STATE OF ALASKA

DEPARTMENT OF NATURAL RESOURCES

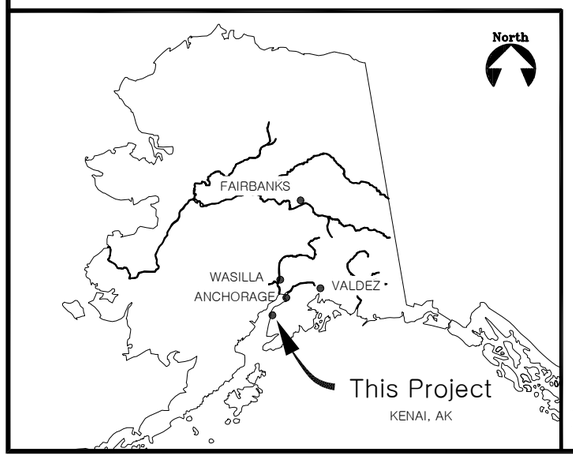
DIVISION OF PARKS
AND
OUTDOOR RECREATION

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION

PROJECT NO.
CFHWY00830

In Cooperation with the Alaska Department of Transportation
& Public Facilities

Vicinity Map



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The following Division of Parks & Outdoor Rec. standard drawings apply to this project: NONE:
The following D.O.T.(Highways) standard drawings apply to this project: D-04.22, D06.10, D-07.00, D-30.11, D-31.01, G-00.05, M-25.00, S-00.12, S-01.02, S-20.11, S-23.00, S-30.05, S-31.02, T-20.04, T-21.03, T-22.04

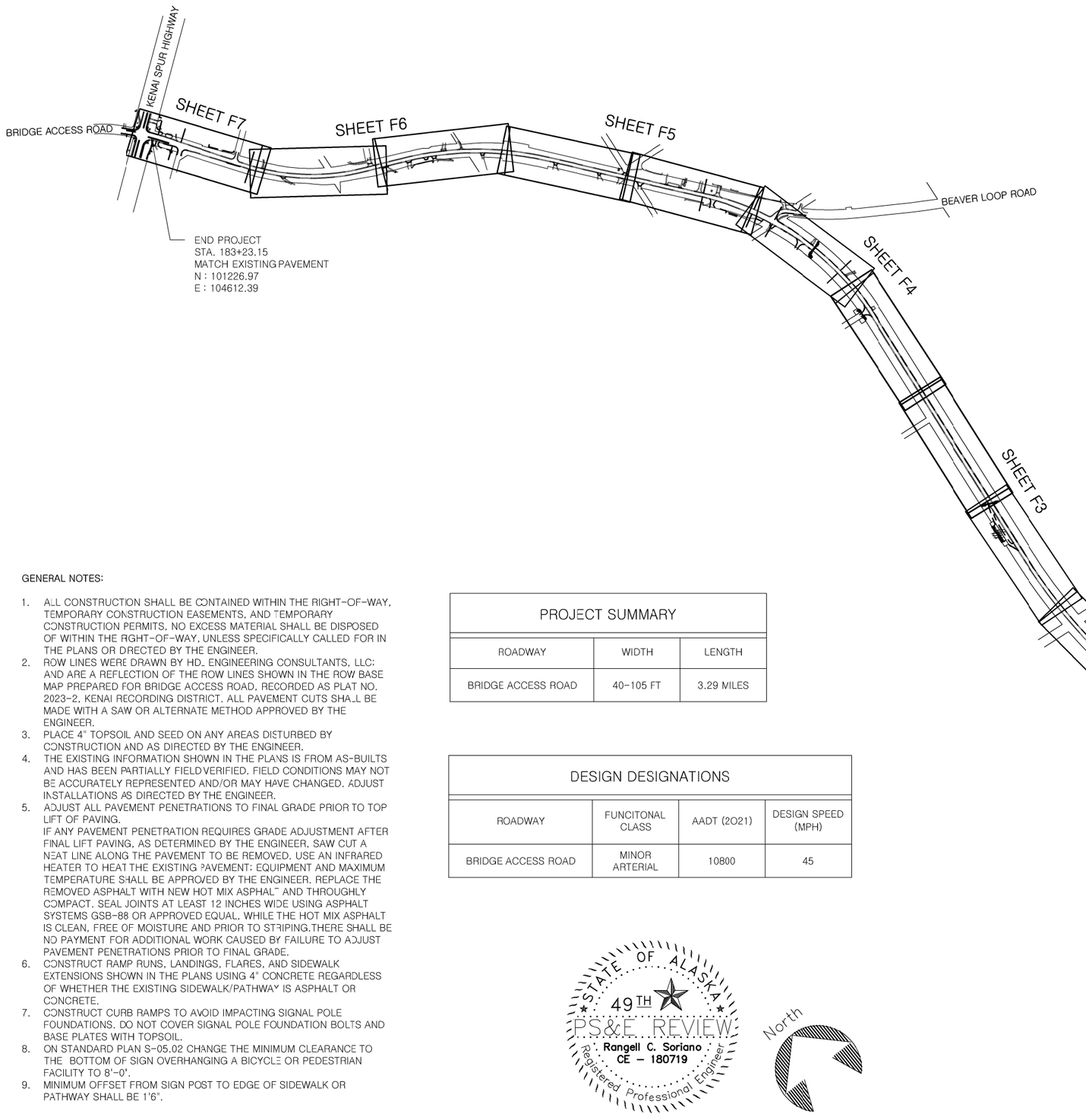
Plans developed by:
STATE OF ALASKA
Department of Natural Resources
Division of Parks & Outdoor Recreation
550 W 7th Ave. Suite 1340, Anchorage, AK 99501

Recommended:

Rys Miranda, P.E. — Date
Chief, Design and Construction

Approved:

Regional — Date
Preconstruction Engineer, Alaska DOT&PF



ABBREVIATIONS:

AADT = AVERAGE ANNUAL DAILY TRAFFIC
A.A. = ALGEBRAIC DIFFERENCE
ADA = AMERICANS WITH DISABILITIES ACT
AMATS = ANCHORAGE METROPOLITAN AREA TRANSPORTATION SOLUTIONS
DOT&PF = ALASKA DEPAFTMENT OF TRANSPORTATION & PUBLIC FACILITIES
APX./APPROX = APPROXIMATE
AVE = AVENUE
BLVD = BOULEVARD
BM = BENCHMARK
BOP = BEGINNING OF PROJECT
BVCE = BEGINNING OF VERTICAL CURVE ELEVATION
BVCS = BEGINNING OF VERTICAL CURVE STATION
CB = CATCH BASIN
C/L, C = CENTERLINE
CS = CONTINGENT SUM
CY = CUBIC YARD
D = DASH. DISTANCE
DIA = DIAMETER
DR = DRIVE
DW = DETECTABLE WARNING
E = EAST/EASTING
ELEC = ELECTRICAL
ELEV. = ELEVATION
EOG = EDGE OF GRAVEL
EOP = END OF PROJECT
EOP = EDGE OF PAVEMENT
EOS = EDGE OF SHOULDER
EVCE = END OF VERTICAL CURVE ELEVATION
EVCS = END OF VERTICAL CURVE STATION
ESMT = EASEMENT
FG – FINAL/FINISHED GRADE
FL = FLOW LINE
FOC = FACE OF CURB
FT = FEET
F&I = FURNISH & INSTALL
GB = GRADE BREAK
GS = GRAVITY SEWER
GV = GATE VALVE
HWY = HIGHWAY
IOW = IN ACCORDANCE WITH
INV = INVERT
LF = LINEAR FOOT (FEET)
LOC = LIP OF CURB
LT = LEFT
LS = LUMP SUM
LVC = LENGTH OF VERTICAL CURVE
MAX = MAXIMUM
MH = MANHOLE
MIN = MINIMUM
MMA = METHYL METHACRYALTE
MPH = MILES PER HOUR
N = NORTH/NORTHING
N.T.S. = NOT TO SCALE
N/A = NOT APPLICABLE
OG = ORIGINAL GROUND (ELEV.)
PC = POINT OF CURVATURE
PCC = PORTLAND CEMENT CONCRETE
PI = POINT OF INTERSECTION
PL = PROPERTY LINE
PP = POWER POLE
PT = POINT OF TANGENCY
PC = POINT OF CURVATURE
R = RADIUS (LENGTH)
REQ'D = REQUIRED
RD = ROAD
RP = RADIUS POINT
RT = RIGHT
ROW = RIGHT-OF-WAY
S = SOUTH
SD = STORM DRAIN
SE = SLOPE EASEMENT
SF = SQUARE FEET
SHLDR = SHOULDER
SI = STREET INTERSECTION
ST = STREET
STA = STATION
T = TANGENT (LENGTH)
TBC = TOP BACK OF CURB
TBM = TEMPORARY BENCHMARK
TCP = TEMPORARY CONSTRUCTION PERMIT
TELE = TELEPHONE
TL = TRANSITION LENGTH
TYP = TYPICAL
V.C. = VERTICAL CURVE
V.P.C. = VERTICAL POINT OF CURVATURE
V.P.I. = VERTICAL POINT OF INTERSECTION
V.P.T. = VERTICAL POINT OF TANGENCY
W = WEST, WHITE

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY, TEMPORARY CONSTRUCTION EASEMENTS, AND TEMPORARY CONSTRUCTION PERMITS. NO EXCESS MATERIAL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.
2. ROW LINES WERE DRAWN BY HDL ENGINEERING CONSULTANTS, LLC: AND ARE A REFLECTION OF THE ROW LINES SHOWN IN THE ROW BASE MAP PREPARED FOR BRIDGE ACCESS ROAD, RECORDED AS PLAT NO. 2023-2, KENAI RECORDING DISTRICT. ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW OR ALTERNATE METHOD APPROVED BY THE ENGINEER.
3. PLACE 4" TOPSOIL AND SEED ON ANY AREAS DISTURBED BY CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.
4. THE EXISTING INFORMATION SHOWN IN THE PLANS IS FROM AS-BUILTS AND HAS BEEN PARTIALLY FIELD VERIFIED. FIELD CONDITIONS MAY NOT BE ACCURATELY REPRESENTED AND/OR MAY HAVE CHANGED. ADJUST INSTALLATIONS AS DIRECTED BY THE ENGINEER.
5. ADJUST ALL PAVEMENT PENETRATIONS TO FINAL GRADE PRIOR TO TOP LIFT OF PAVING.
   IF ANY PAVEMENT PENETRATION REQUIRES GRADE ADJUSTMENT AFTER FINAL LIFT PAVING, AS DETERMINED BY THE ENGINEER, SAW CUT A NEAT LINE ALONG THE PAVEMENT TO BE REMOVED. USE AN INFRARED HEATER TO HEAT THE EXISTING PAVEMENT: EQUIPMENT AND MAXIMUM TEMPERATURE SHALL BE APPROVED BY THE ENGINEER. REPLACE THE REMOVED ASPHALT WITH NEW HOT MIX ASPHALT AND THROUGHLY COMPACT. SEAL JOINTS AT LEAST 12 INCHES WIDE USING ASPHALT SYSTEMS GSB-88 OR APPROVED EQUAL. WHILE THE HOT MIX ASPHALT IS CLEAN, FREE OF MOISTURE AND PRIOR TO STRIPING.THERE SHALL BE NO PAYMENT FOR ADDITIONAL WORK CAUSED BY FAILURE TO ADJUST PAVEMENT PENETRATIONS PRIOR TO FINAL GRADE.
6. CONSTRUCT RAMP RUNS, LANDINGS, FLARES, AND SIDEWALK EXTENSIONS SHOWN IN THE PLANS USING 4" CONCRETE REGARDLESS OF WHETHER THE EXISTING SIDEWALK/PATHWAY IS ASPHALT OR CONCRETE.
7. CONSTRUCT CURB RAMPS TO AVOID IMPACTING SIGNAL POLE FOUNDATIONS. DO NOT COVER SIGNAL POLE FOUNDATION BOLTS AND BASE PLATES WITH TOPSOIL.
8. ON STANDARD PLAN S-05.02 CHANGE THE MINIMUM CLEARANCE TO THE BOTTOM OF SIGN OVERHANGING A BICYCLE OR PEDESTRIAN FACILITY TO 8'-0".
9. MINIMUM OFFSET FROM SIGN POST TO EDGE OF SIDEWALK OR PATHWAY SHALL BE 1'6".

PROJECT SUMMARY		
ROADWAY	WIDTH	LENGTH
BRIDGE ACCESS ROAD	40-105 FT	3.29 MILES

DESIGN DESIGNATIONS			
ROADWAY	FUNCITONAL CLASS	AADT (2021)	DESIGN SPEED (MPH)
BRIDGE ACCESS ROAD	MINOR ARTERIAL	10800	45

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

North

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

ABBREVIATIONS, SHEET LAYOUT AND GENERAL NOTES

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
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OF XX SHEETS

ROADWAY

	EXISTING	PROPOSED
EDGE OF PAVEMENT		
LIMIT OF CUT SLOPE & FILL SLOPE		CUT / FILL
GRAVEL EDGE		
SIDEWALK AND PATH/TRAIL		
CONCRETE CURB & GUTTER		
CONCRETE CURB CUT		
PARALLEL CURB RAMP PERPENDICULAR CURB RAMP		
DIRECTIONAL CURB RAMP & MID–BLOCK CURB RAMP		
DETECTABLE WARNING TILE		
BRIDGE		
TUNNEL		
GUARDRAIL		
END & PARALLEL END SECTIONS		
ROADWAY OBLITERATION		
FENCE		
STONE FENCE		
NOISE BARRIER		
RETAINING WALL		
HEADWALL & WINGWALL		
BOTTOM OF DITCH		
SPECIAL DITCH		
FLAT BOTTOM DITCH		
BERM		
RIPRAP		
BOULDER OR BOULDERS		
PRIVATE SIGN, MAILBOX	LPMB	MB
POST, BOLLARD		

UTILITIES

	EXISTING	PROPOSED
STORM DRAIN	SD	
STORM DRAIN MANHOLE, CLEANOUT	SD, CO	SD, CO
CURB INLET CATCH BASIN FIELD INLET CATCH BASIN	FI	FI
PIPE CULVERT WITH END SECTION		
SANITARY SEWER	SS	SS
SANITARY SEWER MANHOLE, CLEANOUT	SS, CO	SS, CO
SEPTIC VENT, SEWER SERVICE CONNECTION	S	
WATER	W	W
FIRE HYDRANT, VALVE OR RISER		
WELL, WATER SERVICE CONNECTION	W	
NATURAL GAS	G	
OIL OR GASOLINE PIPELINE	OIL	
TANKS (ABOVE GROUND, UNDERGROUND)		
ELECTRIC	OE (OVERHEAD) UE (UNDERGROUND) OE|OT (OVERHEAD)	
UTILITY POLE, POLE WITH LUMINAIRE		
GUY POLE, GUY WIRE ANCHOR	GP	
TRANSMISSION TOWER (WOOD, STEEL)	W, S	
ELECTRIC PEDESTAL, TRANSFORMER	E	
ELECTRIC MANHOLE, METER	E	
ELECTRIC OUTLET, LANDSCAPE LIGHT		
TELEPHONE	OT (OVERHEAD) UT (UNDERGROUND) UT|UTV (UNDERGROUND)	
TELEPHONE MANHOLE, PEDESTAL		
FIBER OPTIC	OFO (OVERHEAD) FO (UNDERGROUND)	
FIBER OPTIC MANHOLE	FO	
CABLE TV	OTV (OVERHEAD) UTV (UNDERGROUND)	
CABLE TV PEDESTAL, SATELLITE DISH		
UNDERGROUND DUCT, UTILIDOR (ELECTRIC, TELEPHONE, FIBER OPTIC)		
VENT		

TOPOGRAPHY

	EXISTING	EXISTING	PROPOSED
LAKE OR POND, WETLANDS	LAKE/POND	CONTOUR, MAJOR OR MINOR	520
TREE (CONIFER/DECIDUOUS) TREELINE (EDGE OF VEGETATION)		DRAINAGE FLOW	
PLANTER	P	CREEK (CENTERLINE)	
BUILDING OR FOUNDATION		RIVER (EDGE OF WATER)	

TRAFFIC

	EXISTING	PROPOSED
LOAD CENTER		
STATE TRAFFIC, MOA TRAFFIC, & BEACON CONTROLLER ARROW INDICATES DOOR LOCATION		
TYPE 1A, II, III, IV JUNCTION BOX		##
FIBER OPTIC VAULT	F/O	F/O ##
ELECTROLIER		
HIGHTOWER		HT#
SIGNAL POLE WITH MASTARM		14
PEDESTRIAN PUSH BUTTON & SIGNAL		
VEHICULAR SIGNAL		
VEHICULAR SIGNAL LEFT & RIGHT		
OPTICAL, CAMERA, RADAR, AND GPS DETECTOR		CAM, RAD, GPS
LOOP DETECTOR		###
COMMUNICATION ANTENNA		
MASTARM BEACON		
RURAL & SCHOOL ZONE BEACON		
LOOP DETECTOR CONDUIT		
SIGNAL CONDUIT	TR	TR
LIGHTING CONDUIT	LTG	LTG
SIGNAL & LIGHTING CONDUIT	T/L	T/L
CONDUIT BORING		
CONDUIT SIZE IN INCHES	2"–3C4	2"–1–3C4 CKT BA12 CKT BA13
INTERCONNECT	I/C	I/C
SIGN POST		##

PAVEMENT MARKINGS

	PROPOSED
TRAFFIC PROJECT CENTERLINE	
8" & 4" WHITE SOLID STRIPE	8"W, 4"W
4" WHITE SKIP STRIPE 10' STRIPES AND 30' SPACES	4"W SKIP
8" WHITE LANE GUIDE SKIP LANE CONTINUATION OR TURN SKIP 1' STRIPES AND 3' SPACES	8"W GUIDE SKIP
8" & 4" YELLOW SOLID STRIPE	8"Y, 4"Y
4" YELLOW SKIP STRIPE 10' STRIPES AND 30' SPACES	4"Y SKIP
STRIPING CHANGE STATION INTERVAL	+20
2' CROSSWALK OR STOPBAR	24"W (TYP)
LADDER CROSSWALK LAYOUT 2' WIDE RUNGS WITH 2' SPACES ALIGNED TO AVOID TIRE PATHS	10', 12', (2)–4"Y 3" APART, VARIES, 18"Y @ 45°
TYPICAL PAINTED MEDIAN	

RIGHT–OF–WAY

	RECOVERED	SET THIS PROJECT
FEDERAL GOV'T SURVEY MONUMENT		
GOV'T CONTROL STATION		
PRIMARY MONUMENT (BRASS/AL CAP)		
MISC SECONDARY CORNER		
PRIMARY CENTERLINE MONUMENT		
SECONDARY CENTERLINE MONUMENT		
RANDOM CONTROL MONUMENT	RCM	
PRIMARY GPS CONTROL POINT	GPS	
HORIZONTAL CONTROL POINT	CP	
SECONDARY CONTROL POINT	SCP	
VERTICAL BENCHMARK	BM	
TEMPORARY BENCHMARK	TBM	
TOWNSHIP AND RANGE LINES	T13N, T12N, R2W, R3W	
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
CORPORATE or CITY LIMITS		
EXISTING RIGHT–OF–WAY		
RIGHT–OF–WAY OR EASEMENT REQUIRED		
PROJECT RIGHT–OF–WAY LINE		
EXISTING RIGHT–OF–WAY EASEMENT		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
EXISTING UTILITY EASEMENT		
PROPOSED UTILITY EASEMENT		
EXISTING CENTERLINE		
RAILROAD CENTERLINE		
TEMPORARY CONSTRUCTION EASEMENT		
TEMPORARY CONSTRUCTION PERMIT		

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PROJECT No. CFHWY00830

LEGEND

ALASKA STATE PARKS

STATE OF ALASKA 49TH
PS&E REVIEW
Rangell Soriano
CE – 180719
Registered Professional Engineer

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

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OF XX SHEETS

SURVEY CONTROL TO BE COMPLETED BY AKDOT&PF SURVEY SECTION PRIOR TO ADVERTISEMENT

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

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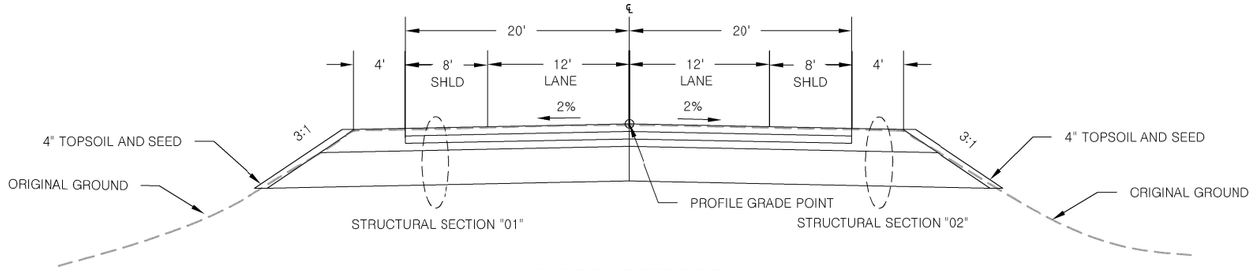
SURVEY CONTROL

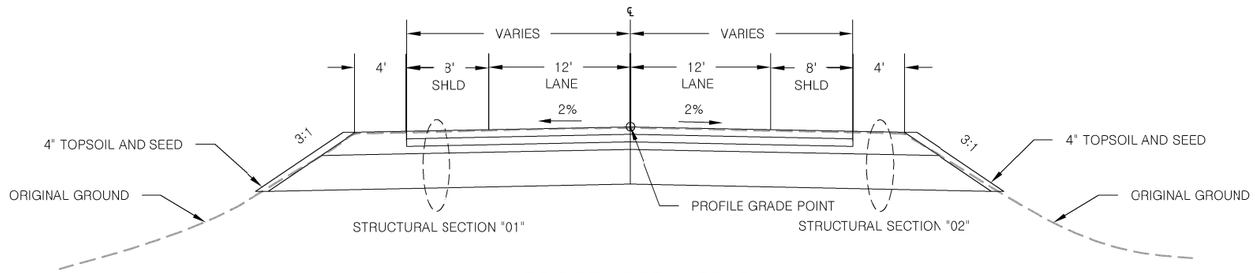
PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
A4
OF XX SHEETS



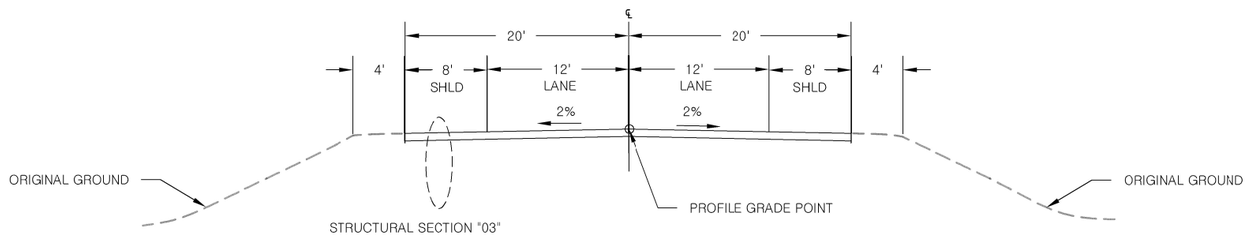
BRIDGE ACCESS ROAD

STA. 16+00 TO 39+85
STA. 173+00 TO 177+00



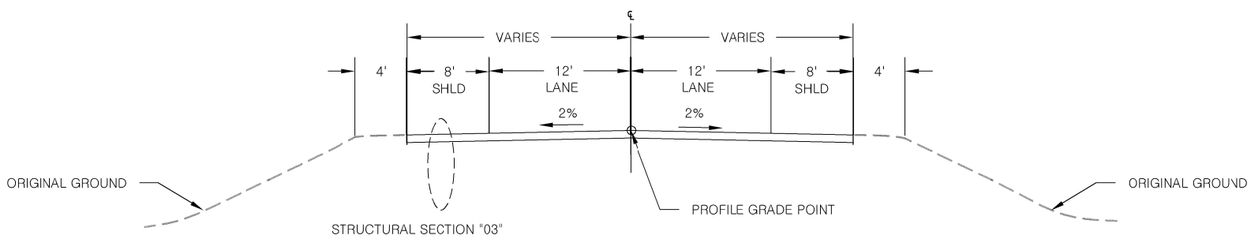
BRIDGE ACCESS ROAD

STA. 10+00 TO 16+00
STA. 177+00 TO 183+25



BRIDGE ACCESS ROAD

STA. 49+67 TO 109+00
STA. 121+50 TO 173+00

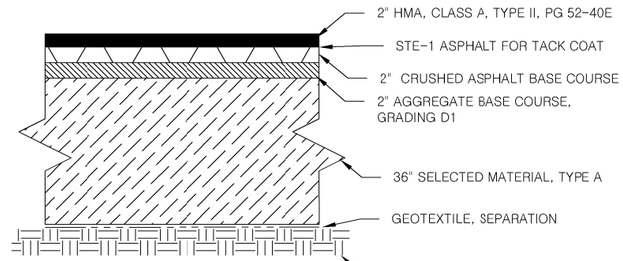


BRIDGE ACCESS ROAD

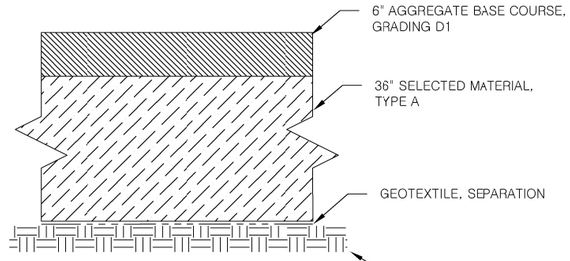
STA. 109+00 TO 121+50

NOTES:

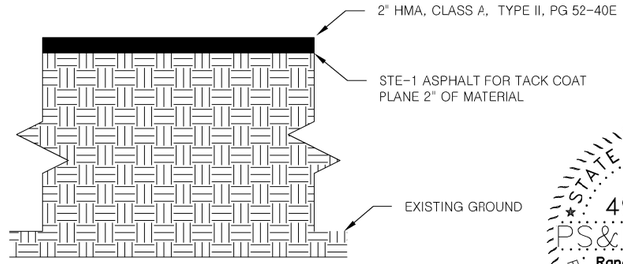
1. CONDUCT PRECONSTRUCTION SURVEY TO IDENTIFY EXISTING ROAD ELEVATIONS PRIOR TO DISTURBING ROADWAY TO CONSTRUCT TYPICAL SECTIONS.
2. FINISHED ROADWAY CROSS-SLOPES SHALL MATCH EXISTING AND BE CONSISTENT ACROSS THE ROADWAYS HALF-WIDTH IN SUPERELEVATED SECTIONS, CROWNED AT 2% IN TANGENT SECTIONS.



01/B1 STRUCTURAL SECTION "01"
DETAIL - PREVENTATIVE MAINTENANCE



02/B1 STRUCTURAL SECTION "02"
DETAIL - PREVENTATIVE MAINTENANCE



03/B1 STRUCTURAL SECTION "03"
PLANING STRUCTURAL SECTION

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TYPICAL SECTIONS AND STRUCTURAL SECTIONS

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STATE OF ALASKA 49TH PS&E REVIEW
Rangell C. Soriano
CE - 180719
Registered Professional Engineer

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
B1
OF XX SHEETS

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0007.0000	CLEARING AND GRUBBING	LS	ALL REQ'D
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	ALL REQ'D
202.0002.0000	REMOVAL OF PAVEMENT	SY	77462
202.0004.0000	REMOVAL OF CULVERT PIPE	LF	256
202.2023.0000	PAVEMENT PLANING	SY	77462
203.0003.0000	UNCLASSIFIED EXCAVATION	CY	35610
203.0006.000A	BORROW, TYPE A	TON	15500
205.0007.0000	POROUS BACKFILL MATERIAL	TON	175
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	2254
304.0001.000F	SUBBASE GRADING F	TON	750
308.0001.0000	CRUSHED ASPHALT BASE COURSE	SY	12,584
401.0001.00A2	HMA, TYPE II: CLASS A	TON	9,247
401.0015.0000	ASPHALT MATERIAL PRICE ADJUSTMENT	CS	ALL REQ'D
501.2007.0000	HEADWALL	EACH	4
508.0001.0000	WATERPROOFING MEMBRANE, SPRAY-APPLIED	L.S.	1
602.0001.0132	STRUCTURAL PLATE PIPE 132" DIAMETER, 10 GAGE	LF	142
603.0001.0096	CSP 96 INCH	LF	115
603.0002.0000	CSP ARCH, 81X59 INCH	LF	64
603.0009.0096	CORRUGATED ALUMINUM PIPE 96 INCH	LF	115
603.2005.0000	DEADMAN	EACH	2
603.2032.0024	CORRUGATED HDPE PIPE 24 INCH	LF	200
603.2032.0036	CORRUGATED HDPE PIPE 36 INCH	LF	200
603.2033.0024	END SECTION FOR CORRUGATED HDPE 24 INCH	EACH	6
603.2033.0036	END SECTION FOR CORRUGATED HDPE 36 INCH	EACH	2
603.0001.0072	10 GAGE ALUMINUM PIPE 72"	LF	110
606.0001.0000	W-BEAM GUARDRAIL	LF	200
606.0006.0000	REMOVING AND DISPOSING OF GUARDRAIL	LF	200
606.0013.0000	PARALLEL GUARDRAIL TERMINAL	EACH	4
610.0002.0000	DITCH LINING	TON	110
611.0002.0001	RIPRAP, CLASS I	TON	355
618.0002.0000	SEEDING	POUND	275
620.0001.0000	TOPSOIL	SY	20691
630.0001.0001	GEOTEXTILE, SEPARATION, CLASS 1	SY	1650
630.0001.0003	GEOTEXTILE, SEPARATION, CLASS 3	SY	38543
630.0002.0001	GEOTEXTILE, STABLILIZATION, CLASS 1	SY	1650
634.0002.0000	GEOGRID, REINFORCEMENT, CLASS 1	SY	105
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	LS	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQ'D
641.0002.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	CS	ALL REQ'D
641.0006.0000	WITHHOLDING	CS	ALL REQ'D
641.0007.0000	SWPPP MANAGER	LS	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HR	30
642.0011.0000	ADJUST EXISTING MONUMENT CASE	EACH	1
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LS	ALL REQ'D
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CS	ALL REQ'D
643.0032.0000	FLAGGING	CS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.2004.0000	ENGINEERING COMMUNICATIONS	CS	ALL REQ'D
646.0001.0000	CPM SCHEDULING	LS	ALL REQ'D
647.2002.0000	BACKHOE, 4WD, 1 CY BUCKET, 75-HP MINIMUM, 15 FT DEPTH	CS	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEMS MODIFICATIONS	LS	ALL REQ'D
670.0010.0000	MMA PAVEMENT MARKINGS	LS	ALL REQ'D
682.2000.0000	VAC-TRUCK POTHOLE	CS	ALL REQ'D
690.2001.0000	WATERWAY BED FILL	LF	245
690.2003.0000	WATERWAY BANK REVEGETATION AND PROTECTION	LF	450

ESTIMATING FACTORS

ITEM NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006.000A	BORROW, TYPE A	144 LB/C.F.
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	144 LB/C.F.
304.0001.000F	SUB BASE GRADING F	
401.0001.002A	HOT MIX ASPHALT, TYPE A	151 LB/C.F.
401.0004.5240	ASPHALT BINDER	5.3% OF HMA
610.0002.0000	DITCH LINING	110 LB/C.F.
610.0002.0001	RIPRAP, CLASS 1	108 LB/C.F.

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ESTIMATE OF QUANTITIES

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
C1
OF XX SHEETS

606 ITEMS - GUARDRAIL SUMMARY

SHEET	STATION FROM	STATION TO	OFFSET	W-BEAM GUARDRAIL (LF) 606.0001.0000	REMOVING AND DISPOSING OF GUARDRAIL (LF) 606.0006.0000	PARALLEL GUARDRAIL TERMINAL (EA) 606.0013.0000	GUARDRAIL CASE	REMARKS
F1	35+77	39+85	26 RT	409.81	409.81			
F2	38+51	39+86	25 LT	135.28	135.28			
F2	49+65	50+93	20 RT	128.90	128.90			
F2	49+65	53+63	21 LT	396.89	396.89			

ITEM NO. 202.0002.0000 REMOVAL OF PAVEMENT

SHEET	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	AREA (S.F.)	AREA (S.Y.)	REMARKS
F1	10+00	CL	16+00	CL	30534	3393	
F1	16+00	CL	36+00	CL	81068	9008	
F2	36+00	CL	39+85	CL	12042	1338	
F2	49+67	CL	63+00	CL	53586	5954	
F3	63+00	CL	90+00	CL	106704	11856	
F4	90+00	CL	109+00	CL	77064	8562	
F4	109+00	CL	117+00	CL	39696	4410	
F5	117+00	CL	121+50	CL	21528	2392	
F5	121+50	CL	144+00	CL	89559	9951	
F6	144+00	CL	170+00	CL	104546	11616	
F7	170+00	CL	173+00	CL	12063	1340	
F7	173+00	CL	177+00	CL	19424	2158	
F7	177+00	CL	183+25	CL	40867	4540	
					TOTAL	76518	

ITEM NO. 202.0004.0000 REMOVAL OF CULVERT PIPE

SHEET	STATION	CULVERT SIZE	QUANTITY (L.F.)	REMARKS
F1	19+00	36"	62	
F1	26+25	36"	97	
F2	60+50	36"	87	
F5	130+81	24"	70	
		TOTAL	316	

ITEM NO. 202.0009.0000 REMOVAL OF CURB AND GUTTER

SHEET	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	LENGTH (L.F.)	REMARKS
F7	178+10.55	31 L	178+60	101 L	105.50	
F7	179+02	103 L	182+77	238 L	601.40	
F7	180+20	8 L	182+45	8 L	225	
				TOTAL	931.90	

ITEM NO. 603.0003.0024 CSP 24 INCH

SHEET	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	LENGTH (L.F.)	REMARKS
F8	27+18	L	27+18	R	17	CULVERT ENDS
				TOTAL	17	

ITEM NO. 639.2000.0000 APPROACH

SHEET	FROM STATION	FROM OFFSET	TO STATION	TO OFFSET	QUANTITY	REMARKS
F1	32+65	CL	33+38	CL	TBD	KENAI FLATS
F7	178+21	CL	179+36	CL	TBD	FRONTAGE ROAD

670(10F) MMA PAVEMENT MARKINGS, TRANSVERSE AND GORE INLAID

SHEET	STATION	OFFSET	LENGTH (L.F.)	REMARKS
				TBD

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

SUMMARY TABLE

ALASKA STATE PARKS

STATE OF ALASKA 49TH
PS&E REVIEW
Rangell C. Soriano
CE - 180719
Registered Professional Engineer

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
D1
OF XX SHEETS

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E01	E07

DESIGNED BY EJS
CHECKED BY
DRAFTED BY EJS

SCALE 1" = 10'

DATE TIME 11/14/2025 4:19 PM

DRAWING LOCATION
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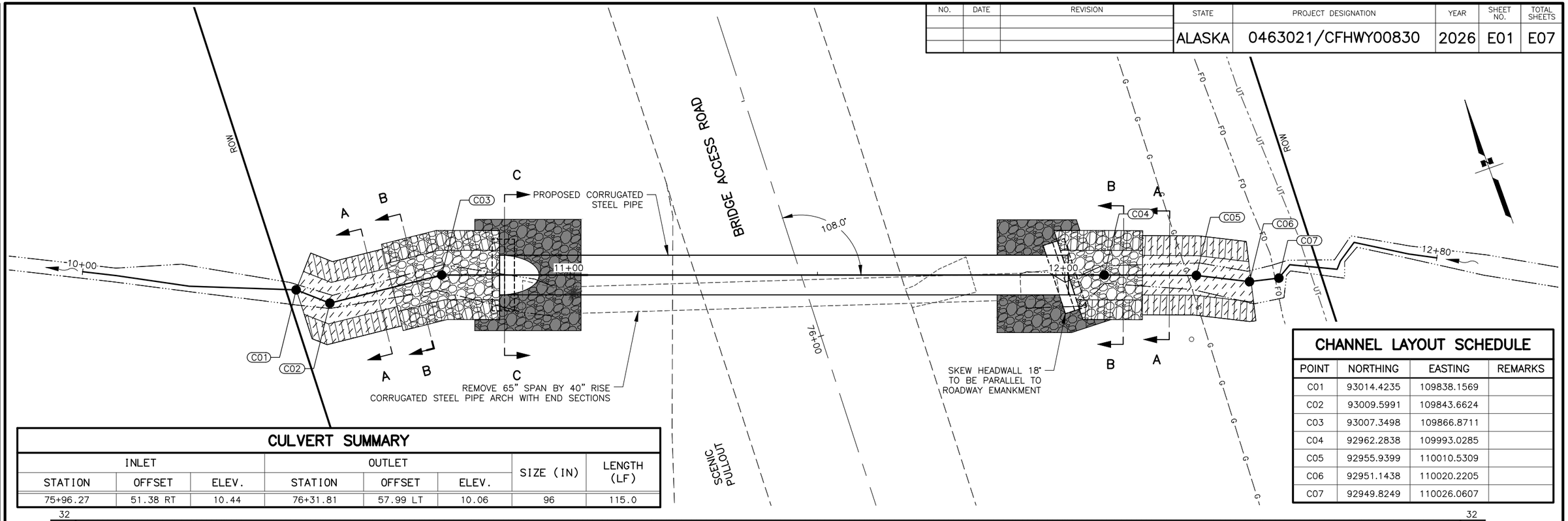
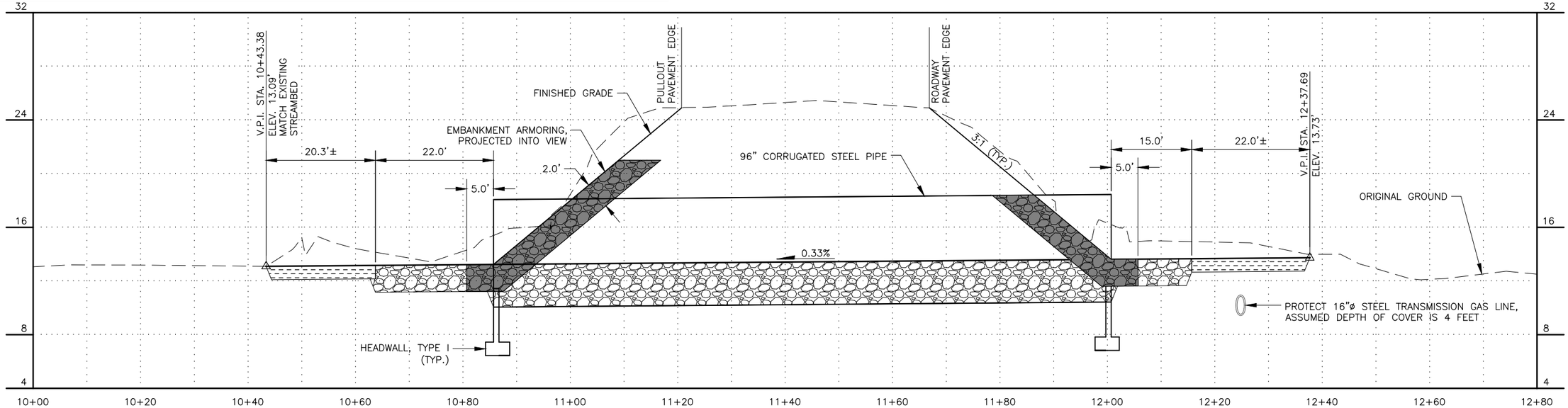


CULVERT SUMMARY

INLET			OUTLET			SIZE (IN)	LENGTH (LF)
STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.		
75+96.27	51.38 RT	10.44	76+31.81	57.99 LT	10.06	96	115.0

CHANNEL LAYOUT SCHEDULE

POINT	NORTHING	EASTING	REMARKS
C01	93014.4235	109838.1569	
C02	93009.5991	109843.6624	
C03	93007.3498	109866.8711	
C04	92962.2838	109993.0285	
C05	92955.9399	110010.5309	
C06	92951.1438	110020.2205	
C07	92949.8249	110026.0607	



HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 0.7 SQUARE MILES			
ANNUAL EXCEEDANCE PROBABILITY (AEP)	2% AEP	1% AEP (DESIGN EVENT)	REGULATORY FLOOD
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	64 CFS	78 CFS	N/A
DESIGN HIGH WATER ELEVATION	19.7 FEET	20.6 FEET	N/A
OVERTOPPING FLOOD DISCHARGE = 250 CFS			
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			

GENERAL LARGE-DIAMETER CULVERT NOTES:

1. FIELD ADJUST ARMORED CHANNELS TO ENSURE A SMOOTH TRANSITION INTO EXISTING CREEK CHANNELS.
2. DO NOT USE EROSION CONTROL MATERIAL CONTAINING PLASTIC OR NYLON WITHIN OR ADJACENT TO THE PROPOSED STREAM IMPROVEMENTS.
3. PIPES AT SITE NO.1 & SITE NO.3 SHALL BE 10 GAGE MINIMUM.

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0555

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

SITE NO.1 CULVERT DESIGN

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E02	E07

DESIGNED BY EJS
CHECKED BY
DRAFTED BY EJS

SCALE 1" = 10'

DATE 11/14/2025 TIME 4:19 PM

DRAWING LOCATION
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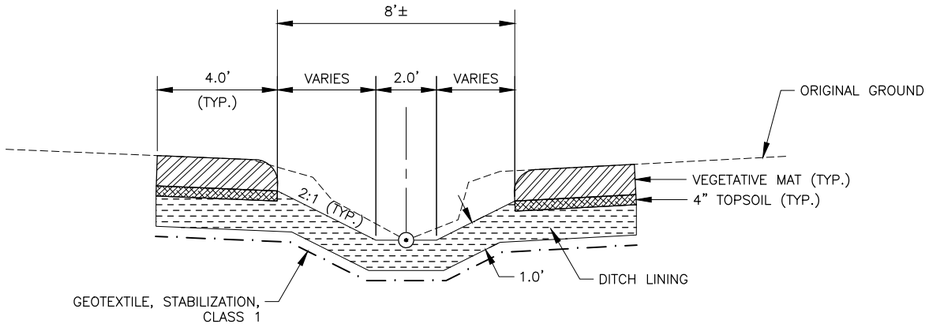
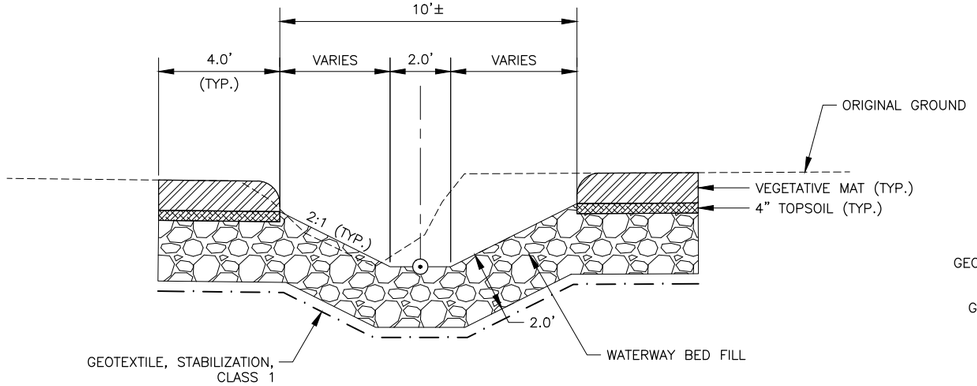


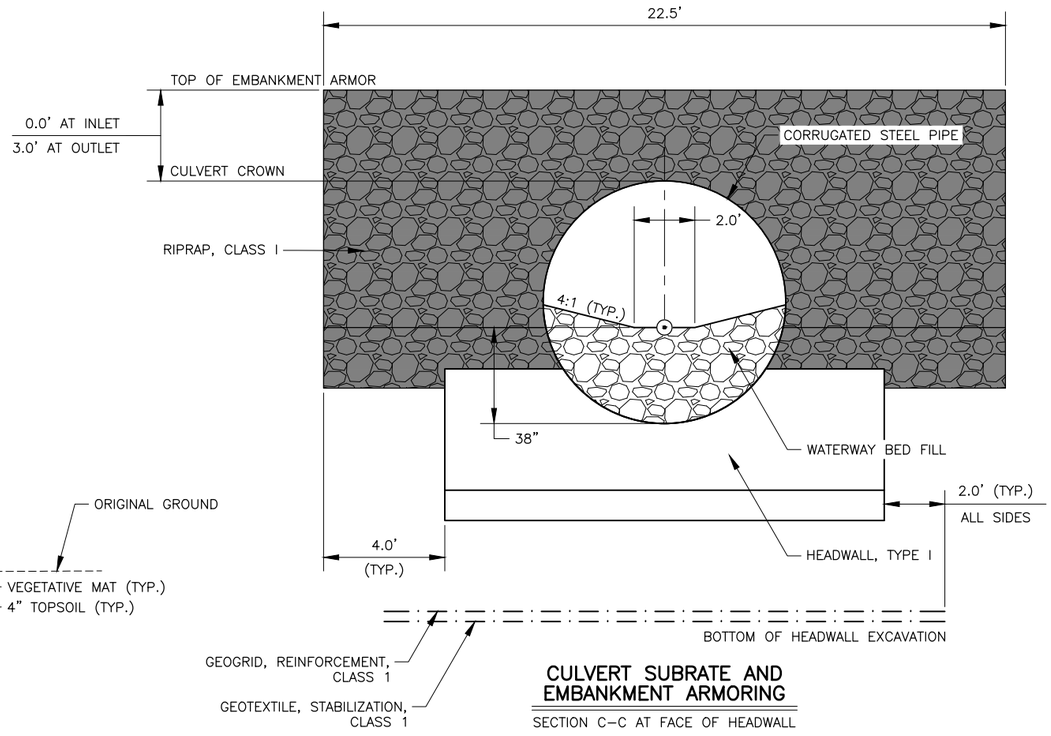
STREAM RECONSTRUCTION

SECTION A–A



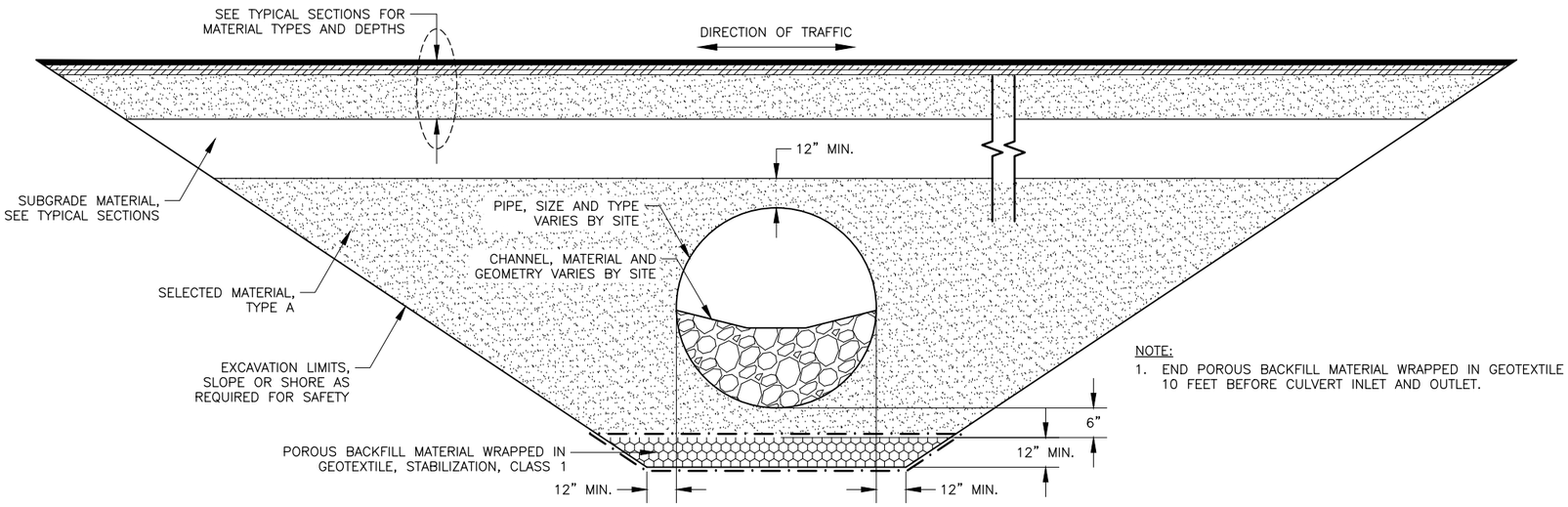
RIPRAP APRON

SECTION B–B



CULVERT SUBRATE AND EMBANKMENT ARMORING

SECTION C–C AT FACE OF HEADWALL



TYPICAL CULVERT CROSS SECTION FOR SITE NO.1, NO.2, AND NO.3

NOTE:

1. END POROUS BACKFILL MATERIAL WRAPPED IN GEOTEXTILE 10 FEET BEFORE CULVERT INLET AND OUTLET.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

SITE NO.1 CULVERT DESIGN SECTIONS AND DETAILS

STATE OF ALASKA
REGISTERED PROFESSIONAL ENGINEER
PROJECT NUMBER
0463021
PSS&E REVIEW

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0555

NO.	DATE	REVISION

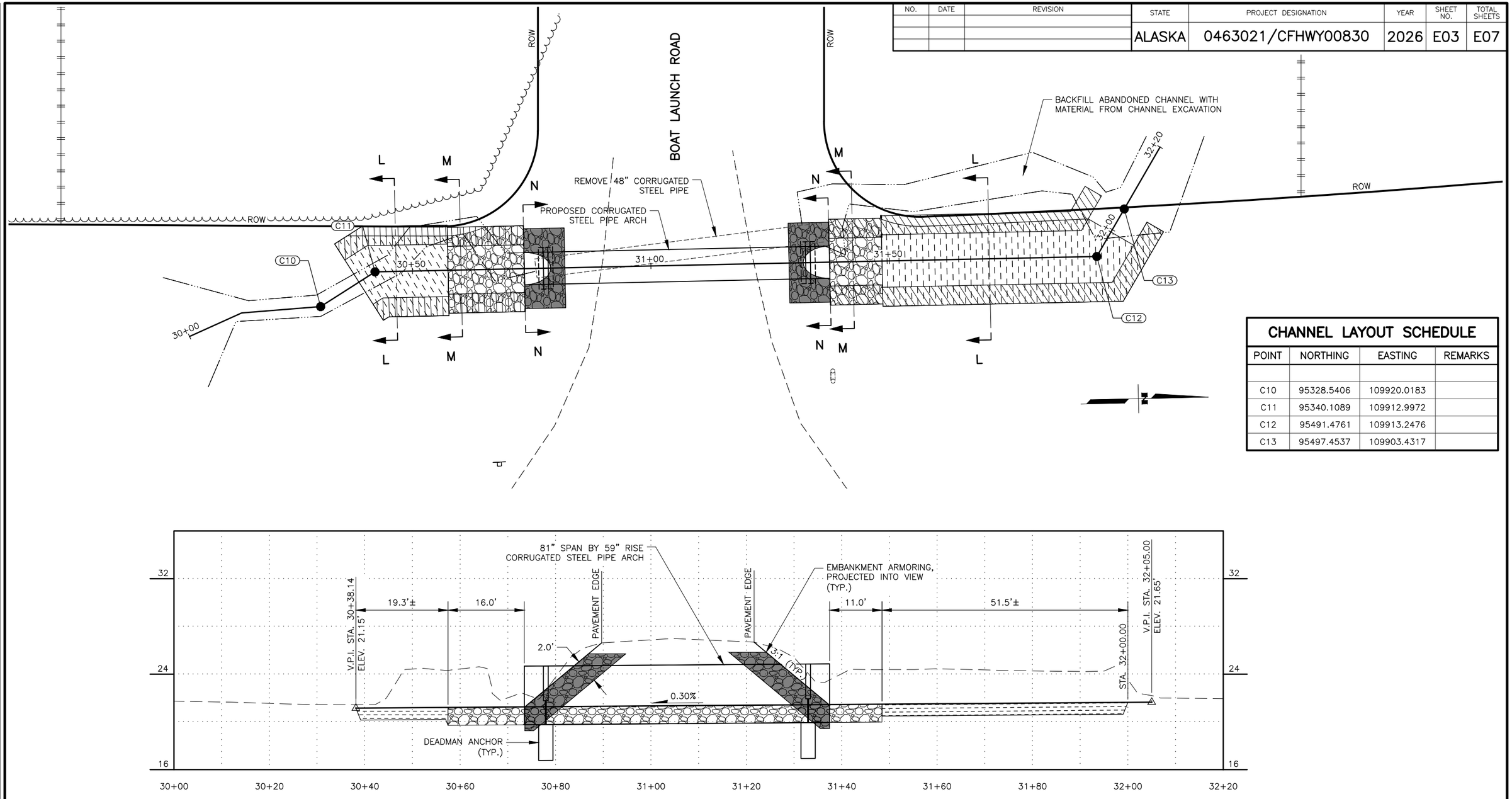
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E03	E07

DESIGNED BY EJS
CHECKED BY
DRAFTED BY EJS

SCALE 1" = 10'

DATE TIME 11/14/2025 4:20 PM

DRAWING LOCATION
W:\HYDRO\HYDRO PROJECTS\BRIDGE ACCESS ROAD PAVEMENT PRESERVATION\CIV3D\PLANS\00830 CULVERT DETAILS.DWG



CHANNEL LAYOUT SCHEDULE

POINT	NORTHING	EASTING	REMARKS
C10	95328.5406	109920.0183	
C11	95340.1089	109912.9972	
C12	95491.4761	109913.2476	
C13	95497.4537	109903.4317	

CULVERT SUMMARY

INLET			OUTLET			SIZE	LENGTH
STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.	SPAN (IN) BY RISE (IN)	(LF)
100+67.25	91.17 LT	19.95	100+01.14	91.07 RT	19.75	81 BY 59	64.0

PS&E REVIEW

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

SITE NO.2
CULVERT DESIGN

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E04	E07

DESIGNED BY EJS
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SCALE 1" = 10'

DATE TIME
11/14/2025 4:20 PM

DRAWING LOCATION
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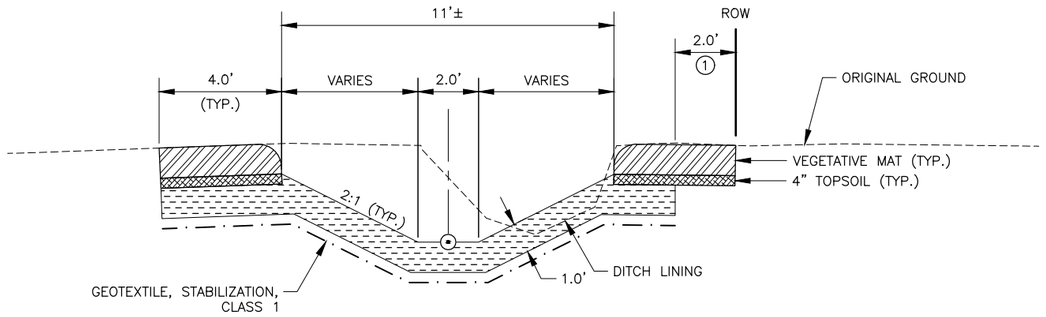
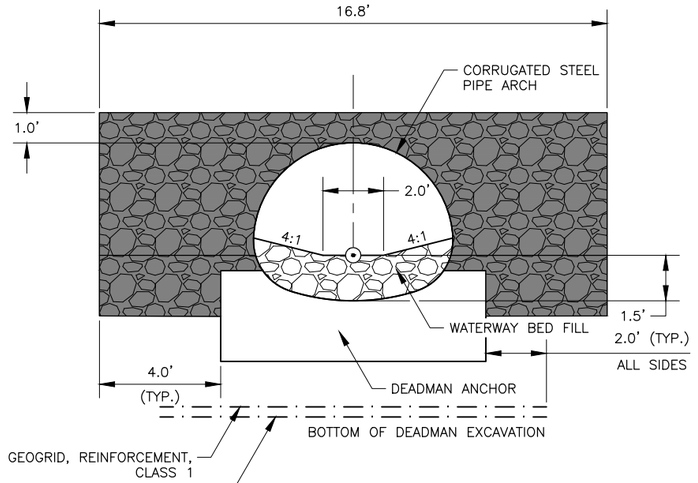


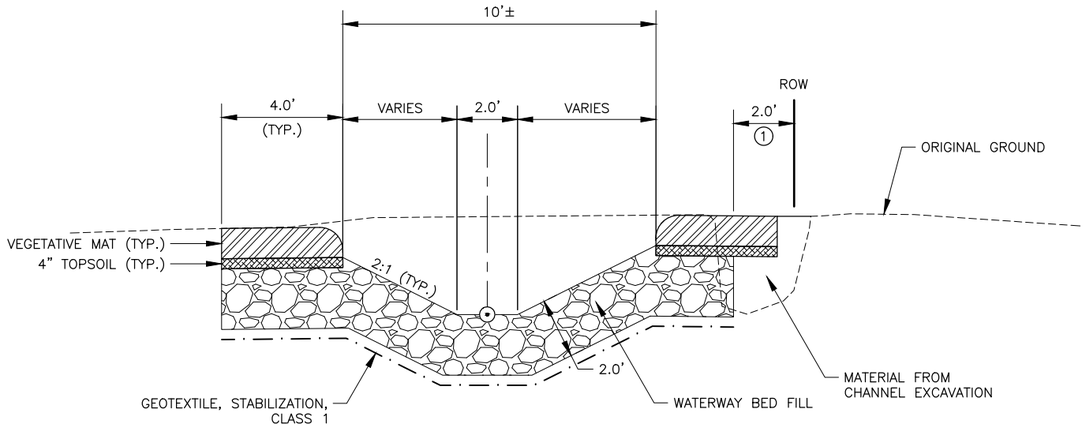
STREAM RECONSTRUCTION

SECTION L–L



CULVERT SUBRATE AND EMBANKMENT ARMORING

SECTION N–N AT CULVERT END



RIPRAP APRON

SECTION M–M

NOTE:

① TERMINATE WATERWAY BED FILL, DITCH LINING, AND GEOTEXTILE FABRIC TWO FEET INSIDE RIGHT OF WAY. REVEGETATION FEATURES MAY EXTEND BEYOND RIGHT OF WAY.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

SITE NO.2 CULVERT DESIGN SECTIONS

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0555

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E05	E07

DESIGNED BY EJS
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SCALE 1" = 10'

DATE TIME
11/14/2025 4:21 PM

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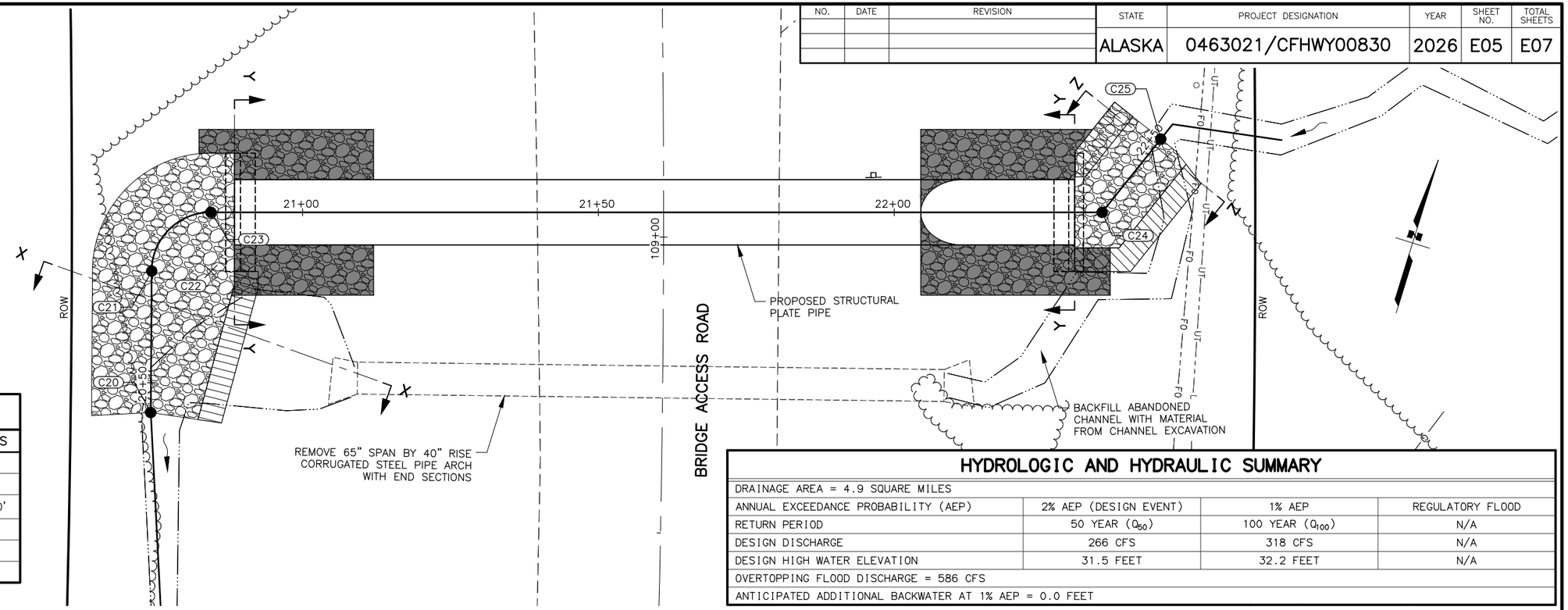
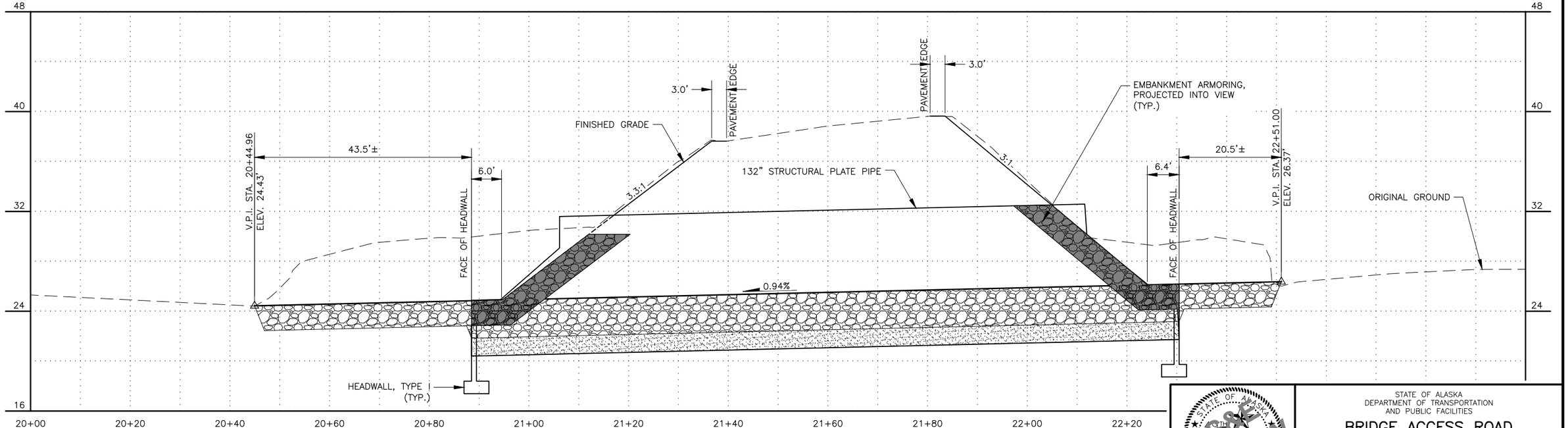


CHANNEL LAYOUT SCHEDULE

POINT	NORTHING	EASTING	REMARKS
C20	96202.2529	109803.2522	
C21	96225.1273	109796.3330	PC
C22	96228.0226	109805.9047	RP, R:10.0'
C23	96237.5744	109802.9446	PT
C24	96282.1662	109946.8341	
C25	96296.9207	109952.6361	

HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 4.9 SQUARE MILES			
ANNUAL EXCEEDANCE PROBABILITY (AEP)	2% AEP (DESIGN EVENT)	1% AEP	REGULATORY FLOOD
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	266 CFS	318 CFS	N/A
DESIGN HIGH WATER ELEVATION	31.5 FEET	32.2 FEET	N/A
OVERTOPPING FLOOD DISCHARGE = 586 CFS			
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			



CULVERT SUMMARY

INLET			OUTLET			SIZE (IN)	LENGTH (LF)
STATION	OFFSET	ELEV.	STATION	OFFSET	ELEV.		
109+04.18	69.47 RT	21.74	109+04.18	72.53 LT	20.41	132	142.0

NOTES:

1. BEVEL CULVERT ENDS ACCORDING TO ALASKA STANDARD PLAN D-7.00. FABRICATE BEVEL GEOMETRY CORRESPONDING TO 3:1 EMBANKMENT FORESLOPES.
2. LOCATE BRIDGE NUMBER PLATE ON THE RIGHT HAND SIDE OF EACH CULVERT END (INSIDE) WHEN FACING INSIDE THE CULVERT. MOUNT THE BRIDGE NUMBER PLATE AT THE 2 O'CLOCK POSITION.

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0555

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

SITE NO.3 CULVERT DESIGN

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E06	E07

DESIGNED BY EJS
CHECKED BY
DRAFTED BY EJS

SCALE 1" = 10'

DATE TIME
11/14/2025 4:21 PM

DRAWING LOCATION
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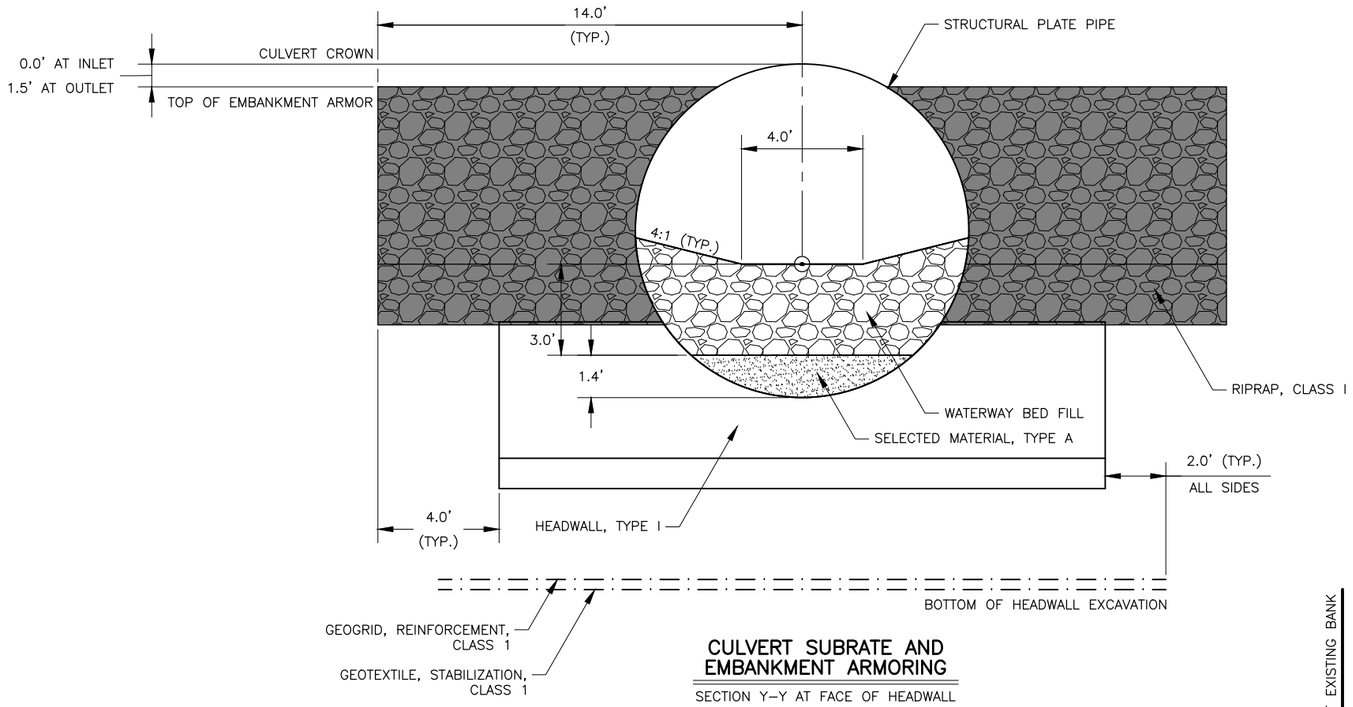
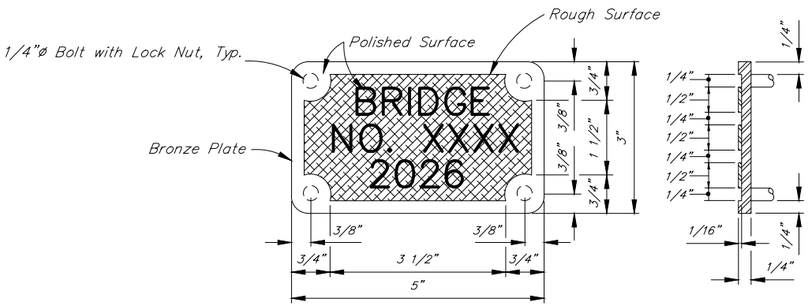


CULVERT SUBRATE AND EMBANKMENT ARMORING

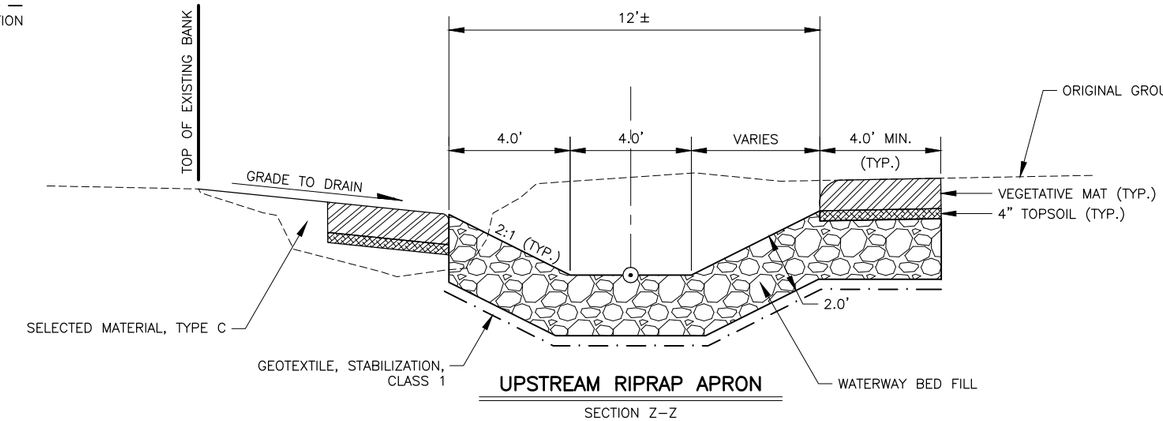
SECTION Y–Y AT FACE OF HEADWALL



BRONZE BRIDGE NO. PLATE

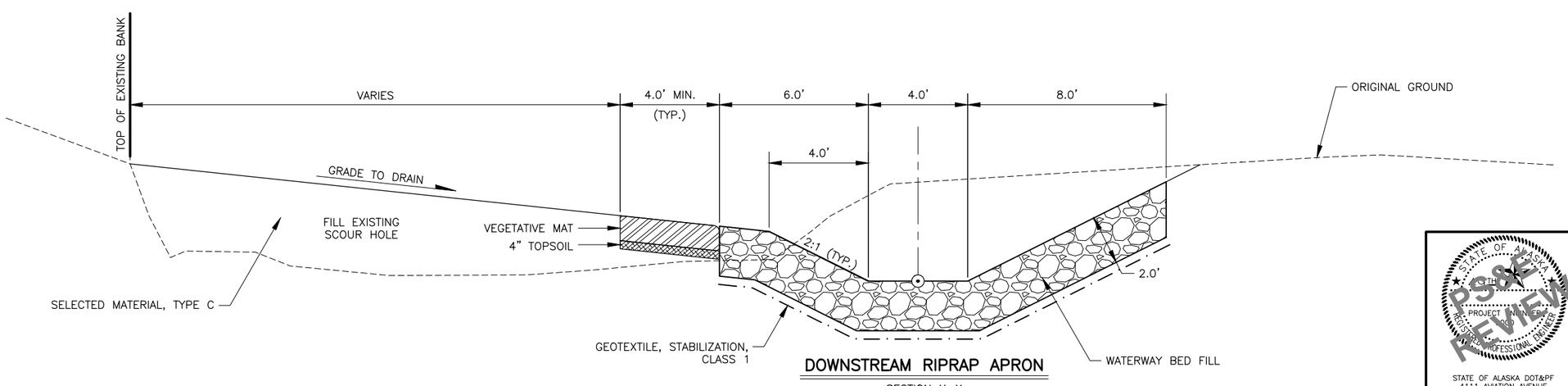
BRONZE BRIDGE NO. PLATE NOTES:

1. LOCATE BRIDGE NUMBER PLATES AS SHOWN ON SHEET TBD.
2. USE "CENTURY" TYPE STYLE LETTERING.
3. USE FASTENERS THAT CONFORM TO UNS C65100 OR C65500.



UPSTREAM RIPRAP APRON

SECTION Z–Z



DOWNSTREAM RIPRAP APRON

SECTION X–X

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269–0555

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

SITE NO.3 CULVERT DESIGN SECTIONS

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2026	E07	E07

DESIGNED BY
CHECKED BY
DRAFTED BY

SCALE ---

DATE TIME 11/14/2025 3:31 PM

DRAWING LOCATION
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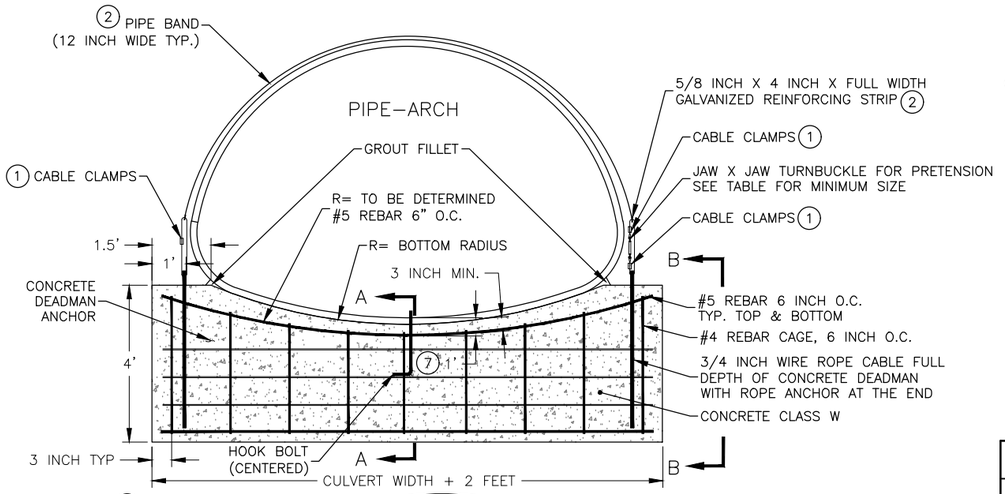
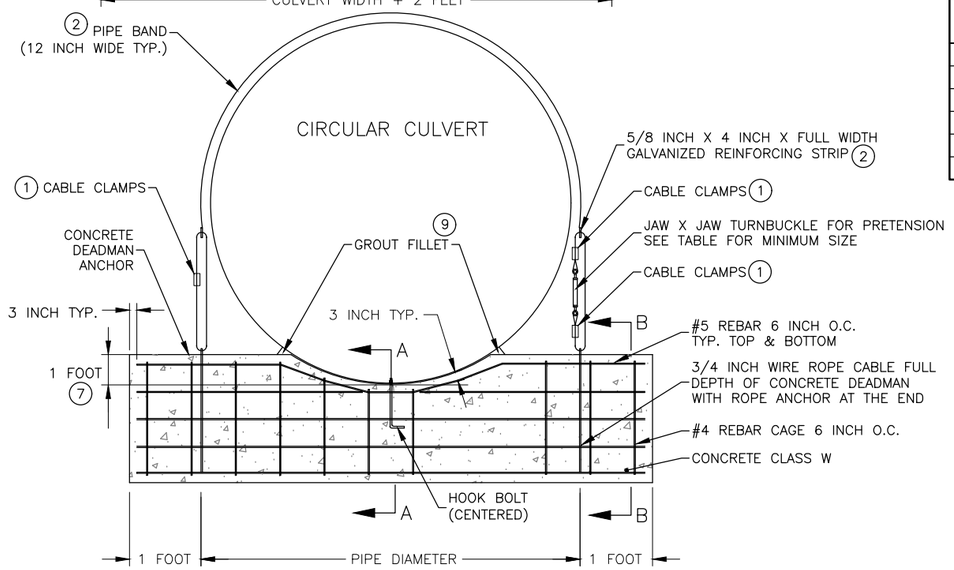
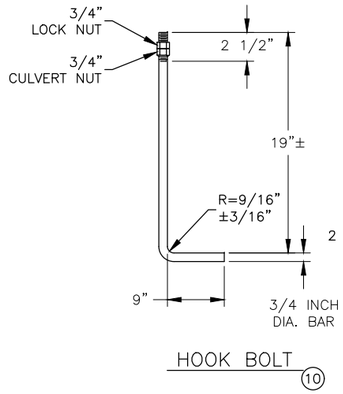
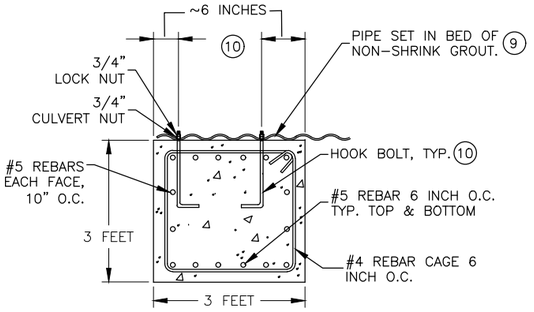




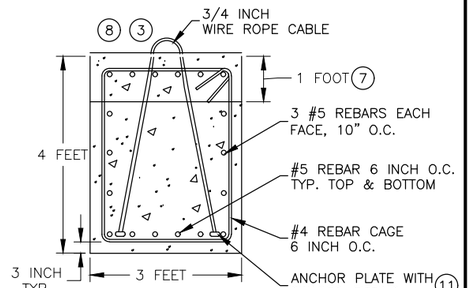
DEADMAN DETAIL



HOOK BOLT (10)



SECTION A-A



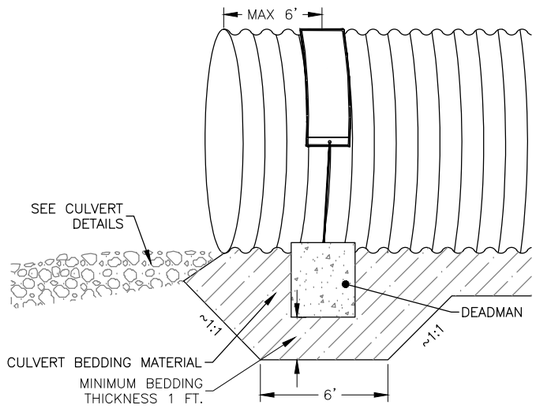
SECTION B-B

CONCRETE DEADMAN ANCHOR DETAILS

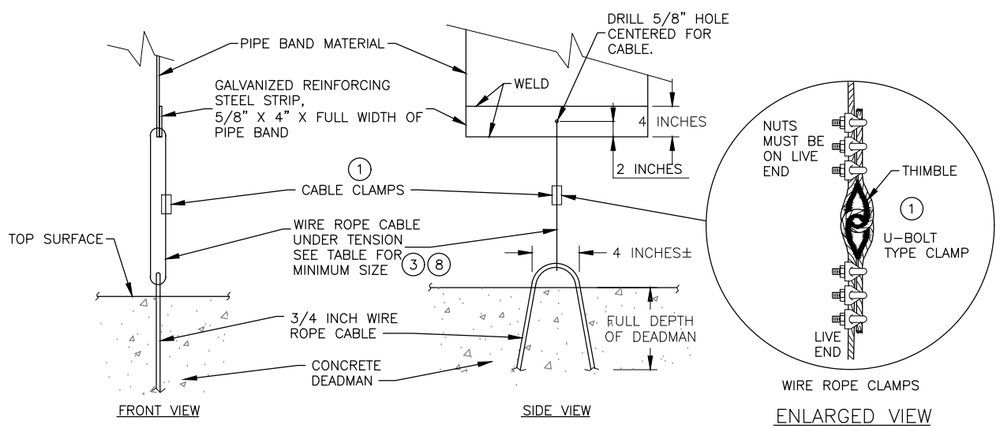
NOTE: REBAR SIZES ARE MINIMUMS.

TABLE 1: MINIMUM HARDWARE SIZE

CULVERT DIA./SPAN (FT)	WIRE ROPE DIA. (IN)	TURNBUCKLE DIA. (IN)	MINIMUM WIRE ROPE TURNBACK/SPLICE (IN)	U-BOLT NUT TORQUE (FT-LB)
3.00 TO 3.50	1/4	5/8	4 3/4	15
3.51 TO 4.00	1/4	3/4	4 3/4	15
4.01 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



DEADMAN BEDDING DETAIL



PIPE BAND DETAILS

WIRE ROPE CLAMPS

ENLARGED VIEW

NOTES:

(1) IF DROP FORGED U-BOLT TYPE CLAMPS ARE USED, THEY SHOULD BE INSTALLED USING THE FOLLOWING:
LENGTH OF 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 INSTALLATION AND ANCHOR BOLT NUTS HAVE BEEN TIGHTENED, COAT THE ANCHOR BOLT AND SURROUNDING AREA WITH ZINC RICH PAINT.

(11) USE CRT HARDWARE DETAILS, FROM ALASKA STANDARD PLAN G-00.05 SHEET 4, FOR WIRE ROPE ANCHOR.

