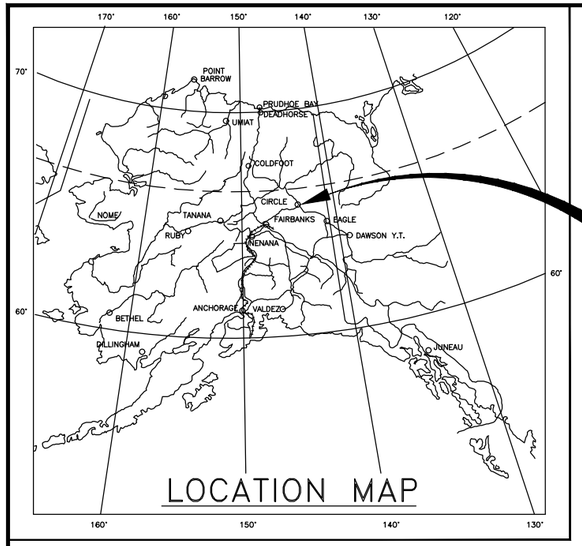
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	A1	262
CDS ROUTE: 2581572X000	MILEPOINT:	0.071	TO	1.01



STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

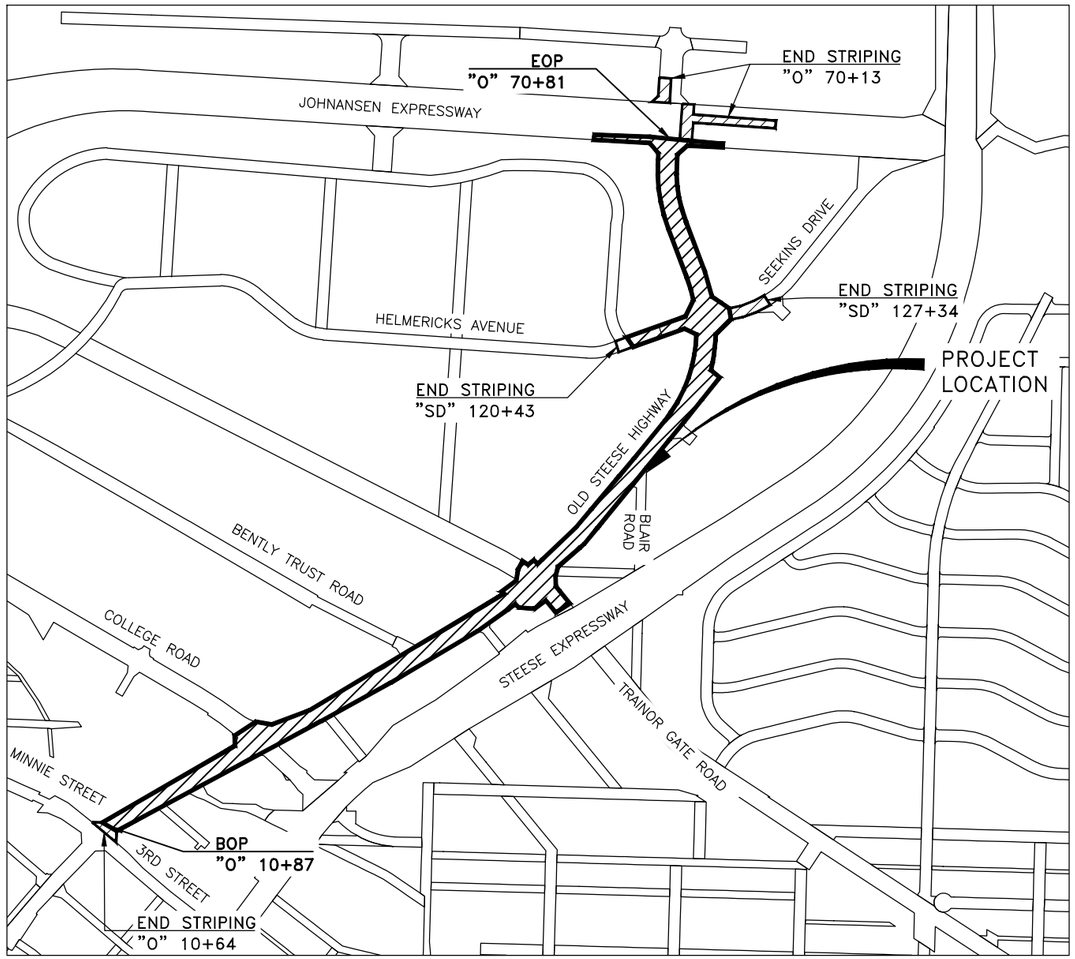
PROPOSED HIGHWAY PROJECT

OLD STEESE HIGHWAY RECONSTRUCTION

Z624870000

GRADING, DRAINAGE, PAVING, UTILITIES, ILLUMINATION, STORM DRAIN, SIGNALIZATION, AND LANDSCAPE

Preliminary PS&E
October 24, 2022
Northern Region



VICINITY MAP

NOTE TO REVIEWERS: DESIGNER NOTES PROVIDED IN RED TEXT THROUGH OUT THE PLANS ARE PROVIDED FOR BACKGROUND INFORMATION AND/OR DISCUSSION, AND WILL BE REMOVED POST THIS SUBMITTAL

INDEX OF SHEETS

THE FOLLOWING APPLY TO THIS PROJECT:

STANDARD PLANS:
C–04.12, C–05.20, C–06.00, D–01.02, D–04.22, D–06.10, D–09.00, F–01.04, I–20.20, L–03.11, L–23.03, L–25.01, L–30.11, S–00.12, S–01.02, S–05.02, S–23.00, S–30.05, S–31.02, T–20.04, T–21.04, T–22.04, T–23.01, T–30.12, T–31.01, T–52.22, T–54.11, T–55.11, T–56.12

