

FILE \\intranet.hdr\hdr\Eng\ActiveProjects\3171\10003518\10354808\6.0_CAD_BIM\6.2_WIP\6.2a_Production\00436_DMI\TLC246\2025 15:01 LAYOUT A1
DESIGNED ###
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STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

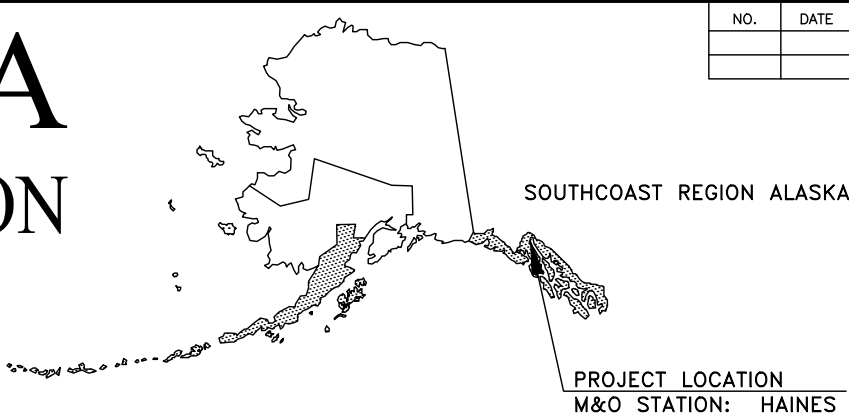
PROPOSED HIGHWAY PROJECT

HNS ANADROMOUS CULVERTS

00048 - DEC 20 SE PR

PROJECT NO. SDRER00436

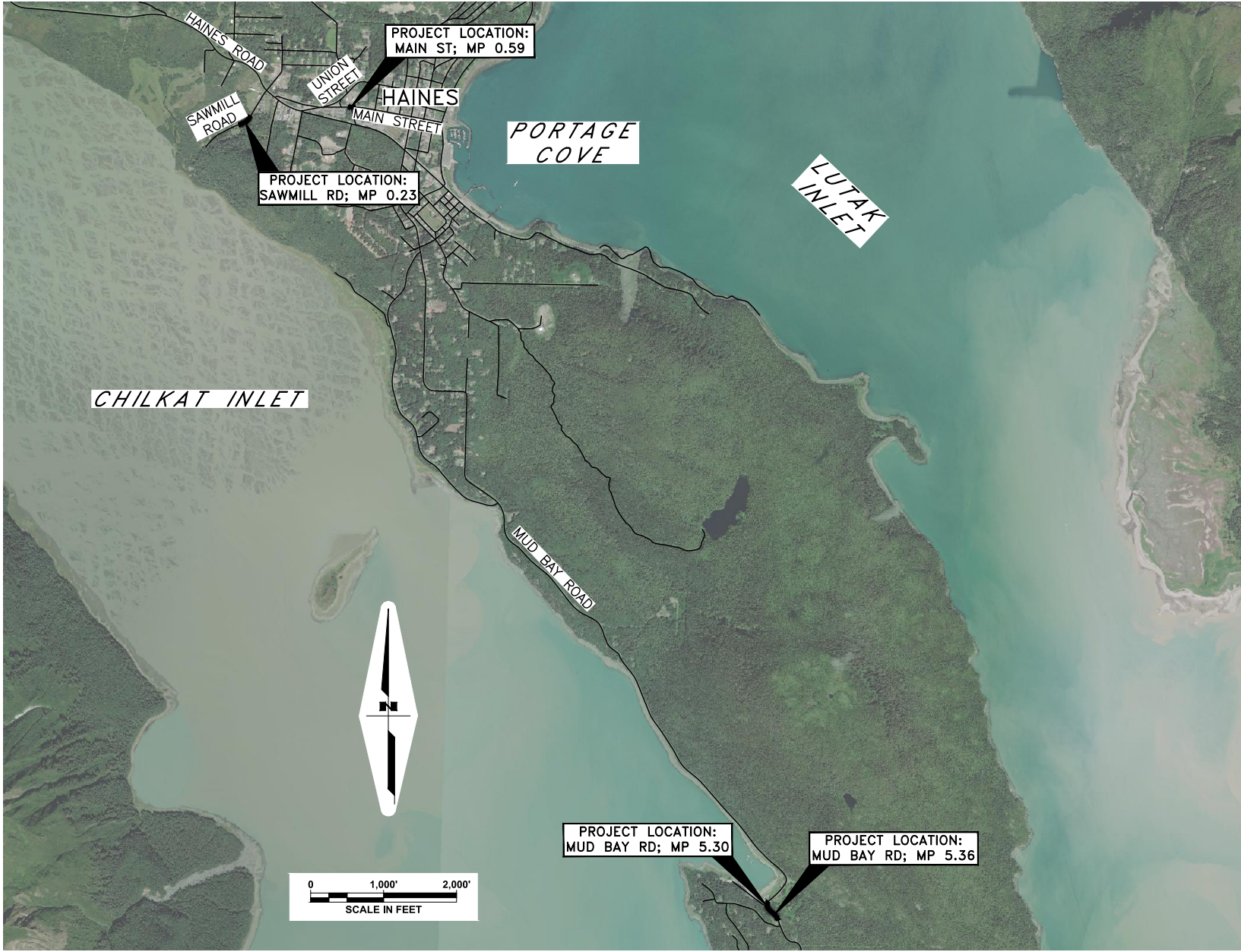
GRADING, DRAINAGE, AND SIDE SLOPE STABILIZATION



NO.	DATE	REVISIONS	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	A1	51
DI #461258			ROUTE ID: 2021012X000	MILEPOINT: 0.23			
			LATITUDE: 59.23430	LONGITUDE: -135.47437			
DI #461641			ROUTE ID: 2021017X000	MILEPOINT: 0.59			
			LATITUDE: 59.23621	LONGITUDE: -135.45787			
DI #461219			ROUTE ID: 2021022X000	MILEPOINT: 5.30			
			LATITUDE: 59.170806	LONGITUDE: -135.386926			
DI #548035			ROUTE ID: 2021022X000	MILEPOINT: 5.36			
			LATITUDE: 59.170079	LONGITUDE: -135.385525			

PROJECT SUMMARY			
LOCATION	WIDTH	LENGTH	REMARKS
DI #461258	24'	150'	SAWMILL RD. CULVERT
DI #461641	--	63'	DOT M&O YARD CULVERT
DI #461219	11'	150'	MUD BAY ROAD SHOULDER
DI #548035	22'	60'	MUD BAY ROAD CULVERT

DESIGN DESIGNATIONS				
LOCATION	DI #461258 SAWMILL ROAD MP 0.23	DI #461641 M&O YARD MAIN ST MP 0.59	DI #461219 MUD BAY ROAD MP 5.30	DI #548035 MUD BAY ROAD MP 5.36
PROJECT TYPE	INSTALL NEW FISH PASSAGE CULVERT AND REPAVE ROAD	REMOVE AND BACKFILL OLD CULVERTS, INSTALL NEW FISH PASSAGE CULVERT AND REPAVE APPROACH	REPAIR AND REPAVE DAMAGED ROADWAY SHOULDER	INSTALL NEW FISH PASSAGE CULVERT AND REPAVE ROAD
FUNCTIONAL CLASS	MINOR COLLECTOR	MAJOR COLLECTOR	MINOR COLLECTOR	MINOR COLLECTOR
ADT (2020)	140	210	140	140
DESIGN SPEED (V)	-	25	20	25



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

PS&E REVIEW

FEBRUARY 2025

CONCUR:

CHRIS GOINS, P.E., C.M.
DIRECTOR, SOUTHCOAST REGION

DATE

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

	EXISTING	PROPOSED
SANITARY SEWER (FLOW DIRECTION)		
FUEL LINE		
GAS LINE		
WATER LINE		
METER, VALVE, FIRE HYDRANT		
EXISTING CULVERT		
PROPOSED STORM DRAIN		
FIBER OPTIC LINE		
DIRECT BURIAL TELEPHONE CABLE		
DIRECT BURIAL ELECTRIC CABLE		
ELECTRIC LINE (OVERHEAD)		
POWER POLE LINE		
JOINT USE POWER & TELEPHONE		
TELEPHONE POLE LINE		
POLE ANCHOR		
STUB POLE (POWER OR TELEPHONE)		
TELEPHONE DUCT		
TELEPHONE PEDESTAL		
BURIED CABLE MARKER		
PIPELINE MARKER OR VALVE		
CATCH BASIN OR DROP INLET		
MANHOLE		
SANITARY SEWER CLEAN OUT		
PRIVATE LUMINAIRE		
ELECTRIC BOX		
MILE POST		
RIPRAP		
AGGREGATE SURFACE COURSE		
PAVEMENT		
GRAVEL EDGE		
DITCH RECONDITIONING		
THAW WIRE		

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

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

ABBREVIATIONS:

APPROX	APPROXIMATELY
CL	CENTERLINE
CY	CUBIC YARD
E	EAST, EASTING
ELEV	ELEVATION
FT. '	FOOT, FEET
H	HORIZONTAL
IN, "	INCH, INCHES
L	LENGTH OF CURVE
LT	LEFT
LVC	LENGTH OF VERTICAL CURVE
M	MUDBAY ROAD ALIGNMENT
MAX	MAXIMUM
MIN	MINIMUM
MYC	MAINTENANCE YARD CHANNEL ALIGNMENT
MYD	MAINTENANCE YARD DRIVEWAY ALIGNMENT
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
RT	RIGHT
S	SOUTH
SC	SAWMILL CREEK ALIGNMENT
SR	SAWMILL ROAD ALIGNMENT
SQ. FT.	SQUARE FOOT
STA	STATION
T	TANGENT
TYP	TYPICAL
V	VERTICAL
VPC	VERTICAL POINT OF CURVATURE
VPI	VERTICAL POINT OF INTERSECTION
VPT	VERTICAL POINT OF TANGENCY
W	WEST
TRM	TURF REINFORCEMENT MAT

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



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR

LEGEND

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	A3	51



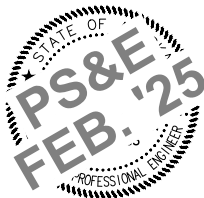
INDEX OF SHEETS	
SHEET NO.	DESCRIPTION
A1	TITLE SHEET
A2	LEGEND
A3	LAYOUT AND INDEX OF SHEETS
A4	SURVEY CONTROL
B1-B4	TYPICAL SECTIONS
C1-C2	ESTIMATE OF QUANTITIES
D1-D2	SUMMARY TABLES
H1	STRIPING DETAILS
P1-P11	SAWMILL CREEK PLANS
P12-23	MAINTENANCE YARD PLANS
P24-P27	MUD BAY ROAD PLANS
T1-T9	TRAFFIC CONTROL

THE FOLLOWING STANDARD PLANS APPLY:
C-03.30, C-06.00
D-01.02, D-04.22, D-08.00, D-09.00, D-13.10
E-09.00
F-01.04, F-03.02
T-21.04

GENERAL NOTES:

- MAKE ALL PAVEMENT CUTS CLEAN, VERTICAL, AND TRUE TO REMOVAL LIMITS SHOWN ON PLANS.
- RIGHT-OF-WAY LINES SHOWN ON THE PLANS ARE SOURCED FROM THE HAINES BOROUGH. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO MAKE ALL REASONABLE EFFORT TO STAY WITHIN THE RIGHT OF WAY.

PLANS DEVELOPED BY:
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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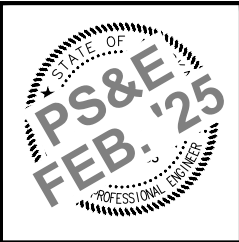
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CULVERTS 00048 -
DEC 20 SE PR

LAYOUT AND INDEX OF
SHEETS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	A4	51

PLACEHOLDER
SURVEY CONTROL
SHEET

PLANS DEVELOPED BY:
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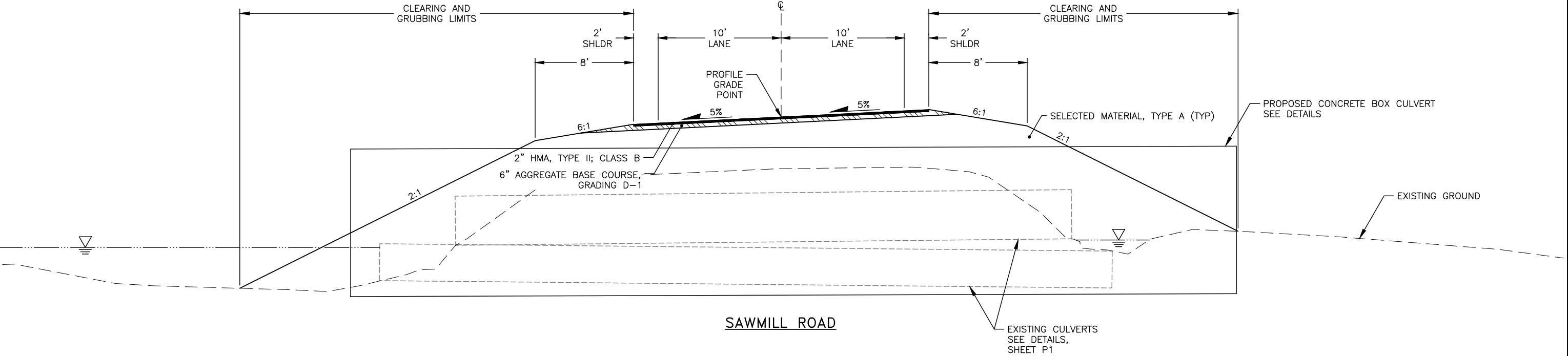


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SURVEY CONTROL

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	B1	51



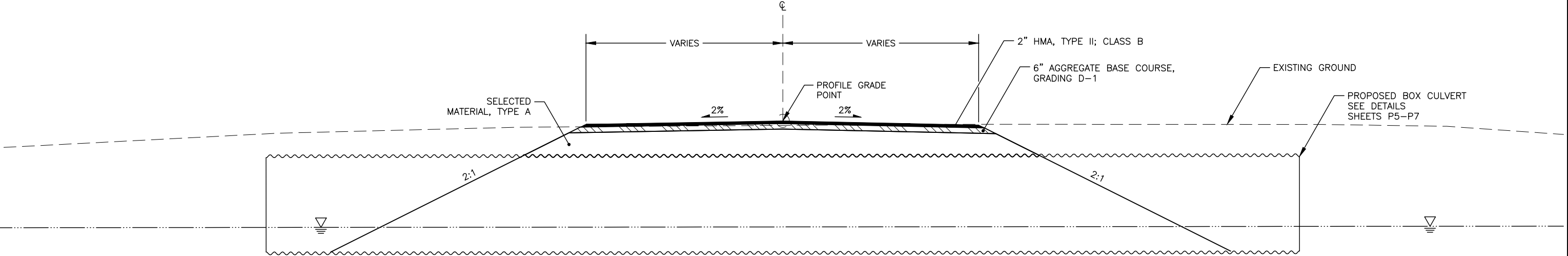
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
CERT. OF AUTH. AECC569



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DEC 20 SE PR
SAWMILL ROAD
TYPICAL SECTION
DI #461258

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	B2	51



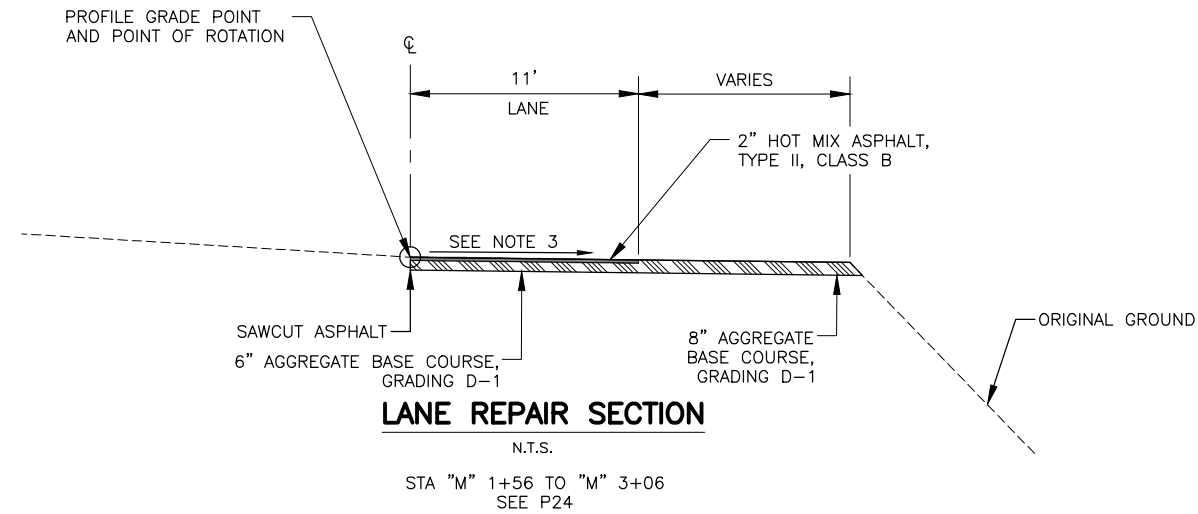
DOT M&O YARD SOUTH DRIVEWAY CULVERT CROSS SECTION
SEE PLAN SHEETS FOR PIPE REMOVAL LOCATION

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
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STATE OF ALASKA
PS&E
FEB: '25
PROFESSIONAL ENGINEER

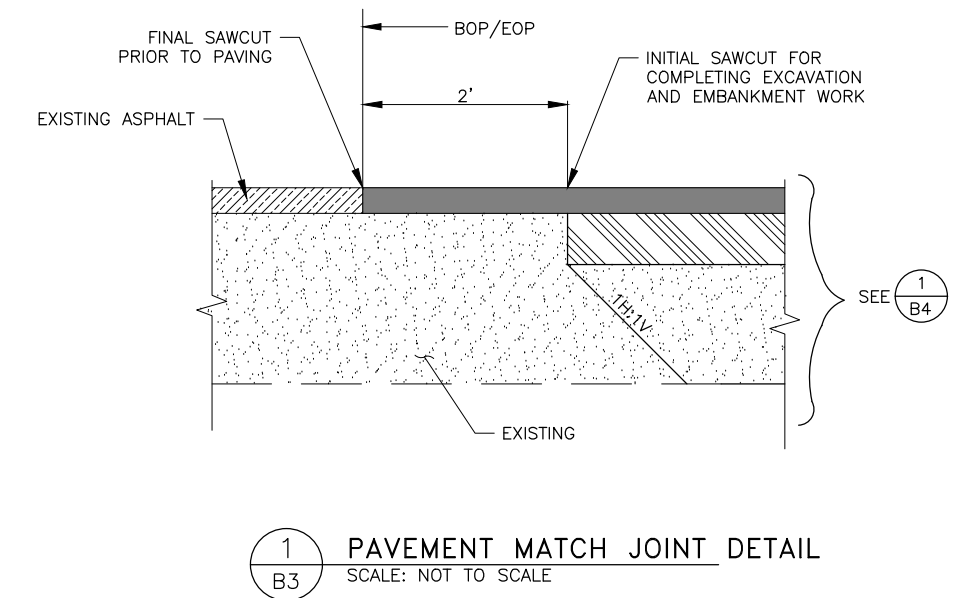
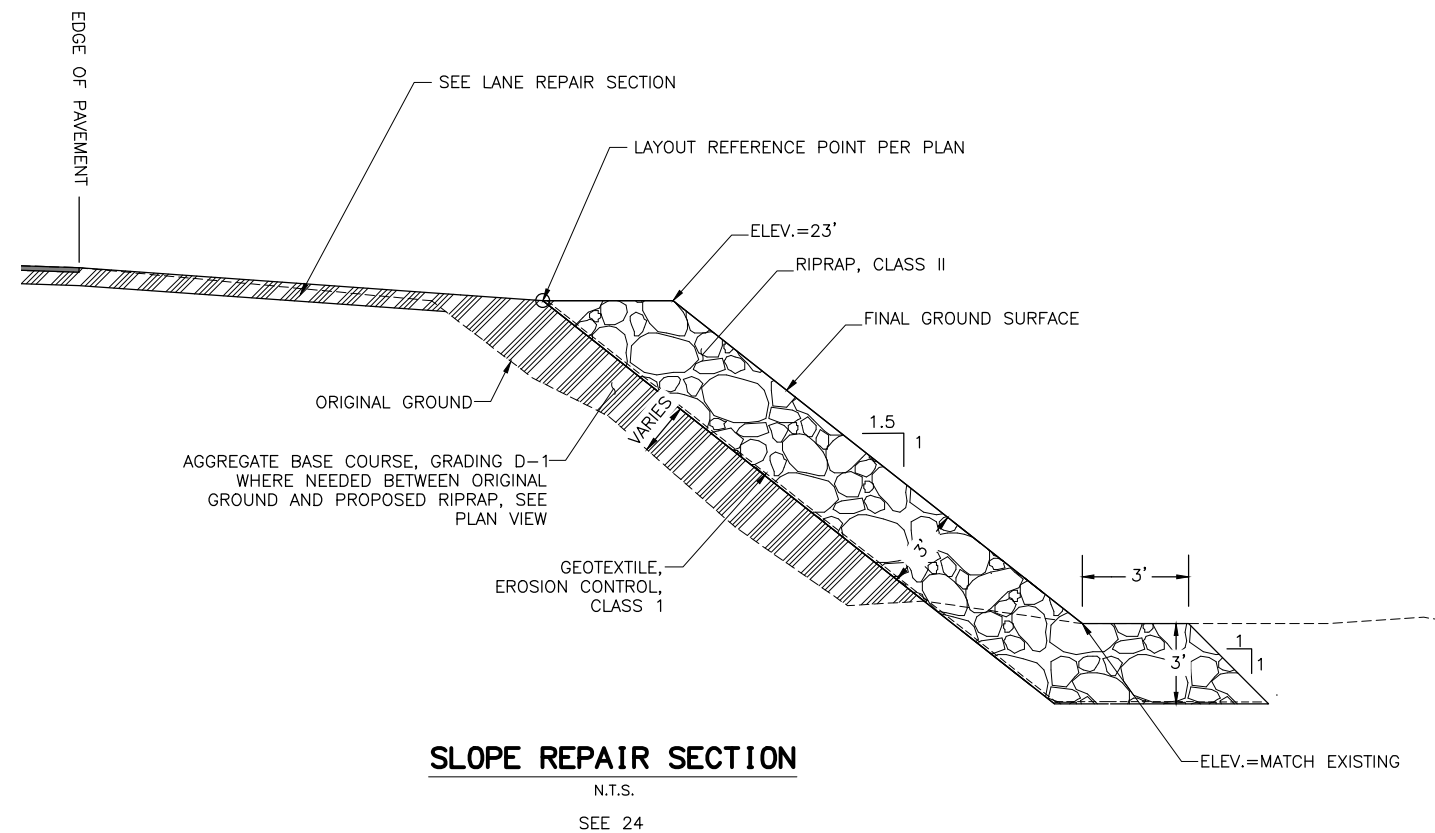
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
M&O YARD DRIVEWAY
TYPICAL SECTION
DI #461641

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	B3	51



NOTE:

1. WITHIN TWO (2) DAYS AFTER PAVING, PLACE AGGREGATE BASE COURSE, GRADING D-1 AGAINST PAVEMENT EDGE TO ENSURE THERE IS NO VERTICAL DROP AT THE EDGE OF PAVEMENT. USE APPROVED TRAFFIC CONTROL DEVICES IN THE INTERIM.
2. MATCH EXISTING PAVEMENT AT BEGIN/END PAVEMENT STATIONS AS APPROVED BY THE ENGINEER.
3. MATCH EXISTING ROAD CROSS-SLOPES. BOTTOM CROSS-SLOPE OF AGGREGATE BASE COURSE, GRADING D-1 SHALL BE CONSISTENT WITH CORRESPONDING ROADWAY CROSS-SLOPE TO MAINTAIN POSITIVE DRAINAGE.
4. MATCH EXISTING SUPERELEVATIONS AND TRANSITIONS.
5. PLACE 3 INCHES MINIMUM TOPSOIL AND SEED PER SECTION 618 FROM EDGE OF AGGREGATE BASE COURSE, GRADING D-1 TO LIMITS OF CLEARING AND GRUBBING, EXCLUDING RIPRAP SLOPES AND BELOW OHW.



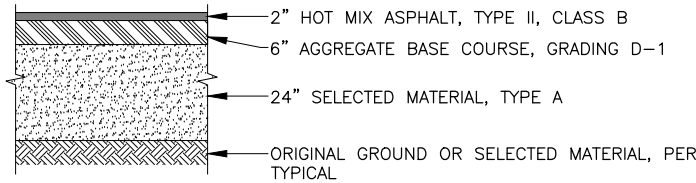
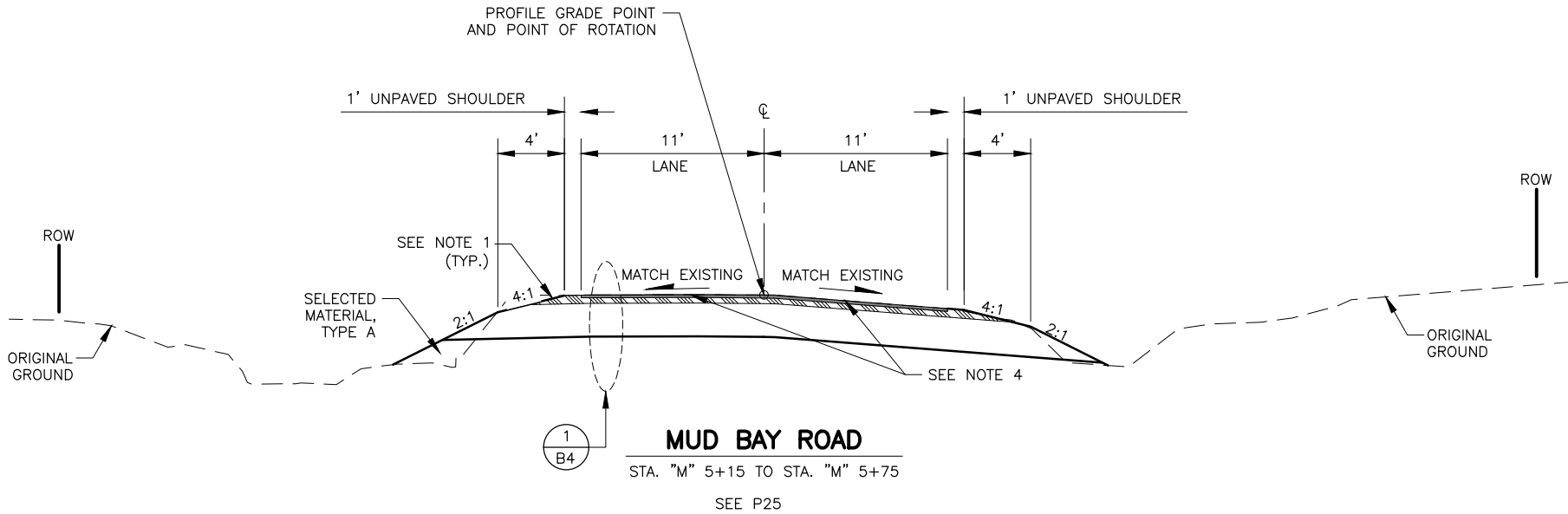
1 PAVEMENT MATCH JOINT DETAIL

PLANS DEVELOPED BY:
DOWL
5015 BUSINESS PARK BLVD,
SUITE 4000,
ANCHORAGE, AK 99503
(907) 562-2000
AECL848

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
MUD BAY ROAD MPT 5.3
TYPICAL SECTIONS
DI #461219

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	B4	51



1
B4 ROADWAY STRUCTURAL SECTION
SCALE: NOT TO SCALE

PLANS DEVELOPED BY:
DOWL
5015 BUSINESS PARK BLVD.,
SUITE 4000,
ANCHORAGE, AK 99503
(907) 562-2000
AECL848

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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HNS ANADROMOUS
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DEC 20 SE PR
MUD BAY CULVERT
TYPICAL SECTIONS
DI #548035

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DATE 2/10/2025 16:40

LAYOUT C1

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	C1	51

ESTIMATE OF QUANTITIES							
ITEM NO.	PAY ITEM	PAY UNIT	DI# 461258	DI# 461641	DI# 461219	DI# 548035	TOTAL QUANTITY
201.0003.0000	CLEARING AND GRUBBING	ACRE	0.34	0.67	0.15	0.04	1.2
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LUMP SUM	–	ALL REQUIRED	–	–	ALL REQUIRED
202.0002.0000	REMOVAL OF PAVEMENT	SQUARE YARD	400	105	184	147	836
202.0004.0000	REMOVAL OF CULVERT PIPE	LINEAR FEET	131	615	–	80	826
202.2022.0000	REMOVAL OF FENCE	LINEAR FEET	–	902	–	–	902
203.0003.0000	UNCLASSIFIED EXCAVATION	CUBIC YARD	450	9,500	173	509	10,632
203.0006.000A	BORROW, TYPE A	TON	570	7,000	–	652	8,222
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D–1	TON	133	60	560	35	788
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E–1	TON	–	421	–	–	421
401.0001.002B	HMA, TYPE II; CLASS B	TON	45	21	20.8	19	105.8
401.0004.582B	ASPHALT BINDER, GRADE PG 58–28 E	TON	2	1	2	2	7
501.0004.0000	CLASS A CONCRETE	CY	–	2	–	–	2
602.2001.1108	ALUMINUM BOX CULVERT, 11’–8” SPAN, 5’–9” RISE	LINEAR FOOT	–	60	–	–	60
603.0002.0095	95X67 INCH CSP ARCH – ALUMINUM–COATED	LINEAR FOOT	–	–	–	64	64
603.2013.1900	BOX CULVERT, PRECAST REINFORCED CONCRETE, 19’–0” SPAN, 16’–0” RISE, PLACEHOLDER	LINEAR FOOT	72	–	–	–	72
607.0003.0000	CHAIN LINK FENCE	LF	–	711	–	–	711
611.0001.0001	RIPRAP, CLASS I	CY	–	–	–	41	41
611.0001.0002	RIPRAP, CLASS II	CY	525	83	212	–	820
613.0002.0000	CULVERT MARKER POST	EACH	2	2	–	–	4
618.0002.0000	SEEDING	POUND	4	28	–	2	34
620.0001.0000	TOPSOIL	SQUARE YARD	330	3120	–	127	3,577
621.0001.0000	TREE, PAPER BIRCH	EACH	–	248	–	–	248
621.0001.0000	TREE, WHITE SPRUCE	EACH	–	124	–	–	124
621.0002.0000	SHRUB, DWARF DOGWOOD	EACH	–	372	–	–	372
621.0002.0000	SHRUB, LABRADOR TEA	EACH	–	372	–	–	372
621.0002.0000	SHRUB, RED OSIER DOGWOOD	EACH	–	371	–	–	371
631.0002.0001	GEOTEXTILE, EROSION CONTROL, CLASS 1	SQUARE YARD	–	–	237	41	278
635.0001.0000	INSULATION BOARD	MBM	–	0.4	–	–	0.4
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
640.0004.0000	WORKER MEALS AND LODGING, OR PER DIEM	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED

PLANS DEVELOPED BY:
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR

ESTIMATE OF QUANTITIES

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	C2	51

ESTIMATE OF QUANTITIES							
ITEM NO.	PAY ITEM	PAY UNIT	DI# 461258	DI# 461641	DI# 461219	DI# 548035	TOTAL QUANTITY
642.0001.0000	CONSTRUCTION SURVEYING	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
642.0003.0000	THREE PERSON SURVEY PARTY	HR	25	35	4	6	70
643.0002.0000	TRAFFIC MAINTENANCE	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
643.0025.0000	TRAFFIC CONTROL	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
644.0001.0000	FIELD OFFICE	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
644.0002.0000	FIELD LABORATORY	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	
644.2004.0000	ENGINEERING COMMUNICATIONS	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
658.0001.0000	EROSION, SEDIMENT, POLLUTION CONTROL WITHOUT CGP COVERAGE	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
658.0002.0000	ESCP CHANGES BY DIRECTIVE	CONTINGENT SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
670.0001.0000	PAINTED TRAFFIC MARKINGS	LUMP SUM	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED	ALL REQUIRED
671.2003.0000	STREAM SUBSTRATE	TON	254	4,700	–	113	5,067
671.2005.0000	STREAM DIVERSION AND DEWATERING	LUMP SUM	ALL REQUIRED	–	–	ALL REQUIRED	ALL REQUIRED
690.2002.0000	WATERWAY BANK FILL	LINEAR FEET	–	–	–	82	82
690.2004.0000	WATERWAY RESTORATION	LINEAR FEET	–	870	–	41	911

BASIS OF ESTIMATE		
ITEM NO.	PAY ITEM	ESTIMATING FACTOR
203.0006.000A	BORROW, TYPE A	144 LB/FT³
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D–1	144 LB/FT³
301.0003.00E1	AGGREGATE SURFACE COURSE, GRADING E–1	144 LB/FT³
401.0001.002B	HMA, TYPE II; CLASS B	150 LB/FT³
401.0004.0000	ASPHALT BINDER, GRADE PG 58–28	5.3% OF 401.0001.002B
618.0002.0000	SEEDING	SEE SPECIFICATIONS
671.2003.0000	STREAM SUBSTRATE	148 LB/FT³

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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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CULVERTS 00048 –
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ESTIMATE OF QUANTITIES

FILE \\intranet.hdr\hdr\Eng\ActiveProjects\3171\1003518\10354808\6.0_CAD\BIM\6.2_WIP\6.2a_Product\ton\00436.D1_SUMMARIES.dwg DATE 2/10/2025 13:55 LAYOUT D1

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	D1	51

[201.0003.0000] CLEARING AND GRUBBING						
DI#	SHEET	STATION		AREA (SY)	AREA (ACRES)	REMARKS
		FROM	TO			
461258	F1	"SR" 10+10	"SR" 11+60	496	0.10	SAWMILL ROAD CORRIDOR
	F1, P1, P2	"SR" 10+44	"SR" 11+17	624	0.13	SAWMILL STREAM BANKS & STREAM
	T2	"SR" 10+84	"SR" 11+60	375	0.08	TEMPORARY DIVERSION
461641	P5	"MYC"10+00	"MYC"12+42	322	0.07	FILLED-IN, EXISTING EAST UP-STREAM CHANNEL
	P5, P6	"MYC"10+14	"MYC"13+68	13872	0.26	AREA FOR NEW EAST UPSTREAM CHANNEL
	P7, P8	"MYC"16+36	"MYC"19+61	1297	0.27	AREA FOR NEW DOWN STREAM CHANNEL
	F2, P8	"MYC"17+65	"MYC"19+53	368	0.08	FILLED-IN, EXISTING DOWN-STREAM CHANNEL
461219	F3	"M" 01+56	"M" 03+06	6450	0.15	
548035	F4	"M" 05+15	"M" 05+75	1463	0.04	
TOTAL:				1.18		
PAY ITEM QUANTITY:						

[202.0001.0000] REMOVAL OF STRUCTURES AND OBSTRUCTIONS					
DI#	SHEET	STATION	OFFSET	QUANTITY	REMARKS
		FROM			
461641	P6	"MYC"13+92	70.6' RT	1	PIECE OF OLD TEMPORARY BRIDGE
	P6	"MYC"13+93	1.8' LT	1	CONCRETE BUILDING FOUNDATION
TOTAL:				2	
PAY ITEM QUANTITY:				ALL REQ'D	

[202.0002.0000] REMOVAL OF PAVEMENT					
DI#	SHEET	STATION		PLAN AREA (YD²)	REMARKS
		FROM	TO		
461258	F1	"SR" 10+10	"SR" 11+60	440	
461641	F2	"MYD"00+32	"MYD"00+32	105	
461219	F3	"M" 01+56	"M" 03+06	184	MUD BAY ROAD MPT 5.3
548035	F4	"M" 05+15	"M" 05+75	147	MUD BAY CULVERT
TOTAL:				876	
PAY ITEM QUANTITY:					

[202.0004.0000] REMOVAL OF CULVERT PIPE					
DI#	SHEET	STATION	OFFSET	LENGTH (FT)	REMARKS
461258	F1, P1	"SC" 01+02	5.5' LT	60	36" DIAMETER PIPE
	F1, P1	"SC" 01+02	0.2' RT	48	48" DIAMETER PIPE
	F1, P1	"SR" 10+99	26' RT	20	
461641	F2	"MYC"14+50	36' RT	381	48" DIAMETER PIPE
	F2	"MYC"17+28	78' RT	106	48" DIAMETER PIPE
	P6	"MYC"14+25	5' LT	80	
	P7	"MYC"15+44	16' LT	50	
548035	P14	"M" 05+32		40	
	P14	"M" 05+36		40	
TOTAL:				825	
PAY ITEM QUANTITY:					

[202.2022.0000] REMOVAL OF FENCE					
DI#	SHEET	STATION	OFFSET	LENGTH (FT)	REMARKS
461641	P5, P6, P7	"MYC"10+50	19' LT	605	EXISTING FENCE EAST OF SOUTH DRIVEWAY
	P7, P8	"MYC"16+45	0.5' LT	297	EXISTING FENCE WEST OF SOUTH DRIVEWAY
TOTAL:				902	
PAY ITEM QUANTITY:					

[607.0003.0000] CHAIN LINK FENCE					
DI#	SHEET	STATION	OFFSET	LENGTH (FT)	REMARKS
461641	F2, P7	"MYC"11+42	63' LT	440	NEW FENCE EAST OF SOUTH DRIVEWAY
	P7, P8	"MYC"16+58	36' LT	272	NEW FENCE WEST OF SOUTH DRIVEWAY
TOTAL:				712	
PAY ITEM QUANTITY:					

[611.0001.0001] RIPRAP, CLASS I								
DI#	SHEET	STATION	OFFSET	LENGTH (FT)	X-SECTION AREA (FT²)	VOLUME (FT³)	VOLUME (CY)	REMARKS
548035	P14	"M" 05+45	LT, RT				41	
TOTAL:							41	
PAY ITEM QUANTITY:								

PLANS DEVELOPED BY:
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ANCHORAGE, AK 99503-4169
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR

SUMMARY TABLES

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	D2	51

[611.0001.0002] RIPRAP, CLASS II								
DI#	SHEET	STATION	OFFSET	LENGTH (FT)	X-SECTION AREA (FT²)	VOLUME (FT³)	VOLUME (CY)	REMARKS
461258	P1	"SC" 00+35	12.8' RT, LT	3	1217	3650	406	CULVERT INLET RIP RAP
	P1	"SC" 01+26	11' LT	3	856	2567	285	CULVERT OUTLET RIP RAP
461641	P7	"MYR"00+48	25.8' RT, LT	3	978	2933	326	RIPRAP AROUND FISH CULVERT
461219	F3	"M" 01+63		71	73	5701	211	SLOPE REPAIR
TOTAL:							1228	
PAY ITEM QUANTITY:								

[631.0002.0001] GEOTEXTILE, EROSION CONTROL, CLASS 1								
DI#	SHEET	STATION		LENGTH (FT)	WRAPPED WIDTH (FT)	AREA (FT²)	AREA (YD²)	REMARKS
		FROM	TO					
461219	P15	"CC" 02+15	"CC" 02+85	20	16	320	36	
PAY ITEM QUANTITY:							36	

[618.0002.0000] SEEDING						
DI#	SHEET	STATION		OFFSET	WEIGHT (LB)	REMARKS
		FROM	TO			
461258	F1	"SR" 10+10	"SR" 11+60	12' RT, LT	0.48	ROADWAY EXCAVATION
	P1	"SC" 00+31	"SC" 01+79	11.8' RT, LT	1.17	AREA AROUND STREAMBED RIPRAP
	T2	"SR" 10+84	"SR" 11+38	62' LT	3.61	TEMPORARY CREEK DIVERSION EXCAVATION AREA
461641	P5, P6, F2	"MYC"00+00	"MYC"14+25	4' RT	6.13	FILLED-IN EXISTING UPSTREAM CHANNEL
	P5, P6, P7	"MYC"10+14	"MYC"15+90	6' RT	11.53	NEW EAST UPSTREAM CHANNEL SIDES
	F2, P7	"MYD"00+32	"MYD"00+95	0' RT	1.22	AREA AROUND RIP RAP AND CULVERT EXCAVATION
	P7, P8	"MYC"16+53	"MYD"19+60	4' RT, LT	4.05	NEW DOWNSTREAM CHANNEL SIDES
	F2, P8	"MYC"17+30	"MYC"19+53	68' RT	4.31	FILLED-IN EXISTING DOWNSTREAM CHANNEL
548035	F4	"M" 05+15	"M" 05+75	LT, RT	2	
PAY ITEM QUANTITY:					34.50	

[620.0001.0000] TOPSOIL							
DI#	SHEET	STATION		OFFSET	WEIGHTED 3D AREA (FT²)	AREA (YD²)	REMARKS
		FROM	TO				
461258	F1	"SR" 10+10	"SR" 11+60	12' RT, LT	4464	496	ROADWAY EXCAVATION
	P1	"SC" 00+31	"SC" 01+79	11.8' RT, LT	1091	121	AREA AROUND STREAMBED RIPRAP
	T2	"SR" 10+84	"SR" 11+38	62' LT	3374	375	TEMPORARY CREEK DIVERSION EXCAVATION AREA
461641	P5, P6, F2	"MYC"00+00	"MYC"14+25	4' RT	5732	637	FILLED-IN EXISTING UPSTREAM CHANNEL
	P5, P6, P7	"MYC"10+14	"MYC"15+90	6' RT	10786	1198	NEW EAST UPSTREAM CHANNEL SIDES
	F2, P7	"MYD"00+32	"MYD"00+95	0' RT	1137	126	AREA AROUND RIP RAP AND CULVERT EXCAVATION
	P7, P8	"MYC"16+53	"MYD"19+60	4' RT, LT	3788	421	NEW DOWNSTREAM CHANNEL SIDES
	F2, P8	"MYC"17+30	"MYC"19+53	68' RT	4028	448	FILLED-IN EXISTING DOWNSTREAM CHANNEL
548035	F4	"M" 05+15	"M" 05+75		1145	127	
ROUNDED PAY ITEM QUANTITY:					3,949		

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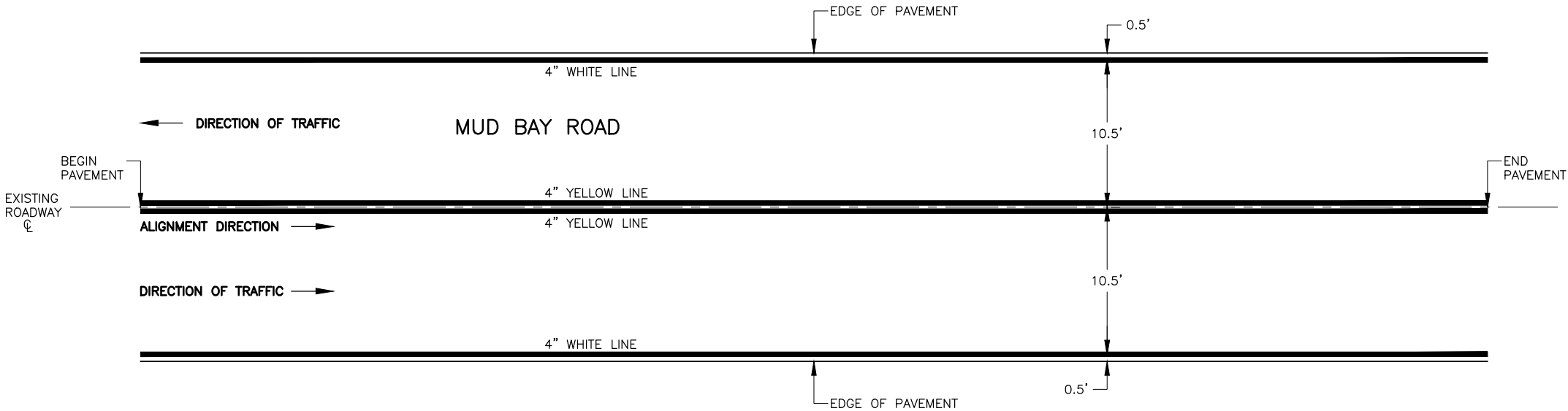
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SUMMARY TABLES

STRIPING NOTES:

1. DIMENSIONS REFER TO THE CENTER OF STRIPE AND THE EDGE OF PAVEMENT.
2. IF THE NEW AND EXISTING PAVEMENT MARKINGS ARE NOT ALIGNED AT MATCH LINE, TRANSITION BETWEEN THE TWO USING A 55:1 TAPER ON THE NEW PAVEMENT.

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
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MUD BAY ROAD STRIPING DETAIL

NOTES:

1. FROM STA. "M" 1+56 TO STA. "M" 3+06 AND FROM STA. "M" 5+15 TO STA. "M" 5+75.

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DOWL
5015 BUSINESS PARK BLVD.,
SUITE 4000,
ANCHORAGE, AK 99503
(907) 562-2000
AECL848

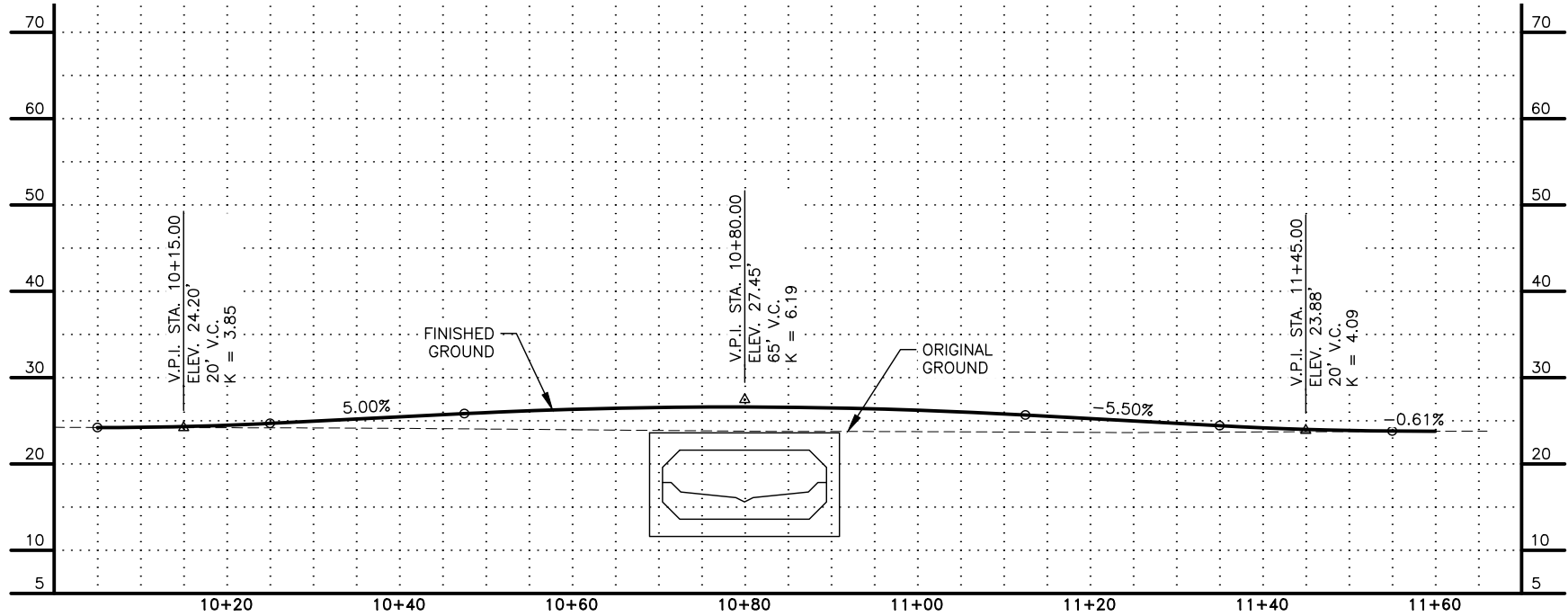
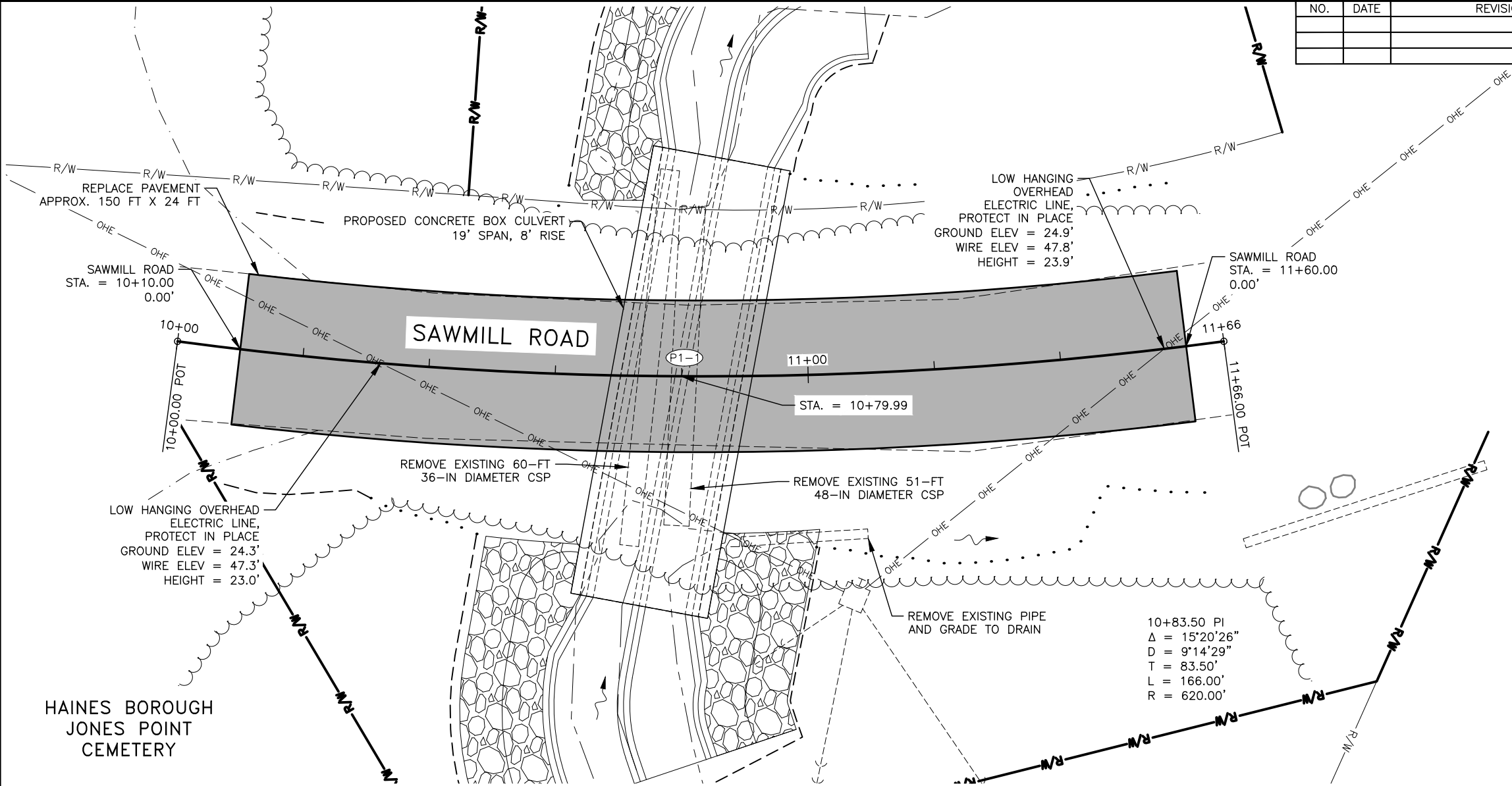
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49TH
HNS THOMPSON
REGISTERED PROFESSIONAL ENGINEER

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CULVERTS 00048 –
DEC 20 SE PR
MUD BAY ROAD
STRIPING DETAIL
DI #461219 AND DI #548035

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P1	51



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STATE OF ALASKA
PS&E
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PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
SAWMILL ROAD MP 0.23
PLAN AND PROFILE
DI #461258

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R = 50.00'

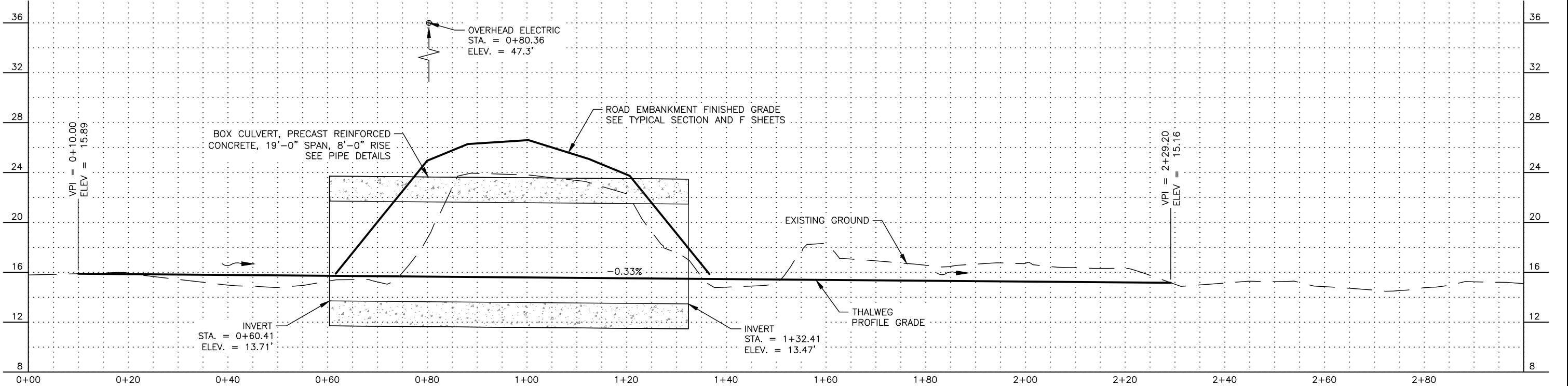
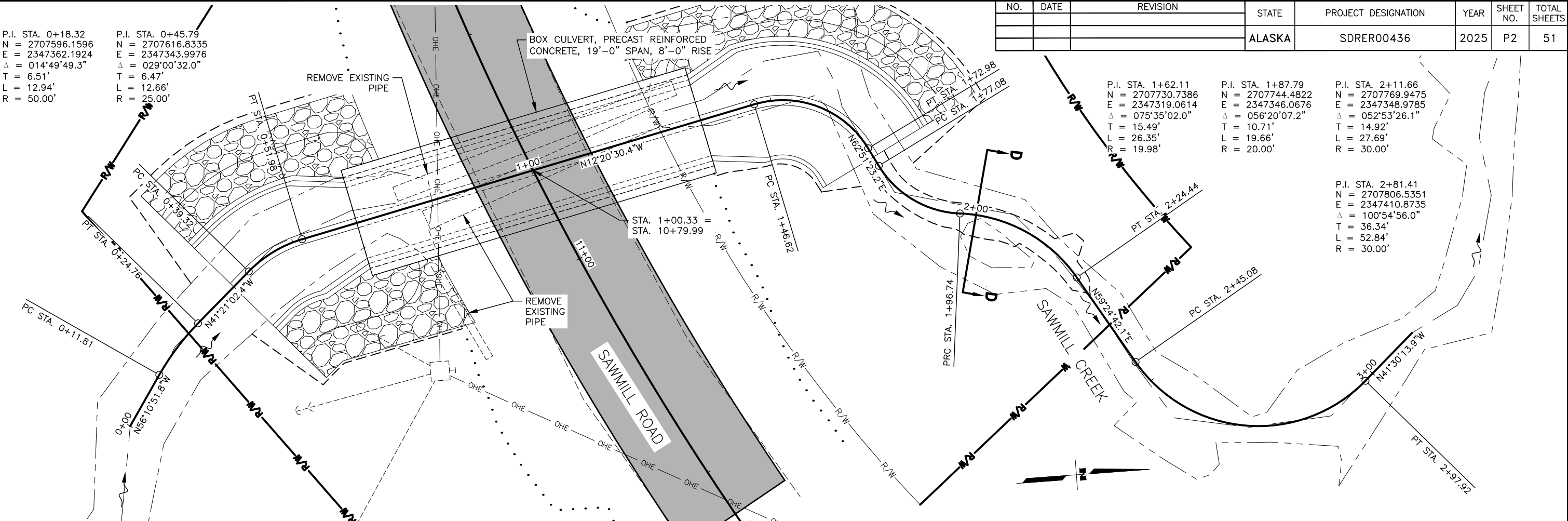
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P.I. STA. 1+62.11
N = 2707730.7386
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L = 26.35'
R = 19.98'

P.I. STA. 1+87.79
N = 2707744.4822
E = 2347346.0676
Δ = 056°20'07.2"
T = 10.71'
L = 19.66'
R = 20.00'

P.I. STA. 2+11.66
N = 2707769.9475
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L = 27.69'
R = 30.00'

P.I. STA. 2+81.41
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E = 2347410.8735
Δ = 100°54'56.0"
T = 36.34'
L = 52.84'
R = 30.00'



HYDROLOGIC AND HYDRAULIC SUMMARY - SAWMILL CREEK WATERSHED			
DRAINAGE AREA = 1.5 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	380 CFS	484 CFS	N/A
DESIGN HIGH WATER ELEVATION	21.1 FEET	22.0 FEET	N/A
ANTICIPATED ADDITIONAL BACKWATER AT (Q_{100}) = 0.0 FEET			



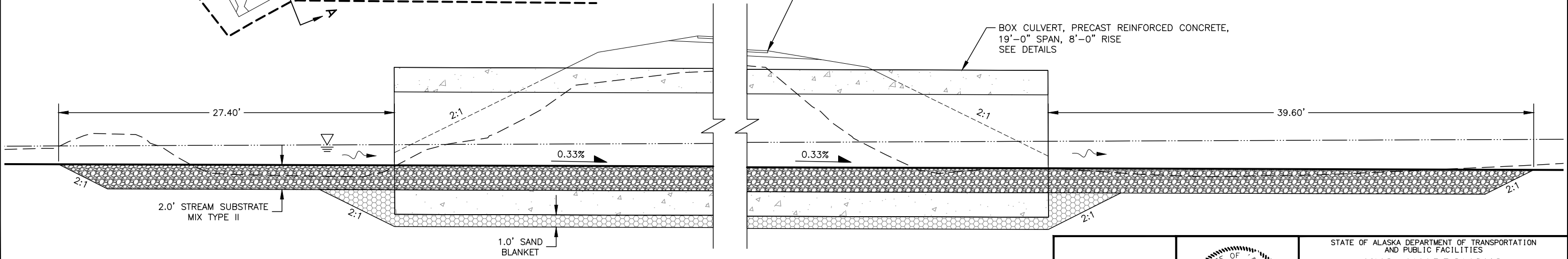
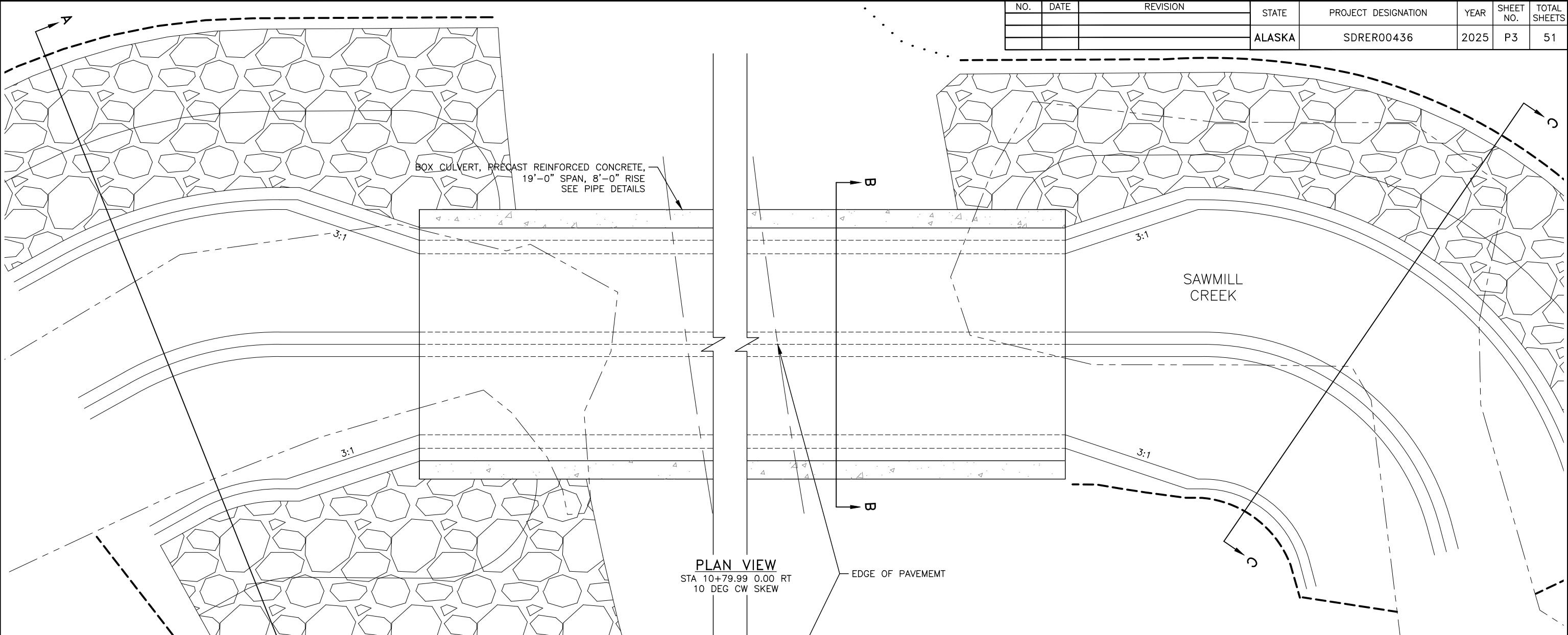
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SAWMILL CREEK PLAN
AND PROFILE
DI #461258

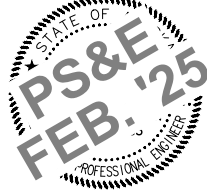
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P3	51



- NOTES:
- SEE SECTION 611-2.01 OF THE DOT&PF STANDARD SPECIFICATIONS FOR RIPRAP CLASS GRADING DETAILS.
 - SEE SHEET P3 FOR SECTION VIEWS A-A, B-B, AND C-C

