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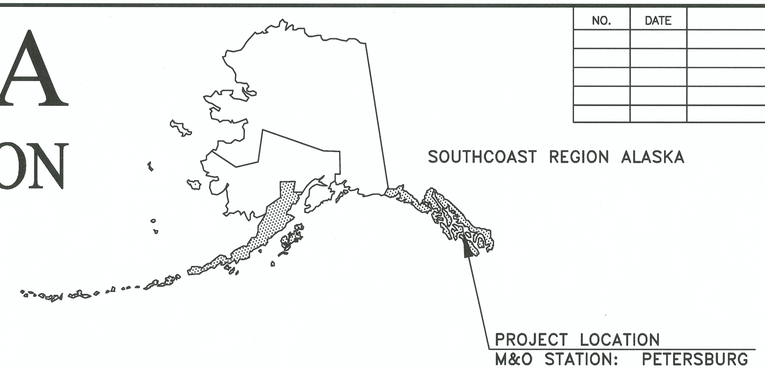
STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

PROPOSED HIGHWAY PROJECT

PSG MITKOF HWY MPT 10.8
CULVERT REPLACEMENT - DEC 20 SE PR
PROJECT NO. 0093001/SFHWY00379

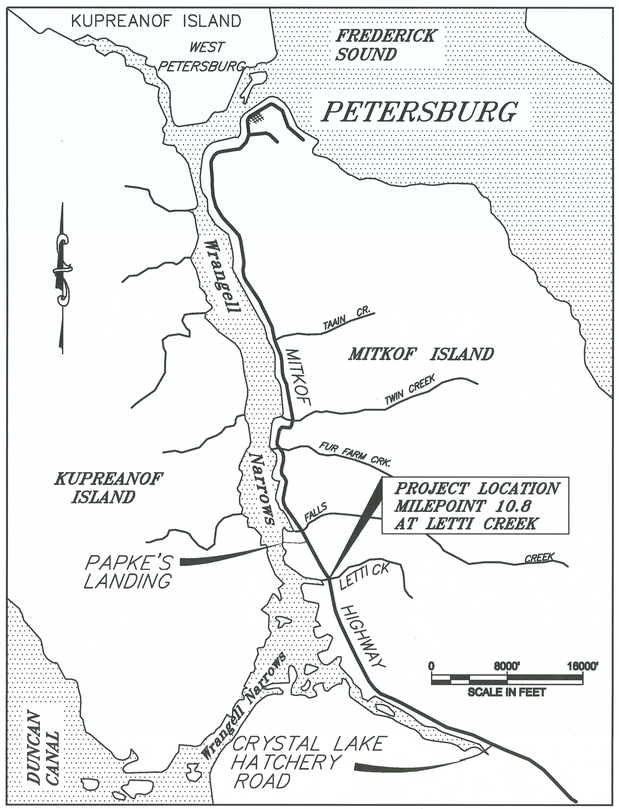
GRADING, DRAINAGE, PAVING, STRIPING, AND SIDE SLOPE STABILIZATION



NO.	DATE	REVISIONS	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	A1	16
			ROUTE ID 4281008X000		MILEPOINT: 10.350–11.350		
			LATITUDE: 56.668133°N		LONGITUDE: –132.909167°E		

PROJECT SUMMARY	
	MITKOF HIGHWAY MPT 10.8
WIDTH OF PAVEMENT	24'
LENGTH OF PAVING	280'
LENGTH OF PROJECT	280'

DESIGN DESIGNATIONS	
FUNCTIONAL CLASS	MAJOR COLLECTOR
PROJECT TYPE	RECONSTRUCTION
ADT (2021)	180
ADT (2045)	191
DHV (2021)	23
DHV (2045)	24
PERCENT TRUCKS (T)	6.47%
DIRECTIONAL SPLIT (D)	52/48
DESIGN SPEED (V)	55
DESIGN EAL'S (20 YEARS)	N/A



The undersigned hereby certifies that this duplicated document is an exact and true copy of the original.

Jessica Pinkale

November 08, 2022

As - Builts

Contractor : Rock-N-Road Construction Inc.,
Project Engineer : Val Bean
Begin Date: April 24, 2023
End Date: July, 27, 2023

USE THESE PLANS IN CONJUNCTION WITH THE STATE OF ALASKA STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2020 EDITION AND THE PROJECT SPECIAL PROVISIONS.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
6860 GLACIER HIGHWAY, JUNEAU, AK 99801
(907) 465–1763

APPROVED: DocuSigned by: CEE1F1E341494BA... 7/19/2022
KIRK MILLER, P.E. DATE
REGIONAL PRECONSTRUCTION ENGINEER

CONCUR: DocuSigned by: F255012206784D8... 7/19/2022
D. LANCE MEARIG, P.E. DATE
DIRECTOR, SOUTHCOAST REGION

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	A2	16

	RECOVERED	SET
BLM MONUMENT		
GLO MONUMENT		
USC&GS MONUMENT		
PRIMARY MONUMENT		
CENTERLINE MONUMENT IN CASING		
PRIMARY R.O.W. MONUMENT		
BEARING OBJECT		
MISCELLANEOUS MONUMENT		
LINE OF SIGHT MONUMENT		
CONCRETE R.O.W. MONUMENT		
BENCHMARK		BM
REBAR AND CAP		
REBAR		
IRON PIPE		
PK NAIL		
SPIKE		
HUB AND TACK		

CONSTRUCTION CENTERLINE	5+00
MISCELLANEOUS CENTERLINE	10+00
STATION EQUATION	"L"48+97.23 POT BK= "O"48+97.23 PC AHD
PROJECT RIGHT–OF–WAY LINE	R/W
EXISTING RIGHT–OF–WAY LINE	
EXISTING PROPERTY LINE	
CONTROLLED ACCESS LINE	C/A
UTILITY EASEMENT LINE	PUE
TEMPORARY EASEMENT LINE (TCP OR TCE)	TCP
ACCESS OR SECTION LINE EASEMENT	ACCESS EASEMENT
PROPOSED CUT SLOPE LIMIT	
PROPOSED FILL SLOPE LIMIT	
SECTION LINE	
1/4 SECTION LINE	
1/16 SECTION LINE	
TOWNSHIP & RANGE LINE	T. 2 N. / T. 1 N. — T.1 E. / T.2 E.

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION →)	SS	SS
FUEL LINE	O	O
GAS LINE	G	G
WATER LINE	W	W
METER, VALVE, FIRE HYDRANT	W	W
EXISTING CULVERT		
PROPOSED STORM DRAIN	S–10, S–11, P–11, P–10, MH	
FIBER OPTIC LINE	FO	
DIRECT BURIAL TELEPHONE CABLE	T	T
DIRECT BURIAL ELECTRIC CABLE	E	E
ELECTRIC LINE (OVERHEAD)	OHE	
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT	T	T
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE	MH	MH
SANITARY SEWER CLEAN OUT		
MILEPOST MARKER	1	

	EXISTING	PROPOSED
ROADWAY/PAVEMENT EDGE		
FENCE		
CURB AND GUTTER		
DETECTABLE WARNINGS		
GUARDRAIL		
CULVERT PIPE		
SIGN		
MAILBOX	MB	MB
RAILROAD TRACKS		
RAILROAD DEVICES	CROSS–BUCK, FLASHING LIGHT	CANTILEVER, SWITCH
TREE LINE		
WATER BOUNDARY		
ORDINARY HIGH WATER LINE		
FLOW CENTERLINE		
FLOW DIRECTION		
WETLANDS		
EXISTING BUILDINGS	H	
POST OR BOLLARD		
WELL OR MONITORING WELL	W	
SEPTIC PIPE	S, MW	
FUEL TANK FILL PIPE/VENT	P	
SATELLITE DISH	SAT. DISH	
TEST HOLE	TH	
CONIFER TREE		
DECIDUOUS TREE		
GRAVE		
THERMOSIPHON		
PARKING METER		
VEHICLE PLUG–IN		
DELINEATOR/GUIDE MARKER		

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

	EXISTING	PROPOSED
JUNCTION BOX, TYPE IA		5
JUNCTION BOX, TYPE II		6
JUNCTION BOX, TYPE III		3
SIGNAL FACE, VEHICULAR	4.2	4.2
SIGNAL FACE, BACKPLATE	4.2	4.2
SIGNAL FACE, LEFT TURN, BACKPLATE	4.3	4.3
SIGNAL FACE, PEDESTRIAN		4.8
LOOP DETECTOR	33	73
VIDEO DETECTOR	2	2
RADAR DETECTOR	4	4A
OPTICOM DETECTOR	1	1
PEDESTRIAN PUSH BUTTON	1	1
SIGNAL POST W/O MAST ARM		1
SIGNAL POLE W/MAST ARM		4
SIGNAL CONTROLLER		
LOAD CENTER		
LUMINAIRE		122
RIGID METAL CONDUIT		

ABBREVIATIONS:

APPROX	APPROXIMATLY
BGS	BELOW GROUND SURFACE
℄	CENTERLINE
CY	CUBIC YARD
E	EAST, EASTING
ELE, ELEV	ELEVATION
EOP	EDGE OF PAVEMENT
FT. '	FOOT, FEET
H	HORIZONTAL
IE	INVERT ELEVATION
IN, "	INCH, INCHES
L	LENGTH OF CURVE
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
MAX	MAXIMUM
MB	MAILBOX
MIN	MINIMUM
N	NORTH, NORTHING
NO.	NUMBER
NTS	NOT TO SCALE
PC	POINT OF CURVATURE
POT	POINT ON TANGENT
PT	POINT OF TANGENCY
PVI	POINT OF VERTICAL INTERSECTION
R	RADIUS
RD	ROAD
ROW	RIGHT–OF–WAY
RT	RIGHT
S	SOUTH
SHLDR	SHOULDER
SQ. FT.	SQUARE FOOT
STA	STATION
STD	STANDARD
T	TANGENT
TYP	TYPICAL
V	VERTICAL
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
Ø	DIAMETER

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE 500 ANCHORAGE, AK 99503-4169
907-644-2000
CERT.OF AUTH. AECC569

