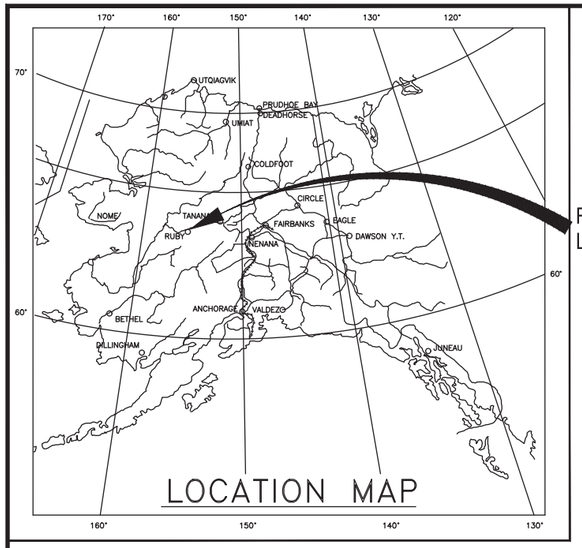
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	A1	53
CDS ROUTE: N/A	MILEPOINT: 0.0 TO 3.1			

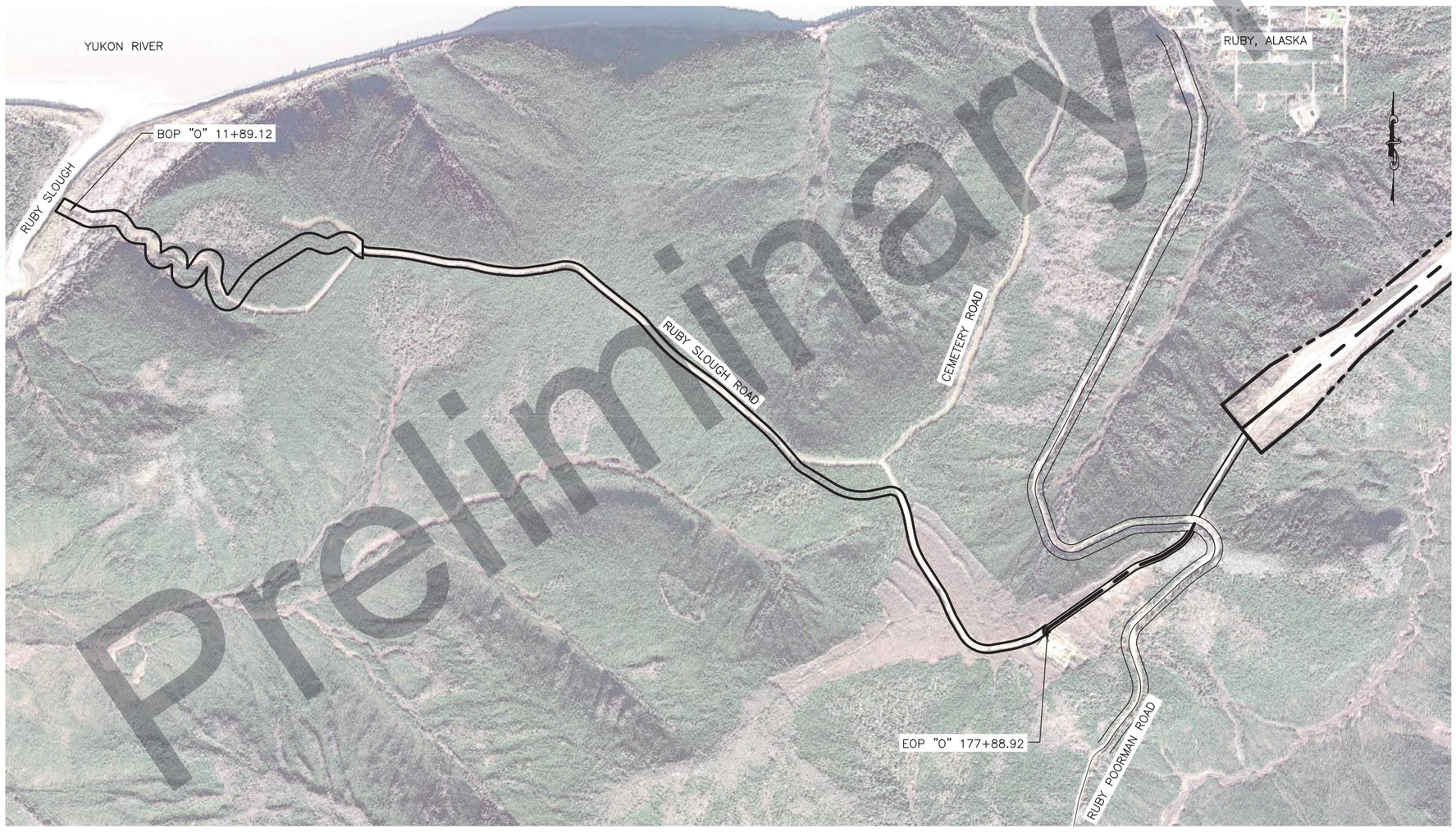


STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT

0002509/NFHWY00630

RUBY SLOUGH ROAD REHABILITATION



INDEX OF SHEETS

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND & ABBREVIATIONS
A3	HAUL ROUTE, MATERIAL SITES & STAGING AREA
B1–B3	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES
D1–D2	SUMMARY TABLES
E1–E2	MISC. DETAILS
F1–F14	PLAN & PROFILE
G1–G4	ROAD RECLAMATION PLAN AND DETAILS
H1–H7	SIGNING PLAN
Q1–Q7	EROSION SEDIMENT CONTROL PLANS
V1–V10	STANDARD PLANS

THE FOLLOWING STANDARD PLANS APPLY TO THIS PROJECT:
D–01.02, D–06.10, D–09.00
S–00.12, S–01.02, S–05.02*, S–30.05, S–32.02

*AS MODIFIED HEREIN

DESIGN DESIGNATIONS

ADT (2023)	<100 VPD
ADT (2042)	<100 VPD
DHV (%)	N/A
PERCENT TRUCKS (T)	N/A
DIRECTIONAL SPLIT (D)	50 / 50
DESIGN SPEED (V)	25 MPH
MAX. GRADE	12%
MAX. SUPERELEVATION	3%

PROJECT SUMMARY

WIDTH OF GRAVEL SURFACE	18 FT
LENGTH OF GRADING	16,600 FT
LENGTH OF PROJECT	16,600 FT

JONATHAN HUTCHINSON P.E., PROJECT MANAGER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY:

_____ DATE _____

Sarah E. Schacher, P.E.
Preconstruction Engineer, Northern Region

ACCEPTED FOR CONSTRUCTION:

_____ DATE _____

Joseph P. Kemp, P.E.
Acting Regional Director, Northern Region

J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_A_Cover-A1 Mon, Aug/07/23 11:55am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	A2	A3

	RECOVERED	SET
BLM MONUMENT	✠	
GLO MONUMENT	✠	
USC&GS MONUMENT	▲	
PRIMARY MONUMENT	✠	✠
CENTERLINE MONUMENT IN CASING	⊕	⊕
PRIMARY R.O.W. MONUMENT	⊕	⊕
BEARING OBJECT	✳	
MISCELLANEOUS MONUMENT	⊗	
LINE OF SIGHT MONUMENT		⊕
CONCRETE R.O.W. MONUMENT	■	
BENCHMARK		BM
REBAR AND CAP	⊙	⊙
REBAR	⊕	●
IRON PIPE	✺	
PK NAIL		▽
SPIKE		✳
HUB AND TACK		◘
CONSTRUCTION CENTERLINE	5+00	
MISCELLANEOUS CENTERLINE	10+00	
STATION EQUATION	"L"48+97.23 POT BK= "O"48+97.23 PC AHD	
PROJECT RIGHT-OF-WAY LINE	R/W	
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE	C/A	
UTILITY EASEMENT LINE	PUE	
TEMPORARY EASEMENT LINE (TCP OR TCE)	TCP	
ACCESS OR SECTION LINE EASEMENT	ACCESS EASEMENT	
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE	T. 2 N. / T. 1 N. — T. 1 E. / T. 2 E.	

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)	SS	SS
FUEL LINE	O	O
GAS LINE	G	G
WATER LINE	W	W
METER, VALVE, FIRE HYDRANT	W	W
EXISTING STORM DRAIN (FLOW DIRECTION →)	SD	
PROPOSED STORM DRAIN		S-10, S-11, P-11, P-10, MH
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE	T	T
DIRECT BURIAL ELECTRIC CABLE	E	E
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT	T	T
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE	MH	MH
SANITARY SEWER CLEAN OUT		
POST OR BOLLARD		●
WELL OR MONITORING WELL	W	
SEPTIC PIPE	S, MW	
FUEL TANK FILL PIPE/VENT	P	
SATELLITE DISH	SAT. DISH	
TEST HOLE	TH	

	EXISTING	PROPOSED
ROADWAY/GRAVEL EDGE		
FENCE	X	X
V-DITCH CENTER		
FLAT BOTTOM DITCH		
RIPRAP		
CULVERT PIPE		
SIGN		
MAILBOX	MB	MB
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
MAJOR CONTOUR		
MINOR CONTOUR		
EXISTING BUILDINGS	H	

H = HOUSE
G = GARAGE
M = MERCHANT/STORE
B = BARN
S = SHED
P = PRIVY
SS= SERVICE STATION
W = WAREHOUSE

ROAD RECLAMATION (GRADES >4%)	
UNCLASSIFIED EXCAVATION DISPOSAL/ROAD RECLAMATION (GRADES ≤4%)	
ROAD RECLAMATION BERM	
CONIFER TREE	
DECIDUOUS TREE	
GRAVE	
THERMOSIPHON	
PARKING METER	
VEHICLE PLUG-IN	
DELINEATOR/GUIDE MARKER	

ABBREVIATIONS:

APPROX	APPROXIMATELY
BOP	BEGINNING OF PROJECT
℄	CENTERLINE
C.S.	CONTINGENT SUM
C.Y.	CUBIC YARD
E	EAST, EASTING
ELE, ELEV	ELEVATION
EOP	END OF PROJECT
ECB	EROSION CONTROL BLANKET
ESCP	EROSION AND SEDIMENT CONTROL PLAN
FT, '	FOOT, FEET
H	HORIZONTAL
HW/D	HEADWATER TO DIAMETER RATIO
IE	INVERT ELEVATION
IN, "	INCH, INCHES
L	LENGTH OF CURVE
LB	POUND
L.C.L	LEFT OF CENTERLINE
L.F.	LINEAR FOOT
L.S.	LUMP SUM
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX	MAXIMUM
MIN	MINIMUM
MS	MATERIALS SITES
N	NORTH, NORTHING
NO.	NUMBER
NTS	NOT TO SCALE
O.C.	ON CENTER
PC	POINT OF CURVATURE
POT	POINT ON TANGENT
P.S.T.	PERFORATED STEEL TUBE
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
R.C.L	RIGHT OF CENTERLINE
RECP	ROLLED EROSION CONTROL PRODUCT
RT	RIGHT
S	SOUTH
S.F.	SQUARE FOOT
STA	STATION
SWPPP	STORMWATER POLLUTION PREVENTION PLAN
T	TANGENT
TCE	TEMPORARY CONSTRUCTION EASEMENT
T.S.	STEEL TUBE SQUARE
TYP.	TYPICAL
V	VERTICAL
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
WWR	WELDED WIRE REINFORCEMENT
Ø	DIAMETER

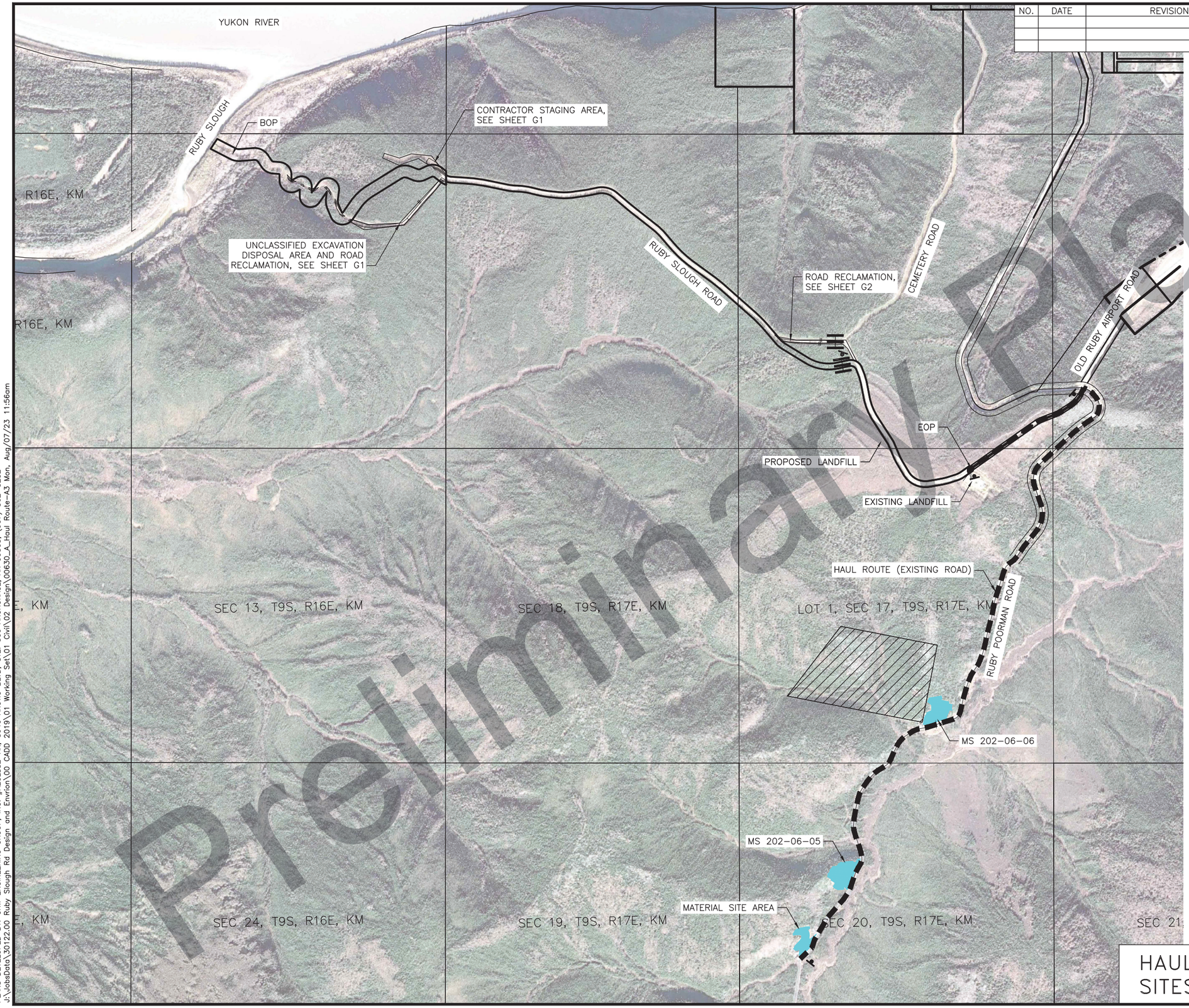
LEGEND & ABBREVIATIONS

STATE OF ALASKA 49TH — Colin M. Singleton CE-12820 — REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503, (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_A_Legend-A2 Mon, Aug/07/23 11:55am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	A3	A3



LEGEND:

- NATIVE ALLOTMENTS
- MATERIAL SITES
- HAUL ROUTE
- TRUCK CROSSING SIGN
- TYPE III BARRICADE WITH ROAD CLOSED SIGN

NOTES:

1. ALL MATERIALS, HAUL ROUTES, STAGING AREAS, AND ASSOCIATED PERMITS ARE CONTRACTOR FURNISHED. CONTRACTOR SHALL SECURE ALL PERMITS AND APPROVALS AS REQUIRED TO UTILIZE MATERIAL SITES. HAUL ROUTES AND MATERIAL SITE LIMITS SHALL AVOID CROSSING NATIVE ALLOTMENTS. SEE SUPPLEMENTAL INFORMATION.
2. FEATURE AND LAND STATUS LOCATIONS DISPLAYED ON THIS SHEET ARE APPROXIMATE ONLY.
3. MAINTAIN PUBLIC ACCESS TO EXISTING AND PROPOSED LANDFILL AND CEMETERY ROAD.

800' 400' 0 800' 1600'

HAUL ROUTE, MATERIAL SITES & STAGING AREA

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER
Colin M. Singleton
CE-124820

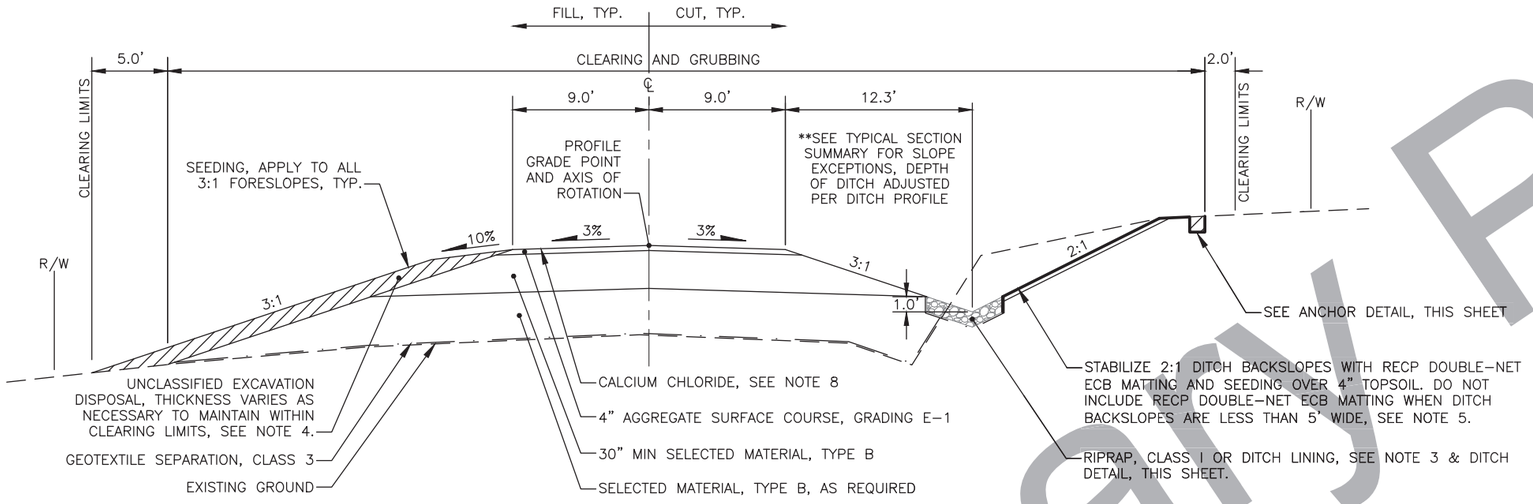
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503, (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_A_Haul Route-A3 Mon, Aug/07/23 11:56am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	B1	B3

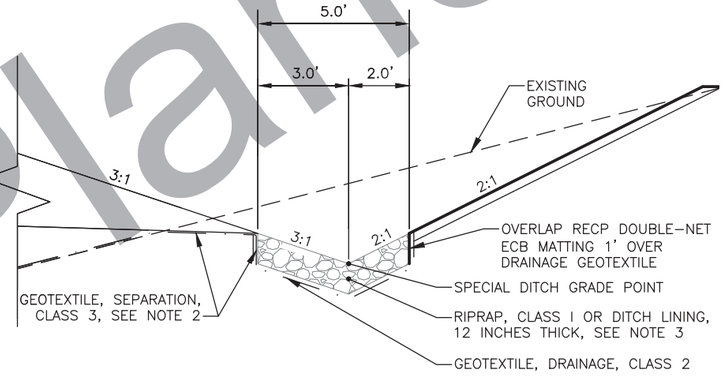
TYPICAL SECTION NOTES:

1. SEE SHEET B3 FOR SUPERELEVATION SLOPES AND TRANSITIONS.
2. TERMINATE SEPARATION GEOTEXTILE WHERE SUBGRADE INTERSECTS DRAINAGE GEOTEXTILE. WHERE SEPARATION GEOTEXTILE TERMINATES ABOVE DRAINAGE GEOTEXTILE, EXTEND 1' OVERLAP OVER DRAINAGE GEOTEXTILE BENEATH DITCH MATERIAL.
3. IN DITCHES AND WHERE TOE OF FILL LIMITS DRAIN TOWARDS ROADWAY, INSTALL RIPRAP, CLASS I WHEN ROAD GRADE IS EQUAL TO OR GREATER THAN 4% AND DITCH LINING WHEN ROAD GRADE IS LESS THAN 4%. SEE SHEET B2 FOR DITCH FILL DETAIL.
4. DISPOSE OF UNCLASSIFIED EXCAVATION ON FILL SLOPES MORE THAN 25 FEET FROM WETLANDS, WITHIN CLEARING LIMITS WHERE LONGITUDINAL GRADE OF THE ROAD DOES NOT EXCEED 4%. COMPACT ACCORDING TO SUBSECTION 203-3.05.
5. UTILIZE TOPSOIL RECLAIMED FROM CLEARING AND GRUBBING ACTIVITIES.
6. SEED PRIOR TO INSTALLATION OF RECP DOUBLE-NET ECB MATTING.
7. OVERLAP RECP DOUBLE-NET ECB MATTING AND SECURE MID SLOPE PER MANUFACTURER'S RECOMMENDATIONS.
8. APPLY CALCIUM CHLORIDE TO TOP GRAVEL ROAD SURFACE AT A RATE OF 1LB/S.Y.

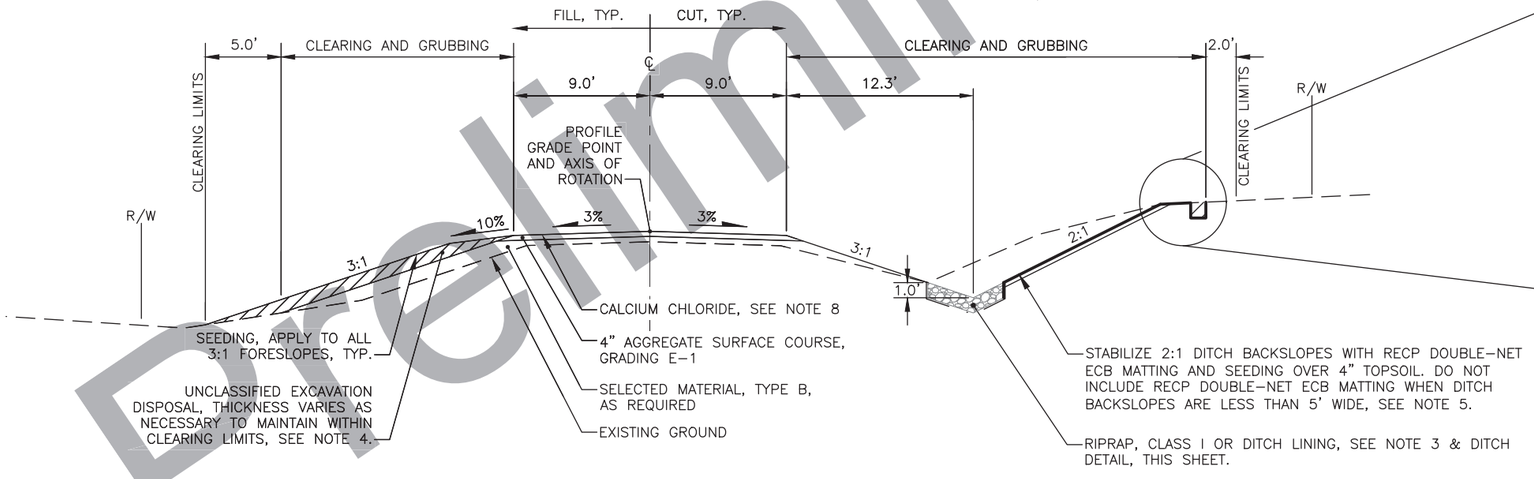


TYPICAL REALIGNMENT ROAD SECTION 1

SEE TYPICAL SECTION SUMMARY TABLE SHEET B3

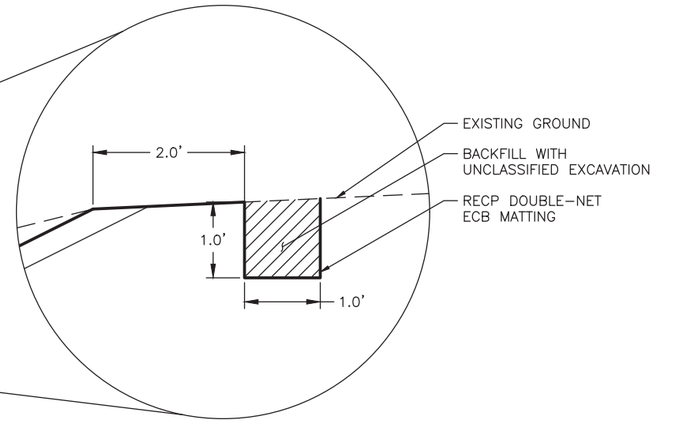


DITCH DETAIL



TYPICAL RESURFACING ROAD SECTION 2

SEE TYPICAL SECTION SUMMARY TABLE SHEET B3



RECP DOUBLE-NET ECB MATTING ANCHOR DETAIL

TYPICAL SECTIONS

Colin M. Singleton
CE-124820

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
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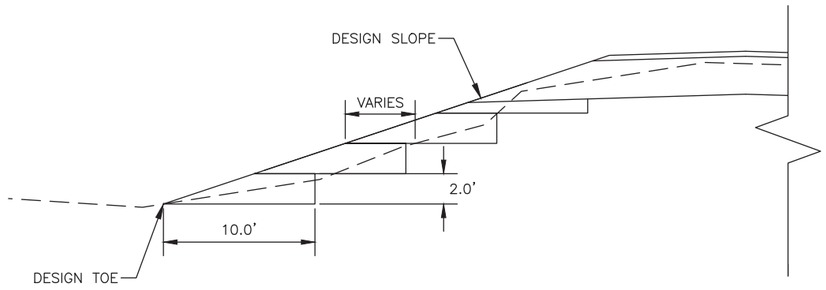
NO.	DATE	REVISION

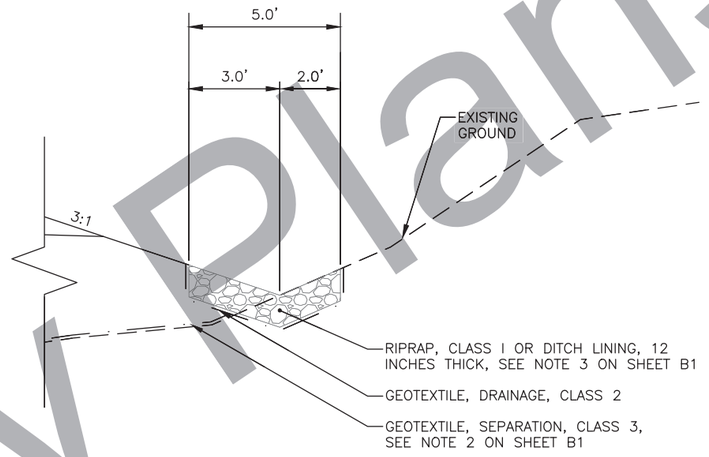
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	B2	B3

BENCHING DETAIL NOTE:

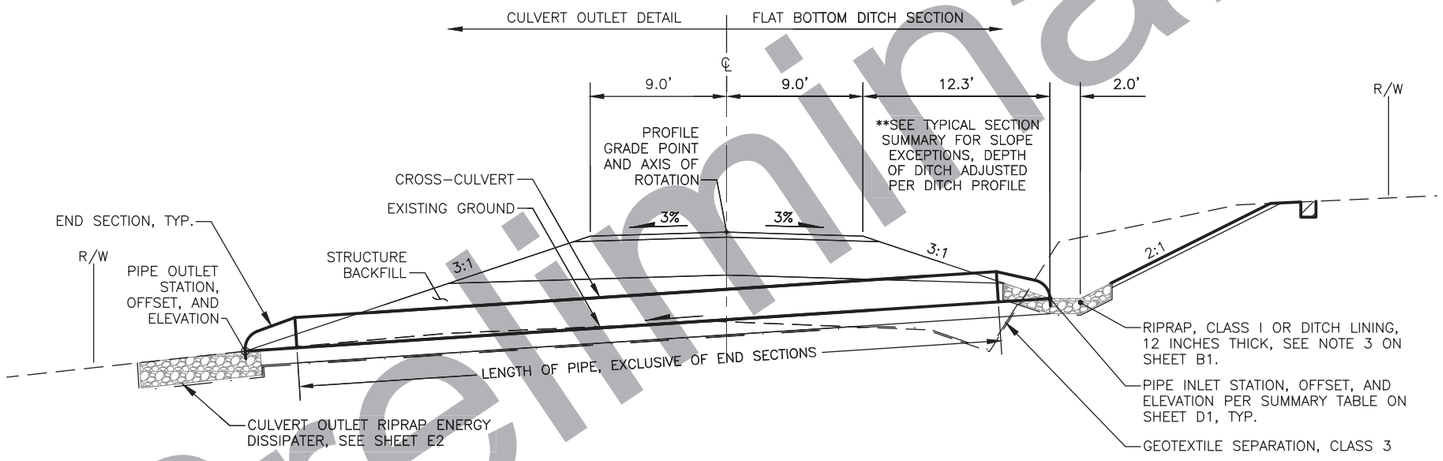
1. CONSTRUCT BENCHES AS NECESSARY IN CONFORMANCE WITH 203-3.03 AS SHOWN.



