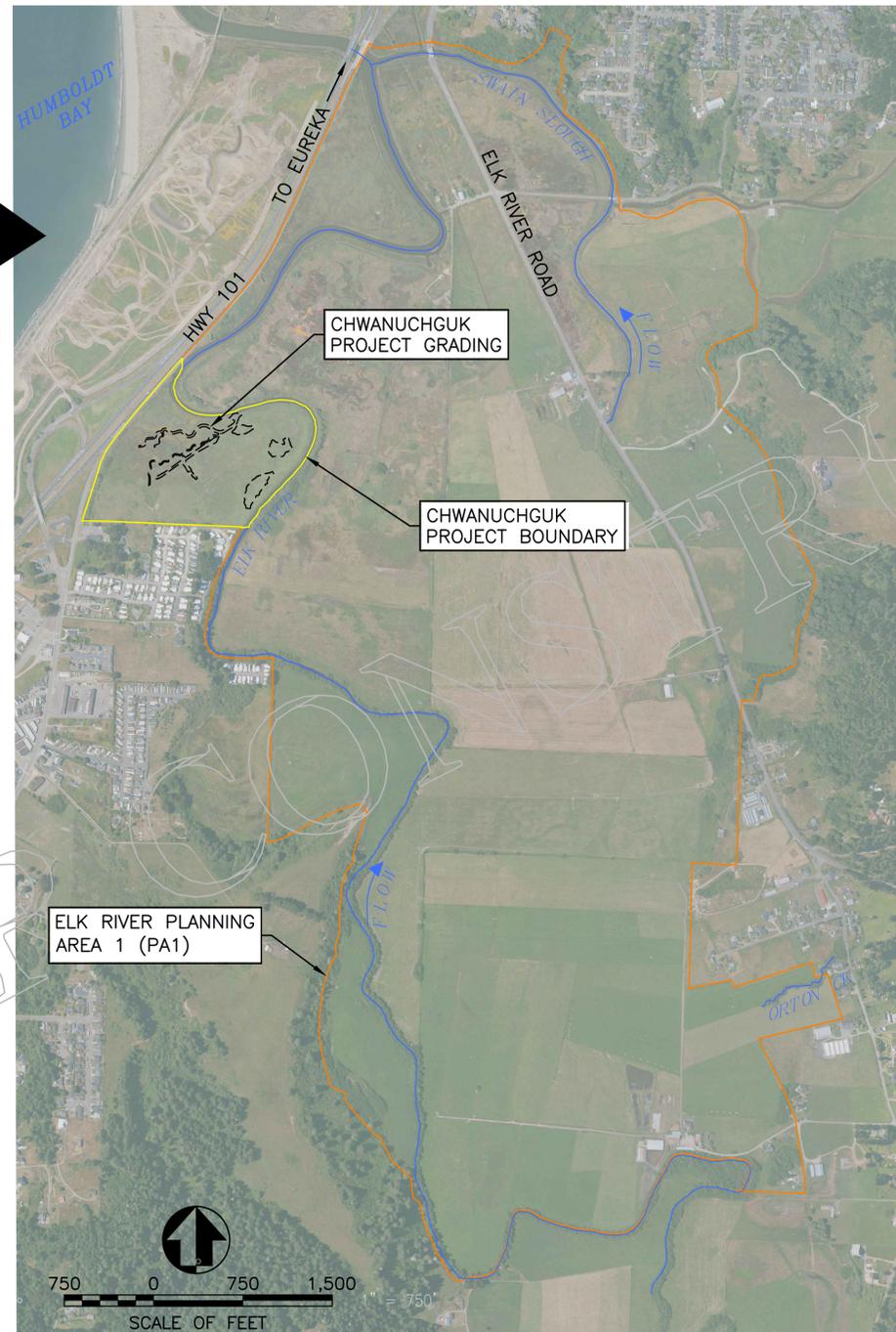


# ELK RIVER PLANNING AREA 1 65% DESIGN: CHWANUCHGUK PERMIT SET HUMBOLDT COUNTY, CALIFORNIA



## SHEET INDEX

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1	G1	COVER
2	G2	EXISTING CONDITIONS OVERVIEW
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5	C2	PROFILE
6	C3	SECTION
7	C4	ISOPACH
8	C5	DETAILS

