

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

**Klamath River Renewal Corporation
PacifiCorp**

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

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

**EXHIBIT R
100% Design Report
(Part 4 of 12)**

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

Fall Creek Hatchery 100% Design Drawings



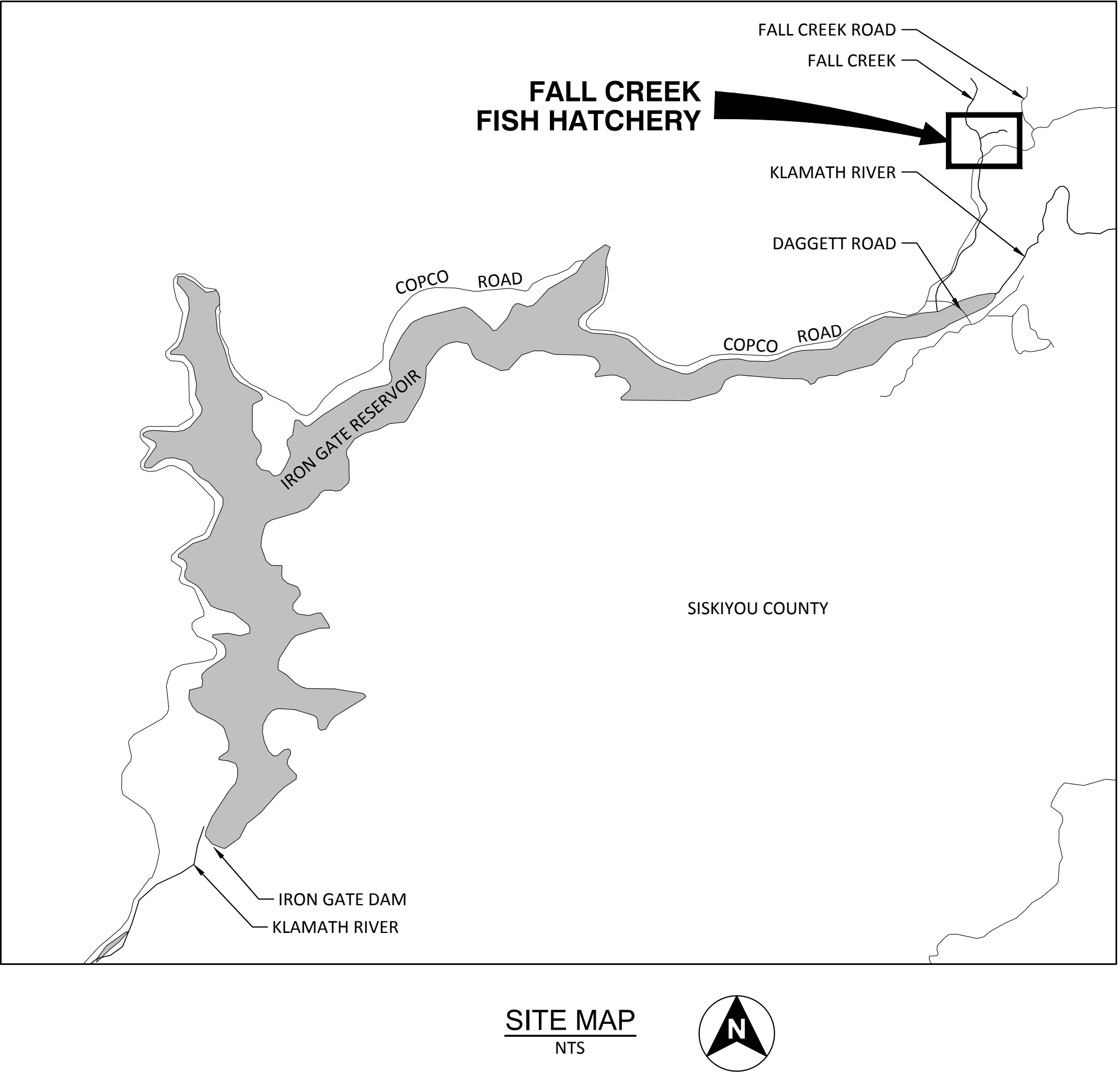
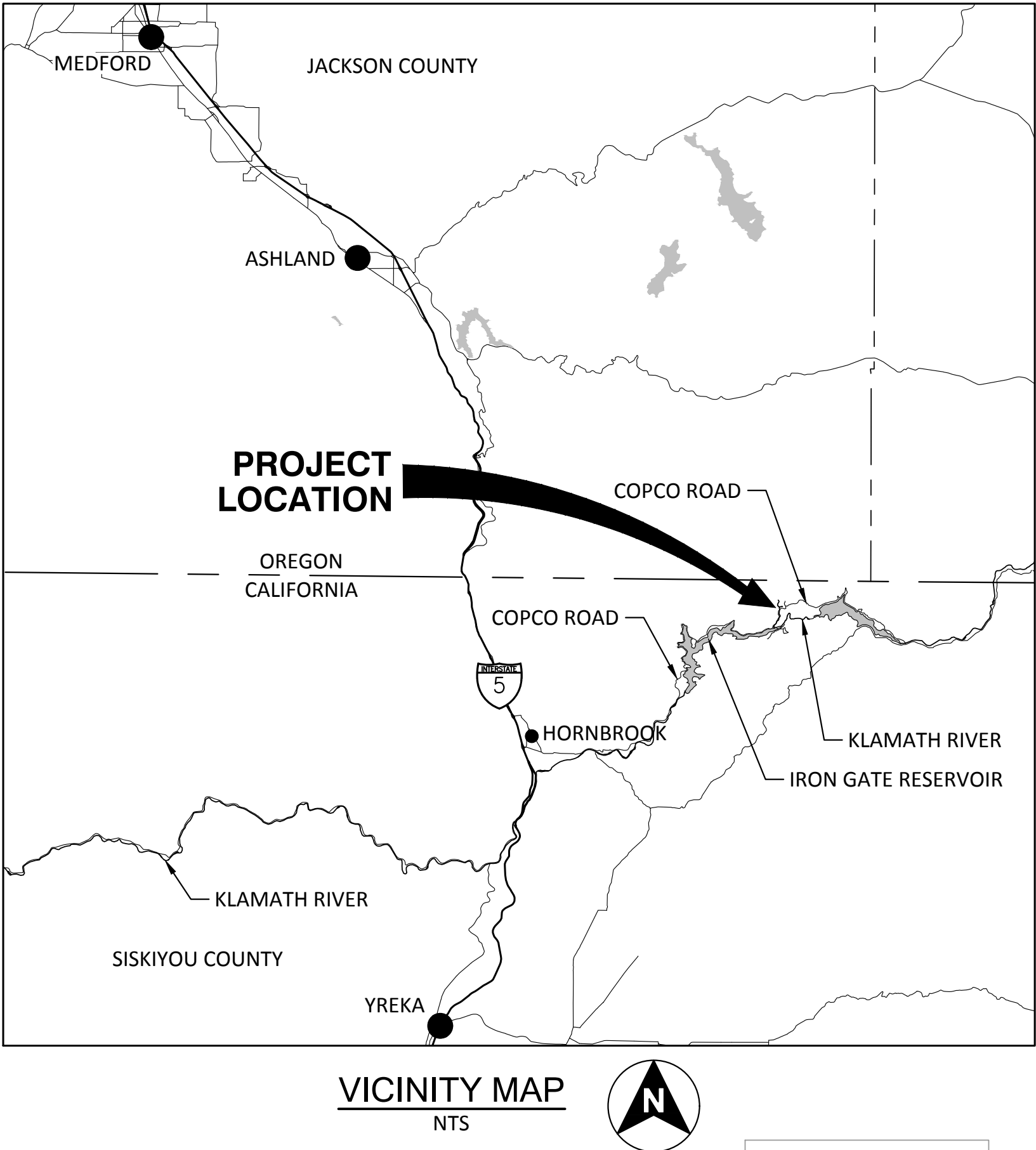
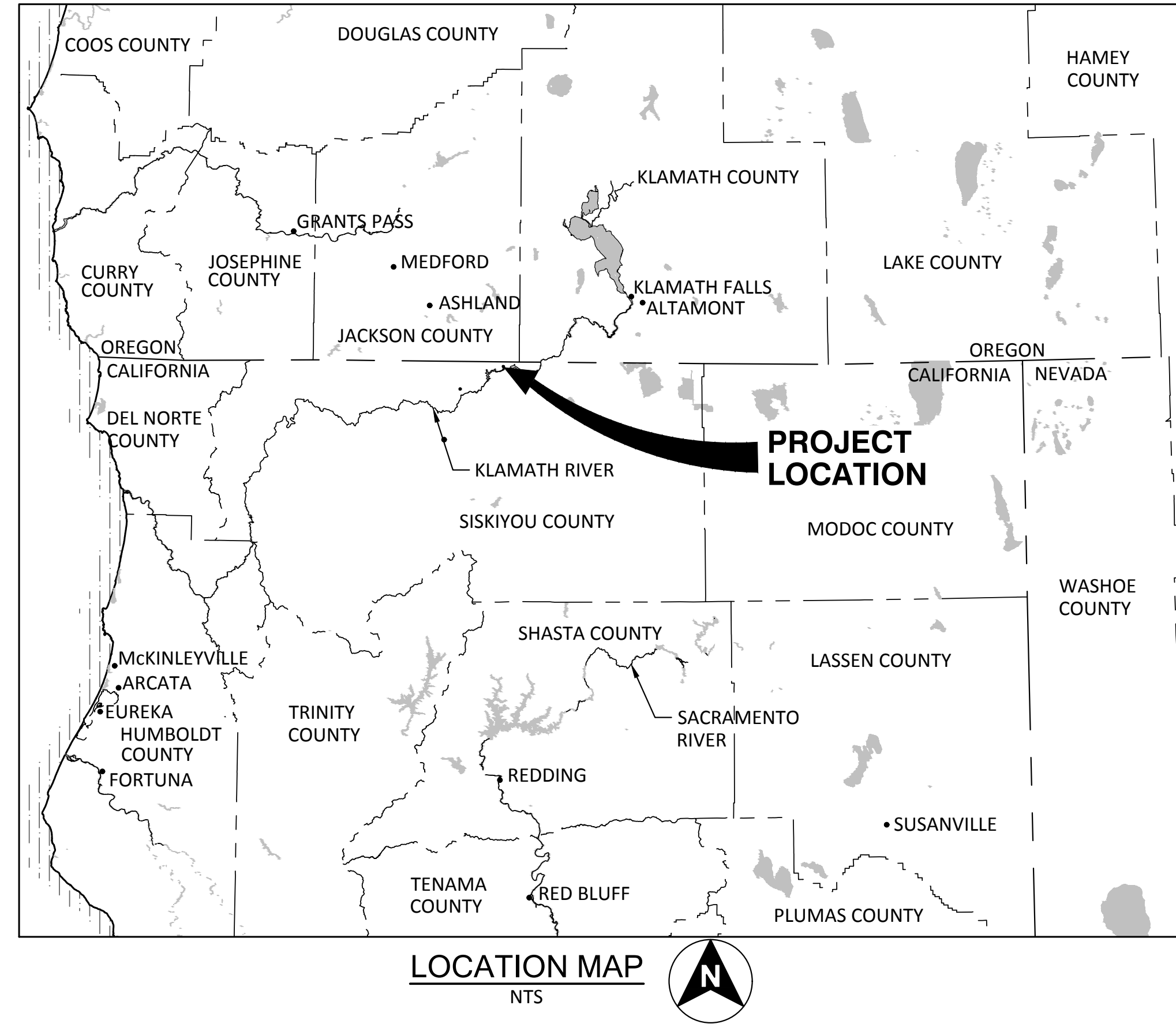
KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY

VOLUME 2 - CONSTRUCTION DRAWINGS
OCTOBER, 2020

ISSUED FOR CONSTRUCTION

KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY ISSUED FOR CONSTRUCTION



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

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



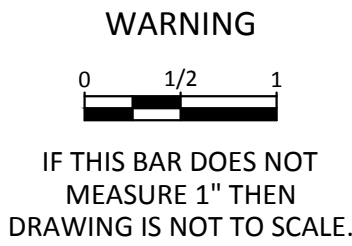
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED J. BURNS	DRAWING G001
FALL CREEK FISH HATCHERY		DRAWN R. GUERRERO	
LOCATION MAP, VICINITY MAP AND SITE MAP		CHECKED V. AUTIER	
		PROJECT DATE 10/28/20	

DRAWING INDEX			
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
GENERAL			
		COVER SHEET	X
1	G001	LOCATION MAP, VICINITY MAP AND SITE MAP	X
2	G002	DRAWING INDEX 1	X
3	G003	DRAWING INDEX 2	X
4	G004	STANDARD ABBREVIATIONS	X
5	G005	STANDARD SYMBOLS	X
6	G006	OVERALL PROJECT PLAN AND PROJECT CONTROL	X
7	G007	SUPPLY PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA	X
8	G008	DRAIN PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA	X
9	G009	WASTE DRAIN PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA	X
10	G010	PIPING SCHEDULE	X
11	G011	CONTRACTOR STAGING AREA	X
EROSION AND SEDIMENT CONTROL			
12	EC001	EROSION AND SEDIMENT CONTROL STANDARD DETAILS 1	X
13	EC002	EROSION AND SEDIMENT CONTROL STANDARD DETAILS 2	X
14	EC100	EROSION AND SEDIMENT CONTROL KEY PLAN	X
15	EC101	EROSION AND SEDIMENT CONTROL NORTH PLAN	X
16	EC102	EROSION AND SEDIMENT CONTROL SOUTH PLAN	X
17	EC210	EROSION AND SEDIMENT CONTROL DAM B PLAN	X
DEMOLITION			
18	D100	SITE DEMOLITION KEY PLAN	X
19	D101	ENLARGED FLUME DEMO PLAN AND PHOTOS	X
20	D102	ENLARGED RACEWAY DEMO PLAN AND PHOTOS	X
21	D103	ENLARGED DAM A DEMO PLAN AND SECTIONS	X
22	D104	DAM A DEMO SECTIONS AND PHOTOS	X
23	D105	ENLARGED DAM B DEMO PLAN AND SECTIONS	X
24	D601	IRON GATE HATCHERY EQUIPMENT RELOCATION PLAN	X
25	D602	IRON GATE HATCHERY CROWDER MODIFICATION	X
CIVIL			
26	GC001	CIVIL GENERAL NOTES	X
27	GC002	CIVIL STANDARD DETAILS 1	X
28	GC003	CIVIL STANDARD DETAILS 2	X
29	GC004	CIVIL STANDARD DETAILS 3	X
30	GC005	CIVIL STANDARD DETAILS 4	X
31	GC006	CIVIL STANDARD DETAILS 5	X
32	GC007	SITE COORDINATES	X
33	GC008	PIPING COORDINATES	X
34	C100	OVERALL SITE KEY PLAN	X
35	C101	SITE LAYOUT NORTH PLAN	X
36	C102	SITE LAYOUT SOUTH PLAN	X
37	C103	SITE GRADING NORTH PLAN	X
38	C104	SITE GRADING SOUTH PLAN	X
39	C105	SITE RESTORATION NORTH PLAN	X
40	C106	SITE RESTORATION SOUTH PLAN	X
41	C107	SITE YARD PIPING NORTH PLAN	X
42	C108	SITE YARD PIPING SOUTH PLAN	X
43	C109	STORM DRAIN PIPING NORTH PLAN	X
44	C110	STORM DRAIN PIPING SOUTH PLAN	X
45	C111	SITE CIVIL SECTIONS 1	X
46	C112	SITE CIVIL SECTIONS 2	X
47	C113	SITE CIVIL SECTIONS 3	X
48	C114	SITE CIVIL SECTIONS 4	X
49	C200	DAM A INTAKE PLAN	X
50	C201	DAM A INTAKE SECTIONS	X
51	C202	DAM A MODIFICATIONS PLAN	X
52	C203	DAM A MODIFICATIONS SECTIONS	X
53	C204	DAM A FRENCH DRAIN SECTIONS AND DETAILS	X
54	C210	DAM B MODIFICATIONS PLAN AND PHOTOGRAPH	X
55	C211	DAM B MODIFICATIONS SECTIONS	X
56	C212	DAM B FRENCH DRAIN SECTIONS AND DETAILS	X
57	C215	METER VAULT PLAN AND SECTION	X
58	C300	COHO BUILDING WATER SUPPLY PLAN AND PROFILE	X
59	C301	COHO BUILDING DRAIN PLAN AND PROFILE	X
60	C302	COHO BUILDING WASTE DRAIN PLAN AND PROFILE	X

DRAWING INDEX			
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
61	C303	COHO BUILDING FISH RELEASE PIPE PLAN AND PROFILE	X
62	C400	CHINOOK RACEWAYS WATER SUPPLY PLAN	X
63	C401	CHINOOK RACEWAYS WATER SUPPLY PROFILE	X
64	C402	CHINOOK RACEWAYS DRAIN PLAN AND PROFILE	X
65	C403	CHINOOK RACEWAYS WASTE DRAIN PLAN AND PROFILE	X
66	C404	CHINOOK RACEWAYS FISH RELEASE PIPE PLAN AND PROFILE	X
67	C500	CHINOOK INCUBATION BUILDING WATER SUPPLY PLAN AND PROFILE 1	X
68	C501	CHINOOK INCUBATION BUILDING WATER SUPPLY PLAN AND PROFILE 2	X
69	C502	CHINOOK INCUBATION BUILDING DRAIN PLAN AND PROFILE	X
70	C503	CHINOOK INCUBATION BUILDING WASTE DRAIN PLAN AND PROFILE	X
71	C600	SPAWNING BUILDING, ADULT HOLDING, FISH BARRIER AND FISH LADDER SITE LAYOUT	X
72	C601	ADULT HOLDING WATER SUPPLY PLAN AND PROFILE 1	X
73	C602	ADULT HOLDING WATER SUPPLY PLAN AND PROFILE 2	X
74	C603	ADULT HOLDING WATER SUPPLY PLAN AND PROFILE 3	X
75	C604	ADULT HOLDING FISH RELEASE PIPE PLAN AND PROFILE	X
76	C605	SETTLING POND DRAIN PIPE PLAN AND PROFILE	X
77	C610	ADULT HOLDING AND SETTLING PONDS PLAN	X
78	C611	ADULT HOLDING AND SETTLING PONDS SECTIONS AND DETAILS 1	X
79	C612	ADULT HOLDING AND SETTLING PONDS SECTIONS AND DETAILS 2	X
80	C620	FISH BARRIER SECTIONS	X
81	C630	FISH LADDER PROFILE	X
82	C631	FISH LADDER DETAILS	X
ARCHITECTURAL			
83	A300	COHO BUILDING CODE PLAN AND ASSEMBLY TYPES	X
84	A301	COHO BUILDING DOOR SCHEDULE AND DETAILS	X
85	A302	COHO BUILDING OVERALL FLOOR PLAN	X
86	A303	COHO BUILDING ROOF PLAN	X
87	A304	COHO BUILDING EXTERIOR ELEVATIONS 1	X
88	A305	COHO BUILDING EXTERIOR ELEVATIONS 2	X
89	A306	COHO BUILDING SECTIONS 1	X
90	A307	COHO BUILDING DETAILS 1	X
91	A500	CHINOOK INCUBATION BUILDING CODE PLAN AND ASSEMBLY TYPES	X
92	A501	CHINOOK INCUBATION BUILDING DOOR SCHEDULE AND DETAILS	X
93	A502	CHINOOK INCUBATION BUILDING FLOOR PLAN	X
94	A503	CHINOOK INCUBATION BUILDING ROOF PLAN	X
95	A504	CHINOOK INCUBATION BUILDING EXTERIOR ELEVATIONS 1	X
96	A505	CHINOOK INCUBATION BUILDING SECTIONS 1	X
97	A506	CHINOOK INCUBATION BUILDING DETAILS 1	X
98	A507	CHINOOK INCUBATION BUILDING DETAILS 2	X
99	A600	SPAWNING BUILDING CODE PLAN	X
100	A601	SPAWNING BUILDING DOOR SCHEDULE AND DETAILS	X
101	A602	SPAWNING BUILDING OVERALL FLOOR PLAN	X
102	A603	SPAWNING BUILDING ROOF PLAN	X
103	A604	SPAWNING BUILDING EXTERIOR ELEVATIONS 1	X
104	A605	SPAWNING BUILDING SECTIONS 1	X
105	A606	SPAWNING BUILDING DETAILS 1	X
STRUCTURAL			
106	GS001	STRUCTURAL GENERAL NOTES	X
107	GS002	STRUCTURAL STANDARD DETAILS 1	X
108	GS003	STRUCTURAL STANDARD DETAILS 2	X
109	GS004	STRUCTURAL STANDARD DETAILS 3	X
110	GS005	STRUCTURAL STANDARD DETAILS 4	X
111	GS006	STRUCTURAL STANDARD DETAILS 5	X
112	GS007	STRUCTURAL STANDARD DETAILS 6	X
113	GS008	STRUCTURAL STANDARD DETAILS 7	X
114	GS009	STRUCTURAL STANDARD DETAILS 8	X
115	S100	OVERALL STRUCTURAL SITE KEY PLAN	X
116	S200	INTAKE FOUNDATION AND TOP PLAN	X
117	S201	INTAKE SECTIONS AND DETAILS	X
118	S205	DAM A PLAN	X
119	S206	DAM A SECTIONS	X
120	S210	DAM B MODIFICATIONS PLAN	X
121	S211	DAM B MODIFICATIONS SECTIONS	X
122	S212	DAM B MODIFICATIONS SECTIONS AND DETAILS	X

DRAWING INDEX			
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
123	S215	METER VAULT PLANS AND SECTIONS	X
124	S300	COHO BUILDING FOUNDATION PLAN	X
125	S301	COHO BUILDING TOP PLAN	X
126	S302	COHO BUILDING ROOF FRAMING PLAN	X
127	S303	COHO BUILDING SECTIONS 1	X
128	S304	COHO BUILDING SECTIONS 2	X
129	S305	COHO BUILDING SECTIONS 3	X
130	S306	COHO BUILDING SECTIONS AND DETAILS	X
131	S307	COHO BUILDING INCUBATION STACK FRAME SECTIONS AND DETAILS	X
132	S308	COHO BUILDING HEAD TANK SUPPORT PLAN AND SECTIONS	X
133	S310	COHO RACEWAY BANK 1 RESTORATION PLAN	X
134	S311	COHO RACEWAY BANK 1 RESTORATION SECTIONS	X
135	S312	COHO RACEWAY BANK 1 RESTORATION SECTIONS AND DETAILS	X
136	S320	COHO RACEWAY BANK 2 PLAN	X
137	S321	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 1	X
138	S322	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 2	X
139	S400	CHINOOK RACEWAYS #1-4 PLAN	X
140	S401	CHINOOK RACEWAYS #5-8 PLAN	X
141	S402	CHINOOK RACEWAYS SECTIONS 1	X
142	S403	CHINOOK RACEWAYS SECTIONS 2	X
143	S404	CHINOOK RACEWAYS SECTIONS AND DETAILS	X
144	S405	CHINOOK RACEWAYS BIRD NETTING PLAN	X
145	S406	CHINOOK RACEWAYS BIRD NETTING SECTIONS AND DETAILS 1	X
146	S407	CHINOOK RACEWAYS BIRD NETTING SECTIONS AND DETAILS 2	X
147	S408	CHINOOK RACEWAYS BIRD NETTING SECTIONS AND DETAILS 3	X
148	S410	CHINOOK RACEWAYS FISH RELEASE PIPE SUPPORT PLAN AND ELEVATION	X
149	S411	CHINOOK RACEWAYS FISH RELEASE PIPE SUPPORT SECTIONS AND DETAILS	X
150	S500	CHINOOK INCUBATION BUILDING FOUNDATION PLAN	X
151	S501	CHINOOK INCUBATION BUILDING TOP PLAN	X
152	S502	CHINOOK INCUBATION BUILDING ROOF FRAMING PLAN	X
153	S503	CHINOOK INCUBATION BUILDING SECTIONS 1	X
154	S504	CHINOOK INCUBATION BUILDING SECTIONS 2	X
155	S505	CHINOOK INCUBATION BUILDING SECTIONS AND DETAILS	X
156	S506	CHINOOK INCUBATION BLDG INCUBATION STACK SECTIONS AND DETAILS	X
157	S600	SPAWNING BUILDING FOUNDATION PLAN	X
158	S601	SPAWNING BUILDING TOP PLAN	X
159	S602	SPAWNING BUILDING ROOF FRAMING PLAN	X
160	S603	SPAWNING BUILDING SECTIONS 1	X
161	S604	SPAWNING BUILDING SECTIONS 2	X
162	S605	SPAWNING BUILDING SECTIONS AND DETAILS	X
163	S610	SETTLING PONDS AND ADULT HOLDING PONDS PLAN	X
164	S611	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS 1	X
165	S612	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS 2	X
166	S613	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 1	X
167	S614	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 2	X
168	S615	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 3	X
169	S620	FISH BARRIER FOUNDATION PLAN	X
170	S621	FISH BARRIER TOP PLAN	X
171	S622	FISH BARRIER SECTIONS	X
172	S623	PICKET BARRIER DETAILS	X
173	S624	PICKET BARRIER SECTIONS AND DETAILS	X
174	S630	FISH LADDER FOUNDATION PLAN	X
175	S631	FISH LADDER TOP PLAN	X
176	S632	FISH LADDER SECTIONS AND DETAILS	X

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



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

DRAWING INDEX 1

DESIGNED J. BURNS

DRAWN R. GUERRERO

CHECKED V. AUTIER

PROJECT DATE 10/28/20

DRAWING

G002

DRAWING INDEX			
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
MECHANICAL			
177	GM001	MECHANICAL EQUIPMENT SCHEDULES 1	X
178	GM002	MECHANICAL EQUIPMENT SCHEDULES 2	X
179	GM003	MECHANICAL EQUIPMENT SCHEDULES 3	X
180	GM004	MECHANICAL EQUIPMENT SCHEDULES 4	X
181	GM005	MECHANICAL EQUIPMENT SCHEDULES 5	X
182	GM006	MECHANICAL STANDARD DETAILS 1	X
183	GM007	MECHANICAL STANDARD DETAILS 2	X
184	GM008	MECHANICAL STANDARD DETAILS 3	X
185	GM009	MECHANICAL STANDARD DETAILS 4	X
186	GM010	UTILITY WATER FLOW SCHEMATIC	X
187	M100	OVERALL MECHANICAL SITE KEY PLAN	X
188	M200	INTAKE MECHANICAL PLAN	X
189	M201	INTAKE MECHANICAL SECTIONS AND DETAILS 1	X
190	M202	INTAKE MECHANICAL SECTIONS AND DETAILS 2	X
191	M210	DAM B MODIFICATIONS MECHANICAL PLAN	X
192	M211	DAM B MODIFICATIONS MECHANICAL SECTIONS AND DETAILS	X
193	M215	METER VAULT PLAN AND SECTIONS	X
194	M300	COHO BUILDING MECHANICAL PLAN	X
195	M301	COHO BUILDING SUPPLY PIPING PLAN	X
196	M302	COHO BUILDING DRAIN PIPING PLAN	X
197	M303	COHO BUILDING WASTE DRAIN PIPING PLAN	X
198	M304	COHO BUILDING UTILITY WATER PIPING PLAN	X
199	M305	COHO BUILDING PIPING SECTIONS 1	X
200	M306	COHO BUILDING PIPING SECTIONS 2	X
201	M307	COHO BUILDING PIPING SECTIONS 3	X
202	M310	COHO BUILDING INCUBATION STACKS PLAN AND SECTIONS	X
203	M311	COHO BUILDING INCUBATION STACKS SECTIONS AND DETAILS 1	X
204	M312	COHO BUILDING INCUBATION STACKS SECTIONS AND DETAILS 2	X
205	M313	COHO BUILDING WORKING VESSELS PLAN, SECTIONS, AND DETAILS	X
206	M320	COHO RACEWAY BANK 1 PLAN	X
207	M321	COHO RACEWAY BANK 1 SECTIONS AND DETAILS	X
208	M322	COHO RACEWAY BANK 2 PLAN	X
209	M323	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 1	X
210	M324	COHO RACEWAY BANK 2 SECTIONS AND DETAILS 2	X
211	M330	COHO BUILDING FEEDING VESSELS PLAN	X
212	M331	COHO BUILDING FEEDING VESSELS SECTIONS AND DETAILS	X
213	M400	CHINOOK RACEWAYS #1-4 PLAN	X
214	M401	CHINOOK RACEWAYS #5-8 PLAN	X
215	M402	CHINOOK RACEWAYS SECTIONS 1	X
216	M403	CHINOOK RACEWAYS SECTIONS 2	X
217	M404	CHINOOK RACEWAYS SECTIONS AND DETAILS	X
218	M500	CHINOOK INCUBATION BUILDING MECHANICAL PLAN	X
219	M501	CHINOOK INCUBATION BUILDING SUPPLY PIPING PLAN	X
220	M502	CHINOOK INCUBATION BUILDING DRAIN PIPING PLAN	X
221	M503	CHINOOK INCUBATION BUILDING WASTE DRAIN PIPING PLAN	X
222	M504	CHINOOK INCUBATION BUILDING UTILITY WATER PIPING PLAN	X
223	M505	CHINOOK INCUBATION BUILDING UTILITY WATER PIPING SECTIONS	X
224	M510	CHINOOK INCUBATION BLDG INCUBATION STACKS PLAN AND SECTIONS	X
225	M511	CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 1	X
226	M512	CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 2	X
227	M513	CHINOOK INCUBATION BLDG INCUBATION STACKS SECTIONS AND DETAILS 3	X
228	M514	CHINOOK INCUBATION BUILDING WORKING VESSELS PLAN AND SECTIONS	X
229	M600	SPAWNING BUILDING MECHANICAL PLAN	X
230	M601	SPAWNING BUILDING UTILITY WATER PIPING PLAN	X
231	M602	SPAWNING BUILDING UTILITY WATER PIPING SECTIONS AND DETAILS 1	X
232	M603	SPAWNING BUILDING UTILITY WATER PIPING SECTIONS AND DETAILS 2	X
233	M610	SETTLING PONDS AND ADULT HOLDING PONDS MECHANICAL PLAN	X
234	M611	SETTLING PONDS AND ADULT HOLDING PONDS PIPING PLAN	X
235	M612	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 1	X
236	M613	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 2	X
237	M614	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 3	X
238	M615	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 4	X
239	M616	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 5	X
240	M617	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 6	X

DRAWING INDEX			
DWG NO	SHEET NO.	DESCRIPTION	ISSUED FOR CONSTRUCTION
241	M618	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 7	X
242	M619	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 8	X
243	M620	SETTLING PONDS AND ADULT HOLDING PONDS SECTIONS AND DETAILS 9	X
HVAC			
244	GH001	HVAC SCHEDULES	X
245	GH002	HVAC STANDARD DETAILS	X
246	GH003	HVAC & CONTROLS OPERATIONS DIAGRAM	X
247	H215	METER VAULT HVAC PLAN AND SECTIONS	X
248	H300	COHO BUILDING HVAC PLAN	X
249	H500	CHINOOK INCUBATION BUILDING HVAC PLAN	X
250	H600	SPAWNING BUILDING HVAC PLAN	X
ELECTRICAL			
251	GE001	STANDARD ELECTRICAL ABBREVIATIONS AND DEVICE INDEXES	X
252	GE002	ELECTRICAL STANDARD SYMBOLS 1	X
253	GE003	ELECTRICAL STANDARD SYMBOLS 2	X
254	GE004	ELECTRICAL LUMINAIRE SCHEDULE AND PANEL SCHEDULES	X
255	GE005	ELECTRICAL PANEL SCHEDULES	X
256	GE006	ELECTRICAL DUCT BANK SCHEDULE	X
257	GE007	ELECTRICAL CONDUIT SCHEDULE	X
258	GE008	ELECTRICAL CABLE SCHEDULE	X
259	GE009	ELECTRICAL STANDARD DETAILS 1	X
260	GE010	ELECTRICAL STANDARD DETAILS 2	X
261	E001	ELECTRICAL OVERALL ONE-LINE DIAGRAM	X
262	E100	OVERALL ELECTRICAL SITE KEY PLAN	X
263	E101	ELECTRICAL SITE NORTH PLAN	X
264	E102	ELECTRICAL SITE SOUTH PLAN	X
265	E200	INTAKE STRUCTURE POWER AND LIGHTING PLAN	X
266	E201	METER VAULT POWER PLAN	X
267	E300	COHO BUILDING POWER AND LIGHTING PLAN	X
268	E400	CHINOOK RACEWAYS #1-4 POWER PLAN	X
269	E401	CHINOOK RACEWAYS #5-8 POWER PLAN	X
270	E500	CHINOOK INCUBATION BUILDING POWER AND LIGHTING PLAN	X
271	E501	CHINOOK INCUBATION BUILDING ELEC ROOM POWER AND LIGHTING PLAN	X
272	E502	SCADA CABINET LAYOUT AND BILL OF MATERIALS	X
273	E503	SCADA CABINET CONTROL DIAGRAM 1	X
274	E504	SCADA CABINET CONTROL DIAGRAM 2	X
275	E505	SCADA CABINET CONTROL DIAGRAM 3	X
276	E506	HATCHERY INSTRUMENTATION AND CONTROL BLOCK DIAGRAM	X
277	E600	SPAWNING BUILDING POWER AND LIGHTING PLAN	X
278	E610	SETTLING PONDS AND ADULT HOLDING PONDS POWER PLAN	X
279	E611	WET WELL PUMP CONTROL PANEL LAYOUT AND BILL OF MATERIALS	X
280	E612	WET WELL PUMP CONTROL PANEL CONTROL DIAGRAM	X
INSTRUMENTATION			
281	GI001	INSTRUMENTATION AND EQUIPMENT LEGEND	X
282	GI002	GENERAL MECHANICAL PROCESS LEGEND	X
283	I200	PROCESS & INSTRUMENTATION DIAGRAM INTAKE	X
284	I300	PROCESS & INSTRUMENTATION DIAGRAM COHO BUILDING	X
285	I400	PROCESS & INSTRUMENTATION DIAGRAM CHINOOK RACEWAYS	X
286	I500	PROCESS & INSTRUMENTATION DIAGRAM CHINOOK INCUBATION BUILDING	X
287	I600	PROCESS & INSTRUMENTATION DIAGRAM SETTLING AND ADULT HOLDING PONDS	X

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REV	DATE	BY	DESCRIPTION

WARNING

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1/2

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



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>J. BURNS</u>	DRAWING G003
FALL CREEK FISH HATCHERY	DRAWN <u>R. GUERRERO</u>	
DRAWING INDEX 2	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	

A/C	AIR CONDITIONING	CLR	CLEAR	F TO F	FACE TO FACE	I	INSTRUMENTATION (DWG DISCIPLINE)	N	NORTH, NEUTRAL	RESIL	RESILIENT	UTIL	UTILITY
A/E	ARCHITECT/ENGINEER	CMH	COMMUNICATION MANHOLE	FAB	FABRICATE	ID	INSIDE DIAMETER, INTERIOR DIMENSION	NA	NOT APPLICABLE	RET	RETAINING, RETURN	V	VENT, VELOCITY, VOLT
A	ARCHITECTURAL (DWG DISCIPLINE), AMP	CMU	CONCRETE MASONRY UNIT	FBO	FURNISHED BY OWNER	IE	INVERT ELEVATION	NAT	NATURAL	REV	REVISION, REVERSE	VA	VOLT AMPERE
AB	ANCHOR BOLT	CO	CLEAN OUT, CONCRETE OPENING	FC	FLUSHING CONNECTION	IF	INSIDE FACE	NC	NORMALLY CLOSED	RFL	REFLECTED, REFLECTOR	VAC	VACUUM
ABC	AGGREGATE BASE COURSE	COL	COLUMN	FCA	FLANGED COUPLING ADAPTER	IH	INTAKE HOOD	NEG	NEGATIVE	RGS	RIGID GALVANIZED STEEL	VAR	VARNISH, VARIABLE, VOLT AMPERES REACTIVE
ABAN	ABANDON	COM	COMMON	FCV	FIXED CONE VALVE	IMP	IMPACT	NF	NEAR FACE, NON-FUSED	RH	RELIEF HOOD, RIGHT HAND, RELATIVE HUMIDITY	VB	VAPOR BARRIER, VINYL BASE, VALVE BOX
AC	ALTERNATING CURRENT	COMB	COMBINATION	FD	FLOOR DRAIN	IN	INCH	NG	NATURAL GAS	RL	REQUIRED LAP	VC	VERTICAL CURVE
ACST	ACOUSTIC	COMM	COMMUNICATION	FDC	FLEXIBLE DUCT CONNECTION	INC	INCLUDE, INCANDESCENT	NIC	NOT IN CONTRACT	RND	ROUND	VCT	VINYL COMPOSITION TILE, VERTICAL CENTERLINE
AD	ADDENDUM, AREA DRAIN	COMP	COMPOSITION, COMPRESSIBLE, COMPOSITE	FDR	FEEDER	INF	INFLUENT	NO	NORMALLY OPEN, NUMBER	RO	ROUGH OPENING	VEL	VELOCITY
ADDL	ADDITIONAL	CONC	CONCENTRIC, CONCRETE	FE	FLANGED END	INSTR	INSTRUMENTATION	NOM	NOMINAL	ROW	RIGHT-OF-WAY	VENT	VENTILATION
ADH	ADHESIVE	CONN	CONNECTION	FEC	FIRE EXTINGUISHER CABINET	INSUL	INSULATION	NPS	NOMINAL PIPE SIZE	RPM	REVOLUTIONS PER MINUTE	VERT	VERTICAL
ADJ	ADJUSTABLE, ADJACENT	CONST	CONSTRUCTION	FEXT	FIRE EXTINGUISHER	INT	INTERIOR, INTERSECTION	NPT	NATIONAL PIPE THREAD	RR	RAILROAD	VS	VERSES, VAPOR SEAL
AF	AMP FRAME, AMP FUSE	CONT	CONTINUOUS, CONTINUED	FF	FAR FACE, FACTORY FINISH, FLAT FACE	INTR	INTERMEDIATE, INTERIOR	NS	NEAR SIDE	RT	RIGHT	VOL	VOLUME
AFF	ABOVE FINISH FLOOR	COORD	COORDINATE	FG	FINISHED GRADE	INV	INVERT	NTS	NOT TO SCALE			VPC	VERTICAL POINT OF CURVATURE
AFG	ABOVE FINISH GRADE	CORR	CORROSIVE, CORRUGATED	FIG	FIGURE	IPS	IRON PIPE SIZE	NWL	NORMAL WATER LEVEL			VPI	VERTICAL POINT OF INTERSECTION
AGGR	AGGREGATE	CP	CHECKER PLATE, CONTROL POINT	FH	FIRE HYDRANT	IPT	INTERNAL PIPE THREAD			S	SOUTH, SINK, STRUCTURAL (DWG DISCIPLINE)	VPT	VERTICAL POINT OF TANGENCY
AIC	AMPS INTERRUPTING CAPACITY	PLG	COUPLING	FIN	FINISH	IRR	IRRIGATION			SA	SUPPLY AIR	VTR	VENT THROUGH ROOF
ALIG	ALIGNMENT	CSK	COUNTERSINK	FL	FLOW, FLOW LINE	ISO	ISOMETRIC			SCH	SCHEDULE	WVC	VINYL WALL COVERING
ALUM	ALUMINUM	CTR	CENTER	FLEX	FLEXIBLE					SCHEM	SCHEMATIC		
ALT	ALTERNATE, ALTITUDE	CTRL	CONTROL	FLG	FLANGE					SCRN	SCREEN	W/	WITH
AMB	AMBIENT	CU	COPPER, CUBIC	FLOR	FLUORESCENT					SE	STEEL/ALUMINUM EDGE	W/O	WITHOUT
ANC	ANCHOR	CW	CLOCKWISE	FLR	FLOOR					SEC	SECONDARY, SECONDS	W	WATT, WEST, WIDE, WINDOW, WIRE, WIDE FLANGE BEAM
AP	ACCESS PANEL	CY	CUBIC YARD	FLS	FLASHING, FLUSH					SECT	SECTION	WC	WATER CLOSET, WATER COLUMN
APRX	APPROXIMATE			FND	FOUNDATION					SEP	SEPARATE	WD	WIDTH
APVD	APPROVED ARCH ARCHITECTURAL	d	PENNY (NAIL MEASURE)	FNC	FENCE					SF	SQUARE FOOT	WF	WIDE FLANGE, WASH FOUNTAIN
ARV	AIR RELEASE VALVE	D	DEEP, DIFFUSER	FO	FINISHED OPENING					SH	SHOWER	WG	WIRE GLASS, WATER GAGE
ASSY	ASSEMBLY	DB	DECT BANK, DECIBEL, DRY BULB	FOB	FLAT ON BOTTOM					SHT	SHEET	WH	WALL HYDRANT, WEEP HOLE
AT	AMP TRIP	DBA	DEFORMED BAR ANCHOR	FOC	FACE OF CONCRETE, FACE OF CURB, FIBER					SHTG	SHEATHING	WL	WATER LEVEL
ATM	ATMOSPHERE	DBL	DOUBLE	FOF	FACE OF FINISH					SIM	SIMILAR	WLD	WELDED
AUTO	AUTOMATIC	DC	DIRECT CURRENT	FOM	FACE OF FINISH					SL	SLOPE	WM	WIRE MESH
AUX	AUXILIARY	DEG	DEGREE	FOS	FACE OF STUDS					SLTD	SLOTTED	WP	WATERPROOF, WORKING POINT
AVE	AVENUE	DEG C	DEGREE CENTIGRADE	FOT	FLAT ON TOP					SLV	SLEEVE	WTHP	WEATHERPROOF
AVG	AVERAGE	DEG F	DEGREE FAHRENHEIT	FPT	FEMALE PIPE THREAD					SMLS	SEAMLESS	WS	WATERSTOP, WATER SURFACE
AWG	AMERICAN WIRE GAGE	DEMO	DEMOLITION	FR	FRAME					SOG	SLAB ON GRADE	WSEL	WATER SURFACE ELEVATION
		DEP	DEPRESSED	FRP	FIBERGLASS REINFORCED PLASTIC					SP	SOUNDPROOF, STANDPIPE	WT	WEIGHT, WATER TIGHT
B/B	BACK TO BACK	DEPT	DEPARTMENT	FS	FLOOR SINK, FAR SIDE					SPC	SPACING	WWF	WELDED WIRE FABRIC
BAL	BALANCE	DET	DETAIL	FT	FEET, FOOT					SPLY	SPECIFICATION		
BBD	BULLETIN BOARD	DI	DROP INLET, DUCTILE IRON	FTG	FOOTING, FITTING FUR FURRED, FURRING					SPT	SET POINT	XS	EXTRA STRONG
BC	BASE CABINET, BOTTOM CHORD, BOLT CENTER, BOLT CIRCLE	DIA	DIAMETER	FURN	FURNITURE, FURNISH					SQ	SQUARE	XXS	DOUBLE EXTRA STRONG
		DIAG	DIAGONAL, DIAGRAM	FUT	FUTURE					SR	SHORT RADIUS	XSECT	CROSS SECTION
BD	BOARD	DIFF	DIFFERENTIAL, DIFFERENCE	FV	FACE VELOCITY					SS	SERVICE SINK		
BE	BOTH ENDS, BELL END	DIM	DIMENSION	FW	FIELD WELD, FIRE WALL					SST	STAINLESS STEEL	YH	YARD HYDRANT
BF	BOTH FACES, BOTTOM FACE, BLIND FLANGE, BOARD FEET	DISCH	DISCHARGE	FWD	FORWARD					ST	STREET	YS	YIELD STRENGTH
		DIST	DISTANCE, DISTRIBUTION	FWE	FURNISHED WITH EQUIPMENT					STA	STATION		
BFV	BUTTERFLY VALVE	DIV	DIVISION	FXT	FIXTURE					STD	STANDARD		
BITUM	BITUMINOUS	DL	DEAD LOAD							STIF	STIFFENER		
BKG	BACKING	DN	DOWN							STIR	STIRRUP		
BL	BASE LINE	DP	DEPTH							STL	STEEL		
BLDG	BUILDING	DS	DOWN SPOUT							STOR	STORAGE		
BLK	BLOCK	DT	DOUBLE TEE, DRIP TRAP ASSEMBLY							STR	STRUCTURAL, STRAIGHT		
BLKG	BLOCKING	DUP	DUPLICATE							SUB	SUBSTITUTE		
BM	BENCHMARK, BEAM	DWG	DRAWING							SUC	SUCTION		
BOC	BACK OF CURB	DWL	DOWEL							SUSP	SUSPENDED		
BOD	BOTTOM OF DUCT									SY	SQUARE YARD		
BOG	BOTTOM OF GRILLE	E	EAST, ELECTRICAL (DWG DISCIPLINE)							SYM	SYMBOL		
BOL	BOTTOM OF LOUVER	EA	EACH, EXHAUST AIR							SYMM	SYMMETRICAL		
BOP	BOTTOM OF PIPE	EC	ELECTRICAL CONTRACTOR							SYN	SYNTHETIC		
BOR	BOTTOM OF REGISTER	ECC	ECCENTRIC										
BOT	BOTTOM	EDB	ELECTRICAL DUCT BANK										
BOU	BOTTOM OF UNIT	EE	EACH END										
BP	BASE PLATE	EF	EACH FACE										
BRG	BEARING	EG	EXISTING GRADE										
BRGP	BEARING PLATE	EGL	ENERGY GRADE LINE										
BRKT	BRACKET	EFF	EFFLUENT, EFFICIENCY										
BS	BOTH SIDES	EGH	ELECTRICAL HANDHOLE										
BTU	BRITISH THERMAL UNIT	EIFS	EXTERIOR INSULATION & FINISH SYSTEM										
BTW	BETWEEN	EJ	EXPANSION JOINT										
BTWLD	BUTT WELD	EL	ELBOW, ELEVATION										
BV	BALL VALVE	ELC	ELECTRICAL										
BW	BOTH WAYS	EMBD	EMBEDDED										
BYP	BYPASS	EMER	EMERGENCY										
		EMH	ELECTRICAL MANHOLE										
C TO C	CENTER TO CENTER	ENCL	ENCLOSURE										
C&G	CURB & GUTTER	ENGR	ENGINEER										
C	CHANNEL SHAPE, CENTIGRADE, CONDUIT, CIVIL (DRAWING DISCIPLINE)	ENTR	ENTRANCE										
		EOP	EDGE OF PAVEMENT										
CAB	CABINET	EOW	EDGE OF WATER										
CAP	CAPACITY	EQ	EQUAL										
CAT	CATALOG	EQUIP	EQUIPMENT										
CAV	CAVITY	EQUIV	EQUIVALENT										
CB	CATCH BASIN	ES	EACH SIDE, EQUAL SPACE, EMERGENCY SHOWER										
CCB	CONCRETE BLOCK	ESEW	EMERGENCY SHOWER AND EYE WASH										
CCV	COUNTER CLOCKWISE	EST	ESTIMATE										
CF	CUBIC FEET (FOOT)	EW	EACH WAY, EMERGENCY EYE/FACE WASH										
CHFR	CHAMFER	EW	ELECTRIC WATER COOLER										
CHD	CHORD	EWFC	EACH WAY, EACH FACE										
CHH	COMMUNICATION HANDHOLE	EWFB	EACH WAY, TOP AND BOTTOM										
CI	CURB INLET	EXC	EXCAVATION										
CIP	CAST-IN-PLACE	EXH	EXHAUST										
CIPB	CONCRETE INTERLOCKING PAVER	EXIST	EXISTING										
		EXP	EXPANSION, EXPOSED										
CIRC	CIRCULATION, CIRCULAR	EXT	EXTERIOR, EXTERNAL, EXTENSION										
CJ	CONSTRUCTION JOINT, CONTROL JOINT												
CKT	CIRCUIT												
CL	CENTERLINE, CLASS, CLOSE												

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

WARNING

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

McMILLEN JACOBS ASSOCIATES

KLAMATH RIVER RENEWAL CORPORATION

KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	J. BURNS	DRAWING
FALL CREEK FISH HATCHERY		DRAWN	R. GUERRERO	
STANDARD ABBREVIATIONS		CHECKED	V. AUTIER	
		PROJECT DATE	10/28/20	

GENERAL NOTES:

1.

THESE ABBREVIATIONS APPLY TO THE ENTIRE SET OF CONTRACT DRAWINGS.

2.

LISTING OF ABBREVIATIONS DOES NOT IMPLY ALL ABBREVIATIONS ARE USED IN THE CONTRACT DRAWINGS.

3.

ABBREVIATIONS SHOWN ON THIS SHEET INCLUDE VARIATIONS OF THE WORD. FOR EXAMPLE, "MOD" MAY MEAN MODIFY OR MODIFICATION; "INC" MAY MEAN INCLUDED OR INCLUDING; "REINF" MAY MEAN EITHER REINFORCE OR REINFORCING.

4.

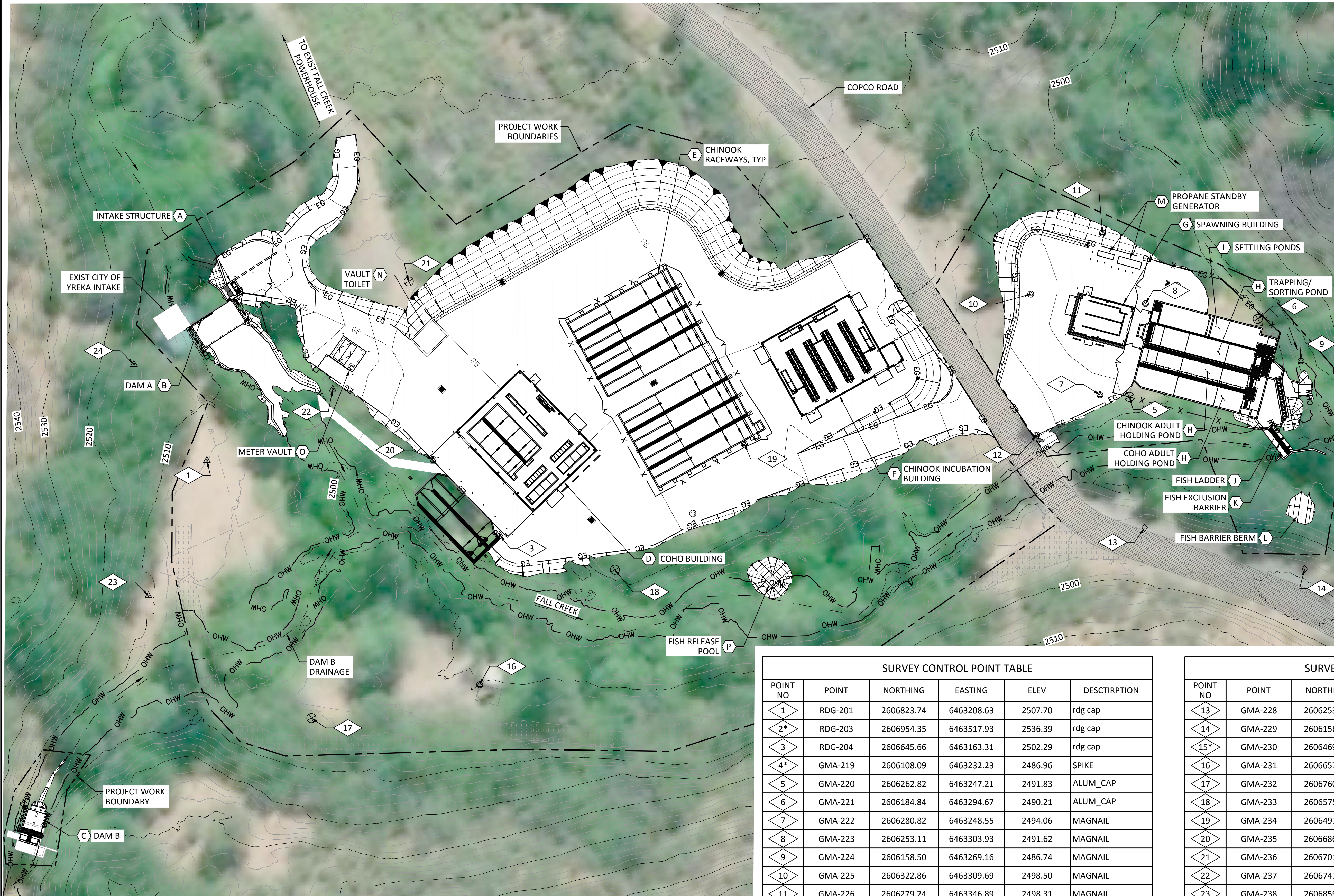
SCREENING OR SHADING OF WORK IS USED TO INDICATE EXISTING COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS TO HIGHLIGHT SELECTED TRADE WORK. REFER TO CONTEXT OF EACH SHEET FOR USAGE.

5.

SEE SHEET G1002 FOR PROJECT SPECIFIC EQUIPMENT SYMBOLS, EQUIPMENT ABBREVIATIONS AND PIPING SYSTEM ABBREVIATIONS.

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JOB NO: 000000



- SHEET NOTES:**
1. LIDAR SURVEY PROVIDED BY KRRC ON FEBRUARY 2020, CONTRACTOR SHALL CONFIRM AND VERIFY ELEVATIONS PRIOR TO CONSTRUCTION.
 2. THE HORIZONTAL DATUM FOR THE PROJECT IS BASED UPON THE CALIFORNIA COORDINATE SYSTEM OF 1983, ZONE 1 NORTH AMERICAN DATUM OF 1983 (NAD83) IN FEET.
 3. THE VERTICAL DATUM FOR THE PROJECT IS BASED UPON THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD88, GEOID 12B).

- MAJOR CONSTRUCTION ITEMS:**
- A CONSTRUCT CONCRETE INTAKE STRUCTURE ON SOUTHEAST BANK OF FALL CREEK ADJACENT TO DAM A. THE INTAKE WILL DIVERT UP TO 10 CFS FROM FALL CREEK.
 - B CONSTRUCT CONCRETE APRON DOWNSTREAM OF DAM A TO CREATE A VELOCITY FISH BARRIER TO PRECLUDE ADULT AND JUVENILE FISH.
 - C CONSTRUCT CONCRETE APRON DOWNSTREAM OF DAM B TO CREATE A VELOCITY FISH BARRIER TO PRECLUDE ADULT AND JUVENILE FISH.
 - D CONSTRUCT PEMB COHO BUILDING TO HOUSE COHO INCUBATION, GROW-OUT AND REARING RACEWAY INFRASTRUCTURE. REHABILITATE EXISTING UPPER RACEWAY STRUCTURE CONCRETE PER CONTRACT DOCUMENTS.
 - E CONSTRUCT CONCRETE CHINOOK RACEWAYS. RACEWAYS SHALL BE CONSTRUCTED WITH FISH SCREEN GUIDE SLOTS AND STOP LOG SLOTS ALONG THE LENGTH OF THE STRUCTURE SUCH THAT PONDING VOLUMES CAN BE INCREMENTED BASED ON FISH DEVELOPMENT.
 - F CONSTRUCT PEMB CHINOOK INCUBATION BUILDING TO HOUSE THE CHINOOK EGG INCUBATION OPERATIONS.
 - G CONSTRUCT PEMB SPAWNING BUILDING TO HOUSE AND STORE ALL SPAWNING INFRASTRUCTURE AND ACTIVITIES. SPAWNING BUILDING TO OPEN TO THE TRAPPING AND SORTING POND.
 - H REHABILITATE AND CONSTRUCT NEW CONCRETE WALLS IN EXISTING LOWER RACEWAYS TO CREATE THE ADULT HOLDING PONDS PER CONTRACT DOCUMENTS.
 - I REHABILITATE AND CONSTRUCT NEW CONCRETE WALLS IN EXISTING LOWER RACEWAYS TO CREATE THE SETTLING PONDS PER CONTRACT DOCUMENTS.
 - J CONSTRUCT DENIL-TYPE FISH LADDER.
 - K CONSTRUCT CONCRETE SILL FOR INSTALLATION OF MANUAL PICKET FISH EXCLUSION BARRIER.
 - L CONSTRUCT EARTHEN FISH BARRIER BERM TO PREVENT FISH PASSAGE DURING EXTREME FLOOD EVENTS.
 - M INSTALL EXISTING IGFH 100 KW KOHLER PROPANE STANDBY GENERATOR AND EXISTING IGFH 500 GALLON PROPANE STORAGE TANK.
 - N CONSTRUCT VAULT TOILET.
 - O CONSTRUCT CONCRETE METER VAULT AND INSTALL APPURTENANT VALVES AND FLOW METERS.
 - P CONSTRUCT FISH RELEASE PLUNGE POOL IN FALL CREEK EAST OVBANK AREA.

OVERALL PLAN AND PROJECT CONTROL

SCALE: 1"= 30'

0" 30' 60'



NOTE: * INDICATES CONTROL POINT IS OUTSIDE OF PLAN VIEW AREA AND NOT SHOWN.

