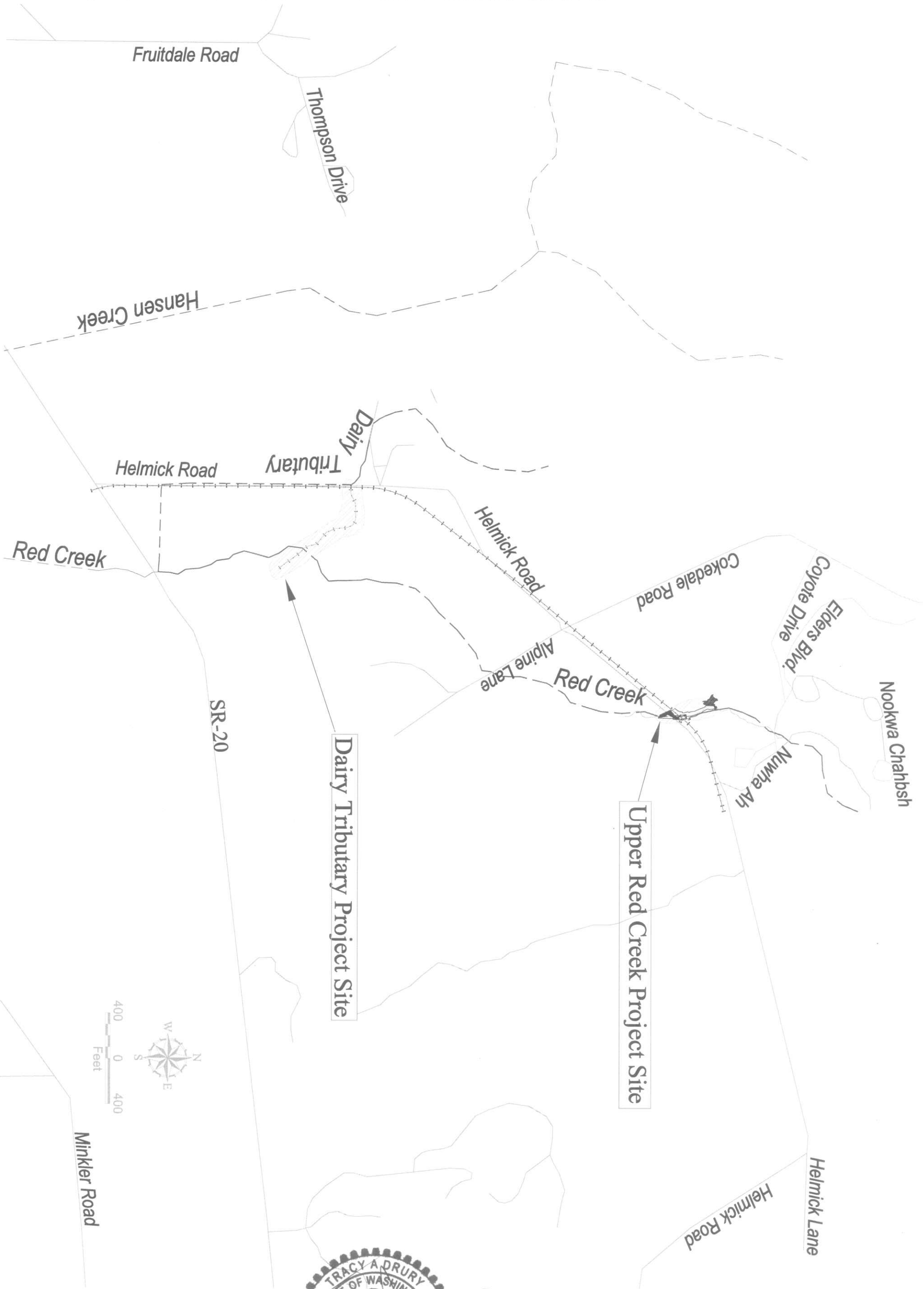




VICMAP

PROJECT TITLE:
**HELMICK ROAD
PROJECT**
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.

