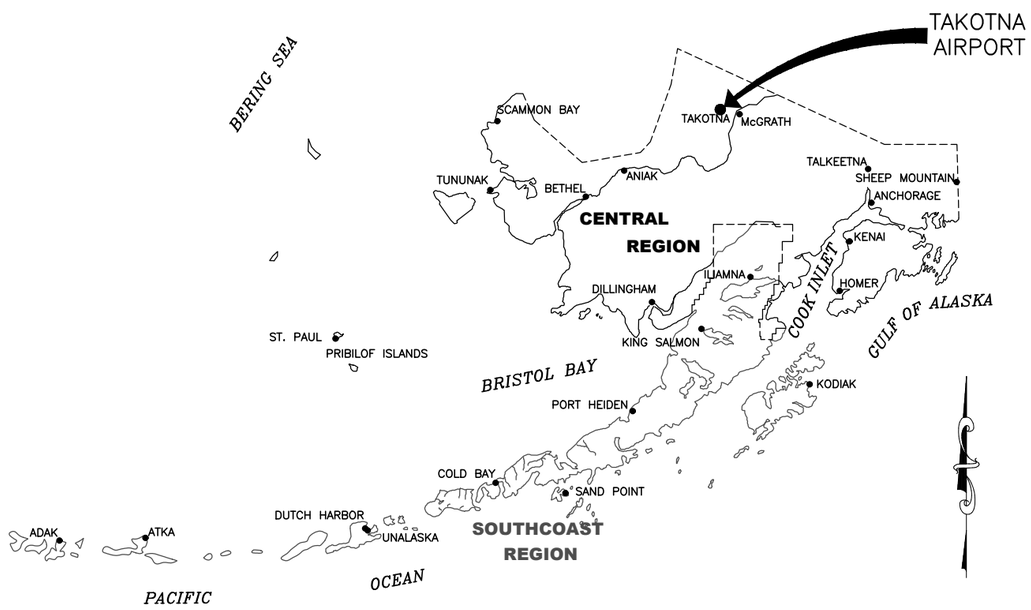
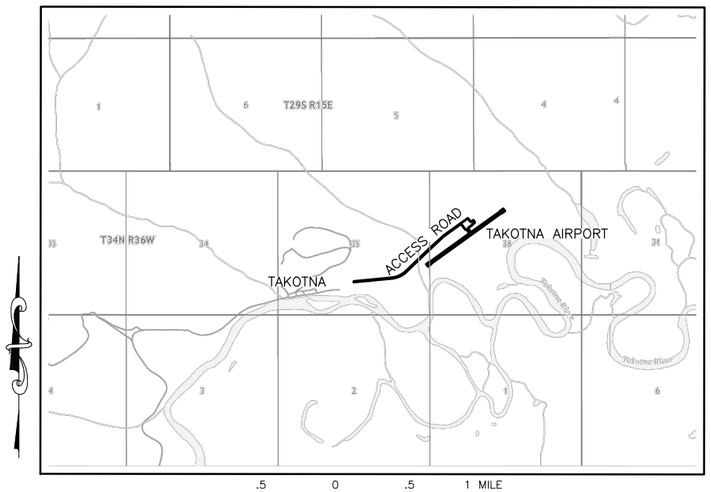


ALASKA CENTRAL REGION LOCATION MAP

NOT TO SCALE



VICINITY MAP

SCALE 1" = 1/2 MILE
T 34 N, R 36 W SEC. 35 & 36
SEWARD MERIDIAN
USGS IDITAROD
D-1 NE, AK 2019

CONSTRUCTION PLANS

TAKOTNA AIRPORT

TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIRPORT IMPROVEMENT PROGRAM
No. 3-02-0284-XXX-20XX
2025

PS&E
SEPTEMBER 2025

CONCUR	**DATE**
JOEL G. ST. AUBIN, P.E.	**REGIONAL CONSTRUCTION ENGINEER**
APPROVED	**DATE**
LUKE BOWLAND, P.E.	**REGIONAL PRECONSTRUCTION ENGINEER**
APPROVED	**DATE**
STEVEN RZEPKA, P.E.	**AVIATION DESIGN GROUP CHIEF**
APPROVED	**DATE**
AARON HUGHES, P.E.	**PROJECT MANAGER**

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB
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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
COVER

DATE: 9/24/2025

INDEX

SHEET TITLE	SHEET No.
CIVIL PLANS	
COVER	1
INDEX	2
LEGEND & ABBREVIATIONS	3
ESTIMATED QUANTITIES	4
PROJECT LAYOUT PLAN	5
DEMOLITION PLAN	6
CLEARING PLAN	7
TYPICAL SECTIONS (1 OF 3)	8
TYPICAL SECTIONS (2 OF 3)	9
TYPICAL SECTIONS (3 OF 3)	10
RUNWAY PLAN & PROFILE STA 96+00 TO STA 116+50	11
RUNWAY PLAN & PROFILE STA 116+50 TO STA 136+50	12
TAXIWAY PLAN & PROFILE	13
APRON LAYOUT PLAN	14
ACCESS ROAD PLAN & PROFILE STA 25+50 TO STA 36+50	15
ACCESS ROAD PLAN & PROFILE STA 36+50 TO STA 46+00	16
ACCESS ROAD PLAN & PROFILE STA 46+00 TO STA 57+50	17
ACCESS ROAD PLAN & PROFILE STA 57+50 TO STA 69+50	18
ACCESS ROAD PLAN & PROFILE STA 69+50 TO STA 79+12.54	19
HAUL ROAD PLAN & PROFILE STA 302+50 TO STA 307+00	20
CULVERT PLAN & PROFILE – P–8	21
CULVERT PLAN & PROFILE – P–17	22
CULVERT PLAN & PROFILE – P–18	23
CULVERT PLAN & PROFILE – P–22 & P–23	24
CIVIL DETAILS	25
SIGN SUMMARY	26
SIGN DETAILS	27
SEGMENTED CIRCLE DETAILS (1 OF 2)	28
SEGMENTED CIRCLE DETAILS (2 OF 2)	29
DEADMAN ANCHOR DETAIL	30
ELECTRICAL PLANS	
LEGEND, NOTES, AND ABBREVIATIONS	E01
DEMOLITION LIGHTING PLAN STA 97+00 TO STA 112+00	E02
DEMOLITION LIGHTING PLAN STA 112+00 TO STA 127+00	E03

INDEX

SHEET TITLE	SHEET No.
DEMOLITION LIGHTING PLAN STA 127+00 TO STA 142+00	E04
ENLARGED APRON DEMOLITION PLAN	E05
NEW LIGHTING PLAN STA 97+00 TO STA 112+00	E06
NEW LIGHTING PLAN STA 112+00 TO STA 127+00	E07
NEW LIGHTING PLAN STA 127+00 TO STA 142+00	E08
ENLARGED APRON NEW WORK PLAN	E09
LIGHT BASE AND HANDHOLE DETAILS	E10
TRENCH, COUNTERPOISE, AND CONDUIT DRAIN DETAILS	E11
LIGHTING AND CONNECTOR DETAILS	E12
WIND CONE DETAILS	E13
ROTATING BEACON DETAILS	E14
AIRFIELD LIGHTING AND WIRING SCHEMATIC	E15
EEB PLAN	E16
EEB DETAILS	E17
PANEL SCHEDULE, ONE–LINE, BEACON CONTROL DIAGRAM, AND LFMC DETAIL	E18
GROUNDING DETAILS	E19
CULVERT THAW WIRE DETAILS	E20
HANDHOLE AND EDGE LIGHT SCHEDULES	E21

APPENDIX DRAWINGS

SHEET TITLE	SHEET No.
APPENDIX A	
SURVEY CONTROL SHEET	AA1–AA2
APPENDIX C	
CONSTRUCTION SAFETY AND PHASING PLAN	AC1–AC16

STANDARD PLANS

SHEET TITLE	SHEET No.
CULVERT PIPE AND ARCH INSTALLATION DETAILS	D–01.02
PIPE AND ARCH TABLES	D–04.22
CULVERT BEVELS	D–07.00
HEADWALLS PRECAST TYPE II	D–31.01
POST MOUNTED SIGN OFFSET AND HEIGHT	S–05.02
LIGHT SIGN STRUCTURE POST EMBEDMENT	S–30.05
SIGN POST BASE & FOUNDATION	S–31.02

REFERENCE DRAWINGS

SHEET TITLE	SHEET No.
TAKOTNA AIRPORT RELOCATION (PROJECT NO. 56774) AS–BUILT	1–33

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
INDEX

DATE: 9/24/2025

LEGEND

DESCRIPTION	EXISTING	PROPOSED
AIRCRAFT TIE–DOWN		
AIRPORT PROPERTY BOUNDARY		
BOLLARD		
BUILDING		
CENTERLINE		
CULVERT		
CUT LIMIT		
DETAIL CALLOUT		DETAIL NUMBER / SHEET LOCATION (X / XX)
DITCH		
ELECTRIC HAND HOLE	H	
ELECTRIC JUNCTION BOX		
ELECTRIC METER		
ELECTRIC SWITCH	E	
FENCE		-- X ---- X ---- X ---
FILL LIMIT		
GPS CONTROL STATION	GPS	
GRADE BREAK		GB
GRAVEL EDGE		
GUY WIRE		
HAUL ROUTE (TWO–WAY)		
OVERHEAD ELECTRIC	OHE	OHE
ROTATING BEACON		
RUNWAY CENTERLINE MONUMENT		
RUNWAY EDGE LIGHT		
RUNWAY OBJECT FREE AREA		OFA
RUNWAY OBSTACLE FREE ZONE		OFZ
RUNWAY PROTECTION ZONE		RPZ
RUNWAY SAFETY AREA		RSA
RUNWAY THRESHOLD LIGHTS		
RUNWAY THRESHOLD MARKERS		
SEGMENTED CIRCLE WITH WIND CONE		
SIGN POST		
TAXIWAY EDGE LIGHTS		
TAXIWAY OBJECT FREE AREA		
TAXIWAY SAFETY AREA		TOFA TSA
TEMPORARY CONSTRUCTION EASEMENT		
UNDERGROUND ELECTRIC	UGE	UGE
UTILITY POLE		
WATER EDGE		
WIND CONE		

ABBREVIATIONS

AC	ADVISORY CIRCULAR/ACRE
AR	ACCESS ROAD
AIP	AIRPORT IMPROVEMENT PROGRAM
ASSY	ASSEMBLY
ASTM	AMERICAN SOCIETY FOR TESTING AND MATERIALS
BOP	BEGINNING OF PROJECT
BVCS	BEGIN VERTICAL CURVE STATION
BVCE	BEGIN VERTICAL CURVE ELEVATION
CABC	CRUSHED AGGREGATE BASE COURSE
CASC	CRUSHED AGGREGATE SURFACE COURSE
℄	CENTERLINE
CMP	CORRUGATED METAL PIPE
CS	CONTINGENT SUM/CORRUGATED STEEL
CSPP	CONSTRUCTION SAFETY AND PHASING PLAN
CY	CUBIC YARD
DEMO	DEMOLITION
DIA, ø	DIAMETER
DOT&PF	ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
E	EASTING
EA	EACH
EG	EXISTING GROUND
EEB	ELECTRICAL EQUIPMENT BUILDING
ELEV	ELEVATION
EOP	END OF PROJECT
ETR	EXISTING TO REMAIN
EVCS	END VERTICAL CURVE STATION
EVCE	END VERTICAL CURVE ELEVATION
FAA	FEDERAL AVIATION ADMINISTRATION
FG	FINISHED GRADE
FOD	FOREIGN OBJECT DEBRIS
FT	FEET
GB	GRADE BREAK
HAR	HAUL ROAD
HDPE	HIGH DENSITY POLYETHYLENE
HR	HOUR
L	LENGTH
LF	LINEAR FOOT
LS	LUMP SUM
LT	LEFT
MAINT	MAINTENANCE
MAX	MAXIMUM
MGAL	MILLION GALLONS
MIN	MINIMUM
MIRL	MEDIUM INTENSITY RUNWAY LIGHTING
MITL	MEDIUM INTENSITY TAXIWAY LIGHTING
M&O	MAINTENANCE AND OPERATIONS
MPH	MILES PER HOUR
N	NORTHING
NAVAID	NAVIGATIONAL AID
NOTAM	NOTICE TO AIRMEN
NTS	NOT TO SCALE
OHE	OVERHEAD ELECTRIC
OFZ	OBSTACLE FREE ZONE
OG	ORIGINAL GROUND
OHT	OVERHEAD TELEPHONE
PC	POINT OF CURVATURE
PI	POINT OF INTERSECTION
PVI	POINT OF VERTICAL INTERSECTION
PT	POINT OF TANGENCY
R	RADIUS
RD	ROAD
REIL	RUNWAY END IDENTIFIER LIGHTS
RPZ	RUNWAY PROTECTION ZONE
RSA	RUNWAY SAFETY AREA
ROFA	RUNWAY OBJECT FREE AREA
RP	RADIUS POINT
RT	RIGHT
RW	RUNWAY
SF	SQUARE FEET
SREB	SNOW REMOVAL EQUIPMENT BUILDING
SSP	STRUCTURAL STEEL PLATE
STA	STATION
SWPPP	STORM WATER POLLUTION PREVENTION PLAN
SY	SQUARE YARD
T	TON
TOFA	TAXIWAY OBJECT FREE AREA
TSA	TAXIWAY SAFETY AREA
TW	TAXIWAY
TYP	TYPICAL
UGE	UNDERGROUND ELECTRIC
UGT	UNDERGROUND TELEPHONE

ESTIMATING FACTORS

NO.	ITEM	FACTOR
P152.200.0000	BORROW	1.99 T/CY
P152.275.0000	POROUS BACKFILL	1.50 T/CY
P180.020.0000	RIPRAP, CLASS I	1.46 T/CY
P180.040.0000	RIPRAP, CLASS II	1.46 T/CY
P180.060.0000	RIPRAP, CLASS III	1.60 T/CY
P299.020.0000	CRUSHED AGGREGATE SURFACE COURSE	2.00 T/CY

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
LEGEND & ABBREVIATIONS

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Legend & Abbreviation

ESTIMATED QUANTITIES

NO.	ITEM	UNIT	QUANTITY
D–ITEMS			
D701.010.0000	CS PIPE, 36 INCH DIAMETER, 12 GAUGE	LF	495
D701.010.0000	CS PIPE, 48 INCH DIAMETER, 12 GAUGE	LF	174
D701.210.0000	SSP PIPE, 72 INCH DIAMETER, 12 GAUGE	LF	136
D704.010.0000	SLIPLINING 48–INCH PIPE	LF	497
D752.060.3020	CONCRETE HEADWALL, TYPE II	EA	3
D760.040.0000	THAW WIRE INSTALLATION	EA	1
F–ITEMS			
F170.010.0000	STEEL BOLLARD	EA	8
G–ITEMS			
G100.010.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
G105.010.0000*	POST AWARD CONFERENCE	LS	ALL REQ'D
G115.010.0000	WORKERS MEALS AND LODGING, OR PER DIEM	LS	ALL REQ'D
G130.010.0000	FIELD OFFICE	LS	ALL REQ'D
G130.020.0000	FIELD LABORATORY	LS	ALL REQ'D
G130.040.0000	MEAL	EA	3,600
G130.050.0000	LODGING	EA	1,200
G130.060.0000	NUCLEAR TESTING EQUIPMENT STORAGE SHED	EA	1
G130.070.0000	STORAGE CONTAINER	EA	1
G130.110.0000	FIELD COMMUNICATIONS	CS	ALL REQ'D
G131.010.0000	ENGINEERING TRANSPORTATION (TRUCK)	EA	3
G131.025.0000	ENGINEERING TRANSPORTATION (UTV)	EA	1
G135.010.0000	CONSTRUCTION SURVEYING BY THE CONTRACTOR	LS	ALL REQ'D
G135.020.0000	EXTRA THREE PERSON SURVEY PARTY	HR	60
G135.050.0000	CONTRACTOR FURNISHED ENGINEERING TOOLS	CS	ALL REQ'D
G150.010.0070	EQUIPMENT RENTAL, DOZER 70–HP MINIMUM	HR	50
G300.010.0000	CPM SCHEDULING	LS	ALL REQ'D
G700.010.0000	AIRPORT FLAGGER	CS	ALL REQ'D
G710.010.0000	HIGHWAY TRAFFIC MAINTENANCE	LS	ALL REQ'D
G710.020.0000	HIGHWAY FLAGGER	CS	ALL REQ'D
G710.030.0000	HIGHWAY TRAFFIC PRICE ADJUSTMENT	CS	ALL REQ'D
G710.040.0000	HIGHWAY TRAFFIC CONTROL	CS	ALL REQ'D
L–ITEMS			
L101.020.0000	ROTATING BEACON, MEDIUM INTENSITY, L–801A	EA	1
L103.010.0030	30–FEET HINGED POLE BEACON TOWER	EA	1
L107.010.0008	8–FEET LIGHTED WIND CONE, IN PLACE	EA	1
L108.010.2008	UNDERGROUND CABLE #8 AWG, COPPER, 5KV FAA TYPE C, L–824	LF	8,897
L108.030.0006	#6 BARE COPPER GROUND CONDUCTOR	LF	16,258
L108.050.1010	UNDERGROUND CABLE #10 AWG, COPPER, 600V, TYPE C, L–824	LF	2,739
L108.070.0000	GROUND ROD	EA	21
L109.040.0000	INSTALLATION OF ELECTRICAL EQUIPMENT IN NEW OR EXISTING STRUCTURE	EA	1
L109.060.0000	RELOCATION OF ELECTRICAL EQUIPMENT STRUCTURE	EA	1
L110.050.1004	RIGID STEEL CONDUIT, 4–INCH	LF	429
L110.080.1002	HDPE CONDUIT, 2–INCH	LF	10,312
L125.020.0010	REGULATOR, L–829	EA	1
L125.030.0000	MEDIUM INTENSITY RUNWAY EDGE AND THRESHOLD LIGHT, L–861 AND L–861E	EA	43
L125.040.0000	TAXIWAY EDGE LIGHT, L–861T	EA	16
L125.070.0000	REMOVE RUNWAY AND TAXIWAY LIGHT	EA	102
L125.150.0000	HANDHOLE, L–867, SIZE B	EA	12
L125.170.0000	SPARE PARTS	CS	ALL REQ'D
L125.180.0000	TEMPORARY RUNWAY LIGHTING SYSTEM	LS	ALL REQ'D
P–ITEMS			
P151.010.0000	CLEARING	AC	10.4
P151.040.0000	CLEARING AND GRUBBING	LS	ALL REQ'D
P151.075.0000	OBSTRUCTION CLEARING REMOVAL	CS	ALL REQ'D
P152.010.0000	UNCLASSIFIED EXCAVATION	CY	168,300
P152.200.0000	BORROW	TON	59,900
P152.275.0000	POROUS BACKFILL	TON	7,200
P154.020.0000	SUBBASE COURSE	TON	700
P165.010.0000	REMOVAL OF STRUCTURES	LS	ALL REQ'D
P167.010.0000	DUST PALLIATIVE	SY	99,500
P180.020.0000	RIPRAP, CLASS I	TON	6,320
P180.040.0000	RIPRAP, CLASS II	TON	1,070
P180.060.0000	RIPRAP, CLASS III	TON	410
P299.020.0000	CRUSHED AGGREGATE SURFACE COURSE	TON	57,800
P299.070.0000*	CRUSHED AGGREGATE SURFACE COURSE STOCKPILE	TON	200
P620.070.0000	TEMPORARY RUNWAY & TAXIWAY PAINTING	LS	ALL REQ'D
P640.020.0000	SEGMENTED CIRCLE (PANEL–TYPE)	LS	ALL REQ'D
P641.010.0000	EROSION, SEDIMENT, AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQ'D
P641.050.0000	TEMPORARY EROSION, SEDIMENT, AND POLLUTION CONTROL BY DIRECTIVE	CS	ALL REQ'D
P641.060.0000	WITHHOLDING	CS	ALL REQ'D
P641.070.0000	SWPPP MANAGER	LS	ALL REQ'D
P641.110.0000	SWPPPTRACK	CS	ALL REQ'D
P650.010.0000	AIRCRAFT TIE–DOWN	EA	24
P660.030.0000	REFLECTIVE MARKER, TYPE II	EA	71
P661.010.0000	STANDARD SIGN	SF	46
P670.010.0000	HAZARD MARKER BARRIER, PLASTIC	EA	56
P671.010.0000	RUNWAY CLOSURE MARKER, VINYL MESH	EA	7
P671.020.0000	RUNWAY CLOSURE MARKER, ILLUMINATED	EA	2
P681.010.0020	GEOTEXTILE, SEPARATION	SY	14,400
P687.010.0020	GEOGRID, STABILIZATION, CLASS 2	SY	309,000

* NON–PARTICIPATING ITEM

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ESTIMATED QUANTITIES

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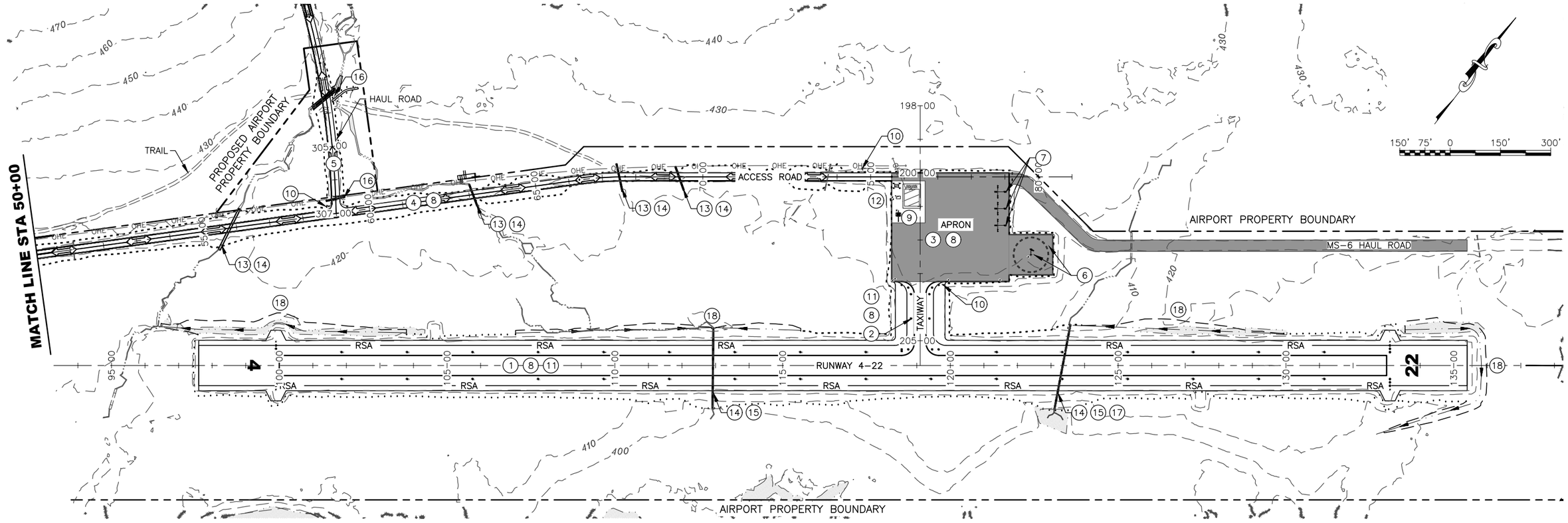
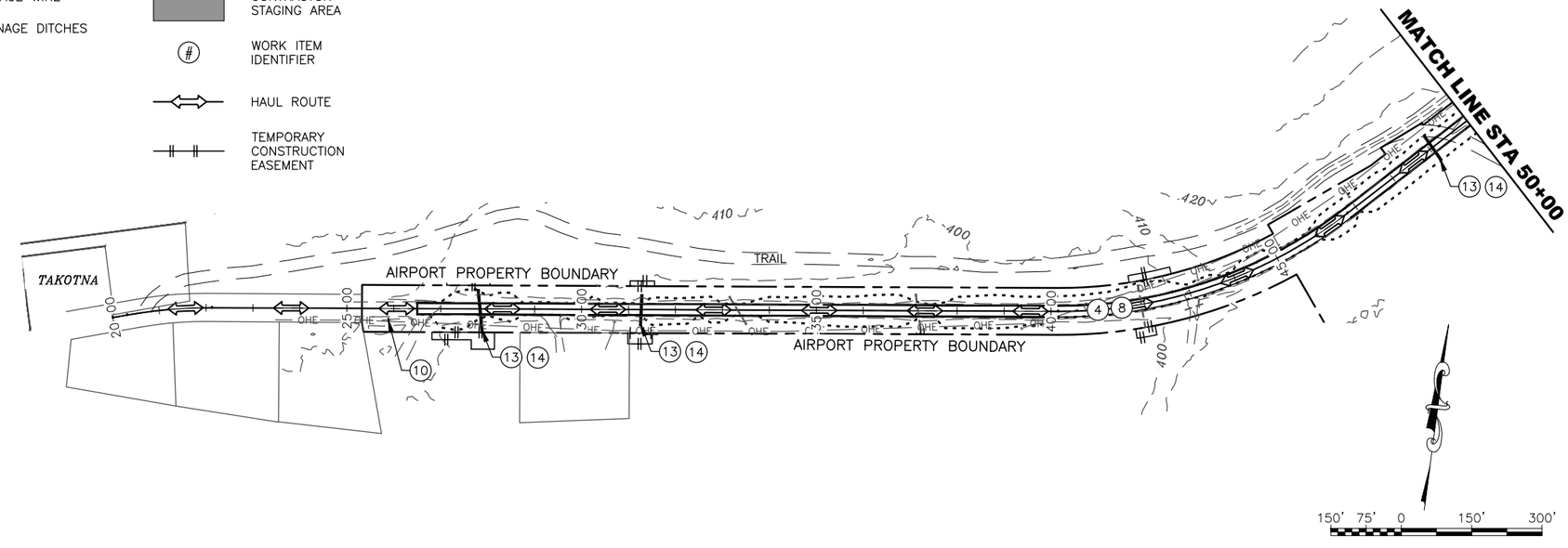


PROJECT WORK ITEMS:

1. REHABILITATE RUNWAY AND RUNWAY SAFETY AREA
2. REHABILITATE TAXIWAY AND TAXIWAY SAFETY AREA
3. REHABILITATE APRON
4. REHABILITATE AIRPORT ACCESS ROAD
5. REHABILITATE HAUL ROAD
6. REPLACE SEGMENTED CIRCLE AND WIND CONE
7. REPLACE AIRCRAFT TIE–DOWNS
8. APPLY DUST PALLIATIVE TO RUNWAY, TAXIWAY, APRON, AND AIRPORT ACCESS ROAD
9. RELOCATE BEACON TO TIP–DOWN TOWER
10. REMOVE AND INSTALL SIGNAGE
11. REMOVE AND REPLACE RUNWAY AND TAXIWAY LIGHTING
12. RELOCATE EEB
13. REMOVE AND REPLACE CULVERTS
14. IMPROVE CULVERT INLETS AND OUTLETS
15. SLIP LINE CULVERTS
16. INSTALL HAUL ROAD CULVERTS & CONSTRUCT DRAINAGE DAM
17. INSTALL CULVERT HEAT TRACE WIRE
18. CONSTRUCT RUNWAY DRAINAGE DITCHES

LEGEND:

- CONTRACTOR STAGING AREA
- (#) WORK ITEM IDENTIFIER
- HAUL ROUTE
- TEMPORARY CONSTRUCTION EASEMENT



NOTES:

1. SEE THE SURVEY CONTROL SHEET FOR PROJECT AND ALIGNMENT CONTROL.
2. OVERHEAD ELECTRIC FOLLOWS ACCESS ROAD AND CROSSES ONTO APRON.
3. ADDITIONAL CONTRACTOR OBTAINED STAGING AREA MAY BE NEEDED OFF AIRPORT PROPERTY.

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Checked By: CJB

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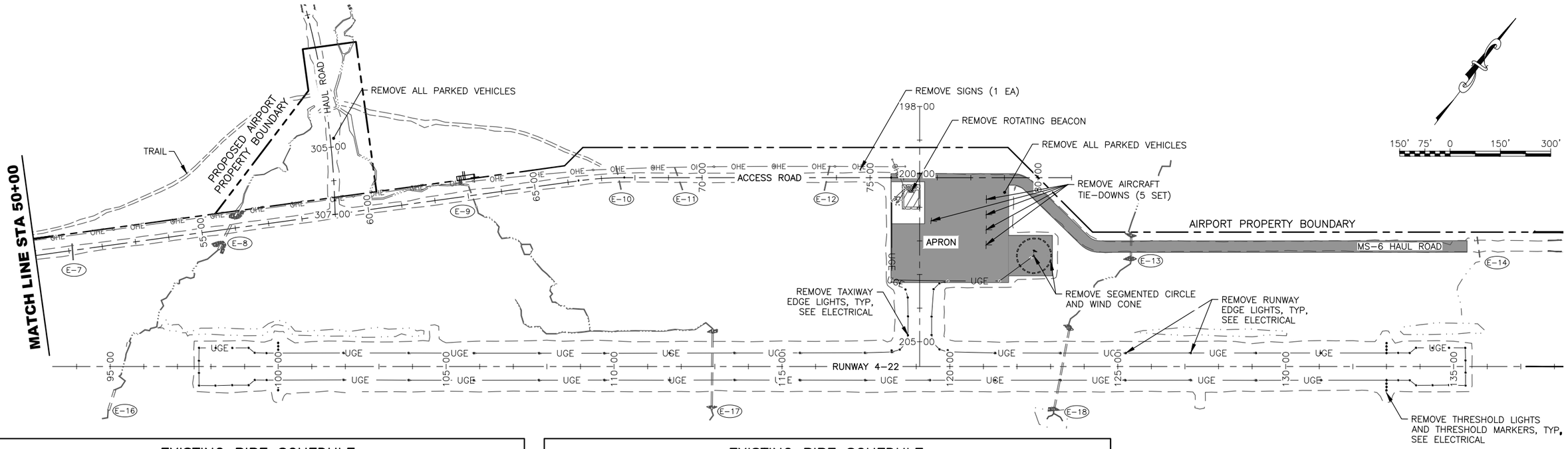
PROJECT LAYOUT PLAN

DATE: 9/24/2025
SHEET: 5 OF 30



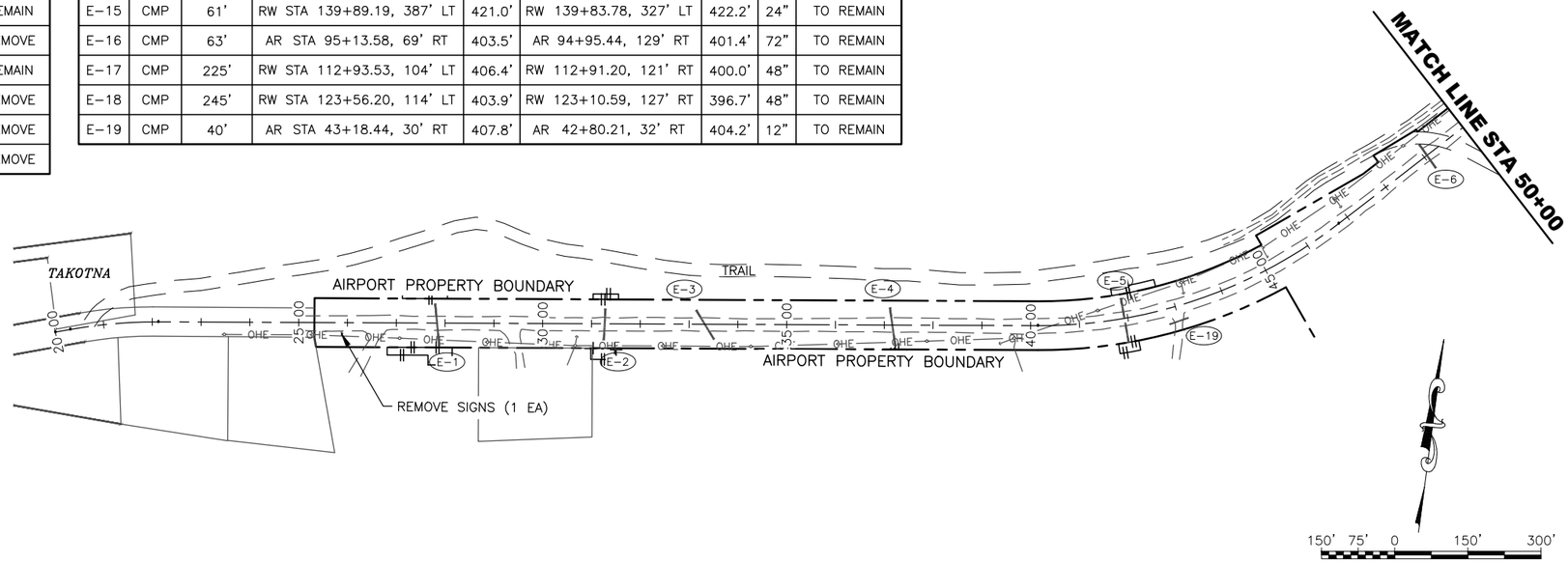
EXISTING PIPE SCHEDULE

ID	TYPE	LENGTH	INLET	ELEV	OUTLET	ELEV	DIA	DISPOSITION
E-1	CMP	81'	AR STA 27+79.86, 37' LT	396.4'	AR 27+87.87, 43' RT	396.3'	24"	TO REMOVE
E-2	CMP	58'	AR STA 31+28.21, 27' LT	397.6'	AR 31+25.70, 30' RT	396.3'	24"	TO REMOVE
E-3	CMP	64'	AR STA 33+16.27, 26' LT	397.5'	AR 33+49.38, 28' RT	396.9'	24"	TO REMAIN
E-4	CMP	68'	AR STA 37+11.94, 32' LT	395.1'	AR 37+21.66, 35' RT	394.5'	24"	TO REMAIN
E-5	CMP	86'	AR STA 41+92.94, 38' LT	394.7'	AR 41+93.21, 48' RT	394.1'	24"	TO REMAIN
E-6	CMP	53'	AR STA 49+07.63, 23' LT	414.5'	AR 49+05.24, 29' RT	411.9'	24"	TO REMOVE
E-7	CMP	49'	AR STA 51+11.94, 20' LT	417.8'	AR 51+08.85, 28' RT	415.2'	24"	TO REMAIN
E-8	SPP	127'	AR STA 56+13.22, 48' LT	415.2'	AR 55+41.94, 57' RT	410.5'	72"	TO REMOVE
E-9	CMP	61'	AR STA 63+05.25, 28' LT	424.3'	AR 63+18.47, 31' RT	423.4'	24"	TO REMOVE
E-10	CMP	72'	AR STA 67+44.12, 35' LT	422.0'	AR 67+57.98, 34' RT	421.1'	24"	TO REMOVE

EXISTING PIPE SCHEDULE

ID	TYPE	LENGTH	INLET	ELEV	OUTLET	ELEV	DIA	DISPOSITION
E-11	CMP	70'	AR STA 69+18.50, 29' LT	420.2'	AR 69+41.44, 36' RT	420.5'	24"	TO REMOVE
E-12	CMP	74'	AR STA 73+79.84, 35' LT	423.2'	AR 73+63.92, 37' RT	421.5'	24"	TO REMAIN
E-13	CMP	70'	RW STA 125+39.82, 385' LT	409.9'	RW 125+38.65, 315' LT	408.6'	48"	TO REMAIN
E-14	CMP	61'	RW STA 135+69.87, 385' LT	421.7'	RW 135+77.82, 326' LT	420.4'	24"	TO REMAIN
E-15	CMP	61'	RW STA 139+89.19, 387' LT	421.0'	RW 139+83.78, 327' LT	422.2'	24"	TO REMAIN
E-16	CMP	63'	AR STA 95+13.58, 69' RT	403.5'	AR 94+95.44, 129' RT	401.4'	72"	TO REMAIN
E-17	CMP	225'	RW STA 112+93.53, 104' LT	406.4'	RW 112+91.20, 121' RT	400.0'	48"	TO REMAIN
E-18	CMP	245'	RW STA 123+56.20, 114' LT	403.9'	RW 123+10.59, 127' RT	396.7'	48"	TO REMAIN
E-19	CMP	40'	AR STA 43+18.44, 30' RT	407.8'	AR 42+80.21, 32' RT	404.2'	12"	TO REMAIN

AIRPORT PROPERTY BOUNDARY



LEGEND:

CONTRACTOR STAGING AREA

E-# EXISTING CULVERT IDENTIFIER

TEMPORARY CONSTRUCTION EASEMENT

NOTES:

1. THE LOCATIONS OF EXISTING UTILITIES SHOWN ARE BASED OFF FIELD SURVEY AND AS-BUILT RECORDS. THEY ARE APPROXIMATE LOCATIONS ONLY AND NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR TO FIELD LOCATE ALL UTILITIES PRIOR TO EXCAVATION. SEE PROJECT SPECIFICATIONS, GCP SUBSECTION 50-60.
2. REMOVE SIGNS, SIGN POSTS, AND SIGN POST FOUNDATIONS FOR ALL SIGNS SCHEDULED FOR REPLACEMENT.
3. GRUBBING OF SHRUBS AND LOW VEGETATION SHALL BE PERFORMED ALONG THE RUNWAY, TAXIWAY, AND APRON AREAS, INCLUDING THE ASSOCIATED SAFETY AREAS EXTENDING TO THE TOES OF SLOPE.
4. CLEARING AND GRUBBING SHALL BE CONDUCTED ALONG THE ACCESS ROAD, INCLUDING THE SIDE SLOPES, TO REMOVE EXISTING ALDERS AND LOW VEGETATION.
5. REFER TO THE ELECTRICAL PLANS FOR ELECTRICAL DEMOLITION INFORMATION.
6. REMOVE END SECTIONS FROM ALL CULVERTS SCHEDULED FOR REPLACEMENT.
7. PROPOSED CULVERTS RETAIN EXISTING CULVERT NUMBERING.
8. PROTECT ALL EXISTING CULVERTS FROM DAMAGE DURING CONSTRUCTION.

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(907) 522-1707
CERT. OF AUTH. NO. AECC111

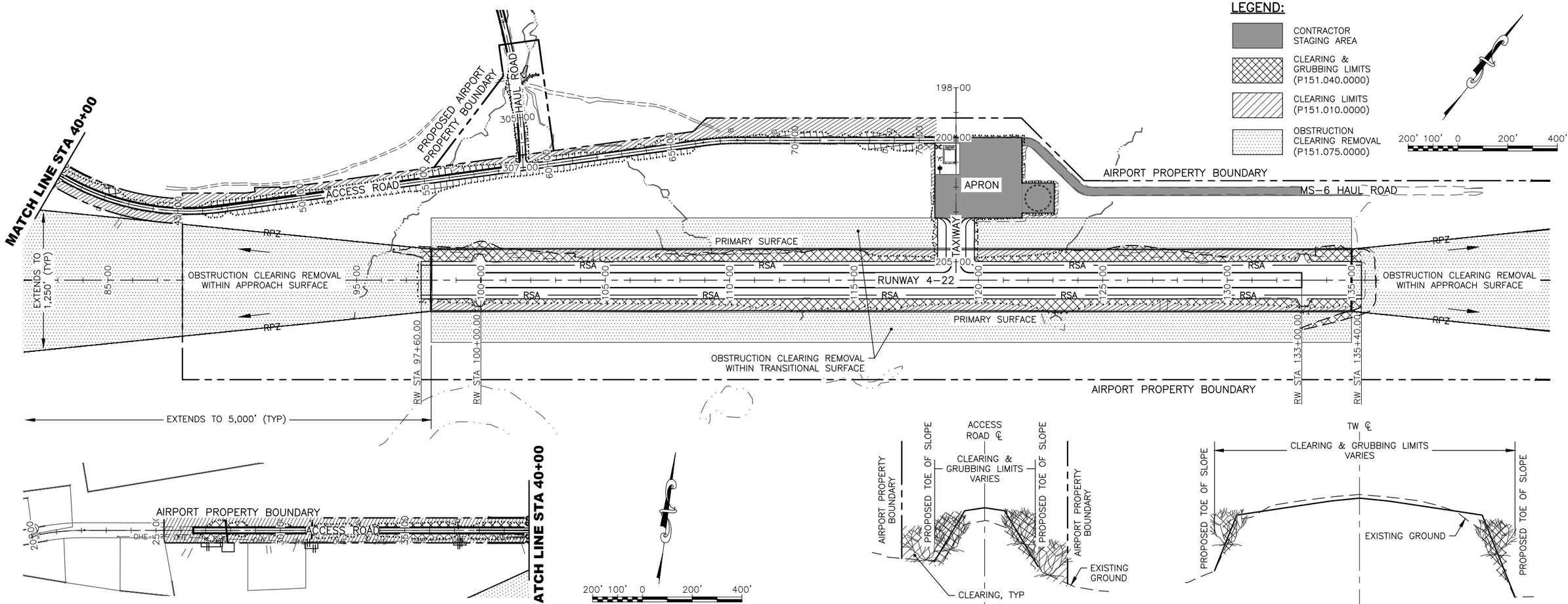
BY	DATE	REVISION

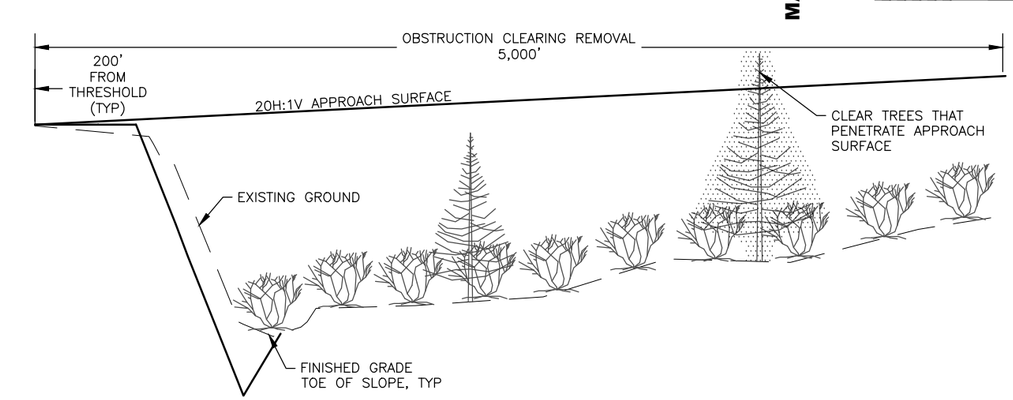
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
DEMOLITION PLAN

DATE: 9/24/2025
SHEET: 6 OF 30

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised:
Layout Name: DEMO PLAN
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-Demolition Plan.dwg
9/24/2025, 12:41 PM

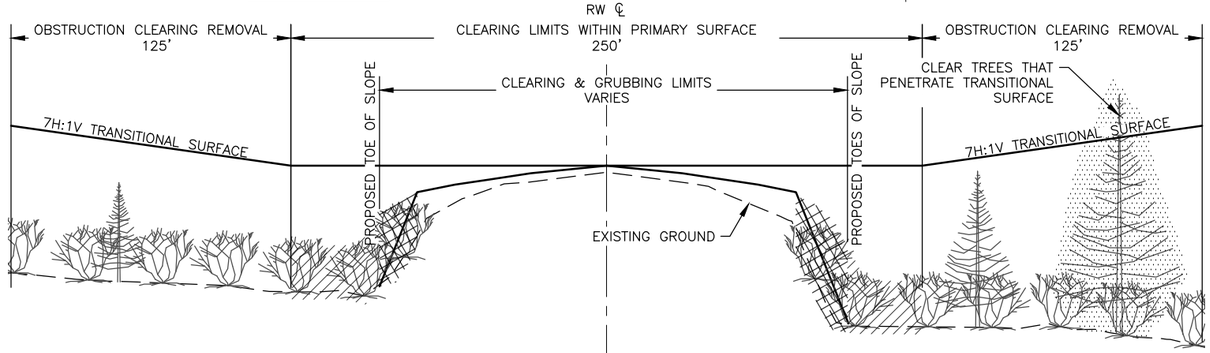




RUNWAY OBSTRUCTION CLEARING REMOVAL WITHIN APPROACH SURFACE

CLEARING AND CLEARING & GRUBBING ACCESS ROAD

CLEARING & GRUBBING TAXIWAY



RUNWAY CLEARING, CLEARING & GRUBBING, AND OBSTRUCTION CLEARING REMOVAL WITHIN PRIMARY AND TRANSITIONAL SURAFCE

NOTES:

1. THE LOCATION OF EXISTING UTILITIES SHOWN ARE BASED OFF FIELD SURVEY AND AS-BUILT RECORDS. THEY ARE APPROXIMATE LOCATIONS ONLY AND NOT ALL UTILITIES MAY BE SHOWN. CONTRACTOR TO FIELD LOCATE UTILITIES PRIOR TO EXCAVATION. SEE PROJECT SPECIFICATIONS, GCP SUBSECTION 50-06.
2. CLEAR AND GRUB VEGETATION AROUND RUNWAY, TAXIWAY, APRON, AIRPORT ACCESS ROAD, AND HAUL ROAD AS SHOWN ON THIS PLAN AND PER THE ENGINEER'S DIRECTION. GRUBBING SHALL NOT EXTEND PAST THE FINISHED GRADE TOE OF SLOPE.
3. OBSTRUCTION CLEARING REMOVAL OUTSIDE OF CLEARING AND CLEARING & GRUBBING LIMITS PAID UNDER P151.075.0000.

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised: 9/24/2025, 12:42 PM
Layout Name: CLEAR
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-Clearing Plan.dwg

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BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
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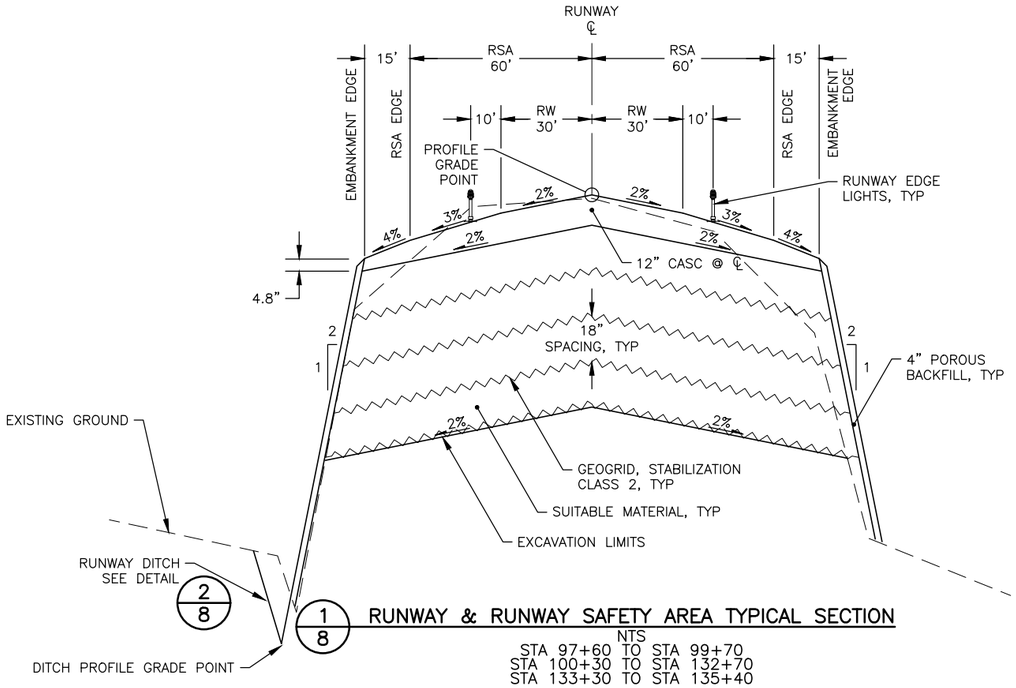
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CLEARING PLAN

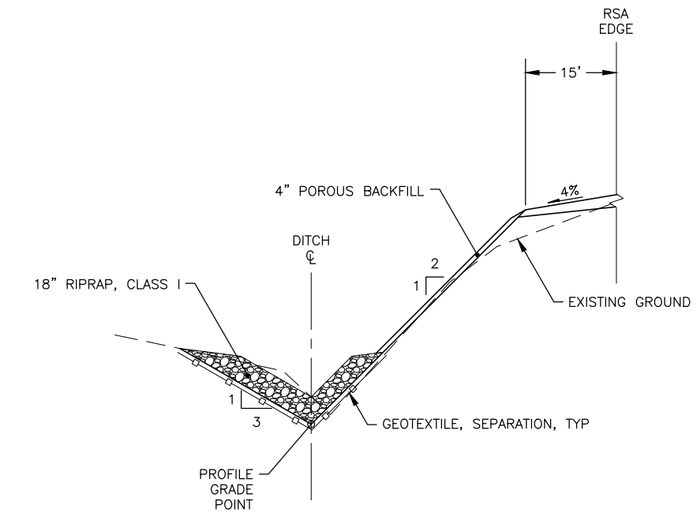
DATE: 9/24/2025



1/8 RUNWAY & RUNWAY SAFETY AREA TYPICAL SECTION

NTS

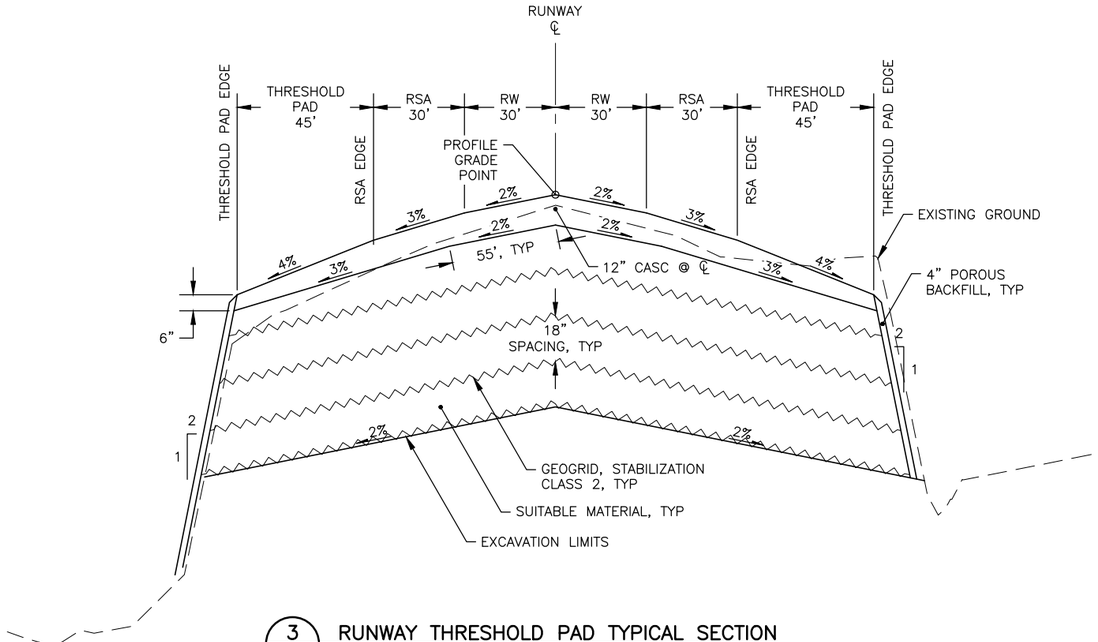
STA 97+60 TO STA 99+70
STA 100+30 TO STA 132+70
STA 133+30 TO STA 135+40



2/8 RUNWAY DITCH TYPICAL SECTION

NTS

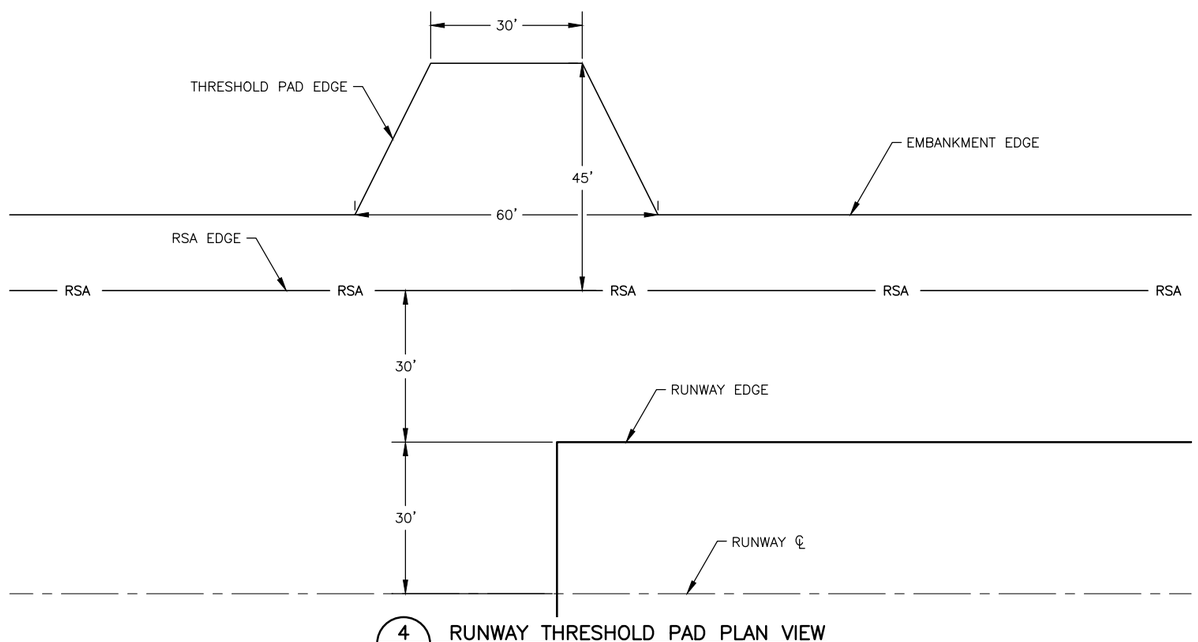
* DITCH DEPTH AND WIDTH VARIES
SEE SHEET 11 AND 12 FOR DITCH SCHEDULE



3/8 RUNWAY THRESHOLD PAD TYPICAL SECTION

NTS

STA 99+70 TO STA 100+30
STA 132+70 TO STA 133+30



4/8 RUNWAY THRESHOLD PAD PLAN VIEW

NTS

STA 99+70 TO STA 100+30
STA 132+70 TO STA 133+30

NOTES:

1. SEE ELECTRICAL PLANS FOR RUNWAY LIGHT PLACEMENT.
2. APPLY DUST PALLIATIVE TO ALL AREAS RECEIVING NEW CASC.
3. APPLY 4" POROUS BACKFILL TO ALL DISTURBED SLOPES.

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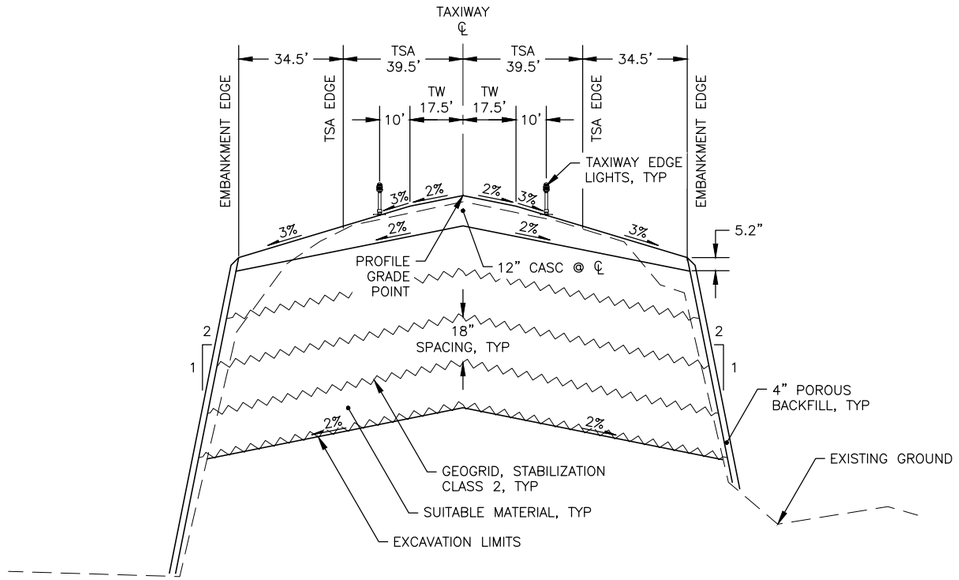
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TYPICAL SECTIONS (1 OF 3)

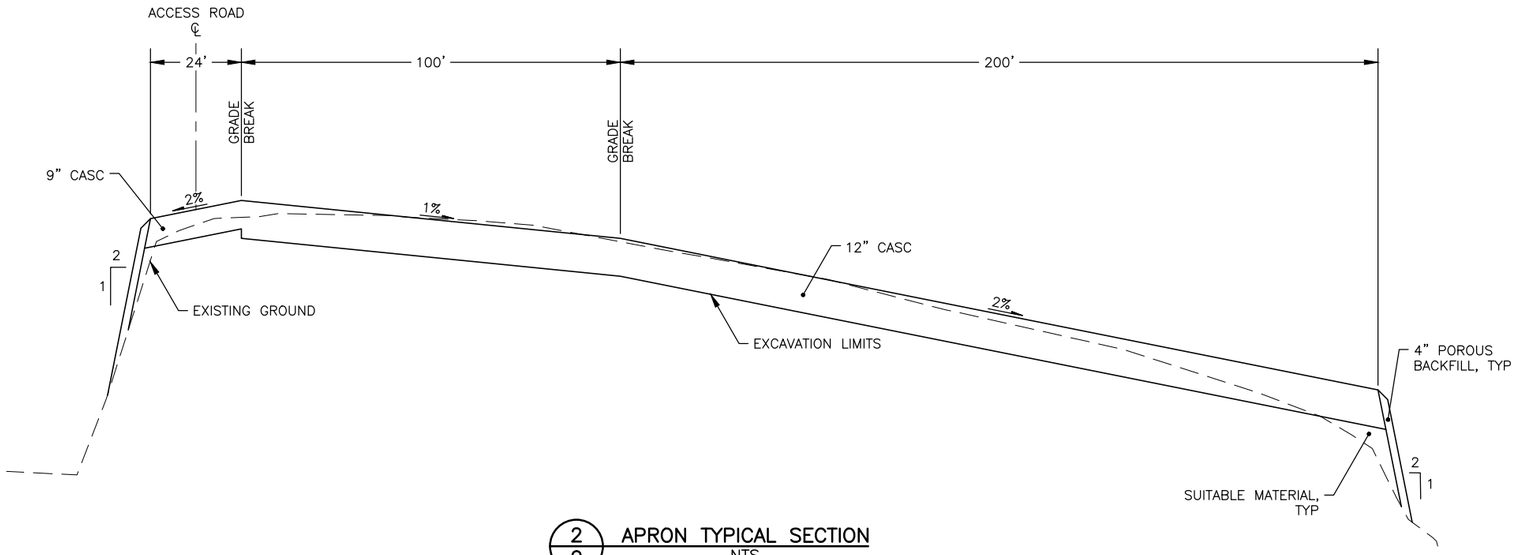
DATE: 9/24/2025

SHEET: 8 OF 30

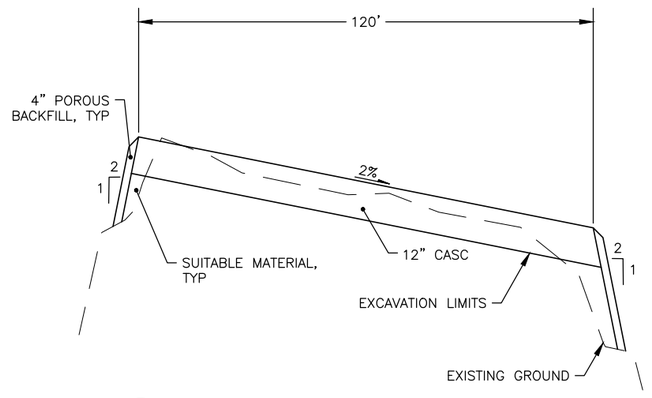
Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB
Date Revised:	9/24/2025, 12:42 PM
Layout Name:	TYP1
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-Typical Sections.dwg



1/9 TAXIWAY TYPICAL SECTION
NTS
STA 203+24 TO STA 205+44



2/9 APRON TYPICAL SECTION
NTS



3/9 SEGMENTED CIRCLE PAD TYPICAL SECTION
NTS

NOTES:

1. SEE ELECTRICAL PLANS FOR TAXIWAY LIGHT PLACEMENT.
2. SEE APRON GRADING PLAN FOR NON-TYPICAL GRADING.
3. APPLY DUST PALLIATIVE TO ALL AREAS RECEIVING NEW CASC.
4. APPLY 4" POROUS BACKFILL TO ALL DISTURBED SLOPES.
5. ACCESS ROAD TRANSITIONS FROM CROWNED SLOPE TO OUT-SLOPE STARTING AT STA 75+00.