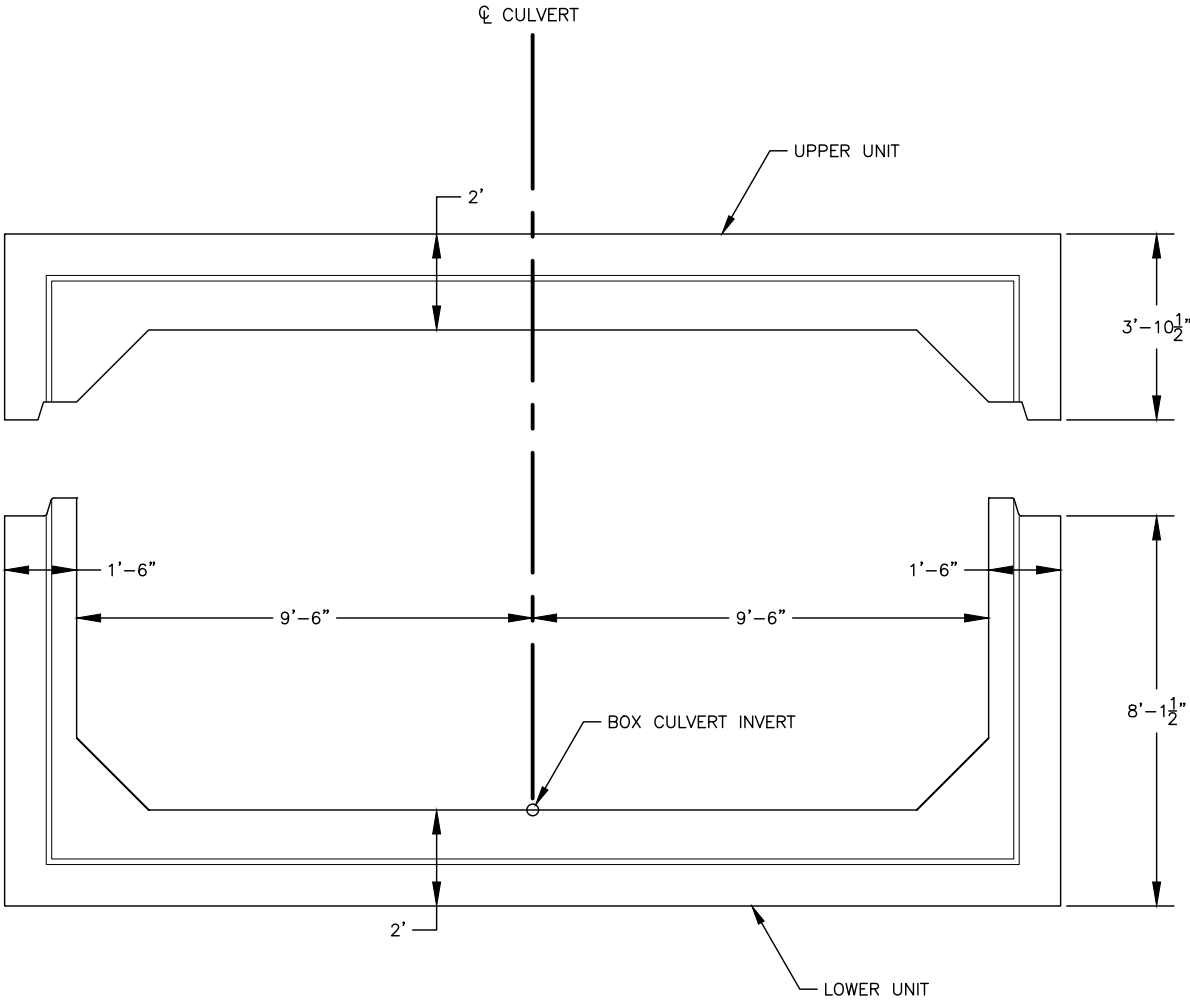
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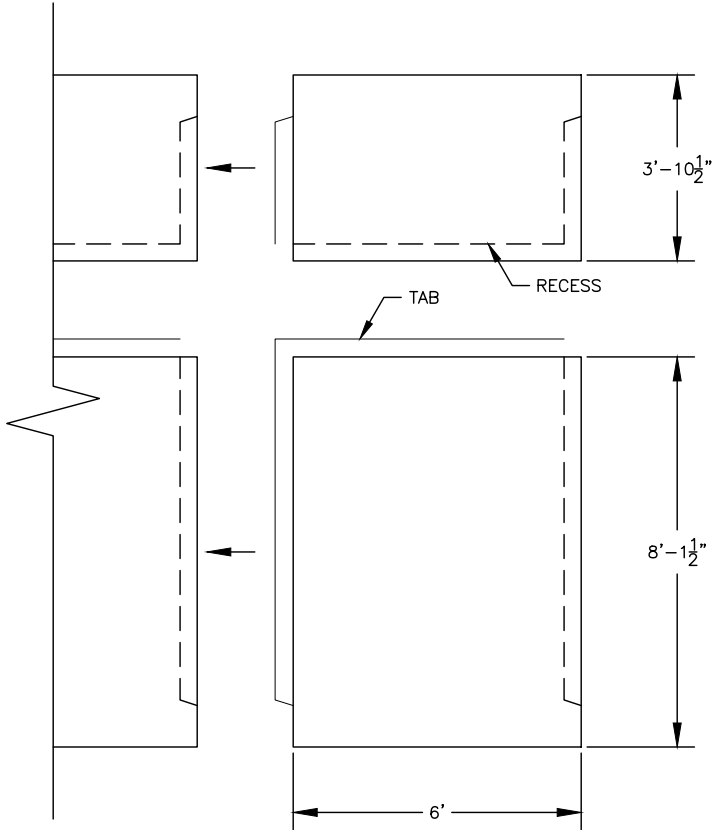
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SAWMILL ROAD
CULVERT SECTION DETAILS
DI #461258

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			ALASKA	SDRER00436	2025	P4	51



BOX CULVERT, PRECAST REINFORCED CONCRETE,
19'-0" SPAN, 8'-0" RISE
TYPICAL SECTION



BOX CULVERT, PRECAST REINFORCED CONCRETE,
19'-0" SPAN, 8'-0" RISE
TYPICAL PROFILE

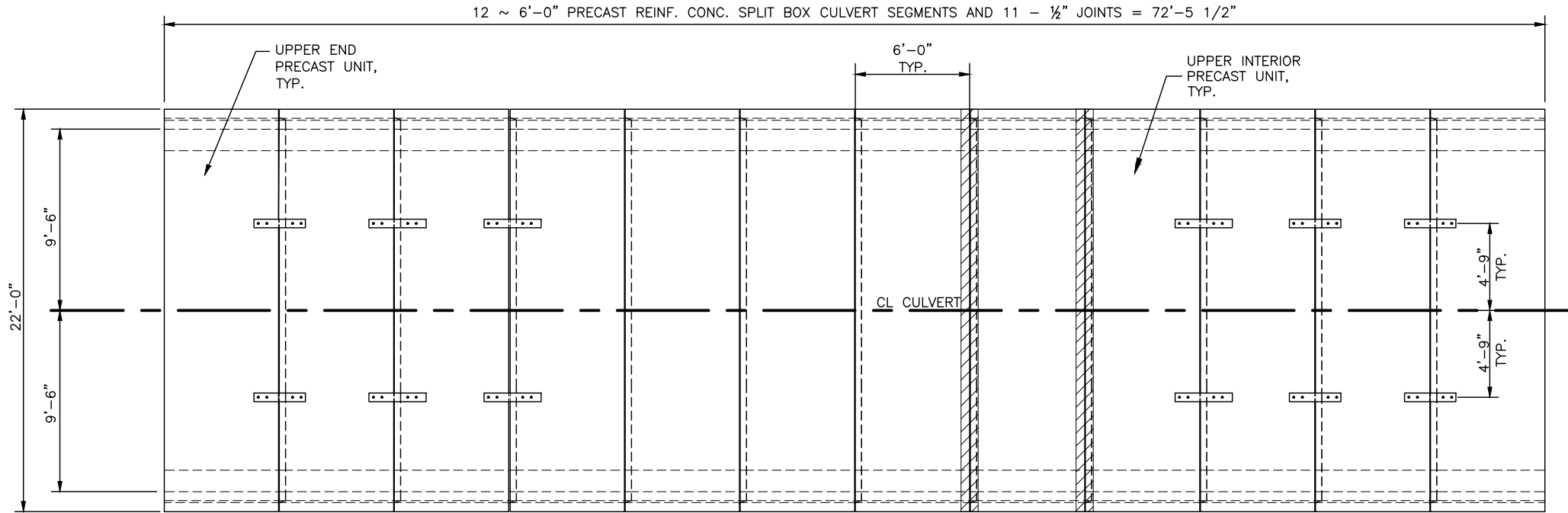
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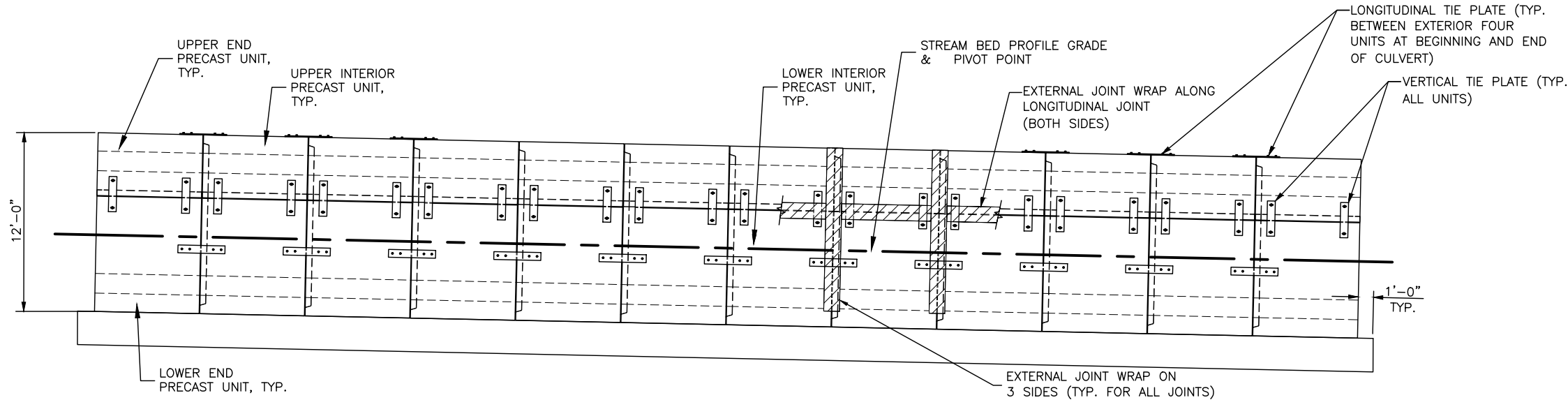
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CULVERTS 00048 –
DEC 20 SE PR
CULVERT SECTION

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P5	51



SEGMENT LAYOUT PLAN



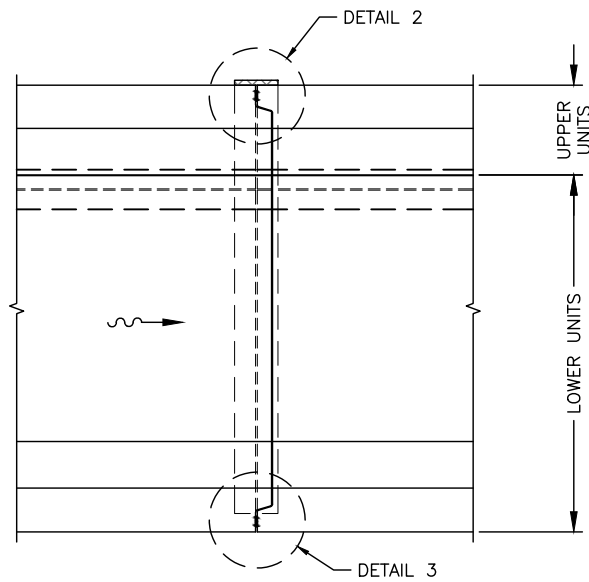
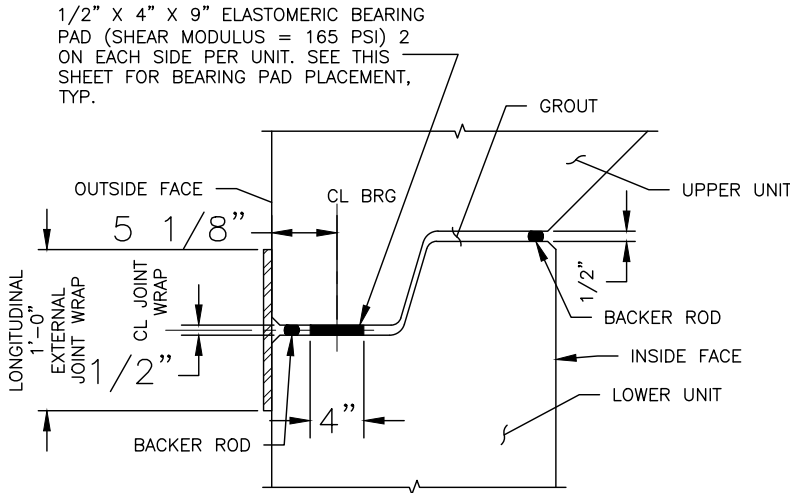
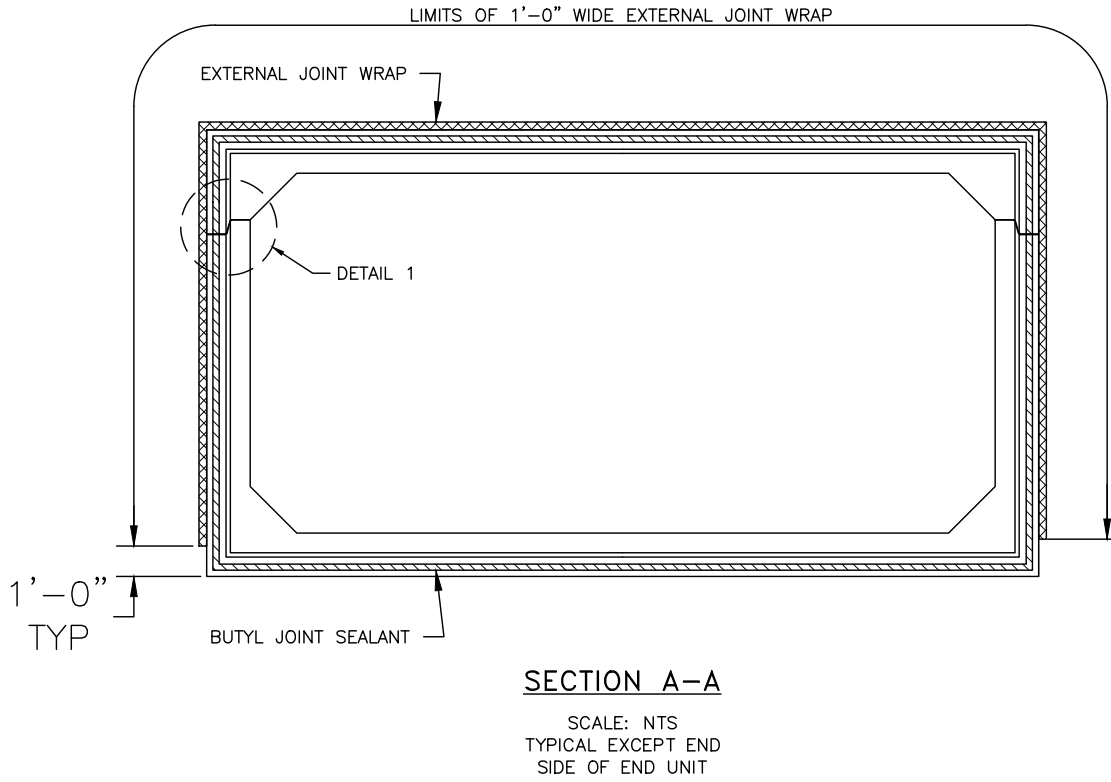
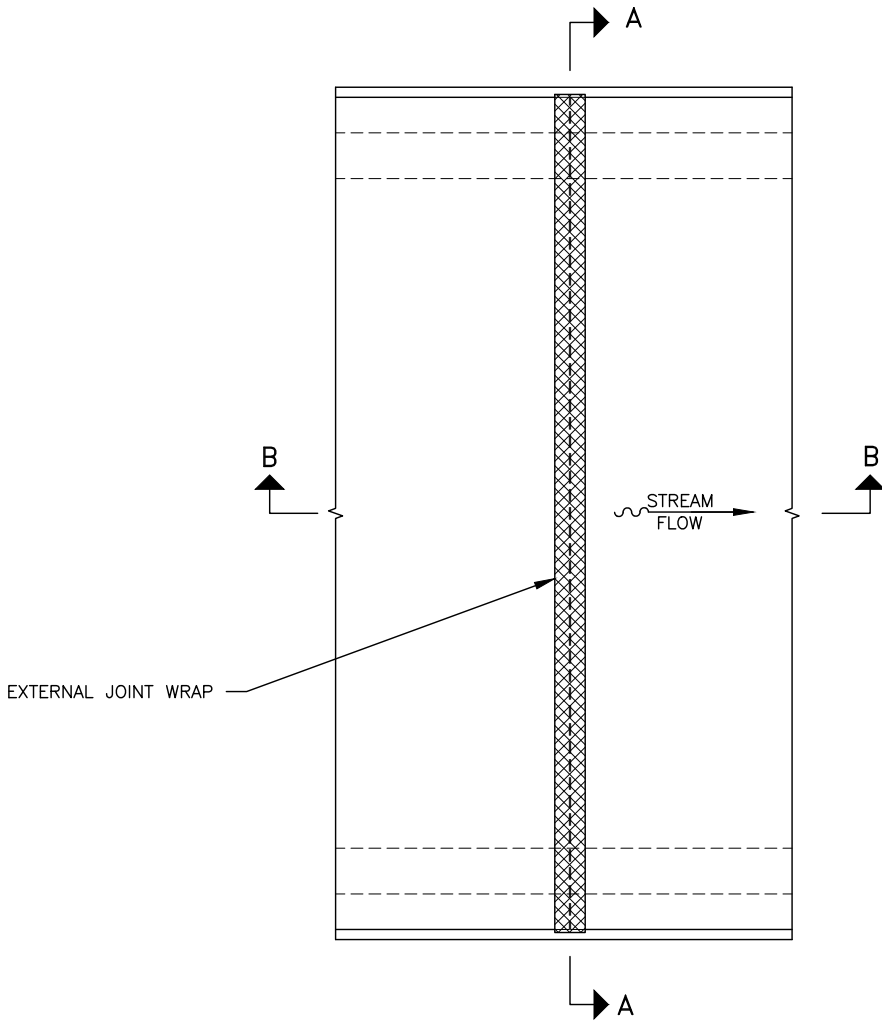
SEGMENT LAYOUT ELEVATION

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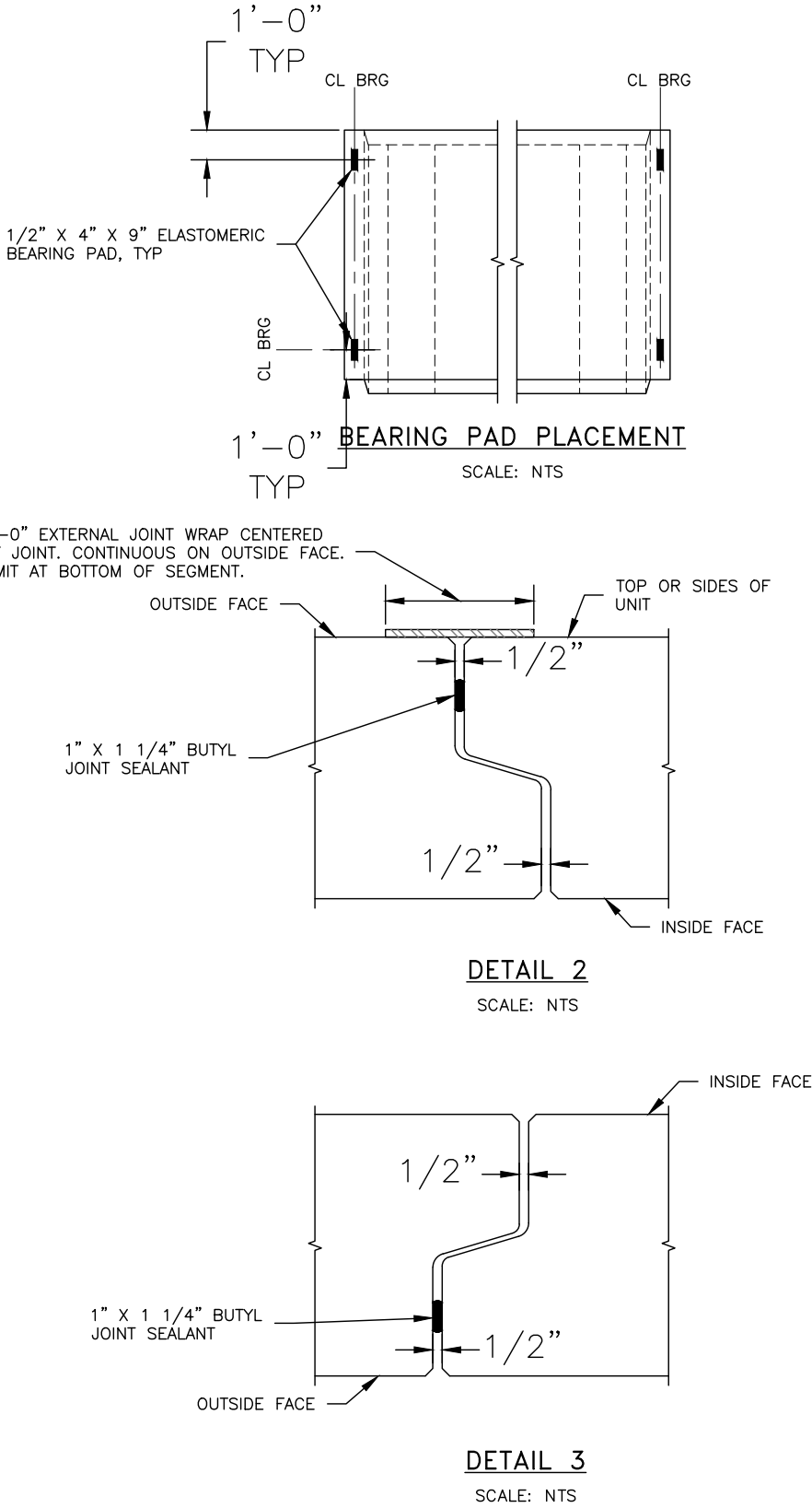
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CULVERTS 00048 -
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CULVERT PLAN AND
PROFILE

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P6	51



NOTES:
THE CONTRACTOR SHALL PLACE THE GROUT BEFORE PLACING THE BACKFILL ON TOP OF STRUCTURE. GROUT SHALL CONFORM TO STANDARD SPECIFICATION 701-2.03 AND SHALL ACHIEVE A MINIMUM COMPRESSIVE STRENGTH OF 2500 PSI BEFORE BACKFILL PLACEMENT ON TOP OF STRUCTURE.

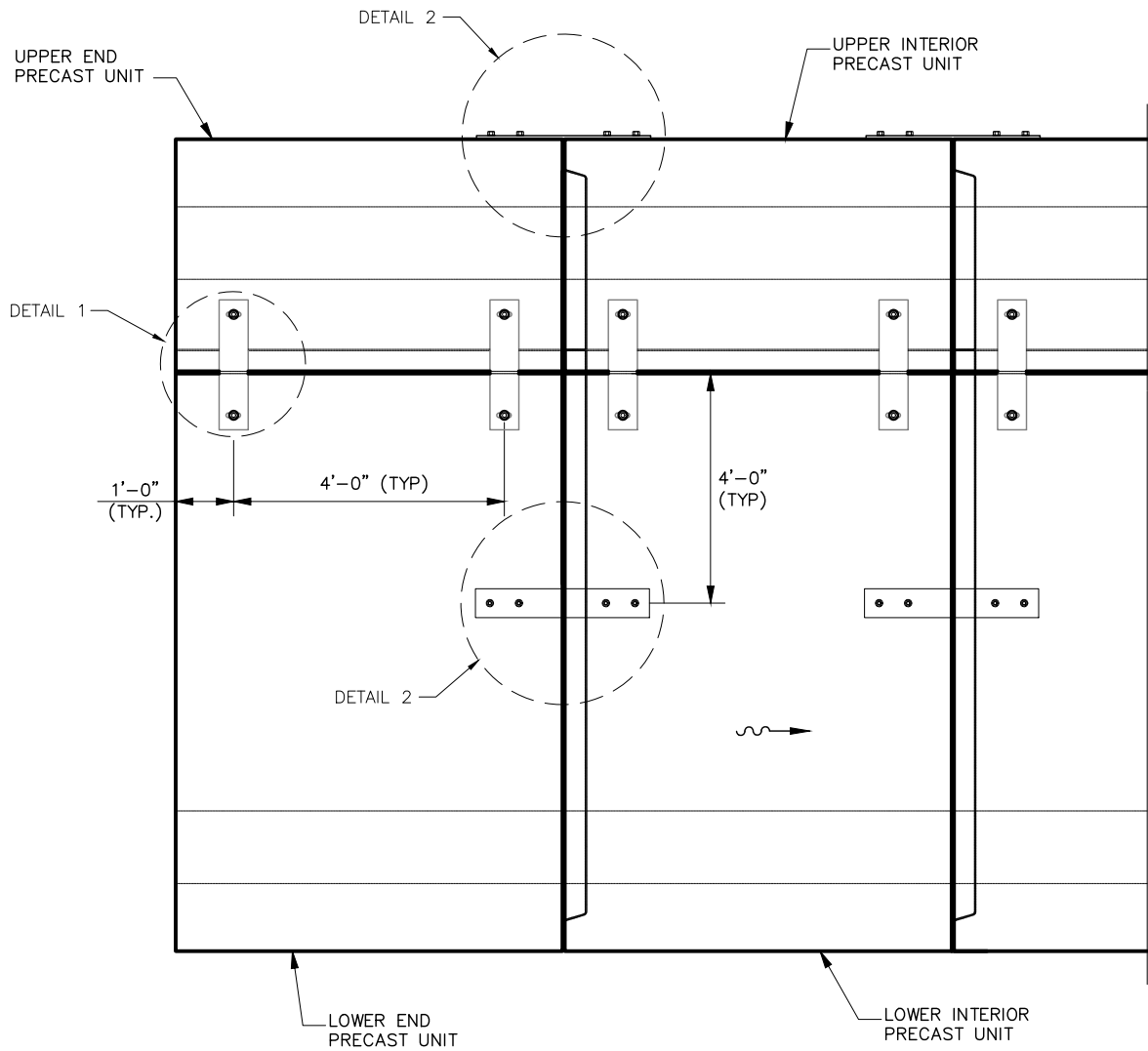
** ELASTOMERIC BEARING PAD SHALL CONFORM STANDARD SPECIFICATION 720-2.01.