SURVEY CONTROL POINT TABLE

POINT NO	POINT	NORTHING	EASTING	ELEV	DESCIRPTION
1	RDG-201	2606823.74	6463208.63	2507.70	rdg cap
2*	RDG-203	2606954.35	6463517.93	2536.39	rdg cap
3	RDG-204	2606645.66	6463163.31	2502.29	rdg cap
4*	GMA-219	2606108.09	6463232.23	2486.96	SPIKE
5	GMA-220	2606262.82	6463247.21	2491.83	ALUM_CAP
6	GMA-221	2606184.84	6463294.67	2490.21	ALUM_CAP
7	GMA-222	2606280.82	6463248.55	2494.06	MAGNAIL
8	GMA-223	2606253.11	6463303.93	2491.62	MAGNAIL
9	GMA-224	2606158.50	6463269.16	2486.74	MAGNAIL
10	GMA-225	2606322.86	6463309.69	2498.50	MAGNAIL
11	GMA-226	2606279.24	6463346.89	2498.31	MAGNAIL
12	GMA-227	2606319.23	6463224.09	2494.50	MAGNAIL

SURVEY CONTROL POINT TABLE

POINT NO	POINT	NORTHING	EASTING	ELEV	DESCIRPTION
13	GMA-228	2606253.57	6463167.72	2496.70	SPIKE
14	GMA-229	2606156.29	6463142.68	2499.27	SPIKE
15*	GMA-230	2606469.67	6463058.61	2502.11	SPIKE
16	GMA-231	2606657.88	6463072.32	2500.25	MAGNAIL
17	GMA-232	2606760.22	6463052.02	2504.21	ALUM_CAP
18	GMA-233	2606575.73	6463142.16	2502.67	ALUM_CAP
19	GMA-234	2606497.02	6463218.66	2503.68	MAG W SHINER
20	GMA-235	2606686.24	6463209.10	2504.32	MAG W FLASHER
21	GMA-236	2606701.04	6463317.49	2510.86	ALUM_CAP
22	GMA-237	2606747.25	6463251.91	2506.06	SPIKE
23	GMA-238	2606859.31	6463126.43	2510.37	SPIKE
24	GMA-239	2606868.09	6463267.05	2514.47	SPIKE

REV	DATE	BY	DESCRIPTION
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WARNING
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IF THIS BAR DOES NOT
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KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

OVERALL PROJECT PLAN
AND PROJECT CONTROL

DESIGNED A. LEMAN

DRAWN J. LAHMON

CHECKED V. AUTIER

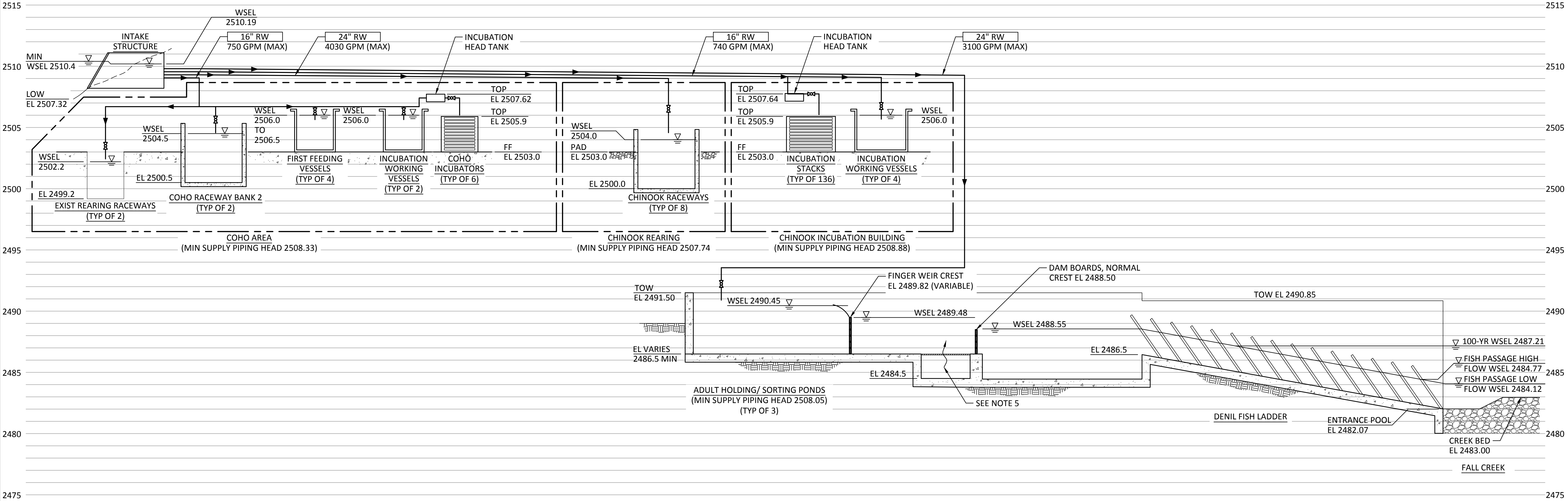
PROJECT DATE 10/28/20

DRAWING

G006

SUPPLY DESIGN CRITERIA	
DESCRIPTION	VALUE
INTAKE SCREEN PERCENT OPEN AREA	50%
INTAKE SCREEN PERCENT OCCLUDED	40%
INTAKE LOSSES	0.21 FT
SUPPLY PIPING HAZEN-WILLIAMS COEFFICIENT	120
MAXIMUM WATER RIGHT	10 CFS
INTAKE PIPING MINIMUM ALLOWABLE VELOCITY	1.5 FT/S
INTAKE PIPING MAXIMUM ALLOWABLE VELOCITY	5.0 FT/S

- SHEET NOTES:**
- DRAIN PIPING, WASTE DRAIN PIPING, UTILITY WATER PIPING, AND FISH RELEASE PIPING NOT SHOWN ON THIS SHEET FOR CLARITY.
 - SUPPLY PIPING HYDRAULICS WERE EVALUATED UNDER 5 DIFFERENT SCENARIOS TO ACCOUNT FOR CONTINGENCIES IN PIPE ROUGHNESS, OPERATIONAL CHANGES, ADDITIONAL INTAKE LOSSES, AND ALTERNATIVE MINOR LOSS ACCOUNTING. THE PIPING SYSTEM WAS FOUND TO PROVIDE THE REQUIRED DESIGN FLOWS TO ALL DEMAND NODES IN EACH OF THE SCENARIOS. REPORTED SUPPLY HEAD ON THIS SHEET REFERS TO THE SUPPLY DESIGN CRITERIA, AS SHOWN, AND FLOW RATES AS INDICATED ON THIS SHEET.
 - SUPPLY PIPING TO THE SPAWNING BUILDING IS USED FOR UTILITY WATER ONLY, AND THEREFORE IS NOT SHOWN ON THIS SHEET. SUPPLY TO THE SPAWNING BUILDING WILL BE TAPPED FROM THE ADULT HOLDING SUPPLY PIPE.
 - FLOW RATES INDICATED AS MAXIMA ARE ANNUAL MAXIMA BASED ON BIOPROGRAM DEMANDS FOR EACH OF THE FACILITIES. MAXIMUM FLOWS DO NOT OCCUR SIMULTANEOUSLY. AT ALL TIMES DURING THE YEAR, BIOPROGRAM DEMANDS ARE WITHIN THE 10 CFS WATER RIGHT.
 - WATER SUPPLIED THROUGH DIFFUSER PLATE FROM CHINOOK AND COHO ADULT HOLDING POND OVERFLOW.



SUPPLY PIPING HYDRAULIC PROFILE
SCALE: NTS

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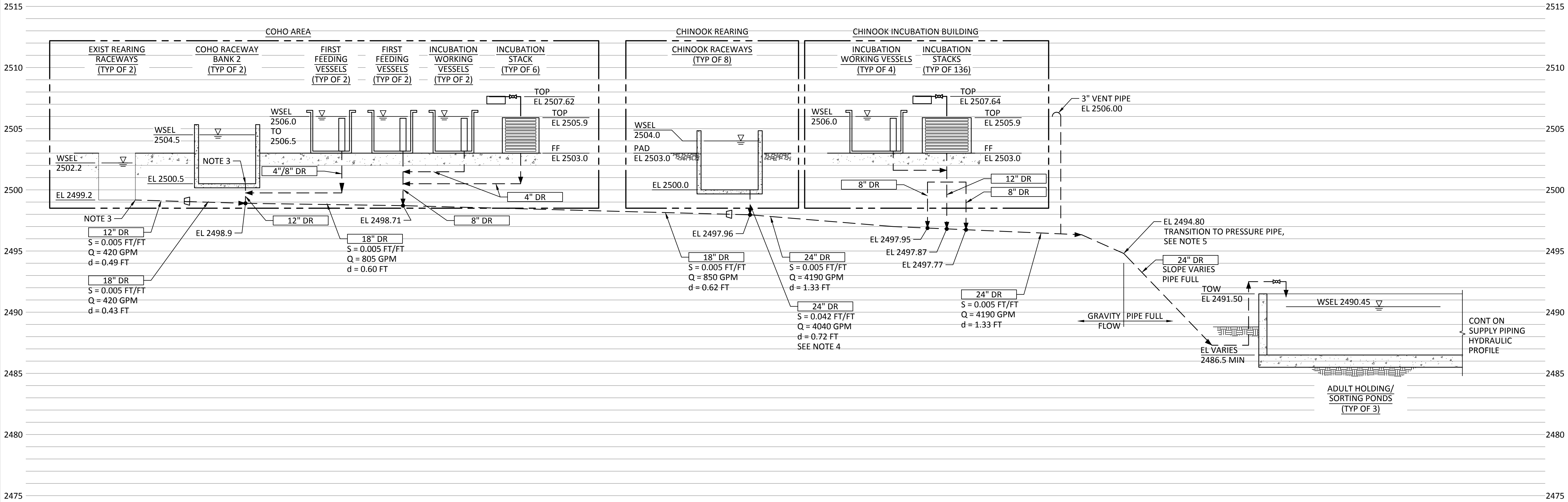
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED J. BURNS	DRAWING G007
FALL CREEK FISH HATCHERY		DRAWN R. GUERRERO	
SUPPLY PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA		CHECKED V. AUTIER	
		PROJECT DATE 10/28/20	

DRAIN PIPING DESIGN CRITERIA	
DESCRIPTION	VALUE
MAXIMUM FLOW DEPTH - % INNER DIAMETER	75%
MINIMUM SELF-CLEANING VELOCITY	2.0 FT/S
ADULT HOLDING ORIFICE COEFFICIENT	0.62
ADULT HOLDING NUMBER OF ORIFICES	3
PRESSURE PIPE ROUGHNESS COEFFICIENT	6.0x10 ⁻⁵ IN
OPEN CHANNEL PIPE ROUGHNESS COEFFICIENT	0.013

- SHEET NOTES:
- DISCHARGE LISTED IS MAXIMUM DESIGN FLOW. FLOW DEPTH CORRESPONDS TO THE MAXIMUM DESIGN FLOW.
 - ALL SUPPLY PIPING, WASTE DRAIN PIPING, UTILITY WATER PIPING, AND FISH RELEASE PIPING NOT SHOWN ON THIS SHEET FOR CLARITY.
 - PIPE INLET CONFIGURATIONS AT THE COHO AREA RACEWAYS ALLOW FOR SUFFICIENT AIRFLOW TO AERATE THE UPPER REACH OF THE DRAIN PIPE.
 - 24"Ø CHINOOK RACEWAYS DRAIN PIPE EQUIPPED WITH VENT PIPE TO EL 2506.00 THAT WILL SERVE TO AERATE THE CHINOOK RACEWAYS DRAIN AND THE TRUNK LINE.
 - PIPE RISERS AT THE ADULT HOLDING PONDS WILL INDUCE THE DRAIN PIPE TO FILL AT APPROX EL 2494.80 WHEN THE FULL 10 CFS IS CONVEYED BY THIS PIPELINE TO THE ADULT HOLDING PONDS. THIS WILL BE THE MAXIMUM ELEVATION ATTAINED BY THE PRESSURE FLOW, AND FOR LOWER FLOW RATES, THIS ELEVATION WILL BE SLIGHTLY LOWER. IN NO CASE DOES THE PRESSURE FLOW CAUSE AN INUNDATION OF THE UPPER SITE DRAIN SYSTEMS.

ABBREVIATIONS:

S = PIPE SLOPE
Q = MAXIMUM DISCHARGE
d = FLOW DEPTH



DRAIN PIPING HYDRAULIC PROFILE
SCALE: NTS

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KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>J. BURNS</u>	DRAWING G008
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
DRAIN PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	

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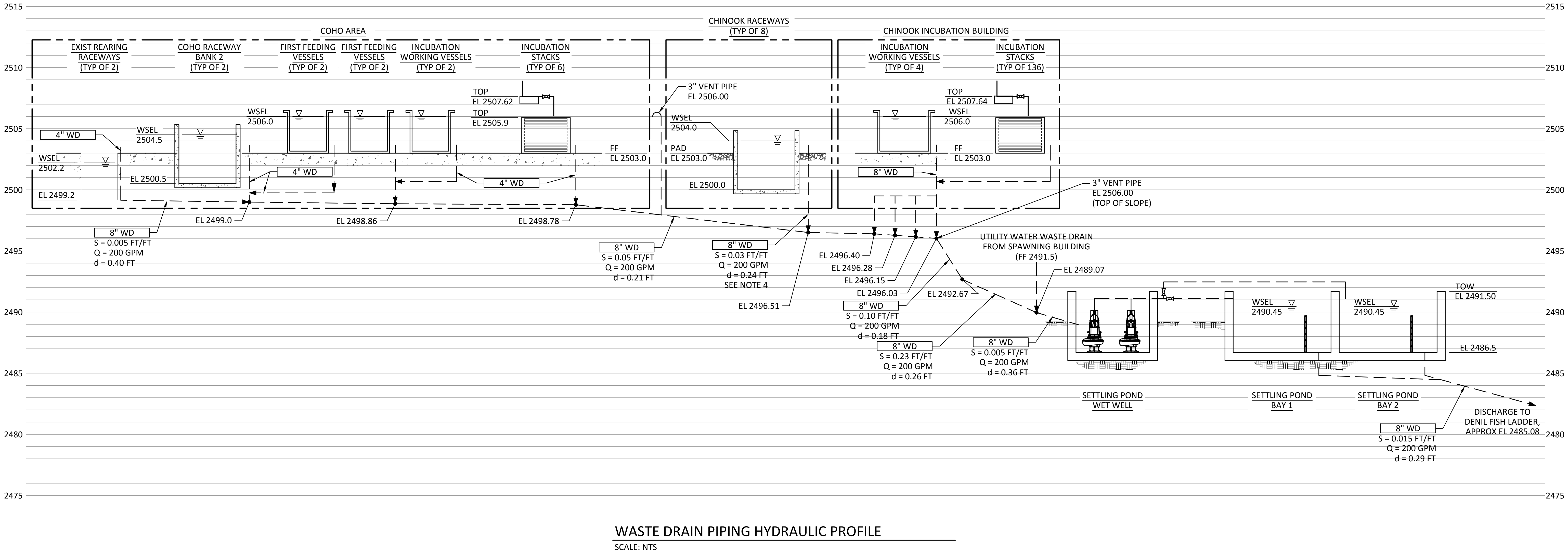
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WASTE DRAIN PIPING DESIGN CRITERIA	
DESCRIPTION	VALUE
MAXIMUM FLOW DEPTH - % INNER DIAMTER	75%
MINIMUM SELF-CLEANING VELOCITY	2.0 FT/S
DESIGN SETTLING VELOCITY	0.00151 FT/S
CLEANING MAXIMUM FLOW RATE, SEE NOTE 3	200 GPM
SETTLING POND WEIR COEFFICIENT	3.33
OPEN CHANNEL PIPE ROUGHNESS COEFFICIENT	0.013

- SHEET NOTES:**
- AT EACH POND OR VAT A RISER PIPE WILL BE PROVIDED AT GRADE SUCH THAT POND WASTE CAN BE VACUUMED TO THE WASTE DRAIN SYSTEM.
 - ALL SUPPLY PIPING, DRAIN PIPING, UTILITY WATER PIPING, AND FISH RELEASE PIPING NOT SHOWN ON THIS SHEET FOR CLARITY.
 - MAXIMUM CLEANING RATE IS CONTROLLED BY THE SIZE OF THE TWO SETTLING POND BAYS, AND THEREFORE THE PIPELINE WAS SIZED FOR THIS CONDITION. IT IS ASSUMED THAT THIS WILL ALLOW FOR THE OPERATION OF (2) VACUUMS SIMULTANEOUSLY.
 - CHINOOK RACEWAYS WASTE DRAIN PIPE EQUIPPED WITH VENT PIPE TO EL 2506.00. CHINOOK RACEWAY WASTE DRAIN VENT PIPE SERVES TO VENTILATE THE WASTE DRAIN PIPE AND THE TRUNK LINE.
 - WASTE DRAINPIPE DISCHARGES TO WET WELL WITH (2) SUBMERSIBLE NON-CLOG SUMP PUMPS. PUMP CONFIGURATION, STARTS/STOPS, AND ALARMS ARE SHOWN ON SHEET M614.

ABBREVIATIONS:

S = PIPE SLOPE
Q = MAXIMUM DISCHARGE
d = FLOW DEPTH



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WARNING

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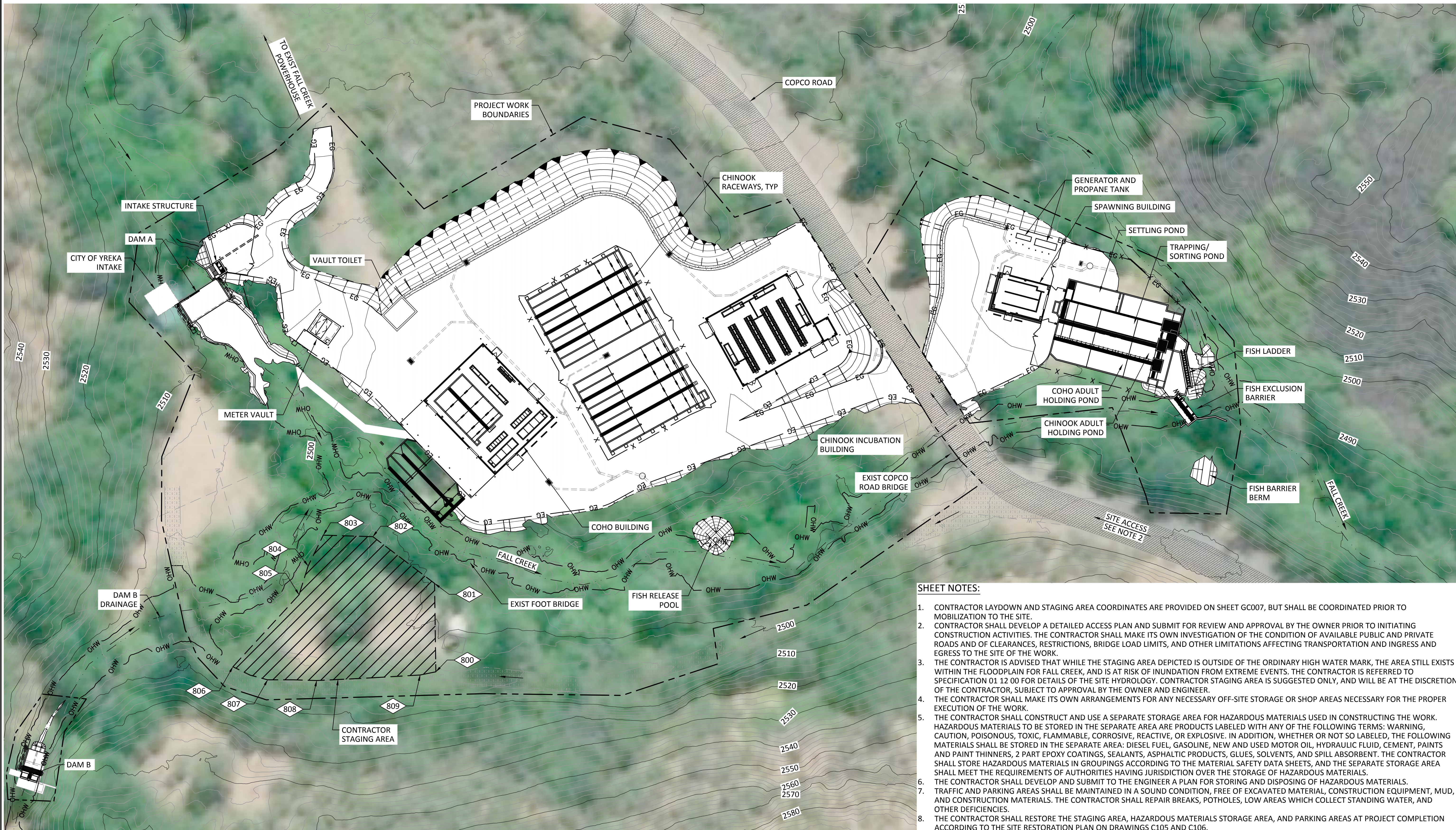
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KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>J. BURNS</u>	DRAWING G009
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
WASTE DRAIN PIPING HYDRAULIC PROFILE AND DESIGN CRITERIA		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	

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JOB NO: 000000



- SHEET NOTES:**
1. CONTRACTOR LAYDOWN AND STAGING AREA COORDINATES ARE PROVIDED ON SHEET GC007, BUT SHALL BE COORDINATED PRIOR TO MOBILIZATION TO THE SITE.
 2. CONTRACTOR SHALL DEVELOP A DETAILED ACCESS PLAN AND SUBMIT FOR REVIEW AND APPROVAL BY THE OWNER PRIOR TO INITIATING CONSTRUCTION ACTIVITIES. THE CONTRACTOR SHALL MAKE ITS OWN INVESTIGATION OF THE CONDITION OF AVAILABLE PUBLIC AND PRIVATE ROADS AND OF CLEARANCES, RESTRICTIONS, BRIDGE LOAD LIMITS, AND OTHER LIMITATIONS AFFECTING TRANSPORTATION AND INGRESS AND EGRESS TO THE SITE OF THE WORK.
 3. THE CONTRACTOR IS ADVISED THAT WHILE THE STAGING AREA DEPICTED IS OUTSIDE OF THE ORDINARY HIGH WATER MARK, THE AREA STILL EXISTS WITHIN THE FLOODPLAIN FOR FALL CREEK, AND IS AT RISK OF INUNDATION FROM EXTREME EVENTS. THE CONTRACTOR IS REFERRED TO SPECIFICATION 01 12 00 FOR DETAILS OF THE SITE HYDROLOGY. CONTRACTOR STAGING AREA IS SUGGESTED ONLY, AND WILL BE AT THE DISCRETION OF THE CONTRACTOR, SUBJECT TO APPROVAL BY THE OWNER AND ENGINEER.
 4. THE CONTRACTOR SHALL MAKE ITS OWN ARRANGEMENTS FOR ANY NECESSARY OFF-SITE STORAGE OR SHOP AREAS NECESSARY FOR THE PROPER EXECUTION OF THE WORK.
 5. THE CONTRACTOR SHALL CONSTRUCT AND USE A SEPARATE STORAGE AREA FOR HAZARDOUS MATERIALS USED IN CONSTRUCTING THE WORK. HAZARDOUS MATERIALS TO BE STORED IN THE SEPARATE AREA ARE PRODUCTS LABELED WITH ANY OF THE FOLLOWING TERMS: WARNING, CAUTION, POISONOUS, TOXIC, FLAMMABLE, CORROSIVE, REACTIVE, OR EXPLOSIVE. IN ADDITION, WHETHER OR NOT SO LABELED, THE FOLLOWING MATERIALS SHALL BE STORED IN THE SEPARATE AREA: DIESEL FUEL, GASOLINE, NEW AND USED MOTOR OIL, HYDRAULIC FLUID, CEMENT, PAINTS AND PAINT THINNERS, 2 PART EPOXY COATINGS, SEALANTS, ASPHALTIC PRODUCTS, GLUES, SOLVENTS, AND SPILL ABSORBENT. THE CONTRACTOR SHALL STORE HAZARDOUS MATERIALS IN GROUPINGS ACCORDING TO THE MATERIAL SAFETY DATA SHEETS, AND THE SEPARATE STORAGE AREA SHALL MEET THE REQUIREMENTS OF AUTHORITIES HAVING JURISDICTION OVER THE STORAGE OF HAZARDOUS MATERIALS.
 6. THE CONTRACTOR SHALL DEVELOP AND SUBMIT TO THE ENGINEER A PLAN FOR STORING AND DISPOSING OF HAZARDOUS MATERIALS.
 7. TRAFFIC AND PARKING AREAS SHALL BE MAINTAINED IN A SOUND CONDITION, FREE OF EXCAVATED MATERIAL, CONSTRUCTION EQUIPMENT, MUD, AND CONSTRUCTION MATERIALS. THE CONTRACTOR SHALL REPAIR BREAKS, POTHOLES, LOW AREAS WHICH COLLECT STANDING WATER, AND OTHER DEFICIENCIES.
 8. THE CONTRACTOR SHALL RESTORE THE STAGING AREA, HAZARDOUS MATERIALS STORAGE AREA, AND PARKING AREAS AT PROJECT COMPLETION ACCORDING TO THE SITE RESTORATION PLAN ON DRAWINGS C105 AND C106.

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

WARNING
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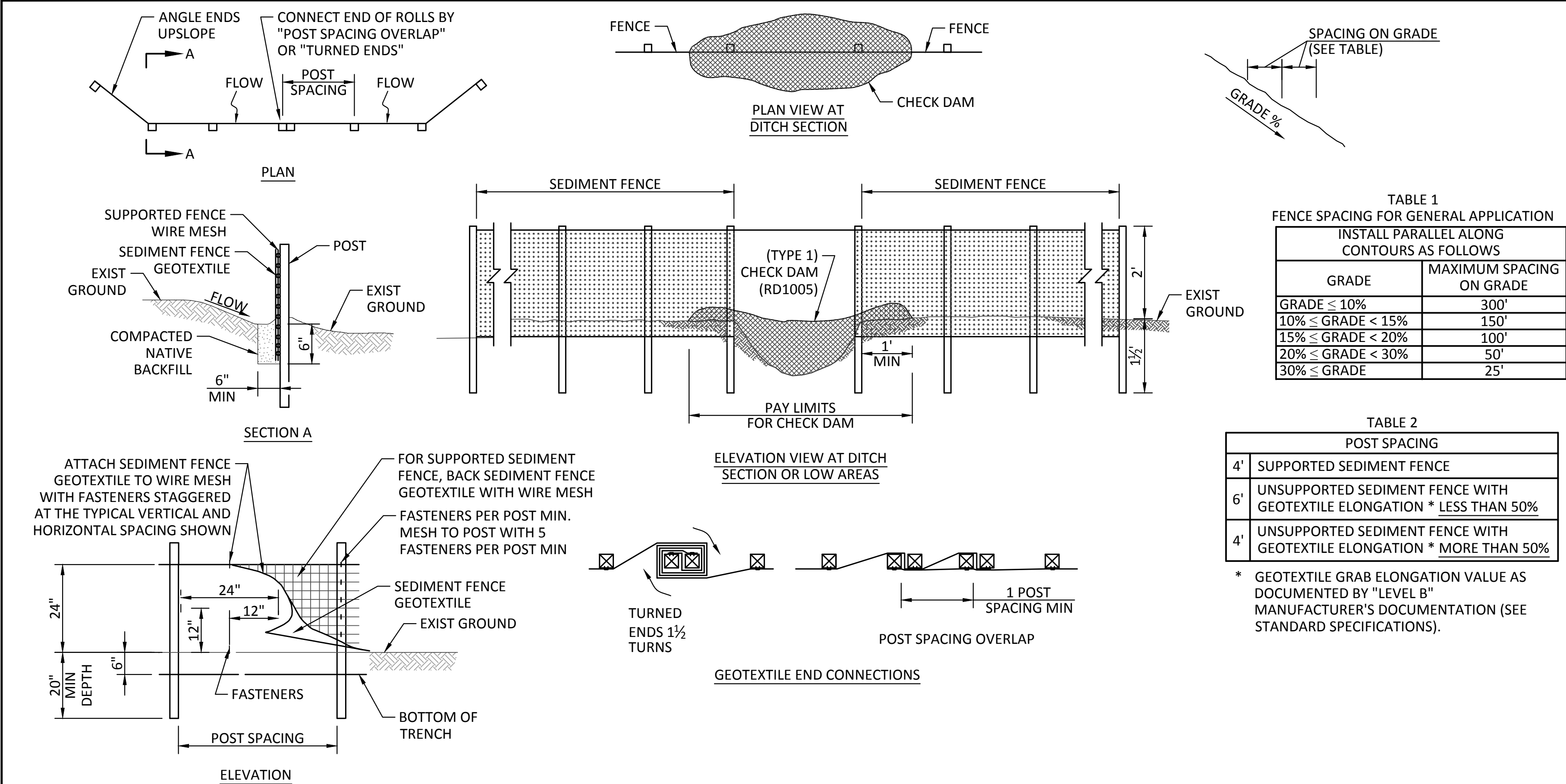


KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY
CONTRACTOR STAGING AREA

DESIGNED A. LEMAN
DRAWN J. LAHMON
CHECKED V. AUTIER
PROJECT DATE 10/28/20

DRAWING

G011

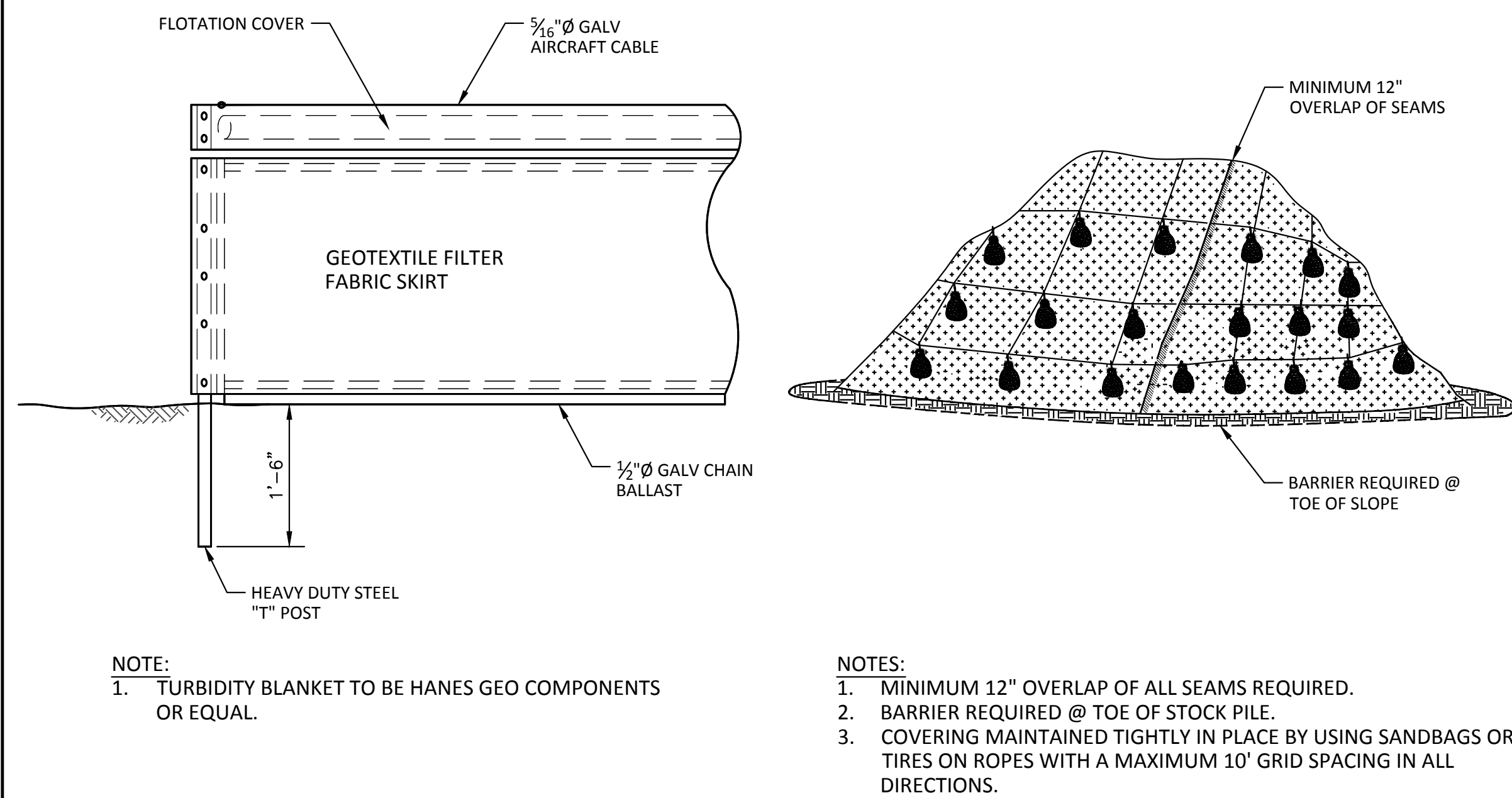
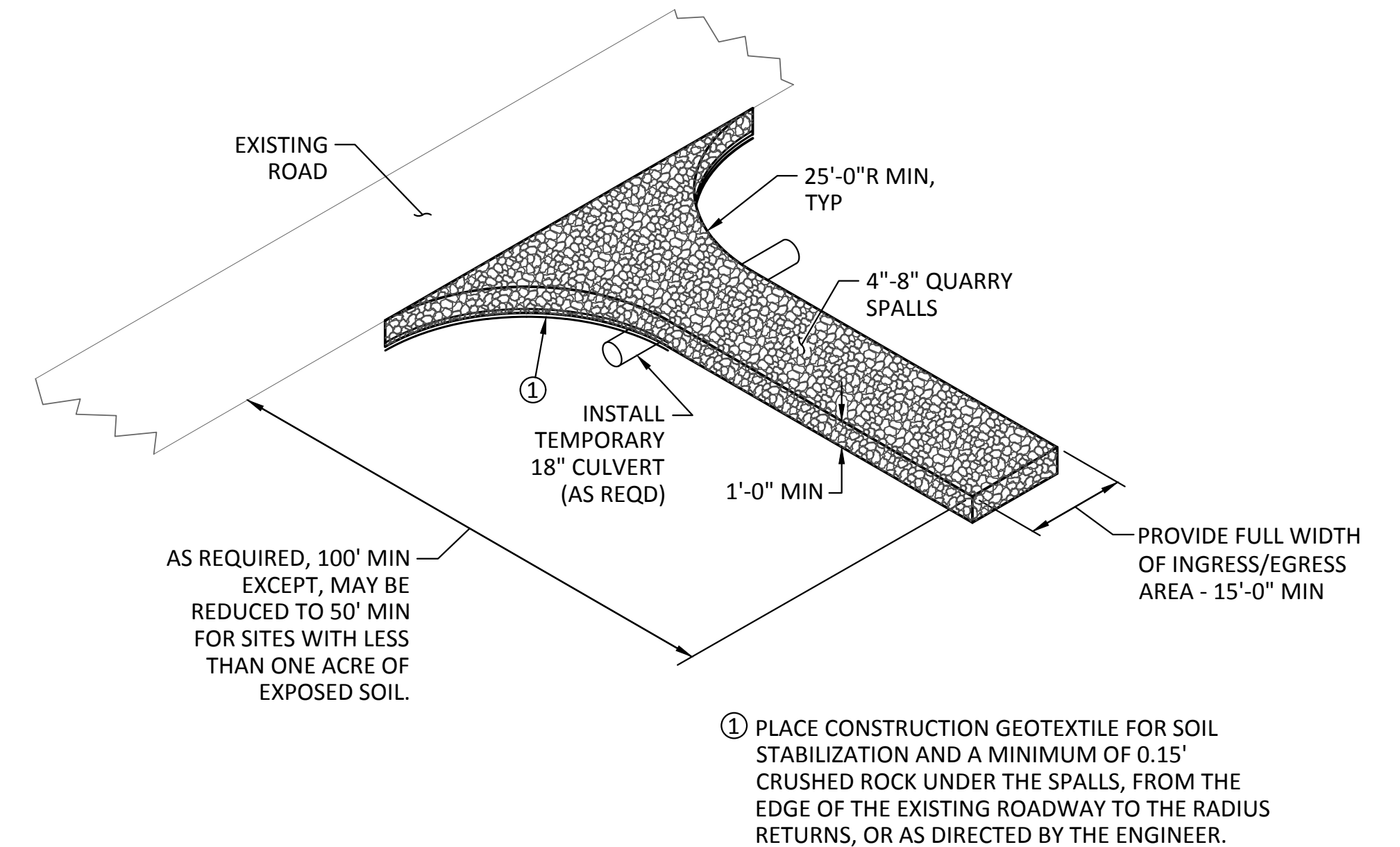


SILT FENCE DETAIL

SCALE: NTS

TEMPORARY ENTRANCE

SCALE: NTS

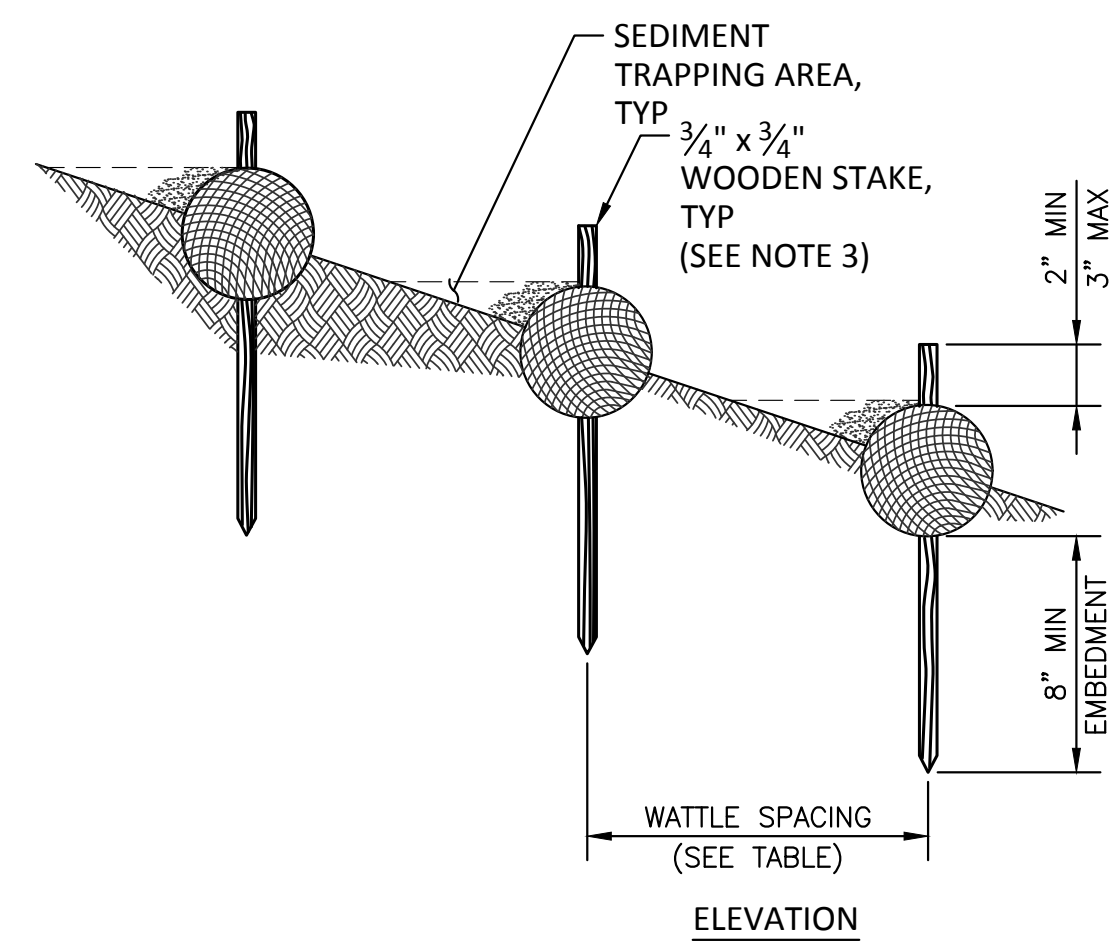


TURBIDITY CURTAIN DETAIL

SCALE: NTS

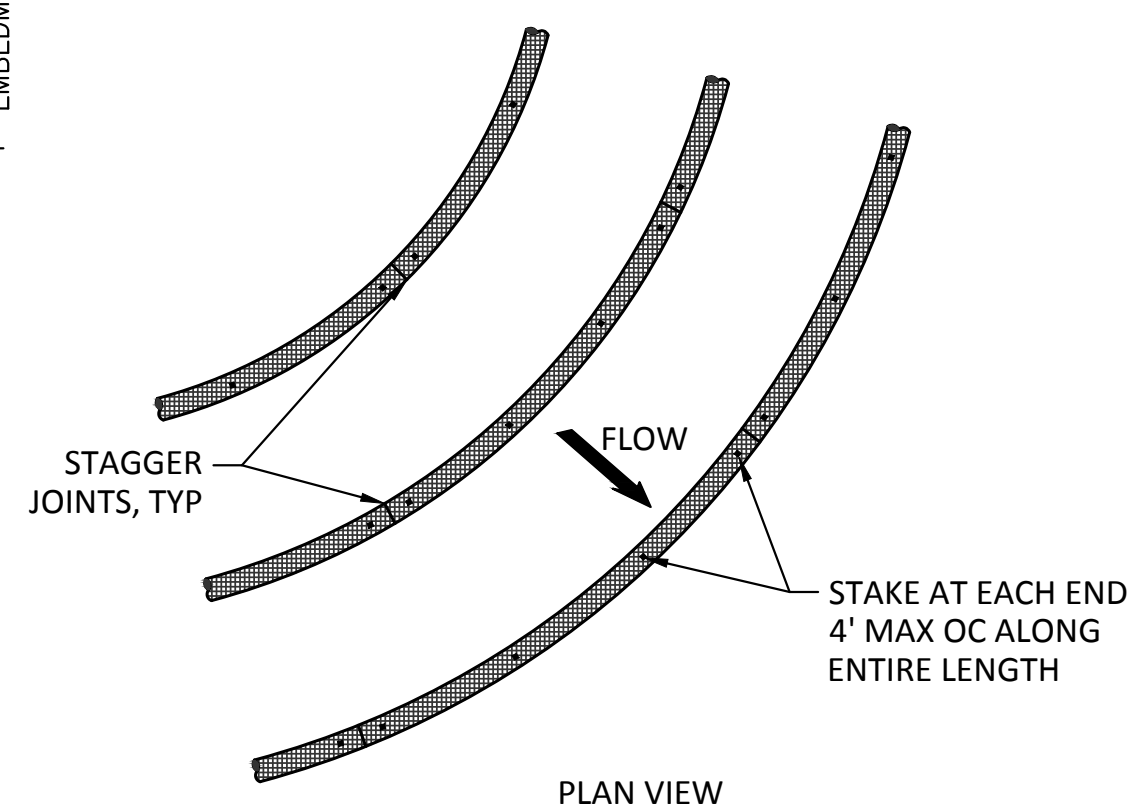
PLASTIC SHEETING DETAIL

SCALE: NTS



WATTLE SPACING TABLE	
SLOPE	MAXIMUM SPACING
1:1	10 FEET
2:1	20 FEET
3:1	30 FEET
4:1	40 FEET
>4:1	80 FEET

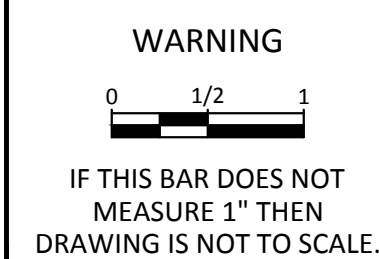
- NOTES
1. INSTALL WATTLES ALONG CONTOURS. SEE TABLE FOR SPACING.
 2. WATTLES SHALL BE INSPECTED REGULARLY, AND IMMEDIATELY AFTER A RUNOFF PRODUCING RAINFALL, TO ENSURE THEY REMAIN THOROUGHLY ENTRENCHED AND IN CONTACT WITH THE SOIL.
 3. LIVE STAKES MAY BE USED FOR PERMANENT INSTALLATIONS.
 4. INSTALL WATTLES SNUGLY INTO THE TRENCH. ABUT ADJACENT WATTLES TIGHTLY, END TO END, WITHOUT OVERLAPPING THE ENDS.
 5. PILOT HOLES MAY BE DRIVEN THROUGH THE WATTLE AND INTO THE SOIL, WHEN SOIL CONDITIONS REQUIRE.
 6. INSTALL AT TOE OF SLOPES. SLOPES GREATER THAN 15' IN LENGTH SHALL HAVE A WATTLE INSTALLED MID SLOPE.



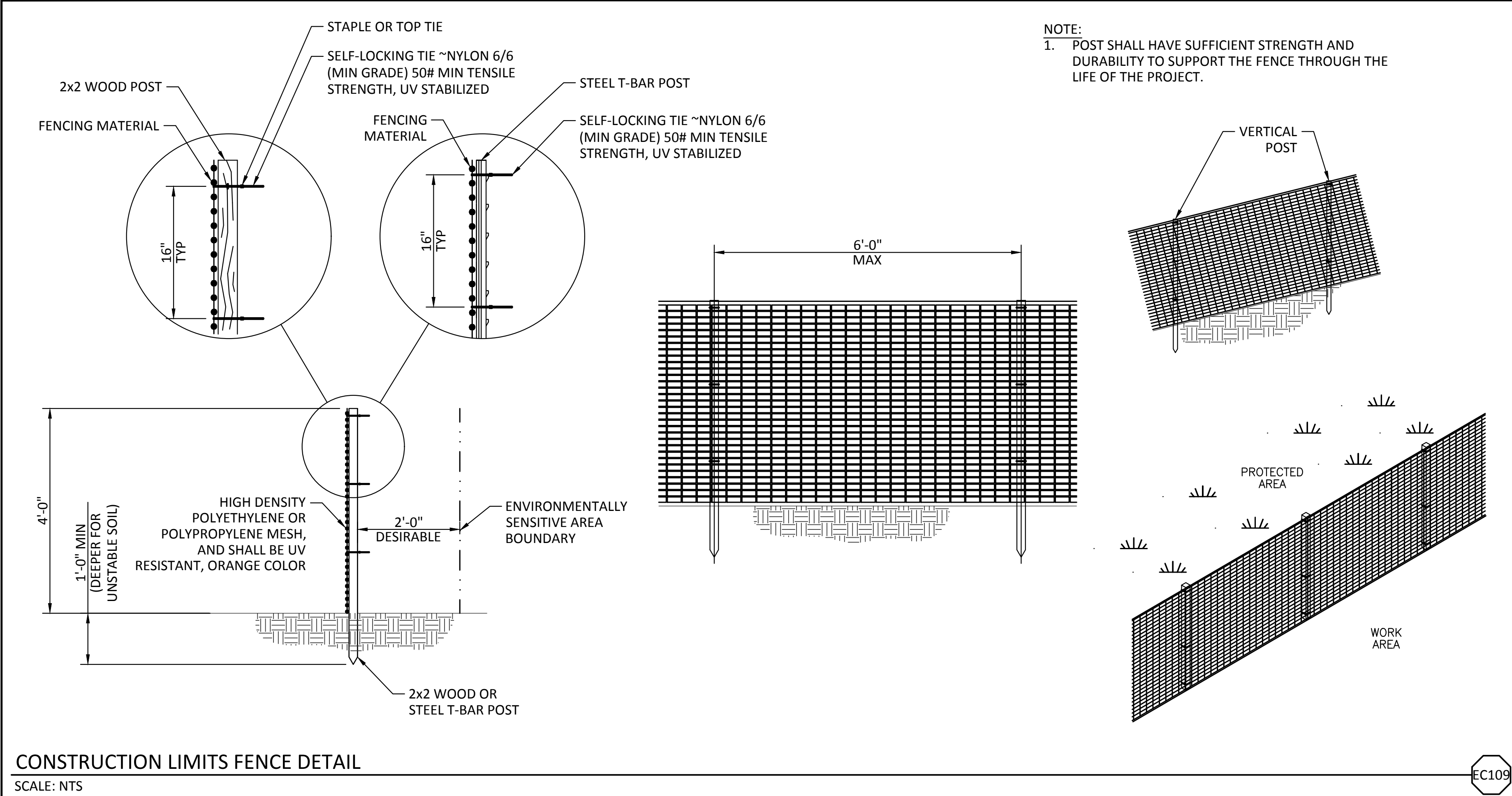
WATTLE DETAIL

SCALE: NTS

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KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	J. BURNS	DRAWING EC001
FALL CREEK FISH HATCHERY		DRAWN	J. LAHMON	
EROSION AND SEDIMENT CONTROL STANDARD DETAILS 1		CHECKED	V. AUTIER	
		PROJECT DATE	10/28/20	

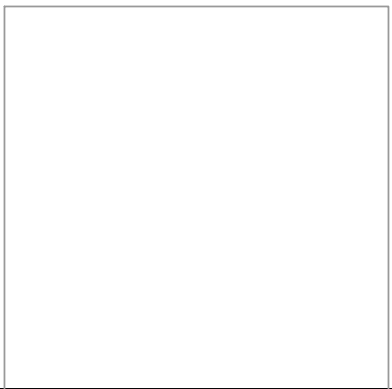


CONSTRUCTION LIMITS FENCE DETAIL

SCALE: NTS

EC109

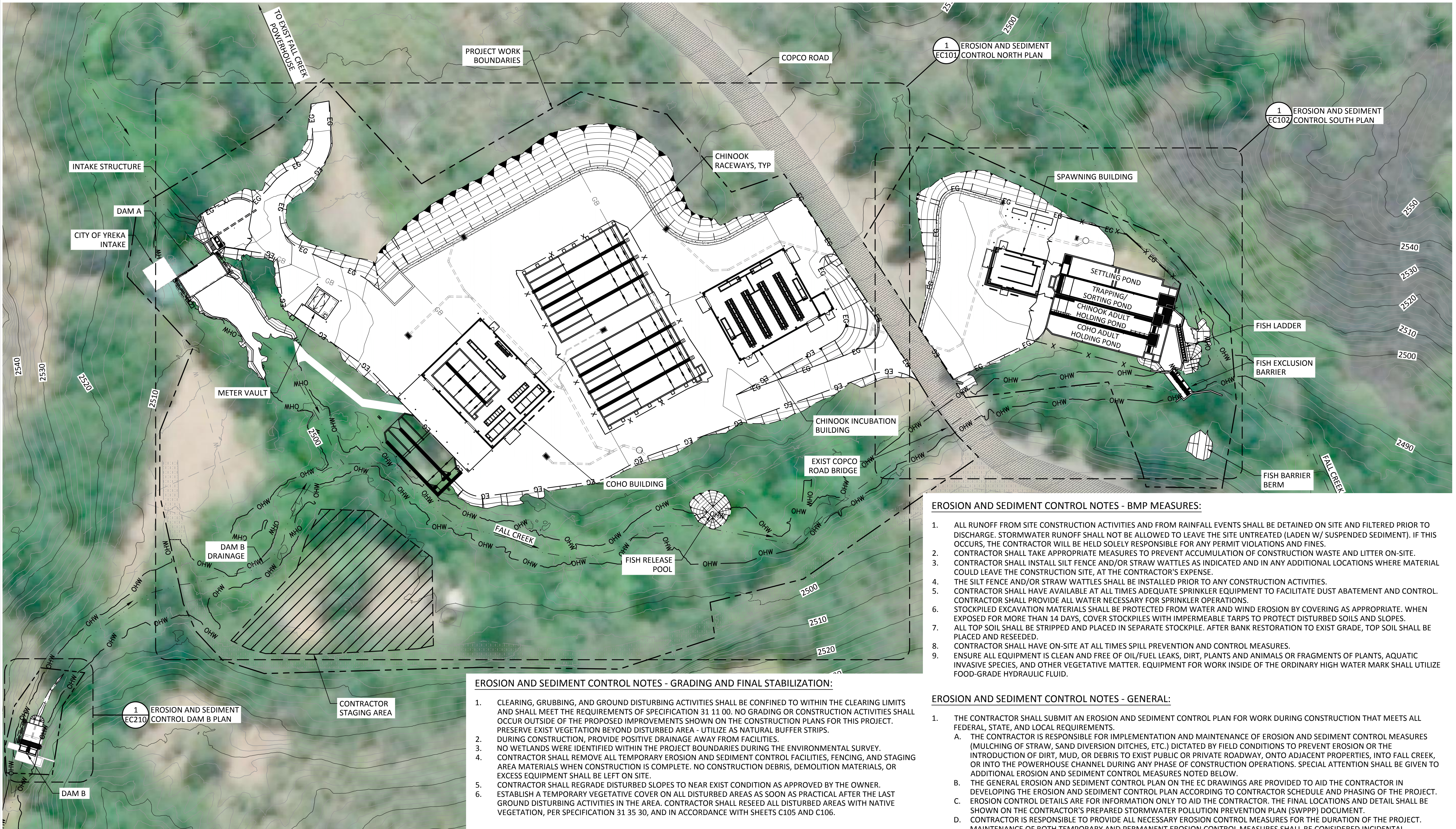
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION



WARNING
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KLAMATH RIVER RENEWAL CORPORATION	DESIGNED J. BURNS	DRAWING EC002
FALL CREEK FISH HATCHERY	DRAWN J. LAHMON	
EROSION AND SEDIMENT CONTROL STANDARD DETAILS 2	CHECKED V. AUTIER	
	PROJECT DATE 10/28/20	



EROSION AND SEDIMENT CONTROL NOTES - GRADING AND FINAL STABILIZATION:

1. CLEARING, GRUBBING, AND GROUND DISTURBING ACTIVITIES SHALL BE CONFINED TO WITHIN THE CLEARING LIMITS AND SHALL MEET THE REQUIREMENTS OF SPECIFICATION 31 11 00. NO GRADING OR CONSTRUCTION ACTIVITIES SHALL OCCUR OUTSIDE OF THE PROPOSED IMPROVEMENTS SHOWN ON THE CONSTRUCTION PLANS FOR THIS PROJECT. PRESERVE EXIST VEGETATION BEYOND DISTURBED AREA - UTILIZE AS NATURAL BUFFER STRIPS.
2. DURING CONSTRUCTION, PROVIDE POSITIVE DRAINAGE AWAY FROM FACILITIES.
3. NO WETLANDS WERE IDENTIFIED WITHIN THE PROJECT BOUNDARIES DURING THE ENVIRONMENTAL SURVEY.
4. CONTRACTOR SHALL REMOVE ALL TEMPORARY EROSION AND SEDIMENT CONTROL FACILITIES, FENCING, AND STAGING AREA MATERIALS WHEN CONSTRUCTION IS COMPLETE. NO CONSTRUCTION DEBRIS, DEMOLITION MATERIALS, OR EXCESS EQUIPMENT SHALL BE LEFT ON SITE.
5. CONTRACTOR SHALL REGRADE DISTURBED SLOPES TO NEAR EXIST CONDITION AS APPROVED BY THE OWNER.
6. ESTABLISH A TEMPORARY VEGETATIVE COVER ON ALL DISTURBED AREAS AS SOON AS PRACTICAL AFTER THE LAST GROUND DISTURBING ACTIVITIES IN THE AREA. CONTRACTOR SHALL RESEED ALL DISTURBED AREAS WITH NATIVE VEGETATION, PER SPECIFICATION 31 35 30, AND IN ACCORDANCE WITH SHEETS C105 AND C106.

EROSION AND SEDIMENT CONTROL NOTES - BMP MEASURES:

1. ALL RUNOFF FROM SITE CONSTRUCTION ACTIVITIES AND FROM RAINFALL EVENTS SHALL BE DETAINED ON SITE AND FILTERED PRIOR TO DISCHARGE. STORMWATER RUNOFF SHALL NOT BE ALLOWED TO LEAVE THE SITE UNTREATED (LADEN W/ SUSPENDED SEDIMENT). IF THIS OCCURS, THE CONTRACTOR WILL BE HELD SOLELY RESPONSIBLE FOR ANY PERMIT VIOLATIONS AND FINES.
2. CONTRACTOR SHALL TAKE APPROPRIATE MEASURES TO PREVENT ACCUMULATION OF CONSTRUCTION WASTE AND LITTER ON-SITE.
3. CONTRACTOR SHALL INSTALL SILT FENCE AND/OR STRAW WATTLES AS INDICATED AND IN ANY ADDITIONAL LOCATIONS WHERE MATERIAL COULD LEAVE THE CONSTRUCTION SITE, AT THE CONTRACTOR'S EXPENSE.
4. THE SILT FENCE AND/OR STRAW WATTLES SHALL BE INSTALLED PRIOR TO ANY CONSTRUCTION ACTIVITIES.
5. CONTRACTOR SHALL HAVE AVAILABLE AT ALL TIMES ADEQUATE SPRINKLER EQUIPMENT TO FACILITATE DUST ABATEMENT AND CONTROL. CONTRACTOR SHALL PROVIDE ALL WATER NECESSARY FOR SPRINKLER OPERATIONS.
6. STOCKPILED EXCAVATION MATERIALS SHALL BE PROTECTED FROM WATER AND WIND EROSION BY COVERING AS APPROPRIATE. WHEN EXPOSED FOR MORE THAN 14 DAYS, COVER STOCKPILES WITH IMPERMEABLE TARPS TO PROTECT DISTURBED SOILS AND SLOPES.
7. ALL TOP SOIL SHALL BE STRIPPED AND PLACED IN SEPARATE STOCKPILE. AFTER BANK RESTORATION TO EXIST GRADE, TOP SOIL SHALL BE PLACED AND RESEDED.
8. CONTRACTOR SHALL HAVE ON-SITE AT ALL TIMES SPILL PREVENTION AND CONTROL MEASURES.
9. ENSURE ALL EQUIPMENT IS CLEAN AND FREE OF OIL/FUEL LEAKS, DIRT, PLANTS AND ANIMALS OR FRAGMENTS OF PLANTS, AQUATIC INVASIVE SPECIES, AND OTHER VEGETATIVE MATTER. EQUIPMENT FOR WORK INSIDE OF THE ORDINARY HIGH WATER MARK SHALL UTILIZE FOOD-GRADE HYDRAULIC FLUID.