STATE OF ALASKA PSAP REVIEW PROJECT NUMBER REGIONAL PROFESSIONAL ENGINEER

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
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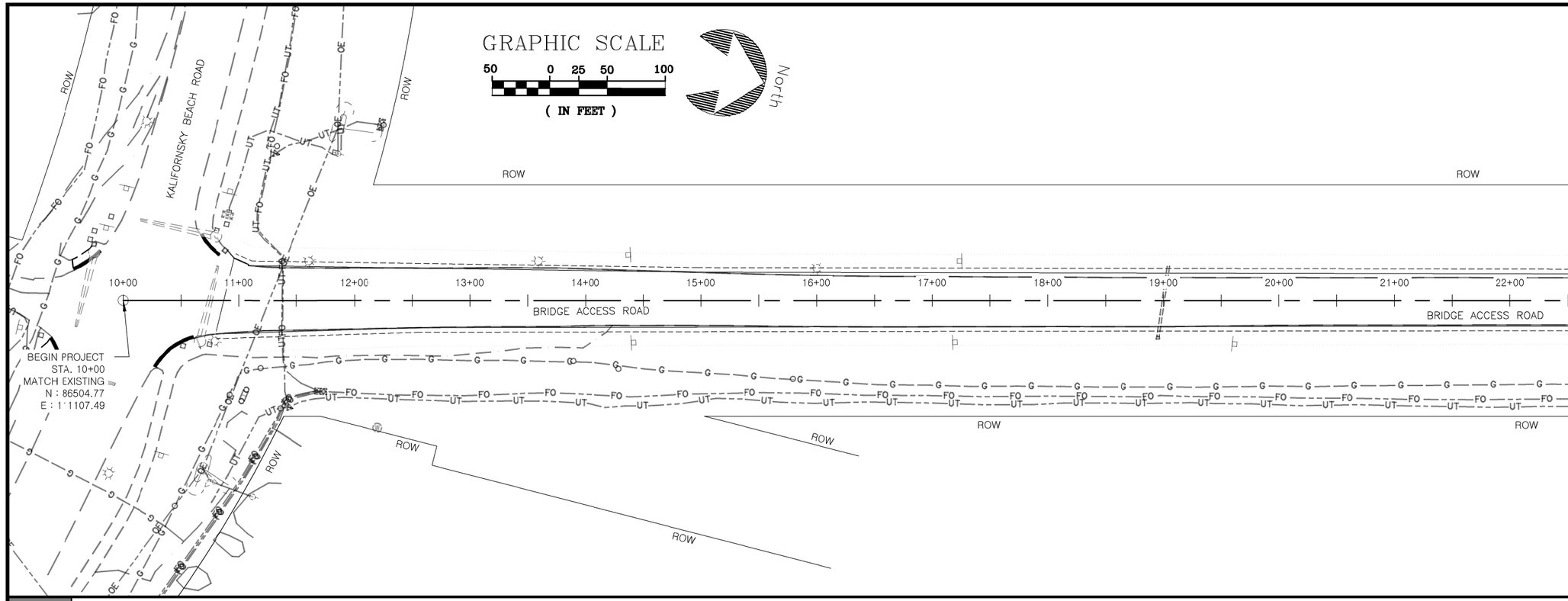
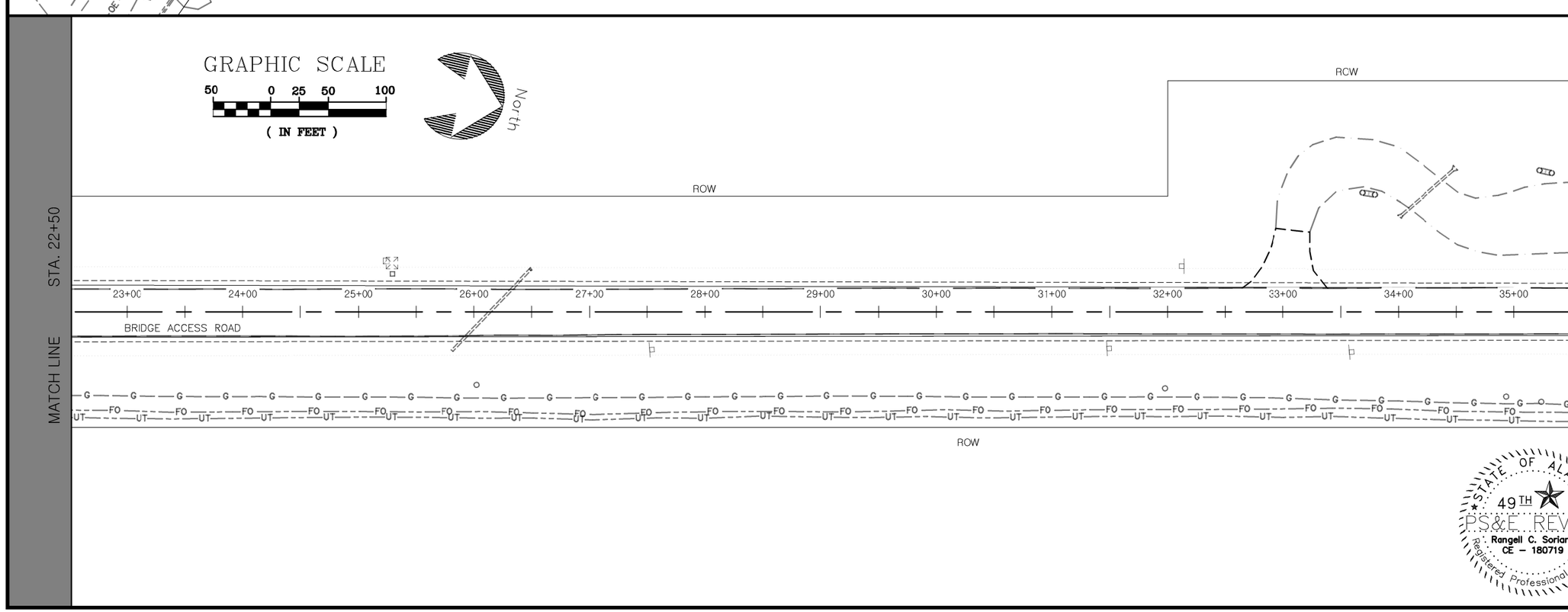
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

CULVERT DEADMAN DETAILS





PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer
STATE OF ALASKA
49TH

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 10+00 TO STA. 36+00

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
F1
OF XX SHEETS

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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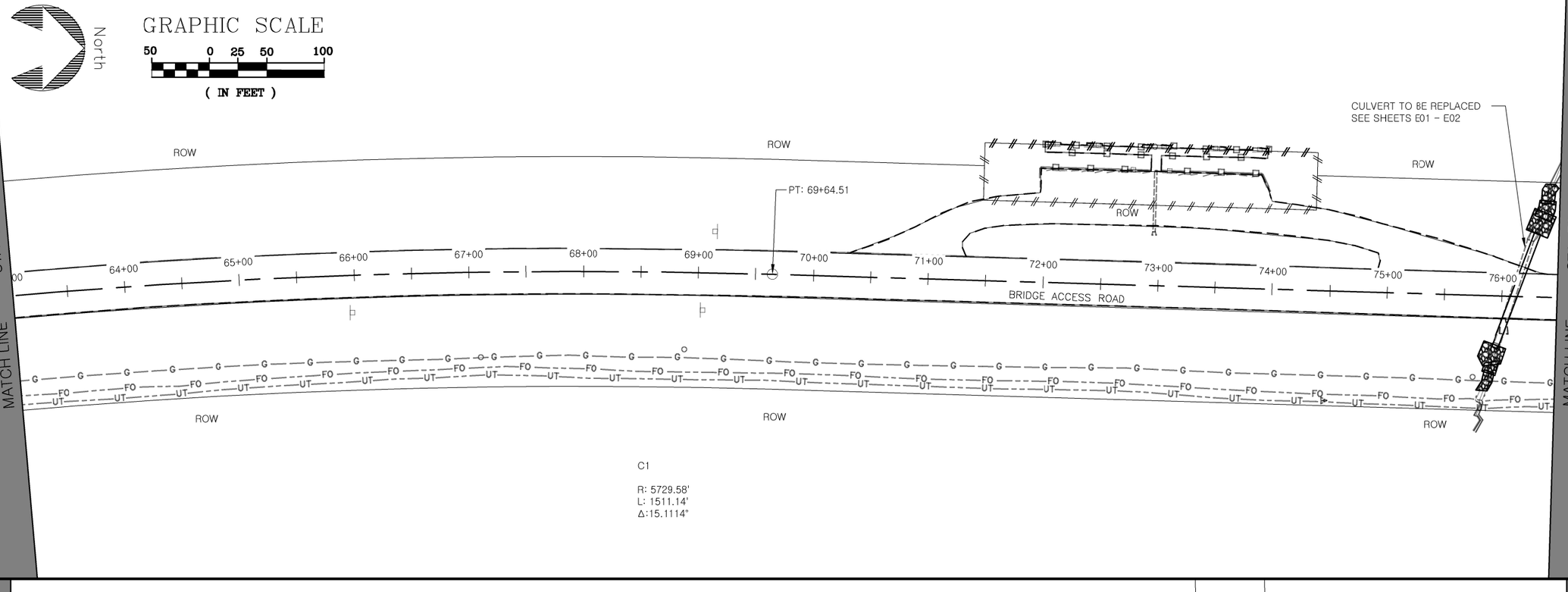
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 36+00 TO STA. 63+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
F2
OF XX SHEETS



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KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 63+00 TO STA. 90+00

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
F3
OF XX SHEETS

STATE OF ALASKA
49TH
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CE - 180719
Registered Professional Engineer

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

North

MATCH LINE

STA. 90+00

STA. 103+00

ROW

BOAT LAUNCH ROAD

CULVERT TO BE REPLACED
SEE SHEETS E03 - E04

PC: 99+60.37

91+00 92+00 93+00 94+00 95+00 96+00 97+00 98+00 99+00 100+00 101+00 102+00 103+00

BRIDGE ACCESS ROAD

C2

R: 2864.79'
L: 2245.30'
Δ: 44.9059°

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

North

MATCH LINE

STA. 103+00

STA. 117+00

CULVERT TO BE REPLACED
SEE SHEETS E05 - E07

STA. 105+47.58
BEGIN TAPER
20.21 LT

STA. 105+47.53
BEGIN TAPER
26.17 RT

104+00 105+00 106+00 107+00 108+00 109+00 110+00 111+00 112+00 113+00 114+00 115+00 116+00

BRIDGE ACCESS ROAD

STA. 114+26.62
END TAPER
29.15 LT

STA. 114+26.62
END TAPER
26.26 RT

STA. 116+68.70
BEGIN TAPER
28.80 LT

STA. 116+68.70
BEGIN TAPER
26.57 RT

BEAVER LOOP RD

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KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 90+00 TO STA. 117+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
F4
OF XX SHEETS

GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

North

C2

R: 2864.79'
L: 2245.30'
Δ: 44.9059°

MATCH LINE STA. 117+00

MATCH LINE STA. 130+50

ROW

BRIDGE ACCESS ROAD

END TAPER STA. 122+29.00 26.27 LT

END TAPER STA. 122+29.01 26.37 RT

PT: 122+05.67

VAN ANTWERP AVENUE

GRAPHIC SCALE

50 0 25 50 100

North

C3

R: 2864.79'
L: 1366.48'
Δ: 27.3295°

PC: 140+25.84

MATCH LINE STA. 130+50

MATCH LINE STA. 143+50

CHILDS AVENUE

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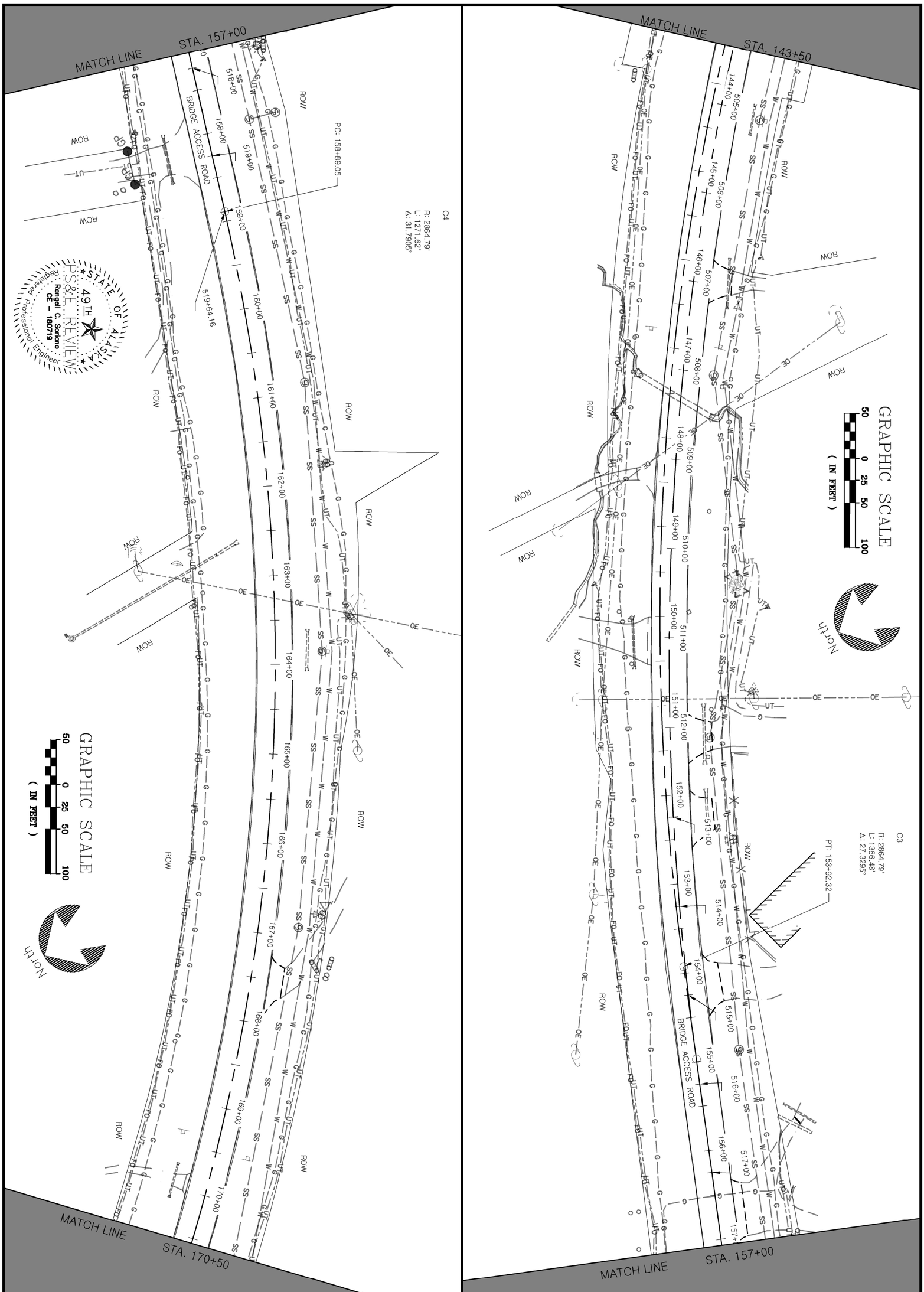
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 117+00 TO STA. 143+50

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
F5
OF XX SHEETS



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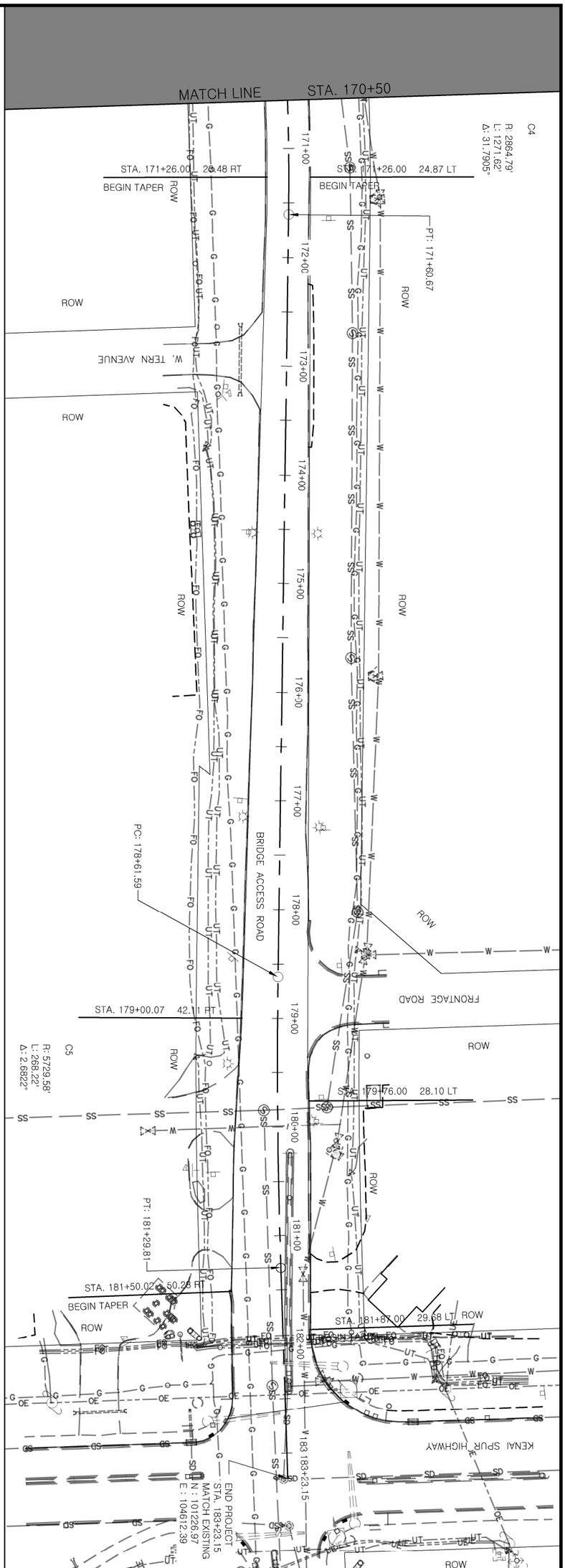
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 143+50 TO STA. 170+50

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET F6 OF XX SHEETS



GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

North

PS&E REVIEW

STATE OF ALASKA 49TH

Professional Engineer Registered

Rangell C. Soriano

CE – 18071

PREPARED: RCS

DRAWN: D&C

REVIEWED: D&C

DATE: NOV 2025

SHEET F7 OF XX SHEETS

ALASKA STATE PARKS

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES

PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION

550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 170+50 TO STA. 183+23.15

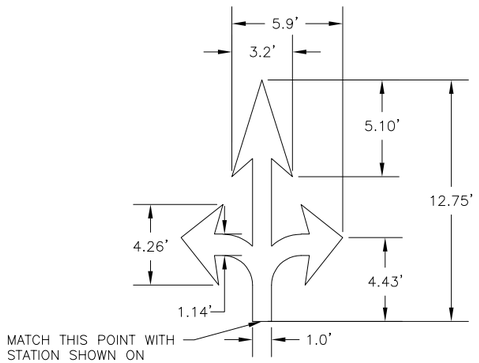
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	CFHWY00830	2025	H0	HXX

DESIGNED BY ZJH
CHECKED BY RDR
DRAFTED BY MF

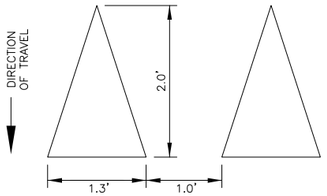
SCALE X" = XX'

DATE 11/17/2025 TIME 3:33 PM

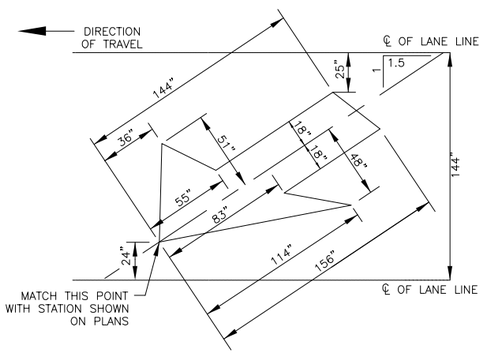
DRAWING LOCATION
Z:\ACTIVE PROJECTS\AKDOTPF PAVEMENT PRESERVATION\PAVEMENT PRES AND CULVERT REPLACEMENT 2_CURRENT OCT 31 2025.DWG



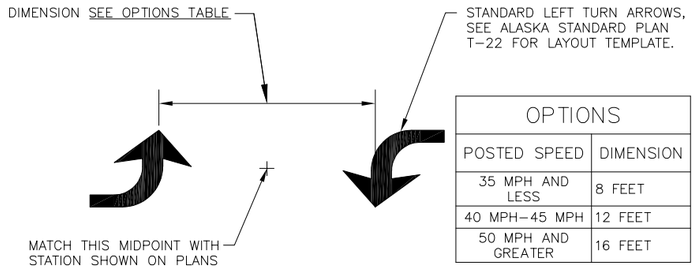
LEFT/THRU/RIGHT ARROW DETAIL



YIELD PAVEMENT MARKINGS DETAIL

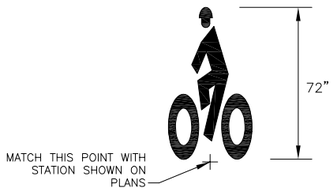


LANE DROP ARROW DETAIL



OPTIONS	
POSTED SPEED	DIMENSION
35 MPH AND LESS	8 FEET
40 MPH–45 MPH	12 FEET
50 MPH AND GREATER	16 FEET

TWO WAY LEFT TURN ARROW DETAIL



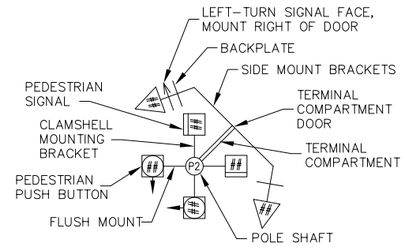
HELMETED MUTCD BIKE SYMBOL
(EXCLUDE ARROW UNLESS SHOWN IN PLANS)

SIGNING & STRIPING NOTES:

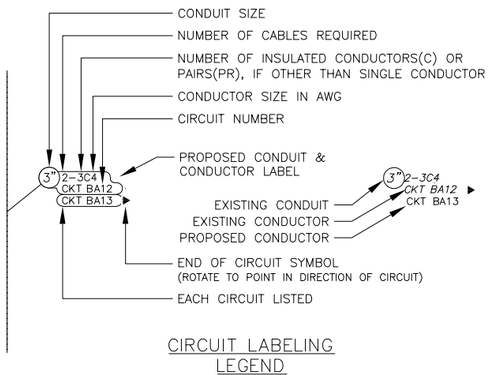
1. FOR SIGNS SUPPORTED BY MULTIPLE POSTS, FABRICATE THE POSTS WITH THEIR TOPS LEVEL WITH ONE ANOTHER.
2. FABRICATE GUIDE SIGNS ACCORDING TO THE SHOP DRAWINGS INCLUDED IN THE APPENDICES OF PART 4, CONTRACT PROVISIONS AND SPECIAL PROVISIONS. TRIM THE CORNERS OF ALL SIGNS TO THE RADIUS SHOWN ON EACH SHOP DRAWING.
3. FOR SIGNS SUPPORTED BY MULTIPLE TUBES OR PIPES, LOCATE THE OUTER POSTS ON MAXIMUM SIX FEET CENTERS. INSTALL ADJACENT WIDE FLANGE POSTS ON MINIMUM EIGHT FEET CENTERS.
4. WHERE NEW STRIPING IS TO EXTEND BEYOND PAVING LIMITS, REMOVE EXISTING STRIPING IN ACCORDANCE WITH SUBSECTION 670–3.04 TO THE EXTENT OF STRIPING LIMITS.

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE	NB	NORTH BOUND
CAM	CAMERA	OMNI	OMNI DIRECTIONAL ANTENNA
EB	EAST BOUND	P#	TRAFFIC SIGNAL POLE #
GND	GROUND	PE	PHOTOELECTRIC CELL
HDPE	HIGH DENSITY POLYETHYLENE CONDUIT	PED B ##	PEDESTRIAN PUSH BUTTON #
HEAD	VEHICULAR SIGNAL HEAD	PEDI	PEDESTRIAN SIGNAL HEAD
SIG	SIGNAL	PRE #	PREEMPTION #
I/C	INTERCONNECT	PRE CON #	PREEMPTION CONFIRMATION LIGHT #
INTX	INTERSECTION	RAD	RADAR
INTXL	INTERSECTION LIGHTING	RMC	RIGID METAL CONDUIT
LC	LOAD CENTER	SB	SOUTH BOUND
LFNC	LIQUIDTIGHT FLEXIBLE NONMETALLIC CONDUIT	TC	TRAFFIC CONTROLLER
LTG	LIGHTING	WB	WEST BOUND
MUTCD	MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES	YAGI	DIRECTIONAL ANTENNA



POLE SHAFT LEGEND



CIRCUIT LABELING LEGEND

CALL BEFORE YOU DIG!

CONTRACTOR SHALL CALL A MINIMUM OF 3 DAYS IN ADVANCE OF CONSTRUCTION

ALASKA DIGLINE....907-278-3121 OR 800-478-3121

CALL OR GO TO WWW.AKONECALL.COM/STATEWIDE.HTM FOR MEMBER LIST OF WHO WILL BE NOTIFIED

FOUNDATIONS NOTES:

1. STATION & C.L. REFERENCE ARE TO THE CENTER OF THE STRUCTURE, EXCEPT ON LOOPS WHICH ARE TO THE CENTER OF THE TRAILING EDGE OF THE LOOP (EDGE NEAREST INTERSECTION).
2. LOCATE J–BOXES SO THAT THEY ARE LOCATED OUT OF THE PATHWAY, SIDEWALK, CURB RAMPS, AND DRAINAGE COLLECTION AREAS.
3. INSTALL LOAD CENTER AND TRAFFIC CONTROLLER FOUNDATIONS WITHIN 1–DEGREE OF PLUMB.
4. INSTALL ANCHOR BOLTS IN CAST FOUNDATIONS TO BE WITHIN 1:48 OF PLUMB.

SIGNAL SYSTEM NOTES:

1. FURNISH THE SIGNAL AND LUMINAIRE MASTARM LENGTHS AND DIMENSIONS SPECIFIED ON THE POLE ELEVATIONS.
2. INSTALL DEVICES SUCH THAT THE DIMENSIONS SHOWN TO THE BOTTOM OF THE DEVICES ON THE POLE ELEVATIONS ARE MINIMUMS. VERTICAL DIMENSIONS TO SIGNAL HEADS ARE TO BOTTOM OF THE BACK PLATE.
3. INSTALL MAST ARMS PERPENDICULAR TO THE ROADWAY CENTERLINE. ACCEPTABLE VARIANCE IS +/– 1–DEGREE.
4. SALVAGE SIGNAL POLE ASSEMBLIES, SIGNS, SIGNAL FACES, AND LUMINAIRES AND DELIVER TO MAINTENANCE AND OPERATIONS WITHIN 48–HOURS OF DECOMMISSIONING. COMPONENTS DAMAGED WHILE IN THE CONTRACTOR'S CUSTODY MUST BE REPLACED AT THE CONTRACTOR'S EXPENSE. REMOVE AND DISPOSE OF FOUNDATIONS.
5. SALVAGE EXISTING CONTROLLER CABINET AFTER NEW CONTROLLER CABINET IS IN SERVICE AND DELIVER TO MAINTENANCE AND OPERATIONS WITHIN 48–HOURS OF DECOMMISSIONING.
6. REMOVE ABANDONED OR UNUSED TRAFFIC JUNCTION BOXES UNLESS OTHERWISE NOTED.
7. NEW SIGNAL HEADS THAT ARE MOUNTED BUT NOT IN OPERATION SHALL BE COVERED WITH A COMMERCIALLY AVAILABLE SIGNAL–SHIRT. EACH SIGNAL SHIRT SHALL FEATURE ELASTICIZED OPENINGS THAT FIT OVER THE VISORS AND AT LEAST TWO STRAPS TO SECURE IT TO THE SIGNAL. PROVIDE SHIRTS WITH A LEGEND THAT READS "OUT OF SERVICE" AND A CENTER SECTION THAT ALLOWS AN OPERATOR TO SEE THE INDICATIONS DURING SYSTEM TESTS.
8. SIGNAL HEADS ARE TO BE LOCATED PER FIGURE 4D–100, TYPICAL SIGNAL HEAD LOCATIONS, PER THE ALASKA TRAFFIC MANUAL. ACCEPTABLE VARIANCE IS +/– 1–FOOT.
9. AIM SIGNALS PER TABLE 660–2, THROUGH–SIGNAL AIMING POINT, OF THE SPECIAL PROVISIONS. SIGNALS SHALL ALSO BE AIMED SO AS NOT TO BE VISIBLE FROM SIDE STREET TRAFFIC. ACCEPTABLE VARIANCE IS +/– 5 DEGREES.
10. EXISTING CIRCUITS LISTED ON THE LOAD CENTER SUMMARY AND PLAN SHEETS WERE OBTAINED FROM AS–BUILT INFORMATION AND MUST BE VERIFIED BY THE CONTRACTOR PRIOR TO WORK INVOLVING THOSE CIRCUITS.
11. CONTRACTOR SHALL PROVIDE TRAFFIC CONTROL, INCLUDING ARROW BOARD DEVICE(S), FOR OVERHEAD INSPECTION AND LOCATE WORK PERFORMED BY MOA SIGNAL ELECTRONICS. CONTRACTOR SHALL BE ON–SITE AT COMPLETION OF LOCATES TO REVIEW LAYOUT AND MAKE STATIONING MEASUREMENTS FOR CONDUIT LOCATIONS.

STATE OF ALASKA DOT&PF
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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

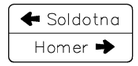
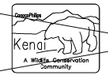
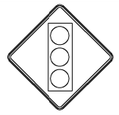
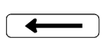
KENAI BRIDGE ACCESS ROAD PAVEMENT PRESERVATION

TRAFFIC LEGEND AND NOTES

SIGNING & STRIPING NOTES:

1. ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
2. USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
   A. PST MEANS A PERFORATED STEEL TUBE.
   B. SST MEANS A SQUARE STEEL TUBE.
   C. RSP MEANS A ROUND STEEL PIPE.
   D. W MEANS A WIDE FLANGE BEAM.
   E. POPL MEANS A POLE PLATE INSTALLED PER ITS ALASKA STANDARD PLAN S-23.
3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE, WITH TYPE IX REFLECTIVE SHEETING.
4. FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
5. ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
6. SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER, IN ACCORDANCE WITH SECTION 201, UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
7. FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMETHACRYLATE MATERIALS. ALL STRIPING AND MARKINGS SHALL BE INLAID AND 125 MILS.
8. DIMENSIONS REFER TO THE CENTEF OF STRIPE AND THE EDGE OF PAVEMENT OR FACE OF CURB WHEN PRESENT.
9. IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.

SIGN SUMMARY TABLE

SHEET	POST NO.	STATION	OFFSET	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SF)	SIGN FACES	POST: NO., SIZE & TYPE	FRAMED? YES	FRAMED? NO	SALVAGE SIGN (EACH)	REMARKS
H1	1	14+41	36 RT	W11-104		36	36	9.00	S	1 - 3" SST		X		
H1	2	14+37	39 LT	D3-1C		42	96	28.00	N	1 - 3" SST		X		
				CS-1		24	30	5.00	N			X		
H1	3	17+20	35 RT	R2-1		30	36	7.50	S	1 - 3" SST		X		
				CS-2		24	18	3.00	S			X		
H1	4	17+23	34 LT	W3-3		36	36	9.00	N	2 - 3" SST		X		
H1	5	19+61	37 RT	CS-3		96	30	20.00	S	2 - 3" SST	X			
H1	6	27+54	33 RT	D9-14		24	24	4.00	S	1 - 3" SST		X		
				D9-L		24	6	1.00	S			X		
H1	7	31+50	32 RT	R4-1		18	24	3.00	S	1 - 3" SST		X		
H1	8	32+12	39 LT	D11-1		18	16	2.00	N	1 - 3" SST		X		
H1	9	33+60	35 RT	D11-1		18	16	2.00	S	1 - 3" SST		X		

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE - 180719
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

SIGN SUMMARY AND NOTES

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H1
OF XX SHEETS

SIGNING & STRIPING NOTES:

1. ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
2. USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
   A. PST MEANS A PERFORATED STEEL TUBE.
   B. SST MEANS A SQUARE STEEL TUBE.
   C. RSP MEANS A ROUND STEEL PIPE.
   D. W MEANS A WIDE FLANGE BEAM.
   E. POPL MEANS A POLE PLATE INSTALLED PER ITS ALASKA STANDARD PLAN S-23.
3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE, WITH TYPE IX REFLECTIVE SHEETING.
4. FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
5. ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
6. SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER, IN ACCORDANCE WITH SECTION 201, UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
7. FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMETHACRYLATE MATERIALS. ALL STRIPING AND MARKINGS SHALL BE INLAID AND 125 MILS.
8. DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT OR FACE OF CURB WHEN PRESENT.
9. IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

SIGN SUMMARY TABLE

SHEET	POST NO.	STATION	OFFSET	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SF)	SIGN FACES	POST: NO., SIZE & TYPE	FRAMED? YES	FRAMED? NO	SALVAGE SIGN (EACH)	REMARKS
H2	10	37+96	33 LT	D9-14	P	24	24	4.00	N	1 – 3" SST		X		
				D9-R	→	24	6	1.00	N			X		
H2	11	39+45	27 RT	CS-4	Kenai River Warren Ames Memorial Bridge	96	30	20.00	S	2 – 3" SST	X			
H2	12	39+82	23 RT	OM-3R		12	36	3.00	S	1 – 3" SST		X		
H2	13	39+82	23 LT	OM-3R		12	36	3.00	S	1 – 3" SST		X		
H2	14	49+68	24 RT	OM-3R		12	36	3.00	N	1 – 3" SST		X		
H2	15	49+68	24 LT	OM-3R		12	36	3.00	N	1 – 3" SST		X		
H2	16	50+05	29 LT	CS-4	Kenai River Warren Ames Memorial Bridge	96	30	20.00	N	2 – 3" SST	X			
H2	17	51+92	33 RT	CS-5	ADOPT A HIGHWAY	30	24	5.00	S	1 – 2.5" PST		X		
H2	18	53+00	26 LT	D9-14	P	24	24	4.00	N	1 – 3" SST		X		
				D9-B	2000 FT	24	6	1.00	N			X		
H2	19	57+96	36 LT									X		UNUSED POST

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

SIGN SUMMARY AND NOTES

ALASKA STATE PARKS

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SHEET
H2
OF XX SHEETS

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7. FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMETHACRYLATE MATERIALS. ALL STRIPING AND MARKINGS SHALL BE INLAID AND 125 MILS.
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H3	20	59+03	36 LT	CS-3	ENTERING KENAI RIVER SPECIAL MANAGEMENT AREA	96	30	20.00	N	2 – 3" SST	X			
H3	21	61+04	32 RT	D9-14	P	24	24	4.00	S	1 – 3" SST		X		
				D9-B	1000 FT	24	6	1.00	S			X		
H3	22	65+97	32 RT	D9-14	P	24	24	4.00	S	1 – 3" SST		X		
				D9-L	←	24	6	1.00	S			X		
H3	23	69+04	32 RT	W11-21		36	36	9.00	S	1 – 3" SST		X		
				W7-3A	NEXT 2 MILES	20	18	2.50	S			X		
H3	24	69+13	36 LT	D11-1	BIKE ROUTE	18	16	2.00	N	1 – 3" SST		X		
H3	25	77+09	34 RT	D11-1	BIKE ROUTE	18	16	2.00	S	1 – 3" SST		X		
H3	26	80+00	33 LT	D9-14	P	24	24	4.00	N	1 – 3" SST		X		
				D9-R	→	24	6	1.00	N			X		

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PAVEMENT PRESERVATION
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STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

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H4	27	85+16	33 LT	D9-14	P	24	24	4.00	N	1 - 3" SST		X		
				D9-B	1000 FT	24	6	1.00	N			X		
				Rs-76		24	24	4.00	N			X		
H4	28	99+95	50 Lt	D3-1B	BOAT LAUNCH Rd	48	8	2.67	S	1 - 3" SST		X		DOUBLE-SIDED
				R1-1	STOP	30	30	6.25	W			X		
H4	29	107+60	36 RT	CS-6	J Hi-Lo Charters 1.8	90	12	7.50	S	2 - 3" SST		X		
H4	30	109+10	35 RT	D3-2R	Beaver Lp	100	30	20.83	S	1 - 3" SST	X			
H4	31	110+11	38 LT	R1-1	STOP	30	30	6.25	W	1 - 3" SST		X		
H4	32	113+71	38 LT	D11-1	BIKE ROUTE	18	16	2.00	N	LIGHT POLE		X		
				CS-5	ADOPT A HIGHWAY	30	24	5.00	N			X		

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H5	33	113+93	48 Lt	R6-1R	ONE WAY	42	8	2.33	S	1 – 3" SST		X		
				R6-1L	ONE WAY	42	8	2.33	N			X		
				R5-1	DO NOT ENTER	30	30	6.25	E			X		
				R1-1	STOP	30	30	6.25	W			X		
				R7-101	NO PARKING ANY TIME	24	30	5.00	N			X		
				D9-R	→	24	6	1.00	N			X		
H5	34	114+49	46 LT	R6-1L	ONE WAY	42	8	2.33	N	1 – 3" SST		X		
				W1-7	↔	48	24	8.00	E			X		
				R5-1	DO NOT ENTER	30	30	6.25	E			X		
				R1-1	STOP	30	30	6.25	W			X		

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

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H6	35	114+82	44 RT	D3-1B	Bridge Access Rd	42	8	2.33	E	1 - 3" SST		X		
				D3-1B	Bridge Access Rd	42	8	2.33	W			X		
				D3-1B	Beaver Loop Rd	42	8	2.33	S			X		
				D3-1B	Beaver Loop Rd	42	8	2.33	N			X		
				R1-1	STOP	30	30	6.25	E			X		
H6	36	115+09	37 RT	CS-5	ADOPT A HIGHWAY	30	24	5.00	SE	LIGHT POLE		X		
H6	37	116+47	38 RT	D11-1	BIKE ROUTE	24	18	3.00	SE	LIGHT POLE		X		
H6	38	119+29	39 LT	D3-2L	Beaver Lp	100	30	20.83	NW	3 - 3" SST	X			
H6	39	131+36	73 RT	R2-1	SPEED LIMIT 45	30	36	7.50	SE	1 - 3" SST		X		
H6	40	131+47	37 LT	R2-1	SPEED LIMIT 55	30	36	7.50	NW	1 - 3" SST		X		
H6	41	144+31	61 LT	H-1658	NO PARKING	18	24	3.00		1 - 3" SST				
H6	42	146+80	28 RT	D11-1	BIKE ROUTE	18	16	2.00	SE	1 - 3" SST		X		

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SHEET
H6
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H7	43	146+93	50 LT	D11-1	BIKE ROUTE	18	16	2.00	NW	1 - 3" SST		X		
H7	44	169+36	41 RT	R2-5A	REDUCED SPEED AHEAD	20	24	3.33	SE	1 - 3" SST		X		
H7	45	169+48	36 LT	R2-1	SPEED LIMIT 45	30	36	7.50	NW	1 - 3" SST		X		
H7	46	141+64	37 LT	W11-21		36	36	9.00	NW	1 - 3" SST		X		
				W7-3A	NEXT 2 MILES	20	18	2.50	NW			X		
H7	47	143.19	56 RT	D3-1B	W TERN AVE	24	8	1.33	SE	1 - 3" SST		X		DOUBLE-SIDED
				R1-1	STOP	30	30	6.25	NE			X		
H7	48	147+53	33 RT	R2-1	SPEED LIMIT 35	30	36	7.50	SE	LIGHT POLE		X		
H7	49	177+00	37 RT	CS-7	SENIOR CITIZENS COMMUNITY CENTER	30	24	5.00	SE	1 - 2" PST		X		
H7				CS-8	SENIOR CITIZENS COMMUNITY CENTER	30	24	5.00	NW			X		
H7	50	177+24	40 LT	D11-1	BIKE ROUTE	18	16	2.00	NW	LIGHT POLE		X		

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   E. POPL MEANS A POLE PLATE INSTALLED PER ITS ALASKA STANDARD PLAN S-23.
3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE, WITH TYPE IX REFLECTIVE SHEETING.
4. FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
5. ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
6. SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER, IN ACCORDANCE WITH SECTION 201, UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
7. FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMETHACRYLATE MATERIALS. ALL STRIPING AND MARKINGS SHALL BE INLAID AND 125 MILS.
8. DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT OR FACE OF CURB WHEN PRESENT.
9. IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

SIGN SUMMARY TABLE

SHEET	POST NO.	STATION	OFFSET	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (SF)	SIGN FACES	POST: NO., SIZE & TYPE	FRAMED? YES	FRAMED? NO	SALVAGE SIGN (EACH)	REMARKS
H8	51	178+46	43 RT	CS-10	CITY OF KENAI LIBRARY FIRE DEPT POLICE DEPT	30	24	5.00	SE	1 - 3" SST		X		
				CS-11	WELCOME TO THE PURPLE HEART COMMUNITY	12	18	1.50	SE			X		
H8	52	178+50	56 LT	D3-1B	FRONTAGE Rd	24	8	1.33	SE	1 - 3" SST		X		DOUBLE-SIDED
				R1-1	STOP	30	30	6.25	SW			X		
H8	53	179+73	41 LT	CS-5	ADOPT A HIGHWAY	30	24	5.00	NW	1 - 2" PST		X		
H8	54	175+95	36 LT	R2-1	SPEED LIMIT 35	30	36	7.50	NW	LIGHT POLE		X		
H8	55	180+26	10 LT	R4-7		12	18	1.50	SE	1 - 3" SST		X		
				OM1-3		18	18	2.25	SE			X		
				OM1-3		18	18	2.25	NW			X		
H8	56	180+42	60 RT	D3-1C	Kenai Soldotna	96	42	28.00	SE	1 - 3" SST		X		
				CS-12	H HOSPITAL	24	36	6.00	SE			X		
				CS-13	OLD TOWN KENAI	18	24	3.00	SE			X		
							TOTAL	501.92						

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

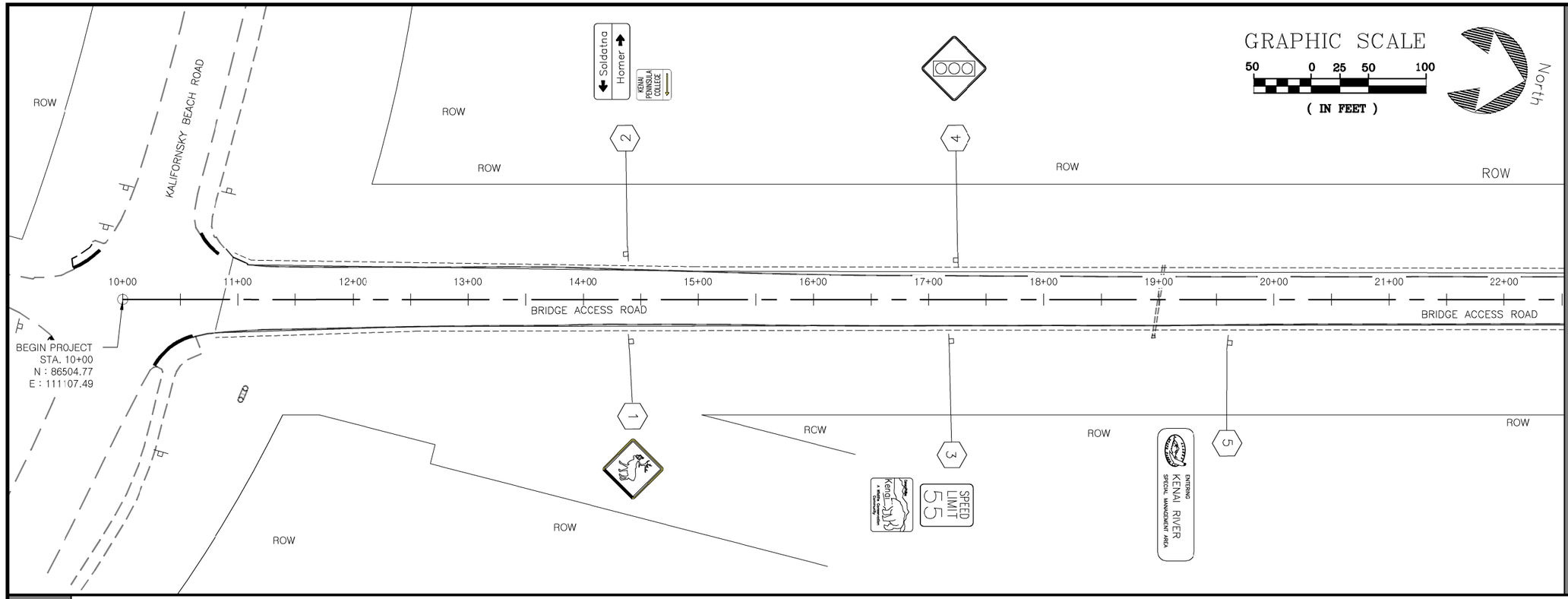
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

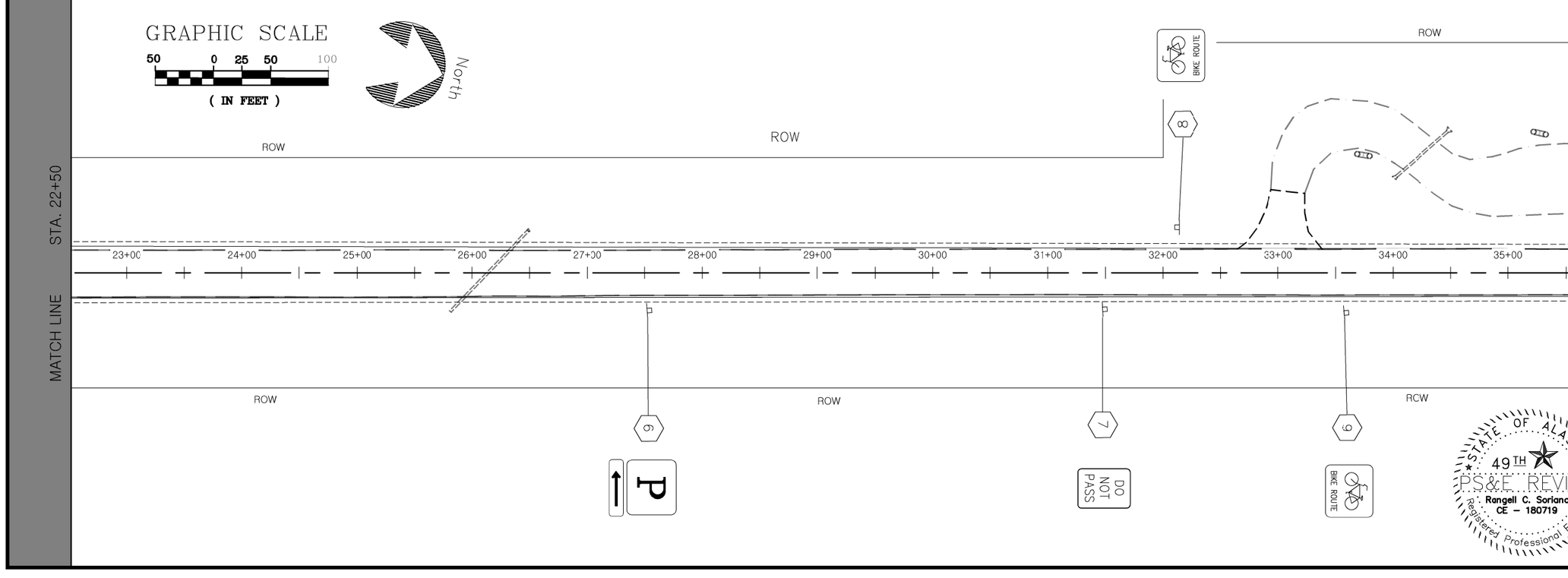
SIGN SUMMARY AND NOTES

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H8
OF XX SHEETS





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

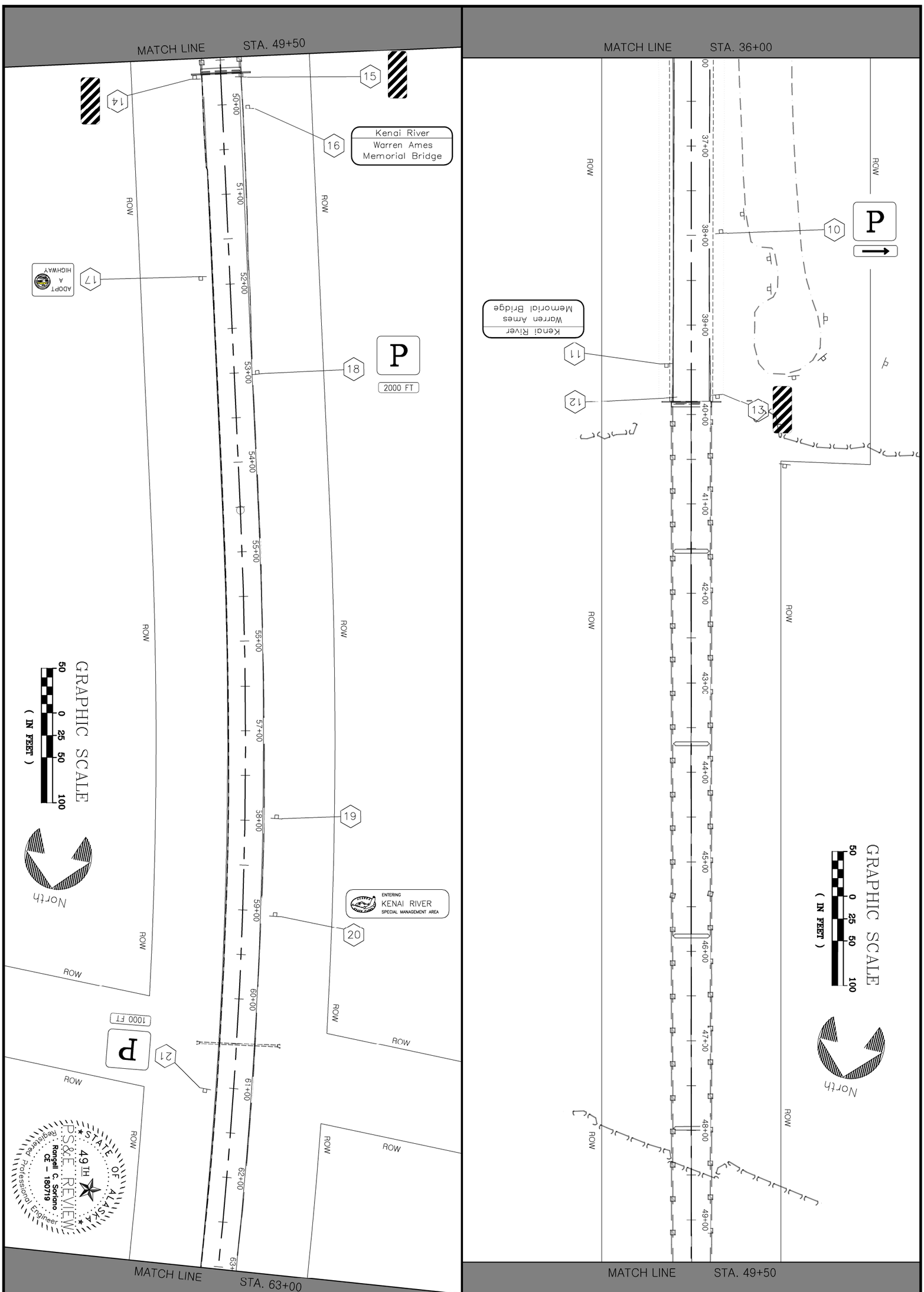
STA. 10+00 TO STA. 36+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

SHEET
H9
OF XX SHEETS



S&E REVIEW

STATE OF ALASKA
49TH
Registered Professional Engineer
Rangell C. Soriano
CE – 180719

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET H10 OF XX SHEETS

ALASKA STATE PARKS

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 36+00 TO STA. 63+00

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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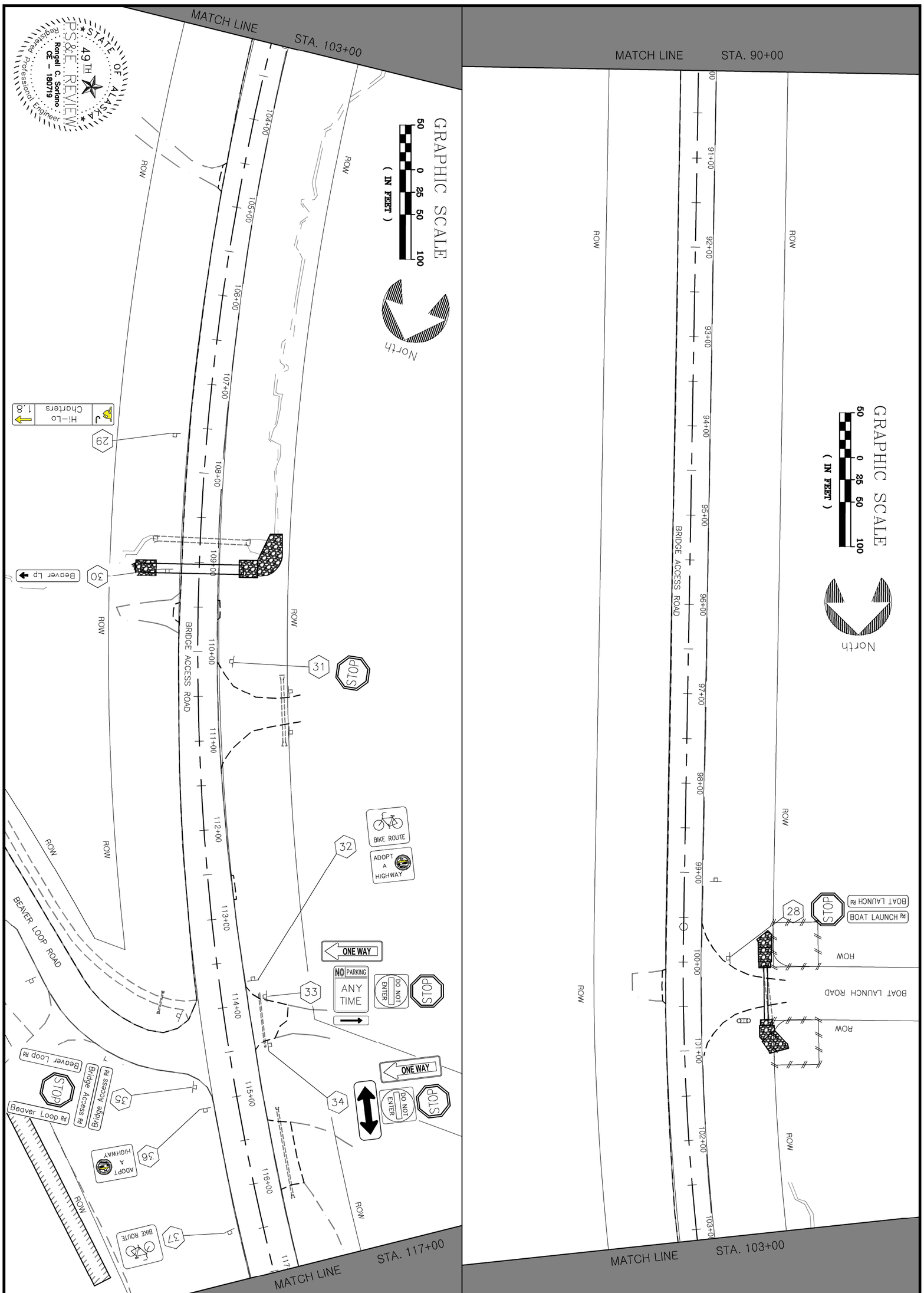
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 63+00 TO STA. 90+00

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H11
OF XX SHEETS



STATE OF ALASKA
49TH
P.S.&E. REVIEW
Registered Professional Engineer
Rangell C. Soriano
CE – 18071?

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

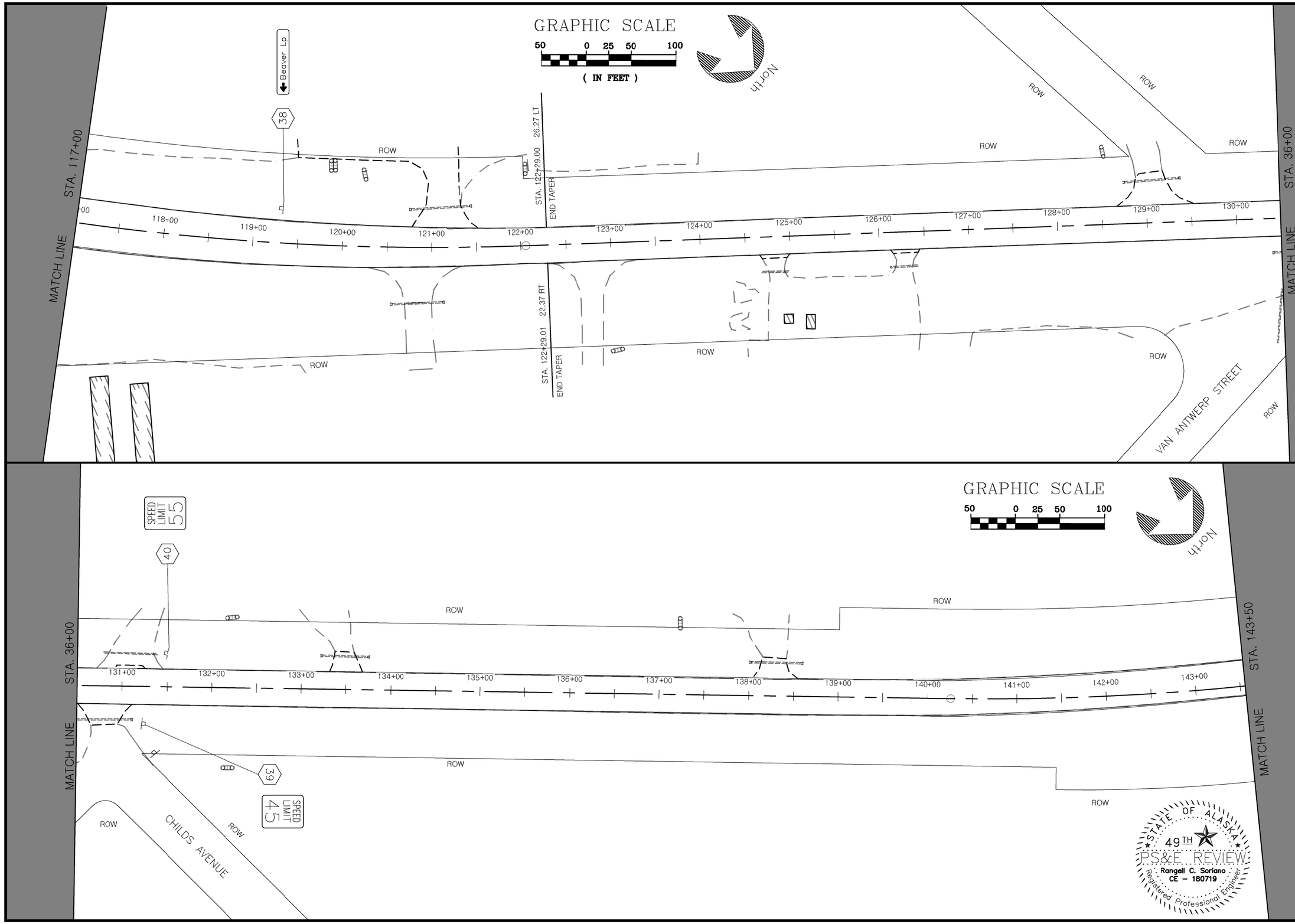
SHEET H12 OF XX SHEETS

ALASKA STATE PARKS

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 90+00 TO STA. 117+00



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

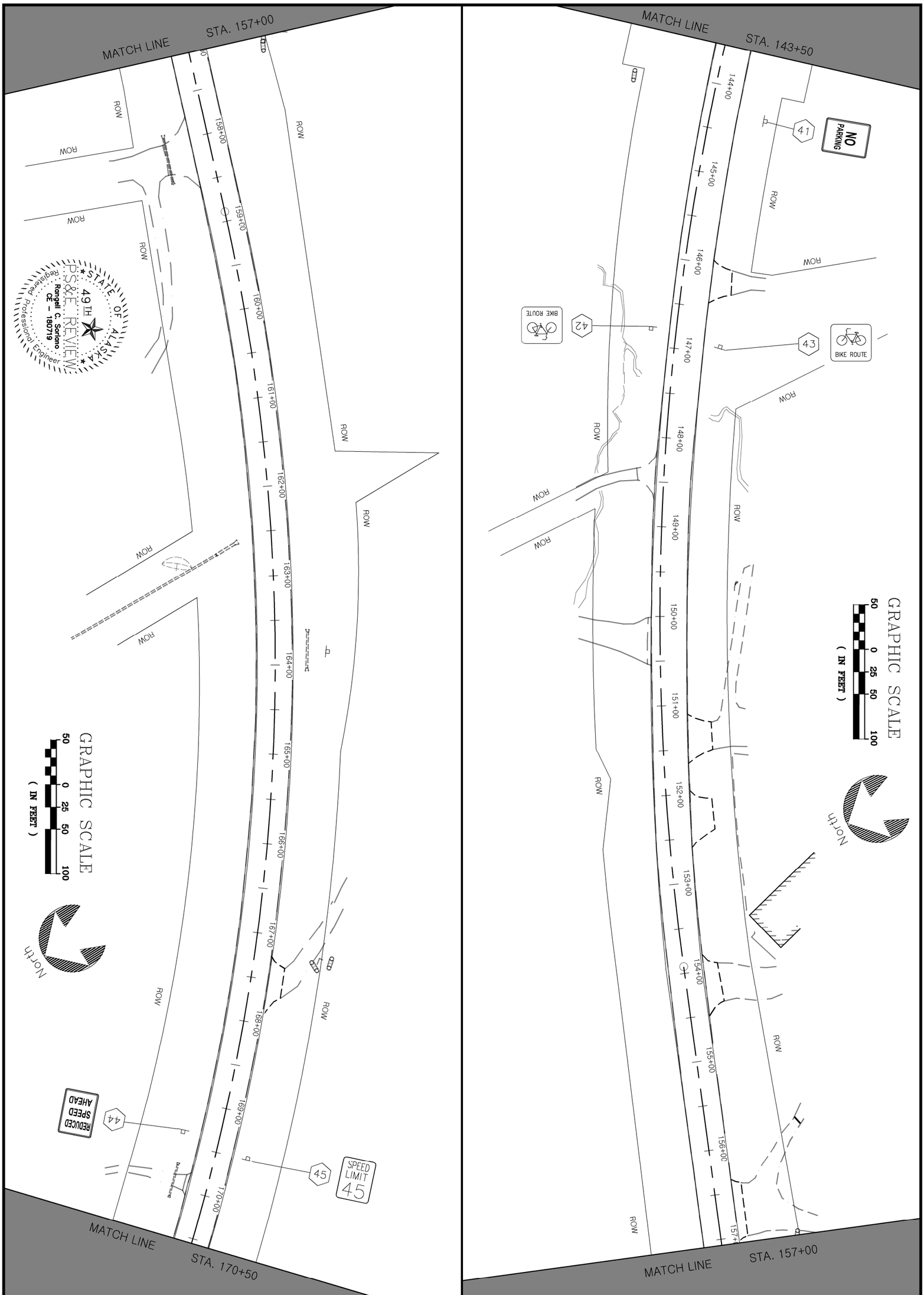
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 117+00 TO STA. 144+50

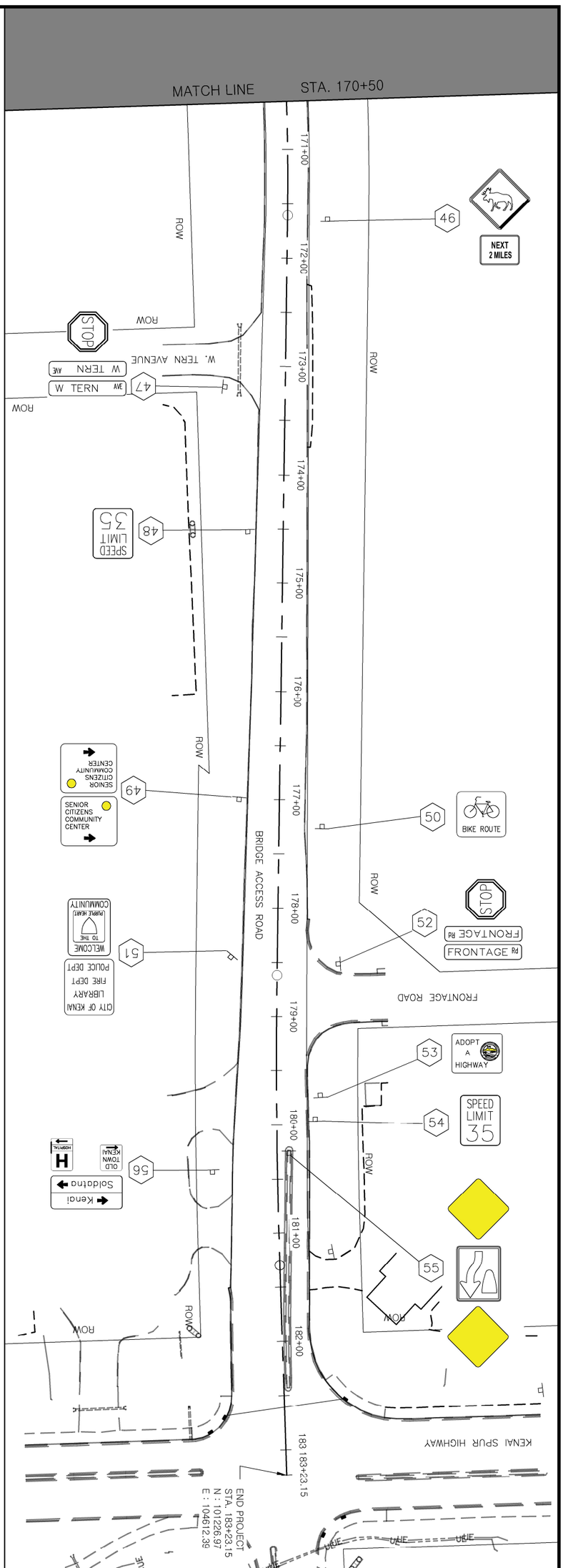
ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H13
OF XX SHEETS



PREPARED: RCS DRAWN: D&C REVIEWED: D&C DATE: NOV 2025	STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION 550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731	SHEET H14 OF XX SHEETS
	KENAI BRIDGE ACCESS ROAD PAVEMENT PRESERVATION PROJECT No. CFHWY00830	STA. 144+00 TO STA. 170+50



GRAPHIC SCALE

(IN FEET)

50 0 25 50 100

North

PS&E REVIEW

STATE OF ALASKA 49TH

Registered Professional Engineer

Rongell C. Soriano

CE – 18071

PREPARED: RCS

DRAWN: D&C

REVIEWED: D&C

DATE: NOV 2025

SHEET H15 OF XX SHEETS

ALASKA STATE PARKS

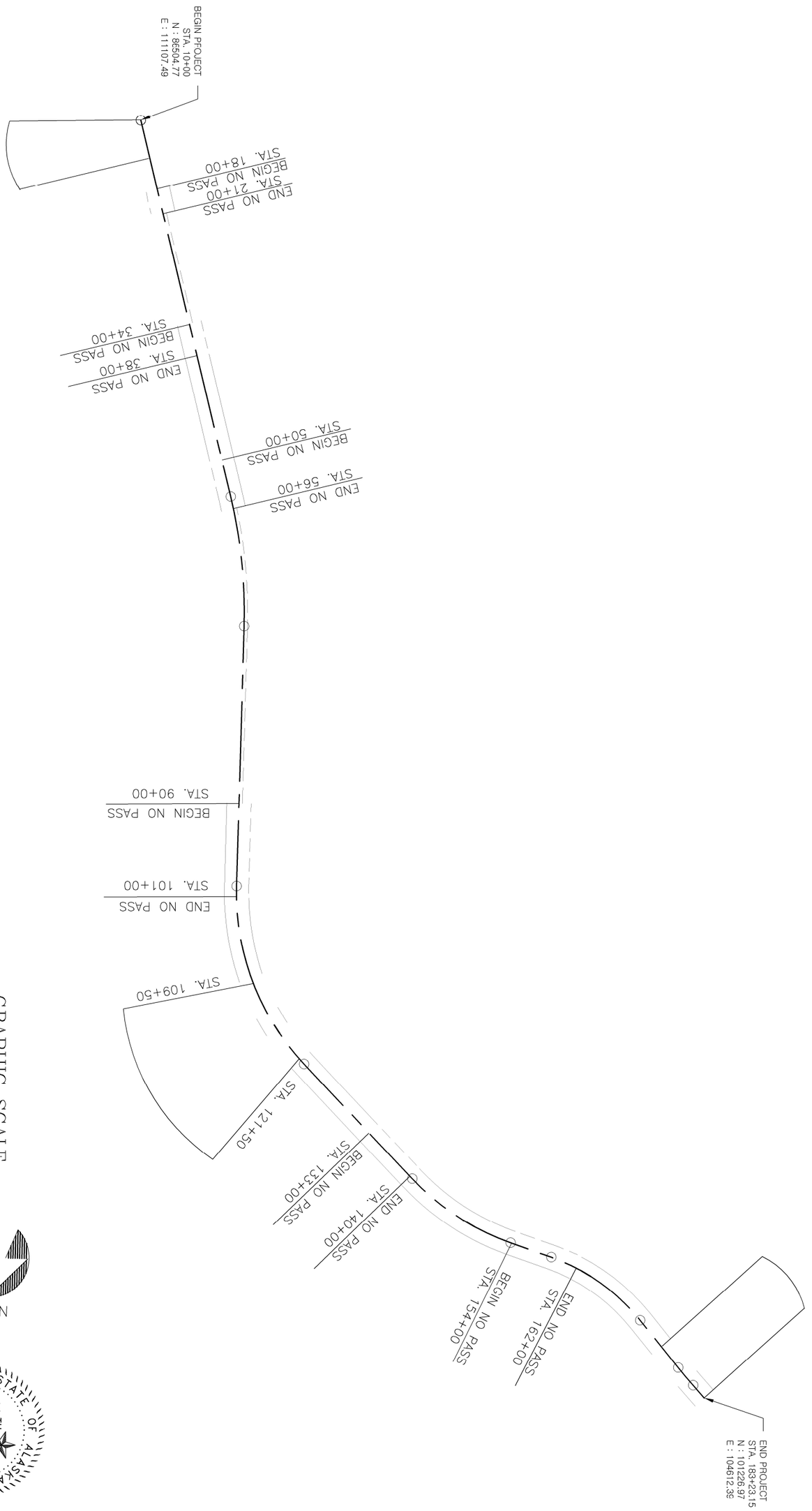
STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES

PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION

550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STA. 170+50 TO STA. 183+23.15



GRAPHIC SCALE

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(IN FEET)

North

P,S&E REVIEW

STATE OF ALASKA 49TH

Registered Professional Engineer

Rangell C. Soriano

CE – 180719

PREPARED: RCS

DRAWN: D&C

REVIEWED: D&C

DATE: NOV 2025

SHEET H16 OF XX SHEETS

ALASKA STATE PARKS

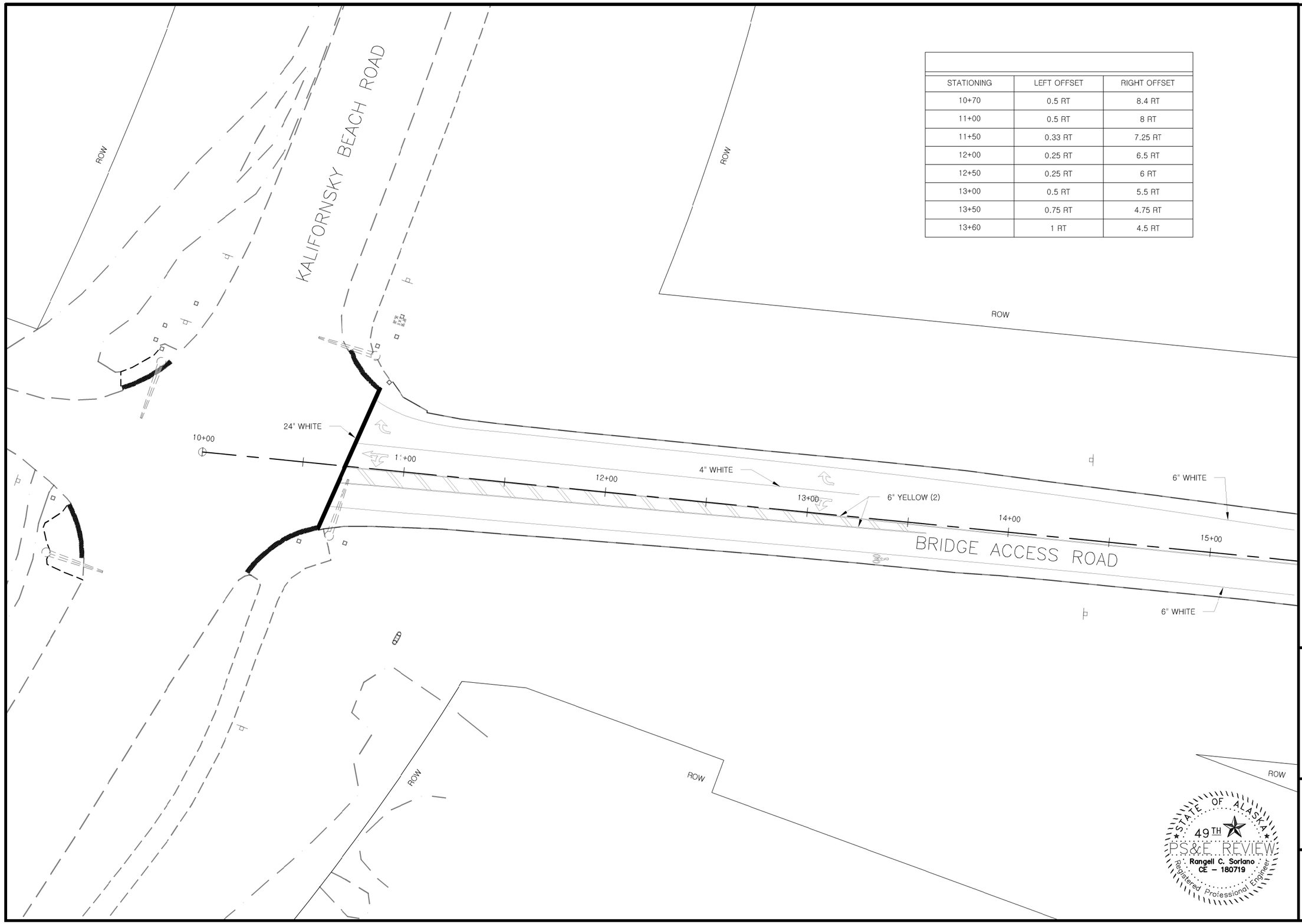
STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES

PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION

550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STRIPING DETAILS



STATIONING	LEFT OFFSET	RIGHT OFFSET
10+70	0.5 RT	8.4 RT
11+00	0.5 RT	8 RT
11+50	0.33 RT	7.25 RT
12+00	0.25 RT	6.5 RT
12+50	0.25 RT	6 RT
13+00	0.5 RT	5.5 RT
13+50	0.75 RT	4.75 RT
13+60	1 RT	4.5 RT

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

STRIPING PLANS
STA.10+00 TO STA. 15+00

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

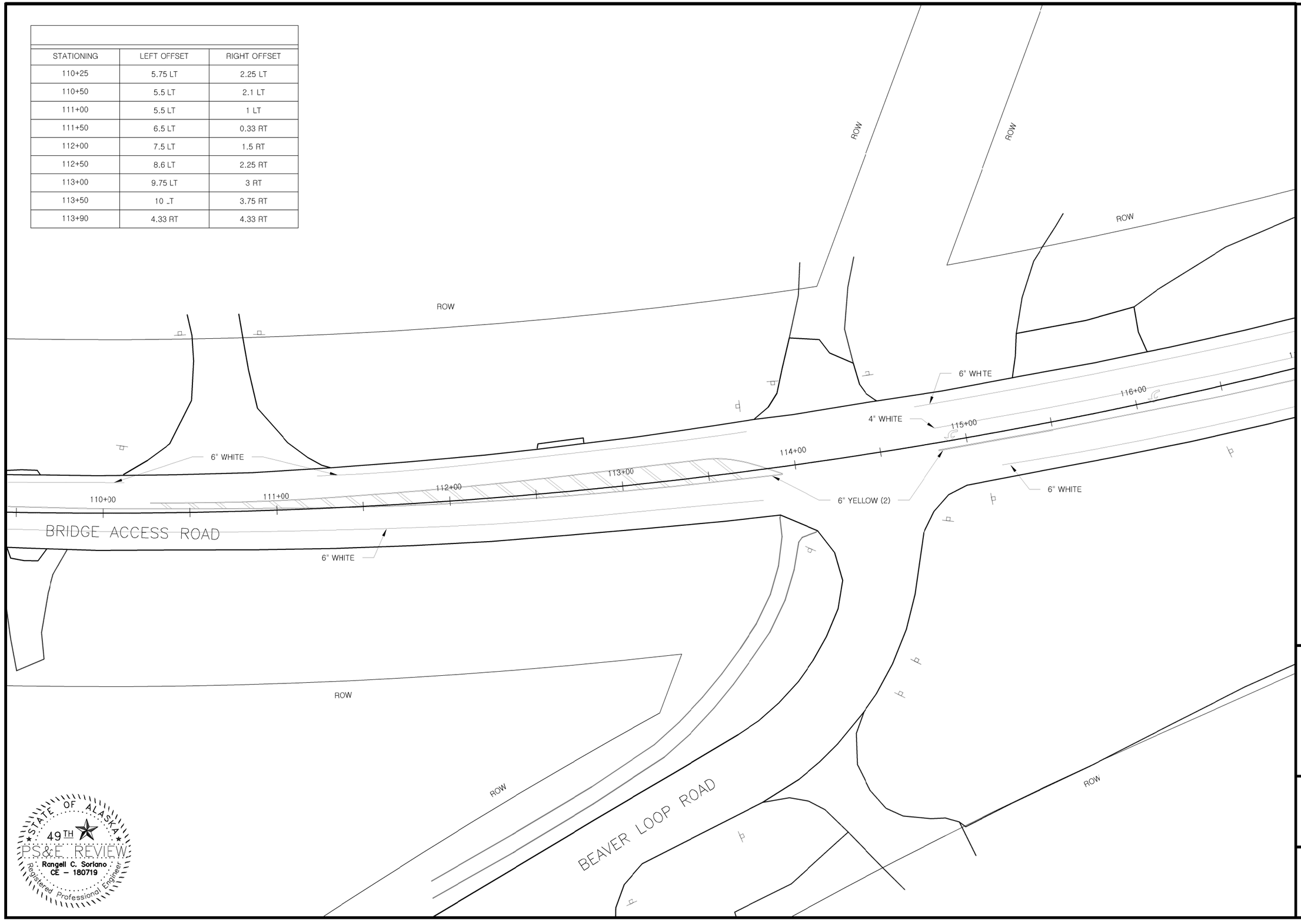
ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

SHEET
H17
OF XX SHEETS

STATIONING	LEFT OFFSET	RIGHT OFFSET
110+25	5.75 LT	2.25 LT
110+50	5.5 LT	2.1 LT
111+00	5.5 LT	1 LT
111+50	6.5 LT	0.33 RT
112+00	7.5 LT	1.5 RT
112+50	8.6 LT	2.25 RT
113+00	9.75 LT	3 RT
113+50	10 _T	3.75 RT
113+90	4.33 RT	4.33 RT



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

STRIPING PLANS
STA. 109+50 TO STA. 116+50

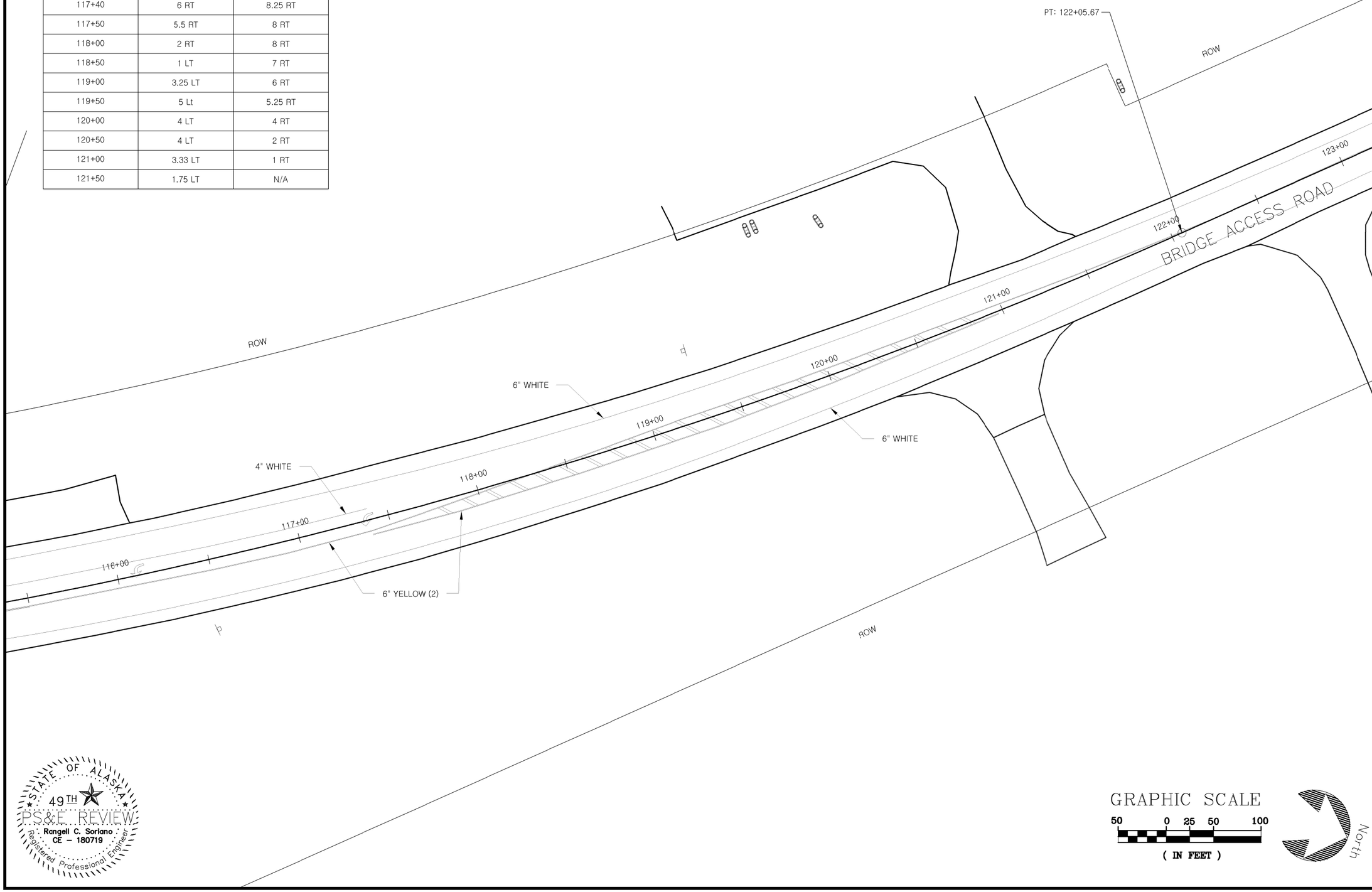
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H18
OF XX SHEETS

STATIONING	LEFT OFFSET	RIGHT OFFSET
117+40	6 RT	8.25 RT
117+50	5.5 RT	8 RT
118+00	2 RT	8 RT
118+50	1 LT	7 RT
119+00	3.25 LT	6 RT
119+50	5 Lt	5.25 RT
120+00	4 LT	4 RT
120+50	4 LT	2 RT
121+00	3.33 LT	1 RT
121+50	1.75 LT	N/A



GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

North

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

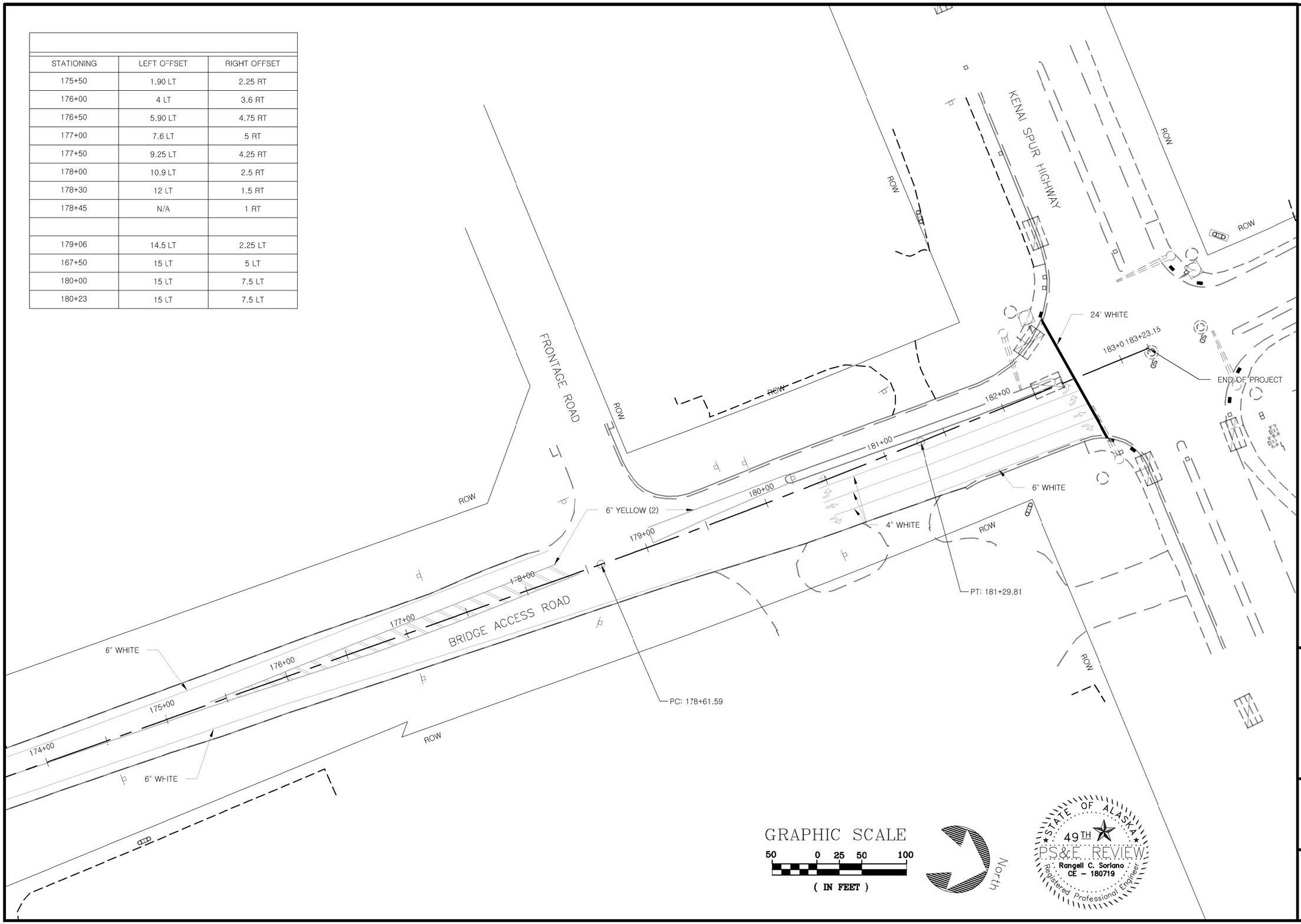
STRIPING PLANS
STA. 115+50 TO STA. 123+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H19
OF XX SHEETS