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BY	DATE	REVISION

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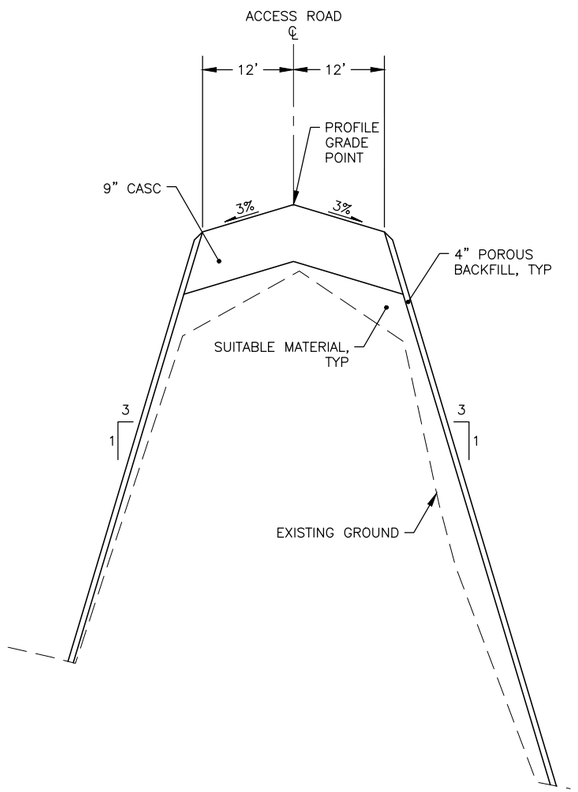
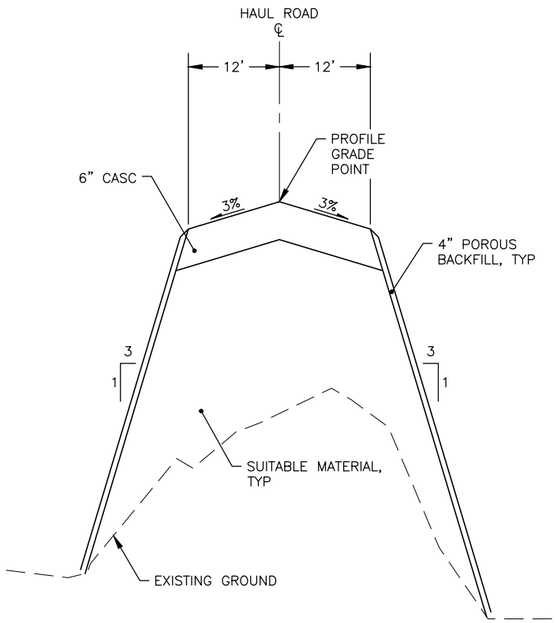
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TYPICAL SECTIONS (2 OF 3)

DATE: 9/24/2025
SHEET: 9 OF 30

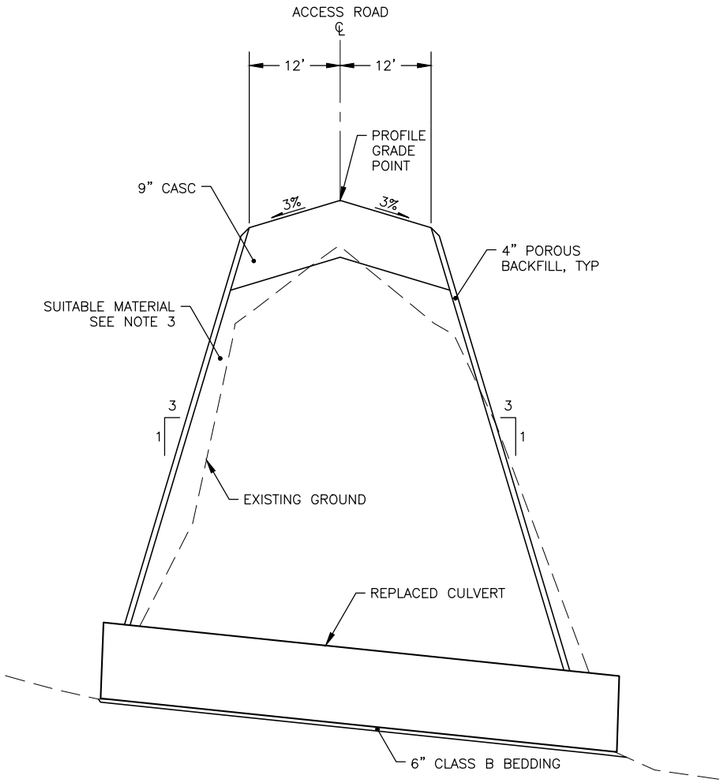
Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised:
Layout Name: TYP 2
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-Typical Sections.dwg
9/24/2025, 12:42 PM



1/10 ACCESS ROAD TYPICAL SECTION
NTS
STA 26+50 TO STA 75+62.54
SEE NOTE 4



2/10 HAUL ROAD TYPICAL SECTION
NTS
STA 302+50 TO STA 306+88



3/10 CULVERT REPLACEMENT TYPICAL SECTION
NTS

NOTES:

1. APPLY DUST PALLIATIVE TO ALL AREAS RECEIVING NEW CASC.
2. APPLY 4" POROUS BACKFILL TO ALL DISTURBED SLOPES.
3. SUITABLE MATERIAL FOR CULVERTS REPLACEMENT BACKFILL WILL NOT BE PAID FOR DIRECTLY BUT WILL BE SUBSIDIARY TO PIPE ITEMS.
4. ACCESS ROAD TRANSITIONS FROM 3% CROWNED SLOPE TO 2% OUT-SLOPE STARTING AT STA 75+00.

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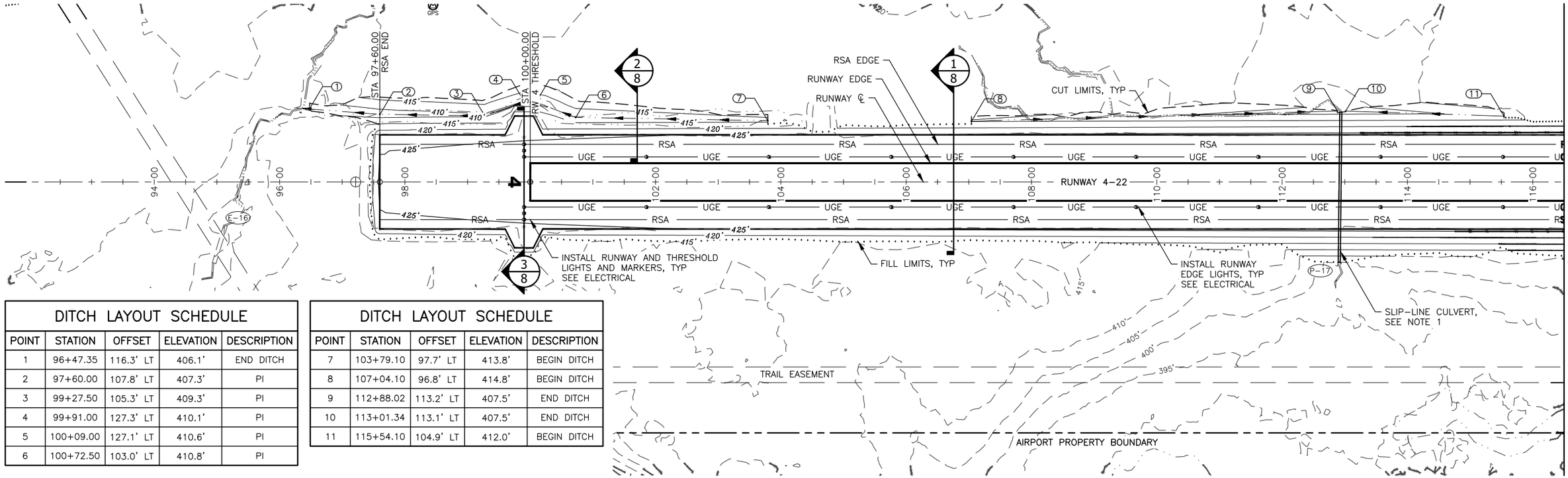
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TYPICAL SECTIONS (3 OF 3)

DATE: 9/24/2025
SHEET: 10 OF 30

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised: 9/24/2025, 12:42 PM
Layout Name: TYP3
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-Typical Sections.dwg

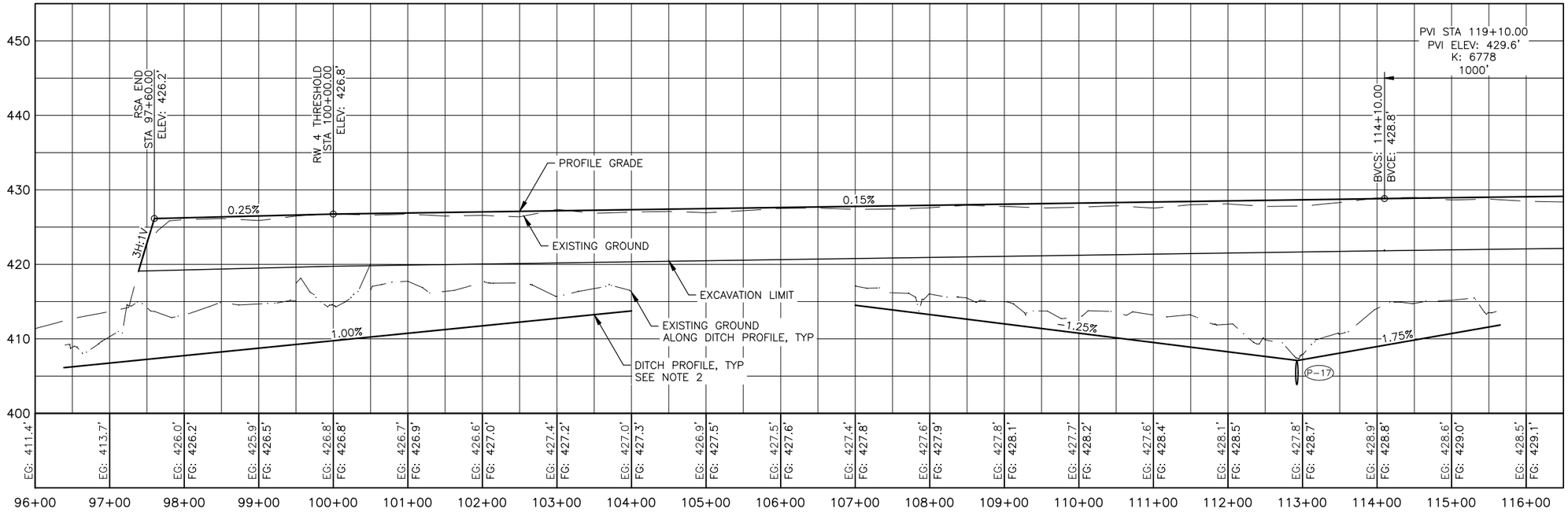


MATCH LINE STA 116+50

DITCH LAYOUT SCHEDULE				
POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
1	96+47.35	116.3' LT	406.1'	END DITCH
2	97+60.00	107.8' LT	407.3'	PI
3	99+27.50	105.3' LT	409.3'	PI
4	99+91.00	127.3' LT	410.1'	PI
5	100+09.00	127.1' LT	410.6'	PI
6	100+72.50	103.0' LT	410.8'	PI

DITCH LAYOUT SCHEDULE				
POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
7	103+79.10	97.7' LT	413.8'	BEGIN DITCH
8	107+04.10	96.8' LT	414.8'	BEGIN DITCH
9	112+88.02	113.2' LT	407.5'	END DITCH
10	113+01.34	113.1' LT	407.5'	END DITCH
11	115+54.10	104.9' LT	412.0'	BEGIN DITCH

80' 40' 0 80' 160'
HORIZONTAL TO VERTICAL RATIO 1H:10V



NOTES:

1. SEE CULVERT PLAN & PROFILE SHEET 22 FOR P–17 CULVERT.
2. DITCH PROFILE IS SHOWN ALONG THE RUNWAY CENTERLINE. REFER TO THE DITCH LAYOUT SCHEDULE FOR STATION AND OFFSET DETAILS.

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised: 9/24/2025, 12:42 PM
Layout Name: RW 4
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-P&P-Runway.dwg

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BY	DATE	REVISION

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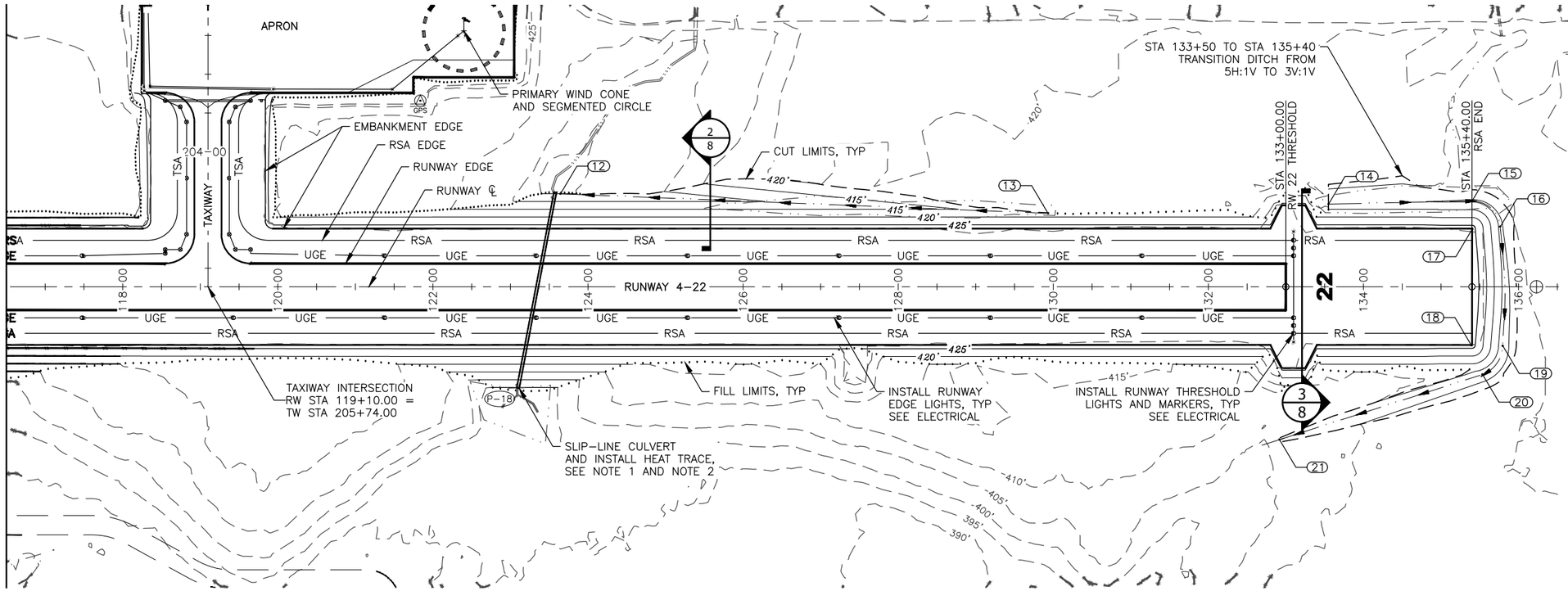
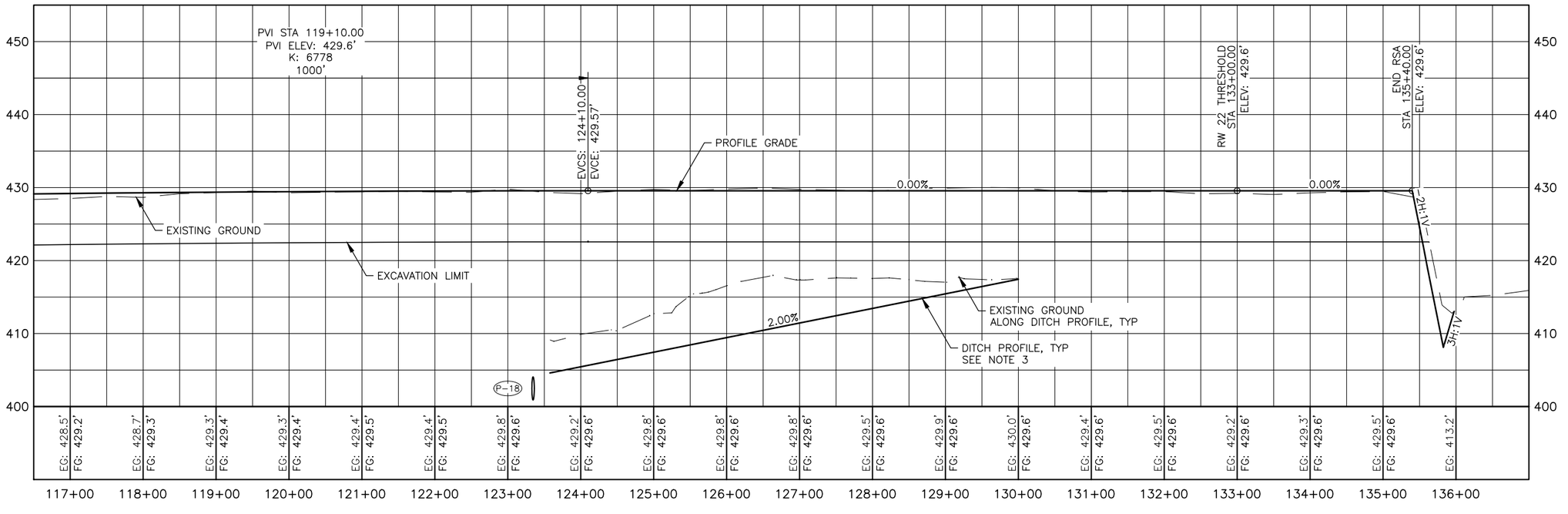
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
RUNWAY PLAN & PROFILE
STA 96+00 TO STA 116+50

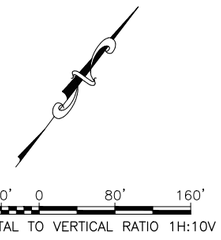
DATE: 9/24/2025
SHEET: 11 OF 30

MATCH LINE STA 116+50



DITCH LAYOUT SCHEDULE				
POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
12	123+64.53	119.9' LT	405.0'	END DITCH
13	129+93.49	94.7' LT	417.6'	BEGIN DITCH
14	133+55.00	106.6' LT	411.7'	BEGIN DITCH
15	135+40.00	110.5' LT	409.4'	PI
16	135+76.47	77.6' LT	408.9'	PI
17	135+40.57	74.5' LT	426.9'	PI
18	135+39.35	75.5' RT	426.9'	RP, R=36'
19	135+79.62	76.2' RT	407.4'	RP, R=40'
20	135+53.56	113.1' RT	406.9'	PI
21	132+91.69	197.1' RT	405.0'	END DITCH





NOTES:

1. INSTALL HEAT TRACE FOR CULVERT P–18. THE HEAT TRACE WILL BE POWERED BY A HAND–HELD GENERATOR UNIT, SEE ELECTRICAL.
2. SEE CULVERT PLAN & PROFILE SHEET 23 FOR P–18 CULVERT.
3. DITCH PROFILE IS SHOWN ALONG THE RUNWAY CENTERLINE. REFER TO THE DITCH LAYOUT SCHEDULE FOR STATION AND OFFSET DETAILS.

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BY	DATE	REVISION

STATE OF ALASKA
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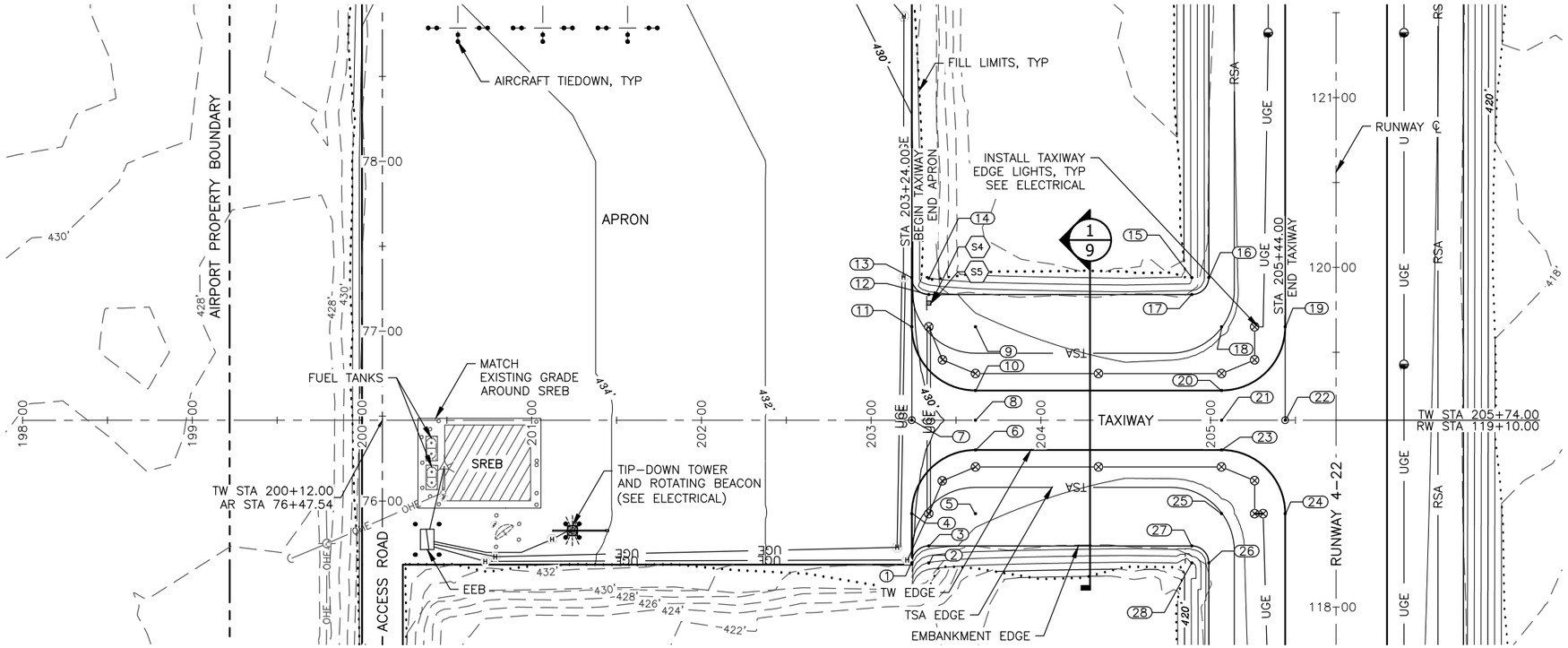
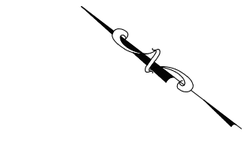
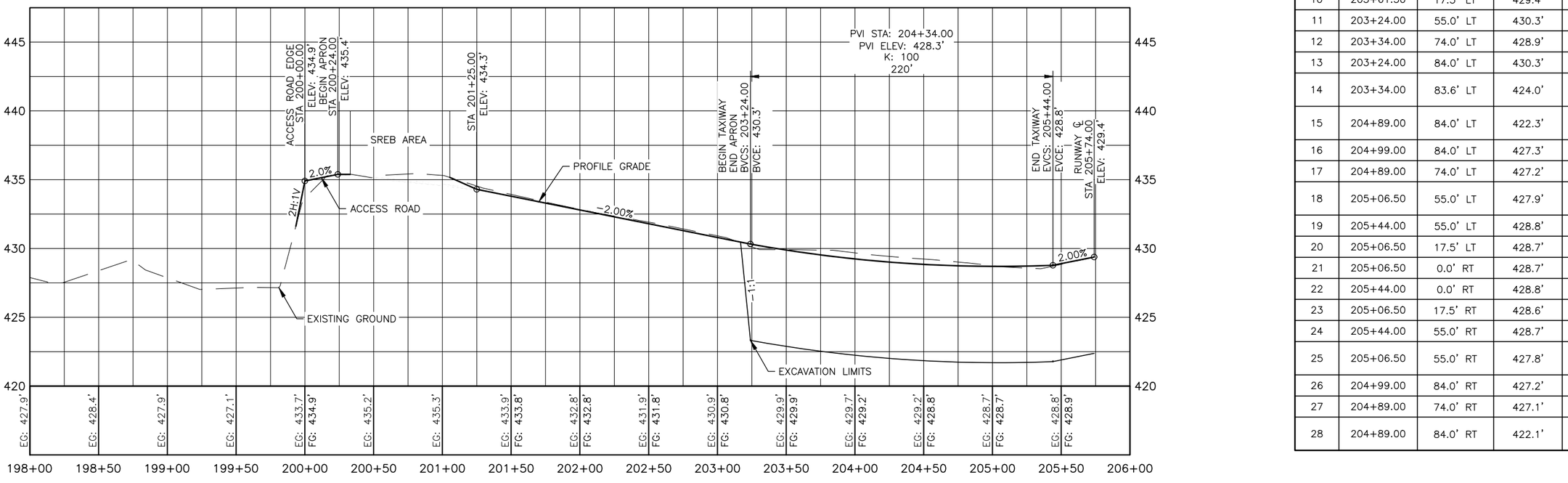
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3–02–0284–XXX–20XX
RUNWAY PLAN & PROFILE
STA 116+50 TO STA 136+50

DATE: 9/24/2025
SHEET: 12 OF 30

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised:
Layout Name: 9/24/2025, 12:42 PM
File Path and Name: RW 22
Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-P&P-Runway.dwg







TAXIWAY LAYOUT SCHEDULE

POINT	TW STATION	TW OFFSET	ELEVATION	DESCRIPTION
1	203+24.00	84.0' RT	430.3'	PC
2	203+34.00	84.0' RT	423.9'	EMBANKMENT EDGE RP, R=10'
3	203+34.00	74.0' RT	428.9'	PT
4	203+24.00	55.0' RT	430.3'	PC
5	203+61.50	55.0' RT	428.2'	TW EDGE RP, R=37.5'
6	203+61.50	17.5' RT	429.4'	PT
7	203+24.00	0.0'	430.3'	PC
8	203+61.50	0.0' RT	429.7'	PC
9	203+61.50	55.0' LT	428.2'	TW EDGE RP, R=37.5'
10	203+61.50	17.5' LT	429.4'	PT
11	203+24.00	55.0' LT	430.3'	PC
12	203+34.00	74.0' LT	428.9'	PT
13	203+24.00	84.0' LT	430.3'	PC
14	203+34.00	83.6' LT	424.0'	EMBANKMENT EDGE RP, R=10'
15	204+89.00	84.0' LT	422.3'	EMBANKMENT EDGE RP, R=10'
16	204+99.00	84.0' LT	427.3'	PT
17	204+89.00	74.0' LT	427.2'	PC
18	205+06.50	55.0' LT	427.9'	TW EDGE RP, R=37.5'
19	205+44.00	55.0' LT	428.8'	PT
20	205+06.50	17.5' LT	428.7'	PC
21	205+06.50	0.0' RT	428.7'	PC
22	205+44.00	0.0' RT	428.8'	PC
23	205+06.50	17.5' RT	428.6'	PC
24	205+44.00	55.0' RT	428.7'	PT
25	205+06.50	55.0' RT	427.8'	TW EDGE RP, R=37.5'
26	204+99.00	84.0' RT	427.2'	PT
27	204+89.00	74.0' RT	427.1'	PC
28	204+89.00	84.0' RT	422.1'	EMBANKMENT EDGE RP, R=10'

NOTES:

1. SEE APRON LAYOUT PLAN SHEET 14 FOR APRON GRADING.

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised: 9/24/2025, 12:42 PM
Layout Name: TW P&P
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-P&P-Taxiway.dwg

PLANS DEVELOPED BY:
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CERT. OF AUTH. NO. AECC111

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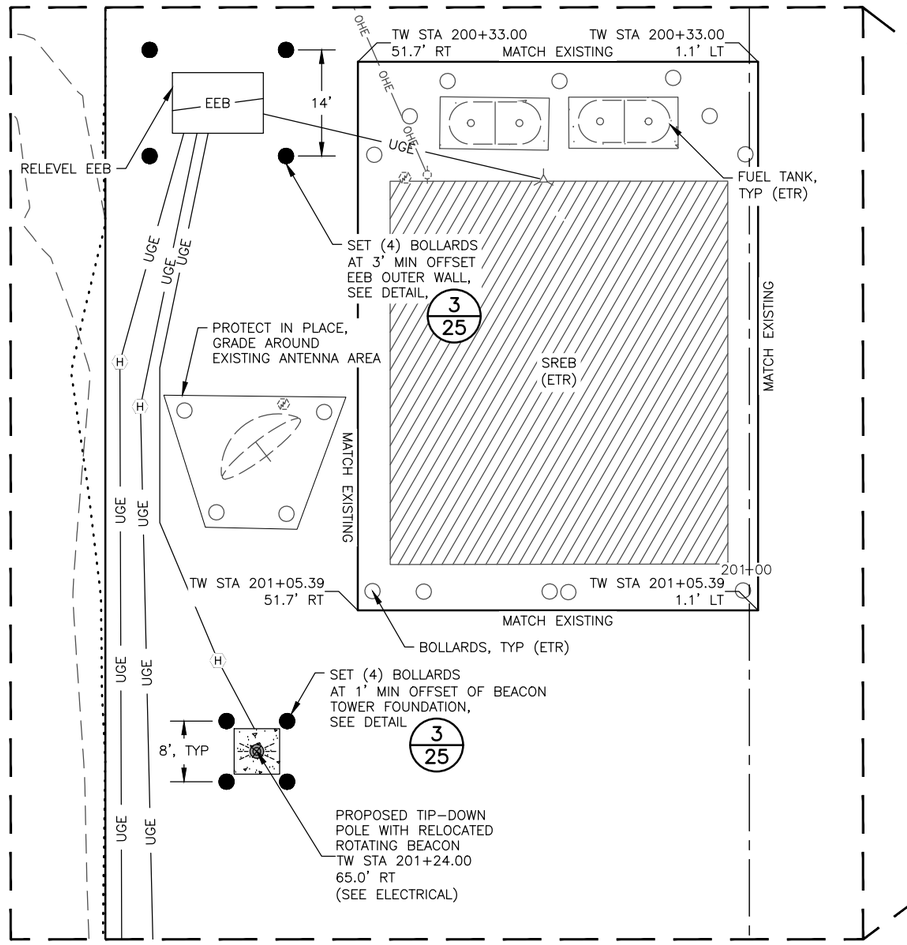
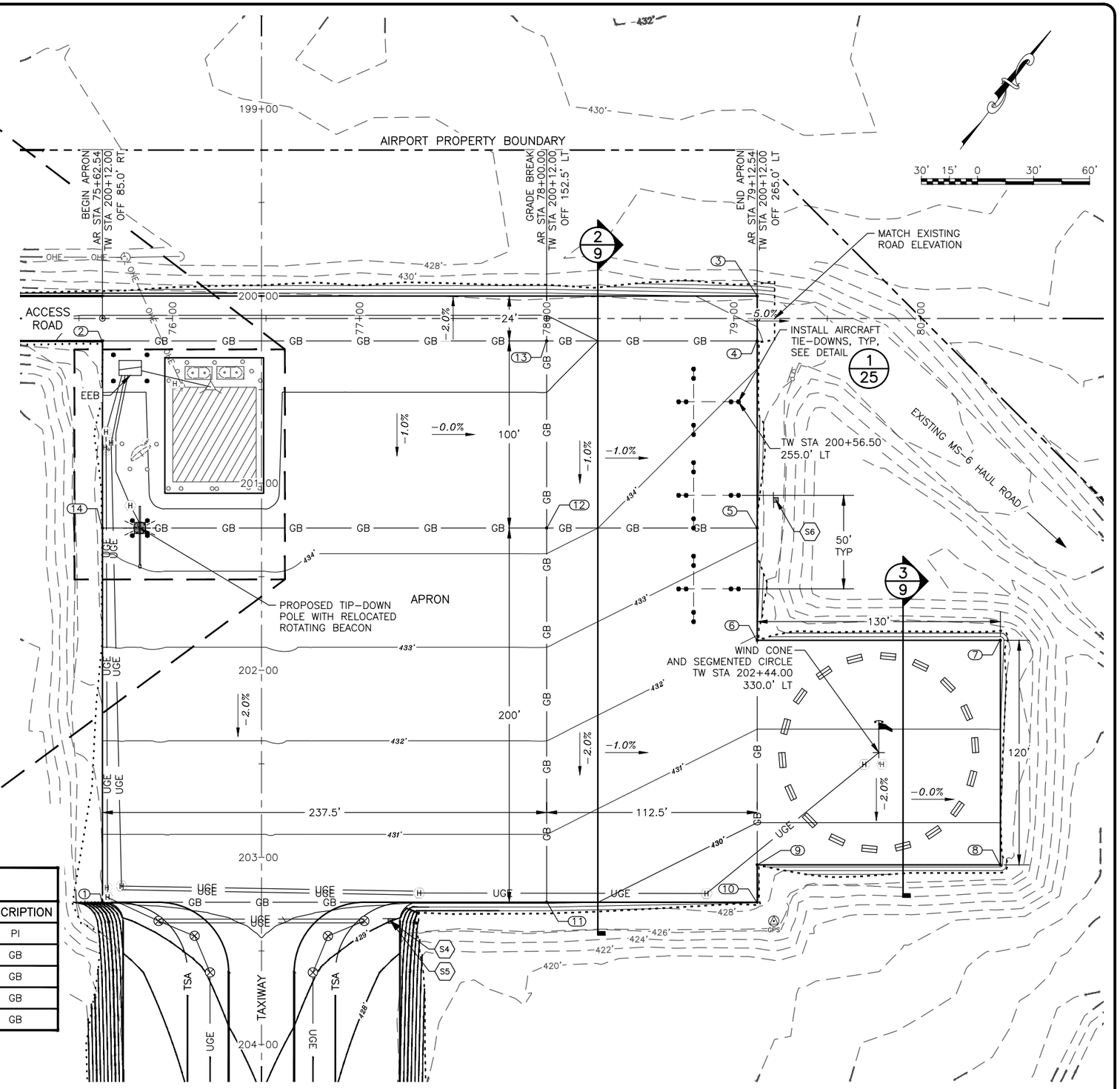
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TAXIWAY PLAN & PROFILE

DATE: 9/24/2025
SHEET: 13 OF 30



1/14 EEB STRUCTURE AND TIP-DOWN BEACON LAYOUT PLAN ENLARGED VIEW
NTS



APRON LAYOUT SCHEDULE				
POINT	TW STATION	TW OFFSET	ELEVATION	DESCRIPTION
1	203+24.00	85.0' RT	430.3'	PI
2	200+24.00	85.0' RT	435.3'	GB
3	200+00.00	265.0' LT	433.7'	PI
4	200+24.00	265.0' LT	434.1'	GB
5	201+24.00	265.0' LT	433.1'	GB
6	201+84.00	265.0' LT	431.9'	GB
7	201+84.00	395.0' LT	431.9'	PI
8	203+04.00	395.0' LT	429.5'	PI
9	203+04.00	265.0' LT	429.5'	GB

APRON LAYOUT SCHEDULE				
POINT	TW STATION	TW OFFSET	ELEVATION	DESCRIPTION
10	203+24.00	265.0' LT	429.1'	PI
11	203+24.00	152.5' LT	430.3'	GB
12	201+24.00	152.5' LT	434.3'	GB
13	200+24.00	152.5' LT	435.3'	GB
14	201+24.00	85.0' RT	434.3'	GB

NOTES:

1. ACCESS ROAD TRANSITIONS FROM 3% CROWNED SLOPE TO 2% OUT-SLOPE STARTING AT STA 75+00.

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised: 9/24/2025, 12:42 PM
Layout Name: Apron Layout
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-Apron Layout.dwg

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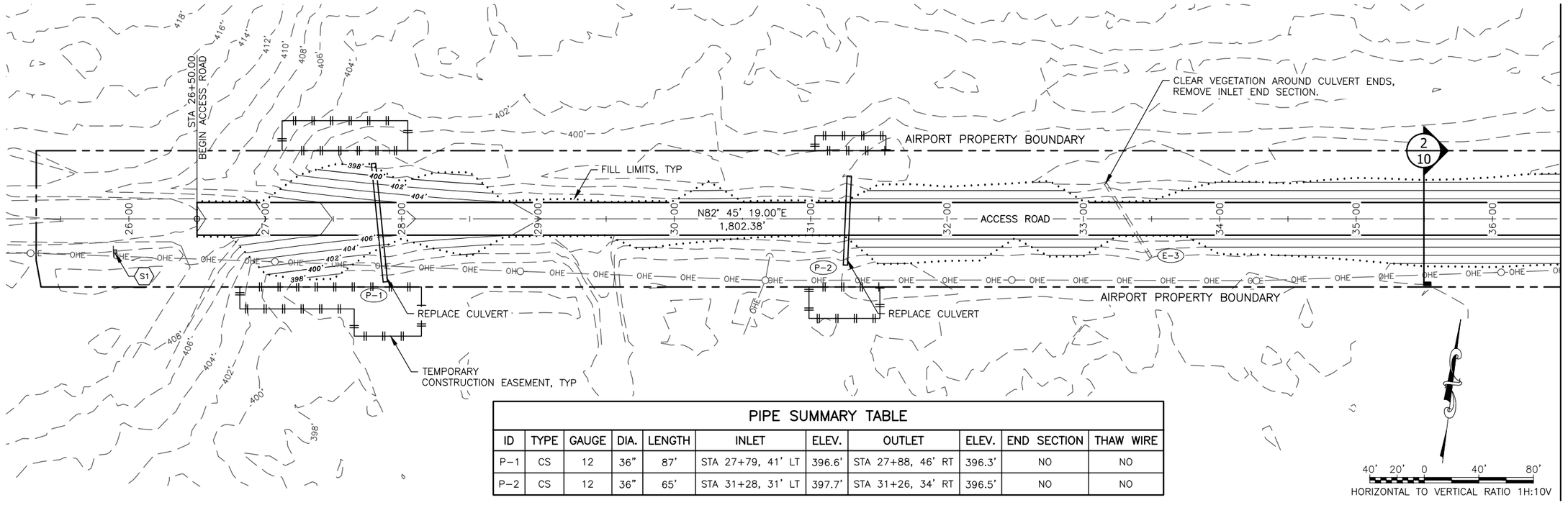
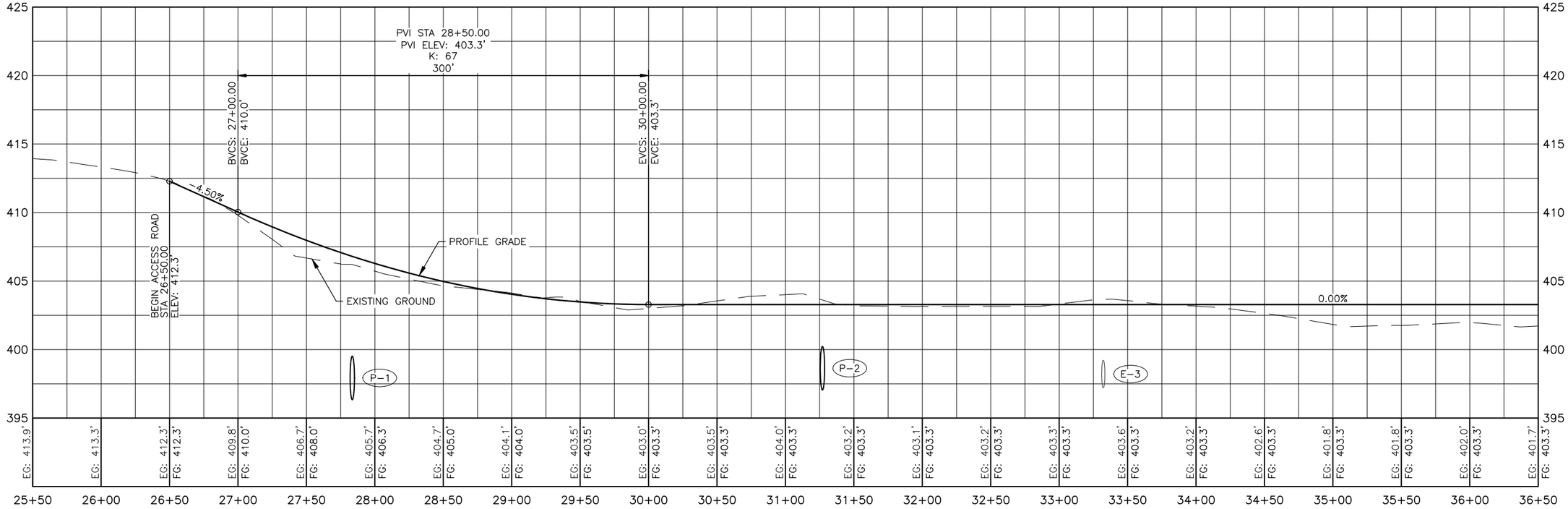
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
APRON LAYOUT PLAN

DATE: 9/24/2025
SHEET: 14 OF 30



PIPE SUMMARY TABLE									
ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTION	THAW WIRE
P-1	CS	12	36"	87'	STA 27+79, 41' LT	396.6'	STA 27+88, 46' RT	396.3'	NO	NO
P-2	CS	12	36"	65'	STA 31+28, 31' LT	397.7'	STA 31+26, 34' RT	396.5'	NO	NO



NOTES:

1. ALLOW TRAFFIC ACCESS BETWEEN THE AIRPORT AND COMMUNITY AT ALL TIMES DURING CULVERT REPLACEMENT.
2. SEE SHEET 26 FOR SIGN SUMMARY TABLE.

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB

Date Revised:	9/24/2025, 12:42 PM
Layout Name:	AR 1
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-P&P-Access Road.dwg

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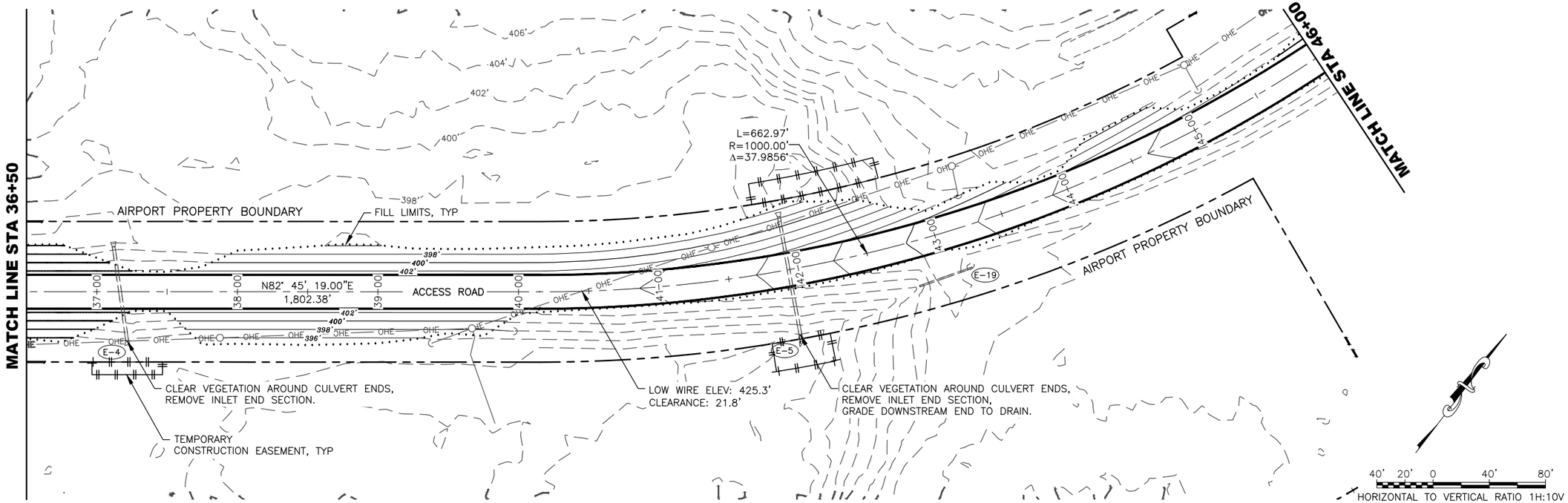
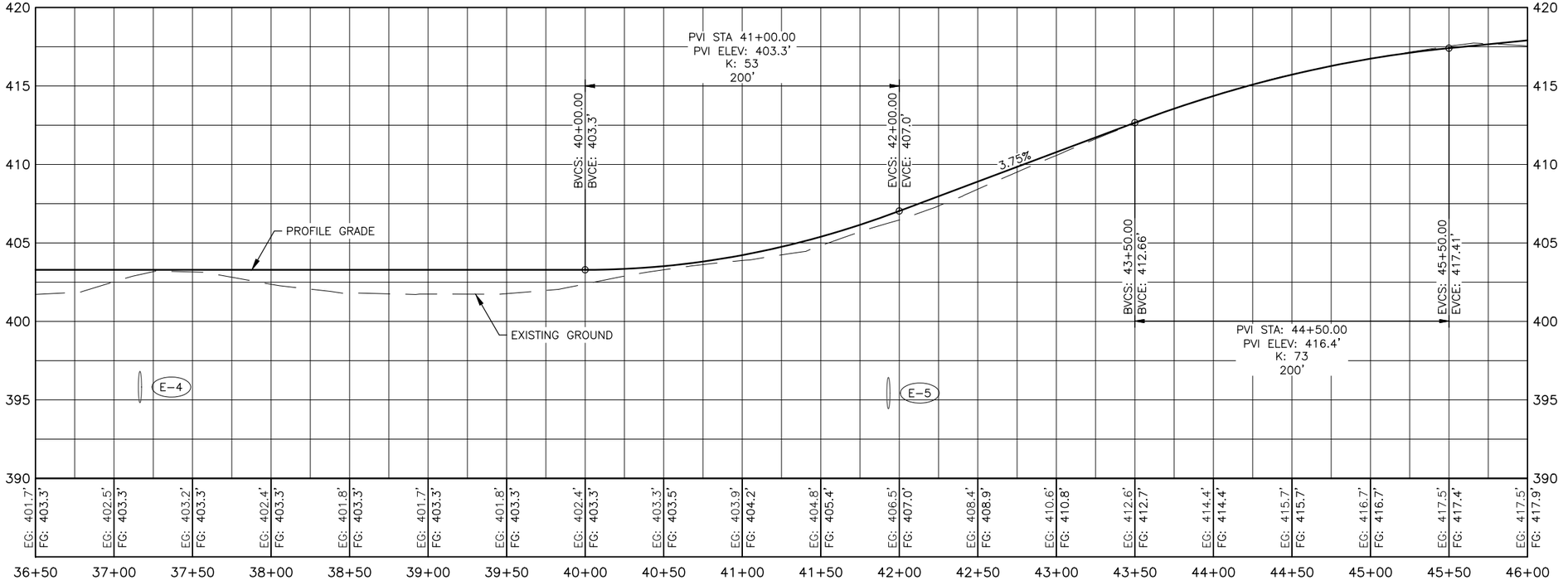
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ACCESS ROAD PLAN & PROFILE
STA 25+50 TO STA 36+50

DATE: 9/24/2025

SHEET: 15 OF 30





Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB
Date Revised:	9/24/2025, 12:42 PM
Layout Name:	AR 2
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD_00805-TCT-P&P-Access Road.dwg

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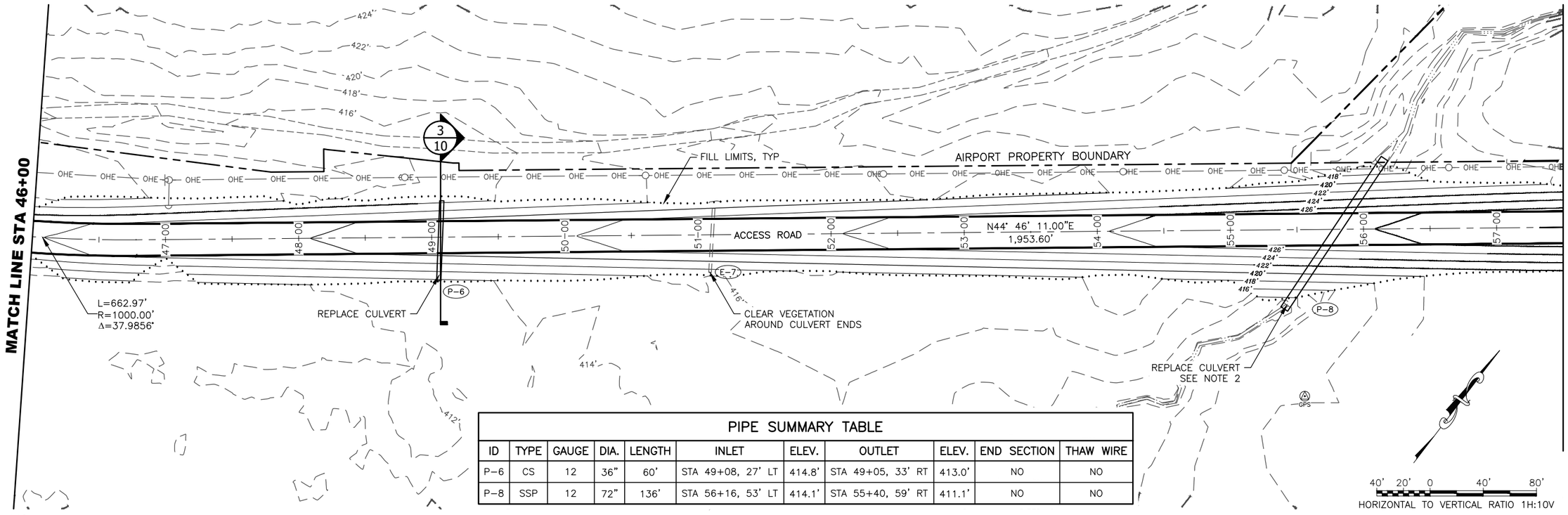
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ACCESS ROAD PLAN & PROFILE
STA 36+50 TO STA 46+00

DATE: 9/24/2025

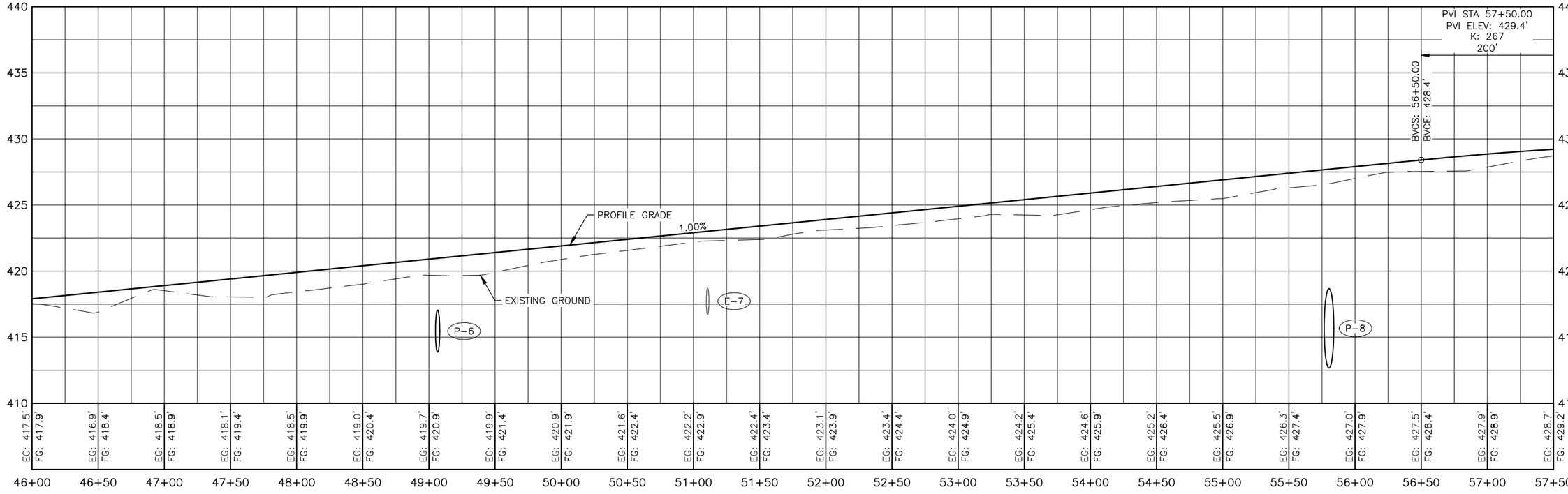
SHEET: 16 OF 30



PIPE SUMMARY TABLE										
ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTION	THAW WIRE
P-6	CS	12	36"	60'	STA 49+08, 27' LT	414.8'	STA 49+05, 33' RT	413.0'	NO	NO
P-8	SSP	12	72"	136'	STA 56+16, 53' LT	414.1'	STA 55+40, 59' RT	411.1'	NO	NO

40' 20' 0 40' 80'

HORIZONTAL TO VERTICAL RATIO 1H:10V



NOTES:

1. ALLOW TRAFFIC ACCESS BETWEEN THE AIRPORT AND COMMUNITY AT ALL TIMES DURING CULVERT REPLACEMENT.
2. SEE CULVERT PLAN & PROFILE SHEET 21 FOR P-8 CULVERT.