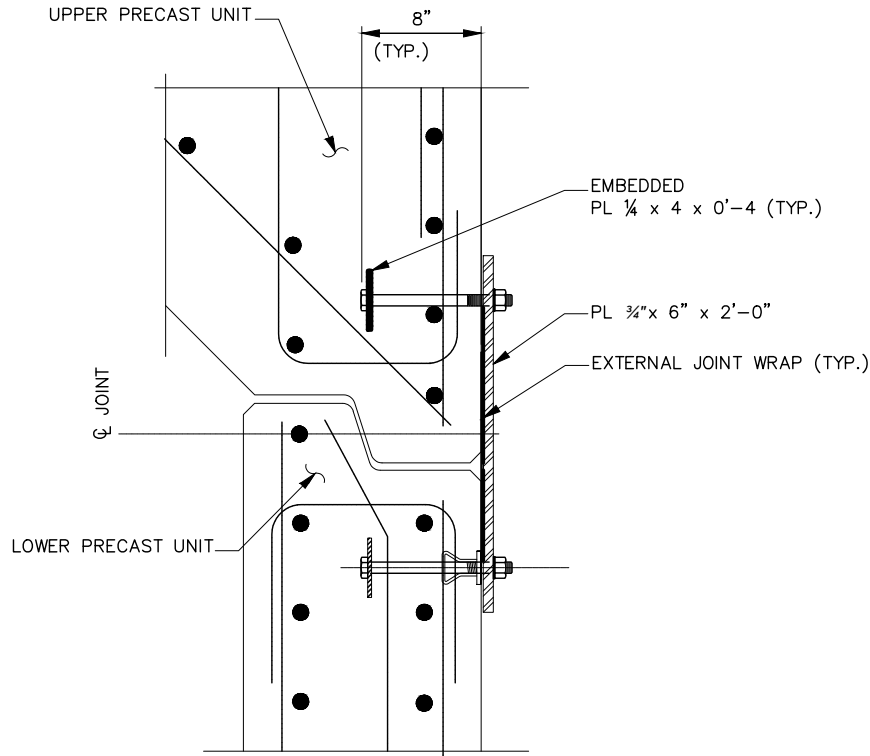
PLANS DEVELOPED BY:
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ANCHORAGE, AK 99503-4169
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
CULVERT DETAILS

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P7	51



ELEVATION

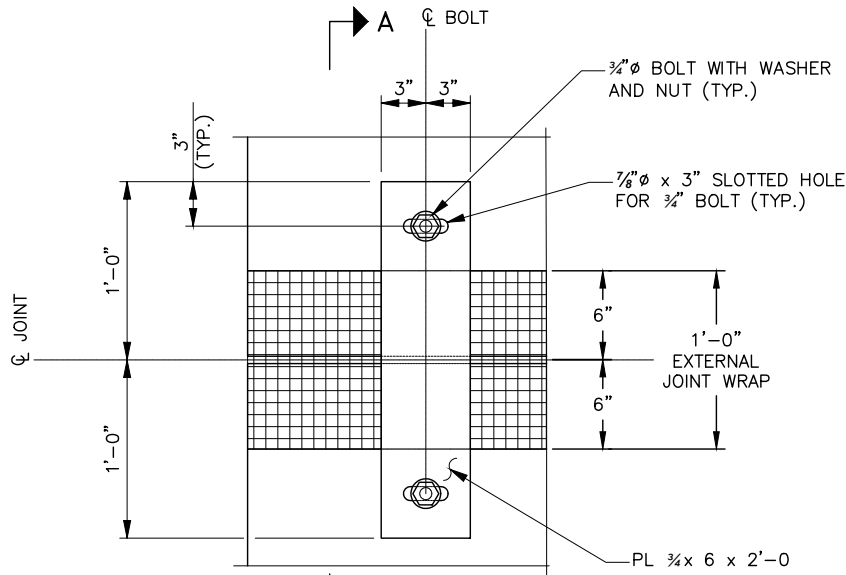


SECTION A-A

REINFORCEMENT DIMENSIONS NOT SHOWN FOR CLARITY

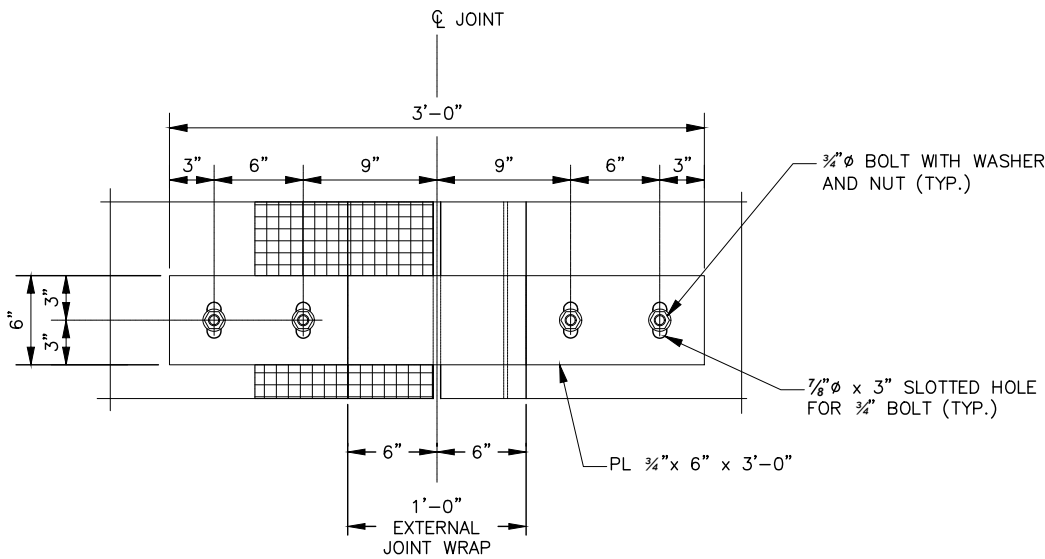
NOTES:

1. PLACE EXTERNAL JOINT WRAPS UNDER THE CONNECTION TIE PLATES.



DETAIL 1

VERTICAL TIE PLATE



DETAIL 2

LONGITUDINAL TIE PLATE

PLANS DEVELOPED BY:
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582 E 36TH AVE STE 500
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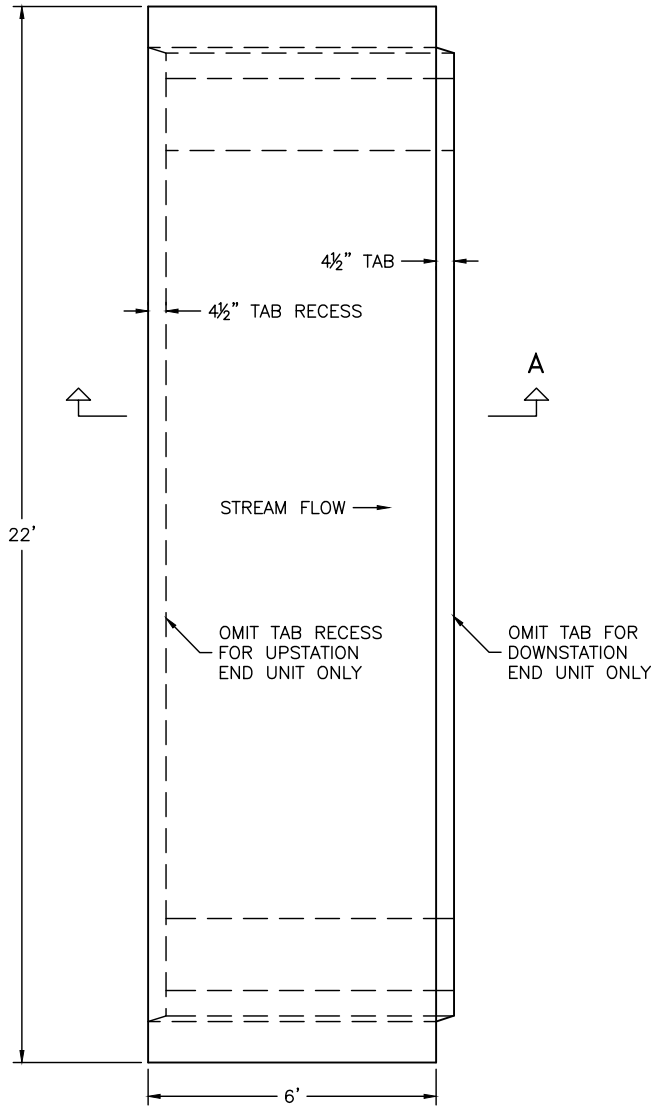


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

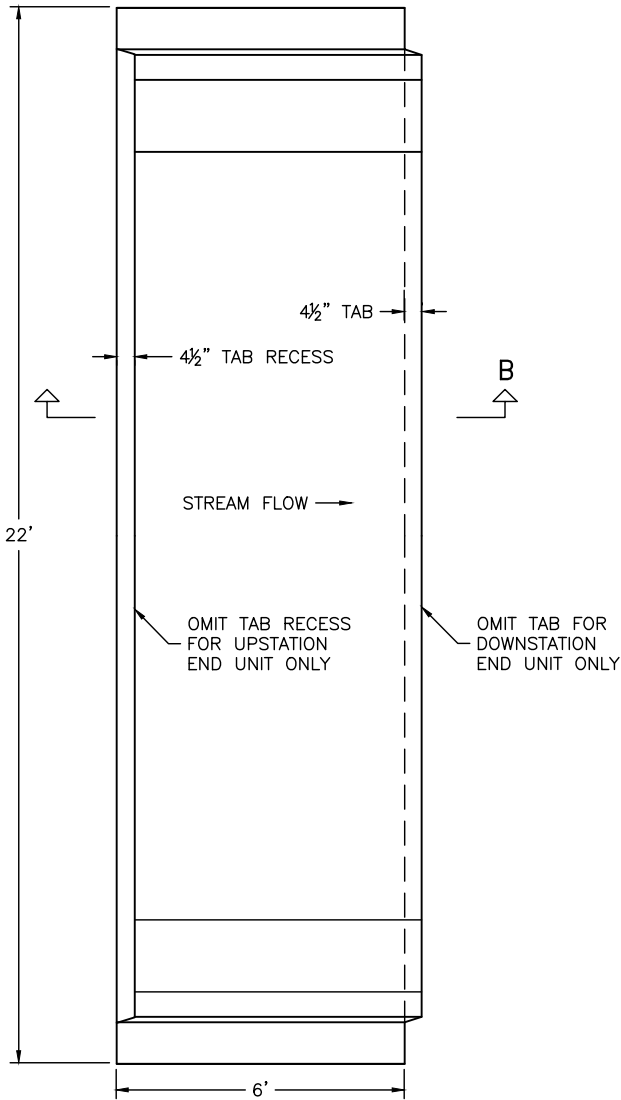
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CULVERTS 00048 –
DEC 20 SE PR

CULVERT DETAILS

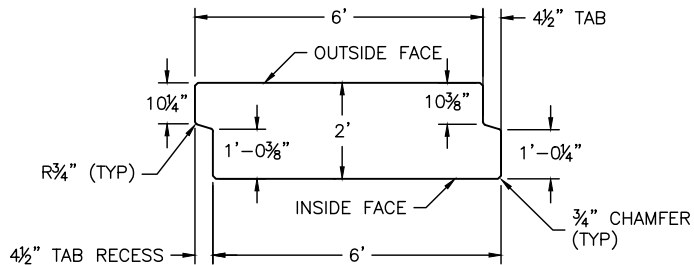
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P8	51



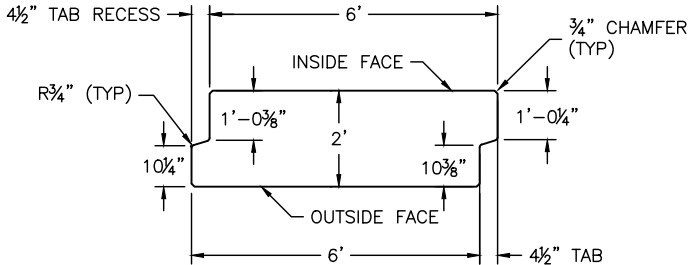
UPPER PRECAST UNIT – PLAN VIEW
TYPICAL UPPER INTERIOR UNIT SHOWN
UPPER END UNITS SIMILAR UNLESS SHOW OTHERWISE



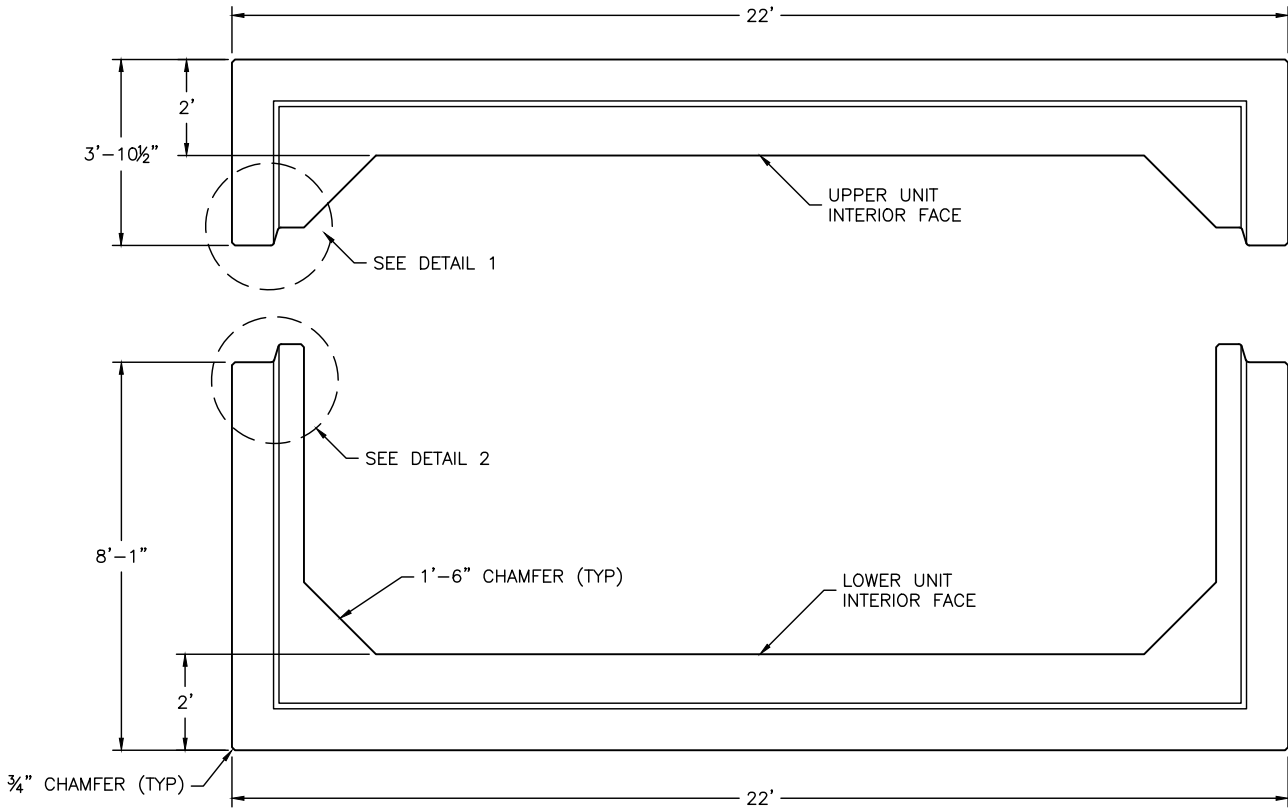
LOWER PRECAST UNIT – PLAN VIEW
TYPICAL LOWER INTERIOR UNIT SHOWN
LOWER END UNITS SIMILAR UNLESS SHOW OTHERWISE



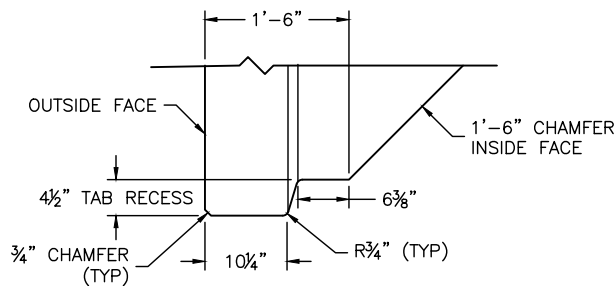
SECTION A-A



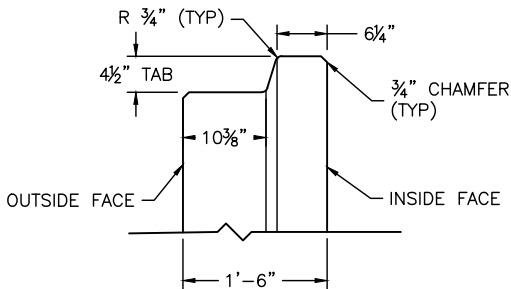
SECTION B-B



UPPER & LOWER PRECAST UNIT – ELEVATION VIEW



DETAIL 1



DETAIL 2

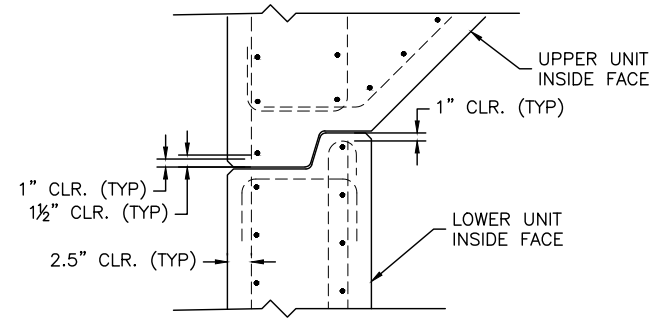
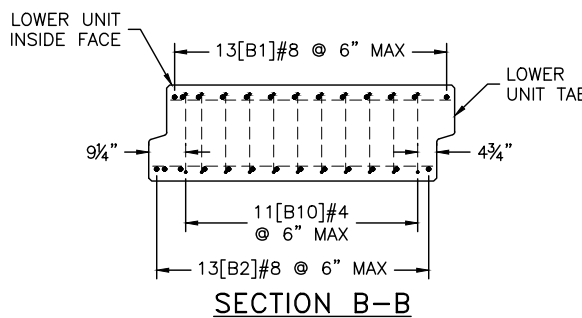
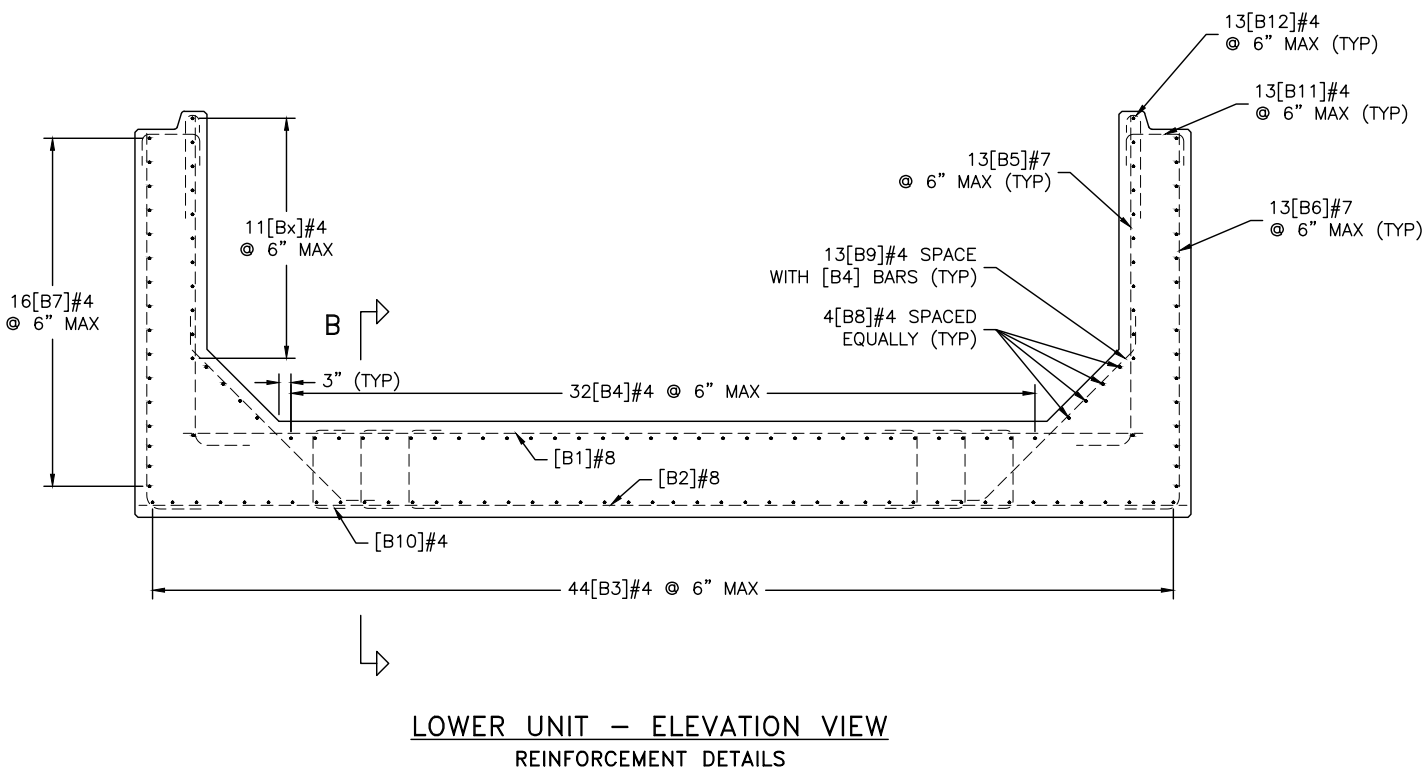
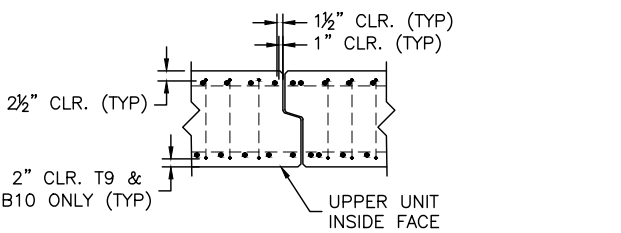
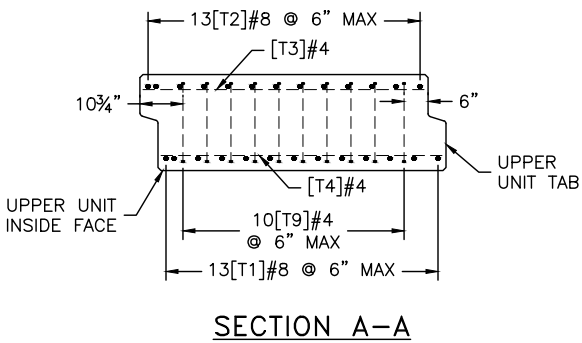
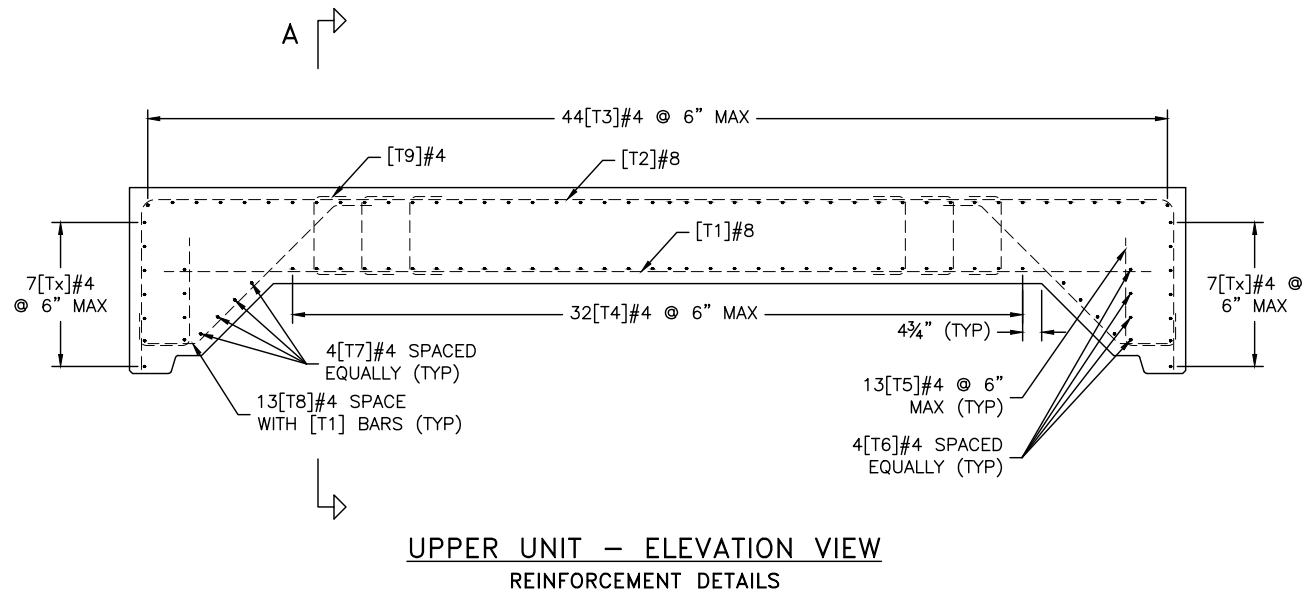
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
CERT. OF AUTH. AECC569



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
CULVERT DETAILS

FILE \\intranet.hdr\hdr\Eng\ActiveProjects\3171\1003518\10354808\6.0_CAD\BIM\6.2_WIP\6.2a_Production\00436_E_STRUCTURES.dwg DATE 12/10/2025 17:30 LAYOUT P9

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P9	51



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HDR ENGINEERING, INC.
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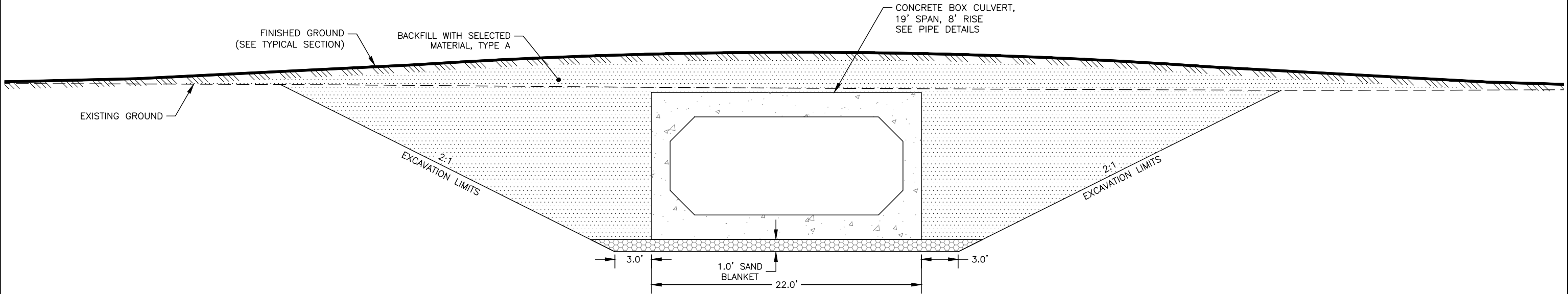


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
CULVERT DETAILS

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GJH DATE 2/9/2025 QJH7 LAYOUT P10 KLB

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P10	51



4 SAWMILL CREEK CULVERT BEDDING AND BACKFILL DETAIL
P4 SCALE: 1:4

PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
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CERT. OF AUTH. AECC569

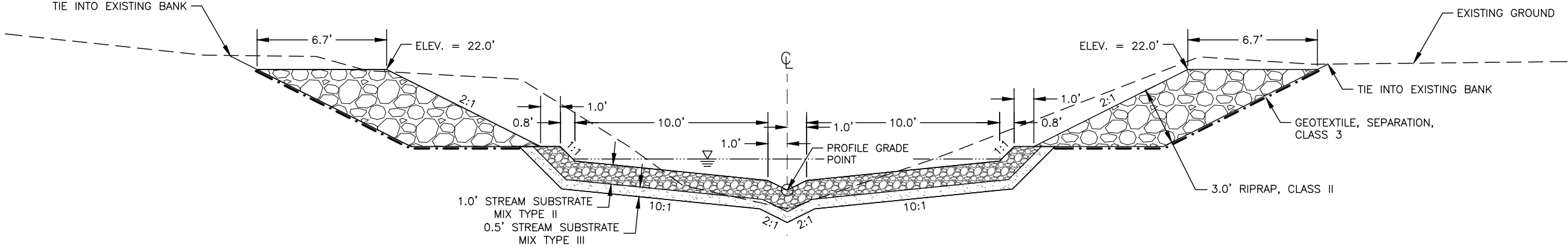


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
SAWMILL ROAD
CULVERT EXCAVATION DETAILS
DI #461258

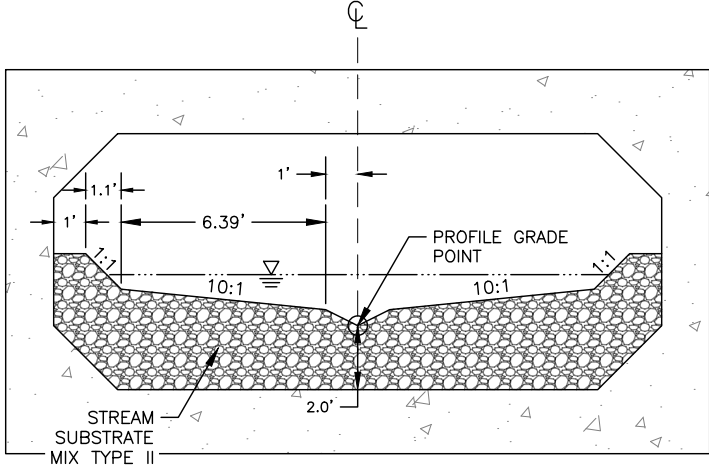
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GJH DATE 2/9/2025 QJH7 LAYOUT P11 KLB

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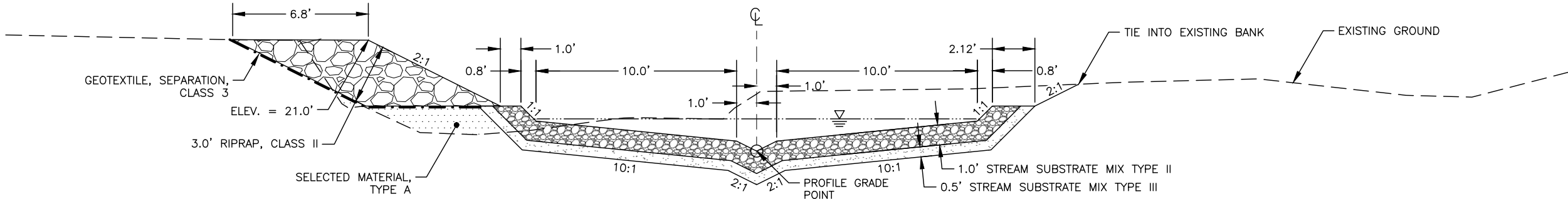


1 SAWMILL CREEK INLET CHANNEL SECTION A-A
SCALE: 1:3

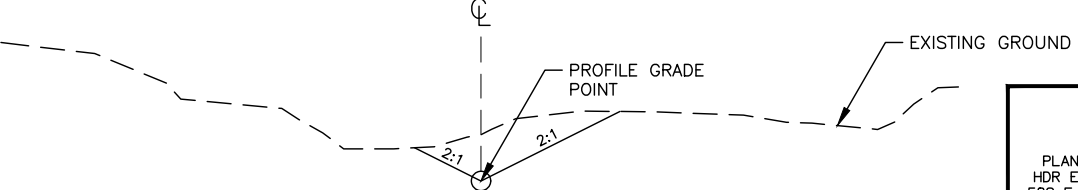


2 SAWMILL CREEK CONCRETE BOX CULVERT CHANNEL SECTION B-B
SCALE: 1:3

NOTES:
1. SEE SECTION 611-2.01 OF THE DOT&PF STANDARD SPECIFICATIONS FOR RIPRAP CLASS GRADING DETAILS.