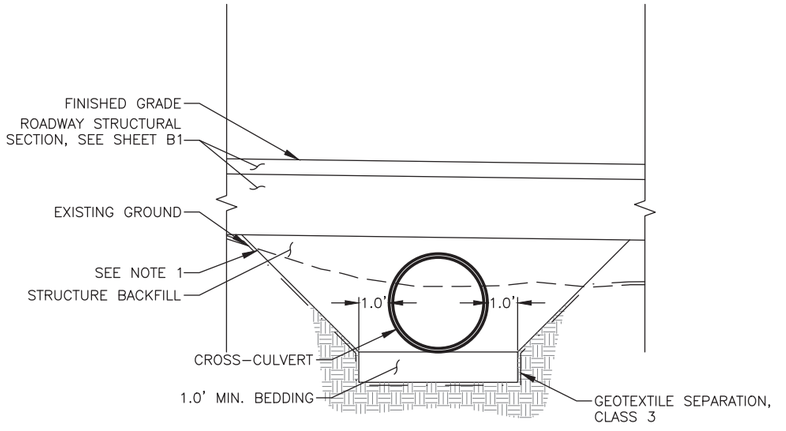
BENCHING DETAIL



DITCH FILL DETAIL



CROSS-CULVERT DETAIL



CROSS-CULVERT TRENCH DETAIL

CROSS-CULVERT NOTE:

1. SLOPE TRENCH WALLS ACCORDING TO SOIL CONDITIONS AND OSHA SAFETY STANDARDS.

TYPICAL SECTIONS

STATE OF ALASKA
49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_B_Typ-B2 Mon, Aug/07/23 01:04pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	B3	B3

SUPERELEVATION TABLE

SHEET	BEGIN TRANSITION	CROSS SLOPE	END TRANSITION	CROSS SLOPE	RUNOUT	RUNOFF	% RUNOFF
F1	13+28.6	NORMAL CROWN	14+06.1	REVERSE CROWN LEFT	38.8	38.8	80%
F1	15+01.2	REVERSE CROWN LEFT	15+78.7	NORMAL CROWN	38.8	38.8	80%
F1	16+79.8	NORMAL CROWN	17+57.3	REVERSE CROWN RIGHT	38.8	38.8	80%
F1	19+15.1	REVERSE CROWN RIGHT	19+83.8	ZERO PERCENT	0.0	68.8	80%
F1	19+83.8	ZERO PERCENT	20+52.6	REVERSE CROWN LEFT	0.0	68.8	80%
F1	21+50.2	REVERSE CROWN LEFT	22+18.9	ZERO PERCENT	0.0	68.8	80%
F1	22+18.9	ZERO PERCENT	22+87.7	REVERSE CROWN RIGHT	0.0	68.8	80%
F1	24+24.5	REVERSE CROWN RIGHT	24+87.0	ZERO PERCENT	0.0	62.5	80%
F1/F2	24+87.0	ZERO PERCENT	25+49.5	REVERSE CROWN LEFT	0.0	62.5	80%
F2	27+32.0	REVERSE CROWN LEFT	27+94.5	ZERO PERCENT	0.0	62.5	80%
F2	27+94.5	ZERO PERCENT	28+57.0	REVERSE CROWN RIGHT	0.0	62.5	80%
F2	29+82.6	REVERSE CROWN RIGHT	30+60.1	NORMAL CROWN	38.8	38.8	80%
F2	30+88.3	NORMAL CROWN	31+65.8	REVERSE CROWN LEFT	38.8	38.8	80%
F2	33+52.9	REVERSE CROWN LEFT	34+30.4	NORMAL CROWN	38.8	38.8	80%
F2	35+55.2	NORMAL CROWN	36+32.7	REVERSE CROWN RIGHT	38.8	38.8	80%
F2	38+56.4	REVERSE CROWN RIGHT	39+33.9	NORMAL CROWN	38.8	38.8	80%
F3	42+22.6	NORMAL CROWN	43+00.1	REVERSE CROWN LEFT	38.8	38.8	80%
F3	45+19.2	REVERSE CROWN LEFT	45+96.7	NORMAL CROWN	38.8	38.8	80%

SUPERELEVATION TABLE (CONTINUED)

SHEET	BEGIN TRANSITION	CROSS SLOPE	END TRANSITION	CROSS SLOPE	RUNOUT	RUNOFF	% RUNOFF
F6	90+27.7	NORMAL CROWN	91+05.2	REVERSE CROWN RIGHT	38.8	38.8	80%
F6	94+09.9	REVERSE CROWN RIGHT	94+87.4	NORMAL CROWN	38.8	38.8	80%
F9	130+42.9	NORMAL CROWN	131+20.4	REVERSE CROWN LEFT	38.8	38.8	80%
F9	132+15.2	REVERSE CROWN LEFT	132+92.7	NORMAL CROWN	38.8	38.8	80%
F9	143+47.6	NORMAL CROWN	144+25.1	REVERSE CROWN RIGHT	38.8	38.8	80%
F10	146+21.9	REVERSE CROWN RIGHT	146+99.4	NORMAL CROWN	38.8	38.8	80%
F10	158+94.4	NORMAL CROWN	159+71.9	REVERSE CROWN LEFT	38.8	38.8	80%
F11	160+23.1	REVERSE CROWN LEFT	161+00.6	NORMAL CROWN	38.8	38.8	80%
F11	165+03.8	NORMAL CROWN	165+81.3	REVERSE CROWN LEFT	38.8	38.8	80%
F11	170+18.2	REVERSE CROWN LEFT	170+95.7	NORMAL CROWN	38.8	38.8	80%
F11/F12	174+30.5	NORMAL CROWN	175+08.0	REVERSE CROWN LEFT	38.8	38.8	80%
F12	175+98.8	REVERSE CROWN LEFT	176+76.3	NORMAL CROWN	38.8	38.8	80%

SUPERELEVATION NOTE:

1. SEE SHEET E1 FOR SUPERELEVATION TRANSITION DETAILS.

TYPICAL SECTION SUMMARY

SHEET	START STATION	END STATION	LEFT			RIGHT			REMARKS
			REALIGNMENT ROAD SECTION 1	FLAT BOTTOM DITCH SECTION	RESURFACING ROAD SECTION 2	REALIGNMENT ROAD SECTION 1	FLAT BOTTOM DITCH SECTION	RESURFACING ROAD SECTION 2	
F1	11+89.1	18+00.0	X**			X**			
F1-F2	18+00.0	34+22.0	X			X			
F2	34+22.0	34+52.0	X			X	X		
F2	34+52.0	39+85.0	X			X			
F2-F3	39+85.0	40+15.0	X	X		X			
F3	40+15.0	47+80.0	X			X			
F3	47+80.0	48+10.0	X			X	X		
F3-F4	48+10.0	56+20.0	X			X			
F4	56+20.0	56+50.0	X			X	X		
F4	56+50.0	62+46.0	X			X			
F4	62+46.0	62+76.0	X			X	X		
F4-F7	62+76.0	104+70.0	X			X			
F7	104+70.0	105+05.0	X	X		X			
F7-F9	105+05.0	131+50.0	X			X			
F9	131+50.0	131+85.0	X	X		X			
F9-F10	131+85.0	146+50.0	X			X			
F10	146+50.0	146+76.4			X			X	
F10	146+76.4	147+35.2			X**			X	
F10	147+35.2	147+60.0			X**			X**	
F10	147+60.0	148+00.0		X	X**		X	X**	
F10	148+00.0	148+46.1			X**			X**	
F10	148+46.1	149+50.0			X			X	
F10-F11	149+50.0	167+00.0	X			X			
F11-F12	167+00.0	177+88.9			X			X	

**DEPTH OF DITCH ADJUSTED PER DITCH PROFILE, SEE F SHEETS

TYPICAL SECTIONS

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	C1	C1

ESTIMATE OF QUANTITIES			
ITEM NO.	ITEM DESCRIPTION	PAY UNIT	QUANTITY
201.0007.0000	CLEARING	L.S.	ALL REQUIRED
201.0009.0000	CLEARING AND GRUBBING	L.S.	ALL REQUIRED
202.0004.0000	REMOVAL OF CULVERT PIPE	L.F.	40
203.0003.0000	UNCLASSIFIED EXCAVATION	C.Y.	39,770
203.0006.000B	BORROW, TYPE B	TON	153,700
203.0009.0000	OBLITERATION OF ROADWAY	S.Y.	21,810
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	TON	7,420
603.0001.0024	CSP 24 INCH	L.F.	518
603.0003.0024	END SECTION FOR CSP 24 INCH	EACH	20
610.0002.0000	DITCH LINING	TON	3,130
611.0002.0001	RIPRAP, CLASS I	TON	4,534
613.0002.0000	CULVERT MARKER POST	EACH	20
615.0001.0000	STANDARD SIGN	S.F.	242
618.0001.0000	SEEDING	ACRE	16
619.2003.0000	SEDIMENT RETENTION FIBER ROLLS	L.F.	15,430
619.2018.000E	MATTING - RECP DOUBLE-NET ECB	S.Y.	14,164
620.0001.0000	TOPSOIL	S.Y.	11,224
624.0001.0000	CALCIUM CHLORIDE	TON	17
630.0001.0003	GEOTEXTILE, SEPARATION, CLASS 3	S.Y.	80,470
631.0001.0002	GEOTEXTILE, DRAINAGE, CLASS 2	S.Y.	20,610
639.2000.00A0	APPROACH, PUBLIC	EACH	2
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	L.S.	ALL REQUIRED
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	L.S.	ALL REQUIRED
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	L.S.	ALL REQUIRED
641.0002.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	C.S.	ALL REQUIRED
642.0001.0000	CONSTRUCTION SURVEYING	L.S.	ALL REQUIRED
642.0003.0000	THREE PERSON SURVEY PARTY	HOUR	24
643.0002.0000	TRAFFIC MAINTENANCE	L.S.	ALL REQUIRED
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	L.S.	ALL REQUIRED
644.0001.0000	FIELD OFFICE	L.S.	ALL REQUIRED
644.0002.0000	FIELD LABORATORY	L.S.	ALL REQUIRED
644.0015.0000	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EACH	1
644.0016.0000	STORAGE CONTAINER	EACH	1
644.2002.0000	FIELD COMMUNICATIONS	C.S.	ALL REQUIRED
644.2007.0000	VEHICLE (LT/SUV)	EACH	1
646.0001.0000	CPM SCHEDULING	L.S.	ALL REQUIRED
647.2000.0000	WIDE PAD DOZER, 65-HP MINIMUM	C.S.	ALL REQUIRED

ESTIMATING FACTORS		
ITEM NO.	ITEM	ESTIMATING FACTOR
203.0006.000B	BORROW, TYPE B	1.94 TON/C.Y.
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	2.00 TON/C.Y.
610.0002.0000	DITCH LINING	110 LB/C.F.
611.0002.0001	RIPRAP, CLASS I	1.50 TON/C.Y.
618.0001.0000	SEEDING	0.94 LB/1,000 S.F
624.0001.0000	CALCIUM CHLORIDE	1 LB/S.Y.

ESTIMATE OF QUANTITIES

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	D1	D2

CROSS-CULVERT SUMMARY

SHEET	PIPE	INLET			OUTLET			% GRADE	603.0001.0024 CSP 24 INCH (L.F.)	603.0003.0024 END SECTION FOR CSP 24 INCH (EACH)	613.0002.0000 CULVERT MARKER POST (EACH)	RIPRAP OUTLET CHANNEL L x W x D (FT x FT x IN)	REMARKS	AS-BUILT CENTERLINE LOCATION		
		STATION	OFFSET (FT)	ELEV. (FT)	STATION	OFFSET (FT)	ELEV. (FT)							STATION	LATITUDE	LONGITUDE
F1	P-1	24+71.6	31.9 LT	206.22	24+42.6	47.7 RT	198.14	9.54%	78.3	2	2	8x6x20				
F2	P-2	30+99.7	26.5 LT	272.54	30+76.7	36.6 RT	267.16	8.01%	60.5	2	2	8x6x20				
F2	P-3	34+32.7	21.3 RT	309.04	34+06.7	50.9 LT	296.04	16.93%	71.0	2	2	8x6x20				
F2	P-4	39+95.0	21.3 LT	366.17	39+95.0	39.9 RT	360.00	10.08%	54.7	2	2	8x6x20				
F3	P-5	47+90.2	21.4 RT	454.67	47+68.6	25.7 LT	451.14	6.81%	45.1	2	2	8x6x20				
F4	P-6	56+30.7	21.3 RT	550.93	56+18.8	23.3 LT	549.17	3.81%	39.4	2	2	8x6x20				
F4	P-7	62+56.5	21.3 RT	602.18	62+44.4	22.9 LT	601.41	1.68%	39.0	2	2	8x6x20				
F7	P-8	104+91.2	21.3 LT	667.77	105+09.7	23.3 RT	666.41	2.81%	41.5	2	2	8x6x20				
F9	P-9	131+63.3	21.4 LT	693.45	131+35.1	28.2 RT	688.63	8.42%	50.6	2	2	8x6x20				
F10	P-10	147+80.0	21.5 LT	817.83	147+80.0	23.5 RT	817.16	1.49%	38.1	2	2	8x6x20				
								TOTAL	518.3	20	20					

CROSS-CULVERT SUMMARY NOTES:

1. SEE SHEET B2 FOR CROSS-CULVERT DETAIL.
2. SEE SHEET E2 FOR RIPRAP OUTLET ENERGY DISSIPATER DETAIL.
3. STATIONING AND SKEW FOR CULVERTS IS APPROXIMATE. STAKE CULVERTS IN THE FIELD AND ADJUST TO FIELD CONDITIONS AS DIRECTED BY THE ENGINEER.
4. CULVERT LENGTHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
5. THE CONTRACTOR SHALL ENTER AS-BUILT LOCATIONS FOR ALL INSTALLED CULVERTS IN THE CULVERT SUMMARY TABLE. COORDINATES SHALL BE LOCATED AT THE INTERSECTION OF THE CULVERT AND ROADWAY CENTERLINE. USE THE PROJECT COORDINATE SYSTEM FORMATTED TO DECIMAL DEGREES TO A PRECISION OF 5 DECIMAL PLACES. THIS WORK IS SUBSIDIARY TO 603 SERIES PAY ITEMS.

639.2000.00A0

APPROACH, PUBLIC

SHEET	INTERSECTION STATION	OFFSET	APPROACH TYPE ROADWAY	WIDTH (FT)	RADIUS (FT)	LANDING LENGTH (FT)	SKEW ANGLE (DEG)	SLOPE % (LT/RT)	ALIGNMENT/ROADWAY NAME	REMARKS
F10/F13	146+17.36	CL	X	18	20	NL	4.4°	1%	"A1"	
F12/F14	170+60.32	CL	X	16	20	NL	26.2°	9.2%	"A2"	
			TOTAL	2						

NL = NO LANDING, SMOOTH GRADE TO ROAD CENTERLINE

619.2003.0000

SEDIMENT RETENTION FIBER ROLLS

SHEET	STATION TO STATION		OFFSET	TOTAL (L.F.)	REMARKS
Q1	11+89	24+26	RT	1,342	
Q1-Q2	11+89	33+94	LT	2,221	
Q2	24+49	30+63	RT	669	
Q2	30+85	39+85	RT	945	
Q2-Q3	34+15	47+60	LT	1,453	
Q3	40+05	63+94	RT	2,553	
Q3	47+77	56+07	LT	858	
Q3	56+27	62+35	LT	623	
Q3	62+52	63+92	LT	169	
Q5-Q6	122+00	145+00	LT	2,287	
Q5	122+00	131+24	RT	924	
Q6	131+41	145+00	RT	1,386	
			TOTAL	15,430	

REMOVAL OF CULVERT PIPE

SHEET	INLET		OUTLET		202.0004.0000 REMOVAL OF CULVERT PIPE (L.F.)	REMARKS
	STATION	OFFSET (FT)	STATION	OFFSET (FT)		
F10	47+88.0	19.3 LT	47+79.7	20.0 RT	41.0	24" CMP
				TOTAL	41.0	

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SUMMARY TABLES

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	D2	D2

DITCH SUMMARY

SHEET	STATION TO STATION		OFFSET	LENGTH (FT)	610.0002.0000 DITCH LINING (TON)	611.0002.0001 RIPRAP, CLASS I (TON)	REMARKS
F1	11+89.1	18+27.4	RT	648.2	178.2		
F1	11+89.1	18+50.0	LT	656.5	180.5		
F1	18+50.0	27+29.7	LT	839.3		233.1	
F1	19+00.0	23+51.4	RT	470.0		130.4	
F2	25+75.0	30+25.2	RT	473.1		131.4	
F2	28+04.7	33+00.0	LT	492.8		136.5	
F2	28+07.2	28+12.7	LT	8.0		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F2	32+20.3	32+25.0	RT	8.0		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F2	32+25.0	38+75.1	RT	629.5		177.8	
F2	37+69.3	37+75.2	LT	8.0		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F2	39+25.1	39+75.0	RT	49.9		13.8	
F2-F3	37+75.2	46+49.9	LT	839.0		236.7	
F3	43+68.7	43+74.3	RT	8.0		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F3	47+75.1	49+25.8	LT	154.6		42.9	
F3-F4	46+74.3	65+50.0	RT	2177.7		614.7	
F3-F4	54+99.8	55+99.3	LT	99.5		27.6	
F4	58+66.1	58+74.1	LT	8.0		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F4	58+74.1	62+16.1	LT	327.5		91.0	
F4	62+75.6	62+80.0	LT	8		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F4	62+80.0	65+50.0	LT	275.1		76.4	
F4-F5	65+50.0	76+00.0	LT & RT	2100.0	577.5		
F5-F6	76+00.0	87+50.0	LT & RT	2303.3		639.6	
F6	87+50.0	95+50.0	LT & RT	1600.0	440.0		
F6-F7	95+50.0	110+00.0	LT & RT	2901.8		808.9	
F7-F8	110+00.0	117+23.3	RT	723.8	199.0		
F7-F8	110+00.0	117+25.5	LT	725.0	199.4		
F8-F9	123+00.0	131+19.8	RT	817.2		227.0	
F8-F9	123+00.0	144+25.0	LT	2112.8		590.2	
F9	140+68.0	140+74.8	RT	8.0		3.7	DITCH OUTLET RIPRAP ENERGY DISSIPATER
F9	140+74.8	144+25.0	RT	353.4		98.1	
F9	144+25.0	144+93.8	LT	105.2		29.5	
F9-F11	144+25.0	163+50.1	RT	1899.4	522.5		
F10-F11	200+59.9	162+74.9	LT	1797.9	494.4		
F11	166+50.0	173+50.0	LT	676.1	186.1		
F11	166+74.6	169+99.7	RT	343.6	94.4		
F11	170+49.7	172+32.5	RT	182.9	50.3		
F11	173+24.8	173+50.0	RT	25.7	7.1		
F11-F12	173+50.0	177+23.8	RT	388.9		108.3	
F11-F12	173+50.0	177+88.9	LT	432.1		48.6	
				SUBTOTAL	3,130.0	4,489.0	
				CULVERT OUTLET RIPRAP ENERGY DISSIPATER		45.0	SEE NOTE 1
				TOTAL	3,130.0	4,534.0	

DITCH SUMMARY NOTES:

1. SEE CROSS-CULVERT SUMMARY TABLE, SHEET D1 FOR CULVERT RIPRAP ENERGY DISSIPATER LOCATIONS AND DIMENSIONS.
2. SEE SHEET E2 FOR DITCH OUTLET RIPRAP ENERGY DISSIPATER DETAIL.

203.0009.0000

OBLITERATION OF ROADWAY

SHEET	STATION TO STATION		OFFSET	ROAD RECLAMATION (S.Y.)	UNCLASSIFIED EXCAVATION DISPOSAL/ROAD RECLAMATION (S.Y.)	ROAD RECLAMATION BERM (S.Y.)	REMARKS
G1	24+74.5	25+18.0	LT			270	
G1	25+18.0	27+45.7	LT	170			
G1	27+45.7	27+75.4	LT			200	
G1	28+58.9	29+93.0	RT	140			
G1	30+15.0	30+35.5	LT			130	
G1	30+35.5	34+79.0	LT	230			
G1	34+79.0	35+12.9	LT			270	
G1	36+39.4	36+44.9	RT			150	
G1	36+44.9	38+83.9	RT	170			
G1	38+83.9	39+40.2	RT			230	
G1	40+43.8	41+47.7	LT			310	
G1	41+47.7	43+62.5	LT	690			
G1	43+62.5	44+50.2	LT			210	
G1	45+00.1	45+11.4	RT			180	
G1	45+11.4	53+96.4	RT	5,190			
G1	53+96.4	64+86.4	RT		4,280		
G1	64+86.4	65+00.3	RT			460	
G1	62+23.7	63+40.6	LT	2,520			
G1	63+40.6	63+87.0	LT			1,050	
G2	130+45.5	131+37.7	LT			360	
G2	131+37.7	143+50.8	LT	4,460			
G2	143+50.8	143+83.5	LT			140	
			SUBTOTAL	13,570.0	4,280.0	3,960.0	
			TOTAL	21,810.0			

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STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

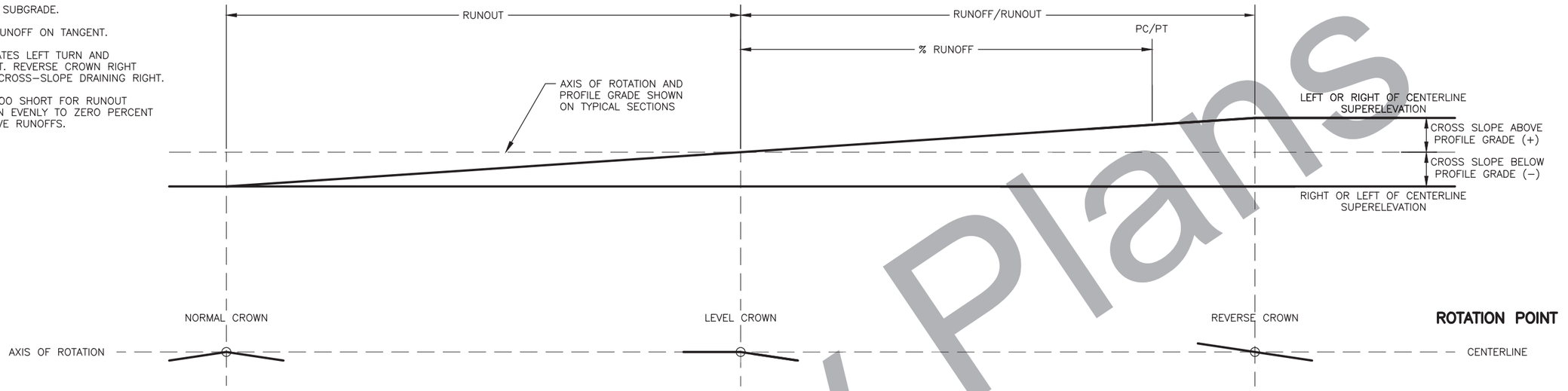
SUMMARY TABLES

NO.	DATE	REVISION

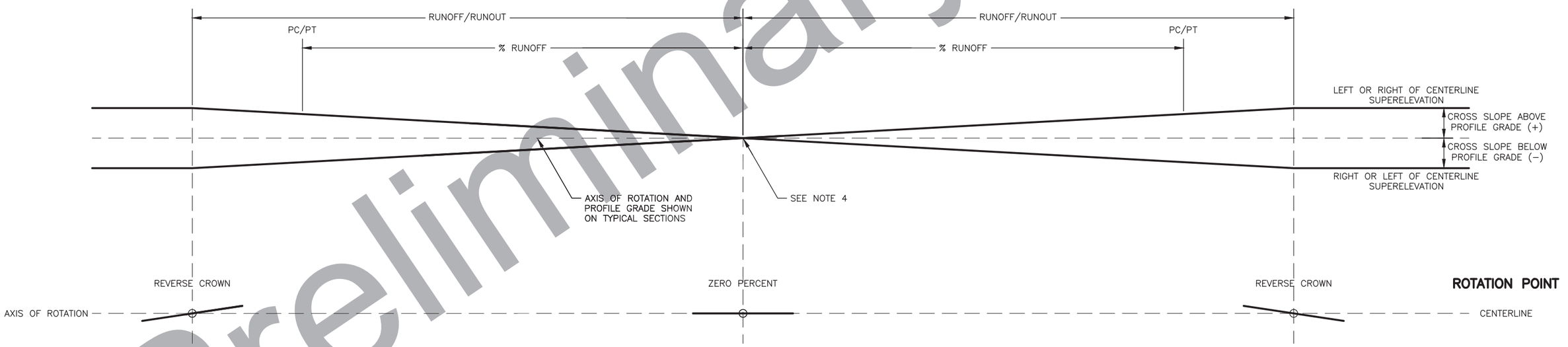
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	E1	E2

NOTES:

1. BUILD SUPERELEVATION INTO SUBGRADE.
2. % RUNOFF = PORTION OF RUNOFF ON TANGENT.
3. REVERSE CROWN LEFT INDICATES LEFT TURN AND CROSS–SLOPE DRAINING LEFT. REVERSE CROWN RIGHT INDICATES RIGHT TURN AND CROSS–SLOPE DRAINING RIGHT.
4. WHEN TANGENT LENGTH IS TOO SHORT FOR RUNOUT BETWEEN CURVES, TRANSITION EVENLY TO ZERO PERCENT WITH NO GAP BETWEEN CURVE RUNOFFS.

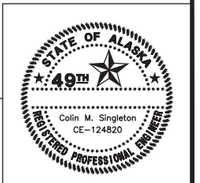


NORMAL CROWN SUPERELEVATION TRANSITION



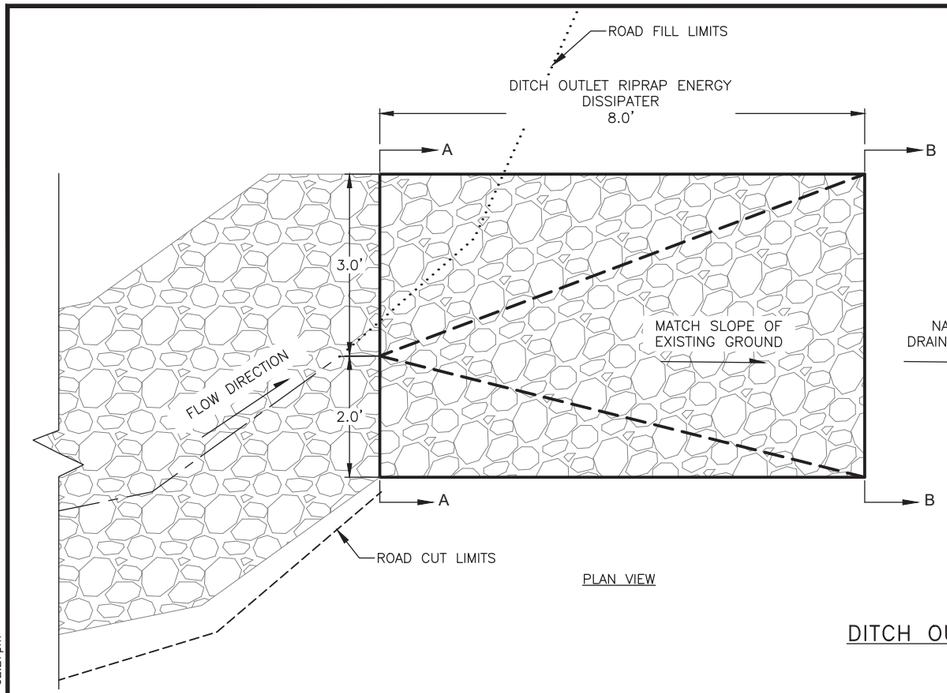
ZERO PERCENT SUPERELEVATION TRANSITION

SUPERELEVATION DETAILS

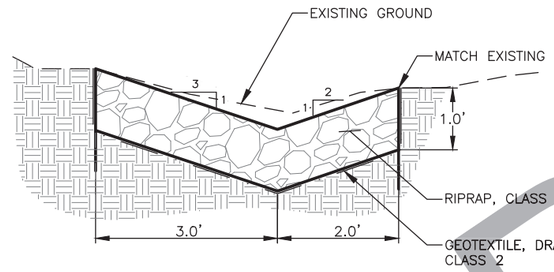


NO.	DATE	REVISION

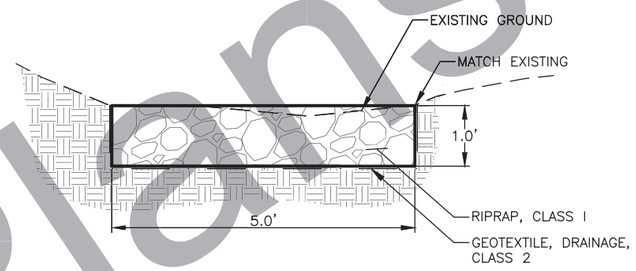
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	E2	E2



PLAN VIEW

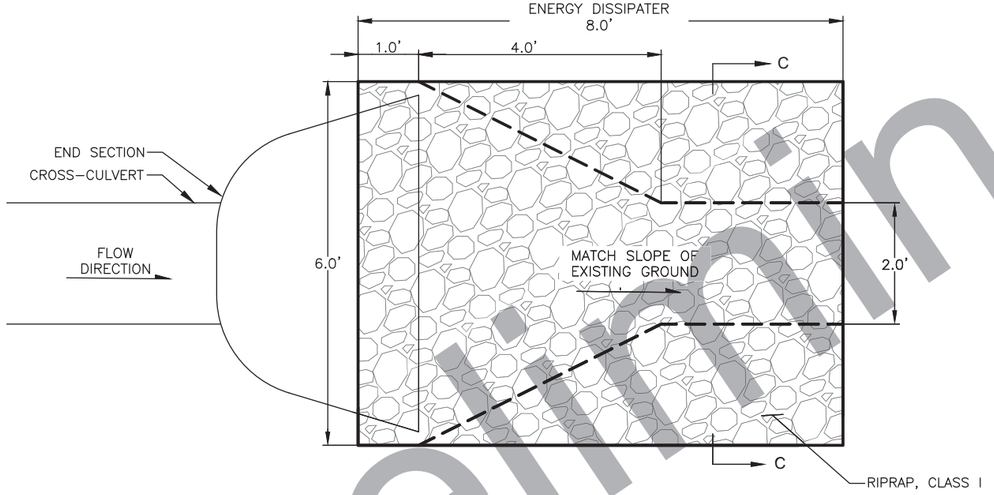


SECTION VIEW A–A

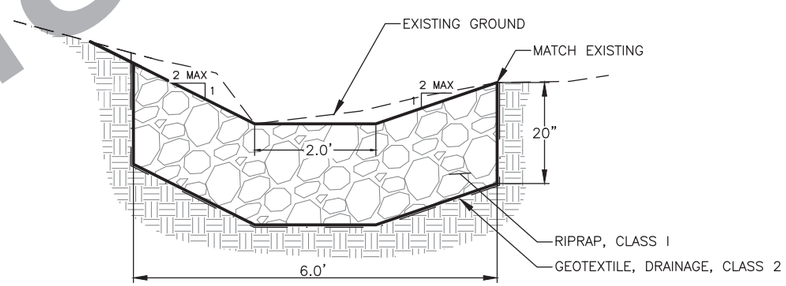


SECTION VIEW B–B

DITCH OUTLET RIPRAP ENERGY DISSIPATER



PLAN VIEW



SECTION VIEW C–C

CULVERT OUTLET RIPRAP ENERGY DISSIPATER

STATE OF ALASKA 49TH
Colin M. Singleton
CE–124820
REGISTERED PROFESSIONAL ENGINEER

MISC. DETAILS

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882–AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562–3252
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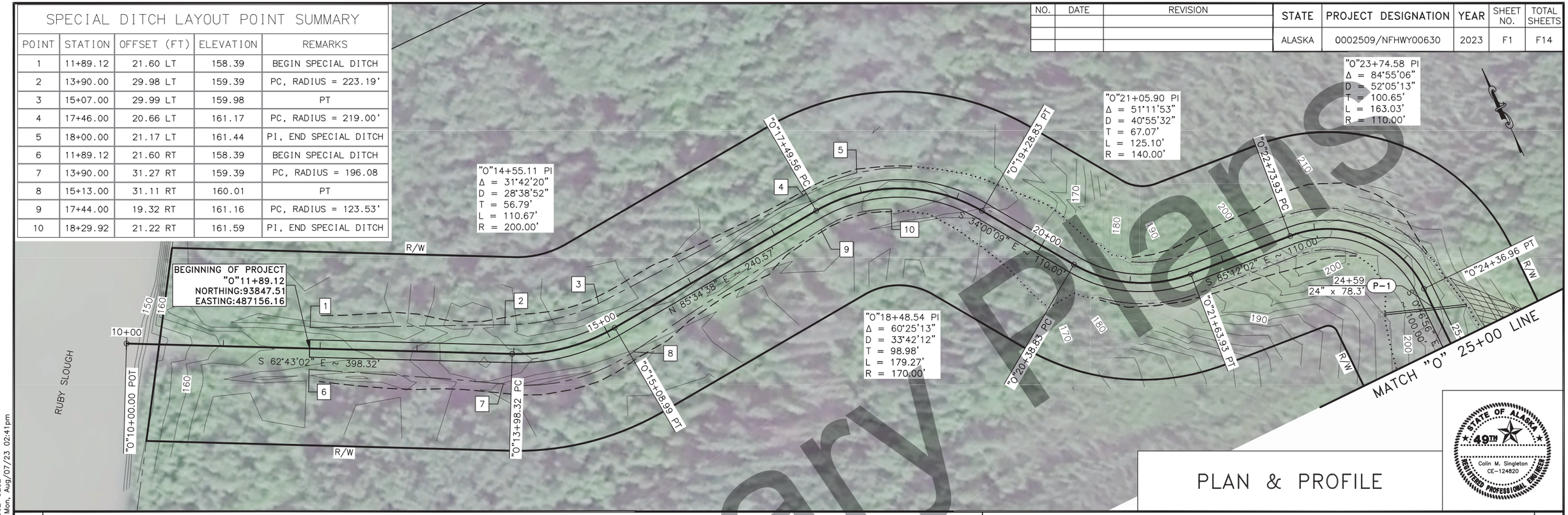
SPECIAL DITCH LAYOUT POINT SUMMARY