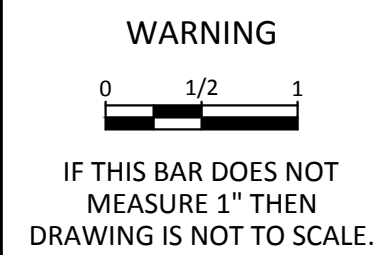
EROSION AND SEDIMENT CONTROL NOTES - GENERAL:

1. THE CONTRACTOR SHALL SUBMIT AN EROSION AND SEDIMENT CONTROL PLAN FOR WORK DURING CONSTRUCTION THAT MEETS ALL FEDERAL, STATE, AND LOCAL REQUIREMENTS.
 - A. THE CONTRACTOR IS RESPONSIBLE FOR IMPLEMENTATION AND MAINTENANCE OF EROSION AND SEDIMENT CONTROL MEASURES (MULCHING OF STRAW, SAND DIVERSION DITCHES, ETC.) DICTATED BY FIELD CONDITIONS TO PREVENT EROSION OR THE INTRODUCTION OF DIRT, MUD, OR DEBRIS TO EXIST PUBLIC OR PRIVATE ROADWAY, ONTO ADJACENT PROPERTIES, INTO FALL CREEK, OR INTO THE POWERHOUSE CHANNEL DURING ANY PHASE OF CONSTRUCTION OPERATIONS. SPECIAL ATTENTION SHALL BE GIVEN TO ADDITIONAL EROSION AND SEDIMENT CONTROL MEASURES NOTED BELOW.
 - B. THE GENERAL EROSION AND SEDIMENT CONTROL PLAN ON THE EC DRAWINGS ARE PROVIDED TO AID THE CONTRACTOR IN DEVELOPING THE EROSION AND SEDIMENT CONTROL PLAN ACCORDING TO CONTRACTOR SCHEDULE AND PHASING OF THE PROJECT.
 - C. EROSION CONTROL DETAILS ARE FOR INFORMATION ONLY TO AID THE CONTRACTOR. THE FINAL LOCATIONS AND DETAIL SHALL BE SHOWN ON THE CONTRACTOR'S PREPARED STORMWATER POLLUTION PREVENTION PLAN (SWPPP) DOCUMENT.
 - D. CONTRACTOR IS RESPONSIBLE TO PROVIDE ALL NECESSARY EROSION CONTROL MEASURES FOR THE DURATION OF THE PROJECT. MAINTENANCE OF BOTH TEMPORARY AND PERMANENT EROSION CONTROL MEASURES SHALL BE CONSIDERED INCIDENTAL.
 - E. ALL BMP REQUIRED MATERIALS SHALL MEET OR EXCEED STATE OF CALIFORNIA STORMWATER QUALITY ASSOCIATION (CASQA) REQUIREMENTS.
 - F. CONTRACTOR SHALL DEVELOP A SPILL PREVENTION, CONTAINMENT, AND RESPONSE PLAN THAT WILL BE ATTACHED TO THE SWPPP.

EROSION AND SEDIMENT CONTROL KEY PLAN

SCALE: 1"= 30'

0' 30' 60'



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

EROSION AND SEDIMENT CONTROL
KEY PLAN

DESIGNED A. LEMAN

DRAWN J. LAHMON

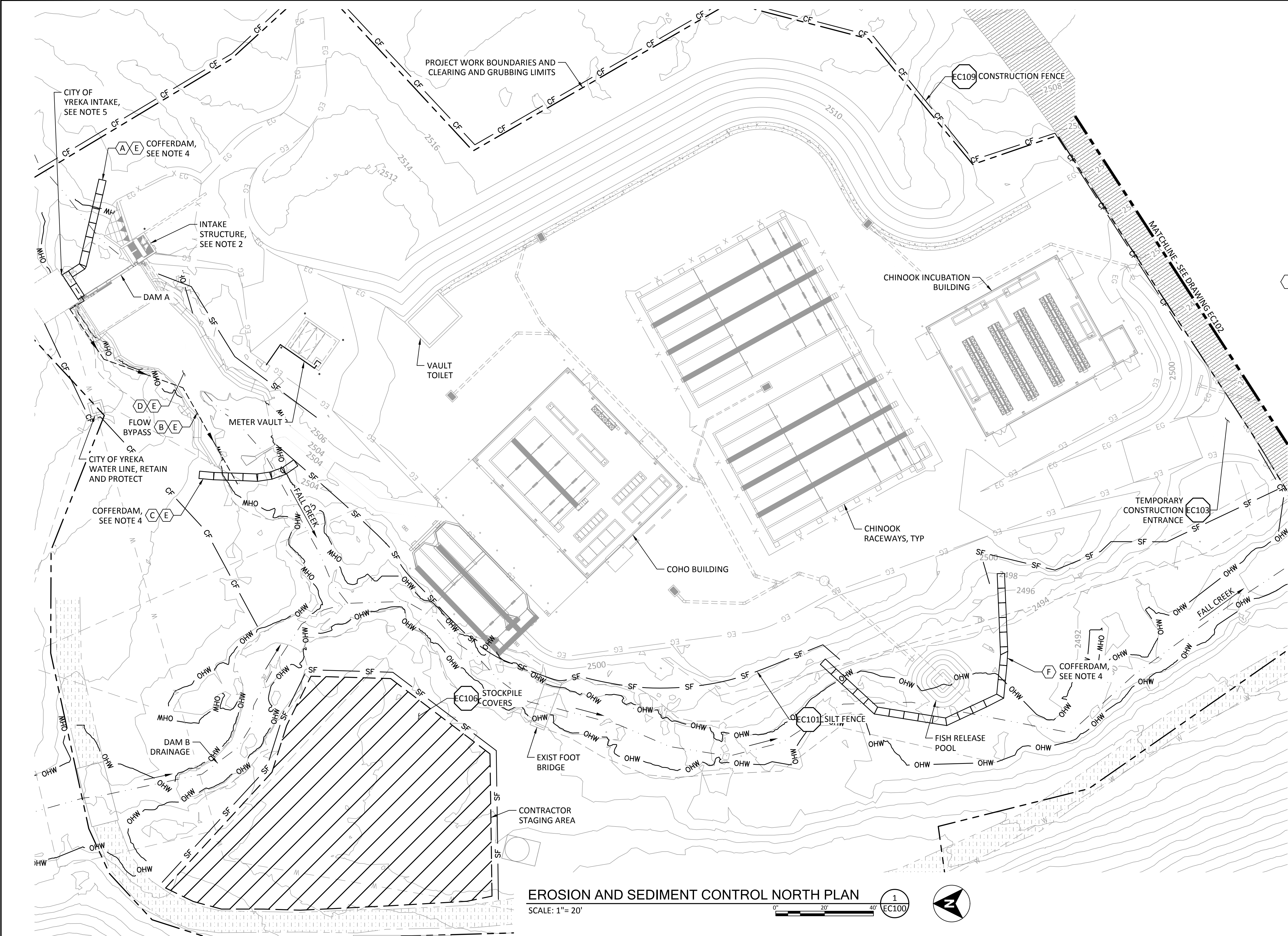
CHECKED V. AUTIER

PROJECT DATE 10/28/20

DRAWING

EC100

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			DESCRIPTION



- SHEET NOTES:**
- SEE DRAWING EC100 FOR STANDARD EROSION AND SEDIMENT CONTROL NOTES.
 - UTILIZE SURFACE ROUGHENING AND/OR SILT FENCE AS REQUIRED TO STABILIZE SOILS DURING CONSTRUCTION OF INTAKE STRUCTURE.
 - BULK STORAGE OF HAZARDOUS MATERIALS, INCLUDING PLANTS, CHEMICALS, FERTILIZERS, PESTICIDES, FUEL, OIL, GREASE, ETC. ARE NOT ALLOWED IN THE INTAKE STRUCTURE AREA. ONLY MINIMUM QUANTITIES NECESSARY FOR CURRENT WORK EFFORTS SHALL BE STORED AT THE INTAKE STRUCTURE SITE.
 - CONTRACTOR SHALL REVIEW SPECIFICATIONS TO UNDERSTAND THE HYDROLOGY AND HYDRAULICS OF FALL CREEK WHEN DESIGNING THE COFFERDAM. CONTRACTOR SHALL SUBMIT THE COFFERDAM PLAN FOR APPROVAL AS PER SPECIFICATION 02 15 00.
 - CONTRACTOR'S COFFERDAM STAGING SHALL NOT INTERFERE WITH THE CITY OF YREKA ACCESS TO WATER AT ANY TIME.
 - PROPOSED COFFERDAM STAGING IS PROVIDED TO AID THE CONTRACTOR IN DEVELOPMENT OF A PLAN FOR IN-WATER WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR STAGING OF WORK, COORDINATION WITH SITE HYDROLOGY, COFFERDAM DESIGN, CONSTRUCTION, AND MAINTENANCE, FLOW BYPASSING, ETC AS INCIDENTAL TO THE CONSTRUCTION PROCESS.

- PROPOSED COFFERDAM STAGING, SEE NOTE 6:**
- A** CONSTRUCT COFFERDAM TO ISOLATE INTAKE STRUCTURE CONSTRUCTION AREA, AND DAM A OVERFLOWS. MAINTAIN FLOW TO THE CITY OF YREKA INTAKE FOR THE DURATION OF CONSTRUCTION.
 - B** CONCURRENT WITH UPSTREAM COFFERDAM CONSTRUCTION, INSTALL FLOW BYPASS PIPE TO PASS POWERHOUSE FLOWS DOWNSTREAM OF CANAL DEMOLITION. UTILIZE ANY PUMPS OR SIPHONS AS REQD BY FLOW BYPASS ROUTING. AT OUTLET OF BYPASS PIPE PLACE TEMPORARY RIPRAP TO PROTECT THE CREEK FROM EROSION. PRIOR TO ANY SUPPORTING EARTHWORKS, THE CITY OF YREKA WATER LINE MUST BE FIELD LOCATED AND PROTECTED FOR THE DURATION OF CONSTRUCTION.
 - C** CONSTRUCT COFFERDAM DOWNSTREAM OF EXIST CANAL DEMOLITION TO PRECLUDE BACKWATER FROM THE CONFLUENCE OF THE POWERHOUSE CHANNEL AND FALL CREEK INUNDATING THE CONSTRUCTION AREA.
 - D** PERFORM FISH SALVAGE OPERATIONS PER SPECIFICATION 02 15 00, THEN DEWATER CONSTRUCTION AREA FOR INTAKE STRUCTURE, DAM A VELOCITY BARRIER, AND EXIST CANAL DEMOLITION. CONTRACTOR SHALL BE RESPONSIBLE FOR TREATING WATER BY AN APPROVED METHOD IN ACCORDANCE WITH THE CONTRACTOR'S CGP PRIOR TO DISCHARGE.
 - E** AFTER CONSTRUCTION IS COMPLETE AND THE CONSTRUCTION AREA IS READY TO RECEIVE POWERHOUSE FLOWS AGAIN, SAFELY REMOVE DOWNSTREAM COFFERDAM (WHILE KEEPING THE BYPASS PIPE IN COMMISSION), THEN SAFELY BREACH UPSTREAM COFFERDAM AND ALLOW CONSTRUCTION AREA TO REWATER. LASTLY, REMOVE FLOW BYPASS PIPE.
 - F** FOR FISH RELEASE POOL, CONSTRUCT COFFERDAM AS REQD BY TIME OF YEAR AND FALL CREEK FLOWS. THE MAJORITY OF CONSTRUCTION WILL BE PERFORMED IN THE OVERBANK AREA, AND MAY BE PERFORMED IN THE DRY. WHEN THE COFFERDAM IS REQD, ALLOW SUFFICIENT SPACE IN THE CREEK FOR FLOWS TO BYPASS THE CONSTRUCTION AREA. FOLLOWING CONSTRUCTION OF THE FISH RELEASE POOL AND APPURTENANT PIPING, SUPPORTS, ETC. SAFELY BREACH THE COFFERDAM AND REMOVE.

- LEGEND:**
- SF SILT FENCE
 - COFFERDAM
 - CF CONSTRUCTION FENCE

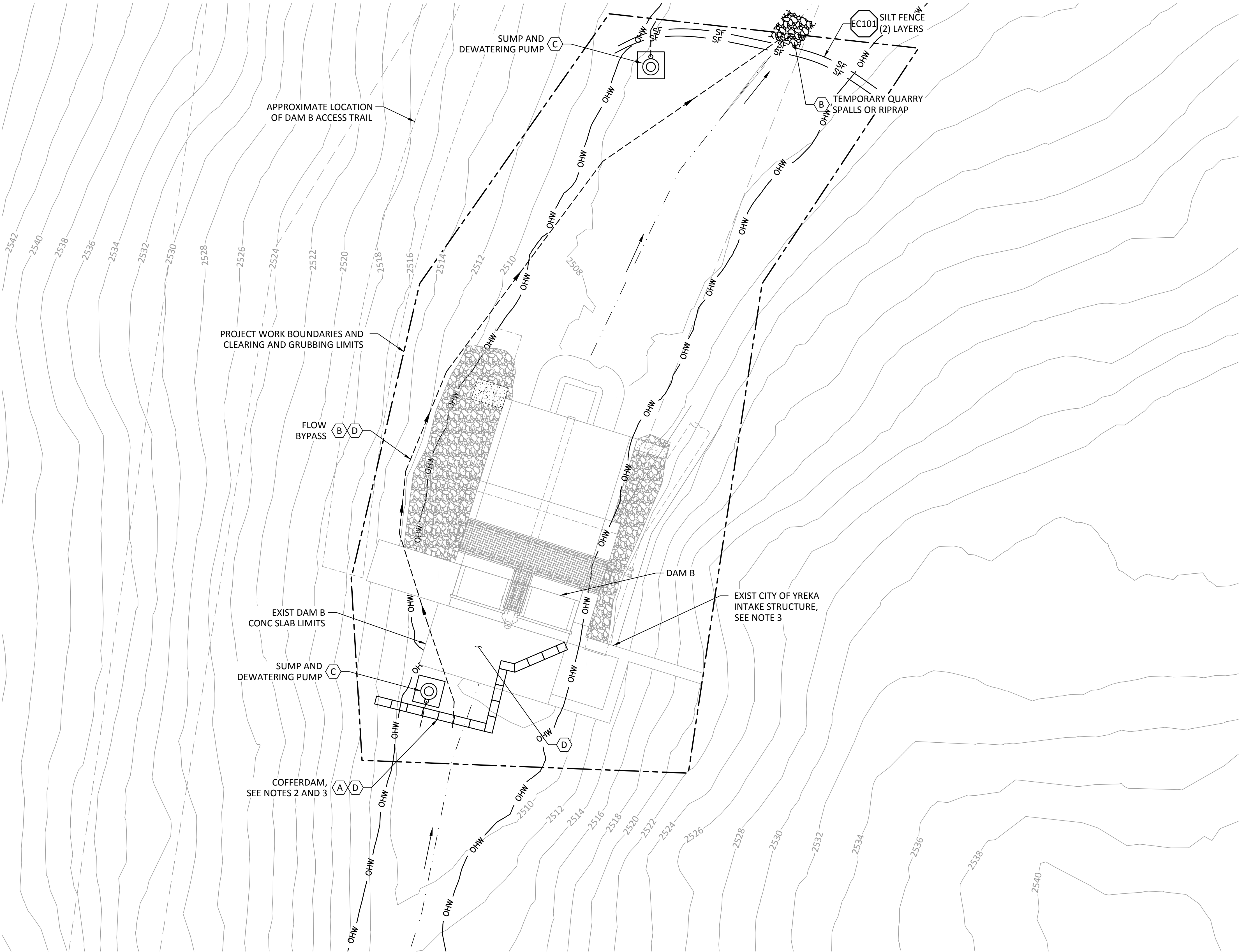
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WARNING
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KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING EC101
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
EROSION AND SEDIMENT CONTROL NORTH PLAN	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	

KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING EC102
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
EROSION AND SEDIMENT CONTROL SOUTH PLAN	CHECKED <u>V. AUTIER</u> PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
- SEE DRAWING EC100 FOR STANDARD EROSION AND SEDIMENT CONTROL NOTES.
 - CONTRACTOR SHALL REVIEW SPECIFICATIONS TO UNDERSTAND THE HYDROLOGY AND HYDRAULICS OF FALL CREEK WHEN DESIGNING THE COFFERDAM. CONTRACTOR SHALL SUBMIT THE COFFERDAM PLAN FOR APPROVAL AS PER SPECIFICATION 02 15 00.
 - CONTRACTOR'S COFFERDAM STAGING SHALL NOT INTERFERE WITH THE CITY OF YREKA INTAKE ACCESS TO WATER AT ANY TIME.
 - PROPOSED COFFERDAM STAGING IS PROVIDED TO AID THE CONTRACTOR IN DEVELOPMENT OF A PLAN FOR IN-WATER WORK. CONTRACTOR SHALL BE RESPONSIBLE FOR STAGING OF WORK, COORDINATION WITH SITE HYDROLOGY, COFFERDAM DESIGN, CONSTRUCTION, AND MAINTENANCE, FLOW BYPASSING, ETC AS INCIDENTAL TO THE CONSTRUCTION PROCESS.

- PROPOSED COFFERDAM STAGING, SEE NOTE 4:**
- A CONSTRUCT UPSTREAM COFFERDAM TO ISOLATE DAM B MODIFICATIONS CONSTRUCTION AREA. MAINTAIN FLOW TO THE CITY OF YREKA INTAKE FOR THE DURATION OF CONSTRUCTION.
 - B CONCURRENT WITH UPSTREAM COFFERDAM CONSTRUCTION, INSTALL FLOW BYPASS PIPE TO PASS CREEK FLOWS DOWNSTREAM OF THE CONSTRUCTION AREA. UTILIZE PUMPS OR SIPHONS AS REQD BY THE FLOW BYPASS ROUTING. AT OUTLET OF BYPASS PIPE PLACE TEMPORARY QUARRY SPALLS OR RIPRAP TO PROTECT THE CREEK FROM EROSION.
 - C PERFORM FISH SALVAGE OPERATIONS PER SPECIFICATION 02 15 00, THEN DEWATER CONSTRUCTION AREA FOR THE DAM B BARRIER MODIFICATIONS. CONTRACTOR SHALL BE RESPONSIBLE FOR TREATING WATER BY AN APPROVED METHOD IN ACCORDANCE WITH THE CONTRACTOR'S CGP PRIOR TO DISCHARGE.
 - D AFTER CONSTRUCTION IS COMPLETE AND THE CONSTRUCTION AREA IS READY TO RECEIVE CREEK FLOWS AGAIN, SAFELY BREACH AND REMOVE UPSTREAM COFFERDAM AND ALLOW CONSTRUCTION AREA TO REWATER. LASTLY, REMOVE FLOW BYPASS PIPE.

LEGEND:

SF SILT FENCE

COFFERDAM

EROSION AND SEDIMENT CONTROL DAM B PLAN

SCALE: 1"= 5'

0" 5' 10'

1 EC100

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REV	DATE	BY	DESCRIPTION

WARNING

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KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	DRAWING EC210
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
EROSION AND SEDIMENT CONTROL DAM B PLAN		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	

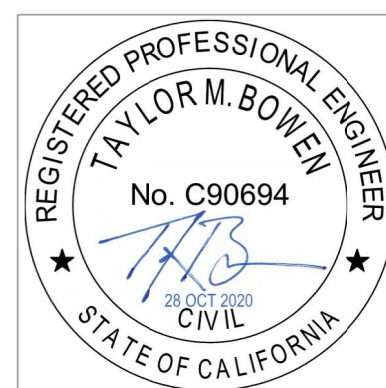
1. ALL DEMOLITION SHALL CONFORM TO SPECIFICATION SECTION 02 41 00 - DEMOLITION.
2. EXISTING BASE MAP MAY CONTAIN ERRORS. CONTRACTOR TO VERIFY LOCATION OF PIPES AND STRUCTURES PRIOR TO DEMOLITION.
3. CONTRACTOR SHALL SUBMIT A DEWATERING PLAN FOR REVIEW AND APPROVAL PER SPECIFICATIONS.
4. CONTRACTOR SHALL FIELD VERIFY EXACT EXTENT OF DEMOLITION PRIOR TO CONSTRUCTION.
5. NO DEMOLITION SHALL BE PERFORMED UNTIL A DEMOLITION PLAN, COFFERDAM PLAN, DEWATERING PLAN, AND SWPP HAS BEEN SUBMITTED BY THE CONTRACTOR AND APPROVED BY THE OWNER. A COPY OF THE APPROVED DEMOLITION PLAN SHALL BE RETAINED ON-SITE FOR THE DURATION OF CONSTRUCTION.



SCALE: 1"= 30'



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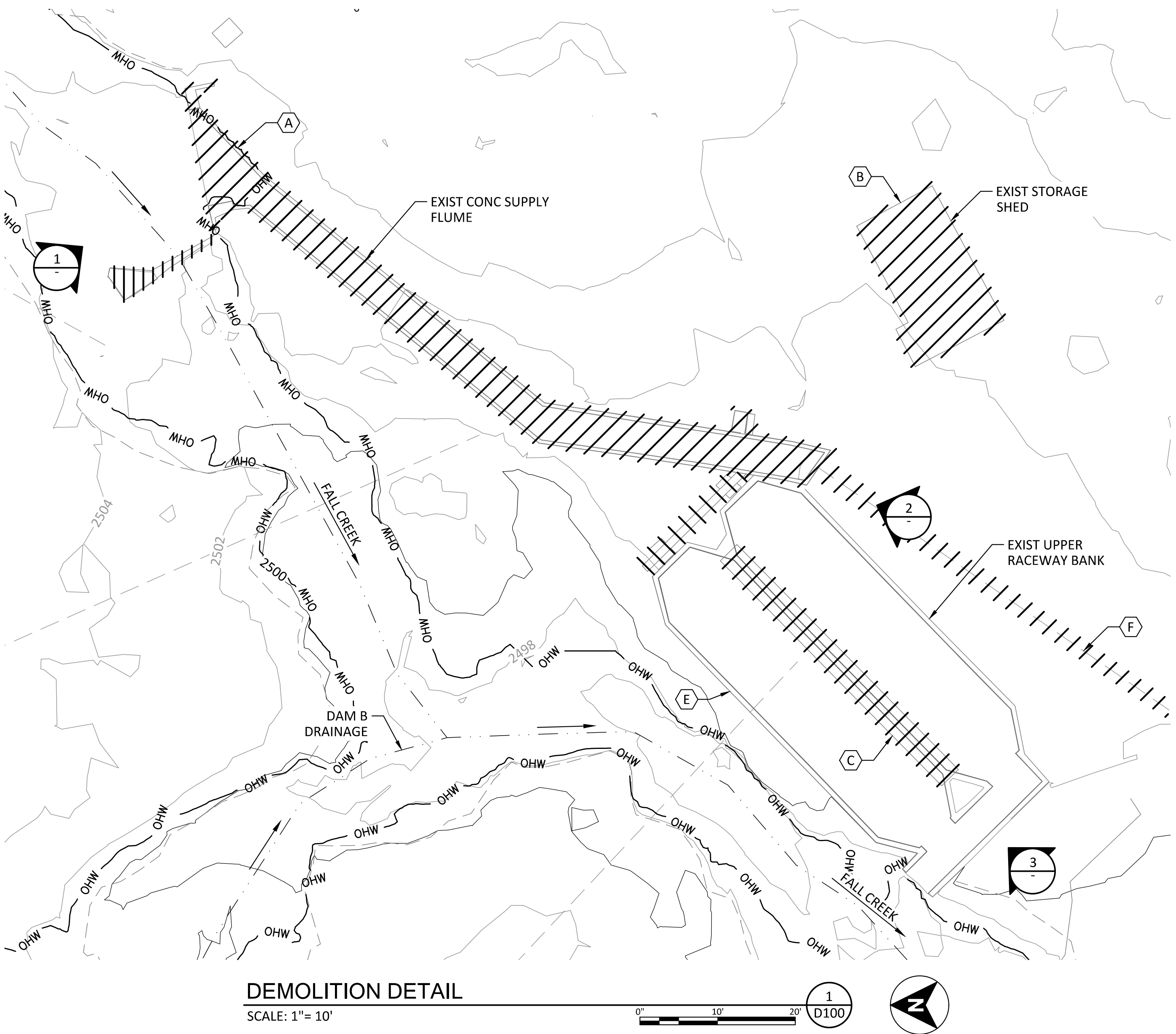
WARNING



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KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. JABIR</u>	DRAWING D100
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
SITE DEMOLITION KEY PLAN	CHECKED <u>T. BOWEN</u>	
	PROJECT DATE <u>10/28/20</u>	



- SHEET KEY NOTES:**
- A DEMOLISH AND REMOVE CONC SUPPLY FLUME WALLS AND SLAB, ASSOCIATED PIPING, AND DEBRIS SCREENS AND SUPPORTS. BACKFILL TO MATCH SURROUNDING GRADE WITH TYPE C MATERIAL PER SPECIFICATIONS.
 - B DEMOLISH AND REMOVE STORAGE SHED AND CONC FOUNDATIONS.
 - C DEMOLISH AND REMOVE STEEL WALKWAY GRATING, SUPPORTS AND LADDERS. RETAIN AND PROTECT CONCRETE WALLS BELOW.
 - D DEMOLISH PVC PIPING.
 - E PROTECT EXISTING UPPER RACEWAY WALLS AND SLAB.
 - F DEMOLISH BURIED PVC PIPING FROM EXISTING CONCRETE SUPPLY FLUME TO EXISTING LOWER RACEWAY BANK. NO PIPE SIZE INFORMATION IS AVAILABLE FOR THE BURIED PIPE.



PHOTO
SCALE: NTS



PHOTO
SCALE: NTS

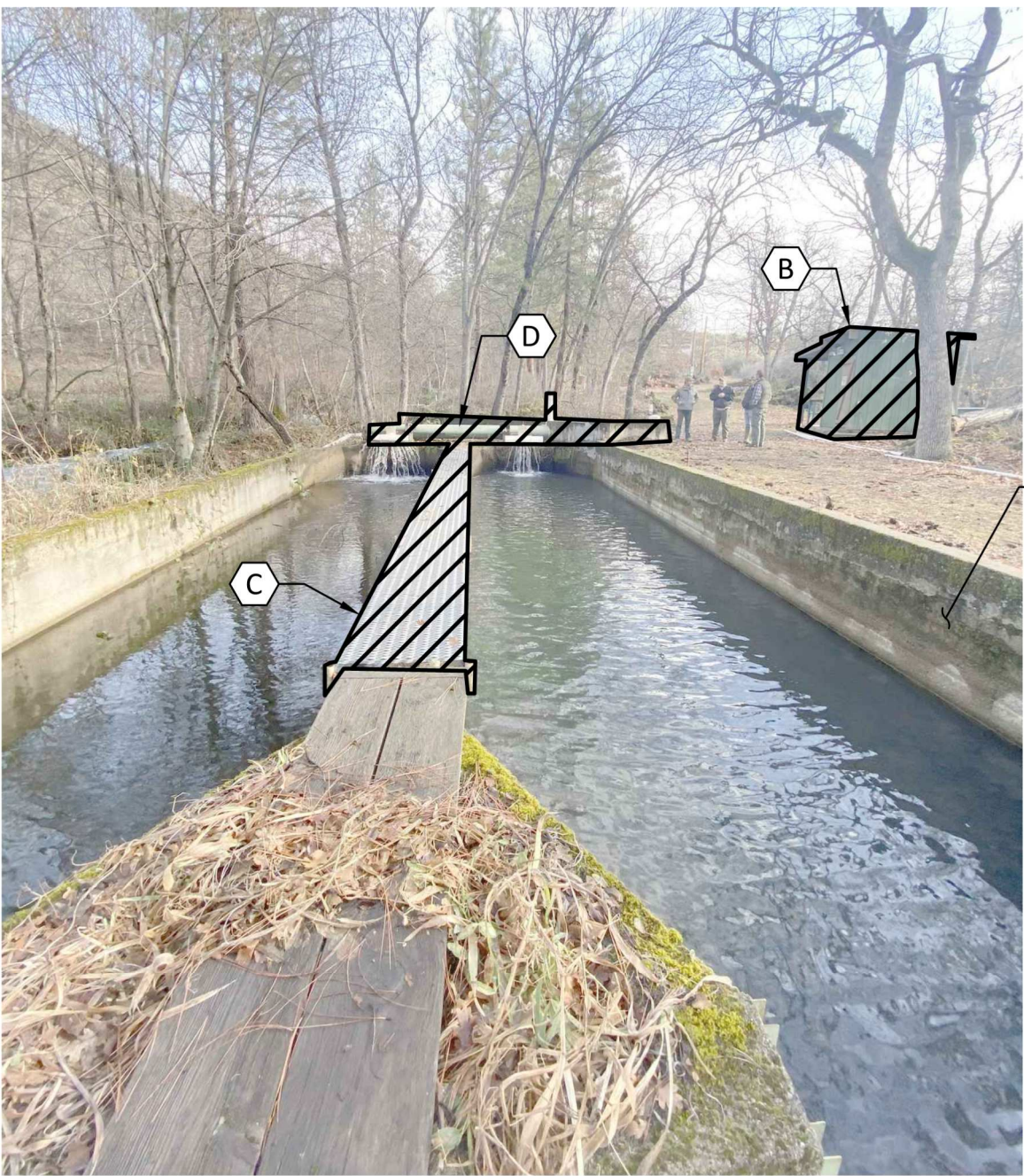


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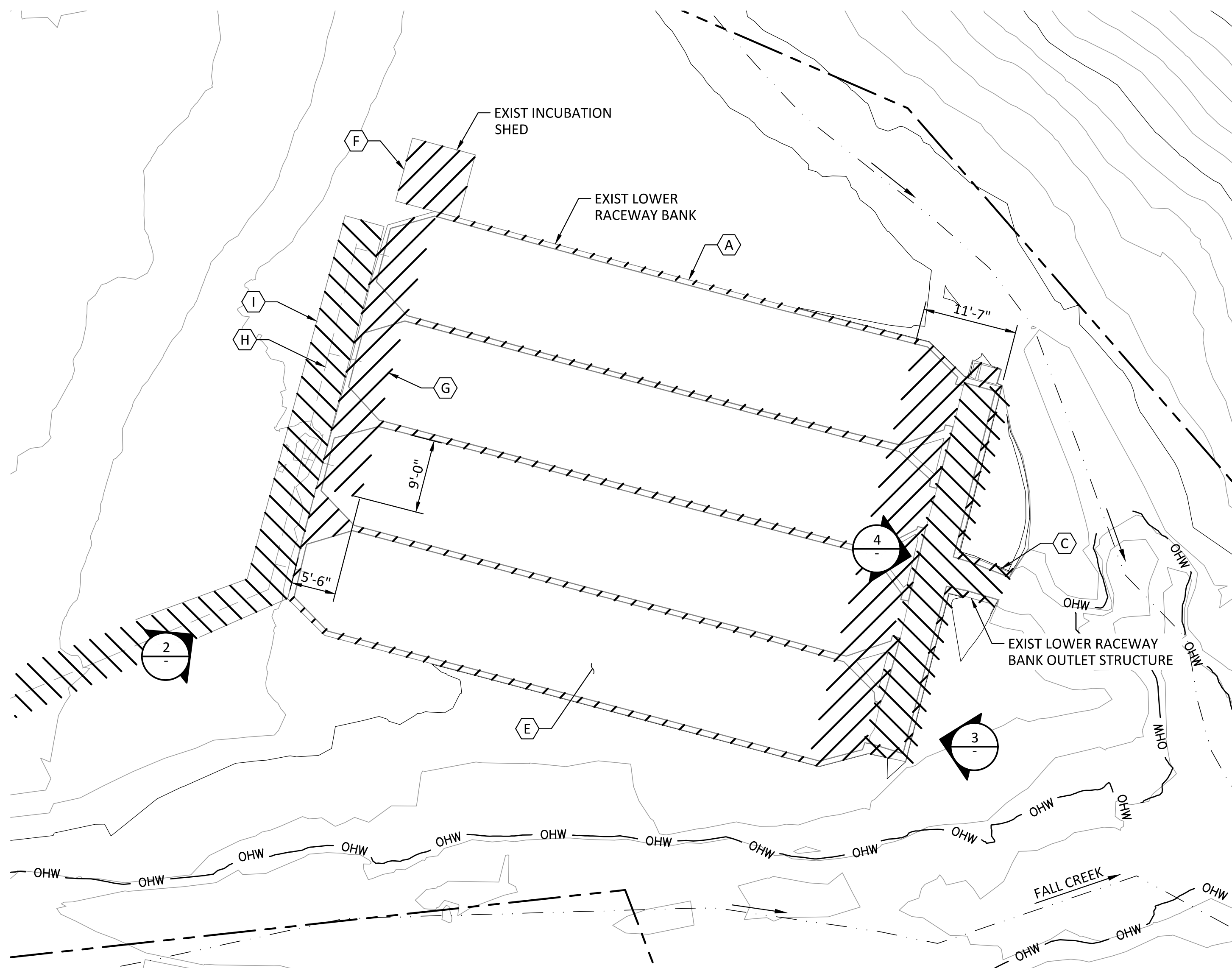
WARNING

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KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. JABIR</u>	DRAWING D101
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
ENLARGED FLUME DEMO PLAN AND PHOTOS		CHECKED <u>T. BOWEN</u>	
		PROJECT DATE <u>10/28/20</u>	



DEMOLITION DETAIL

SCALE: 1" = 10'



PHOTO

SCALE: NTS



PHOTO

SCALE: NTS



PHOTO

SCALE: NTS

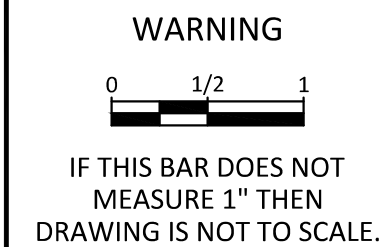
SHEET NOTES:

1. THE EXISTING CONCRETE SLAB, WHERE INDICATED, SHALL BE RETAINED AND PROTECTED. DURING CONSTRUCTION NO DRIVING OF CONSTRUCTION EQUIPMENT ON THE CONCRETE PAD SHALL BE ALLOWED. CONSTRUCTION EQUIPMENT SHALL ACCESS THIS AREA FROM OUTSIDE THE EXISTING PAD.

SHEET KEY NOTES:

- A DEMOLISH AND REMOVE CONCRETE WALLS DOWN TO EXISTING SLAB.
- B DEMOLISH AND REMOVE STEEL WALKWAY GRATING, SUPPORTS, GUARDRAIL AND LADDERS.
- C DEMOLISH CONCRETE OUTLET STRUCTURE WALLS, SLAB AND PIPING. DEMOLISH ADJACENT RACEWAY SLAB TO THE EXTENTS SHOWN.
- D DEMOLISH PVC PIPING.
- E PROTECT EXIST CONC SLAB. BURN BACK EXIST REBAR 2" BELOW SURFACE.
- F DEMOLISH AND REMOVE BUILDING AND CONC FOUNDATIONS.
- G DEMOLISH EXISTING SLAB LOCALLY FOR CONSTRUCTION OF DIFFUSER BOX, SETTLING POND WET WELL, AND VALVE BOX. DEMOLISH ONLY TO THE EXTENTS SHOWN.
- H DEMOLISH BURIED PVC PIPE FROM EXISTING CONCRETE SUPPLY FLUME TO EXISTING LOWER RACEWAY BANK. NO PIPE SIZE INFORMATION IS AVAILABLE FOR THE BURIED PIPE.
- I DEMOLISH EXISTING CONCRETE SIDEWALK.
- J REMOVE EXISTING TREE, AS REQUIRED FOR CONSTRUCTION. NOT ALL TREE REMOVAL REQUIRED IS DOCUMENTED HERE. SEE SPECIFICATION 31 11 00 FOR DETAILS ON TREE REMOVAL WITHIN CONSTRUCTION LIMITS.

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



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

ENLARGED RACEWAY DEMO
PLAN AND PHOTOS

DESIGNED A. JABIR

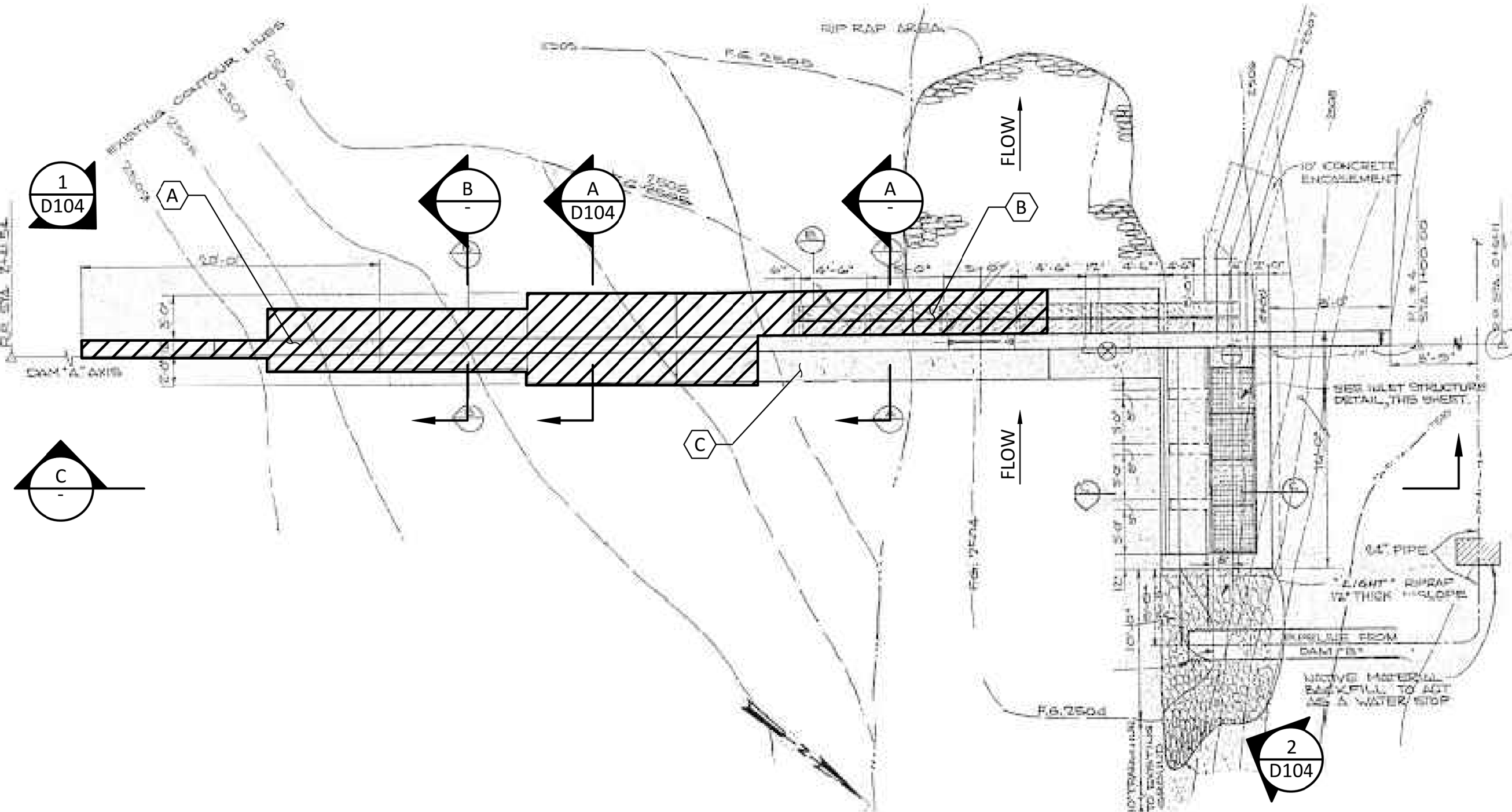
DRAWN J. LAHMON

CHECKED T. BOWEN

PROJECT DATE 10/28/20

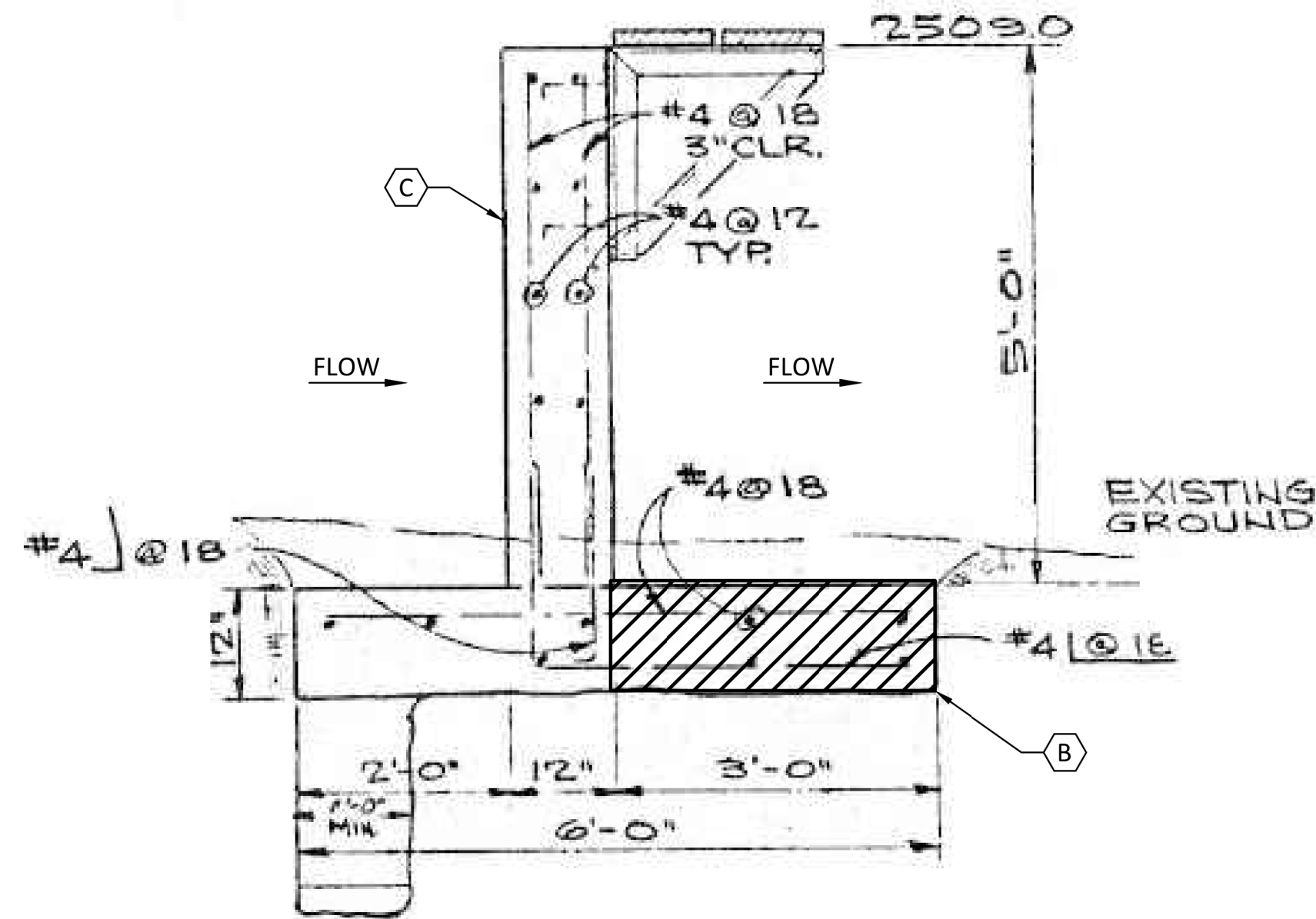
DRAWING

D102



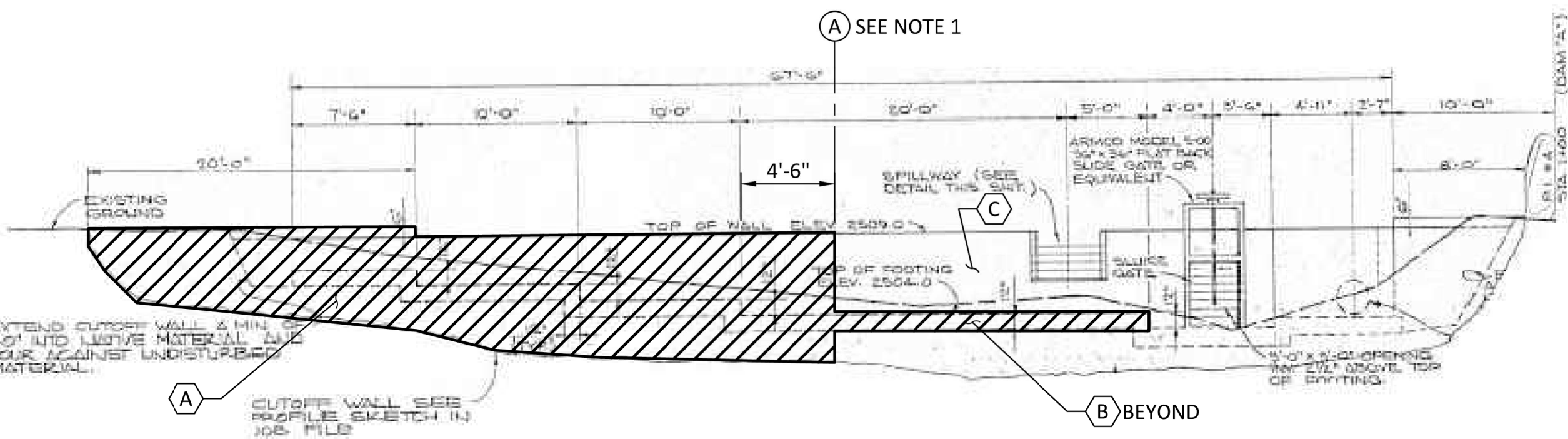
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1
D104



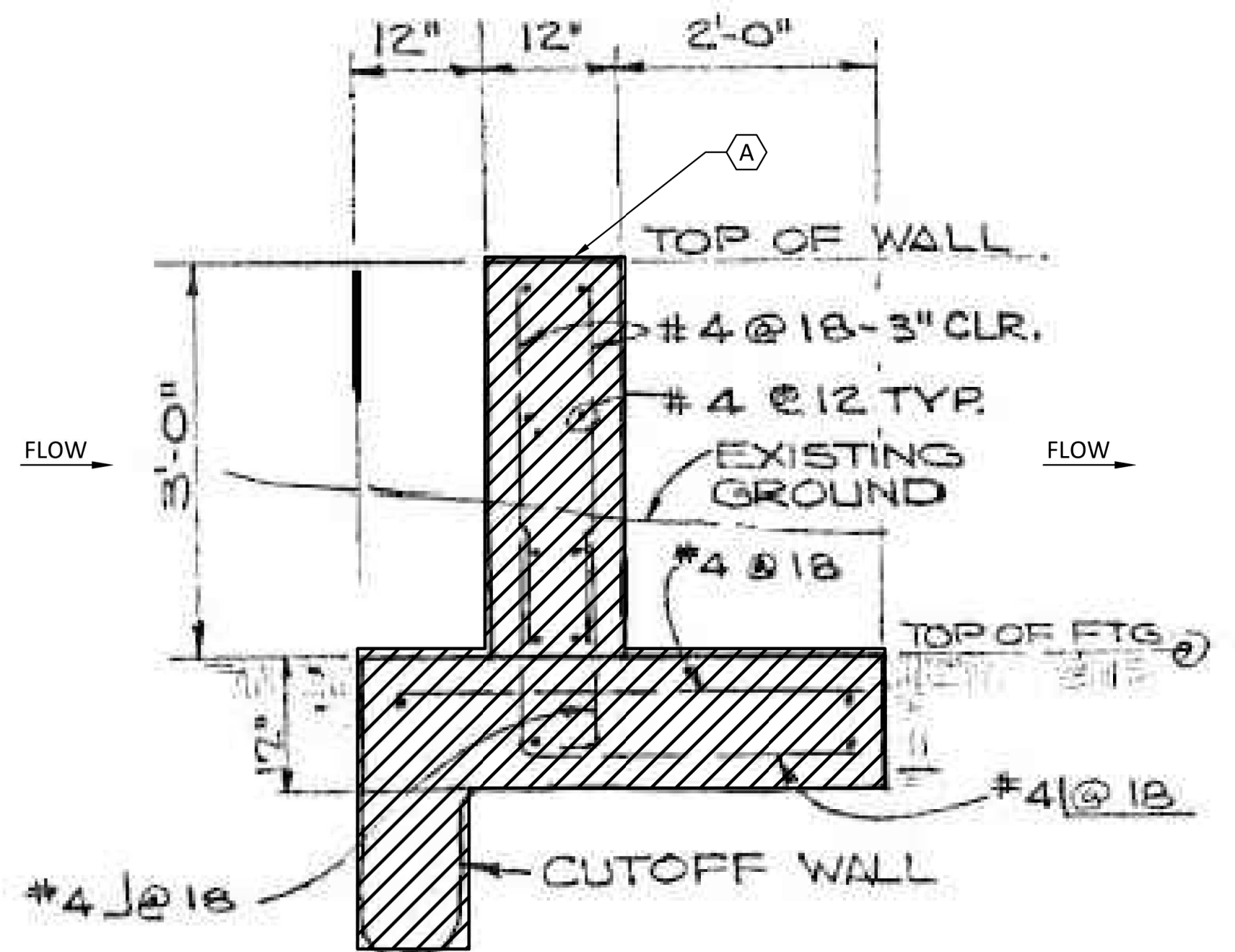
SECTION
SCALE: NTS

A
-



ELEVATION
SCALE: NTS

C
-



SECTION
SCALE: NTS

B
-

SHEET KEY NOTES:

- A DEMOLISH AND REMOVE DAM WALL, COMPLETE DAM FOOTING, AND CUTOFF WALL.
- B DEMOLISH AND REMOVE DAM FOOTING TOE ONLY. CUT OR BURN REBAR 2" BACK FROM EXPOSED SURFACE.
- C PROTECT WALL, WALKWAY, FOOTING HEEL AND CUTOFF WALL.

SHEET NOTES:

- 1. GRIDLINE CORRELATING DEMOLITION WORK TO PROPOSED WORK SHOWN ON SHEET S200.

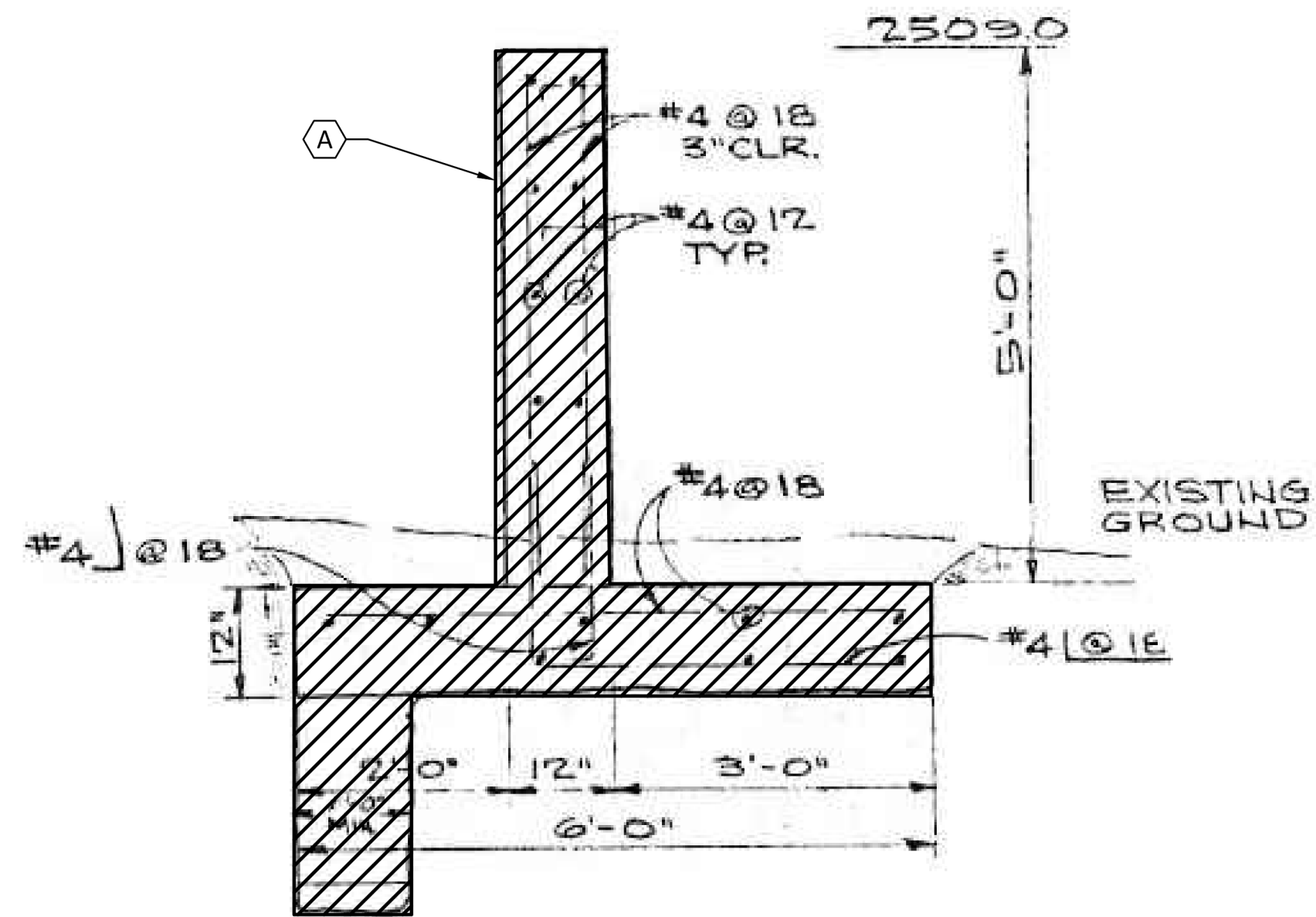
REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



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



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED A. JABIR	DRAWING D103
FALL CREEK FISH HATCHERY	DRAWN J. LAHMON	
ENLARGED DAM A DEMO PLAN AND SECTIONS	CHECKED T. BOWEN	
	PROJECT DATE 10/28/20	



SECTION
SCALE: NTS

A
D103

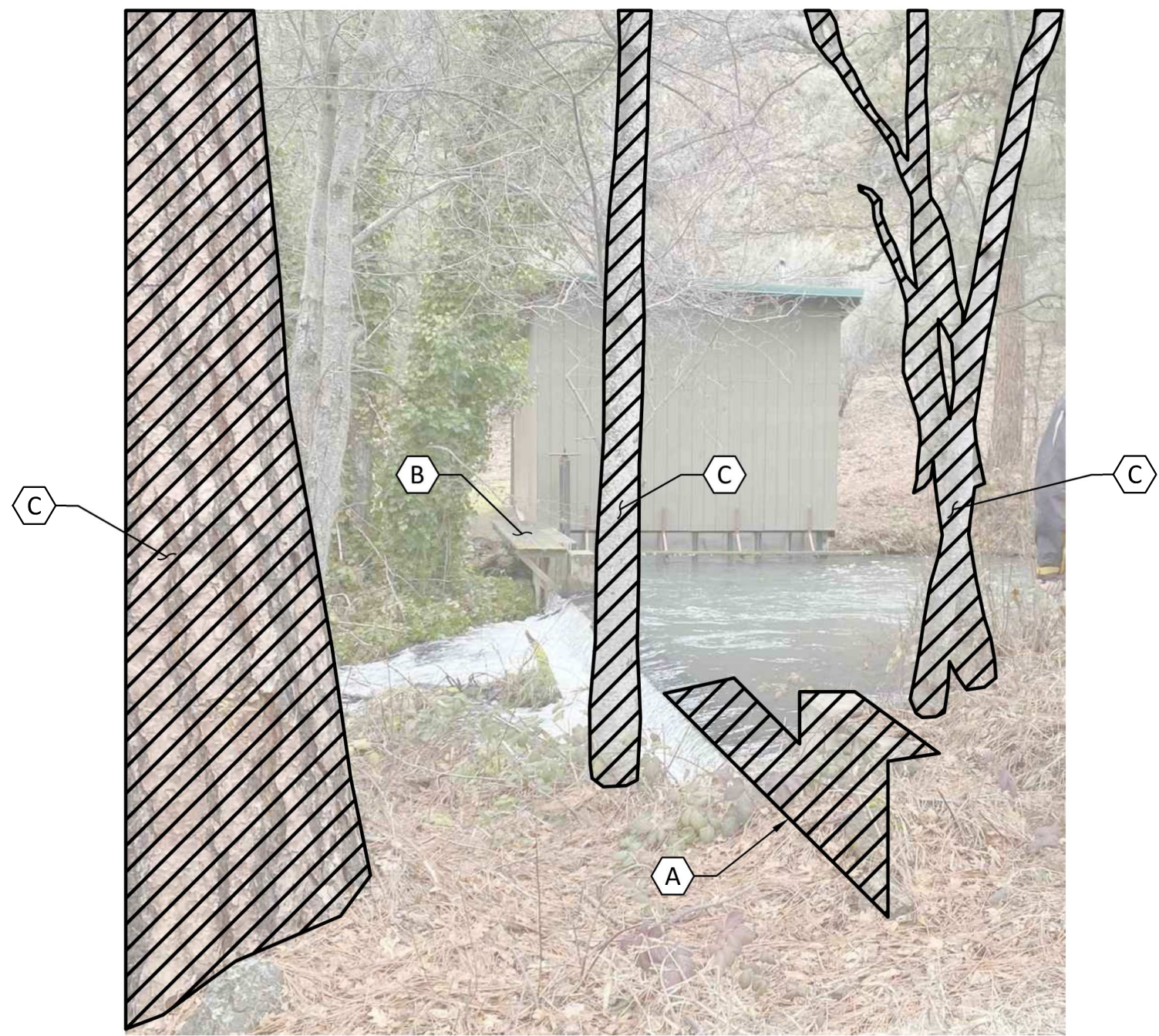


PHOTO
SCALE: NTS

1
D103

SHEET KEY NOTES:

- A DEMOLISH AND REMOVE DAM WALL, COMPLETE DAM FOOTING, AND CUTOFF WALL AT LOCATION OF INTAKE STRUCTURE.
- B PROTECT WALL, WALKWAY, FOOTING HEEL AND CUTOFF WALL.
- C REMOVE EXISTING TREE, AS REQUIRED FOR CONSTRUCTION. NOT ALL TREE REMOVAL REQUIRED IS DOCUMENTED HERE. SEE SPECIFICATION 31 11 00 FOR DETAILS ON TREE REMOVAL WITHIN CONSTRUCTION LIMITS.