STATIONING	LEFT OFFSET	RIGHT OFFSET
175+50	1.90 LT	2.25 RT
176+00	4 LT	3.6 RT
176+50	5.90 LT	4.75 RT
177+00	7.6 LT	5 RT
177+50	9.25 LT	4.25 RT
178+00	10.9 LT	2.5 RT
178+30	12 LT	1.5 RT
178+45	N/A	1 RT
179+06	14.5 LT	2.25 LT
167+50	15 LT	5 LT
180+00	15 LT	7.5 LT
180+23	15 LT	7.5 LT



GRAPHIC SCALE

50 0 25 50 100

(IN FEET)

North

STATE OF ALASKA
49TH
PS&E REVIEW
Rangell C. Soriano
CE – 180719
Registered Professional Engineer

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

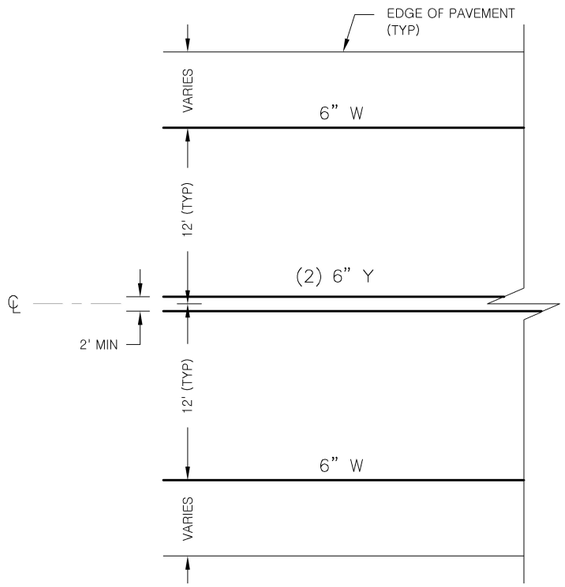
KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

STRIPING PLANS
STA. 174+00 TO STA. 183+23.15

ALASKA STATE PARKS

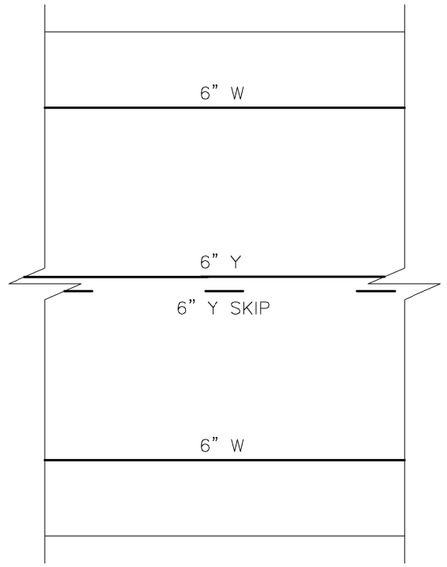
PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

SHEET
H20
OF XX SHEETS



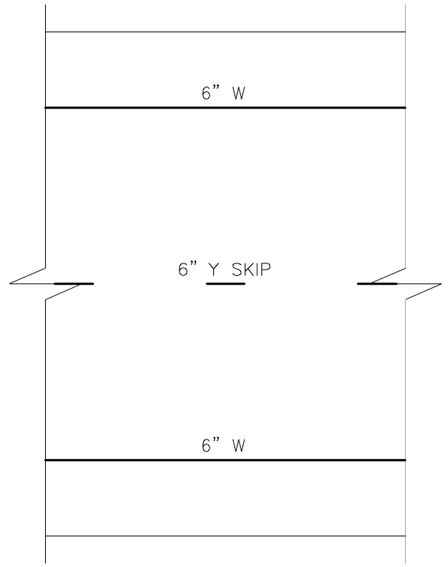
CASE I – LANE STRIPING
NO PASS ZONE

STA. 38+00 TO STA. 50+00
STA. 101+00 TO STA. 109+50
STA. 121+50 TO STA. 133+00
STA. 140+00 TO STA. 154+00



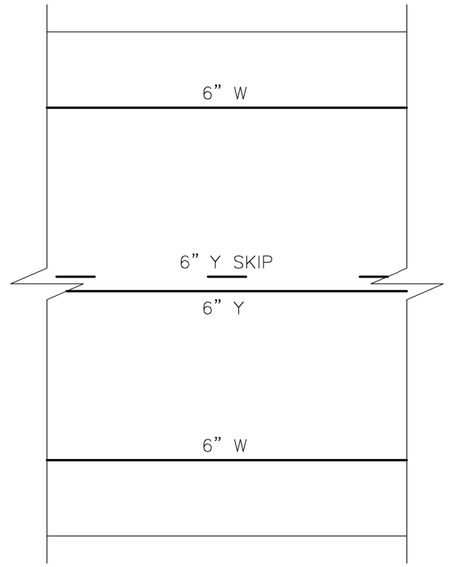
CASE II – LANE STRIPING
ONE DIRECTION (RIGHT) PASSING ZONE

STA. 18+00 TO STA. 21+00
STA. 50+00 TO STA. 56+50



CASE III – LANE STRIPING
TWO DIRECTION PASSING ZONE

STA. 21+00 TO STA. 34+00
STA. 56+00 TO STA. 90+50
STA. 109+50 TO STA. 121+50



CASE IV – LANE STRIPING
ONE DIRECTION (LEFT) PASSING ZONE

STA. 34+00 TO STA. 38+00
STA. 90+00 TO STA. 101+00
STA. 121+50 TO STA. 140+00
STA. 154+00 TO STA. 162+00

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 – 907.269.8731

KENAI BRIDGE ACCESS ROAD
PAVEMENT PRESERVATION
PROJECT No. CFHWY00830

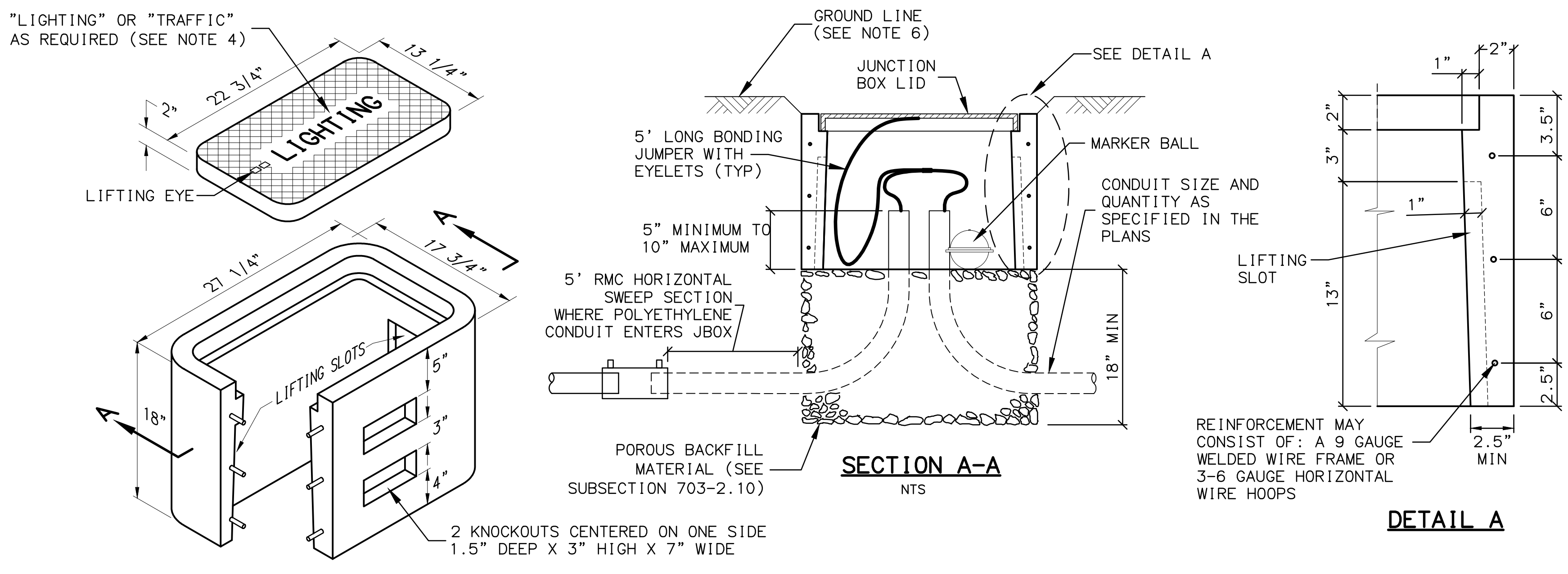
GENERAL STRIPING PLANS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: NOV 2025

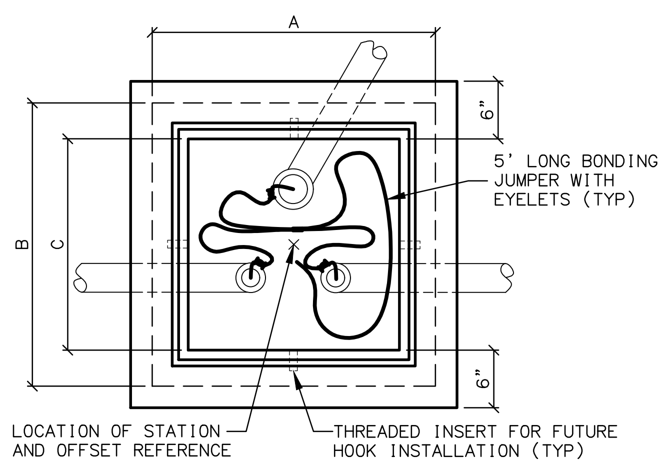
SHEET
H21
OF XX SHEETS

NO.	DATE	REVISION

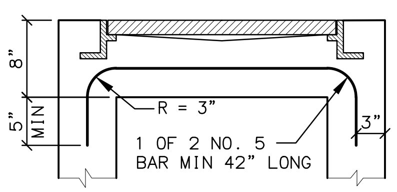
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	XXXXXXX/XXXXXXXXXX	20XX	H##	HXX



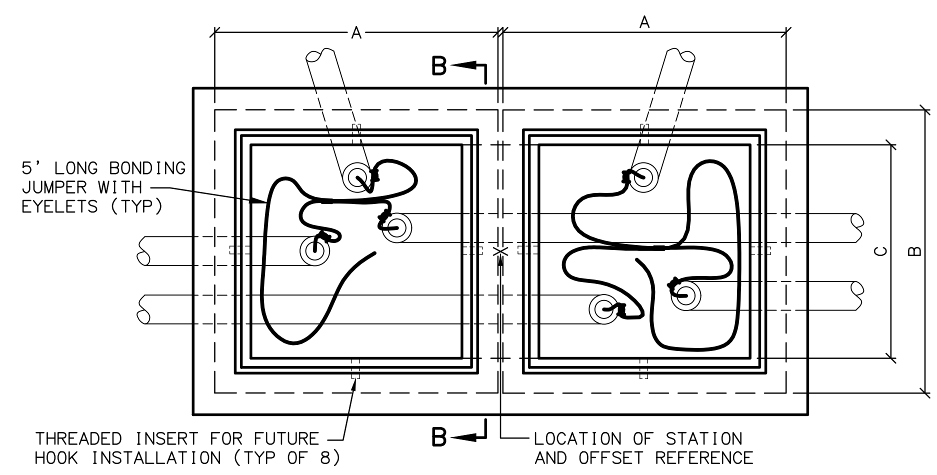
TYPE IA JUNCTION BOX



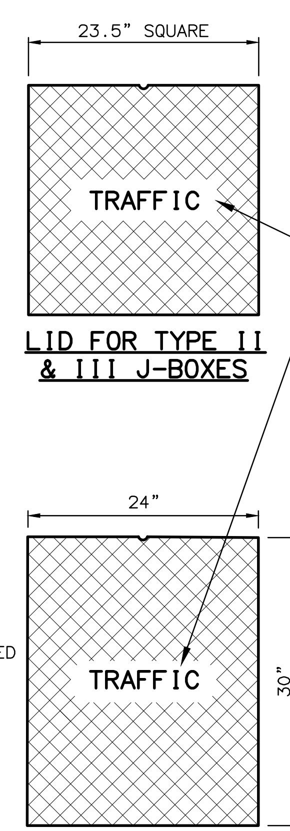
PLAN



SECTION B-B

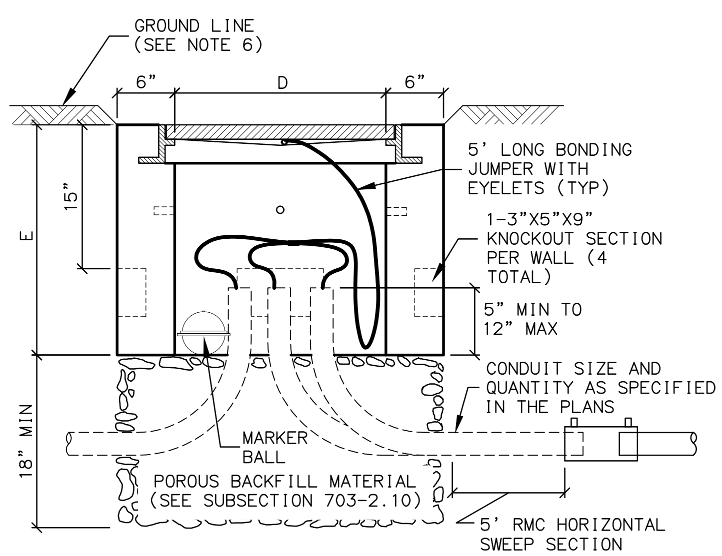


PLAN



LIDS FOR TYPE II & III J-BOXES

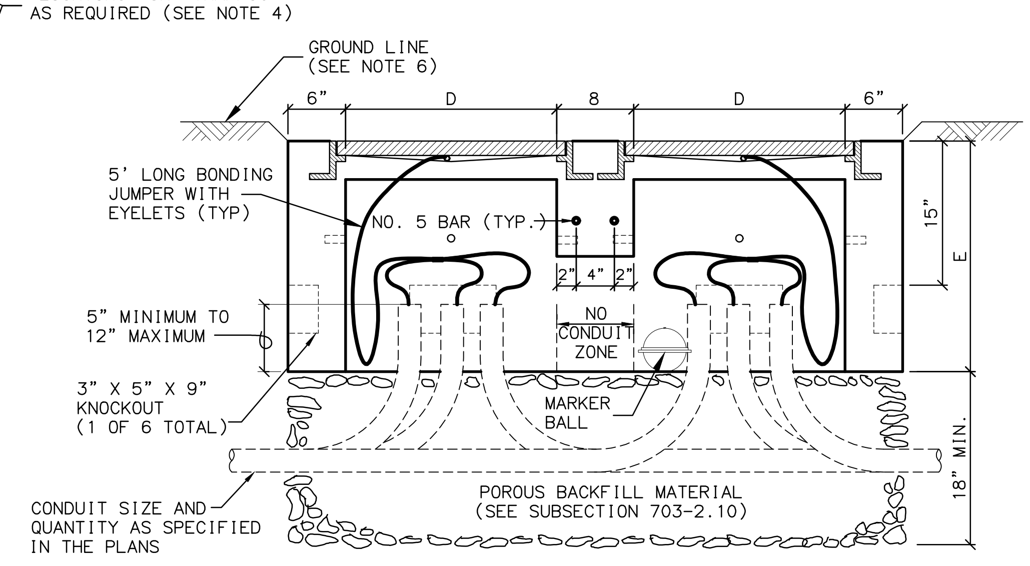
LID FOR TYPE IV J-BOXES



TYPE II JUNCTION BOX

ELEVATION

NTS



TYPE III/IV JUNCTION BOX

ELEVATION (TYPE III LAYOUT DEPICTED)

NOTES:

1. AVOID INSTALLING TYPE IA JUNCTION BOXES IN DRIVEWAYS OR IN LOCATIONS SUBJECT TO USE BY HEAVY TRUCKS. INSTALL JUNCTION BOXES ONLY AT THE LATERAL LOCATIONS ALLOWED IN SUBSECTION 660-3.04.
2. FURNISH TYPE II, III AND IV JUNCTION BOXES WITH CAST IRON FRAMES AND LIDS THAT WEIGH A MINIMUM OF 210 POUNDS AND ARE RATED FOR HEAVY TRAFFIC LOADS IN COMPLIANCE WITH AASHTO M306. FURNISH TYPE IA JUNCTION BOXES WITH CAST IRON LIDS THAT WEIGH A MINIMUM OF 50 POUNDS.
3. CONSTRUCT JUNCTION BOXES ACCORDING TO SECTION 501 USING CLASS A CONCRETE. REINFORCE TYPE IA JUNCTION BOXES AS SHOWN. SYNTHETIC STRUCTURAL FIBER-REINFORCED CONCRETE THAT MEETS ASTM C 1116 AND CONTAINS FIBER IN PROPORTIONS AS RECOMMENDED BY THE FIBER MANUFACTURER MAY BE ADDED FOR STRENGTH.
4. FOR JUNCTION BOXES THAT CONTAIN ILLUMINATION CONDUCTORS EXCLUSIVELY, FURNISH LIDS WITH THE WORD "LIGHTING" INSCRIBED INTO THEM. FOR OTHER JUNCTION BOXES, FURNISH LIDS WITH THE WORD "TRAFFIC" INSCRIBED INTO THEM.
5. UNDER JUNCTION BOXES, INSTALL POROUS BACKFILL MATERIAL CONFORMING TO SUBSECTION 703-2.10.
6. SET THE TOPS OF JUNCTION BOXES WITH THE FOLLOWING DIMENSIONS BELOW THE FINISHED SURROUNDING SURFACE:
   - 1" IN PAVED MEDIANS AND ADJACENT TO PEDESTRIAN FACILITIES
   - 1/4" IN PEDESTRIAN FACILITIES
   - 2" IN ALL OTHER AREAS
7. BOND JUNCTION BOX LIDS TO THE SYSTEM OF EQUIPMENT GROUNDING CONDUCTORS ACCORDING TO SUBSECTION 660-3.06. ATTACH BONDING JUMPERS TO THE JUNCTION BOX LIDS WITH BRASS OR STAINLESS STEEL HARDWARE.
8. INSTALL LOOP DETECTOR TAILS THROUGH ONE OF THE KNOCKOUTS OF TYPE 1A JUNCTION BOXES. AFTER SETTING THE BOXES TO GRADE, INSTALL GROUT IN THE GAPS THAT REMAIN IN THE KNOCKOUT.
9. INSTALL A 1/2" THICK PREFORMED BITUMINOUS JOINT MATERIAL AROUND JUNCTION BOXES INSTALLED IN PORTLAND CEMENT CONCRETE WALKWAYS.
10. INSTALL AN ELECTRONIC MARKER BALL IN ALL JUNCTION BOXES PER SUBSECTION 660-3.04.
11. PRIOR TO INSTALLATION MARK ALL JUNCTION BOX LOCATIONS WITH A WIRE STAFF VINYL FLAG. THE FLAG SHALL BE RED IN COLOR AND MINIMUM 4-INCHES TALL BY 5-INCHES WIDE. THE WIRE STAFF SHALL BE 21-INCHES IN LENGTH AND CONSTRUCTED OF MINIMUM 15.5 GAUGE STEEL.
12. WHERE MODIFIED TYPE II JUNCTION BOXES ARE REQUIRED FOR DETECTOR LOOP TAIL INSTALLATIONS, ADD ONE(1) ADDITIONAL 5" DEEP X 3" HIGH X 18" WIDE KNOCKOUT 8" BELOW TOP OF JUNCTION BOX.

J-BOX DIMENSIONS

J-BOX TYPE	DIMENSIONS				
	A (MAX.)	B (MAX.)	C (MIN.)	D (MIN.)	E (MIN.)
II	29 1/2"	29 1/2"	22"	22"	24"
III	29 1/2"	29 1/2"	22"	22"	24"
IV	30"	36"	30"	24"	30"

XXXXX REVIEW

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

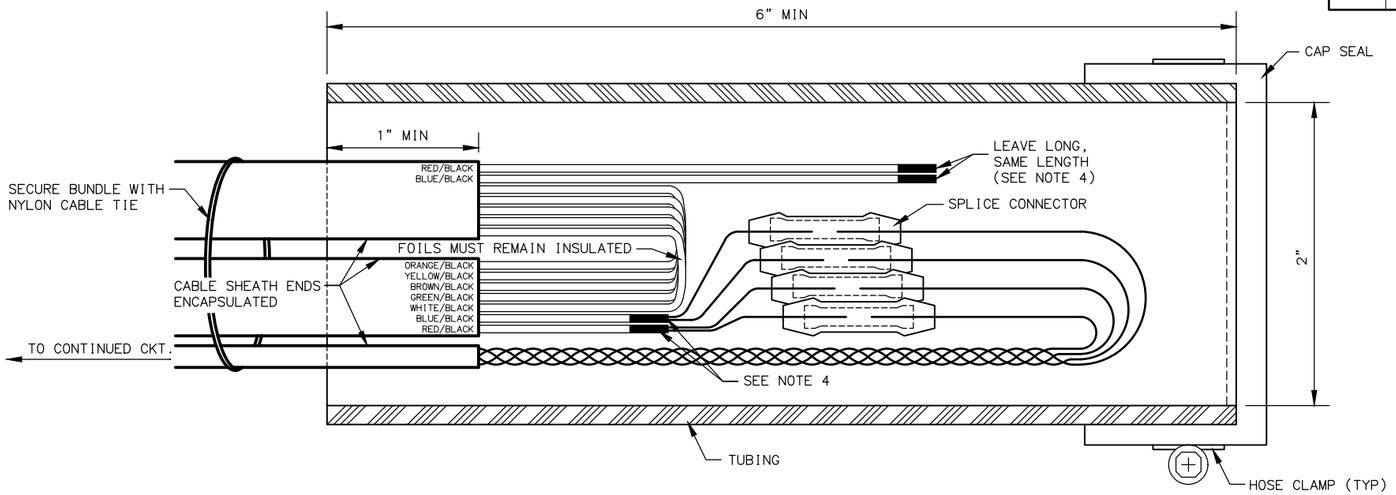
PROJECT TITLE
PROJECT TITLE

JUNCTION BOX DETAILS

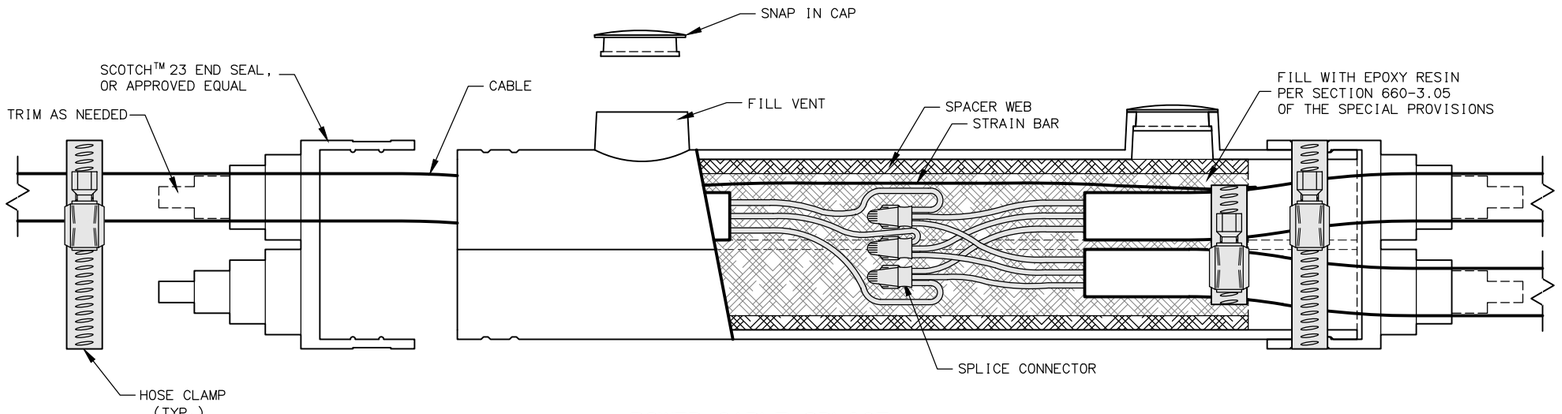
DESIGNED BY ZJH
CHECKED BY RDR
DRAFTED BY MF
SCALE X" = XX'
DATE 3/27/2024 TIME 11:30 AM
DRAWING LOCATION: \\DOT.SOA.ALASKA.GOV\SHARED\AVI\TSE\PROJECTS\02-REGIONAL DETAILS\CIV3D\TP MASTERS\2021 FORMAT\03-JUNCTION BOX.DWG

NO.	DATE	REVISION

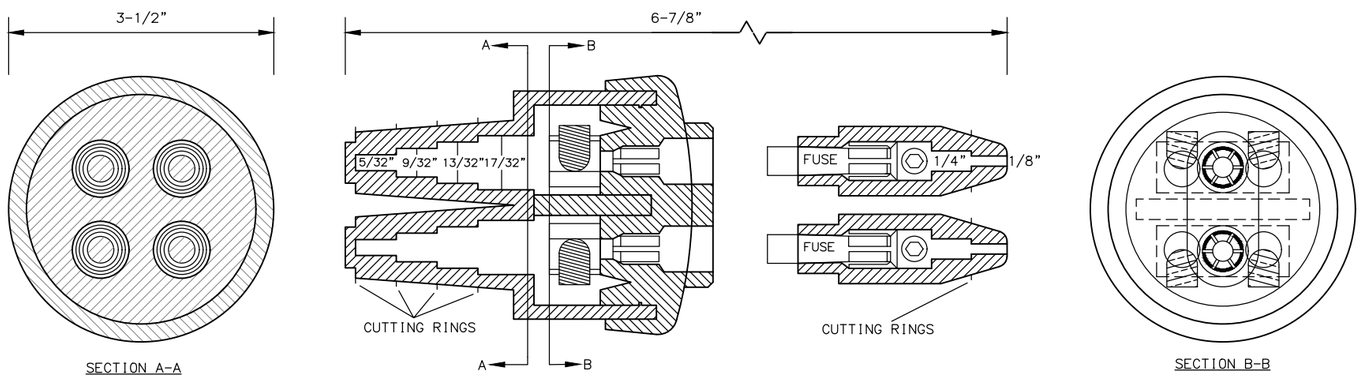
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	XXXXXXX/XXXXXXXXXX	20XX	H##	HXX



LOOP LEAD-IN SPLICE



POWER CABLE SPLICE



DOUBLE FUSED CONNECTOR

NOTES:

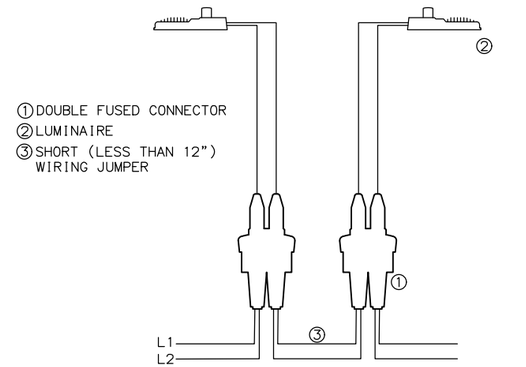
LOOP LEAD-IN SPLICE

1. FABRICATE LOOP LEAD-IN SPLICE IN THE FIELD AS SHOWN.
2. CAP SEAL ONE END AND COMPLETELY FILL OPEN END WITH RE-ENTERABLE ENCAPSULATION COMPOUND TO EDGE OF TUBING.
3. LEAVE A MINIMUM OF 1/2" CLEARANCE BETWEEN THE ENCLOSURE AND THE SPLICE AT BOTH ENDS OF THE TUBING.
4. EXPOSE FOIL AND DRAIN WIRES, SEAL WITH HEAT SHRINK TUBING (TYP).
5. INSTALL SPLICE CONNECTORS ACCORDING TO MANUFACTURER'S SPECIFICATIONS.

POWER CABLE SPLICE

6. SECURE CABLE/CONNECTOR BUNDLE WITH HOSE CLAMPS AS SHOWN.

MATERIAL PROPERTIES	
LOOP LEAD-IN SPLICE	
TUBING	PER SECTION 660-3.05
CAP SEAL	FERNCO QWIK CAP #QC-102, OR APPROVED EQUAL
HOSE CLAMP	STAINLESS STEEL
SPLICE CONNECTOR	ML56-16, OR APPROVED EQUAL
COMPOUND	RE-ENTERABLE ENCAPSULATION
POWER CABLE SPLICE	
SPLICE KIT	3M MODEL 78R, OR APPROVED EQUAL
SPLICE CONNECTOR	SCOTCHLOCK G, R, OR Y SPRING CONNECTOR, OR APPROVED EQUAL
HOSE CLAMP	(4)- STAINLESS STEEL
EPOXY RESIN	PER SECTION 660-3.05
DOUBLE FUSED CONNECTOR	
DOUBLE FUSED CONNECTOR	SEC-1791-DF-1, OR APPROVED EQUAL
FUSES	(2) - COMPATIBLE 5-AMP TIME DELAY TYPE FOR LED FIXTURE OR 10-AMP FAST ACTING FOR ALL OTHER FIXTURES



DUAL LUMINAIRE WIRING DIAGRAM

STATE OF ALASKA DOT&PF
4111 AVIATION AVENUE
ANCHORAGE, AK 99502
(907) 269-0590

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

PROJECT TITLE
PROJECT TITLE

SPLICE DETAILS

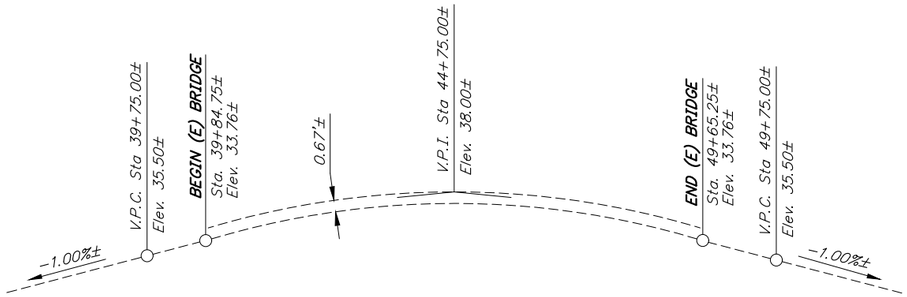
DESIGNED BY ZJH
CHECKED BY RDR
DRAFTED BY MF

SCALE X" = XX'

DATE TIME 3/27/2024 11:30 AM

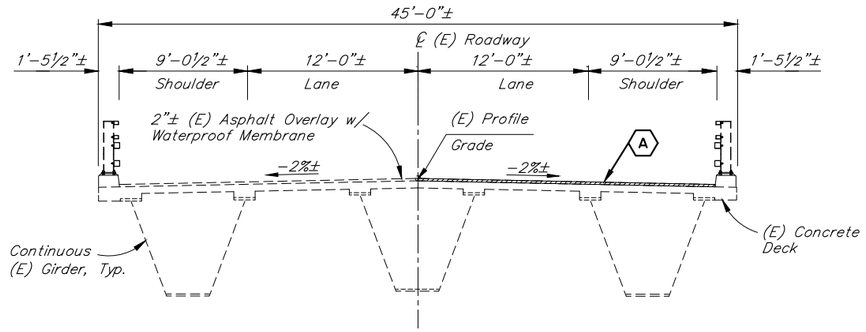
DRAWING LOCATION
\\DOT.SOA.ALASKA.GOV\SHARED\AVI\TSE\PROJECTS\02-REGIONAL DETAILS\CIV3D\FTP MASTERS\2021 FORMAT\05-SPLICE.DWG

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2025	N1	N2



PROFILE GRADE DATA

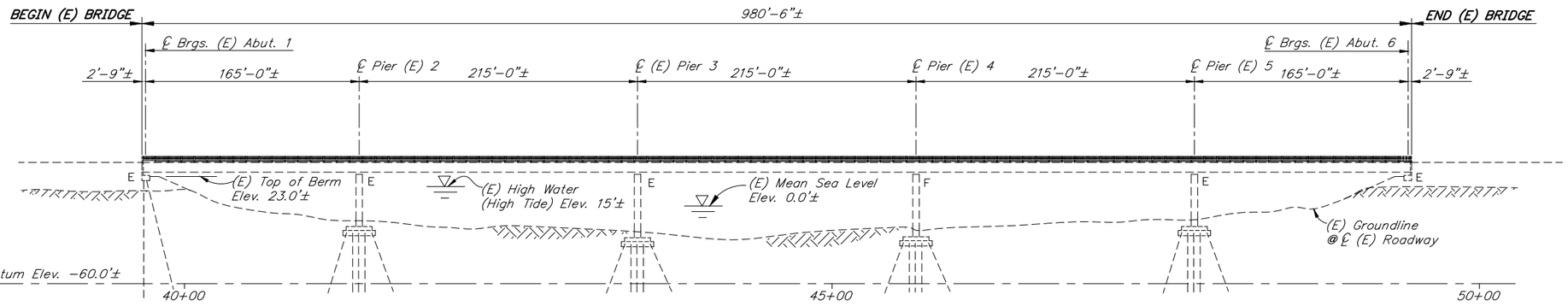
No Scale



EXISTING PROPOSED

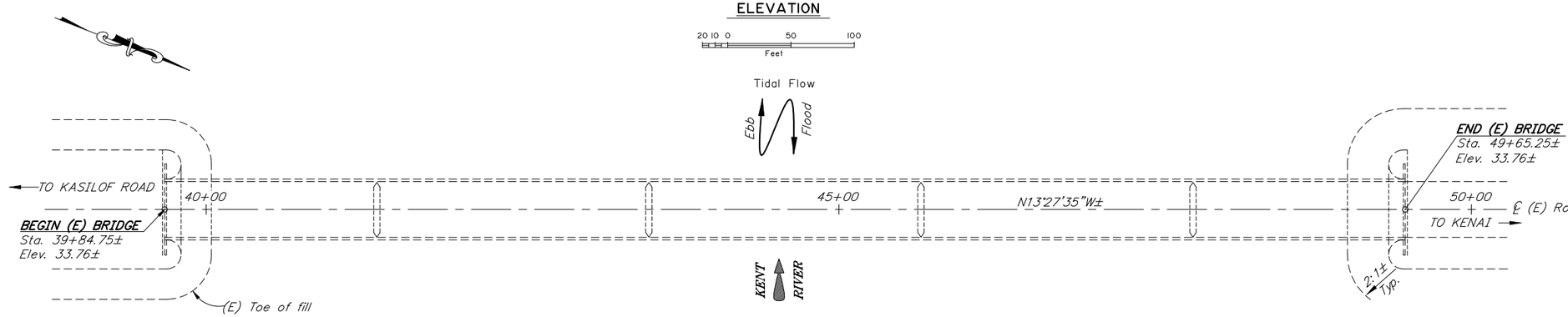
TYPICAL SECTION

12 0 5 10
In. Feet



ELEVATION

20 10 0 50 100
Feet



PLAN

20 10 0 50 100
Feet

LEGEND	
A	= 2" Asphalt Overlay w/ Waterproof Membrane

BRIDGE DRAWING INDEX

TITLE	DWG. NO.
GENERAL LAYOUT	1
GENERAL NOTES	2

REHABILITATION

PRELIMINARY PLAN

NOTES:

(E) = Existing

– – – – – = Existing

——— = Proposed

1. Bridge stations and elevations are based on 1977 as-built drawings.
2. Verify controlling field dimensions before ordering or fabricating any material.

R:\cad\1149\1149-1-GEN Wed, Aug/27/25 7:49am

DESIGNED BY: Leslie Daugherty	CHECKED: Checker	LAYOUT BY: Leslie Daugherty	CHECKED BY: Checker
DRAWN BY: Rick Grantham	CHECKED: Leslie Daugherty	SPECIFICATIONS BY: Leslie Daugherty	P S & E COMPARED: Checker
QUANTITIES BY: Leslie Daugherty	CHECKED: Checker	APPROVAL RECOMMENDED BY: Leslie Daugeherty	

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

KENAI RIVER BRIDGE AT KENAI

BRIDGE ACCESS ROAD

GENERAL LAYOUT

BRIDGE NO. 1149

DWG. NO. 1

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0463021/CFHWY00830	2025	N2	N2

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM	PAY UNIT	ESTIMATING UNIT	SUBST.	SUPERST.	TOTAL QUANTITY
508.0001.0000	Waterproofing Membrane, Spray-Applied	LS	SF	---	41,263	41,263

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 25 psf for all wearing surfaces.

Existing 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 dimensions and adjust proposed dimensions of the work to fit existing conditions.

ABBREVIATIONS:

℄	= centerline	e.f.	= each face	min.	= minimum
?	= plate	e.w.	= each way	n.f.	= near face
&	= and	Ext.	= exterior	No.	= number
@	= at	F	= fixed	o.c.	= center
ø	= diameter	f.a.	= front/air face	O.H.W.	= ordinary high water
±	= approximate	Ft.	= feet	pcf	= pounds per cubic foot
Abut.	= abutment	Fy	= yield stress	psf	= pounds per square foot
Approx.	= approximate	Glav.	= galvanize	psi	= pounds per square inch
b.f.	= back/dirt face	H.S.	= high strength	R	= radius
bot.	= bottom	Hwy.	= highway	R.O.W.	= right of way
Br.	= bridge	Int.	= interior	RT.	= right
btwn.	= between	Jt.	= joint	Rd.	= road
Brg.	= bearings	K	= kips	spcs.	= space, spaces
C.G.	= center of gravity	ksf	= 1000 pounds per square foot	Sta.	= station
C.I.P.	= cast in place	ksi	= 1000 pounds per square inch	SF	= square feet
Clr.	= clear, clearance	LBS or lb	= pounds	SY	= square yard
CY	= cubic yard	LF	= linear foot	Std.	= standard
Dia.	= diameter	LS	= lump sum	Symm.	= symmetric
Dwg.	= drawing	LT.	= left	Typ.	= typical
E	= expansion	max.	= maximum	VPC	= point of vertical curve
(E)	= existing			VPI	= point of vertical intersection
EA	= each			VPT	= point of vertical tangent
Elev.	= elevation			w/	= with

DESIGNED BY: Leslie Daugherty	CHECKED: Checker	**REHABILITATION**	STATE OF ALASKA **DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES** BRIDGE SECTION 3132 Channel Drive Juneau, Alaska 99801 907-465-2975
DRAWN BY: Rick Grantham	CHECKED: Leslie Daugherty	**PRELIMINARY PLAN**	
QUANTITIES BY: Leslie Daugherty	CHECKED: Checker		

KENAI RIVER BRIDGE AT KENAI

BRIDGE ACCESS ROAD

GENERAL NOTES

BRIDGE NO. 1149

DWG. NO. 2

R:\cad\1149\1149-2-NOTES Wed, Aug/27/25 07:49am

CORRUGATED CIRCULAR ALUMINUM PIPE

Minimum & Maximum Cover for 2 2/3"X 1/2" Aluminum Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100	100+	100+	100+	100+
18	12	83	100+	100+	100+	100+
21	12	71	89	100+	100+	100+
24	12	62	78	100+	100+	100+
27	12		69	97	100+	100+
30	12		62	87	100+	100+
36	12		51	73	94	100+
42	12			62	80	100+
48	12			54	70	85
54	15			48	62	76
60	15				52	64
66	18					52
72	18					43

Minimum & Maximum Cover for 3" x 1" Aluminum Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
30	12	57	72	100+	100+	100+
36	12	47	60	84	100+	100+
42	12	40	51	72	96	100+
48	12	35	44	62	84	99
54	15	31	39	55	74	88
60	15	28	35	50	67	79
66	18	25	32	45	61	72
72	18	23	29	41	56	66
78	21		27	38	51	61
84	21			35	48	56
90	24			33	44	52
96	24			31	41	49
102	24				39	46
108	24				37	43
114	24					39
120	24					36

Minimum & Maximum Cover for 9"X 2 1/2" Aluminum Structural Plate Pipe*			
Thickness		0.125	0.150
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)
84	18	31	
90	18	27	
96	18	27	
102	18	24	
108	18	24	
114	18	21	
120	24	21	
126	24	19	
132	30	19	
138	30	18	
144	30	18	
150	30		22
156	30		22
162	36		20
168	36		20

*5.33 - 3/4" dia. steel bolts per foot.

CORRUGATED ALUMINUM PIPE-ARCH

Minimum & Maximum Cover for 2 2/3"X 1/2" Aluminum Pipe-Arch					
				2 Tons/Sf Corner Bearing Pressure	
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
17	13	3 4/8	16 (0.060)	12	13
21	15	4 1/8	16 (0.060)	12	12
24	18	4 7/8	16 (0.060)	12	12
28	20	5 4/8	14 (0.075)	12	12
35	24	6 7/8	14 (0.075)	12	12
42	29	8 2/8	12 (0.105)	12	12
49	33	9 5/8	12 (0.105)	15	12
57	38	11	10 (0.135)	15	12
64	43	12 3/8	10 (0.135)	18	12
71	47	13 6/8	8 (0.164)	18	12

Minimum & Maximum Cover for 3" x 1" Aluminum Pipe-Arch					
				2 Tons/Sf Corner Bearing Pressure	
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
60	46	18 6/8	14 (0.075)	15	20
66	51	20 6/8	14 (0.075)	18	20
73	55	22 7/8	14 (0.075)	21	20
81	59	20 7/8	12 (0.105)	21	16
87	63	22 7/8	12 (0.105)	24	16
95	67	24 3/8	12 (0.105)	24	16
103	71	26 1/8	10 (0.135)	24	16
112	75	27 6/8	8 (0.164)	24	16

Minimum & Maximum Cover for 9" x 2 1/2" Aluminum Multiplate Pipe-Arch*					
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	2 Tons/Sf Corner Bearing Pressure Max. Cover (Ft)
6-7	5-8	31.75	0.125	24	24
6-11	5-9	31.75	0.125	24	24
7-3	5-11	31.75	0.125	24	18
7-9	6-0	31.75	0.125	24	18
8-5	6-3	31.75	0.125	24	16
9-3	6-5	31.75	0.125	24	15
10-3	6-9	31.75	0.125	30	13
10-9	6-10	31.75	0.125	30	13
11-5	7-1	31.75	0.125	30	13
12-7	7-5	31.75	0.125	30	11
12-11	7-6	31.75	0.125	30	11
13-1	8-2	31.75	0.125	30	11
13-11	8-5	31.75	0.125	36	10
14-8	9-8	31.75	0.125	36	9
15-4	10-0	31.75	0.150	36	8
16-1	10-4	31.75	0.150	36	8
16-9	10-8	31.75	0.150	42	7
17-3	11-0	31.75	0.150	42	7
18-0	11-4	31.75	0.175	42	7
18-8	11-8	31.75	0.175	42	7

*5.33 - 3/4" dia. steel bolts per foot.

GENERAL NOTES:

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflection.
7. These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

Minimum & Maximum Cover for 2 2/3" x 1/2" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100+	100+	100+	100+	100+
18	12	100+	100+	100+	100+	100+
21	12	100+	100+	100+	100+	100+
24	12	100+	100+	100+	100+	100+
30	12	83	100+	100+	100+	100+
36	12	69	86	100+	100+	100+
42	12	59	74	100+	100+	100+
48	12	51	64	91	100+	100+
54	12		57	80	100+	100+
60	12			72	93	100+
66	12			66	85	100+
72	12				78	95
78	12					84
84	12					73

Minimum & Maximum Cover fo 3" x 1" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12			100+	100+	100+
42	12			100+	100+	100+
48	12		74	100+	100+	100+
54	12	53	66	93	100+	100+
60	12	47	59	83	100+	100+
66	12	43	54	76	98	100+
72	12	39	49	69	89	100+
78	12	36	45	64	82	100+
84	12	33	42	59	77	94
90	12	31	39	55	71	87
96	12	29	37	52	67	82
102	18	27	34	49	63	77
108	18		32	46	59	73
114	18		31	43	56	69
120	18		29	41	53	65
126	18			39	51	62
132	18			37	48	59
138	18			36	46	57
144	18				44	54

Minimum & Maximum Cover for 5" x 1" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12	71	88	100+	100+	100+
42	12	60	76	100+	100+	100+
48	12	53	66	93	100+	100+
54	12	47	59	82	100+	100+
60	12	42	53	74	96	100+
66	12	38	48	67	87	100+
72	12	35	44	62	79	97
78	12	32	40	57	73	90
84	12	30	37	53	68	83
90	12	28	35	49	63	78
96	12	26	33	46	59	73
102	18	24	31	43	56	69
108	18		29	41	53	65
114	18		27	39	50	61
120	18		26	37	47	58
126	18			35	45	55
132	18			33	43	53
138	18			32	41	50
144	18				39	48

Minimum & Maximum Cover for 6" x 2" Steel Multiplate Pipe*								
Gage		12	10	8	7	5	3	1
Thickness		0.111	0.140	0.170	0.188	0.218	0.249	0.280
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
60	12	46	67	87	100	100+	100+	100+
66	12	42	60	79	91	100+	100+	100+
72	12	38	55	73	83	100+	100+	100+
78	12	35	51	67	77	93	100+	100+
84	12	32	47	62	71	86	100+	100+
90	12	30	44	58	67	80	95	100+
96	12	28	41	54	62	75	89	97
102	18	27	39	51	59	71	84	91
108	18	25	37	48	55	67	79	86
114	18	24	35	45	52	63	75	82
120	18	22	33	43	50	60	71	77
126	18	21	31	41	47	57	68	74
132	18	20	30	39	45	54	64	70
138	18	19	28	37	43	52	62	67
144	18	18	27	36	41	50	59	64

*4 - 3/4" dia. steel bolts per foot.

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

CORRUGATED CIRCULAR STEEL PIPE

CORRUGATED STEEL PIPE-ARCH

Minimum & Maximum Cover for 2 2/3"X 1/2"Steel Pipe-Arch					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
17	13	3 4/8	16 (0.060)	12	11
21	15	4 1/8	16 (0.060)	12	11
24	18	4 7/8	16 (0.060)	12	11
28	20	5 4/8	16 (0.060)	12	11
35	24	6 7/8	16 (0.060)	12	11
42	29	8 2/8	16 (0.060)	12	11
49	33	9 5/8	14 (0.075)	12	11
57	38	11	12 (0.109)	12	11
64	43	12 3/8	12 (0.109)	12	11
71	47	13 6/8	10 (0.138)	12	11
77	52	15 1/8	10 (0.138)	12	11
83	57	16 4/8	8 (0.168)	12	11

Minimum & Maximum Cover for 3"X 1"Steel Pipe-Arch					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
53	41	10 2/8	14 (0.079)	12	10
60	46	18 6/8	14 (0.079)	15	29
66	51	20 6/8	14 (0.079)	15	29
73	55	22 7/8	14 (0.079)	18	18
81	59	20 7/8	14 (0.079)	18	15
87	63	22 7/8	14 (0.079)	18	15
95	67	24 3/8	14 (0.079)	18	15
103	71	26 1/8	14 (0.079)	18	14
112	75	27 6/8	14 (0.079)	21	14
117	79	29 4/8	12 (0.109)	21	14
128	83	31 2/8	10 (0.138)	24	14
137	87	33	10 (0.138)	24	14
142	91	34 6/8	10 (0.138)	24	13
150	96	36	10 (0.138)	30	13
157	96	38	10 (0.138)	30	13
164	105	40	10 (0.138)	30	14
171	110	41	10 (0.138)	30	13

Minimum & Maximum Cover for 5"X 1"Steel Pipe-Arch					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
53	41	10 2/8	14 (0.079)	12	10
60	46	18 6/8	14 (0.079)	15	29
66	51	20 6/8	14 (0.079)	15	29
73	55	22 7/8	14 (0.079)	18	18
81	59	20 7/8	14 (0.079)	18	15
87	63	22 7/8	14 (0.079)	18	15
95	67	24 3/8	14 (0.079)	18	15
103	71	26 1/8	14 (0.079)	18	14
112	75	27 6/8	14 (0.079)	21	14
117	79	29 4/8	12 (0.109)	21	14
128	83	31 2/8	10 (0.138)	24	14
137	87	33	10 (0.138)	24	14
142	91	34 6/8	10 (0.138)	24	13
150	96	36	10 (0.138)	30	13
157	96	38	10 (0.138)	30	13
164	105	40	10 (0.138)	30	14
171	110	41	10 (0.138)	30	13

Minimum & Maximum Cover for Steel Multiplate Pipe-Arch 6" x 2" *					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Gage (In)	Min. Cover (In)	Max. Cover (Ft)
6-1	4-7	18	12 (0.111)	12	14
7-0	5-1	18	12 (0.111)	12	12
7-11	5-7	18	12 (0.111)	12	10
8-10	6-1	18	12 (0.111)	18	9
9-9	6-7	18	12 (0.111)	18	8
10-11	7-1	18	12 (0.111)	18	6
11-10	7-7	18	12 (0.111)	18	5
12-10	8-4	18	12 (0.111)	24	5
13-3	9-4	31	10 (0.140)	24	11
14-2	9-10	31	10 (0.140)	24	10
15-4	10-4	31	10 (0.140)	24	9
16-3	10-10	31	10 (0.140)	30	8
17-2	11-4	31	10 (0.140)	30	8
18-1	11-10	31	10 (0.140)	30	7
19-3	12-4	31	10 (0.140)	30	7
19-11	12-10	31	10 (0.140)	30	6
20-7	13-2	31	10 (0.140)	36	6

*4 - 3/4" dia. steel bolts per foot.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

Maximum Cover for Type S Corrugated Polyethelene Pipe	
Size (in)	Max. Cover (ft)
12	24
15	25
18	24
24	20
30	20
36	18
42	16
48	17

GENERAL NOTES

1. All materials and workmanship shall be in accordance with the State of Alaska Standard Specifications for Highway Construction.

2. For foundation and structural backfill details see Standard Plan D-01 "Culvert Pipe & Arch Installation Details".

3. Pipe cover height is measured from top of the pipe to top of rigid pavement, or to the bottom of subgrade for flexible pavement. In all cases the minimum cover shall be no less than 2 ft. Where loads traverse the culvert during construction minimum cover shall be no less than 4 ft.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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Carolyn Morehouse, P.E.
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D-04.22

Minimum & Maximum Cover for Aluminum Spiral Rib Circular Pipe*					
Gage		16	14	12	10
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	43	61		
21	12	38	52	84	
24	12	33	45	73	
30	15	26	36	58	
36	18	21	30	49	69
42	21		25	41	59
48	24			36	51
54	24			32	46
60	24			29	41
66	24				37
72	30				34

*¾ x ¾ x 7½ in. Corrugations

Minimum & Maximum Cover for Aluminum Spiral Rib Pipe-Arch*						
Gage			16	14	12	10
Thickness			0.060	0.075	0.105	0.135
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)			
20	16	12	16			
23	19	12	15			
27	21	15	13	13		
33	26	18	13	13	13	
40	31	21		13	13	
46	36	24			13	13
53	41	24			13	13
60	46	24			13	13
66	51	24				13

*¾ x ¾ x 7½ in. Corrugations

ALUMINUM SPIRAL RIB PIPE

STEEL SPIRAL RIB PIPE

Minimum & Maximum Cover for Steel and Aluminized Steel Spiral Rib Circular Pipe*					
Gage		16	14	12	10
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	91			
24	12	68	95	100+	
30	12	54	76	100+	
36	12	45	63	100+	
42	12	38	54	90	
48	12	33	47	79	
54	18	30	42	70	
60	18	27	38	63	92
66	18	24	34	57	83
72	18		31	52	76
78	24		29	48	70
84	24		27	45	65
90	24			42	61
96	24			39	56
102	30			36	50
108	30			32	45

*¾ x ¾ x 7½ in. Corrugations.

Minimum & Maximum Cover for Steel Spiral Rib Pipe-Arch*					
			2 Tons/Sf Corner Bearing Pressure		
Thickness			0.064	0.079	0.109
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)		
20	16	12	13		
23	19	12	13		
27	21	12	11		
33	26	12	11		
40	31	12	11		
46	36	12	11		
53	41	18		11	
60	46	18		19	
66	51	18		19	
73	55	18			18
81	59	18			15
87	63	18			15
95	67	18			15

*¾ x ¾ x 7½ in. Corrugations

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

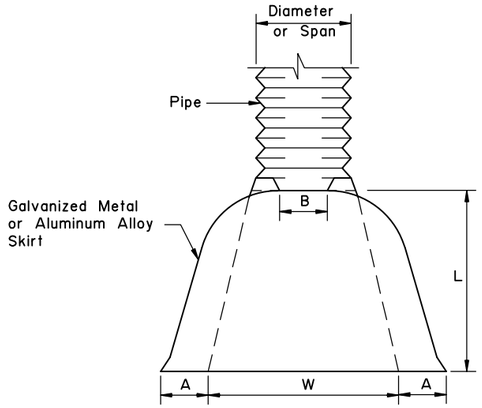
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

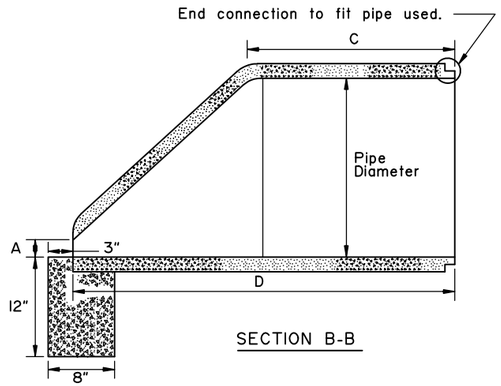
Next Code and Standards Review date: 7/8/2030

D-04.22



PLAN

ROUND AND PIPE ARCH

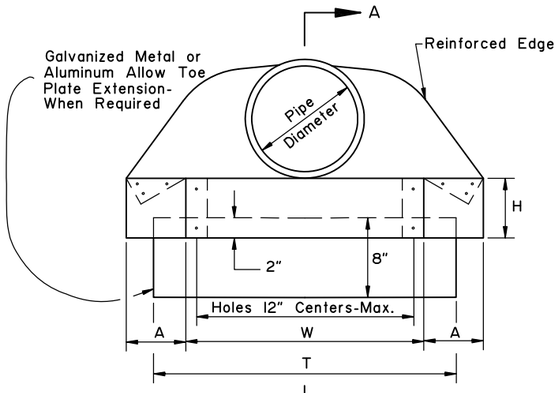


SECTION B-B

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

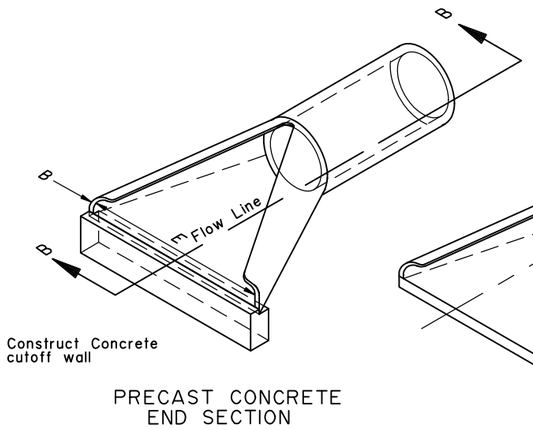
ROUND PIPE									
Pipe Diam. Inches	Thickness For Aluminum	Thk. for Galv. Metal	Dimension Inches A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
12"	0.060	0.064	6"	6"	6"	21"	24"	34"	1 Pc.	2 1/2
15"	0.060	0.064	7"	8"	6"	26"	30"	40"	1 Pc.	2 1/2
18"	0.060	0.064	8"	10"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

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

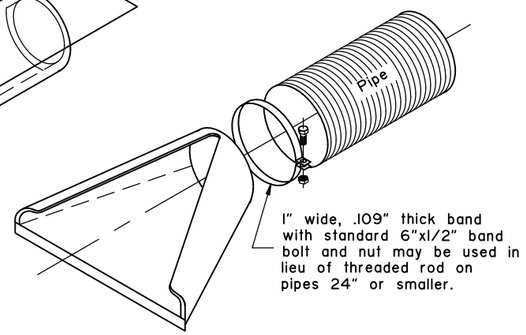


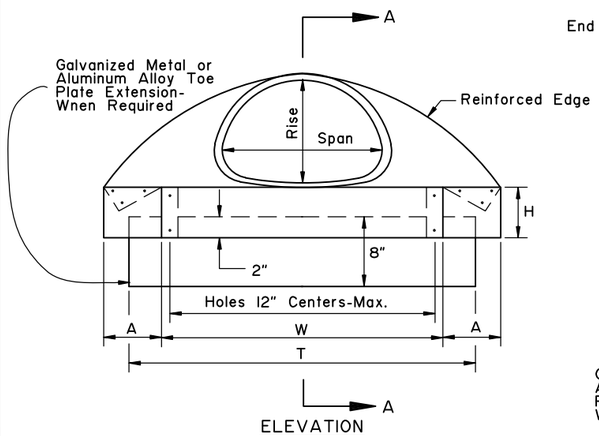
ELEVATION

ROUND PIPE



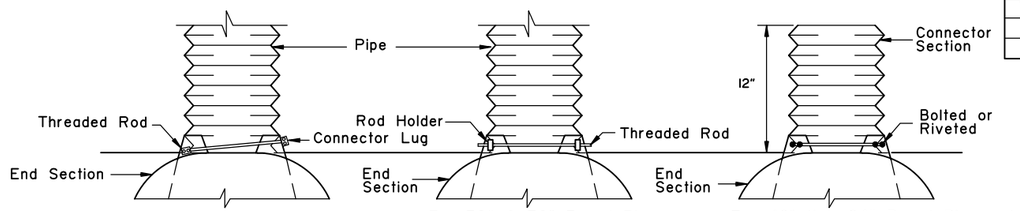
PRECAST CONCRETE END SECTION





ELEVATION

PIPE ARCH

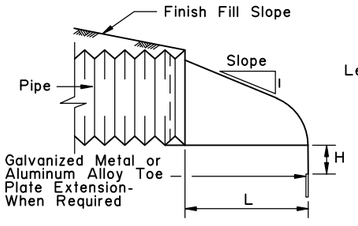


For 12" thru 24" Round Pipe with Annular Corrugations

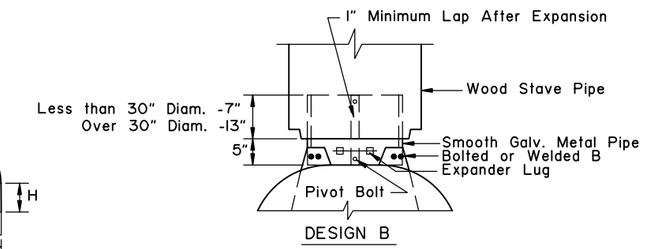
For 30" & 36" Round Pipe and 18"x11" thru 58"x36" Pipe Arch with Annular Corrugations.

For 42" thru 84" Round Pipe and 65"x40" thru 85"x54" Pipe Arch with Annular Corrugations and All Helically Corrugated Pipe and Pipe Arch.

DESIGN A



SECTION A-A



DESIGN B

METAL END SECTION CONNECTED TO WOOD STAVE PIPE

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

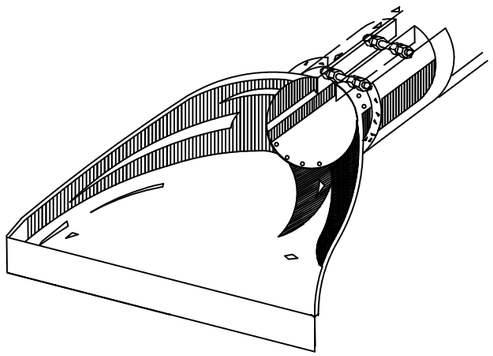
Adopted as an Alaska Standard Plan by:
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

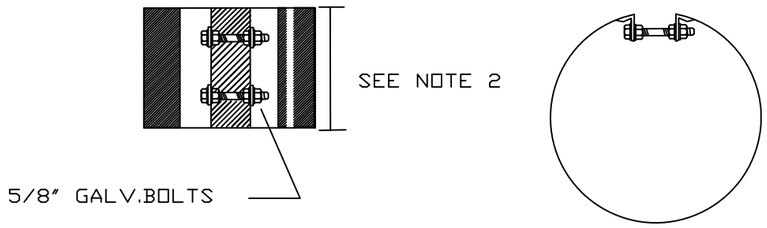
Last Code and Stds. Review
By: Date:

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

D-06.10



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



GENERAL NOTES

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

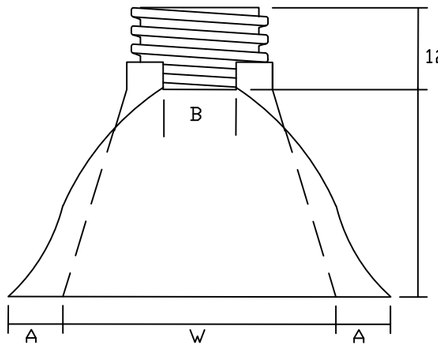
CULVERT END SECTIONS

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

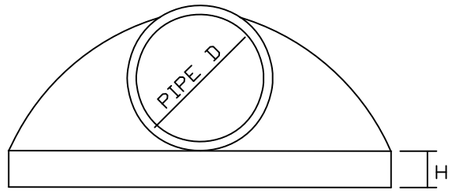
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

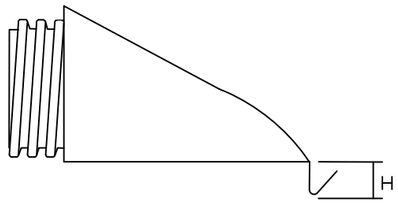
Next Code and Standards Review date: 02/08/2029



TOP VIEW



END VIEW



SIDE VIEW

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

PLASTIC END SECTION FOR CORRUGATED PLASTIC PIPE

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

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

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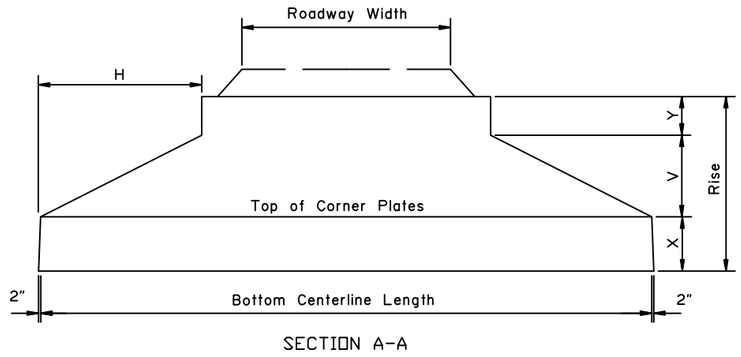
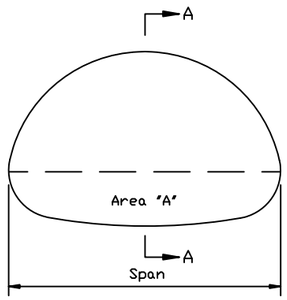
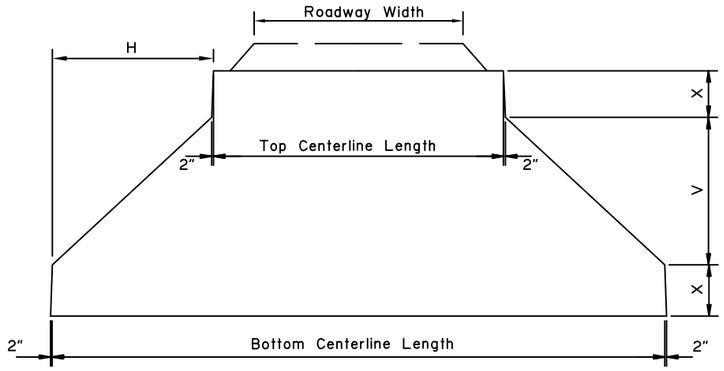
By: Date:

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

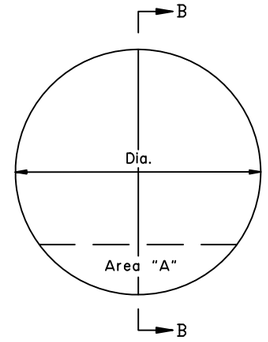


SECTION A-A





SECTION B-B

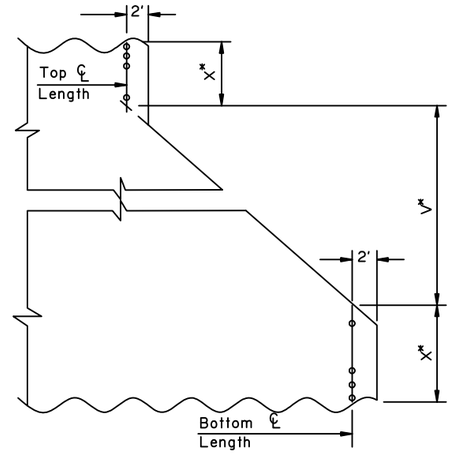


STRUCTURAL PLATE PIPE ARCH

SPAN	RISE	X in ft.	'H' in Feet For Bevels of			'Y' in Feet For Bevels of			'V' in Feet For Bevels of			AREA "A" Sq. Ft.
			1 1/2:1	2:1	3:1	1 1/2:1	2:1	3:1	1 1/2:1	2:1	3:1	
6'- 1"	4'- 7"	2.3			6.0			0.3			2.0	12
6'- 4"	4'- 9"	2.1			6.0			0.7			2.0	11
6'- 9"	4'- 11"	2.4			6.0			0.5			2.0	14
7'- 0"	5'- 1"	2.3			6.0			0.8			2.0	13
7'- 3"	5'- 3"	2.1		6.0	6.0		0.2	1.2		3.0	2.0	14
7'- 8"	5'- 5"	2.3		6.0	6.0		0.1	1.1		3.0	2.0	16
7'-11"	5'- 7"	2.2		6.0	6.0		0.4	1.4		3.0	2.0	15
8'- 2"	5'- 9"	2.0		6.0	6.0		0.8	1.8		3.0	2.0	15
8'- 7"	5'- 11"	2.3		6.0	6.0		0.6	1.6		3.0	2.0	17
8'-10"	6'- 1"	2.2		6.0	6.0		0.9	1.9		3.0	2.0	17
9'- 4"	6'- 3"	2.4		6.0	6.0		0.9	1.9		3.0	2.0	19
9'- 6"	6'- 5"	2.3	6.0	6.0	6.0	0.1	1.1	2.1	4.0	3.0	2.0	20
9'- 9"	6'- 7"	2.2	6.0	6.0	6.0	0.4	1.4	2.4	4.0	3.0	2.0	19
10'- 3"	6'- 9"	2.4	6.0	6.0	6.0	0.4	1.4	2.4	4.0	3.0	2.0	22
10'- 8"	6'- 11"	2.8	6.0	6.0	6.0	0.1	1.1	2.1	4.0	3.0	2.0	25
10'-11"	7'- 1"	2.6	6.0	6.0	6.0	0.5	1.5	2.5	4.0	3.0	2.0	24
11'- 5"	7'- 3"	2.8	6.0	6.0	6.0	0.5	1.5	2.5	4.0	3.0	2.0	27
11'- 7"	7'- 5"	2.7	6.0	6.0	8.0	0.7	1.7	2.0	4.0	3.0	2.7	26
11'-10"	7'- 7"	2.5	6.0	6.0	8.0	1.1	2.1	2.4	4.0	3.0	2.7	26
12'- 4"	7'- 9"	2.8	6.0	6.0	8.0	1.0	1.9	2.3	4.0	3.0	2.7	29
12'- 6"	7'- 11"	2.7	6.0	6.0	8.0	1.2	2.2	2.5	4.0	3.0	2.7	29
12'- 8"	8'- 1"	2.5	6.0	8.0	8.0	1.6	1.6	2.9	4.0	4.0	2.7	27
12'-10"	8'- 4"	2.3	6.0	8.0	8.0	2.0	2.0	3.3	4.0	4.0	2.7	25
13'- 5"	8'- 5"	2.6	6.0	8.0	8.0	1.8	1.8	3.1	4.0	4.0	2.7	30
13'-11"	8'- 7"	2.9	6.0	8.0	8.0	1.7	1.7	3.0	4.0	4.0	2.7	34
14'- 1"	8'- 9"	2.8	6.0	8.0	8.0	2.0	2.0	3.2	4.0	4.0	2.7	33
14'- 3"	8'- 11"	2.6	6.0	8.0	8.0	2.3	2.3	3.6	4.0	4.0	2.7	32
14'-10"	9'- 1"	2.9	6.0	8.0	8.0	2.2	2.2	3.5	4.0	4.0	2.7	37
15'- 4"	9'- 3"	3.2	6.0	8.0	8.0	2.1	2.1	3.4	4.0	4.0	2.7	40
15'- 6"	9'- 5"	3.0	6.0	8.0	12.0	2.4	2.4	2.4	4.0	4.0	4.0	39
15'- 8"	9'- 7"	2.8	6.0	8.0	12.0	2.8	2.8	2.8	4.0	4.0	4.0	38
15'-10"	9'- 10"	2.7	8.0	8.0	14.0	1.8	3.1	2.4	5.3	4.0	4.7	35
16'- 5"	9'- 11"	3.0	8.0	8.0	14.0	1.6	2.9	2.2	5.3	4.0	4.7	41
16'- 7"	10'- 1"	2.8	8.0	8.0	14.0	2.0	3.3	2.6	5.3	4.0	4.7	40

STRUCTURAL PLATE PIPE

Dia. Inches	'H' in Feet For Bevels of			'V' in Feet For Bevels of			'X' in Feet For Bevels of			Area "A" in Sq. Ft.		
	1 1/2:1	2:1	3:1	1 1/2:1	2:1	3:1	1 1/2:1	2:1	3:1	1 1/2:1	2:1	3:1
60	6.0	6.0	8.0	4.0	3.0	2.7	0.5	1.0	1.2	0.7	2.5	3.2
66	6.0	6.0	8.0	4.0	3.0	2.7	0.8	1.2	1.4	1.5	3.7	4.6
72	6.0	8.0	12.0	4.0	4.0	4.0	1.0	1.0	1.0	2.6	3.5	2.8
78	6.0	6.0	12.0	4.0	3.0	4.0	1.2	1.2	1.2	3.9	6.7	4.2
84	6.0	8.0	12.0	4.0	4.0	4.0	1.5	1.5	1.5	5.4	5.6	5.7
90	6.0	8.0	12.0	4.0	4.0	4.0	1.8	1.8	1.8	7.1	7.3	7.5
96	8.0	8.0	16.0	5.3	4.0	5.3	1.4	2.0	1.4	4.9	9.3	5.2
102	8.0	8.0	14.0	5.3	4.0	4.7	1.6	2.2	1.9	6.7	12.0	9.2
108	8.0	8.0	14.0	5.3	4.0	4.7	1.8	2.5	2.2	8.5	13.8	11.4
114	8.0	14.0	14.0	5.3	7.0	4.7	2.1	1.2	2.4	10.7	5.0	13.8
120	8.0	14.0	18.0	5.3	7.0	6.0	2.4	1.5	2.0	13.0	6.8	10.7
126	8.0	14.0	18.0	5.3	7.0	6.0	2.6	1.8	2.2	15.5	8.9	13.1
132	12.0	14.0	18.0	8.0	7.0	6.0	1.5	2.0	2.5	6.9	11.1	15.7
138	12.0	16.0	24.0	8.0	8.0	8.0	1.8	1.8	1.8	9.1	9.3	9.5
144	12.0	12.0	20.0	8.0	6.0	6.7	2.0	3.0	2.6	11.4	21.2	18.2
150	12.0	16.0	24.0	8.0	8.0	8.0	2.2	2.2	2.2	14.0	14.2	14.5
156	12.0	16.0	24.0	8.0	8.0	8.0	2.5	2.5	2.5	16.8	17.0	17.3
162	12.0	16.0	24.0	8.0	8.0	8.0	2.8	2.8	2.8	19.6	20.1	20.4
168	14.0	14.0	22.0	9.3	7.0	7.3	2.4	3.5	3.3	15.8	29.1	27.4
174	14.0	14.0	24.0	9.3	7.0	8.0	2.6	3.8	3.2	18.8	32.8	26.9
180	12.0	16.0	24.0	8.0	8.0	8.0	3.5	3.5	3.5	31.1	30.3	30.7



* For elliptical pipe, increase vertical dimensions by percent of ellipse.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

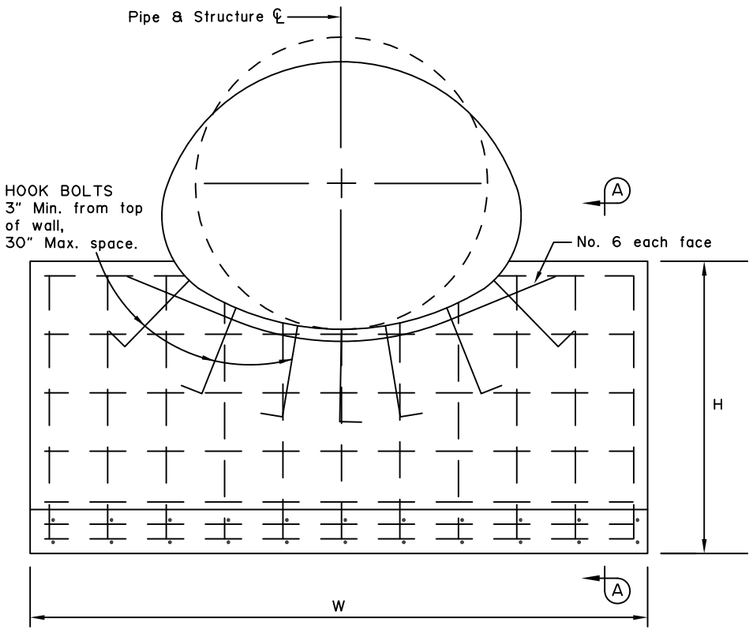
CULVERT BEVELS

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

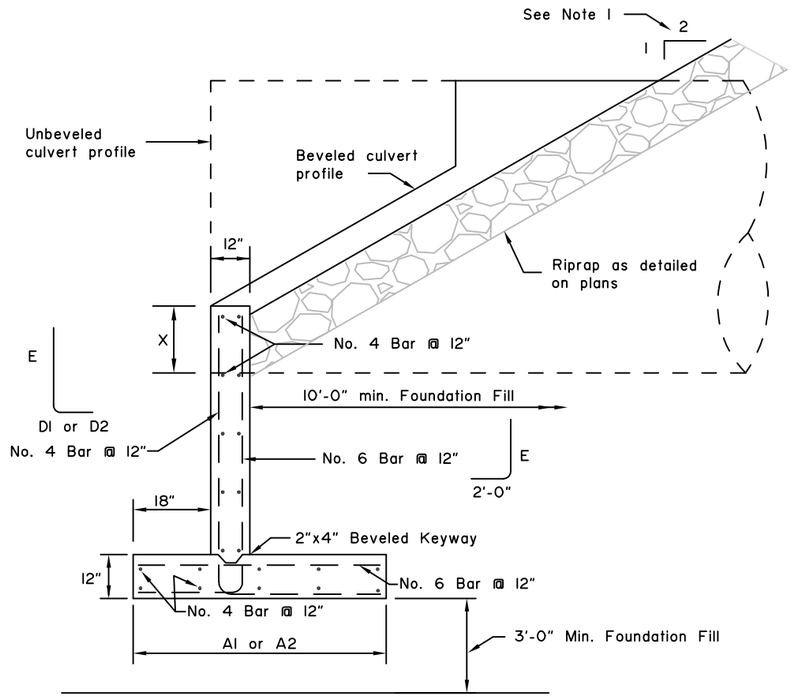
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

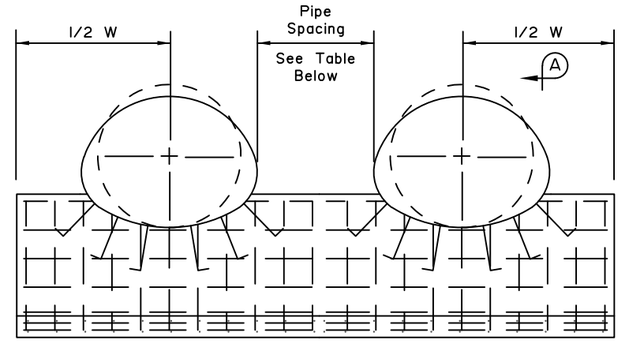
Next Code and Standards Review date: 02/08/2029



ELEVATION



SECTION A-A



MULTIPLE INSTALLATION

Minimum Space Between Pipes
1/2 Dia. of Pipe or 1/2 Span of Pipe Arch, 24" Min.

ELEVATION

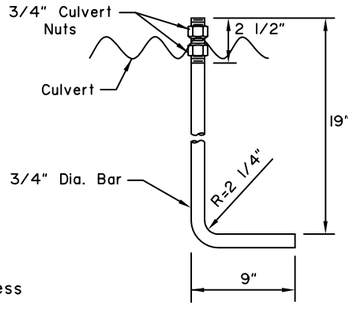
CORRUGATED METAL PIPE ✳ SEE NOTE II							
Dia.	W	H	A1✳	A2✳	D1✳	D2✳	E
5'-0"	9'-0"	4'-0"	4'-0"	4'-0"	2'-0"	2'-0"	3'-6"
5'-6"	10'-0"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
6'-0"	11'-0"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
6'-6"	12'-0"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
7'-0"	12'-6"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
7'-6"	13'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-0"	14'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-6"	15'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-0"	16'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
9'-6"	17'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
10'-0"	18'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
10'-6"	19'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
11'-0"	20'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
11'-6"	21'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
12'-0"	21'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
12'-6"	22'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
13'-0"	23'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
13'-6"	24'-6"	6'-0"	5'-6"	4'-0"	3'-6"	2'-0"	5'-6"
14'-0"	25'-6"	6'-6"	6'-0"	4'-0"	4'-0"	2'-0"	6'-0"
14'-6"	26'-0"	6'-6"	6'-0"	4'-0"	4'-0"	2'-0"	6'-0"
15'-0"	27'-0"	6'-6"	6'-0"	4'-0"	4'-0"	2'-0"	6'-0"

SECTION A-A

CORRUGATED METAL PIPE ARCH ✳ SEE NOTE II								
SPAN	RISE	W	H	A1✳	A2✳	D1✳	D2✳	E
6'-1"	4'-7"	14'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
6'-4"	4'-9"	14'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
6'-9"	4'-11"	15'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-0"	5'-1"	15'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-3"	5'-3"	16'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-8"	5'-5"	16'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-11"	5'-7"	17'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-2"	5'-9"	17'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-7"	5'-11"	18'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-10"	6'-1"	18'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-4"	6'-3"	19'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-6"	6'-5"	19'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-9"	6'-7"	20'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
10'-3"	6'-9"	20'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
10'-8"	6'-11"	21'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
10'-11"	7'-1"	21'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
11'-5"	7'-3"	22'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
11'-7"	7'-5"	22'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
11'-10"	7'-7"	23'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
12'-4"	7'-9"	23'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
12'-6"	7'-11"	24'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
12'-8"	8'-1"	24'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
12'-10"	8'-4"	25'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
13'-5"	8'-5"	25'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
13'-11"	8'-7"	26'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
14'-1"	8'-9"	26'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
14'-3"	8'-11"	27'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
14'-10"	9'-1"	27'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
15'-4"	9'-3"	28'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
15'-6"	9'-5"	28'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
15'-8"	9'-7"	29'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
15'-10"	9'-10"	29'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
16'-5"	9'-11"	30'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
16'-7"	10'-1"	30'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"

GENERAL NOTES:

1. For use on 2:1 or flatter backfill slopes only.
2. See plans for pipe beveling requirements. See Std. Dwg. D-07 for "X" dimension and culvert beveling geometry.
3. Use Class A concrete.
4. Use epoxy-coated ASTM A706, Grade 60 reinforcing steel fy=60,000 psi.
5. Place reinforcement 3" clear from surface of concrete unless otherwise noted.
6. Chamfer all exposed concrete corners 3/4".
7. If unsuitable foundation material is encountered, remove and backfill with Foundation Fill as directed by the Engineer.
8. Furnishing and installing hook bolts in place is incidental to Class A concrete.
9. Use galvanized ASTM A307 hook bolts and nuts. Torque culvert nuts to 140 ft-lbs.
10. Headwalls for skewed culverts to be parallel to road centerline. See plans for dimensions of openings in headwalls for skewed culverts.
11. For backfill soil with:
    ϕ=30°, γ=130 pcf
    Use A1 and D1
    ϕ=34°, γ=135 pcf
    Use A2 and D2



HOOK BOLT

State of Alaska DOT&PF
ALASKA STANDARD PLAN

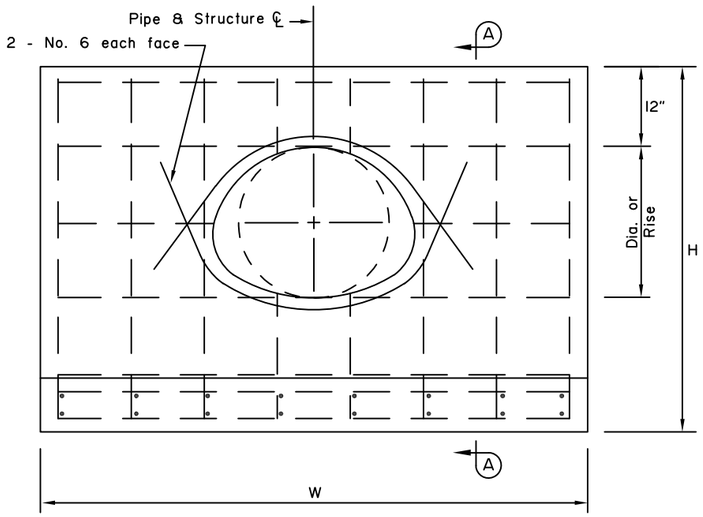
**HEADWALLS
CAST-IN-PLACE
TYPE I**

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

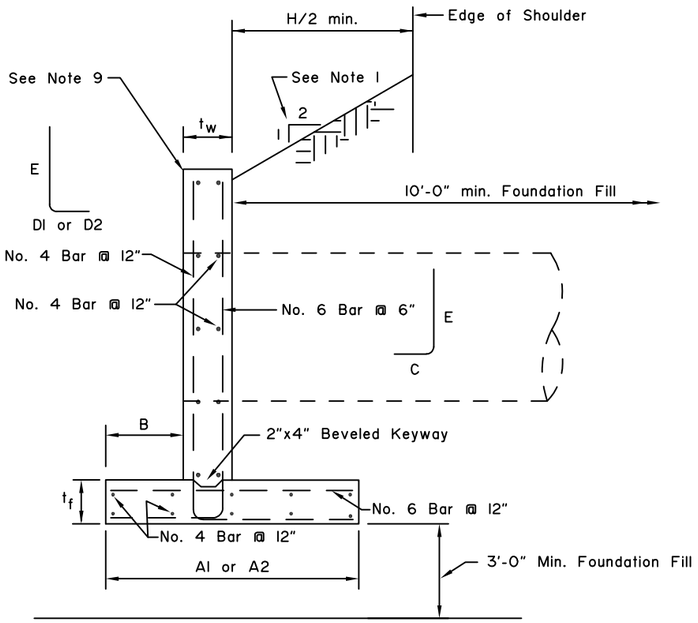
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

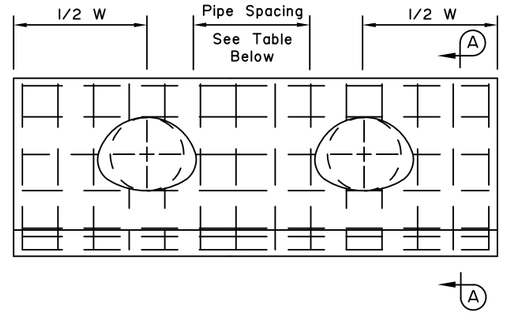
Next Code and Standards Review date: 02/08/2029



ELEVATION



SECTION A-A



MULTIPLE INSTALLATION

Minimum Space Between Pipes
1/2 Dia. of Pipe or 1/2 Span of Pipe Arch, 24" Min.

