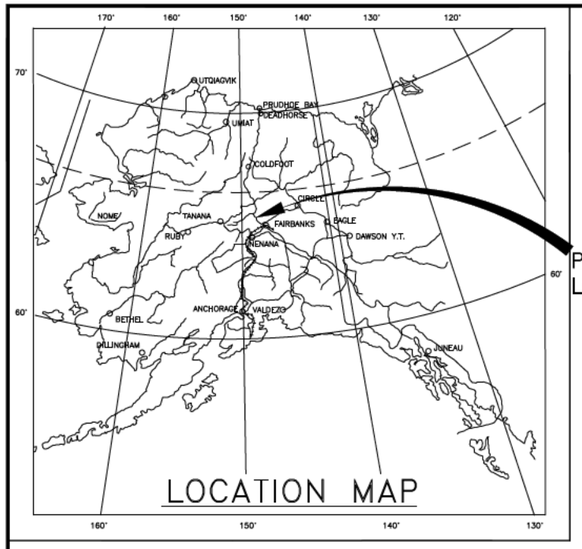
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	A1	----
CDS ROUTE: 153000	MILEPOINT: 51 TO 63			



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT

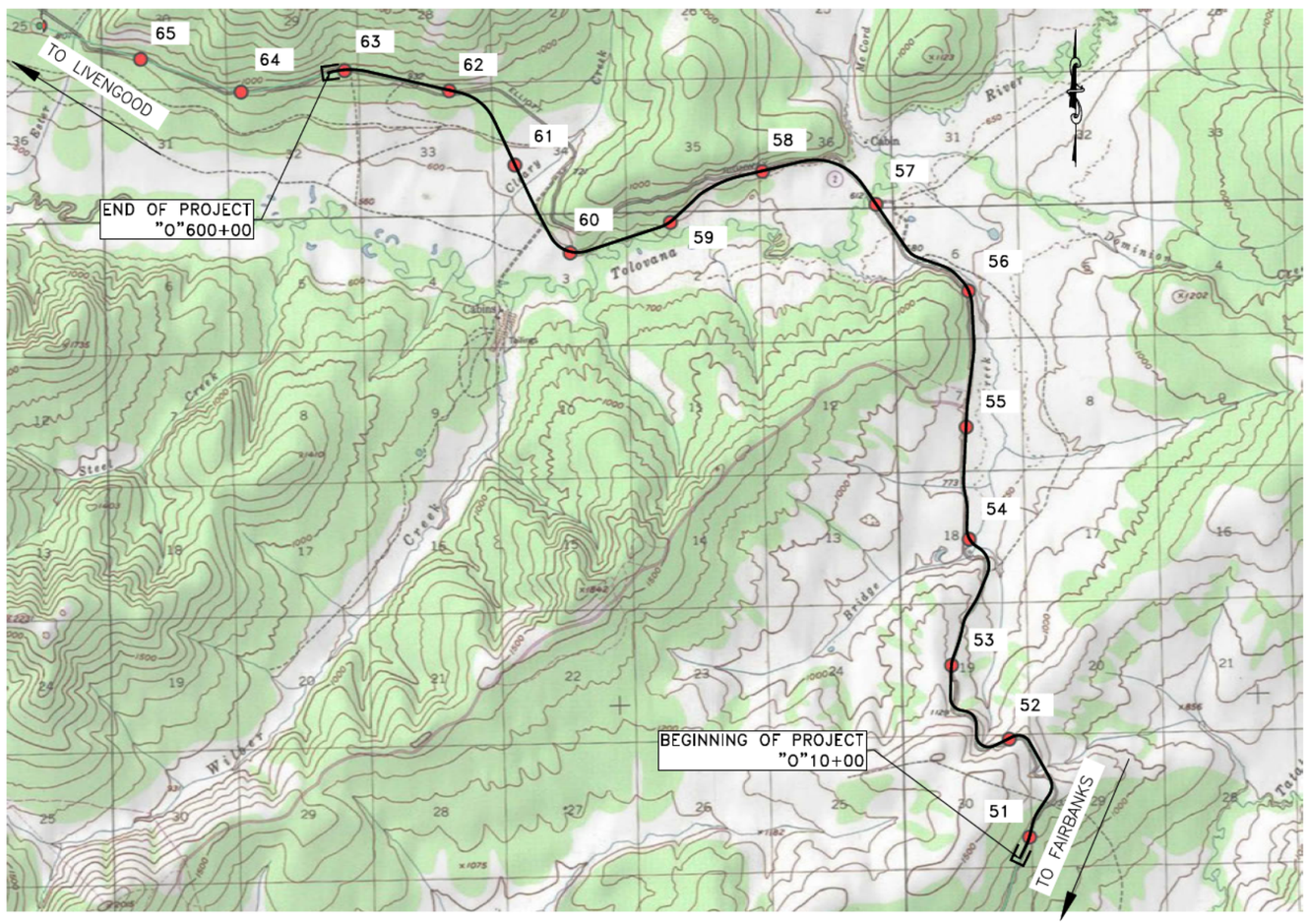
0651032 / NFHWY00420

ELLIOTT MP 51–63

GRADING, DRAINAGE, PAVING, BRIDGE, DECK REPLACEMENT

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND & SHEET LAYOUT INDEX
A3	CONTROL SHEET
A4	ALIGNMENT GEOMETERY
B1–B2	TYPICAL SECTIONS AND DETAILS
B3	TYPICAL SECTION SLOPE TABLE
C1	ESTIMATE OF QUANTITIES & GENERAL NOTES
D1	GUARDRAIL SUMMARY
D2	APPROACH SUMMARY AND DETAILS
D3	RUMBLE STRIP DETAILS
D4	SUPERELEVATION SUMMARY
E1–E7	CULVERT/DRAINAGE DETAILS & SUMMARY
F1–F20	PLAN & PROFILE
H1–H2	SIGNING SUMMARY
N1–N4	BRIDGE PLANS
Q1–Q11	EROSION SEDIMENT CONTROL PLANS
T1	TRAFFIC CONTROL PLANS (and/or DEVICES)
V1–V32	STANDARD PLANS



THE FOLLOWING STANDARD DRAWINGS APPLY TO THIS PROJECT:
C–05.20
D–01.02, D–04.22
G–00.05, G–05.11S, G–10.20, G–14.01, G–20.12, G32.02
I–20.20, I–30.10, I–81.00
M–20.15, M–23.13
S–00.12, S–01.02, S–05.02, S–30.05, S–31.02, S–32.02
T–21.04, T–25.10

DESIGN DESIGNATIONS

ADT (2019)	400
ADT (2035)	510
DHV	13%
PERCENT TRUCKS (T)	44%
DIRECTIONAL SPLIT (D)	40 / 60
DESIGN SPEED (V)	50 MPH
DESIGN ESALS (?? YEARS)	919,000

PROJECT SUMMARY

WIDTH OF PAVEMENT	24 ft.
LENGTH OF GRADING	58,500 ft.
LENGTH OF PAVING	42,290 ft.
LENGTH OF PROJECT	58,500 ft.

DAVID FISCHER, P.E., PROJECT MANAGER
SAM CARLSON, P.E., DESIGN ENGINEER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY:

_____ DATE _____

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

ACCEPTED FOR CONSTRUCTION:

_____ DATE _____

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

HWYS TITLE SHEET
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_A1-A2-Title Wed, Jul/20/22 10:26am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	A2	A4

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

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)	SS	SS
FUEL LINE	O	O
GAS LINE	G	G
WATER LINE	W	W
METER, VALVE, FIRE HYDRANT	W	W
EXISTING STORM DRAIN (FLOW DIRECTION →)	SD	
PROPOSED STORM DRAIN	S-10, S-11, P-11, P-10, MH	
FIBER OPTIC LINE	FO	
DIRECT BURIAL TELEPHONE CABLE	T	T
DIRECT BURIAL ELECTRIC CABLE	E	E
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT	T	T
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE	MH	MH
SANITARY SEWER CLEAN OUT		

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX	MB	MB
RAILROAD TRACKS		
RAILROAD DEVICES	CROSS-BUCK, FLASHING LIGHT	CANTILEVER, SWITCH
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS	H = HOUSE; G = GARAGE; M = MERCHANT/STORE; B = BARN; S = SHED; P = PRIVY; SS = SERVICE STATION; W = WAREHOUSE	
POST OR BOLLARD		
WELL OR MONITORING WELL	W	
SEPTIC PIPE	S, MH	
FUEL TANK FILL PIPE/VENT	P	
SATELLITE DISH	SAT. DISH	
TEST HOLE	TH	
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG-IN		
DELINEATOR/GUIDE MARKER		

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		5
JUNCTION BOX, TYPE II		6
JUNCTION BOX, TYPE III		3
SIGNAL FACE, VEHICULAR	42	42
SIGNAL FACE, BACKPLATE	42	42
SIGNAL FACE, LEFT TURN, BACKPLATE	43	43
SIGNAL FACE, PEDESTRIAN		
LOOP DETECTOR	33	73
VIDEO DETECTOR	2	2
RADAR DETECTOR	4	4A
OPTICOM DETECTOR	1	1
PEDESTRIAN PUSH BUTTON	1	1
SIGNAL POST W/O MAST ARM		1
SIGNAL POLE W/MAST ARM		4
SIGNAL CONTROLLER		
LOAD CENTER		
LUMINAIRE		22
RIGID METAL CONDUIT		

LEGEND

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_A1-A2-HWYS Legend Wed, Jul/20/22 10:26am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	A3	A4

OL PRIOR TO USE ON MULTI-YEAR PROJECTS, VERIFY ALL

ANCES, US SURVEY FEET.

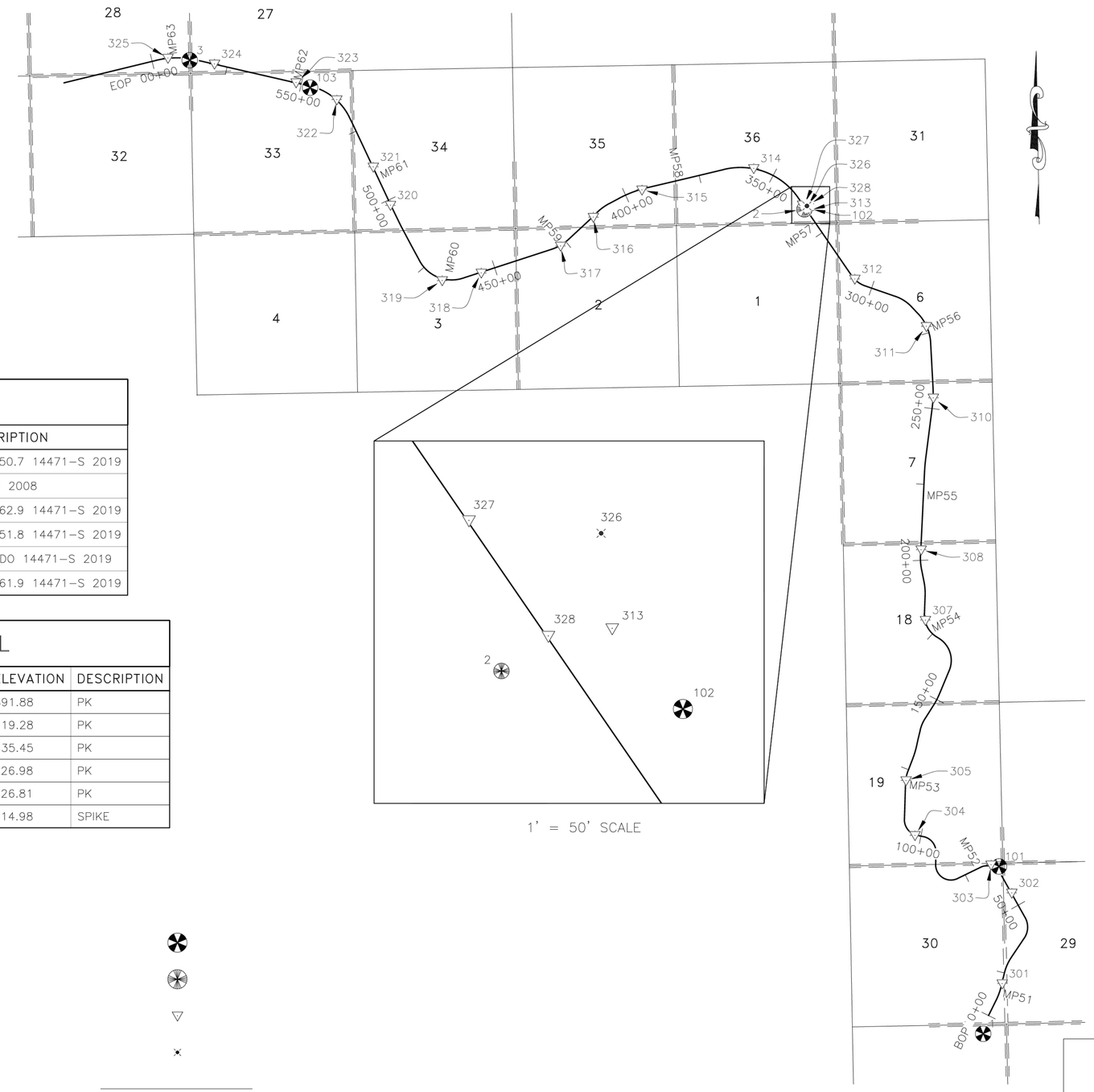
N THE DALTON ZONE 4 LOW DISTORTION PROJECTION (LDP),
BY THE ALASKA DEPARTMENT OF TRANSPORTATION AND

_AZIMUTH_NATURAL_ORIGIN

3(2011)(EPOCH:2010.0000) OPUS AVERAGED POSITION OF

VERAGED GEOID12A (NAVD88) ELEVATION OF 1,346.86 FT AT

.



PRIMARY CONTROL

POINT NO.	NORTHING	EASTING	ELEVATION	LATITUDE	LONGITUDE	DESCRIPTION
1	174913.45	965780.48	1205.15	N65° 23' 48.0464"	W148° 14' 01.6465"	PRIM MON ELLIOT 50.7 14471-S 2019
2	201972.08	959913.51	617.07	N65° 28' 15.3736"	W148° 16' 08.1514"	PRIM MON COP 47 2008
3	206868.10	939741.49	931.45	N65° 29' 07.0624"	W148° 24' 03.7482"	PRIM MON ELLIOT 62.9 14471-S 2019
101	180404.20	966297.34	1346.86	N65° 24' 41.9710"	W148° 13' 46.9336"	PRIM MON ELLIOT 51.8 14471-S 2019
102	202007.04	960004.34	621.22	N65° 28' 15.7007"	W148° 16' 05.9856"	PRIM MON COLORADO 14471-S 2019
103	205967.95	943692.16	860.89	N65° 28' 57.5497"	W148° 22' 30.5381"	PRIM MON ELLIOT 61.9 14471-S 2019

CONTROL

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
301	176559.45	966404.31	1271.14	PK
302	179536.10	966719.31	1310.42	PK
303	180462.39	966038.57	1345.74	PK
304	181425.97	963542.03	1173.40	PK
305	183226.53	963249.79	1104.99	PK
307	188489.38	963884.64	801.60	PK
308	190800.24	963744.67	779.76	PK
310	195786.76	964143.99	791.19	PK
311	198134.23	963915.64	763.84	PK
312	199689.64	961567.20	680.43	PK
313	201940.89	960062.37	622.45	PK
314	203320.17	958249.87	624.65	PK
315	202615.86	954582.19	726.29	PK
316	201720.04	952986.01	656.11	PK
317	200773.80	951912.80	634.51	PK
318	199890.22	949308.69	583.26	PK
319	199638.82	948027.38	582.17	PK
320	202112.14	946329.75	623.04	PK
321	203367.37	945765.94	646.04	PK
322	205575.61	944567.11	799.92	PK

CONTROL

POINT NO.	NORTHING	EASTING	ELEVATION	DESCRIPTION
323	206136.51	943231.28	891.88	PK
324	206748.88	940553.50	919.28	PK
325	206940.96	939026.77	935.45	PK
326	202000.86	959951.95	626.98	PK
327	202095.62	959886.82	626.81	PK
328	202085.10	959995.26	614.98	SPIKE

LEGEND

PRIMARY MONUMENT SET

PRIMARY MONUMENT FOUND

PK NAIL SET

SPIKE SET

SECTION LINE

EXISTING SECTION LINE OR ACCESS EASEMENT

CONTROL SHEET

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	A4	A4

ENT COORDINATES

ON	NORTHING	EASTING
.00	175512.0773	965954.3392
.34	176006.7986	966199.9549
.15	176489.8937	966374.6170
.04	176894.5423	966470.6565
.94	177417.5187	966699.4348
.44	178056.1953	967128.6531
.52	178726.4643	967155.5414
.38	180171.2463	966344.4906
.79	180375.9417	965689.4151
.48	180010.6575	964940.0102
.26	180468.7196	964221.0078
.69	180876.0894	964228.0253
.13	181382.7240	963822.9390
.15	181426.4158	963612.4037
.62	181956.6892	963194.3332
.08	183128.5947	963230.5704
.85	183537.2259	963312.7310
.20	183941.8873	963467.7895
.05	184381.2206	963598.6283
.42	184579.9956	963641.6141
.67	184881.6697	963714.0569
.32	185256.5249	963872.1604
.80	185746.6960	964181.2471
.01	186000.7972	964314.4458
.64	186180.7568	964391.1767
.92	186842.2295	964665.9716
.78	187883.6756	964340.1117
.41	187947.2069	964241.1198
.27	188695.2252	963850.8479
.79	189290.3031	963873.7349
.84	189755.8473	963837.0809
.00	190145.4316	963759.8976
.89	190629.8012	963724.0565
.19	193389.9353	963856.2660
.98	193784.1111	963890.8217
.94	195518.9827	964112.3801
.03	196101.8773	964134.0518
.14	197591.9167	964055.4590
.64	198544.5133	963646.4816
.15	198779.3653	963423.9953
.72	199113.3412	962906.7835
.70	199460.1419	961908.3161
.83	199800.7203	961461.7824
.15	202348.7552	959711.4109
.09	203283.4611	957281.0523
.47	203003.5341	956109.6532
.98	202690.0842	954780.6073
.23	202329.1840	953821.8515
.03	202163.1706	953509.4256
.90	201844.4374	953082.4925

'O' ALIGNMENT COORDINATES

DESCRIPTION	STATION	NORTHING	EASTING
PI	413+52.61	201691.2844	952932.0034
PC	423+85.47	200989.5745	952174.1182
PT	430+33.34	200664.0523	951619.7757
PC	460+92.00	199716.3957	948711.6278
PT	477+58.94	200285.5209	947284.8392
PI	483+22.06	200780.6016	947016.4968
PI	490+60.06	201431.9825	946669.6036
PI	497+60.07	202061.4748	946363.3966
PI	515+02.68	203639.4763	945624.0803
PI	527+61.34	204778.3778	945088.2265
PC	530+18.46	205008.5358	944973.6219
PT	545+54.38	205976.5416	943835.0535
PI	546+71.27	206011.1286	943723.4076
PC	585+14.76	206871.1269	939977.3611
PT	598+60.87	206862.5600	938643.3300
EOP	600+00.00	206829.6900	938508.1400

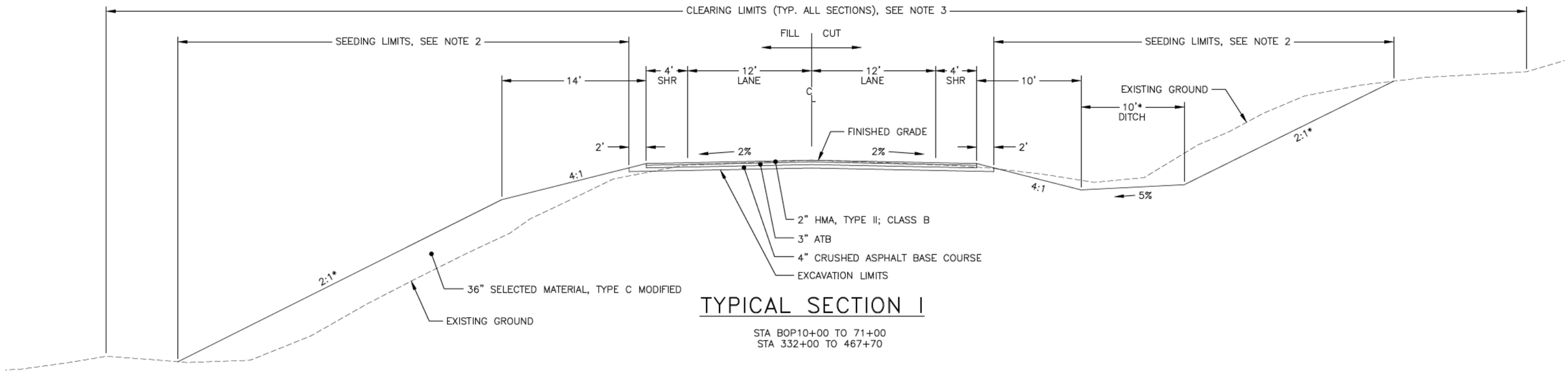
ALIGNMENT GEOMETRY

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	B1	B3

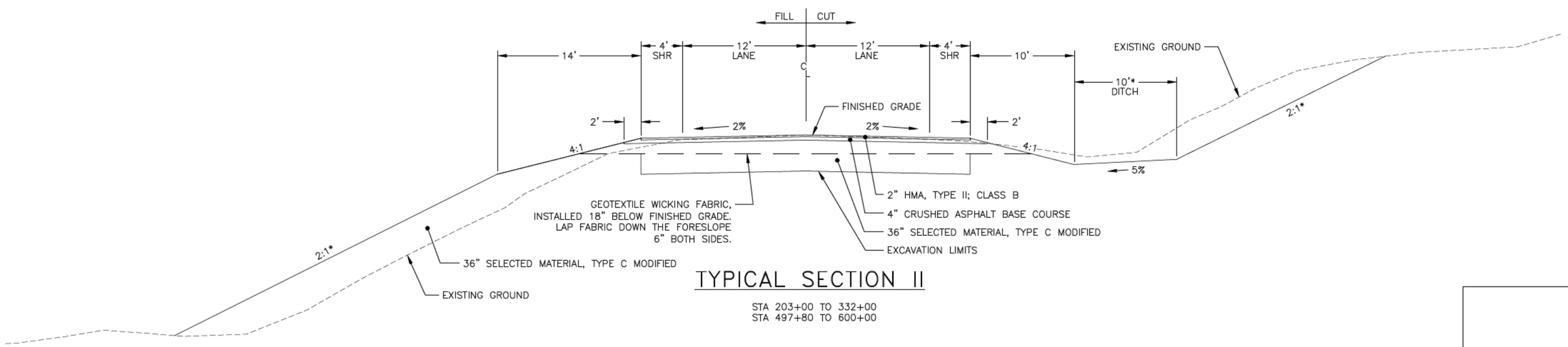
TYPICAL SECTION NOTES:

1. STATION LIMITS MAY VARY AS NEEDED AND APPROVED BY THE ENGINEER TO ACCOMMODATE CULVERT INSTALLATIONS.
2. SEED ALL DISTURBED AREAS OR AS DIRECTED BY THE ENGINEER
3. CLEAR 100' FEET EACH SIDE OF THE CENTERLINE, OR TO ROW, WHICHEVER IS LESS.
4. INSTALL CULVERTS BEFORE INSTALLING GEOTEXTILE AND/OR CONSTRUCTING THE PAVEMENT STRUCTURE.
5. CONSTRUCT SUPERELEVATIONS AS SHOWN ON PLAN SHEET D3.
6. SEE TYPICAL SECTION ALTERNATE SLOPE/DITCH TABLE ON SHEET B3.



TYPICAL SECTION I

STA BOP10+00 TO 71+00
STA 332+00 TO 467+70



TYPICAL SECTION II

STA 203+00 TO 332+00
STA 497+80 TO 600+00

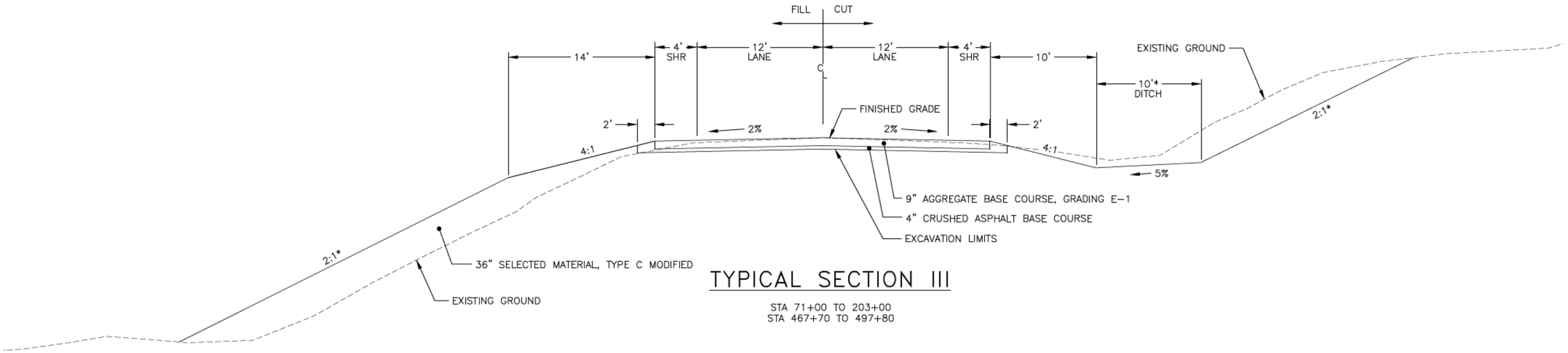
*SLOPE/DITCH WIDTH VARY, SEE SHEET B3 FOR ALTERNATE SLOPE AND DITCH WIDTH VALUES

TYPICAL SECTIONS 1

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\typicals-B1 TYPICALS AND NOTES Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

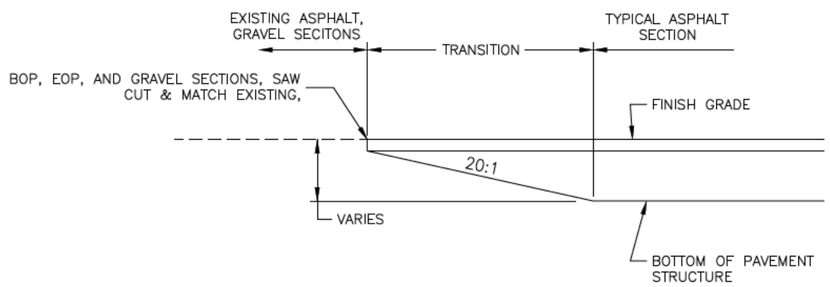
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	B2	B3



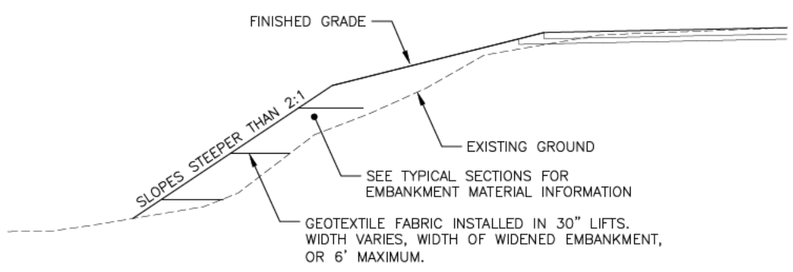
TYPICAL SECTION III

STA 71+00 TO 203+00
STA 467+70 TO 497+80

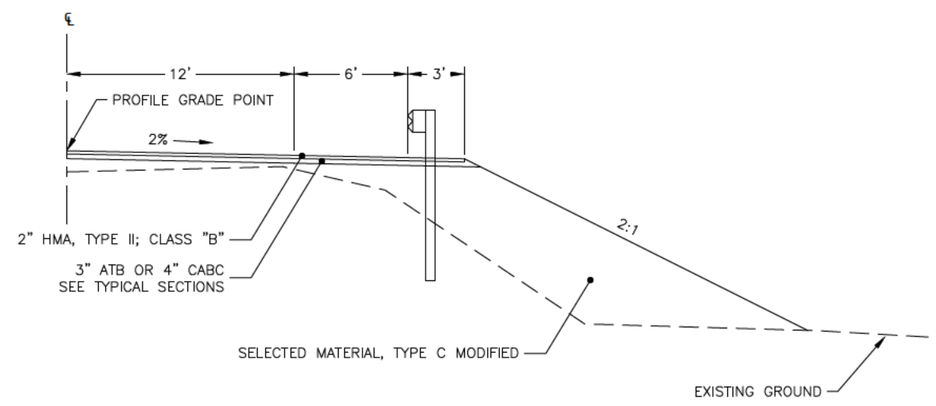
*SLOPE/DITCH WIDTH VARY, SEE SHEET B3 FOR ALTERNATE SLOPE AND DITCH WIDTH VALUES



TYPICAL TRANSITION TO EXISTING PAVEMENT/GRAVEL DETAIL



STEEP EMBANKMENT FABRIC REINFORCEMENT DETAIL



GUARDRAIL WIDENING DETAIL

TYPICAL SECTIONS 2 AND DETAILS

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\typicals-B2 TYPICALS AND DETAILS Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	B3	B3

TYPICAL SECTION ALTERNATE SLOPE/DITCH TABLE NOTES:

1. THIS TABLE MODIFIES THE TYPICAL SECTIONS SHOWN ON SHEET B1 AND B2.
2. TRANSITION INTO THE MODIFIED VALUES SHOWN IN THIS TABLE IS 50 FEET BEFORE THE "BEGIN STATION" AND 50 FEET AFTER THE "END STATION".
3. THE ENGINEER MAY ADJUST SLOPE AND DITCH VALUES IN THE FIELD TO TAKE ADVANTAGE OF EXISTING FEATURES OR FOR DISPOSAL OF EXCESS USABLE EXCAVATION.

TYPICAL SECTION ALTERNATE SLOPE/DITCH TABLE

LEFT SIDE					RIGHT SIDE				
BEGIN STATION	END STATION	BACKSLOPE (H:V)	FORESLOPE (H:V)	DITCH WIDTH	BEGIN STATION	END STATION	BACKSLOPE (H:V)	FORESLOPE (H:V)	DITCH WIDTH
10+00	48+00	1.5:1			14+00	18+00		3.0:1	
					27+00	33+00	3.0:1		
					39+00	42+00	1.5:1		
54+00	67+00	1.5:1			65+00	66+00	3.0:1		
69+00	70+00		3.0:1						
					73+00	74+00		1.5:1	
					76+00	81+00		3.0:1	
85+00	99+00	1.5:1	2.0:1		87+00	94+00	1.5:1		
					95+00	97+00	3.0:1		
					100+00	105+00		1.5:1	
					107+00	110+00		3.0:1	
					126+00	130+00		3.0:1	
					135+00	136+00		1.5:1	
138+00	139+00	1.5:1			139+00	141+00		3.0:1	
145+00	147+00	1.5:1							
					157+00	164+00		1.5:1	
					171+00	174+00		1.5:1	
					182+00	183+00		3.0:1	
					186+00	188+00		3.0:1	
203+00	208+00		3.0:1		204+00	216+00		3.0:1	
					228+00	229+00		3.0:1	
					234+00	237+00		3.0:1	
212+00	244+00		3.0:1		242+00	246+00		3.0:1	
					249+00	250+00		3.0:1	
251+00	261+00	1.5:1	3.0:1						
266+00	272+00	1.5:1							
281+00	288+00	1.5:1							
292+00	295+00		3.0:1						
					302+00	319+00		3.0:1	
307+00	320+00		3.0:1						
323+00	358+00		3.0:1		324+00	325+00		3.0:1	
					332+00	337+00		3.0:1	
					353+00	360+00		3.0:1	
					361+00	367+00	3.0:1		0 FT, V DITCH
363+00	366+00		3.0:1		368+00	379+00		3.0:1	0 FT, V DITCH
					380+00	397+00	1.3:1		0 FT, V DITCH
					398+00	404+00	3.0:1		0 FT, V DITCH
					405+00	406+00	1.3:1		0 FT, V DITCH
					407+00	410+00	3.0:1		0 FT, V DITCH
429+00	432+00		3.0:1		411+00	427+00		3.0:1	0 FT, V DITCH
436+00	437+00		3.0:1		428+00	433+00		3.0:1	
					442+00	445+00	1.5:1		
447+00	455+00		3.0:1		447+00	455+00		3.0:1	
457+00	458+00	3.0:1	3.0:1		456+00	461+00	1.5:1		
463+00	468+00	3.0:1			464+00	465+00		3.0:1	
473+00	480+00		3.0:1						
					470+00	490+00		3.0:1	
491+00	513+00		3.0:1		495+00	502+00		3.0:1	
					511+00	517+00		3.0:1	
					522+00	523+00	3.0:1		
529+00	532+00		3.0:1		526+00	534+00		3.0:1	
					537+00	538+00		3.0:1	
544+00	553+00		3.0:1						
					553+00	578+00		3.0:1	
576+00	577+00		3.0:1		581+00	582+00		3.0:1	
579+00	586+00		3.0:1		585+00	590+00		3.0:1	

TYPICAL SECTION SLOPE TABLE

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\typicals-B3 ALTERNATE SLOPE DITCH TABLE Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	C1	C1

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	UNIT	QUANTITY
201.0003	CLEARING AND GRUBBING	ACRE	210
202.0014	REMOVAL OF PAVEMENT	LS	ALL REQ'D
202.0017	REMOVAL OF CULVERT PIPE	EACH	40
203.0003	UNCLASSIFIED EXCAVATION	CUBIC YARD	549,536
203.0006	BORROW	TON	200,000
204.0001	STRUCTURE EXCAVATION	CY	11,300
204.2002	EMBEDMENT MATERIAL	TON	16,702
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	2,310
301.0003.00E1	AGGREGATE BASE COURSE, GRADING E-1	TON	28,820
306.0001	ATB	TON	11,657
306.0002	ASPHALT BINDER, TYPE 52-28	TON	525
308.0001	CRUSHED ASPHALT BASE COURSE	SQUARE YARD	215,360
401.0001.002B	HMA, TYPE II; CLASS "B"	TON	17,800
401.0004.5228	ASPHALT BINDER, GRADE 52-28	TON	979
401.0009	LONGITUDINAL JOINT DENSITY PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
401.0008	HMA PRICE ADJUSTMENT, TYPE II; CLASS B	CONTINGENT SUM	ALL REQ'D
401.001	PAVEMENT SMOOTHNESS PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
401.0011.002B	HMA, DRIVEWAY, TYPE II; CLASS "B"	TON	771
401.0015	ASPHALT MATERIAL PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
406.0003	RUMBLE STRIPS	STATION	895
507.2005.0001	EXISTING RAILING REPAIR	LUMP SUM	1
510.0001.0000	REMOVAL OF STEEL BRIDGE CONCRETE BRIDGE DECK	SQUARE FOOT	3,066
510.2000.0000	BRIDGE DECK REPAIR	SQUARE FOOT	1,390
525.2001.0000	POLYESTER CONCRETE OVERLAY	LUMP SUM	1
602.0001.0084	STRUCTURAL PLATE PIPE , 84" DIAMETER, __ GAUGE	LINEAR FOOT	96
602.0001.0108	STRUCTURAL PLATE PIPE , 108"DIAMETER, __ GAUGE	LINEAR FOOT	176
602.0001.0144	STRUCTURAL PLATE PIPE, 144" DIAMETER, __ GAUGE	LINEAR FOOT	116
602.2009.0000	DEADMAN	EACH	3
603.0001.0024	24 INCH CSP	LINEAR FOOT	160
603.0001.0036	36 INCH CSP	LINEAR FOOT	3,443
603.0001.0048	48 INCH CSP	LINEAR FOOT	102
603.2001.0048	DRIVEN PIPE 48 INCH - SMOOTH WALL	LINEAR FOOT	430
606.0001	W-BEAM GUARDRAIL	LINEAR FOOT	10,673.0
606.0006	REMOVING AND DISPOSING OF GUARDRAIL	LINEAR FOOT	18,391.0
606.0013	PARALLEL GUARDRAIL TERMINAL	EACH	18
606.0016	TRANSITION RAIL	EACH	4
611.0001	RIPRAP, CLASS II	CUBIC YARD	1,900
613.0002	CULVERT MARKER POST	EACH	76
615.0001	STANDARD SIGN	SQUARE FOOT	257.00
616.0002.0050	1/2 INCH DIAMETER THAW PIPE	EACH	21
618.0002	SEEDING	POUND	4,000.0
624.0001	CALCIUM CHLORIDE	TON	96.0
630.2002.0000	GEOTEXTILE, WICKING FABRIC	SQUARE YARD	113,031
631.0002	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD	7,300
639.0001	APPROACH	EACH	15
640.0001	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQ'D
641.0001	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LUMP SUM	ALL REQ'D
641.0003	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	LUMP SUM	ALL REQ'D
641.0005	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL BY DIRECTIVE	CONTINGENT SUM	ALL REQ'D
641.0006	WITHOLDING	CONTINGENT SUM	ALL REQ'D
641.0008	SWPPP MANAGER	LUMP SUM	ALL REQ'D
642.0001	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQ'D
642.0003	THREE PERSON SURVEY PARTY	HR	80
643.0002	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQ'D
643.0023	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQ'D
643.0025	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQ'D
644.0001	FIELD OFFICE	LUMP SUM	ALL REQ'D
644.0002	FIELD LABORATORY	LUMP SUM	ALL REQ'D
644.0003	CURING SHED	LUMP SUM	ALL REQ'D
644.0006	VEHICLES	LUMP SUM	ALL REQ'D
644.0015	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EACH	1
646.0001	CPM SCHEDULING	LUMP SUM	ALL REQ'D
670.0013	PAINTED TRAFFIC MARKINGS	LINEAR FEET	188,600