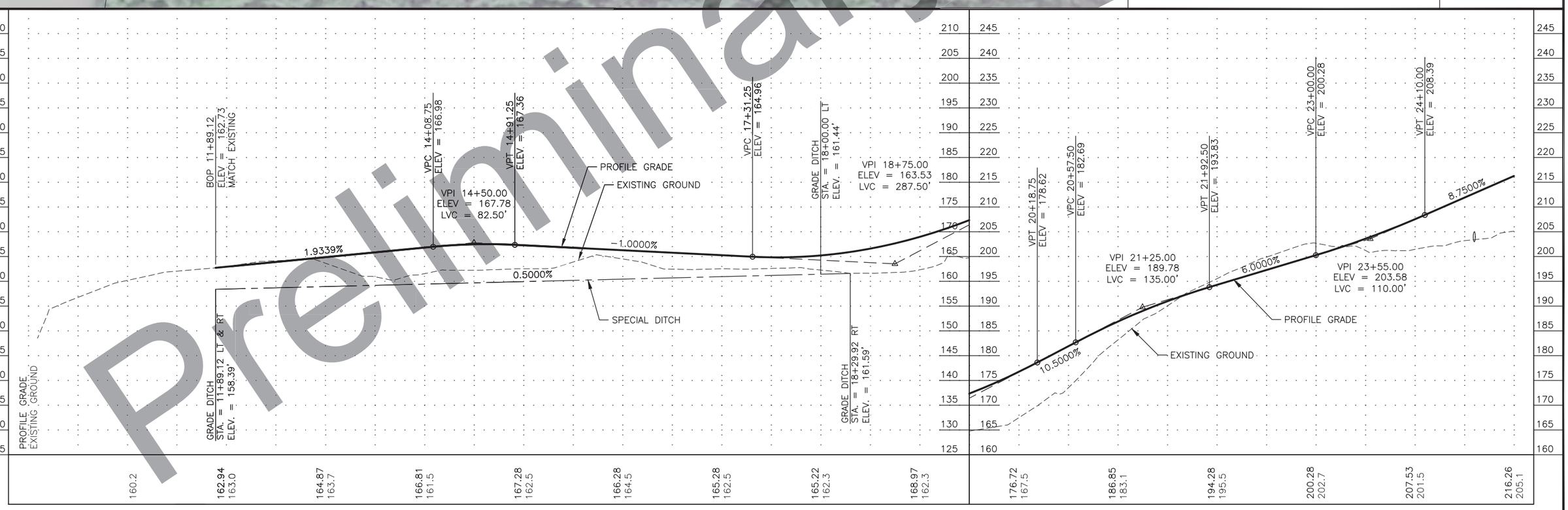
POINT	STATION	OFFSET (FT)	ELEVATION	REMARKS
1	11+89.12	21.60 LT	158.39	BEGIN SPECIAL DITCH
2	13+90.00	29.98 LT	159.39	PC, RADIUS = 223.19'
3	15+07.00	29.99 LT	159.98	PT
4	17+46.00	20.66 LT	161.17	PC, RADIUS = 219.00'
5	18+00.00	21.17 LT	161.44	PI, END SPECIAL DITCH
6	11+89.12	21.60 RT	158.39	BEGIN SPECIAL DITCH
7	13+90.00	31.27 RT	159.39	PC, RADIUS = 196.08
8	15+13.00	31.11 RT	160.01	PT
9	17+44.00	19.32 RT	161.16	PC, RADIUS = 123.53'
10	18+29.92	21.22 RT	161.59	PI, END SPECIAL DITCH

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F1	F14



PLAN & PROFILE



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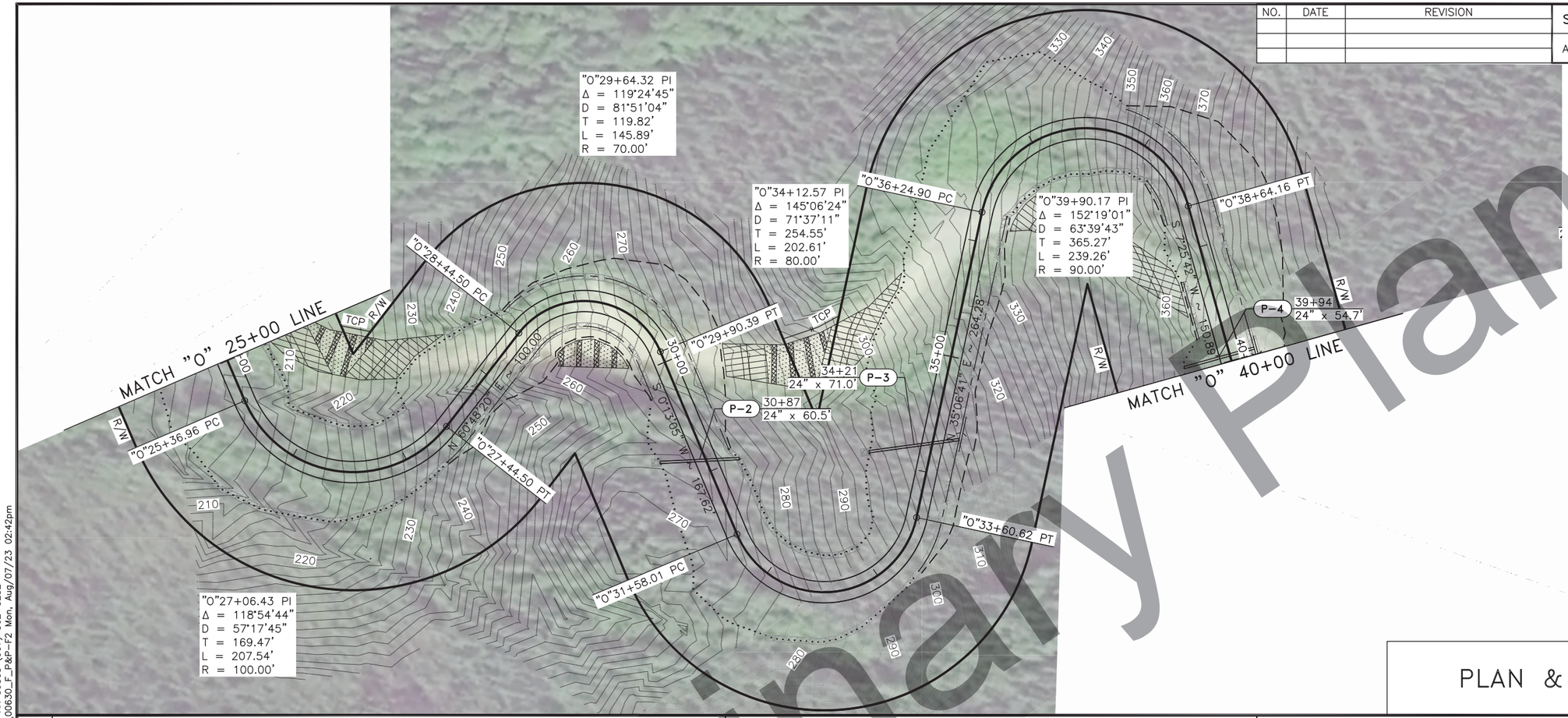
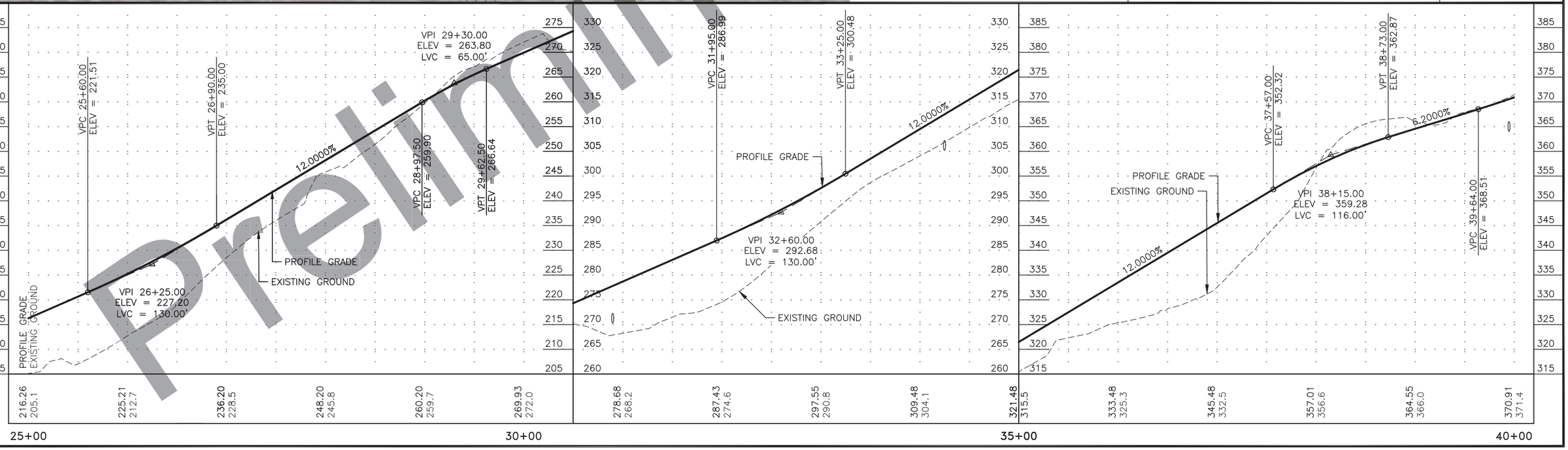
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F2	F14





PLAN & PROFILE

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STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F3	F14

MATCH "O" 40+00 LINE

"O"40+15.05 PC

"O"40+82.81 PI
Δ = 30°19'39"
D = 22°55'06"
T = 67.75'
L = 132.33'
R = 250.00'

"O"41+47.38 PT

"O"44+91.54 PI
Δ = 122°11'08"
D = 52°05'13"
T = 199.21'
L = 234.58'
R = 110.00'

S 22°53'57" E ~ 144.95'

"O"42+92.33 PC

N 34°54'55" E ~ 234.46'

"O"45+26.91 PT

"O"47+61.37 PC

"O"49+26.25 PI
Δ = 23°17'28"
D = 7°09'43"
T = 164.88'
L = 325.20'
R = 800.00'

"O"50+86.58 PT

N 58°12'22" E ~ 572.24'

47+80
24" x 45.1"
P-5

45+00

50+00

55+00

R/W

TCP

MATCH "O" 55+00 LINE

PLAN & PROFILE

VPI 40+80.00
ELEV = 375.71
LVC = 232.00'

VPT 41+96.00
ELEV = 389.63

VPI 44+50.00
ELEV = 420.11
LVC = 55.00'

VPC 44+22.50
ELEV = 416.81

VPT 44+77.50
ELEV = 423.25

12.0000%

PROFILE GRADE
EXISTING GROUND

11.4504%

370.91 371.4
379.26 376.7
390.11 385.0
402.11 399.2
414.11 414.8
425.83 428.9
437.28 439.6
448.73 447.6
460.18 461.2
471.63 473.0
483.08 480.1
494.53 491.3
505.98 503.9
517.43 515.5
528.88 527.5
540.33 539.6

40+00 45+00 50+00 55+00

Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER
STATE OF ALASKA 49TH

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F3 Mon, Aug/07/23 02:43pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F4	F14

"O"57+59.68 PI
Δ = 53°31'28"
D = 28°38'52"
T = 100.86'
L = 186.84'
R = 200.00'

"O"62+89.48 PI
Δ = 62°52'39"
D = 38°11'50"
T = 91.70'
L = 164.61'
R = 150.00'

"O"65+49.13 PI
Δ = 34°09'06"
D = 28°38'52"
T = 61.44'
L = 119.21'
R = 200.00'

"O"60+20.20 PI
Δ = 46°33'48"
D = 38°11'50"
T = 64.54'
L = 121.90'
R = 150.00'

56+26
24" x 39.4'
P-6

62+51
24" x 39.0'
P-7

S 68°16'10" E ~ 110.00'

N 65°10'02" E ~ 120.22'

S 51°57'19" E ~ 125.30'

S 86°06'24" E ~ 289.77'

"O"56+58.82 PC

"O"58+45.65 PT

"O"59+55.65 PC

"O"60+77.55 PT

"O"61+97.78 PC

"O"63+62.39 PT

"O"64+87.69 PC

"O"66+06.90 PT

"O"68+96.67 PC

TCP

R/W

MATCH "O" 55+00 LINE

MATCH "O" 70+00 LINE

PLAN & PROFILE

VPI 57+50.00
ELEV = 568.96
LVC = 58.00'

VPC 57+21.00
ELEV = 565.64

VPT 57+79.00
ELEV = 571.86

VPI 60+15.00
ELEV = 595.46
LVC = 165.00'

VPC 59+32.50
ELEV = 587.21

VPT 60+97.50
ELEV = 599.17

VPI 62+80.00
ELEV = 607.38
LVC = 127.80'

VPC 62+16.10
ELEV = 604.51

VPT 63+43.90
ELEV = 611.28

VPI 65+50.00
ELEV = 623.85
LVC = 118.55'

VPC 64+90.73
ELEV = 620.23

VPT 66+09.27
ELEV = 625.12

VPI 67+50.00
ELEV = 628.14
LVC = 52.00'

VPC 67+24.00
ELEV = 627.58

VPT 67+76.00
ELEV = 628.53

PROFILE GRADE
EXISTING GROUND

11.4504%

10.0000%

4.5000%

6.0975%

2.1459%

1.5000%

55+00

60+00

65+00

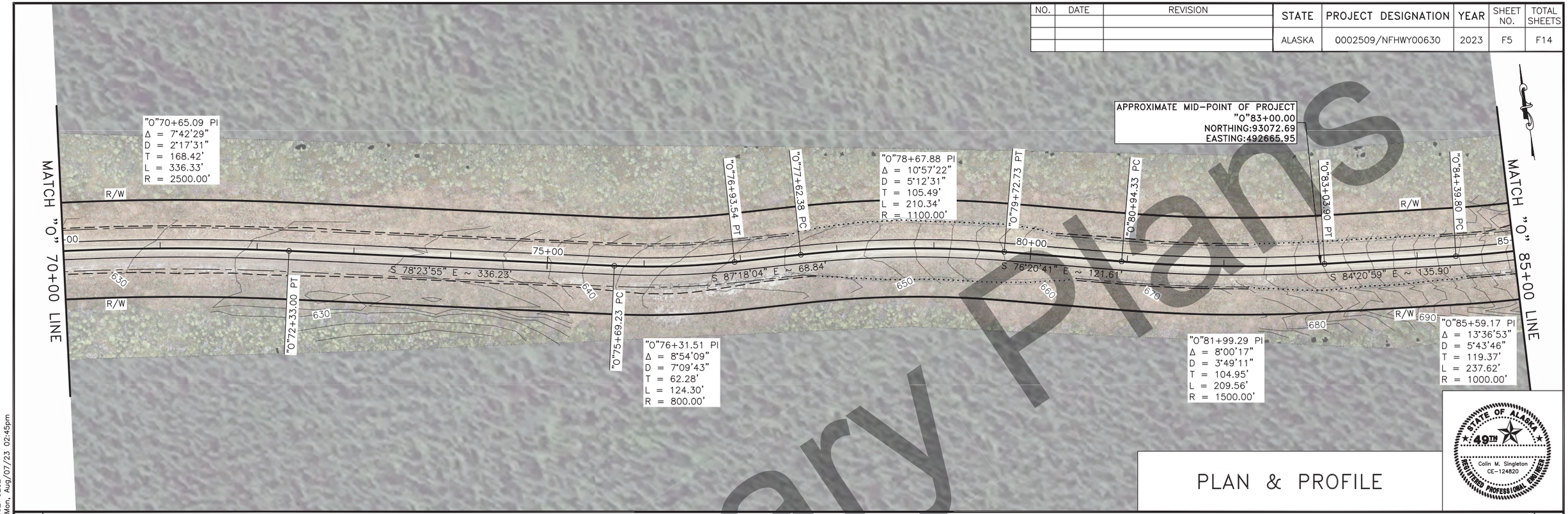
70+00

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

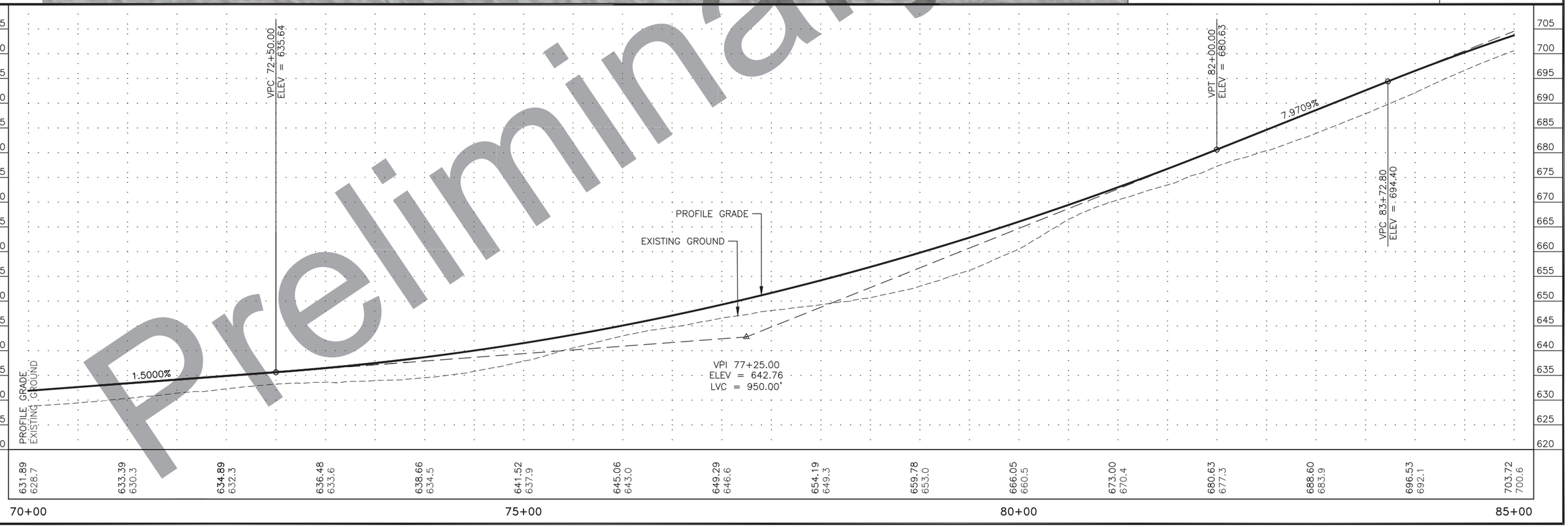
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F4 Mon, Aug/07/23 02:44pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F5	F14

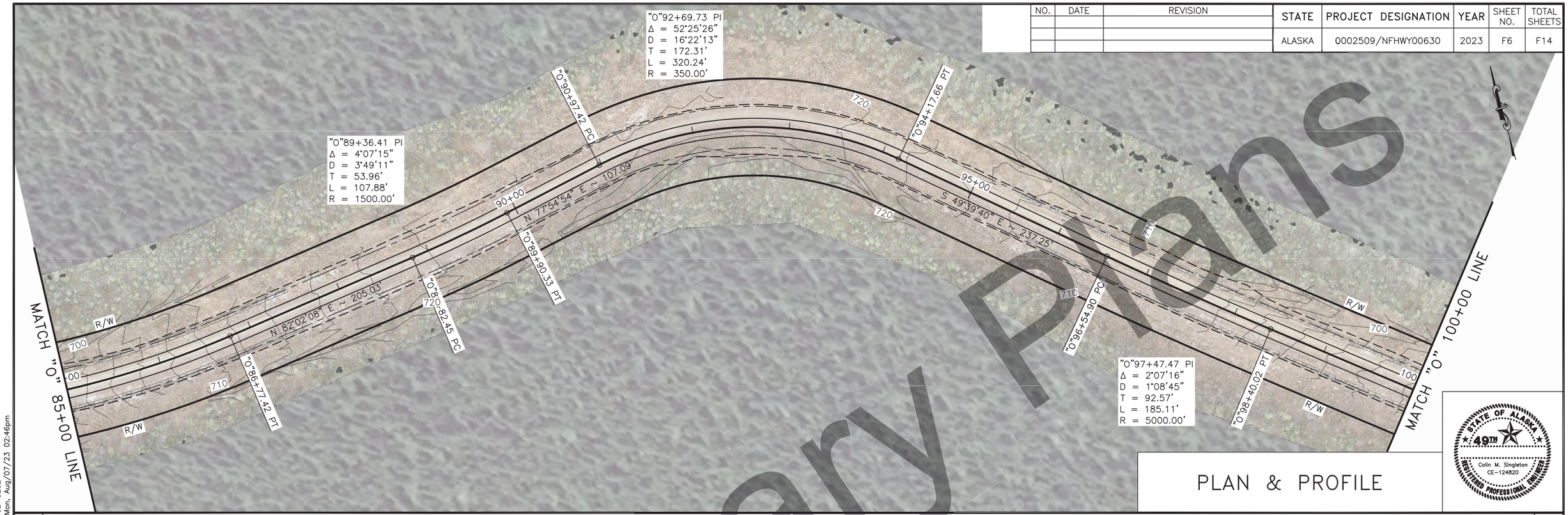


PLAN & PROFILE

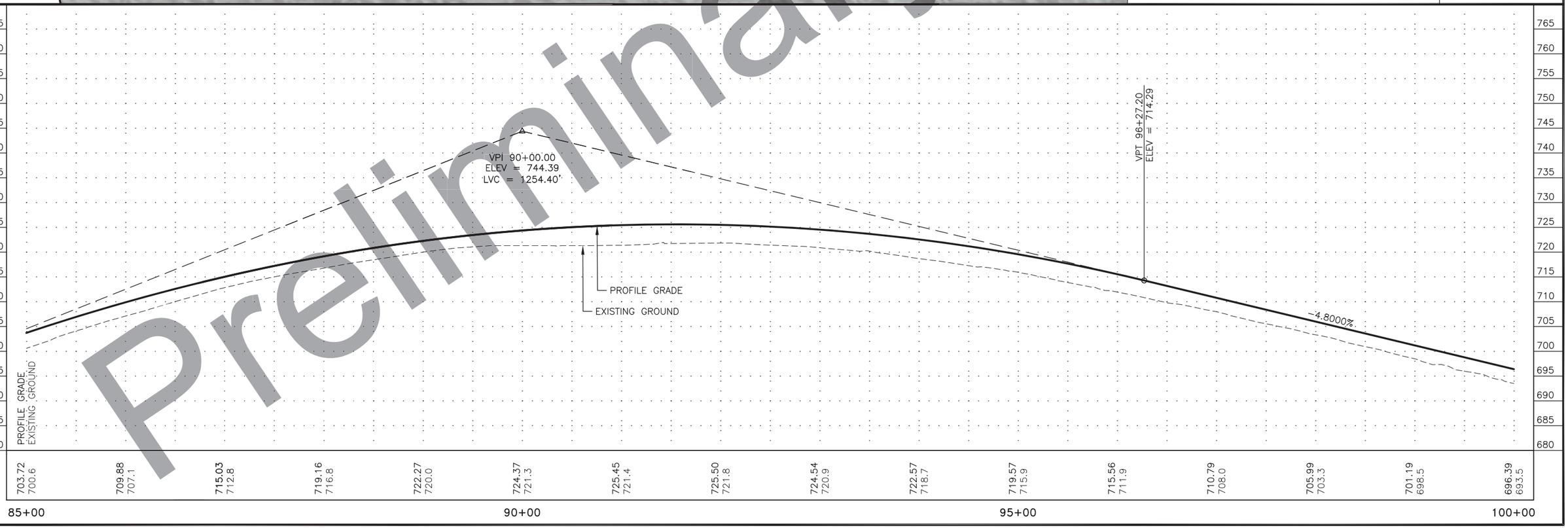


NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F6	F14



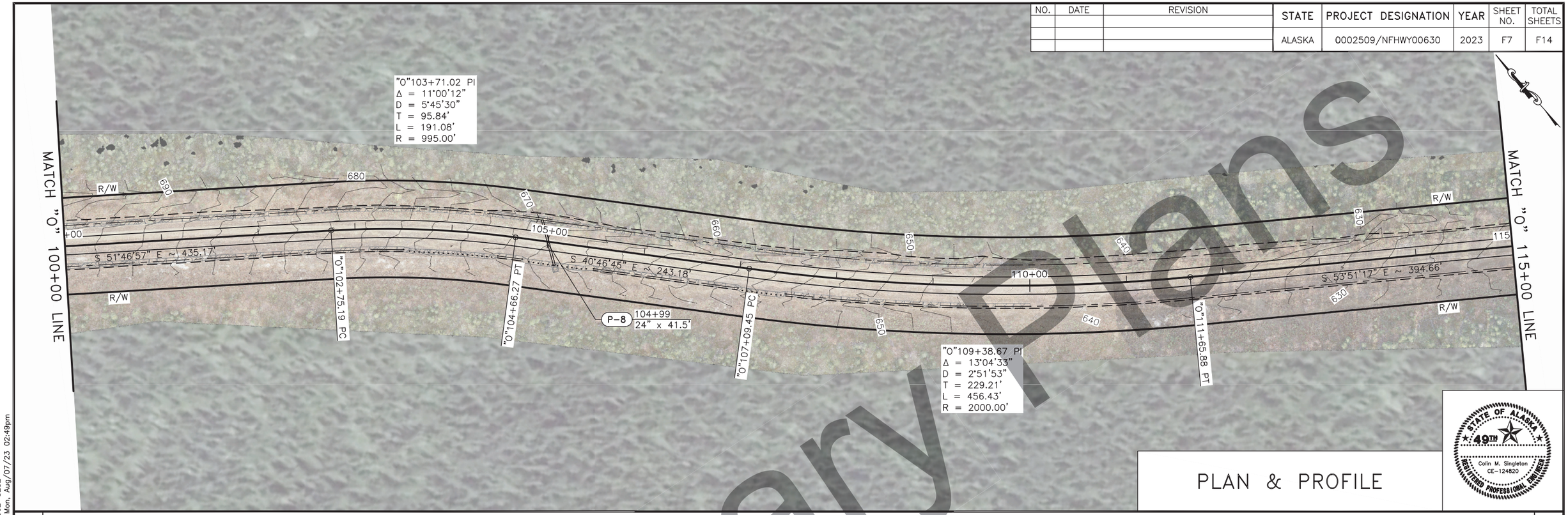
PLAN & PROFILE



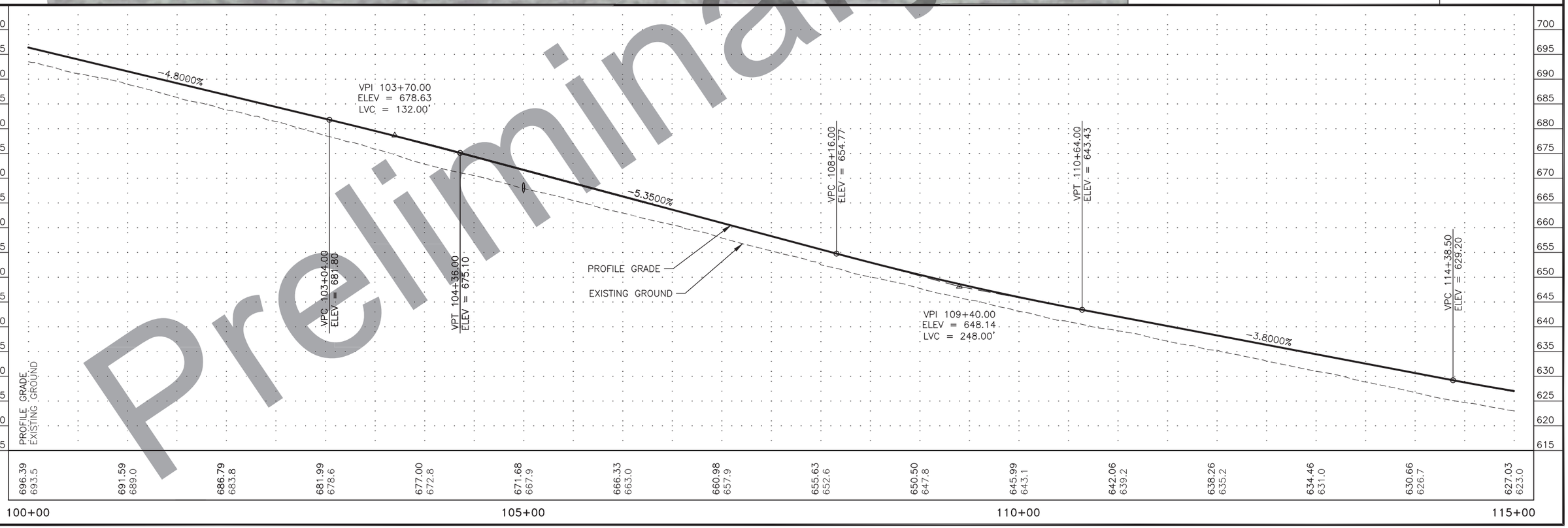
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F6 Mon, Aug/07/23 02:46pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F7	F14