3 SAWMILL CREEK OUTLET CHANNEL SECTION C-C
SCALE: 1:3

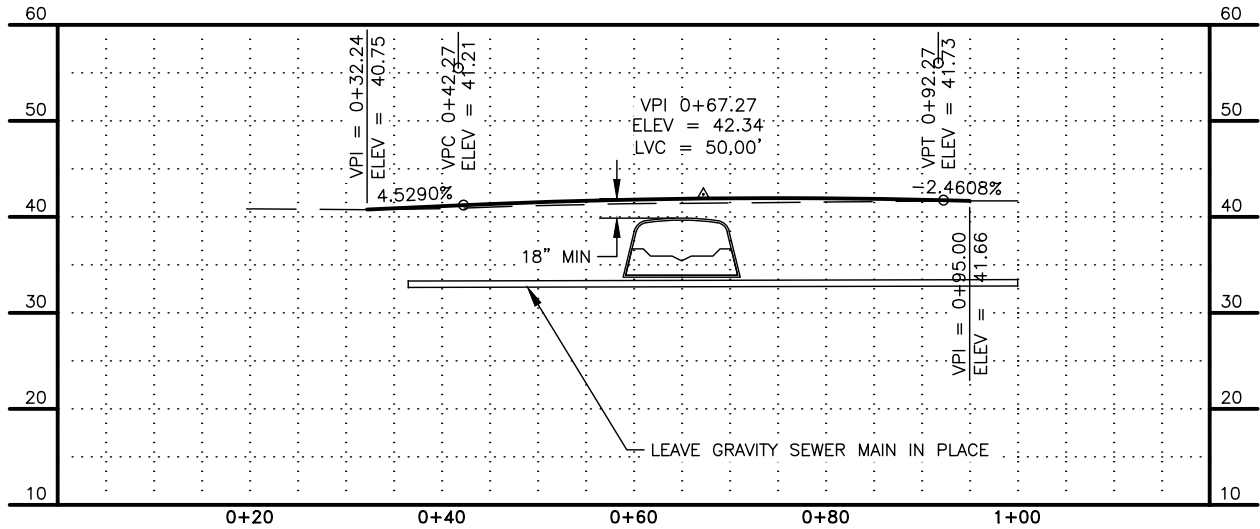
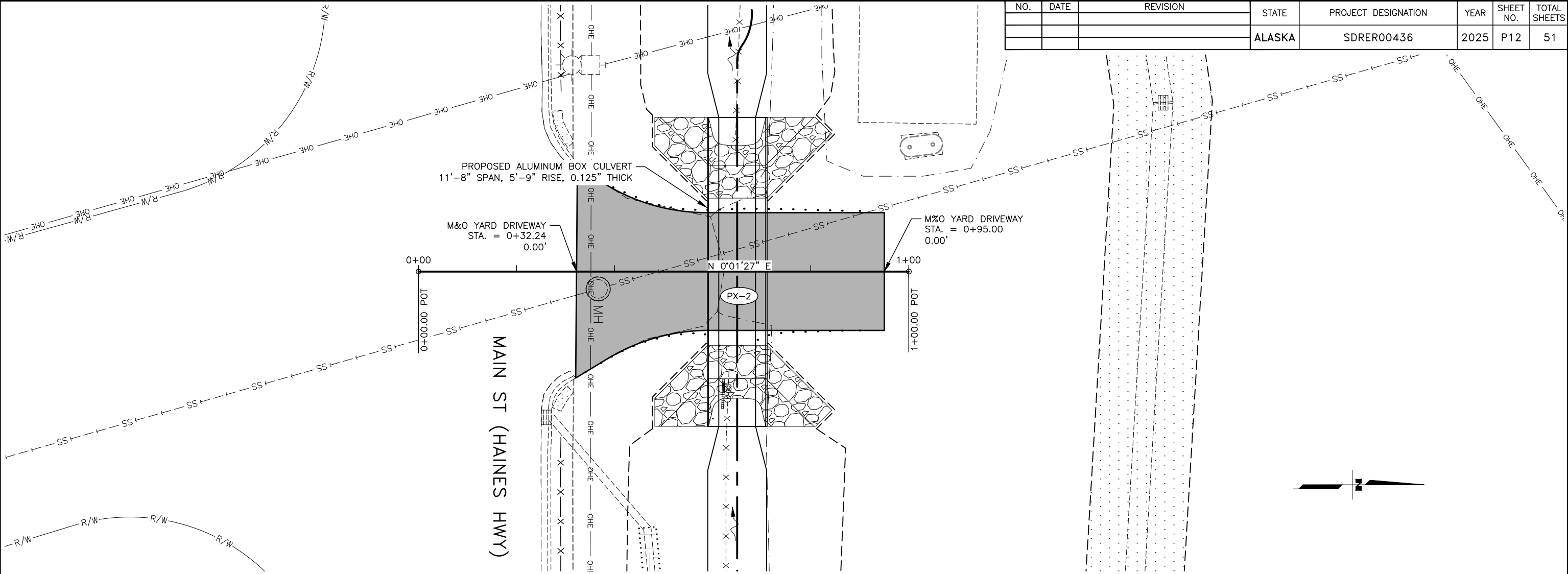


4 SAWMILL CREEK OUTLET CHANNEL SECTION D-D
SCALE: 1:3

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582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
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STATE OF ALASKA
PS&E
FEB '25
PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
SAWMILL ROAD
SECTION DETAILS
DI #461258



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ANCHORAGE, AK 99503-4169
(907) 644-2000
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STATE OF ALASKA

PS&E

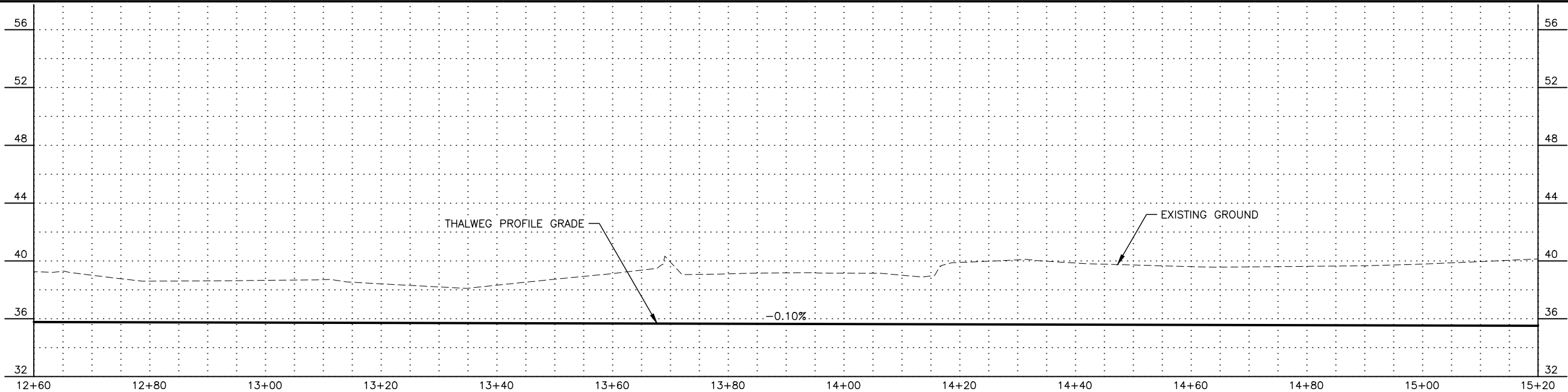
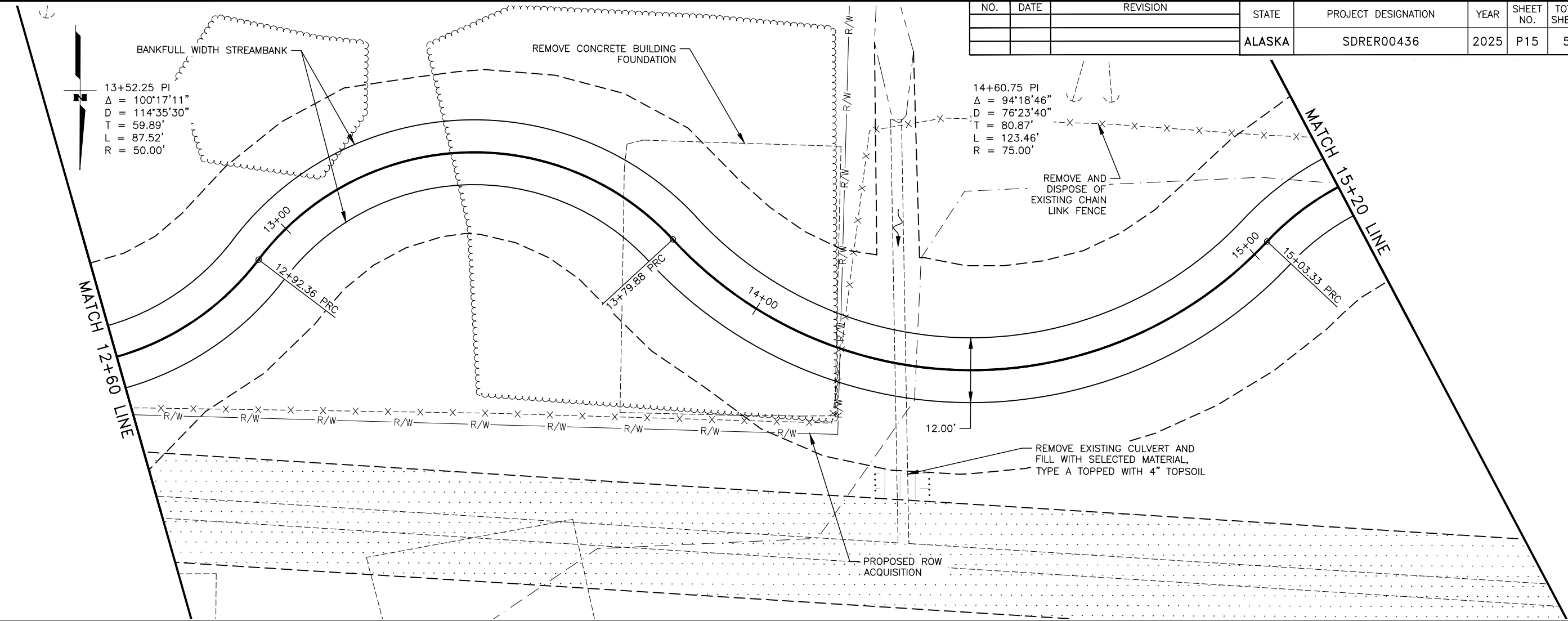
FEB: '25

PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
M&O YARD DRIVEWAY
PLAN AND PROFILE
DI #461641

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P15	51

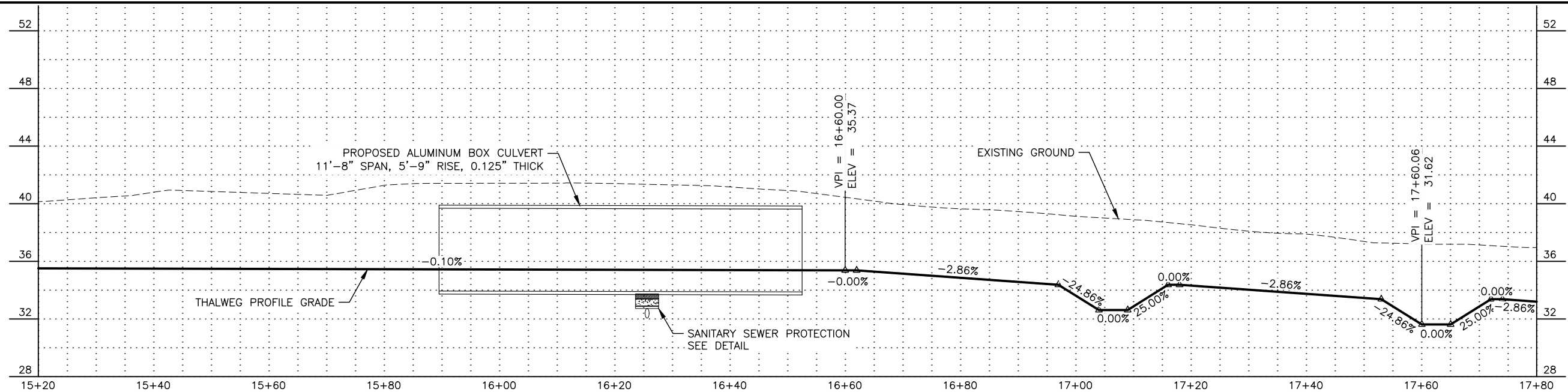
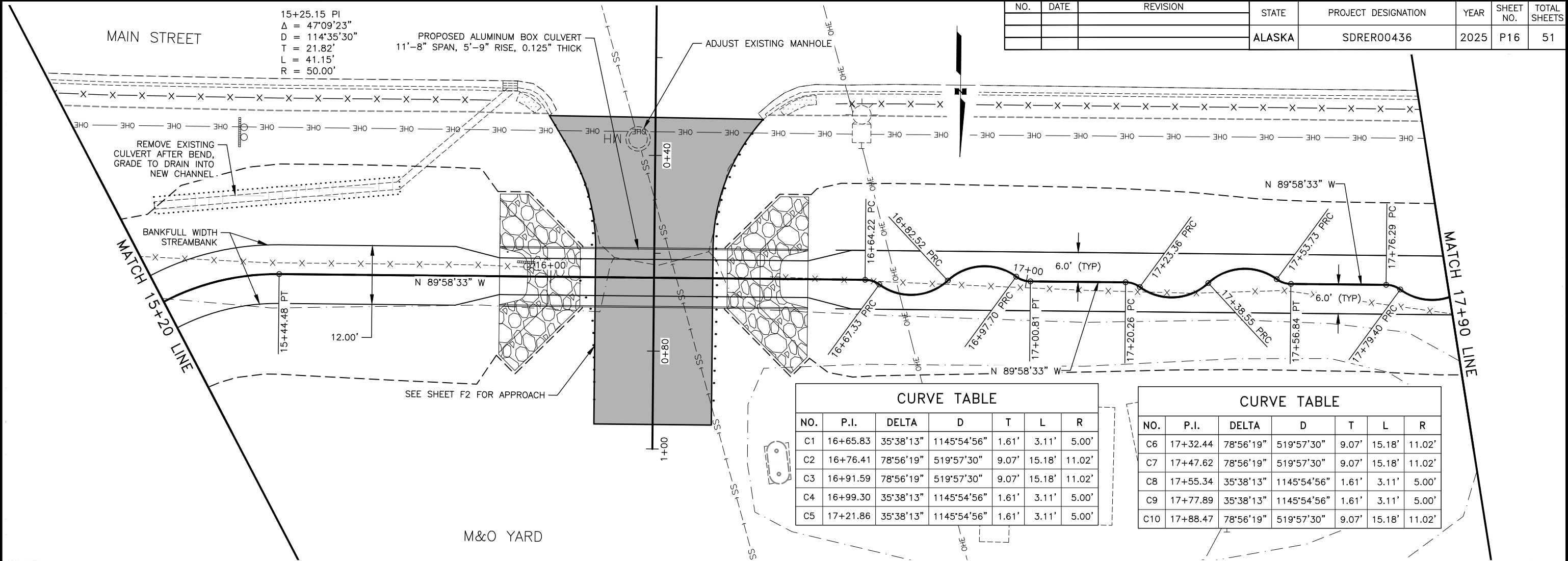


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HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
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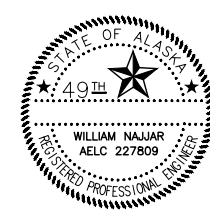


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
M&O YARD CHANNEL
PLAN AND PROFILE
DI #461641

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HYDROLOGIC AND HYDRAULIC SUMMARY - M&O YARD WATERSHED			
DRAINAGE AREA = 0.27 SQUARE MILES			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	77 CFS	96 CFS	N/A
DESIGN HIGH WATER ELEVATION	34.9 FEET	35.3 FEET	N/A
ANTICIPATED ADDITIONAL BACKWATER AT (Q_{100}) = 0.0 FEET			



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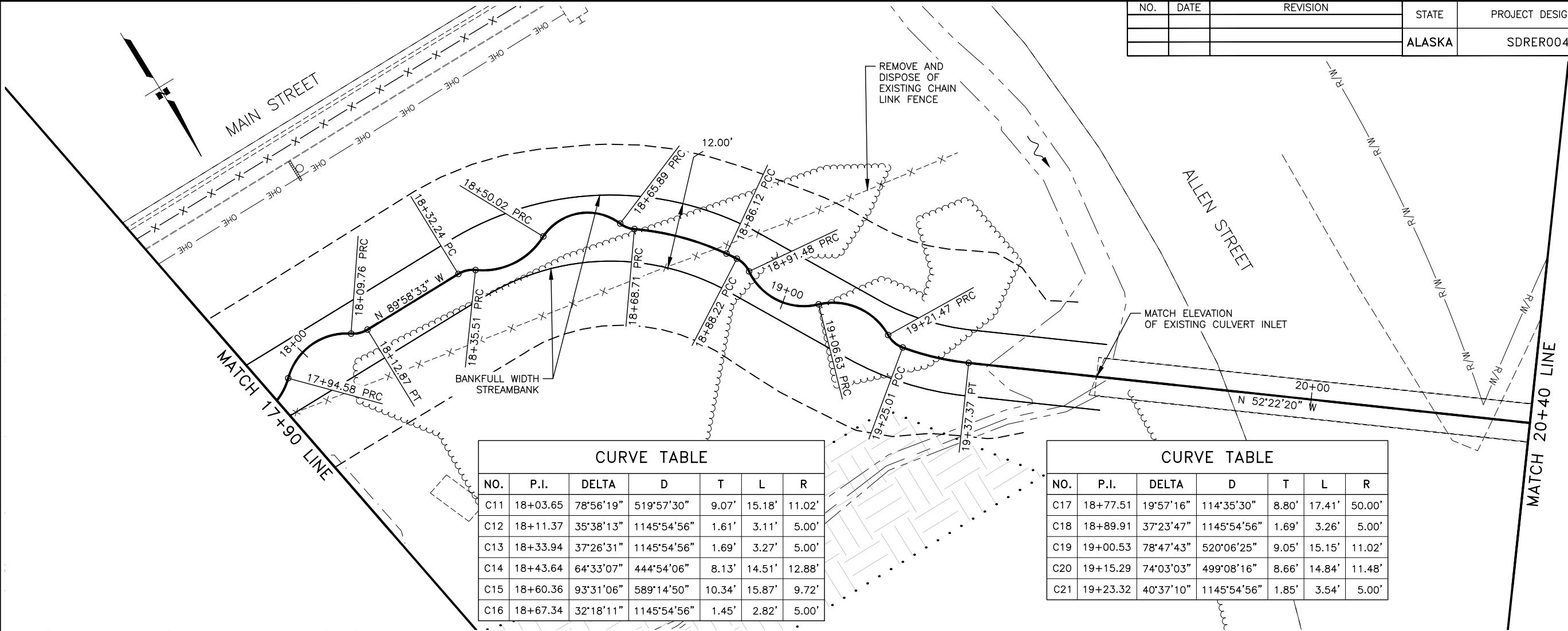


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
M&O YARD CHANNEL
PLAN AND PROFILE
DI #461641

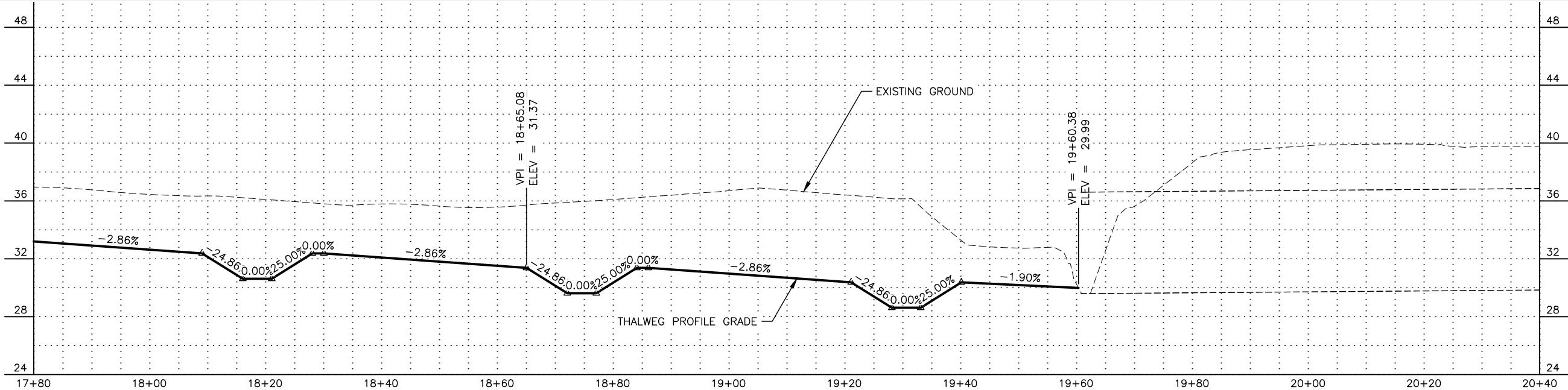
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P17	51



CURVE TABLE						
NO.	P.I.	DELTA	D	T	L	R
C11	18+03.65	78°56'19"	519°57'30"	9.07'	15.18'	11.02'
C12	18+11.37	35°38'13"	1145°54'56"	1.61'	3.11'	5.00'
C13	18+33.94	37°26'31"	1145°54'56"	1.69'	3.27'	5.00'
C14	18+43.64	64°33'07"	444°54'06"	8.13'	14.51'	12.88'
C15	18+60.36	93°31'06"	589°14'50"	10.34'	15.87'	9.72'
C16	18+67.34	32°18'11"	1145°54'56"	1.45'	2.82'	5.00'

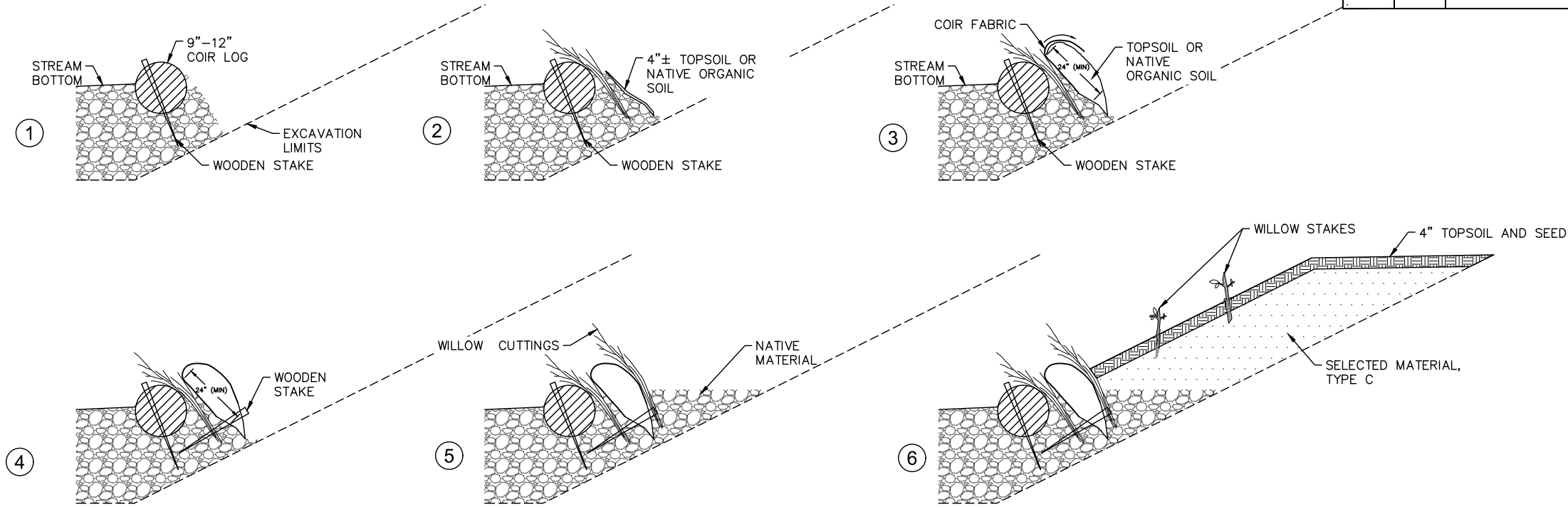
CURVE TABLE						
NO.	P.I.	DELTA	D	T	L	R
C17	18+77.51	19°57'16"	114°35'30"	8.80'	17.41'	50.00'
C18	18+89.91	37°23'47"	1145°54'56"	1.69'	3.26'	5.00'
C19	19+00.53	78°47'43"	520°06'25"	9.05'	15.15'	11.02'
C20	19+15.29	74°03'03"	499°08'16"	8.66'	14.84'	11.48'
C21	19+23.32	40°37'10"	1145°54'56"	1.85'	3.54'	5.00'



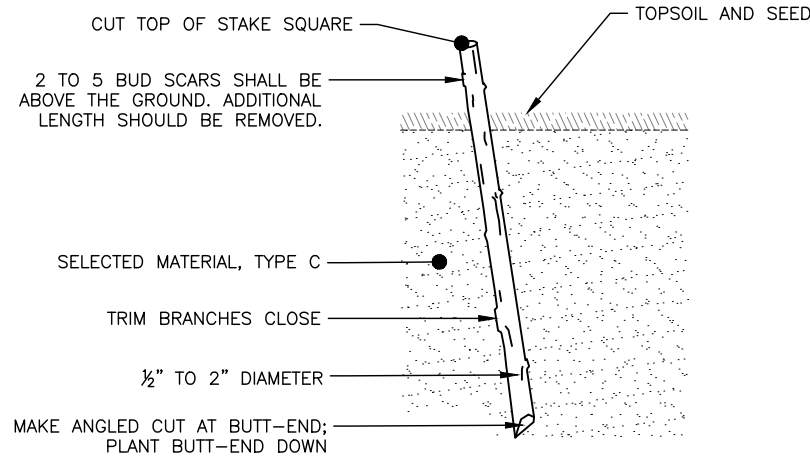
PLANS DEVELOPED BY:
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582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
M&O YARD CHANNEL
PLAN AND PROFILE
DI #461641

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P18	51



BRUSH LAYERING INSTALLATION
NTS



WILLOW STAKING DETAIL

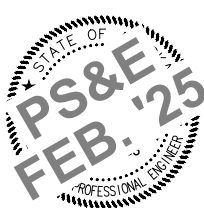
WILLOW STAKING NOTES:

1. THE CUTTING SHALL BE TRIMMED INTO LIVE STAKES AT LEAST 20" LONG.
2. DO NOT PLANT IN ROWS.
3. DO NOT DAMAGE BUDS, STRIP BARK OR SPLIT THE STAKE DURING INSTALLATION. DAMAGED STAKES SHALL BE REPLACED IMMEDIATELY.
4. SPRING PLANTING: PLANT STAKES BY FIRST MAKING A PILOT HOLE USING A REBAR OR "STINGER". FALL PLANTING: INSERT LIVE STAKES IN CONJUNCTION WITH ROCK PLACEMENT.
5. WATER EACH STAKE WHEN PLANTING TO REMOVE AIR POCKETS.
6. WILLOWS WILL BE PLANTED APPROXIMATELY 15" O.C.

NOTES:

1. REFER TO THE, "STREAMBANK REVEGETATION AND PROTECTION: A GUIDE FOR ALASKA" FOR ADDITIONAL DETAIL ON BRUSH LAYERING AND WILLOW STAKING.

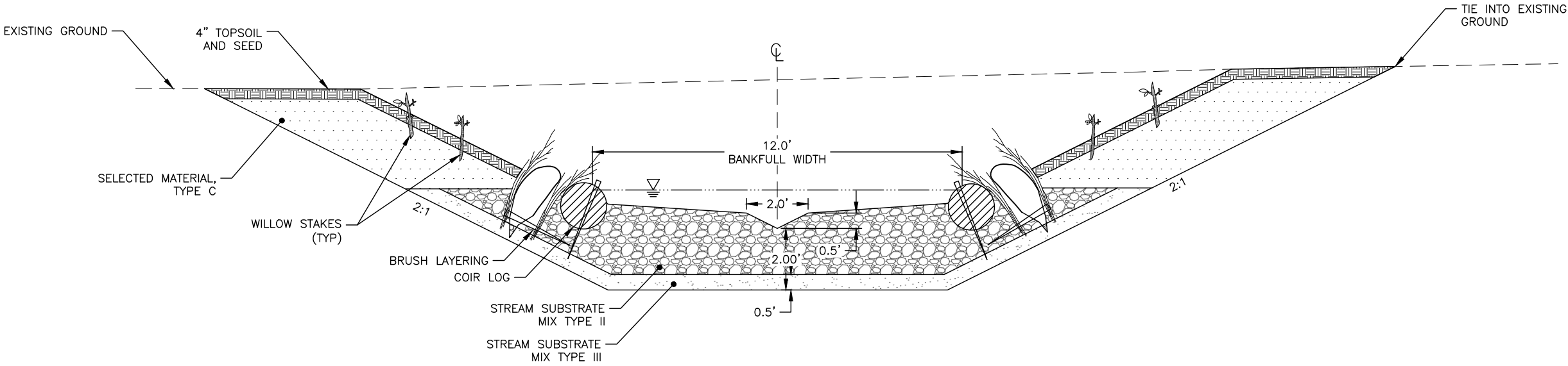
PLANS DEVELOPED BY:
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ANCHORAGE, AK 99503-4169
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
BRUSH LAYERING AND WILLOW
STAKING DETAILS
DI #461641

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P19	51



STREAM SECTION
MYC STA 10+15 TO STA 15+90

PLANS DEVELOPED BY:
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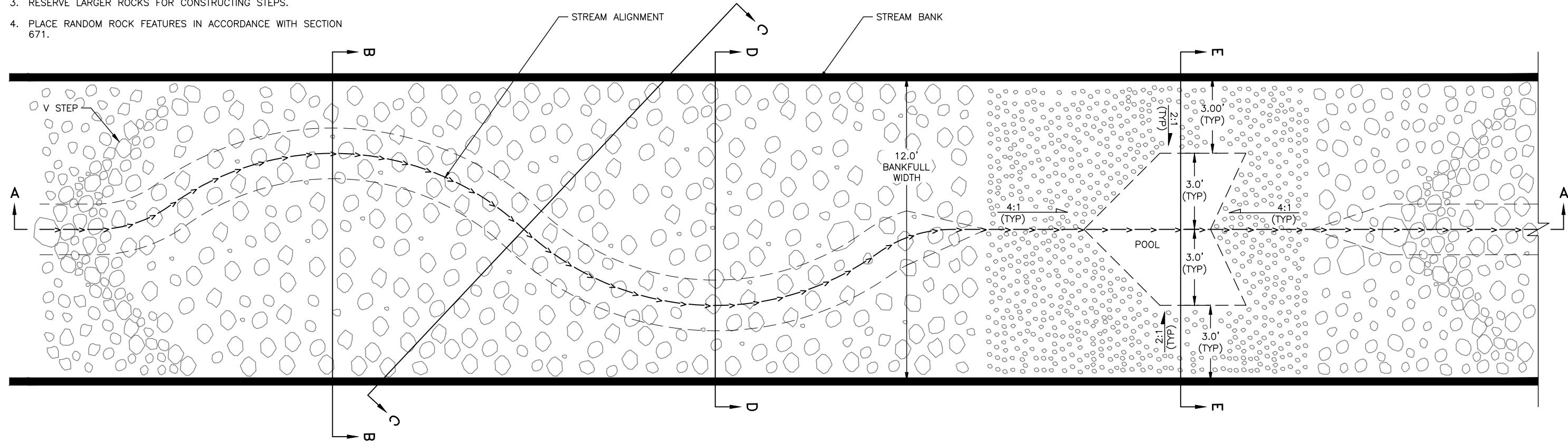


STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
M&O YARD CHANNEL
STEP POOL DETAILS
DI #461641

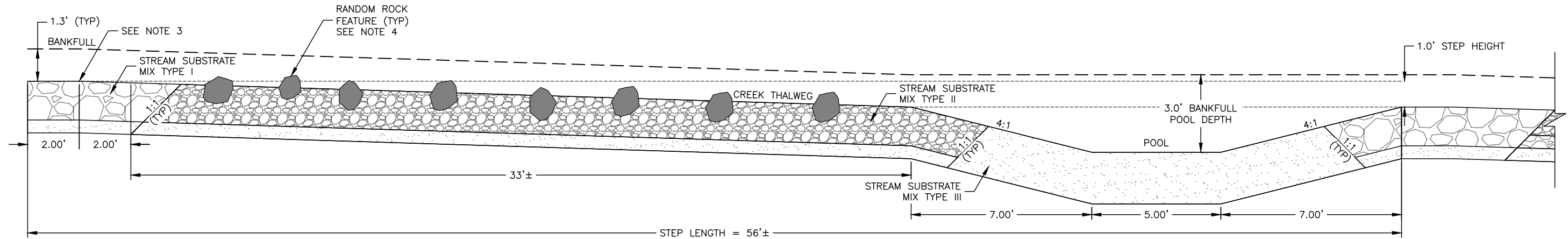
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NOTES:

1. SEE SECTION 690 FOR STREAM REALIGNMENT HABITAT INFORMATION.
2. CONSTRUCT CHANNEL UNDER DIRECTION OF THE PROJECT ENGINEER.
3. RESERVE LARGER ROCKS FOR CONSTRUCTING STEPS.
4. PLACE RANDOM ROCK FEATURES IN ACCORDANCE WITH SECTION 671.