EXISTING ASPHALT THICKNESS

BEGIN STATION	END STATION	ASPHALT THICKNESS (FT)	NOTES
BOP10+00	71+00	0.5	
71+00	203+00	0.5-6	ASPHALT INTERLAYERED WITH GRAVEL/SILT/SAND
203+00	330+00	1-2.5	ASPHALT INTERLAYERED WITH GRAVEL/SILT/SAND
330+00	382+00	0.5	
382+00	415+00	0.5	
415+00	429+00	1.5-3.5	ASPHALT INTERLAYERED WITH GRAVEL/SILT/SAND
429+00	467+80	0.5	
467+80	600+00	0.5-1.75	ASPHALT INTERLAYERED WITH GRAVEL/SILT/SAND

UNCLASSIFIED EXCAVATION FOR DEEP CULVERTS

PIPE STATION	VOLUME (CY)
83+34	18552
131+83	2753
136+13	2589
153+10	4798
162+13	4215
173+86	67481
263+84	19811
299+94	13999
TOTAL	134,198

SEE SHEET T1 FOR HALF WIDTH EXCAVATION DETAIL

ESTIMATE TABLES

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\NFHWY00420_D_MISC_SUMMARIES-ESTIMATE TABLES Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	D1	D4

GUARDRAIL SUMMARY

*APPROX. BEGIN STATION	*APPROX. END STATION	APPROX. EXISTING LENGTH (FEET)	LT/RT	606.0006.0000 REMOVING AND DISPOSING OF GUARDRAIL (FEET)	606.0001.0000 W-BEAM GUARDRAIL (FEET)	606.0013.0000 PARALLEL GUARDRAIL TERMINAL (EACH)	606.0016.0000 TRANSITION RAIL (EACH)	REMARKS
47+05	54+80		RT		775	2		
47+05	54+58	753	RT	753				
47+50	55+00		LT		750	2		
47+50	55+00	750	LT	750				
80+92	86+36	544	RT	544				
81+25	86+38	513	LT	513				
97+08	108+95	1187	RT	1187				
101+96	108+94	698	LT	698				
157+41	179+36	2195	RT	2195				
158+24	179+50	2126	LT	2126				
259+10	292+90		RT		3380	2		
261+26	292+92	3166	RT	3166				
297+90	305+00		LT		710	2		
297+95	305+17	722	LT	722				
331+98	334+60	262	LT	262				
332+00	334+60		LT		260	1	1	
332+20	334+60		RT		240	1	1	
335+76	337+55		RT		179	1	1	
335+76	338+00		LT		224	1	1	
332+22	334+60	238	RT	238				
335+76	337+50	174	RT	174				
336+00	338+02	202	LT	202				
375+00	394+50		LT		1950	2		
374+75	394+26	1951	LT	1951				
413+00	427+16		LT		1416	2		
413+03	427+14	1411	LT	1411				
436+92	444+00	708	LT	708				
454+78	462+67		LT		789	2		
454+80	462+71	791	LT	791				
TOTALS		18391		18391	10673	18	4	

GUARDRAIL SUMMARY

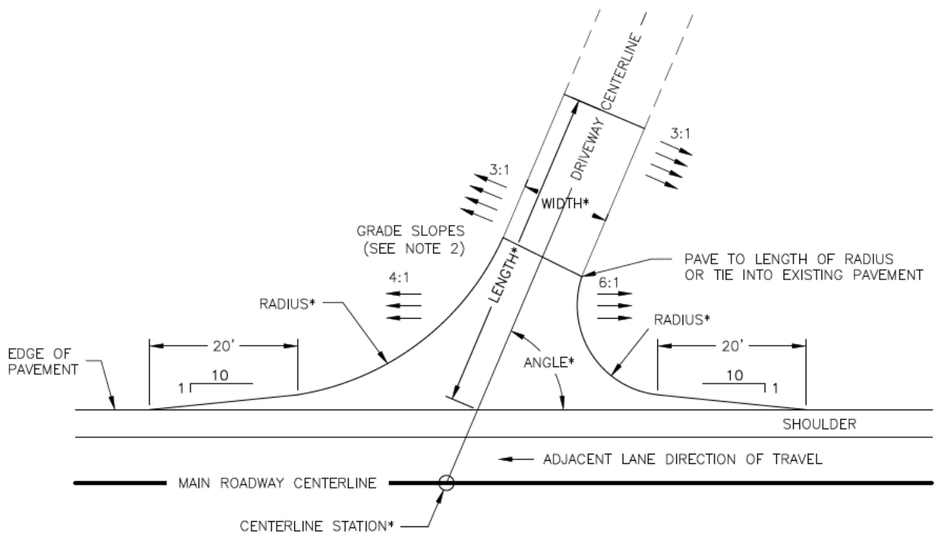
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\NFHWY00420_D_MISC_SUMMARIES-GUARDRAIL SUMMARY Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	D2	D4

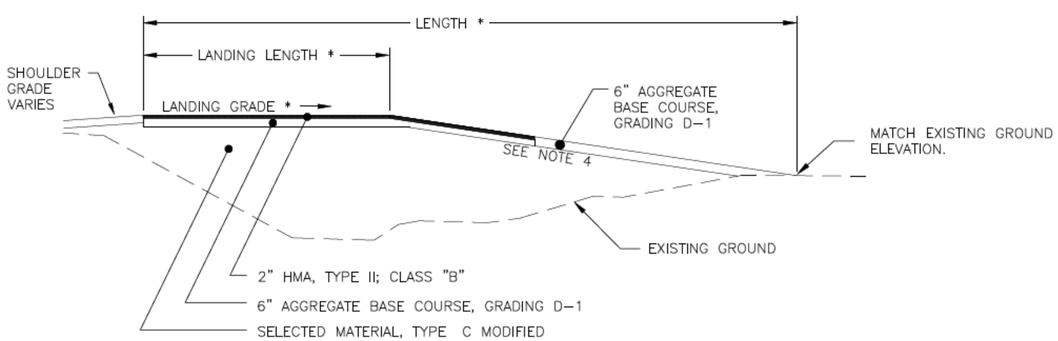
APPROACH SUMMARY

APPROACH	CENTERLINE STATION	LT	RT	ANGLE (DEG)	WIDTH (FT)	RADIUS (FT)	LANDING LENGTH (FT)	LANDING GRADE (%)	LENGTH (FT)
1	41+68		X	80	12	20,40	25	3	45
2	65+35		X	90	142	40	42	−3	42
3	232+19	X		80	24	40	25	−2	48
4	233+79	X		90	24	40	25	−2	42
5	265+20	X		75	28	40	25	−2	58
6	330+30	X		90	20	40	25	−2	42
7	331+30		X	90	30	40	25	−2	42
8	337+93		X	90	16	40	25	−2	42
9	343+11		X	118	24	40,13	25	−2	63
10	444+13	X		90	26	40	25	−2	60
11	465+28	X		90	510	40	48	4	48
12	483+85		X	63	12	40,20	25	3	40
13	483+87	X		107	16	20,40	25	−3	32
14	566+76		X	90	24	40,40	25	2	47
15	572+00	X		25	24	20,40	42	2	42



APPROACH PLAN VIEW

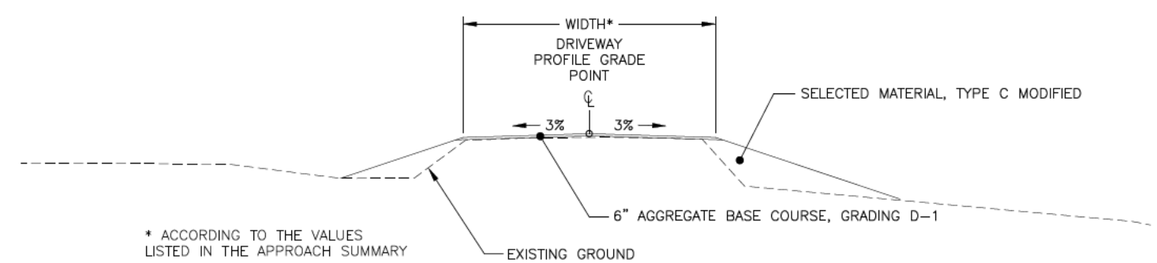
* ACCORDING TO THE VALUES
LISTED IN THE APPROACH SUMMARY



APPROACH PROFILE CROSS−SECTION TYPICAL

DRIVEWAY DETAIL NOTES:

1. APPROACH DIMENSIONS AND LOCATIONS MAY BE FIELD ADJUSTED BY THE ENGINEER.
2. REMOVAL OF EXISTING APPROACH EMBANKMENT WILL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY.
3. BEYOND THE PAVING LIMIT, WARP EMBANKMENT SLOPES FROM 6:1 (H:V) TO 3:1 (H:V) OVER 50 FT AND FROM 4:1 (H:V) TO 3:1 (H:V) OVER 25 FT OR AS APPROVED BY THE ENGINEER. GRADING OF SLOPES IS SUBSIDIARY TO EMBANKMENT CONSTRUCTION.
4. WARP CROSS−SLOPES OF EXISTING APPROACHES TO MATCH INTO THE PAVED APPROACH.
5. BLEND AND GRADE FOR A SMOOTH TRANSITION BETWEEN THE DRIVEWAY AND THE EXISTING GROUND.
6. APPROACH RADIUS BEGINS AT END OF TAPER.
7. ENSURE POSITIVE DRAINAGE AWAY FROM THE ROADWAY AND DRIVEWAY EMBANKMENTS.
8. DRIVEWAY AND APPROACH TERMS ARE USED INTERCHANGEABLY.
9. STAKE EACH APPROACH AND PROVIDE THE ENGINEER WITH GRADING DETAILS FOR APPROACH LANDING, TRANSITION, AND SIDE SLOPES; OBTAIN ENGINEER APPROVAL PRIOR TO DEMOLITION OR CONSTRUCTION OF ANY APPROACH.



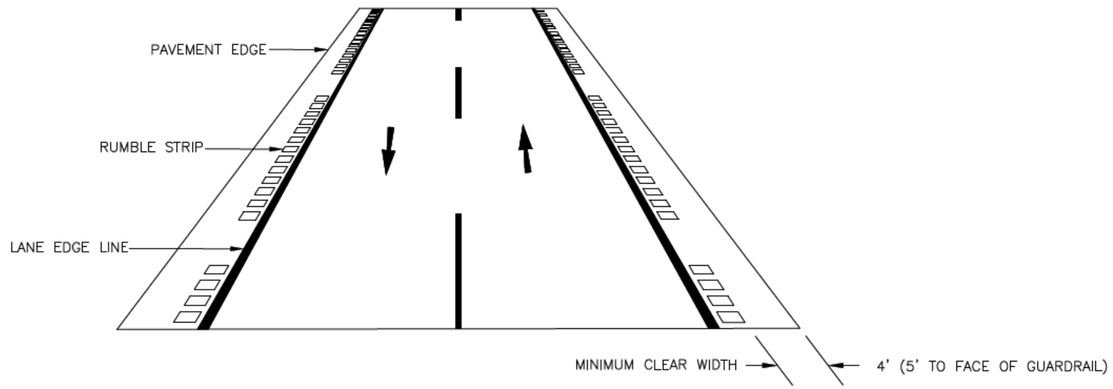
APPROACH TYPICAL SECTION

APPROACH SUMMARY AND DETAILS

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451−2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51−63\6 Design\4 c3d working\drawings\APPROACH DETAILS−APPROACH SUMMARY AND DETAILS Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

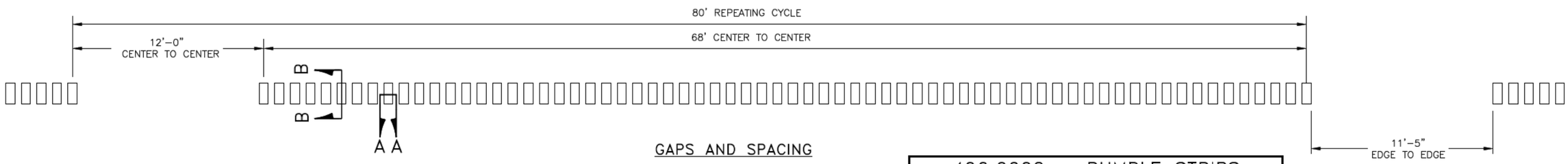
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	D3	D4



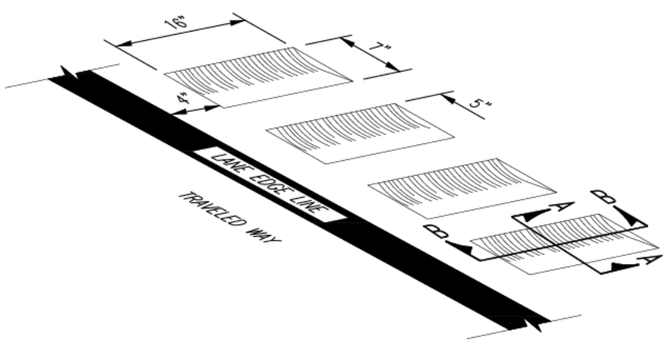
TYPICAL SHOULDER INSTALLATION – TWO–WAY
PERSPECTIVE VIEW

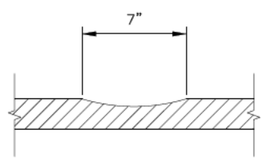
SHOULDER RUMBLE STRIP NOTES:

1. USE CENTERLINE OR LANE LINE DIVIDING LINES, RATHER THAN LANE EDGE LINES, FOR RUMBLE STRIP ALIGNMENT CONTROL WHENEVER POSSIBLE.
2. SHOULDER RUMBLE STRIP GAPS SHALL BE CONTINUOUS.
3. STATIONS SHOWN ARE FOR THE ENTIRE PROJECT. DO NOT CONSTRUCT RUMBLE STRIPS ON THE BRIDGE DECK, APPROACH SLABS, GUARDRAIL RUNS, OR APPROACH RADII.
4. THIS SHEET REPLACES THE FIRST SHEET IN STANDARD DRAWING T–25.00. USE SHEETS 2 AND 3 ON STANDARD DRAWING T–25.10 IN CONJUNCTION WITH THIS SHEET.

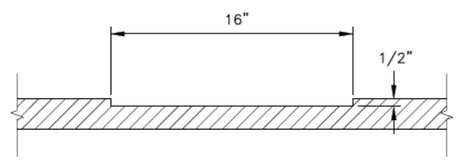


GAPS AND SPACING





SECTION A–A



SECTION B–B

TYPICAL SHOULDER INSTALLATION DETAIL

406.0002 – RUMBLE STRIPS			
BEGIN STATION	END STATION	SIDE	QUANTITY (STATION)
BOP	41+35	RT	31.4
BOP	71+00	LT	61.0
41+93	64+26	RT	22.3
66+40	71+00	RT	4.6
203+00	231+82	LT	28.8
203+00	330+75	RT	127.8
232+56	233+41	LT	0.9
234+22	264+62	LT	30.4
265+90	329+92	LT	64.0
330+66	443+72	LT	113.1
331+71	334+50	RT	2.8
335+85	337+65	RT	1.8
338+21	342+64	RT	4.4
343+60	483+65	RT	140.1
444+76	461+63	LT	16.9
468+78	483+43	LT	14.7
484+14	571+58	LT	87.4
484+20	566+36	RT	82.2
567+28	EOP	RT	32.7
572+28	EOP	LT	27.7
		TOTAL	895

RUMBLE STRIP DETAILS

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\NFHWY00420_D_MISC_SUMMARIES-RUMBLE STRIP DETAILS Wed, Jul/20/22 10:27am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	D4	D4

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
18+10.86'	2260.0	14+33.54'	149.1	15+52.34'	15+82.64'	4.2%	20+36.85'	20+67.15'	149.1	21+85.94'
27+73.10'	1600.0	23+51.04'	168.0	24+83.04'	25+19.04'	5.0%	30+20.94'	30+56.94'	168.0	31+88.94'
42+20.26'	640.0	36+77.64'	192.0	38+26.44'	38+69.64'	6.0%	44+89.32'	45+32.52'	192.0	46+81.32'
66+61.20'	500.0	60+40.58'	192.0	61+89.38'	62+32.58'	6.0%	69+02.59'	69+45.79'	192.0	70+94.59'
85+94.97'	500.0	76+30.68'	192.0	77+79.48'	78+22.68'	6.0%	87+57.06'	88+00.26'	192.0	89+49.06'
96+28.82'	508.5	90+58.89'	192.0	92+07.69'	92+50.89'	6.0%	98+67.93'	99+11.13'	192.0	100+59.93'
105+67.04'	525.0	99+77.35'	192.0	101+26.15'	101+69.35'	6.0%	108+16.42'	108+59.62'	192.0	110+08.42'
122+43.45'	1250.0	118+90.43'	181.9	120+32.08'	120+72.28'	5.6%	124+10.65'	124+50.85'	181.9	125+92.51'
131+14.07'	3000.0	127+78.57'	130.2	128+84.20'	129+08.80'	3.4%	133+18.45'	133+43.05'	130.2	134+48.68'
140+62.83'	1250.0	137+15.01'	181.9	138+56.67'	138+96.87'	5.6%	142+25.12'	142+65.32'	181.9	144+06.98'
149+88.71'	1800.0	147+19.98'	157.8	148+44.80'	148+77.80'	4.6%	150+99.01'	151+32.01'	157.8	152+56.83'
167+55.49'	850.0	158+95.12'	192.0	160+43.92'	160+87.12'	6.0%	171+85.58'	172+28.78'	192.0	173+77.58'
178+32.33'	850.0	171+97.61'	192.0	173+46.41'	173+89.61'	6.0%	181+86.07'	182+29.27'	192.0	183+78.07'
190+59.89'	2000.0	187+02.41'	154.2	188+24.79'	188+56.59'	4.4%	192+61.04'	192+92.84'	154.2	194+15.22'
199+34.65'	2000.0	195+67.61'	154.2	196+90.00'	197+21.80'	4.4%	201+45.09'	201+76.89'	154.2	202+99.27'
231+38.19'	5000.0	228+51.26'	106.3	229+40.19'	229+57.59'	2.4%	233+18.58'	233+35.98'	106.3	234+24.91'
253+77.77'	3250.0	249+82.92'	125.1	250+84.94'	251+08.04'	3.2%	256+45.93'	256+69.03'	125.1	257+71.05'
277+13.50'	1500.0	270+25.56'	173.1	271+61.14'	271+98.64'	5.2%	281+82.14'	282+19.64'	173.1	283+55.22'
288+59.99'	1300.0	284+04.00'	178.2	285+43.15'	285+82.15'	5.4%	291+25.72'	291+64.72'	178.2	293+03.87'
305+17.25'	900.0	300+72.90'	192.0	302+21.70'	302+64.90'	6.0%	307+49.63'	307+92.83'	192.0	309+41.63'
354+63.50'	2300.0	337+68.95'	144.0	338+84.15'	339+12.95'	4.0%	366+23.29'	366+52.09'	144.0	367+67.29'
397+38.45'	4000.0	391+27.22'	114.9	392+21.98'	392+42.08'	2.8%	402+29.13'	402+49.23'	114.9	403+43.99'
408+72.57'	1749.4	404+74.61'	162.9	406+03.03'	406+37.53'	4.8%	411+03.40'	411+37.90'	162.9	412+66.31'
427+14.54'	1500.0	422+49.89'	173.1	423+85.47'	424+22.97'	5.2%	429+95.84'	430+33.34'	173.1	431+68.92'
470+91.63'	1200.0	459+50.34'	181.9	460+92.00'	461+32.20'	5.6%	477+18.74'	477+58.94'	181.9	479+00.59'
538+31.17'	1900.0	528+93.63'	157.8	530+18.46'	530+51.46'	4.6%	545+21.38'	545+54.38'	157.8	546+79.21'
592+00.17'	2900.0	584+06.78'	133.8	585+14.76'	585+40.56'	3.6%	598+35.07'	598+60.87'	133.8	599+68.85'

SUPERELEVATION SUMMARY

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\NFHWY00420_D_MISC_SUMMARIES-SUPERELEVATION SUMMARY Wed, Jul/20/22 10:28am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032/NFHWY00420	2022	E1	E6

CULVERT SUMMARY

PROJECT STATION	202(101) REMOVAL OF CULVERT PIPE (EA)	602 & 603 PAY ITEMS (FT)				614(2) MARKER POSTS (EA)	616(2) 1/2" DIA. THAW PIPE (EA)	602(103) DEADMAN (EA)	603 ()CLEAN AND REPAIR PIPE (EA)	REMARKS	AS-BUILT CENTERLINE LOCATION		
		24"	36"	48"	60"+						STATION	LATITUDE	LONGITUDE
30+86	24" x 64' CSP		68			2							
41+85									1	APPROACH RT-CULVERT TO REMAIN			
50+50	36" x 304' CSP			250		2				RAMMING			
74+87	36" x 73' CSP		72			2							
83+35	36" x 152' CSP		134			2							
96+68	24" x 88' CSP		100			2				DROP OUTLET ELEVATION APPROXIMATELY 5'			
104+58	36" x 216' CSP			180		2				UPSIZE DUE TO PONDING ON INLET, RAMMING			
120+23	24" x 70' CSP		70			2							
131+83	24" x 96' CSP		110			2							
136+13	24" x 105' CSP		125			2							
140+20	24" x 100' CSP		100			2							
153+11	24" x 103' CSP		112			2							
162+15	24" x 92' CSP		94			2							
170+27	24" x 138' CSP		140			2							
173+87	84" x 147' CSP				176	2	2	1		BRIDGE CREEK-INSTALL 108" SPP FOR FISH PASS			
191+10	24" X 130' CSP		132			2							
201+05	24" x 94' CSP			102		2	2						
204+81	24" x 97' CSP		102			2	2			DROP OUTLET 1.5'			
225+07	24" x 100' CSP		108			2	2						
231+28	24" x 110' CSP		115			2							
232+20	24" x 62' CSP	60								APPROACH LT			
233+77									1	APPROACH LT-CULVERT TO REMAIN			
238+49	24" x 108' CSP		118			2							
252+05	30" x 62' CSP		72			2							
263+83	36" x 120' CSP		130			2							
265+24									1	APPROACH LT-CULVERT TO REMAIN			
273+07									1	EXISTING CULVERT TO REMAIN			
282+03	24" x 66' CSP		66			2				LOWER OUTLET ELEVATION 4'			
290+66	36" x 68' CSP		84			2				LOWER OUTLET ELEVATION 10'			
299+94	96" x 88' CSP				116	2	2	1		BRIDGE CREEK-INSTALL 144" SPP FOR FISH PASS			
348+75	24" x 68' CSP		72			2							
358+54	24" x 80' CSP		98			2	1						
370+51	24" x 101' CSP		118			2							
379+75	24" x 83' CSP		102			2							
401+77	24" x 85' CSP		95			2	1						
412+44	24" x 90' CSP		102			2							
421+80	24" x 132' CSP		156			2							
467+75	24" x 129' CSP		150			2	1						
481+66	24" X 80' CSP		86			2	1						
483+90	18" x 40' CSP	40								APPROACH RT			
501+40	48" x 91' CSP		86			2	1			CLEARY CREEK NEW OVERFLOW			
501+43	24" x 68' CSP									CLEARY CREEK REMOVE EXISTING OVERFLOW			
501+45	48 x 91' CSP				96	2	2			CLEARY CREEK-INSTALL 84" SPP FOR FISH PASS			
532+64	24" x 73' CSP		92			2	1						
544+14		10							1	EXTEND EXISTING CULVERT AT OUTLET			
559+63	24" x 95' CSP		130			2	1						
563+63	24" x 73' CSP		104			2	1						
567+14		20					1		1	EXTEND 10' AT INLET AND OUTLET			
572+39		20							1	EXTEND 10' AT INLET AND 14' AT OUTLET			
579+42		10							1	EXTEND 4' AT INLET AND 6' AT OUTLET			
SUBTOTALS:	40	160	3443	532	388	78	21	2	8				

HYDROLOGIC & HYDRAULIC SUMMARY

ELLIOTT HWY MP 54.47 -STATION 201+05 - 48" CSP CROSS DRAINAGE

BASIN AREA (SQ MI)	QFISH (CFS)	Q2 (CFS)	Q5 (CFS)	Q50 (CFS)	Q100 (CFS)
0.79	N/A	11	22	56	69

HEADWATER ELEVATION @Q50 IS 776.7FT, HEADWATER ELEVATION @Q100 IS 777.3 FT

HW/D @ 1=60 CFS, ROAD OVERTOPS AT APPROXIMATELY 130.2 CFS

CULVERT SUMMARY NOTES:

1. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
2. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.
3. SEE ADDITIONAL E3-E5 SHEETS FOR FISH PASS HYDROLOGIC AND HYDRAULIC SUMMARIES.

CULVERT SUMMARY

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Preconstruction\Support_Hydraulics\Working_Restricted\H_Hydro_Projects\Elliott\Elliott_MP_51-63\Drafting\NFHWY00420 Culvert Summary-E1 CULVERT SUMMARY 1 OF 1 Fri, Jul/15/22 10:45am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0651032/NFHWY00420	2022	E2	E6

GENERAL CULVERT NOTES:

1. FOLLOW MANUFACTURERS INSTALLATION SPECIFICATIONS IN ALL CULVERT INSTALLATIONS.
2. ALL CULVERTS SHALL BE INSTALLED IN EXCAVATIONS ABSENT OF STANDING WATER.
3. CULVERT BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 204 OF THE SPECIFICATIONS.
4. STATIONING AND SKEW FOR CULVERTS ARE APPROXIMATE. STAKE CULVERTS TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.
5. CULVERT LENGTHS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR. WHEN INSTALLING SKEWED CULVERTS, ENSURE THE FINAL LENGTH IS DETERMINED OFF THE NEAR EDGE, NOT THE CENTERLINE OF THE CULVERT.
6. REMOVAL OF EXISTING CULVERTS, MARKER POSTS, AND THAW PIPES BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE REMOVED FROM THE PROJECT AND DISPOSED OF AT NO ADDITIONAL COST TO THE DEPARTMENT, UNLESS NOTED OTHERWISE.
7. IN AREAS OF POOR FOUNDATION, SUBEXCAVATE BENEATH CULVERTS 1 FOOT TO 3 FEET, OR GREATER TO PROVIDE ADEQUATE FOUNDATION, AS DIRECTED BY THE ENGINEER.
8. MINIMUM ALLOWABLE CULVERT CROSS SLOPE IS 0.5%, UNLESS NOTED OTHERWISE ON THE PLANS.
9. NO CULVERT SHALL BE PLACED UNTIL THE BED HAS BEEN APPROVED BY THE ENGINEER.
10. WHERE APRONS ARE NOT SPECIFIED, MINIMIZE DISTURBANCE TO THE VEGETATIVE MAT AROUND CULVERT ENDS, BUT CLEAR AND GRADE AS NEEDED TO ENSURE PROPER DRAINAGE. THIS WORK IS SUBSIDIARY TO 603 SERIES PAY ITEMS.
11. ESTABLISH RIPRAP APRONS AND FORESLOPES AS SOON AS POSSIBLE AS PERMANENT EROSION CONTROL.
12. EROSION CONTROL STRUCTURES ARE APPROXIMATE AND MAY BE FIELD ADJUSTED BY THE ENGINEER TO TAKE ADVANTAGE OF EXISTING BANKS AND OTHER CHANNEL FEATURES WITHIN THE PERMITTED CONSTRUCTION AREA.
13. PLACE GEOTEXTILE, EROSION CONTROL, CLASS I (NON-WOVEN), UNDER ALL RIPRAP. GEOTEXTILE SHALL BE TRIMMED SO THAT IT IS NOT VISIBLE UPON PROJECT COMPLETION.
14. ALL WORK FOR CULVERT ARMORING AND CULVERT RIPRAP APRONS, INCLUDING EXCAVATION AND CLEARING AND GRUBBING, IS SUBSIDIARY TO 611 PAY ITEMS.
15. THE CONTRACTOR SHALL ENTER AS-BUILT LOCATIONS FOR ALL CULVERTS IN THE CULVERT SUMMARY TABLE. COORDINATES SHALL BE LOCATED AT THE INTERSECTION OF THE CULVERT AND ROAD CENTERLINE. USE NAD 83 DATUM FORMATTED TO DEGREES, MINUTES, SECONDS TO A PRECISION OF 2 DECIMAL PLACES (DDD° MM' SS.SS"). THIS WORK IS SUBSIDIARY TO 603 SERIES PAY ITEMS.

MAJOR CULVERT NOTES, 10-FOOT DIAMETER AND LARGER:

1. SET MAJOR CULVERTS AT STREAM GRADIENT.
2. CULVERT BEDDING AND BACKFILL SHALL BE IN ACCORDANCE WITH SECTION 204 OF THE SPECIFICATIONS.
3. EXTEND FORESLOPE RIPRAP 3.0 FEET ABOVE THE CULVERT, OR TO THE SHOULDER ELEVATION, WHICHEVER IS LESS ON THE INLET SIDE, AND TO THE TOP OF THE CULVERT ON THE OUTLET SIDE, UNLESS NOTED OTHERWISE ON THE PLANS.
4. PLACE GEOTEXTILE, EROSION CONTROL, CLASS I (NON-WOVEN), UNDER ALL RIPRAP. GEOTEXTILE SHALL BE TRIMMED SO THAT IT IS NOT VISIBLE UPON PROJECT COMPLETION.
5. CONDUCT AN AS-BUILT SURVEY TO ENSURE THAT CULVERTS WERE CONSTRUCTED PER DESIGN. INCLUDE ELEVATIONS OF CULVERT INVERTS, TOP OF RIPRAP APRON ELEVATIONS. COLLECT APPROPRIATE DATA AT CORRESPONDING PHASE OF INSTALLATION. IE: SURVEY TOP OF EXCAVATION PRIOR TO PLACING BEDDING.

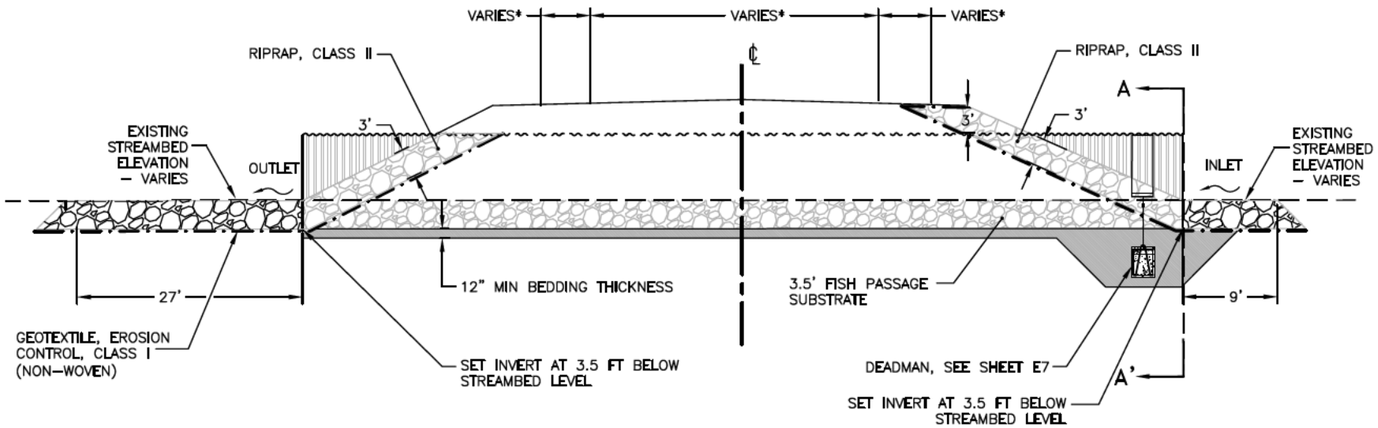
FISH PASSAGE CULVERT NOTES:

1. FISH PASSAGE SUBSTRATE CONSISTS OF RIPRAP WITH VOIDS FILLED WITH AGGREGATE SURFACE COURSE, E-1, AS SPECIFIED IN SPECIAL PROVISION 628.
2. BACKFILL ALONG THE ENTIRE CULVERT INVERT WITH FISH PASSAGE SUBSTRATE TO THE CHANNEL ELEVATION PER SPECIAL PROVISION 628.
3. PLACE FISH PASSAGE SUBSTRATE IN RIPRAP APRON INLET & OUTLET POOL/CHANNELS AS SPECIFIED ON THE FISH PASSAGE CULVERT DETAIL SHEETS AND PER SPECIAL PROVISION 628. SHAPE INLET & OUTLET CHANNELS TO MATCH EXISTING CREEK CHANNEL CROSS SECTION, OR AS SPECIFIED ON THE PLANS.
4. EXTEND FORESLOPE RIPRAP 3.0 FEET ABOVE THE CULVERT, OR TO THE SHOULDER ELEVATION, WHICHEVER IS LESS ON THE INLET SIDE, AND TO THE TOP OF THE CULVERT ON THE OUTLET SIDE, UNLESS NOTED OTHERWISE ON THE PLANS.
5. CONDUCT AN AS-BUILT SURVEY TO ENSURE THAT FISH PASSAGE CULVERTS WERE CONSTRUCTED PER DESIGN. INCLUDE ELEVATIONS OF CULVERT INVERTS, TOP OF FISH PASSAGE SUBSTRATE ELEVATIONS AND RIPRAP APRON ELEVATIONS. COLLECT APPROPRIATE DATA AT CORRESPONDING PHASE OF INSTALLATION. EG: SURVEY TOP OF EXCAVATION PRIOR TO PLACING BEDDING.
6. ADDITIONAL REQUIREMENTS FOR FISH PASSAGE CULVERTS MAY BE CONTAINED IN THE ADF&G HABITAT PERMITS.

CULVERT NOTES

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Preconstruction\Support_Hydraulics\Working_Restricted\N_Hydro_Projects\Elliott\Elliott_MP_51-63\Drafting\ACAD Culvert Notes-CULVERT NOTES Fri, Jul/15/22 10:10am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0651032/NFHWY00420	2022	E3	E6



SECTION B–B'

NOTES:

1. THIS CULVERT WAS DESIGNED TO PROVIDE FISH PASSAGE.
2. SEE GENERAL AND FISH PASSAGE CULVERT NOTES ON SHEET E2.
3. INSTALL ALLUVIAL GRAVEL AND COBBLES FROM EXISTING CHANNEL TO FILL VOIDS WITHIN THE FISH PASS SUBSTRATE. SEE SPECIAL PROVISION 628.
4. INSTALL A 108" SPP DEPRESSED 3.5 FEET INTO THE CHANNEL BOTTOM.
5. RIPRAP WILL BE INSTALLED ON THE SLOPES FULL WIDTH TO THE TOP OF THE CULVERT AT THE OUTLET AND 3' ABOVE THE CULVERT AT THE INLET.