CITY OF FAIRBANKS STANDARD DETAILS:
SD1, SD2

DESIGN DESIGNATIONS

DESIGNATIONS	BOP TO KUTTER ROAD	KUTTER ROAD TO HELMERICKS AVENUE	HELMERICKS AVENUE TO EOP
ADT (2014/2015)	11,300	15,800	8,000
ADT (2030)	15,210	21,050	10,650
ADT (2040/2045)	20,470	24,400	12,375
DHV (%)	11.7%	11.5%	11.5%
PERCENT TRUCKS (T)	4.0%	3.25	3.25
DIRECTIONAL SPLIT (D)	45–55	45–55	45–55
DESIGN SPEED (V)	35	35	35
DESIGN ESAL'S (2040)	2,188,445	2,191,408	999,059

PROJECT SUMMARY

WIDTH OF PAVEMENT	60.0'	62.0'	62.0'
LENGTH OF GRADING	2,200'	2,022'	1,075'
LENGTH OF PAVING	2,200'	2,022'	1,075'
LENGTH OF PROJECT	2,220'	2,022'	1,075'

RUSSELL JOHNSON, P.E., PROJECT MANAGER

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
&
PUBLIC FACILITIES

APPROVED BY:

_____ DATE _____

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

ACCEPTED FOR CONSTRUCTION:

_____ DATE _____

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

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	A2	A5

RECOVERED / SET

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

EXISTING / PROPOSED

- SANITARY SEWER (FLOW DIRECTION) — SS / SS1-1
- FUEL LINE — O / O
- GAS LINE — G / G
- WATER LINE — W / W1-1
- METER, VALVE, FIRE HYDRANT — W / W, FH1-1
- EXISTING STORM DRAIN (FLOW DIRECTION) — SD
- PROPOSED STORM DRAIN — S1-1, CB1-1, SD1-1, P1-11, P1-1
  - S1-1 CURB BOX
  - CB1-1 CATCH BASIN
  - SD1-1 STORM DRAIN MANHOLE
  - P1-1 STORM PIPE
  - SE1-1 END SECTION
- FIBER OPTIC LINE — FO
- DIRECT BURIED TELEPHONE CABLE — T
- DIRECT BURIED ELECTRIC CABLE — E
- ELECTRIC LINE (OVERHEAD)
- POWER POLE LINE
- JOINT USE POWER & TELEPHONE
- TELEPHONE POLE LINE
- POLE ANCHOR
- STUB POLE (POWER OR TELEPHONE)
- TELEPHONE DUCT — T
- TELEPHONE PEDESTAL
- BURIED CABLE MARKER
- PIPELINE MARKER OR VALVE
- CATCH BASIN OR DROP INLET
- MANHOLE (MH / SSMH1-1)
- SANITARY SEWER CLEAN OUT

EXISTING / PROPOSED

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

EXISTING / PROPOSED

- JUNCTION BOX, TYPE IA (5)
- JUNCTION BOX, TYPE II (6)
- JUNCTION BOX, TYPE III (3)
- SIGNAL FACE, VEHICULAR (42)
- SIGNAL FACE, BACKPLATE (42)
- SIGNAL FACE, LEFT TURN, BACKPLATE (43)
- SIGNAL FACE, PEDESTRIAN (80)
- LOOP DETECTOR (33 / 73)
- VIDEO DETECTOR (2)
- RADAR DETECTOR (4 / 4A)
- OPTICOM DETECTOR (1)
- PAN, TILT, ZOOM CAMERA (5)
- INTERCONNECT MANHOLE (IC)
- TYPE I INTERCONNECT VAULT (I/C)
- TYPE II INTERCONNECT VAULT (I/C)
- BORED OR JACKED CASING
- INTERCONNECT CONDUIT (I/C)
- RIGID METAL CONDUIT
- PEDESTRIAN PUSH BUTTON (1)
- SIGNAL POST W/O MAST ARM (1)
- SIGNAL POST W/MAST ARM (4)
- SIGNAL CONTROLLER
- LOAD CENTER
- LUMINAIRE (2)

LEGEND

STATE OF ALASKA 49TH — PRELIMINARY PS&E — NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	A3	A5

SUPPLEMENTAL LEGEND

	EXISTING	PROPOSED
UNMARKED CROSSWALK REFERENCE LINE		
GRADE BREAK REFERENCE LINE		
SLOPE LABEL REFERENCE LINE		
SIGNING AND STRIPING SHT CENTERLINE		5+00
AGGREGATE BASE COURSE, GRADING COURSE D-1		
HMA, SIDEWALKS AND PATHS HMA, TYPE II; CLASS B		
POROUS BACKFILL MATERIAL, GRADATION A		
ROCK MULCH		
TOPSOIL/SEEDING		
DROP ARM GATE W/FLASHING LIGHT		
CANTILEVER SIGNAL STRUCTURE		
DROP ARM GATE W/O FLASHING LIGHT		
DITCH		
V-SECTION SPECIAL DITCH		
FLAT BOTTOM SPECIAL DITCH		
RIPRAP		

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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LEGEND