PLANS DEVELOPED BY:
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BY	DATE	REVISION

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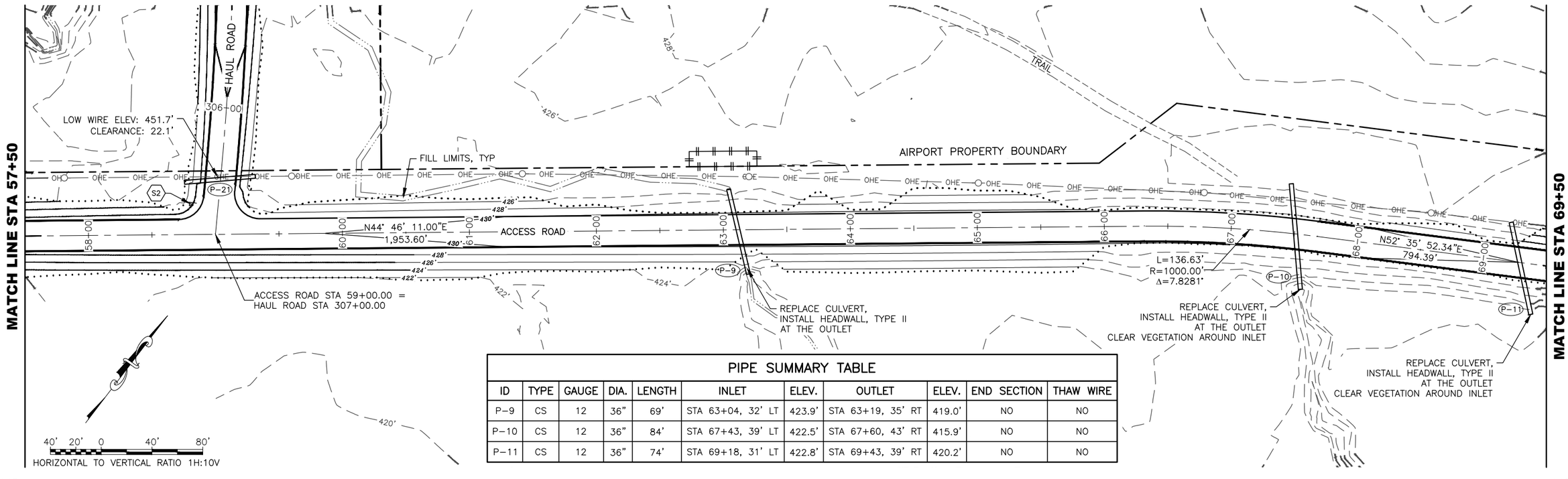
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ACCESS ROAD PLAN & PROFILE
STA 46+00 TO STA 57+50

DATE: 9/24/2025

SHEET: 17 OF 30

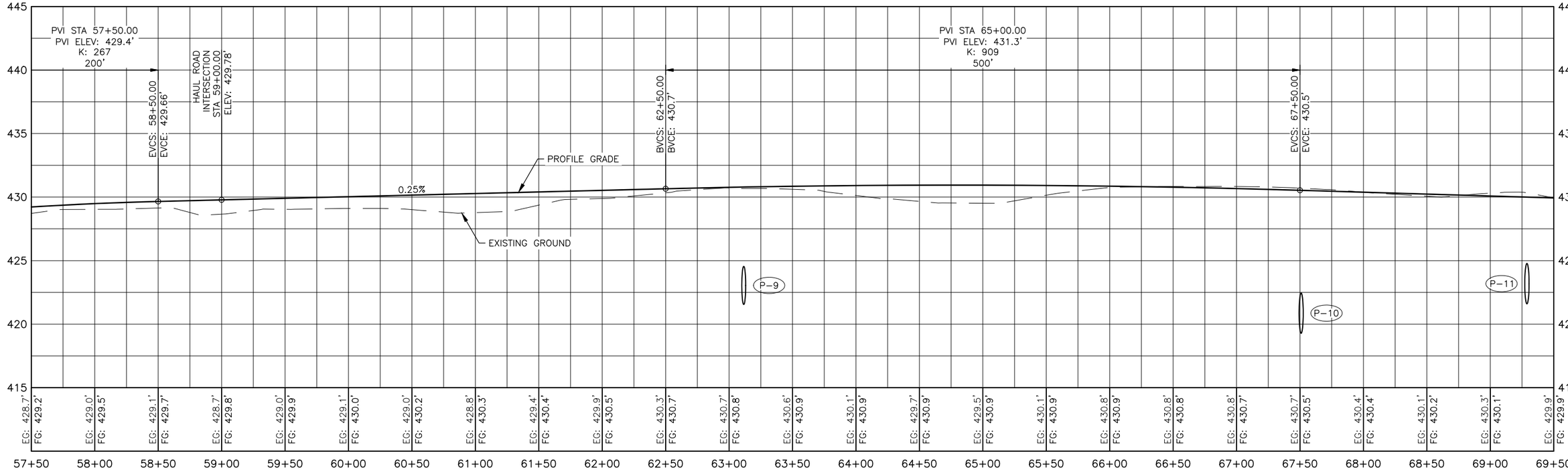
Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised: 9/24/2025, 12:42 PM
Layout Name: AR 3
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-P&P-Access Road.dwg



PIPE SUMMARY TABLE

ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTION	THAW WIRE
P-9	CS	12	36"	69'	STA 63+04, 32' LT	423.9'	STA 63+19, 35' RT	419.0'	NO	NO
P-10	CS	12	36"	84'	STA 67+43, 39' LT	422.5'	STA 67+60, 43' RT	415.9'	NO	NO
P-11	CS	12	36"	74'	STA 69+18, 31' LT	422.8'	STA 69+43, 39' RT	420.2'	NO	NO



NOTES:

1. ALLOW TRAFFIC ACCESS BETWEEN THE AIRPORT AND COMMUNITY AT ALL TIMES DURING CULVERT REPLACEMENT.
2. INSTALL PRECAST HEADWALLS AT THE OUTLET OF CULVERT PER ALASKA STANDARD PLAN D31.01

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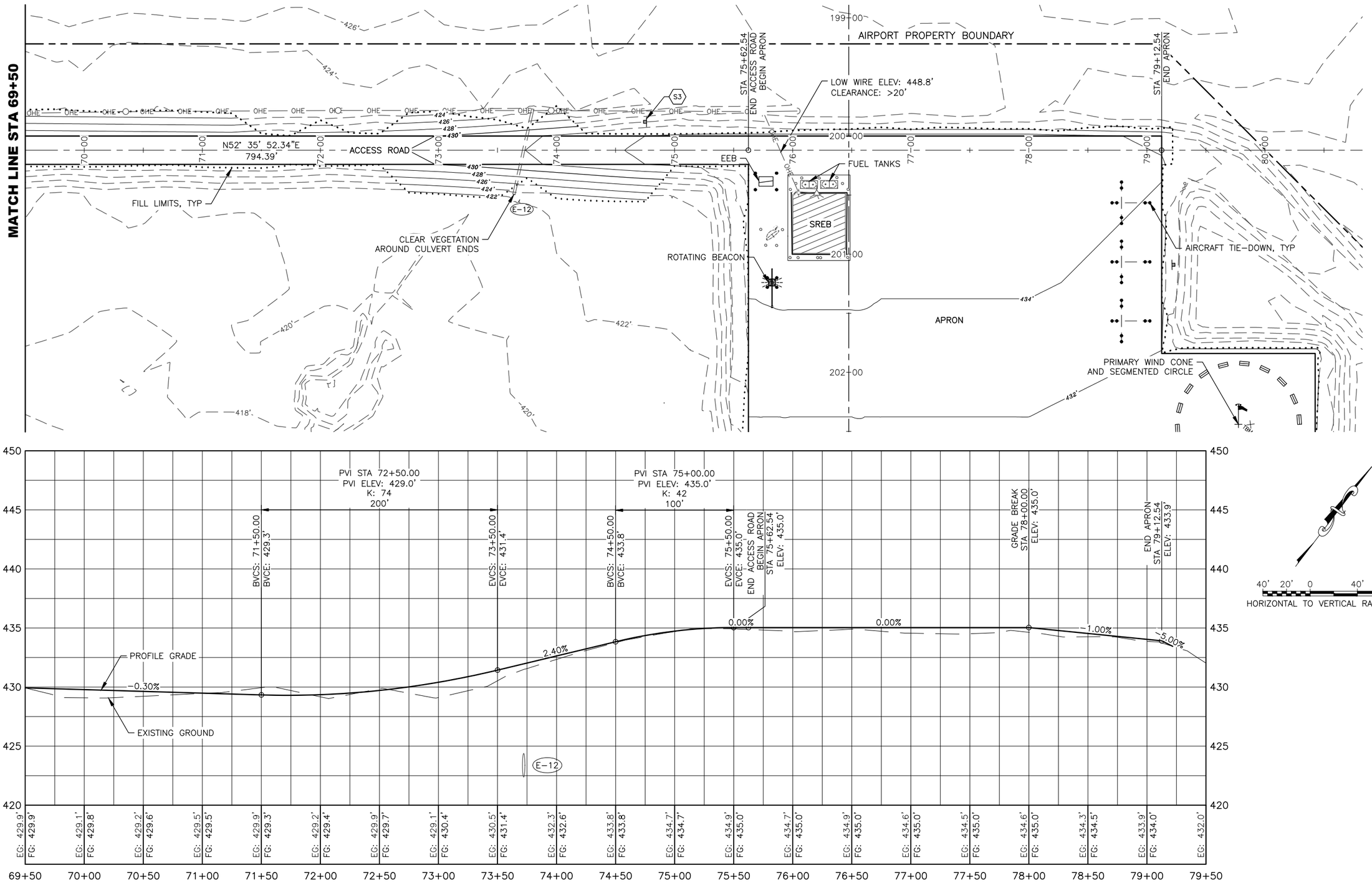
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ACCESS ROAD PLAN & PROFILE
STA 57+50 TO STA 69+50

DATE: 9/24/2025

SHEET: 18 OF 30

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised:
Layout Name: AR 4
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-P&P-Access Road.dwg
9/24/2025, 12:42 PM



NOTES:

1. ACCESS ROAD TRANSITIONS FROM CROWNED SLOPE TO OUT-SLOPE STARTING AT STA 75+00.

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB
Date Revised:	9/24/2025, 12:42 PM
Layout Name:	AR 5
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-P&P-Access Road.dwg

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CERT. OF AUTH. NO. AECC111

BY	DATE	REVISION

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ACCESS ROAD PLAN & PROFILE
STA 69+50 TO STA 79+12.54

DATE: 9/24/2025

SHEET: 19 OF 30

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB

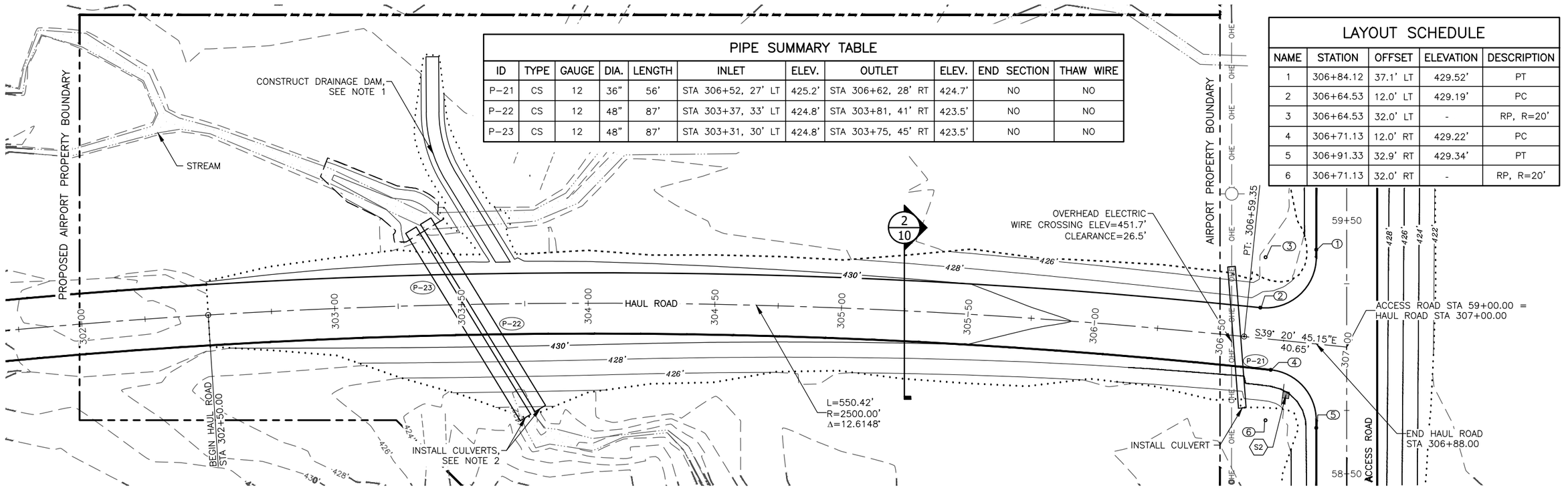
Date Revised:	9/24/2025, 12:42 PM
Layout Name:	HAUL RD
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-P&P-MS3 Haul Road.dwg

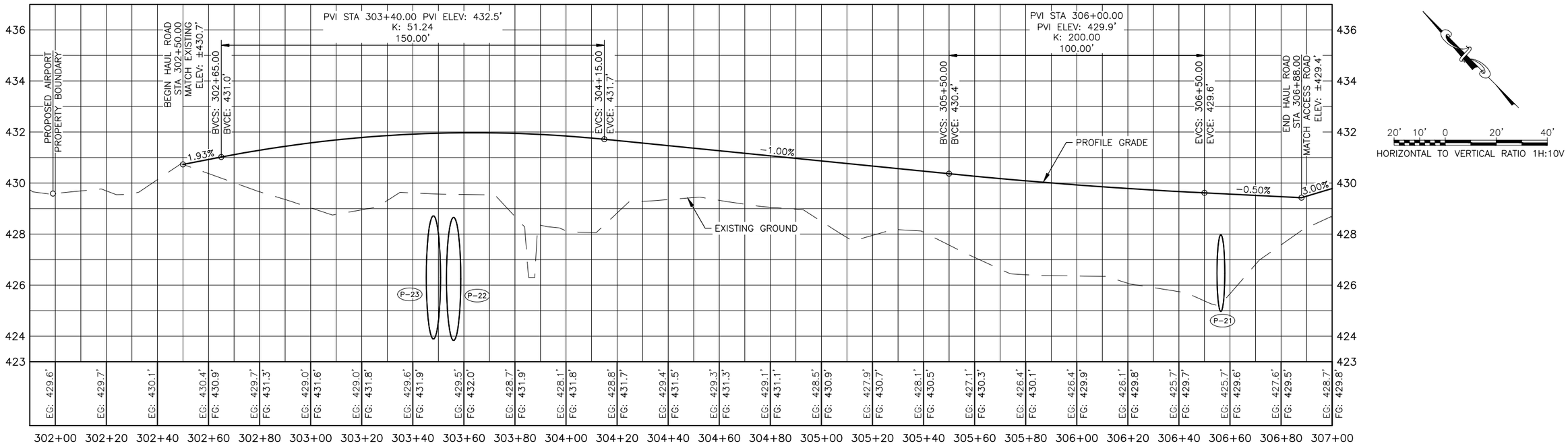
PIPE SUMMARY TABLE

ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTION	THAW WIRE
P-21	CS	12	36"	56'	STA 306+52, 27' LT	425.2'	STA 306+62, 28' RT	424.7'	NO	NO
P-22	CS	12	48"	87'	STA 303+37, 33' LT	424.8'	STA 303+81, 41' RT	423.5'	NO	NO
P-23	CS	12	48"	87'	STA 303+31, 30' LT	424.8'	STA 303+75, 45' RT	423.5'	NO	NO

LAYOUT SCHEDULE

NAME	STATION	OFFSET	ELEVATION	DESCRIPTION
1	306+84.12	37.1' LT	429.52'	PT
2	306+64.53	12.0' LT	429.19'	PC
3	306+64.53	32.0' LT	-	RP, R=20'
4	306+71.13	12.0' RT	429.22'	PC
5	306+91.33	32.9' RT	429.34'	PT
6	306+71.13	32.0' RT	-	RP, R=20'





NOTES:

1. SEE CULVERT PLAN & PROFILE SHEET 24 FOR P-22 & P-23 CULVERT AND CHANNEL REGRADING AND DRAINAGE DAM.
2. SEE SHEET 26 FOR SIGN SUMMARY TABLE.
3. STATION AND OFFSET REFERENCE THE HAUL ROAD ALIGNMENT UNLESS LABELED OTHERWISE.

PLANS DEVELOPED BY:
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BY	DATE	REVISION

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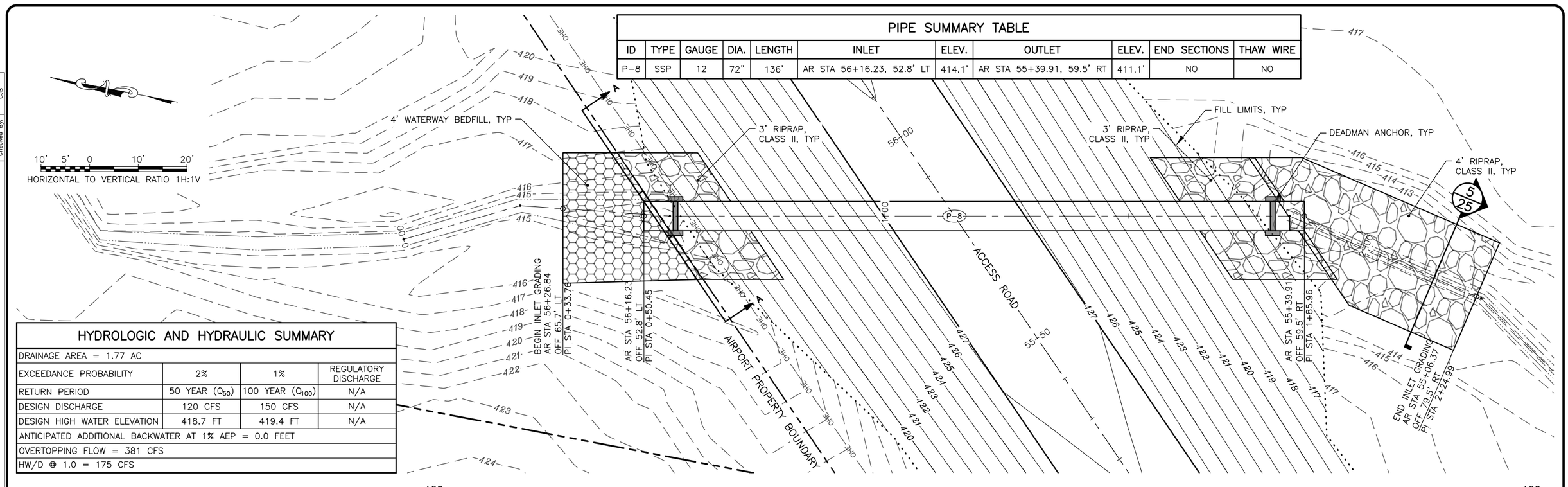
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
HAUL ROAD PLAN & PROFILE STA 302+50 TO STA 307+00

DATE: 9/24/2025

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB

Date Revised:	9/24/2025, 12:43 PM
Layout Name:	P-8
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\03805-TCT-P&P-Culvert.dwg

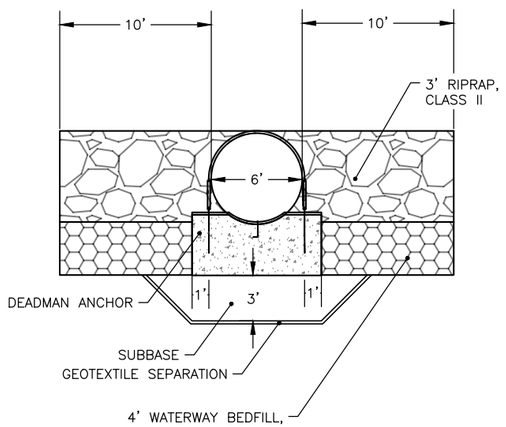


PIPE SUMMARY TABLE									
ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTIONS	THAW WIRE
P-8	SSP	12	72"	136'	AR STA 56+16.23, 52.8' LT	414.1'	AR STA 55+39.91, 59.5' RT	411.1'	NO	NO

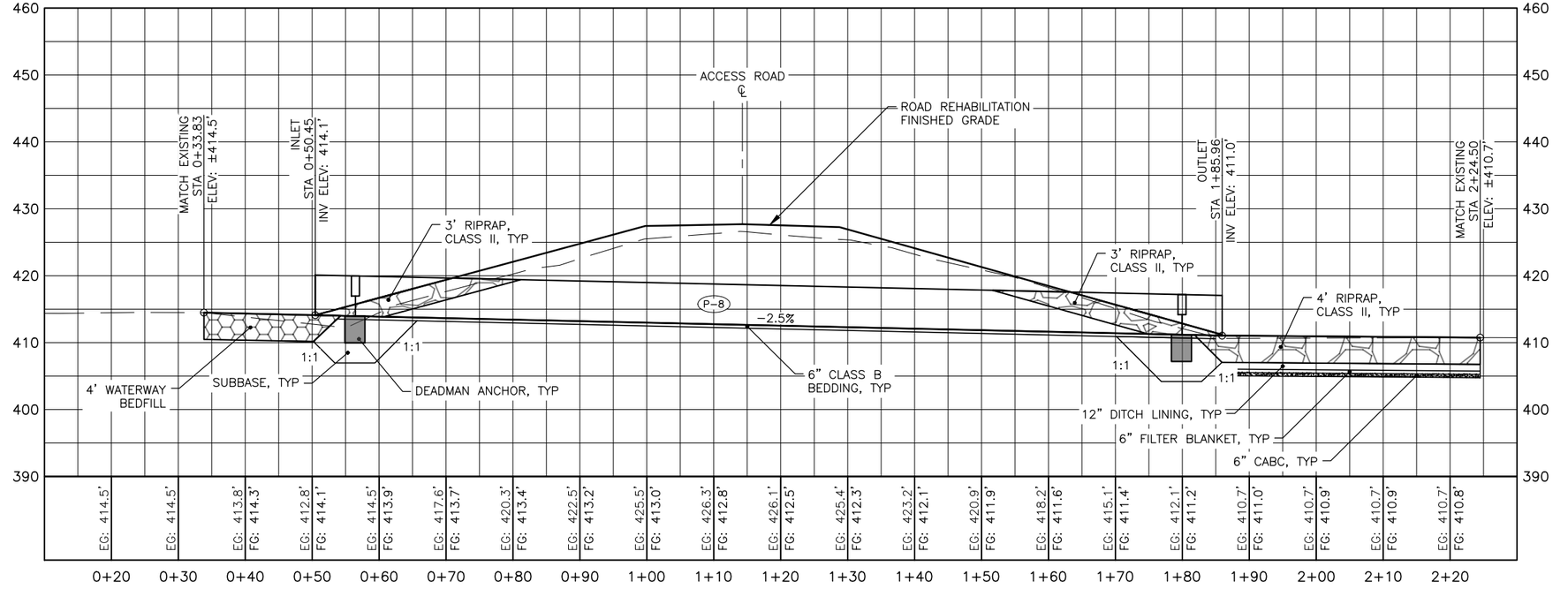
HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 1.77 AC			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	120 CFS	150 CFS	N/A
DESIGN HIGH WATER ELEVATION	418.7 FT	419.4 FT	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 381 CFS			
HW/D @ 1.0 = 175 CFS			

LEGEND:

- RIPRAP, CLASS II
- WATERWAY BEDFILL
- CABC



SECTION A–A



NOTES:

1. ALLOW TRAFFIC ACCESS BETWEEN THE AIRPORT AND COMMUNITY AT ALL TIMES DURING CULVERT REPLACEMENT.
2. INSTALL PRECAST DEADMAN ANCHORS AT THE INLET AND OUTLET OF CULVERT

PLANS DEVELOPED BY:
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BY	DATE	REVISION

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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
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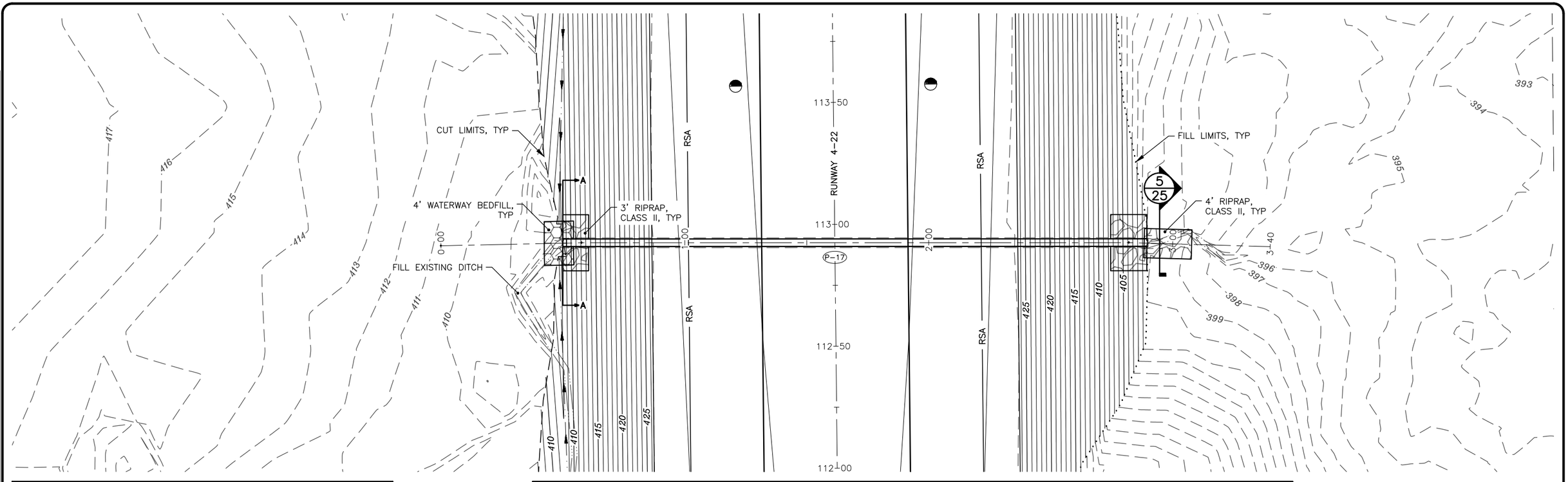
PHONE (907) 269-0590

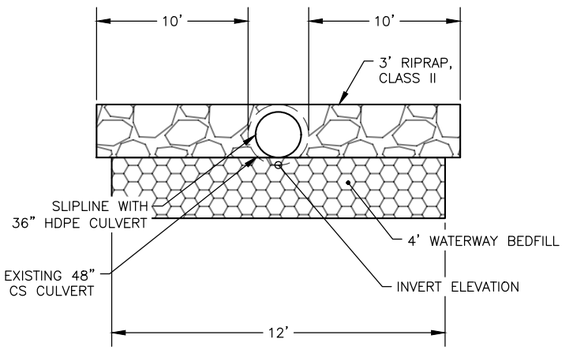
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CULVERT PLAN & PROFILE – P-8

DATE: 9/24/2025



HYDROLOGIC AND HYDRAULIC SUMMARY

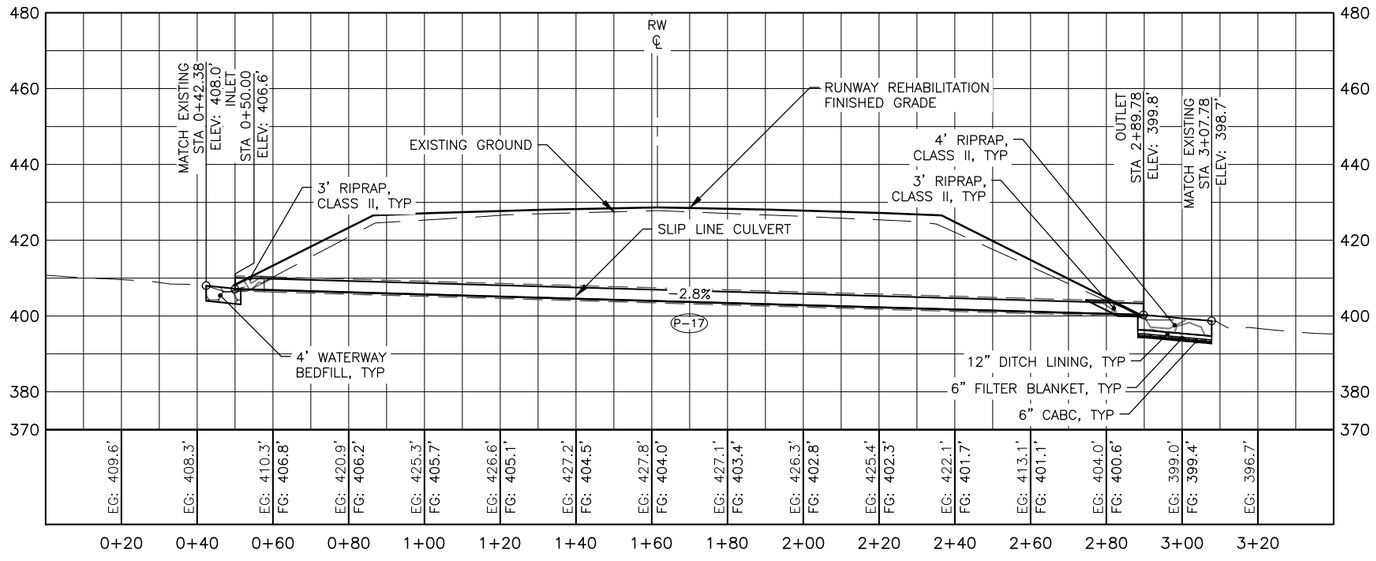
DRAINAGE AREA = 0.21 AC			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	15 CFS	18 CFS	N/A
DESIGN HIGH WATER ELEVATION	408.8 FT	409.0 FT	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.0 FEET			
OVERTOPPING FLOW = 151 CFS			
HW/D @ 1.0 = 35 CFS			

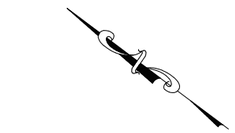


SECTION A–A

PIPE SUMMARY TABLE

ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTIONS	THAW WIRE
P–17	HDPE SLIP LINE	–	36"	240'	RW STA 112+93.61, 111.5' LT	406.6'	RW STA 112+91.12, 128.3' RT	399.8'	NO	NO





20' 10' 0 20' 40'

HORIZONTAL TO VERTICAL RATIO 1H:1V

LEGEND:

- RIPRAP, CLASS II
- WATERWAY BEDFILL
- CABC

NOTES:

1. SLIPLINE CULVERT MAXIMUM 6 INCHES ABOVE INVERT ELEVATION.
2. REMOVE CULVERT END SECTIONS FOR SLIP LINING.

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB

Date Revised:
Layout Name: P-17
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\06805-TCT-P&P-Culvert.dwg 9/24/2025, 12:42 PM

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CULVERT PLAN & PROFILE - P-17

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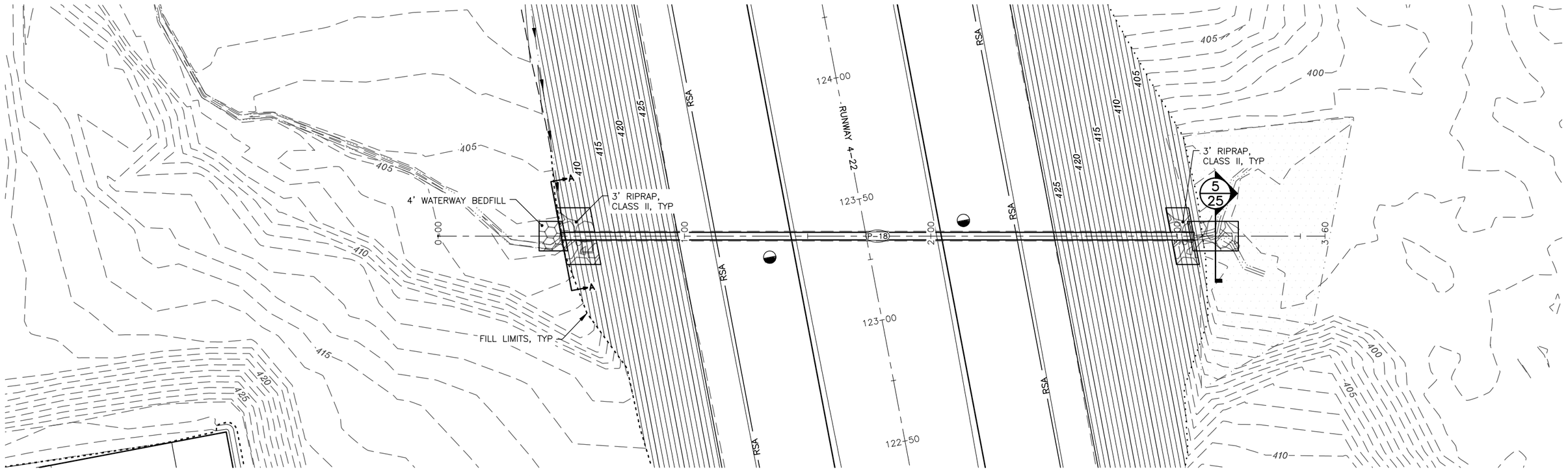
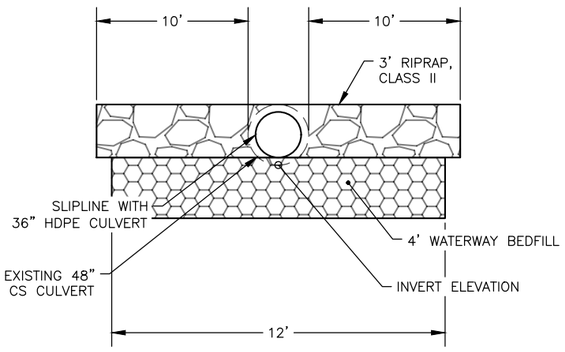


HYDROLOGIC AND HYDRAULIC SUMMARY			
DRAINAGE AREA = 0.57 AC			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	50 CFS	70 CFS	N/A
DESIGN HIGH WATER ELEVATION	408.6 FT	410.4 FT	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 2.8 FEET			
OVERTOPPING FLOW = 166 CFS			
HW/D @ 1.0 = 32 CFS			

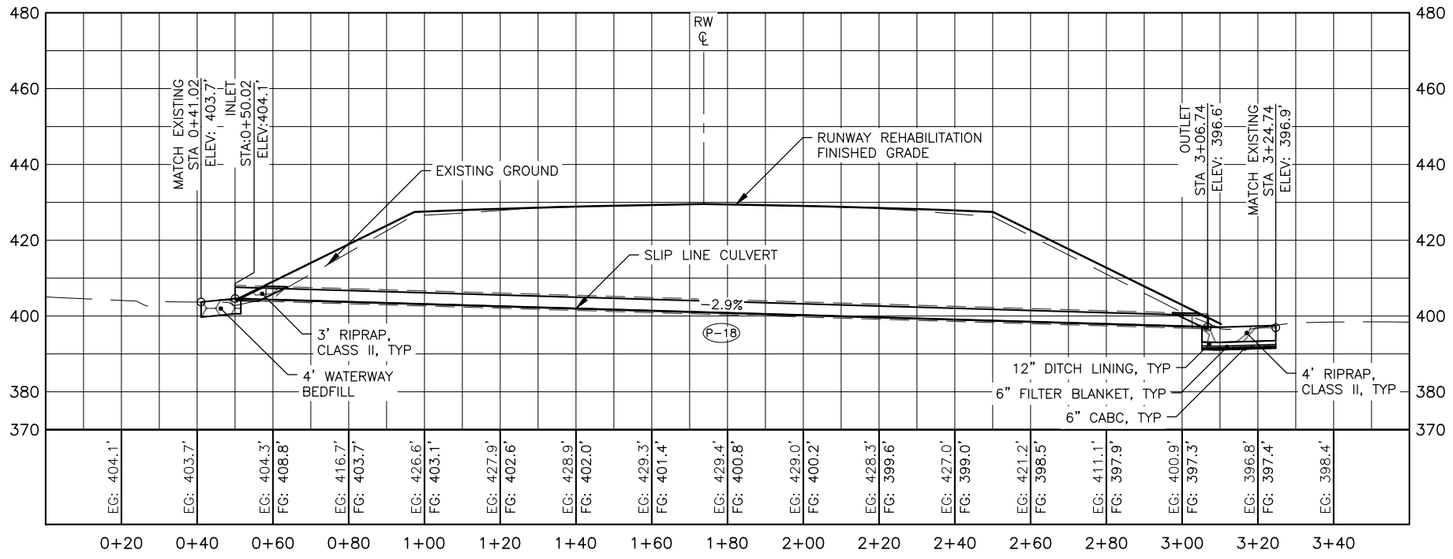


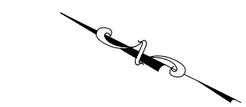
SECTION A–A

NOTES:

1. SLIPLINE CULVERT MAXIMUM 6 INCHES ABOVE INVERT ELEVATION.

PIPE SUMMARY TABLE										
ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTIONS	THAW WIRE
P–18	HDPE SLIP LINE	–	36"	257'	RW STA 123+57.72, 121.5' LT	404.1'	RW STA 123+09.81, 130.7' RT	396.6'	NO	YES





20' 10' 0 20' 40'

HORIZONTAL TO VERTICAL RATIO 1H:1V

LEGEND:

- RIPRAP, CLASS II
- WATERWAY BEDFILL
- CABC

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PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CULVERT PLAN & PROFILE – P-18

DATE: 9/24/2025

Designed By:	CWB
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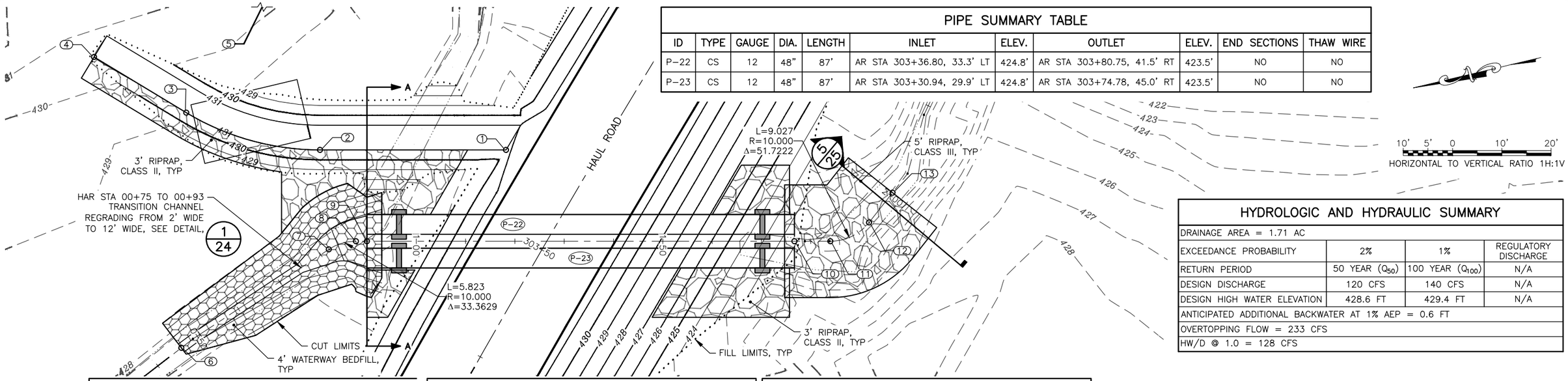
Date Revised:	9/24/2025, 12:41 PM
Layout Name:	P-22 & P-23
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-P&P-Culvert.dwg



PIPE SUMMARY TABLE

ID	TYPE	GAUGE	DIA.	LENGTH	INLET	ELEV.	OUTLET	ELEV.	END SECTIONS	THAW WIRE
P-22	CS	12	48"	87'	AR STA 303+36.80, 33.3' LT	424.8'	AR STA 303+80.75, 41.5' RT	423.5'	NO	NO
P-23	CS	12	48"	87'	AR STA 303+30.94, 29.9' LT	424.8'	AR STA 303+74.78, 45.0' RT	423.5'	NO	NO

HYDROLOGIC AND HYDRAULIC SUMMARY

DRAINAGE AREA = 1.71 AC			
EXCEEDANCE PROBABILITY	2%	1%	REGULATORY DISCHARGE
RETURN PERIOD	50 YEAR (Q_{50})	100 YEAR (Q_{100})	N/A
DESIGN DISCHARGE	120 CFS	140 CFS	N/A
DESIGN HIGH WATER ELEVATION	428.6 FT	429.4 FT	N/A
ANTICIPATED ADDITIONAL BACKWATER AT 1% AEP = 0.6 FT			
OVERTOPPING FLOW = 233 CFS			
HW/D @ 1.0 = 128 CFS			

CHANNEL LAYOUT SCHEDULE

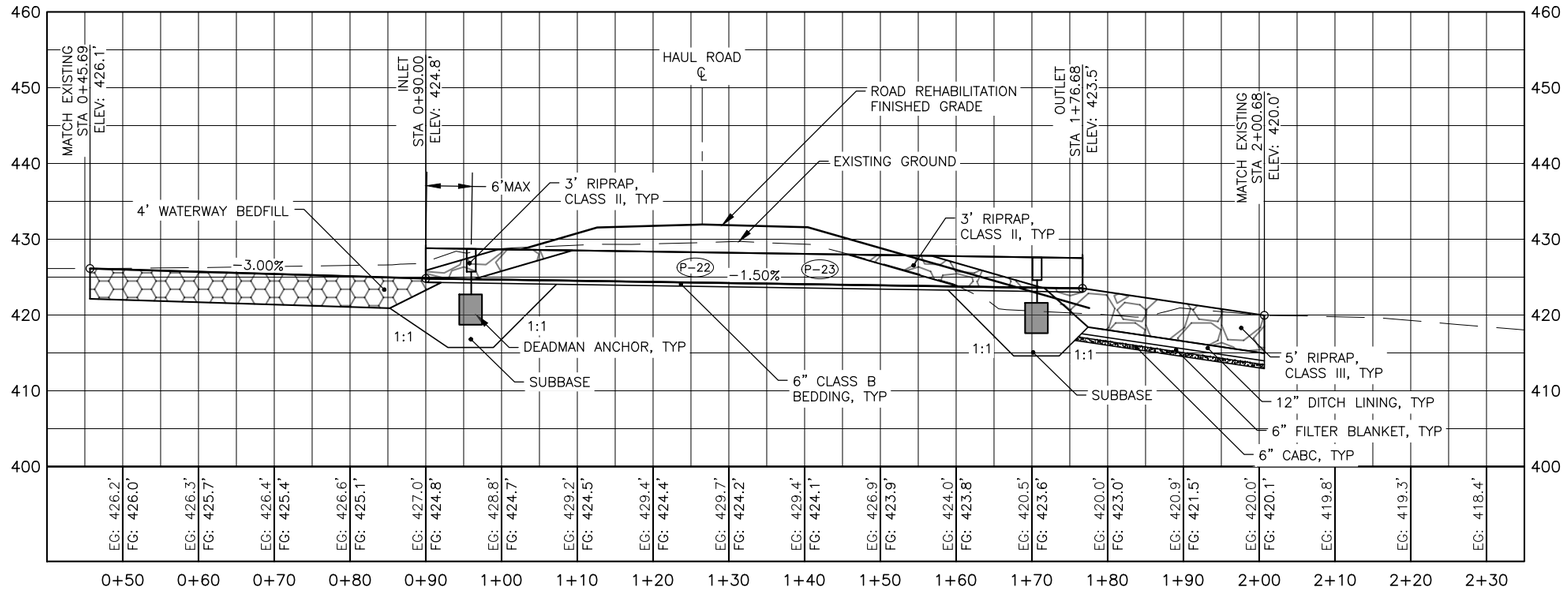
POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
1	HAR STA 303+63.76	16.5' LT	431.0'	PI
2	HAR STA 303+44.97	49.0' LT	431.0'	PC
3	HAR STA 303+38.11	76.3' LT	431.0'	PT
4	HAR STA 303+38.53	98.1' LT	431.0'	PI
5	HAR STA 303+89.06	75.8' LT	–	RP, R: 52.5'

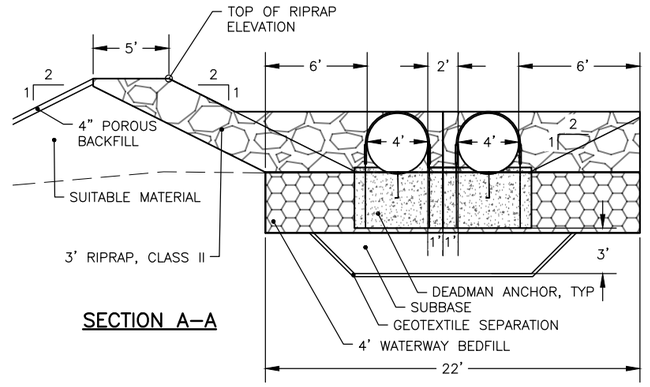
CHANNEL LAYOUT SCHEDULE

POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
6	HAR STA 302+97.21	53.7' LT	426.1'	BEGIN
7	HAR STA 303+28.68	37.5' LT	425.1'	PC
8	HAR STA 303+32.78	33.5' LT	424.9'	PT
9	HAR STA 303+33.87	31.6' LT	424.8'	END; INLET
10	HAR STA 303+77.77	43.2' RT	423.5'	OUTLET

CHANNEL LAYOUT SCHEDULE

POINT	STATION	OFFSET	ELEVATION	DESCRIPTION
11	HAR STA 303+81.58	49.5' RT	422.4'	PC
12	HAR STA 303+89.05	54.3' RT	421.1'	PT
13	HAR STA 303+96.83	55.2' RT	420.0'	END

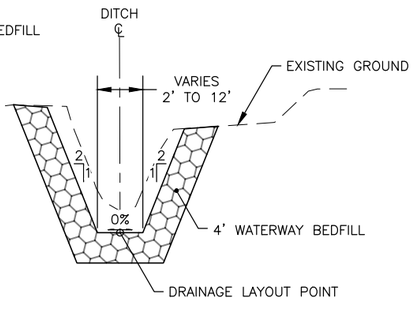




SECTION A–A

LEGEND:

RIPRAP, CLASS II (INLET)
RIPRAP, CLASS III (OUTLET)
WATERWAY BEDFILL
CABC



1/24 HAUL ROAD DITCH GRADING TYPICAL SECTION
NTS

NOTES:

INSTALL PRECAST DEADMAN ANCHORS AT THE INLET AND OUTLET OF CULVERT

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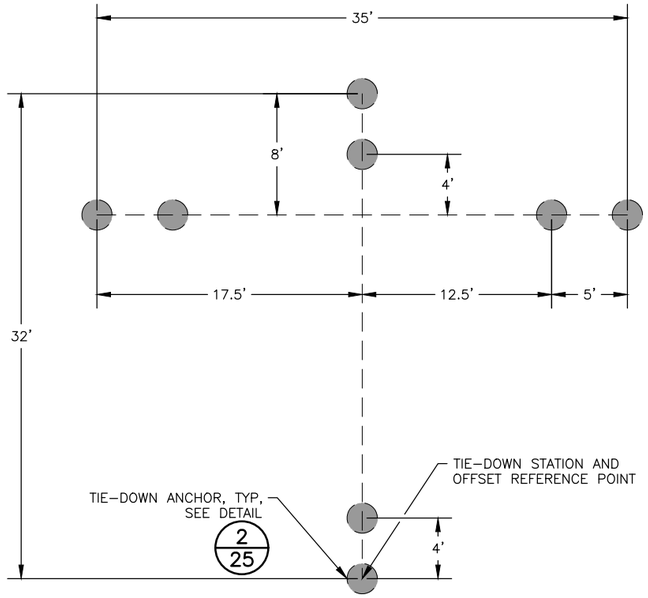
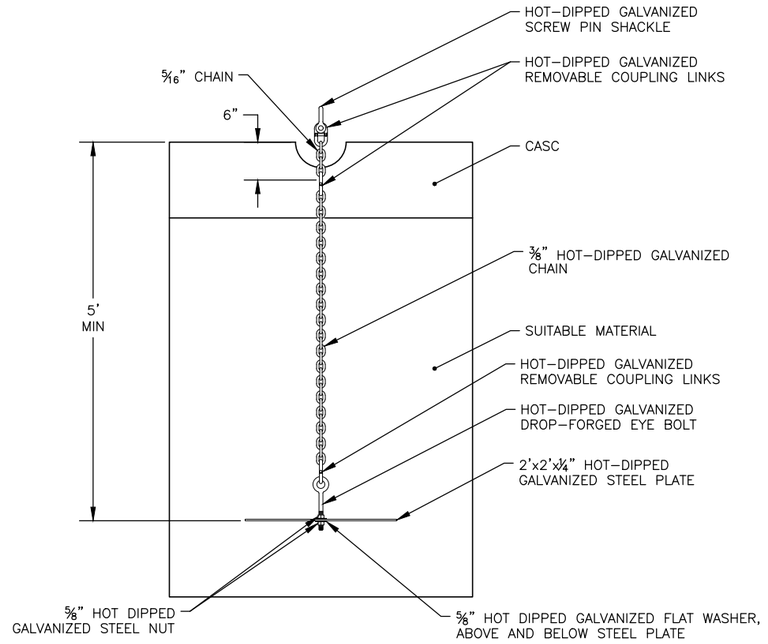
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CULVERT PLAN & PROFILE – P-22 & P-23

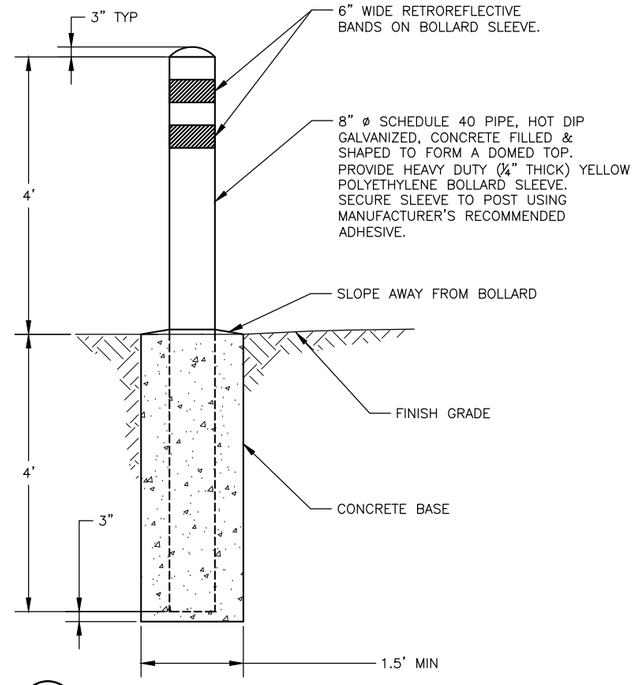
DATE: 9/24/2025
SHEET: 24 OF 30



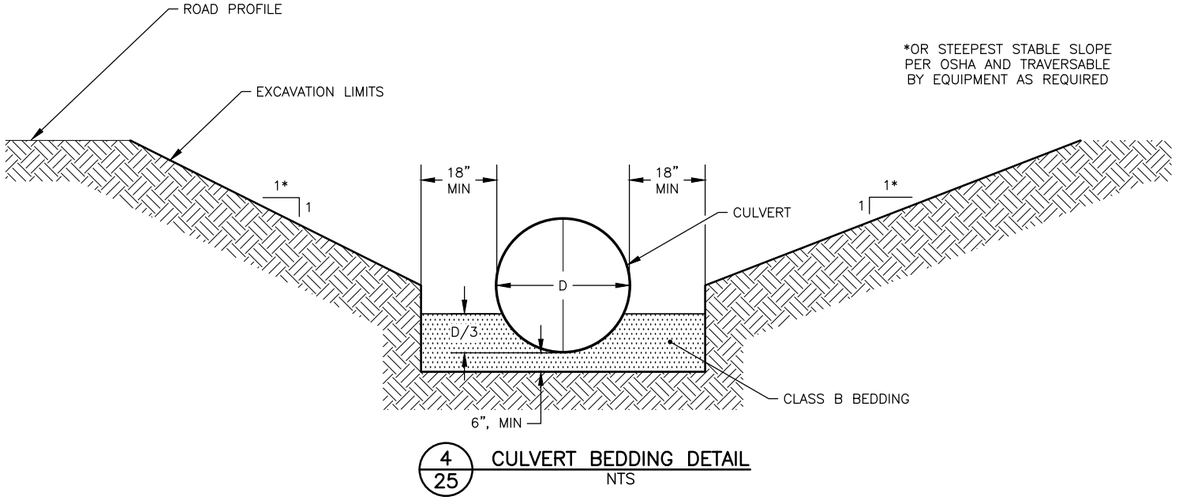
1/25 AICRAFT TIE-DOWNS LAYOUT
NTS



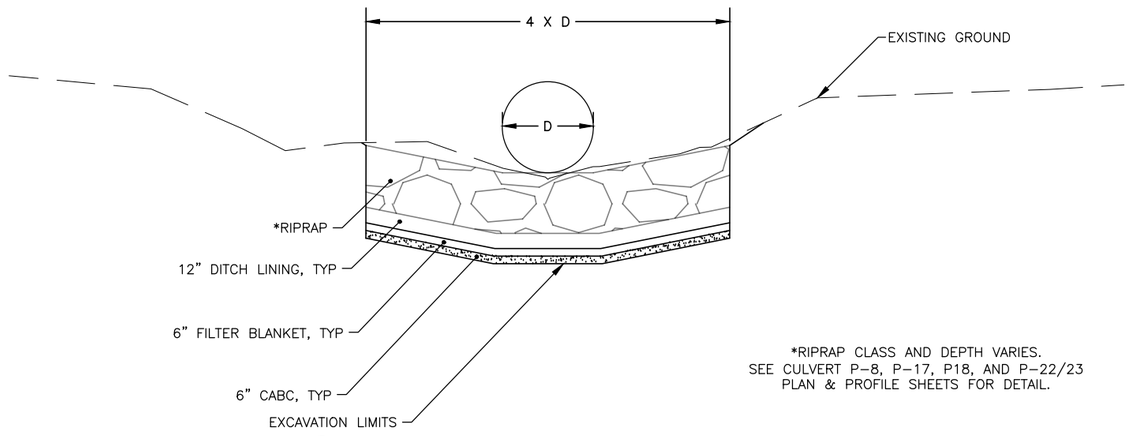
2/25 AICRAFT ANCHOR TIE-DOWNS DETAIL
NTS



3/25 EXTERIOR BOLLARD DETAIL
NTS



4/25 CULVERT BEDDING DETAIL
NTS



5/25 CULVERT OUTLET CHANNEL REGRADING DETAIL
NTS

NOTES:

1. REFERENCE AVIATION SPECIFICATIONS FOR EARTHWORK DEFINITIONS AND BACKFILL AND COMPACTION REQUIREMENTS.
2. CULVERT SHALL BE INSTALLED IN EXCAVATION ABSENT OF STANDING WATER.
3. STATIONING, OFFSET, AND GRADE FOR CULVERT IS APPROXIMATE. STAKE CULVERT TO FIT FIELD CONDITIONS AND AS DIRECTED BY THE ENGINEER.
4. CULVERT SHALL BE PLACED AFTER THE BEDDING HAS BEEN APPROVED BY THE ENGINEER.
5. ALLOW TRAFFIC ACCESS BETWEEN THE AIRPORT AND COMMUNITY AT ALL TIMES DURING CULVERT REPLACEMENT.

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CIVIL DETAILS

DATE: 9/24/2025
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Checked By: CJB
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Layout Name:	SIGN SUMMARY
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-Civil Details.dwg

AIRPORT SIGN SUMMARY

SIGN No.	STATION/OFFSET	TYPE	SIGN	LEGEND	SIZE (IN)	COLOR		AREA (SF)	SIGN FACES	POSTS: No. SIZE, TYPE	FRAMED		FOUNDATION	SHEET NO.
						LEGEND	BACKGROUND				YES	NO		
S1	AR STA 25+90.00 24' RT	R2-1	SPEED LIMIT 25	SPEED LIMIT 25 MPH	24x30	BLACK	WHITE	5.00	W	2-1/2" X 2-1/2" PERFORATED STEEL TUBE		X	REFERENCE S-30.05	15
S2	AR STA 58+81.00 24' LT	R1-1	STOP	STOP	30x30	WHITE	RED	6.25	NW	2-1/2" X 2-1/2" PERFORATED STEEL TUBE		X	REFERENCE S-30.05	18
S3	AR STA 74+75.00 24' LT	R2-1	SPEED LIMIT 25	SPEED LIMIT 25 MPH	24x30	BLACK	WHITE	5.00	NE	2-1/2" X 2-1/2" PERFORATED STEEL TUBE		X	REFERENCE S-30.05	19
S4	TW STA 203+34.00 69' LT	SPECIAL	–	SELECTIVE EXCLUSION	36x48	BLACK	WHITE	12.00	NW	2-1/2" X 2-1/2" PERFORATED STEEL TUBE		X	REFERENCE S-30.05	14
S5	TW STA 203+34.00 69' LT	SPECIAL	–	AUTHORIZED PERSONNEL ONLY	42X30	WHITE	RED	8.75	NW	SAME POST AS SIGN S4*		X	REFERENCE S-30.05	14
S6	TW STA 201+09.00 275' LT	SPECIAL	–	AIRCRAFT PARKING ONLY	42X30	WHITE	RED	8.75	SW	2-1/2" X 2-1/2" PERFORATED STEEL TUBE		X	REFERENCE S-30.05	14

* PLACE SIGN AS PRIMARY PANEL ON SAME POST AS SIGN S4.
SEE ALASKA STANDARD PLAN S-05.02.

1/26 SELECTIVE EXCLUSION SIGN (S4) DETAILS
NTS

2/26 AUTHORIZED PERSONNEL ONLY SIGN (S5) DETAILS
NTS

3/26 AIRCRAFT PARKING ONLY SIGN (S6) DETAILS
NTS

NOTES:

1. FABRICATE SIGNS FROM 0.125" THICK ALUMINUM SHEETING.
2. SIGN LOCATIONS ARE APPROXIMATE AND SUBJECT TO FIELD ADJUSTMENTS BY THE ENGINEER.
3. REMOVE EXISTING POST AND INSTALL NEW POSTS FROM AIRPORT SIGN SUMMARY TABLE.

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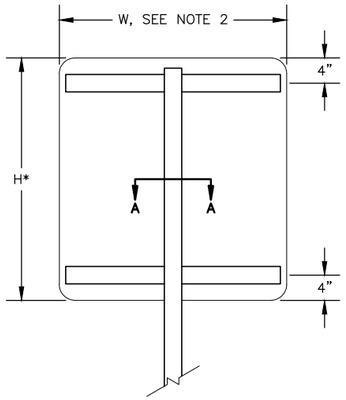
SIGN SUMMARY

DATE: 9/24/2025



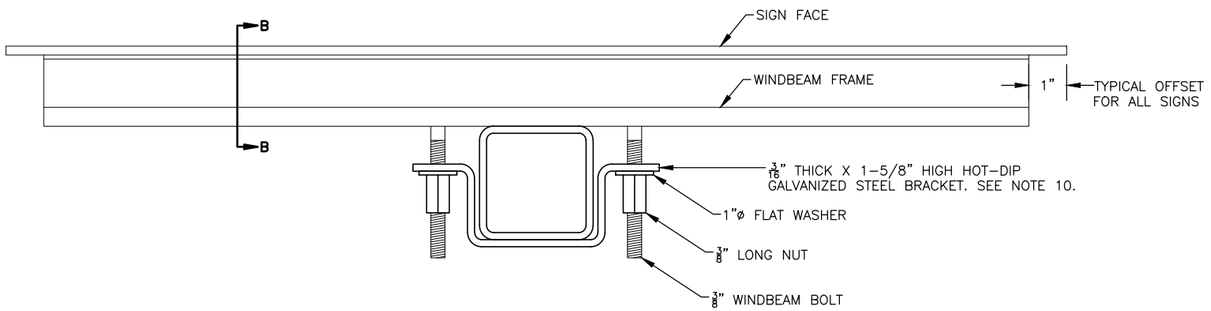
RECTANGLES AND TRAPEZOIDS

* WHEN H > 42 INCHES, INSTALL A THIRD WINDBEAM CENTERED ON THE SIGN

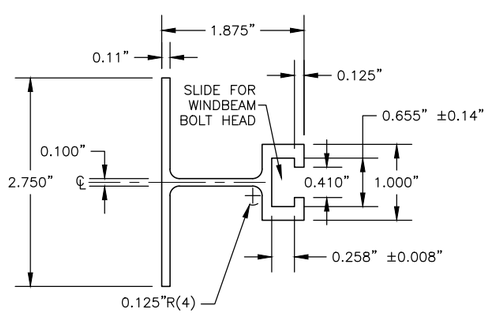
NOTES:

1. ONLY USE SQUARE STEEL TUBES TO SUPPORT SIGNS MOUNTED ON SINGLE POSTS.
2. INSTALL WINDBEAM ON SIGNS 36 INCHES WIDE AND WIDER.
3. THE ENGINEER MAY APPROVE OTHER FRAMING MEMBERS. SUBMIT DOCUMENTS THAT DETAIL THE FRAME'S CROSS SECTION AND STRENGTH, AND METHOD OF ATTACHING THE FRAME TO A POST.
4. USE FRAMING MEMBERS MADE FROM ALUMINUM ALLOY 6061–T6.
5. EACH FRAMING MEMBER SHALL BE ONE CONTINUOUS PIECE.
6. ATTACH FRAMING MEMBERS TO THE SIGN PANELS WITH RIVETS OR AN ENGINEER APPROVED, DOUBLE SIDED, HIGH STRENGTH, ADHESIVE TAPE.
7. WITH THE ADHESIVE TAPE, INSTALL TWO RIVETS IN BOTH ENDS OF EACH FRAMING MEMBER, AND ATTACH THE FRAMING MEMBERS TO THE SIGN PANELS ACCORDING TO THE TAPE MANUFACTURER'S WRITTEN INSTRUCTIONS, INCLUDING:
   A. THE CLEANING AND HANDLING OF THE SIGN PANELS AND FRAMING MEMBERS.
   B. THE APPLICATION OF THE ADHESIVE TAPE.
8. WHEN RIVETS ARE USED TO ATTACH FRAMING MEMBERS, INSTALL 2 RIVETS IN EACH END AND THE BALANCE ON 8" MAXIMUM CENTERS.
9. USE 3⁄16" DIAMETER RIVETS CONFORMING TO ALUMINUM ALLOY 6061–T6 FOR COLD DRIVEN RIVETS, OR ALUMINUM ALLOY 6061–T43 FOR HOT DRIVEN RIVETS.
10. THE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES ½" SMALLER IN SIZE.
11. REMOVE AND DISPOSE OF ALL EXISTING SIGNS, POSTS, AND FOUNDATIONS SCHEDULED FOR REPLACEMENT.