VICINITYMAP



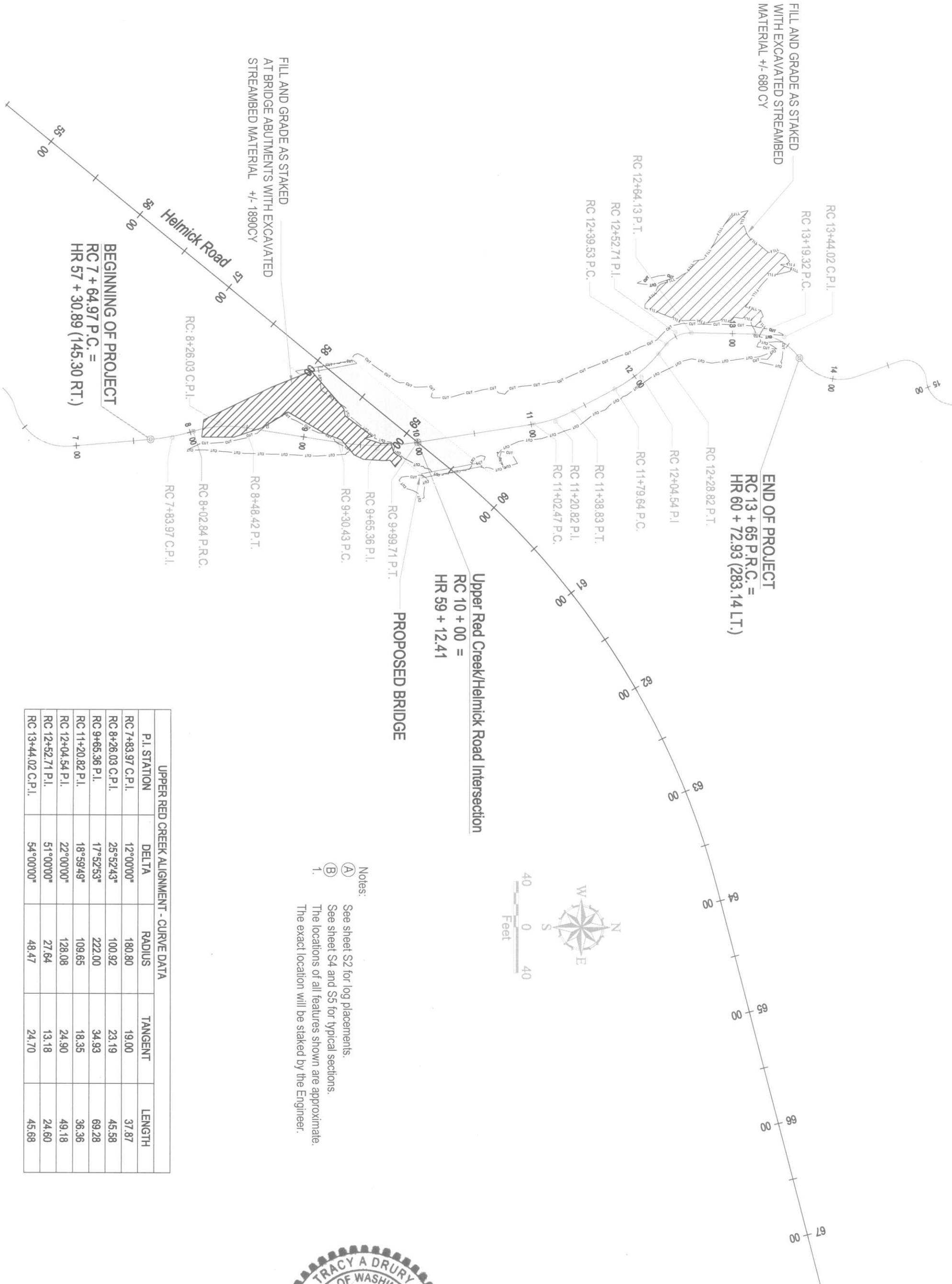
EXPIRES: 11 / 12 / 06

**SKAGIT PUBLIC
COUNTY WORKS**
MOUNT VERNON, WASHINGTON
CONTACT:
JANICE MARLEGA
1800 CONTINENTAL PLACE
MOUNT VERNON, WA 98273
PH: 360-336-9400 FAX: 360-336-9369

C.R.P. NO.	C.R.P.	ROAD NO.	ROAD NO.
FEDERAL AID NO.	STPH-0005 (188)		
DESIGNED BY:	DESIGNED		
DRAWN BY:	DRAWN		
CHECKED BY:	CHECKED		
APPROVED BY:	APPROVED		

GEOENGINEERS
JOB NUMBER: 022007501
OFFICE: BELLINGHAM, WASHINGTON
PHONE: (360) 647-1510
FAX: (360) 647-5044

COUNTY ENGINEER DATE



UPPER RED CREEK ALIGNMENT - CURVE DATA				
P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH
RC 7+83.97 C.P.I.	12°00'00"	180.80	19.00	37.87
RC 8+26.03 C.P.I.	25°52'43"	100.92	23.19	45.58
RC 9+65.36 P.I.	17°52'53"	222.00	34.93	69.28
RC 11+20.82 P.I.	18°59'49"	109.65	18.35	36.36
RC 12+04.54 P.I.	22°00'00"	128.08	24.90	49.18
RC 12+52.71 P.I.	51°00'00"	27.64	13.18	24.60
RC 13+44.02 C.P.I.	54°00'00"	48.47	24.70	45.68

Notes:
(A) See sheet S2 for log placements.
(B) See sheet S4 and S5 for typical sections.
1. The locations of all features shown are approximate.
The exact location will be staked by the Engineer.

PROJECT TITLE:
HELMICK ROAD PROJECT
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.

