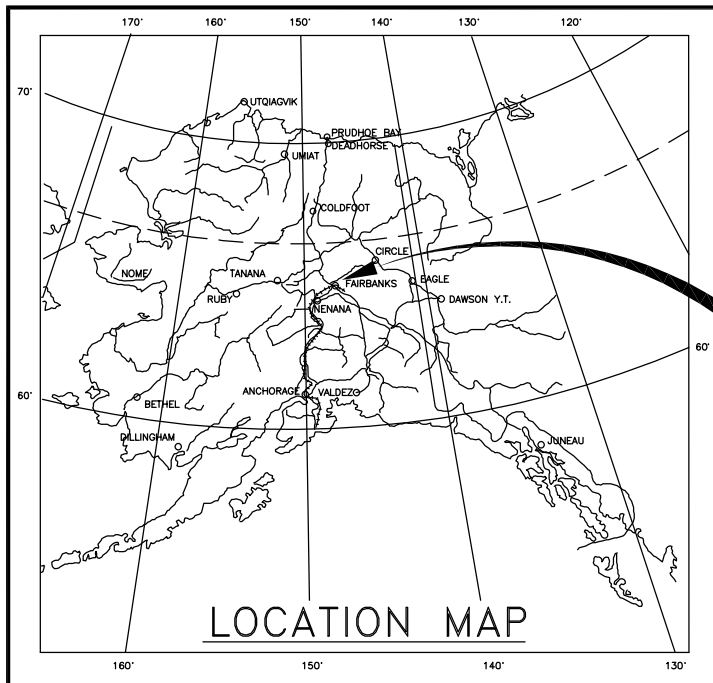


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	A1	A2
			CDS ROUTE: 175500	MILEPOINT: 0 TO	8.16		
			CDS ROUTE: 175510	MILEPOINT: 0 TO	4.65		

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT
PENDING/NFHWY00570
CHENA RIDGE AND CHENA PUMP RESURFACING
PAVING, BRIDGE, AND GUARDRAILS



PROJECT LOCATION

INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND & SHEET LAYOUT INDEX
B1-B2	TYPICAL SECTIONS
C1	ESTIMATE OF QUANTITIES & GENERAL NOTES
D1-D8	SUMMARIES
E1	MISCELLANEOUS DETAILS
N1-N6	BRIDGE PLANS
Q1	EROSION SEDIMENT CONTROL PLAN
T1	TRAFFIC CONTROL PLANS (and/or DEVICES)
V1-V25	STANDARD PLANS

THE FOLLOWING STANDARD PLANS APPLY TO THIS PROJECT:
G-00.05, G-05.11S, G-05.11W, G-10.20, G-14.01, G-20.12,
G-26.00, G-32.02
S-00.12, S-01.02, S-05.02, 20.11, S-23.00, S-30.05, S-31.02

PROJECT SUMMARY	
WIDTH OF PAVEMENT	32-82 FEET
LENGTH OF PROJECT	12.81 MILES



JOHN NETARDUS, P.E., PROJECT MANAGER
PATRICK WOOLERY, DESIGNER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY: _____ DATE _____

Sarah E. Schacher, P.E.
Preconstruction Engineer, Northern Region
ACCEPTED FOR CONSTRUCTION:

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

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	A2	A2

	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		
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		
CONSTRUCTION CENTERLINE		
MISCELLANEOUS CENTERLINE		
STATION EQUATION	$\begin{matrix} "L"48+97.23 \text{ POT BK=} \\ "O"48+97.23 \text{ PC AHD} \end{matrix}$	
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY LINE		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
UTILITY EASEMENT LINE		
TEMPORARY EASEMENT LINE (TCP OR TCE)		
ACCESS OR SECTION LINE EASEMENT		
PROPOSED CUT SLOPE LIMIT		
PROPOSED FILL SLOPE LIMIT		
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
TOWNSHIP & RANGE LINE	$\begin{matrix} T. 2 \text{ N.} \\ T. 1 \text{ N.} \end{matrix}$	$\begin{matrix} T. 2 \text{ E.} \\ T. 1 \text{ E.} \end{matrix}$

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)	---SS---	→→→SS→
FUEL LINE	---O---	→→→O→
GAS LINE	---G---	→→→G→
WATER LINE	---W---	→→→W→
METER, VALVE, FIRE HYDRANT		
EXISTING STORM DRAIN (FLOW DIRECTION →)	---SD---	
PROPOSED STORM DRAIN		
FIBER OPTIC LINE	---FO---	
DIRECT BURIAL TELEPHONE CABLE	---T---	---T---
DIRECT BURIAL ELECTRIC CABLE	---E---	---E---
ELECTRIC LINE (OVERHEAD)	---E---	---E---
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		
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE	-----	=====
FENCE	-x-x-x-	-x-x-x-
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL
CULVERT PIPE		
SIGN		
MAILBOX		
RAILROAD TRACKS		
RAILROAD DEVICES		
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS		
POST OR BOLLARD	•	•
WELL OR MONITORING WELL		
SEPTIC PIPE		
FUEL TANK FILL PIPE/VENT		
SATELLITE DISH		
TEST HOLE		
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

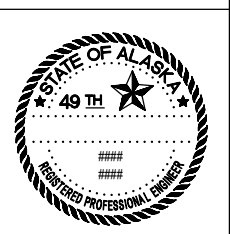
	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		
JUNCTION BOX, TYPE II		
JUNCTION BOX, TYPE III		
SIGNAL FACE, VEHICULAR		
SIGNAL FACE, BACKPLATE		
SIGNAL FACE, LEFT TURN, BACKPLATE		
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR		
VIDEO DETECTOR		
RADAR DETECTOR		
OPTICOM DETECTOR		
PEDESTRIAN PUSH BUTTON		
SIGNAL POST W/O MAST ARM		
SIGNAL POLE W/MAST ARM		
SIGNAL CONTROLLER		
LOAD CENTER		
LUMINAIRE		
RIGID METAL CONDUIT		

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

ABBREVIATIONS:

APPROX	APPROXIMATELY	SQ. FT.	SQUARE FOOT
C	CENTERLINE	STA	STATION
CY	CUBIC YARD	T	TANGENT
E	EAST, EASTING	TCE	TEMPORARY CONSTRUCTION EASEMENT
ELE, ELEV	ELEVATION	TS	TUBE STEEL
FT.	FOOT, FEET	TYP	TYPICAL
H	HORIZONTAL	V	VERTICAL
HW/D	HEADWATER TO DIAMETER RATIO	VPC	VERTICAL POINT OF CURVATURE
IE	INVERT ELEVATION	VPI	VERTICAL POINT OF INTERSECTION
IN, "	INCH, INCHES	VPT	VERTICAL POINT OF TANGENCY
L	LENGTH OF CURVE	W	WEST
L.C.L	LEFT OF CENTERLINE	WWR	WELDED WIRE REINFORCEMENT
LT	LEFT	Ø	DIAMETER
LVC	LENGTH OF VERTICAL CURVE		
MAX	MAXIMUM		
MIN	MINIMUM		
N	NORTH, NORTHING		
NO.	NUMBER		
NTS	NOT TO SCALE		
O.C.	ON CENTER		
PC	POINT OF CURVATURE		
POT	POINT ON TANGENT		
PST	PERFORATED STEEL TUBE		
PT	POINT OF TANGENCY		
PVI	POINT OF VERTICAL INTERSECTION		
R	RADIUS		
R.C.L	RIGHT OF CENTERLINE		
RT	RIGHT		
S	SOUTH		

LEGEND AND ABBREVIATIONS

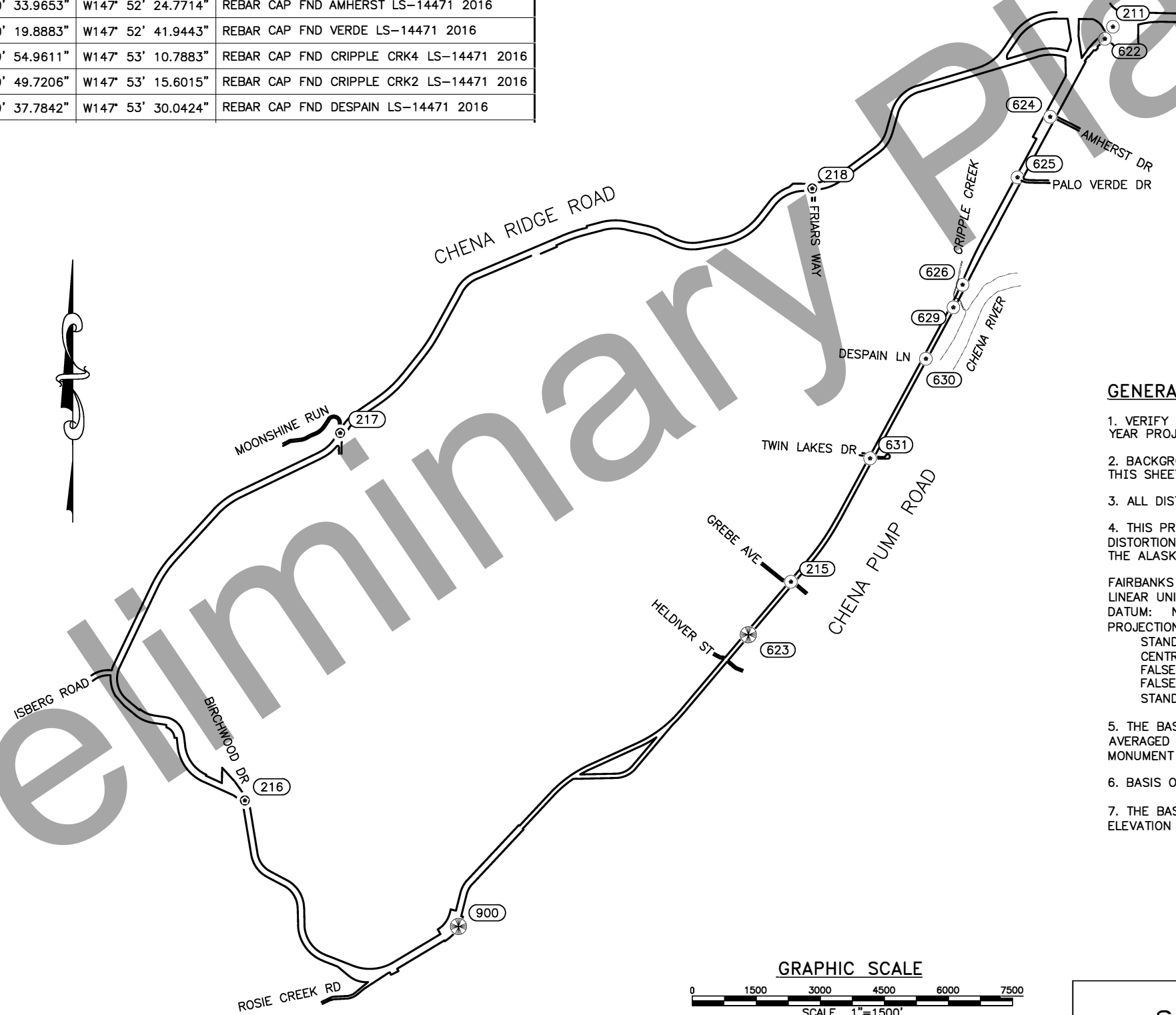


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570_Chena_Ridge_and_Pump_Design\5_Civil_3D\3_Drawings\00570_TITLE_LEGEND-HWYS Legend & Abbreviations.Fri, Aug/05/22 03:35pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO	TOTAL SHEETS
			ALASKA	0645(015)/NFHWY00570	2023	A3	A3

CONTROL MONUMENTS						
POINT NO.	NORTHING	EASTING	ELEVATION	LATITUDE	LONGITUDE	DESCRIPTION
211	200550.32	655094.22	478.32	N64° 50' 54.9281"	W147° 51' 51.5070"	REBAR CAP FND 11 PLS 14471 2016
215	187555.34	647555.06	432.32	N64° 48' 45.9314"	W147° 54' 41.2081"	REBAR CAP FND GREBE LS-14471 2016
216	182435.06	634768.93	952.16	N64° 47' 53.5201"	W147° 59' 34.5122"	REBAR CAP SET BRCHWD 14471-S 2021
217	191039.60	636999.40	1131.93	N64° 49' 18.5569"	W147° 58' 46.3122"	REBAR CAP SET MOONSHINE 14471-S 2021
218	196762.20	648054.41	823.63	N64° 50' 16.6074"	W147° 54' 32.9541"	REBAR CAP SET FRIARS 14471-S 2021
622	200267.61	654905.96	455.56	N64° 50' 52.1188"	W147° 51' 55.7644"	REBAR CAP FND GUMP LS-14471 2016
623	186316.11	646556.64	431.39	N64° 48' 33.5844"	W147° 55' 03.8208"	PRIM MON FND PUMP2.8 LS-14471 2016
624	198441.81	653624.47	458.11	N64° 50' 33.9653"	W147° 52' 24.7714"	REBAR CAP FND AMHERST LS-14471 2016
625	197022.67	652860.52	454.03	N64° 50' 19.8883"	W147° 52' 41.9443"	REBAR CAP FND VERDE LS-14471 2016
626	194508.85	651574.93	435.90	N64° 49' 54.9611"	W147° 53' 10.7883"	REBAR CAP FND CRIPPLE CRK4 LS-14471 2016
629	193979.57	651358.69	436.71	N64° 49' 49.7206"	W147° 53' 15.6015"	REBAR CAP FND CRIPPLE CRK2 LS-14471 2016
630	192776.30	650715.59	436.34	N64° 49' 37.7842"	W147° 53' 30.0424"	REBAR CAP FND DESPAIN LS-14471 2016

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
K:\21_Projects\Chena Pump_Ridge Resurfacing NFHWY00570\5-CAD Drawings\2-Control\00570_Control-A3_Fri_Jul15/22_02:19pm



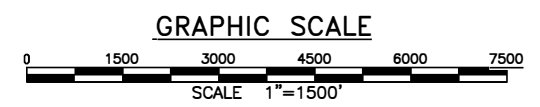
GENERAL NOTES

1. VERIFY HORIZONTAL AND VERTICAL CONTROL PRIOR TO USE. ON MULTI YEAR PROJECTS, VERIFY ALL CONTROL ON A SEASONAL BASIS.
2. BACKGROUND MAPPING IS SHOWN FOR ORIENTATION PURPOSES ONLY. THIS SHEET DOES NOT PURPORT TO DEPICT RIGHT OF WAY.
3. ALL DISTANCES SHOWN ARE GROUND DISTANCES, IN U.S. SURVEY FEET.
4. THIS PROJECT IS LOCATED ENTIRELY WITHIN THE FAIRBANKS LOW DISTORTION PROJECTION (LDP), A LOW DISTORTION PROJECTION CREATED BY THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES.

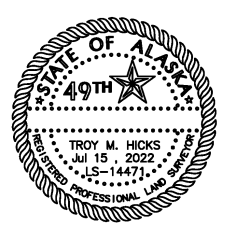
FAIRBANKS LDP DEFINITION:
LINEAR UNIT: U.S. SURVEY FOOT (SFT)
DATUM: NAD83(2011)
PROJECTION: LAMBERT CONFORMAL CONIC, (SINGLE PARALLEL)
STANDARD PARALLEL AND GRID ORIGIN: 64°51'00"N
CENTRAL MERIDIAN (GRID ORIGIN): 146°56'00"W
FALSE NORTHING: 200,000 SFT
FALSE EASTING: 800,000 SFT
STANDARD PARALLEL SCALE: 1.00003 (EXACT)
5. THE BASIS OF COORDINATES IS THE NAD83(2011)(EPOCH:2010.0000) OPUS AVERAGED POSITION OF RECOVERED CONTROL POINT 900 "ROSIE" A PRIMARY MONUMENT STAMPED "ROSIE LS 11649 2017"
6. BASIS OF BEARING IS FAIRBANKS LDP.
7. THE BASIS OF ELEVATION IS THE OPUS AVERAGED GEOID12A (NAVD88) ELEVATION OF 573.50 FT AT POINT 900 "ROSIE".

LEGEND

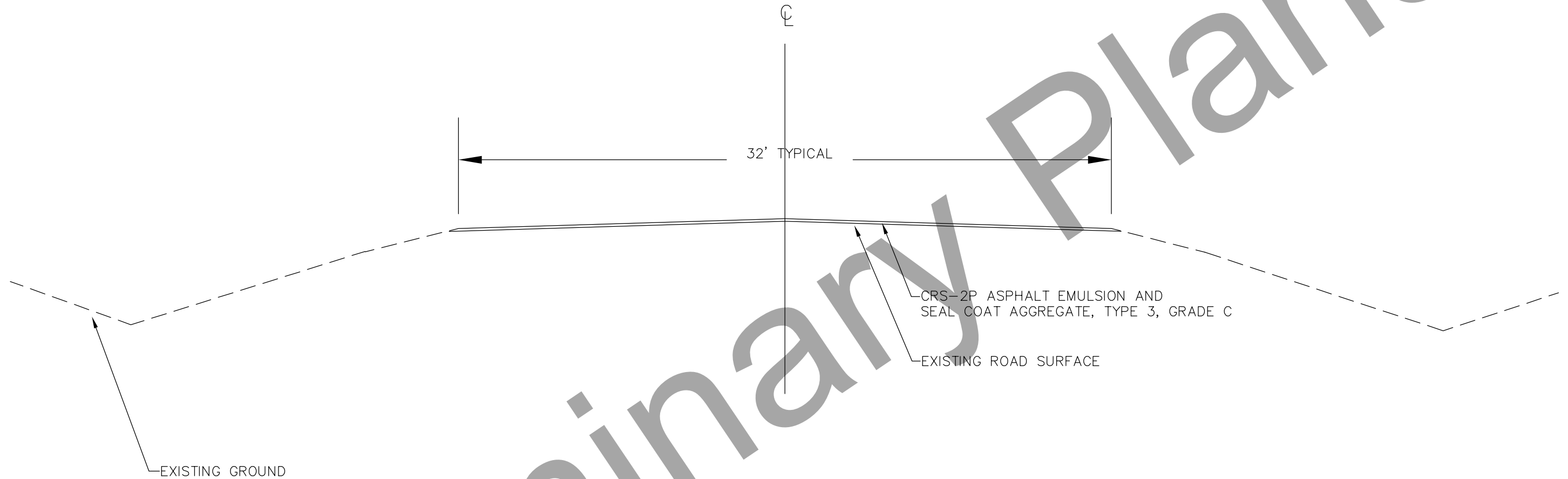
- ⊕ PRIMARY MONUMENT FOUND
- ⊙ REBAR AND CAP FOUND



SURVEY CONTROL



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	B1	B2



PROPOSED TYPICAL SECTION – SEAL COAT
 CHENA RIDGE ROAD AND CHENA PUMP ROAD
 10+40 TO 46+00, 84+00 TO 626+30, 639+30 TO 680+91

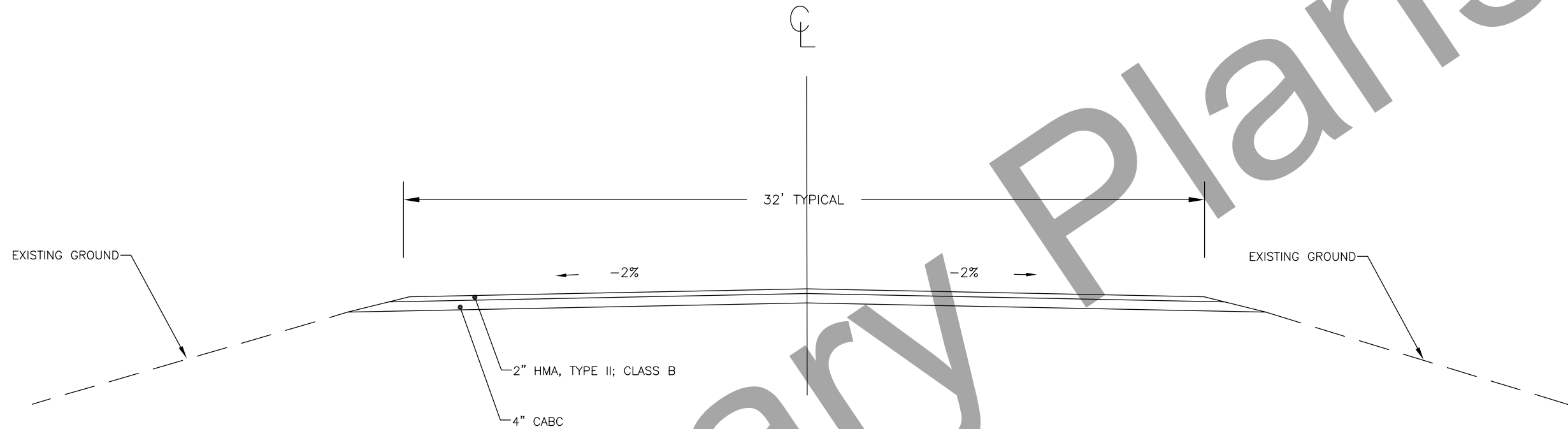
Preliminary Plans

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbs_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\3D\3 Drawings\00570_B-TYPICAL SECTIONS 1 OF 2.Fri. Aug/05/22 03:35pm

TYPICAL SECTION 1



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	B2	B2



FROM STATION 46+00 TO STATION 84+00, RECLAIM ASPHALT, AND PAVE TO MATCH EXISTING ROADWAY
 USE THIS SECTION
 THIS WORK TO BE PERFORMED AT LEAST 2 WEEKS PRIOR TO SURFACE SEAL ACTIVITIES IN THIS AREA

PROPOSED TYPICAL SECTION – REPAVED AREAS
 CHENA RIDGE ROAD AND CHENA PUMP ROAD
 46+00 TO 84+00

Preliminary Plans

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbs\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\3D\3 Drawings\00570_B-TYPICAL_SECTIONS 2 OF 2.Fri_Aug/05/22 03:36pm

TYPICAL SECTION 2 OF 2



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0645(015)/NFHWY00570	2023	C1	C1

ESTIMATE OF QUANTITIES

PAY ITEM	DESCRIPTION	UNIT	QUANTITY
201.0001.0000	CLEARING	ACRE	.24
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	1440
308.0001.0000	CRUSHED ASPHALT BASE COURSE	SY	13511
401.0001.002B	HMA, TYPE II, CLASS B	TON	1600
401.0004.5228	ASPHALT BINDER, GRADE 52-28	TON	213
401.0013.0000	JOB MIX DESIGN	EACH	1
401.0016.0000	CRACK REPAIR	LF	94148
401.0018.0000	REPAIR UNSTABLE PAVEMENT	SY	1712
404.0001.0000	CRS-2P ASPHALT FOR SEAL COAT	TON	541
404.0002.003C	SEAL COAT AGGREGATE TYPE 3, GRADE C	TON	3206
504.0001.0000	STRUCTURAL STEEL, DRAINS	EACH	4
507.2000.0000	STEEL BRIDGE RAILING REPLACEMENT, 2-TUBE	LF	140
510.0001.0000	REMOVAL OF CONCRETE BRIDGE DECK	SF	1730
510.2001.0000	BRIDGE DECK REPAIR	CSUM	ALL REQ'D
525.2001.0000	POLYESTER CONCRETE OVERLAY	SY	193
606.0016.0000	TRANSITION RAIL	EACH	4
606.0001.0000	W-BEAM GUARDRAIL	LF	11650
606.0006.0000	REMOVE AND DISPOSE OF GUARDRAIL	LF	11650
606.0013.0000	PARALLEL GUARDRAIL TERMINAL	EACH	34
615.0001.0000	STANDARD SIGN	SF	1317.6
615.0006.0000	SALVAGE SIGN	EACH	139
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CSUM	ALL REQ'D
643.2005.0000	PUBLIC INFORMATION PROGRAM	LS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.0006.0000	VEHICLE	LS	ALL REQ'D
670.0001.0000	PAINTED TRAFFIC MARKINGS	LF	270100

ESTIMATING FACTORS

ITEM NO.	DESCRIPTION	VALUE
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	2 TON/CY
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E-1	2 TON/CY

GENERAL NOTES:

- ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN THE EXISTING ROW.
- CRACK SEALING AND POT HOLE REPAIR IS TO BE COMPLETED AT LEAST 2 WEEKS PRIOR TO SURFACE SEALING.
- MILL AND PAVE CHENA RIDGE ROAD FROM STATION 46+00 TO 84+00, CORRECT SUPERELEVATIONS ACCORDING TO SUMMARY TABLE ON SHEET D1
- NO WORK IS TO BE PERFORMED BETWEEN STATIONS 626+30 AND 639+30, WHICH WILL BE ADDRESSED BY A DIFFERENT PROJECT.
- PRIOR TO BEGINNING CONSTRUCTION, CONTRACTOR WILL MAKE A RECORD OF EXISTING STRIPING AND REPLACE IN KIND AFTER APPLYING SURFACE SEAL COAT
- SAW CUT ALL MATCH LINES WHERE NEW CONSTRUCTION ABUTS EXISTING ASPHALT, APPLY STE-1 ASPHALT FOR TACK COAT ON THE VERTICAL FACE OF ALL SAW CUTS PRIOR TO PAVING. SAW CUTTING WILL NOT BE MEASURED BY OR PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO OTHER HOT MIX ASPHALT PAY ITEMS.
- MECHANIZED LAND VEGETATION CLEARING AND GRUBBING IS PROHIBITED DURING THE MIGRATORY BIRD NESTING SEASON (MAY 1 - JULY 15).
- VERIFY UTILITY LOCATIONS PRIOR TO BEGINNING ANY GROUND DISTURBING WORK, LOCATE ALL EXISTING UTILITIES WITHIN THE PROJECT BOUNDARIES. PROTECT UTILITIES FROM CONSTRUCTION DAMAGE FOR THE DURATION OF THE PROJECT.
- ALL UNUSABLE WASTE MATERIAL IS TO BE DISPOSED OF OUTSIDE THE PROJECT LIMITS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING WASTE DISPOSAL SITES AT AREAS APPROVED BY THE ENGINEER.

Preliminary Plans

ESTIMATE OF QUANTITIES



STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	PENDING/NFHWHY00570	2023	D1	D8

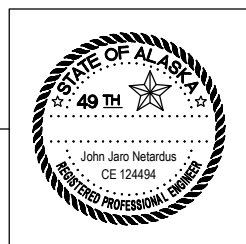
606.0006 – REMOVING AND DISPOSING OF GUARDRAIL	
DESCRIPTION	TOTAL (LINEAR FOOT)
EXISTING GUARDRAIL FOR CHENA RIDGE ROAD	13216.5
EXISTING GUARDRAIL FOR CHENA PUMP ROAD	450

606 – GUARDRAIL SUMMARY							
BEGIN STATION	END STATION	LT	RT	606.0001.0000 W-BEAM GUARDRAIL (LINEAR FOOT)	606.0013.0000 PARALLEL GUARDRAIL TERMINAL (EA.)	G-10.20 CASE TYPE & G-05.11S TYPE 1 INSTALLATION	REMARKS
14+78	18+45	X		267	(2)	N/A	NO ACTION
56+73	85+29	X		2912.5	1	CASE 1	
118+45	125+56		X	712.5	2	CASE 1	
138+15	140+75		X	277	0	N/A	NO ACTION
158+79	170+09		X	1130	2	CASE 1	
309+10	322+34	X		1355	1	CASE 4	
323+79	331+43	X		767	2	CASE 1	
332+20	337+06	X		480	2	CASE 2	
337+00	347+82	X		1100	1	CASE 2	
348+73	352+53	X		412.5	1	CASE 1	
402+87	409+32		X	545	2	N/A	NO ACTION
409+26	413+50		X	324	2	N/A	NO ACTION
414+00	418+15		X	425	2	CASE 2	
420+00	424+25		X	437.5	2	CASE 2	
420+28	425+65	X		512.5	2	CASE 1	
424+93	447+65		X	2375	1	CASE 1	
444+95	448+14	X		320	1	CASE 1	
617+37	619+98		X	250	2	CASE 1	SEE BRIDGE DETAIL SHEETS
618+16	620+23	X		200	2	CASE 1	SEE BRIDGE DETAIL SHEETS
PAY ITEM TOTALS				13666.5	28		

Preliminary Plans

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709, (907)451-2200
H:\Projects\Fbs_NFHWY00570 Chena Ridge and Pump Resurfacing 6 Design\5 Civil\3D\3 Drawings\00570_GUARDRAIL SUMMARY-GUARDRAIL SUMMARY Ftr_Aug\05\22 03:38pm

GUARDRAIL SUMMARY



SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
1	23+70	X		D3-100	Kentshire Dr	30 X 8	X		1.67	E	PST	2.5	1	4C/3C LETTERING	
				D3-100	Kentshire Dr	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	S					
2	26+50		X	R2-1	SPEED LIMIT 45	24 X 30	X		5.00	3	PST	2.5	1		
3	29+10		X	R2-5A	REDUCED SPEED AHEAD	36 X 36	X		9.00	E	PST	2.5	1		
4	29+20		X	OM1-1		18 X 18	X		2.25	E	PST	2.5	1	OBJECT MARKER TYPE 1	
			X	W12-1		48 X 24			8.00					double ended arrow	
5	41+00		X	W2-2L		36 X 36	X		9.00	E	PST	2.5	1		
				S3-1	SCHOOL BUS STOP AHEAD	36 X 36	X		9.00						
				W7-3A	NEXT 3 MILES	24 X 18	X		3.00						
6	44+29	X		D3-100	Knightsbridge Rd	30 X 8	X		1.67	E	PST	2.5	1		
				D3-100	Knightsbridge Rd	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	S					
7	44+31		X	D3-100	Crestmont Dr	30 X 8	X		1.67	E	PST	2.5	1		
				D3-100	Crestmont Dr	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	N					
8	47+20		X	CW1-4L		36 X 36	X		9.00	E	PST	2.5	1		
				W13-1	45 MPH	24 X 24			4.00						
9	62+45		X		1			####		E	PST	2.5	1		
10	72+56	X		CW1-4L		36 X 36	X		9.00						
				W13-1	45 MPH	24 X 24	X		4.00						
11	75+27		X	D3-100	Chena Ridge Rd	32 X 8	X		1.78	N	PST	2.5	1		
				D3-100	Chena Ridge Rd	32 X 8	X		1.78	S					
				D3-100	Yak Rd	30 X 8	X		1.67	E					
				D3-100	Yak Rd	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	N					
12	76+76	X		CW1-4R		36 X 36	X		9.00	W	PST	2.5	1		
				W13-1	45 MPH	24 X 24	X		4.00	W					
13	78+34	X		D14-100	ADOPT A HIGHWAY	30 X 24	X		5.00	W	PST	2.5	1		
				D14-100	ALASKA FUEL DISTRIBUTORS	30 X 12	X		2.50						
14	85+14	X		D3-100	Friar's Way	30 X 8	X		1.67	E	PST	2.5	1		
				D3-100	Friar's Way	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	S					
15	85+92		X	S3-1	SCHOOL BUS STOP AHEAD	30 X 30	X		6.25	E	PST	2.5	1		

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
16	89+94		X	D3-100	Ridgecrest Dr	30 X 8	X		1.67	E	PST	2.5	1	4C/3C LETTERING	
				D3-100	Kentshire Dr	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	N					
17	90+87		X	W7-1		30 X 30	X		6.25	3	PST	2.5	1	Hill Symbol	
18	92+68		X	S3-1	SCHOOL BUS STOP AHEAD	36 X 36	X		9.00	E	PST	2.5	1		
19	99+36		X	CW1-4R		36 X 36			9.00	E	PST	2.5	1		
				W13-1	50 MPH	24 X 24			4.00						
20	107+25	X		D3-100	Alaska Range Ln	34 X 8	X		1.89	E	PST	2.5	1		
				D3-100	Alaska Range Ln	34 X 8	X		1.89	W					
				R1-1	STOP	30 X 30	X		6.25	S					
21	126+21	X		D3-100	Guinivere Pl	30 X 8	X		1.67	E	PST	2.5	1		
				D3-100	Guinivere Pl	30 X 8	X		1.67	W					
				R1-1	STOP	30 X 30	X		6.25	S					
22	128+79		X	W11-8		36 X 36	X		9.00	E	PST	2.5	1	FIRE STATION (TRUCK)	
23	12+26	X		W7-102	HIDDEN DRIVEWAY	36 X 36	X		9.00	E	PST	2.5	1		
				W13-1	45 MPH	24 X 24			4.00						
24	134+23		X	D14-100	ADOPT A HIGHWAY	30 X 24	X		5.00	W	PST	2.5	1		
				D14-100	ALASKA FUEL DISTRIBUTORS	30 X 12	X		2.50						
25	139+88	X		W11-8		36 X 36	X		9.00	W	PST	2.5	1	FIRE STATION (TRUCK)	
				W11-8A	FIRE STATION	24 X 24	X		4.00						
26	140+14	X		W7-102	Hidden Driveway	30 X 30	X		6.25	N	PST	2.5	1		
				W13-1	45 mph	24 X 8	X		1.33	S					
27	141+35	X		W?	Caution Emergency Vehicles Ahead	30 X 30	X		6.25	W	PST	2.5	1		
				W13-1	45 MPH	24 X 24	X		4.00	W					
28	149+37	X		D3-100	Chena Hills Dr	30 X 8	X		1.67	N	PST	2.5	1		
				D3-100	Chena Hills Dr	30 X 8	X		1.67	S					
				R1-1	STOP	30 X 30	X		6.25	W					
29	149+80	X		R2-1	SPEED LIMIT 55	24 X 30	X		5.00	E	PST	2.5	1		
30	156+11	X		R2-1	SPEED LIMIT 55	24 X 30	X		5.00	E	PST	2.5	1		

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
 W_X_ = WIDE FLANGE

NOTES:

- ADD THE SIGNING NOTES HERE.
- THE EXAMPLE SUMMARY ABOVE SHOWS A FEW UNIQUE SITUATIONS. TO FACILITATE FORMATTING, CELLS FROM THIS SUMMARY CAN BE COPIED AND MODIFIED.
- THE BORDER COLORS ARE 1(REDF) FOR ROW AND COLUMN LINES, 174 FOR THE TITLE AND OUTER BORDERS

SIGN SUMMARY 1



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D7	D8

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
151	640+23	X		D3-1	Chena Small Tracts Rd	40 X 18	X		5.00		E	PST	2.5	1	
152	640+23		X	R2-1	SPEED LIMIT 50	30 X 36	X		7.50		W	PST	2.5	1	NO ACTION
153	644+89		X	D3-1	Palo Verde Ave	36 X 18	X		4.50		S	PST	2.5	1	NO ACTION
154	647+91	X		W4-2R		36 X 36	X		9.00		W	PST	2.5	1	
155	649+90		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
156	651+18		X	D3-100	Chena Pump Rd	30 X 8	X		1.67		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30 X 8	X		1.67		S				NO ACTION
				D3-100	Palo Verde Ave	30 X 8	X		1.67		E				NO ACTION
				D3-100	Palo Verde Ave	30 X 8	X		1.67		W				NO ACTION
				R1-1	STOP	36 X 36	X		9.00		S				NO ACTION
157	651+60		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
158	654+88	X		W9-1R	RIGHT LANE ENDS	36 X 36	X		9.00		E	PST	2.5	1	
159	655+26	X		D3-1	PALO VERDE AVE WOODRIVER SCHOOL	48 X 36	X		12.00		E	PST	2.5	1	
160	661+61		X	D3-1	AMHERST DR	36 X 24	X		6.00		W	PST	2.5	1	NO ACTION
161	666+49	X		D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-1	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
162	666+50	X		R2-1	SPEED LIMIT 45	30 X 36	X		7.50		W	PST	2.5	1	
163	667+71		X	R3-9CP	BEGIN	30 X 12	X		2.50		N	PST	2.5	1	NO ACTION
				R3-9B	Chena Pump Rd	24 X 35	X		5.83		S				NO ACTION
164	668+30		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
165	668+88		X	R2-1	SPEED LIMIT 45	30 X 36	X		7.50		E	PST	2.5	1	NO ACTION
166	669+69	X		W2-2R		36 X 36	X		9.00		E	PST	2.5	1	
				W16-8	ROLAND RD	30 X 8	X		1.67						
167	670+52		X	D3-1	Nebula Way	32 X 8	X		1.78		N	PST	2.5	1	NO ACTION
168	672+62	X		D3-1	AMHERST DR	36 X 8	X		2.00		S				
169	677+02		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
				R5-3	NO MOTOR VEHICLES	24 X 24	X		4.00		W				NO ACTION
170	678+10	X		R4-7		24 X 30	X		5.00		W	PST	2.5	1	ON MEDIAN ISLAND
				OM1-1		18 X 18	X		2.25		W				

POST TYPE LEGEND:

PST = PERFORATED STEEL TUBE
 TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
 W_X = WIDE FLANGE

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION		ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING		AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST			REMARKS
		LT.	RT.				BRACED	FRAMED				TYPE	SIZE (INCHES)	NO.	
						X			####						
171	677+98		X	D3-100	Chena Pump Rd	30 X 8	X		1.67		N	PST	2.5	1	NO ACTION
				D3-100	Chena Pump Rd	30 X 8	X		1.67		S				NO ACTION
				D3-100	Nebula Way	26 X 8	X		1.44		E				NO ACTION
				D3-100	Nebula Way	26 X 8	X		1.44		W				NO ACTION
				R1-1	STOP	36 X 36	X		9.00		S				NO ACTION
172	678+40	X		W6-1		36 X 36	X		9.00		W	PST	2.5	1	
173	680+50		X	D11-1	BIKE ROUTE	30 X 24	X		5.00		W	PST	2.5	1	NO ACTION
174	680+87	X		D14-100	ADOPT A HIGHWAY	30 X 24	X		5.00		E		2.5	1	ON LIGHT POST
					THE PUMP HOUSE RESTAURANT	12 X 24	X		2.00		E				
				R12-102	75% MAXIMUM AXLE LOAD	42 X 48	X		14.00		E				
175	680+60	X		W6-1		36 X 36	X		9.00		E	PST	2.5	1	

NOTES:

1. MOUNTING HEIGHTS ARE PER STANDARD PLAN S-5.02 UNLESS OTHERWISE NOTED.
2. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
3. INSTALL PST SIGHT POSTS WITH SLEEVE TYPE SOIL EMBEDMENT. EMBED PST IN SLEEVE 12" TO 24" PER STANDARD PLAN S-30.05. ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHER AND TWO FLAT WASHERS.
4. 1/2" X 1 1/2" ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES AS SHOWN ON STANDARD PLANS S-01.02.
5. ATTACH ALL SIGN POSTS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
6. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" UNDER SECTION 730-2.07 OF THE SSHC
7. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
8. ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.
9. LOCATE AND PROTECT ALL NEW AND EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NO ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
10. CLEARING, AS DIRECTED BY THE ENGINEER, MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF THE SIGNS. THIS WORK IS SUBSIDIARY TO PAY ITEM 615.0001.0000

SIGN SUMMARY 6



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	D8	D8

SUPERELEVATION SUMMARY											
CURVE PI	RADIUS (FT)	BEGIN TRANSITION	TRANSITION LENGTH (FT)	CURVE PC	BEGIN FULL SUPERELEVATION	SUPERELEVATION RATE (%)	END FULL SUPERELEVATION	CURVE PT	TRANSITION LENGTH (FT)	END TRANSITION	REMARKS
54+13	818.51	48+35	215	49+99.21	50+50	6	57+75	58+20.70	215	59+90	
65+58	763.94	61+45	210	63+05.66	63+55	6	67+60	68+06.86	215	69+75	
81+85	954.93	77+65	210	79+26.96	79+75	6	83+95	84+40.86	215	86+10	

NOTES:

- ALL CONSTRUCTION ACTIVITIES SHALL OCCUR WITHIN THE EXISTING ROW.
- RECONSTRUCTION OF CHENA RIDGE ROAD FROM STATION 46+00 TO 84+00 IS TO BE COMPLETED AT LEAST 2 WEEKS PRIOR TO SURFACE SEALING.
- USE TYPICAL SECTION ON PAGE B2
- SAW CUT ALL MATCH LINES WHERE NEW CONSTRUCTION ABUTS EXISTING ASPHALT, APPLY STE-1 ASPHALT FOR TACK COAT ON THE VERTICAL FACE OF ALL SAW CUTS PRIOR TO PAVING. SAW CUTTING WILL NOT BE MEASURED BY OR PAID FOR DIRECTLY, BUT IS SUBSIDIARY TO OTHER HOT MIX ASPHALT PAY ITEMS.
- MECHANIZED LAND VEGETATION CLEARING AND GRUBBING IS PROHIBITED DURING THE MIGRATORY BIRD NESTING SEASON (MAY 1 - JULY 15).
- CONTRACTOR WILL VERIFY UTILITY LOCATIONS PRIOR TO BEGINNING ANY GROUND DISTURBING WORK, LOCATE ALL EXISTING UTILITIES WITHIN THE PROJECT BOUNDARIES. PROTECT UTILITIES FROM CONSTRUCTION DAMAGE FOR THE DURATION OF THE PROJECT.
- ALL UNUSABLE WASTE MATERIAL IS TO BE DISPOSED OF OUTSIDE THE PROJECT LIMITS. THE CONTRACTOR IS RESPONSIBLE FOR OBTAINING WASTE DISPOSAL SITES AT AREAS APPROVED BY THE ENGINEER.

SUPERELEVATION SUMMARY



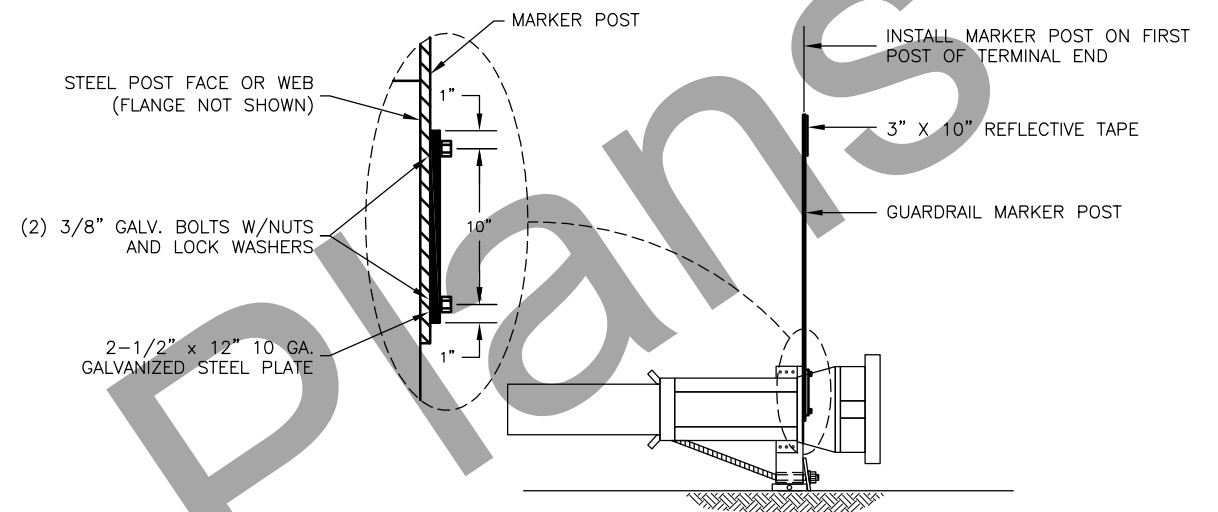
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	PENDING/NFHWHY00570	2023	E1	E1

GUARDRAIL SUMMARY NOTES:

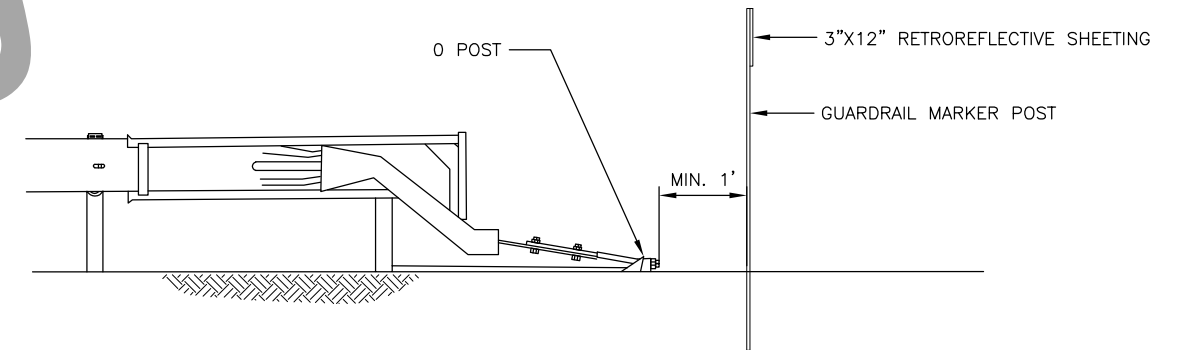
1. GUARDRAIL LENGTHS AND LOCATIONS ARE APPROXIMATE AND MAY BE ADJUSTED IN THE FIELD BY THE ENGINEER.
2. GUARDRAIL POST LENGTH SHALL BE DETERMINED IN ACCORDANCE WITH STANDARD PLAN G-10.20, SHEET 1 OF 1. ALL WORK AND MATERIALS REQUIRED TO INSTALL GUARDRAIL POSTS ARE SUBSIDIARY TO THE 606 PAY ITEMS.
3. IN ADDITION TO THE GUARDRAIL REFLECTORS, INSTALL GUARDRAIL FLEXIBLE DELINEATORS AS SHOWN ON STANDARD PLAN G-00.05, SHEET 5 OF 5.
4. USE AGGREGATE BASE COURSE, GRADING D-1, FROM THE FRONT FACE OF THE POST TO THE HINGE POINT BEHIND THE POST; COMPACT AND GRADE TO MATCH THE TOP SURFACE AND CROSS-SLOPE OF SHOULDER UNLESS OTHERWISE STATED BY CASE TYPE IN STANDARD PLAN G-10.20.
5. 606.0013 PARALLEL GUARDRAIL TERMINAL = 50'.
6. END ANCHORS =12.5' (INCLUDED AS PART OF THE 606.0001 PAY ITEM)

GUARDRAIL MARKER NOTES:

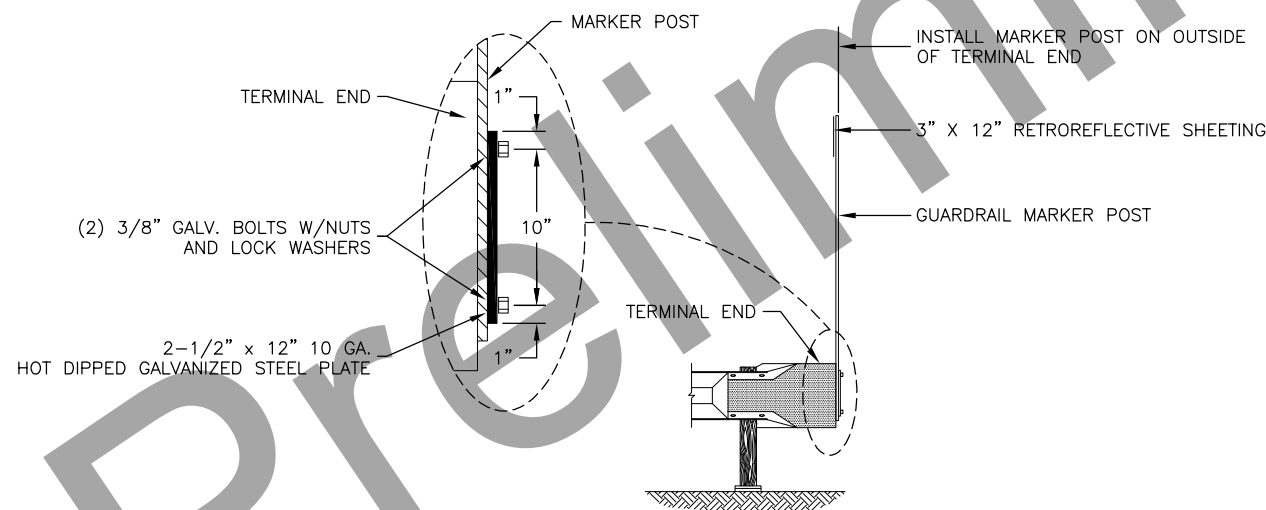
7. GUARDRAIL MARKER POSTS SHALL BE YELLOW AND AT LEAST 78" LONG. POSTS SHALL MEET THE REQUIREMENTS OF SUBSECTION 730-2.05 FLEXIBLE DELINEATOR POSTS.
8. RETROREFLECTIVE SHEETING SHALL MEET ASTM D4956 REQUIREMENTS FOR TYPE VIII, IX, OR XI. COLOR OF RETROREFLECTIVE SHEETING SHALL MATCH COLOR OF ADJACENT EDGE LINE STRIPE. PLACE RETROREFLECTIVE SHEETING ON SIDE OF MARKER POST FACING TRAFFIC IN ADJACENT LANE.
9. FOR SOFT STOP PARALLEL END TREATMENTS PLACE CENTER OF MARKER POST IN LINE WITH TRAFFIC SIDE OF O POST. DRIVE GUARDRAIL MARKER POST 18" INTO GROUND.
10. FOR ALL OTHER END TREATMENTS, DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
11. ALL WORK AND MATERIAL REQUIRED TO INSTALL GUARDRAIL MARKER POSTS IS SUBSIDIARY TO 606 PAY ITEMS.