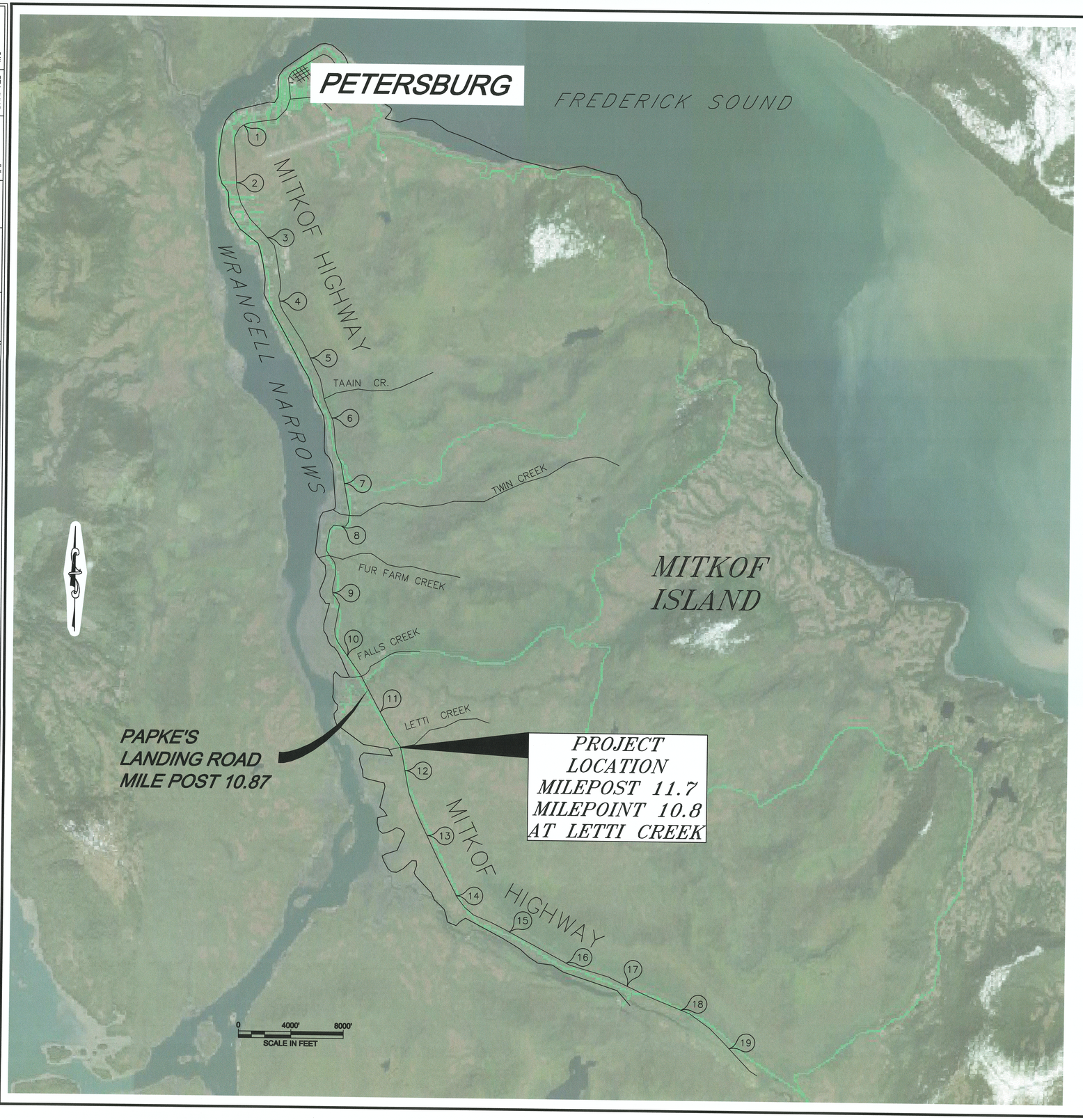
STATE OF ALASKA 49TH — GREGORY J. HARTMAN — CE 14653 — REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

LEGEND

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0093001/SFHWY00379	2022	A3	16

INDEX OF SHEETS

SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND
A3	LAYOUT AND INDEX OF SHEETS
A4	SURVEY CONTROL
B1–B2	TYPICAL SECTION
C1	ESTIMATE OF QUANTITIES
D1	SUMMARY TABLES
E1–E2	DETAILS
F1–F2	PLAN AND PROFILE
H1	STRIPING PLAN
Q1	EROSION SEDIMENT CONTROL PLAN
T1	TRAFFIC CONTROL PLAN
T2	CONSTRUCTION PHASING PLAN

THE FOLLOWING STANDARD PLANS APPLY:
D–01.02, D–04.22, D–09.00
T–21.04

GENERAL NOTES:

1. CONTAIN ALL CONSTRUCTION WITHIN THE RIGHT–OF–WAY. DO NOT DISPOSE OF EXCESS MATERIAL WITHIN THE RIGHT–OF–WAY, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS.
2. MAKE ALL PAVEMENT CUTS CLEAN, VERTICAL, AND TRUE TO THE REMOVAL LIMITS SHOWN ON THE PLANS.
3. RIGHT–OF–WAY LINES WERE TAKEN FROM THE MITKOF HWY PAVEMENT REHABILITATION AND DRAINAGE IMPROVEMENTS PROJECT #68819. RIGHT–OF–WAY LINES AND PROPERTY LINES WERE INSERTED INTO THE PLANS USING A COMMON COORDINATE SYSTEM. THE LOCATION OF THE RIGHT–OF–WAY LINES HAVE NOT BEEN SURVEYED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF, AND STAY WITHIN THE RIGHT–OF–WAY.
4. LOCATION OF EXISTING UTILITIES ARE APPROXIMATE ONLY. CERTIFY EXACT LOCATION BY OBTAINING UTILITY LOCATES, FIELD LOCATES AND EXERCISING CAUTION DURING EXCAVATION.
5. CLEARING LIMITS SHALL BE 5 FEET BEYOND SLOPE CATCH POINTS OR 5 FEET INSIDE THE RIGHT–OF–WAY LINE, WHICHEVER IS LESS.

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE
500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

STATE OF ALASKA 49 TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

LAYOUT AND INDEX OF SHEETS

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	A4	16

MONUMENT NOTES:

1. IF ANY PAIR OF CONTROL POINTS DISAGREES FROM PUBLISHED VALUE BY MORE THAN 1:10,000 HORIZONTALLY OR VERTICALLY THEN A THIRD NETWORK POINT MUST BE TIED TO ASCERTAIN WHICH POINT IS IN ERROR OR HAS BEEN DISTURBED.

2. WHETHER LISTED OR NOT, ALL PROPERTY MONUMENTS, PROPERTY MARKERS, CORNERS OR ACCESSORIES WHICH WILL BE DISTURBED OR BURIED SHALL BE REFERENCED PRIOR TO BEING DISTURBED, AND RE-ESTABLISHED IN THEIR ORIGINAL HORIZONTAL POSITION AND A RECORD OF MONUMENT FORM IN ACCORDANCE WITH (A.S.34.65.040) AND (A.S.19.10.260) SHALL BE SUBMITTED TO THE CONSTRUCTION ENGINEER FOR REVIEW PRIOR TO RECORDING. COORDINATE VALUES LISTED ARE FOR INFORMATIONAL PURPOSES AND SHOULD BE USED TO RESET MONUMENTS ONLY AS A LAST RESORT.

3.WHEN POSSIBLE ALL ORIGINAL PRIMARY MONUMENTS SHALL BE SAVED AND RESET IN THEIR ORIGINAL HORIZONTAL POSITION AND A RECORD OF MONUMENT FORM IN ACCORDANCE WITH (A.S.34.65.040) AND (A.S.19.10.260) SHALL BE SUBMITTED TO THE CONSTRUCTION ENGINEER FOR REVIEW PRIOR TO RECORDING.

4. RIGHT OF WAY LOCATION IS SHOWN FOR GRAPHICAL ORIENTATION PURPOSES ONLY. REFER TO ALASKA DOT&PF RIGHT OF WAY MAPS FOR RIGHT OF WAY INFORMATION.

5. HORIZONTAL AND VERTICAL CONTROL MUST BE FIELD VERIFIED BY THE CONTRACTOR. DISCREPANCIES WILL BE REPORTED TO DOT&PF CONSTRUCTION PROJECT ENGINEER.

HORIZONTAL CONTROL

Project Specific Basis of Horizontal Control

100 : 2.5" Alum Cap 0.2 Down, 2.1' From Edge Pvmt Inbound Lane. Across From PP72-15M Bearing S46W 45' From PP.
AK SPC Zone 1 N =1766951.88' E=2837980.62'

101 : 2.5" Alum Cap 0.2 Down, 1.4' From Fog Line Inbound Lane. NW From Inlet of Culvert
AK SPC Zone 1 N 1766372.42' E 2838350.01'

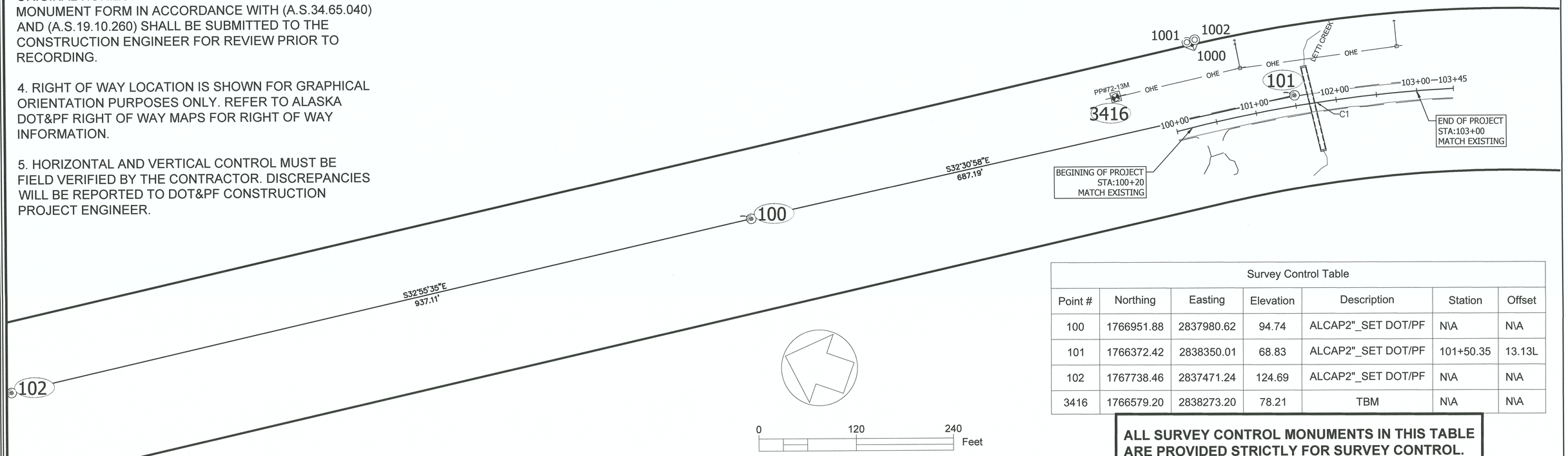
102 : 2.5" Alum Cap 0.2 Down, 0.6' From Edge Pvmt . Across From PP Bearing S66W 45' From PP
AK SPC Zone 1 N 1767738.46' E 2837471.24'

VERTICAL CONTROL

TBM #3416
Set Spike in PP 72-13M
Elev=75.21'

HORIZONTAL AND VERTICAL CONTROL STATEMENT:
COORDINATES LISTED ARE NAD83(2011) ALASKA STATE PLANE COORDINATE SYSTEM ZONE 1 U.S. FEET. ALL BEARINGS AND DISTANCES ARE GRID AND DERIVED FROM TIES TO THE NATIONAL SPATIAL REFERENCE SYSTEM. THE VERTICAL DATUM IS NAVD88 DERIVED FROM ELLIPSOIDAL HEIGHTS AND NATIONAL GEODETIC SURVEY GEOID MODEL 12B.