TYPICAL STEP POOL PLAN VIEW



SECTION A-A PROFILE

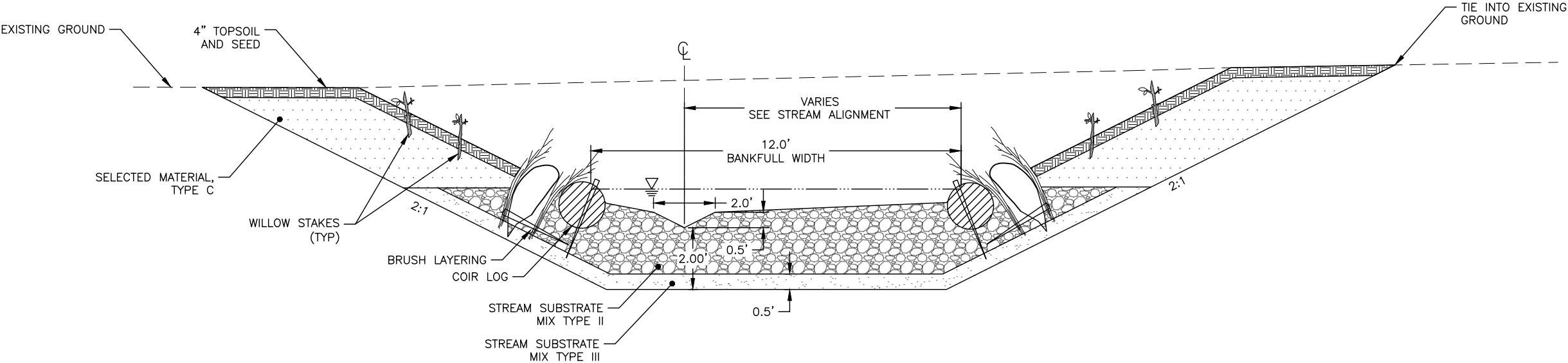
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
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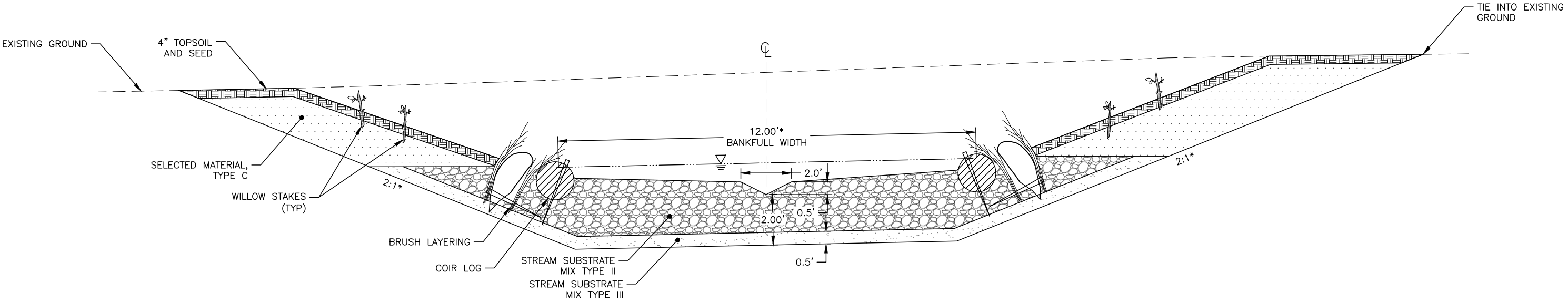
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
M&O YARD CHANNEL
STEP POOL DETAILS
DI #461641

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P21	51



SECTION B-B



SECTION C-C

*SLOPES AND BANKFULL CHANNEL WIDTH ARE ALTERED DUE TO CROSS SECTION SKEW

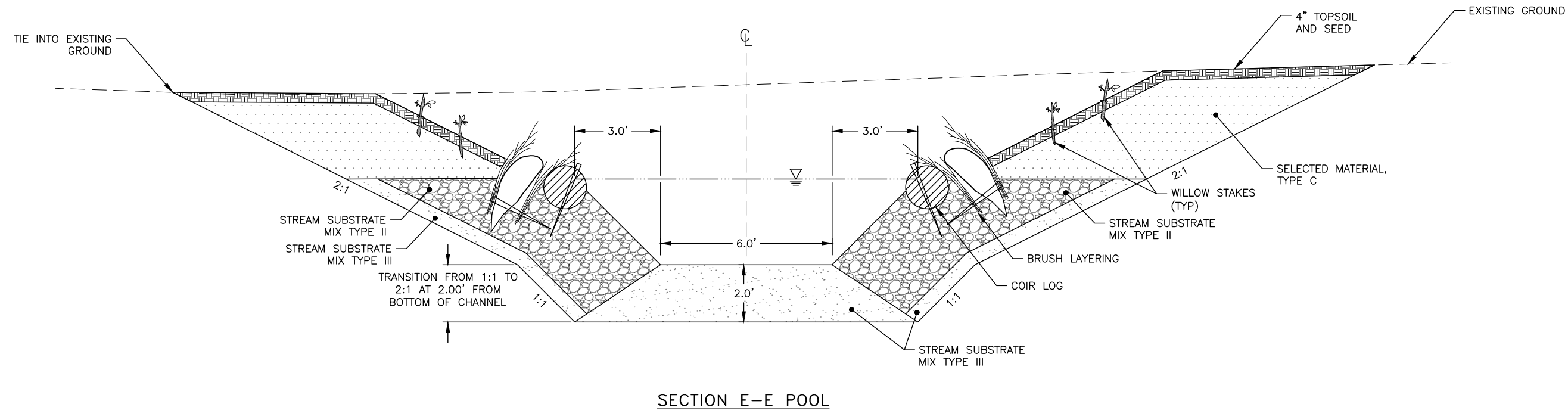
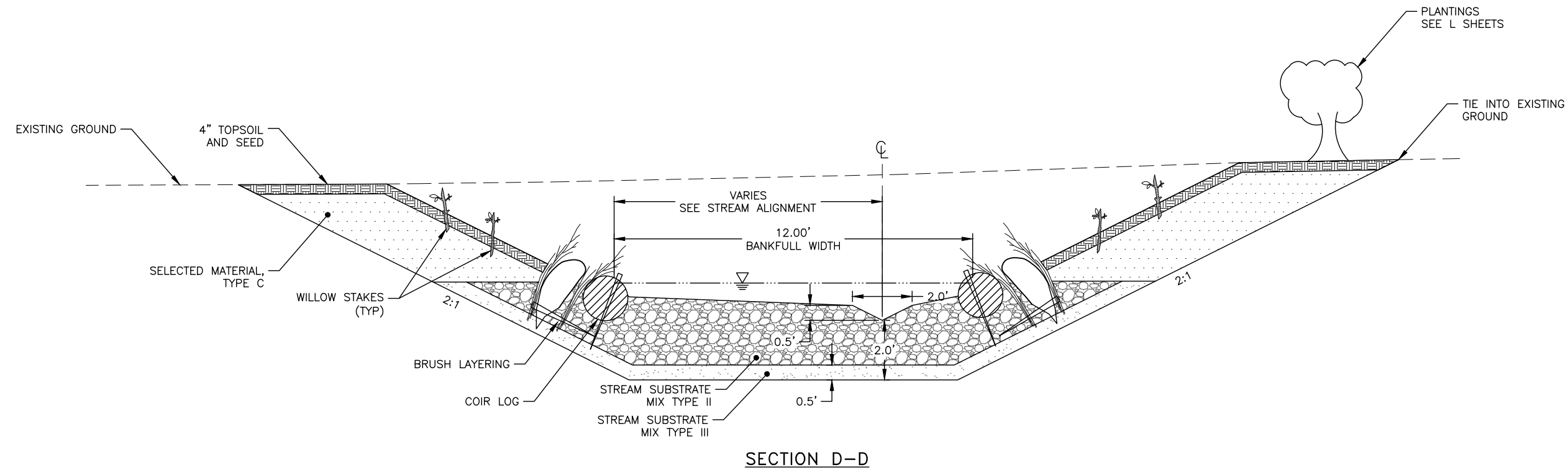
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
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STATE OF ALASKA
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
HNS ANADROMOUS CULVERTS 00048 – DEC 20 SE PR
M&O YARD CHANNEL STEP POOL DETAILS
DI #461641

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P22	51



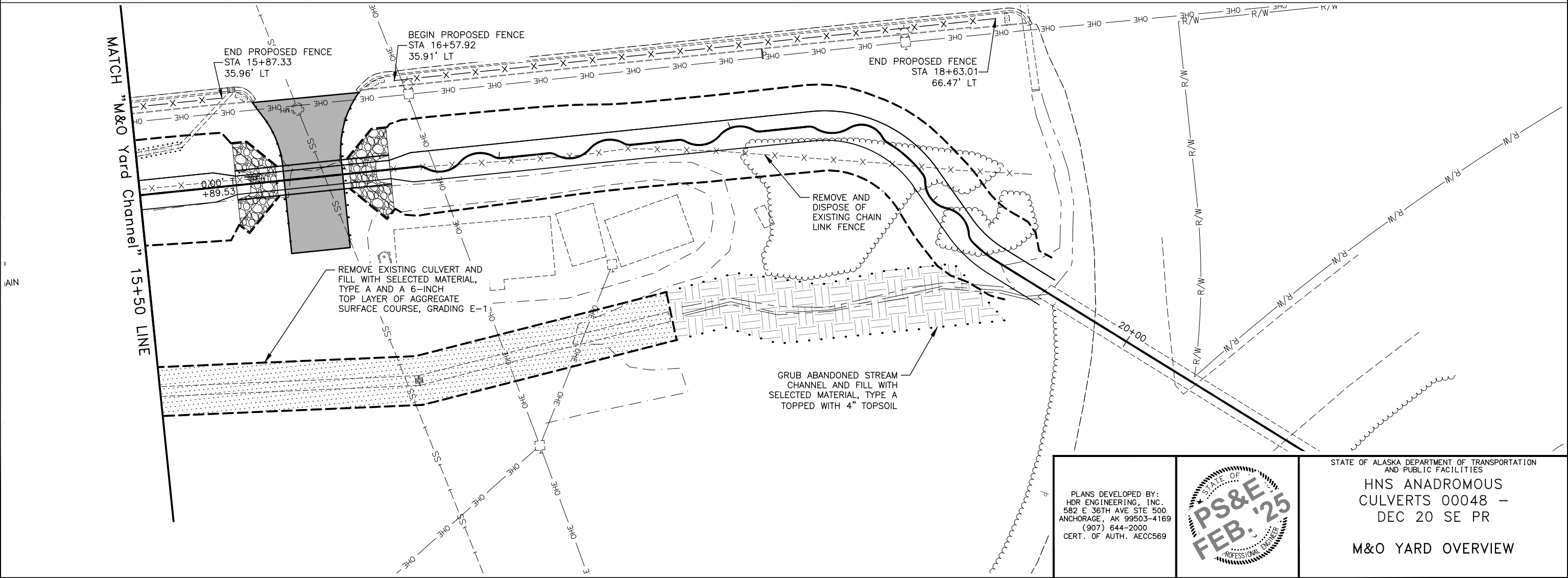
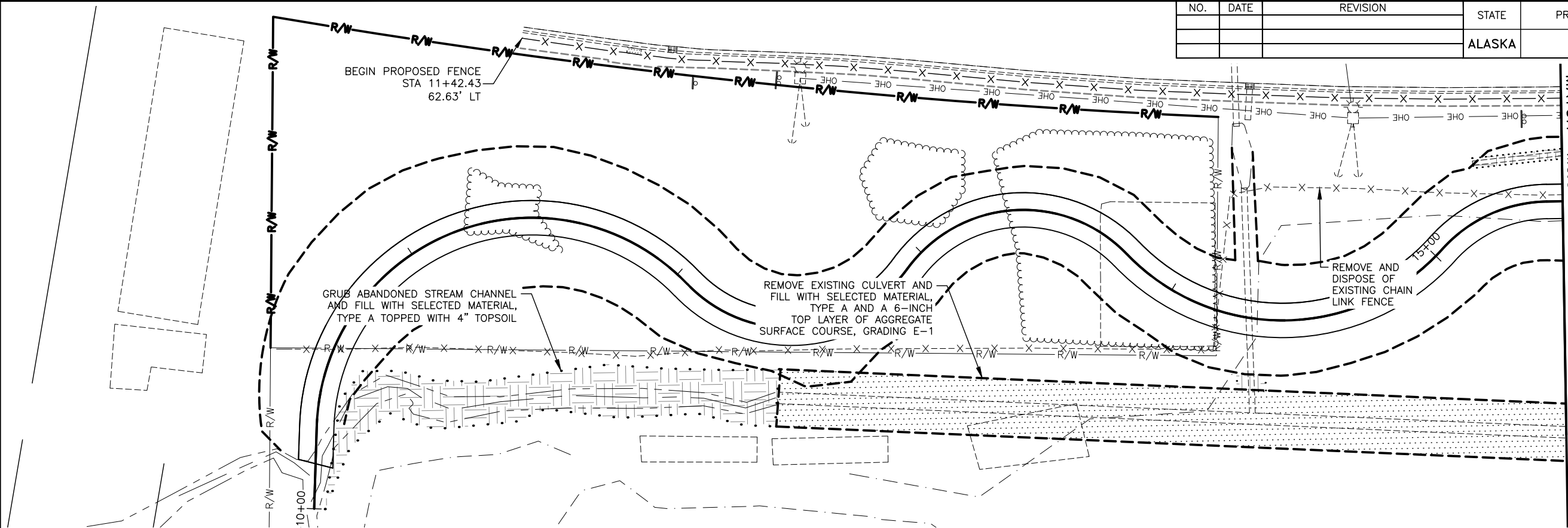
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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M&O YARD CHANNEL
STEP POOL DETAILS
DI #461641

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	P23	51



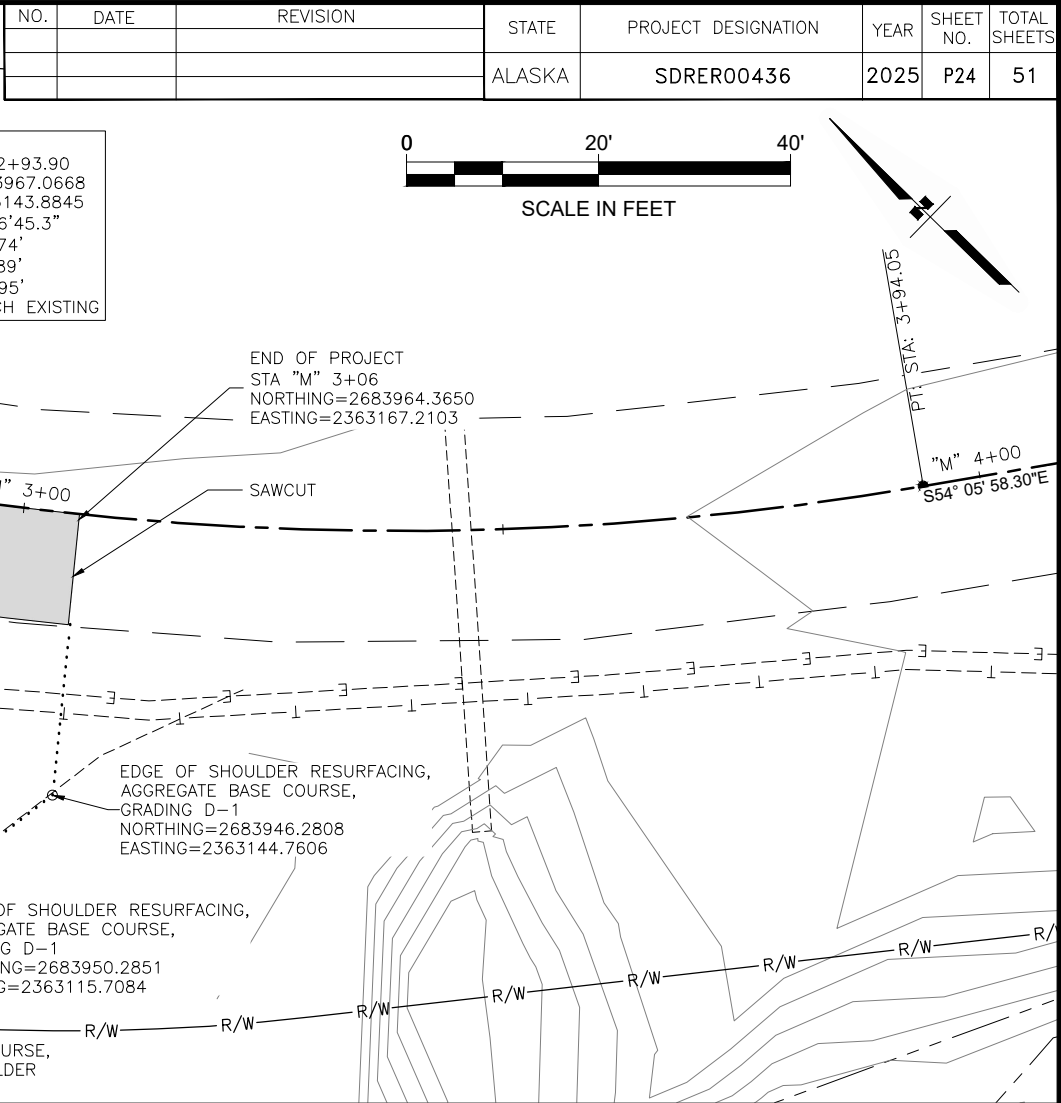
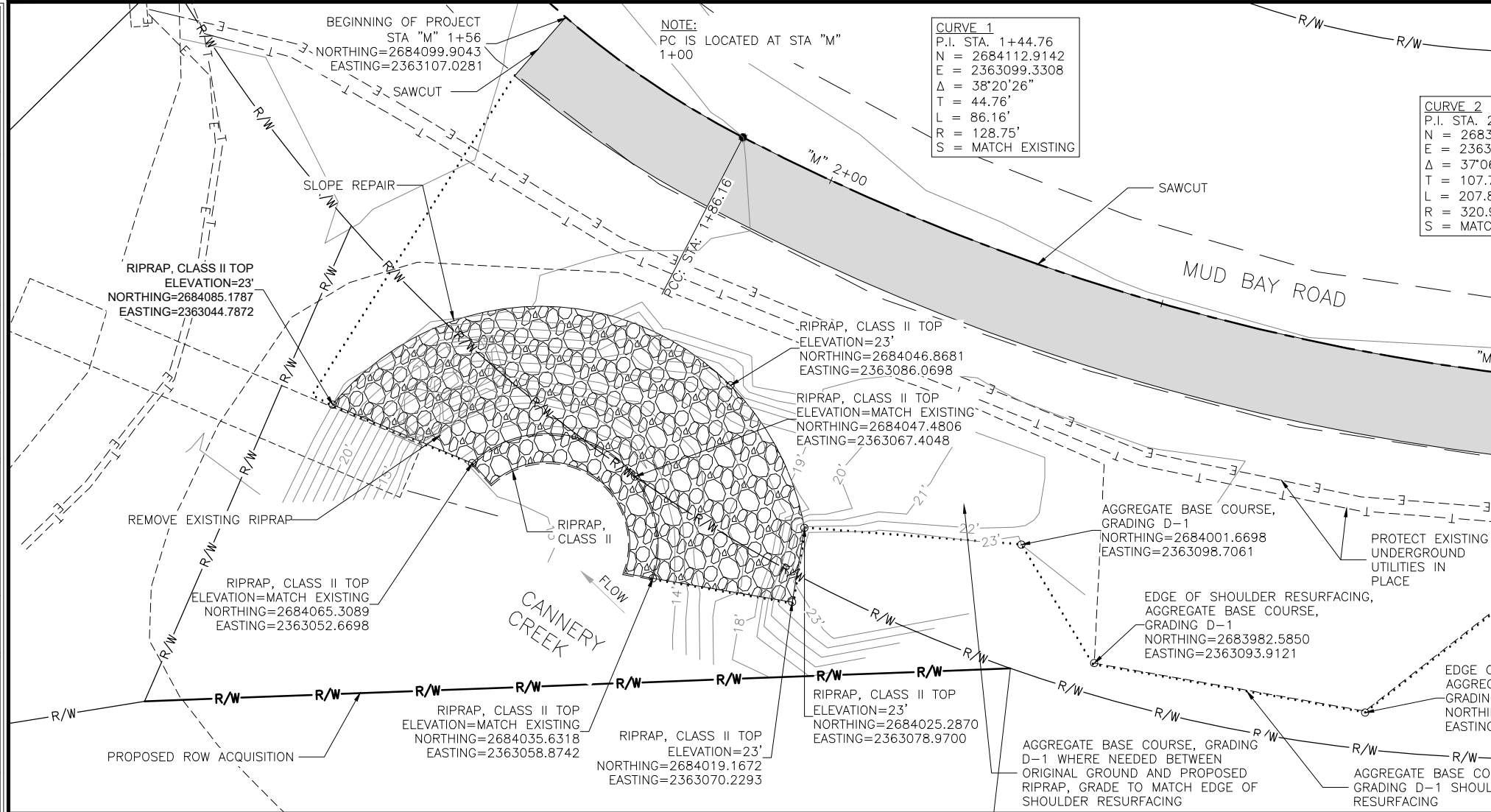
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR

M&O YARD OVERVIEW



PLAN

PROFILE

PLANS DEVELOPED BY:

DOWL

5015 BUSINESS PARK BLVD.,

SUITE 4000,

ANCHORAGE, AK 99503

(907) 562-2000

AECL848

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

HNS ANADROMOUS

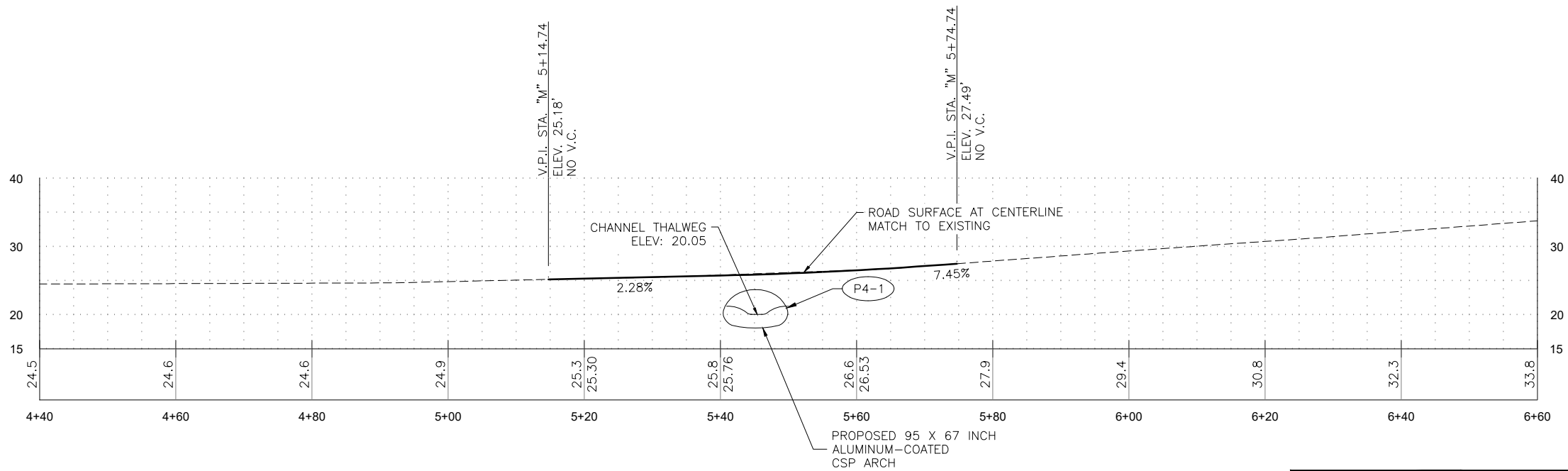
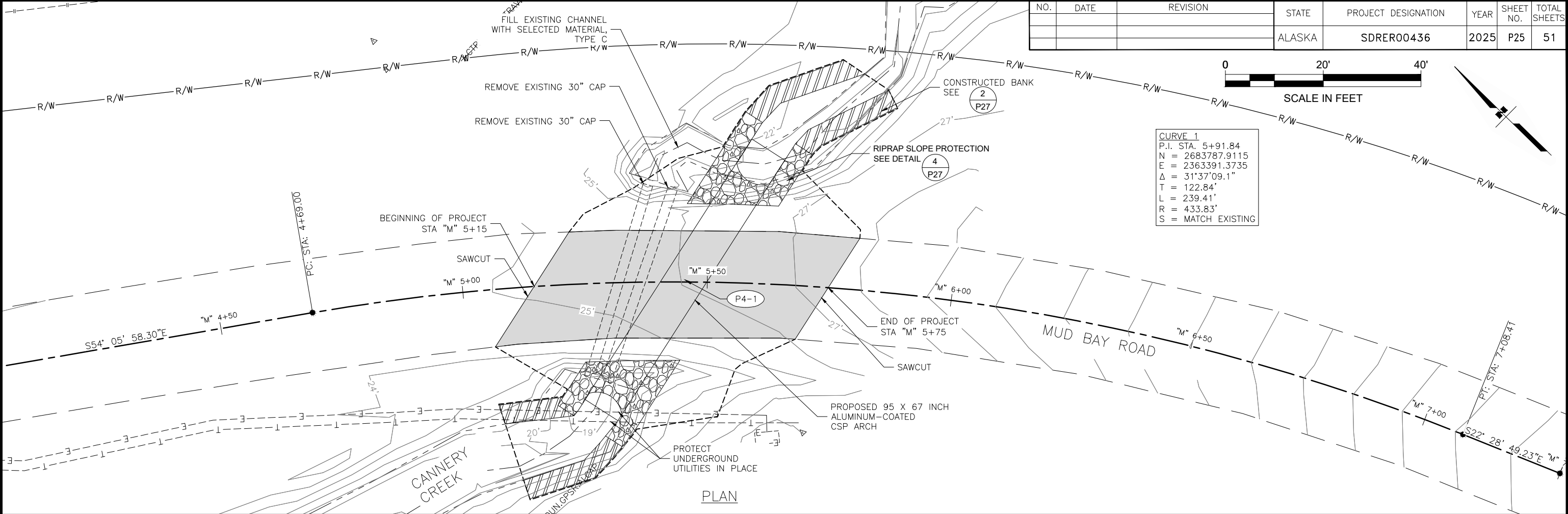
CULVERTS 00048 -

DEC 20 SE PR

MUD BAY ROAD MPT 5.3

ROADWAY PLAN AND PROFILE

DI #461219



PROFILE

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SUITE 4000,
ANCHORAGE, AK 99503
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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CULVERTS 00048 –
DEC 20 SE PR
MUD BAY CULVERT
ROADWAY PLAN AND PROFILE
DI #548035

0 10' 20'

SCALE IN FEET

RIPRAP SLOPE PROTECTION
SEE DETAIL 4
P27

CONSTRUCTED BANK
SEE 2
P27

EXISTING THALWEG

OHW

FLOW

"M" +78
44.09 LT

"M" +83
41.23 LT

PROPOSED THALWEG

TIE-IN POINT
STA 3+09.78
ELEV = 20.78

ROW

STA 2+81.45
TREAMBED ELEV=20.46

ELEV = 18.50

22.2
20.55

22.2
20.67

20.8

21.0

21.1

2+90 3+00 3+10 3+20 3+30

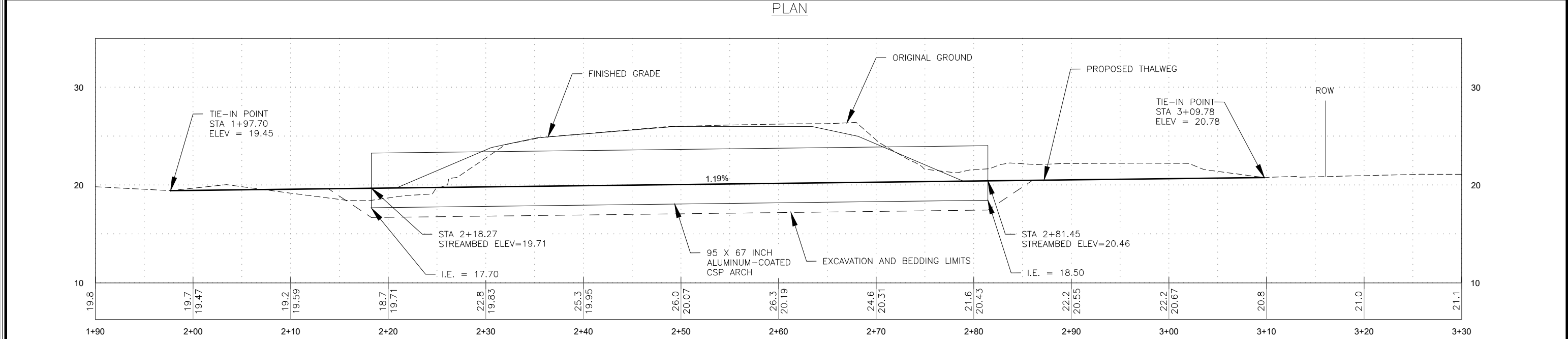
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STATE OF ALASKA
49 TH
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
MUD BAY CULVERT
CULVERT PLAN AND PROFILE
DI #548035



PROFILE

CULVERT SUMMARY TABLE	
SPAN X RISE	95" X 67"
LENGTH	64'
CORRUGATION	3" X 1"
GAUGE	10

PLANS DEVELOPED BY: DOWL 5015 BUSINESS PARK BLVD. SUITE 4000 ANCHORAGE, AK 99503 (907) 562-2000 AECL848		STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES HNS ANADROMOUS CULVERTS 00048 - DEC 20 SE PR MUD BAY CULVERT CULVERT PLAN AND PROFILE DI #548035
--	---	---

1 TYPICAL CULVERT CROSS-SECTION
SCALE: NOT TO SCALE

2 CONSTRUCTED BANK
SCALE: NOT TO SCALE

3 CONSTRUCTED CHANNEL
SCALE: NOT TO SCALE

EXCAVATE BED MATERIAL TO TRANSITION INTO EXISTING STREAMBED. SALVAGE BED MATERIAL AND MIX WITH STREAM SUBSTRATE.

WATERWAY BANK REVEGETATION AND PROTECTION

RIPRAP, CLASS I

4' MIN.

4'

NEW CULVERT

ROAD SHOULDER

PLAN

ROAD SHOULDER

NEW CULVERT

1' MIN.

2

1

4

TOP OF STREAM BANK

4'

2'

BANKFULL HEIGHT

2' MIN.