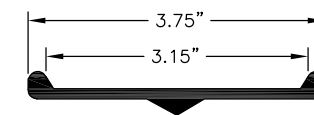
GUARDRAIL MARKER POST ATTACHMENT DETAIL
PARALLEL GUARDRAIL TERMINALS



GUARDRAIL MARKER POST INSTALLATION DETAIL
SOFT STOP PARALLEL GUARDRAIL TERMINAL



GUARDRAIL MARKER POST ATTACHMENT DETAIL
DOWNSTREAM END ANCHOR



POST DETAIL
CROSS-SECTIONAL VIEW

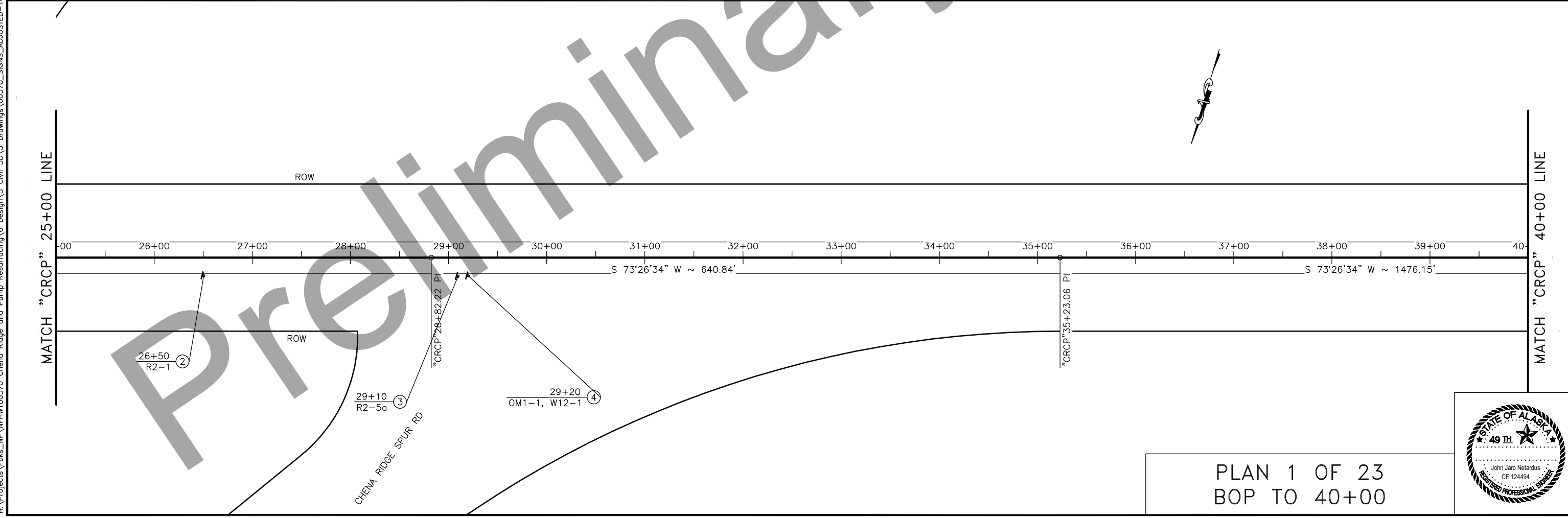
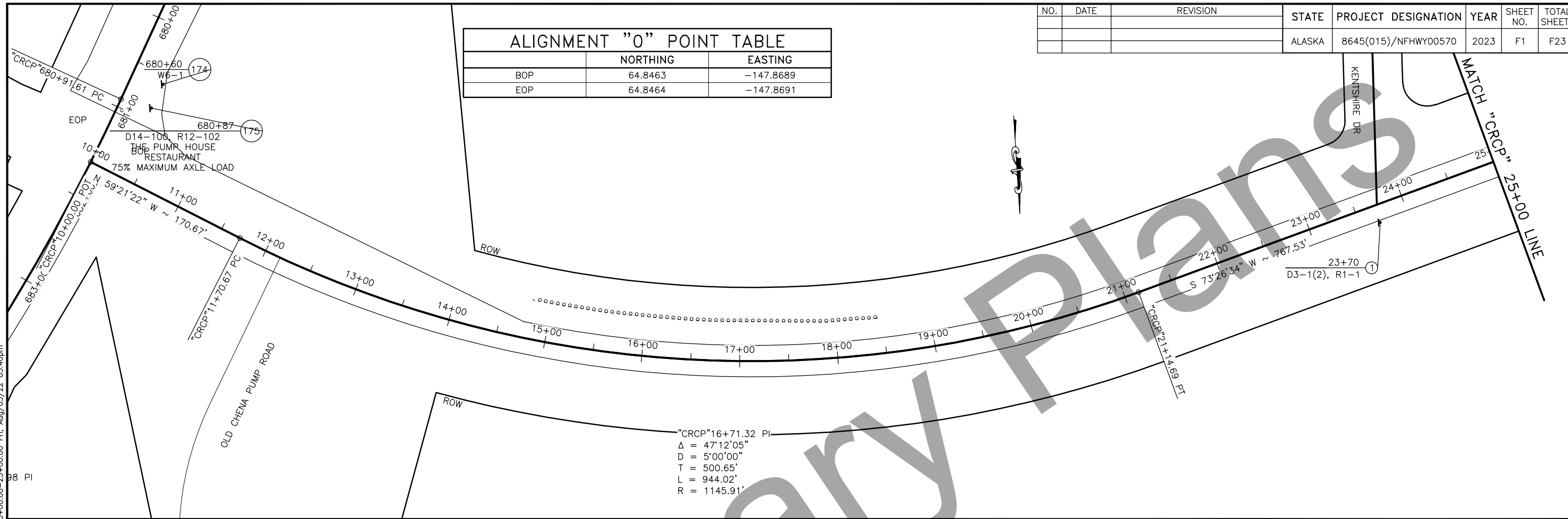
**GUARDRAIL DETAILS
AND NOTES**



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709, (907)451-2200
H:\Projects\Fbs_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil\3D\3 Drawings\00570_GUARDRAIL SUMMARY_GUARDRAIL DETAILS Tue, Aug/02/22 04:04pm

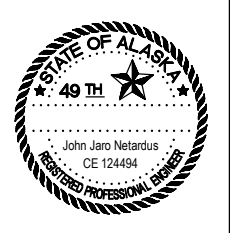
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F1	F23

ALIGNMENT "0" POINT TABLE		
	NORTHING	EASTING
BOP	64.8463	-147.8689
EOP	64.8464	-147.8691

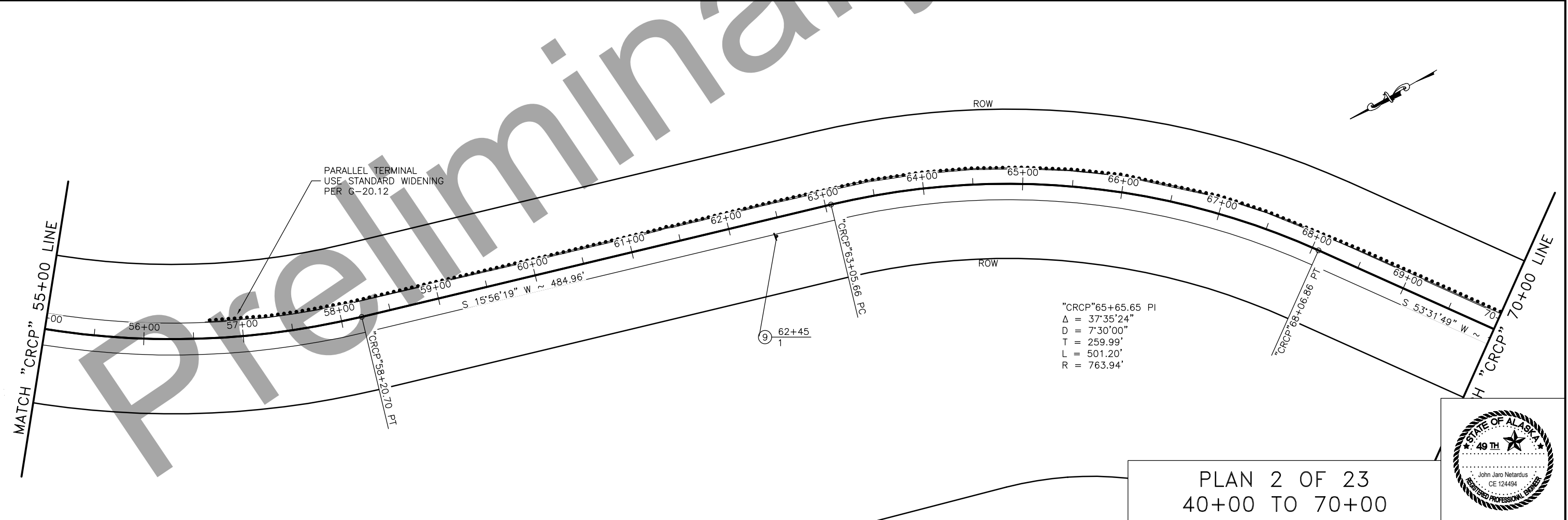
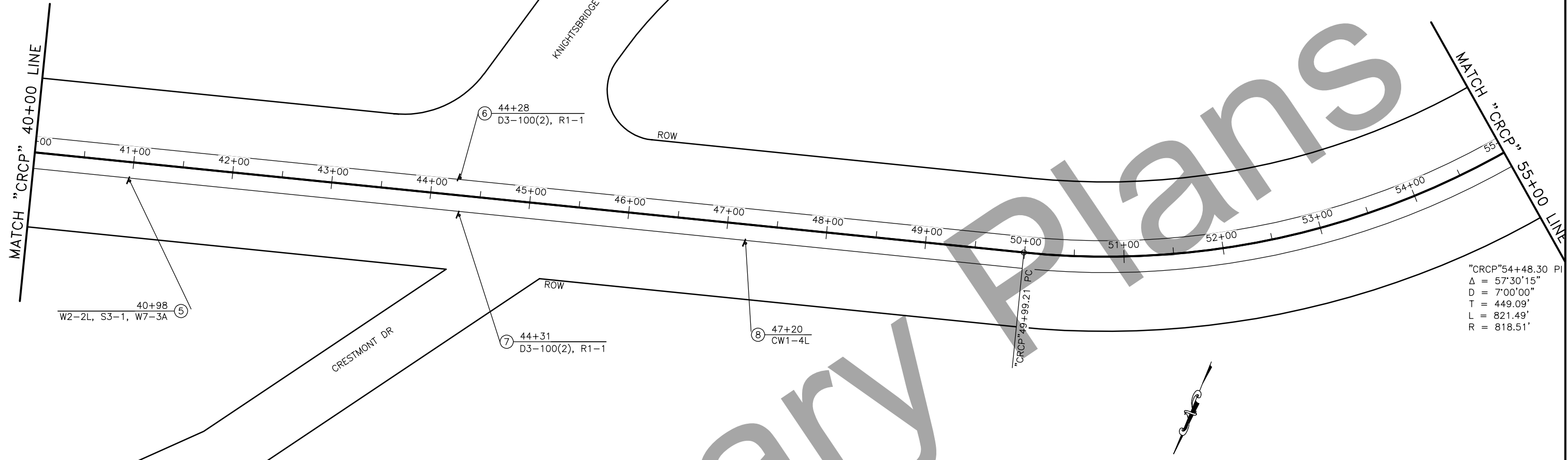


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\FHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-10+00.00-25+00.00 Fri, Aug/05/22 03:40pm

PLAN 1 OF 23
 BOP TO 40+00

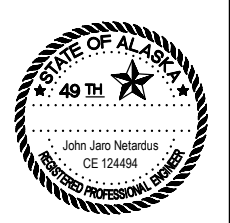


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F2	F23

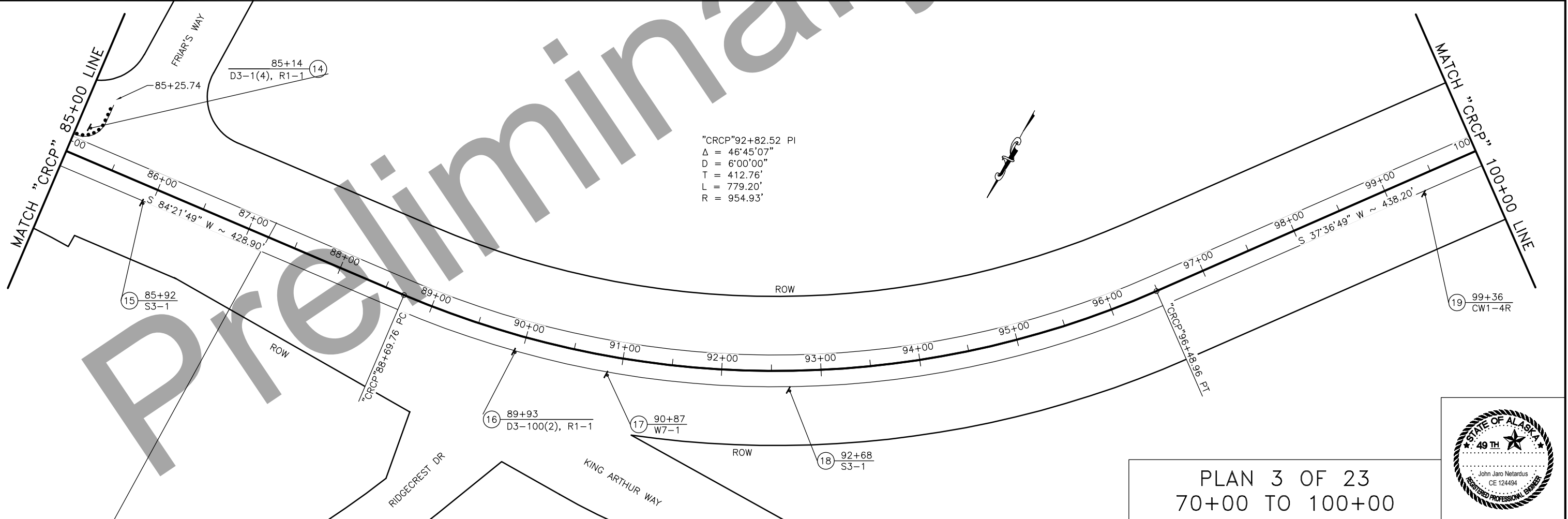
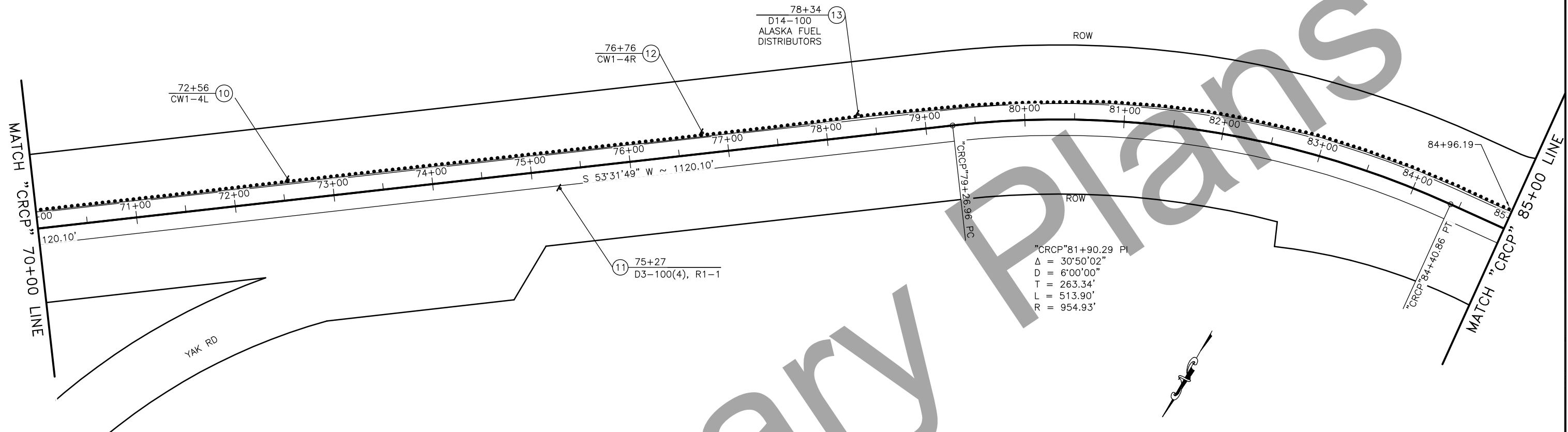


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump_Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-40+00.00-55+00.00 Fri, Aug/05/22 04:36pm

PLAN 2 OF 23
 40+00 TO 70+00

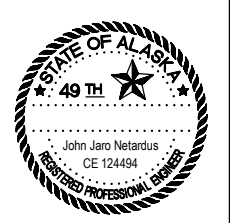


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F3	F23

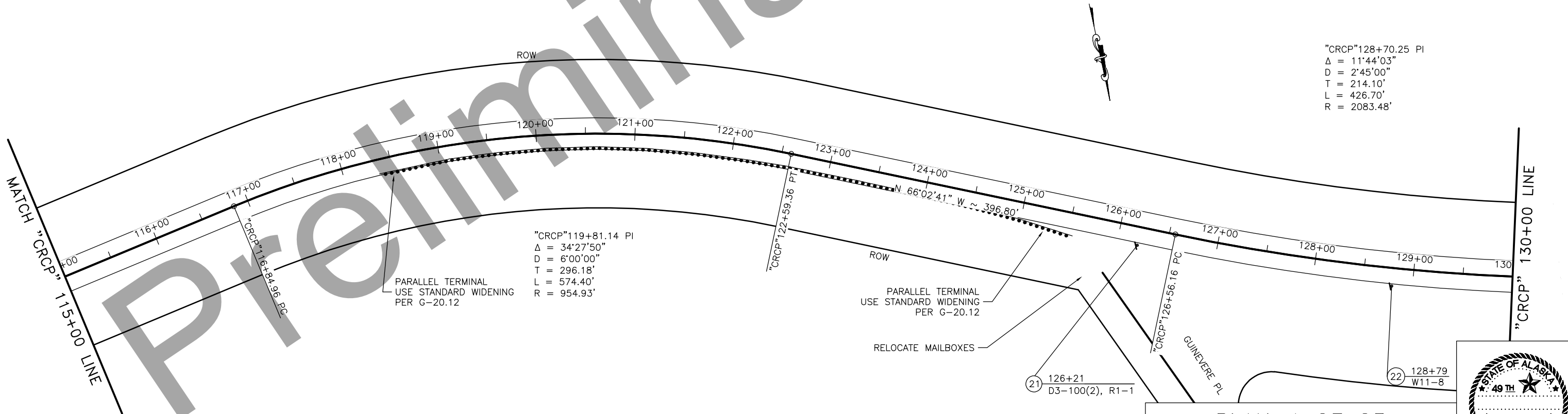
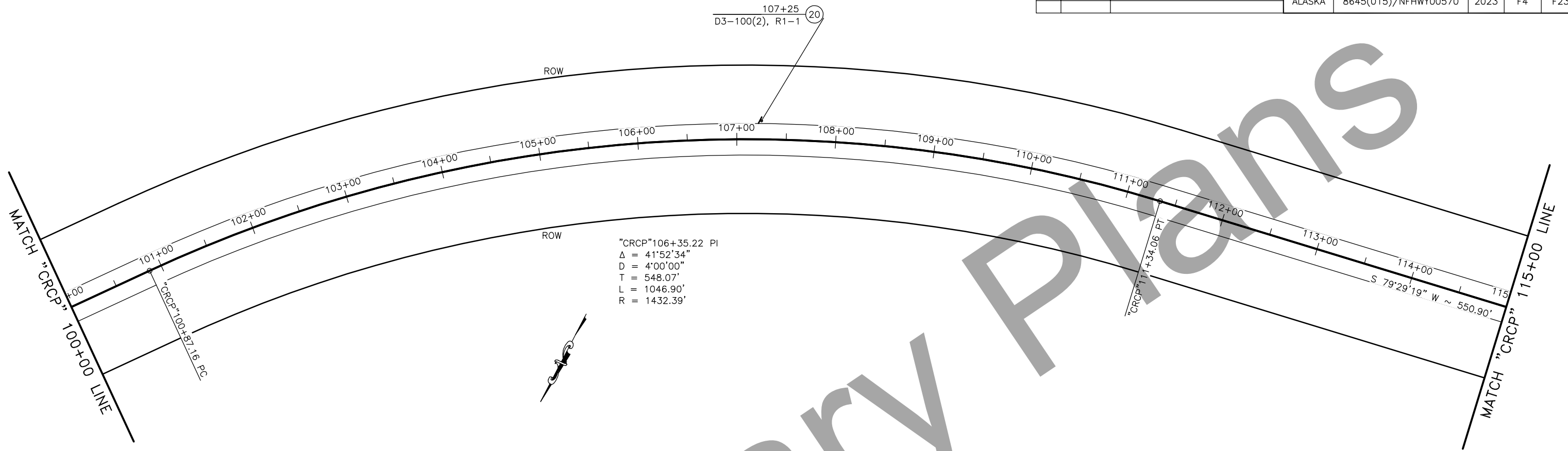


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\FHWY00570 Chena Ridge and Pump_Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-70+00.00-85+00.00 Fri, Aug/05/22 04:01:pm

PLAN 3 OF 23
 70+00 TO 100+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F4	F23

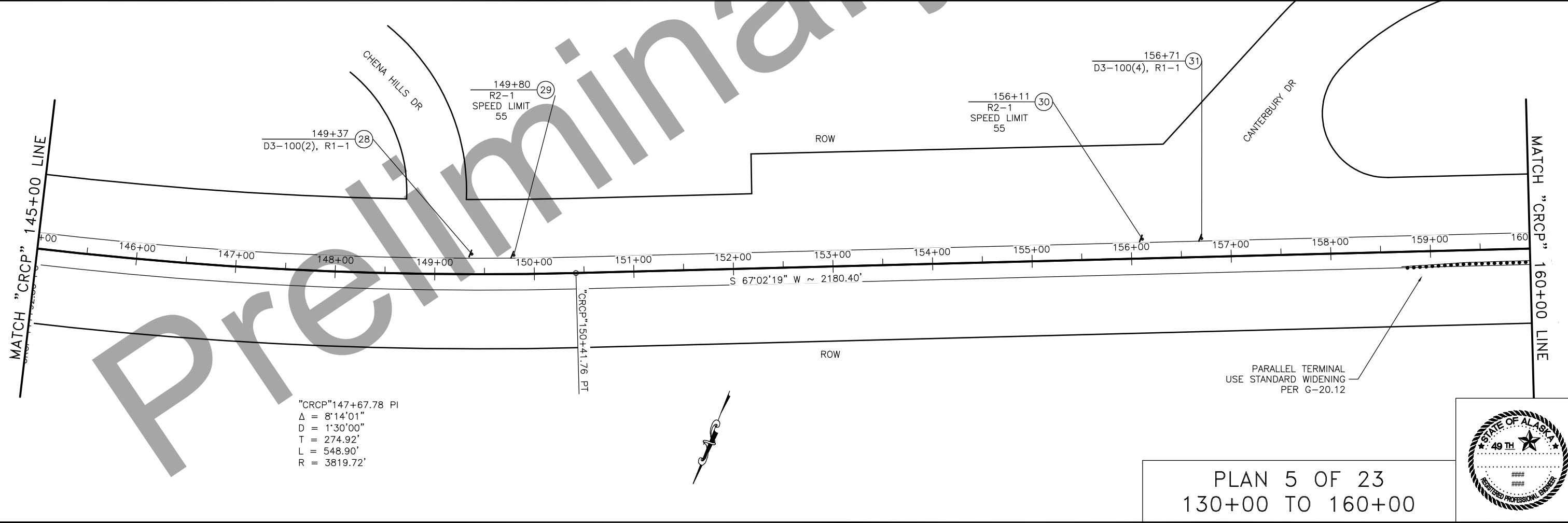
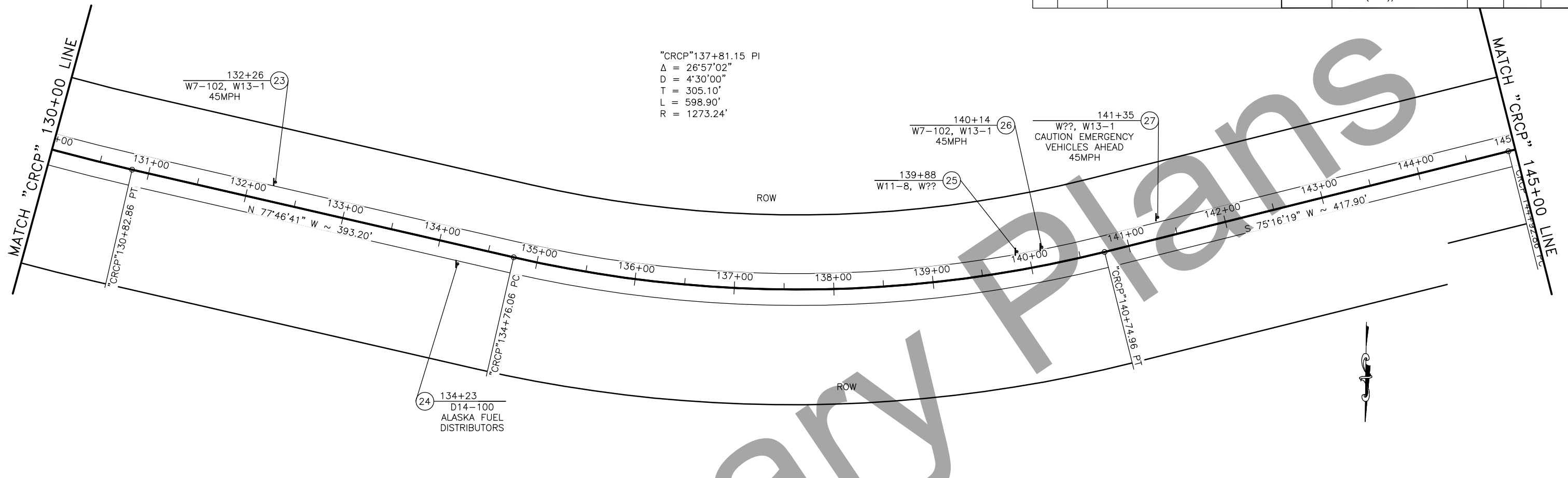


PLAN 4 OF 23
100+00 TO 130+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-100+00.00-115+00.00-Fri_Aug/05/22_03:41pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F5	F23

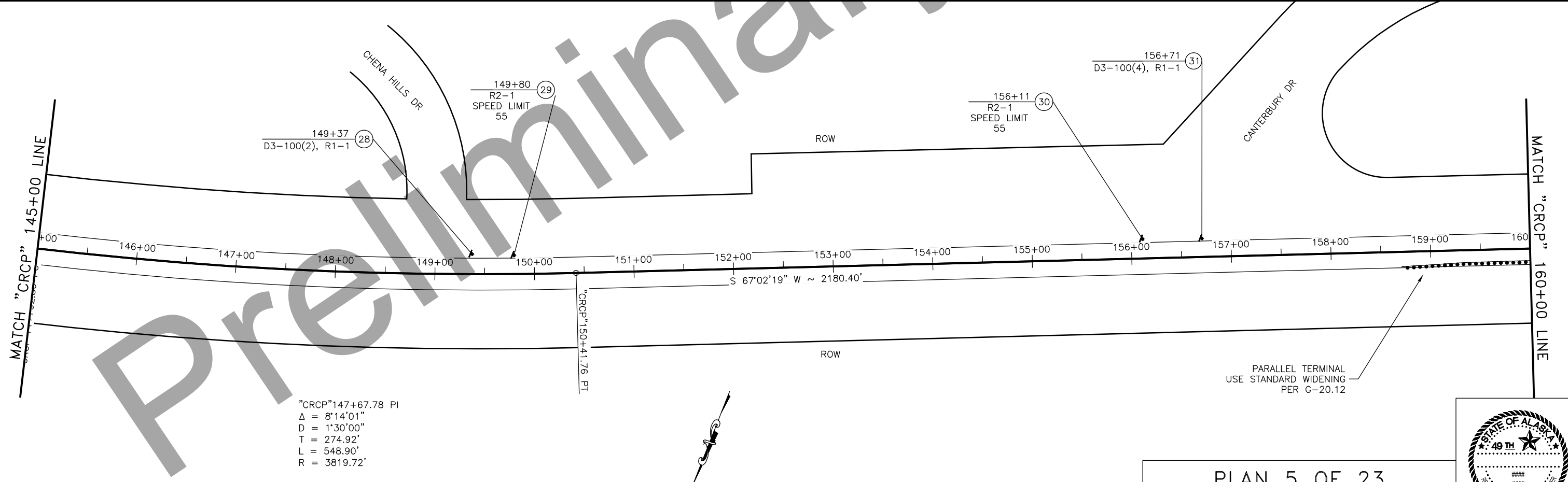
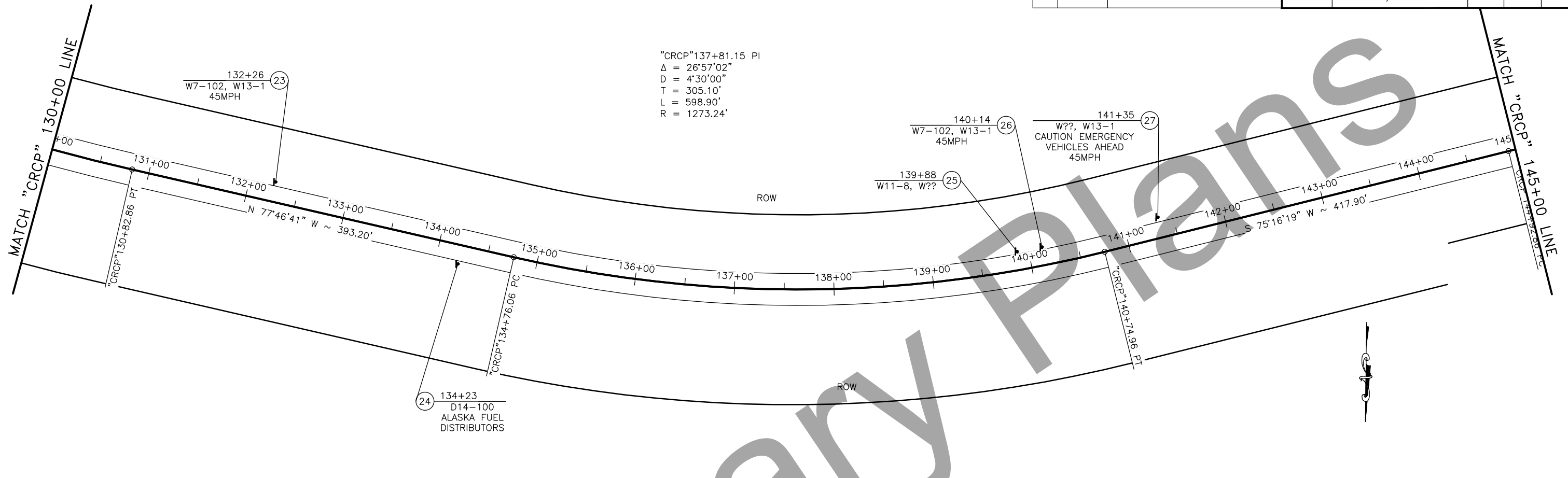


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-130+00.00-145+00.00 Fri, Aug/05/22 03:59pm

PLAN 5 OF 23
 130+00 TO 160+00

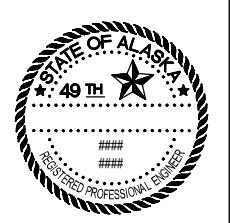


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	PENDING/NFHWY00570	2023	F5	F23

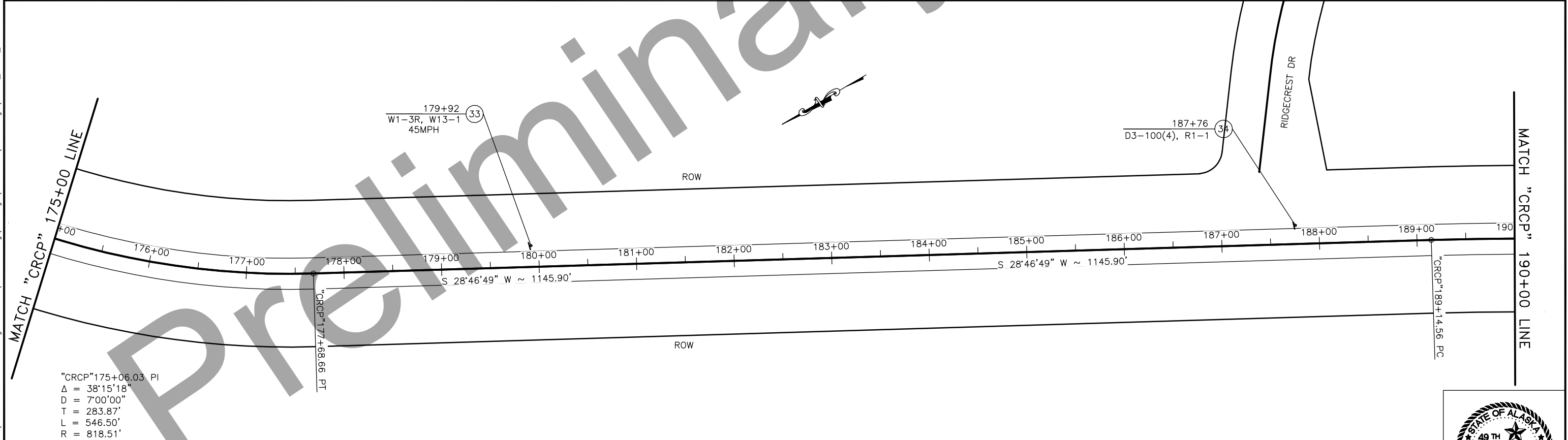
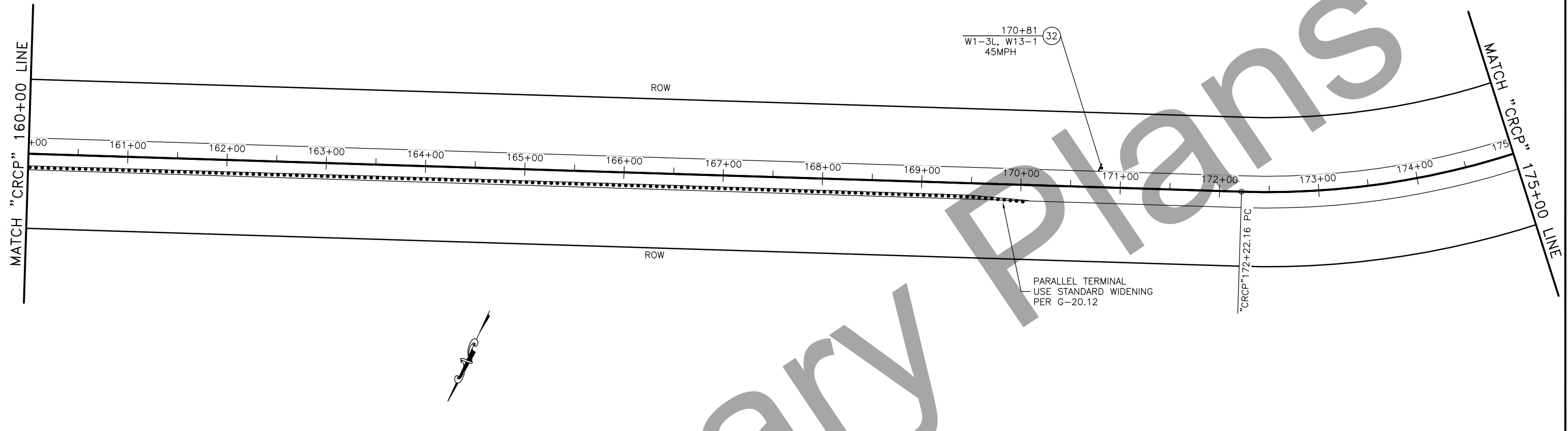


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-130+00.00-145+00.00_Thu, Aug/04/22 02:55pm

PLAN 5 OF 23
 130+00 TO 160+00

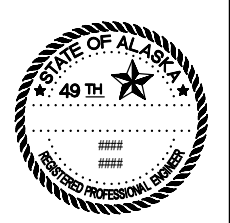


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F6	F23



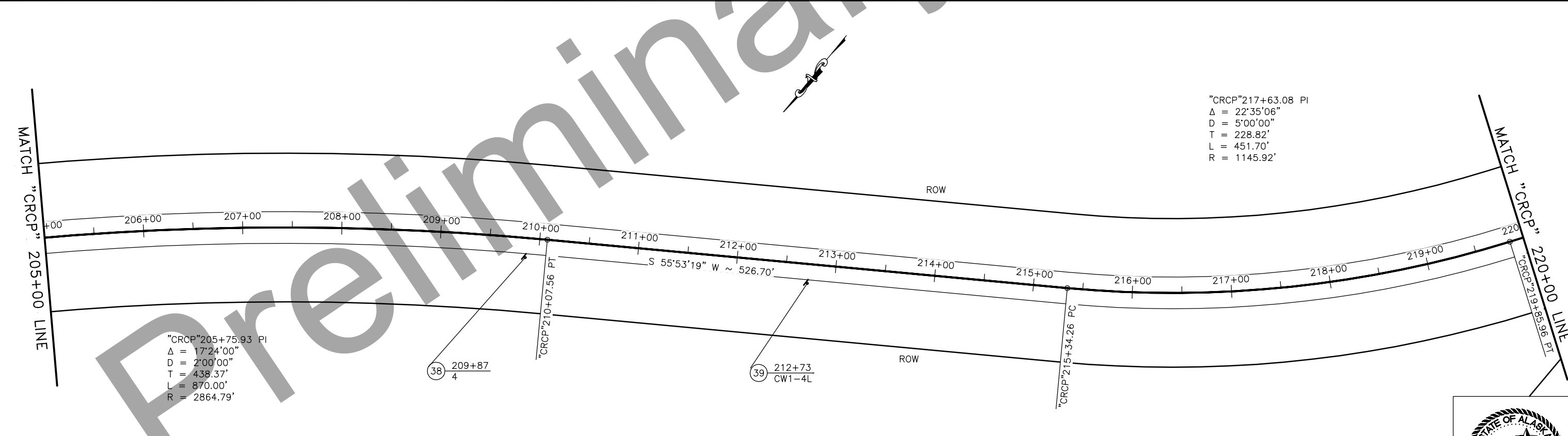
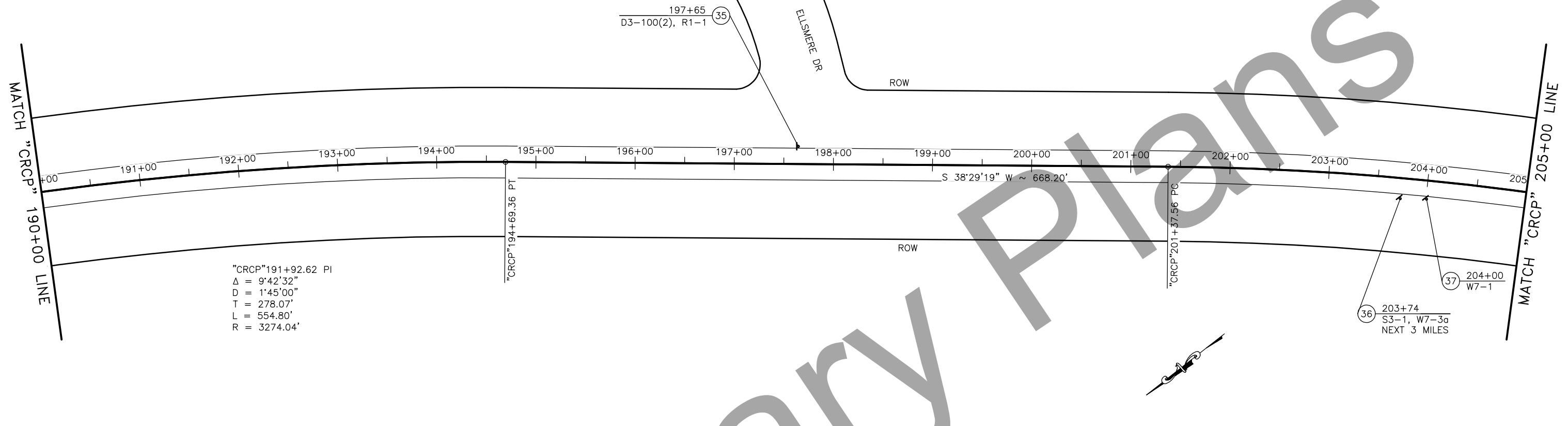
"CRCP"175+06.03 PI
 $\Delta = 38'15'18"$
 $D = 7'00'00"$
 $T = 283.87'$
 $L = 546.50'$
 $R = 818.51'$

PLAN 6 OF 23
 160+00 TO 190+00



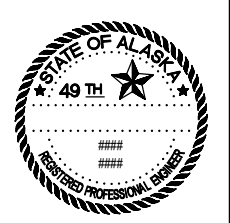
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-160+00.00-175+00.00 Fri, Aug/05/22 03:42pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F7	F23

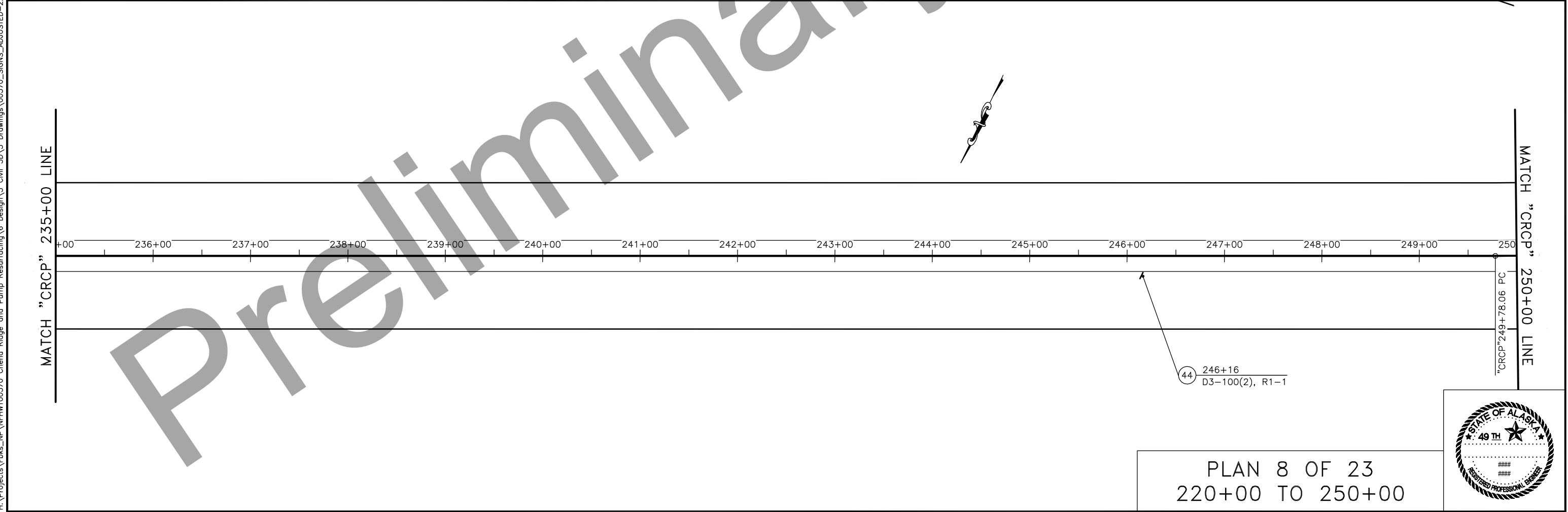
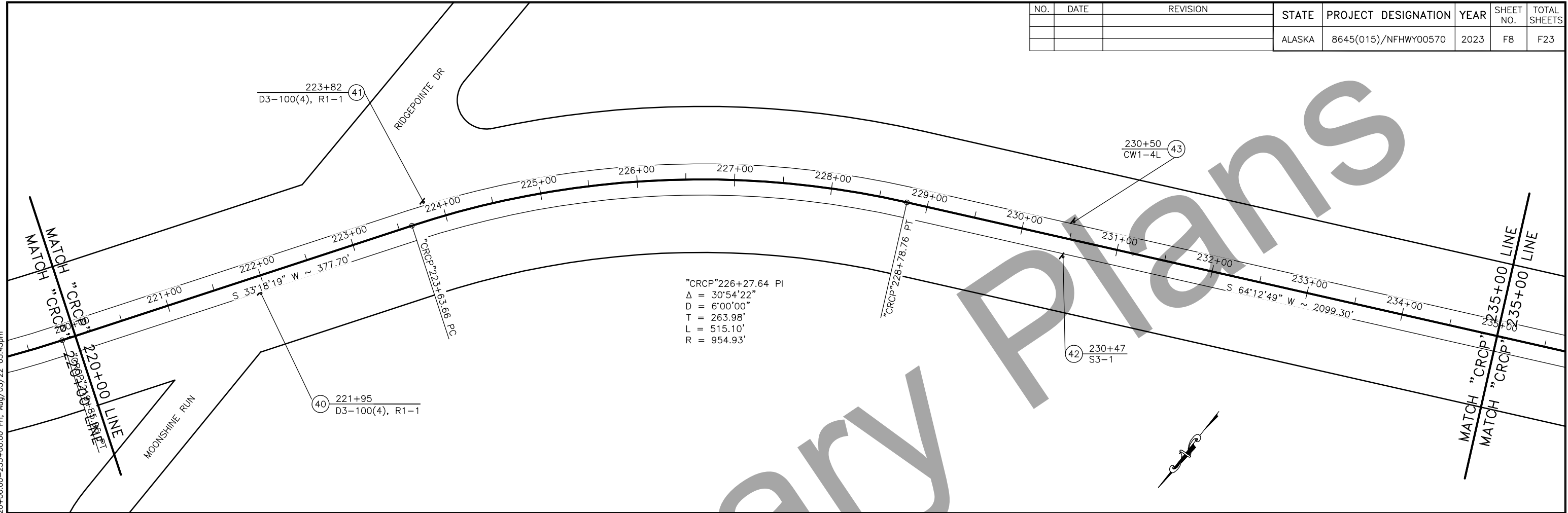


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-190+00.00-205+00.00 Fri, Aug/05/22 03:43pm

PLAN 7 OF 23
 190+00 TO 220+00

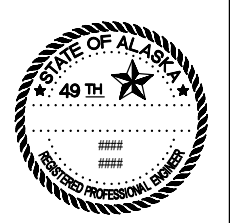


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F8	F23

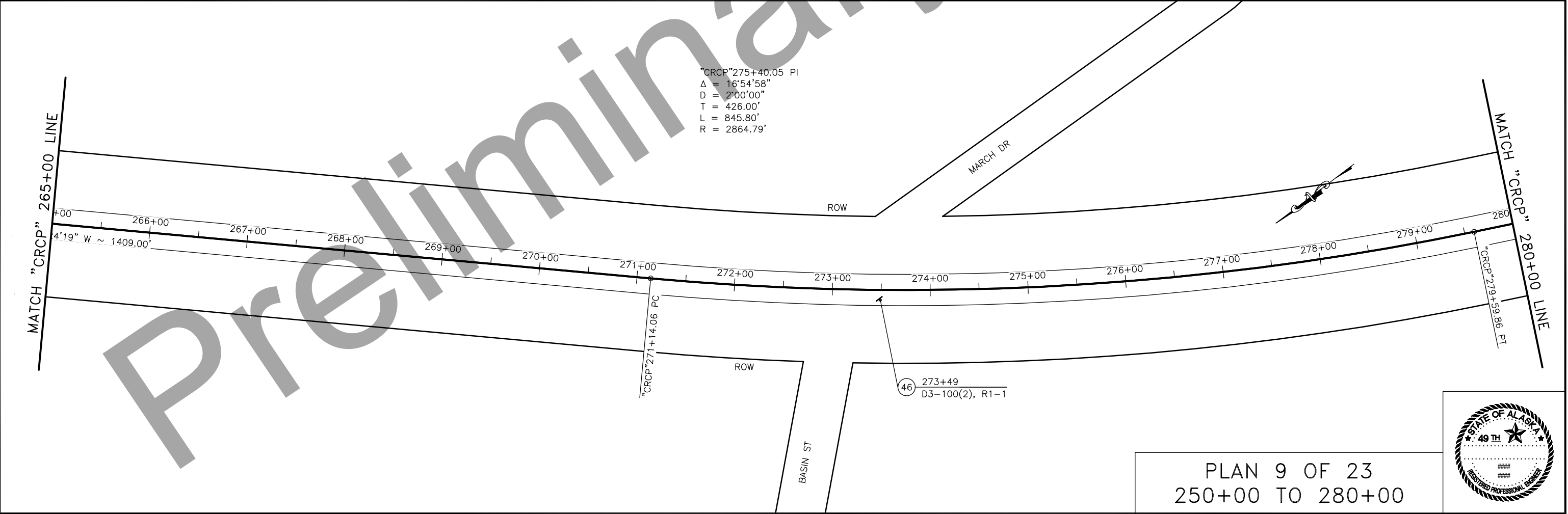
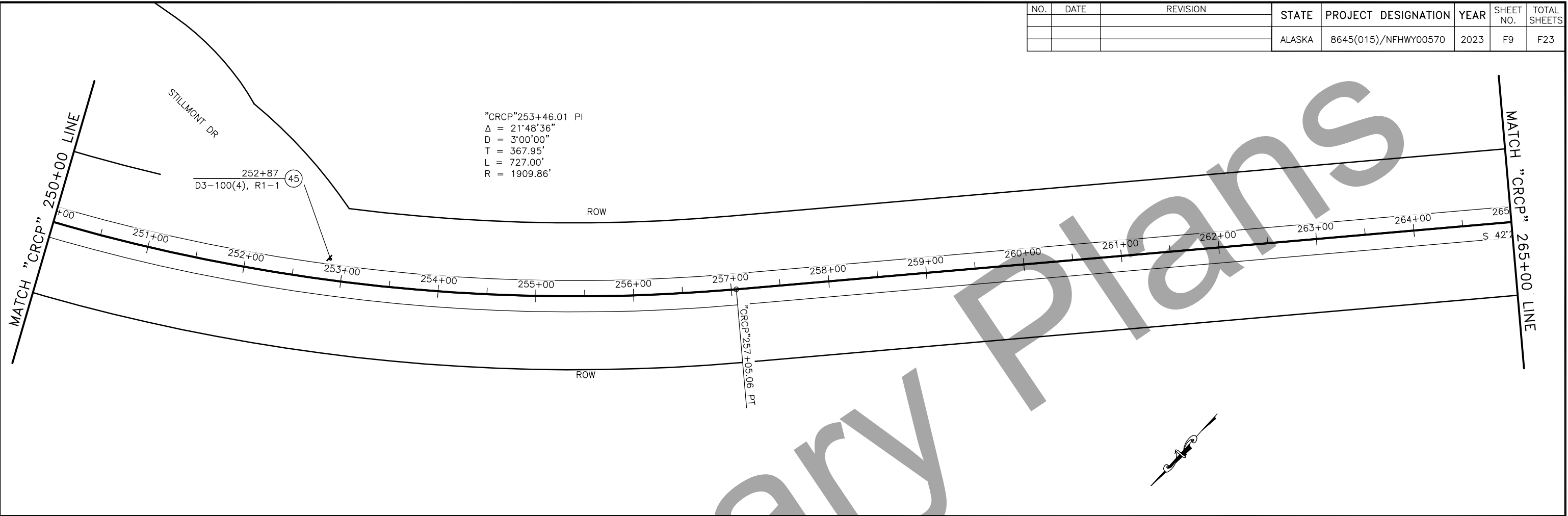


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-220+00.00-235+00.00 Fri, Aug/05/22 03:43pm

PLAN 8 OF 23
 220+00 TO 250+00

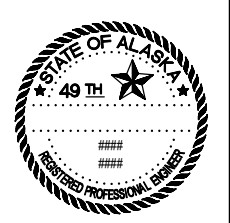


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F9	F23

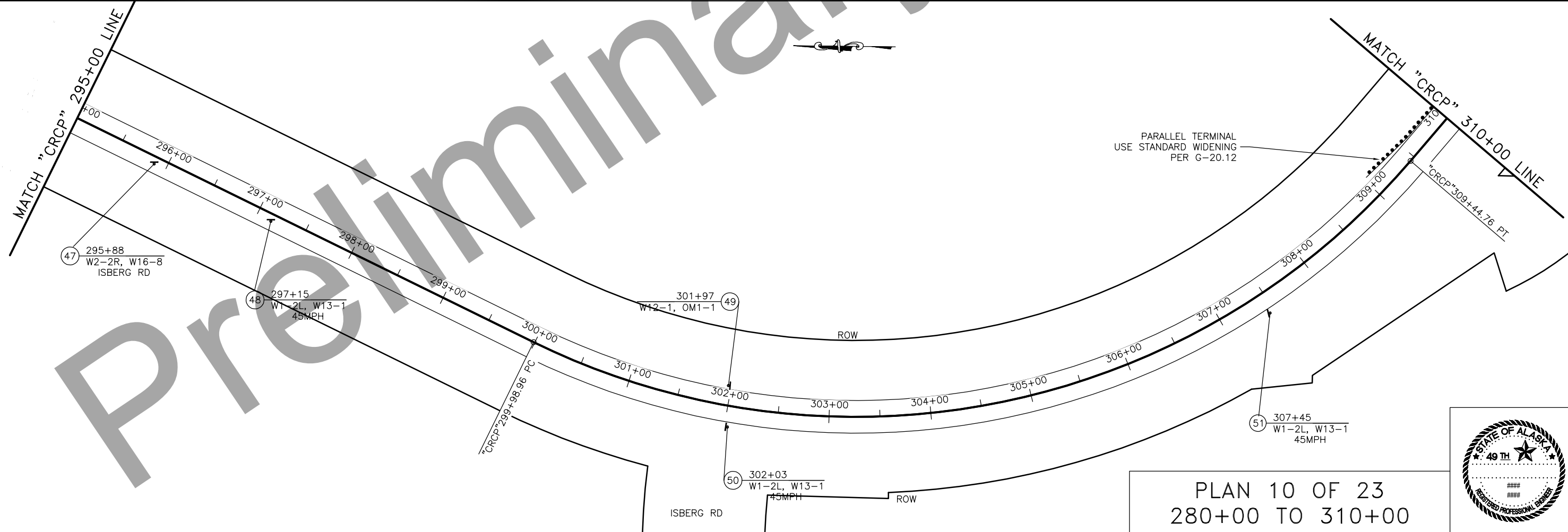
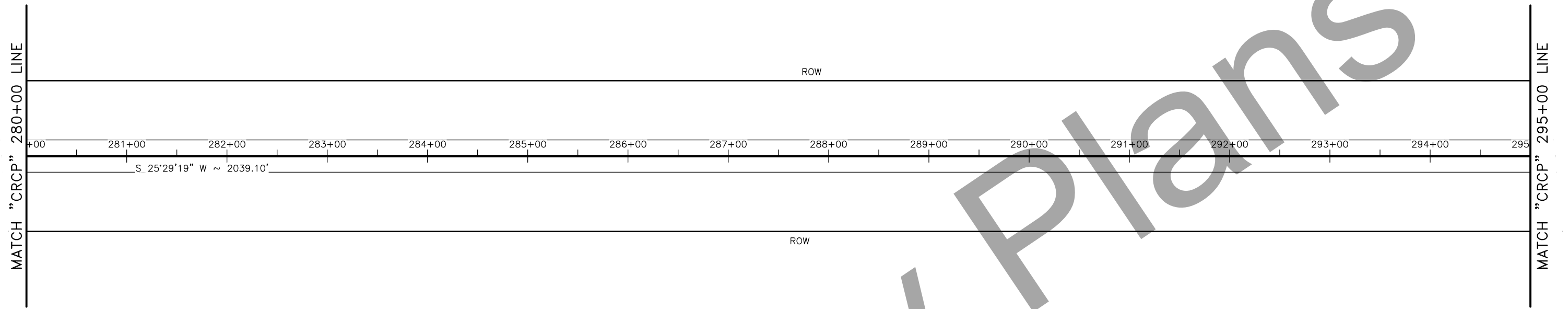


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-250+00.00-265+00.00 Fri, Aug/05/22 03:44pm

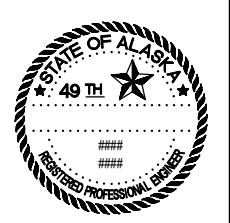
PLAN 9 OF 23
 250+00 TO 280+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F10	F23