UPPER REDCREEK-SITEPLAN

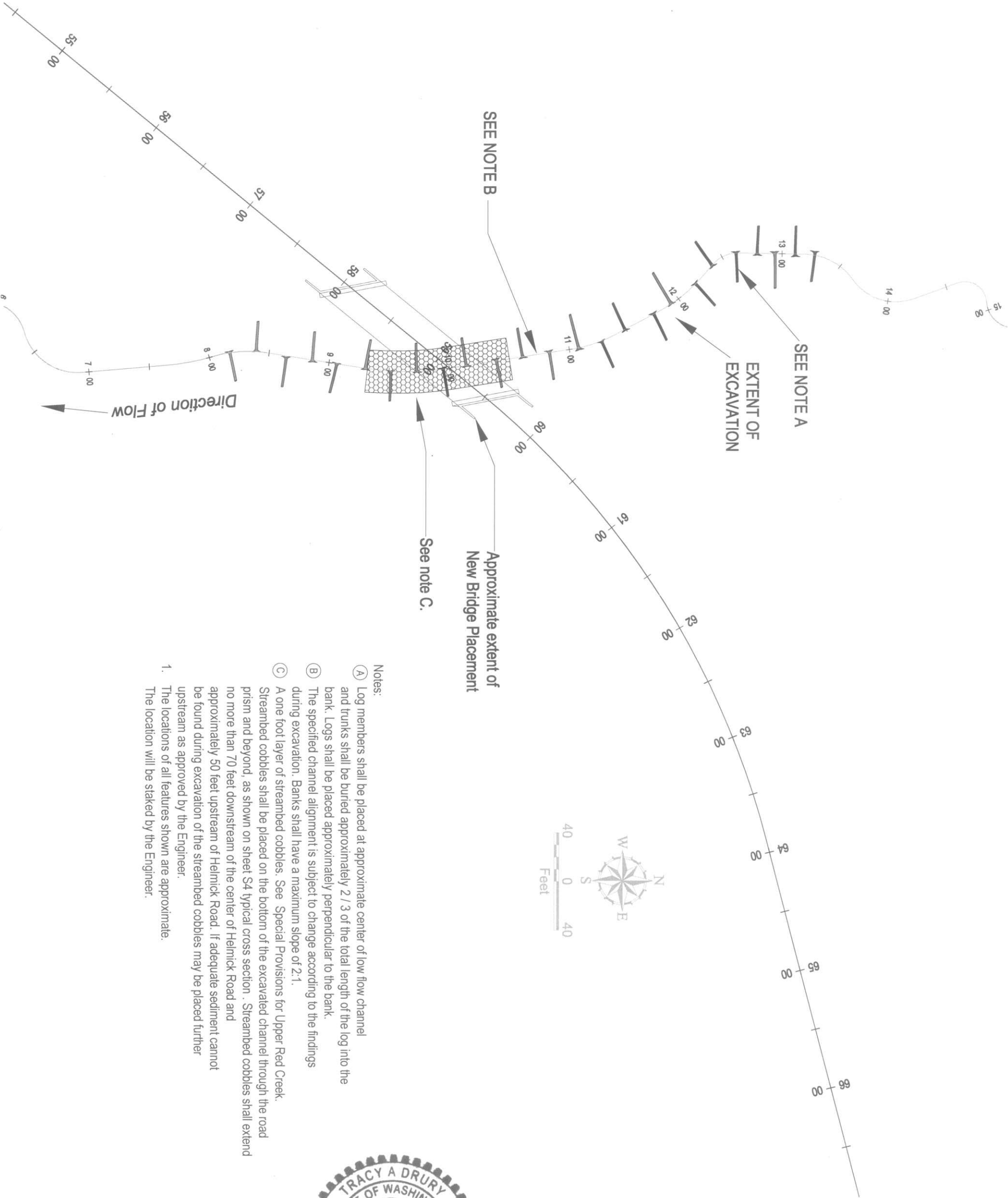


SKAGIT PUBLIC COUNTY WORKS
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C.R.P. NO. C.R.P. ROAD NO. ROADNO
FEDERAL AID NO. STPH-0005 (188)
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED

GEOENGINEERS
JOB NUMBER: 022007501
OFFICE: BELLINGHAM, WASHINGTON
PHONE: (360) 647-1510
FAX: (360) 647-5044

COUNTY ENGINEER DATE



HELMICKROAD PROJECT

SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.

UPPER REDCREEK-SITEPLAN



**SKAGIT PUBLIC
COUNTY WORKS**
MOUNT VERNON, WASHINGTON

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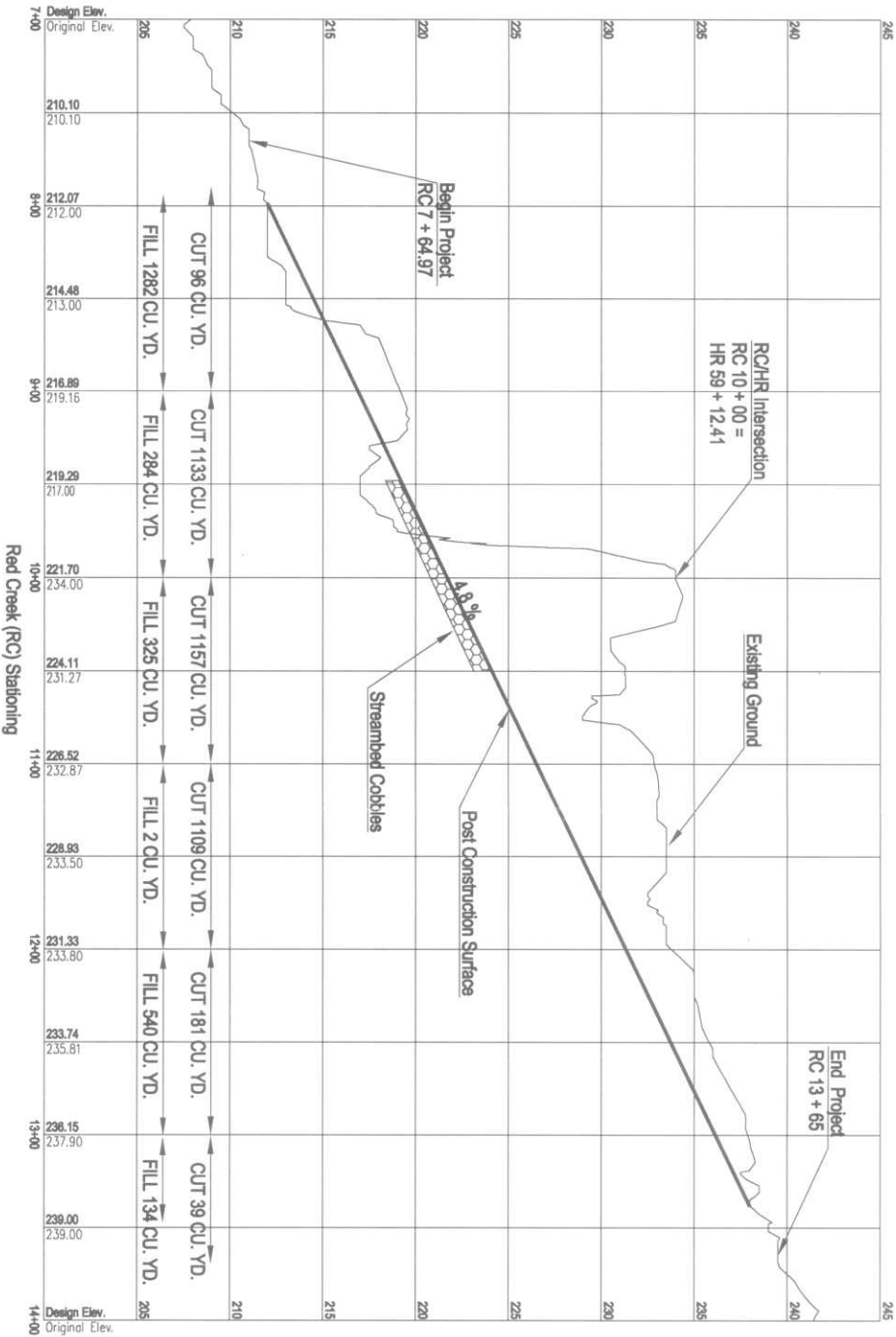
C.R.P. NO. C.R.P. ROAD NO. ROADNO
FEDERAL AID NO. STPH-0005 (188)
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED



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FAX: (360) 647-5044

COUNTY ENGINEER DATE

- Notes:
1. FILL MATERIAL BETWEEN STA. 8+50 AND 11+00 TO BE PLACED AND GRADED AS STAKED AT THE BRIDGE ABUTMENTS.
 2. FILL MATERIAL BETWEEN STA. 11+00 AND 13+50 TO BE PLACED WEST OF CREEK AND BETWEEN STA. 12+50 AND 13+25 AS NOTED ON S1.
 3. APPROXIMATELY 80 CY. OF EXCAVATED GRAVEL STREAMBED MATERIAL TO BE HAULED TO 96" DIAMETER CULVERT AT HELMICK ROAD STA. 23+00.
 4. EXCESS STREAM BED EXCAVATION MATERIAL TO BE HAULED TO DESIGNATED STOCKPILE AT LOCATION SHOWN IN SHEET C15.
 5. APPROXIMATELY 650 CY. OF EXCAVATED GRAVEL STREAMBED MATERIAL TO BE HAULED TO STOCKPILE SITE FOR PLACEMENT IN DAIRY TRIBUTARY CHANNEL.
 6. THE LOCATIONS OF ALL FEATURES SHOWN ARE APPROXIMATE. THE EXACT LOCATION WILL BE STAKED BY THE ENGINEER.
 7. CUT VOLUME ESTIMATE INCLUDES ESTIMATES OF EXCAVATION TO REMOVE EXISTING ROAD PRISM AND CULVERTS TO POST-CONSTRUCTION STREAM GRADE.



SCALE:
1" = 50' HORIZONTAL
1" = 5' VERTICAL

PROJECT TITLE:
HELMICK ROAD
PROJECT
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.



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C.R.P. NO. C.R.P. ROAD NO. ROADNO
FEDERAL AID NO. STPH-0005 (188)
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED

GEOENGINEERS
JOB NUMBER: 022007501
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PROFILES

COUNTY ENGINEER DATE



GEOENGINEERS 

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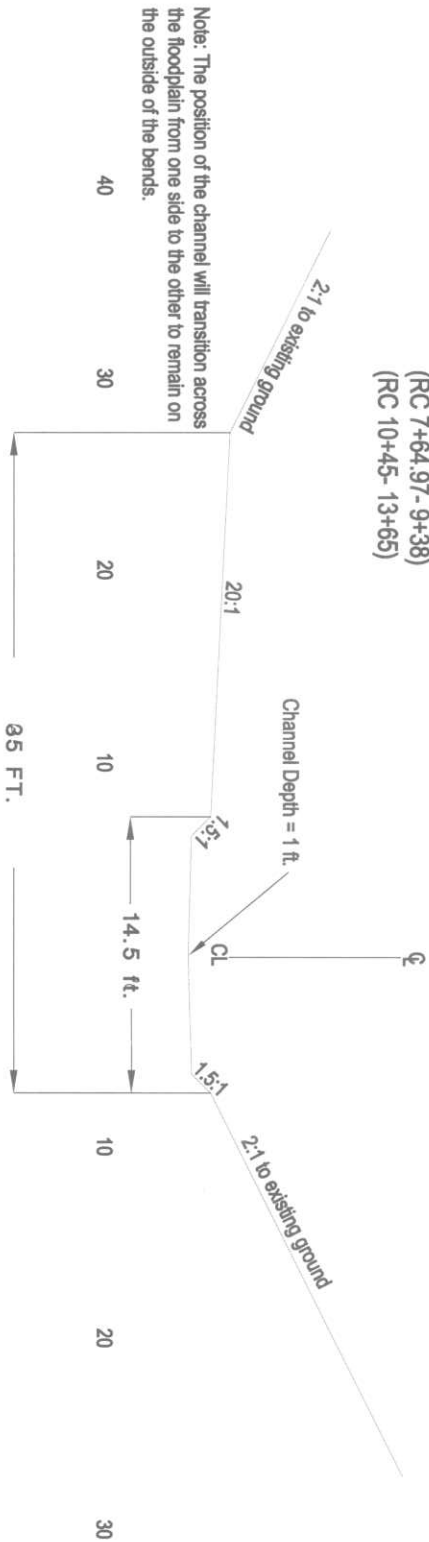


C.R.P. NO. C.R.P. ROAD NO. ROADNO
FEDERAL AID NO. STH-0005 (188)
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED

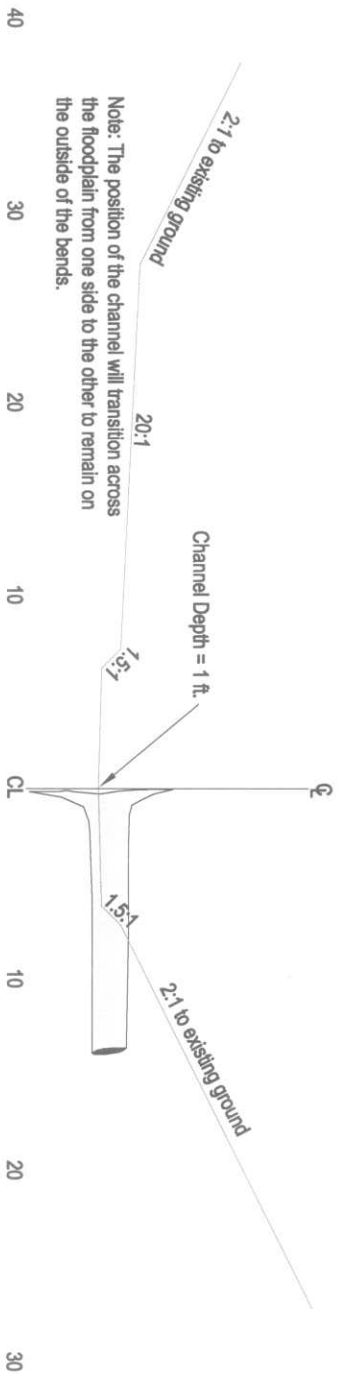
COUNTY ENGINEER DATE

SCALE:
1" = 10' HORIZONTAL
1" = 10' VERTICAL

TYPICAL CROSS SECTION
(RC 7+64.97- 9+38)
(RC 10+45- 13+65)



TYPICAL CROSS SECTION WITH WOOD PLACEMENT



- Notes:
- Log placements and stationing identified in Sheet S2. The locations of all features shown are approximate. The exact locations will be staked by the Engineer.