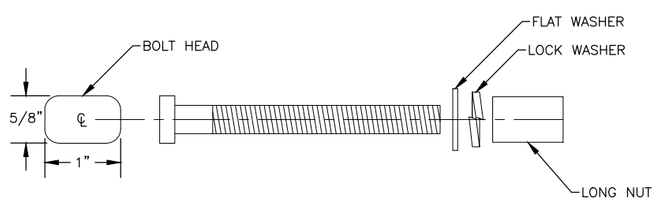
1/27 **WINDBEAM LOCATIONS**
ELEVATION VIEW



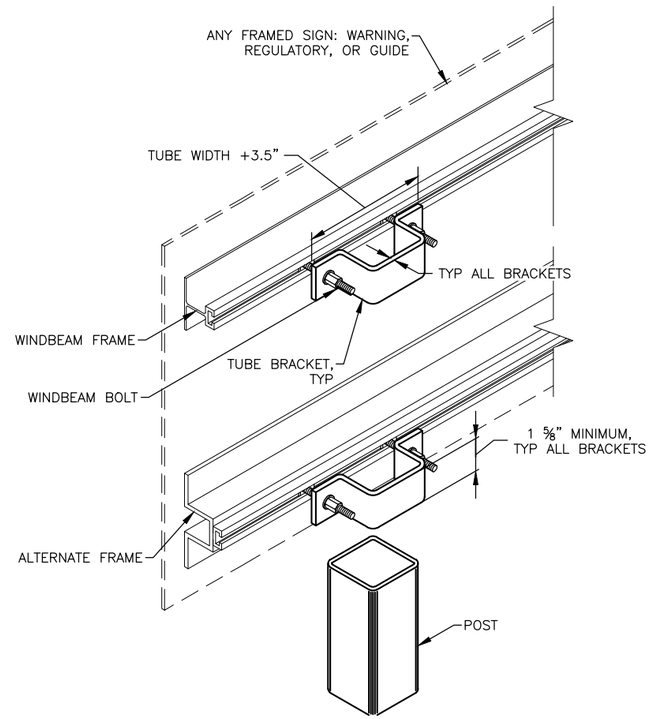
2/27 **SECTION A – A TYPICAL SIGN ATTACHMENT DETAILS AT EACH WINDBEAM**
NTS



3/27 **SECTION B – B WINDBEAM CROSS SECTION**
NTS



4/27 **3/8" WINDBEAM BOLT AND LONG NUT**
NTS



5/27 **3/8" WINDBEAM BOLT AND LONG NUT**
NTS

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Drawn By:	AVA
Checked By:	CJB

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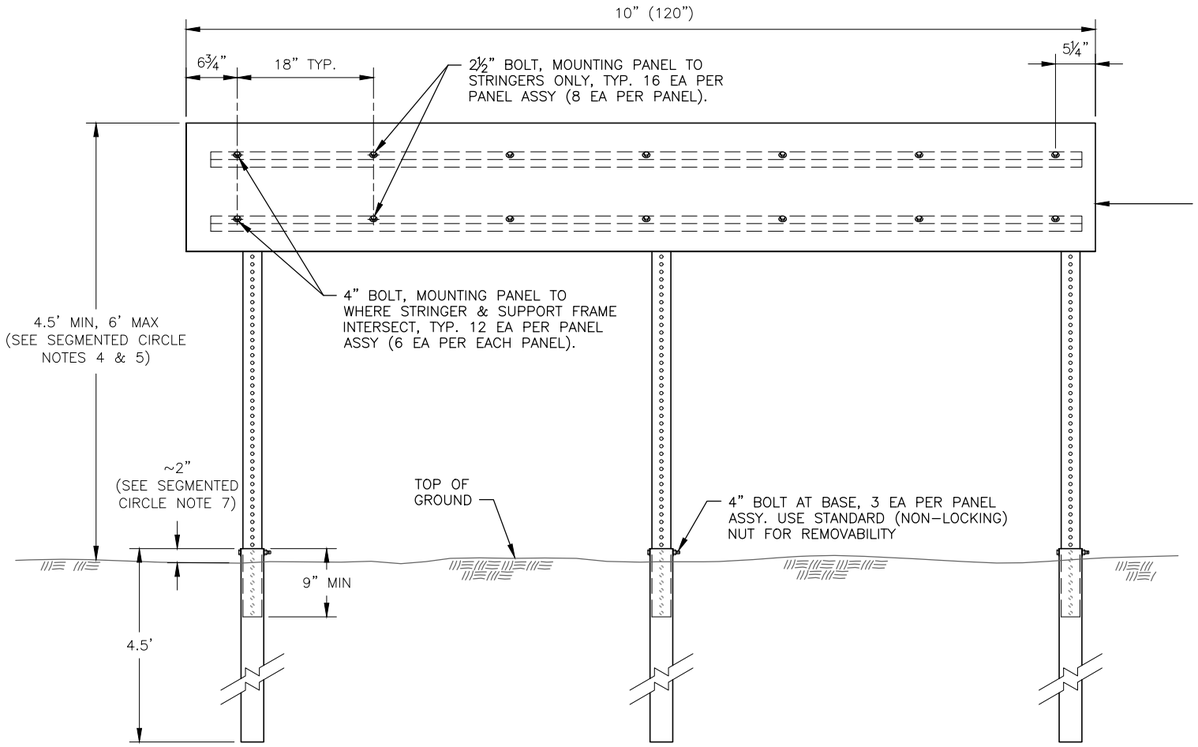
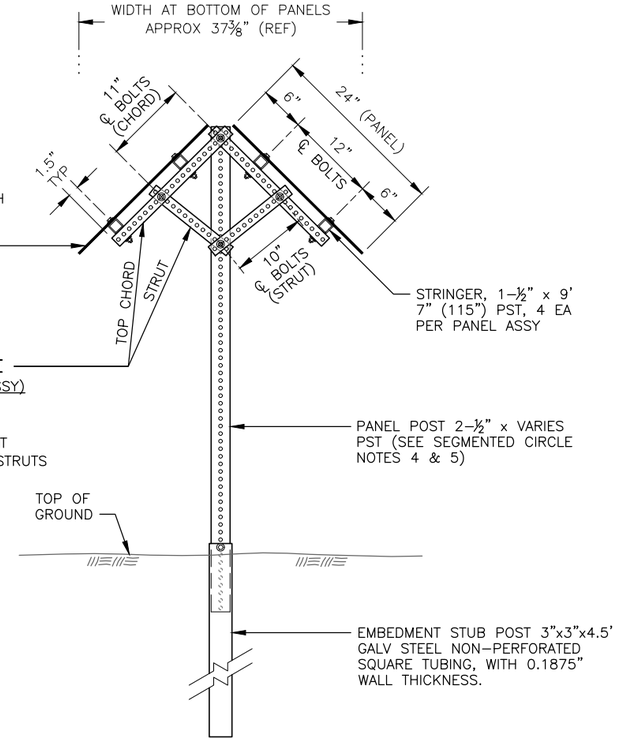
SIGN DETAILS

DATE: 9/24/2025



FRONT VIEW



SIDE VIEW – PANEL POST & SUPPORT FRAME

1/28 SEGMENTED CIRCLE PANEL ASSEMBLY
NTS

GENERAL NOTES:

1. SALVAGE THE EXISTING SEGMENTED CIRCLE AND DELIVER TO THE TAKOTNA AIRPORT SREB. COMPATIBLE COMPONENTS MAY BE RE-USED FOR THE PROJECT WITH THE ENGINEER'S APPROVAL.
2. NEW SIGN PANEL SURFACES SHALL BE SUBSTANTIALLY FREE OF ANY SCRATCHES AND NICKS. AVOID BOLT OVER-TIGHTENING THAT MAY CAUSE RETRO-REFLECTIVE SHEETING TO WRINKLE AROUND BOLT LOCATIONS.
3. PRIOR TO LEAVING SITE VERIFY THAT ALL BOLTS ARE SUFFICIENTLY TIGHTENED.
4. DO NOT STOCKPILE ON SITE UNLESS APPROVED BY ENGINEER. REMOVAL AND DISPOSAL OF EXISTING SEGMENTED CIRCLE MATERIALS IS SUBSIDIARY TO THE P640.020.0000 PAY ITEM.

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised:
Layout Name: 9/24/2025, 12:42 PM
File Path and Name: SEGMENTED CIRCLE DETAILS 1
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PLANS DEVELOPED BY:
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BY	DATE	REVISION

STATE OF ALASKA
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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
SEGMENTED CIRCLE DETAILS (1 OF 2)

DATE: 9/24/2025
SHEET: 28 OF 30

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised:
Layout Name: 9/24/2025, 12:42 PM
File Path and Name: SEGMENTED CIRCLE DETAILS 2
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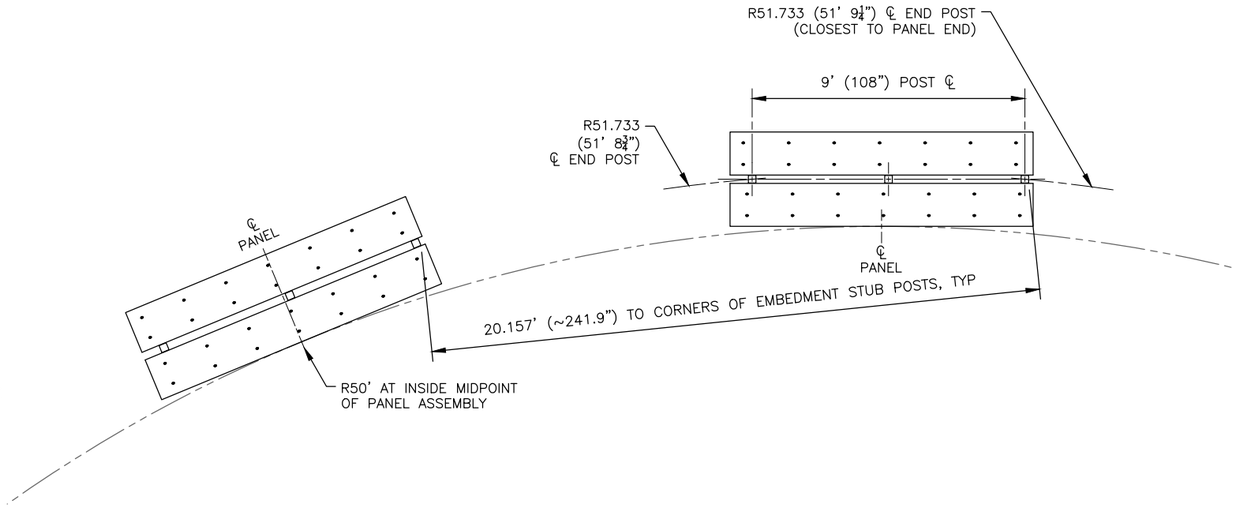
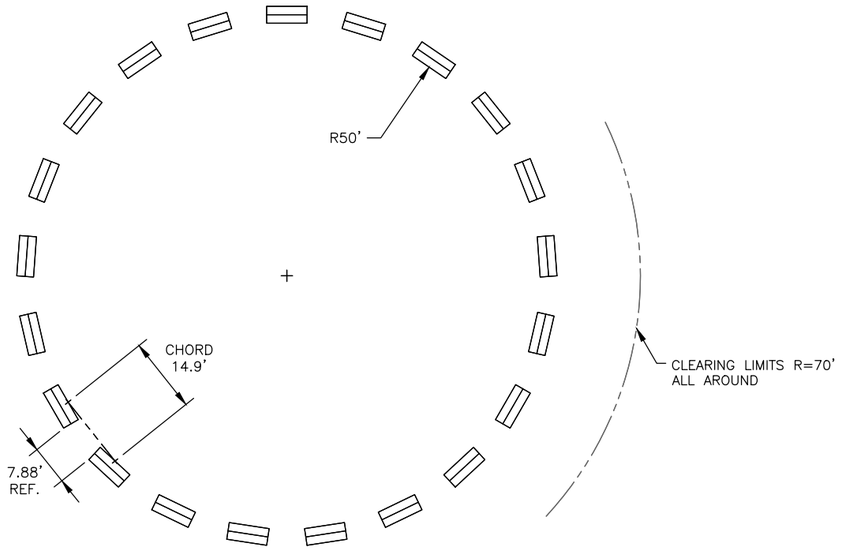
SEGMENTED CIRCLE NOTES:

1. ALL ABOVE GROUND STRUCTURAL MEMBERS OF PANEL ASSEMBLY ARE PST (PERFORATED STEEL TUBING), SIZE AS INDICATED IN DRAWING, IN CONFORMANCE WITH SPECIFICATION P-640-2.2B.
2. ALL BOLTS, NUTS, AND WASHER SHALL CONFORM TO FASTENER SPECIFICATION TABLE INCLUDED IN THIS PLAN SET. ALL BOLTS USED IN PANEL ASSEMBLY SHALL BE ⅜" DIA. x LENGTH CALLED OUT IN PLANS, UNLESS OTHERWISE NOTED. FOR EACH BOLT INCLUDE 1 EA ⅜" ALL METAL LOCK NUT (EXCEPT AT POST BASES), AND 2 EA ⅜" WASHERS (7/16 ID x OD) – ONE AT THE BOLT HEAD AND ONE AT THE NUT.
3. LOCATE UNDERGROUND UTILITIES TO AVOID DISTURBANCE PRIOR TO LAYOUT OF CIRCLE, AND CONSULT WITH THE ENGINEER OR LOCAL M&O REPRESENTATIVE ON A BEST WAY TO ALIGN PANEL ARRANGEMENT SUCH THAT ONE OF THE OPENINGS BETWEEN PANELS MATCHES BEST ROUTE FOR MAINTENANCE EQUIPMENT ACCESS.
4. FINISH HEIGHT OF ALL INSTALLED PANEL ASSEMBLIES COMPRISING A SINGLE SEGMENTED CIRCLE SHALL BE UNIFORM WITH A MAXIMUM VARIANCE OF 6" THROUGHOUT CIRCLE LAYOUT, UNLESS OTHERWISE APPROVED BY THE ENGINEER.
5. THE TERRAIN OF CIRCLE INSTALLATION AREA MAY NOT BE LEVEL, THEREFORE INDIVIDUAL PANEL POST HEIGHTS MUST BE DETERMINED BY THE CONTRACTOR, AND CUT TO LENGTH IN THE FIELD, TO MEET REQUIREMENTS OF NOTE 4.
6. TO FACILITATE THE EASE OF REMOVABILITY OF PANEL ASSEMBLY FROM EMBEDMENT STUB POSTS TO MEET ANY SITE MAINTENANCE NEEDS CONTRACTOR SHALL ENSURE THAT THE INSIDE OF ALL EMBEDMENT STUB POSTS IS CLEAR OF EARTH AND DEBRIS FOR A LENGTH OF AT LEAST 12" TO EXCEED THE LENGTH OF PANEL POST INSERTION.
7. INSTALLATION OF EMBEDMENT STUB POSTS MAY REQUIRE MINOR TRENCHING IF OCCASIONAL ROCK IS ENCOUNTERED. BACKFILL EXCAVATED MATERIAL AND RESTORE LEVEL SURFACE AS APPROVED BY THE ENGINEER. THIS WORK IS SUBSIDIARY TO THE RESPECTIVE P-640 PAY ITEM AT EACH SEGMENTED CIRCLE LOCATION (WHEN MULTIPLE SEGMENTED CIRCLES CONSTRUCTED AS PART OF ONE PROJECT).
8. EMBEDMENT STUB POST HEIGHT OF 2" ABOVE GROUND IS TO ACCOMMODATE HAVING MINIMAL CLEARANCE TO MANIPULATE THE BOLT ABOVE THE GROUND, WHILE ALSO BEING LOW ENOUGH TO BE DRIVE OVER WITH RUBBER TIRES OF EQUIPMENT IF PANEL ASSEMBLY IS REMOVED.
9. DIMENSIONS LABELED "(REF)" ARE FOR INFORMATIONAL PURPOSES ONLY.

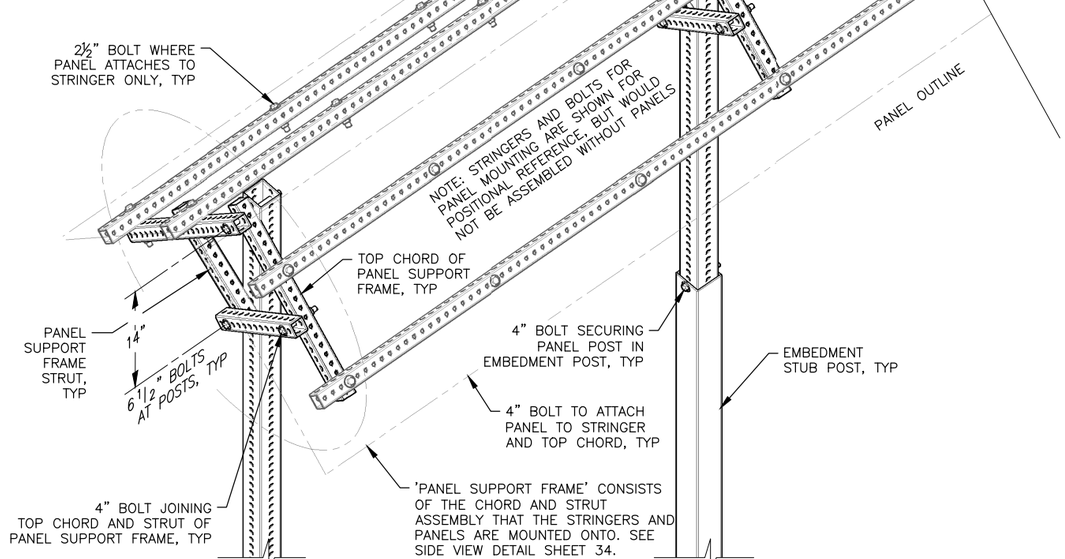
FASTENER SPECIFICATION TABLE		
FASTENER TYPE	STEEL HOT DIPPED GALVANIZED	STAINLESS STEEL
BOLTS	ASTM A 307	ASTM F 593
NUTS & LOCK NUTS	ASTM A 563	ASTM F 594
WASHERS	ASTM F 844	ASTM A 480



1/29 POST PLACEMENT DETAIL
NTS



2/29 SEGMENTED CIRCLE LAYOUT
NTS



3/29 PANEL SUPPORT FRAME ASSEMBLY – 3D DETAIL
NTS

PANEL SUPPORT FRAME ASSEMBLY NOTES:

1. ALL PANEL SUPPORT FRAMES SHALL BE ASSEMBLED THE SAME WAY FOR THE ENTIRE CIRCLE, AS SHOWN IN DETAIL.
2. ALL PANEL SUPPORT FRAMES SHALL FACE THE SAME WAY IN A PANEL ASSEMBLY.
3. BECAUSE THE POSTS ARE NOT CENTERED WITHIN THE PANEL ASSEMBLY, ALL PANEL ASSEMBLIES SHALL MATCH IN DIRECTIONAL ORIENTATION ABOUT THE CIRCLE RADIUS.
4. LEADER NOTES IN THIS DETAIL ARE TO HELP WITH IDENTIFYING PARTS OF THE ASSEMBLY. DETAILS ON SHEET 28 SHALL TAKE PRECEDENCE IN CASE OF DISCREPANCIES.

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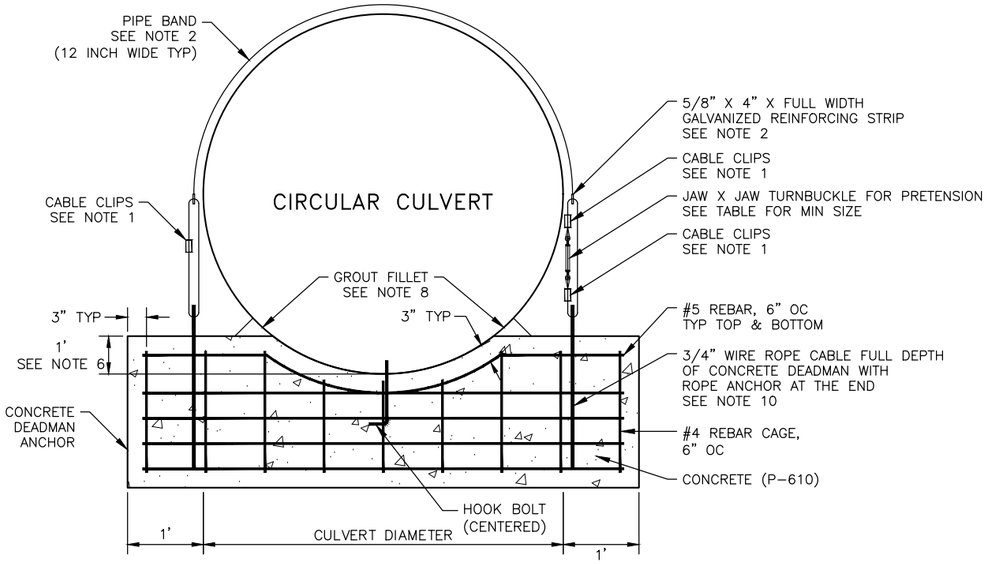
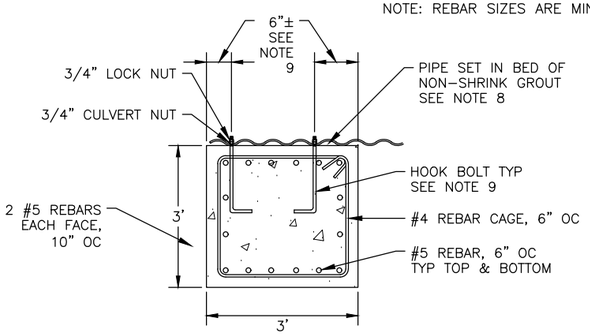
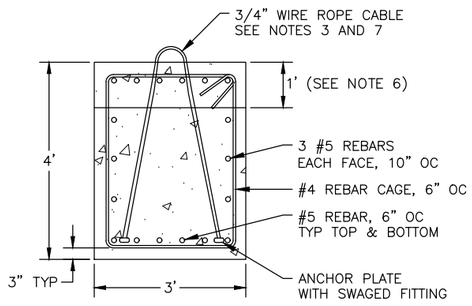
SEGMENTED CIRCLE DETAILS (2 OF 2)

DATE: 9/24/2025

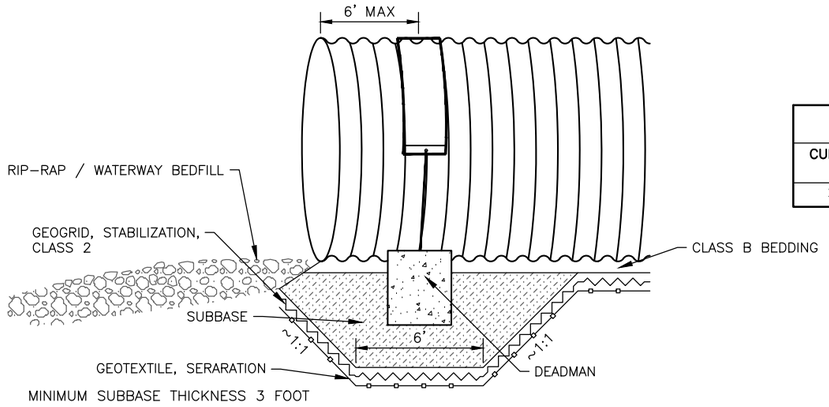


NOTE: REBAR SIZES ARE MINIMUMS

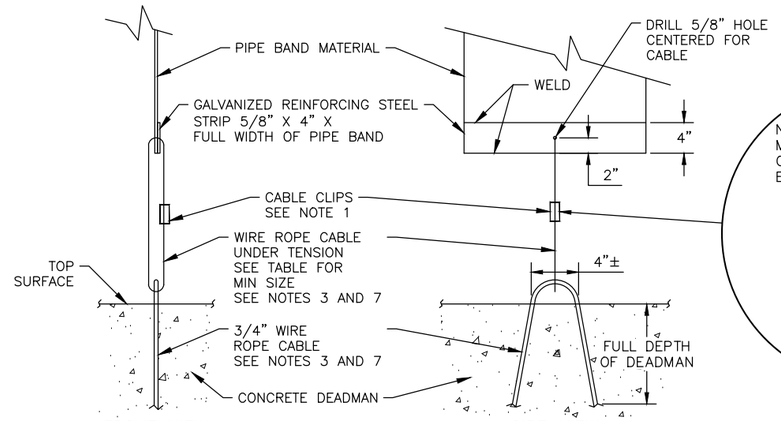




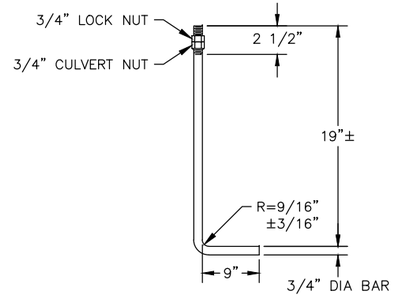
1/30 DEADMAN DETAIL
NTS



2/30 CONCRETE DEADMAN ANCHOR DETAILS
NTS



3/30 PIPE BAND DETAILS
NTS



4/30 HOOK BOLT DETAIL
NTS
SEE NOTE 4

TABLE 1: MINIMUM HARDWARE SIZE

CULVERT DIA/SPAN (FT)	WIRE ROPE DIA. (IN)	TURNBUCKLE DIA. (IN)	MINIMUM WIRE ROPE TURNBACK/SPLICE (IN)	U-BOLT NUT TORQUE (FT-LB)
2.00 TO 6.00	5/8	7/8	5 1/2	30

NOTES:

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

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

2. THE LENGTH OF THE PIPE BANDS SHALL BE A MINIMUM OF HALF THE CIRCUMFERENCE OF THE ROUND CULVERT. THE PIPE BANDS SHALL BE A MINIMUM THICKNESS OF 1/16" GALVANIZED ASTM A1011 SS GRADE 36 OR MINIMUM THICKNESS 0.109" GALVANIZED AASHTO M218. THE REINFORCING STRIP SHALL BE GALVANIZED ASTM A36.

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

4. ALL HARDWARE SHALL BE GALVANIZED TO MEET AASHTO M232

5. CONCRETE IN CONFORMANCE WITH P-610 SHALL BE USED TO CONSTRUCT THE CONCRETE DEADMAN ANCHOR. REINFORCEMENT SHALL BE ASTM A615 GRADE 40, EPOXY COATED.

6. CONCRETE DEADMAN SHALL BE CAST TO CONFORM TO THE OUTER RADIUS OF THE CULVERT.

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

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

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

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised:
Layout Name: 9/24/2025, 12:42 PM
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-Civil Details.dwg DEADMAN ANCHOR DETAIL

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
DEADMAN ANCHOR DETAIL

DATE: 9/24/2025
SHEET: 30 OF 30

LEGEND:

EXISTING	DEMOLITION	NEW	
———	– – –	——/——	2" HDPE CONDUIT. HASH MARKS INDICATE NUMBER OF NEW #8 AWG. 5KV AIRPORT CABLES, TYPE "C", PLUS ONE #6 BARE COPPER GROUND CONDUCTOR.
———	– – –	——//——	2" HDPE CONDUIT IN 4" RSC SLEEVE. HASH MARKS INDICATE NUMBER OF NEW #8 AWG. 5KV AIRPORT CABLES, TYPE "C", PLUS ONE #6 BARE COPPER GROUND CONDUCTOR.
○	⊗	R G	THRESHOLD LIGHT, RED/GREEN
○	⊗	◐	RUNWAY EDGE LIGHT, WHITE/WHITE
Ⓑ	⊗	⊗	TAXIWAY EDGE LIGHT, BLUE
⬡	⬡	⬢	HANDHOLE, L–867
Ⓗ	Ⓗ	■	J–BOX, TYPE II
▱	▱	▰	WIND CONE, L–806 OR L–807
✳	✳	✳	ROTATING BEACON
⅄	⅄	⅄	RADIO CONTROLLER ANTENNA
		▽	3/4" X 10' COPPER COATED GROUND ROD
		RXXX	LIGHT OR HANDHOLE NUMBER "X" – SEE SCHEDULE
		Ⓦ	TEMPORARY RUNWAY EDGE LIGHT
		Ⓑ	TEMPORARY TAXIWAY EDGE LIGHT
		◐	TEMPORARY THRESHOLD LIGHT
⊟	⊟	⊟	OVERHEAD ELECTRIC POLE
—— OHE ——	——— OHE ——— OHE ———	—— OHE ——	OVERHEAD ELECTRIC
—— UGE ——	——— UGE ——— UGE ———	—— UGE ——	UNDERGROUND ELECTRIC
—— UGT ——	——— UGT ——— UGT ———	—— UGT ——	UNDERGROUND TELEPHONE
—— FAA ——	——— FAA ——— FAA ———	—— FAA ——	UNDERGROUND FAA POWER AND COMM

ABBREVIATIONS

AWG	AMERICAN WIRE GAUGE
BCU	BARE COPPER GROUND
C	CONDUIT
CCR	CONSTANT CURRENT REGULATOR
CSPP	CONSTRUCTION SAFETY AND PHASING PLAN
CU	COPPER
DEB	DIRECT EARTH BURY
DEG	DEGREES
EEB	ELECTRICAL EQUIPMENT BUILDING
EES	EARTH ELECTRODE SYSTEM
EMT	ELECTRICAL METALLIC TUBING
ETR	EXISTING TO REMAIN
FAA	FEDERAL AVIATION ADMINISTRATION
FT	FOOT
GND	GROUND
GRN	GREEN
HDPE	HIGH DENSITY POLYETHYLENE
ICC	INDIVIDUAL CONTROL CABINET
IN	INCH
KV	KILOVOLT
KW	KILOWATT
LED	LIGHT EMITTING DIODE
LHA	LIGHT HOUSING ASSEMBLY
LFMC	LIQUIDTIGHT FLEXIBLE METAL CONDUIT
MAX	MAXIMUM
MIN	MINIMUM
MIRL	MEDIUM INTENSITY RUNWAY LIGHT
MTS	MANUAL TRANSFER SWITCH
NEC	NATIONAL ELECTRICAL CODE
NRTL	NATIONALLY RECOGNIZED TESTING LABORATORY
OC	ON CENTER
PAPI	PRECISION APPROACH PATH INDICATOR
PCT	PERCENT
PE	PHOTO–ELECTRIC CONTROLLER
PR	PAIR
PRI	PRIMARY
PVC	POLYVINYL CHLORIDE
REIL	RUNWAY END IDENTIFIER LIGHT
RSC	RIGID STEEL CONDUIT
RW	RUNWAY
SCO	SERIES CUT OUT
SHLD	SHIELDED
SREB	SNOW REMOVAL EQUIPMENT BUILDING
SS	STAINLESS STEEL
STA	STATION
TH	THRESHOLD
TOC	TOP OF CONCRETE
TW	TAXIWAY
TYP	TYPICAL
UON	UNLESS OTHERWISE NOTED
XFMR	TRANSFORMER

DEMOLITION GENERAL NOTES:

1. DECOMMISSIONED CONDUCTORS AND CONDUIT SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. ABANDONED WIRING AND CONDUIT RUNS EXPOSED DURING EXCAVATION SHALL BE REMOVED AND DISPOSED OF BY THE CONTRACTOR. THIS WORK SHALL BE SUBSIDIARY TO EXCAVATION AND NO SEPARATE PAYMENT WILL BE MADE.
2. THE CONTRACTOR SHALL RESTORE GRADE AND FINISH SURFACES DISTURBED BY THE REMOVAL OF STRUCTURES. THIS WORK SHALL BE SUBSIDIARY TO THE ITEM BEING REMOVED AND NO SEPARATE PAYMENT WILL BE MADE.
3. DEMOLISHED FIXTURES, TRANSFORMERS, REGULATOR, BEACON, AND WIND CONE, SHALL BE SALVAGED AND OFFERED TO THE DEPARTMENT. EQUIPMENT DEEMED OF NO SALVAGE VALUE BY THE DEPARTMENT, AND ALL OTHER EQUIPMENT AND MATERIALS NOT LISTED ABOVE, INCLUDING LIGHT BASES, HANDHOLES, WIND CONE FOUNDATIONS, PAPI/REIL FOUNDATIONS, WIRE, GROUND RODS, GROUND CONDUCTORS, AND RACEWAYS, SHALL BECOME THE PROPERTY OF THE CONTRACTOR AND SHALL BE DISPOSED OF IN ACCORDANCE WITH FEDERAL, STATE, AND LOCAL STATUTES. DISPOSAL SHALL NOT TAKE PLACE IN TAKOTNA.
4. REMOVAL OF EXISTING CONDUCTORS AND GROUND WIRE SHALL BE SUBSIDIARY TO THE REMOVAL OF THE ASSOCIATED EQUIPMENT AND NO SEPARATE PAYMENT WILL BE MADE.
5. REMOVAL OF HANDHOLES, UNLESS NOTED OTHERWISE, SHALL BE PAID UNDER ITEM L125.070.0000.
6. REMOVAL OF REFLECTIVE MARKERS AND CONES SHALL BE SUBSIDIARY TO ITEM L125.070.0000 AND NO SEPARATE PAYMENT WILL BE MADE.
7. LOCATE EXISTING UNDERGROUND UTILITIES PRIOR TO COMMENCING WORK. IN ADDITION TO CALLING THE 811 CALL CENTER, THE CONTRACTOR SHALL LOCATE UTILITIES THAT FALL OUTSIDE THE SCOPE OF THE 811 CALL CENTER, INCLUDING RUNWAY AND TAXIWAY LIGHTING CIRCUITS; FEEDERS TO THE SREB, EEB, BEACON, WIND CONE, ETC. THE CONTRACTOR SHALL ALSO LOCATE AND PROTECT EXISTING FAA UTILITIES THAT ARE TO REMAIN.

SHEET NOTES:

(1) REMOVE RUNWAY EDGE LIGHTS, THRESHOLD LIGHTS, TAXIWAY LIGHTS, LIGHT BASES, HANDHOLES, TRANSFORMERS, CONDUIT, AND UNUSED WIRING.

(2) ALL WORK REQUIRED TO RELOCATE EEB AND TO PUT IT BACK IN SERVICE SHALL BE SUBSIDIARY TO L109.060.0000. THIS INCLUDES:

1. DISCONNECT/REMOVE ELECTRIC CABLES AND CONDUIT AS INDICATED FOR EEB.
2. PROVIDE NEW CABLES AND CONDUIT AS INDICATED FOR EEB. RECONNECT TO EXISTING METER.
3. PROVIDE POWER FOR TEMPORARY RUNWAY LIGHTING.
4. OUTAGES SHALL BE LIMITED TO ONE SHIFT OF WORK OR AS APPROVED. ALL OUTAGES SHALL BE COORDINATED WITH THE ENGINEER.
5. FIELD VERIFY SREB METER BASE GROUNDING AND BONDING IS COMPLIANT WITH NEC. PROVIDE GROUNDING AND BONDING. PER DETAIL 3/E19 IF NOT PRESENT.

(3) PROVIDE NEW L861T FIXTURE, TRANSFORMER, BASE PLATE, FRANGIBLE COUPLING, MOUNTING BOLTS WITH SEALING WASHERS AND NEOPRENE GASKET. COAT FRANGIBLE AND BOLT THREADS WITH MARINE GRADE ANTI–SEIZE LUBRICANT. SEE DETAIL 1/E10. PAID UNDER PAY ITEM L125.040.0000.

(4) PROVIDE NEW L861 OR L861E FIXTURE, TRANSFORMER, BASE PLATE, FRANGIBLE COUPLING, MOUNTING BOLTS WITH SEALING WASHERS AND NEOPRENE GASKET. COAT FRANGIBLE AND BOLT THREADS WITH MARINE GRADE ANTI–SEIZE LUBRICANT. SEE DETAIL 1/E10. PAID UNDER PAY ITEM L125.030.0000.

GENERAL NOTES:

1. CONDUITS AND LIGHT BASES SHALL BE INSTALLED PRIOR TO PLACEMENT OF FINISH COURSE.
2. REMOVE POWER FROM LIGHTING CIRCUITS DURING ASSOCIATED WORK, RESTORE POWER WHEN WORK IS COMPLETE.
3. AIRFIELD LIGHTING CABLE SHALL BE #8 AWG, 5kV, FAA TYPE "C" AIRPORT CABLE.
4. CONNECT HDPE CONDUIT TO DISSIMILAR CONDUIT USING A LISTED TRANSITION FITTING. HDPE TO HDPE CONNECTIONS SHALL BE BUTT WELDED.
5. PROVIDE LIGHT BASES WITH HUB CONFIGURATIONS TO ACCOMMODATE THE LAYOUT AS SHOWN IN THE PLANS. ROUTE CONDUIT FROM POINT TO POINT, IN A STRAIGHT LINE, EXCEPT AS REQUIRED TO AVOID AN OBSTRUCTION.
6. ALL BOLTS, NUTS, AND THREADED SURFACES SHALL BE COATED WITH ANTI–SEIZE LUBRICANT. ANTI–SEIZE MUST MEET THE REQUIREMENTS OF L–125–2.22.
7. HANDHOLE LOCATIONS SHALL BE FIELD ADJUSTED AS APPROVED BY THE ENGINEER.
8. CONDUIT ROUTING SHOWN FOR CLARITY. ROUTE CONDUITS ON SHOULDER. CONDUITS THAT RUN IN CLOSE PROXIMITY MAY BE INSTALLED IN SAME TRENCH. SEE TRENCH DETAIL, 2/E11.
9. PROVIDE LIGHTNING PROTECTION COUNTERPOISE FOR ALL RUNWAY AND TAXIWAY LIGHTING CIRCUITS PER DETAIL 5/E11. #6 BARE COPPER WIRE IS PAID UNDER ITEM L108.030.0006, GROUND RODS ARE PAID UNDER ITEM L108.070.0000.
10. CONTRACTOR SHALL PROVIDE A LIST OF PROPOSED SPARE PARTS AND THE COST FOR EACH CATEGORY TO THE ENGINEER FOR REVIEW PRIOR TO PLACING THE ORDER FOR THE PARTS. QUANTITIES SHALL BE REDUCED IF NECESSARY UNTIL THE COSTS ARE WITHIN THE LIMITS OF THE FAA REQUIREMENTS. SEE SECTION L–125 FOR ADDITIONAL INFORMATION.

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

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LEGEND, NOTES, AND ABBREVIATIONS

DATE: 9/24/2025
SHEET: E01 OF E21

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Date Revised:
Layout Name: E01 9/24/2025, 11:14 AM
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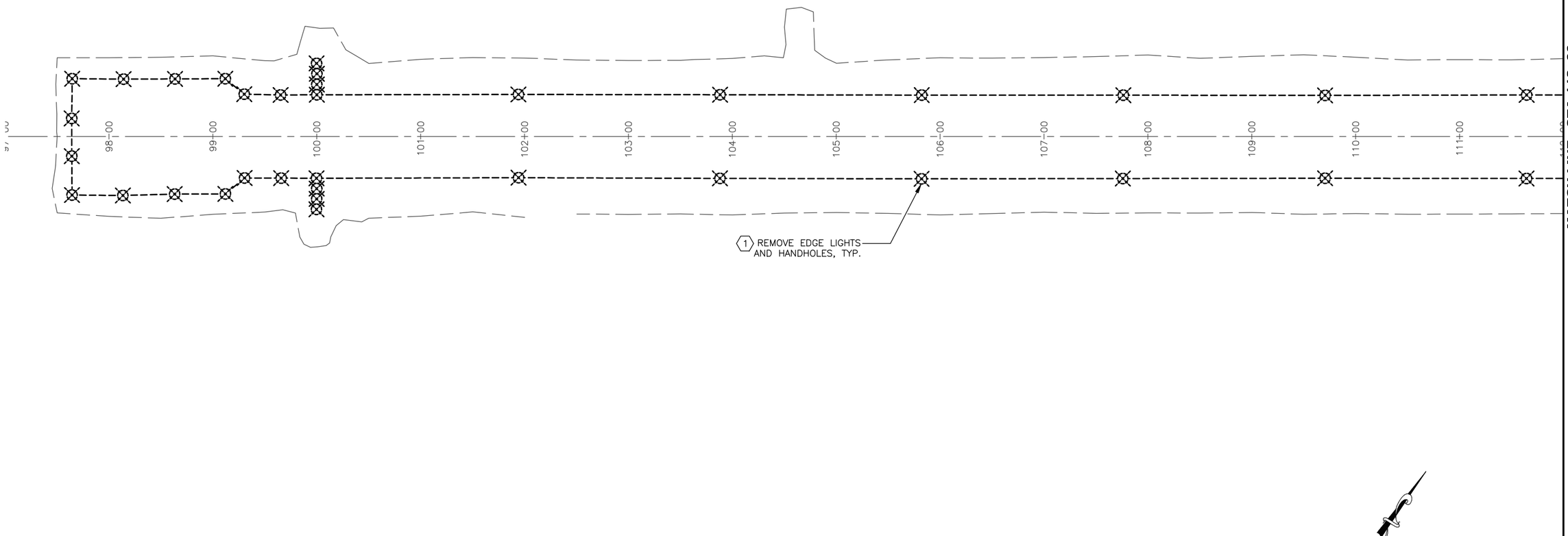

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GRAPHIC SCALE: 1" = 50'

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TAKOTNA AIRPORT
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AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
DEMOLITION LIGHTING PLAN
STA 97+00 TO STA 112+00

DATE: 9/24/2025

SHEET: E02 OF E21

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Drawn By:	AD
Checked By:	EC

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Layout Name:	E03
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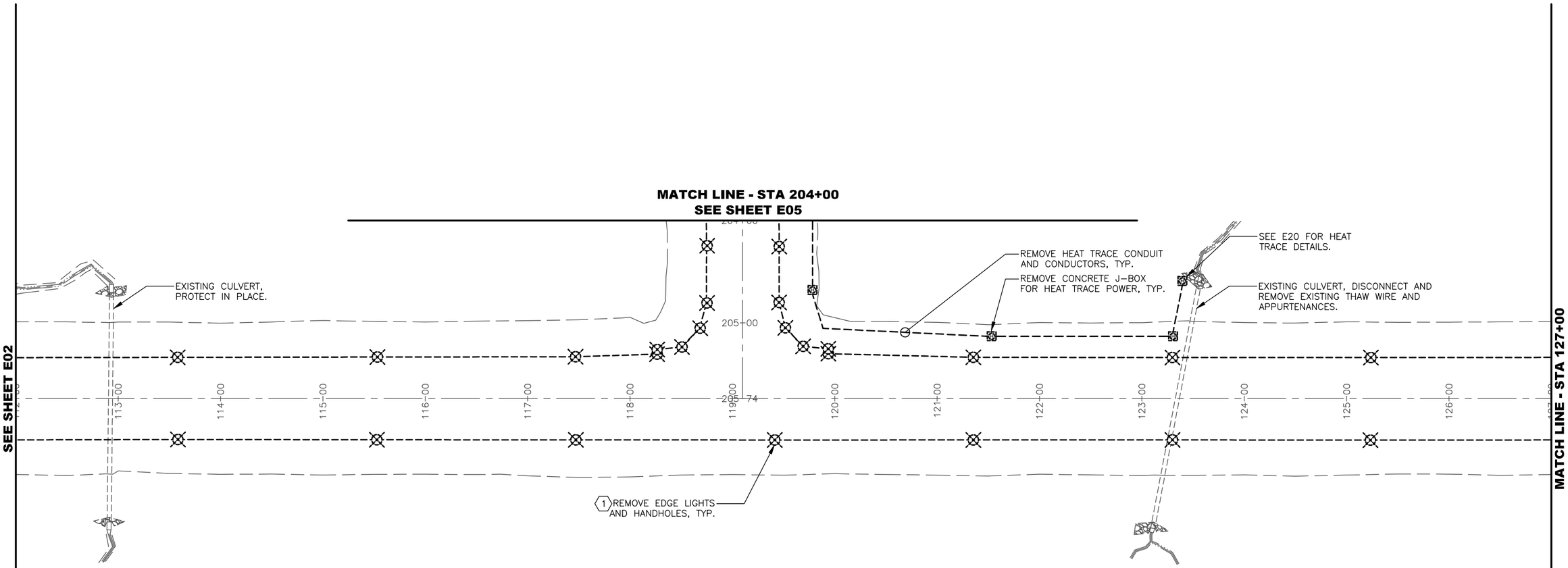
MATCH LINE - STA 112+00
SEE SHEET E02

MATCH LINE - STA 204+00
SEE SHEET E05

MATCH LINE - STA 127+00
SEE SHEET E04



50' 0 50' 100' 150'

GRAPHIC SCALE: 1" = 50'

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SUITE 101
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(907) 274-2622
CERT. OF AUTH. NO. AECC578

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

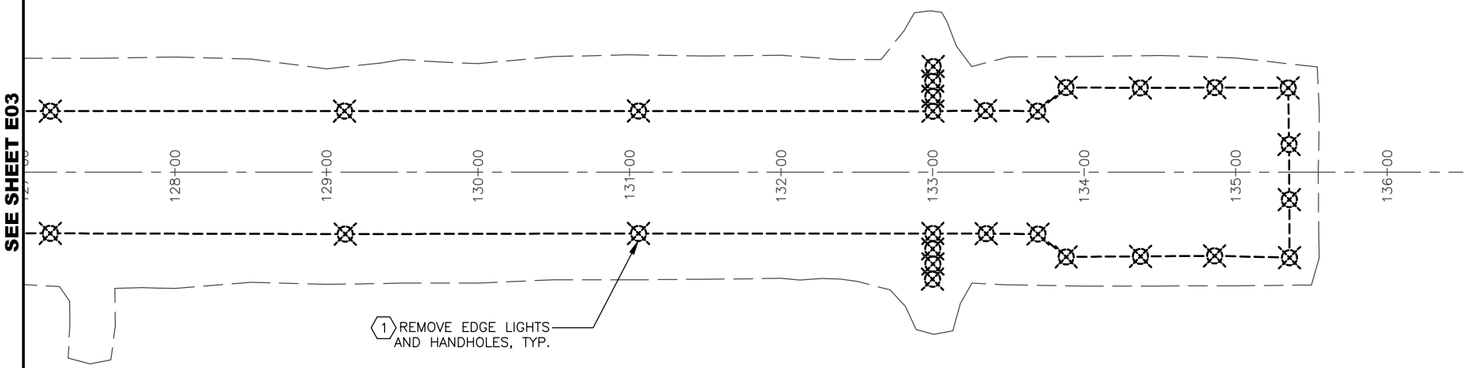
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
DEMOLITION LIGHTING PLAN
STA 112+00 TO STA 127+00

DATE: 9/24/2025

SHEET: E03 OF E21

Designed By:	DH
Drawn By:	AD
Checked By:	EC

MATCH LINE - STA 127+00
SEE SHEET E03



50' 0 50' 100' 150'
GRAPHIC SCALE: 1" = 50'

Date Revised:	9/24/2025, 11:14 AM
Layout Name:	E04
File Path and Name:	Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TGT_LTG_DEMO.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
SUITE 101
EAGLE RIVER, AK 99577
(907) 274-2622
CERT. OF AUTH. NO. AECC578

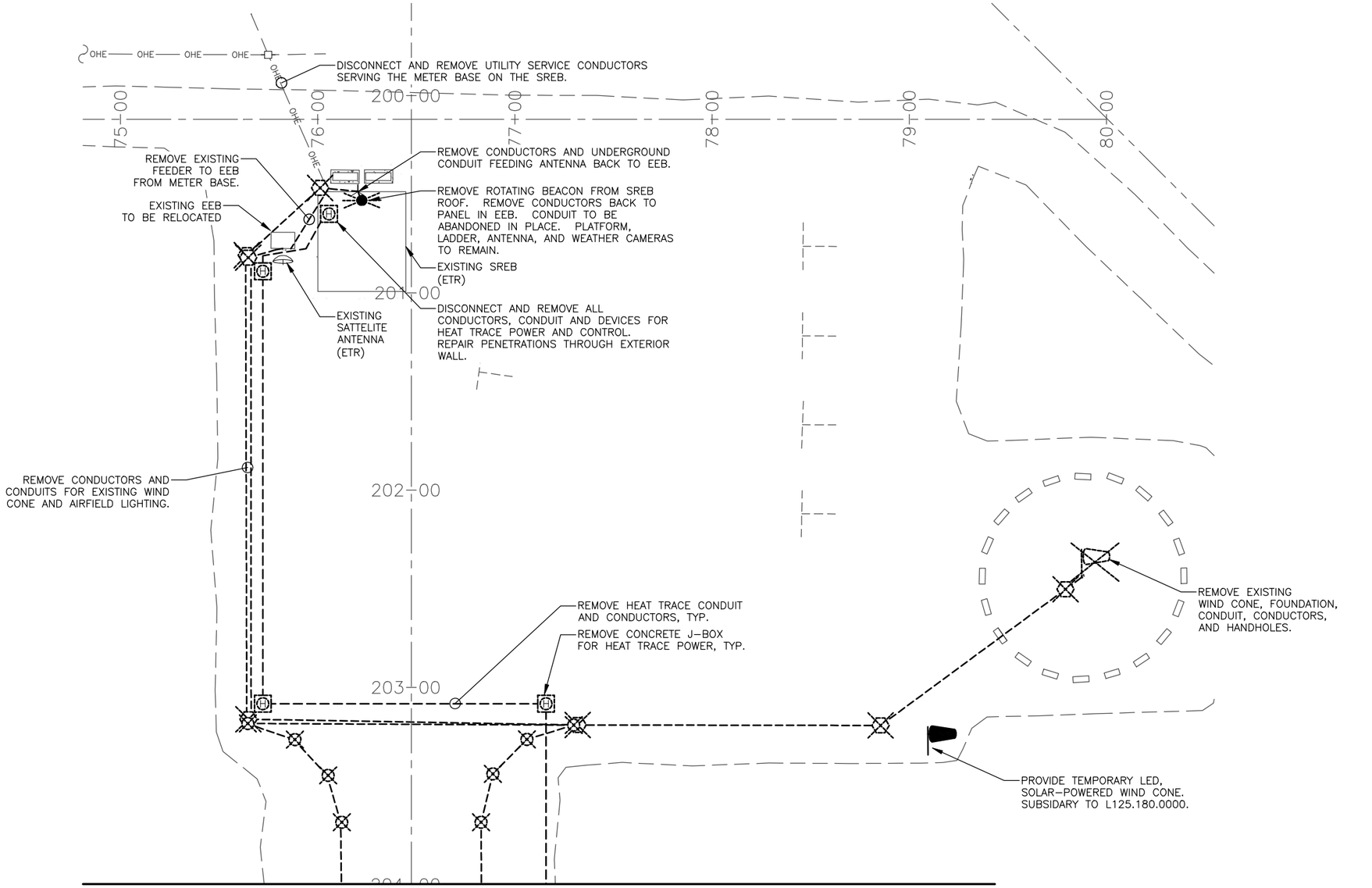
BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
DEMOLITION LIGHTING PLAN
STA 127+00 TO STA 136+50

DATE: 9/24/2025

SHEET: E04 OF E21



1 / E05 ENLARGED APRON DEMOLITION PLAN
1" = 30'

30' 0 30' 60' 90'
GRAPHIC SCALE: 1" = 30'

Designed By:	DH
Drawn By:	AD
Checked By:	EC
Date Revised:	9/24/2025, 11:14 AM
Layout Name:	E05
File Path and Name:	Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DEMO.dwg

STATE OF ALASKA 49TH
EDWARD W. CARLSON
EE-9354
REGISTERED PROFESSIONAL ENGINEER

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16515 CENTERFIELD DRIVE,
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STATE OF ALASKA
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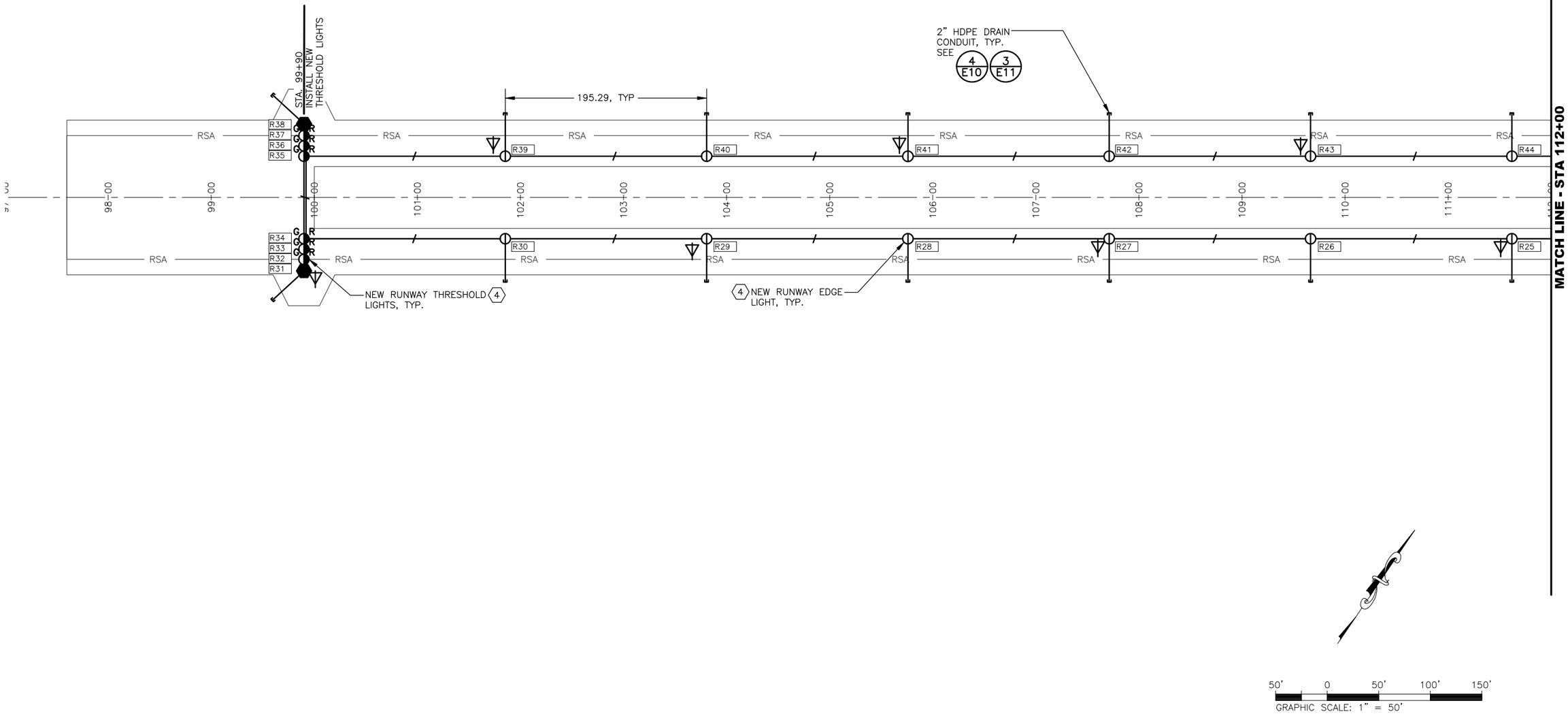
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ENLARGED APRON DEMOLITION PLAN

DATE: 9/24/2025
SHEET: E05 OF E21



50' 0 50' 100' 150'

GRAPHIC SCALE: 1" = 50'

Designed By:	DH
Drawn By:	AD
Checked By:	EC
Date Revised:	9/24/2025, 11:14 AM
Layout Name:	E06
File Path and Name:	Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TGT_LTG_NEW.dwg

STATE OF ALASKA
49 TH
EDWARD W. CARLSON
EE-9354
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
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EAGLE RIVER, AK 99577
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STATE OF ALASKA
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CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
NEW LIGHTING PLAN
STA 97+00 TO STA 112+00

DATE: 9/24/2025

SHEET: E06 OF E21

MATCH LINE - STA 204+00
SEE SHEET E09

2" HDPE DRAIN CONDUIT, TYP. SEE 4/E10 3/E11

195.29, TYP

72.50, TYP

NEW TAXIWAY EDGE LIGHT, TYP. (3)

EXISTING CULVERT, PROTECT IN PLACE.

(4) NEW RUNWAY EDGE LIGHT, TYP.

EXISTING CULVERT, PROTECT IN PLACE.

PROVIDE NEW HEAT TRACE CABLE IN EXISTING CONDUIT PER DETAILS ON SHEET E20. GENERATOR CONNECTION TO BE LOCATED ON OUT FLOW END OF CULVERT.

EXISTING CULVERT P-18. SEE CIVIL FOR CULVERT INFORMATION.