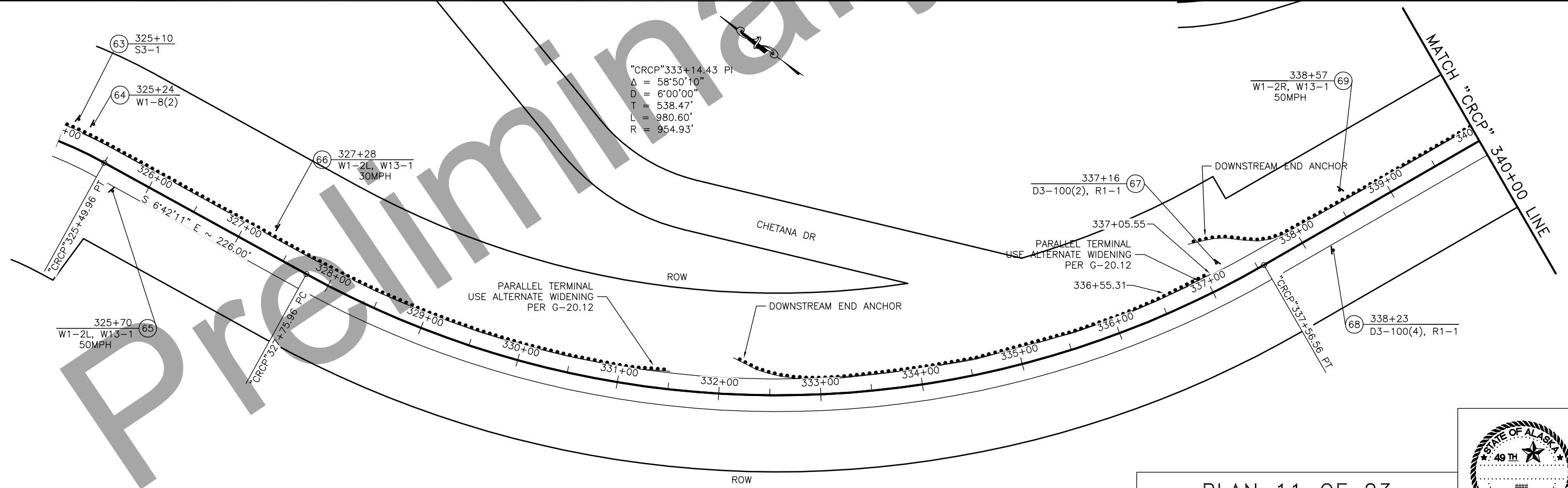
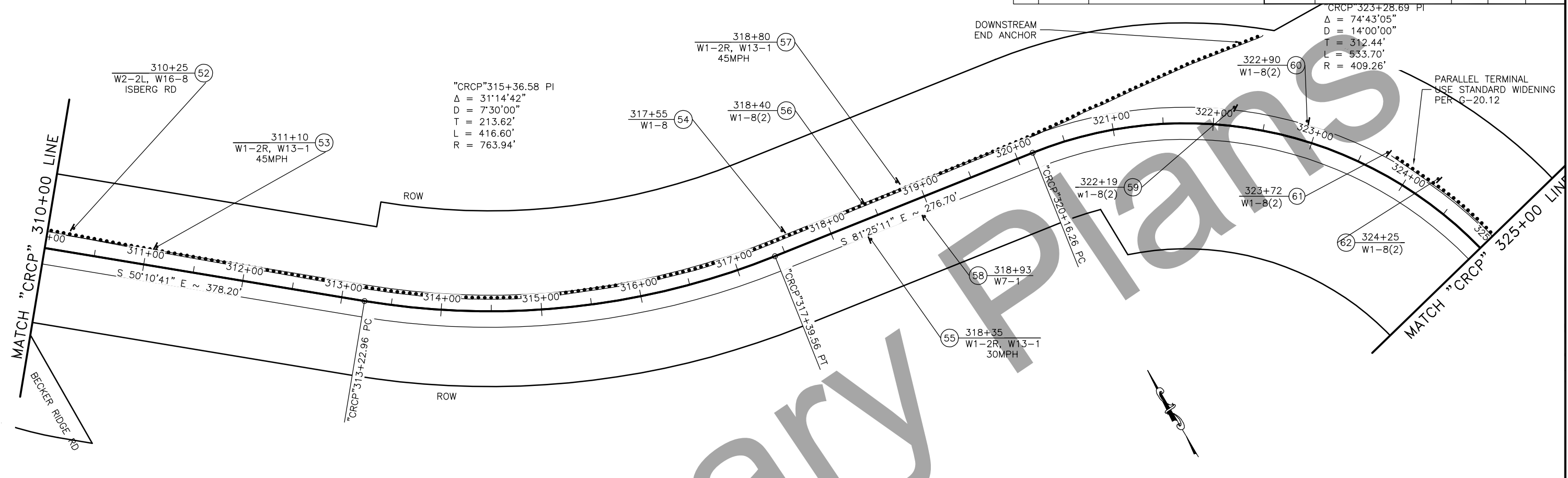


PLAN 10 OF 23
280+00 TO 310+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NF\FHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-280+00.00-295+00.00 Fri, Aug/05/22 03:46pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F11	F23

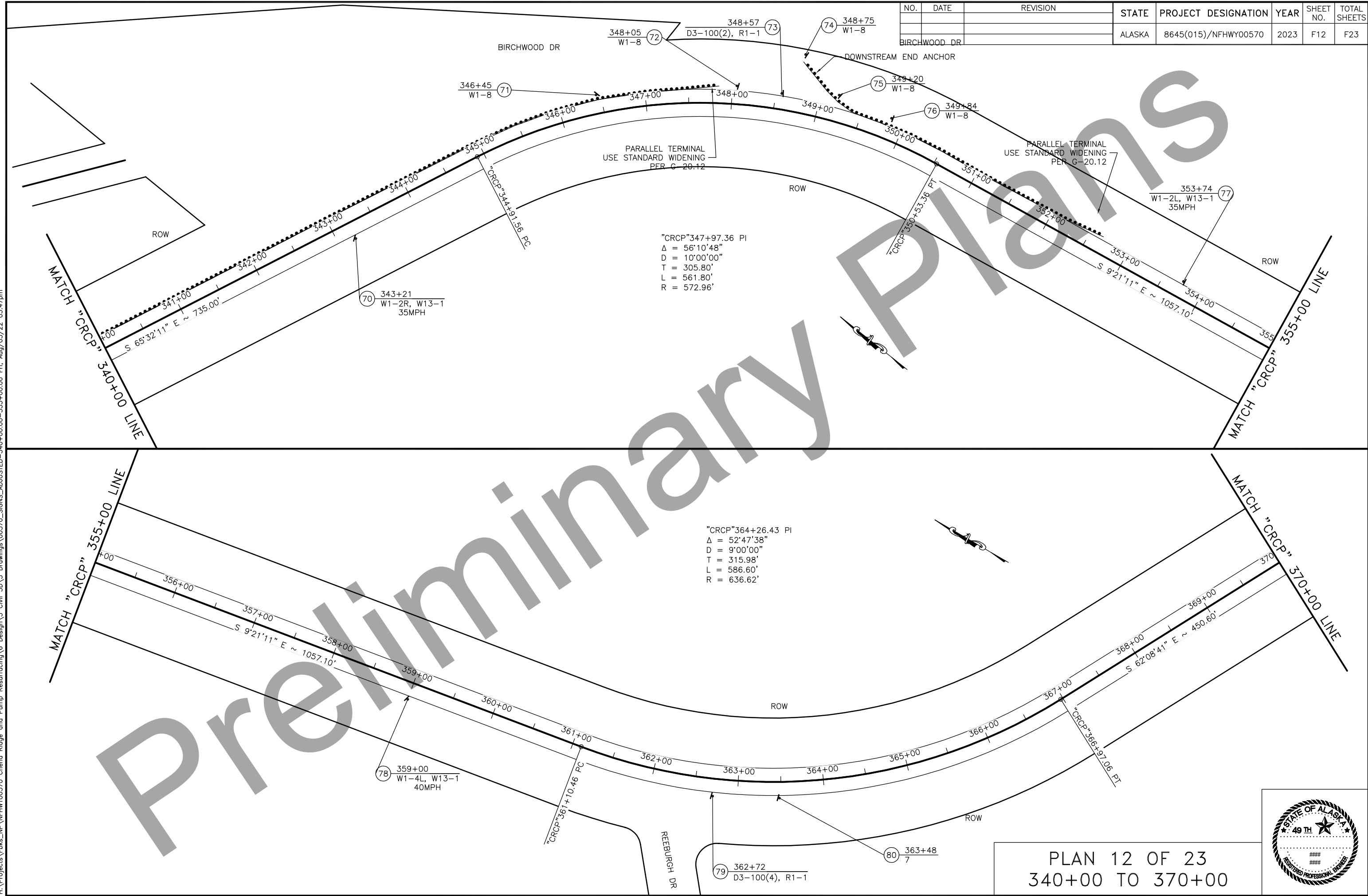


PLAN 11 OF 23
310+00 to 340+00



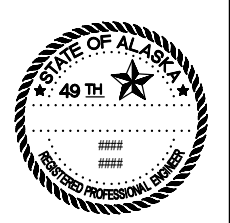
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump_Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-310+00.00-325+00.00 Fri_Aug/05/22 03:46pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F12	F23



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump_Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-340+00.00-355+00.00 Fri, Aug/05/22 03:47pm

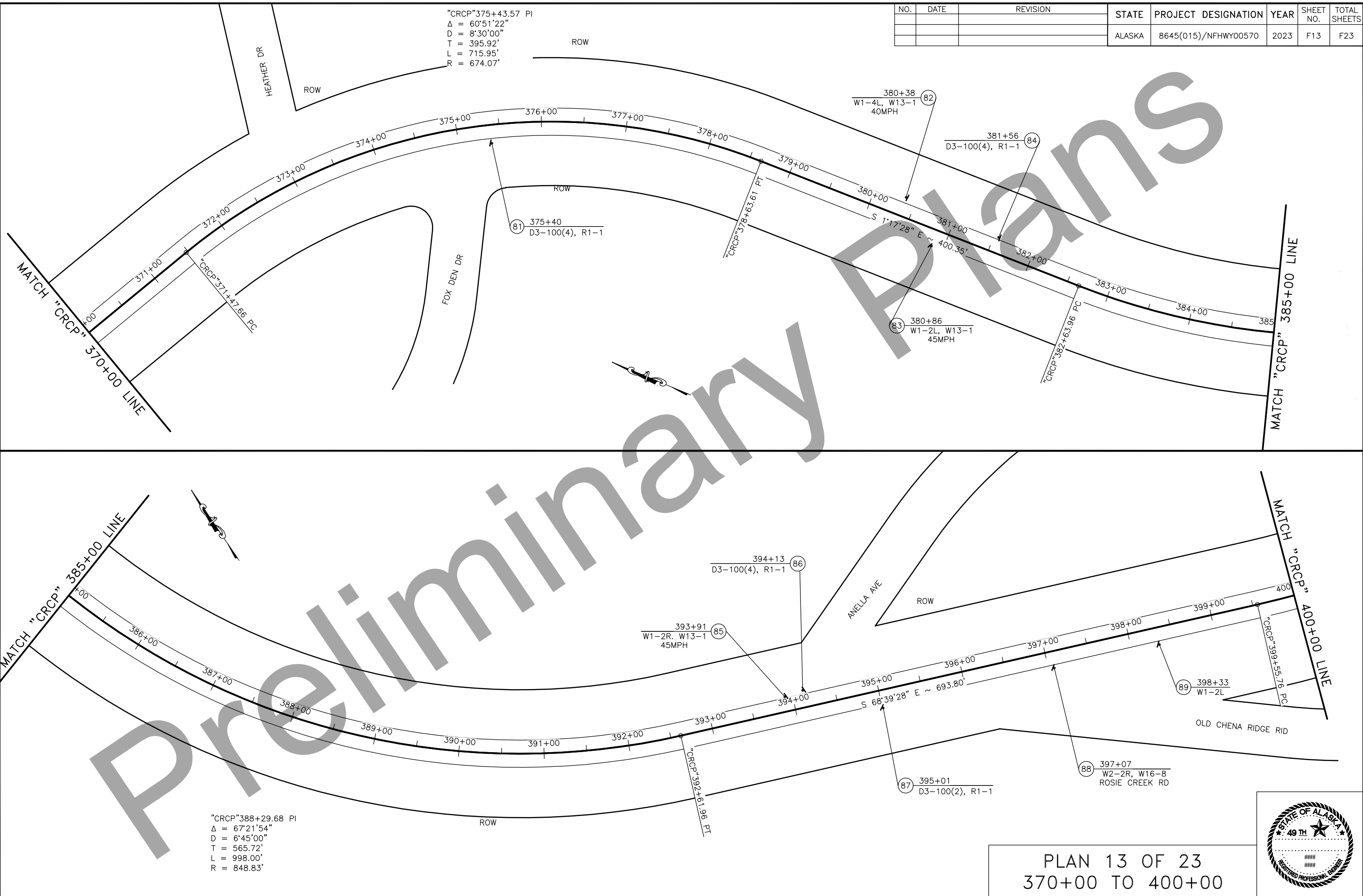
PLAN 12 OF 23
 340+00 TO 370+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F13	F23

"CRCP"375+43.57 PI
 $\Delta = 60^{\circ}51'22"$
 $D = 8^{\circ}30'00"$
 $T = 395.92'$
 $L = 715.95'$
 $R = 674.07'$

"CRCP"388+29.68 PI
 $\Delta = 67^{\circ}21'54"$
 $D = 6^{\circ}45'00"$
 $T = 565.72'$
 $L = 998.00'$
 $R = 848.83'$

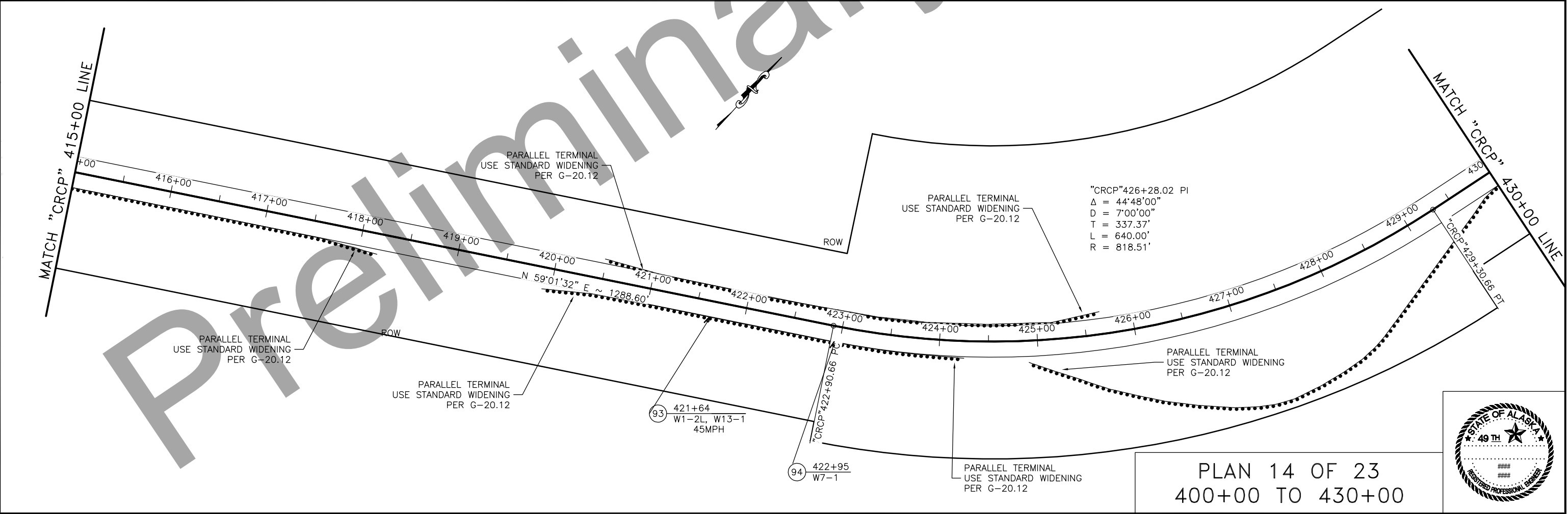
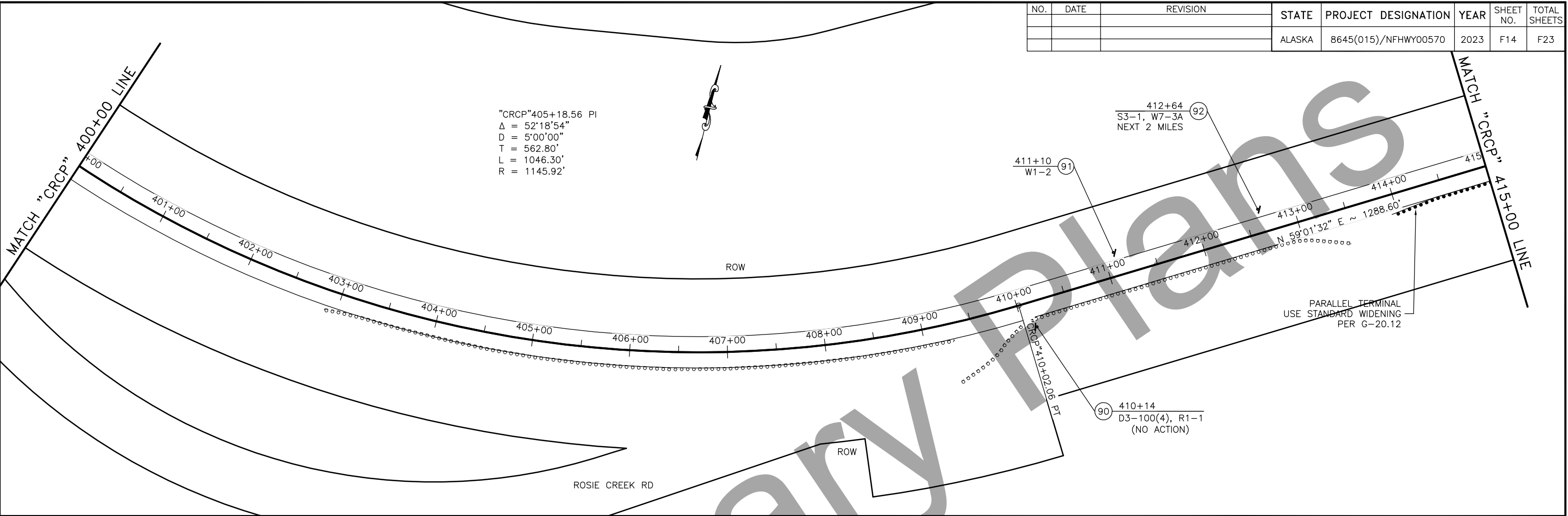


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\FHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-370+00.00-385+00.00 Fri, Aug/05/22 03:48pm

PLAN 13 OF 23
 370+00 TO 400+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F14	F23

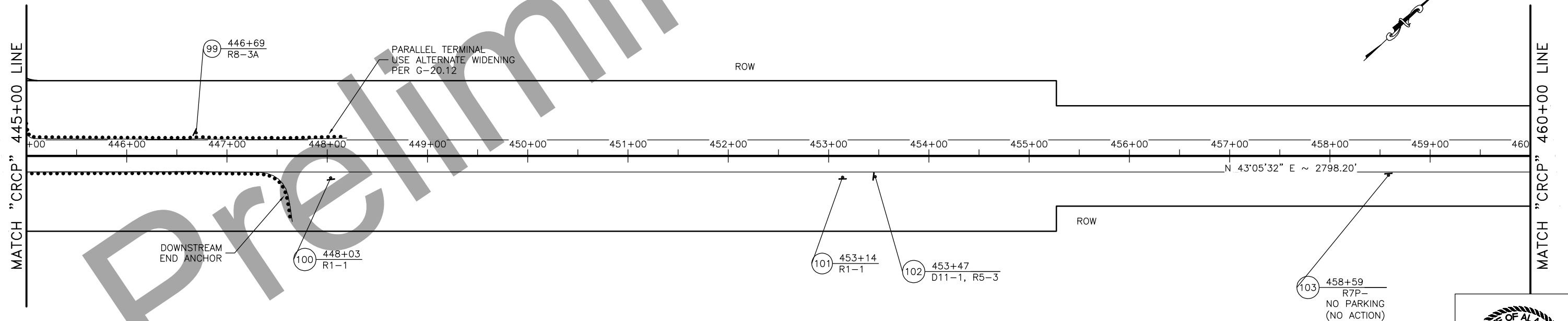
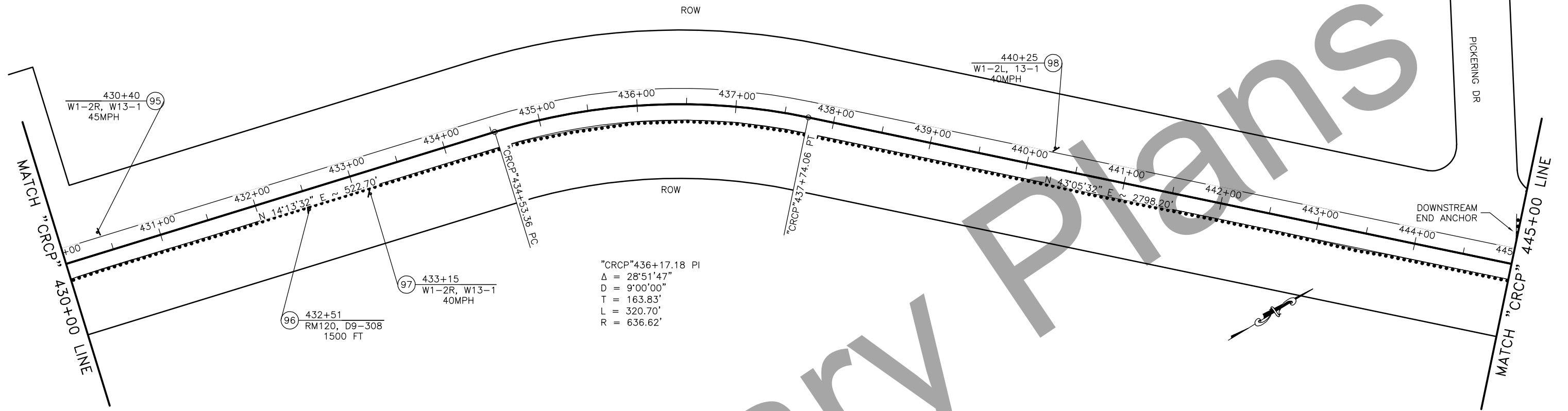


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump_Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-400+00.00-415+00.00 Fri_Aug/05/22_03:48pm

PLAN 14 OF 23
 400+00 TO 430+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F15	F23

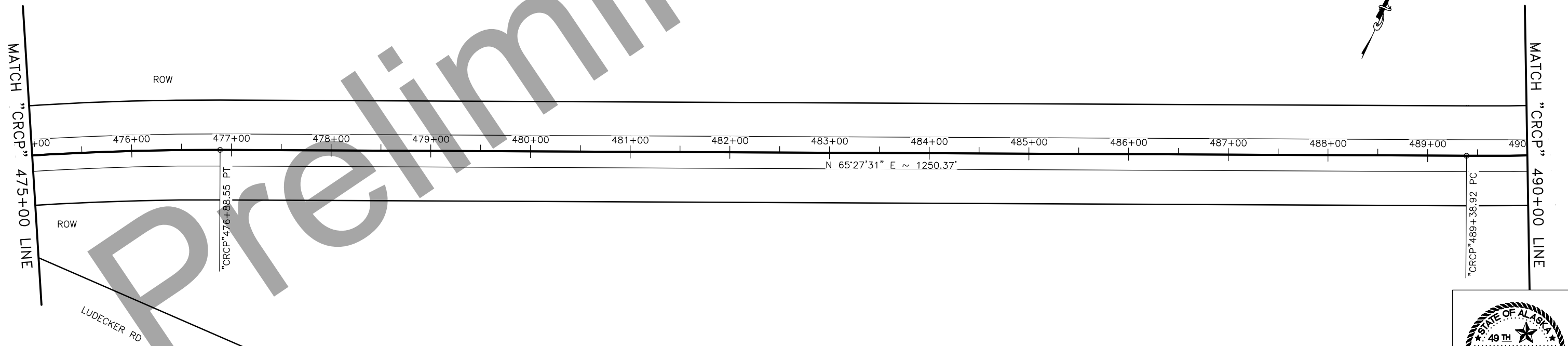
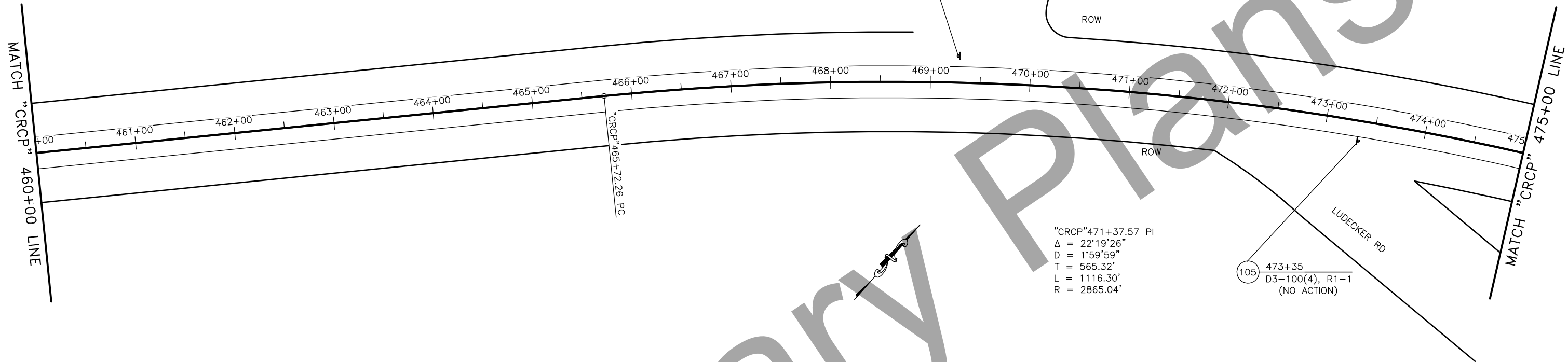


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\FH0570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-430+00.00-445+00.00 Fri, Aug/05/22 03:49pm

PLAN 15 OF 23
 430+00 TO 460+00

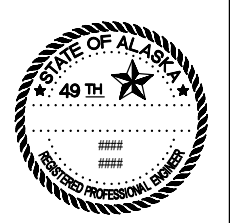


NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F16	F23



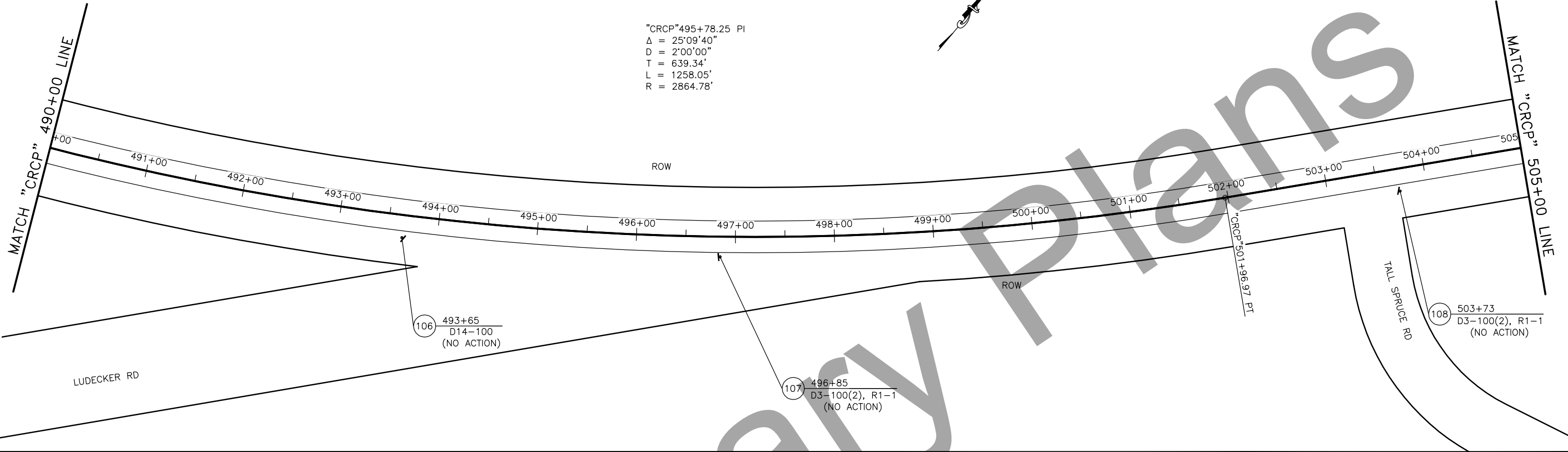
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\FH0570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-460+00.00-475+00.00 Fri, Aug/05/22 03:49pm

PLAN 16 OF 23
 460+00 TO 490+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F17	F23

"CRCP" 495+78.25 PI
 $\Delta = 25^{\circ}09'40''$
 $D = 2'00'00''$
 $T = 639.34'$
 $L = 1258.05'$
 $R = 2864.78'$

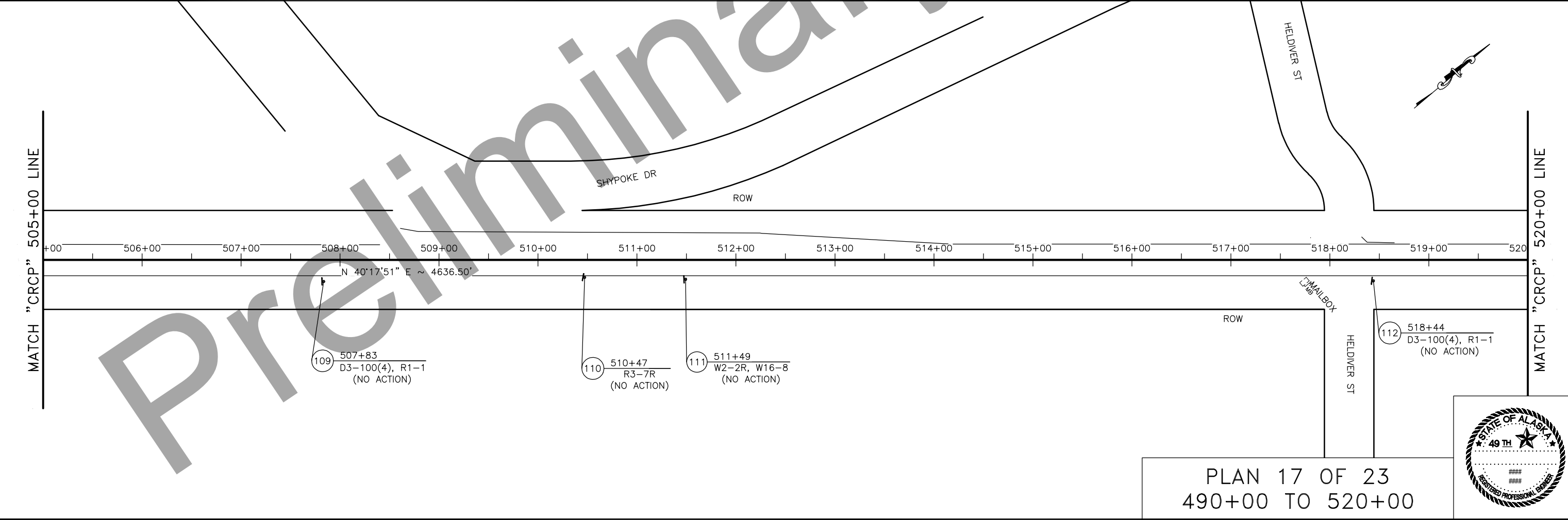


106 493+65
 D14-100
 (NO ACTION)

107 496+85
 D3-100(2), R1-1
 (NO ACTION)

108 503+73
 D3-100(2), R1-1
 (NO ACTION)

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-490+00.00-505+00.00 Fri, Aug/05/22 03:50pm



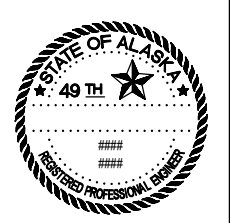
109 507+83
 D3-100(4), R1-1
 (NO ACTION)

110 510+47
 R3-7R
 (NO ACTION)

111 511+49
 W2-2R, W16-8
 (NO ACTION)

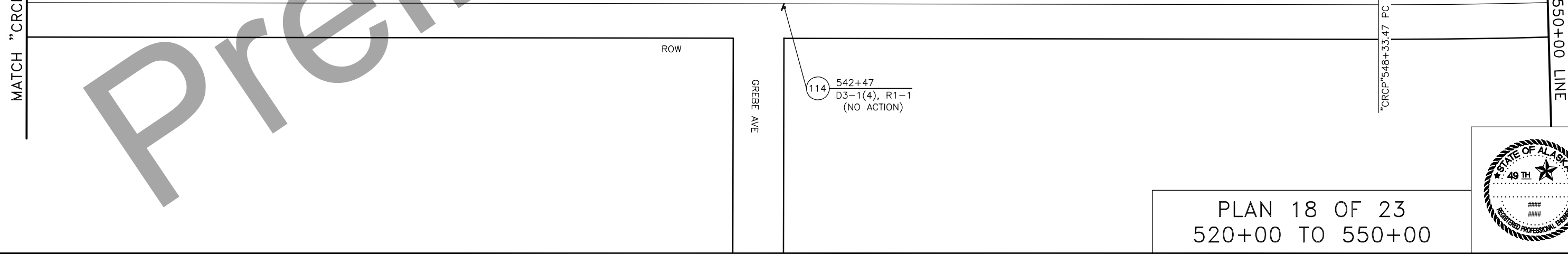
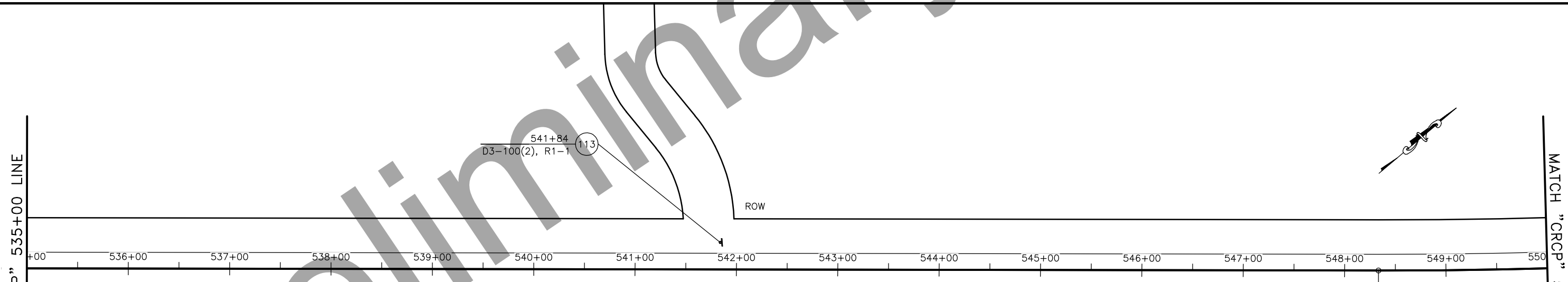
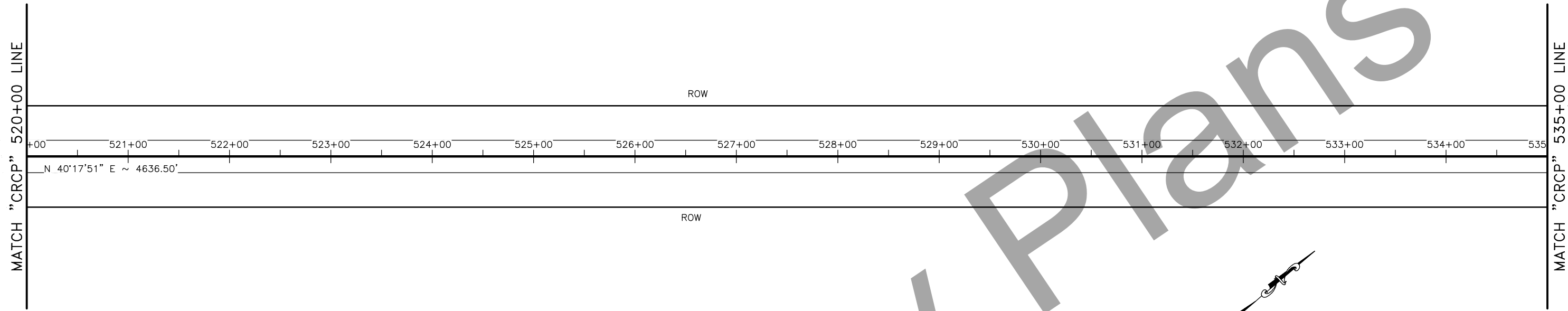
112 518+44
 D3-100(4), R1-1
 (NO ACTION)

PLAN 17 OF 23
 490+00 TO 520+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F18	F23

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-520+00.00-535+00.00 Fri, Aug/05/22 03:51pm

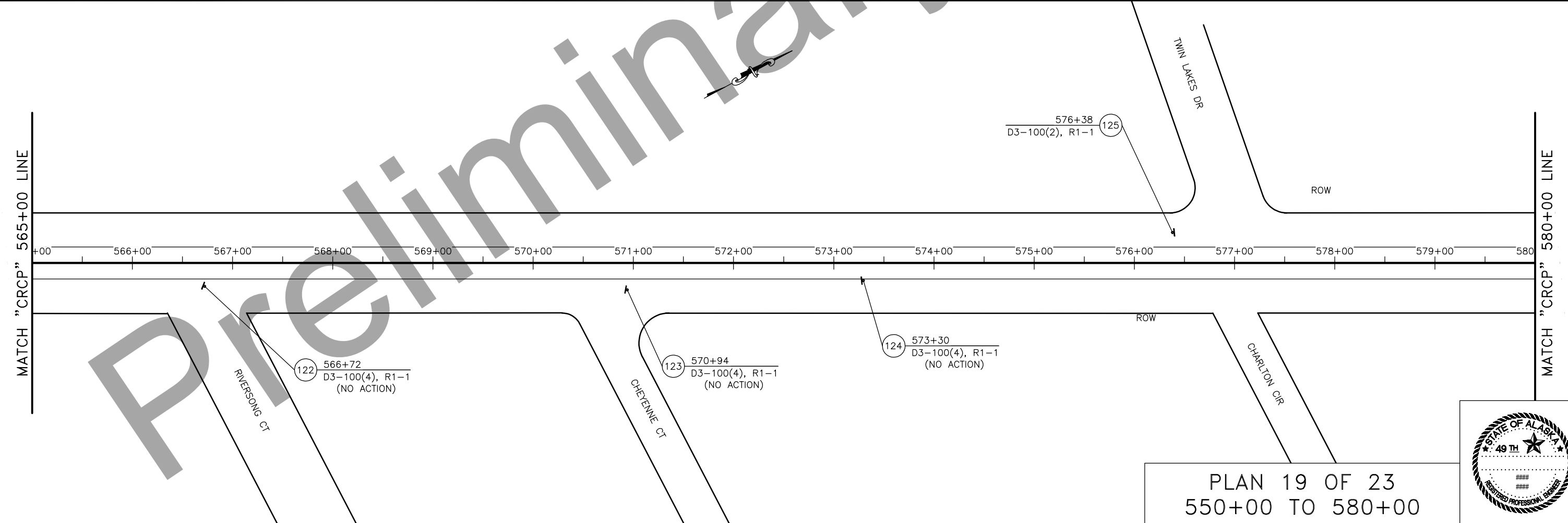
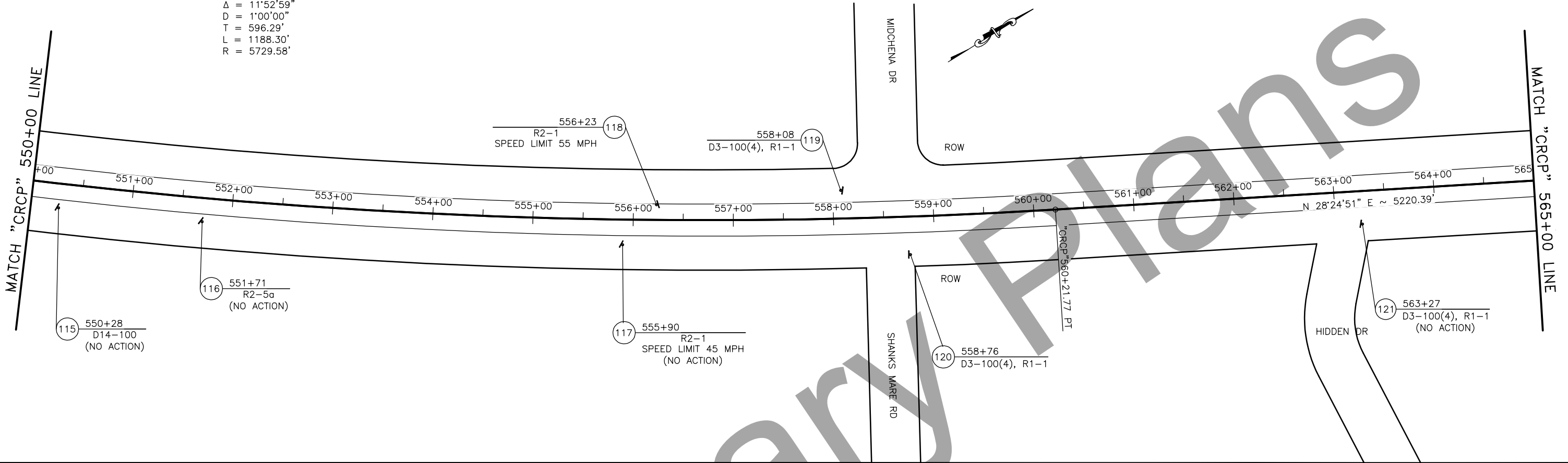


PLAN 18 OF 23
520+00 TO 550+00



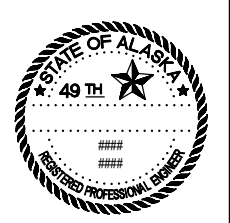
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F19	F23

"CRCP" 554+29.76 PI
 $\Delta = 11^{\circ}52'59"$
 $D = 1'00'00"$
 $T = 596.29'$
 $L = 1188.30'$
 $R = 5729.58'$



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_SIGNS_ADJUSTED-550+00.00-565+00.00 Fri_Aug/05/22 03:52pm

PLAN 19 OF 23
 550+00 TO 580+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F20	F23

MATCH "CRCP" 580+00 LINE

MATCH "CRCP" 595+00 LINE

+00 581+00 582+00 583+00 584+00 585+00 586+00 587+00 588+00 589+00 590+00 591+00 592+00 593+00 594+00 595

N 28°24'51" E ~ 5220.39'

ROW

126 585+70
W2-2R, W16-8
ROLAND RD
(NO ACTION)

588+41 127
D3-100(4), R1-1

128 591+02
R3-7R
(NO ACTION)

593+92 129
W2-2R, W16-8
ROLAND RD
(NO ACTION)

603+57 131
D3-100(2), R1-1

596+09 130
D3-100(4), R1-1

MATCH "CRCP" 595+00 LINE

MATCH "CRCP" 610+00 LINE

+00 596+00 597+00 598+00 599+00 600+00 601+00 602+00 603+00 604+00 605+00 606+00 607+00 608+00 609+00 610

N 28°24'51" E ~ 5220.39'

ROW

LINDA LN

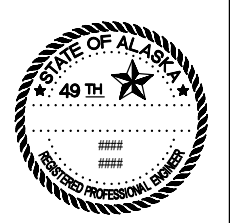
DESPAN LN

DESPAN LN

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-580+00.00-595+00.00 Fri, Aug/05/22 03:54pm

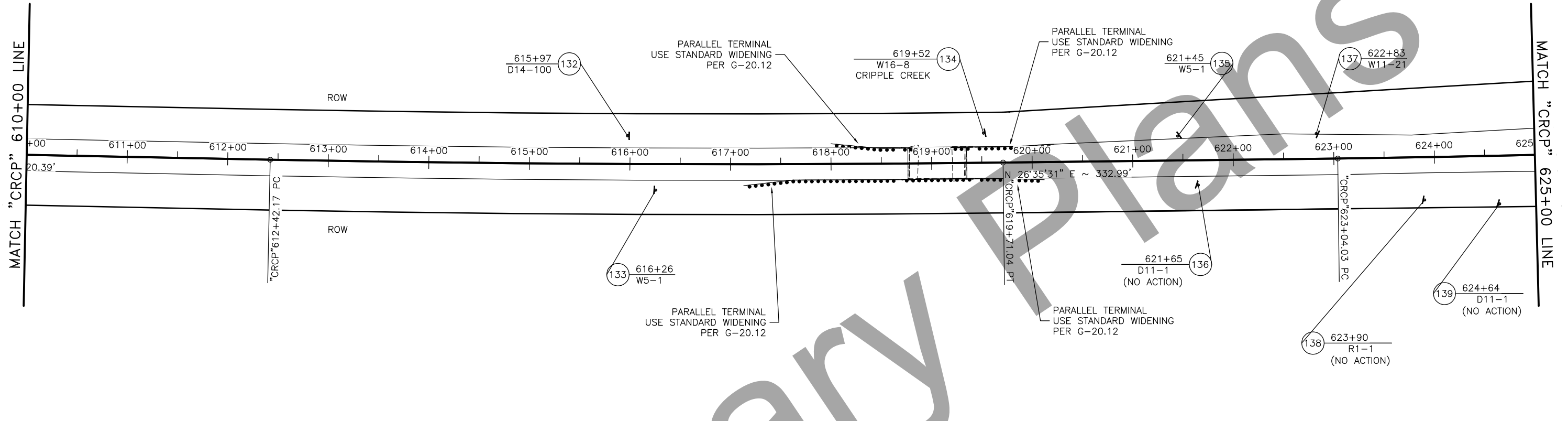
Preliminary Plans

PLAN 20 OF 23
580+00 TO 610+00



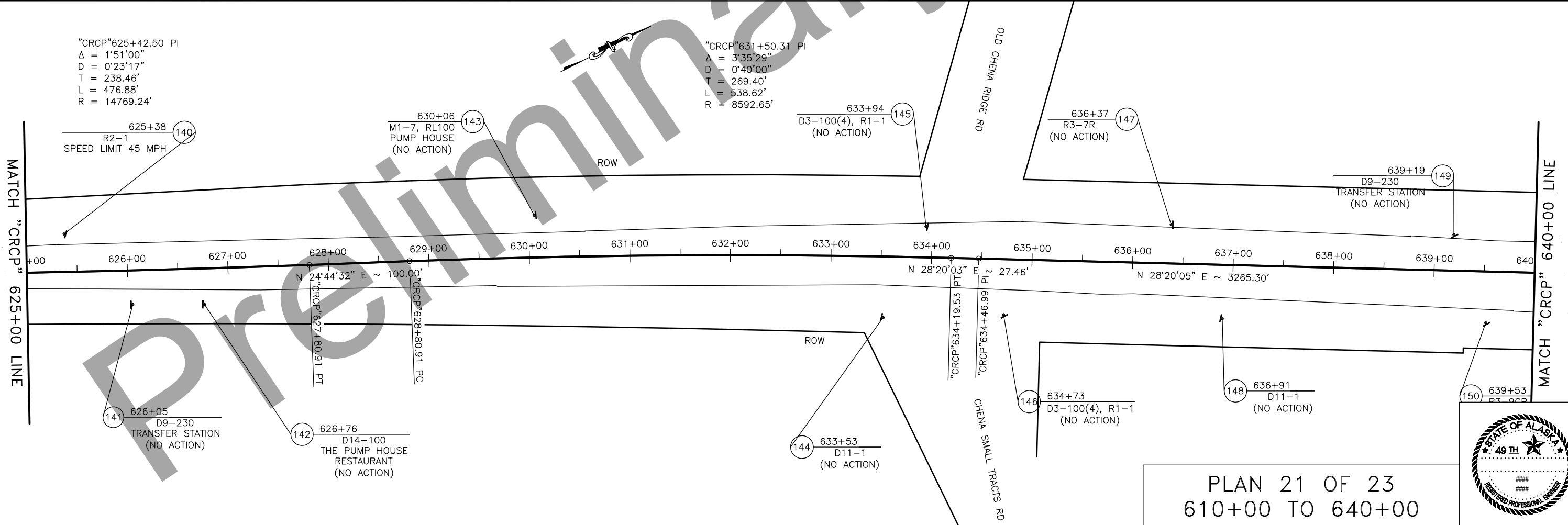
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F21	F23

"CRCP"616+06.64 PI
 $\Delta = 1'49'20"$
 $D = 0'15'00"$
 $T = 364.47'$
 $L = 728.87'$
 $R = 22918.31'$



"CRCP"625+42.50 PI
 $\Delta = 1'51'00"$
 $D = 0'23'17"$
 $T = 238.46'$
 $L = 476.88'$
 $R = 14769.24'$

"CRCP"631+50.31 PI
 $\Delta = 3'35'29"$
 $D = 0'40'00"$
 $T = 269.40'$
 $L = 538.62'$
 $R = 8592.65'$



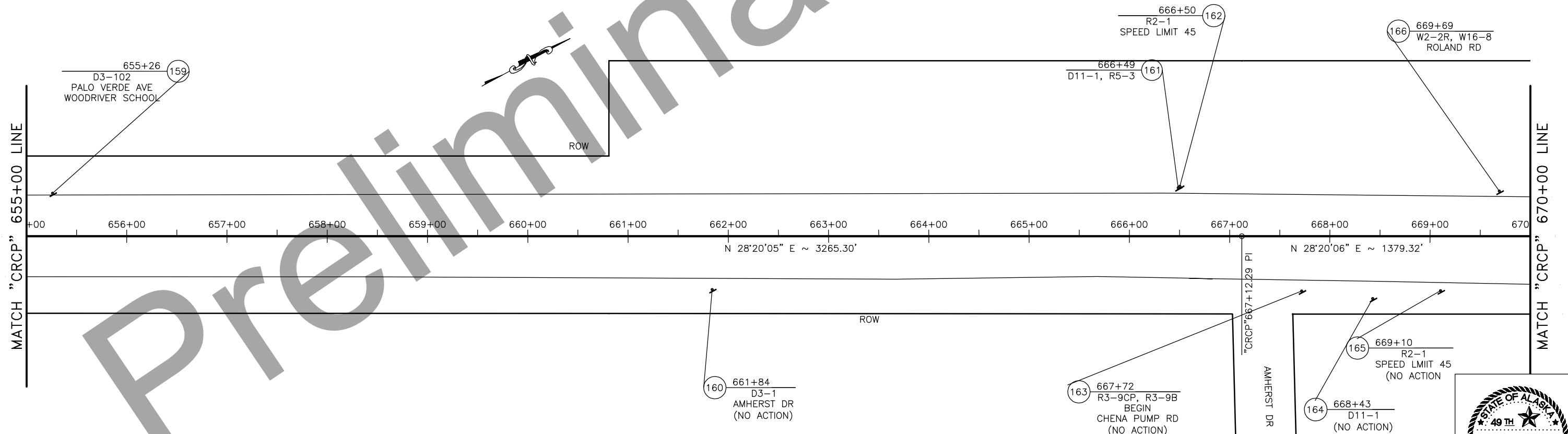
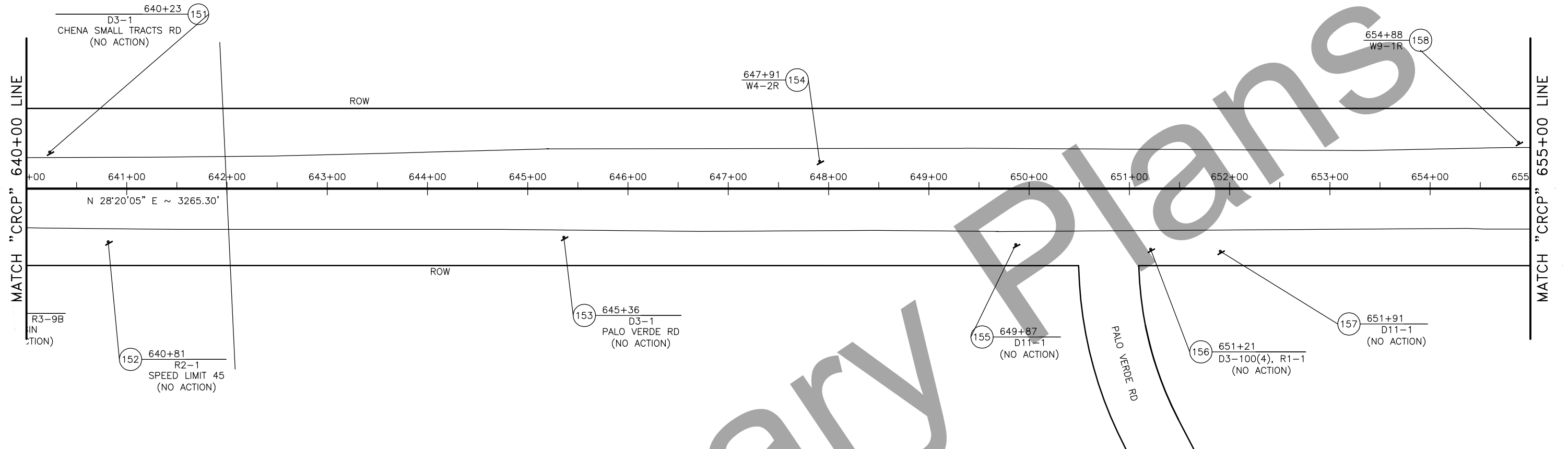
PLAN 21 OF 23
610+00 TO 640+00



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-610+00.00-625+00.00 Fri_Aug/05/22 03:55pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F22	F23

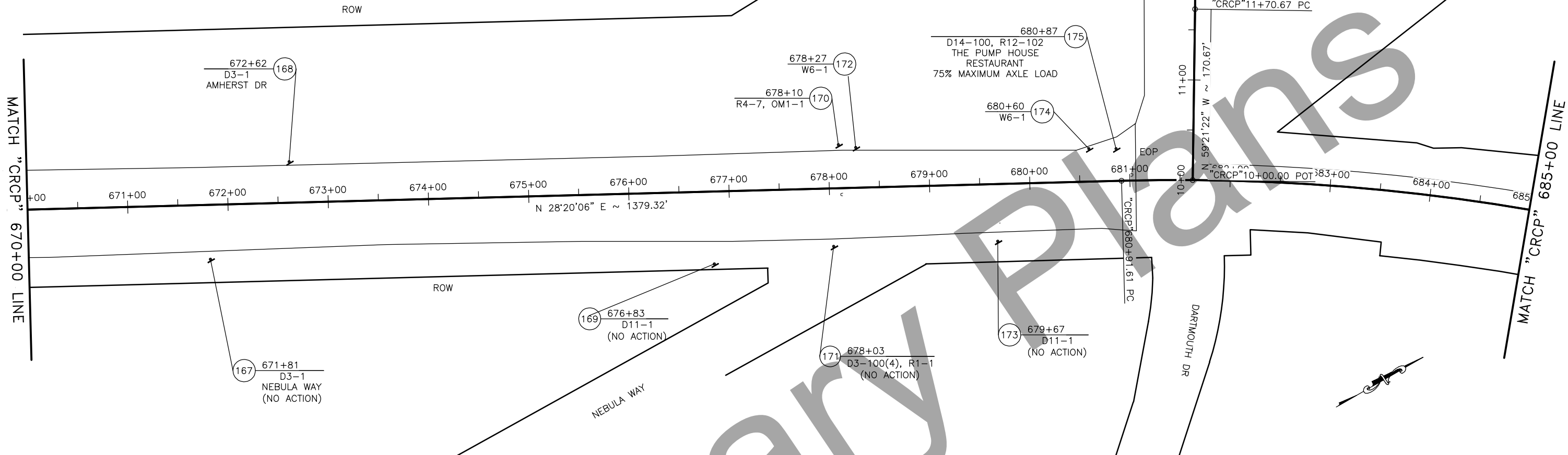
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-640+00.00-655+00.00 Fri_Aug/05/22 03:55pm