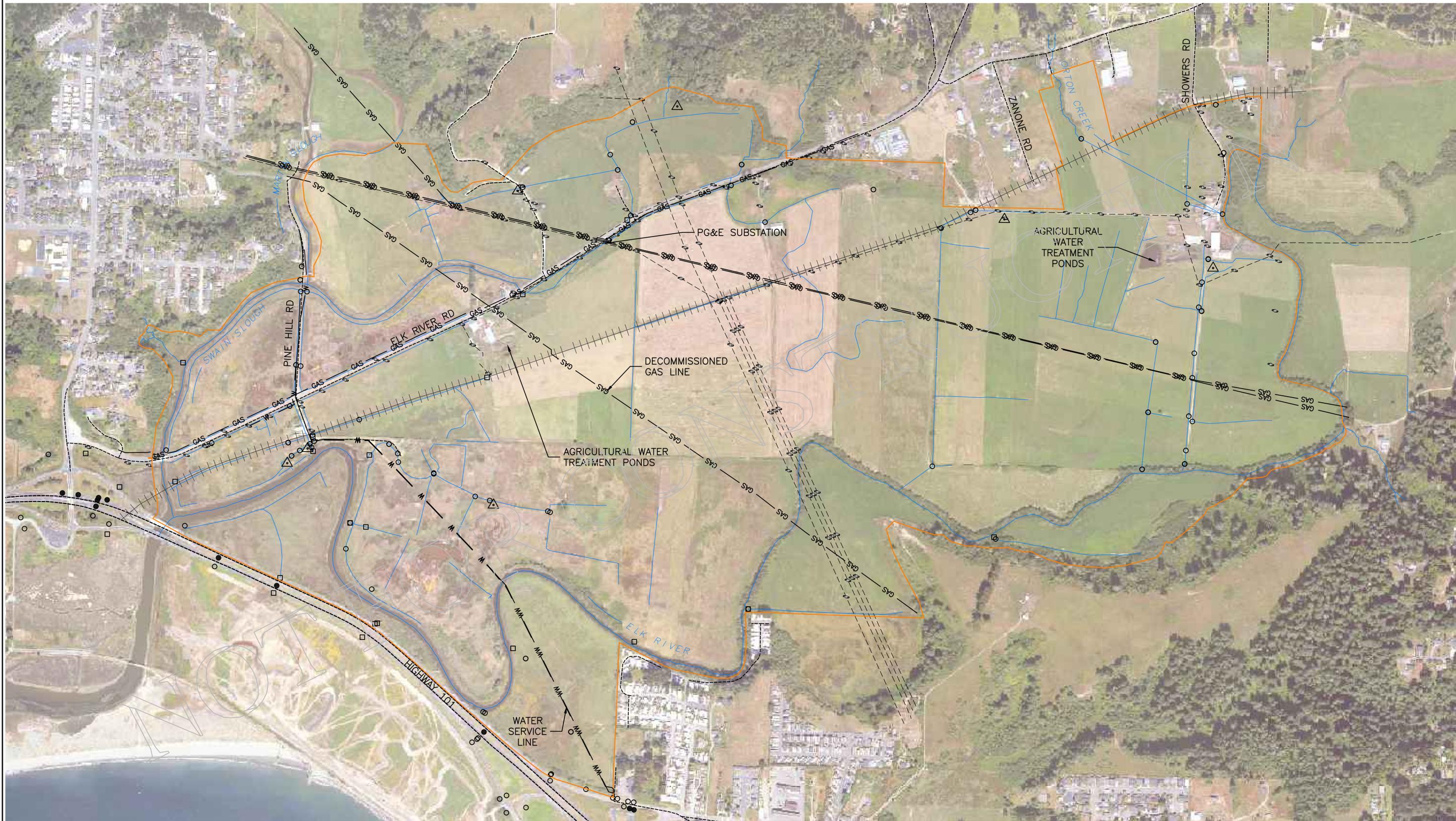
Plotted: 10/15/2025 12:18 PM - By: LICENSED USER - R17.1 - File: G1-COVER-CHWANUCHGUK-65PER-DRAFT-PERMIT

NOT FOR CONSTRUCTION

THESE PLANS WERE PREPARED UNDER THE SUPERVISION OF JEFFREY K. ANDERSON P.E. LICENSE # 50713

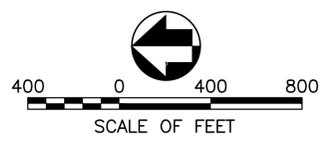
ELK PA-1 65% DESIGN: PERMIT SET

	 <p><b>Northern Hydrology &amp; Engineering</b></p> <p>PO BOX 2515, MCKINLEYVILLE, CA 95519 (707) 839-2195</p>	DESIGNED:	SUB SHEET NO.	<p style="font-size: 10px;">TITLE OF SHEET</p> <p style="font-size: 14px;"><b>COVER CHWANUCHGUK PROJECT</b></p> <p style="font-size: 8px;">HUMBOLDT COUNTY, CA</p>	<p style="font-size: 8px;">SHEET</p> <p style="font-size: 14px;"><b>1</b></p> <p style="font-size: 8px;">OF</p> <p style="font-size: 14px;"><b>8</b></p>	
		NHE	<b>G1</b>			
		TC				TECH. REVIEW:
		DATE:				10/15/2025