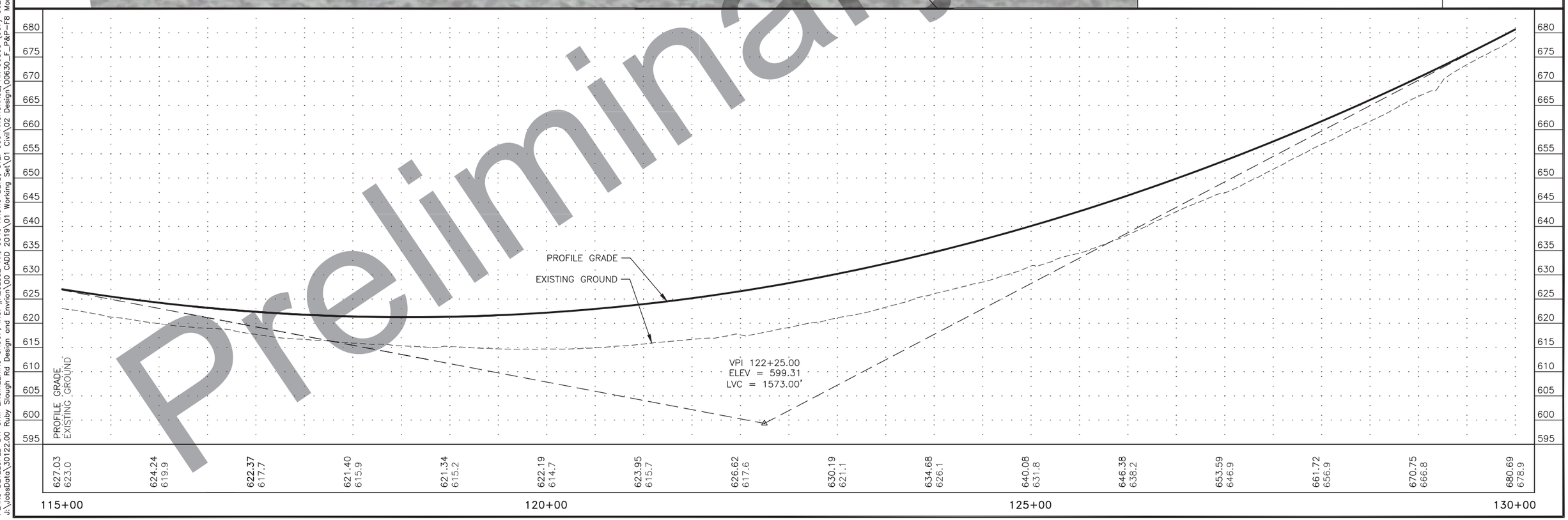
PLAN & PROFILE



NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F8	F14

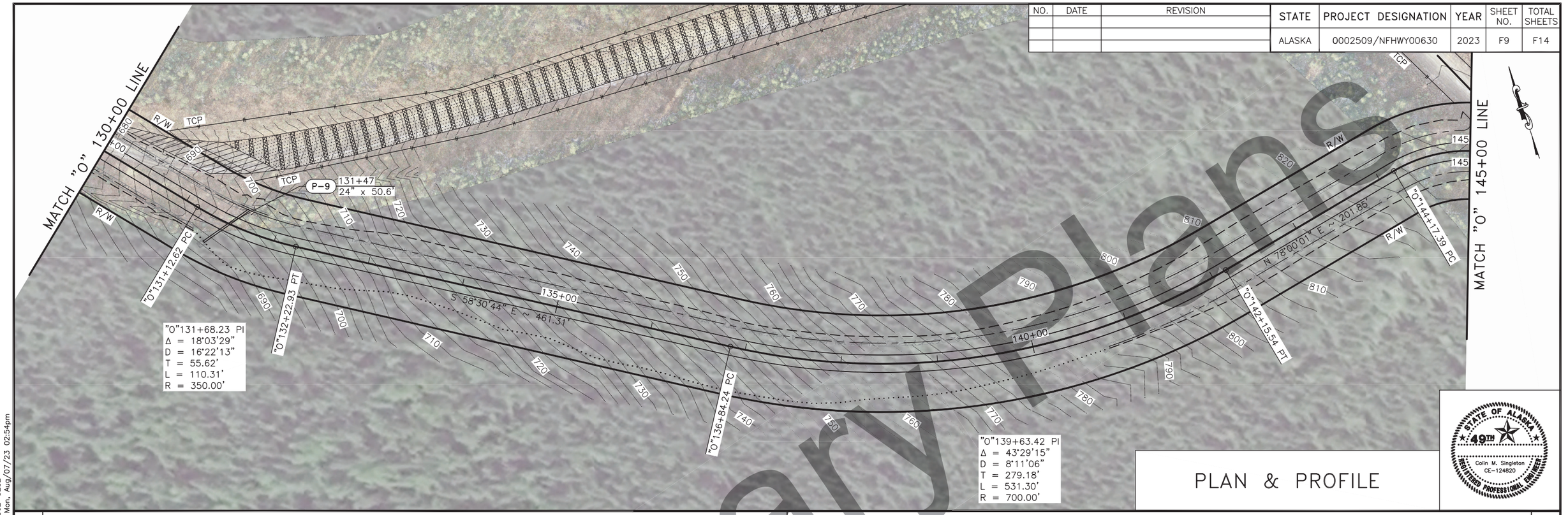
PLAN & PROFILE



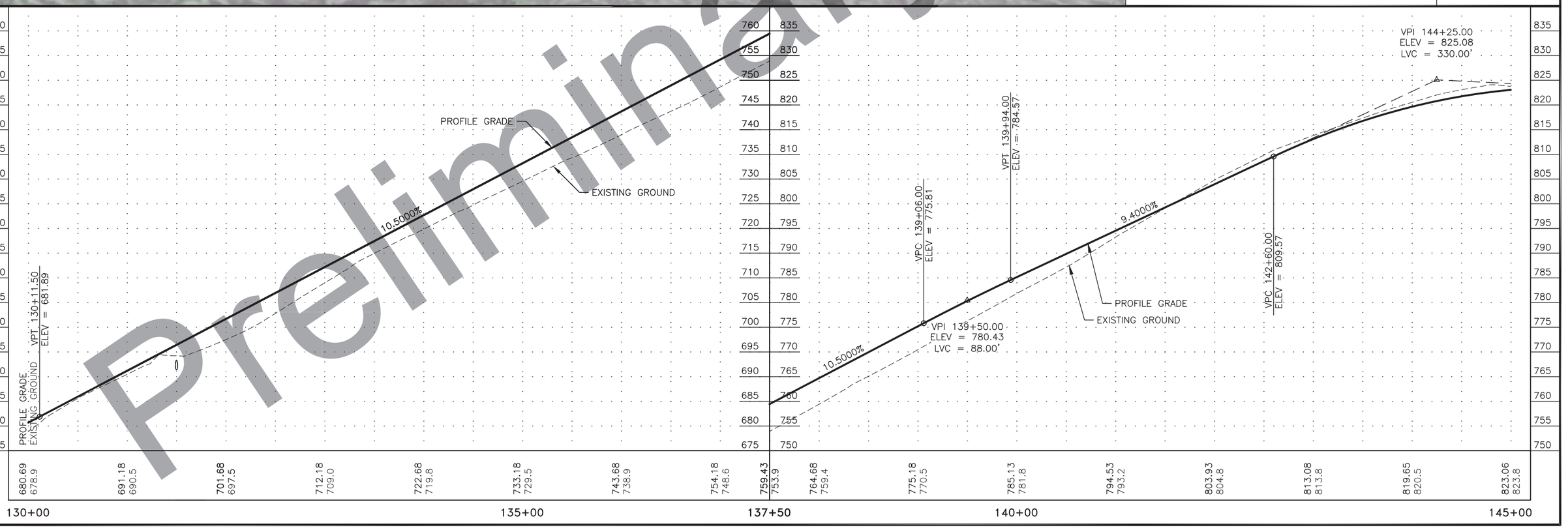
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F8 Mon, Aug/07/23 02:52pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F9	F14



PLAN & PROFILE



PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F9 Mon, Aug/07/23 02:54pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F10	F14

"O"145+45.67 PI
Δ = 81°04'22"
D = 38°11'50"
T = 128.28'
L = 212.25'
R = 150.00'

"O"148+15.26 PI
Δ = 9°58'07"
D = 4°46'29"
T = 104.65'
L = 208.78'
R = 1200.00'

"O"159+97.57 PI
Δ = 9°32'29"
D = 14°19'26"
T = 33.38'
L = 66.61'
R = 400.00'

"O"153+24.33 PI
Δ = 21°51'39"
D = 5°43'46"
T = 193.12'
L = 381.54'
R = 1000.00'

MATCH "O" 145+00 LINE

MATCH "O" 160+00 LINE

"O"146+29.64 PT

"O"147+10.61 PC

"O"149+19.39 PT

"O"151+31.21 PC

"O"155+12.75 PT

"O"159+64.18 PC

R/W

S 20°55'37" E ~ 80.97'

S 10°57'30" E ~ 211.82'

S 32°49'10" E ~ 451.43'

REMOVE EP-1 147+83 24" x 40.1'

P-10 147+79 24" x 38.1'

145+00 150+00 155+00 160+00

820 830 840 850

PLAN & PROFILE

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

PROFILE GRADE
EXISTING GROUND

VPT 145+90.00
ELEV = 823.43

VPC 146+76.00
ELEV = 822.57

GRADE DITCH
STA. = 146+76.35 LT
ELEV. = 818.35'

GRADE DITCH
STA. = 147+35.23 RT
ELEV. = 817.83'

GRADE DITCH
STA. = 147+80.00 RT
ELEV. = 817.16'

GRADE DITCH
STA. = 147+80.00 LT
ELEV. = 817.83'

SPECIAL DITCHES

LEFT AND RIGHT SPECIAL DITCH PROFILES, OFFSETS PER CULVERT SUMMARY TABLE

GRADE DITCH
STA. = 148+46.07 RT
ELEV. = 818.32'

GRADE DITCH
STA. = 148+46.07 LT
ELEV. = 818.31'

VPI 148+60.00
ELEV = 820.73
LVC = 368.00'

VPT 150+44.00
ELEV = 827.36

PROFILE GRADE

EXISTING GROUND

VPC 155+86.00
ELEV = 846.87

VPI 157+00.00
ELEV = 850.97
LVC = 228.00'

VPT 158+14.00
ELEV = 851.83

-1.0000%
-0.50%
-1.50%
0.72%
1.75%
3.6000%
0.7500%

865 860 855 850 845 840 835 830 825 820 815 810 805 800 795 790 785 780

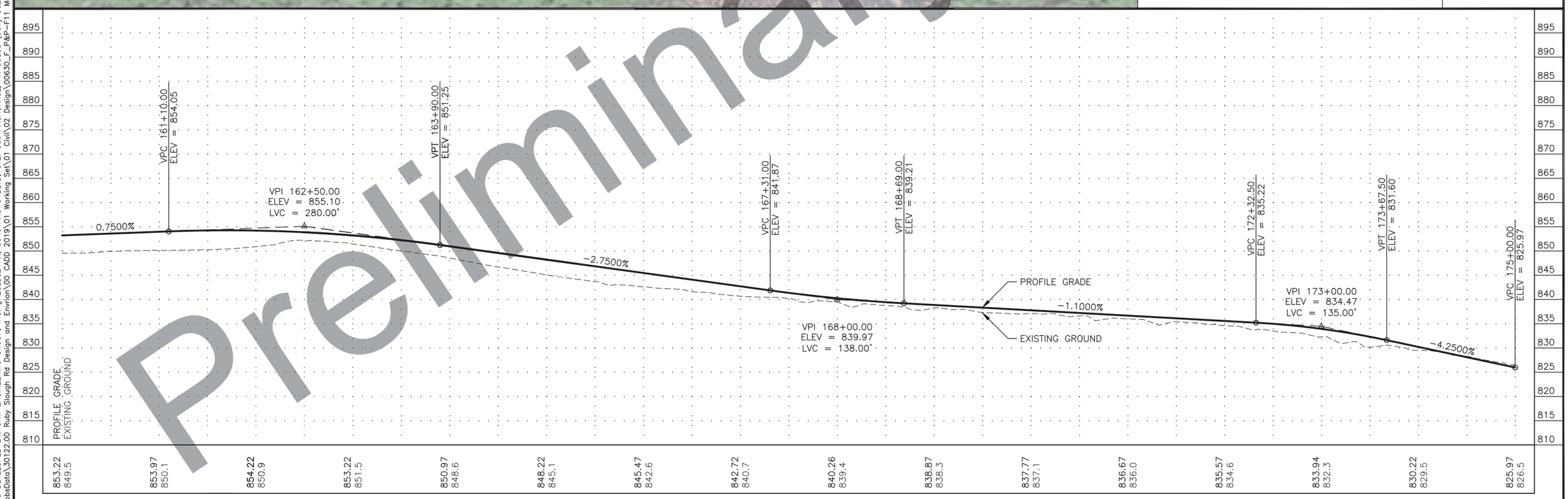
823.06 823.8
823.33 822.2
822.37 821.6
822.29 820.9
823.47 822.2
825.89 823.7
829.37 827.2
832.97 830.4
836.57 834.1
840.17 838.1
843.77 841.4
847.36 844.7
850.16 846.9
851.71 848.6
852.47 849.4
853.22 849.5

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F10 Mon, Aug/07/23 02:56pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F11	F14

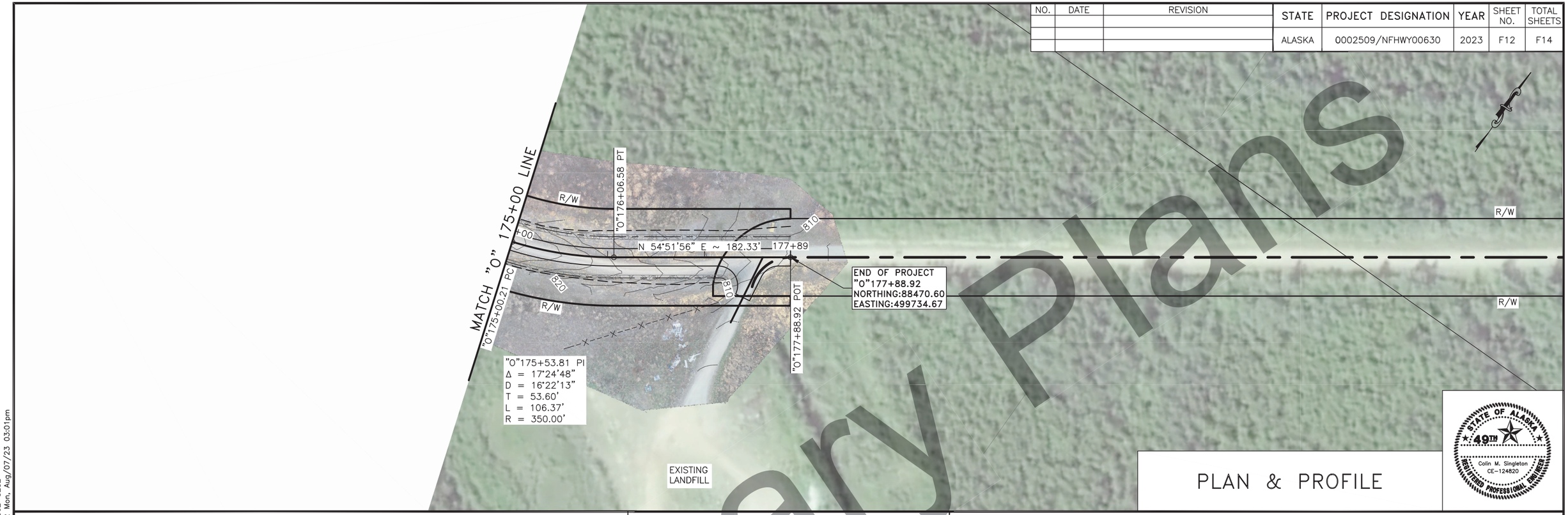
PLAN & PROFILE



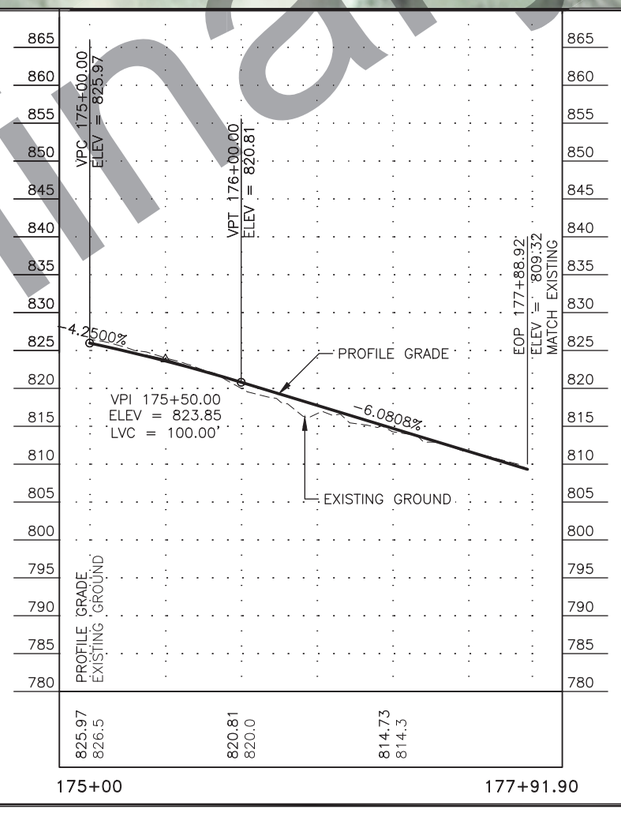
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F11 Mon, Aug/07/23 02:59pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F12	F14



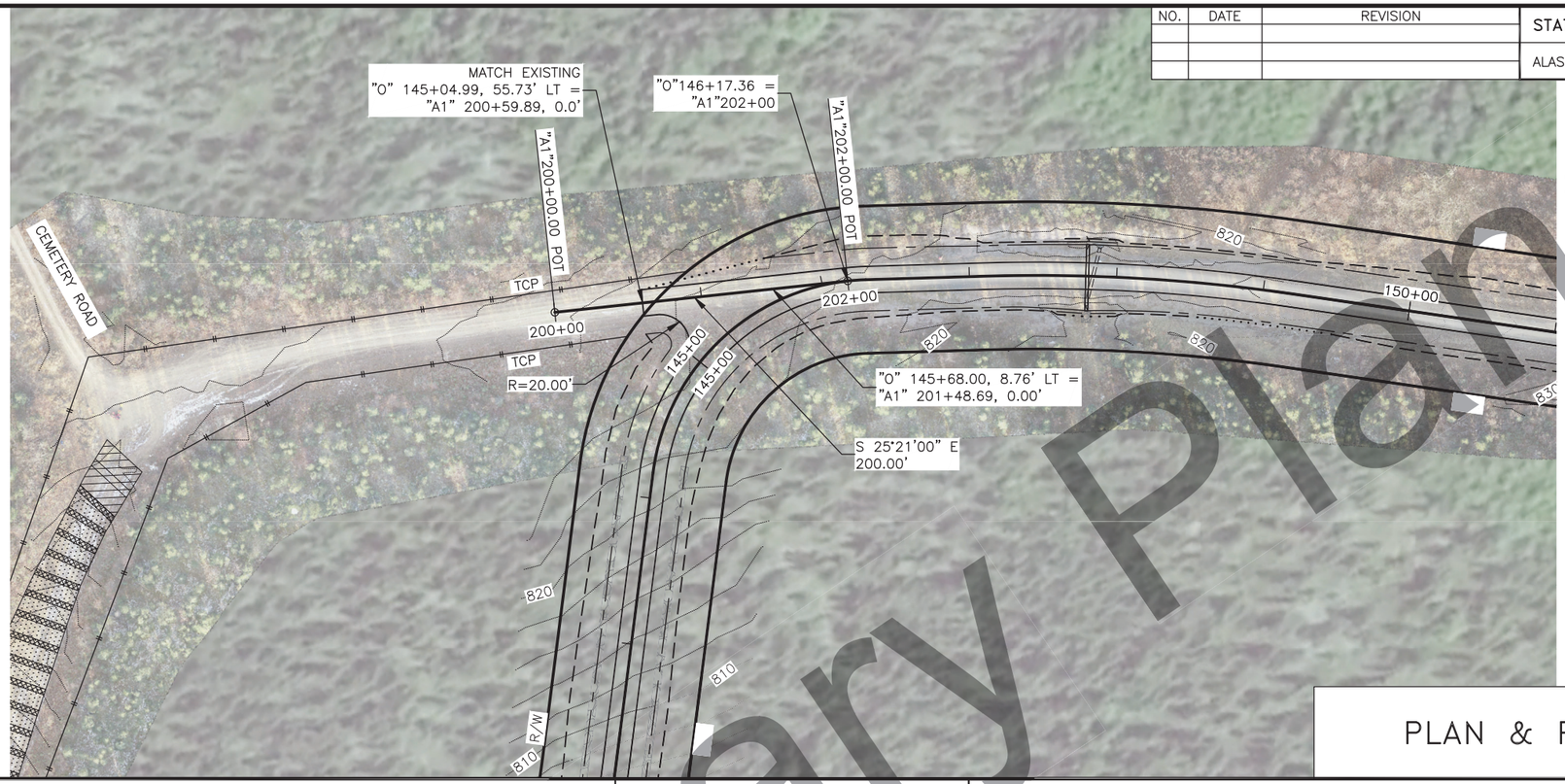
PLAN & PROFILE



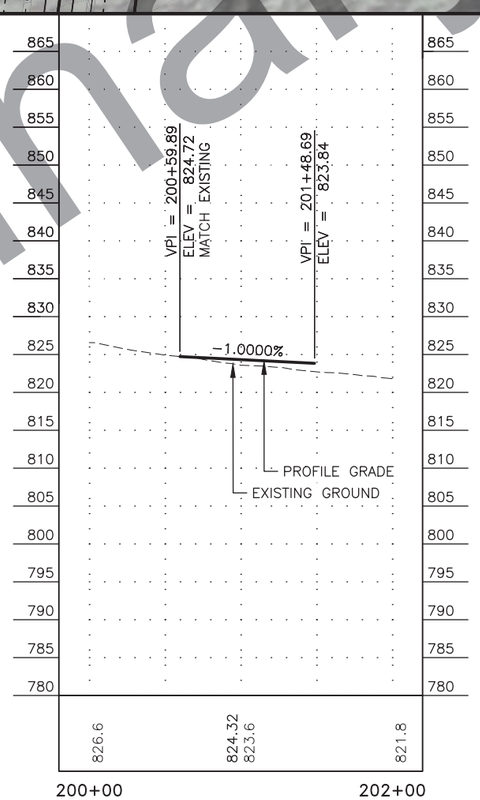
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F12 Mon, Aug/07/23 03:01pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F13	F14



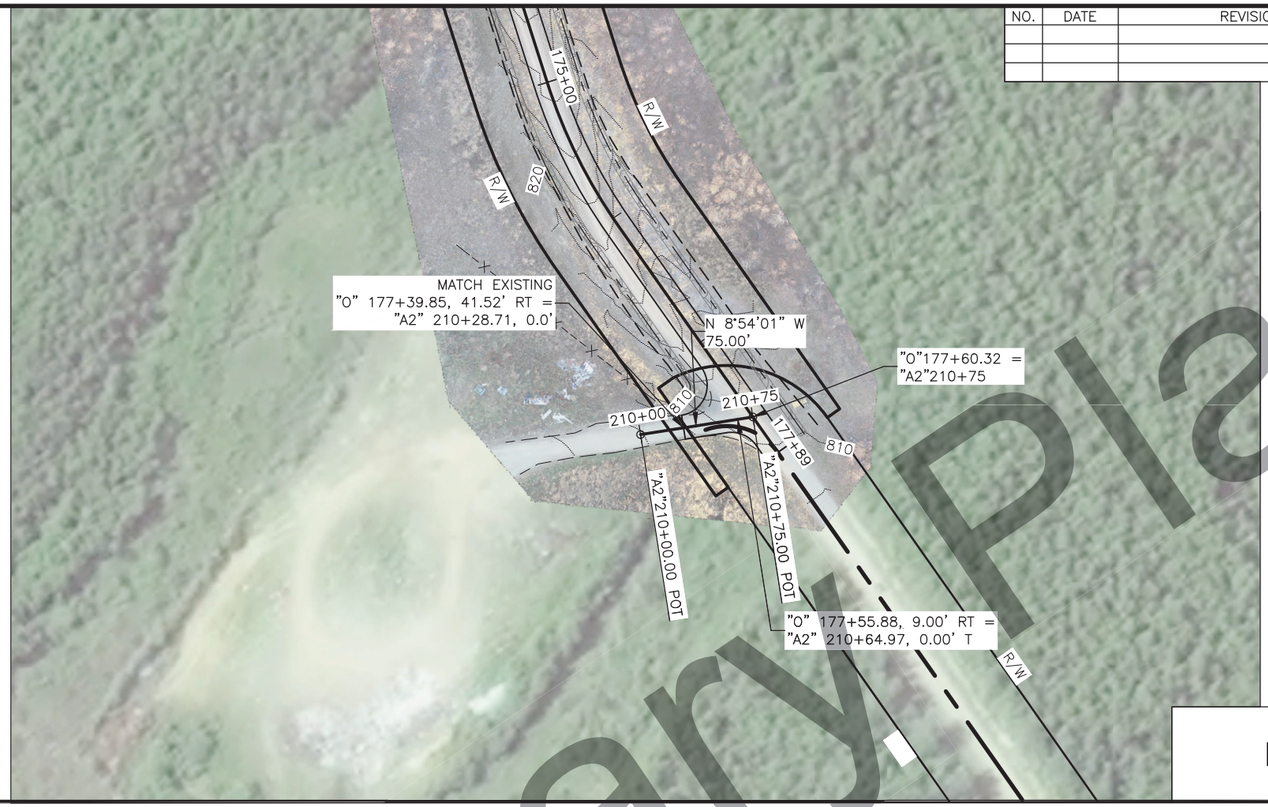
PLAN & PROFILE



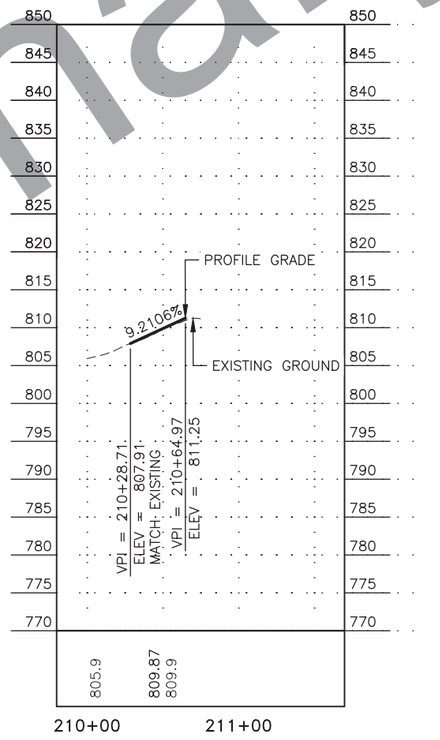
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F13 Mon, Aug/07/23 03:02pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	F14	F14



PLAN & PROFILE



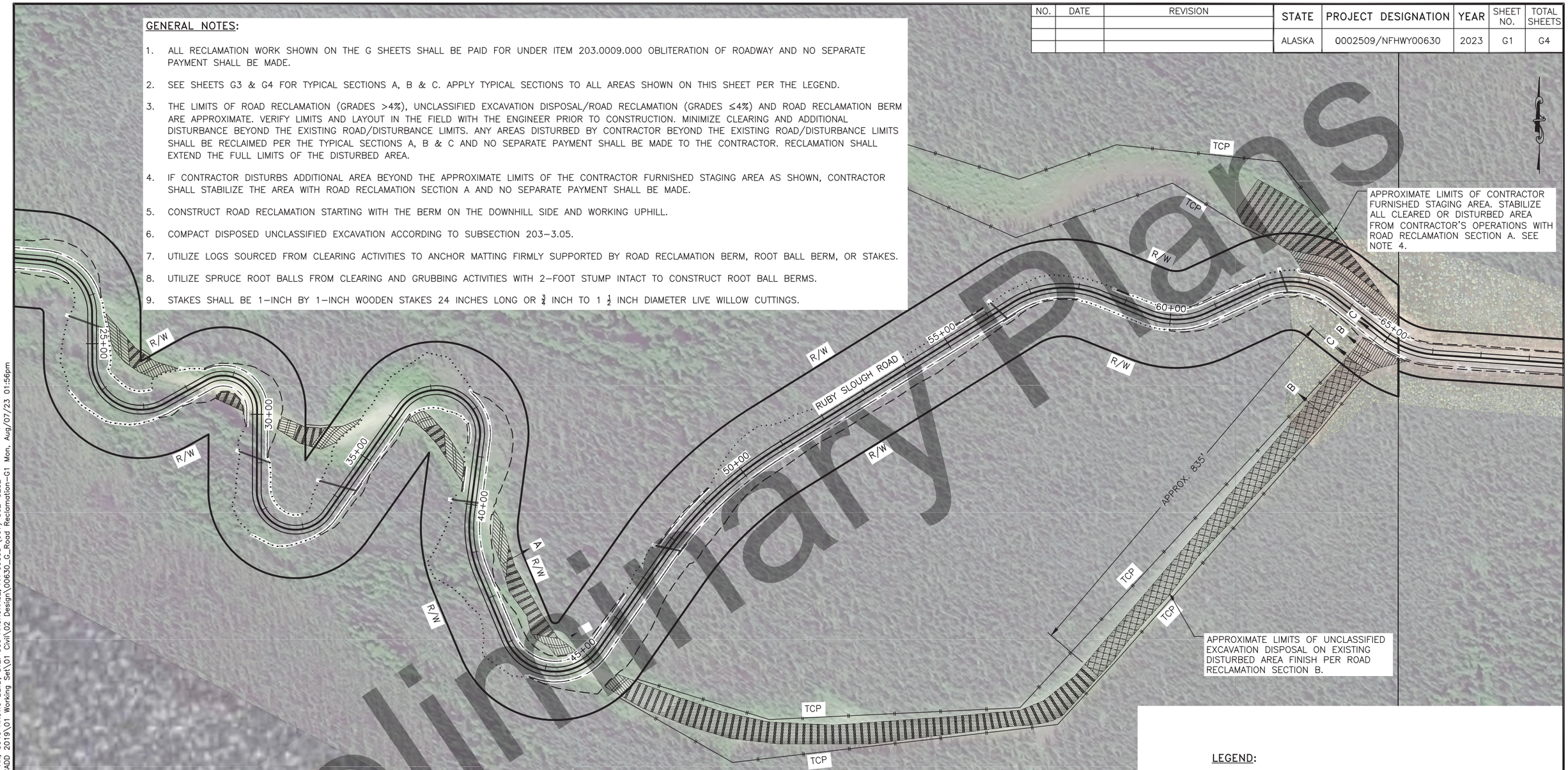
PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_F_P&P-F14 Mon, Aug/07/23 03:02pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	G1	G4

GENERAL NOTES:

1. ALL RECLAMATION WORK SHOWN ON THE G SHEETS SHALL BE PAID FOR UNDER ITEM 203.0009.000 OBLITERATION OF ROADWAY AND NO SEPARATE PAYMENT SHALL BE MADE.
2. SEE SHEETS G3 & G4 FOR TYPICAL SECTIONS A, B & C. APPLY TYPICAL SECTIONS TO ALL AREAS SHOWN ON THIS SHEET PER THE LEGEND.
3. THE LIMITS OF ROAD RECLAMATION (GRADES >4%), UNCLASSIFIED EXCAVATION DISPOSAL/ROAD RECLAMATION (GRADES ≤4%) AND ROAD RECLAMATION BERM ARE APPROXIMATE. VERIFY LIMITS AND LAYOUT IN THE FIELD WITH THE ENGINEER PRIOR TO CONSTRUCTION. MINIMIZE CLEARING AND ADDITIONAL DISTURBANCE BEYOND THE EXISTING ROAD/DISTURBANCE LIMITS. ANY AREAS DISTURBED BY CONTRACTOR BEYOND THE EXISTING ROAD/DISTURBANCE LIMITS SHALL BE RECLAIMED PER THE TYPICAL SECTIONS A, B & C AND NO SEPARATE PAYMENT SHALL BE MADE TO THE CONTRACTOR. RECLAMATION SHALL EXTEND THE FULL LIMITS OF THE DISTURBED AREA.
4. IF CONTRACTOR DISTURBS ADDITIONAL AREA BEYOND THE APPROXIMATE LIMITS OF THE CONTRACTOR FURNISHED STAGING AREA AS SHOWN, CONTRACTOR SHALL STABILIZE THE AREA WITH ROAD RECLAMATION SECTION A AND NO SEPARATE PAYMENT SHALL BE MADE.
5. CONSTRUCT ROAD RECLAMATION STARTING WITH THE BERM ON THE DOWNHILL SIDE AND WORKING UPHILL.
6. COMPACT DISPOSED UNCLASSIFIED EXCAVATION ACCORDING TO SUBSECTION 203–3.05.
7. UTILIZE LOGS SOURCED FROM CLEARING ACTIVITIES TO ANCHOR MATTING FIRMLY SUPPORTED BY ROAD RECLAMATION BERM, ROOT BALL BERM, OR STAKES.
8. UTILIZE SPRUCE ROOT BALLS FROM CLEARING AND GRUBBING ACTIVITIES WITH 2–FOOT STUMP INTACT TO CONSTRUCT ROOT BALL BERMS.
9. STAKES SHALL BE 1–INCH BY 1–INCH WOODEN STAKES 24 INCHES LONG OR ¾ INCH TO 1 ½ INCH DIAMETER LIVE WILLOW CUTTINGS.