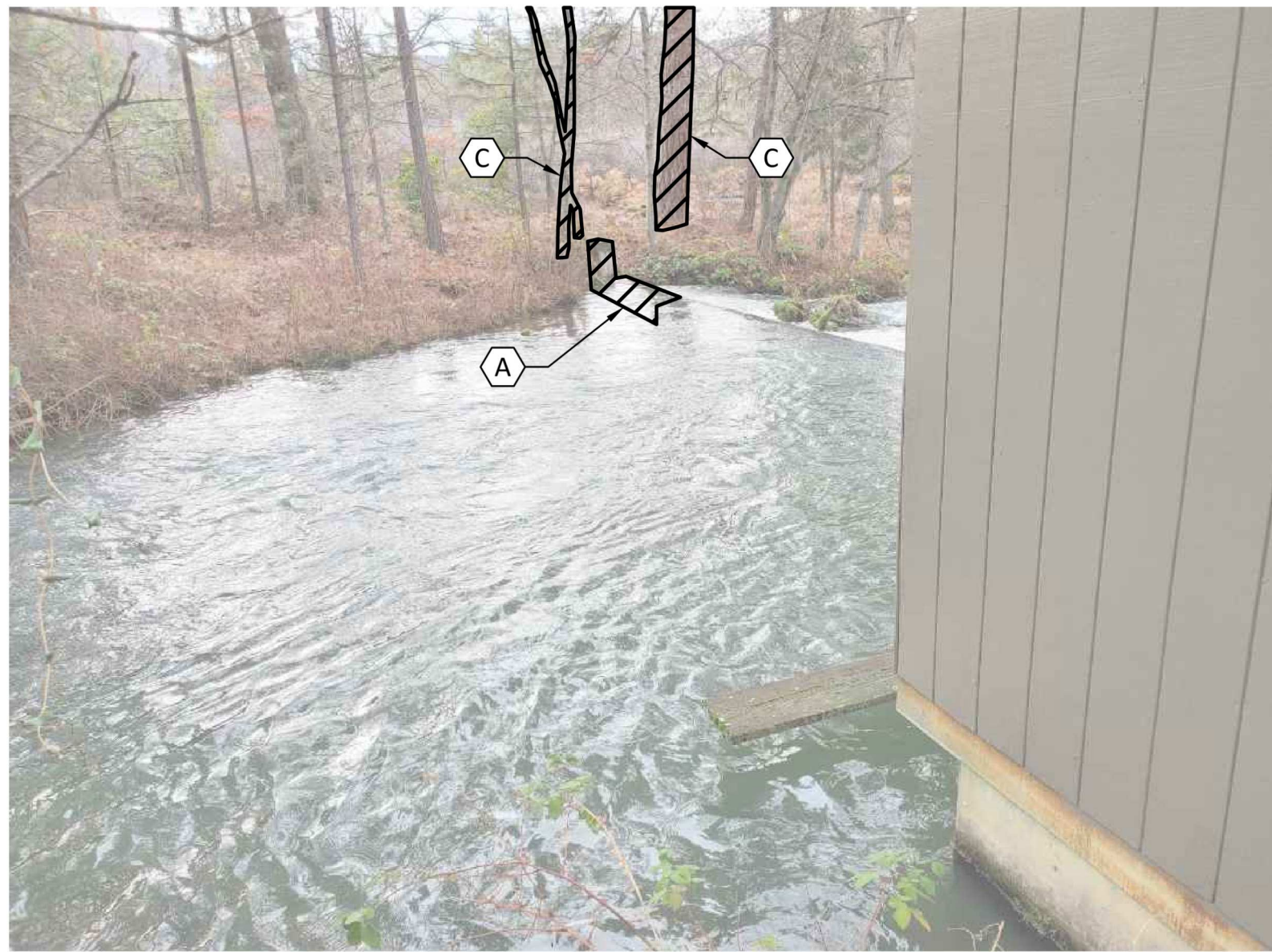
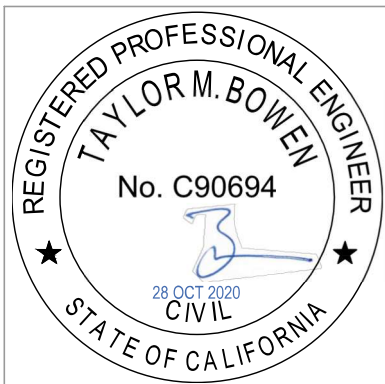


PHOTO
SCALE: NTS

2
D103

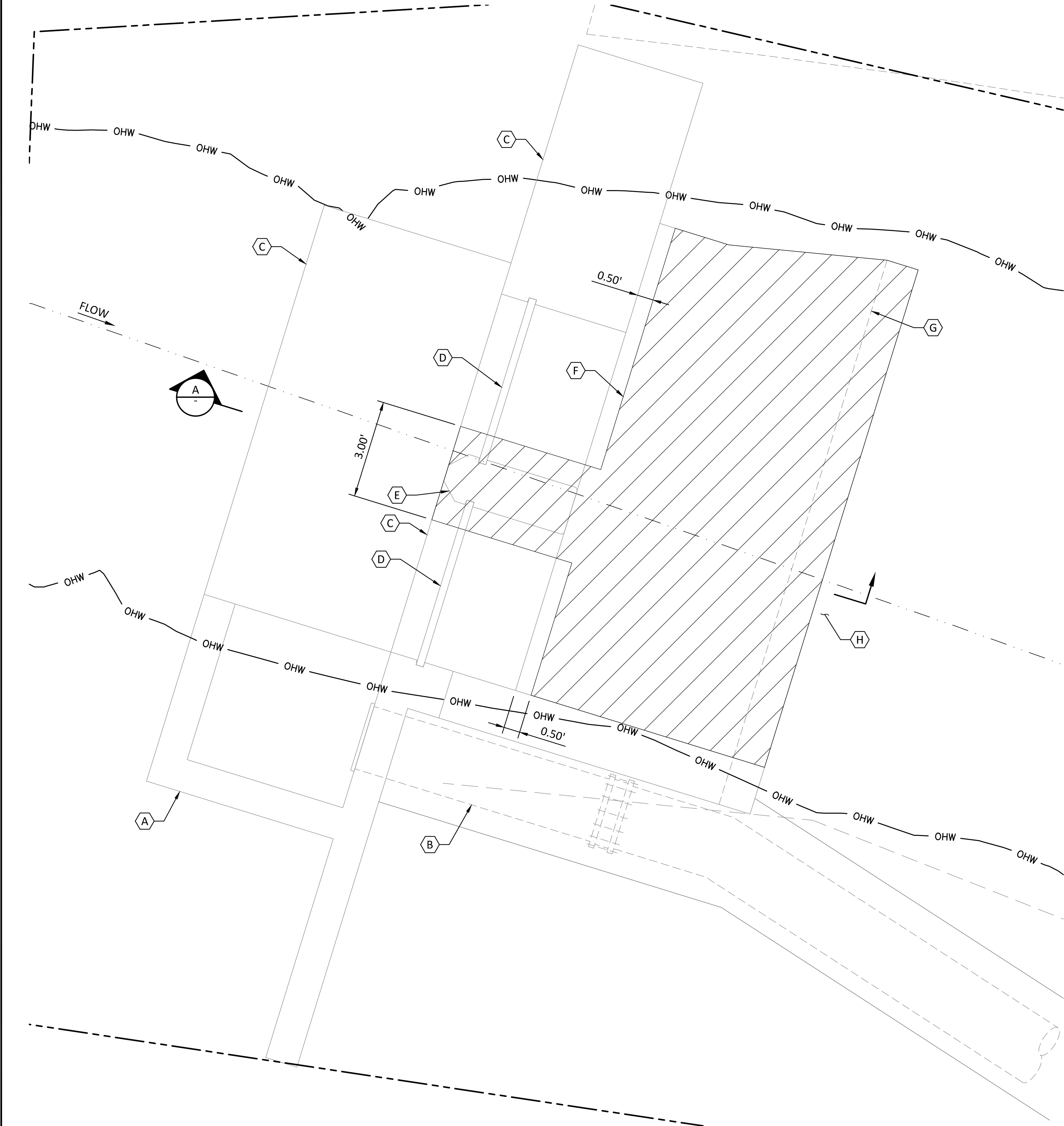
REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION



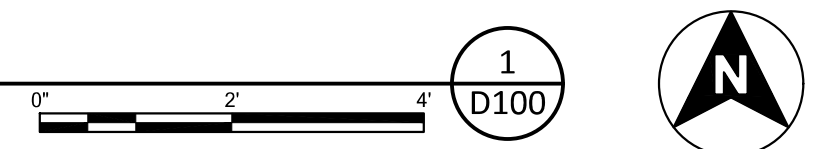
WARNING IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.
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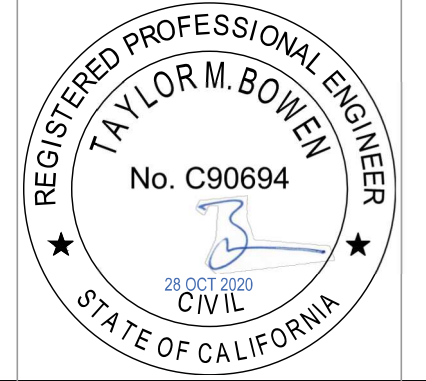
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FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMOM</u>	
DAM A DEMO SECTIONS AND PHOTOS	CHECKED <u>T. BOWEN</u>	
	PROJECT DATE <u>10/28/20</u>	



ENLARGED DAM B DEMO PLAN
SCALE: 1"= 2'



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



WARNING
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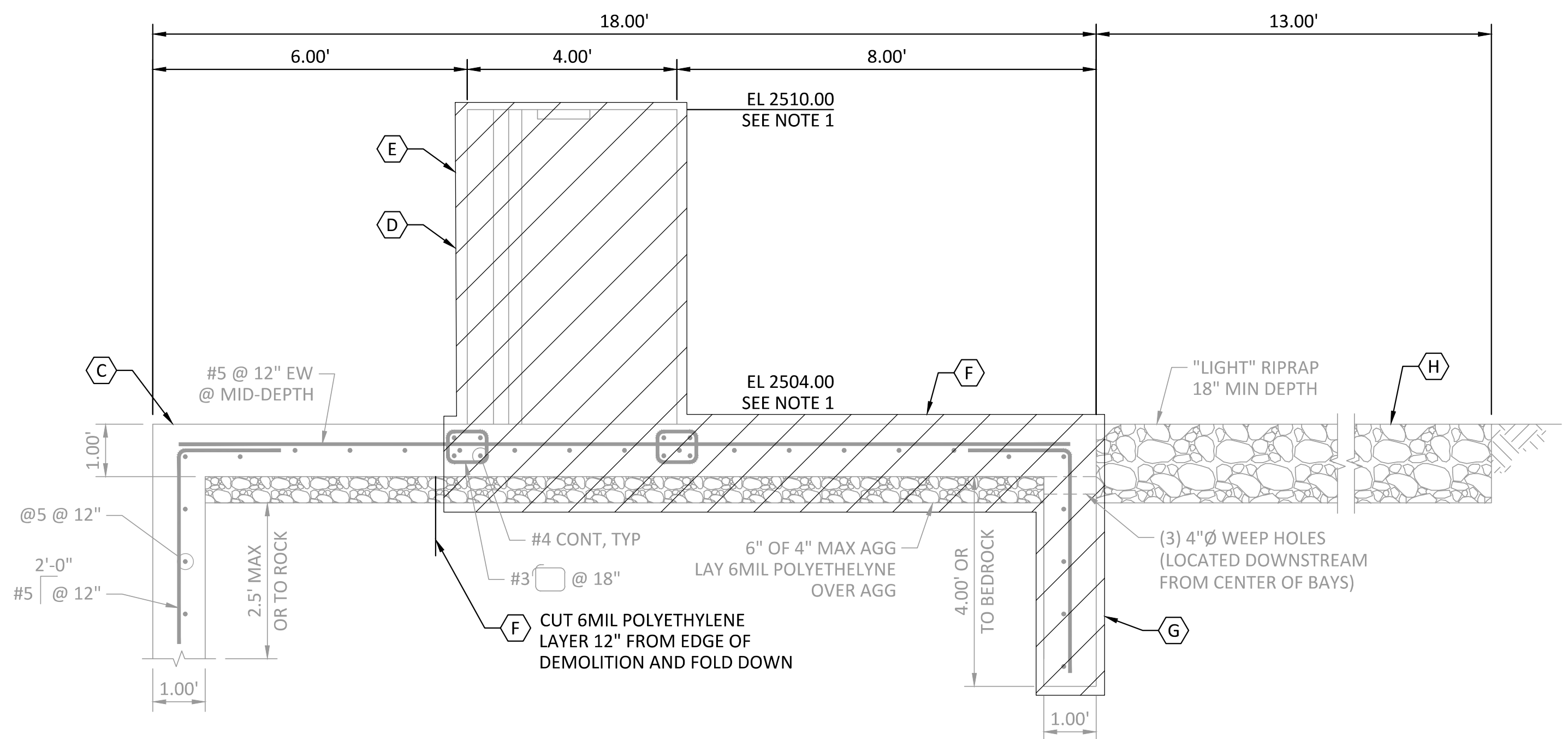
KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. JABIR</u>	DRAWING D105
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
ENLARGED DAM B DEMO PLAN AND SECTIONS		CHECKED <u>T. BOWEN</u>	
		PROJECT DATE <u>10/28/20</u>	

SHEET NOTES:

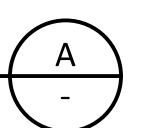
- ELEVATIONS SHOWN IN AS-BUILT SECTION UTILIZE A DIFFERENT VERTICAL DATUM THAN THE PROJECT VERTICAL DATUM, AND SHOULD NOT BE USED FOR REFERENCE.

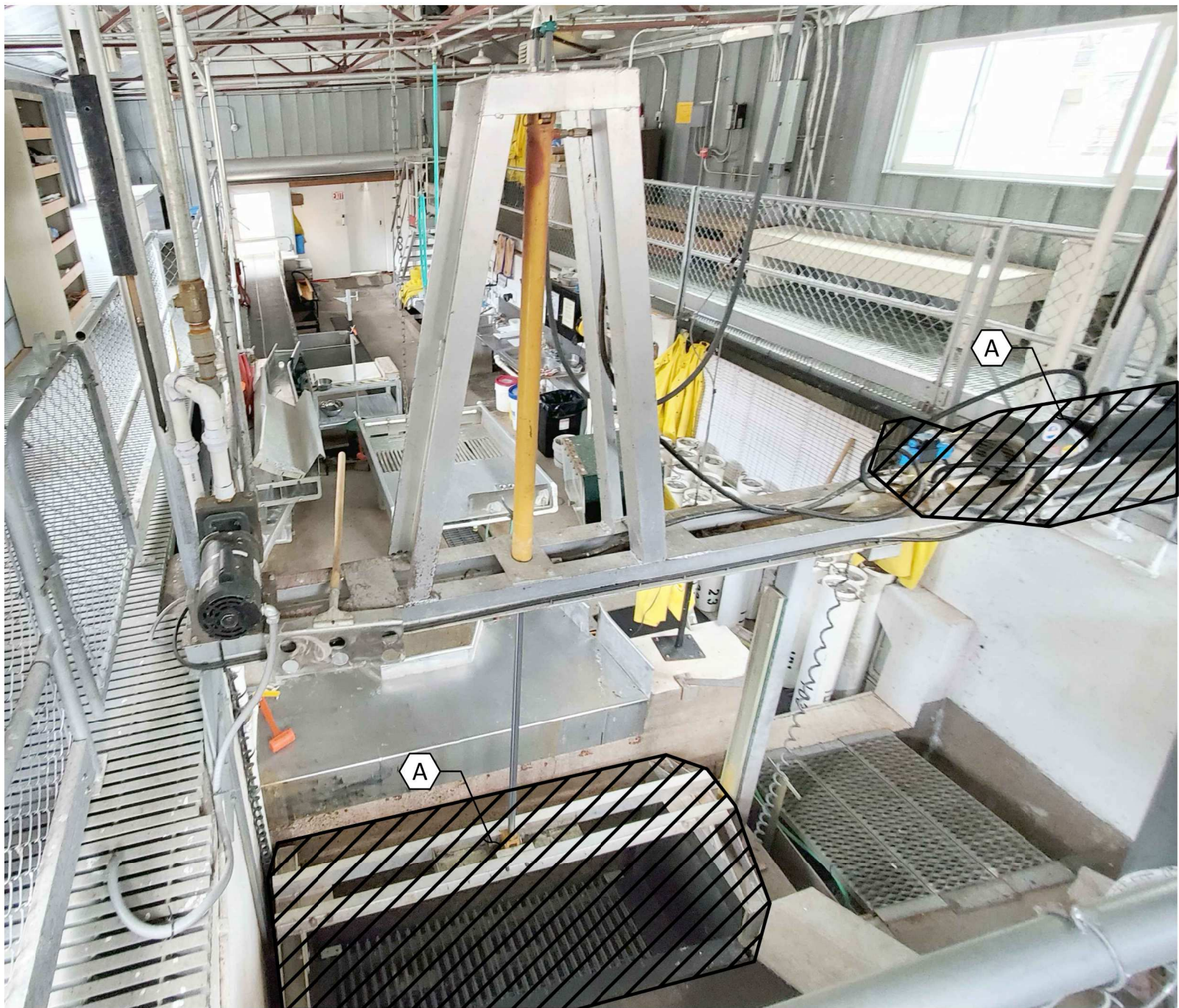
SHEET KEY NOTES:

- A RETAIN AND PROTECT EXIST CITY OF YREKA INTAKE. INTAKE TO REMAIN IN OPERATION FOR ENTIRE DURATION OF CONSTRUCTION.
- B RETAIN AND PROTECT EXISTING CITY OF YREKA SUPPLY PIPE. PRIOR TO ANY EARTHWORKS OR DEMOLITION IN THIS AREA, CONTRACTOR TO FIELD LOCATE THE EXIST PIPE AND PROVIDE PROTECTIVE MEASURES SUCH THAT PIPE REMAINS UNIMPACTED BY CONSTRUCTION. CITY OF YREKA SUPPLY PIPE SHALL REMAIN IN OPERATION FOR ENTIRE DURATION OF CONSTRUCTION.
- C RETAIN AND PROTECT EXISTING DAM B STRUCTURE, IMPOUNDMENT CONC SLAB, AND DOWNSTREAM APRON CONC SLAB WHERE NO DEMOLITION IS INDICATED. EXTENTS SHOWN ARE APPROXIMATE BASED ON AS-BUILT DATA PROVIDED BY THE CITY OF YREKA. EXTENTS SHALL BE DETERMINED IN THE FIELD. CONTRACTOR SHALL NOT LOAD THE EXIST DAM STRUCTURE OR CONC SLABS TO BE RETAINED WITH HEAVY EQUIPMENT.
- D SALVAGE EXIST STOP LOGS, AND COORDINATE RELOCATION WITH THE OWNER.
- E DEMOLISH EXIST CONC PIER, INCLUDING STOP LOG SLOTS. PIER DIMENSIONS ARE APPROXIMATELY 4.0' x 1.5'W x 6'H.
- F DEMOLISH EXIST CONC SLAB, AS INDICATED. CUT OR BURN REBAR BACK 2" FROM EXPOSED SURFACE. SLAB THICKNESS APPROXIMATELY 12" PER CITY OF YREKA AS-BUILTS. DIMENSIONS TO BE CONFIRMED IN THE FIELD. AS PART OF SLAB REMOVAL, REMOVE 6" THICK LAYER OF DRAIN AGGREGATE SUBGRADE AND CUT EXIST 6MIL POLYETHYLENE LAYER 12" FROM THE EDGE OF THE CONC DEMOLITION. FOLD 6MIL POLYETHYLENE LAYER DOWN OVER DRAIN AGGREGATE AT THE JUNCTION WITH THE REMAINING CONC SLAB.
- G DEMOLISH EXIST CUT-OFF WALL. CUT-OFF WALL APPROXIMATELY 12" THICK AND 4.0' DEEP (OR TO BEDROCK, WHICHEVER IS SHORTER) PER CITY OF YREKA AS-BUILTS.
- H AS PART OF THE SUBGRADE PREPARATION FOR THE NEW CONCRETE VELOCITY APRON CONSTRUCTION, REMOVE EXIST "LIGHT" RIPRAP PRIOR TO PLACEMENT OF APRON SUBGRADE FILL MATERIALS.



SECTION
SCALE: NTS



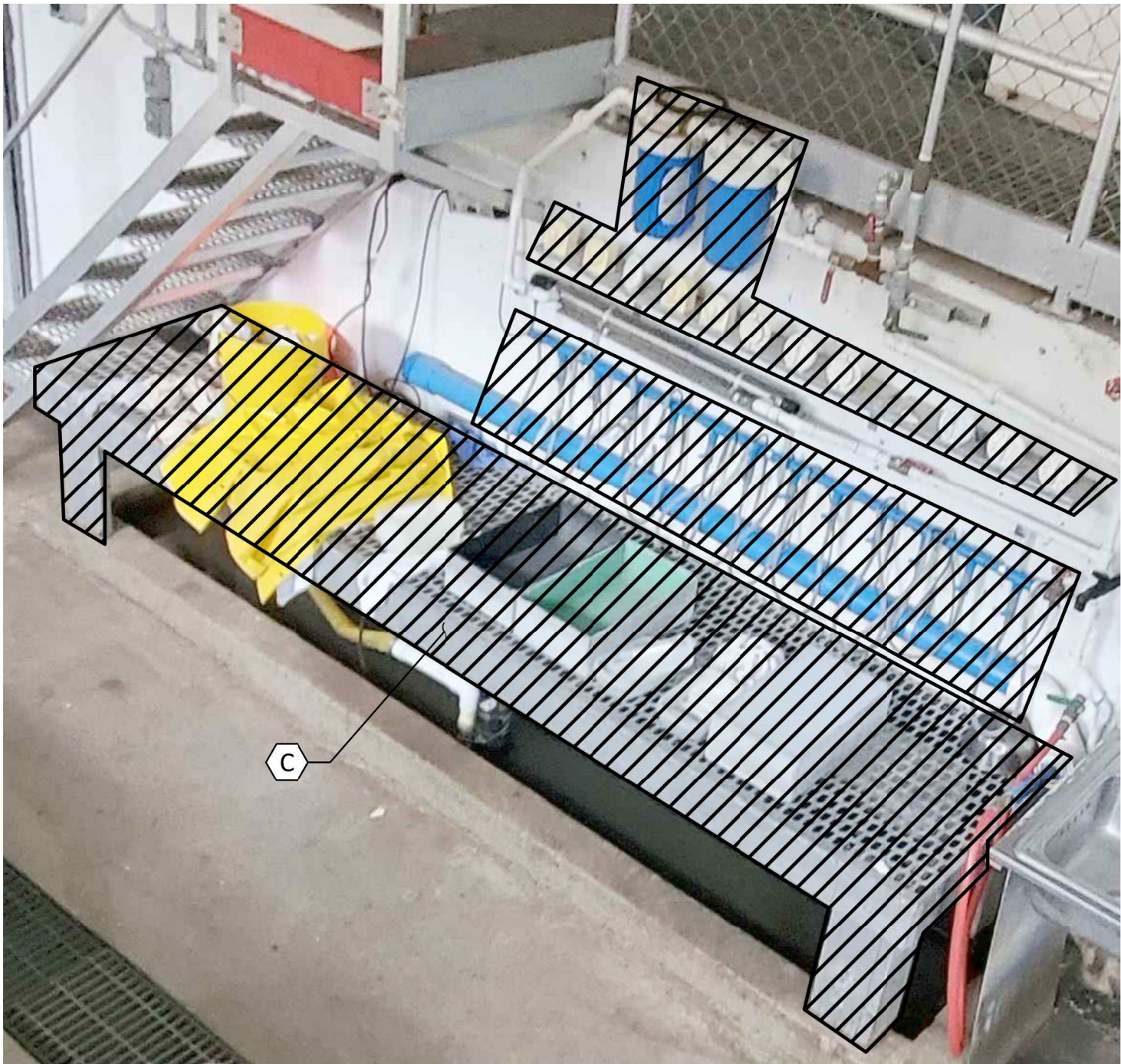


ELECTROANESTHESIA TANKS
SCALE: NTS



SPAWNING TABLE
SCALE: NTS

- SHEET KEY NOTES:
- A SALVAGE AND RELOCATE ELECTROANESTHESIA TANK, GUIDE RAILS, HYDRAULIC PUMP AND HYDRAULIC MANIFOLD FROM IRON GATE HATCHERY.
 - B SALVAGE AND RELOCATE SPAWNING TABLE, HOLDING TABLE, AND TRANSFER FLUMES FROM IRON GATE HATCHERY.
 - C SALVAGE AND RELOCATE WATER HARDENING TABLE, SUPPLY MANIFOLD, FILTERS AND UV LAMP FROM IRON GATE HATCHERY.
 - D SALVAGE AND RELOCATE EGG RINSE TABLE FROM IRON GATE HATCHERY.
 - E SALVAGE AND RELOCATE CONVEYOR BELT, MOTOR, AND TWO (2) 10-FT CONVEYOR FRAME SEGMENTS FROM IRON GATE HATCHERY.



WATERING HARDENING TABLE
SCALE: NTS



EGG RINSE TABLE
SCALE: NTS



CONVEYOR BELT
SCALE: NTS

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REV	DATE	BY	DESCRIPTION



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

KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S. ELLENSON</u>	DRAWING D601
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
IRON GATE HATCHERY EQUIPMENT RELOCATION PLAN		CHECKED <u>K. DeSOMBER</u>	
		PROJECT DATE <u>10/28/20</u>	



CROWDER (FRONT VIEW)

SCALE: NTS



CROWDER (UNDERSIDE VIEW)

SCALE: NTS

SHEET NOTES:

- 1. SEE MECHANICAL DRAWINGS FOR PROPOSED MODIFICATIONS TO FISH CROWDER FOLLOWING RELOCATION.

SHEET KEY NOTES:

- A SALVAGE AND RELOCATE MECHANICAL FISH CROWDER FROM IRON GATE FISH HATCHERY.
- B CUT 34" OFF LOWER GUIDES PRIOR TO RELOCATION. TOTAL HEIGHT OF GUIDE SHALL BE 97 3/4" AFTER DEMO.
- C DEMOLISH LOWER BRACE PRIOR TO RELOCATION.
- D DEMOLISH REAR BRACE PRIOR TO RELOCATION.

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



WARNING

0 1/2 1

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



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>S.ELLENSON</u>	DRAWING D602
FALL CREEK FISH HATCHERY		DRAWN <u>D. JOHNSTON</u>	
IRON GATE HATCHERY CROWDER MODIFICATION		CHECKED <u>K. DeSOMBER</u>	
		PROJECT DATE <u>10/28/20</u>	

GENERAL PROJECT NOTES:

- 1. ELEVATIONS GIVEN ARE TO FINISH GRADE UNLESS OTHERWISE SHOWN.
- 2. SLOPE UNIFORMLY BETWEEN CONTOURS AND SPOT ELEVATIONS SHOWN.
- 3. GEOTECHNICAL EVALUATION WAS NOT PREPARED SPECIFICALLY FOR THE FALL CREEK FISH HATCHERY PROJECT. HOWEVER, TWO BORINGS WERE COMPLETED BY AECOM IN 2019 TO SUPPORT THE COPCO BRIDGE DESIGN. REFER TO LOG OF CORE BORINGS B-13 AND B-14 PROVIDED AS AN ATTACHMENT TO THE SPECIFICATIONS.
- 4. CONTRACTOR SHALL REPAIR ALL EXIST SURFACE, UTILITIES, BUILDINGS, AND FOUNDATIONS IMPACTED BY CONSTRUCTION, WHICH ARE NOT INDICATED TO BE DEMOLISHED.
- 5. CONTRACTOR SHALL KEEP ALL CONSTRUCTION WITHIN THE WORK BOUNDARIES DEFINED FOR THIS PROJECT AS SHOWN. THIS INCLUDES, BUT IS NOT LIMITED TO, VEHICLES AND EQUIPMENT, LIMITS OF TRENCH EXCAVATION, STOCKPILED EXCAVATED MATERIAL, BACKFILL MATERIAL, AND PIPE MATERIAL.
- 6. SEE SPECIFICATION 31 00 00 FOR AGGREGATE MATERIAL TYPES.

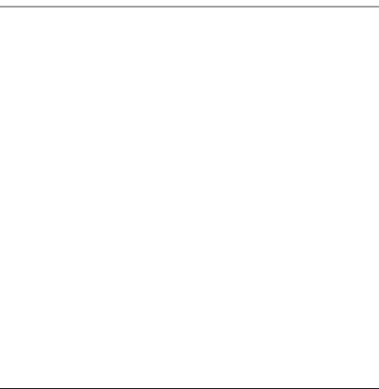
GENERAL CONSTRUCTION NOTES:

- 1. ALL MATERIAL FURNISHED ON, OR FOR THE PROJECT, MUST MEET THE MINIMUM REQUIREMENTS OF APPROVING AGENCIES. AT THE REQUEST OF THE APPROVING AGENCY OR THE DESIGN ENGINEER, CONTRACTORS SHALL FURNISH PROOF THAT ALL MATERIALS INSTALLED ON THIS PROJECT MEET THE SPECIFICATION REQUIREMENTS SET FORTH IN THE PROJECT SPECIFICATIONS.
- 2. ANY DEVIATION FROM THE APPROVED PLANS AND SPECIFICATIONS MUST HAVE DESIGN ENGINEER AND OWNER APPROVAL IN WRITING PRIOR TO CONSTRUCTION.
- 3. ALL DISTURBED SURFACES SHALL BE RETURNED TO ORIGINAL OR BETTER CONDITIONS.

GENERAL YARD PIPING AND UTILITY NOTES:

- 1. EXIST BASE MAP MAY CONTAIN ERRORS. CONTRACTOR TO VERIFY LOCATION OF EXIST PIPES, STRUCTURES, AND OVERHEAD UTILITIES PRIOR TO THE START OF CONSTRUCTION OR THE SUBMITTAL OF SHOP DRAWINGS.
- 2. EXIST PIPING LOCATIONS ARE UNKNOWN. CONTRACTOR SHALL DEMOLISH ALL EXIST PIPING SYSTEMS AS APPROVED BY THE ENGINEER.
- 3. THE CONTRACTOR SHALL PROTECT ALL EXISTING UTILITIES TO REMAIN.
- 4. THE CONTRACTOR SHALL CONTACT THE UTILITY AGENCIES FOR FIELD LOCATION OF UTILITIES, AT LEAST 72 HOURS PRIOR TO START OF CONSTRUCTION.
- 5. SHADING, SCREENING, OR LIGHT-LINING OF PIPING AND/OR EQUIPMENT IS USED TO INDICATE EXIST COMPONENTS OR TO DE-EMPHASIZE PROPOSED IMPROVEMENTS FOR WHICH INFORMATION IS PRESENTED ELSEWHERE IN THE DRAWINGS. REFER TO CONTENT OF EACH SHEET FOR USAGE.
- 6. THE CONTRACTOR SHALL PROVIDE A MINIMUM OF 24" COVER ON TOP OF ALL PIPELINES UNLESS OTHERWISE INDICATED OR DIRECTED.
- 7. ELEVATIONS SHOWN ARE TO THE INVERT (FLOWLINE) OF PIPES, UNLESS OTHERWISE NOTED.
- 8. STRAIGHT SLOPES SHALL BE MAINTAINED BETWEEN INVERTS SHOWN OR SPECIFIED.
- 9. THE CONTRACTOR SHALL ADJUST ALL VALVE BOXES, PULL BOXES, AND MANHOLES TO FINISHED GRADE UNLESS OTHERWISE SHOWN OR SPECIFIED.
- 10. ALL PIPE TRENCHING AND BACKFILL SHALL BE IN ACCORDANCE WITH THE CONTRACT DOCUMENTS.
- 11. ALL BUILDING COORDINATES ARE TO OUTSIDE CORNER OF BUILDING STEM WALL UNLESS OTHERWISE NOTED.
- 12. FOR PIPING INSIDE STRUCTURES AND POND INLETS, SEE MECHANICAL DRAWINGS.
- 13. THE CONTRACTOR SHALL PROVIDE PIPE PENETRATIONS PER MECHANICAL DETAILS M402 OR M404 FOR ALL PIPES PENETRATING CONC STRUCTURES, UNLESS SHOWN OTHERWISE.
- 14. THE CONTRACTOR SHALL PROVIDE TRANSITION COUPLINGS AT ALL YARD PIPE JOINTS WHERE THERE IS A MATERIAL CHANGE, UNLESS NOTED OTHERWISE.
- 15. CONC THRUST BLOCKS PER DETAIL C605 SHALL BE PLACED ON ALL BENDS AND TEES FOR ALL PIPELINES 4"Ø AND LARGER WHERE PIPES ARE INDICATED TO BE PRESSURIZED.
- 16. ALL SLEEVE COUPLINGS ON YARD PIPING SHALL BE UNRESTRAINED, UNLESS NOTED OTHERWISE.

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



WARNING

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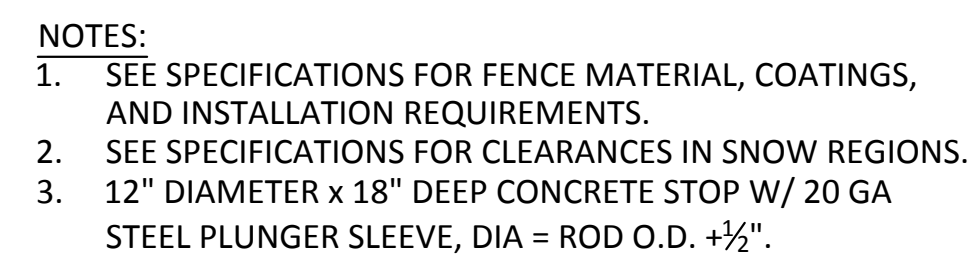
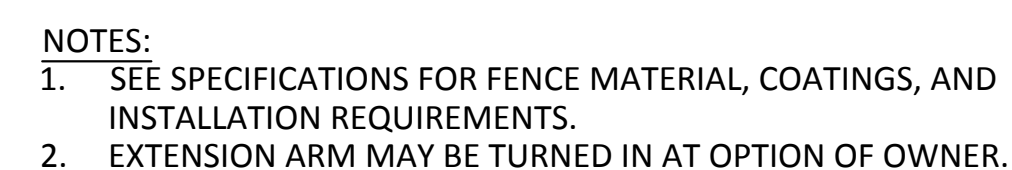
1/2

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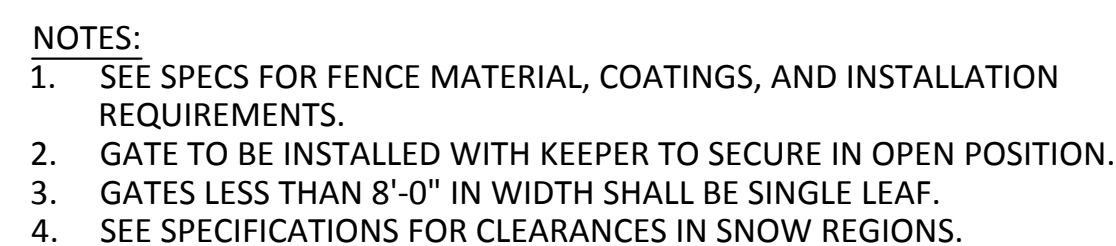
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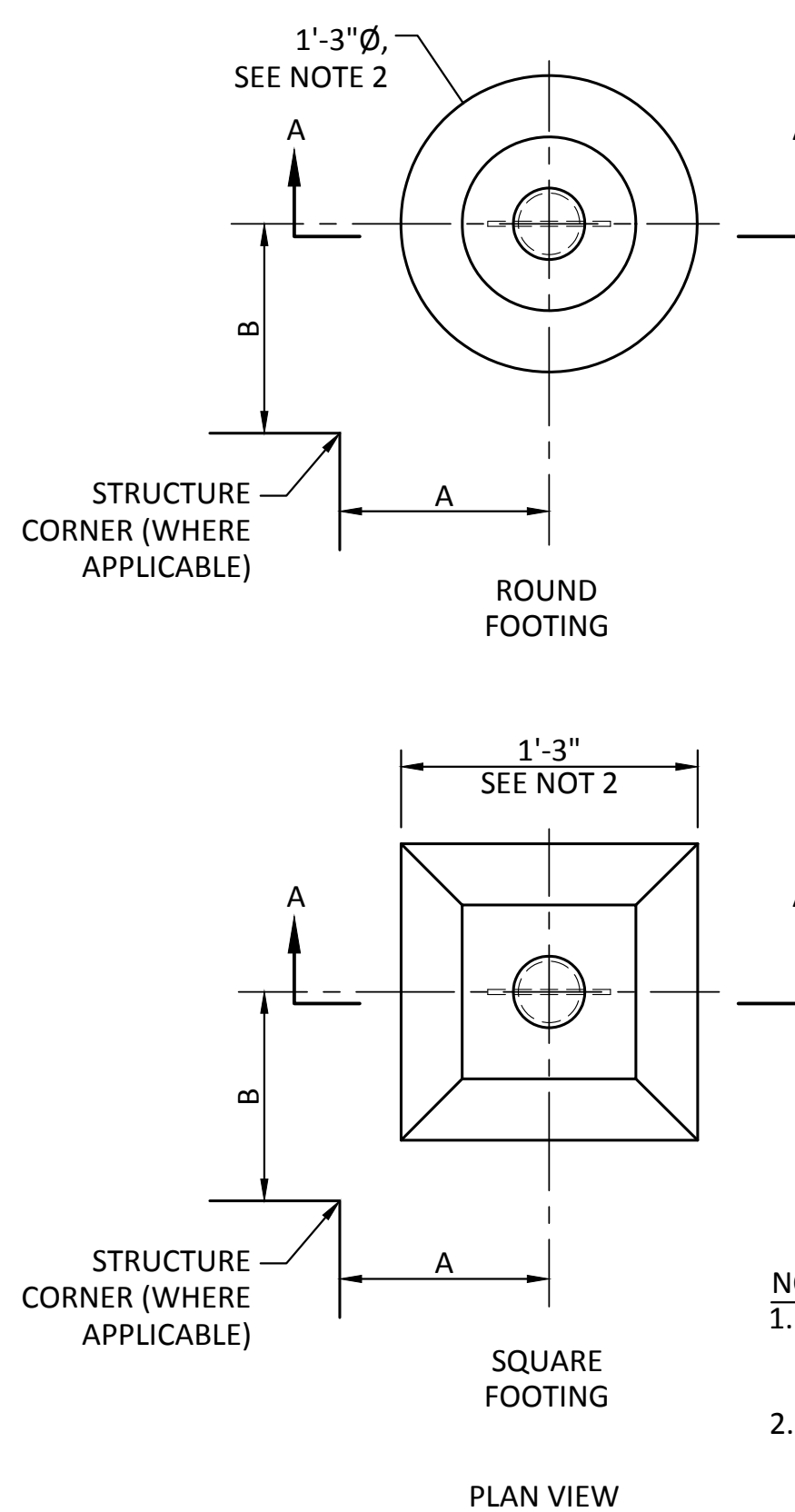
KLAMATH RIVER RENEWAL CORPORATION		DRAWING GC001
FALL CREEK FISH HATCHERY		
CIVIL GENERAL NOTES		
DESIGNED <u>A. LEMAN</u>		
DRAWN <u>J. LAHMON</u>		
CHECKED <u>V. AUTIER</u>		
PROJECT DATE <u>10/28/20</u>		



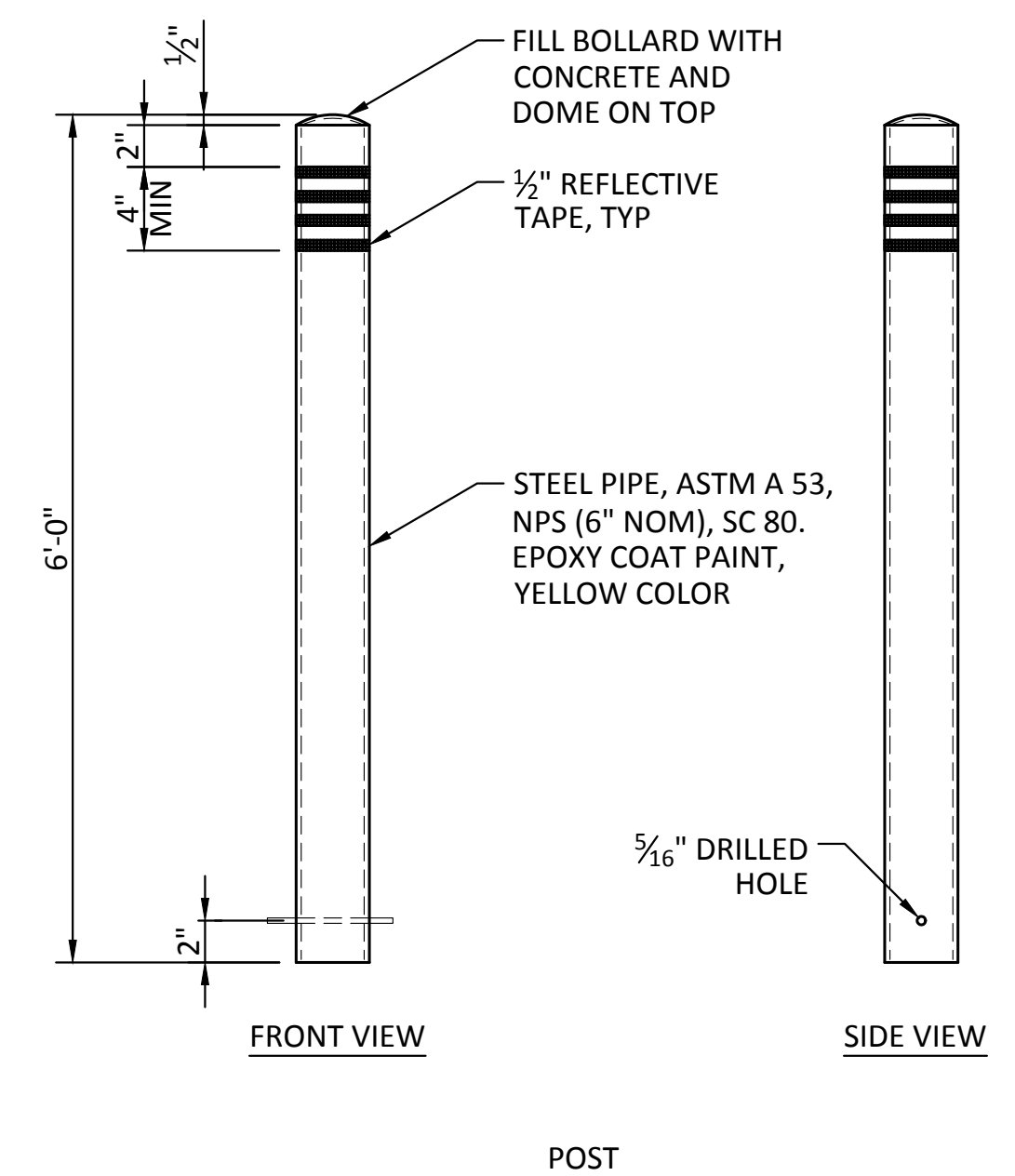
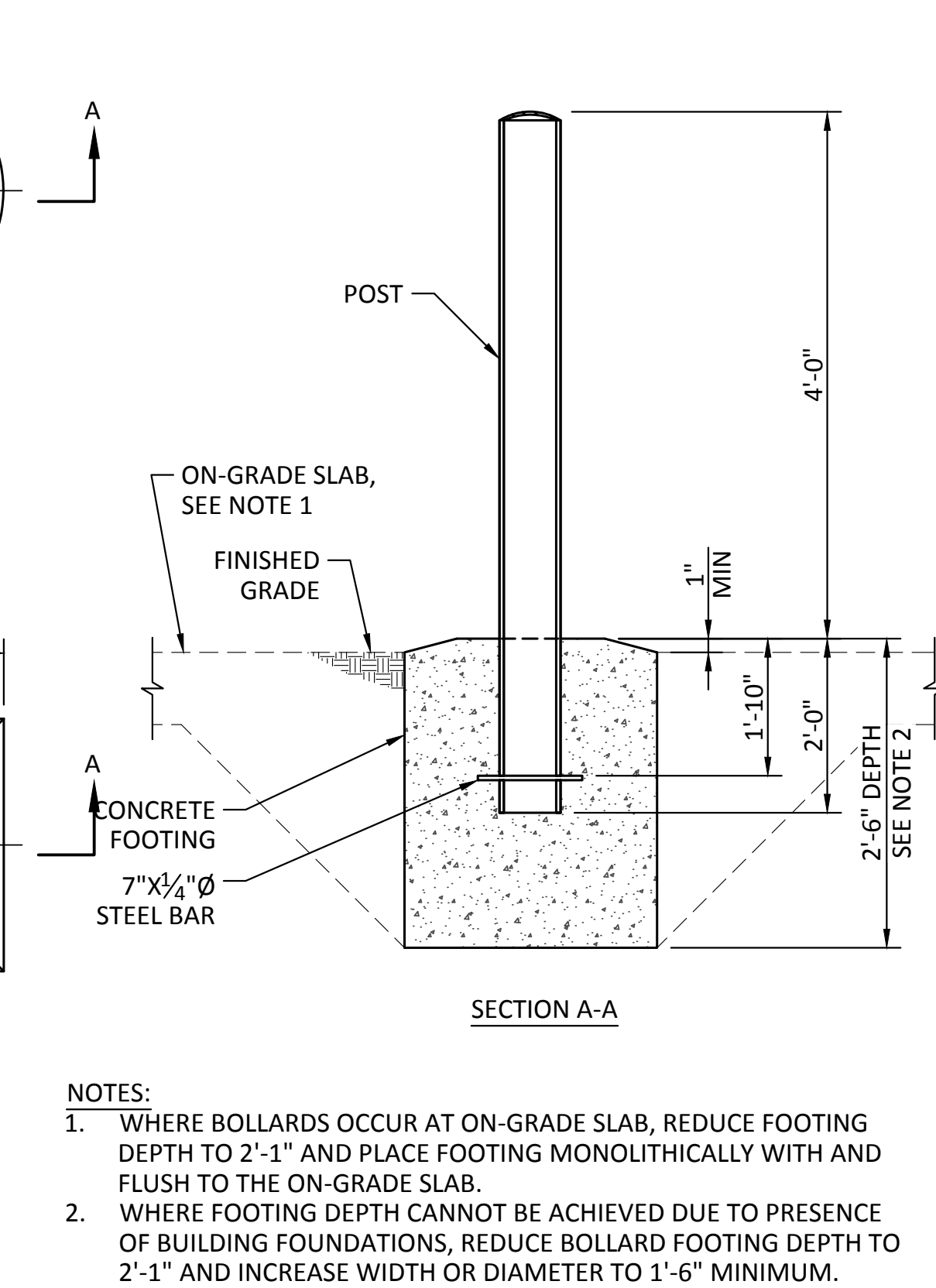
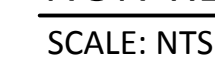
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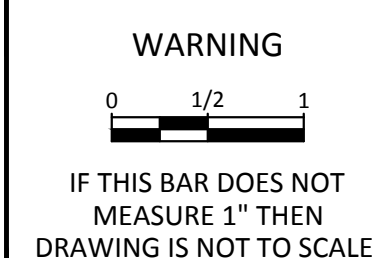


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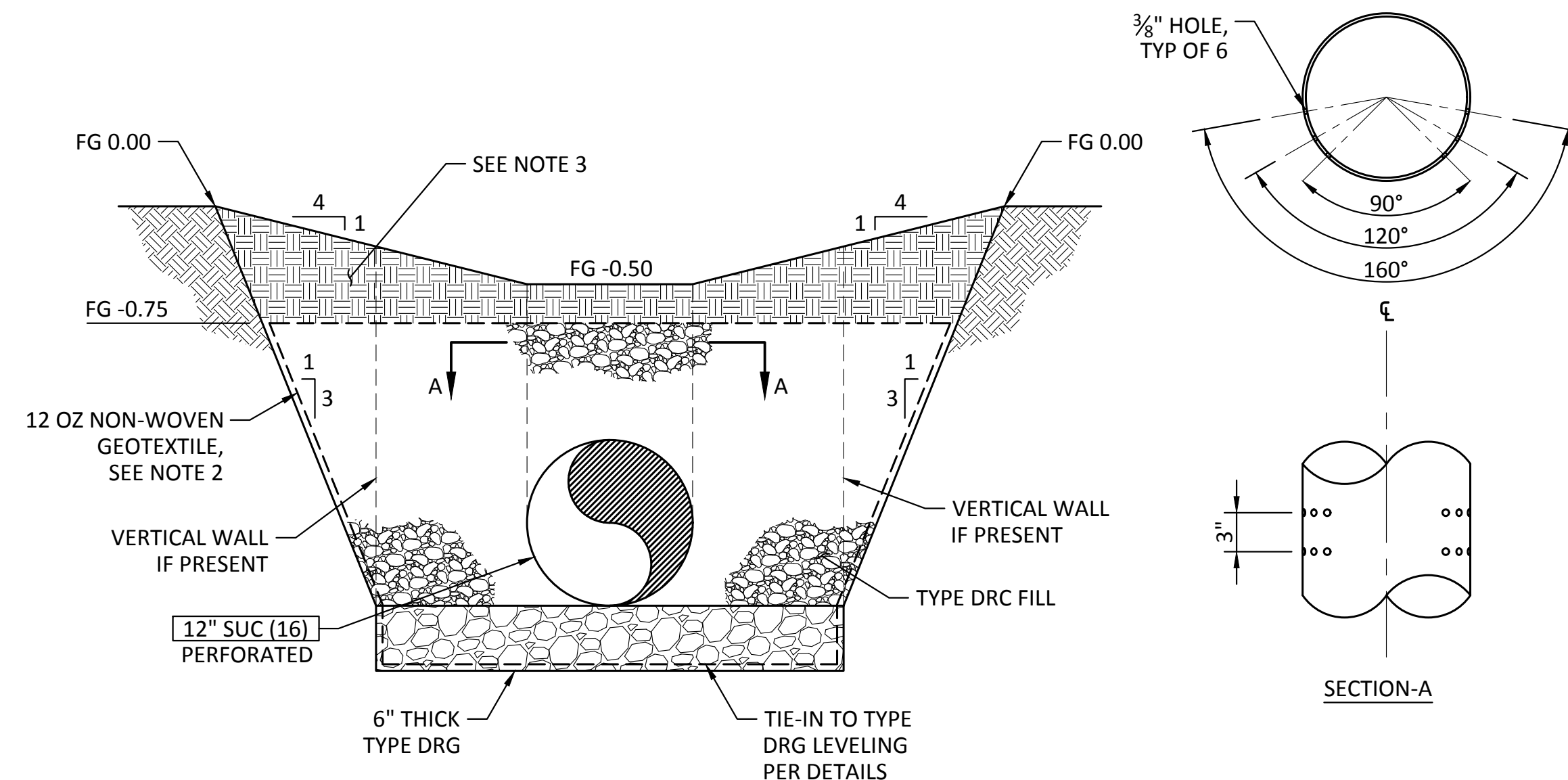
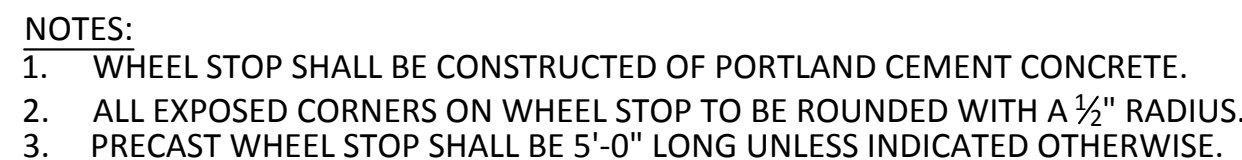


LOCATION	A	B
COHO BUILDING (CORNERS)	12"	12"
CHINOOK INCUBATION BUILDING (CORNERS)	12"	12"
SPAWNING BUILDING (CORNERS)	30"	30"
OTHERS	PER PLANS	PER PLANS

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



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING GC002	JOB NO. 000000
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>		
CIVIL STANDARD DETAILS 1	CHECKED <u>V. AUTIER</u>		
	PROJECT DATE <u>10/28/20</u>		



SCALE: NTS



C116

SCALE: NTS



SCALE: NTS

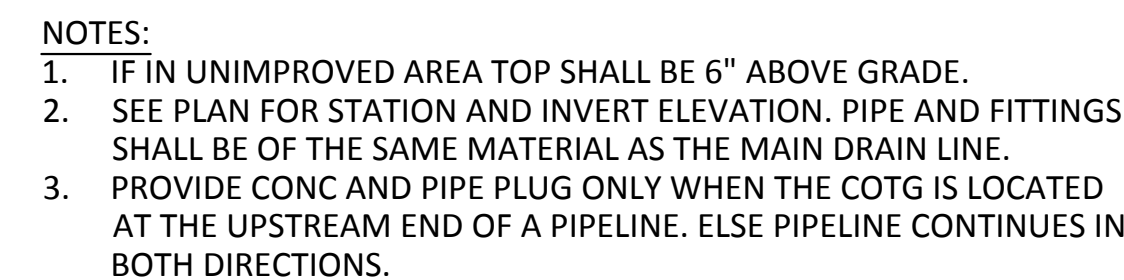
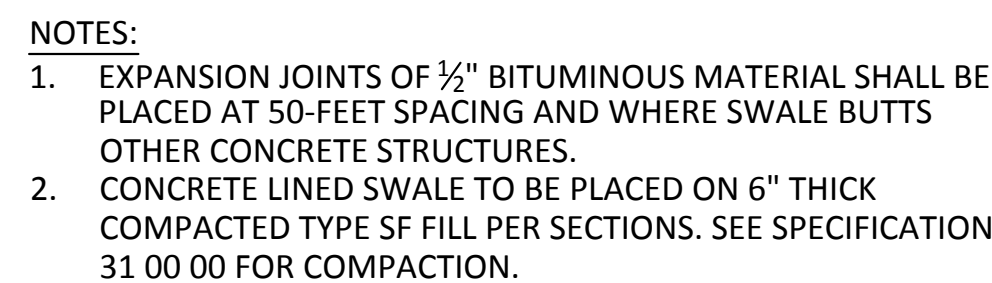
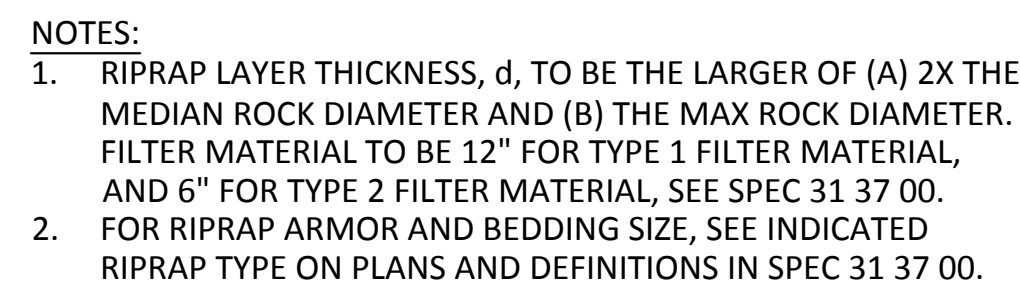