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
SIGNED PROFESSIONAL ENGR

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	A4	A5

ABBREVIATIONS

ABC – AGGREGATE BASE COURSE
AASHTO – AMERICAN ASSOCIATION OF STATE HIGHWAY AND TRANSPORTATION OFFICIALS
AC – ACRES
ACP – ASPHALT CONCRETE PAVEMENT
ACS – ALASKA COMMUNICATIONS SYSTEMS
ADA – AMERICANS WITH DISABILITIES ACT
ADEC – ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION
ADT – ANNUAL AVERAGE DAILY TRAFFIC
AHD – AHEAD
AP – ANGLE POINT
APPROX – APPROXIMATELY
ARRC – ALASKA RAILROAD CORPORATION
AVAP – AS VERTICAL AS POSSIBLE
BK – BACK
BLDG – BUILDING
BMP – BEST MANAGEMENT PRACTICES
BOP – BEGINNING OF PROJECT
BSWK – BACK OF SIDEWALK
BTM – BOTTOM
CABC – CRUSHED ASPHALT BASE COURSE
CB – CATCH BASIN
CDS – CONTRACT DELIVERY SERVICE
CL – CENTER LINE
C&G – CURB AND GUTTER
CGP – CONSTRUCTION GENERAL PERMIT
CMP – CORRUGATED METAL PIPE
CO – CLEANOUT
COF – CITY OF FAIRBANKS
CONC – CONCRETE
CONT – CONTINUOUS
CPLG – COUPLING
CPP – CORRUGATED POLYETHYLENE PIPE
CTC – CENTER TO CENTER
CTE – CONNECT TO EXISTING
CU – COPPER
DEMO – DEMOLITION
DHV – DESIGN HOURLY VOLUME
DIA – DIAMETER
DIP – DUCTILE IRON PIPE
DOT&PF – DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
DSC – DESCRIPTION
DTL – DETAIL
DWT – DETECTABLE WARNING TILE
DWY – DRIVEWAY
EA – EACH
ED – EDGE DRIVEWAY
EG – EXISTING GROUND
EL – ELEVATION
EOL – END OF LINE
EOP – END OF PROJECT
EP – EDGE PAVEMENT
ESAL – EQUIVALENT SINGLE AXLE LOAD
ESCP – EROSION AND SEDIMENT CONTROL PLAN
EXPWY – EXPRESSWAY
FG – FINISHED GROUND
FH – FIRE HYDRANT
FL – FLOW LINE
GB – GRADE BREAK
GCI – GENERAL COMMUNICATIONS INC.
GP – GRADE POINT
GVEA – GOLDEN VALLEY ELECTRIC ASSOCIATION
HDPE – HIGH DENSITY POLYETHELENE
HMA – HOT MIX ASPHALT
HMCP – HAZARDOUS MATERIAL CONTROL PLAN
HP – HIGH POINT
IE – INVERT ELEVATION
INV – INVERT
L – LENGTH
LC – LOAD CENTER
LED – LIGHT EMITTING DIODE
LF – LINEAR FEET
LMA – LUMINAIRE MAST ARM
LP – LOW POINT
LT – LEFT
MH – MANHOLE
MIL – MILLIMETERS
MIN – MINIMUM
MJ – MECHANICAL JOINT
MTAC – MATANUSKA TELECOM ASSOCIATION COMPANY
MTE – MATCH TO EXISTING
NFS – NON–FROST SUSCEPTIBLE
NTS – NOT–TO–SCALE
OFF – OFFSET
OHV – OVERHEAD UTILITY
OSH – OLD STEESE HIGHWAY
PC – POINT OF CURVATURE
PCC – POINT OF COMPOUND CURVATURE
PGP – PROFILE GRADE POINT
PI – POINT–OF–INTERSECTION
POC – POINT–ON–CURVE
P&P – PLAN AND PROFILE
PRC – POINT–OF–REVERSE CURVE
PT – POINT–OF–TANGENCY
QAPP – QUALITY ASSURANCE PROJECT PLAN
R – RADIUS
RMC – RIGID METAL CONDUIT
R/W – RIGHT–OF–WAY
ROW – RIGHT–OF–WAY
RP – RADIUS POINT
RPM – REINFORCED PLASTIC MORTAR
RT – RIGHT
RW – RETAINING WALL
SD – STORM DRAIN
SH – SHEET
SHT – SHEET
SMA – SIGNAL MAST ARM
SOP – STANDARD OPERATING PROCEDURE
SS – SANITARY SEWER SERVICE
SSMH – SANITARY SEWER MANHOLE
SHLDR – SHOULDER
SPRK – SPRINKLER
ST – STREET
STA – STATION
STD – STANDARD
SWK – SIDEWALK
SWPPP – STORM WATER POLLUTION PREVENTION PLAN
SY – SQUARE YARD
TA – TOP OF ASPHALT
TBC – TOP BACK OF CURB
TC – TOP OF CONCRETE
TCE – TEMPORARY CONSTRUCTION EASEMENT
TCP – TEMPORARY CONSTRUCTION PERMIT
TCP – TRAFFIC CONTROL PLAN
TYP – TYPICAL
UTAAS – UTILITY TRENCHING AGREEMENT AREAS
U – UTILIDOR
VPI – VERTICAL POINT OF INTERSECTION
W/ – WITH
WS – WATER SERVICE
WWF – WELDED WIRE FABRIC
WWM – WELDED WIRE MESH

GENERAL NOTES

1. CONTRACTOR SHALL RESTORE ALL DISTURBED AREAS TO BETTER OR EQUAL–TO–EXISTING CONDITION AT THEIR EXPENSE, UNLESS OTHERWISE AGREED TO WITH DOT&PF.

2. WITHIN THE PROJECT LIMITS PROTECT ALL EXISTING FEATURES DESIGNATED TO REMAIN FROM DAMAGE, UNLESS OTHERWISE NOTED. ANY REPAIRS WILL BE AT THE CONTRACTOR'S EXPENSE.

3. UNLESS OTHERWISE NOTED ON PLANS, PRESERVE AND PROTECT ALL FEATURES ON PRIVATE PROPERTY. WHERE FEATURES CANNOT BE PROTECTED, REMOVE AND REPLACE ITEMS. CONTRACTOR TO RETURN ALL PRIVATE PROPERTY TO MATCH CONDITION PRIOR TO CONSTRUCTION. PAYMENT IS SUBSIDIARY TO PAY ITEMS RELATED TO THE WORK BEING PERFORMED.

4. UTILITIES (OVERHEAD AND BURIED), TO THE EXTENT THEY ARE KNOWN, ARE SHOWN ON THE PLANS. BEFORE CONDUCTING ANY GROUND–DISTURBING ACTIVITIES THE CONTRACTOR SHALL VERIFY UTILITY LOCATIONS BY CONTACTING THE DIGLINE AT 1–800–478–3121, THE UTILITY COMPANY, OR THE CITY OF FAIRBANKS AND DOT&PF SIGNAL DEPARTMENTS. UTILITY COMPANIES WITHIN THE PROJECT LIMITS ARE LISTED IN SECTION 651 OF THE SPECIAL PROVISIONS.