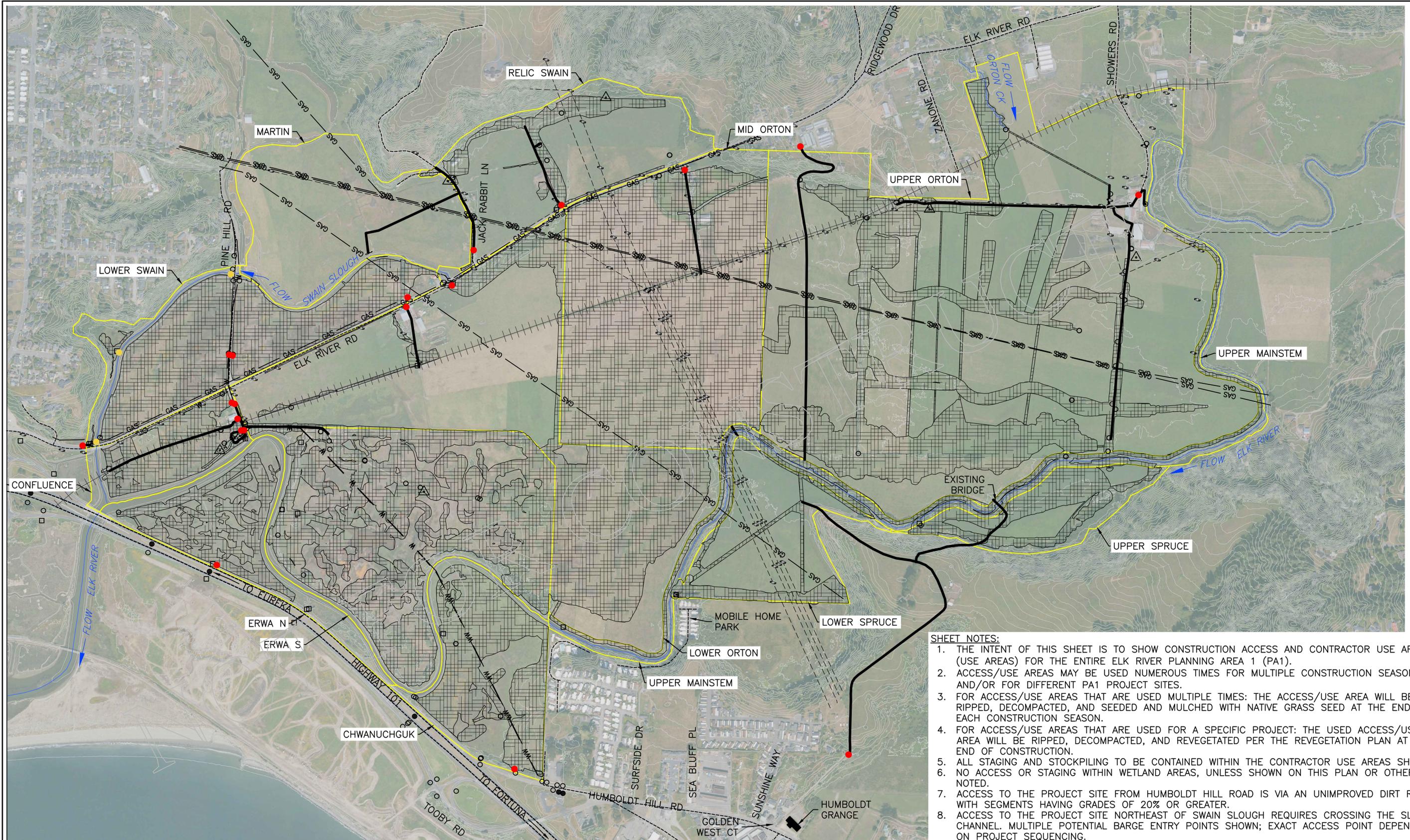
- |  |                    |  |                       |  |               |
|--|--------------------|--|-----------------------|--|---------------|
|  | PLANNING AREA 1    |  | OVERHEAD UTILITY LINE |  | CULVERT       |
|  | HIGHWAY            |  | WATER LINE            |  | DROP INLET    |
|  | MAIN ROAD          |  | RIVER CENTERLINE      |  | TIDE GATE     |
|  | ABANDONED RAILROAD |  | STREAMS               |  | ARTESIAN WELL |
|  | GAS                |  | DRAINAGE CHANNEL      |  | UTILITY POLE  |