C135

SCALE: NTS



C138



SCALE: NTS



C202

SCALE: NTS



C206

SCALE: NTS

C302

SCALE: NTS



C305

WARNING

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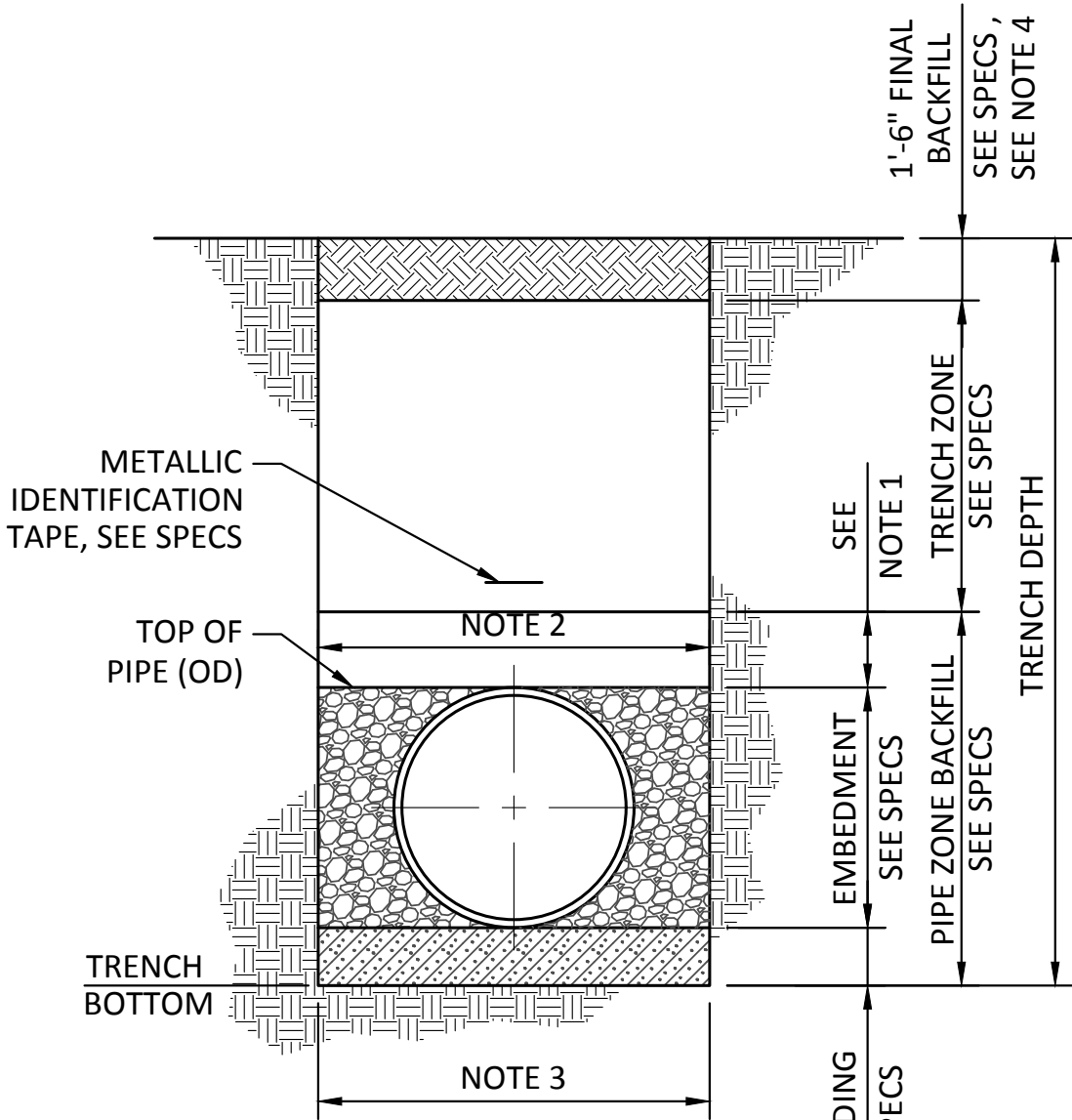


IF THIS BAR DOES NOT
MEASURE 1" THEN
DRAWING IS NOT TO SCALE

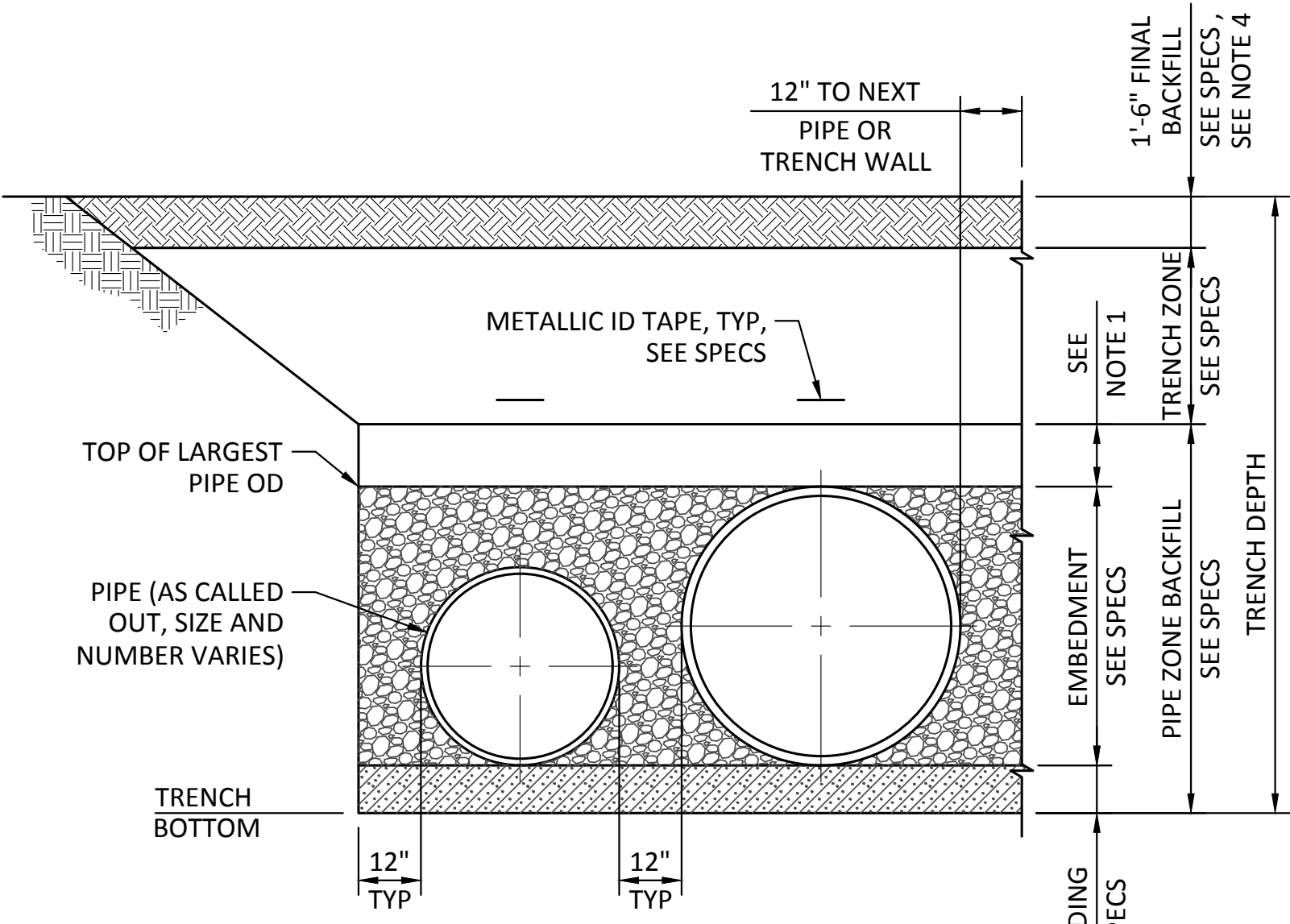


KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING GC003
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
CIVIL STANDARD DETAILS 2	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	

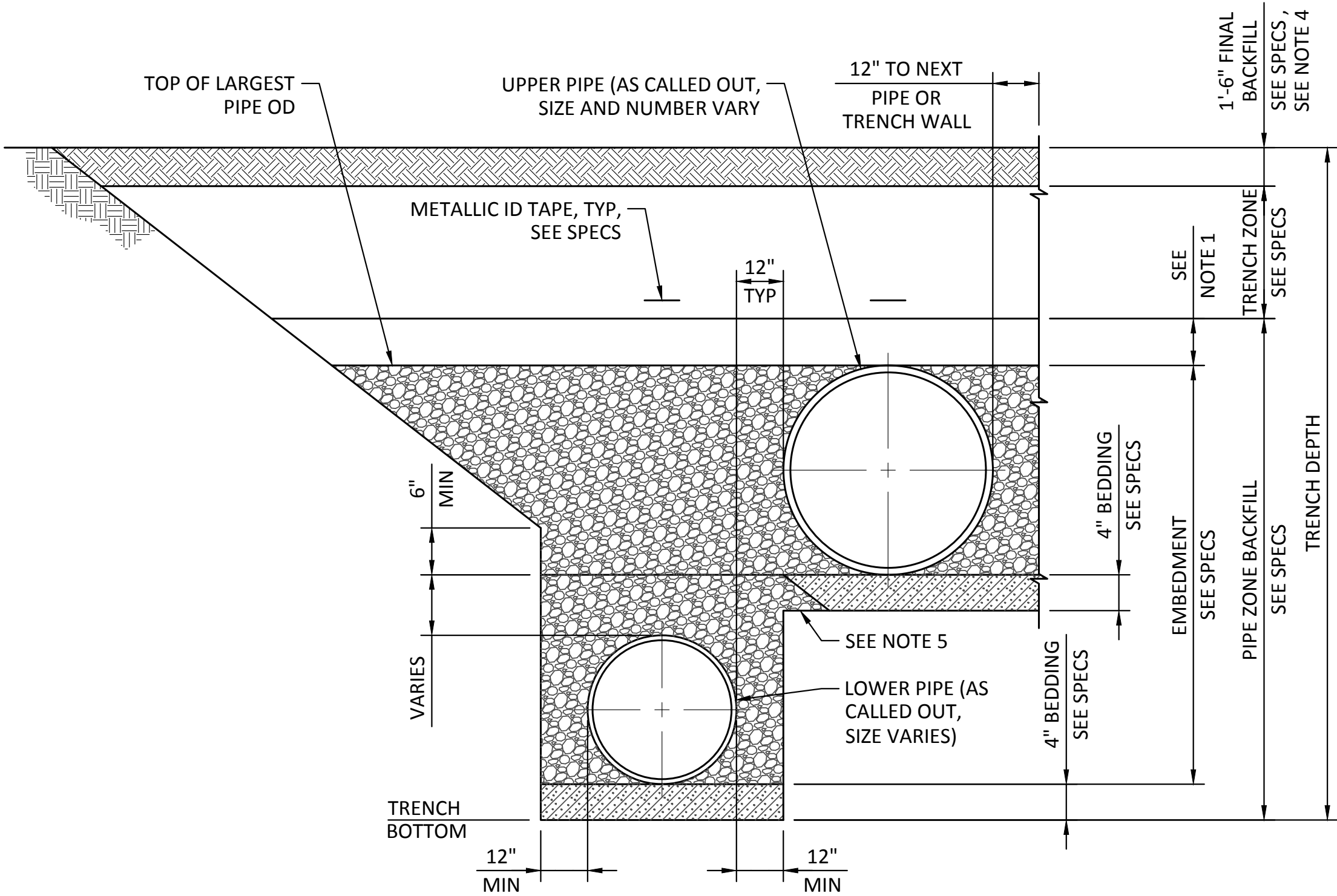
- A. FLEXIBLE PIPE REFERS TO ALL STEEL, DUCTILE-IRON, AND PLASTIC PIPES.
- B. TYPICAL TRENCH SECTIONS ARE TO BE USED ONLY WHERE STABLE, COMPACT SOIL CONDITIONS EXIST. IF BOULDERS OR LARGE OBSTRUCTIONS ARE ENCOUNTERED, TRENCH SECTIONS MAY BE DEEPER OR WIDER THAN SHOWN. THE ENGINEER SHALL BE ADVISED SHOULD THIS OCCUR.
- C. THE NEED FOR PROTECTIVE SYSTEMS AND EXCAVATION SLOPES SHALL BE DETERMINED CONSIDERING APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS, AND GEOTECHNICAL CONSULTANTS' RECOMMENDATIONS.
- D. PROTECTIVE SYSTEMS SHALL BE DESIGNED AND BUILT IN ACCORDANCE WITH THE APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS.
- E. SUPPORTING DOCUMENTATION SHALL BE SUBMITTED TO THE ENGINEER REGARDING PIPE DESIGN AND COMPLIANCE WITH APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS.
- F. UNSUPPORTED VERTICAL AND/OR SLOPING TRENCH WALL SLOPES SHALL NOT BE STEEPER THAN ALLOWED BY APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS, UNLESS SUPPORTING DOCUMENTATION IS SUBMITTED, ACCORDING TO AFOREMENTIONED SAFETY STANDARDS.
- G. TRENCH SECTIONS OTHER THAN THE TYPICAL SECTIONS SHOWN MAY BE UTILIZED PROVIDED THEY COMPLY WITH APPLICABLE LOCAL, STATE AND FEDERAL (OSHA) SAFETY STANDARDS AND REGULATIONS. DOCUMENTATION SUPPORTING THIS COMPLIANCE AND PIPE DESIGN CALCULATIONS SHALL BE SUBMITTED TO THE ENGINEER.
- H. IF OVER-EXCAVATION DUE TO POOR FOUNDATION MATERIAL IS ORDERED BY THE ENGINEER, THE BACKFILL MATERIAL SHALL BE ACCORDING TO EARTHWORK SPECIFICATION 31 00 00.
- I. IF DURING CONSTRUCTION, THE WATER TABLE IS DISCOVERED TO BE ABOVE THE TRENCH BOTTOM, THE ENGINEER SHALL BE NOTIFIED, AND APPROPRIATE DEWATERING SHALL BE IMPLEMENTED TO LOWER THE WATER LEVEL BELOW THE TRENCH BOTTOM. THE BACKFILL MATERIAL SHALL BE ACCORDING TO THE EARTHWORK SECTIONS OF THE SPECIFICATIONS, OR AS ORDERED BY THE ENGINEER.
- J. ALL PIPE BEDDING, PIPE ZONE BACKFILL, AND TRENCH ZONE BACKFILL MATERIAL TYPES AND COMPACTION REQUIREMENTS ARE INDICATED IN SPECIFICATION 31 00 00.



TRENCH SECTION - SINGLE PIPE



TRENCH SECTION - MULTIPLE PIPES (SAME IE)



TRENCH SECTION - MULTIPLE PIPES (BENCHED)

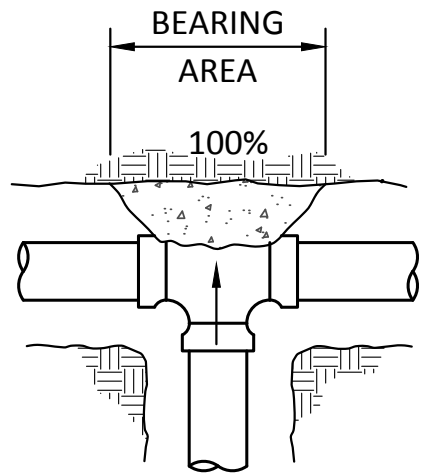
NOTES:

1. 6" MIN FOR PIPE DIAMETER < 24" LESS THAN OR EQUAL TO 24".
2. MAX TRENCH WIDTH @ TOP OF PIPE:
O.D. + 36" FOR 18" & LARGER PIPE O.D.
O.D. + 24" FOR LESS THAN 18" PIPE O.D.
3. MIN TRENCH BOTTOM WIDTH =
O.D. + 24" FOR MECHANICAL COMPACTION
4. WHERE PIPES ARE UNDER GRAVEL ROAD SURFACING OR ASPHALT REPAIR, FINAL BACKFILL SHALL BE TO 18" BELOW THE ROAD SUBGRADE. PLACE FILL PER SPECIFICATIONS AND TOP WITH ROAD SURFACING PER DETAIL C134 OR C135, PER LOCATION.
5. CONSTRUCT LOWER PIPE TRENCH TO 12" MIN. EITHER SIDE OF LOWER PIPE AND UP TO INVERT ELEVATION OF UPPER PIPE. THEN PLACE BEDDING FOR UPPER PIPE, AND CONSTRUCT UPPER PIPE TRENCH. UPPER PIPE TRENCH BEDDING NOT TO INFRINGE UPON EMBEDMENT OF LOWER PIPE TO 12" EITHER SIDE.

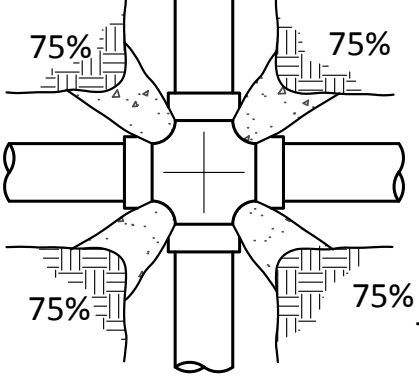
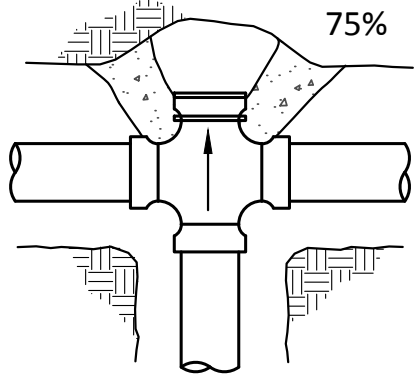
TRENCH SECTION FLEXIBLE PIPE

SCALE: NTS

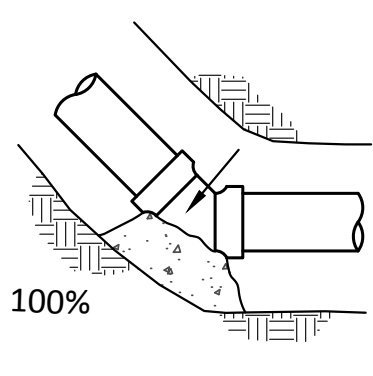
C601



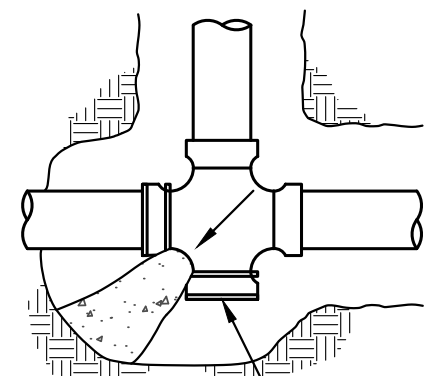
75% OF TEE, TYP



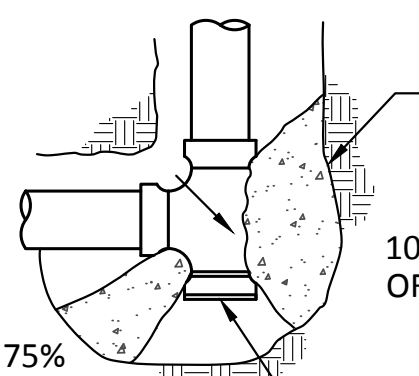
75% OF TEE, TYP



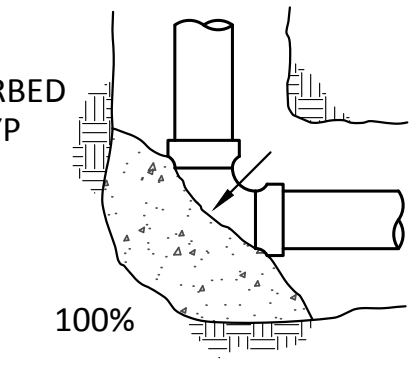
PLAN



100% OF 90° ELL



75%



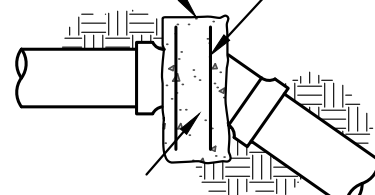
100%

THRUST DIRECTION

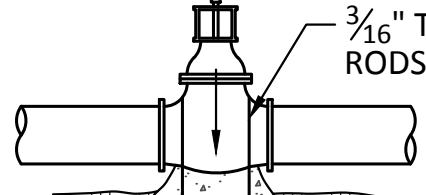
NOTE:

FIGURE (100%) AT THRUST BLOCK INDICATES PERCENT OF TOTAL THRUST TO BE APPLIED FOR BEARING AREA.

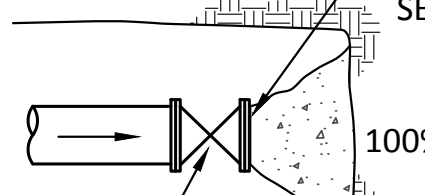
WEIGHT OF CONCRETE TO RESIST 100% OF TOTAL THRUST



VERTICAL BLEND



VALVE



DEAD-END

THRUST PER PSI OF WATER PRESSURE AT VARIOUS FITTINGS						
PIPE SIZE	11.25° BEND	22.5° BEND	30° BEND	45° BEND	90° BEND	DEAD END / TEE
4	3	7	9	13	24	24
6	8	15	20	29	54	54
8	13	26	35	52	95	95
10	21	41	55	81	150	150
12	29	59	78	115	213	213
14	36	71	94	139	257	257
16	47	93	123	182	337	337
18	59	118	156	231	427	427
20	73	146	194	286	529	529
24	106	211	280	414	764	764

EXAMPLE:

8-INCH 90° ELBOW, PRESSURE = 200 PSI

FROM TABLE: THRUST = 95x200 = 19,000 LB

ASSUME BEARING STRENGTH OF SOIL = 2000 PSF

$$\frac{19,000}{2000} = 9.5 \text{ SQ FT}$$

BEARING AREA REQUIRED FOR THRUST BLOCK

NOTES:

1. IN USING THE ABOVE TABLES, USE THE MAXIMUM INTERNAL PRESSURE ANTICIPATED (i.e. HYDROSTATIC TEST PRESSURE).
2. SEE SOILS REPORT FOR BEARING STRENGTH OF SOIL IN THE ABSENCE OF A SOILS REPORT AN AVERAGE SOIL (SPADABLE MEDIUM CLAY) CAN BE ASSUMED TO HAVE A BEARING STRENGTH OF 2000 PSF.
3. USE LIGHTWEIGHT CONCRETE FOR HILL THRUST BLOCK. CONCRETE FOR THRUST BLOCKS TO BE 2000 PSI.
4. THRUST BLOCKS SHALL BE PLACED ON ALL PRESSURE PIPE BENDS AND TEES. PRESSURE PIPES INCLUDE ALL SUPPLY LINES, AND A PORTION OF THE DRAIN LINE, SO INDICATED ON THE PLANS.

CONCRETE THRUST BLOCKS

SCALE: NTS

C605

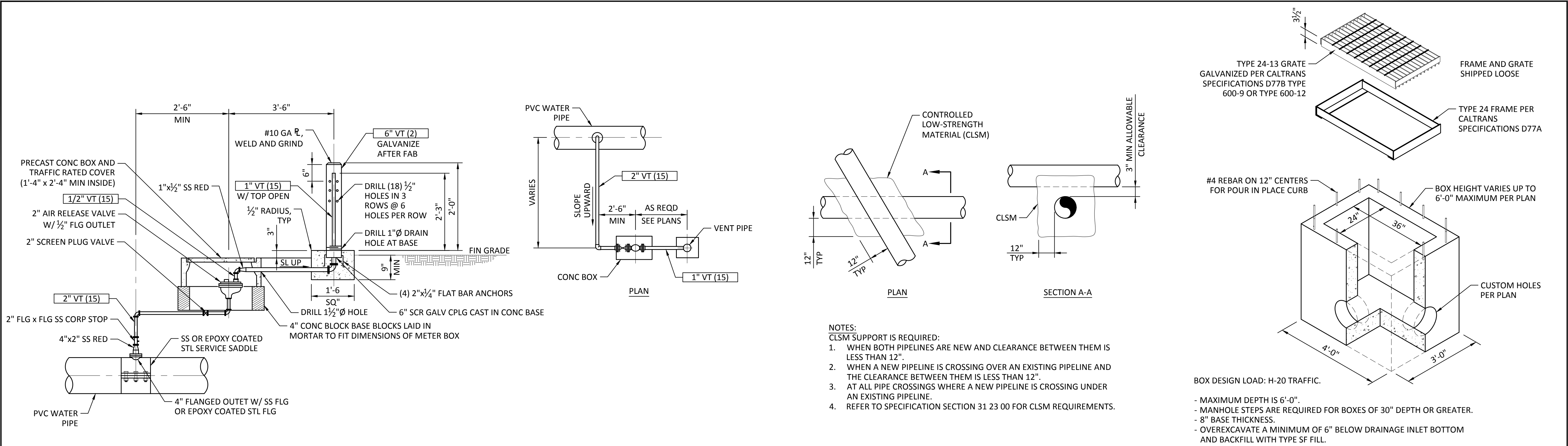
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION	
REV	DATE	BY	DESCRIPTION	



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

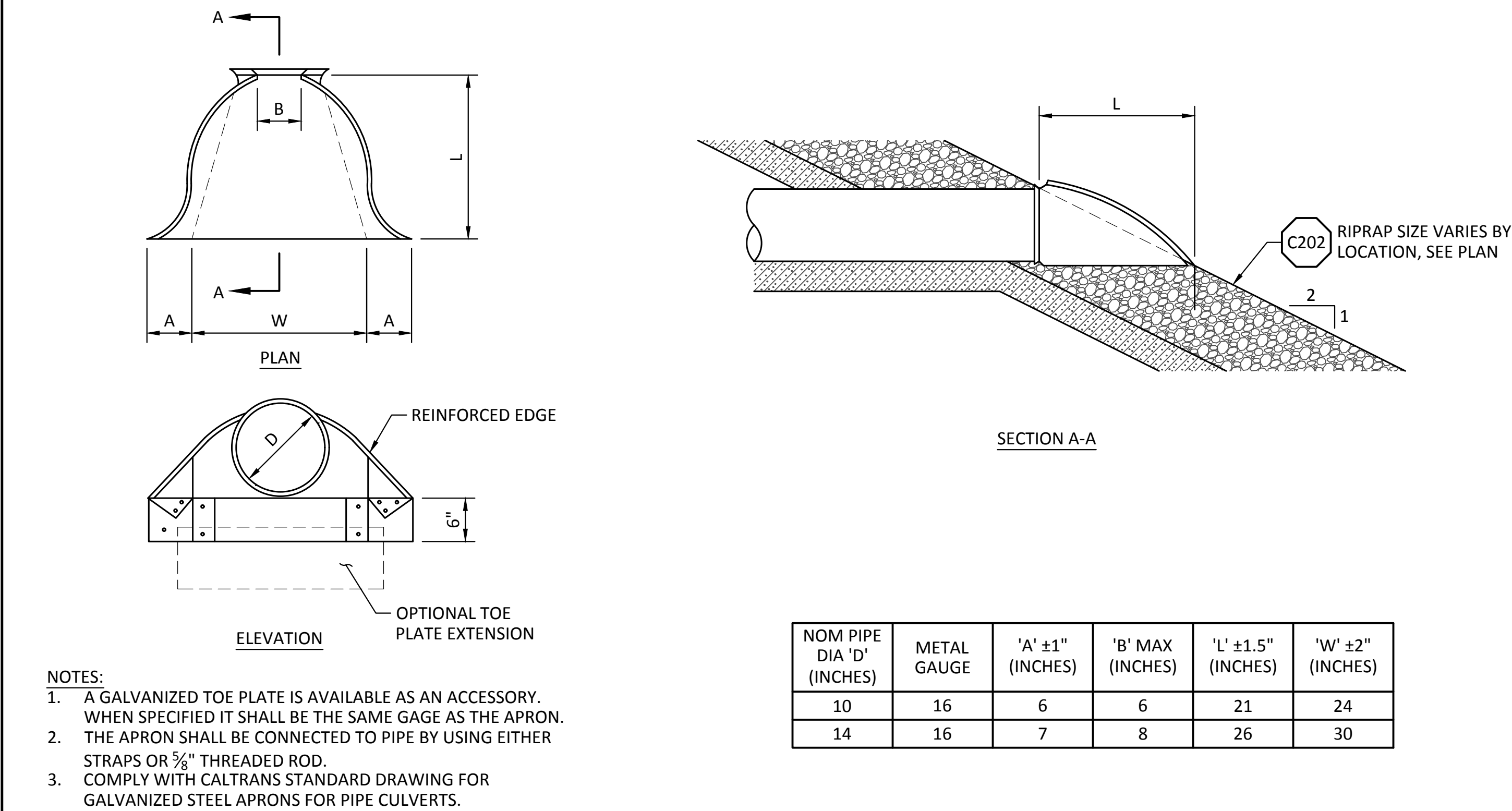


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	A. LEMAN	DRAWING GC004
FALL CREEK FISH HATCHERY		DRAWN	J. LAHMON	
CIVIL STANDARD DETAILS 3		CHECKED	V. AUTIER	
		PROJECT DATE	10/28/20	



2" AIR RELEASE VALVE (ARV) ASSEMBLY

SCALE: NTS



STORM DRAIN OUTFALL

SCALE: NTS

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

WARNING

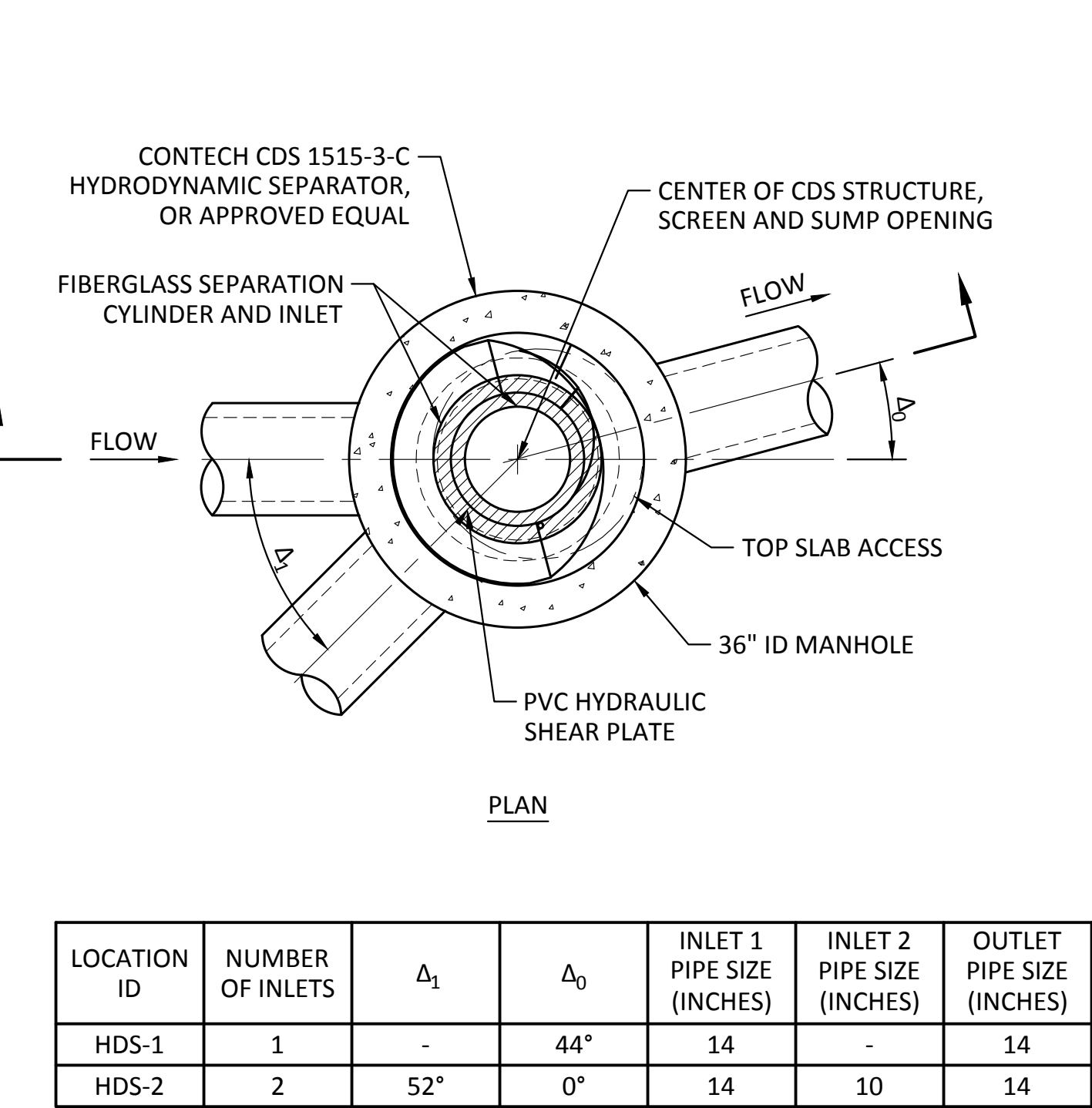
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

McMILLEN JACOBS ASSOCIATES

KLAMATH RIVER RENEWAL CORPORATION

TYPICAL PIPE CROSSING

SCALE: NTS



STORM SEWER HYDRODYNAMIC SEPARATOR

SCALE: NTS

KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

CIVIL STANDARD DETAILS 4

DESIGNED A. LEMAN

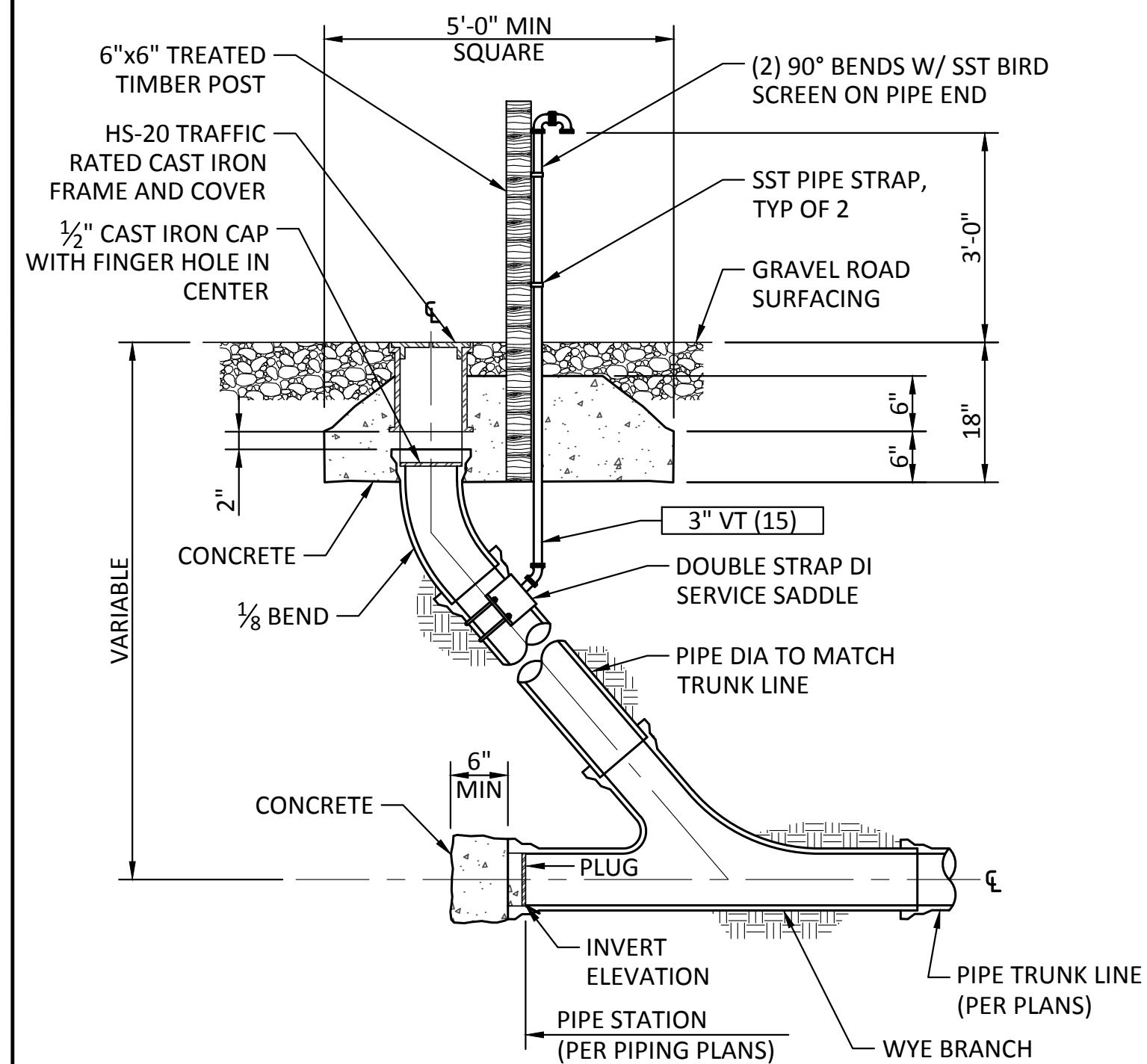
DRAWN J. LAHMON

CHECKED V. AUTIER

PROJECT DATE 10/28/20

DRAWING

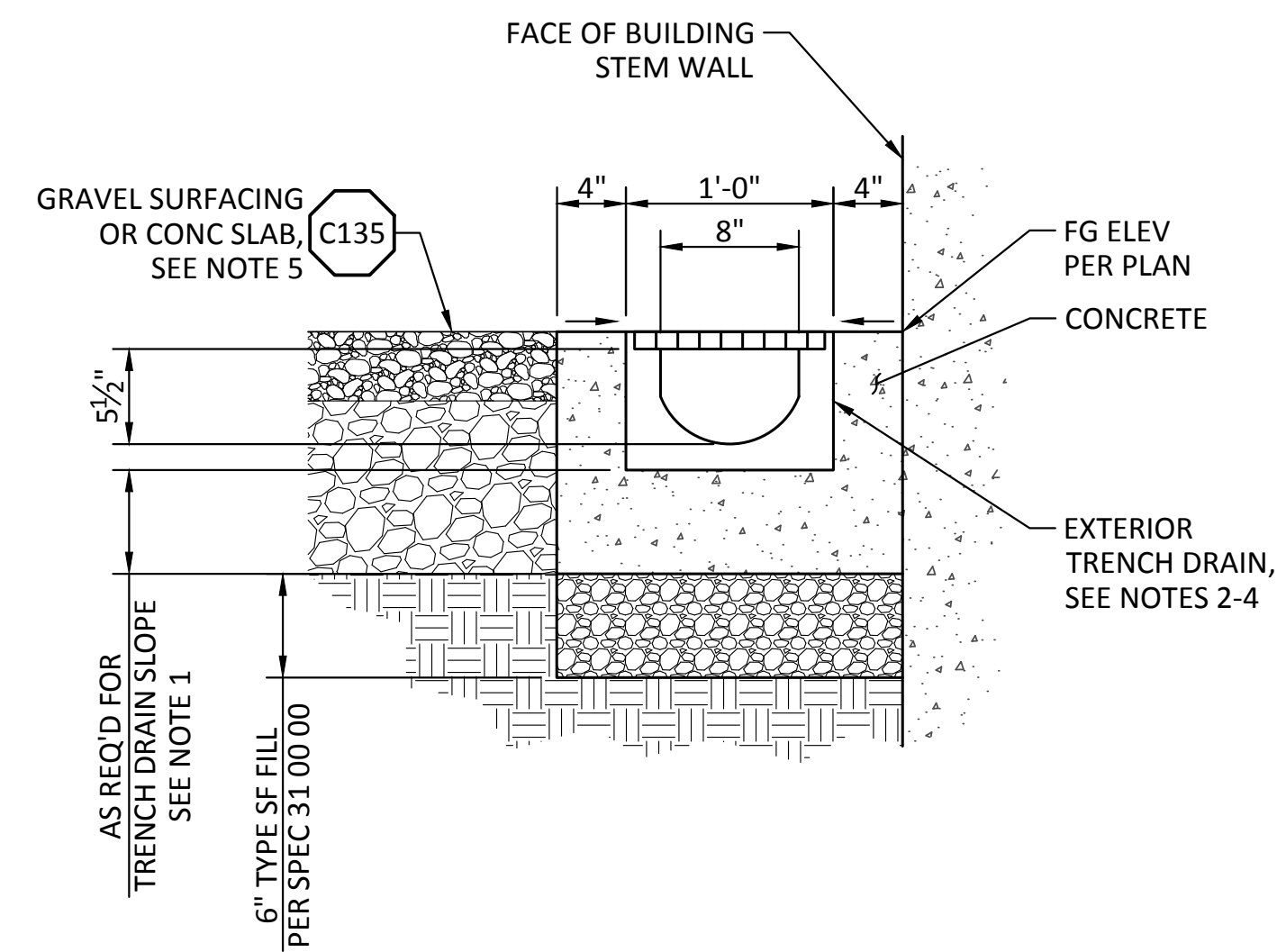
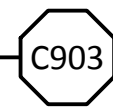
GC005



- NOTES:**
1. IF IN UNIMPROVED AREA TOP SHALL BE 6" ABOVE GRADE.
 2. SEE PLAN FOR STATION AND INVERT ELEVATION. PIPE AND FITTINGS SHALL BE OF THE SAME MATERIAL AS THE MAIN DRAIN LINE.

VENT CLEANOUT TO GRADE

SCALE: NTS

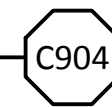


NOTES:

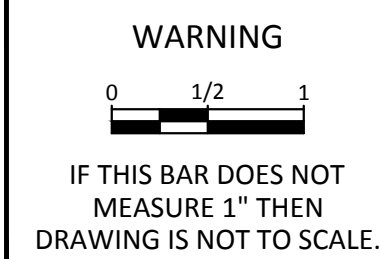
1. TRENCH DRAIN SHALL BE SLOPED AT 0.5% PER PLANS.
2. TRENCH DRAIN SHALL BE RATED LOAD CLASS "E" PER DIN 19580 (525-650 PSI), AND SHALL HAVE GALVANIZED OR STAINLESS STEEL COVER. CHANNEL DRAIN PORTION SHALL BE CONSTRUCTED OF CONCRETE.
3. TRENCH DRAIN SHALL BE SWIFTDRAIN HD 200, OR APPROVED EQUAL.
4. AT TERMINUS, TRENCH DRAIN SHALL HAVE PIPE END CONNECTION INSTALLED PER MANUFACTURER'S RECOMMENDATIONS.
5. IN AREAS WHERE THE TRENCH DRAIN PASSES THROUGH CONCRETE SLABS AT DOORS, TRENCH DRAIN AND CONCRETE BLOCK TO BE CAST WITH THE SLAB.

EXTERIOR TRENCH DRAIN SYSTEM

SCALE: NTS



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



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING GC006
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
CIVIL STANDARD DETAILS 5	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	

SITE GENERAL COORDINATES (SEE SHEET C101)			
POINT #	NORTHING	EASTING	LOCATION
◊100	2606422.74	6463344.20	EDGE OF PAD, AT COPCO ROAD
◊101	2606468.40	6463318.93	EDGE OF PAD, PC
◊102	2606485.34	6463349.56	EDGE OF PAD, CC
◊103	2606510.30	6463324.96	CORNER OF CATCH BASIN
◊104	2606516.29	6463333.19	EDGE OF PAD, PT
◊105	2606523.41	6463346.07	EDGE OF PAD, PC
◊106	2606554.04	6463329.12	EDGE OF PAD, CC
◊107	2606568.45	6463361.02	EDGE OF PAT, PT
◊108	2606646.59	6463318.04	CORNER OF CATCH BASIN
◊109	2606680.88	6463299.12	EDGE OF PAD, PT
◊110	2606686.67	6463295.12	CORNER OF VAULT TOILET PAD
◊111	2606676.53	6463284.61	CORNER OF VAULT TOILET PAD
◊112	2606683.36	6463252.35	CORNER OF CATCH BASIN
◊113	2606651.05	6463156.48	EDGE OF PAD, AT COHO RACEWAYS
◊114	2606644.74	6463150.16	EDGE OF PAD, PC
◊115	2606632.31	6463165.40	EDGE OF PAD, CC
◊116	2606632.02	6463145.74	EDGE OF PAD, PT
◊117	2606590.13	6463174.75	CORNER OF CATCH BASIN
◊118	2606559.51	6463155.41	EDGE OF PAD, PC
◊119	2606564.22	6463190.09	EDGE OF PAD, CC
◊120	2606547.27	6463159.47	EDGE OF PAD, PT
◊121	2606528.06	6463170.10	EDGE OF PAD, PT
◊122	2606523.08	6463172.37	EDGE OF PAD, PT
◊123	2606553.05	6463253.42	CORNER OF CATCH BASIN
◊124	2606373.53	6463226.82	EDGE OF DRIVEWAY, PC
◊125	2606363.67	6463196.07	EDGE OF DRIVEWAY, CC
◊126	2606344.27	6463221.88	EDGE OF DRIVEWAY, AT COPCO ROAD
◊127	2606464.45	6463212.87	EDGE OF DRIVEWAY
◊128	2606379.94	6463243.64	EDGE OF DRIVEWAY, PT
◊129	2606399.48	6463248.84	EDGE OF PAD, PT
◊130	2606385.07	6463257.74	EDGE OF DRIVEWAY, CC
◊131	2606406.84	6463261.73	EDGE OF PAD, CC
◊132	2606372.37	6463265.72	EDGE OF DRIVEWAY, AT COPCO ROAD
◊133	2606393.93	6463269.05	EDGE OF PAD, PT
◊134	2606396.71	6463303.06	EDGE OF PAD, AT COPCO ROAD
◊135	2606408.80	6463295.91	EDGE OF PAD, PC
◊136	2606401.75	6463299.81	EDGE OF PAD, CC
◊137	2606403.55	6463298.82	EDGE OF PAD, CC
◊138	2606406.45	6463304.07	EDGE OF PAD, PT
◊139	2606404.57	6463305.11	EDGE OF PAD, PC
◊140	2606483.41	6463135.50	CORNER OF FISH RELEASE POOL
◊141	2606479.81	6463138.96	CORNER OF FISH RELEASE POOL
◊142	2606514.01	6463184.32	CENTER OF HDS-1

MECH TRUCK ACCESS ROAD COORDINATES (SEE SHEET C101)			
POINT #	NORTHING	EASTING	LOCATION
◊200	2606704.95	6463277.58	ACCESS ROAD CENTERLINE, START
◊201	2606708.46	6463281.22	ACCESS ROAD CENTERLINE, PC
◊202	2606726.46	6463263.86	ACCESS ROAD CENTERLINE, CC
◊203	2606716.22	6463286.67	ACCESS ROAD CENTERLINE, PT
◊204	2606755.15	6463304.14	ACCESS ROAD CENTERLINE, PC
◊205	2606743.27	6463330.60	ACCESS ROAD CENTERLINE, CC
◊206	2606754.76	6463357.23	ACCESS ROAD CENTERLINE, PRC
◊207	2606765.65	6463382.48	ACCESS ROAD CENTERLINE, CC
◊208	2606738.18	6463383.77	ACCESS ROAD CENTERLINE, PT
◊209	2606739.21	6463405.83	ACCESS ROAD CENTERLINE, END
◊210	2606740.69	6463284.37	CORNER OF METER VAULT
◊211	2606749.25	6463272.05	CORNER OF METER VAULT
◊212	2606705.84	6463229.03	EDGE OF GRAVEL
◊213	2606763.24	6463269.88	EDGE OF GRAVEL
◊214	2606767.24	6463302.99	EDGE OF GRAVEL
◊215	2606772.45	6463305.56	EDGE OF GRAVEL
◊216	2606802.02	6463310.42	CORNER OF INTAKE STRUCTURE
◊217	2606807.50	6463319.02	CORNER OF INTAKE STRUCTURE
◊218	2606817.89	6463331.49	EDGE OF GRAVEL
◊219	2606799.37	6463340.62	EDGE OF GRAVEL, PC
◊220	2606792.88	6463327.93	EDGE OF GRAVEL, FENCE PI
◊221	2606783.43	6463338.61	EDGE OF GRAVEL, FENCE PI
◊222	2606788.37	6463308.64	EDGE OF GRAVEL, FENCE PI

COHO BUILDING COORDINATES (SEE SHEET C101)			
POINT #	NORTHING	EASTING	LOCATION
◊300	2606688.32	6463210.73	CORNER OF CONCRETE PAD
◊301	2606633.37	6463263.72	CORNER OF COHO BUILDING

CHINOOK RACEWAYS COORDINATES (SEE SHEET C101)			
POINT #	NORTHING	EASTING	LOCATION
◊400	2606604.74	6463292.06	CORNER OF RACEWAYS 1-4
◊401	2606574.07	6463236.64	CORNER OF RACEWAYS 5-8
◊402	2606609.65	6463292.77	CORNER OF FENCE
◊403	2606550.98	6463186.75	CORNER OF FENCE
◊404	2606497.00	6463216.62	FENCE, PI
◊405	2606489.89	6463219.80	FENCE, PI
◊406	2606479.97	6463225.28	CORNER OF FENCE
◊407	2606485.25	6463234.83	FENCE, PI
◊408	2606495.48	6463250.15	FENCE, PI
◊409	2606536.04	6463323.45	CORNER OF FENCE

CHINOOK INCUBATION BUILDING COORDINATES (SEE SHEET C101)			
POINT #	NORTHING	EASTING	LOCATION
◊500	2606462.06	6463235.20	CORNER OF CHINOOK INCUBATION BUILDING
◊501	2606486.91	6463280.11	CORNER OF CHINOOK INCUBATION BUILDING

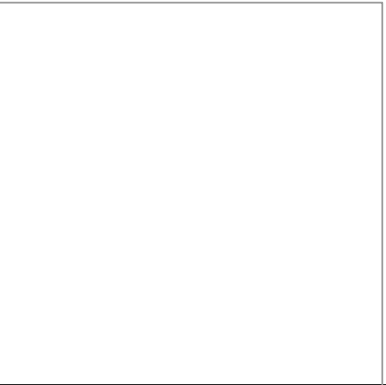
SOUTH SITE COORDINATES (SEE SHEET C102)			
POINT #	NORTHING	EASTING	LOCATION
◊600	2606344.10	6463257.36	EDGE OF PAD, AT COPCO ROAD
◊601	2606334.08	6463293.80	EDGE OF PAD, PC
◊602	2606367.83	6463303.08	EDGE OF PAD, CC
◊603	2606332.83	6463302.48	EDGE OF PAD, PT
◊604	2606332.39	6463328.47	EDGE OF PAD, PC
◊605	2606307.09	6463329.47	EDGE OF PAD, CC
◊606	2606330.88	6463338.03	EDGE OF PAD, PT
◊607	2606330.39	6463339.65	EDGE OF PAD, PC
◊608	2606318.59	6463337.10	EDGE OF PAD, CC
◊609	2606315.40	6463348.74	EDGE OF PAD, PT
◊610	2606289.03	6463341.44	CORNER OF CATCH BASIN
◊611	2606281.69	6463336.30	CORNER OF PROPANE TANK
◊612	2606269.16	6463332.83	CORNER OF GENSET
◊613	2606238.27	6463317.48	CORNER OF CATCH BASIN
◊614	2606233.71	6463314.67	CENTER OF HDS-2
◊615	2606206.89	6463318.61	EDGE OF PAD, PI
◊616	2606171.42	6463286.26	EDGE OF PAD, PI
◊617	2606321.34	6463222.95	EDGE OF PAD, AT COPCO ROAD
◊618	2606267.97	6463248.66	EDGE OF PAD, PC
◊619	2606274.48	6463262.18	EDGE OF PAD, CC
◊620	2606185.75	6463233.93	EDGE OF PAD AT CONC WALL
◊621	2606181.30	6463228.12	EDGE OF PAD, AT CONC WALL
◊622	2606155.63	6463189.73	FISH BARRIER BERM, CENTERLINE
◊623	2606158.45	6463170.28	FISH BARRIER BERM, CENTERLINE

CONTRACTOR STAGING AREA COORDINATES (SEE SHEET G011)			
POINT #	NORTHING	EASTING	LOCATION
◊800	2606664.38	6463047.40	STAGING AREA LIMITS
◊801	2606665.21	6463105.61	STAGING AREA LIMITS
◊802	2606705.85	6463136.40	STAGING AREA LIMITS
◊803	2606738.48	6463137.38	STAGING AREA LIMITS
◊804	2606748.48	6463117.08	STAGING AREA LIMITS
◊805	2606754.44	6463098.11	STAGING AREA LIMITS
◊806	2606798.00	6463050.73	STAGING AREA LIMITS
◊807	2606775.11	6463042.12	STAGING AREA LIMITS
◊808	2606742.79	6463041.65	STAGING AREA LIMITS
◊809	2606674.70	6463045.29	STAGING AREA LIMITS

ABBREVIATIONS:

PC	POINT OF CURVATURE
CC	CENTER OF CURVE
PT	POINT OF TANGENCY
PI	POINT OF INFLECTION
PCC	POINT OF COMPOUND CURVATURE
PRC	POINT OF REVERSE CURVATURE

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



WARNING

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



KLAMATH RIVER RENEWAL CORPORATION	
FALL CREEK FISH HATCHERY	
SITE COORDINATES	DESIGNED <u>A. LEMAN</u>
	DRAWN <u>J. LAHMON</u>
	CHECKED <u>V. AUTIER</u>
	PROJECT DATE <u>10/28/20</u>

DRAWING

GC007

STORM SEWER SYSTEM COORDINATES (SEE SHEETS C109 AND C110)				
POINT #	NORTHING	EASTING	ELEVATION*	DESCRIPTION
700	2606650.92	6463313.37	2497.41	45° BEND
701	2606654.50	6463301.03	2497.22	45° BEND
702	2606643.98	6463281.92	2497.07	11.25° BEND
703	2606654.12	6463277.77	2497.27	45° BEND
704	2606639.72	6463277.51	2497.00	45° WYE
705	2606576.37	6463242.23	2497.21	45° BEND
706	2606581.69	6463223.56	2497.64	45° BEND
707	2606582.42	6463218.08	2495.91	30° BEND
708	2606577.95	6463216.80	2495.85	45° WYE
709	2606556.73	6463178.44	2495.42	45° BEND
710	2606585.73	6463167.90	2496.30	45° BEND
711	2606561.08	6463167.16	2495.70	30° BEND
712	2606546.18	6463175.40	2495.31	45° WYE
713	2606538.82	6463179.48	2495.23	45° BEND
714	2606491.95	6463143.82	2494.83	PIPE OUTLET
715	2606480.77	6463295.01	2498.58	45° BEND
716	2606469.50	6463295.46	2498.41	30° BEND
717	2606435.67	6463314.18	2497.80	45° BEND
718	2606404.67	6463305.36	2497.30	45° BEND
719	2606401.58	6463299.78	2497.20	PIPE OUTLET
720	2606373.82	6463260.36	2493.00	PIPE END CAP
721	2606376.14	6463252.31	2493.00	PIPE END CAP
722	2606374.98	6463256.33	2493.00	TEE
723	2606324.11	6463241.74	2490.41	45° BEND
724	2606315.60	6463246.46	2490.12	45° BEND
725	2606295.76	6463320.94	2487.81	45° BEND
726	2606289.20	6463324.75	2487.57	45° BEND
727	2606290.34	6463332.97	2487.55	45° BEND
728	2606284.91	6463323.60	2487.46	45° WYE
729	2606291.79	6463316.24	2489.68	45° BEND
730	2606280.92	6463322.54	2487.41	14"x6" RED WYE
731	2606239.26	6463311.45	2486.94	45° BEND
732	2606189.20	6463305.71	2486.51	22.5° BEND
733	2606175.72	6463295.48	2486.34	22.5° BEND
734	2606164.83	6463276.86	2486.12	22.5° BEND
735	2606161.02	6463249.08	2485.84	22.5° BEND
736	2606162.59	6463243.08	2485.78	PIPE OUTLET

* ALL ELEVATIONS ARE INVERT ELEVATIONS.