5. THE PROJECT LIMITS ARE DEFINED AS FOLLOWS:

   A. TO THE TCP OR TCE BEYOND THE R/W LINE;

   B. WHERE ALL WORK IS WITHIN THE R/W AND THERE IS NO TCE/TCP, TO 3 FEET BEYOND THE BACK OF SIDEWALK, PATH, OR SLOPE LIMITS, NOT EXCEEDING THE R/W;

   C. TO THE LIMITS OF STAGING AREAS AND APPROVED TRAFFIC CONTROL PLAN(S).

6. COMMITMENTS RELATED TO TCE'S ARE NOTED ON THE PLANS AND ARE DESCRIBED IN DETAIL IN THE MEMORANDUMS OF AGREEMENT (MOA'S) FOR EACH AFFECTED PARCEL.

7. THE ARRC IS REPLACING ELEMENTS OF THE RAILROAD SIGNAL NEAR TRAINOR GATE ROAD. THE CONTRACTOR SHALL COORDINATE WITH THE ARRC PROJECT AND WORK IN ACCORDANCE WITH SECTION 651. THE CONTRACTOR SHALL COORDINATE WITH ARRC PRIOR TO REMOVAL OF EXISTING RAILROAD SYSTEM PAVEMENT MARKINGS AND SIGNS NOTED FOR SALVAGE ON THE PLANS. A COPY OF THE DRAFT TEMPORARY CONSTRUCTION PERMIT BETWEEN THE ARRC AND THE DEPARTMENT IS PROVIDED AS SUPPLEMENTAL INFORMATION. THE CONTRACTOR SHALL APPLY FOR AND SECURE THE FINAL TEMPORARY CONSTRUCTION PERMIT.

8. IF CLEARING ACTIVITIES OCCUR, MECHANIZED VEGETATION CLEARING ACTIVITIES WILL BE AVOIDED DURING MIGRATORY BIRD NESTING SEASON (MAY 1–JULY 15) UNLESS A MITIGATIVE WORK PLAN IS SUBMITTED BY THE CONTRACTOR AND APPROVED BY DOT&PF.

9. BOP TO STA "O" EQ. 32+76.11=39+78.12, REMOVAL OF EXISTING NON–OPERABLE INDUCTIVE LOOPS AND CONDUITS AT SIGNALIZED INTERSECTION APPROACHES IS SUBSIDIARY TO 308.0001.0000 CRUSHED ASPHALT BASE COURSE.

10. THE PROJECT HAS A QUALITY ASSURANCE PROJECT PLAN (QAPP) CONTAINING UTILITY TRENCHING AGREEMENT AREAS (UTAAS) INCLUDED IN THE PROJECT SPECIFICATIONS, REFER TO THE QAPP AND UTAAS FOR REQUIREMENTS ADDRESSING CONTAMINATED SOILS.

11. GRUBBING LIMITS SHALL EXTEND A MAXIMUM OF 3 FEET BEYOND SLOPE LIMITS AND SHALL NOT EXCEED THE R/W OR TCE/TCP. WHERE SLOPE LIMITS TIE IN DITCH, DO NOT GRUB, DISTURB, OR COMPACT PAST THE SLOPE LIMITS.

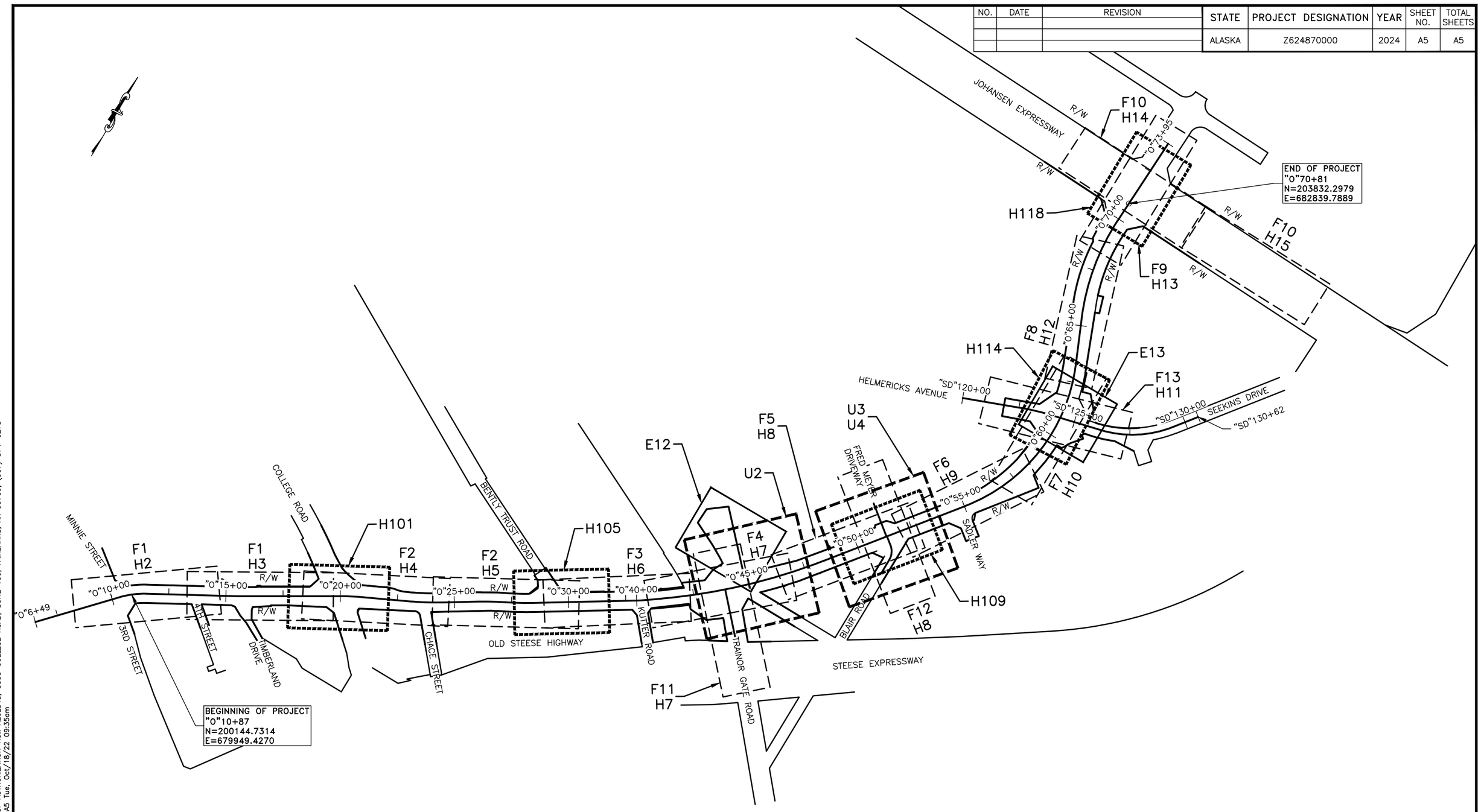
ABBREVIATIONS AND LEGEND

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
C:\dowl_pw\d0401392\62487_A–A4 Tue, Oct/18/22 09:35am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	A5	A5