**SHEET NOTES:**  
 1) ALL INFRASTRUCTURE LOCATIONS ARE APPROXIMATE.



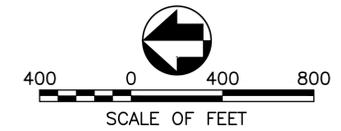
DESIGNED: NHE CV		SUB SHEET NO. <b>G2</b>		DRAFT ELK RIVER PA1		SHEET 2	
TECH. REVIEW: JRP		<b>EXISTING CONDITIONS OVERVIEW PLANNING AREA 1</b>		TITLE OF SHEET		OF	
DATE: 10/01/2025				HUMBOLDT COUNTY, CA		8	

Plotted: 10/15/2025 12:17 PM - By: LICENSED USER - R17.1 - File: G3-CONTRACTOR USE-&-ACCESS-65PER-PERMIT



- SHEET NOTES:**
1. THE INTENT OF THIS SHEET IS TO SHOW CONSTRUCTION ACCESS AND CONTRACTOR USE AREAS (USE AREAS) FOR THE ENTIRE ELK RIVER PLANNING AREA 1 (PA1).
  2. ACCESS/USE AREAS MAY BE USED NUMEROUS TIMES FOR MULTIPLE CONSTRUCTION SEASONS AND/OR FOR DIFFERENT PA1 PROJECT SITES.
  3. FOR ACCESS/USE AREAS THAT ARE USED MULTIPLE TIMES: THE ACCESS/USE AREA WILL BE RIPPED, DECOMPACTED, AND SEEDED AND MULCHED WITH NATIVE GRASS SEED AT THE END OF EACH CONSTRUCTION SEASON.
  4. FOR ACCESS/USE AREAS THAT ARE USED FOR A SPECIFIC PROJECT: THE USED ACCESS/USE AREA WILL BE RIPPED, DECOMPACTED, AND REVEGETATED PER THE REVEGETATION PLAN AT THE END OF CONSTRUCTION.
  5. ALL STAGING AND STOCKPILING TO BE CONTAINED WITHIN THE CONTRACTOR USE AREAS SHOWN.
  6. NO ACCESS OR STAGING WITHIN WETLAND AREAS, UNLESS SHOWN ON THIS PLAN OR OTHERWISE NOTED.
  7. ACCESS TO THE PROJECT SITE FROM HUMBOLDT HILL ROAD IS VIA AN UNIMPROVED DIRT ROAD WITH SEGMENTS HAVING GRADES OF 20% OR GREATER.
  8. ACCESS TO THE PROJECT SITE NORTHEAST OF SWAIN SLOUGH REQUIRES CROSSING THE SLOUGH CHANNEL. MULTIPLE POTENTIAL BARGE ENTRY POINTS SHOWN; EXACT ACCESS POINT DEPENDENT ON PROJECT SEQUENCING.

— — — — —	EXISTING CONTOUR (5-FT INTERVAL)	○	CULVERT (E)
— GAS —	GASLINE (E)	⊕	DROP INLET
— — — — —	OVERHEAD UTILITY LINE (E)	△	ARTESIAN WELL
— + + + + —	ABANDONED RAILROAD	●	ACCESS POINT (E)
— w —	WATER LINE	●	ACCESS POINT: POTENTIAL BARGE ENTRY LOCATION (SEE NOTE #8)
— — — — —	HIGHWAY	—	ACCESS ROAD (E)
— — — — —	MAIN ROAD	▨	CONTRACTOR USE AREA
○	UTILITY POLE (E)		
□	TIDE GATE (E)		