PLAN 22 OF 23
 640+00 TO 670+00



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	F23	F23



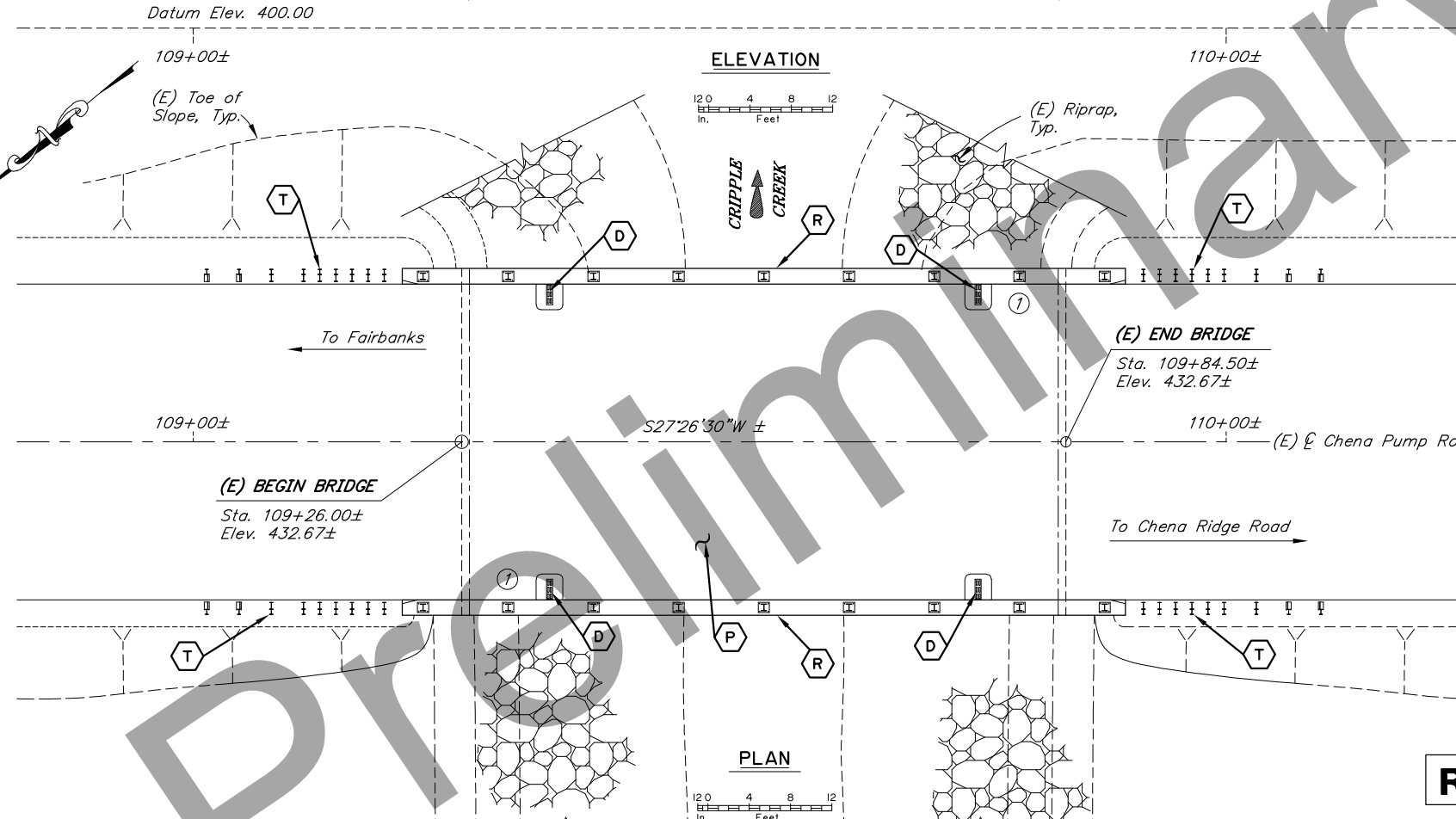
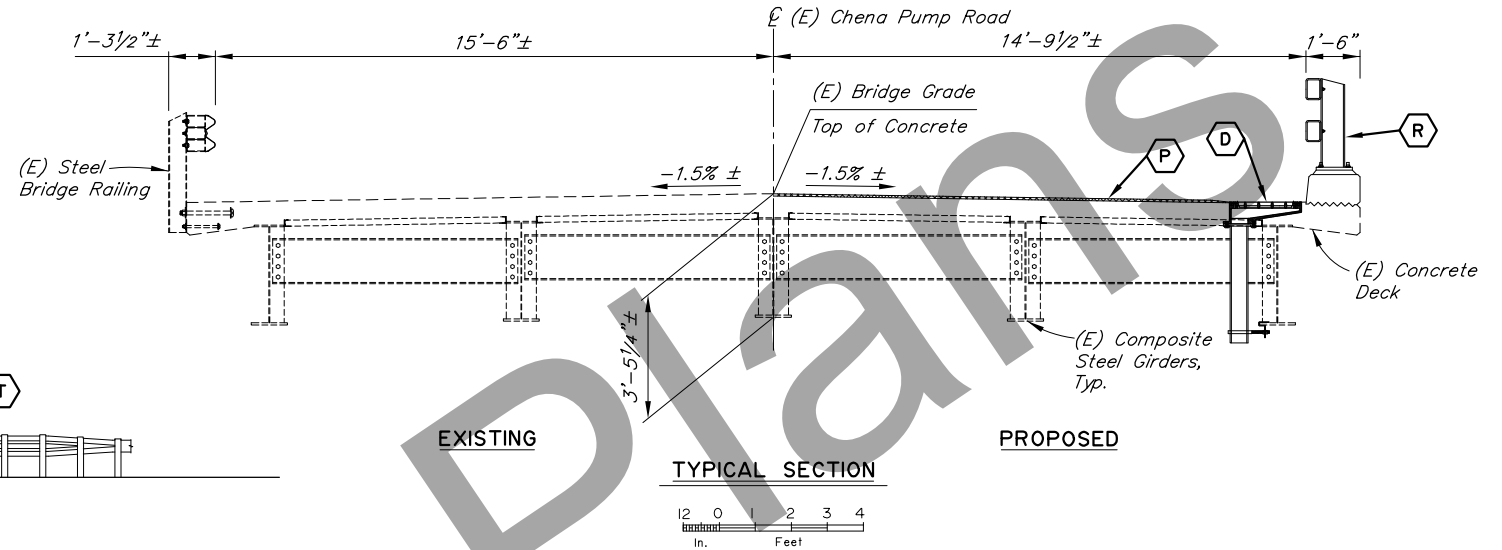
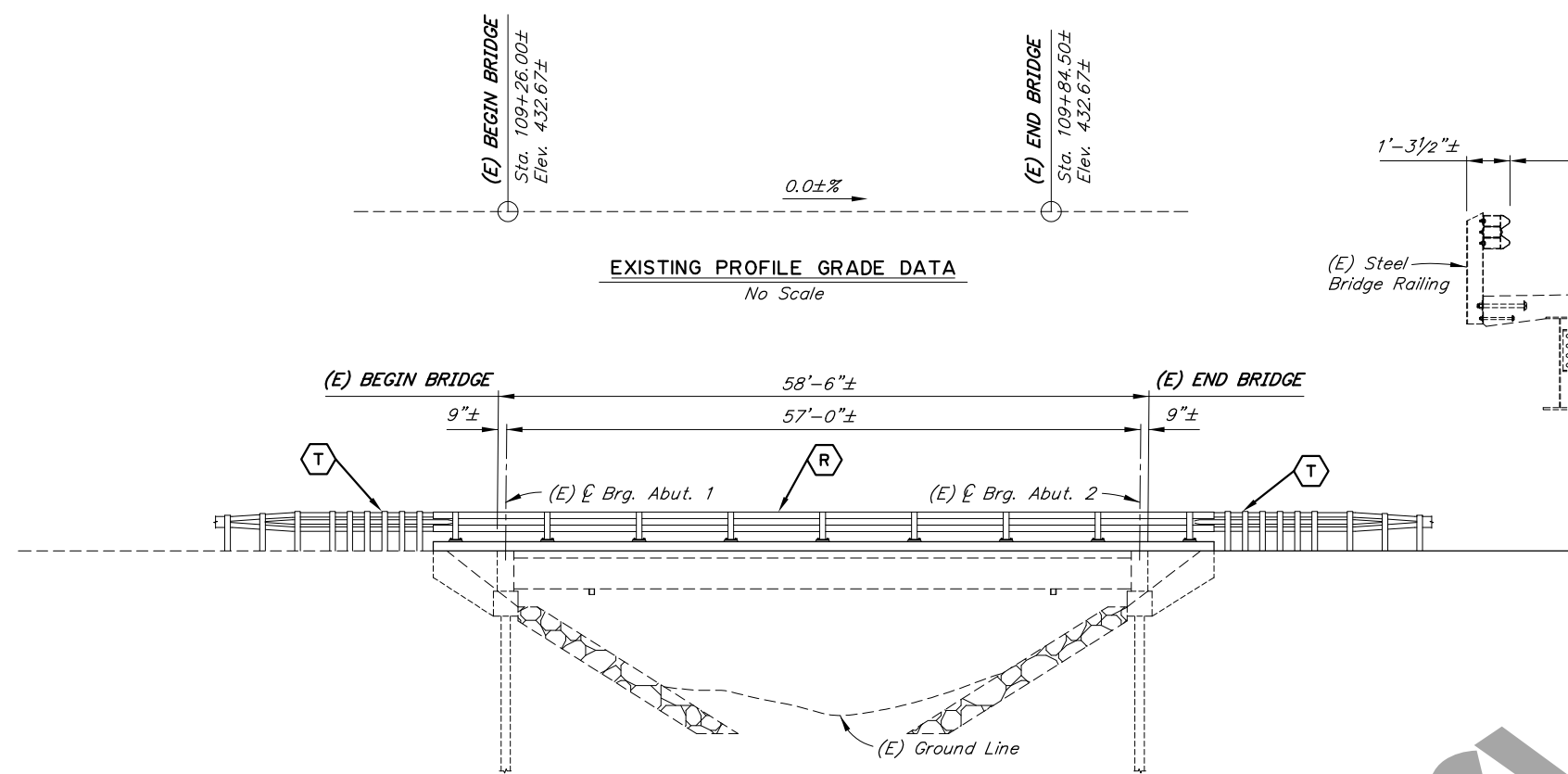
"CRCP" 685+46.98 PI
 $\Delta = 24'28'06"$
 $D = 2'43'42"$
 $T = 455.37'$
 $L = 896.85'$
 $R = 2100.10'$

PLAN 23 OF 23
 670+00 TO EOP



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
 H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump_Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_SIGNS_ADJUSTED-670+00.00-685+00.00 Fri_Aug/05/22 03:57.ppt

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N1	N6



BRIDGE DRAWING INDEX	
TITLE	DWG. NO.
GENERAL LAYOUT	1
GENERAL NOTES	2
DECK DETAILS	3
DECK DRAIN DETAILS	4
STEEL BRIDGE RAILING, 2-TUBE	5
MASH BRIDGE RAIL THRIE BEAM TRANSITION	6

LEGEND	
(D)	Install Deck Drain Scuppers.
(P)	Install 3/4" Polyester Concrete.
(R)	Remove existing Railing Install Steel Bridge Railing, 2-Tube
(T)	Install Thrie Beam Transition

NOTES:
 (E) = Existing
 - - - = Existing
 ——— = Proposed
 For project stations and elevations see roadway sheets.
 (1) Approximate location of Bridge Number Plate.
 Existing stations, elevations and dimensions are based on 1967 as-built plans, and those plans may not show existing dimensions and conditions. Where dimensions of the proposed work depend on the existing bridge dimensions, field-verify the controlling dimensions and adjust proposed dimensions of the work to fit existing conditions.


PRELIMINARY PLAN

REHABILITATION

DESIGNED BY: Duane Davis	CHECKED: Nick Murray	LAYOUT BY: Duane Davis	CHECKED BY: Nick Murray
DRAWN BY: Sam Solie	CHECKED: Duane Davis	SPECIFICATIONS BY: Duane Davis	P S & E COMPARED: Nick Murray
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray	APPROVAL RECOMMENDED BY:	Rich Pratt

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION
 3132 Channel Drive
 Juneau, Alaska 99801
 907-465-2975

CRIPPLE CREEK BRIDGE
 CHENA PUMP ROAD
 GENERAL LAYOUT


 BRIDGE NO. 1008
 DWG. NO. 1

R:\cadd\1008\1008 Refab 2022-GENERAL Tue, Jul/12/22 02:36pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N2	N6

GENERAL NOTES

DESIGN:..... AASHTO LRFD Bridge Design Specifications, 2020 Edition, with latest interim specifications.
 Seismic design per AASHTO Guide Specifications for LRFD Seismic Bridge Design, 2011 with latest interim revisions.

REINFORCEMENT:..... ASTM A706, Grade 60, Fy = 60,000 psi
 Space reinforcement evenly unless otherwise noted.

CONCRETE:..... Class A Concrete unless otherwise noted, f'c = 4000 psi

STRUCTURAL STEEL:..... ASTM A709, Grade 36T3, Fy = 36,000 psi
 Galvanize structural steel in accordance with AASHTO M111 unless shown otherwise.

BRIDGE BASIS OF ESTIMATE						
ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBST.	SUPERST.	TOTAL QUANTITY
504.0001.0000	Structural Steel, Drains	LS	EA	---	4	4
507.2000.0000	Steel Bridge Railing Replacement, 2- Tube	LF	LF	---	140	140
510.0001.0000	Removal Concrete Bridge Deck	SF	SF	---	1,730	1,730
510.2001.0000	Bridge Deck Repairs	CS	CS	---	All Req'd	All Req'd
525.2001.0000	Polyester Concrete Overlay	LS	SY	---	193	193
606.0016.0000	Transition Rail	EA	EA	---	4	4

Item numbers are for reference only. Quantities shown are not necessarily the pay quantities nor the total quantity of the particular item.

ABBREVIATIONS:

- | | | | | | |
|---------|------------------------------|-------|--|--------|----------------------------------|
| ℄ | = centerline | e.f. | = each face | min. | = minimum |
| ℄ | = plate | e.w. | = each way | MSE | = mechanically stabilized earth |
| & | = and | Ext. | = exterior | n.f. | = near face |
| @ | = at | F | = fixed | No. | = number |
| ∅ | = diameter | f.f. | = front/air face | o.c. | = on center |
| ± | = approximate | f'c | = specified concrete compressive strength | O.H.W. | = ordinary high water |
| Abut. | = abutment | f'ci | = specified concrete compressive strength at release | pcf | = pounds per cubic foot |
| Approx. | = approximate | Ft. | = feet | psf | = pounds per square foot |
| b.f. | = back/dirt face | Galv. | = galvanize | psi | = pounds per square inch |
| bot. | = bottom | H.S. | = high strength | R | = radius |
| Br. | = bridge | Hwy. | = highway | R.O.W. | = right of way |
| btwn. | = between | ID | = internal diameter | RT. | = right |
| Brg. | = bearings | Int. | = interior | Rd. | = road |
| C.G. | = center of gravity | Jt. | = joint | spcs. | = space, spaces |
| C.I.P. | = cast in place | K | = kips | Sta. | = station |
| CJP | = complete joint penetration | ksf | = 1000 pounds per square foot | SF | = square feet |
| Clr. | = clear, clearance | ksi | = 1000 pounds per square inch | SY | = square yard |
| CMP | = corrugated metal pipe | LF | = linear foot | Std. | = standard |
| CY | = cubic yard | LS | = lump sum | Symm. | = symmetric |
| D.H.W. | = design high water | L.T. | = left | Typ. | = typical |
| Dia. | = diameter | max. | = maximum | UT | = ultrasonic testing |
| Dwg. | = drawing | | | V.P.C. | = point of vertical curve |
| E | = expansion | | | V.P.I. | = point of vertical intersection |
| (E) | = existing | | | V.P.T. | = point of vertical tangent |
| EA | = each | | | w/ | = with |
| Elev. | = elevation | | | | |

PRELIMINARY PLAN

DESIGNED BY: Duane Davis	CHECKED: Nick Murray
DRAWN BY: Sam Sollie	CHECKED: Duane Davis
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray

REHABILITATION

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION
 3132 Channel Drive
 Juneau, Alaska 99801
 907-465-2975

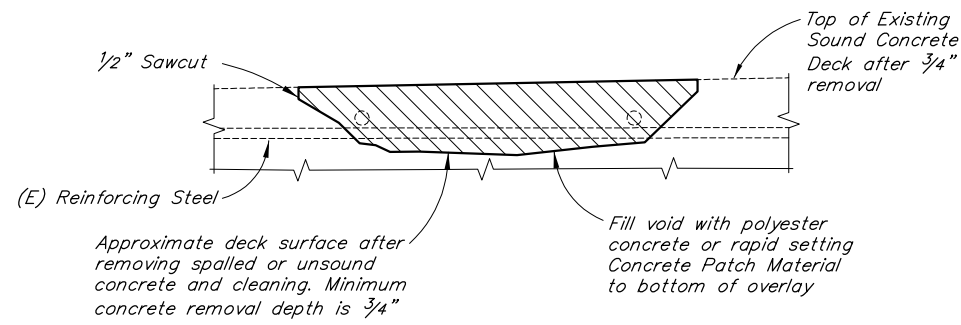
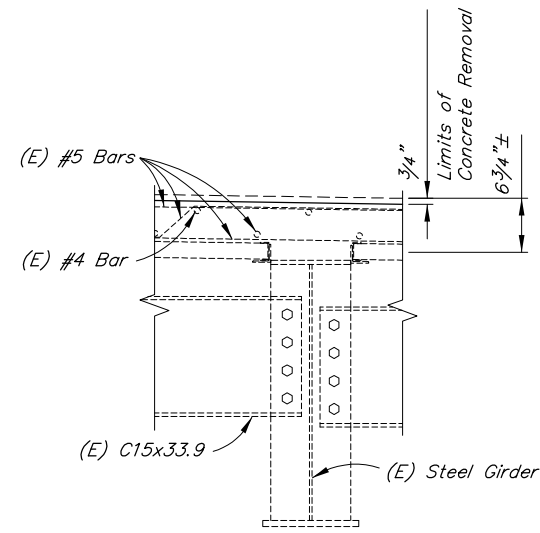
CRIPPLE CREEK BRIDGE
 CHENA PUMP ROAD
GENERAL NOTES



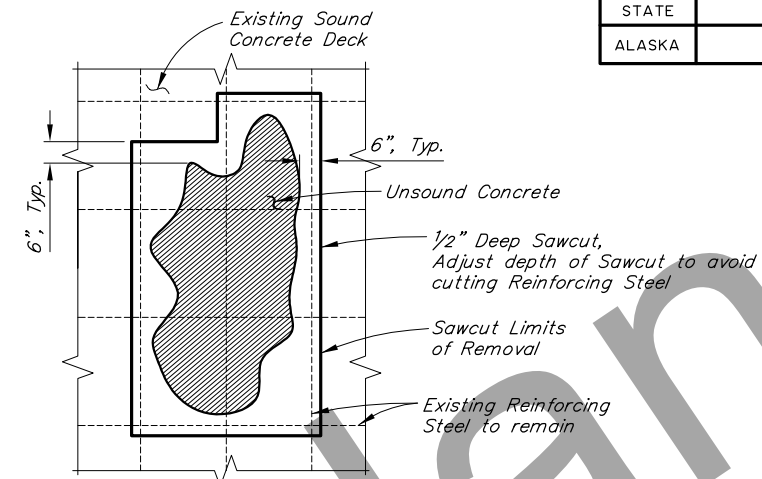
BRIDGE NO. 1008
 DWG. NO. 2

R:\cda\1008\1008 Refab 2022-NOTES Tue, Jul/12/22 02:37pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N3	N6

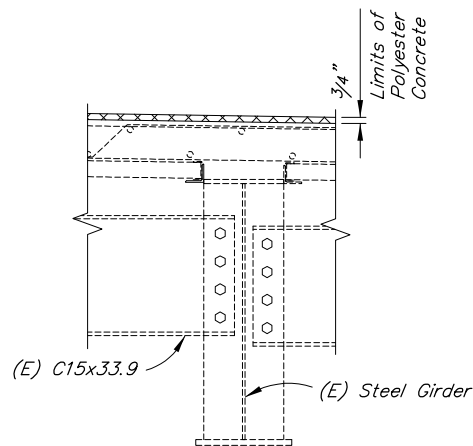
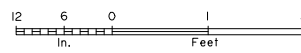


CONCRETE REPAIR DETAIL
No Scale

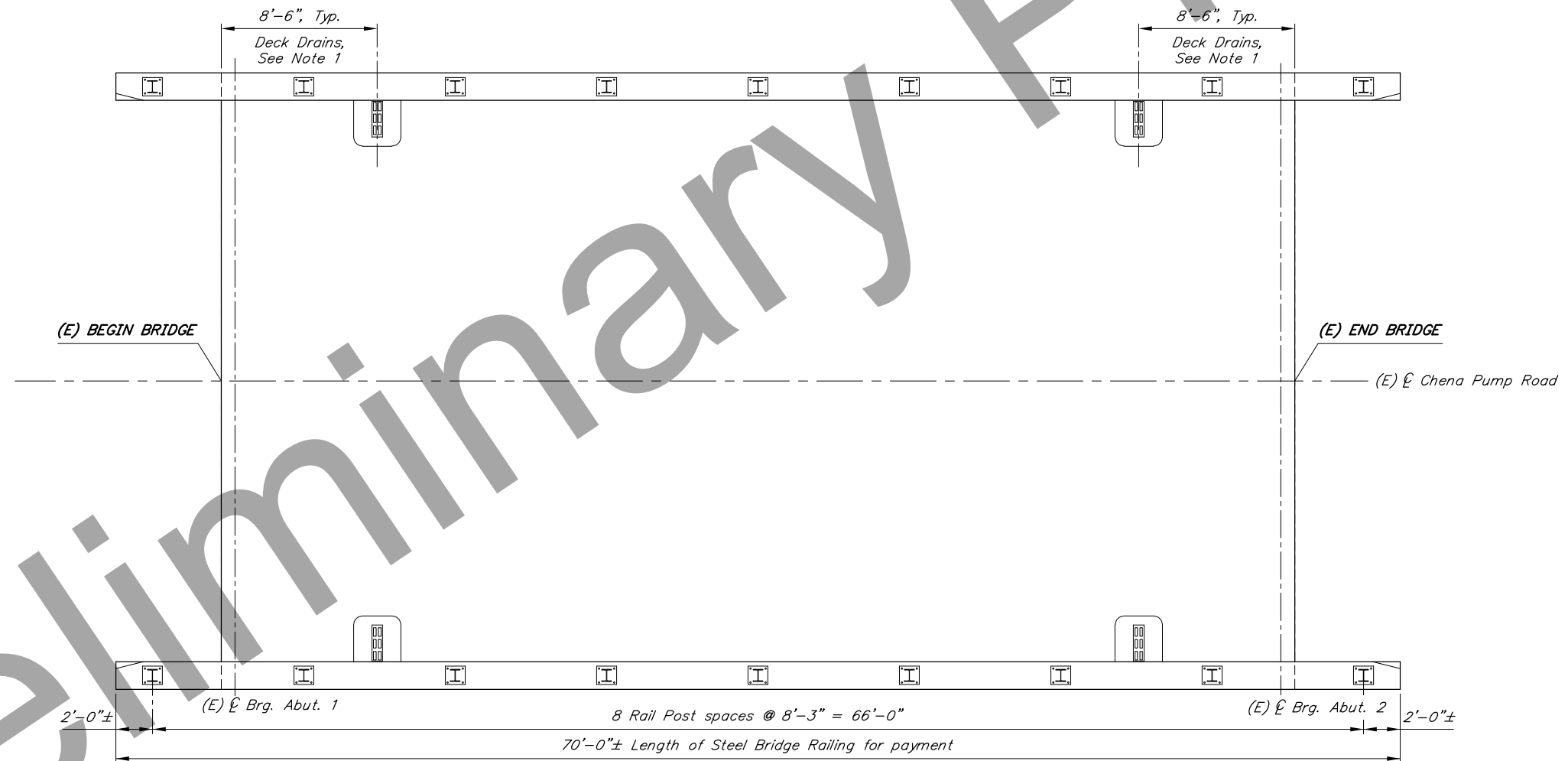


CONCRETE REPAIR
No Scale

EXISTING DECK SECTION



PROPOSED DECK SECTION



RAILING LAYOUT



NOTES:

- (E) = Existing
- = Existing
- = Proposed

1. Engineer may adjust location of deck drains to minimize cutting Reinforcing Steel
2. Verify controlling field dimensions before ordering or fabricating any material.

PRELIMINARY PLAN

DESIGNED BY: Duane Davis	CHECKED: Nick Murray
DRAWN BY: Sam Sollie	CHECKED: Duane Davis
QUANTITIES BY: Duane Davis	CHECKED: Nick Murray

REHABILITATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

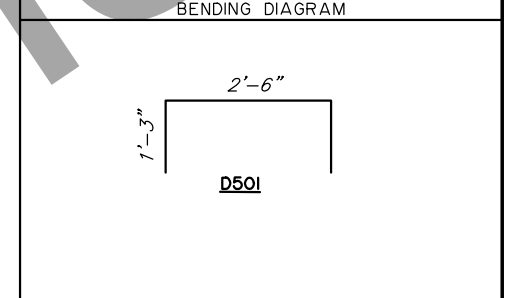
CRIPPLE CREEK BRIDGE
CHENA PUMP ROAD
DECK DETAILS



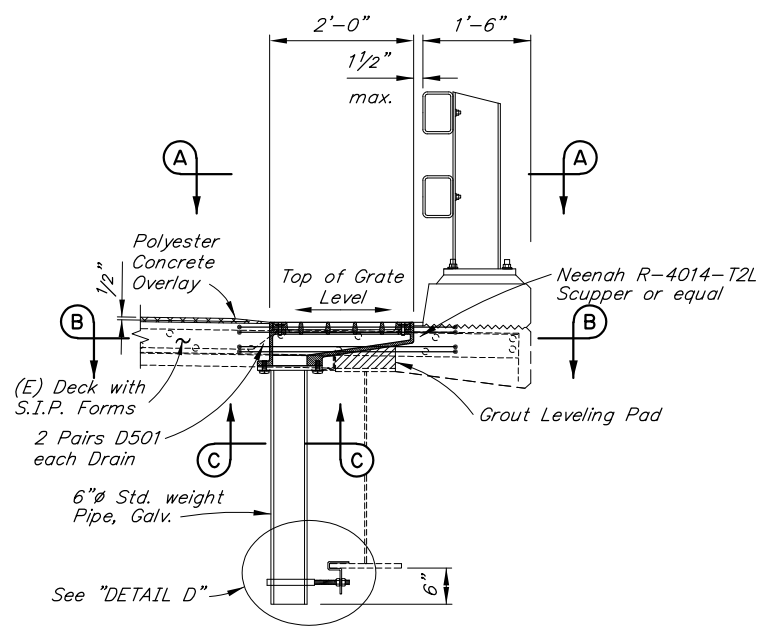
BRIDGE NO. 1008
DWG. NO. 3

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N4	N6

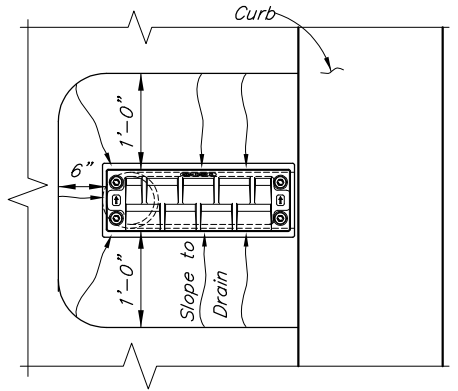
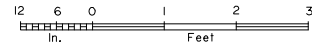
REINFORCING STEEL - DECK					
MARK	NOTE	SIZE	NO.	LENGTH	TYPE
D501	E	5	16	5'-0"	BENT



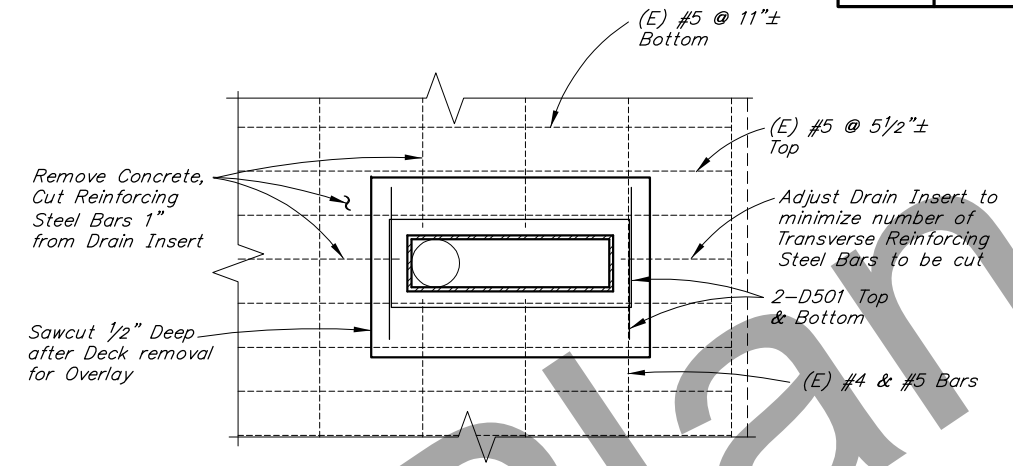
E - Epoxy-Coated



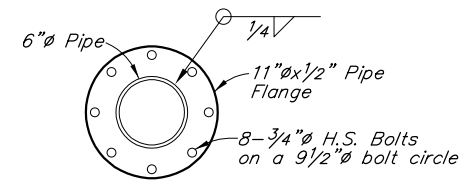
DECK DRAIN



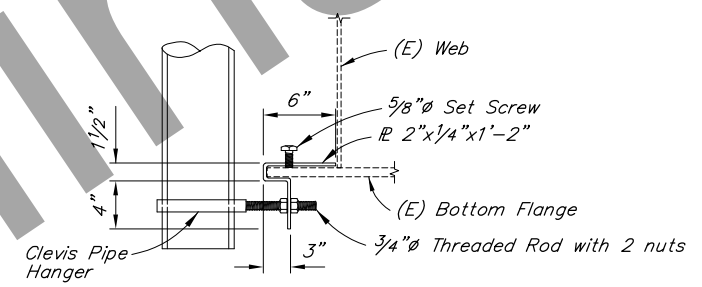
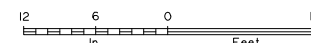
VIEW A-A



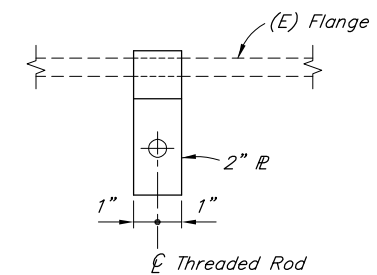
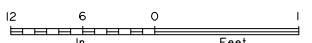
SECTION B-B



SECTION C-C



DETAIL D



SECTION E-E



- NOTES:**
- (E) = Existing
 - = Existing
 - = Proposed

Verify controlling field dimensions before ordering or fabricating any material.

PRELIMINARY PLAN

DESIGNED BY:	Duane Davis	CHECKED:	Nick Murray
DRAWN BY:	Sam Sollie	CHECKED:	Duane Davis
QUANTITIES BY:	Duane Davis	CHECKED:	Nick Murray

REHABILITATION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

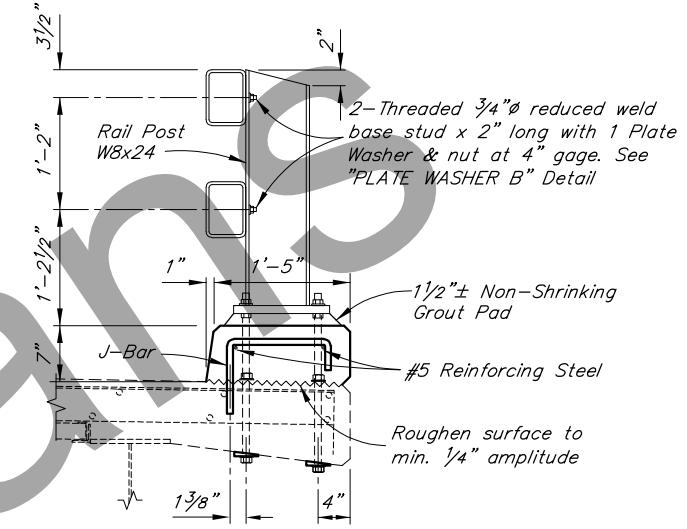
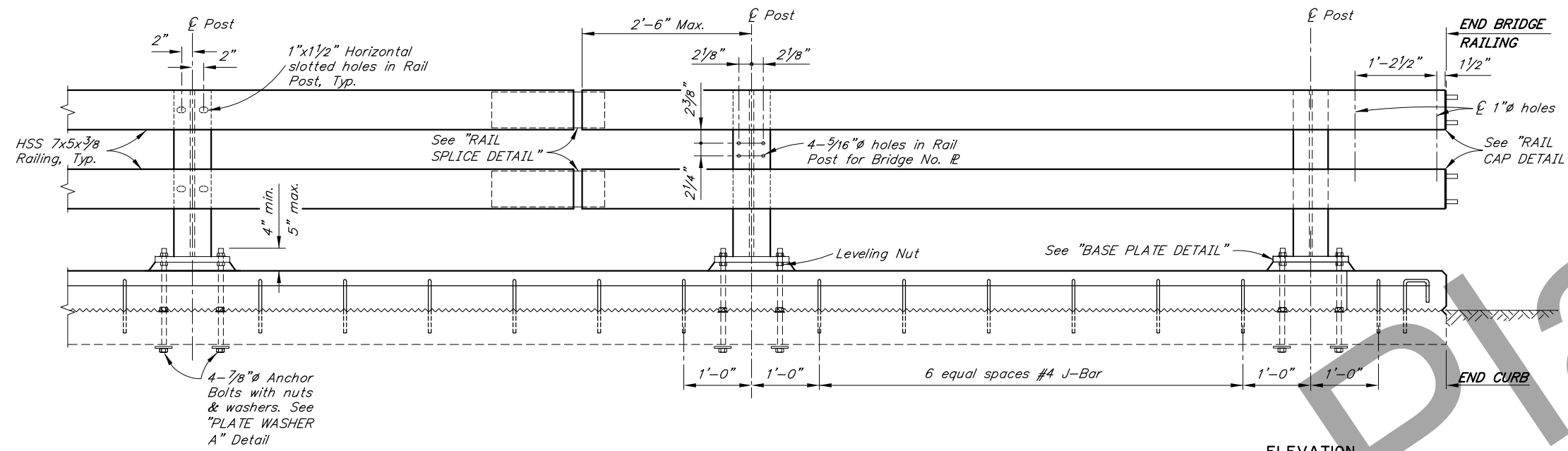
CRIPPLE CREEK BRIDGE
CHENA PUMP ROAD
DECK DRAIN DETAILS



BRIDGE NO. 1008
DWG. NO. 4

R:\cda\1008\1008 Rehab 2022-DRAIN Tue, Jul/12/22 02:37pm

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N5	N6



TYPICAL POST ELEVATION

EXPANSION JOINT

ELEVATION

TYPICAL SECTION

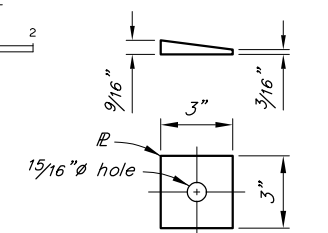
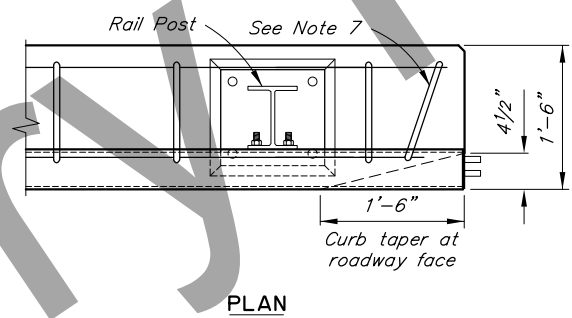
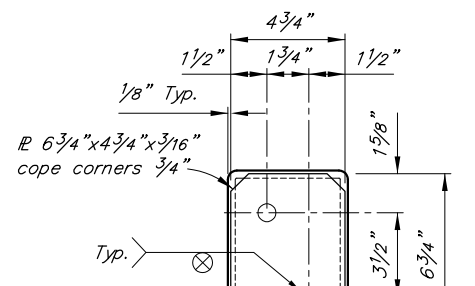
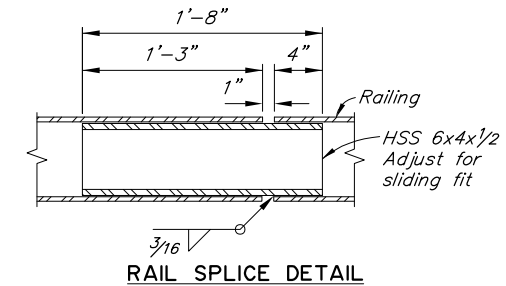
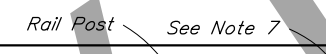


PLATE WASHER A
No Scale

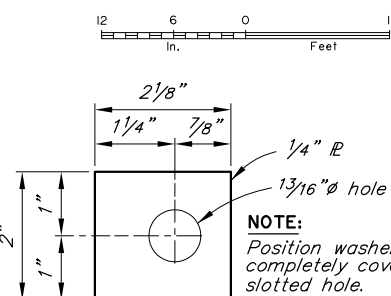
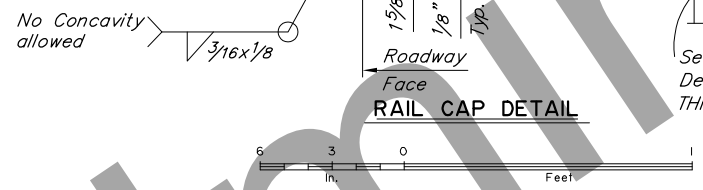
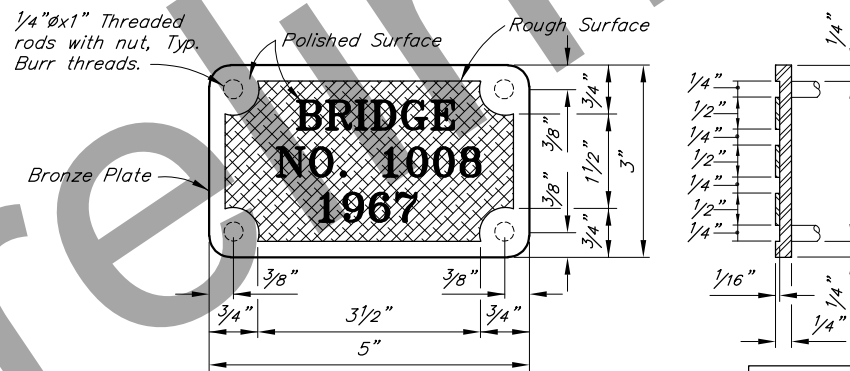


PLATE WASHER B
No Scale

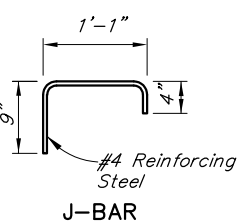


RAILING STUD DETAIL

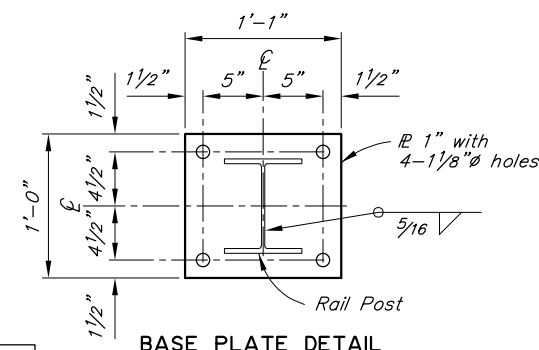


BRIDGE NO. PLATE
No Scale

PRELIMINARY PLAN



J-BAR



BASE PLATE DETAIL

NOTES:

1. Remove existing bridge number plates. Install bridge number plates onto new steel bridge railing posts. Use studs and nuts that conform to UNS C65100 or UNS C65500. Braze 1/4" threaded rod to back of plate with nut - 4 required. Use tamper proof nuts.
2. Locate bridge number plates on right hand side of approaching traffic near each end as shown on "GENERAL LAYOUT" Dwg. (2 total).
3. Provide railing expansion joints at 50'-0" maximum intervals. Railing shall be continuous over 2 posts minimum. Railing expansion joints are required in rail panels that span bridge expansion joints.
4. See "DECK DETAILS" Dwg. for rail post spacing.
5. Install bridge rail posts plumb.
6. Core and bond anchor bolts through the existing deck and existing rail hardware. Drill and bond J-Bars 4" into the existing deck. Adjust J-Bar spacing to avoid existing reinforcing and existing rail hardware.
7. Adjust reinforcing to accommodate curb taper.
8. Contractor shall verify all controlling field dimensions before ordering or fabricating any material.
9. Use grout with a minimum 24-hour f'c of 3,000 psi in single placement.

R:\cda\1008\1008 Rehab 2022-RAILING Tue, Jul/12/22 02:37pm

DESIGNED BY:	Duane Davis	CHECKED:	Nick Murray
DRAWN BY:	Sam Sollie	CHECKED:	Duane Davis
QUANTITIES BY:	Duane Davis	CHECKED:	Nick Murray

REHABILITATION

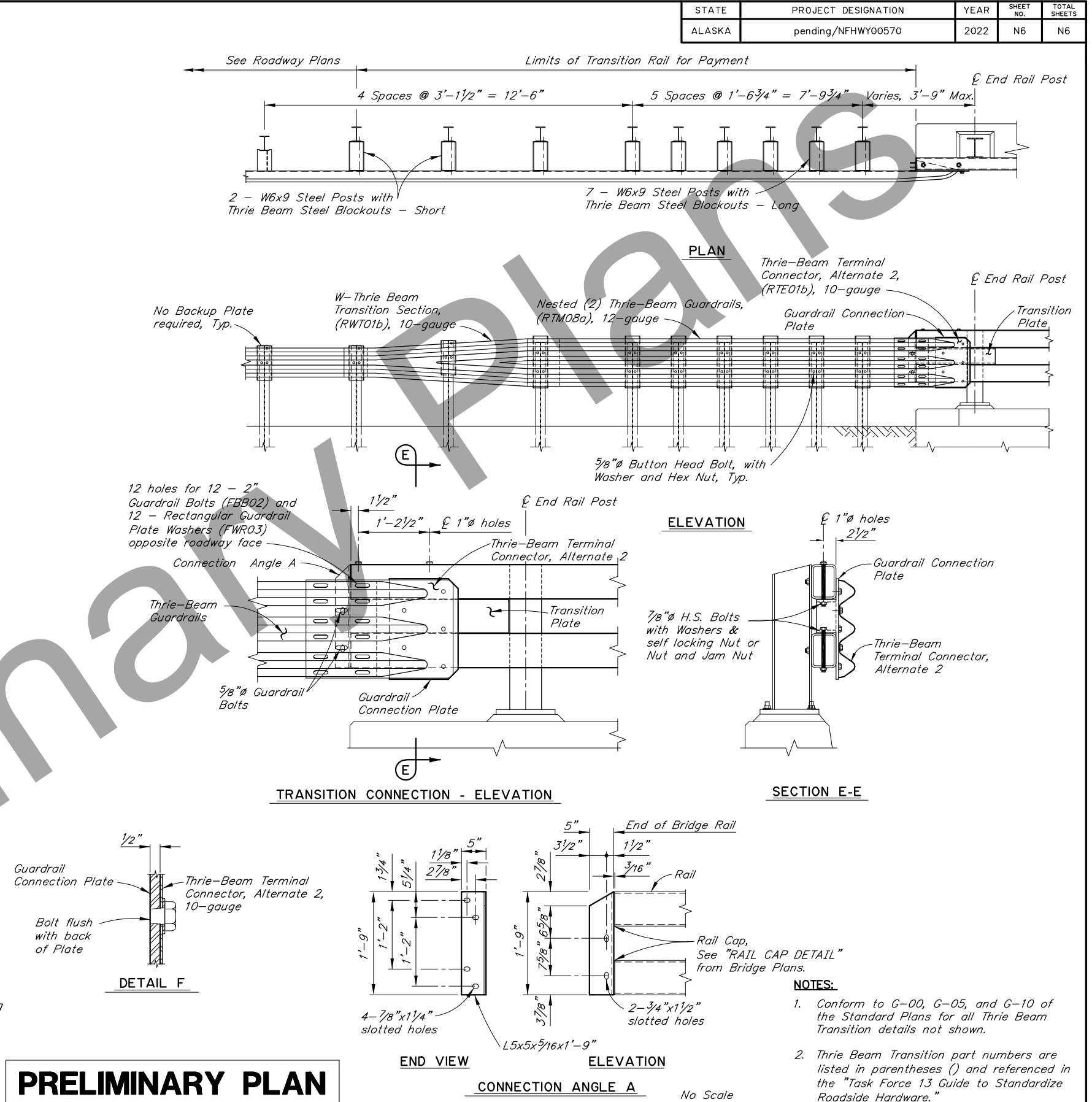
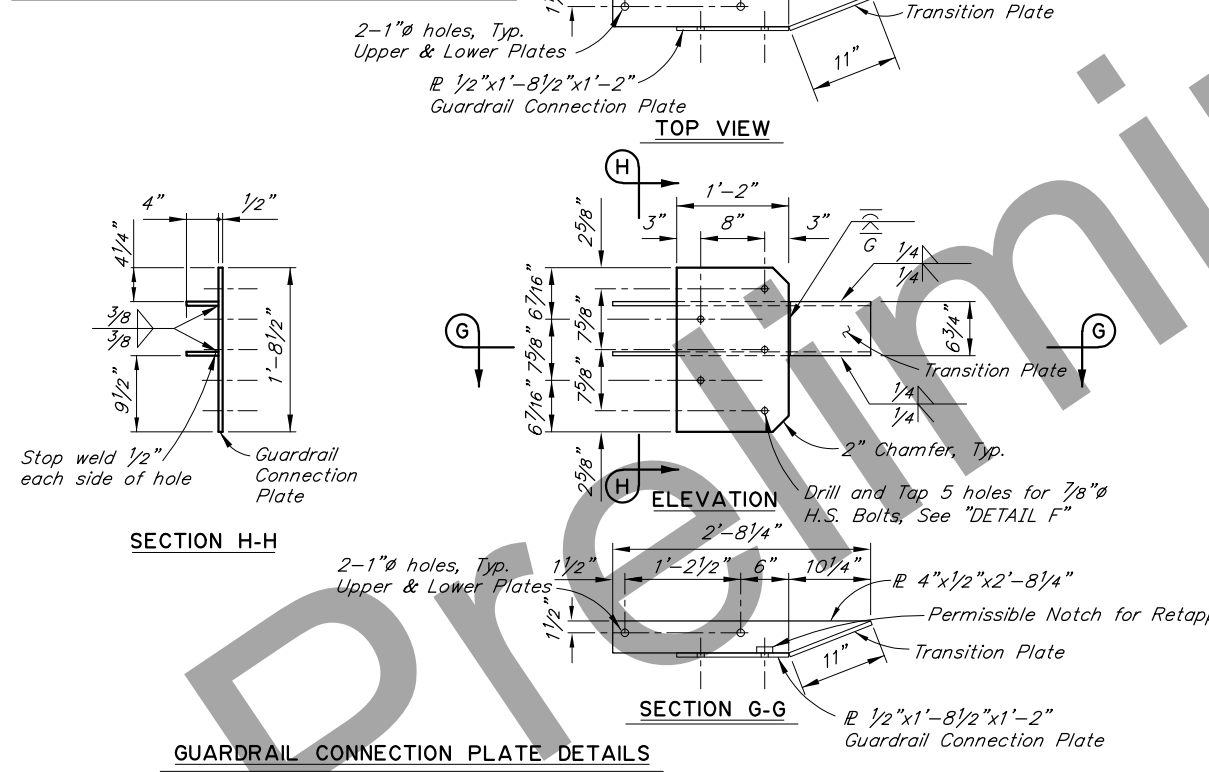
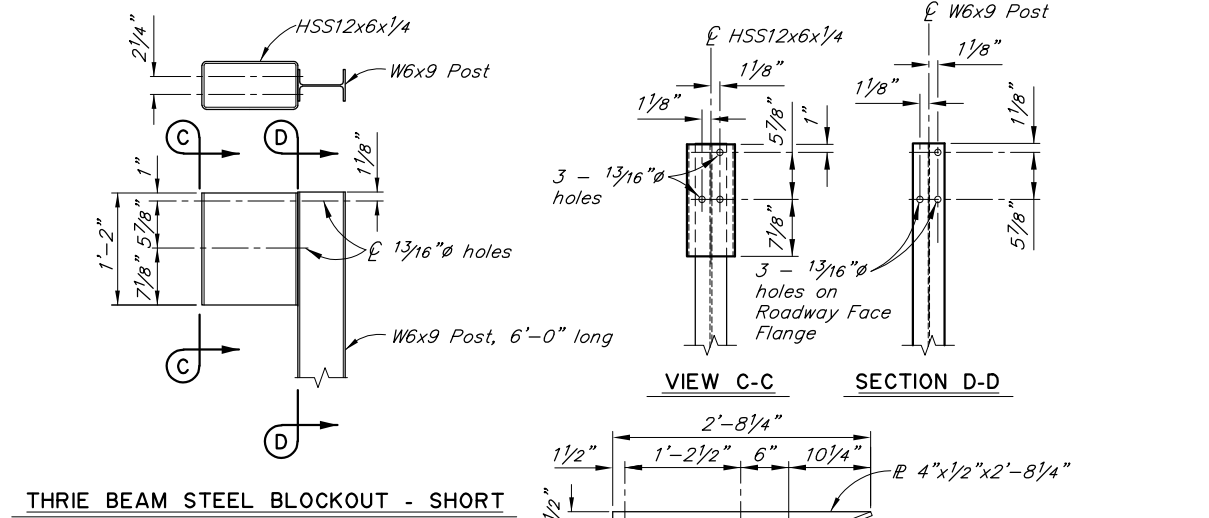
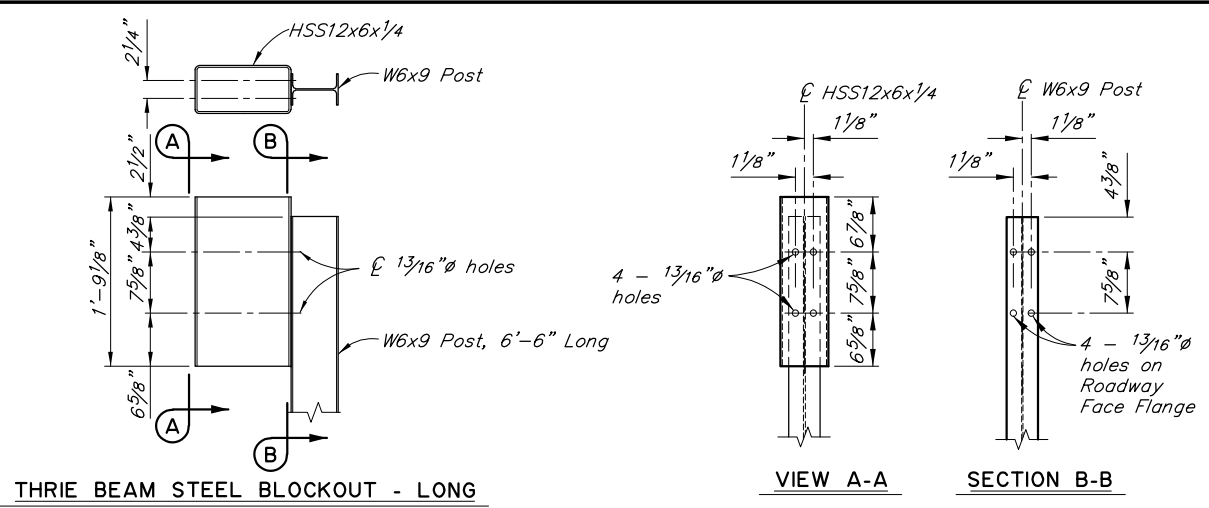
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

CRIPPLE CREEK BRIDGE
CHENA PUMP ROAD
STEEL BRIDGE RAILING, 2-TUBE



BRIDGE NO. 1008
DWG. NO. 5

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	pending/NFHWY00570	2022	N6	N6



- NOTES:**
1. Conform to G-00, G-05, and G-10 of the Standard Plans for all Thrie Beam Transition details not shown.
 2. Thrie Beam Transition part numbers are listed in parentheses () and referenced in the "Task Force 13 Guide to Standardize Roadside Hardware."