LEGEND:

- ROAD RECLAMATION (GRADES > 4%), SEE NOTE 3
- UNCLASSIFIED EXCAVATION DISPOSAL/ROAD RECLAMATION (GRADES ≤4%), SEE NOTE 3
- ROAD RECLAMATION BERM, SEE NOTE 3

ROAD RECLAMATION PLANS

STATE OF ALASKA 49TH
Colin M. Singleton
CE–124820
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882–AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562–3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_G_Road Reclamation–G1 Mon, Aug/07/23 01:56pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	G2	G4

NOTES:

1. SEE GENERAL NOTES ON SHEET G1.

LEGEND:

ROAD RECLAMATION
(GRADES > 4%), SEE NOTE 3 ON SHEET G1

ROAD RECLAMATION BERM, SEE NOTE 3 ON SHEET G1

ROAD RECLAMATION

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
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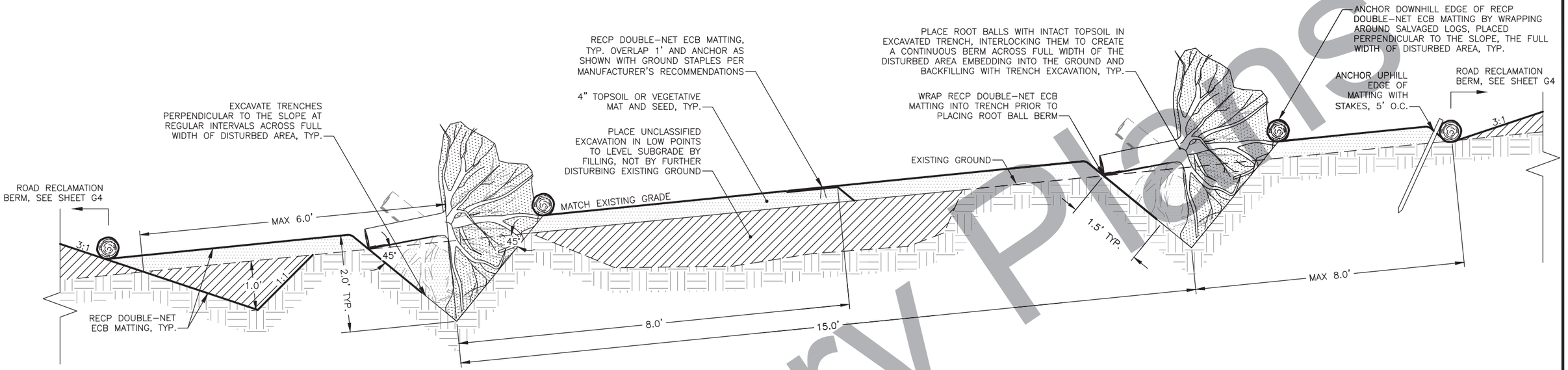
J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_G_Road Reclamation-G2 Mon, Aug/07/23 01:57pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	G3	G4



SECTION A NOTES:

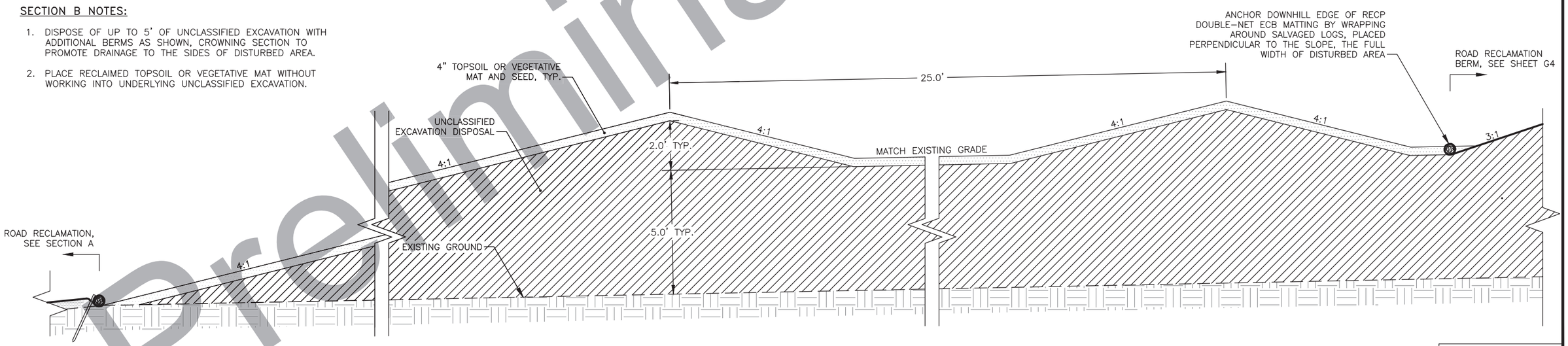
1. PLACE TOPSOIL OR VEGETATIVE MAT IN LIFTS THAT ARE NOT WIDER THAN RECP DOUBLE–NET ECB MATTING WIDTH TO ACHIEVE REQUIRED ANCHORING. SEED PRIOR TO INSTALLATION OF MATTING.
2. PULL MATTING TAUT OVER TOPSOIL EXTENDING TO SUBGRADE OR INTO TRENCH PRIOR TO PLACEMENT OF NEXT LIFT OF TOPSOIL OR ROOT BALLS.

ROAD RECLAMATION – SECTION A

GRADES >4%

SECTION B NOTES:

1. DISPOSE OF UP TO 5' OF UNCLASSIFIED EXCAVATION WITH ADDITIONAL BERMS AS SHOWN, CROWNING SECTION TO PROMOTE DRAINAGE TO THE SIDES OF DISTURBED AREA.
2. PLACE RECLAIMED TOPSOIL OR VEGETATIVE MAT WITHOUT WORKING INTO UNDERLYING UNCLASSIFIED EXCAVATION.



UNCLASSIFIED EXCAVATION DISPOSAL/ ROAD RECLAMATION – SECTION B

GRADES ≤4%

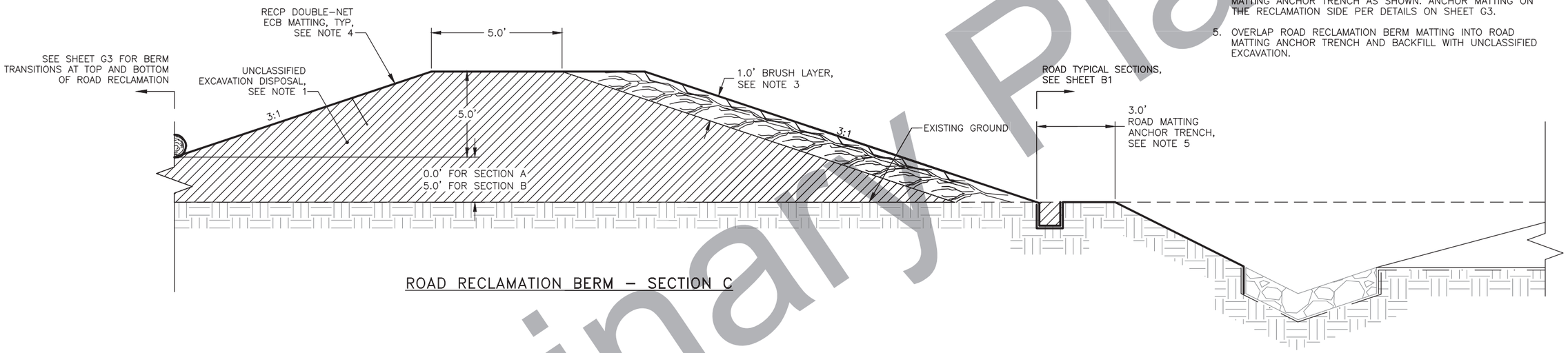
ROAD RECLAMATION DETAILS

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER
Colin M. Singleton
CE–124820

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882–AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562–3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_G_Details–G3 Mon, Aug/07/23 01:57pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	G4	G4



ROAD RECLAMATION BERM – SECTION C

SECTION C NOTES:

1. CONSTRUCT ROAD RECLAMATION BERMS BY DISPOSING OF UNCLASSIFIED EXCAVATION FROM ROAD CONSTRUCTION PARALLEL TO THE PROPOSED ROADWAY COMPLETELY BLOCKING ACCESS TO RECLAIMED ROADBED.
2. SEED PRIOR TO INSTALLATION OF MATTING.
3. ON THE BERM SLOPE FACING THE PROPOSED ROAD, PLACE A 1' THICK LAYER OF BRUSH SOURCED FROM CLEARING ACTIVITIES, AS SHOWN WITH THE BRANCH TIPS POINTING UP THE SLOPE.
4. PLACE MATTING PERPENDICULAR TO AND OVER THE BERM AND BRUSH LAYER AND ANCHOR WITH PROPOSED ROAD MATTING ANCHOR TRENCH AS SHOWN. ANCHOR MATTING ON THE RECLAMATION SIDE PER DETAILS ON SHEET G3.
5. OVERLAP ROAD RECLAMATION BERM MATTING INTO ROAD MATTING ANCHOR TRENCH AND BACKFILL WITH UNCLASSIFIED EXCAVATION.

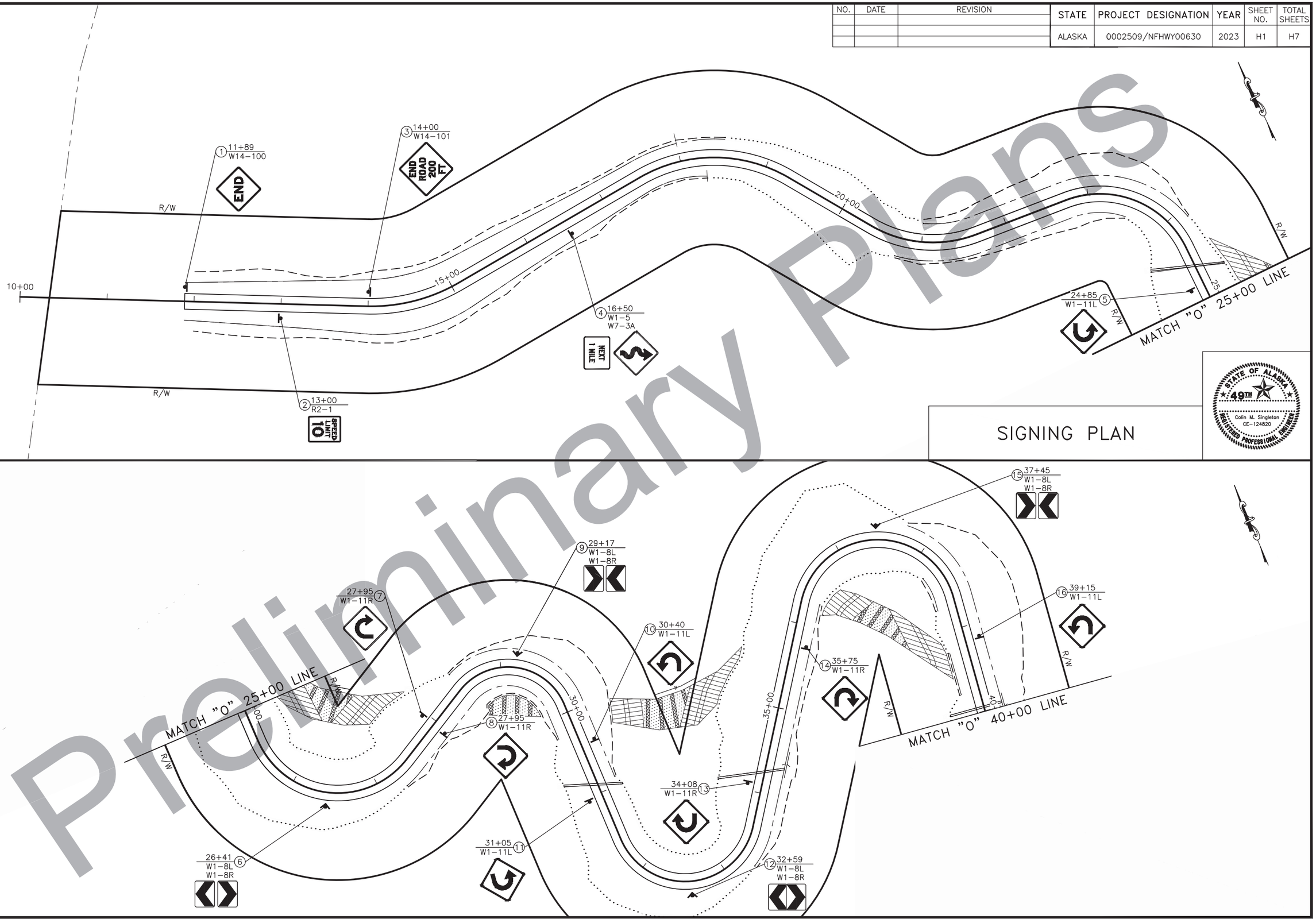
ROAD RECLAMATION DETAILS

STATE OF ALASKA 49TH REGISTERED PROFESSIONAL ENGINEER
Colin M. Singleton
CE-124820

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_G_Details-G4 Mon, Aug/07/23 01:57pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	H1	H7

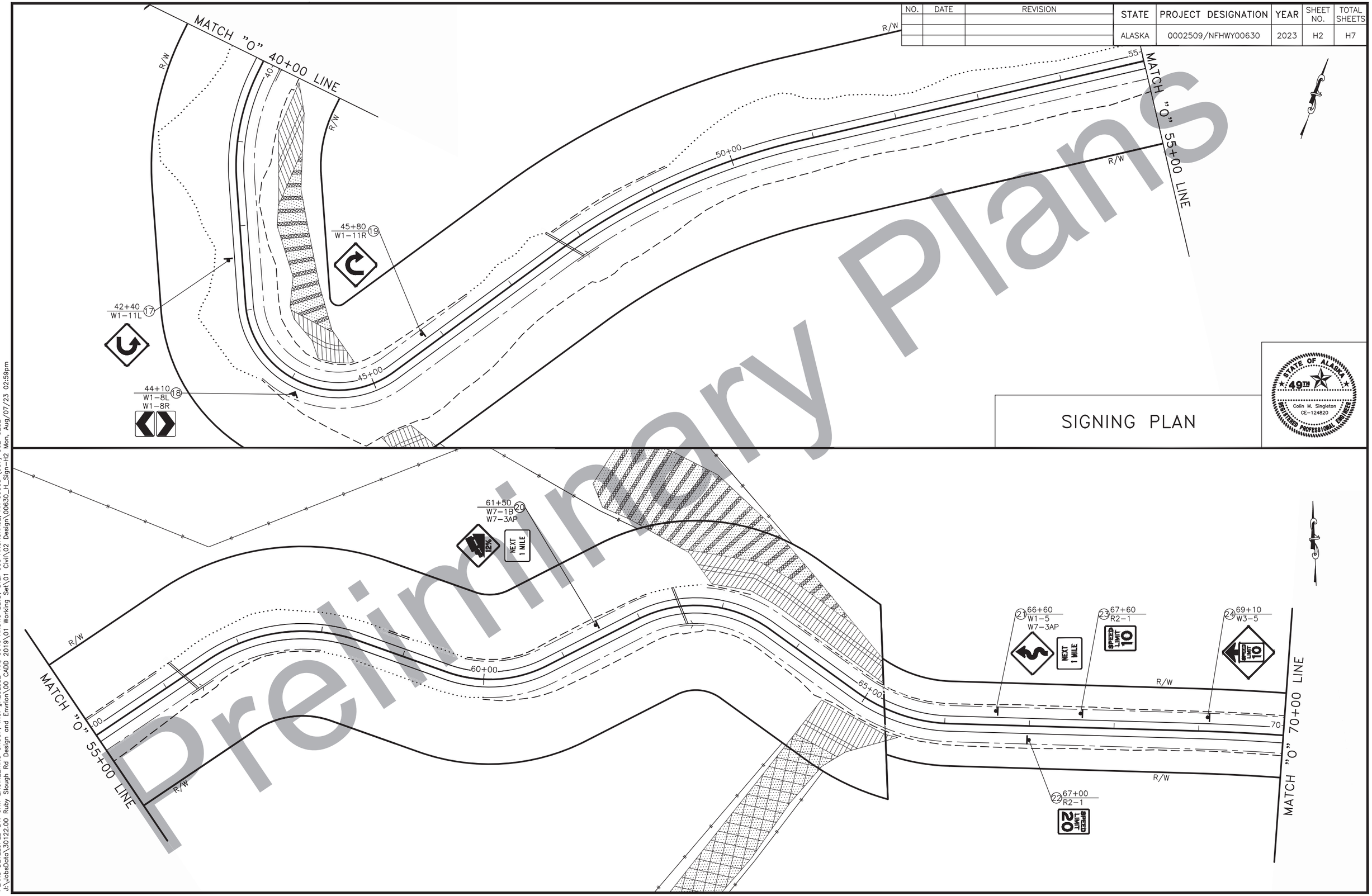


SIGNING PLAN

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Envrion\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_H_Sign-H1 Mon, Aug/07/23 02:59pm

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	H2	H7



SIGNING PLAN

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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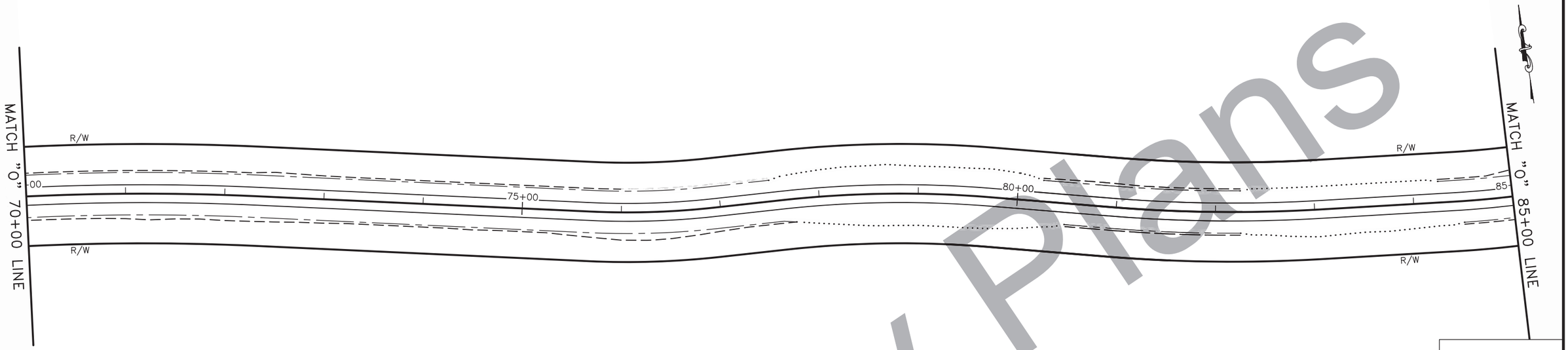

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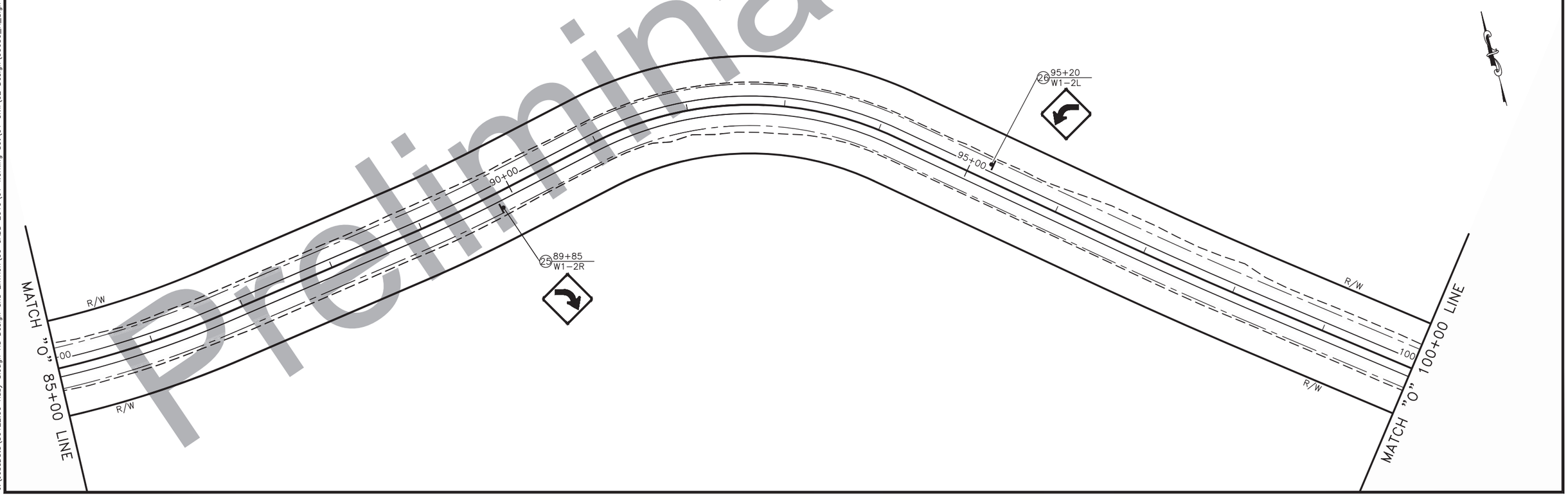
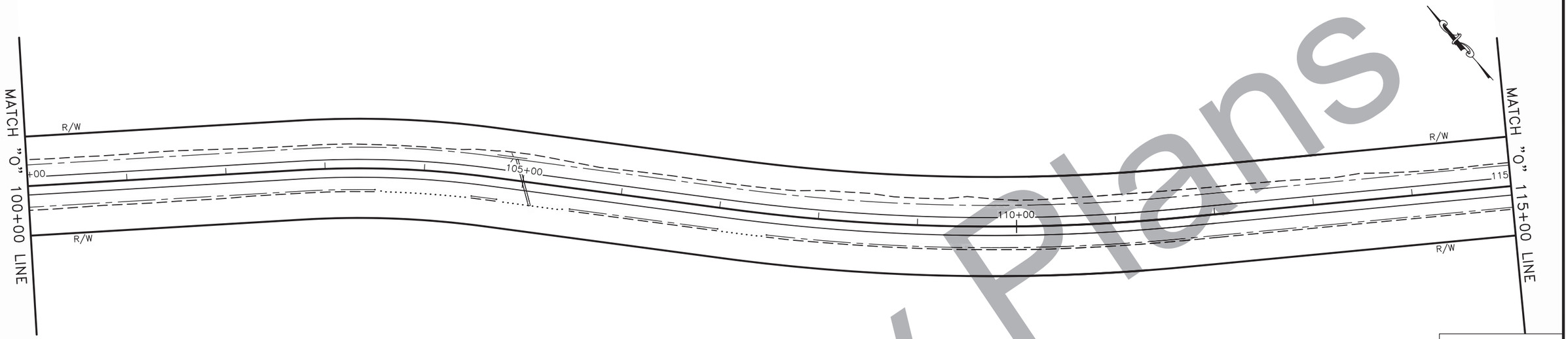


NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	H4	H7



SIGNING PLAN

STATE OF ALASKA
49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE, AK 99503 (907) 562-3252
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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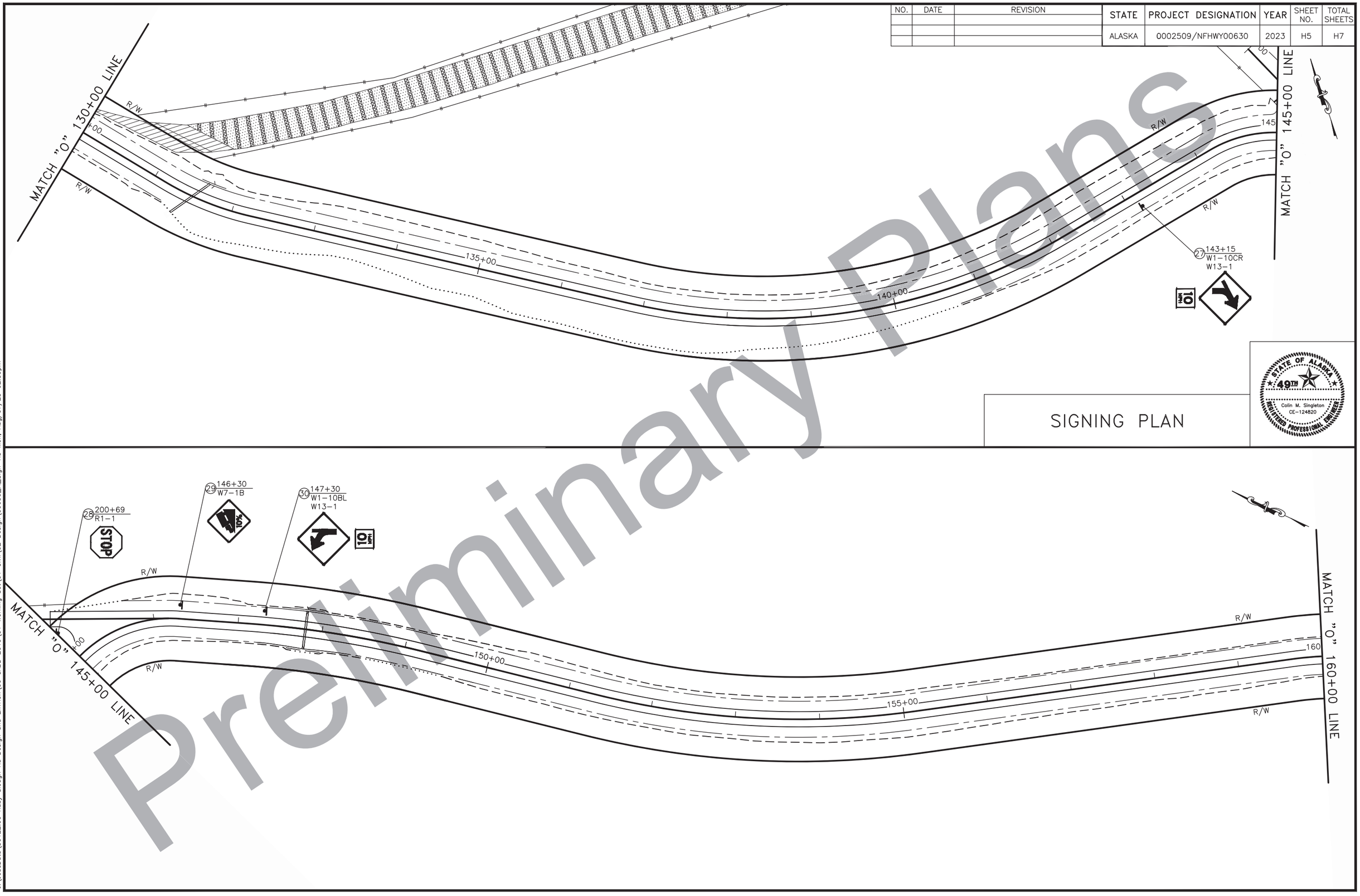
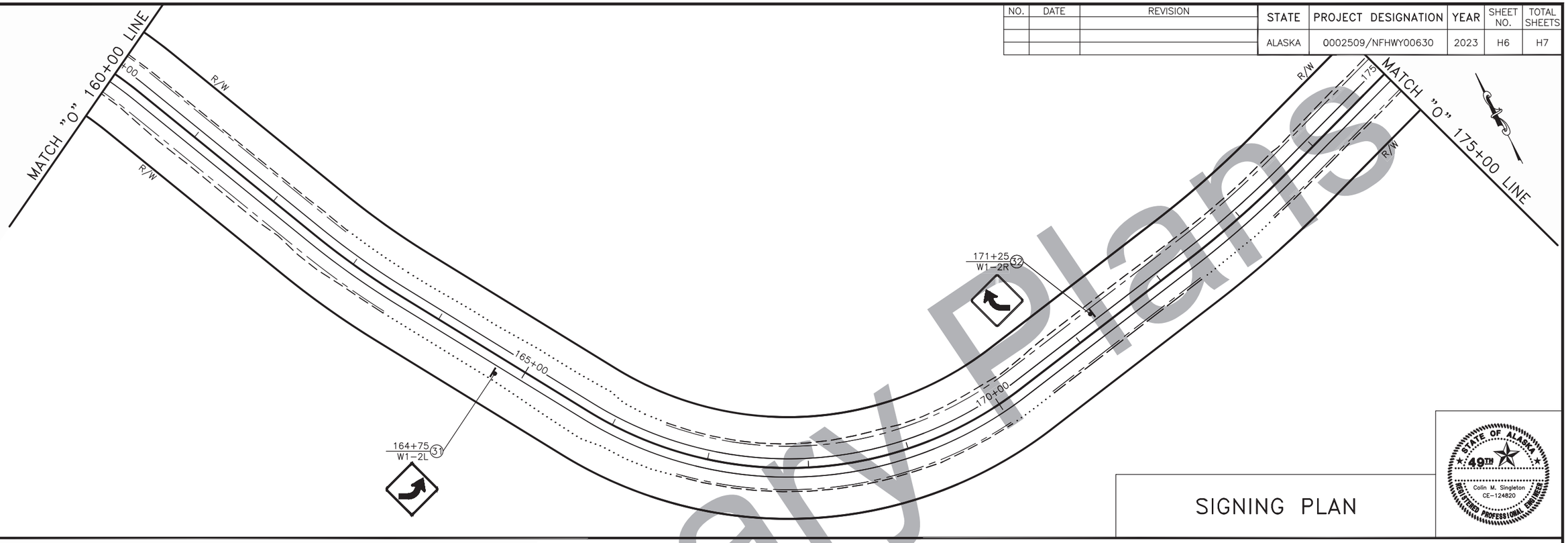