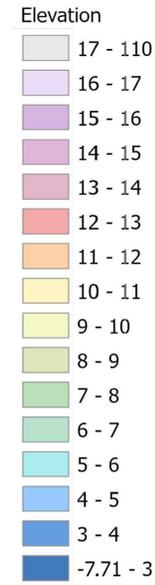
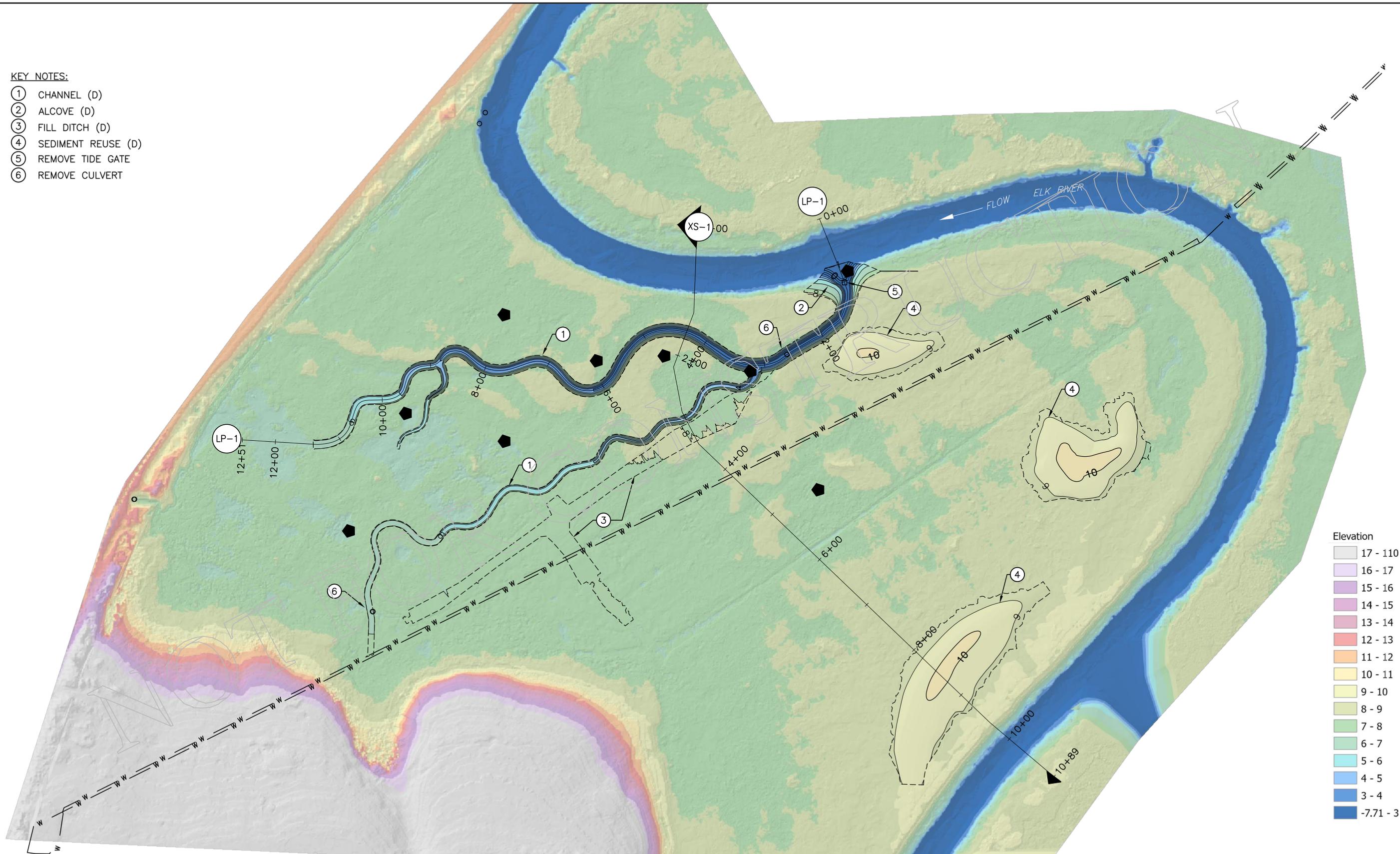


ELK PA1 65% DESIGN: PERMIT SET		TITLE OF SHEET	SHEET
DESIGNED: NHE GADD BD	SUB SHEET NO. <b>G3</b>	<b>CONTRACTOR USE AREAS &amp; ACCESS PLANNING AREA 1</b>	3 OF 8
TECH. REVIEW:	DATE: 10/15/2025	HUMBOLDT COUNTY, CA	

Plotted: 10/15/2025 12:29 PM - By: LICENSED USER - R17.1 - File: 07\_CHWANUCHGUK--PRELIM--65%-DRAFT--PERMIT--SET

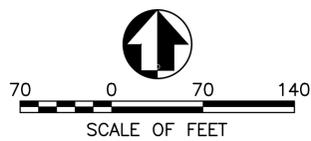
**KEY NOTES:**

- ① CHANNEL (D)
- ② ALCOVE (D)
- ③ FILL DITCH (D)
- ④ SEDIMENT REUSE (D)
- ⑤ REMOVE TIDE GATE
- ⑥ REMOVE CULVERT



**SHEET NOTES:**

- 1. (XS-1) REFERS TO CROSS-SECTION LOCATION; SEE CROSS SECTION SHEET.
- 2. (LP-1) REFERS TO LONG-PROFILE LOCATION; SEE LONG PROFILE SHEET.