R:\cadd\1008\1008 Refab 2022-TRANSITION Tue, Jul/12/22 02:37pm

DESIGNED BY:	Duane Davis	CHECKED:	Nick Murray
DRAWN BY:	Sam Solite	CHECKED:	Duane Davis
QUANTITIES BY:	Duane Davis	CHECKED:	Nick Murray

REHABILITATION

STATE OF ALASKA
 DEPARTMENT OF TRANSPORTATION
 AND PUBLIC FACILITIES
 BRIDGE SECTION
 3132 Channel Drive
 Juneau, Alaska 99801
 907-465-2975

CRIPPLE CREEK BRIDGE
 CHENA PUMP ROAD
MASH BRIDGE RAIL
THRIE BEAM TRANSITION



BRIDGE NO. 1008
 DWG. NO. 6

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	Q1	Q1

GENERAL SITE INFORMATION

1. SITE FUNCTION: ROAD
2. AVERAGE ANNUAL PRECIPITATION: 10.53 INCHES (SOURCE: WESTERN REGIONAL CLIMATE CENTER WEBSITE FOR FOR UNIVERSITY EXP STN, AK).
3. 2-YEAR 24-HOUR PRECIPITATION REASSURANCE INTERVAL: 1.09 INCHES (SOURCE: [HTTP://HDSC.NWS.NOAA.GOV/HDSC/PFDS/PFDS_MAP_AK.HTML](http://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html)).
4. SEE SHEET A1 FOR GENERAL PROJECT AREA MAP.

PROJECT INFORMATION TABLE	
PROJECT AREA (ACRES)	49.70
PAVEMENT AREA (ACRES)	49.70
PRE-CONSTRUCTION RUNOFF COEFFICIENT	0.96
POST-CONSTRUCTION RUNOFF COEFFICIENT	0.96

ENVIRONMENTAL INFORMATION

1. RECEIVING WATER BODIES: TANANA RIVER, CHENA RIVER, CRIPPLE CREEK
2. IMPAIRED WATER BODIES: NONE
3. TOTAL MAXIMUM DAILY LOAD (TMDL) WATERS: NONE.
4. THREATENED AND ENDANGERED SPECIES: NONE.
5. HISTORIC & CULTURAL RESOURCE PRESENCE: CHENA TOWNSITE ARCHAEOLOGICAL DISTRICT IS WITHIN THE PROJECT AREA. CONSTRUCTION IS LIMITED TO PREVIOUSLY DISTURBED AREAS.
6. FISH & WILDLIFE ESSENTIAL HABITAT: CRIPPLE CREEK, CHENA RIVER, TANANA RIVER
7. WETLANDS: NONE.
8. PERMITS: FNSB FLOODPLAIN PERMIT
9. CONTACT THE PROJECT ENGINEER WITH QUESTIONS/CONCERNS REGARDING ENVIRONMENTAL ISSUES OR PERMIT INFORMATION.

ESCP NOTES:

GENERAL:

1. THIS PROJECT WILL NOT BE REQUIRED TO DEVELOP A SWPPP OR FILE AN NOI. THE PROJECT WILL COMPLY WITH THE CLEAN WATER ACT AND PROTECT WATER QUALITY.
2. TEMPORARY BEST MANAGEMENT PRACTICES (BMPS) THAT ARE REQUIRED WILL BE SUBSIDIARY TO 641.2000.0000 POLLUTION CONTROL
3. MAINTAIN BMPS ON A REGULAR BASIS INCLUDING, BUT NOT LIMITED TO REMOVAL AND DISPOSAL OF SEDIMENT AND REPLACING DAMAGED BMPS OR AS DIRECTED BY THE ENGINEER.

CATCHBASINS AND CULVERTS:

4. PROVIDE TEMPORARY INLET AND OUTLET PROTECTION FOR PROPOSED CULVERTS IN THE AREA OF DISTURBANCE PRIOR TO MAKING OPERATIONAL OR BEGINNING EARTH DISTURBING ACTIVITIES.
5. PERMANENT CULVERT INLET AND OUTLET PROTECTION IS ESTABLISHED VEGETATION.

DITCH PROTECTION AND CONCENTRATED FLOWS:

6. DURING CONSTRUCTION, PROTECT DITCHES TO LIMIT RELEASE OF SEDIMENT. PROVIDE TEMPORARY DITCH PROTECTION IN THE FORM OF VELOCITY CONTROLS OR TEMPORARY NON-ERODIBLE LINING.
7. WHEN POSSIBLE, AVOID CONDITIONS WHICH PROMOTE CONCENTRATED FLOWS. OTHERWISE, INSTALL VELOCITY CONTROL BMPS (I.E. WATTLE CHECK DAMS OR ROCK CHECK DAMS).

PERIMETER CONTROL:

8. VEGETATIVE BUFFER IS THE PREFERRED PERIMETER PROTECTION FOR THIS PROJECT. THERE ARE NO WETLANDS IN THE PROJECT AREA.

HAULING:

9. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPEMENT OCCURS DURING HAULING ACTIVITIES.
10. CONSTRUCTION ENTRANCE/EXIT TRACK OUT CAN STILL BE CONSIDERED A DISCHARGE.

STOCKPILE PROTECTION:

11. ALL ERODIBLE STOCKPILES MUST BE PROTECTED BY EROSION AND SEDIMENT CONTROL DEVICES.
12. EROSION AND SEDIMENT CONTROL BMPS MAY HAVE TO BE REMOVED AND RE-INSTALLED EACH SHIFT.

TIMING OF BMP INSTALLATION:

13. INSTALL EROSION AND SEDIMENT CONTROL BMP'S PRIOR TO THE START OF CONSTRUCTION, AS NECESSARY TO MINIMIZE EROSION FROM DISTURBED SURFACES AND CAPTURE SEDIMENT ONSITE.
14. INSTALL TEMPORARY PERIMETER CONTROL BMP'S BEFORE ANY UP-GRADIENT SOIL DISTURBANCE OCCURS.

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil 3D\3 Drawings\00570_TITLE_LEGEND-ESCP Frt, Aug/05/22 03:32pm

ESCP








NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	8645(015)/NFHWY00570	2023	T1	T1

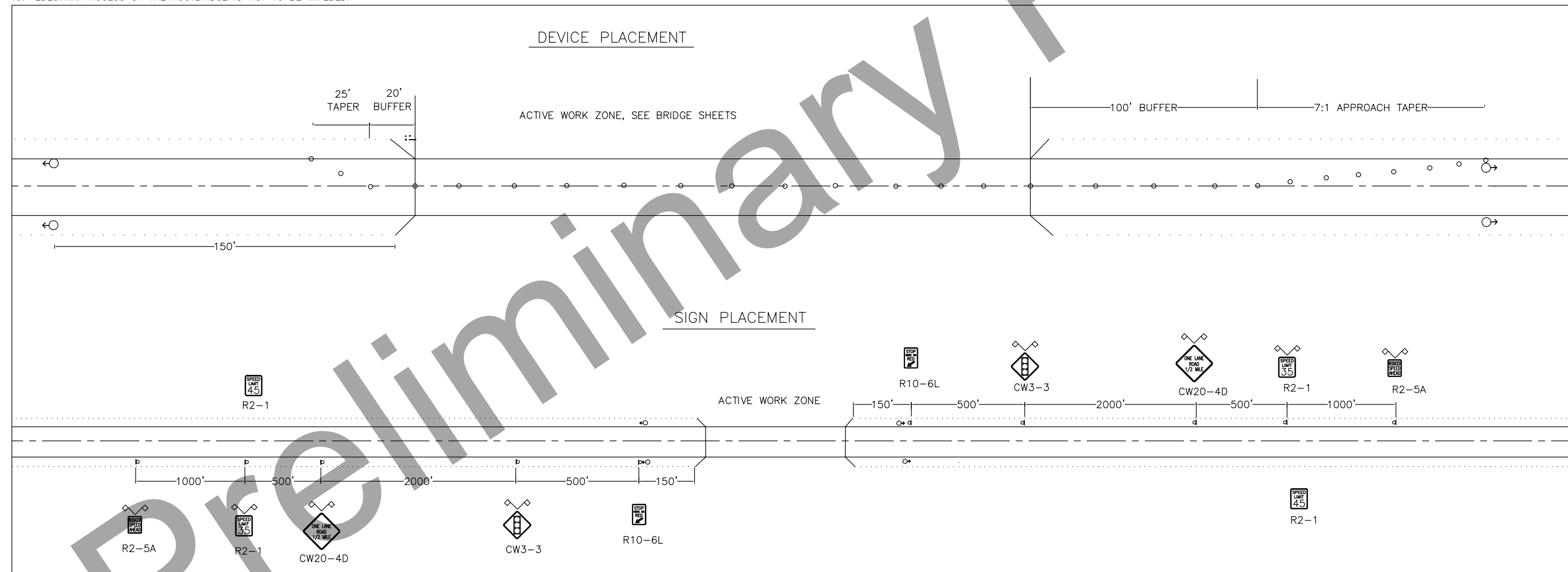
TRAFFIC CONTROL NOTES:

GENERAL:

- KEEP ONE LANE OPEN TO 2-WAY PILOT CAR TRAFFIC AT ALL TIMES.
- PROVIDE A MINIMUM 10' WIDE LANE FOR TRAFFIC.
- USE WARNING LIGHTS TO MARK BARRICADES, PORTABLE CONCRETE BARRIERS OR ANY OTHER CHANNELING DEVICE AT NIGHT. EQUIP THE FIRST DEVICE IN A LINE OF CHANNELING DEVICES FACING THE DIRECTION OF TRAFFIC WITH A TYPE A FLASHING WARNING LIGHT. EQUIP ALL OTHERS WITH STEADY-BURN WARNING LIGHTS.
- TRAFFIC DRUM SPACINGS IN TAPERS AND TANGENTS SHALL BE APPROVED BY ENGINEER.
- RUN FLARE TO EDGE OF SHOULDER AS SHOWN.
- COMPLETE ALL WORK ON ONE SIDE OF ROAD BEFORE BEGINNING WORK ON THE OTHER SIDE.
- MOUNT CONSTRUCTION SIGNS AT 7' ON 4 X 4 WOOD POST IN ACCORDANCE WITH STANDARD DRAWINGS S-05.01 AND S-30.03 UNLESS OTHERWISE DIRECTED BY THE ENGINEER.
- PROVIDE EMERGENCY VEHICLES WITH ACCESS THROUGH THE PROJECT AT ALL TIMES.
- THE ADJACENT PEDESTRIAN BRIDGE IS TO REMAIN OPEN AT ALL TIMES.
- THE SPACING BETWEEN CHANNELIZING DEVICES (WHEN USED) MUST NOT EXCEED A DISTANCE IN FEET EQUAL TO 1.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TAPER CHANNELIZATION, AND A DISTANCE IN FEET EQUAL TO 2.0 TIMES THE SPEED LIMIT IN MPH WHEN USED FOR TANGENT CHANNELIZATION.
- USE WARNING LIGHTS ON CHANNELIZING DEVICES DURING NIGHT WORK AS DEFINED IN SECTION 643-1.02. USE TYPE "C" STEADY BURN WARNING LIGHTS ON ALL TAPER AND TANGENT CHANNELIZATION DEVICES.
- PAYMENT FOR TEMPORARY SIGNAL DEVICES IS SUBSIDIARY TO 643.0002.0000 TRAFFIC MAINTENANCE
- PEDESTRIAN ACCESS OF THE FOOTBRIDGE IS NOT TO BE IMPEDED.

LEGEND

-  DRUM
-  CONSTRUCTION SIGN
-  TEMPORARY SIGNAL OR PORTABLE SIGNAL
-  HIGH LEVEL WARNING DEVICE
-  WORK AREA



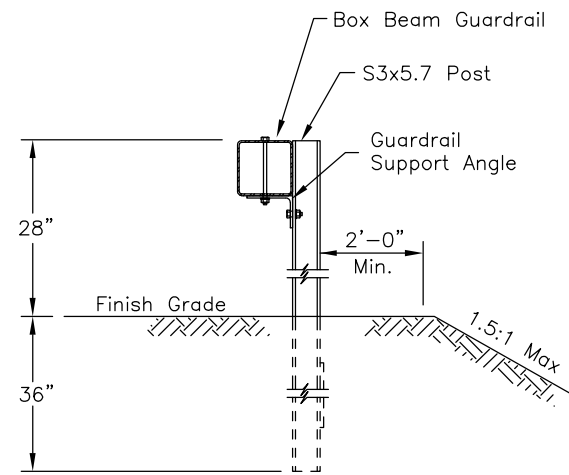
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\Fbks_NF\NFHWY00570 Chena Ridge and Pump Resurfacing\6 Design\5 Civil_3D\3 Drawings\00570_TITLE_LEGEND-TRAFFIC CONTROL_PLAN_Fri_Aug_05_22_03:31pm

BRIDGE LANE CLOSURE

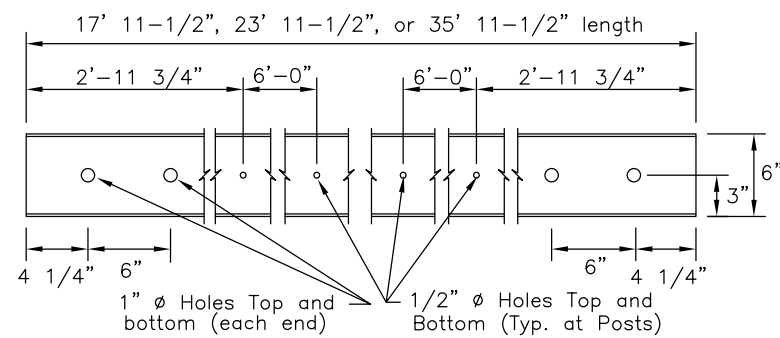
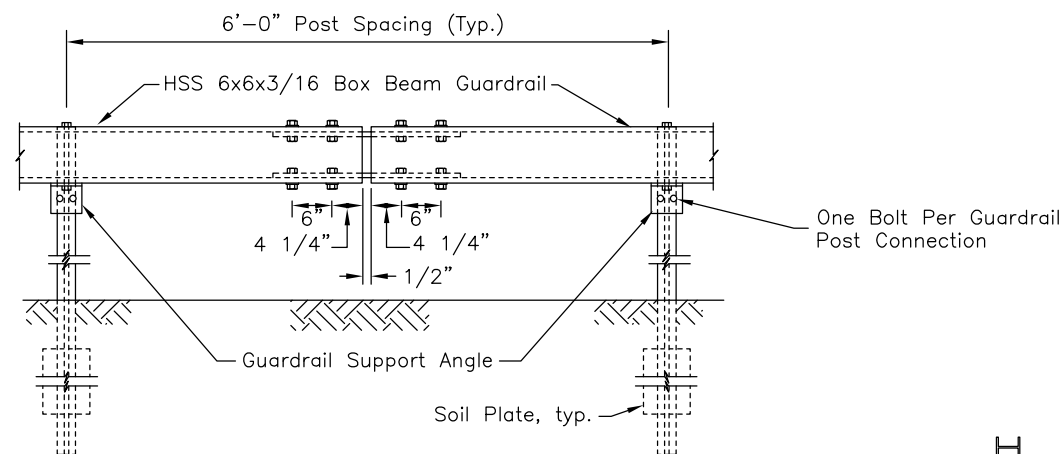


CONSTRUCTION NOTES:

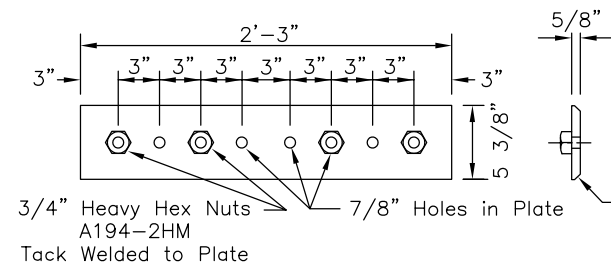
1. No fixed objects allowed within 60" of the back of the guardrail post.
2. Shop form guardrail on curves with a radius of less than 717'.
3. Splice plate connections shall meet ASTM F3125, Grade A325 for bolts and A563, Grade A for hex nuts.
4. HSS Steel Tube box beam rail elements shall meet ASTM A500 Grade B.
5. Provide guardrail reflectors conforming to Standard Plan G-00 and Section 606 of the Standard Specifications.
6. Mount guardrail reflectors every 48' on tangents and 24' on curves. Start reflector installation on the first post. Use Type A reflectors unless shown otherwise on the plans.
7. Do not galvanize contact surfaces between the splice plate and the interior HSS tube surface.



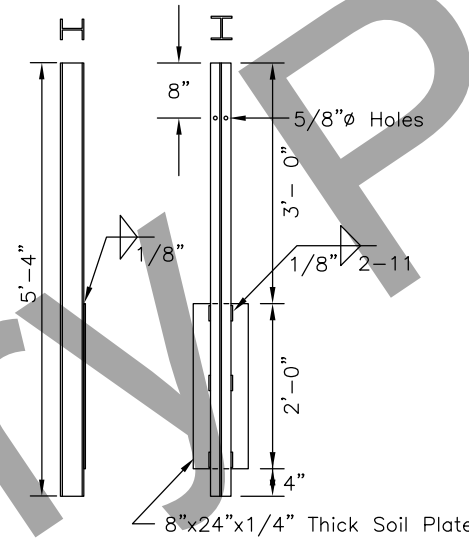
POST INSTALLATION



HSS 6x6 x 3/16 BOX BEAM GUARDRAIL



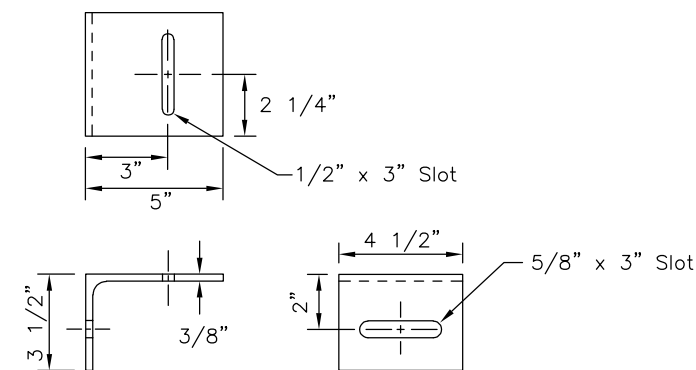
SPLICE PLATE



S3x5.7 BOX BEAM GUARDRAIL POST

ASTM A992 Post, ASTM A36 Plate

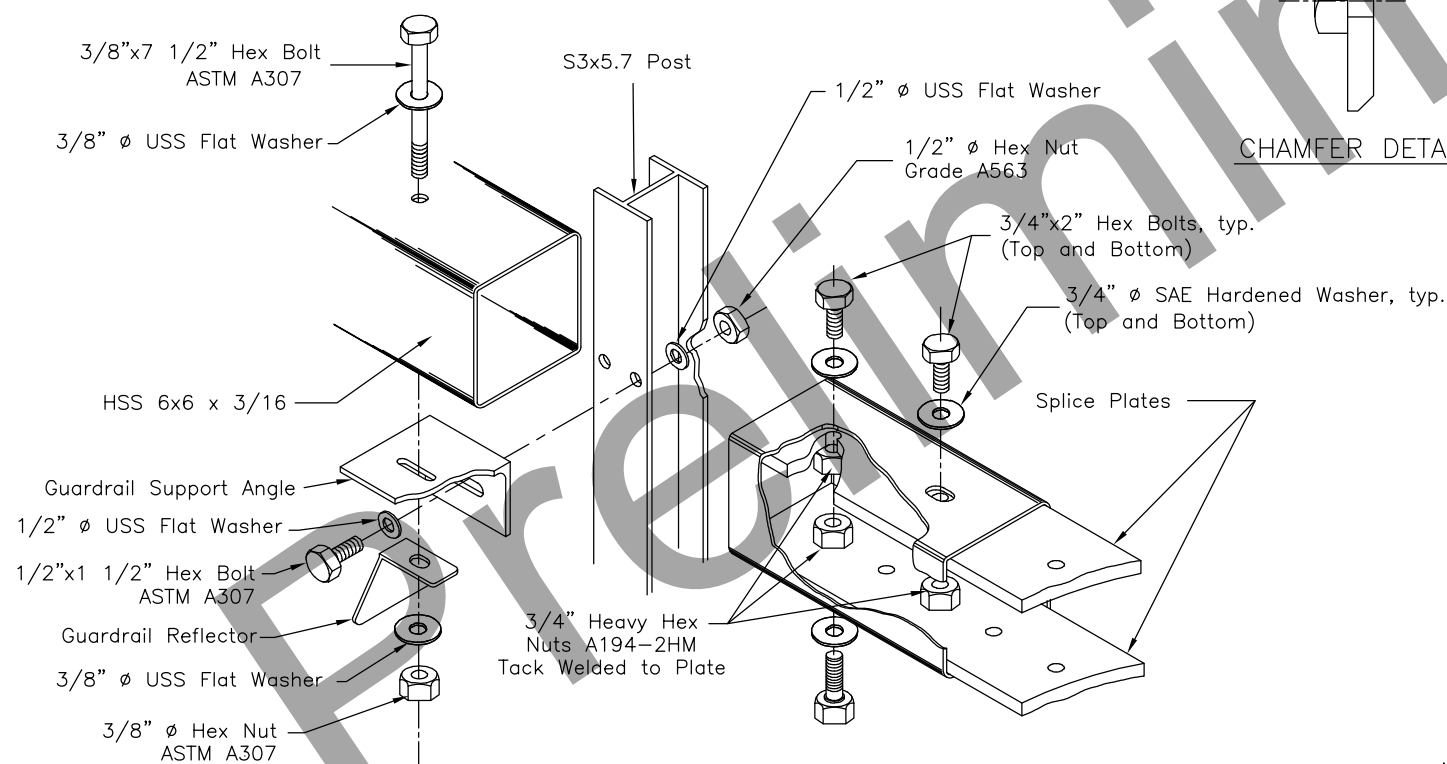
CHAMFER DETAIL



GUARDRAIL SUPPORT ANGLE

L 5 x 3.5 x 3/8 - ASTM A36

Note: Drawing not to scale



ASSEMBLY DETAIL

State of Alaska DOT&PF
ALASKA STANDARD PLAN

**MASH BOX BEAM
GUARDRAIL**

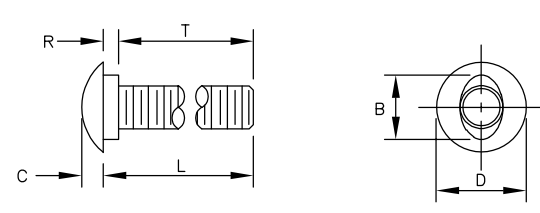
Adopted as an Alaska
Standard Plan by: _____

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 07/30/2021

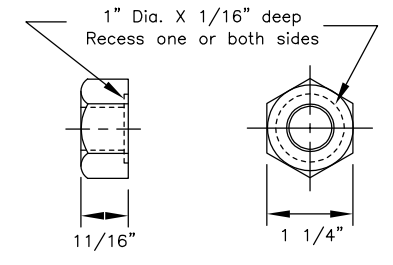
Last Code and Stds. Review
By: LRG Date: 07/30/2021

Next Code and Standards Review date: 7/30/2021

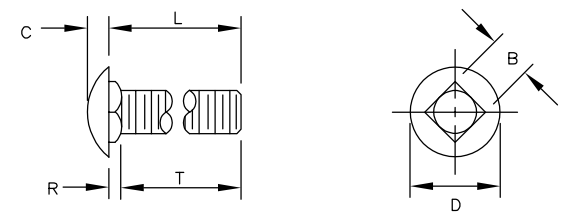


B	C	D	L (Length)	R	T (Thread Length)
15/16"	5/16"	1 5/16" or 1 7/16"	As Required	7/32"	As Required

5/8" BUTTONHEAD BOLT
(FBB01-05)

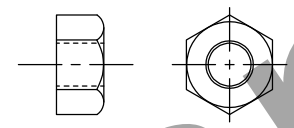


5/8" Dia. RECESSED HEX NUT
(FBB01-05)



B	C	D	L (Length)	R	T (Thread Length)
5/8"	5/16"	1 5/16"	As Required	3/16"	As Required

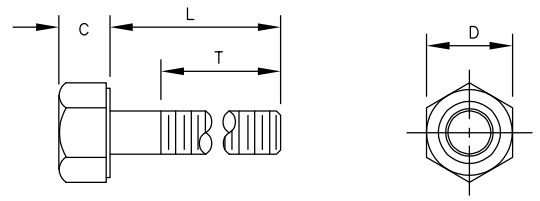
5/8" Dia. CARRIAGE BOLT
(FBC10-20)



STANDARD HEX NUT

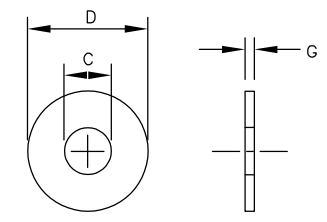
GENERAL NOTES:

1. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.



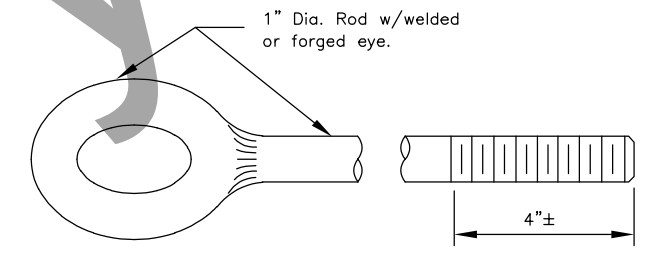
Bolt Size	C	D	L (Length)	T (Thread Length)
5/16"	—	—	1 1/2"	7/8"
5/16"	—	—	1"	1"
3/8"	—	—	7 1/2"	1 1/2"
1/2"	—	—	1 1/2"	1 1/2"
1/2"	—	—	1 1/4"	1 1/4"
5/8" H.S.	5/16"	7/8"	8"	1 1/2"
5/8"-11	—	—	1 1/2"	1 1/2"
3/4"	—	—	1 1/2"	1 1/2"
3/4"	—	—	As Required	2"
3/4" H.S.	15/32"	1 1/4"	2"	1 1/2"

STANDARD HEX BOLTS

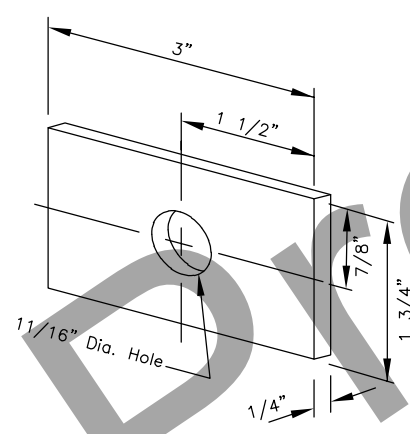


For Bolt ø	C	D	G
3/8"	7/16"	1"	5/64"
1/2"	17/32"	1 1/16"	3/32"
1/2" H.S.	17/32"	1 1/16"	3/32"
5/8"	11/16"	1 3/4"	9/64"
3/4"	13/16"	1 15/32"	9/64"
3/4" H.S.	13/16"	2"	5/32"
1"	1 1/16"	2"	9/64"

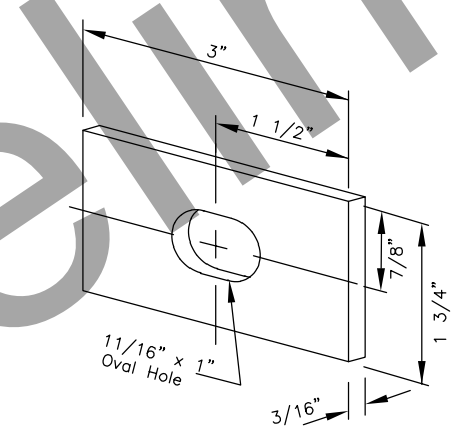
STANDARD STEEL WASHERS



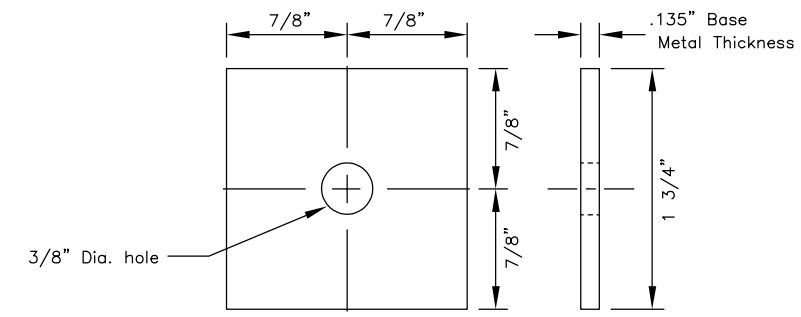
EYE BOLT



FLAT PLATE WASHER



RECTANGULAR POST BOLT WASHER
(FWR03)



SQUARE STEEL WASHER
(FWR01)

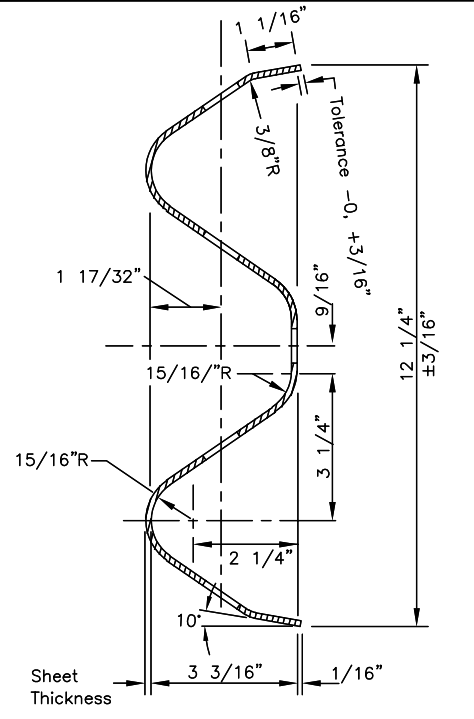
State of Alaska DOT&PF
ALASKA STANDARD PLAN
**STANDARD GUARDRAIL
HARDWARE
(NUTS, BOLTS & WASHERS)**

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

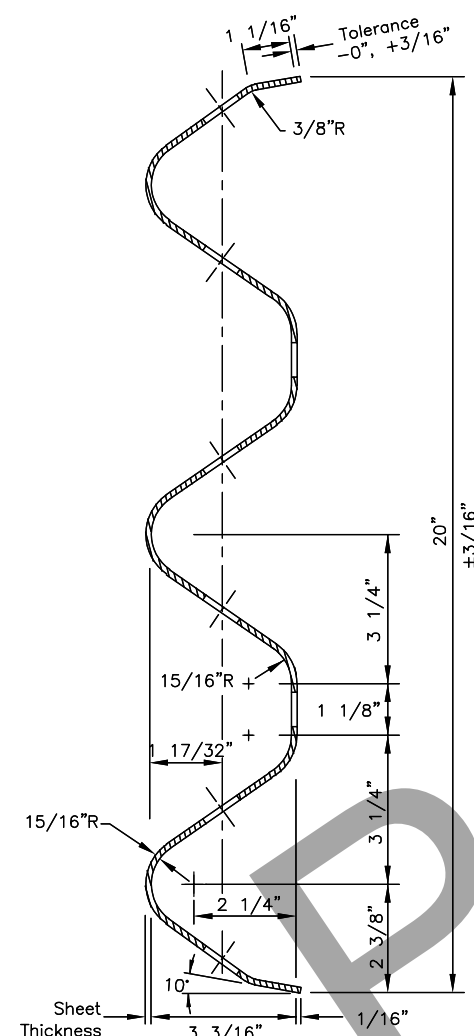
Adoption Date: 7/17/2020

Last Code and Stds. Review By: KLK Date: 7/8/2020

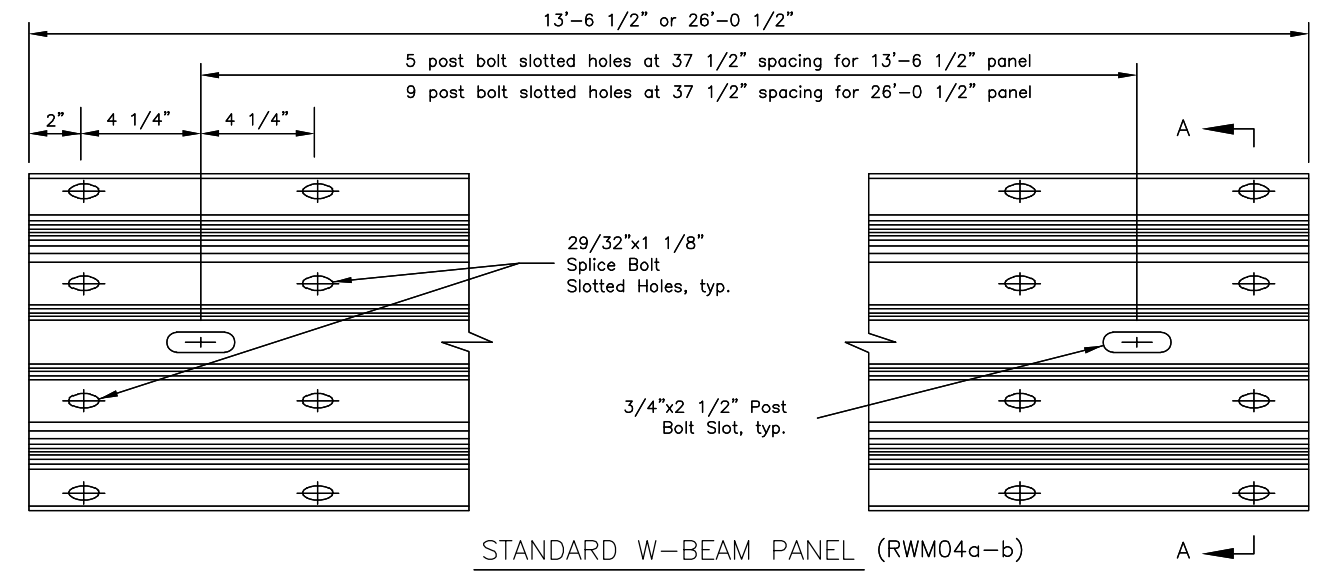
Next Code and Standards Review Date: 7/8/2030



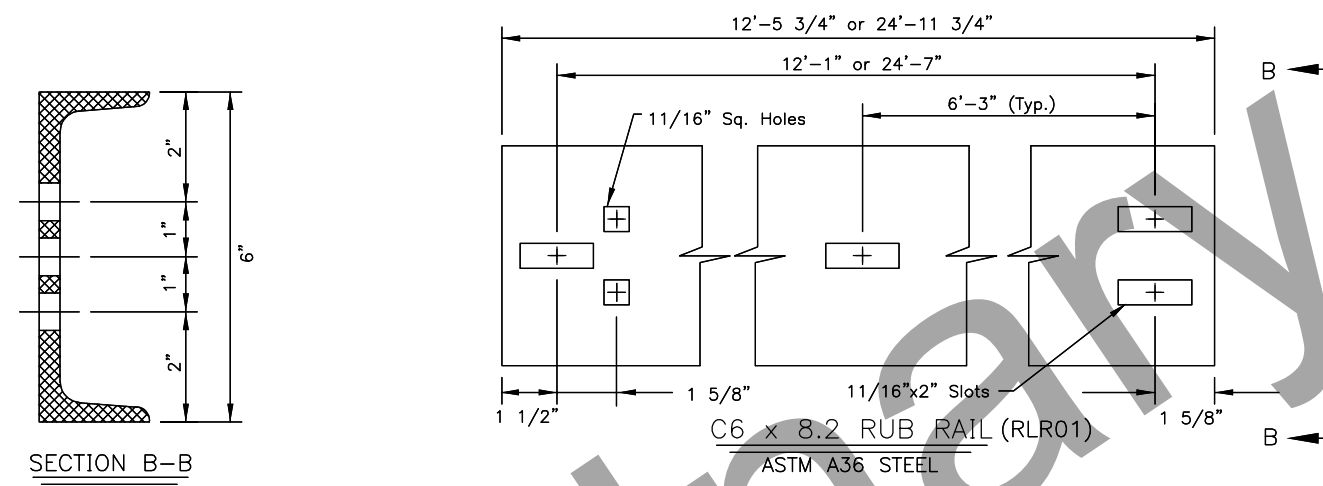
SECTION A-A
(cross section same as RWM02a-b)



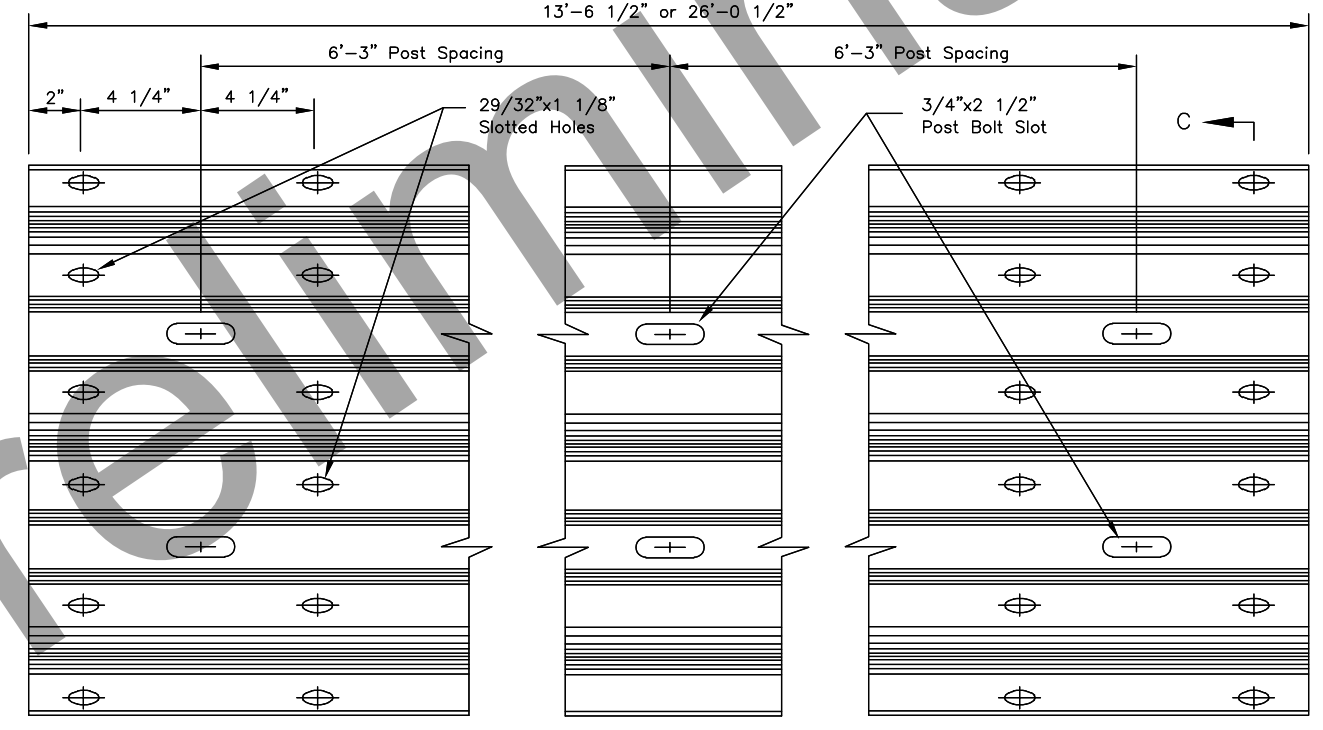
SECTION C-C
(RTM01a-02b)



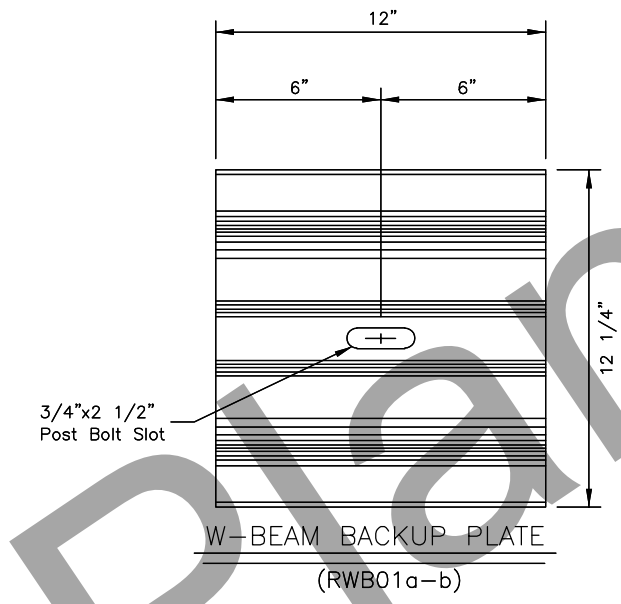
STANDARD W-BEAM PANEL (RWM04a-b)



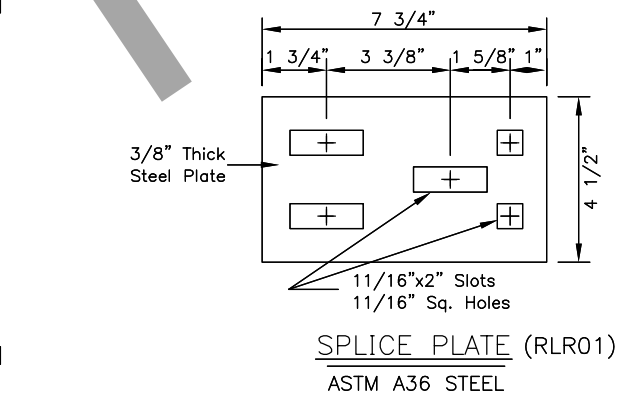
C6 x 8.2 RUB RAIL (RLR01)
ASTM A36 STEEL



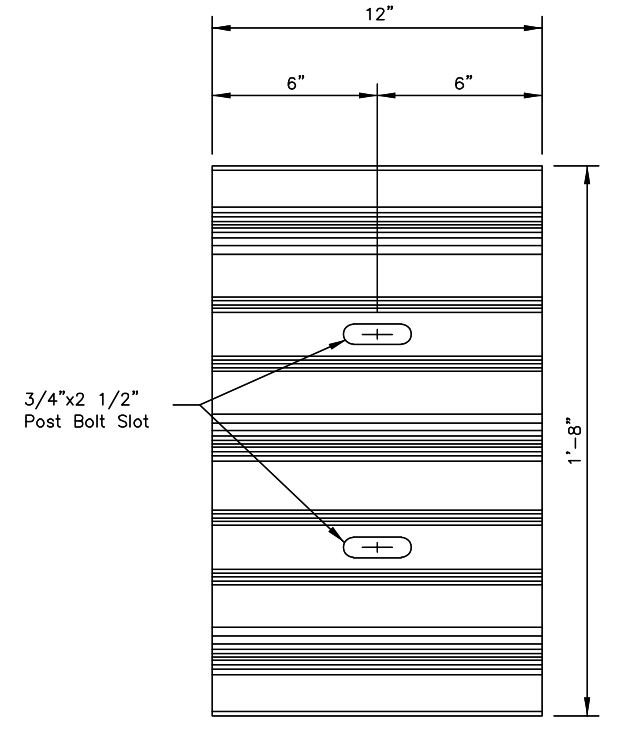
STANDARD THRIE BEAM PANEL (RTM01a-02b)



W-BEAM BACKUP PLATE (RWB01a-b)



SPLICE PLATE (RLR01)
ASTM A36 STEEL



THRIE BEAM BACKUP PLATE (RTB01a-02b)

- GENERAL NOTES:**
- All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.
 - Install back-up plates between blockouts and w-beam or thrie-beam rail at intermediate (non-splice) posts when steel blockouts are used but not with wood, rubber, plastic, or other approved blockouts.

State of Alaska DOT&PF
ALASKA STANDARD PLAN
**STANDARD GUARDRAIL
HARDWARE
(RAILS AND SPLICES)**

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

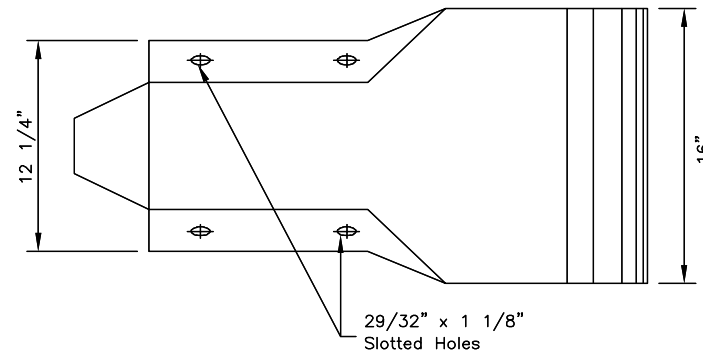
Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

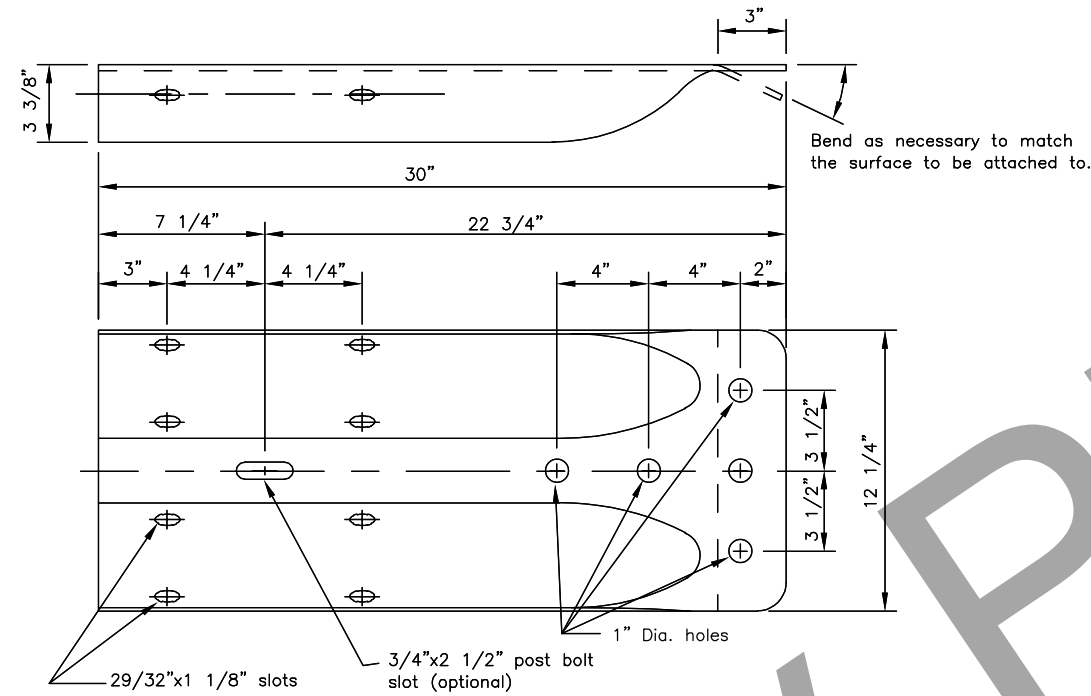
Next Code and Standards Review Date: 7/8/2030

GENERAL NOTES:

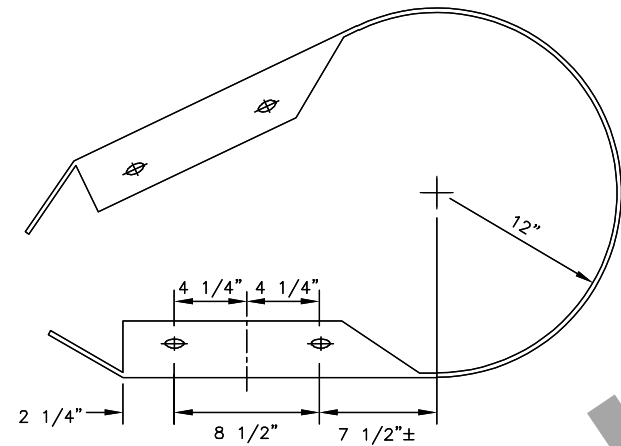
1. W-Beam and Thrie Beam Terminal Connectors shall conform to AASHTO M 180, Class B, Type II.
2. W-Beam end sections shall conform to AASHTO M 180, Class A, Type II.
3. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.



PROFILE



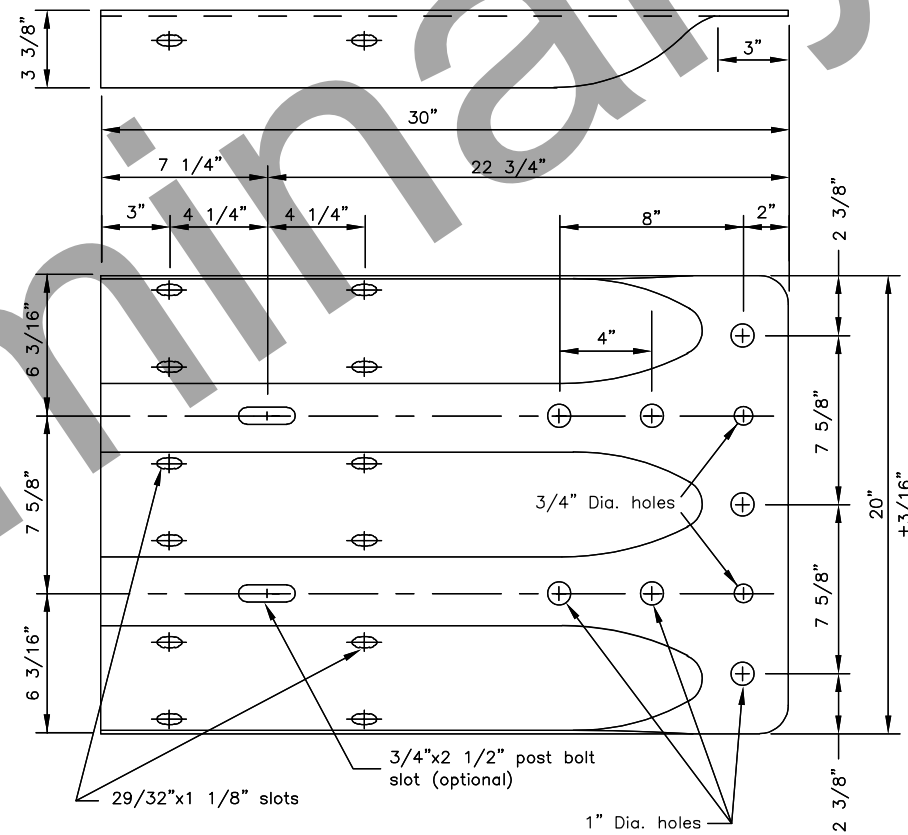
STANDARD W-BEAM TERMINAL CONNECTOR
(RWE02)



W-BEAM PLAN VIEW

*Radius to be specified on the plans

STANDARD W-BEAM END SECTION
(RWE06)



STANDARD THRIE BEAM TERMINAL CONNECTOR
(RTE01b)

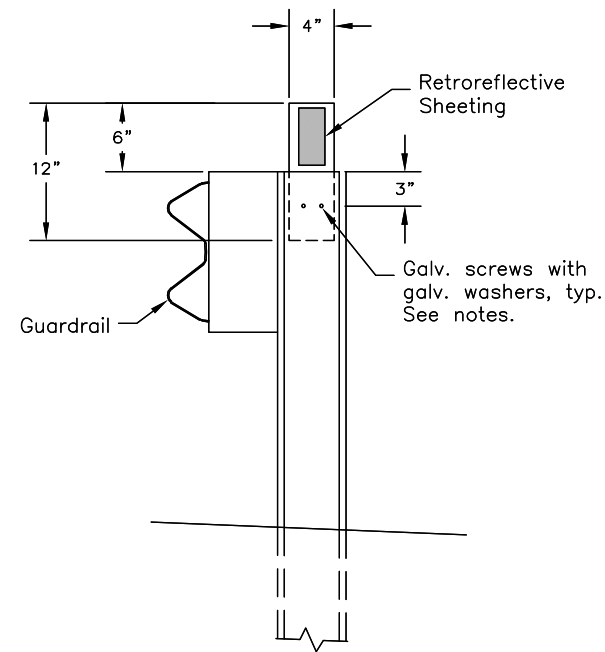
State of Alaska DOT&PF
ALASKA STANDARD PLAN
**STANDARD GUARDRAIL
HARDWARE
(TERMINAL CONNECTORS)**

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

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

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



GUARDRAIL FLEXIBLE DELINEATOR DETAIL

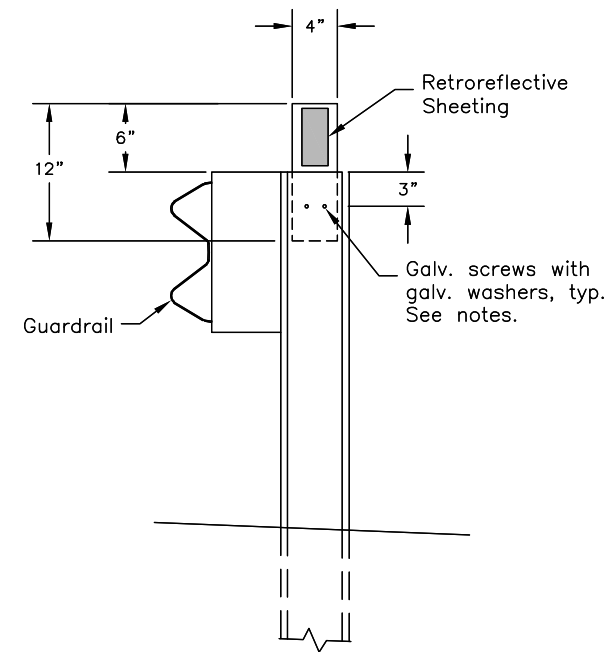
(Steel post shown - similar for wood post)

CONSTRUCTION NOTES

1. Install guardrail flexible delineators where shown on the plans.
2. Install guardrail flexible delineators at 50 foot spacing, unless otherwise noted on the plans. Install not less than 2 delineators per guardrail run.
3. Use 3" x 5" white/yellow/red retroreflective sheeting as required per Standard Plan T-05. Install retroreflective sheeting on both sides of delineator on two-way roads.
4. Attach 4" x 12" flexible delineators to the top of new guardrail posts, on the trailing side of the posts relative to the adjacent lane's direction of travel.
5. Use 2 each 1/4" dia. x 1-1/2" long galvanized lag screws for attaching to wood posts and 2 each 1/4" dia. x 3/4" long galvanized self-drilling fasteners for steel posts. Install a galvanized washer between the fastener head and the flexible delineator.