CORRUGATED METAL PIPE											✳ SEE NOTE 8
Dia.	W	t_w	t_f	H	A1 ✳	A2 ✳	B	C	D1 ✳	D2 ✳	E
1'-6"	8'-0"	1'-0"	1'-0"	4'-6"	4'-0"	4'-0"	1'-6"	2'-0"	2'-0"	2'-0"	4'-0"
1'-9"	9'-0"	1'-0"	1'-0"	4'-9"	4'-6"	4'-0"	1'-6"	2'-0"	2'-6"	2'-0"	4'-3"
2'-0"	9'-6"	1'-0"	1'-0"	5'-0"	4'-6"	4'-0"	1'-6"	2'-0"	2'-6"	2'-0"	4'-6"
2'-6"	11'-6"	1'-0"	1'-0"	5'-6"	5'-0"	4'-0"	1'-6"	2'-0"	3'-0"	2'-0"	5'-0"
3'-0"	13'-0"	1'-0"	1'-0"	6'-0"	5'-6"	4'-0"	1'-6"	2'-0"	3'-6"	2'-0"	5'-6"
3'-6"	14'-6"	1'-0"	1'-0"	6'-6"	6'-0"	4'-0"	1'-6"	2'-0"	4'-0"	2'-0"	6'-0"
4'-0"	16'-0"	1'-0"	1'-0"	7'-0"	6'-6"	4'-6"	2'-0"	2'-6"	4'-0"	2'-0"	6'-6"
4'-6"	18'-0"	1'-0"	1'-0"	7'-6"	7'-0"	4'-6"	2'-0"	2'-6"	4'-6"	2'-0"	7'-0"
5'-0"	19'-6"	1'-0"	1'-0"	8'-0"	8'-0"	5'-0"	2'-6"	3'-0"	5'-0"	2'-0"	7'-6"
5'-6"	21'-0"	1'-0"	1'-0"	8'-6"	8'-6"	5'-6"	2'-6"	3'-0"	5'-6"	2'-6"	8'-0"
6'-0"	23'-0"	1'-0"	1'-0"	9'-0"	9'-6"	6'-0"	3'-0"	3'-6"	6'-0"	2'-6"	8'-6"
6'-6"	24'-6"	1'-3"	1'-3"	9'-9"	10'-0"	6'-0"	3'-0"	3'-9"	6'-6"	2'-6"	9'-3"
7'-0"	26'-0"	1'-3"	1'-3"	10'-3"	10'-0"	6'-6"	3'-0"	3'-9"	6'-6"	3'-0"	9'-9"
7'-6"	28'-0"	1'-6"	1'-6"	11'-0"	10'-6"	6'-6"	3'-0"	4'-0"	7'-0"	3'-0"	10'-6"
8'-0"	29'-6"	1'-6"	1'-6"	11'-6"	11'-0"	7'-0"	3'-0"	4'-0"	7'-6"	3'-6"	11'-0"
8'-6"	31'-0"	2'-0"	2'-0"	12'-6"	11'-6"	7'-0"	3'-0"	4'-6"	8'-0"	3'-6"	12'-0"
9'-0"	33'-0"	2'-0"	2'-0"	13'-0"	11'-6"	7'-6"	3'-0"	4'-6"	8'-0"	4'-0"	12'-6"

CORRUGATED METAL PIPE ARCH												✳ SEE NOTE 8
SPAN	RISE	W	tw	tf	H	A1 ✳	A2 ✳	B	C	D1 ✳	D2 ✳	E
1'-5"	1'-1"	6'-6"	1'-0"	1'-0"	4'-1"	4'-0"	4'-0"	1'-6"	2'-0"	2'-0"	2'-0"	3'-7"
1'-9"	1'-3"	7'-0"	1'-0"	1'-0"	4'-3"	4'-0"	4'-0"	1'-6"	2'-0"	2'-0"	2'-0"	3'-9"
2'-0"	1'-6"	8'-0"	1'-0"	1'-0"	4'-6"	4'-0"	4'-0"	1'-6"	2'-0"	2'-0"	2'-0"	4'-0"
2'-4"	1'-8"	8'-6"	1'-0"	1'-0"	4'-8"	4'-0"	4'-0"	1'-6"	2'-0"	2'-0"	2'-0"	4'-2"
2'-11"	2'-0"	9'-6"	1'-0"	1'-0"	5'-0"	4'-6"	4'-0"	1'-6"	2'-0"	2'-6"	2'-0"	4'-6"
3'-6"	2'-5"	11'-0"	1'-0"	1'-0"	5'-5"	5'-0"	4'-0"	1'-6"	2'-0"	3'-0"	2'-0"	4'-11"
4'-1"	2'-9"	12'-0"	1'-0"	1'-0"	5'-9"	5'-6"	4'-0"	1'-6"	2'-0"	3'-6"	2'-0"	5'-3"
4'-9"	3'-2"	13'-6"	1'-0"	1'-0"	6'-2"	5'-6"	4'-0"	1'-6"	2'-0"	3'-6"	2'-0"	5'-8"
5'-4"	3'-7"	15'-0"	1'-0"	1'-0"	6'-7"	6'-0"	4'-0"	1'-6"	2'-0"	4'-0"	2'-0"	6'-1"
5'-11"	3'-11"	16'-0"	1'-0"	1'-0"	6'-11"	6'-6"	4'-6"	2'-0"	2'-6"	4'-0"	2'-0"	6'-5"
6'-5"	4'-4"	17'-0"	1'-0"	1'-0"	7'-4"	7'-0"	4'-6"	2'-0"	2'-6"	4'-6"	2'-0"	6'-10"
7'-1"	4'-9"	19'-0"	1'-0"	1'-0"	7'-9"	8'-0"	4'-6"	2'-0"	2'-6"	5'-6"	2'-0"	7'-3"

GENERAL NOTES:

1. For use on 2:1 or flatter backfill slopes only.
2. Use Class A concrete.
3. Use epoxy-coated ASTM A706, Grade 60 reinforcing steel fy=60,000 psi.
4. Place reinforcement 3" clear from surface of concrete unless otherwise noted.
5. Chamfer all exposed concrete corners 3/4".
6. If unsuitable foundation material is encountered, remove and backfill with Foundation Fill as directed by the Engineer.
7. Headwalls for skewed culverts to be parallel to road centerline. See plans for dimensions of openings in headwalls for skewed culverts.
8. For backfill soil with:
   ϕ=30°, γ=130 pcf
   Use A1 and D1
   ϕ=34°, γ=135 pcf
   Use A2 and D2
9. See plans for railing requirements at top of wall.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

HEADWALLS CAST-IN-PLACE TYPE II

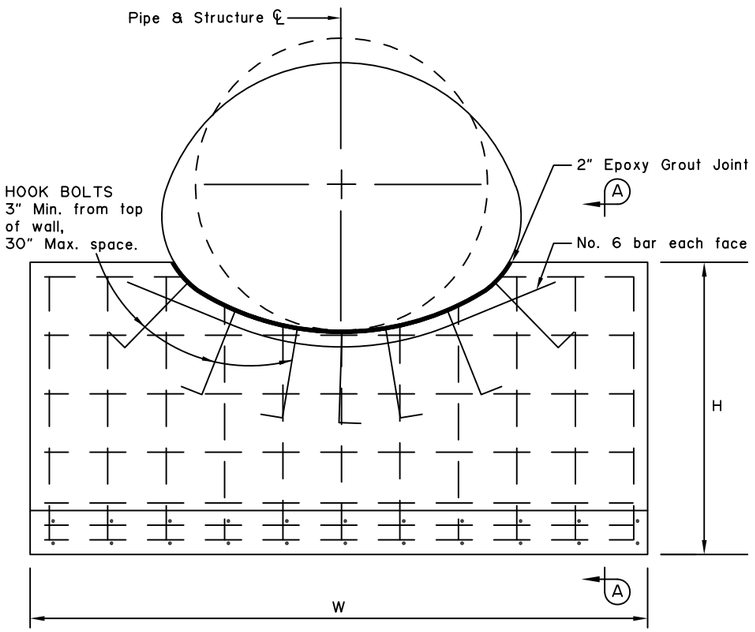
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

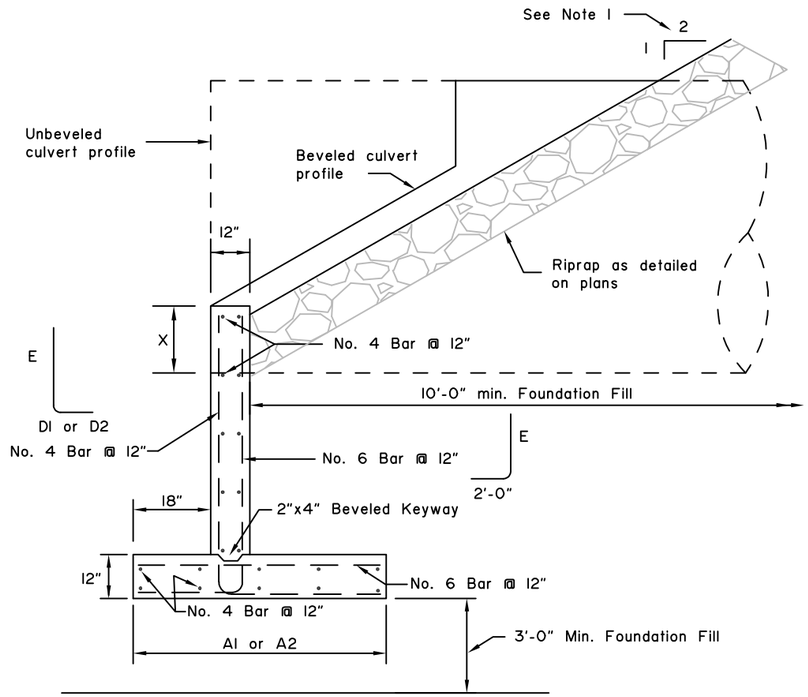
Last Code and Stds. Review
By: Date:

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

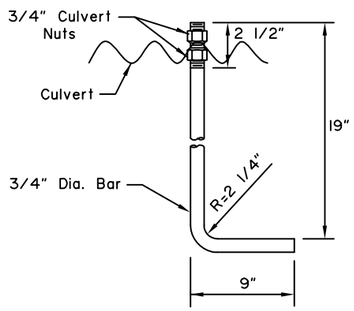
D-30.11



ELEVATION



SECTION A-A



HOOK BOLT

CORRUGATED METAL PIPE ✳ SEE NOTE 11							
Dia.	W	H	A1 ✳	A2 ✳	D1 ✳	D2 ✳	E
5'-0"	9'-0"	4'-0"	4'-0"	4'-0"	2'-0"	2'-0"	3'-6"
5'-6"	10'-0"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
6'-0"	11'-0"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
6'-6"	12'-0"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
7'-0"	12'-6"	4'-6"	4'-0"	4'-0"	2'-0"	2'-0"	4'-0"
7'-6"	13'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-0"	14'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-6"	15'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-0"	16'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
9'-6"	17'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
10'-0"	18'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
10'-6"	19'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
11'-0"	20'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"

CORRUGATED METAL PIPE ARCH ✳ SEE NOTE 11								
SPAN	RISE	W	H	A1 ✳	A2 ✳	D1 ✳	D2 ✳	E
6'-1"	4'-7"	14'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
6'-4"	4'-9"	14'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
6'-9"	4'-11"	15'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-0"	5'-1"	15'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-3"	5'-3"	16'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-8"	5'-5"	16'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
7'-11"	5'-7"	17'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-2"	5'-9"	17'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-7"	5'-11"	18'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
8'-10"	6'-1"	18'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-4"	6'-3"	19'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-6"	6'-5"	19'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
9'-9"	6'-7"	20'-0"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
10'-3"	6'-9"	20'-6"	5'-0"	4'-6"	4'-0"	2'-6"	2'-0"	4'-6"
10'-8"	6'-11"	21'-0"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"
10'-11"	7'-1"	21'-6"	5'-6"	5'-0"	4'-0"	3'-0"	2'-0"	5'-0"

GENERAL NOTES:

1. For use on 2:1 or flatter backfill slopes only.
2. See plans for pipe beveling requirements. See Std. Dwg. D-07 for "X" dimension and culvert beveling geometry.
3. Use Class A concrete.
4. Use epoxy-coated ASTM A706, Grade 60 reinforcing steel fy=60,000 psi.
5. Place reinforcement 3" clear from surface of concrete unless otherwise noted.
6. Chamfer all exposed concrete corners 3/4".
7. If unsuitable foundation material is encountered, remove and backfill with Foundation Fill as directed by the Engineer.
8. Furnishing and installing hook bolts in place is incidental to Class A concrete.
9. Use galvanized ASTM A307 hook bolts and nuts. Torque culvert nuts to 140 ft-lbs.
10. Headwalls for skewed culverts to be parallel to road centerline. See plans for dimensions of openings in headwalls for skewed culverts.
11. For backfill soil with:
    ϕ=30°, γ=130 pcf
    Use A1 and D1
    ϕ=34°, γ=135 pcf
    Use A2 and D2

State of Alaska DOT&PF
ALASKA STANDARD PLAN

HEADWALLS
PRECAST
TYPE I

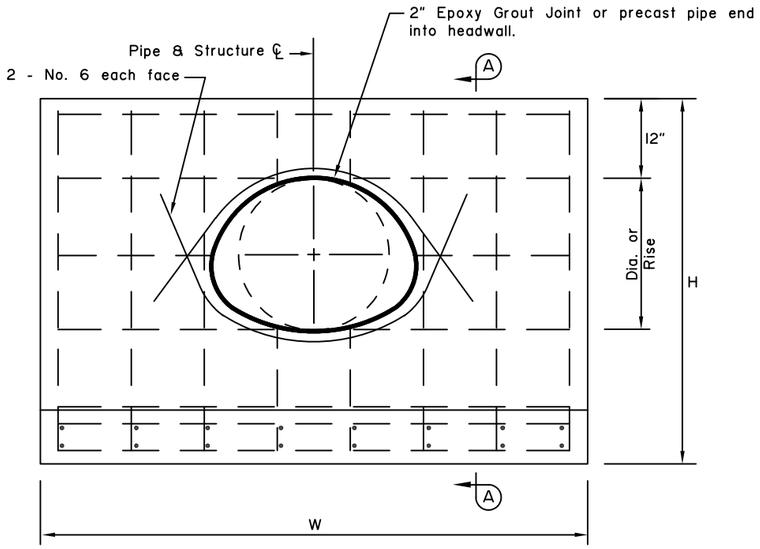
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

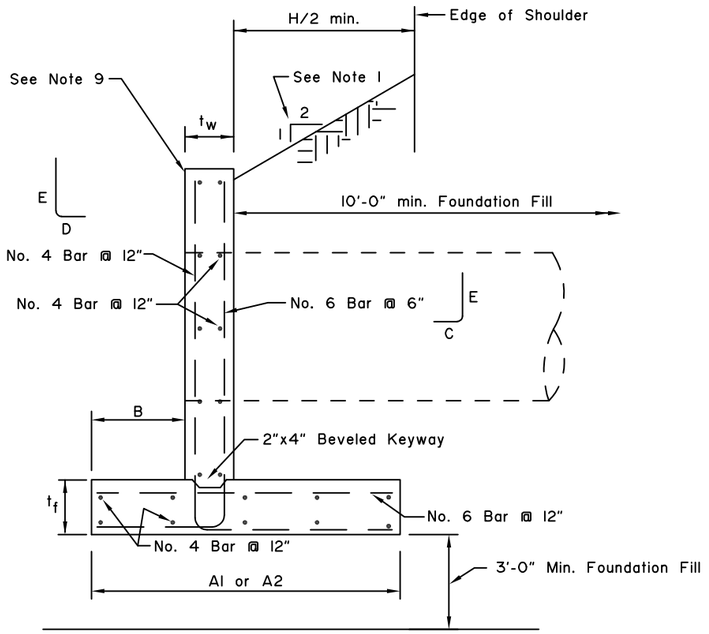
Last Code and Stds. Review
By: Date:

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

D-31.01



ELEVATION



SECTION A-A

CORRUGATED METAL PIPE											✳ SEE NOTE 8
Dia.	W	t_w	t_f	H	A1✳	A2✳	B	C	D1✳	D2✳	E
1'-6"	8'-0"	1'-0"	1'-0"	4'-6"	6'-0"	4'-0"	1'-6"	2'-0"	4'-0"	2'-0"	4'-0"
1'-9"	9'-0"	1'-0"	1'-0"	4'-9"	6'-6"	4'-0"	1'-6"	2'-0"	4'-6"	2'-0"	4'-3"
2'-0"	9'-6"	1'-0"	1'-0"	5'-0"	7'-0"	4'-0"	1'-6"	2'-0"	5'-0"	2'-0"	4'-6"
2'-6"	11'-6"	1'-0"	1'-0"	5'-6"	7'-6"	4'-0"	1'-6"	2'-0"	5'-6"	2'-0"	5'-0"
3'-0"	13'-0"	1'-0"	1'-0"	6'-0"	8'-6"	4'-6"	1'-6"	2'-0"	6'-6"	2'-6"	5'-6"
3'-6"	14'-6"	1'-0"	1'-0"	6'-6"	9'-0"	5'-0"	1'-6"	2'-0"	7'-0"	3'-0"	6'-0"
4'-0"	16'-0"	1'-0"	1'-0"	7'-0"	10'-0"	5'-6"	2'-0"	2'-6"	7'-6"	3'-0"	6'-6"
4'-6"	18'-0"	1'-3"	1'-3"	7'-9"	11'-0"	6'-0"	2'-0"	2'-9"	8'-6"	3'-6"	7'-3"
5'-0"	19'-6"	1'-6"	1'-6"	8'-6"	12'-0"	6'-6"	2'-6"	3'-6"	9'-0"	3'-6"	8'-0"

CORRUGATED METAL PIPE ARCH											✳ SEE NOTE 8	
SPAN	RISE	W	t_w	t_f	H	A1✳	A2✳	B	C	D1✳	D2✳	E
1'-5"	1'-1"	6'-6"	1'-0"	1'-0"	4'-1"	5'-6"	4'-0"	1'-6"	2'-0"	3'-6"	2'-0"	3'-7"
1'-9"	1'-3"	7'-0"	1'-0"	1'-0"	4'-3"	5'-6"	4'-0"	1'-6"	2'-0"	3'-6"	2'-0"	3'-9"
2'-0"	1'-6"	8'-0"	1'-0"	1'-0"	4'-6"	6'-0"	4'-0"	1'-6"	2'-0"	4'-0"	2'-0"	4'-0"
2'-4"	1'-8"	8'-6"	1'-0"	1'-0"	4'-8"	6'-0"	4'-0"	1'-6"	2'-0"	4'-0"	2'-0"	4'-2"
2'-11"	2'-0"	9'-6"	1'-0"	1'-0"	5'-0"	7'-0"	4'-0"	1'-6"	2'-0"	5'-0"	2'-0"	4'-6"
3'-6"	2'-5"	11'-0"	1'-0"	1'-0"	5'-5"	7'-6"	4'-0"	1'-6"	2'-0"	5'-6"	2'-0"	4'-11"
4'-1"	2'-9"	12'-0"	1'-0"	1'-0"	5'-9"	8'-0"	4'-0"	1'-6"	2'-0"	6'-0"	2'-6"	5'-3"
4'-9"	3'-2"	13'-6"	1'-0"	1'-0"	6'-2"	8'-6"	4'-0"	1'-6"	2'-0"	6'-6"	2'-6"	5'-8"
5'-4"	3'-7"	15'-0"	1'-0"	1'-0"	6'-7"	9'-0"	5'-0"	1'-6"	2'-0"	7'-0"	3'-0"	6'-1"
5'-11"	3'-11"	16'-0"	1'-0"	1'-0"	6'-11"	10'-0"	5'-6"	2'-0"	2'-6"	7'-6"	3'-0"	6'-5"
6'-5"	4'-4"	17'-0"	1'-3"	1'-3"	7'-7"	10'-6"	5'-6"	2'-0"	2'-9"	8'-0"	3'-0"	7'-1"
7'-1"	4'-9"	19'-0"	1'-6"	1'-6"	8'-3"	11'-6"	6'-6"	2'-6"	3'-6"	8'-6"	3'-6"	7'-9"

GENERAL NOTES:

1. For use on 2:1 or flatter backfill slopes only.
2. Use Class A concrete.
3. Use epoxy-coated ASTM A706, Grade 60 reinforcing steel fy=60,000 psi.
4. Place reinforcement 3" clear from surface of concrete unless otherwise noted.
5. Chamfer all exposed concrete corners 3/4".
6. If unsuitable foundation material is encountered, remove and backfill with Foundation Fill as directed by the Engineer.
7. Headwalls for skewed culverts to be parallel to road centerline. See plans for dimensions of openings in headwalls for skewed culverts.
8. For backfill soil with:
   ϕ=30°, γ=130 pcf
   Use A1 and D1
   ϕ=34°, γ=135 pcf
   Use A2 and D2
9. See plans for railing requirements.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

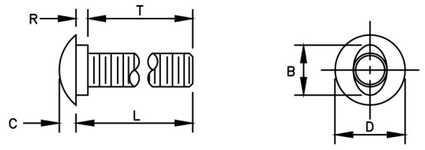
HEADWALLS PRECAST TYPE II

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

Adoption Date: 02/08/2019

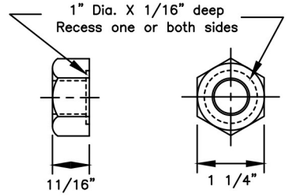
Last Code and Stds. Review By: Date:

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

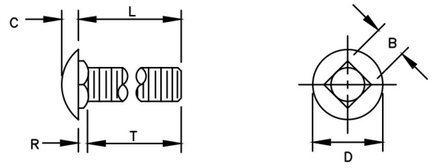


B	C	D	L (Length)	R	T (Thread Length)
15/16"	5/16"	1 5/16" or 1 7/16"	As Required	7/32"	As Required

5/8" BUTTONHEAD BOLT
(FBB01–05)

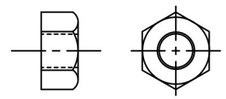


5/8" Dia. RECESSED HEX NUT
(FBB01–05)

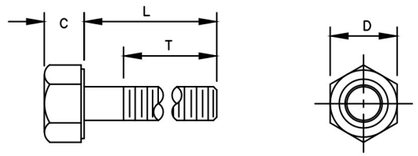


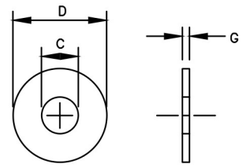
B	C	D	L (Length)	R	T (Thread Length)
5/8"	5/16"	1 5/16"	As Required	3/16"	As Required

5/8" Dia. CARRIAGE BOLT
(FBC10–20)



STANDARD HEX NUT



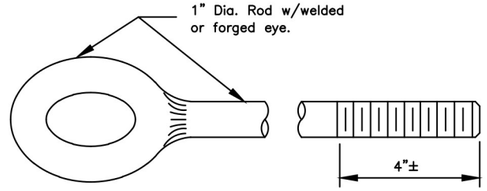


Bolt Size	C	D	L (Length)	T (Thread Length)
5/16"	——	——	1 1/2"	7/8"
5/16"	——	——	1"	1"
3/8"	——	——	7 1/2"	1 1/2"
1/2"	——	——	1 1/2"	1 1/2"
1/2"	——	——	1 1/4"	1 1/4"
5/8" H.S.	5/16"	7/8"	8"	1 1/2"
5/8"–11	——	——	1 1/2"	1 1/2"
3/4"	——	——	1 1/2"	1 1/2"
3/4"	——	——	As Required	2"
3/4" H.S.	15/32"	1 1/4"	2"	1 1/2"

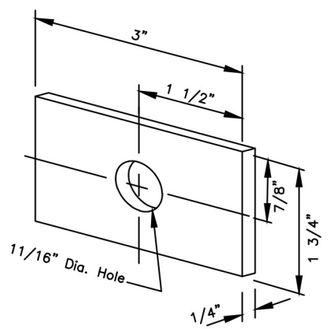
STANDARD HEX BOLTS

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

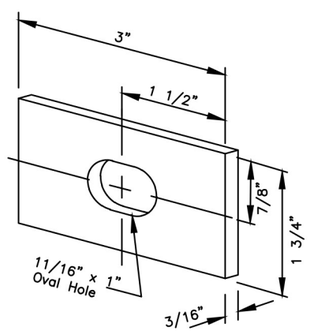
STANDARD STEEL WASHERS



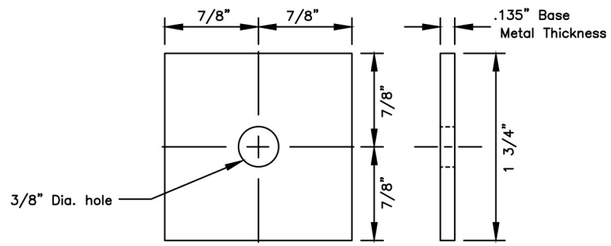
EYE BOLT



FLAT PLATE WASHER



RECTANGULAR POST BOLT WASHER
(FWR03)



SQUARE STEEL WASHER
(FWR01)

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

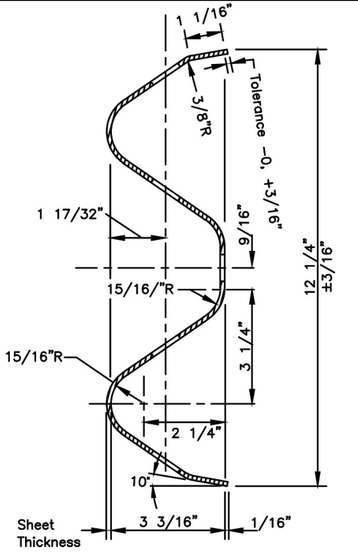
STANDARD GUARDRAIL HARDWARE (NUTS, BOLTS & WASHERS)

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

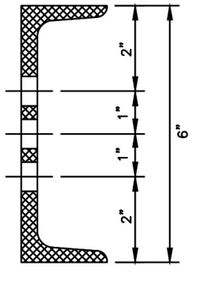
Adoption Date: 7/17/2020

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

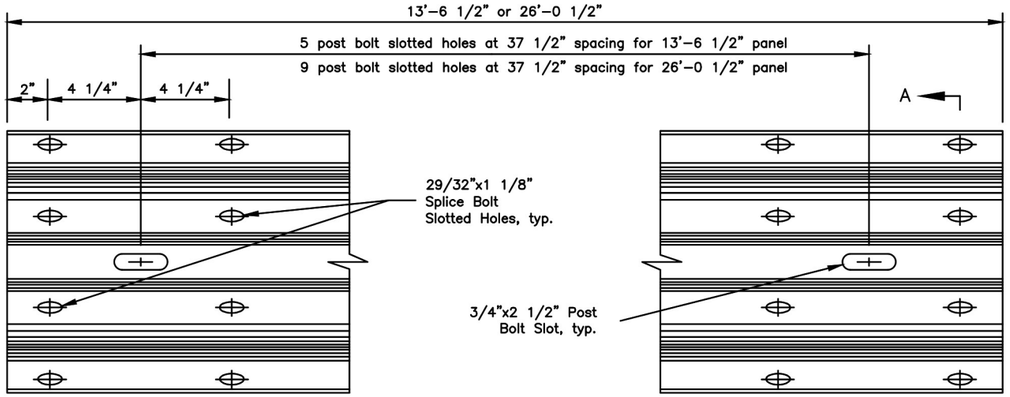
Next Code and Standards Review Date: 7/8/2030



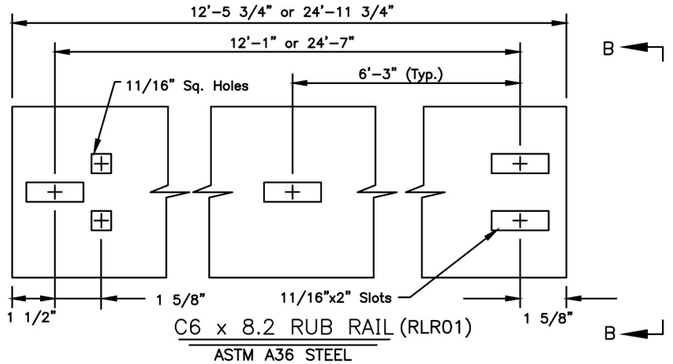
SECTION A–A
(cross section same as RWM02a–b)



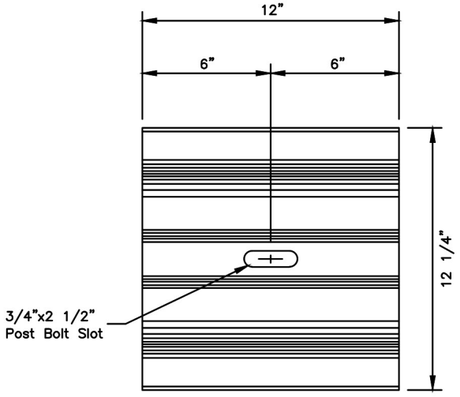
SECTION B–B



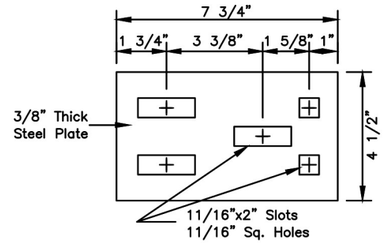
STANDARD W–BEAM PANEL (RWM04a–b)



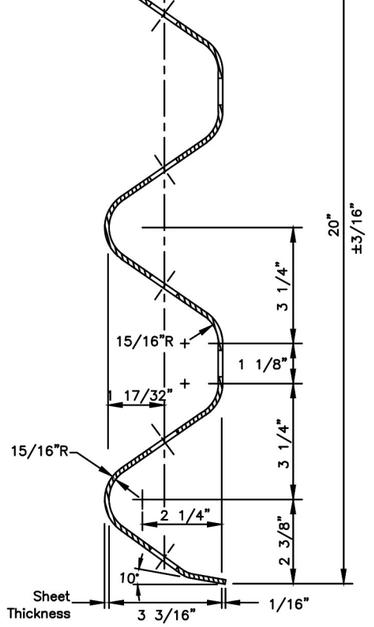
C6 x 8.2 RUB RAIL (RLR01)
ASTM A36 STEEL



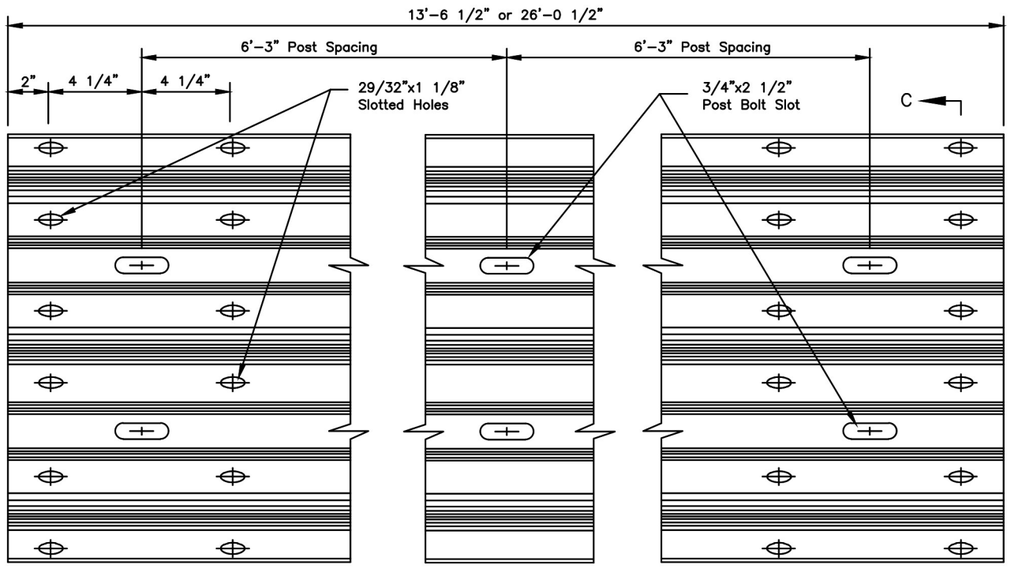
W–BEAM BACKUP PLATE
(RWB01a–b)



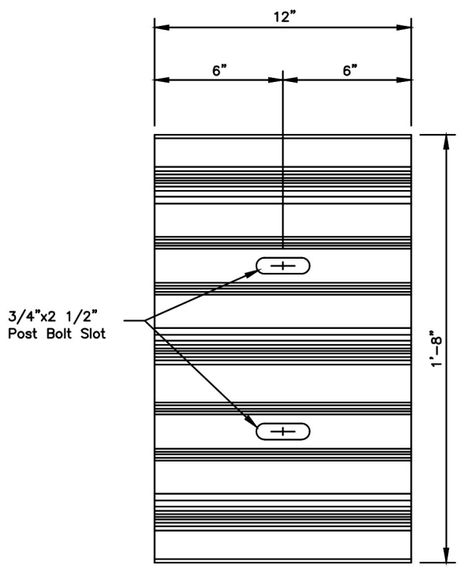
SPLICE PLATE (RLR01)
ASTM A36 STEEL



SECTION C–C
(RTM01a–02b)



STANDARD THRIE BEAM PANEL (RTM01a–02b)



THRIE BEAM BACKUP PLATE
(RTB01a–02b)

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

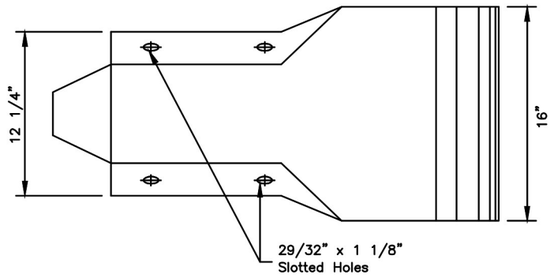
STANDARD GUARDRAIL HARDWARE (RAILS AND SPLICES)

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

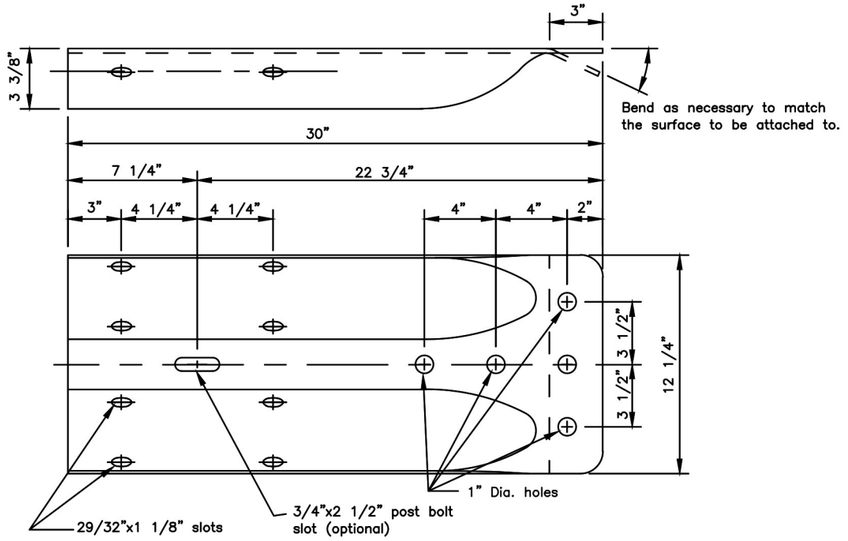
Adoption Date: 7/17/2020

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

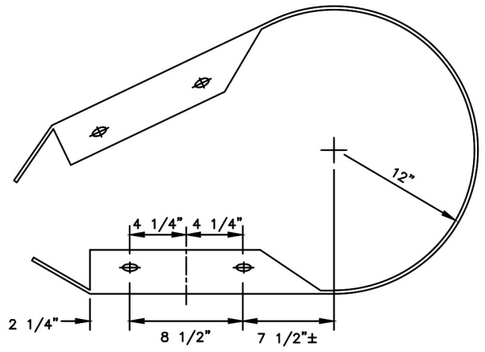
Next Code and Standards Review Date: 7/8/2030



PROFILE

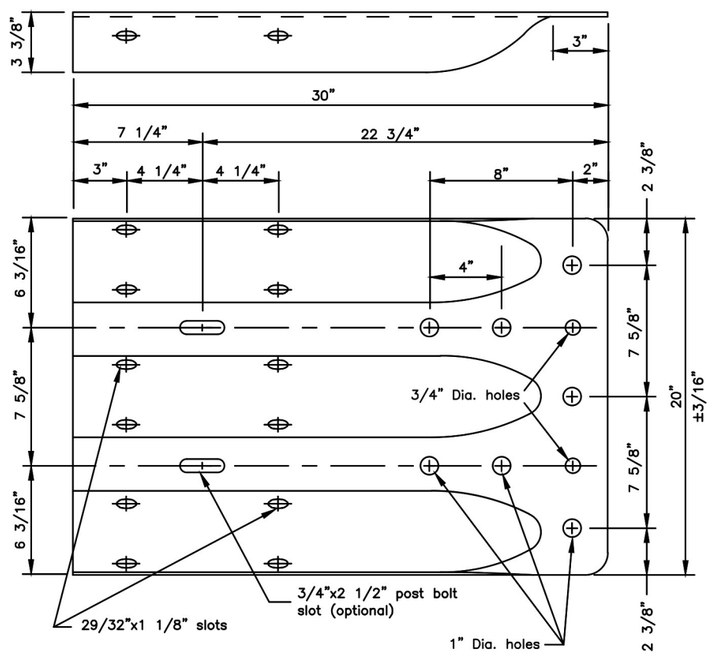


STANDARD W-BEAM TERMINAL CONNECTOR
(RWE02)



W-BEAM PLAN VIEW
*Radius to be specified on the plans

STANDARD W-BEAM END SECTION
(RWE06)



STANDARD THRIE BEAM TERMINAL CONNECTOR
(RTE01b)

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

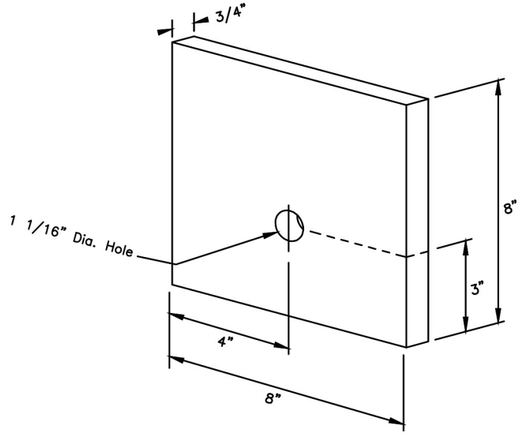
STANDARD GUARDRAIL HARDWARE (TERMINAL CONNECTORS)

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

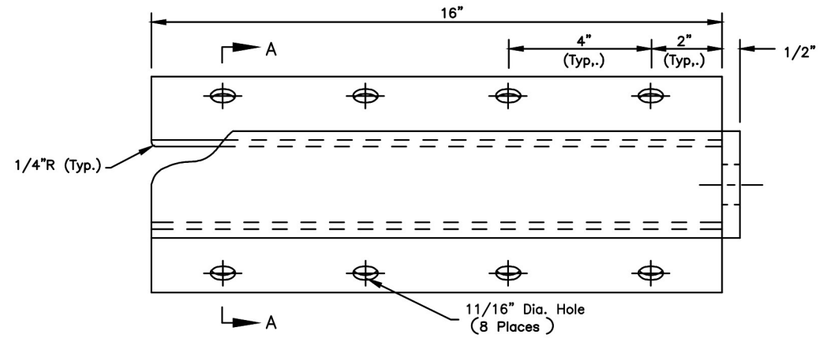
Adoption Date: 7/17/2020

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

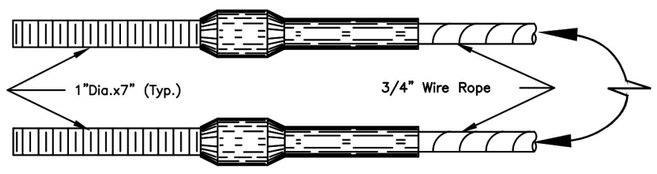
Next Code and Standards Review Date: 7/8/2030



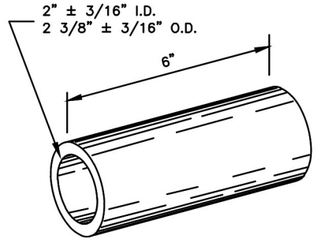
BEARING PLATE for CRT TERMINAL ANCHOR
(FPB01)



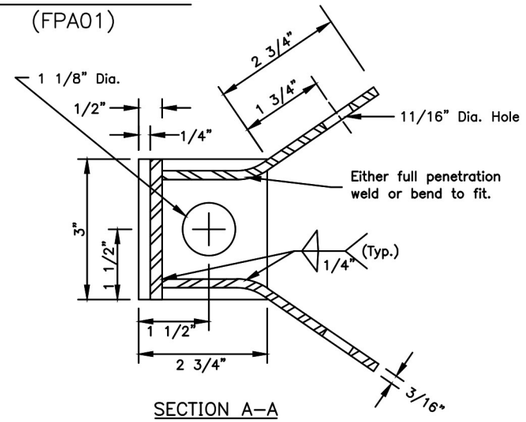
CABLE ANCHOR PLATE
(FPA01)



SWAGED FITTING DETAIL
(FCA01–02)



SLEEVE DETAIL
(FMM02)

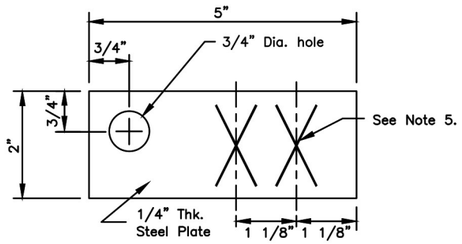


SECTION A–A

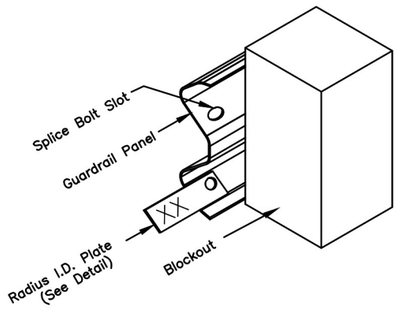
CONTROLLED RELEASE TERMINAL HARDWARE DETAILS

GENERAL NOTES:

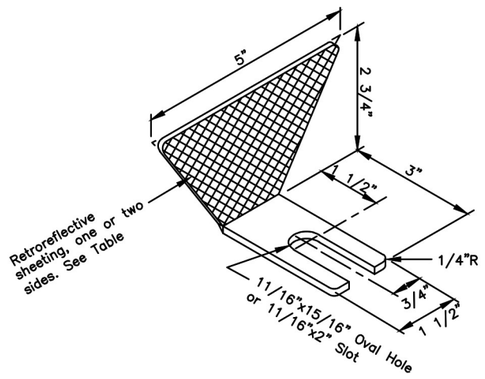
1. Cable Anchor Plate may be formed in single unit or welded fabrication.
2. Anchor Cable Assembly must conform to AASHTO M 30 with Type II Wire Rope.
3. Provide Sleeve for Wood Posts meeting the requirements of ASTM A53 and made of 2–inch galvanized standard pipe. Sleeve shall be a tight, pressed fit in post.
4. Attach radius ID plates to all shop–bent guardrail sections. Bolt the ID plates to the back side of the guardrail panel with the lower splice bolt nearest the P.C. of the radius.
5. Show the Rail bend radius, in feet, as "XX" on the radius ID plate. Digits shall be etched or stamped and have a min. height of 1 1/2" and a max. width of 3/4". Galvanize the plate after the digits are marked.
6. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.



RADIUS I.D. PLATE



RADIUS I.D. PLATE MOUNTING DETAIL



GUARDRAIL REFLECTOR

Guardrail Reflector Table

Type	Color	Reflectorized
A	White	Front & Rear
B	White	Front
C	Yellow	Front
D	Yellow	Front & Rear

State of Alaska DOT&PF
ALASKA STANDARD PLAN

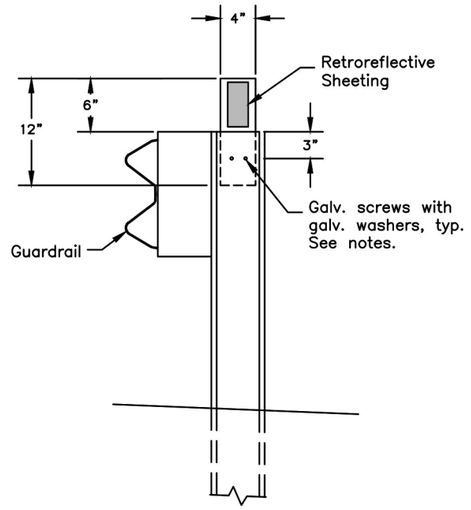
STANDARD GUARDRAIL HARDWARE (MISCELLANEOUS)

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

Adoption Date: 7/17/2020

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

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



GUARDRAIL FLEXIBLE DELINEATOR DETAIL

(Steel post shown – similar for wood post)

CONSTRUCTION NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

STANDARD GUARDRAIL HARDWARE (FLEXIBLE DELINEATORS)

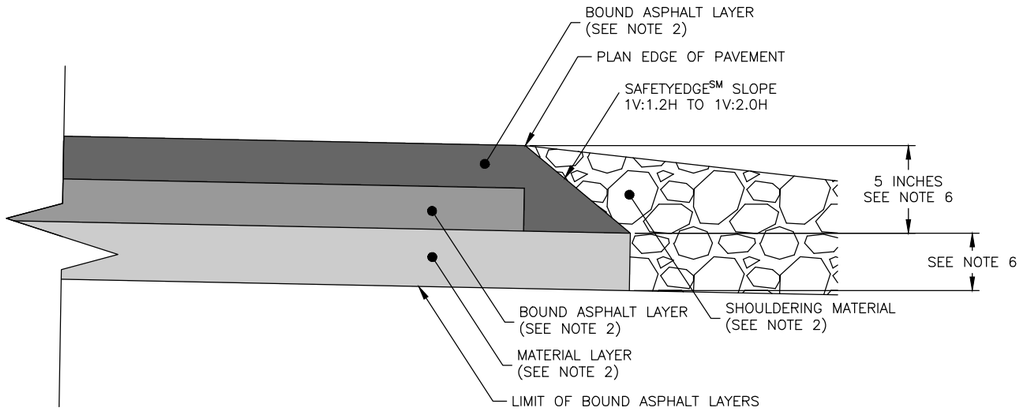
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

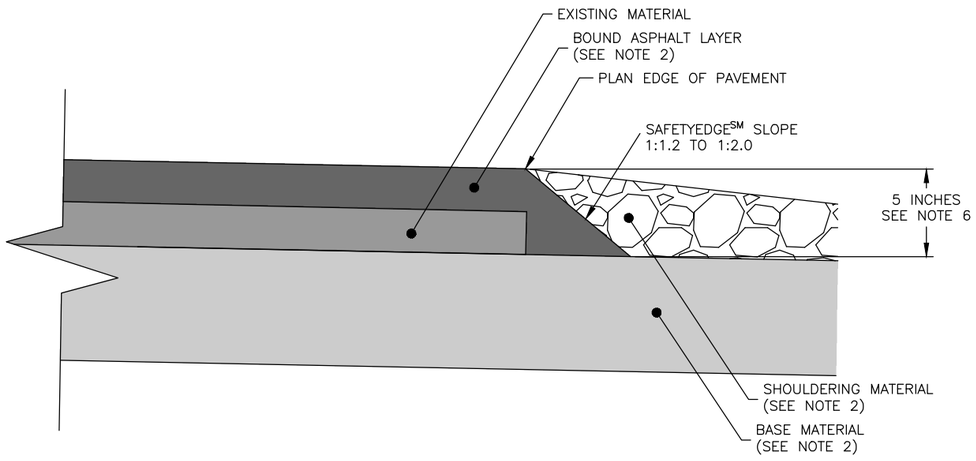
Next Code and Standards Review Date: 7/8/2030

G–00.05



NEW CONSTRUCTION; RECONSTRUCTION DETAIL

N.T.S.



RESURFACING; OVERLAY DETAIL

N.T.S.

ASPHALT SAFETYEDGE[SM] NOTES:

1. DO NOT CONSTRUCT SAFETYEDGE[SM] ACROSS BRIDGES OR BRIDGE SLABS AND WHERE CURB AND GUTTER IS PRESENT.
2. REFER TO TYPICAL SECTIONS FOR MATERIAL TYPE AND THICKNESS.
3. REFER TO PROJECT SPECIFICATIONS FOR SAFETYEDGE[SM] LABOR AND EQUIPMENT PAYMENT INFORMATION.
4. OBTAIN ENGINEER APPROVAL BEFORE CONSTRUCTING SAFETYEDGE[SM] BY HAND.
5. SAFETYEDGE[SM] IS NOT REQUIRED, BUT IS PERMISSIBLE WHERE GUARDRAIL IS PRESENT AND ACROSS DRIVEWAYS.
6. CONSTRUCT SAFETYEDGE[SM] FOR ALL BOUND ASPHALT LAYERS UP TO A DEPTH OF 5 INCHES. SAFETYEDGE[SM] IS NOT REQUIRED, BUT IS PERMISSIBLE FOR BOUND ASPHALT LAYERS BELOW THE UPPER FIVE INCHES.

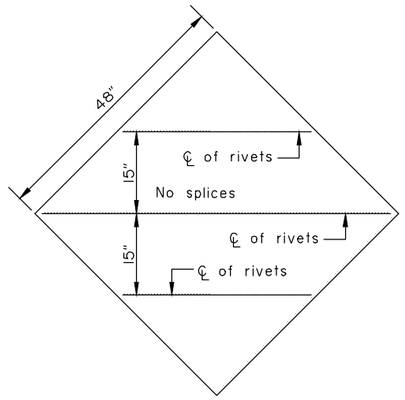
State of Alaska DOT&PF
DETAIL DRAWING

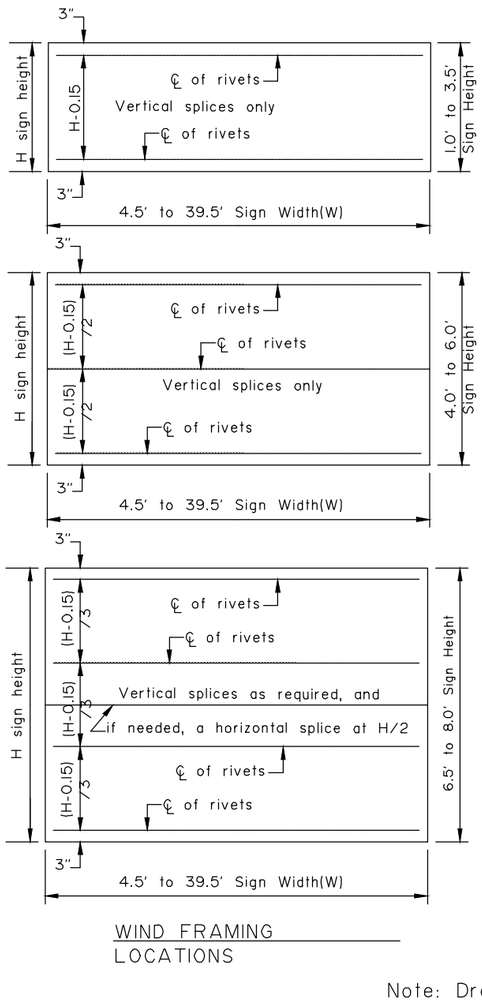
ASPHALT
SAFETYEDGE[SM]

STATE OF ALASKA 49TH
BRANDON E. IRVINE
105211
REGISTERED PROFESSIONAL ENGINEER

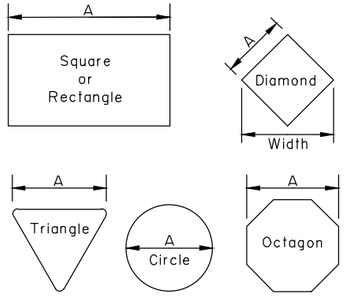
Date: 03/04/2025

M-25.00





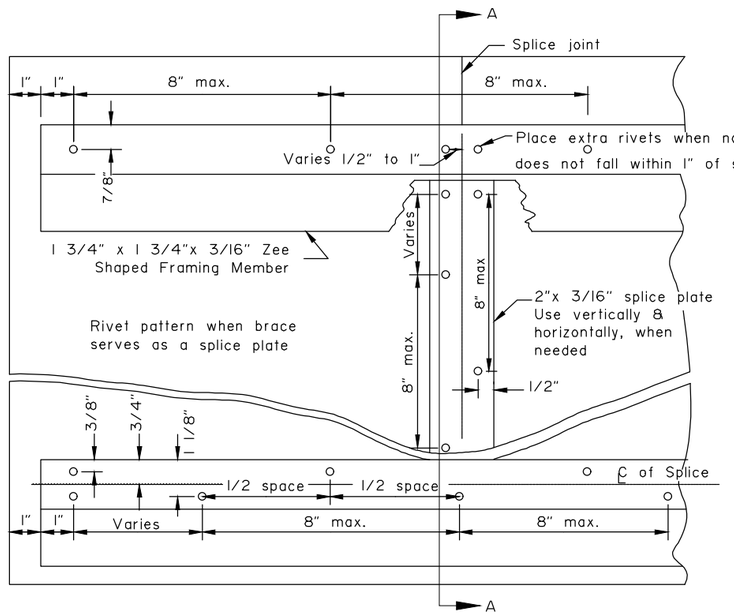
WIND FRAMING LOCATIONS



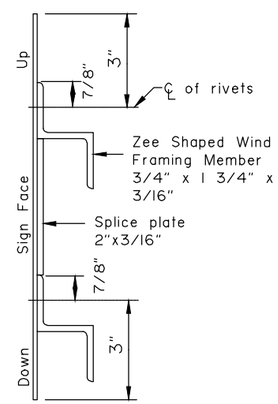
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

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

LIGHT SIGNS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN FRAMING

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

Adoption Date: 7/17/2020

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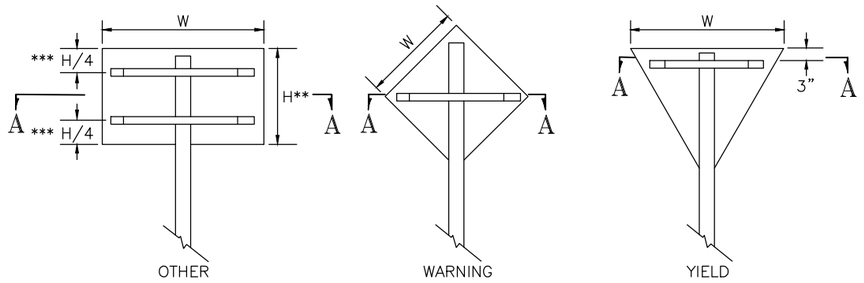
By: WTH Date: 7/8/2020

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

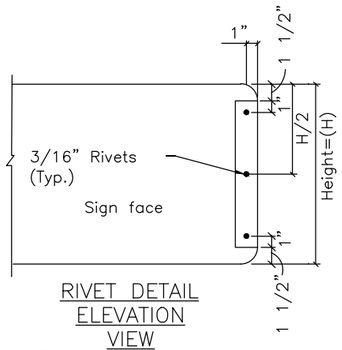
S-00.12



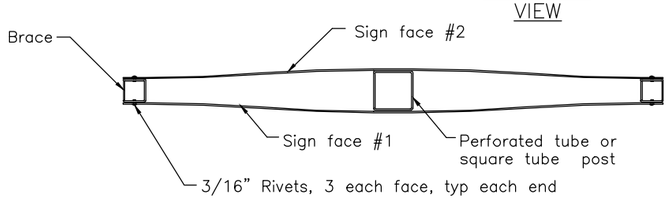
*** Use one brace when H ≤ 18"
Use two braces when 18"< H < 48"
Use three braces when H ≥ 48"

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

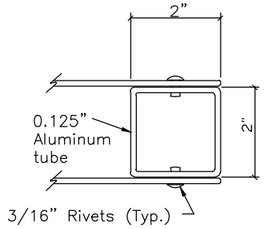
SIGN BRACING PLACEMENT



RIVET DETAIL
ELEVATION
VIEW

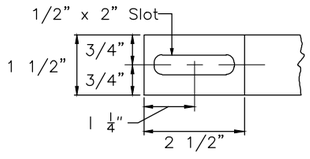


PLAN VIEW

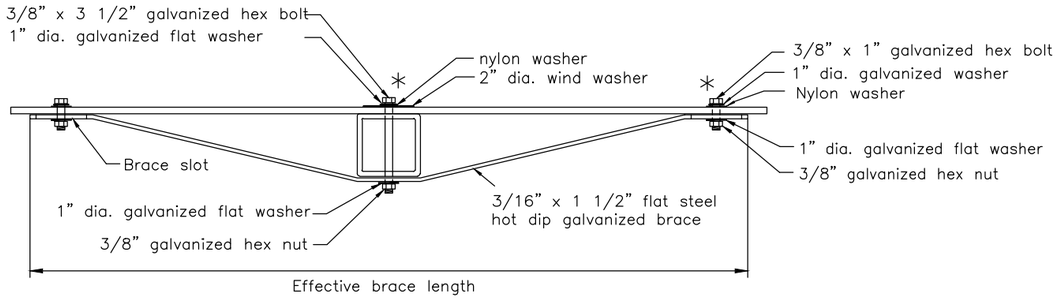


END BRACE DETAIL

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



DETAIL OF BRACE SLOT
Elevation view



TUBE POST SIGN BRACING SECTION A-A
Plan view

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

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

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

BRACING FOR SIGNS
MOUNTED ON SINGLE POST

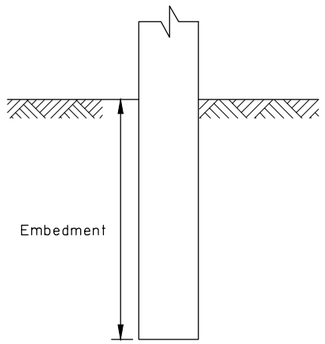
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

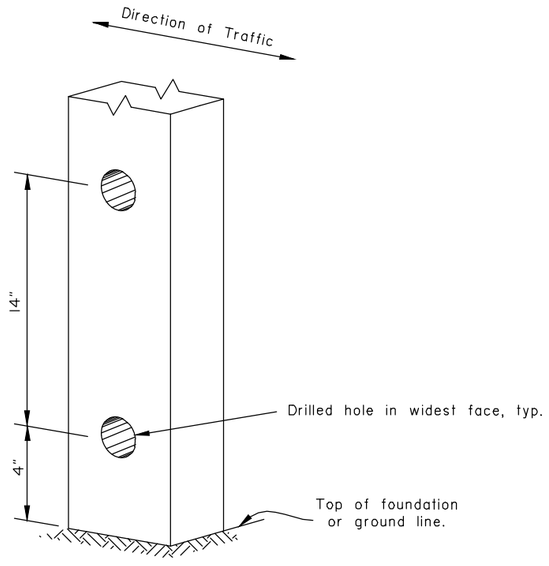
Adoption Date: 7/17/2020

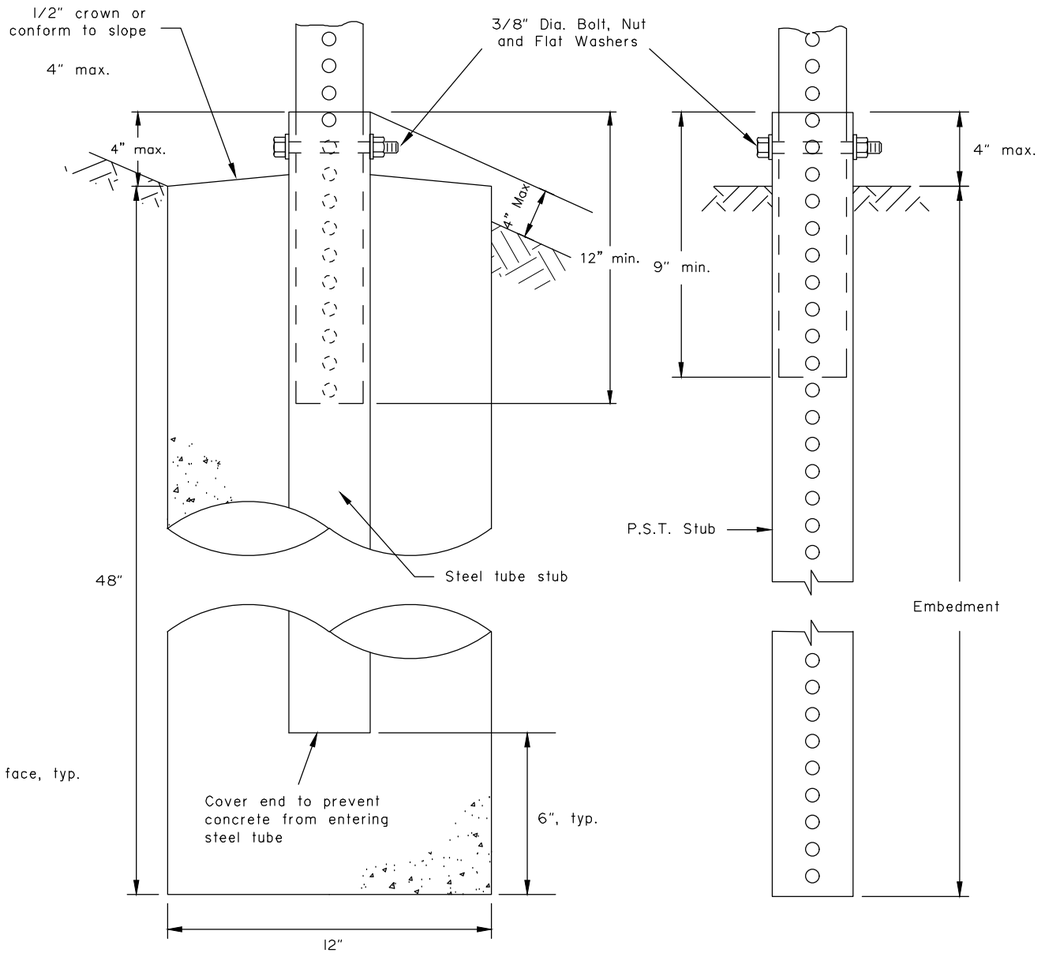
Last Code and Stds. Review
By: WTH Date: 7/8/2020

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

S-01.02







SLEEVE TYPE
CONCRETE FOUNDATION

SLEEVE TYPE*
SOIL EMBEDMENT

GENERAL NOTES:

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

SIGN POST SPACING NOTES:

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

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

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

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

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

PERFORATED STEEL TUBE (PST) POSTS

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

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHT SIGN STRUCTURE
POST EMBEDMENT

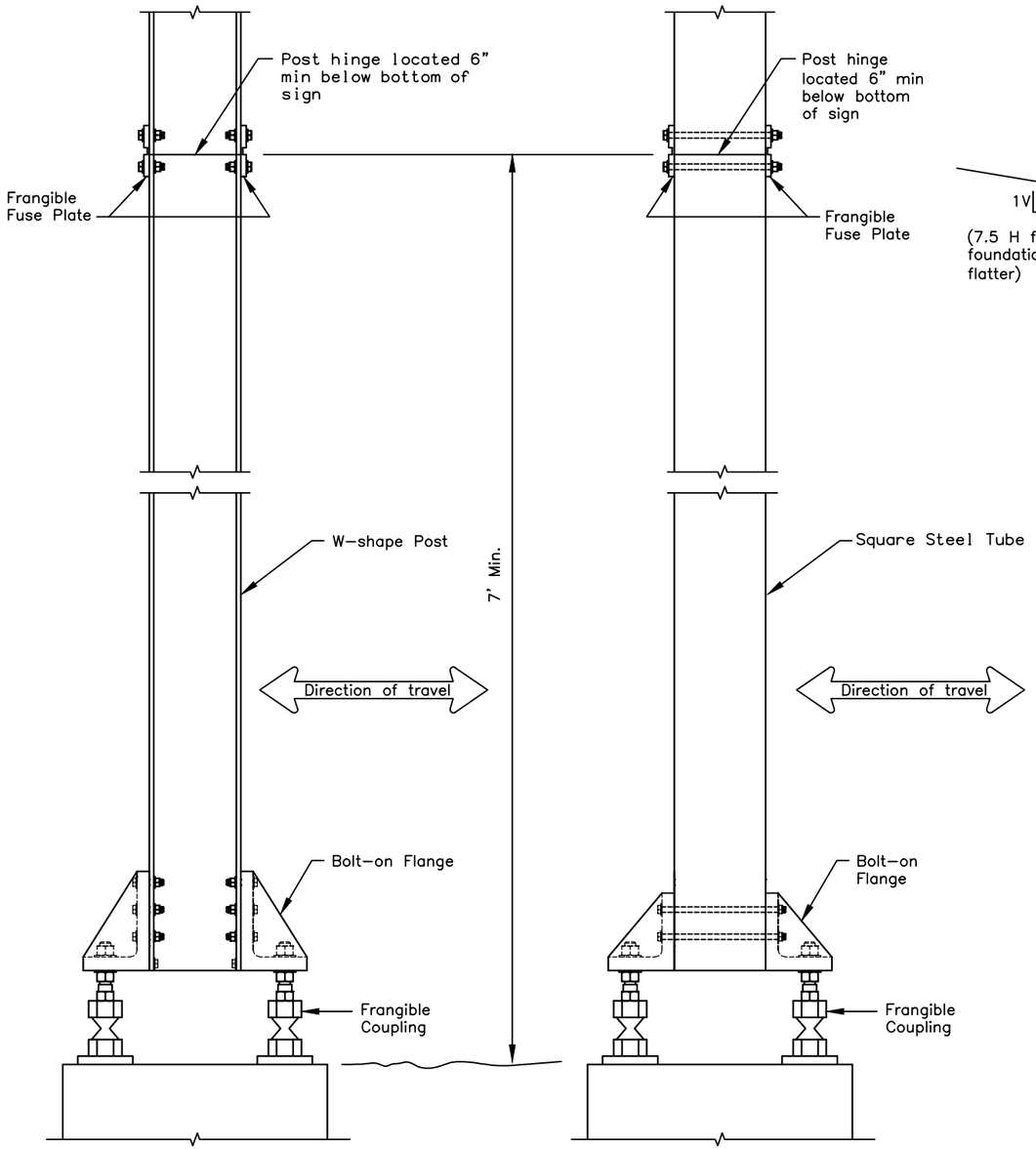
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

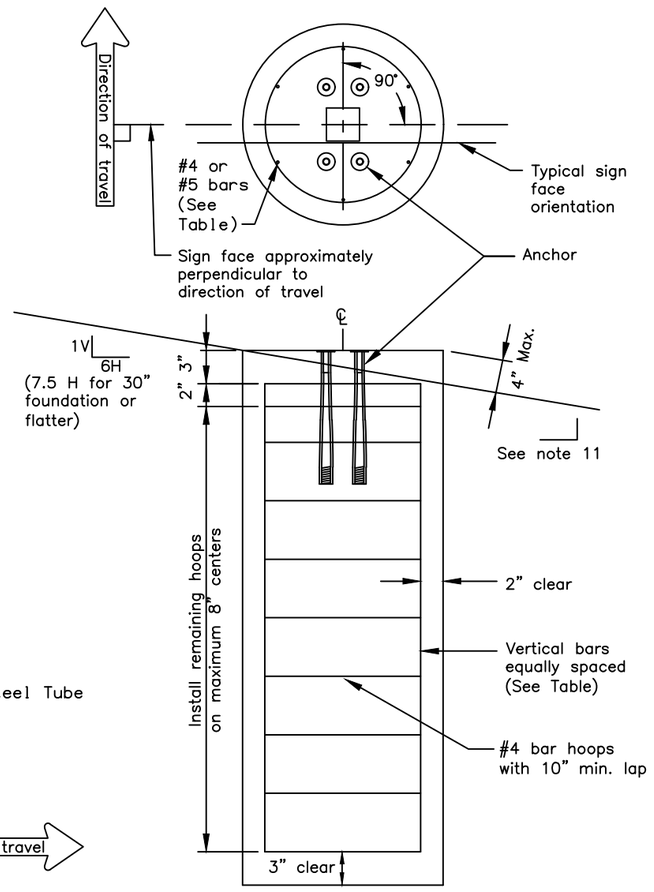
Next Code and Standards Review date: 7/8/2030

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



FRANGIBLE COUPLING SYSTEM FOR W–SHAPE POST

FRANGIBLE COUPLING SYSTEM FOR SQUARE STEEL TUBES



SIGN POST FOUNDATION
See Table for depth and diameter

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

FOUNDATION TABLE

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

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION

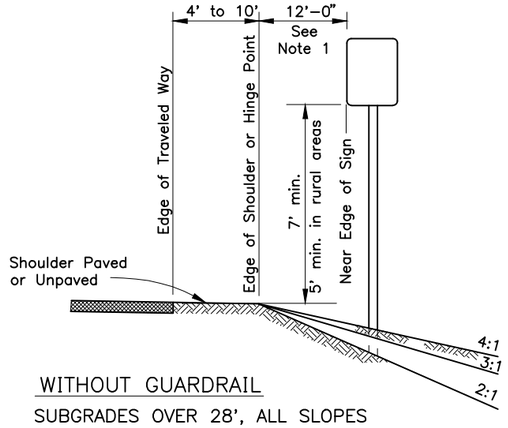
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

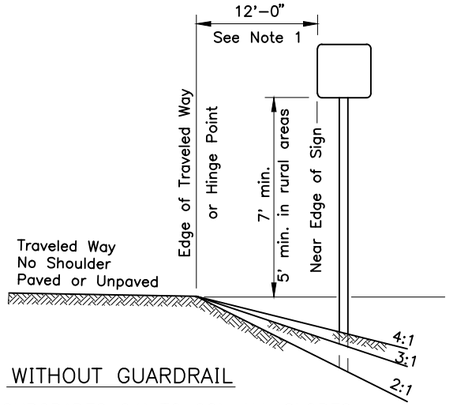
Next Code and Standards Review Date: 7/8/2030

S-31.02



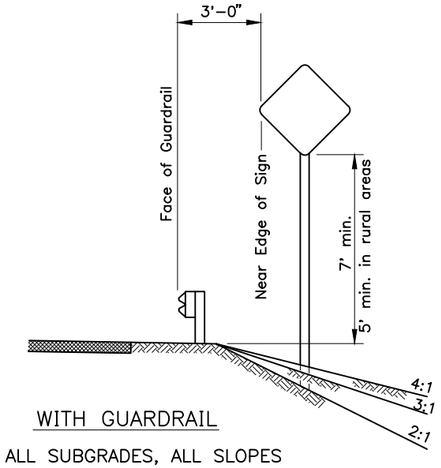
WITHOUT GUARDRAIL

SUBGRADES OVER 28', ALL SLOPES



WITHOUT GUARDRAIL

SUBGRADES 24' TO 28', ALL SLOPES

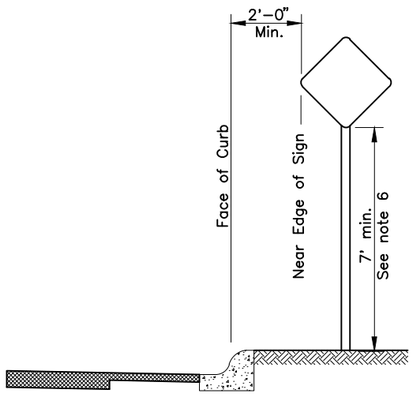


WITH GUARDRAIL

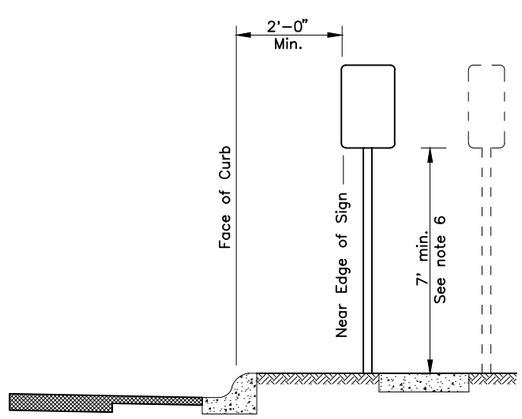
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

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

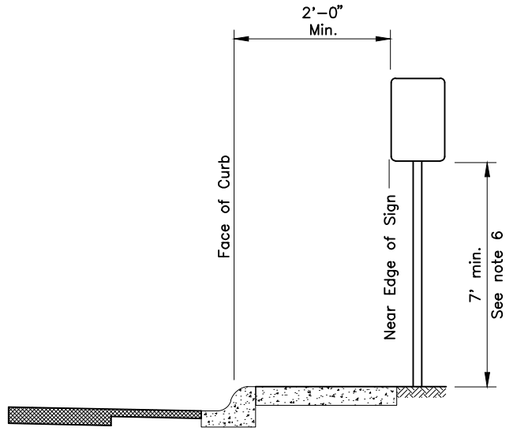


CURB WITHOUT SIDEWALK

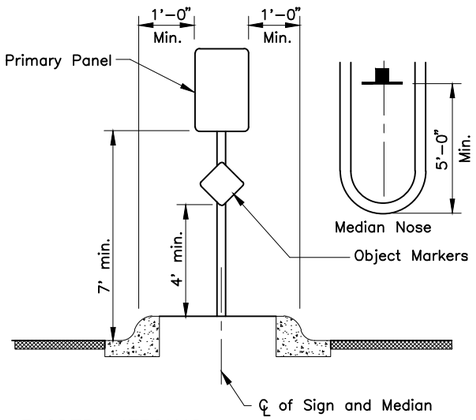


CURB WITH PARKWAY AND SIDEWALK

(If R/W width permits, signs should be placed behind sidewalk.)

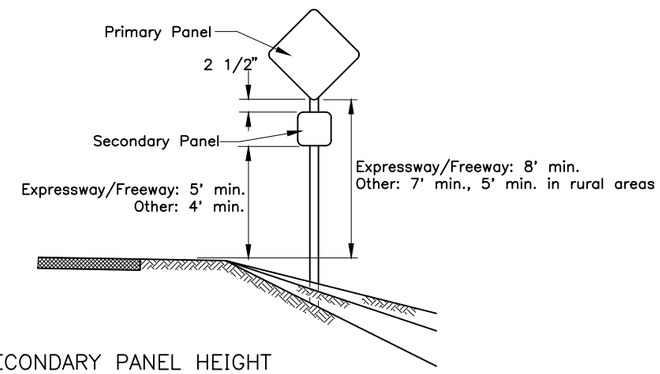


CURB WITH SIDEWALK WITHOUT PARKWAY



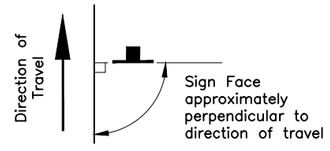
RAISED MEDIANS

Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT

ALL TWO PANEL MOUNTING



SIGN POSITIONING

State of Alaska DOT&PF
ALASKA STANDARD PLAN

POST MOUNTED SIGN
OFFSET AND HEIGHT

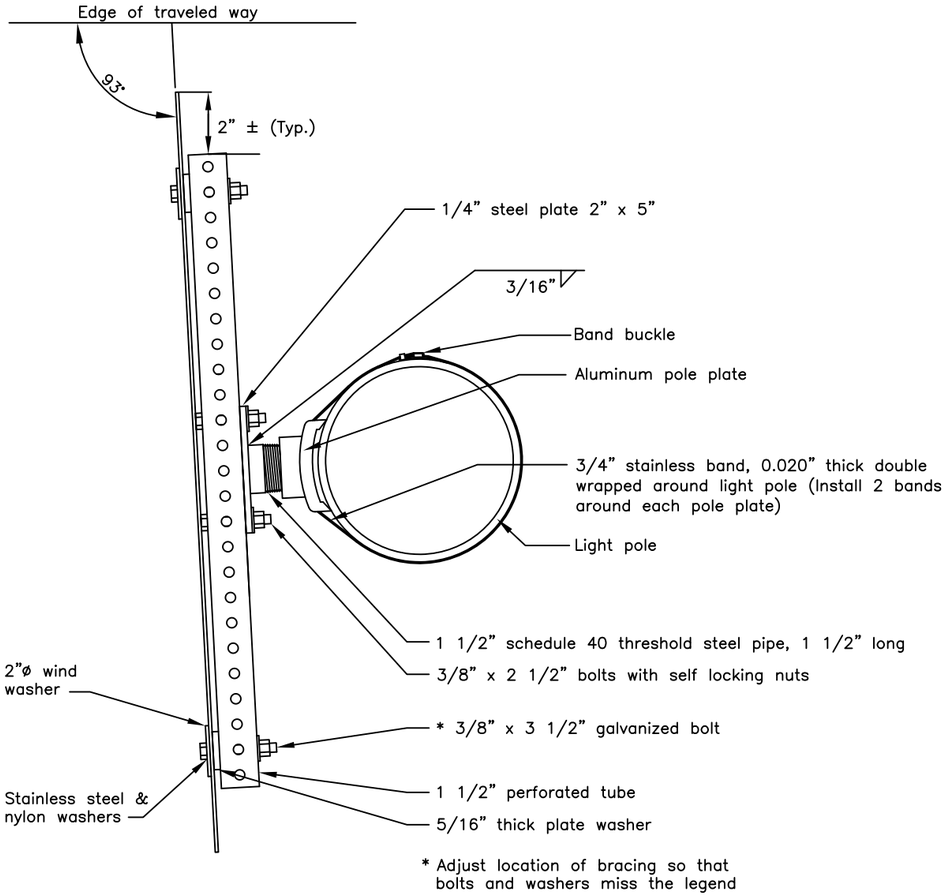
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

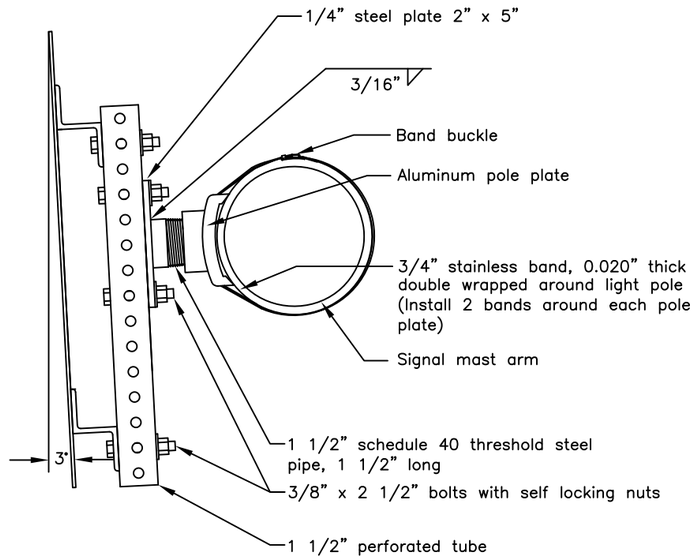
Last Code and Stds. Review
By: KLK Date: 7/8/2020

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

S-05.02



ELECTROLIER SIGN MOUNTING
(PLAN VIEW)



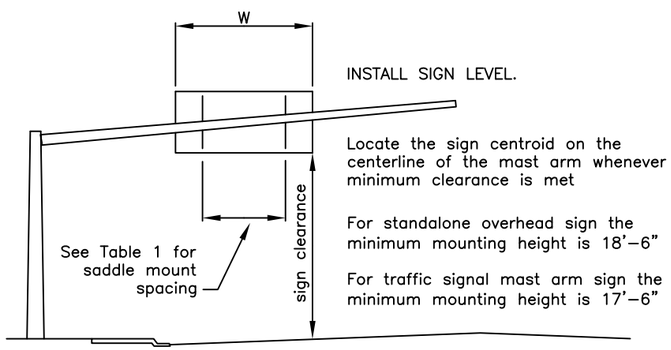
SIGNAL POLE MAST ARM SIGN MOUNTING
(ELEVATION VIEW)

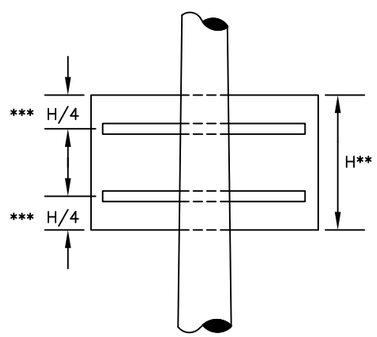
GENERAL NOTES

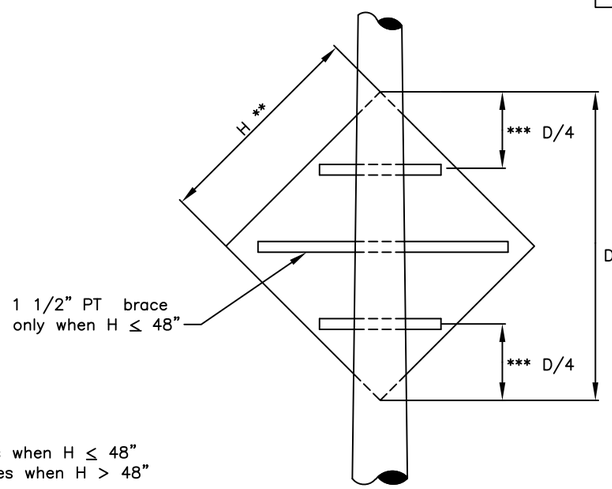
1. Use pole plate assemblies shown here to install signs on tapered mast arms and light poles. Install one pole plate per 10 square feet of sign panel. Use at least two plates for each installation.
2. Fabricate each pole plate-to-perforated tube adapter (steel plate welded to pipe) using steel plate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

TABLE 1
POLE PLATE SPACING

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







** Use two pole plates when H ≤ 48" use three pole plates when H > 48"

*** When sign panels features predrilled mountings holes, use them to attach the perforated tubes

State of Alaska DOT&PF
ALASKA STANDARD PLAN

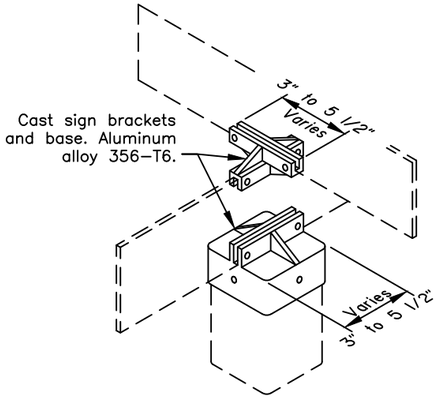
POLE AND MASTARM SIGN MOUNTING

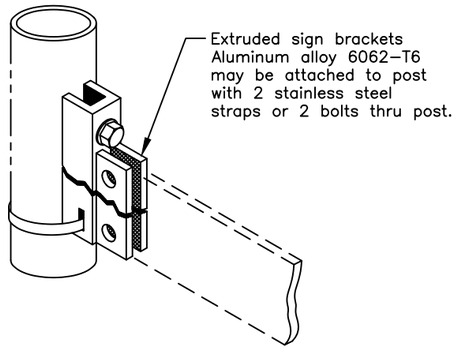
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E. Chief Engineer

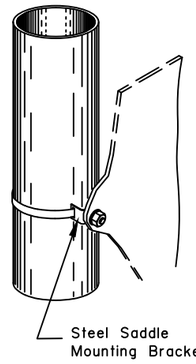
Adoption Date: 02/08/2019

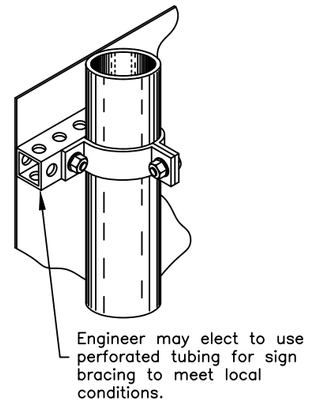
Last Code and Stds. Review By: Date:

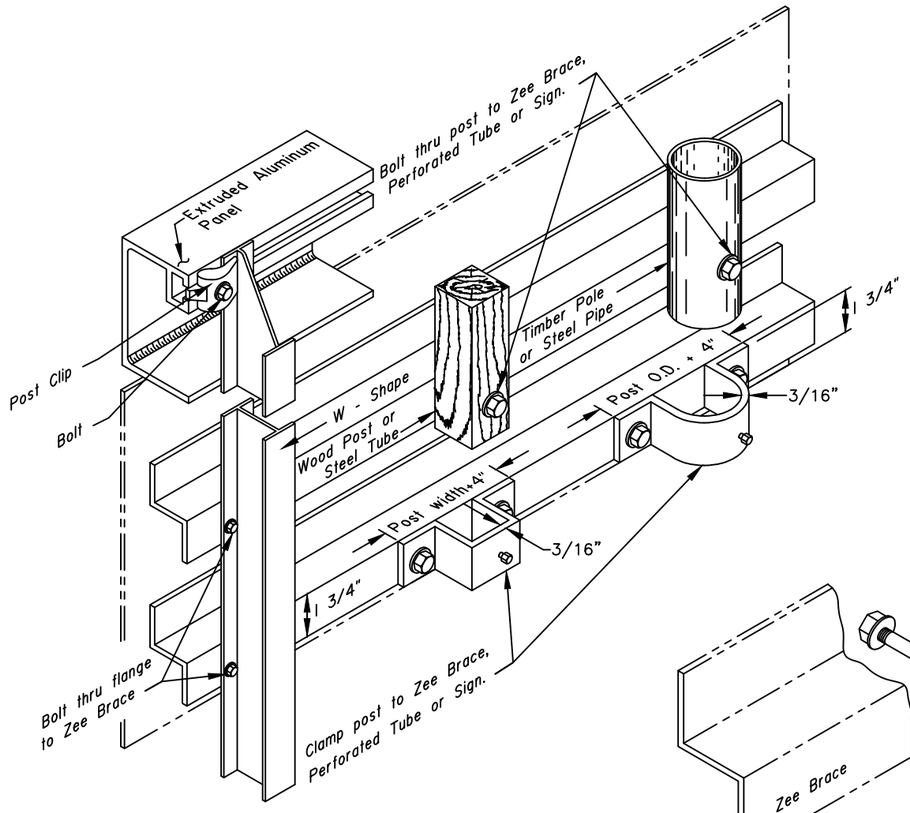
Next Code and Standards Review date: 02/08/2029

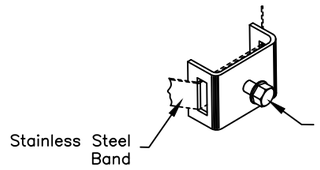




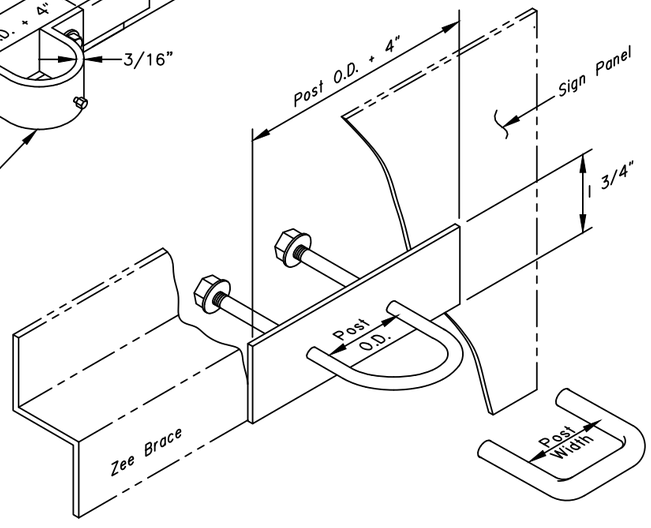


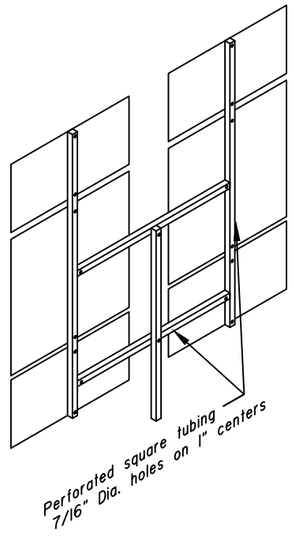






MOUNTING BRACKET DETAIL





CONSTRUCTION NOTES

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

FASTENER SPECIFICATION TABLE
(ALL REFERENCES ARE TO ASTM)

FASTENERS		ALUMINUM	STEEL	STAINLESS STEEL
BOLTS	MACHINE	F468 2024-T4	A307	F593
	CARRIAGE "U"	F468 2024-T4	A307	A276 TYPE 304
NUTS	REGULAR	F467 6061-T6	A563	F594
	LOCKING	F467 2017-T4		
WASHERS		F468 2024-T4	F844	A480
POST CLIP		A356-T6	N/A	N/A

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN TO SIGN POST CONNECTION

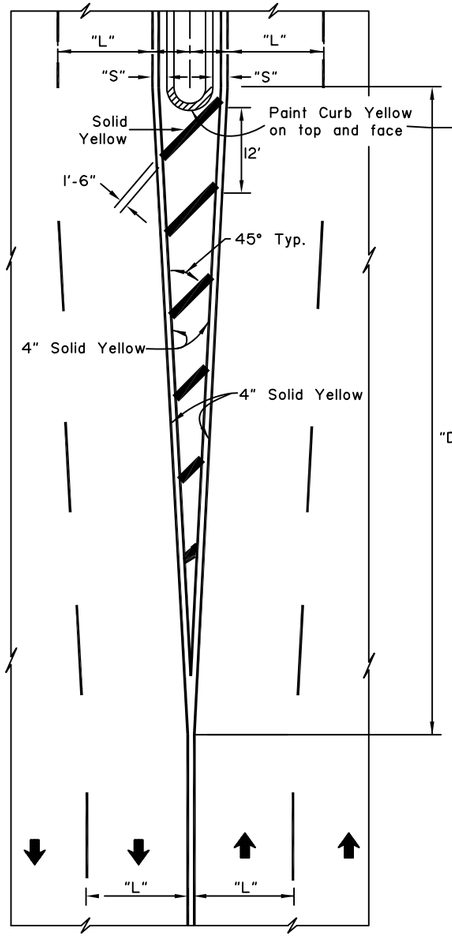
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 07/30/2021

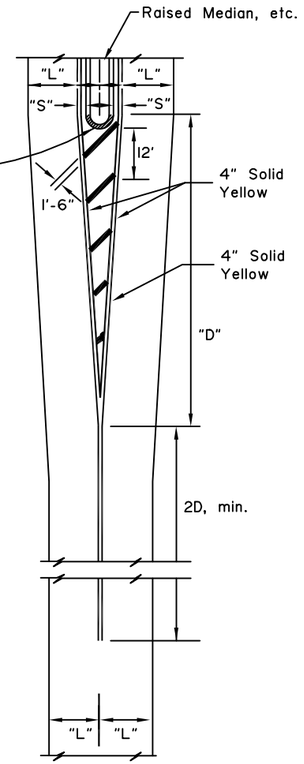
Last Code and Stds. Review
By: LRG Date: 07/30/2021

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

S-20.11



FOUR OR MORE LANES
DRIVE TO RIGHT

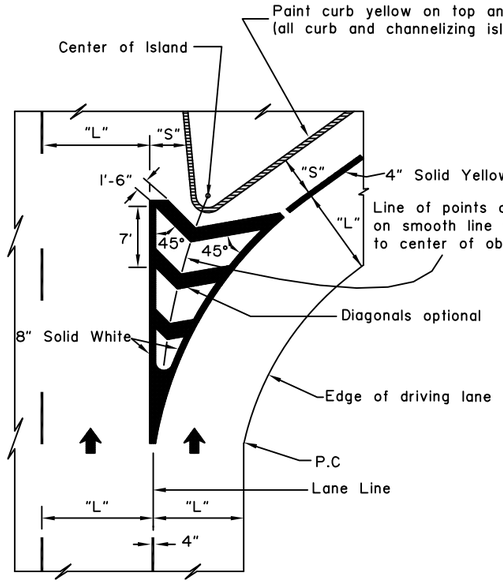


TWO LANES
DRIVE TO RIGHT

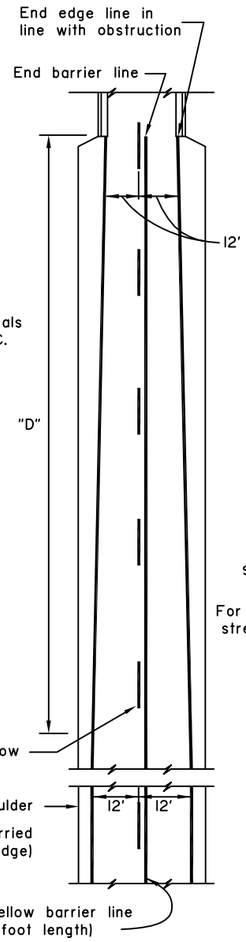
White longitudinal and diagonal markers identical to Four Lane Arrangement.