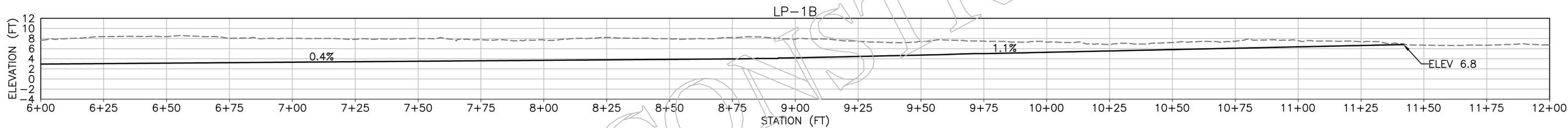
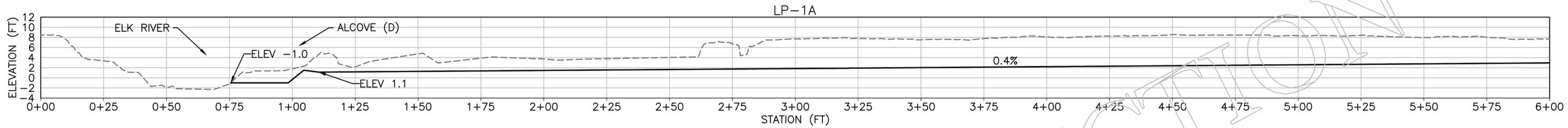


- DESIGN CONTOUR (1-FT INTERVAL)
- DESIGN CONTOUR (5-FT INTERVAL)
- - - - GRADING BOUNDARY
- - - - WATER LINE
- ◼ WOOD STRUCTURE (D)
- CULVERT (E)
- TIDE GATE (E)



ELK PA1 65% DESIGN: PERMIT SET		TITLE OF SHEET		SHEET
DESIGNED: NHE	SUB SHEET NO.	<b>C1C</b>		4
TC				
TECH. REVIEW: JRP, JKA		<b>COLOR SITE OVERVIEW CHWANUCHGUK PROJECT</b>		OF
DATE: 10/15/2025				
		HUMBOLDT COUNTY, CA		8

Plotted: 10/15/2025 12:32 PM - By: LICENSED USER - R17.1 - File: 07\_CHWANUCHGUK-PRELIM-65%-DRAFT-PERMIT-SET



NOT FOR CONSTRUCTION

**SHEET NOTES:**

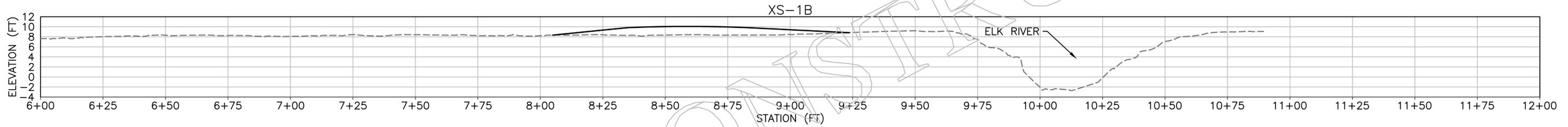
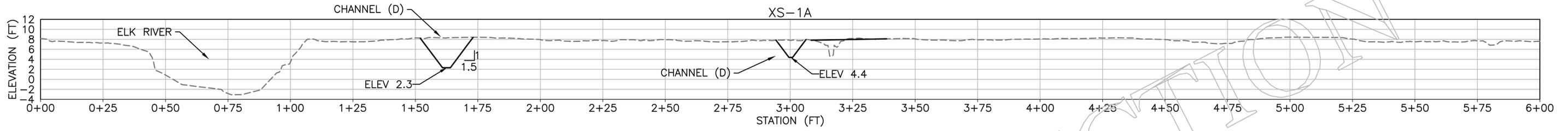
1. SEE SITE OVERVIEW SHEET FOR PROFILE ALIGNMENT LOCATION.
2. VERTICAL EXAGGERATION OF 2 FOR ALL PROFILE VIEWS ON THIS SHEET.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.
4. DESIGN MHHW = ~7 FT.