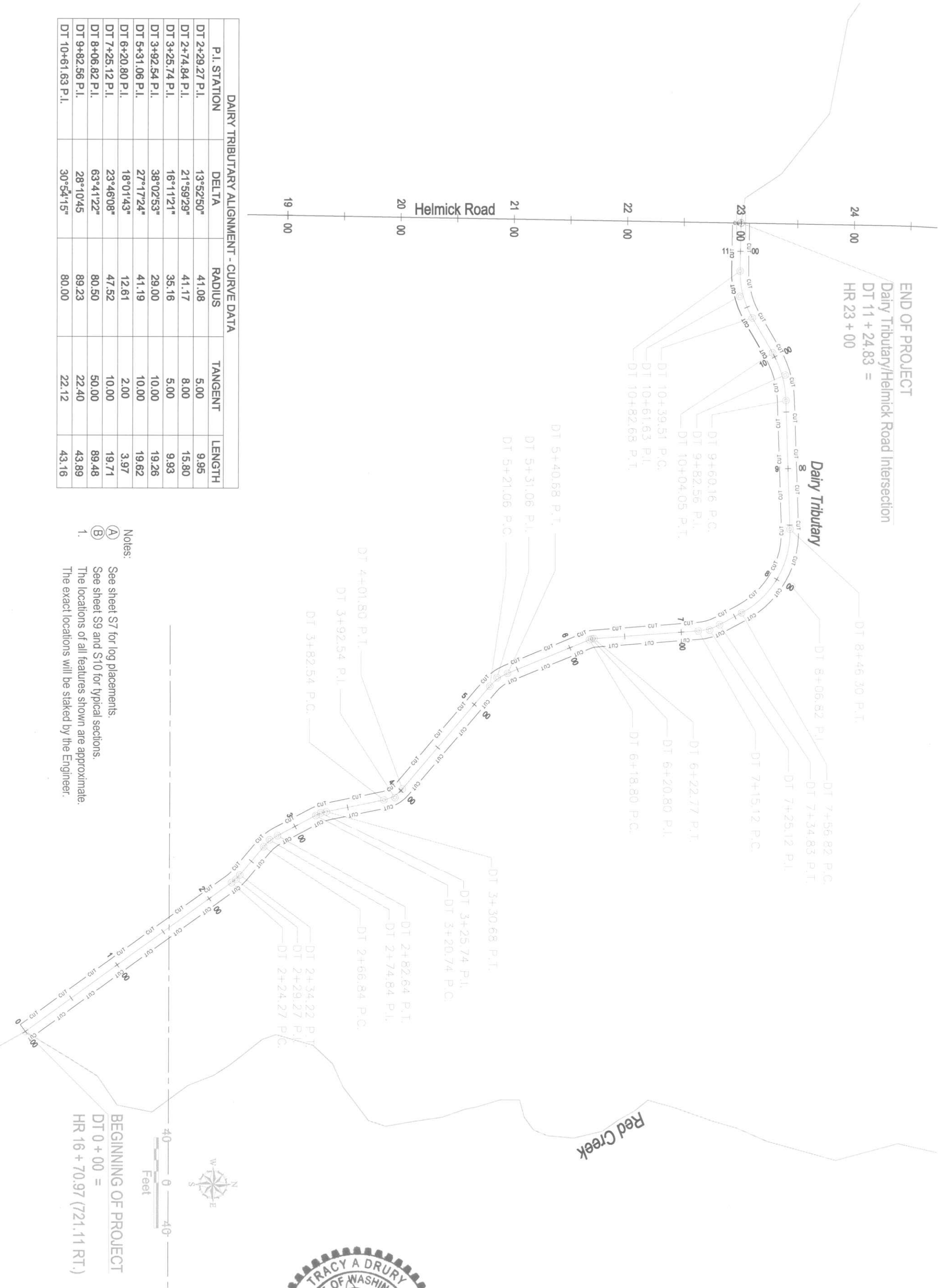
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C.R.P. NO. C.R.P. ROAD NO. ROADNO
FEDERAL AID NO. FEDAIDNO
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED

GEOENGINEERS
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OFFICE: BELLINGHAM, WASHINGTON
PHONE: (360) 647-1510
FAX: (360) 647-5044