NOTES: "D" = Speed limit (mph) X "S" (offset width in feet) or as indicated on the plans. Minimum "D" = 100 feet urban, 200 feet rural.

APPROACH TO OBSTRUCTIONS

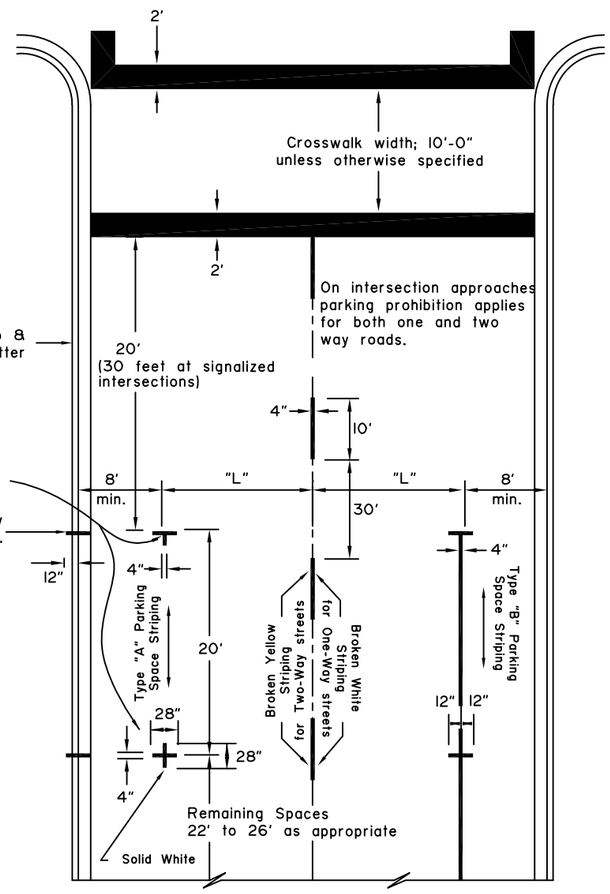


CHANNELIZING ISLAND



Note: On bridges over 24' wide use standard pavement markings. Barrier lines not used unless otherwise required.

EDGE LINE TRANSITION TO NARROW BRIDGE AND APPROACH BARRIER LINE

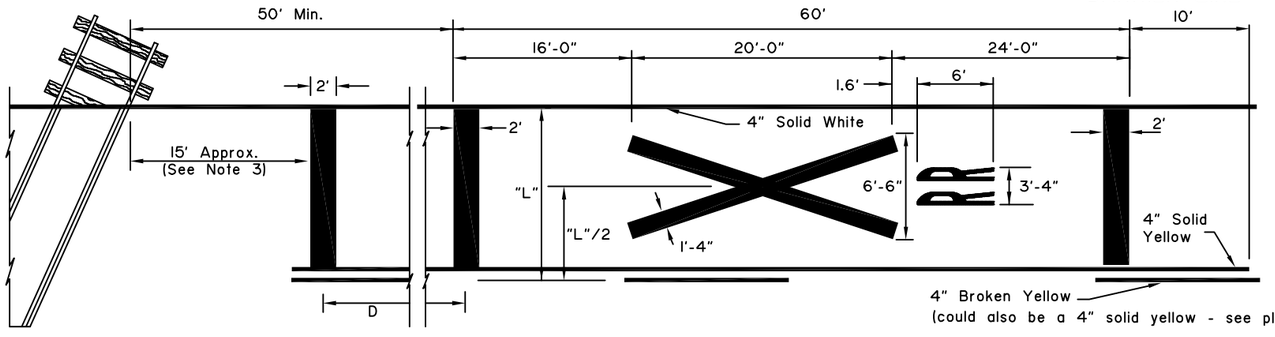


CENTERLINES FOR TWO LANE TWO WAY URBAN ROADS-PARKING LIMIT LINES

RAILROAD CROSSING NOTES:

1. All markings solid while unless indicated otherwise.
2. On 4-lane roadways place railroad crossing approach markings in each lane of the approach.
3. Locate Stop Bar 15' from railroad track or 8' from gate, if present.
4. Place edge lines and lane lines on a uni-directional approach in a normal manner except that the lane line(s) shall be solid 4" white in lieu of broken for a distance of (D+60') in advance of the stop bands.

POSTED LIMIT	D
30 M.P.H.	225'
40	350'
50	475'
60	625'



APPROACH TO RAILROAD CROSSING ON 2 LANE 2 WAY HIGHWAY

GENERAL NOTES:

1. "S"= offset distance as shown on the plans, otherwise 1 to 2 feet.
2. "L"= driving lane width.
3. See the Alaska Traffic Manual for additional guidance and/or restrictions on the use of traffic control devices.

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MAKING APPLICATIONS

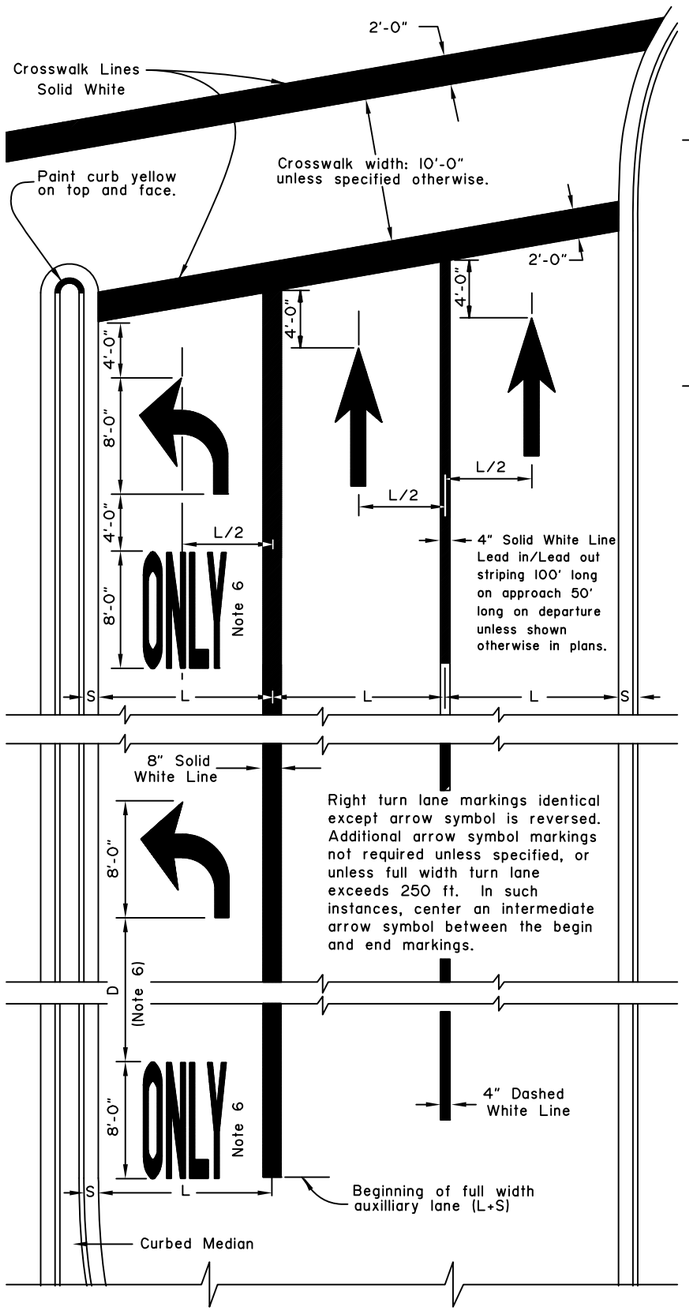
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

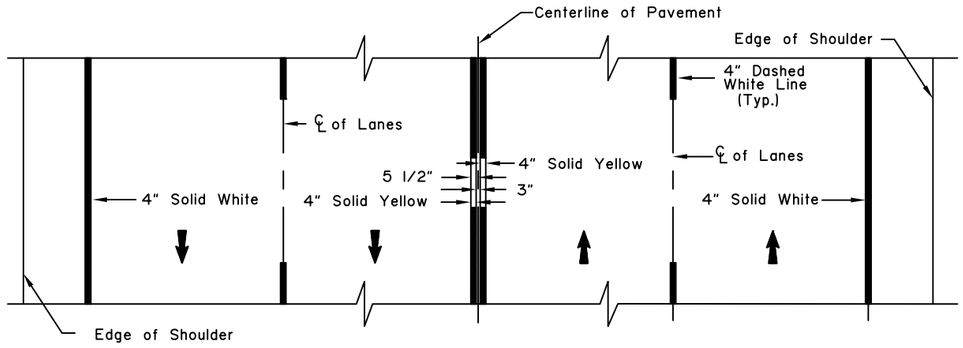
Last Code and Stds. Review
By: Date:

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

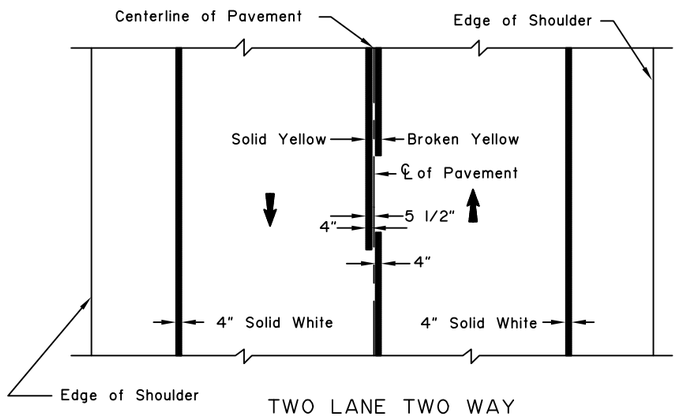
T-20.04



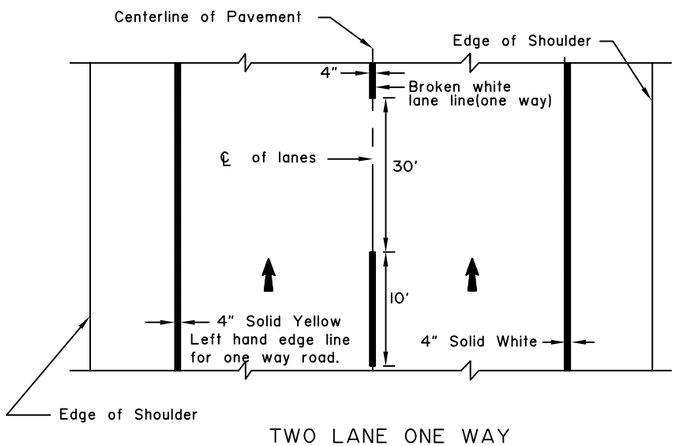
APPROACH TO INTERSECTION



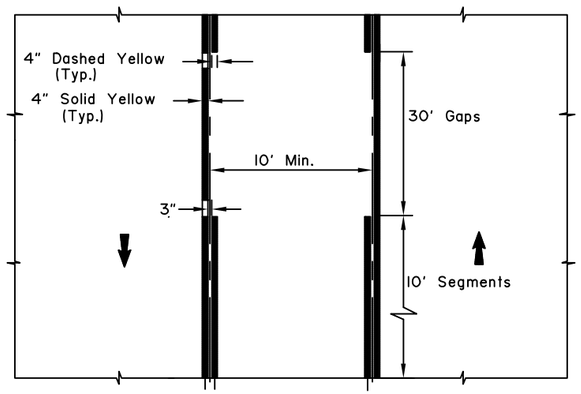
FOUR LANE TWO WAY



TWO LANE TWO WAY

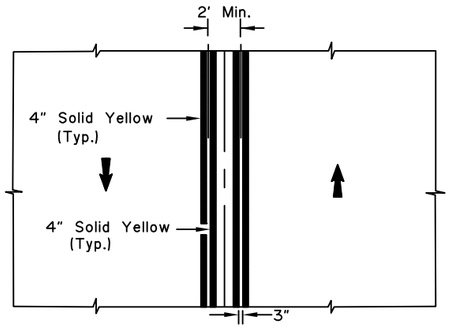


TWO LANE ONE WAY



TWO-WAY LEFT TURN LANE

SPEED	D
25 or less	35'
30	45'
35	50'
40	60'
45	65'
50	75'
55 or more	80'



STRIPED MEDIAN

GENERAL NOTES:

1. All markings white unless indicated otherwise.
2. Lengths of stripe and gap for lane and center lines identical.
3. Lane lines for auxiliary lanes are unbroken solid lines.
4. "L" = driving lane width.
5. "S" = shy distance as shown on plans, otherwise 1 to 2 feet.
6. ONLY markings are required where through lanes change to turn lanes. In other cases, apply ONLY markings as indicated on plans.
7. See ALASKA TRAFFIC MANUAL for additional instruction on the use of TRAFFIC CONTROL DEVICES.
8. 6. Adjust distance D between ONLY and Turn Arrow based on SPEED vs. D table.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MAKING APPLICATIONS

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

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

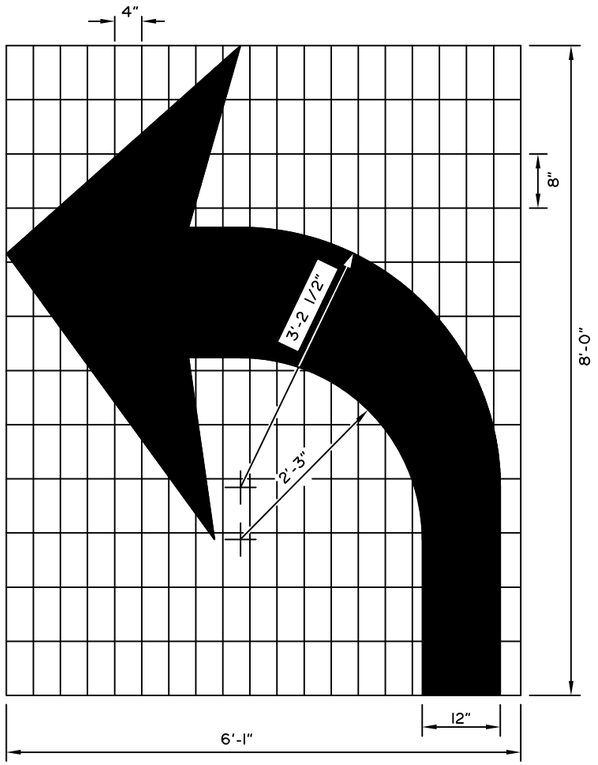
T-21.03

T-22.04

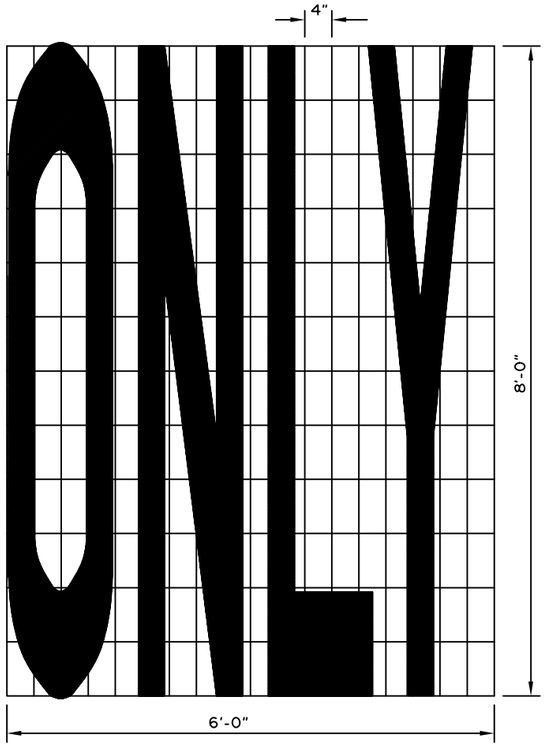
SHEET | of |

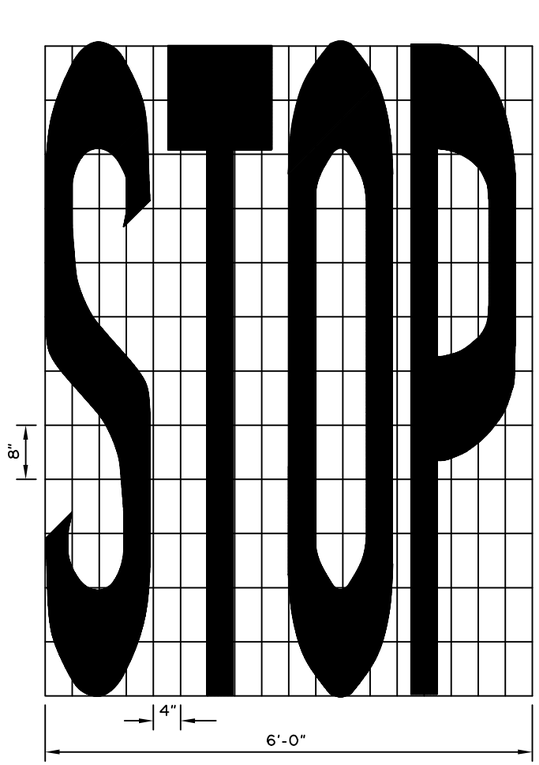
GENERAL NOTES:

1. All symbols shown shall be white and reflectorized in accordance with the Special Provisions.
2. See the Alaska Sign Design Specifications (ASDS) for lettering and symbols for pavement marking details not provided on this drawing.

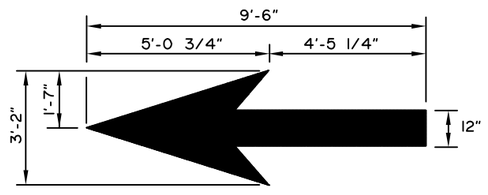


Right turn auxilliary lane usage markings identical except arrow symbol is reversed.

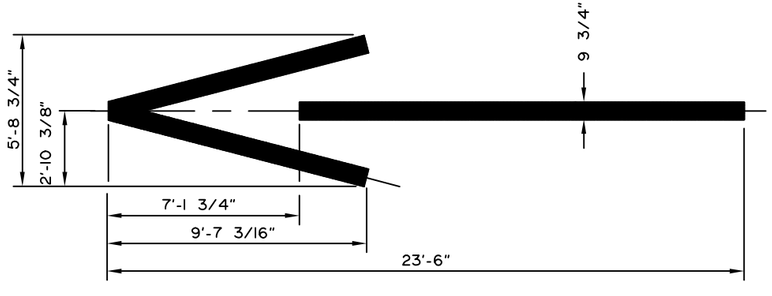




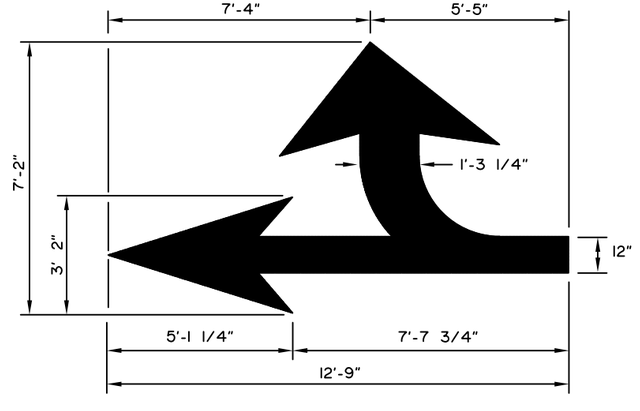
LAYOUT TEMPLATES FOR STENCILS



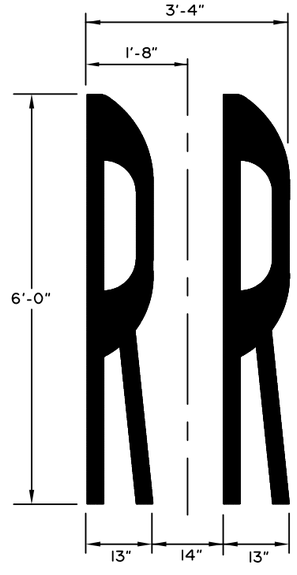
STRAIGHT AHEAD ARROW



WRONG WAY ARROW



COMBINATION ARROW



RAILROAD SYMBOL

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING SYMBOL DIMENSIONS

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

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

T-22.04

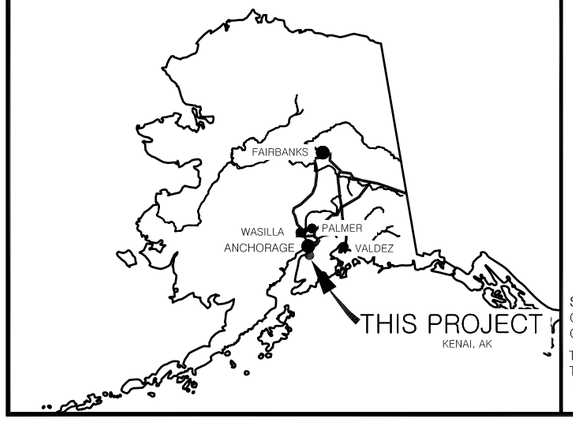
STATE OF ALASKA
DEPARTMENT OF NATURAL RESOURCES
DIVISION OF PARKS
AND
OUTDOOR RECREATION

KENAI BRIDGE ACCESS ROAD
PATHWAY

PROJECT NO.
CFHWY00689

In Cooperation with the Department of Transportation and
Public Facilities

Vicinity Map



INDEX

SPECIFICATION:
CONSTRUCT THE IMPROVEMENTS COVERED BY THESE PLANS IN ACCORDANCE WITH THE ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES 2020 STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND THE PROJECT SPECIAL PROVISIONS.

The following Division of Parks & Outdoor Rec. standard drawings apply to this project: N/A
The following State of Alaska DOT&PF STANDARD PLANS apply to this project: C-04.12, C-05.20, CR-T-01.20, D-01.02, D-04.22, D-06.10, G-00.05, G-05.11S, G-12.21, I-20.20, I-21.12, L-23.03, S-00.12, S-05.02, S-30.05, S-31.02, S-32.02, T-20.04, T-21.04

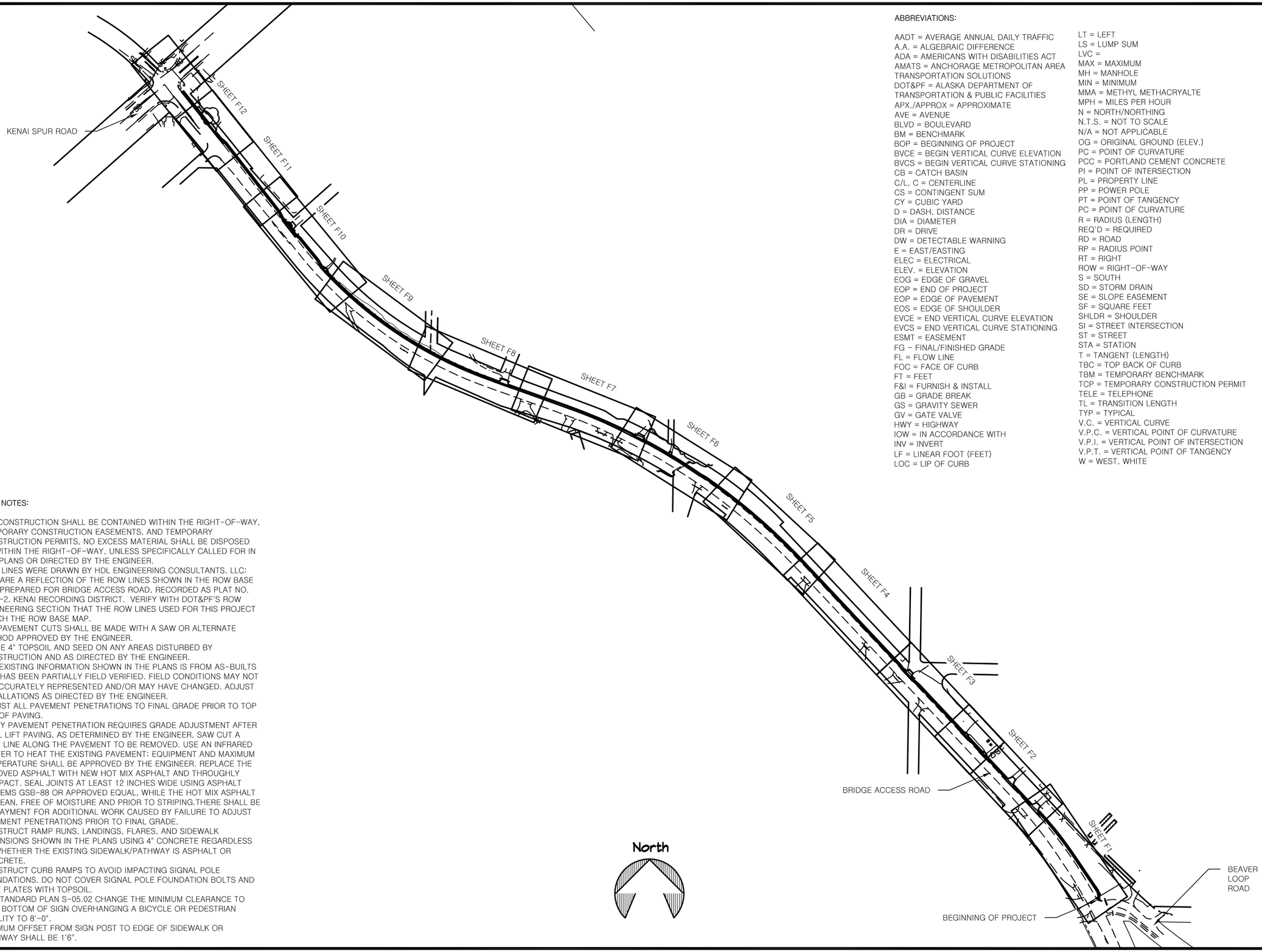
Plans developed by:
STATE OF ALASKA
Department of Natural Resources
Division of Parks & Outdoor Recreation
550 W 7th Ave. Suite 1340, Anchorage, AK 99501

Recommended:

Rys Miranda, P.E. — Date
Chief, Design and Construction

Approved:

Date
Director, Alaska State Parks



ABBREVIATIONS:

AADT = AVERAGE ANNUAL DAILY TRAFFIC
A.A. = ALGEBRAIC DIFFERENCE
ADA = AMERICANS WITH DISABILITIES ACT
AMATS = ANCHORAGE METROPOLITAN AREA TRANSPORTATION SOLUTIONS
DOT&PF = ALASKA DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
APX./APPROX = APPROXIMATE
AVE = AVENUE
BLVD = BOULEVARD
BM = BENCHMARK
BOP = BEGINNING OF PROJECT
BVCE = BEGIN VERTICAL CURVE ELEVATION
BVCS = BEGIN VERTICAL CURVE STATIONING
CB = CATCH BASIN
C/L, C = CENTERLINE
CS = CONTINGENT SUM
CY = CUBIC YARD
D = DASH, DISTANCE
DIA = DIAMETER
DR = DRIVE
DW = DETECTABLE WARNING
E = EAST/EASTING
ELEC = ELECTRICAL
ELEV. = ELEVATION
EOG = EDGE OF GRAVEL
EOP = END OF PROJECT
EOP = EDGE OF PAVEMENT
EOS = EDGE OF SHOULDER
EVCE = END VERTICAL CURVE ELEVATION
EVCS = END VERTICAL CURVE STATIONING
ESMT = EASEMENT
FG - FINAL/FINISHED GRADE
FL = FLOW LINE
FOC = FACE OF CURB
FT = FEET
F&I = FURNISH & INSTALL
GB = GRADE BREAK
GS = GRAVITY SEWER
GV = GATE VALVE
HWY = HIGHWAY
IOW = IN ACCORDANCE WITH
INV = INVERT
LF = LINEAR FOOT (FEET)
LOC = LIP OF CURB
LT = LEFT
LS = LUMP SUM
LVC =
MAX = MAXIMUM
MH = MANHOLE
MIN = MINIMUM
MMA = METHYL METHACRYALTE
MPH = MILES PER HOUR
N = NORTH/NORTHING
N.T.S. = NOT TO SCALE
N/A = NOT APPLICABLE
OG = ORIGINAL GROUND (ELEV.)
PC = POINT OF CURVATURE
PCC = PORTLAND CEMENT CONCRETE
PI = POINT OF INTERSECTION
PL = PROPERTY LINE
PP = POWER POLE
PT = POINT OF TANGENCY
PC = POINT OF CURVATURE
R = RADIUS (LENGTH)
REQ'D = REQUIRED
RD = ROAD
RP = RADIUS POINT
RT = RIGHT
ROW = RIGHT-OF-WAY
S = SOUTH
SD = STORM DRAIN
SE = SLOPE EASEMENT
SF = SQUARE FEET
SHLDR = SHOULDER
SI = STREET INTERSECTION
ST = STREET
STA = STATION
T = TANGENT (LENGTH)
TBC = TOP BACK OF CURB
TBM = TEMPORARY BENCHMARK
TCP = TEMPORARY CONSTRUCTION PERMIT
TELE = TELEPHONE
TL = TRANSITION LENGTH
TYP = TYPICAL
V.C. = VERTICAL CURVE
V.P.C. = VERTICAL POINT OF CURVATURE
V.P.I. = VERTICAL POINT OF INTERSECTION
V.P.T. = VERTICAL POINT OF TANGENCY
W = WEST, WHITE

GENERAL NOTES:

1. ALL CONSTRUCTION SHALL BE CONTAINED WITHIN THE RIGHT-OF-WAY, TEMPORARY CONSTRUCTION EASEMENTS, AND TEMPORARY CONSTRUCTION PERMITS. NO EXCESS MATERIAL SHALL BE DISPOSED OF WITHIN THE RIGHT-OF-WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR DIRECTED BY THE ENGINEER.
2. ROW LINES WERE DRAWN BY HDL ENGINEERING CONSULTANTS, LLC: AND ARE A REFLECTION OF THE ROW LINES SHOWN IN THE ROW BASE MAP PREPARED FOR BRIDGE ACCESS ROAD, RECORDED AS PLAT NO. 2023-2, KENAI RECORDING DISTRICT. VERIFY WITH DOT&PF'S ROW ENGINEERING SECTION THAT THE ROW LINES USED FOR THIS PROJECT MATCH THE ROW BASE MAP.
3. ALL PAVEMENT CUTS SHALL BE MADE WITH A SAW OR ALTERNATE METHOD APPROVED BY THE ENGINEER.
4. PLACE 4" TOPSOIL AND SEED ON ANY AREAS DISTURBED BY CONSTRUCTION AND AS DIRECTED BY THE ENGINEER.
5. THE EXISTING INFORMATION SHOWN IN THE PLANS IS FROM AS-BUILTS AND HAS BEEN PARTIALLY FIELD VERIFIED. FIELD CONDITIONS MAY NOT BE ACCURATELY REPRESENTED AND/OR MAY HAVE CHANGED. ADJUST INSTALLATIONS AS DIRECTED BY THE ENGINEER.
6. ADJUST ALL PAVEMENT PENETRATIONS TO FINAL GRADE PRIOR TO TOP LIFT OF PAVING.
   IF ANY PAVEMENT PENETRATION REQUIRES GRADE ADJUSTMENT AFTER FINAL LIFT PAVING, AS DETERMINED BY THE ENGINEER, SAW CUT A NEAT LINE ALONG THE PAVEMENT TO BE REMOVED. USE AN INFRARED HEATER TO HEAT THE EXISTING PAVEMENT: EQUIPMENT AND MAXIMUM TEMPERATURE SHALL BE APPROVED BY THE ENGINEER. REPLACE THE REMOVED ASPHALT WITH NEW HOT MIX ASPHALT AND THROUGHLY COMPACT. SEAL JOINTS AT LEAST 12 INCHES WIDE USING ASPHALT SYSTEMS GSB-88 OR APPROVED EQUAL. WHILE THE HOT MIX ASPHALT IS CLEAN, FREE OF MOISTURE AND PRIOR TO STRIPING.THERE SHALL BE NO PAYMENT FOR ADDITIONAL WORK CAUSED BY FAILURE TO ADJUST PAVEMENT PENETRATIONS PRIOR TO FINAL GRADE.
7. CONSTRUCT RAMP RUNS, LANDINGS, FLARES, AND SIDEWALK EXTENSIONS SHOWN IN THE PLANS USING 4" CONCRETE REGARDLESS OF WHETHER THE EXISTING SIDEWALK/PATHWAY IS ASPHALT OR CONCRETE.
8. CONSTRUCT CURB RAMPS TO AVOID IMPACTING SIGNAL POLE FOUNDATIONS. DO NOT COVER SIGNAL POLE FOUNDATION BOLTS AND BASE PLATES WITH TOPSOIL.
9. ON STANDARD PLAN S-05.02 CHANGE THE MINIMUM CLEARANCE TO THE BOTTOM OF SIGN OVERHANGING A BICYCLE OR PEDESTRIAN FACILITY TO 8'-0".
10. MINIMUM OFFSET FROM SIGN POST TO EDGE OF SIDEWALK OR PATHWAY SHALL BE 1'6".

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

ABBREVIATIONS, SHEET LAYOUT AND GENERAL NOTES

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
A2
OF XX SHEETS

ROADWAY

	EXISTING	PROPOSED
EDGE OF PAVEMENT		
LIMIT OF CUT SLOPE & FILL SLOPE		CUT / FILL
GRAVEL EDGE		
SIDEWALK AND PATH/TRAIL		
CONCRETE CURB & GUTTER		
CONCRETE CURB CUT		
PARALLEL CURB RAMP PERPENDICULAR CURB RAMP		
UNIDIRECTIONAL CURB RAMP & MID-BLOCK CURB RAMP		
DETECTABLE WARNING TILE		
BRIDGE		
TUNNEL		
GUARDRAIL		
END & PARALLEL END SECTIONS		
ROADWAY OBLITERATION		
FENCE		
STONE FENCE		
NOISE BARRIER		
RETAINING WALL		
HEADWALL & WINGWALL		
BOTTOM OF DITCH		
SPECIAL DITCH		
FLAT BOTTOM DITCH		
BERM		
RIPRAP		
BOULDER OR BOULDERS		
PRIVATE SIGN, MAILBOX	PMB	MB
POST, BOLLARD		

UTILITIES

	EXISTING	PROPOSED
STORM DRAIN	SD	
STORM DRAIN MANHOLE, CLEANOUT	SD CO	SD CO
CURB INLET CATCH BASIN FIELD INLET CATCH BASIN	FI	FI
PIPE CULVERT WITH END SECTION		
SANITARY SEWER	SS	SS
SANITARY SEWER MANHOLE, CLEANOUT	SS CO	SS CO
SEPTIC VENT, SEWER SERVICE CONNECTION	S	
WATER	W	W
FIRE HYDRANT, VALVE OR RISER		
WELL, WATER SERVICE CONNECTION	W	
NATURAL GAS	G	G
OIL OR GASOLINE PIPELINE	O	O
TANKS (ABOVE GROUND, UNDERGROUND)		U
ELECTRIC	OE (OVERHEAD) UE (UNDERGROUND) OE&OT (OVERHEAD)	
UTILITY POLE, POLE WITH LUMINAIRE		
GUY POLE, GUY WIRE ANCHOR	GP	
TRANSMISSION TOWER (WOOD, STEEL)		
ELECTRIC PEDESTAL, TRANSFORMER		E
ELECTRIC MANHOLE, METER	E	
ELECTRIC OUTLET, LANDSCAPE LIGHT		
TELEPHONE	OT (OVERHEAD) UT (UNDERGROUND) UT&TV (UNDERGROUND)	
TELEPHONE MANHOLE, PEDESTAL	T	
FIBER OPTIC	FO	
FIBER OPTIC MANHOLE	FO	
CABLE TV	OTV (OVERHEAD) UTV (UNDERGROUND)	
CABLE TV PEDESTAL, SATELLITE DISH		
UNDERGROUND DUCT, UTILIDOR (ELECTRIC, TELEPHONE, FIBER OPTIC)		
VENT		

TOPOGRAPHY

	EXISTING	EXISTING	PROPOSED
LAKE OR POND, WETLANDS	LAKE/POND	CONTOUR, MAJOR OR MINOR	520
TREE (CONIFER/DECIDUOUS) TREELINE (EDGE OF VEGETATION)		DRAINAGE FLOW	
PLANTER	P	CREEK (CENTERLINE)	
BUILDING OR FOUNDATION		RIVER (EDGE OF WATER)	

TRAFFIC

	EXISTING	PROPOSED
LOAD CENTER		
STATE TRAFFIC, MOA TRAFFIC, & BEACON CONTROLLER ARROW INDICATES DOOR LOCATION		
TYPE 1A, II, III, IV JUNCTION BOX	15 26 57 48	60
FIBER OPTIC VAULT	F/O 58	F/O 7
ELECTROLIER	58	
HIGHTOWER	HT#	OHT#
SIGNAL POLE WITH MASTARM	149	14
PEDESTRIAN PUSH BUTTON & SIGNAL	58 12	
VEHICULAR SIGNAL	14	
VEHICULAR SIGNAL LEFT & RIGHT	167 24	17
OPTICAL, CAMERA, RADAR, AND GPS DETECTOR	CAM RAD GPS	CAM RAD GPS
LOOP DETECTOR	555	735
COMMUNICATION ANTENNA		
MASTARM BEACON		
RURAL & SCHOOL ZONE BEACON	254 77 124 55	128 82 128 42
LOOP DETECTOR CONDUIT		
SIGNAL CONDUIT	TR	TR
LIGHTING CONDUIT	LTG	LTG
SIGNAL & LIGHTING CONDUIT	T/L	T/L
CONDUIT BORING		
CONDUIT SIZE IN INCHES	2"-3C4	2"-3C4 CKT BA12 CKT BA13
INTERCONNECT	I/C	I/C
SIGN POST		22

PAVEMENT MARKINGS

	PROPOSED
TRAFFIC PROJECT CENTERLINE	
8" & 4" WHITE SOLID STRIPE	8"W 4"W
4" WHITE SKIP STRIPE 10' STRIPES AND 30' SPACES	4"W SKIP
8" WHITE LANE GUIDE SKIP LANE CONTINUATION OR TURN SKIP 1' STRIPES AND 3' SPACES	8"W GUIDE SKIP
8" & 4" YELLOW SOLID STRIPE	8"Y 4"Y
4" YELLOW SKIP STRIPE 10' STRIPES AND 30' SPACES	4"Y SKIP
STRIPING CHANGE STATION INTERVAL	+20
2' CROSSWALK OR STOPBAR	24"W (TYP)
LADDER CROSSWALK LAYOUT 2' WIDE RUNGS WITH 2' SPACES ALIGNED TO AVOID TIRE PATHS	3'-6" 3' 12' (2)-4"Y 3" APART
TYPICAL PAINTED MEDIAN	VARIES 18"Y @ 45°

RIGHT-OF-WAY

	RECOVERED	SET THIS PROJECT
FEDERAL GOV'T SURVEY MONUMENT		
GOV'T CONTROL STATION		
PRIMARY MONUMENT (BRASS/AL CAP)		
MISC SECONDARY CORNER		
PRIMARY CENTERLINE MONUMENT		
SECONDARY CENTERLINE MONUMENT		
RANDOM CONTROL MONUMENT	RCM	
PRIMARY GPS CONTROL POINT	GPS	
HORIZONTAL CONTROL POINT	CP	
SECONDARY CONTROL POINT	SCP	
VERTICAL BENCHMARK	BM	
TEMPORARY BENCHMARK	TBM	
TOWNSHIP AND RANGE LINES	T13N T12N R2W R3W	
SECTION LINE		
1/4 SECTION LINE		
1/16 SECTION LINE		
CORPORATE or CITY LIMITS		
EXISTING RIGHT-OF-WAY		
RIGHT-OF-WAY OR EASEMENT REQUIRED		
PROJECT RIGHT-OF-WAY LINE		
EXISTING RIGHT-OF-WAY EASEMENT		
EXISTING PROPERTY LINE		
CONTROLLED ACCESS LINE		
EXISTING UTILITY EASEMENT		
PROPOSED UTILITY EASEMENT		
EXISTING CENTERLINE		
RAILROAD CENTERLINE		
TEMPORARY CONSTRUCTION EASEMENT		
TEMPORARY CONSTRUCTION PERMIT		

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

LEGEND

ALASKA STATE PARKS

STATE OF ALASKA 49TH PS&E REVIEW Soriano Registered Professional Engineer

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
A3
OF XX SHEETS

SURVEY CONTROL TO BE COMPLETED BY AKDOT&PF SURVEY SECTION PRIOR TO ADVERTISEMENT

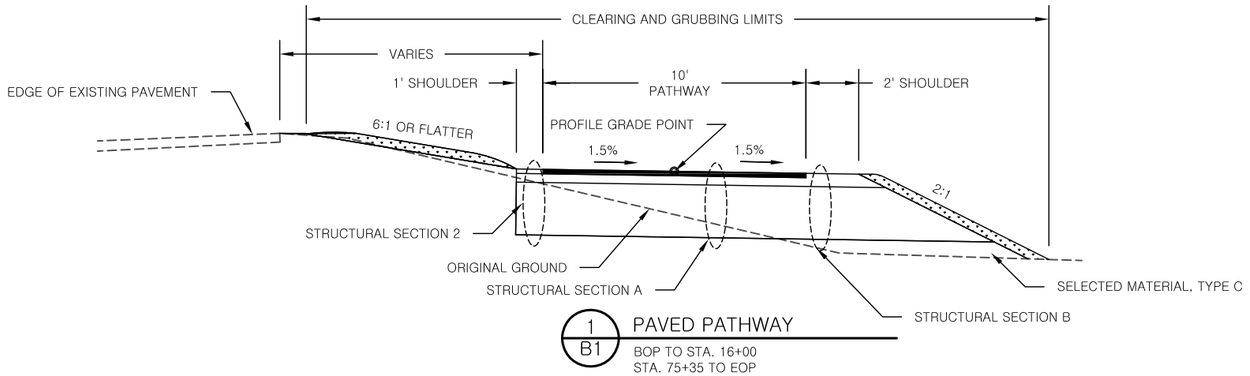
STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

SURVEY CONTROL

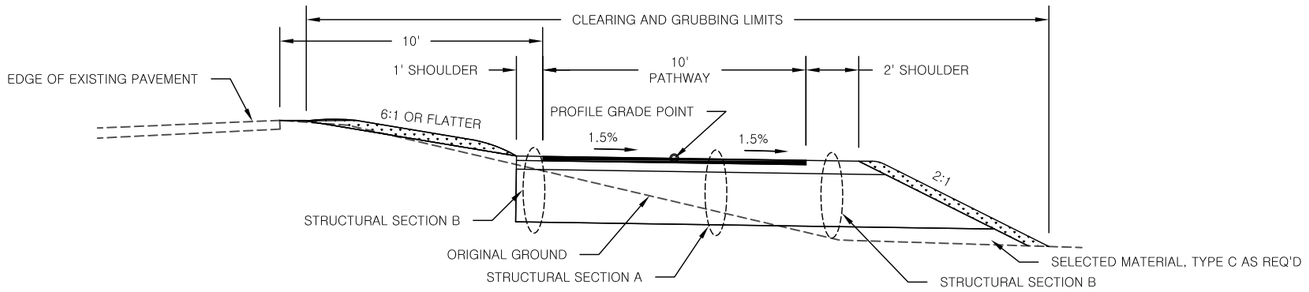
PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
A4
OF XX SHEETS



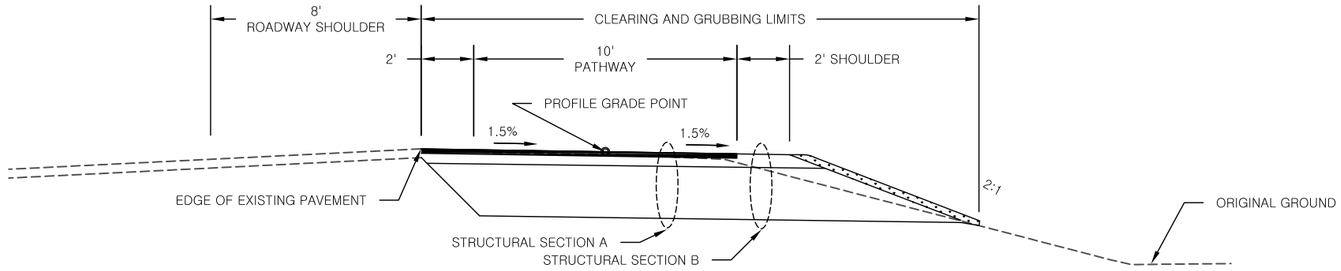
1/B1 PAVED PATHWAY

BOP TO STA. 16+00
STA. 75+35 TO EOP



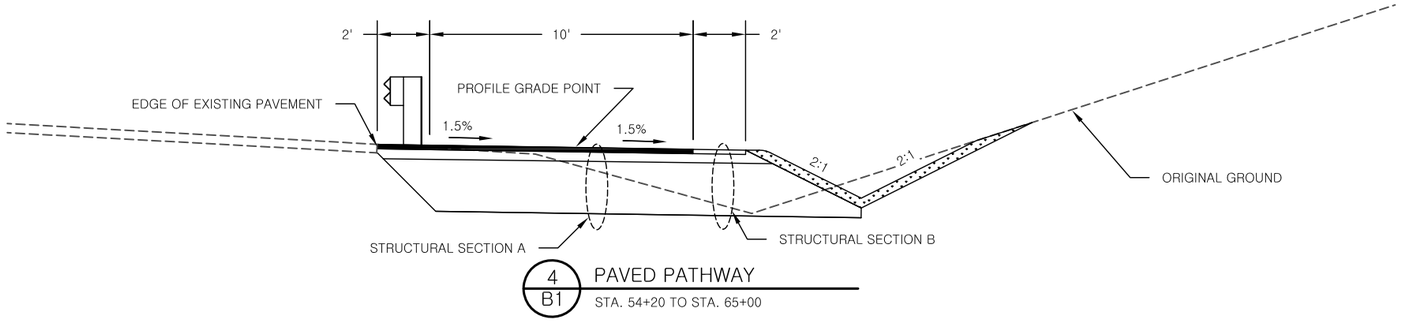
2/B1 PAVED PATHWAY

STA. 16+00 TO STA. 41+80
STA. 65+00 TO STA. 75+35



3/B1 PAVED PATHWAY

STA. 41+80 TO STA. 54+20



4/B1 PAVED PATHWAY

STA. 54+20 TO STA. 65+00

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

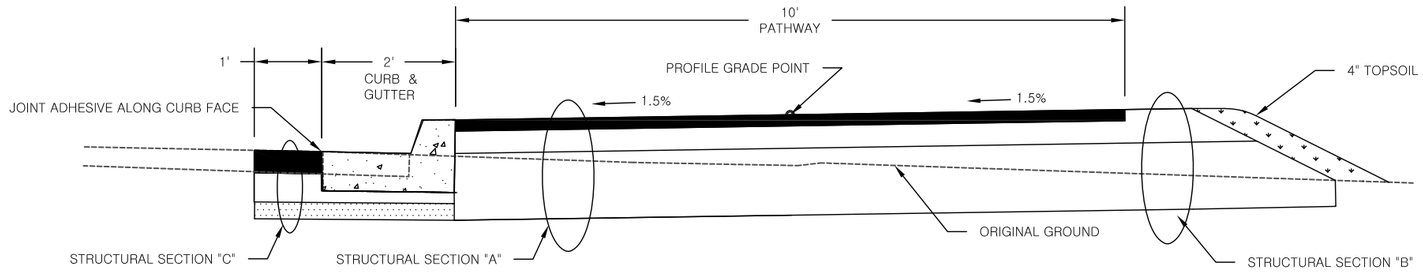
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

TYPICAL SECTIONS AND STRUCTURAL SECTIONS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

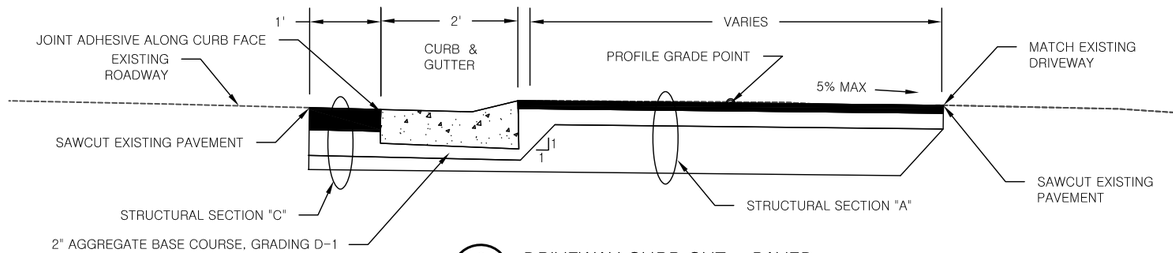
SHEET
B1
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Registered Professional Engineer



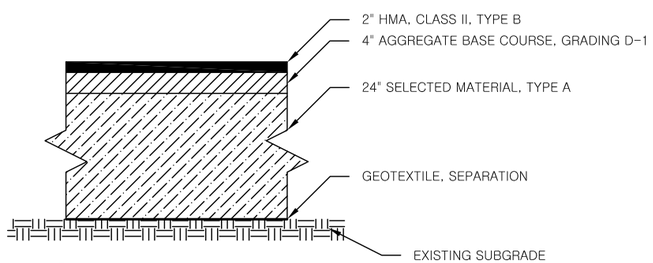
1/B2 CURB AND GUTTER WITH PATHWAY

STA. 29+71.95 TO 29+87 CL
STA. 36+05 TO 36+50 CL



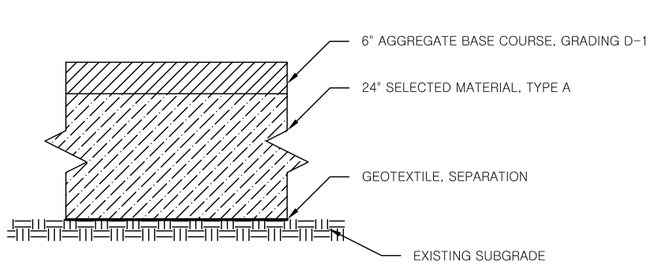
2/B2 DRIVEWAY CURB CUT - PAVED

STA. 33+66 TO 35+97.94



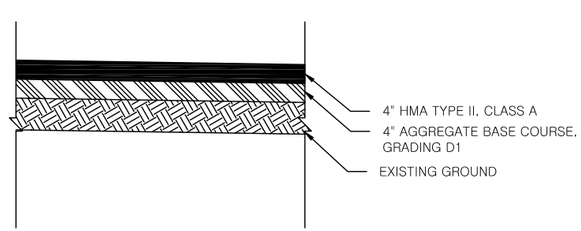
3/B2 STRUCTURAL SECTION "A"

DETAIL



4/B2 STRUCTURAL SECTION "B"

DETAIL



5/B2 STRUCTURAL SECTION "C"

DETAIL - ROADWAY

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PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

TYPICAL SECTIONS AND STRUCTURAL SECTIONS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
B2
OF XX SHEETS

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
201.0003.0000	CLEARING AND GRUBBING	ACRE	3.75
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	L.S.	ALL REQ'D
202.0002.0000	REMOVAL OF PAVEMENT	S.Y.	1,412
202.0004.0000	REMOVAL OF CULVERT PIPE	L.F.	386
202.0009.0000	REMOVAL OF CURB AND GUTTER	L.F.	82
203.0003.0000	UNCLASSIFIED EXCAVATION	C.Y.	6,300
203.0006.000A	BORROW, TYPE A	TON	15,350
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	2,115
603.0001.0024	CSP 24 INCH	L.F.	345
603.0003.0024	END SECTION FOR CSP 24 INCH	EACH	14
606.0001.0000	W-BEAM GUARDRAIL	L.F.	1,060
608.2002.0000	ASPHALT PATHWAY	TON	1000
609.0002.0001	CURB AND GUTTER, TYPE 1	L.F.	357
615.0001.0000	STANDARD SIGN	S.F.	32.00
615.0006.0000	SALVAGE SIGN	EACH	2
618.0002.0000	SEEDING	LB	80
620.0001.0000	TOPSOIL	S.Y.	9000
630.0001.0003	GEOTEXTILE, SEPARATION, CLASS 3	S.Y.	17500
639.2000.0000	APPROACH	EACH	12

ESTIMATE OF QUANTITIES

ITEM NO.	ITEM DESCRIPTION	PAY UNIT	TOTAL QUANTITY
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	L.S.	ALL REQ'D
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	L.S.	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	L.S.	ALL REQ'D
641.0002.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL	C.S.	ALL REQ'D
641.0006.0000	WITHHOLDING	C.S.	ALL REQ'D
641.0007.0000	SWPPP MANAGER	L.S.	ALL REQ'D
642.0001.0000	CONSTRUCTION SURVEYING	L.S.	ALL REQ'D
642.0003.0000	THREE PERSON SURVEY PARTY	HOUR	25
643.0002.0000	TRAFFIC MAINTENANCE	L.S.	ALL REQ'D
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	L.S.	ALL REQ'D
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	C.S.	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	C.S.	ALL REQ'D
643.0032.0000	FLAGGING	C.S.	ALL REQ'D
644.0001.0000	FIELD OFFICE	L.S.	ALL REQ'D
644.2004.0000	ENGINEERING COMMUNICATIONS	C.S.	ALL REQ'D
646.0001.0000	CPM SCHEDULING	L.S.	ALL REQ'D
647.2002.0000	BACKHOE, 4WD, 1 CY BUCKET, 75-HP MINIMUM, 15 FT DEPTH	C.S.	ALL REQ'D
670.2008.0000	MMA PAVEMENT MARKINGS, TRANSVERSE AND GORE INLAID	L.S.	ALL REQ'D
682.2000.0000	VAC-TRUCK POTHOLE	C.S.	ALL REQ'D

ESTIMATING FACTORS

ITEM NO.	ITEM DESCRIPTION	ESTIMATING FACTOR
203.0006.000A	BORROW, TYPE A	144 LB/C.F.
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	144 LB/C.F.
608.2002.0000	ASPHALT PATHWAY	151 LB/C.F.

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STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ESTIMATE OF QUANTITIES

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
C1
OF XX SHEETS

ITEM NO. 202.0002.0000 REMOVAL OF PAVEMENT

SHEET	FROM		TO				
	STATION	OFFSET	STATION	OFFSET	AREA (S.F.)	AREA (S.Y.)	REMARKS
F2	15+60	CL	16+67	CL	2011	224	DRIVEWAY
F2	17+68	CL	18+50	CL	1805	201	DRIVEWAY
F2	20+00	CL	20+34	CL	125	14	DRIVEWAY
F2	21+46	CL	21+78	CL	116	13	DRIVEWAY
F3	25+83	CL	26+44	CL	990	110	DRIVEWAY
F6	43+53	CL	44+10	CL	539	60	DRIVEWAY
F6	45+41	CL	45+96	CL	224	25	DRIVEWAY
F8	53+19	CL	54+01	CL	1568	175	DRIVEWAY
F10	65+09	CL	65+35	CL	92	11	DRIVEWAY
F10	67+80	CL	68+70	CL	1933	215	TERN AVE.
F11	74+74	CL	74+51	CL	1012	113	BUSINESS ENTRANCE
F12	75+95	CL	76+65	CL	952	106	BUSINESS ENTRANCE
F12	74+08	9' L	77+63	9' L	1304	145	BRIDGE ACCESS ROAD
					TOTAL	1412	

ITEM NO. 202.0004.0000 REMOVAL OF CULVERT PIPE

SHEET	STATION	CULVERT SIZE	QUANTITY (L.F.)	REMARKS
F2	16+15	18"	56	
F2	20+17	18"	30	
F2	21+61	18"	31	
F3	26+10	24"	69	
F6	45+70	24"	54	
F8	53+63	24"	50	
F10	65+22	18"	35	
F10	68+24	24"	61	
		TOTAL	386	

ITEM NO. 202.0009.0000 REMOVAL OF CURB AND GUTTER

SHEET	FROM		TO		LENGTH (L.F.)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F12	76+81	9' L	77+63	9' L	82	BRIDGE ACCESS ROAD
				TOTAL	327	

ITEM NO. 000.0000.0000 CULVERTS

SHEET	PIPE ID	CSP 24 INCH	Inlet			Outlet			Grade	End Section
		Length	Station	Offset	Invert	Station	Offset	Invert		Each
F2	P-1	54	17+87	18.00	44.35	18+41	15.50	43.66	1.28%	2
F2	P-2	41	20+00	12.00	41.15	20+40	11.50	41.45	0.74%	2
F2	P-3	41	21+38	12.00	41.58	21+79	13.00	41.07	1.26%	2
F3	P-4	56	25+93	18.00	41.70	26+39	17.50	71.80	0.22%	2
F6	P-5	57	45+42.07	11.00	22.00	45+98	13.00	22.85	1.50%	2
F8	P-6	69	53+28	21.00	43.20	53+98	22.00	46.12	4.24%	2
F10	P-7	34	65+06	15.00	81.50	65+41	15.00	82.29	2.32%	2

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STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

SUMMARY TABLE

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
D1
OF XX SHEETS

ITEM NO. 609.0002.0001 CURB AND GUTTER, TYPE 1						
SHEET	FROM		TO		LENGTH (L.F.)	REMARKS
	STATION	OFFSET	STATION	OFFSET		
F12	74+07	L	77+63	L	357	KENAI SPUR ROAD/BRIDGE ACCESS ROAD
				TOTAL	327	

ITEM NO. 639.2000.0000 APPROACH						
SHEET	FROM		TO			
	STATION	OFFSET	STATION	OFFSET	QUANTITY	REMARKS
F2	15+60	CL	16+67	CL	1	DRIVEWAY
F2	17+68	CL	18+50	CL	1	DRIVEWAY
F2	20+00	CL	20+34	CL	1	DRIVEWAY
F2	21+46	CL	21+78	CL	1	DRIVEWAY
F3	25+83	CL	26+44	CL	1	DRIVEWAY
F6	43+53	CL	44+10	CL	1	DRIVEWAY
F6	45+41	CL	45+96	CL	1	DRIVEWAY
F8	53+19	CL	54+01	CL	1	DRIVEWAY
F10	65+09	CL	65+35	CL	1	DRIVEWAY
F10	67+80	CL	68+70	CL	1	TERN AVE.
F11	74+74	CL	74+51	CL	1	BUSINESS ENTRANCE
F12	75+95	CL	76+65	CL	1	BUSINESS ENTRANCE
F12	74+08	9' L	77+63	9' L	1	BRIDGE ACCESS ROAD
					12	

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STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

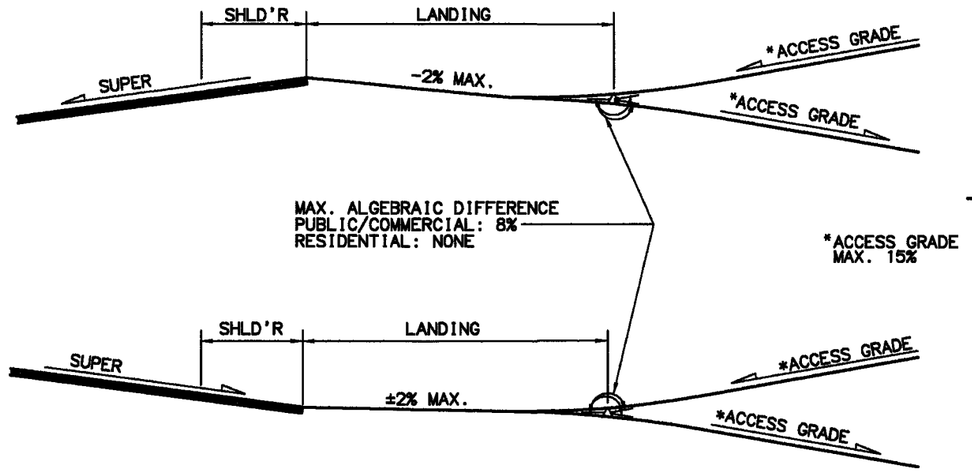
KENAI BRIDGE ACCESS ROAD
PEDESTRIAN PATHWAY
PROJECT No. CFHWY00689

SUMMARY TABLE

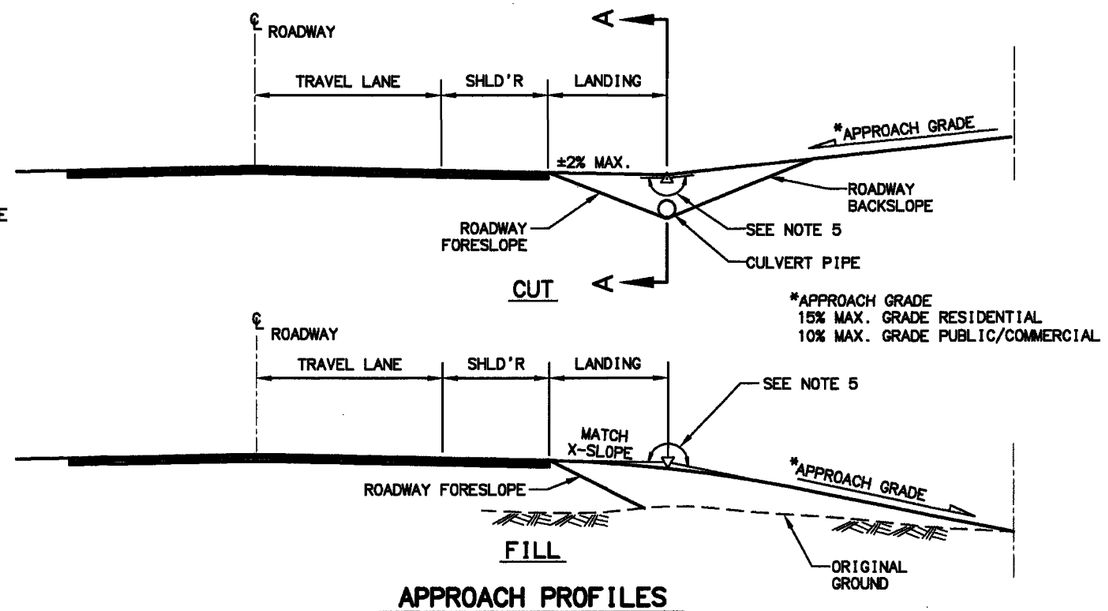
ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

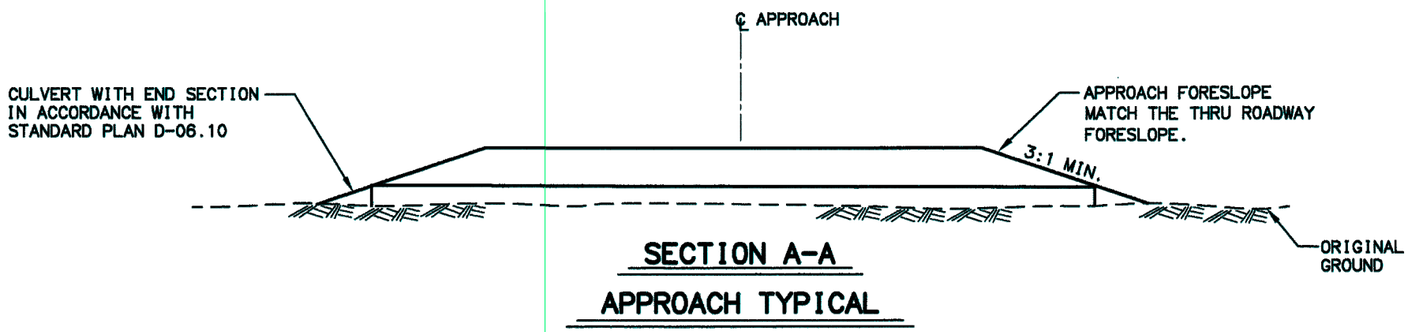
SHEET
D2
OF XX SHEETS



APPROACH PROFILES ON SUPER ELEVATED ROADWAY



APPROACH PROFILES



SECTION A-A
APPROACH TYPICAL

NOTES:

1. SEE APPROACH SUMMARY (D7 & D8) FOR APPROACH STATION, LENGTH, WIDTH, SKEW ANGLE, LANDING LENGTH AND TYPE.
2. SEE PIPE SUMMARY (D4 & D5) FOR CULVERT PIPE SIZE, LENGTH, AND PLACEMENT.
3. THE PAVED PORTION OF THE APPROACH STRUCTURAL SECTION SHALL BE CONSTRUCTED OF THE SAME MATERIAL AS THE ROADWAY STRUCTURAL SECTION UNLESS A SEPARATE TYPICAL SECTION IS INCLUDED IN THE PLANS COVERING APPROACHES.
4. PAVE TO THE END OF THE RAD*IUS* RETURN UNLESS OTHERWISE INDICATED IN THE PLANS.
5. MAXIMUM ALGEBRAIC DIFFERENCE FOR A PUBLIC/COMMERCIAL APPROACH IS 8%.
6. SEE APPROACH PLAN & PROFILE "F" SHEETS FOR APPROACH VERTICAL CURVE REQUIREMENTS. APPROACH VERTICAL CURVE REQUIREMENTS IF MINIMUM NOT SPECIFIED: CREST - 2 1/2" MAXIMUM IN A 10-FOOT CHORD. SAG - 2" MAXIMUM IN A 10-FOOT CHORD.

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APPROACH DETAILS

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
E1
OF XX SHEETS

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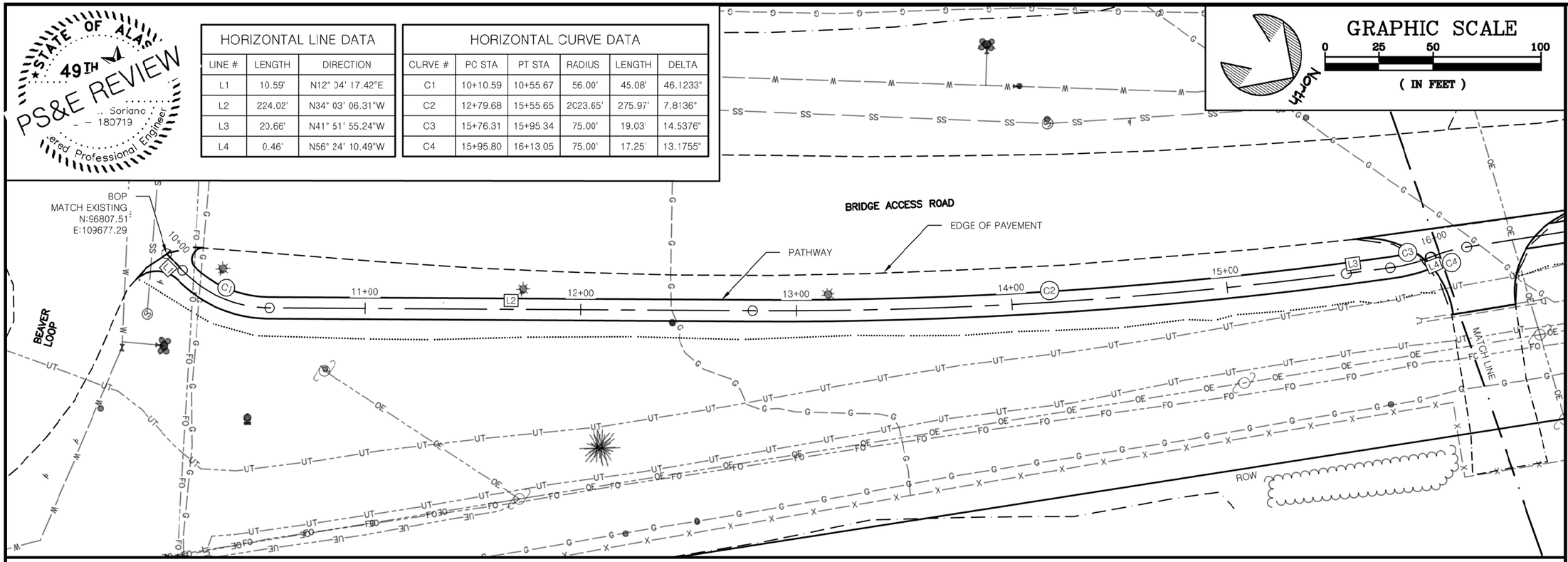
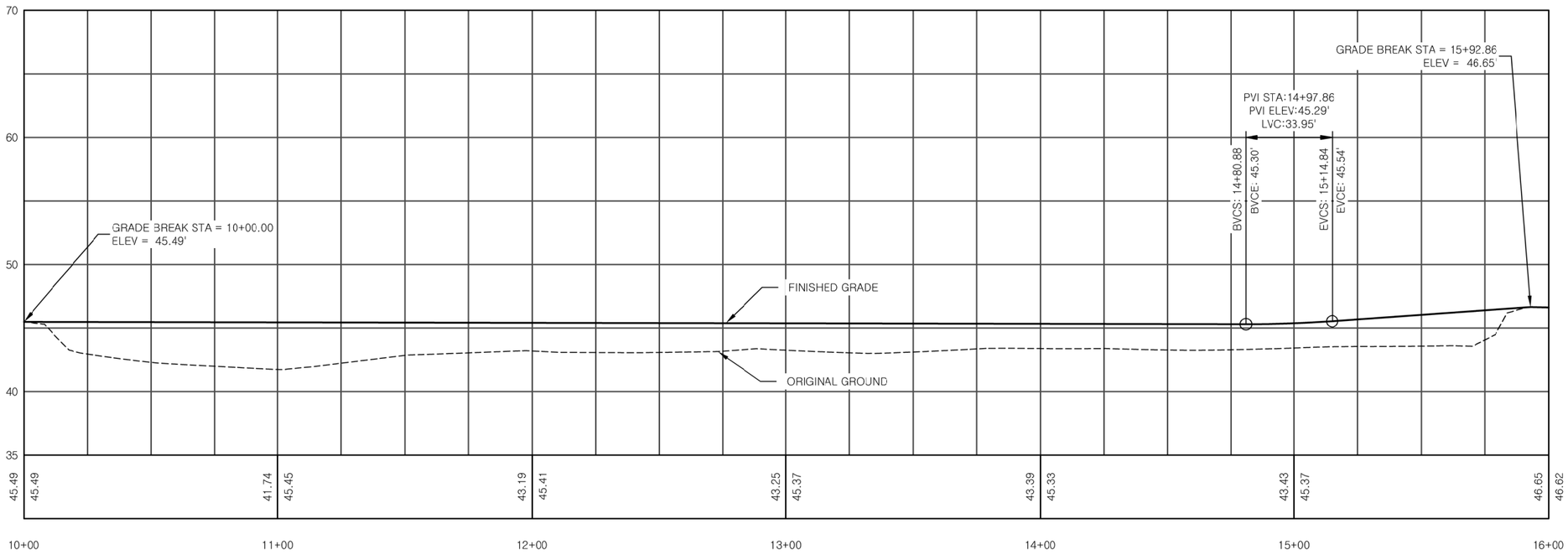
HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L1	10.59'	N12° 04' 17.42"E
L2	224.02'	N34° 03' 06.31"W
L3	20.66'	N41° 51' 55.24"W
L4	0.46'	N56° 24' 10.49"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C1	10+10.59	10+55.67	56.00'	45.08'	46.1233°
C2	12+79.68	15+55.65	2023.65'	275.97'	7.8136°
C3	15+76.31	15+95.34	75.00'	19.03'	14.5376°
C4	15+95.80	16+13.05	75.00'	17.25'	13.1755°





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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 10+00 TO STA. 16+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F1
OF XX SHEETS

STATE OF ALASKA
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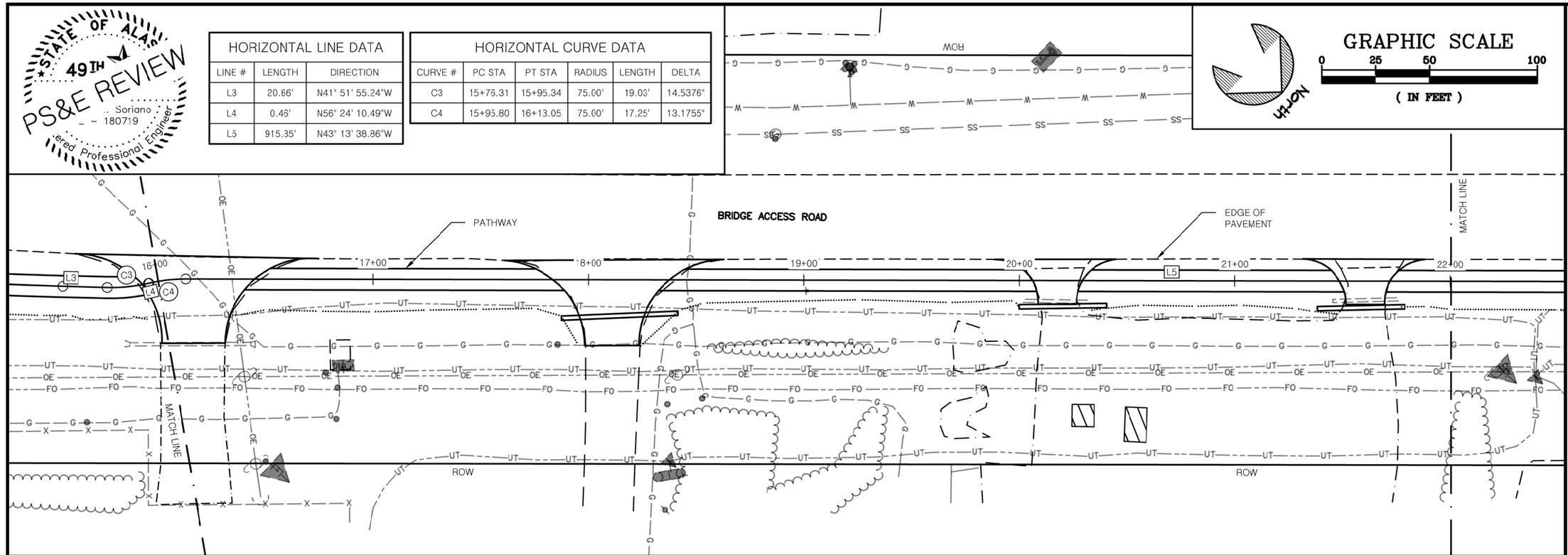
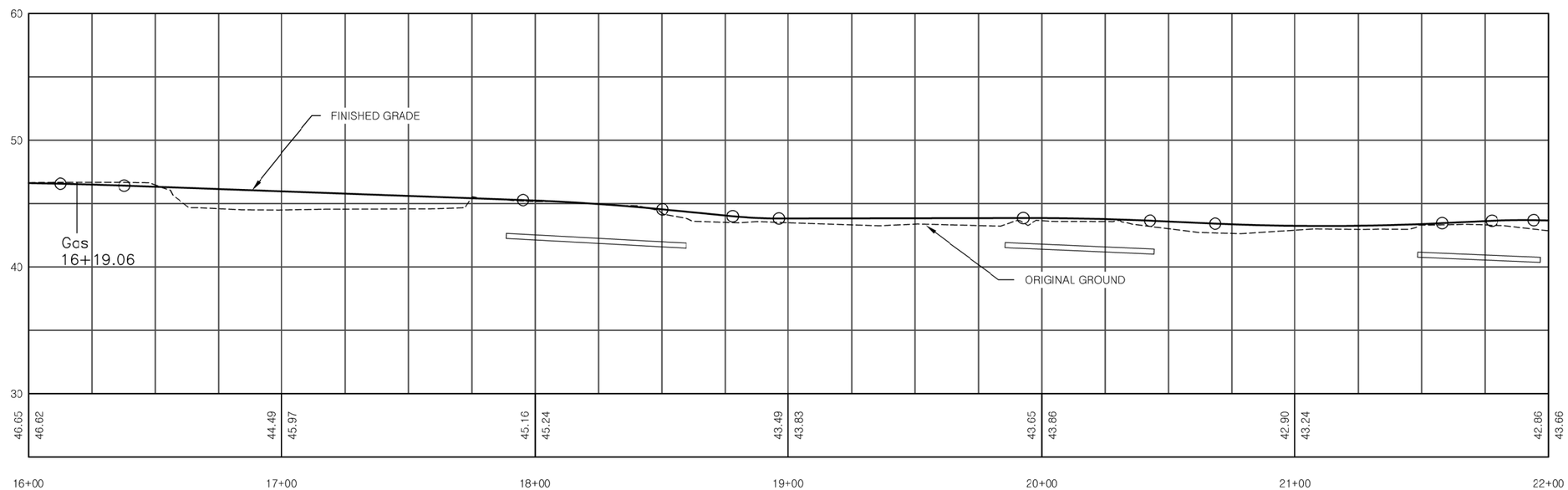
HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L3	20.66'	N41° 51' 55.24"W
L4	0.45'	N56° 24' 10.49"W
L5	915.35'	N43° 13' 38.86"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C3	15+76.31	15+95.34	75.00'	19.03'	14.5376°
C4	15+95.80	16+13.05	75.00'	17.25'	13.1755°





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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
STA. 16+00 TO STA. 22+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F2
OF XX SHEETS