MATCH LINE - STA 112+00
SEE SHEET E06

MATCH LINE - STA 127+00
SEE SHEET E08

50' 0 50' 100' 150'
GRAPHIC SCALE: 1" = 50'

Designed By:	DH
Drawn By:	AD
Checked By:	EC
Date Revised:	9/24/2025, 11:14 AM
Layout Name:	E07
File Path and Name:	Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_NEW.dwg

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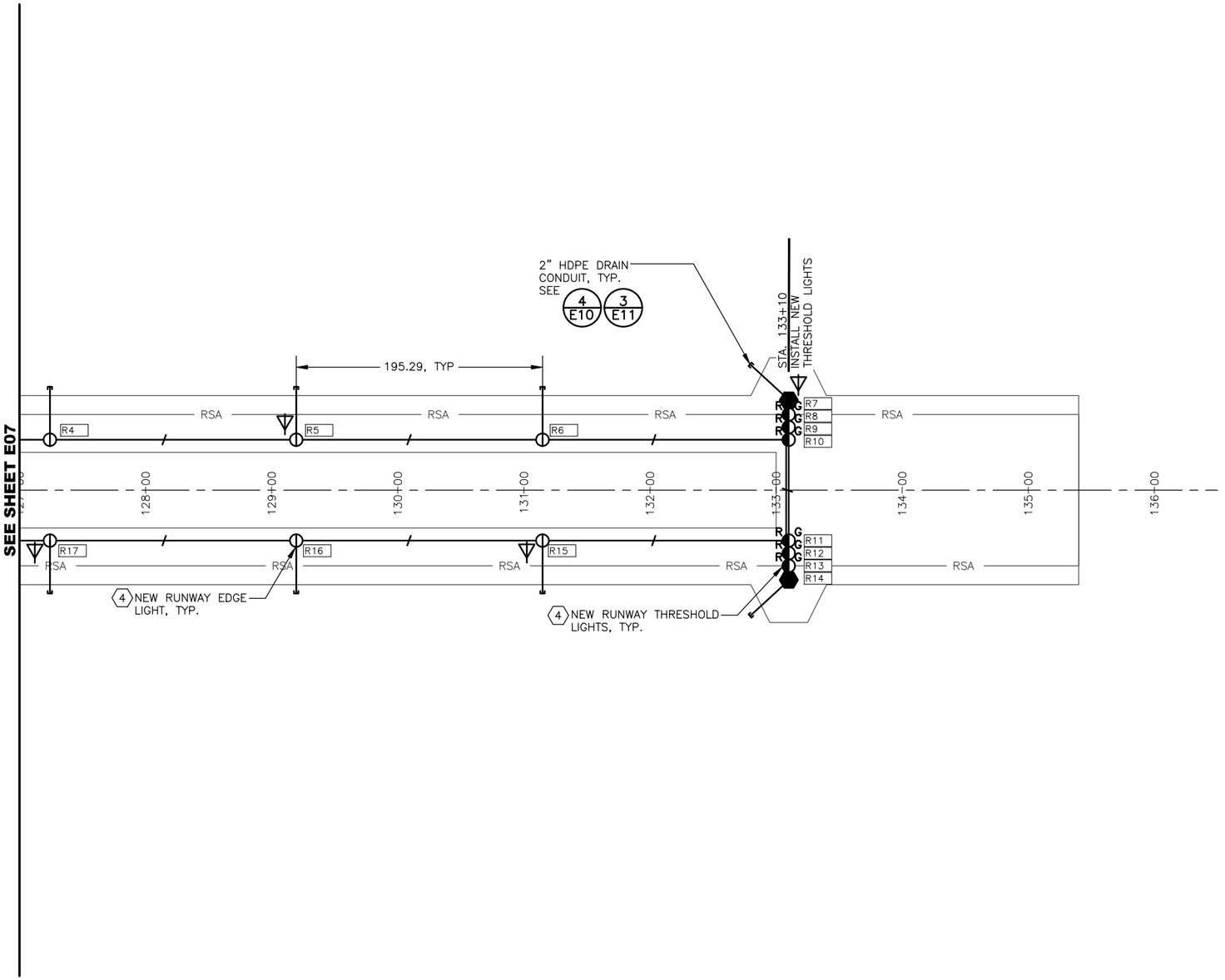
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
NEW LIGHTING PLAN
STA 112+00 TO STA 127+00

DATE: 9/24/2025

SHEET: E07 OF E21



50' 0 50' 100' 150'

GRAPHIC SCALE: 1" = 50'

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E08
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_NEW.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
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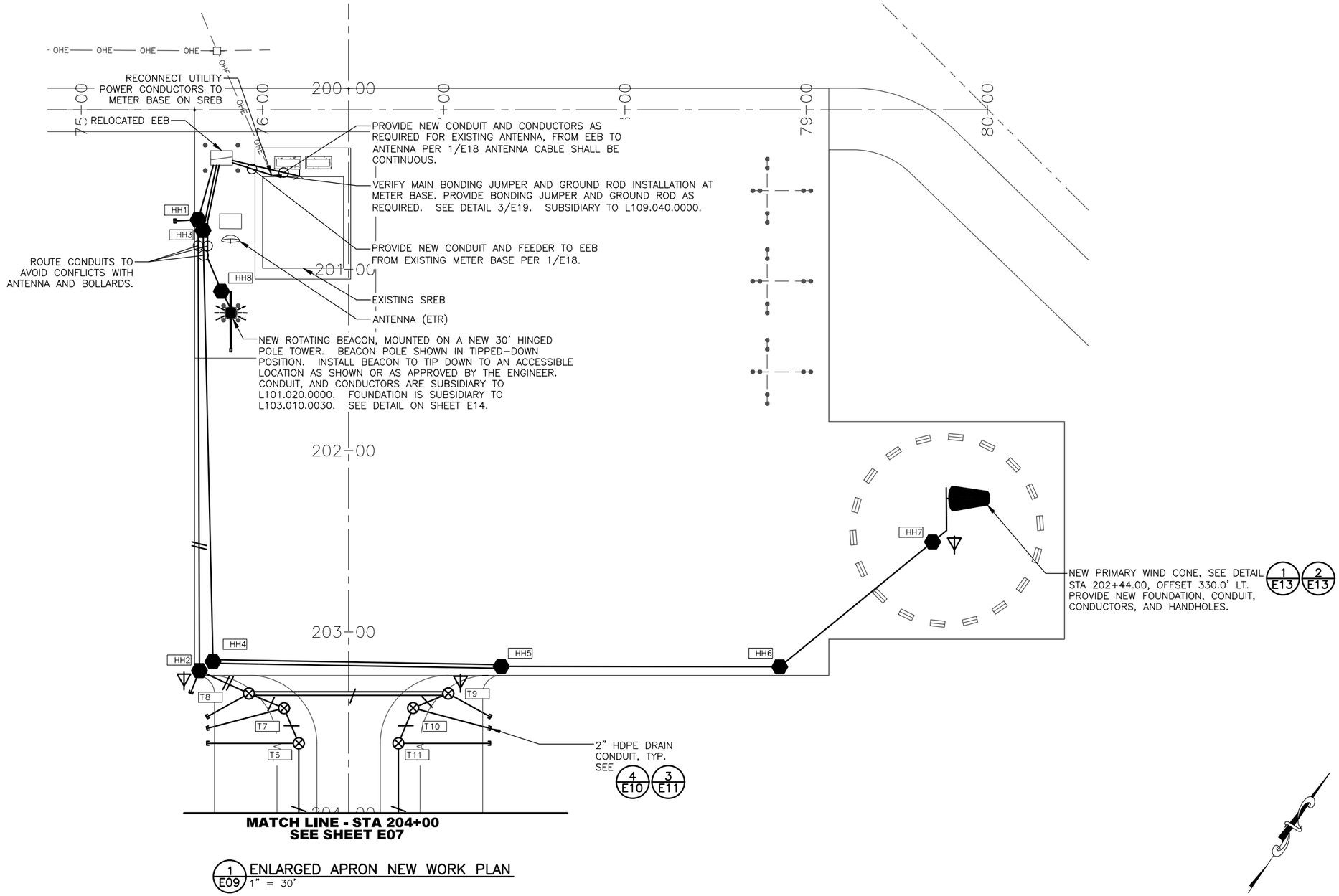
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
NEW LIGHTING PLAN
STA 127+00 TO STA 136+50

DATE: 9/24/2025

SHEET: E08 OF E21



1/E09 ENLARGED APRON NEW WORK PLAN
1" = 30'

30' 0 30' 60' 90'
GRAPHIC SCALE: 1" = 30'

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised:
Layout Name: E09
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_NEW.dwg
9/24/2025, 11:14 AM

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
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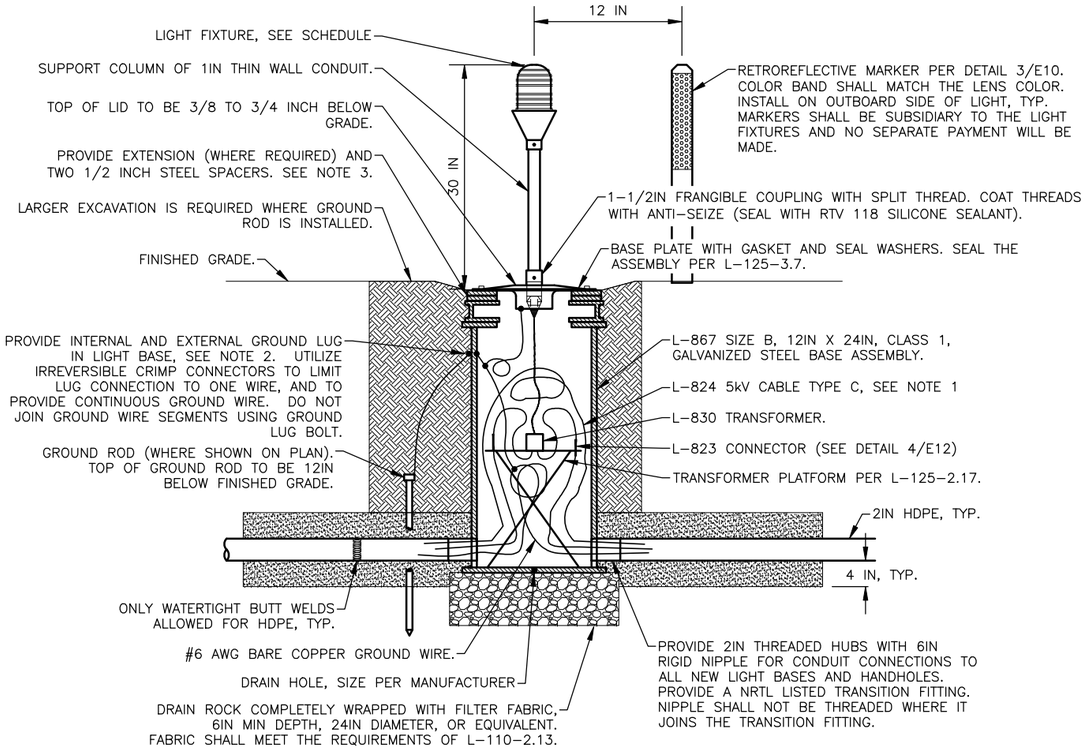
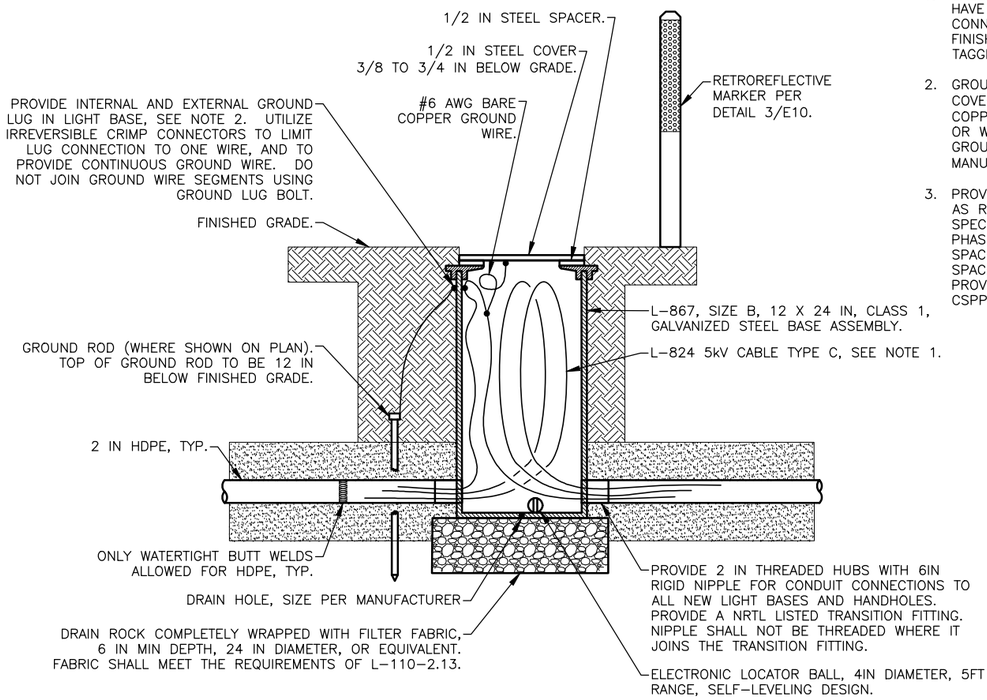
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ENLARGED APRON NEW WORK PLAN

DATE: 9/24/2025
SHEET: E09 OF E21

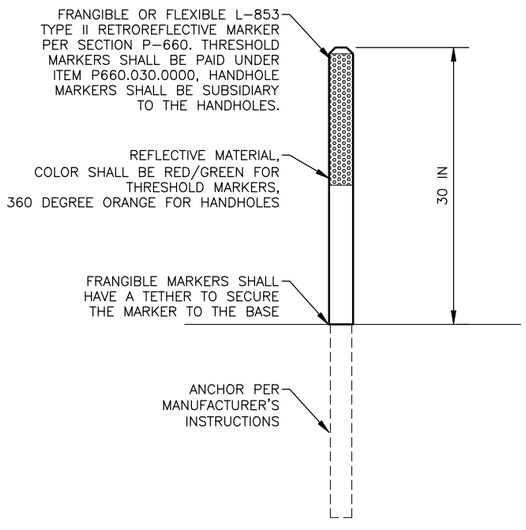




DETAIL 1 & 2 NOTES:

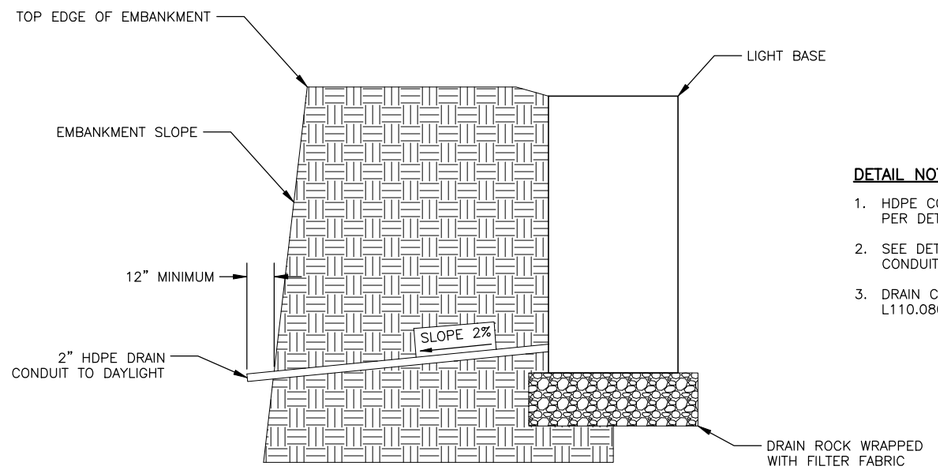
1. CABLES AND GROUND STRAPS SHALL HAVE SUFFICIENT SLACK TO ALLOW CONNECTORS TO BE DRAWN 36 IN ABOVE FINISHED GRADE. ALL CABLES SHALL BE TAGGED 6 IN FROM CONNECTOR.
2. GROUND FIXTURES AND HANDHOLE COVERS WITH MINIMUM #6 AWG STRANDED COPPER, GREEN INSULATED CONDUCTOR OR WITH EQUIVALENT COPPER BRAIDED GROUND STRAP. BOND TO FIXTURE PER MANUFACTURER'S INSTRUCTIONS.
3. PROVIDE 2 IN EXTENSION AND SPACERS AS REQUIRED TO BRING LIGHT UP TO SPECIFIED MOUNTING HEIGHT PER PHASING PLANS. MAXIMUM OF THREE SPACERS. SEAL EXTENSION AND SPACERS WITH SILICONE SEALANT. PROVIDE GASKET FOR BASEPLATE. SEE CSPP FOR ADDITIONAL INFORMATION.

1 E10 STEEL L-867 BASE MOUNTED LIGHT DETAIL
NTS



3 E10 RETROREFLECTIVE MARKER DETAIL
NTS

2 E10 STEEL L-867 HANDHOLE DETAIL
NTS



DETAIL NOTES:

1. HDPE CONNECTION TO LIGHT BASE SHALL BE PER DETAIL 1/E10.
2. SEE DETAIL 3/E11 FOR PLAN VIEW OF CONDUIT DRAIN.
3. DRAIN CONDUITS SHALL BE PAID UNDER L110.080.1002.

4 E10 CONDUIT DRAIN SECTION VIEW
NTS

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

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STATE OF ALASKA
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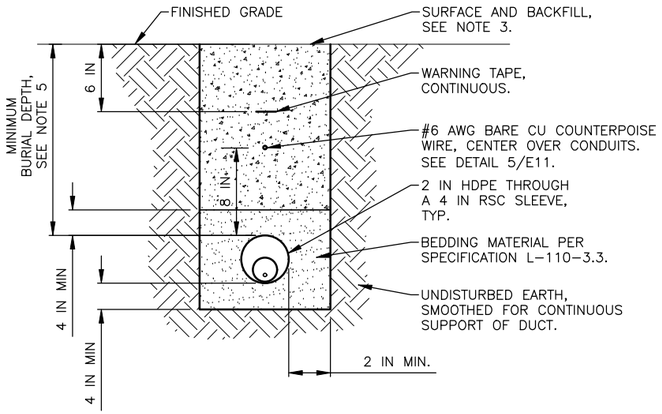
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

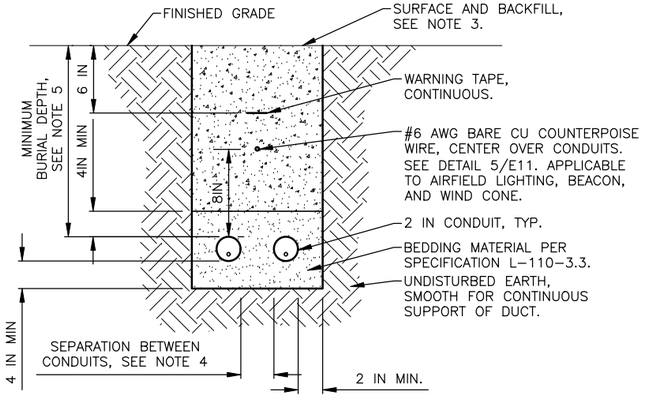
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
LIGHT BASE AND HANDHOLE DETAILS

DATE: 9/24/2025
SHEET: E10 OF E21

Designed By: DH
Drawn By: AD
Checked By: EC
Date Revised:
Layout Name: E10
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg 9/24/2025, 11:14 AM



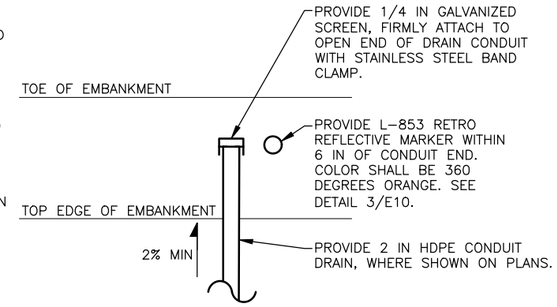
1 E11 CONDUIT CROSSING DETAIL
NTS



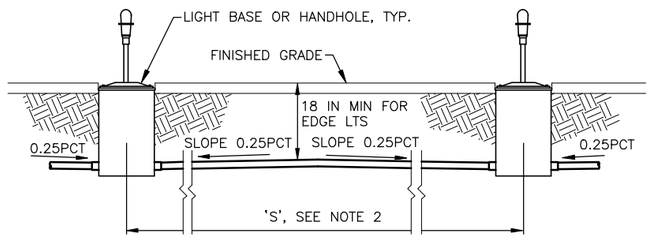
2 E11 TRENCH DETAIL
NTS

NOTES FOR DETAILS 1 AND 2:

1. NUMBER OF CONDUITS PER TRENCH TO BE DETERMINED IN FIELD (2 SHOWN). WIDTH OF TRENCH PER SPECIFICATION L-110.
2. INSTALL NEW LIGHT BASES AND CONDUITS PRIOR TO PLACEMENT OF SURFACE COARSE.
3. IN AREAS OF NEW CONSTRUCTION, SEE CIVIL FOR SURFACING AND BACKFILL. IN EXISTING AREAS, MATCH EXISTING SURFACE AND BACKFILL.
4. SEPARATION BETWEEN CONDUITS SHALL BE AS FOLLOWS. UTILIZE COMMERCIALLY AVAILABLE DUCT SPACERS, 5'-0" O.C., TO MAINTAIN SEPARATION.
   - BETWEEN LIGHTING CONDUITS – 4 IN MIN.
   - BETWEEN SYSTEMS OF DIFFERENT VOLTAGES – 12 IN MIN.
5. MINIMUM BURIAL DEPTH SHALL BE AS FOLLOWS:
   - AIRPORT LIGHTING, BEACON, AND WIND CONE CONDUITS: 18IN
   - ALL OTHER CONDUITS: 30 IN OR AS INDICATED
   - UTILITY DISTRIBUTION/SERVICE CONDUITS: 48IN
6. PROVIDE TWO RUNS OF WARNING TAPE AND COUNTERPOISE WIRE IF WIDTH OF DUCTBANK IS OVER 36 IN WIDE.
7. 4 IN RSC SLEEVE SHALL EXTEND 3'-0" OUTSIDE STRUCTURAL SECTION OF AIRFIELD EMBANKMENT.



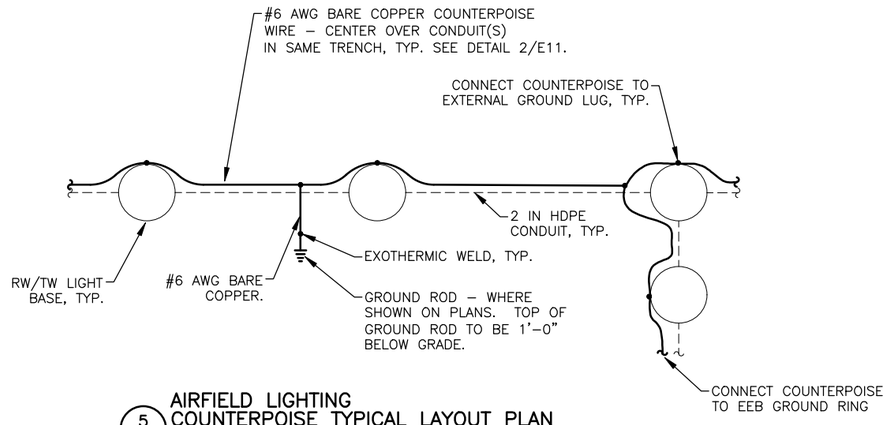
3 E11 CONDUIT DRAIN PLAN VIEW
NTS



DETAIL NOTES:

1. CONDUIT SHALL BE INSTALLED WITH CROWN TO DRAIN TO LIGHT BASES AS SHOWN.
2. IF 'S' IS LESS THAN 20'-0" T, OR IF 0.25PCT SLOPE CAN BE MAINTAINED IN ONE DIRECTION DUE TO SLOPE OF GRADE, LAY CONDUIT STRAIGHT WITHOUT CROWN BETWEEN BASES/HANDHOLES.

4 E11 TYPICAL INTERCONNECTION DETAIL
NTS



AIRFIELD LIGHTING
5 E11 COUNTERPOISE TYPICAL LAYOUT PLAN
NTS

Designed By: DH
Drawn By: AD
Checked By: EC
Date Revised: 9/24/2025, 11:14 AM
Layout Name: E11
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
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STATE OF ALASKA
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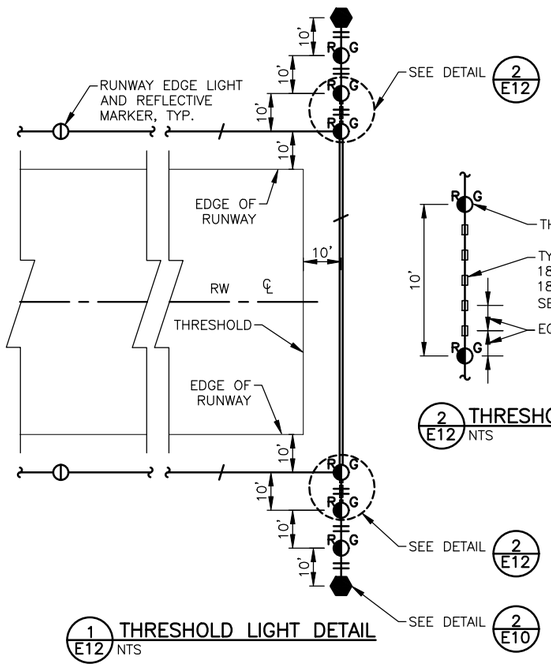
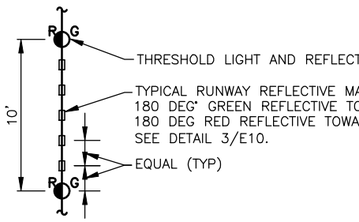
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TRENCH, COUNTERPOISE, AND CONDUIT DRAIN DETAILS

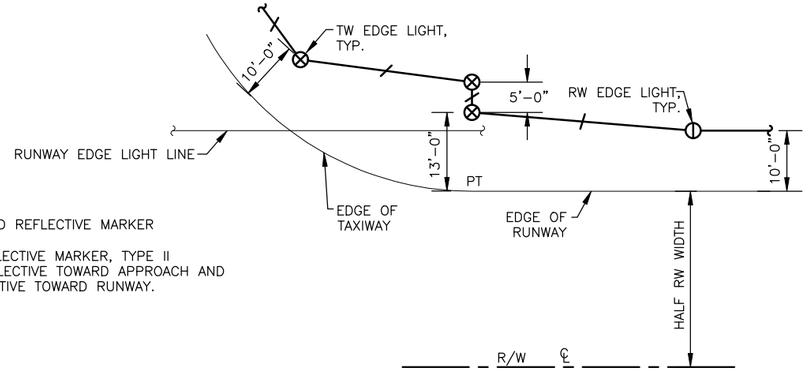
DATE: 9/24/2025
SHEET: E11 OF E21



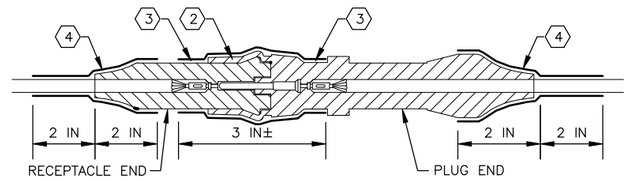
1/E12 THRESHOLD LIGHT DETAIL
NTS



2/E12 THRESHOLD MARKER DETAIL
NTS

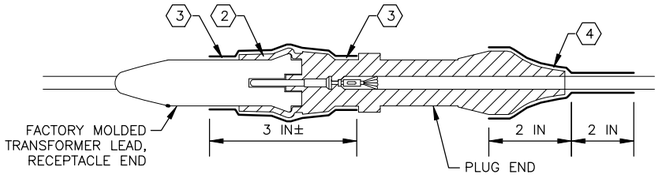


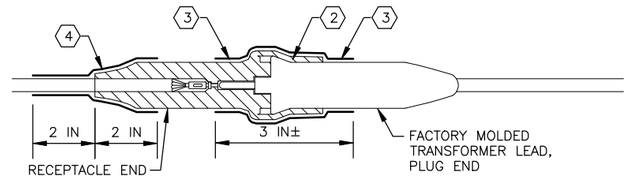
3/E12 TW ENTRANCE/EXIT LIGHT DETAIL – RADIUS
NTS



TYPE B

FOR SPLICES FOR USE AT TEST POINTS, JUNCTION OF HOMERUN WITH LOOP CIRCUITS, AND SPLICES IN HOMERUN CABLES





TYPE C

FOR SPLICES AT ISOLATION TRANSFORMERS

4/E12 L-823 CONNECTOR DETAILS
NTS

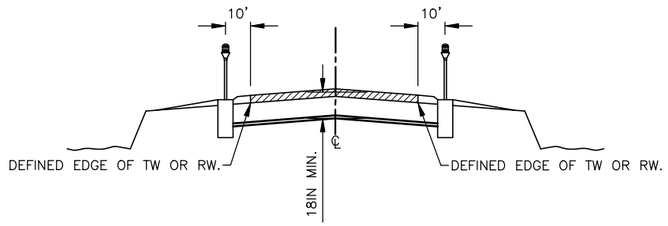
NOTES FOR DETAIL 4:

1. CABLE MUST MEET SPECIFICATION L-824. INSIDE DIAMETER OF CONNECTOR MUST PROPERLY MATCH THE OUTSIDE DIAMETER OF CABLE. CONNECTOR MUST BE SUPPLIED TO MATCH CABLE PER MANUFACTURER'S INSTRUCTIONS.

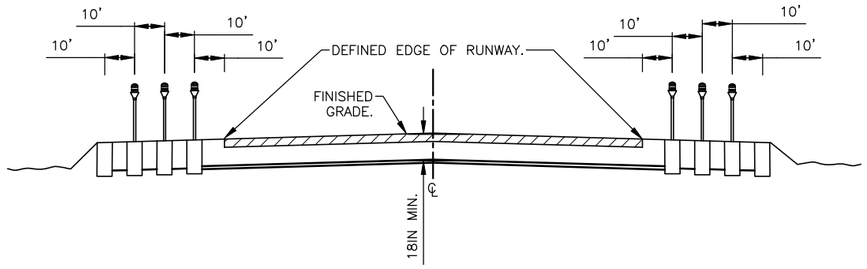
(2) L-823 CONNECTOR MUST HAVE FACTORY-MOLDED SEALING FLAP. PULL SEALING FLAP ACROSS CONNECTOR INTERFACE. REMOVE SEALING FLAP FROM RECEPTACLE CONNECTOR FOR TYPE B CONNECTIONS.

(3) WRAP CONNECTOR INTERFACE WITH A MINIMUM OF ONE LAYER RUBBER TAPE AND ONE LAYER PLASTIC TAPE, EACH LAYER ONE-HALF LAPPED. EXTEND TAPE TO A FLAT SECTION OF CONNECTOR BODY TO ACHIEVE A GOOD CONTACT SEAL, APPROXIMATELY 3" OF TOTAL WRAP AREA.

(4) L-823 CONNECTOR MUST HAVE TAPERED STRAIN RELIEF AT CABLE ENTRY. WRAP CABLE ENTRY POINT OF FIELD-INSTALLED CONNECTOR WITH A MINIMUM OF ONE LAYER RUBBER TAPE AND ONE LAYER PLASTIC TAPE, EACH LAYER ONE-HALF LAPPED, EXTENDING AT LEAST 2" ONTO CABLE AND CONNECTOR.



TAXIWAY OR RUNWAY



RUNWAY THRESHOLD

5/E12 LIGHTING SECTIONS
NTS

STATE OF ALASKA 49TH
EDWARD W. CARLSON
EE-9364
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
LIGHTING AND CONNECTOR DETAILS

DATE: 9/24/2025

SHEET: E12 OF E21

Designed By: DH
Drawn By: AD
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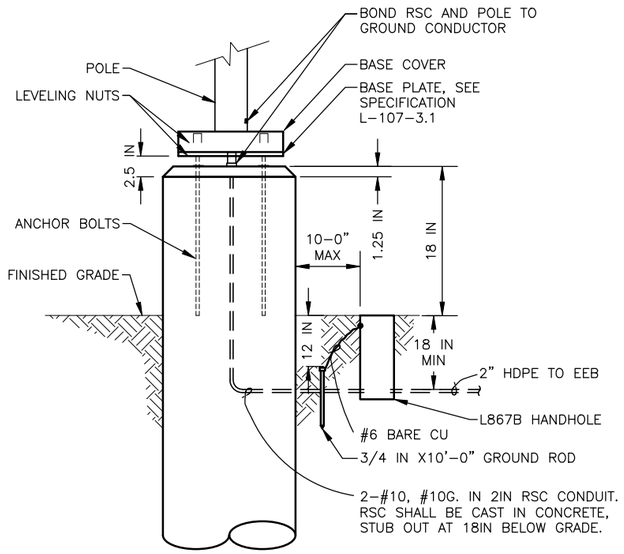
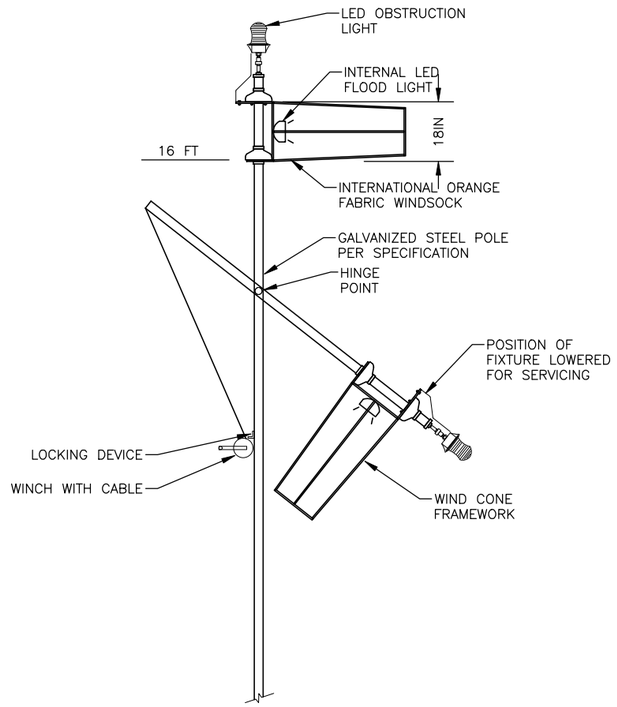
Date Revised: 9/24/2025, 11:14 AM
Layout Name: E12
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg



NOTES:

1. PROVIDE STRUCTURAL FOUNDATION PER SECTION L-107.
2. VERIFY ANCHOR BOLT SIZE, BOLT CIRCLE, AND FOUNDATION SIZE WITH MANUFACTURER'S SHOP DRAWINGS.
3. WIND CONE, FOUNDATION, CONDUIT AND WIRING TO THE FIRST HANDHOLE (WITHIN 10 FT OF WIND CONE), SHALL BE SUBSIDIARY TO L107.010.0008.

1 / E13 PRIMARY WIND CONE FOUNDATION DETAIL
NTS



NOTES:

1. PRIMARY WIND CONE: L-807, SIZE 1, INTERNALLY LIGHTED, LED, 120V.
2. PROVIDE MARINE TREATED, POWDER COATED FINISH, STAINLESS STEEL WINCH, STAINLESS STEEL AIRCRAFT CABLE, STAINLESS STEEL HARDWARE, AND STAINLESS STEEL BEARINGS.

2 / E13 PRIMARY WIND CONE DETAIL
NTS

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised:
Layout Name: E13
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TGT_LTG_DETL.dwg
9/24/2025, 11:14 AM

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

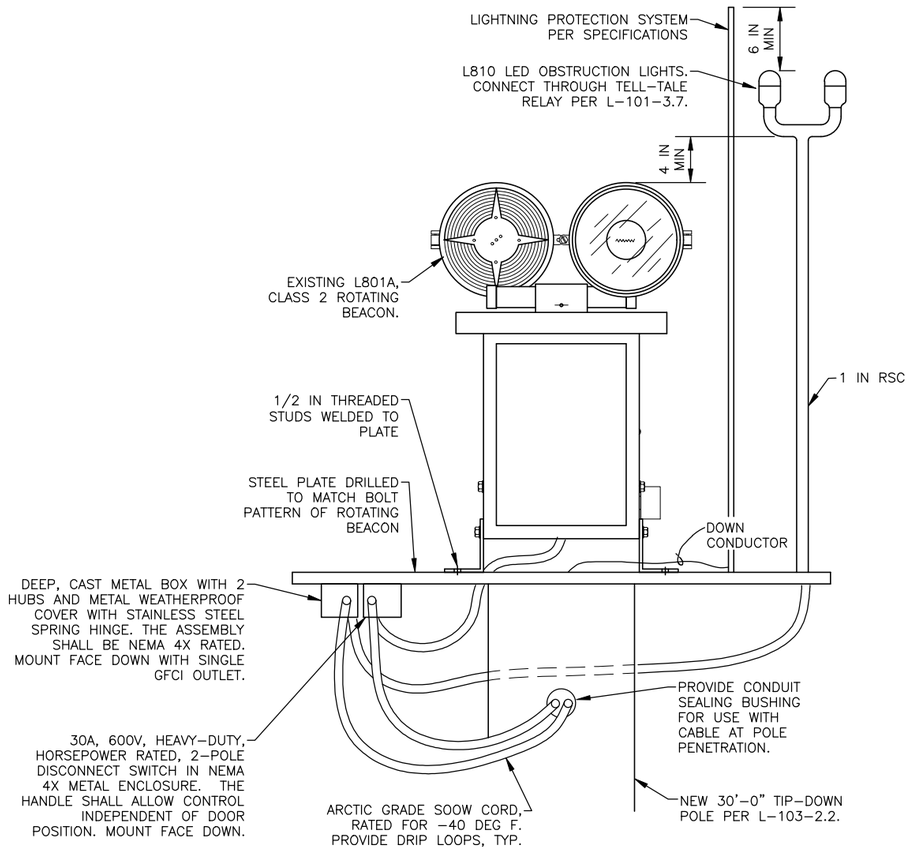
PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
SUITE 101
EAGLE RIVER, AK 99577
(907) 274-2622
CERT. OF AUTH. NO. AECC578

BY	DATE	REVISION

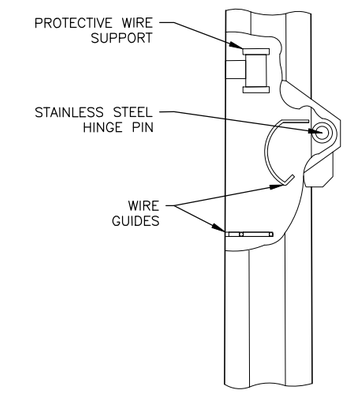
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
WIND CONE DETAILS

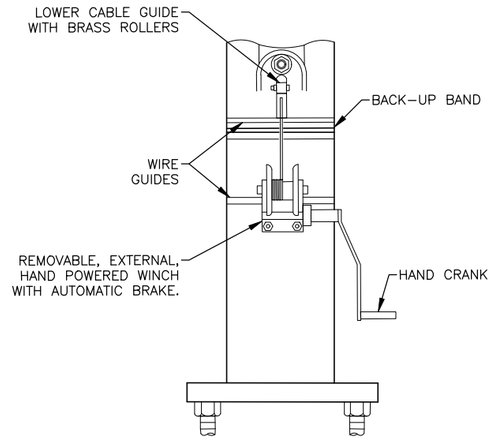
DATE: 9/24/2025
SHEET: E13 OF E21



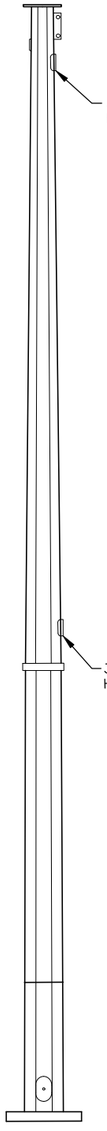
1 E14 ROTATING BEACON MOUNTING DETAIL
NTS



HINGE



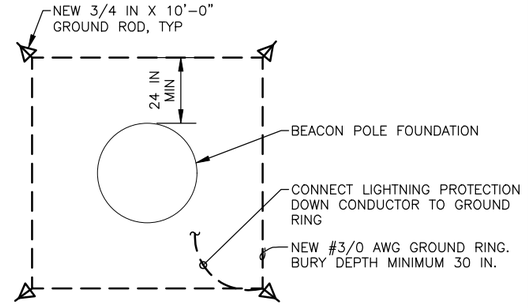
BASE



NOTES:

1. PROVIDE STRUCTURAL FOUNDATION PER SECTION L-103. PROVIDE 2 IN RSC CONDUIT EMBEDDED IN FOUNDATION. CONDUIT SHALL ENTER THE FOUNDATION HORIZONTALLY AT 18 IN BELOW GRADE, AND TERMINATE AT TOP OF CONCRETE, CENTERED UNDER BEACON TOWER.
2. VERIFY ANCHOR BOLT SIZE, BOLT CIRCLE, AND FOUNDATION SIZE WITH MANUFACTURER'S SHOP DRAWINGS.

2 E14 HINGED POLE BEACON TOWER DETAIL
NTS



3 E14 BEACON TOWER GROUND RING DETAIL
NTS

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E14
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
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16515 CENTERFIELD DRIVE,
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(907) 274-2622
CERT. OF AUTH. NO. AECC578

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PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
ROTATING BEACON DETAILS

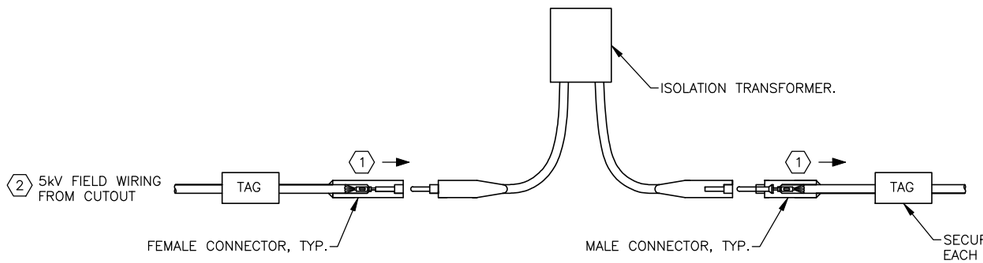
DATE: 9/24/2025
SHEET: E14 OF E21

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E15
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

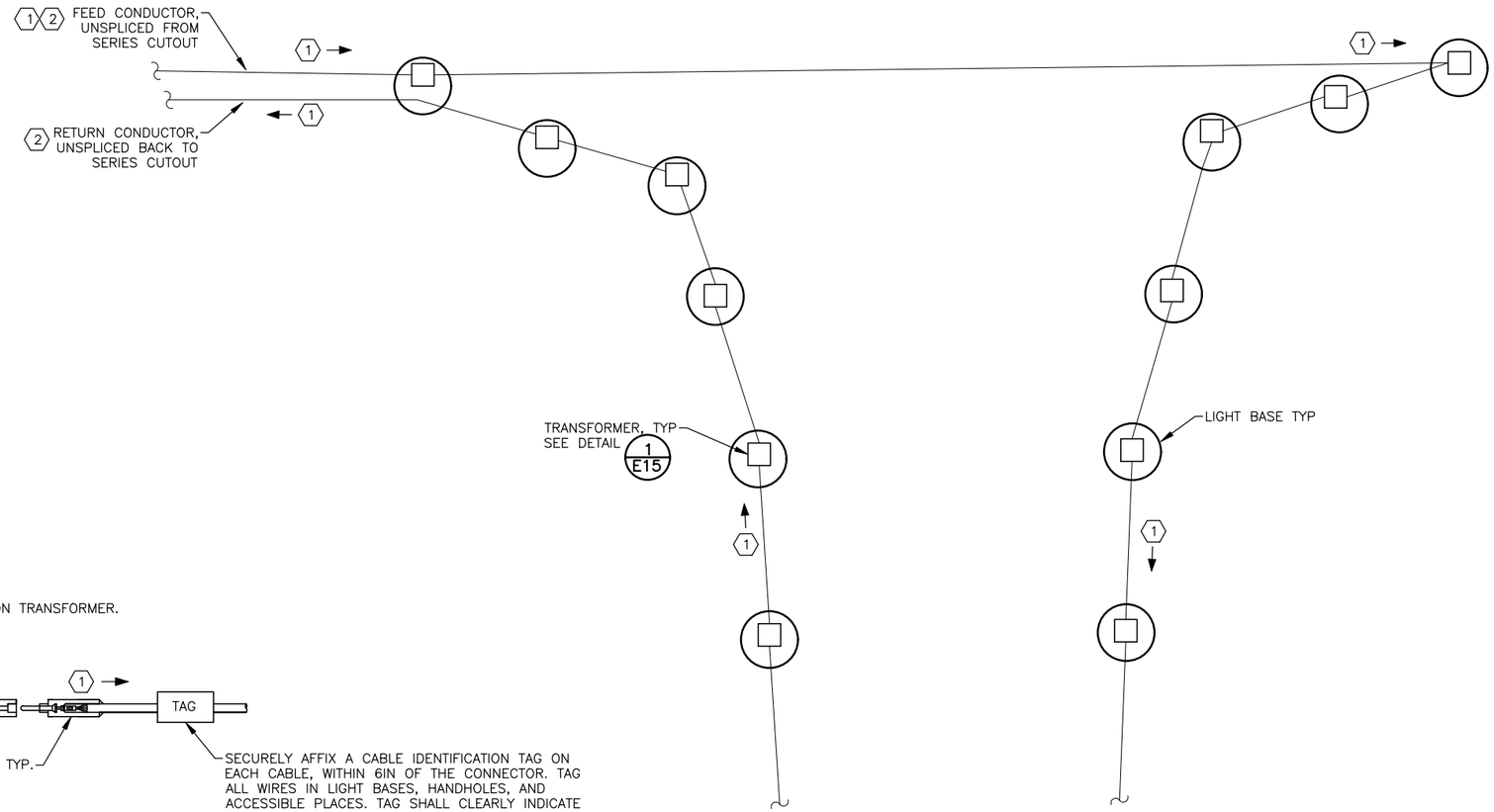
SHEET NOTES:

1. ARRANGE THE LIGHTING CIRCUIT TO FLOW CLOCKWISE AROUND THE RUNWAY AND TAXIWAY WITH THE FEMALE CONNECTOR ON THE REGULATOR SIDE OF THE TRANSFORMER.
2. ALL TRANSFORMER CONNECTIONS SHALL BE MADE ON THE FEED SIDE OF THE SERIES LOOP. RETURN AND LOOP CONDUCTORS SHALL BE CONTINUOUS AND UNSPLICED.

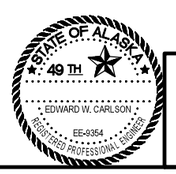


SECURELY AFFIX A CABLE IDENTIFICATION TAG ON EACH CABLE, WITHIN 6IN OF THE CONNECTOR. TAG ALL WIRES IN LIGHT BASES, HANDHOLES, AND ACCESSIBLE PLACES. TAG SHALL CLEARLY INDICATE THE COMPASS DIRECTION (NORTH, SOUTH, EAST, WEST) OF THE CABLE ENTERING THE LIGHT BASE, AND THE WORD "OUT" IF THE CABLE IS FEEDING THE NEXT LIGHT, OR AS APPROVED BY THE ENGINEER. MARKING TAGS SHALL BE PRODUCED FROM A REINFORCED, FLEXIBLE, PLASTIC (NON-METALLIC) MATERIAL WITH AN INTEGRATED LOCKING STRAP DESIGNED TO WRAP AROUND CABLE OR CONDUCTORS AND SECURE IN PLACE UPON ITSELF. TAGS SHALL BE RESISTANT TO CONDITIONS FOUND IN THE INSTALLATION AREA (MOISTURE RESISTANT, UV STABILIZED) AND SHALL NOT TEAR OR DEGRADE. TAGS SHALL BE LEGIBLE AFTER BEING WRITTEN ON WITH AN OIL-BASED BALL POINT INK PEN OR PERMANENT STYLE MARKER AND WRITING SHALL NOT WASH OFF. TAGS SHALL HAVE A MINIMUM WRITING AREA OF SIX SQUARE INCHES, AND BE MADE FROM A BRIGHT VISIBLE COLOR.

1/E15 CONNECTOR ORIENTATION DETAIL
NTS



2/E15 FIELD WIRING SCHEMATIC
NTS



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MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
SUITE 101
EAGLE RIVER, AK 99577
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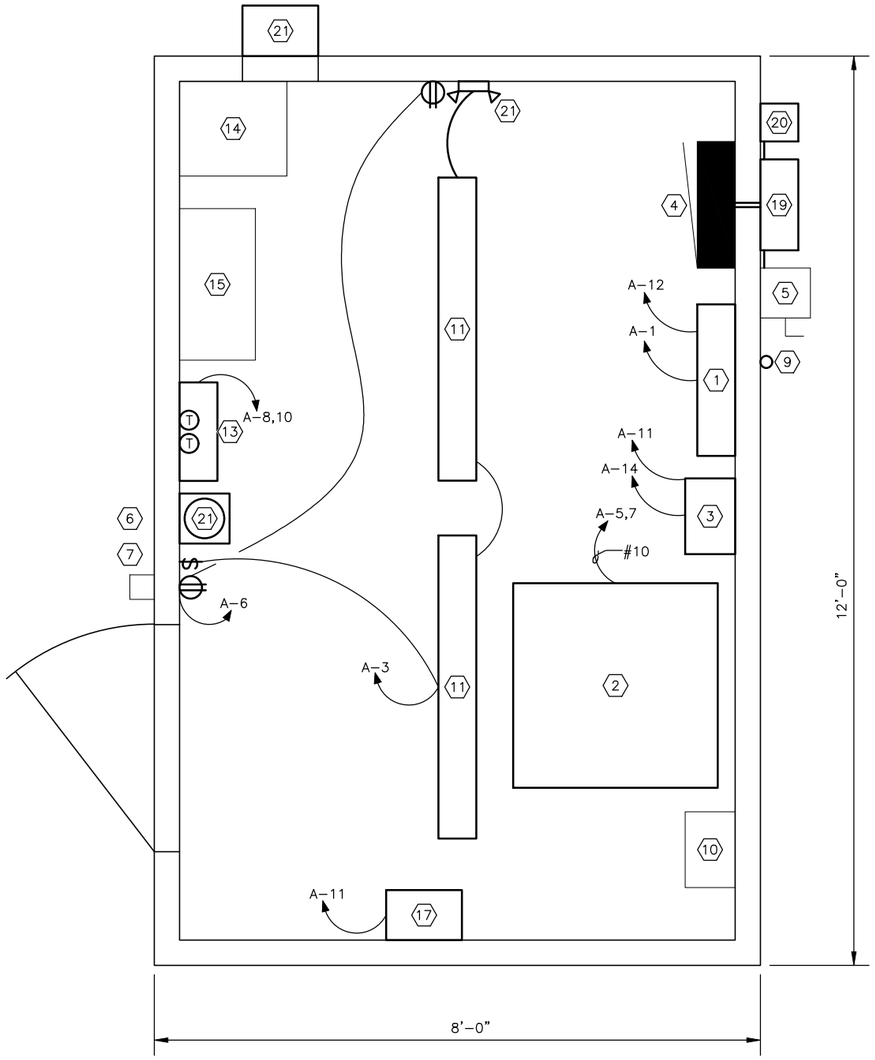
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
AIRFIELD LIGHTING AND WIRING SCHEMATIC

DATE: 9/24/2025
SHEET: E15 OF E21



ENCLOSURE NOTES:

1. ALL EXISTING TO REMAIN EXCEPT AS NOTED.
2. REMOVE EXISTING 7.5KW CCR, AND OFFER TO M&O FOR SALVAGE. TEST THE REGULATOR PRIOR TO REMOVAL AND ATTACH A WRITTEN DESCRIPTION OF THE CONDITION AND THE DATE IT WAS TESTED. CONDITION REPORT TO INCLUDE THE OUTPUT CURRENT OF ALL INTENSITY STEPS.
3. PROVIDE NEW FERRORESONANT REGULATOR WITH DIGITAL POWER METER PER L-125-2.14.a. INPUT VOLTAGE: 240V, OUTPUT CURRENT: 6.6A. PROVIDE WITH FACTORY INSTALLED INPUT FUSES. PROVIDE AND INSTALL ALL NECESSARY ELECTRICAL COMPONENTS FOR PROPER OPERATION AND NEC CODE COMPLIANCE.
4. REPLACE EXISTING 40/2 CIRCUIT BREAKER WITH NEW 30/2 CIRCUIT BREAKER.
5. PROVIDE NEW RG-8 COAX CABLE FROM EEB TO ANTENNA ON SREB. CONNECT TO RADIO CONTROLLER AND ANTENNA PER MANUFACTURER'S INSTRUCTIONS. EXISTING ABOVE GRADE CONDUIT MAY BE RE-USED.
6. REMOVE EXISTING LIGHT FIXTURES AND EMERGENCY LIGHT. PROVIDE NEW LED FIXTURES PER EQUIPMENT LIST AND L-109-3.8.
7. RELOCATE EXISTING DISCONNECT SWITCH AS SHOWN AND PROVIDE A NEW MANUAL TRANSFER SWITCH AND GENERATOR INLET.
8. PROVIDE NEW PRECISION VOLTAGE REGULATOR, 120V, SINGLE PHASE, 15 A, 1400 VA, 60 HZ, ±20% INPUT RANGE, ±3% OUTPUT, 1/2 LINE CYCLE RESPONSE TIME, 20 KHZ PULSE WIDTH MODULATION TECHNOLOGY, AUTOMATIC BYPASS TYPE. PROVIDE FOR CORD CONNECTION OF RADIO CONTROLLER. MOUNT ON SHELF NEAR RADIO CONTROLLER.
9. PROVIDE NEW FIVE POUND, CLASS A,B,C FIRE EXTINGUISHER. MOUNT IN CABINET, ON WALL NEAR DOOR.
10. PROVIDE NEW ANCHORS AND TIE-DOWNS FOR THE EEB. TURNBUCKLES SHALL BE MINIMUM SIX INCH TAKE UP, 1/2 IN DIAMETER. ALL HARDWARE SHALL BE HOT DIP GALVANIZED.
11. ALL FIXTURES AND DEVICES SHALL BE SURFACE MOUNTED. ALL 120/240V WIRING SHALL BE SURFACE MOUNTED AND ITS LOCATION SHALL BE COMPLETELY SHOWN ON CONTRACTOR'S REDLINE DRAWINGS.
12. PROVIDE AND INSTALL A GREEN-COLOR-CODED EQUIPMENT GROUNDING CONDUCTOR IN EACH CONDUIT.
13. ALL INSTALLED ELECTRICAL FIXTURES AND DEVICES, INCLUDING JUNCTION BOXES, SHALL BE NRTL LISTED.
14. ALL ELECTRICAL METHODS, TECHNIQUES, AND MATERIAL SHALL CONFORM TO THE CURRENT EDITION OF THE NEC.
15. ALL NEW BUILDING PENETRATIONS SHALL BE THROUGH THE FLOOR AND SEALED WEATHERTIGHT UNLESS SPECIFICALLY NOTED OTHERWISE.
16. ALL BURIED GROUND CONNECTIONS SHALL BE BY EXOTHERMIC WELDS.

EQUIPMENT LIST (EXISTING UNLESS NOTED)

1. LIGHTING CONTROL PANEL, PER L-109-3.16
2. (NEW) CONSTANT CURRENT REGULATOR (CCR). RUNWAY AND TAXIWAY - TYPE L-829, CLASS 1, STYLE 1, 5 KW, 240V, 1 PHASE, 60HZ.
3. L-854 RADIO CONTROLLER WITH INTEGRATED HEATER, PER L-109-3.24.
4. PANELBOARD, PANEL A. SEE NOTE 4.
5. 100A/2P SERVICE DISCONNECT, PER L-109-3.31, SERVICE ENTRANCE RATED.
6. PUSH BUTTON STATION: SURFACE MOUNTED, MOMENTARY CONTACT, NEMA TYPE 4X.
7. SIGN: PUSH TO TURN RUNWAY LIGHTS ON, AUTO OFF IN 15 MIN.
8. RADIO CONTROL ANTENNA, PER L-109-3.25, MOUNTED ON SREB.
9. (NEW) PHOTOELECTRIC CONTROL, PER L-109-3.27.
10. SERIES CUTOUT - 5kV, PER L-109-3.32, MOUNTED IN 14"x12"x8" NEMA 1 LOCKABLE ENCLOSURE WITH HINGED COVER.
11. (NEW) 4FT LED WRAPAROUND FIXTURE, PER L-109-3.8, 120V, SINGLE PHASE, REPORTED LIFE AT 80% LUMEN MAINTENANCE GREATER THAN 60,000 HOURS, 5 YEAR WARRANTY.
12. (NEW) EMERGENCY LIGHT WITH SEALED NICKEL CADMIUM BATTERIES, PER L-109-3.8, 120V, SINGLE PHASE, 90 MIN. RATING, LOW VOLTAGE DISCONNECT, OVERLOAD / SHORT CIRCUIT PROTECTION, UL924 LISTED.
13. (NEW) 2000W, 240V WALL MOUNTED FAN-FORCED ELECTRIC HEATER AND THERMOSTAT, PER L-109-3.35.
14. METAL WALL DESK.
15. METAL WALL CABINET.
16. BEACON CONTACTOR, INCLUDED WITH L-821 CONTROL PANEL.
17. (NEW) PRECISION VOLTAGE REGULATOR.
18. (NEW) FIRE EXTINGUISHER.
19. (NEW) 100A MANUAL TRANSFER SWITCH, PER L-109-3.29, NEMA 3R.
20. (NEW) 100A GENERATOR INLET.
21. (NEW) VENT HOOD, EXISTING DAMPER TO REMAIN PER L-109-3.37.

1 / E16 EXISTING ELECTRICAL EQUIPMENT BUILDING (EEB) PLAN
NTS

NOTE: ALL EQUIPMENT, AND DEVICES ARE EXISTING TO REMAIN EXCEPT AS NOTED.

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E16
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9364 REGISTERED PROFESSIONAL ENGINEER

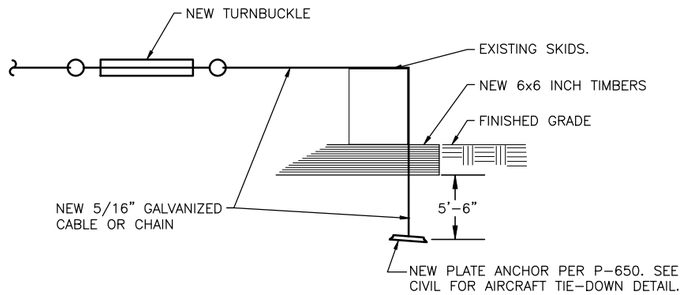
PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
SUITE 101
EAGLE RIVER, AK 99577
(907) 274-2622
CERT. OF AUTH. NO. AECC578

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
EEB PLAN

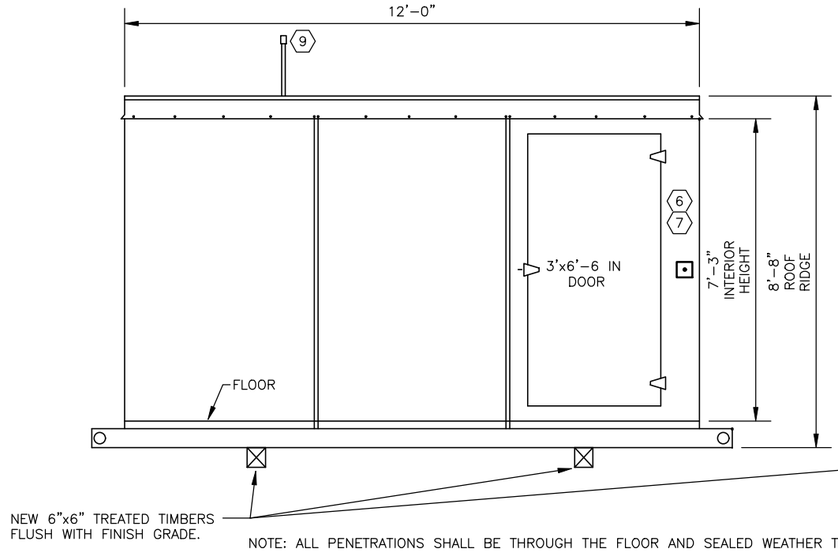
DATE: 9/24/2025
SHEET: E16 OF E21



NOTE:

INSTALL A TOTAL OF FOUR ANCHORS, ONE AT EACH CORNER. BELOW GRADE STEEL SHALL BE HOT DIPPED GALVANIZED.

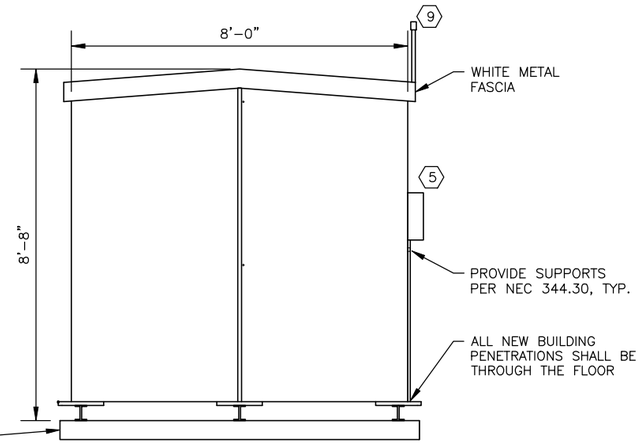
1 E17 ELECTRICAL EQUIPMENT BUILDING TIE DOWN DETAIL
NTS



NOTE: ALL PENETRATIONS SHALL BE THROUGH THE FLOOR AND SEALED WEATHER TIGHT.

2 E17 EXISTING ELECTRICAL EQUIPMENT BUILDING SIDE ELEVATION
NTS

NOTE: SEE SHEET E16 FOR EQUIPMENT LIST. DIMENSIONS ARE APPROX.



3 E17 EXISTING ELECTRICAL EQUIPMENT BUILDING END ELEVATION
NTS

NOTE: SEE SHEET E16 FOR EQUIPMENT LIST. DIMENSIONS ARE APPROX.

