



WASHINGTON DEPARTMENT OF
FISH AND WILDLIFE
CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
TN:M34:2020-1

THURSTON COUNTY
RECEIVED
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BUILDING DEVELOPMENT CENTER

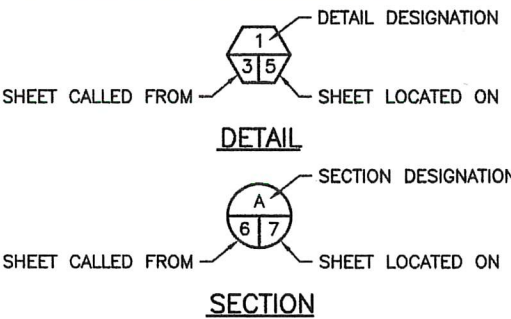
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ABBREVIATIONS

ALUM	-	ALUMINUM
L	-	ANGLE
APPROX	-	APPROXIMATELY
BM	-	BENCH MARK
CL	-	CENTERLINE
CMP	-	CORRUGATED METAL PIPE
CLR	-	CLEARANCE
CONC	-	CONCRETE
CSBC	-	CRUSHED SURFACE BASE COURSE
CSTC	-	CRUSHED SURFACE TOP COURSE
DIA	-	DIAMETER
ELEV	-	ELEVATION
FB	-	FLAT BAR
FFE	-	FINISHED FLOOR ELEVATION
FTG	-	FOOTING
GALV	-	GALVANIZED
ID	-	INSIDE DIAMETER
IE	-	INVERT ELEVATION
MFG	-	MANUFACTURER'S
MISC	-	MISCELLANEOUS
OC	-	ON CENTER
OD	-	OUTSIDE DIAMETER
PL	-	PLATE
REQ'D	-	REQUIRED
SEC	-	SECTION
SPEC'S	-	PROJECT SPECIFICATIONS
SS	-	STAINLESS STEEL
STA	-	STATION
TOW	-	TOP OF WALL
TYP	-	TYPICAL
WS	-	WATER SURFACE

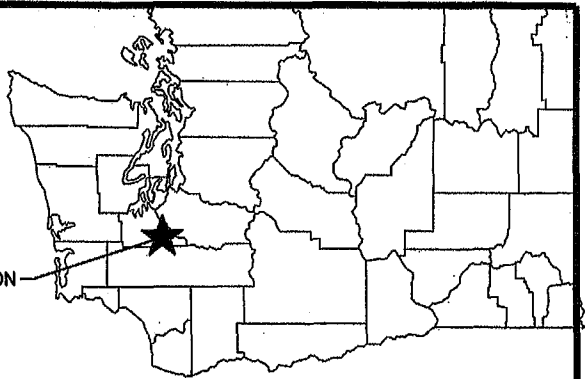
SHEET SYMBOLS



KNOW WHAT'S BELOW
CALL BEFORE YOU DIG

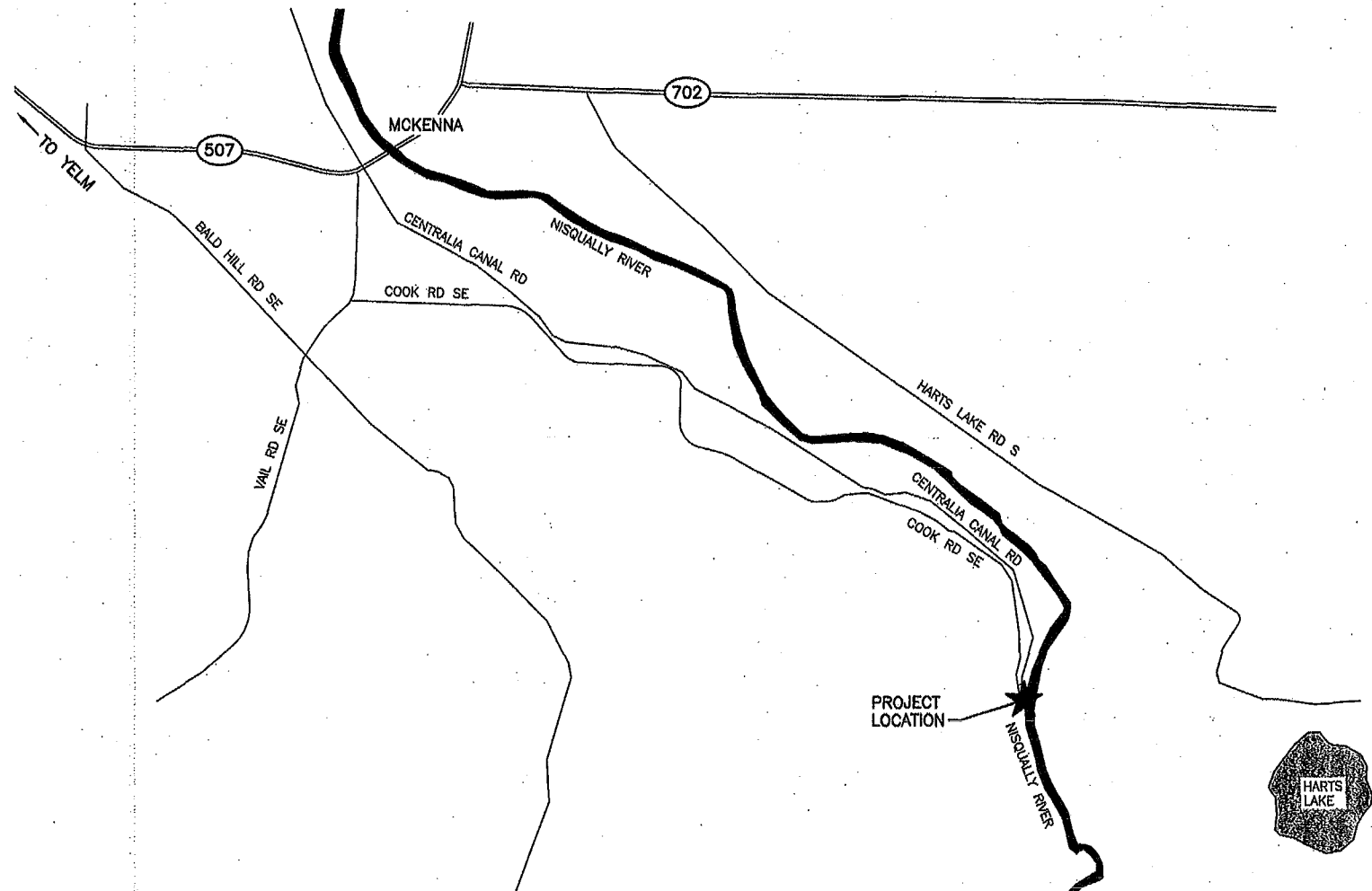
NOTE REFERENCE
REFERENCE DESIGNATION TO A
NOTE, A PART, OR MATERIAL IN
A SCHEDULE/TABLE

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PROJECT LOCATION

STATE MAP
NOT TO SCALE



VICINITY MAP
NOT TO SCALE

SITE ADDRESS:
20000 COOK ROAD SE
YELM, WA 98597

DIRECTIONS:

FROM MCKENNA, HEAD SOUTHWEST ON WA-507 / STATE ROUTE 507 S TOWARD VAIL RD SE.
TURN LEFT ON VAIL RD SE THEN LEFT ON COOK RD SE.
STAY ON COOK RD SE TO THE END OF THE ROAD, PASSING CENTRALIA CANAL RD ON LEFT, ARRIVING AT PROJECT SITE.

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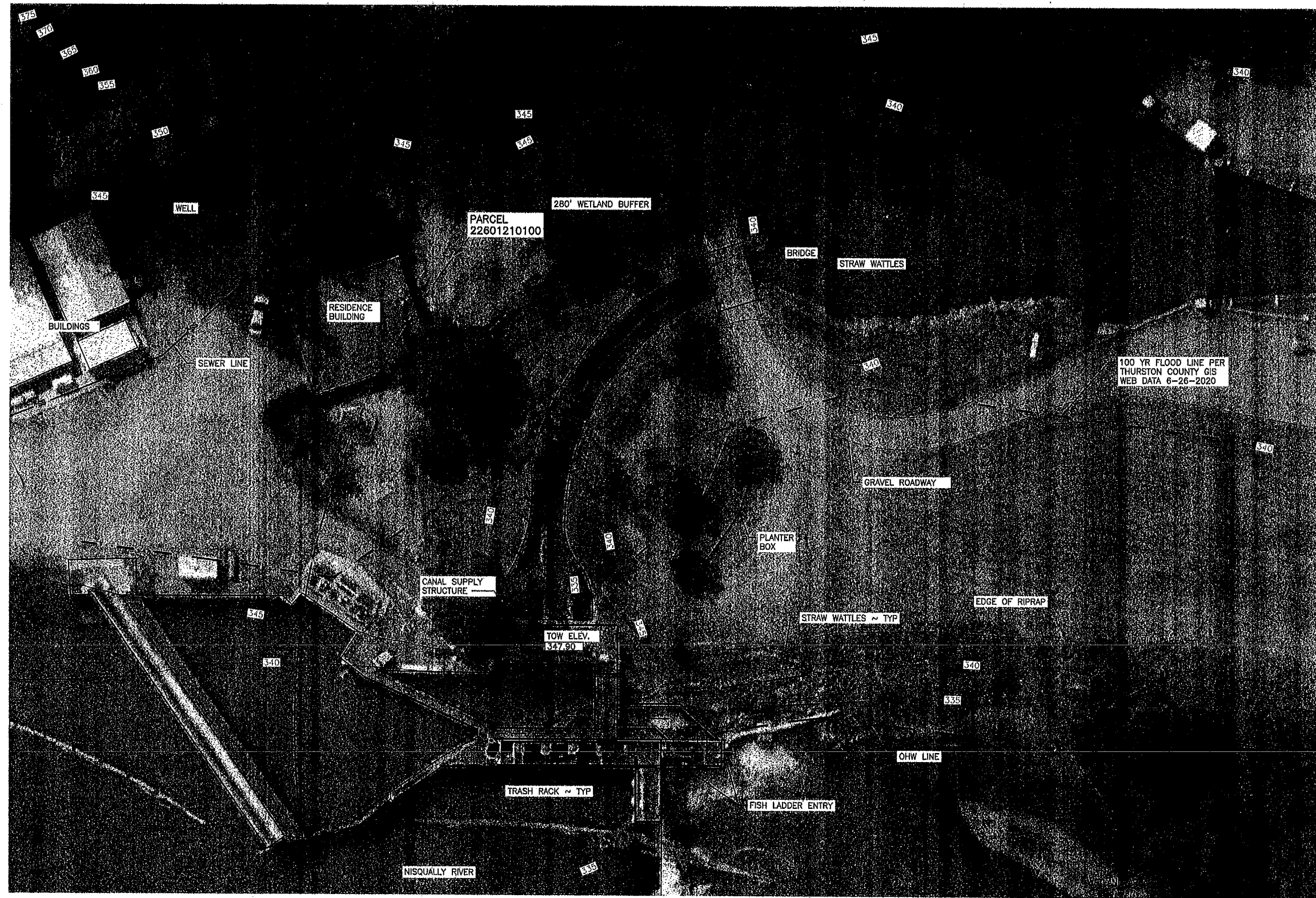


SYM	DATE	REVISION DESCRIPTION	BY
		APPROVED AND RELEASED FOR CONSTRUCTION	
CHIEF ENGINEER	DATE:		
PROGRAM	DATE:		
		DESIGNED BY L. PAGANO	
		CHECKED BY D. PONDER	
		DRAWN BY NW / RS	
		DATE 10-17-2023	

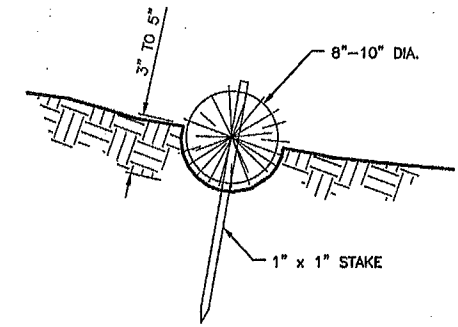
CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
VICINITY & STATE MAPS

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SHEET
2
OF
33



DATUM NOTES:
ELEVATION AND DATUM INFORMATION DESCRIBED:
EXISTING STRUCTURE ELEVATIONS WERE FEET
PROJECT DATUM WHICH IS APPROXIMATELY 1.5
FEET HIGHER THAN NGVD
LIDAR IS NAVD 88
CONVERSION FROM NGVD TO NAVD IS +3.4'
FOR EXAMPLE:
CONVERSION OF EXISTING STRUCTURE DRAWINGS
TO NGVD: 100.00 - 1.5' = 98.50
CONVERSION FROM NGVD TO NAVD: 98.50 +
3.4' = 101.90
ELEVATIONS WITHIN THIS PLAN SET HAVE BEEN
ADJUSTED TO NAVD 88

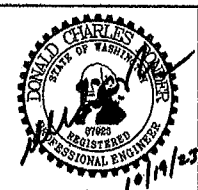


STRAW WATTLE DETAIL
NOT TO SCALE

- CONSTRUCTION SPECIFICATIONS:**
1. PREPARE THE SLOPE BEFORE THE WATTLING PROCEDURE IS STARTED.
 2. SMOOTH SHALLOW GULLIES AS WORK PROGRESSES.
 3. DIG SMALL TRENCHES ACROSS THE SLOPE ON CONTOUR, TO PLACE ROLLS IN THE TRENCH SHOULD BE DEEP ENOUGH TO ACCOMMODATE HALF THE THICKNESS OF THE ROLL. WHEN THE SOIL IS LOOSE AND UNCOMPACTED, THE TRENCH SHOULD BE DEEP ENOUGH TO BURY THE ROLL 2/3 OF ITS THICKNESS BECAUSE THE GROUND WILL SETTLE.
 4. ROLLS SHALL BE INSTALLED PERPENDICULAR TO WATER MOVEMENT, PARALLEL TO THE SLOPE CONTOUR.
 5. BUILD TRENCHES AND INSTALL ROLLS FROM THE BOTTOM OF THE SLOPE AND WORK UP.
 6. CONSTRUCT TRENCHES AT CONTOUR INTERVALS 3-12 FEET APART DEPENDING ON STEEPNESS OF SLOPE. THE STEEPER THE SLOPE, THE CLOSER TOGETHER THE TRENCHES. 1:1=10' 2:1=20' 3:1=30' 4:1=40'
 7. LAY THE ROLL ALONG THE TRENCHES FITTING IT SNUGLY AGAINST THE SOIL. MAKE SURE NO GAPS EXIST BETWEEN THE SOIL AND THE STRAW WATTLE.
 8. USE A STRAIGHT BAR TO DRIVE HOLES THROUGH THE WATTLE AND INTO THE SOIL FOR THE WILLOW OR WOODEN STAKES.
 9. DRIVE THE STAKE THROUGH PREPARED HOLE INTO SOIL. LEAVE ONLY 1 OR 2 INCHES OF STAKE EXPOSED ABOVE ROLL.
 10. IF USING WILLOW STAKES REFER TO LIVE STAKING BEST MANAGEMENT PRACTICES.
 11. INSTALL STAKES AT LEAST EVERY 4 FEET APART THROUGH THE WATTLE. ADDITIONAL STAKES MAY BE DRIVEN ON THE DOWNSLOPE SIDE OF THE TRENCHES ON HIGHLY EROSION OR VERY STEEP SLOPES.
 12. INSPECT THE STRAW ROLLS AND THE SLOPES AFTER SIGNIFICANT STORMS. MAKE SURE THE ROLLS ARE IN CONTACT WITH THE SOIL.
 13. REPAIR ANY ROLLS OR GULLIES PROMPTLY.
 14. RESEED OR REPLANT VEGETATION IF NECESSARY UNTIL SLOPES ARE STABILIZED.

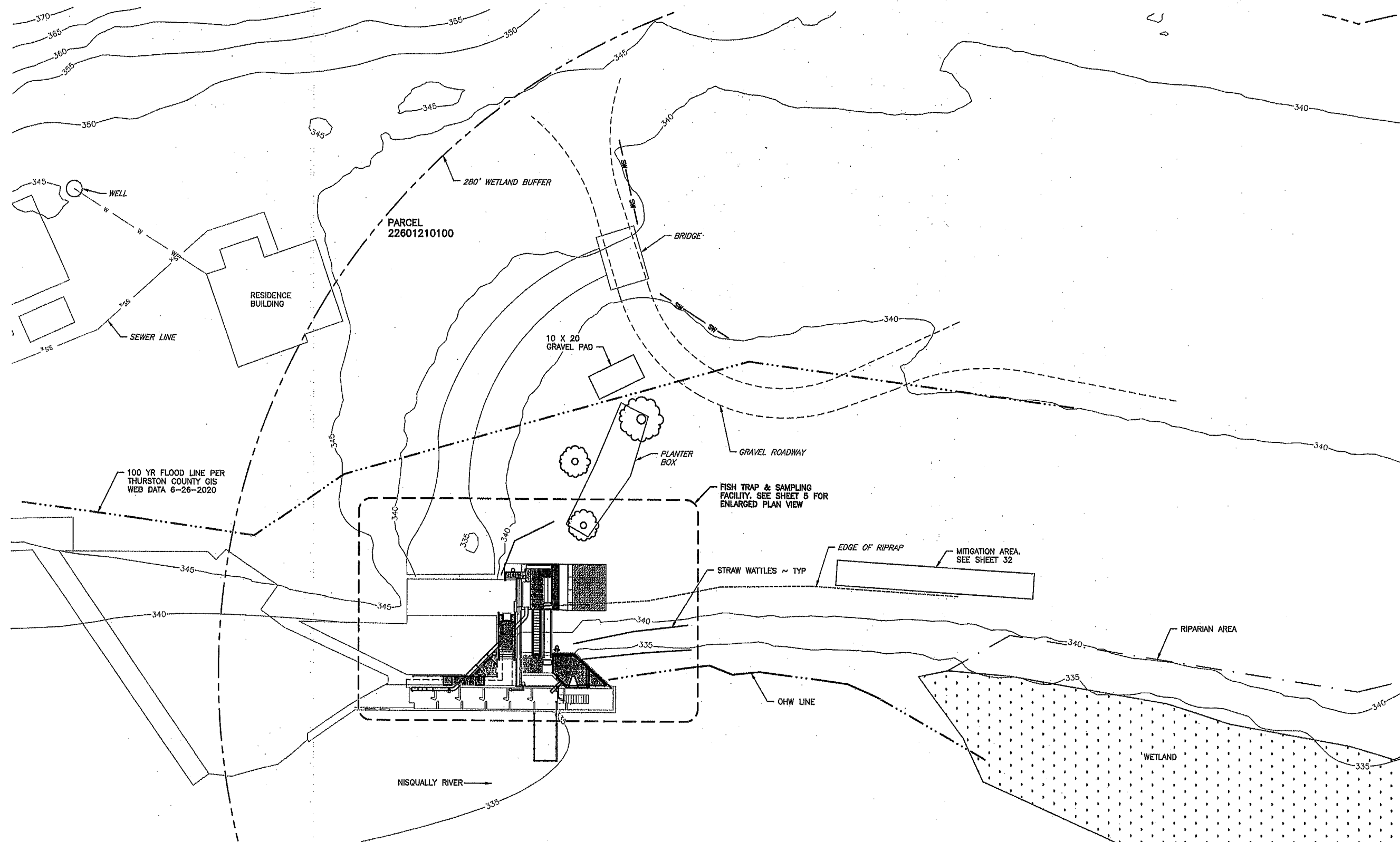
EXISTING SITE & EROSION CONTROL PLAN
1"=20' 22x34
1"=40' 11x17

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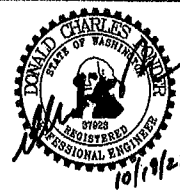
CENTRALIA HYDRO DAM		PROJECT NO.	
FISH TRAP - CIVIL & ELECTRICAL		TN:M34:2020-1	
EXISTING SITE PLAN		SHEET	OF
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OVERALL NEW SITE PLAN

1"=20' 22x34
1"=40' 11x17

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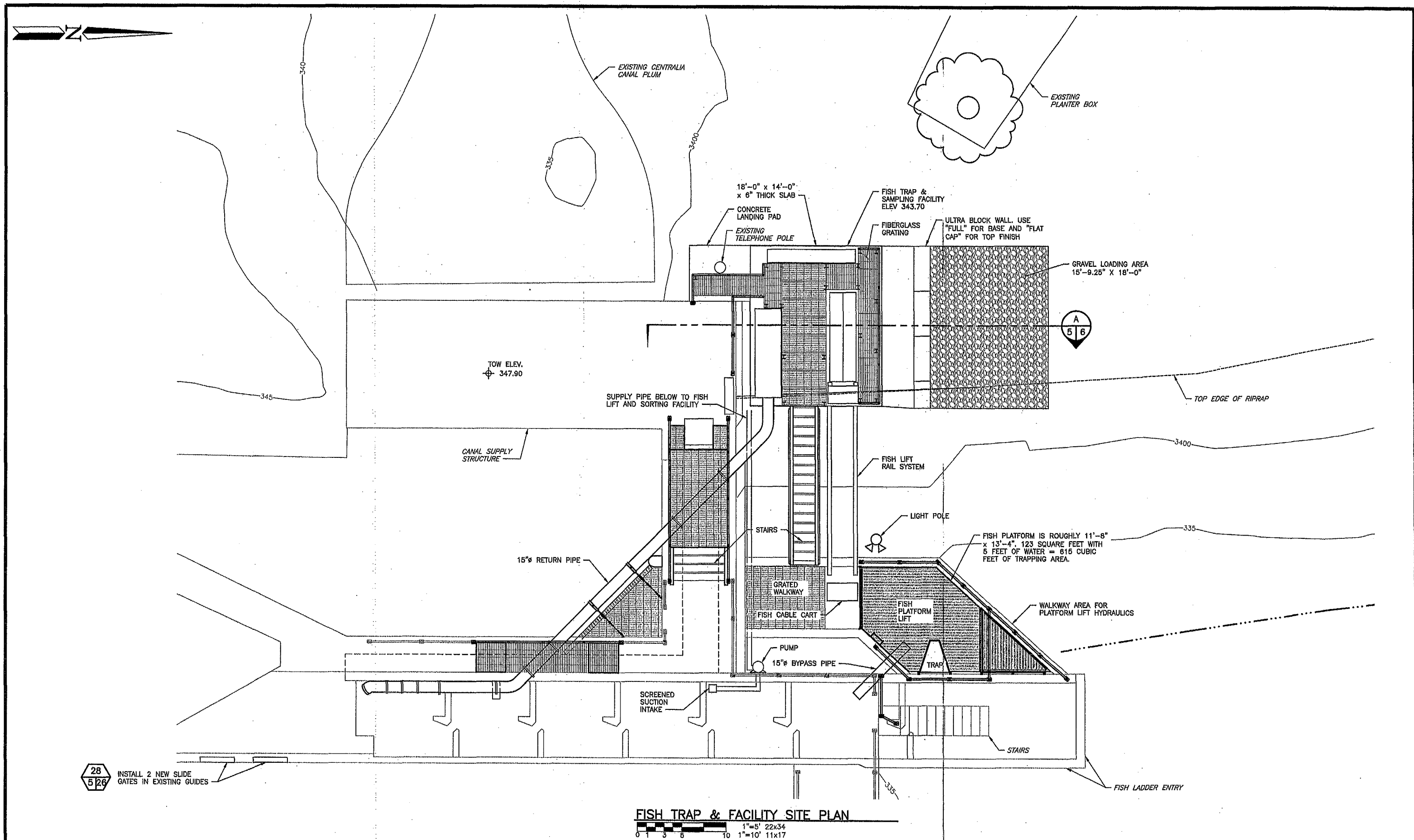


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CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
OVERALL NEW SITE PLAN

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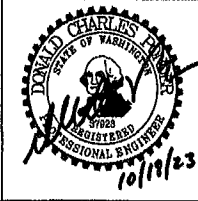
SHEET
4
OF
33



28
5 26
INSTALL 2 NEW SLIDE
GATES IN EXISTING GUIDES

FISH TRAP & FACILITY SITE PLAN
 1"=5' 22x34
 1"=10' 11x17

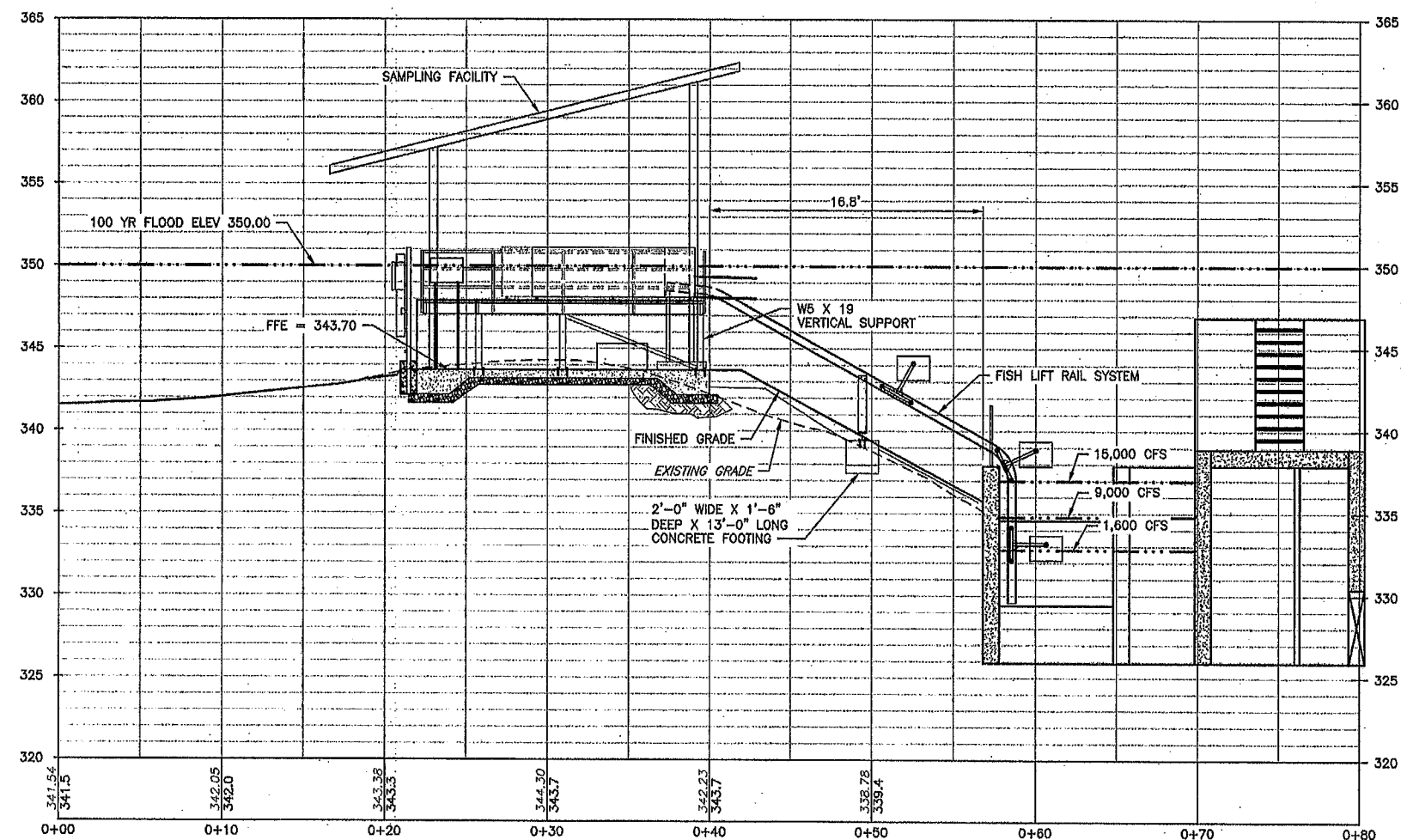
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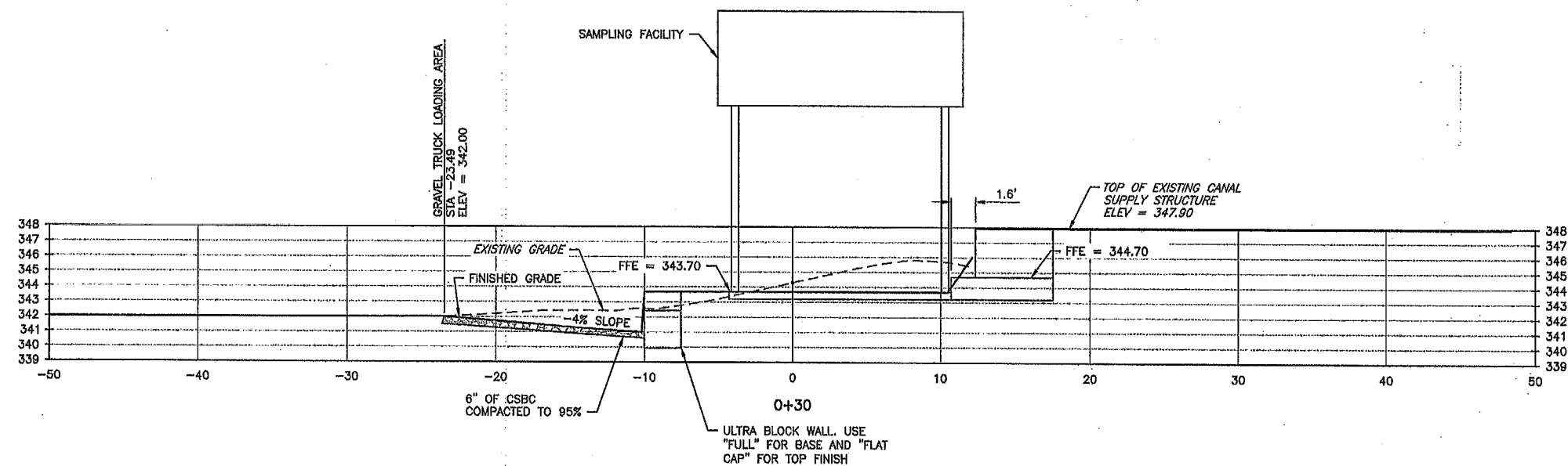
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CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
 NEW SITE PLAN

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SAMPLING FACILITY PROFILE
SCALE: 1" = 5'



SAMPLING FACILITY SECTION
SCALE: 1" = 5'

SAMPLING FACILITY CUT & FILL IN 100YR FLOOD

	CUT	FILL	IMPACT AREA
NATIVE MATERIAL	14 CY	0 CY	700 SF
CSTC/CSBC	16 CY	16 CY	1,260 SF
CONCRETE	0 CY	14 CY	305 SF
TOTAL	30 CY CUT	30 CY FILL	
	NET 0 CY		1,260 SF

GRAVEL PAD CUT & FILL OUT 100YR FLOOD

	CUT	FILL	IMPACT AREA
NATIVE MATERIAL	4 CY	0 CY	200 SF
CSTC/CSBC	0 CY	4 CY	200 SF
TOTAL	4 CY CUT	4 CY FILL	
	NET 0 CY		200 SF

IMPERVIOUS SURFACE:

GRAVEL PAD ABOVE 100YR FLOOD
EXISTING = 0 SF
NEW = 200 SF

SAMPLING FACILITY IN 100YR FLOOD
EXISTING = 670 SF
NEW = 590 SF

TOTAL NEW IMPERVIOUS SURFACING = 790 SF

NOTES:

1. SOME IMPACT AREAS OVERLAP
2. BOTH TABLES REPRESENT CUT AND FILLS INSIDE THE WETLAND BUFFER.

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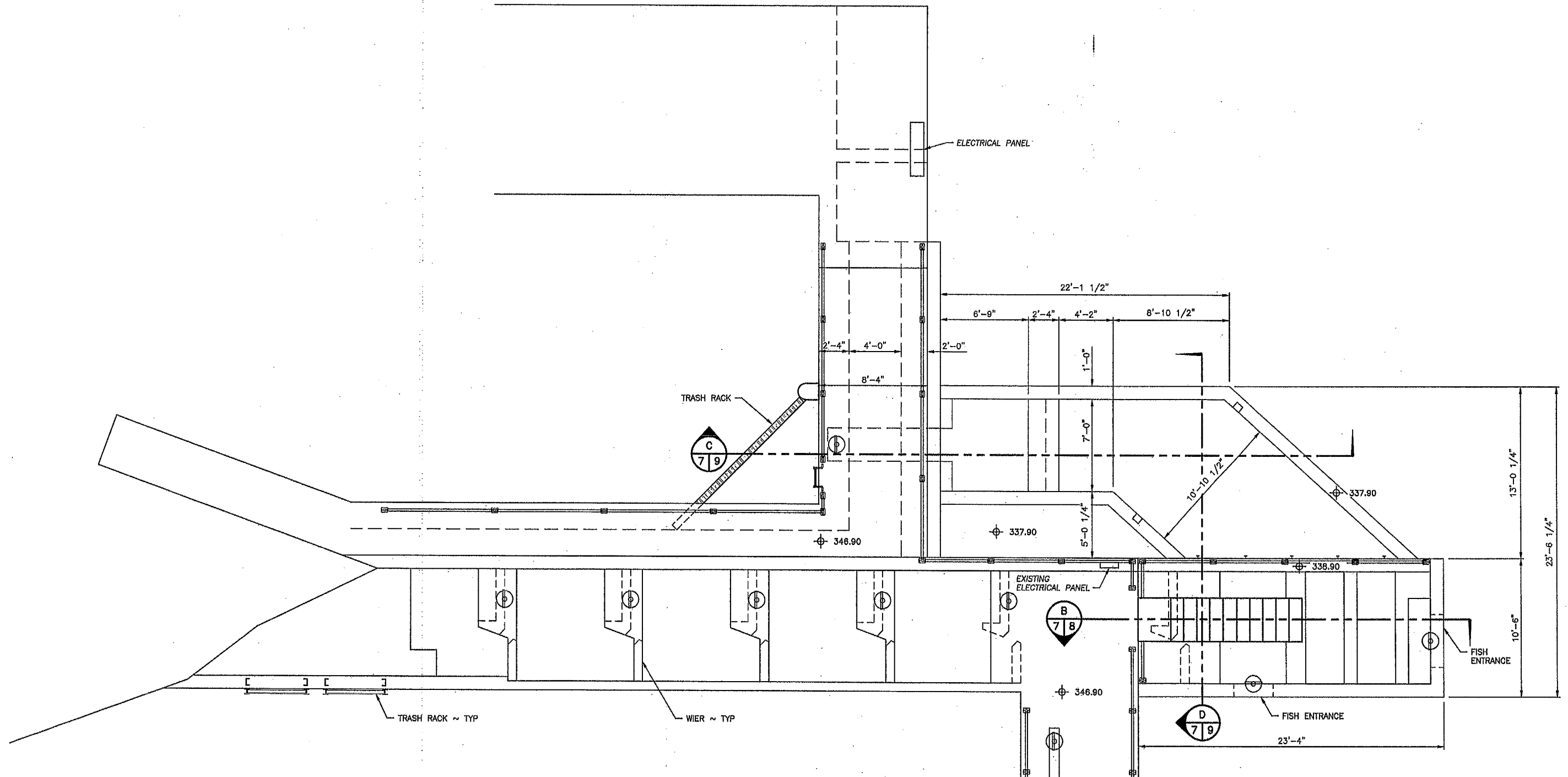
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CENTRALIA HYDRO DAM

FISH TRAP - CIVIL & ELECTRICAL
NEW PROFILE & SECTION

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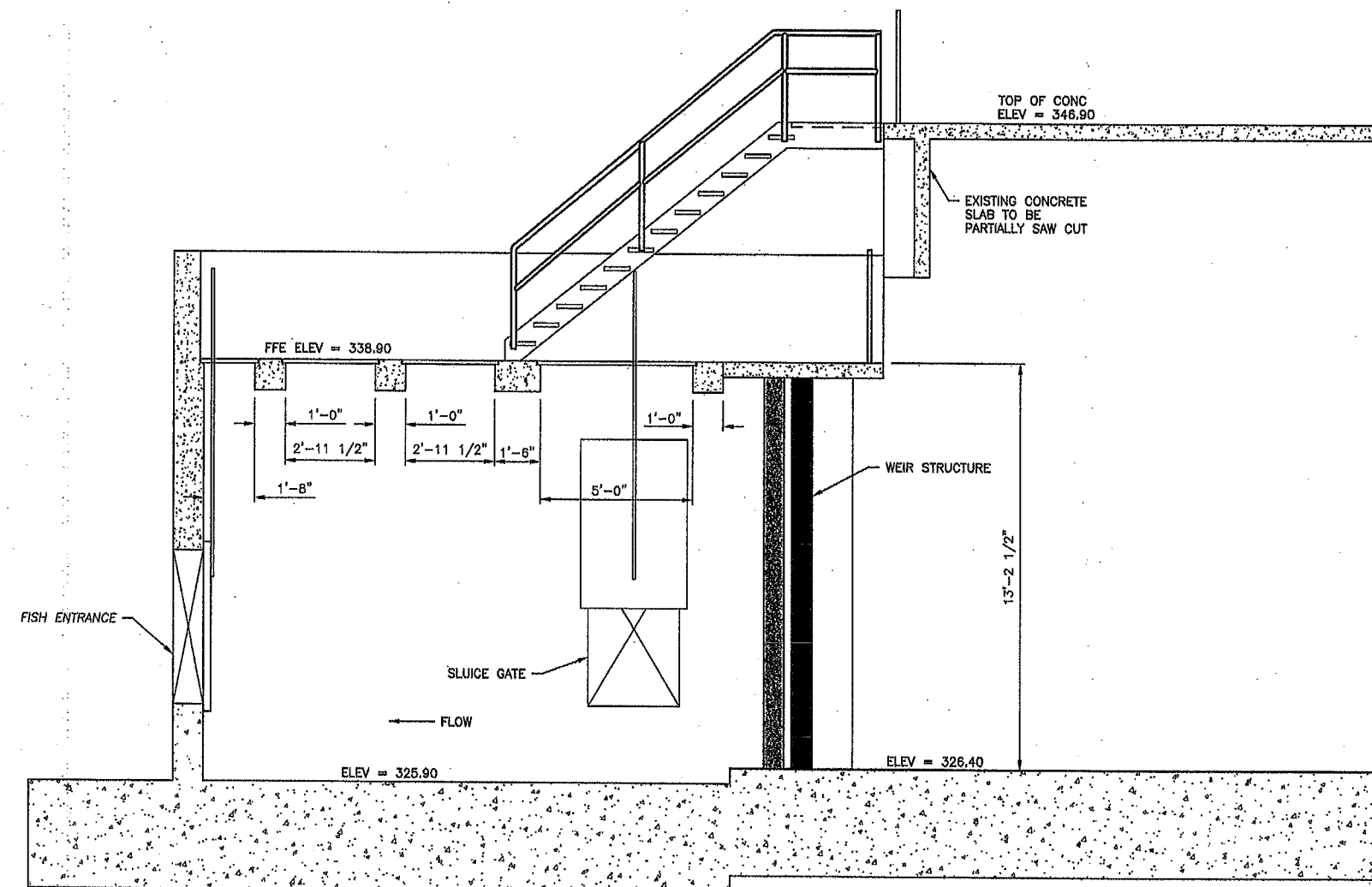


SCALE: 1/4" = 1'-0"

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DRAWN BY: NW / RS
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CENTRALIA HYDRO DAM

SHEET	OF
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EXISTING FACILITY SECTION
SCALE: 3/8" = 1'-0"



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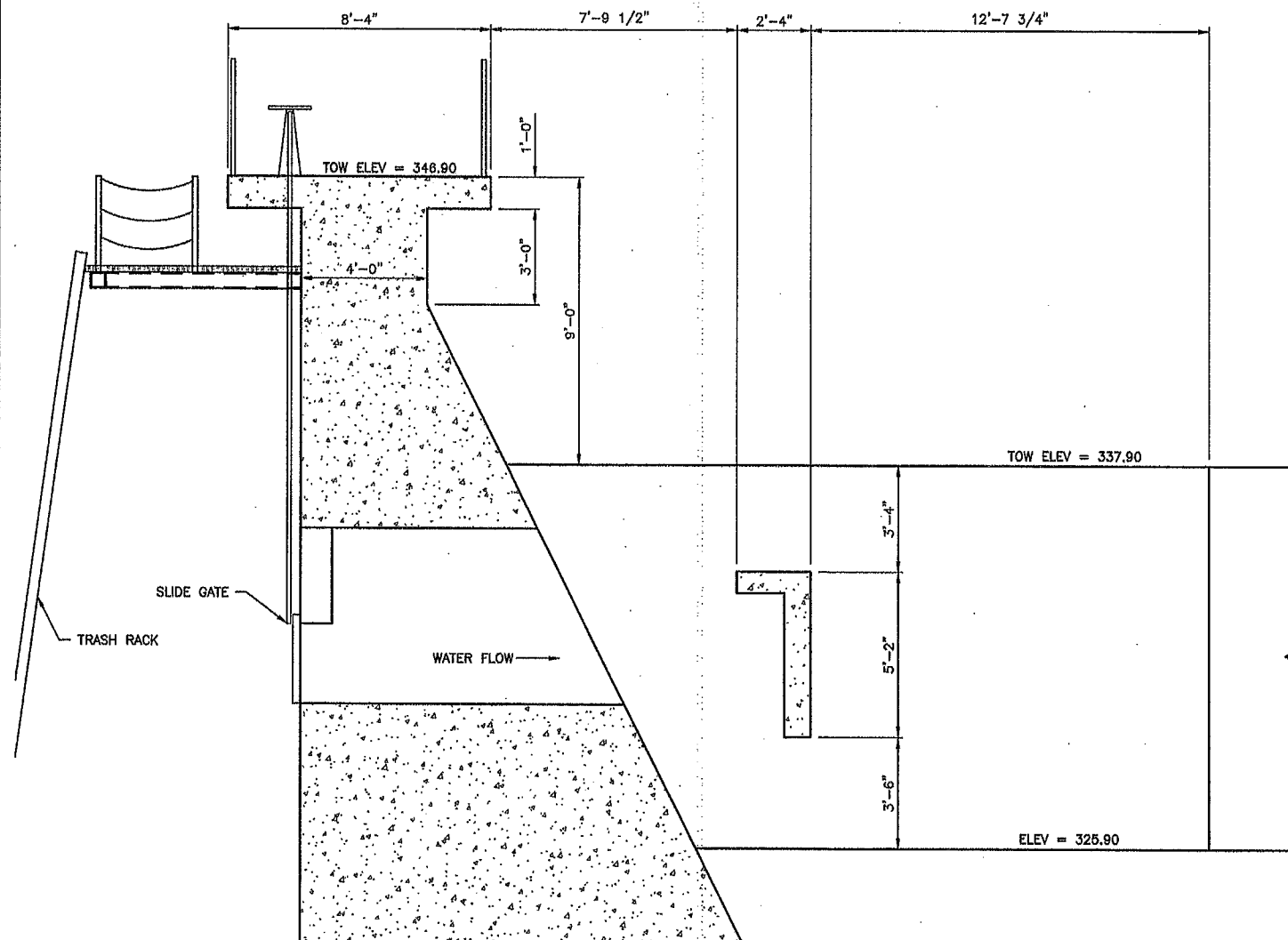