STATE OF ALASKA
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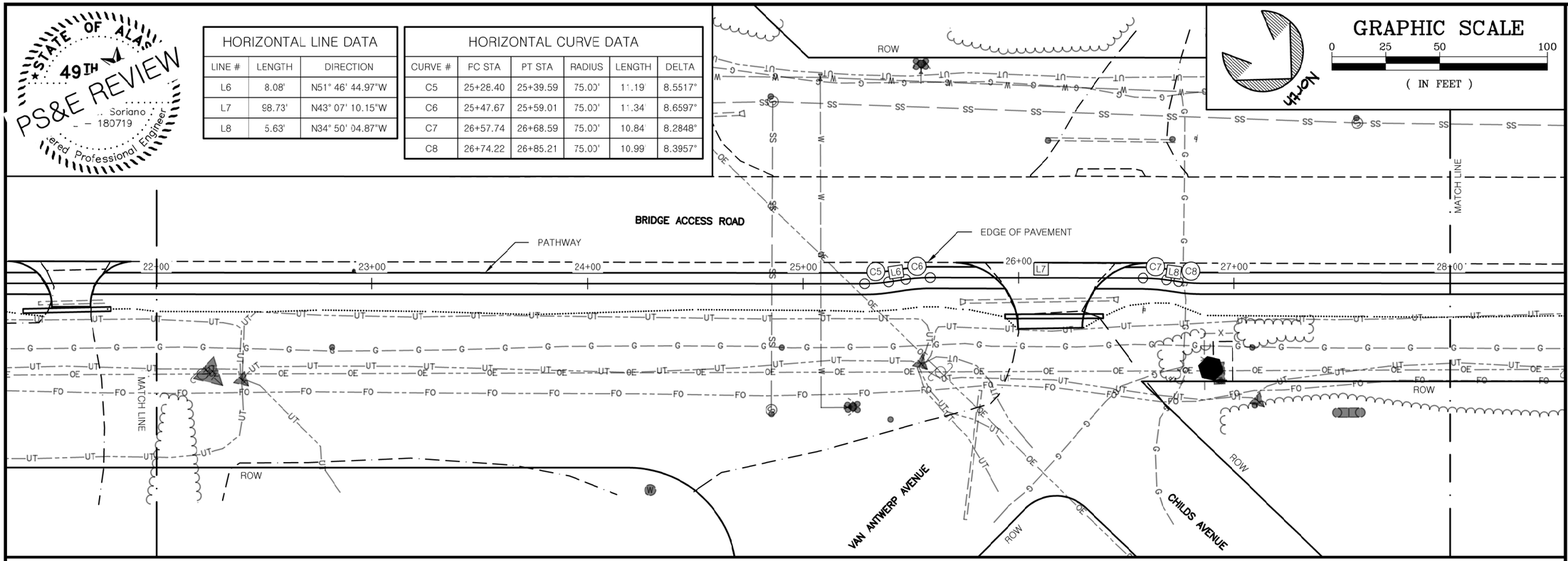
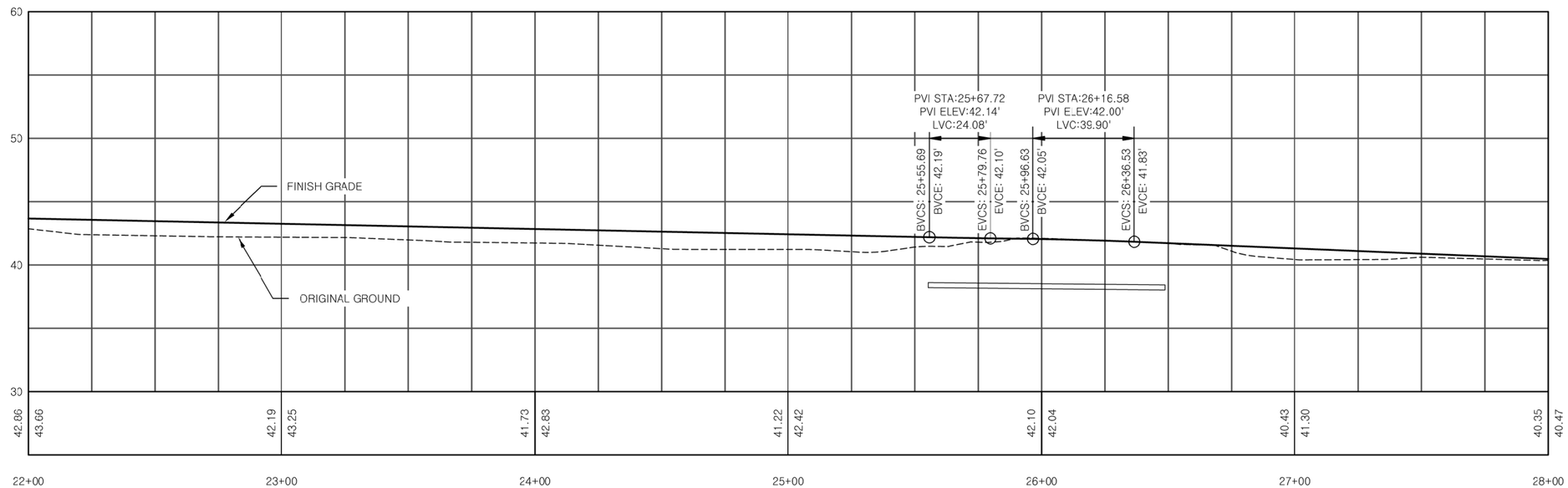
HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L6	8.08'	N51° 46' 44.97"W
L7	98.73'	N43° 07' 10.15"W
L8	5.63'	N34° 50' 04.87"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C5	25+28.40	25+39.59	75.00'	11.19'	8.5517°
C6	25+47.67	25+59.01	75.00'	11.34'	8.6597°
C7	26+57.74	26+68.59	75.00'	10.84'	8.2848°
C8	26+74.22	26+85.21	75.00'	10.99'	8.3957°





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 22+00 TO STA. 28+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F3
OF XX SHEETS

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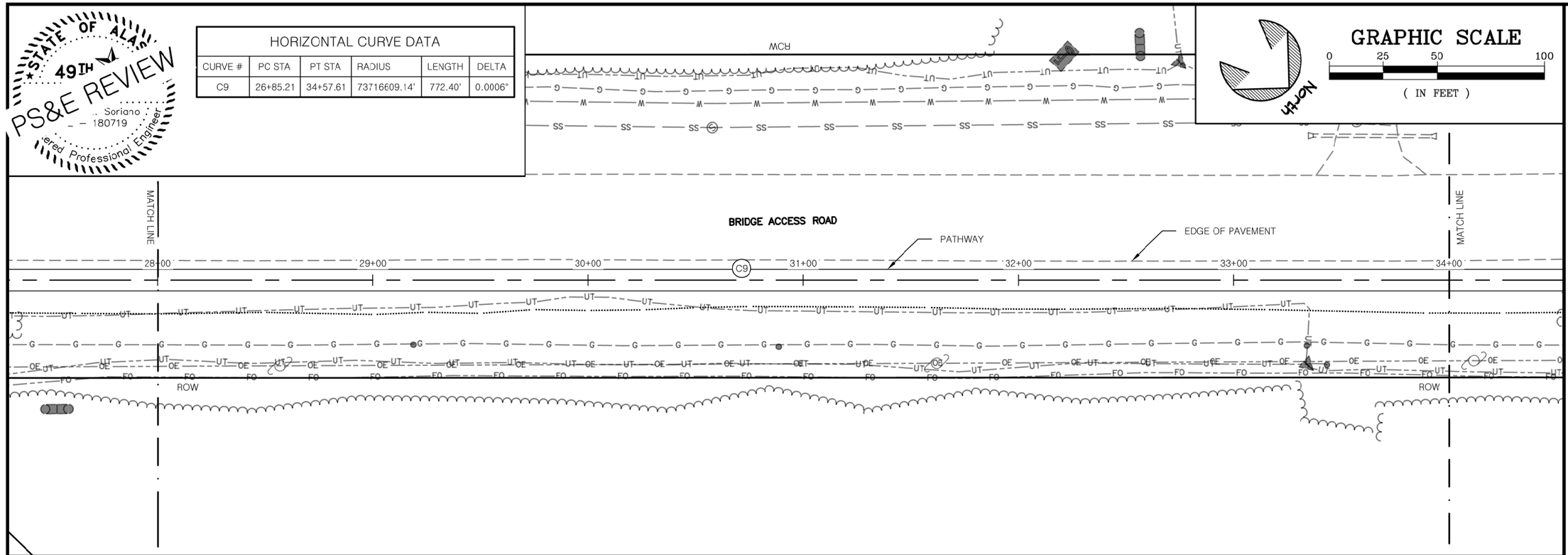
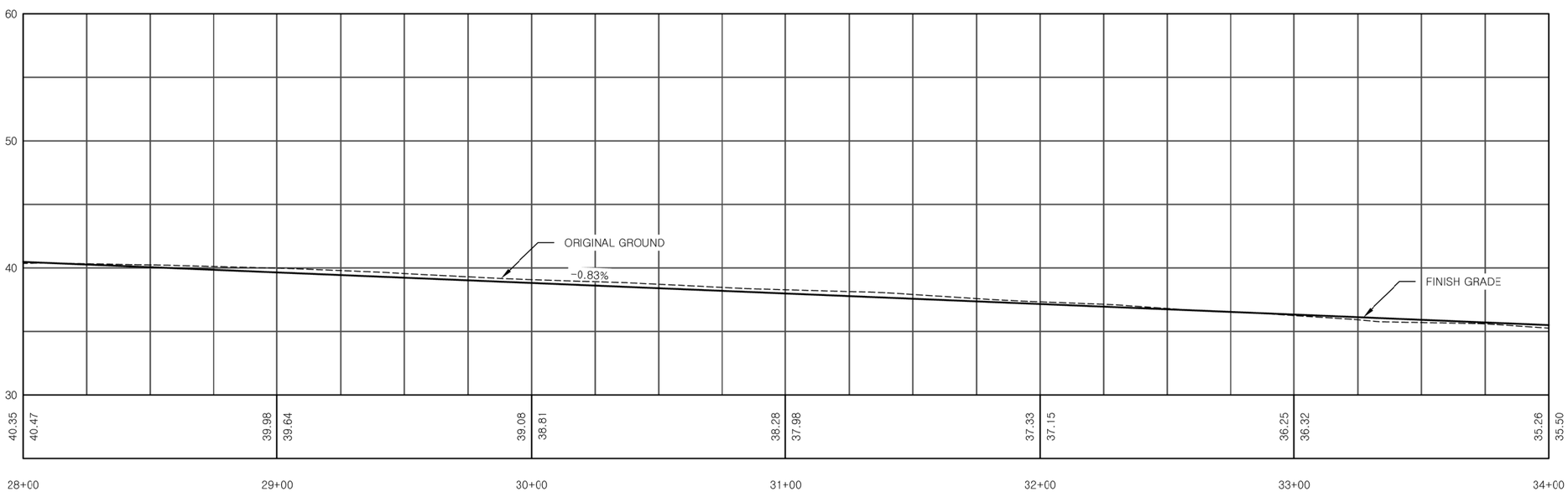
HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C9	26+85.21	34+57.61	73716609.14'	772.40'	0.0006°



GRAPHIC SCALE
0 25 50 100
(IN FEET)



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
STA. 28+00 TO STA. 34+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F4
OF XX SHEETS

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49TH
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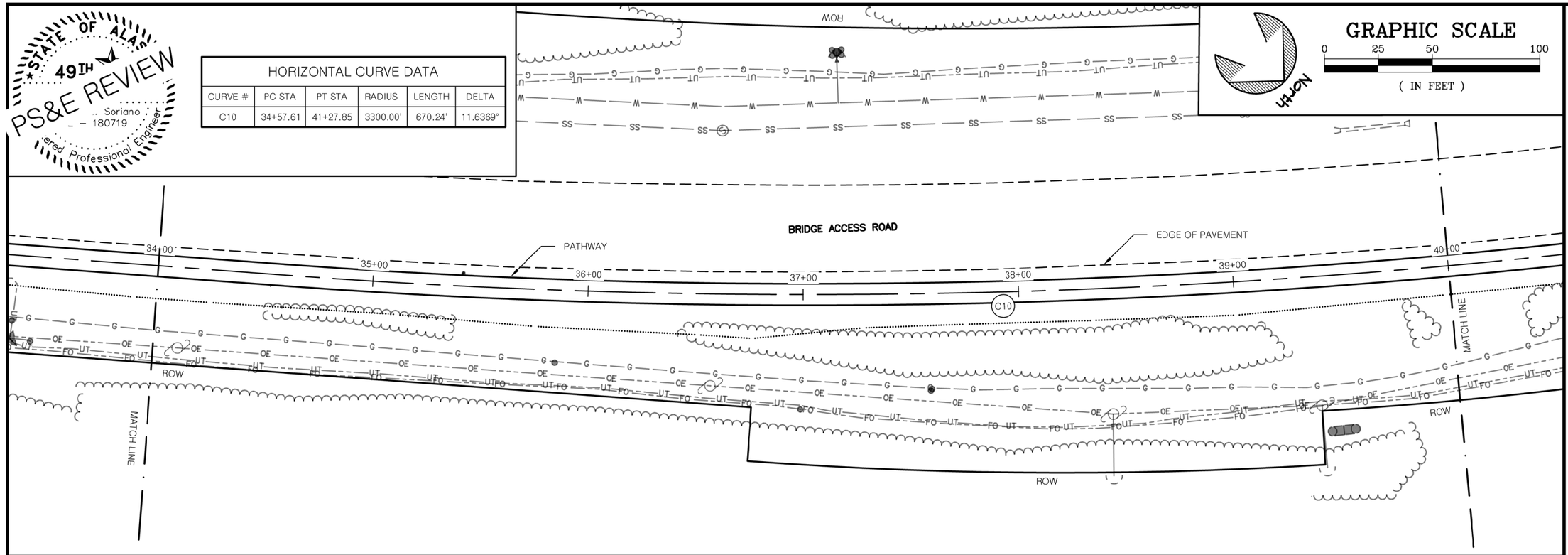
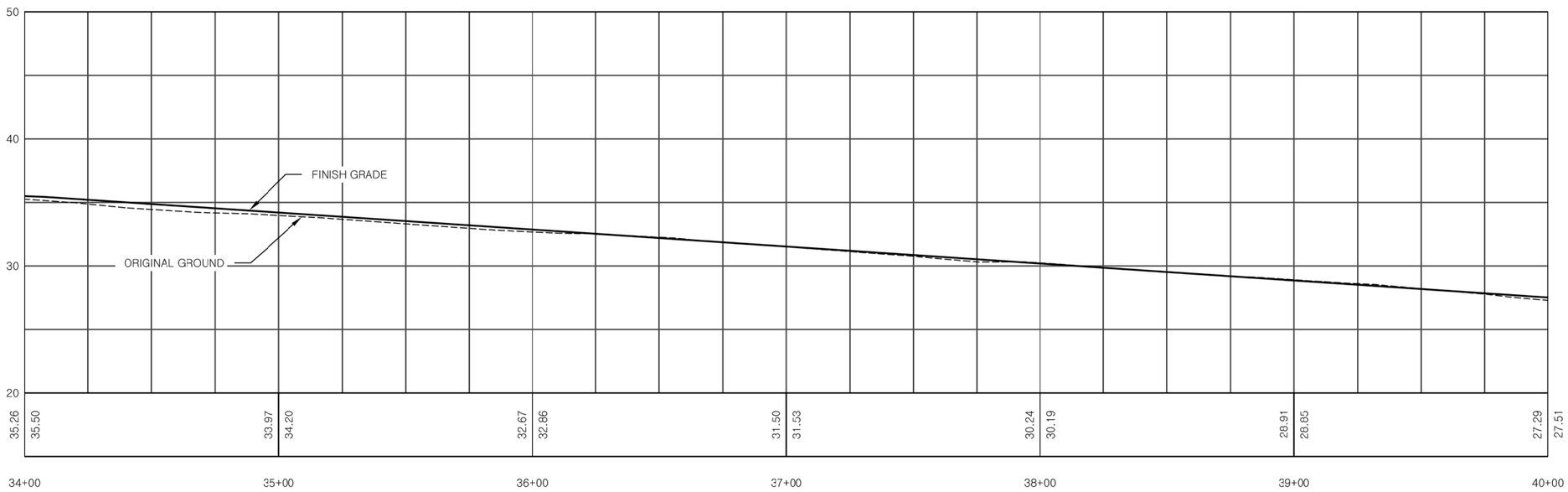
HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C10	34+57.61	41+27.85	3300.00'	670.24'	11.6369°





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
STA. 34+00 TO STA. 40+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F5
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
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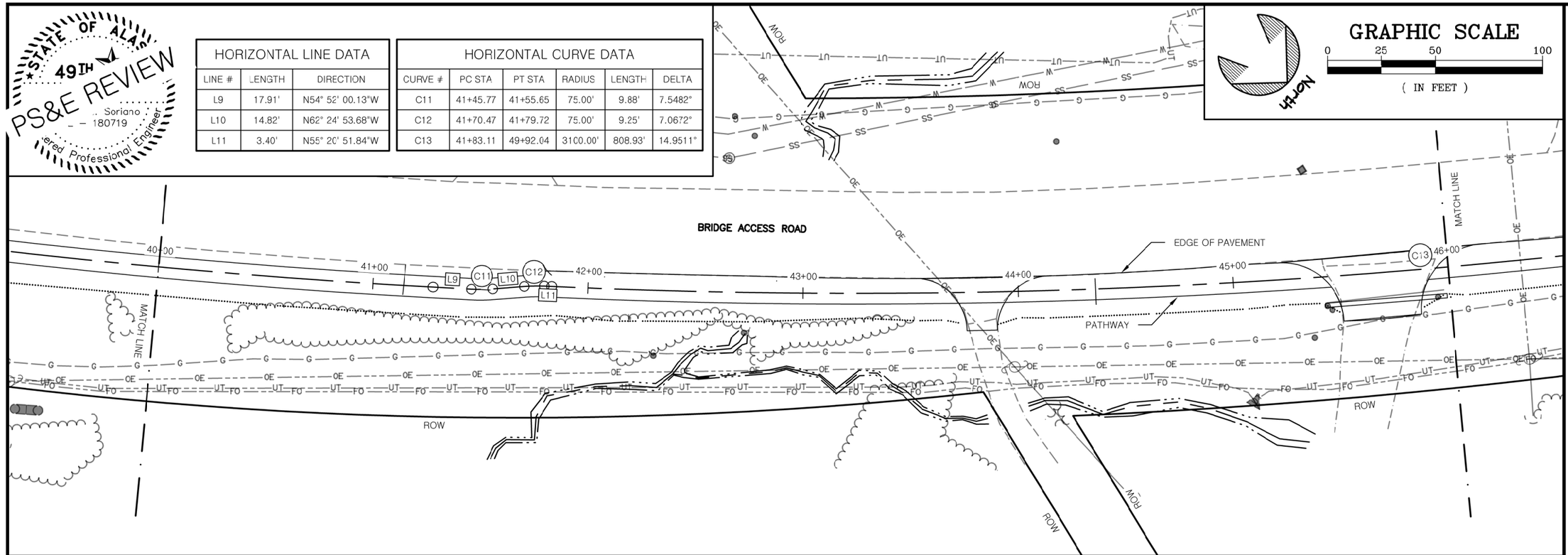
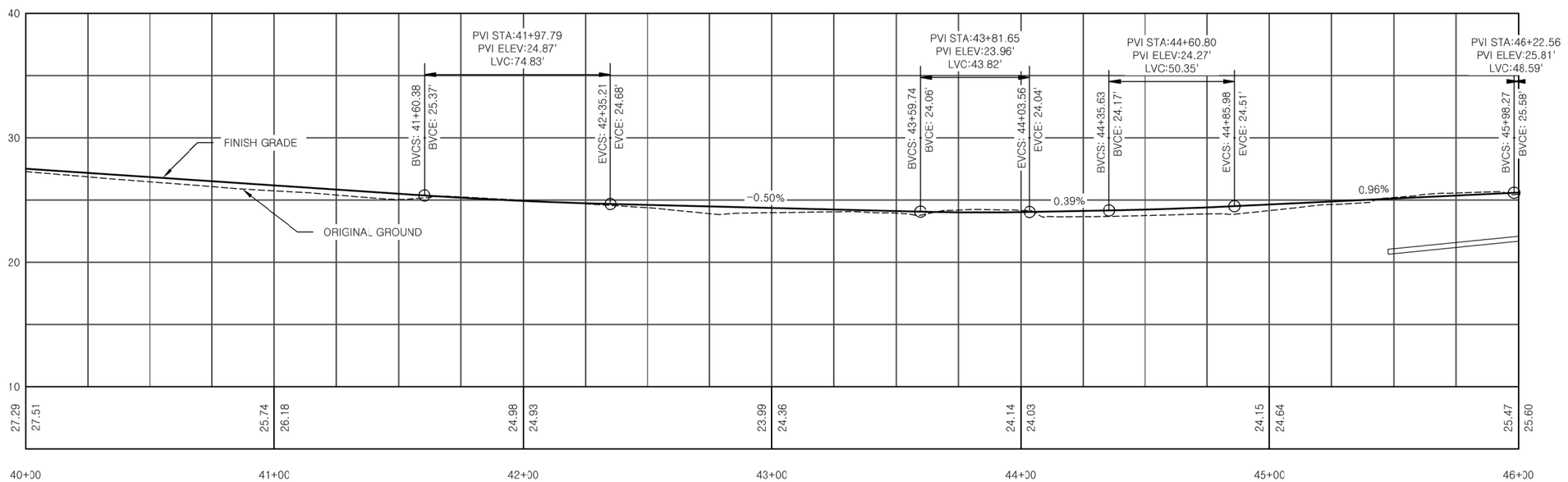
HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L9	17.91'	N54° 52' 00.13"W
L10	14.82'	N62° 24' 53.68"W
L11	3.40'	N55° 20' 51.84"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C11	41+45.77	41+55.65	75.00'	9.88'	7.5482°
C12	41+70.47	41+79.72	75.00'	9.25'	7.0672°
C13	41+83.11	49+92.04	31C0.00'	808.93'	14.9511°





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
STA. 40+00 TO STA. 46+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

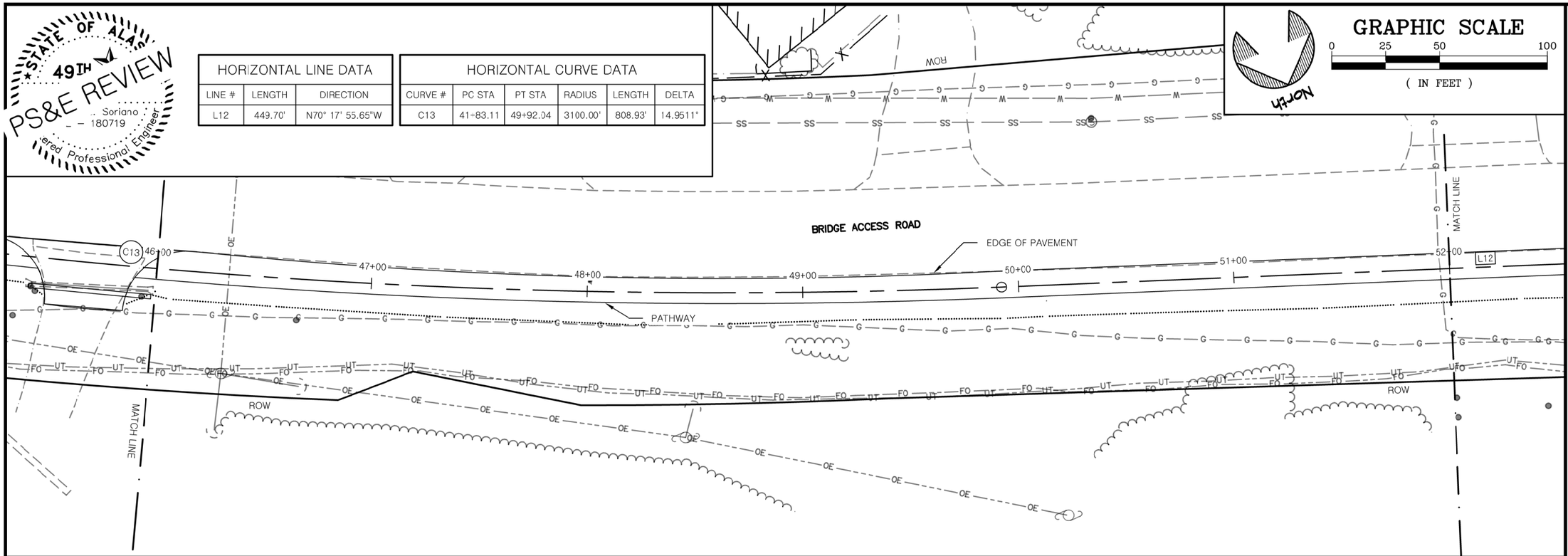
PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

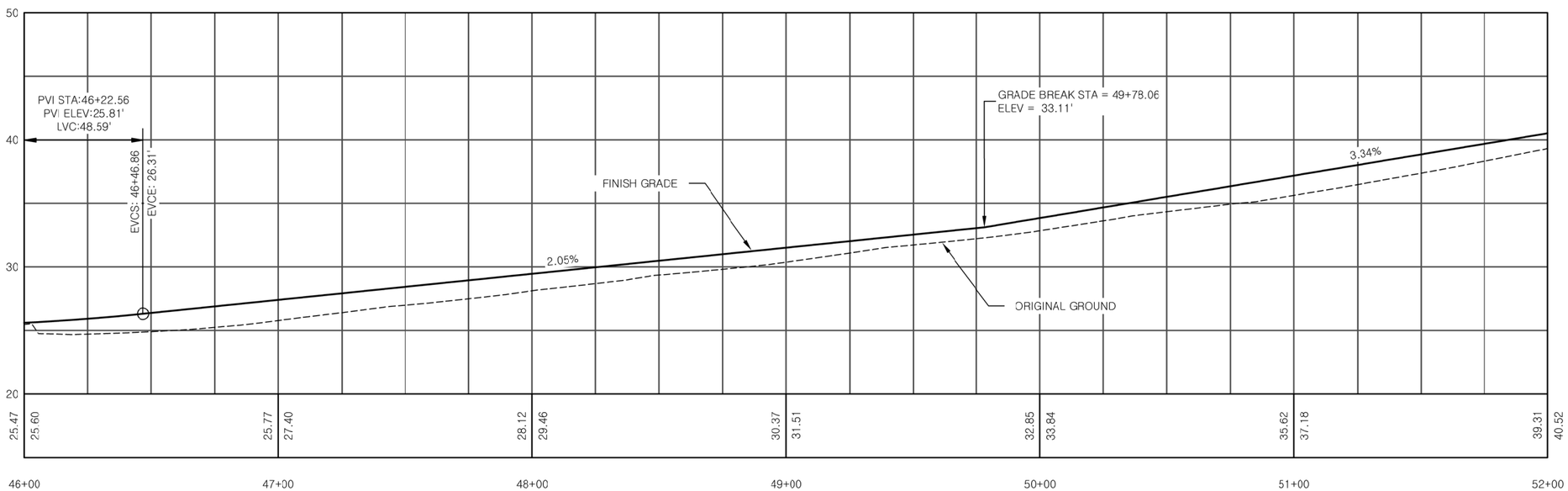
SHEET
F6
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Registered Professional Engineer

HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L12	449.70'	N70° 17' 55.65"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C13	41+83.11	49+92.04	3100.00'	808.93'	14.9511°





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
STA. 46+00 TO STA. 52+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
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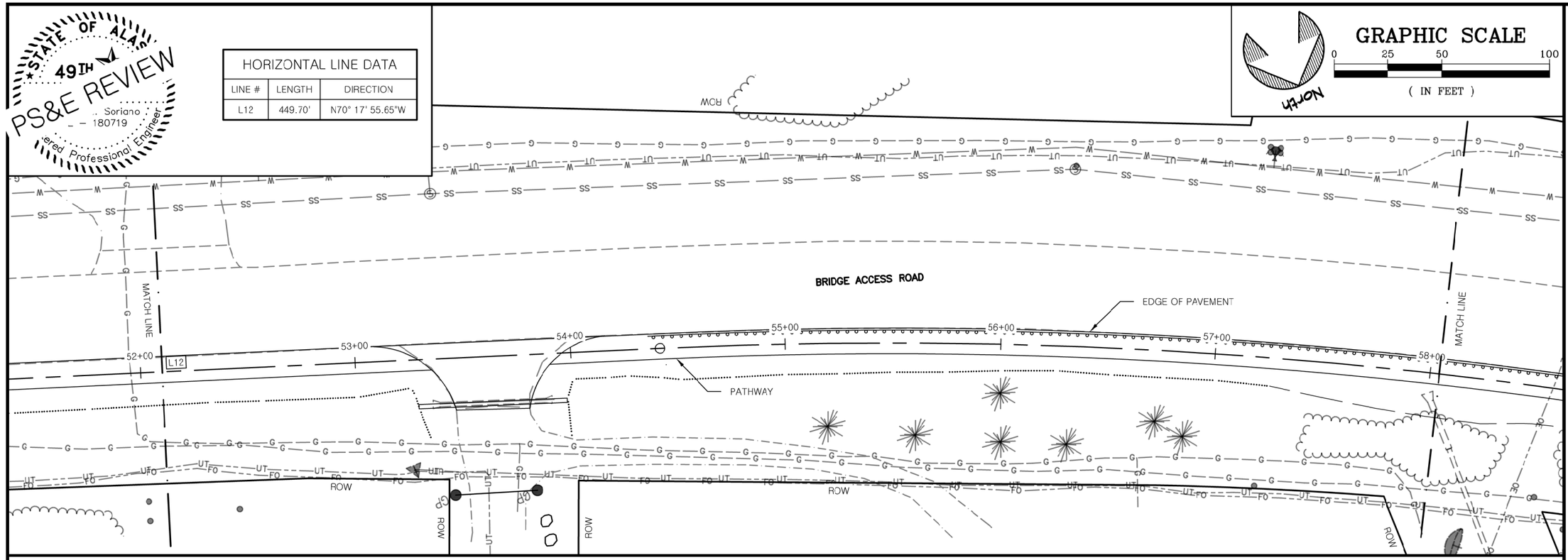
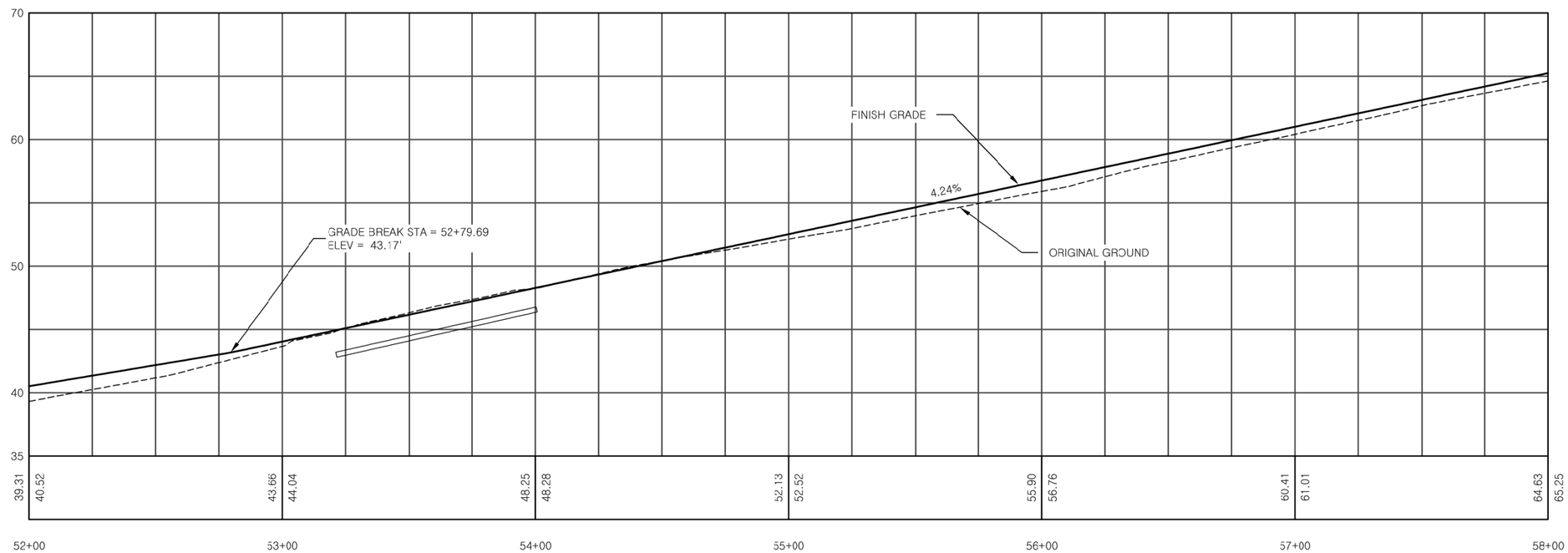
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Professional Engineer

HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L12	449.70'	N70° 17' 55.65"W





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 52+00 TO STA. 58+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

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OF XX SHEETS

STATE OF ALASKA
49TH
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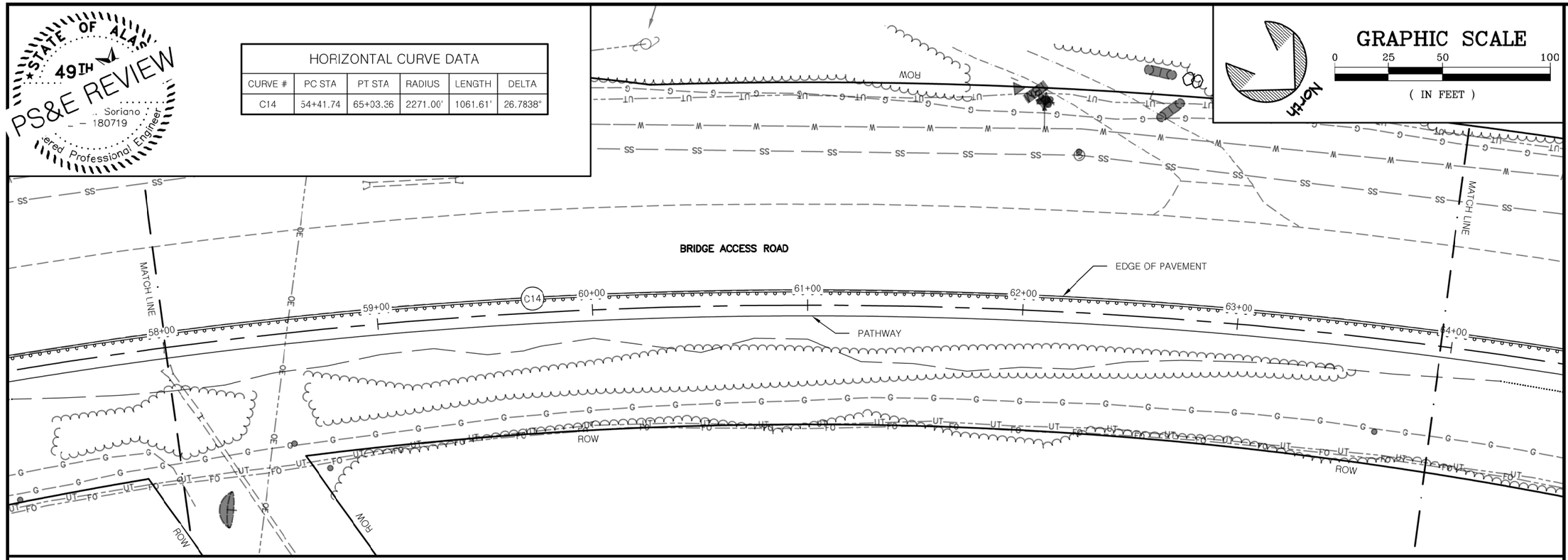
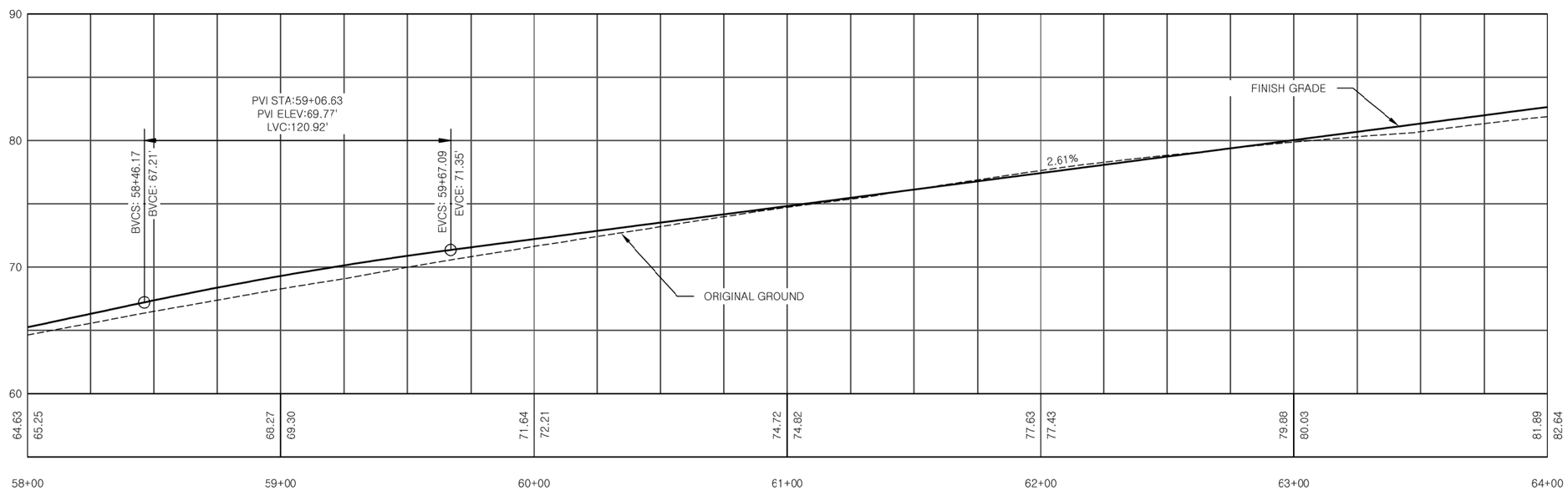
HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C14	54+41.74	65+03.36	2271.00'	1061.61'	26.7838°



GRAPHIC SCALE
0 25 50 100
(IN FEET)



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 58+00 TO STA. 64+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

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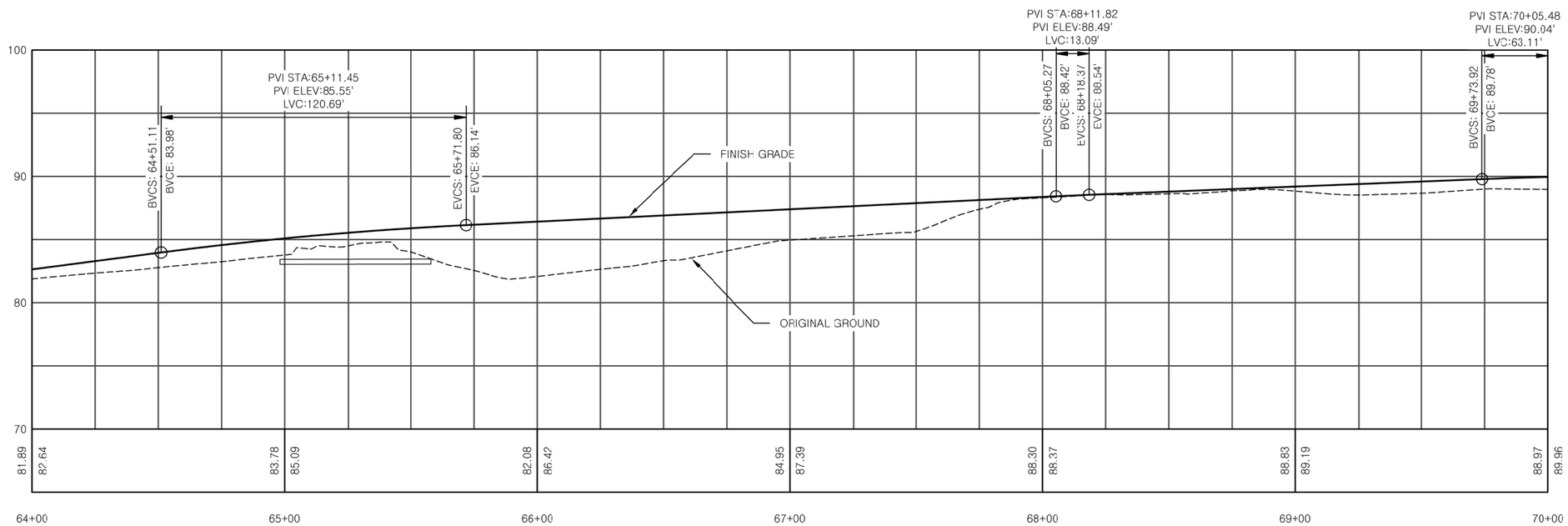
OF XX SHEETS

HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L13	29.19'	N43° 30' 54.14"W
L14	30.94'	N30° 20' 10.37"W
L15	144.98'	N39° 12' 29.38"W
L16	0.12'	N56° 45' 17.87"W
L17	95.12'	N38° 02' 57.32"W
L18	15.35'	N24° 47' 00.95"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C15	65+32.54	65+49.79	75.00'	17.25	13.1788°
C16	65+80.74	65+92.35	75.00'	11.61	8.8719°
C17	67+37.33	67+60.30	75.00'	22.97	17.5468°
C18	67+60.42	67+84.91	75.00'	24.49	18.7057°
C19	68+80.03	68+97.40	75.00'	17.36	13.2657°
C20	69+12.75	69+29.90	75.00'	17.15	13.1028°



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
STA. 64+00 TO STA. 70+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

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OF XX SHEETS

STATE OF ALASKA
49TH
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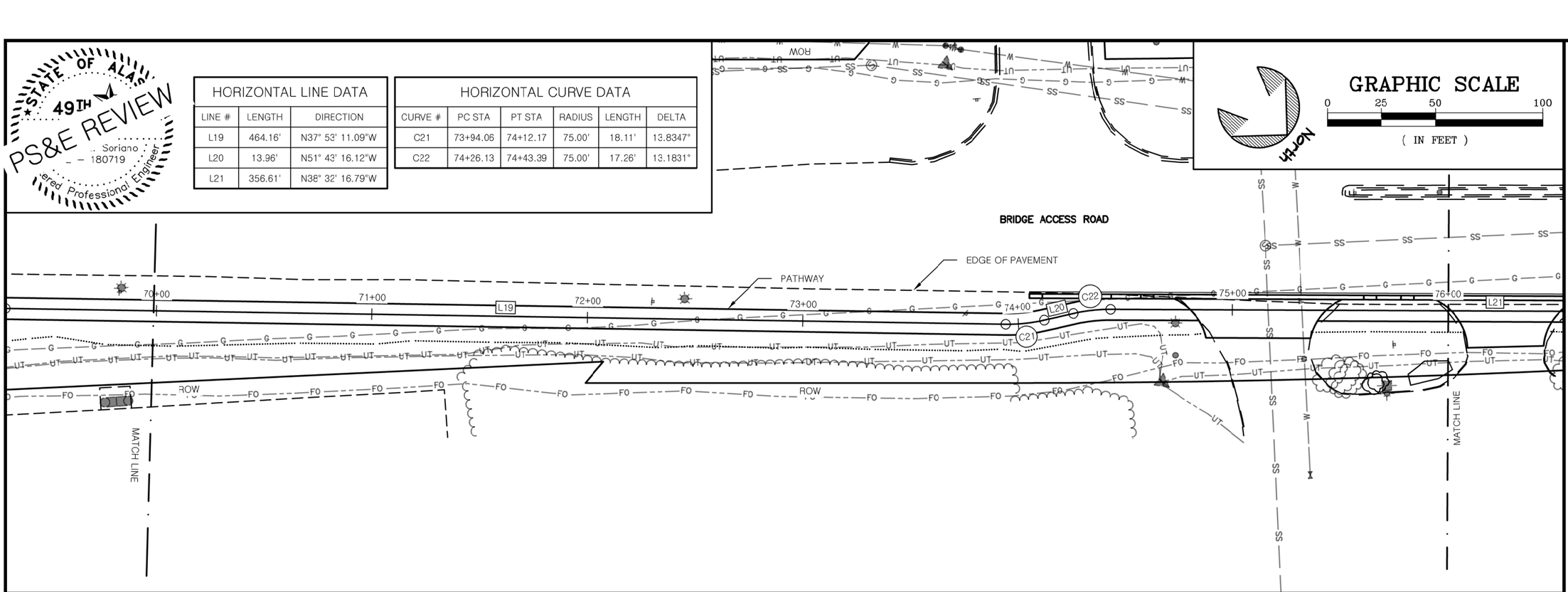
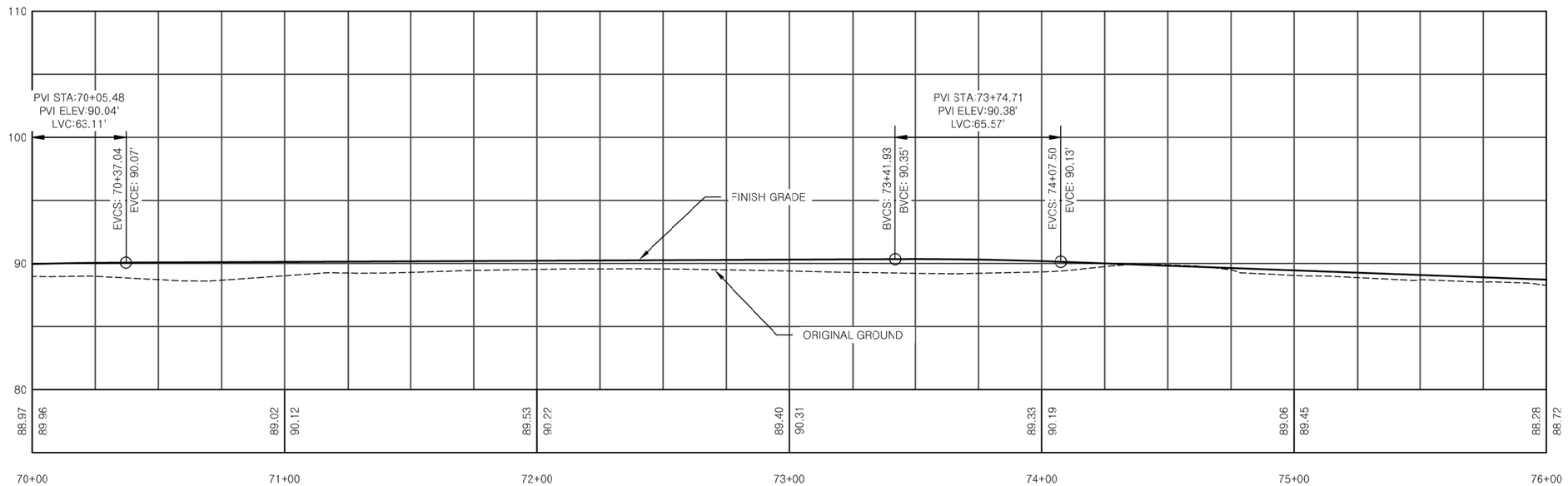
Professional Engineer

HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L19	464.16'	N37° 53' 11.09"W
L20	13.96'	N51° 43' 16.12"W
L21	356.61'	N38° 32' 16.79"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C21	73+94.06	74+12.17	75.00'	18.11'	13.8347°
C22	74+26.13	74+43.39	75.00'	17.26'	13.1831°

GRAPHIC SCALE
0 25 50 100
(IN FEET)





STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 70+00 TO STA. 76+00

ALASKA STATE PARKS

PREPARED: RCS
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DATE: APRIL 2025

SHEET
F11
OF XX SHEETS

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49TH
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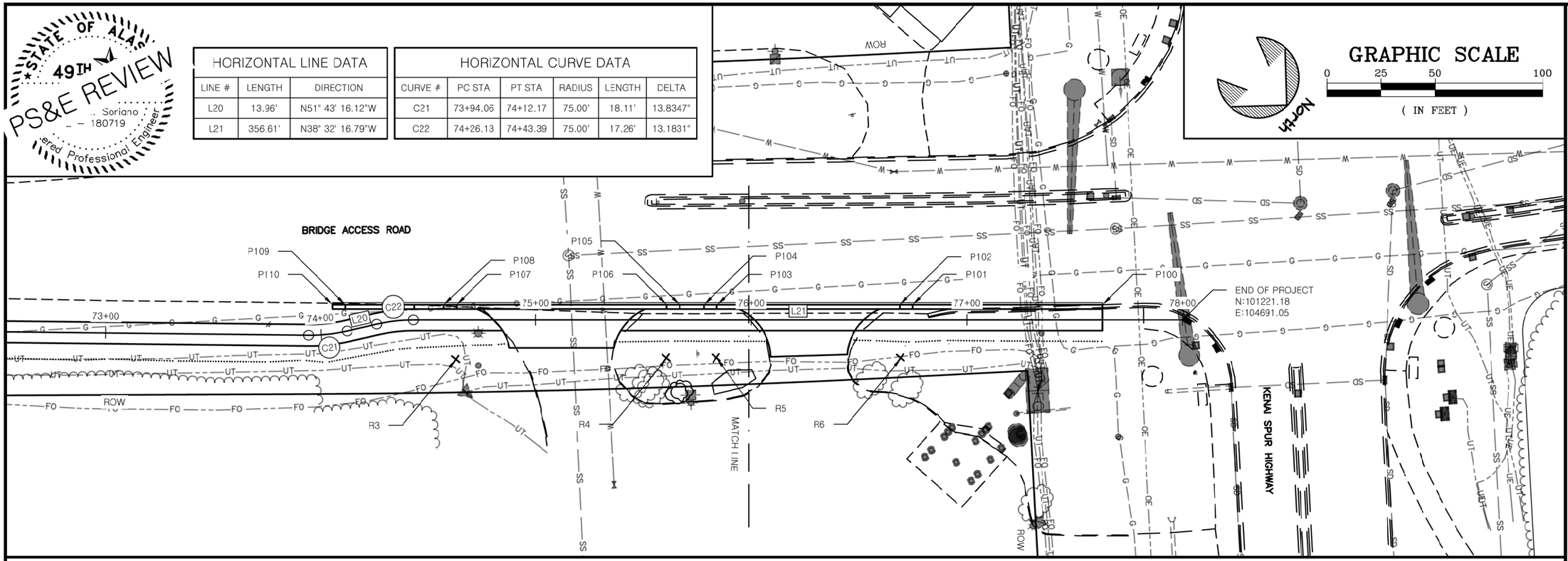
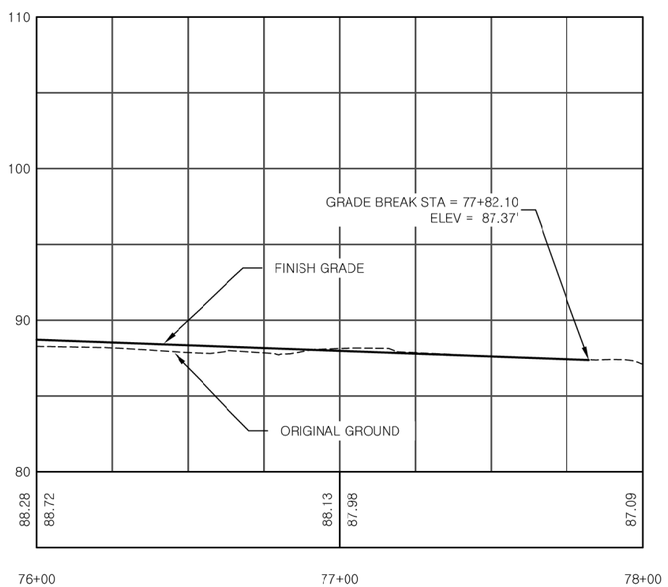
HORIZONTAL LINE DATA		
LINE #	LENGTH	DIRECTION
L20	13.96'	N51° 43' 16.12"W
L21	356.61'	N38° 32' 16.79"W

HORIZONTAL CURVE DATA					
CURVE #	PC STA	PT STA	RADIUS	LENGTH	DELTA
C21	73+94.06	74+12.17	75.00'	18.11'	13.8347°
C22	74+26.13	74+43.39	75.00'	17.26'	13.1831°



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R3	101130.28	104786.44	25'	DW RADIUS
R4	101063.41	104839.55	25'	DW RADIUS
R5	101045.34	104854.09	25'	DW RADIUS
R6	100969.11	104915.24	25'	DW RADIUS



COORDINATE POINT TABLE					
POINT #	NORTHING	EASTING	ELEVATION	CURB TYPE	DESCRIPTION
100	101187.09	104707.97	86.94	STANDARD	LOC. END CURB, MATCH EXISTING
101	101118.90	104763.53	87.67	STANDARD	LOC. BEING CURB TRANSITION
102	101114.20	104767.27	87.75	DEPRESSED	LOC. END CURB TRANSITION
103	101047.94	104820.09	88.49	DEPRESSED	LOC. BEGIN CURB TRANSITION
104	101043.25	104823.82	88.55	STANDARD	LOC. END CURB TRANSITION
105	101034.41	104830.86	88.64	STANDARD	LOC. FULL CURB
106	101029.72	104834.60	88.69	DEPRESSED	LOC. BEGIN TRANSITION
107	100953.54	104895.28	89.67	DEPRESSED	LOC. END CURB TRANSITION
108	100948.84	104899.02	89.76	STANDARD	LOC. BEGIN TRANSITION
109	100913.21	104927.40	90.26	STANDARD	LOC. END TRANSITION
110	100908.53	104931.13	90.32	DEPRESSED	LOC. CURB START. BEGIN TRANSITION

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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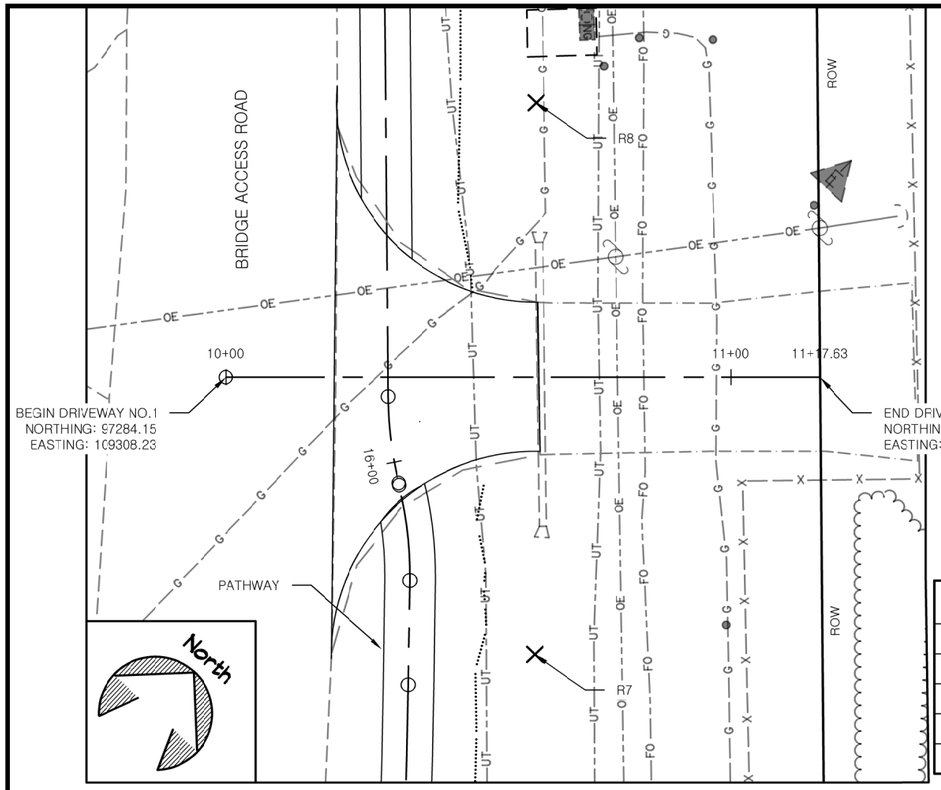
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 76+00 TO STA. 78+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

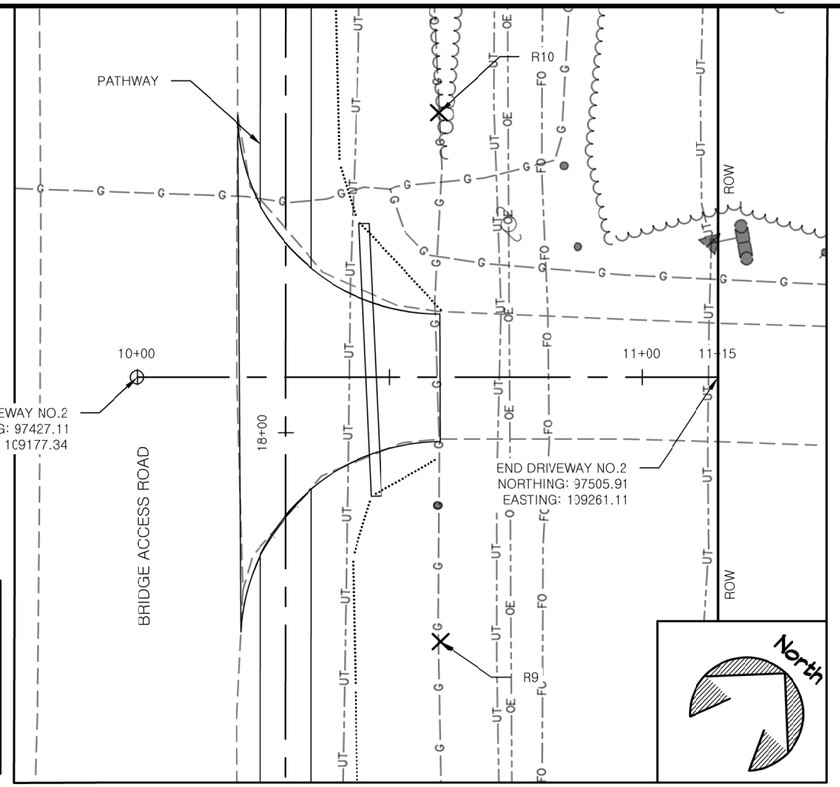
SHEET
F12
OF XX SHEETS



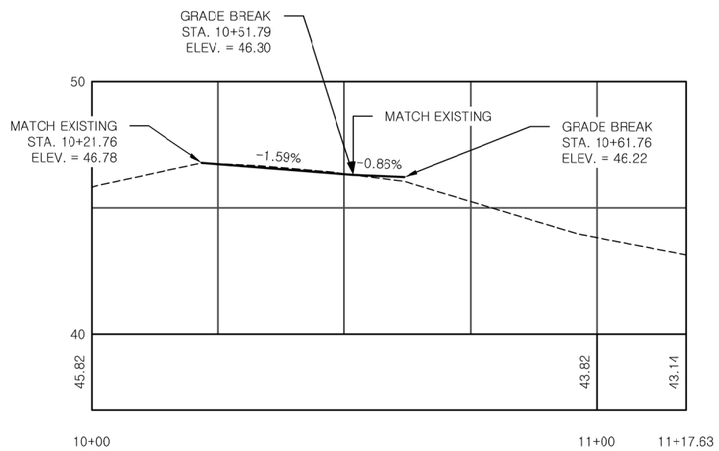
GRAPHIC SCALE

30 0 15 30

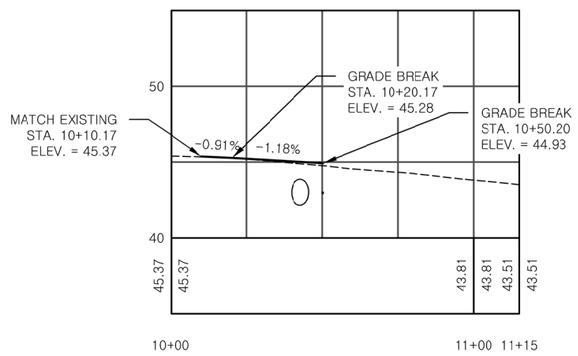
(IN FEET)



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R7	97506.27	109185.06	40'	DW RADIUS
R8	97430.23	109257.04	40'	DW RADIUS
R9	97365.75	109316.43	40'	DW RADIUS
R10	97285.36	109390.35	40'	DW RADIUS



1 / F13 DRIVEWAY NO.1
MAIN ALIGNMENT STA. 16+02.90



2 / F13 DRIVEWAY NO.2
MAIN ALIGNMENT STA. 18+11

STATE OF ALASKA
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STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

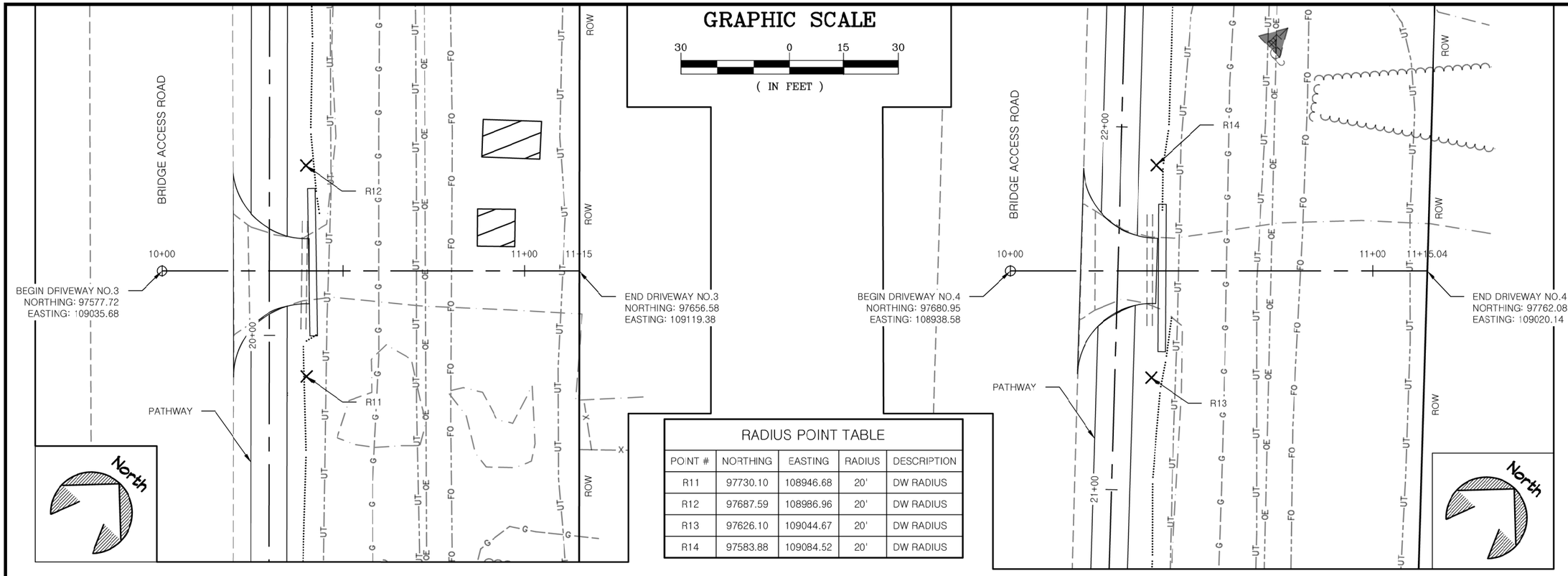
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.1 AND NO.2

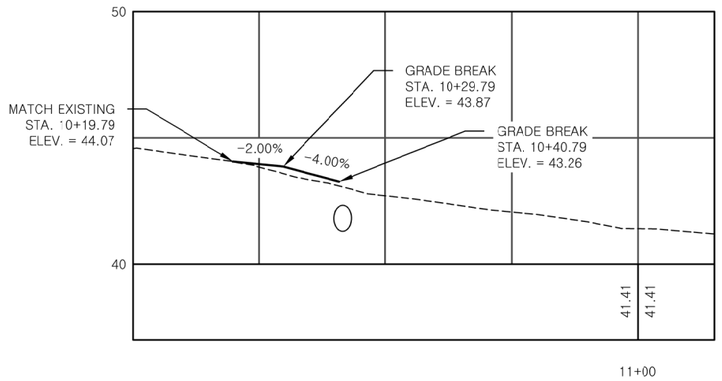
ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

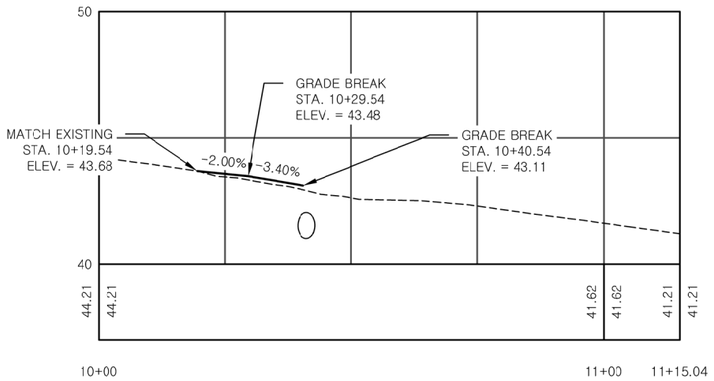
SHEET
F13
OF SHEETS



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R11	97730.10	108946.68	20'	DW RADIUS
R12	97687.59	108986.96	20'	DW RADIUS
R13	97626.10	109044.67	20'	DW RADIUS
R14	97583.88	109084.52	20'	DW RADIUS



1 / F14 DRIVEWAY NO.3
MAIN ALIGNMENT STA. 20+18



2 / F14 DRIVEWAY NO.4
MAIN ALIGNMENT STA. 21+60

STATE OF ALASKA
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550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.3 AND NO.4

ALASKA STATE PARKS

PREPARED: RCS
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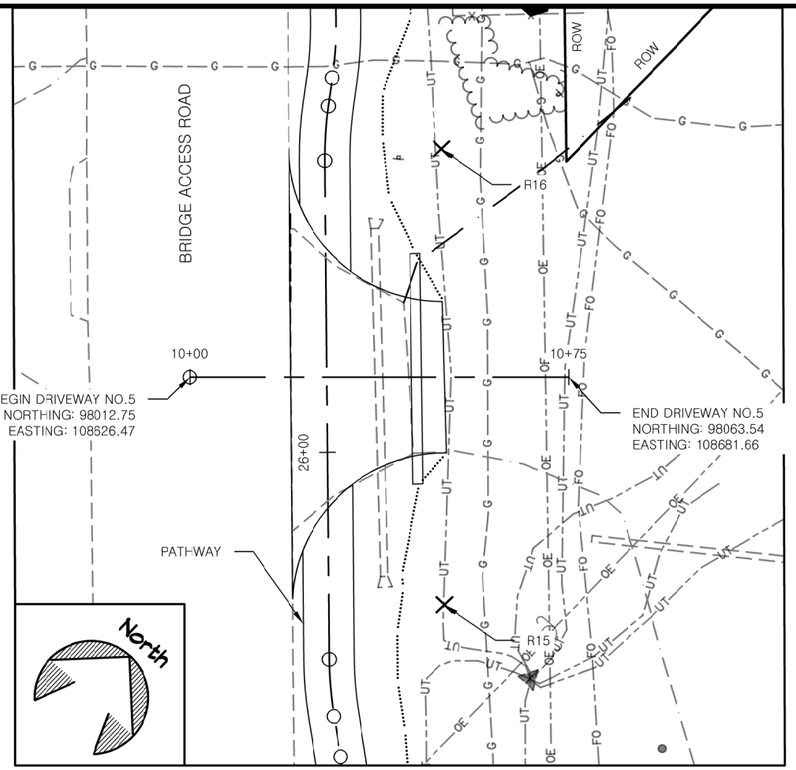
REVIEWED: D&C
DATE: APRIL 2025

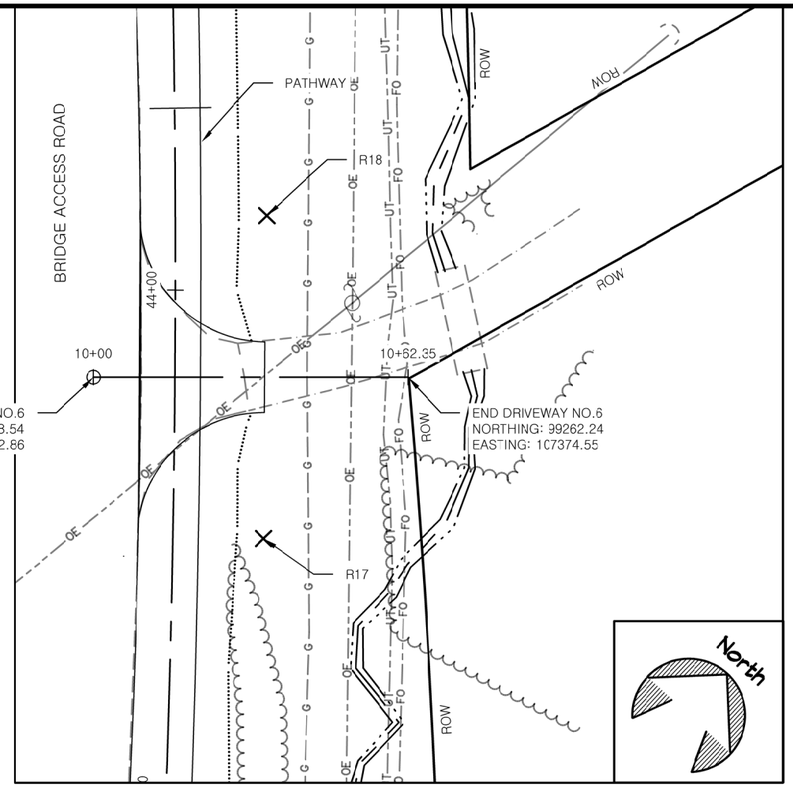
SHEET
F14
OF SHEETS



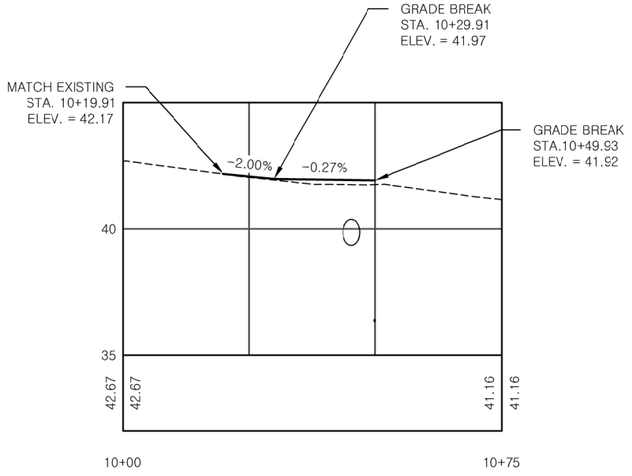
GRAPHIC SCALE

30 0 15 30

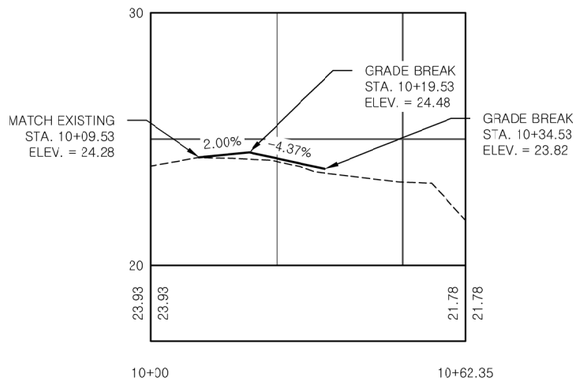
(IN FEET)



RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R15	99254.33	107332.75	30'	DW RADIUS
R16	99221.28	107387.47	30'	DW RADIUS
R17	98079.75	108632.55	25'	DW RADIUS
R18	98013.76	108694.10	25'	DW RADIUS



1 / F15 DRIVEWAY NO.5
MAIN ALIGNMENT STA. 26+15



2 / F15 DRIVEWAY NO.6
MAIN ALIGNMENT STA. 42+82

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STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
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KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.5 AND NO.6

ALASKA STATE PARKS

PREPARED: RCS
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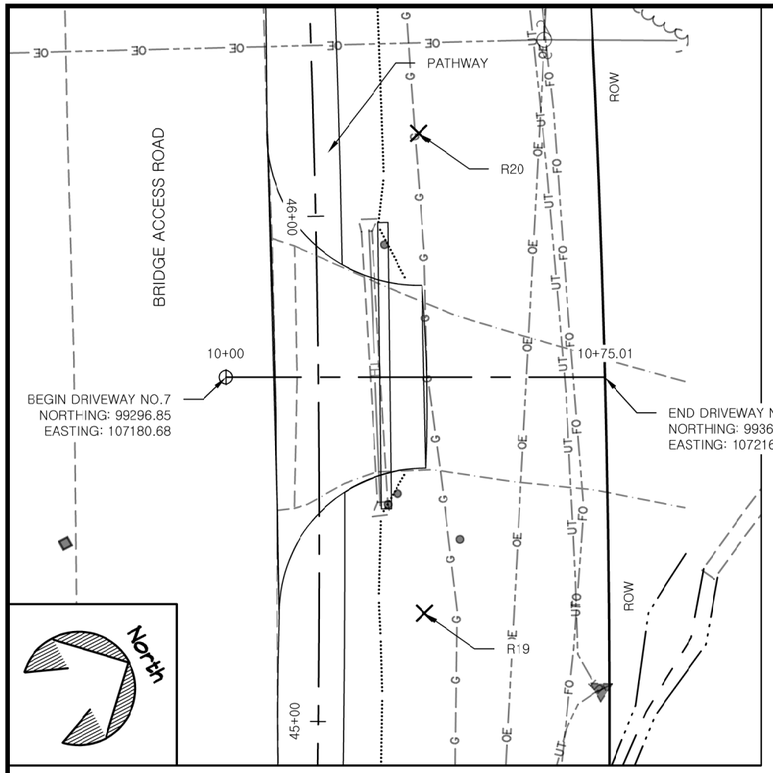
DATE: APRIL 2025

SHEET
F15
OF SHEETS

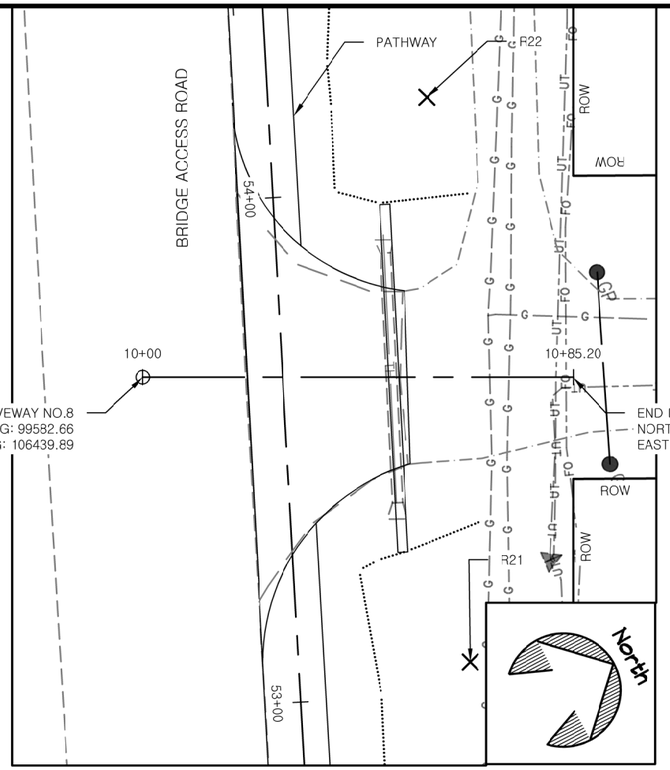


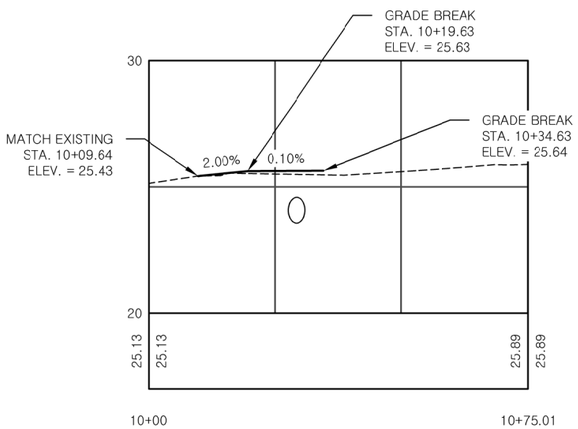
GRAPHIC SCALE

30 0 15 30

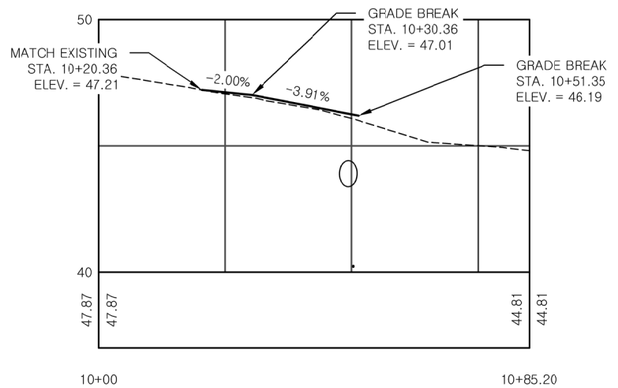
(IN FEET)

RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R19	99655.98	106410.67	30'	DW RADIUS
R20	99620.48	106517.03	30'	DW RADIUS
R21	99353.30	107156.13	40'	DW RADIUS
R22	99309.45	107240.42	40'	DW RADIUS





1 / F16 DRIVEWAY NO.7
MAIN ALIGNMENT STA. 45+67



2 / F16 DRIVEWAY NO.8
MAIN ALIGNMENT STA. 53+64

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STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

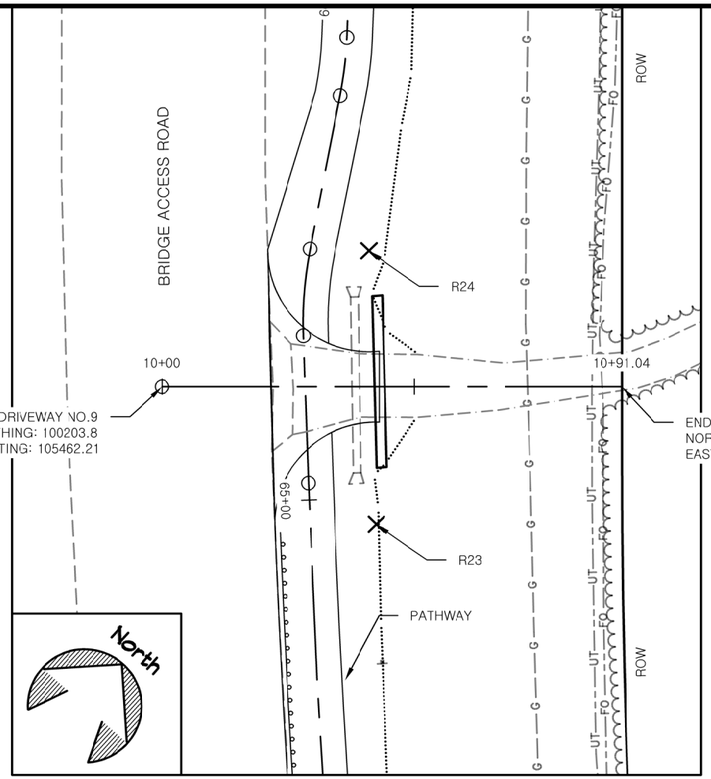
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
DRIVEWAY NO.7 AND NO.8

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F16
OF SHEETS

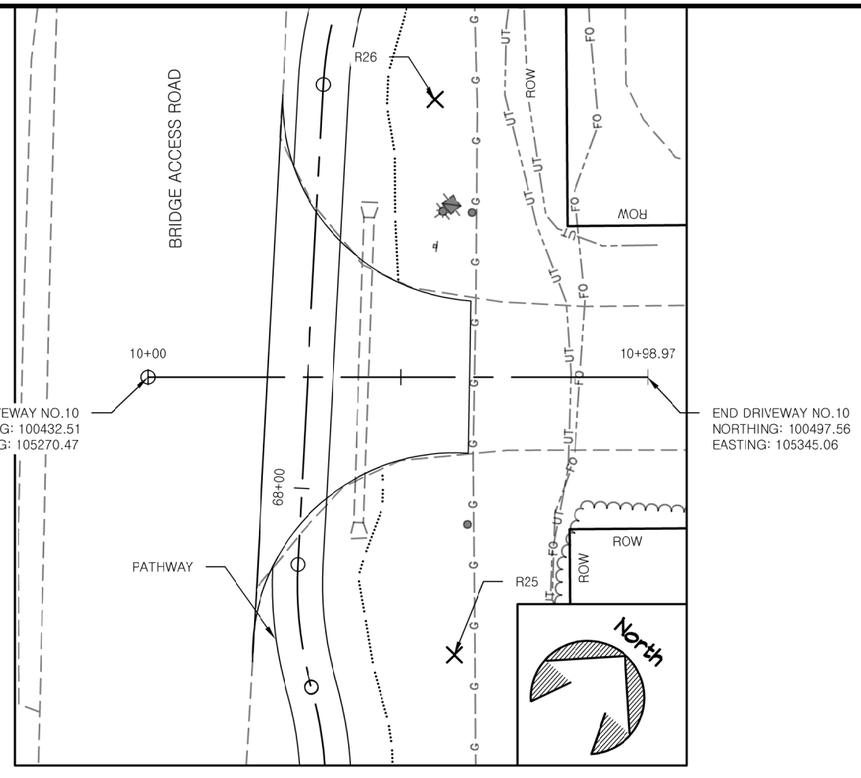


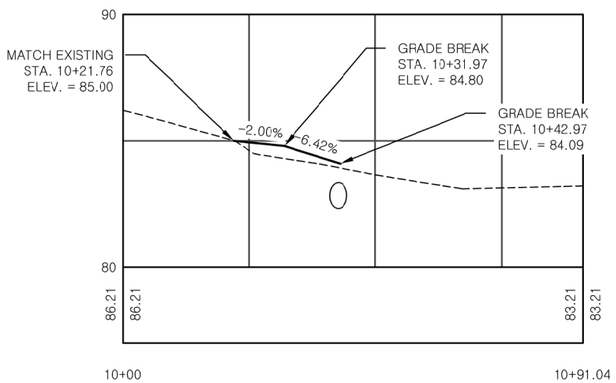
GRAPHIC SCALE

30 0 15 30

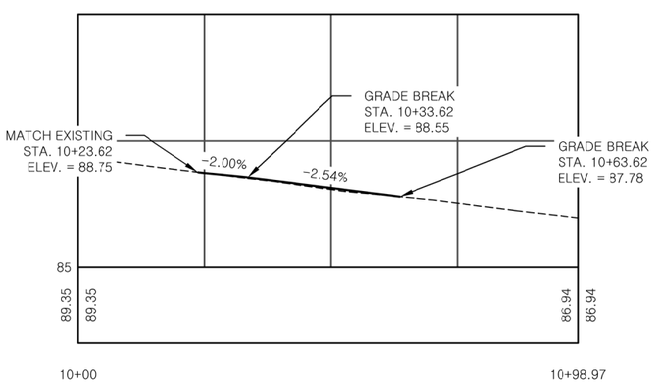
(IN FEET)

RADIUS POINT TABLE				
POINT #	NORTHING	EASTING	RADIUS	DESCRIPTION
R23	100517.68	105284.44	20'	DW RADIUS
R24	100430.92	105352.25	20'	DW RADIUS
R25	100251.08	105475.07	40'	DW RADIUS
R26	100211.59	105511.94	40'	DW RADIUS





1 / F17 DRIVEWAY NO.9
MAIN ALIGNMENT STA. 65+22



2 / F17 DRIVEWAY NO.10
MAIN ALIGNMENT STA. 68+22

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

PLAN AND PROFILE
DRIVEWAY NO.9 AND NO.10

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
F17
OF SHEETS

SIGNING & STRIPING NOTES:

1. ALL STATION LOCATIONS FOR SIGN INSTALLATION ARE APPROXIMATE. INSTALL SIGNS AT LOCATIONS AS DIRECTED BY THE ENGINEER.
2. USE THE FOLLOWING DEFINITIONS TO DECIPHER THE ABBREVIATED SIGN POST TYPES IN THE SIGN SUMMARY SHEETS.
   A. PST MEANS A PERFORATED STEEL TUBE.
   B. T MEANS A SQUARE STEEL TUBE.
   C. P MEANS A ROUND STEEL PIPE.
   D. W MEANS A WIDE FLANGE BEAM.
   E. POPL MEANS A POLE PLATE INSTALLED PER ITS ALASKA STANDARD PLAN S-23.
3. FABRICATE ALL SIGNS FROM 0.125" THICK ALUMINUM SHEETING, UNLESS STATED ELSEWHERE, WITH TYPE IX REFLECTIVE SHEETING.
4. FOR PERFORATED STEEL TUBE SIGNPOSTS, INSTALL THE CONCRETE FOUNDATION OPTION SHOWN ON STANDARD PLAN S-30. TRIM EACH PT POST TO LIMIT THE LENGTH INSERTED INTO THE FOUNDATION TO 12 INCHES.
5. ERECT NEW SIGNS BEFORE REMOVAL OF EXISTING SIGNS WITH SIMILAR MESSAGE. NOTIFY THE ENGINEER A MINIMUM OF 14 DAYS PRIOR TO BEGINNING SIGN REMOVAL AND SALVAGE OR DISPOSAL ACTIVITIES.
6. SELECTIVE AND HAND CLEARING SHALL BE PERFORMED AT THE DISCRETION OF THE ENGINEER, IN ACCORDANCE WITH SECTION 201, UPSTREAM OF ALL SIGN INSTALLATION LOCATIONS TO ACHIEVE MINIMUM SIGN VISIBILITY REQUIREMENTS. IF NOT INCLUDED AS A SEPARATE ITEM, THIS WORK SHALL BE SUBSIDIARY TO THE SIGN INSTALLATION ITEMS AND WORK.
7. FOR ALL FINAL PAVEMENT MARKINGS USE METHYLMETHACRYLATE MATERIALS. ALL STRIPING AND MARKINGS SHALL BE INLAID AND 125 MILS.
8. DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT OR FACE OF CURB WHEN PRESENT.
9. IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 100:1 TAPER ON THE NEW PAVEMENT.