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E17
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

STATE OF ALASKA 49 TH · EDWARD W. CARLSON · EE-9354 · REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
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EAGLE RIVER, AK 99577
(907) 274-2622
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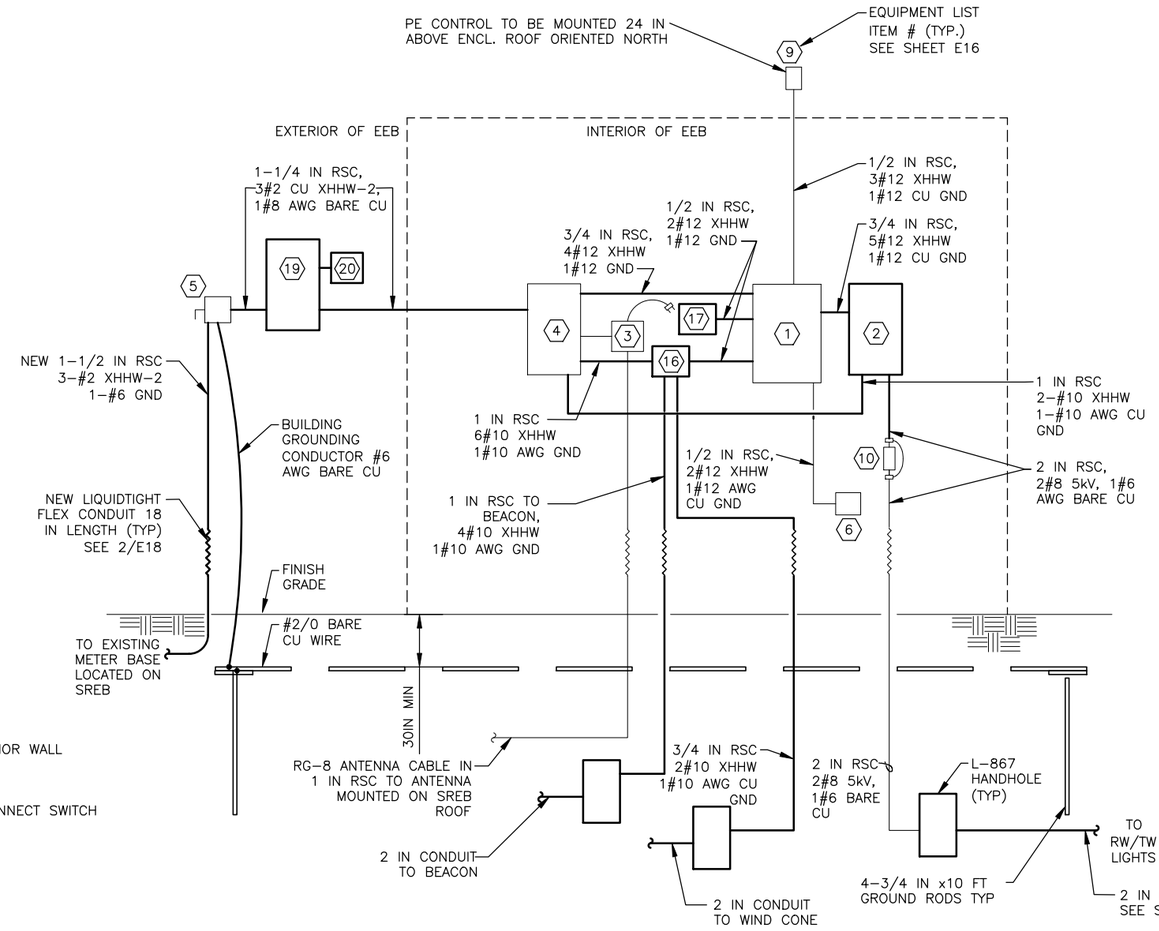
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
EEB DETAILS

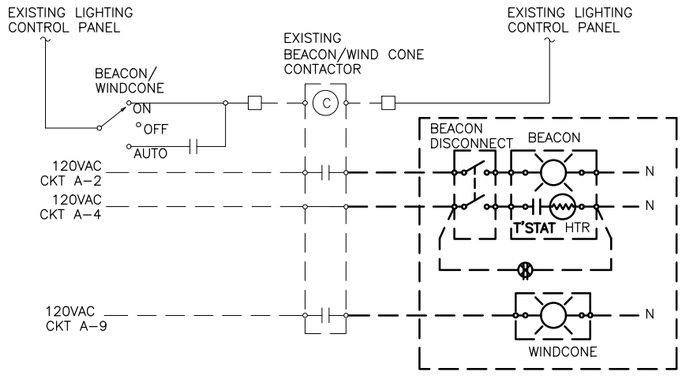
DATE: 9/24/2025
SHEET: E17 OF E21

PANEL: A	MOUNTING		MAINS			OPTIONS			
PROJECT: TAKOTNA AIRPORT	SURFACE		LUGS			1. SOLID NEUTRAL 2. GROUND BAR			
LOCATION: EEB									
VOLTAGE: 240/120 VOLT	1 PHASE		3 WIRE		100 A	MLO		22k AIC	
CIRCUIT DESCRIPTION	KVA	AMP	P	CKT	CKT	AMP	P	KVA	CIRCUIT DESCRIPTION
LIGHTING CONTROL PANEL	0.6	20	1	1	2	20	1	0.4	ROTATING BEACON & MOTOR
ENCLOSURE LIGHTS	0.4	20	1	3	4	20	1	0.4	BEACON STRIP HEATER AND RECEPTACLE
5 kW REGULATOR (RW AND TW)	5.0	30	2	5	6	20	1	0.4	CONV. RECEPTS
				7	8	20	2	2.0	ELECTRIC HEATER
WIND CONE (PRIMARY)	0.1	20	1	9	10				
RADIO CONTROL/PRECISION VOLT REG	0.1	20	1	11	12	20	1	0.1	CONTROL PANEL STRIP HEATER
SPARE		20	1	13	14	20	1	0.1	RADIO CONTROLLER HEATER
SPARE		20	1	15	16	20	1		SPARE
SPARE		20	1	17	18	20	1		SPARE
SPACE				19	20				SPACE
SPACE				21	22				SPACE
SPACE				23	24				SPACE
SPACE				25	26				SPACE
SPACE				27	28				SPACE
SPARE		20	1	29	30				SPACE
CONNECTED LOAD:		9.6	KVA	40.0	A	REMARKS:			
DEMAND LOAD:		11.5	KVA	47.8	A				
DATE:									
REV:									

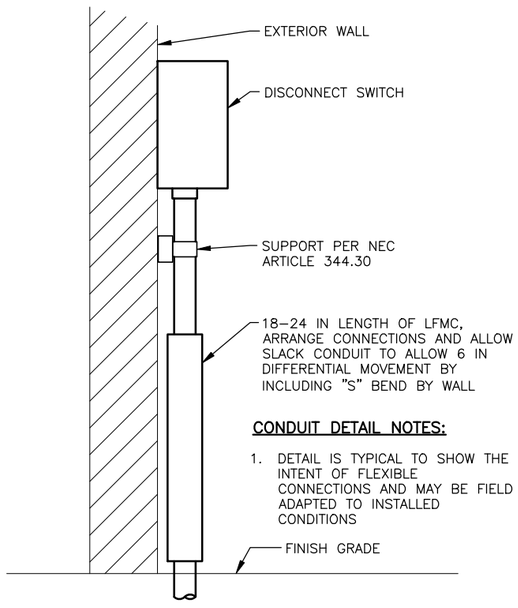


1 / E18 ONE LINE DIAGRAM
NTS

NOTE: SEE SHEET E16 FOR EQUIPMENT LIST.



3 / E18 ROTATING BEACON AND WIND CONE CONTROL DETAIL
NTS



CONDUIT DETAIL NOTES:

1. DETAIL IS TYPICAL TO SHOW THE INTENT OF FLEXIBLE CONNECTIONS AND MAY BE FIELD ADAPTED TO INSTALLED CONDITIONS

2 / E18 LFMC DETAIL
NTS

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E18
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

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PLANS DEVELOPED BY:
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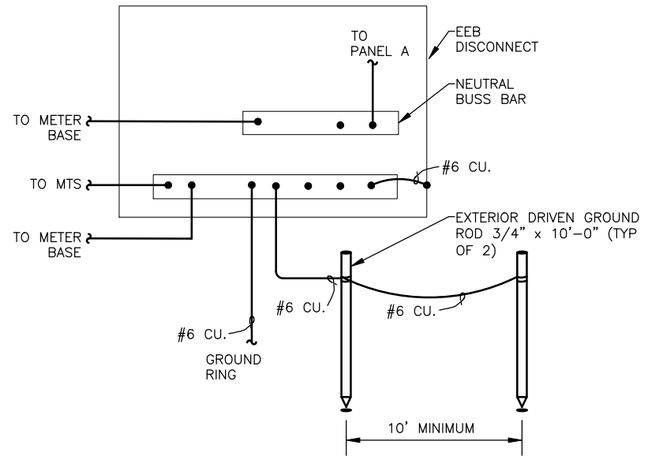
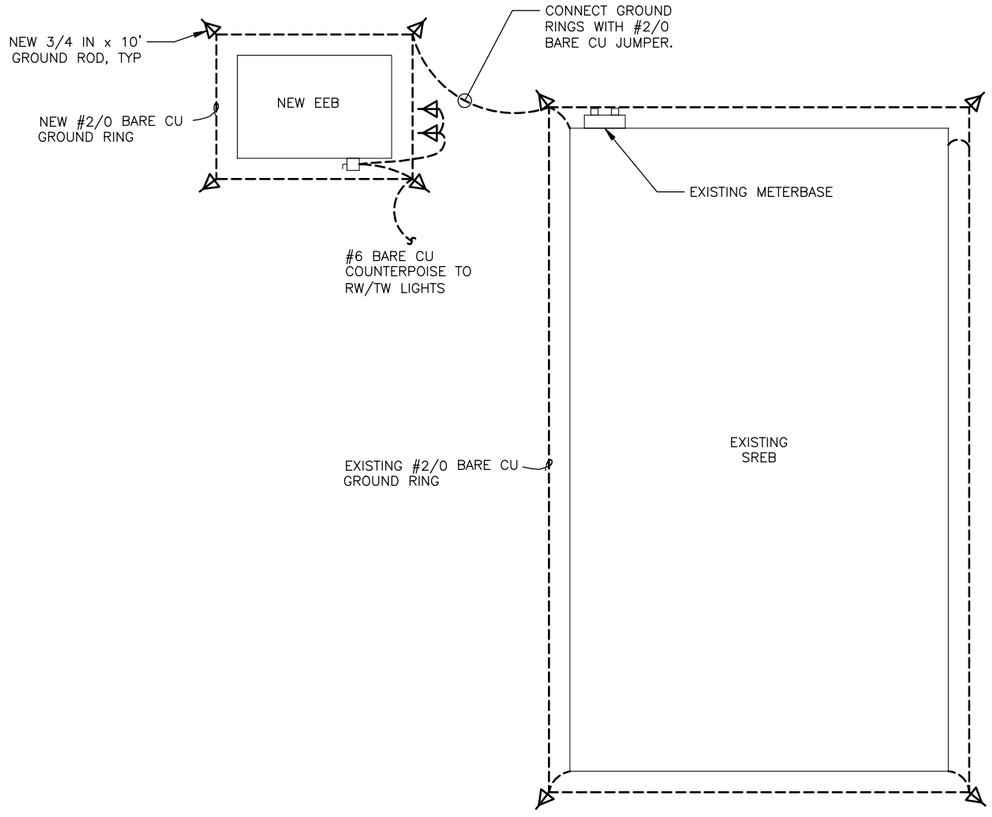
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
PANEL SCHEDULE, ONE-LINE, BEACON CONTROL DIAGRAM, AND LFMC DETAIL

DATE: 9/24/2025

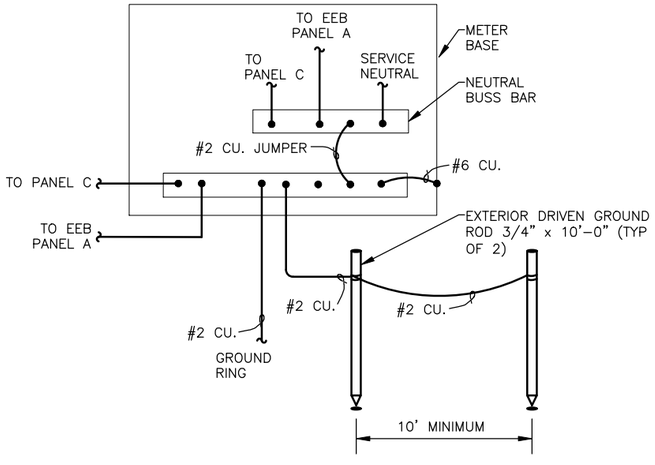
SHEET: E18 OF E21



1 E19 EEB DISCONNECT GROUNDING DETAIL
NTS



2 E19 GROUND RING DETAIL
NTS



3 E19 SREB METER BASE GROUNDING DETAIL
NTS

Designed By: DH
Drawn By: AD
Checked By: EC
Date Revised: 9/24/2025, 11:14 AM
Layout Name: E19
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

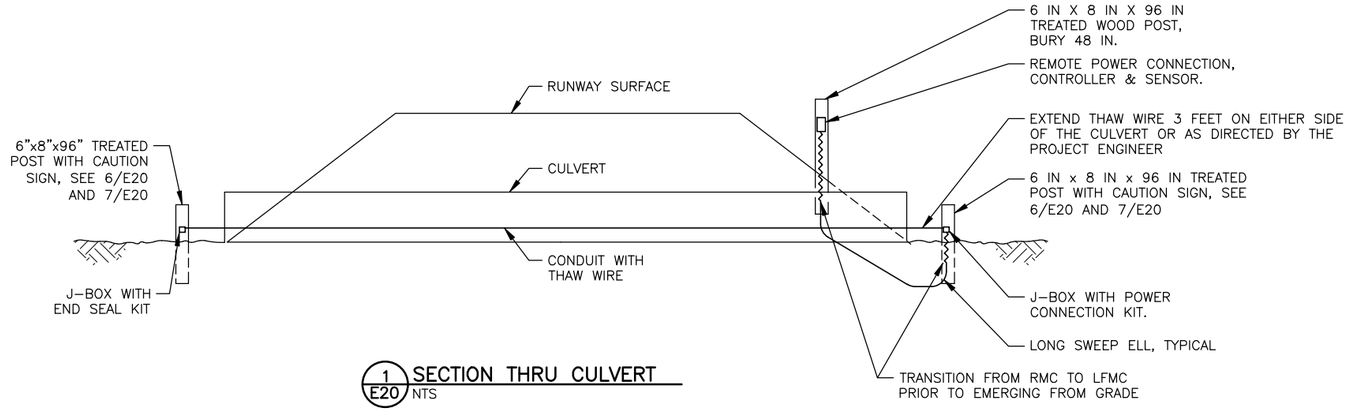
PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
SUITE 101
EAGLE RIVER, AK 99577
(907) 274-2622
CERT. OF AUTH. NO. AECC578

BY	DATE	REVISION

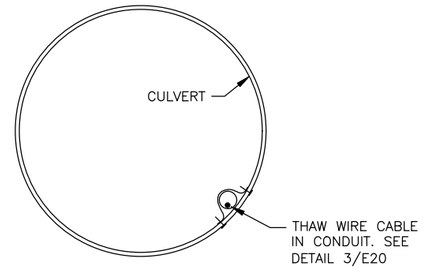
STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
GROUNDING DETAILS

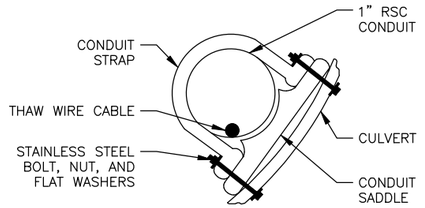
DATE: 9/24/2025
SHEET: E19 OF E21



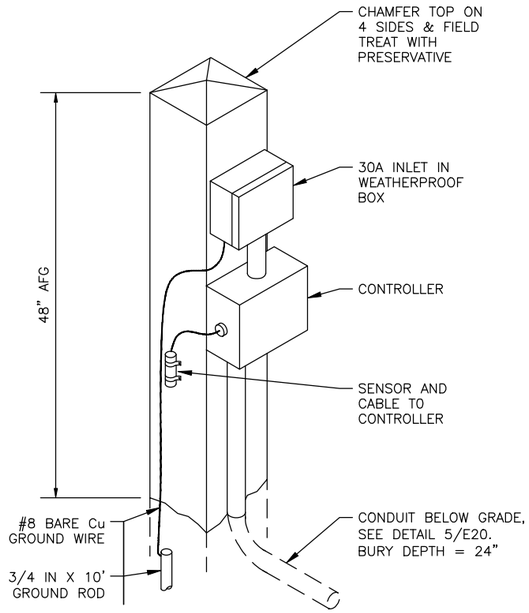
1 E20 SECTION THRU CULVERT
NTS



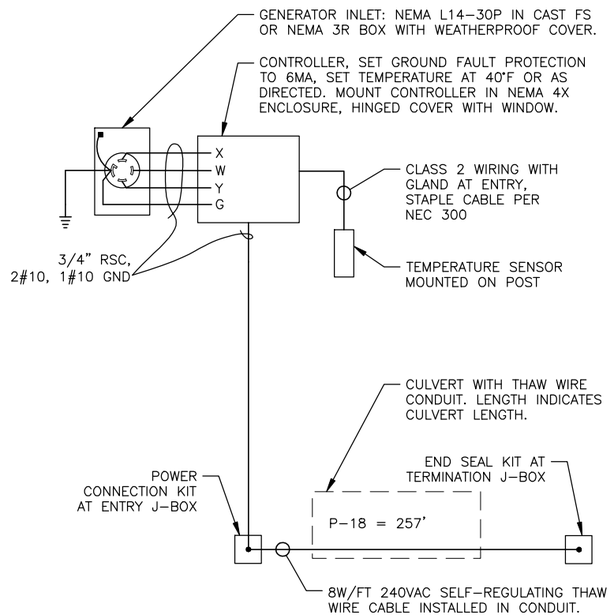
2 E20 CULVERT CROSS SECTION
NTS



3 E20 CONDUIT SADDLE & STRAP DETAIL
NTS

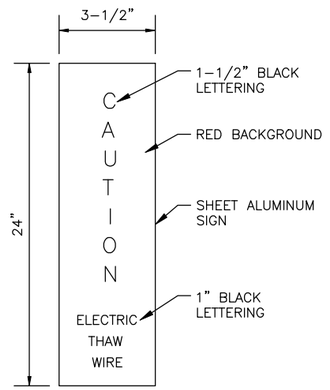


4 E20 THAW WIRE PEDESTAL DETAIL
NTS

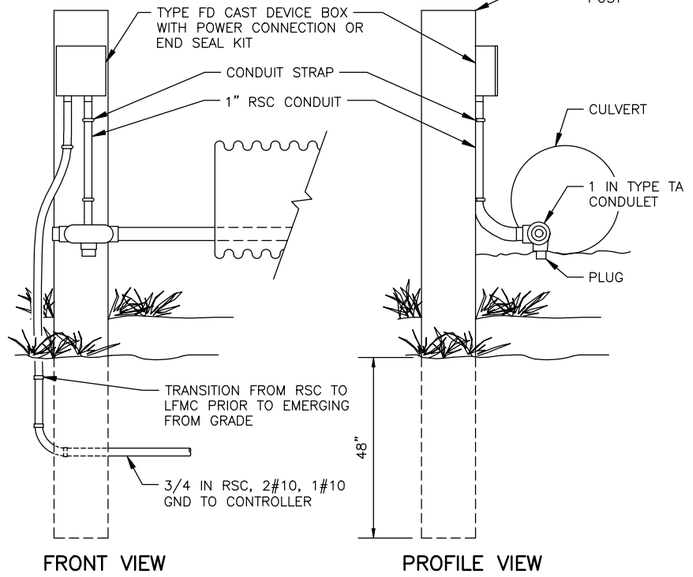


NOTE: PROVIDE A 50 FOOT, 3 CONDUCTOR, #10 SOOW EXTENSION CORD THAT WILL REMAIN FLEXIBLE TO –40° F, WITH NEMA L14–30R ON ONE END, AND NEMA L14–30P ON THE OTHER END. NEUTRAL IS NOT USED. PROVIDE A LABEL FOR THE CORD: "CULVERT THAW WIRE".

5 E20 THAW WIRE WIRING DIAGRAM
NTS



6 E20 CAUTION SIGN
NTS



7 E20 TERMINAL POST ELEVATION
NTS

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:14 AM
Layout Name: E20
File Path and Name: Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TGT_LTG_DETL.dwg

STATE OF ALASKA 49TH EDWARD W. CARLSON EE-9354 REGISTERED PROFESSIONAL ENGINEER

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PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3–02–0284–XXX–20XX
CULVERT THAW WIRE DETAILS

DATE: 9/24/2025
SHEET: E20 OF E21

TAKOTNA AIRPORT TAXIWAY EDGE LIGHT SCHEDULE

LIGHT #	LAMP	LENS	TYPE	WATT	XFMR	ALIGNMENT	STATION	OFFSET	MARKER COLOR	PAY ITEM
T1	QUARTZ	BLUE	L-861T	45	45	TW	205+31.00	54.99'	BLUE	L125.040.0000
T2	QUARTZ	BLUE	L-861T	45	45	TW	205+26.00	54.99'	BLUE	L125.040.0000
T3	QUARTZ	BLUE	L-861T	45	45	TW	205+25.95	35.55'	BLUE	L125.040.0000
T4	QUARTZ	BLUE	L-861T	45	45	TW	205+06.50	27.49'	BLUE	L125.040.0000
T5	QUARTZ	BLUE	L-861T	45	45	TW	204+34.00	27.50'	BLUE	L125.040.0000
T6	QUARTZ	BLUE	L-861T	45	45	TW	203+61.50	27.50'	BLUE	L125.040.0000
T7	QUARTZ	BLUE	L-861T	45	45	TW	203+42.06	35.55'	BLUE	L125.040.0000
T8	QUARTZ	BLUE	L-861T	45	45	TW	203+34.00	55.00'	BLUE	L125.040.0000
T9	QUARTZ	BLUE	L-861T	45	45	TW	203+34.00	-55.00'	BLUE	L125.040.0000
T10	QUARTZ	BLUE	L-861T	45	45	TW	203+42.05	-35.56'	BLUE	L125.040.0000
T11	QUARTZ	BLUE	L-861T	45	45	TW	203+61.50	-27.50'	BLUE	L125.040.0000
T12	QUARTZ	BLUE	L-861T	45	45	TW	204+34.00	-27.50'	BLUE	L125.040.0000
T13	QUARTZ	BLUE	L-861T	45	45	TW	205+06.50	-27.51'	BLUE	L125.040.0000
T14	QUARTZ	BLUE	L-861T	45	45	TW	205+25.94	-35.56'	BLUE	L125.040.0000
T15	QUARTZ	BLUE	L-861T	45	45	TW	205+26.00	-55.01'	BLUE	L125.040.0000
T16	QUARTZ	BLUE	L-861T	45	45	TW	205+31.00	-55.01'	BLUE	L125.040.0000

TAKOTNA AIRPORT HANDHOLE SCHEDULE

NO.	SYSTEM	PAY ITEM	REMARKS	LOCATION
HH1	RW/TW LTG	L125.150.0000	PER EACH	FIELD LOCATE
HH2	RW/TW LTG	L125.150.0000	PER EACH	FIELD LOCATE
HH3	WIND CONE	L125.150.0000	PER EACH	FIELD LOCATE
HH4	WIND CONE	L125.150.0000	PER EACH	FIELD LOCATE
HH5	WIND CONE	L125.150.0000	PER EACH	FIELD LOCATE
HH6	WIND CONE	L125.150.0000	PER EACH	FIELD LOCATE
HH7	WIND CONE	L125.150.0000	PER EACH	FIELD LOCATE
HH8	BEACON	L125.150.0000	PER EACH	FIELD LOCATE

TAKOTNA AIRPORT RUNWAY EDGE LIGHT SCHEDULE

UNIT #	LAMP TYPE	LENS	TYPE	WATTS	XFMR	ALIGNMENT	STATION	OFFSET	MARKER COLOR	REMARKS	PAY ITEM
R1	QUARTZ	W/W	L-861	45	45	RW	121+38.24	-40.00'	WHITE/WHITE		L125.030.0000
R2	QUARTZ	W/W	L-861	45	45	RW	123+33.53	-40.00'	WHITE/WHITE		L125.030.0000
R3	QUARTZ	W/W	L-861	45	45	RW	125+28.82	-40.00'	WHITE/WHITE		L125.030.0000
R4	QUARTZ	W/W	L-861	45	45	RW	127+24.12	-40.00'	WHITE/WHITE		L125.030.0000
R5	QUARTZ	W/W	L-861	45	45	RW	129+19.41	-40.00'	WHITE/WHITE		L125.030.0000
R6	QUARTZ	W/W	L-861	45	45	RW	131+14.71	-40.00'	WHITE/WHITE		L125.030.0000
R7						RW	133+10.00	-71.25'	ORANGE	REFER TO NOTE 1	L125.150.0000
R8	QUARTZ	R/G	L-861E	45	45	RW	133+10.00	-60.00'	RED/GREEN		L125.030.0000
R9	QUARTZ	R/G	L-861E	45	45	RW	133+10.00	-50.00'	RED/GREEN		L125.030.0000
R10	QUARTZ	R/G	L-861E	45	45	RW	133+10.00	-40.00'	RED/GREEN		L125.030.0000
R11	QUARTZ	R/G	L-861E	45	45	RW	133+10.00	40.00'	RED/GREEN		L125.030.0000
R12	QUARTZ	R/G	L-861E	45	45	RW	133+10.00	50.00'	RED/GREEN		L125.030.0000
R13	QUARTZ	R/G	L-861E	45	45	RW	133+10.00	60.00'	RED/GREEN		L125.030.0000
R14						RW	133+10.00	71.25'	ORANGE	REFER TO NOTE 1	L125.150.0000
R15	QUARTZ	W/W	L-861	45	45	RW	131+14.71	40.00'	WHITE/WHITE		L125.030.0000
R16	QUARTZ	W/W	L-861	45	45	RW	129+19.41	40.00'	WHITE/WHITE		L125.030.0000
R17	QUARTZ	W/W	L-861	45	45	RW	127+24.12	40.00'	WHITE/WHITE		L125.030.0000
R18	QUARTZ	W/W	L-861	45	45	RW	125+28.82	40.00'	WHITE/WHITE		L125.030.0000
R19	QUARTZ	W/W	L-861	45	45	RW	123+33.53	40.00'	WHITE/WHITE		L125.030.0000
R20	QUARTZ	W/W	L-861	45	45	RW	121+38.24	40.00'	WHITE/WHITE		L125.030.0000
R21	QUARTZ	W/W	L-861	45	45	RW	119+42.94	40.00'	WHITE/WHITE		L125.030.0000
R22	QUARTZ	W/W	L-861	45	45	RW	117+47.65	40.00'	WHITE/WHITE		L125.030.0000
R23	QUARTZ	W/W	L-861	45	45	RW	115+52.35	40.00'	WHITE/WHITE		L125.030.0000
R24	QUARTZ	W/W	L-861	45	45	RW	113+57.06	40.00'	WHITE/WHITE		L125.030.0000
R25	QUARTZ	W/W	L-861	45	45	RW	111+61.76	40.00'	WHITE/WHITE		L125.030.0000
R26	QUARTZ	W/W	L-861	45	45	RW	109+66.47	40.00'	WHITE/WHITE		L125.030.0000
R27	QUARTZ	W/W	L-861	45	45	RW	107+71.18	40.00'	WHITE/WHITE		L125.030.0000
R28	QUARTZ	W/W	L-861	45	45	RW	105+75.88	40.00'	WHITE/WHITE		L125.030.0000
R29	QUARTZ	W/W	L-861	45	45	RW	103+80.59	40.00'	WHITE/WHITE		L125.030.0000
R30	QUARTZ	W/W	L-861	45	45	RW	101+85.29	40.00'	WHITE/WHITE		L125.030.0000
R31						RW	99+90.00	71.25'	ORANGE	REFER TO NOTE 1	L125.150.0000
R32	QUARTZ	G/R	L-861E	45	45	RW	99+90.00	60.00'	GREEN/RED		L125.030.0000
R33	QUARTZ	G/R	L-861E	45	45	RW	99+90.00	50.00'	GREEN/RED		L125.030.0000
R34	QUARTZ	G/R	L-861E	45	45	RW	99+90.00	40.00'	GREEN/RED		L125.030.0000
R35	QUARTZ	G/R	L-861E	45	45	RW	99+90.00	-40.00'	GREEN/RED		L125.030.0000
R36	QUARTZ	G/R	L-861E	45	45	RW	99+90.00	-50.00'	GREEN/RED		L125.030.0000
R37	QUARTZ	G/R	L-861E	45	45	RW	99+90.00	-60.00'	GREEN/RED		L125.030.0000
R38						RW	99+90.00	-71.25'	ORANGE	REFER TO NOTE 1	L125.150.0000
R39	QUARTZ	W/W	L-861	45	45	RW	101+85.29	-40.00'	WHITE/WHITE		L125.030.0000
R40	QUARTZ	W/W	L-861	45	45	RW	103+80.59	-40.00'	WHITE/WHITE		L125.030.0000
R41	QUARTZ	W/W	L-861	45	45	RW	105+75.88	-39.87'	WHITE/WHITE		L125.030.0000
R42	QUARTZ	W/W	L-861	45	45	RW	107+71.18	-40.00'	WHITE/WHITE		L125.030.0000
R43	QUARTZ	W/W	L-861	45	45	RW	109+66.47	-40.00'	WHITE/WHITE		L125.030.0000
R44	QUARTZ	W/W	L-861	45	45	RW	111+61.76	-40.00'	WHITE/WHITE		L125.030.0000
R45	QUARTZ	W/W	L-861	45	45	RW	113+57.06	-40.00'	WHITE/WHITE		L125.030.0000
R46	QUARTZ	W/W	L-861	45	45	RW	115+52.35	-40.00'	WHITE/WHITE		L125.030.0000
R47	QUARTZ	W/W	L-861	45	45	RW	117+47.65	-40.02'	WHITE/WHITE		L125.030.0000

NOTE:

1. INSTALL LIGHT BASE AND CONDUIT WITH BLANK COVER PER DETAIL 2/E10.

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised:
Layout Name: E21
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_DETL.dwg
9/24/2025, 11:14 AM

STATE OF ALASKA 49TH
EDWARD W. CARLSON
EE-9354
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
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STATE OF ALASKA
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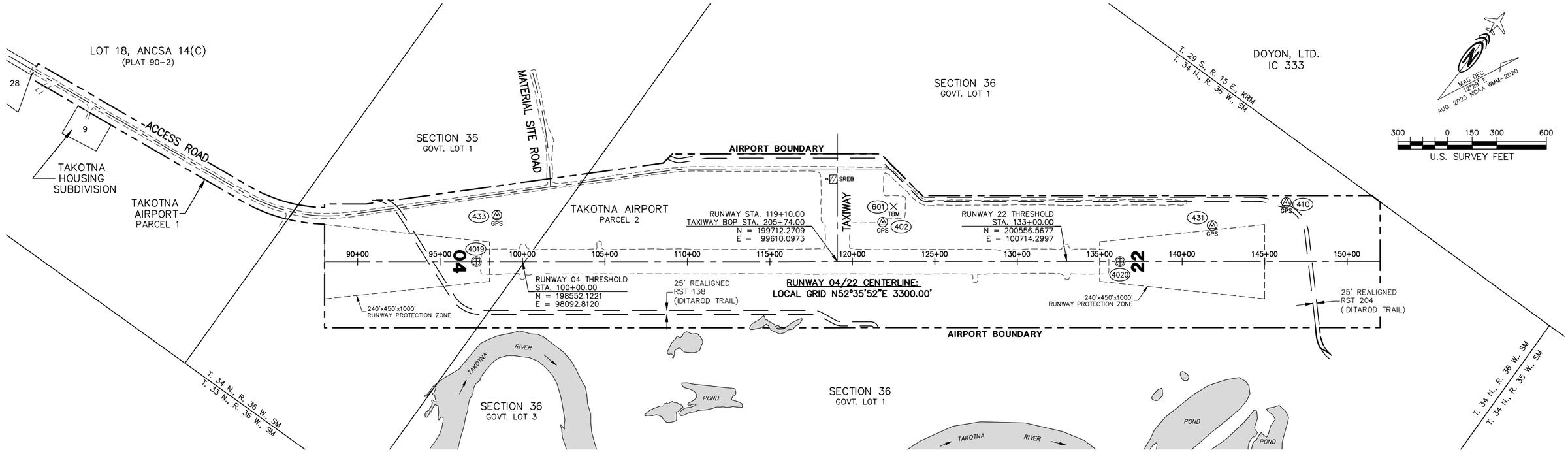
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
HANDHOLE AND EDGE LIGHT SCHEDULES

DATE: 9/24/2025

SHEET: E21 OF E21



HORIZONTAL CONTROL STATEMENT

COORDINATE SYSTEM:
THIS PROJECT IS LOCATED ENTIRELY WITHIN A U.S. FOOT LOCAL SURFACE GRID COORDINATE SYSTEM DEVELOPED BY USKH FOR DOT&PF IN 2015. REFERENCE: *RIGHT OF WAY ACQUISITION PLAT, TAKOTNA AIRPORT, PLAT 2016-2, MMRD.*

BASIS OF COORDINATES:
THE BASIS OF COORDINATES FOR THIS PROJECT IS POINT NO. 402, A 2-1/2" BRASS CAP ON A 9/16" STAINLESS STEEL ROD SET IN A MONUMENT CASE, AS SHOWN ON SHEET 1 OF THE ABOVE REFERENCED RIGHT OF WAY ACQUISITION PLAT (RWAP). USING THE TRANSLATION PARAMETERS PROVIDED ON SHEET 3 OF THE RWAP, THE FOLLOWING POINT NO. 402 GEODETIC COORDINATES WERE DEVELOPED AND USED TO CONSTRAIN GPS STATIC ADJUSTMENTS AND PROJECT CONTROL:

POINT NO. 402	POINT NO. 402
NAD83(CORS)(EPOCH:1997.0000):	LOCAL GRID
N 62°59'39.54249" LATITUDE	200,069.2850 NORTH
W 156°01'40.64959" LONGITUDE	99,681.9390 EAST
458.801 ELLIPSOID HEIGHT (USFT)	426.29 NAVD88 ELEV. (USFT)

THE LOCAL COORDINATE SYSTEM IS RELATED TO NAD83(CORS)(EPOCH:1997.0000) ALASKA STATE PLANE ZONE 6 COORDINATES USING THE FOLLOWING TRANSLATION PARAMETERS.

TO CONVERT FROM STATE PLANE ZONE 6, NAD83 FEET TO LOCAL FEET:
1. SCALE STATE PLANE COORDINATES USING 1.00000051122
2. TRANSLATE RESULTING COORDINATES USING -3,091,485.3129 N -1,868,578.7904 E

TO CONVERT FROM LOCAL FEET TO STATE PLANE ZONE 6, NAD83 FEET:
1. TRANSLATE LOCAL COORDINATES USING +3,091,485.3129 N +1,868,578.7904 E
2. SCALE RESULTING COORDINATES USING 0.99999948878

BASIS OF BEARINGS:
PROJECT BEARINGS ARE THE SAME AS ALASKA STATE PLANE ZONE 6 GRID BEARINGS.

VERTICAL CONTROL STATEMENT

PROJECT VERTICAL DATUM IS NAVD88 (GEOID12B), PER *SURVEY CONTROL DIAGRAM (SCD), RECORD OF SURVEY, TAKOTNA RIVER BRIDGE REHABILITATION, PLAT NO. 2018-1 MMRD.* ELEVATIONS ARE BASED ON POINT NO. 402, HAVING AN NAVD88 ORTHOMETRIC HEIGHT OF 426.291 FEET, AS DESCRIBED IN THE VERTICAL CONTROL STATEMENT ON SHEET 1 OF SAID PLAT.
NOTE: THIS DATUM IS 5.859' ABOVE THE 2009 DOT&PF AIRPORT DESIGN DATUM. SUBTRACT 5.859' FROM PROJECT ELEVATIONS SHOWN HEREON TO CONVERT TO THE 2009 DATUM.

NOTES

1. INFORMATION PROVIDED HEREON IS BASED ON FIELD SURVEYS PERFORMED BY R&M CONSULTANTS, INC. IN JUNE 2023. SURVEY INFORMATION CAN BE FOUND IN R&M FIELD BOOKS 3028.01 #1 & #2.
2. ALL DIMENSIONS, COORDINATES, AND ELEVATIONS SHOWN HEREON ARE EXPRESSED IN U.S. SURVEY FEET, UNLESS OTHERWISE NOTED.
3. ALL COORDINATES AND ELEVATIONS SHOWN HEREON SHOULD BE VERIFIED IN THE FIELD BEFORE USE.
4. FOR ADDITIONAL INFORMATION, REFER TO SURVEY CONTROL DIAGRAM "TAKOTNA AIRPORT REHABILITATION" PROJECT NO. CFAPT00805 RECORDED AS RECORD OF SURVEY PLAT NO. 2023-3 MT. MCKINLEY RECORDING DISTRICT.
5. SEE SHEET AA2 FOR TAXIWAY, ACCESS ROAD, AND MATERIAL SITE ROAD ALIGNMENT DETAILS.
6. ALIGNMENT STATIONING
   A) RUNWAY, TAXIWAY, AND ACCESS ROAD STATIONING ARE EXISTING PER TAKOTNA AIRPORT AS-BUILT PLANS, PROJECT NO. 56774, APPROVED AUGUST 7, 2013.
   B) MATERIAL SITE ROAD STATIONING IS NEWLY ESTABLISHED THIS PROJECT. BEGINNING STATION 300+00.00
7. WHETHER LISTED OR NOT, ALL MONUMENTS OR PROPERTY MARKERS, CORNERS, OR ACCESSORIES WHICH WILL BE DISTURBED OR BURIED, SHALL BE REFERENCED OR RE-ESTABLISHED IN THEIR ORIGINAL POSITION (A.S. 19.10.260) AND RECORDED (A.S. 34.65.040).
8. MONUMENTS TO BE REPLACED BY OTHERS POST-CONSTRUCTION.

LEGEND

GPS — GPS CONTROL STATION	— — — — AIRPORT BOUNDARY
RUNWAY CENTERLINE MONUMENT	—— —— RS2477 ROW CORRIDOR
TBM — TEMPORARY BENCH MARK	- - - - - - - - EDGE GRAVEL
(123) — POINT NUMBER	

PROJECT HORIZONTAL CONTROL

POINT	RUNWAY 04/22 STATION	RUNWAY 04/22 OFFSET	TAXIWAY STATION	TAXIWAY OFFSET	ACCESS ROAD STATION	ACCESS ROAD OFFSET	NORTHING	EASTING	ELEV.	DESCRIPTION
402	121+83.92	239.97 Lt.	203+34.03	273.92 Lt.	79+21.46	322.03 Rt.	200069.2850	99681.9390	426.29	FD BC/ROD[USKH]: GPS NO. 4
410	146+31.44	358.69 Lt.	202+15.31	2721.44 Lt.	--	--	201650.2389	101554.1106	431.44	SET AM[R&M]: CP 410
431	141+81.90	218.93 Lt.	203+55.07	2271.90 Lt.	--	--	201266.1579	101281.8972	427.30	FD BC/ROD[DOT&PF]: GPS NO. 2
432	--	--	--	--	20+13.06	26.83 Lt.	197613.4963	94517.6614	412.04	FD BC/ROD[DOT&PF]: GPS NO. 3
433	98+44.74	282.04 Lt.	202+91.96	2065.26 Rt.	55+54.77	125.16 Rt.	198681.8625	97798.1621	420.68	FD BC/ROD[DOT&PF]: GPS NO. 1
4019	97+20.03	0.09 Lt.	205+73.91	2189.97 Rt.	53+92.82	387.49 Rt.	198382.1370	97870.3475	--	FD ALROD: R/W CL
4020	136+22.81	0.12 Rt.	--	--	--	--	200752.5447	100970.8075	--	FD AC/ROD[11758-S]: R/W CL

PROJECT VERTICAL CONTROL

POINT	RUNWAY 04/22 STATION	RUNWAY 04/22 OFFSET	TAXIWAY STATION	TAXIWAY OFFSET	NORTHING	EASTING	ELEVATION	DESCRIPTION
601	122+50	330 Lt.	202+44	340 Lt.	200181	99680	431.87	SET X/BOLT: N BOLT WIND SOCK

STATE OF ALASKA
49TH
Alan J. Griffin
LS-13020
REGISTERED PROFESSIONAL LAND SURVEYOR

PLANS DEVELOPED BY:
R&M CONSULTANTS, INC.
9101 VANGUARD DR.
ANCHORAGE, AK 99507
(907) 522-1707
CERT. OF AUTH. NO. AECC111

BY	DATE	REVISION

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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
SURVEY CONTROL

DATE: 9/2/2025
SHEET: AA1 OF AA2

Designed By: CWB AVA
Drawn By: CJB
Checked By:
Date Revised:
Layout Name: 1
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Survey\ACAD\CFAPT00805_SCS.dwg 9/02/2025, 2:38 PM

Designed By:	CWB
Drawn By:	AVA
Checked By:	CJB
Date Revised:	9/02/2025, 2:38 PM
Layout Name:	2
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Survey\ACAD\CFAPT00805_SCS.dwg

USS 4105
2B

PI STA 21+22.08
N = 197620.9702
E = 94629.6879
Δ = 10°23'53"
T = 90.99'
L = 181.48'
R = 1000.00'

PC STA 20+31.09

PT STA 22+12.57

432 GPS

N 72°21'26" E
31.09'

ACCESS ROAD BOP
STA. 20+00.00
N = 197583.9700
E = 94513.3500

7

8

28

9

LOT 18,
ANCSA 14(C)
(PLAT 90-2)

TAKOTNA
HOUSING
SUBDIVISION

25+00

30+00

N 82°45'19" E 1802.38'

35+00

AIRPORT BOUNDARY

ACCESS ROAD

40+00

TAKOTNA AIRPORT
PARCEL 1

PC STA 40+14.95

T. 34 N., R. 36 W., SEC. 35, SM

SECTION 35
GOVT. LOT 1

45+00

50+00

1222.08'
N 44°46'11" E

PT STA 46+77.92

25' REALIGNED
RST 138
(IDITAROD TRAIL)

MATCHLINE "A"

PI STA 43+59.14
N = 197903.1431
E = 96849.3812
Δ = 37°59'08"
T = 344.19'
L = 662.97'
R = 1000.00'

MAG DEC
12°29' E
AUG. 2023 NOAA WMM-2020

150 0 75 150 300
U.S. SURVEY FEET

LEGEND

- GPS — GPS CONTROL STATION
- RUNWAY CENTERLINE MONUMENT
- TBM — TEMPORARY BENCH MARK
- (123) — POINT NUMBER
- AIRPORT BOUNDARY
- RS2477 ROW CORRIDOR
- EDGE GRAVEL

MATERIAL SITE ROAD BOP
STA. 300+00.00
N = 199497.6267
E = 97448.0497

S 51°57'38" E
108.92'

PC STA 301+08.92

302+00

MATERIAL SITE ROAD

304+00

306+00

PI STA 303+85.25
N = 199260.2338
E = 97751.4694
Δ = 12°36'53"
T = 276.33'
L = 550.42'
R = 2500.00'

T. 34 N., R. 36 W., SEC. 35, SM

T. 34 N., R. 36 W., SEC. 36, SM

PI STA 66+99.94
N = 199583.0149
E = 98515.8038
Δ = 7°49'41"
T = 68.42'
L = 136.63'
R = 1000.00'

PC STA 66+31.52

PT STA 67+68.15

SECTION 36
GOVT. LOT 1

TAXIWAY EOP
STA. 198+00.00
N = 200327.1289
E = 99139.9637

ACCESS ROAD EOP
STA. 80+00.00
N = 200372.8067
E = 99548.7269

SECTION 35
GOVT. LOT 1

S 39°20'45" E
40.65'

ACCESS ROAD STA. 59+00.00
MATERIAL SITE ROAD EOP STA. 307+00.00
N = 199015.1007
E = 97952.4365

PT STA 306+59.35

731.52'

65+00

70+00

879.39'

75+00

352.46'

200+00

N 52°35'52" E

AIRPORT BOUNDARY

ACCESS ROAD STA. 76+47.54
TAXIWAY STA. 200+12.00
N = 200158.7182
E = 99268.7342

SREB

774.00'
S 37°24'08" E

202+00

TAXIWAY

601 TBM

GPS 402

25' REALIGNED
RST 204
(IDITAROD TRAIL)

MAG DEC
12°29' E
AUG. 2023 NOAA WMM-2020

150 0 75 150 300
U.S. SURVEY FEET

MATCHLINE "A"

1222.08'

55+00

60+00

N 44°46'11" E

433 GPS

TAKOTNA AIRPORT
PARCEL 2

240'x450'x1000'
RUNWAY PROTECTION ZONE

RUNWAY STA. 119+10.00
TAXIWAY BOP STA. 205+74.00
N = 199712.2709
E = 99610.0973

204+00

RUNWAY 22 THRESHOLD
STA. 133+00.00
N = 200556.5677
E = 100714.2997

95+00

04

4019

100+00

105+00

110+00

115+00

120+00

125+00

130+00

135+00

4020

22

RUNWAY 04/22 CENTERLINE:
LOCAL GRID N52°35'52"E 3300.00'

RUNWAY 04 THRESHOLD
STA. 100+00.00
N = 198552.1221
E = 98092.8120

25' REALIGNED
RST 138
(IDITAROD TRAIL)

240'x450'x1000'
RUNWAY PROTECTION ZONE

AIRPORT BOUNDARY

TAKOTNA RIVER

STATE OF ALASKA
49TH
Alan J. Griffin
LS-13020
REGISTERED PROFESSIONAL LAND SURVEYOR

PLANS DEVELOPED BY:
R&M CONSULTANTS, INC.
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(907) 522-1707
CERT. OF AUTH. NO. AECC111

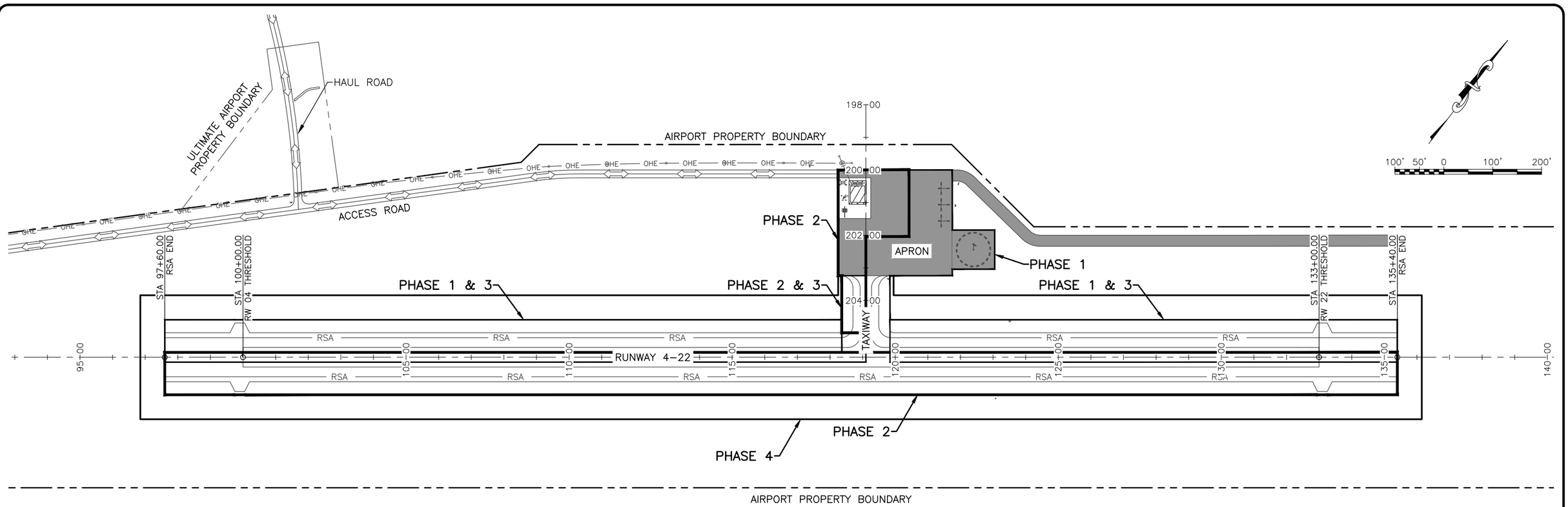
BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
SURVEY CONTROL

DATE: 9/2/2025

SHEET: AA2 OF AA2



CONSTRUCTION PHASE TABLE

CONSTRUCTION PHASE	WORK TO BE COMPLETED	DURATION	RUNWAY CLOSURE	TAXIWAY CLOSURE
PHASE 1	CONSTRUCT HAUL ROAD, CONSTRUCT NORTH HALF OF RUNWAY, EAST SIDE OF TAXIWAY, AND EAST SIDE OF APRON. DEMO EXISTING AIRCRAFT TIEDOWNS, INSTALL NEW AIRCRAFT TIEDOWNS, REPLACE PRIMARY WIND CONE AND SEGMENTED CIRCLE.	30 DAYS	NIGHTLY RUNWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.	NIGHTLY TAXIWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.
PHASE 2	CONSTRUCT SOUTH HALF OF RUNWAY, WEST SIDE OF TAXIWAY, AND WEST SIDE OF APRON. DEMO EXISTING AIRCRAFT TIEDOWN, RELOCATE EEB, RELOCATE AIRPORT BEACON TO TIP–DOWN POLE.	40 DAYS	NIGHTLY RUNWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.	NIGHTLY TAXIWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.
PHASE 3	CONSTRUCT NORTH HALF OF RUNWAY AND WEST SIDE OF TAXIWAY. INSTALL PERMANENT LIGHTING, APPLY DUST PALLIATIVE.	40 DAYS	NIGHTLY RUNWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.	NIGHTLY RUNWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.
PHASE 4	CONSTRUCT RUNWAY AND TAXIWAY TO FINISH GRADE, APPLY DUST PALLIATIVE, INSTALL PERMANENT LIGHTING.	30 DAYS	NIGHTLY RUNWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.	NIGHTLY RUNWAY CLOSURE 7PM–8:30AM. HALF–WIDTH DAY OPERATIONS.
PHASE 5	REHABILITATE AIRPORT ACCESS ROAD, REPLACE SIGNS, INSTALL AND REPLACE CULVERTS. THIS PHASE CAN BE COMPLETED IN CONCURRENCE WITH THE OTHER PHASES.	20 DAYS	–	–

RUNWAY SAFETY AREAS

ITEM DESCRIPTION	RUNWAY 04–22	TEMPORARY RUNWAY			
	EXISTING	PHASE 1	PHASE 2	PHASE 3	PHASE 4
RUNWAY DESIGN CODE	A–I(S)	A–I(S)	A–I(S)	A–I(S)	A–I(S)
APPROACH TYPE	V	V	V	V	V
RUNWAY TYPE	UTILITY	UTILITY	UTILITY	UTILITY	UTILITY
RUNWAY DIMENSIONS	60'x3,300'	30'x3,300'	30'x3,300'	30'x3,300'	30'x3,300'
RUNWAY SAFETY AREA	120'x3,780'	60'x3,780'	60'x3,780'	60'x3,780'	60'x3,780'
RUNWAY OBJECT FREE AREA	250'x3780'	125'x3780'	125'x3,780'	125'x3,780'	125'x3,780'
RUNWAY OBSTACLE FREE ZONE	250'x3,700'	125'x3,700'	125'x3,700'	125'x3,700'	125'x3,700'
PRIMARY SURFACE WIDTH	500'	250'	250'	250'	250'
OFFSET FROM PERMANENT RUNWAY CENTERLINE	–	15' RT	45' LT	45' RT	–

TAXIWAY SAFETY AREAS

ITEM DESCRIPTION	EXISTING	PHASE 1	PHASE 2	PHASE 3	PHASE 4
TAXIWAY WIDTH	50'	25'	25'	25'	25'
TAXIWAY SAFETY AREA	118'	49'	49'	49'	49'
TAXIWAY OBJECT FREE AREA	186'	89'	89'	89'	89'
OFFSET FROM PERMANENT TAXIWAY CENTERLINE	–	37' RT	37' LT	37' LT	–

LEGEND:

HAUL ROUTE

STAGING/STOCKPILE AREA

PLANS DEVELOPED BY:
R&M CONSULTANTS, INC.
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(907) 522-1707
CERT. OF AUTH. NO. AECC111

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3–02–0284–XXX–20XX
CONSTRUCTION SAFETY AND PHASING PLAN OVERVIEW

DATE: 9/24/2025

SHEET: AC1 OF AC16

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised: 9/24/2025, 12:41 PM
Layout Name: CSPP OW
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-CSPP.dwg

GENERAL SAFETY REQUIREMENTS:

1. SEE APPENDIX C OF THE SPECIFICATIONS FOR THE CONSTRUCTION SAFETY AND PHASING PLAN (CSPP) REQUIREMENTS. THE CONTRACTOR SHALL COMPLY WITH THE SAFETY REQUIREMENTS AS REQUIRED IN THE CSPP. ALL SAFETY RELATED WORK SHALL BE SUBSIDIARY TO THE CONTRACT AND NO ADDITIONAL PAYMENT WILL BE MADE.

2. THE CONTRACTOR SHALL SUBMIT A SAFETY PLAN COMPLIANCE DOCUMENT, PER FAA AC 150/5370-2, TO THE ENGINEER FOR REVIEW AND APPROVAL PRIOR TO ISSUANCE OF A NOTICE TO PROCEED. IF THE CONSTRUCTION PHASING PLAN DIFFERS FROM WHAT IS SHOWN OR IF SUBSEQUENT CHANGES ARE MADE, SUBMIT A REVISION TO THE ENGINEER FOR REVIEW AND APPROVAL.

3. DURING ALL PHASES, THE CLOSED PORTIONS OF THE RUNWAY AND TAXIWAY MAY BE USED AS A HAUL ROUTE. HAUL ROUTES WILL NOT BE ALLOWED ON ANY OPEN RUNWAY OR TAXIWAY, INCLUDING THE ACTIVE RSA OR TSA.

4. WHEN WORKING NEAR THE OPEN RUNWAY, EVACUATE ALL PERSONNEL AND EQUIPMENT TO THE SAFE ZONES DESCRIBED IN DETAILS 1 AND 2 ON SHEET AC9, 15 MINUTES PRIOR TO AND 15 MINUTES AFTER ALL ARRIVALS AND DEPARTURES. WHEN PERSONNEL AND EQUIPMENT CANNOT BE EVACUATED TO THE SAFE ZONES, THEY MUST EVACUATE THE RSA AND/OR TSA AND MOVE AS FAR AWAY FROM THE RUNWAY CENTERLINE AS PRACTICAL DURING AIRCRAFT OPERATIONS. **IN NO CASE CAN PERSONNEL OR EQUIPMENT BE INSIDE THE RSA OR TSA DURING AIRCRAFT OPERATIONS.**

5. DETERMINE THE TIMES OF SCHEDULED FLIGHTS INTO TAKOTNA AIRPORT AND ALLOW AIRCRAFT TO USE THE RUNWAY DURING THE SCHEDULED TIMES. THE CONTRACTOR SHALL MONITOR THE COMMON TRAFFIC ADVISORY FREQUENCY (CTAF) AND PERFORM VISUAL MONITORING FOR UNSCHEDULED FLIGHTS. THE CONTRACTOR SHALL CLEAR THE RUNWAY ACCORDING TO NOTE 4 FOR ALL ARRIVALS AND DEPARTURES INCLUDING EMERGENCY MEDEVACS. DURING RUNWAY CLOSURES, A 45-MINUTES PRIOR PERMISSIONS REQUIRED (PPR) TO LAND MUST BE ISSUED VIA NOTAM.

6. ALL CONSTRUCTION VEHICLES AND EQUIPMENT SHALL OPERATE A FLASHING YELLOW BEACON AND 3' X 3' CHECKERED FLAG WITH 1' X 1' ORANGE AND WHITE SQUARES WHEN WORKING ON THE AIRPORT. THE CONTRACTOR'S SAFETY OFFICER VEHICLE SHALL HAVE BOTH A YELLOW FLASHING BEACON AND A SEPARATE VISUAL AND/OR AUDIBLE SIGNAL (E.G., COLORED FLASHING BEACON OTHER THAN YELLOW, MEGAPHONE, AIR HORN, 2-WAY RADIO CONTACT, ETC) USED TO SIGNAL WORKERS TO CLEAR THE AREAS DESCRIBED IN NOTE 4 DURING AIRCRAFT TAKEOFFS AND LANDINGS.

7. KEEP AREAS WITHIN THE ROFA AND TOFA LIMITS CLEAR OF CONSTRUCTION MATERIALS. REMOVE ANY DEBRIS FROM THESE AREAS WITHIN 15 MINUTES OF VERBAL NOTICE FROM THE ENGINEER OR ENGINEER'S REPRESENTATIVE.

8. CLEAR SAFETY AREAS AND OBJECT FREE AREAS AT ANY TIME DIRECTED BY THE ENGINEER.

9. THERE ARE FAA CAMERAS ON TOP OF THE SREB AND FAA SATELLITE DISH NEXT TO THE SREB. DAMAGE TO FAA FACILITIES INCLUDING POWER DISRUPTION SHALL BE IMMEDIATELY REPAIRED IN A MANNER ACCEPTABLE TO THE FAA AT THE CONTRACTOR'S EXPENSE.

10. REMOVE MATERIAL STOCKPILES AND EQUIPMENT FROM OBJECT FREE AREAS DURING NON-WORK HOURS.

11. PROVIDE AIRPORT FLAGGERS FOR ALL OPEN TAXIWAYS AND RUNWAYS AND WHERE THE ENGINEER DETERMINES A FLAGGER IS NECESSARY.

12. CONTRACTOR HAULING OPERATIONS ARE SHOWN ON THE PLANS. FOLLOWING CONSTRUCTION COMPLETION, THE CONTRACTOR IS REQUIRED TO RESTORE THE HAUL ROUTE TO ITS ORIGINAL CONDITION. TEMPORARY ACCESS ROUTES MUST BE REMOVED AND THE GROUND RESTORED TO ITS ORIGINAL CONDITION.

13. THE CONTRACTOR MUST REPORT ANY SAFETY ISSUES TO THE ENGINEER UPON DISCOVERY. THE CONTRACTOR MUST TAKE IMMEDIATE ACTION TO RESOLVE SAFETY ISSUES AS DIRECTED.

14. IMMEDIATELY REMOVE ALL FOREIGN OBJECT DEBRIS (FOD) FROM ACTIVE SURFACES UPON DISCOVERY OR NOTIFICATION. FAILURE TO REMOVE FOD MAY BE CONSIDERED A SAFETY VIOLATION AS DETERMINED BY THE ENGINEER. STATION ADEQUATE CLEANING EQUIPMENT AT THE JOB SITE FOR IMMEDIATE CLEANUP OF ANY MATERIAL SPILLS ON ALL ACTIVE RUNWAY, TAXIWAY, AND APRON SURFACES.

15. THE NEW ROTATING BEACON MUST BE OPERATIONAL BEFORE DECOMMISSIONING THE OLD ROTATING BEACON.

16. THE CONTRACTOR SHALL BE AWARE OF AND ACCOMMODATE ALL SCHEDULED, UNSCHEDULED, AND CHARTERED OPERATIONS.

17. A TEMPORARY WIND CONE MUST BE INSTALLED BEFORE THE PRIMARY WIND CONE IS REMOVED AND REPLACED. THE TEMPOARY WIND CONE MUST BE LOCATED OUTSIDE OF THE ROFA AND TOFA.

RUNWAY STATUS CHANGE PROCEDURES:

THE CONTRACTOR SHALL NOTIFY FAA (THROUGH THE ENGINEER) AT LEAST 45 DAYS PRIOR TO RUNWAY CLOSURES (PARTIAL OR FULL), RE-OPENING A CLOSED RUNWAY, INTERRUPTING SERVICE OR REMOVING AND DISPLACING A RUNWAY THRESHOLD BY EMAILING AN "AIRPORT SPONSOR STRATEGIC EVENT SUBMISSION FORM", FAA FORM 6000-26 TO 9-AJV-SEC-WSA@FAA.GOV.

FOLLOW THESE PROCEDURES ANY TIME THE STATUS OF THE RUNWAY OR TAXIWAY IS TO BE ALTERED.