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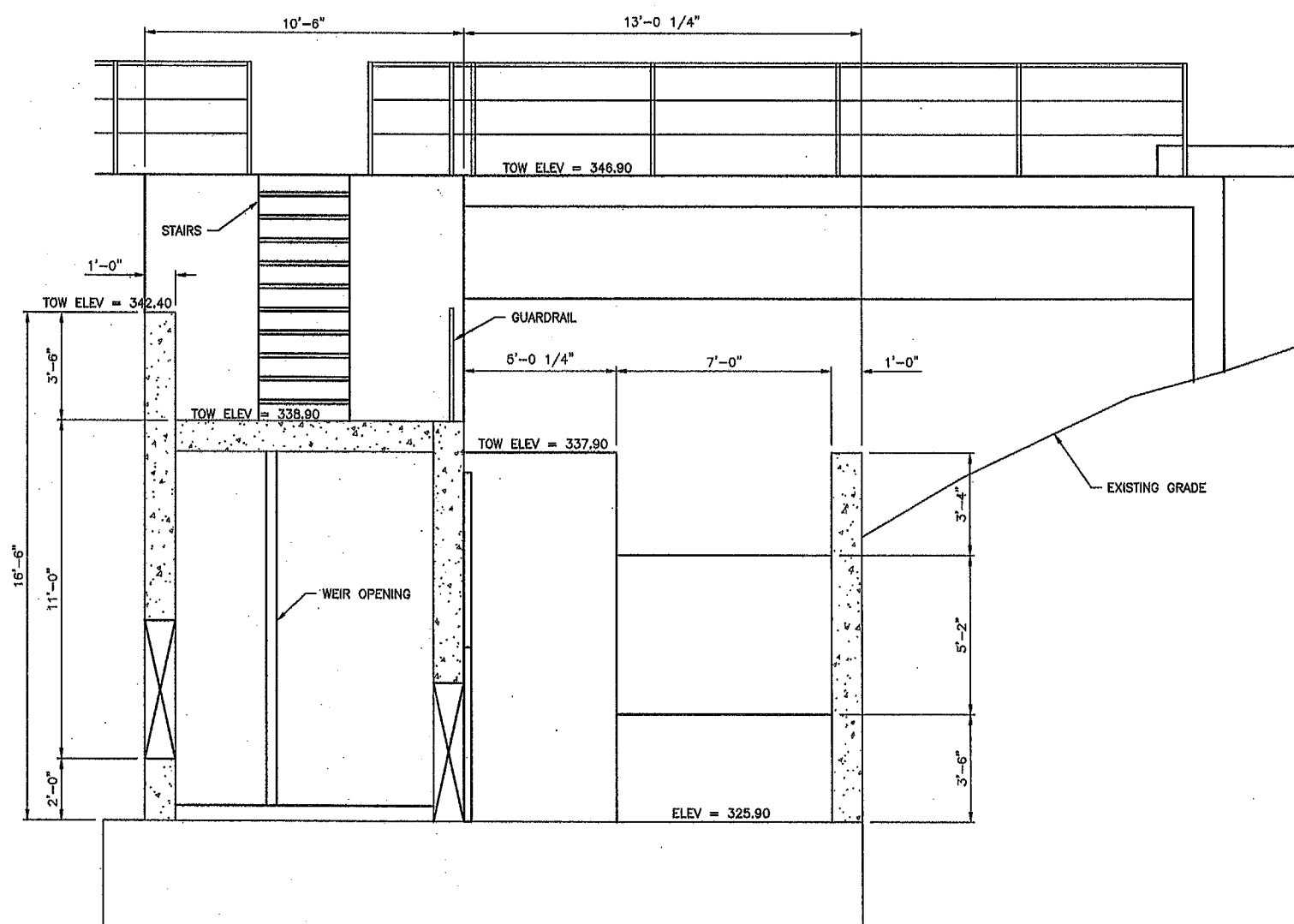
CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
EXISTING FACILITY SECTION 1

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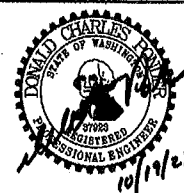


EXISTING FACILITY SECTION C
SCALE: 3/8" = 1'-0"



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

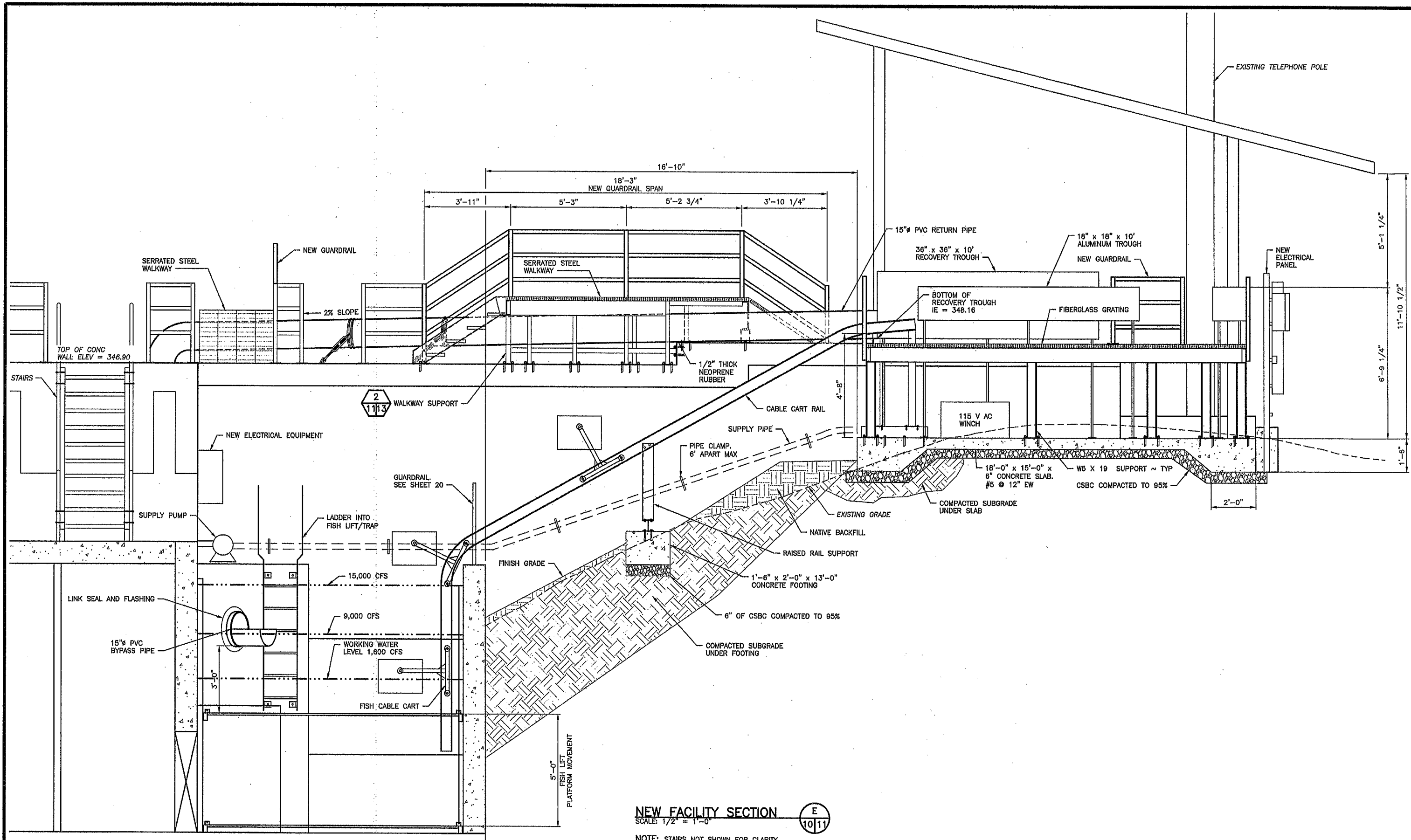
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CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
EXISTING FACILITY SECTIONS 2

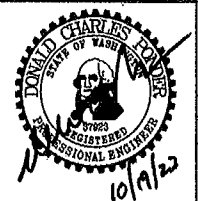
PROJECT NO.
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NEW FACILITY SECTION
SCALE: 1/2" = 1'-0"

NOTE: STAIRS NOT SHOWN FOR CLARITY

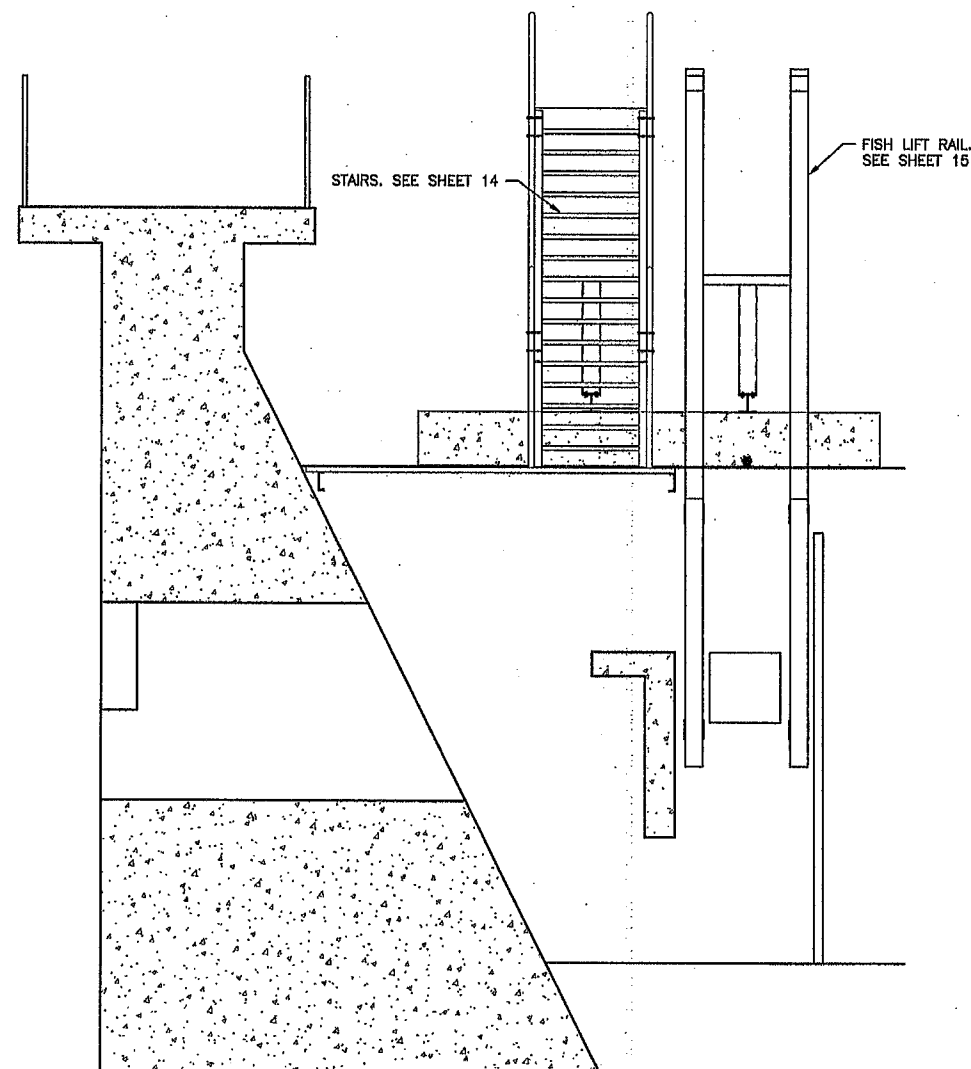
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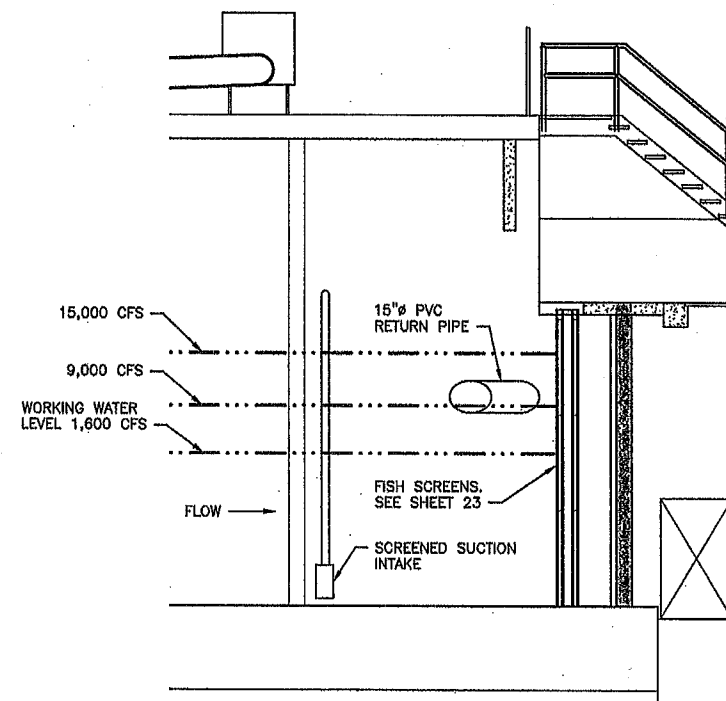
CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
NEW FACILITY SECTION 1

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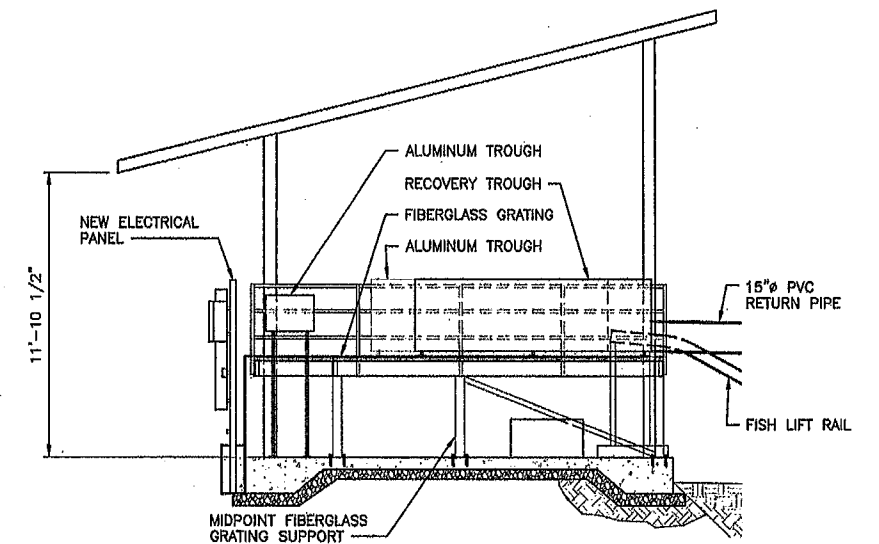
NEW FACILITY SECTION
SCALE: 3/8" = 1'-0"

F
10/12



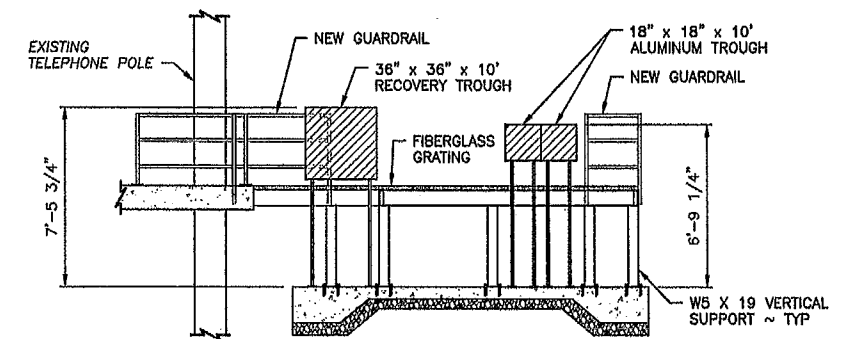
NEW FACILITY SECTION
SCALE: 1/4" = 1'-0"

G
10/12



SORTING FACILITY SECTION
SCALE: 1/4" = 1'-0"

H
10/12



SORTING FACILITY SECTION
SCALE: 1/4" = 1'-0"

I
10/12

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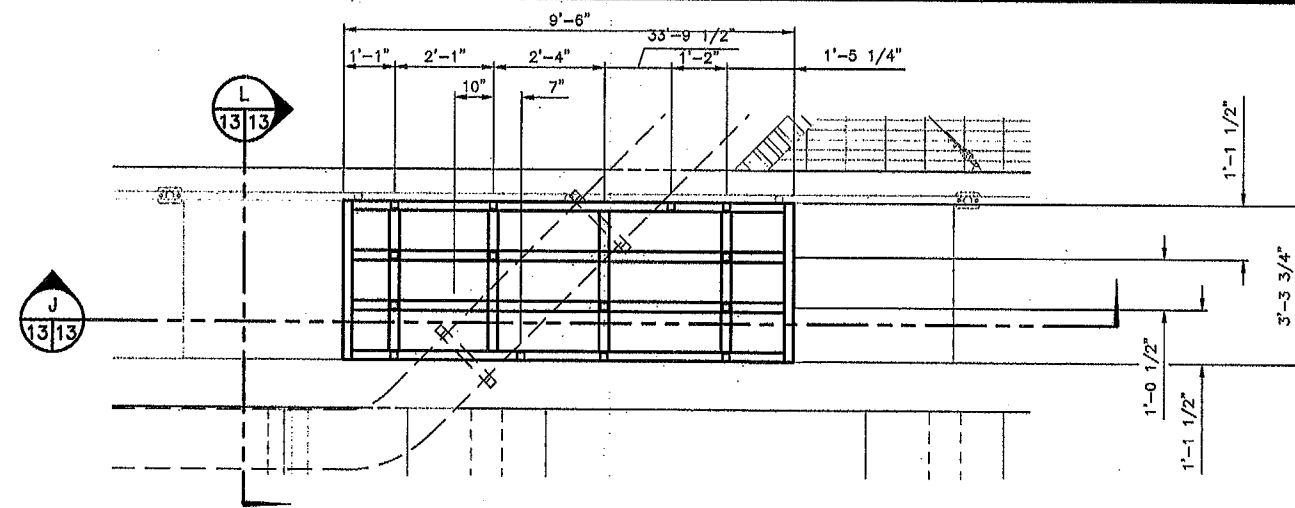
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CENTRALIA HYDRO DAM

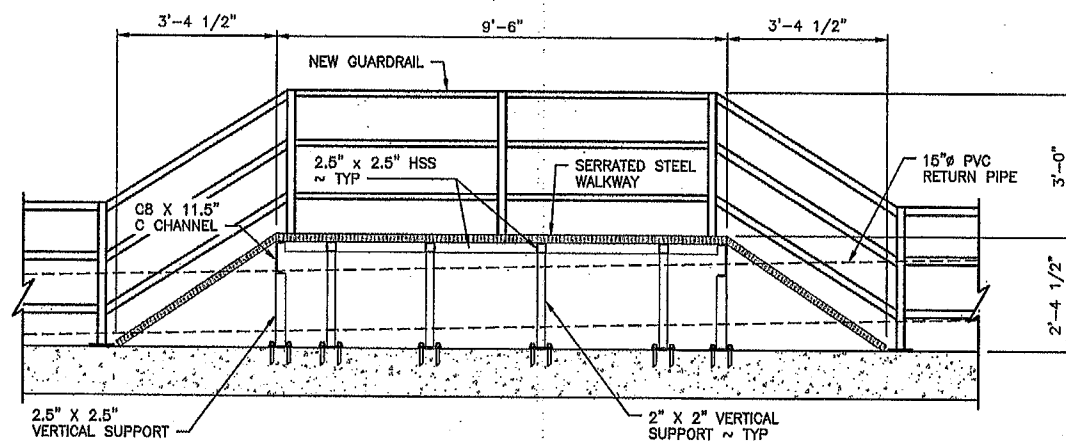
FISH TRAP - CIVIL & ELECTRICAL
NEW FACILITY SECTIONS 2

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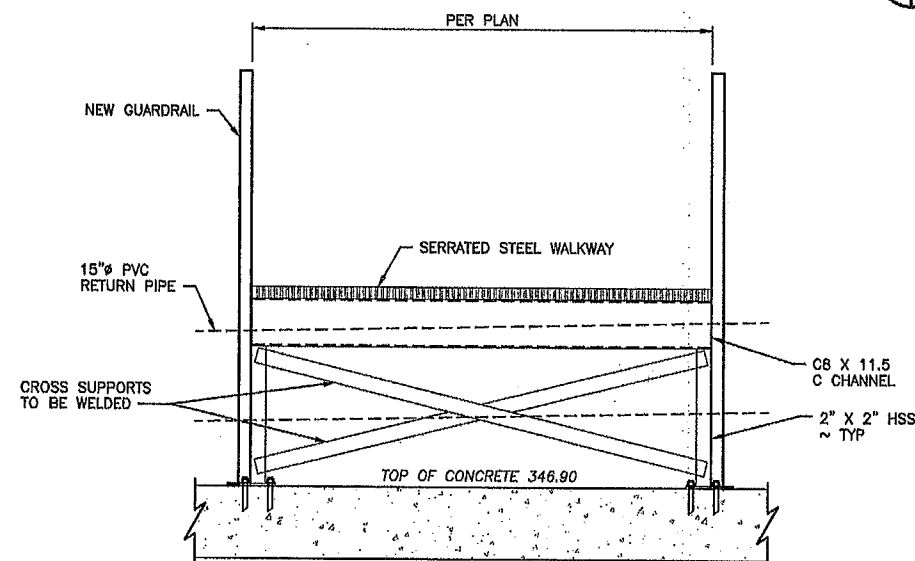
SHEET	OF
12	33



SOUTH WALKWAY SUPPORT PLAN
SCALE: 1/2" = 1'-0"

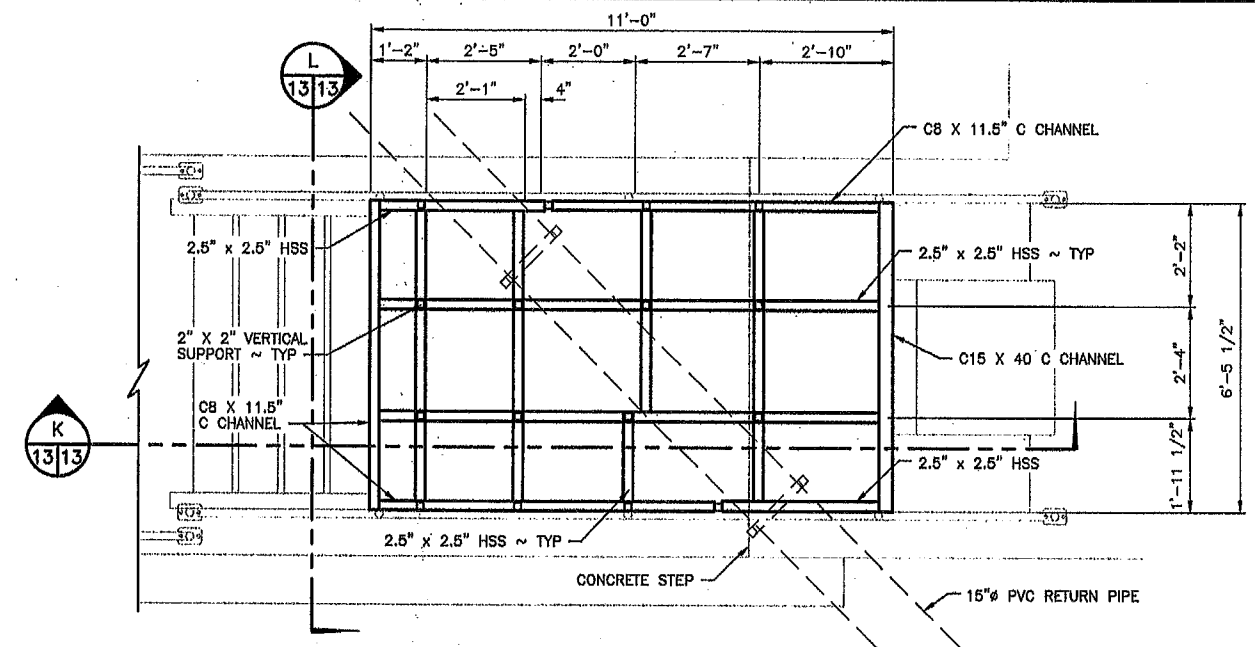


SOUTH WALKWAY SECTION
SCALE: 1" = 1'-0"

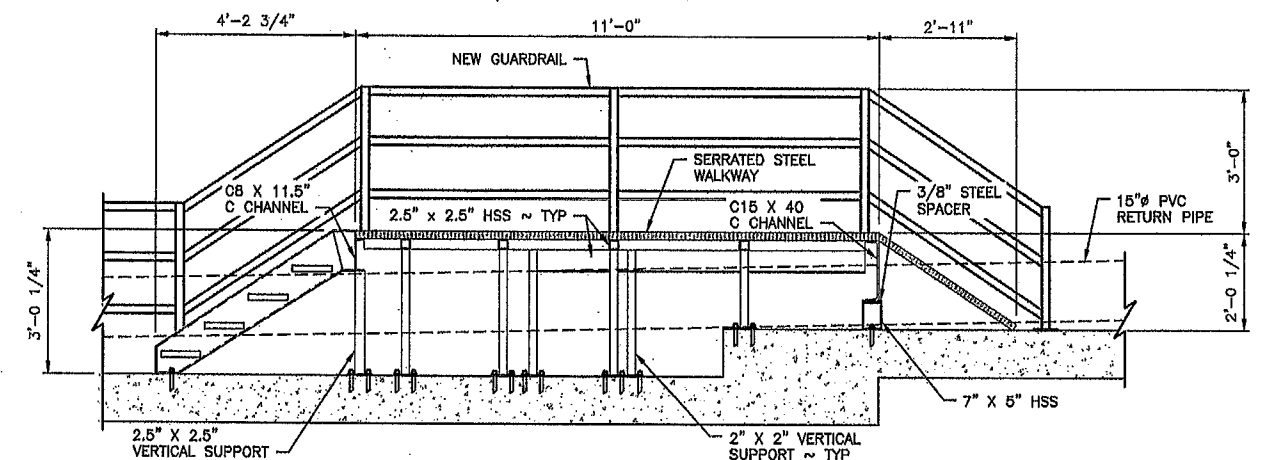


TYPICAL WALKWAY SECTION
SCALE: 1/2" = 1'-0"

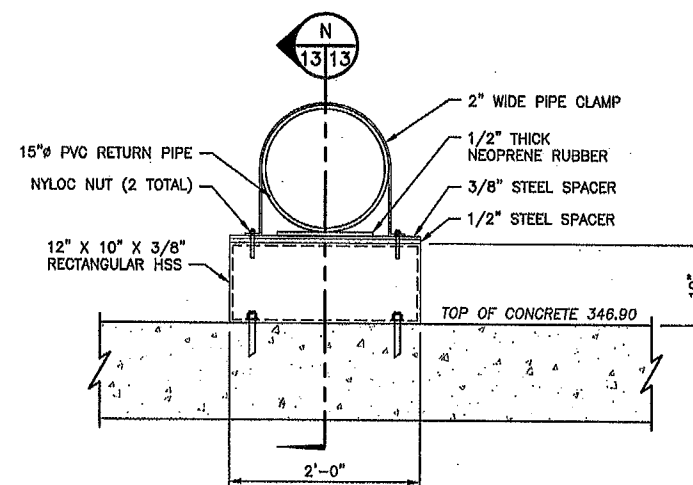
NOTE: STAIRS NOT SHOWN FOR CLARITY



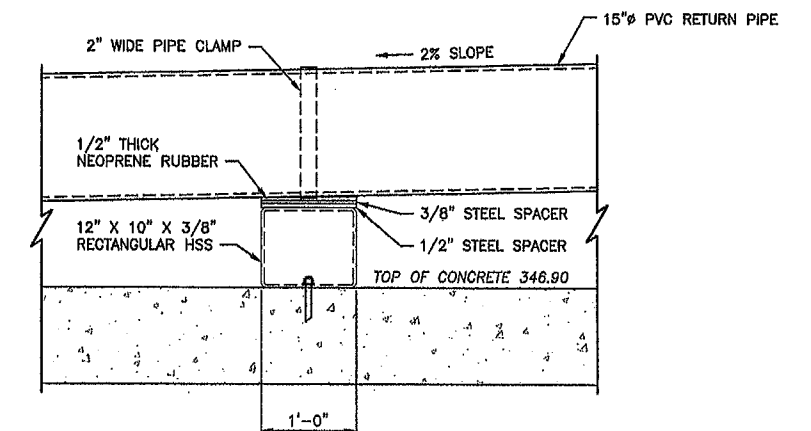
NORTH WALKWAY SUPPORT PLAN
SCALE: 1/2" = 1'-0"



NORTH WALKWAY SECTION
SCALE: 1" = 1'-0"

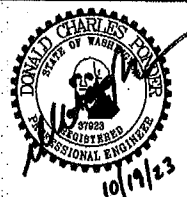


NORTH WALKWAY SECTION
SCALE: 1" = 1'-0"



NORTH WALKWAY SECTION
SCALE: 1" = 1'-0"

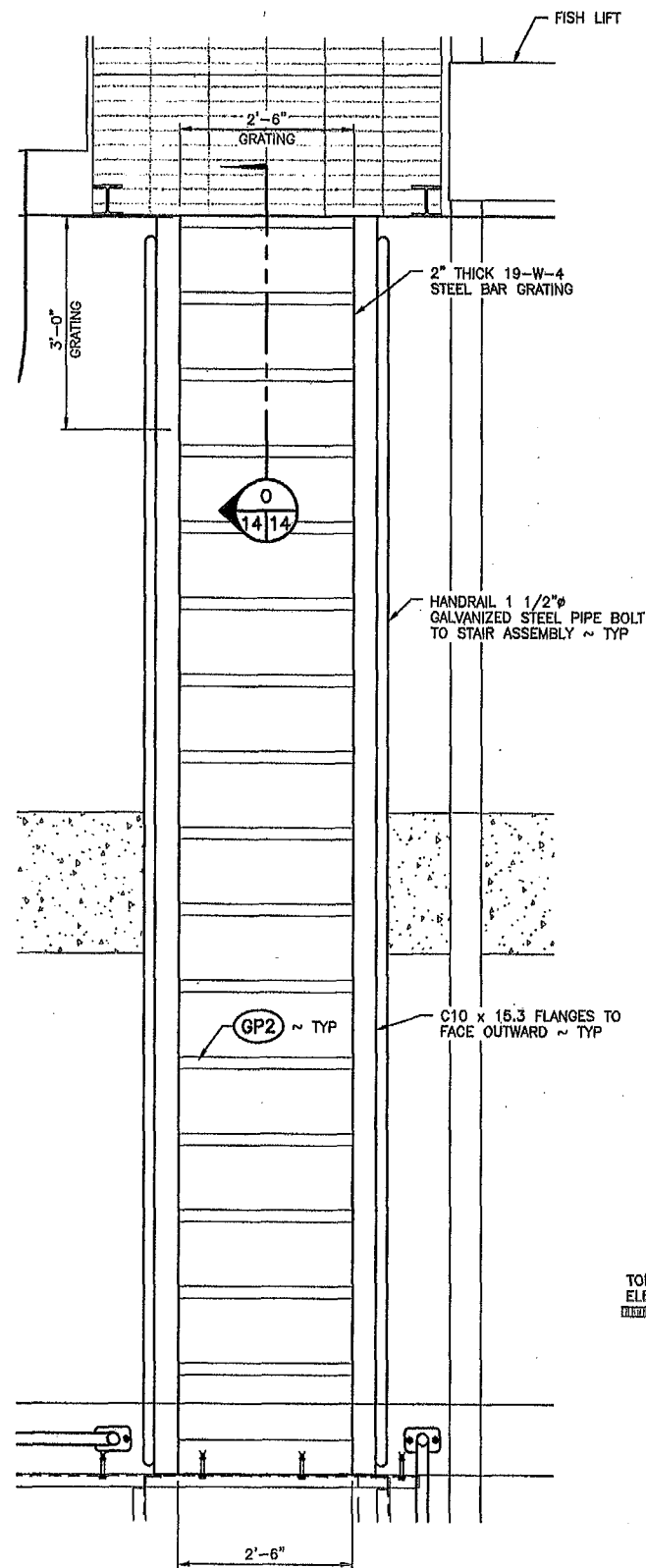
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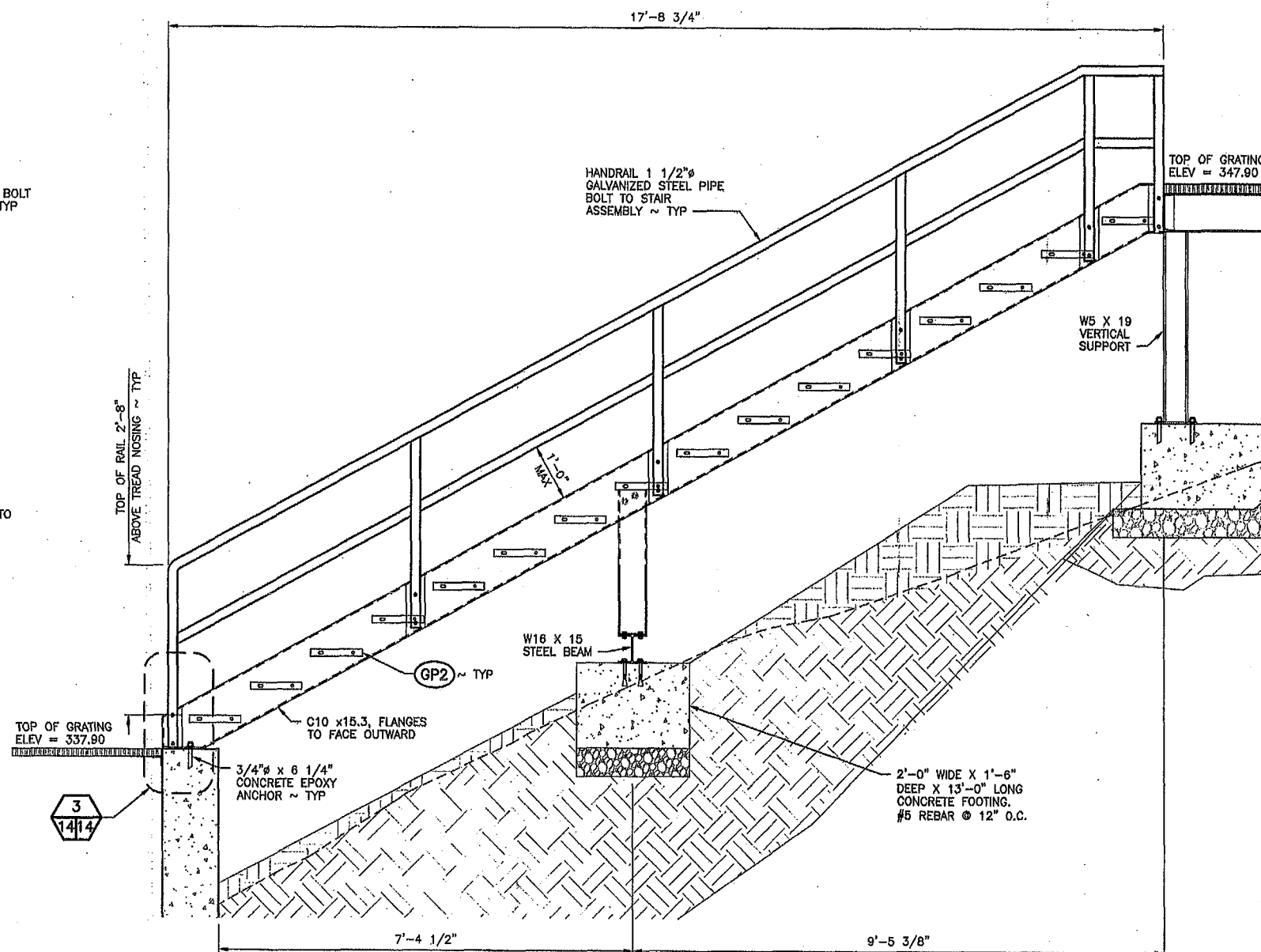
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CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
NEW WALKWAY SUPPORT PLAN & SECTIONS

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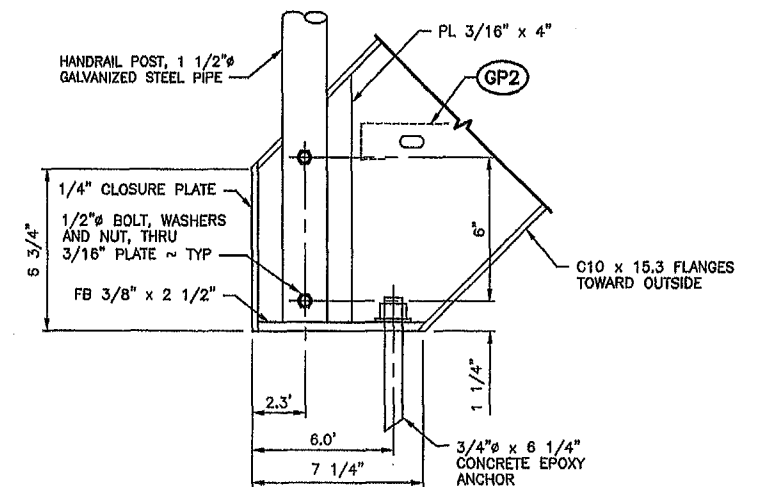
STAIRS PLAN
SCALE: 3/4" = 1'-0"



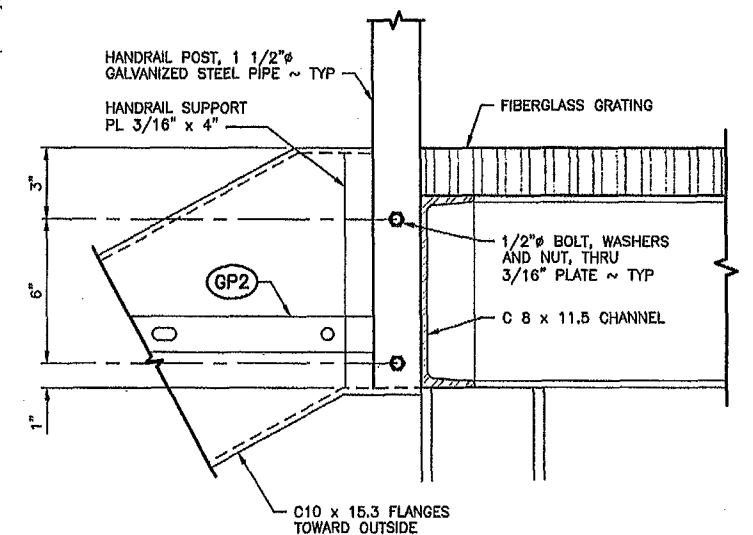
SIDE ELEVATION
SCALE: 3/4" = 1'-0"

GRATING			
MARK	TYPE	SUPPORT	SPECIFICATIONS
GP2	GRIP STRUT (STAIRWAYS)	AS DETAILED	GRIP STRUT SHALL BE PRE-GALVANIZED STEEL ASTM A-9124-G90, 14 GAUGE, 1 1/2 INCHES DEEP, 5 DIAMOND- 11 1/2 INCHED WIDE, WITH WIDTHS AS NOTED. FASTEN WITH 1/2 INCH A307 BOLTS PER MANUFACTURERS RECOMMENDATIONS. MAXIMUM RISE 8 3/4", MINIMUM RUN 8 3/4" PER OCCUPATIONAL SAFETY AND HEALTH ADMINISTRATION (OSHA), SUB PART "D", SECTION 1910.24.

NOTE: FIELD VERIFY ALL FABRICATED ITEMS PRIOR TO FABRICATION. AS-BUILTS REQUIRED.