PROJECT TITLE:
HELMICK ROAD
PROJECT
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.
REDCREEK_CROSSECTIONS

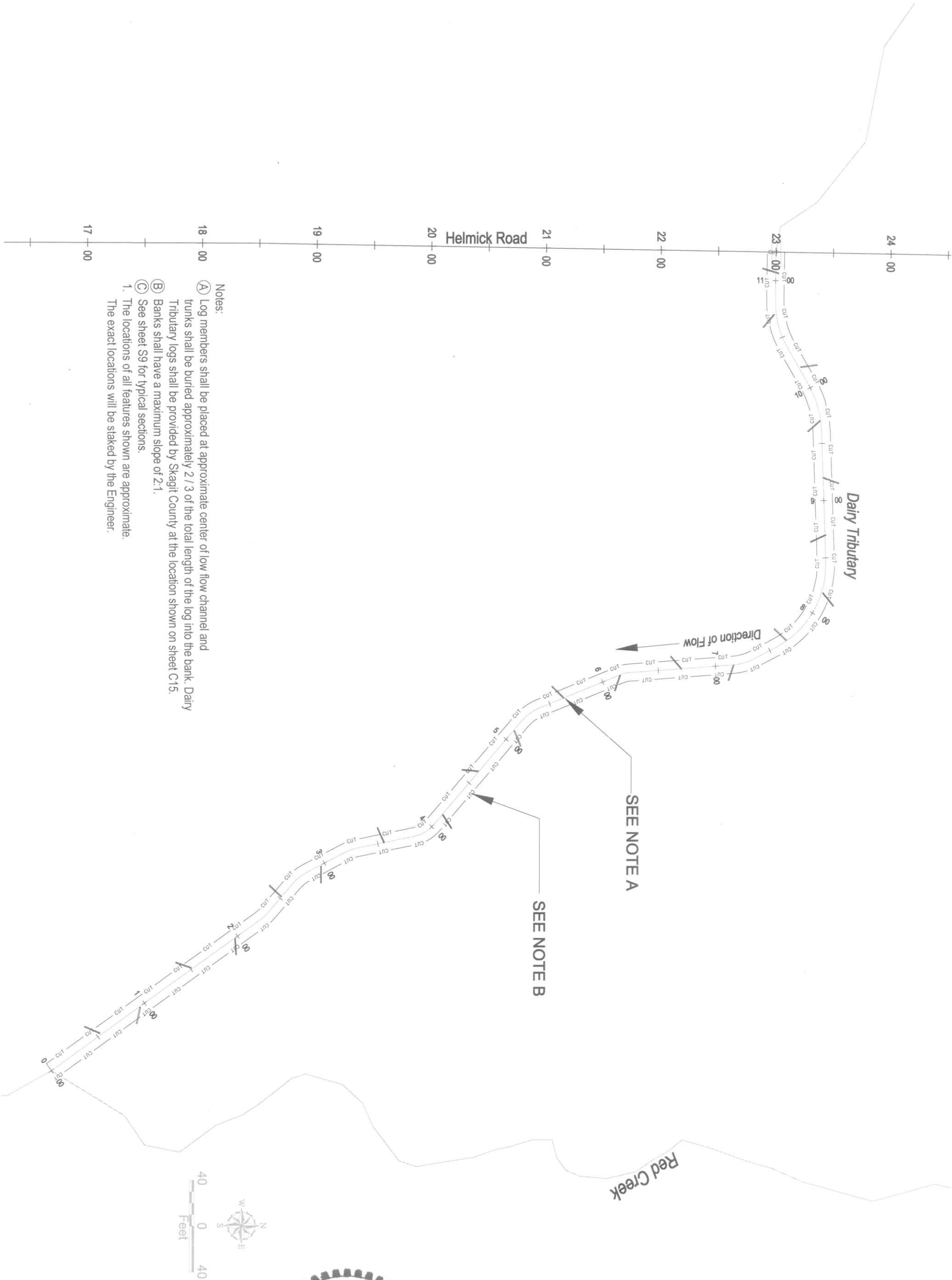
DAIRY TRIBUTARY ALIGNMENT - CURVE DATA				
P.I. STATION	DELTA	RADIUS	TANGENT	LENGTH
DT 2+29.27 P.I.	13°52'50"	41.08	5.00	9.95
DT 2+74.84 P.I.	21°59'29"	41.17	8.00	15.80
DT 3+25.74 P.I.	16°11'21"	35.16	5.00	9.93
DT 3+92.54 P.I.	38°02'53"	29.00	10.00	19.26
DT 5+31.06 P.I.	27°17'24"	41.19	10.00	19.62
DT 6+20.80 P.I.	18°01'43"	12.61	2.00	3.97
DT 7+25.12 P.I.	23°46'08"	47.52	10.00	19.71
DT 8+06.82 P.I.	63°41'22"	80.50	50.00	89.48
DT 9+82.56 P.I.	28°10'45"	89.23	22.40	43.89
DT 10+61.63 P.I.	30°54'15"	80.00	22.12	43.16



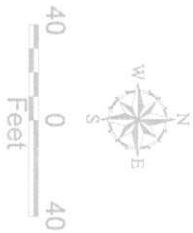
SKAGIT PUBLIC WORKS
MOUNT VERNON, WASHINGTON
CONTACT:
JANICE MARLEGA
1800 CONTINENTAL PLACE
MOUNT VERNON, WA 98273
PH: 360-336-9400 FAX: 360-336-9369

C.R.P. NO. C.R.P.	ROAD NO. ROADNO
FEDERAL AID NO. STPH-0005 (198)	
DESIGNED BY: DESIGNED	
DRAWN BY: DRAWN	
CHECKED BY: CHECKED	
APPROVED BY: APPROVED	

GEOENGINEERS
JOB NUMBER: 022007501
OFFICE: BELLINGHAM, WASHINGTON
PHONE: (360) 647-1510
FAX: (360) 647-5044



- Notes:
- (A) Log members shall be placed at approximate center of low flow channel and trunks shall be buried approximately 2 / 3 of the total length of the log into the bank. Dairy Tributary logs shall be provided by Skagit County at the location shown on sheet C15.
 - (B) Banks shall have a maximum slope of 2:1.
 - (C) See sheet S9 for typical sections.
1. The locations of all features shown are approximate. The exact locations will be staked by the Engineer.



PROJECT TITLE:
HELMICK ROAD
 PROJECT
 LOCATED IN
 SEDRO-WOOLLEY, WA
 SECTION 8 AND 17 T35N, RGE 5 E, W.M.

DAIRYTRIB-SITEPLAN

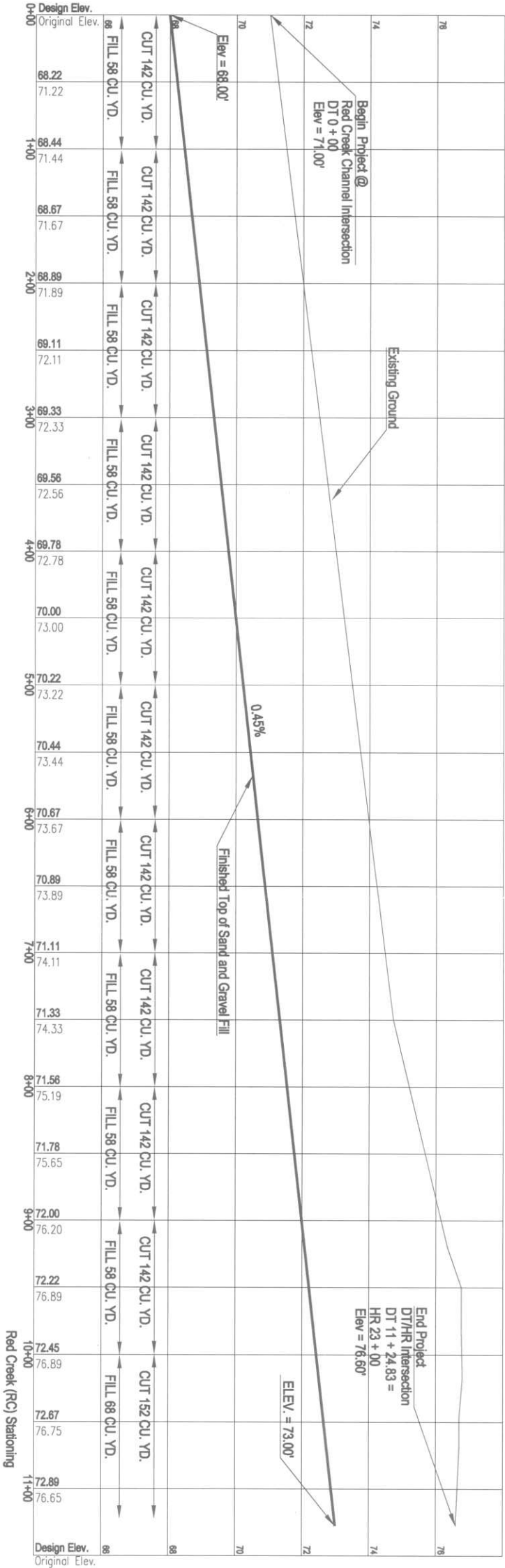
SKAGIT PUBLIC WORKS
 MOUNT VERNON, WASHINGTON
 CONTACT:
 JANICE MARLEGA
 1800 CONTINENTAL PLACE
 MOUNT VERNON, WA 98273
 PH: 360-336-9400 FAX: 360-336-9369