COHO BUILDING SUPPLY PIPING COORDINATES (SEE SHEET C300)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606794.70	6463321.29	2504.90	TEE
0+27.83	2606779.68	6463297.86	2503.79	22.5° BEND
1+01.08	2606719.52	6463256.06	2501.21	11.25° BEND
1+59.70	2606678.83	6463213.86	2498.83	TEE

* ALL ELEVATIONS ARE INVERT ELEVATIONS

CHINOOK RACEWAY SUPPLY PIPING COORDINATES (SEE SHEETS C400-C401)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606786.26	6463326.70	2504.90	TEE
0+37.18	2606766.20	6463295.40	2503.12	22.5° BEND
0+98.51	2606715.83	6463260.40	2501.18	11.25° BEND
1+44.61	2606683.83	6463227.21	2498.80	90° BEND
2+37.24	2606617.15	6463291.51	2498.62	11.25° BEND
2+45.91	2606609.57	6463295.71	2498.60	90° BEND
3+66.14	2606551.35	6463190.51	2499.25	PRESSURIZED CLEANOUT

* ALL ELEVATIONS ARE INVERT ELEVATIONS

CHINOOK INCUBATION SUPPLY PIPING COORDINATES (SEE SHEETS C500-C501)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606781.21	6463329.93	2504.90	90° BEND
0+44.68	2606757.09	6463292.32	2502.72	22.5° BEND
0+97.05	2606714.09	6463262.44	2501.16	11.25° BEND
1+40.74	2606683.76	6463230.98	2498.81	90° BEND
2+41.26	2606611.40	6463300.76	2498.61	11.25° BEND
3+16.22	2606545.82	6463337.05	2498.45	90° BEND
4+02.99	2606503.89	6463261.08	2496.50	90° BEND
4+27.05	2606482.84	6463272.74	2496.67	PIPE PENETRATION

* ALL ELEVATIONS ARE INVERT ELEVATIONS

ADULT HOLDING SUPPLY PIPING COORDINATES (SEE SHEETS C601-C603)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606790.48	6463323.99	2504.90	TEE
0+32.92	2606772.72	6463296.27	2503.33	22.5° BEND
0+99.81	2606717.78	6463258.10	2501.38	11.25° BEND
1+48.62	2606683.91	6463222.97	2498.80	90° BEND
2+43.84	2606615.36	6463289.07	2498.61	11.25° BEND
2+49.07	2606610.79	6463291.61	2498.60	90° BEND
3+71.16	2606551.67	6463184.78	2495.21	45° BEND
3+82.28	2606540.99	6463181.71	2495.21	45° BEND
5+36.99	2606405.62	6463256.62	2496.68	45° BEND
6+34.64	2606311.78	6463229.64	2486.76	45° BEND
6+90.30	2606263.07	6463256.58	2484.49	45° BEND
7+20.74	2606255.35	6463286.03	2484.97	90° BEND
7+23.74	2606252.25	6463285.22	2484.97	PIPE PENETRATION

* ALL ELEVATIONS ARE INVERT ELEVATIONS

DRAIN PIPING COORDINATES (SEE SHEETS C301, C402 AND C502)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606644.44	6463150.20	2499.11	CLEANOUT
0+85.27	2606583.05	6463209.38	2498.68	30° BEND
0+92.27	2606576.25	6463211.04	2498.65	30° BEND
0+98.34	2606570.41	6463209.37	2498.62	45° BEND
1+30.79	2606554.70	6463180.98	2498.45	45° BEND
1+35.03	2606550.63	6463179.80	2498.43	45° BEND
10+00.00	2606485.71	6463230.49	2499.00	PIPE PENETRATION
10+06.33	2606480.17	6463233.56	2498.65	45° BEND
10+24.60	2606462.61	6463228.51	2497.96	WYE
20+43.96	2606405.99	6463259.85	2496.87	45° BEND
21+41.61	2606312.14	6463232.86	2487.18	45° BEND
21+94.78	2606265.62	6463258.61	2484.40	45° BEND
22+26.40	2606257.62	6463289.20	2484.86	90° BEND
22+31.94	2606252.25	6463287.81	2484.86	PIPE PENETRATION

* ALL ELEVATIONS ARE INVERT ELEVATIONS

SETTLING POND DRAIN PIPING COORDINATES (SEE SHEET C605)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606212.46	6463296.32	2486.50	PIPE PENETRATION
0+04.89	2606211.22	6463301.05	2486.42	45° BEND
0+06.39	2606209.92	6463301.80	2486.40	45° BEND
0+40.82	2606176.61	6463293.08	2485.85	45° BEND
0+60.38	2606166.74	6463276.19	2485.54	22.5° BEND
0+82.33	2606163.76	6463254.45	2485.19	45° BEND
0+86.15	2606166.07	6463251.40	2485.13	45° BEND
0+89.94	2606169.83	6463250.88	2485.07	PIPE PENETRATION

* ALL ELEVATIONS ARE INVERT ELEVATIONS

WASTE DRAIN PIPING COORDINATES (SEE SHEETS C302, C403 AND C503)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606640.92	6463156.52	2499.16	CLEANOUT
0+78.98	2606584.06	6463211.34	2498.77	30° BEND
0+87.06	2606576.21	6463213.28	2498.73	30° BEND
0+94.61	2606568.96	6463211.19	2498.69	45° BEND
1+27.06	2606553.25	6463182.80	2498.53	45° BEND
1+29.27	2606551.12	6463182.19	2498.52	45° BEND
10+00.00	2606543.93	6463329.10	2500.14	CLEANOUT
11+01.95	2606494.42	6463239.98	2497.08	45° BEND
11+34.63	2606463.02	6463230.95	2496.36	WYE
20+48.03	2606406.27	6463262.35	2495.84	45° BEND
21+45.68	2606312.43	6463235.37	2491.14	45° BEND
21+96.87	2606267.62	6463260.15	2489.95	45° BEND
22+35.99	2606257.71	6463297.99	2489.04	45° BEND
22+37.03	2606256.82	6463298.52	2489.01	45° BEND

* ALL ELEVATIONS ARE INVERT ELEVATIONS

COHO FISH RELEASE PIPING COORDINATES (SEE SHEET C303)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+34.72	2606647.77	6463163.00	2500.16	PIPE PENETRATION
0+35.55	2606647.17	6463163.58	2500.17	BEGIN JOINT MITER
0+41.84	2606644.72	6463169.19	2500.23	END JOINT MITER
0+60.91	2606644.37	6463188.27	2500.42	BEGIN JOINT MITER
0+67.20	2606641.93	6463193.88	2500.48	END JOINT MITER
0+68.42	2606641.05	6463194.73	2500.49	PIPE PENETRATION
0+72.17	2606638.35	6463197.33	2500.50	PIPE PENETRATION

* ALL ELEVATIONS ARE INVERT ELEVATIONS

CHINOOK FISH RELEASE PIPING COORDINATES (SEE SHEET C404)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.67	2606491.30	6463222.35	2498.93	PIPE PENETRATION
0+28.95	2606516.02	6463208.61	2497.20	BEGIN JOINT MITER
0+44.66	2606525.56	6463196.67	2496.79	END JOINT MITER
0+46.28	2606526.01	6463195.12	2496.76	BEGIN JOINT MITER
0+68.25	2606520.43	6463175.03	2496.32	END JOINT MITER
1+22.48	2606480.87	6463137.95	2495.24	PIPE OUTLET

* ALL ELEVATIONS ARE INVERT ELEVATIONS

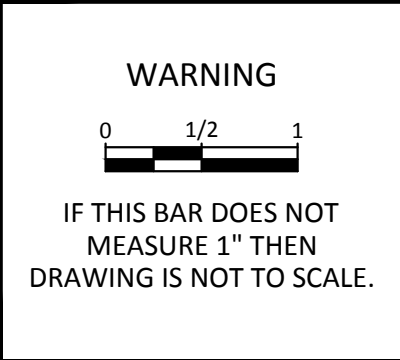
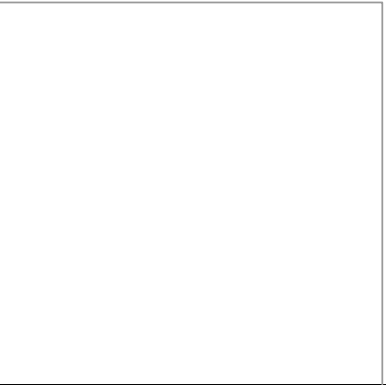
ADULT HOLDING FISH RELEASE PIPING COORDINATES (SEE SHEET C604)				
STA	NORTHING	EASTING	ELEVATION*	DESCRIPTION
0+00.00	2606169.75	6463232.24	2486.25	PIPE PENETRATION
0+15.98	2606185.21	6463236.29	2486.50	PIPE PENETRATION

* ALL ELEVATIONS ARE INVERT ELEVATIONS

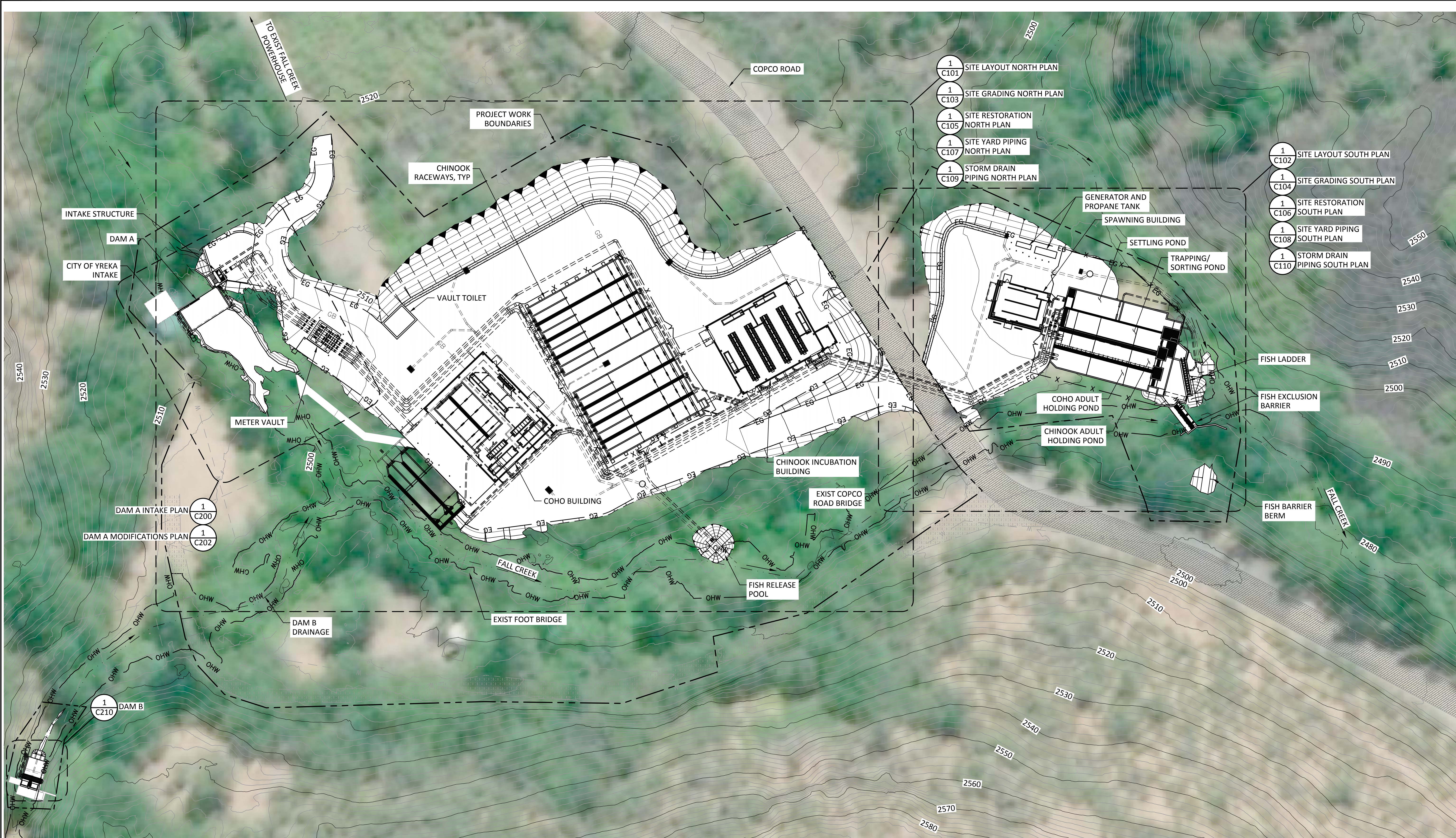
SHEET NOTES:

1. PIPING COORDINATES SHOW HORIZONTAL INFLECTION POINTS ONLY. SEE PLAN AND PROFILE SHEETS FOR VERTICAL INFLECTION POINTS.
2. NORTHINGS, EASTINGS, AND INVERTS ARE LOCATED AT THE CENTER OF THE FITTING IN THE HORIZONTAL PLANE.

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



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	DRAWING GC008
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
PIPING COORDINATES		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	



OVERALL SITE KEY PLAN

SCALE: 1"= 30'

0" 30' 60'



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



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

OVERALL SITE
KEY PLAN

DESIGNED A. LEMAN

DRAWN J. LAHMON

CHECKED V. AUTIER

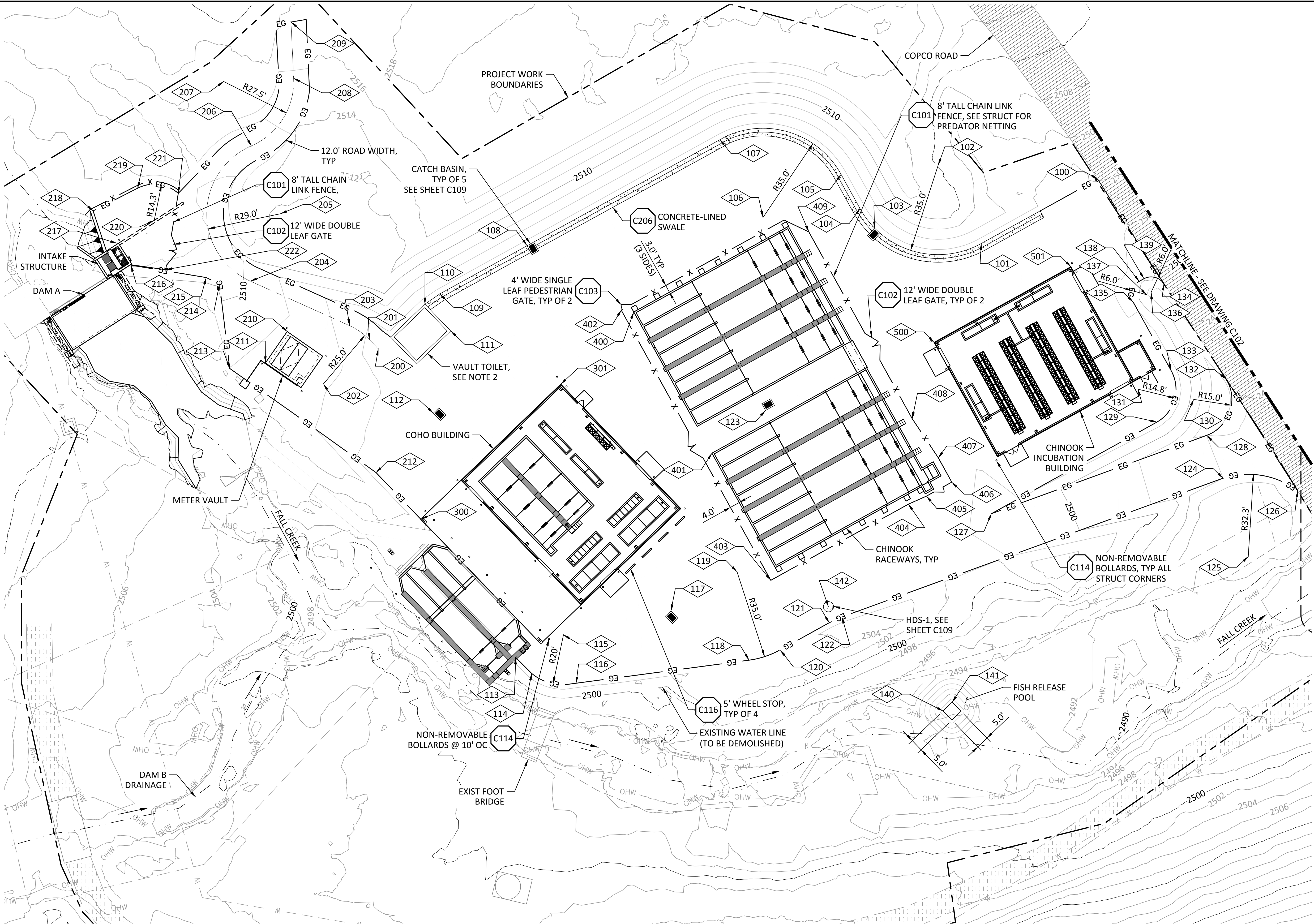
PROJECT DATE 10/28/20

DRAWING

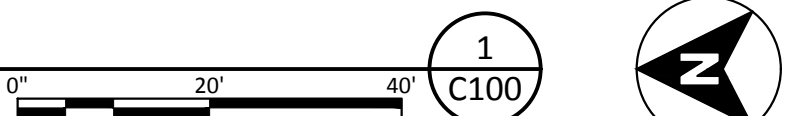
C100

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

- SHEET NOTES:
- SEE GC007 FOR SITE LAYOUT COORDINATES.
 - VAULT TOILET SHALL BE A VENDOR PACKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS.



SITE LAYOUT NORTH PLAN
SCALE: 1" = 20'



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



KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY

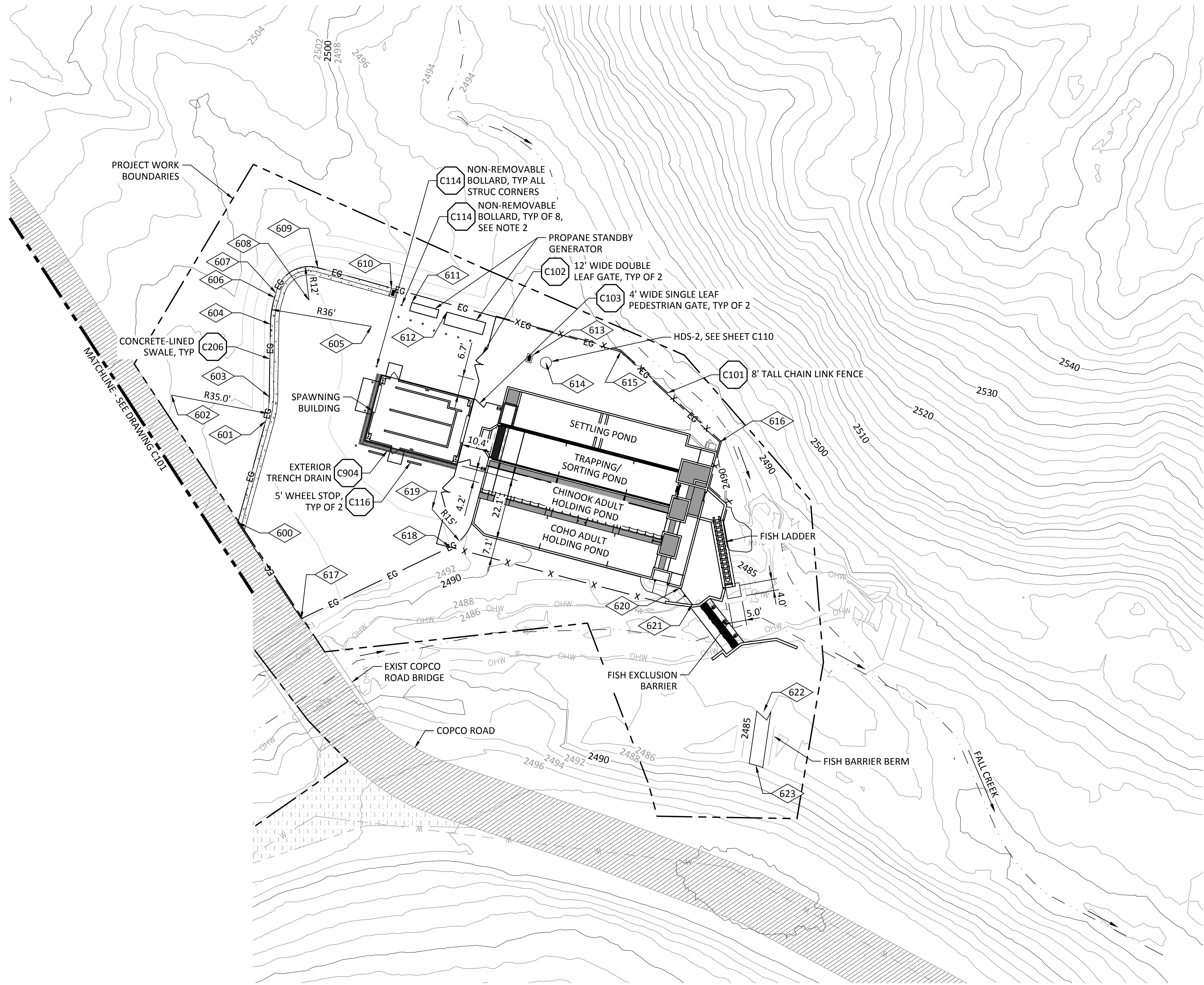
SITE LAYOUT
NORTH PLAN

DESIGNED A. LEMAN
DRAWN J. LAHMON
CHECKED V. AUTIER
PROJECT DATE 10/28/20

DRAWING

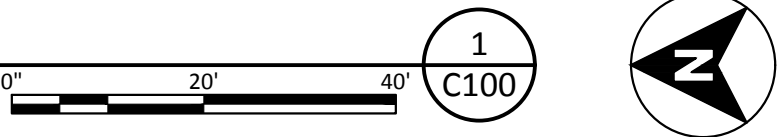
C101

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



- SHEET NOTES:**
- SEE GC007 FOR SITE LAYOUT COORDINATES.
 - NON-REMOVABLE BOLLARDS TO BE LOCATED AROUND STANDBY GENERATOR AND PROPANE TANK AT 4.5' O.C. AND TO MAINTAIN 3.0' CLEAR DISTANCE TO GENERATOR/TANK.

SITE LAYOUT SOUTH PLAN
SCALE: 1"= 20'



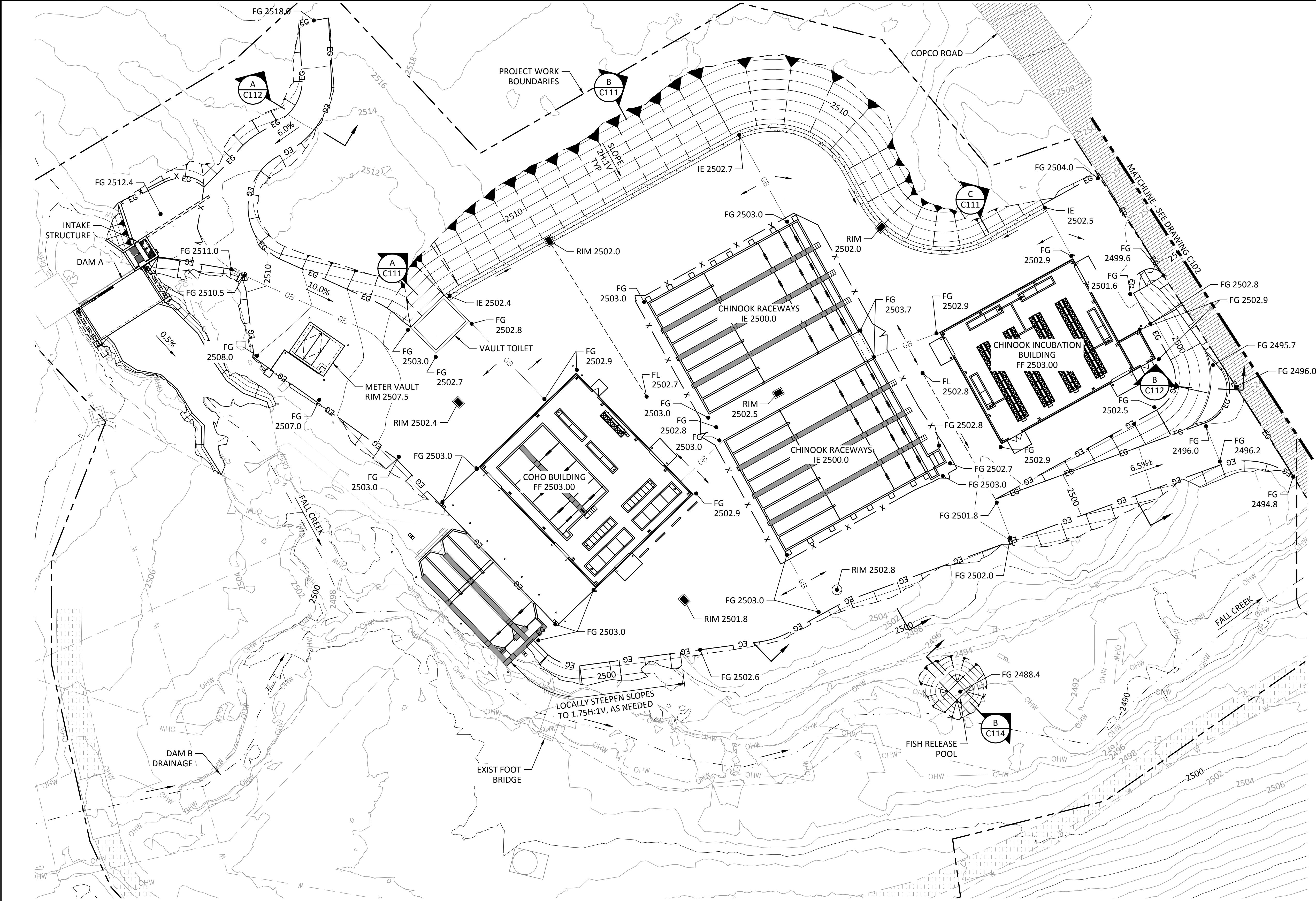
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REV	DATE	BY	DESCRIPTION	

WARNING

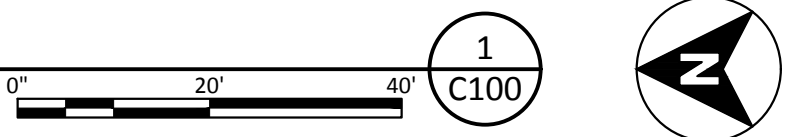
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.

KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	C102
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
SITE LAYOUT SOUTH PLAN		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	

- SHEET NOTES:
- CUT AND FILL SLOPES SHALL TYPICALLY BE 2H:1V, UNO. EXCAVATION SLOPES MAY BE MODIFIED BASED UPON SOIL AND GROUNDWATER CONDITIONS ENCOUNTERED IN THE FIELD.
 - MATCH EXISTING GRADE AND PROVIDE SMOOTH TRANSITION BETWEEN ALL NEW SURFACING AND EXISTING SURFACING.
 - PROVIDE POSITIVE DRAINAGE AWAY FROM FACILITIES.



SITE GRADING NORTH PLAN
SCALE: 1"= 20'

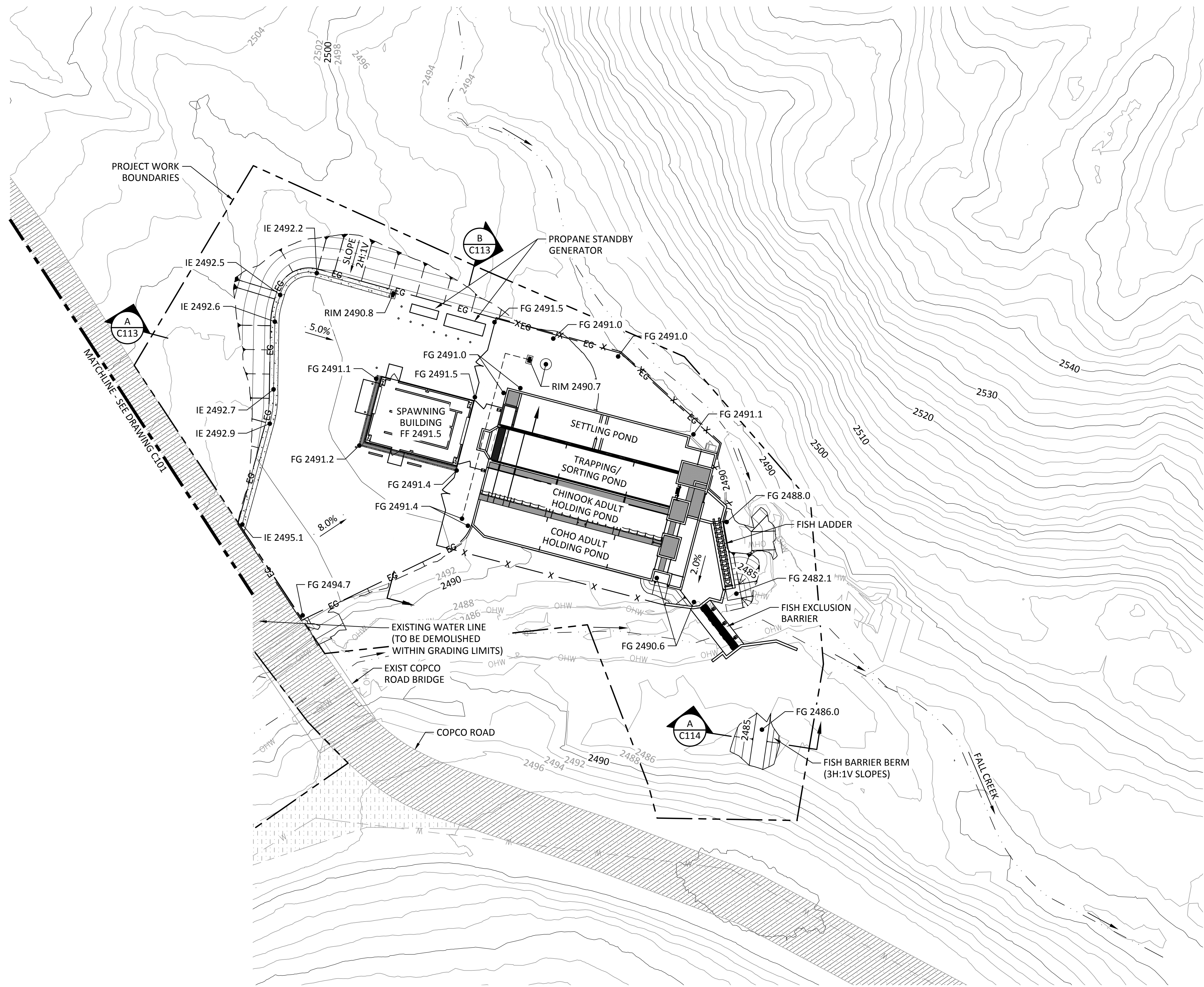


REV	DATE	BY	DESCRIPTION
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION

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



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING C103
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
SITE GRADING NORTH PLAN	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	

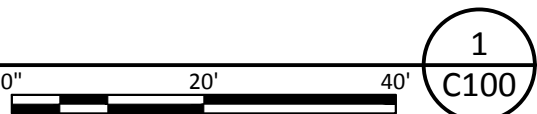


SHEET NOTES:

1. CUT AND FILL SLOPES SHALL TYPICALLY BE 2H:1V, UNO. EXCAVATION SLOPES MAY BE MODIFIED BASED UPON SOIL AND GROUNDWATER CONDITIONS ENCOUNTERED IN THE FIELD.
2. MATCH EXISTING GRADE AND PROVIDE SMOOTH TRANSITION BETWEEN ALL NEW SURFACING AND EXISTING SURFACING.
3. PROVIDE POSITIVE DRAINAGE AWAY FROM FACILITIES WHERE POSSIBLE, IN ACCORDANCE WITH THIS GRADING PLAN. WHERE DRAINAGE IS DIRECTED TOWARDS FACILITIES, TRENCH DRAIN SYSTEM TO BE PROVIDED TO DIRECT SURFACE RUNOFF TO CATCH BASINS. SEE SHEET C113.

SITE GRADING SOUTH PLAN

SCALE: 1"= 20'



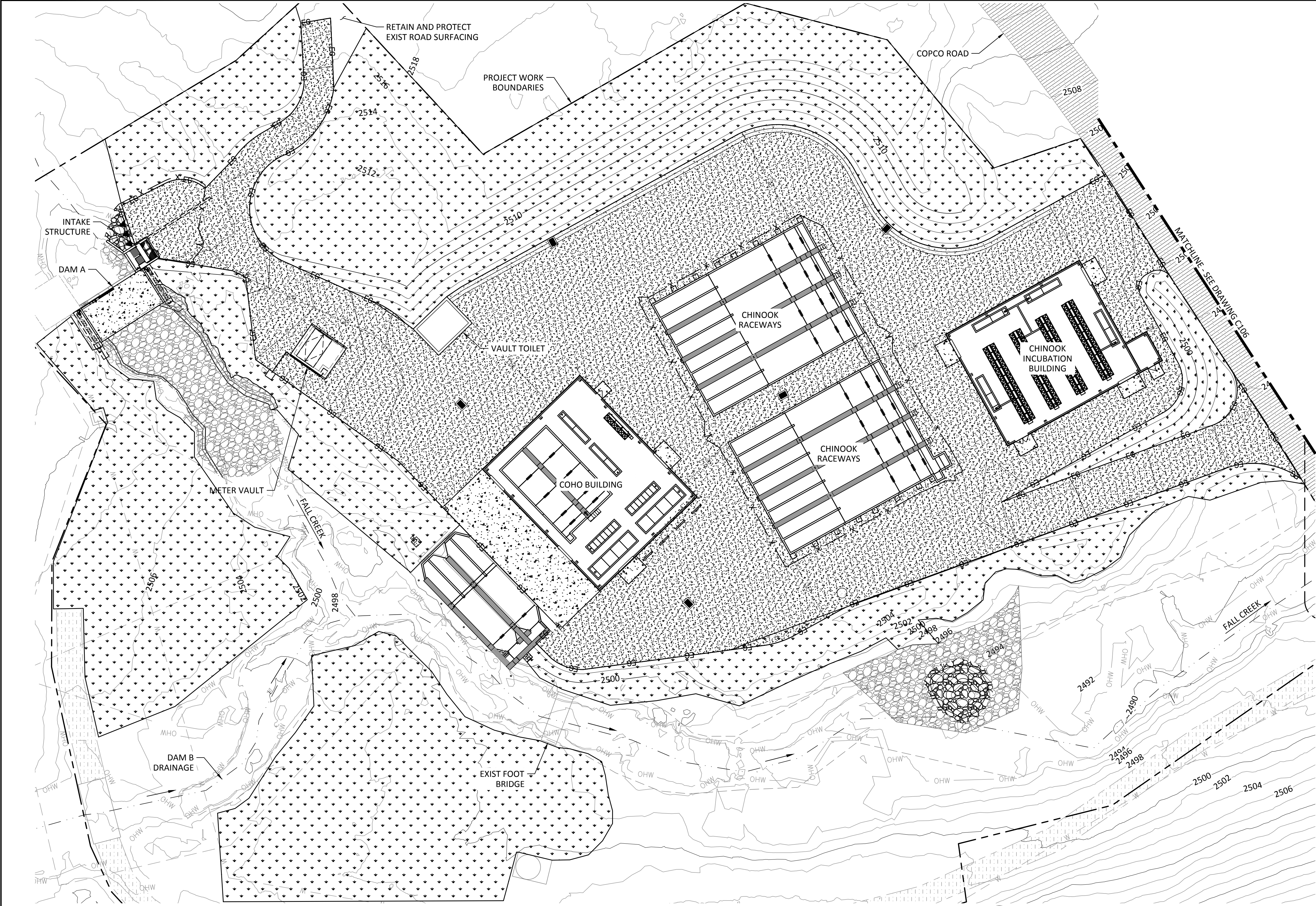
0	10/28/20	MDM	ISSUED FOR CONSTRUCTION
REV	DATE	BY	DESCRIPTION

WARNING

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



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	DRAWING C104
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
SITE GRADING SOUTH PLAN		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
- 1. ALL DISTURBED AREAS THAT WILL NOT BE RECEIVING A FINISH COURSE PER THIS PLAN, WILL NEED TO BE REVEGETATED AT PROJECT COMPLETION. CONTRACTOR TO MINIMIZE DISTURBANCES TO THE EXISTING VEGETATION TO THE EXTENT PRACTICAL WITHIN THE PROJECT NATURAL VEGETATION BUFFERS AROUND THE PROJECT LIMITS IN ADDITION TO THE EROSION AND SEDIMENT CONTROL MEASURES.
 - 2. ANY DISTURBED STREAM BED OR BANK SHALL BE RESTORED WITH IN-KIND MATERIAL AT PROJECT COMPLETION. CONTRACTOR TO RECEIVE FINAL ACCEPTANCE OF STREAM RESTORATION MATERIALS FROM BOTH THE OWNER AND THE ENGINEER PRIOR TO DEMOBILIZATION FROM THE SITE.
 - 3. FOR RIPRAP SIZE, SEE AREA-SPECIFIC SECTIONS AND DETAILS AND SPECIFICATION 31 37 00.

- LEGEND:**
- GRAVEL SURFACE
 - REVEGETATION (SEE NOTE 1)
 - RIPRAP (SEE NOTE 3)
 - CONCRETE
 - RESTORE ORIGINAL CREEK BED/COBBLES (SEE NOTE 2)

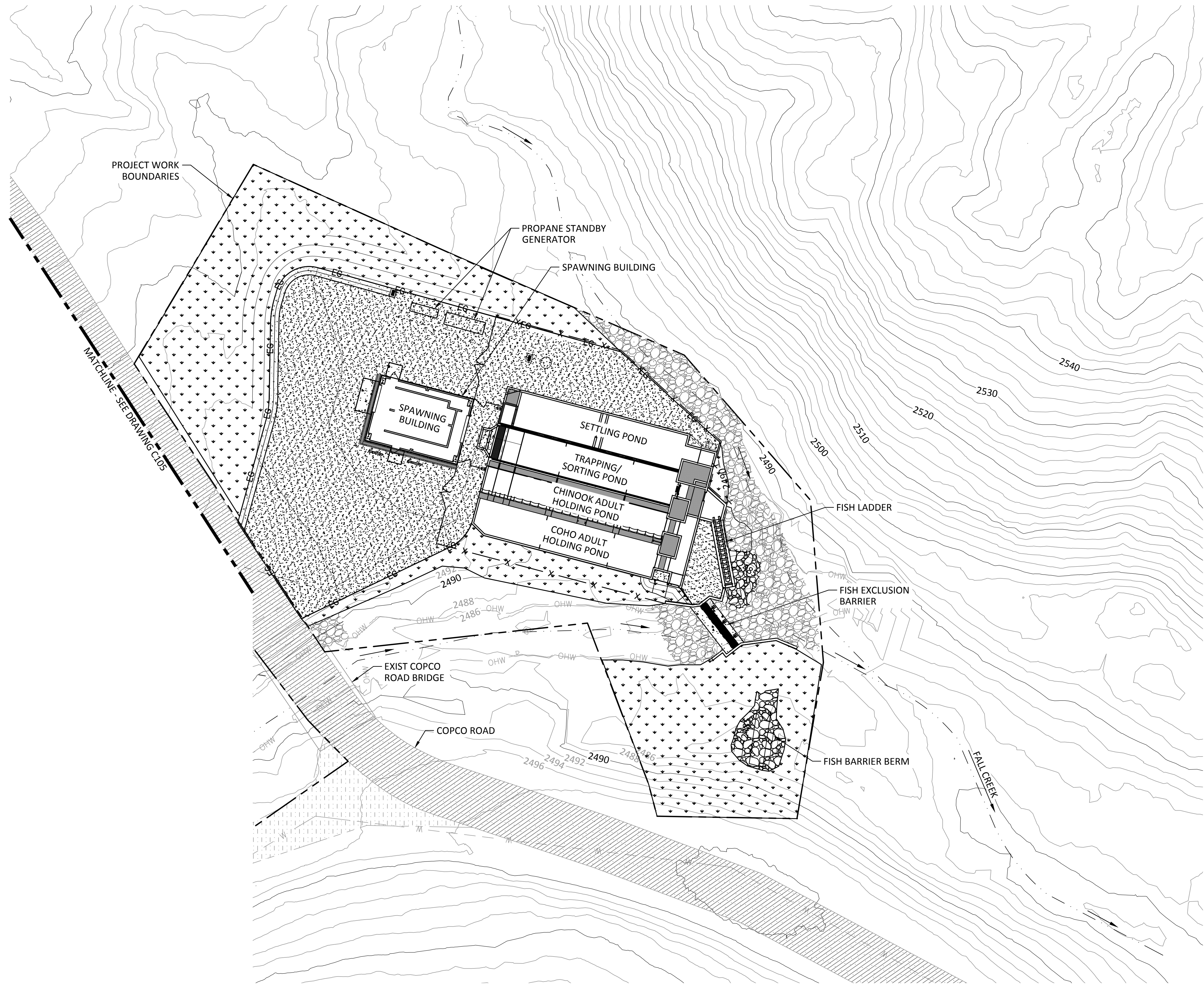
SITE RESTORATION NORTH PLAN
SCALE: 1"= 20'

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

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



KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING C105
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
SITE RESTORATION NORTH PLAN	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	



SHEET NOTES:

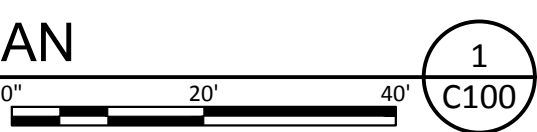
1. ALL DISTURBED AREAS THAT WILL NOT BE RECEIVING A FINISH COURSE PER THIS PLAN, WILL NEED TO BE REVEGETATED AT PROJECT COMPLETION. CONTRACTOR TO MINIMIZE DISTURBANCES TO THE EXISTING VEGETATION TO THE EXTENT PRACTICAL WITHIN THE PROJECT NATURAL VEGETATION BUFFERS AROUND THE PROJECT LIMITS IN ADDITION TO THE EROSION AND SEDIMENT CONTROL MEASURES.
2. ANY DISTURBED STREAM BED OR BANK SHALL BE RESTORED WITH IN-KIND MATERIAL AT PROJECT COMPLETION. CONTRACTOR TO RECEIVE FINAL ACCEPTANCE OF STREAM RESTORATION MATERIALS FROM BOTH THE OWNER AND THE ENGINEER PRIOR TO DEMOBILIZATION FROM THE SITE.
3. FOR RIPRAP SIZE, SEE AREA-SPECIFIC SECTIONS AND DETAILS AND SPECIFICATION 31 37 00.

LEGEND:

- GRAVEL SURFACE
- REVEGETATION (SEE NOTE 1)
- RIPRAP (SEE NOTE 3)
- CONCRETE
- RESTORE ORIGINAL CREEK BED/COBBLES (SEE NOTE 2)

SITE RESTORATION SOUTH PLAN

SCALE: 1"= 20'



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

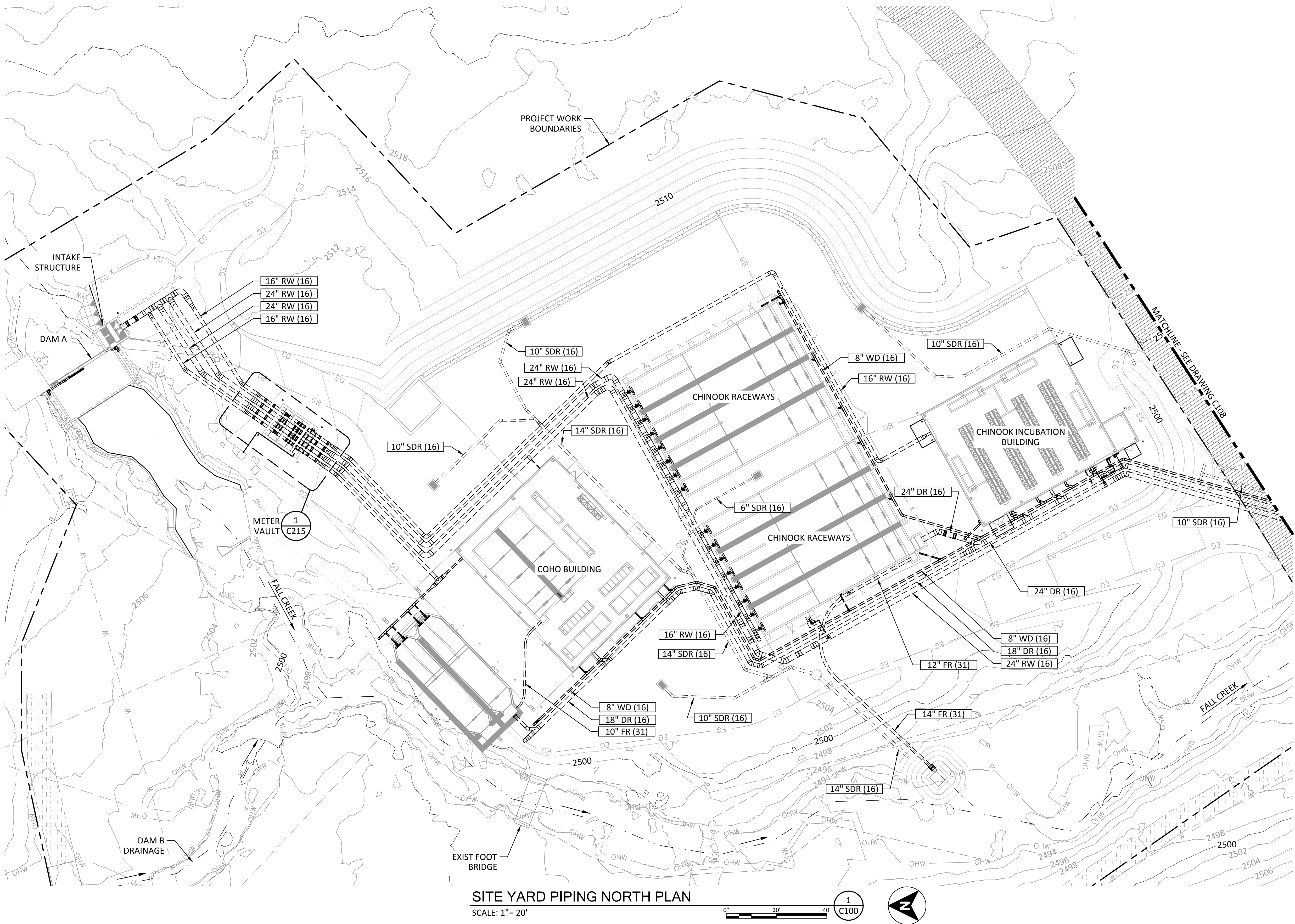
WARNING

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



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	DRAWING C106
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
SITE RESTORATION SOUTH PLAN		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	

- SHEET NOTES:
- INTERIOR PIPING NOT SHOWN ON THIS SHEET FOR CLARITY. SEE MECHANICAL FOR ALL INTERIOR PLUMBING AND PIPING.



SITE YARD PIPING NORTH PLAN

SCALE: 1" = 20'



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

SITE YARD PIPING
NORTH PLAN

DESIGNED A. LEMAN

DRAWN R. GUERRERO

CHECKED V. AUTIER

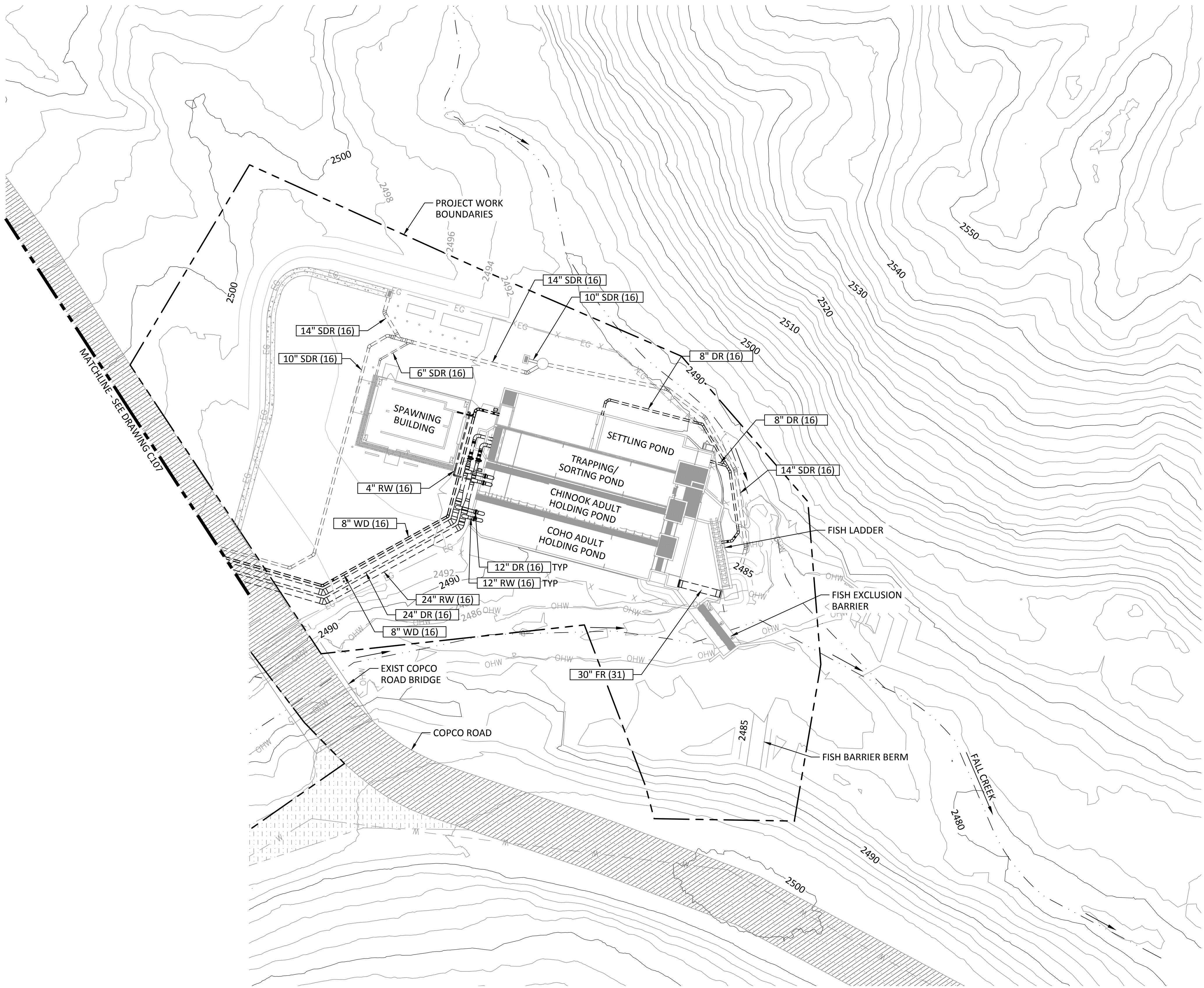
PROJECT DATE 10/28/20

DRAWING

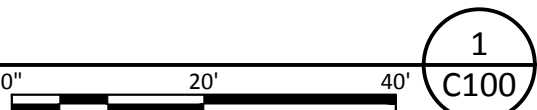
C107

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

- SHEET NOTES:
- INTERIOR PIPING NOT SHOWN ON THIS SHEET FOR CLARITY. SEE MECHANICAL FOR ALL INTERIOR PLUMBING AND PIPING.



SITE YARD PIPING SOUTH PLAN
SCALE: 1"= 20'



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

WARNING

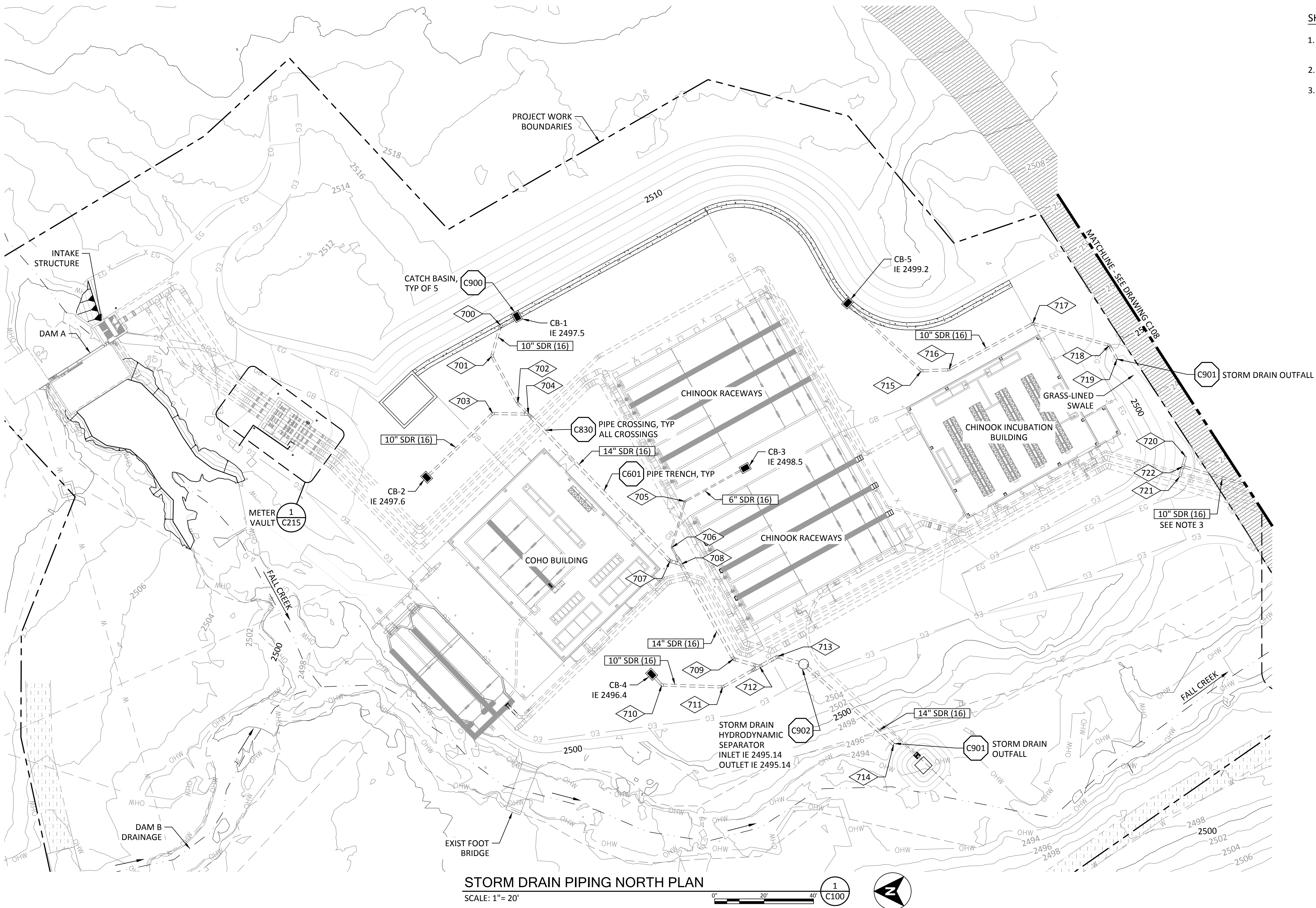
IF THIS BAR DOES NOT MEASURE 1" THEN DRAWING IS NOT TO SCALE.



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	A. LEMAN	DRAWING C108
FALL CREEK FISH HATCHERY		DRAWN	R. GUERRERO	
SITE YARD PIPING SOUTH PLAN		CHECKED	V. AUTIER	
		PROJECT DATE	10/28/20	

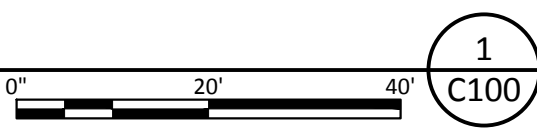
SHEET NOTES:

1. FOR PIPING CONTROL POINTS COORDINATES AND ELEVATIONS, SEE SHEET GC008. BETWEEN PIPING CONTROL POINTS, MAINTAIN CONSISTENT GRADE.
2. ALL STORM DRAIN PIPES SHALL HAVE MINIMUM 2.0' COVER OVER THE CROWN OF THE PIPE.
3. PIPE MATERIAL (16) IN DRAIN ROCK SUMP SHALL BE PERFORATED ACCORDING TO THE AASHTO M278/ASTM F758 PATTERN WITH 3/8" HOLES AT A SPACING OF 3" (±1/4").



STORM DRAIN PIPING NORTH PLAN

SCALE: 1" = 20'



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

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



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

STORM DRAIN PIPING
NORTH PLAN

DESIGNED A. LEMAN

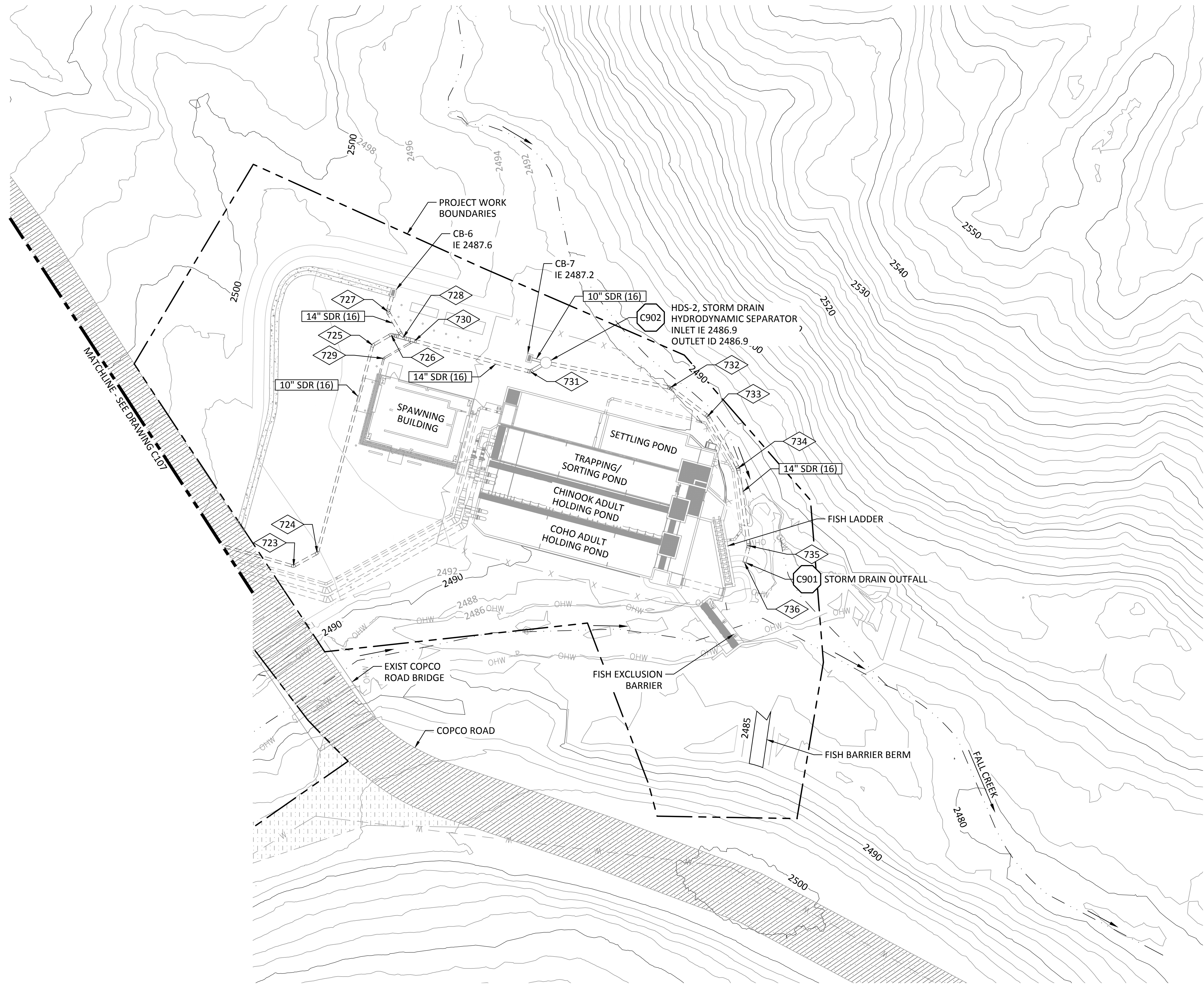
DRAWN R. GUERRERO

CHECKED V. AUTIER

PROJECT DATE 10/28/20

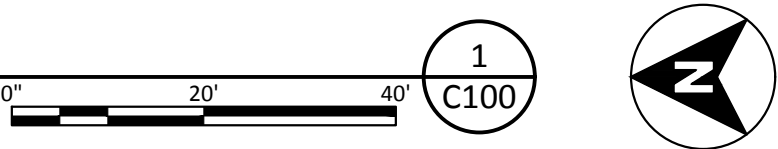
DRAWING

C109



- SHEET NOTES:**
- 1. FOR PIPING CONTROL POINTS COORDINATES AND ELEVATIONS, SEE SHEET GC008. BETWEEN PIPING CONTROL POINTS, MAINTAIN CONSISTENT GRADE.
 - 2. ALL STORM DRAIN PIPES SHALL HAVE MINIMUM 2.0' COVER OVER THE CROWN OF THE PIPE.