STAIR SUPPORT DETAIL
SCALE: 3/4" = 1'-0"



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

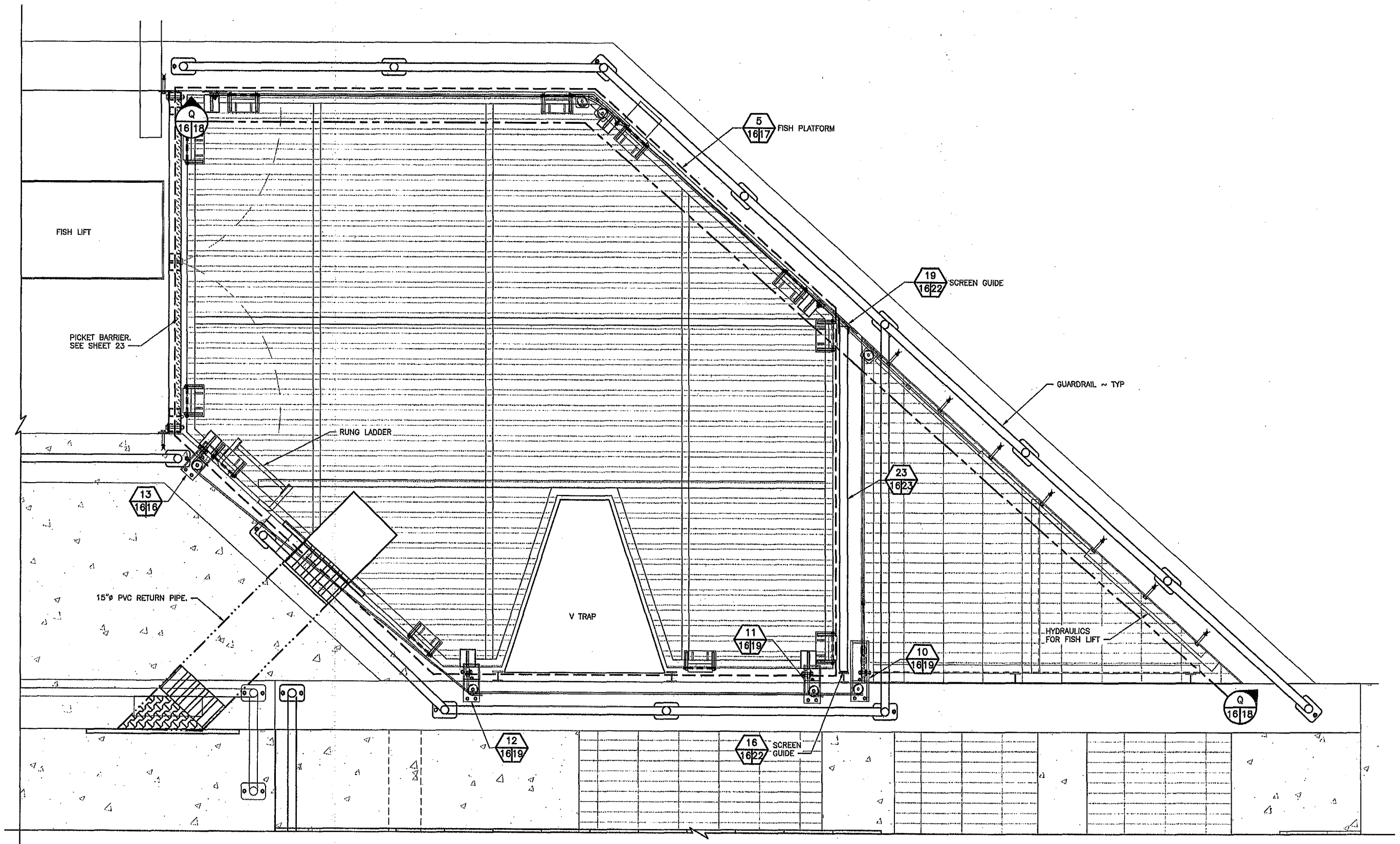
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FISH TRAP - CIVIL & ELECTRICAL
STAIR PLAN & DETAILS

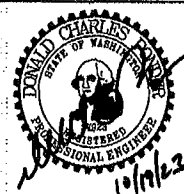
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FISH LIFT PLATFORM PLAN

SCALE: 1" = 1'-0"

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FISH & WILDLIFE

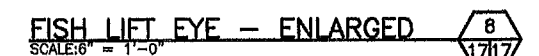
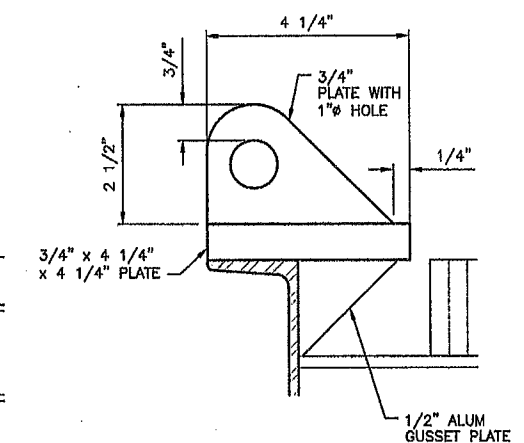
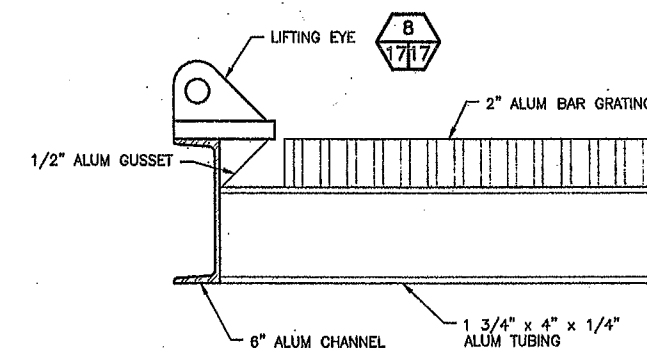
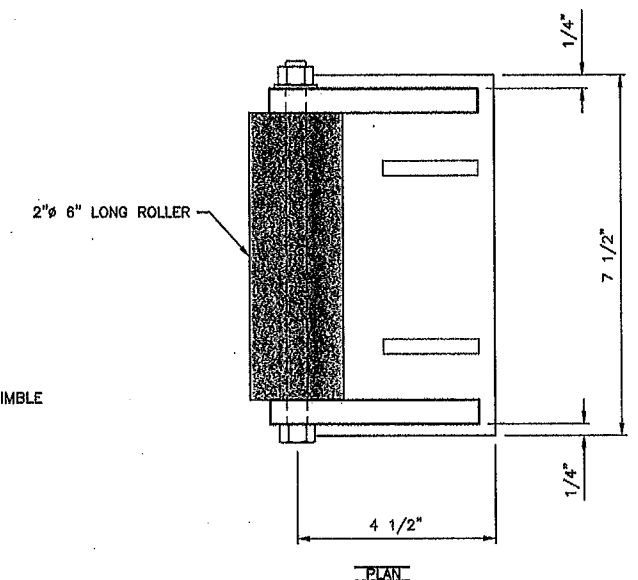
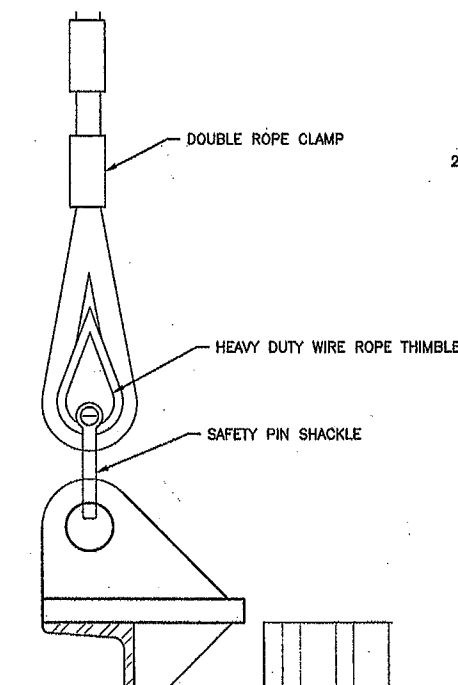
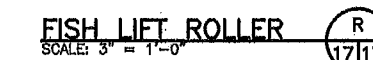
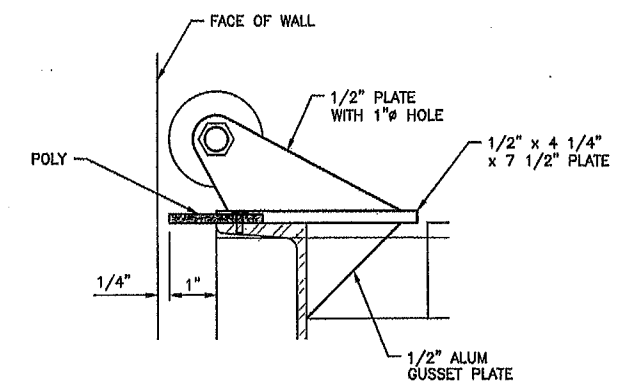
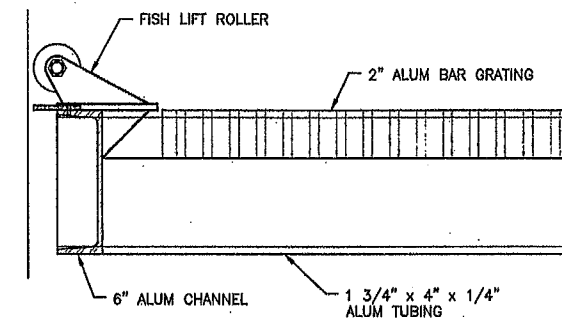
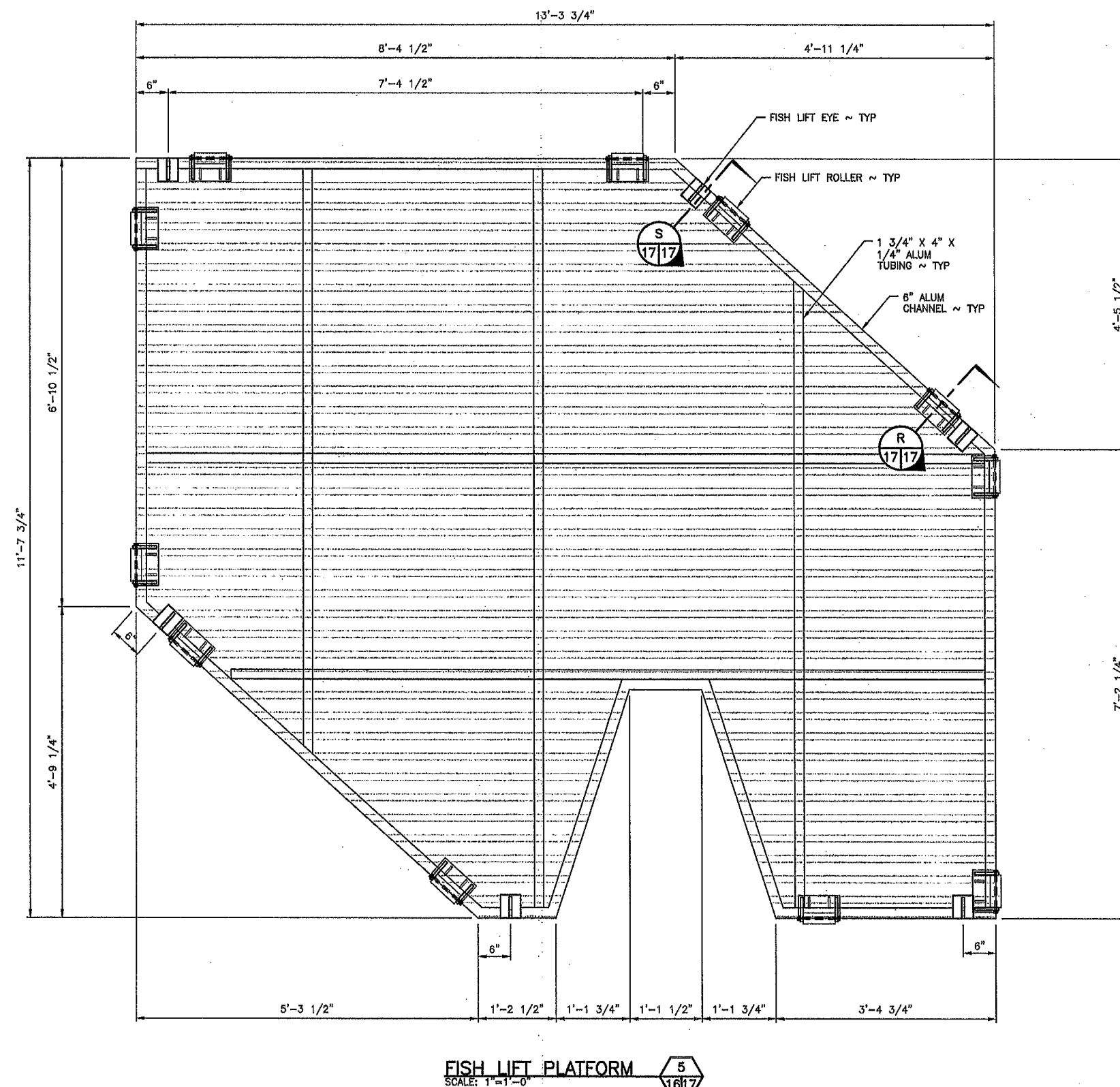


SYM	DATE	REVISION DESCRIPTION	BY
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CHIEF ENGINEER	DATE:	DESIGNED BY L. PAGANO	
PROGRAM	DATE:	CHECKED BY D. PONDER	
		DRAWN BY NW / RS	
		DATE 10-17-2023	

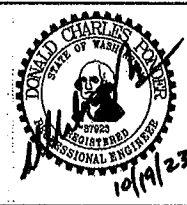
CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
FISH LIFT PLATFORM PLAN

PROJECT NO.
TN:M34:2020-1

SHEET OF
16 33



WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



SYM	DATE	REVISION DESCRIPTION	BY
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PROGRAM		DATE2	

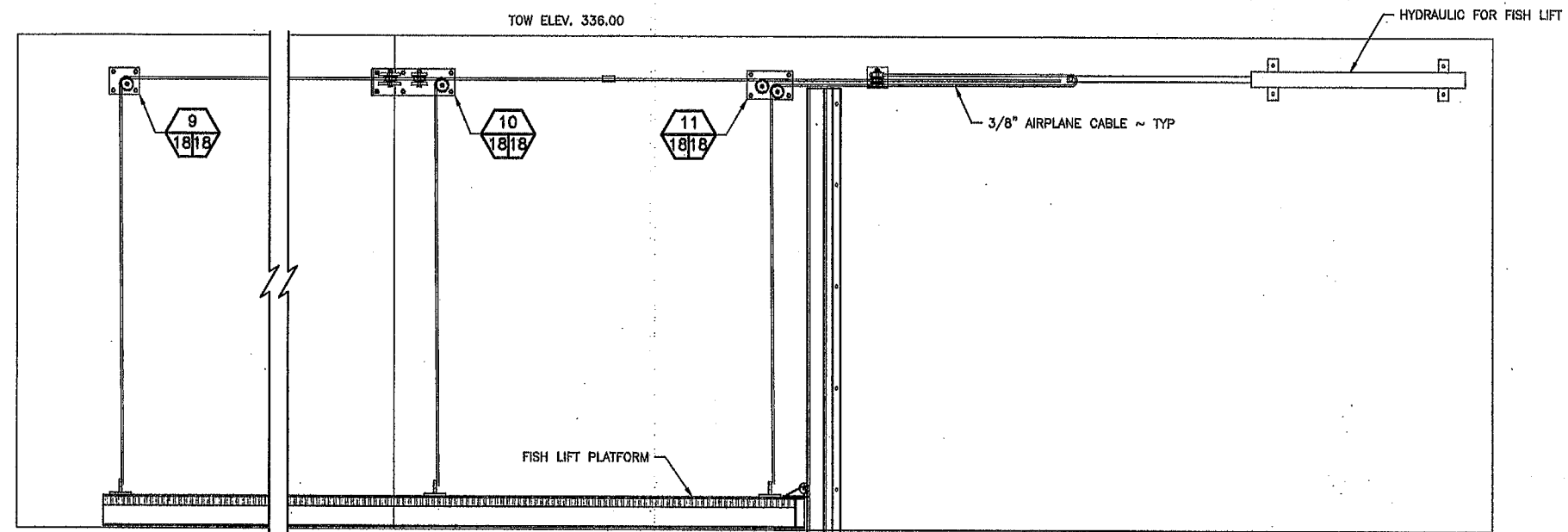
DESIGNED BY L. PAGANO
CHECKED BY D. PONDER
DRAWN BY NW / RS
DATE 10-17-2023

CENTRALIA HYDRO DAM

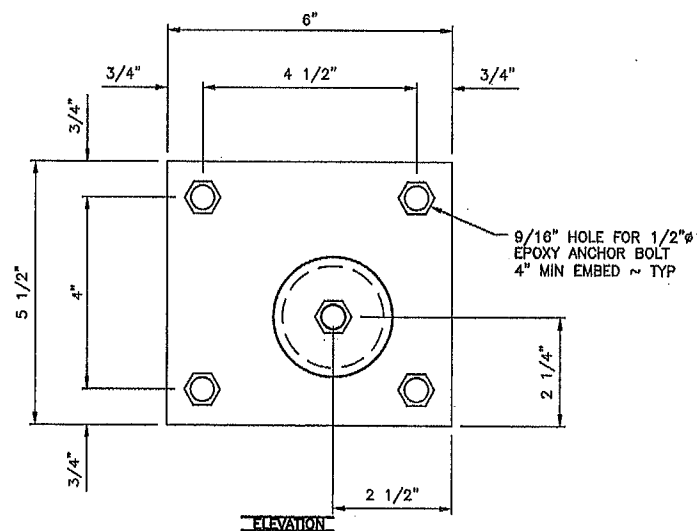
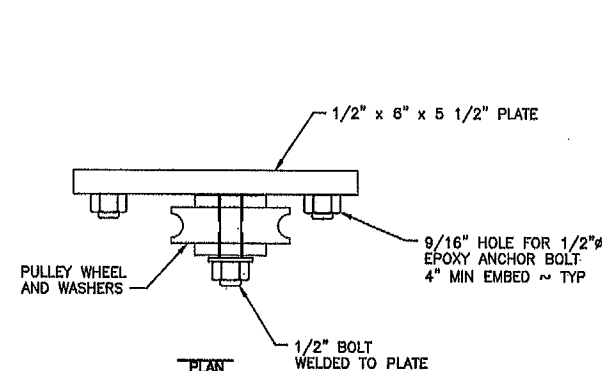
FISH TRAP - CIVIL & ELECTRICAL
FISH LIFT PLATFORM DETAILS & SECTIONS

PROJECT NO.
TN:M34:2020-1

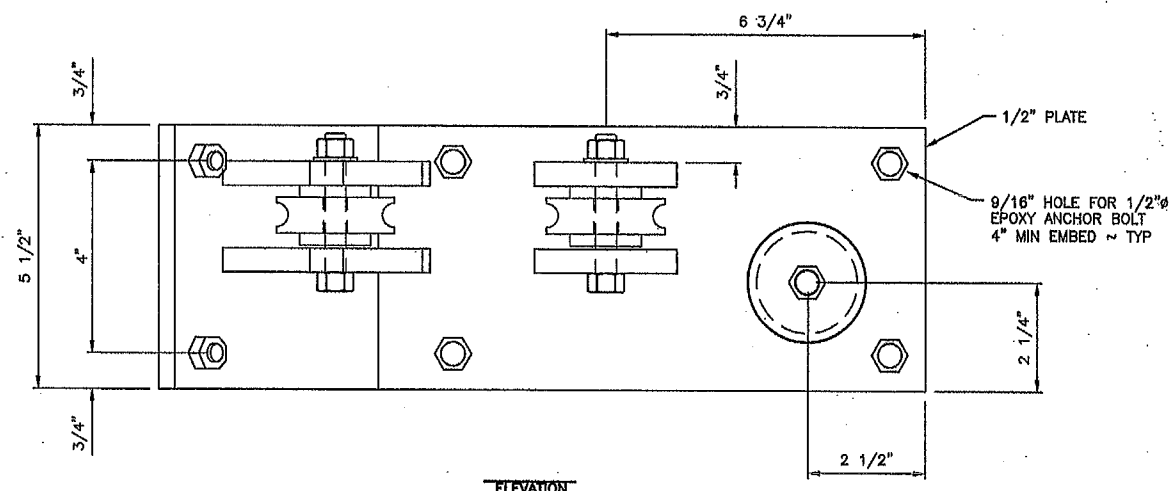
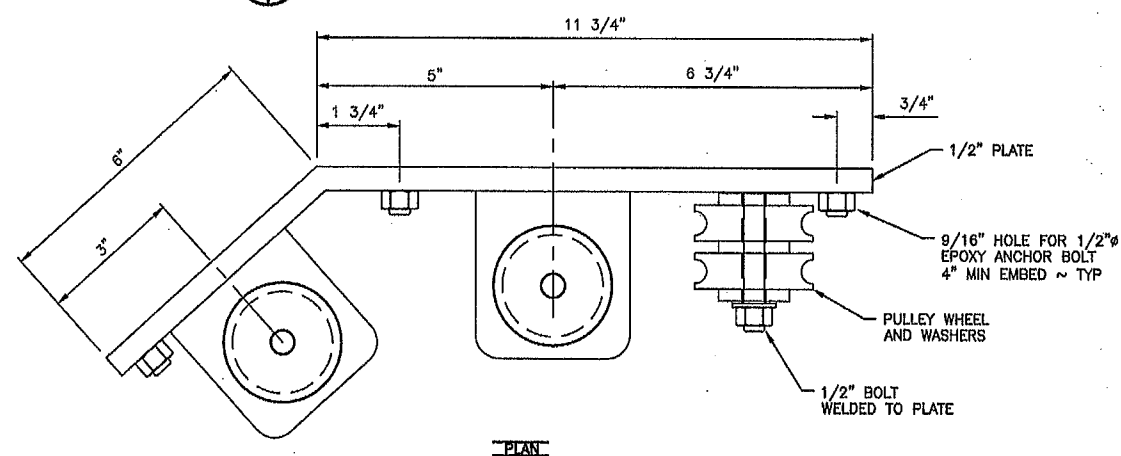
SHEET	OF
17	33



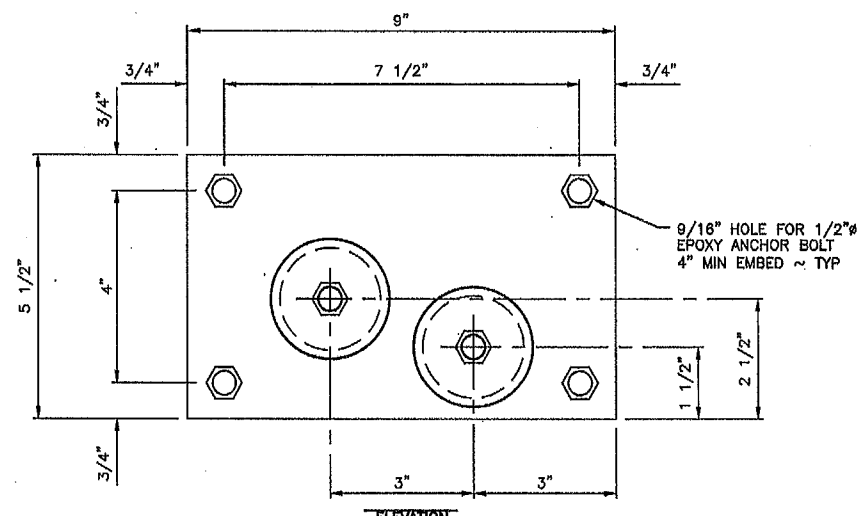
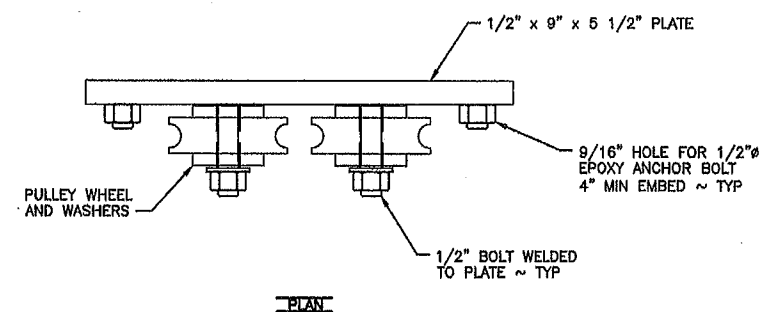
FISH LIFT PLATFORM SECTION
SCALE: 3/4" = 1'-0"



FISH LIFT PULLEY DETAIL 9
SCALE: 6\"/>

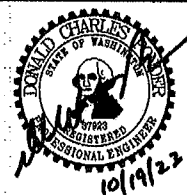


FISH LIFT PULLEY DETAIL 10
SCALE: 6\"/>



FISH LIFT PULLEY DETAIL 11
SCALE: 6\"/>

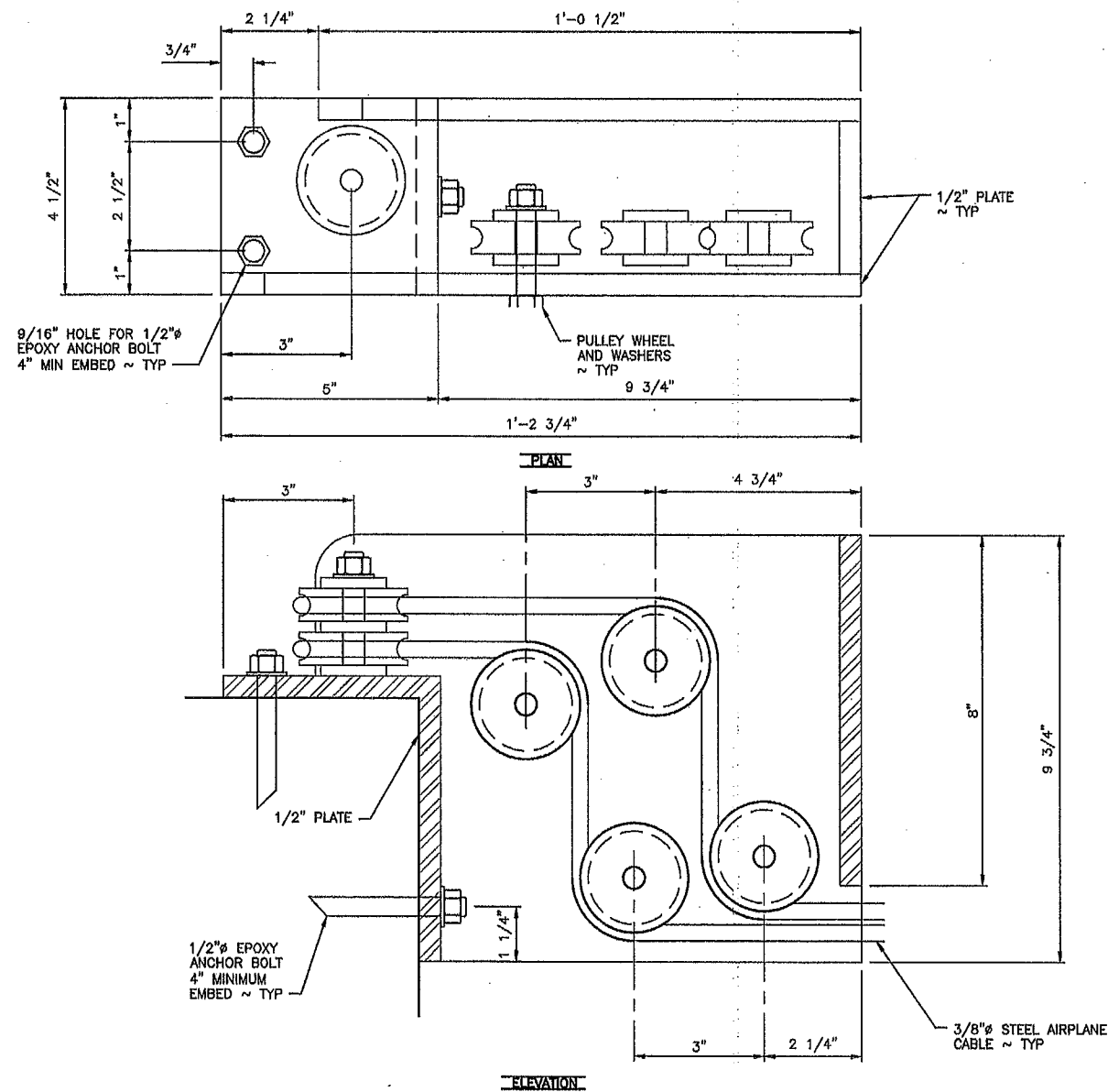
WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



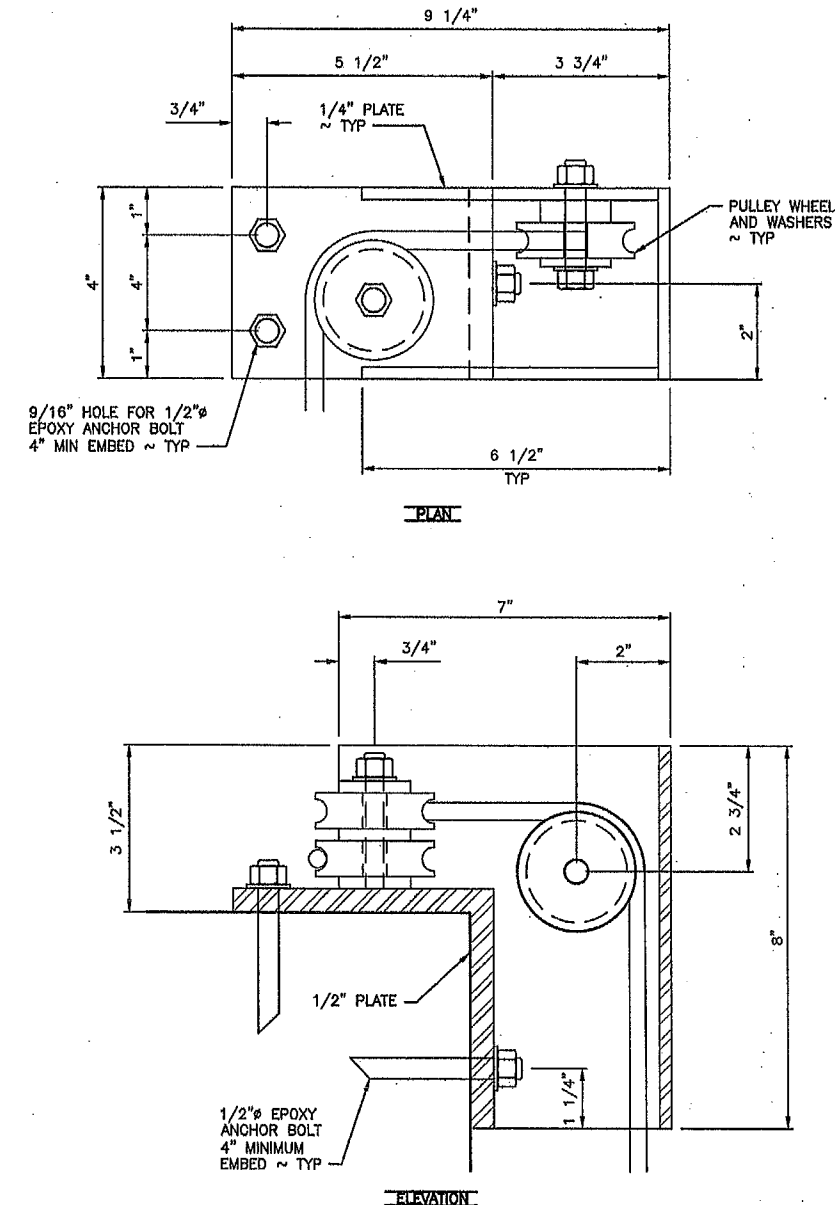
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CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
FISH LIFT PLATFORM DETAILS 1

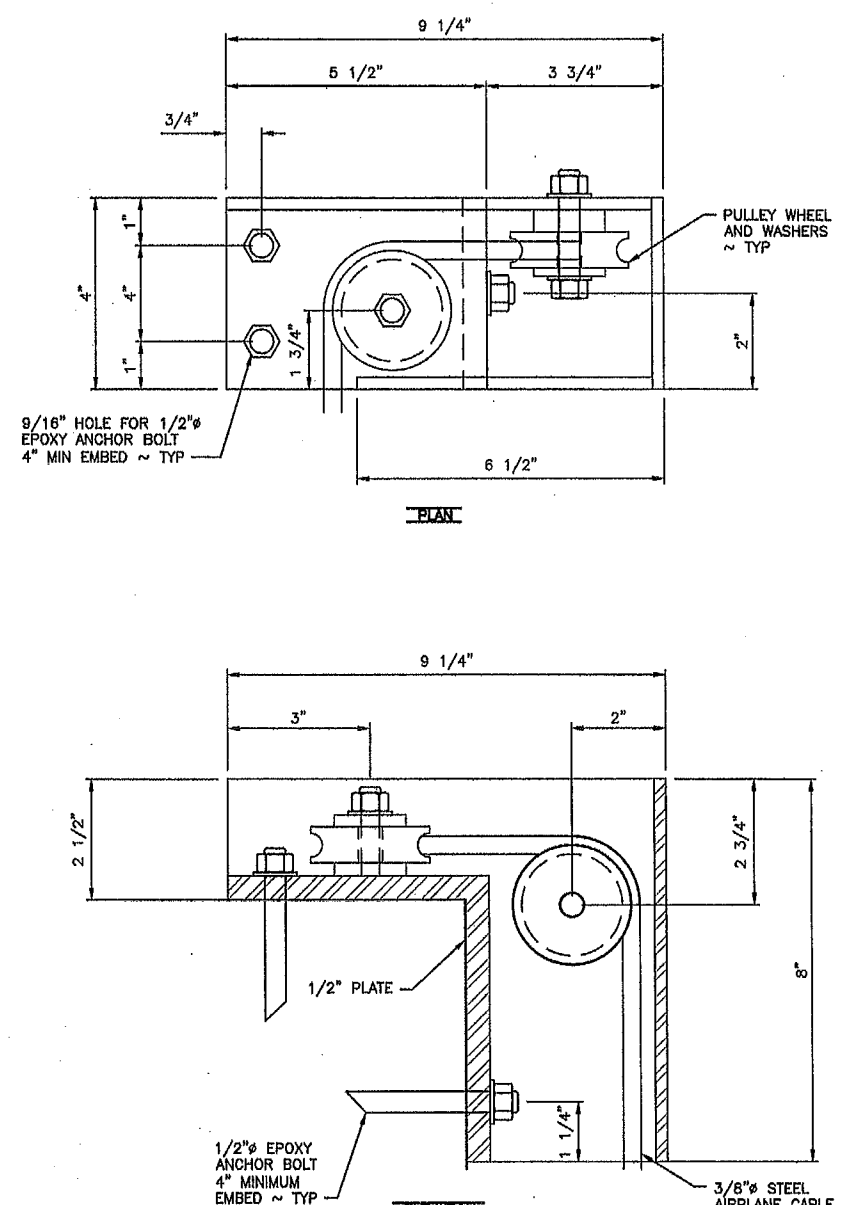
PROJECT NO.
TN:M34:2020-1
SHEET 18 OF 33



FISH LIFT PULLEY DETAIL 12
SCALE: 6" = 1'-0"

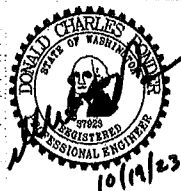


FISH LIFT PULLEY DETAIL 13
SCALE: 6" = 1'-0"



FISH LIFT PULLEY DETAIL 14
SCALE: 6" = 1'-0"

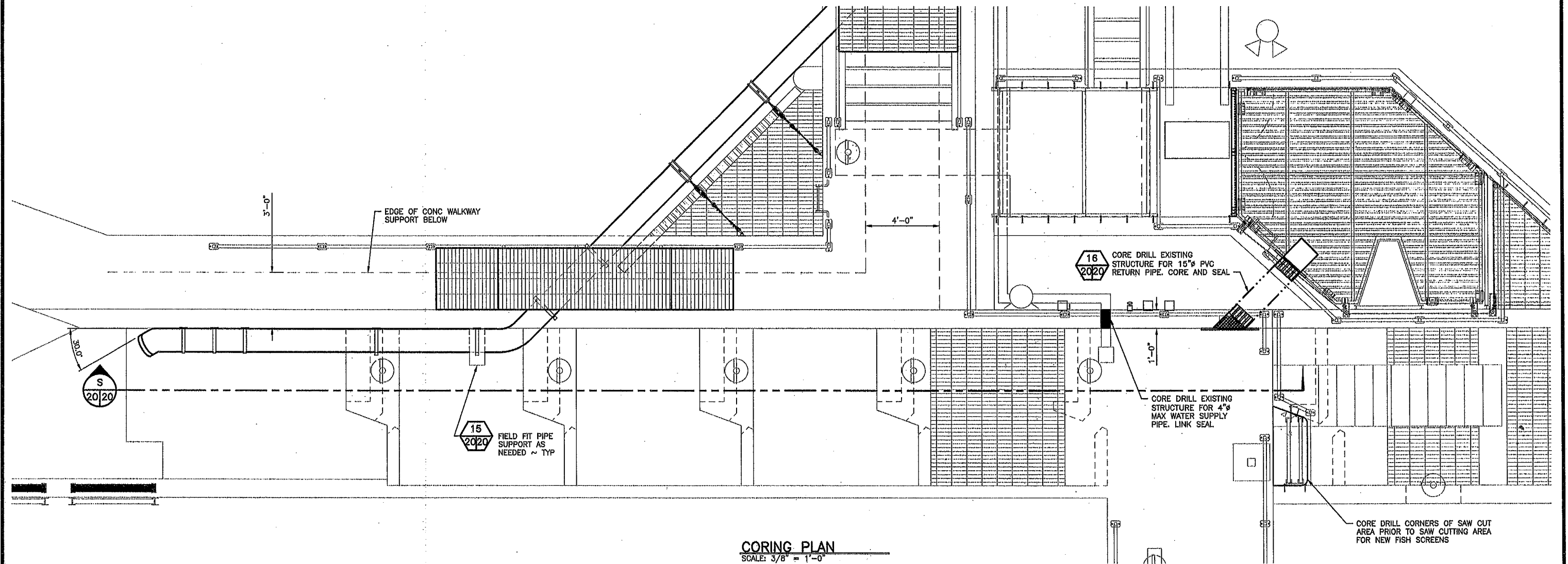
WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



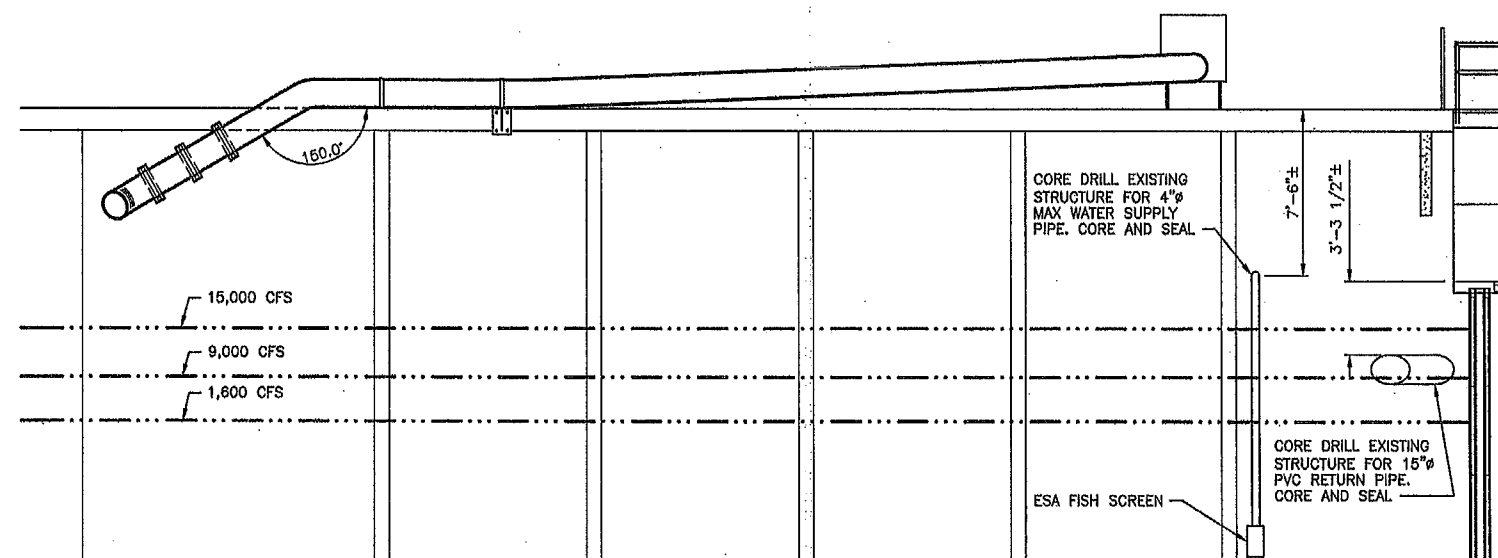
SYM	DATE	REVISION DESCRIPTION	BY
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		DATE 10-17-2023	

CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
FISH LIFT PLATFORM DETAILS 2

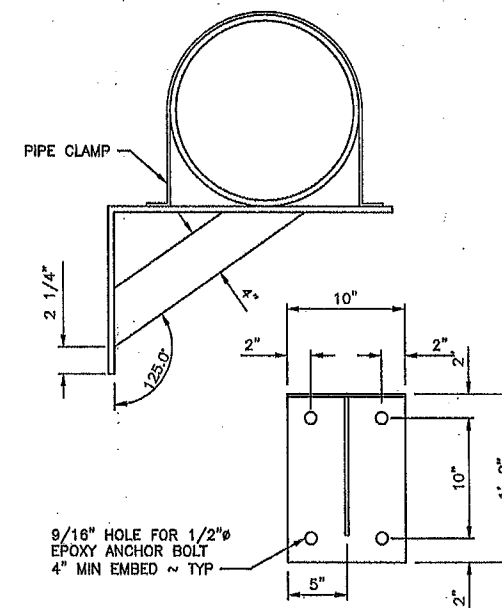
PROJECT NO. TN:M34:2020-1	
SHEET 19	OF 33



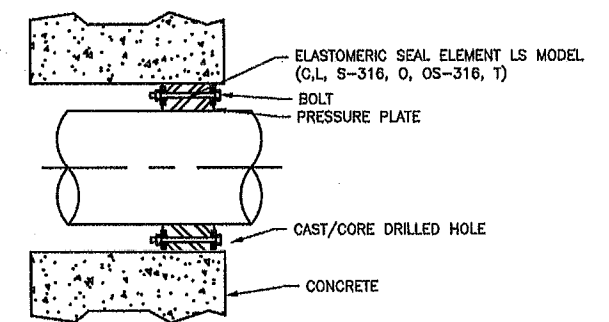
CORING PLAN
SCALE: 3/8" = 1'-0"



CORING SECTION
NOT TO SCALE



PIPE SUPPORT
NOT TO SCALE



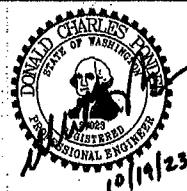
LINK SEAL
NOT TO SCALE

LS Model	Seal Element	Bolts/Nuts	Pressure Plate
C	EPDM (Black)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
L	EPDM (Blue)	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
O	Nitrile	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Reinforced Nylon Polymer
T	Silicone	Zinc Dichromate/Organic Coated Carbon Steel Bolt	Steel Zinc Dichromate
(C,L,O)+S-316	(see model options)	316 Stainless Steel	Reinforced Nylon Polymer

Sleeve Model	Description	Material
CS	Century-Line Sleeve	HDPE
WS	Steel Wall Sleeve	Steel

For more Material Property Information, see literature at www.linksseal.com

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CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
CORING PLAN & DETAILS

PROJECT NO. TN:M34:2020-1	
SHEET 20	OF 33

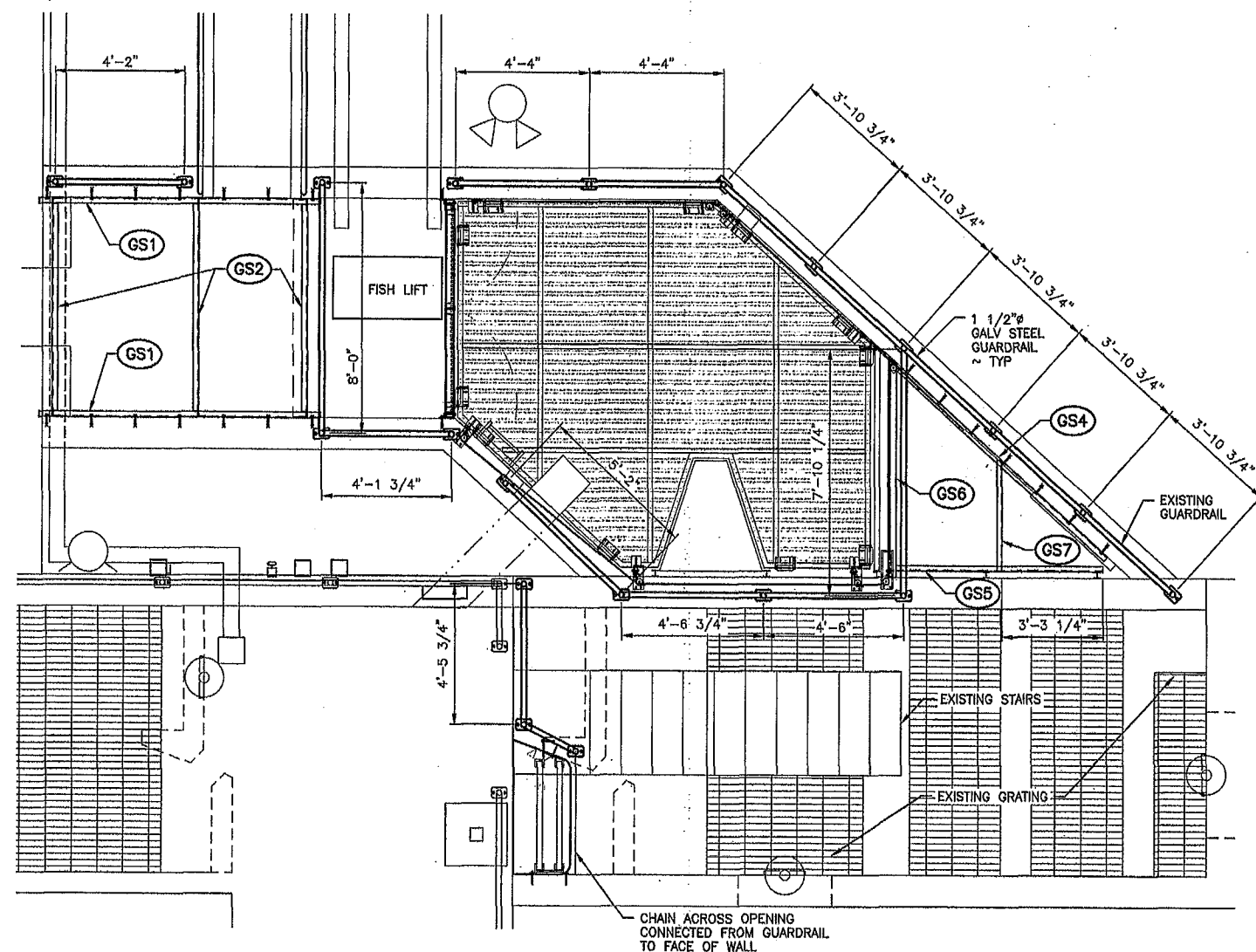
GRATING SCHEDULE			
#	SPAN	WIDTH	QUANTITY
G1	9'-0 1/2"	6'-11 1/2"	1
G2	7'-8 7/8"	7'-0 3/16"	1

NOTES:

1. STEEL GRATING SHALL BE 19-W-4 2" DEPTH
2. ALL GRATING SHALL MEET THE GRATING MANUFACTURER REQUIREMENTS FOR SPANS, WIDTHS, AND MOUNTING METHODS.