C.R.P. NO. C.R.P. ROAD NO. ROADNO
 FEDERAL AID NO. STPH-0005 (188)
 DESIGNED BY: DESIGNED
 DRAWN BY: NEK
 CHECKED BY: TAD
 APPROVED BY: APPROVED

GEOENGINEERS
 JOB NUMBER: 022007501
 OFFICE: BELLINGHAM, WASHINGTON
 PHONE: (360) 647-1510
 FAX: (360) 647-5044

COUNTY ENGINEER DATE

SCALE:
1" = 50' HORIZONTAL
1" = 5' VERTICAL



- Notes:
1. Fill material shall be stream bed material excavated from Upper Red Creek and placed per cross section.
 2. Material excavated for new channel shall be bermed along westernly side as shown on sheet C15.
 3. The locations of all features shown are approximate. The exact location will be staked by the Engineer.



**SKAGIT PUBLIC
COUNTY**

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C.R.P. NO. C.R.P. ROAD NO. ROADNO
FEDERAL AID NO. STPH-0005 (188)
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED

GEOENGINEERS

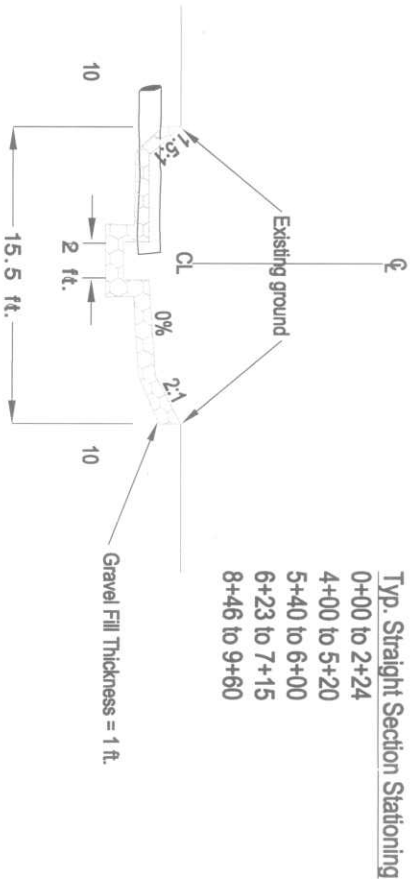
JOB NUMBER: 022007501
OFFICE: BELLINGHAM, WASHINGTON
PHONE: (360) 647-1510
FAX: (360) 647-5044

PROJECT TITLE:
HELMICK ROAD
PROJECT
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.

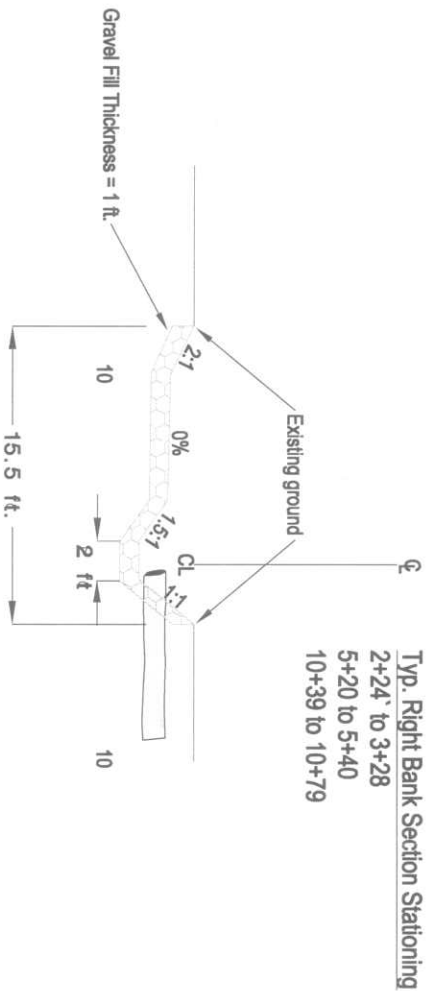
PROFILES

COUNTY ENGINEER DATE

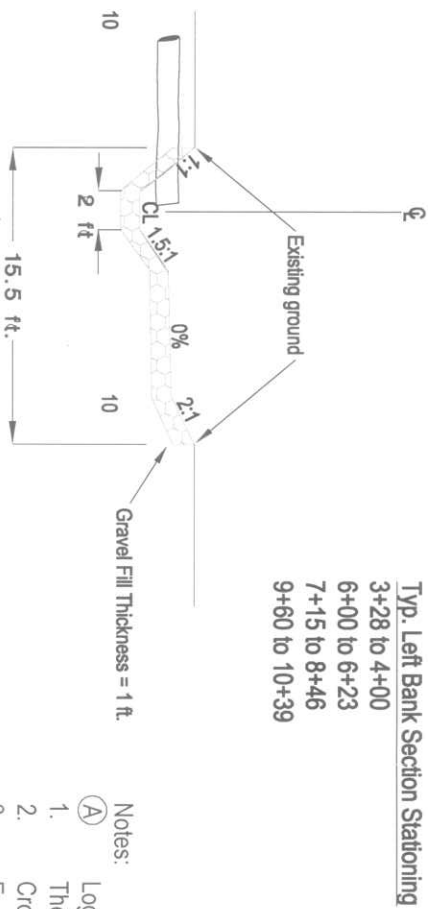
CROSS SECTION (TYP.) - STRAIGHT SECTION, LOG PLACEMENT



CROSS SECTION (TYP.) - RIGHT BANK SECTION, LOG PLACEMENT



CROSS SECTION (TYP.) - LEFT BANK SECTION, LOG PLACEMENT



- Notes:
1. Log placements and stationing identified in Sheet S7.
 2. The locations of all features shown are approximate. The exact location will be staked by the Engineer.
 3. Cross sections are looking downstream.
 4. Excavate to allow placement of 1 ft. sand and gravel fill from Red Creek excavation.