MITKOF HIGHWAY MP 11.7 ALIGNMENT											
SEGMENT	STATION	NORTHING	EASTING	RADIUS	LENGTH	DELTA	TANGENT	DEGREE	STATION	NORTHING	EASTING
C1	100+00.00	1766493.53	2838259.07	1691.49	345.38	11°41'56"	173.29	3°23'14"	103+45.38	1766190.9064	2838424.2733



Survey Control Table						
Point #	Northing	Easting	Elevation	Description	Station	Offset
100	1766951.88	2837980.62	94.74	ALCAP2"_SET DOT/PF	N\A	N\A
101	1766372.42	2838350.01	68.83	ALCAP2"_SET DOT/PF	101+50.35	13.13L
102	1767738.46	2837471.24	124.69	ALCAP2"_SET DOT/PF	N\A	N\A
3416	1766579.20	2838273.20	78.21	TBM	N\A	N\A

ALL SURVEY CONTROL MONUMENTS IN THIS TABLE ARE PROVIDED STRICTLY FOR SURVEY CONTROL. SHOULD ANY OF THEM BE DESTROYED DURING CONSTRUCTION THEY SHALL NOT BE REPLACED.

Existing Property					
Point #	Northing	Easting	Description	Station	Offset
1000	1766512.38	2838366.37	CONC_MON	100+42.70	99.69L
1001	1766519.27	2838367.10	ALCAP2"_FND RM-1 C9 L1TLS 2018-13 4469S	100+37.63	104.07L
1002	1766511.30	2838373.35	ALCAP2"_FND RM-2 C9 L1TLS 2018-13 4469S	100+47.13	104.96L

PROPERTY MONUMENTS SHALL BE REFERENCED AS NEEDED PRIOR TO DISTURBANCE FROM CONSTRUCTION AND RE-ESTABLISHED IN THEIR ORIGINAL HORIZONTAL POSITION AND A RECORD OF MONUMENT FORM IN ACCORDANCE WITH A.S.34.65.040 SHALL BE SUBMITTED TO DOT FOR REVIEW PRIOR TO RECORDING.

STATE OF ALASKA
49th
H. Erik Pedersen
05/27/22
No. 14828
REGISTERED PROFESSIONAL LAND SURVEYOR

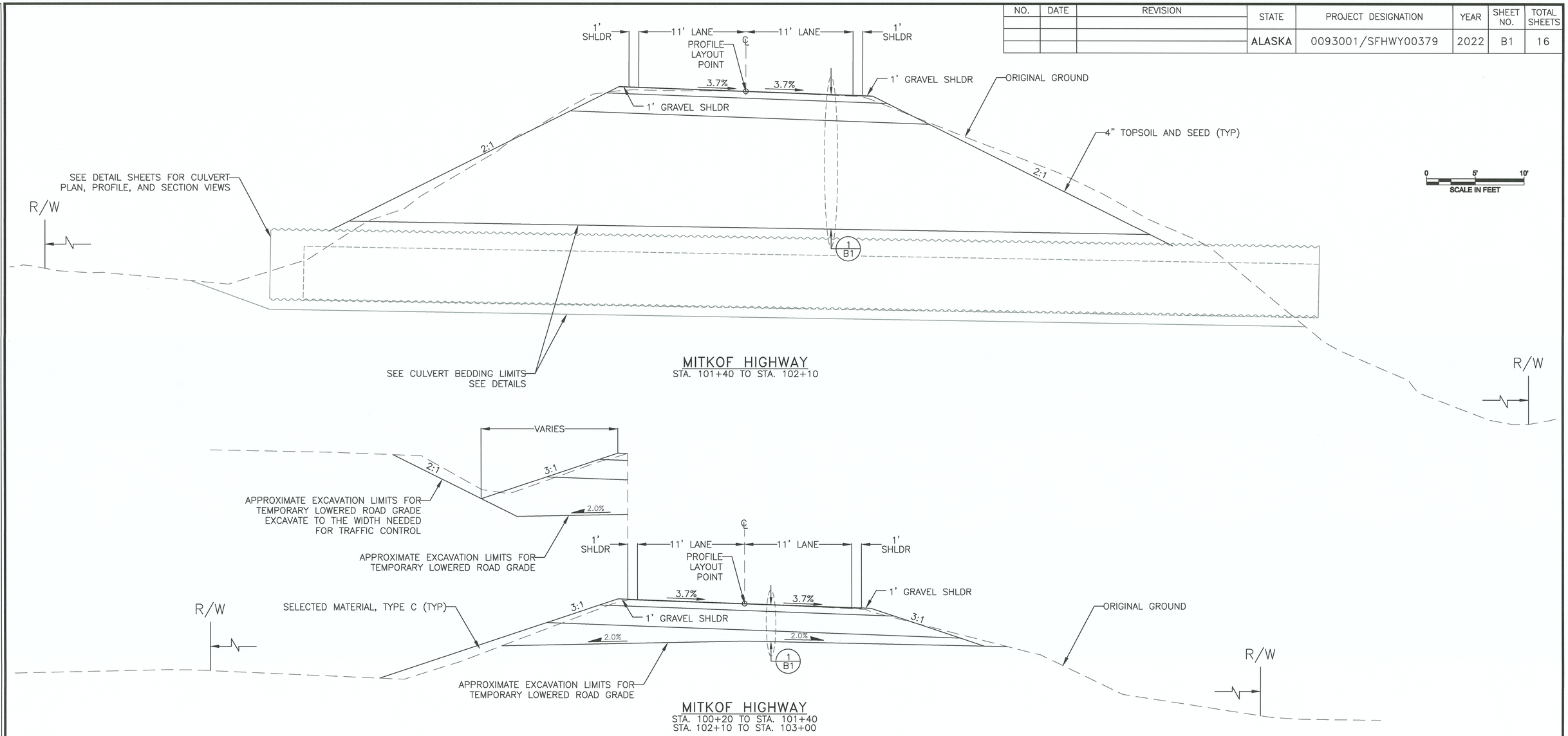
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8
CULVERT REPLACEMENT–
DEC 20 SE PR

SURVEY CONTROL

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CHECKED | E.PEDERSEN
DRAFTED | J.PAPOI

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	B1	16

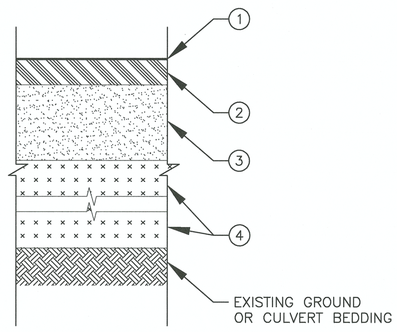


MITKOF HIGHWAY
STA. 101+40 TO STA. 102+10

MITKOF HIGHWAY
STA. 100+20 TO STA. 101+40
STA. 102+10 TO STA. 103+00

LEGEND

1. DOUBLE B/E CHIP AST
2. 8" AGGREGATE BASE COURSE, GRADING D-1
3. 24" SELECTED MATERIAL, TYPE A
4. THICKNESS VARIES, SELECTED MATERIAL, TYPE C



1/B1 PAVEMENT STRUCTURAL SECTION NO. 1
SCALE: 1:2

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE 500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

STATE OF ALASKA 49TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

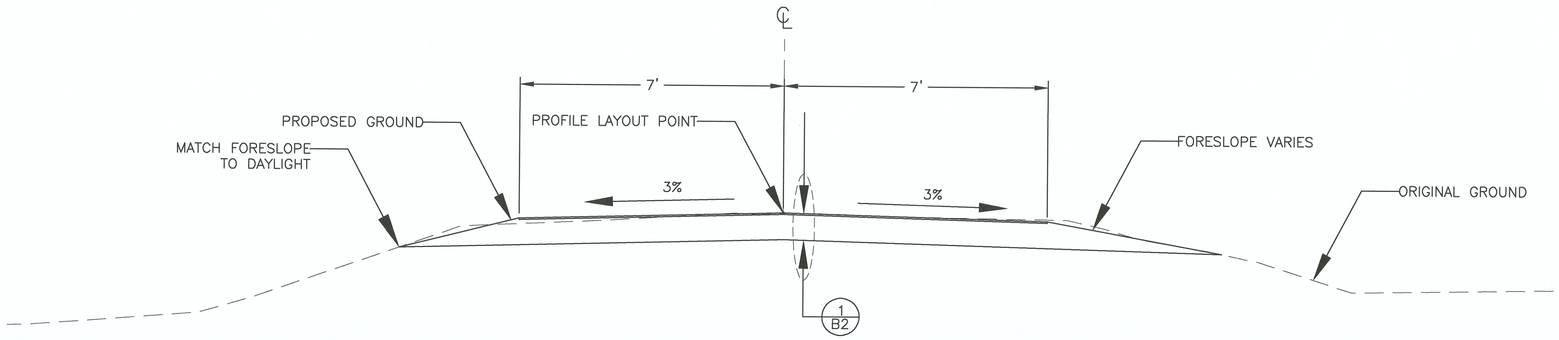
PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

TYPICAL SECTION

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	B2	16

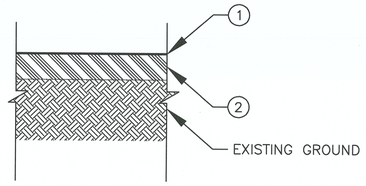
0 2' 4'
SCALE IN FEET



APPROACH AT STA. 100+41

LEGEND

1. DOUBLE B/E CHIP AST
2. 8" AGGREGATE BASE COURSE, GRADING D-1



1/B2 STRUCTURAL SECTION NO. 2
SCALE: 1:2

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE
500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

STATE OF ALASKA
49 TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

TYPICAL SECTION

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
4	8/23/22	DELETED ITEM 201.2002.0000	ALASKA	0093001/SFHWY00379	2022	C1	16
1	8/12/22	ADDED APPLICATION RATE FOR BFM					
1	8/12/22	ADDED PAY ITEM 640.0004.0000					

ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
201.0003.0000	CLEARING AND GRUBBING	ACRE	~~0.3~~ 0
201.2001.0000	INVASIVE PLANT SPECIES CONTROL, REMOVAL, AND DISPOSAL	SQUARE YARD	~~1,300~~ 860.54 △4
202.0002.0000	REMOVAL OF PAVEMENT	SQUARE YARD	~~790~~ 852.17
202.0004.0000	REMOVAL OF CULVERT PIPE	LINEAR FOOT	105
203.0003.0000	UNCLASSIFIED EXCAVATION	CUBIC YARD	~~3,850~~ 3,614.00
203.0006.000A	BORROW, TYPE A	TON	~~1,300~~ 2,338.09
203.0020.0000	BORROW, 8 INCH CO 01	LUMP SUM	ALL REQUIRED
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	~~376~~ 542.38
405.2001.0000	DOUBLE B/E CHIP AST	SQUARE YARD	~~810~~ 777.00
602.2012.0700	ALUMINUM STRUCTURAL PLATE PIPE, 7'-0" DIAMETER, 0.175" THICK	LINEAR FOOT	108
611.0001.0002	RIPRAP, CLASS II	CUBIC YARD	~~153~~ 166.5
618.0002.0000	SEEDING, CO 01	POUND	~~18~~ 0
619.2002.0000	TURF REINFORCEMENT MAT, CO 01	SQUARE YARD	~~30~~ 0
620.0001.0000	TOPSOIL, CO 01	SQUARE YARD	~~1,300~~ 0
639.0001.0000	DRIVEWAY	EACH	1
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQUIRED △1
642.0001.0000	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED
642.0003.0000	THREE PERSON SURVEY PARTY	HOUR	~~16~~ 0
643.0002.0000	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED
643.0003.0000	PERMANENT CONSTRUCTION SIGNS	LUMP SUM	ALL REQUIRED
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED
643.0025.0000	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED
643.0032.0000	FLAGGING	CONTINGENT SUM	ALL REQUIRED
644.0001.0000	FIELD OFFICE	LUMP SUM	ALL REQUIRED
644.0006.0000	VEHICLE	LUMP SUM	ALL REQUIRED
644.0015.0000	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EACH	1
644.2004.0000	ENGINEERING COMMUNICATIONS	CONTINGENT SUM	ALL REQUIRED
658.0001.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL WITHOUT CGP COVERAGE	LUMP SUM	ALL REQUIRED
658.0002.0000	ESCP CHANGES BY DIRECTIVE	CONTINGENT SUM	ALL REQUIRED
670.0001.0000	PAINTED TRAFFIC MARKINGS	LUMP SUM	ALL REQUIRED

BASIS OF ESTIMATE

ITEM NO.	PAYITEM	ESTIMATING FACTOR
203.0006.000A	BORROW, TYPE A	144 LB/FT^3
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	144 LB/FT^3
405.2001.0000	CRS-2P ASPHALT FOR SURFACE TREATMENT	243 GAL/TON
	CRS-2P ASPHALT FOR B AGGREGATE LAYER	0.6 GAL/SYD
	CRS-2P ASPHALT FOR E AGGREGATE LAYER	0.55 GAL/SYD
	GRADE B AGGREGATE FOR SURFACE TREATMENT	55 LB/SYD
	GRADE E AGGREGATE FOR SURFACE TREATMENT	30 LB/SYD
618.0002.0000	SEEDING	SEE SPECIFICATIONS
--	BONDED FIBER MATRIX (BFM)	4,000 LB/ACRE △1

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE
500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

STATE OF ALASKA 49TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8
CULVERT REPLACEMENT –
DEC 20 SE PR

ESTIMATE OF QUANTITIES

FILE C:\pwworking\west01\d2336813\C1_ESTIMATE OF QUANTITIES.dwg
DATE 8/24/2022 16:54
LAYOUT C1
DESIGNED ##
CHECKED ##
DRAFTED WU

NO.	DATE	REVISION
1	8/12/22	ADDED 203.0003.0000 SUMMARY TABLE

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	0093001/SFHWY00379	2022	D1	16

[201.0003.0000] CLEARING AND GRUBBING

SHEET	STATION FROM	STATION TO	AREA (ACRES)	REMARKS
~~F1~~	~~100+20~~	~~103+00~~	~~0.3~~	
		TOTAL:	~~0.3~~	
		PAY ITEM QUANTITY:	~~0.3~~	

[202.0002.0000] REMOVAL OF PAVEMENT

SHEET	STATION FROM	STATION TO	202.0002.0000 REMOVAL OF PAVEMENT (SY)	REMARKS
F1	100+20	103+~~00~~ 09	~~784~~ 768.87	
	100 + 20	100 + 45	83.3	DRIVEWAY
		TOTAL:	~~784~~ 852.17	
		PAY ITEM QUANTITY:	~~790~~ 852.17	

[202.0004.0000] REMOVAL OF CULVERT PIPE

SHEET	STATION	OFFSET	LENGTH (FT)	REMARKS
F1	101+70	CL	105	
		TOTAL:	105	
		PAY ITEM QUANTITY:	105	

[611.0001.0002] – RIPRAP, CLASS II

SHEET	STATION	OFFSET	LENGTH (FT)	X-SECTION AREA (FT^2)	VOLUME (FT^3)	VOLUME (CY)	REMARKS
F1	100+20	LT	7.00	96.85	678	25	INLET CHANNEL
			21.00	72.14	1,515	56	INLET FORESLOPE
F1	101+20	RT	9.75	90.21	880	33	OUTLET CHANNEL
			21.00	50.00	1,050	39	OUTLET FORESLOPE
				SUBTOTAL:		~~153~~	
				ROUNDED PAY ITEM QUANTITY:		~~153~~ 166.50	

[618.0002.0000] SEEDING

SHEET	STATION FROM	STATION TO	OFFSET	WEIGHT (LB)	REMARKS
~~F1~~	~~100+20~~	~~103+00~~	~~LT/RT~~	~~18~~	DELETED BY CO 01
			TOTAL:	~~18~~	
			PAY ITEM QUANTITY:	~~18~~	

[620.0001.0000] TOPSOIL

SHEET	STATION FROM	STATION TO	AREA (SY)	REMARKS
~~F1~~	~~100+20~~	~~103+00~~	~~1,300~~	DELETED BY CO 01
		PROJECT PAY ITEM QUANTITY (SY):	~~1,300~~	

[639.0001.0000] DRIVEWAY

SHEET	STATION	OFFSET	LENGTH (FT)	WIDTH (FT)	SKEW (DEG)	REMARKS
F2	100+41	RT	40	14	90	
				PAY ITEM QUANTITY (EACH):	1	

[203.0003.0000] UNCLASSIFIED EXCAVATION

SHEET	START STATION	END STATION	VOLUME (CY)	UNSUITABLE MATERIAL VOLUME (CY)	REMARKS
F1	100+20	103+00	~~3,850~~ 3,614.00	0	
		PAY ITEM QUANTITY (EACH):	~~3,850~~ 3,614.00	N/A	

PLANS DEVELOPED BY:
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528 E 36TH AVE. SUITE 500 ANCHORAGE, AK
99503-4169
907-644-2000
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STATE OF ALASKA
49 TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

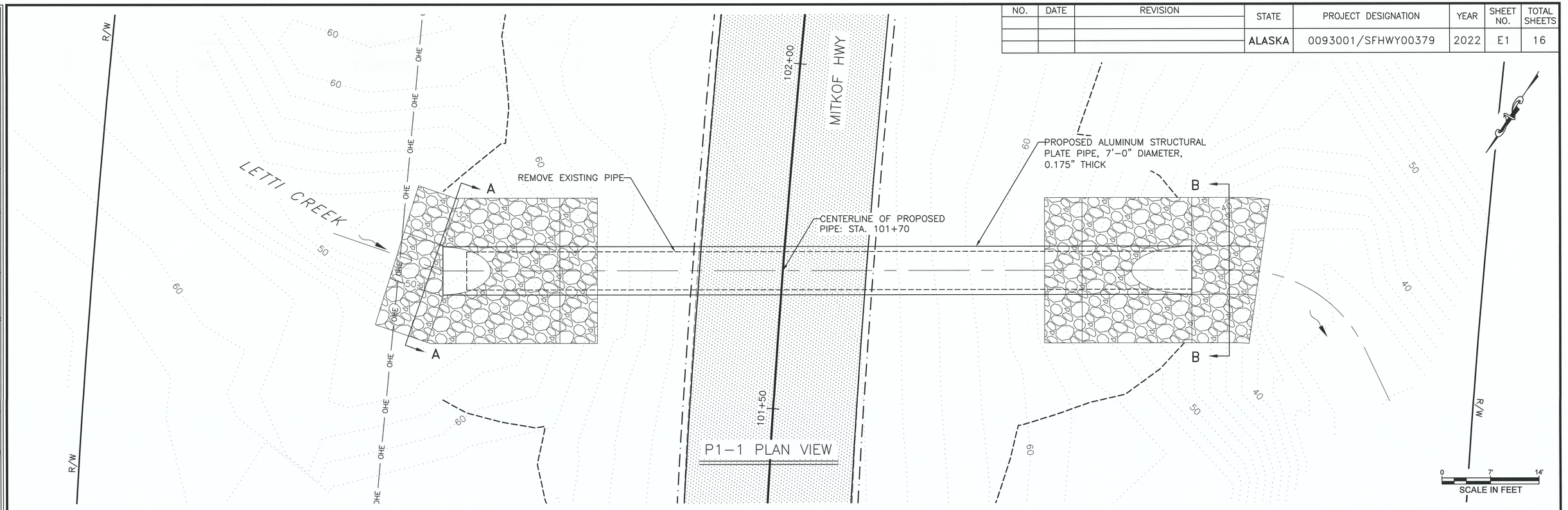
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

SUMMARY TABLES

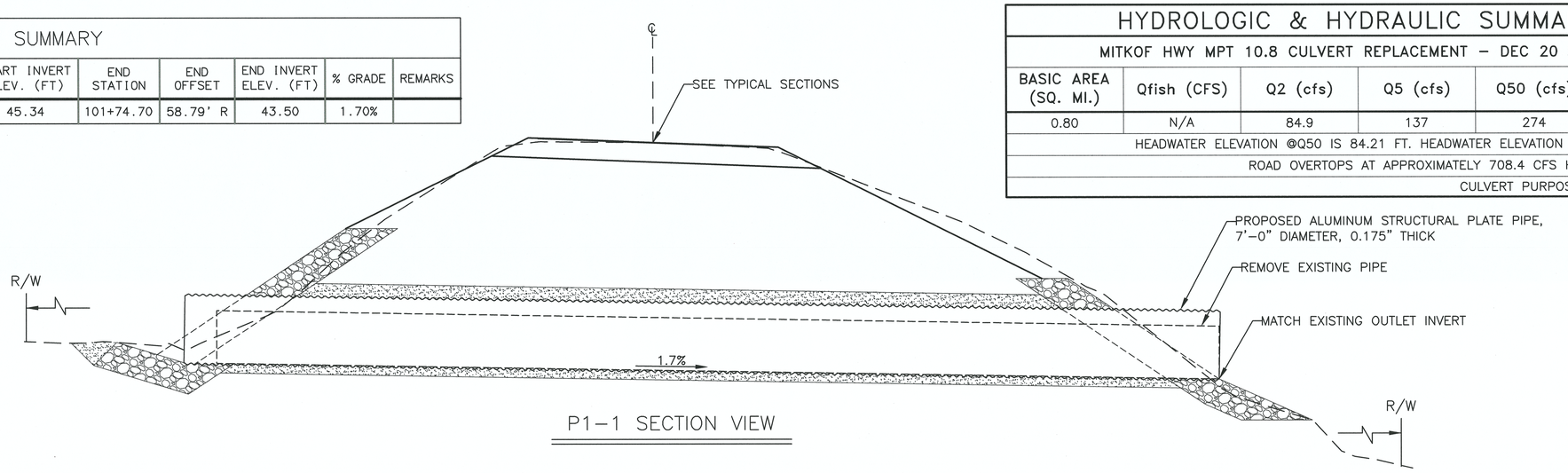
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	E1	16