<p>State of Alaska DOT&PF ALASKA STANDARD PLAN</p> <p>STANDARD GUARDRAIL HARDWARE (FLEXIBLE DELINEATORS)</p> <p>Adopted as an Alaska Standard Plan by: _____ Carolyn Morehouse, P.E. Chief Engineer</p> <p>Adoption Date: 7/17/2020</p> <hr/> <p>Last Code and Stds. Review By: KLK Date: 7/8/2020 Next Code and Standards Review Date: 7/8/2030</p>

G-00.04



GUARDRAIL FLEXIBLE DELINEATOR DETAIL

(Steel post shown – similar for wood post)

CONSTRUCTION NOTES

1. Install guardrail flexible delineators where shown on the plans.
2. Install guardrail flexible delineators at 50 foot spacing, unless otherwise noted on the plans. Install not less than 2 delineators per guardrail run.
3. Use 3" x 5" white/yellow/red retroreflective sheeting as required per Standard Plan T-05. Install retroreflective sheeting on both sides of delineator on two-way roads.
4. Attach 4" x 12" flexible delineators to the top of new guardrail posts, on the trailing side of the posts relative to the adjacent lane's direction of travel.
5. Use 2 each 1/4" dia. x 1-1/2" long galvanized lag screws for attaching to wood posts and 2 each 1/4" dia. x 3/4" long galvanized self-drilling fasteners for steel posts. Install a galvanized washer between the fastener head and the flexible delineator.

Preliminary Plans

State of Alaska DOT&PF
ALASKA STANDARD PLAN

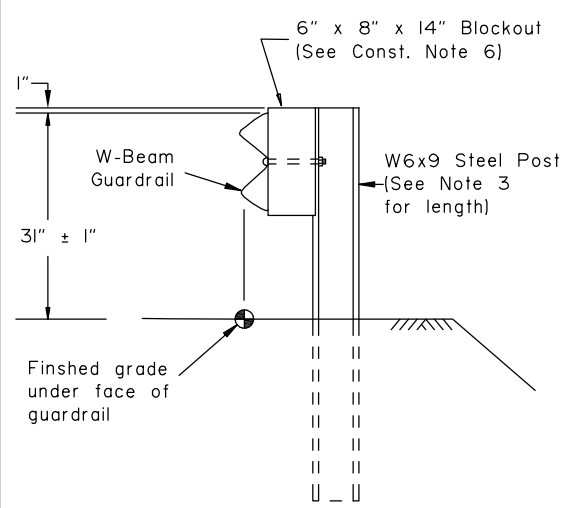
STANDARD GUARDRAIL
HARDWARE
(FLEXIBLE DELINEATORS)

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

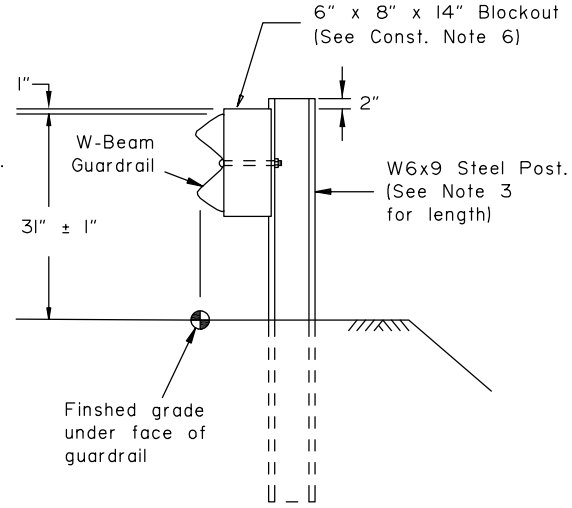
Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020
Next Code and Standards Review Date: 7/8/2030

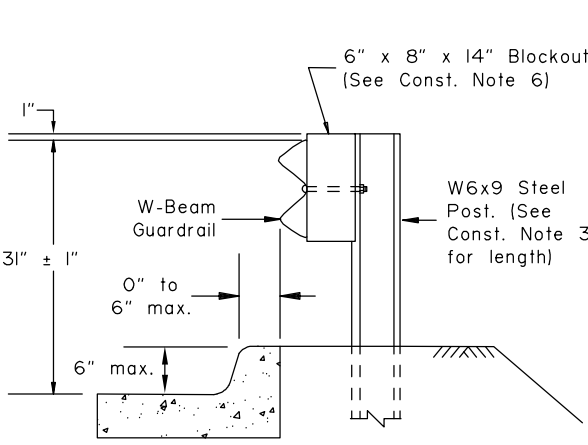
G-00.04



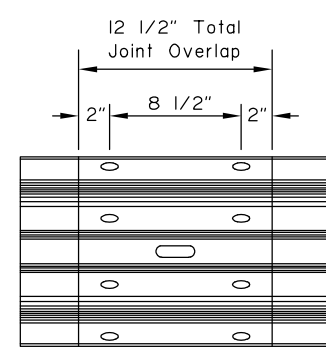
TYPE I POST INSTALLATION



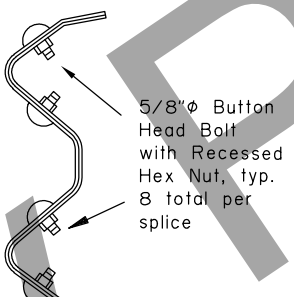
TYPE II POST INSTALLATION
(Facilitates raising rail for future overlays.)



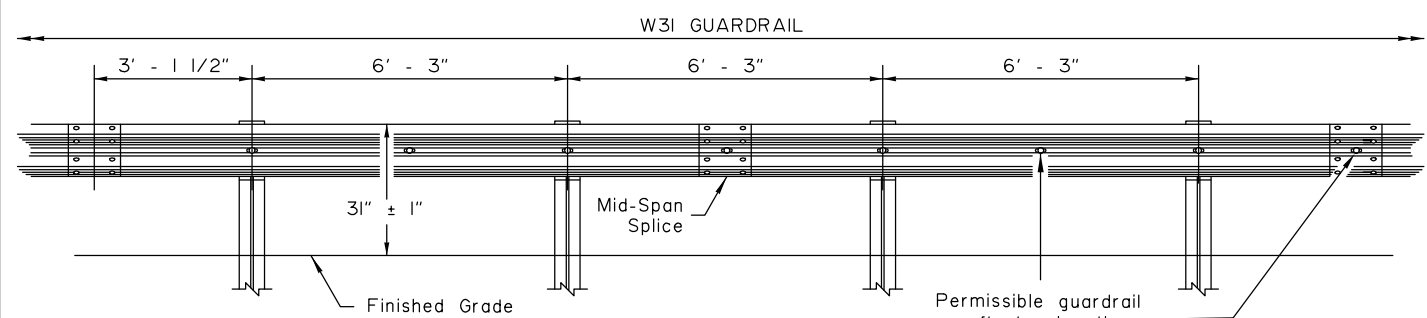
TYPE III POST INSTALLATION



SPLICE DETAIL
(At mid span between posts only. Bolts not shown for clarity)

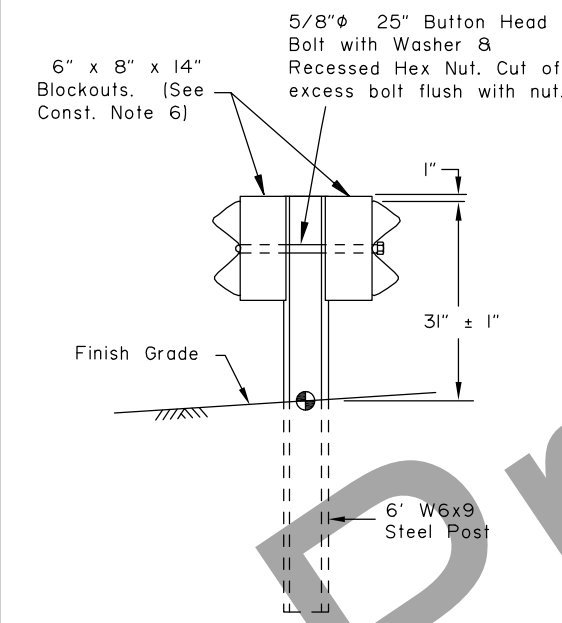


SPLICE CROSS-SECTION

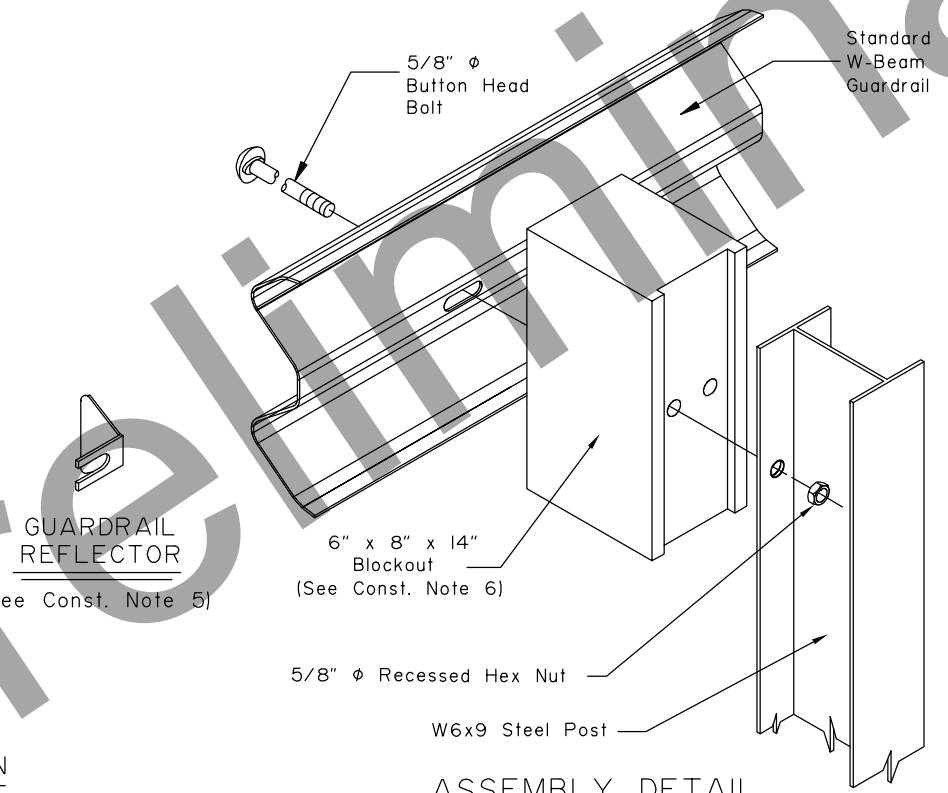


TYPICAL ELEVATION

Permissible guardrail reflector locations (must be mid-span)

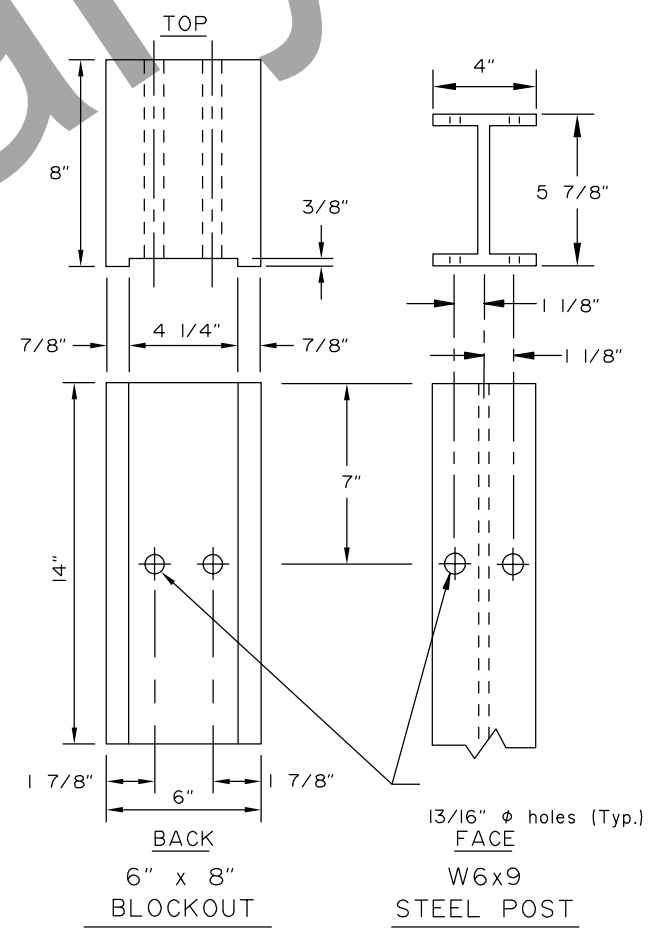


TYPE IV DOUBLE SIDED INSTALLATION



ASSEMBLY DETAIL

(Type I post shown)



CONSTRUCTION NOTES:

1. Provide hardware compliant with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware.
2. See Standard Plan G-00 for hardware details not shown on this drawing.
3. See Standard Plan G-10 for post lengths corresponding to different combinations of slope and behind-post embankment width.
4. Typical post spacing is 6'-3" center to center.
5. Attach guardrail reflector to guardrail using a 5/8" button head bolt with 5/8" recessed head hex nut and steel washer at location shown in the Typical Elevation. Install reflectors every 25' on tangents and every 12.5' on curves starting 100' before the P.C. and ending 100' after the P.T.
6. Use wood or synthetic blockouts designed, tested, and passed per MASH for use with steel posts. Either bolt hole on the blockout may be used for attachment.
7. Use a 25 linear foot transition to match differing height of existing or new rail elements and end treatments - see Standard Plan G-11.
8. W6x8.5 steel post may be substituted for W6x9 steel post.
9. Install flexible delineators on guardrail posts when called for in the contract. See Standard Plan G-00 for guardrail flexible delineator details.

DESIGN NOTES:

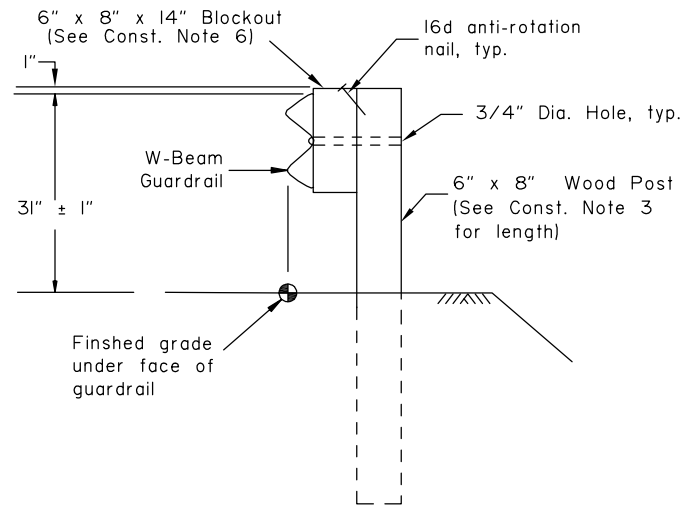
1. No fixed objects allowed within 36" of the back side of guardrail post.
2. This barrier is acceptable under MASH Tests 3-10 and 3-11.

State of Alaska DOT&PF
ALASKA STANDARD PLAN
**STEEL POST W31
GUARDRAIL**

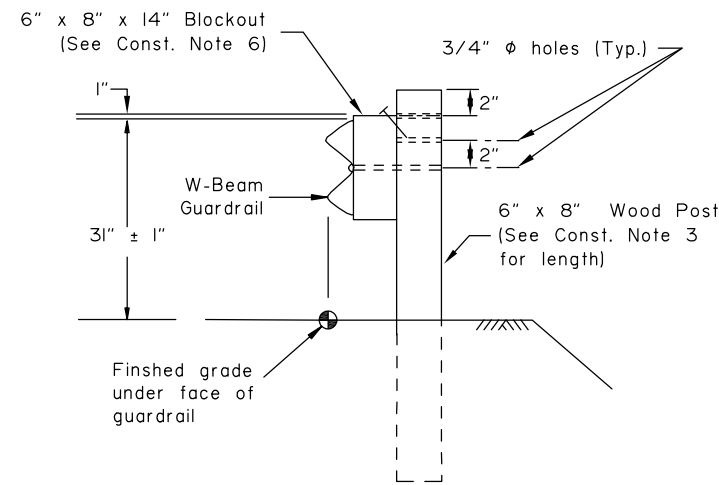
Adopted as an Alaska Standard Plan by: **Carolyn Morehouse**
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 05/15/2019

Last Code and Stds. Review
By: LRG Date: 5/15/2019
Next Code and Standards Review date: 5/15/2029

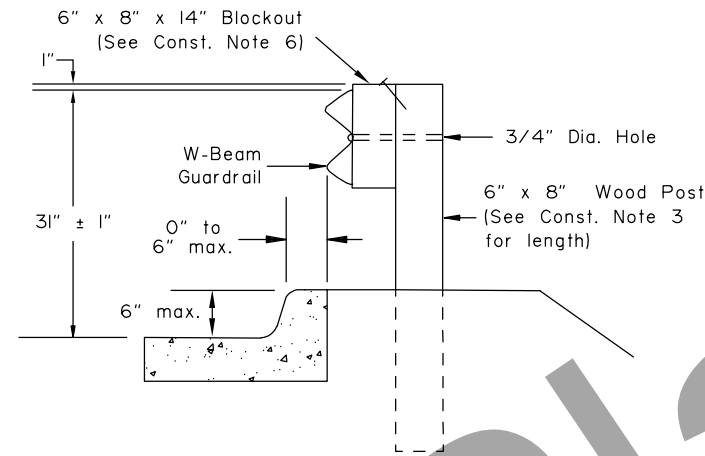


TYPE I POST INSTALLATION

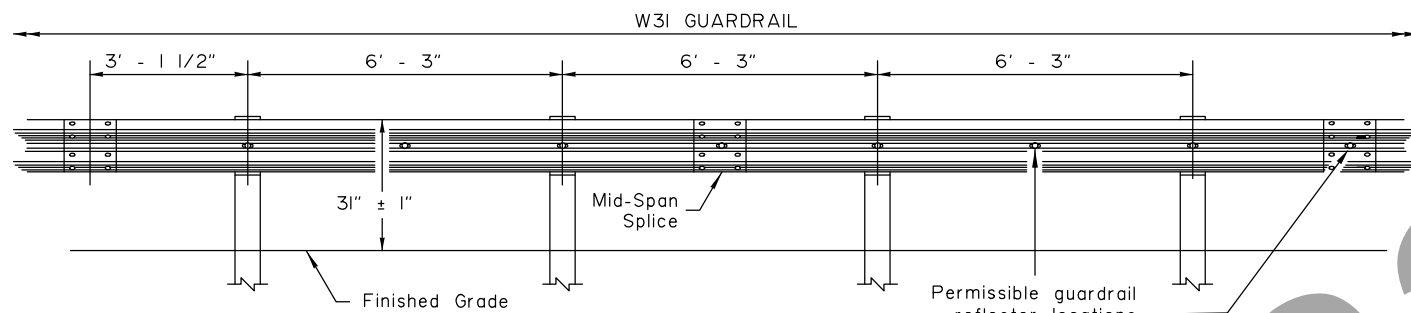


TYPE II POST INSTALLATION

(Facilitates raising rail for future overlays.)

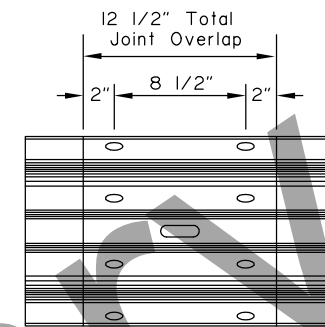


TYPE III POST INSTALLATION



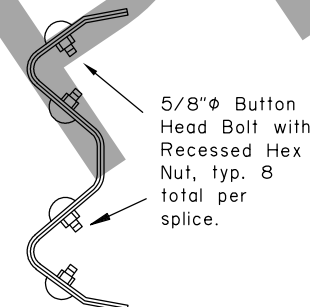
TYPICAL ELEVATION

Permissible guardrail reflector locations (must be mid-span)

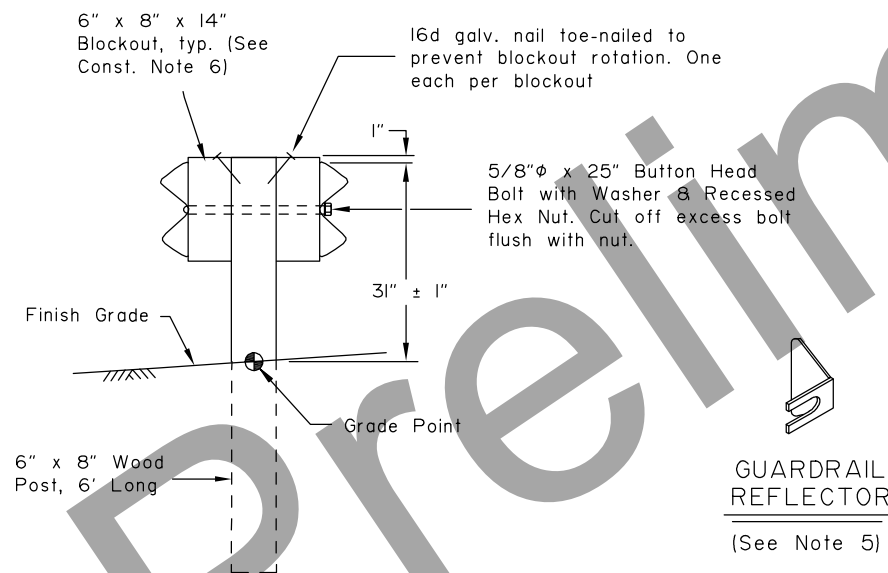


SPLICE DETAIL

(At mid-span between posts only. Bolts not shown for clarity.)



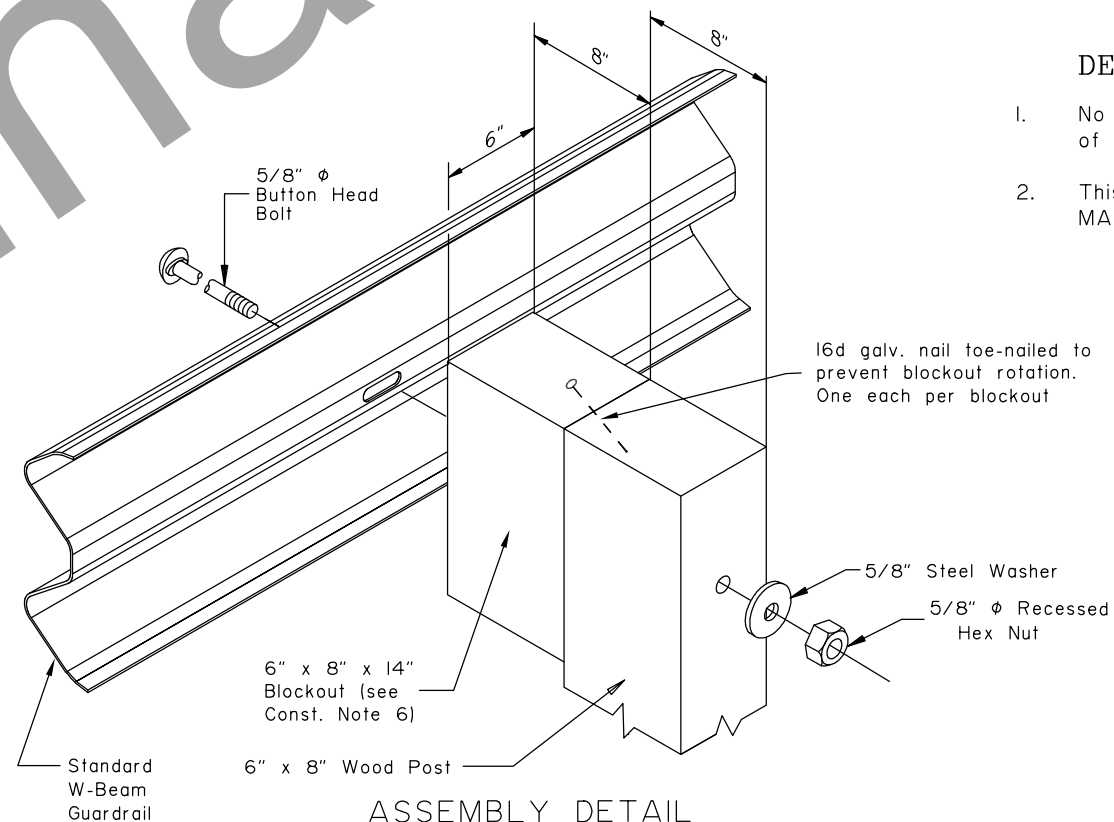
SPLICE CROSS-SECTION



TYPE IV DOUBLE SIDED INSTALLATION

GUARDRAIL REFLECTOR

(See Note 5)



ASSEMBLY DETAIL

(Type I post shown)

CONSTRUCTION NOTES:

1. Provide hardware compliant with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware.
2. See Standard Plan G-00 for hardware details.
3. See Standard Plan G-10 for post lengths corresponding to different combinations of slope and behind-post embankment width.
4. Typical post spacing is 6'-3" center to center.
5. Attach guardrail reflector using a 5/8" button head bolt with 5/8" recessed head hex nut and steel washer at the location shown on the Typical Elevation. Install reflectors every 25' on tangents and every 12.5' on curves starting 100' before the P.C. and ending 100' after the P.T.
6. Use wood blockouts designed, tested, and passed per MASH to be used with wood posts.
7. Use 25 linear foot transition panel to match differing height of existing or new rail elements and end treatments. See Standard Plan G-II.
8. Install flexible delineators on guardrail posts when called for in the contract. See Standard Plan G-00 for guardrail flexible delineator details.

DESIGN NOTES:

1. No fixed objects allowed within 36" of the back side of guardrail post.
2. This barrier is acceptable under MASH tests 3-10 and 3-11.

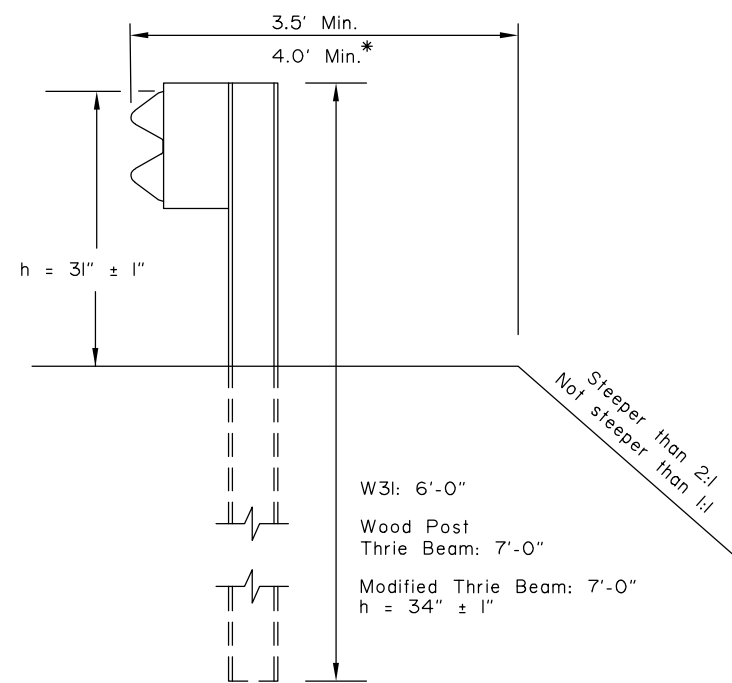
State of Alaska DOT&PF
ALASKA STANDARD PLAN
**STEEL POST W3
GUARDRAIL**

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

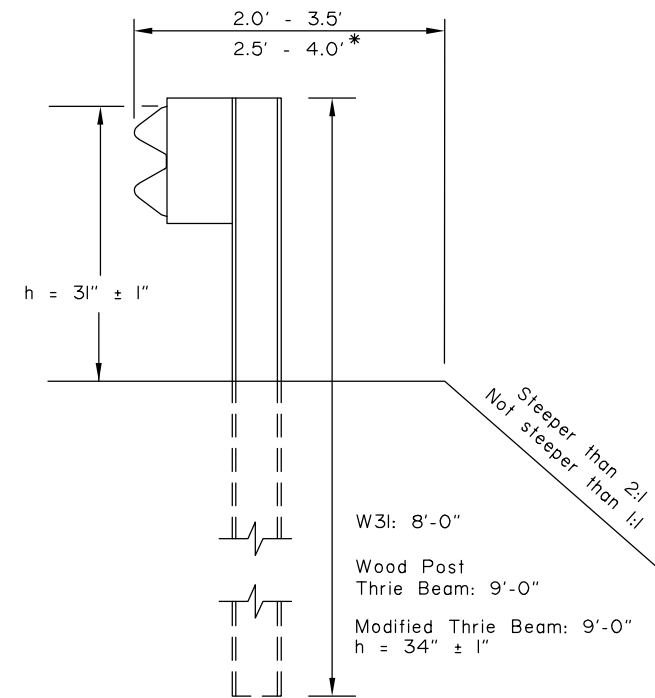
Adoption Date: 5/15/2019

Last Code and Stds. Review
By: LRG Date: 5/15/2019

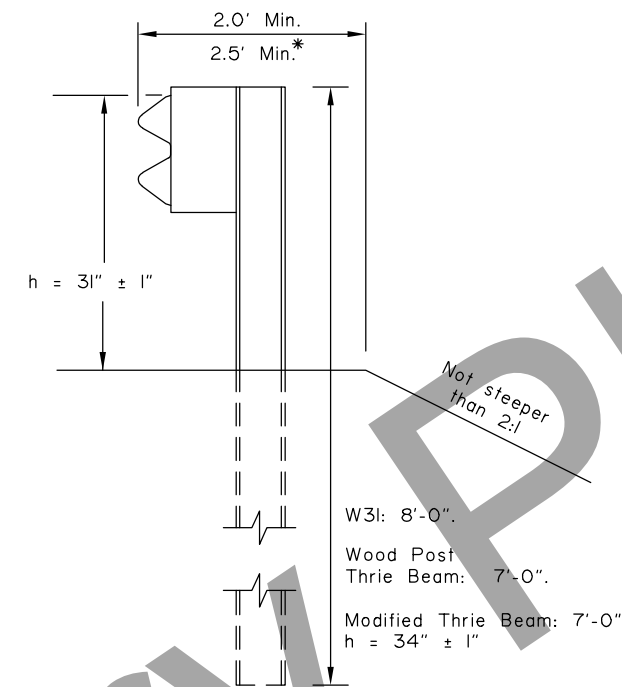
Next Code and Standards Review date: 5/15/2029



CASE 1



CASE 2



CASE 3

* with Modified Thrie Beam

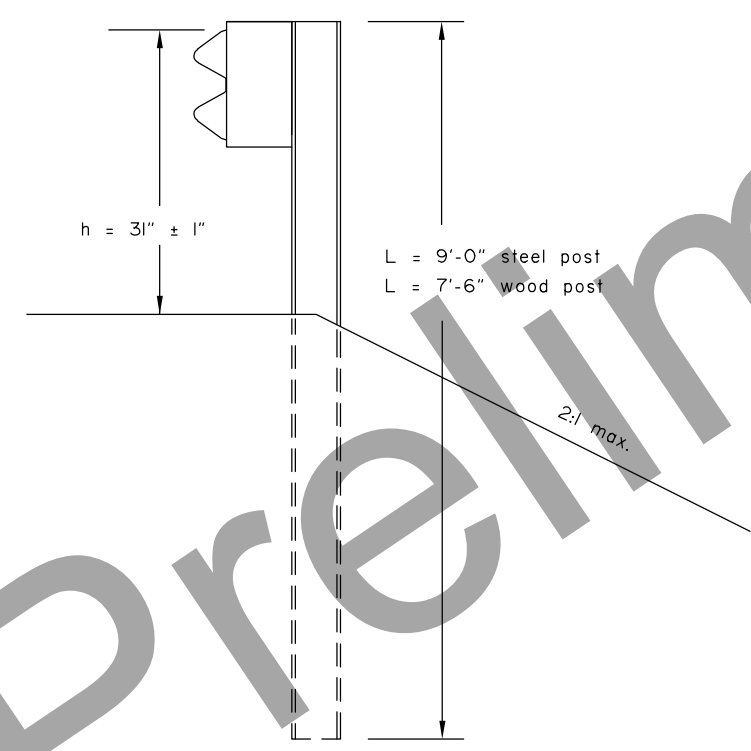
* with Modified Thrie Beam

CONSTRUCTION NOTES:

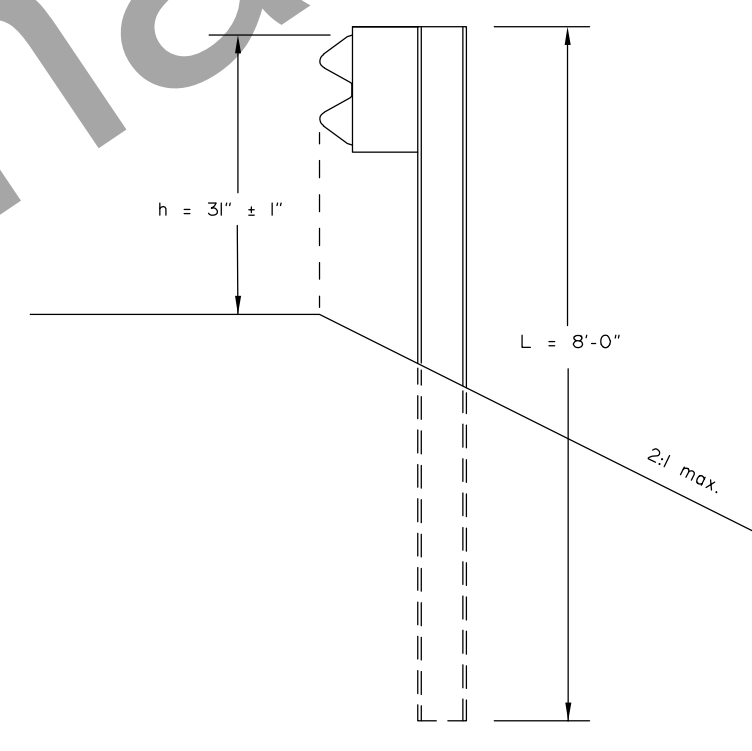
1. This drawings is to be used for post length determination only. See Plans for slopes and behind-post embankment widths.
2. To determine post length, identify the case that matches site conditions and read the length corresponding to the pertinent guardrail type.
3. These dimensions apply to both curbed and uncurbed section.
4. Case 1, 2 and 3 are shown with steel posts. Wood posts may be substituted when allowed by specifications. Wood Post Thrie Beam installations must use wood posts only.
5. Case 4 and 5 apply to W31 guardrail only.

DESIGN NOTES:

1. No fixed objects allowed within 36" of the back of post for Cases 1, 2 & 3.
2. No fixed objects allowed within 48" of the back of post for Cases 4 & 5.



CASE 4
(See Note 5)



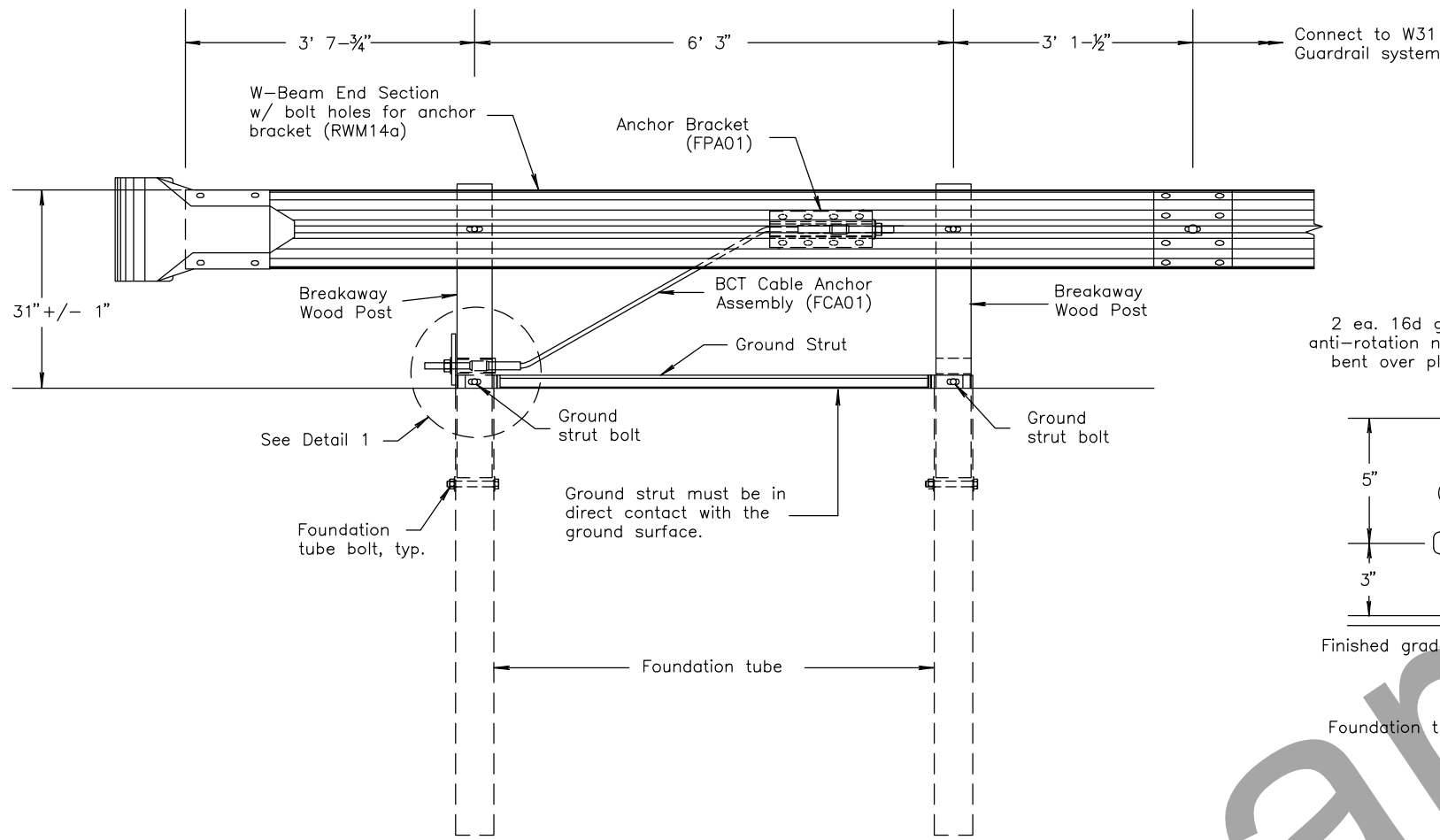
CASE 5
(See Note 5)

State of Alaska DOT&PF
ALASKA STANDARD PLAN
**GUARDRAIL
POST INSTALLATION**

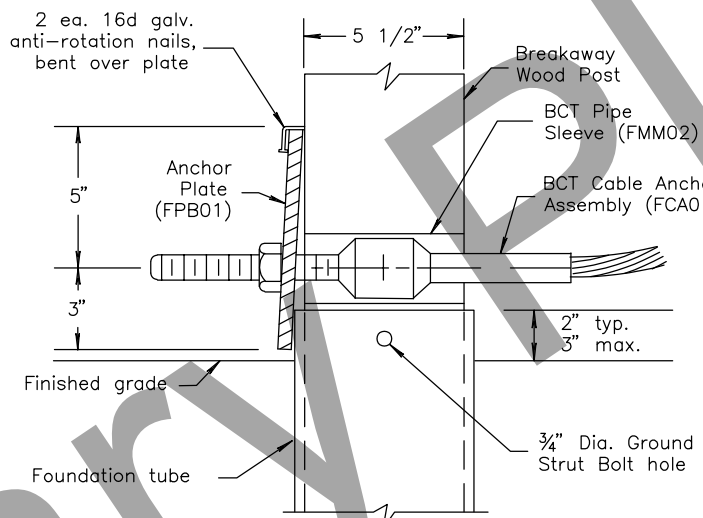
Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:
Next Code and Standards Review date: 02/08/2029

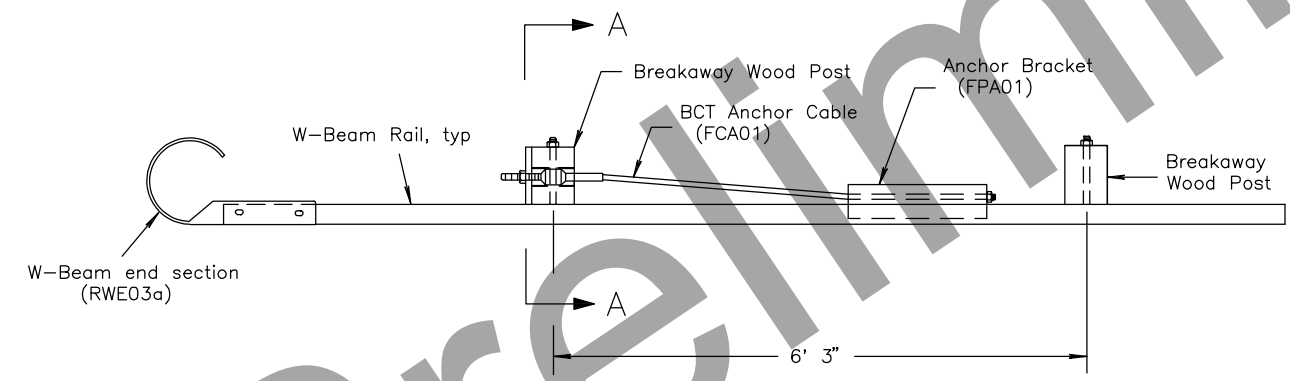


ELEVATION

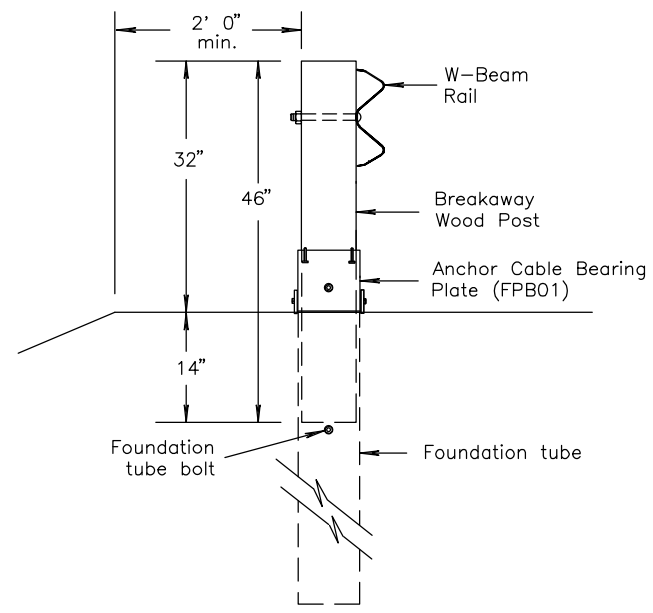


DETAIL 1

(Ground strut not shown for clarity)



PLAN VIEW



SECTION A-A

CONSTRUCTION NOTES

1. All covered hardware must comply with Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators are given in parenthesis, when possible.
2. End section bolts and nuts have the same material requirements as splice bolts.
3. Foundation tube bolts are 7/8" diameter ASTM A307 hex head. Foundation tube bolts require an ASTM A563 A nut and two ASTM F844 7/8" diameter flat washers. Install one washer under bolt head and one under nut.
4. Anchor bracket and strut bolts are 5/8" diameter ASTM A307 hex head. Foundation tube bolts require ASTM A563 A nut and two ASTM F844 7/8" diameter flat washers. Install one washer under bolt head and one under nut.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

**W31 DOWNSTREAM
END ANCHOR**

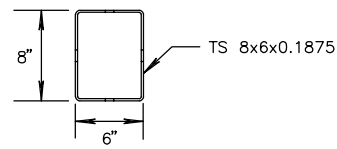
Adopted as an Alaska
Standard Plan by: _____
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

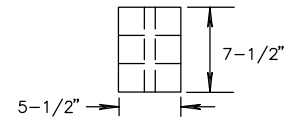
Last Code and Stds. Review
By: KLK Date: 7/8/2020

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

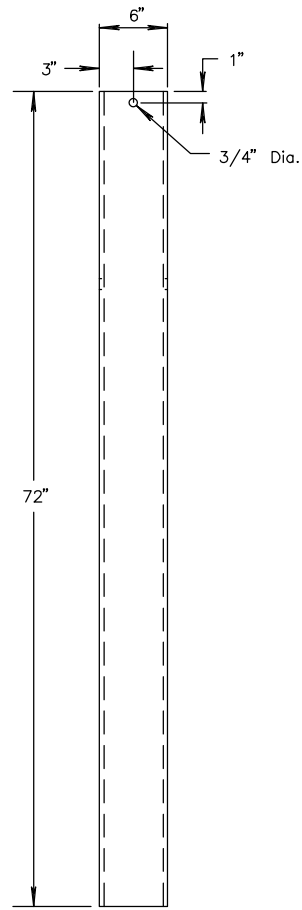
G-14.00



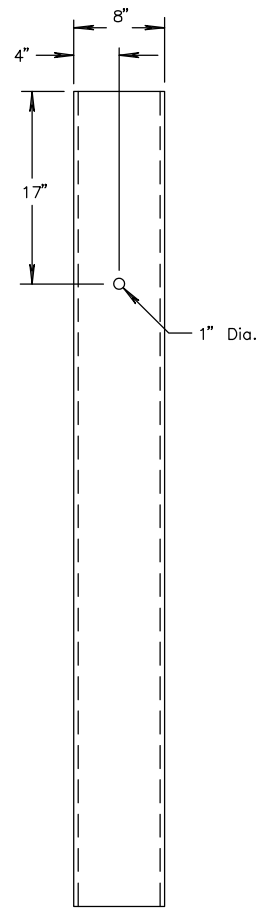
PLAN VIEW



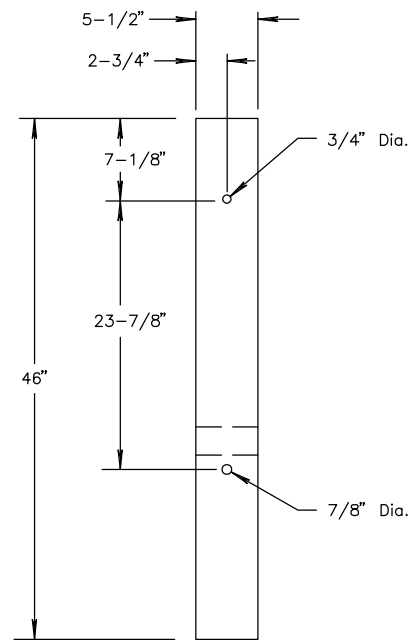
PLAN VIEW



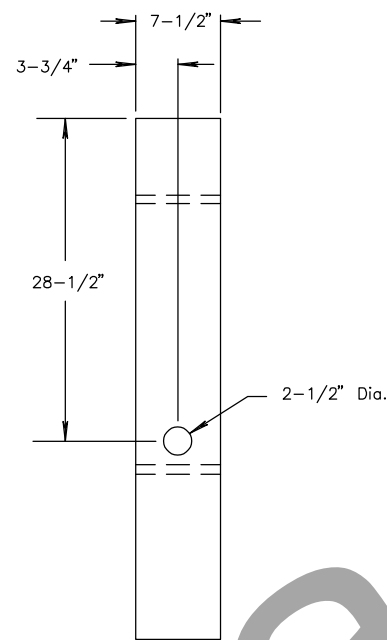
FRONT VIEW



SIDE VIEW

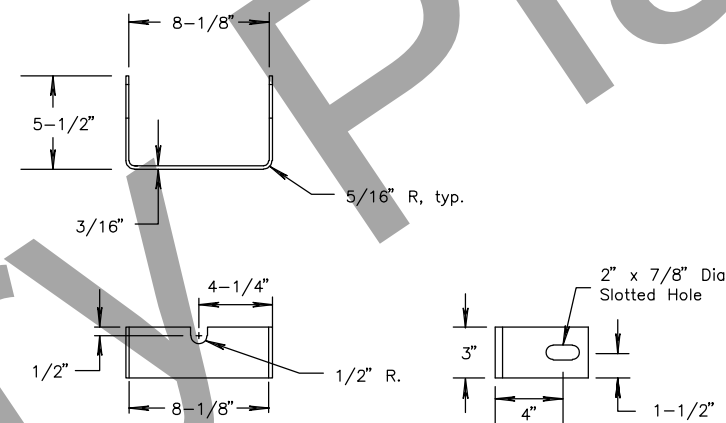


FRONT VIEW

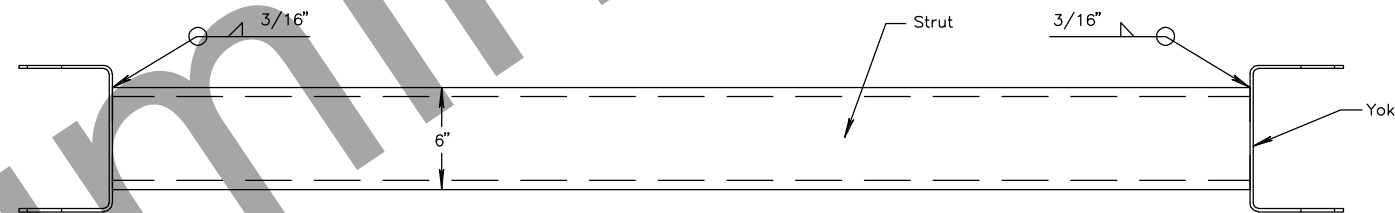


SIDE VIEW

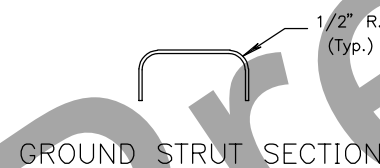
BREAKAWAY WOOD POST



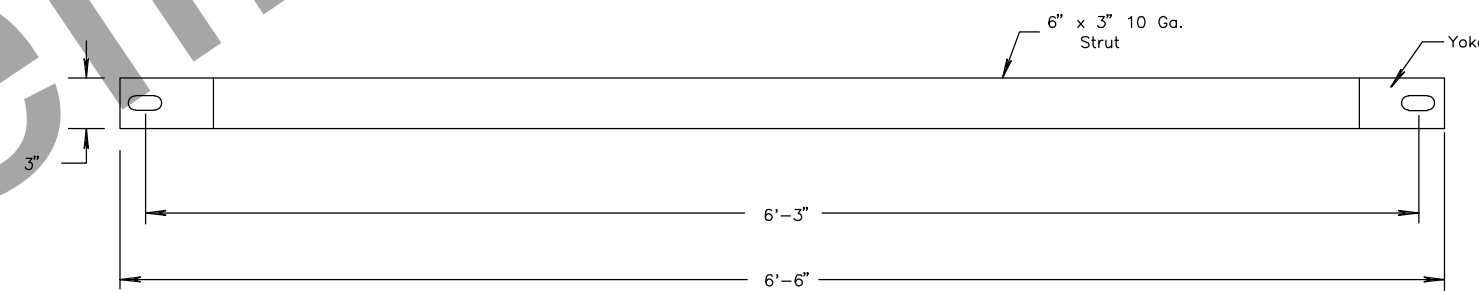
YOKE DETAIL



PLAN VIEW



GROUND STRUT SECTION



FRONT VIEW

GROUND STRUT DETAIL

CONSTRUCTION NOTES

- All covered hardware must comply with Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators are given in parenthesis, when possible.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

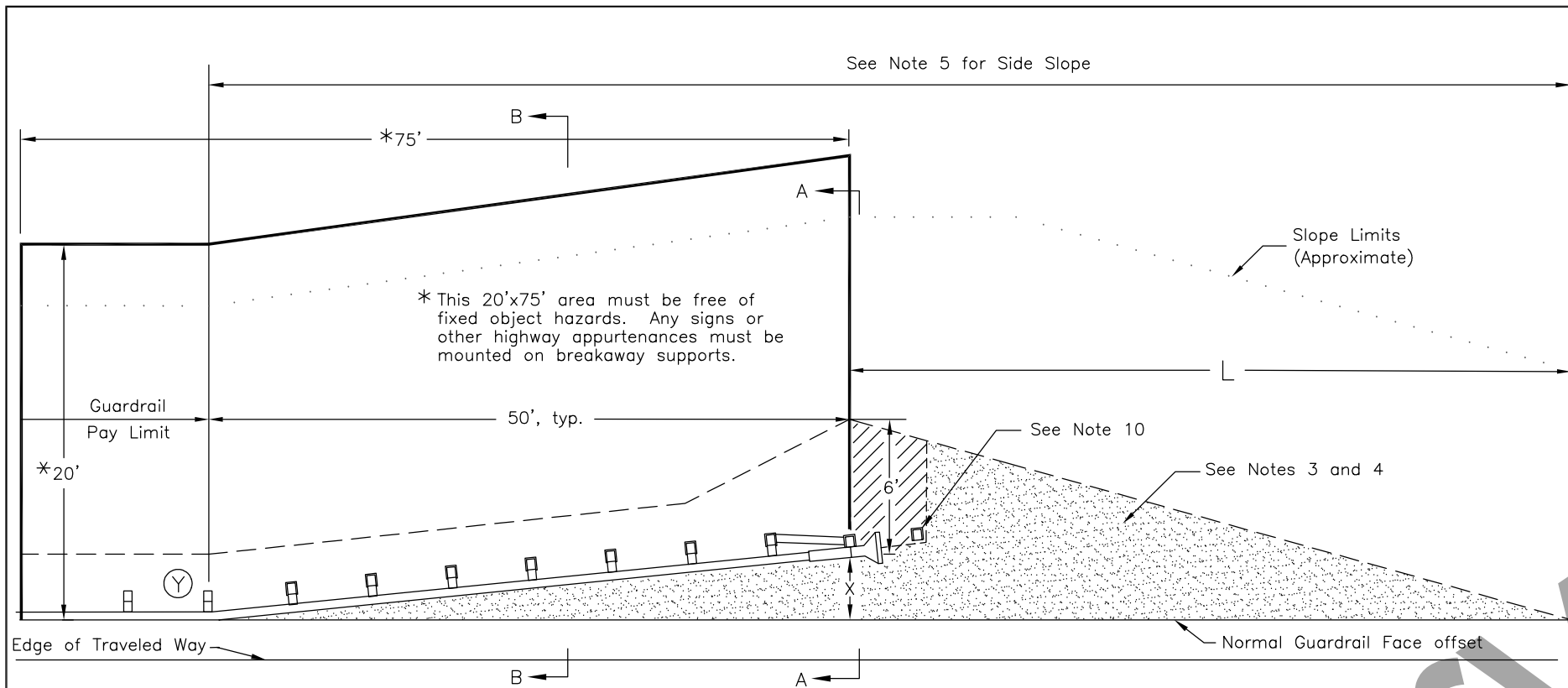
**W31 DOWNSTREAM
END ANCHOR**

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

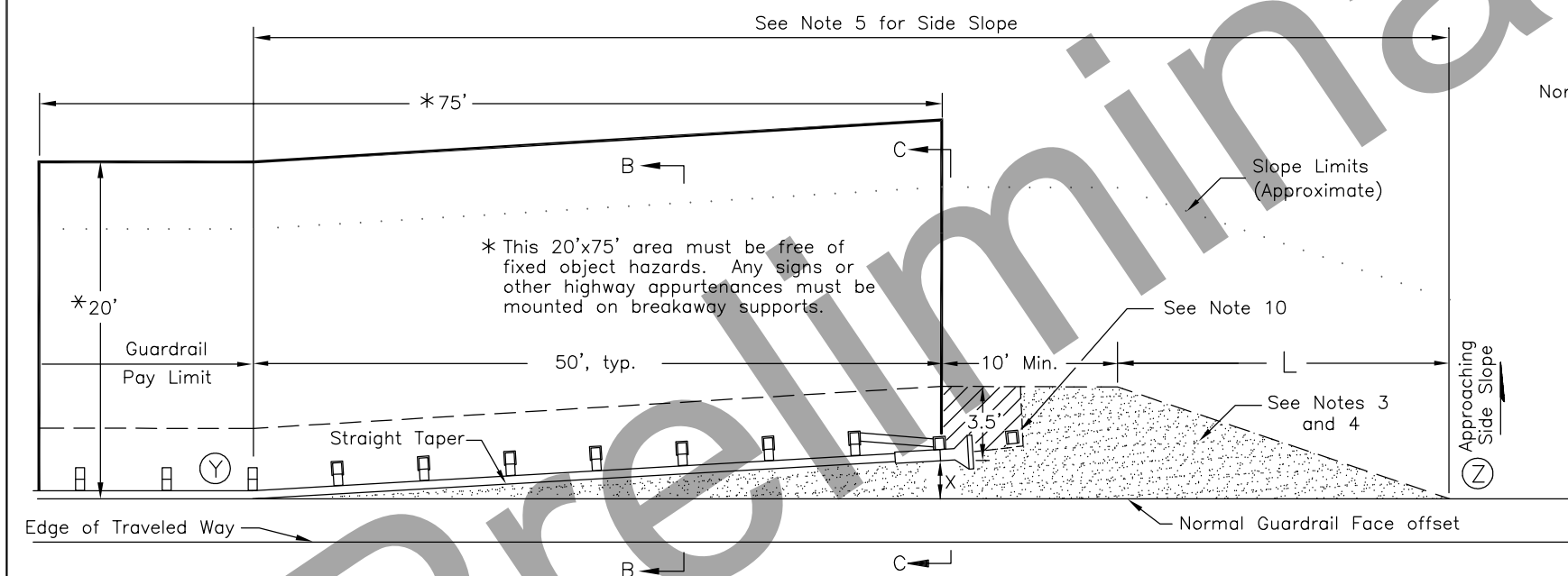
Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

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



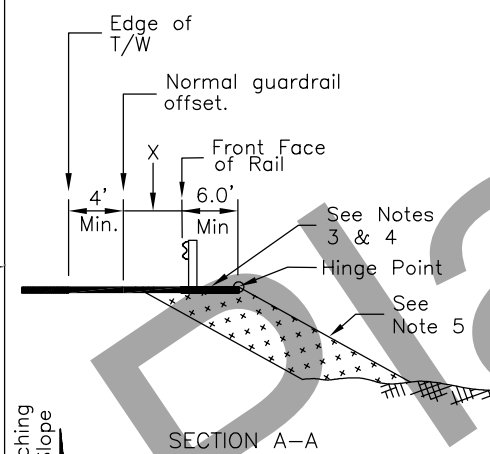
STANDARD GUARDRAIL TERMINAL WIDENING DETAIL



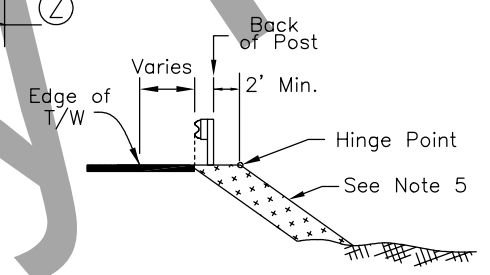
ALTERNATE GUARDRAIL TERMINAL WIDENING DETAIL

(USE ONLY WHEN LIMITED RIGHT-OF-WAY OR LIMITING SITE CONDITIONS MAKE THE STANDARD DETAIL INFEASIBLE)

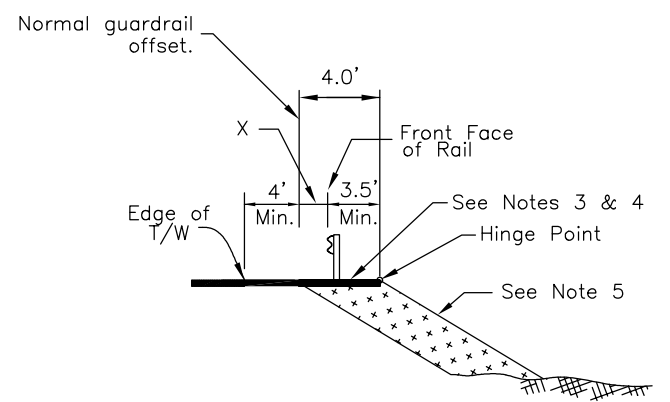
X=End offset. See manufacturer's information for the range of acceptable end offsets for each MASH compliant terminal.