LEGEND:

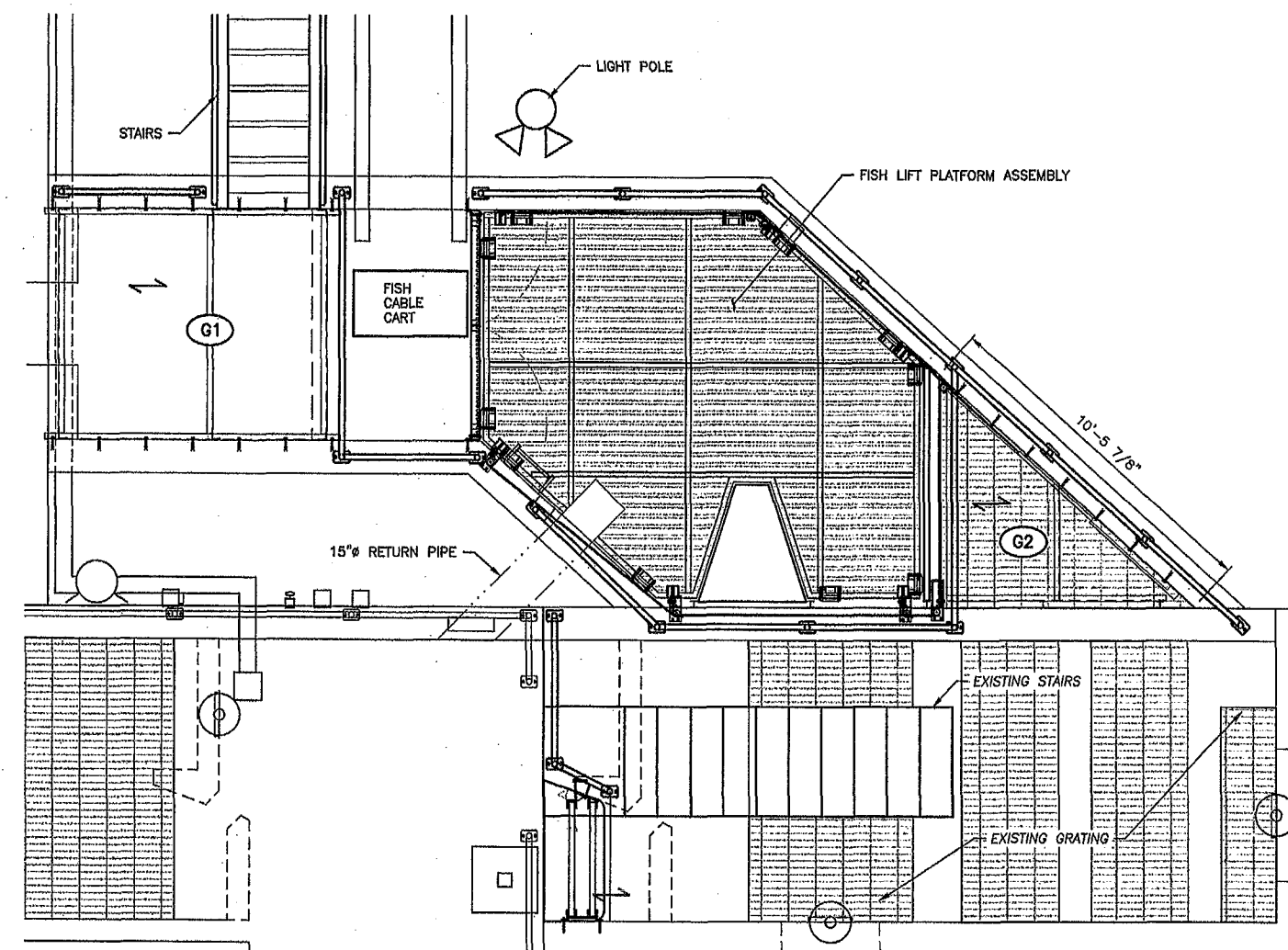
 SPAN DIRECTION



**GUARDRAIL LAYOUT &
GRATING SUPPORT PLAN**

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

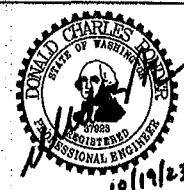
NOTE: SEE SHEET 22 FOR GRATING SUPPORTS



GRATING PLAN
SCALE: $3/8" = 1'-0"$

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

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE

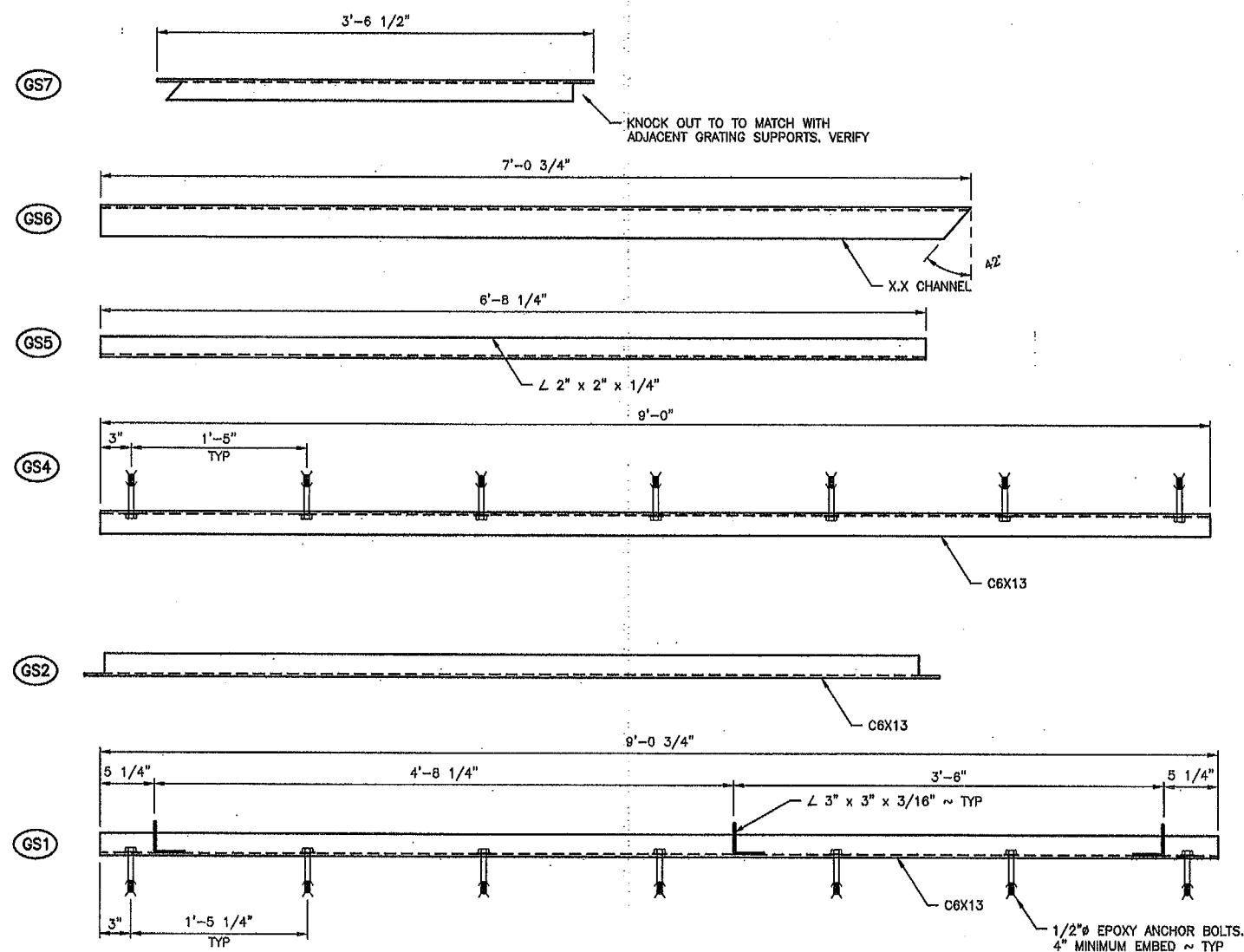


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PROGRAM	DATE:	DATE <u>10-17-2023</u>	

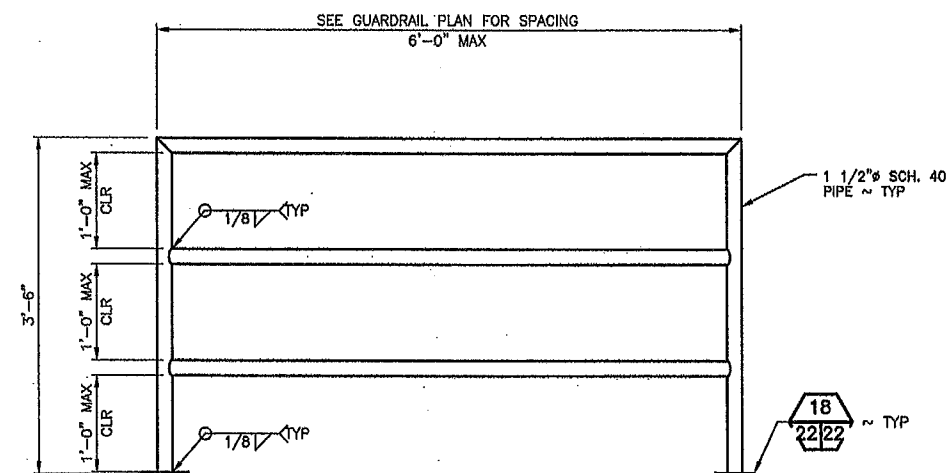
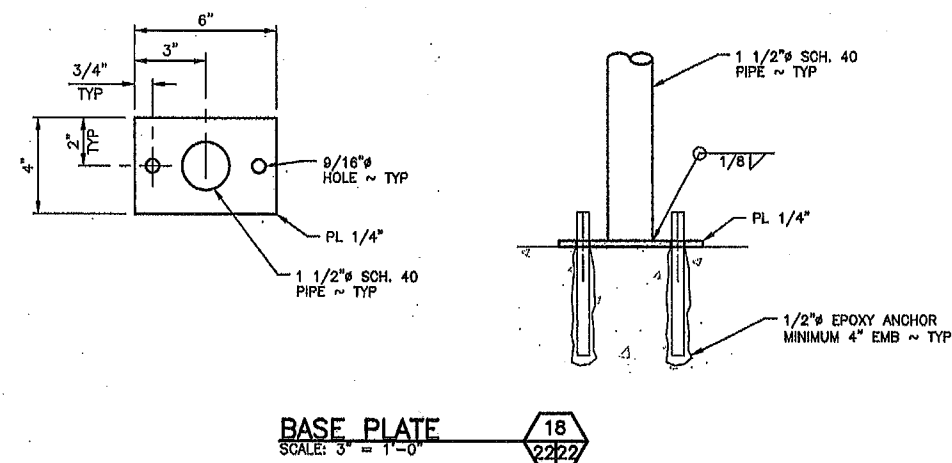
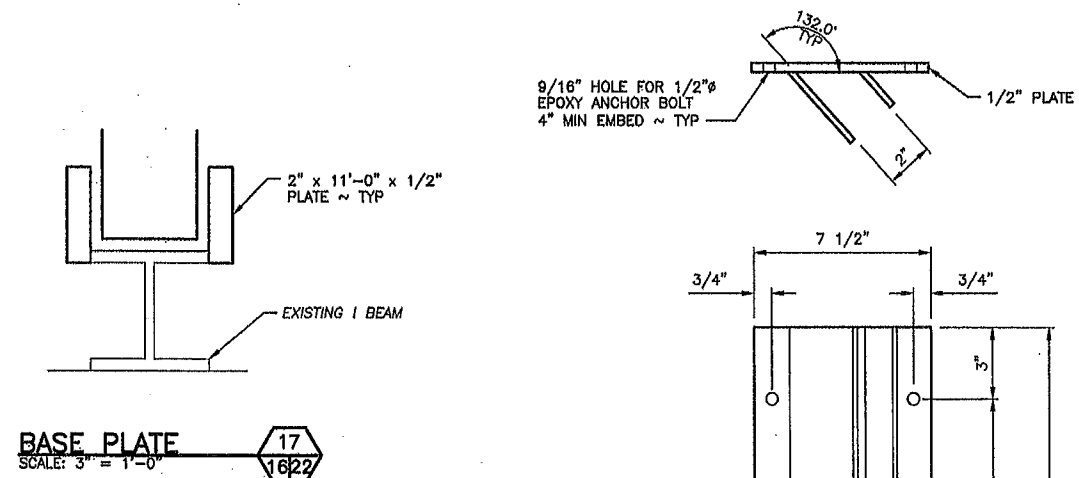
CENTRALIA HYDRO DAM
FISH TRAP — CIVIL & ELECTRICAL
GUARDRAIL LAYOUT & GRATING PLANS

PROJECT NO.
TN:M34:2020-1

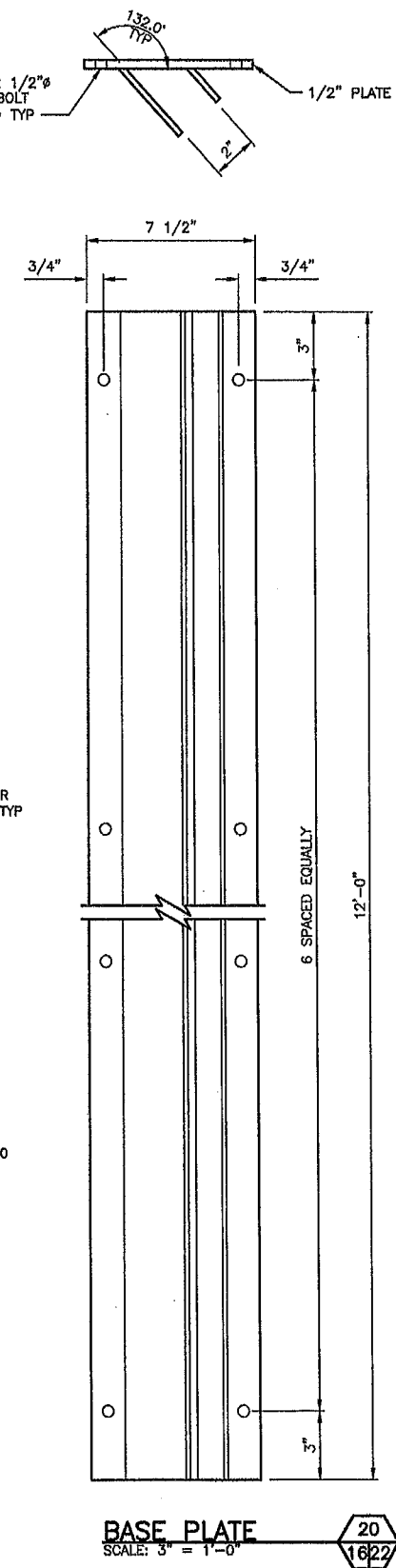
SHEET	OF
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GRATING SUPPORTS PLAN
SCALE: 1-1/2" = 1'-0"

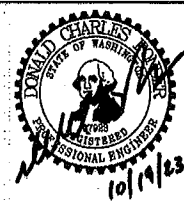


GUARDRAIL
SCALE: 3" = 1'-0"



BASE PLATE
SCALE: 3" = 1'-0"

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FISH & WILDLIFE

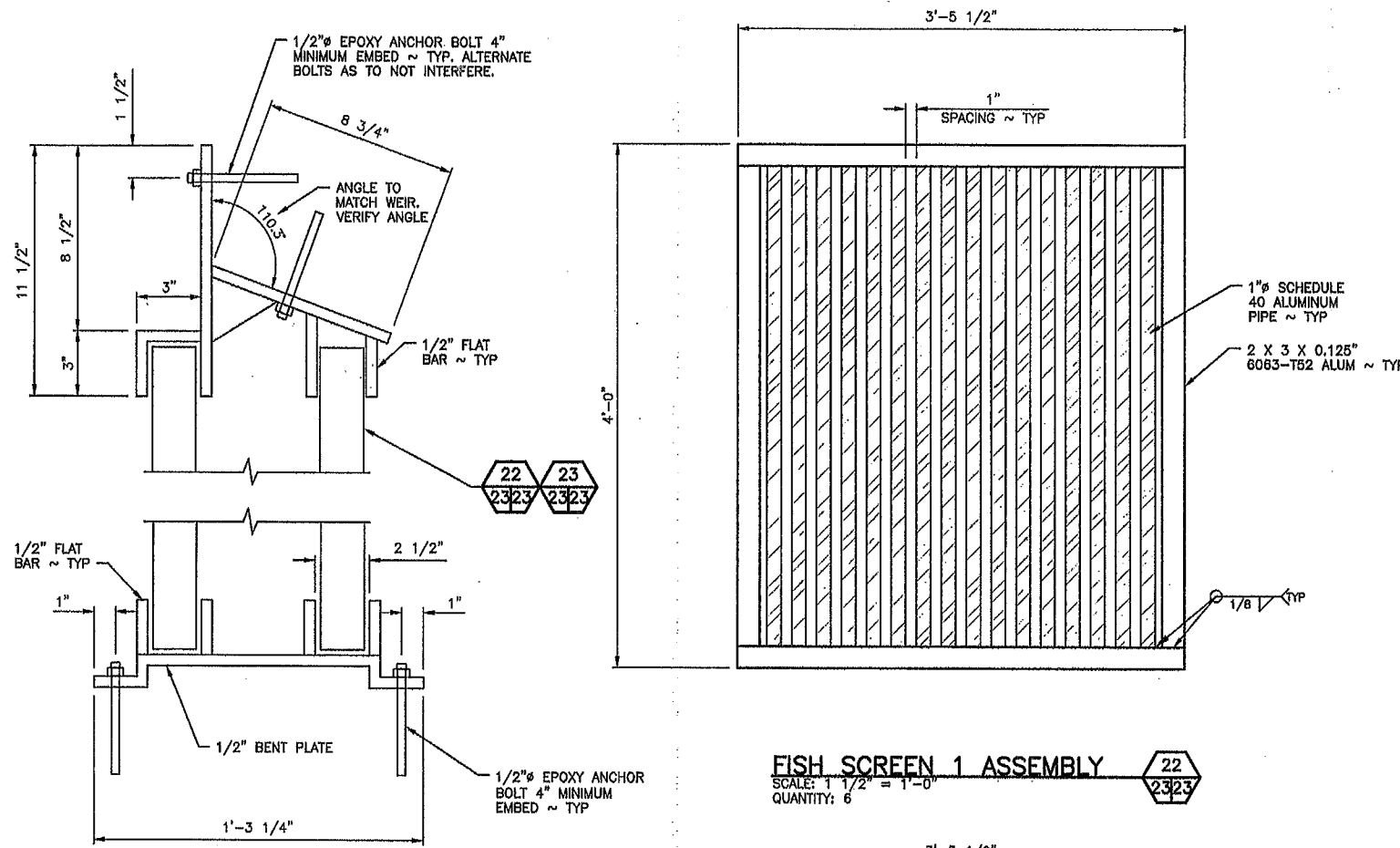


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DRAWN BY	NW / RS	DATE	10-17-2023

CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
GRATING SUPPORT DETAILS

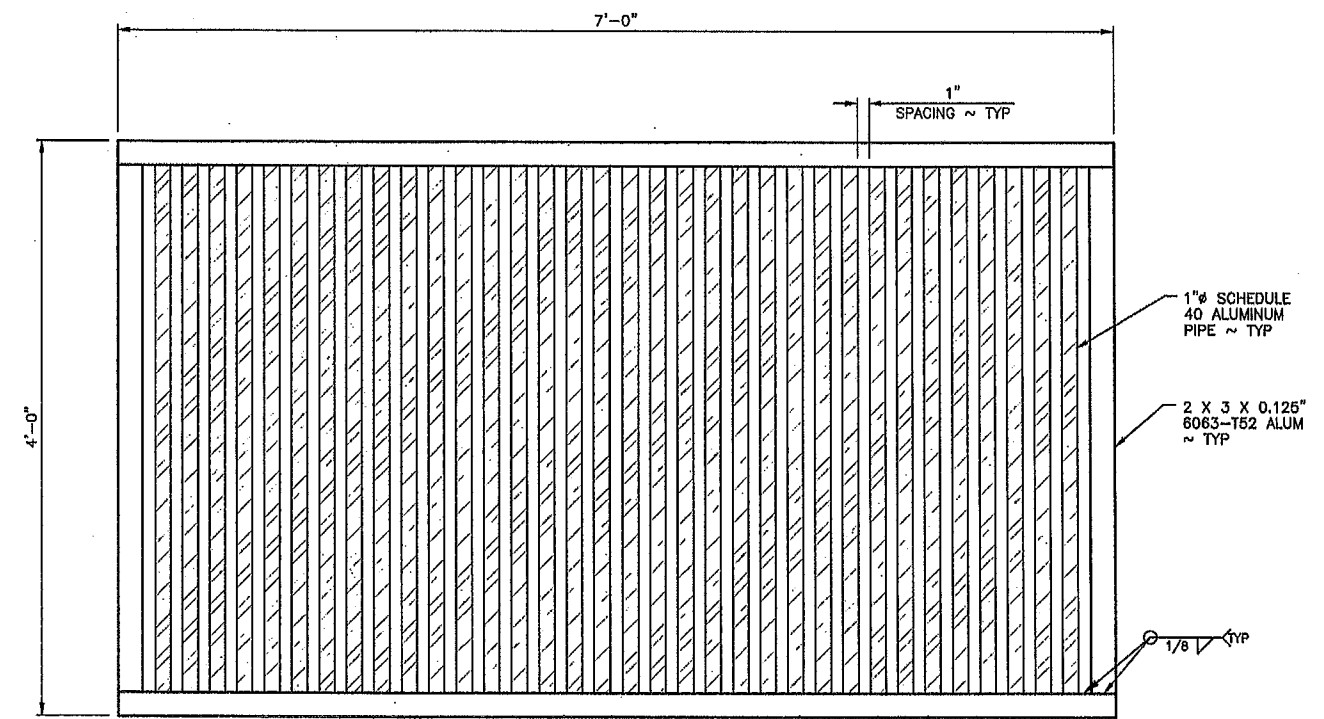
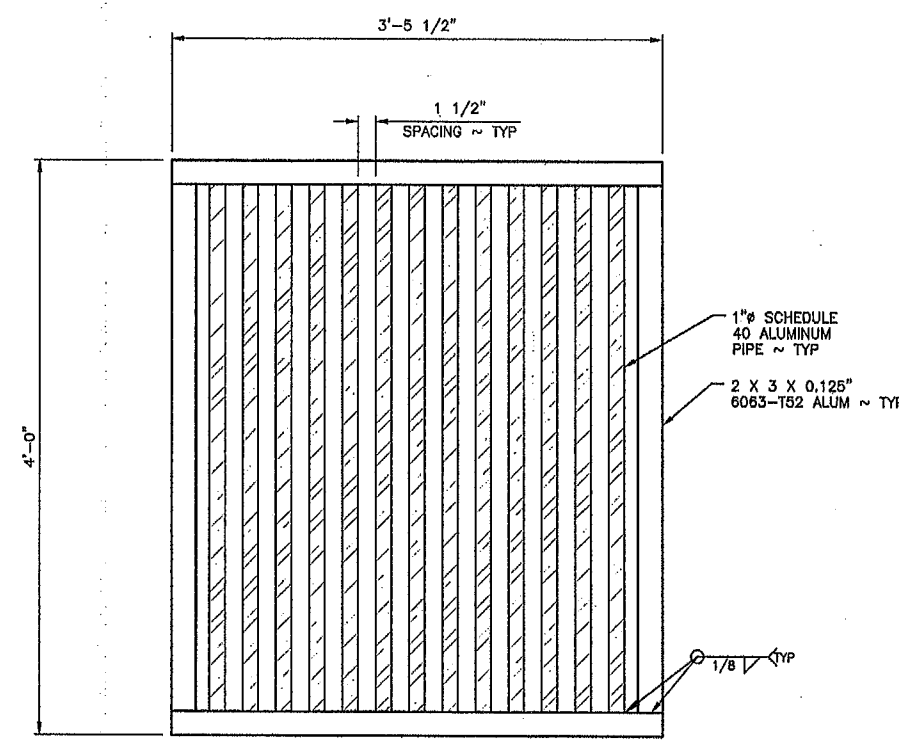
PROJECT NO.
TN:M34:2020-1
SHEET 22 OF 33

ALUMINUM FABRICATION NOTE:
ALL ALUMINUM CONSTRUCTION SHALL
HAVE ZINC ANODE ATTACHED

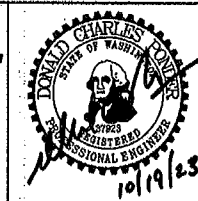


DETAIL 21 10 23

NOTE:
HEIGHT OF SCREEN GUIDE TO REACH
FULL HEIGHT OF OPENING
APPROXIMATELY 12'-0"



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FISH & WILDLIFE

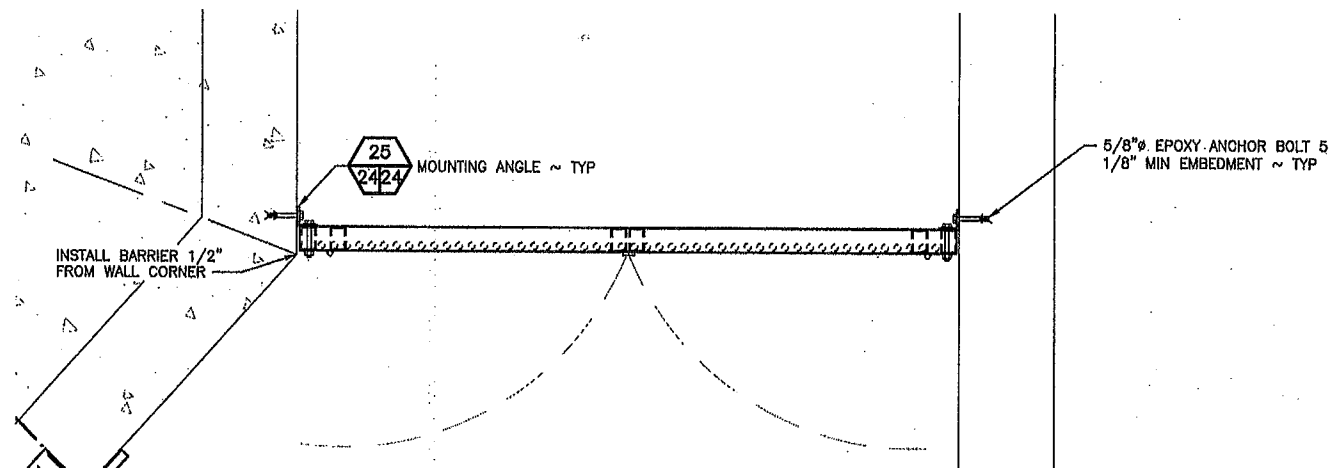


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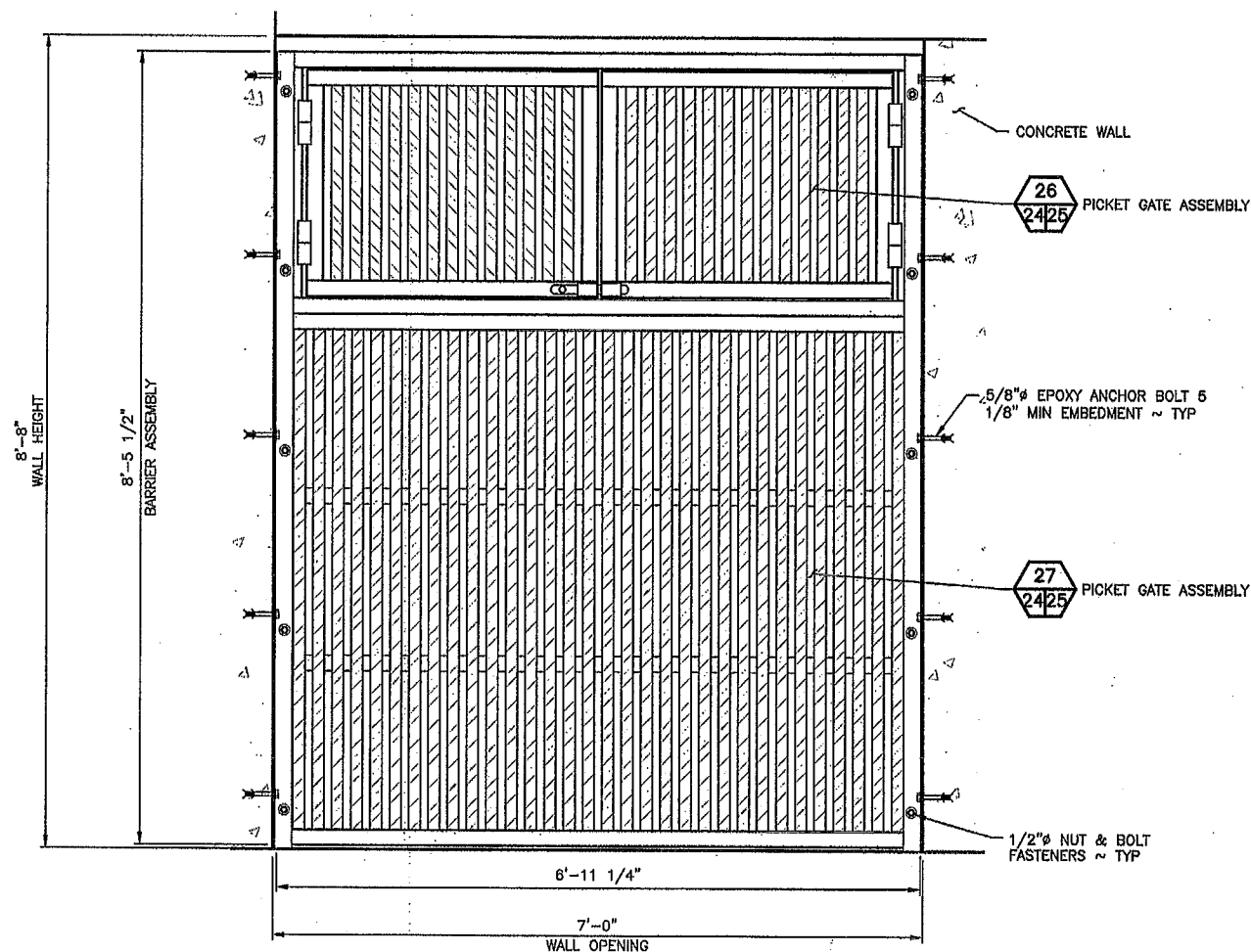
CENTRALIA HYDRO DAM	
FISH TRAP - CIVIL & ELECTRICAL	
FISH SCREEN DETAILS	

PROJECT NO. TN:M34:2020-1	
SHEET 23	OF 33

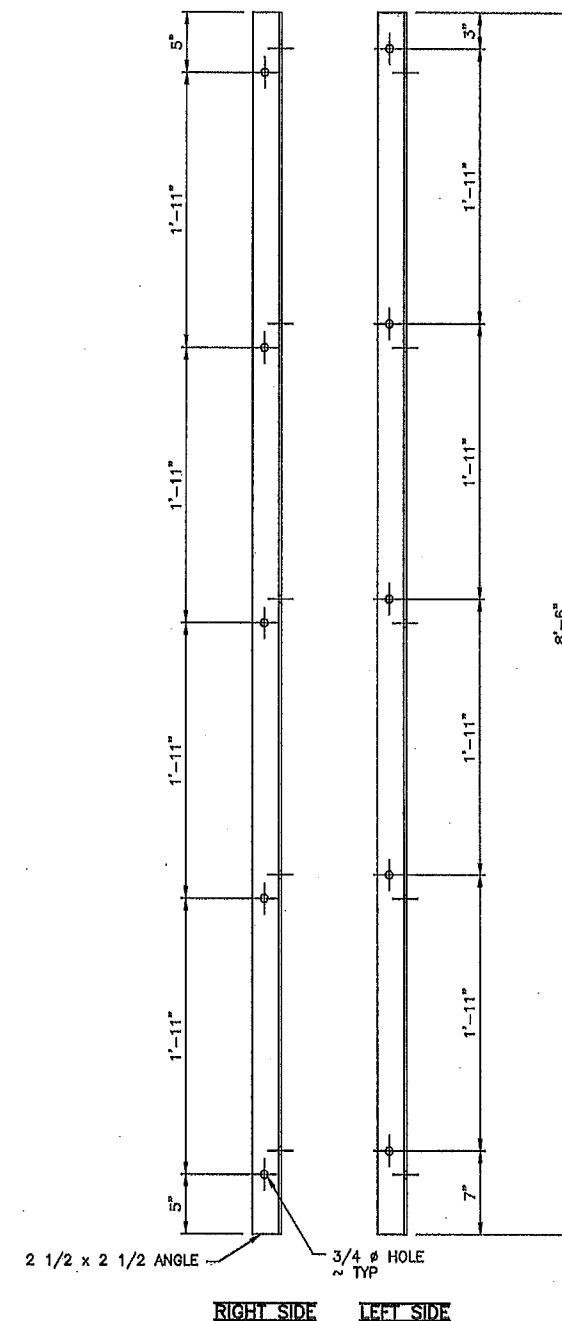
ALUMINUM FABRICATION NOTE:
ALL ALUMINUM CONSTRUCTION SHALL
HAVE ZINC ANODE ATTACHED



PICKET BARRIER PLAN VIEW
SCALE: 1" = 1'-0"



PICKET BARRIER FRONT ELEVATION
SCALE: 1" = 1'-0"



MOUNTING ANGLE (25)
SCALE: 1-1/2" = 1'-0"

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



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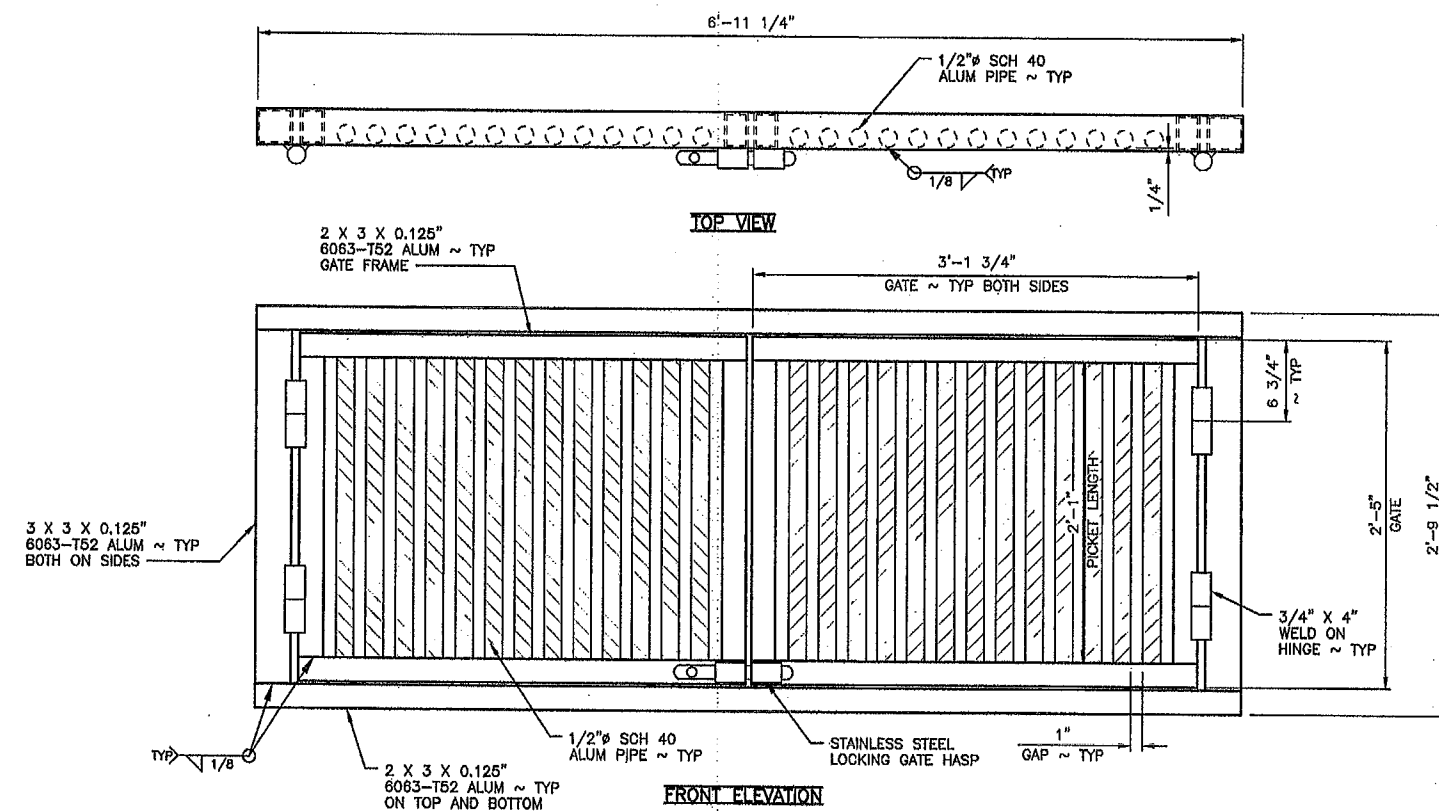
CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
PICKET BARRIER ELEVATION & DETAILS

PROJECT NO.
TN:M34:2020-1

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ALUMINUM FABRICATION NOTE:

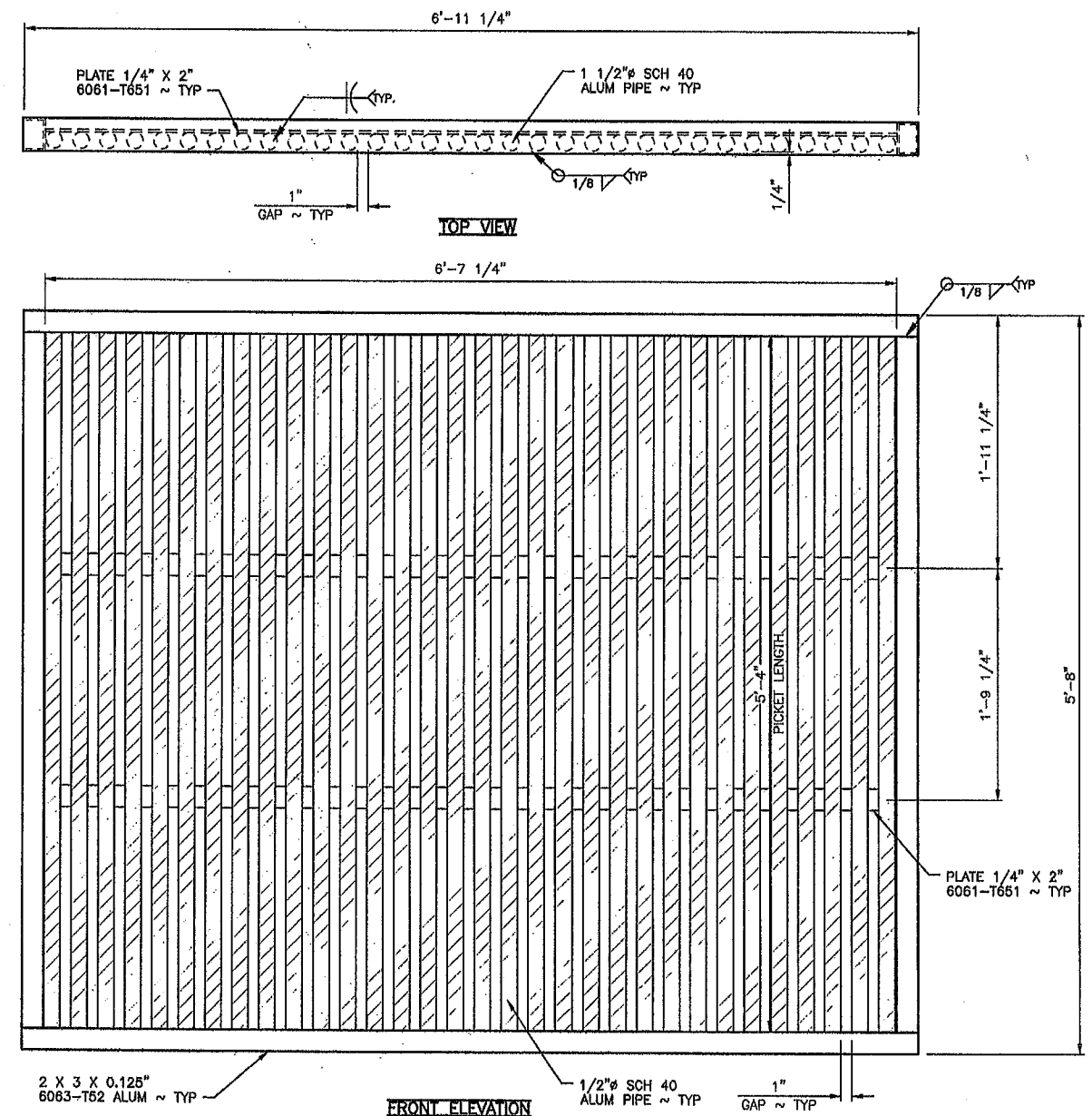
ALL ALUMINUM CONSTRUCTION SHALL HAVE ZINC ANODE ATTACHED



PICKET GATE ASSEMBLY

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

26
24/25

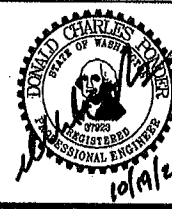


PICKET BARRIER ASSEMBLY

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

27
24/25

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



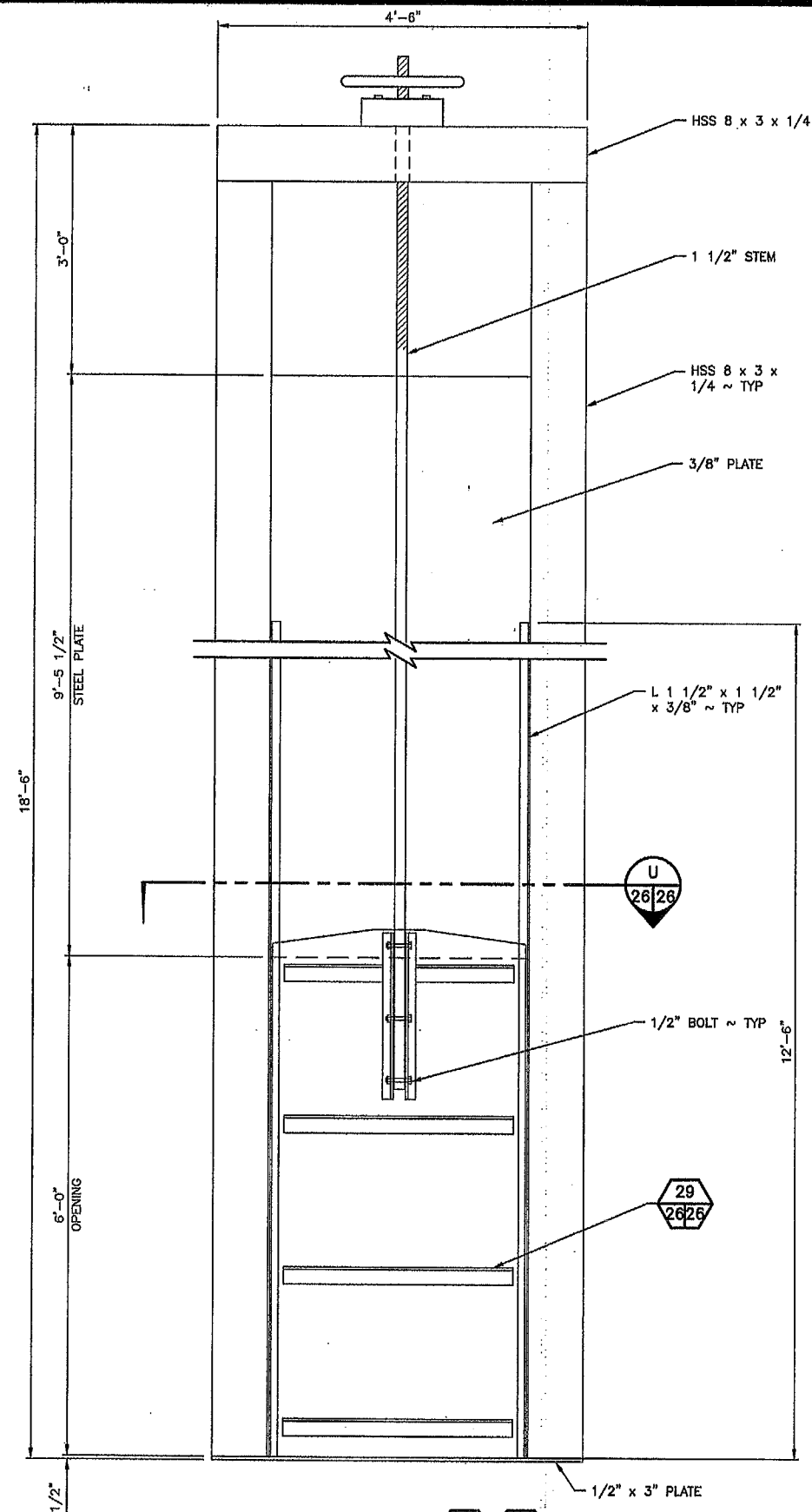
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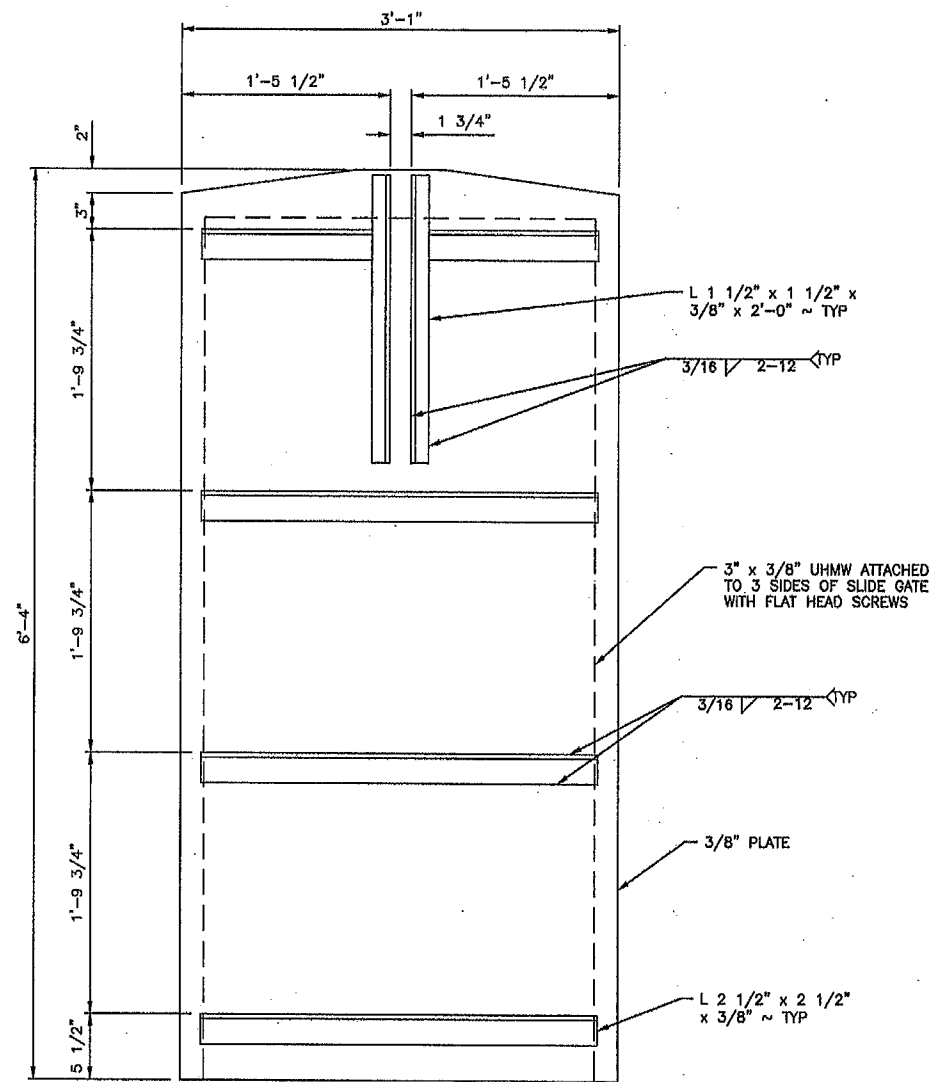
CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
PICKET GATE DETAILS