CULVERT INSTALLATION DETAILS, ELLIOTT HWY MILE 53.99

DESCRIPTION	LOCATION	DIAMETER OR SPAN X RISE (IN)	LENGTH (FT)	SKEW	ELEVATIONS (FT)	
					INLET INVERT	OUTLET INVERT
MAIN PIPE 10 GAGE SPP	173+79	108	148	0 DEG	759.9	757.3

HYDROLOGIC & HYDRAULIC SUMMARY

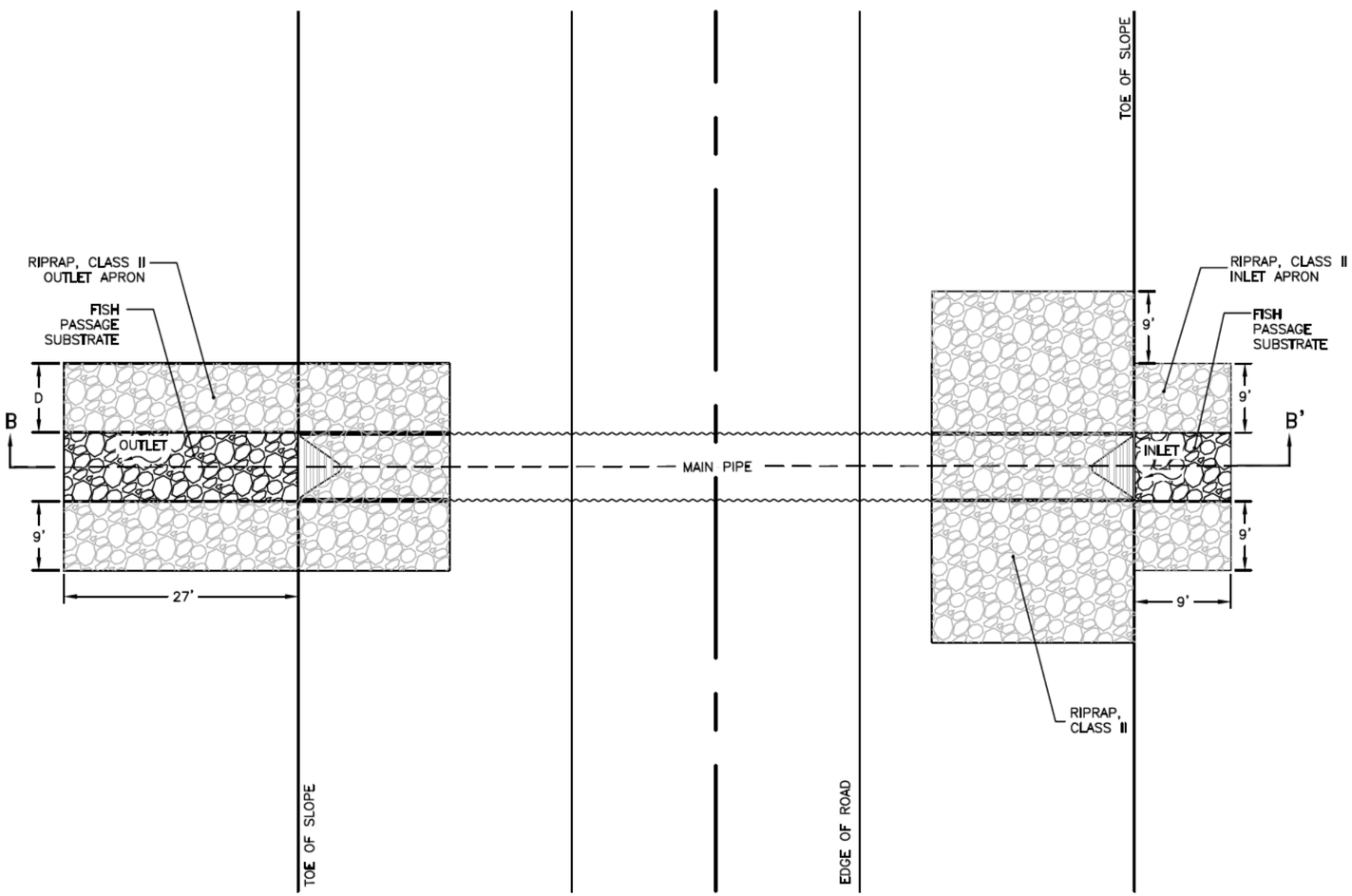
ELLIOTT HWY, MILE 53.99 –BRIDGE CREEK– STATION 173+79

BASIN AREA (SQ. MI)	QFISH (CFS)	Q2 (CFS)	Q5 (CFS)	Q50 (CFS)	Q100 (CFS)
5.3	8.1	53.4	98.9	231	278

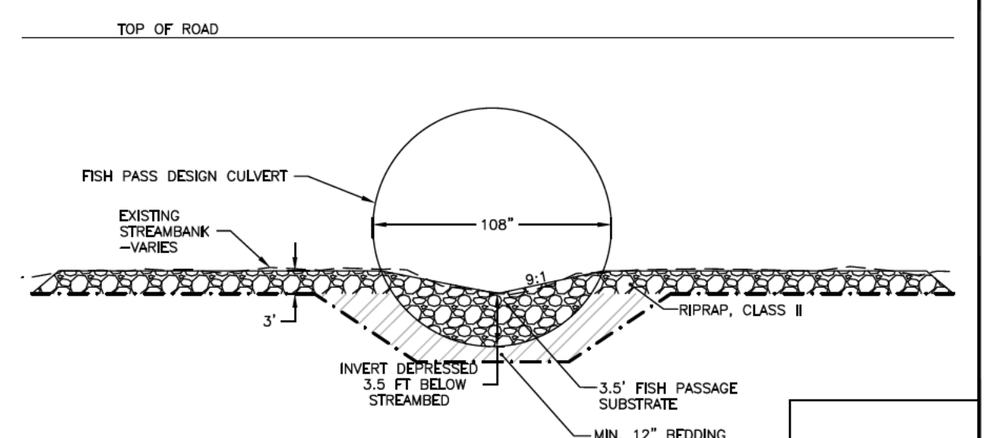
HEADWATER ELEVATION @Q50 IS 768.8 FT, HEADWATER ELEVATION @Q100 IS 769.7 FT

ROAD OVERTOPS AT APPROXIMATELY 807 CFS, H_W/D @ 1= 240 CFS

CULVERT PURPOSE: CROSS DRAINAGE/FISH PASSAGE



PLAN VIEW



SECTION A–A'

BRIDGE CREEK
ELLIOTT HIGHWAY MP 53.99

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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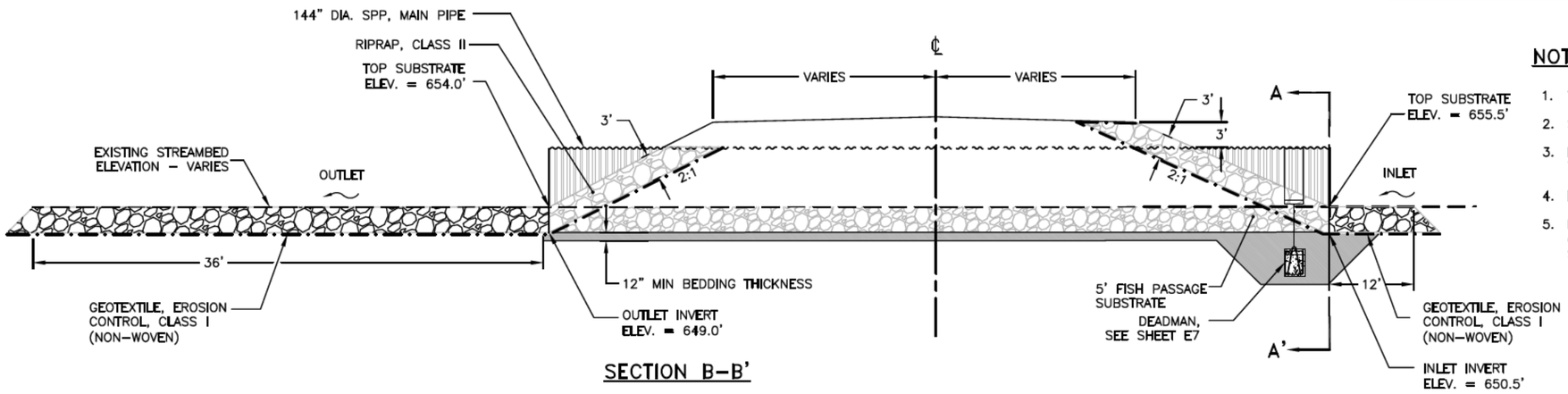
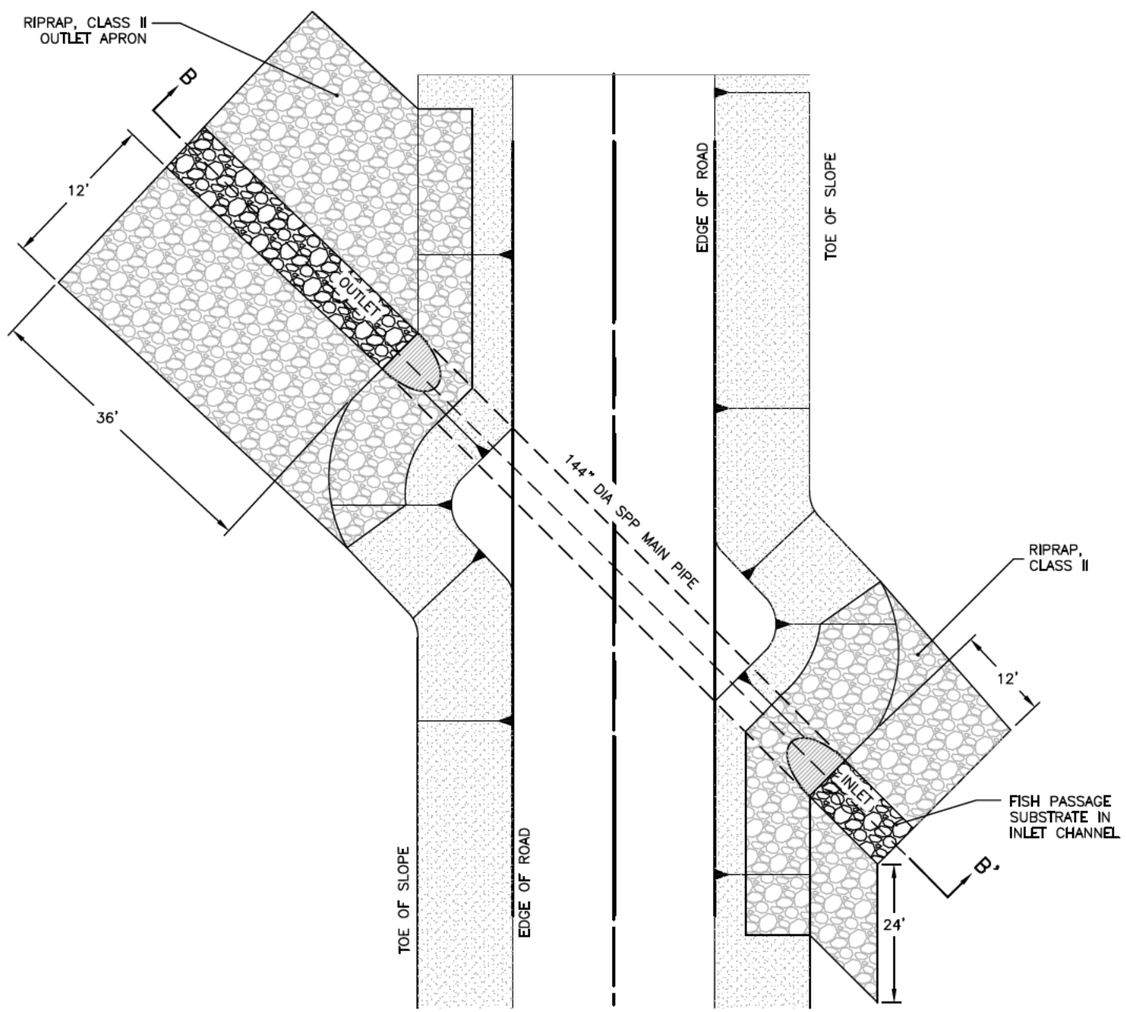
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0651032/NFHWY00420	2022	E4	E6



SECTION B–B'

NOTES:

1. THIS CULVERT WAS DESIGNED TO PROVIDE FISH PASSAGE.
2. SEE GENERAL AND FISH PASSAGE CULVERT NOTES ON SHEET E2.
3. INSTALL ALLUVIAL GRAVEL AND COBBLES FROM EXISTING CHANNEL TO FILL VOIDS WITHIN THE FISH PASS SUBSTRATE. SEE SPECIAL PROVISION 628.
4. INSTALL A 144" SPP DEPRESSED 5.0 FEET INTO THE CHANNEL BOTTOM.
5. RIPRAP WILL BE INSTALLED ON THE SLOPES FULL WIDTH TO THE TOP OF THE CULVERT AT THE OUTLET AND 3' ABOVE THE CULVERT AT THE INLET OR TO THE SHOULDER EDGE. RIPRAP WILL BE CENTERED ON THE MAIN CULVERT INVERT.



PLAN VIEW

CULVERT INSTALLATION DETAILS, ELLIOTT HWY MILE 56.41

DESCRIPTION	LOCATION	DIAMETER OR SPAN X RISE (IN)	LENGTH (FT)	SKEW	ELEVATIONS (FT)	
					INLET INVERT	OUTLET INVERT
MAIN PIPE 10 GAGE SPP	299+94	144	100	27 DEG LT AH	650.5	649.0

HYDROLOGIC & HYDRAULIC SUMMARY

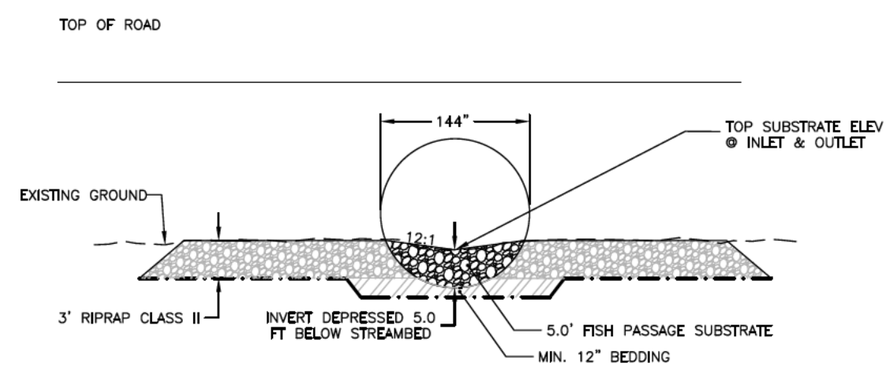
ELLIOTT HWY, MILE 56.41 – BRIDGE CREEK – STATION 299+94

BASIN AREA (SQ. MI)	QFISH (CFS)	Q2 (CFS)	Q5 (CFS)	Q50 (CFS)	Q100 (CFS)
13.3	18.1	106	191	430	512

HEADWATER ELEVATION @Q50 IS 662.2 FT, HEADWATER ELEVATION @Q100 IS 663.3 FT

ROAD OVERTOPS AT APPROXIMATELY 1005 CFS, H_W/D @ 1= 455 CFS

CULVERT PURPOSE: CROSS DRAINAGE/FISH PASSAGE

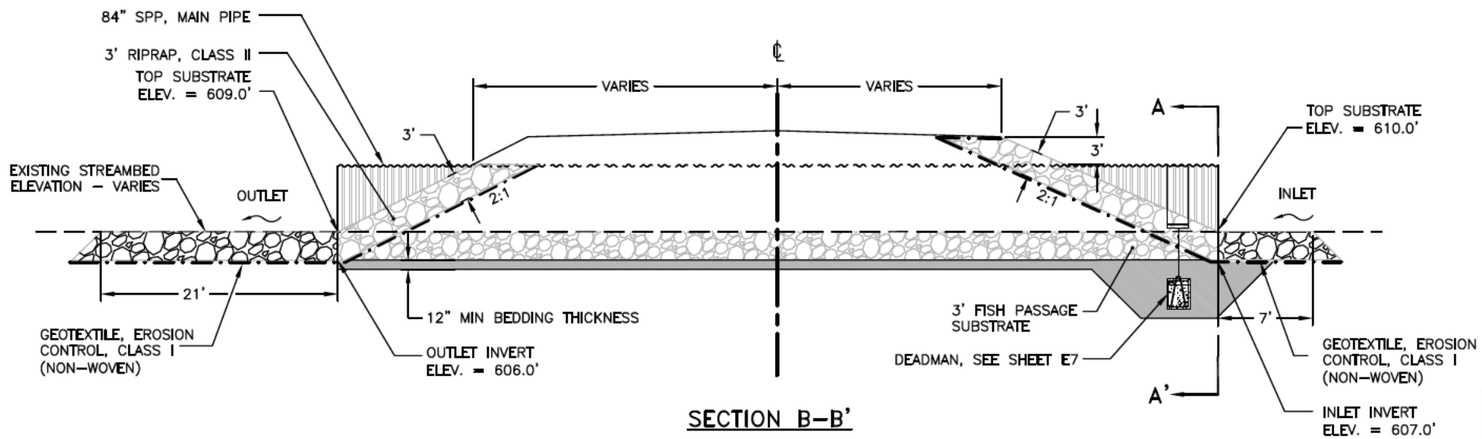


SECTION A–A'

BRIDGE CREEK
ELLIOTT HWY MP 56.41

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Preconstruction\Support_Hydraulics\0Working_Restricted\NL_Hydro_Projects\Elliott_MP_51-63\Drafting\NFHWY00420_ Elliott MP 51-63_Hydro-BRIDGE CREEK MP 56.41 Fri, Jul/15/22 10:16am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0651032/NFHWY00420	2022	E5	E6



SECTION B–B'

NOTES:

1. THIS CULVERT WAS DESIGNED TO PROVIDE FISH PASSAGE.
2. SEE GENERAL AND FISH PASSAGE CULVERT NOTES ON SHEET E2.
3. INSTALL A 84" STRUCTURAL PLATE PIPE EMBEDDED 3.0 FEET INTO THE CHANNEL BOTTOM.
4. EXTEND FORESLOPE RIPRAP 3 FEET ABOVE THE PIPE OR TO THE SHOULDER EDGE ON THE INLET SIDE, AND TO THE TOP OF THE PIPE ON THE OUTLET SIDE. RIPRAP SHALL BE INSET INTO THE ROADWAY TYPICAL PRISM.
5. INSTALL ALLUVIAL GRAVEL AND COBBLES FROM EXISTING CHANNEL TO FILL VOIDS WITHIN THE FISH PASS SUBSTRATE. SEE SPECIAL PROVISION 628.
6. CENTER FORESLOPE RIPRAP ON MAIN CULVERT INVERT.

CULVERT INSTALLATION DETAILS, ELLIOTT HWY MILE 60.64

DESCRIPTION	LOCATION	DIAMETER OR SPAN X RISE (IN)	LENGTH (FT)	SKEW	ELEVATIONS (FT)	
					INLET INVERT	OUTLET INVERT
FLANKER PIPE 12 GAGE CMP	501+47	36	80	10 DEG RT AH	610.0	611.0
MAIN PIPE 10 GAGE CMP	501+53	84	90	10 DEG RT AH	607.0	606.0

HYDROLOGIC & HYDRAULIC SUMMARY

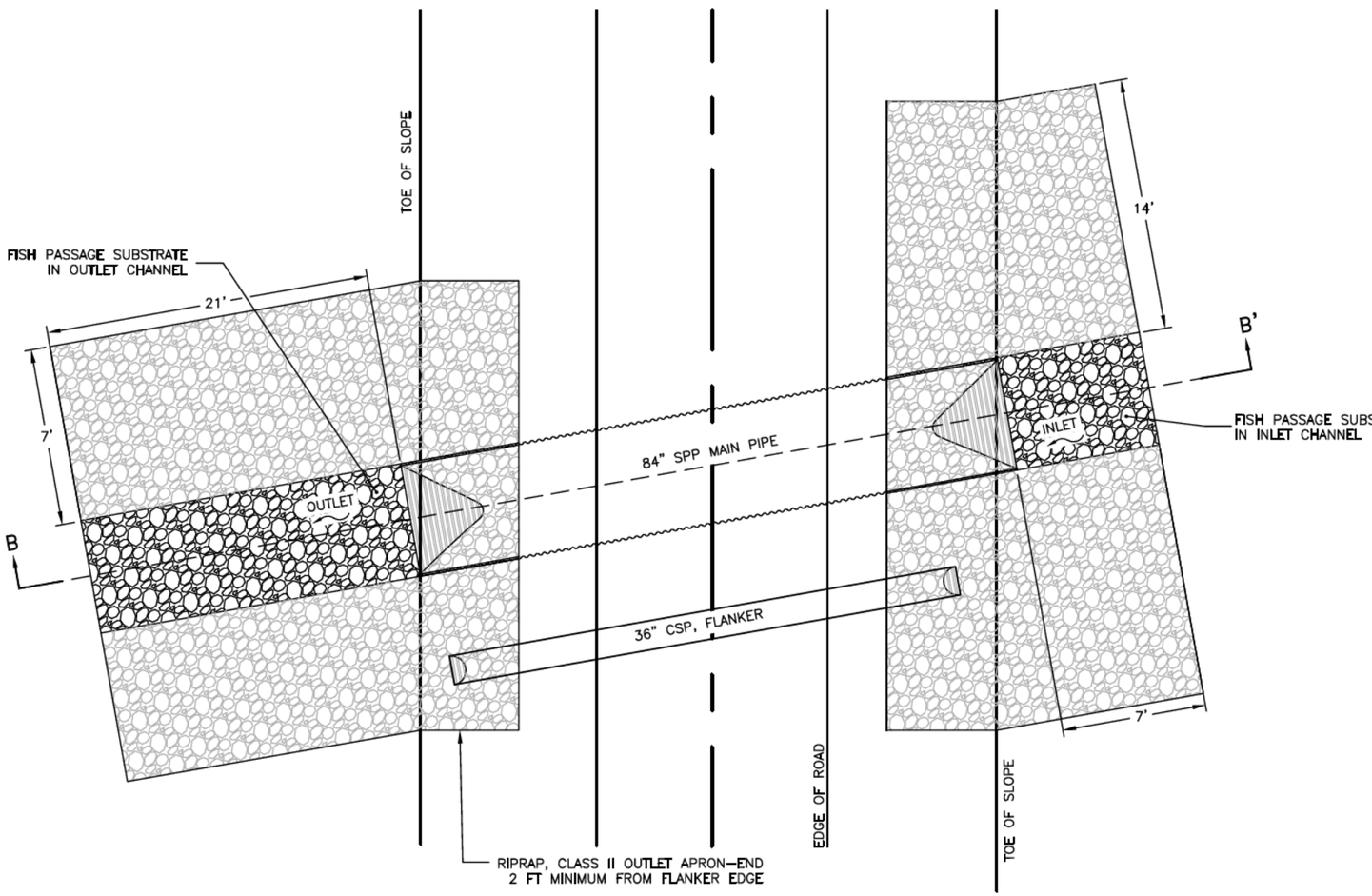
ELLIOTT HWY, MILE 60.64 – CLEARY CREEK – STATION 501+53

BASIN AREA (SQ. MI)	QFISH (CFS)	Q2 (CFS)	Q5 (CFS)	Q50 (CFS)	Q100 (CFS)
2.9	3.8	29.2	56	137	166

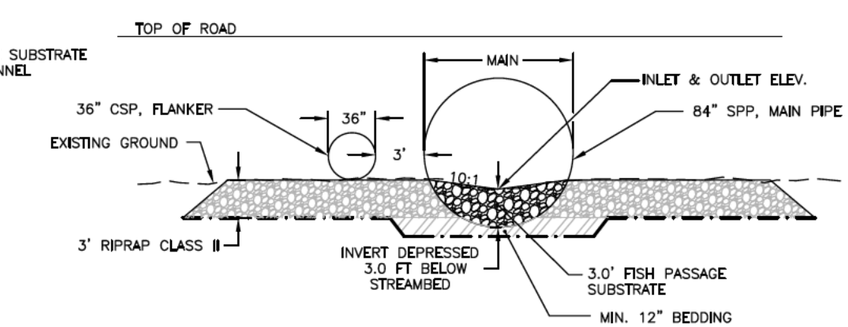
HEADWATER ELEVATION @Q50 IS 613.9 FT, HEADWATER ELEVATION @Q100 IS 614.5 FT

ROAD OVERTOPS AT APPROXIMATELY 329.4 CFS, H_W/D @ 1= 142 CFS

CULVERT PURPOSE: CROSS DRAINAGE/FISH PASSAGE



PLAN VIEW



SECTION A–A'

CLEARY CREEK
ELLIOTT HIGHWAY MP 60.64

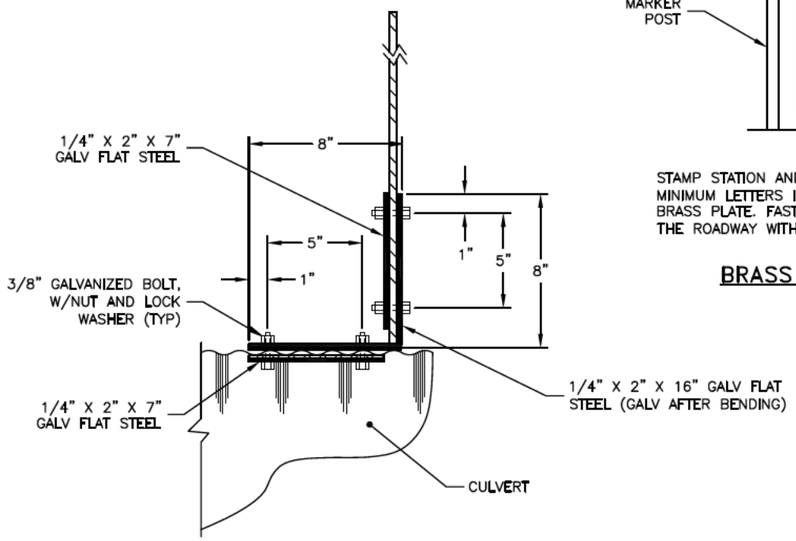
PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Preconstruction\Support_Hydraulics\0Working_Restricted\H_Hydro_Projects\Elliott\Elliott_MP_51-63\Drafting\NFHWY00420_ Elliott MP 51-63_Hydro-CLEARY CREEK Fri, Jul/15/22 10:14am

NO.	DATE	REVISION

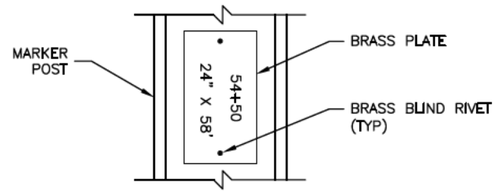
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032/NFHWY00420	2022	E6	E6

CULVERT MARKER POSTS NOTES:

1. MARKER POSTS ARE TO BE INSTALLED ON CROSS CULVERTS ONLY.
2. IF CULVERTS ARE CLOSELY SPACED, MARK ONLY THE FIRST AND LAST CULVERT IN SERIES AS APPROVED BY THE ENGINEER.
3. DRILL ALL BOLT HOLES. COAT HOLES WITH ZINC RICH PAINT. FLAME CUTTING SHALL NOT BE PERMITTED.
4. GASKET MATERIAL SHALL BE PLACED BETWEEN DISSIMILAR METALS. GASKET MATERIAL SHALL BE APPROVED PRIOR TO INSTALLATION.

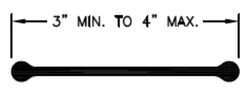


BRACKET DETAIL

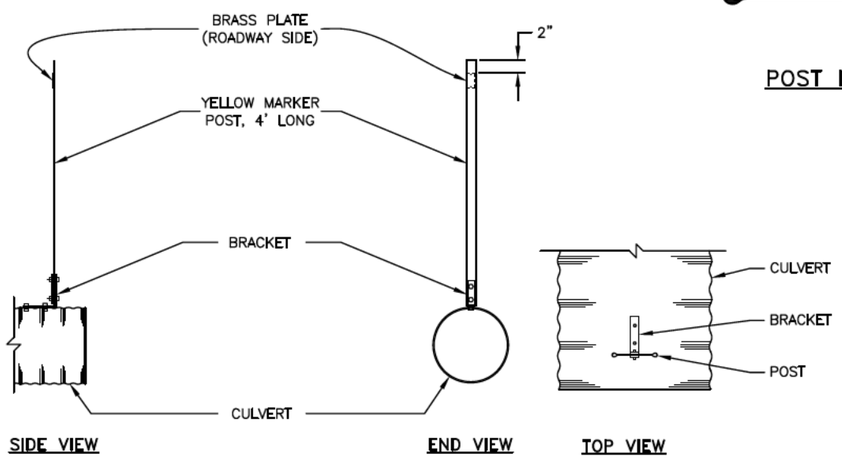


STAMP STATION AND PIPE SIZE, USING 3/8" HIGH MINIMUM LETTERS INTO A 2" X 4" X 0.064" THICK BRASS PLATE. FASTEN PLATE TO THE SIDE FACING THE ROADWAY WITH TWO 1/8" BRASS BLIND RIVETS.

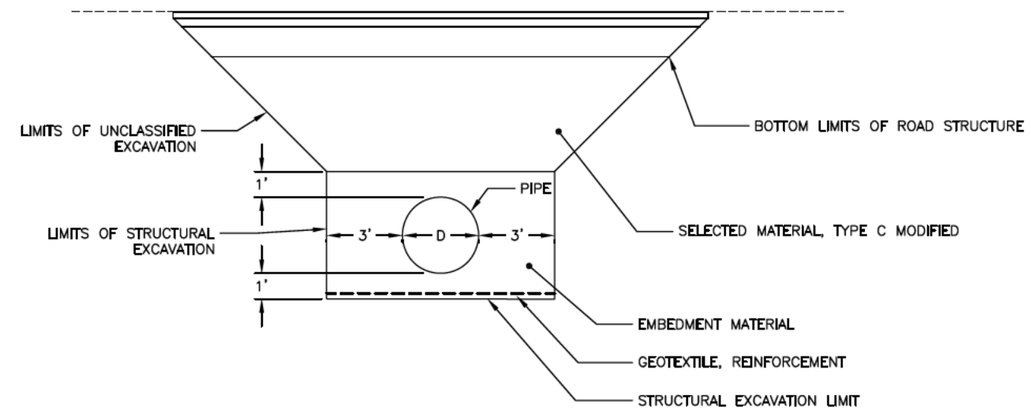
BRASS PLATE DETAIL



POST DETAIL



CULVERT MARKER POST DETAIL

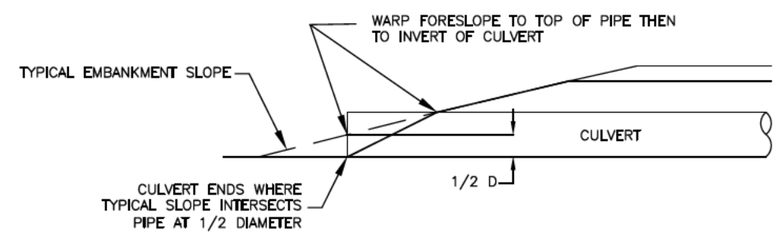


CULVERT BEDDING DETAIL

END VIEW

CULVERT BEDDING NOTES:

1. INSTALL ROAD STRUCTURE AS SHOWN ON TYPICAL SECTIONS.



CULVERT SLOPE WARPING DETAIL

2:1 OR FLATTER FORESLOPES

CULVERT DETAILS

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Preconstruction\Support_Hydraulics\OWorking_Restricted\H_Hydro_Projects\Elliott\Elliott_MP_51-63\Drafting\NFHWY00420 Culvert Details-E18 CULVERT DETAILS Fri, Jul/15/22 10:09am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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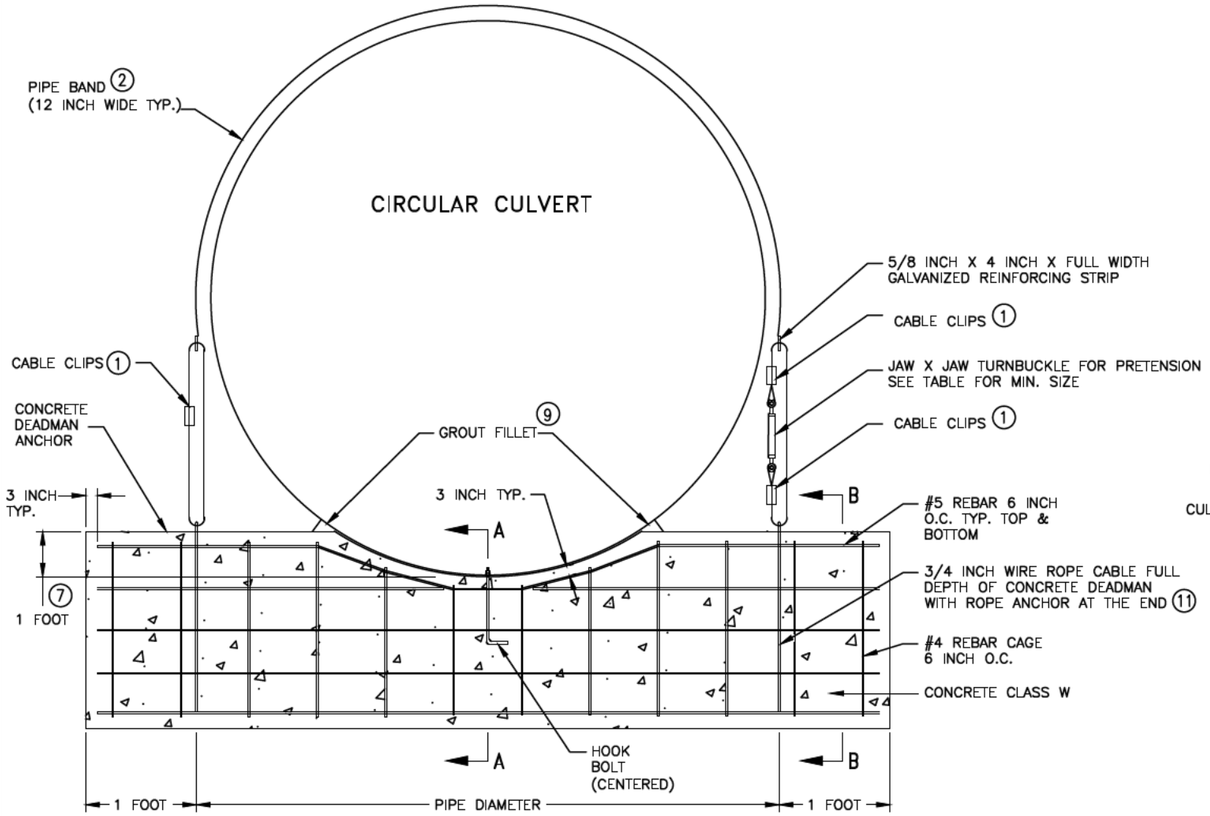
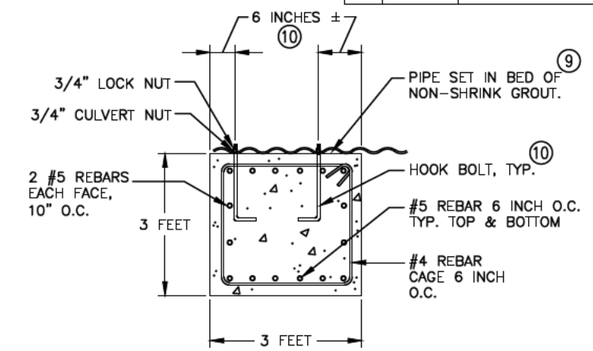
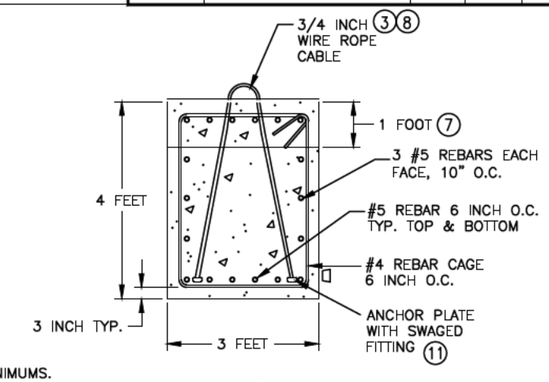


DEADMAN DETAIL



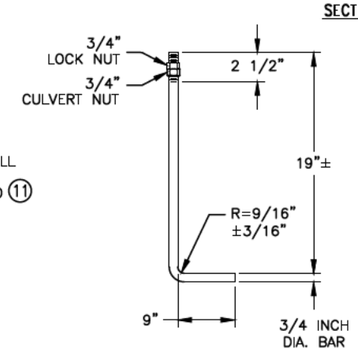
SECTION A-A



SECTION B-B

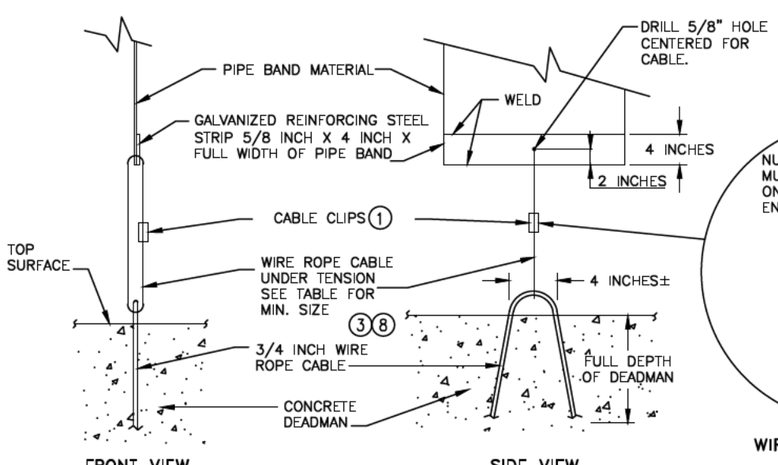
NOTE:
REBAR SIZES ARE MINIMUMS.