SIGNING PLAN

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	H6	H7



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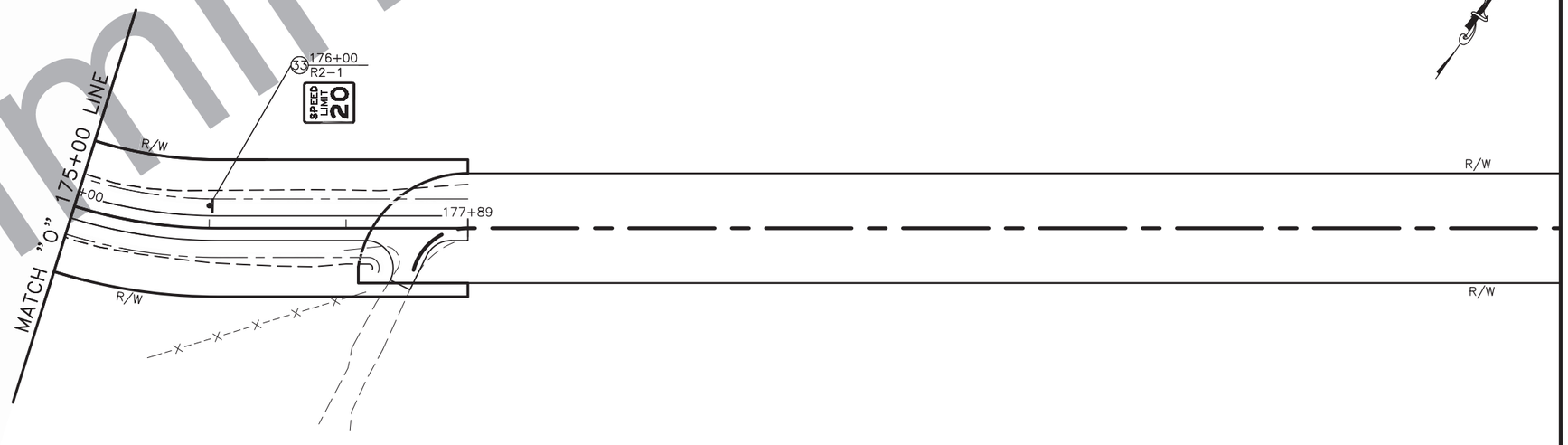

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ALASKA	0002509/NFHWY00630	2023	H7	H7

615.0001.0000 - SIGNING SUMMARY

SHEET	SIGN NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE HxV (IN)	BRACING / FRAMING		DIRECTION	SIGN POST	615.0001.0000 STANDARD SIGN (S.F.)	REMARKS
			LT	RT				BRACED	FRAMED				
H1	1	11+89	X		W14-100	END	30x30	X		SE	2.5" P.S.T.	6.25	
H1	2	13+00		X	R2-1	SPEED LIMIT 10	36x30	X		NW	2.5" P.S.T.	7.50	
H1	3	14+00	X		W14-101	END ROAD 200 FT	36x36	X		SE	2.5" P.S.T.	9.00	
H1	4	16+50		X	W1-5	WINDING ROAD	36x36	X		W	3" T.S.	9.00	
					W7-3A	NEXT 1 MILE	18x24	X				3.00	
H1	5	24+85		X	W1-11L	HAIRPIN CURVE	30x30	X		N	2.5" P.S.T.	6.25	
H1	6	26+41		X	W1-8L	CHEVRON ALIGNMENT	24x18	X		N	2.5" P.S.T.	3.00	
					W1-8R	CHEVRON ALIGNMENT	24x18	X		E		3.00	
H1	7	27+95	X		W1-11R	HAIRPIN CURVE	30x30	X		E	2.5" P.S.T.	6.25	
H1	8	27+95		X	W1-11R	HAIRPIN CURVE	30x30	X		W	2.5" P.S.T.	6.25	
H1	9	29+17	X		W1-8L	CHEVRON ALIGNMENT	24x18	X		W	2.5" P.S.T.	3.00	
					W1-8R	CHEVRON ALIGNMENT	24x18	X		S		3.00	
H1	10	30+40	X		W1-11L	HAIRPIN CURVE	30x30	X		S	2.5" P.S.T.	6.25	
H1	11	31+05		X	W1-11L	HAIRPIN CURVE	30x30	X		N	2.5" P.S.T.	6.25	
H1	12	32+59		X	W1-8L	CHEVRON ALIGNMENT	24x18	X		NW	2.5" P.S.T.	3.00	
					W1-8R	CHEVRON ALIGNMENT	24x18	X		E		3.00	
H1	13	34+08	X		W1-11R	HAIRPIN CURVE	30x30	X		NE	2.5" P.S.T.	6.25	
H1	14	35+75		X	W1-11R	HAIRPIN CURVE	30x30	X		SW	2.5" P.S.T.	6.25	
H1	15	37+45	X		W1-8L	CHEVRON ALIGNMENT	24x18	X		W	2.5" P.S.T.	3.00	
					W1-8R	CHEVRON ALIGNMENT	24x18	X		SE		3.00	
H1	16	39+15	X		W1-11L	HAIRPIN CURVE	30x30	X		S	2.5" P.S.T.	6.25	
H2	17	42+40		X	W1-11L	HAIRPIN CURVE	30x30	X		NW	2.5" P.S.T.	6.25	
H2	18	44+10		X	W1-8L	CHEVRON ALIGNMENT	24x18	X		NW	2.5" P.S.T.	3.00	
					W1-8R	CHEVRON ALIGNMENT	24x18	X		NE		3.00	
H2	19	45+80	X		W1-11R	HAIRPIN CURVE	30x30	X		NE	2.5" P.S.T.	6.25	
H2	20	61+50	X		W7-1B	TRUCK ON HILL 12% SLOPE	30x30	X		NE	2.5" P.S.T.	6.25	
					W7-3AP	NEXT 1 MILE	24x30	X				5.00	
H2	21	66+60	X		W1-5	WINDING ROAD	30x30	X		E	2.5" P.S.T.	6.25	
					W7-3AP	NEXT 1 MILE	24x30	X				5.00	
H2	22	67+00		X	R2-1	SPEED LIMIT 20	36x30	X		W	2.5" P.S.T.	7.50	
H2	23	67+60	X		R2-1	SPEED LIMIT 10	36x30	X		E	2.5" P.S.T.	7.50	
H2	24	69+10	X		W3-5	SPEED REDUCTION 10	36x36	X		E	2.5" P.S.T.	9.00	
H3	25	89+85		X	W1-2R	CURVE	30x30	X		W	2.5" P.S.T.	6.25	
H3	26	95+20	X		W1-2L	CURVE	30x30	X		SE	2.5" P.S.T.	6.25	
H5	27	143+15		X	W1-10C	COMBINATION HORIZONTAL ALIGNMENT (CURVE)/ SKEWED SIDE ROAD	36x36	X		W	3" T.S.	9.00	
					W13-1	ADVISORY SPEED	18x18	X				2.25	
H5	28	200+69		X	R1-1	STOP	30x30	X		NW	2.5" P.S.T.	6.25	
H5	29	146+30	X		W7-1B	TRUCK ON HILL 10% SLOPE	30x30	X		SE	2.5" P.S.T.	6.25	
H5	30	147+30	X		W1-10B	COMBINATION HORIZONTAL ALIGNMENT (CURVE) / FORK	36x36	X		SE	3" T.S.	9.00	
					W13-1	ADVISORY SPEED	18x18	X				2.25	
H6	31	164+75		X	W1-2L	CURVE	30x30	X		NW	2.5" P.S.T.	6.25	
H6	32	171+25	X		W1-2R	CURVE	30x30	X		E	2.5" P.S.T.	6.25	
H6	33	176+00	X		R2-1	SPEED LIMIT 20	36x30	X		NE	2.5" P.S.T.	7.50	
											SUBTOTAL	241.25	
											TOTAL	242.00	

SIGNING NOTES:

1. STAKE ALL SIGN LOCATIONS IN THE FIELD FOR APPROVAL BY ENGINEER PRIOR TO INSTALLATION. THIS WORK IS SUBSIDIARY TO PAY ITEM 615.0001.0000.
2. ON S-05.02 CHANGE STANDARD SIGN POST OFFSET TO 7.5' FROM EDGE OF TRAVELED WAY.
3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE.
4. FOR PERFORATED STEEL TUBE SIGN POSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD PLAN S-30.05. TRIM EACH P.S.T. POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
5. INSTALL T.S. SIGN POST BASES IN ACCORDANCE WITH STANDARD PLAN S-32.02.
6. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO P.S.T. POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
7. MOUNT SIGNS WITH THE BOTTOM EDGE OF PRIMARY PANEL 5' ABOVE ROAD SURFACE AT THE NEAR EDGE OF ROAD PER STANDARD PLAN S-05.02.
8. INSTALL THE TOP EDGE OF SIGNS 1" ABOVE THE TOPS OF POSTS.
6. INSTALL WEATHER TIGHT CAPS ON ALL T.S. POSTS.
7. CLEARING, AS DIRECTED BY THE ENGINEER, MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF SIGNS. THIS WORK IS SUBSIDIARY TO PAY ITEM 615.0001.0000.

POST TYPE LEGEND:

P.S.T. = PERFORATED STEEL TUBE

T.S. = STEEL TUBE SQUARE

FASTENER SPECIFICATION TABLE

FASTENERS	STEEL	STAINLESS STEEL
BOLTS	ASTM A 307	ASTM F 593
NUTS	ASTM A 563	ASTM F 594
WASHERS	ASTM F 844	ASTM A 480

SIGN SUMMARY TABLE

STATE OF ALASKA 49TH
Colin M. Singleton
CE-124820
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: CRW ENGINEERING GROUP, INC. #AECL882-AK, 3940 ARCTIC BLVD, STE. 300 ANCHORAGE AK 99503 (907) 562-3252
J:\JobsData\30122.00 Ruby Slough Rd Design and Environ\00 CADD 2019\01 Working Set\01 Civil\02 Design\00630_H_Sign Summary-H7 Mon, Aug/07/23 02:59pm

NO.	DATE	REVISION

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ALASKA	0002509/NFHWY00630	2023	Q1	Q7

ESCP GENERAL NOTES:

1. THIS ESCP IS A GENERAL PLAN FOR GUIDING THE DEVELOPMENT OF THE CONTRACTOR'S SWPPP. THE CONTRACTOR IS EXPECTED TO PROVIDE ADDITIONAL DETAILS AND BMPS BASED ON THE CONTRACTORS ACTUAL SCHEDULE AND CONSTRUCTION METHODS, AS REQUIRED TO COMPLY WITH THE CONSTRUCTION GENERAL PERMIT AND SECTION 641 OF THE PROJECT SPECIFICATIONS.
2. CONSTRUCTION ENTRANCE/EXIT MUST BE ESTABLISHED TO MINIMIZE OFF-SITE IMPACTS.
3. INSTALL PERIMETER PROTECTION AROUND ANY AREA OF EXPOSED ERODIBLE SOILS. PROVIDE PERIMETER PROTECTION AT THE TOE CONSISTING OF ONE OF THE FOLLOWING CONTROLS: 25-FOOT VEGETATIVE BUFFER BEYOND TEMPORARY WORK AREA, GRAVEL, FIBER ROLL, SILT FENCE, OR EQUIVALENT.
4. INLET / OUTLET PROTECTION REQUIRED FOR ALL CULVERTS AND DITCH OUTLETS.
5. ALL CONCRETE WASHOUTS WILL BE DISPOSED OF IN A LINED CONTAINMENT AREA DESIGNATED IN THE CONTRACTORS SWPPP.
6. AREAS OF DISTURBANCE, TEMPORARY AND PERMANENT STABILIZATION, WILL BE MARKED AS WORK PROCEEDS AND ADDED TO THE LEGEND.
7. PERIMETER CONTROL SHALL BE INSTALLED PRIOR TO ANY EARTH DISTURBING ACTIVITIES IN THE AREA OF WORK.
8. THE CONTRACTOR WILL PROVIDE EROSION AND SEDIMENT CONTROL (ESC) MEASURES IN ACCORDANCE WITH THEIR SWPPP. DOT&PF'S PROJECT ENGINEER MAY REQUIRE ADDITIONAL ESC MEASURES AS FIELD CONDITIONS DICTATE.
9. REFER TO APPENDIX A OF THE CONTRACT FOR ENVIRONMENTAL PERMIT INFORMATION.
10. REFER TO APPENDIX C OF THE CONTRACT FOR THE ESCP TEMPLATE.

ENVIRONMENTAL COMMITMENTS:

1. MECHANIZED LAND/VEGETATION CLEARING ACTIVITIES WILL BE AVOIDED DURING THE MIGRATORY BIRD NESTING SEASON (MAY 1 – JULY 15) UNLESS A MITIGATIVE WORK PLAN IS SUBMITTED BY THE CONTRACTOR AND APPROVED BY DOT&PF.

LEGEND:

- SEDIMENT RETENTION FIBER ROLLS ——— FR ———
- CULVERT
- INLET PROTECTION
- OUTLET PROTECTION
- VEHICLE TRACKING
- PERMANENT SLOPE STABILIZATION (PER PLANS)
- PROPOSED SURFACE FLOW DIRECTION
- WETLANDS
- ROAD RECLAMATION (GRADES > 4%)
- UNCLASSIFIED EXCAVATION DISPOSAL/ ROAD RECLAMATION (GRADES ≤4%)
- ROAD RECLAMATION BERM

ESCP

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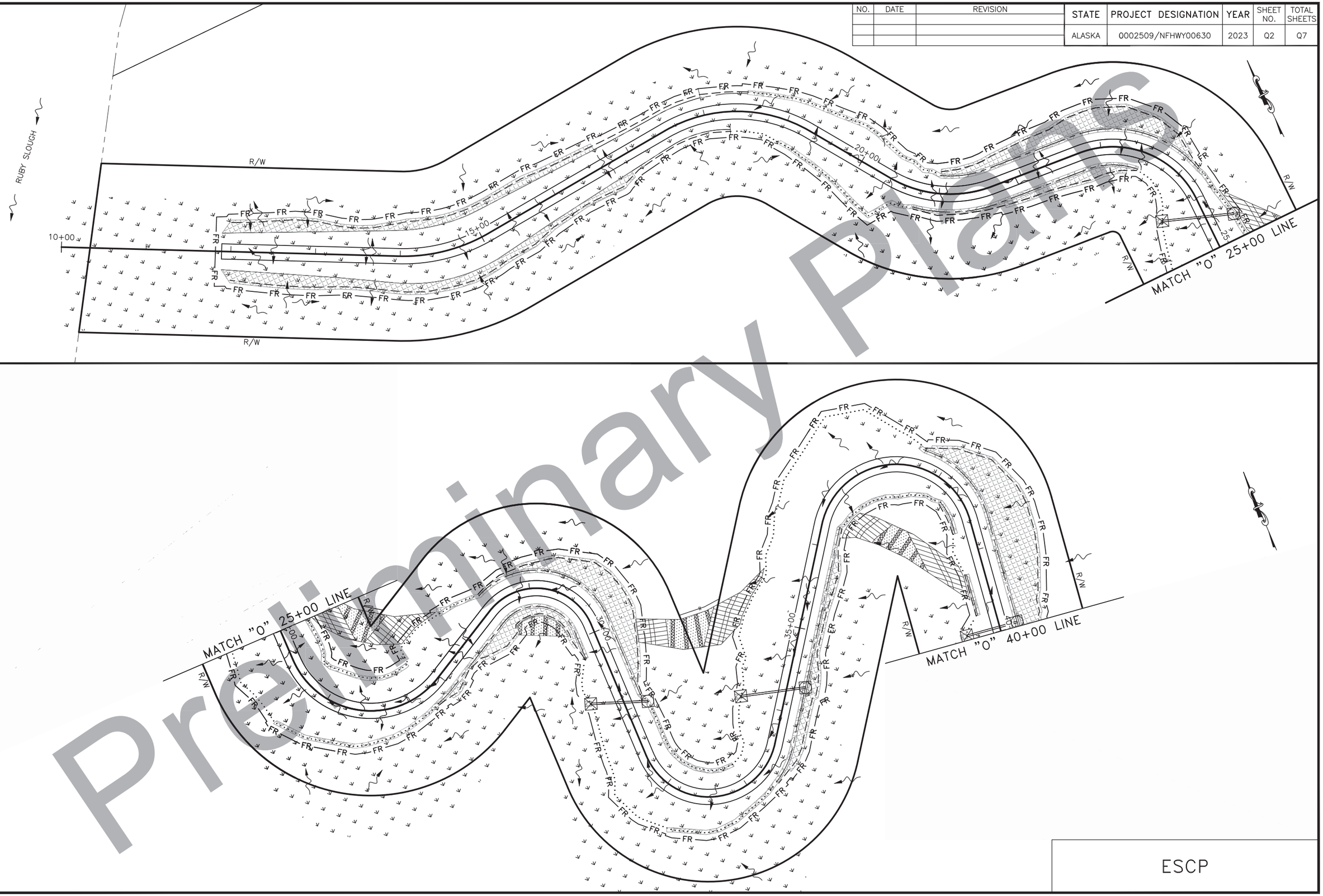
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	Q2	Q7



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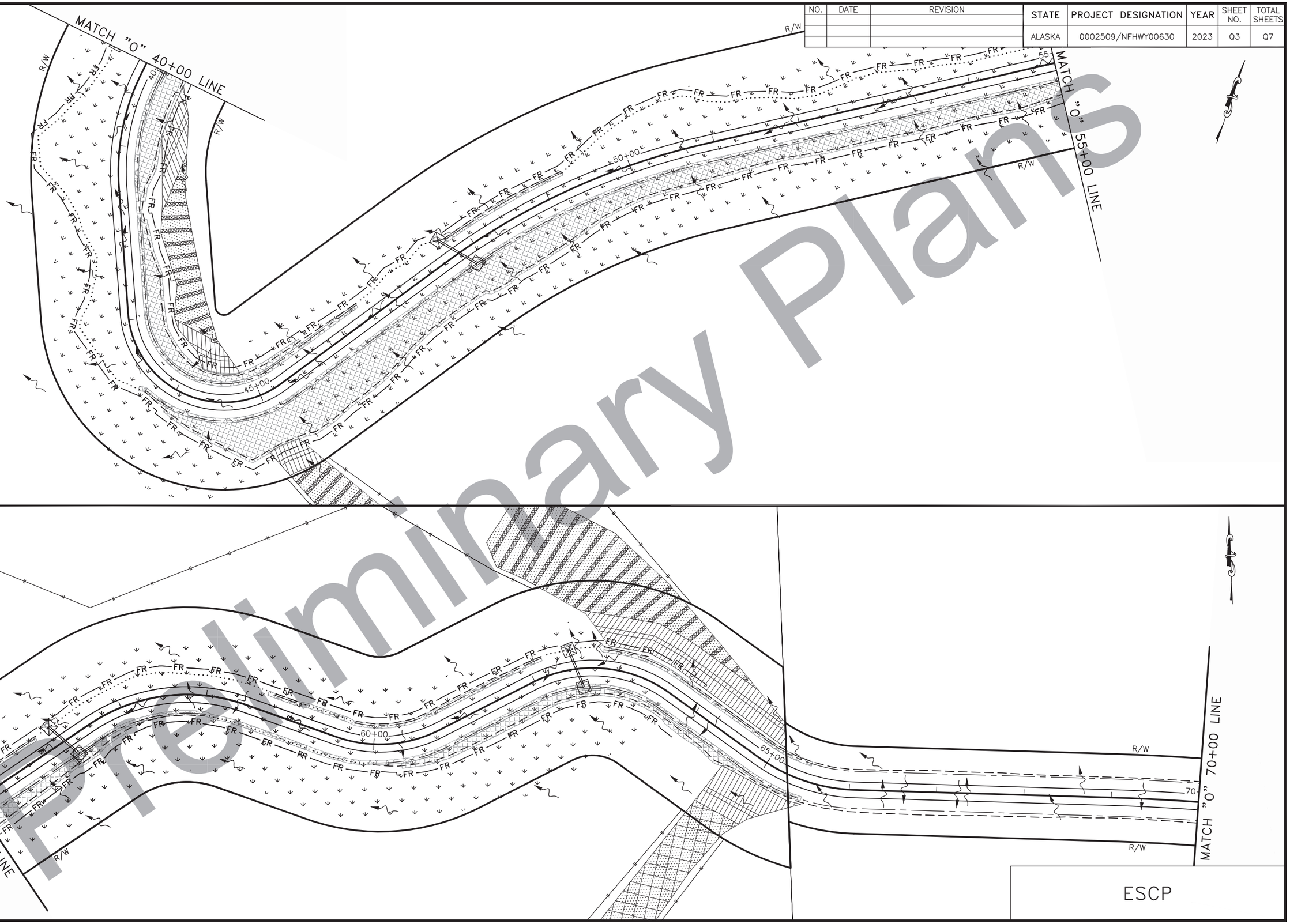
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	Q3	Q7



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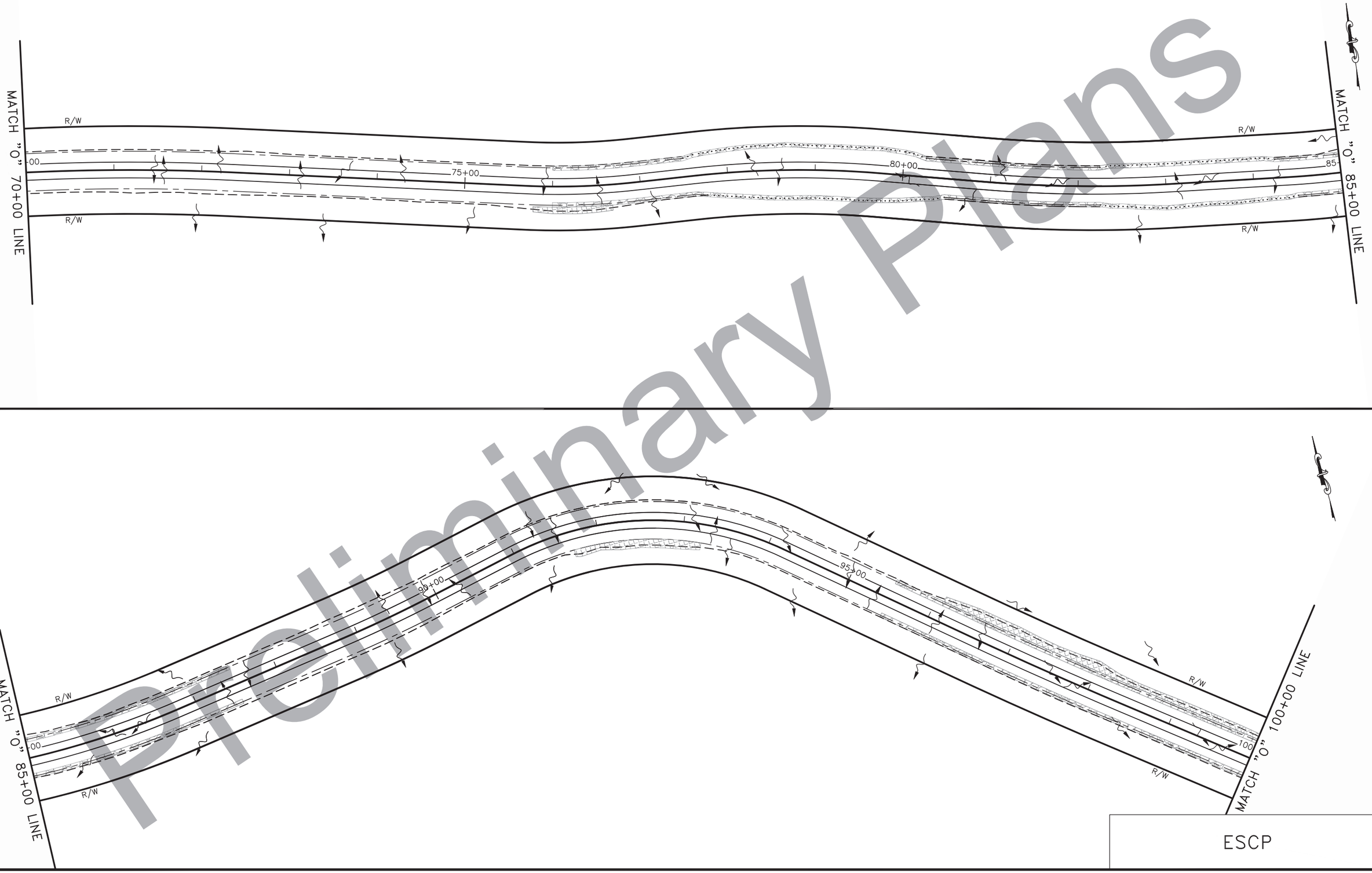
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0002509/NFHWY00630	2023	Q4	Q7



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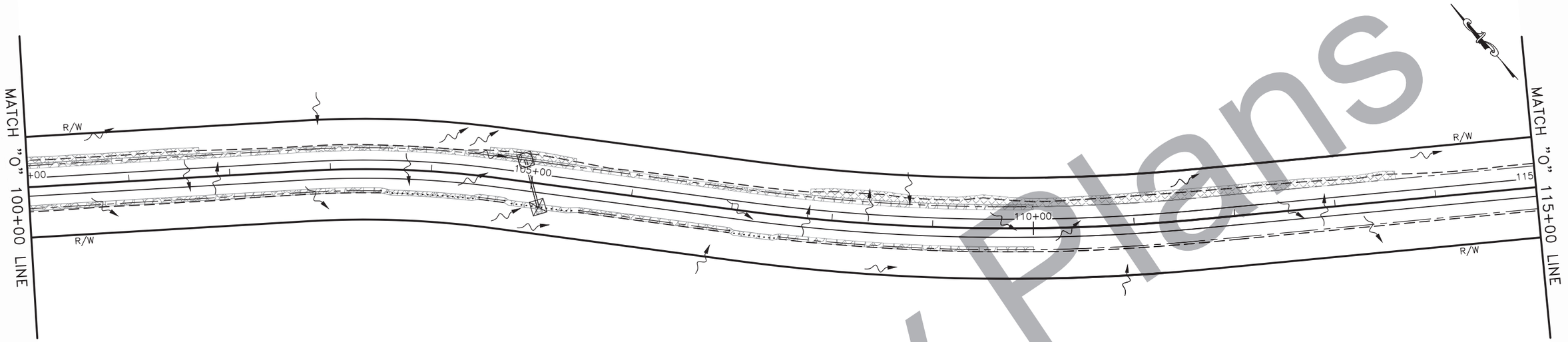
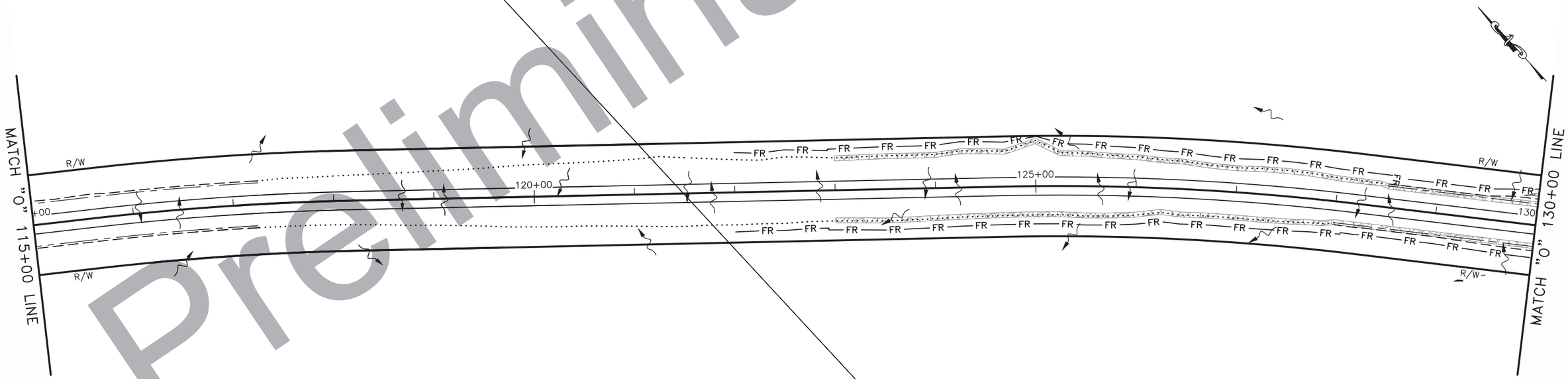
ALASKA	0002509/NFHWY00630	2023	Q5	Q7