PROJECT NO.
TN:M34:2020-1

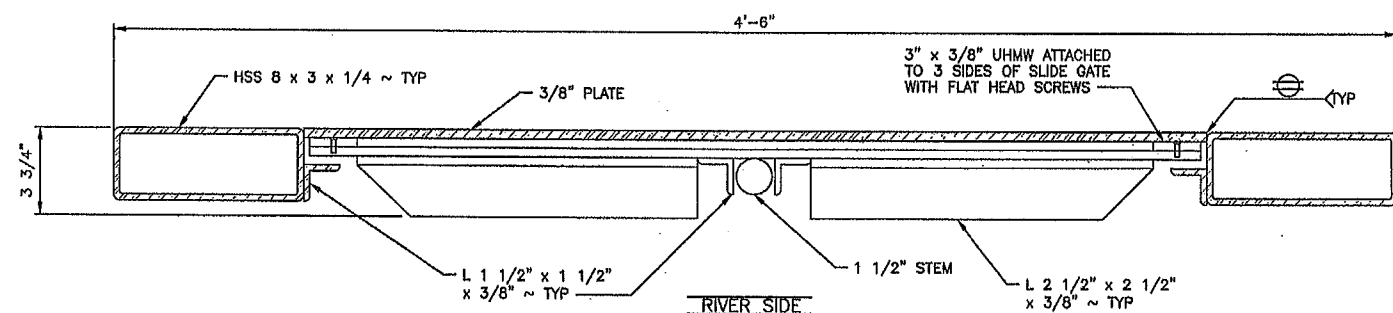
SHEET 25 OF 33



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



SLIDE GATE DETAIL
SCALE: 1 1/2" = 1'-0"



SLIDE GATE SECTION
SCALE: 3" = 1'-0"

GENERAL NOTES:

- STRUCTURAL STEEL SHALL CONFORM TO THE FOLLOWING GRADES:
 PLATE & BARS ASTM A36 36KSI YIELD STRESS
 CHANNEL & ANGELS ASTM A36 36KSI YIELD STRESS
 HSS ASTM A500, GR. C 60KSI YIELD STRESS
- WELD ACCORDING TO CURRENT AWS STANDARDS WITH E70XX ELECTRODES
- ALL STEEL EXPOSED TO WEATHER SHALL BE PAINTED OR HOT-DIP GALVANIZED

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



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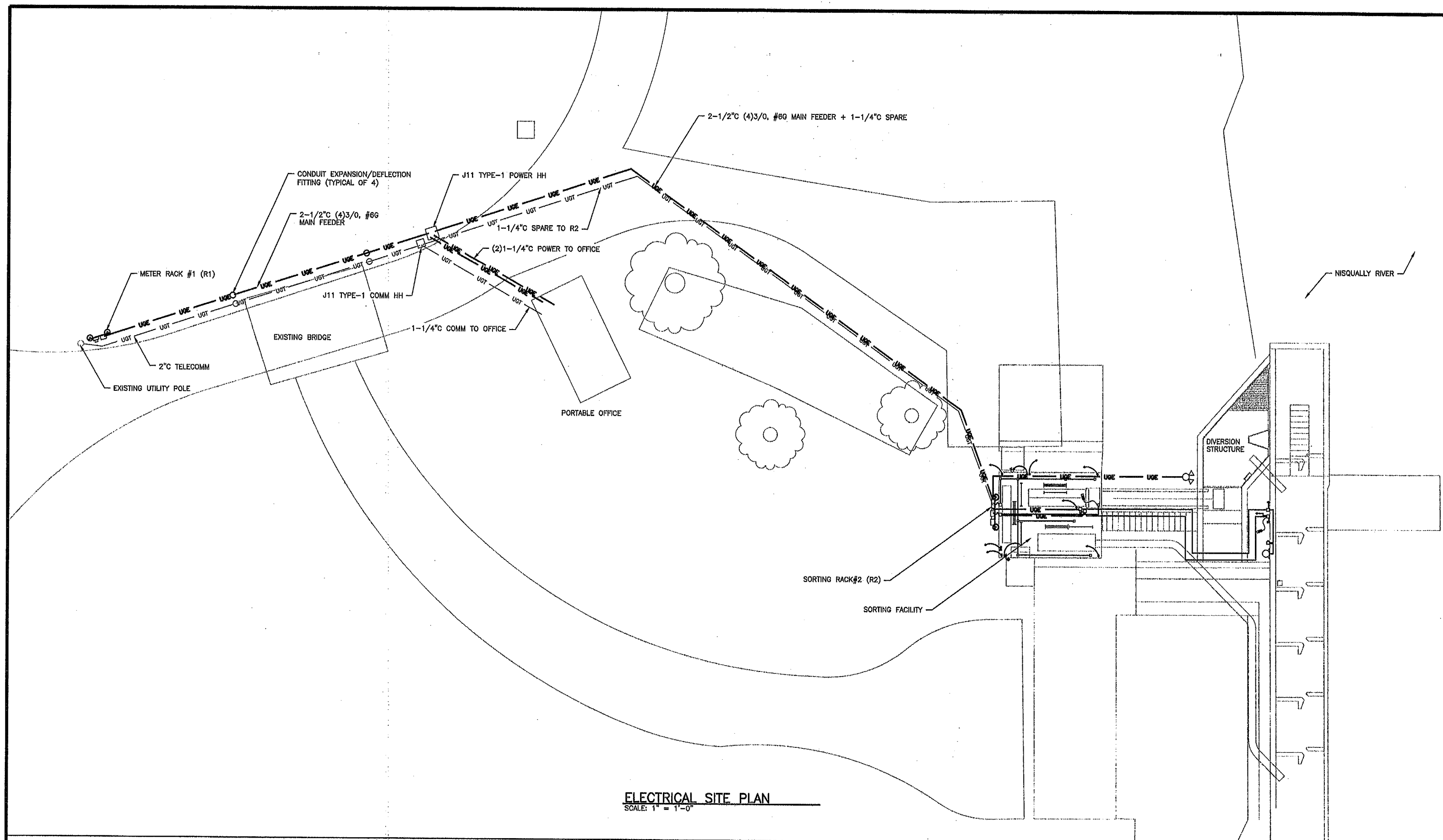
CENTRALIA HYDRO DAM

FISH TRAP - CIVIL & ELECTRICAL

SLIDE GATE DETAILS

PROJECT NO.
TN:M34:2020-1

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ELECTRICAL SITE PLAN
SCALE: 1" = 1'-0"

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



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CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
ELECTRICAL SITE PLAN

PROJECT NO.
TN:M34:2020-1

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EQUIPMENT SCHEDULE				
SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	COMMENTS
MD1	EATON		200A 208v 3PH 3R ENCLOSED BREAKER	SERVICE RATED MAIN BREAKER AT RACK #1 (R1)
P-1	EATON	PRL1A	225A 208v COPPER BUSS 3R PANELBOARD	200A MAIN BREAKER
CFL1	EATON		NON-COMBO FISH-LIFT MOTOR STARTER	SEE SCHEMATIC SHEET "MS"
CWD1	EATON		NON-COMBO WASH-DOWN PUMP STARTER	SEE SCHEMATIC SHEET "MS"
DWD1	EATON		60A 208v 3PH UN-FUSED SAFETY SWITCH	EMERGENCY DISCONNECT ADJACENT TO W/D PUMP
H1	FOSTORIA	OCH-46-120V	RADIANT LINEAR ELECTRIC HEATER	CHAIN HUNG, CONTROLLED BY WALL TIMER
H2	FOSTORIA	OCH-46-120V	RADIANT LINEAR ELECTRIC HEATER	CHAIN HUNG, CONTROLLED BY WALL TIMER
H3	FOSTORIA	OCH-46-120V	RADIANT LINEAR ELECTRIC HEATER	CHAIN HUNG, CONTROLLED BY WALL TIMER

LIGHTING FIXTURE SCHEDULE				
SYMBOL	MANUFACTURER	CATALOG NUMBER	DESCRIPTION	COMMENTS
F1	LITHONIA	XWL232MV	INDUSTRIAL WET LOCATION GASKETED LED	CHAIN HANG OR FASTEN TO STRUCTURE
F2	HUBBELL	VWGL-1	LED JAR LIGHT (VAPOR TIGHT)	WALL MOUNT AT ENTRANCE
F2A	HUBBELL	VBGL-1	LED JAR LIGHT (VAPOR TIGHT)	CEILING MOUNT AT RACK #2 (R2)
F3	LITHONIA	DSXF1-LED-P1-40K-WFL MVOLT-THK	D-SERIES LED FLOODLIGHT	MOUNTED ON OCTO "BELL BOX" ROUND COVER
F4	LITHONIA	RSXF1-LED-P2-40K-AWFD MVOLT-AASP	LED POLE MOUNTED FLOOD LIGHT	SQUARE POLE MOUNTED
POLE	SPAULDING	SHS-20-40-1-TA-DB	SQUARE, HINGED STEEL POLE	PROVIDE (1) TWH-40 WINCH

ABBREVIATIONS:	
AFCI:	ARC-FAULT CIRCUIT INTERRUPTER
AFG:	ABOVE FINISHED GRADE
AL:	ALUMINUM (BUSS/CONDUCTOR)
BFG:	BELOW FINISHED GRADE
BLDG:	BUILDING
BRKR:	BREAKER/CIRCUIT BREAKER
CKT:	CIRCUIT
CU:	COPPER (BUSS/CONDUCTOR)
EGC:	EQUIPMENT GROUNDING CONDUCTOR
EX:	EXISTING
GALV:	GALVANIZED (COATING)
GEC:	GROUNDING ELECTRODE CONDUCTOR
GFCI:	GROUND FAULT CIRCUIT INTERRUPTER
GRS:	GALVANIZED RIGID STEEL (CONDUIT/POSTS)
HH:	HANDHOLE/ELECTRICAL VAULT
LTF:	LIQUID-TIGHT FLEXIBLE CONDUIT (METALLIC)
OH:	OVERHEAD
PSE:	PUGET SOUND ENERGY (LOCAL UTILITY)
UF:	UNFUSED
UG:	UNDERGROUND
W/P:	WEATHER PROOF (WET LOCATION)

DISTRIBUTION RACK #2 (R2)										P-1		VOLTAGE: 208		3 PHASE	
PANEL AMPS: 225			FEEDER SIZE: 3/0 CU			ENCLOSURE: 3R									
MAIN BREAKER SIZE: 200			NEUTRAL SIZE: 3/0 CU			MOUNTING: SURFACE/RACK									
FEED: BOTTOM			GROUND SIZE: #6 CU			METER RACK (R1) DISCONNECT MD1									
CKT	DESCRIPTION	LOAD	AMP	POLE	PH	POLE	AMP	LOAD	DESCRIPTION	CKT					
1	SITE LIGHTING		20	1	A				WASHDOWN PUMP WD1	2					
3	RECEPTACLES - EAST		20	1	B	3	90			4					
5	RECEPTACLES - WEST		20	1	C					6					
7	RECEPTACLE - LIFT		20	1	A				FISH-LIFT	8					
9	RECEPTACLE-DIVERSION STRUCT		20	1	B	3	15			10					
11	SPARE		20	1	C					12					
13	SPARE		20		A				PORTABLE OFFICE	14					
15	SPARE		20	2	B	2	100			16					
17	SPARE		20	1	C	1	20			18					
19	SPARE		20	1	A	1	20		RADIANT HEATER H1	20					
21	SPARE		20	1	B	1	20		RADIANT HEATER H2	22					
23	SPARE		20	1	C	1	20		RADIANT HEATER H3	24					
25	SPARE		20	1	A	1	20		SPARE	26					
27	SPARE		20	1	B	1	20		SPARE	28					
29	SPARE		20	1	C	1	20		SPARE	30					
31			20	1	A	1	20			32					
33			20	1	B	1	20			34					
35			20	1	C	1	20			36					
37			20	1	A	1	20			38					
39			20	1	B	1	20			40					
41			20	1	C	1	20			42					

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE

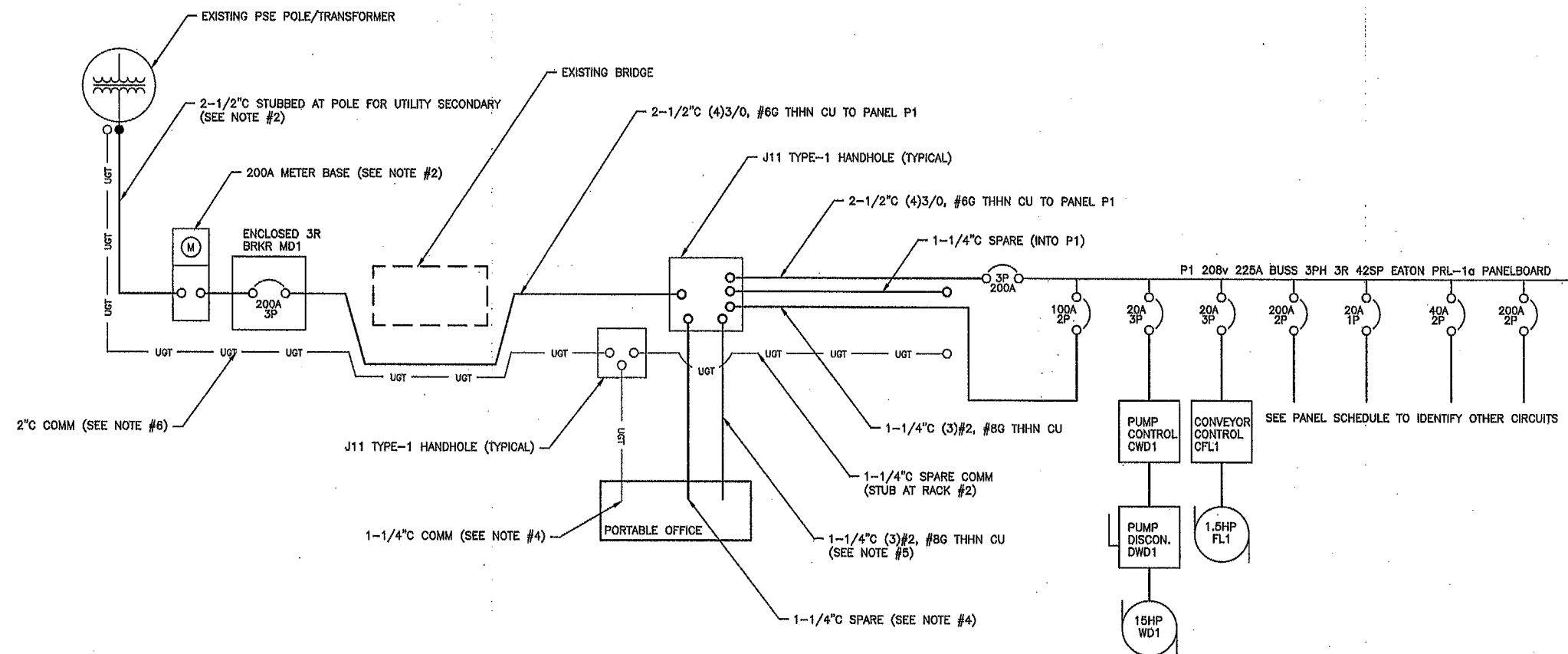


SYM	DATE	REVISION DESCRIPTION	BY
APPROVED AND RELEASED FOR CONSTRUCTION			
CHIEF ENGINEER		DATE	
PROGRAM		DATE	
DESIGNED BY L. PAGANO		CHECKED BY D. PONDER	
DRAWN BY NW / RS		DATE 10-17-2023	

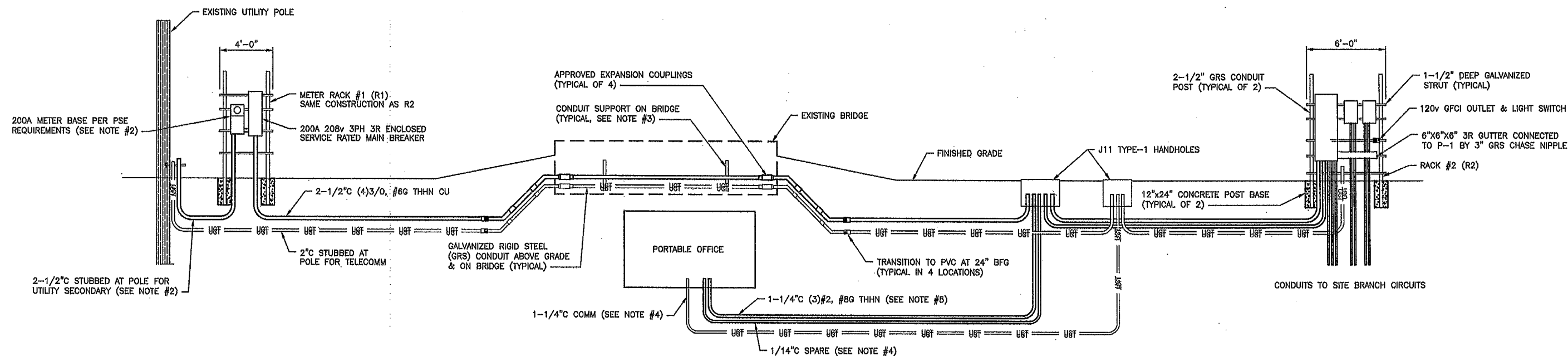
CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
ELECTRICAL SCHEDULES

PROJECT NO.
TN:M34:2020-1

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OF
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ONE-LINE DIAGRAM
NOT TO SCALE

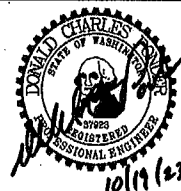


EQUIPMENT/CONDUIT PROFILE
NOT TO SCALE

ELECTRICAL NOTES:

1. GROUNDING & BONDING IS NOT SHOWN IN ITS ENTIRETY. INSTALL GROUNDING ELECTRODES, GEC, EGC, & ALL APPURTENANCES TO FORM A COMPLETE, CODE COMPLIANT GROUNDING SYSTEM.
2. COORDINATE SERVICE EQUIPMENT, METERING, & UTILITY SECONDARY INSTALLATION WITH PSE. INSTALLATION SHALL COMPLY WITH PSE REQUIREMENTS. PROVIDE SECONDARY CONDUIT & WIRE AT POLE AS REQUIRED BY UTILITY.
3. SECURE GRS CONDUITS TO BRIDGE AT 4FT INTERVALS OR LESS. USE GALVANIZED STRUT OR FABRICATED GALVANIZED BRACKETS SECURELY ATTACHED TO BRIDGE STRUCTURE WITH GALVANIZED 3/8" LAGS & WASHERS.
4. OFFICE POWER & COMM CONDUITS SHALL RUN UG TO OFFICE LOCATION. STUB UP ADJACENT TO CONNECTION POINT. STUB & CAP SPARES IN LOCATION NOT LIKELY SUBJECT TO PHYSICAL DAMAGE OR TRAFFIC.
5. COORDINATE WITH OFFICE INSTALLER/MANUFACTURER FOR SIZE & LOCATION OF POWER STUBS. CONDUIT SIZE FROM HH MAY NEED TO BE ADJUSTED TO MATCH BLDG STUB SIZE. IF A HH IS NEEDED ADJACENT TO OFFICE FOR TRANSITION, IT IS PERMITTED TO BE A NON-METALLIC STANDARD ROUND BOX. CONSULT WITH OWNER BEFORE INSTALLING.
6. 2" TELECOMM CONDUIT STUBS FROM POLE TO COMM HH, THEN TO OFFICE & R2. THESE ARE "CONDUIT ONLY" WITH PULL-STRINGS. INSTALL PVC OR THREADED CAP. DO NOT GLUE.
7. CONTRACTOR IS RESPONSIBLE TO PROCURE APPLICABLE ELECTRICAL PERMITS. CONTRACTOR SHALL SCHEDULE ALL REQUIRED INSPECTIONS WITH L&I. FACILITATE WORK AND REINSPECTION OF ALL INSPECTION CORRECTIONS. PERMIT MUST BE "FINALED" BEFORE FINAL PAYMENT WILL BE ISSUED.

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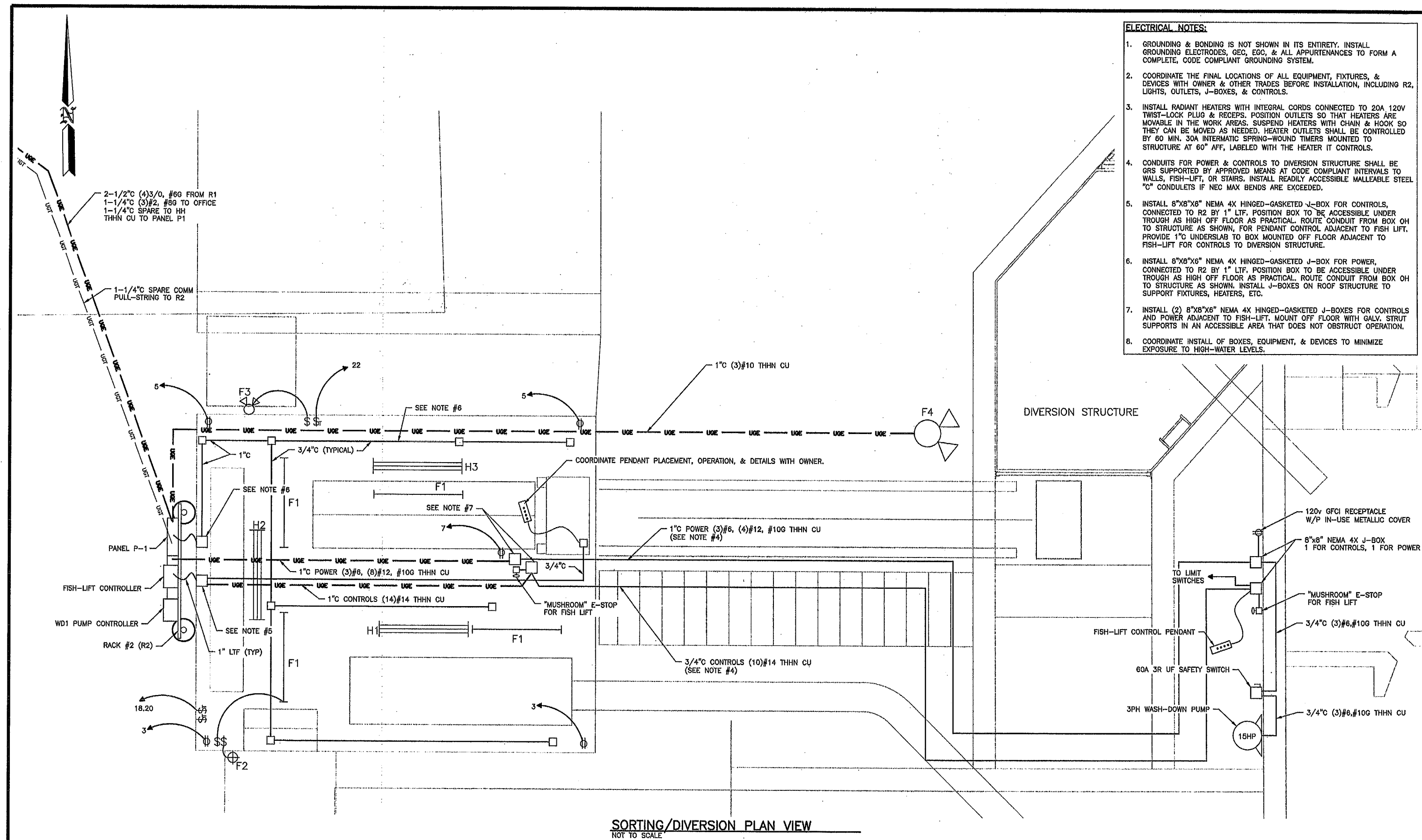


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CHIEF ENGINEER	DATE	DATE	DATE
PROGRAM	DATE	DATE	DATE

DESIGNED BY L. PAGANO
CHECKED BY D. PONDER
DRAWN BY NW / RS
DATE 10-17-2023

CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
ELECTRICAL ONE LINE DIAGRAMS

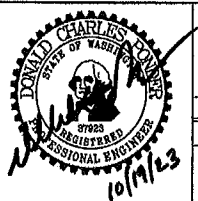
PROJECT NO.
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- ELECTRICAL NOTES:**
1. GROUNDING & BONDING IS NOT SHOWN IN ITS ENTIRETY. INSTALL GROUNDING ELECTRODES, GEC, EGC, & ALL APPURTENANCES TO FORM A COMPLETE, CODE COMPLIANT GROUNDING SYSTEM.
 2. COORDINATE THE FINAL LOCATIONS OF ALL EQUIPMENT, FIXTURES, & DEVICES WITH OWNER & OTHER TRADES BEFORE INSTALLATION, INCLUDING R2, LIGHTS, OUTLETS, J-BOXES, & CONTROLS.
 3. INSTALL RADIANT HEATERS WITH INTEGRAL CORDS CONNECTED TO 20A 120V TWIST-LOCK PLUG & RECEPT. POSITION OUTLETS SO THAT HEATERS ARE MOVABLE IN THE WORK AREAS. SUSPEND HEATERS WITH CHAIN & HOOK SO THEY CAN BE MOVED AS NEEDED. HEATER OUTLETS SHALL BE CONTROLLED BY 60 MIN. 30A INTERMATIC SPRING-WOUND TIMERS MOUNTED TO STRUCTURE AT 60" AFF, LABELED WITH THE HEATER IT CONTROLS.
 4. CONDUITS FOR POWER & CONTROLS TO DIVERSION STRUCTURE SHALL BE GRS SUPPORTED BY APPROVED MEANS AT CODE COMPLIANT INTERVALS TO WALLS, FISH-LIFT, OR STAIRS. INSTALL READILY ACCESSIBLE MALLEABLE STEEL "C" CONDUITS IF NEC MAX BENDS ARE EXCEEDED.
 5. INSTALL 8"x8"x6" NEMA 4X HINGED-GASKETED J-BOX FOR CONTROLS, CONNECTED TO R2 BY 1" LTF. POSITION BOX TO BE ACCESSIBLE UNDER TROUGH AS HIGH OFF FLOOR AS PRACTICAL. ROUTE CONDUIT FROM BOX OH TO STRUCTURE AS SHOWN, FOR PENDANT CONTROL ADJACENT TO FISH LIFT. PROVIDE 1" UNDERSLAB TO BOX MOUNTED OFF FLOOR ADJACENT TO FISH-LIFT FOR CONTROLS TO DIVERSION STRUCTURE.
 6. INSTALL 8"x8"x6" NEMA 4X HINGED-GASKETED J-BOX FOR POWER, CONNECTED TO R2 BY 1" LTF. POSITION BOX TO BE ACCESSIBLE UNDER TROUGH AS HIGH OFF FLOOR AS PRACTICAL. ROUTE CONDUIT FROM BOX OH TO STRUCTURE AS SHOWN. INSTALL J-BOXES ON ROOF STRUCTURE TO SUPPORT FIXTURES, HEATERS, ETC.
 7. INSTALL (2) 8"x8"x6" NEMA 4X HINGED-GASKETED J-BOXES FOR CONTROLS AND POWER ADJACENT TO FISH-LIFT. MOUNT OFF FLOOR WITH GALV. STRUT SUPPORTS IN AN ACCESSIBLE AREA THAT DOES NOT OBSTRUCT OPERATION.
 8. COORDINATE INSTALL OF BOXES, EQUIPMENT, & DEVICES TO MINIMIZE EXPOSURE TO HIGH-WATER LEVELS.

SORTING/DIVERSION PLAN VIEW
NOT TO SCALE

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE

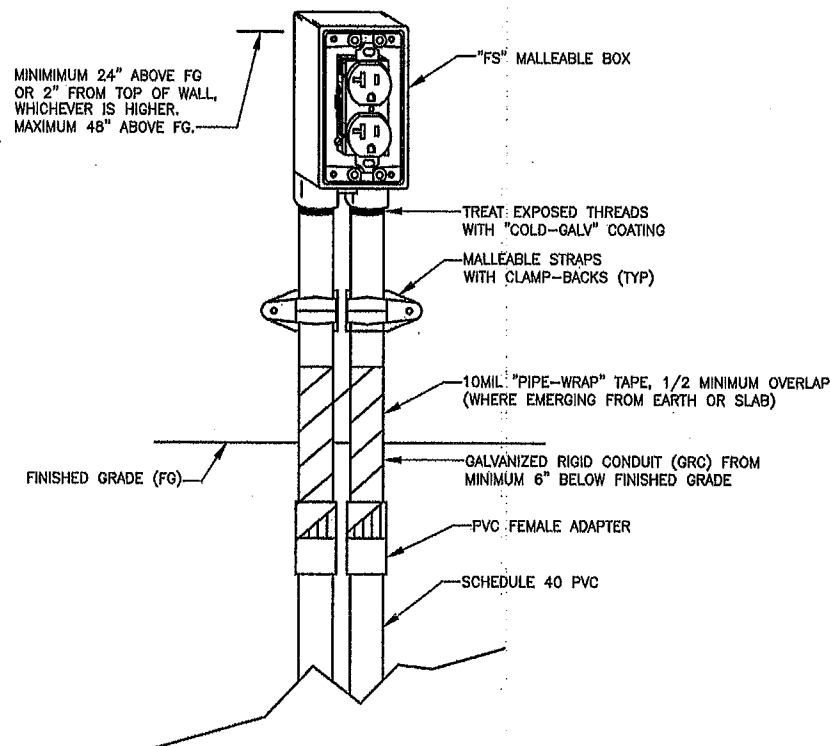
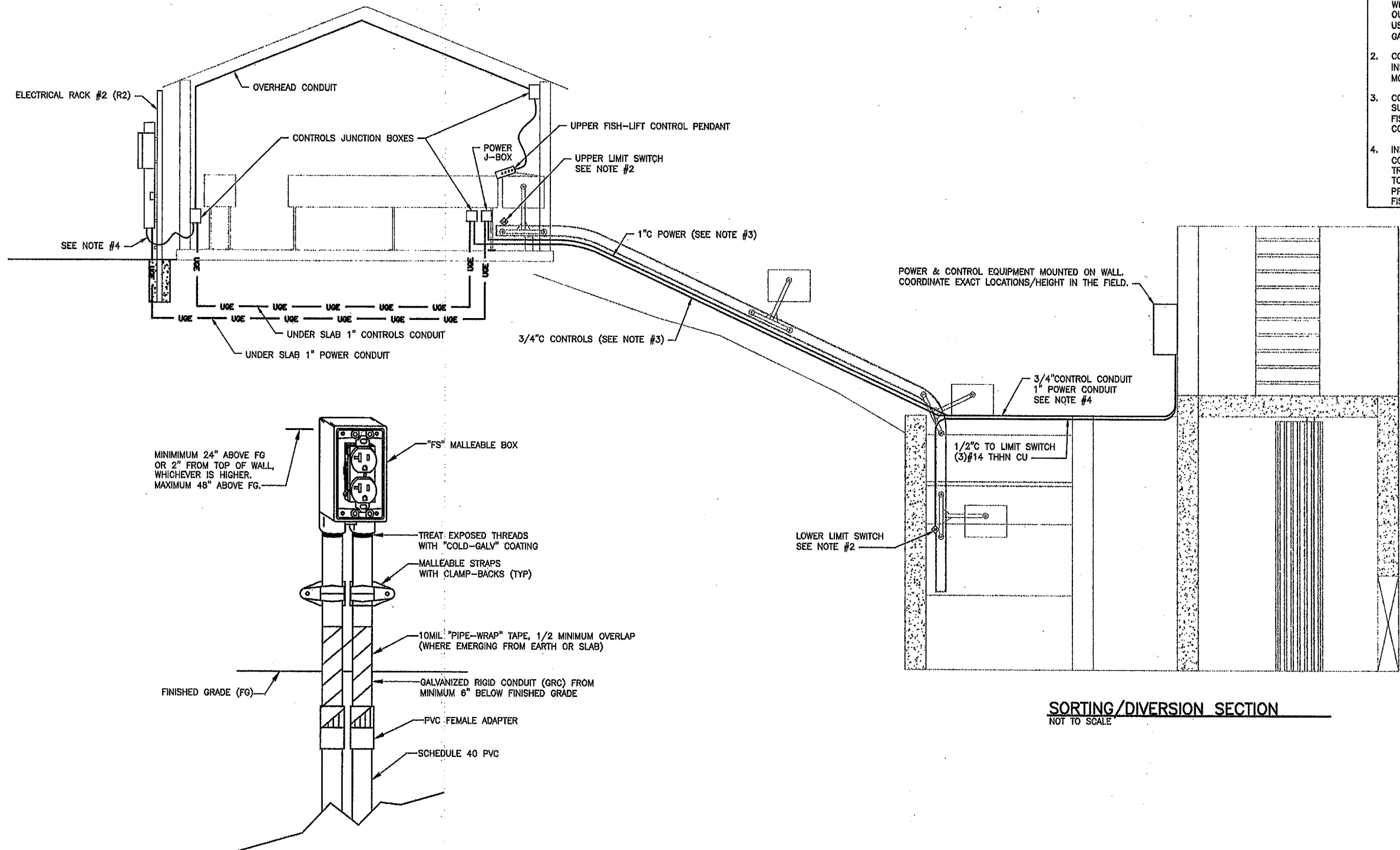


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		DATE 10-17-2023	

CENTRALIA HYDRO DAM		PROJECT NO.	
FISH TRAP - CIVIL & ELECTRICAL		TN:M34:2020-1	
ELECTRICAL FISH SORTING AREA		SHEET	OF
		30	33

ELECTRICAL NOTES:

- COORDINATE THE FINAL LOCATIONS OF ALL EQUIPMENT, FIXTURES, & DEVICES WITH OWNER & OTHER TRADES BEFORE INSTALLATION, INCLUDING R2, LIGHTS, OUTLETS, J-BOXES, & CONTROLS. MOUNT ALL EQUIPMENT TO EXTERIOR WALLS USING GALV STRUT CHANNEL, SPACERS, AND/OR CLAMP-BACKS TO LEAVE A GAP ON "WET" WALLS.
- COORDINATE LOCATION, TYPE, & MOUNTING OF LIMIT SWITCHES WITH FISH-LIFT INSTALLER. USE FLEXIBLE CONNECTION(S) TO FACILITATE MOVEMENT/ADJUSTMENT OF SWITCHES.
- CONDUITS FOR POWER & CONTROLS TO DIVERSION STRUCTURE SHALL BE GRS SUPPORTED BY APPROVED MEANS AT CODE COMPLIANT INTERVALS TO WALLS, FISH-LIFT, OR STAIRS. INSTALL READILY ACCESSIBLE MALLEABLE STEEL "C" CONDUITS IF NEC MAX BENDS ARE EXCEEDED.
- INSTALL 8"x8"x6" NEMA 4X HINGED-GASKETED J-BOX FOR CONTROLS, CONNECTED TO R2 BY 1" LTF. POSITION BOX TO BE ACCESSIBLE UNDER TROUGH AS HIGH OFF FLOOR AS PRACTICAL. ROUTE CONDUIT FROM BOX OH TO STRUCTURE AS SHOWN, FOR PENDANT CONTROL ADJACENT TO FISH LIFT. PROVIDE 1"C UNDERSLAB TO BOX MOUNTED OFF FLOOR ADJACENT TO FISH-LIFT FOR CONTROLS TO DIVERSION STRUCTURE.



EXTERIOR RECEPTACLE DETAIL
NOT TO SCALE

NOTES:

- DUPLEX RECEPTACLES SHALL BE W/R RATED.
- RECEPTACLES SHALL HAVE METALLIC "IN-USE" W/P COVERS.
- USE STAINLESS STEEL HARDWARE FOR MOUNTING.
- PROVIDE GFCI PROTECTION AS REQUIRED.

SORTING/DIVERSION SECTION
NOT TO SCALE

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



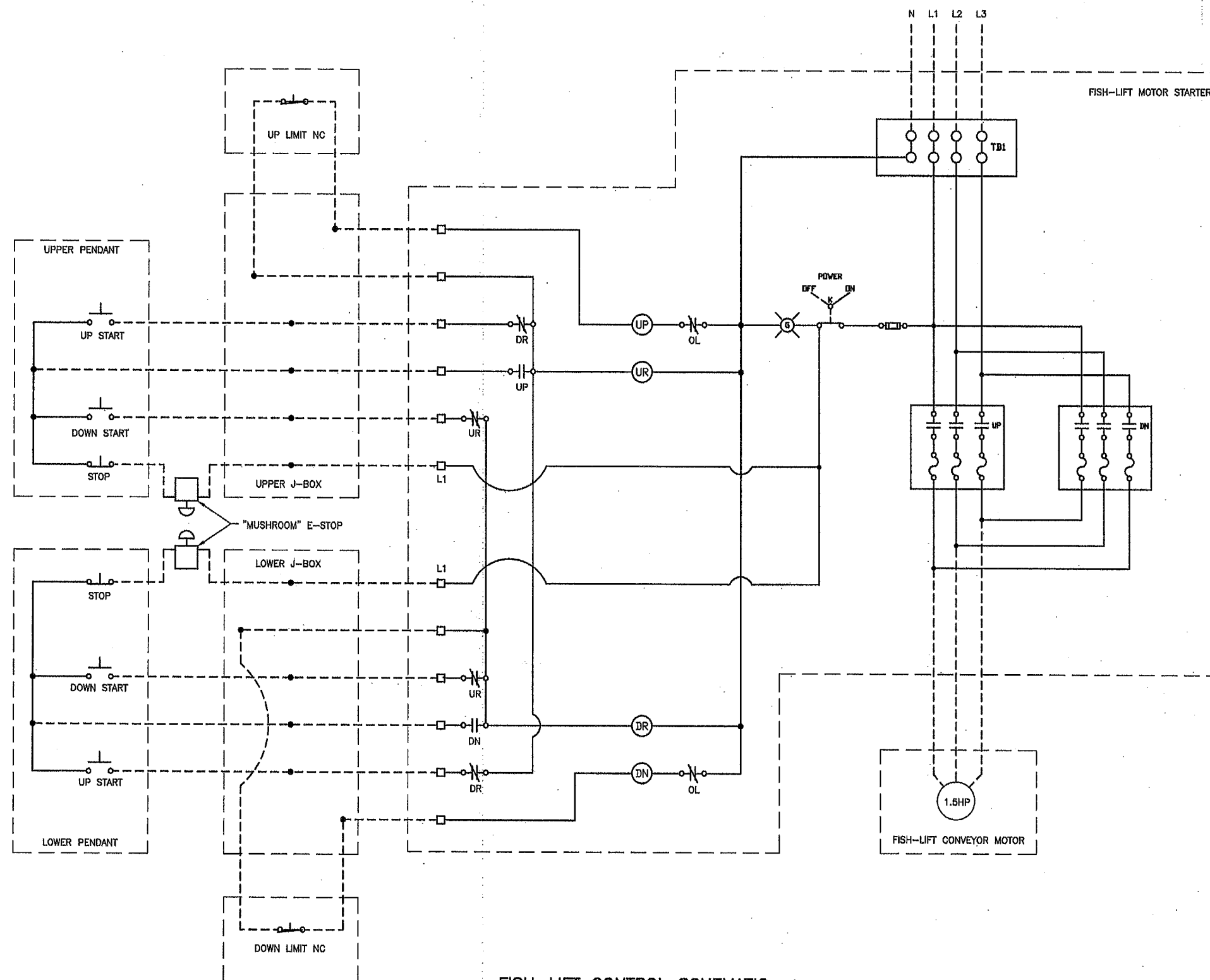
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CENTRALIA HYDRO DAM

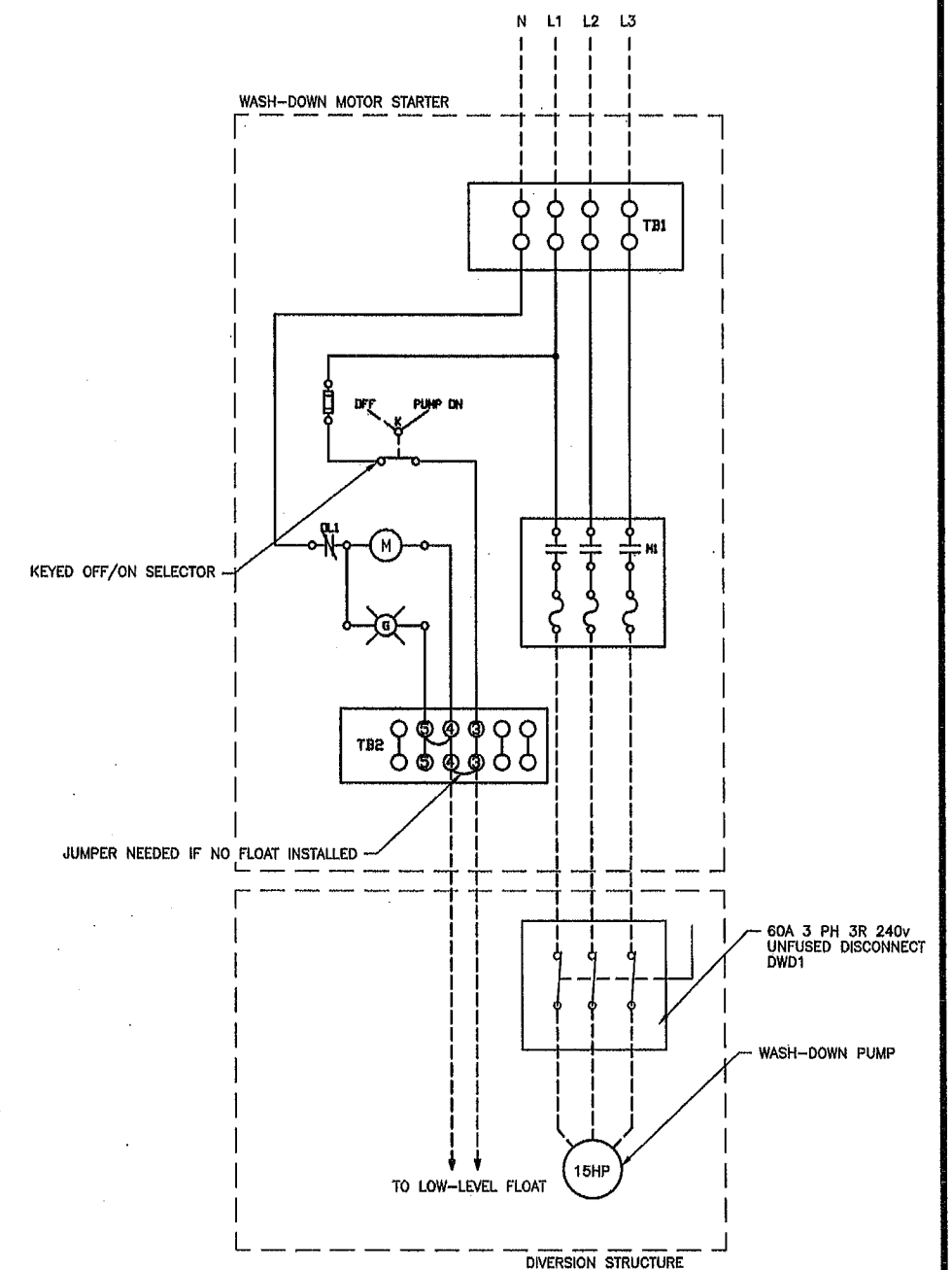
FISH TRAP - CIVIL & ELECTRICAL
ELECTRICAL FISH SORTING SECTION

PROJECT NO.
TN:M34:2020-1

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FISH-LIFT CONTROL SCHEMATIC
NOT TO SCALE



WASH-DOWN PUMP CONTROL SCHEMATIC
NOT TO SCALE

WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



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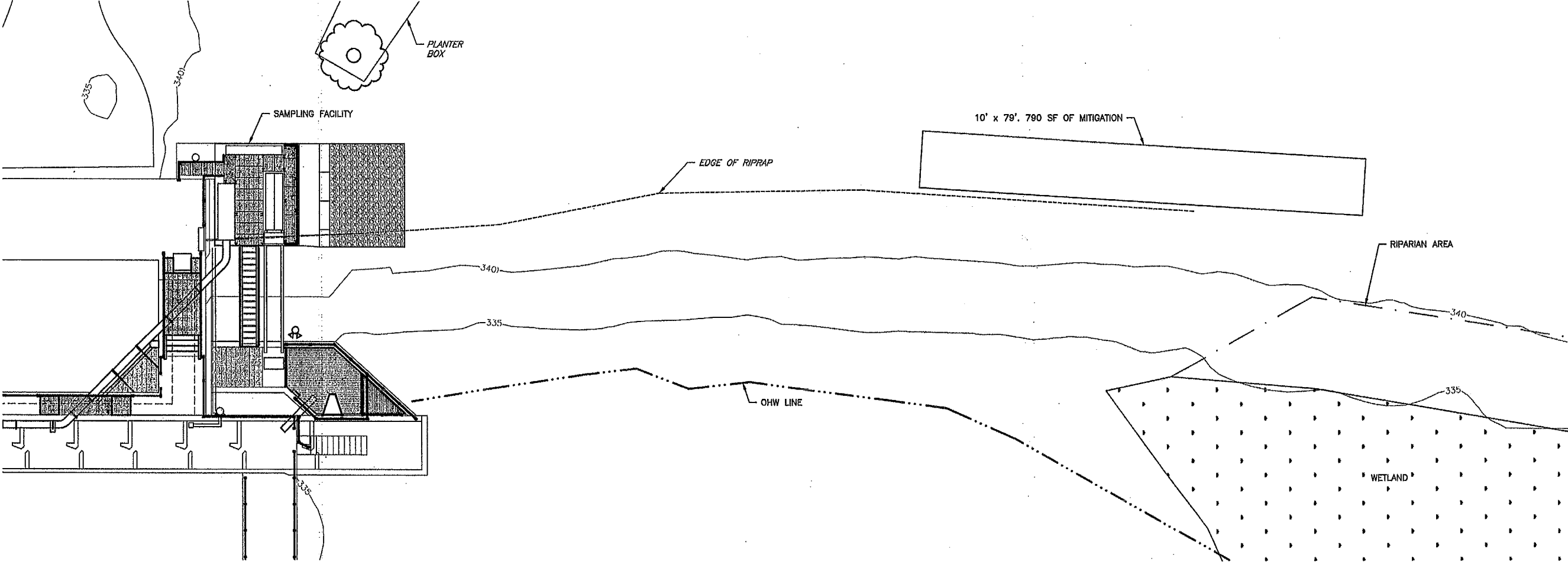
CENTRALIA HYDRO DAM
FISH TRAP - CIVIL & ELECTRICAL
ELECTRICAL CONTROL SCHEMATICS

PROJECT NO.
TN:M34:2020-1

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MITIGATION PLANTING TABLE			
PLANT NAME	SPACING	SIZE	#
DOUGLAS FIR (PSEUDOTSUGA MENZIESII)	10' OC	1 GALLON	8
NOOTKA ROSE (ROSA NUTKANA)	4' OC	PLUG	41

- PLANTING NOTES:**
1. ORDER SPECIES WITH A PROVENANCE OR SEED SOURCE FROM PUGET LOWLANDS OR THURSTON.
 2. OBTAIN TREES IN ONE GALLON CONTAINERS WHEN POSSIBLE.
 3. SUBSTITUTE SIMILAR SPECIES IF RECOMMENDED ONES ARE NOT AVAILABLE.
 4. SCARIFY GROUND SURFACE PRIOR TO PLANTING.
 5. MULCH GROUND SURFACE WHEN PLANTING IS COMPLETE.