KEYMAP

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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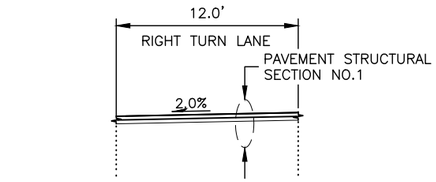
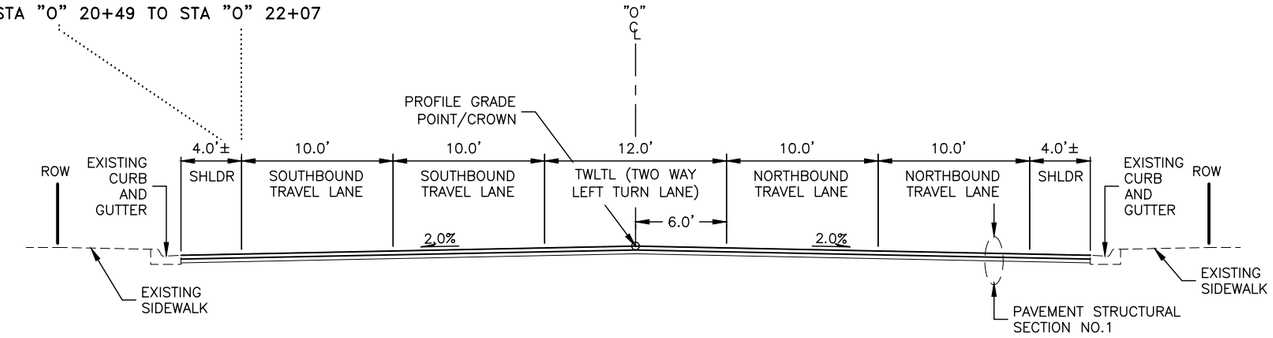
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z6624870000	2024	B1	B3



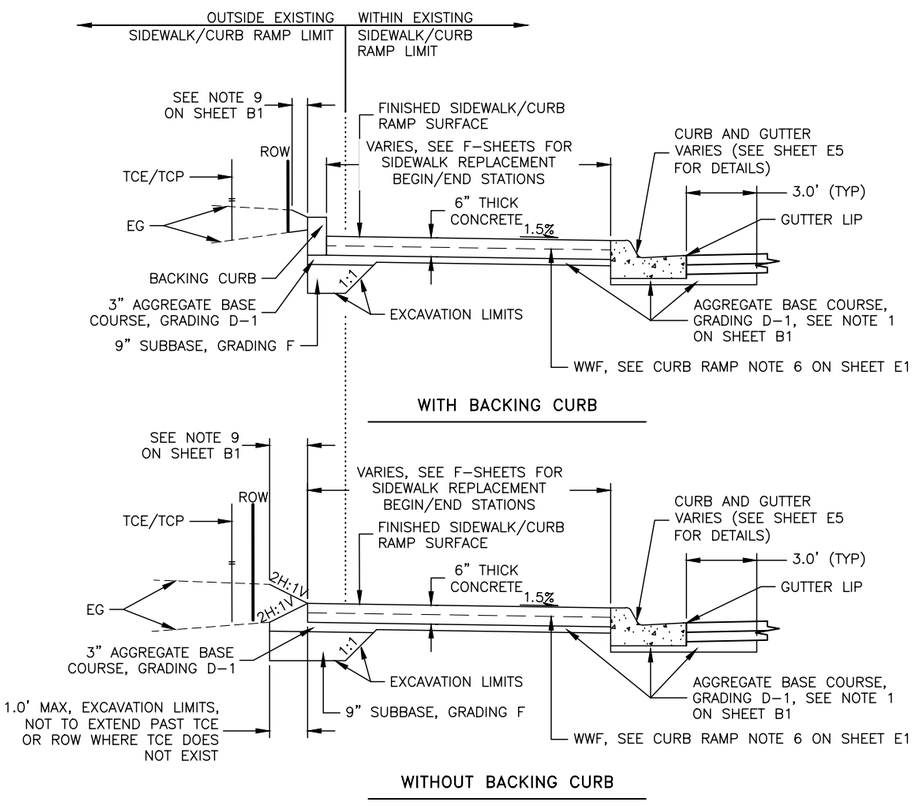
RIGHT TURN LANE EXCEPTION

STA "O" 20+49 TO STA "O" 22+07



OLD STEESE HIGHWAY

STA "O" 10+87 TO STA "O" EQ. 32+76.11=39+78.12

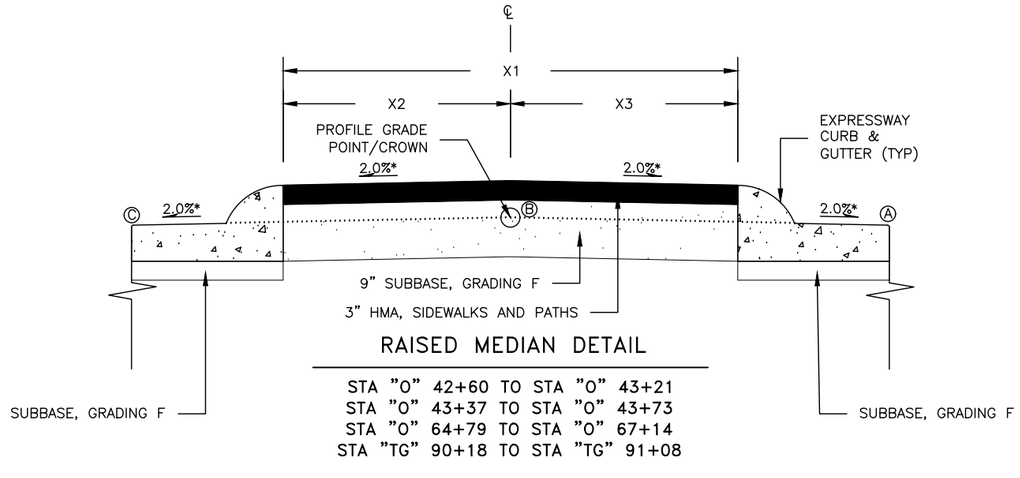


CURB RAMP & SIDEWALK REPLACEMENT DETAILS

STA "O" 10+87 TO STA "O" EQ. 32+76.11=39+78.12

NOTES:

1. FROM STA "O" 10+87 TO "O" EQ. 32+76.11=39+78.12:
   - 1.1. MAINTAIN EXISTING ROADWAY CROWN, TRANSITIONS, AND DRAINAGE PATTERNS UNLESS OTHERWISE APPROVED BY THE ENGINEER.
   - 1.2. PULVERIZE 6" FOR THE FULL WIDTH OF ROADWAY SECTION TO LIP OF GUTTER.
   - 1.3. PLACEMENT OF PROCESSED CRUSHED ASPHALT BASE COURSE ON UNSIGNALIZED APPROACHES IS PAID FOR BY PAY ITEM 308.0001.0000 CRUSHED ASPHALT BASE COURSE.
   - 1.4. EXISTING HMA REMOVAL AT UNSIGNALIZED APPROACHES IS PAID FOR BY PAY ITEM 202.0002.0000 REMOVAL OF PAVEMENT. EXCAVATION OF EXISTING BASE COURSE AT THESE LOCATIONS IS SUBSIDIARY TO SECTION 308.
   - 1.3. PLACE UP TO 2" TO 3" AGGREGATE BASE COURSE, GRADING D-1 LEVELING COURSE AS NEEDED.
2. EXCAVATE AND PLACE SUBBASE, GRADING F:
   - 2.1. 3 INCHES FROM STA "O" EQ. 32+76.11=39+78.12 TO STA "O" 61+50. SECTIONS WHERE THE FINISHED GRADE IS HIGHER THAN EXISTING GROUND, PLACE ADDITIONAL SUBBASE, GRADING F MATERIAL AS NEEDED TO ESTABLISH GRADE, THIS QUANTITY IS SUBSIDIARY TO PAY ITEM 304.0001.000F.
   - 2.2. 15 INCHES FROM STA "O" 61+50 TO STA "O" 70+75.
   - 2.2. 3 INCHES ON APPROACHES AND DRIVEWAYS.
3. TRANSITION AT A 10H:1V LONGITUDINAL SLOPE BETWEEN VARYING DEPTH OF SUBBASE, GRADING F, PAVEMENT STRUCTURAL SECTIONS NO.1 AND 2, AND AT EXISTING TIE-IN LOCATIONS.
4. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D-1 IN AREAS WHERE TEMPORARY COUNTERS INDUCTIVE LOOPS WILL BE INSTALLED. SEE K-SHEETS FOR LIMITS.
5. SAW CUT ALL MATCH POINTS. APPLY STE-1 ASPHALT FOR TACK COAT TO THE VERTICAL FACE OF SAW CUT LINES, CURB AND GUTTER, CURB, AND STRUCTURES WITHIN THE PROPOSED PAVING LIMIT. MATCH EXISTING PAVEMENT AT BEGINNING AND END OF PROJECT AS APPROVED BY THE ENGINEER.
6. INSTALL ASPHALT AT THE LIP OF GUTTER SO THERE IS NOT A VERTICAL EDGE GREATER THAN 1/4" ABOVE THE LIP.
7. FOR CURB RAMP AND CURB AND GUTTER HORIZONTAL AND VERTICAL CONSTRUCTION REQUIREMENTS, REFER TO CURB RAMP DETAILS ON E-SHEETS, RETURN RADIUS ALIGNMENTS AND PROFILES ON F SHEETS, AND DIGITALLY PROVIDED CAD FINISHED GRADE SURFACE (USE AT THE CONTRACTOR'S RISK).
8. ALL WORK WITHIN THE UTILITY TRENCHING AGREEMENT AREAS (UTAAS) AND EXISTING SIDEWALK/CURB RAMP LIMITS SHALL LIMIT EXCAVATION DEPTH TO AVOID NEEDING TO INSTALL AGGREGATE BASE COURSE, GRADING D-1, UNLESS OTHERWISE WARRANTED BY THE SITE CONDITIONS AND AS APPROVED BY THE ENGINEER.
9. REFER TO E AND F SHEETS FOR MATERIAL BEHIND SIDEWALK AND DRIVEWAY CURB CUT DETAILS AND LAYOUTS. REFER TO F-SHEETS FOR PARKING LOT GRADING SLOPE REQUIREMENTS AT LOCATIONS WHERE BACK OF SIDEWALK ABUTS PARKING LOTS AND DRIVEWAY CURB CUTS.



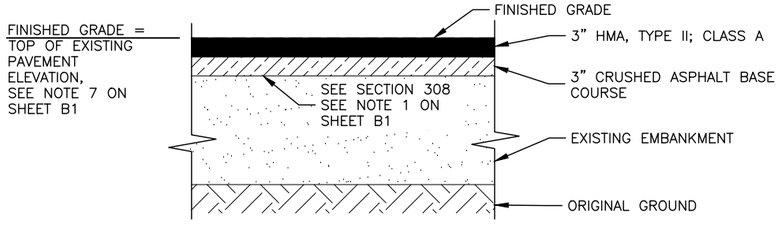
RAISED MEDIAN DETAIL

STA "O" 42+60 TO STA "O" 43+21
STA "O" 43+37 TO STA "O" 43+73
STA "O" 64+79 TO STA "O" 67+14
STA "TG" 90+18 TO STA "TG" 91+08

"O"
X1=6.0'
X2=4.0'

"TG"
X1=VARIES 2.0'-19.0'
X3=VARIES 0.0'-1.0'

* CROSS SLOPES ON TRAINOR GATE ROAD VARIES, REFER TO THE F-SHEETS FOR CHANNELIZED ISLAND DESIGN PROFILES AT POINT Ⓐ AND Ⓒ. CROSS-SLOPE IS SET BY A STRAIGHT LINE FROM POINTS Ⓐ & Ⓒ TO POINT Ⓑ AT CENTER LINE DESIGN PROFILE "TG".