A. CONTRACTOR NOTIFIES ENGINEER OF UPCOMING CHANGE IN AIRPORT STATUS. PROVIDE 10 DAYS ADVANCE NOTICE.

B. AIRPORT MANAGER FILES NOTAM WITH FAA.

C. CONTRACTOR RECEIVES TENTATIVE APPROVAL TO CHANGE RUNWAY STATUS AT A SPECIFIC TIME AND DATE.

D. ON THE DAY OF THE CHANGE IN STATUS, A MEETING IS CONDUCTED WITH ENGINEER TO REVIEW SCHEDULE AND SAFETY PROCEDURES.

E. ENGINEER CLOSES RUNWAY/TAXIWAY TEMPORARILY FOR REQUIRED GRADING AND/OR NEW TEMPORARY MARKINGS.

F. CONTRACTOR GRADES TEMPORARY RUNWAY SO TRANSVERSE GRADES WITHIN TEMPORARY RUNWAY SHALL BE 1-2%. TRANSVERSE GRADES WITHIN TEMPORARY RSA SHALL NOT EXCEED 5%. LONGITUDINAL GRADES ALONG TEMPORARY RUNWAY SHALL NOT EXCEED 2%. COMPACT TEMPORARY RUNWAY TO THE ENGINEER'S SATISFACTION. ALL GRADES AND TRANSITIONS SHALL BE SMOOTH AND ELIMINATE ANY HUMPS AND DIPS.

G. CONTRACTOR INSTALLS APPROVED TEMPORARY MARKINGS AND/OR APPROVED TEMPORARY LIGHTING.

H. ENGINEER INSPECTS AND APPROVES MARKINGS AND LIGHTING.

I. CONTRACTOR IS PROVIDED NOTICE TO PROCEED WITH THE WORK.

J. CONTRACTOR CHANGES RUNWAY STATUS TO A NEW CONFIGURATION, OR CHANGES TO PERMANENT STATUS. AIRPORT MANAGER SHALL CANCEL OR REVISE NOTAM WITH FAA WHEN WORK IS COMPLETE.

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised: 9/24/2025, 12:41 PM
Layout Name: CSPP NOTES
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-CSPP.dwg

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CERT. OF AUTH. NO. AECC111

BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN NOTES

DATE: 9/24/2025
SHEET: AC2 OF AC16

NOTES:

1. COMPLETE RUNWAY STATUS CHANGE PROCEDURES LISTED ON SHEET AC2 PRIOR TO PHASE CONSTRUCTION.
2. PROVIDE AND MAINTAIN W60'xL100' TEMPORARY AIRCRAFT TURNAROUNDS AT EACH RUNWAY END ANYTIME THE HALF WIDTH RUNWAY IS OPEN FOR OPERATIONS. TEMPORARY AIRCRAFT TURNAROUND SHALL HAVE A SMOOTH AND COMPACTED SURFACE THAT IS SUITABLE FOR AIRCRAFT TRAFFIC AND NO MORE THAN A 2% GRADE IN ANY DIRECTION. USE 6" THICK CASC TO CONSTRUCT TURNAROUND AREAS.
3. HAZARD MARKER BARRIERS SHOWN AT APPROXIMATE LOCATIONS. ADDITIONAL LOCATIONS, OR ADJUSTMENTS MAY BE REQUIRED. RELOCATE BARRIERS AS DIRECTED BY THE ENGINEER.
4. EVACUATE PERSONNEL AND EQUIPMENT FROM AREAS DESCRIBED IN GENERAL SAFETY REQUIREMENTS NOTE 4 ON SHEET AC2 AND AS SHOWN ON SHEET AC6 DURING AIRCRAFT OPERATIONS.
5. COORDINATE AND MAINTAIN ACCESS TO THE ACTIVE TAXIWAY AND APRON DURING CONSTRUCTION.
6. USE LIGHTED RUNWAY CLOSURE MARKERS DURING NIGHT RUNWAY CLOSURE ONLY. REMOVE DURING DAYTIME RUNWAY HALF WIDTH OPERATIONS AND FOR ANY EMERGENCY LANDINGS.

75' 37.5' 0 75' 150'

AIRPORT PROPERTY BOUNDARY
EXISTING ROTATING BEACON
OHE
ACCESS ROAD
200+00
SREB
EXISTING EEB
APRON
202+00
HAZARD MARKER BARRIER, TYP SEE DETAIL 2 AC10
EXISTING SEGMENTED CIRCLE AND PRIMARY WIND CONE
1 AC8
204+00
60'
TOFA
TSA
TEMPORARY TW
TEMPORARY ROFA/ROFZ
TEMPORARY RSA
1 AC7
RUNWAY CLOSURE MARKER [VINYL MESH PANEL], TYP MAXIMUM 500' SPACING, SEE DETAIL 1 AC10
STA 133+00.00 RW 22 THRESHOLD
STA 135+40.00 RSA END
MATCH LINE STA 114+00
ROFA
OFZ
RSA
115+00
120+00
125+00
130+00
135+00
TEMPORARY RW 4–22
22
60'
60'
TEMPORARY RW
TEMPORARY RW MARKING, TYP SEE DETAIL 5 AC10
AIRCRAFT TURNAROUND AREA, SEE NOTE 2
TEMPORARY THRESHOLD LIGHTS AND MARKERS, TYP SEE DETAIL 6 AC10

LEGEND:

- PHASE 1
- TURNAROUND AREA (W60'xL100')
- STAGING/STOCKPILE AREA
- HAUL ROUTE
- RUNWAY CLOSURE MARKER [VINYL MESH PANEL]
- RUNWAY CLOSURE MARKER [ILLUMINATED PANEL]
- HAZARD MARKER BARRIER

STA 97+60.00 RSA END
STA 100+00.00 RW 04 THRESHOLD
95+00
04
105+00
110+00
TEMPORARY RW 4–22
RUNWAY CLOSURE MARKER [ILLUMINATED PANEL], TYP, SEE NOTE 6
AIRCRAFT TURNAROUND AREA, SEE NOTE 2
MATCH LINE STA 114+00

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised:
Layout Name: 9/24/2025, 12:42 PM
File Path and Name: PHASE 1
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BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
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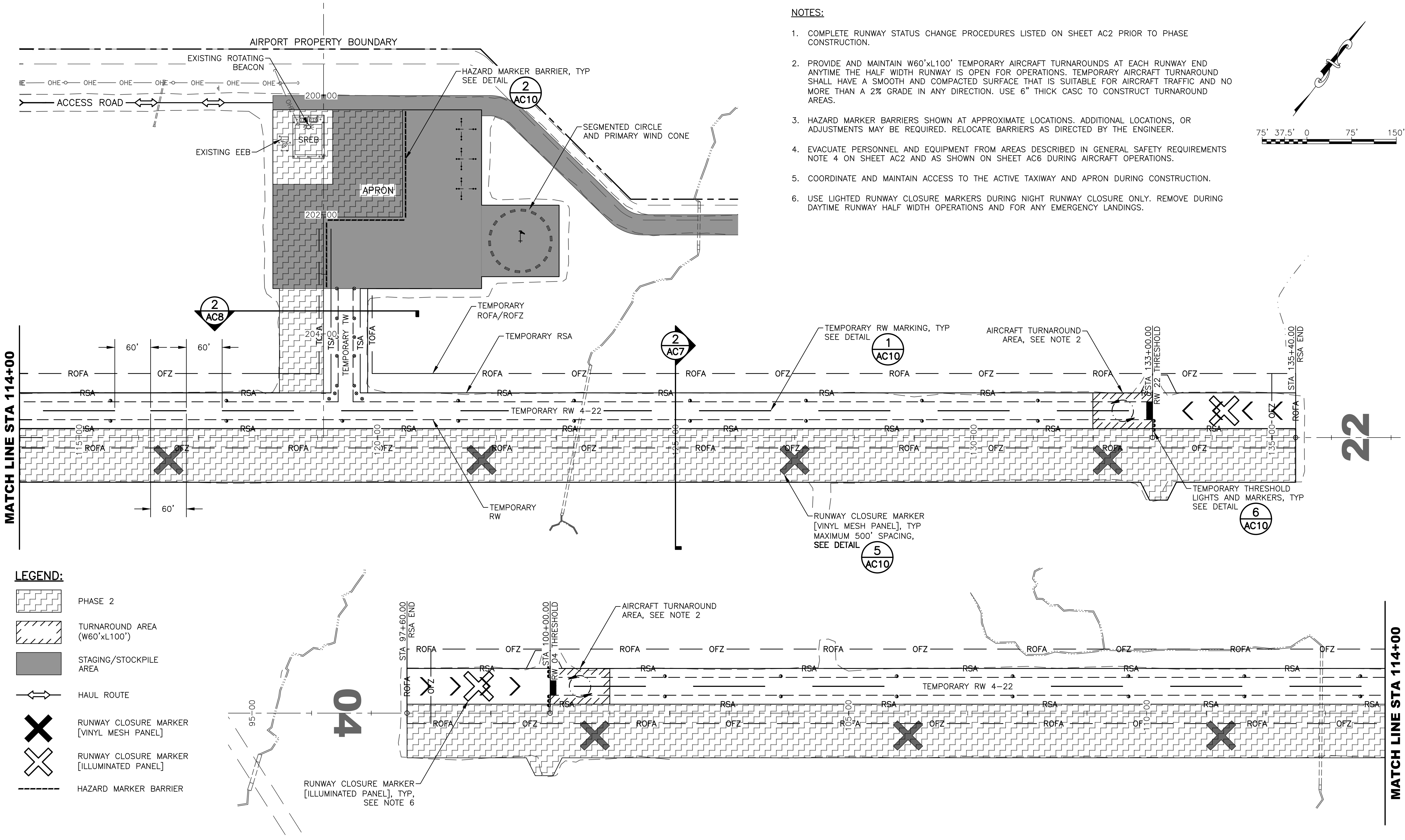
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 1

DATE: 9/24/2025
SHEET: AC3 OF AC16



NOTES:

1. COMPLETE RUNWAY STATUS CHANGE PROCEDURES LISTED ON SHEET AC2 PRIOR TO PHASE CONSTRUCTION.
2. PROVIDE AND MAINTAIN W60'xL100' TEMPORARY AIRCRAFT TURNAROUNDS AT EACH RUNWAY END ANYTIME THE HALF WIDTH RUNWAY IS OPEN FOR OPERATIONS. TEMPORARY AIRCRAFT TURNAROUND SHALL HAVE A SMOOTH AND COMPACTED SURFACE THAT IS SUITABLE FOR AIRCRAFT TRAFFIC AND NO MORE THAN A 2% GRADE IN ANY DIRECTION. USE 6" THICK CASC TO CONSTRUCT TURNAROUND AREAS.
3. HAZARD MARKER BARRIERS SHOWN AT APPROXIMATE LOCATIONS. ADDITIONAL LOCATIONS, OR ADJUSTMENTS MAY BE REQUIRED. RELOCATE BARRIERS AS DIRECTED BY THE ENGINEER.
4. EVACUATE PERSONNEL AND EQUIPMENT FROM AREAS DESCRIBED IN GENERAL SAFETY REQUIREMENTS NOTE 4 ON SHEET AC2 AND AS SHOWN ON SHEET AC6 DURING AIRCRAFT OPERATIONS.
5. COORDINATE AND MAINTAIN ACCESS TO THE ACTIVE TAXIWAY AND APRON DURING CONSTRUCTION.
6. USE LIGHTED RUNWAY CLOSURE MARKERS DURING NIGHT RUNWAY CLOSURE ONLY. REMOVE DURING DAYTIME RUNWAY HALF WIDTH OPERATIONS AND FOR ANY EMERGENCY LANDINGS.

LEGEND:

- PHASE 2
- TURNAROUND AREA (W60'xL100')
- STAGING/STOCKPILE AREA
- HAUL ROUTE
- RUNWAY CLOSURE MARKER [VINYL MESH PANEL]
- RUNWAY CLOSURE MARKER [ILLUMINATED PANEL]
- HAZARD MARKER BARRIER

Designed By: CWB
Drawn By: AVA
Checked By: CJB

Date Revised: 9/24/2025, 12:42 PM
Layout Name: PHASE 2
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-CSPP.dwg

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BY	DATE	REVISION

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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN PHASE 2

DATE: 9/24/2025

SHEET: AC4 OF AC16

NOTES:

1. COMPLETE RUNWAY STATUS CHANGE PROCEDURES LISTED ON SHEET AC2 PRIOR TO PHASE CONSTRUCTION.
2. PROVIDE AND MAINTAIN W60'xL100' TEMPORARY AIRCRAFT TURNAROUNDS AT EACH RUNWAY END ANYTIME THE HALF WIDTH RUNWAY IS OPEN FOR OPERATIONS. TEMPORARY AIRCRAFT TURNAROUND SHALL HAVE A SMOOTH AND COMPACTED SURFACE THAT IS SUITABLE FOR AIRCRAFT TRAFFIC AND NO MORE THAN A 2% GRADE IN ANY DIRECTION. USE 6" THICK CASC TO CONSTRUCT TURNAROUND AREAS.
3. HAZARD MARKER BARRIERS SHOWN AT APPROXIMATE LOCATIONS. ADDITIONAL LOCATIONS, OR ADJUSTMENTS MAY BE REQUIRED. RELOCATE BARRIERS AS DIRECTED BY THE ENGINEER.
4. EVACUATE PERSONNEL AND EQUIPMENT FROM AREAS DESCRIBED IN GENERAL SAFETY REQUIREMENTS NOTE 4 ON SHEET AC2 AND AS SHOWN ON SHEET AC6 DURING AIRCRAFT OPERATIONS.
5. COORDINATE AND MAINTAIN ACCESS TO THE ACTIVE TAXIWAY AND APRON DURING CONSTRUCTION.
6. USE LIGHTED RUNWAY CLOSURE MARKERS DURING NIGHT RUNWAY CLOSURE ONLY. REMOVE DURING DAYTIME RUNWAY HALF WIDTH OPERATIONS AND FOR ANY EMERGENCY LANDINGS.

75' 37.5' 0 75' 150'

AIRPORT PROPERTY BOUNDARY
ACCESS ROAD
OHE
EEB
SREB
APRON
200+00
202+00
204+00
SEGMENTED CIRCLE AND PRIMARY WIND CONE
TIP-DOWN POLE WITH ROTATING BEACON
3 AC8
3 AC7
TEMPORARY ROFA/ROFZ
TEMPORARY RSA
TOFA
TSA
TEMPORARY TW
60'
RUNWAY CLOSURE MARKER [VINYL MESH PANEL], TYP MAXIMUM 500' SPACING, SEE DETAIL 5 AC10
STA 133+00.00 RW 22 THRESHOLD
STA 135+40.00 RSA END
MATCH LINE STA 114+00
115+00
120+00
125+00
130+00
135+00
ROFA
OFZ
RSA
TEMPORARY RW 4-22
TEMPORARY RW
TEMPORARY RW MARKING, TYP SEE DETAIL 1 AC10
AIRCRAFT TURNAROUND AREA, SEE NOTE 2
TEMPORARY THRESHOLD LIGHTS AND MARKERS, TYP SEE DETAIL 6 AC10
22
04
STA 97+60.00 RSA END
STA 100+00.00 RW 04 THRESHOLD
95+00
105+00
110+00
RUNWAY CLOSURE MARKER [ILLUMINATED PANEL], TYP, SEE NOTE 6
AIRCRAFT TURNAROUND AREA, SEE NOTE 2
MATCH LINE STA 114+00

LEGEND:

- PHASE 3
- TURNAROUND AREA (W60'xL100')
- STAGING/STOCKPILE AREA
- HAUL ROUTE
- RUNWAY CLOSURE MARKER [VINYL MESH PANEL]
- RUNWAY CLOSURE MARKER [ILLUMINATED PANEL]

Designed By: CWB
Drawn By: AVA
Checked By: CJB
Date Revised: 9/24/2025, 12:42 PM
Layout Name: PHASE 3
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-CSPP.dwg

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 3

DATE: 9/24/2025
SHEET: AC5 OF AC16

NOTES:

1. COMPLETE RUNWAY STATUS CHANGE PROCEDURES LISTED ON SHEET AC2 PRIOR TO PHASE CONSTRUCTION.
2. PROVIDE AND MAINTAIN W60'xL100' TEMPORARY AIRCRAFT TURNAROUNDS AT EACH RUNWAY END ANYTIME THE HALF WIDTH RUNWAY IS OPEN FOR OPERATIONS. TEMPORARY AIRCRAFT TURNAROUND SHALL HAVE A SMOOTH AND COMPACTED SURFACE THAT IS SUITABLE FOR AIRCRAFT TRAFFIC AND NO MORE THAN A 2% GRADE IN ANY DIRECTION. USE 6" THICK CASC TO CONSTRUCT TURNAROUND AREAS.
3. HAZARD MARKER BARRIERS SHOWN AT APPROXIMATE LOCATIONS. ADDITIONAL LOCATIONS, OR ADJUSTMENTS MAY BE REQUIRED. RELOCATE BARRIERS AS DIRECTED BY THE ENGINEER.
4. EVACUATE PERSONNEL AND EQUIPMENT FROM AREAS DESCRIBED IN GENERAL SAFETY REQUIREMENTS NOTE 4 ON SHEET AC2 AND AS SHOWN ON SHEET AC6 DURING AIRCRAFT OPERATIONS.
5. COORDINATE AND MAINTAIN ACCESS TO THE ACTIVE TAXIWAY AND APRON DURING CONSTRUCTION.
6. USE LIGHTED RUNWAY CLOSURE MARKERS DURING NIGHT RUNWAY CLOSURE ONLY. REMOVE DURING DAYTIME RUNWAY HALF WIDTH OPERATIONS AND FOR ANY EMERGENCY LANDINGS.

75' 37.5' 0 75' 150'

AIRPORT PROPERTY BOUNDARY
OHE
ACCESS ROAD
EEB
200+00
SREB
APRON
202+00
SEGMENTED CIRCLE AND PRIMARY WIND CONE
TIP-DOWN POLE WITH ROTATING BEACON
4 AC8
4 AC7
204+00
TEMPORARY ROFA/ROFZ
TEMPORARY RSA
60'
TOFA
TSA
TEMPORARY TW
MATCH LINE STA 114+00
ROFA
OFZ
RSA
115+00
120+00
TEMPORARY RW 4-22
125+00
130+00
135+00
STA 133+00.00 RW 22 THRESHOLD
STA 135+40.00 RSA END
22
TEMPORARY RW
TEMPORARY RW MARKING, TYP SEE DETAIL 1 AC10
AIRCRAFT TURNAROUND AREA, SEE NOTE 2
TEMPORARY THRESHOLD LIGHTS AND MARKERS, TYP SEE DETAIL 6 AC10

LEGEND:

- PHASE 4
- TURNAROUND AREA (W60'xL100')
- STAGING/STOCKPILE AREA
- HAUL ROUTE
- RUNWAY CLOSURE MARKER [ILLUMINATED PANEL]

STA 97+60.00 RSA END
STA 100+00.00 RW 04 THRESHOLD
95+00
04
105+00
110+00
TEMPORARY RW 4-22
RUNWAY CLOSURE MARKER [ILLUMINATED PANEL], TYP, SEE NOTE 6
AIRCRAFT TURNAROUND AREA, SEE NOTE 2
MATCH LINE STA 114+00

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Checked By: CJB
Date Revised: 9/24/2025, 12:42 PM
Layout Name: PHASE 4
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TGT-CSPP.dwg

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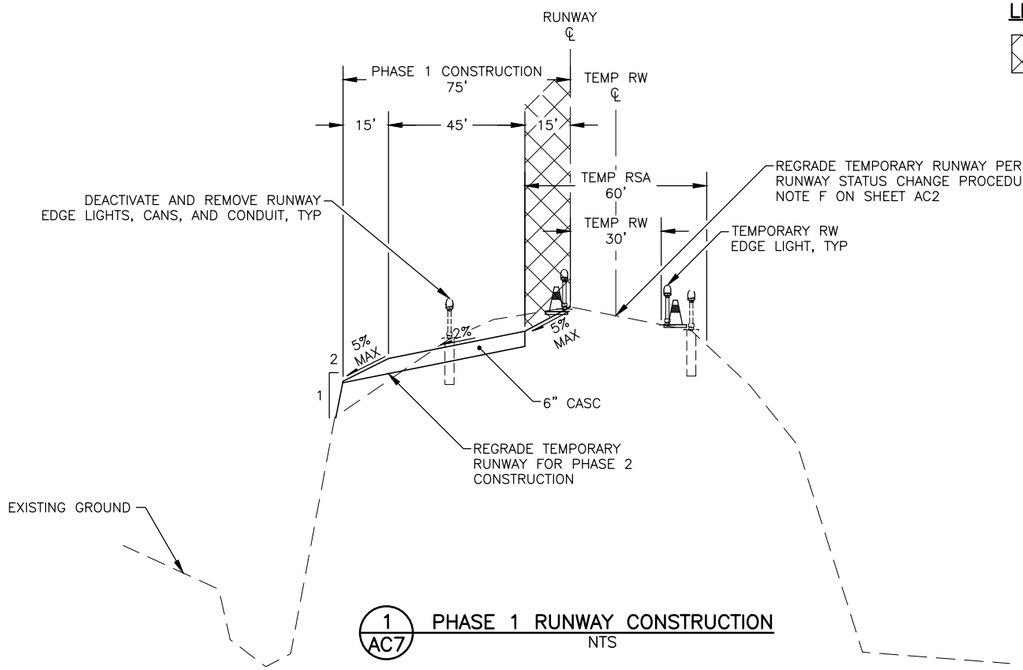
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN
PHASE 4

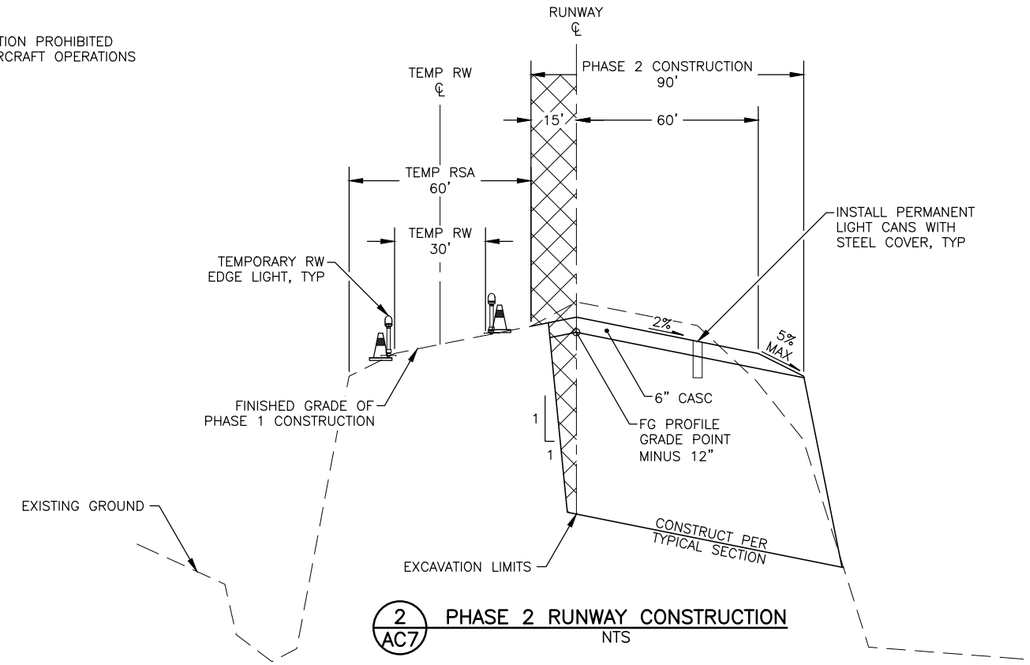
DATE: 9/24/2025
SHEET: AC6 OF AC16

LEGEND:

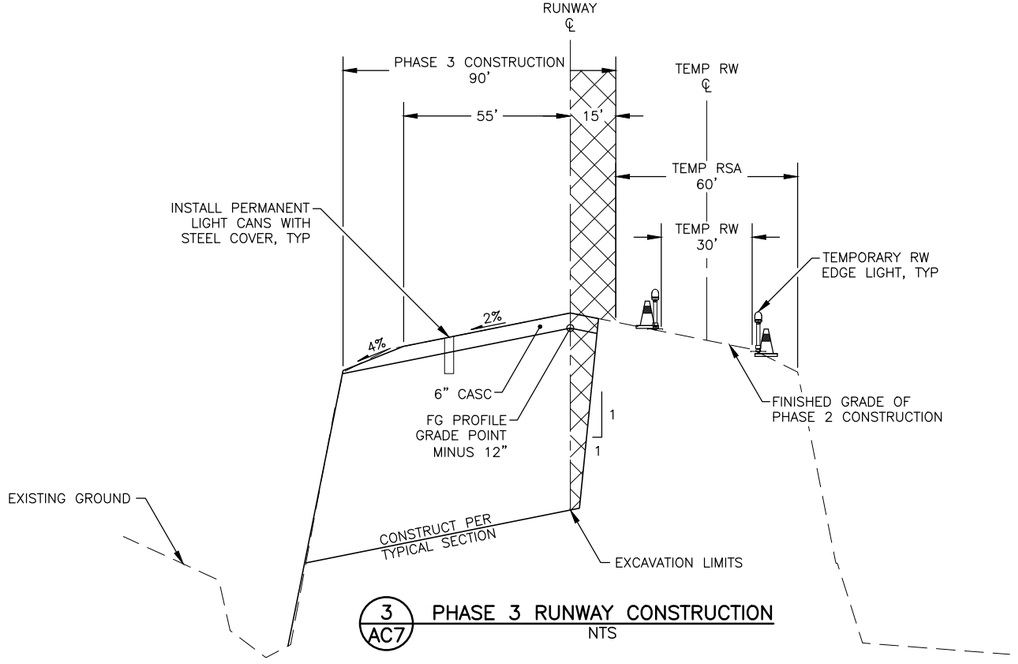
CONSTRUCTION PROHIBITED DURING AIRCRAFT OPERATIONS



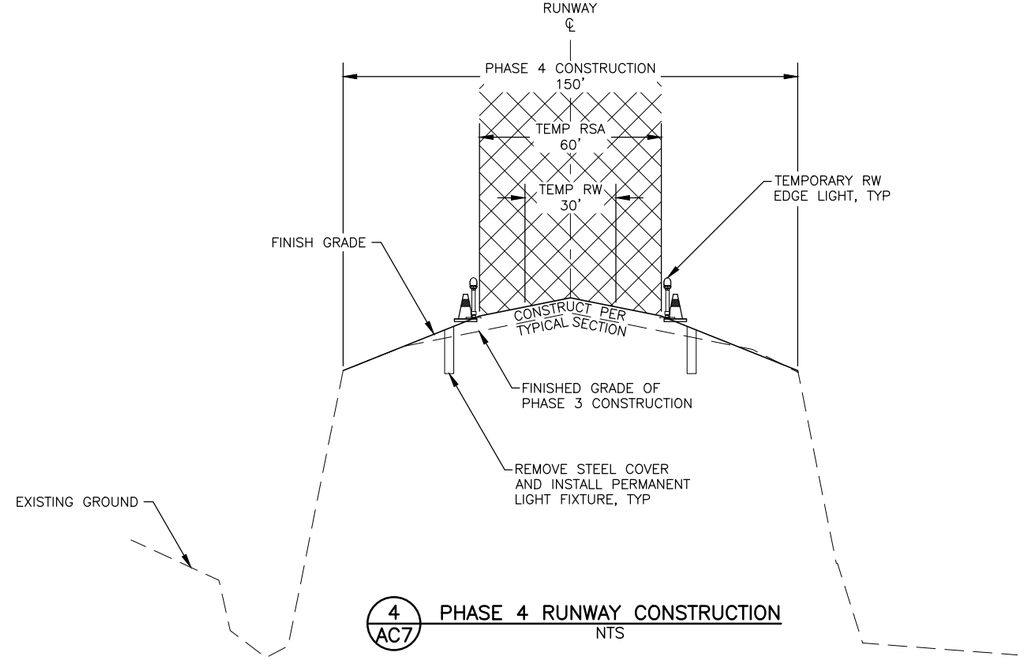
1 AC7 **PHASE 1 RUNWAY CONSTRUCTION**
NTS



2 AC7 **PHASE 2 RUNWAY CONSTRUCTION**
NTS



3 AC7 **PHASE 3 RUNWAY CONSTRUCTION**
NTS



4 AC7 **PHASE 4 RUNWAY CONSTRUCTION**
NTS

NOTES:

1. PROVIDE 2" EXTENSIONS AND SPACERS FOR ALL INSTALLED PERMANENT CANS, AS REQUIRED TO BRING FIXTURES FLUSH WITH FINISHED GARDE.

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TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN
SECTIONS (1 OF 2)

DATE: 9/24/2025

SHEET: AC7 OF AC16

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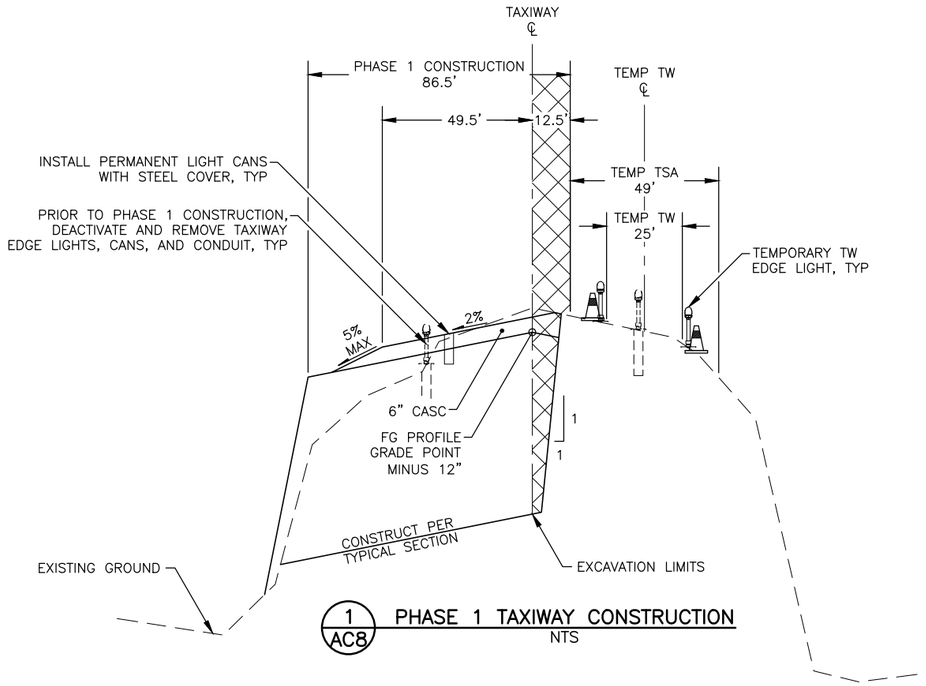
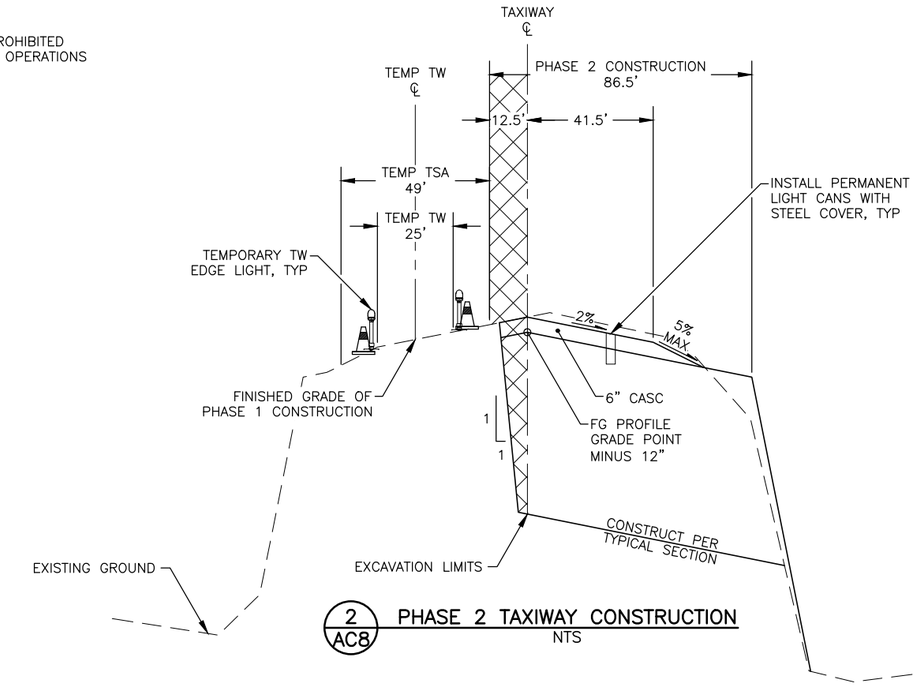
Date Revised: 9/24/2025, 12:42 PM
Layout Name: CSPP SECTIONS - RW
File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-CSPP Details.dwg



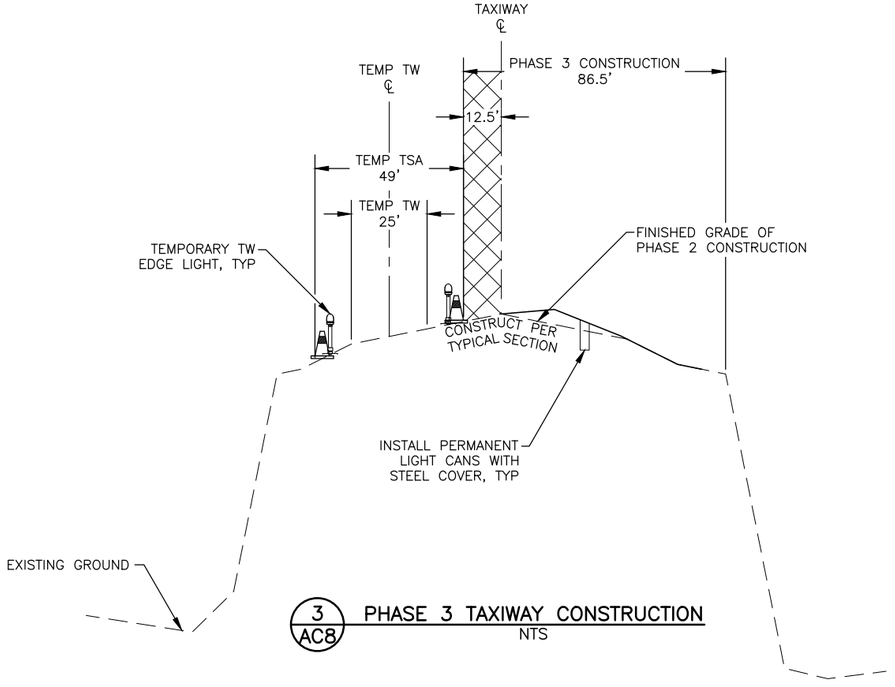
1 AC8 **PHASE 1 TAXIWAY CONSTRUCTION**
NTS

LEGEND:

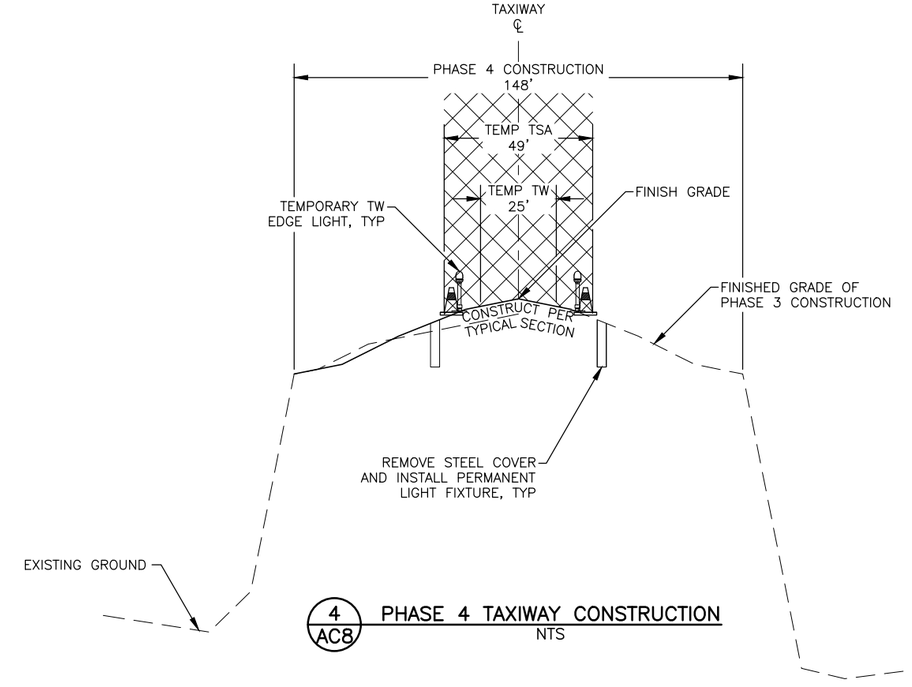
CONSTRUCTION PROHIBITED
DURING AIRCRAFT OPERATIONS



2 AC8 **PHASE 2 TAXIWAY CONSTRUCTION**
NTS



3 AC8 **PHASE 3 TAXIWAY CONSTRUCTION**
NTS



4 AC8 **PHASE 4 TAXIWAY CONSTRUCTION**
NTS

NOTES:

1. PROVIDE 2" EXTENSIONS AND SPACERS FOR ALL INSTALLED PERMANENT CANS, AS REQUIRED TO BRING FIXTURES FLUSH WITH FINISHED GARDE.

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TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN
SECTIONS (2 OF 2)

DATE: 9/24/2025

SHEET: AC8 OF AC16

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Date Revised:
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File Path and Name: Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-CSPP Details.dwg
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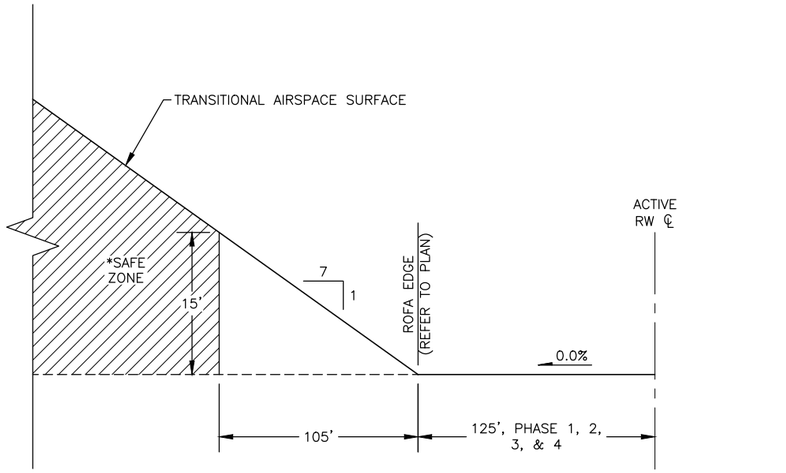
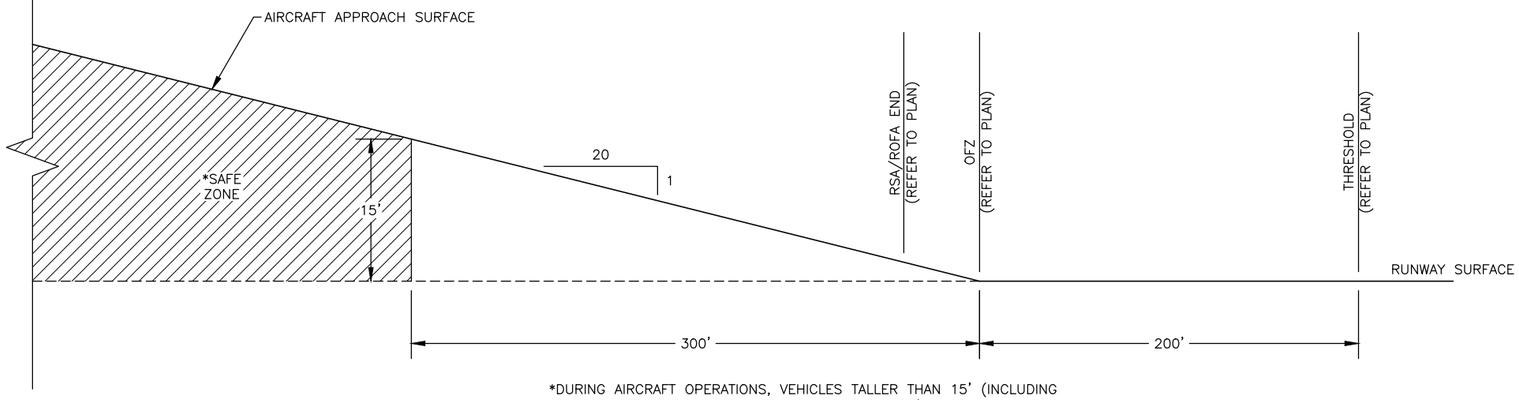


*DURING AIRCRAFT OPERATIONS, VEHICLES TALLER THAN 15' (INCLUDING ALL PARTS OF THE EQUIPMENT, E.G. AN EXCAVATOR) MUST REMAIN FARTHER AWAY FROM THE RUNWAY CENTERLINE. WHEN THIS IS THE CASE, NOTIFY AND COORDINATE SAFE ZONE LIMITS WITH THE ENGINEER.

1 AC9 SAFE ZONES ADJACENT TO ACTIVE RUNWAY EDGES
NTS



*DURING AIRCRAFT OPERATIONS, VEHICLES TALLER THAN 15' (INCLUDING ALL PARTS OF THE EQUIPMENT, E.G. AN EXCAVATOR) MUST REMAIN FARTHER AWAY FROM THE THRESHOLD. WHEN THIS IS THE CASE, NOTIFY AND COORDINATE SAFE ZONE LIMITS WITH THE ENGINEER. THE 20:1 APPROACH SURFACE IS BASED ON THE THRESHOLD ELEVATION. THE ALLOWABLE VEHICLE HEIGHT MAY NEED TO BE REDUCED IF THE GROUND ELEVATION RISES BEYOND THE THRESHOLD.

2 AC9 SAFE ZONES ALONG EXTENDED RUNWAY OR ACTIVE THRESHOLD
NTS

Designed By:	CWB	
Drawn By:	AVA	
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Date Revised:	9/24/2025, 12:42 PM	
Layout Name:	CSPP SAFE ZONE	
File Path and Name:	Z:\project\3028.01 DOT_C Takotna Airport Rehab\Civil\ACAD\00805-TCT-CSPP Details.dwg	

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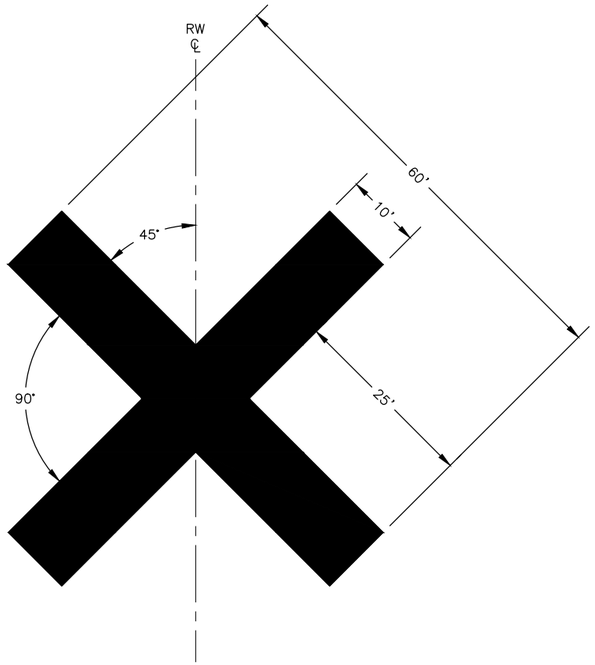
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN
SAFE ZONES

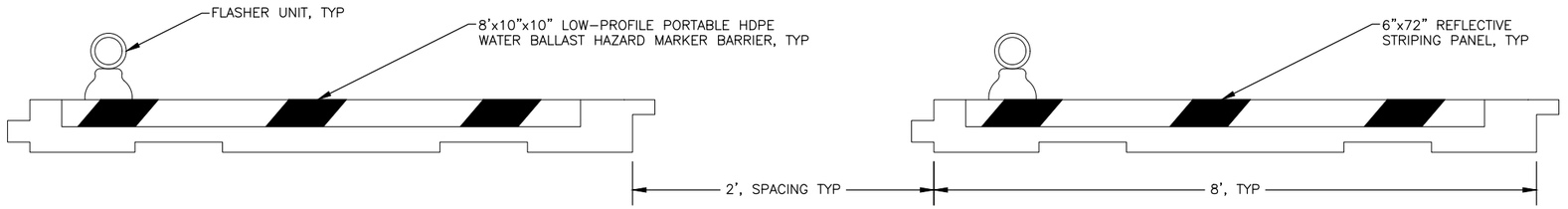
DATE: 9/24/2025
SHEET: AC9 OF AC16



1 AC10 RUNWAY CLOSURE MARKER DETAIL
NTS

CLOSURE MARKER NOTES:

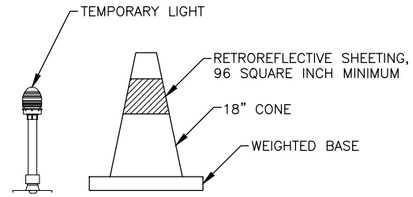
1. MAINTAIN RUNWAY AND TAXIWAY CLOSURE MARKERS AS CONSTRUCTION ALLOWS.
2. CLOSURE MARKER IS YELLOW, VINYL.
3. RUNWAY CLOSURE MARKERS ARE TO BE PLACED AT EACH RUNWAY END AND AT 500 FOOT INTERVALS.
4. TAXIWAY CLOSURE MARKERS ARE TO BE PLACED AT THE ENTRANCE AND EXIT OF TAXIWAYS.
5. WEIGH DOWN CLOSURE MARKERS WITH SANDBAGS.



2 AC10 HAZARD MARKER BARRIER DETAIL
NTS

HAZARD MARKER BARRIER NOTES:

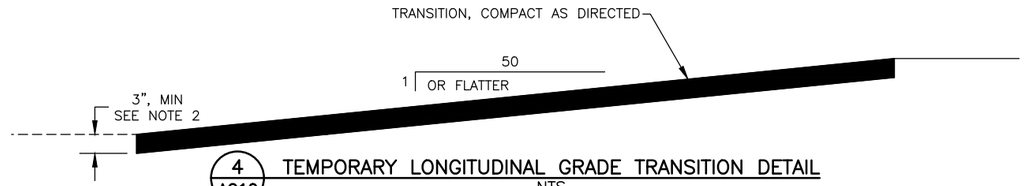
1. PLACE BARRIERS TO LIMIT ACCESS TO THE CLOSED APRON. USE LOW STYLE BARRIERS (LESS THAN 18 INCHES HIGH) WHEN ADJACENT TO AN ACTIVE MOVEMENT AREA.
2. HAZARD AREA BARRIERS ARE NOT TO BE PLACED WITHIN THE OFZ OF THE ACTIVE RUNWAY. CONSIDER PROP WASH WHEN PLACING BARRIERS.
3. ALTERNATE BETWEEN WHITE AND ORANGE HAZARD MARKER BARRIERS.



3 AC10 TEMPORARY MARKER DETAIL
NTS

TEMPORARY MARKER NOTES:

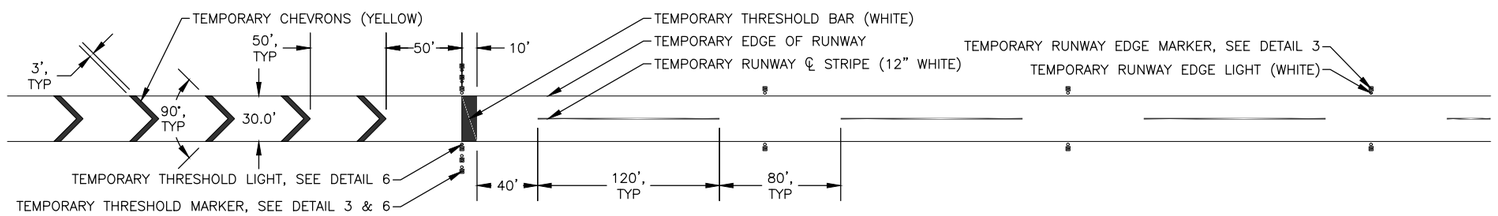
1. TEMPORARY RUNWAY EDGE MARKERS SHALL HAVE A WHITE RETRO REFLECTIVE SHEETING.
2. TEMPORARY THRESHOLD MARKERS SHALL HAVE A RED AND GREEN RETRO REFLECTIVE SHEETING. THE GREEN SIDE OF THE SHEETING SHALL FACE THE APPROACH OF THE RUNWAY, AND THE RED SIDE OF THE SHEETING SHALL FACE THE RUNWAY.
3. TEMPORARY TAXIWAY EDGE MARKERS SHALL HAVE A BLUE RETRO REFLECTIVE SHEETING. SEE TEMPORARY LIGHTING PLANS FOR TEMPORARY TAXIWAY EDGE LIGHTING.
4. TEMPORARY MARKERS PAID UNDER ITEM L125.180.0000.
5. TEMPORARY LIGHTING FIXTURES TO BE EVENLY SPACED AT A MAXIMUM DISTANCE OF 200 FEET. SEE TEMPORARY LIGHTING PLANS.



4 AC10 TEMPORARY LONGITUDINAL GRADE TRANSITION DETAIL
NTS

TEMPORARY TRANSITION NOTES:

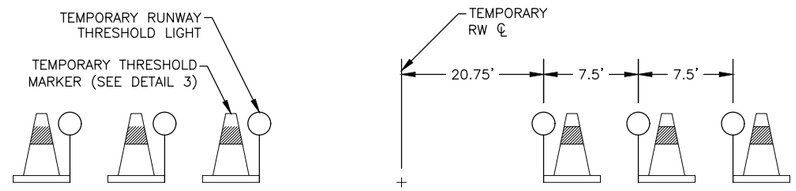
1. TEMPORARY TRANSITIONS SHALL BE SMOOTH AND FREE OF RUTS AND APPROVED BY THE ENGINEER PRIOR TO OPENING FOR AIRCRAFT OPERATIONS.
2. THICKNESS TO MATCH LAYER THICKNESS, OR AS NEEDED TO OBTAIN COMPACTION AS DIRECTED BY THE ENGINEER. USE THE MATERIAL SPECIFIED IN THE TYPICAL SECTION TO SURFACE THE TEMPORARY TRANSITION. ALL ADDITIONAL WORK REQUIRED TO CONSTRUCT TEMPORARY TRANSITIONS IS SUBSIDIARY TO THE MATERIAL BEING PLACED. SUCH WORK MAY INCLUDE PLACEMENT, SCARIFYING, GRADING, COMPACTING, REMOVAL, REPLACEMENT, RE-COMPACTING, RE-GRADING, OR OTHER WORK AS REQUIRED TO ACCEPTABLY INCORPORATE MATERIALS INTO THE SUBSEQUENT WORK. NO SEPARATE MEASUREMENT OR PAYMENT WILL BE MADE.



5 AC10 TEMPORARY RUNWAY MARKINGS DETAIL
NTS

TEMPORARY RUNWAY MARKING NOTES:

1. TEMPORARY RUNWAY CENTERLINE MARKINGS ARE TYPICAL 120' STRIPES WITH 80' GAPS. SEE PLAN VIEW FOR NON-STANDARD STRIPE AND GAP DIMENSIONS.
2. TEMPORARY RUNWAY SURFACE MARKINGS PAID UNDER ITEM P620.070.0000.
3. TEMPORARY RUNWAY LIGHTING PAID UNDER ITEM L125.180.0000.



6 AC10 TEMPORARY RUNWAY THRESHOLD DETAIL
NTS

TEMPORARY RUNWAY THRESHOLD LIGHTING NOTES:

1. TEMPORARY RUNWAY THRESHOLD LIGHTS SHALL EMIT GREEN LIGHT OUTWARD FROM THE RUNWAY AND RED LIGHT TOWARD THE RUNWAY.
2. TEMPORARY RUNWAY THRESHOLD AND EDGE LIGHTS PAID UNDER ITEM L125.180.0000.
3. SEE ELECTRICAL FOR TEMPORARY RUNWAY THRESHOLD LIGHT DETAILS.

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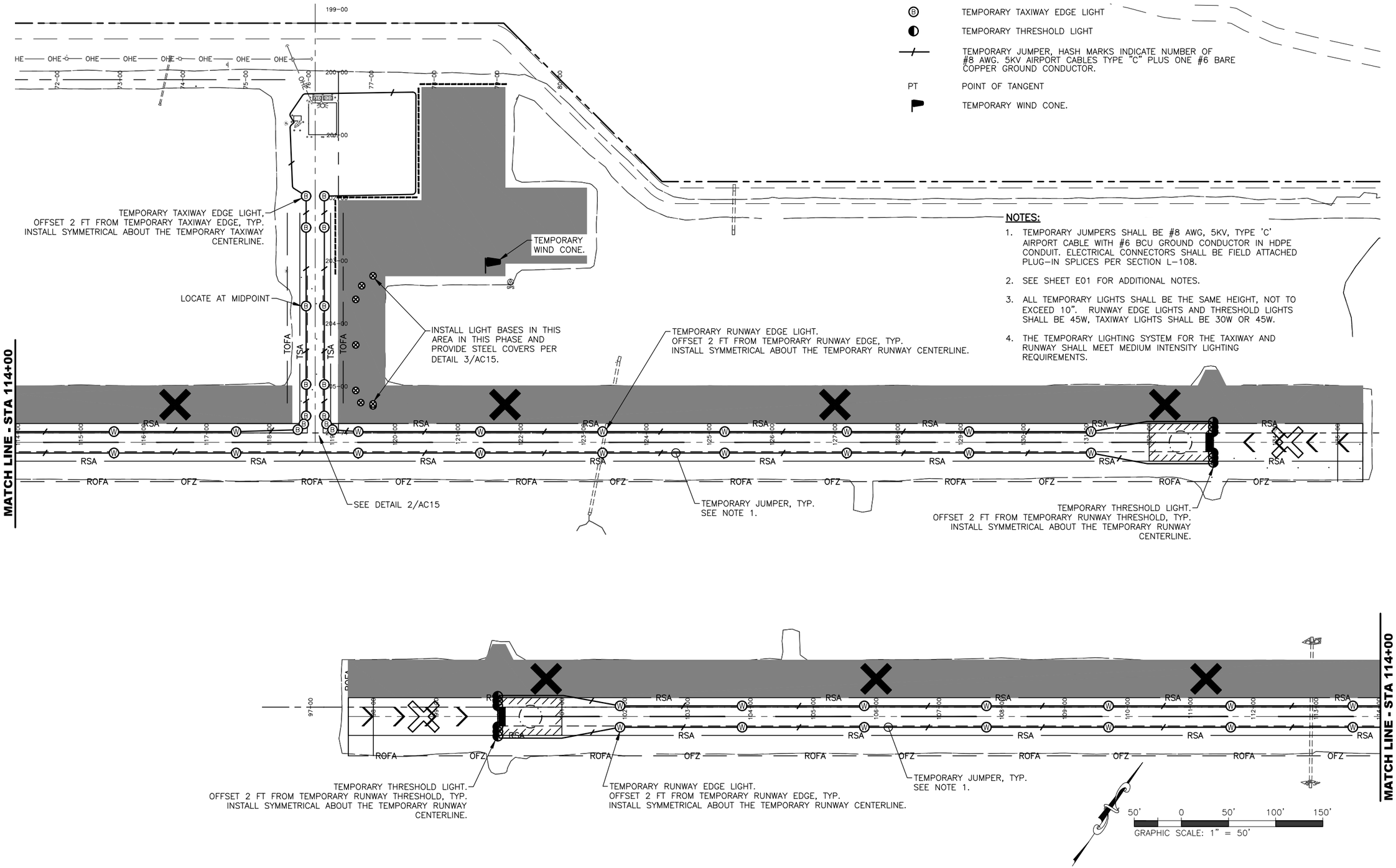
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
CONSTRUCTION SAFETY AND PHASING PLAN DETAILS

DATE: 9/24/2025
SHEET: AC10 OF AC16

TEMP LIGHTING LEGEND:

- Ⓦ — TEMPORARY RUNWAY EDGE LIGHT
- Ⓑ — TEMPORARY TAXIWAY EDGE LIGHT
- ◐ — TEMPORARY THRESHOLD LIGHT
- — TEMPORARY JUMPER, HASH MARKS INDICATE NUMBER OF #8 AWG. 5KV AIRPORT CABLES TYPE "C" PLUS ONE #6 BARE COPPER GROUND CONDUCTOR.
- PT — POINT OF TANGENT
- TEMPORARY WIND CONE.



NOTES:

1. TEMPORARY JUMPERS SHALL BE #8 AWG, 5KV, TYPE 'C' AIRPORT CABLE WITH #6 BCU GROUND CONDUCTOR IN HDPE CONDUIT. ELECTRICAL CONNECTORS SHALL BE FIELD ATTACHED PLUG-IN SPLICES PER SECTION L-108.
2. SEE SHEET E01 FOR ADDITIONAL NOTES.
3. ALL TEMPORARY LIGHTS SHALL BE THE SAME HEIGHT, NOT TO EXCEED 10". RUNWAY EDGE LIGHTS AND THRESHOLD LIGHTS SHALL BE 45W, TAXIWAY LIGHTS SHALL BE 30W OR 45W.
4. THE TEMPORARY LIGHTING SYSTEM FOR THE TAXIWAY AND RUNWAY SHALL MEET MEDIUM INTENSITY LIGHTING REQUIREMENTS.