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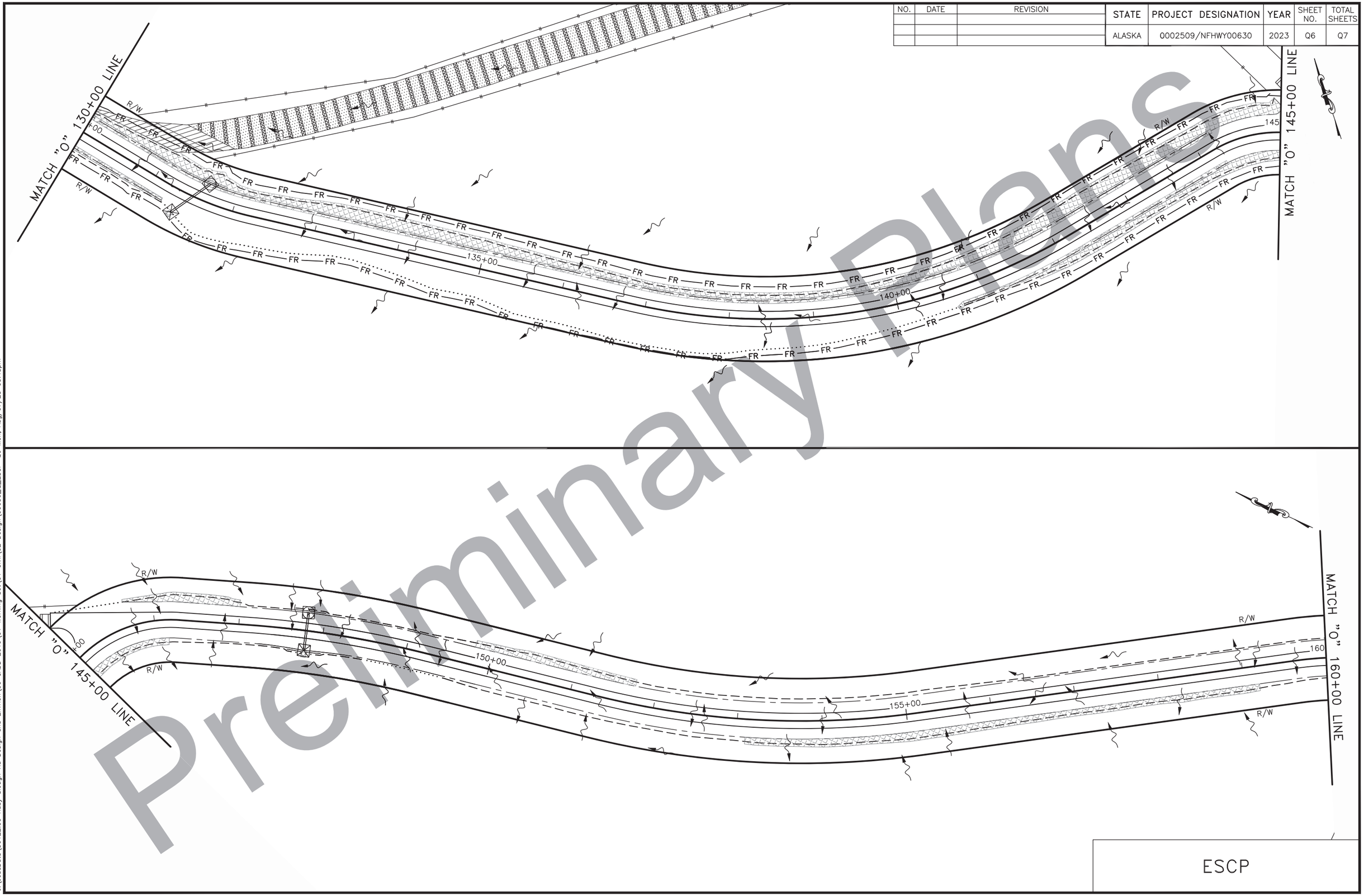
ALASKA	0002509/NFHWY00630	2023	Q6	Q7



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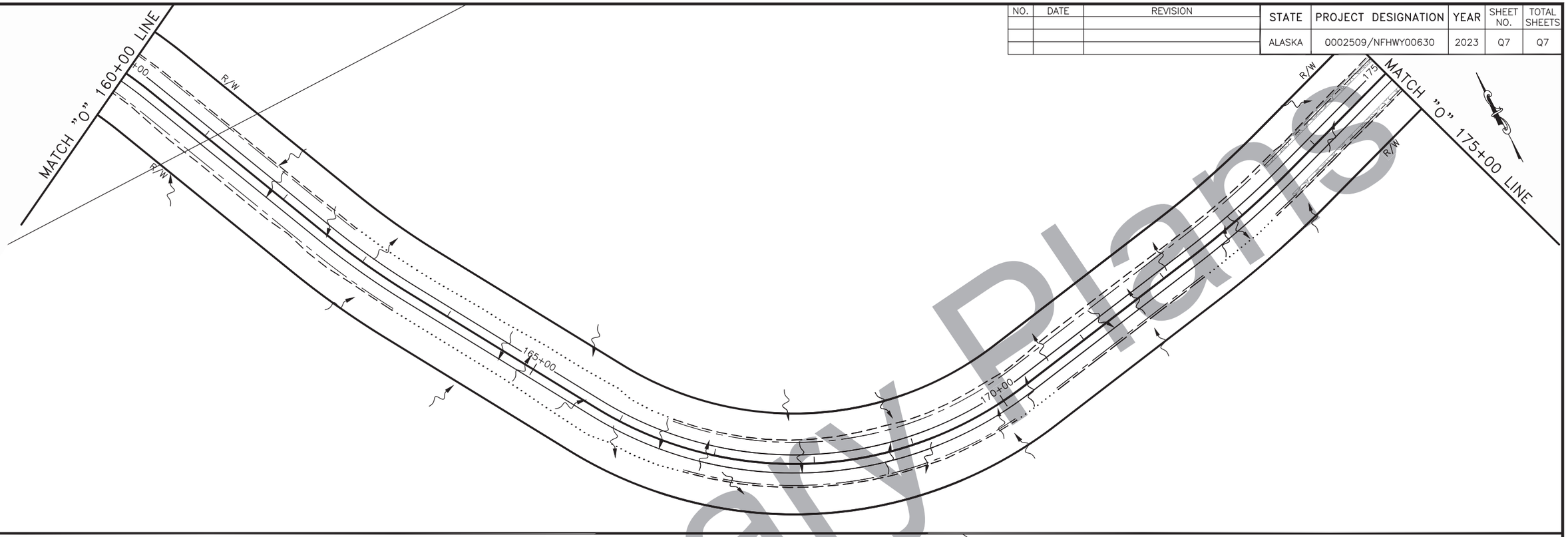

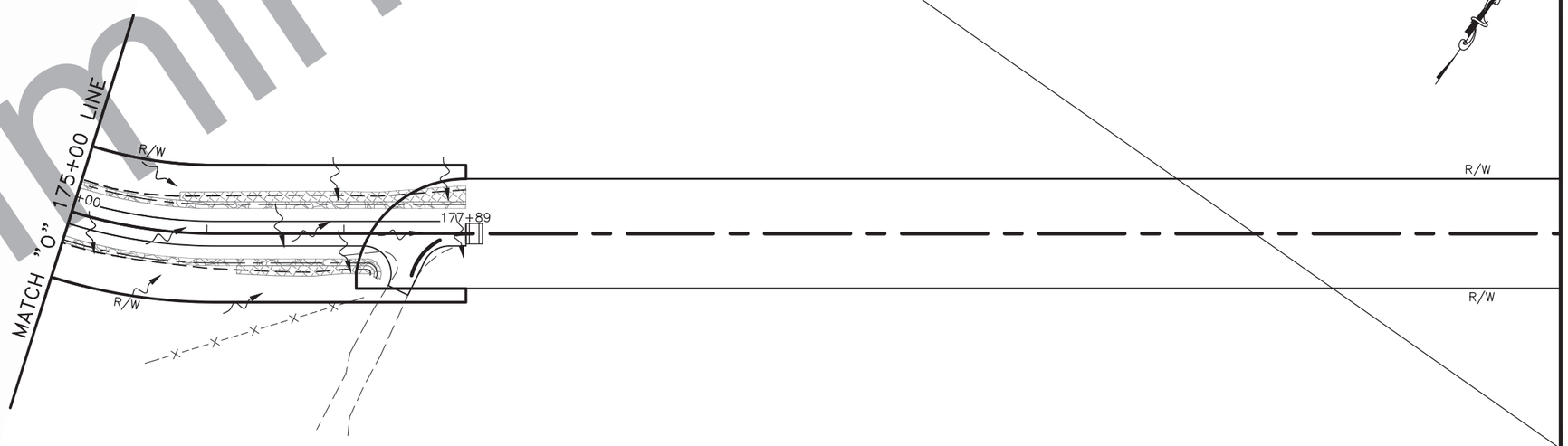

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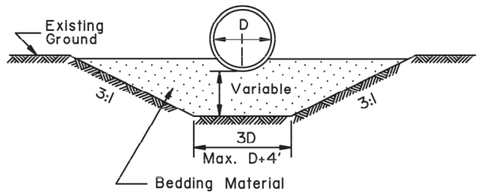
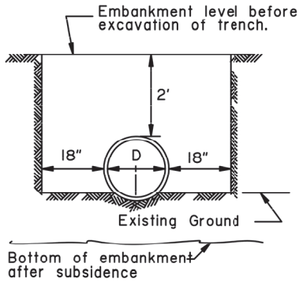
D-01.02

SHEET 1 of 1



TYPE "A"
FOUNDATION STABILIZATION

To be used in unstable areas as directed by the Engineer.



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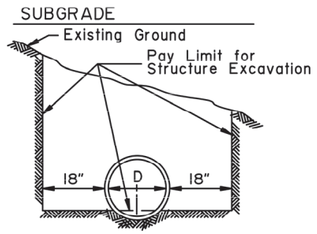
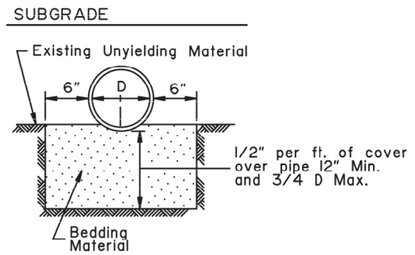
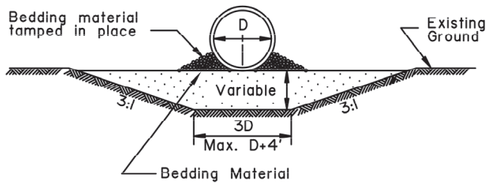


TYPE "C"

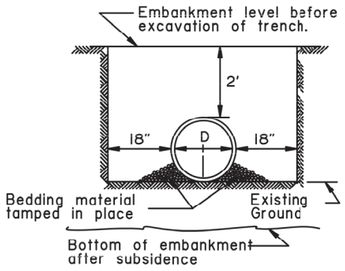


TYPE "D"
ROCK OR UNYIELDING MATERIAL



'ALTERNATE'
TYPE "A"
FOUNDATION STABILIZATION

To be used in unstable areas as directed by the Engineer.



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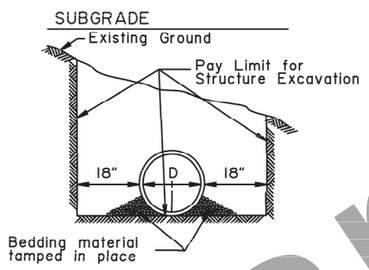
TYPE "B"



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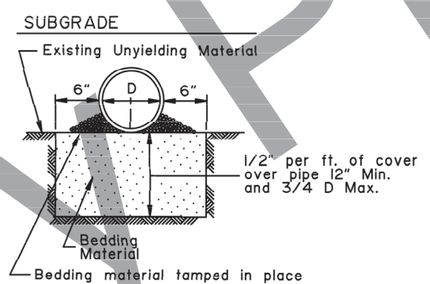
TYPE "C"

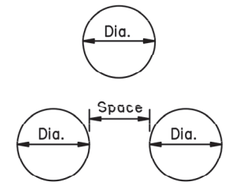


'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

GENERAL NOTES:

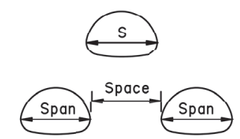
1. Sidefill shall be placed and compacted with care under haunches of pipe and shall be brought up evenly and simultaneously on both sides of pipe to 1 foot above the top of the full length of the pipe.
2. Alternate installation methods may only be used when specified or approved by the Engineer.

D = Nominal Pipe Diameter



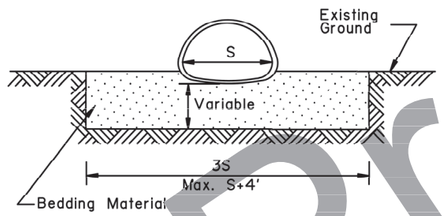
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

S = Nominal Pipe Arch Span



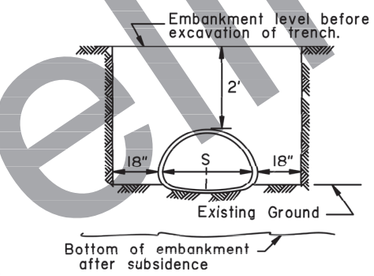
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Span of pipe arch or 3', whichever is less.

CULVERT PIPE



TYPE "A"
FOUNDATION STABILIZATION

To be used in unstable areas as directed by the Engineer.



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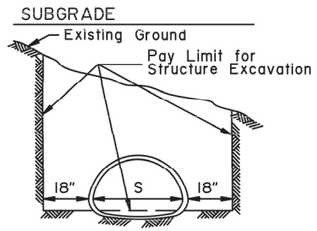
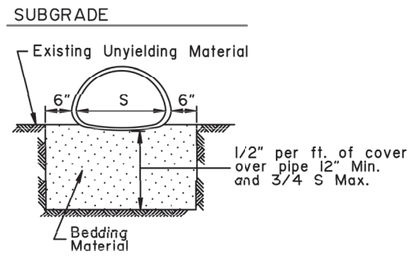


TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

ARCH

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT PIPE & ARCH INSTALLATION DETAILS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E. Chief Engineer

Adoption Date: 02/08/2019

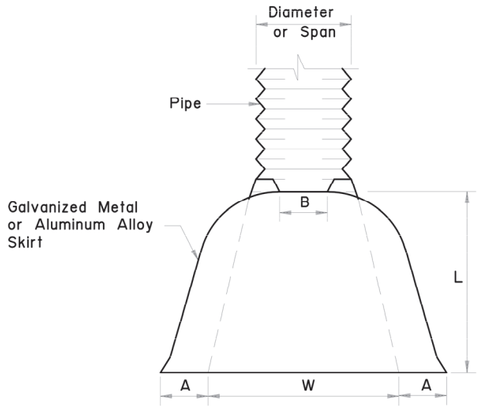
Last Code and Stds. Review By: Date:

Next Code and Standards Review date: 02/08/2029

D-01.02

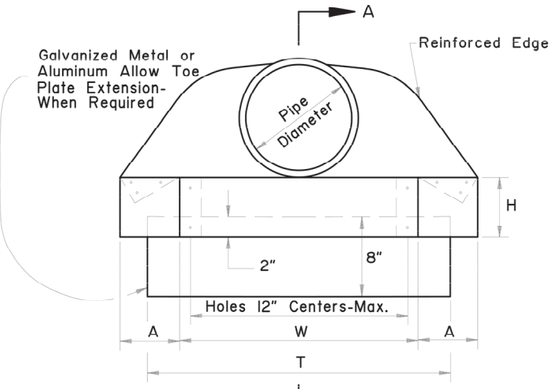
D-06.10

SHEET 1 of 3



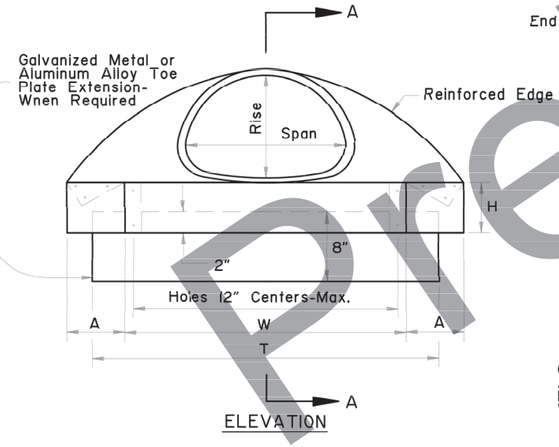
PLAN

ROUND AND PIPE ARCH



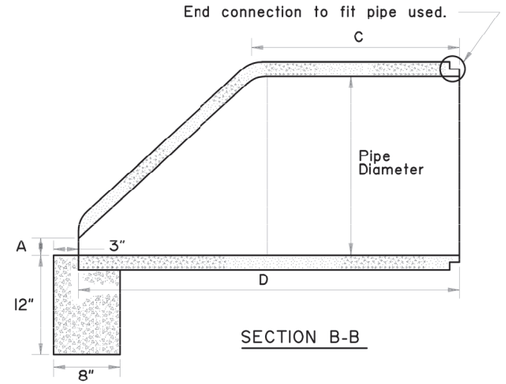
ELEVATION

ROUND PIPE



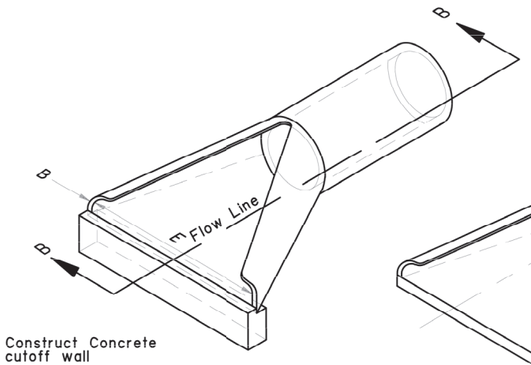
ELEVATION

PIPE ARCH

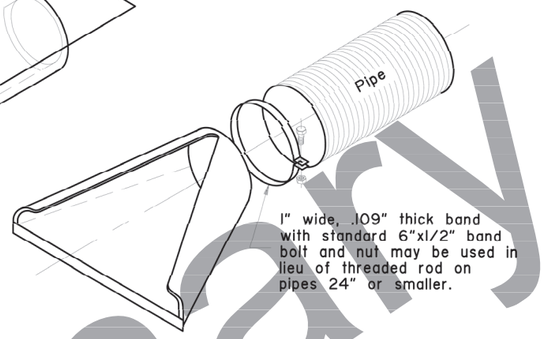


SECTION B-B

MINIMUM DIMENSIONS					
Pipe Diameter	A	B	C	D	E
12"	4"	1 3/4"	24"	46"	24"
18"	9"	2"	25"	50"	36"
24"	9 1/2"	2 1/2"	30"	72"	48"
30"	12"	3"	20"	73"	60"
36"	15"	3 3/8"	35"	97"	72"
42"	21"	3 3/4"	35"	98"	78"
48"	24"	4 1/4"	26"	98"	84"
54"	27"	4 5/8"	33"	99"	82"

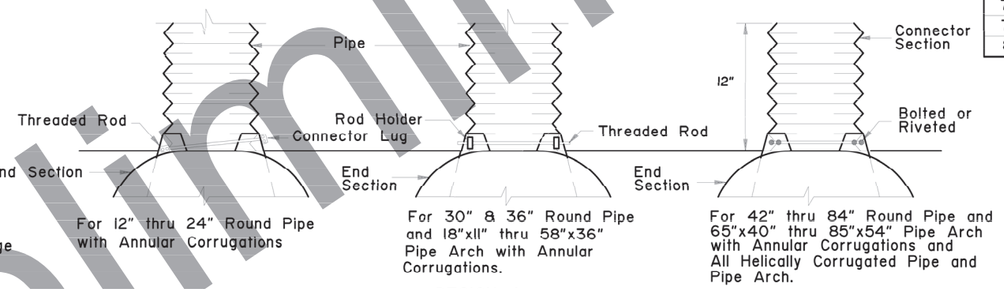


PRECAST CONCRETE END SECTION

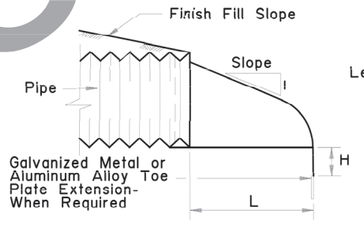


ROUND PIPE										
Pipe Diam. Inches	Thickness For Aluminum	Thk. for Galv. Metal	Dimension Inches A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
12"	0.060	0.064	6"	6"	6"	21"	24"	34"	1 Pc.	2 1/2
15"	0.060	0.064	7"	8"	6"	26"	30"	40"	1 Pc.	2 1/2
18"	0.060	0.064	8"	10"	6"	31"	36"	46"	1 Pc.	2 1/2
21"	0.060	0.064	9"	12"	6"	36"	42"	52"	1 Pc.	2 1/2
24"	0.075	0.064	10"	13"	6"	41"	48"	58"	1 Pc.	2 1/2
30"	0.075	0.079	12"	16"	8"	51"	60"	70"	1 Pc.	2 1/2
36"	0.105	0.079	14"	19"	9"	60"	72"	94"	2 Pc.	2 1/2
42"	0.105	0.109	16"	22"	11"	69"	84"	106"	2 Pc.	2 1/2
48"	0.105	0.109	18"	27"	12"	78"	90"	112"	2 Pc.	2 1/4
54"	0.105	0.109	18"	30"	12"	84"	102"	122"	2 Pc.	2 1/4
60"	0.135	0.109	18"	33"	12"	87"	114"	134"	3 Pc.	2 1/4
66"	0.135	0.109	18"	36"	12"	87"	120"	142"	3 Pc.	2 1/4
72"	0.135	0.109	18"	39"	12"	87"	126"	146"	3 Pc.	2 1/4
78"	—	0.109	18"	42"	12"	87"	132"	152"	3 Pc.	1 1/4
84"	—	0.109	18"	45"	12"	87"	138"	158"	3 Pc.	1 1/6

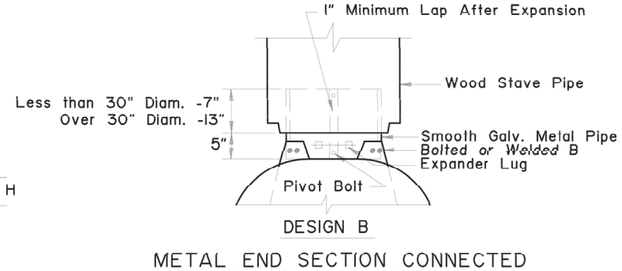
PIPE-ARCH											
Pipe-Arch Dimension Inches Span	Rise	Thickness for Aluminum	Thk. for Galv. Metal	Dimension Inches A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
17"	13"	0.060	0.064	7"	9"	6"	19"	30"	40"	1 Pc.	2 1/2
21"	15"	0.060	0.064	7"	10"	6"	23"	36"	46"	1 Pc.	2 1/2
24"	18"	0.060	0.064	8"	12"	6"	28"	42"	52"	1 Pc.	2 1/2
28"	20"	0.075	0.064	9"	14"	6"	32"	48"	58"	1 Pc.	2 1/2
35"	24"	0.075	0.079	10"	16"	6"	39"	60"	70"	1 Pc.	2 1/2
42"	29"	0.105	0.079	12"	18"	8"	46"	75"	85"	1 Pc.	2 1/2
49"	33"	0.105	0.109	13"	21"	9"	53"	85"	103"	2 Pc.	2 1/2
57"	38"	0.105	0.109	18"	26"	12"	63"	90"	114"	2 Pc.	2 1/2
64"	43"	0.105	0.109	18"	30"	12"	70"	102"	130"	2 Pc.	2 1/4
71"	47"	0.135	0.109	18"	33"	12"	77"	114"	144"	3 Pc.	2 1/4
77"	52"	0.135	0.109	18"	36"	12"	84"	120"	158"	3 Pc.	2 1/4
83"	57"	0.135	0.109	18"	39"	12"	90"	126"	170"	3 Pc.	2 1/4



DESIGN A



SECTION A-A



DESIGN B

METAL END SECTION CONNECTED TO WOOD STAVE PIPE

GENERAL NOTES:

1. Toe plate extensions will be required only when provided for on the plans. When required, the toe plate extensions shall be punched with holes to match those in lip of skirt and fastened with 3/8 inch or larger galvanized nuts and bolts and shall be the same gage as the end section.
2. Galvanized Metal or Aluminum Alloy End Sections may be used on Wood Stave and Plastic Pipe.
3. All 3 piece bodies shall have 12 gage sides and 10 gage center panels. Multiple panel bodies shall have lap seams which are to be *tightly joined* by 3/8" galvcnized rivets or bolts.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

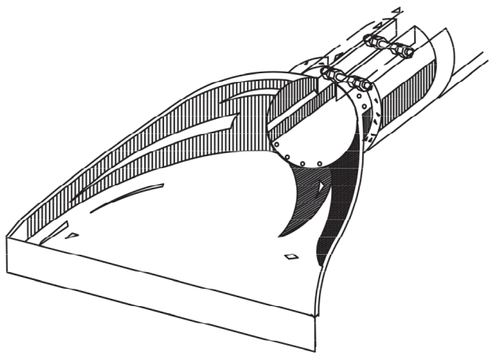
Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

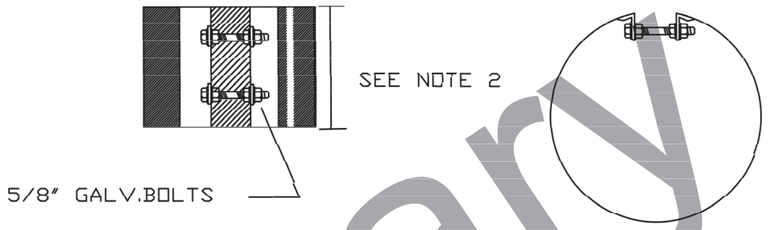
Next Code and Standards Review date: 02/08/2029

D-06.10

D-06.10 SHEET 2 of 3



FOR CONNECTING CONCRETE PIPE OR CORRUGATED POLYETHYLENE PIPE TO METAL END SECTION.



GENERAL NOTES

1. See general notes on sheet 1 of 3.
2. See sheet 1 of 3 for metal end section dimensions.
3. Insert bolts, washers and rivets shall be galvanized. Insert thickness is the same as the end section.
4. Use culvert inserts only at inlet.

METAL INSERTS FOR USE WITH CORRUGATED PLASTIC PIPE AND METAL END SECTIONS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

Adopted as an Alaska Standard Plan by:
Kenneth J. Fisher, P.E.
Chief Engineer

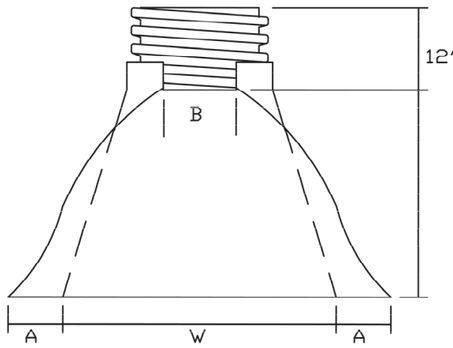
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

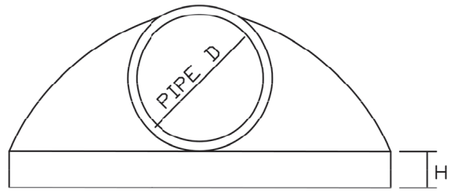
Next Code and Standards Review date: 02/08/2029

D-06.10

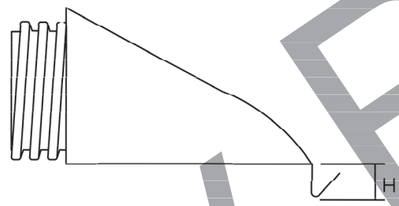
D-06.10 SHEET 3 of 3



TOP VIEW



END VIEW



SIDE VIEW

PIPE DIAMETER	DIMENSIONS IN MILLIMETERS				
	A(1"±)	B MAX	H(1"±)	L(1/2"±)	W(2"±)
12" and 15"	6 1/2"	10"	6 1/2"	25"	29"
18"	7 1/2"	15"	6 1/2"	32"	35"
24"	7 1/2"	18"	6 1/2"	36"	45"
30"	10 1/2"	N/A	7"	53"	68"
36"	10 1/2"	N/A	7"	53"	68"

PLASTIC END SECTION FOR CORRUGATED PLASTIC PIPE

GENERAL NOTES

1. Plastic flared end sections may be used with HDPE corrugated culvert pipes where noted in project plans or approved by project engineer.
2. Consult manufacturer's recommendations for proper sizing and coupling devices. Recommended fasteners may include connecting bands or cinch ties. Fittings across dimension B may include threaded rods with wing nuts or bolts and washers. plastic welds may be recommended.
3. Align coupling to accomodate pipe corrugations.
4. Metal components e.g. bolts or washers must be galvanized.
5. Attachment of end section should preserve culvert alignment and not impair pipe function. Use end sections only on culvert inlet.
6. Toe plate extensions will be required only when designated on the plans.
7. End sections will not be used on HDPE culvert pipes larger than 36" unless indicated by project plans or approved by the Engineer.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

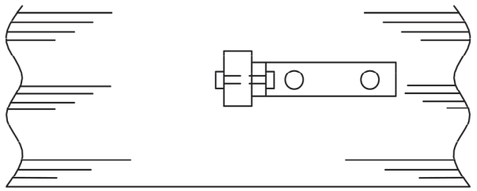
Next Code and Standards Review date: 02/08/2029

D-06.10

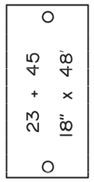
D-09.00 SHEET | of |

DIRECTION OF TRAFFIC

Shoulder of Road



TOP VIEW



Sta. and size of Culvert to be stamped into a 2"x4"x0.064" thick brass plate, fastened, with No. 8 round head brass screws, to the marker post as shown. Plate to be on side of post facing traffic.

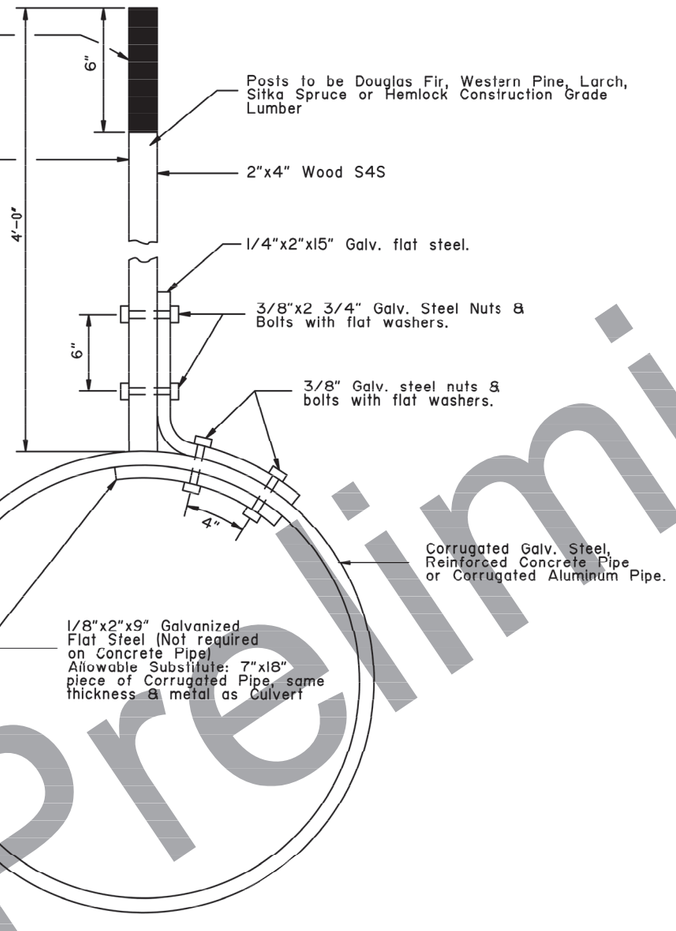
GENERAL NOTES:

1. Culvert marker post shall be installed with galvanized steel hardware meeting the following requirements: Galvanizing for nuts and washers shall meet the requirements of ASTM A-153, Class C. Galvanizing for steel mounting supports shall meet the requirements of MIL-P-26915A, or ASTM A-153, Class C.

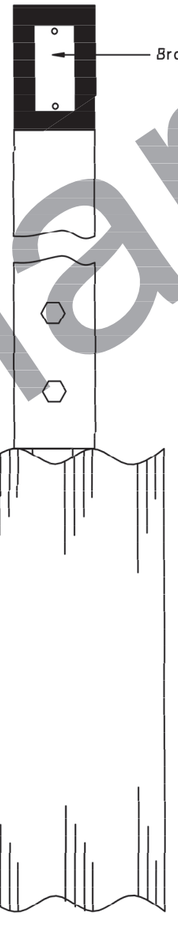
× Black Paint, Exterior Grade, Semi Gloss Enamel.