SIGN SUMMARY TABLE

SHEET	POST NO.	STATION	OFFSET	TYPE	LEGEND	SIZE (IN) WIDTH	SIZE (IN) HEIGHT	AREA (S.F.)	SIGN FACES	POST: NO., SIZE & TYPE	FRAMED? YES	FRAMED? NO	SALVAGE SIGN (EACH)	REMARKS
H1	1	10+12	25 RT	R1-1	STOP	24	24	6.25	N	3" T		X	X	
H1	2	10+30	10 LT	D11-1-SP	PATHWAY	30	30	6.25	E	3" T		X		
H6	3	67+63	10 RT	D11-1-SP	PATHWAY	30	30	6.25	W	3" T		X		
H6	4	68+47	25 RT	R1-1	STOP	30	30	6.25	E	3" T		X	X	
H6	5	68+78	10 LT	D11-1-SP	PATHWAY	24	24	6.25	S	3" T		X		
							TOTAL:	31.25				TOTAL:	1	

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

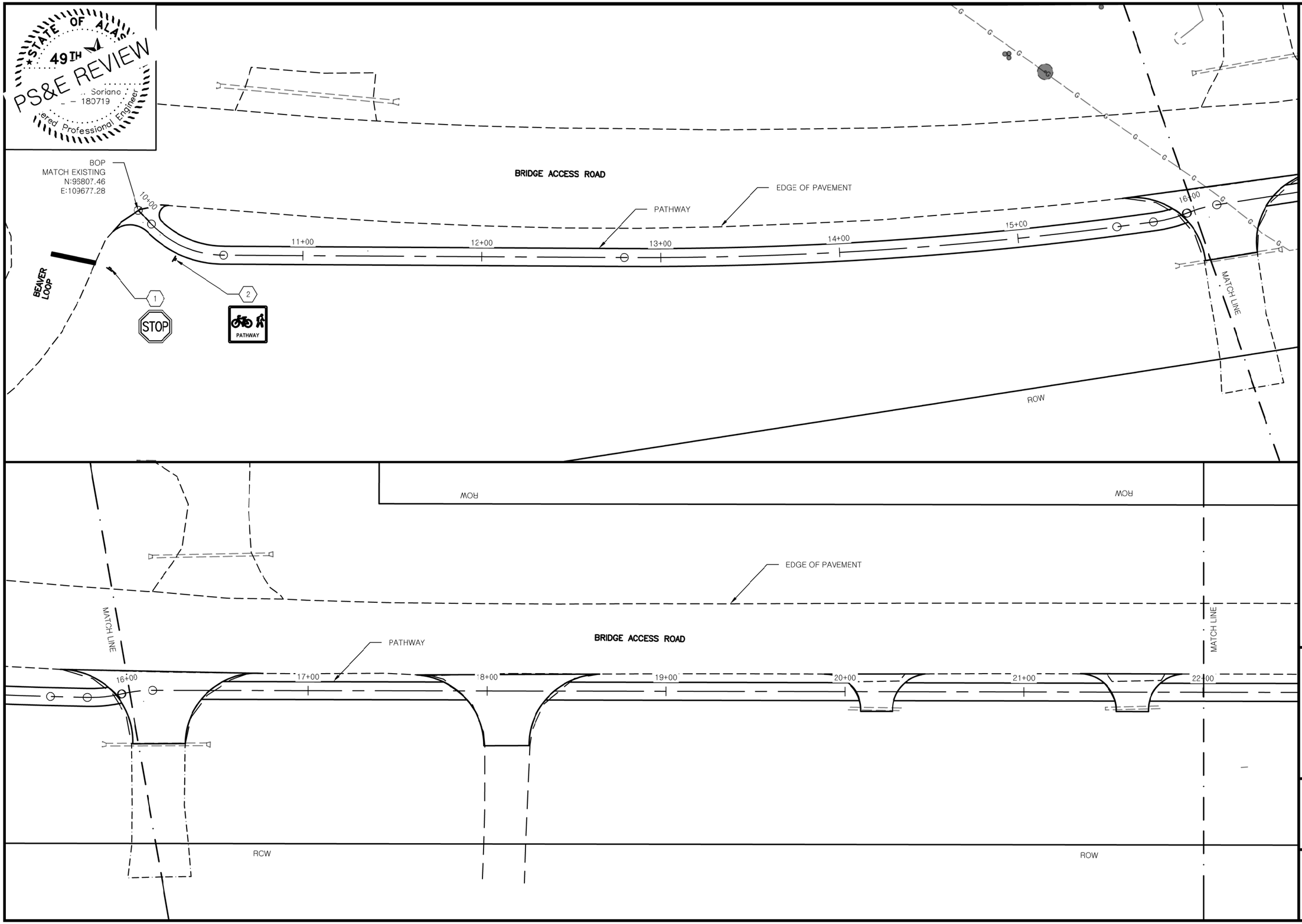
SIGN SUMMARY AND NOTES

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H1
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Registered Professional Engineer



STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

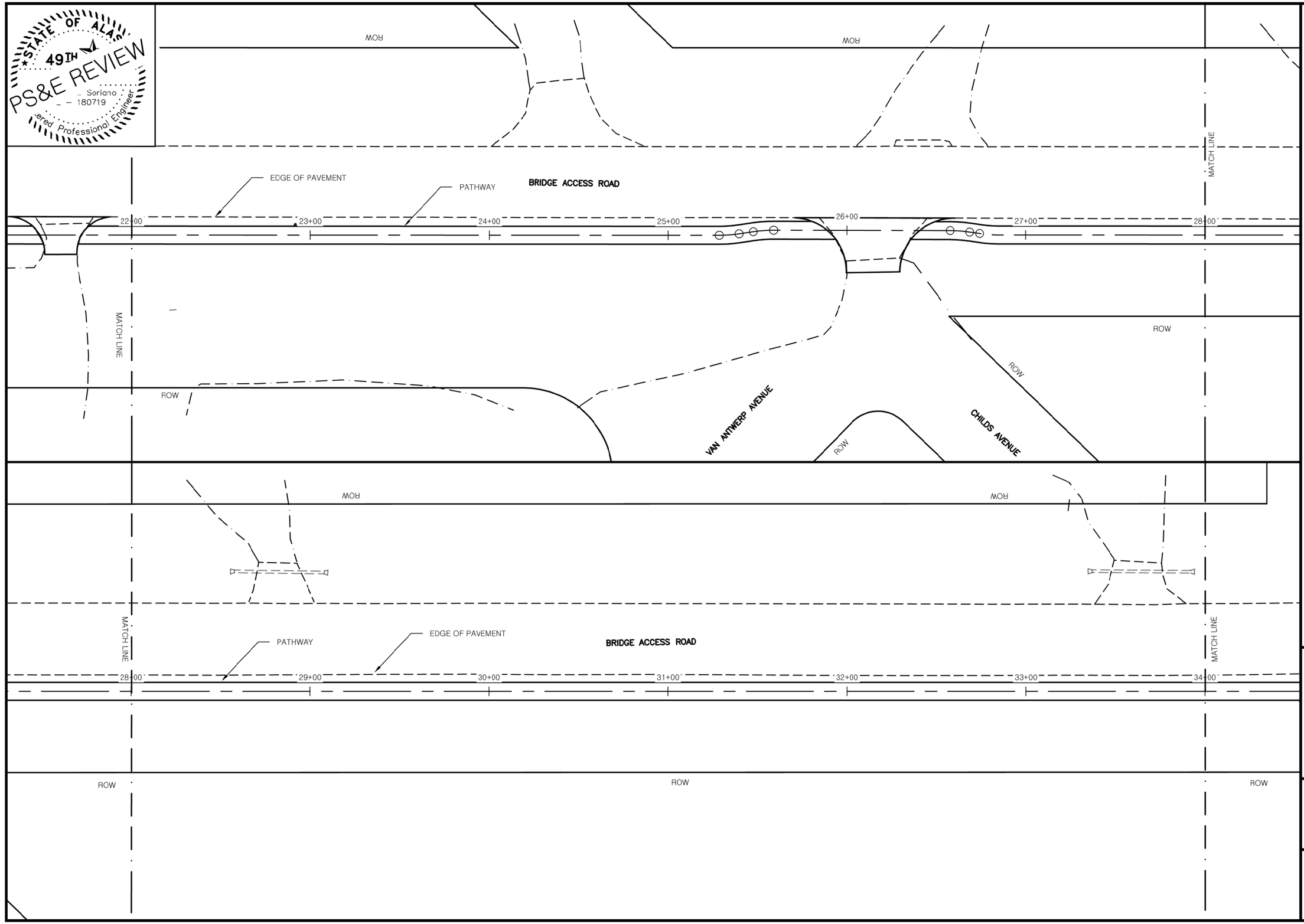
SIGNING AND STRIPING
STA. 10+00 TO STA. 22+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H2
OF XX SHEETS



STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Registered Professional Engineer

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

SIGNING AND STRIPING
STA. 22+00 TO STA. 34+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H3
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Registered Professional Engineer

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

SIGNING AND STRIPING
STA. 34+00 TO STA. 46+00

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H4
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Professional Engineer

ROW

BEGIN STRIPING
STA. 46+14

EDGE OF PAVEMENT

PATHWAY

4" WHITE

20

BRIDGE ACCESS ROAD

18" WHITE

MATCH LINE

46+00 47+00 48+00 49+00 50+00 51+00 52+00

ROW

ROW

MATCH LINE

ROW

ROW

ROW

EDGE OF PAVEMENT

BRIDGE ACCESS ROAD

PATHWAY

END STRIPING
STA. 53+06

52+00 53+00 54+00 55+00 56+00 57+00 58+00

ROW

ROW

ROW

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 46+00 TO STA. 58+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H5
OF XX SHEETS

STATE OF ALASKA
49TH
PS&E REVIEW
Soriano
180719
Registered Professional Engineer

CS 05

ROW

MATCH LINE

EDGE OF PAVEMENT

BRIDGE ACCESS ROAD

PATHWAY

58+00 59+00 60+00 61+00 62+00 63+00 64+00

ROW

ROW

ROW

MATCH LINE

64+00 65+00 66+00 67+00 68+00 69+00 70+00

BRIDGE ACCESS ROAD

ROW

ROW

3

PATHWAY

24" WHITE STOP BAR

W. TERN AVENUE

4

5

STOP

PATHWAY

STATE OF ALASKA, DEPARTMENT OF NATURAL RESOURCES
PLANS DEVELOPED BY: DIVISION OF PARKS AND OUTDOOR RECREATION
550 W 7TH AVE. SUITE 1340, ANCHORAGE, AK 99501 - 907.269.8731

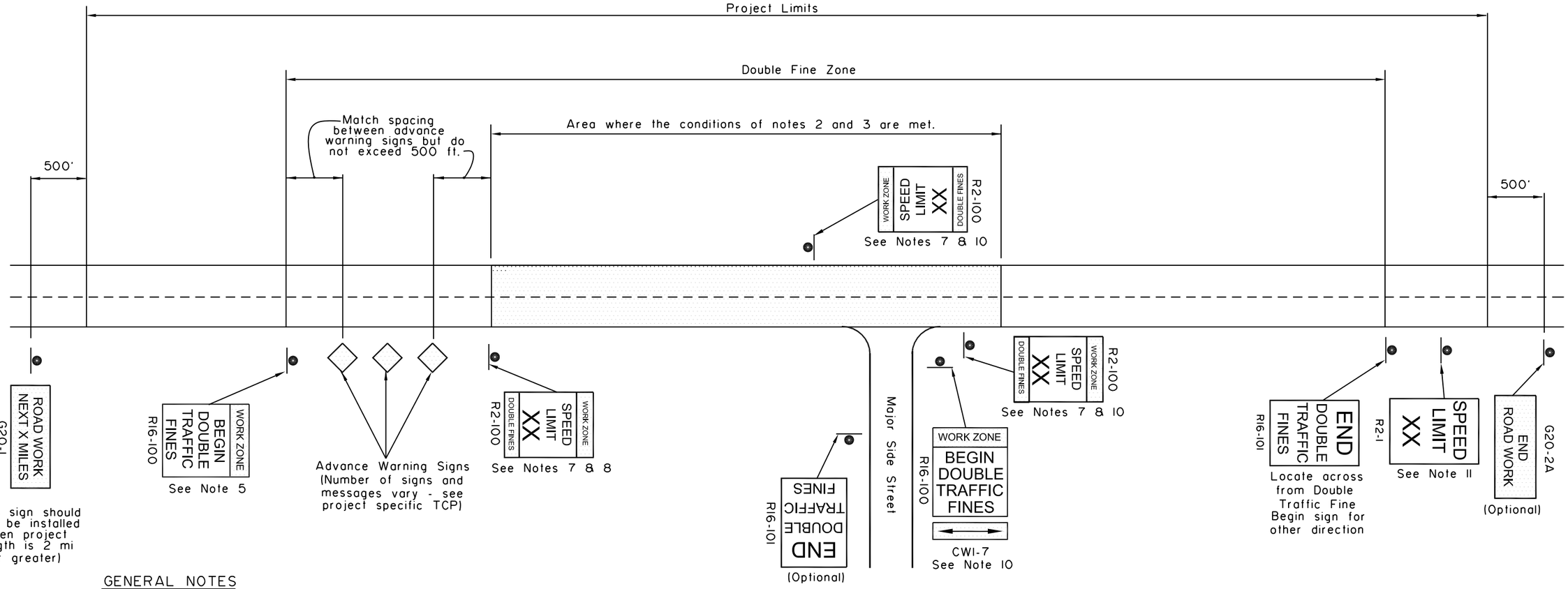
KENAI BRIDGE ACCESS ROAD
PATHWAY
PROJECT No. CFHWY00689

PLAN AND PROFILE
STA. 58+00 TO STA. 70+00

ALASKA STATE PARKS

PREPARED: RCS
DRAWN: D&C
REVIEWED: D&C
DATE: APRIL 2025

SHEET
H6
OF XX SHEETS



GENERAL NOTES

1. Signs are shown for one direction only (with one exception). Signs for the other direction mirror those shown.

2. Double fine signs shall be used only where one or more of the following conditions exist:
   a. Active work areas (where road workers and/or machines are presently working on or adjacent to a road)
   b. Detours on new temporary roads built for that purpose (this does not include detours on existing streets)
   c. Sections of paved roads where pavement has been removed.
   d. Roads being paved where unmatched asphalt lifts result in a vertical lip between lanes.

3. Double fine signs shall be confined to the areas where the above conditions exist, with the following exceptions:
   a. If the project is 2 miles or shorter in length, the entire project may be posted for double fines when the above conditions exist on any part of the project.
   b. When the above conditions exist at multiple locations separated by less than 2 miles, the locations and the intervening segments may be posted as a single double fine zone.

4. Double fine signs shall be removed or covered when work activity ceases for more than two days and conditions b, c, or d of note 2 are not met.

5. The R16-100 "BEGIN" sign may be used in place of the first advance warning sign. However, when this is done, the appropriate advance warning sign must be reinstalled when the double fine sign is taken down or covered.

6. When a double fine zone is longer than 2 miles, work zone speed limit signs shall be posted at spacings not greater than 2 miles within the double fine zone.

7. "Work zone speed limit signs", as used here, refer either to 1) R2-100 signs or 2) standard R2-1 regulatory speed limit signs with CW20-102 "DOUBLE FINES" plates mounted below.

8. The limit shown on work zone speed limit signs shall be either the existing limit before construction or, if a work zone speed limit order has been approved in accordance with ADOT&PF Procedure 05.05.020 PDR, a reduced limit.

9. All existing regulatory speed limit signs within double fine zones shall either be replaced with R2-100 signs or supplemented with CW20-102 plates.

10. Signs shall be installed at major intersections within the double fine zone to warn entering drivers of double fines. This may be done with a R16-100 sign with a CWI-7 arrow panel on the side street or with two work zone speed limit signs on the main street on either side of the intersection. Use of R16-100 signs on side streets eliminates the need for "Road Work Ahead" signs on those streets. If the speed limit has been reduced, the two work zone speed limit signs are mandatory.

11. At the end of each double fine zone, install an R2-1 sign showing the speed limit for the road beyond the double fine zone.

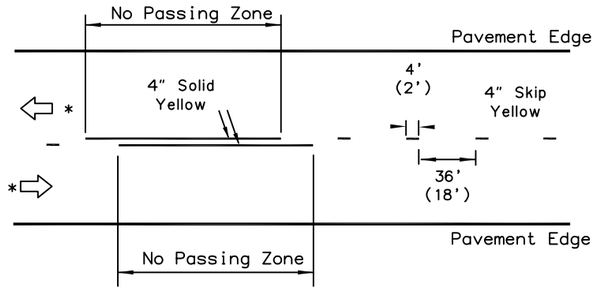
REVISIONS		
Date	Description	By
6/11/99	Revised Notes	KJS
2/28/03	Rev. Notes & Sign No's	KJS

State of Alaska
Department of Transportation
& Public Facilities

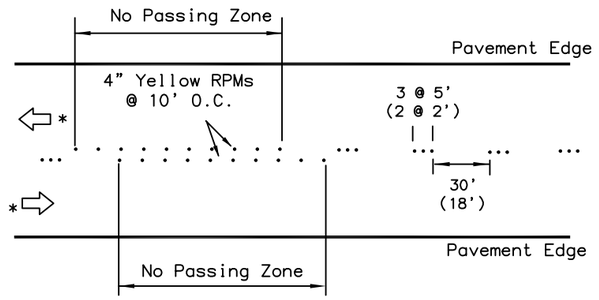
LOCATION OF DOUBLE TRAFFIC FINE SIGNS

APPROVED
Date 3/31/99

C-04.12



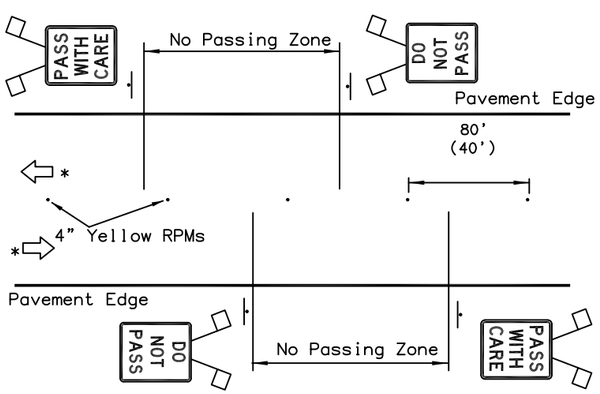
Striping



Temporary Raised Pavement Markers

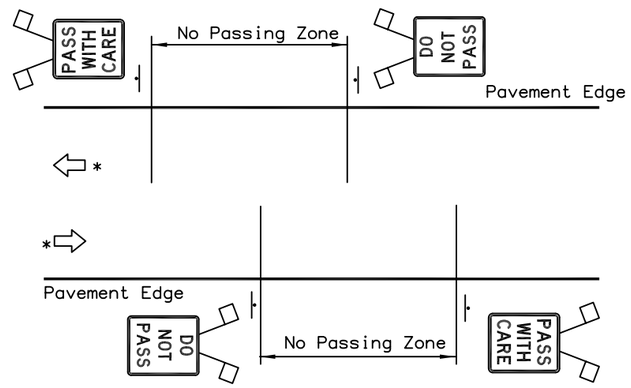
DETAIL A

Two-lane road: No Passing Zones indicated with pavement markings.



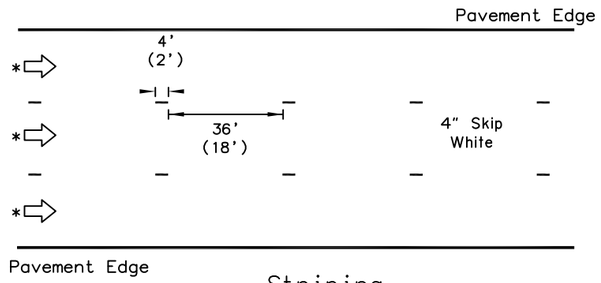
DETAIL B

Two-lane road: No Passing Zones indicated by signs only. Raised pavement markers for centerline delineation.

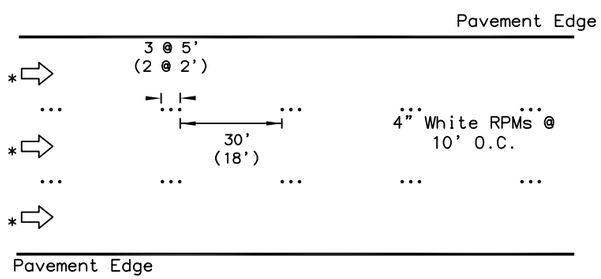


DETAIL C

Two-lane road: No Passing Zones indicated by signs only (see Note 2c). No centerline delineation.



Striping



Temporary Raised Pavement Markers

DETAIL D

Multilane one-way road: Lane dividing lines

* Direction of Travel

GENERAL NOTES:

1. Final pavement markings conforming to Part 3 of the Alaska Traffic Manual should be installed before paved roads are open to public travel. If that is not practical, install interim pavement markings as shown on this drawing. Maintain interim pavement markings until final pavement markings are installed.

2. No interim pavement markings are required:
   a. on projects that will not have permanent markings when finished.
   b. in work zones that are open to public travel for no more than one work shift during daytime or for no more than one hour at night.
   c. where DO NOT PASS and PASS WITH CARE signs are installed on two lane roads as shown in Detail C, no pavement markings are required:
      1) for 3 days if seasonal ADT is above 2000, or
      2) for 1 month if seasonal ADT is below 2000.

3. Interim pavement markings should not be in place longer than 14 calendar days before being replaced with permanent markings conforming to Part 3 of the Alaska Traffic Manual unless the Engineer provides written approval.

4. Where R4-1 DO NOT PASS signs are used, install at the beginning of no passing zones and at no more than 1500' spacings within no passing zones.

5. Install high level warning devices on all DO NOT PASS and PASS WITH CARE signs.

6. Offset temporary markings 8"-12" from the future location of permanent markings if applied on the same lift of pavement.

7. Dimensions in parenthesis apply to curves with a radius of 1000 feet or less or where posted speed limit is 30 mph or less.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

INTERIM PAVEMENT MARKINGS

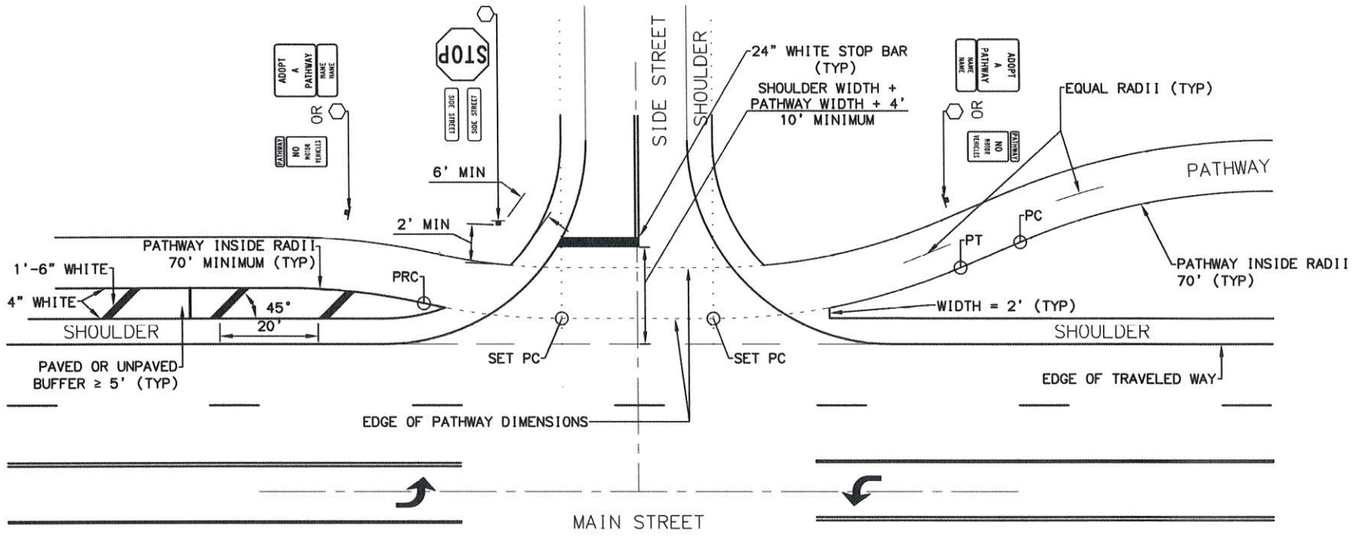
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

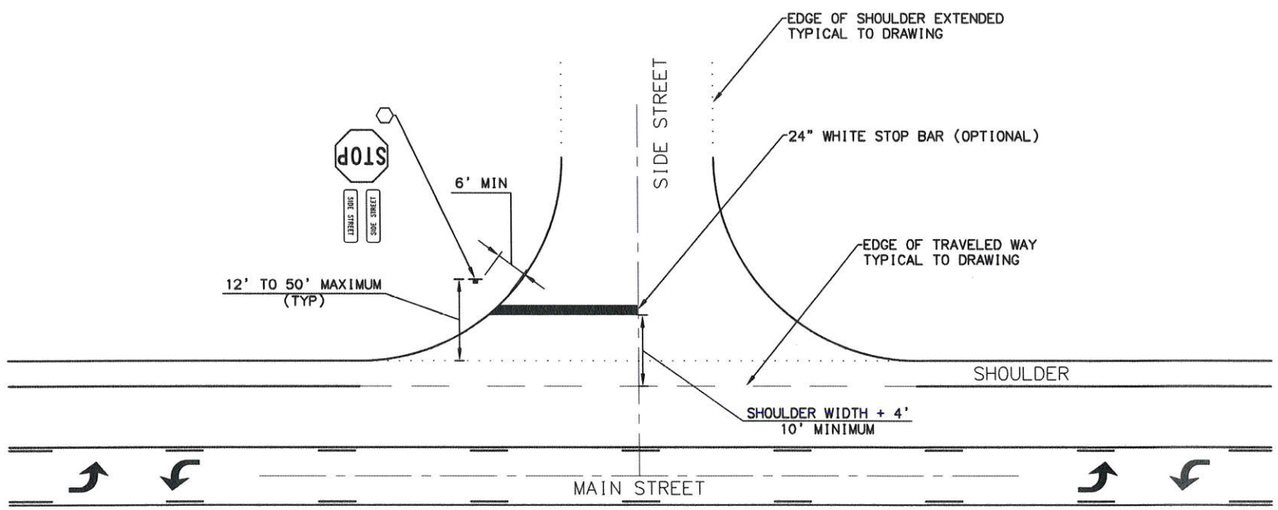
Last Code and Stds. Review By: Date:

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

C-05.20



TYPICAL UNCURBED RETURN WITH PATHWAY



TYPICAL UNCURBED RETURN WITHOUT SIDEWALK

UNCURBED INTERSECTION NOTES: (IN PRIORITY ORDER)

SIGNING:

1. Locate STOP sign so it is visible to approaching traffic and near the stop bar.
2. Provide 2' of clearance between edge of STOP sign panel and edge of pathway or sidewalk.
3. Provide 6' of clearance between edge of STOP sign panel and edge of side street.
4. Place pathway regulatory signs at collector or arterial roadway junctions with side streets. Side streets are typically greater than 1000 vehicles a day, or connect through traffic to other collectors or arterials.
5. PATHWAY NO MOTOR VEHICLES signs are not required within the Municipality of Anchorage.
6. See plans for pathway signing required at side streets.

STRIPING:

1. Stop bars are not required when no pathway or sidewalk is present. See plans.
2. Locate stop bar 4' minimum behind the width of pathway or sidewalk.
3. Break centerline striping within intersections which have dedicated turn lanes.
4. Continue centerline striping through intersections with center two-way-left-turn-only lanes or when there are no mainline left turn lanes.
5. Continue lane "skip" striping through intersections.
6. Delete outermost edge of traveled way striping at intersections or wrap striping to side street.
7. Match side street striping if striping is present.

State of Alaska DOT&PF
CENTRAL REGION
STANDARD DETAIL
Un-Signalized Intersection:
Non-Curbed Stop and Crossing
Traffic Safety Details

Adopted as a Central Region Standard Detail by:

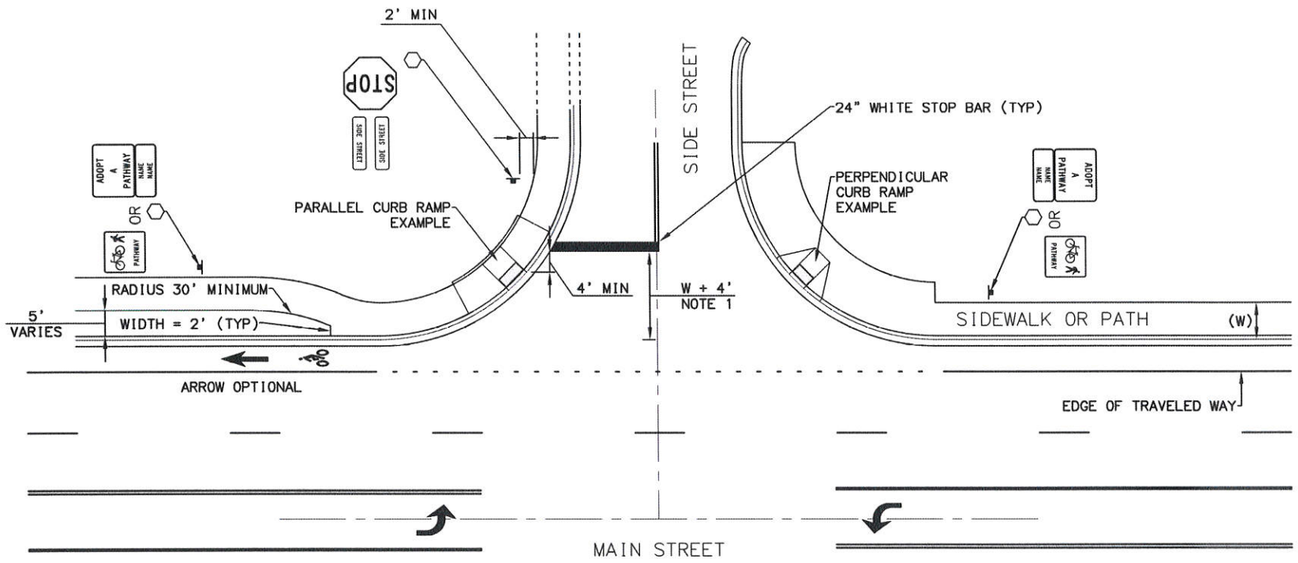
John R. Linnell, P.E.
CR Preconstuction Engineer

Adoption Date: 06/30/2020

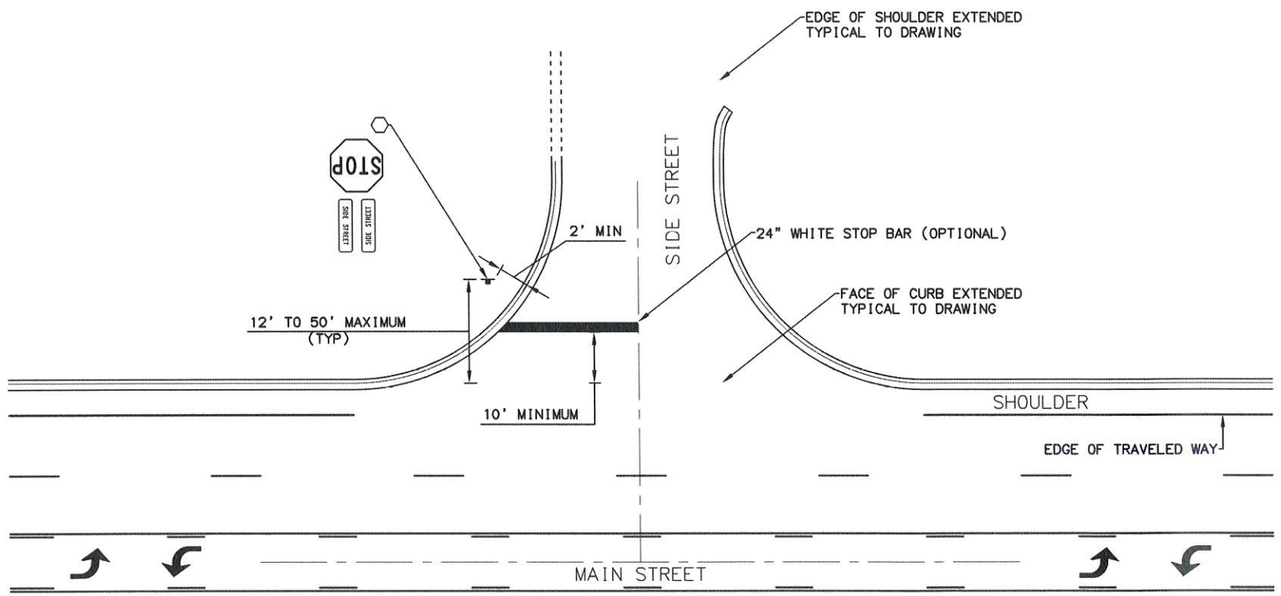
Last Code and Stds. Review
By: Date:

Next Code and Standards Review date: 06/30/2030

CR-T-01.20



TYPICAL CURBED RETURN WITH SIDEWALK



TYPICAL CURBED RETURN WITHOUT SIDEWALK

CURBED INTERSECTION NOTES:

SIGNING:

1. Locate STOP sign so it is visible to approaching traffic and near the stop bar.
2. Provide 2' of clearance between edge of STOP sign panel and edge of pathway or sidewalk.
3. Provide 6' of clearance between edge of STOP sign panel and side street face of curb.
4. Place pathway regulatory signs at collector or arterial roadway junctions with side streets. Side streets are typically greater than 1000 vehicles a day, or connect through traffic to other collectors or arterials.
5. PATHWAY NO MOTOR VEHICLES signs are not required within the Municipality of Anchorage.
6. See plans for pathway signing required at side streets.

STRIPING:

1. Stop bars are not required when no pathway or sidewalk is present. See plans.
2. Locate stop bar 4' minimum between the toe of curb ramp and edge of stop bar or a distance of the width of the sidewalk or pathway plus 4'.
3. Break centerline striping within intersections which have dedicated turn lanes.
4. Continue centerline striping through intersections with center two-way-left-turn-only lanes or when there are no mainline left turn lanes.
5. Continue lane "skip" striping through intersections.
6. Delete outermost edge of traveled way striping at intersections or wrap striping to side street.
7. Match side street striping if striping is present.

State of Alaska DOT&PF
CENTRAL REGION
STANDARD DETAIL
Un-Signalized Intersection:
Curbed Stop and Crossing
Traffic Safety Details

Adopted as a Central Region Standard Detail by:

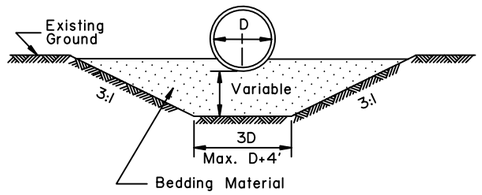
John R. Linnell, P.E.
CR Preconstuction Engineer

Adoption Date: 06/30/2020

Last Code and Stds. Review
By: Date:

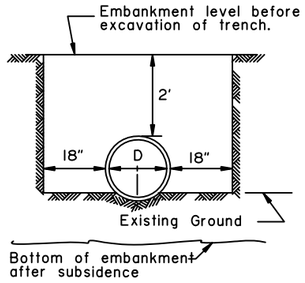
Next Code and Standards Review date: 06/30/2030

CR-T-01.20

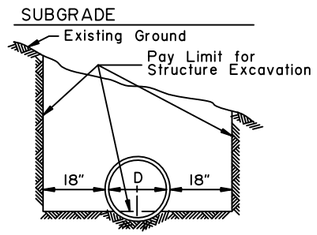


TYPE "A"
FOUNDATION STABILIZATION

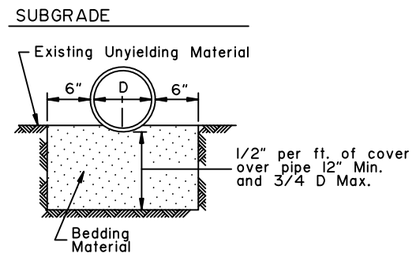
To be used in unstable areas as directed by the Engineer.



TYPE "B"



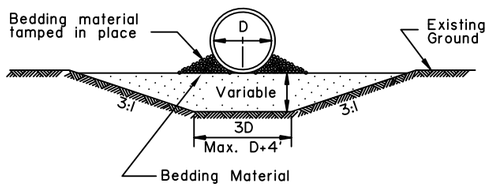
TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

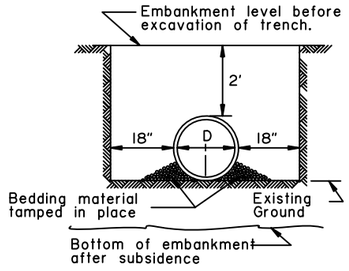
GENERAL NOTES:

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



'ALTERNATE'
TYPE "A"
FOUNDATION STABILIZATION

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



'ALTERNATE'
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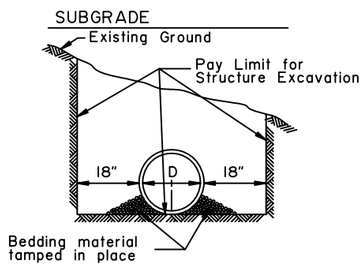

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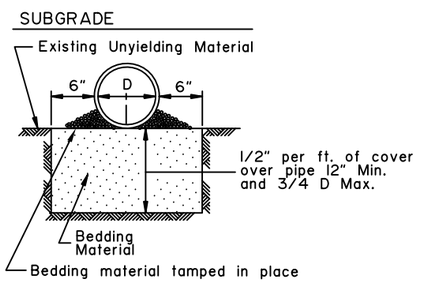
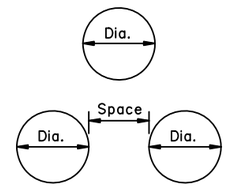


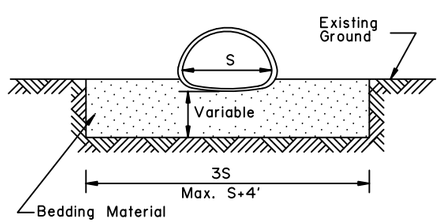
'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

D = Nominal Pipe Diameter



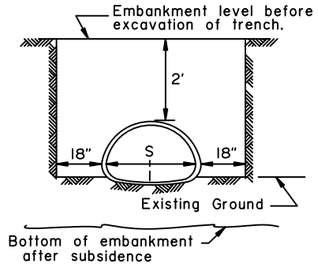
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

CULVERT PIPE



TYPE "A"
FOUNDATION STABILIZATION

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



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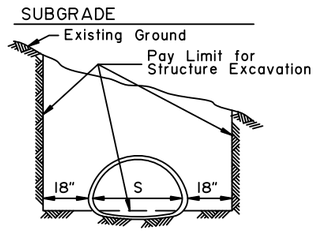
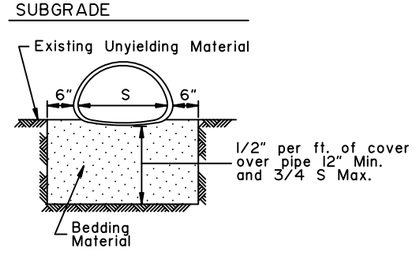
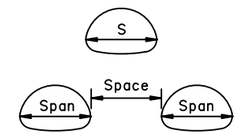


TYPE "C"



TYPE "D"
ROCK OR UNYIELDING MATERIAL

S = Nominal Pipe Arch Span



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

ARCH

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT PIPE & ARCH INSTALLATION DETAILS

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

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

CORRUGATED CIRCULAR ALUMINUM PIPE

Minimum & Maximum Cover for 2 2/3"X 1/2" Aluminum Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100	100+	100+	100+	100+
18	12	83	100+	100+	100+	100+
21	12	71	89	100+	100+	100+
24	12	62	78	100+	100+	100+
27	12		69	97	100+	100+
30	12		62	87	100+	100+
36	12		51	73	94	100+
42	12			62	80	100+
48	12			54	70	85
54	15			48	62	76
60	15				52	64
66	18					52
72	18					43

Minimum & Maximum Cover for 3" x 1" Aluminum Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
30	12	57	72	100+	100+	100+
36	12	47	60	84	100+	100+
42	12	40	51	72	96	100+
48	12	35	44	62	84	99
54	15	31	39	55	74	88
60	15	28	35	50	67	79
66	18	25	32	45	61	72
72	18	23	29	41	56	66
78	21		27	38	51	61
84	21			35	48	56
90	24			33	44	52
96	24			31	41	49
102	24				39	46
108	24				37	43
114	24					39
120	24					36

Minimum & Maximum Cover for 9" X 2 1/2" Aluminum Structural Plate Pipe*			
Thickness		0.125	0.150
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)
84	18	31	
90	18	27	
96	18	27	
102	18	24	
108	18	24	
114	18	21	
120	24	21	
126	24	19	
132	30	19	
138	30	18	
144	30	18	
150	30		22
156	30		22
162	36		20
168	36		20

*5.33 - 3/4" dia. steel bolts per foot.

CORRUGATED ALUMINUM PIPE-ARCH

Minimum & Maximum Cover for 2 2/3"X 1/2" Aluminum Pipe-Arch					
				2 Tons/Sf Corner Bearing Pressure	
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
17	13	3 4/8	16 (0.060)	12	13
21	15	4 1/8	16 (0.060)	12	12
24	18	4 7/8	16 (0.060)	12	12
28	20	5 4/8	14 (0.075)	12	12
35	24	6 7/8	14 (0.075)	12	12
42	29	8 2/8	12 (0.105)	12	12
49	33	9 5/8	12 (0.105)	15	12
57	38	11	10 (0.135)	15	12
64	43	12 3/8	10 (0.135)	18	12
71	47	13 6/8	8 (0.164)	18	12

Minimum & Maximum Cover for 3" x 1" Aluminum Pipe-Arch					
				2 Tons/Sf Corner Bearing Pressure	
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
60	46	18 6/8	14 (0.075)	15	20
66	51	20 6/8	14 (0.075)	18	20
73	55	22 7/8	14 (0.075)	21	20
81	59	20 7/8	12 (0.105)	21	16
87	63	22 7/8	12 (0.105)	24	16
95	67	24 3/8	12 (0.105)	24	16
103	71	26 1/8	10 (0.135)	24	16
112	75	27 6/8	8 (0.164)	24	16

Minimum & Maximum Cover for 9" x 2 1/2" Aluminum Multiplate Pipe-Arch*					
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	2 Tons/Sf Corner Bearing Pressure Max. Cover (Ft)
6-7	5-8	31.75	0.125	24	24
6-11	5-9	31.75	0.125	24	24
7-3	5-11	31.75	0.125	24	18
7-9	6-0	31.75	0.125	24	18
8-5	6-3	31.75	0.125	24	16
9-3	6-5	31.75	0.125	24	15
10-3	6-9	31.75	0.125	30	13
10-9	6-10	31.75	0.125	30	13
11-5	7-1	31.75	0.125	30	13
12-7	7-5	31.75	0.125	30	11
12-11	7-6	31.75	0.125	30	11
13-1	8-2	31.75	0.125	30	11
13-11	8-5	31.75	0.125	36	10
14-8	9-8	31.75	0.125	36	9
15-4	10-0	31.75	0.150	36	8
16-1	10-4	31.75	0.150	36	8
16-9	10-8	31.75	0.150	42	7
17-3	11-0	31.75	0.150	42	7
18-0	11-4	31.75	0.175	42	7
18-8	11-8	31.75	0.175	42	7

*5.33 - 3/4" dia. steel bolts per foot.

GENERAL NOTES:

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflection.
7. These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

Minimum & Maximum Cover for 2 2/3" x 1/2" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
12	12	100+	100+	100+	100+	100+
15	12	100+	100+	100+	100+	100+
18	12	100+	100+	100+	100+	100+
21	12	100+	100+	100+	100+	100+
24	12	100+	100+	100+	100+	100+
30	12	83	100+	100+	100+	100+
36	12	69	86	100+	100+	100+
42	12	59	74	100+	100+	100+
48	12	51	64	91	100+	100+
54	12		57	80	100+	100+
60	12			72	93	100+
66	12			66	85	100+
72	12				78	95
78	12					84
84	12					73

Minimum & Maximum Cover fo 3" x 1" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12			100+	100+	100+
42	12			100+	100+	100+
48	12		74	100+	100+	100+
54	12	53	66	93	100+	100+
60	12	47	59	83	100+	100+
66	12	43	54	76	98	100+
72	12	39	49	69	89	100+
78	12	36	45	64	82	100+
84	12	33	42	59	77	94
90	12	31	39	55	71	87
96	12	29	37	52	67	82
102	18	27	34	49	63	77
108	18		32	46	59	73
114	18		31	43	56	69
120	18		29	41	53	65
126	18			39	51	62
132	18			37	48	59
138	18			36	46	57
144	18				44	54

Minimum & Maximum Cover for 5" x 1" Steel Pipe						
Gage		16	14	12	10	8
Thickness		0.060	0.075	0.105	0.135	0.164
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
36	12	71	88	100+	100+	100+
42	12	60	76	100+	100+	100+
48	12	53	66	93	100+	100+
54	12	47	59	82	100+	100+
60	12	42	53	74	96	100+
66	12	38	48	67	87	100+
72	12	35	44	62	79	97
78	12	32	40	57	73	90
84	12	30	37	53	68	83
90	12	28	35	49	63	78
96	12	26	33	46	59	73
102	18	24	31	43	56	69
108	18		29	41	53	65
114	18		27	39	50	61
120	18		26	37	47	58
126	18			35	45	55
132	18			33	43	53
138	18			32	41	50
144	18				39	48

Minimum & Maximum Cover for 6" x 2" Steel Multiplate Pipe*								
Gage		12	10	8	7	5	3	1
Thickness		0.111	0.140	0.170	0.188	0.218	0.249	0.280
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
60	12	46	67	87	100	100+	100+	100+
66	12	42	60	79	91	100+	100+	100+
72	12	38	55	73	83	100+	100+	100+
78	12	35	51	67	77	93	100+	100+
84	12	32	47	62	71	86	100+	100+
90	12	30	44	58	67	80	95	100+
96	12	28	41	54	62	75	89	97
102	18	27	39	51	59	71	84	91
108	18	25	37	48	55	67	79	86
114	18	24	35	45	52	63	75	82
120	18	22	33	43	50	60	71	77
126	18	21	31	41	47	57	68	74
132	18	20	30	39	45	54	64	70
138	18	19	28	37	43	52	62	67
144	18	18	27	36	41	50	59	64

*4 - 3/4" dia. steel bolts per foot.

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

CORRUGATED CIRCULAR STEEL PIPE

CORRUGATED STEEL PIPE-ARCH

Minimum & Maximum Cover for 2 2/3" X 1/2" Steel Pipe-Arch					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
17	13	3 4/8	16 (0.060)	12	11
21	15	4 1/8	16 (0.060)	12	11
24	18	4 7/8	16 (0.060)	12	11
28	20	5 4/8	16 (0.060)	12	11
35	24	6 7/8	16 (0.060)	12	11
42	29	8 2/8	16 (0.060)	12	11
49	33	9 5/8	14 (0.075)	12	11
57	38	11	12 (0.109)	12	11
64	43	12 3/8	12 (0.109)	12	11
71	47	13 6/8	10 (0.138)	12	11
77	52	15 1/8	10 (0.138)	12	11
83	57	16 4/8	8 (0.168)	12	11

Minimum & Maximum Cover for 3"X 1"Steel Pipe-Arch					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
53	41	10 2/8	14 (0.079)	12	10
60	46	18 6/8	14 (0.079)	15	29
66	51	20 6/8	14 (0.079)	15	29
73	55	22 7/8	14 (0.079)	18	18
81	59	20 7/8	14 (0.079)	18	15
87	63	22 7/8	14 (0.079)	18	15
95	67	24 3/8	14 (0.079)	18	15
103	71	26 1/8	14 (0.079)	18	14
112	75	27 6/8	14 (0.079)	21	14
117	79	29 4/8	12 (0.109)	21	14
128	83	31 2/8	10 (0.138)	24	14
137	87	33	10 (0.138)	24	14
142	91	34 6/8	10 (0.138)	24	13
150	96	36	10 (0.138)	30	13
157	96	38	10 (0.138)	30	13
164	105	40	10 (0.138)	30	14
171	110	41	10 (0.138)	30	13

Minimum & Maximum Cover for 5"X 1"Steel Pipe-Arch					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Thickness (In)	Min. Cover (In)	Max. Cover (Ft)
53	41	10 2/8	14 (0.079)	12	10
60	46	18 6/8	14 (0.079)	15	29
66	51	20 6/8	14 (0.079)	15	29
73	55	22 7/8	14 (0.079)	18	18
81	59	20 7/8	14 (0.079)	18	15
87	63	22 7/8	14 (0.079)	18	15
95	67	24 3/8	14 (0.079)	18	15
103	71	26 1/8	14 (0.079)	18	14
112	75	27 6/8	14 (0.079)	21	14
117	79	29 4/8	12 (0.109)	21	14
128	83	31 2/8	10 (0.138)	24	14
137	87	33	10 (0.138)	24	14
142	91	34 6/8	10 (0.138)	24	13
150	96	36	10 (0.138)	30	13
157	96	38	10 (0.138)	30	13
164	105	40	10 (0.138)	30	14
171	110	41	10 (0.138)	30	13

Minimum & Maximum Cover for Steel Multiplate Pipe-Arch 6" x 2" *					
			2 Tons/Sf Corner Bearing Pressure		
Span (Ft.-In.)	Rise (Ft.-In.)	Corner Radius (In)	Min. Gage (In)	Min. Cover (In)	Max. Cover (Ft)
6-1	4-7	18	12 (0.111)	12	14
7-0	5-1	18	12 (0.111)	12	12
7-11	5-7	18	12 (0.111)	12	10
8-10	6-1	18	12 (0.111)	18	9
9-9	6-7	18	12 (0.111)	18	8
10-11	7-1	18	12 (0.111)	18	6
11-10	7-7	18	12 (0.111)	18	5
12-10	8-4	18	12 (0.111)	24	5
13-3	9-4	31	10 (0.140)	24	11
14-2	9-10	31	10 (0.140)	24	10
15-4	10-4	31	10 (0.140)	24	9
16-3	10-10	31	10 (0.140)	30	8
17-2	11-4	31	10 (0.140)	30	8
18-1	11-10	31	10 (0.140)	30	7
19-3	12-4	31	10 (0.140)	30	7
19-11	12-10	31	10 (0.140)	30	6
20-7	13-2	31	10 (0.140)	36	6

*4 - 3/4" dia. steel bolts per foot.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

Maximum Cover for Type S Corrugated Polyethelene Pipe	
Size (in)	Max. Cover (ft)
12	24
15	25
18	24
24	20
30	20
36	18
42	16
48	17

GENERAL NOTES

1. All materials and workmanship shall be in accordance with the State of Alaska Standard Specifications for Highway Construction.

2. For foundation and structural backfill details see Standard Plan D-01 "Culvert Pipe & Arch Installation Details".

3. Pipe cover height is measured from top of the pipe to top of rigid pavement, or to the bottom of subgrade for flexible pavement. In all cases the minimum cover shall be no less than 2 ft. Where loads traverse the culvert during construction minimum cover shall be no less than 4 ft.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

D-04.22

ALUMINUM SPIRAL RIB PIPE

Minimum & Maximum Cover for Aluminum Spiral Rib Circular Pipe*					
Gage		16	14	12	10
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	43	61		
21	12	38	52	84	
24	12	33	45	73	
30	15	26	36	58	
36	18	21	30	49	69
42	21		25	41	59
48	24			36	51
54	24			32	46
60	24			29	41
66	24				37
72	30				34

*¾ x ¾ x 7½ in. Corrugations

Minimum & Maximum Cover for Aluminum Spiral Rib Pipe-Arch*						
Gage			16	14	12	10
Thickness			0.060	0.075	0.105	0.135
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)			
20	16	12	16			
23	19	12	15			
27	21	15	13	13		
33	26	18	13	13	13	
40	31	21		13	13	
46	36	24			13	13
53	41	24			13	13
60	46	24			13	13
66	51	24				13

*¾ x ¾ x 7½ in. Corrugations

STEEL SPIRAL RIB PIPE

Minimum & Maximum Cover for Steel and Aluminized Steel Spiral Rib Circular Pipe*					
Gage		16	14	12	10
Thickness		0.064	0.079	0.109	0.138
Dia. (In)	Min. (In)	Max. (Ft)	Max. (Ft)	Max. (Ft)	Max. (Ft)
18	12	91			
24	12	68	95	100+	
30	12	54	76	100+	
36	12	45	63	100+	
42	12	38	54	90	
48	12	33	47	79	
54	18	30	42	70	
60	18	27	38	63	92
66	18	24	34	57	83
72	18		31	52	76
78	24		29	48	70
84	24		27	45	65
90	24			42	61
96	24			39	56
102	30			36	50
108	30			32	45

*¾ x ¾ x 7½ in. Corrugations.

Minimum & Maximum Cover for Steel Spiral Rib Pipe-Arch*					
			2 Tons/Sf Corner Bearing Pressure		
Thickness			0.064	0.079	0.109
Span (Ft.-In.)	Rise (Ft.-In.)	Min. Cover (In)	Max. Cover (Ft)		
20	16	12	13		
23	19	12	13		
27	21	12	11		
33	26	12	11		
40	31	12	11		
46	36	12	11		
53	41	18		11	
60	46	18		19	
66	51	18		19	
73	55	18			18
81	59	18			15
87	63	18			15
95	67	18			15

*¾ x ¾ x 7½ in. Corrugations

GENERAL NOTES

1. All material and workmanship shall be in accordance with the State of Alaska, Standard Specifications for Highway Construction.
2. The contractor shall select only pipes that meet specific height of cover criteria shown on the plans or in the special provisions.
3. No more than one type of pipe may be used on any single installation or installation grouping.
4. All structural plate pipes shall be placed on a pre-shaped foundation conforming to the depth of the bottom plates with clearance for assembling to the adjacent plates allowed.
5. See Standard Plan D-01 "Culvert Pipe & Arch Installation Details" for foundation and structural backfill details.
6. Minimum cover shall be measured from the top of pipe to the top of rigid pavement or to the bottom of flexible pavement subgrade. In all cases, the minimum cover shall not be less than 12". Minimum cover during construction shall be that required to protect the pipe from damage or deflecton.
7. These tables have been developed for an HL-93 live load and for compacted soil weighing 120 lbs. per cubic foot or less. If compacted soil cover exceeds 120 lbs. per cubic foot, the contractor shall use the depth of cover shown in the plans for the specific pipe. Where compacted soil cover exceeds 120 lbs. per cubic foot and no specific cover requirements are provided in the plans, the contractor shall determine the required minimum pipe cover in accordance with Section 12 of the 2017 AASHTO "LRFD Bridge Design Specifications".

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

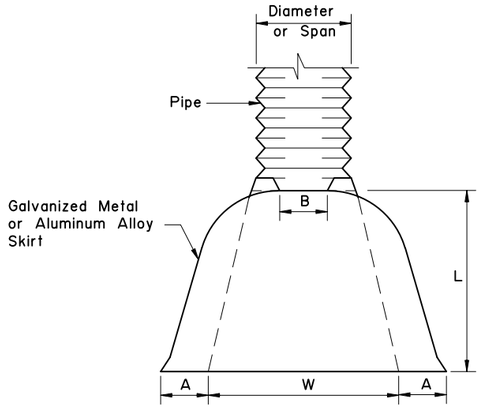
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

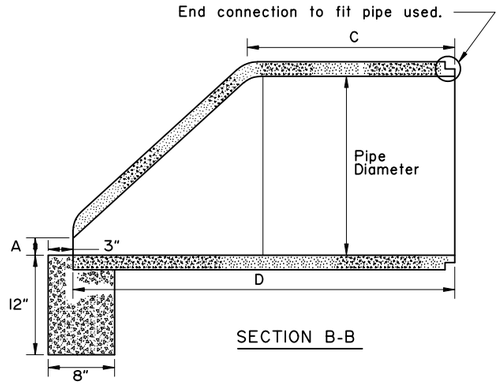
Next Code and Standards Review date: 7/8/2030

D-04.22



PLAN

ROUND AND PIPE ARCH

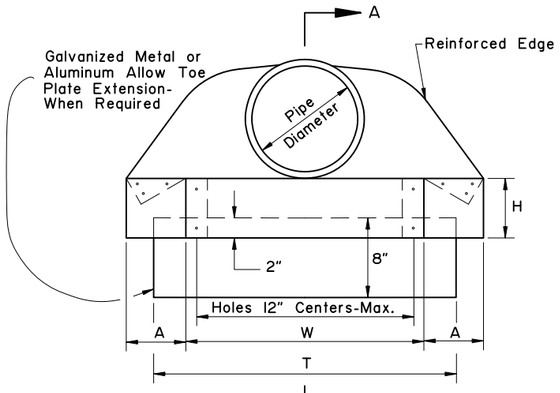


SECTION B-B

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

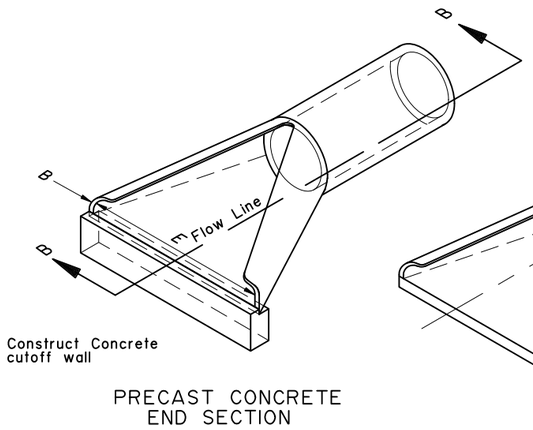
ROUND PIPE									
Pipe Diam. Inches	Thickness For Aluminum	Thk. for Galv. Metal	Dimension Inches A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
12"	0.060	0.064	6"	6"	6"	21"	24"	34"	1 Pc.	2 1/2
15"	0.060	0.064	7"	8"	6"	26"	30"	40"	1 Pc.	2 1/2
18"	0.060	0.064	8"	10"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

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

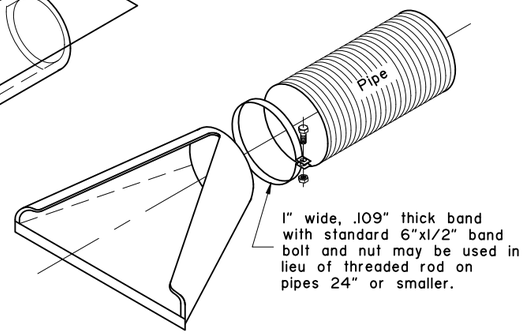


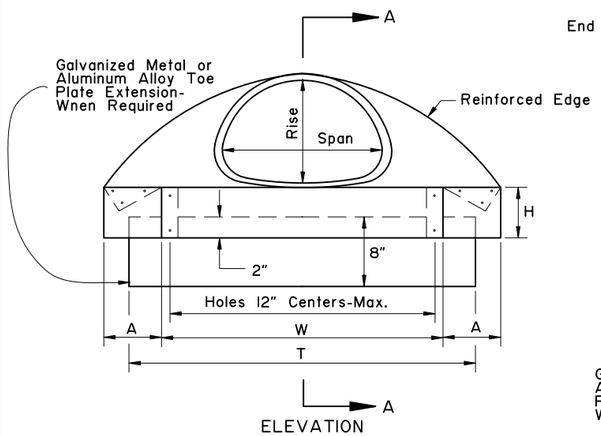
ELEVATION

ROUND PIPE



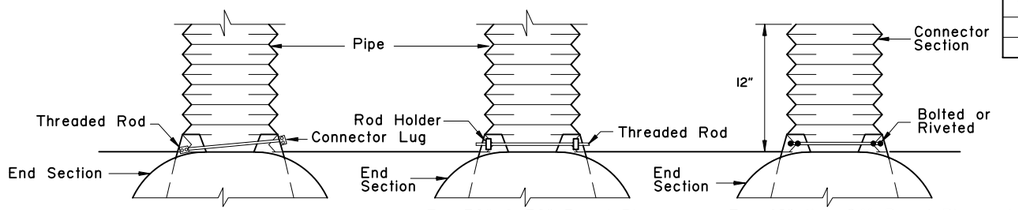
PRECAST CONCRETE END SECTION





ELEVATION

PIPE ARCH

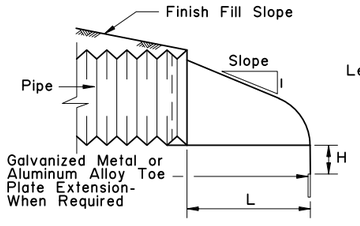


For 12" thru 24" Round Pipe with Annular Corrugations

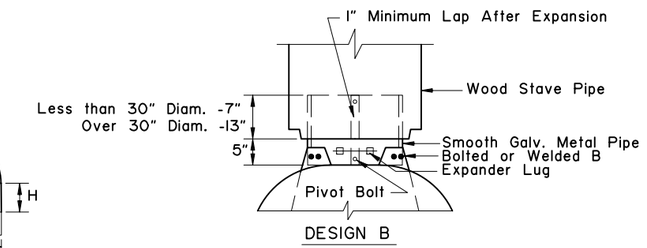
For 30" & 36" Round Pipe and 18"x11" thru 58"x36" Pipe Arch with Annular Corrugations.

For 42" thru 84" Round Pipe and 65"x40" thru 85"x54" Pipe Arch with Annular Corrugations and All Helically Corrugated Pipe and Pipe Arch.

DESIGN A



SECTION A-A



DESIGN B

METAL END SECTION CONNECTED TO WOOD STAVE PIPE

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

Adopted as an Alaska Standard Plan by:

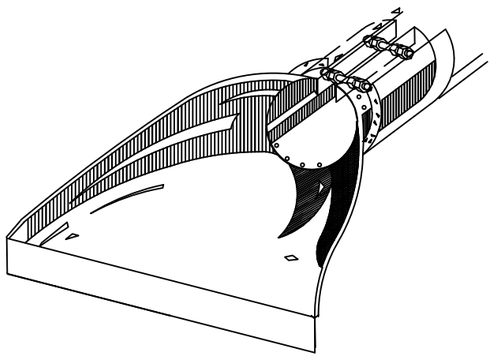
Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

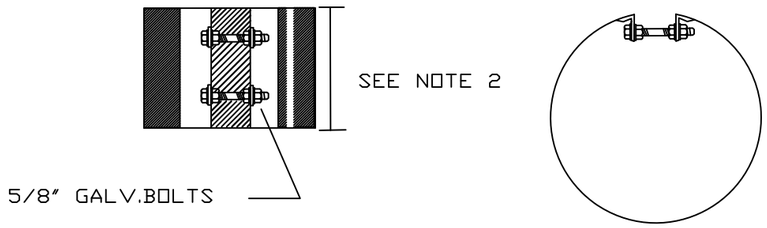
Last Code and Stds. Review
By: Date:

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

D-06.10



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



GENERAL NOTES

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

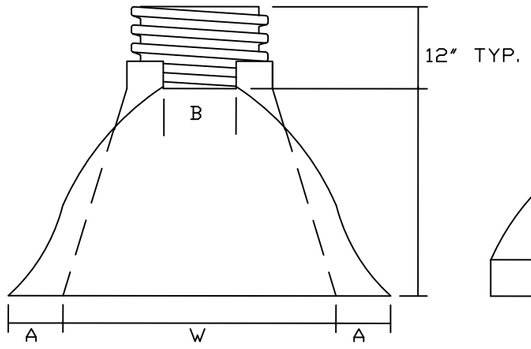
CULVERT END SECTIONS

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

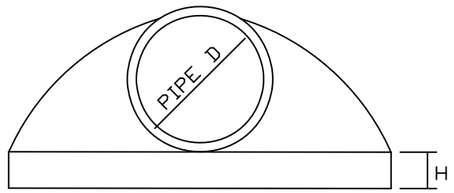
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

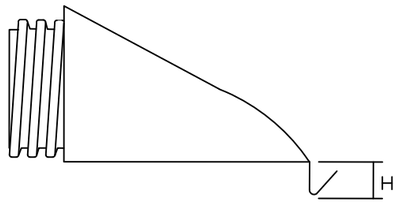
Next Code and Standards Review date: 02/08/2029



TOP VIEW



END VIEW



SIDE VIEW

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

PLASTIC END SECTION FOR CORRUGATED PLASTIC PIPE

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

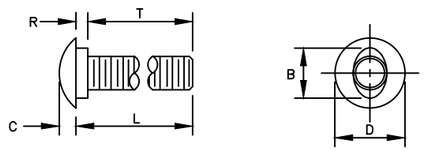
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

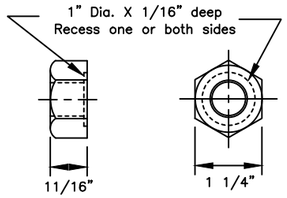
Next Code and Standards Review date: 02/08/2029

D-06.10

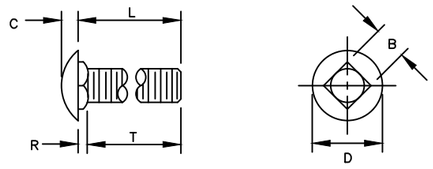


B	C	D	L (Length)	R	T (Thread Length)
15/16"	5/16"	1 5/16" or 1 7/16"	As Required	7/32"	As Required

5/8" BUTTONHEAD BOLT
(FBB01–05)

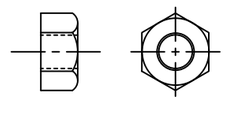


5/8" Dia. RECESSED HEX NUT
(FBB01–05)



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

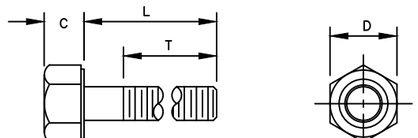
5/8" Dia. CARRIAGE BOLT
(FBC10–20)



STANDARD HEX NUT

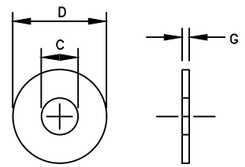
GENERAL NOTES:

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



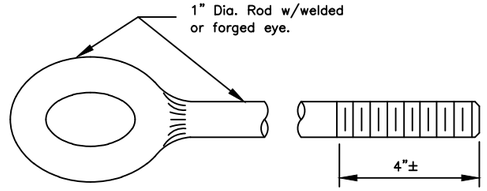
Bolt Size	C	D	L (Length)	T (Thread Length)
5/16"	——	——	1 1/2"	7/8"
5/16"	——	——	1"	1"
3/8"	——	——	7 1/2"	1 1/2"
1/2"	——	——	1 1/2"	1 1/2"
1/2"	——	——	1 1/4"	1 1/4"
5/8" H.S.	5/16"	7/8"	8"	1 1/2"
5/8"–11	——	——	1 1/2"	1 1/2"
3/4"	——	——	1 1/2"	1 1/2"
3/4"	——	——	As Required	2"
3/4" H.S.	15/32"	1 1/4"	2"	1 1/2"

STANDARD HEX BOLTS

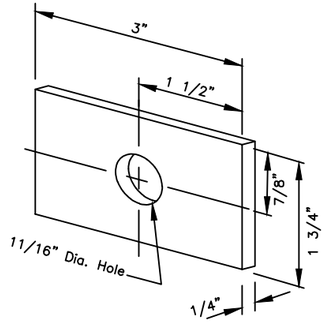


For Bolt ø	C	D	G
3/8"	7/16"	1"	5/64"
1/2"	17/32"	1 1/16"	3/32"
1/2" H.S.	17/32"	1 1/16"	3/32"
5/8"	11/16"	1 3/4"	9/64"
3/4"	13/16"	1 15/32"	9/64"
3/4" H.S.	13/16"	2"	5/32"
1"	1 1/16"	2"	9/64"

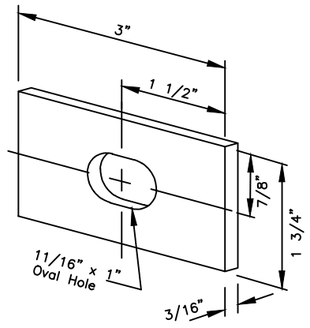
STANDARD STEEL WASHERS



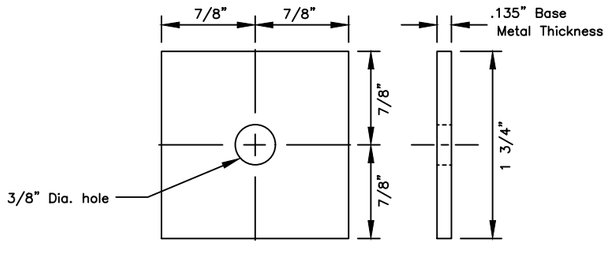
EYE BOLT



FLAT PLATE WASHER



RECTANGULAR POST BOLT WASHER
(FWR03)



SQUARE STEEL WASHER
(FWR01)

State of Alaska DOT&PF
ALASKA STANDARD PLAN

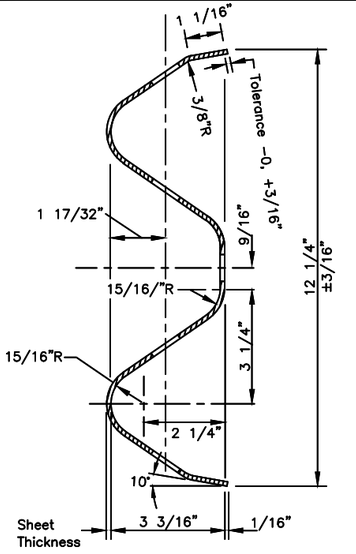
STANDARD GUARDRAIL HARDWARE
(NUTS, BOLTS & WASHERS)

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

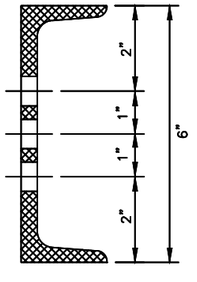
Adoption Date: 7/17/2020

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

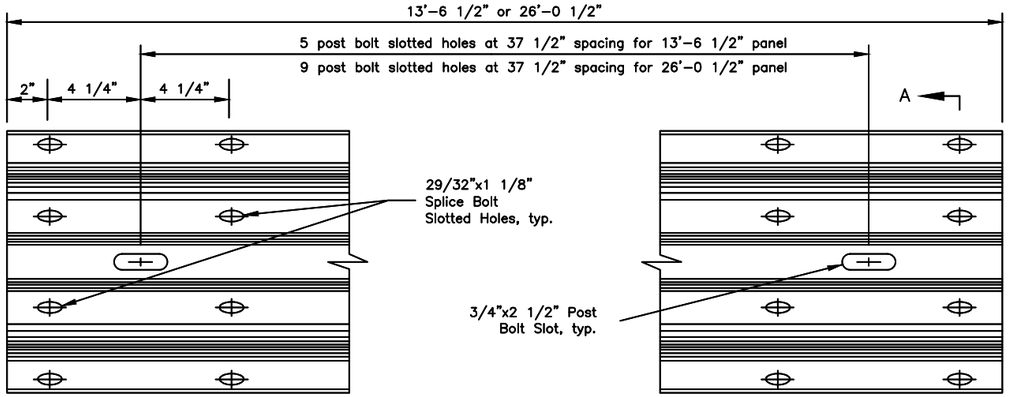
Next Code and Standards Review Date: 7/8/2030



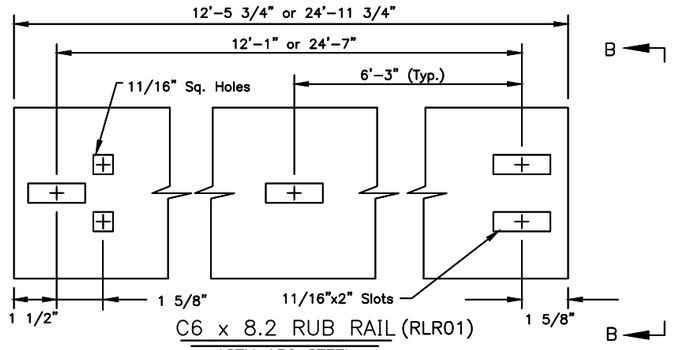
SECTION A–A
(cross section same as RWM02a–b)



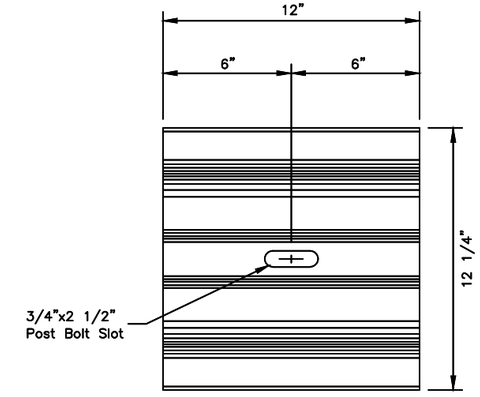
SECTION B–B



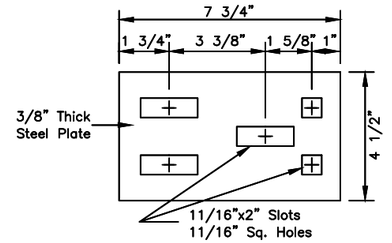
STANDARD W–BEAM PANEL (RWM04a–b)



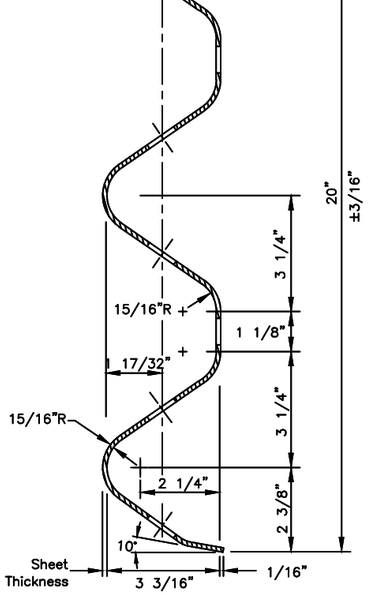
C6 x 8.2 RUB RAIL (RLR01)
ASTM A36 STEEL



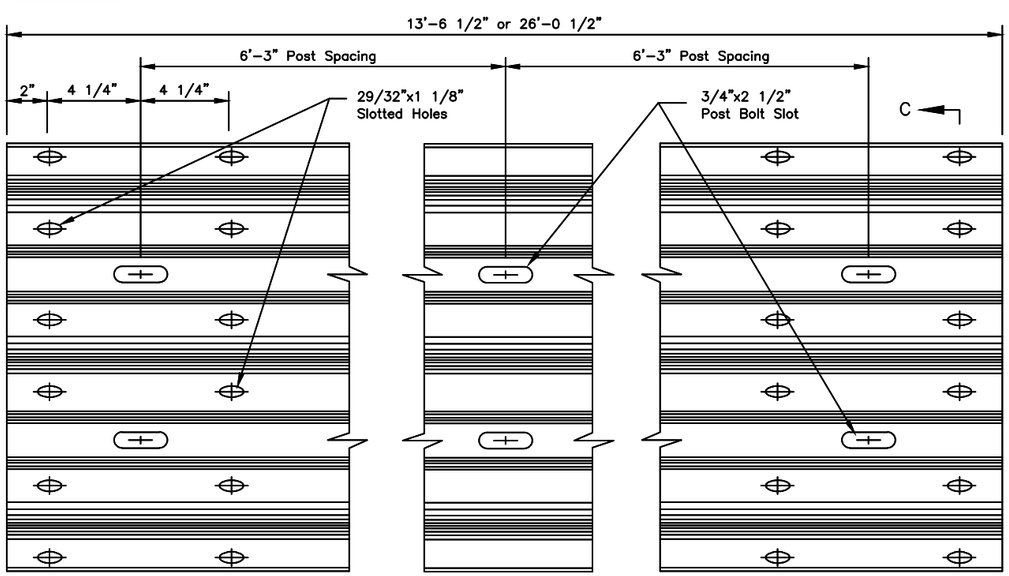
W–BEAM BACKUP PLATE
(RWB01a–b)



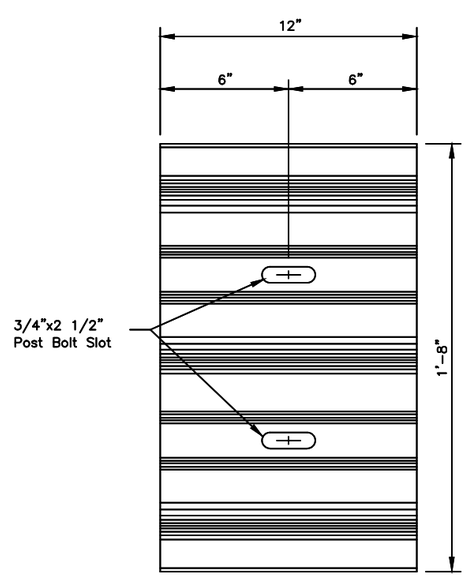
SPLICE PLATE (RLR01)
ASTM A36 STEEL



SECTION C–C
(RTM01a–02b)



STANDARD THRIE BEAM PANEL (RTM01a–02b)



THRIE BEAM BACKUP PLATE
(RTB01a–02b)

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

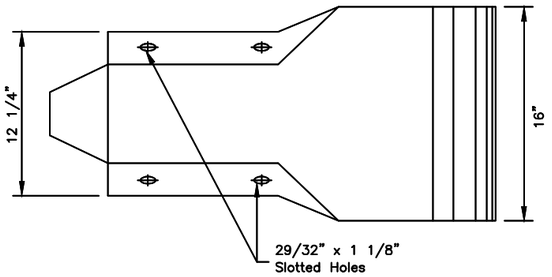
STANDARD GUARDRAIL HARDWARE (RAILS AND SPLICES)

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

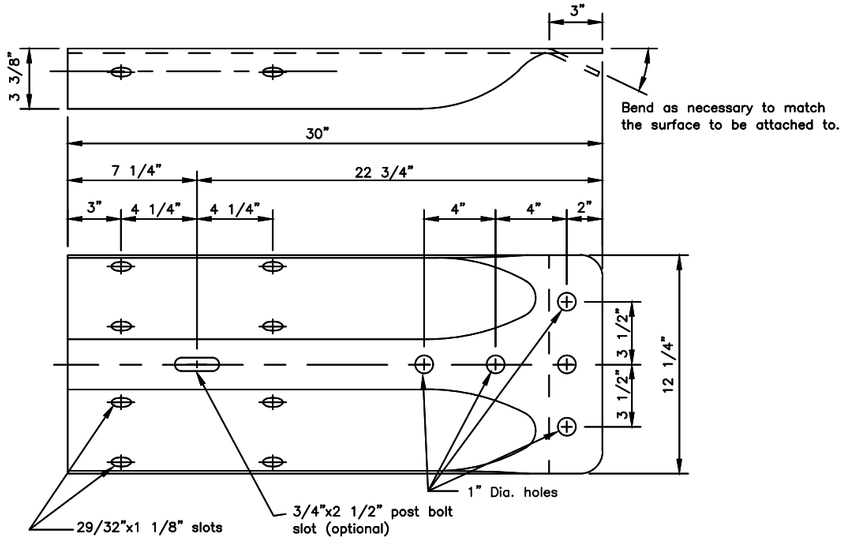
Adoption Date: 7/17/2020

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

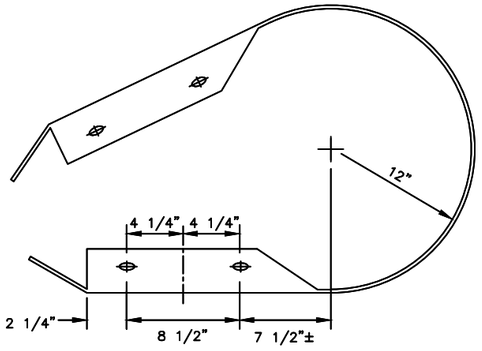
Next Code and Standards Review Date: 7/8/2030



PROFILE

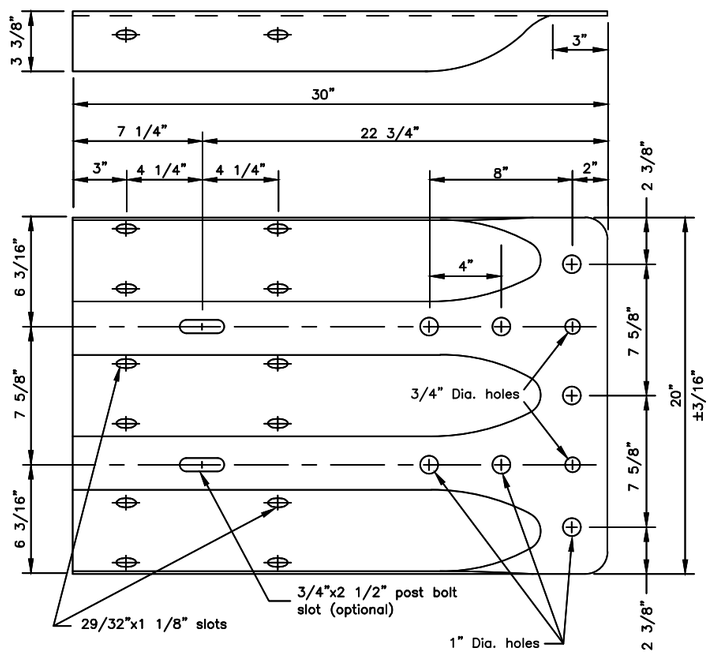


STANDARD W-BEAM TERMINAL CONNECTOR
(RWE02)



W-BEAM PLAN VIEW
*Radius to be specified on the plans

STANDARD W-BEAM END SECTION
(RWE06)



STANDARD THRIE BEAM TERMINAL CONNECTOR
(RTE01b)

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

STANDARD GUARDRAIL HARDWARE (TERMINAL CONNECTORS)

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

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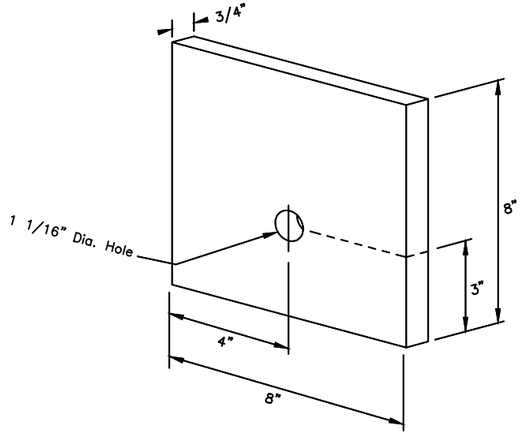
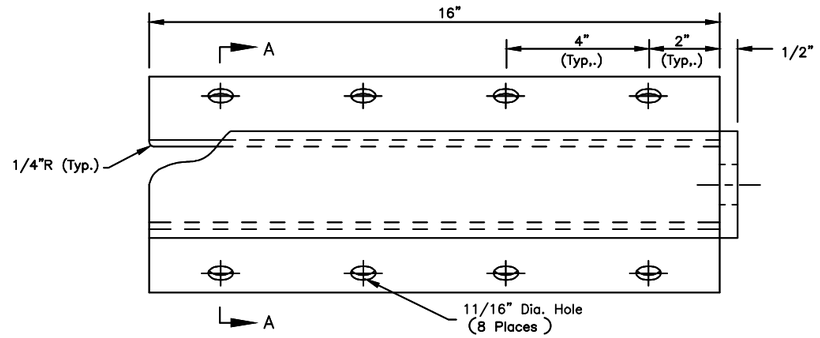
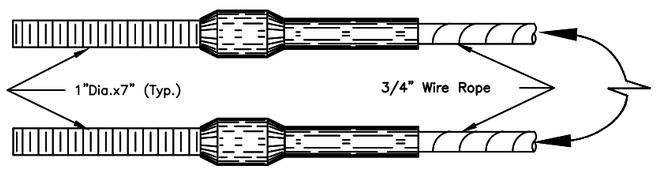
G-00.05



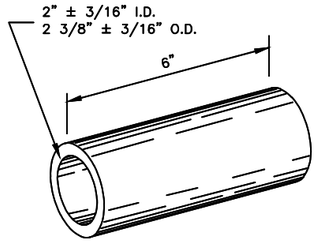
BEARING PLATE for CRT TERMINAL ANCHOR
(FPB01)



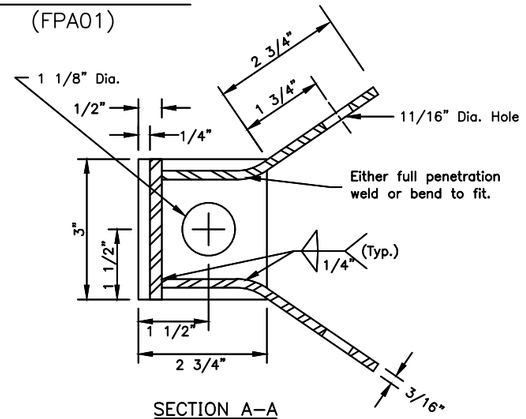
CABLE ANCHOR PLATE
(FPA01)



SWAGED FITTING DETAIL
(FCA01-02)

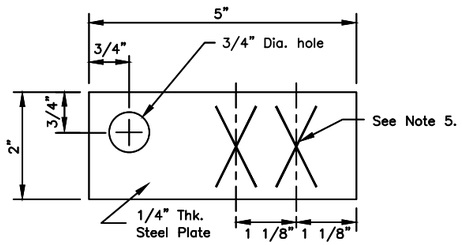


SLEEVE DETAIL
(FMM02)

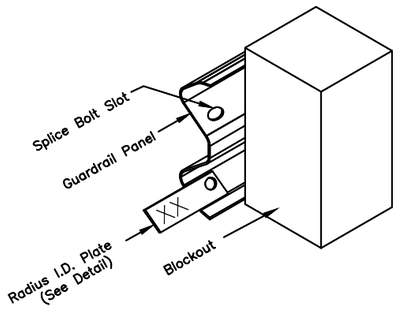


SECTION A-A

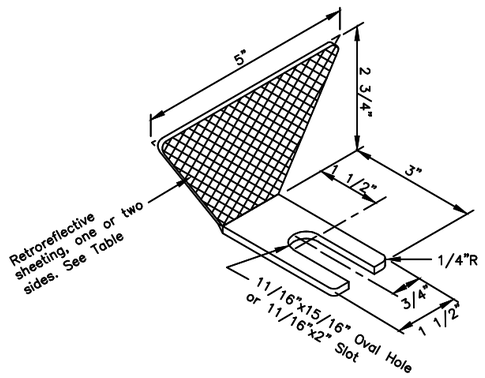
CONTROLLED RELEASE TERMINAL HARDWARE DETAILS



RADIUS I.D. PLATE



RADIUS I.D. PLATE MOUNTING DETAIL



GUARDRAIL REFLECTOR

Guardrail Reflector Table

Type	Color	Reflectorized
A	White	Front & Rear
B	White	Front
C	Yellow	Front
D	Yellow	Front & Rear

GENERAL NOTES:

1. Cable Anchor Plate may be formed in single unit or welded fabrication.
2. Anchor Cable Assembly must conform to AASHTO M 30 with Type II Wire Rope.
3. Provide Sleeve for Wood Posts meeting the requirements of ASTM A53 and made of 2-inch galvanized standard pipe. Sleeve shall be a tight, pressed fit in post.
4. Attach radius ID plates to all shop-bent guardrail sections. Bolt the ID plates to the back side of the guardrail panel with the lower splice bolt nearest the P.C. of the radius.
5. Show the Rail bend radius, in feet, as "XX" on the radius ID plate. Digits shall be etched or stamped and have a min. height of 1 1/2" and a max. width of 3/4". Galvanize the plate after the digits are marked.
6. All covered hardware shall comply with the Task Force 13 (TF13) Guide to Standardized Roadside Safety Hardware online publication. Designators given when possible in parentheses.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

STANDARD GUARDRAIL HARDWARE (MISCELLANEOUS)

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

Adoption Date: 7/17/2020

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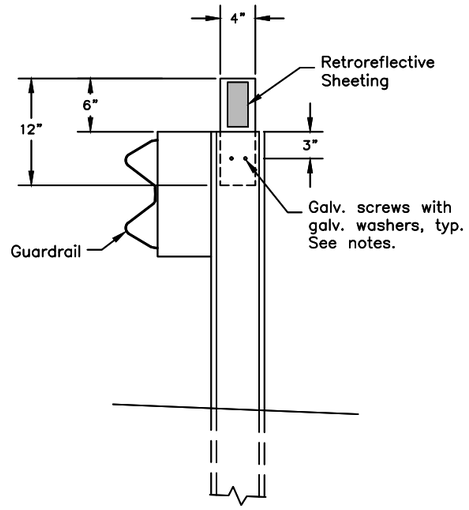
By: KLK Date: 7/8/2020

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



GUARDRAIL FLEXIBLE DELINEATOR DETAIL

(Steel post shown – similar for wood post)

CONSTRUCTION NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

STANDARD GUARDRAIL HARDWARE (FLEXIBLE DELINEATORS)

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

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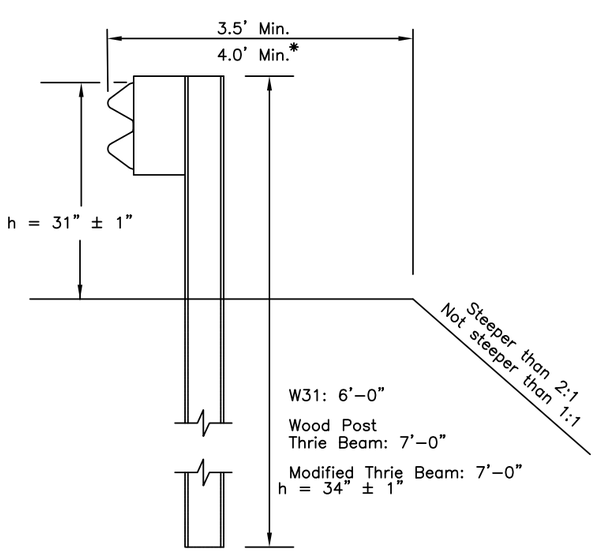
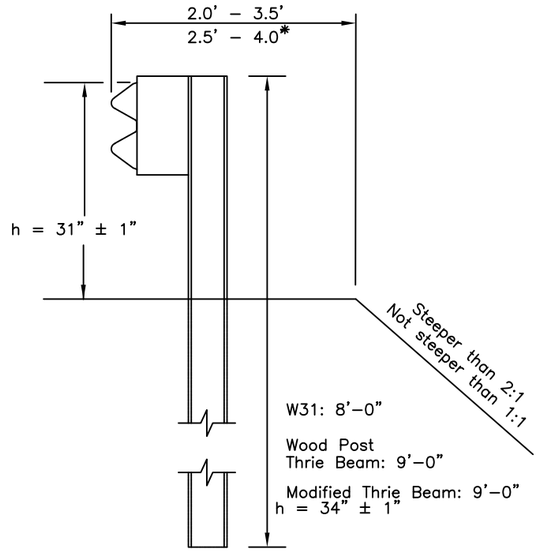
By: KLK Date: 7/8/2020

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



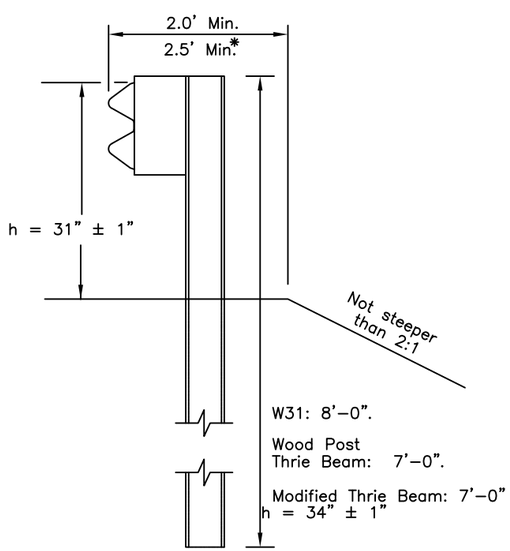
* with Modified Thrie Beam

CASE 1



* with Modified Thrie Beam

CASE 2



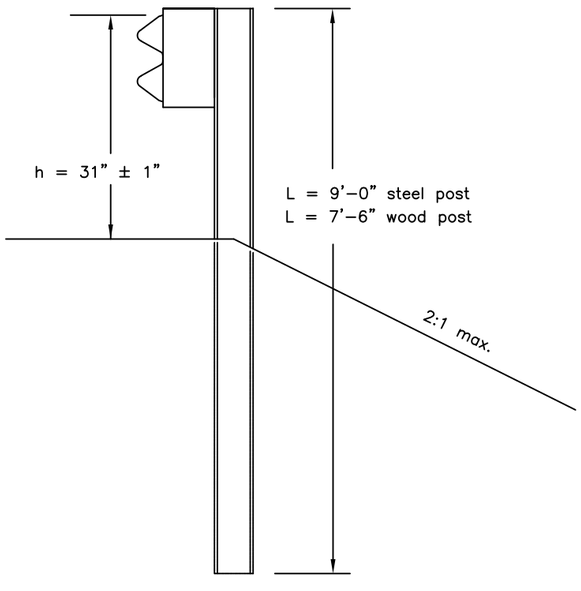
CASE 3

CONSTRUCTION NOTES:

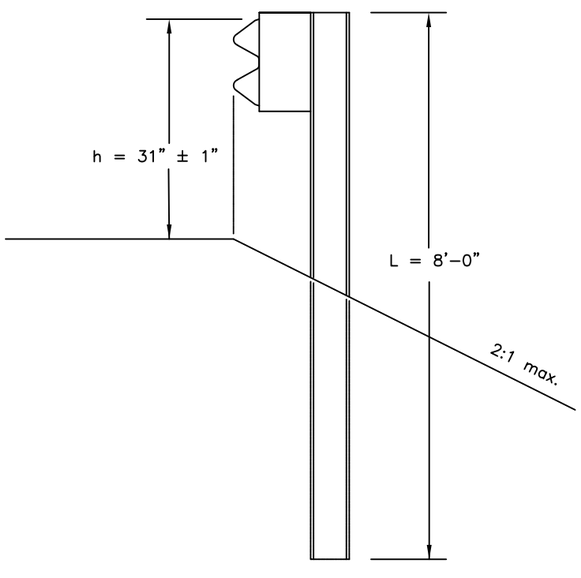
1. This drawings is to be used for post length determination only. See Plans for slopes and behind–post embankment widths.
2. To determine post length, identify the case that matches site conditions and read the length corresponding to the pertinent guardrail type.
3. These dimensions apply to both curbed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

DESIGN NOTES:

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



CASE 4
(See Note 5)



CASE 5
(See Note 5)

State of Alaska DOT&PF
ALASKA STANDARD PLAN

GUARDRAIL POST INSTALLATION

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

Adoption Date: 09/15/2022

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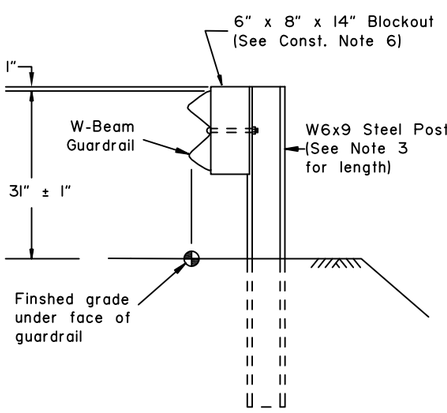
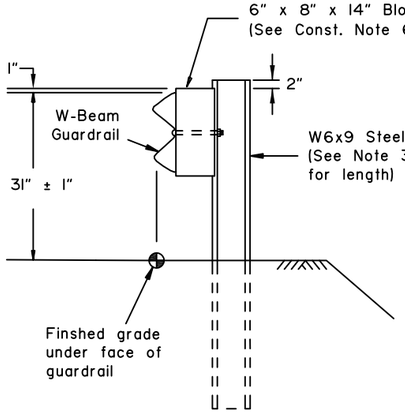
By: LRG Date: 09/15/2022

Next Code and Standards Review date:09/15/2032

G-10.21

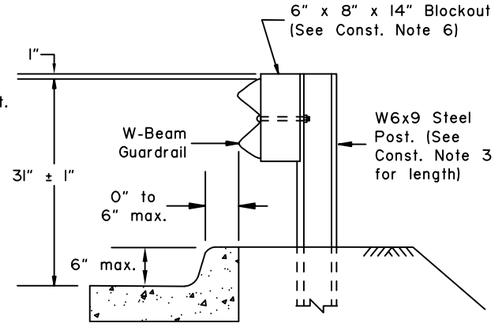


TYPE I POST INSTALLATION

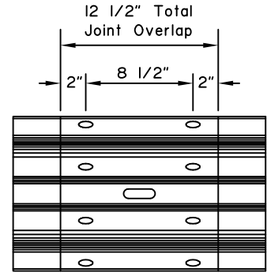


TYPE II POST INSTALLATION

(Facilitates raising rail for future overlays.)