CONCRETE DEADMAN ANCHOR DETAILS

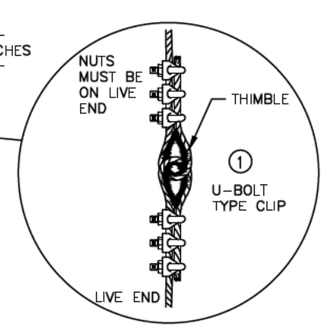


HOOK BOLT (4)

TABLE 1: MINIMUM HARDWARE SIZE				
CULVERT DIA./SPAN (FT)	WIRE ROPE DIA. (IN)	TURNBUCKLE DIA. (IN)	MINIMUM WIRE ROPE TUNRBACK/SPLICE (IN)	U-BOLT NUT TORQUE (FT-LB)
2.00 TO 6.00	5/16	7/8	5 1/2	30
6.01 TO 10.00	3/8	1	6 1/4	45
10.01 TO 16.00	7/16	1 1/4	7	65
16.01 TO 19.99	1/2	1 1/2	11	65

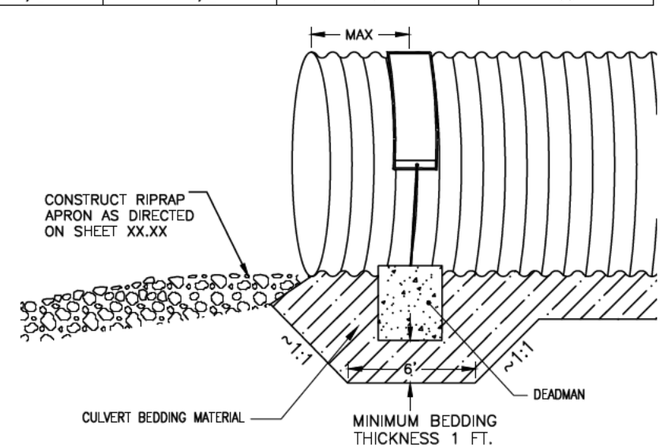


PIPE BAND DETAILS



WIRE ROPE CLAMPS

ENLARGED VIEW



NOTES:

(1) IF DROP FORGED U-BOLT TYPE CLIPS ARE USED, THEY SHOULD BE INSTALLED USING THE FOLLOWING:

AMT. WIRE ROPE TO TURN BACK OR SPLICE SEE TABLE.
TORQUE REQUIRED TO REACH HOLDING POWER SEE TABLE.
SPACING: DIAMETER OF THE ROPE (INCHES) TIMES 6. THE BASE OF THE CLAMPS AND NUTS MUST BE ON THE LIVE END OF THE WIRE INSTALL THIMBLE.

(2) THE LENGTH OF THE PIPE BANDS SHALL BE A MINIMUM OF HALF THE CIRCUMFERENCE OF THE ROUND CULVERT OR SHALL EXTEND TO WITHIN 6" OF THE SPRINGLINE ON PIPE ARCH CULVERT. THE PIPE BANDS SHALL BE A MINIMUM THICKNESS OF 1/16" GALVANIZED ASTM A1011 SS GRADE 36 OR MINIMUM THICKNESS 0.109" GALVANIZED AASHTO M218. THE REINFORCING STRIP SHALL BE GALVANIZED ASTM A36.

(3) WIRE ROPE SHALL BE 6X19 IWRC, EIPS & GALVANIZED AND MEET AASHTO M30 TYPE II REQUIREMENTS OR APPROVED EQUAL.

(4) ALL HARDWARE SHALL BE GALVANIZED TO MEET AASHTO M232

(5) CLASS W CONCRETE SHALL BE USED TO CONSTRUCT THE CONCRETE DEADMAN ANCHOR. REINFORCEMENT SHALL BE ASTM A615 GRADE 40.

(6) ALL WORK AND MATERIALS REQUIRED FOR THE CONSTRUCTION AND INSTALLATION OF THE DEADMAN SHALL NOT BE MEASURED OR PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED SUBSIDIARY TO OTHER ITEMS.

(7) CONCRETE DEADMAN SHALL BE CAST TO CONFORM TO THE OUTER RADIUS OF THE CULVERT.

(8) USE A SPREADER BEAM/BAR WHEN LIFTING DEADMAN TO AVOID BENDING OF TIE-DOWN/LIFTING LOOP.

(9) THE PIPE SHALL BE SET IN A BED OF NON-SHRINK GROUT OF SUFFICIENT THICKNESS TO FULLY FILL THE CORRUGATIONS AFTER TENSIONING OF THE ANCHOR BOLTS AND TIE-DOWN BAND. THE DEADMAN SURFACE SHALL BE PROPERLY PREPARED FOR BEST BONDING WITH GROUT – CLEAN, DUST FREE, SATURATED SURFACE DRY (SSD) CONDITION. BOTTOM OF PIPE SHALL BE AS CLEAN AND DUST FREE AS PRACTICABLE. GROUT SHALL BE FILLETED/CROWNED ALONG SIDES OF PIPE AT THE DEADMAN/PIPE SEAM IN ORDER TO REDUCE WATER INFILTRATION INTO THE GROUTED AREA.

(10) PENETRATE CULVERT INVERT HOOK BOLTS IN A CORRUGATION VALLEY TO PROTECT NUT. ANCHOR BOLT HOLES SHALL BE DRILLED, NOT CUT WITH A TORCH, AND COATED WITH APPROPRIATE ZINC RICH PAINT PRIOR TO INSTALLATION. AFTER INSTLLATION AND ANCHOR BOLT NUTS HAVE BEEN TIGHTENED, COAT THE ANCHOR BOLT AND SURROUNDING AREA WITH ZINC RICH PAINT.

(11) SEE STANDARD DRAWING G-00.02 SHEET 4 FOR ROPE ANCHOR DETAILS.

DEADMAN DETAILS

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709
(907)451-2200
H:\Preconstruction\Support_Hydraulics\Working_Restricted\H_Hydro_Projects\Elliott\Elliott_MP_51-63\Drafting\Circular Deadman Details-Circular Mon, Jun/27/22 09:55am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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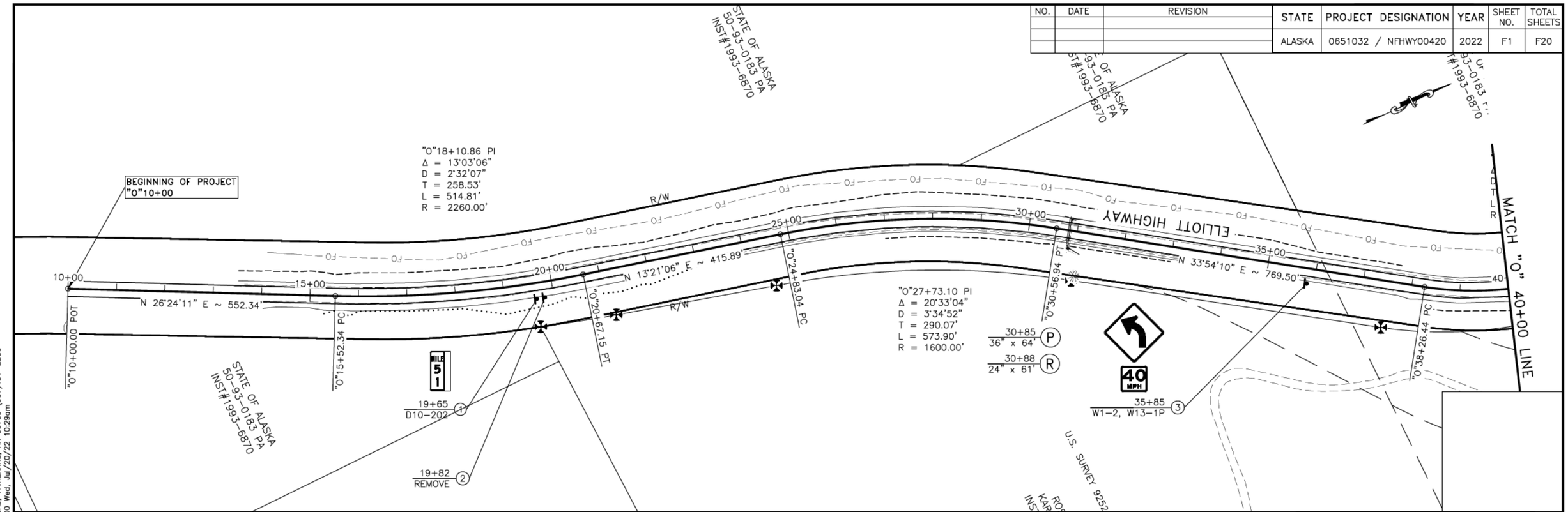
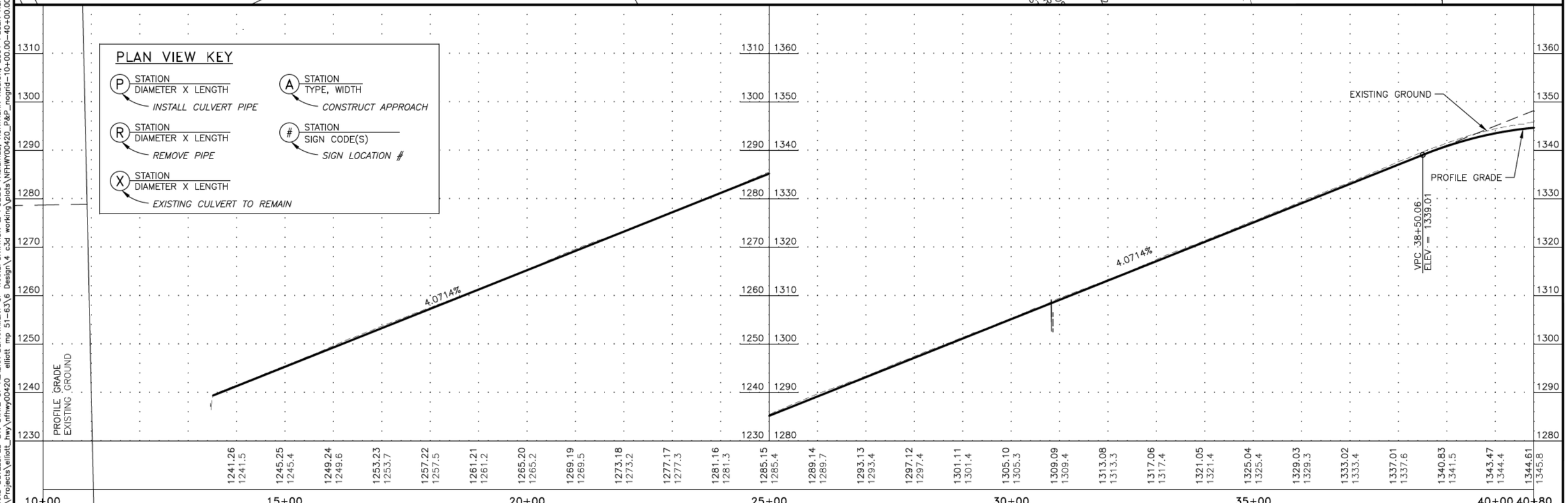


PLAN VIEW KEY

- (P) STATION / DIAMETER X LENGTH — *INSTALL CULVERT PIPE*
- (A) STATION / TYPE, WIDTH — *CONSTRUCT APPROACH*
- (R) STATION / DIAMETER X LENGTH — *REMOVE PIPE*
- (#) STATION / SIGN CODE(S) — *SIGN LOCATION #*
- (X) STATION / DIAMETER X LENGTH — *EXISTING CULVERT TO REMAIN*



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-10+00.00-40+00.00 Wed, Jul/20/22 10:29am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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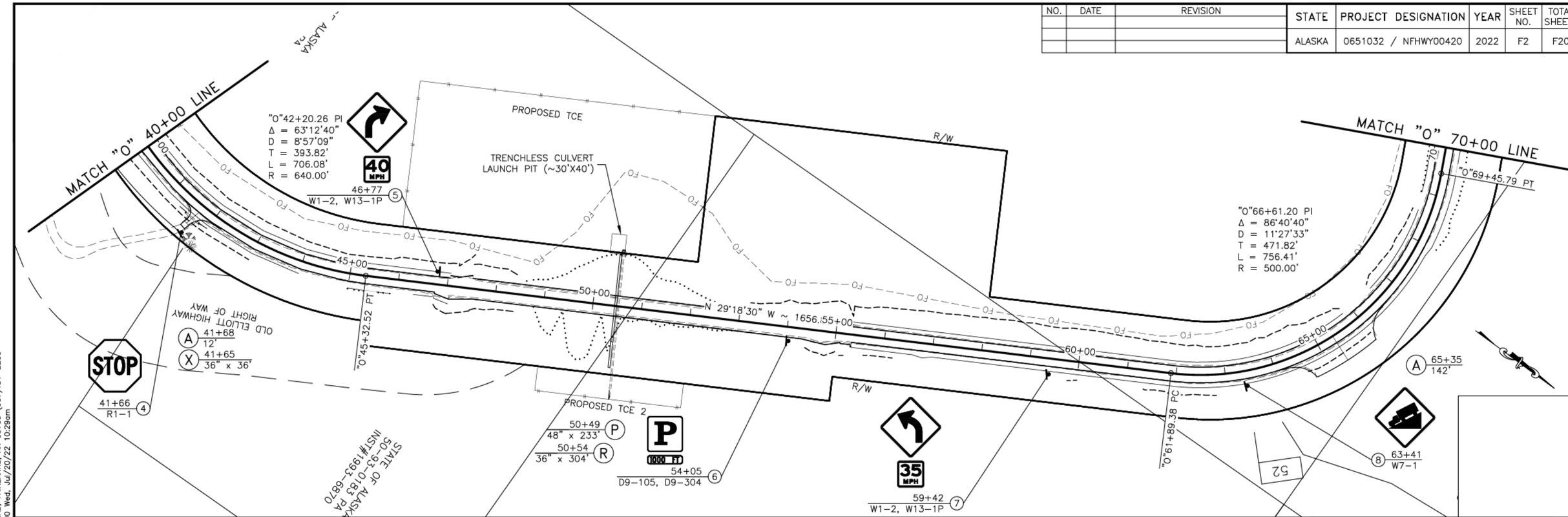

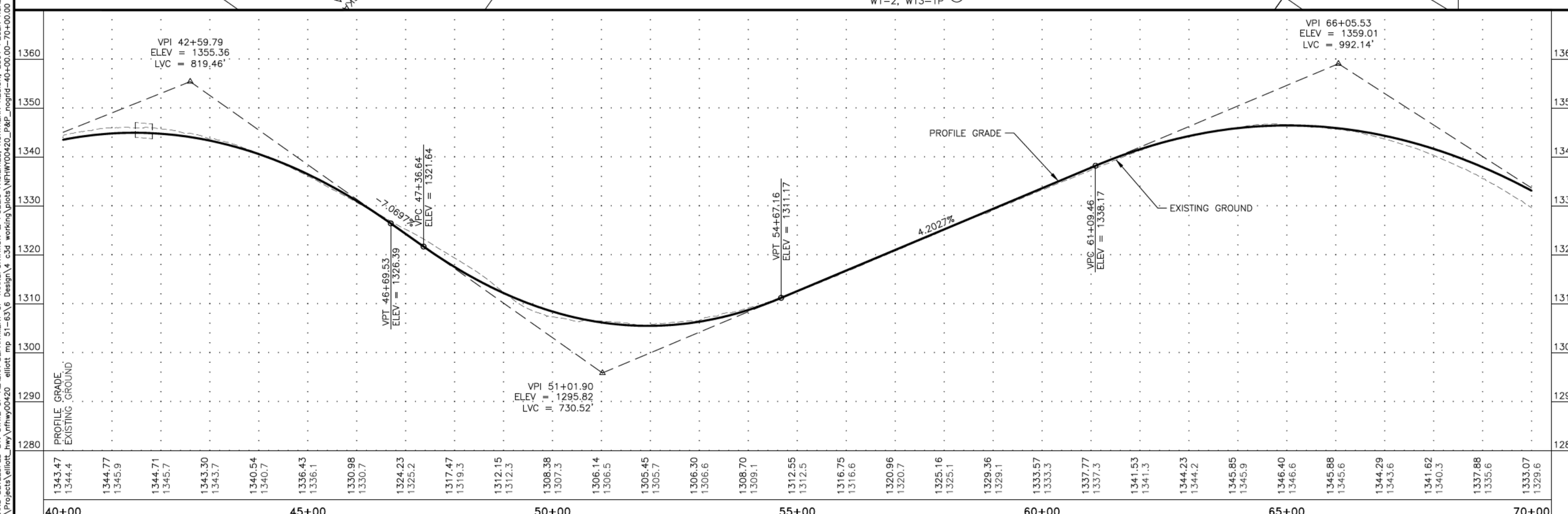

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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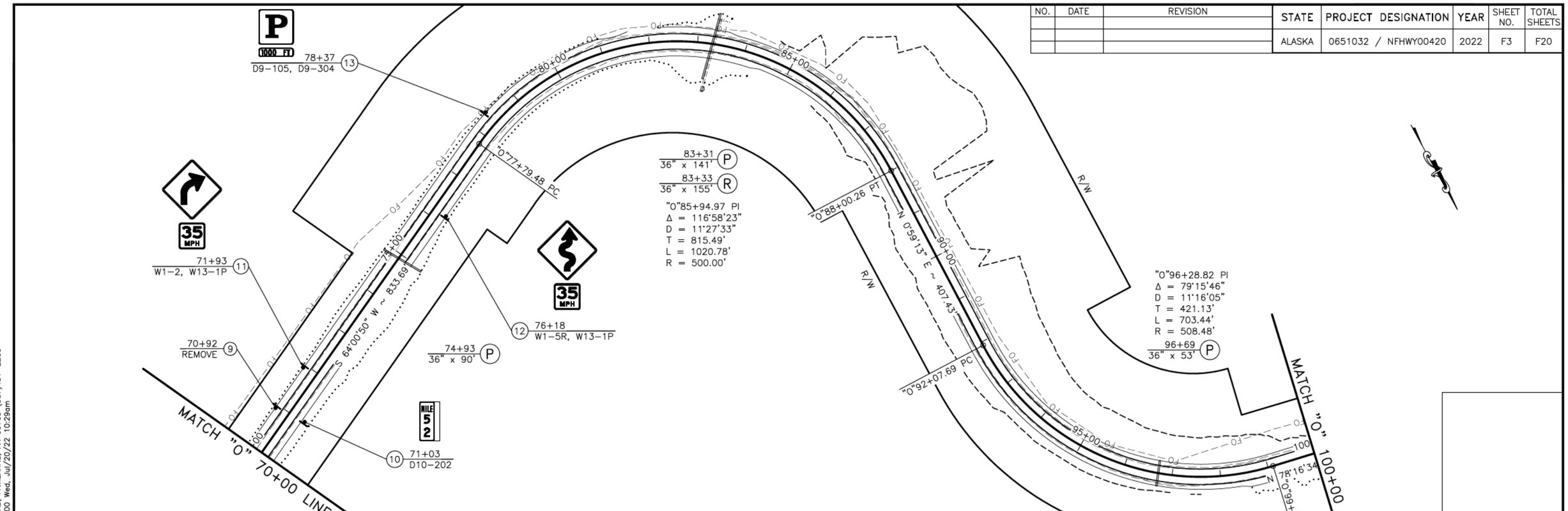

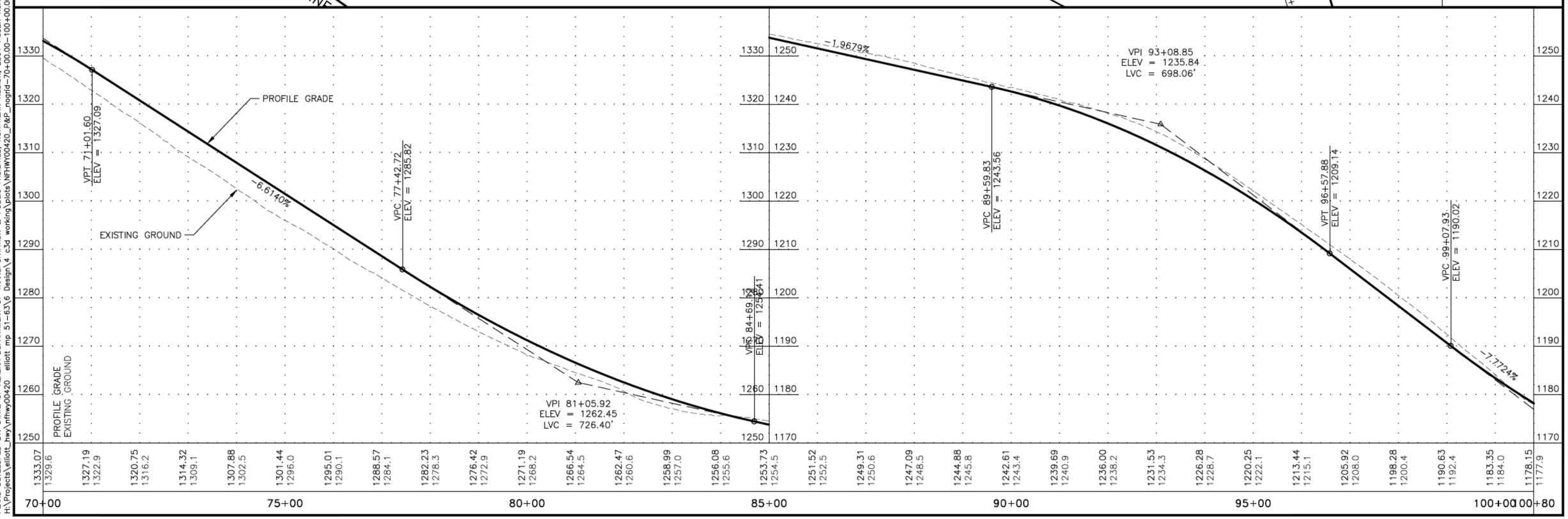

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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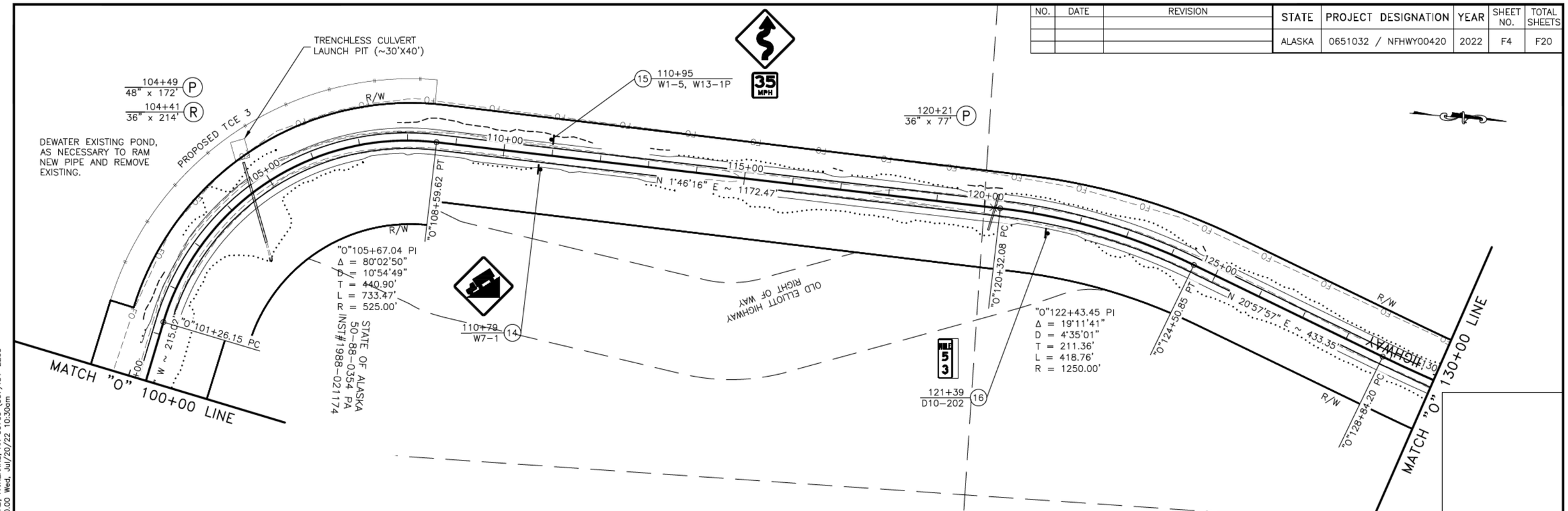

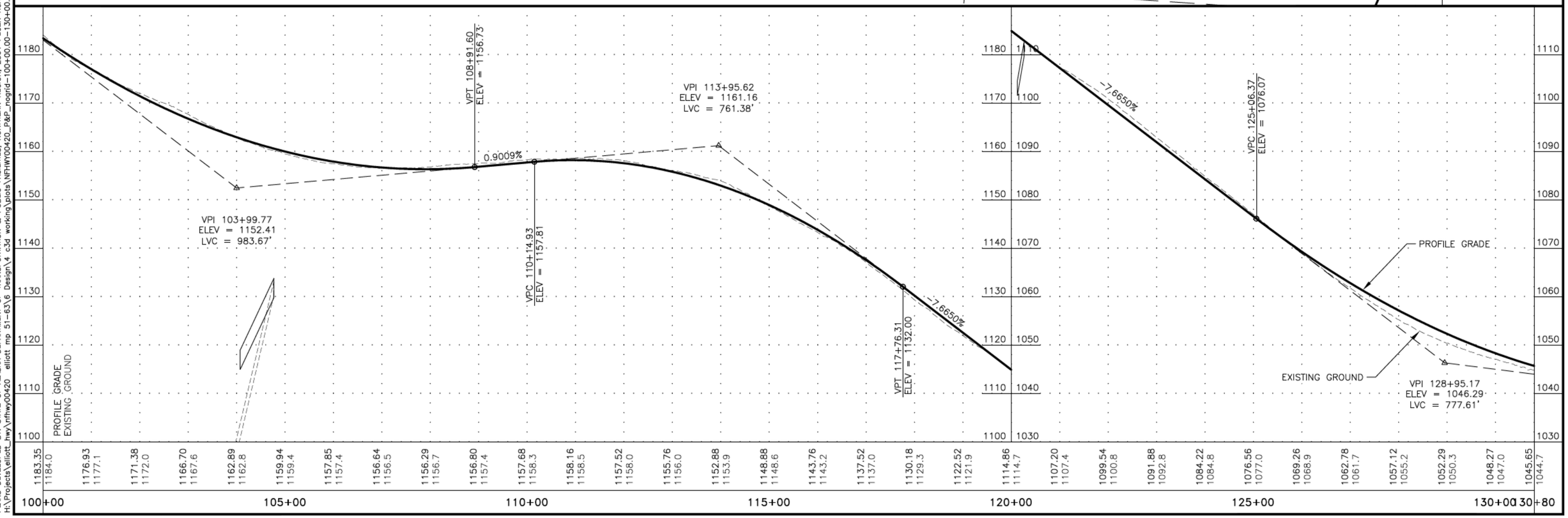

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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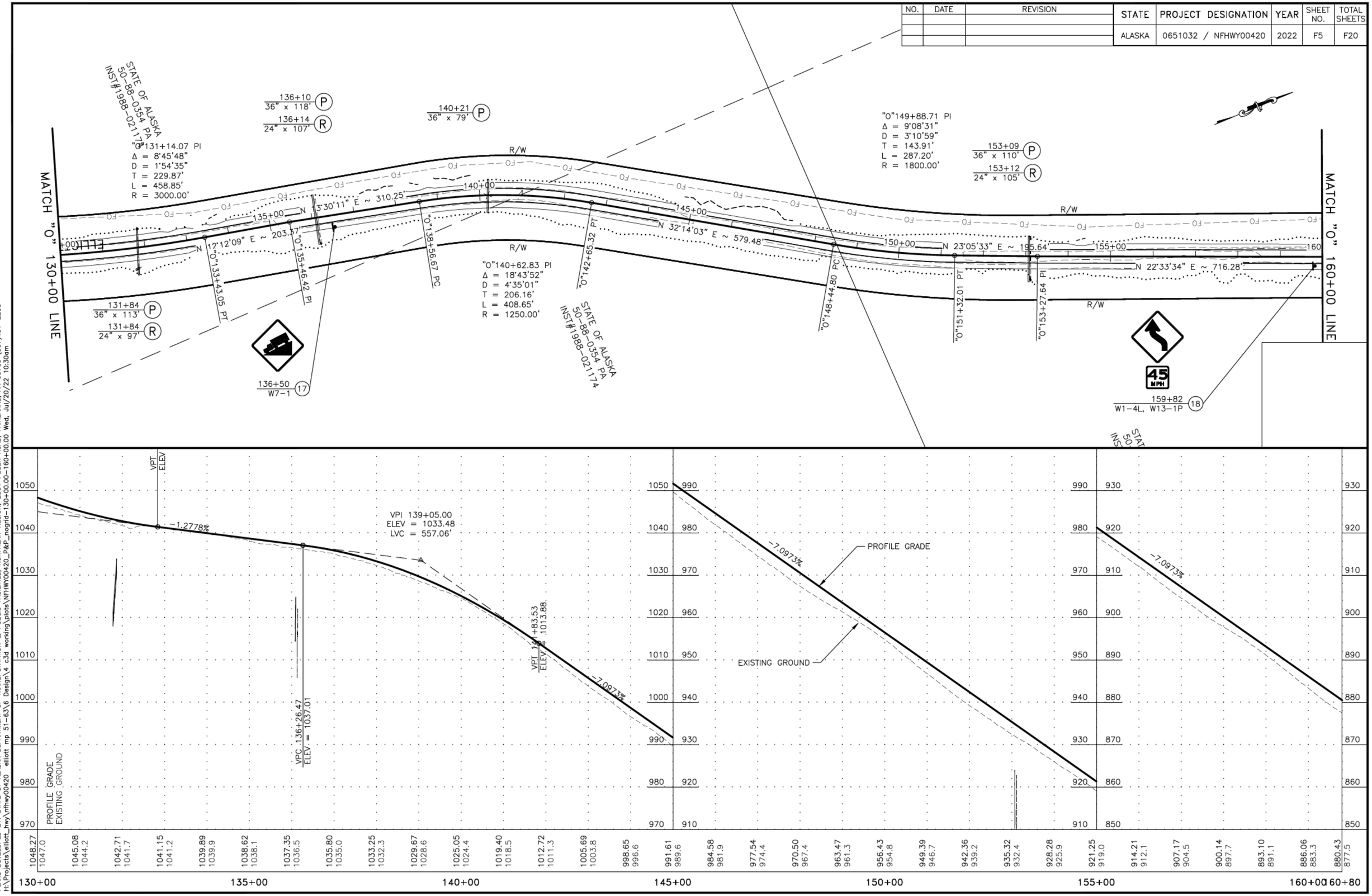

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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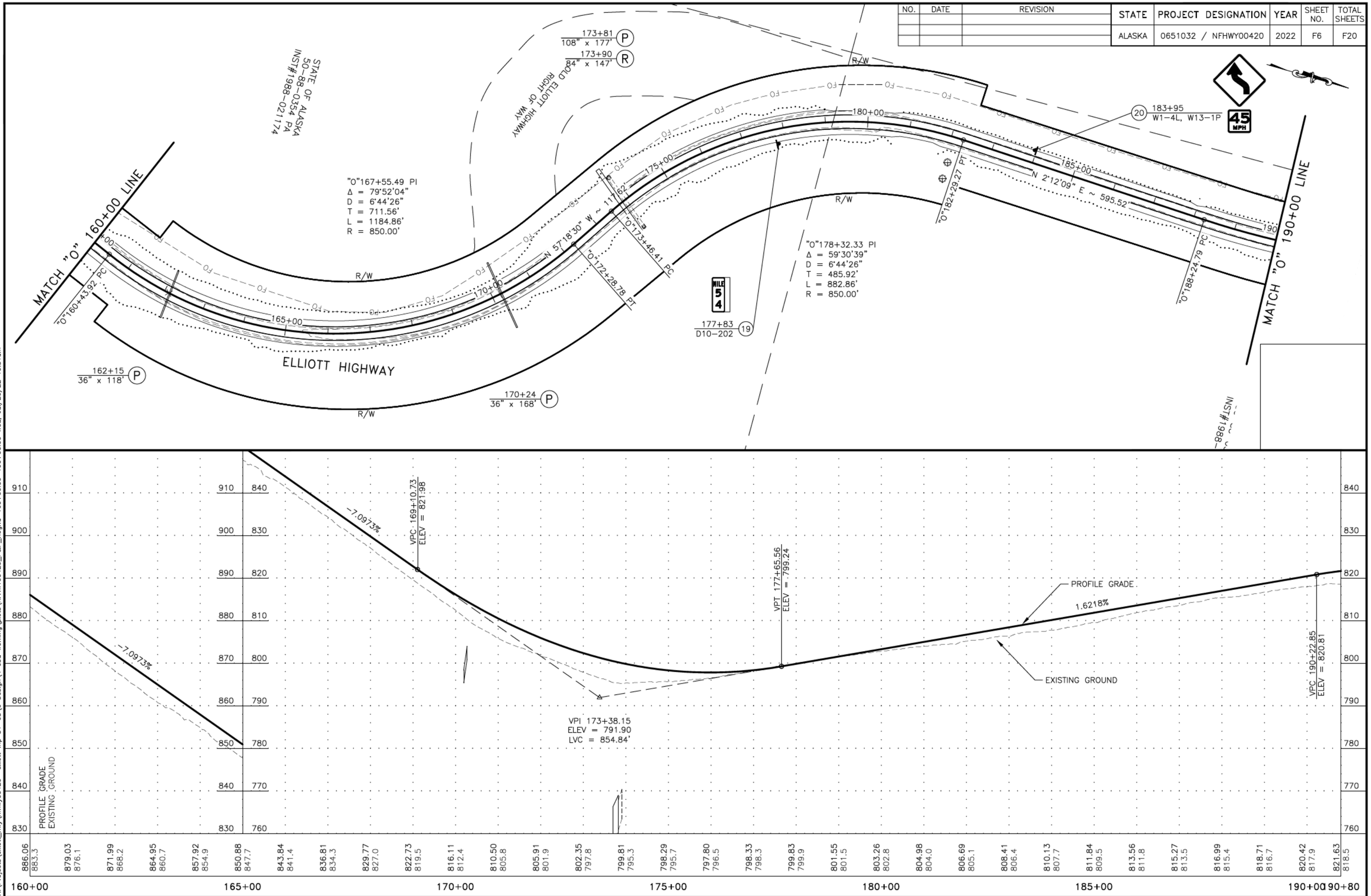