SECTION A-A



SECTION B-B
(Applies to both details)



SECTION C-C

GENERAL NOTES

1. This Std. Dwg. applies to all MASH approved guardrail end terminals (GETs). The alternate detail may only be used with parallel or tangent GETs. The terminal details shown are for illustration only – see manufacturer's drawings for actual post, rail, strut, etc. configuration and layout.
2. Use this Std. Widening Detail for all GETs except when limited right-of-way or limiting site conditions make the use of the Std. Widening Detail infeasible. In that case, the alternate detail is permissible.
3. Construct the shaded areas to match the slope of the adjacent shoulder. The slope may be increased to 10:1 if identified in the plans or when approved by the engineer. Match the slope when the shoulder slopes toward the road as well as away from the road.
4. On paved roads, the shaded areas shall be paved. On gravel roads, surface the shaded areas with the same materials used to surface the travel lanes.
5. From point (Y) to point (Z) make the side slope match the approaching side slope except where it is flatter than 4:1. In that case, the slope may be steepened to 4:1.
6. Attach a flexible marker at the beginning of each GET.
7. The max. allowable height for foundation tubes or other steel components of terminal post breakaway systems is 4" above the surrounding grade.
8. The details on this sheet do not apply to W31 Downstream End Anchors (Std Dwg G-14).
9. The details on this sheet apply to GETs on both the approach and downstream ends on two-way undivided roads and to any downstream MASH compliant GETs.
10. Some MASH GET systems have an additional post/anchor at the approximate location shown. If this post/anchor is present do not pave the diagonally hatched area. If not present, pave the diagonally hatched area also.

Taper Lengths (L) for Common End Offsets (X)		
End Offset	Standard Detail	Alternate Detail
0'	24.0'	13.0'
1'	26.0'	17.0'
1.5'	28.0'	19.0'
2'	30.0'	21.0'
2.5'	32.0'	22.0'
4'	37.0'	28.0'
Interpolate if the end offset falls between table values		

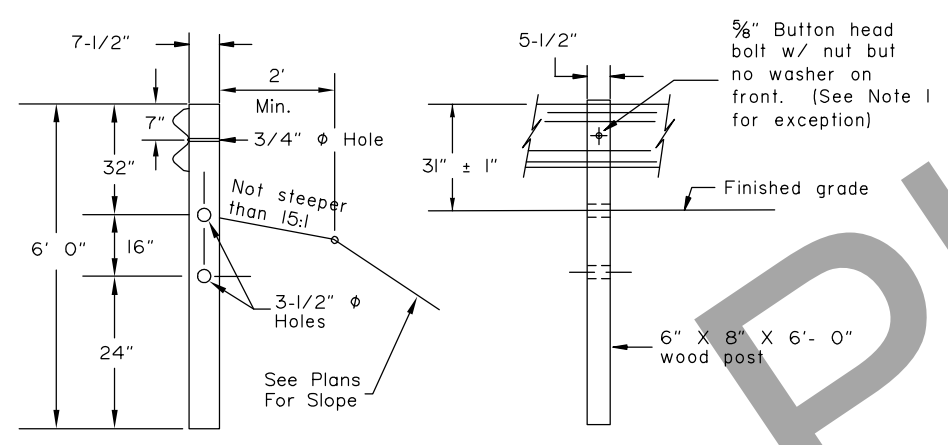
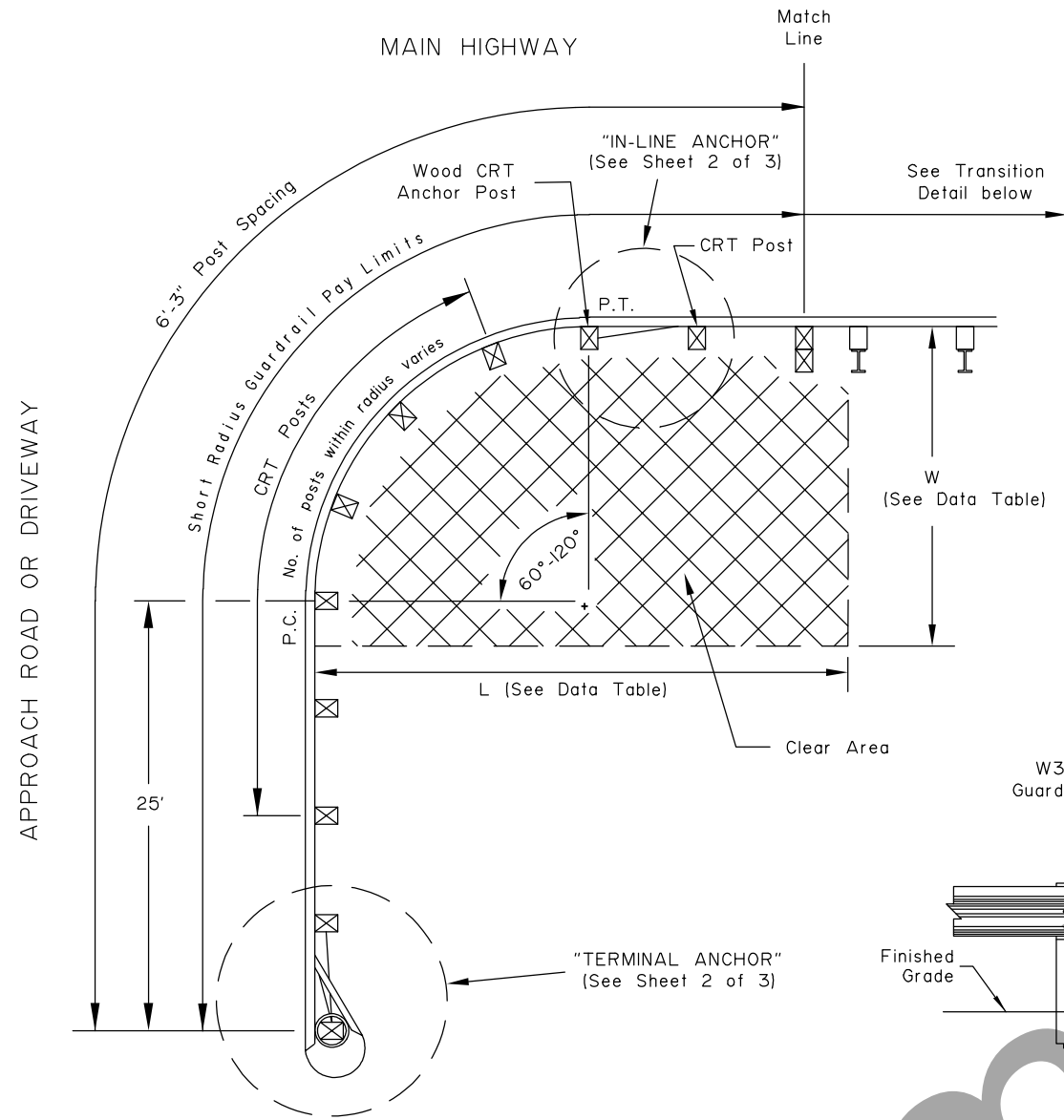
State of Alaska DOT&PF
ALASKA STANDARD PLAN

**WIDENING FOR
GUARDRAIL END TERMINALS**

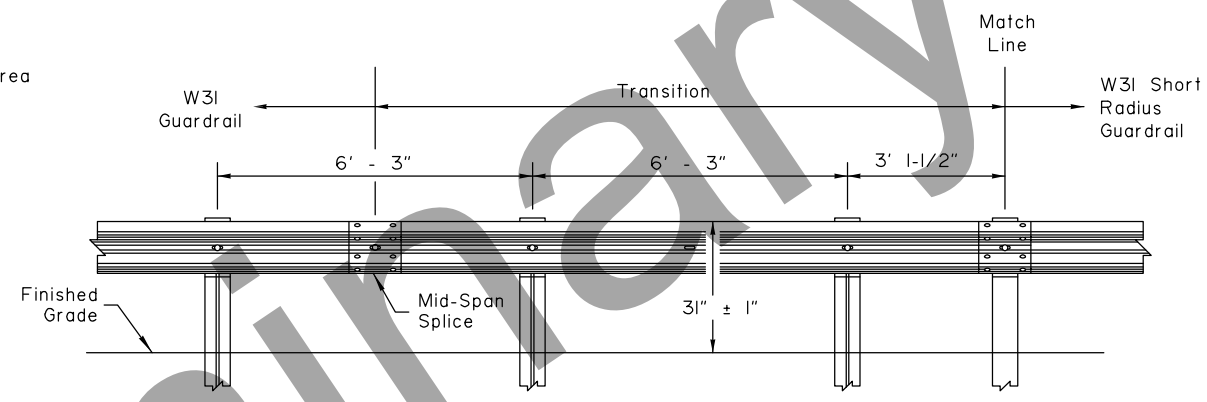
Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:
Next Code and Standards Review date: 02/08/2029

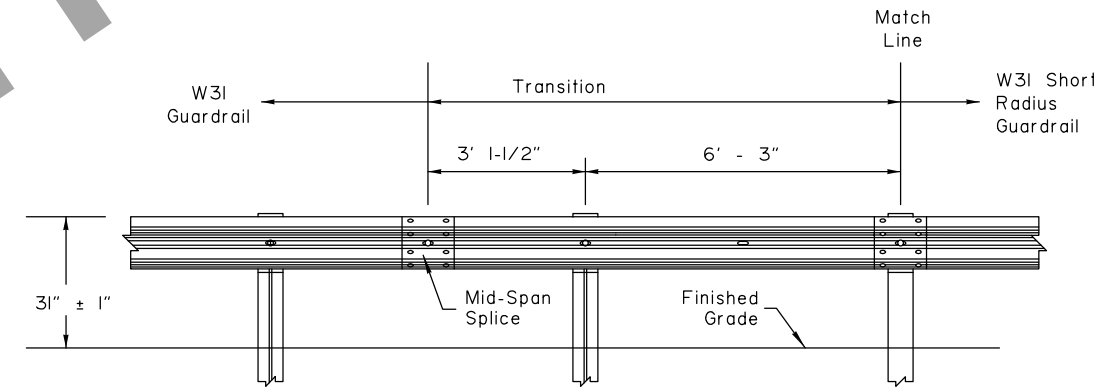


CONTROLLED RELEASE TERMINAL (CRT) POST



TRANSITION TO W31 GUARDRAIL - TYPE I

(As viewed from Main Highway)
(See Construction Note 2)



TRANSITION TO W31 GUARDRAIL TYPE II

(As viewed from Main Highway)
(See Construction Note 2)

CONSTRUCTION NOTES:

1. Do not bolt rail to central post on 8' radius CRT.
2. Steel posts are shown in the transition. Wood post may be substituted when allowed by the Specifications.

DESIGN NOTES:

1. Use the W31 short radius guardrail system to shield hazards at the intersection of a main highway with a minor road or driveway. Typical application include interruptions in guardrail runs caused by intersecting roadways
2. The short radius guardrail Terminal Anchor shown is for use on low speed (<45 mph) approach roads or driveways where motorists are required to stop or yield. Do not use this Terminal Anchor for high speed approach roads or driveways when a MASH approved end treatment is required.
3. The Clear Area shall be free of fixed object hazards. Any signs or other highway appurtenances in the clear area must be mounted on MASH compliant breakaway supports.
4. Connections to other guardrail systems (e.g. bridge rails and end treatments) and not provided on this drawing. Other details may be needed for this.
5. Short Radius Guardrail on 60 to 90 degree approaches are allowed provided they are constructed with posts at the P.C. and P.T. and the posts are placed on a uniform 6'-3" spacing.
6. When Short Radius Guardrail transitions to guardrail not at 31" ± 1" top-of-rail height, transition height over a 25 foot length.

SHORT RADIUS GUARDRAIL PLAN

DATA TABLE *					
Curve Radius, Ft. (Rounded)	Curve Length	Number of Rail Sections	Clear Area		** No. of Posts
			Length (L)	Width (W)	
8'	12.50'	1.0	25	15	5
12'	18.75'	1.5	25	15	6
16'	25.00'	2.0	30	15	7
20'	31.25'	2.5	33	15	8
24'	37.50'	3.0	37	20	9
28'	43.75'	3.5	40	20	10
32'	50.00'	4.0	45	20	11
36'	56.25'	4.5	50	20	12

* The table applies only to 90° approaches or driveways.
 * 36 feet is the maximum allowable radius for this system.
 ** Number of CRT posts includes one for the In-Line Anchor.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

W31 SHORT RADIUS GUARDRAIL

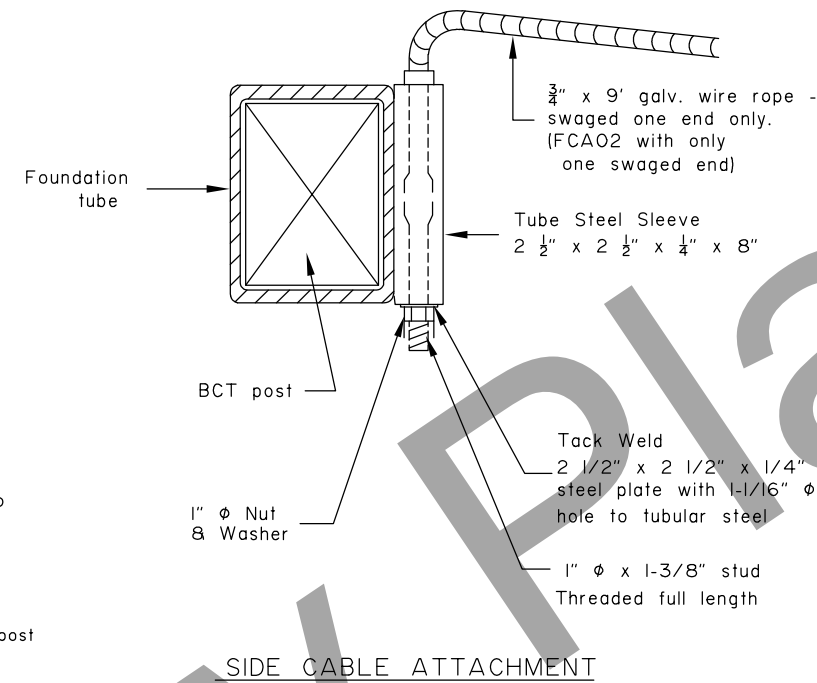
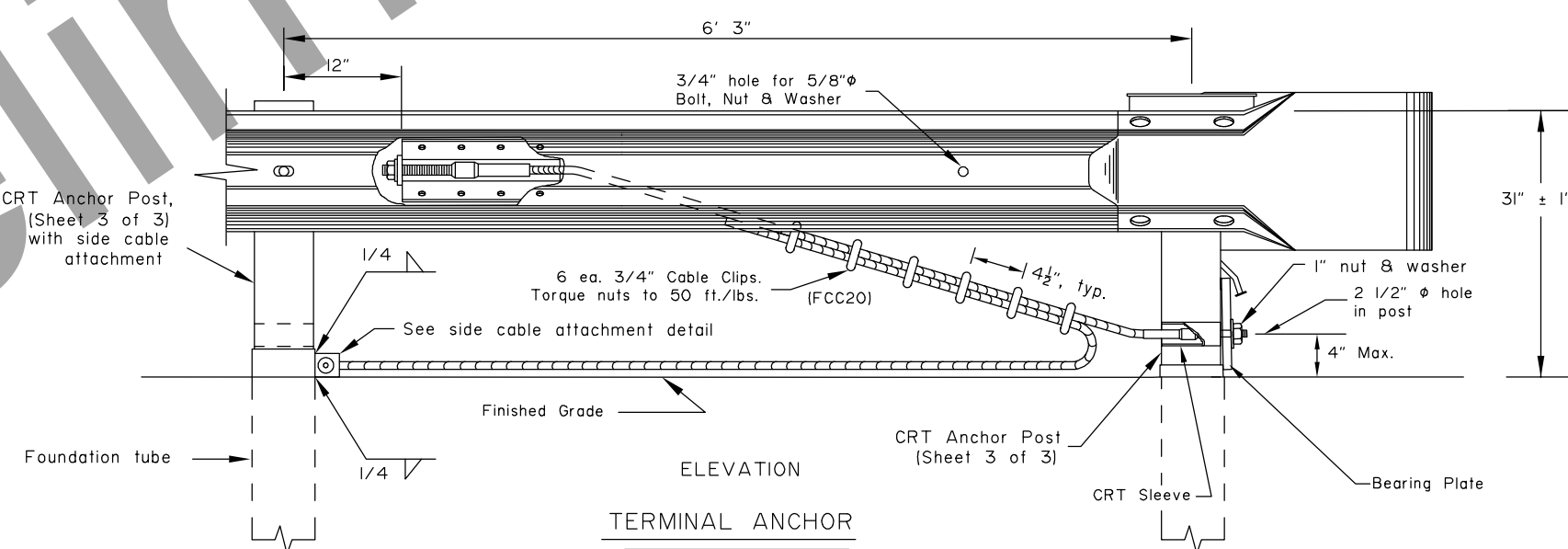
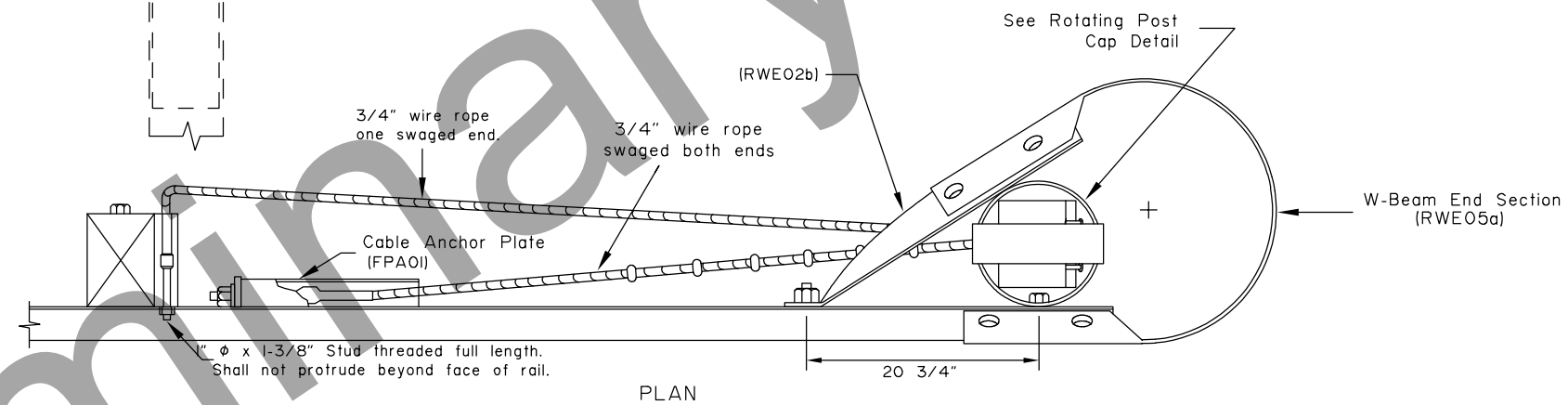
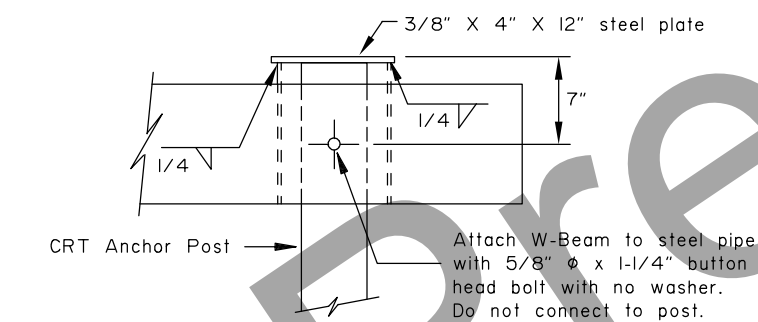
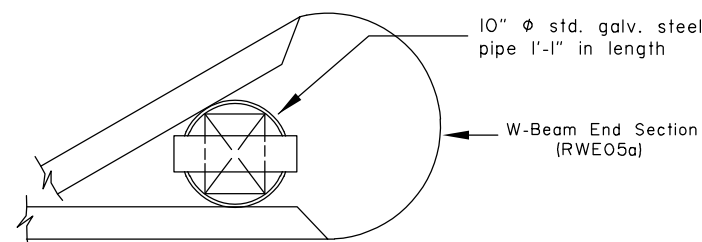
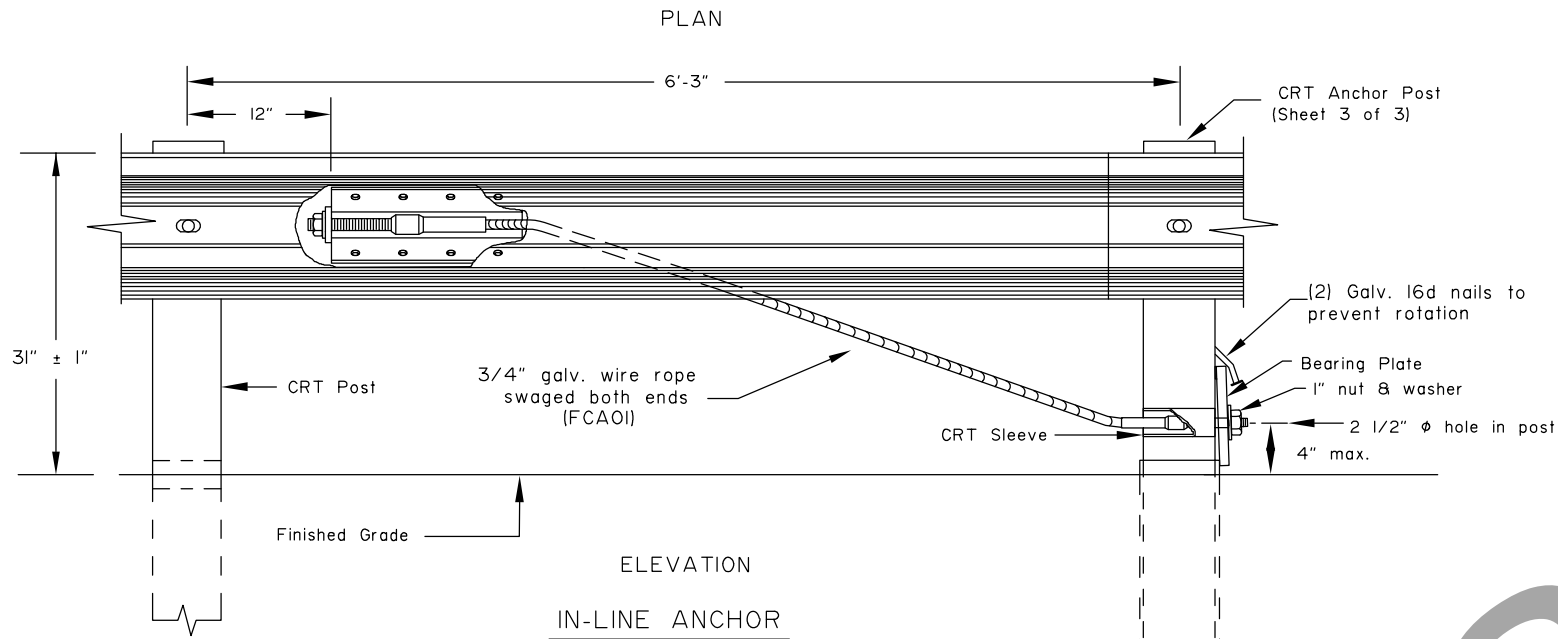
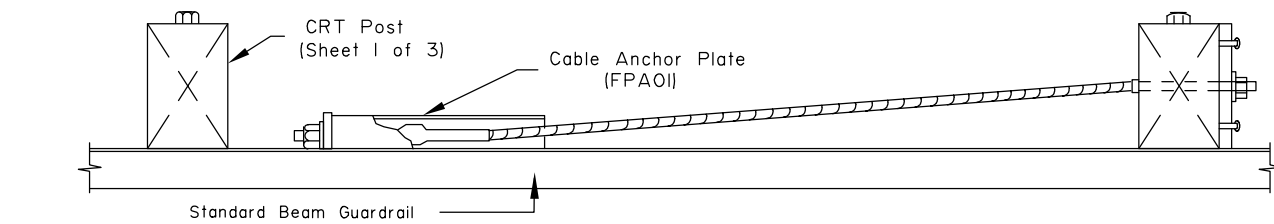
Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:
Next Code and Standards Review date: 02/08/2029

CONSTRUCTION NOTES

1. See Standard Drawings G-00 and G-05 for details not shown here.
2. All covered hardware must comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition. Designators are given in parenthesis, when possible.



State of Alaska DOT&PF
ALASKA STANDARD PLAN
W31 SHORT RADIUS GUARDRAIL

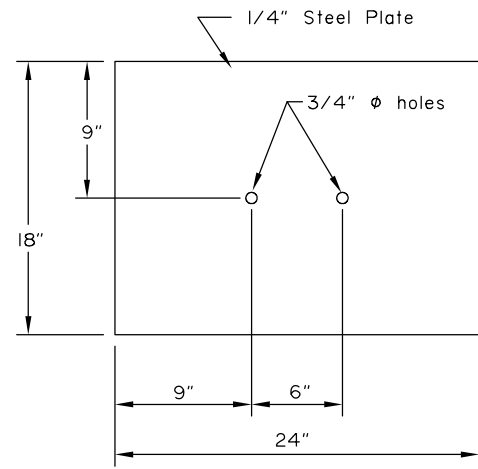
Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

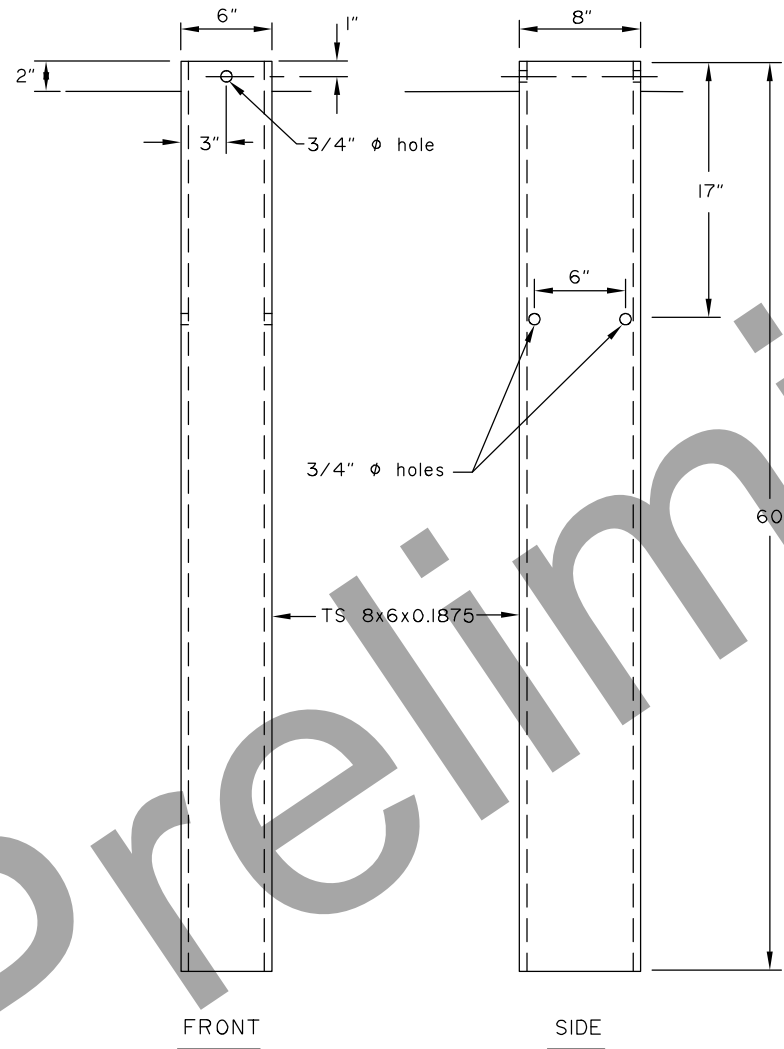
Last Code and Stds. Review By: Date: _____

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

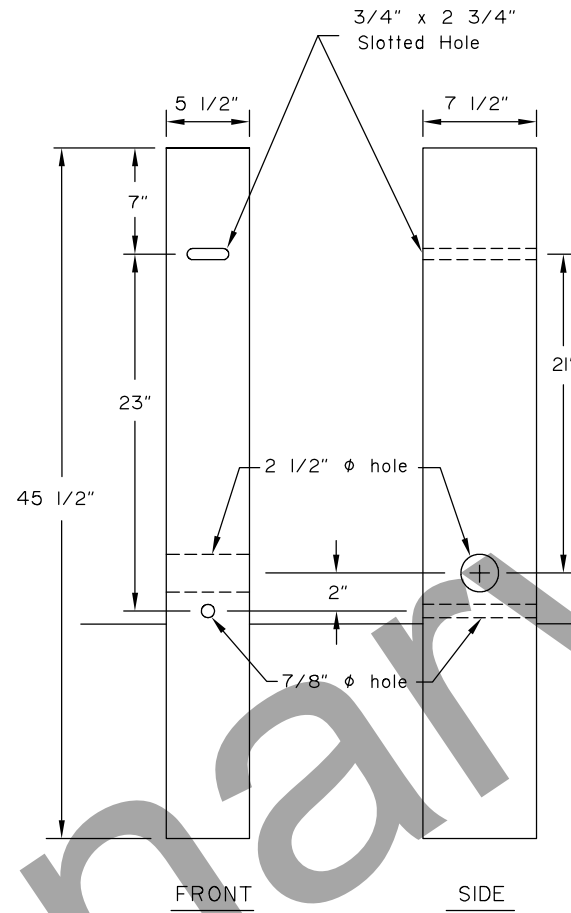
G-26.00



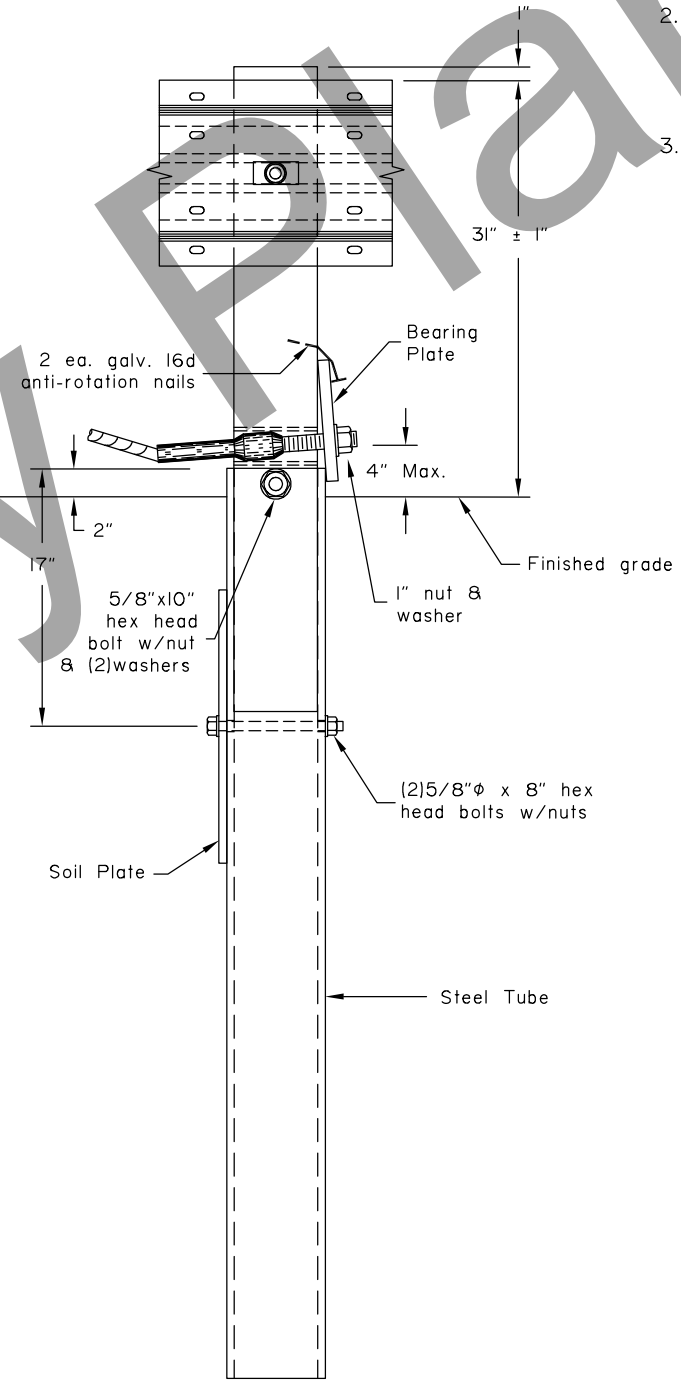
FOUNDATION TUBE SOIL PLATE
(PLS03)



FOUNDATION TUBE
(PTE05)



WOOD POST



ASSEMBLY

GENERAL NOTES:

1. Hardware details not shown here shall conform to drawings G-05W and G-00.
2. Comply with the AASHTO/AGC/ARTBA "A Guide to Standardized Highway Barrier Hardware", latest edition, for all covered guardrail hardware.
3. Not all bolt and nuts are shown for clarity purposes.

State of Alaska DOT&PF
ALASKA STANDARD PLAN
W31 SHORT
RADIUS GUARDRAIL

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

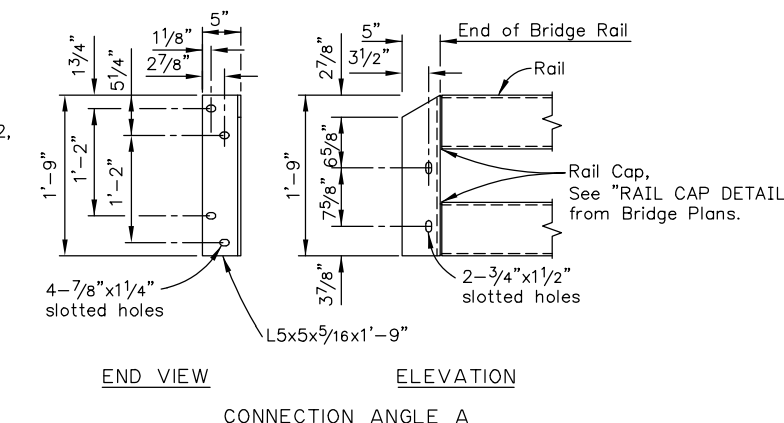
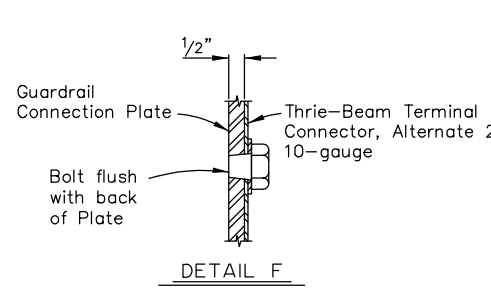
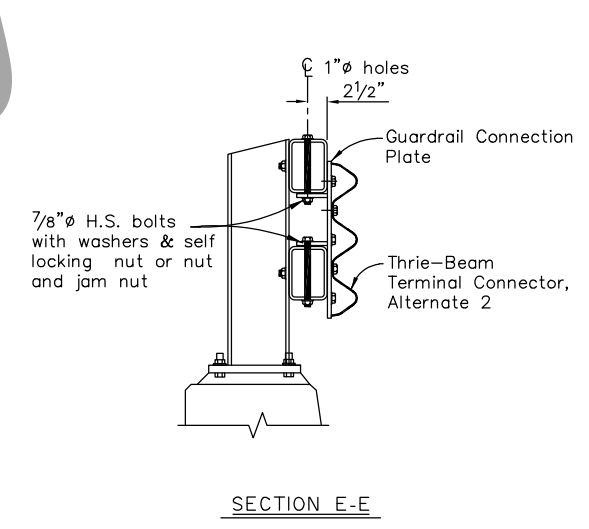
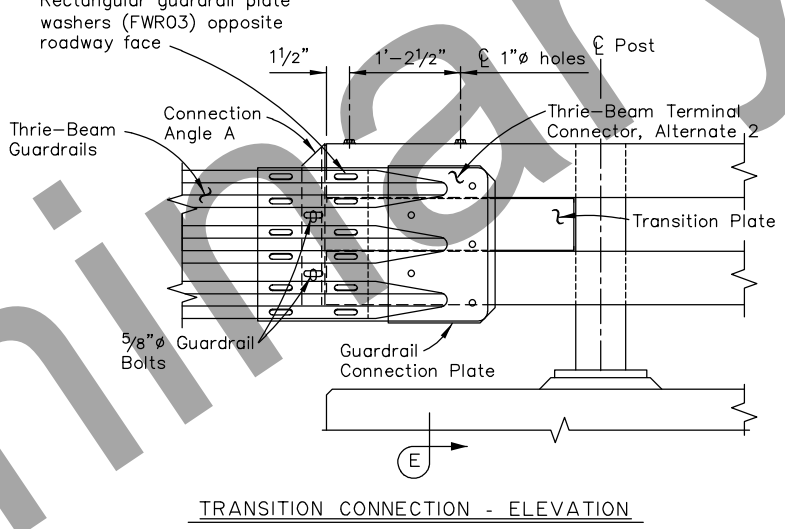
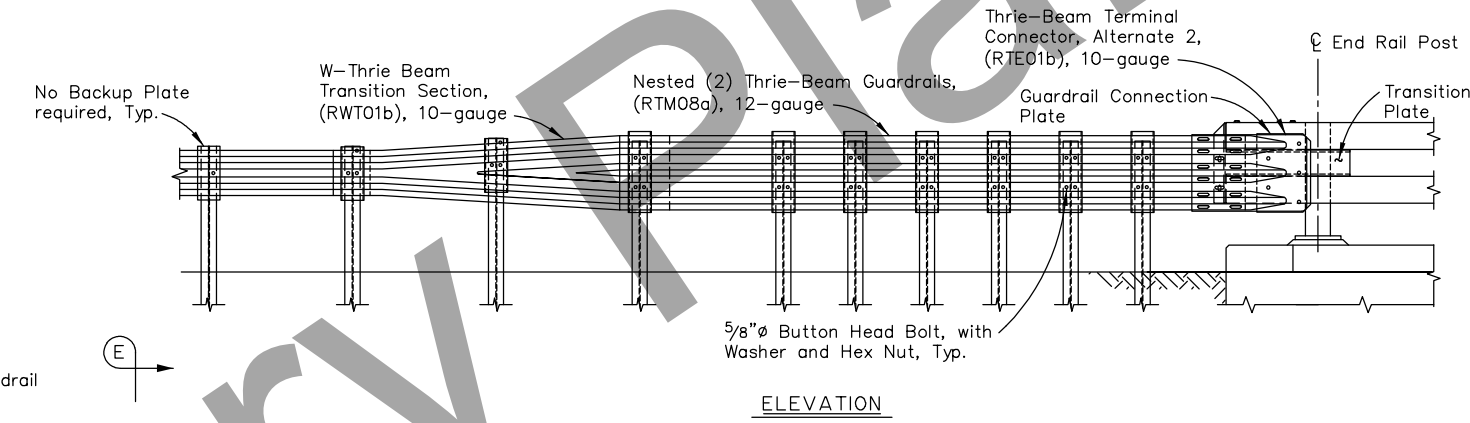
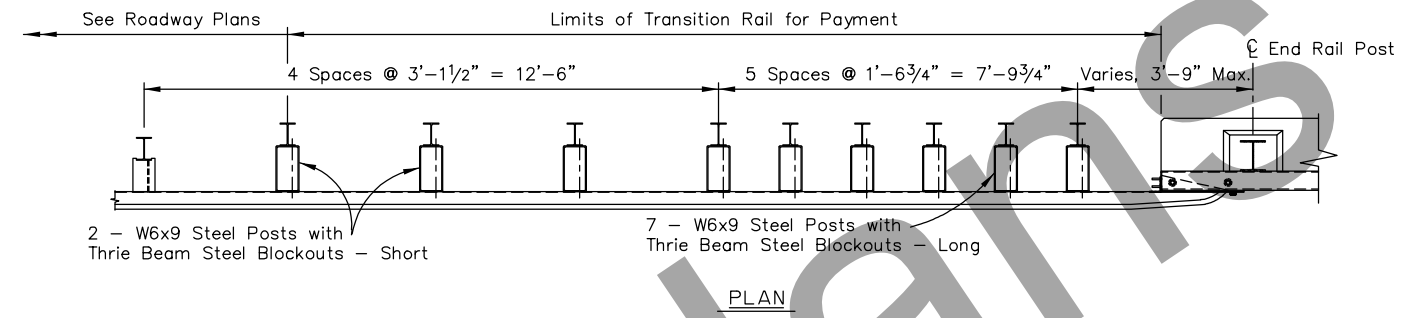
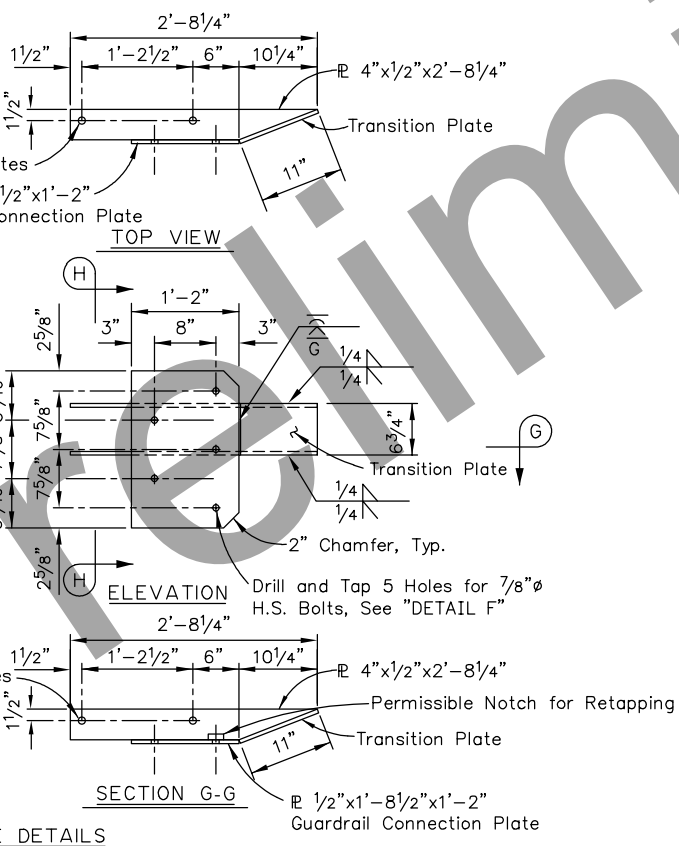
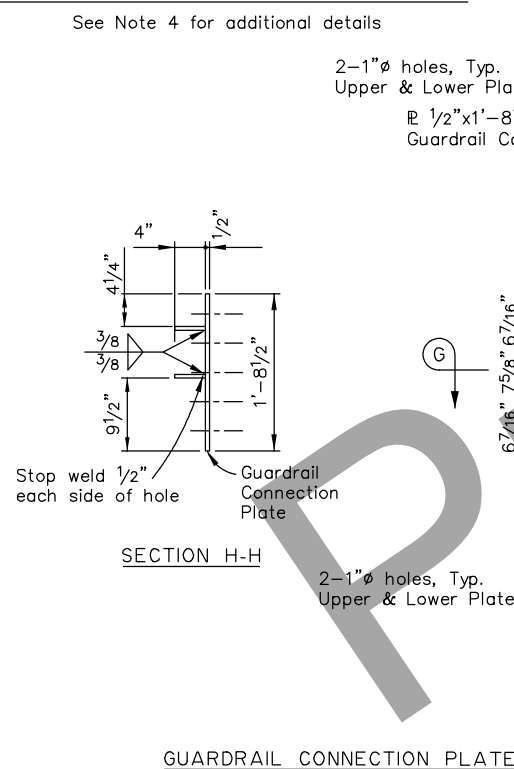
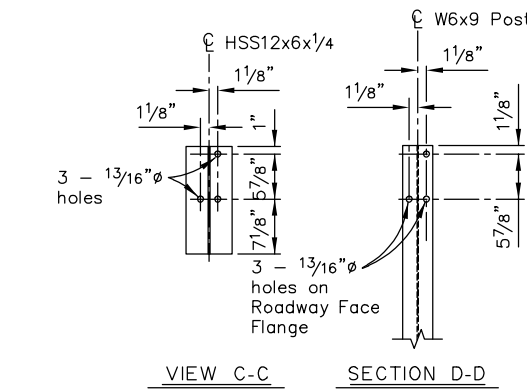
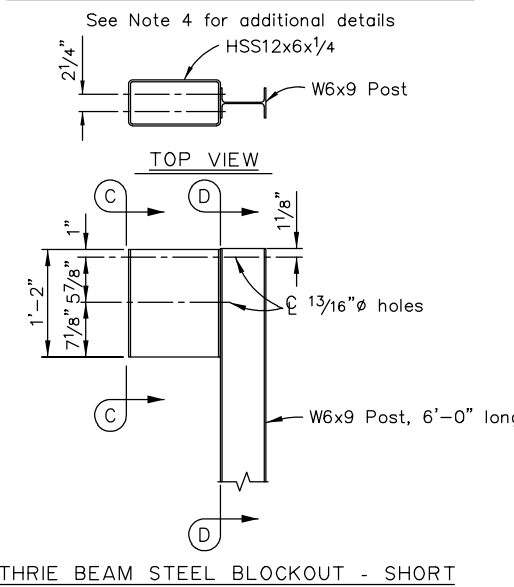
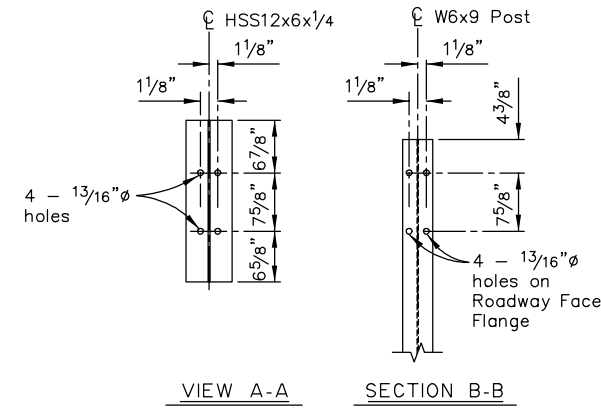
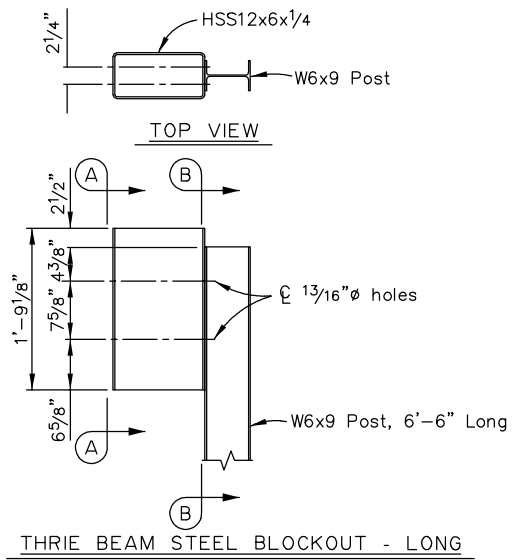
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

G-32.02

SHEET
| of |



- NOTES:**
1. Use AASHTO M 180 for all guardrail, transition rail, and hardware. Use H.S. Bolts conforming to ASTM F3125 Grade A325. All other steel conforms to ASTM A709 Grade 50.
 2. Permissible 3" horizontal slots in Thrie-Beam Guardrails. Adjust guardrail bolts for sliding fit.
 3. Conform to G-00, G-05, and G-10 of the Standard Plans for all Thrie Beam Transition details not shown.
 4. Thrie Beam Transition part numbers are listed in parentheses () and referenced in the "Task Force 13 Guide to Standardize Roadside Hardware."