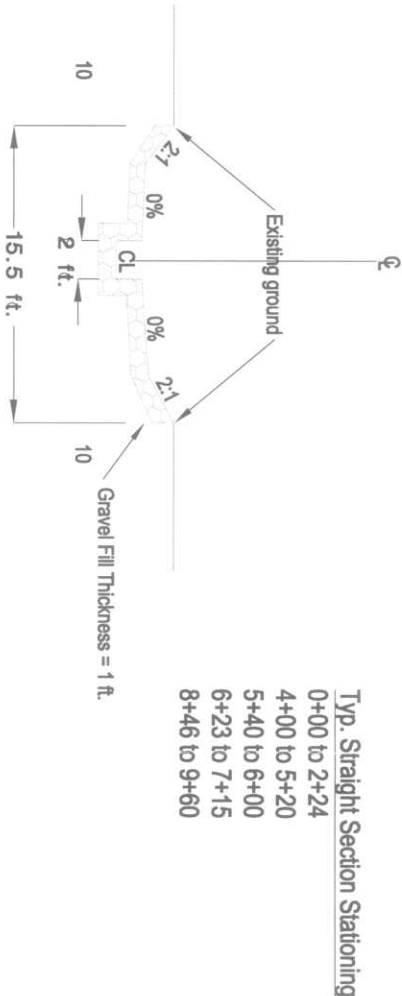
SKAGIT PUBLIC WORKS
CONTACT:
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1800 CONTINENTAL PLACE
MOUNT VERNON, WA 98273
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C.R.P. NO. C.R.P. ROAD NO. ROAD NO.
FEDERAL AID NO. STPH-0005 (188)
DESIGNED BY: DESIGNED
DRAWN BY: DRAWN
CHECKED BY: CHECKED
APPROVED BY: APPROVED

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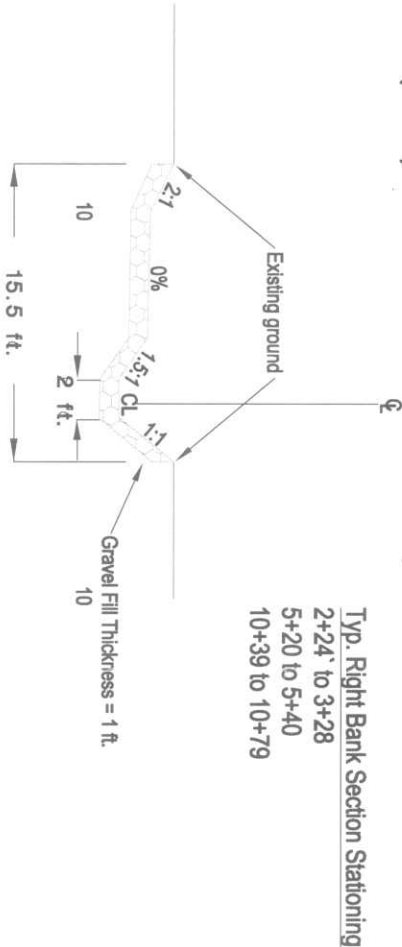
PROJECT TITLE:
HELMICK ROAD PROJECT
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.
DAIRYTRIB-CROSSECTIONS

CROSS SECTION (TYP.) - STRAIGHT SECTION, NO LOG PLACEMENT

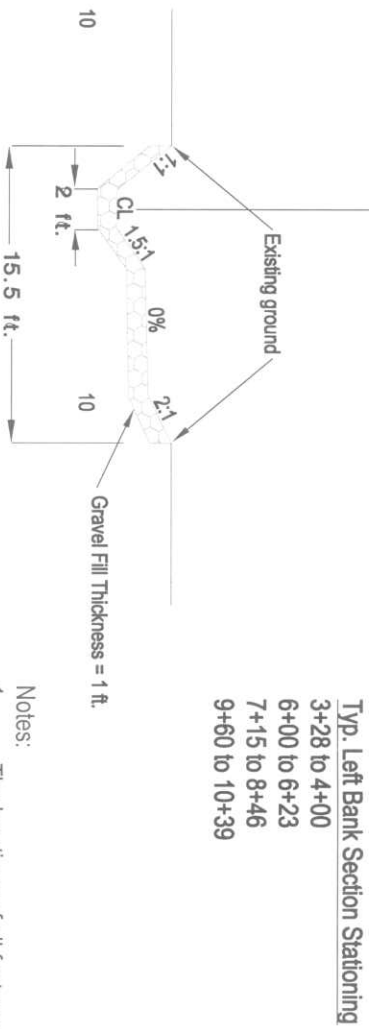


SCALE:
1" = 10' HORIZONTAL
1" = 10' VERTICAL

CROSS SECTION (TYP.) - RIGHT BANK SECTION, NO LOG PLACEMENT



CROSS SECTION (TYP.) - LEFT BANK SECTION, NO LOG PLACEMENT



- Notes:
1. The locations of all features shown are approximate. The exact location will be staked by the Engineer.
 2. Cross sections are looking downstream.
 3. Excavate to allow placement of 1 ft. sand and gravel fill from Red Creek excavation.

PROJECT TITLE:
HELMICK ROAD PROJECT
LOCATED IN
SEDRO-WOOLLEY, WA
SECTION 8 AND 17 T35N, RGE 5 E, W.M.



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