PAVEMENT STRUCTURAL SECTION NO.1

STA "O" 10+87 TO STA "O" EQ. 32+76.11=39+78.12

TYPICAL SECTION

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION
LICENSED PROFESSIONAL ENGINEER

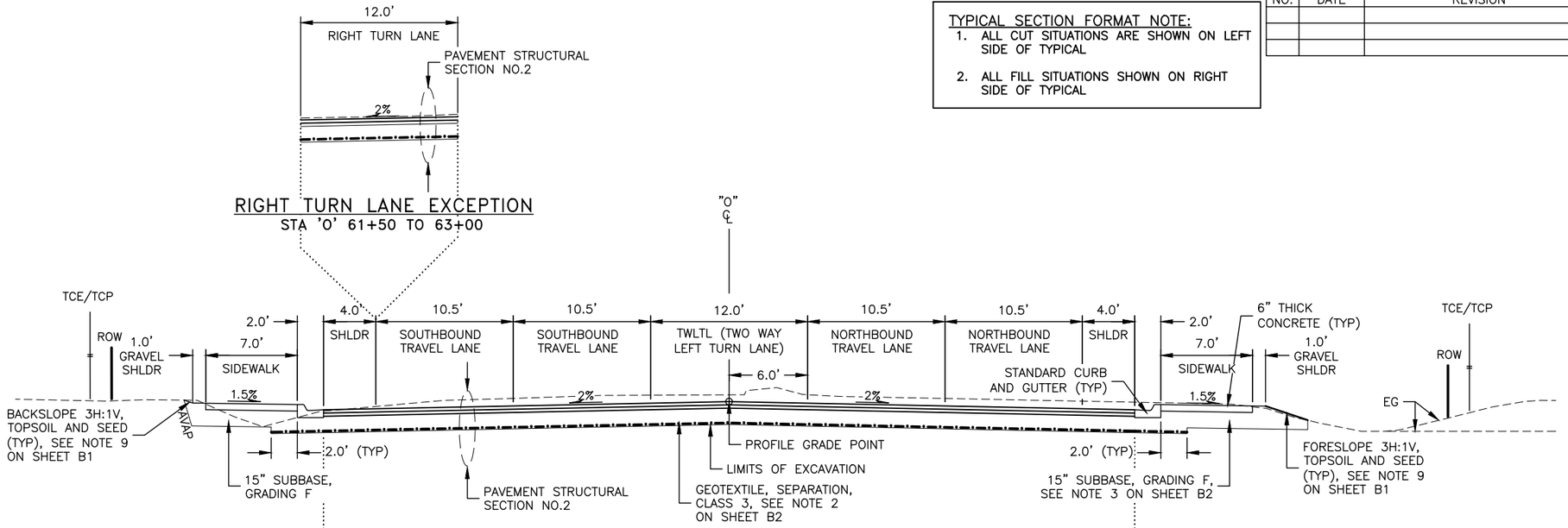
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_B-B1 Tue, Oct/18/22 09:36am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z6624870000	2024	B2	B3

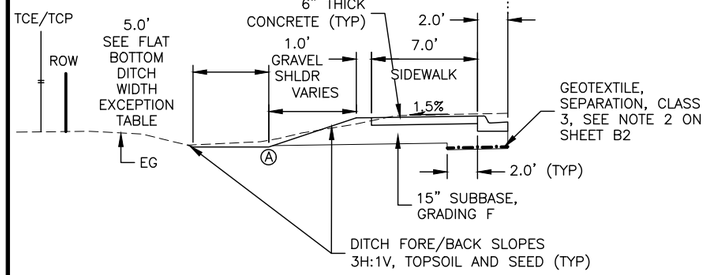
TYPICAL SECTION FORMAT NOTE:

1. ALL CUT SITUATIONS ARE SHOWN ON LEFT SIDE OF TYPICAL
2. ALL FILL SITUATIONS SHOWN ON RIGHT SIDE OF TYPICAL

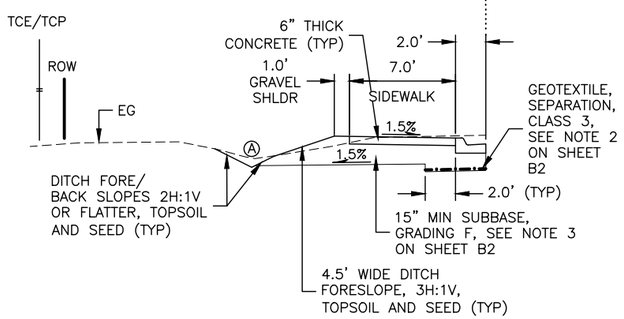


CUT A

FILL A



CUT B



CUT C

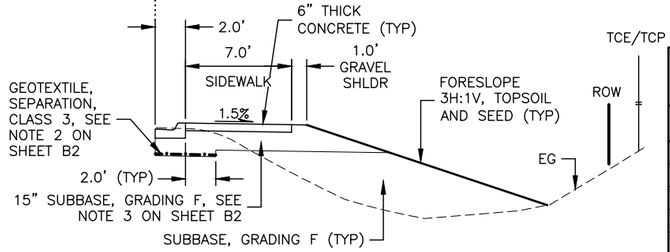
OLD STEESE HIGHWAY

STA "O" EQ. 32+76.11=39+78.12 TO STA "O" 70+75

Ⓐ REFER TO F AND D SHEETS FOR DEPTH OF SPECIAL DITCH PLAN AND PROFILE. EXTEND FORESLOPE TO SPECIAL DITCH OFFSET AND ELEVATIONS SHOWN ON THE F-SHEETS.