----- EXISTING GRADE PROFILE  
 \_\_\_\_\_ DESIGN GRADE PROFILE



ELK PA1 65% DESIGN: PERMIT SET			
DESIGNED: NHE	SUB SHEET NO. <b>C2</b>	TITLE OF SHEET <b>PROFILE CHWANUCHGUK PROJECT</b>	SHEET <b>5</b> OF <b>8</b>
TC			
TECH. REVIEW: JRP, JKA			
DATE: 10/15/2025		HUMBOLDT COUNTY, CA	

Plotted: 10/15/2025 12:29 PM - By: LICENSED USER - R17.1 - File: 07\_CHWANUCHGUK-PRELIM-65%-DRAFT-PERMIT-SET



NOT FOR CONSTRUCTION

**SHEET NOTES:**

1. SEE SITE OVERVIEW SHEET FOR CROSS-SECTION LOCATIONS.
2. VERTICAL EXAGGERATION OF 2 FOR ALL SECTION VIEWS ON THIS SHEET.
3. THIS SHEET SHOWS EXISTING AND DESIGN GRADES, AND APPROXIMATE LOCATION OF DESIGN ELEMENTS.
4. DESIGN MHHW = ~7 FT.

----- EXISTING GRADE PROFILE  
 \_\_\_\_\_ DESIGN GRADE PROFILE

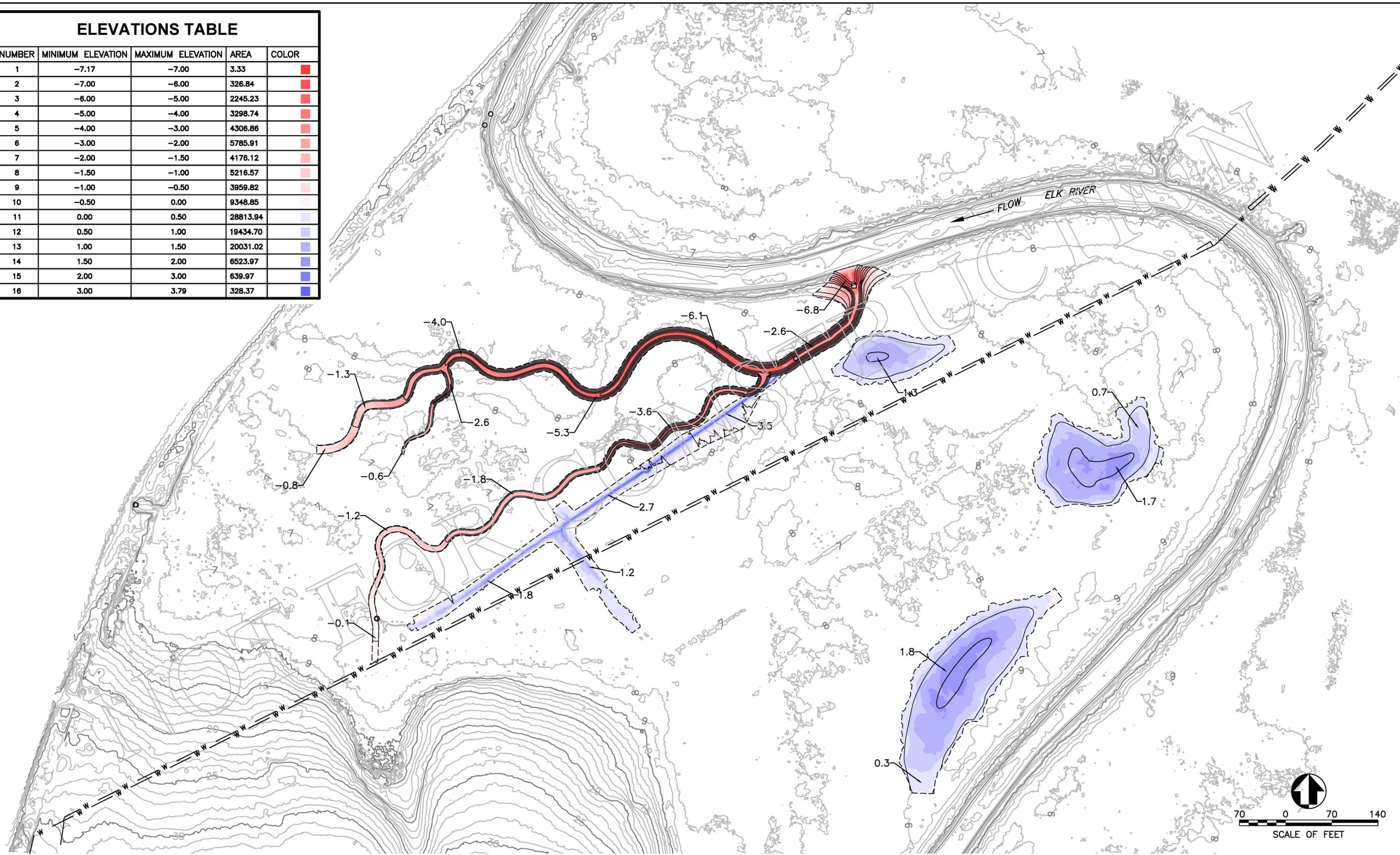


ELK PA1 65% DESIGN: PERMIT SET			
DESIGNED: NHE	SUB SHEET NO. <b>C3</b>	TITLE OF SHEET <b>SECTION CHWANUCHGUK PROJECT</b>	SHEET <b>6</b>
TC			OF
TECH. REVIEW: JRP, JKA			8
DATE: 10/15/2025		HUMBOLDT COUNTY, CA	