WASHINGTON DEPARTMENT OF
FISH & WILDLIFE



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CENTRALIA HYDRO DAM
FISH TRAP – CIVIL & ELECTRICAL
MITIGATION PLAN & DETAILS

PROJECT NO.
TN:M34:2020-1

SHEET	OF
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CITY OF CENTRALIA, WASHINGTON LIGHT DEPARTMENT

RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

THURSTON COUNTY
RECEIVED

NOV 08 2023

BUILDING DEVELOPMENT CENTER

CITY COMMISSIONERS:

JOHN G. GELDER
MAYOR, COMMISSIONER OF SAFETY
PETER L. CORWIN
COMMISSIONER OF PUBLIC WORKS
WILLIAM H. RICKARD
COMMISSIONER OF FINANCE AND ACCOUNTING

CITY LIGHT STAFF:

WILLIAM G. CUMMINGS
SUPERINTENDENT
WILLIAM J. WHEELER
HYDROPLANT SUPERINTENDENT

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RECORD DRAWINGS

Revisions Drawn By: *MR. HIGGINS* Date: *FEB 15 1986*
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VERIFY SCALES
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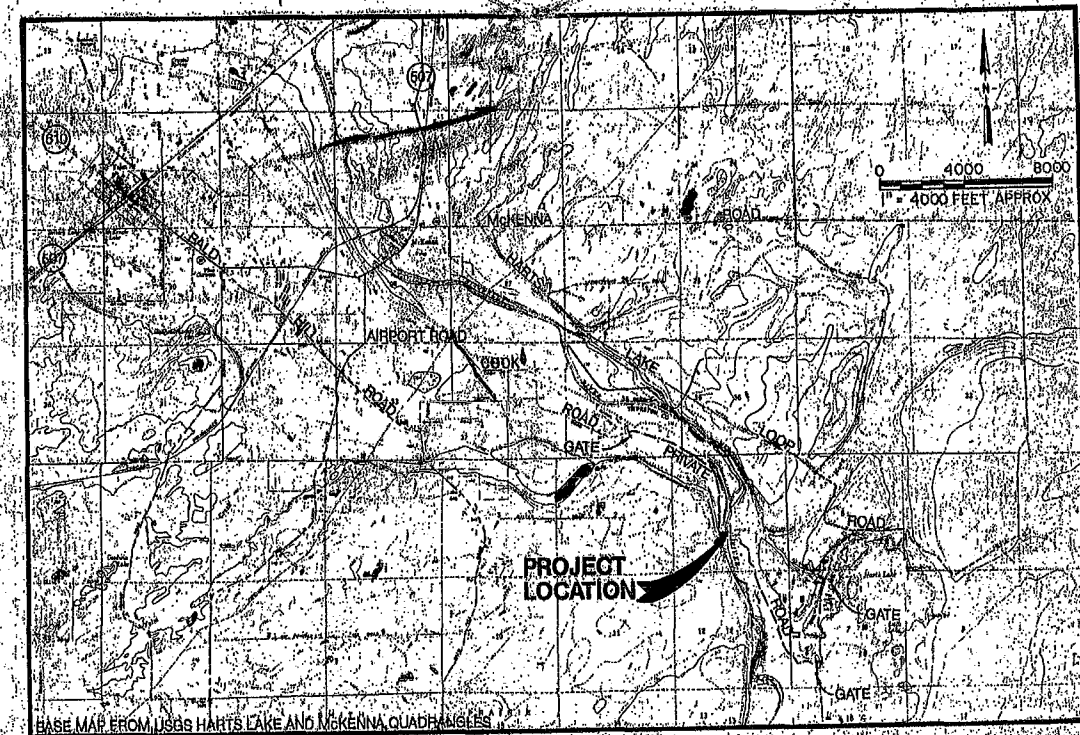
CITY OF CENTRALIA, WASHINGTON
LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA
DAM, FISHWAY & INTAKE STRUCTURE

COVER SHEET

SHEET
DATE: FEB 1986
PROJECT NO: S17895A1



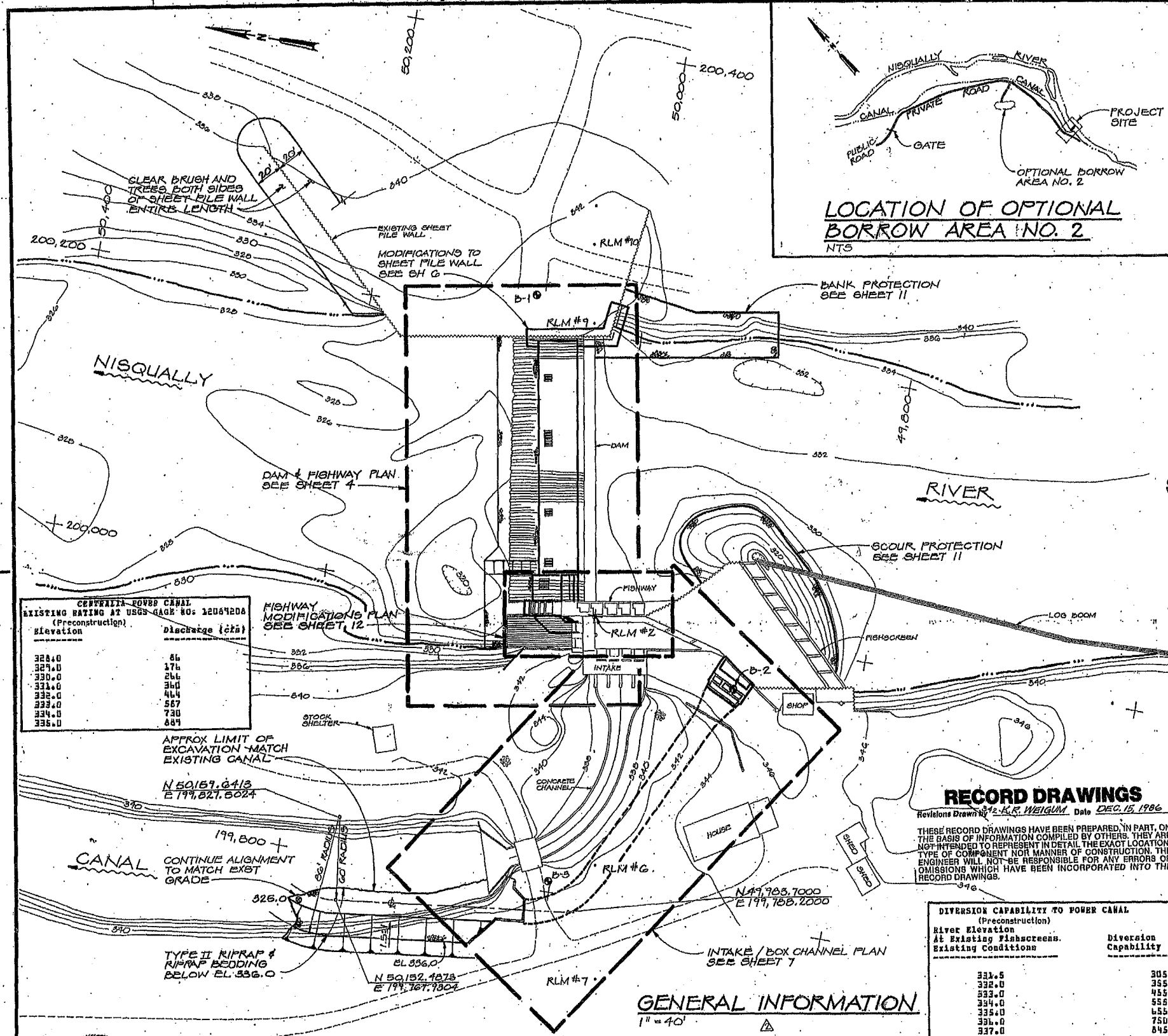
LOCATION MAP



VICINITY MAP



OVERLAY IDENTIFICATION	COMPOSITE	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144	145	146	147	148	149	150	151	152	153	154	155	156	157	158	159	160	161	162	163	164	165	166	167	168	169	170	171	172	173	174	175	176	177	178	179	180	181	182	183	184	185	186	187	188	189	190	191	192	193	194	195	196	197	198	199	200	201	202	203	204	205	206	207	208	209	210	211	212	213	214	215	216	217	218	219	220	221	222	223	224	225	226	227	228	229	230	231	232	233	234	235	236	237	238	239	240	241	242	243	244	245	246	247	248	249	250	251	252	253	254	255	256	257	258	259	260	261	262	263	264	265	266	267	268	269	270	271	272	273	274	275	276	277	278	279	280	281	282	283	284	285	286	287	288	289	290	291	292	293	294	295	296	297	298	299	300	301	302	303	304	305	306	307	308	309	310	311	312	313	314	315	316	317	318	319	320	321	322	323	324	325	326	327	328	329	330	331	332	333	334	335	336	337	338	339	340	341	342	343	344	345	346	347	348	349	350	351	352	353	354	355	356	357	358	359	360	361	362	363	364	365	366	367	368	369	370	371	372	373	374	375	376	377	378	379	380	381	382	383	384	385	386	387	388	389	390	391	392	393	394	395	396	397	398	399	400	401	402	403	404	405	406	407	408	409	410	411	412	413	414	415	416	417	418	419	420	421	422	423	424	425	426	427	428	429	430	431	432	433	434	435	436	437	438	439	440	441	442	443	444	445	446	447	448	449	450	451	452	453	454	455	456	457	458	459	460	461	462	463	464	465	466	467	468	469	470	471	472	473	474	475	476	477	478	479	480	481	482	483	484	485	486	487	488	489	490	491	492	493	494	495	496	497	498	499	500	501	502	503	504	505	506	507	508	509	510	511	512	513	514	515	516	517	518	519	520	521	522	523	524	525	526	527	528	529	530	531	532	533	534	535	536	537	538	539	540	541	542	543	544	545	546	547	548	549	550	551	552	553	554	555	556	557	558	559	560	561	562	563	564	565	566	567	568	569	570	571	572	573	574	575	576	577	578	579	580	581	582	583	584	585	586	587	588	589	590	591	592	593	594	595	596	597	598	599	600	601	602	603	604	605	606	607	608	609	610	611	612	613	614	615	616	617	618	619	620	621	622	623	624	625	626	627	628	629	630	631	632	633	634	635	636	637	638	639	640	641	642	643	644	645	646	647	648	649	650	651	652	653	654	655	656	657	658	659	660	661	662	663	664	665	666	667	668	669	670	671	672	673	674	675	676	677	678	679	680	681	682	683	684	685	686	687	688	689	690	691	692	693	694	695	696	697	698	699	700	701	702	703	704	705	706	707	708	709	710	711	712	713	714	715	716	717	718	719	720	721	722	723	724	725	726	727	728	729	730	731	732	733	734	735	736	737	738	739	740	741	742	743	744	745	746	747	748	749	750	751	752	753	754	755	756	757	758	759	760	761	762	763	764	765	766	767	768	769	770	771	772	773	774	775	776	777	778	779	780	781	782	783	784	785	786	787	788	789	790	791	792	793	794	795	796	797	798	799	800	801	802	803	804	805	806	807	808	809	810	811	812	813	814	815	816	817	818	819	820	821	822	823	824	825	826	827	828	829	830	831	832	833	834	835	836	837	838	839	840	841	842	843	844	845	846	847	848	849	850	851	852	853	854	855	856	857	858	859	860	861	862	863	864	865	866	867	868	869	870	871	872	873	874	875	876	877	878	879	880	881	882	883	884	885	886	887	888	889	890	891	892	893	894	895	896	897	898	899	900	901	902	903	904	905	906	907	908	909	910	911	912	913	914	915	916	917	918	919	920	921	922	923	924	925	926	927	928	929	930	931	932	933	934	935	936	937	938	939	940	941	942	943	944	945	946	947	948	949	950	951	952	953	954	955	956	957	958	959	960	961	962	963	964	965	966	967	968	969	970	971	972	973	974	975	976	977	978	979	980	981	982	983	984	985	986	987	988	989	990	991	992	993	994	995	996	997	998	999	1000	1001	1002	1003	1004	1005	1006	1007	1008	1009	1010	1011	1012	1013	1014	1015	1016	1017	1018	1019	1020	1021	1022	1023	1024	1025	1026	1027	1028	1029	1030	1031	1032	1033	1034	1035	1036	1037	1038	1039	1040	1041	1042	1043	1044	1045	1046	1047	1048	1049	1050	1051	1052	1053	1054	1055	1056	1057	1058	1059	1060	1061	1062	1063	1064	1065	1066	1067	1068	1069	1070	1071	1072	1073	1074	1075	1076	1077	1078	1079	1080	1081	1082	1083	1084	1085	1086	1087	1088	1089	1090	1091	1092	1093	1094	1095	1096	1097	1098	1099	1100	1101	1102	1103	1104	1105	1106	1107	1108	1109	1110	1111	1112	1113	1114	1115	1116	1117	1118	1119	1120	1121	1122	1123	1124	1125	1126	1127	1128	1129	1130	1131	1132	1133	1134	1135	1136	1137	1138	1139	1140	1141	1142	1143	1144	1145	1146	1147	1148	1149	1150	1151	1152	1153	1154	1155	1156	1157	1158	1159	1160	1161	1162	1163	1164	1165	1166	1167	1168	1169	1170	1171	1172	1173	1174	1175	1176	1177	1178	1179	1180	1181	1182	1183	1184	1185	1186	1187	1188	1189	1190	1191	1192	1193	1194	1195	1196	1197	1198	1199	1200	1201	1202	1203	1204	1205	1206	1207	1208	1209	1210	1211	1212	1213	1214	1215	1216	12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LOCATION OF OPTIONAL BORROW AREA NO. 2

NTS

BANK PROTECTION SEE SHEET 11

SCOUR PROTECTION SEE SHEET 11

RECORD DRAWINGS

Revisions Drawn By: 1-2 A.C. WEIGUM Date: DEC. 15, 1986

THESE RECORD DRAWINGS HAVE BEEN PREPARED, IN PART, ON THE BASIS OF INFORMATION COMPILED BY OTHERS. THEY ARE NOT INTENDED TO REPRESENT IN DETAIL THE EXACT LOCATION, TYPE OF COMPONENT, OR MANNER OF CONSTRUCTION. THE ENGINEER WILL NOT BE RESPONSIBLE FOR ANY ERRORS OR OMISSIONS WHICH HAVE BEEN INCORPORATED INTO THE RECORD DRAWINGS.

DIVERSION CAPABILITY TO POWER CANAL (Preconstruction)	
River Elevation	Diversion Capability (cfs)
At Existing Flashescreens	
331.5	305
332.0	355
333.0	455
334.0	555
335.0	655
336.0	750
337.0	845

GENERAL INFORMATION

1" = 40'

REFERENCE LINE MONUMENTS

REFERENCE LINE MONUMENT (RLM) NO.	DESCRIPTION	NORTHING	EASTING	ELEV.
2	BRASS CAP IN CONC	50,000.0000	200,000.0000	345.03
6	5/8" REBAR W/YELLOW CAP	49,970.6083	199,824.8623	
7	"	49,957.1074	199,743.6841	
9	"	50,034.4885	200,205.7786	
10	"	50,043.8350	200,261.9476	

NOTES:

1. ASSUMED HORIZONTAL COORDINATE SYSTEM.
2. ALL ELEVATIONS ARE FEET PROJECT DATUM, WHICH IS APPROXIMATELY 1.5 FEET HIGHER THAN NATIONAL GEODETIC VERTICAL DATUM (NGVD).
3. FOR INFORMATION FROM BORINGS B-1, B-2, AND B-3 SEE CH2M HILL REPORT ENTITLED FINDINGS REPORT, RENOVATION OF THE CENTRALIA DAM, FISHWAY AND INTAKE STRUCTURE, JANUARY 1985.

ABBREVIATIONS

AB	ANCHOR BOLT	N	NORTH
AHR	ANCHOR	NC	NOT IN CONTRACT
ALT	ALTERNATE	NO	NUMBER
APPROX	APPROXIMATE	NTS	NOT TO SCALE
APVD	APPROVED	OO	ON CENTER
B	BORING	OF	OUTSIDE FACE
BOT	BOTTOM	O TO O	OUT TO OUT
BF	BOTTOM FACE	OPNG	OPENING
BM	BEAM	PJF	PREMOLDED JOINT FILLER
C TO C	CENTER TO CENTER	P/L	PROPERTY LINE
CJ	CONSTRUCTION JOINT	PC	POINT OF CURVE
CL	CENTER LINE	PP	POWER POLE
CLR	CLEARANCE	PT	POINT OF TRANSITION
CONC	CONCRETE	R	RADIO OR SENSOR WIRE
CONN	CONNECTION	RC	REINFORCED CONCRETE
CONT	CONTINUOUS	REINF	REINFORCE
CTR	CENTER	RLM	REFERENCE LINE MONUMENT
DIA	DIAMETER	RST	REINFORCING STEEL
DIR	DIRECTION	S	SEWER
DWG	DRAWING	SM	SIMILAR
E	EAST	SPCS	SPECIFICATIONS
EA	EACH	SO	SQUARE
EF	EACH FACE	STD	STANDARD
EL ELEV	ELEVATION	STL	STEEL
ELED	ELECTRIC	SYMM	SYMMETRICAL
EQL SP	EQUALLY SPACED	T & B	TOP AND BOTTOM
EW	EACH WAY	TO	TOP OF CONCRETE
EXP JT	EXPANSION JOINT	TEL	TELEPHONE
EXT	EXISTING	TF	TOP FACE
FG	FINISHED GRADE	THK	THICK
FTG	FOOTING	TRANSV	TRANSVERSE
GAW	GALVANIZED (HOT DIP)	TST	TOP OF STEEL
GVL	GRAVEL	TW	TOP OF WALL
HAS	HEADED ANCHOR STUD	TYP	TYPICAL
HORIZ	HORIZONTAL	U/G	UNDERGROUND
HYDR	HYDRAULIC	USGS	UNITED STATES GEOLOGICAL SURVEY
IF	INSIDE FACE	VERT	VERTICAL
LB	LONG	W	WATER
LONG	LONGITUDINAL	W	WITH
MAX	MAXIMUM	WS	WATERSTOP OR WATER SURFACE
MB	MACHINE BOLTS		
MIN	MINIMUM		

NOTE: FOR ABBREVIATIONS NOT LISTED, SEE "ABBREVIATIONS FOR USE ON DRAWINGS AND TEXT" PUBLISHED BY THE AMERICAN NATIONAL STANDARDS INSTITUTE INC. (ANSI)

SYMBOLS

---	EDGE OF WATER (2/14/84)
---	EXISTING CONTOUR
---	NEW CONTOUR
---	EXISTING GROUND IN SECTION
---	NEW EMBANKMENT OR EXCAVATION - SLOPE AS INDICATED
---	EXISTING UTILITY POLE
---	SHEET PILE
---	FINISHED GRADE
---	EXISTING STRUCTURE
---	NEW STRUCTURE
---	BORING
---	TOP AND BOTTOM
---	TELEPHONE
---	AT
---	NUMBER

SECTION (LETTER) OR DETAIL (NUMERAL) DESIGNATION

ON DRAWING WHERE SECTION OR DETAIL IS TAKEN:
SHEET NUMBER WHERE SHOWN

ON DRAWING WHERE SECTION OR DETAIL IS SHOWN:
SHEET NUMBER(S) WHERE TAKEN

DETAIL AND SECTION DESIGNATION



DESIGN: R. PRIBERG
DRAWN: R. PRIBERG
CHECKED: D. BOTTOFF
APPROVED: A. E. GARTON

12-86
2-22-88
RECORD DRAWINGS
ADDENDUM NO. 2 - ADDED TABLES
REVISION

BY: KRW
APVD: LDB
RE: REG

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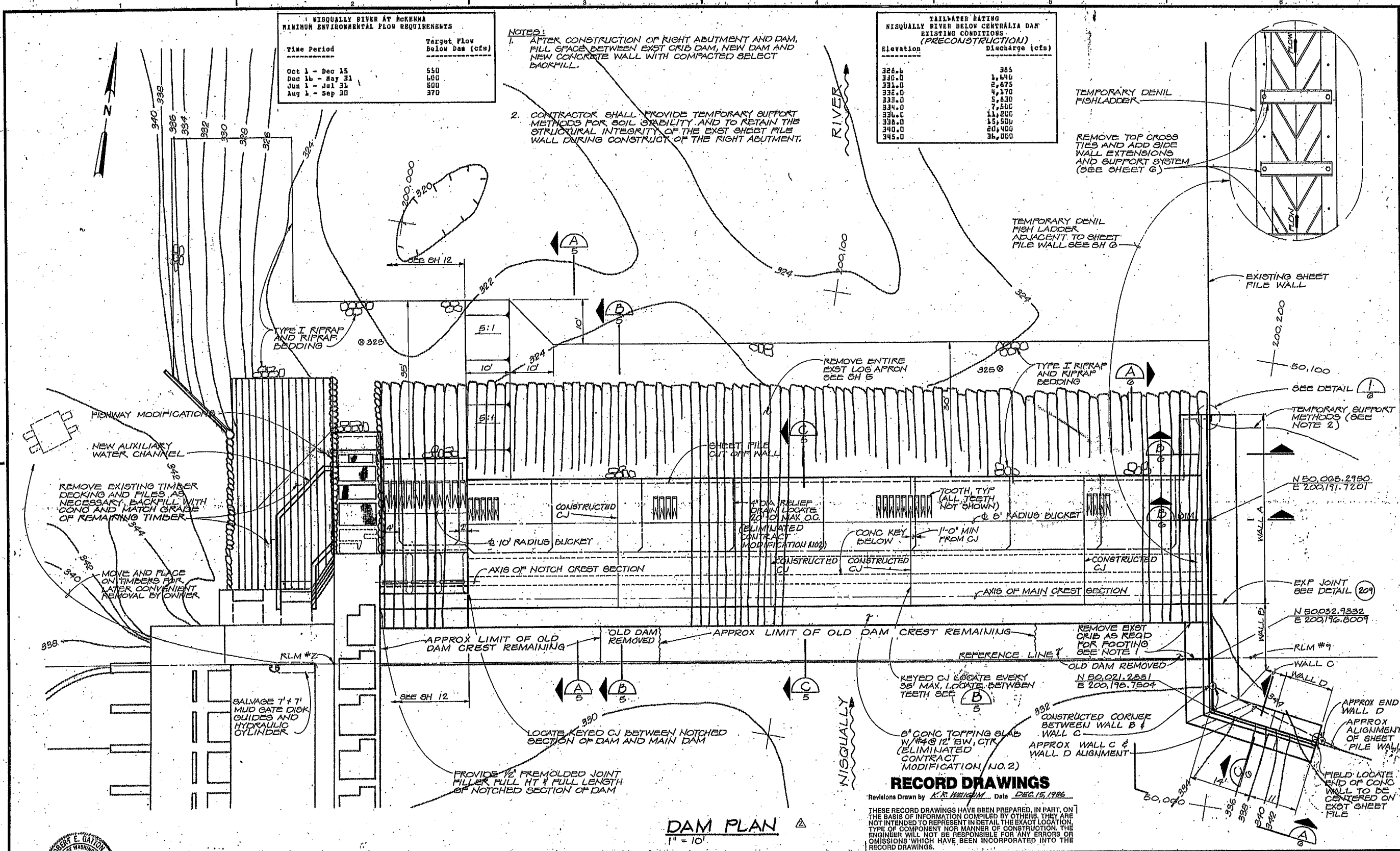
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CITY OF CENTRALIA, WASHINGTON
LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

GENERAL INFORMATION

SHEET: **3**
DATE: **FEB 1986**
PROJ NO.: **S17895A1**

OVERLAY IDENTIFICATION
PROJ. NO. 4-1
COMPOSITE 4-1
OVERLAY 4-1
SCREEN 4-1
CONTRACT 4-1



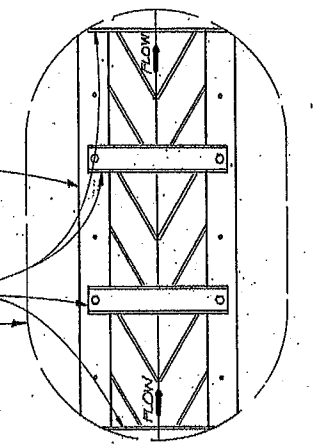
**NISQUALLY RIVER AT MCKENNA
MINIMUM ENVIRONMENTAL FLOW REQUIREMENTS**

Time Period	Target Flow Below Dam (cfs)
Oct 1 - Dec 15	550
Dec 16 - May 31	600
Jun 1 - Jul 31	500
Aug 1 - Sep 30	370

- NOTES:**
1. AFTER CONSTRUCTION OF RIGHT ABUTMENT AND DAM, FILL SPACE BETWEEN EXST CRIB DAM, NEW DAM AND NEW CONCRETE WALL WITH COMPACTED SELECT BACKFILL.
 2. CONTRACTOR SHALL PROVIDE TEMPORARY SUPPORT METHODS FOR SOIL STABILITY AND TO RETAIN THE STRUCTURAL INTEGRITY OF THE EXST SHEET PILE WALL DURING CONSTRUCT OF THE RIGHT ABUTMENT.

**TAILWATER RATING
NISQUALLY RIVER BELOW CENTRALIA DAM
EXISTING CONDITIONS
(PRECONSTRUCTION)**

Elevation	Discharge (cfs)
326.6	365
330.0	1,640
331.0	2,875
332.0	4,170
333.0	5,630
334.0	7,500
336.0	11,200
338.0	15,500
340.0	20,400
345.0	36,000



TEMPORARY DENIL FISH LADDER
REMOVE TOP CROSS TIES AND ADD SIDE WALL EXTENSIONS AND SUPPORT SYSTEM (SEE SHEET G)

TEMPORARY DENIL FISH LADDER ADJACENT TO SHEET PILE WALL SEE SH G

EXISTING SHEET PILE WALL

200,200
50,100

SEE DETAIL 1

TEMPORARY SUPPORT METHODS (SEE NOTE 2)

N 50,005.2950
E 200,191.7201

EXP JOINT SEE DETAIL (209)

N 50,032.9332
E 200,196.8009

RLM #9

WALL C

WALL D

APPROX END WALL D
APPROX ALIGNMENT OF SHEET PILE WALL

FIELD LOCATE END OF CONC WALL TO BE CENTERED ON EXST SHEET PILE

DAM PLAN
1" = 10'

RECORD DRAWINGS

Revisions Drawn by **K.R. WEIGMAN** Date **DEC. 15, 1986**

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LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

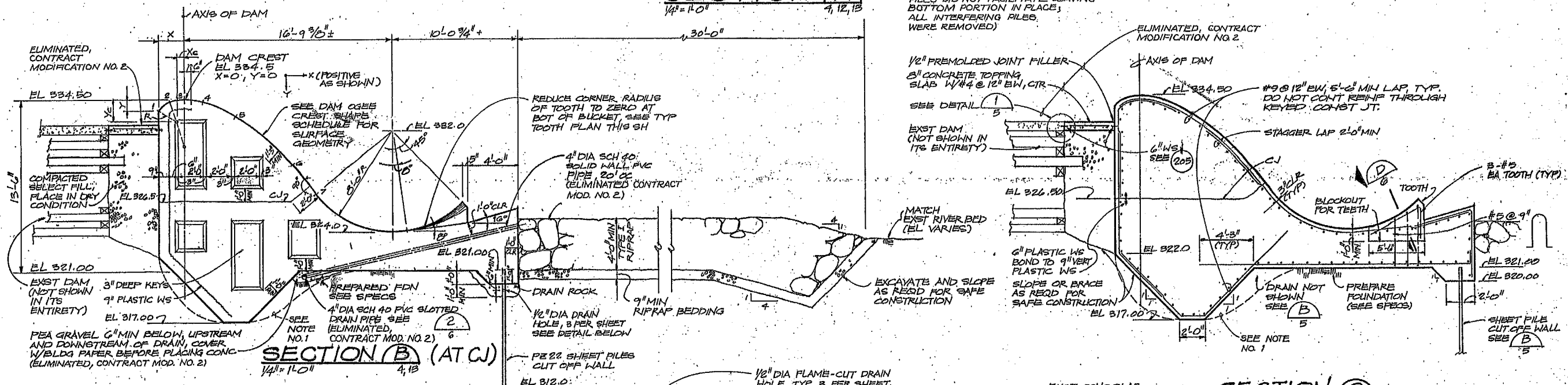
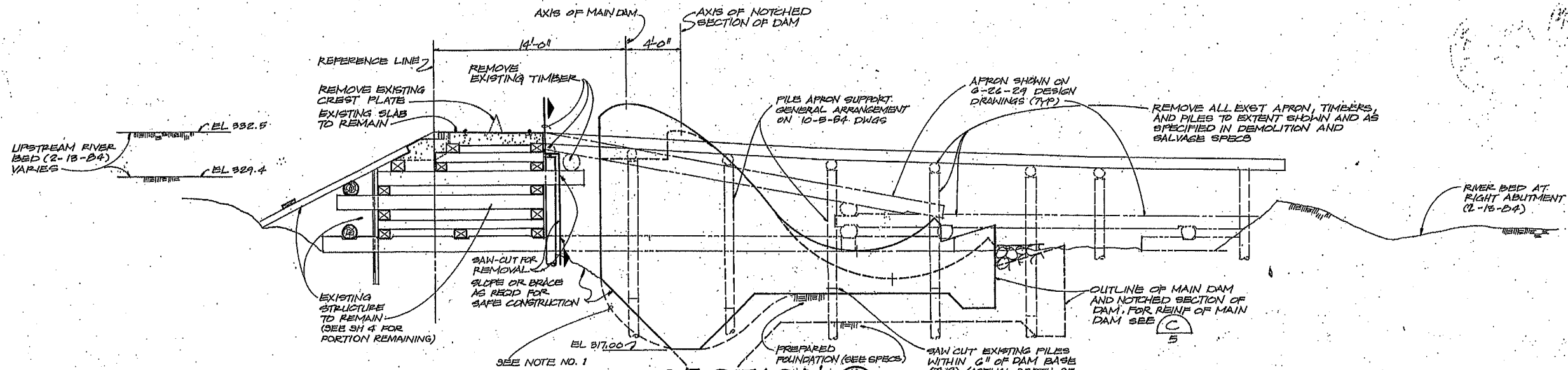
DAM PLAN

SHEET	4
DATE	FEB 1985
PROJ. NO.	S17895A1



DSGN	L.D. BOTTORFA
CHK	R. FRIBERG
APVD	R.E. GATTON
NO.	12/86
DATE	12/22/86
REVISION	RECORD DRAWINGS ADDENDUM NO. 2 - ADDED TABLES

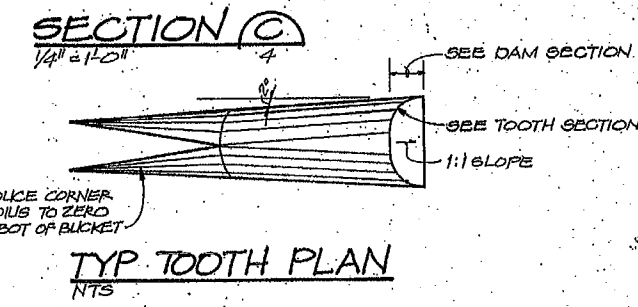
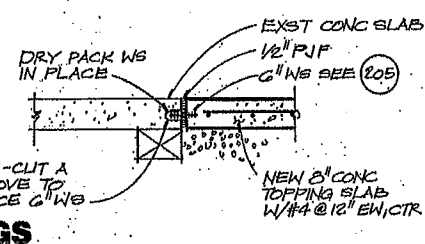
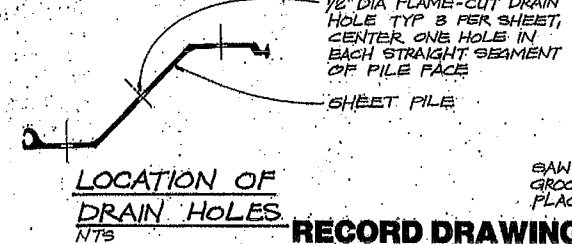
KRW	LDB
REP	REG
BY	APVD
CH2M HILL	



DAM OGEE CREST SHAPE SCHEDULE

PT. #	X (FT)	Y (FT)	R (FT)	Xc (FT)	Yc (FT)
1	-1.988	0.889			
2	-1.029	0.147	1.645	-0.574	1.784
3	0.00	0.000	3.710	0.600	3.710
4	1.519	0.203	5.775	0.600	5.775
5	4.080	1.309	9.870	-1.078	9.723
6	8.610	5.138	19.620	-6.160	18.025
7	10.435	7.367	45.500	-25.676	35.049

NOTE NO. 1:
TYPICAL CONSTRUCTED
SECTION EXCEEDED
DESIGN SECTION BY MIN.
SHOWN (AVERAGE SECTION
WAS LARGER)



RECORD DRAWINGS
Revisions Drawn by K.R. HEIGUM Date DEC. 15, 1986
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LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

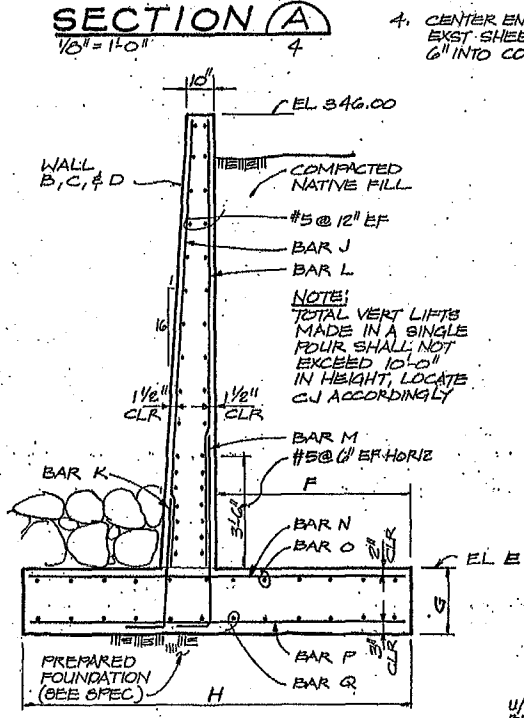
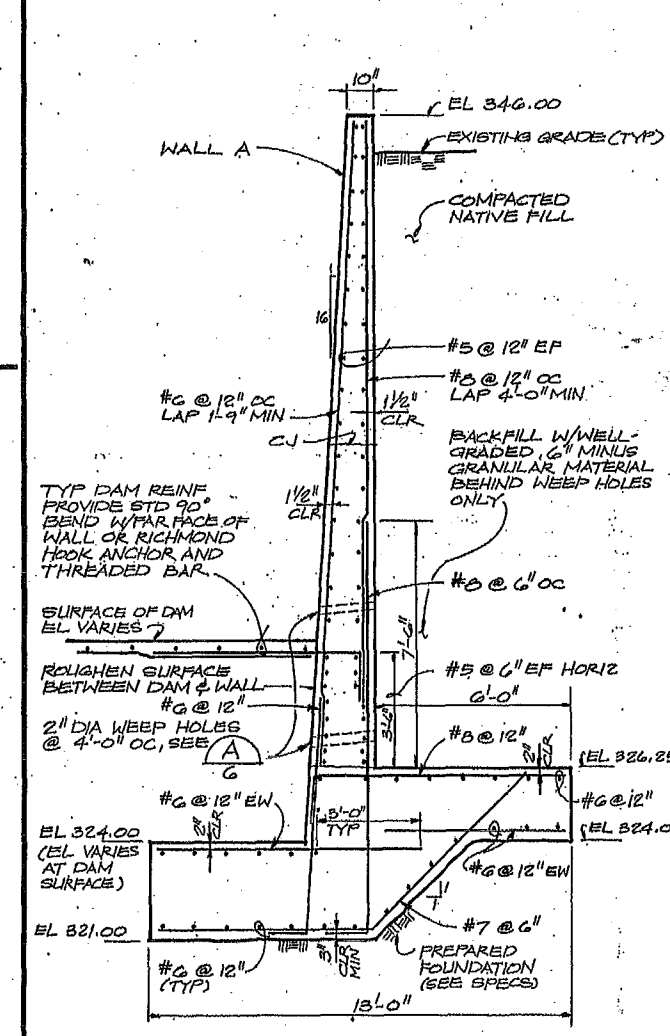
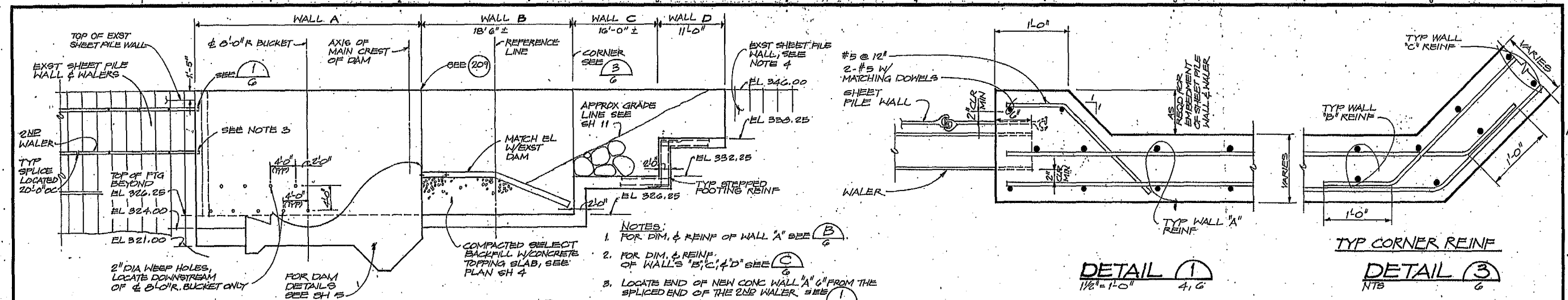
DAM SECTIONS AND DETAILS

