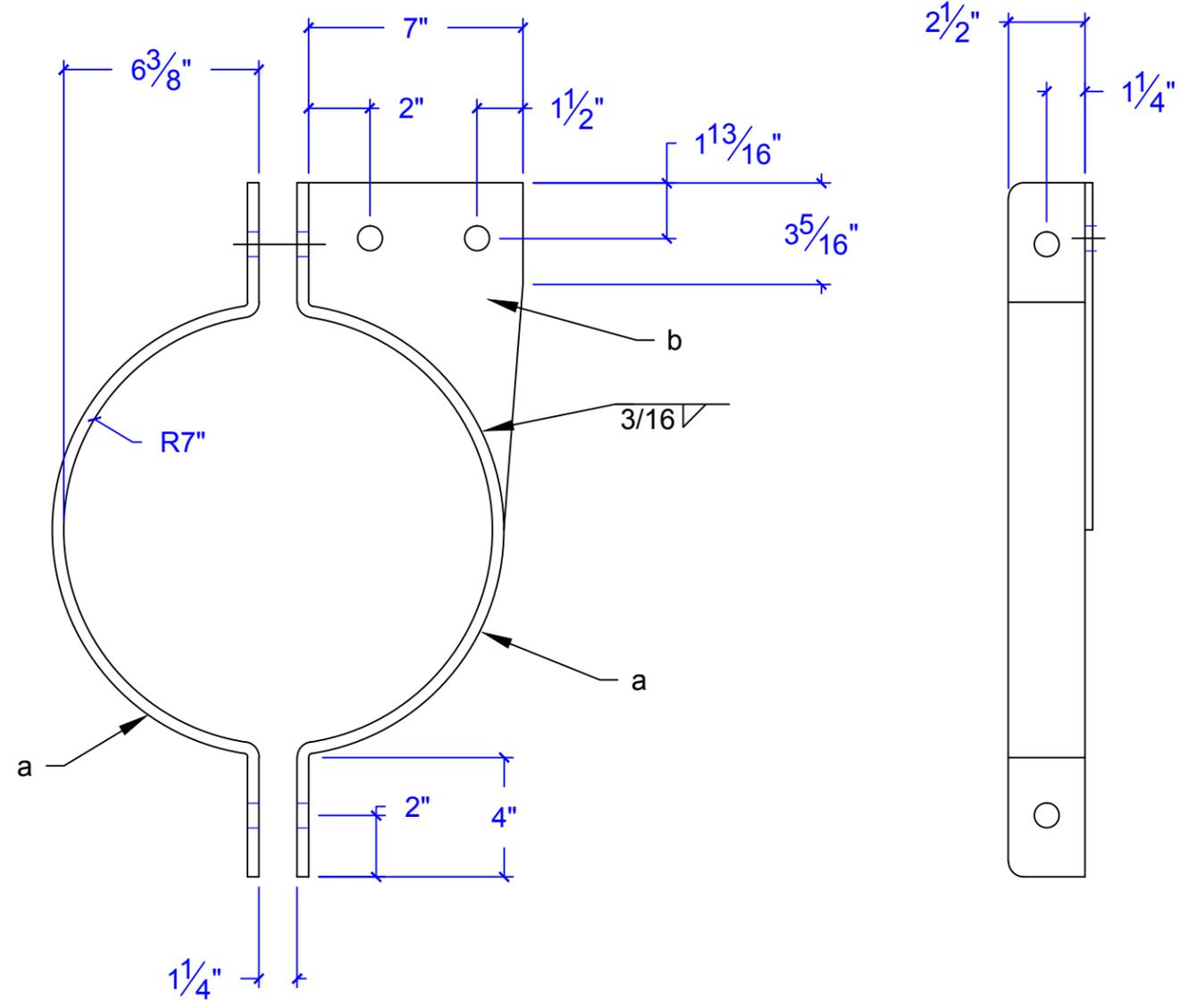
**THREE REQ'D. 501B**  
Scale 1-1/2" = 1' 0"



**FOUR REQ'D. 501C**  
Scale 1-1/2" = 1' 0"

BILL OF MATERIAL					
Mark	Qty.	Description	Feet	Inches	Remarks
501A					
a	3	C 6 x 8.2	7	10-1/4	13/16" holes
b	6	PL 3/8 x 3	1	0	15/16" holes
501B					
c	3	PL 1/2 x 3	1	0	13/16" holes
501C					
d	4	PL 1/4 x 3	1	0	13/16" holes

HOLES	WELDS	
FINISH:	BARE (paint by others)	
MATERIAL:	MILD STEEL, A-36	
REVISION	DATE	DESCRIPTION
△	01-28-13	ISSUED FOR APPROVAL
7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE   CONTRACTOR: CLOUD		
ITEM:	PIPE SUPPORTS	REF. M-002
PROJECT:	BONNEVILLE DAM ADULT FISH FACILITY	DRAWING NO. 501 REV NO. △



THREE REQ'D. AS SHOWN  
 THREE REQ'D. OPP. HAND 502A  
 Scale 2-1/4" = 1' 0"

BILL OF MATERIAL					
Mark	Qty.	Description	Feet	Inches	Remarks
502A					
a	12	PL 1/2 x 2-1/4			13/16" holes
b	6	PL 1/4 x 7			13/16" holes
f-bolt	12	3/4" S.S. hex bolt	0	1-3/4	w/nut
f-bolt	12	3/4" S.S. hex bolt	0	3-1/4	w/nut

HOLES		WELDS	
FINISH:	BARE (paint by others)		
MATERIAL:	MILD STEEL, A-36		
REVISION	DATE	DESCRIPTION	
▲	01-28-13	ISSUED FOR APPROVAL	
 WRIGHT MANUFACTURING, LLC 7474 S.E. Johnson Creek Blvd. Portland, OR 97206 PH. 503-774-9689 FAX 503-774-9691 DETAILER: SCOTT WHITE CONTRACTOR: CLOUD			
ITEM:	PIPE SUPPORTS	REF.	M-002
PROJECT:	BONNEVILLE DAM ADULT FISH FACILITY	DRAWING NO.	502
JOB NO.	XXX-13	REV NO.	0