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised:
Layout Name: 9/24/2025, 11:24 AM
File Path and Name: AC11
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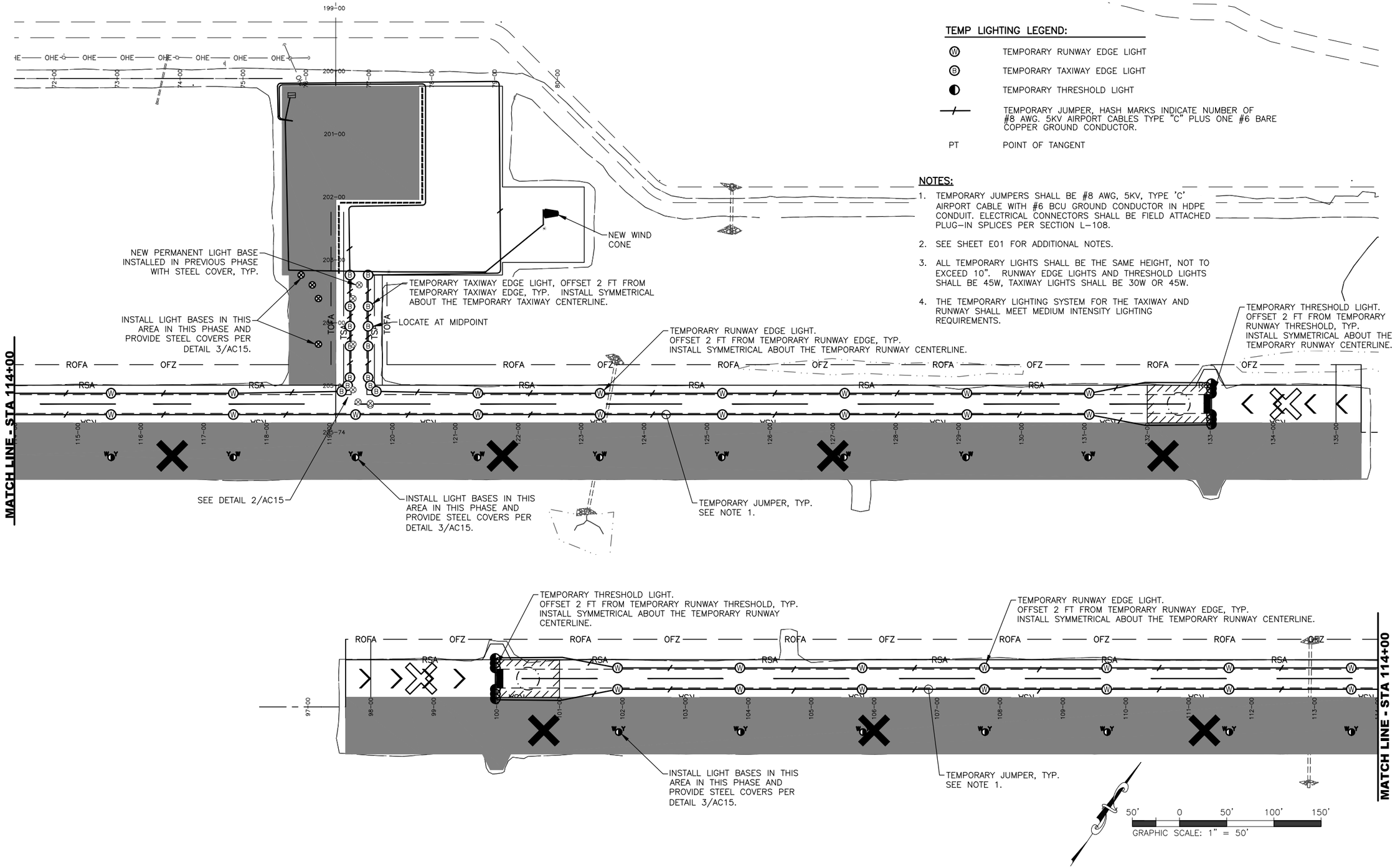
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TEMPORARY LIGHTING PLAN
PHASE 1

DATE: 9/24/2025
SHEET: AC11 OF AC16



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Drawn By:	AD
Checked By:	EC
Date Revised:	9/24/2025, 11:24 AM
Layout Name:	AC12
File Path and Name:	Z:\220361AR - DOT GR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_TEMP.dwg

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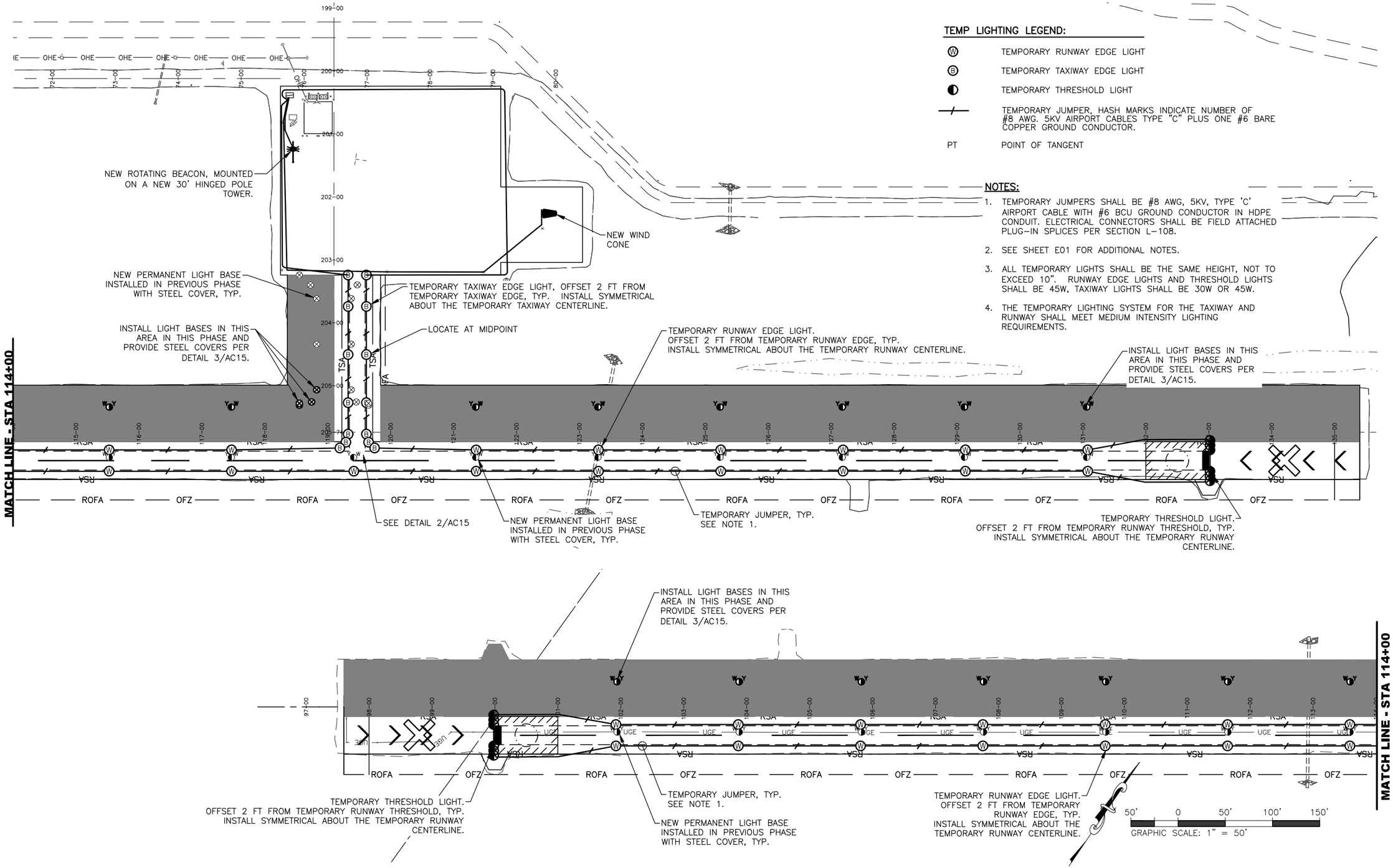
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TEMPORARY LIGHTING PLAN
PHASE 2

DATE: 9/24/2025

SHEET: AC12 OF AC16



Designed By:	DH
Drawn By:	AD
Checked By:	EC
Date Revised:	9/24/2025, 11:24 AM
Layout Name:	AC13
File Path and Name:	Z:\22036TAR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TGT_LTG_TEMP.dwg

PLANS DEVELOPED BY:
MBA CONSULTING ENGINEERS, INC.
16515 CENTERFIELD DRIVE,
SUITE 101
EAGLE RIVER, AK 99577
(907) 274-2622
CERT. OF AUTH. NO. AECC578

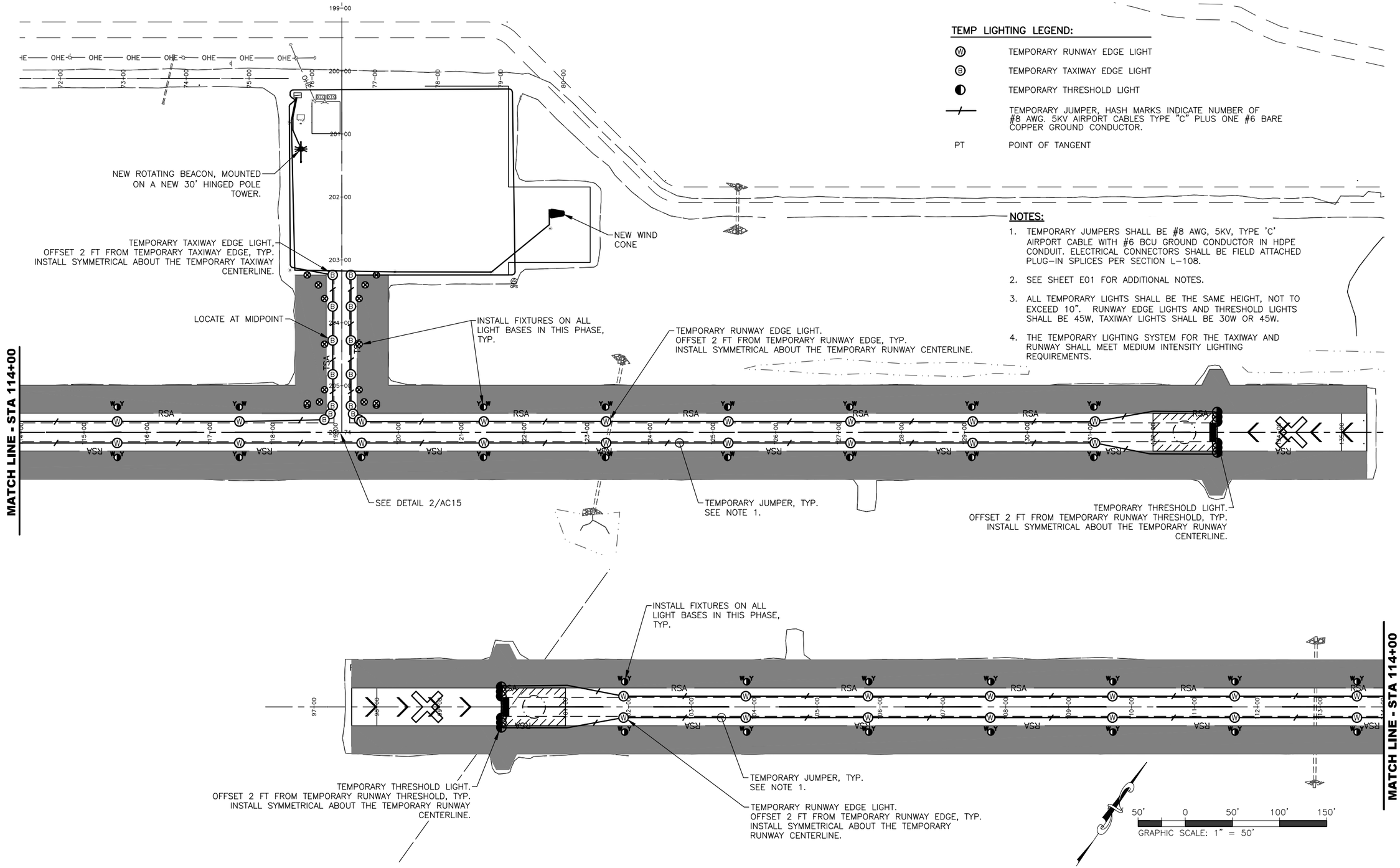
BY	DATE	REVISION

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TEMPORARY LIGHTING PLAN
PHASE 3

DATE: 9/24/2025

SHEET: AC13 OF AC16



TEMP LIGHTING LEGEND:

W	TEMPORARY RUNWAY EDGE LIGHT
B	TEMPORARY TAXIWAY EDGE LIGHT
	TEMPORARY THRESHOLD LIGHT
	TEMPORARY JUMPER, HASH MARKS INDICATE NUMBER OF #8 AWG. 5KV AIRPORT CABLES TYPE "C" PLUS ONE #6 BARE COPPER GROUND CONDUCTOR.
PT	POINT OF TANGENT

NOTES:

1. TEMPORARY JUMPERS SHALL BE #8 AWG, 5KV, TYPE 'C' AIRPORT CABLE WITH #6 BCU GROUND CONDUCTOR IN HDPE CONDUIT. ELECTRICAL CONNECTORS SHALL BE FIELD ATTACHED PLUG-IN SPLICES PER SECTION L-108.
2. SEE SHEET E01 FOR ADDITIONAL NOTES.
3. ALL TEMPORARY LIGHTS SHALL BE THE SAME HEIGHT, NOT TO EXCEED 10". RUNWAY EDGE LIGHTS AND THRESHOLD LIGHTS SHALL BE 45W, TAXIWAY LIGHTS SHALL BE 30W OR 45W.
4. THE TEMPORARY LIGHTING SYSTEM FOR THE TAXIWAY AND RUNWAY SHALL MEET MEDIUM INTENSITY LIGHTING REQUIREMENTS.

Designed By:	DH
Drawn By:	AD
Checked By:	EC
Date Revised:	9/24/2025, 11:24 AM
Layout Name:	AC14
File Path and Name:	Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_TEMP.dwg

PLANS DEVELOPED BY:	BY	DATE	REVISION
MBA CONSULTING ENGINEERS, INC. 16515 CENTERFIELD DRIVE, SUITE 101 EAGLE RIVER, AK 99577 (907) 274-2622 CERT. OF AUTH. NO. AECC578			

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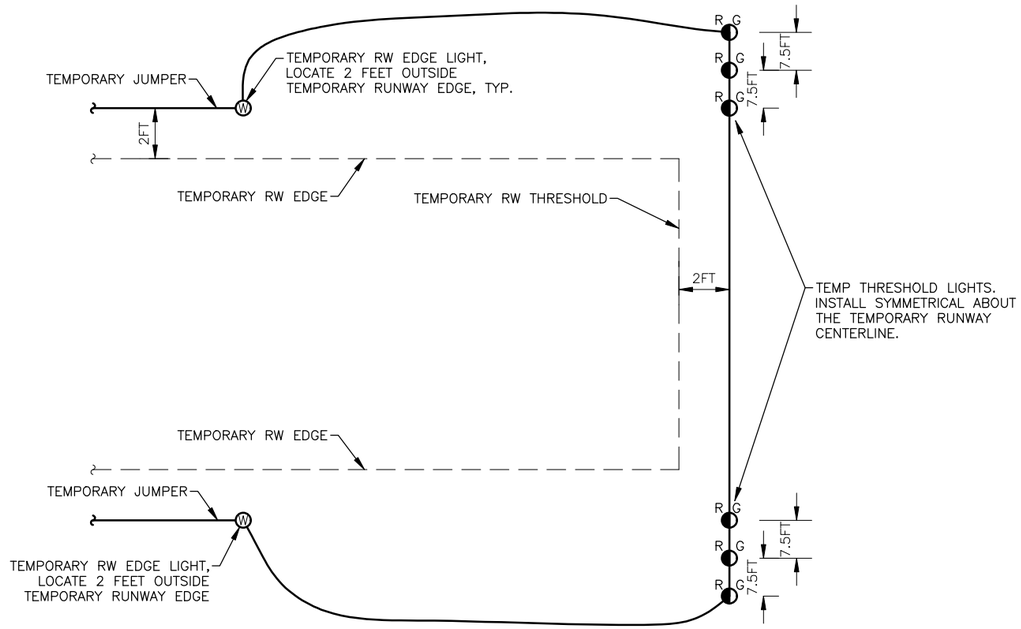
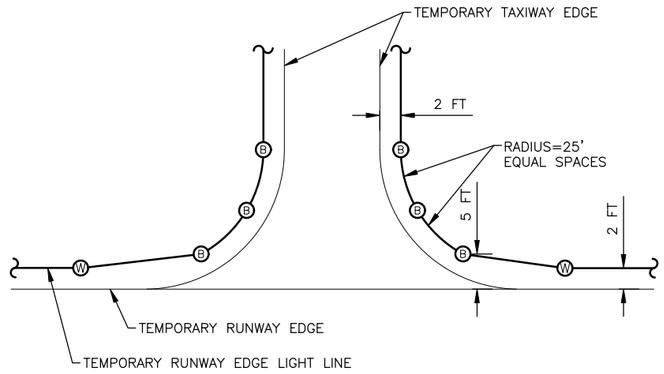
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
4111 AVIATION AVE., ANCHORAGE ALASKA 99502
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TEMPORARY LIGHTING PLAN
PHASE 4

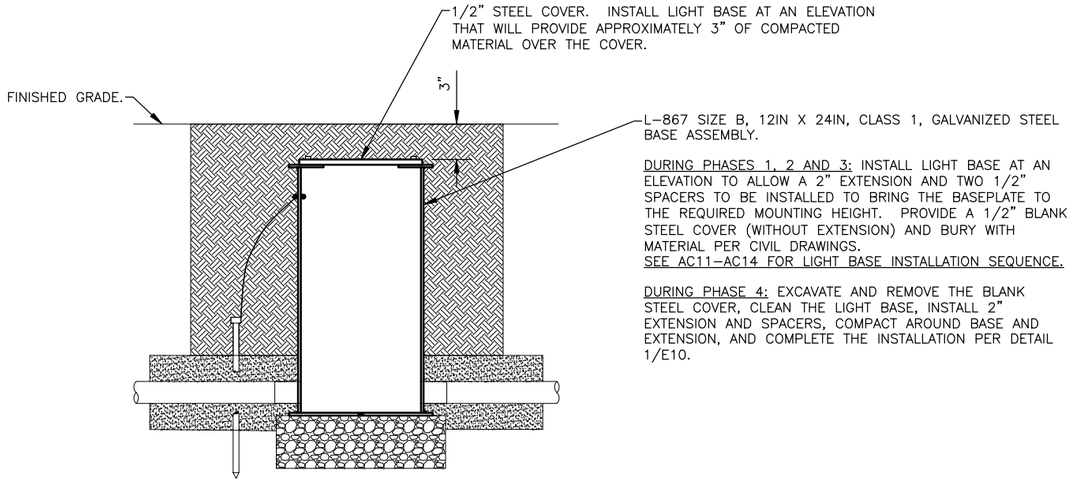
DATE: 9/24/2025
SHEET: AC14 OF AC16



1 AC15 TEMPORARY THRESHOLD LIGHTING DETAIL
NTS



2 AC15 TAXIWAY ENTRANCE DETAIL
NTS



3 AC15 STEEL L-867 BASE INSTALLATION DETAIL
NTS

Designed By: DH
Drawn By: AD
Checked By: EC

Date Revised: 9/24/2025, 11:24 AM
Layout Name: AC15
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_TEMP.dwg

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SUITE 101
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(907) 274-2622
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DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
CENTRAL REGION
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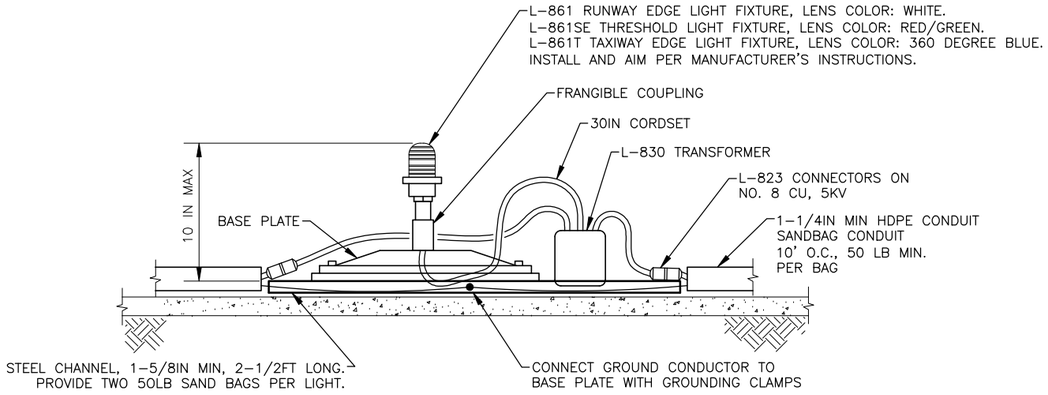
PHONE (907) 269-0590

TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TEMPORARY LIGHTING DETAILS

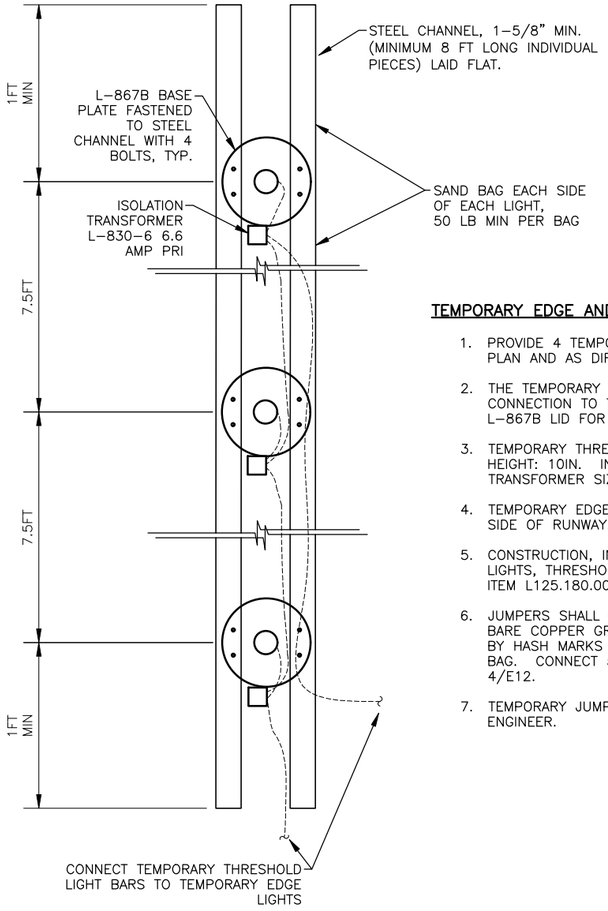
DATE: 9/24/2025
SHEET: AC15 OF AC16

TEMPORARY LIGHTING GENERAL NOTES:

1. PROVIDE A TEMPORARY RUNWAY AND TAXIWAY LIGHTING SYSTEM AND TEMPORARY JUMPERS AS REQUIRED TO PROVIDE A FULLY OPERATIONAL LIGHTING SYSTEM TO THE SATISFACTION OF THE ENGINEER. REVISE AS NECESSARY TO COORDINATE WITH PROJECT PHASING AND MAINTAIN THE SYSTEM FOR THE DURATION OF THE PROJECT. TEMPORARY LIGHTING SYSTEM SHALL MEET THE REQUIREMENTS OF A MEDIUM INTENSITY LIGHTING SYSTEM PER AC 150/5340-30J. PAID FOR UNDER L125.180.0000.
2. RESTORE AIRFIELD LIGHTING POWER AND CONTROL CIRCUITS ONE HOUR PRIOR TO ANY SCHEDULED FLIGHT, OR AS DIRECTED BY THE PROJECT ENGINEER.
3. WHEN TEMPORARY LIGHTING IS NO LONGER NEEDED, REMOVE UNUSED CONDUIT, WIRING, FIXTURES, AND ALL APPURTENANCES.
4. TEMPORARY JUMPERS SHALL BE #8 AWG, 5KV, TYPE 'C' AIRPORT CABLE. RUN JUMPERS IN HDPE CONDUIT, 1-1/4IN MINIMUM, AND 50 LBS SAND BAG EVERY 10 FT ON CENTER. ELECTRICAL CONNECTORS SHALL BE FIELD ATTACHED PLUG-IN SPLICES PER SECTION L-108. TEMPORARY JUMPERS SHALL BE SUBSIDIARY TO ITEM L125.180.0000 AND NO SEPARATE PAYMENT WILL BE MADE.
5. TEMPORARY LIGHT BASES SHALL BE CONSTRUCTED OF STEEL CHANNEL OR APPROVED EQUAL. BOLT THE FIXTURE BASE PLATE TO THE CHANNEL AND SECURE IN PLACE WITH SAND BAGS.
6. PROVIDE 1/2IN STEEL COVER PLATES AS INDICATED OR AS DIRECTED BY THE ENGINEER AND SECURE TO LIGHT BASES PER MANUFACTURER'S INSTRUCTIONS..
7. REMOVE EDGE LIGHTS THAT CONFLICT WITH CONSTRUCTION ACTIVITIES AND PROVIDE MEANS OF BLANKING OUT EXISTING TAXIWAY EDGE LIGHTS AND SIGNS ON CLOSED PORTIONS OF TAXIWAYS AND APRON AS INDICATED IN THE PHASING PLANS AND AS DIRECTED BY THE ENGINEER. THIS MAY BE ACCOMPLISHED BY REMOVING THE FIXTURES AND PROVIDING SHORTING CAPS, OR BY BAGGING THE FIXTURES AND SIGNS. IF FIXTURES ARE REMOVED, PROVIDE STEEL COVER PLATES. THE CONTRACTOR SHALL PROVIDE SAFE STORAGE AND RE-INSTALL THE FIXTURES OR REMOVE BAGS, AND CLEAN EACH FIXTURE AT THE END OF EACH PHASE. THIS WORK SHALL BE PAID UNDER ITEM L125.180.0000 AND NO SEPARATE PAYMENT WILL BE MADE.



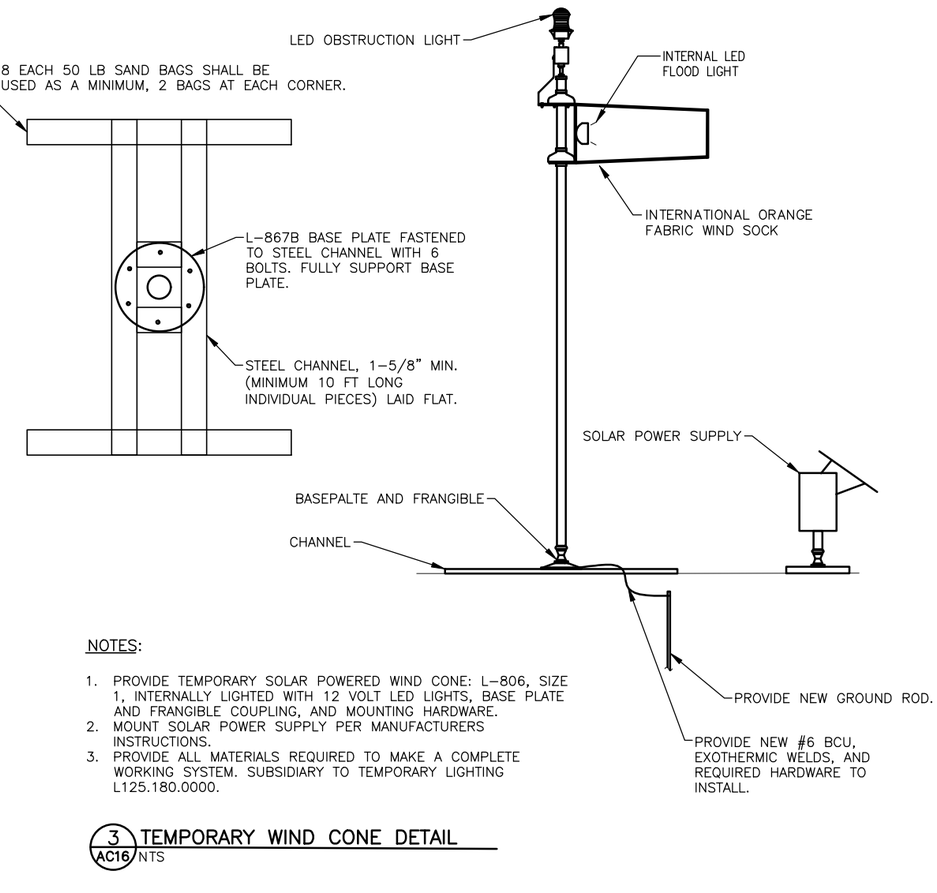
2 AC16 TEMPORARY RUNWAY EDGE LIGHT DETAIL
NTS



TEMPORARY EDGE AND THRESHOLD LIGHT NOTES:

1. PROVIDE 4 TEMPORARY THRESHOLD LIGHT BARS IN ACCORDANCE WITH THE PROJECT SAFETY PLAN AND AS DIRECTED BY THE ENGINEER.
2. THE TEMPORARY LIGHT FIXTURES SHALL HAVE CORD SETS OF SUFFICIENT LENGTH TO ALLOW CONNECTION TO TRANSFORMER SECONDARY REMOTE FROM THE AREA UNDERNEATH THE L-867B LID FOR THE TEMPORARY THRESHOLD.
3. TEMPORARY THRESHOLD LIGHT FIXTURES SHALL BE L-861SE AND SHALL BE THE SAME HEIGHT: 10IN. INSTALL AND AIM PER MANUFACTURER'S INSTRUCTIONS. LAMP WATTAGE AND TRANSFORMER SIZE PER MANUFACTURER'S INSTRUCTIONS.
4. TEMPORARY EDGE LIGHTS SHALL BE LAID OUT SYMMETRICAL TO EDGE LIGHTS ON OPPOSITE SIDE OF RUNWAY. MAINTAIN A STRAIGHT LINE. MATCH EXISTING LENS COLOR.
5. CONSTRUCTION, INSTALLATION, MAINTENANCE AND DEMOLITION OF THE TEMPORARY EDGE LIGHTS, THRESHOLD LIGHTS, THRESHOLD LIGHT BARS AND JUMPERS IS SUBSIDIARY TO PAY ITEM L125.180.0000.
6. JUMPERS SHALL CONSIST OF #8 AWG, 5 KV AIRPORT CABLE, TYPE C, PLUS ONE #6 AWG BARE COPPER GROUND INSTALLED IN HDPE CONDUIT. NUMBER OF CONDUCTORS INDICATED BY HASH MARKS ON PLANS. SAND BAG CONDUIT 10FT OC, 50 LB MINIMUM PER SAND BAG. CONNECT 5 kV AIRPORT CABLE WITH FAA L-823 CONNECTORS AS SHOWN IN DETAIL 4/E12.
7. TEMPORARY JUMPERS SHALL BE SALVAGED OR DISPOSED OF AT THE DIRECTION OF THE ENGINEER.

1 AC16 TEMPORARY THRESHOLD LIGHT BAR
NTS



NOTES:

1. PROVIDE TEMPORARY SOLAR POWERED WIND CONE: L-806, SIZE 1, INTERNALLY LIGHTED WITH 12 VOLT LED LIGHTS, BASE PLATE AND FRANGIBLE COUPLING, AND MOUNTING HARDWARE.
2. MOUNT SOLAR POWER SUPPLY PER MANUFACTURERS INSTRUCTIONS.
3. PROVIDE ALL MATERIALS REQUIRED TO MAKE A COMPLETE WORKING SYSTEM. SUBSIDIARY TO TEMPORARY LIGHTING L125.180.0000.

3 AC16 TEMPORARY WIND CONE DETAIL
NTS

Designed By:	DH
Drawn By:	AD
Checked By:	EC

Date Revised:
Layout Name: AC16
File Path and Name: Z:\220361AR - DOT CR Takotna Airport Rehab\E-Working\Drawings\00805-TCT_LTG_TEMP.dwg
9/24/2025, 11:24 AM

PLANS DEVELOPED BY:
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CENTRAL REGION
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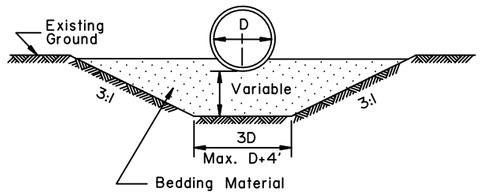
PHONE (907) 269-0590

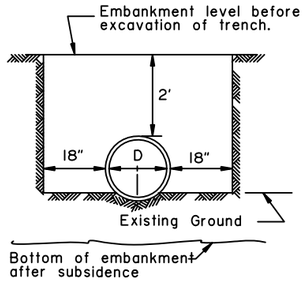
TAKOTNA AIRPORT
TAKOTNA, ALASKA
AIRPORT REHABILITATION
PROJECT No. CFAPT00805
AIP No. 3-02-0284-XXX-20XX
TEMPORARY LIGHTING DETAILS

DATE: 9/24/2025
SHEET: AC16 OF AC16

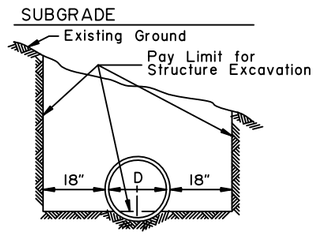


TYPE "A"
FOUNDATION STABILIZATION

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



TYPE "B"



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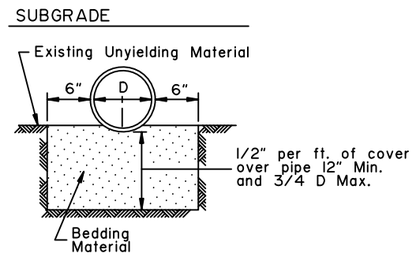
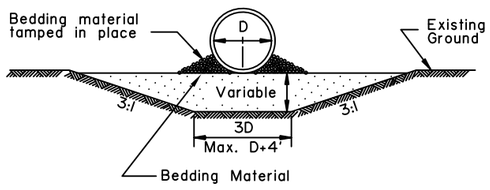


TYPE "D"
ROCK OR UNYIELDING MATERIAL

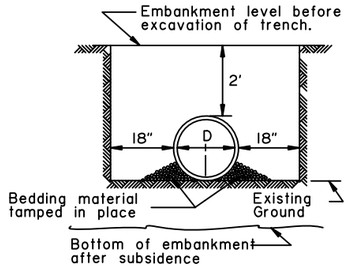
GENERAL NOTES:

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



'ALTERNATE'
TYPE "A"
FOUNDATION STABILIZATION

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



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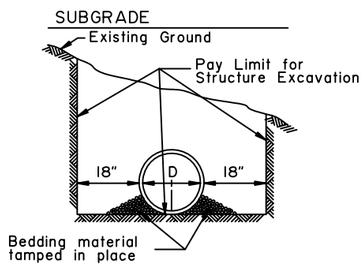
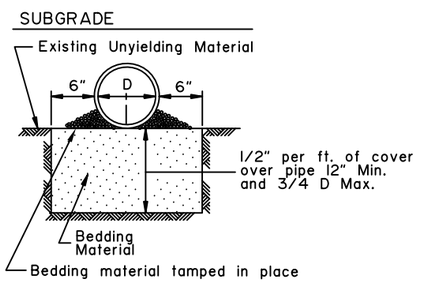
TYPE "B"

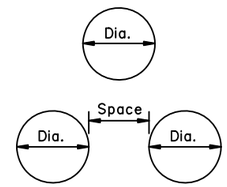


'ALTERNATE'
TYPE "C"



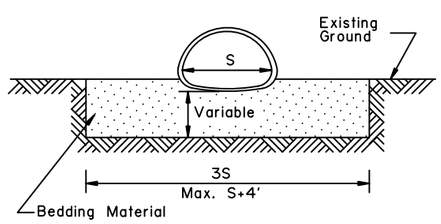
'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

D = Nominal Pipe Diameter



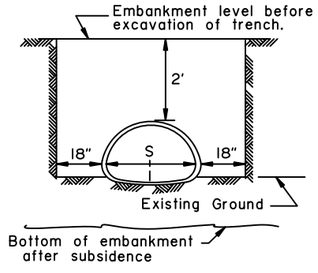
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

CULVERT PIPE

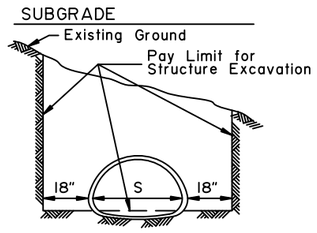


TYPE "A"
FOUNDATION STABILIZATION

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



TYPE "B"



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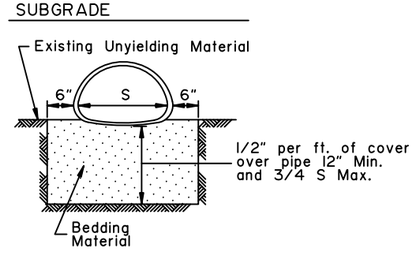
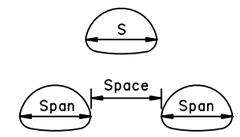


TYPE "D"
ROCK OR UNYIELDING MATERIAL

S = Nominal Pipe Arch Span



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

ARCH

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT PIPE & ARCH INSTALLATION DETAILS

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

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

CORRUGATED CIRCULAR ALUMINUM PIPE

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

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

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

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

CORRUGATED ALUMINUM PIPE-ARCH

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

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

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

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

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

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

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

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

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

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

GENERAL NOTES

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

CORRUGATED CIRCULAR STEEL PIPE

CORRUGATED STEEL PIPE-ARCH

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

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

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

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

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

Adoption Date: 7/17/2020

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

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

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

GENERAL NOTES

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

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

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

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D-04.22

ALUMINUM SPIRAL RIB PIPE

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

*¾ x ¾ x 7½ in. Corrugations

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

*¾ x ¾ x 7½ in. Corrugations

STEEL SPIRAL RIB PIPE

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

*¾ x ¾ x 7½ in. Corrugations.

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

*¾ x ¾ x 7½ in. Corrugations

GENERAL NOTES

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

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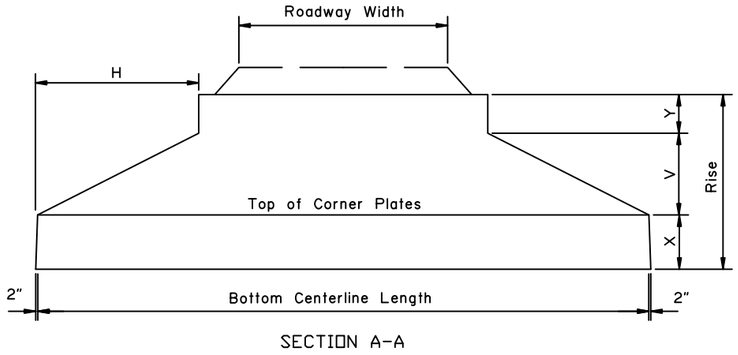
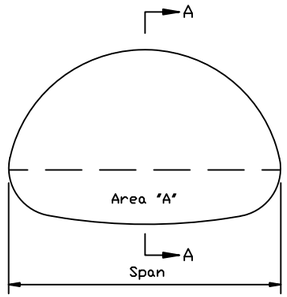
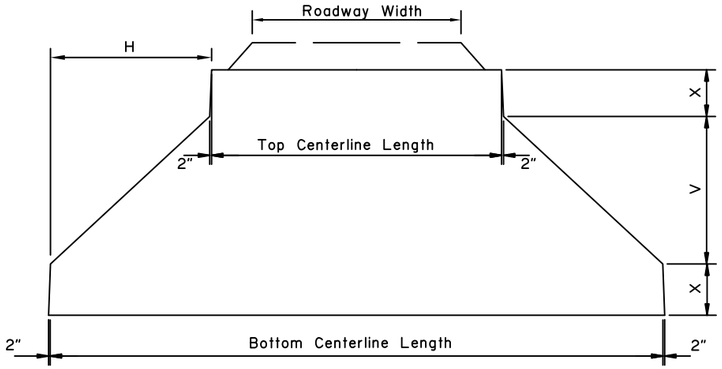
D-04.22



SECTION A-A





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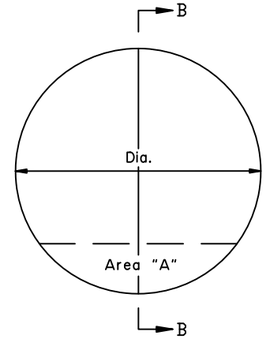
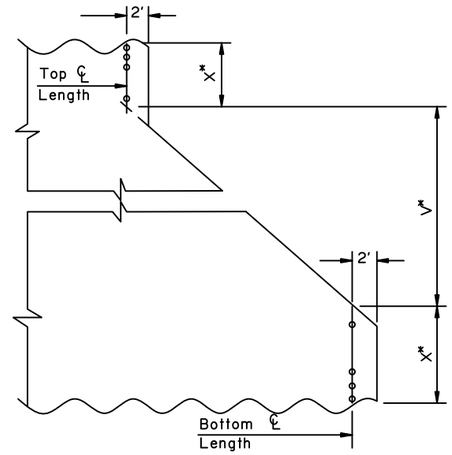


STRUCTURAL PLATE PIPE ARCH

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

STRUCTURAL PLATE PIPE

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



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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

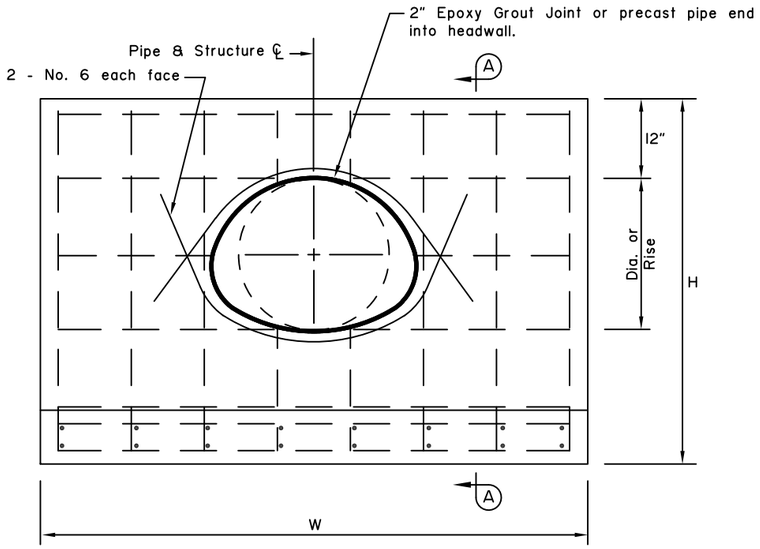
CULVERT BEVELS

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

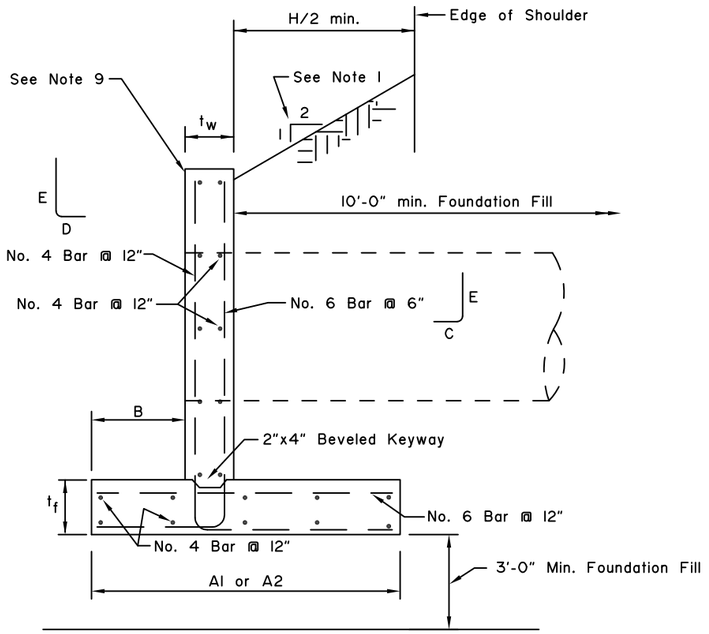
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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



ELEVATION



SECTION A-A

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

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

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

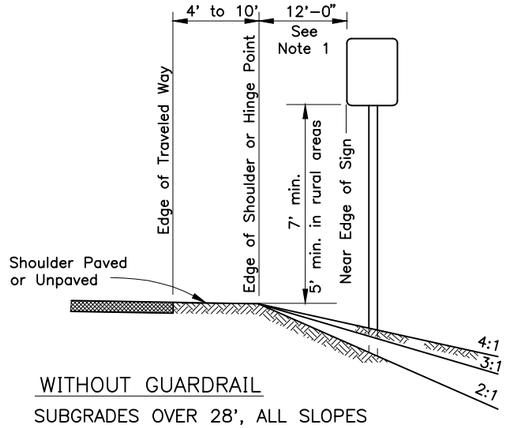
HEADWALLS PRECAST TYPE II

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

Adoption Date: 02/08/2019

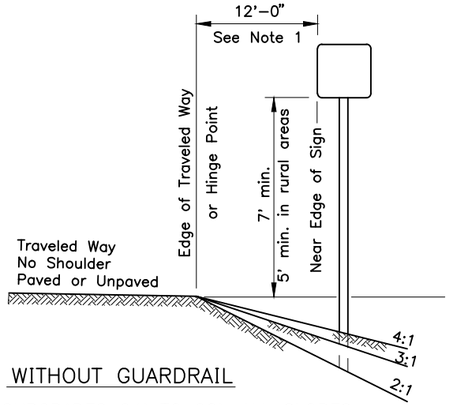
Last Code and Stds. Review
By: Date:

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



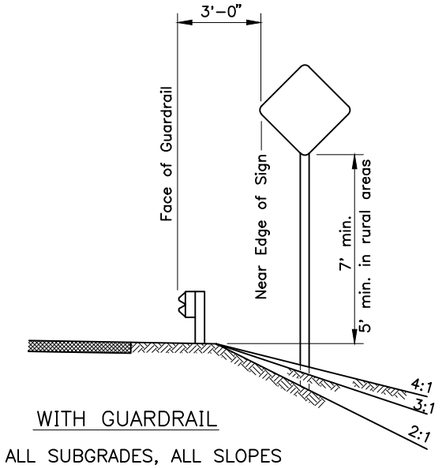
WITHOUT GUARDRAIL

SUBGRADES OVER 28', ALL SLOPES



WITHOUT GUARDRAIL

SUBGRADES 24' TO 28', ALL SLOPES

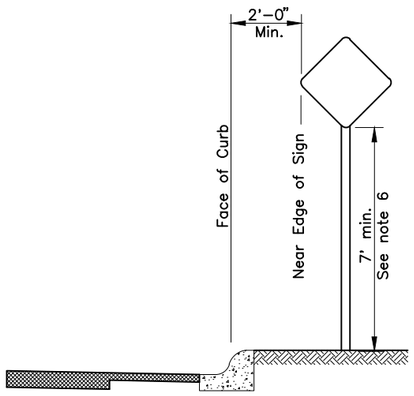


WITH GUARDRAIL

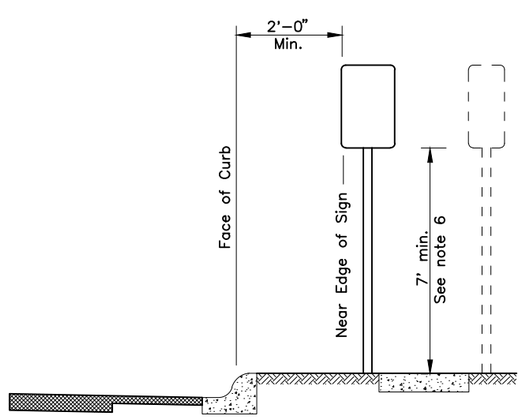
ALL SUBGRADES, ALL SLOPES

GENERAL NOTES

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

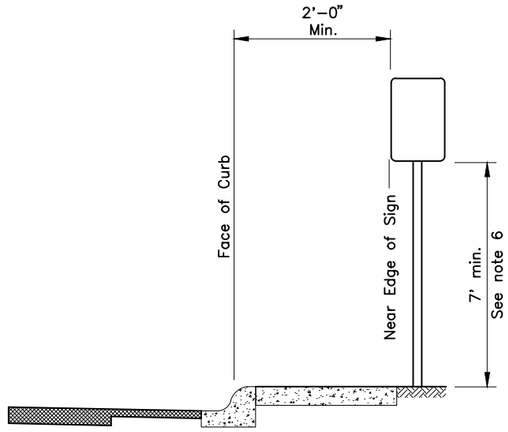


CURB WITHOUT SIDEWALK

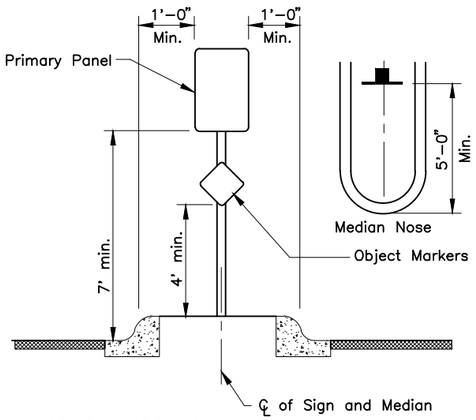


CURB WITH PARKWAY AND SIDEWALK

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

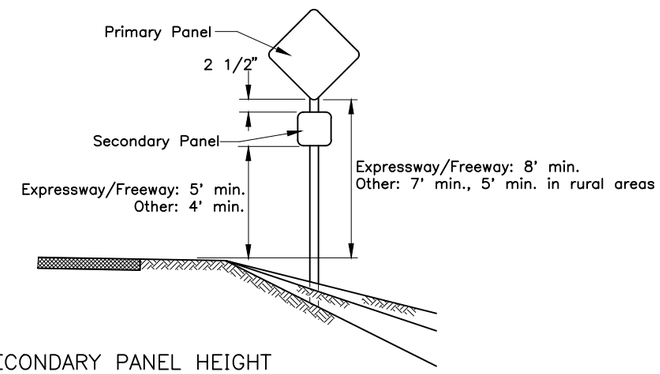


CURB WITH SIDEWALK WITHOUT PARKWAY



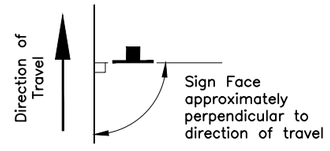
RAISED MEDIANS

Minimum 4' Width for Signing



SECONDARY PANEL HEIGHT

ALL TWO PANEL MOUNTING



SIGN POSITIONING

State of Alaska DOT&PF
ALASKA STANDARD PLAN

POST MOUNTED SIGN
OFFSET AND HEIGHT

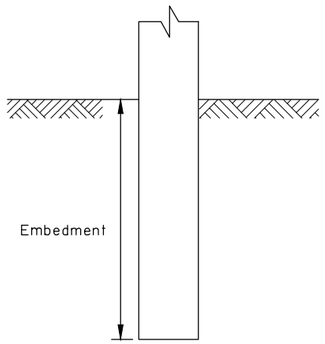
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

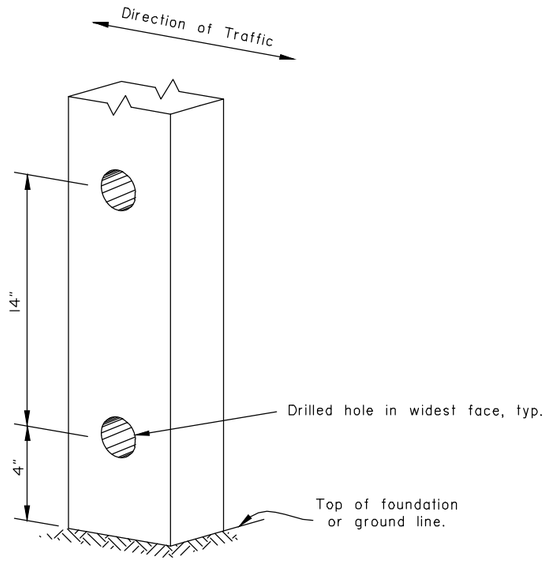
Adoption Date: 7/17/2020

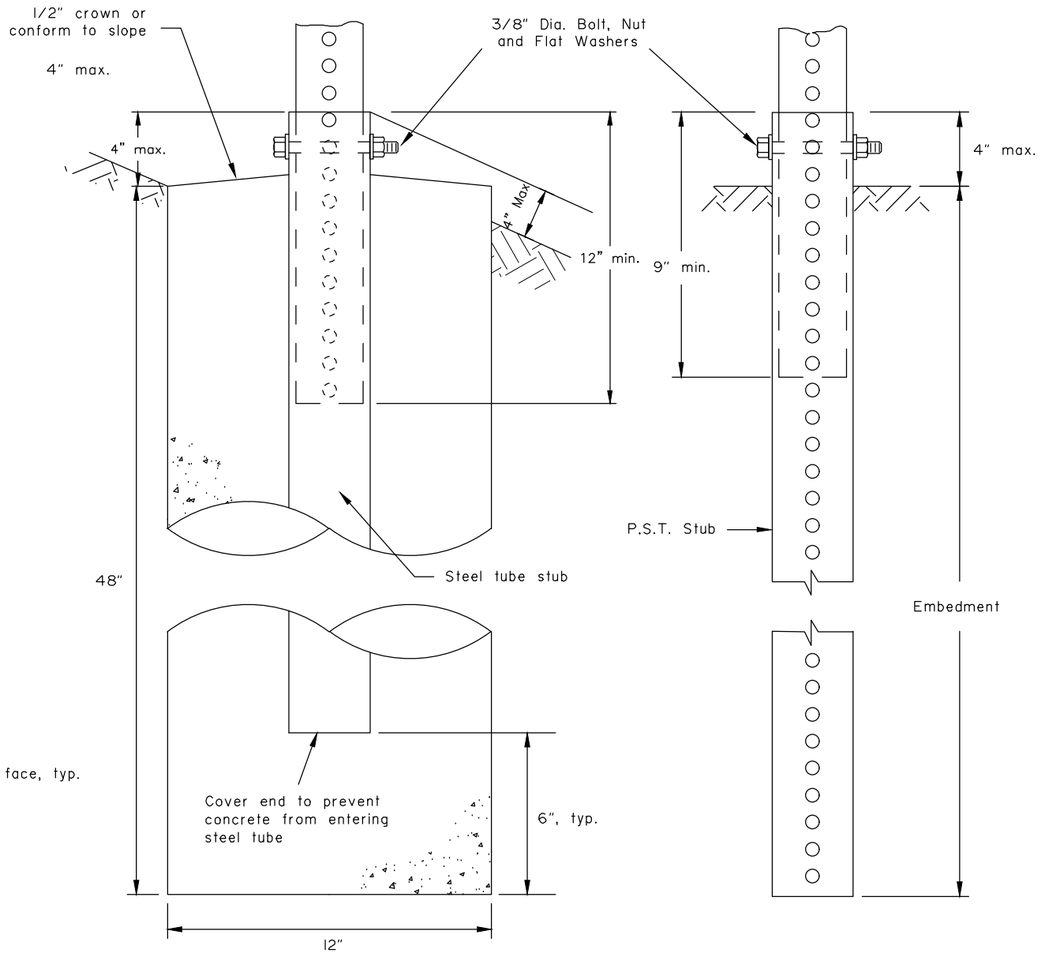
Last Code and Stds. Review
By: KLK Date: 7/8/2020

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

S-05.02







SLEEVE TYPE
CONCRETE FOUNDATION

SLEEVE TYPE*
SOIL EMBEDMENT

GENERAL NOTES:

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

SIGN POST SPACING NOTES:

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

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

* Embedment depth applies in both strong and weak soil.

WOOD POSTS

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

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

PERFORATED STEEL TUBE (PST) POSTS

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

TUBE SIGN POST SPACING

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHT SIGN STRUCTURE
POST EMBEDMENT

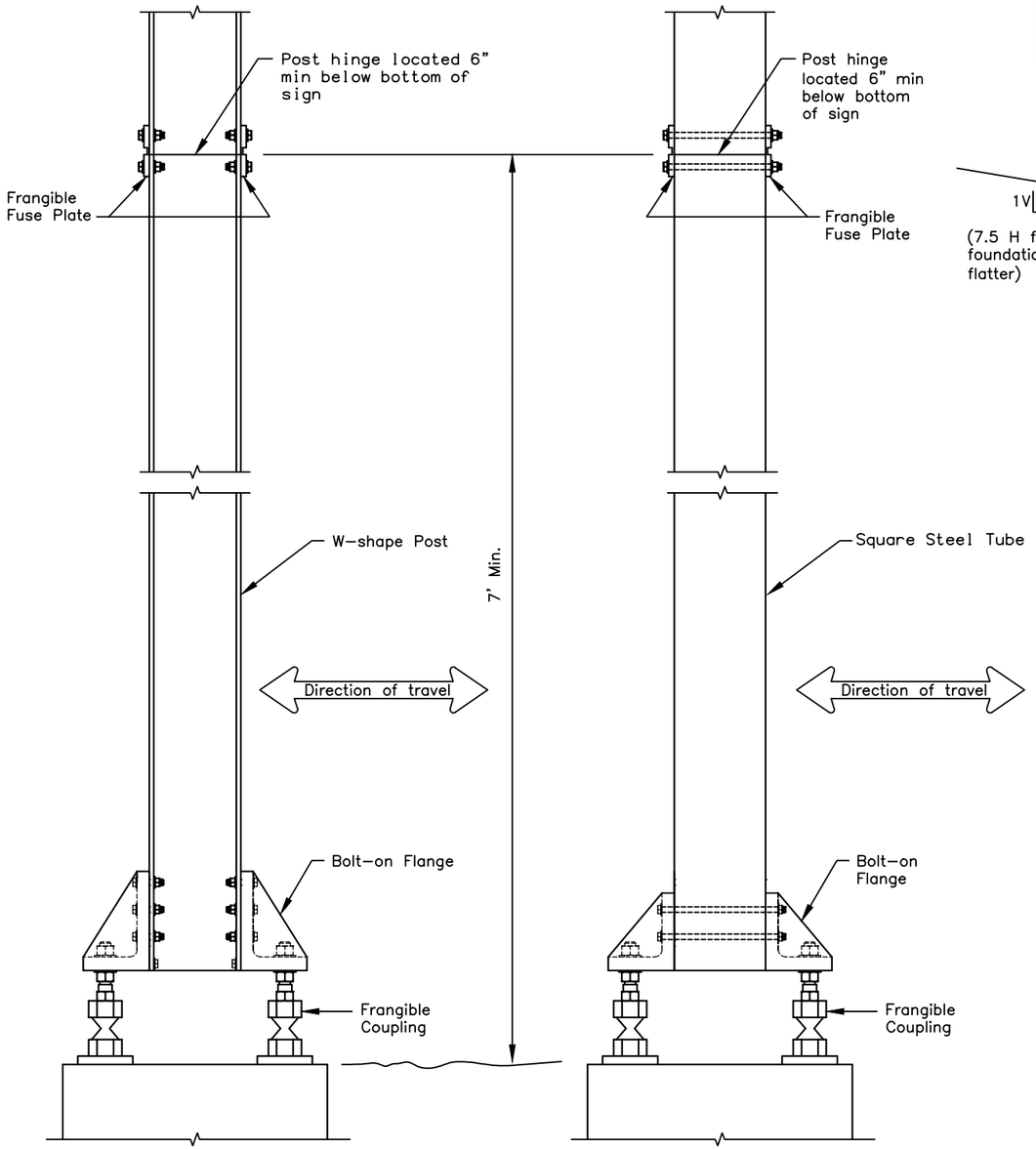
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

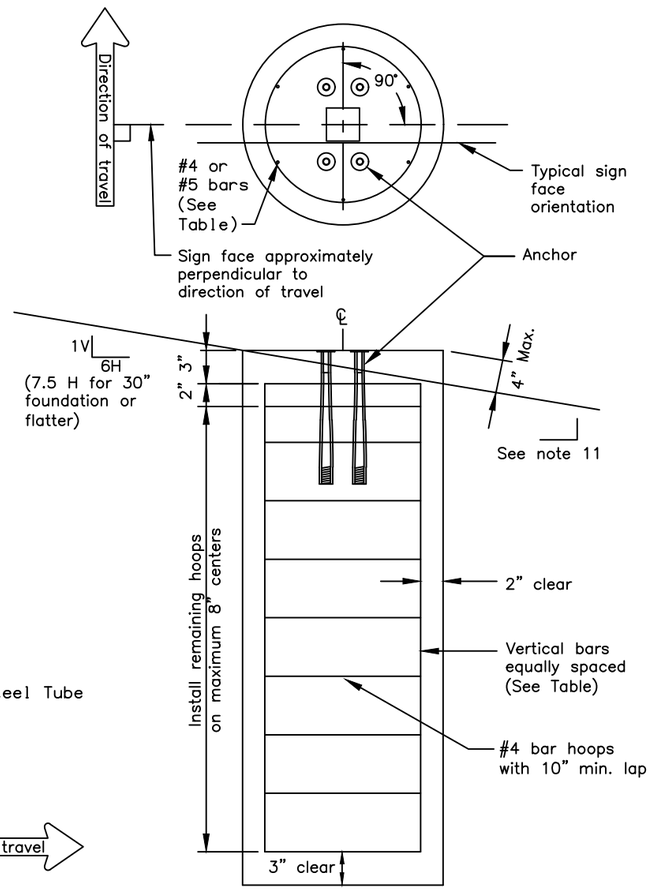
Next Code and Standards Review date: 7/8/2030

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



FRANGIBLE COUPLING SYSTEM FOR W–SHAPE POST

FRANGIBLE COUPLING SYSTEM FOR SQUARE STEEL TUBES



SIGN POST FOUNDATION
See Table for depth and diameter

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

FOUNDATION TABLE

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

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION

Adopted as an Alaska Standard Plan by: Carolyn Morehouse
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