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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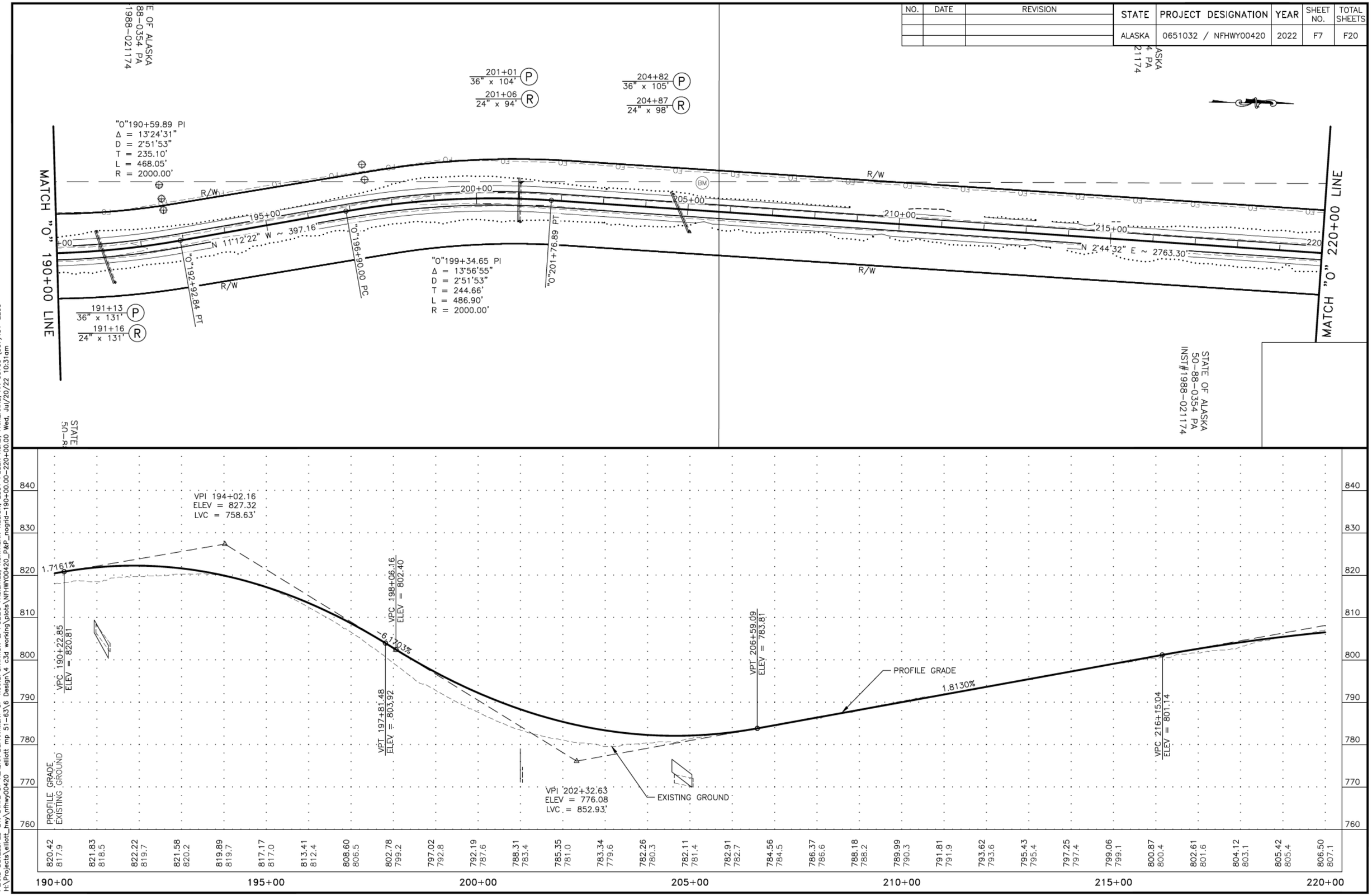

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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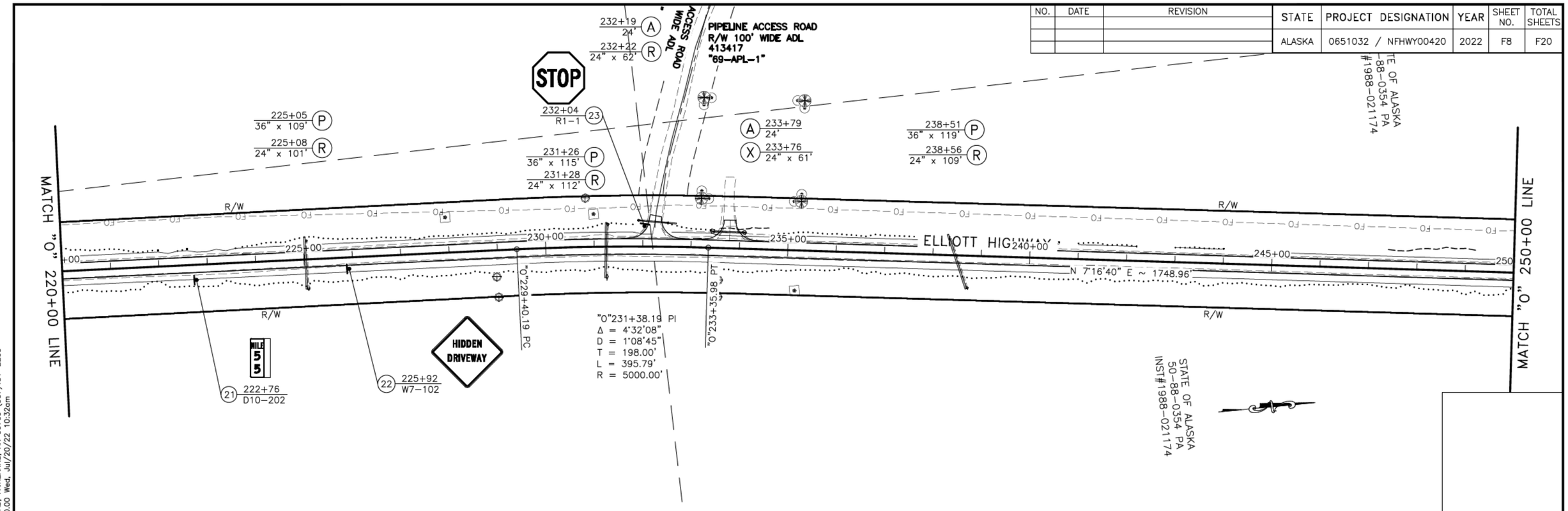

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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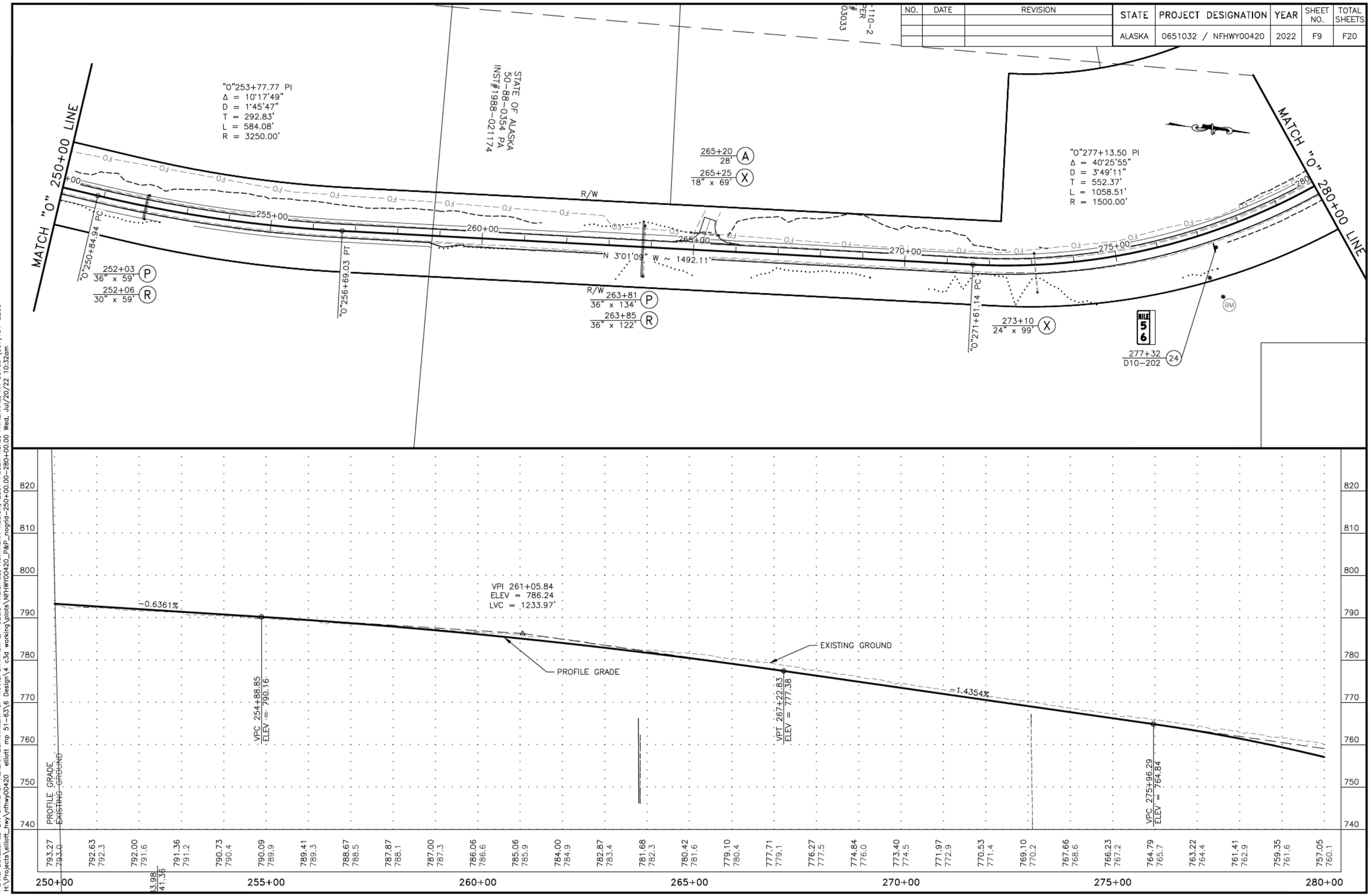
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F9	F20



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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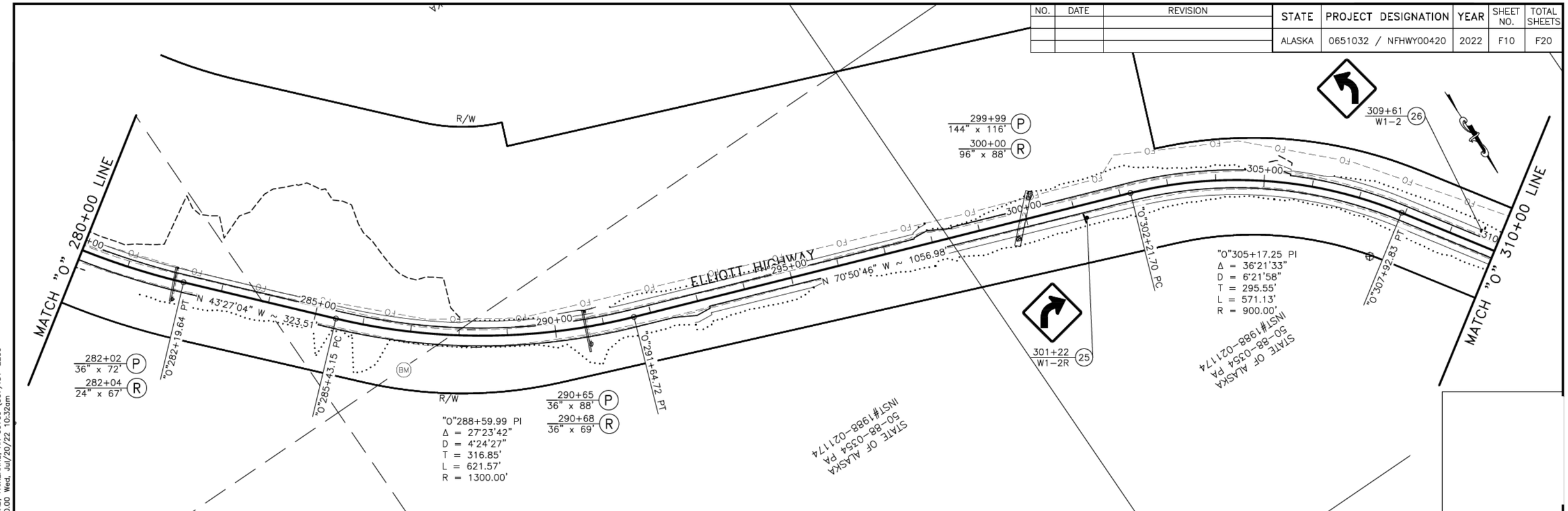

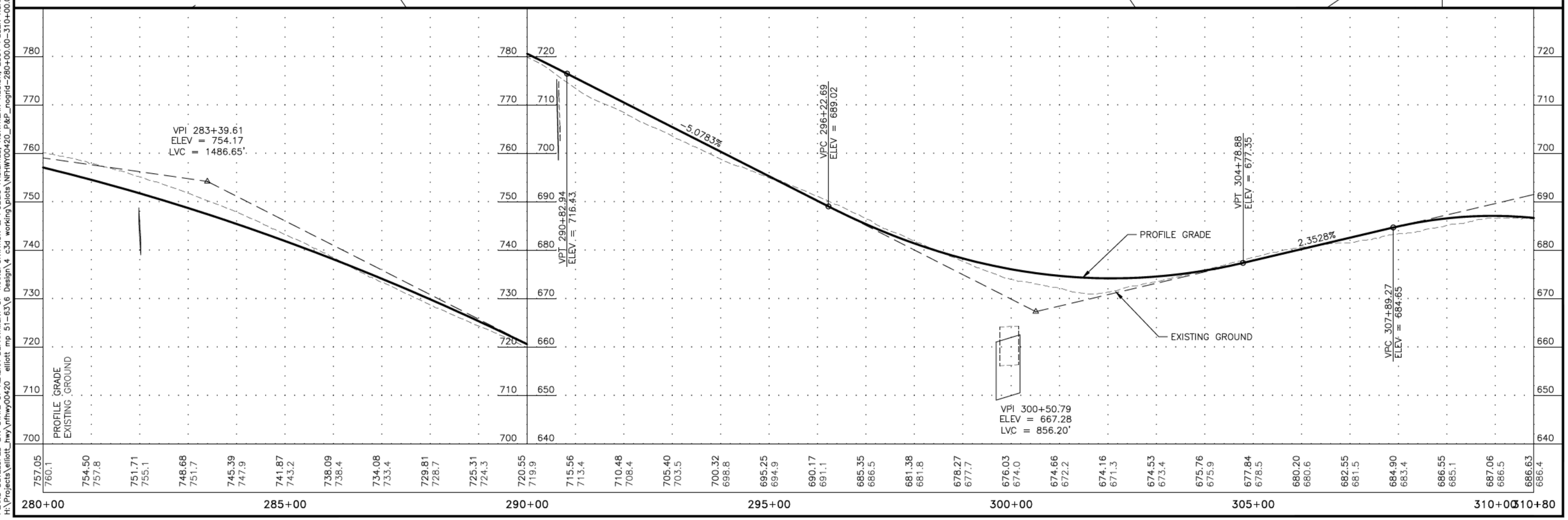

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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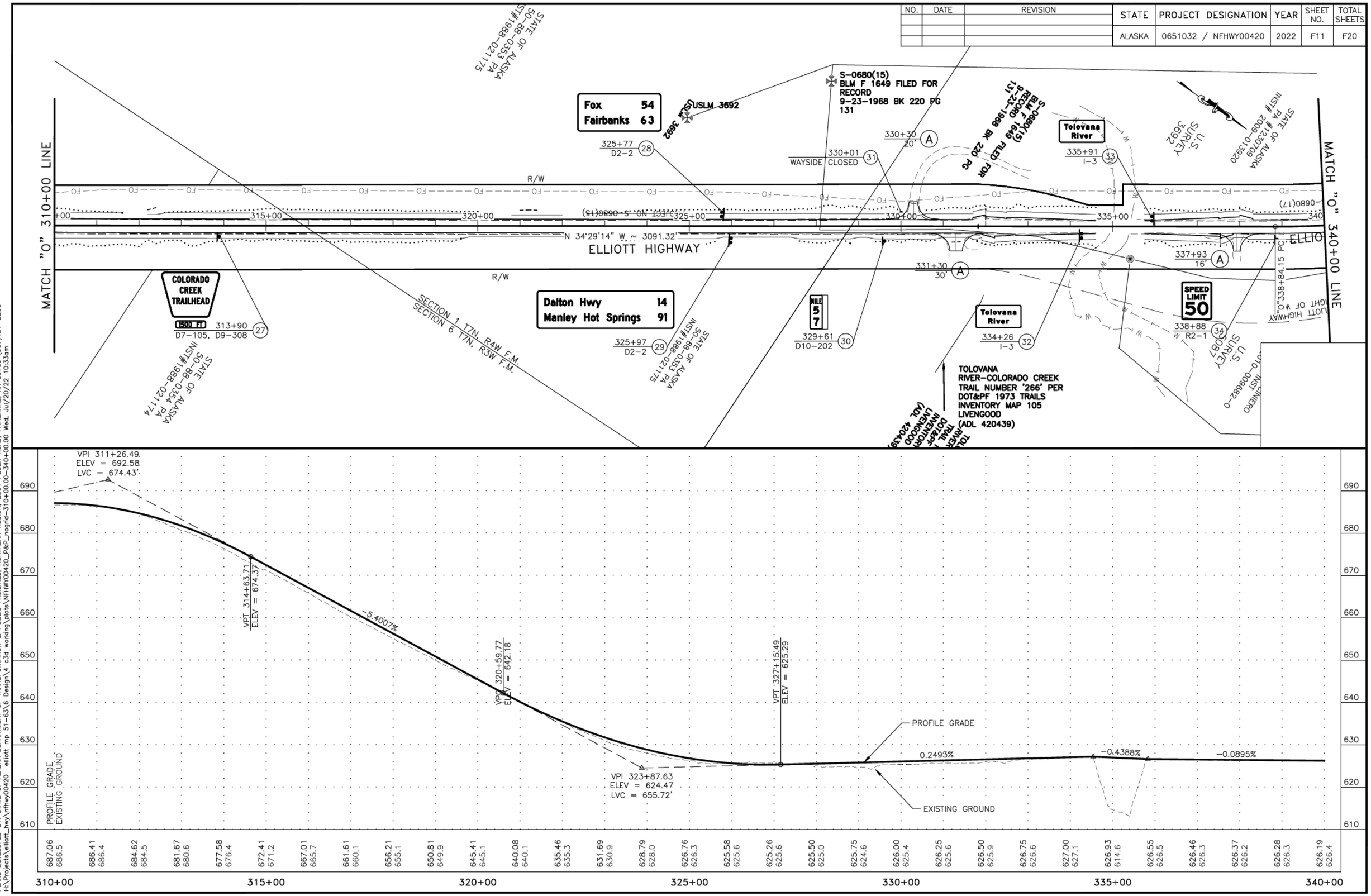

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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NO.	DATE	REVISION

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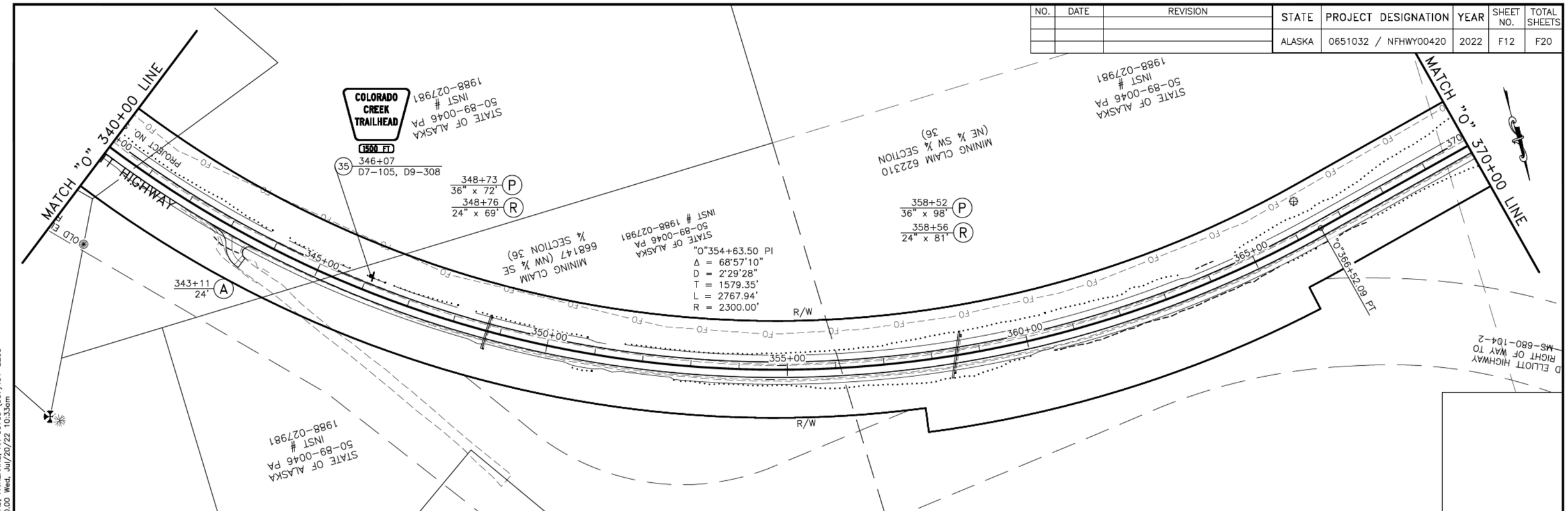
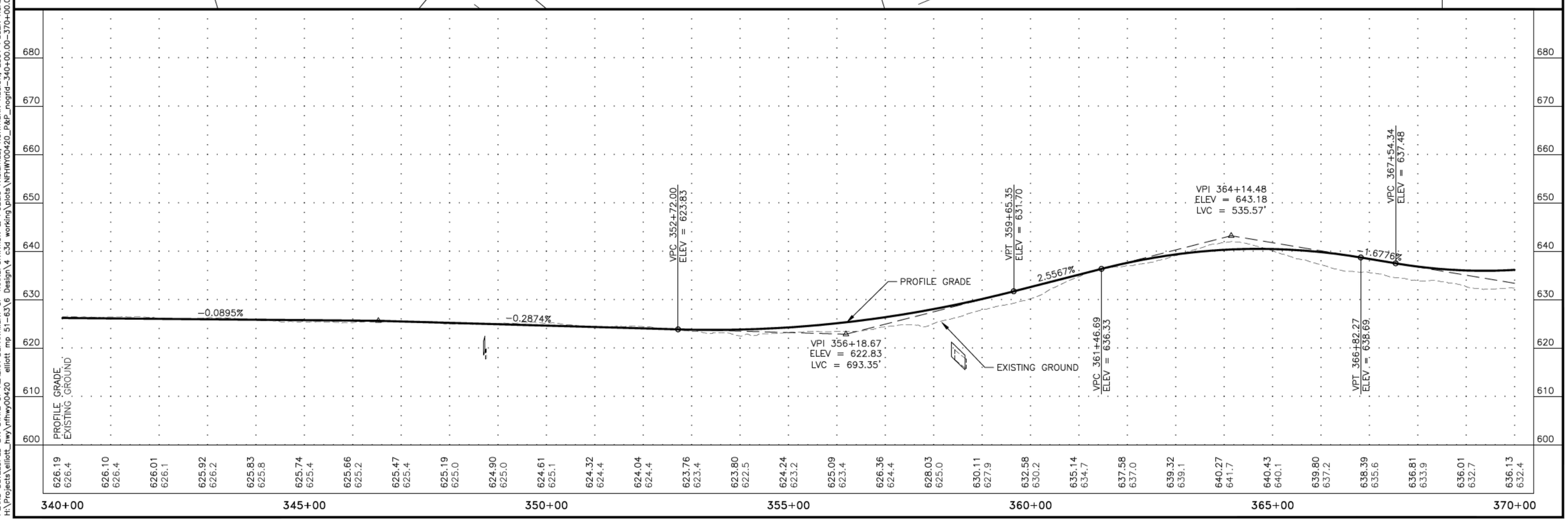
ALASKA	0651032 / NFHWY00420	2022	F12	F20

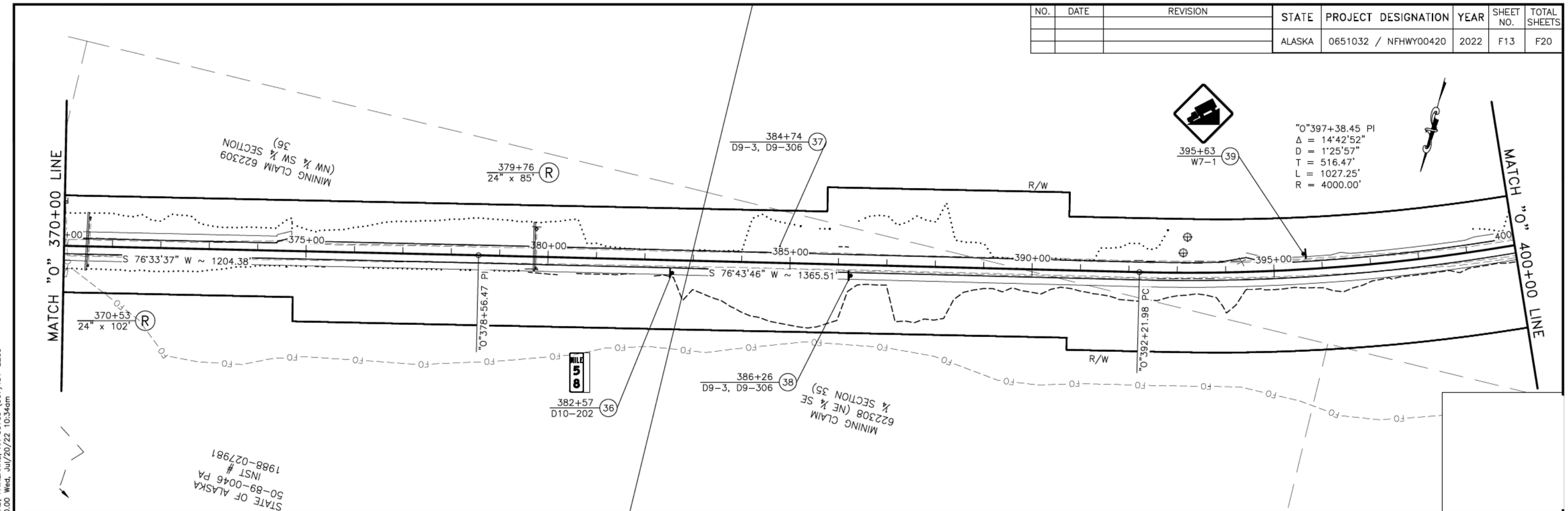


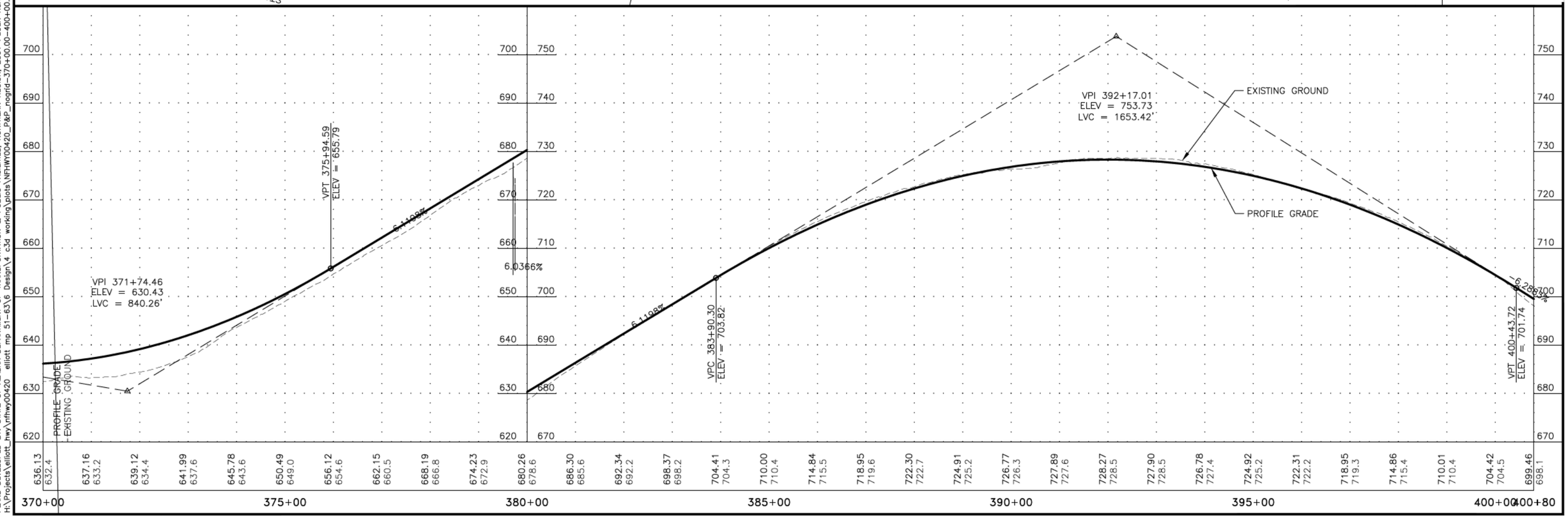


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-340+00.00-370+00.00 Wed, Jul/20/22 10:33am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F13	F20

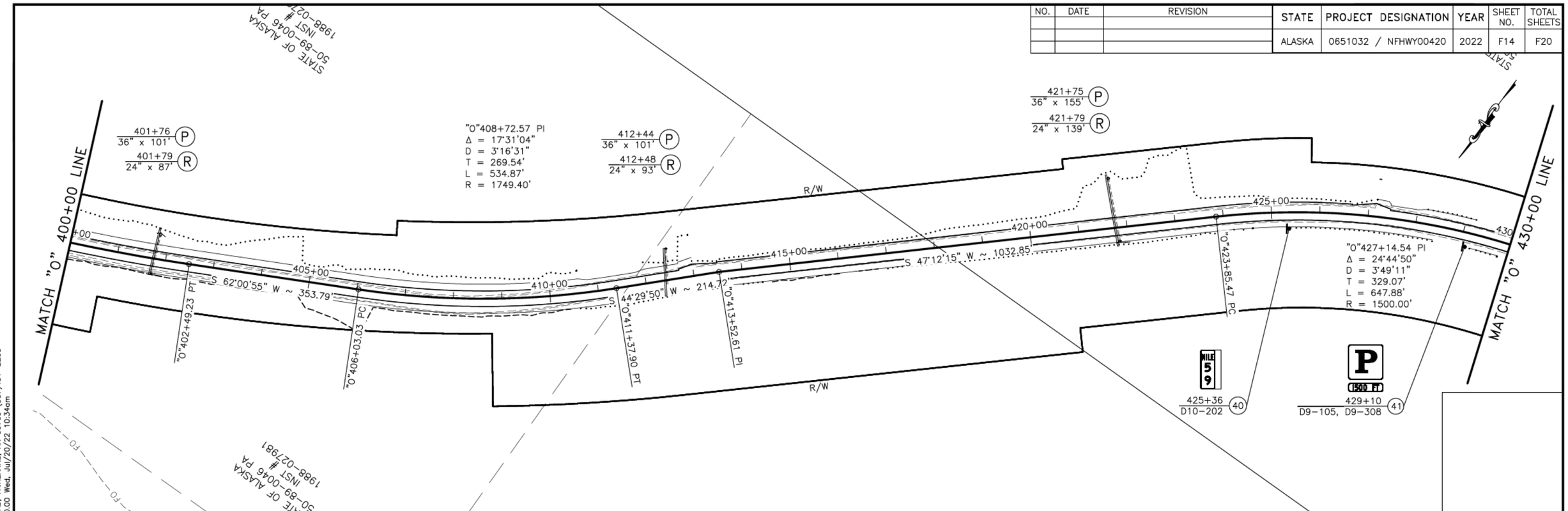


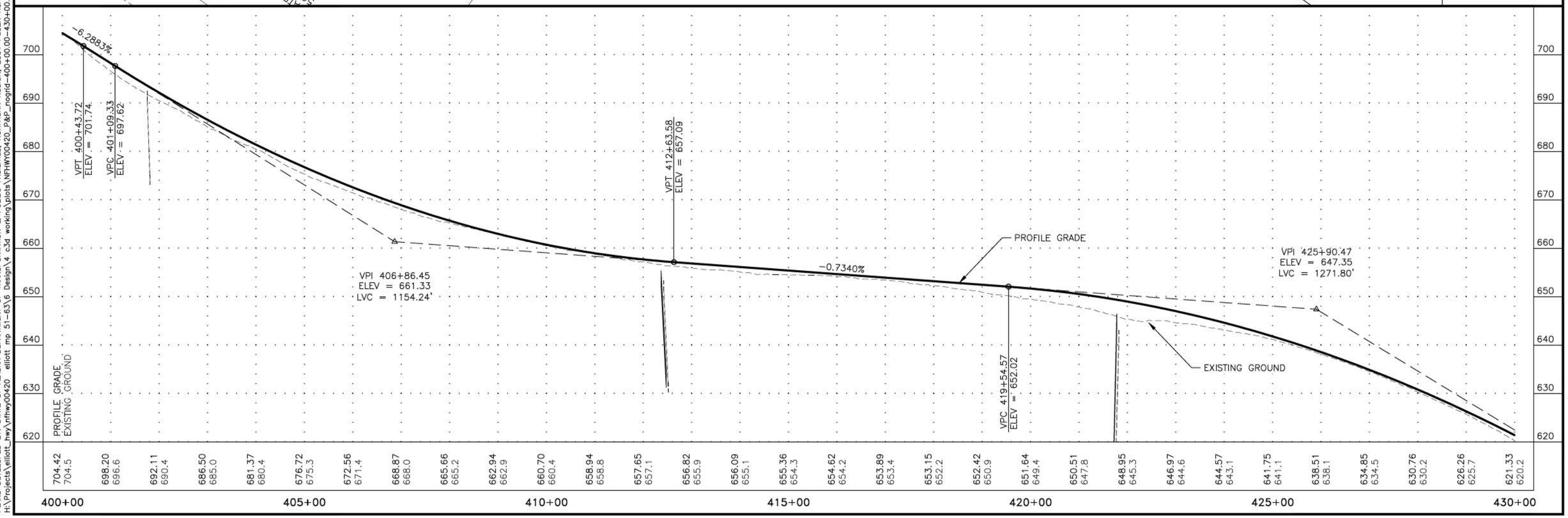


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-370+00.00-400+00.00 Wed, Jul/20/22 10:34am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F14	F20

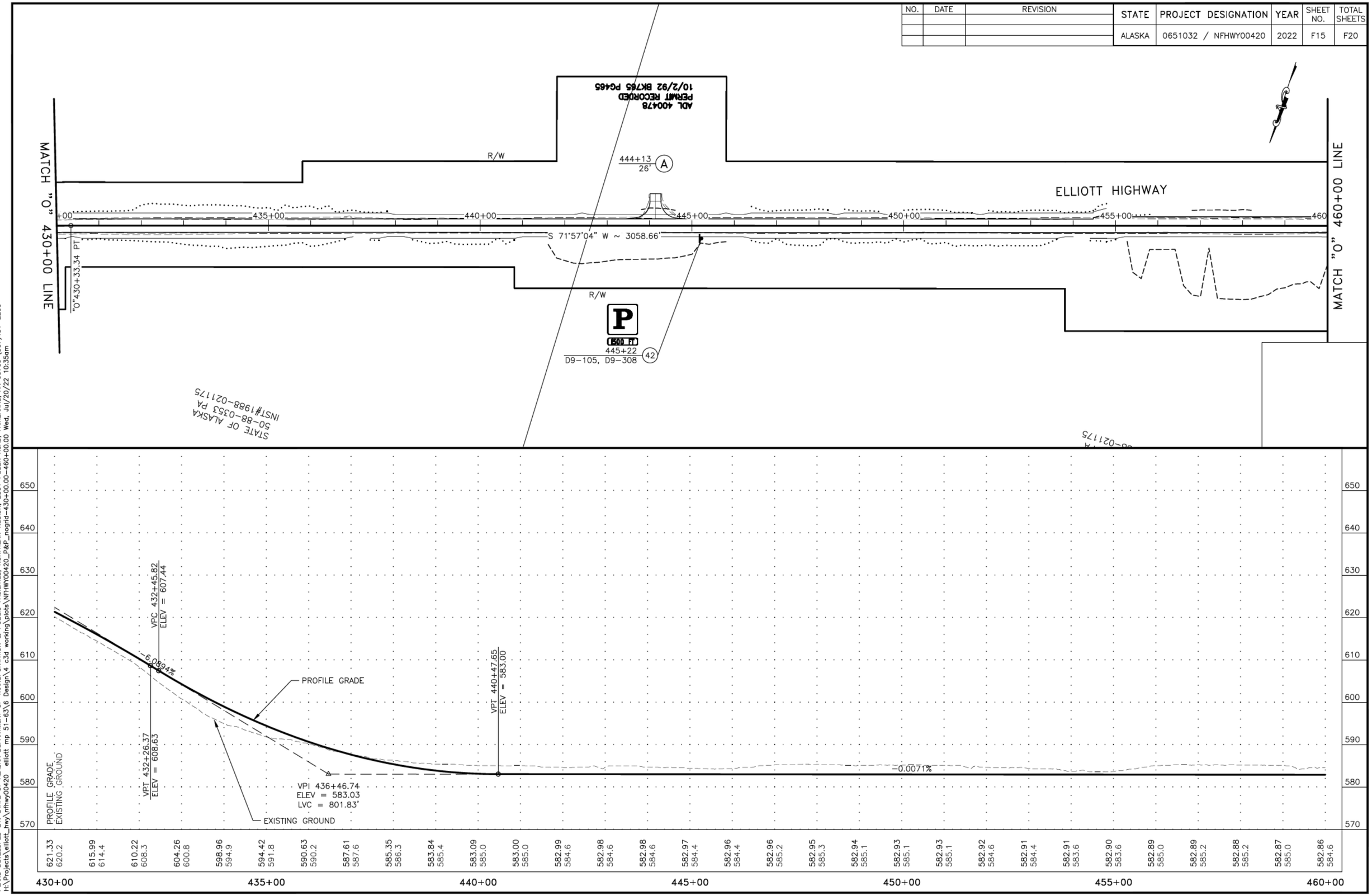




PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-400+00.00-430+00.00 Wed, Jul/20/22 10:34am