P1-1 PLAN VIEW

PIPE SUMMARY										
PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	REMARKS
P1-1	84	108	101+66.36	48.87' L	45.34	101+74.70	58.79' R	43.50	1.70%	



P1-1 SECTION VIEW

HYDROLOGIC & HYDRAULIC SUMMARY					
MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR					
BASIC AREA (SQ. MI.)	Qfish (CFS)	Q2 (cfs)	Q5 (cfs)	Q50 (cfs)	Q100 (cfs)
0.80	N/A	84.9	137	274	320
HEADWATER ELEVATION @Q50 IS 84.21 FT. HEADWATER ELEVATION @Q100 IS 85.21 FT					
ROAD OVERTOPS AT APPROXIMATELY 708.4 CFS Hw/D @ 1=270 CFS					
CULVERT PURPOSE: CROSS DRAINAGE					

CULVERT NOTES:

1. FOLLOW MANUFACTURERS INSTALLATION SPECIFICATIONS IN ALL CULVERT INSTALLATIONS.
2. MINIMIZE DISTURBANCE TO THE VEGETATIVE MAT AROUND CULVERT ENDS, BUT CLEAR AND GRADE AS NEEDED TO ENSURE PROPER DRAINAGE.

STATE OF ALASKA 49 TH — Jeff Stutzke No. 11357 — REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE
500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

STATE OF ALASKA 49 TH — GREGORY J. HARTMAN CE 14653 — REGISTERED PROFESSIONAL ENGINEER

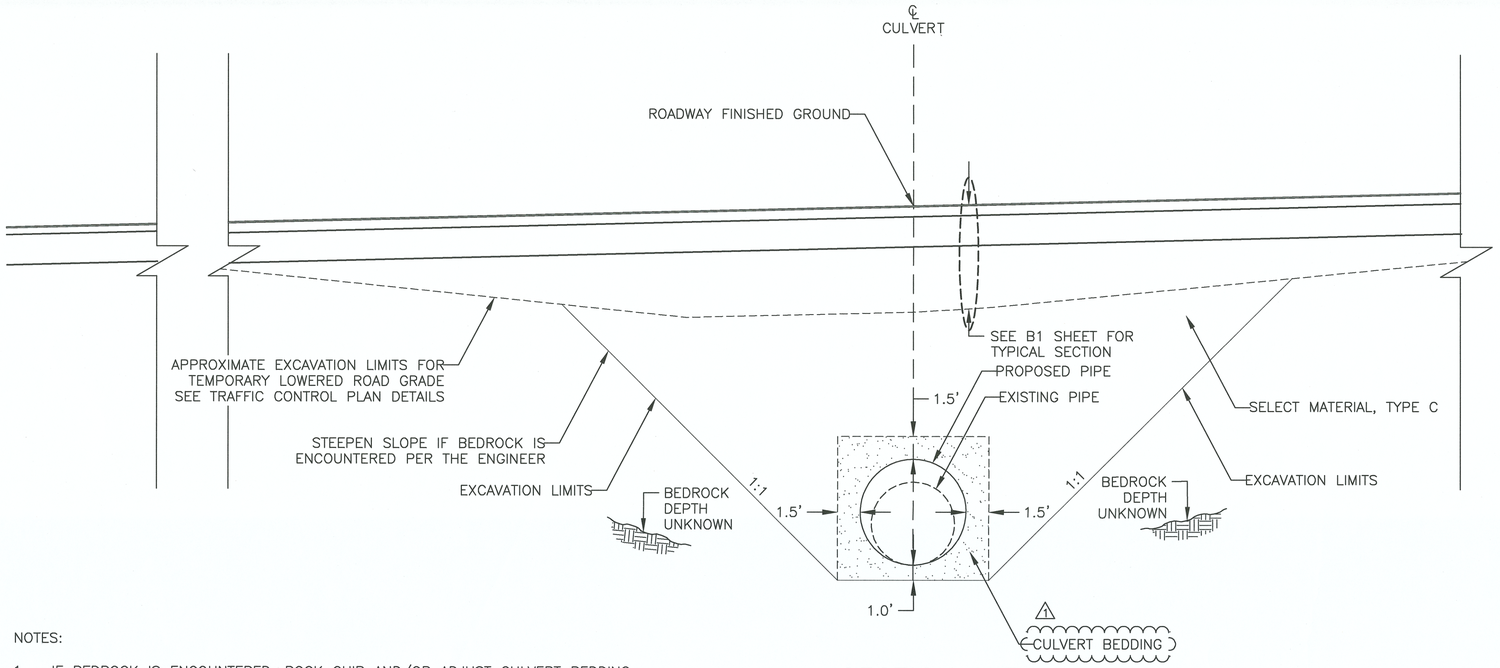
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

DETAILS

DRAFTED MU | CHECKED ## | DESIGNED ## | LAYOUT E1 | DATE 6/2/2022 16:21 | FILE c:\pwworking\west01\d2338813\E1_DETAILS.dwg

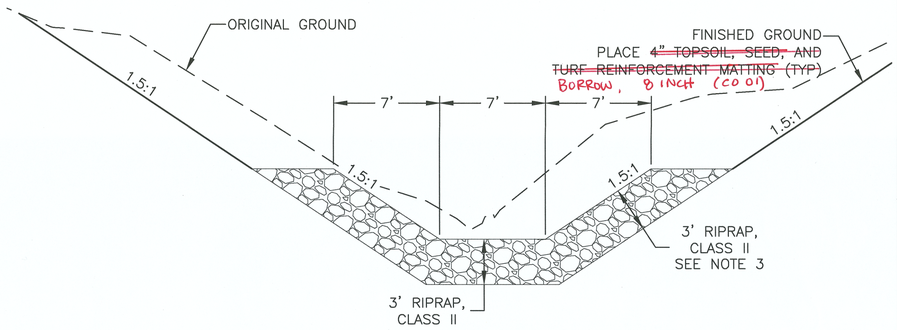
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1	8/12/22	MATERIAL CHANGE	ALASKA	0093001/SFHWY00379	2022	E2	16



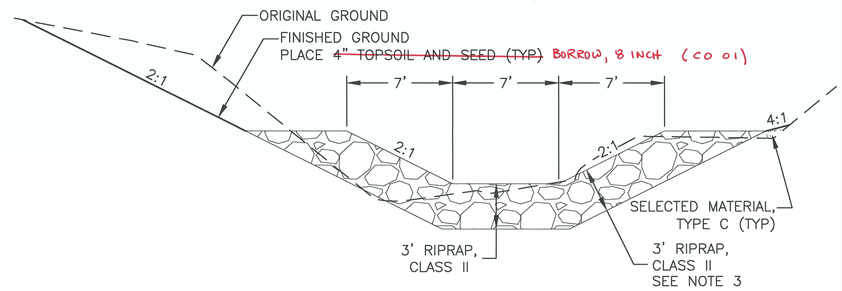
NOTES:

1. IF BEDROCK IS ENCOUNTERED, ROCK CHIP AND/OR ADJUST CULVERT BEDDING LIMITS AS DIRECTED BY THE ENGINEER.

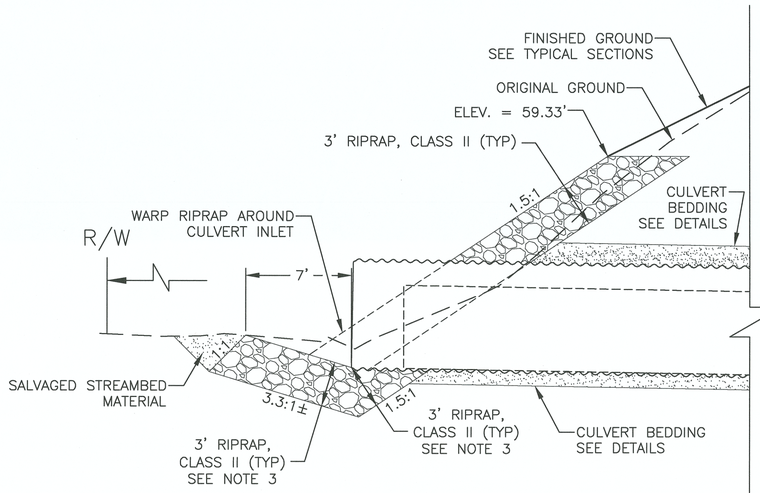
SECTION VIEW
PIPE BEDDING AND BACKFILL



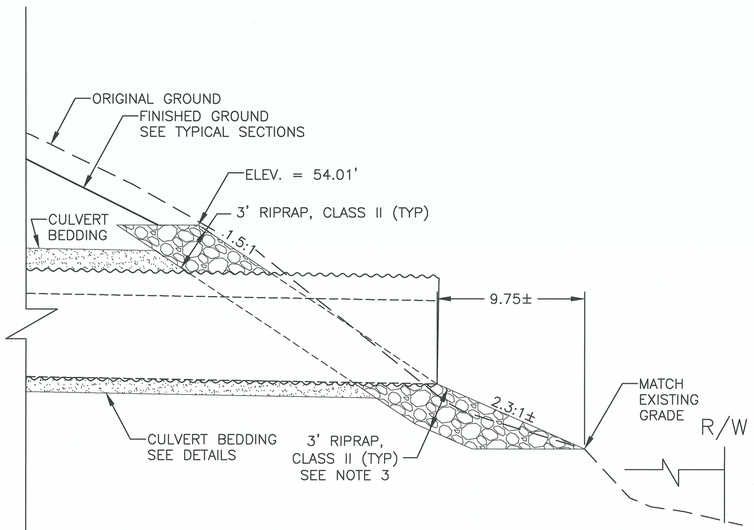
A–A SECTION VIEW



B–B SECTION VIEW



INLET RIPRAP DETAIL



OUTLET RIPRAP DETAIL

NOTES:

2. ALL DIMENSIONS REFERRING TO MATERIAL THICKNESS SHALL BE MEASURED PERPENDICULAR TO THE AIR–FACE OF THE SECTION.
3. REDUCE RIPRAP DEPTH AS NEEDED IF BEDROCK IS ENCOUNTERED AND AS DIRECTED BY THE ENGINEER.