× White Paint, Exterior Grade, Semi Gloss Enamel

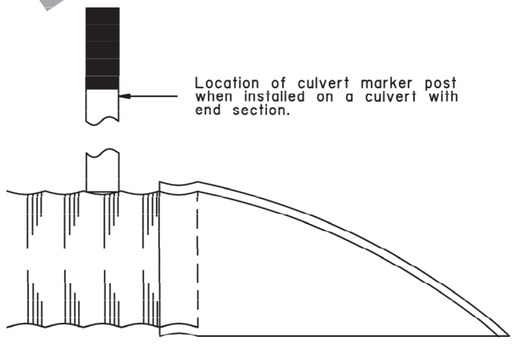
× As approved by the Engineer



END VIEW



SIDE VIEW



END SECTION SIDE VIEW

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT MARKER POST

Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

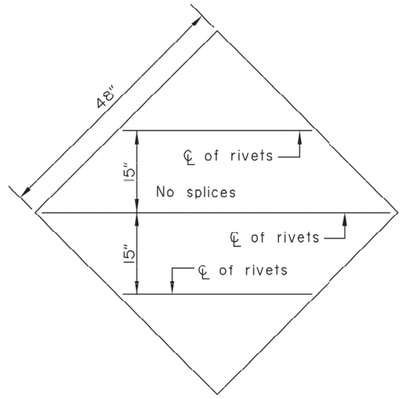
Adoption Date: 02/08/2019

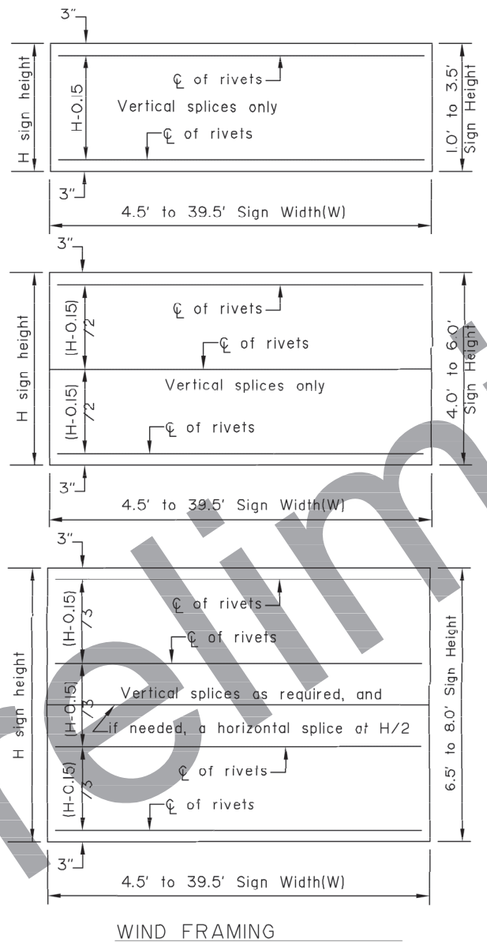
Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 02/08/2029

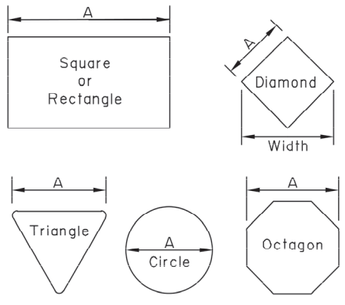
D-09.00

S-00.12 SHEET 1 of 1





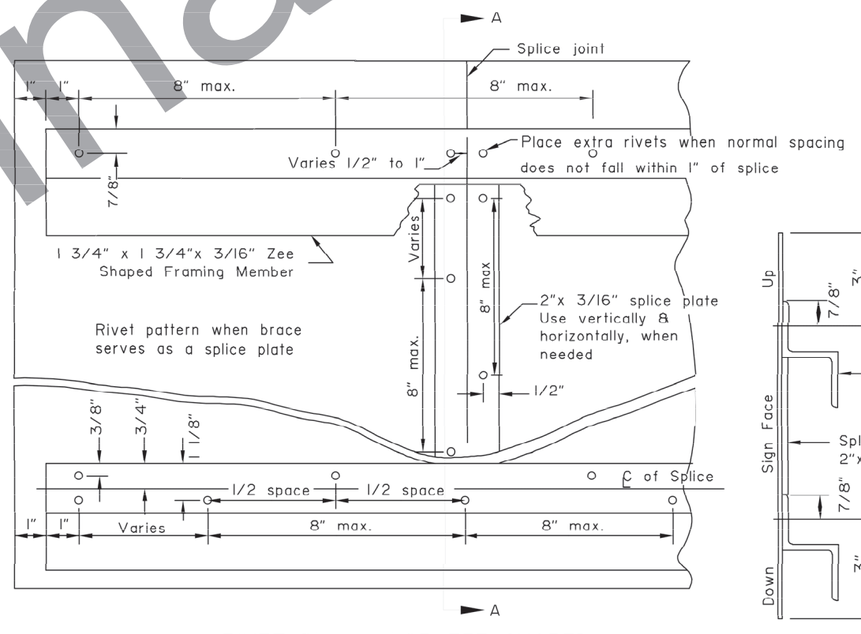
WIND FRAMING LOCATIONS



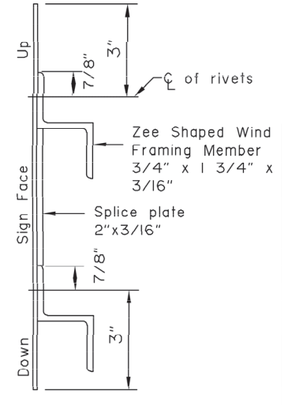
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

Install wind framing on all signs that exceed the dimensions listed.

LIGHT SIGNS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

GENERAL NOTES

1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer certifies their design equals or exceeds the strength of the zee shaped design.
4. Install one piece wind framing members on all signs up to 23.5' wide. Use one splice in each wind frame on all signs wider than 23.5'. Locate splices at least 18" from all posts and panel edges. Stagger splices in adjacent framing members at least 8.0' apart.
5. Attach wind framing members with rivets or with an engineer approved, double sided, high strength, adhesive tape. Clean and handle sheeting and framing members and apply tape in accordance with the tape manufacturer's written instructions. Install two rivets in both ends of each framing member.
6. Use 3/16" diameter rivets conforming to aluminum alloy 6061-T6 for cold driven rivets, or aluminum alloy 6061-T43 for hot driven rivets.
7. Sign fabricators may use sign panels extruded with integral framing with approval of the engineer, if the manufacturer certifies their design equals or exceeds the strength of the 0.125" thick panel with framing attached to it.
8. Frame all signs taller than 8.0' with five wind framing members located (H-0.15)/4 spaces. If needed, make a horizontal splice at the middle wind frame.
9. Do not use round pipes for sign supports.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN FRAMING

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

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S-00.12

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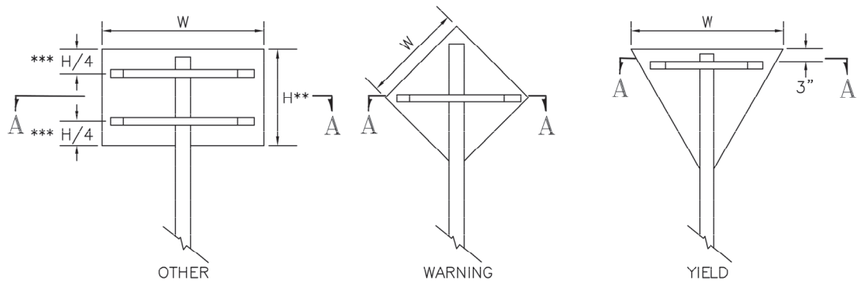
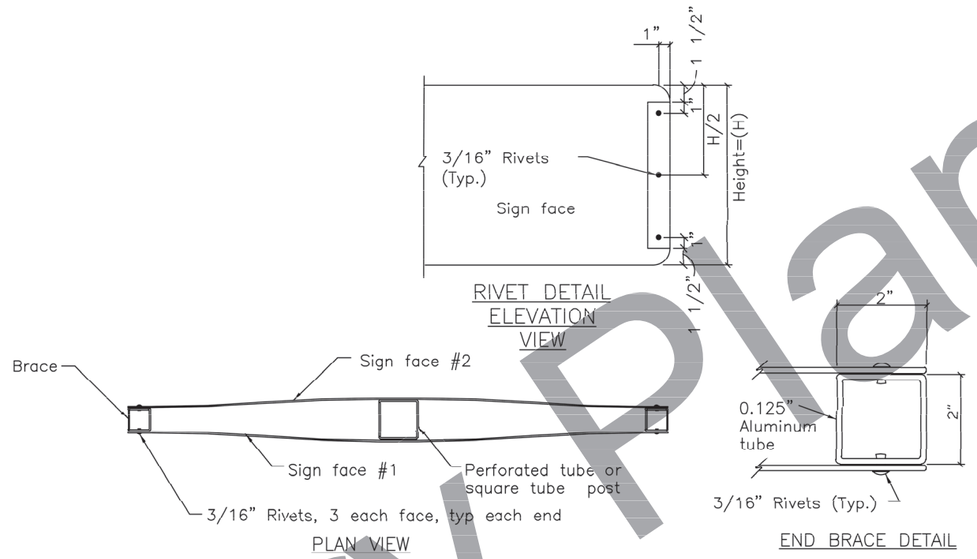


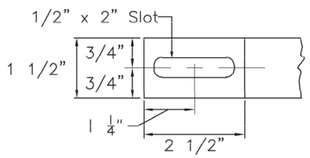
*** Use one brace when H ≤ 18"
Use two braces when 18"< H < 48"
Use three braces when H ≥ 48"

** Position of brace may be varied to match Predrilled mounting holes in panel

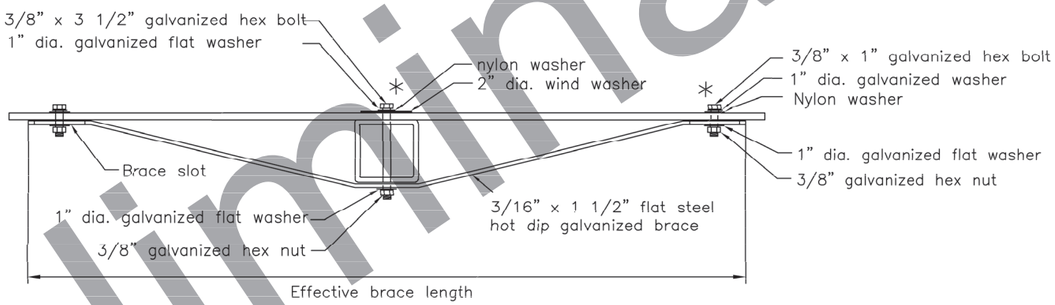
SIGN BRACING PLACEMENT



SMALL STREET NAME SIGN (D3-1, D3-1A, D3-1D) BRACING DETAILS



DETAIL OF BRACE SLOT
Elevation view



TUBE POST SIGN BRACING SECTION A-A
Plan view

* Adjust location of bracing so that bolts and washers will miss the sign legend

Sign Width(W)	Effective Brace Length		
	Warning	Yield	Other
30"	36"	24"	24"
36"	42"	30"	30"
42"	48"	–	36"
48"	Two posts	36"	42"

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

BRACING FOR SIGNS MOUNTED ON SINGLE POST

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

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S-01.02

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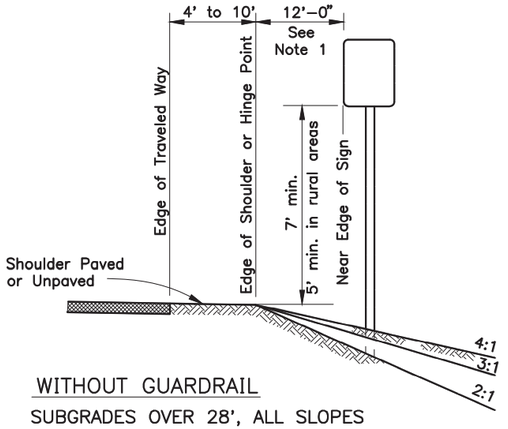
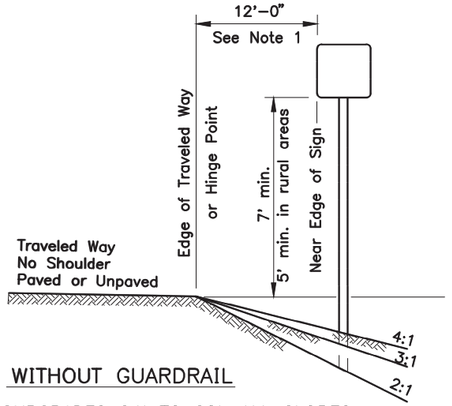
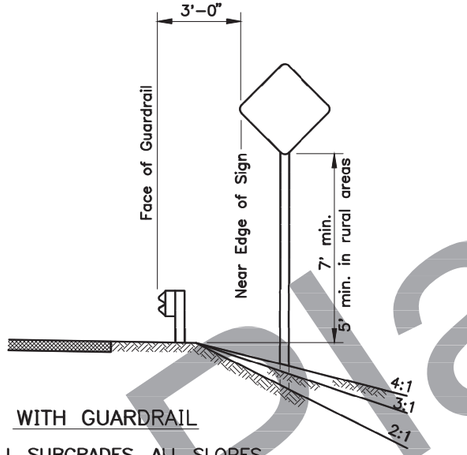


WITHOUT GUARDRAIL
SUBGRADES OVER 28', ALL SLOPES



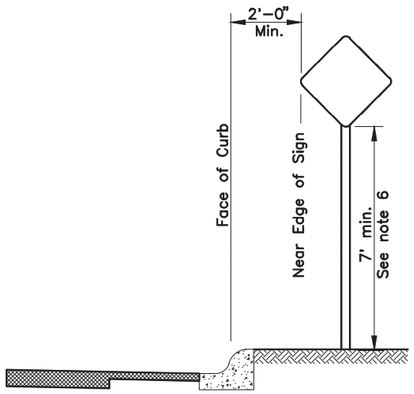
WITHOUT GUARDRAIL
SUBGRADES 24' TO 28', ALL SLOPES



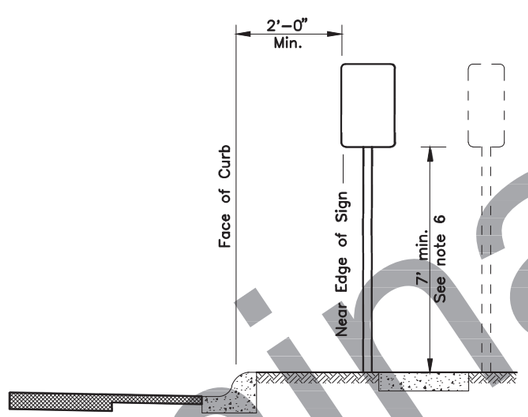
WITH GUARDRAIL
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

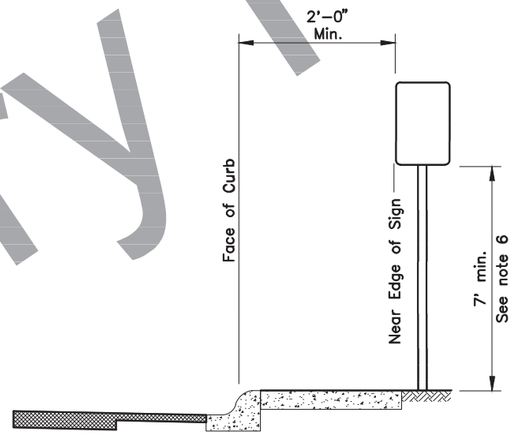
1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge of traveled way, mount them with the bottom of the sign at least 5' above the road surface at the near edge of the road.
5. When multiple hinged sign supports are used, mount hinges at least 7' above the ground.
6. Minimum mounting height is 7'–0" where parking or pedestrian movements are likely to occur, or where sings extend over sidewalks.
7. For construction signs in rural areas, mounting height shall be 7' minimum.



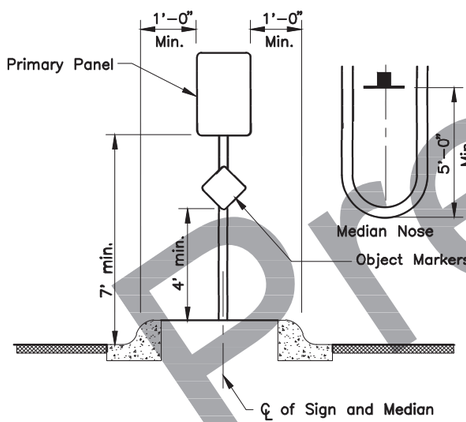
CURB WITHOUT SIDEWALK



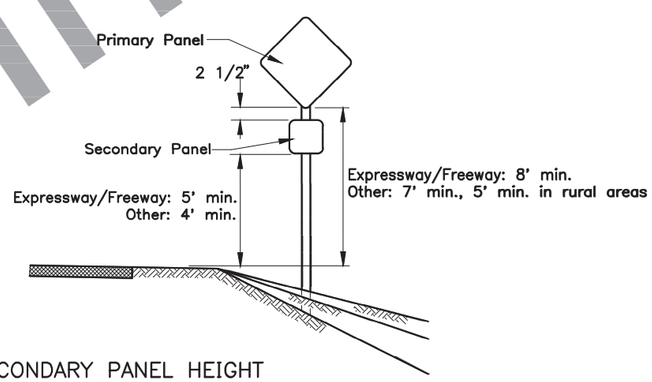
CURB WITH PARKWAY AND SIDEWALK
(If R/W width permits, signs should be placed behind sidewalk.)



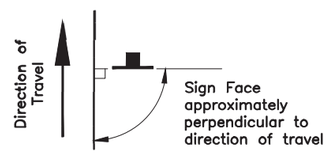
CURB WITH SIDEWALK WITHOUT PARKWAY



RAISED MEDIANS
Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT
ALL TWO PANEL MOUNTING



SIGN POSITIONING

State of Alaska DOT&PF
ALASKA STANDARD PLAN

POST MOUNTED SIGN
OFFSET AND HEIGHT

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

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By: KLK Date: 7/8/2020

Next Code and Standards Review Date: 7/8/2030

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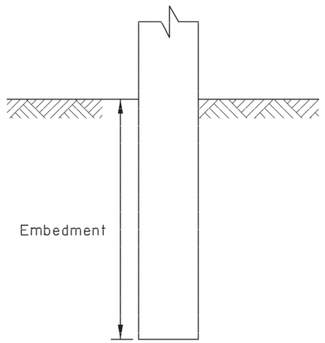
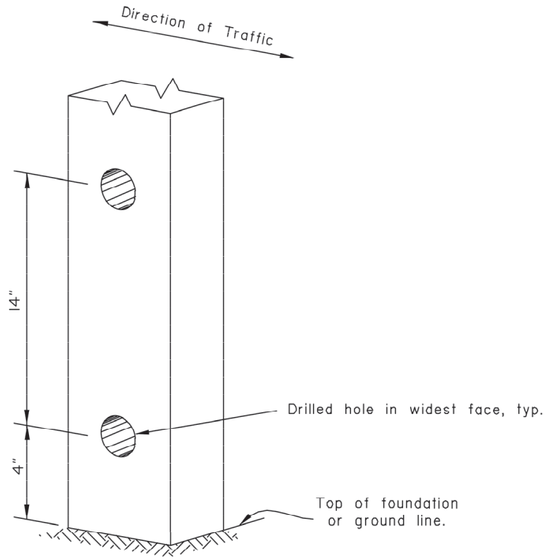
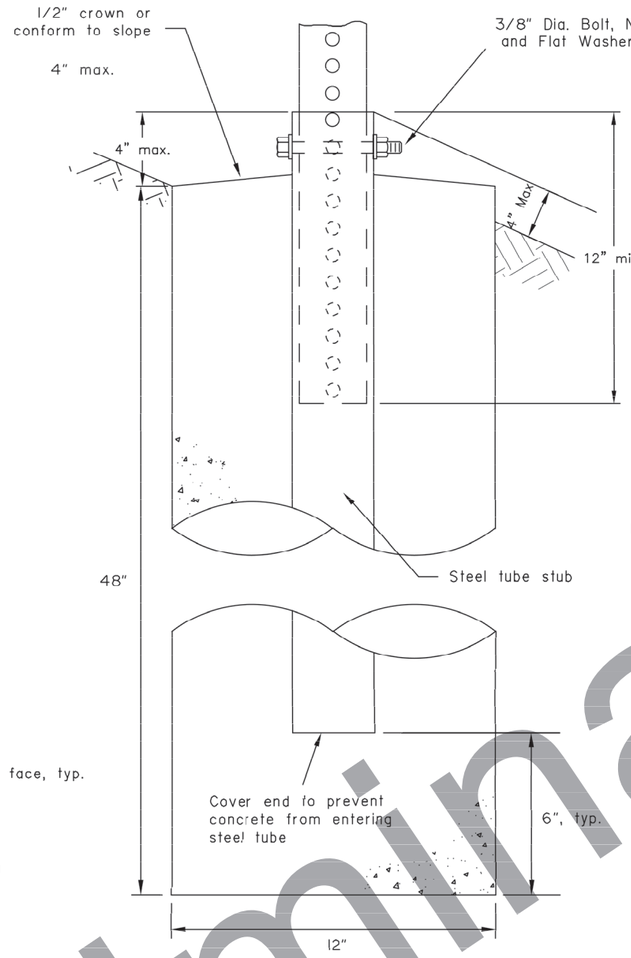
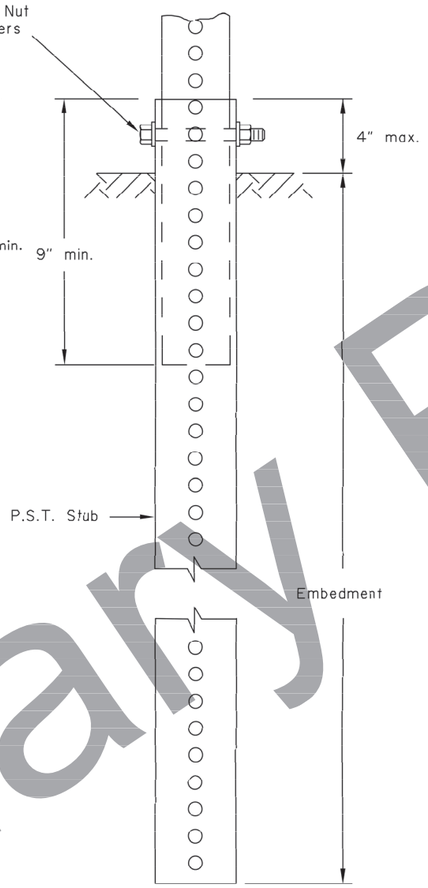






SLEEVE TYPE
CONCRETE FOUNDATION



SLEEVE TYPE*
SOIL EMBEDMENT

GENERAL NOTES:

1. Sign shall be placed symmetrically around posts and refer to Standard Plan S-00 for sign framing details.
2. See plans for type of post, size and embedment type.
3. To maintain crashworthiness, install no more than the number of P.S.T.s or wood posts specified in the tables within 7' of each other.
4. Concrete shall be class B.
5. Do not use the supports on this drawing for multiple support signs if supports are separated by more than 7 feet.
6. Treat all field cuts and field drilled holes in wood posts in accordance with Section 730-2.04 of the Standard Specifications.

SIGN POST SPACING NOTES:

1. Install sign support in accordance with the table below, unless otherwise required by plans or specifications.
2. Exceptions:
   a. Use one post for all E5-1 gore signs, regardless of width.
   b. Use one 2.5" P.S.T. for all STOP signs, with or without street name signs.
3. Supports placed within 7' of each other must be acceptable for that use. See tables below for the sizes of wood posts and P.S.T.s that may be used within 7'. See Manufacturer's documentation for breakaway couplings and tubes that may be used within 7'.
4. See Standard Plan S-31 for frangible couplings, hinges, and foundations for tube and W-shape sign supports.

WOOD SIGN POSTS			
SIZE	HOLE DIA.	EMBEDMENT*	NO. OF POSTS WITHIN 7 Ft. PATH
4"x4"	NONE	4'-1"	2
4"x6"	1 1/2"	5'-3"	2
6"x6"	1 1/2"	4'-9"	1
6"x8"	3"	4'-9"	1

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

PERFORATED STEEL TUBES (P.S.T.)		
POST SIZE	Embedment Depth	No. of P.S.T.s permitted within 7 ft path
1 1/2" x 1 1/2"	4'-8"	2
1 3/4" x 1 3/4"	4'-6"	2
2" x 2"	4'-3"	2
2 1/4" x 2 1/4"	5'-0"	1
2 1/2" x 2 1/2"	4'-6"	1

* Use 3"x3"x3/16" Slub for 2 1/2"x2 1/2" PST Applications.

PERFORATED STEEL TUBE (PST) POSTS

TUBE SIGN POST SPACING								
Sign Width (feet)	No. of Posts	Distance Between Posts	Sign Overhang	Post Type				Notes
				P.S.T.	Wood	Steel Tube	W-Shape	
0.5 to 4.0	1	-	0.5W	X	X	X		See Note 2.
4.5 to 10.0	2	0.6W	0.2W	X	X	X		See Note 3.
10.5 to 11.0	2	6	Varies	X	X	X		See Note 3.
11.5 to 13.0	2	8	Varies				X	
13.5 to 20.0	2	0.6W	0.2W				X	
20.5 to 22.5	3	8	Varies				X	
23.0 to 29.5	3	0.35W	0.15W				X	
30.0 to 31.5	4	8	Varies				X	
32.0 to 40.0	4	0.25W	0.125W				X	

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHT SIGN STRUCTURE
POST EMBEDMENT

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

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S-30.05

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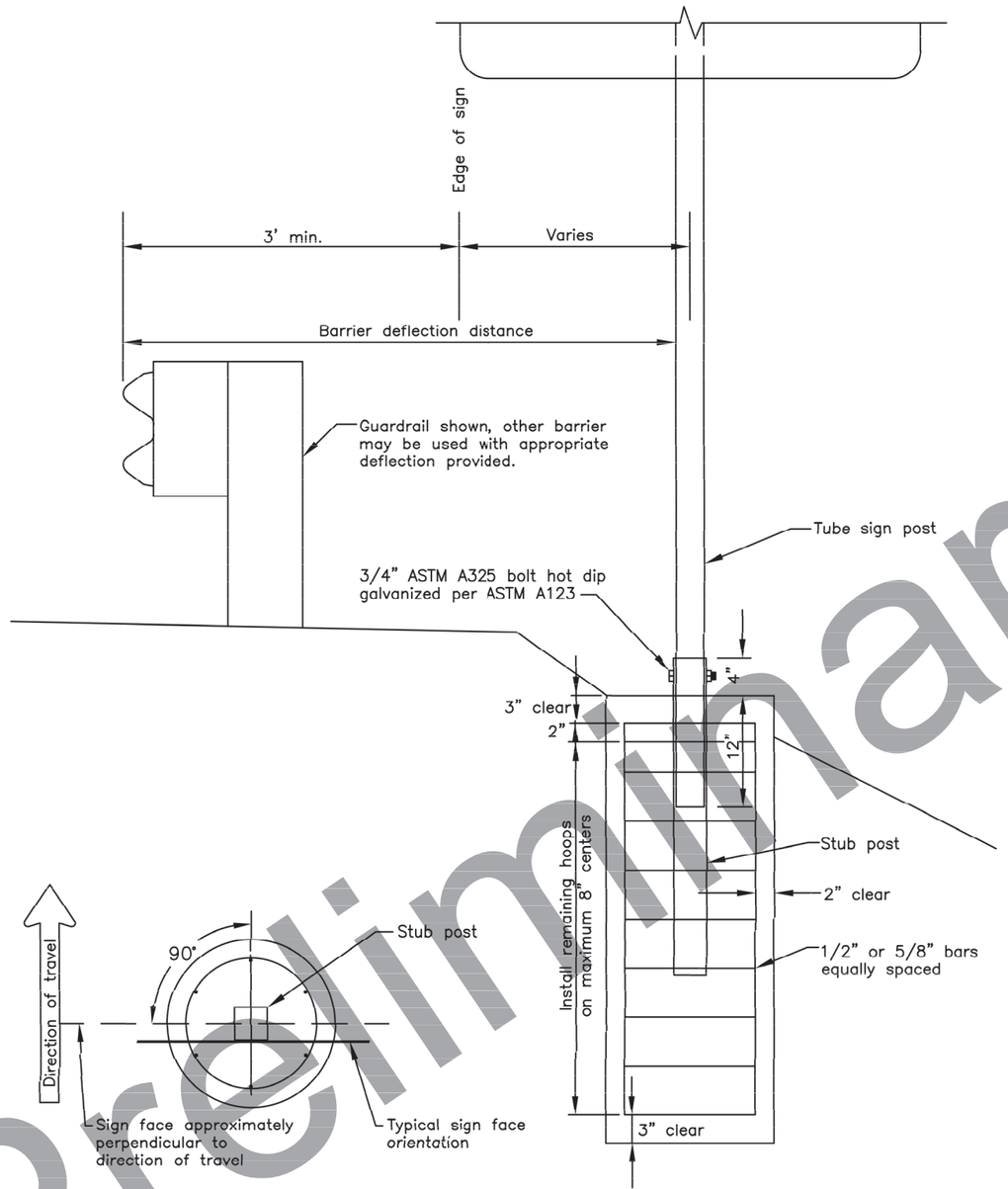

SIGN POST FOUNDATION
(Plan view)

SIGN POST FOUNDATION
See table for depth and diameter

GENERAL NOTES

1. This is a non-crashworthy sign support. It may only be used at locations shielded by a guardrail, barrier, or wall. It may not be used if the sign post is within 20' of the rail and is closer than 75' from the guardrail end post (measured along the rail). For this case use a breakaway sign support. See Standard Plan G-20.
2. Furnish steel tube sign post and stub post that conform to ASTM A500, grade B, and meet ASTM A123 for hot dip galvanizing.
3. Install tubes and stub post with a 0.1875" wall thickness.
4. For Perforated Tubes use Standard Plan S-30.
5. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of No. 3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
6. Use Class A, B or W concrete.

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT					STUB POST	
	DIA.	MIN. DEPTH	C.Y. CONC.	VERTICAL BARS QTY.	VERTICAL BARS SIZE	VERTICAL BARS LGTH.	HOOPS SIZE	HOOPS DIA.	SLEEVE SIZE	SLEEVE LGTH.
2 1/2" TUBE	1'-0"	4'-6"	0.13	6	#4	4'-0"	#4	8"	3"	3'
3" TUBE	1'-6"	4'-0"	0.25	7	#5	3'-6"	#4	1'-2"	3 1/2"	3'
3 1/2" TUBE	1'-6"	4'-6"	0.27	7	#5	4'-0"	#4	1'-2"	4"	3'
4" TUBE	2'-6"	4'-0"	0.69	8	#8	3'-6"	#4	2'-2"	4 1/2"	3'
4 1/2" TUBE	2'-6"	4'-6"	0.78	8	#8	4'-0"	#4	2'-2"	5"	3'

* Foundation sized for use where there are no loose, high moisture, or fine grained soil.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION BEHIND BARRIER

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

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