NO.	DATE	REVISION

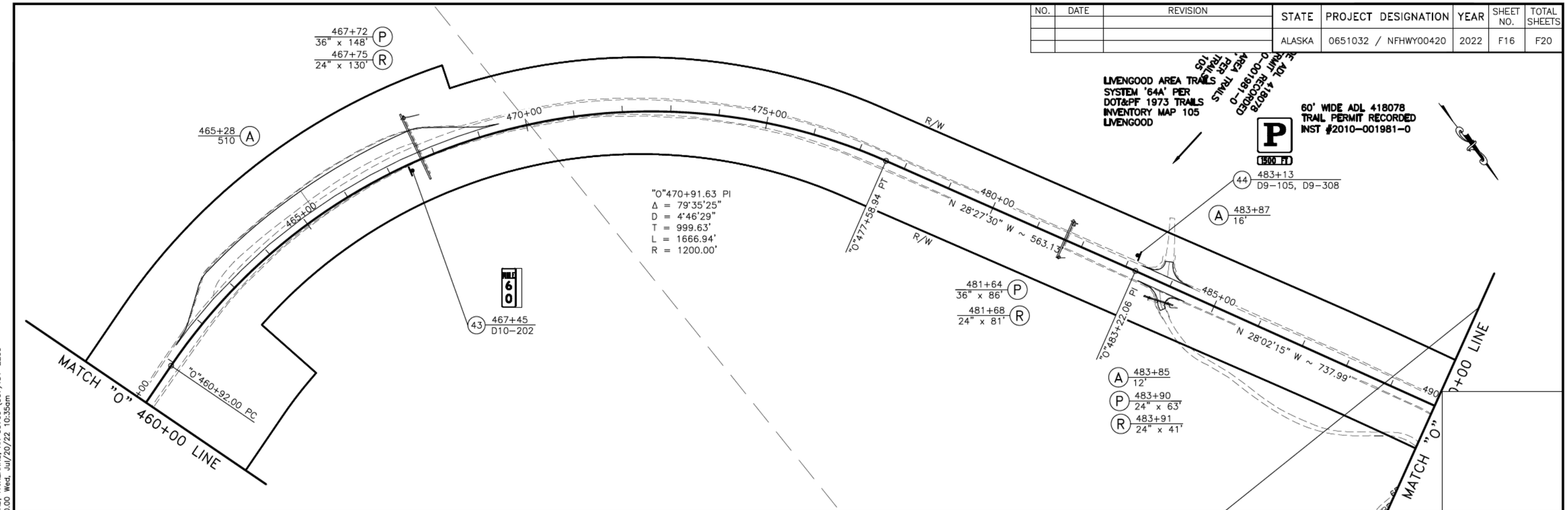
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F15	F20

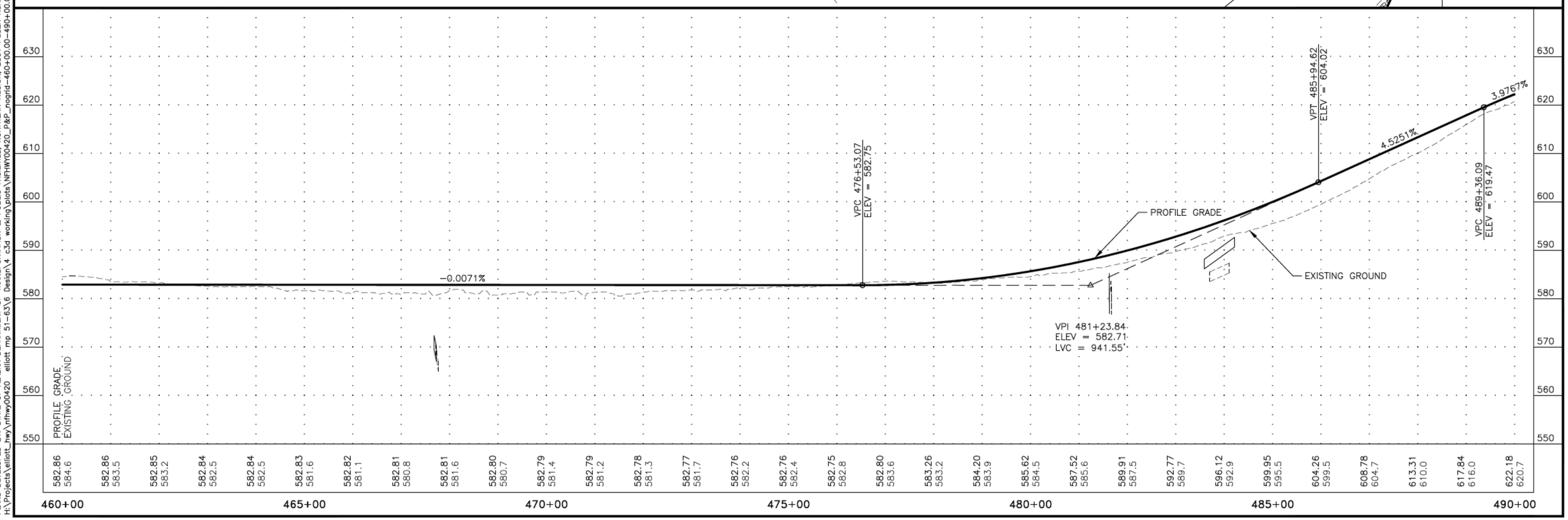


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-430+00.00-460+00.00 Wed, Jul/20/22 10:35am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F16	F20

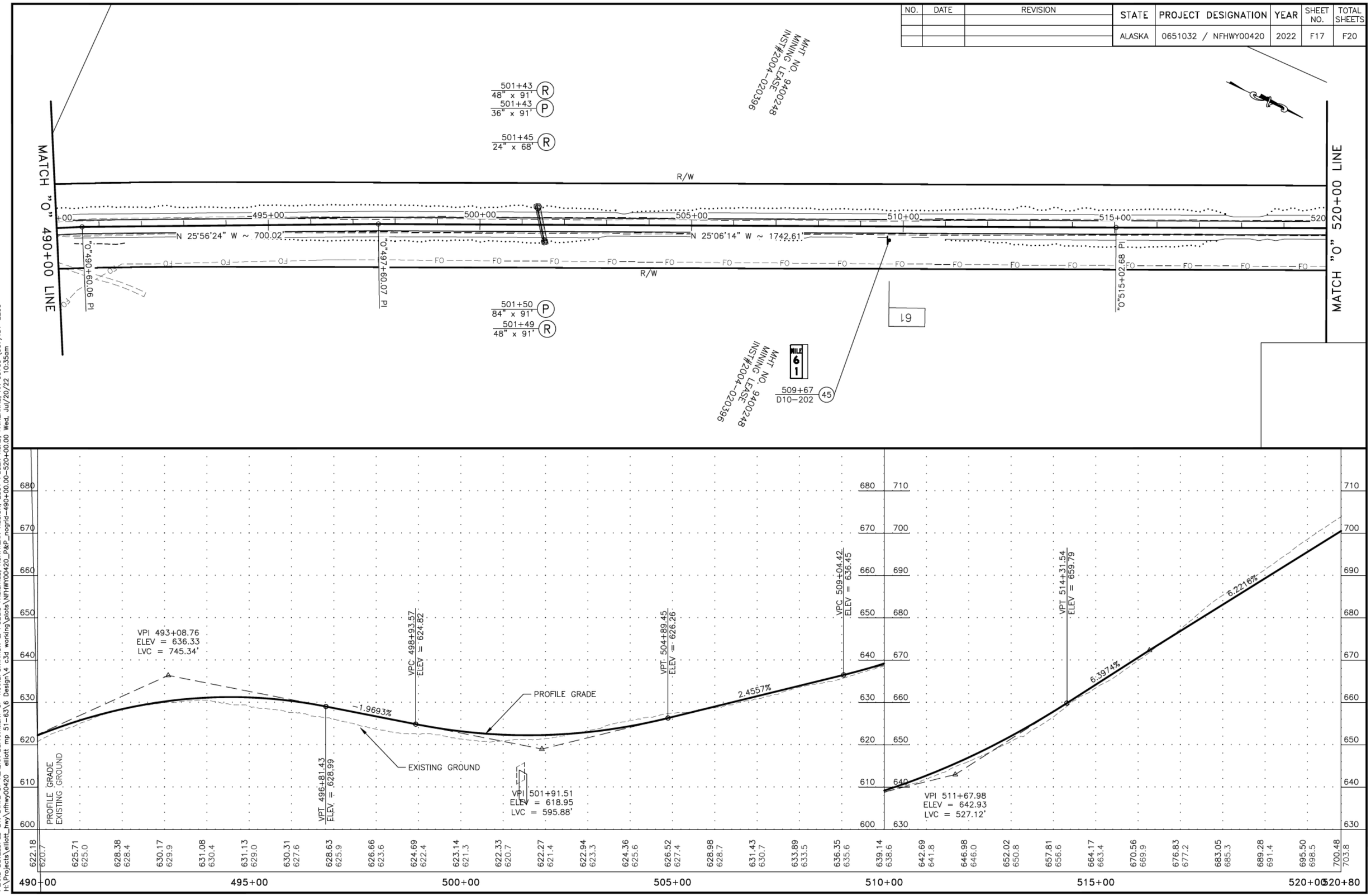




PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-460+00.00-490+00.00 Wed, Jul/20/22 10:35am

NO.	DATE	REVISION

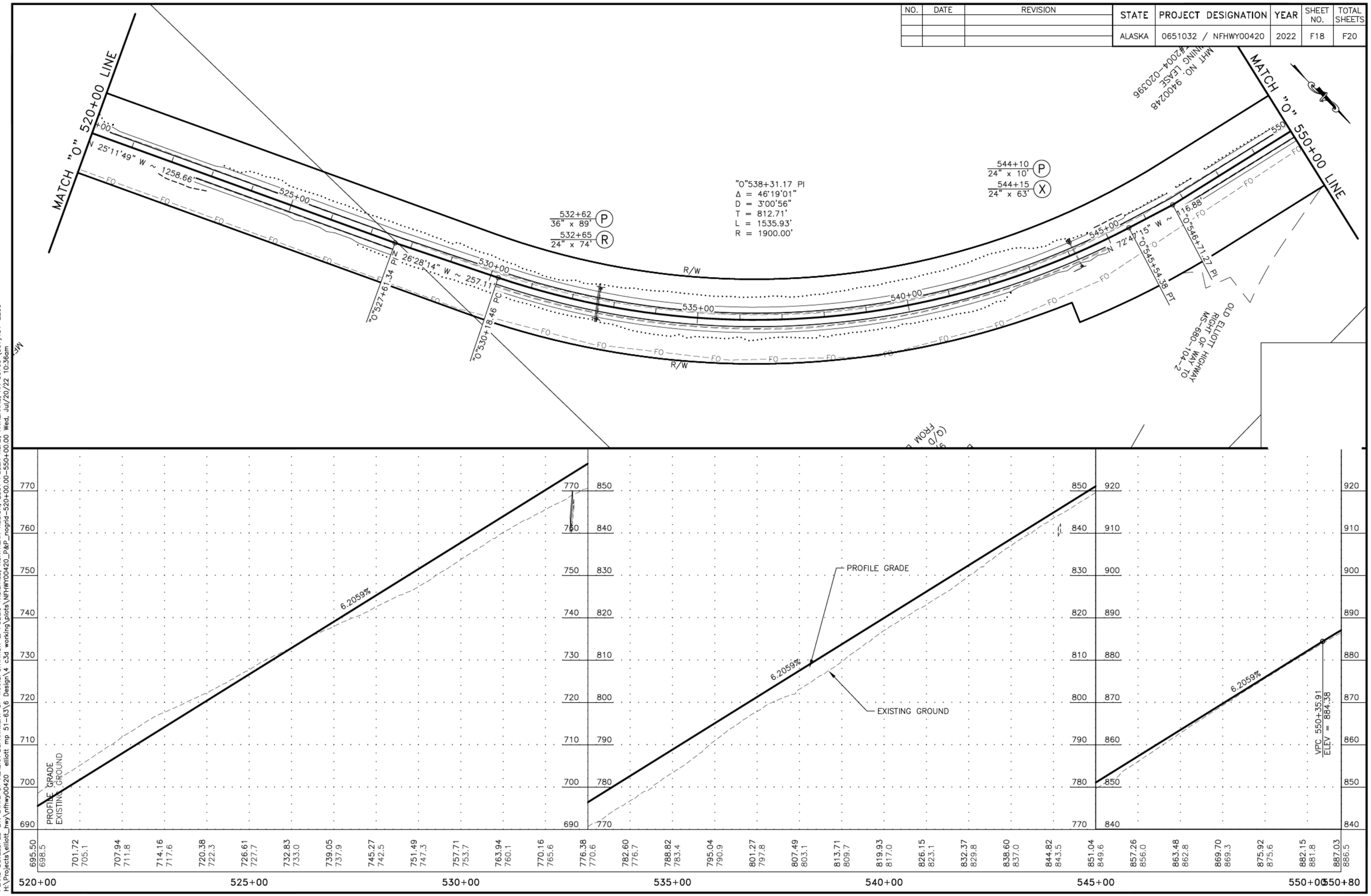
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F17	F20



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-490+00.00-520+00.00 Wed, Jul/20/22 10:35am

NO.	DATE	REVISION

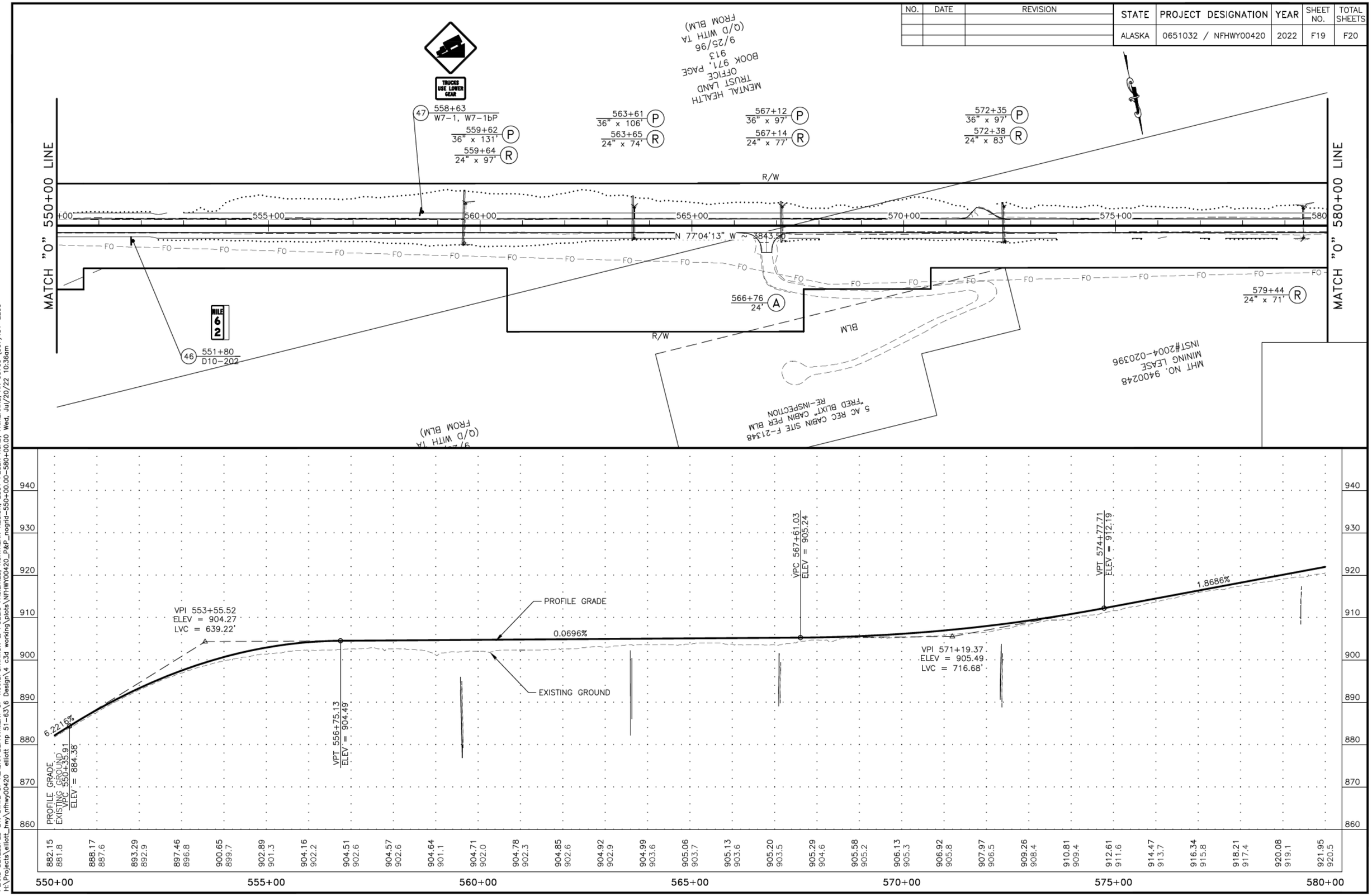
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F18	F20



PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-520+00.00-550+00.00 Wed, Jul/20/22 10:36am

NO.	DATE	REVISION

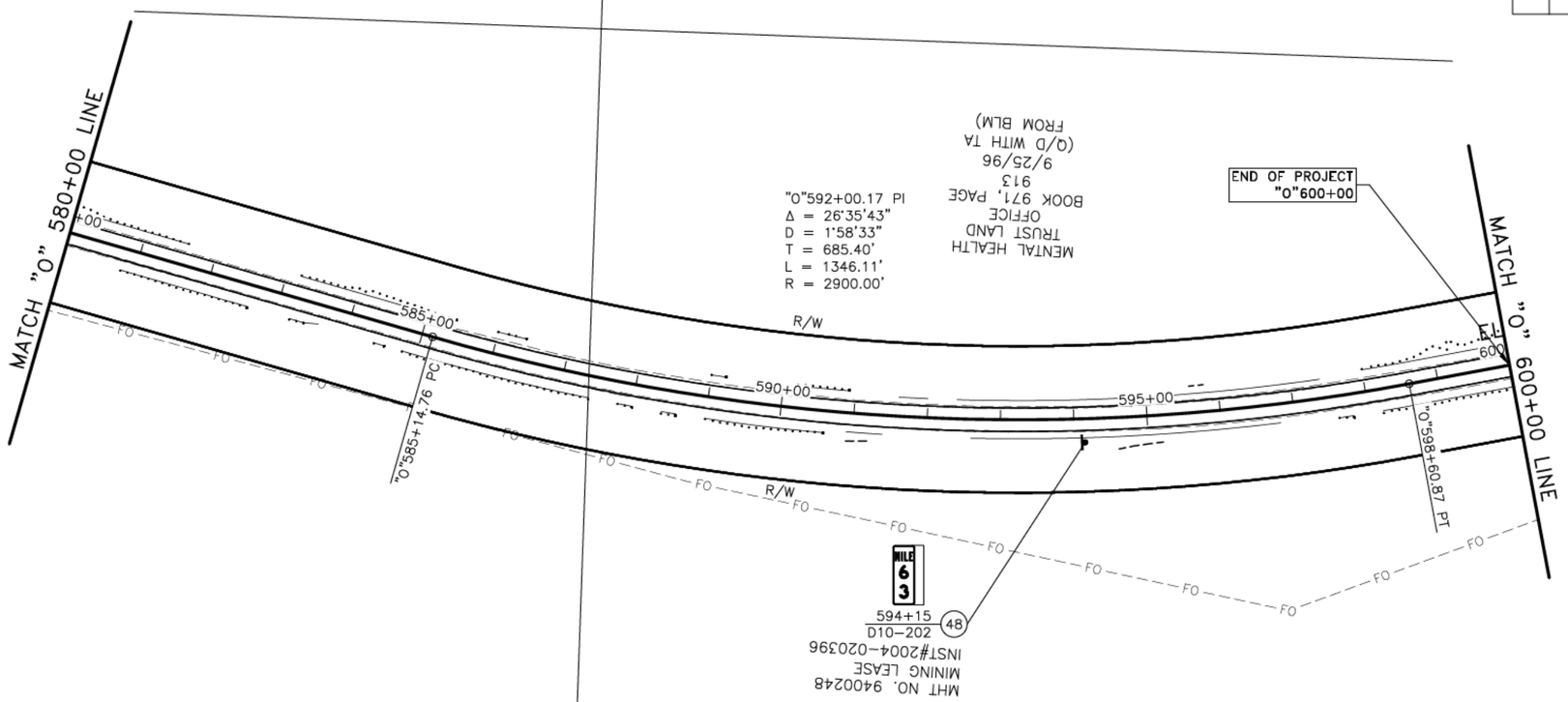
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F19	F20

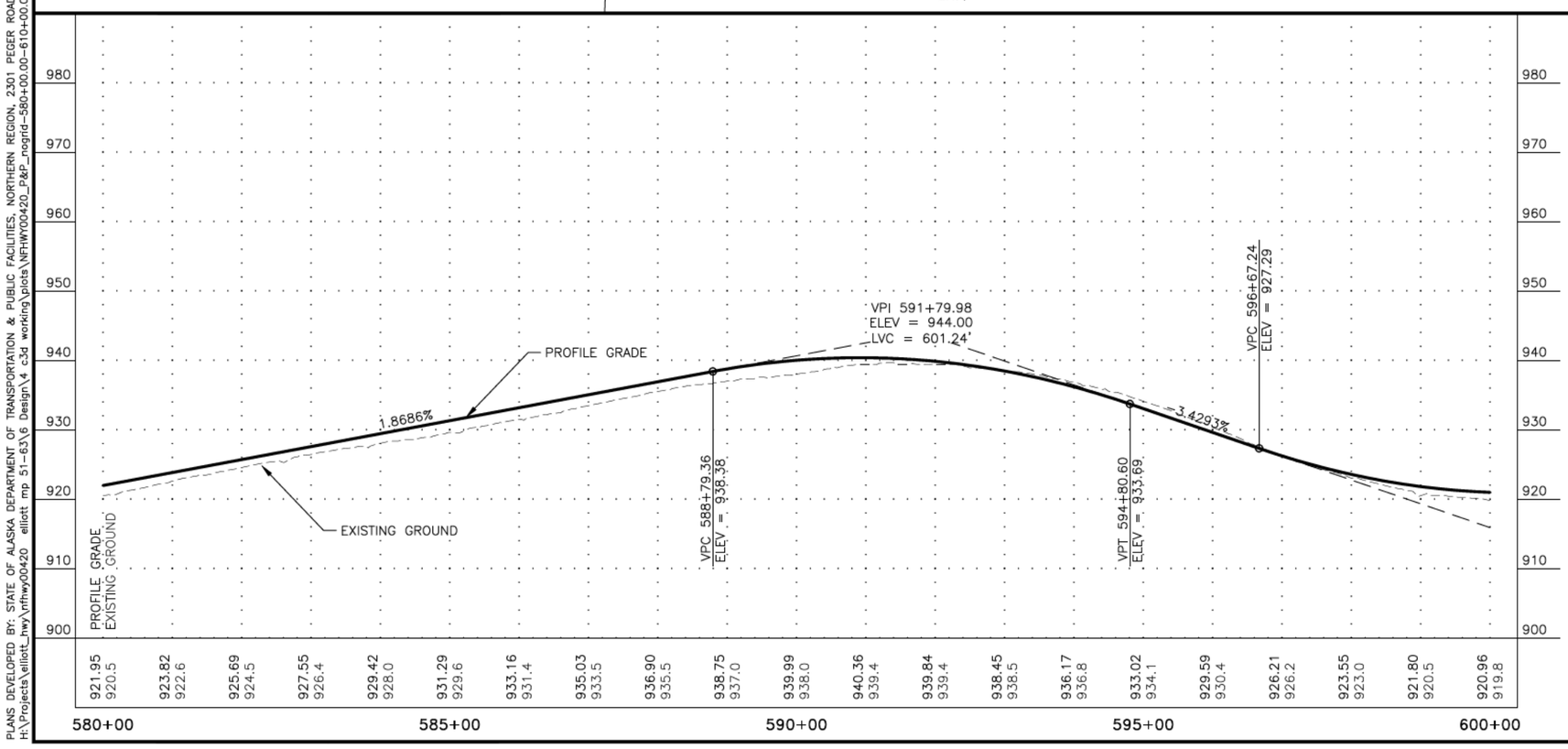


PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-550+00.00-580+00.00 Wed, Jul/20/22 10:36am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	F20	F20





PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_P&P_nogrid-580+00.00-610+00.00 Wed, Jul/20/22 10:37am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	H1	----

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
1	19+65		X	D10-202	MILE 51	14 X 27			2.625		S	PST	2.5	1	
2	19+82		X		ADOPT A HIGHWAY						S				REMOVE
					NORTHERN LIGHTS B&B						S				REMOVE
3	35+85		X	W1-2	CURVE LEFT	30 X 30	X		6.25		S	PST	2.5	1	
				W13-1P	40 MPH	18 X 18			2.25		S				
4	41+66		X	R1-1	STOP	36 X 36	X		9.00		E	PST	2.5	1	
5	46+77	X		W1-2	CURVE RIGHT	30 X 30	X		6.25		N	PST	2.5	1	
				W13-1P	40 MPH	18 X 18			2.25		N				
6	54+05		X	D9-105	P (SYM)	24 X 24			4.00		S	PST	2.5	1	
				D9-304	1000 FT	24 X 6			1.00		S				
7	59+42		X	W1-2	CURVE LEFT	30 X 30	X		6.25		S	PST	2.5	1	
				W13-1P	35 MPH	18 X 18			2.25		S				
8	63+41		X	W7-1	HILL	36 X 36	X		9.00		SE	PST	2.5	1	
9	70+92	X			ADOPT A HIGHWAY						SW				REMOVE
					NORTHERN LIGHTS B&B						SW				REMOVE
10	71+03		X	D10-202	MILE 52	14 X 27			2.625		NE	PST	2.5	1	
11	71+93	X		W1-2	CURVE RIGHT	30 X 30	X		6.25		SW	PST	2.5	1	
				W13-1P	35 MPH	18 X 18			2.25		SW				
12	76+17		X	W1-2	CURVE RIGHT	30 X 30	X		6.25		NE	PST	2.5	1	
				W13-1P	40 MPH	18 X 18			2.25		NE				
13	78+37	X		D9-105	P (SYM)	24 X 24			4.00		SW	PST	2.5	1	
				D9-305	1000 FT	24 X 6			1.00		SW				
14	110+79		X	W7-1	HILL	36 X 36	X		9.00		S	PST	2.5	1	
15	110+95	X		W1-5L	WINDING ROAD (LEFT)	30 X 30	X		6.25		N	PST	2.5	1	
				W13-1P	40 MPH	18 X 18			2.25		N				
16	121+39		X	D10-202	MILE 53	14 X 27			2.625		S	PST	2.5	1	
17	136+50		X	W7-1	HILL	36 X 36	X		9.00		S	PST	2.5	1	
18	159+82		X	W1-4L	REVERSE CURVE (LEFT)	30 X 30	X		6.25		S	PST	2.5	1	
				W13-1P	40 MPH	18 X 18			2.25		S				
19	177+83		X	D10-202	MILE 54	14 X 27			2.625		S	PST	2.5	1	
20	183+95	X		W1-4L	REVERSE CURVE (LEFT)	30 X 30	X		6.25		N	PST	2.5	1	
				W13-1P	40 MPH	18 X 18			2.25		N				
21	222+76		X	D10-202	MILE 55	14 X 27			2.625		S	PST	2.5	1	
22	225+92		X	W7-102	HIDDEN DRIVEWAY	36 X 36	X		9.00		S	PST	2.5	1	

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
23	232+04	X			69 APL/AMS 1 MP 405.95						N	PST	2.5	1	REUSE EXISTING SIGN & MOUNTING HARDWARE
					OMS 68-4R 4.5 MILE						N				REUSE EXISTING SIGN & MOUNTING HARDWARE
				R1-1	STOP	36 X 36	X		9.00		W				
24	277+32		X	D10-202	MILE 56	14 X 27			2.625		S	PST	2.5	1	
25	301+22		X	W1-2	CURVE RIGHT	30 X 30	X		6.25		SE	PST	2.5	1	
26	309+61	X		W1-2	CURVE LEFT	30 X 30	X		6.25		NW	PST	2.5	1	
27	325+78	X		D2-2	Fox 54 Fairbanks 63	66 X 30		X	13.75		NW	TS	3	2	
28	325+98		X	D2-2	Dalton Hwy 14 Manley Hot Springs 91	108 X 30		X	22.50		SE	TS	3	2	
29	329+61		X	D10-202	MILE 57	14 X 27			2.625		SE	PST	2.5	1	
30	330+00	X			WAYSIDE CLOSED										DO NOT DISTURB
31	334+26		X	I-3	Tolovana River	36 X 18	X		4.50		SE	PST	2.5	1	
32	335+92	X		I-3	Tolovana River	36 X 18	X		4.50		NW	PST	2.5	1	
33	338+88		X	R2-1	SPEED LIMIT 50	24 X 30			5.00		SE	PST	2.5	1	
34	346+07	X		D7-105	COLORADO CREEK TRAILHEAD	48 X 36	X		12.00		NW	PST	2.5	1	
				D9-308	1500 FT						NW				REMOVE
35	382+57		X	D10-202	MILE 58	14 X 27			2.625		E	PST	2.5	1	
36	384+74	X			CAMPING 1 MILE (Sym)										
37	386+25		X		CAMPING 1 MILE (Sym)										

NOTES:

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

POST TYPE LEGEND:

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

SIGNING SUMMARY 1 OF 2

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420 GuideSIGN-SIGNING SUM Wed, Jul/20/22 10:37am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	H2	----

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/ FRAMING BRACED	BRACING/ FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
38	395+62	X		W7–1	HILL	36 X 36	X		9.00		E	PST	2.5	1	
39	425+36		X	D10–202	MILE 59	14 X 27			2.625		NE	PST	2.5	1	
40	429+10		X		PARKING 1/2 MILE						NE	PST	2.5	1	
41	445+23		X		PARKING 1500 FT						NE	PST	2.5	1	
42	467+45		X	D10–202	MILE 60	14 X 27			2.625		E	PST	2.5	1	
43	483+13	X			PARKING 1500 FT						S	PST	2.5	1	
44	509+67		X	D10–202	MILE 61	14 X 27			2.625		S	PST	2.5	1	
45	551+80		X	D10–202	MILE 62	14 X 27			2.625		E	PST	2.5	1	
46	558+63	X		W7–1	HILL	36 X 36			9.00		W	PST	2.5	1	
					TRUCKS USE LOWER GEAR						W				
47	594+15		X	D10–202	MILE 63	14 X 27			2.625		E	PST	2.5	1	
								SUBTOTAL =	257.00						

NOTES:

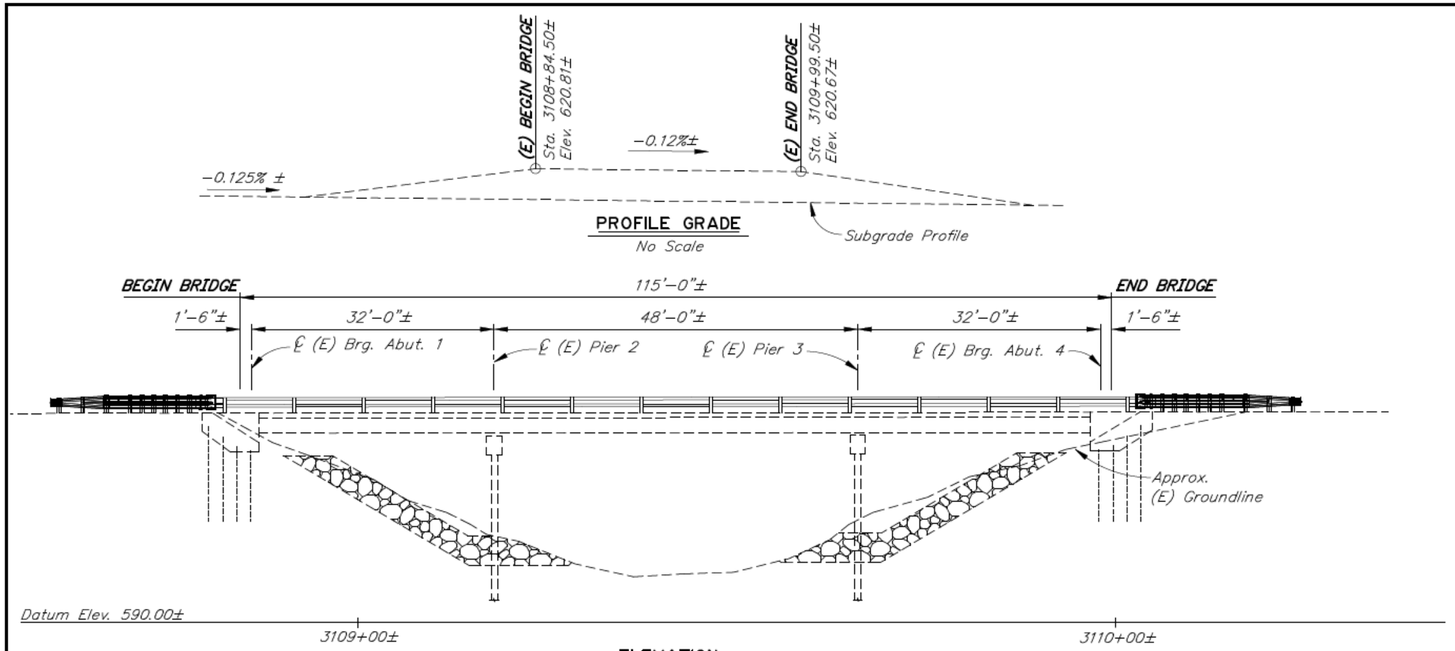
1. REMOVE AND DISPOSE OF ALL EXISTING SIGNS AND SIGN FOUNDATIONS WITHIN THE PROJECT LIMITS, EXCEPT THOSE DESIGNATED FOR REINSTALLATION, SALVAGE OR OTHERWISE NOTED.
2. INSTALL MILEPOST SIGNS (D10 SERIES) IN ACCORDANCE WITH STANDARD PLAN S-05.02, EXCEPT WITH A 15 TO 30 FOOT OFFSET. REDUCE THE OFFSET AS NECESSARY SO THE BOTTOM OF THE SIGN IS NO MORE THAN 15 FEET ABOVE THE GROUND. THE SIGN OFFSET SHALL NOT BE LESS THAN THE OFFSETS SHOWN IN S-05.02.
3. MOUNTING HEIGHTS ARE PER STANDARD PLAN S-05.02 UNLESS OTHERWISE NOTED.
4. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
5. INSTALL PST SIGN POSTS WITH SLEEVE TYPE SOIL EMBEDMENT. EMBED PST IN SLEEVE 12"-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.
6.
7. 1/4" X 1 1/2" ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES AS SHOWN ON STANDARD PLAN S-01.02.
8.
9. INSTALL 48" DIAMOND WARNING SIGNS ON A SINGLE POST WITH A BRACE HAVING EFFECTIVE BRACE LENGTH OF 54" OR WITH THREE WIND FRAMING MEMBERS AS SHOWN ON STANDARD PLAN S-00.12. THIS MODIFIES STANDARD PLAN S-01.02.
10.
11. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
12. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF THE "FASTENER SPECIFICATION TABLE" UNDER SECTION 730-2.07 OF THE SSHC.
13. INSTALL OM-3 OBJECT MARKERS, USING A SLEEVE TYPE SOIL EMBEDMENT FOUNDATION, LOCATED MIDWAY BETWEEN THE FIRST AND SECOND GUARDRAIL POSTS NEAREST TO THE BRIDGE. MOUNT THE SIGN PANEL SO THE BOTTOM IS 2 INCHES ABOVE THE TOP OF GUARDRAIL WITH THE NEAR EDGE LINING UP WITH THE BACK OF THE RAIL.
14. STOP (R1-1) AND YIELD (R1-2) SIGN LOCATIONS, ESPECIALLY THOSE AT LARGE RADIUS INTERSECTIONS, MAY NEED ADJUSTMENT IN THE FIELD. THE ENGINEER WILL APPROVE FINAL LOCATIONS.
15. INSTALL D3-100 SIGNS ABOVE THEIR RESPECTIVE STOP SIGNS. WHEN TWO D3-100 SERIES SIGNS ARE TO BE LOCATED ON THE SAME POST, INSTALL THE CROSS-STREET PANEL IN THE LOWER POSITION.
16. D3-100 SERIES SIGNS REQUIRE TWO SEPARATE SINGLE SIDED PANELS. END-BRACE PANELS PER SMALL STREET NAME SIGN BRACING DETAILS IN STANDARD PLAN S-01.01.
17. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
18. ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.
19. USE SERIES C LETTERS FOR D3-100 SERIES SIGNS UNLESS OTHERWISE NOTED. USE 4.5" FOR DIMENSION "E" FOR 12" D3-100 SIGNS. THE LETTERING INDICATING THE TYPE OF STREET (SUCH AS St, Ave, OR Rd) WILL BE UPPER CASE AND LOWER CASE. THIS MODIFIES THE ASDS.
20. USE A 3" HORIZONTAL SPACING BETWEEN WORDS, BETWEEN CARDINAL DIRECTIONS AND WORDS, AND BETWEEN WORDS AND NUMBERS ON D3-100 AND D3-100A SIGNS UNLESS OTHERWISE NOTED.
21. 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. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
22. DELIVER ALL SALVAGED SIGNS TO THE _____ MAINTENANCE YARD LOCATED AT _____.
23. CLEARING, AS DIRECTED BY THE ENGINEER, MAY BE REQUIRED TO ENSURE ADEQUATE VISIBILITY OF SIGNS. THIS WORK IS SUBSIDIARY TO PAY ITEM 615.0001.0000.
24. INSTALL WEATHER TIGHT CAPS ON ALL TS POSTS.
25. INSTALL FRANGIBLE COUPLING SYSTEMS IN ACCORDANCE WITH STANDARD PLAN S-31.02.
26. INSTALL TS SIGN POST BASES AND FOUNDATIONS BEHIND BARRIER IN ACCORDANCE WITH STANDARD PLAN S-32.02. PLACE SIGNS TO MEET 3' MINIMUM TO EDGE OF SIGN AND 5' MINIMUM TO SIGN POST FROM FACE OF GUARDRAIL.
27. THE 4" MOUNTING AREA ON MILEPOST SIGNS (D10-200 SERIES) SHALL BE BARE ALUMINUM. THIS ELIMINATES THE OPTION OF INSTALLING GREEN REFLECTIVE SHEETING IN THIS AREA AS NOTED IN THE ASDS.
28. ADHESIVE TAPE IS NOT PERMITTED. THIS MODIFIES STANDARD PLAN S-00.12.