PLANS DEVELOPED BY:
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907-644-2000
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STATE OF ALASKA 49TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

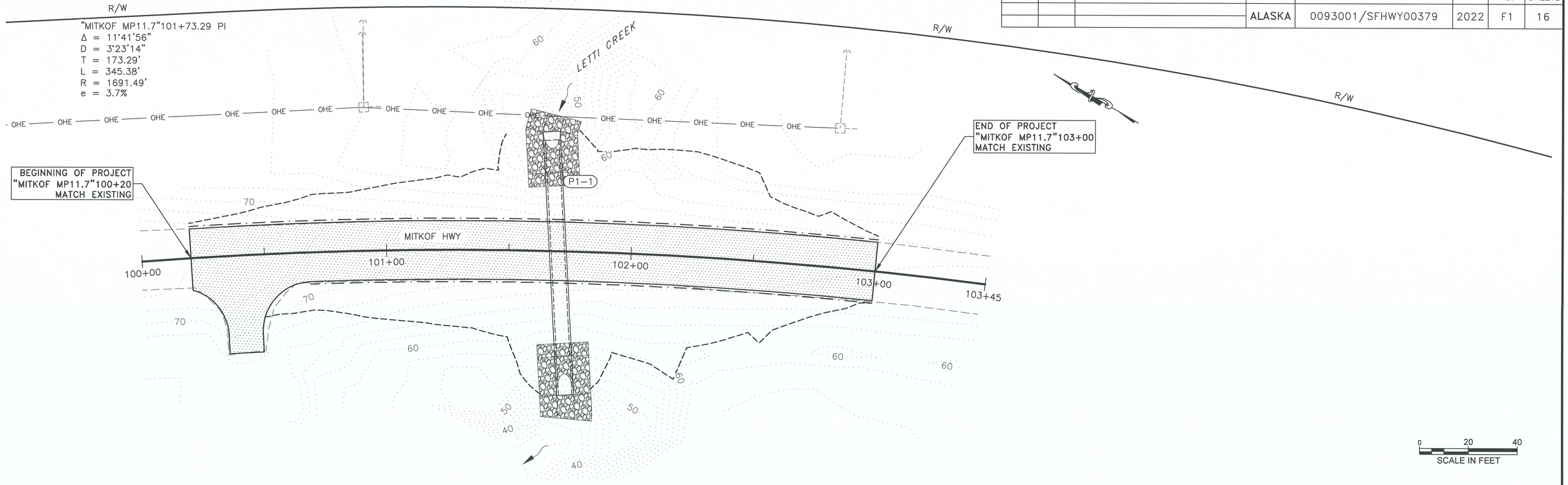
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

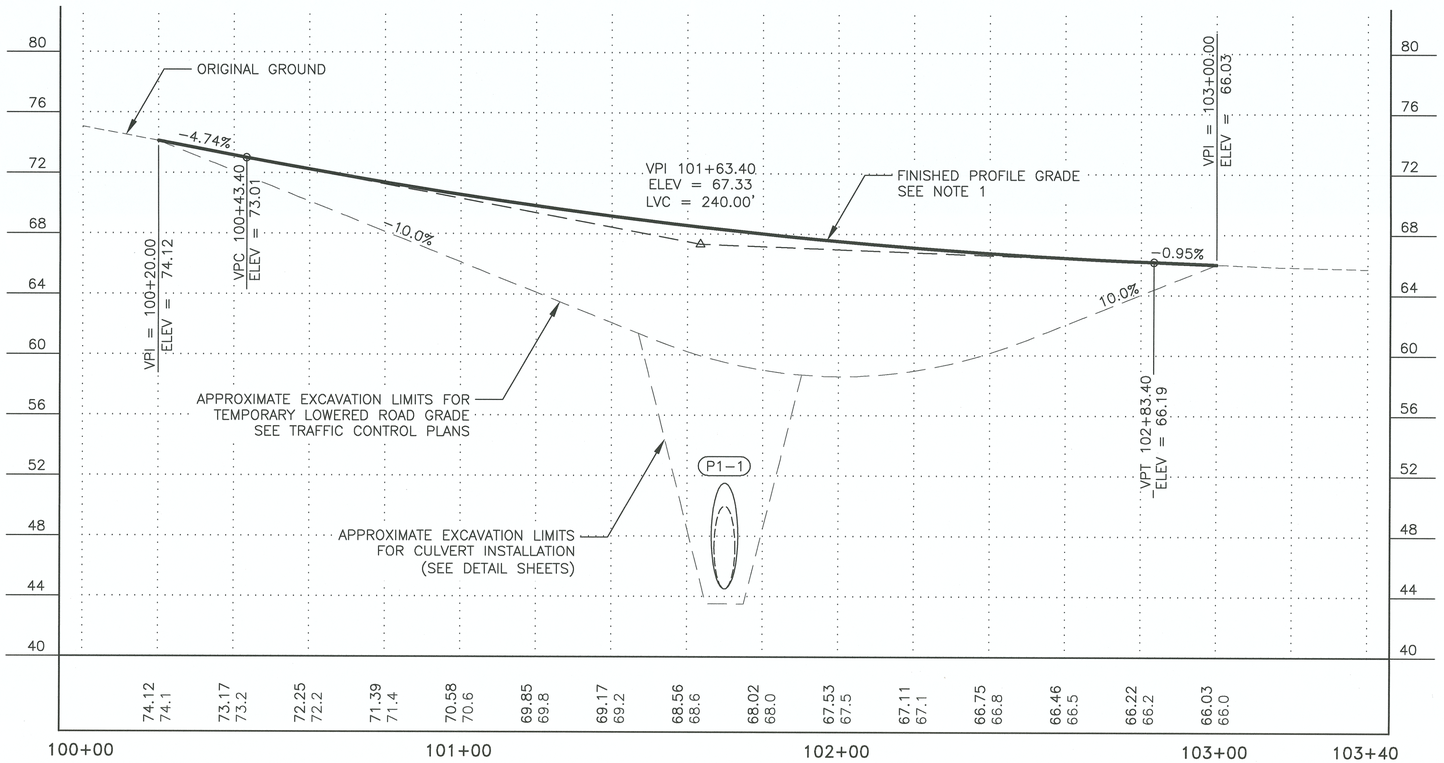
PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

DETAILS

FILE C:\pwworking\west01\d2338113\E1_DETAILS.dwg | DATE 6/2/2022 16:21 | LAYOUT E2 | DESIGNED ## | CHECKED ## | DRAFTED MU

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	F1	16





0 20 40
SCALE IN FEET

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE
500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

STATE OF ALASKA
49 TH
GREGORY J. HARTMAN
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REGISTERED PROFESSIONAL ENGINEER

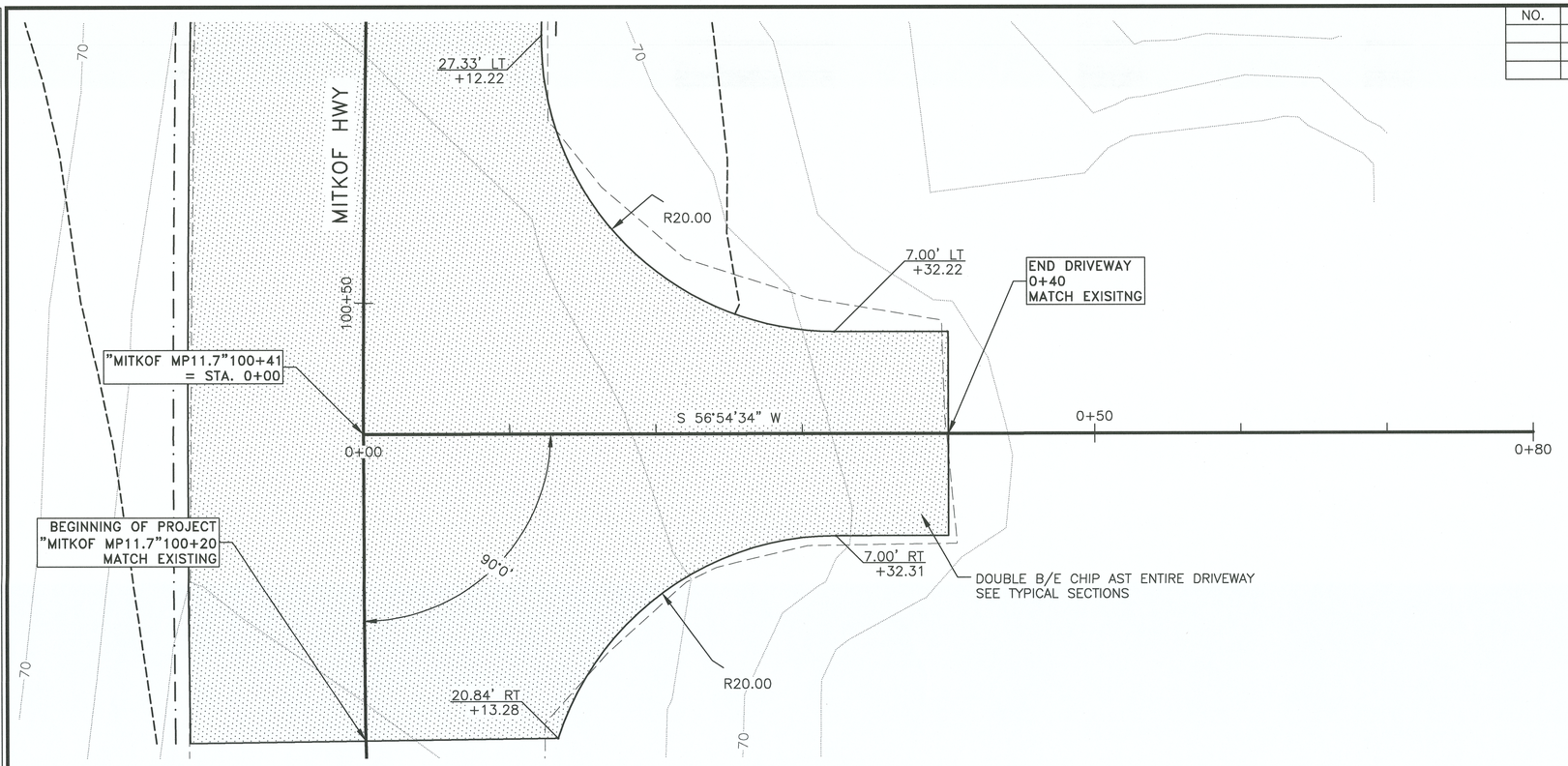
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