STORM DRAIN PIPING SOUTH PLAN
SCALE: 1"= 20'



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

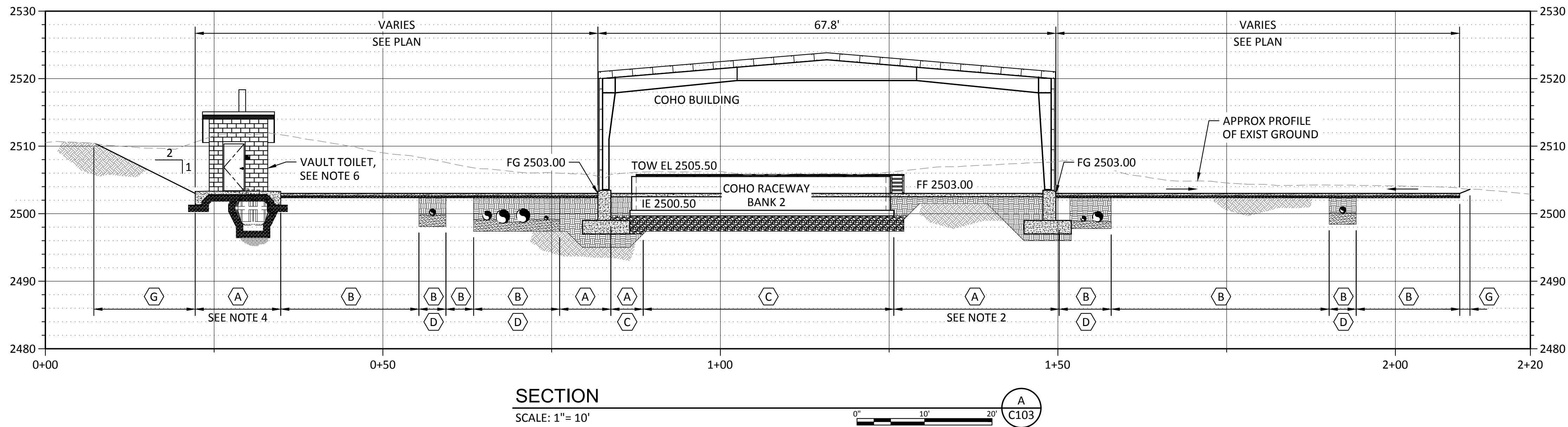
WARNING

0 1/2 1

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

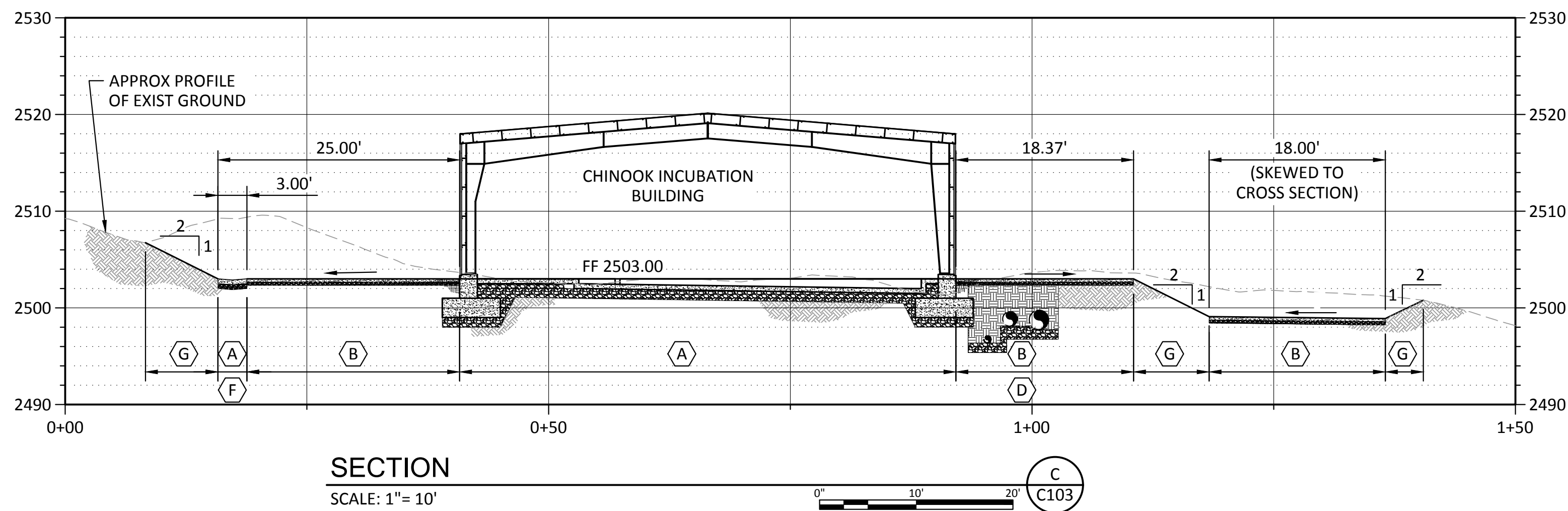
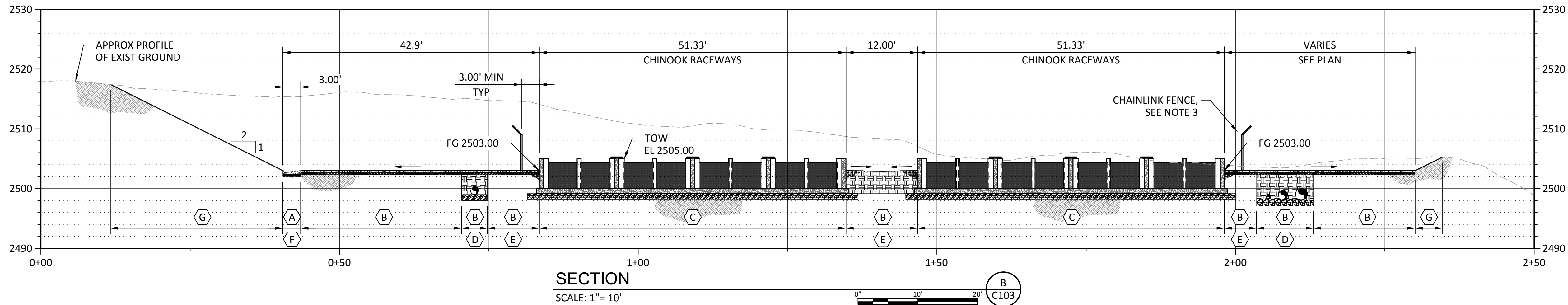


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	C110
FALL CREEK FISH HATCHERY		DRAWN <u>R. GUERRERO</u>	
STORM DRAIN PIPING SOUTH PLAN		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	



- SHEET NOTES:**
- ALL FILL MATERIALS AND PLACEMENT/COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.
 - WHERE BUILDING SUBGRADE AND POND SUBGRADE (EXTENDED 3.0' BEYOND LIMITS) OVERLAP, PLACE NON-WOVEN GEOTEXTILE BETWEEN ANY SF FILL AND DRG FILL, AND WRAP GEOTEXTILE DOWN AROUND EDGES OF DRG FILL.
 - PREDATOR NETTING NOT SHOWN FOR CLARITY. PREDATOR NETTING WILL BE ATTACHED TO THE CHAIN LINK FENCE AT THE CHINOOK RACEWAY EDGES.
 - AT VAULT TOILET, PLACE BEDDING FILL AS INDICATED UNDER CONC SLAB AND UNDER AND AROUND UNDERGROUND VAULT. FOR ALL FINISHED GROUND SLOPES, SEE THE GRADING PLANS. PAD GRADING TO DRAIN TO CATCH BASINS, CONCRETE SWALES, OR DRAINAGE SUMPS ACCORDING TO THE GRADING PLANS.
 - VAULT TOILET CONC PAD TO BE SET A MINIMUM OF 3" ABOVE THE FINISHED GRADE. WHERE CUT SLOPES ENCOUNTER THE PAD, PROVIDE POSITIVE DRAINAGE TO ADJACENT CONC SWALE.
 - VAULT TOILET SHALL BE A VENDOR PACKAGE IN ACCORDANCE WITH THE REQUIREMENTS OF THE PROJECT SPECIFICATIONS.

- SHEET KEY NOTES:**
- A 18" THICK TYPE SF FILL UNDER BUILDING FOOTINGS, AND 6" THICK TYPE SF FILL UNDER SLABS. EXTEND BEYOND 18" ALL SIDES.
 - B GENERAL GRAVEL SURFACING PER C103.
 - C 6" THICK TYPE DRG FILL UNDER POND SLABS AND WATER RETAINING STRUCTURES, EXTEND BEYOND 3.0' ALL SIDES.
 - D PIPE TRENCH PER C601.
 - E BACKFILL WITH TYPE SF OR TYPE C FILL.
 - F CONCRETE LINED SWALE TO CATCH BASIN / STORM DRAIN SYSTEM.
 - G PLACE FINAL 6" WITH TOPSOIL AND REVEGETATE.
 - H TYPE DRC FILL IN DRAIN ROCK SUMP, LINED WITH GEOMEMBRANE ALONG THE BOTTOM AND SIDES. OVERLAY SUMP WITH 12OZ NON-WOVEN GEOTEXTILE. EXTEND BOTH GEOTEXTILE AND GEOMEMBRANE 1.0' BEYOND THE LIMITS OF THE SUMP.



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

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

**McMILLEN
JACOBS**
ASSOCIATES

**KLAMATH
RIVER RENEWAL**
CORPORATION

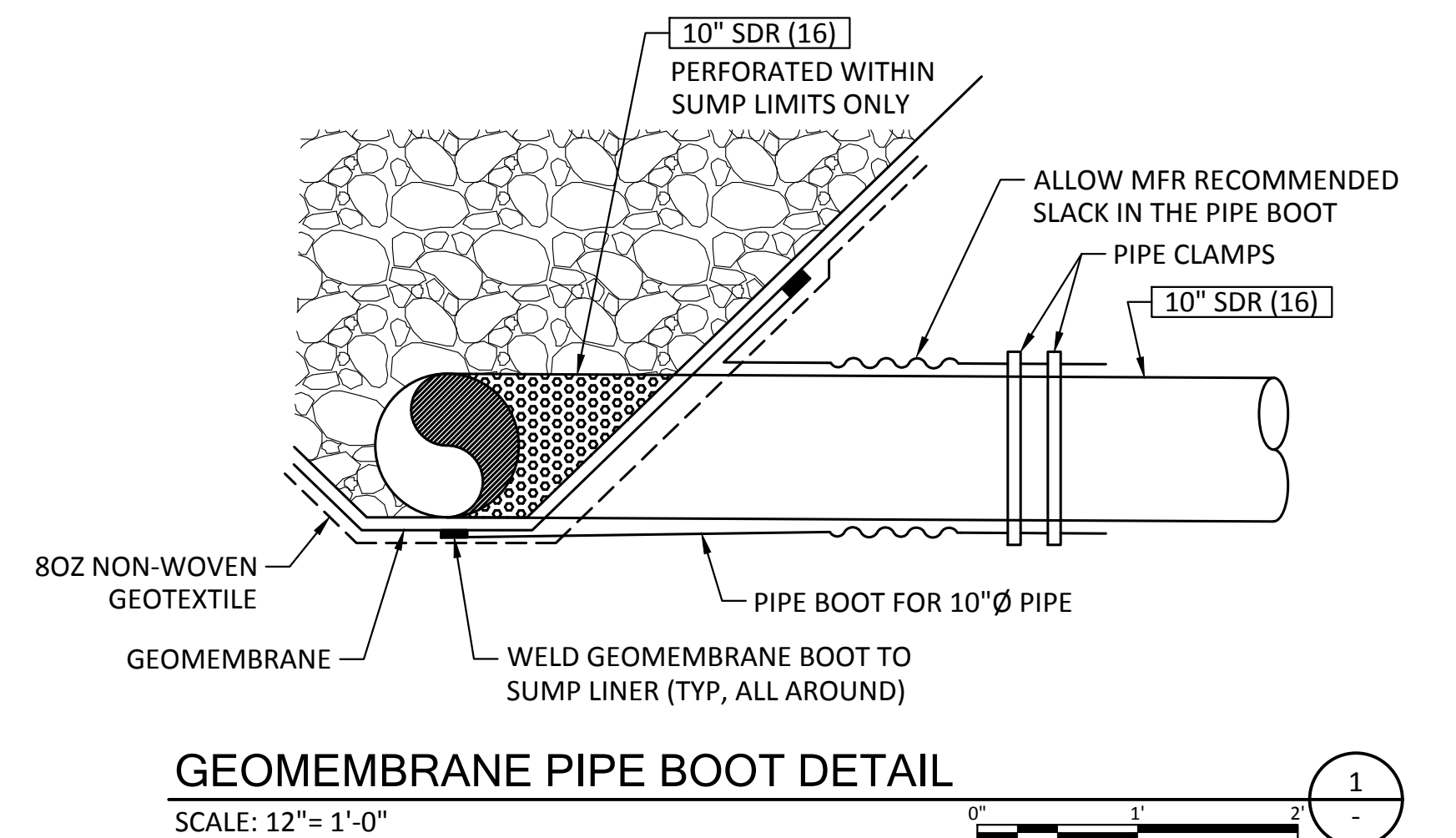
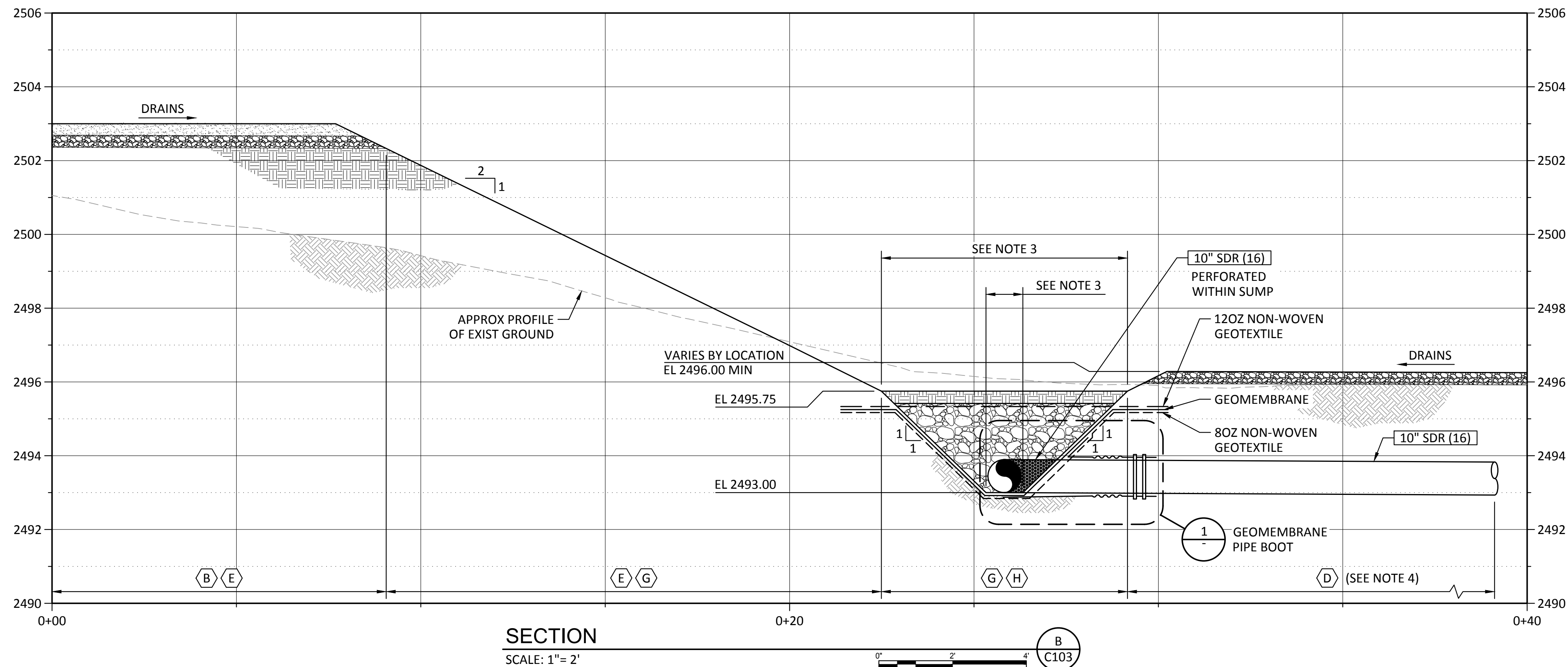
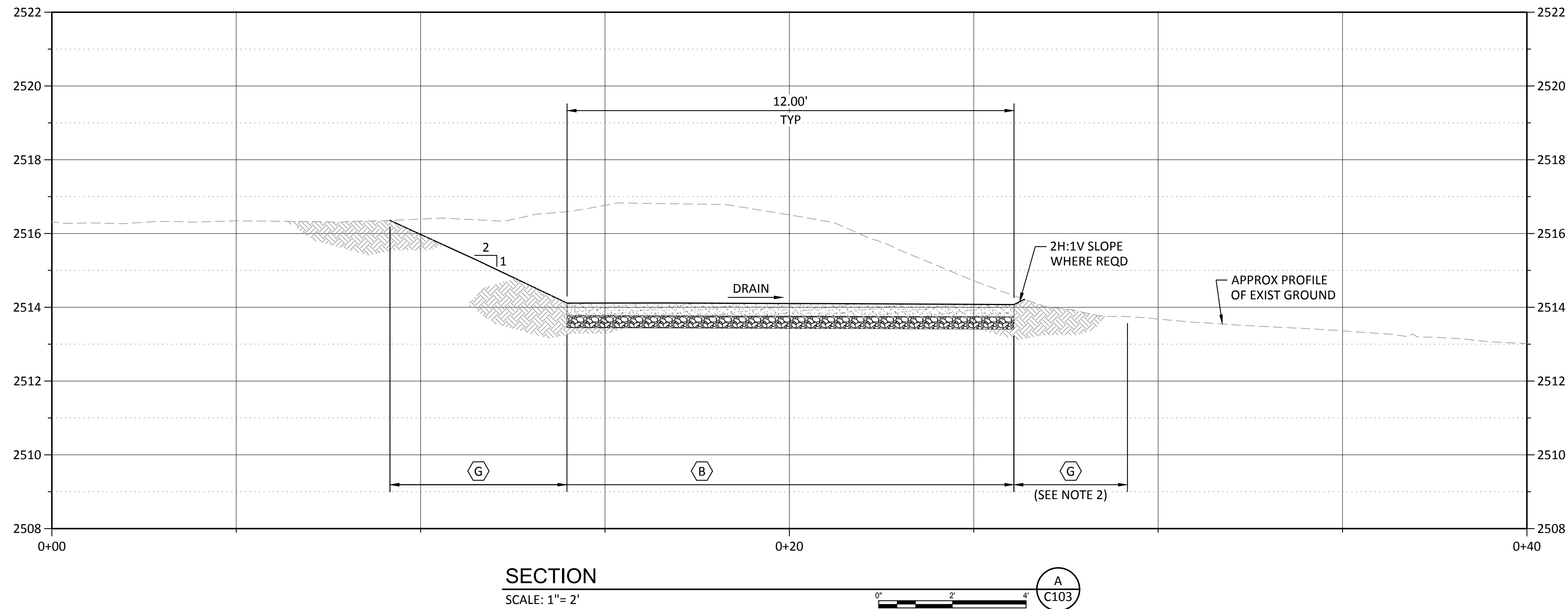
KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY

SITE CIVIL
SECTIONS 1

DESIGNED A. LEMAN
DRAWN J. LAHMON
CHECKED V. AUTIER
PROJECT DATE 10/28/20

DRAWING

C111



- SHEET NOTES:**
- ALL FILL MATERIALS AND PLACEMENT/COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31.00.00.
 - IN AREA OF EXISTING ROAD, TIE ROAD SURFACING TO EXISTING. DO NOT REVEGETATE IN AREAS OF EXISTING GRAVEL ROAD SURFACING.
 - SUMP DIMENSIONS WILL VARY BY LOCATION BASED ON SLOPES FROM NORTH PAD. MAINTAIN SUFFICIENT BOTTOM WIDTH FOR PERFORATED PIPE. SEE STORM DRAIN NORTH PLAN FOR PIPE DETAILS.
 - EXISTING COPCO ASPHALT DEMOLISHED AS PART OF THE PIPE TRENCH EXCAVATION TO BE REPLACED ACCORDING TO **C134**.

- SHEET KEY NOTES:**
- A** 18" THICK TYPE SF FILL UNDER BUILDING FOOTINGS, AND 6" THICK TYPE SF FILL UNDER SLABS. EXTEND BEYOND 18" ALL SIDES.
 - B** GENERAL GRAVEL SURFACING PER **C135**.
 - C** 6" THICK TYPE DRG FILL UNDER POND SLABS AND WATER RETAINING STRUCTURES, EXTEND BEYOND 3.0' ALL SIDES.
 - D** PIPE TRENCH PER **C601**.
 - E** BACKFILL WITH TYPE SF OR TYPE C FILL.
 - F** CONCRETE LINED SWALE TO CATCH BASIN / STORM DRAIN SYSTEM.
 - G** PLACE FINAL 6" WITH TOPSOIL AND REVEGETATE.
 - H** TYPE DRC FILL IN DRAIN ROCK SUMP, LINED WITH GEOMEMBRANE ALONG THE BOTTOM AND SIDES. OVERLAY SUMP WITH 12OZ NON-WOVEN GEOTEXTILE. EXTEND BOTH GEOTEXTILE AND GEOMEMBRANE 1.0' BEYOND THE LIMITS OF THE SUMP.

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

WARNING

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KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

SITE CIVIL

SECTIONS 2

DESIGNED A. LEMAN

DRAWN J. LAHMON

CHECKED V. AUTIER

PROJECT DATE 10/28/20

DRAWING

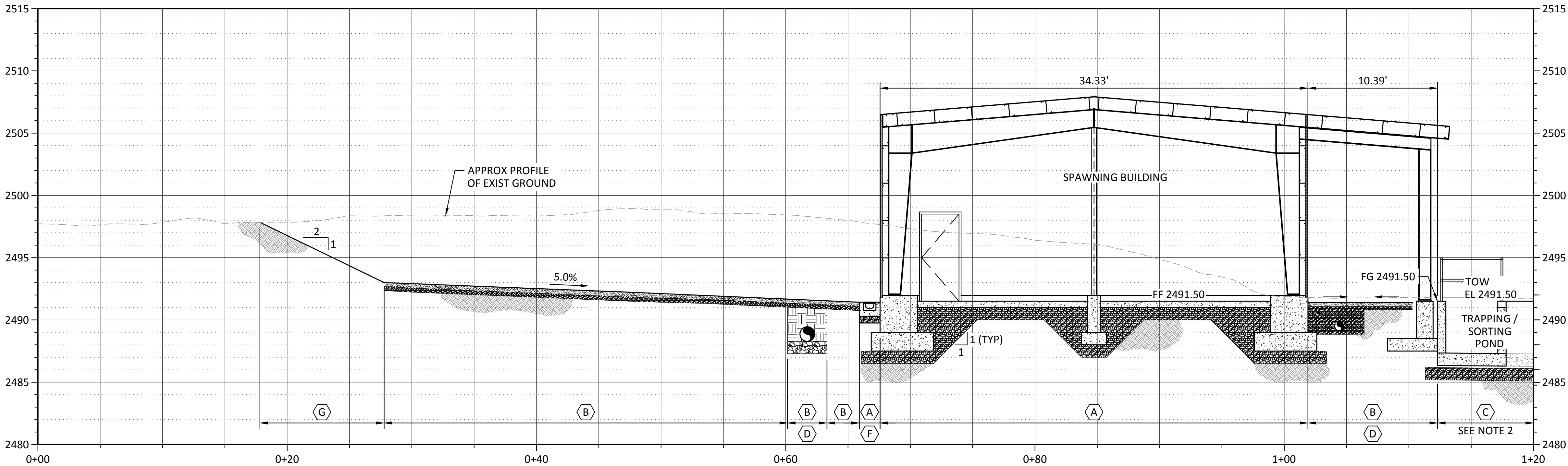
C112

SHEET NOTES:

1. ALL FILL MATERIALS AND PLACEMENT/COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31.00.00.
2. ONLY A PORTION OF THE EXISTING LOWER RACEWAY BANK SLAB WILL BE REPLACED. SEE DEMO SHEETS FOR DETAILS.
3. FOR ALL FINISHED GROUNDS LOPES, SEE THE GRADING PLANS. PAD GRADING TO DRAIN TO CATCH BASINS, CONC SWALES OR DRAINAGE SUMPS ACCORDING TO THE GRADING PLANS.

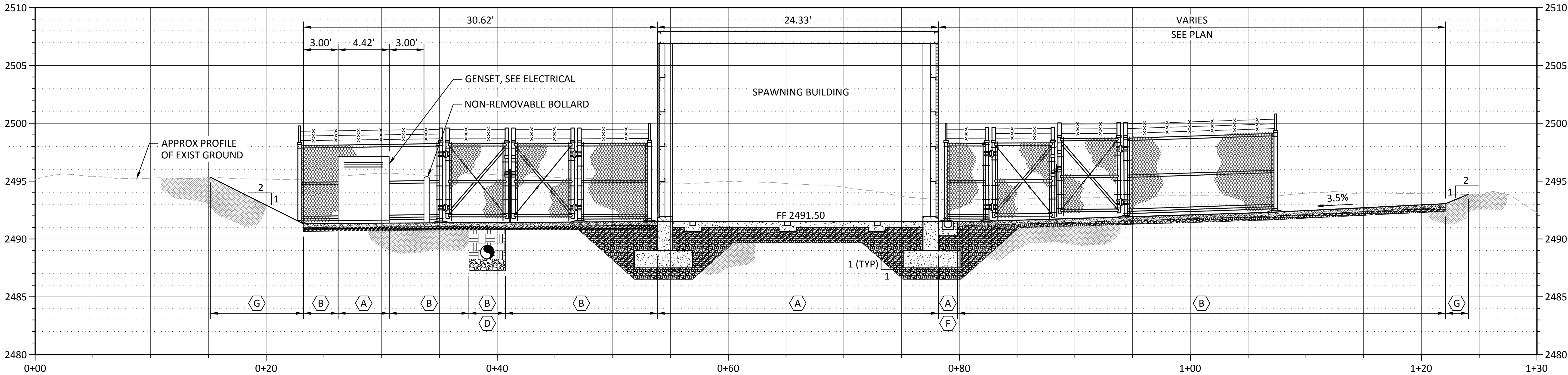
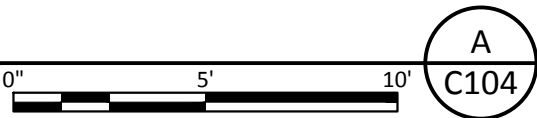
SHEET KEY NOTES:

- A 18" THICK TYPE SF FILL UNDER BUILDING FOOTINGS, AND 6" THICK TYPE SF FILL UNDER SLABS. EXTEND BEYOND 18" ALL SIDES.
- B GENERAL GRAVEL SURFACING PER C135.
- C 6" THICK TYPE DRG FILL UNDER POND SLABS AND WATER RETAINING STRUCTURES, EXTEND BEYOND 3.0' ALL SIDES.
- D PIPE TRENCH PER C601.
- E BACKFILL WITH TYPE SF OR TYPE C FILL.
- F EXTERIOR TRENCH DRAIN PER C904.
- G PLACE FINAL 6" WITH TOPSOIL AND REVEGETATE.
- H TYPE DRC FILL IN DRAIN ROCK SUMP, LINED WITH GEOMEMBRANE ALONG THE BOTTOM AND SIDES. OVERLAY SUMP WITH 12OZ NON-WOVEN GEOTEXTILE. EXTEND BOTH GEOTEXTILE AND GEOMEMBRANE 1.0' BEYOND THE LIMITS OF THE SUMP.



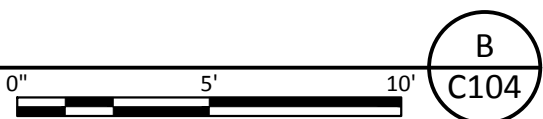
SECTION

SCALE: 1"= 5'



SECTION

SCALE: 1"= 5'



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

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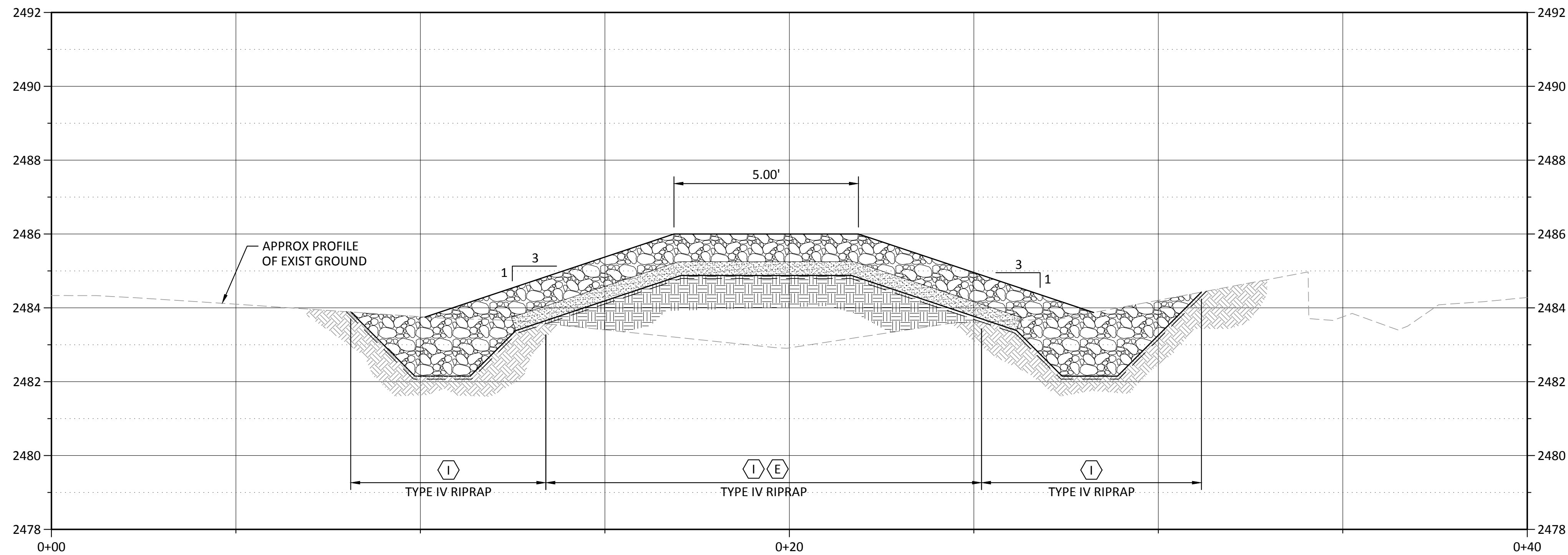
KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY

SITE CIVIL
SECTIONS 3

DESIGNED A. LEMAN
DRAWN J. LAHMON
CHECKED V. AUTIER
PROJECT DATE 10/28/20

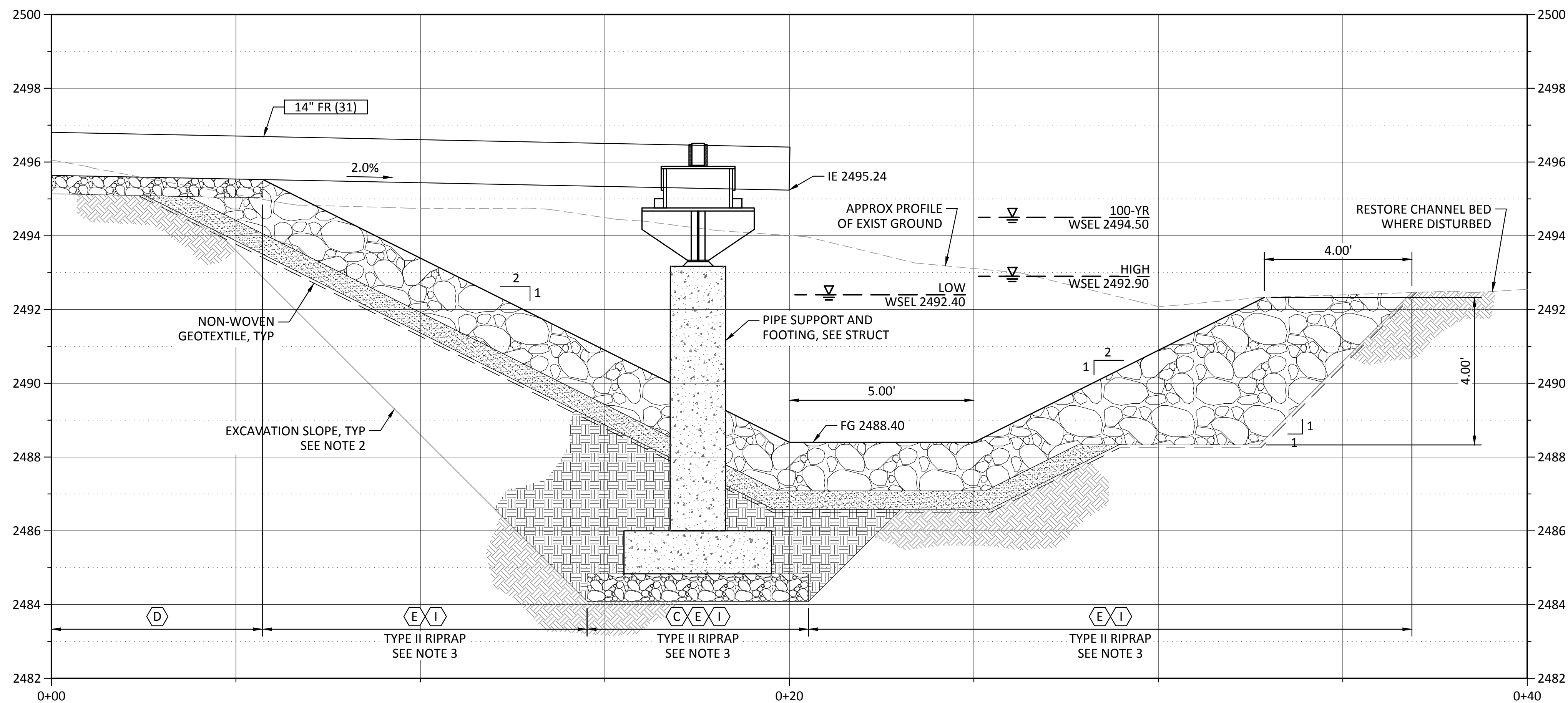
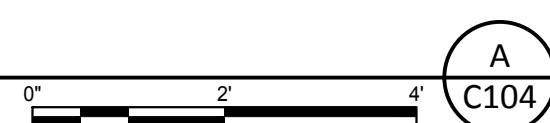
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C113



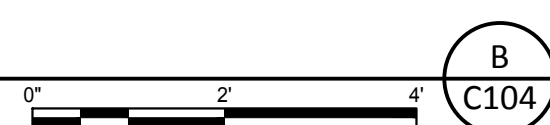
SECTION

SCALE: 1"= 2'



SECTION

SCALE: 1"= 2'



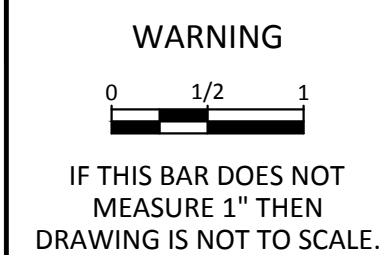
SHEET NOTES:

1. ALL FILL MATERIALS AND PLACEMENT/COMPACTION REQUIREMENTS ARE DEFINED IN SPECIFICATION 31 00 00.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE WORKING SLOPES BASED ON WORKING CONDITIONS, SOIL TYPE, MOISTURE CONTENT, ETC. ALL SLOPES SHALL MEET LOCAL, STATE, AND FEDERAL (OSHA) REQUIREMENTS.
3. IF BEDROCK IS ENCOUNTERED, CONSTRUCT PIPE SUPPORT FOOTING DIRECTLY ON BEDROCK. OTHERWISE, OVER EXCAVATE PIPE SUPPORT FOOTING 6", PLACE NON-WOVEN GEOTEXTILE, AND BACKFILL WITH TYPE DRG FILL TO BOTTOM OF FOOTING ELEVATION.

SHEET KEY NOTES:

- A 18" THICK TYPE SF FILL UNDER BUILDING FOOTINGS, AND 6" THICK TYPE SF FILL UNDER SLABS. EXTEND BEYOND 18" ALL SIDES.
- B GENERAL GRAVEL SURFACING PER C135.
- C 6" THICK TYPE DRG FILL UNDER POND SLABS AND WATER RETAINING STRUCTURES, EXTEND BEYOND 3.0' ALL SIDES.
- D PIPE TRENCH PER C601.
- E BACKFILL WITH TYPE SF OR TYPE C FILL.
- F CONCRETE LINED SWALE TO CATCH BASIN / STORM DRAIN SYSTEM.
- G PLACE FINAL 6" WITH TOPSOIL AND REVEGETATE.
- H TYPE DRC FILL IN DRAIN ROCK SUMP, LINED WITH GEOMEMBRANE ALONG THE BOTTOM AND SIDES. OVERLAY SUMP WITH 12OZ NON-WOVEN GEOTEXTILE. EXTEND BOTH GEOTEXTILE AND GEOMEMBRANE 1.0' BEYOND THE LIMITS OF THE SUMP.
- I RIPRAP/ARMOR, FILTER MATERIAL, AND NON-WOVEN GEOTEXTILE PER C202.

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REV	DATE	BY	DESCRIPTION



KLAMATH RIVER RENEWAL CORPORATION		DESIGNED <u>A. LEMAN</u>	DRAWING C114
FALL CREEK FISH HATCHERY		DRAWN <u>J. LAHMON</u>	
SITE CIVIL SECTIONS 4		CHECKED <u>V. AUTIER</u>	
		PROJECT DATE <u>10/28/20</u>	

1. LARGE DIAMETER ROCK IS AVAILABLE ON-SITE FROM THE NORTH PAD GRADING. IF ROCK IS ABLE TO BE AMENDED TO MEET SPECIFICATION 31 37 00, IT MAY BE USED IN THIS LOCATION FOR RIPRAP. EXTEND RIPRAP LINING A MINIMUM OF 3.0 FEET BEYOND CONSTRUCTED SLOPE LIMITS.
2. SEE MECHANICAL FOR ALL GATES AND EQUIPMENT.



WARNING

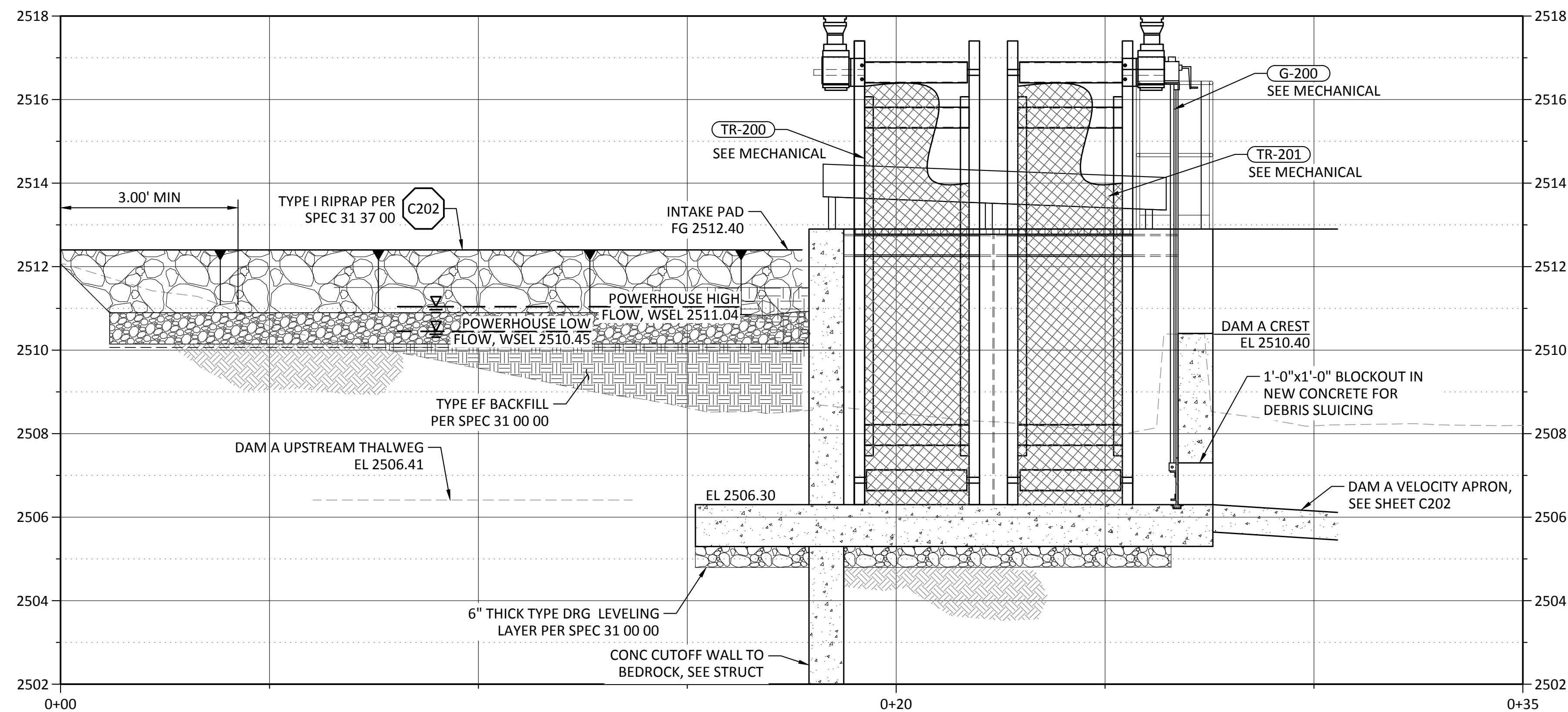
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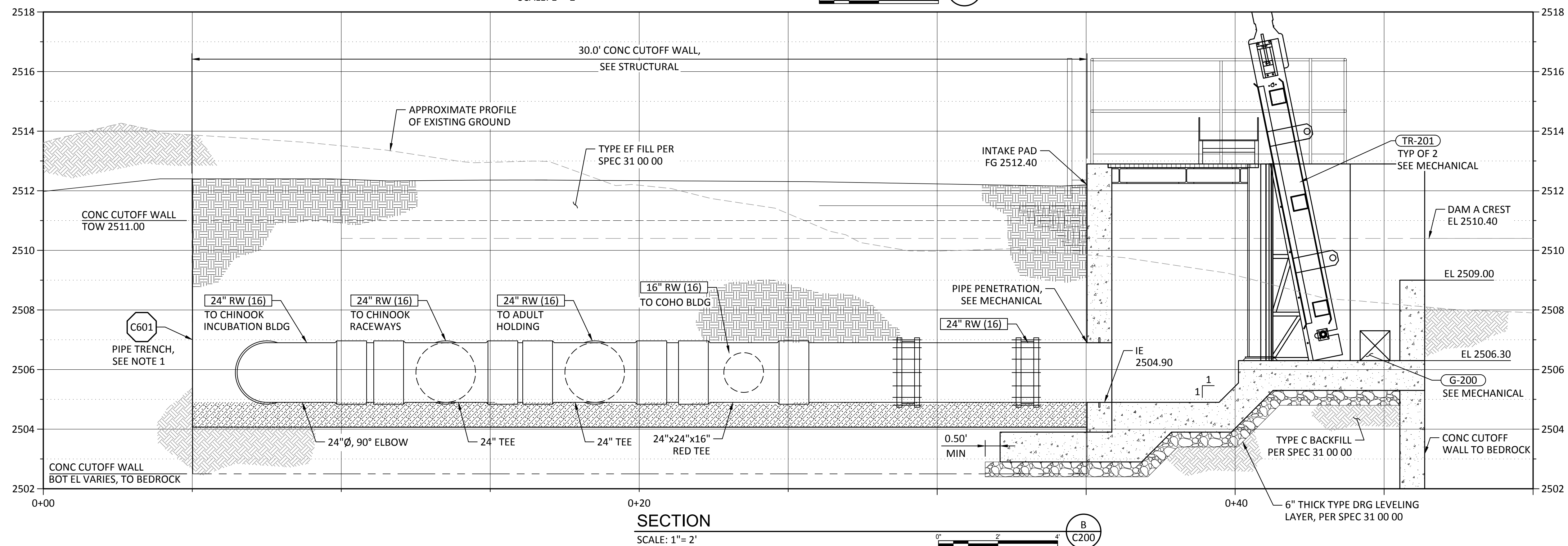


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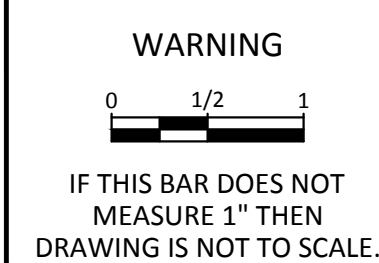


- SHEET NOTES:

1. DEMOLISH DAM A CONCRETE PER DEMOLITION SHEETS.
2. ALL EARTHWORKS MATERIALS ARE TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATION 31 00 00.



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



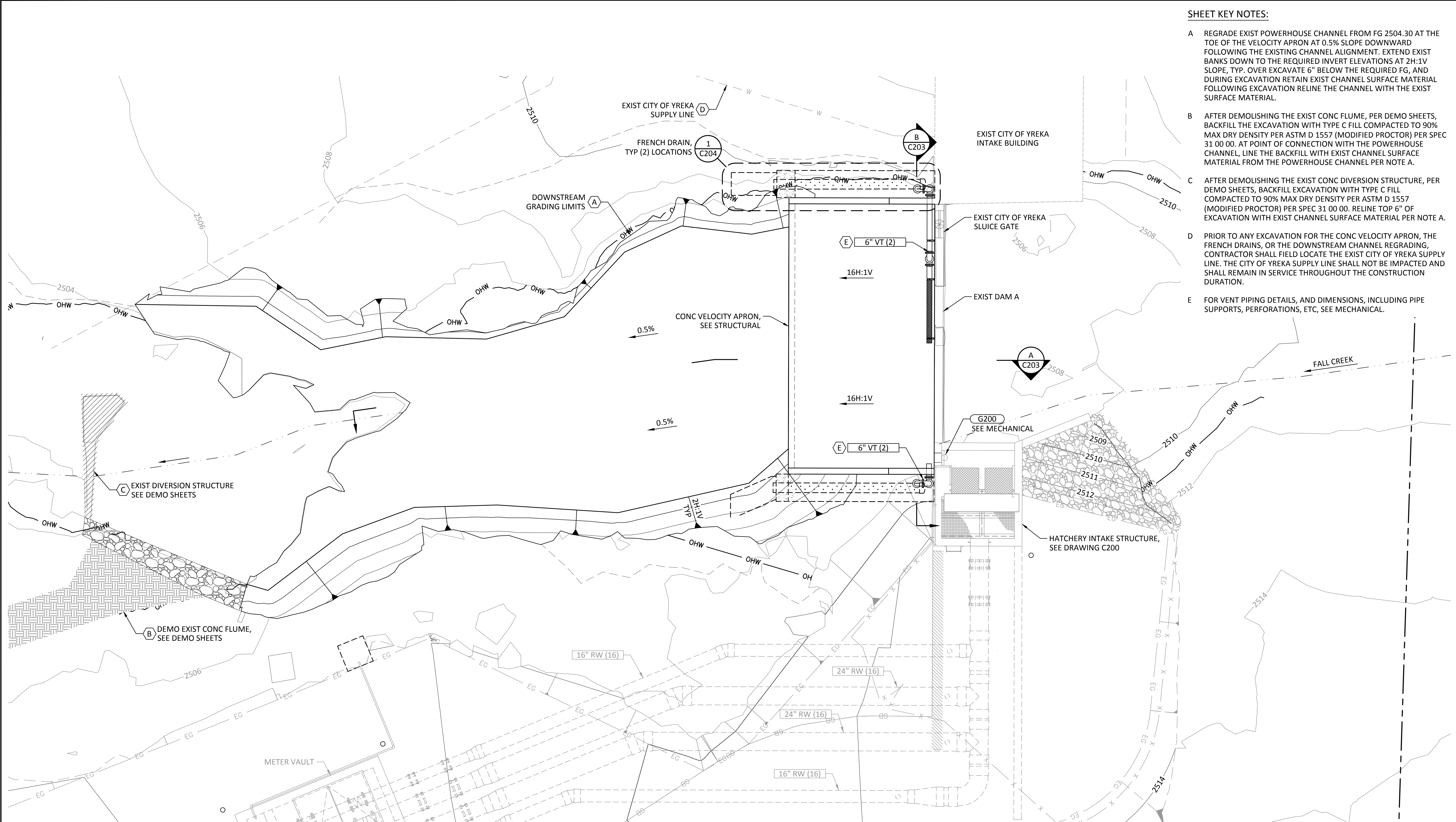
KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY

DAM A INTAKE SECTIONS

DESIGNED A. LEMAN
DRAWN J. LAHMON
CHECKED V. AUTIER
PROJECT DATE 10/28/20

DRAWING

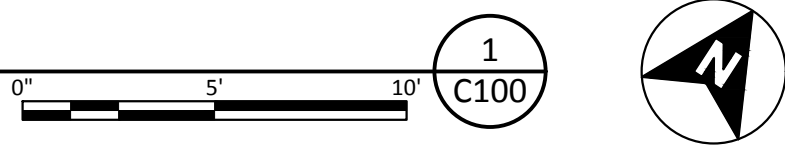
C201



- SHEET KEY NOTES:**
- A REGRADE EXIST POWERHOUSE CHANNEL FROM FG 2504.30 AT THE TOE OF THE VELOCITY APRON AT 0.5% SLOPE DOWNWARD FOLLOWING THE EXISTING CHANNEL ALIGNMENT. EXTEND EXIST BANKS DOWN TO THE REQUIRED INVERT ELEVATIONS AT 2H:1V SLOPE, TYP. OVER EXCAVATE 6" BELOW THE REQUIRED FG, AND DURING EXCAVATION RETAIN EXIST CHANNEL SURFACE MATERIAL FOLLOWING EXCAVATION RELINE THE CHANNEL WITH THE EXIST SURFACE MATERIAL.
 - B AFTER DEMOLISHING THE EXIST CONC FLUME, PER DEMO SHEETS, BACKFILL THE EXCAVATION WITH TYPE C FILL COMPACTED TO 90% MAX DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR) PER SPEC 31 00 00. AT POINT OF CONNECTION WITH THE POWERHOUSE CHANNEL, LINE THE BACKFILL WITH EXIST CHANNEL SURFACE MATERIAL FROM THE POWERHOUSE CHANNEL PER NOTE A.
 - C AFTER DEMOLISHING THE EXIST CONC DIVERSION STRUCTURE, PER DEMO SHEETS, BACKFILL EXCAVATION WITH TYPE C FILL COMPACTED TO 90% MAX DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR) PER SPEC 31 00 00. RELINE TOP 6" OF EXCAVATION WITH EXIST CHANNEL SURFACE MATERIAL PER NOTE A.
 - D PRIOR TO ANY EXCAVATION FOR THE CONC VELOCITY APRON, THE FRENCH DRAINS, OR THE DOWNSTREAM CHANNEL REGRAIDING, CONTRACTOR SHALL FIELD LOCATE THE EXIST CITY OF YREKA SUPPLY LINE. THE CITY OF YREKA SUPPLY LINE SHALL NOT BE IMPACTED AND SHALL REMAIN IN SERVICE THROUGHOUT THE CONSTRUCTION DURATION.
 - E FOR VENT PIPING DETAILS, AND DIMENSIONS, INCLUDING PIPE SUPPORTS, PERFORATIONS, ETC, SEE MECHANICAL.

DAM A MODIFICATIONS PLAN

SCALE: 1"= 5'



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REV	DATE	BY	DESCRIPTION	

WARNING

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KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

DAM A MODIFICATIONS
PLAN

DESIGNED A. LEMAN

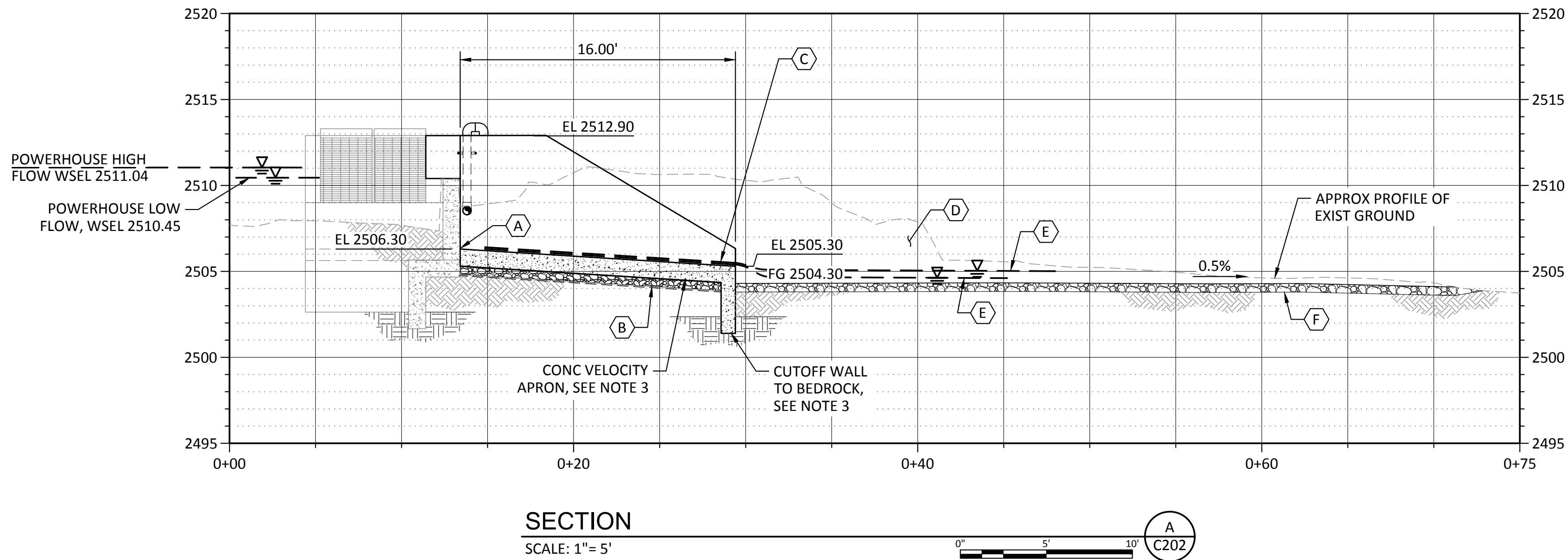
DRAWN J. LAHMON

CHECKED V. AUTIER

PROJECT DATE 10/28/20

DRAWING

C202



SHEET NOTES:

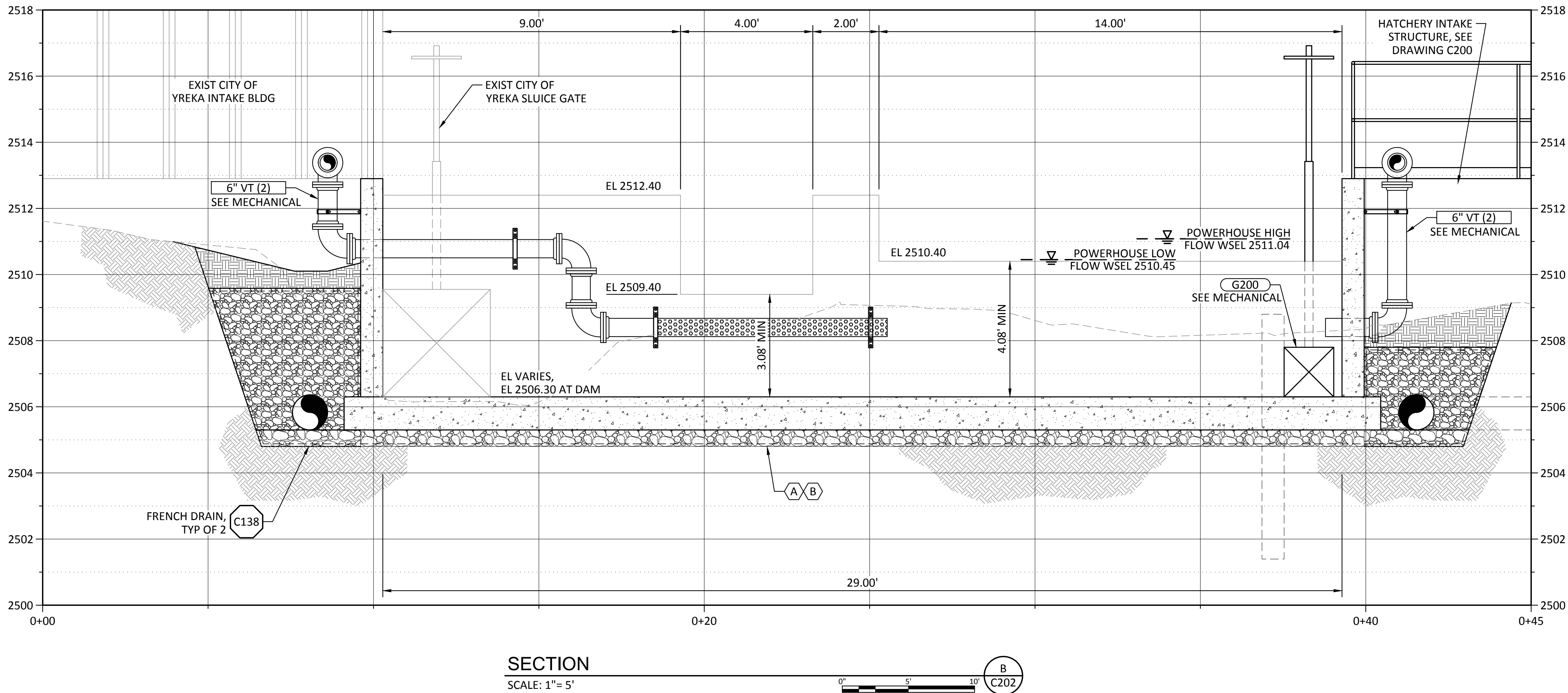
- ALL EARTHWORKS MATERIALS ARE TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATION 31 00 00.
- EXIST DAM A DIMENSIONS ARE BASED ON AS-BUILT DATA PROVIDED BY THE CITY OF YREKA, BUT MAY BE SUBJECT TO SOME VARIATION. PRIOR TO DEVELOPMENT OF SHOP DRAWINGS, CONTRACTOR TO CONFIRM ALL EXISTING DIMENSIONS OF DAM. IF DIMENSIONS VARY SIGNIFICANTLY FROM THOSE REPORTED, CONTRACTOR TO COORDINATE WITH THE OWNER AND ENGINEER.
- FOR CONC VELOCITY APRON DETAILS AND DIMENSIONS, INCLUDING CONNECTIONS TO DAM A, WALL THICKNESS, WALL PENETRATIONS, ETC, SEE STRUCTURAL. FOR VENT PIPING DETAILS AND DIMENSIONS, INCLUDING PIPE SUPPORTS, PERFORATIONS, ETC, SEE MECHANICAL.