State of Alaska DOT&PF
ALASKA STANDARD PLAN

**MASH BRIDGE RAIL
THRIE BEAM TRANSITION**

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

Adoption Date: 07/30/2021

Last Code and Stds. Review
By: SEM Date: 07/17/2020

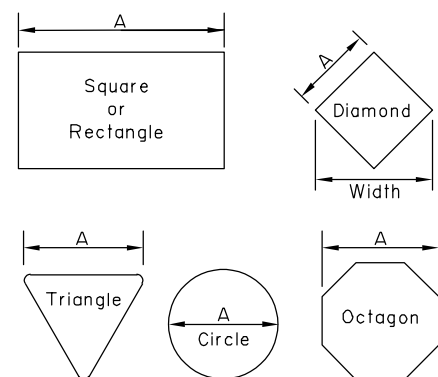
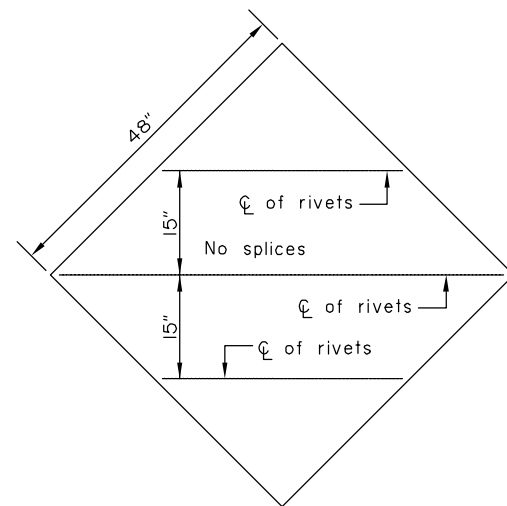
Next Code and Standards Review Date: 07/17/2030

No Scale

G-32.02

GENERAL NOTES

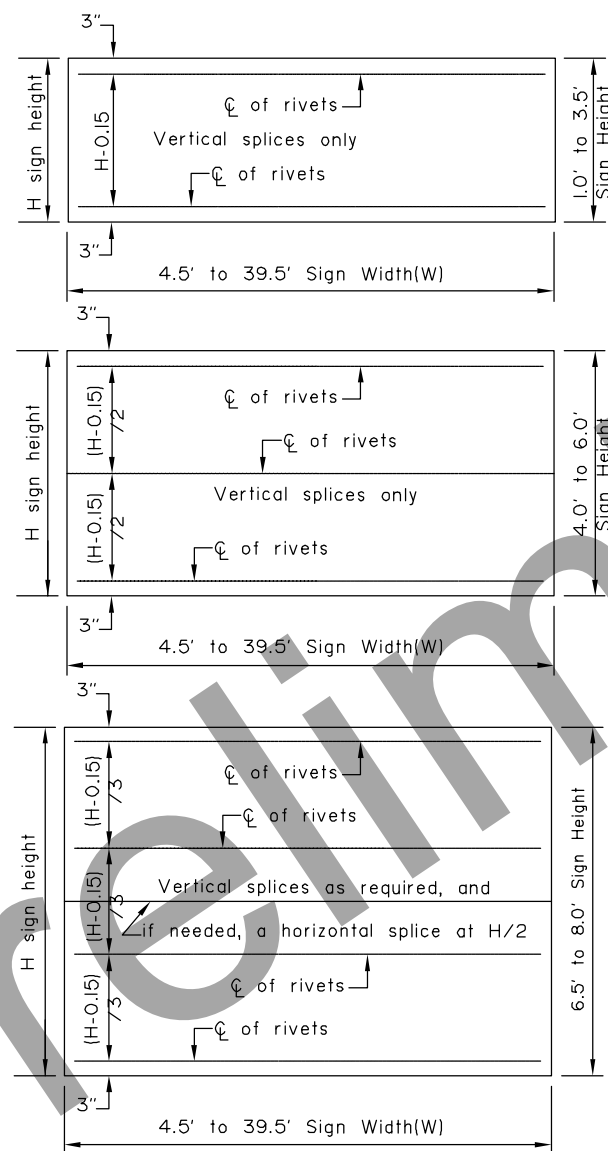
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer 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.



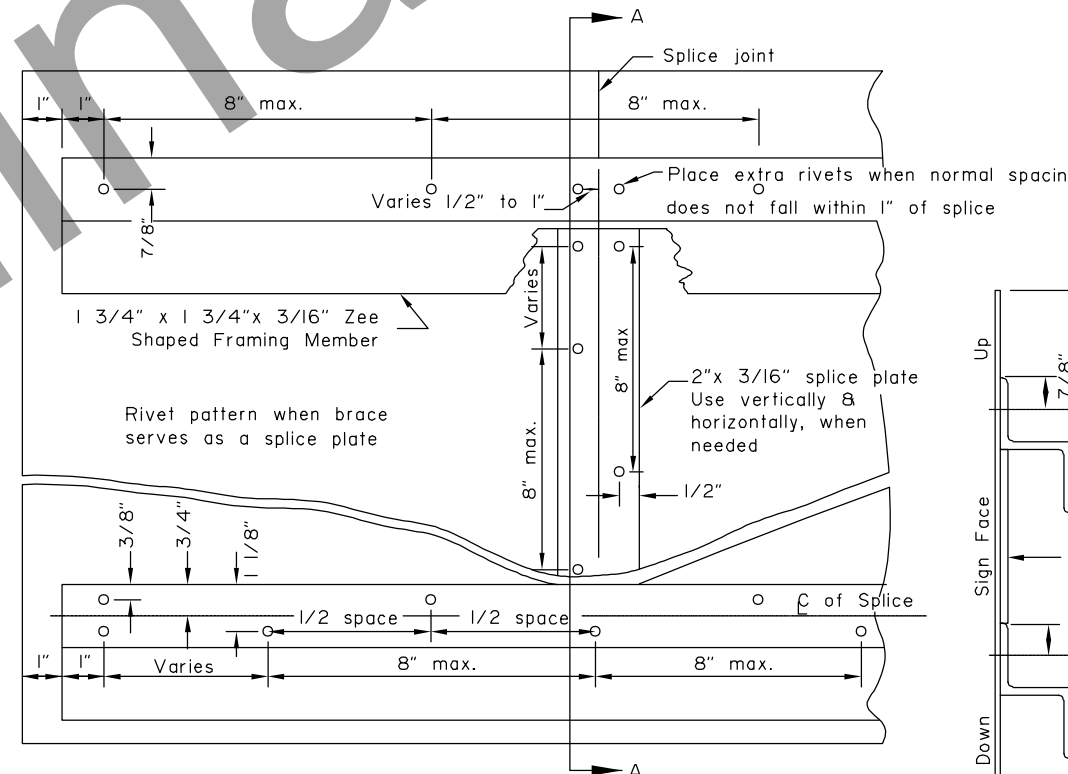
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

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

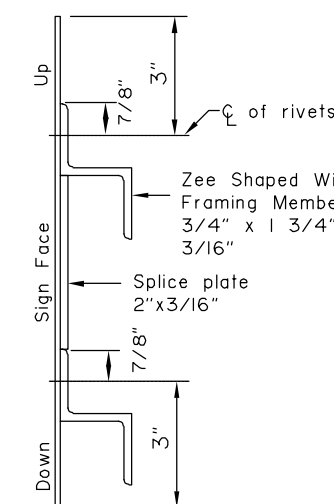
LIGHT SIGNS



WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN FRAMING

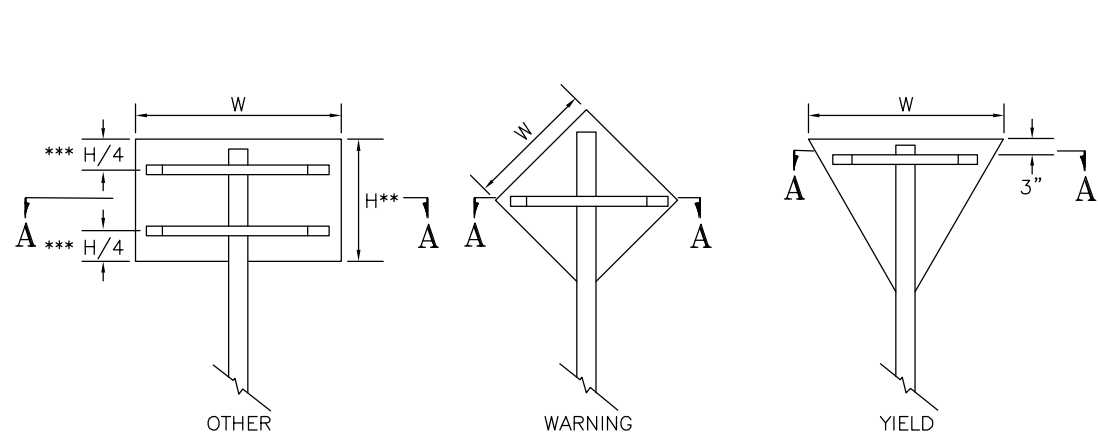
Adopted as an Alaska Standard Plan by: _____

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

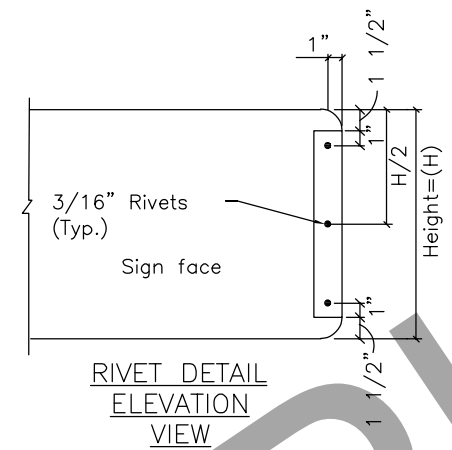
Next Code and Standards Review date: 7/8/2030



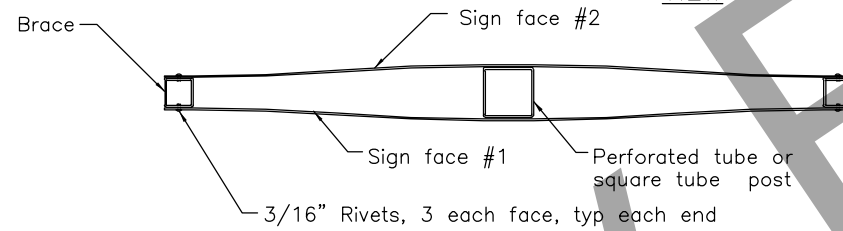
*** Use one brace when $H \leq 18"$
 Use two braces when $18" < H < 48"$
 Use three braces when $H \geq 48"$

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

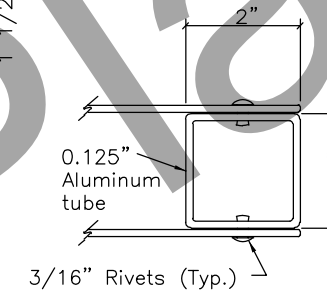
SIGN BRACING PLACEMENT



RIVET DETAIL
ELEVATION
VIEW

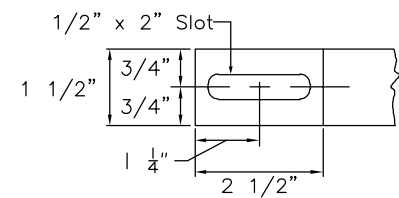


PLAN VIEW

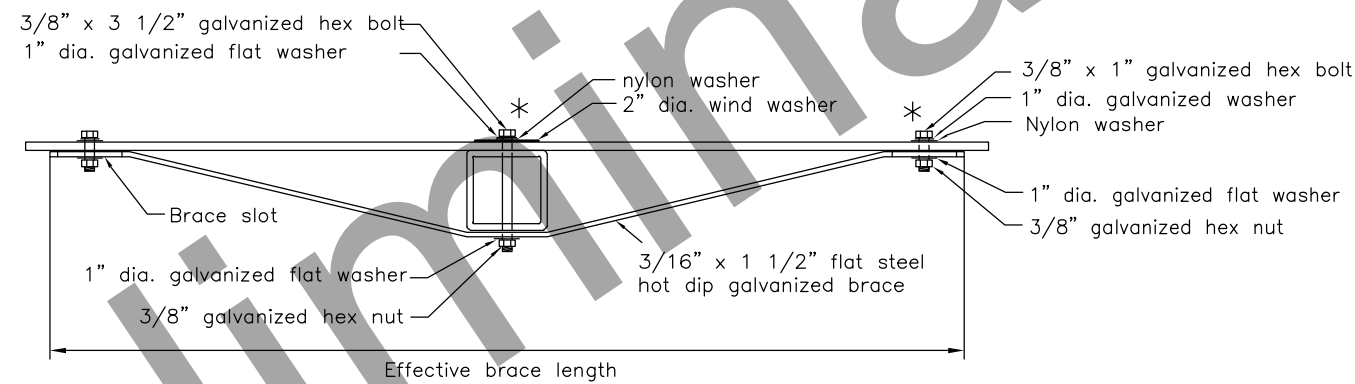


END BRACE DETAIL

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**

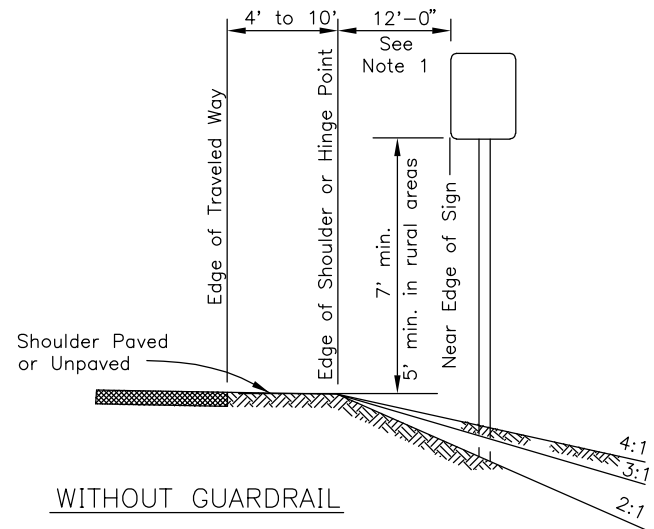
Adopted as an Alaska
 Standard Plan by: _____

Carolyn Morehouse, P.E.
 Chief Engineer

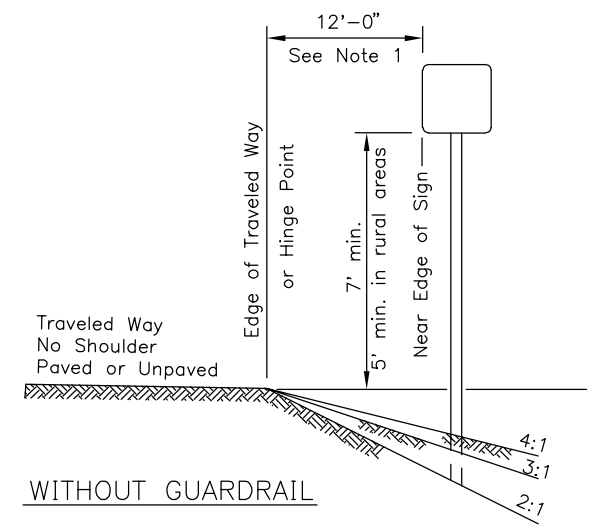
Adoption Date: 7/17/2020

Last Code and Stds. Review
 By: WTH Date: 7/8/2020

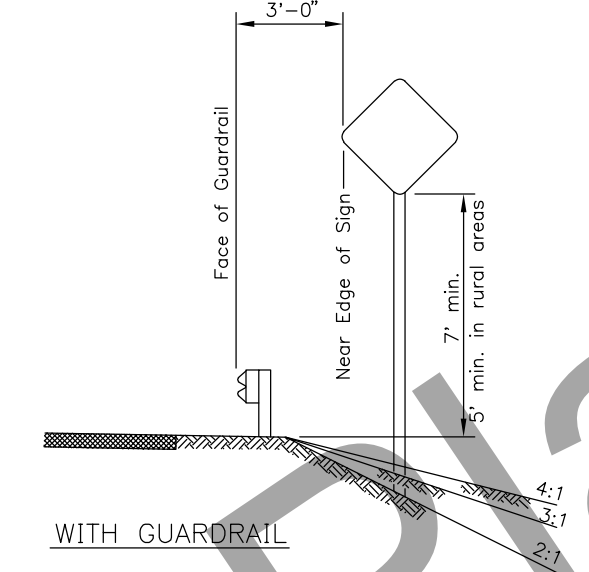
Next Code and Standards Review date: 7/8/2030



WITHOUT GUARDRAIL
SUBGRADES OVER 28', ALL SLOPES



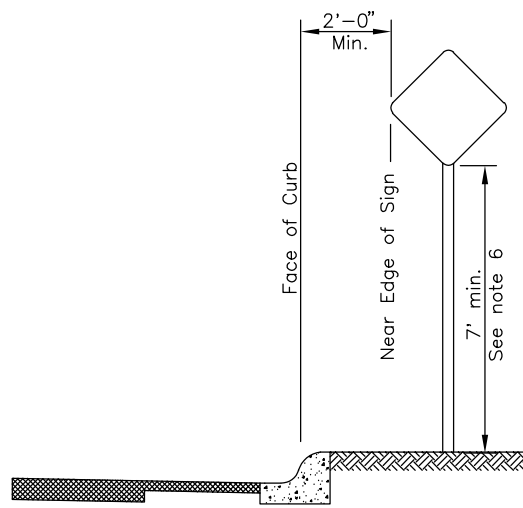
WITHOUT GUARDRAIL
SUBGRADES 24' TO 28', ALL SLOPES



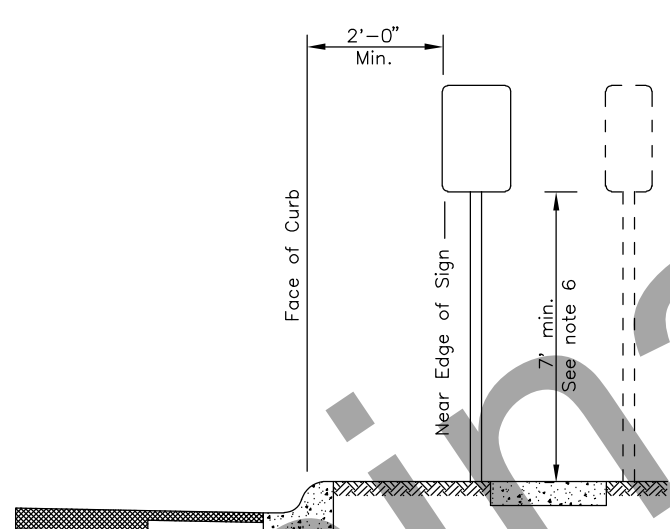
WITH GUARDRAIL
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

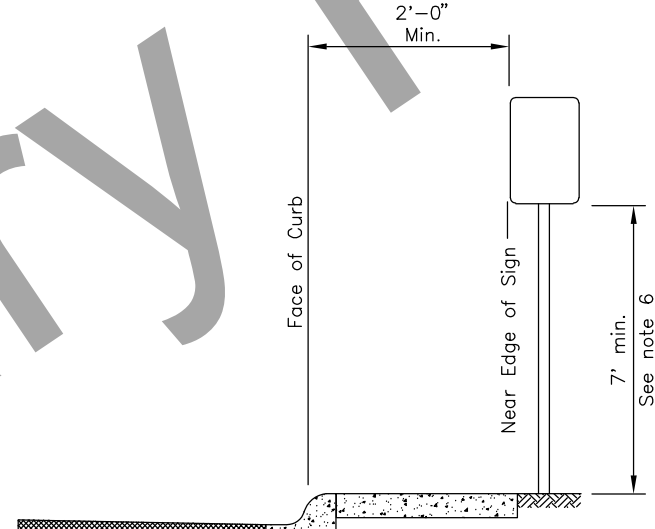
1. Unless shown otherwise on the plans, the standard sign offset is 12'. The minimum is 6' where shoulder width is 6' or greater.
2. Add 6" to mounting height on unpaved roads.
3. If signs extend over bike paths, the minimum vertical clearance is 8' 0".
4. When signs are placed 30' or more from the edge 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 signs extend over sidewalks.
7. For construction signs in rural areas, mounting height shall be 7' minimum.



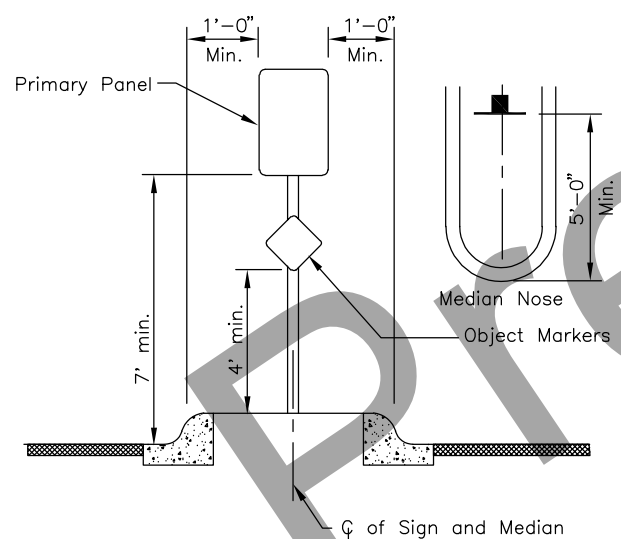
CURB WITHOUT SIDEWALK



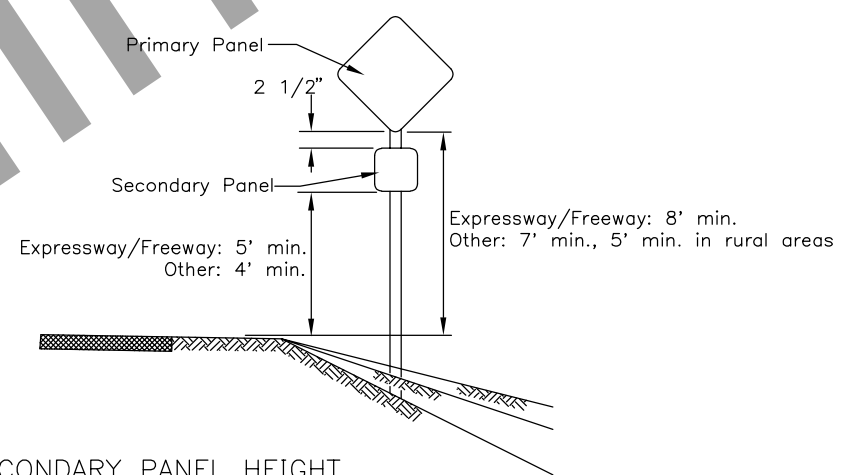
CURB WITH PARKWAY AND SIDEWALK
(If R/W width permits, signs should be placed behind sidewalk.)



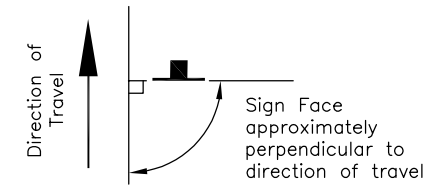
CURB WITH SIDEWALK WITHOUT PARKWAY



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, P.E.
Chief Engineer

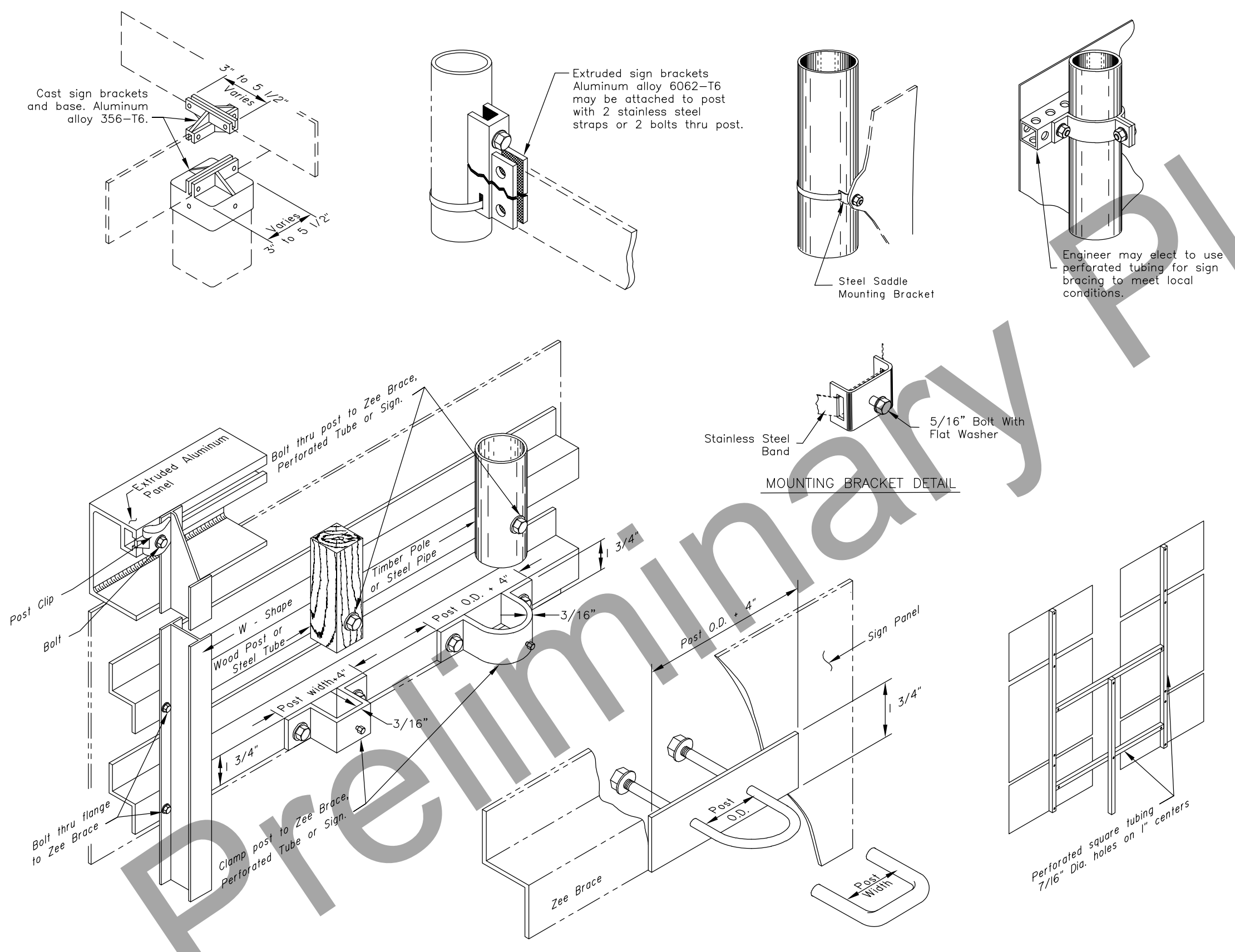
Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK Date: 7/8/2020

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

S-20.11

SHEET
| of |



CONSTRUCTION NOTES

1. Details shown indicate general design only. Dimensions and design may vary among manufacturers.
2. Install weather tight caps on all pipe and tube post (except perforated tubing).
3. Protect driven sign posts with drive caps during installation.
4. Bolt braces to posts at each point where they cross posts.
5. Install signs with top of post, mounting brackets, etc. with a minimum of 3" below top of sign.
6. Paint all sign mounting fasteners on sign face a color closely matching the sign face.
7. Attach all signs, zees and braces mounted to the posts with 5/16" bolts, nuts and washers.
8. Furnish all aluminum nuts, bolts and washers with anodized finish.

FASTENER SPECIFICATION TABLE (ALL REFERENCES ARE TO ASTM)

FASTENERS		ALUMINUM	STEEL	STAINLESS STEEL
BOLTS	MACHINE F468	2024-T4 A307	A276 TYPE 304	F593
	CARRIAGE "U"	F468 2024-T4 A307	A276 TYPE 304	
NUTS	REGULAR F467	6061-T6	A558 2024-T4 F81	F594
	LOCKING	F467 2017-T4		
WASHERS				A480
POST CLIP		A356-T6	N/A	N/A

State of Alaska DOT&PF
ALASKA STANDARD PLAN

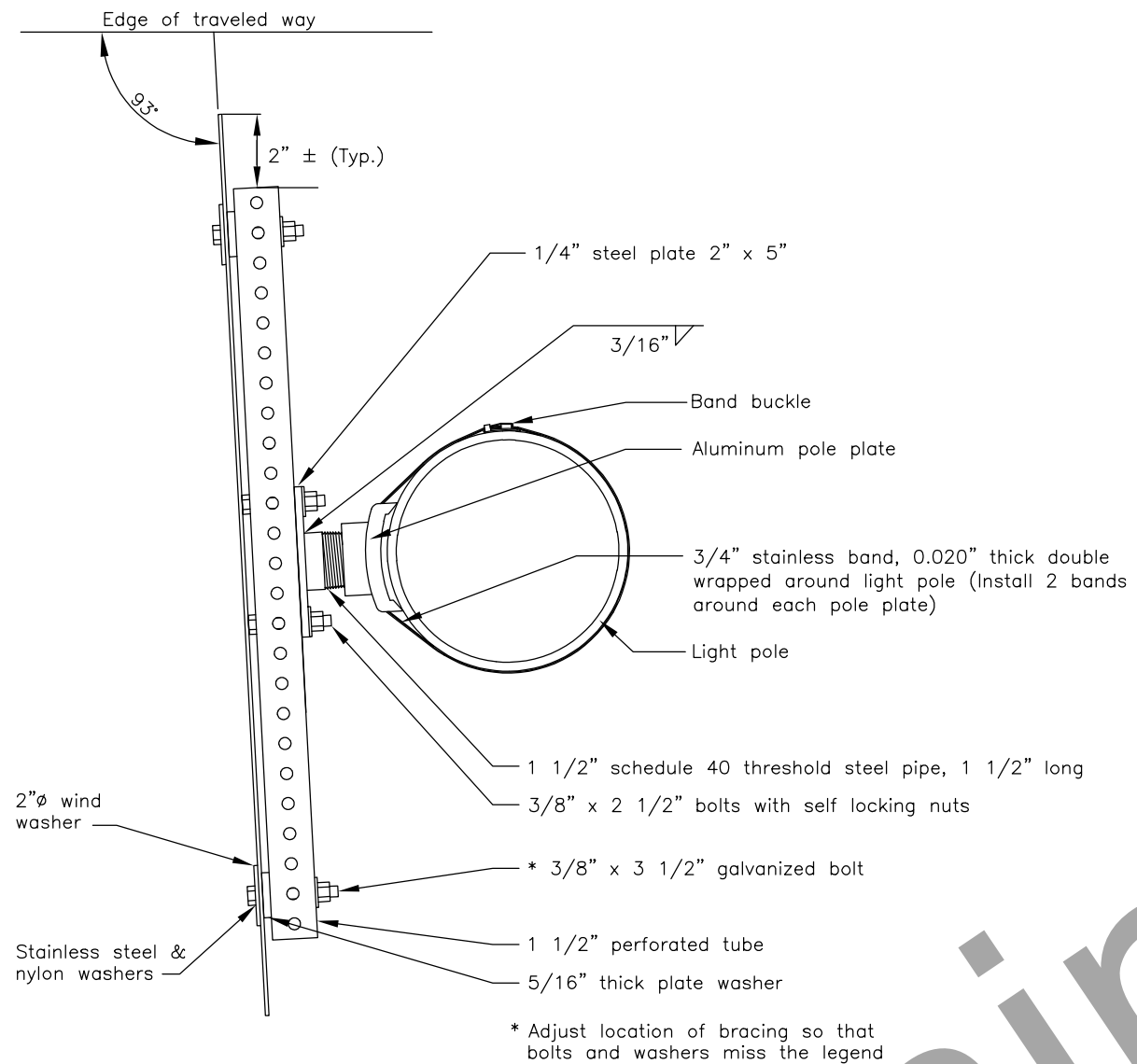
SIGN TO SIGN POST CONNECTION

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

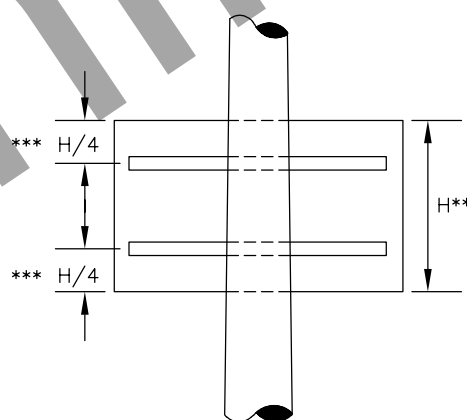
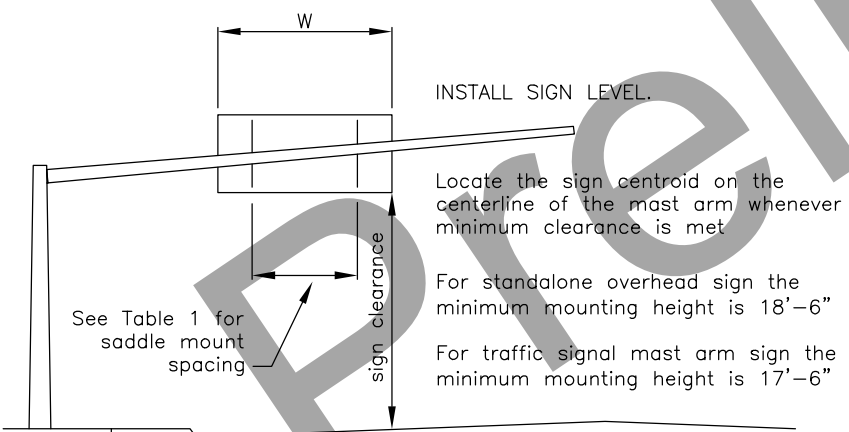
Adoption Date: 07/30/2021

Last Code and Stds. Review
By: LRG Date: 07/30/2021

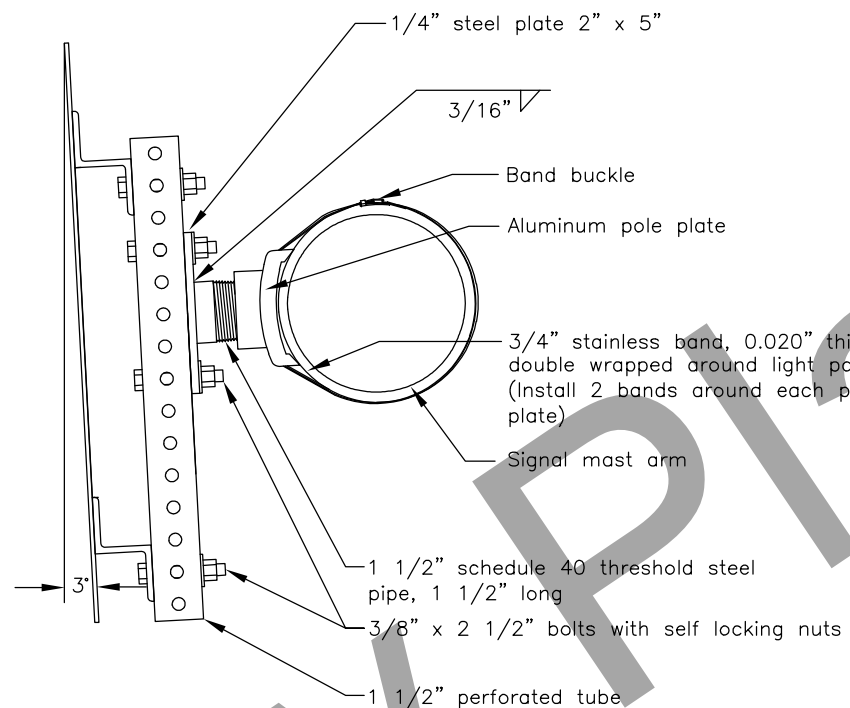
Next Code and Standards Review date: 07/30/2031



ELECTROLIER SIGN MOUNTING
(PLAN VIEW)



** Use two pole plates when $H \leq 48"$
use three pole plates when $H > 48"$
*** When sign panels features predrilled mounting holes, use them to attach the perforated tubes

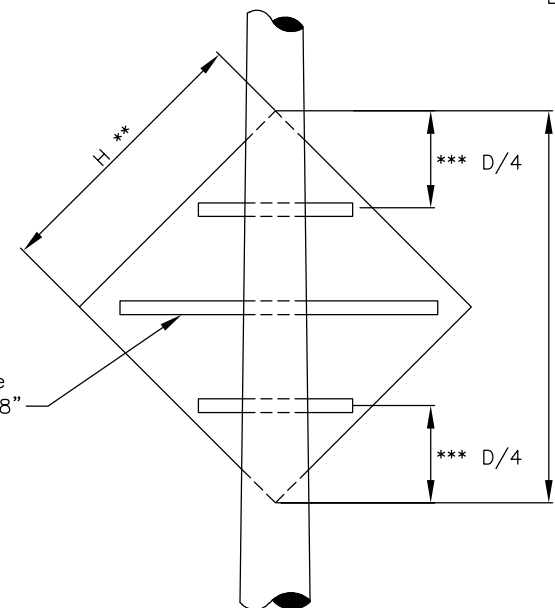


SIGNAL POLE MAST ARM SIGN MOUNTING
(ELEVATION VIEW)

GENERAL NOTES

1. Use pole plate assemblies shown here to install signs on tapered mast arms and light poles. Install one pole plate per 10 square feet of sign panel. Use at least two plates for each installation.
 2. Fabricate each pole plate-to-perforated tube adapter (steel plate welded to pipe) using steel plate conforming to ASTM A36 and steel pipe conforming to ASTM A53. Paint these adapters in conformance with section 504 of the Standard Specifications for Highway Construction, latest edition.
 3. Paint the assemblies in accordance with AASHTO standard specification M69.
 4. Attach each pole plate with two bands of 3/4" wide by 0.020" thick stainless steel banding material. Double wrap each band and tighten it until the band stops moving through the buckle.
- Install bolts, nuts and washers conforming to
5. ASTM A325.

NO. OF POLE PLATES	OVERHANG	BETWEEN POLE PLATES	OVERHANG
2	0.2W	1 SPACE AT 0.6W	2 0.2W
3	0.15W	SPACES AT 0.35W	3 0.15W
4	0.125W	SPACES AT 0.25W	1 0.125W
5	0.2W	SPACE AT 0.6W	0.2W



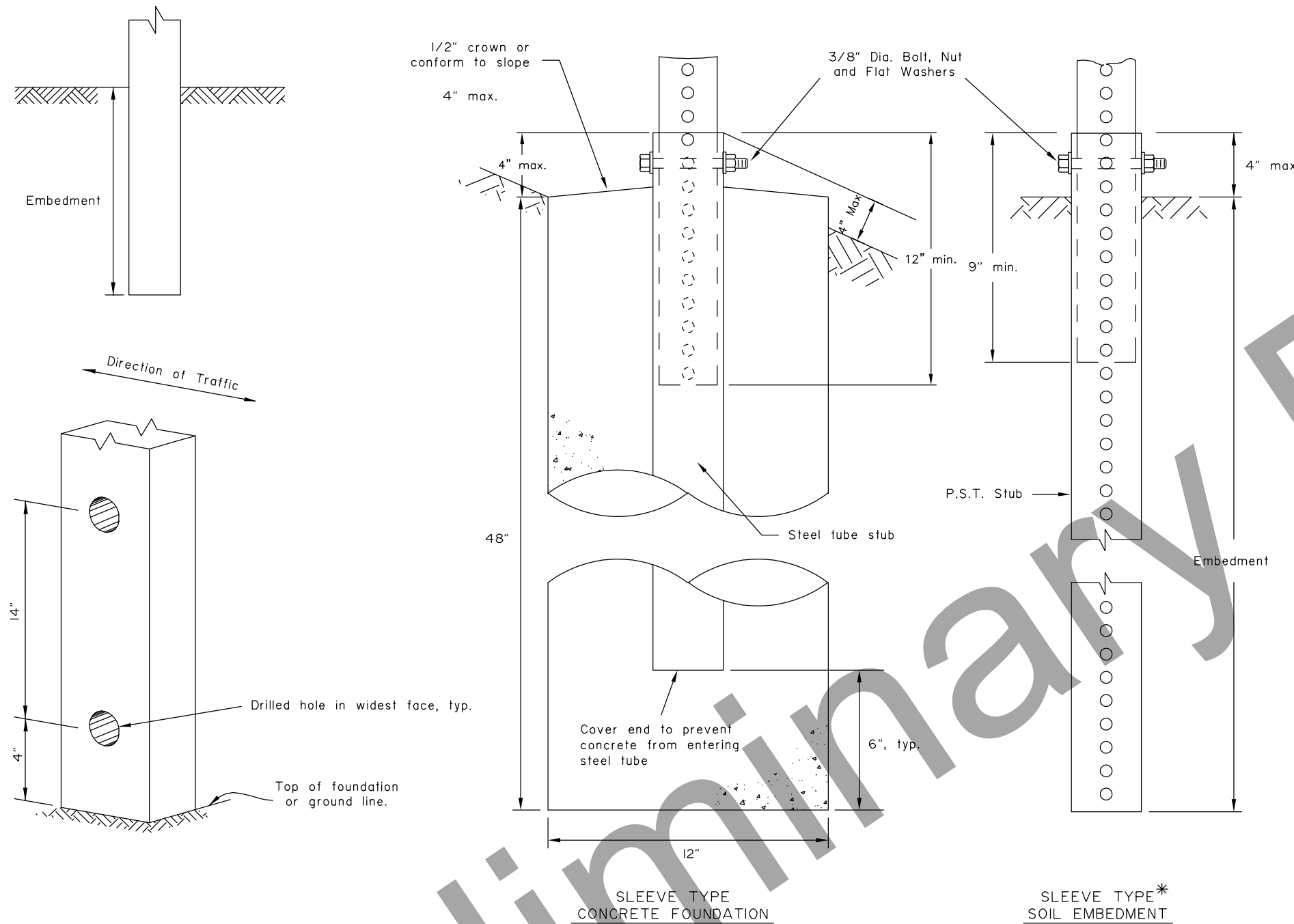
State of Alaska DOT&PF
ALASKA STANDARD PLAN
**POLE AND MASTARM
SIGN MOUNTING**

Adopted as an Alaska Standard Plan by: *Kenneth J. Fisher*
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



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

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	

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	

* Embedment depth applies in both strong and weak soil.

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

WOOD POSTS

PERFORATED STEEL TUBE (PST) POSTS

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

**LIGHT SIGN STRUCTURE
POST EMBEDMENT**

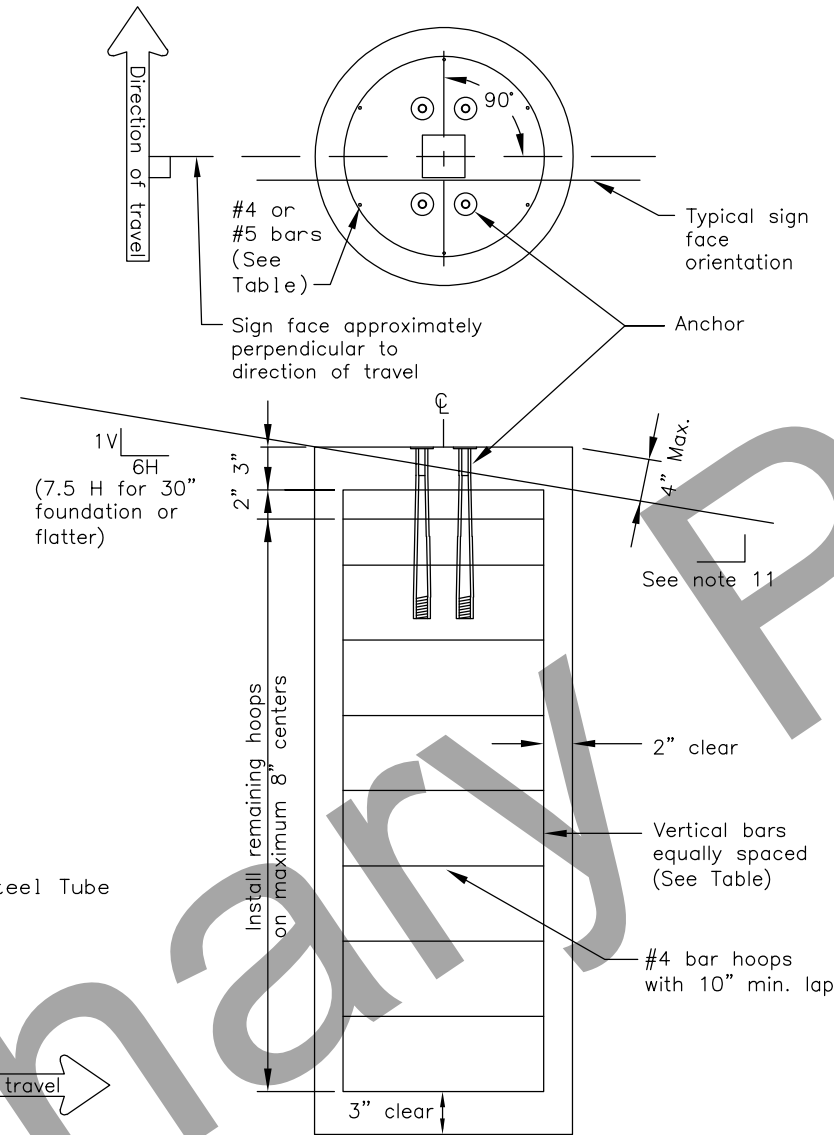
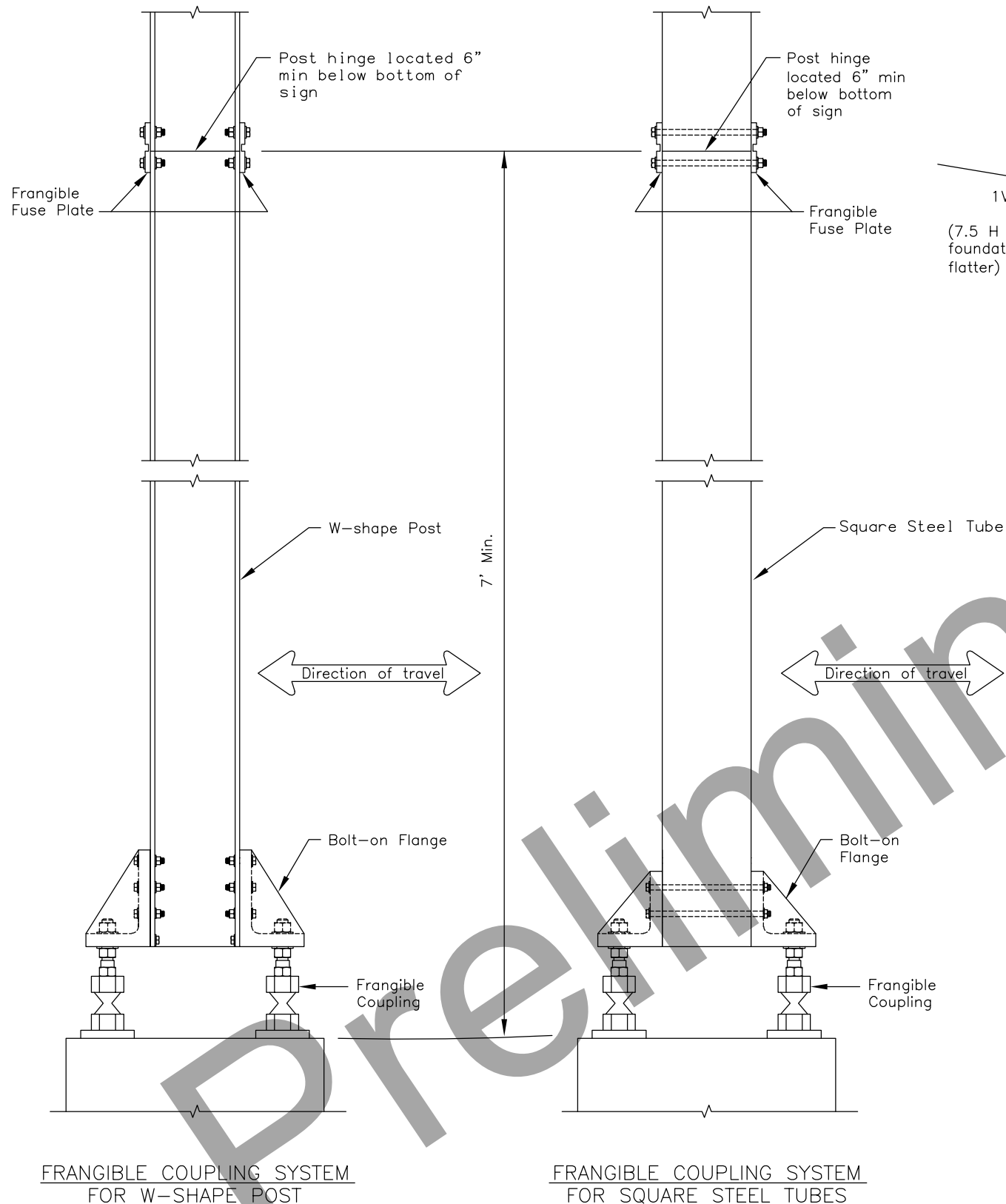
Adopted as an Alaska Standard Plan by:
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: WTH Date: 7/8/2020

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

NOTE:
Install hinges when more than one post is used to support a sign. Do not install hinges on single post installations.



SIGN POST FOUNDATION
See Table for depth and diameter

POST SIZE & TYPE	FOUNDATION *			REINFORCEMENT				
	DIA.	MIN. DEPTH	CY ³ CONC.	VERTICAL BARS QTY.	VERTICAL BARS SIZE	HOOPS QTY.	HOOPS SIZE	HOOPS DIA.
2 1/2" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4 1'-2"
3" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4 1'-2"
3 1/2" TUBE	1'-6"	6'-0"	0.39	7	#5	5'-6"	10	#4 1'-2"
4" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
4 1/2" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
5" TUBE	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
W6 x 9	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
W6 x 12	2'-6"	6'-0"	1.09	8	#8	5'-6"	10	#4 2'-2"
W6 x 15	3'-0"	6'-6"	1.70	8	#11	6'-0"	12	#4 2'-8"
W6 x 30	3'-0"	7'-6"	1.96	8	#11	7'-0"	13	#4 2'-8"

FOUNDATION TABLE

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

GENERAL NOTES

1. Furnish sign posts with NCHRP 350 compliant frangible couplings designed to break away safely when struck from any direction. There is no MASH compliant device at this time. See SPDR report for more info.
2. Furnish frangible coupling systems with bolt-on flanges.
3. Details on this sheet illustrate only the general components of a frangible coupling system, and are not intended to specify a particular product.
4. Install frangible fuse plates as specified by the manufacturer and hinged joints when multiple posts are used to support a sign. Do not use round pipes.
5. Install the components of the breakaway system, including hinges, in accordance with the written instructions of the system manufacturer.
6. Use Class A, B or W concrete conforming to Sections 501 or 550 of the Standard Specifications. Furnish ASTM A615 grade 60 steel bars for concrete reinforcement conforming to AASHTO M31.
7. Spiral reinforcing steel may be substituted for hoops in concrete foundation. Spiral option shall consist of #3 plain spiral with 6" pitch with three flat turns at the top and one flat turn at the bottom.
8. Install the concrete anchors using a rigid template. Locate the anchors on centers and within tolerances specified by the manufacturer.
9. Install the anchors in fresh concrete as recommended by the manufacturer. Adjust the template's final position until it is level. Remove and replace all foundations that need more than 2 shims under any 1 coupling or more than a total of 3 shims under any pair of couplings to plumb the post.
10. Drill the holes for attaching brackets before the sign posts are hot dip galvanized. Test fit templates in the holes to ensure the brackets can be installed square to the posts.
11. Special grading detail and/or shielding may be required to maintain 4" maximum clear distance.

State of Alaska DOT&PF
ALASKA STANDARD PLAN
SIGN POST BASE AND FOUNDATION

Adopted as an Alaska Standard Plan by: _____

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

Last Code and Stds. Review
By: KLK, MJM Date: 7/8/2020

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