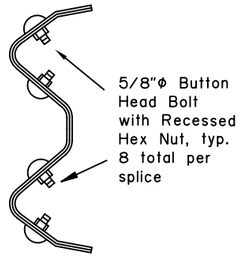


TYPE III POST INSTALLATION

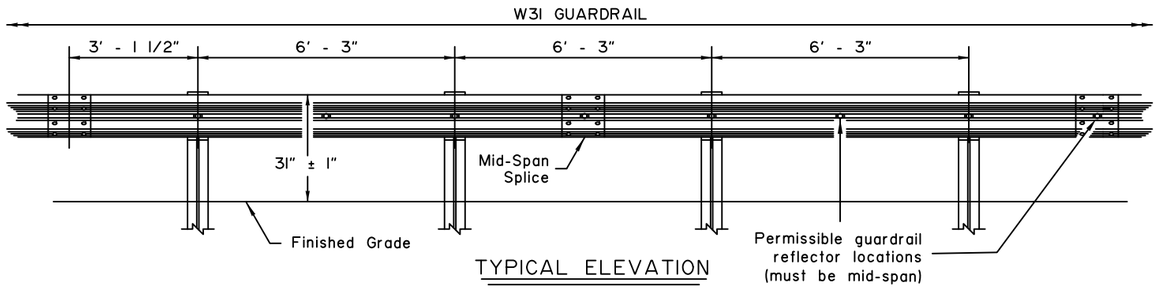


SPLICE DETAIL

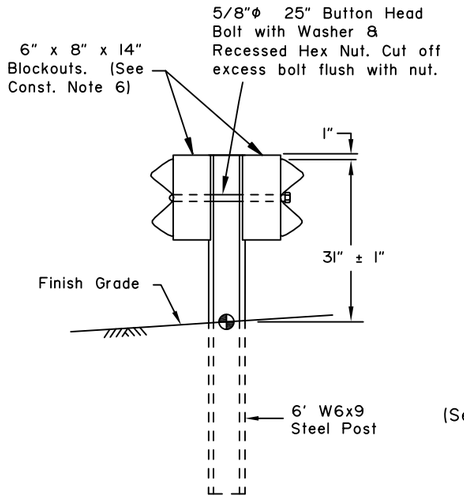
(At mid span between posts only. Bolts not shown for clarity)



SPLICE CROSS-SECTION



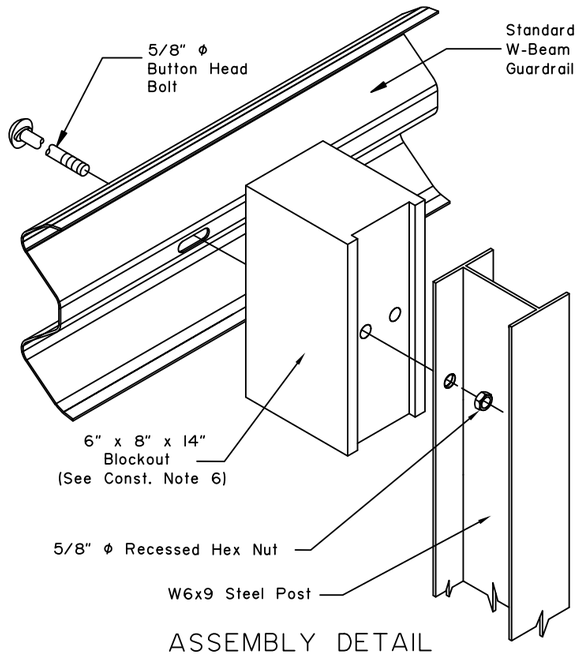
TYPICAL ELEVATION



TYPE IV DOUBLE SIDED INSTALLATION

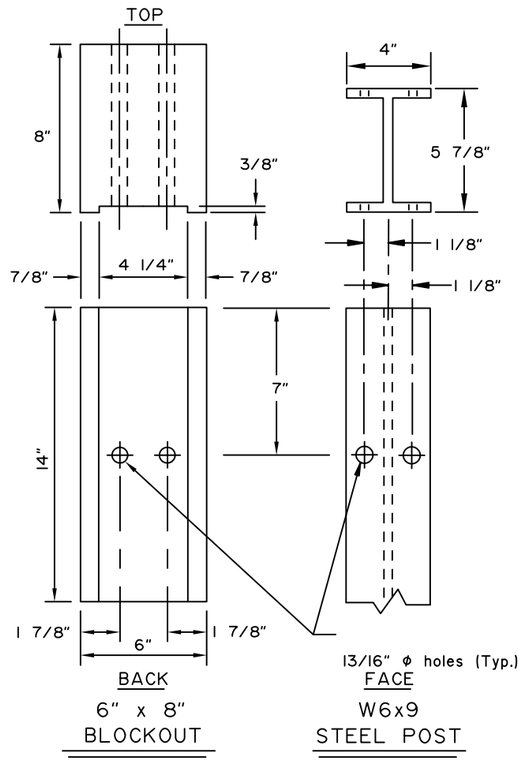
GUARDRAIL REFLECTOR

(See Const. Note 5)



ASSEMBLY DETAIL

(Type I post shown)



BACK

6" x 8" BLOCKOUT

FACE

W6x9 STEEL POST

CONSTRUCTION NOTES:

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

DESIGN NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

STEEL POST W31 GUARDRAIL

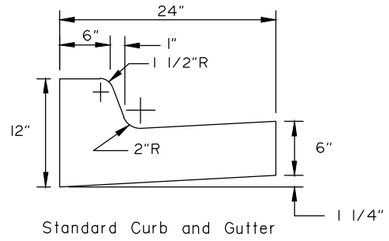
Adopted as an Alaska Standard Plan by: *Carolyn Morehouse*

Carolyn Morehouse, P.E.
Chief Engineer

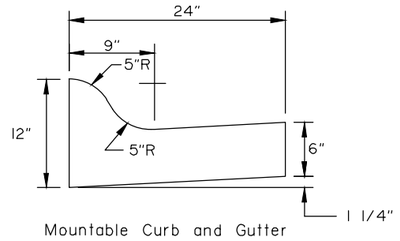
Adoption Date: 05/15/2019

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

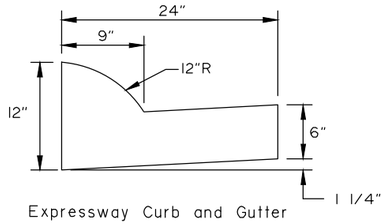
Next Code and Standards Review date: 5/15/2029



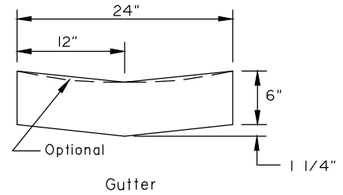
Standard Curb and Gutter



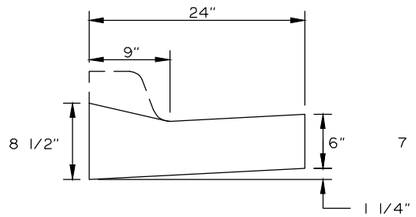
Mountable Curb and Gutter



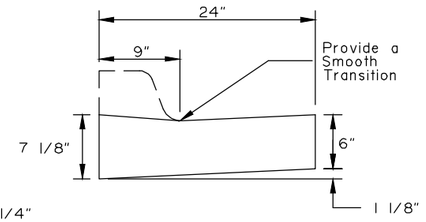
Expressway Curb and Gutter



Gutter

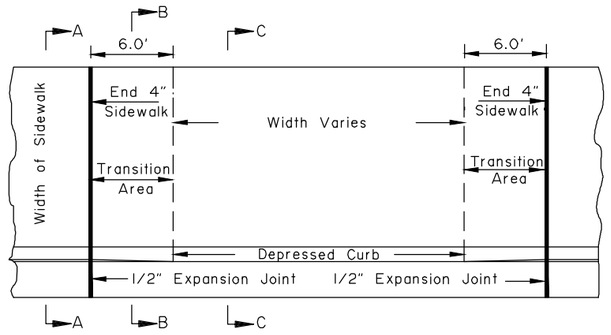


Depressed Curb and Gutter

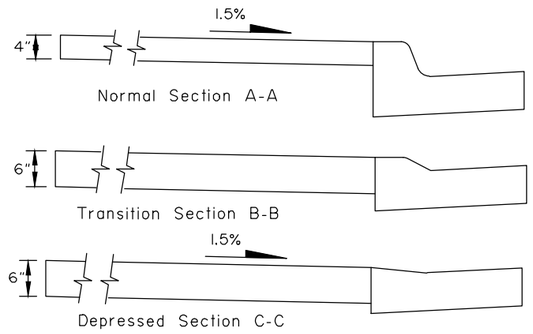


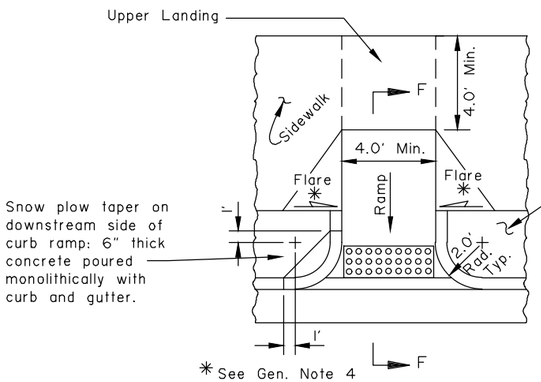
ADA Curb and Gutter

CURB and GUTTER DETAILS

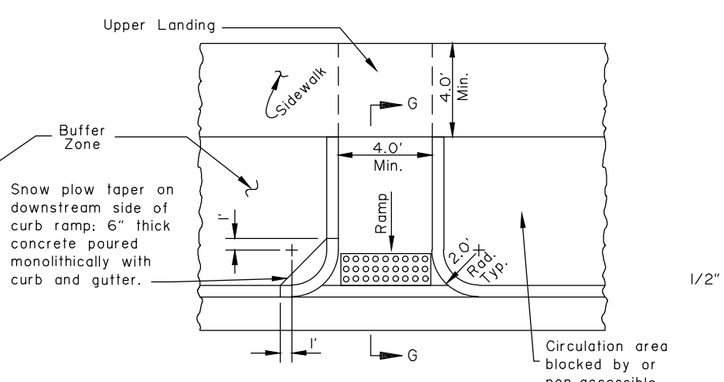


DRIVEWAY CURB CUT DETAILS



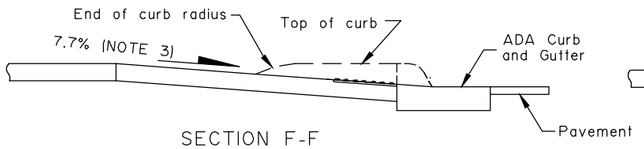


PLAN

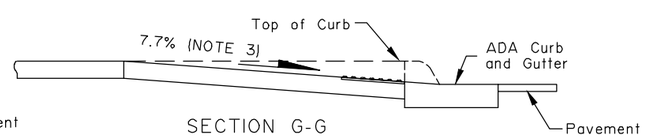


PLAN

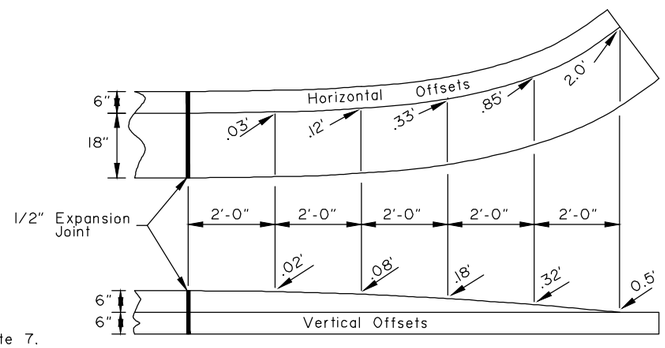
= Detectable Warning Tile (see Note 8)



SECTION F-F
Returned Curb Ramp with
Sidewalk for Pedestrians



SECTION G-G
Returned Curb Ramp
for Pedestrians



CURB and GUTTER
TERMINATION TRANSITIONS

Note: Drawing not to scale

CONSTRUCTION NOTES:

1. Use the type of curb and gutter shown on the plans.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. Construct ramp slopes at a 7.7% nominal grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
4. Construct flare slopes at 8.3% (measured paralllel to the curb line) or flatter, sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max), and ADA Curb and Gutter gutter pan slopes at 4.7% nominal. Construct grade breaks perpendicular to ramp runs.
5. Do not construct flare slopes steeper than 10.0%, sidewalk cross slopes steeper than 2.0% and ADA Curb and Gutter gutter pan slopes steeper than 5.0%. These are the steepest slopes allowed under the 2006 ADA Standards for Transportation Facilities.
6. Provide a coarse broomed finish on ramp runs perpendicular to the ramp slope.
7. When approved by the Engineer, curb returns may be replaced with flares at locations where access to the side of a ramp run is free of poles, utility boxes, other obstructions, or non-accessible surfaces such as a dirt planter strips. See Standard Plan I-22 for flare details.
8. Install 24" wide detectable warning tiles for the full width of the ramp. Provide tiles with truncated domes meeting Section 705.1 of the 2006 ADA Standards for Transportation Facilities. Align truncated dome pattern in the predominant direction of wheelchair travel to permit wheels to roll between domes.
9. Maximum cross slope on upper landings, measured in any direction, is 2.0%. Maximum cross slope on ramps is 2.0% measured perpendicular to the ramp run.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CURB CUT
CURB & GUTTER
AND CURB RAMP DETAILS

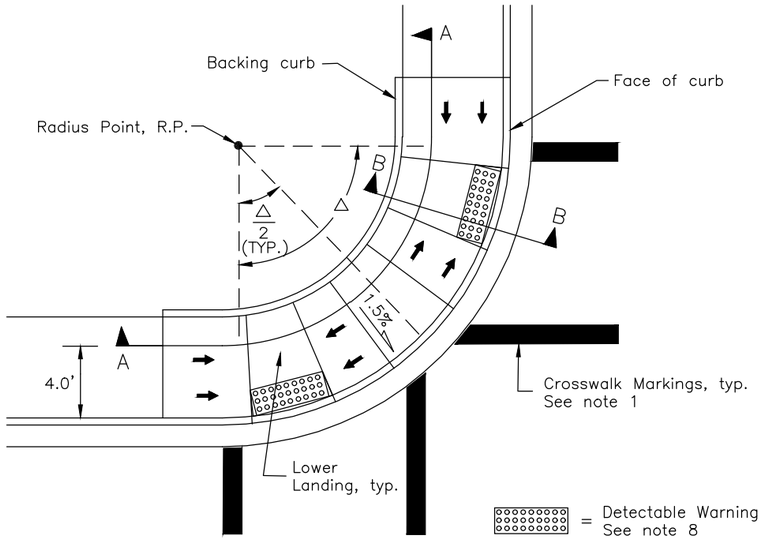
Adopted as an Alaska Standard Plan by: Carolyn Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

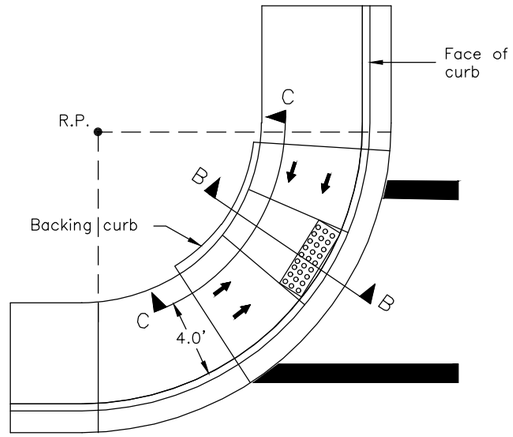
Last Code and Stds. Review
By: KLH Date: 7/8/2020

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



= Detectable Warning Tile See note 8

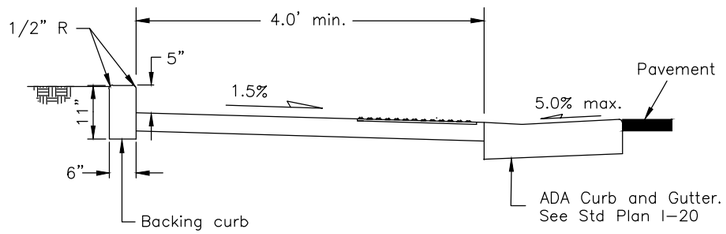
TWO CROSSING DIRECTIONS
At corner



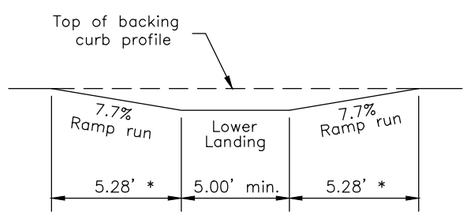
ONE CROSSING DIRECTION
At corner – generic location shown

CONSTRUCTION NOTES:

1. See plans for ramp type at specific locations. See striping plans for crosswalk layouts.
2. Construct ramp runs and landings of concrete, regardless of whether the sidewalk is asphalt or concrete.
3. When one parallel curb ramp will serve two directions, use the One Crossing Direction detail and refer to the striping plans for crosswalk layouts.
4. Ramp run lengths are shown for a flat sidewalk grade. For other sidewalk grades, increase or decrease ramp and flare lengths to maintain the slopes shown.
5. Construct ramp slopes at a nominal 7.7% grade, or flatter. Ramp slopes may be increased to a maximum of 8.3% when site conditions warrant it. Ramp lengths should be increased to keep grades under the 8.3% maximum, but are not required to exceed 15.0 feet. The resulting ramp grade at a 15.0 foot ramp length is acceptable even if it exceeds 8.3%.
6. Construct sidewalk cross slopes at 1.5% nominal (1.0% min. and 2.0% max).
7. Provide a coarse broomed finish running perpendicular to the curb on ramp runs and upper landings and parallel to the curb on lower landings.
8. Install 24" detectable warning tiles meeting Section 705.1 of the 2006 ADA Standards for Transportation Facilities for the full width of the ramp.
9. Maximum cross slope on lower landings is 2.0% as measured in any direction. Maximum cross slope on ramps is 2.0% measured perpendicular to the ramp run.
10. Provide 4" minimum thick concrete on ramps and landings.

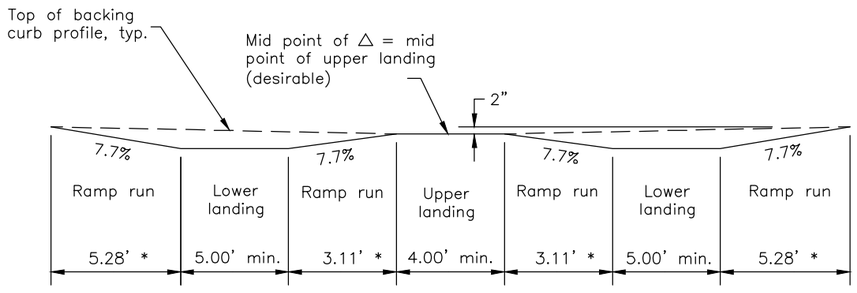


SECTION B–B



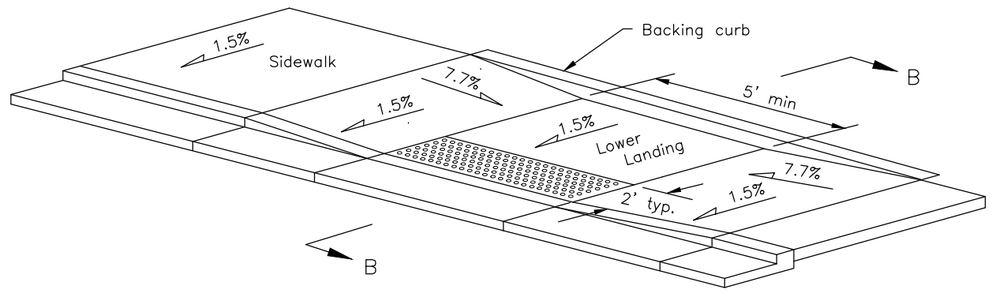
* See Const. Note 5

PROFILE C–C



* See Const. Note 5

PROFILE A–A



MID–BLOCK

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PARALLEL CURB RAMP

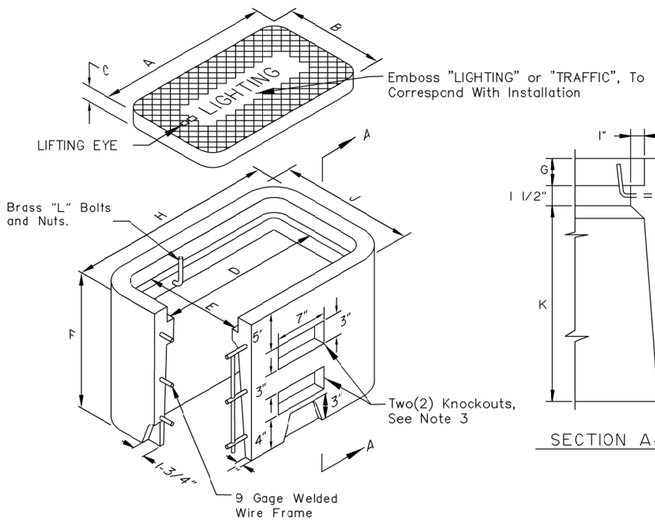
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

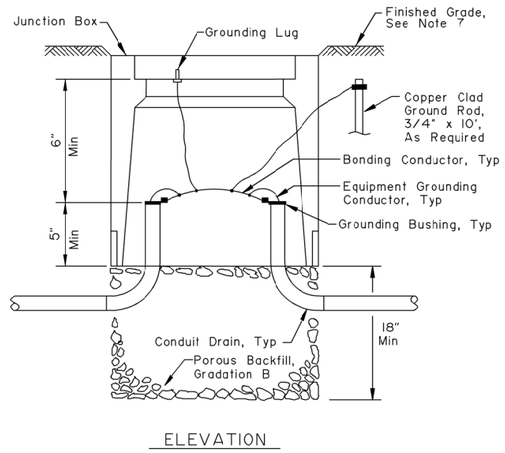
Adoption Date: 7/17/2020

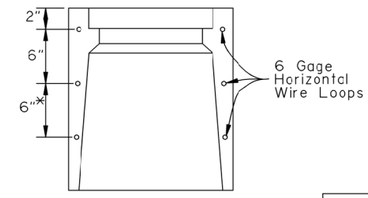
Last Code and Stds. Review
By: KLH Date: 7/8/2020

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

I-21.12







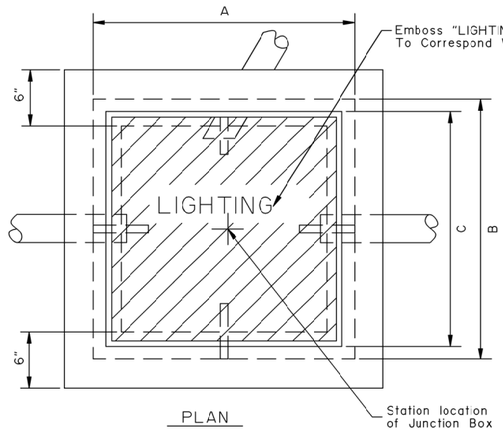
	DIMENSIONS (IN)	
	TYPE I	TYPE IA
A	15	22 3/4
B	10	13 1/4
C	1 3/4	2
D	13 1/2	21 1/4
E	8 1/2	11 3/4
F	12	18
G	1 3/4	2
H	19 1/2	27 1/4
J	14 1/2	17 3/4
K	8 3/4	14 1/2

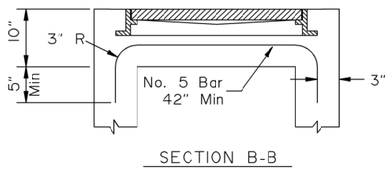
	DIMENSIONS (IN)		
	TYPE II	TYPE III	TYPE IV
A (Max)	30	30	30
B (Max)	30	30	36
C (Min)	22	22	30
D (Min)	22	22	24
E (Min)	24	24	30

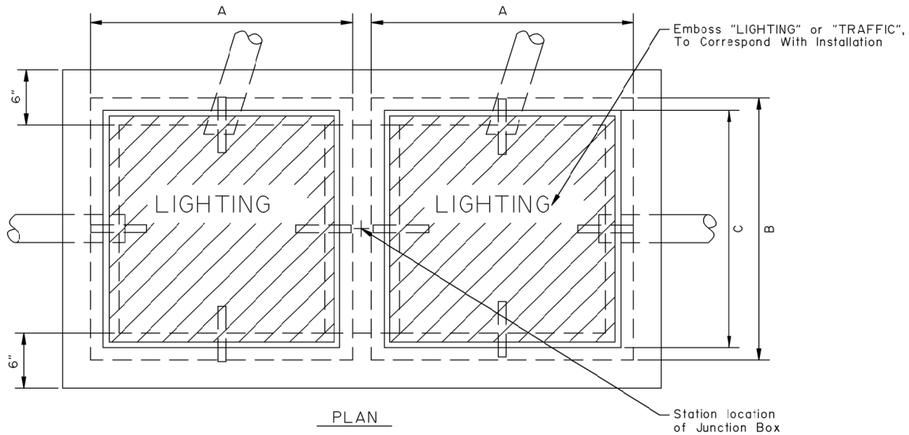
TYPE I & IA JUNCTION BOX

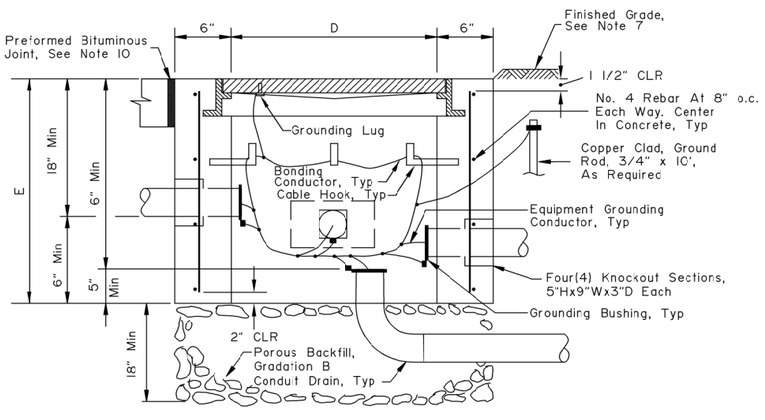
GENERAL NOTES:

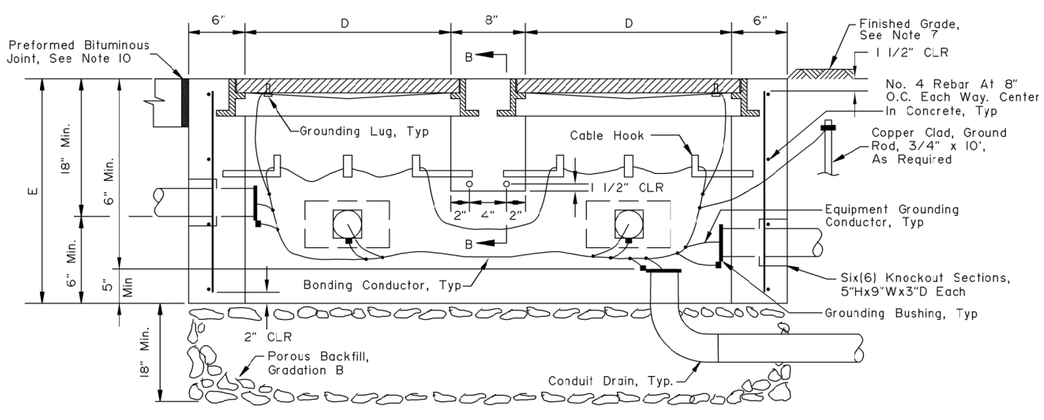
1. See the Standard Specificcations for Highway Construction (SSHC) for additional requirements.
2. See Section 660-2.01 of the SSHC for concrete and reinforcing steel requirements.
3. Provide knockouts indicated in Type IA junction box when installed for loop detection. Conduit for loop detectors to enter junction box through knockouts.
4. Covers for junction boxes shall be cast iron. Type I and IA shall be secured to junction box with a minimum of two bolts and be rated ANSI/SCTE 77, Tier 8, minimum. Type II, Type III and Type IV cover shall weigh over 100 pounds and be ANSI/SCTE77, AASHTO H-20 traffic rated.
5. The minimum required bearing capacity for Type I shall be 6,800psf, for Type IA shall be 5,100psf, for Type II shall be 3,500psf, for Type III shall be 2,300psf, and for Type IV shall be 2,000psf.
6. See section 703-2.10 of the SSHC for Porous Backfill material requirements.
7. See section 660-3.04 of the SSHC for top of junction box placement to finished grade requirements.
8. Provide conduits as required, size and quantity indicated in plans.
9. Provide grout around conduits in knockouts and for unused knockouts.
10. Provide a 1/2" thick preformed bituminous joint material around junction boxes installed in concrete walkways.
11. Metal conduits and junction box covers shall be bonded together to be electrically continuous using No. 8 AWG minimum copper bonding conductor. Cover shall be bonded using a tinned copper braided bonding jumper.











NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

JUNCTION BOXES FOR ELECTROLIER & TRAFFIC SIGNALS

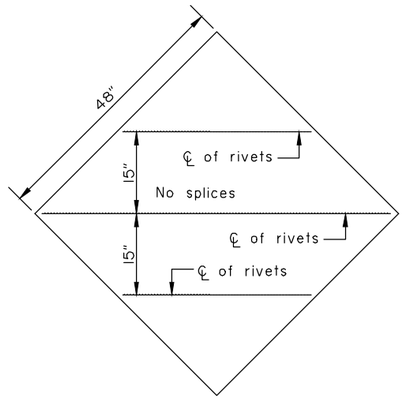
Adopted as an Alaska Standard Plan by Carolyn H Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

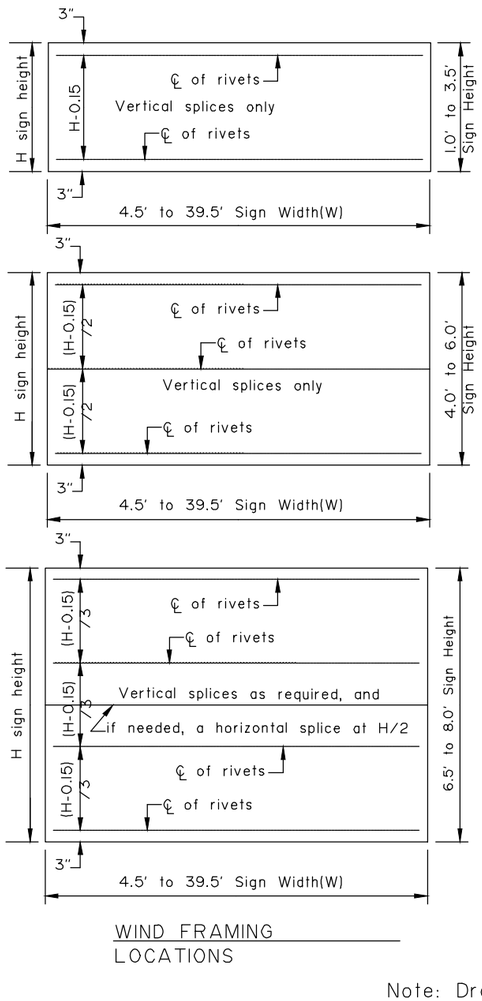
Adoption Date: 09/15/2022

Last Code and Stds. Review
By: CNH Date: 7/15/2020

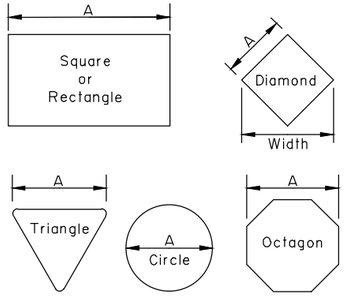
Next Code and Standards Review date: 7/15/2030

L-23.03





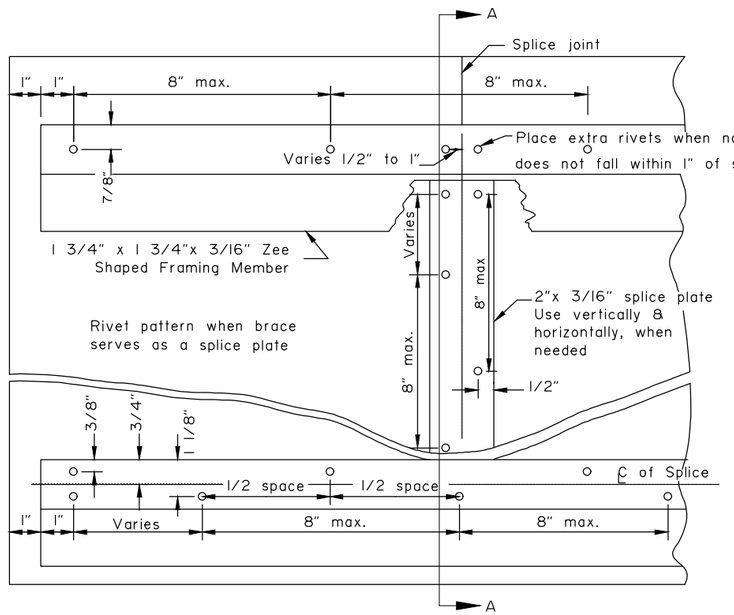
WIND FRAMING LOCATIONS



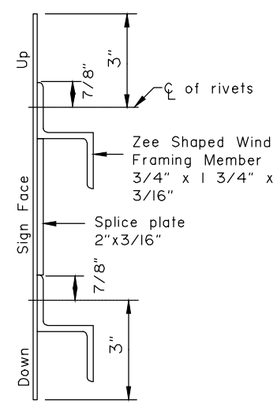
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

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

LIGHT SIGNS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN FRAMING

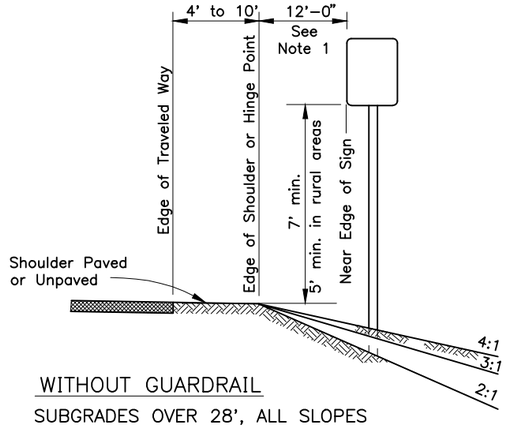
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

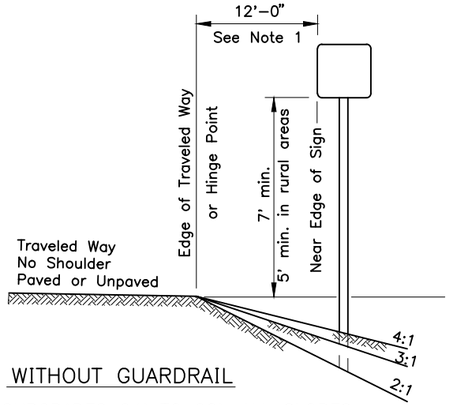
Next Code and Standards Review date: 7/8/2030

S-00.12



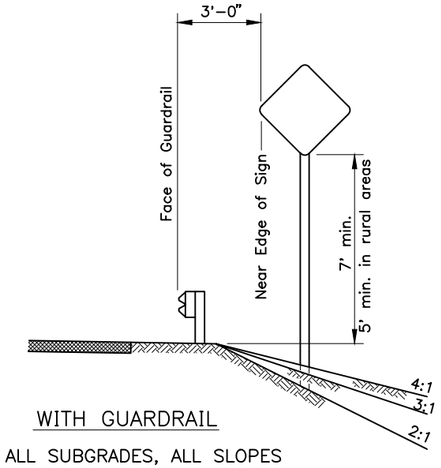
WITHOUT GUARDRAIL

SUBGRADES OVER 28', ALL SLOPES



WITHOUT GUARDRAIL

SUBGRADES 24' TO 28', ALL SLOPES

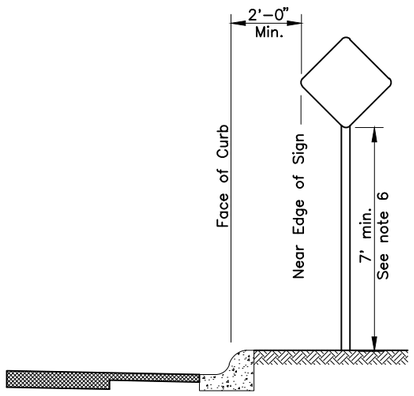


WITH GUARDRAIL

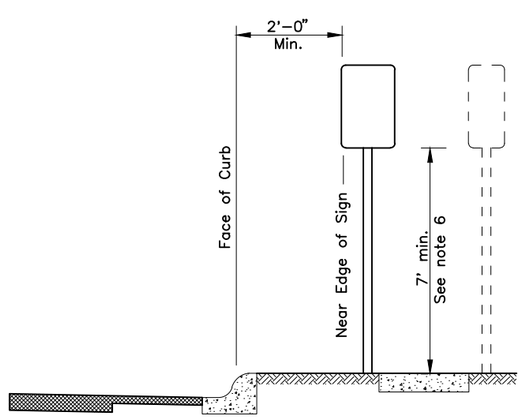
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

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

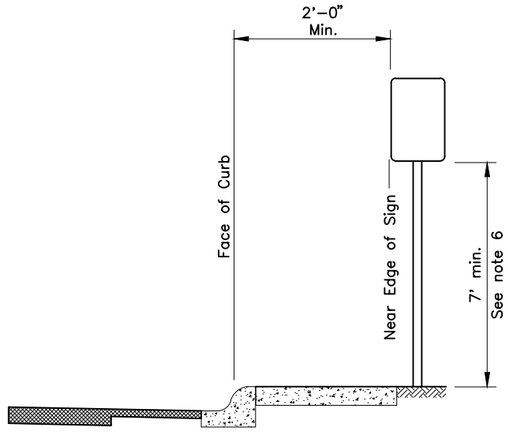


CURB WITHOUT SIDEWALK

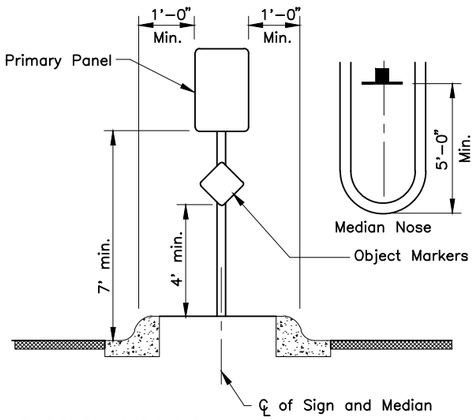


CURB WITH PARKWAY AND SIDEWALK

(If R/W width permits, signs should be placed behind sidewalk.)

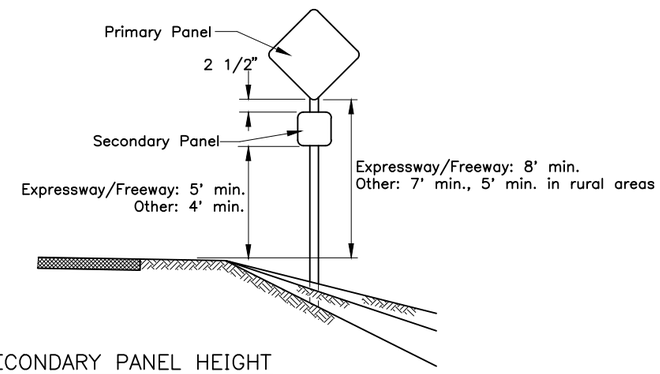


CURB WITH SIDEWALK WITHOUT PARKWAY



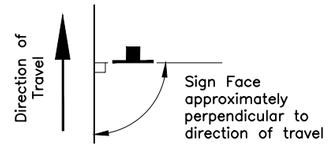
RAISED MEDIANS

Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT

ALL TWO PANEL MOUNTING



SIGN POSITIONING

State of Alaska DOT&PF
ALASKA STANDARD PLAN

POST MOUNTED SIGN
OFFSET AND HEIGHT

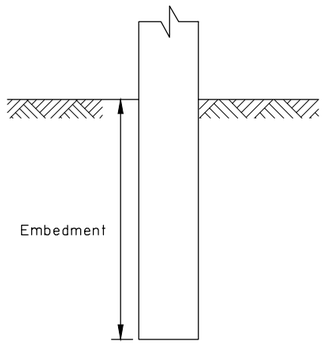
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

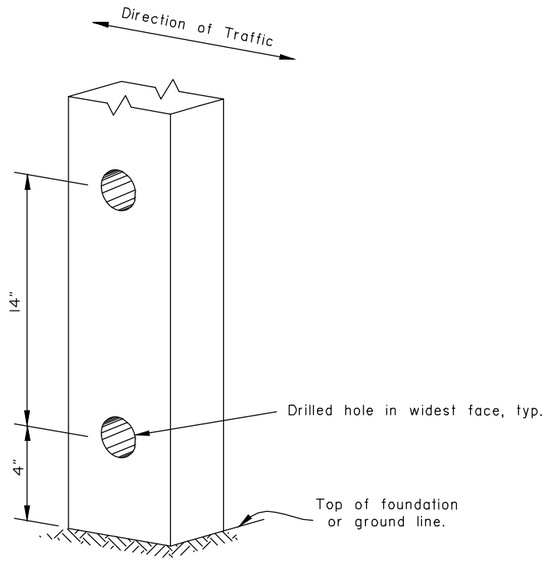
Adoption Date: 7/17/2020

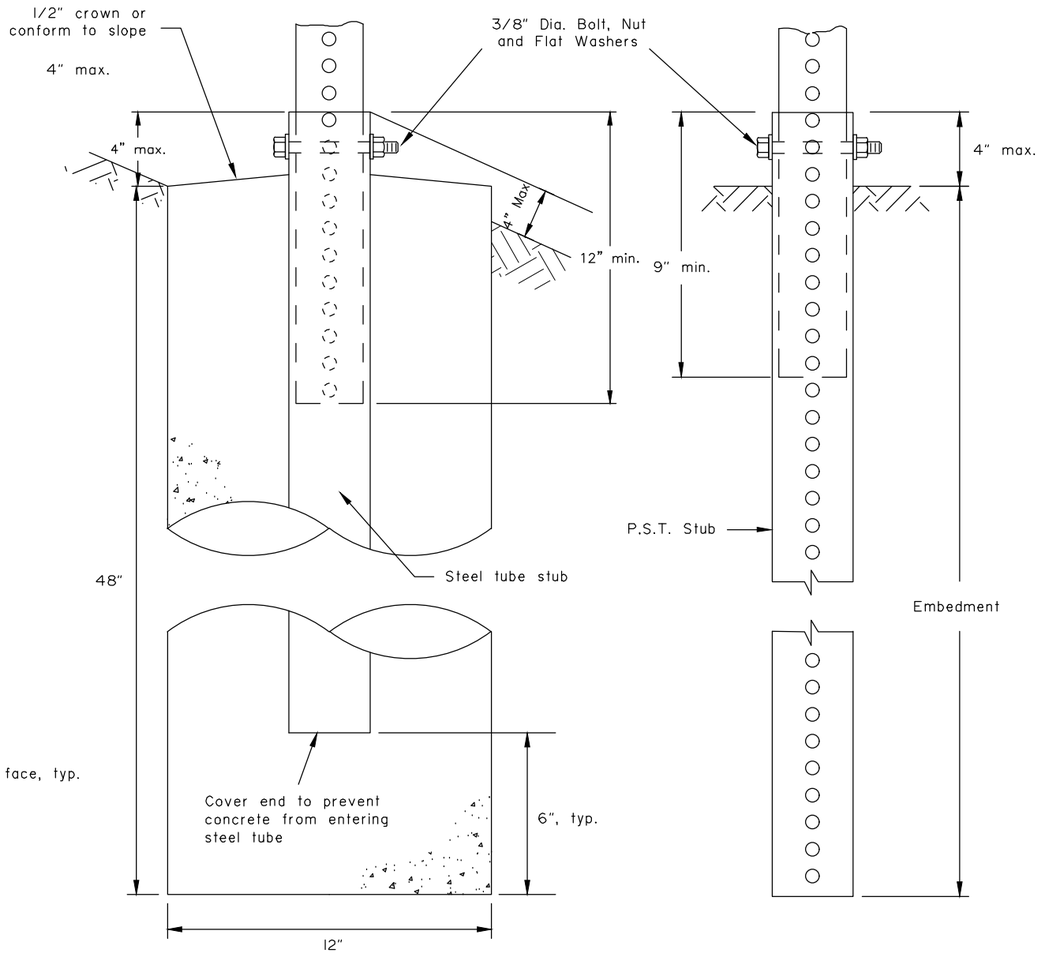
Last Code and Stds. Review
By: KLK Date: 7/8/2020

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

S-05.02







SLEEVE TYPE
CONCRETE FOUNDATION

SLEEVE TYPE*
SOIL EMBEDMENT

GENERAL NOTES:

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

SIGN POST SPACING NOTES:

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

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

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

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

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

PERFORATED STEEL TUBE (PST) POSTS

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

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHT SIGN STRUCTURE
POST EMBEDMENT

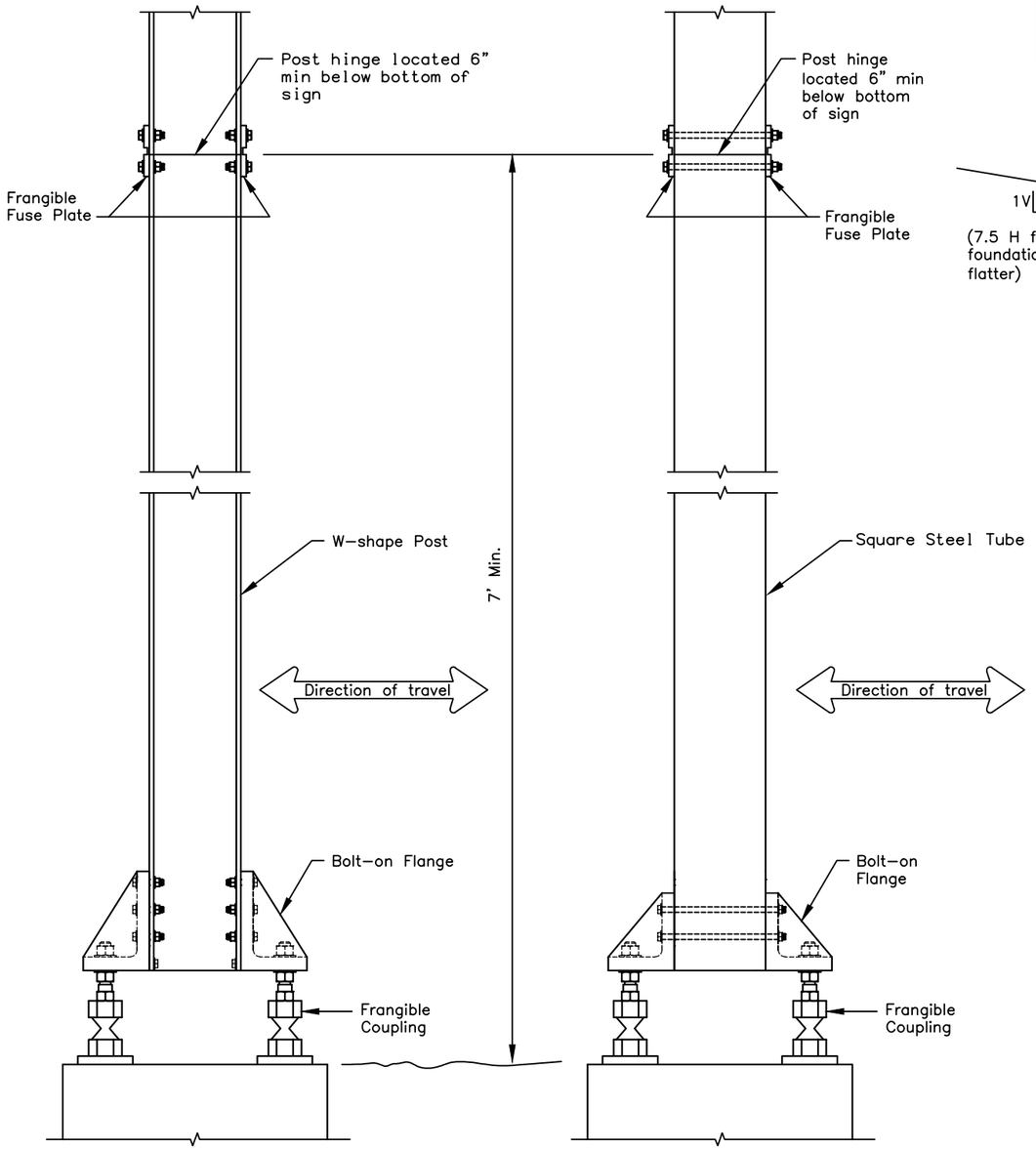
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

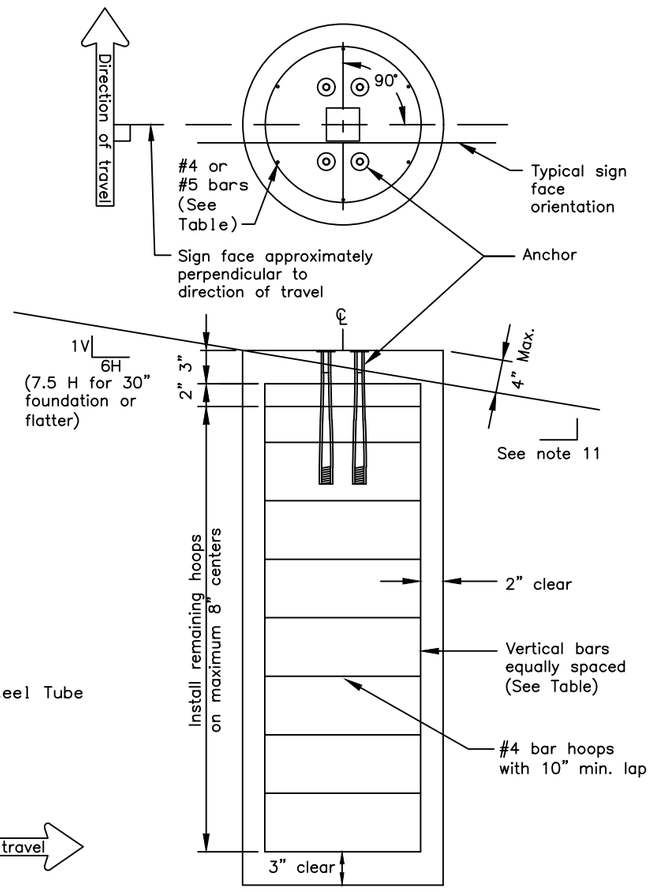
Next Code and Standards Review date: 7/8/2030

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



FRANGIBLE COUPLING SYSTEM FOR W–SHAPE POST

FRANGIBLE COUPLING SYSTEM FOR SQUARE STEEL TUBES



SIGN POST FOUNDATION
See Table for depth and diameter

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

FOUNDATION TABLE

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

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION

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

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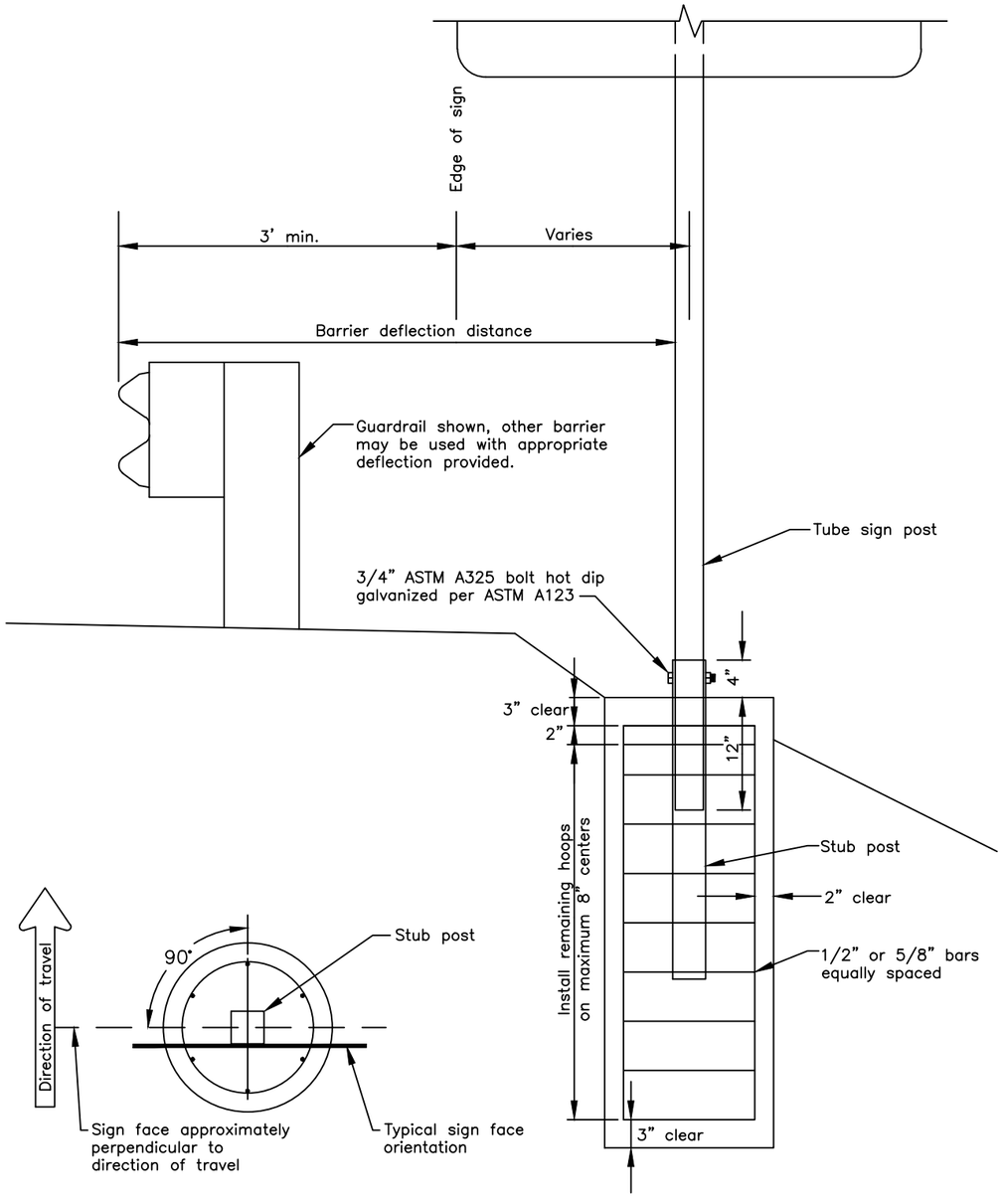
By: KLK, MJM Date: 7/8/2020

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

S-31.02



SIGN POST FOUNDATION
See table for depth and diameter

SIGN POST FOUNDATION
(Plan view)

GENERAL NOTES

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

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION BEHIND BARRIER

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

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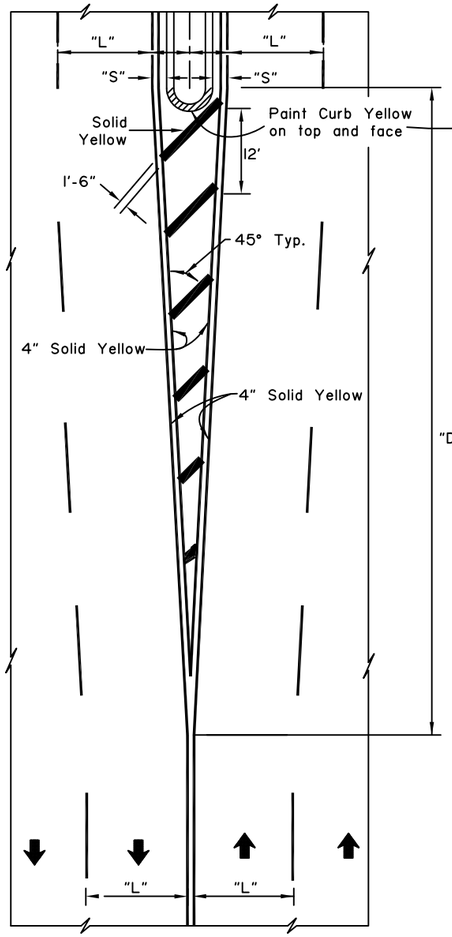
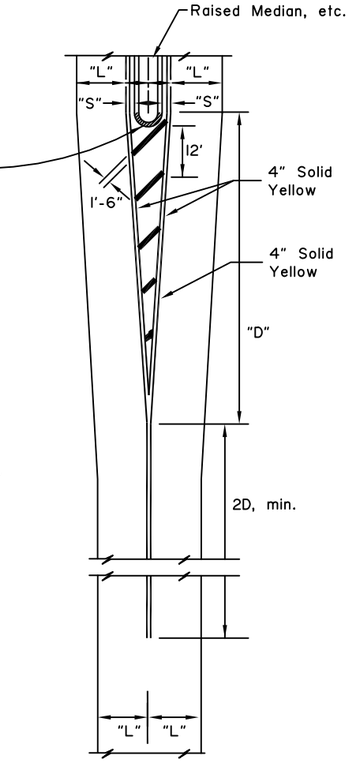
By: KLK Date: 7/8/2020

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



FOUR OR MORE LANES
DRIVE TO RIGHT

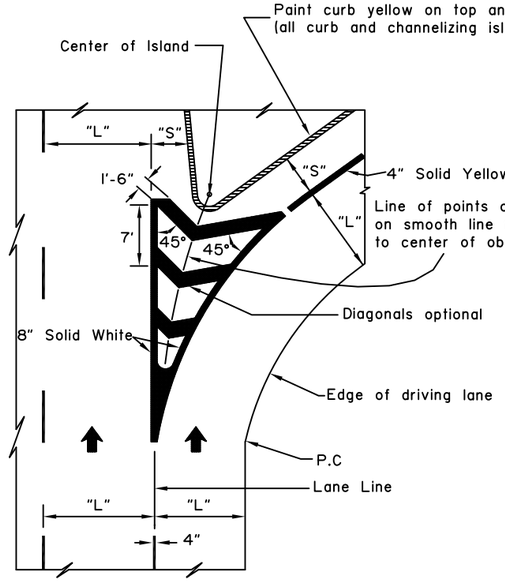


TWO LANES
DRIVE TO RIGHT

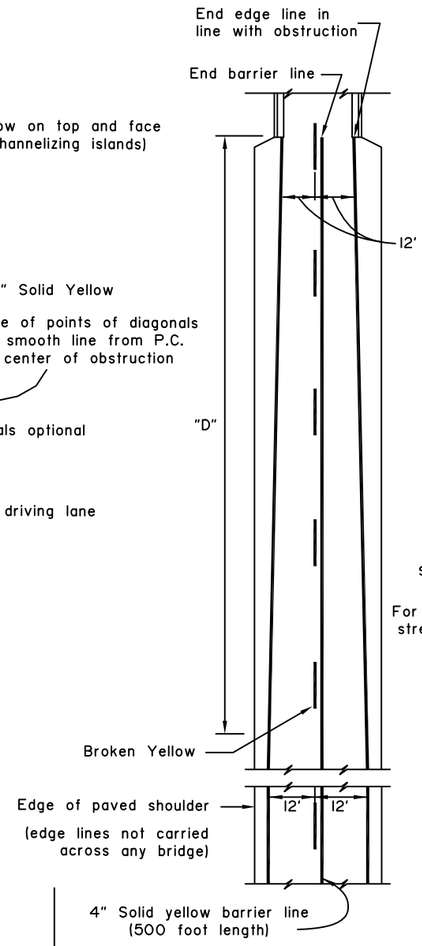
White longitudinal and diagonal markers identical to Four Lane Arrangement.

NOTES: "D" = Speed limit (mph) X "S" (offset width in feet) or as indicated on the plans. Minimum "D" = 100 feet urban, 200 feet rural.

APPROACH TO OBSTRUCTIONS

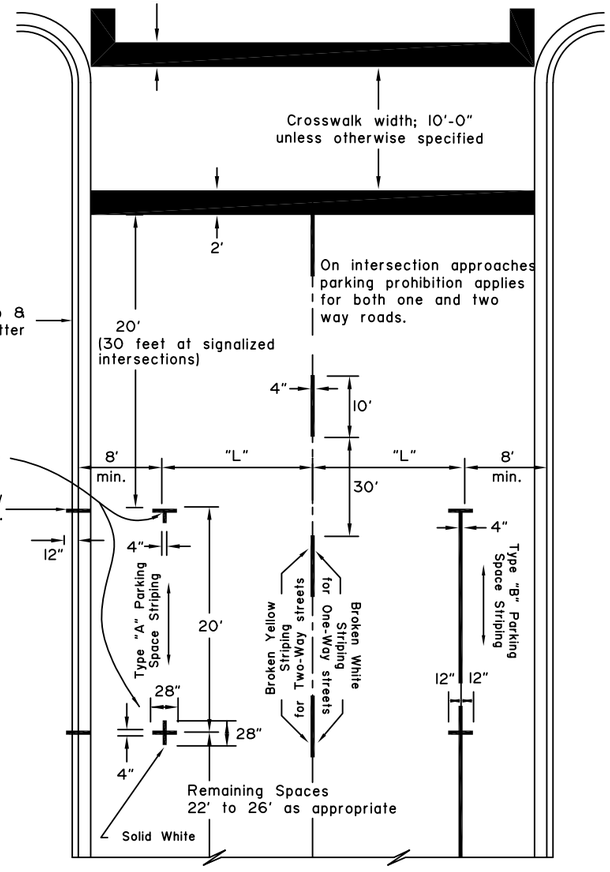


CHANNELIZING ISLAND



Note: On bridges over 24' wide use standard pavement markings. Barrier lines not used unless otherwise required.

EDGE LINE TRANSITION TO NARROW BRIDGE AND APPROACH BARRIER LINE

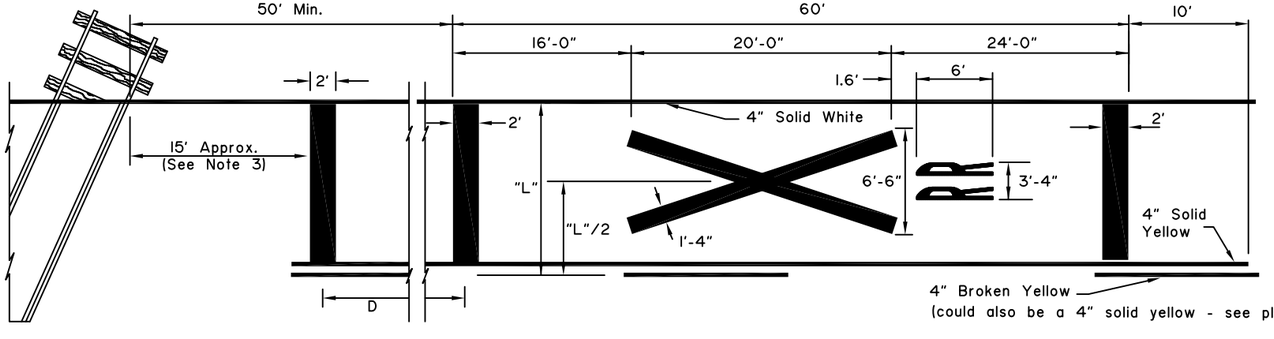


CENTERLINES FOR TWO LANE TWO WAY URBAN ROADS-PARKING LIMIT LINES

RAILROAD CROSSING NOTES:

1. All markings solid while unless indicated otherwise.
2. On 4-lane roadways place railroad crossing approach markings in each lane of the approach.
3. Locate Stop Bar 15' from railroad track or 8' from gate, if present.
4. Place edge lines and lane lines on a uni-directional approach in a normal manner except that the lane line(s) shall be solid 4" white in lieu of broken for a distance of (D+60') in advance of the stop bands.

POSTED LIMIT	D
30 M.P.H.	225'
40	350'
50	475'
60	625'



APPROACH TO RAILROAD CROSSING ON 2 LANE 2 WAY HIGHWAY

GENERAL NOTES:

1. "S"= offset distance as shown on the plans, otherwise 1 to 2 feet.
2. "L"= driving lane width.
3. See the Alaska Traffic Manual for additional guidance and/or restrictions on the use of traffic control devices.

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MAKING APPLICATIONS

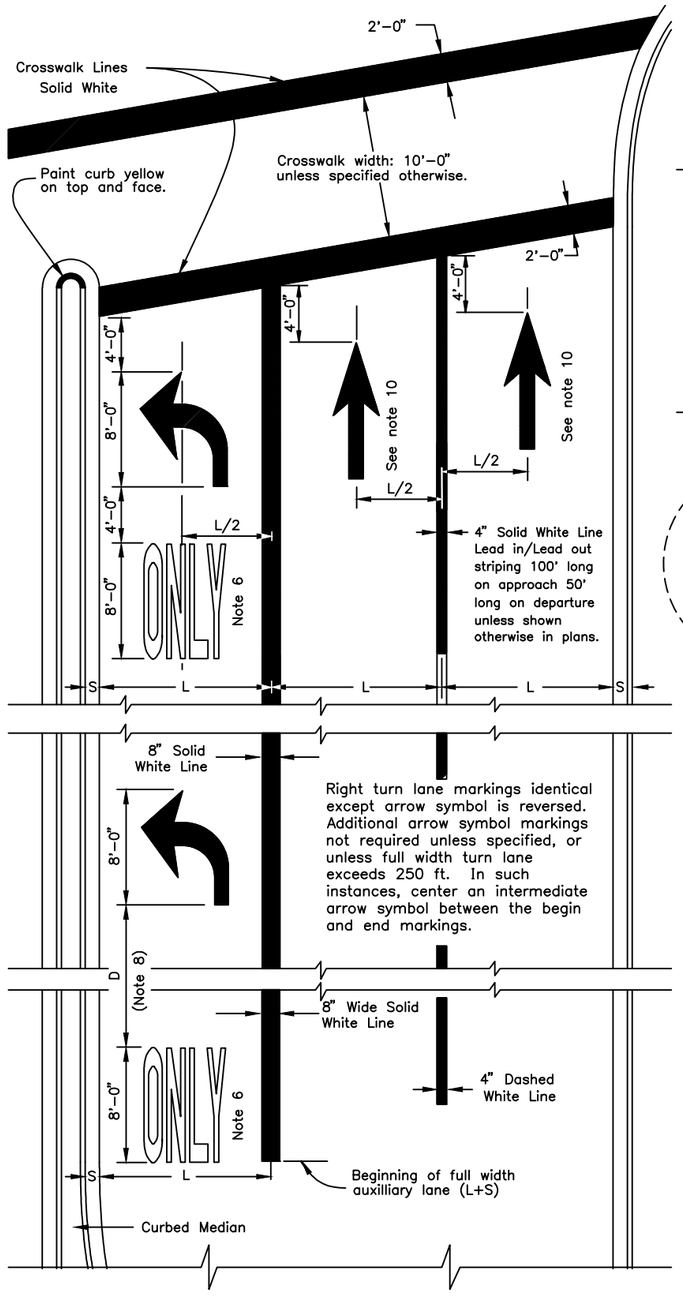
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E. Chief Engineer

Adoption Date: 02/08/2019

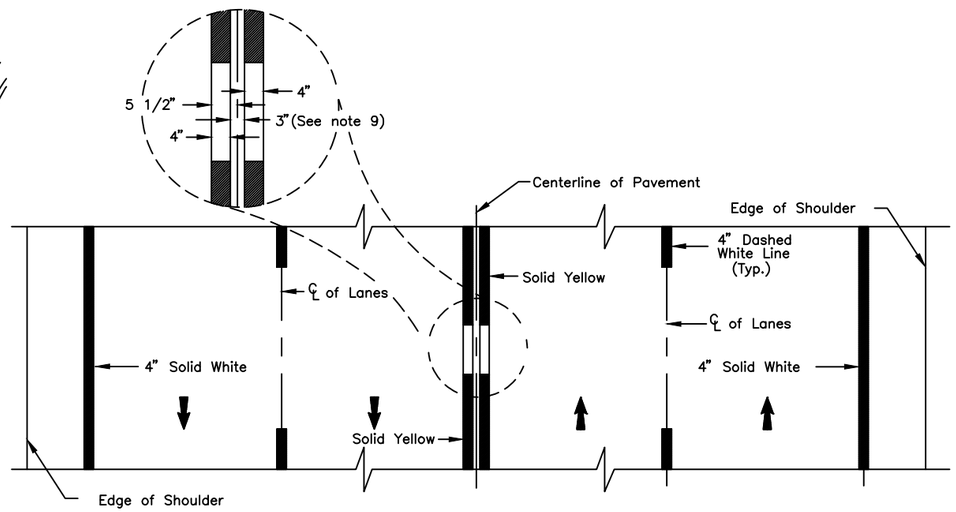
Last Code and Stds. Review By: Date:

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

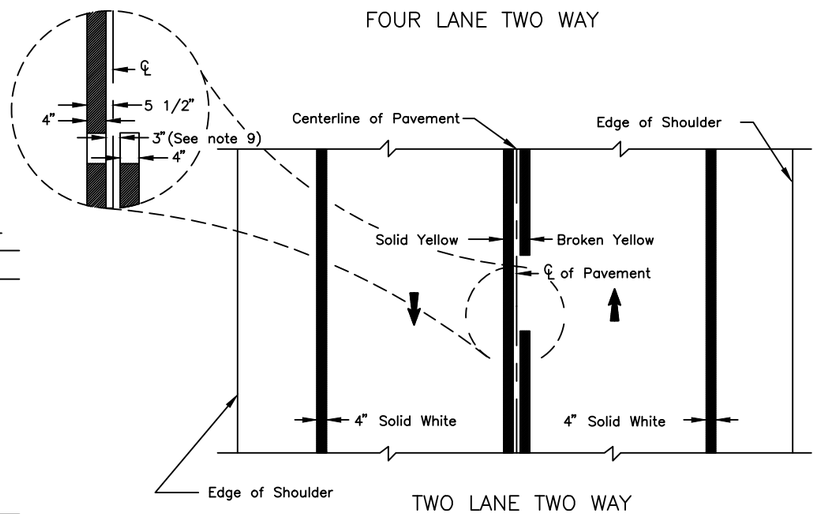
T-20.04



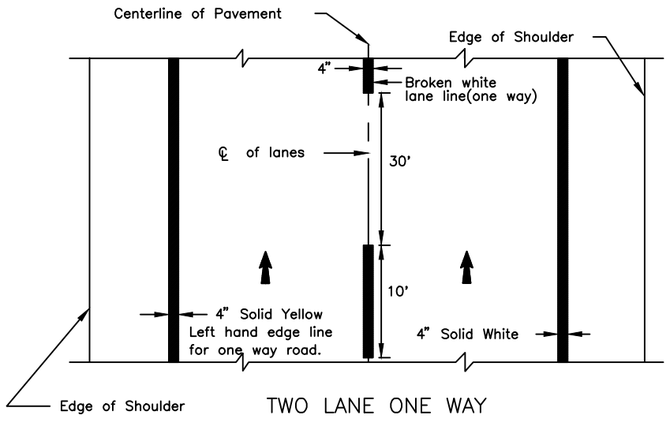
APPROACH TO INTERSECTION



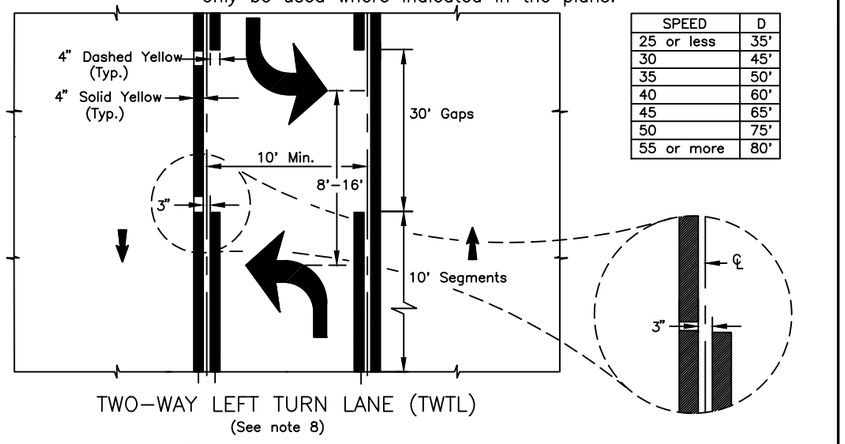
FOUR LANE TWO WAY



TWO LANE TWO WAY

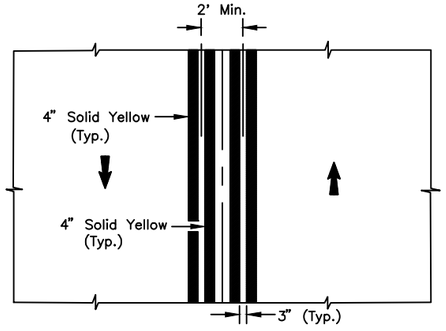


TWO LANE ONE WAY



TWO-WAY LEFT TURN LANE (TWTL)
(See note 8)

SPEED	D
25 or less	35'
30	45'
35	50'
40	60'
45	65'
50	75'
55 or more	80'



STRIPED MEDIAN

GENERAL NOTES:

1. All markings white unless indicated otherwise.
2. Lengths of stripe and gap for lane and center lines identical.
3. Lane lines for auxiliary lanes are unbroken solid lines.
4. "L" = driving lane width.
5. "S" = shy distance as shown on plans, otherwise 1 to 2 feet.
6. ONLY markings are required where through lanes change to turn lanes. In other cases, apply ONLY markings as indicated on plans.
7. See ALASKA TRAFFIC MANUAL for additional instruction on the use of TRAFFIC CONTROL DEVICES.
8. Adjust distance D between ONLY and Turn Arrow based on SPEED vs. D table. Table may be used for spacing between pairs of TWLT markings.
9. Adjust centerline spacing from 3" up to 5" where recessed pavement markers are required.
10. Arrows and symbols are used for through lanes only when the lane layout deviates from the normal intersection rules, and shall only be used where indicated in the plans.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING
APPLICATIONS

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

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