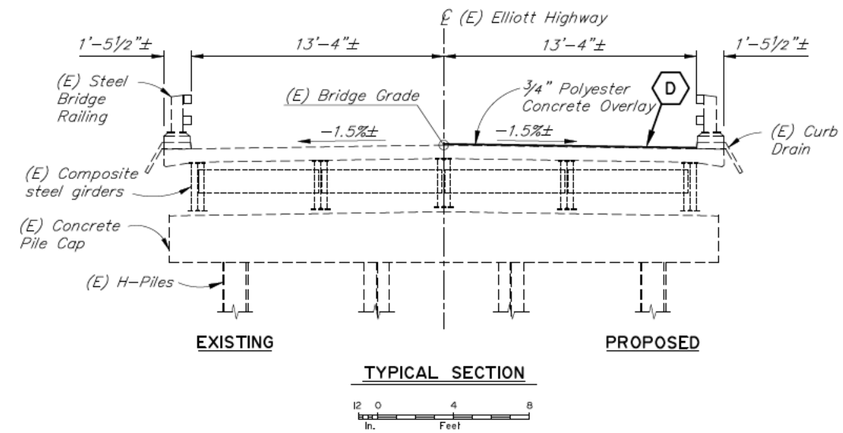
POST TYPE LEGEND:

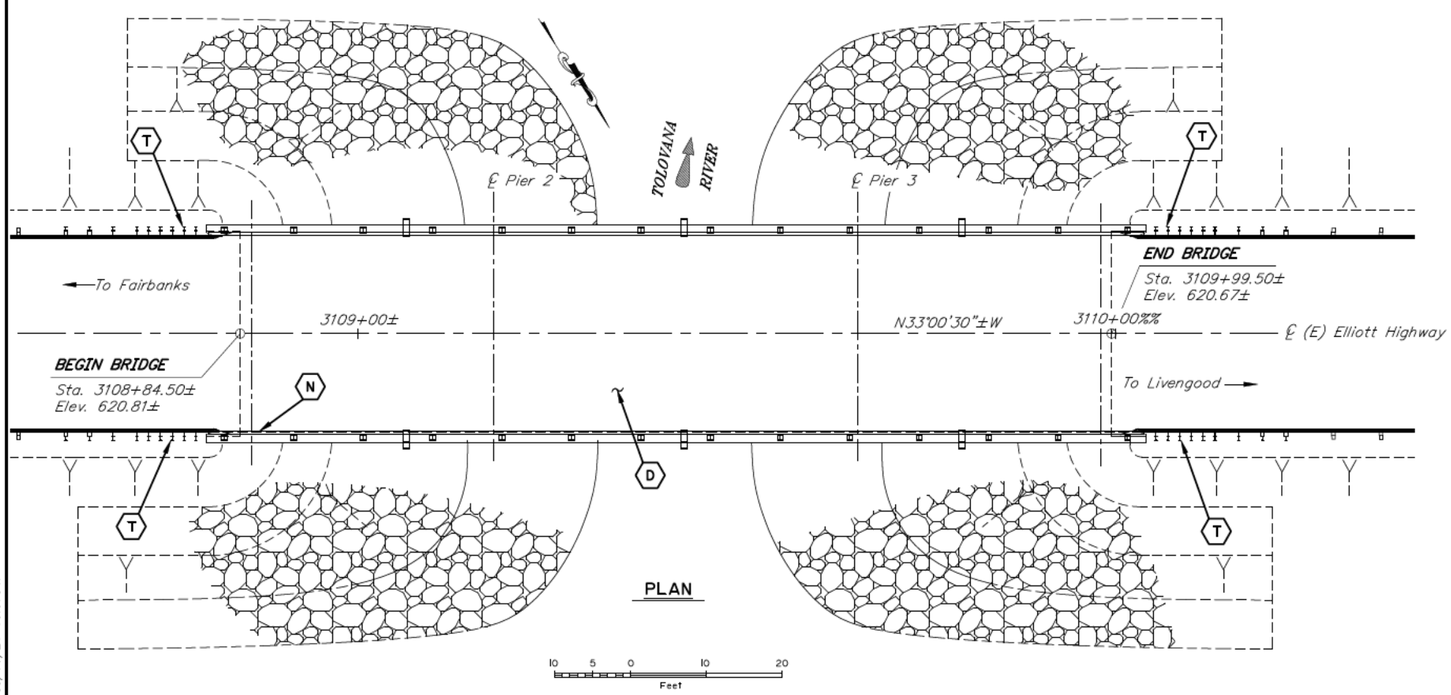
PST = PERFORATED STEEL TUBE
TS = TUBE STEEL (SQUARE STRUCTURAL STEEL TUBING)
W_X_ = WIDE FLANGE

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420 GuideSIGN-SIGNING SUM 2 Wed, Jul/20/22 10:37am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NFHWY00420	2022	N1	N4







BRIDGE DRAWING INDEX	
TITLE	DWG. NO.
GENERAL LAYOUT	1
GENERAL NOTES	2
DECK DETAILS	3
TRANSITION RAIL	4

LEGEND

- (D) – Rehabilitate Deck
- (N) – Install Bridge Number Plates
- (T) – Remove (E) Transition Rail, Install Transition Rail

PRELIMINARY PLAN

REHABILITATION

NOTES:

(E) = Existing
– – – – – = Existing
——— = Proposed

Existing stations, elevations and dimensions are based on 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 dimension and adjust proposed dimensions of the work to fit existing conditions

DESIGNED BY: David McAdoo	CHECKED: Nick Murray	LAYOUT BY: David McAdoo	CHECKED BY: Nick Murray
DRAWN BY: Javier De Leon	CHECKED: David McAdoo	SPECIFICATIONS BY: David McAdoo	P S & E COMPARED: Nick Murray
QUANTITIES BY: David McAdoo	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

TOLOVANA RIVER
ELLIOTT HIGHWAY
GENERAL LAYOUT

BRIDGE NO. 440
DWG. NO. 1

R:\cad\440\440–1 Thu, Dec/16/21 10:07am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NFHWY00420	2022	N2	N4

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBSTRUCTURE	SUPERSTRUCTURE	TOTAL QUANTITY
507.2005.0001	Existing Railing Repair	LS	EA	---	1	1
510.0001.0000	Removal of Steel Bridge Concrete Bridge Deck	SF	SF	---	3,066	3,066
510.2000.0000	Bridge Deck Repair	SF	SF	---	1,390	1,390
525.2001.0000	Polyester Concrete Overlay	LS	SF	---	3,066	3,066
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.

GENERAL NOTES

DESIGN:..... AASHTO LRFD Bridge Design Specifications, 2020 Edition, with latest interim specifications.

LIVE LOAD:..... HL-93

DEAD LOAD:..... Includes 50 psf for all wearing surfaces.

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

CONCRETE:.....Class A Concrete unless otherwise noted, f'c = 4,000 psi

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

PRELIMINARY PLAN

REHABILITATION

ABBREVIATIONS:

℄	= centerline	H.S.	= high strength
ℙ	= plate	Jt.	= joint
&	= and	K	= kips
@	= at	LBS or lb	= pounds
ø	= diameter	LF	= linear foot
±	= approximate	LS	= lump sum
Abut.	= abutment	max.a.	= maximum
Approx.	= approximate	min.b.	= minimum
Alt.	= alternating	n.f.	= near face
Br.	= bridge	No.	= number
btwn.	= between	o.c.	= on center
Brg.	= bearing	pcf	= pounds per cubic foot
CF	= cubic feet	psf	= pounds per square foot
CY	= cubic yard	psi	= pounds per square inch
Dwg.	= drawing	R	= radius
E	= expansion	ROW	= right of way
(E)	= existing	spcs.d.	= space, spaces
EA	= each	Sta.	= station
Elev.	= elevation	SF	= square feet
f'c	= specified concrete compressive strength	SY	= square yard
Ft.	= feet	Std.	= standard
Fy	= yield stress	Symm.	= symmetric
Galv.	= galvanize	Typ.	= typical
		w/	= with

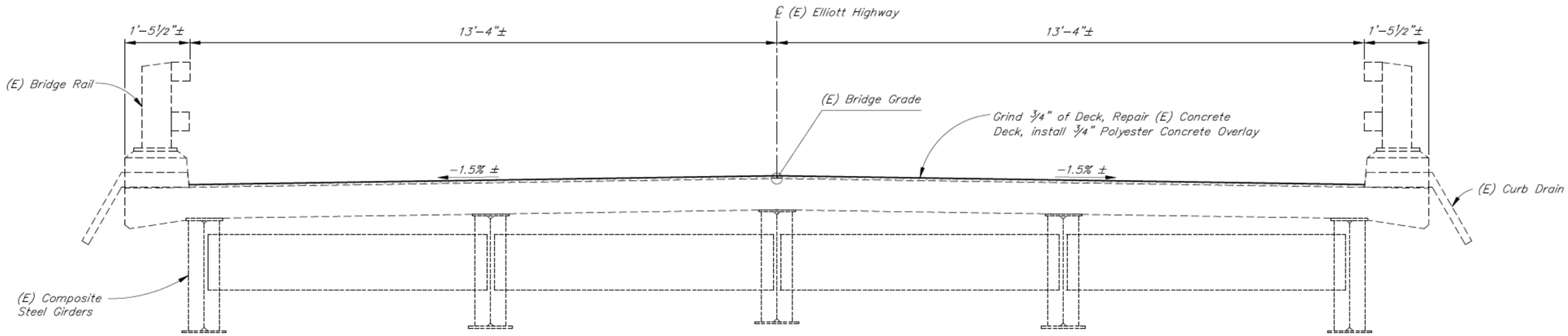
DESIGNED BY: David McAdoo	CHECKED: Nick Murray	REHABILITATION	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975
DRAWN BY: Javier De Leon	CHECKED: David McAdoo		
QUANTITIES BY: David McAdoo	CHECKED: Nick Murray		

TOLOVANA RIVER
ELLIOTT HIGHWAY
GENERAL NOTES

BRIDGE NO. 440
DWG. NO. 2

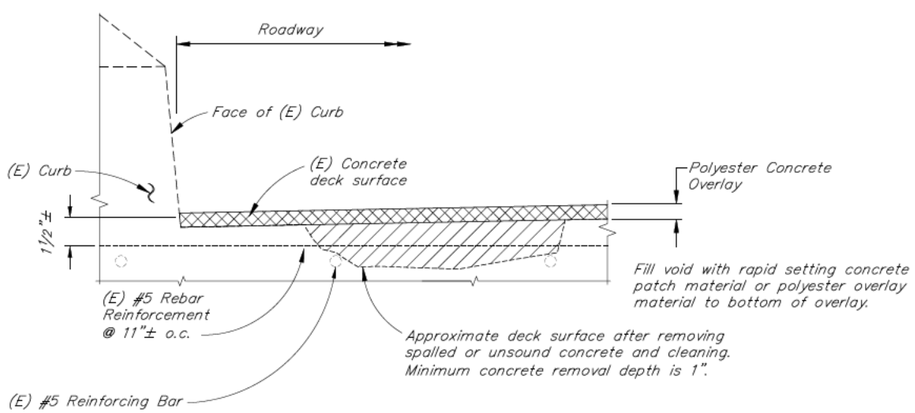
R:\cad\440\440-2 Thu, Dec/16/21 10:07am

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NFHWY00420	2022	N3	N4



TYPICAL SECTION

12 6 0 1 2 3
In. Feet



DECK REPAIR DETAIL

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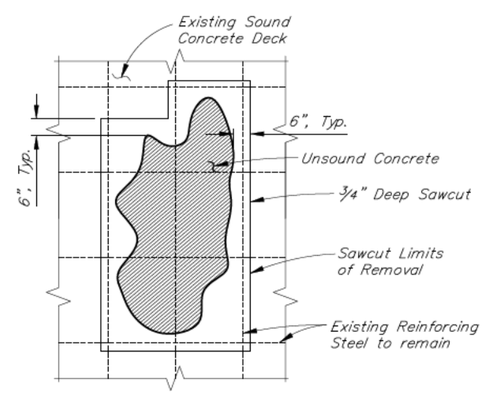
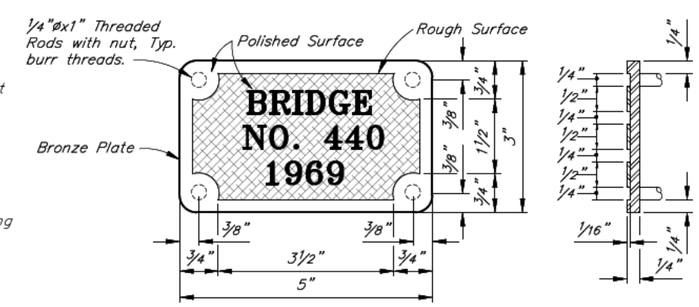


CONCRETE DECK REPAIR PLAN

No Scale



BRONZE BRIDGE NO. PLATE

(1 Required)

NOTES:

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

Verify controlling field dimensions before ordering or fabricating any material

PRELIMINARY PLAN

DESIGNED BY: David McAdoo	CHECKED: Nick Murray		
DRAWN BY: Javier De Leon	CHECKED: David McAdoo		
QUANTITIES BY: David McAdoo	CHECKED: Nick Murray		

REHABILITATION

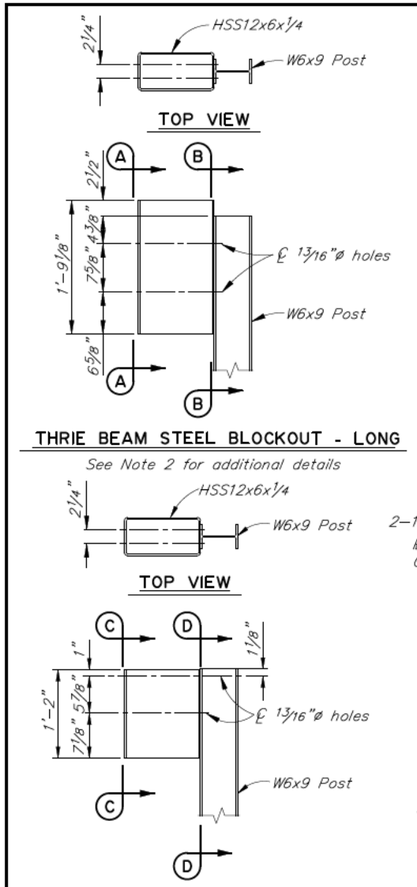
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
BRIDGE SECTION
3132 Channel Drive
Juneau, Alaska 99801
907-465-2975

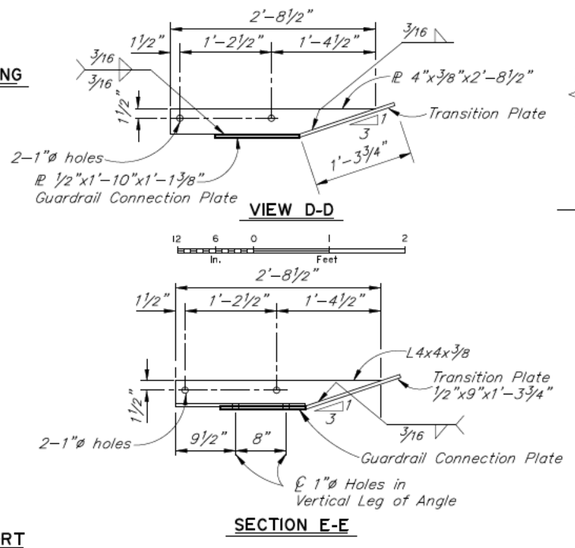
TOLOVANA RIVER
ELLIOTT HIGHWAY
DECK DETAILS

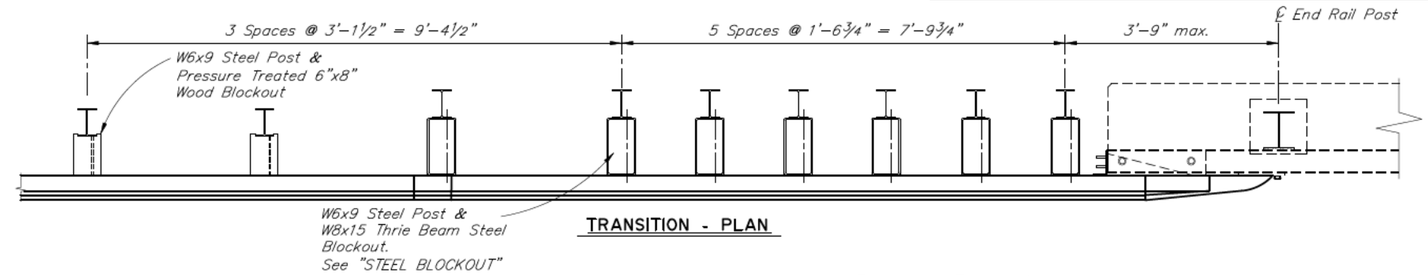
BRIDGE NO. 440
DWG. NO. 3

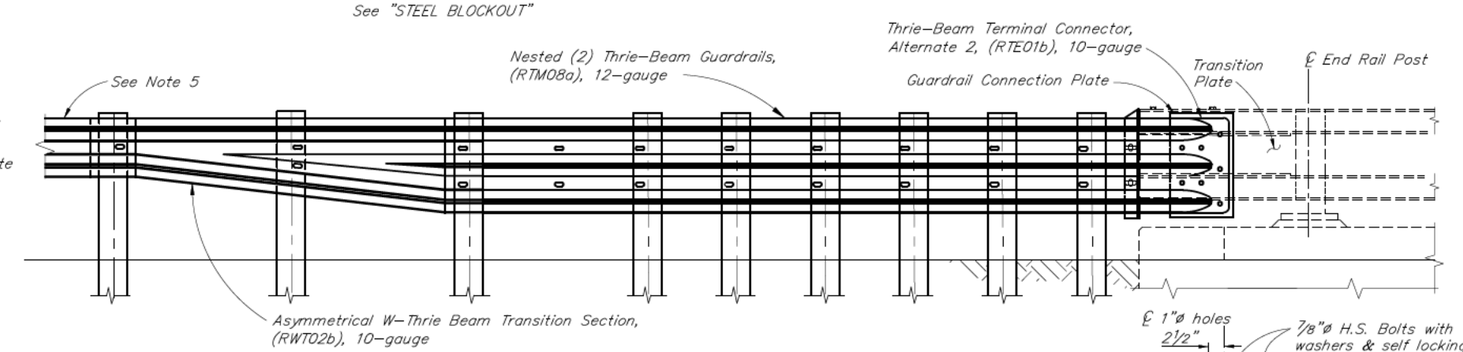
R:\cad\440\440-3 Thu, Dec/16/21 10:07am

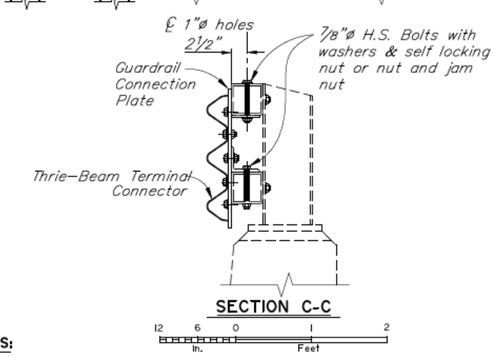
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	NFHWY00420	2022	N4	N4

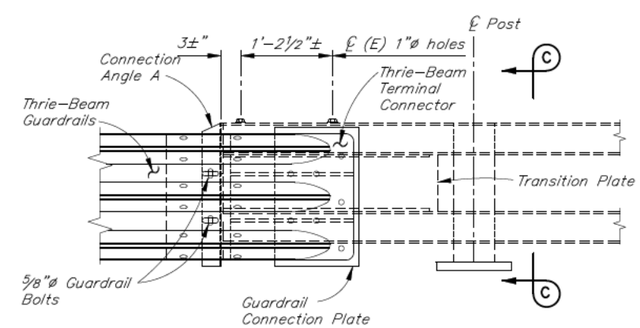










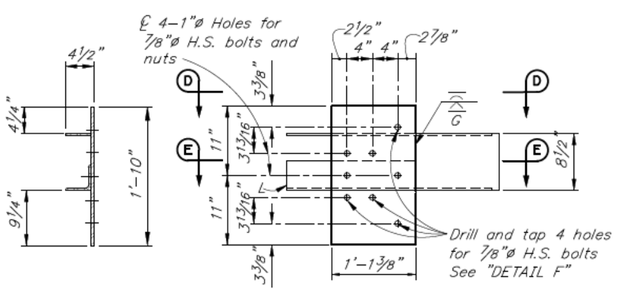


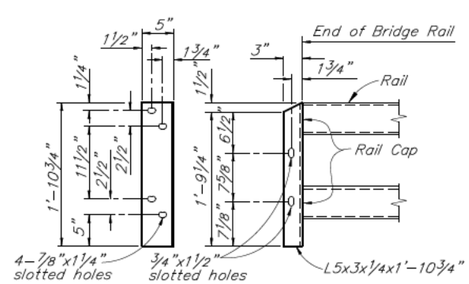
NOTES:

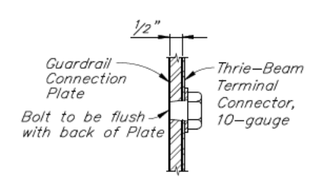
(E) = Existing
= Existing
= Proposed

PRELIMINARY PLAN

1. All guardrail and guardrail connection hardware to conform to AASHTO M 180. US H.S. Bolts conforming to ASTM F3125, Grade A325. All other steel conforms to ASTM A709 Grade 50
2. Conform to G-00, G-05, and G-10 of the Standard Plans for all Thrie Beam Transition details not shown.
3. Lap Thrie Beam Transition elements to prevent snags from oncoming traffic.
4. Provide 4 1/2" horizontal slots in approach guardrails. Adjust guardrail bolts for sliding fit.
5. Match height of existing or new rail elements and end treatments.
6. Thrie Beam transition to follow roadway alignment.
7. Verify controlling field dimensions before ordering or fabricating any material.







No Scale

DESIGNED BY: David McAdoo	CHECKED: Nick Murray
DRAWN BY: Javier De Leon	CHECKED: David McAdoo
QUANTITIES BY: David McAdoo	CHECKED: Nick Murray

REHABILITATION

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

TOLOVANA RIVIER
ELLIOTT HIGHWAY
TRANSITION RAIL

BRIDGE NO. 440
DWG. NO. 4

R:\cad\440\440-4 Thu, Dec/16/21 10:08am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q1	Q11

ESCP GENERAL NOTES:

1. THIS ESCP IS A GENERAL PLAN FOR GUIDING THE DEVELOPMENT OF THE CONTRACTOR'S SWPPP. THE CONTRACTOR IS EXPECTED TO PROVIDE ADDITIONAL DETAILS AND BMPS BASED ON THE CONTRACTORS ACTUAL SCHEDULE AND CONSTRUCTION METHODS, AS REQUIRED TO COMPLY WITH THE 2021 CONSTRUCTION GENERAL PERMIT AND SECTION 641 OF THE PROJECT SPECIFICATIONS.
2. CONSTRUCTION ENTRANCE/EXIT MUST BE ESTABLISHED TO MINIMIZE OFF-SITE IMPACTS.
3. INSTALL PERIMETER CONTROL BMP WHEN WORKING WITHIN 25 FEET OF SURFACE WATERS AND LONG WETLANDS WHERE A 25 FOOT VEGETATIVE BUFFER IS NOT RETAINED.
4. INLET / OUTLET PROTECTION REQUIRED FOR ALL CULVERTS, CROSSING CULVERT PROTECTION IS SHOWN ON THE ESCP SHEETS, DRIVEWAY CULVERTS ARE NOT SHOWN FOR VISUAL CLARIFICATION.
5. AREAS OF DISTURBANCE, TEMPORARY AND PERMANENT STABILIZATION, WILL BE MARKED AS WORK PROCEEDS AND ADDED TO THE LEGEND.
6. REFER TO APPENDIX A OF THE CONTRACT FOR ENVIRONMENTAL PERMIT INFORMATION.
7. REFER TO APPENDIX C OF THE CONTRACT FOR THE ESCP TEMPLATE.

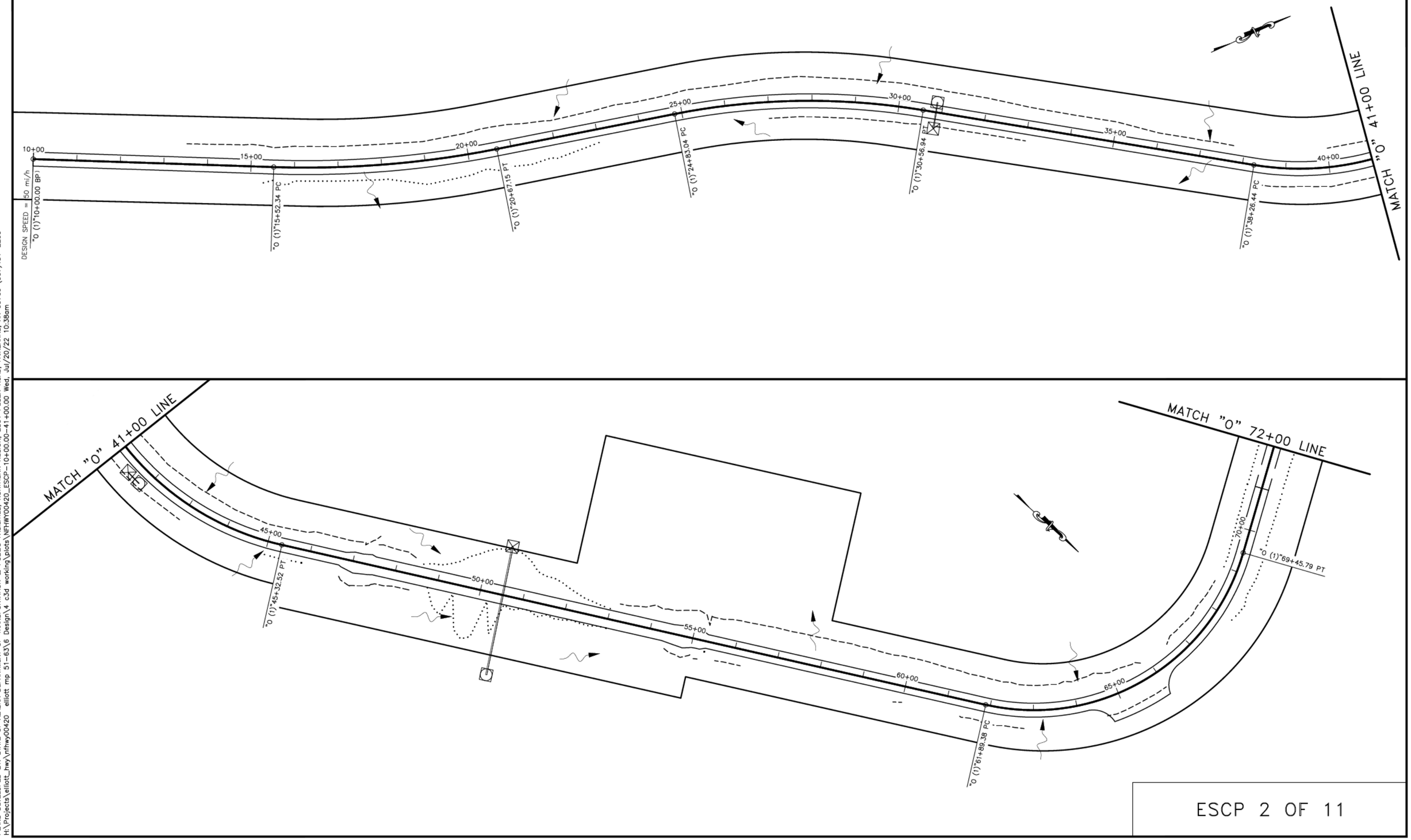
LEGEND:

- WETLANDS
- APPROACH
- CULVERT
- RIPRAP
- REVEGETATIVE EFFORT
- PERIMETER CONTROL
- INLET PROTECTION
- OUTLET PROTECTION
- EXISTING SURFACE FLOW DIRECTION
- CHECK DAMS OR OTHER VELOCITY CONTROL BMPS
- CONSTRUCTION ENTRANCE AND EXIT

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-ESCP Wed, Jul/20/22 10:37am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q2	Q11

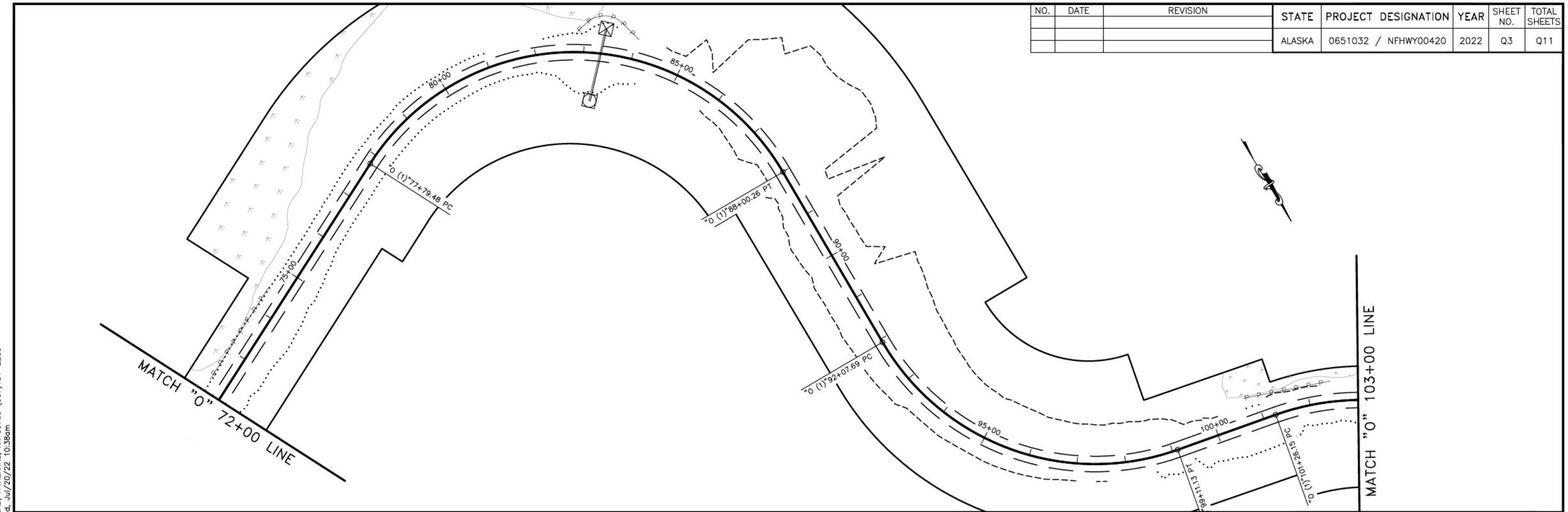


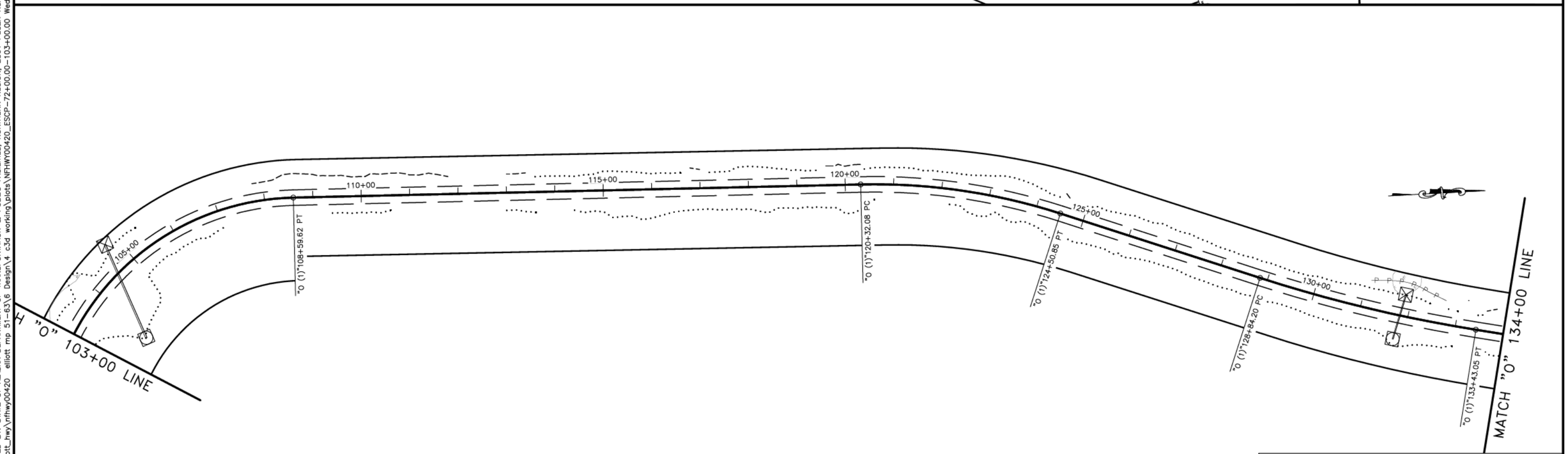
ESCP 2 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nffhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-10+00.00-41+00.00 Wed, Jul/20/22 10:38am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q3	Q11