RIPRAP, CLASS I

GEOTEXTILE, EROSION CONTROL, CLASS I

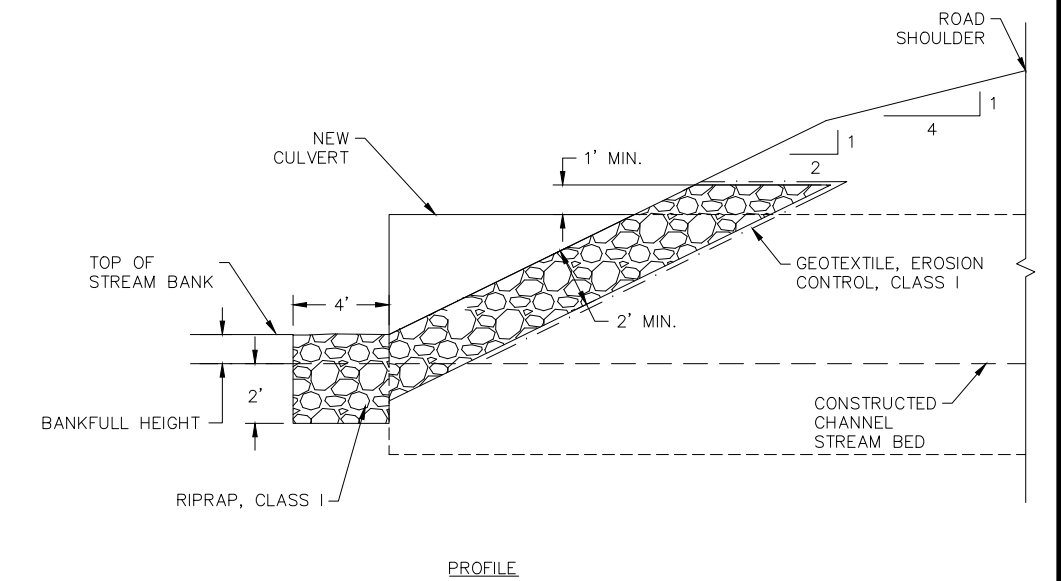
CONSTRUCTED CHANNEL STREAM BED

PROFILE

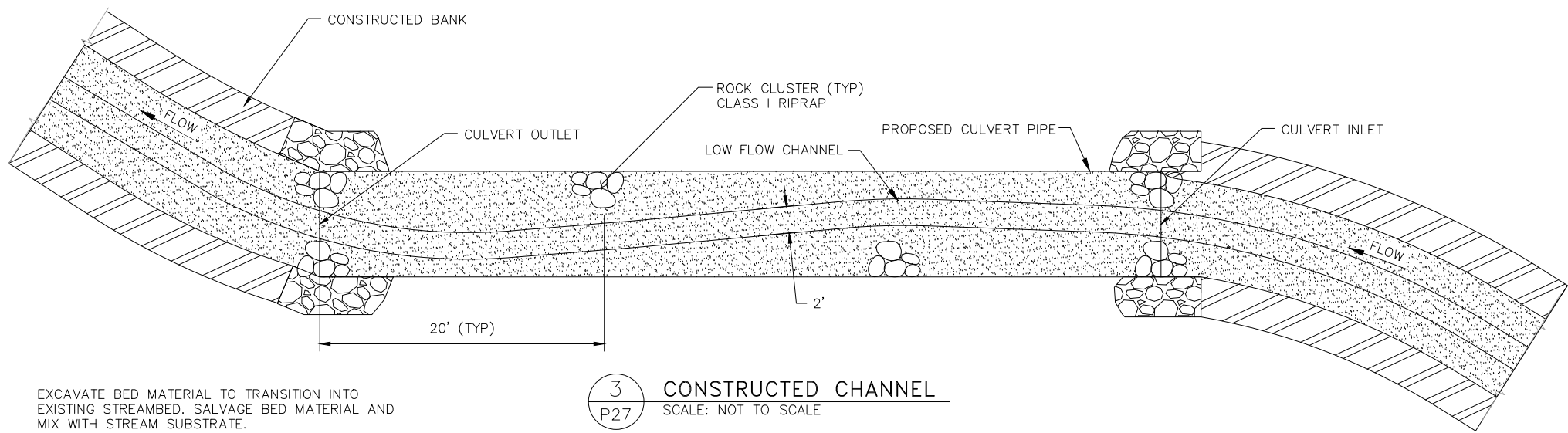
4
P27

RIPRAP SLOPE PROTECTION SECTION

SCALE: NOT TO SCALE



4 RIPRAP SLOPE PROTECTION SECTION
P27 SCALE: NOT TO SCALE



3
P27

CONSTRUCTED CHANNEL
SCALE: NOT TO SCALE

EXCAVATE BED MATERIAL TO TRANSITION INTO
EXISTING STREAMBED. SALVAGE BED MATERIAL AND
MIX WITH STREAM SUBSTRATE.

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HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
MUD BAY CULVERT
CULVERT DETAILS
DI #548035

TRAFFIC CONTROL LEGEND

 FLAGGER

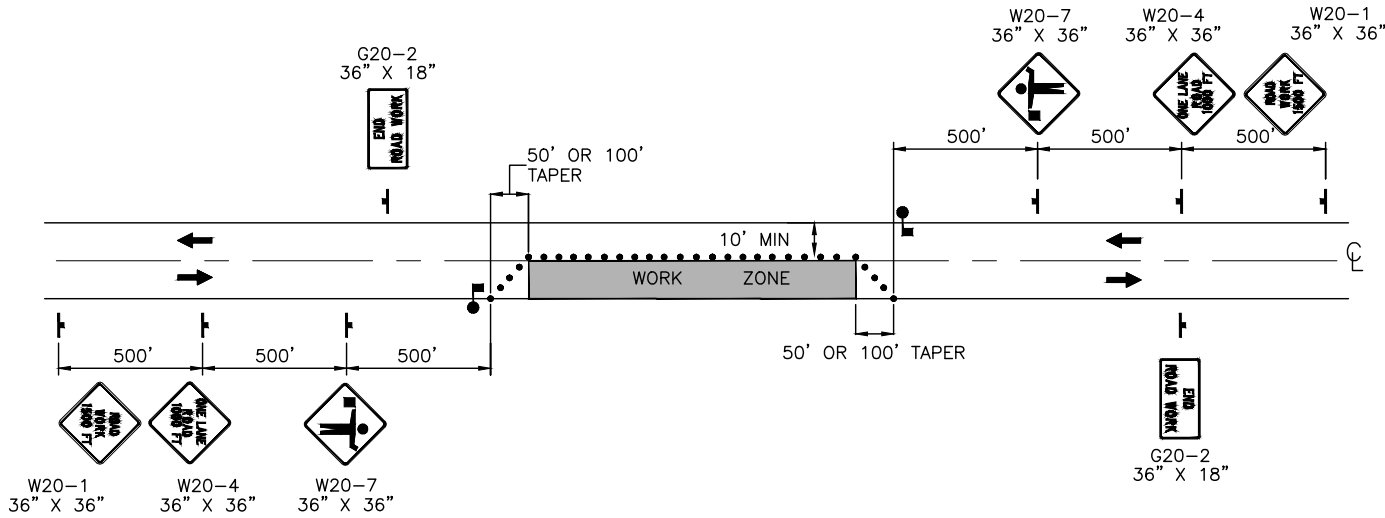
 CONSTRUCTION SIGN

 DRUM

 CONE

 WARNING LIGHT

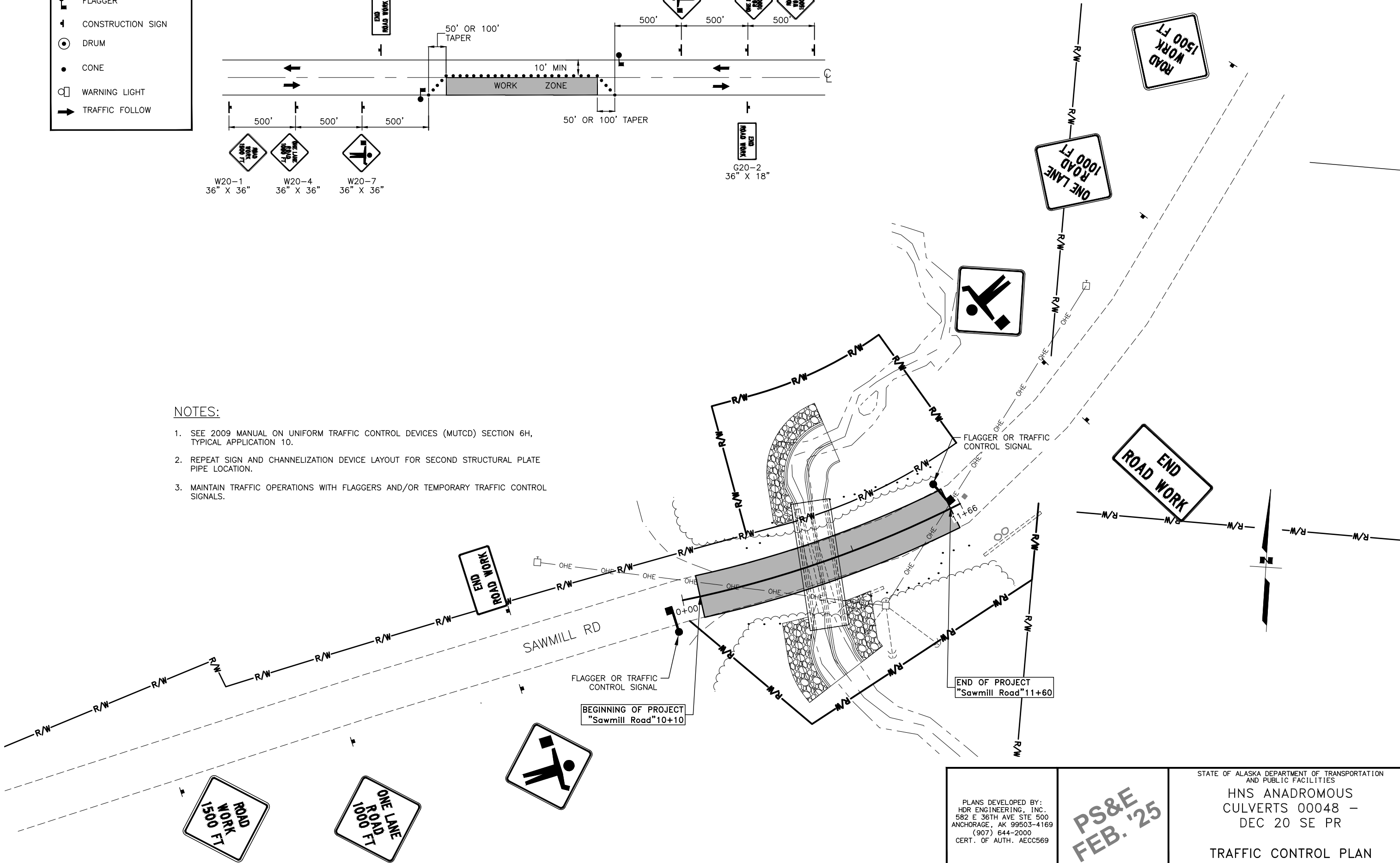
 TRAFFIC FOLLOW



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	T1	51

NOTES:

- SEE 2009 MANUAL ON UNIFORM TRAFFIC CONTROL DEVICES (MUTCD) SECTION 6H, TYPICAL APPLICATION 10.
- REPEAT SIGN AND CHANNELIZATION DEVICE LAYOUT FOR SECOND STRUCTURAL PLATE PIPE LOCATION.
- MAINTAIN TRAFFIC OPERATIONS WITH FLAGGERS AND/OR TEMPORARY TRAFFIC CONTROL SIGNALS.



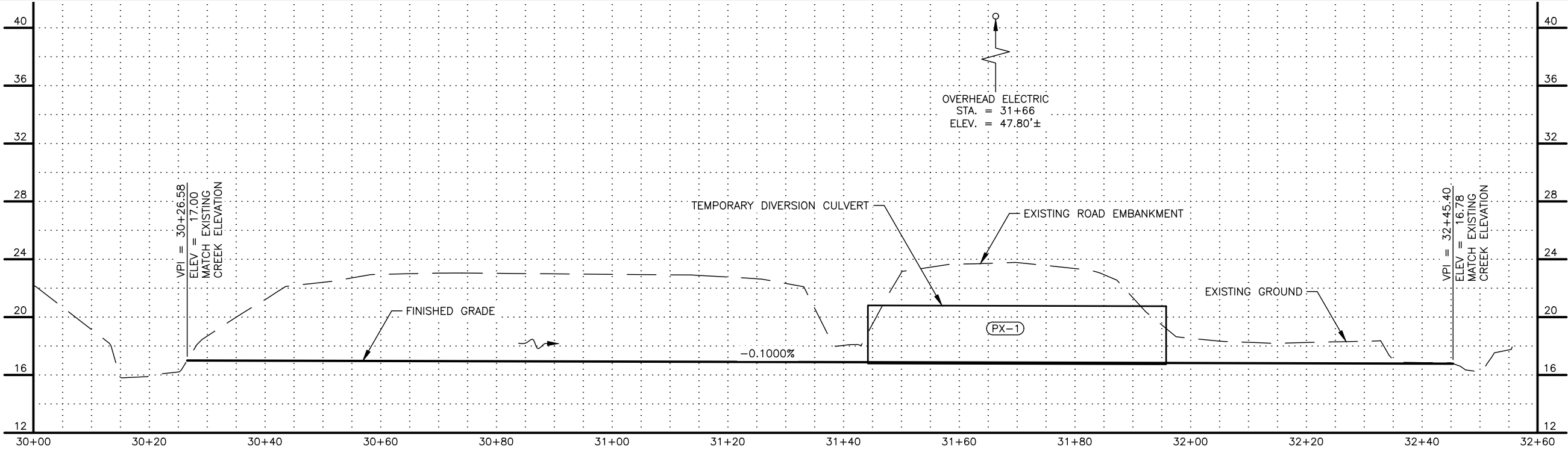
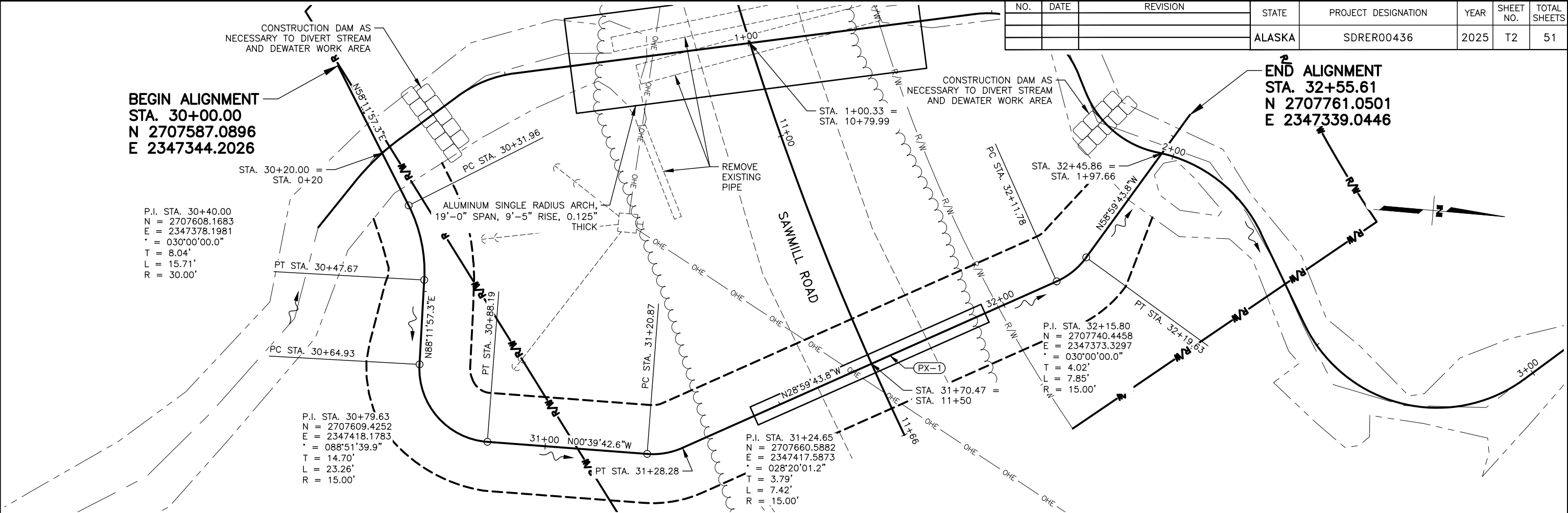
PLANS DEVELOPED BY:
HDR ENGINEERING, INC.
582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
CERT. OF AUTH. AECC569

PS&E
FEB. '25

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
TRAFFIC CONTROL PLAN
DI #461258

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	T2	51



PIPE SUMMARY										
PIPE	SIZE (IN)	LENGTH (FT)	START STATION	START OFFSET	START INVERT ELEV. (FT)	END STATION	END OFFSET	END INVERT ELEV. (FT)	% GRADE	MATERIAL
PX-1	48	51.54	11+50.00	26.21' L	16.80	11+50.00	25.33' L	16.75	0.10%	CORRUGATED METAL PIPE

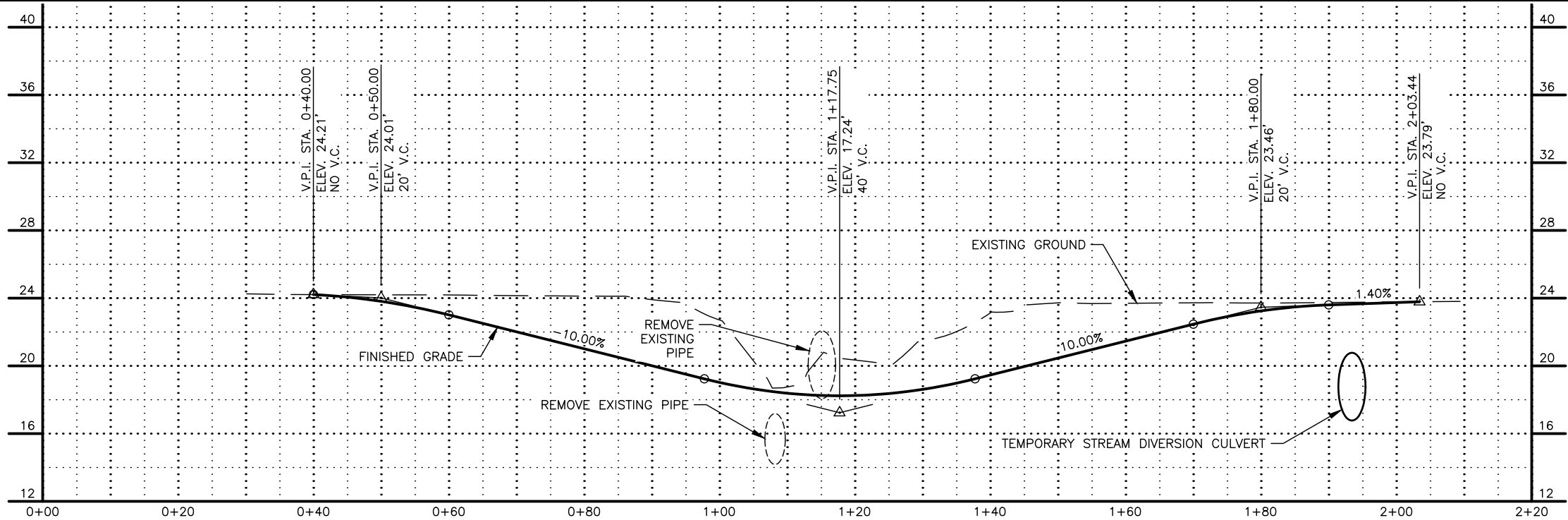
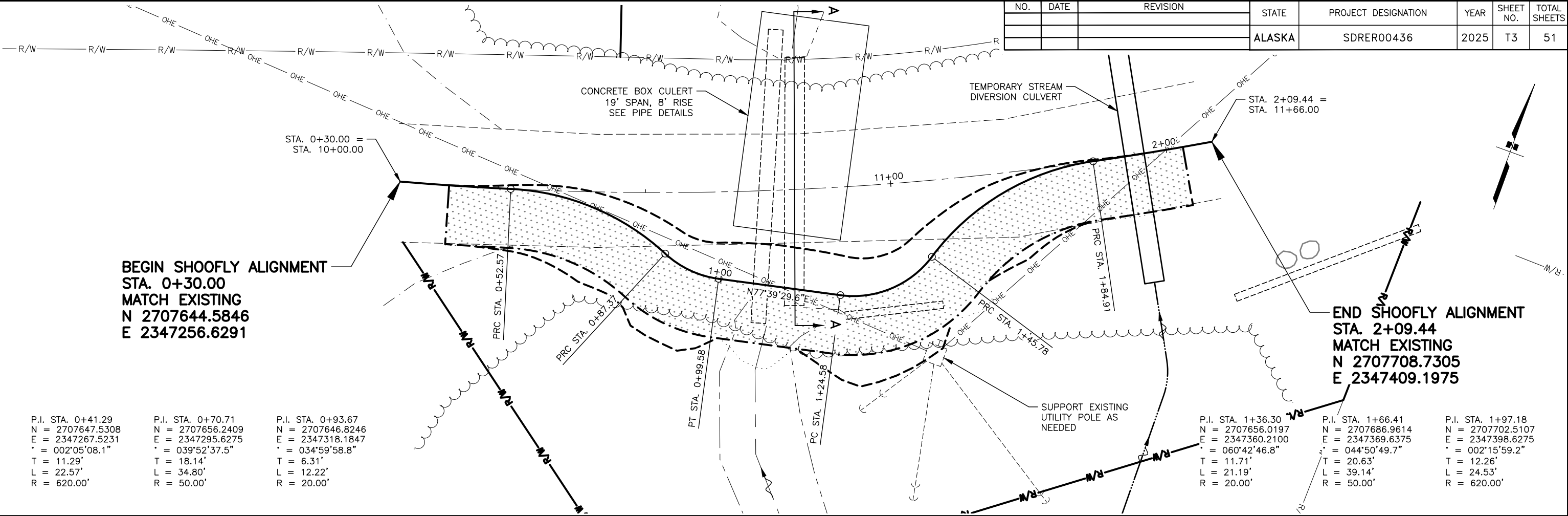
PLANS DEVELOPED BY:
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582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
SAWMILL CREEK
STREAM DIVERSION

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	T3	51



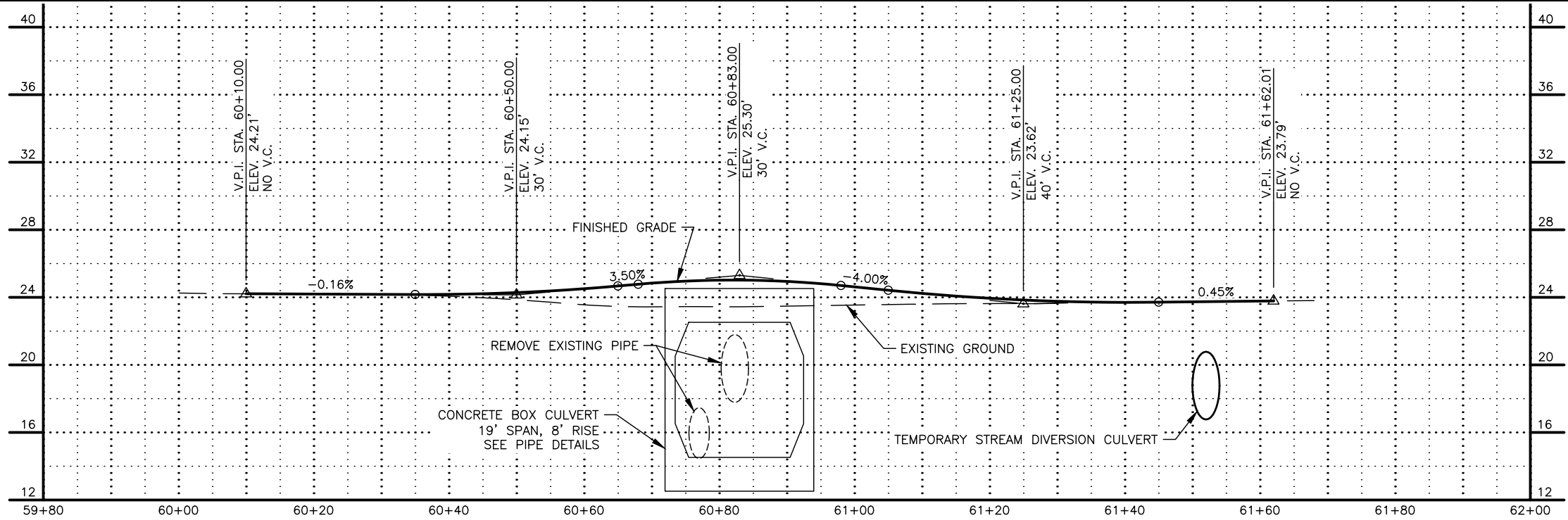
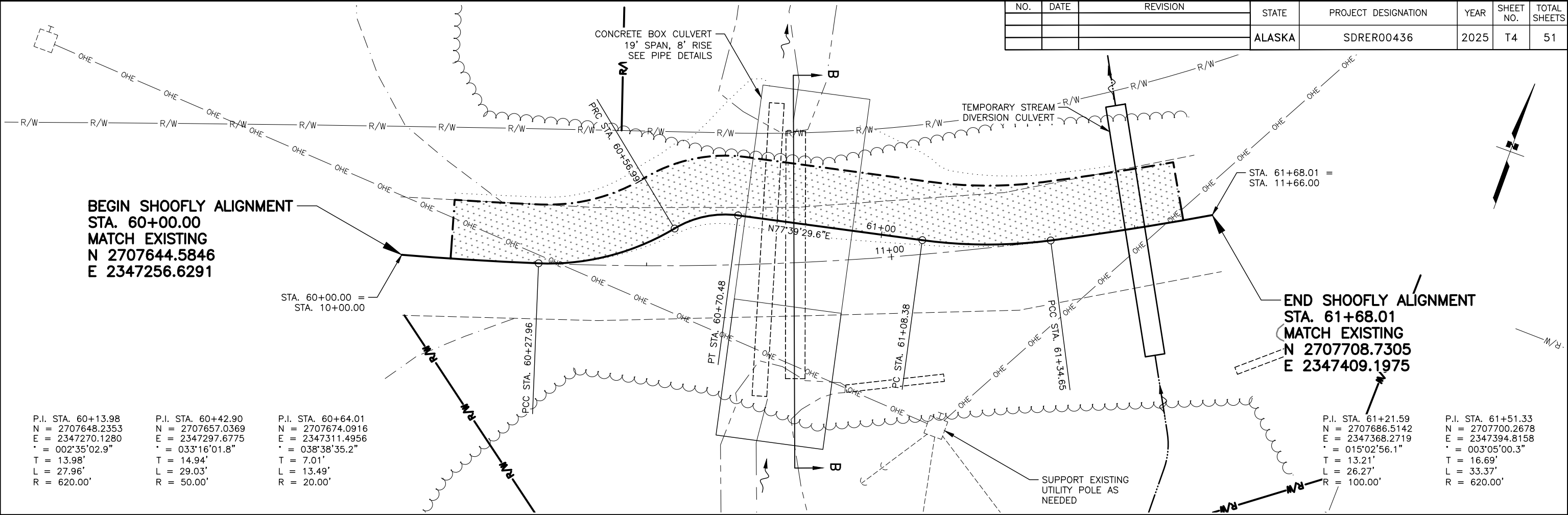
PLANS DEVELOPED BY:
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582 E 36TH AVE STE 500
ANCHORAGE, AK 99503-4169
(907) 644-2000
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
PHASING PLAN
SAWMILL ROAD SHOOFLY A

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	T4	51



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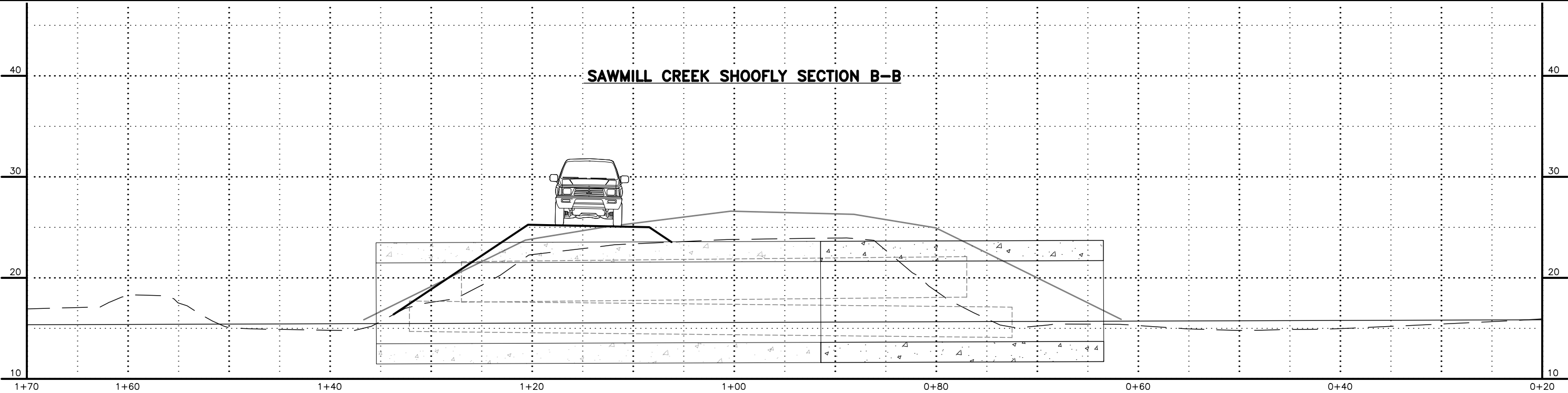
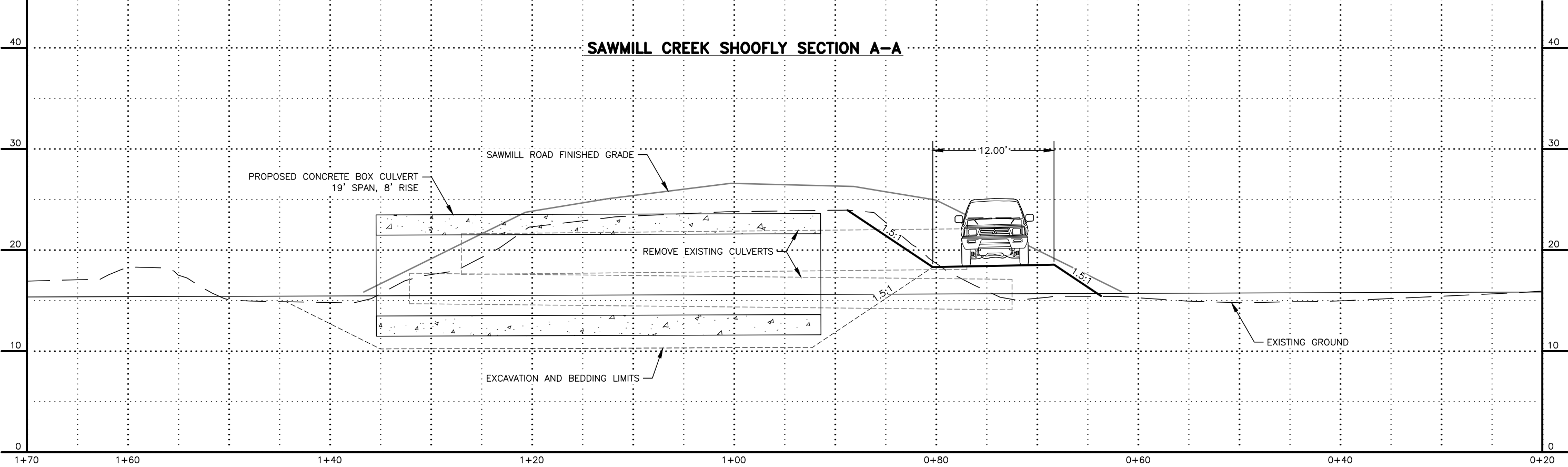
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FEB. '25

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR

PHASING PLAN
SAWMILL ROAD SHOOFLY B

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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	T5	51



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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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CULVERTS 00048 -
DEC 20 SE PR

PHASING SECTION VIEW



TRAFFIC CONTROL LEGEND

.....

SIGN

.....

CONE

.....

WARNING LIGHT

.....