SHEET **6**
DATE FEB 1986
PROJ NO. S17895A1

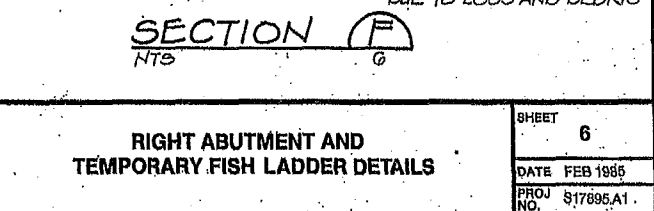
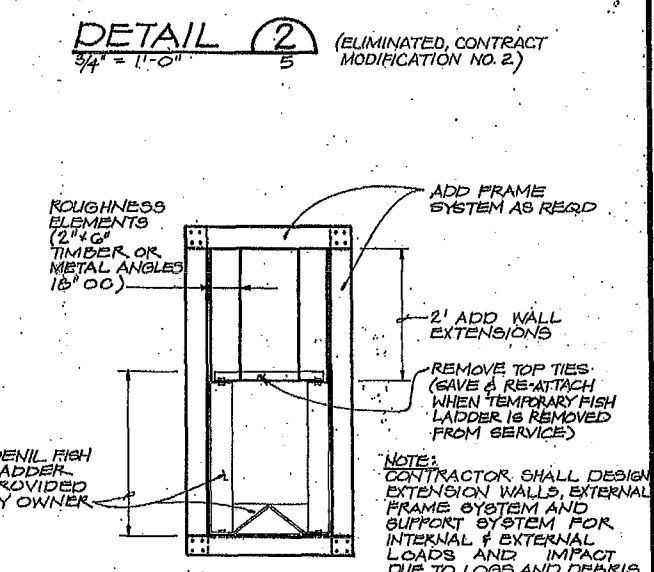
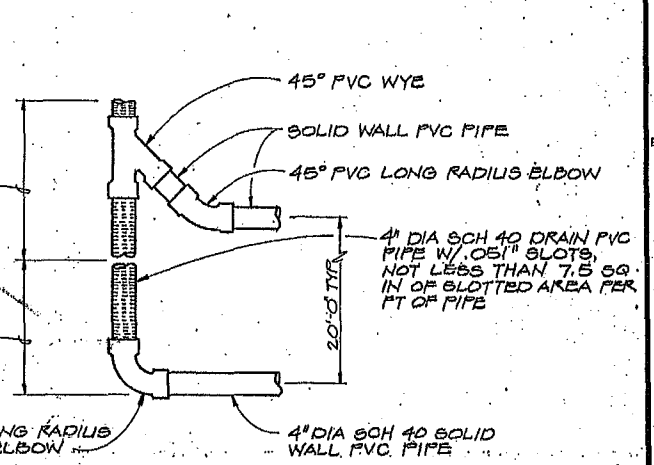
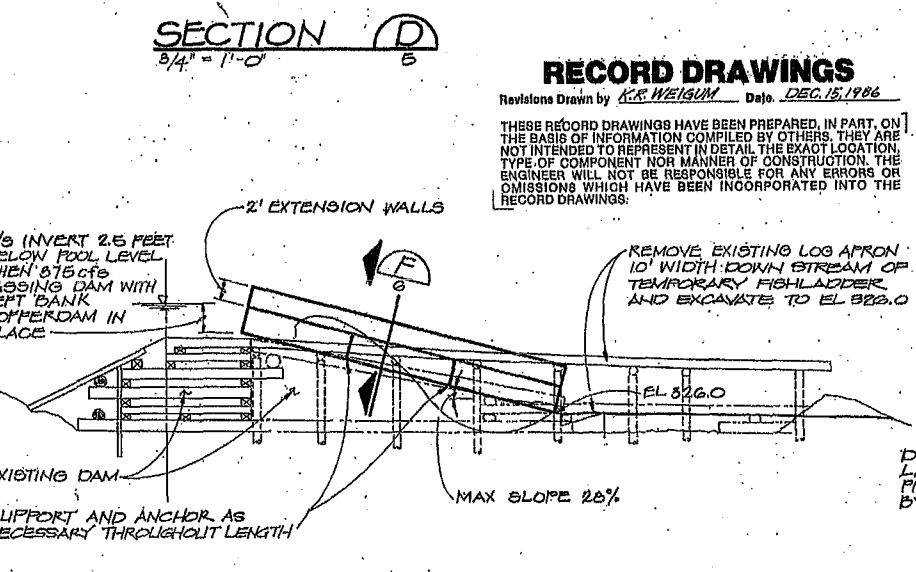
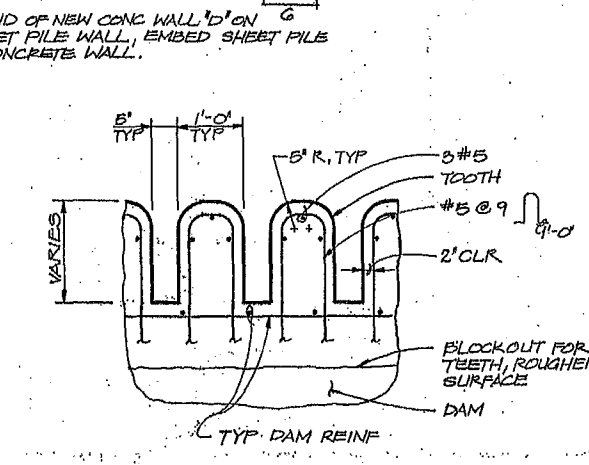


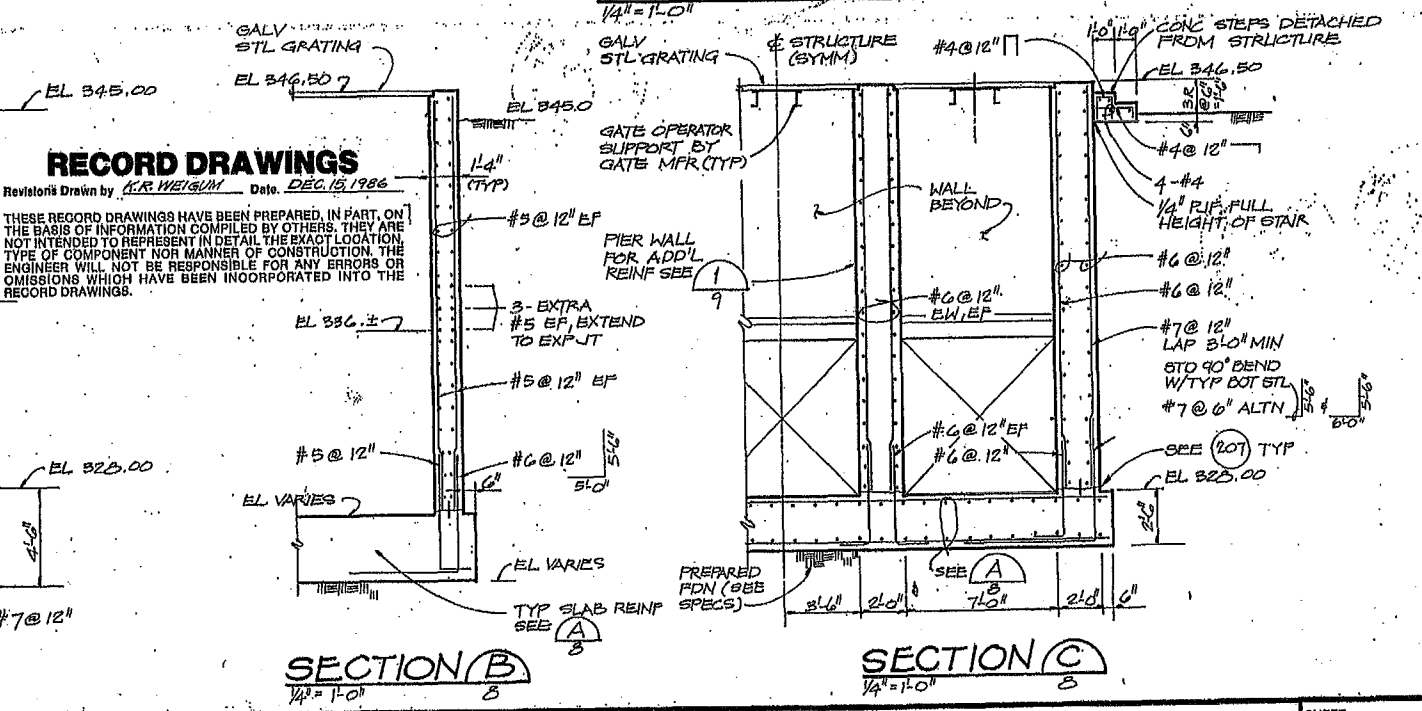
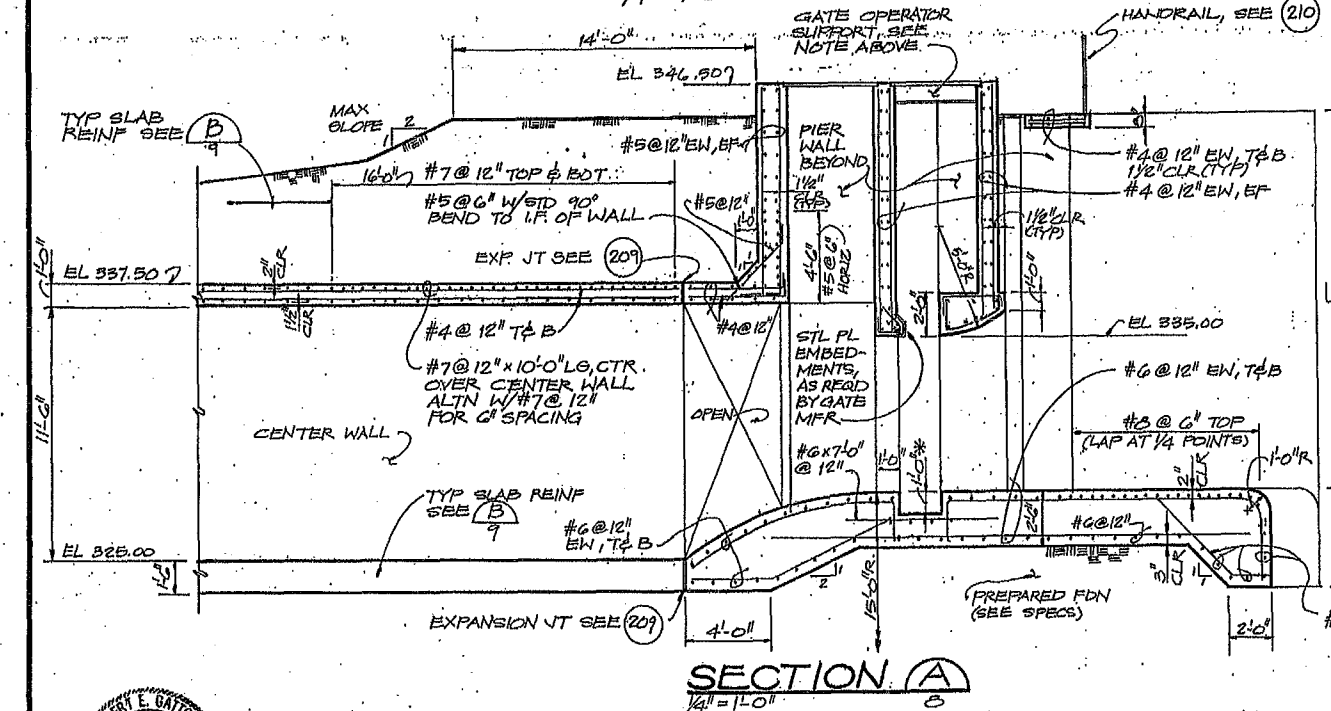
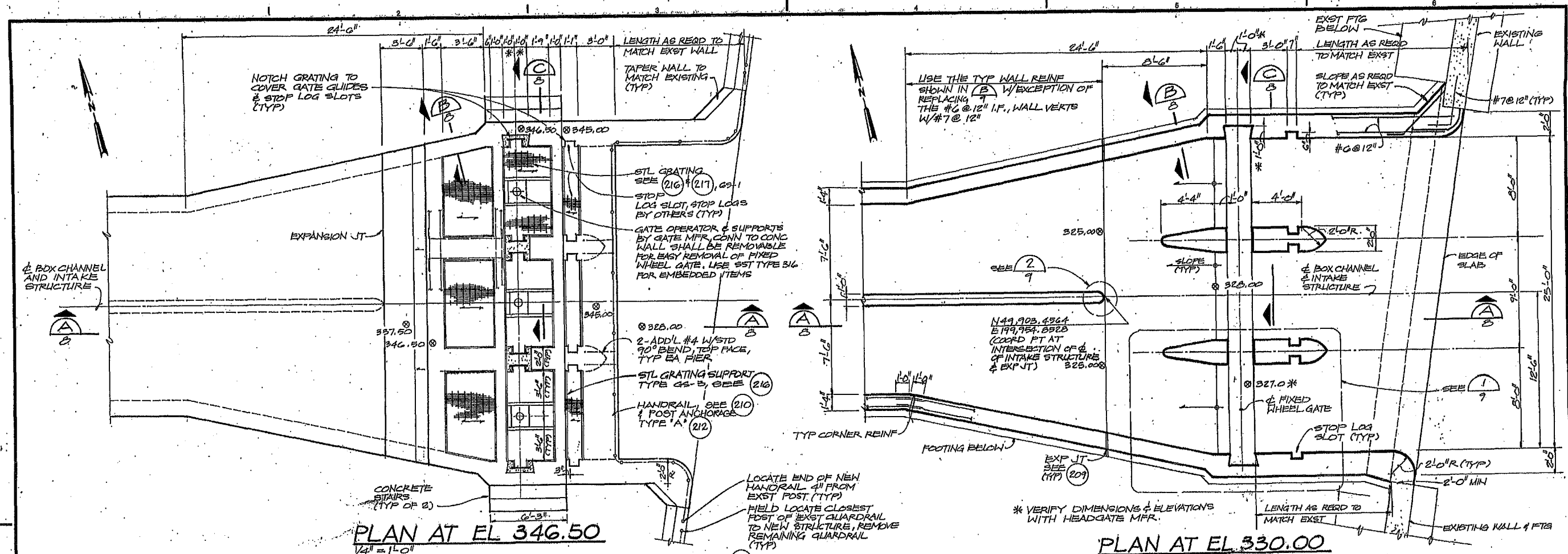
DESIGN
L. KOBUS/L. D. BOTTOM
OR B. LAZARO
CHK'D W. MCGRANTZ
APVD R.E. GARTON

NO.	DATE	REVISION	BY	APVD
1	12/86	RECORD DRAWINGS	KRW	LDH
2				



	WALL B	WALL C	WALL D
EL E	326.25	332.25	338.25
F	6'-0"	4'-0"	4'-0"
G	2'-3"	2'-0"	1'-6"
H	12'-0"	8'-0"	8'-0"
BAR J	#6 @ 12"	#5 @ 12"	#5 @ 12"
BAR K	#6 @ 12"	#5 @ 12"	#5 @ 12"
BAR L	#6 @ 12"	#6 @ 12"	#5 @ 12"
BAR M	#6 @ 12"	#6 @ 12"	#5 @ 12"
BAR N	#6 @ 12"	#6 @ 12"	#5 @ 12"
BAR O	#6 @ 12"	#5 @ 12"	#5 @ 12"
BAR P	#6 @ 12"	#6 @ 12"	#5 @ 12"
BAR Q	#6 @ 12"	#5 @ 12"	#5 @ 12"





RECORD DRAWINGS

Revisions Drawn by: *CR. WEIGUN* Date: *DEC. 15, 1986*

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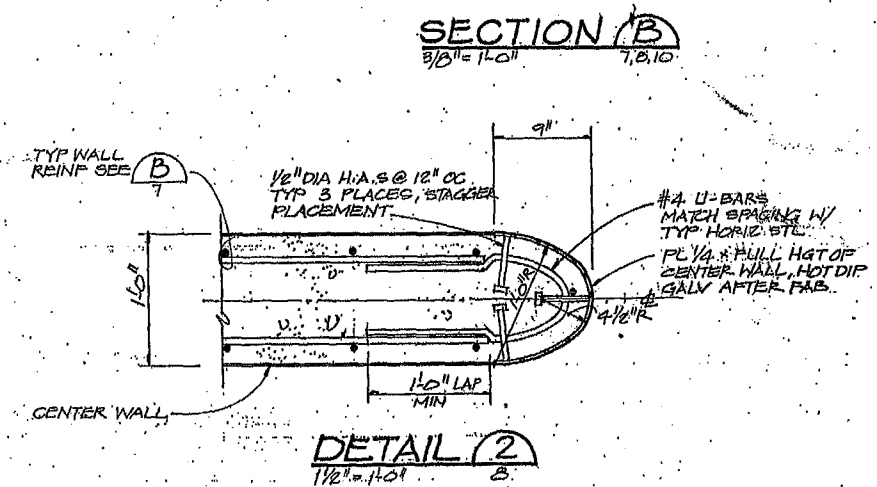
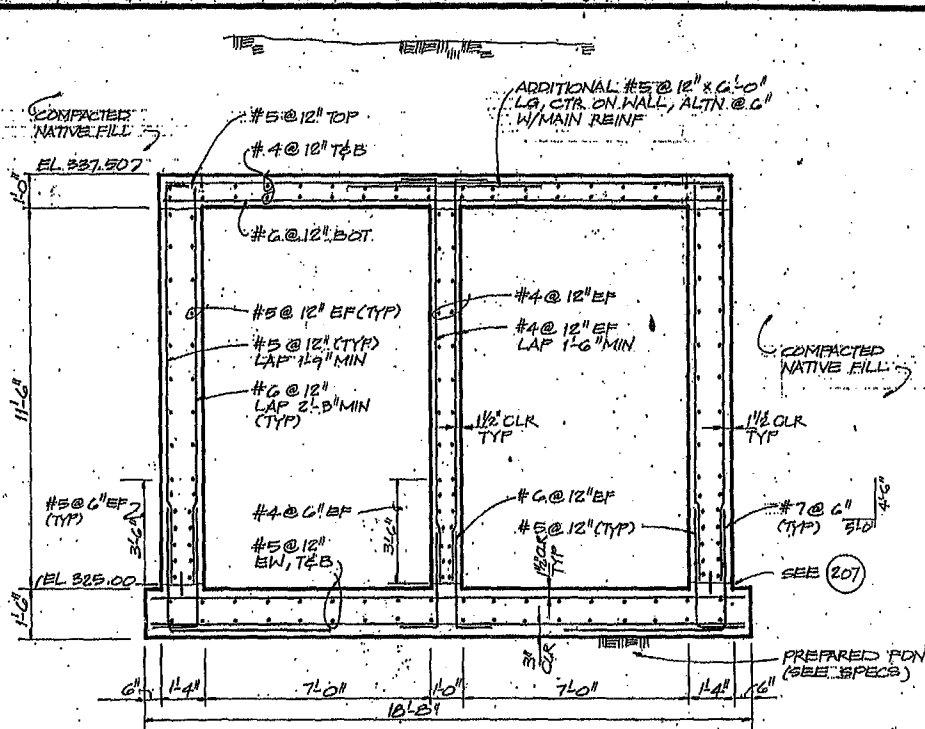
CITY OF CENTRALIA, WASHINGTON
LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

INTAKE STRUCTURE PLANS AND SECTIONS

SHEET 8
DATE FEB 1985
PROJ S17895.A1
NO.



DSGN	L. KORBUS	NO.	12/86	RECORD DRAWINGS	BY	APVD	CH2M HILL
DR	B. LAZARO	DATE		REVISION			
CHK	<i>Brad</i>						
APVD	AE. GATTON						



RECORD DRAWINGS

Drawings Drawn by K.K. WELSH Date DEC. 15, 1986

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CITY OF CENTRALIA, WASHINGTON
LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA,
DAM, FISHWAY & INTAKE STRUCTURE

INTAKE STRUCTURE DETAILS AND BOX CHANNEL SECTIONS

SHEET	9
DATE	FEB 1985
PROJ NO	S17895A1



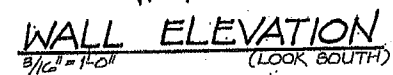
DSGN	L. KORBUS
DR	B. LAZARO
CHK	<i>Bird. Lam.</i>
APVD	A. E. GAYTON

-	12/86	RECORD DRAWINGS
No	DATE	REVISION

	KRW	LDA
	DW	ADL

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 N AUTHORIZATION OF CH



-
- EL VARIES, SEE WALL ELEV ABOVE
- 6% MIN SLOPE TO DRAIN SEE PLAN SH 7
- BAR L
- #5 @ 12"
- #5 @ 12" EF
- 1 1/2" CLR
- 2" CLR
- BAR M
- #5 @ 12"
- #5 @ 12"
- F
- BAR N
- EL E
- 5" CLR
- 10" CLR
- H
- #5 @ 12" EW
- TREMIE CONCRETE (SEE SHEET 7)

WALL SECTION

[illegible]

SECTION (A)

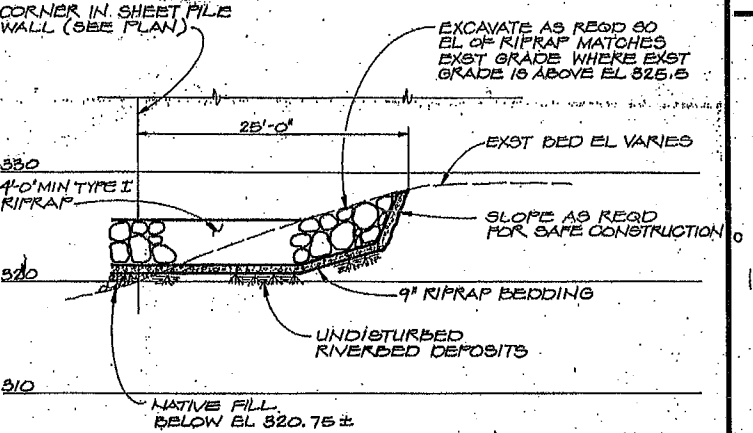
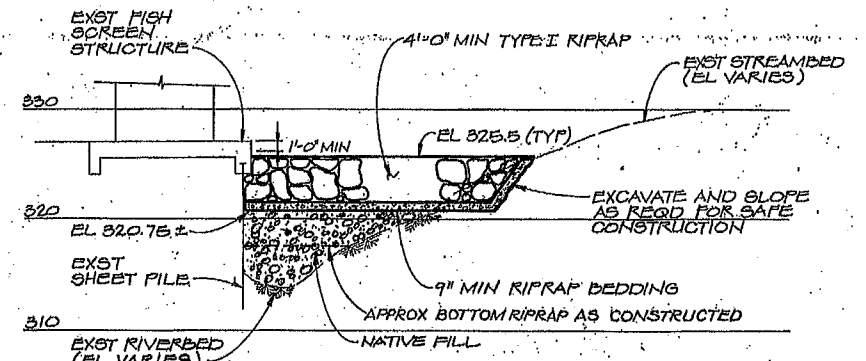
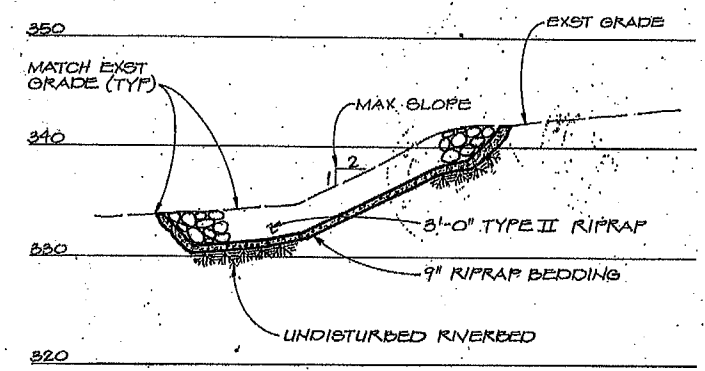
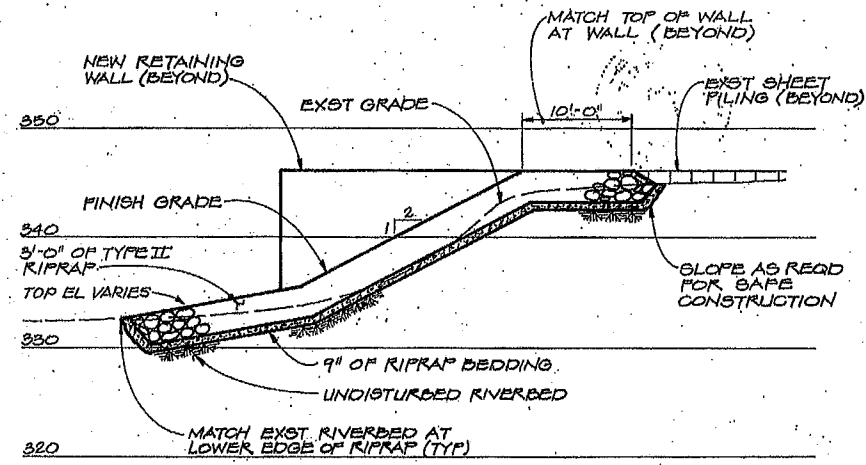
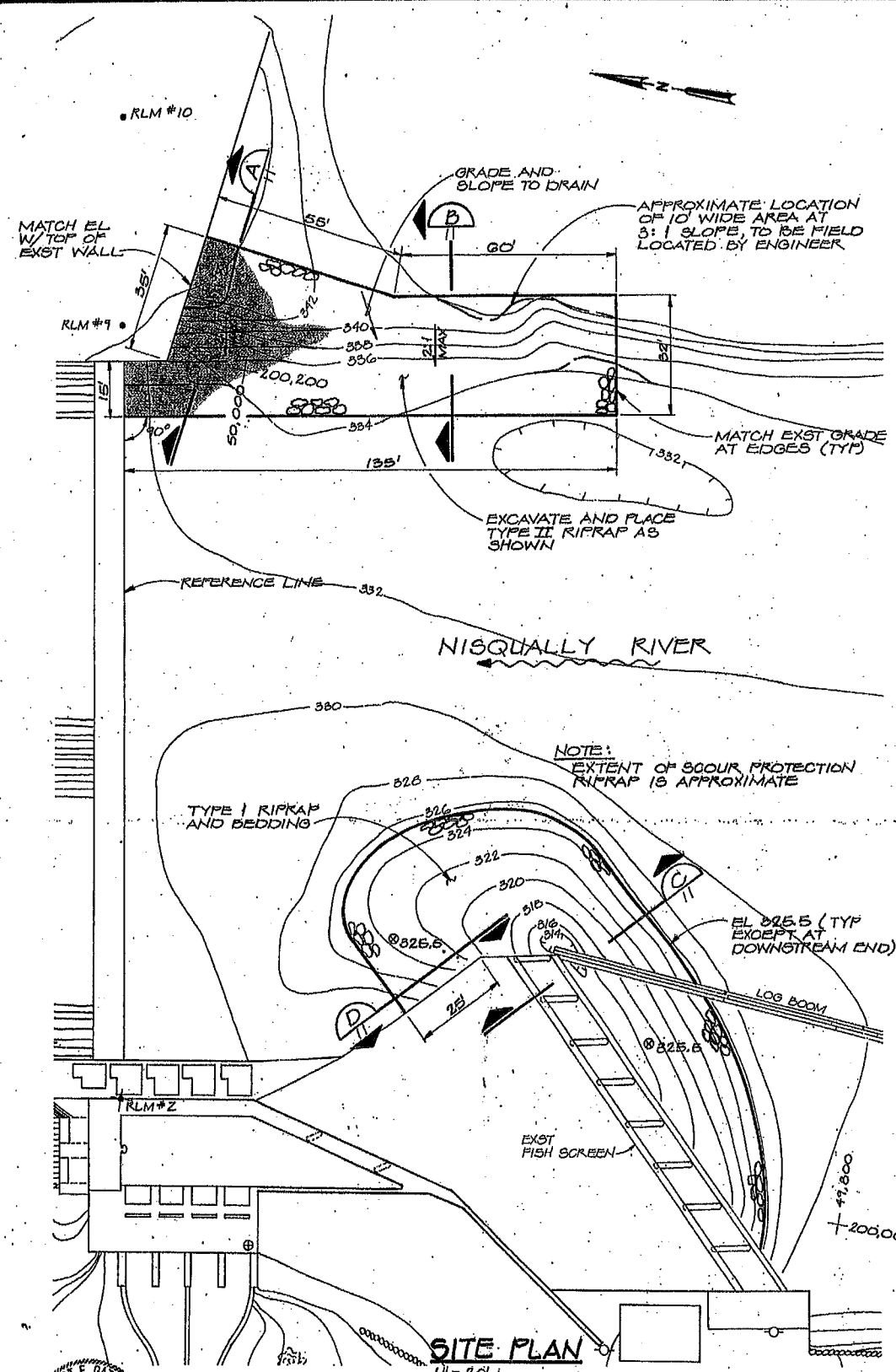
SHEET	10
DATE	FEB 1985
PROJ NO.	S17895.A1



DSGN	L. KORBUS
DR	B. LAZARO
CHR	<i>Read. Stein</i>
APVD	RE GATTON

-	12/86	RECORD DRAWINGS
NO.	DATE	REVISION

KRW	LDB	USED, IN W
BY	APVD	WITHOUT T



DSGN	L.D. BOTTOFF				
DR	R. FRIBERG				
CHK	R.E. GATTON				
APVD	R.E. GATTON	NO.	DATE	REVISION	

BY	APVD	REVISION	
KRW	LDB		

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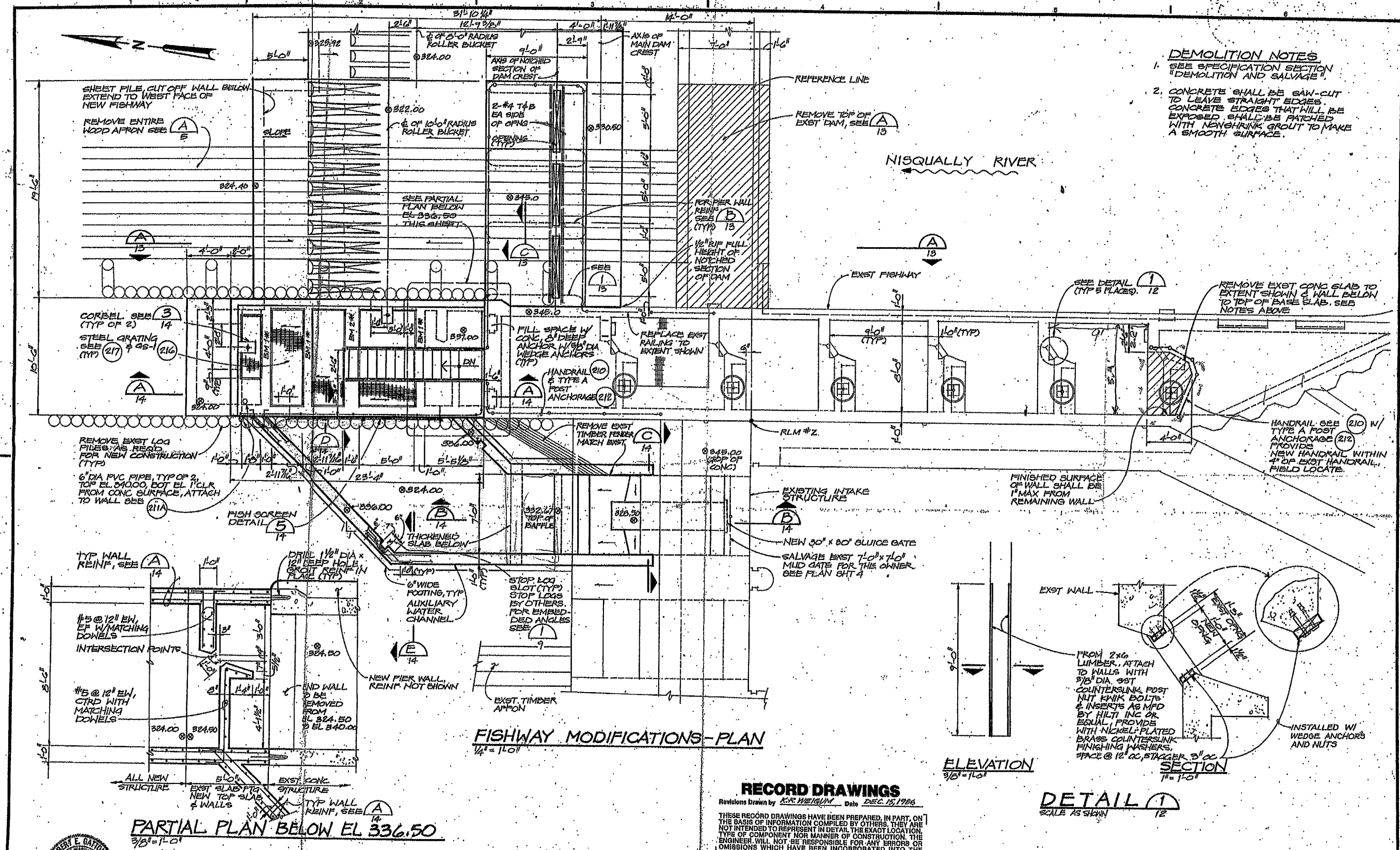
Revisions Drawn by AKR HESGUM Date DEC. 15, 1986

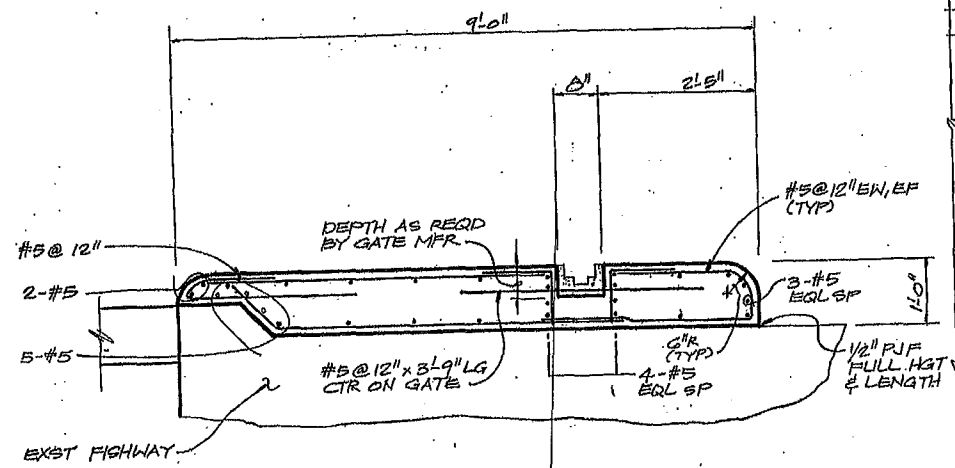
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LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

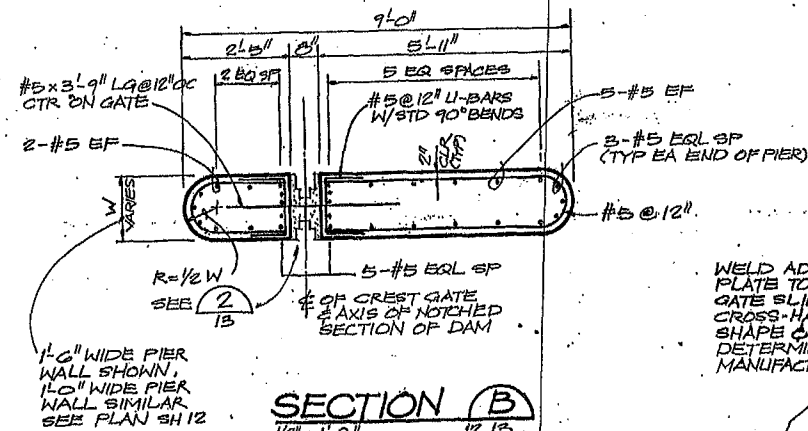
SCOUR PROTECTION

SHEET	11
DATE	FEB 1986
PROJ NO.	617895A1

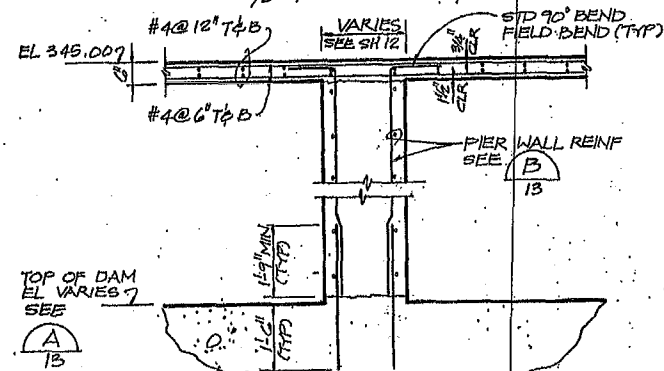




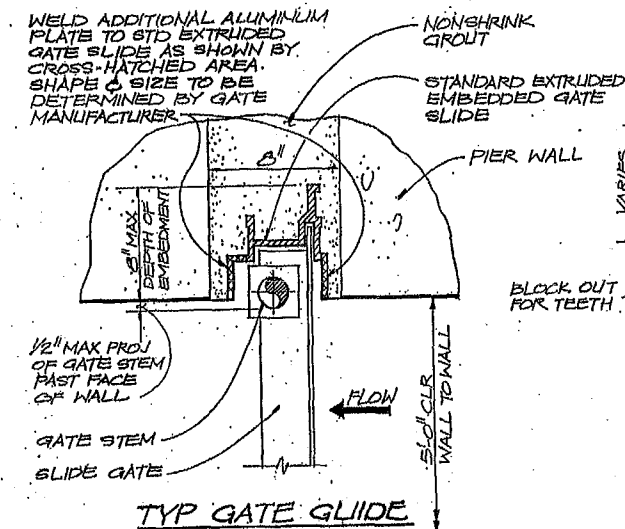
DETAIL 1
3/4" = 1'-0"



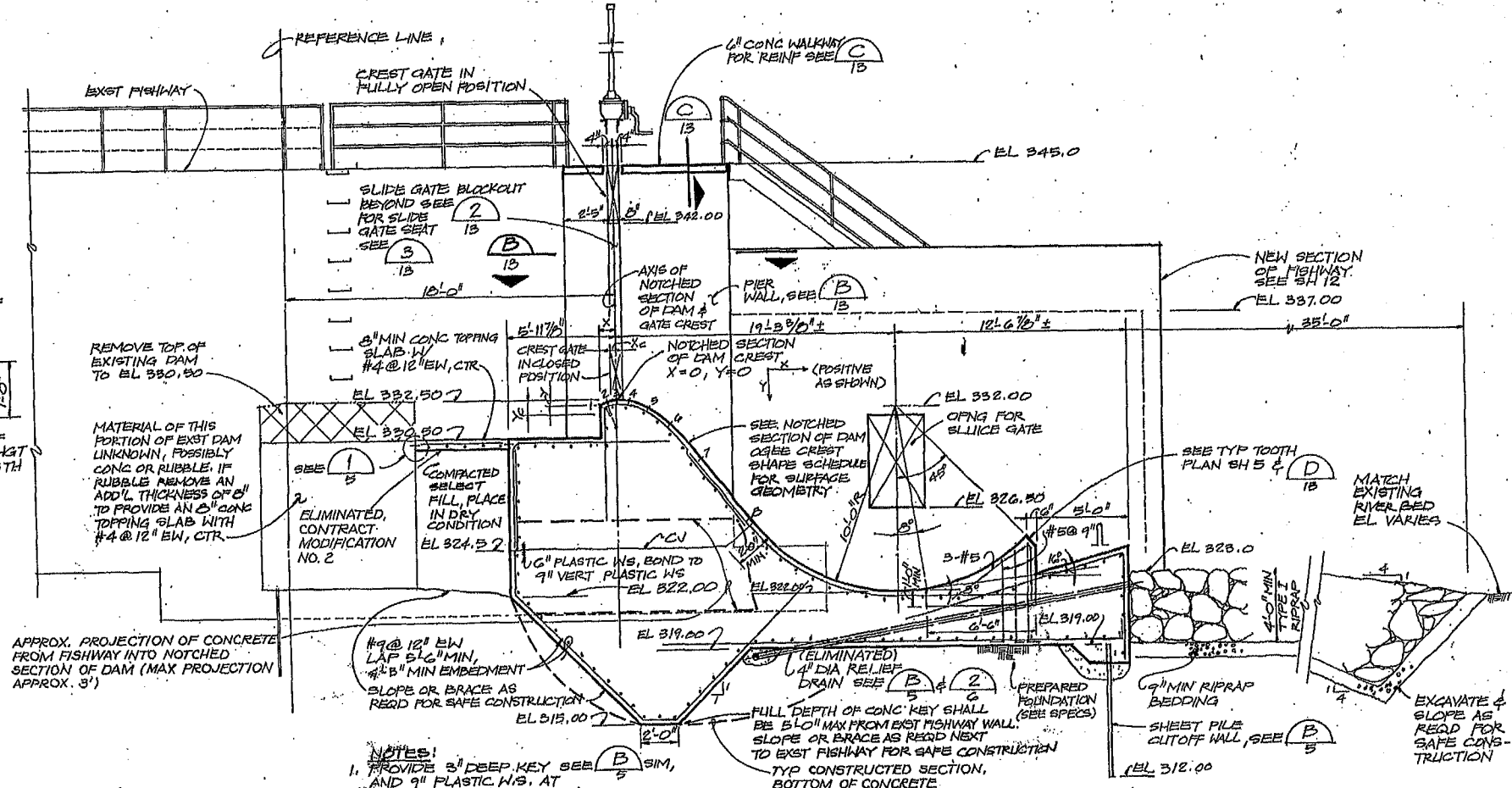
SECTION B
1/2" = 1'-0"



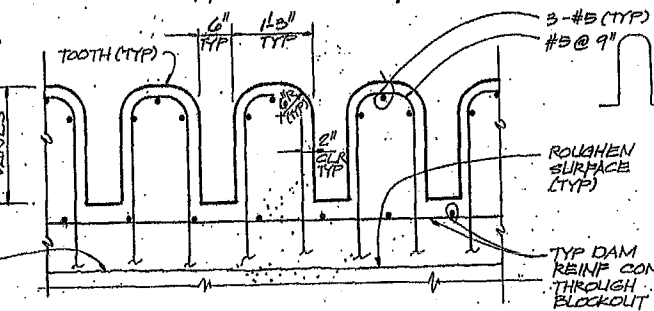
SECTION C
1/2" = 1'-0"



DETAIL 2
NTS



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



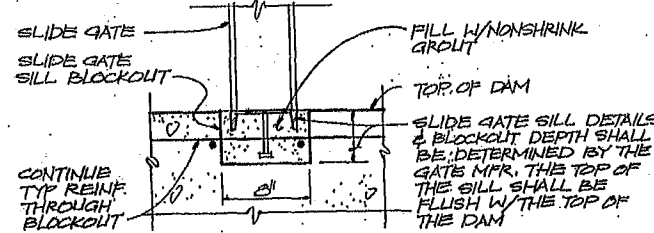
SECTION D
3/4" = 1'-0"

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**NOTCHED SECTION OF DAM
OGEE CREST SHAPE SCHEDULE**

PT.#	X(FT)	Y(FT)	R(FT)	Xc(FT)	Yc(FT)
1	-0.852	0.351	0.705	-0.246	0.741
2	-0.441	0.063	1.590	0.000	1.590
3	0.000	0.000	2.475	0.000	2.475
4	0.651	0.087	4.230	-0.462	4.167
5	1.749	0.561	8.400	-2.640	7.725
6	3.000	1.300	19.600	-10.160	16.025
7	4.610	3.130	45.500	-29.670	33.049
8	7.177	6.365			