SHEET KEY NOTES:

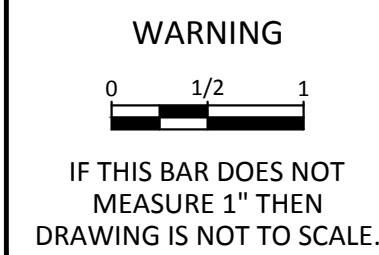
- A HAND EXCAVATION WILL BE REQUIRED WITHIN THE FOOTPRINT OF DAM A AND THE DAM A FOOTING, AS INDICATED IN THE STRUCTURAL DRAWINGS. IN ACCORDANCE WITH NOTE 2 ABOVE AND THE UNCERTAINTY ASSOCIATED WITH THE AS-BUILT DRAWINGS, THE CONTRACTOR SHALL EXERCISE CAUTION DURING EXCAVATION OUTSIDE OF THESE LIMITS TO ENSURE THAT THE DAM A CONC FOOTING IS NOT IMPACTED.
- B OVER EXCAVATE 6" BELOW THE BOTTOM OF THE CONC VELOCITY APRON, PLACE AND COMPACT 6" THICK TYPE DRG LEVELING LAYER WITH 12oz NON-WOVEN GEOTEXTILE UNDERLAY PER SPEC 31 00 00 AND 31 05 19. AT EDGE OF STRUCTURE, TIE-IN THE LEVELING LAYER TO THE DRAIN ROCK OF THE TWO PERIPHERAL FRENCH DRAINS. IF OVER EXCAVATION OCCURS BELOW THE TYPE DRG LEVELING LAYER, BACKFILL TO 6" BELOW THE BOTTOM OF THE STRUCTURE WITH TYPE C FILL COMPACTED TO MIN 90% MAX DRY DENSITY PER ASTM D 1557 (MODIFIED PROCTOR). IF BEDROCK IS ENCOUNTERED AT OR ABOVE THE ELEVATION OF THE 6-INCH OVEREXCAVATION, CONTRACTOR SHALL NOTIFY ENGINEER IMMEDIATELY AND AWAIT DIRECTION.
- C THE EXPECTED FLOW CONDITIONS ON THE CONC VELOCITY APRON ARE SUMMARIZED BELOW:
POWERHOUSE HIGH FLOW (50 CFS)
FLOW DEPTH: 2.4"
FLOW VELOCITY: 8.5 FT/S

POWERHOUSE LOW FLOW (15 CFS)
FLOW DEPTH: 1.2"
FLOW VELOCITY: 5.3 FT/S
- D DOWNSTREAM OF DAM A, THE SITE SURVEY INDICATES THAT THERE EXISTS A MOUND OF MATERIAL. IT IS EXPECTED THAT THIS HIGH POINT IN THE SURVEY REPRESENTS SEDIMENT THAT HAS ACCUMULATED IN THE CHANNEL OVER TIME. AS PART OF THE EXCAVATION FOR THE CONC VELOCITY APRON AND DOWNSTREAM CHANNEL, THIS MATERIAL WILL NEED TO BE EXCAVATED AND DISPOSED OF OFF-SITE. THE REQUIRED EXCAVATION OF THIS ACCUMULATED MATERIAL IS EXPECTED TO BE APPROXIMATELY 85 CY (IN ADDITION TO THE CHANNEL REGRADING EARTHWORKS VOLUME).
- E THE EXPECTED FLOW CONDITIONS IN THE REGRADED CHANNEL IMMEDIATELY DOWNSTREAM OF THE VELOCITY APRON ARE SUMMARIZED BELOW:
POWERHOUSE HIGH FLOW (50 CFS)
FLOW DEPTH: 7.0"
FLOW VELOCITY: 2.4 FT/S

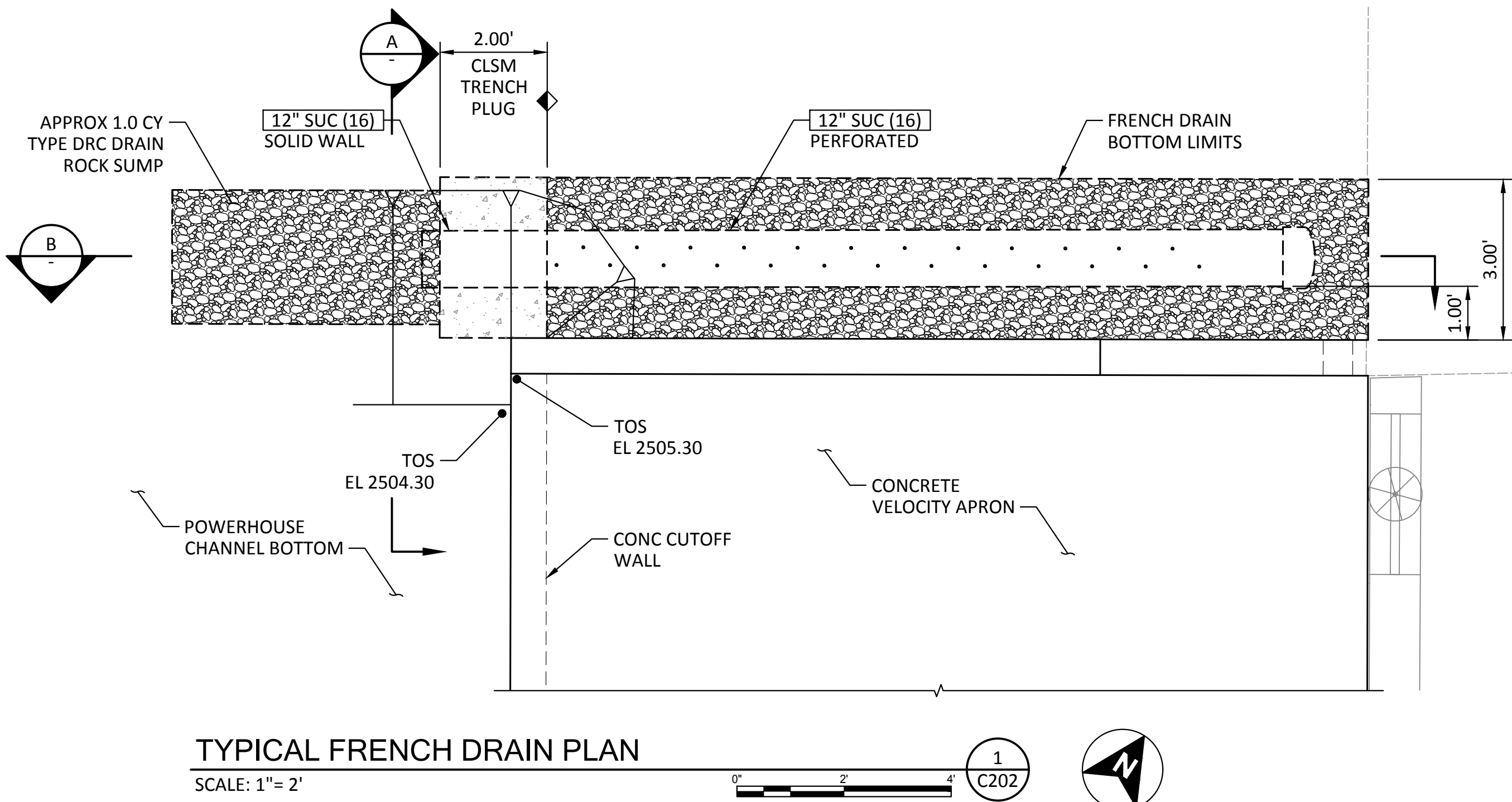
POWERHOUSE LOW FLOW (15 CFS)
FLOW DEPTH: 3.4"
FLOW VELOCITY: 1.5 FT/S
- F DURING EXCAVATION RETAIN SEPARATELY THE SURFACE MATERIAL FROM THE EXIST POWERHOUSE CHANNEL. OVER EXCAVATE TO 6" MIN BELOW THE FINISHED GRADE ELEVATION OF THE CHANNEL, AND BACKFILL WITH THE RETAINED EXIST CHANNEL SURFACE MATERIAL.



REV	DATE	BY	DESCRIPTION
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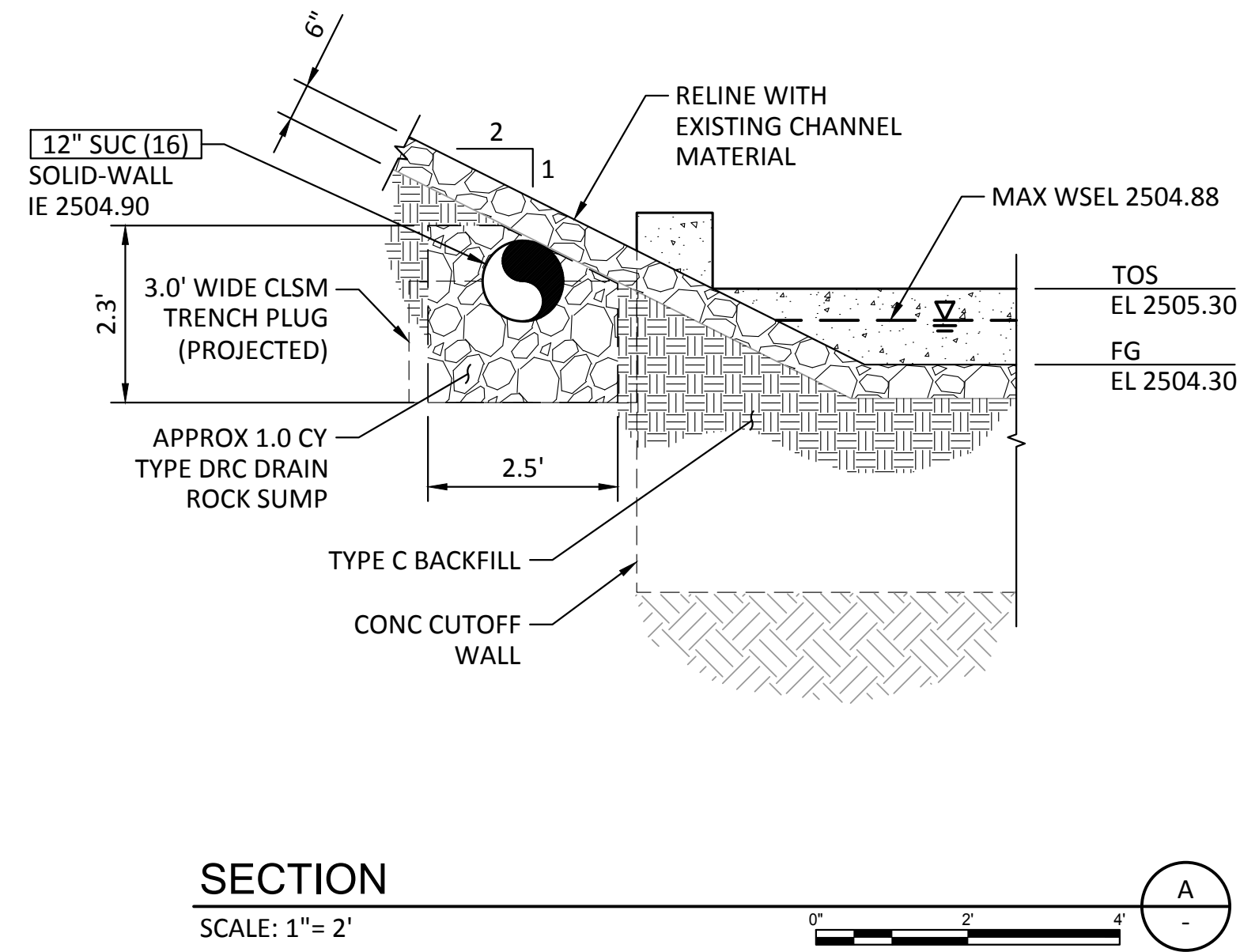


KLAMATH RIVER RENEWAL CORPORATION		DESIGNED	A. LEMAN	DRAWING C203
FALL CREEK FISH HATCHERY		DRAWN	J. LAHMON	
DAM A MODIFICATIONS SECTIONS		CHECKED	V. AUTIER	
		PROJECT DATE	10/28/20	

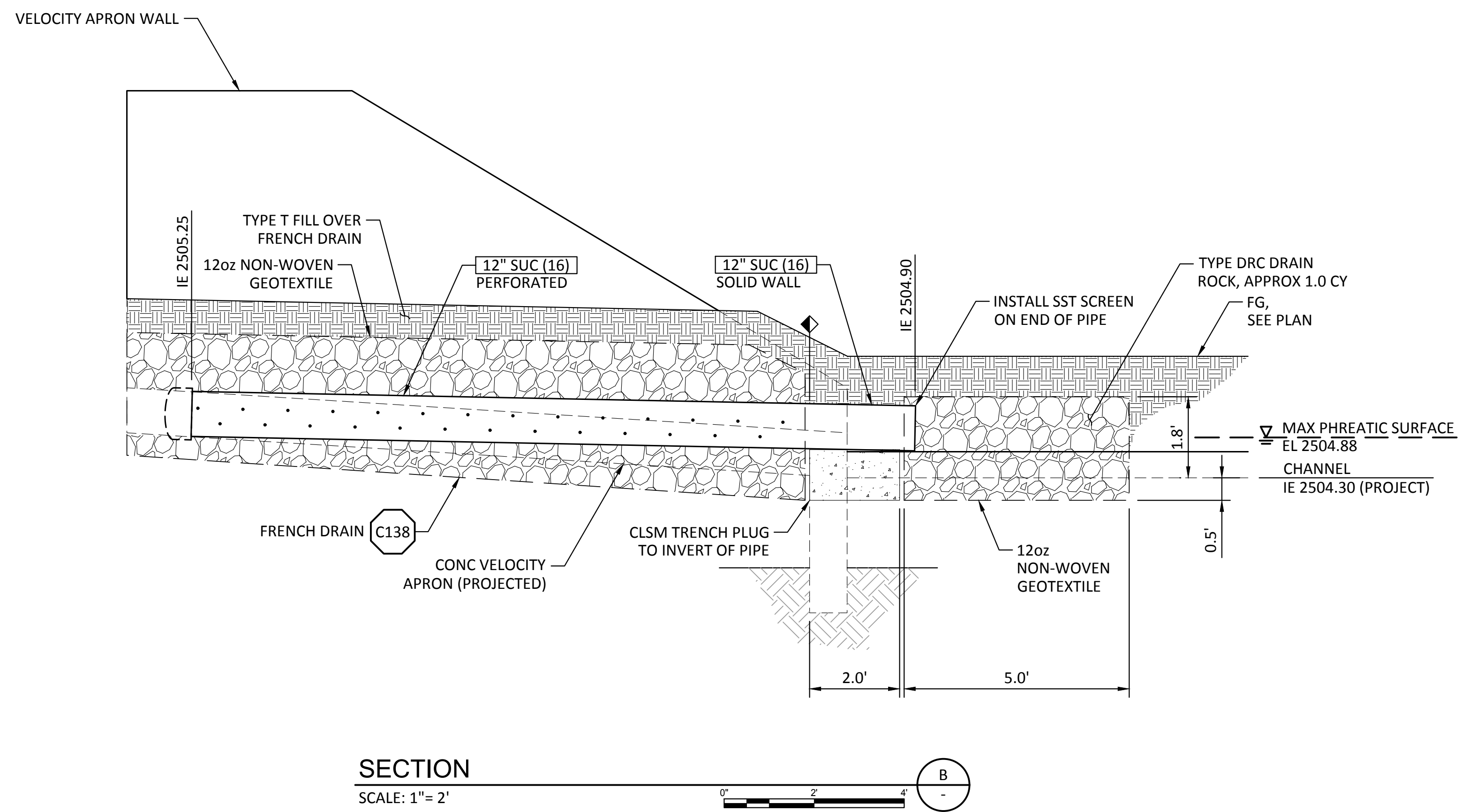


TYPICAL FRENCH DRAIN PLAN
SCALE: 1"= 2'

- SHEET NOTES:**
1. FRENCH DRAIN DETAIL AND SECTIONS TYPICAL OF BOTH SIDES OF THE DAM A CONC VELOCITY APRON. CONFIGURATION TO BE MIRRORED ON OPPOSITE SIDE OF APRON.
 2. ALL EARTHWORKS MATERIALS ARE TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATION 31 00 00.
 3. ALL NON-WOVEN GEOTEXTILE TO BE OVERLAPPED A MINIMUM OF 1.0' AT SEAMS. CARE SHALL BE TAKEN DURING STORAGE, PLACEMENT, AND COMPACTION OF DRAIN ROCK MATERIALS THAT DRAIN ROCK IS NOT CONTAMINATED WITH FINE MATERIALS OR EXISTING SOILS. AFTER PLACEMENT AND COMPACTION (AS SPECIFIED) DRAIN ROCK IS TO BE IMMEDIATELY COVERED WITH GEOTEXTILE PRIOR TO FINAL BACKFILL.
 4. IF SEEPAGE AT THE DAM IS ENCOUNTERED DURING CONSTRUCTION OF THE FRENCH DRAINS, CONTRACTOR SHALL NOTIFY THE OWNER AND ENGINEER.



SECTION
SCALE: 1"= 2'



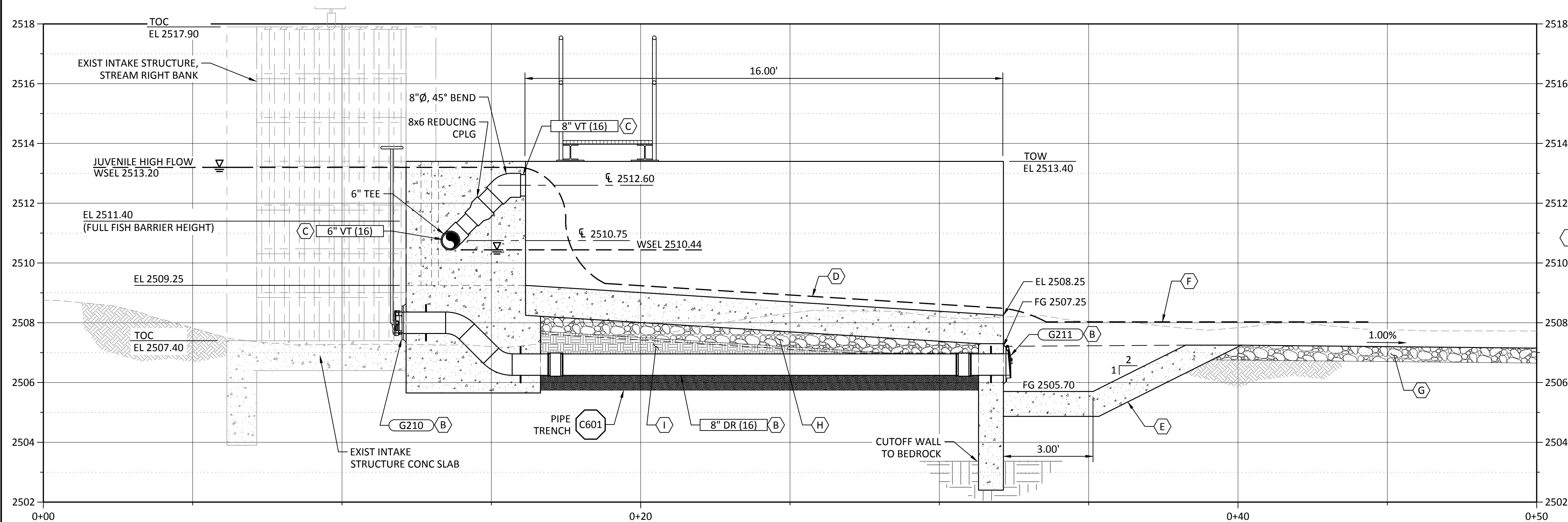
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SCALE: 1"= 2'

REV	DATE	BY	DESCRIPTION
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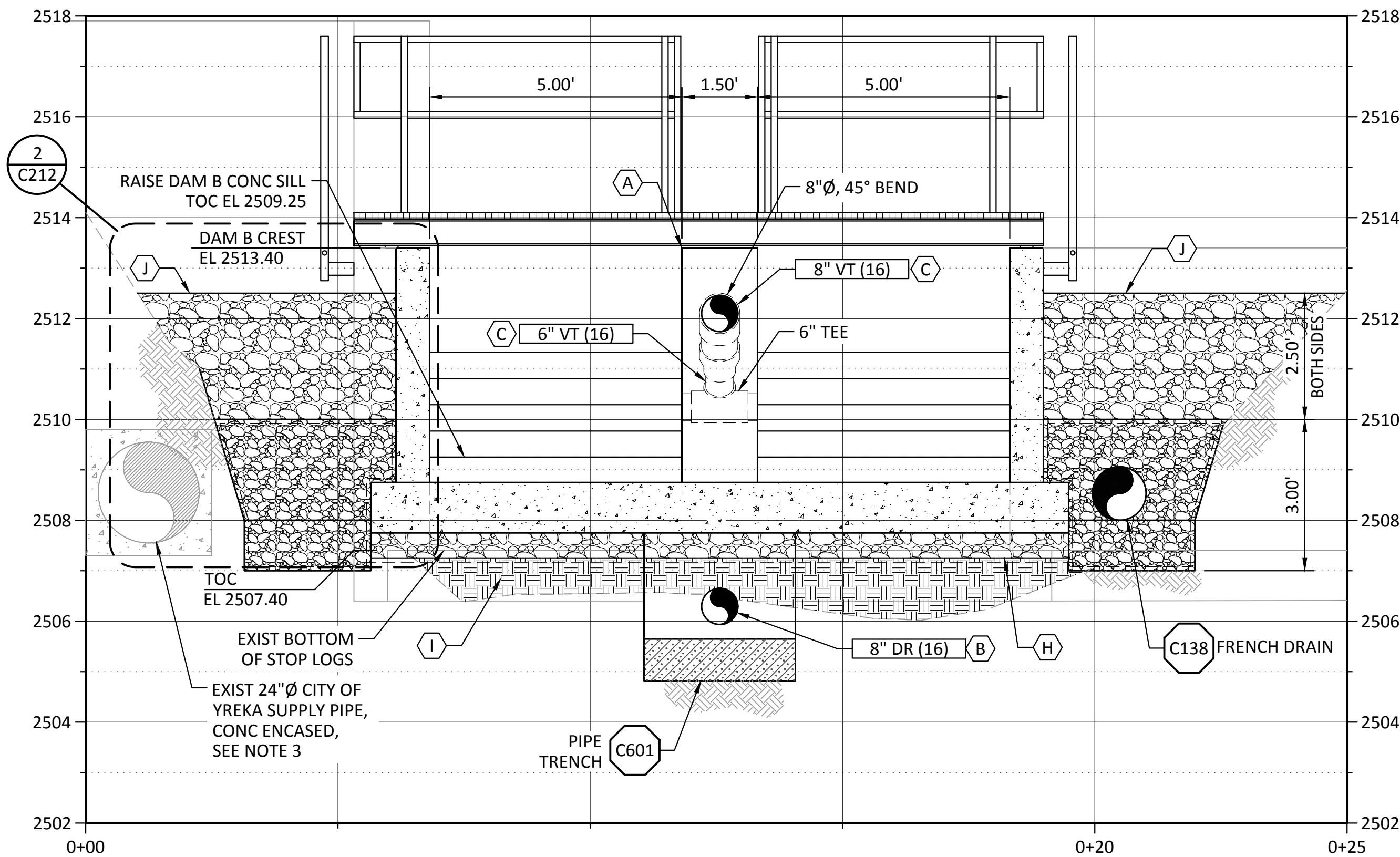


KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING C204
FALL CREEK FISH HATCHERY	DRAWN <u>J. LAHMON</u>	
DAM A FRENCH DRAIN SECTIONS AND DETAILS	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	



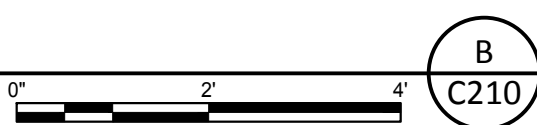
SECTION

SCALE: 1"= 2'



SECTION

SCALE: 1"= 2'



SHEET NOTES:

- ALL EARTHWORKS MATERIALS ARE TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATION 31 00 00.
- EXIST DAM B DIMENSIONS AND ELEVATIONS ARE BASED ON AS-BUILT DATA PROVIDED BY THE CITY OF YREKA, BUT MAY BE SUBJECT TO SOME VARIATION. PRIOR TO DEVELOPMENT OF SHOP DRAWINGS, CONTRACTOR TO CONFIRM ALL EXIST DIMENSIONS OF DAM. IF DIMENSIONS VARY SIGNIFICANTLY FROM THOSE REPORTED, CONTRACTOR TO COORDINATE WITH THE OWNER AND ENGINEER.
- PRIOR TO ANY EXCAVATION FOR THE CONC VELOCITY APRON OR THE ASSOCIATED EARTHWORKS, CONTRACTOR SHALL FIELD LOCATE THE EXIST CITY OF YREKA SUPPLY LINE. THE CITY OF YREKA SUPPLY LINE SHALL NOT BE IMPACTED AND SHALL REMAIN IN SERVICE THROUGHOUT THE CONSTRUCTION DURATION.

SHEET KEY NOTES:

- A SEE STRUCTURAL FOR CONC INVERT RAISE, NEW FABRICATED STOP LOGS, NEW FABRICATED NAPPE EXTENSION FITTINGS, AND WALKWAY.
- B SEE MECHANICAL FOR 8" DRAIN PIPE, PIPE PENETRATIONS, AND GATES. SEE DEMO SHEETS FOR DEMOLITION OF EXIST CONC APRON.
- C CAST VENT PIPE IN THE RECONSTRUCTED CENTRAL PIER AS SHOWN WITH 6" TEE ORIENTED AT 45° TO HORIZONTAL, AND 8x6 REDUCING COUPLING. VT PIPE INLET WILL BE LOCATED ON THE DOWNSTREAM FACE OF THE CONC PIER AT CENTERLINE EL 2512.60, AND THE OUTLETS WILL BE LOCATED EITHER SIDE OF THE PIER AT CENTERLINE EL 2510.75. ALL OPEN ENDS SHALL BE FITTED WITH SST BIRD SCREENS.
- D THE EXPECTED FLOW CONDITIONS ON THE CONC VELOCITY APRON ARE SUMMARIZED BELOW:
JUVENILE HIGH FLOW (62 CFS)
FLOW DEPTH: 4.9"
FLOW VELOCITY: 13.1 FT/S

ADULT HIGH FLOW (57 CFS)
FLOW DEPTH: 4.7"
FLOW VELOCITY: 12.7 FT/S
- E AT THE OUTLET OF THE 8" DR PIPE, CONSTRUCT 3.0'W X 3.0'L CONC POOL AT FG 2505.70 AROUND OUTLET OF DRAIN PIPE WITH 2H:1V SIDE SLOPES UP TO CHANNEL INVERT, SEE STRUCTURAL FOR DETAILS.
- F THE EXPECTED FLOW CONDITIONS IN THE REGRADED CHANNEL IMMEDIATELY DOWNSTREAM OF THE VELOCITY APRON ARE SUMMARIZED BELOW:
JUVENILE HIGH FLOW (62 CFS)
FLOW DEPTH: 11.7"
FLOW VELOCITY: 3.9 FT/S

ADULT HIGH FLOW (57 CFS)
FLOW DEPTH: 11.1"
FLOW VELOCITY: 3.8 FT/S
- G REGRADE THE DOWNSTREAM CHANNEL FROM IE 2507.25 AT TOE OF CONC VELOCITY APRON DOWNWARD AT 1.0% SLOPE FOLLOWING THE EXIST CREEK ALIGNMENT UNTIL EXIST GRADE IS MET (APPROX 25'). EXTEND EXIST BANKS DOWN TO THE REQUIRED INVERT ELEV AT 2H:1V SLOPE, TYP. WHERE NOT IN BEDROCK, OVER EXCAVATE 6" BELOW THE REQUIRED INVERT ELEVATION, AND DURING EXCAVATION RETAIN EXIST CHANNEL SURFACE MATERIAL. FOLLOWING EXCAVATION, RELINE THE EXIST CHANNEL WITH THE EXIST SURFACE MATERIAL.
- H PLACE AND COMPACT 6" THICK TYPE DRG LEVELING LAYER WITH 12oz NON-WOVEN GEOTEXTILE UNDERLAY PER SPEC 31 00 00 AND 31 05 19 IMMEDIATELY UNDER THE CONC VELOCITY APRON. AT EDGE OF STRUCTURE TIE-IN THE LEVELING LAYER TO THE DRAIN ROCK OF THE TWO PERIPHERAL FRENCH DRAINS.
- I BACKFILL TO BOTTOM OF TYPE DRG LEVELING LAYER WITH TYPE SF FILL AND COMPACT TO 95% MAX DRY DENSITY ACCORDING TO ASTM D 1557 (MODIFIED PROCTOR) PER SPEC 31 00 00.
- J PLACE 30" THICK LAYER OF TYPE IV RIPRAP PER SPEC 31 37 00 BEHIND WALLS EITHER SIDE OF THE NEW CONC VELOCITY APRON, WITH 12 OZ NON-WOVEN GEOTEXTILE UNDERLAY. WHERE ADJACENT SLOPES ARE BEDROCK, PLACE TO ADJACENT SLOPES. WHERE ADJACENT SLOPES ARE SOIL, EXCAVATE AND LINE 30" THICK LAYER 2.0' UP THE SLOPE.

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

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



KLAMATH RIVER RENEWAL CORPORATION

FALL CREEK FISH HATCHERY

DAM B MODIFICATIONS
SECTIONS

DESIGNED A. LEMAN

DRAWN J. LAHMON

CHECKED V. AUTIER

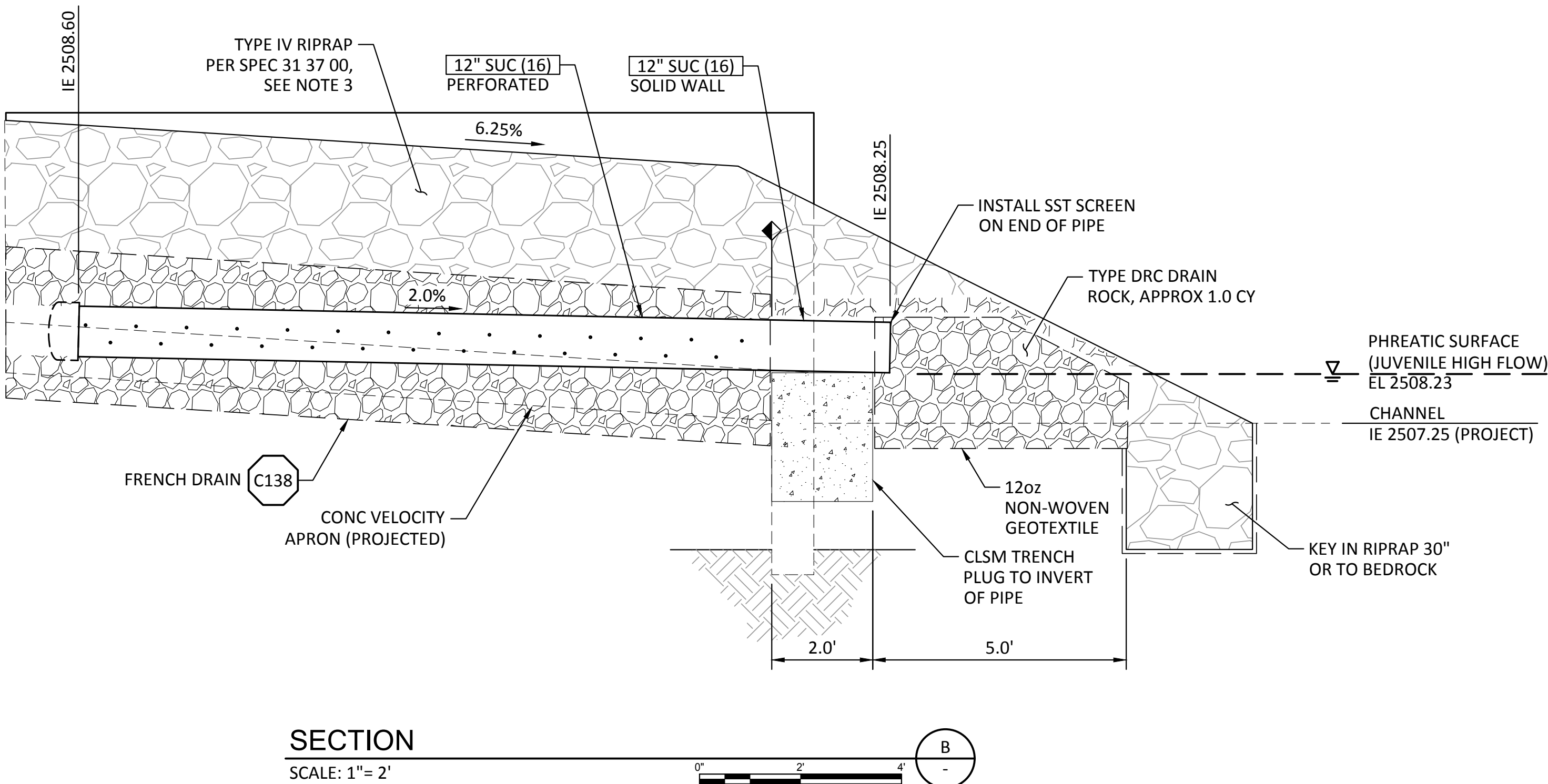
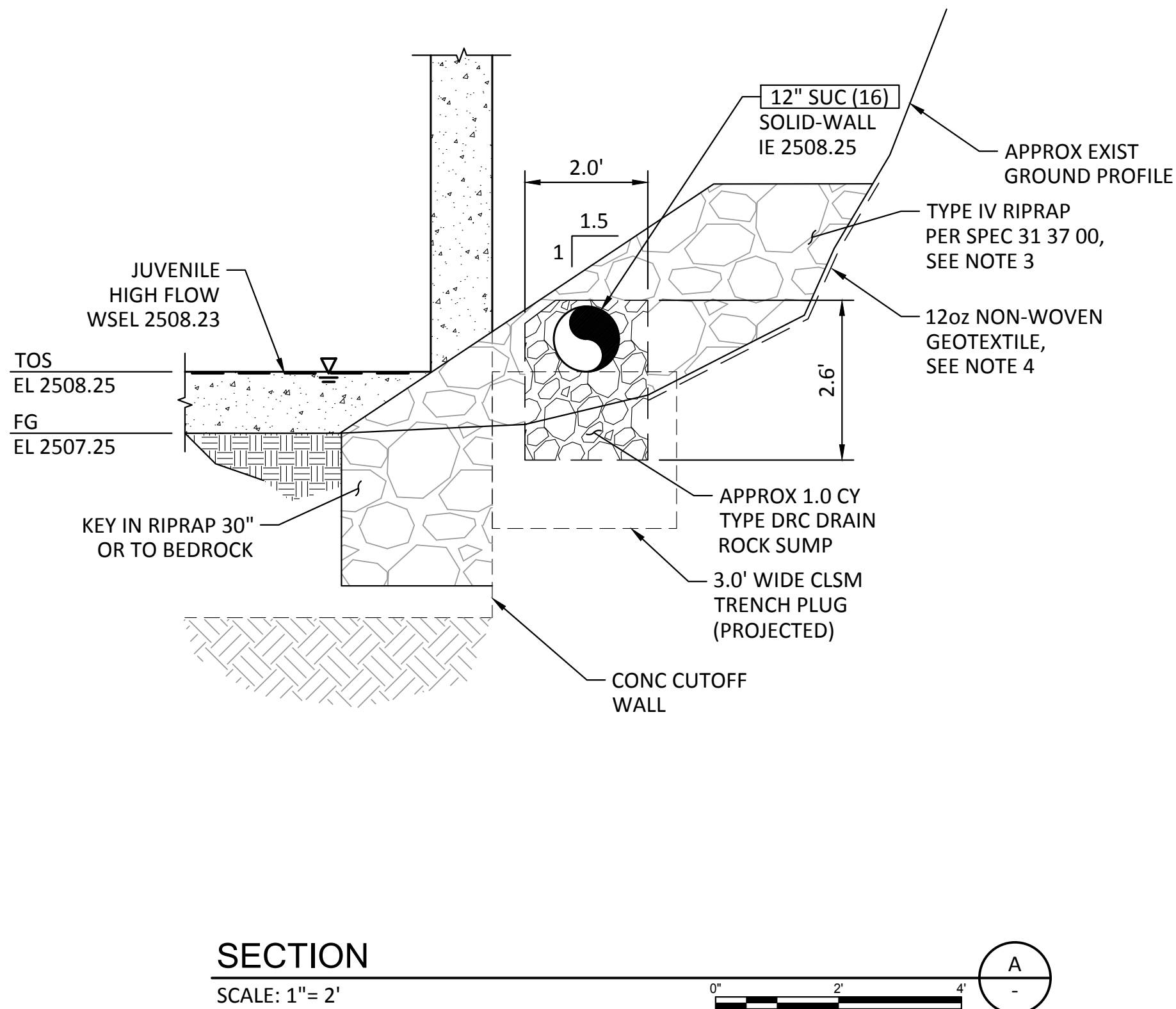
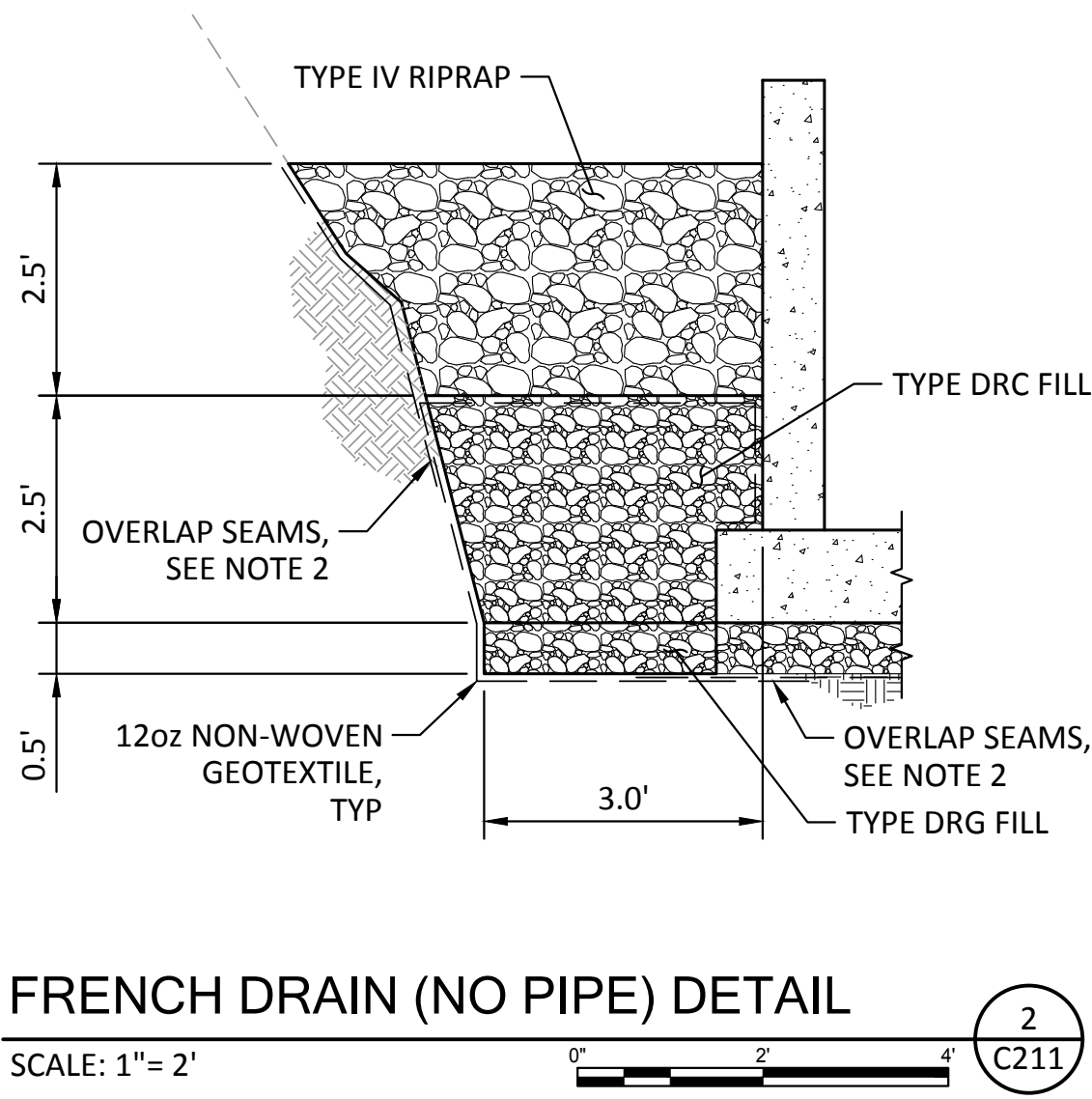
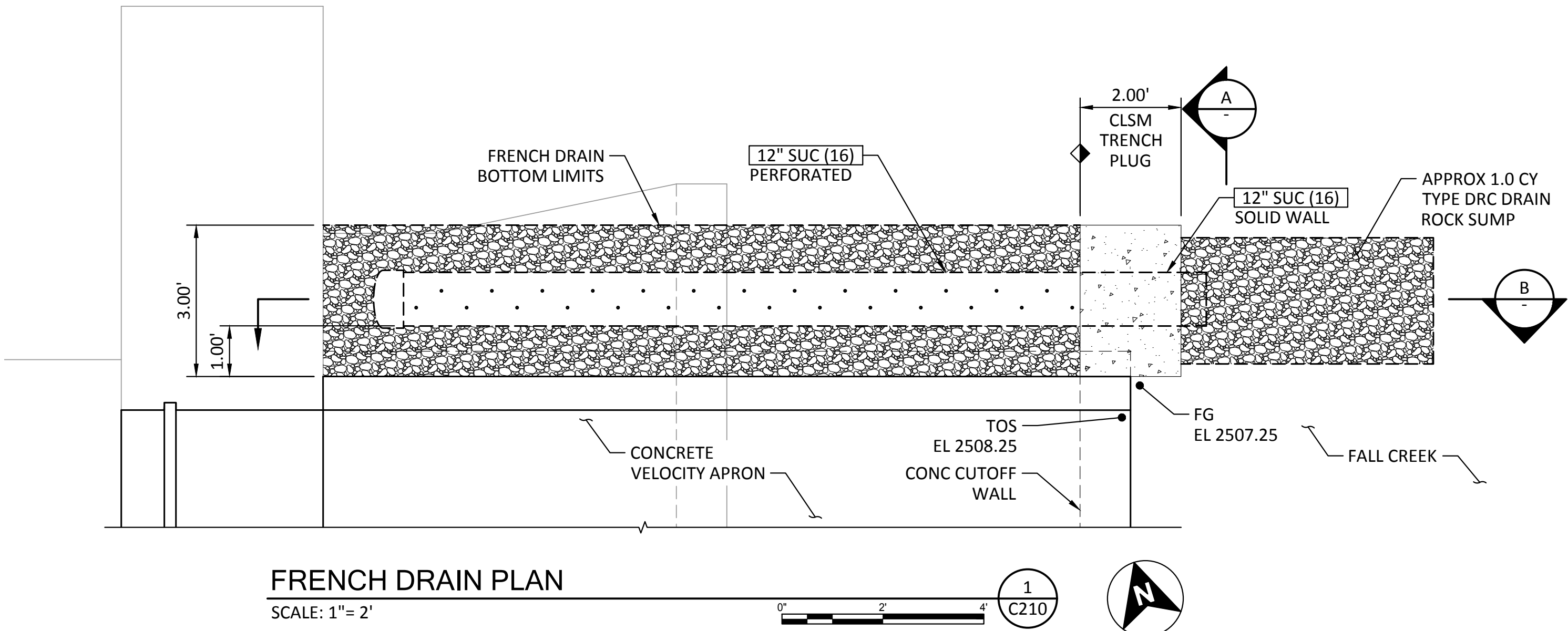
PROJECT DATE 10/28/20

DRAWING

C211

SHEET NOTES:

1. RIPRAP NOT SHOWN IN PLAN ON THIS SHEET FOR CLARITY. FOR RIPRAP LAYER ABOVE FRENCH DRAIN SEE SHEETS C210 AND C211.
2. ALL NON-WOVEN GEOTEXTILE TO BE OVERLAPPED A MINIMUM OF 1.0' AT SEAMS. CARE SHALL BE TAKEN DURING STORAGE, PLACEMENT, AND COMPACTION OF DRAIN ROCK MATERIALS THAT DRAIN ROCK IS NOT CONTAMINATED WITH FINE MATERIALS OR EXISTING SOILS. AFTER PLACEMENT AND COMPACTION (TYPE DRG FILL ONLY) DRAIN ROCK IS TO BE IMMEDIATELY COVERED WITH GEOTEXTILE PRIOR TO FINAL BACKFILL.
3. TYPE IV RIPRAP SHALL BE PLACED BY LIGHT EQUIPMENT OVER THE FRENCH DRAIN. NO END DUMPING WILL BE PERMITTED ON TOP OF THE FRENCH DRAIN PIPE OR DRAIN ROCK.
4. TYPE IV RIPRAP SHALL HAVE 12OZ NON-WOVEN GEOTEXTILE WHERE PLACED AGAINST NATURAL GRADE, OR IN LOCATIONS OF EXCAVATION WHERE PLACED AGAINST BACKFILL MATERIAL.
5. ALL EARTHWORKS MATERIALS ARE TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATION 31 00 00.



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

WARNING
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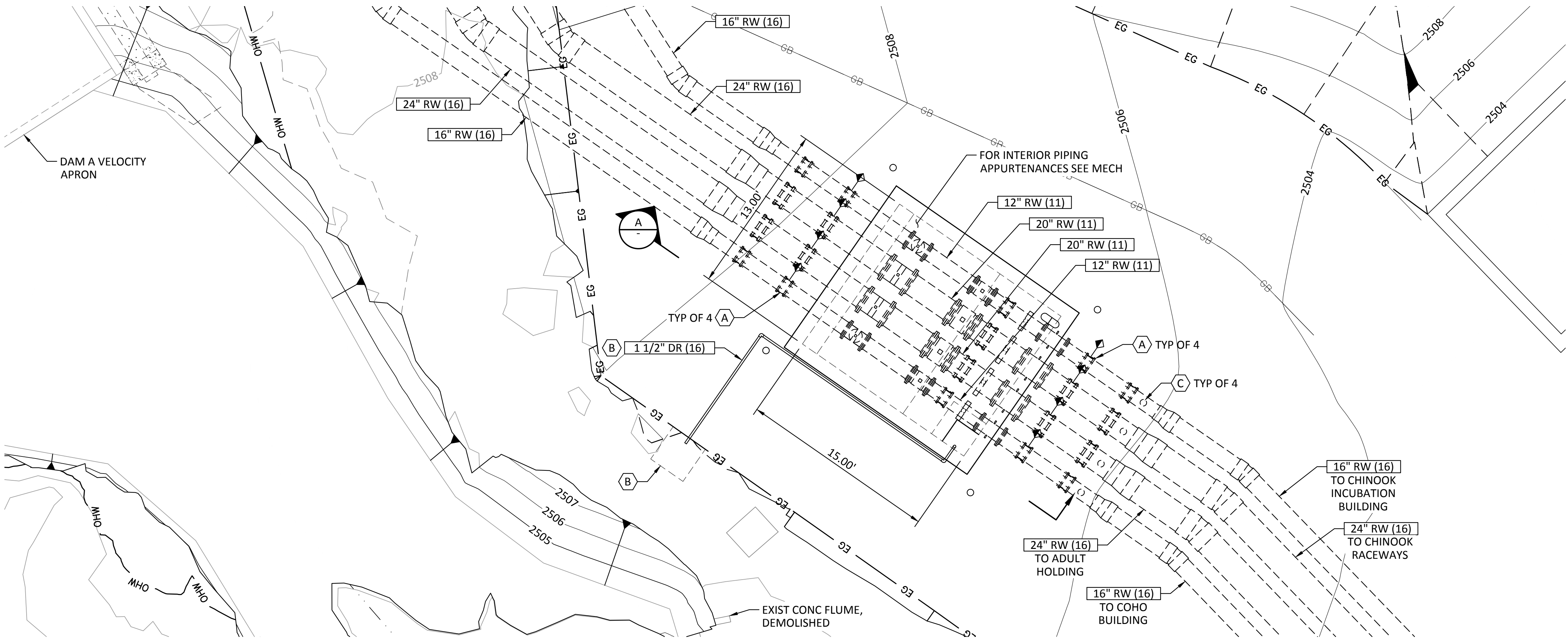


KLAMATH RIVER RENEWAL CORPORATION
FALL CREEK FISH HATCHERY
DAM B FRENCH DRAIN
SECTIONS AND DETAILS

DESIGNED A. LEMAN
DRAWN J. LAHMON
CHECKED V. AUTIER
PROJECT DATE 10/28/20

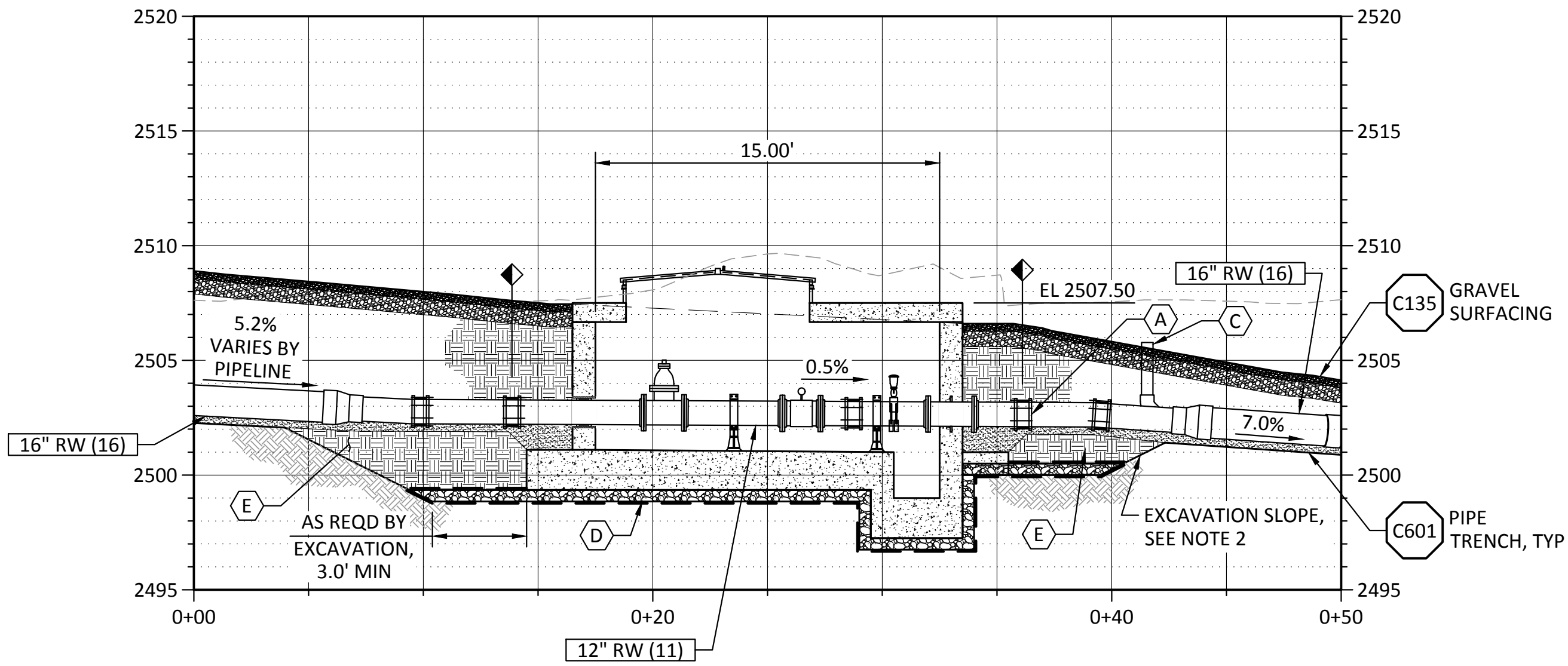
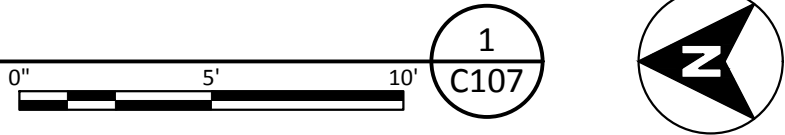
DRAWING

C212



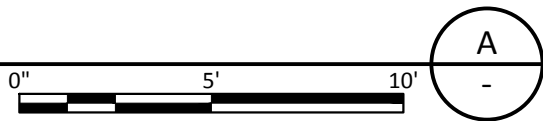
METER VAULT PLAN

SCALE: 1"= 5'



METER VAULT SECTION

SCALE: 1"= 5'



SHEET NOTES:

1. SEE STRUCTURAL FOR FACILITY DIMENSIONS. SEE MECHANICAL FOR ALL INTERIOR PIPING, PENETRATIONS AND APPURTENANCES.
2. CONTRACTOR SHALL BE RESPONSIBLE FOR MAINTAINING SAFE WORKING SLOPES BASED ON WORKING CONDITIONS, SOIL TYPE, MOISTURE CONTENT, ETC. ALL SLOPES SHALL MEET LOCAL, STATE, AND FEDERAL (OSHA) REQUIREMENTS.
3. ALL EARTHWORKS MATERIALS ARE TO BE PLACED AND COMPACTED ACCORDING TO SPECIFICATION 31 00 00.

SHEET KEY NOTES:

- A EITHER SIDE OF THE METER VAULT TRANSITION BETWEEN PIPE MATERIAL (16) AND (11) (SEE SHEET G010 FOR PIPE SCHEDULE) VIA REDUCING SLEEVE COUPLING. REDUCING SLEEVE COUPLING TO BE ROMAC RC501, OR APPROVED EQUAL. IN TOTAL, (4) x 12"Ø DI x PVC REDUCING SLEEVE COUPLINGS AND (4) x 20"Ø DI x PVC REDUCING SLEEVE COUPLINGS.
- B CONSTRUCT 1.0 CY DRAIN ROCK SUMP OF TYPE DRC MATERIAL WRAPPED IN A 12 OZ NON-WOVEN GEOTEXTILE. DRAIN ROCK SUMP DIMENSIONS SHALL BE 3.0' WIDE x 3.0' LONG x 3.0' DEEP, AND SHALL MAINTAIN 6" OF VEGETATED TOPSOIL ABOVE. ROUTE 1.5'Ø METER VAULT SUMP PUMP DISCHARGE TO THE DRAIN ROCK SUMP 24" BELOW FINISHED GRADE.
- C FOR ALL PIPING FITTINGS AND APPURTENANCES, OUTSIDE OF THE METER VAULT, SEE PIPING PLANS AND PROFILES.
- D PLACE 6" THICK LAYER OF TYPE DRC FILL PER SPEC 31 00 00 UNDER THE METER VAULT, AND UNDERLAY WITH 12 OZ NON-WOVEN GEOTEXTILE. EXTEND TYPE DRC LAYER AND GEOTEXTILE A MINIMUM OF 3.0' BEYOND THE FOOTPRINT OF THE METER VAULT. WRAP NON-WOVEN GEOTEXTILE OVER THE TYPE DRC FILL IN ALL AREAS OUTSIDE OF THE METER VAULT FOOTPRINT.
- E PLACE AND COMPACT TYPE C FILL TO 95% DRY DENSITY ACCORDING TO ASTM D 1557 (MODIFIED PROCTOR) PER SPEC 31 00 00.

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KLAMATH RIVER RENEWAL CORPORATION	DESIGNED <u>A. LEMAN</u>	DRAWING C215
FALL CREEK FISH HATCHERY	DRAWN <u>R. GUERRERO</u>	
METER VAULT PLAN AND SECTION	CHECKED <u>V. AUTIER</u>	
	PROJECT DATE <u>10/28/20</u>	