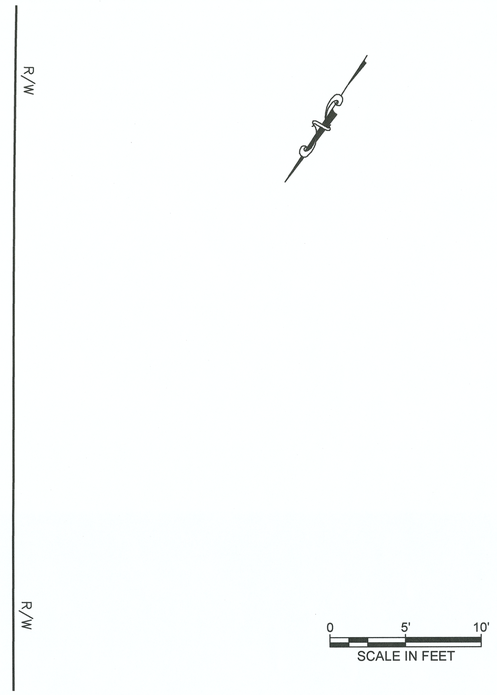
PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

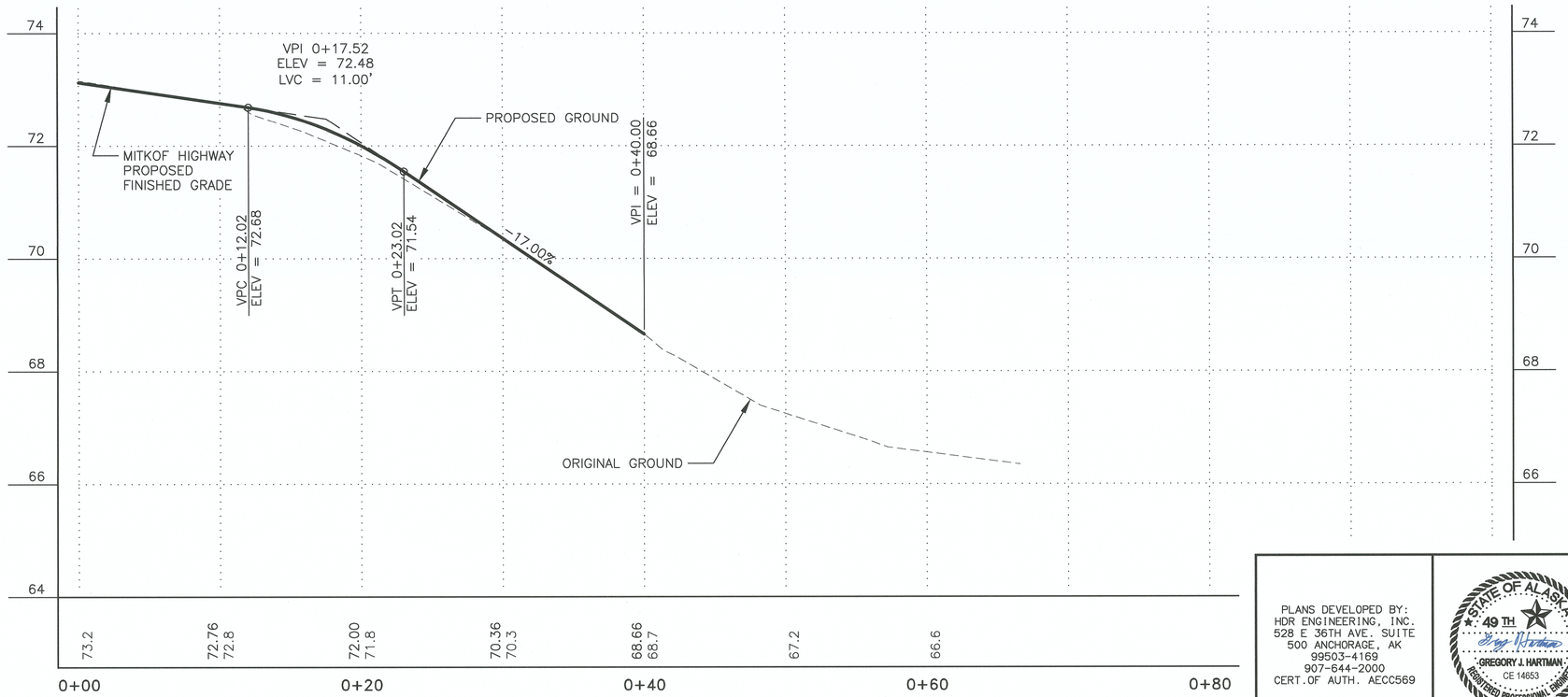
PLAN AND PROFILE

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	F2	16







PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE
500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

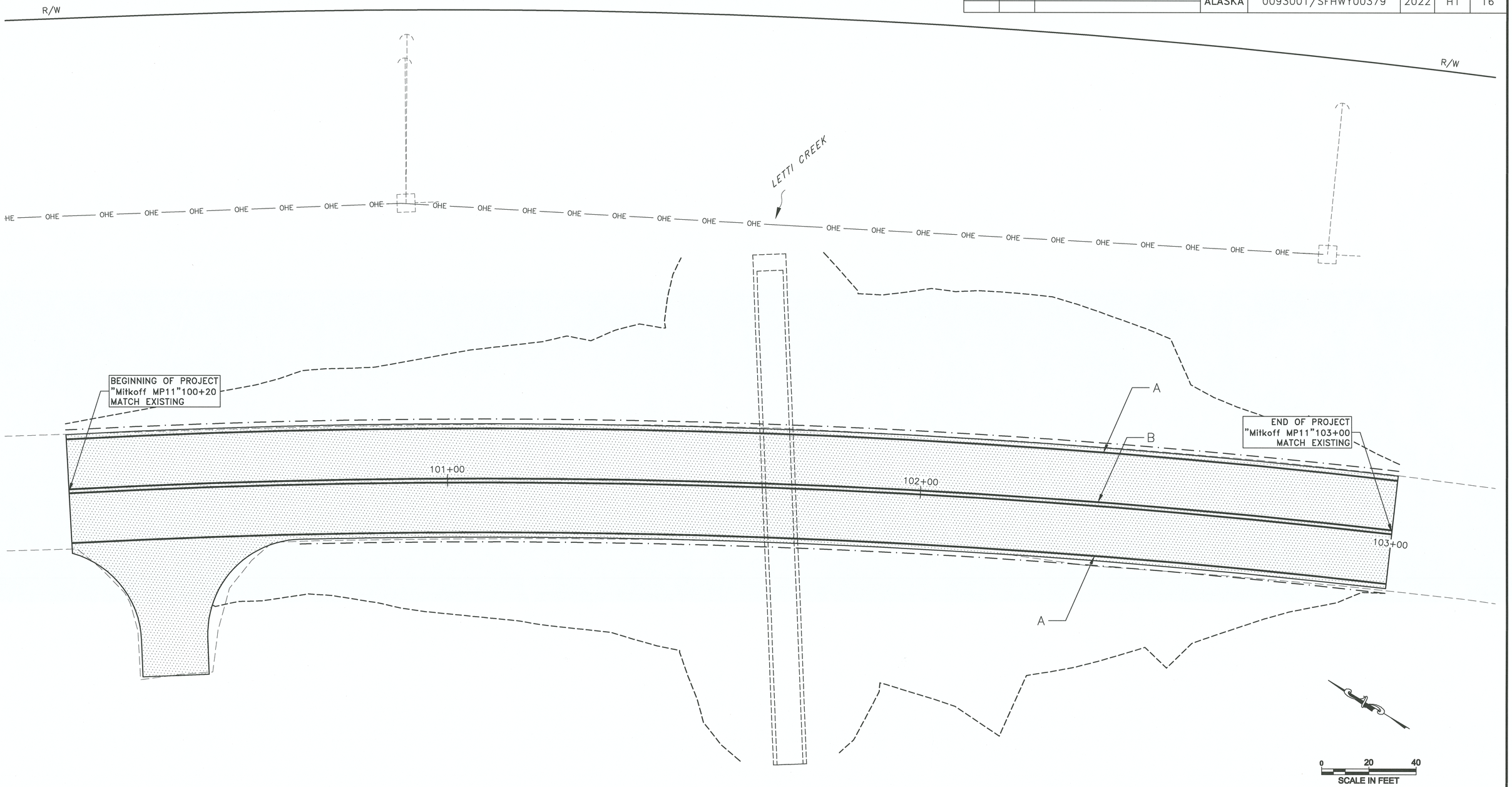
STATE OF ALASKA
49 TH
GREGORY J. HARTMAN
CE 14653
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR PLAN AND PROFILE DRIVEWAY AT 100+41 RT

FILE C:\pwworking\west01\d2338813\F2_PNP APPROACH.dwg
DATE 7/22/2022 11:32
LAYOUT F2
DESIGNED ##
CHECKED ##
DRAFTED MU

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	H1	16



STRIPING LEGEND

SYMBOL	DESCRIPTION	WIDTH	PATTERN
A	SOLID WHITE	4"	
B	SOLID DOUBLE YELLOW	4"	

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HDR ENGINEERING, INC.
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STATE OF ALASKA
49 TH
GREGORY J. HARTMAN
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REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

STRIPING PLAN

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DATE 5/24/2022 11:42
LAYOUT H1
DESIGNED ##
CHECKED ##
DRAFTED MJ

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	Q1	16

LEGEND

SB	SEDIMENT BARRIER
	INLET PROTECTION
	EXISTING CULVERT FLOW
	CULVERT FLOW DIRECTION
	PROFILE FLOW DIRECTION
	SURFACE FLOW DIRECTION
	DISTURBED AREA
FR	FIBER ROLL

R/W

OHE

LETTI CREEK

P1–1

0 10' 20'
SCALE IN FEET

BEGINNING OF PROJECT
"MITKOF MP11.7"100+20

MITKOF HWY

101+00

102+00

103+00

END OF PROJECT
"MITKOF MP11.7"103+00

FIBER ROLLS PLACED ON CONTOURS. SEE BMP–10.00

R/W

PLANS DEVELOPED BY: HDR ENGINEERING, INC. 528 E 36TH AVE. SUITE 500 ANCHORAGE, AK 99503-4169 907-644-2000 CERT.OF AUTH. AECC569	ESCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1120.7.3 DATED NOVEMBER 15, 2013	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR EROSION SEDIMENT CONTROL PLAN

FILE c:\pwworking\west01\d2338113\ESCP.dwg | DATE 5/24/2022 11:00 | LAYOUT Q1 | DESIGNED ## | CHECKED ## | DRAFTED MU

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
1	8/12/22	CHANGED SIGN DIMENSIONS	ALASKA	0093001/SFHWY00379	2022	T1	16