DETAIL 3
NTS



DSGN *L. KORBUS*
DR *P. LAZARO*
CHK *D. WERMICRANTZ*
APVD *R.E. GARTON*

NO. *12/86* DATE *12/86* REVISION

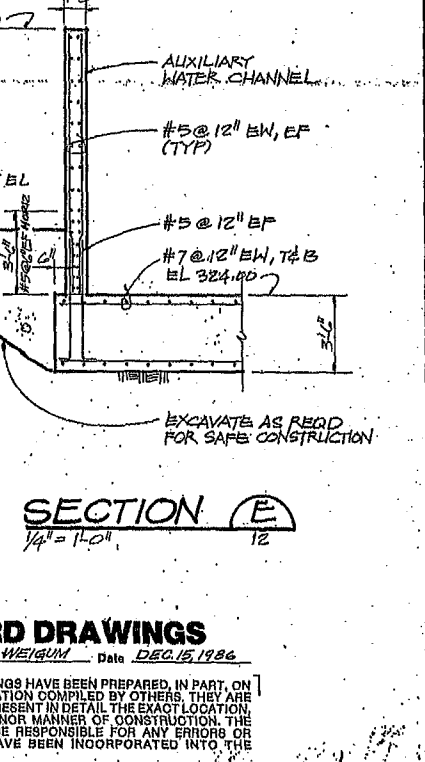
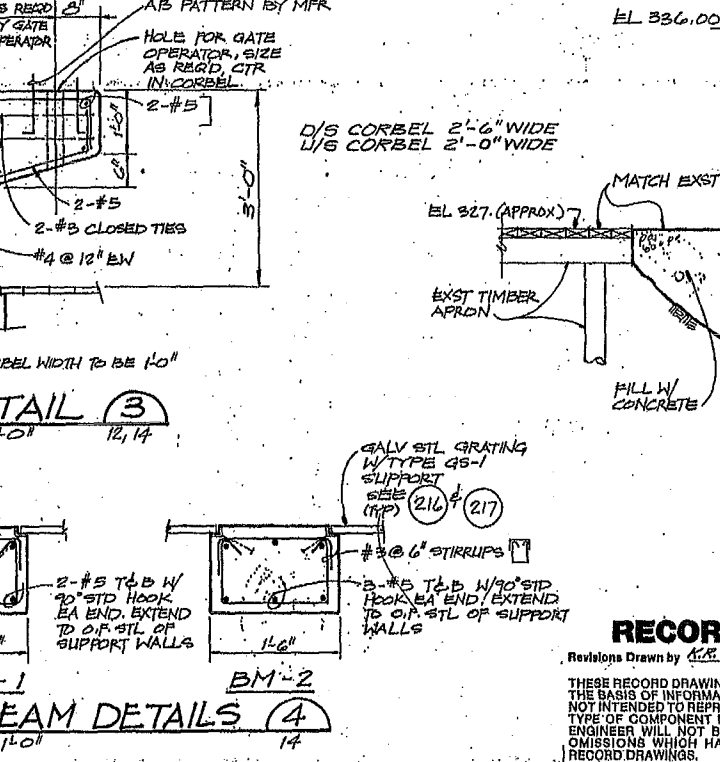
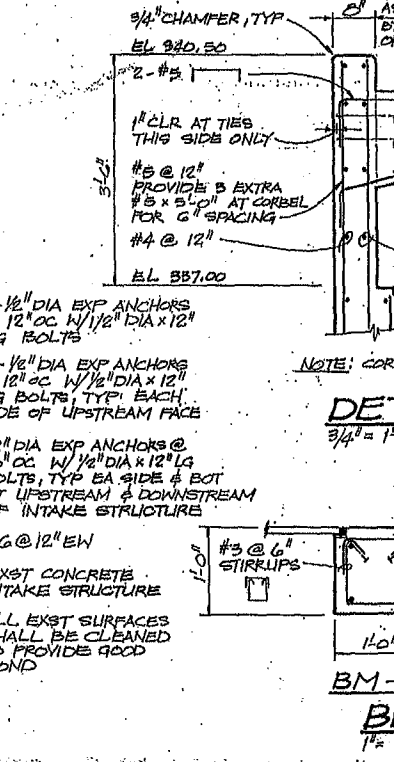
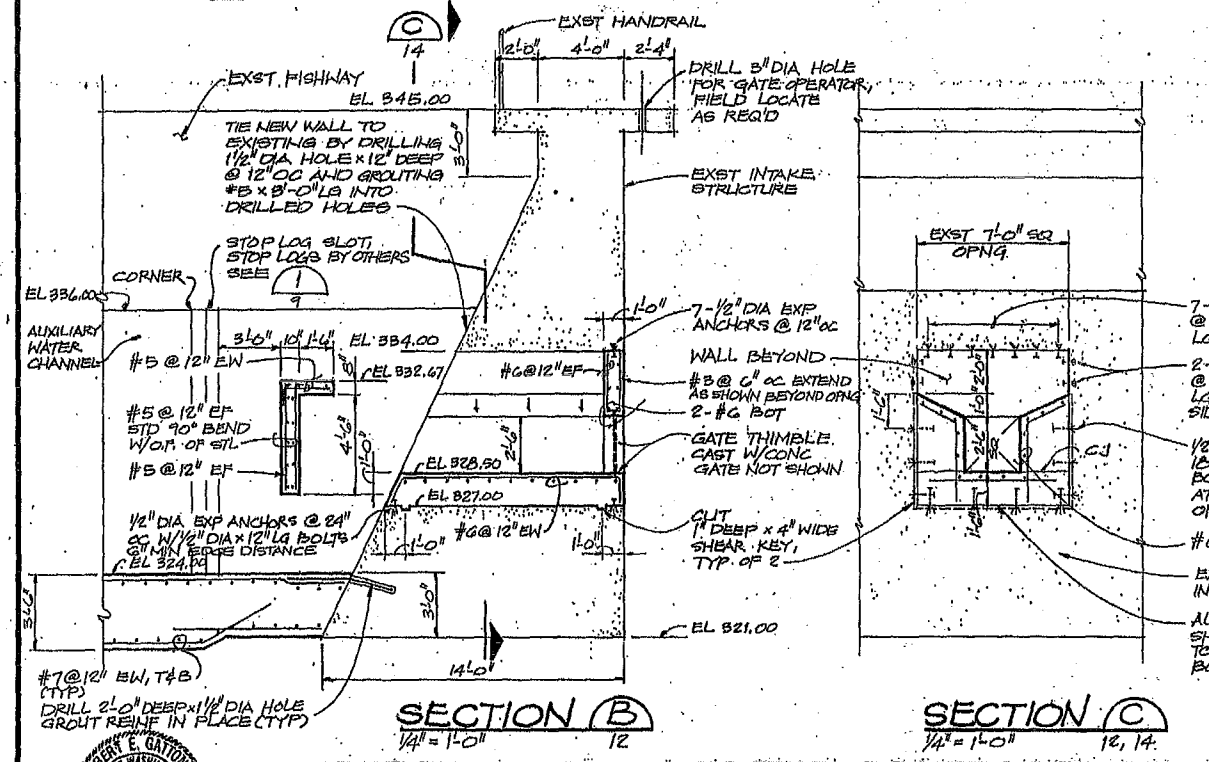
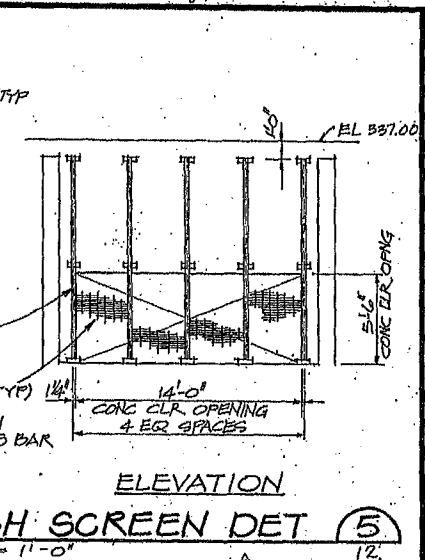
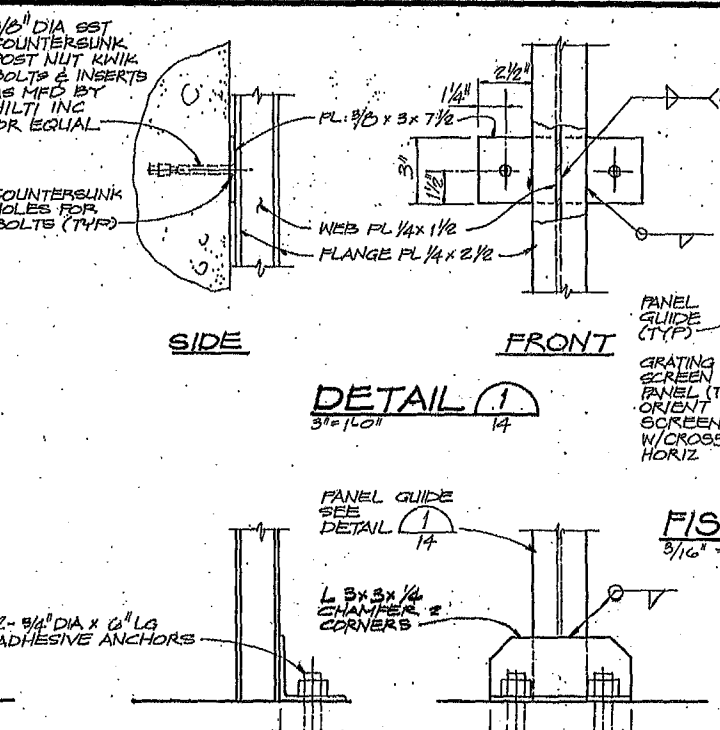
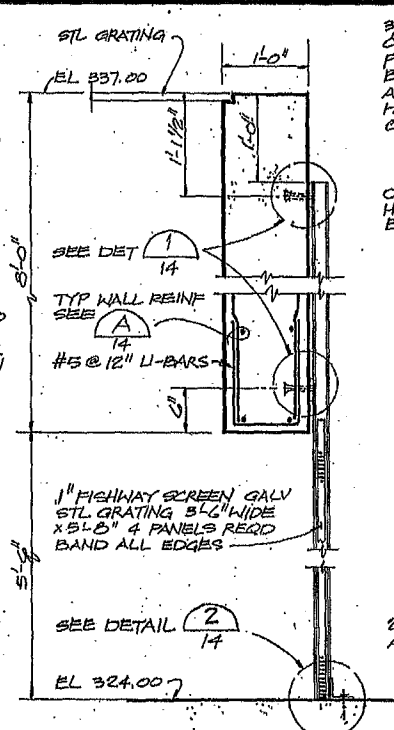
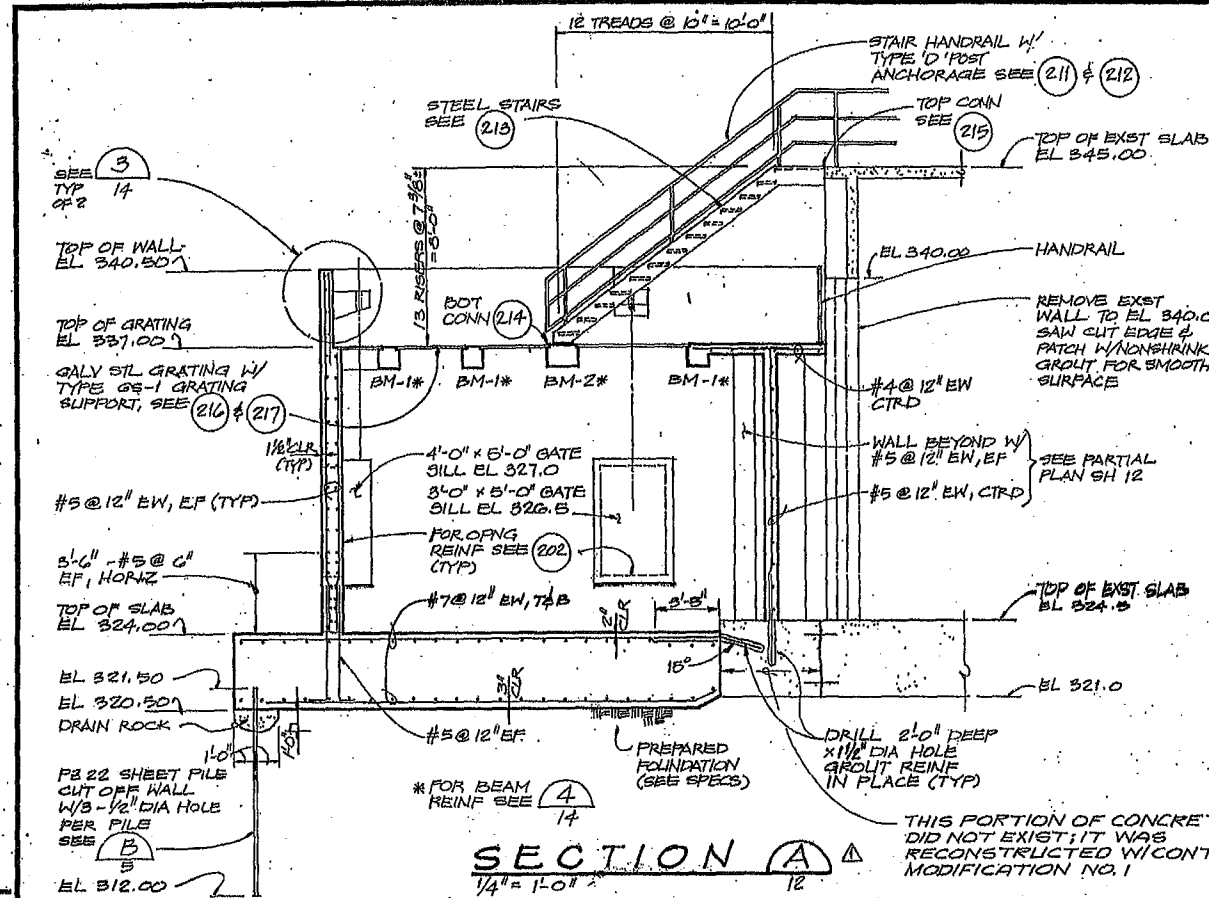
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CITY OF CENTRALIA, WASHINGTON
LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA
DAM, FISHWAY & INTAKE STRUCTURE

**FISHWAY MODIFICATIONS —
NOTCHED SECTION OF DAM
SECTIONS AND DETAILS**

SHEET *13*
DATE *FEB 1985*
PROJ NO. *S17895A1*



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DESGN L. KORBUS DR B. LAZARO CHK D. WERNICHAUT APVD R.E. GARTON	12-86 2-1985 NO. DATE	RECORD DRAWINGS ADDENDUM NO. 1 - CHANGED NOTES REVISION	KRW LDB RDR REG BY APVD	CH2M HILL	CH2M HILL	CH2M HILL	CH2M HILL	CH2M HILL	CH2M HILL	CH2M HILL

RECORD DRAWINGS

Revisions Drawn by K.R. WEIGUM Date DEC 15, 1986
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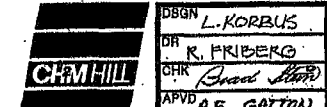
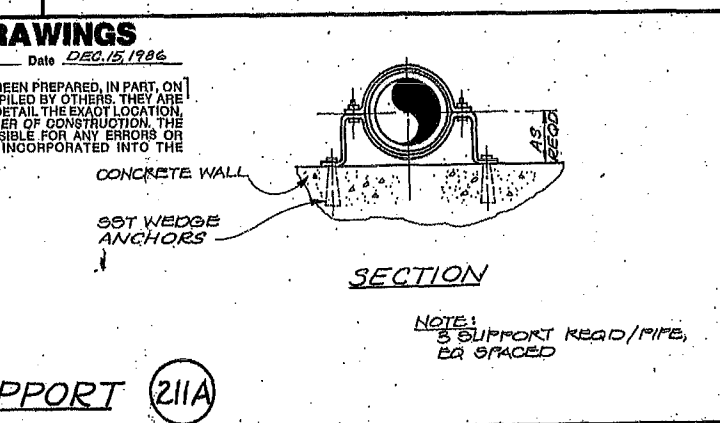
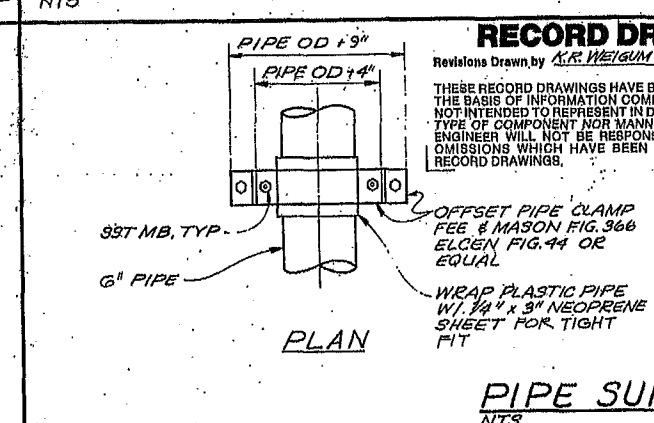
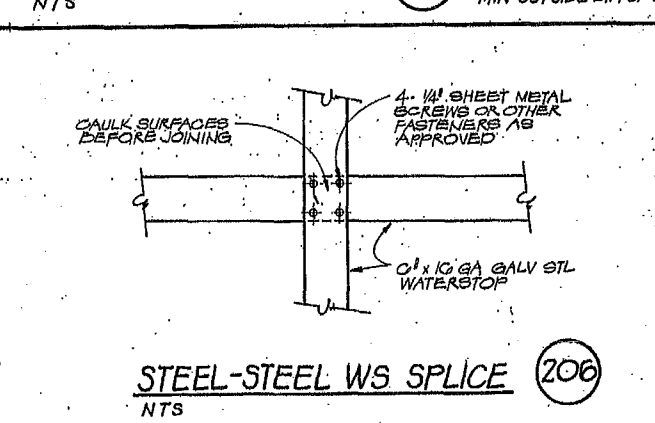
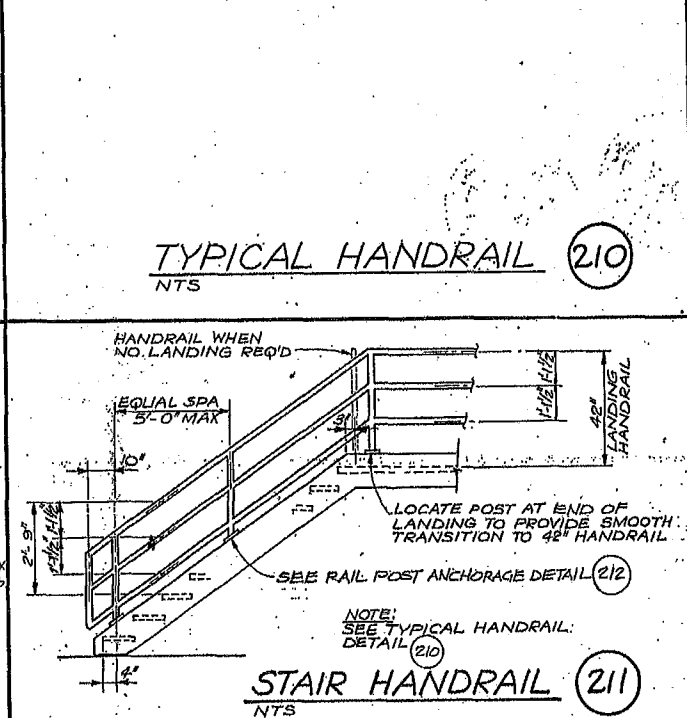
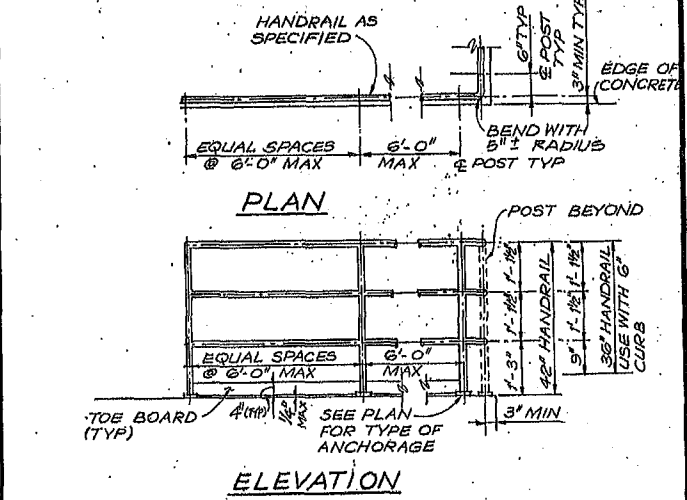
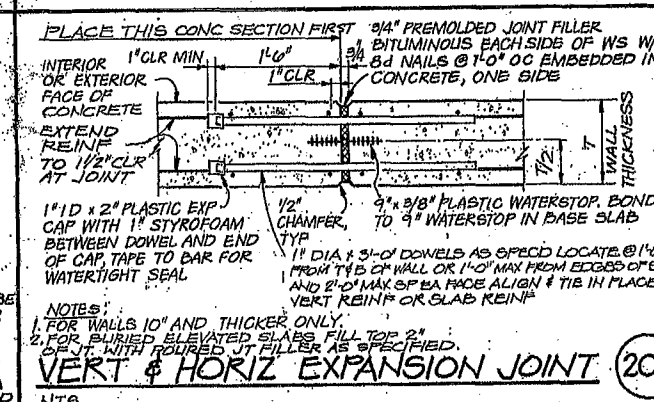
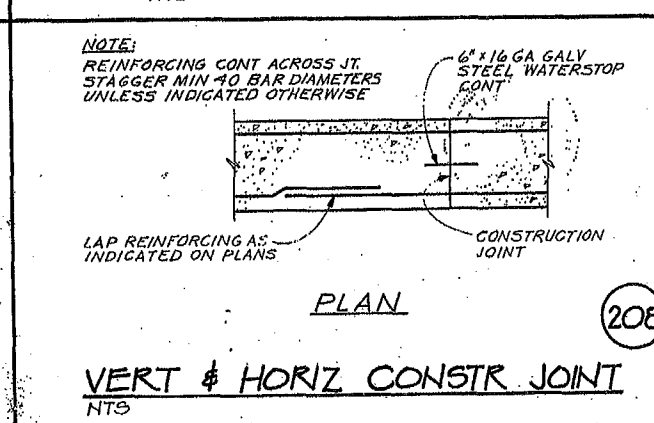
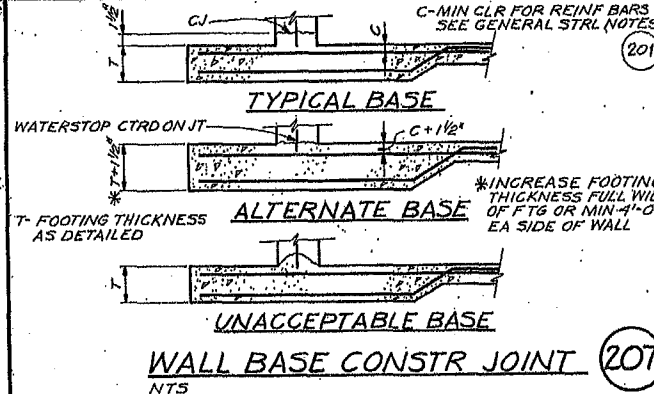
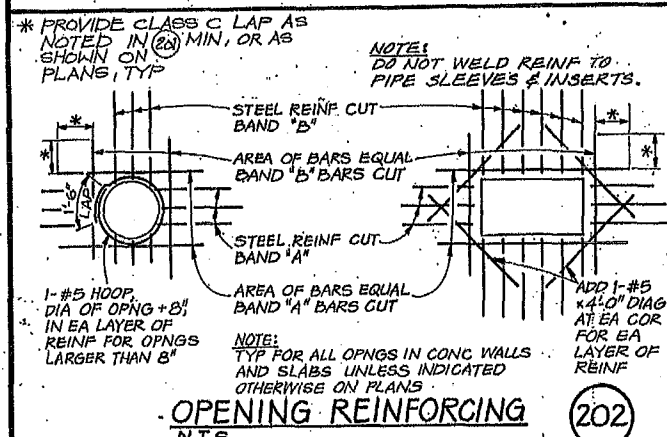
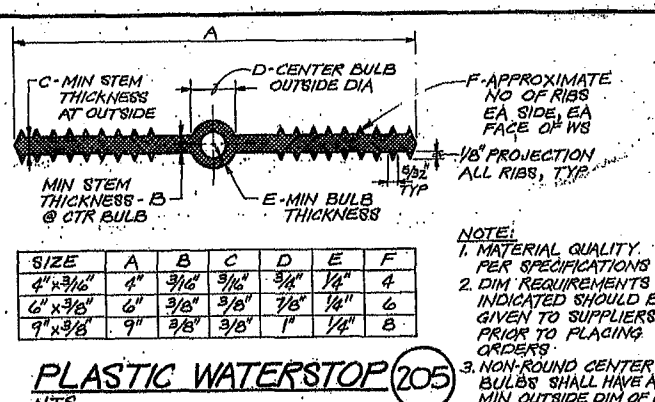
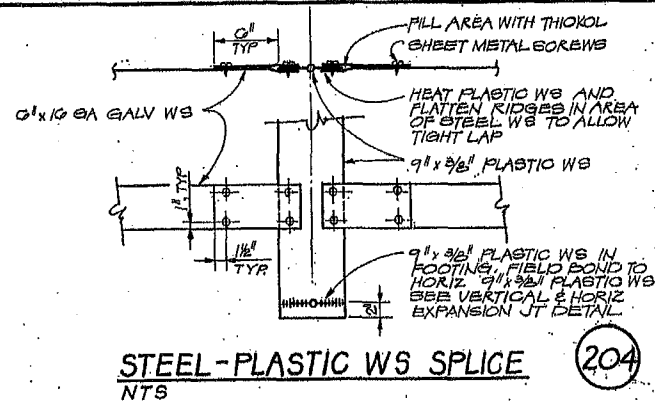
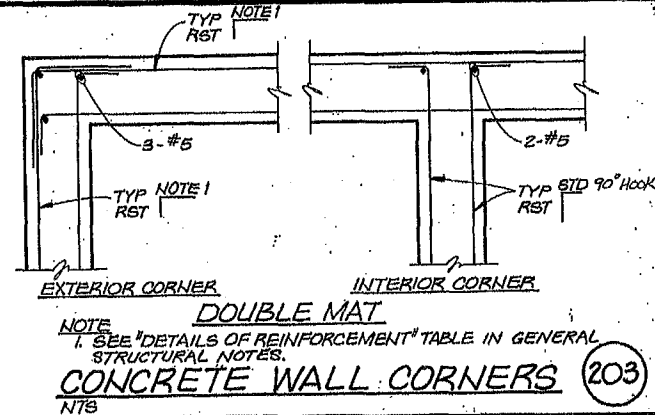
GENERAL STRUCTURAL NOTES

REINFORCING DETAILS

- UNLESS OTHERWISE SHOWN, CONC WALLS AND SLABS SHALL BE REINF AS FOLLOWS: #4@12" EW CENTER OF 8" SECTIONS; #5@12" EW CENTER OF 8" SECTIONS; #4@12" EWEF OF 10" SECTIONS; #5@12" EWEF OF 12" SECTIONS. SINGLE MAT REINF SHALL BE AT CENTER OF SECTION, UNLESS SHOWN OTHERWISE.
- MIN CLR FOR REINF BARS, UNLESS SHOWN OTHERWISE, SHALL BE 3" WHEN PLACED ON GROUND; FOR SURFACES EXPOSED TO WATER OR WEATHER -1 1/2" CLR FOR #5 BAR AND SMALLER AND 2" CLR FOR LARGER BARS; INTERIOR SLABS 3/4" CLR, INTERIOR BEAMS 1 1/2" CLR
- UNLESS OTHERWISE NOTED, ALL WALL REINF BARS SHALL BE CONT AROUND CORNERS AND THROUGH COL OR PLASTERS. REINF SHALL BE EXTENDED INTO CONNECTION WALLS AND LAPPED ON THE OPPOSITE FACE OF THE CONNECTING WALLS, AS INDICATED ELSEWHERE ON THIS SHEET. VERT WALL BARS SHALL BE LAPPED WITH DOVELS FROM BASE SLABS AND EXTENDED INTO THE TOP FACE OF ROOF SLABS AND LAPPED WITH TOP SLAB REINF. UNLESS INDICATED OTHERWISE, CONTRACTOR MAY SPLICE CONTINUOUS SLAB OR LONGITUDINAL BEAM BARS AT LOCATIONS OF HIS CHOOSING, EXCEPT THAT TOP BAR SPLICES SHALL BE LOCATED AT MIDSPAN AND BOTTOM BAR SPLICES SHALL BE LOCATED AT SUPPORTS. STAGGER ADJACENT SPLICES PER ACI 318 WITH A MINIMUM OF 2'-0". ALL REINF BENDS AND LAPS UNLESS OTHERWISE NOTED, SHALL SATISFY THE FOLLOWING MINIMUM REQUIREMENT:

BAR SIZE	STD 90° BEND	DETAILS OF REINFORCEMENT			
		OTHER BAR		TOP BAR*	
		LAP LENGTH		LAP LENGTH	
		CLASS B	CLASS C	CLASS B	CLASS C
3	1'-0"	1'-0"	1'-0"	1'-3"	1'-8"
4	1'-0"	1'-3"	1'-0"	1'-6"	2'-0"
5	1'-0"	1'-6"	1'-3"	2'-0"	2'-6"
6	1'-0"	1'-9"	2'-3"	2'-6"	3'-3"
7	1'-2"	2'-6"	3'-0"	3'-3"	4'-3"
8	1'-4"	3'-0"	4'-0"	4'-3"	5'-0"
9	1'-7"	4'-0"	5'-0"	5'-0"	7'-0"

- * TOP BARS SHALL BE DEFINED AS ANY HORIZONTAL BARS PLACED SUCH THAT MORE THAN 12 INCHES OF FRESH CONCRETE IS CAST IN THE MEMBER BELOW THE BAR, IN ANY SINGLE POUR. HORIZONTAL WALL BARS ARE CONSIDERED TOP BARS
- SEE PLANS FOR LAP LENGTHS OF BARS SPACED CLOSER THAN 8 INCHES O/C.
 - CONT GALVS WS AS SPEC, SHALL BE INSTALLED IN ALL CJ IN WALLS OF WATER HOLDING BASINS AND CHANNELS, EXCEPT WHERE INDICATED OTHERWISE.



DESIGN L. KORBUS
CHECKED R. FRIBERG
APPROVED A.E. GATTION

NO. DATE REVISION
12/86 RECORD DRAWINGS

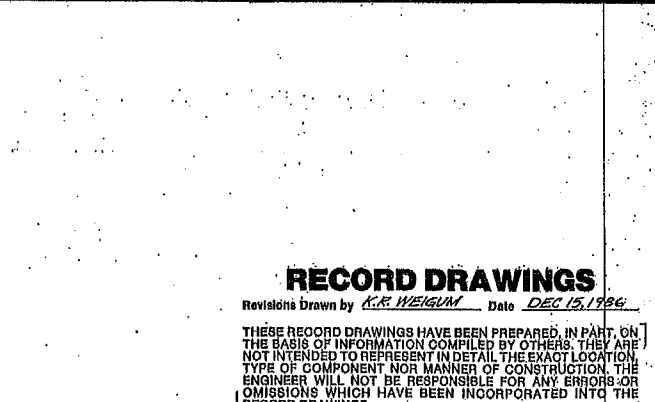
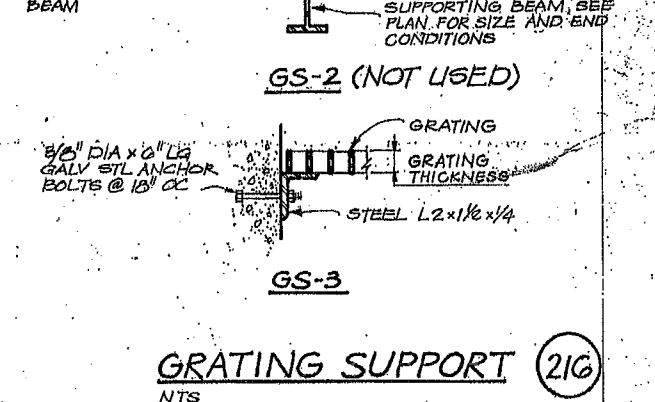
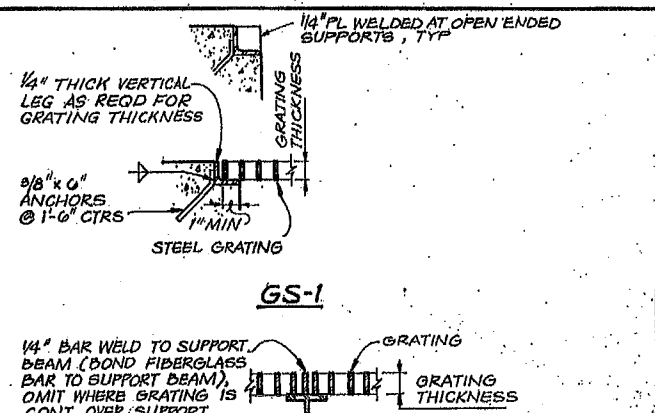
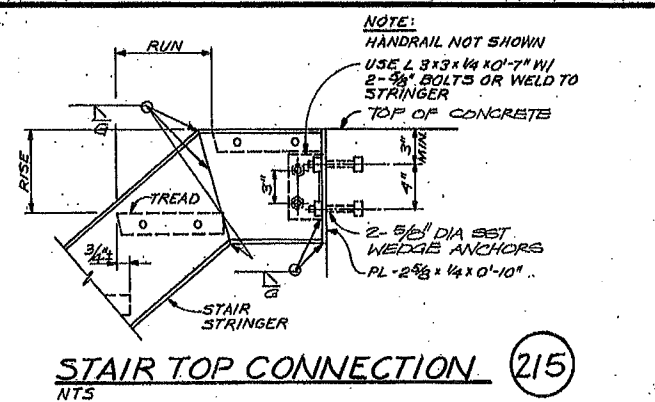
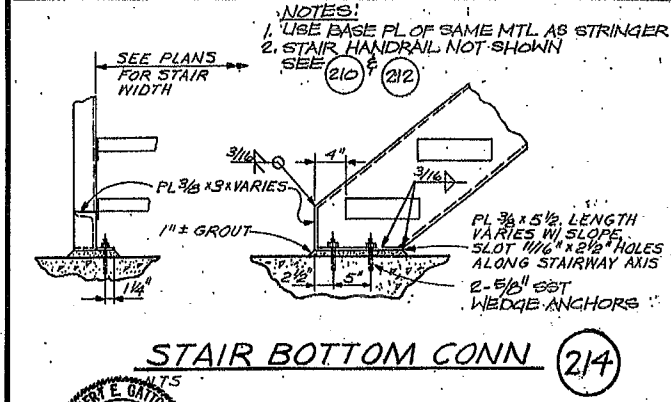
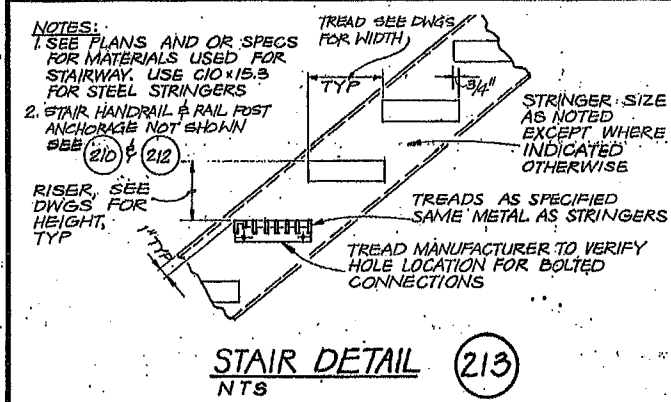
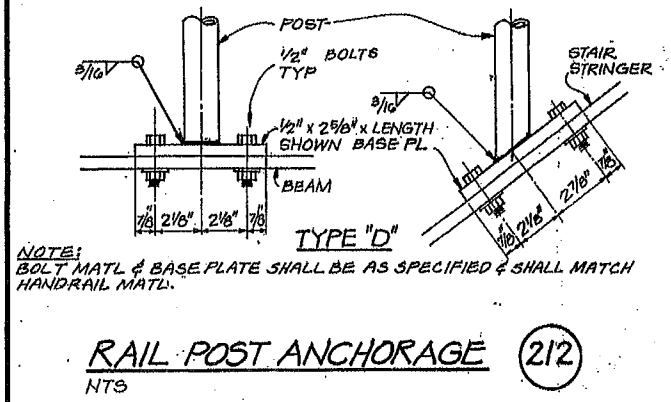
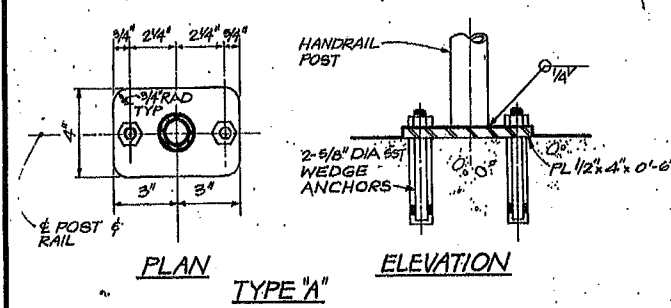
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VERIFY SCALES
BAR IS ONE INCH ON ORIGINAL DRAWING. IF NOT ONE INCH ON THIS SHEET, ADJUST SCALES ACCORDINGLY.

CITY OF CENTRALIA, WASHINGTON
LIGHT DEPARTMENT
RENOVATION OF THE CENTRALIA DAM, FISHWAY & INTAKE STRUCTURE

MISCELLANEOUS DETAILS

SHEET 15
DATE FEB 1985
PROJ NO. S17895A1



RECORD DRAWINGS

Revisions Drawn by *K.R. WEIGUM* Date *DEC 15, 1984*

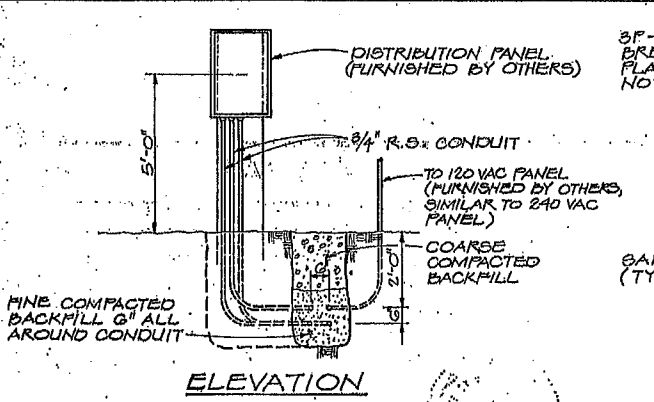
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- GRATING NOTES**
1. EXTEND GRATING CONTINUOUSLY OVER GATE GUIDES AND GATES.
 2. NOTCH GRATING SUPPORTS AT GATES AS REQUIRED.
 3. GRATING SPAN SEE PLAN.
 4. WIDTH OF GRATING SECTIONS SHALL NOT EXCEED 3'-0".
 5. SHOP DRAWINGS SHALL BE SUBMITTED TO THE ENGINEER BASED ON FIELD DIMENSIONS PRIOR TO FABRICATION.
 6. MATERIAL FOR SUPPORTS OF STEEL GRATING TO BE SAME AS GRATING, EXCEPT METAL SUPPORTS THAT ARE TO BE EMBEDDED IN CONCRETE SHALL BE GALVANIZED STEEL.
 7. STEEL GRATING AND SUPPORT TO BE GALVANIZED UNLESS NOTED OTHERWISE ON PLANS.
 8. UNLESS NOTED OTHERWISE ON PLANS, GRATING THICKNESS SHALL BE AS TABULATED IN "GRATING THICKNESS TABLE" FOR APPLICABLE TRAFFIC.
 9. BEARING BAR THICKNESS FOR GRATING TO BE 3/16" MINIMUM.
 10. BAND ALL EDGES WITH 3/16 x DEPTH OF BEARING BAR.
 11. PROVIDE MISCELLANEOUS GRATING FASTENERS AS REQUIRED.
 12. TYPE OF MATERIAL USED SHALL BE AS SHOWN ON PLANS OR AS SPECIFIED. THIS STANDARD DETAIL INCLUDES 3 TYPES ALTHOUGH ALL 3 MAY NOT BE INCLUDED IN PROJECT.

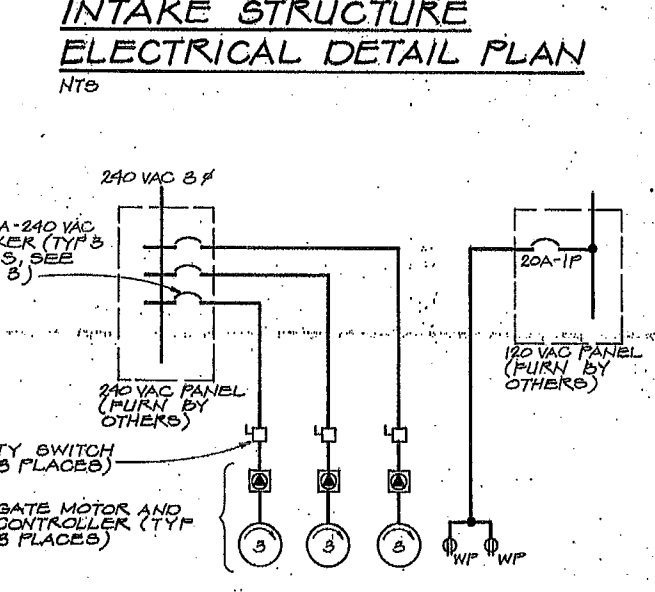
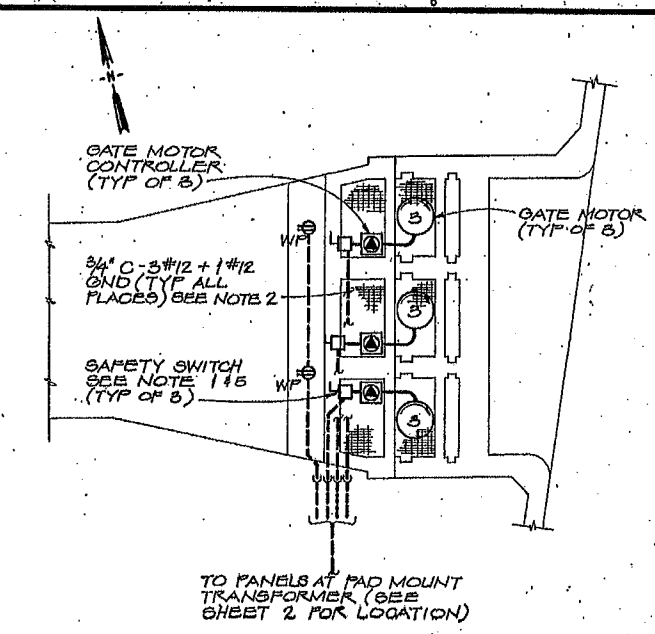
FOOT TRAFFIC GRATING THICKNESS TABLE

MAXIMUM SPAN	ALUMINUM (IN)	STEEL (IN)	FIBERGLASS (IN)
3'-0"	1-1/4"	1"	1-1/2"
4'-0"	1-1/2"	1"	1-1/2"
4'-6"	1-3/4"	1"	1-1/2"
5'-0"	1-3/4"	1-1/4"	1-1/2"
5'-6"	2"	1-1/4"	1-1/2"
6'-0"	2-1/4"	1-1/2"	1-1/2"
6'-6"	2-1/4"	1-1/2"	1-1/2"
7'-0"	2-1/2"	1-3/4"	1-1/2"

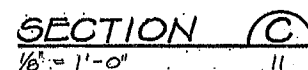
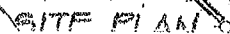
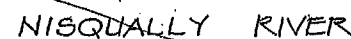
MAXIMUM ALLOWABLE SPAN IS 9'-0". LIMIT DEFLECTION TO 1/4" MAX.



- ELECTRICAL LEGEND**
- | | | | |
|---------------|---|---------------|---|
| SYMBOL | DESCRIPTION | SYMBOL | DESCRIPTION |
| ⊙ | CONNECTION POINT TO EQUIPMENT NOT FURNISHED AND INSTALLED BY ELECTRICAL | ⊕ | CONVENIENCE RECEPTACLE - DUPLEX UNLESS SPECIFIED OTHERWISE |
| ⊙ | CONNECTION TO INDUCTION MOTOR WITH HORSEPOWER INDICATED. | WP | WEATHERPROOF |
| --- | EXPOSED CONDUIT AND CONDUCTORS | TL | TWIST LOCK |
| --- | CONCEALED OR UNDERGROUND CONDUIT AND CONDUCTORS | CR | CORROSION RESISTANT |
| --- | CONDUIT, DOWN | □ | NONFUSED DISCONNECT SWITCH, 3 POLE UNLESS INDICATED OTHERWISE. |
| | | — | CIRCUIT BREAKER, THERMAL MAGNETIC TRIP SHOWN, 3 POLE UNLESS INDICATED OTHERWISE |



- NOTES:**
1. SAFETY SWITCH - HEAVY DUTY 240 VAC, 3P-3HP RATED RAIN PROOF SQUARE D "HUB100" OR EQUAL.
 2. ALL CONDUIT SHALL BE RIGID GALVANIZED STEEL. ALL CONDUCTOR SHALL BE COPPER TYPE "THW".
 3. CONTRACTOR TO MAKE CONNECTION AT PANEL, PANEL AND BREAKER FURNISHED BY OTHERS.
 4. CONTRACTOR TO VERIFY GATE MOTOR HORSEPOWER. IF LARGER MOTORS ARE SUPPLIED, CONTRACTOR SHALL UPGRADE SAFETY SWITCHES, CONDUCTOR AND CONDUIT AS REQUIRED.
 5. MOUNT ON 4" I-BEAM STANCHION EMBEDDED 3" DEEP IN PIER.



Revisions Drawn by KIR WEIGUM Date DEC 15 1986

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