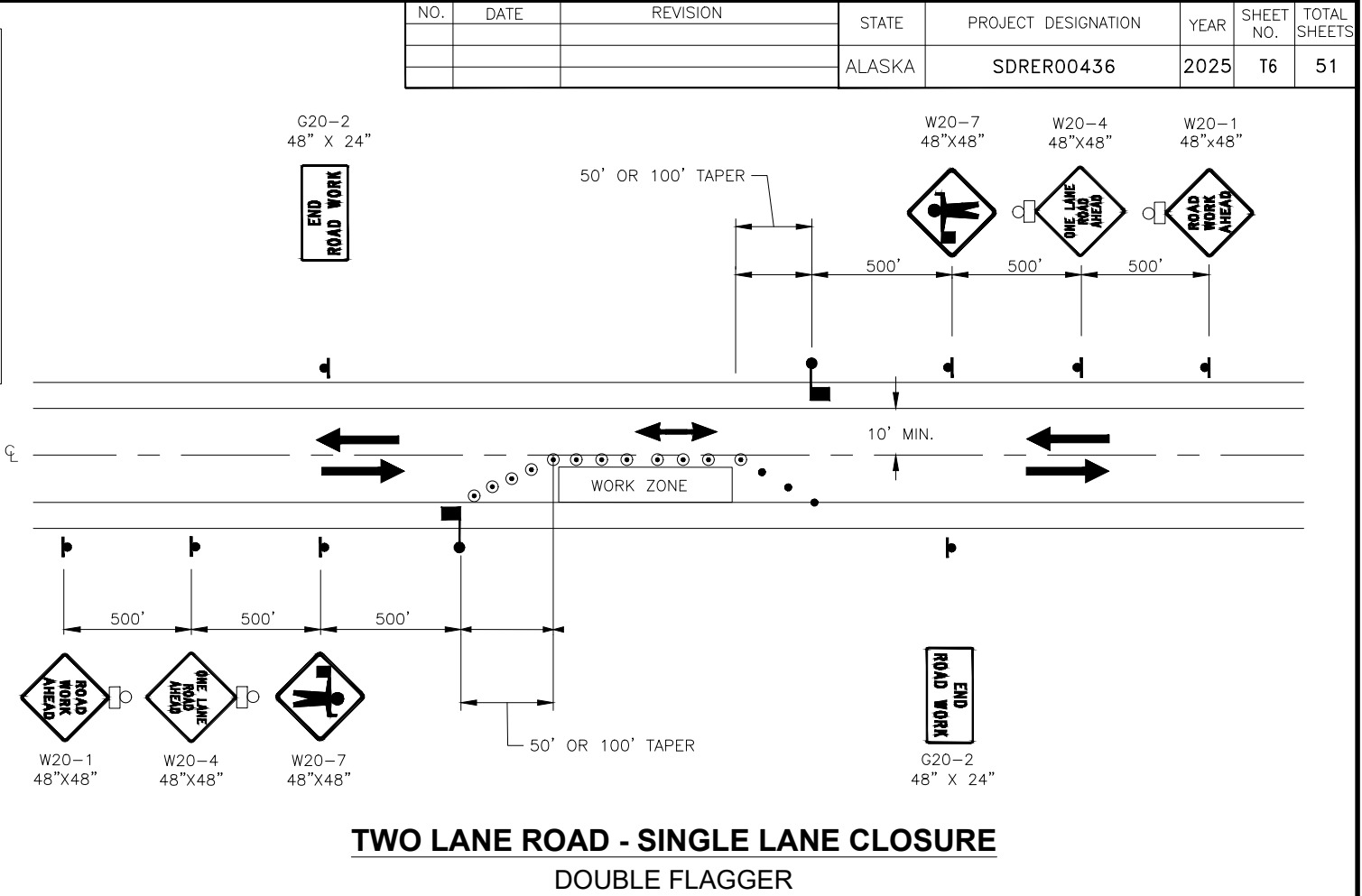
DRUM

.....

FLAGGER

.....

TRAFFIC FLOW



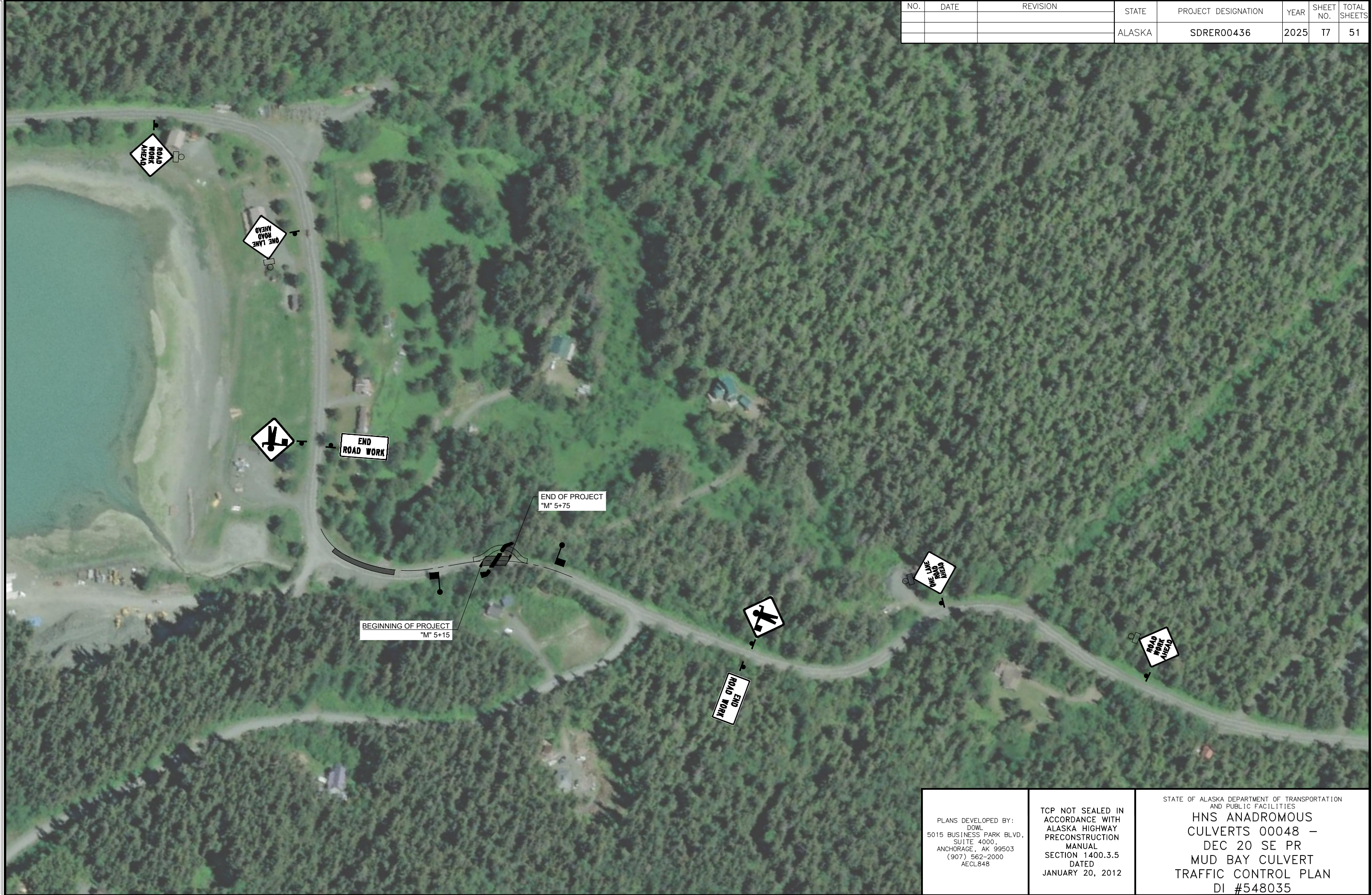
PLANS DEVELOPED BY:

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ACCORDANCE WITH
ALASKA HIGHWAY
PRECONSTRUCTION
MANUAL
SECTION 1400.3.5
DATED
JANUARY 20, 2012

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

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CULVERTS 00048 -
DEC 20 SE PR
MUD BAY ROAD MPT 5.3
TRAFFIC CONTROL PLAN
DI #461219



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	17	51

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PRECONSTRUCTION
MANUAL
SECTION 1400.3.5
DATED
JANUARY 20, 2012

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
MUD BAY CULVERT
TRAFFIC CONTROL PLAN
DI #548035

CURVE 1
P.I. STA. 0+24.73
N = 2683833.7391
E = 2363324.6097
Δ = 30°50'13.2"
T = 17.93'
L = 34.98'
R = 65.00'

BEGIN DETOUR ALIGNMENT
"M" STA 4+93.02
MATCH EXISTING
N=2683845.2160
E=2363310.8386

PC: STA. "D" 0+06.80
PT: STA. "D" 0+41.79
PC: STA. "D" 0+54.66
PT: STA. "D" 1+13.51
PC: STA. "D" 1+21.93

PROPOSED 95 X 67 INCH ALUMINUM-COATED CSP ARCH

TEMPORARY DIVERSION CHANNEL LOCATION APPROXIMATE SEE 1 T8

TEMPORARY 48" STREAM DIVERSION CULVERT

PROTECT UTILITIES IN PLACE

BULK BAGS (TYP.)

MUD BAY ROAD
S54° 05' 58.30"E

PLAN

V.P.I. STA. "D" 0+06.80
ELEV. 24.71'
NO V.C.

V.P.I. STA. "D" 0+40.00
ELEV. 25.30'
20' V.C.

V.P.I. STA. "D" 0+70.77
ELEV. 24.08'
40' V.C.

1.77%

3.96%

10.00%

ORIGINAL GROUND

FINISHED GRADE

TEMPORARY 48" STREAM DIVERSION CULVERT

PROFILE

6 MIL. REINFORCED VISQUEEN OR EQUIVALENT

KEY IN PLASTIC LINER USING BORROW

1 T8 DIVERSION CHANNEL
NTS

STREAM DIVERSION NOTES:

A COFFERDAM MADE OF SHEET PILE OR BULK BAGS MAY BE NEEDED TO REDUCE INUNDATION OF THE EXCAVATED AREA. TEMPORARY DIKES OR BERMS MAY BE USED TO ISOLATE THE WORK AREA FROM WATERS OF THE SURROUNDING AREA. THIS WORK WILL REQUIRE A DIVERSION OF STREAM WATER. THE DESIGNERS RECOGNIZE THAT DIFFERENT CONTRACTORS WILL HAVE VARIOUS APPROACHES FOR CONTROLLING WATER AND CONSTRUCTION SEQUENCING. THIS DIVERSION PLAN HAS BEEN DEVELOPED TO CHECK FOR CONTRACTIBILITY AND AS A STARTING POINT FOR A CONTRACTOR-GENERATED PLAN. CONTRACTOR MUST SUBMIT DIVERSION PLANS TO ENGINEER FOR APPROVAL PRIOR TO IMPLEMENTATION.

NOTES:
1. SEE SHEET T9 FOR PHASING SECTION VIEWS.

CURVE 2
P.I. STA. 0+90.87
N = 2683823.2908
E = 2363390.7961
Δ = 84°18'14.3"
T = 36.21'
L = 58.86'
R = 40.00'

CURVE 3
P.I. STA. 1+35.80
N = 2683764.8948
E = 2363387.4548
Δ = 38°13'58.1"
T = 13.86'
L = 26.69'
R = 40.00'

END DETOUR ALIGNMENT
"M" STA 6+18.21
MATCH EXISTING
N=2683753.5322
E=2363395.3986

PI: STA. "D" 1+48.62
"D" 1+54

0 20' 40'
SCALE IN FEET

S22° 28' 49.23"E

V.P.I. STA. "D" 1+05.00
ELEV. 27.50'
20' V.C.

7.15%

V.P.I. STA. "D" 1+48.62
ELEV. 30.62'
NO V.C.

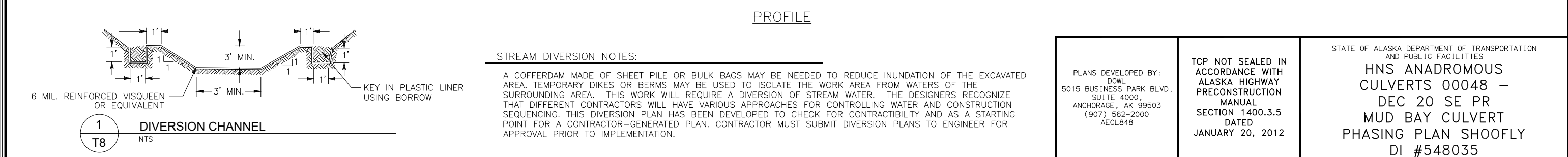
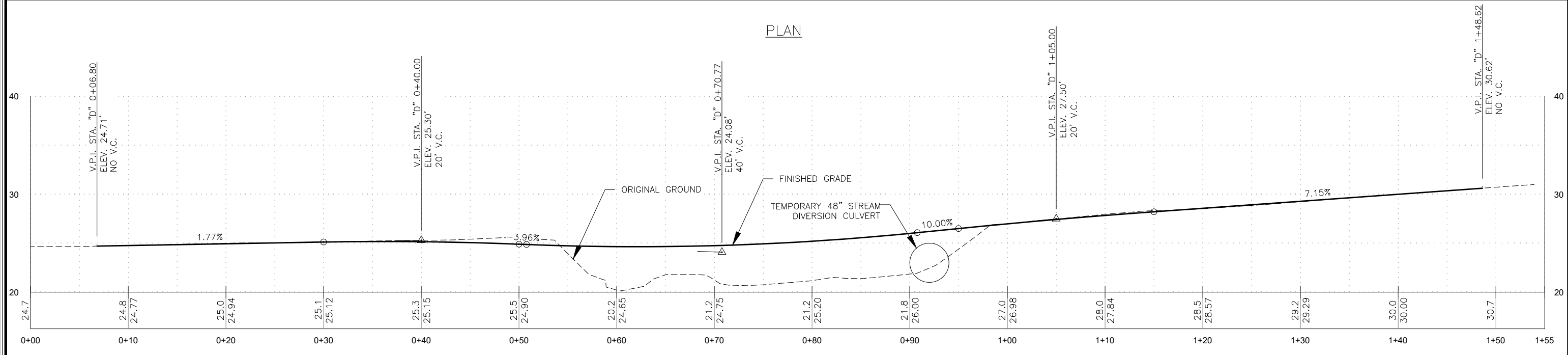
28.0 27.84 28.5 28.57 29.2 29.29 30.0 30.00 30.7

1+10 1+20 1+30 1+40 1+50 1+55

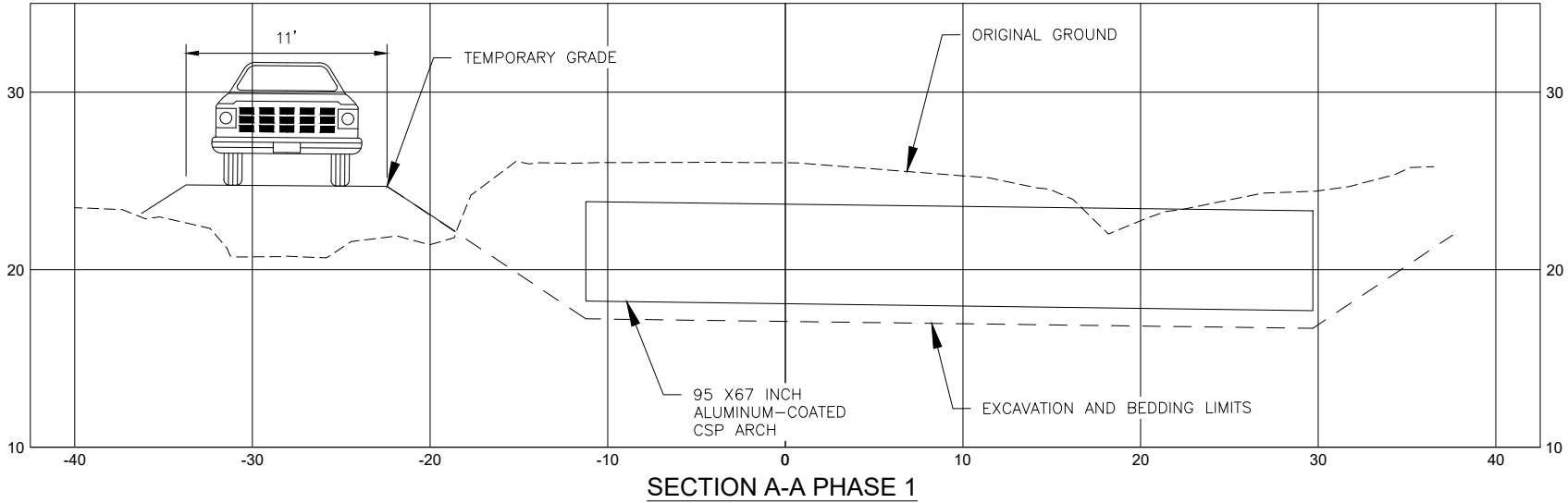
PLANS DEVELOPED BY:
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DATED
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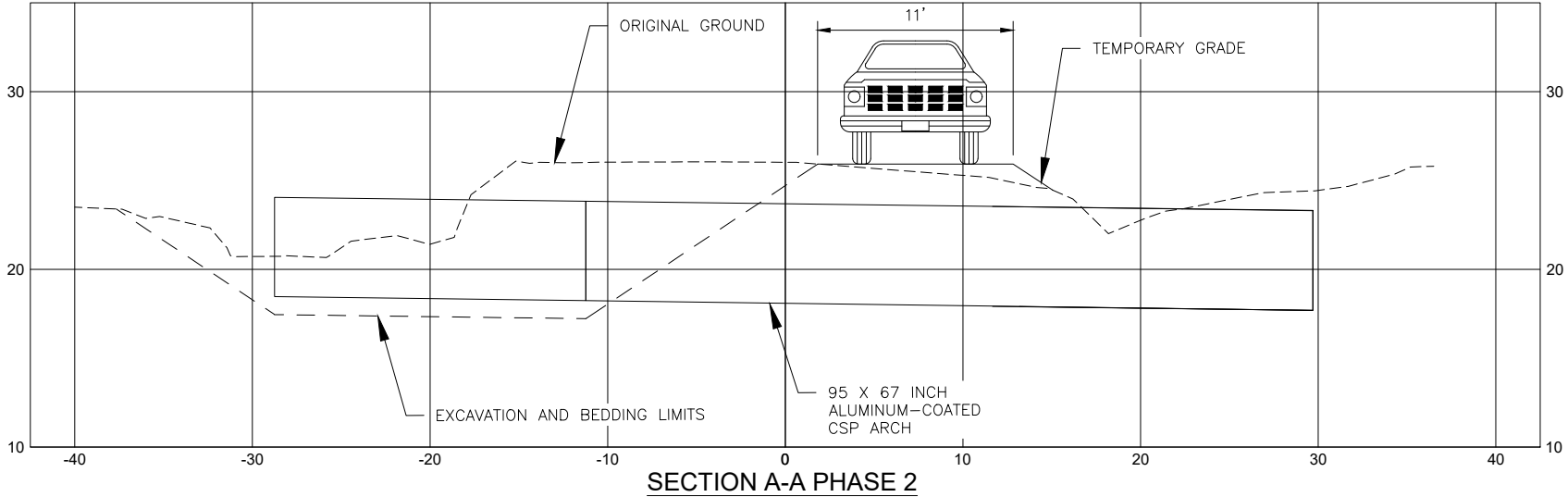
STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
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HNS ANADROMOUS
CULVERTS 00048 -
DEC 20 SE PR
MUD BAY CULVERT
PHASING PLAN SHOOFLY
DI #548035



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	T9	51



- PHASE 1**
- INSTALL A 48" MINIMUM DIAMETER CULVERT ACROSS MUD BAY ROAD.
 - CONSTRUCT VISQUEEN LINED DIVERSION CHANNEL.
 - USE BULK BAGS (SUPERSACKS) TO DIVERT STREAM FLOW THROUGH DIVERSION CHANNEL.
 - PLACE GROUND FABRIC OVER DETOUR ROAD FOOTPRINT PRIOR TO CONSTRUCTION TO PROTECT EXISTING VEGETATION.
 - CONSTRUCT SINGLE LANE DETOUR ROAD OVER THE NEWLY INSTALLED DIVERSION CULVERT.
 - DIRECT TRAFFIC OVER THE SINGLE LANE DETOUR ROAD.
 - KEEP DIVERSION CULVERT, CHANNEL, DETOUR ROAD, AND ALL DISTURBANCE UPSTREAM AND DOWNSTREAM OF MUD BAY ROAD WITHIN ROW.
 - EXCAVATE ROADWAY TO REMOVE EXISTING CULVERT.
 - CONSTRUCT THE OUTLET SIDE OF THE NEW ARCH CULVERT. PROTECT UNDERGROUND UTILITIES IN PLACE.



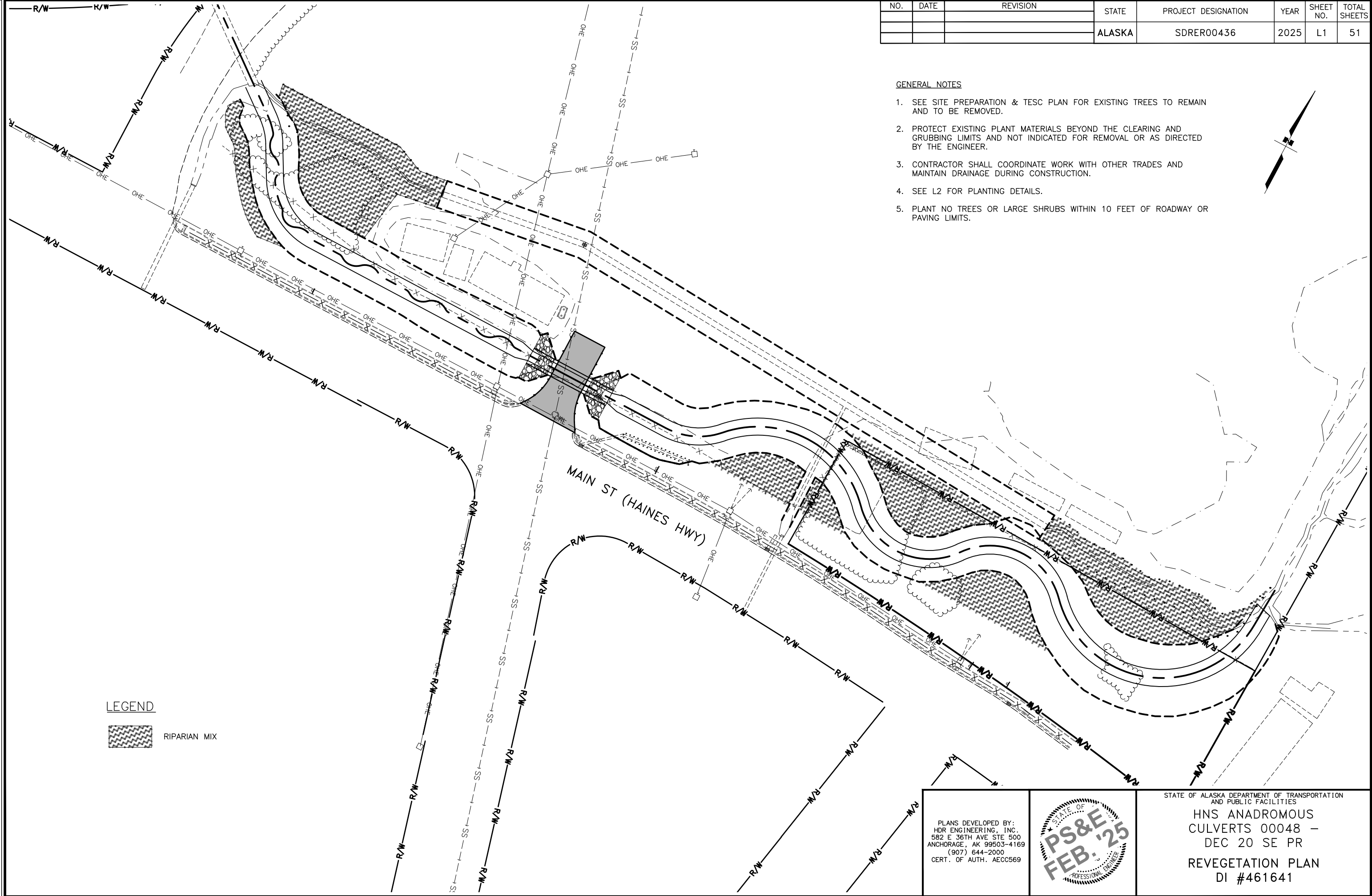
- PHASE 2**
- CONSTRUCT SINGLE LANE ROAD OVER THE NEWLY INSTALLED ARCH CULVERT AND DIRECT TRAFFIC OVER NEW ROAD.
 - REMOVE DETOUR ROAD.
 - CONSTRUCT THE INLET SIDE OF THE NEW ARCH CULVERT.
 - INFILL CULVERT AND RECONSTRUCT CREEK CHANNEL AS SHOWN IN THE PLANS.
 - DIVERT CREEK FLOW THROUGH THE NEW SINGLE ARCH CULVERT.
 - FILL DIVERSION CHANNEL AND RECONSTRUCT MUD BAY ROAD OVER THE NEWLY INSTALLED CULVERT.
 - STABILIZE AND REVEGETATE ALL REMAINING DISTURBED AREAS.

PLANS DEVELOPED BY:
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ANCHORAGE, AK 99503
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ALASKA HIGHWAY
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MANUAL
SECTION 1400.3.5
DATED
JANUARY 20, 2012

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES
**HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR
MUD BAY CULVERT
PHASING SECTION VIEWS
DI #548035**

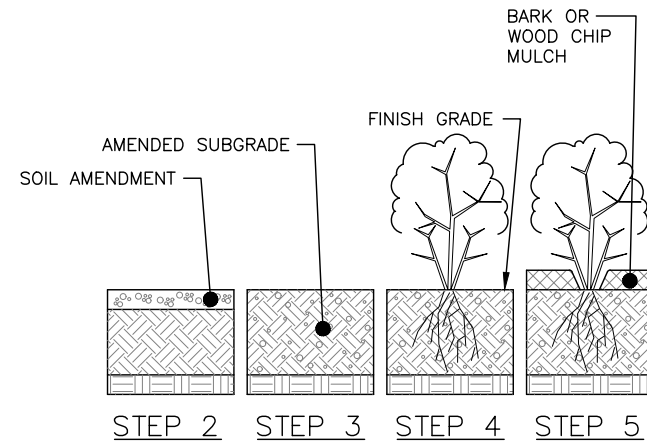
FILE \\intranet.hdr\hdr\Eng\ActiveProjects\3171\1003518\10354808\6.0_CAD\BIM\6.2_WIP\6.2a_Production\00436_1_Revegetation Plan.dwg DATE 2/7/2025 19:03 LAYOUT L1



NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	SDRER00436	2025	L2	51

NOTE:

1. DETAIL APPLICABLE TO RIPARIAN MIX.

**CONSTRUCTION SEQUENCE:**

STEP 1
PLACE STRAW WATTLE ON SLOPES 3H : 1V OR STEEPER PER WSDOT STANDARD PLAN I-30.30-02.

STEP 2
PLACE 3" DEPTH SOIL AMENDMENT OVER EXISTING SUBGRADE.

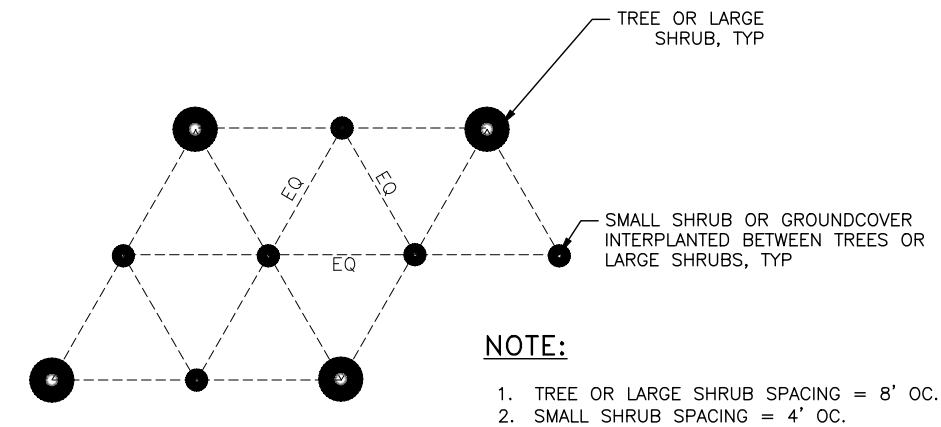
STEP 3
TILL MEDIUM COMPOST INTO EXISTING SUBGRADE TO A DEPTH OF 6". COMPACT TO 85% MAXIMUM DRY DENSITY.

STEP 4
INSTALL PLANT.

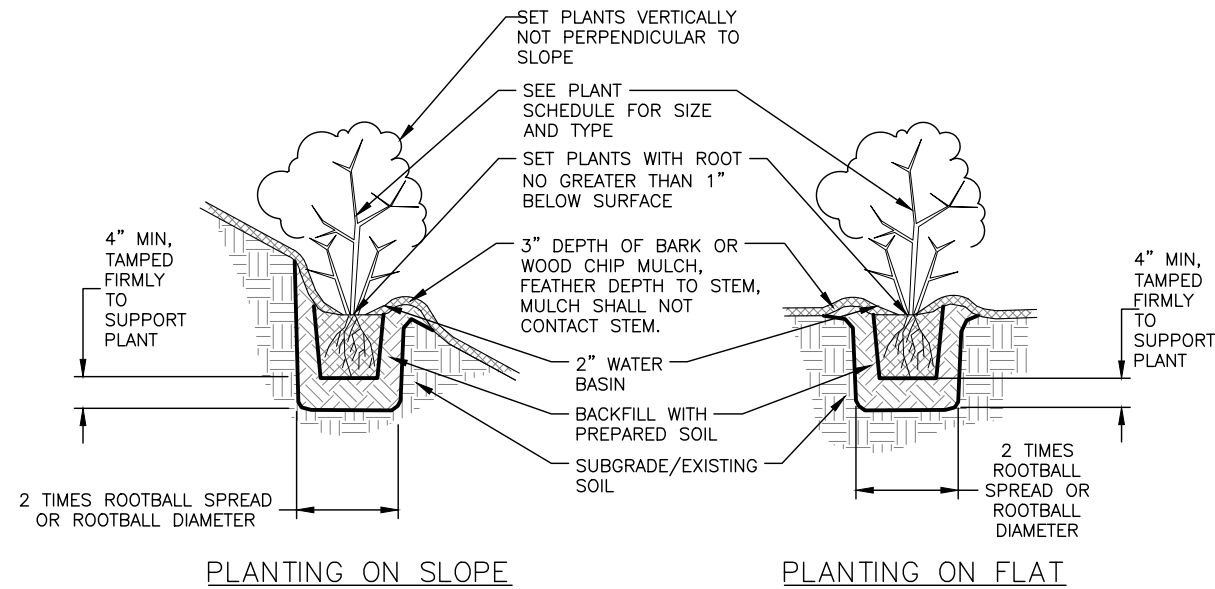
STEP 5
1. INSTALL 3" DEPTH OF BARK OR WOOD CHIP MULCH. ENSURE MULCH DOES NOT CONTACT STEM OR TRUNK AFTER INSTALLATION IS COMPLETE

DETAIL 1 – SOIL PREPARATION

NOT TO SCALE

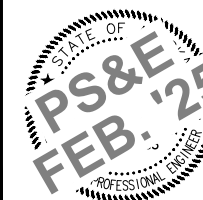
**DETAIL 2 – PLANT SPACING**

NOT TO SCALE

**DETAIL 3 – TREE / SHRUB PLANTING**

NOT TO SCALE

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



STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

HNS ANADROMOUS
CULVERTS 00048 –
DEC 20 SE PR

PLANTING DETAILS
DI #461641