LANE CLOSURE ON TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES

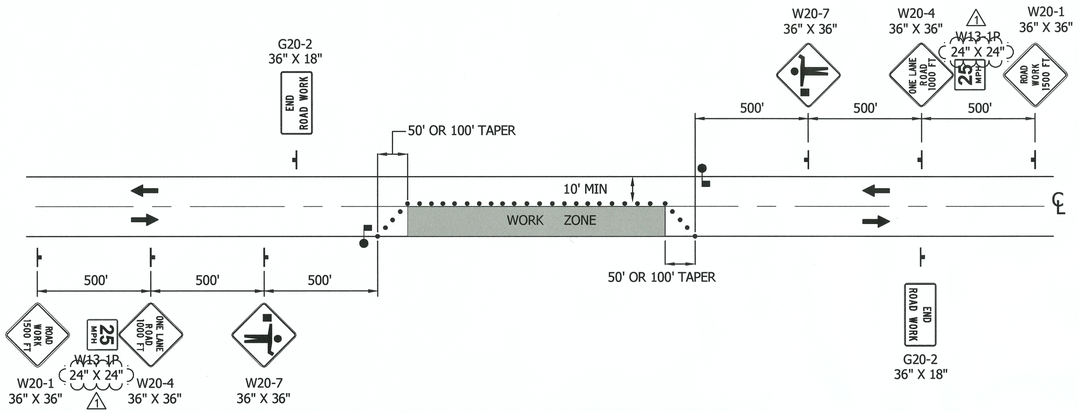
TCP SETUP TABLE					
SPEED 25 (MPH) OR BELOW	MIN NUMBER OF DEVICES WIDTH OF OFFSET (W) IN FT.			MAX DEVICE SPACING ALONG TANGENT	BUFFER SPACE
	10'	11'	12'	(FT)	(FT)
	6 DEVICES EVENLY SPACED			50	155

TRAFFIC CONTROL NOTES:

1. SUBMIT ALL TCPs TO THE ENGINEER FOR APPROVAL.
2. TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0" WITH A MAXIMUM SPEED LIMIT OF 25 MPH.
3. PLACE CONSTRUCTION SIGNS SUCH THAT THEY DO NOT OBSCURE EXISTING TRAFFIC SIGNS.
4. SUGGESTED CONSTRUCTION PHASING:
   - REMOVE PAVEMENT FROM BEGINNING OF PROJECT TO END OF PROJECT. USE SINGLE-LANE CLOSURES AND SWAP TRAFFIC BACK AND FORTH DURING PAVEMENT REMOVAL.
   - EXCAVATE THE ENTIRE ROAD EMBANKMENT WIDTH TO THE EXTENT NECESSARY TO ENABLE THE REMOVAL AND REPLACEMENT OF THE FIRST HALF OF THE CULVERT, AS SHOWN IN THE PLANS. USE SINGLE LANE CLOSURES AND SWAP TRAFFIC BACK AND FORTH AS NEEDED TO REACH DESIRED DEPTH.
   - TRENCH THE NORTHWEST BOUND LANE DOWN TO THE EXISTING CULVERT. MAINTAIN A SINGLE LANE OF TRAFFIC ON THE NORTHWEST BOUND LANE. UTILIZE MUTCD TYPICAL APPLICATION 10 FOR TRAFFIC CONTROL SETUP.
   - CUT AND REMOVE THE FIRST PORTION OF EXISTING CULVERT AND REPLACE WITH THE FIRST HALF OF THE PROPOSED ALUMINUM STRUCTURAL PLATE PIPE.
   - PLACE PIPE BEDDING AND CONSTRUCT EMBANKMENT ON THE SOUTHEAST BOUND LANE AS SHOWN IN TYPICAL SECTION UNTIL THE GRADE IS BROUGHT UP TO THE EXTENT NECESSARY TO PROTECT THE PIPE AND CREATE A TEMPORARY TRAFFIC LANE.
   - TRENCH THE SOUTHEAST BOUND LANE TO THE EXISTING CULVERT. REMOVE REMAINDER OF EXISTING CULVERT AND REPLACE WITH REMAINDER OF THE PROPOSED STRUCTURAL PLATE PIPE. USE SINGLE LANE CLOSURES AND SWAP TRAFFIC BACK AND FORTH AS NEEDED TO PERFORM PIPE WORK AND BRING THE GRADE UP EVEN WITH THE TEMPORARY TRAFFIC LANE ELEVATION.

TRAFFIC CONTROL LEGEND

- FLAGGER
- CONSTRUCTION SIGN
- DRUM
- CONE
- WARNING LIGHT
- TRAFFIC FOLLOW

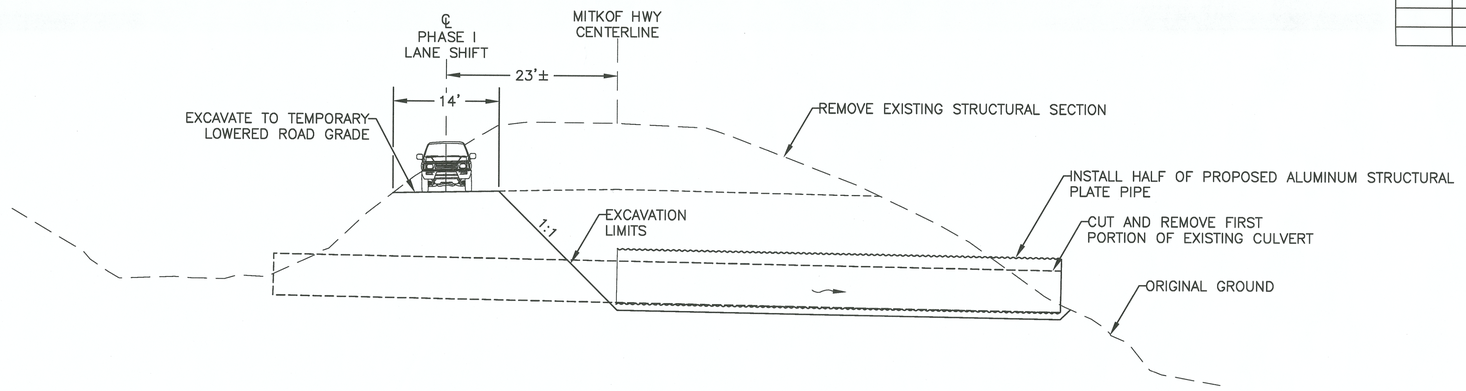




PLANS DEVELOPED BY: HDR ENGINEERING, INC. 528 E 36TH AVE. SUITE 500 ANCHORAGE, AK 99503-4169 907-644-2000 CERT.OF AUTH. AECC569	TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012	STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR TRAFFIC CONTROL PLAN

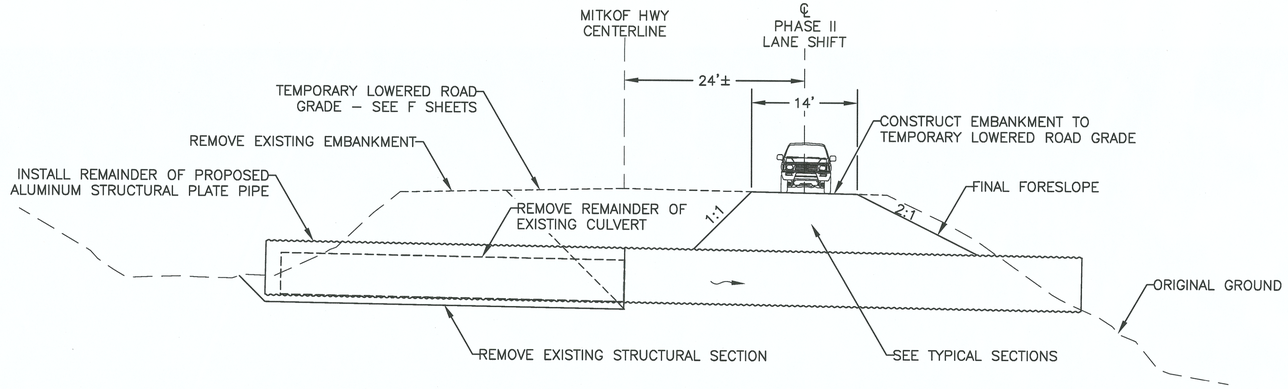
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	0093001/SFHWY00379	2022	T2	16



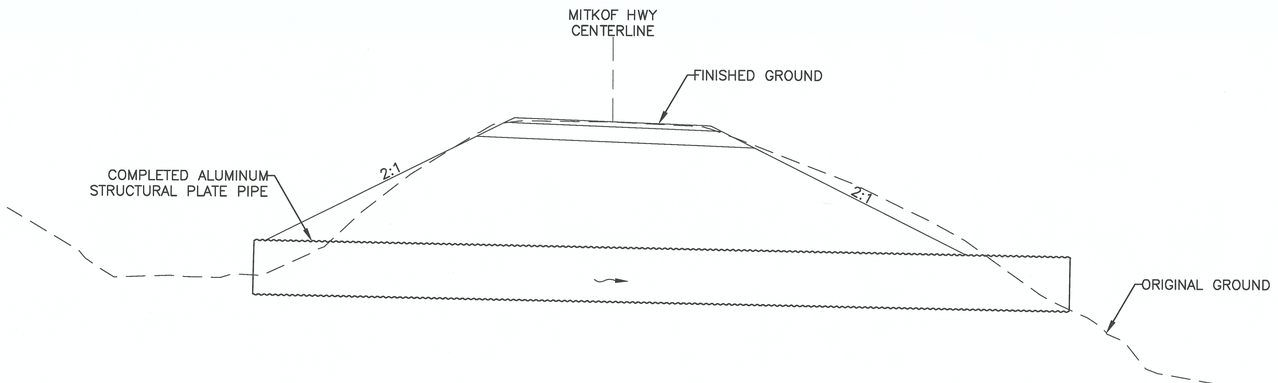
MITKOF MPT10.8 CULVERT PHASE I

MAINTAIN SINGLE LANE OF TRAFFIC



MITKOF MPT10.8 CULVERT PHASE II

MAINTAIN SINGLE LANE OF TRAFFIC



MITKOF MPT 10.8 CULVERT FINAL

SEE TYPICAL SECTION IN PLANS

NOTES:

1. THESE TRAFFIC CONTROL DETAILS APPLY TO THE STRUCTURAL PLATE PIPE AT LETTI CREEK ON MITKOF HWY NEAR MPT 10.8. THESE DETAILS ARE FOR ILLUSTRATIVE PURPOSES ONLY, AND ARE NOT A CONTRACT DOCUMENT.
2. DE–WATER WORK AREA PRIOR TO BEGINNING EXCAVATION.

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
528 E 36TH AVE. SUITE 500 ANCHORAGE, AK
99503-4169
907-644-2000
CERT.OF AUTH. AECC569

TCP NOT SEALED IN ACCORDANCE WITH ALASKA HIGHWAY PRECONSTRUCTION MANUAL SECTION 1400.3.5 DATED JANUARY 30, 2012

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PSG MITKOF HWY MPT 10.8 CULVERT REPLACEMENT – DEC 20 SE PR

CONSTRUCTION PHASING PLAN

DRAFTED WU | DESIGNED ## | CHECKED ## | LAYOUT T2 | DATE 6/2/2022 16:29 | FILE c:\pwworking\west01\d2338813\00379_TCP.dwg