Plotted: 10/15/2025 12:36 PM - By: LICENSED USER - R17.1 - File: 07\_CHWANUCHGUK--PRELIM--65%-DRAFT--ISOPACH

### ELEVATIONS TABLE

NUMBER	MINIMUM ELEVATION	MAXIMUM ELEVATION	AREA	COLOR
1	-7.17	-7.00	3.33	Red
2	-7.00	-6.00	326.84	Red
3	-6.00	-5.00	2245.23	Red
4	-5.00	-4.00	3298.74	Red
5	-4.00	-3.00	4306.86	Red
6	-3.00	-2.00	5785.91	Red
7	-2.00	-1.50	4176.12	Red
8	-1.50	-1.00	5216.57	Red
9	-1.00	-0.50	3959.82	Red
10	-0.50	0.00	9348.85	Light Red
11	0.00	0.50	28813.94	Light Blue
12	0.50	1.00	19434.70	Light Blue
13	1.00	1.50	20031.02	Light Blue
14	1.50	2.00	6523.97	Light Blue
15	2.00	3.00	639.97	Light Blue
16	3.00	3.79	328.37	Light Blue



- EXISTING CONTOUR (1-FT INTERVAL)
- EXISTING CONTOUR (5-FT INTERVAL)
- DESIGN CONTOUR (1-FT INTERVAL)
- DESIGN CONTOUR (5-FT INTERVAL)
- - - GRADING BOUNDARY
- W - WATER LINE
- CULVERT (E)
- TIDE GATE (E)

**SHEET NOTES:**

- 1) THE INTENT OF THIS DRAWING IS TO SHOW FINISHED GRADE CUT/FILL DEPTHS RELATIVE TO EXISTING GRADE (EG).
- 2) ISOPACH LABELS REPRESENT CUT/FILL DEPTHS IN FEET (RELATIVE TO EG).
- 3) SEE SHEETS C1C-C3 FOR ADDITIONAL GRADING DETAILS.



ELK PA1 65% DESIGN: PERMIT SET		TITLE OF SHEET		SHEET	
DESIGNED: NHE	SUB SHEET NO.	<b>ISOPACH: CUT-FILL CHWANUCHGUK PROJECT</b>		7 OF 8	
TC	<b>C4</b>				
TECH. REVIEW:		HUMBOLDT COUNTY, CA			
DATE: 10/15/2025					



DETAIL 1: LWS INSTALLATION AND INTEGRATION ALONG STREAM BANK. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.



DETAIL 3: LWS INSTALLATION WITHIN FLOODPLAIN. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.



DETAIL 5: LWS INSTALLATION ALONG STREAM BANK HIGHLIGHTING ANCHORING WITH PINNING LOGS. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.



DETAIL 2: LWS INSTALLATION AND INTEGRATION ALONG STREAM BANK. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.



DETAIL 4: LWS INSTALLATION WITHIN FLOODPLAIN. PHOTO OF LWS INSTALLED AT PRAIRIE CREEK, HUMBOLDT COUNTY.

Plotted: 10/15/2025 12:16 PM - By: LICENSED USER - R17.1 - File: CX-DETAILS-65PER-PERMIT

**SHEET NOTES:**

1. THE INTENT OF THIS SHEET IS TO SHOW GENERAL EXAMPLES OF THE TYPES OF LARGE WOOD STRUCTURES TO BE INSTALLED.
2. THIS SHEET SHOWS APPROXIMATE LARGE WOOD STRUCTURE CONFIGURATIONS AND INSTALLATION TECHNIQUES USING LOG PILES AS PINNING LOG ANCHORS. ACTUAL LOG STRUCTURES WILL VARY DEPENDING ON VARIABLE FIELD CONDITIONS, LOG VARIABILITY, AND OTHER UNFORESEEN CONDITIONS.



ELK PA1 65% DESIGN: PERMIT SET			
DESIGNED: NHE BD	SUB SHEET NO.  <b>C5</b>	TITLE OF SHEET <b>DETAILS CHWANUCHGUK PROJECT</b>	SHEET <b>8</b> OF <b>8</b>
TECH. REVIEW:	DATE: 10/15/2025	HUMBOLDT COUNTY, CA	