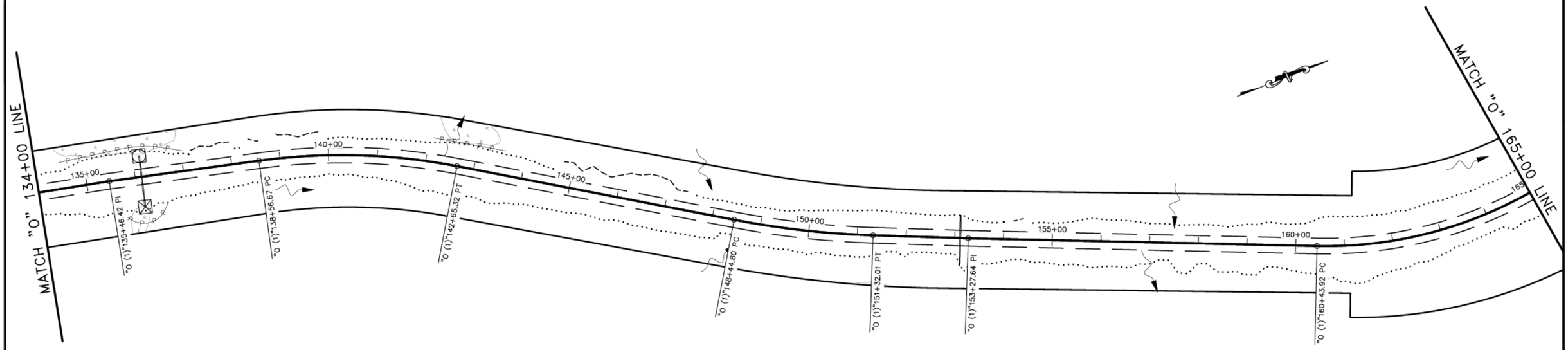


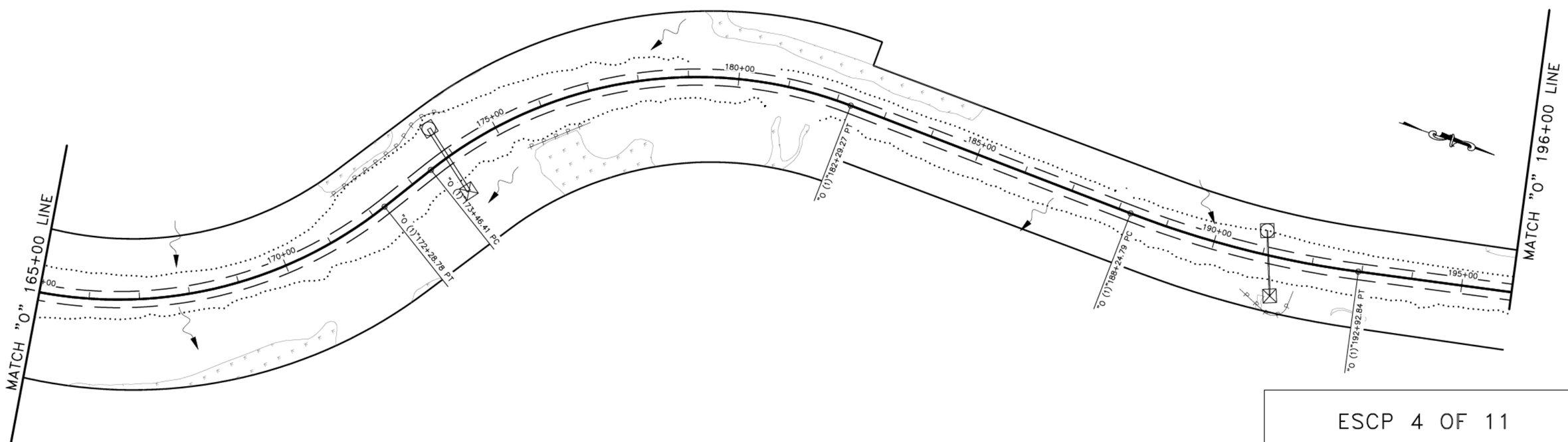
ESCP 3 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-72+00.00-103+00.00 Wed, Jul/20/22 10:38am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q4	Q11





ESCP 4 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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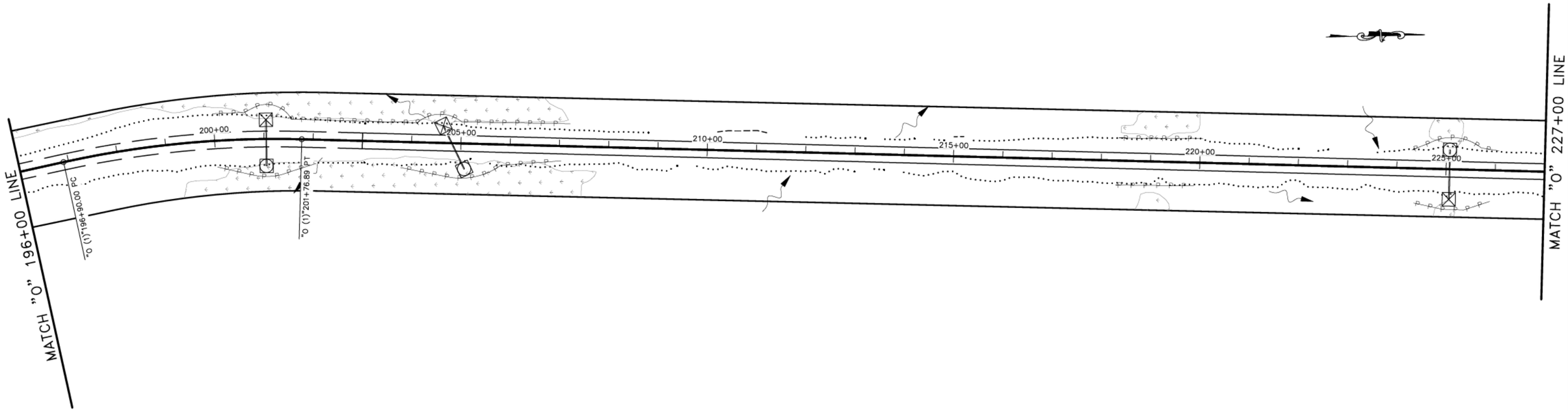
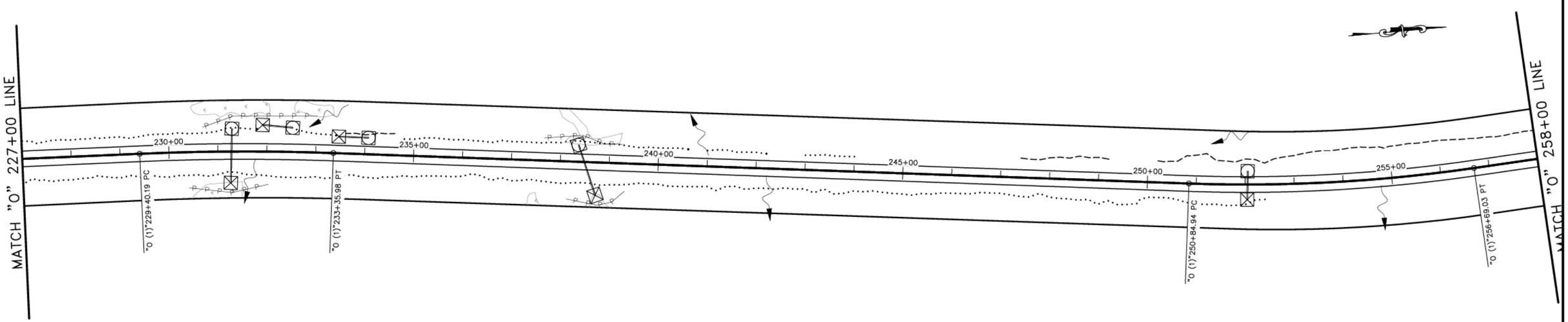
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q5	Q11



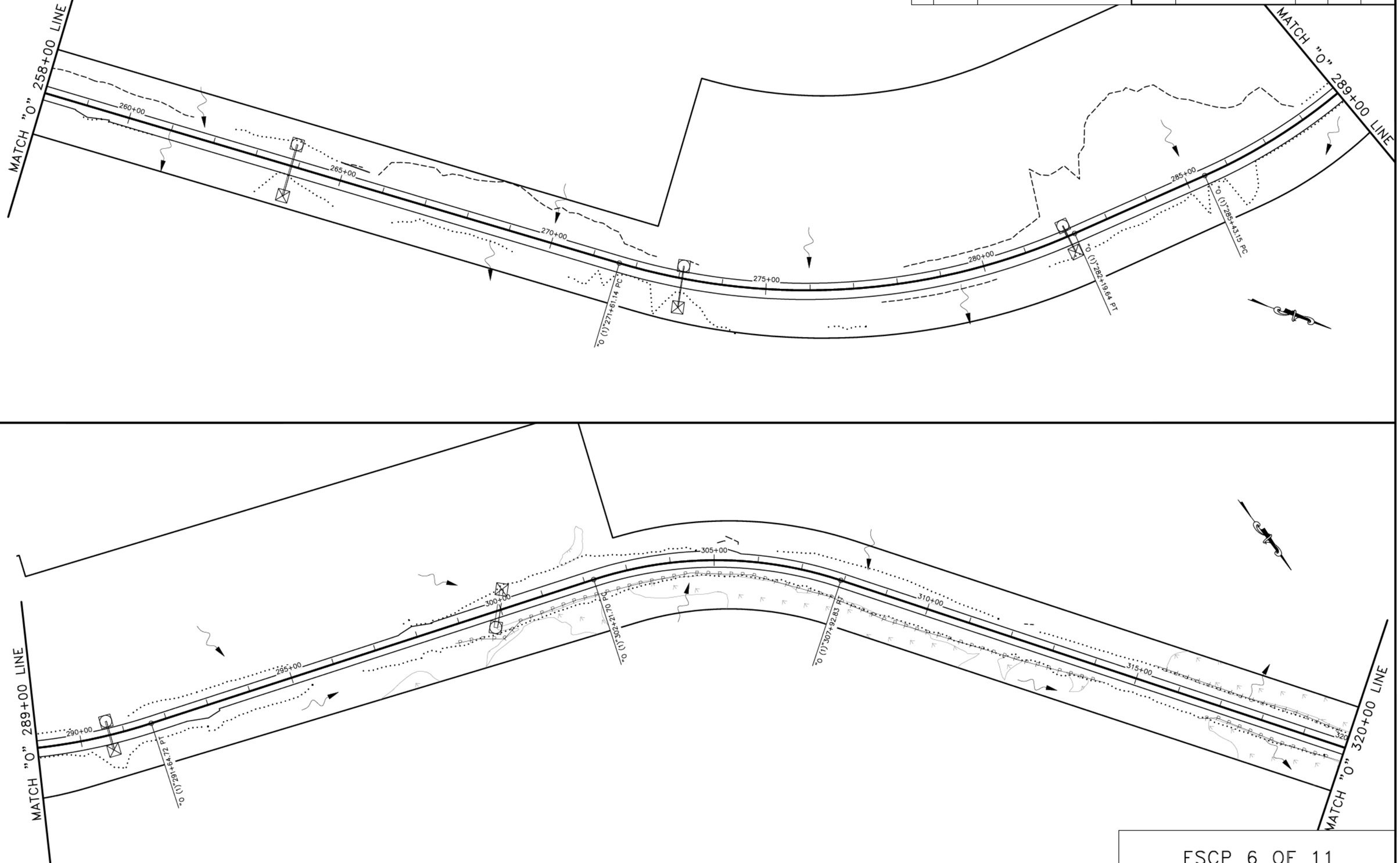


ESCP 5 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-196+00.00-227+00.00 Wed, Jul/20/22 10:39am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q6	Q11



ESCP 6 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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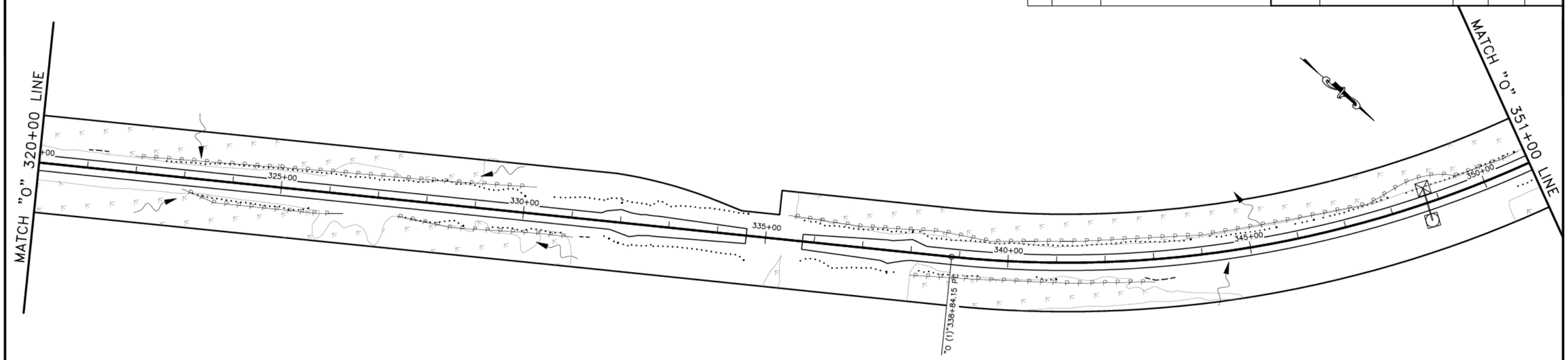
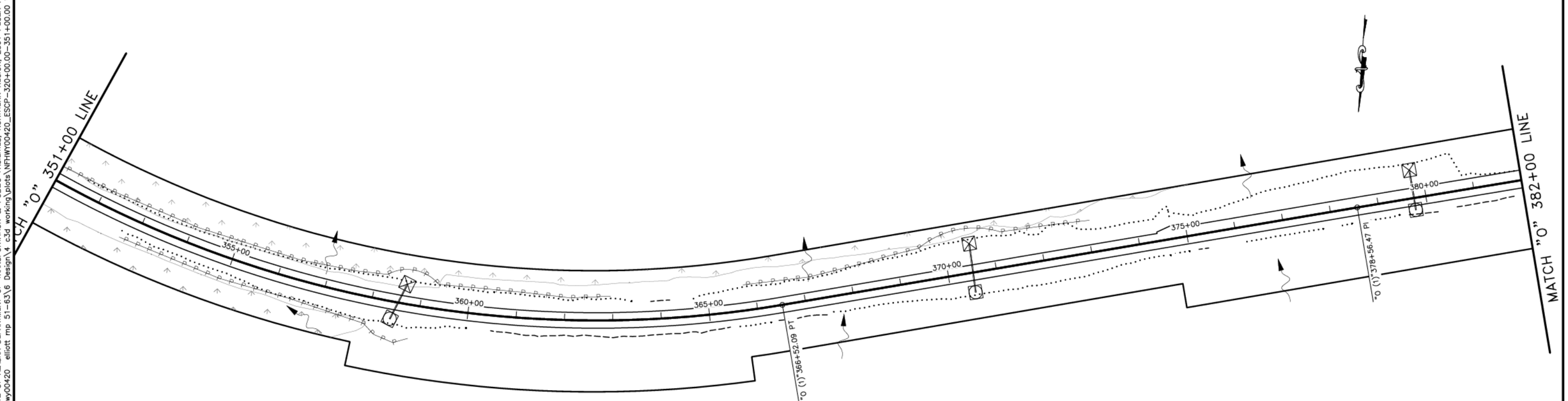
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q7	Q11



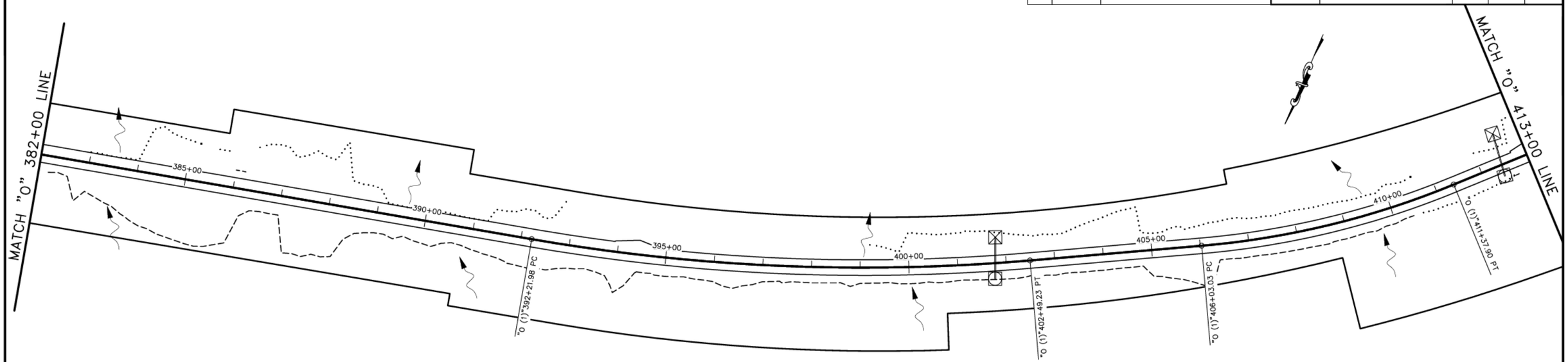


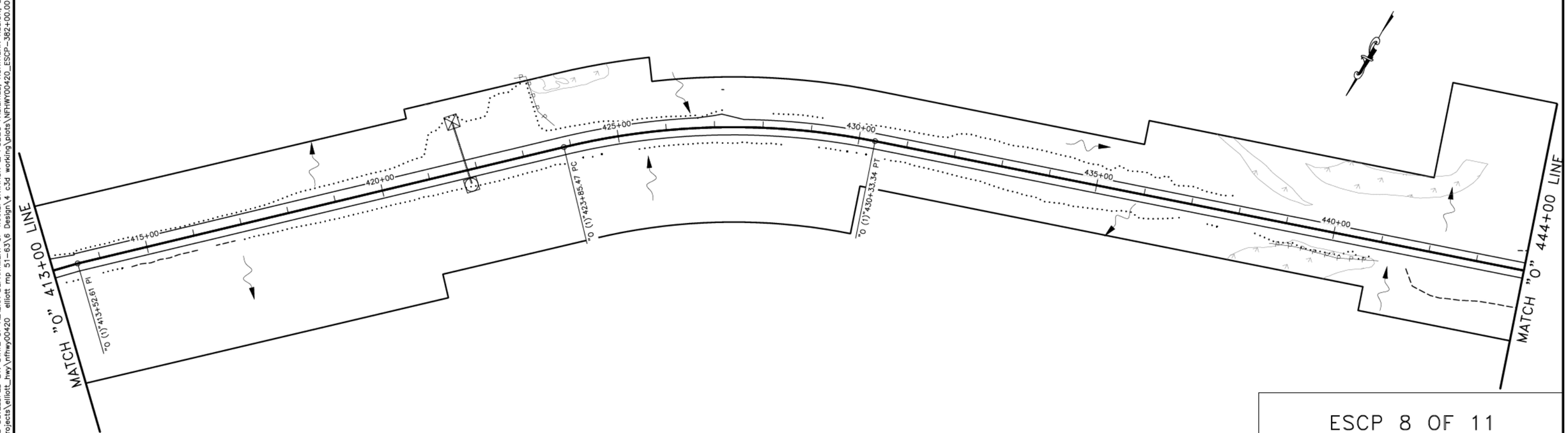
ESCP 7 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-320+00.00-351+00.00 Wed, Jul/20/22 10:40am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q8	Q11



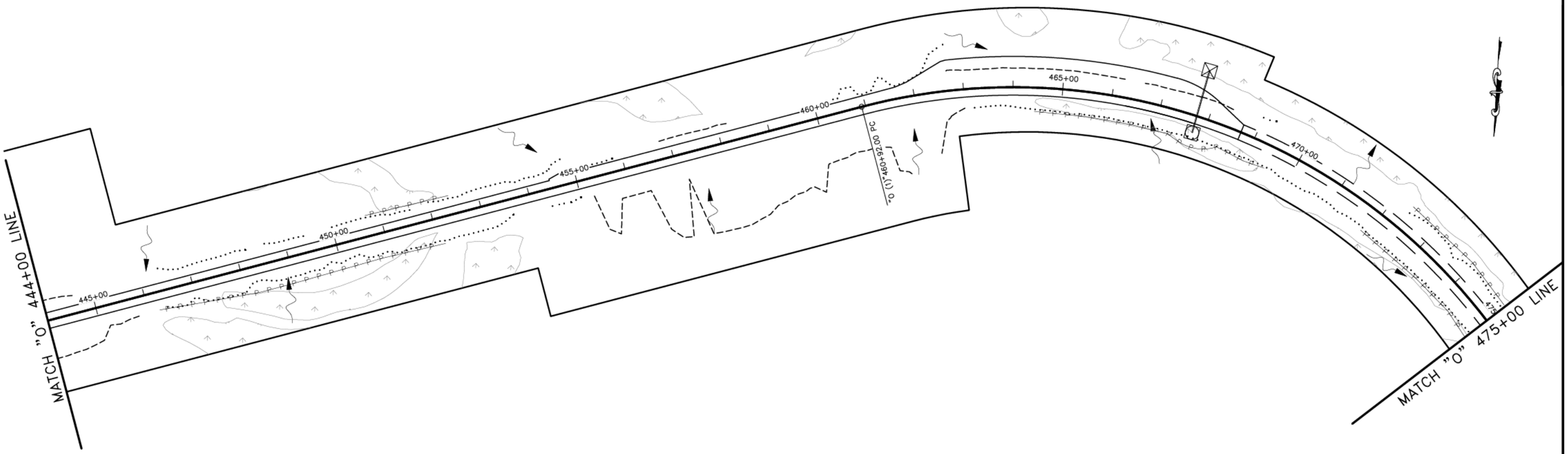


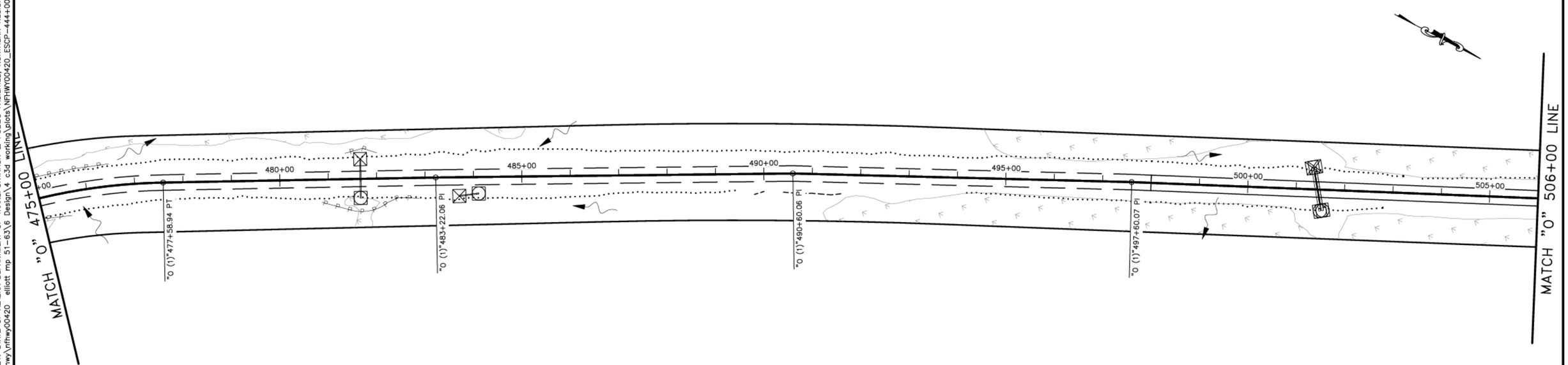
ESCP 8 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-382+00.00-413+00.00 Wed, Jul/20/22 10:41am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q9	Q11



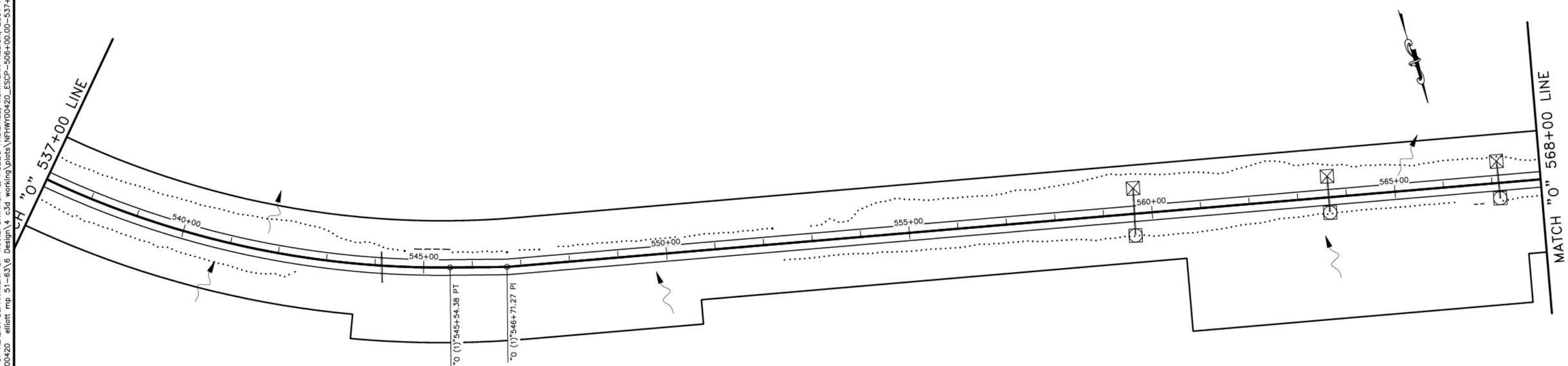


ESCP 9 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\plots\NFHWY00420_ESCP-444+00.00-475+00.00 Wed, Jul/20/22 10:41am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q10	Q11



ESCP 10 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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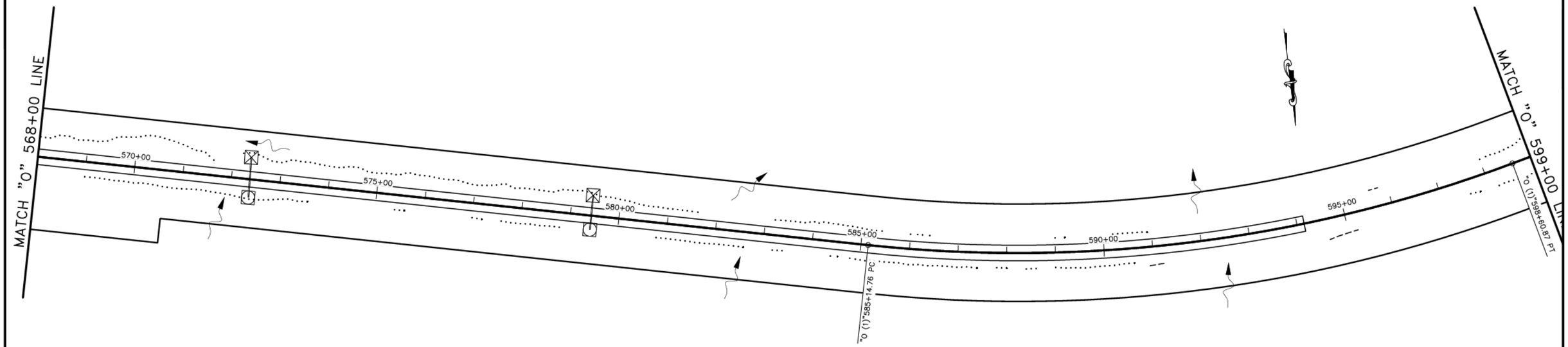
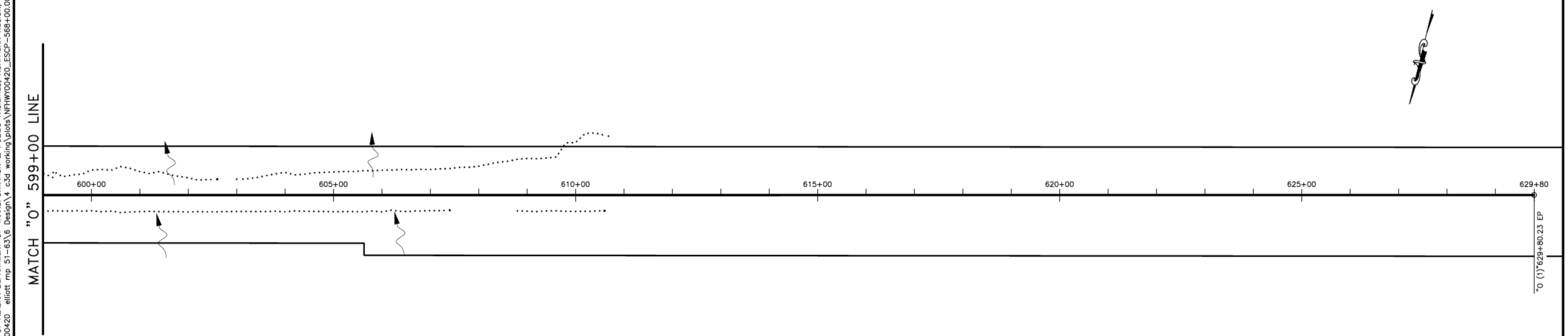
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	Q11	Q11





ESCP 11 OF 11

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
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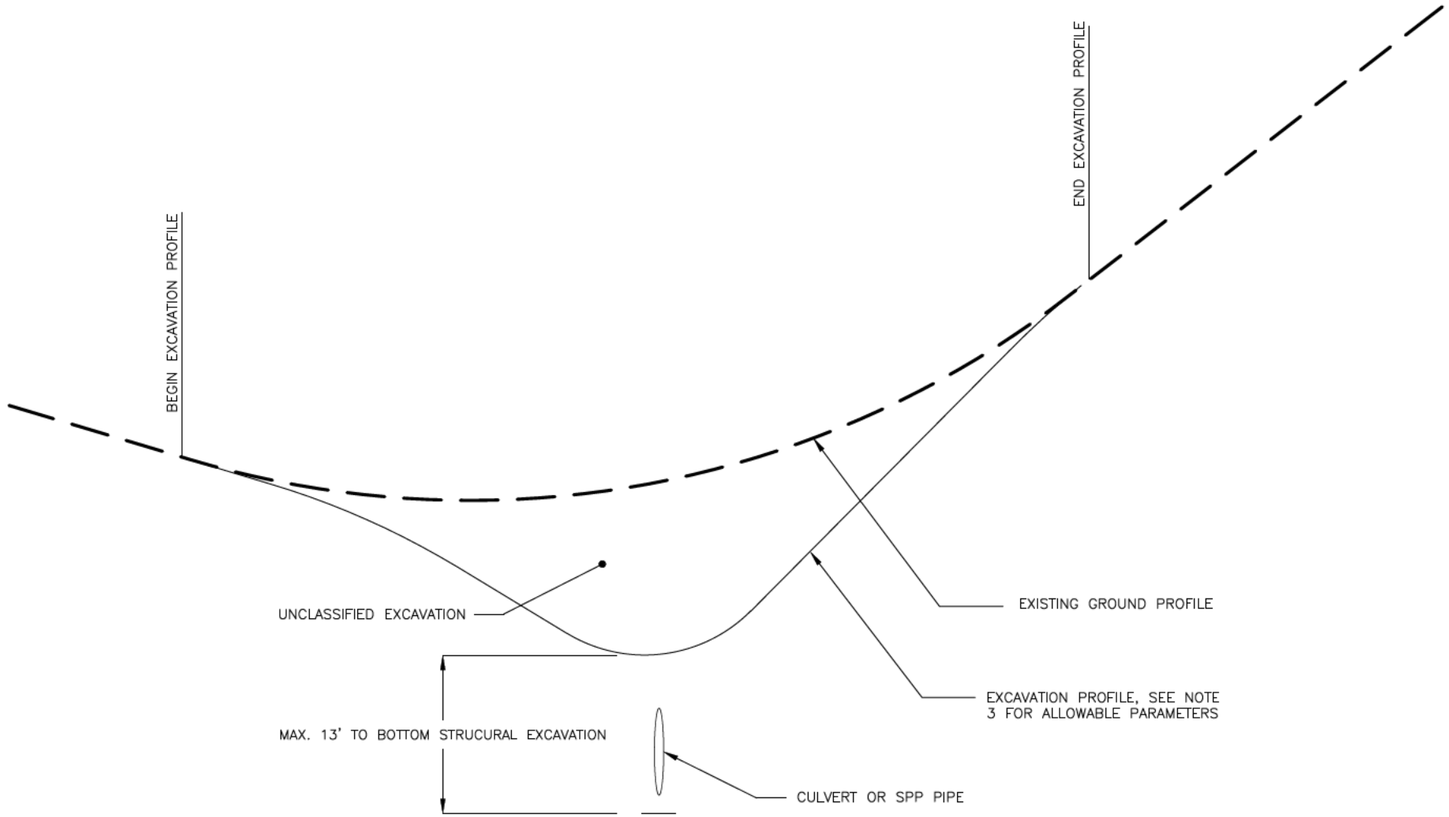
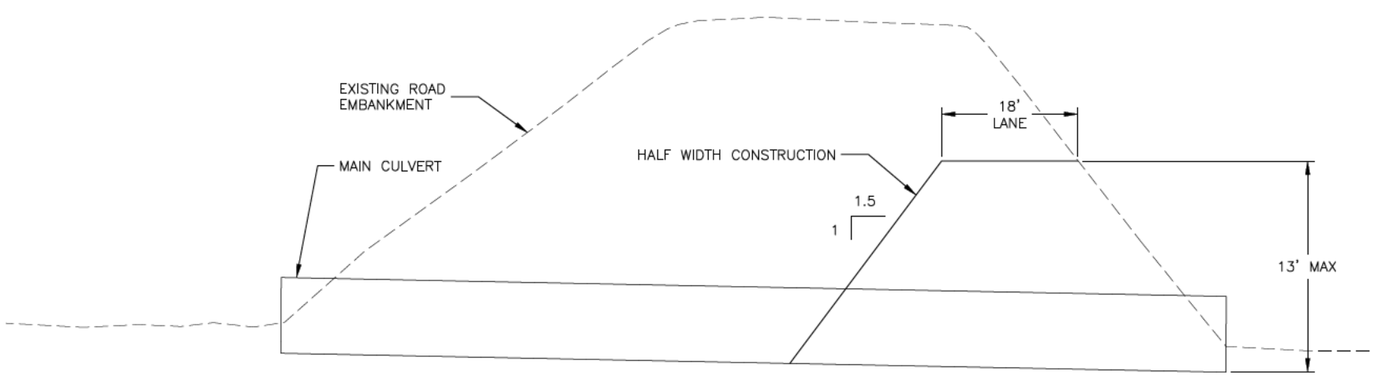
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0651032 / NFHWY00420	2022	T1	T2



HALF WIDTH CONSTRUCTION PROFILE

NTS



HALF WIDTH CONSTRUCTION TYPICAL SECTION

TYPICAL SECTION: HALF WIDTH

NTS

HALF WIDTH CONSTRUCTION NOTES:

1. THE DRAWINGS SHOWN ON THIS SHEET DEPICT THE SHAPE OF A TEMPORARY ROAD INTENDED TO MAINTAIN ONE WAY TRAFFIC DURING HALF WIDTH CONSTRUCTION OF DEEP CULVERTS. TEMPORARY ROADS WILL BE USED AT LOCATIONS WHERE THE WORK TO REMOVE OR INSTALL DRAINAGE FEATURES EXCEEDS 13 FEET BELOW EXISTING GROUND. SEE SHEET C1 FOR CULVERTS WHERE HALF WIDTH CONSTRUCTION WILL BE NEEDED.

2. SUBMIT PROPOSED TEMPORARY ROAD PLANS, AND TRAFFIC CONTROL PLANS, TO THE ENGINEER PRIOR TO CONSTRUCTION OF THE TEMPORARY ROAD.

3. TEMPORARY ROADS SHALL CONFORM TO THE FOLLOWING PARAMETERS, WHICH ARE SUBJECT TO MINOR CHANGES MADE IN THE FIELD, AT THE DIRECTION OF THE ENGINEER.
   3.1. MAXIMUM ALLOWABLE VERTICAL GRADE: 11%
   3.2. CREST CURVE K VALUE: K=19
   3.3. SAG CURVE K VALUE: K=37
   3.4. 2 FEET OF COVER MAINTAINED OVER ALL DRAINAGE FEATURES DURING CONSTRUCTION

4. EXCAVATION FOR THE TEMPORARY ROAD IS MEASURED AND PAID BY 203.0003 UNCLASSIFIED EXCAVATION.

TRAFFIC CONTROL HALF WIDTH DETAILS

PLANS DEVELOPED BY: STATE OF ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES, NORTHERN REGION, 2301 PEGER ROAD, FAIRBANKS, AK 99709 (907)451-2200
H:\Projects\elliott_hwy\nfhwy00420 elliott mp 51-63\6 Design\4 c3d working\drawings\traffic-control-1-T2 Wed, Jul/20/22 10:42am