FLAT BOTTOM DITCH WIDTH EXCEPTION TABLE

BEGIN STATION	END STATION	LT./RT.	WIDTH
"O" 62+19	"O" 63+00	RT	3.0'

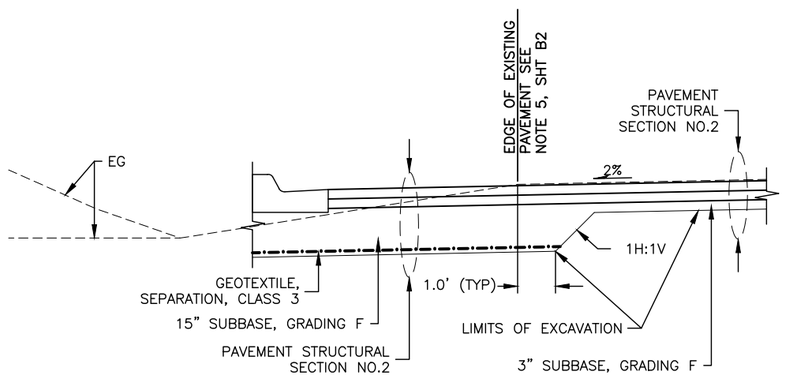


FILL B

SEE NOTE 1

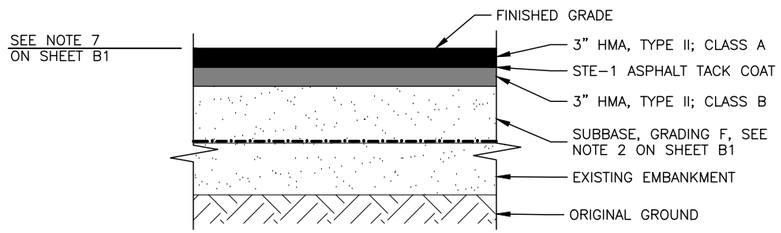
MAINLINE TYPICAL EXCEPTION TABLE

DETAIL	BEGIN STATION	END STATION	REMARKS
ALIGNMENT LT.			
FILL B	"O" 44+25	"O" 45+25	
FILL B	"O" 49+40	"O" 49+70	
FILL B	"O" 54+00	"O" 54+75	
CUT B	"O" 68+76	"O" 69+84	
CUT C	"O" 59+39	"O" 59+72	
ALIGNMENT RT.			
CUT B	"O" 62+19	"O" 65+50	
CUT B	"O" 66+63	"O" 69+84	



EMBANKMENT WIDENING DETAIL – ALIGNMENT RT/LT

STA "O" EQ. 32+76.11=39+78.12 TO STA "O" 61+50



PAVEMENT STRUCTURAL SECTION NO.2

STA "O" EQ. 32+76.11=39+78.12 TO STA "O" 70+75

NOTES:

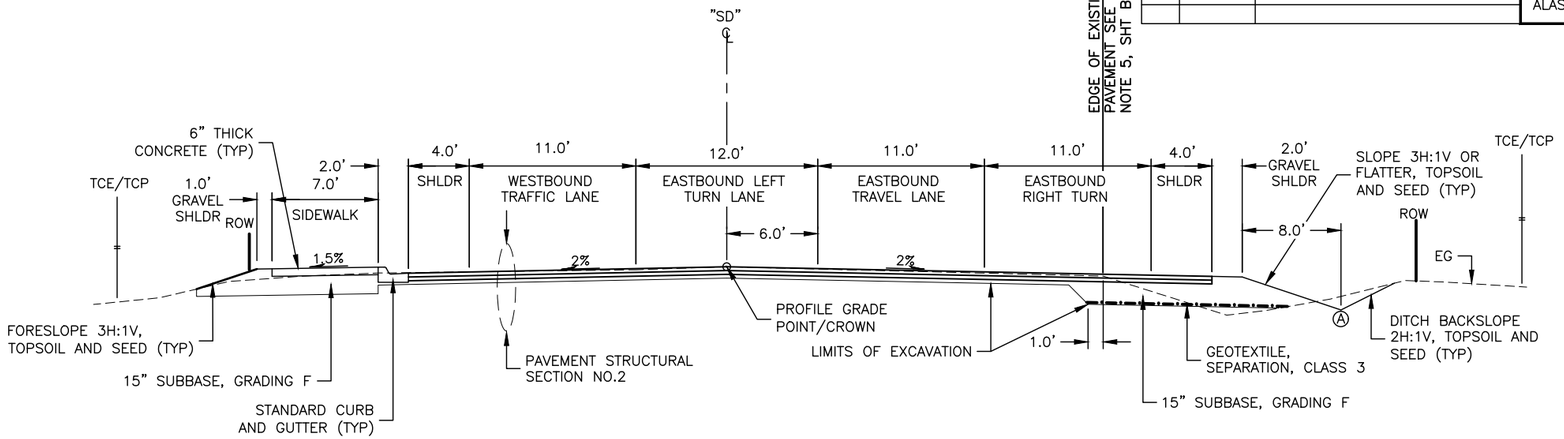
1. FILL SITUATIONS, STA "O" EQ. 32+76.11=39+78.12 TO STA "O" 61+50 ALIGNMENT LEFT/RIGHT, SIDEWALK CROSS-SLOPE IS SLOPED TOWARDS THE CURB AND GUTTER AT 1.5%.
2. STA "O" 61+50 TO STA "O" 70+75, INSTALL GEOTEXTILE, SEPARATION, CLASS 3 AT THE BOTTOM OF 15 INCH SUBBASE, GRADING F FOR THE FULL WIDTH OF ROADWAY AND EXTENDING 2.0' BEHIND THE BACK OF CURB.
3. BOTTOM CROSS-SLOPE OF SUBBASE, GRADING F SHALL DRAIN AWAY FROM THE ROADWAY CENTERLINE REGARDLESS OF THE SIDEWALK FINISHED CROSS-SLOPE DIRECTION.
4. SIDEWALK CROSS-SLOPE SHALL TRANSITION OVER A 20-FOOT MINIMUM LONGITUDINAL DISTANCE WHEN ALTERNATING BETWEEN TYPICAL SECTIONS WITH OPPOSITE CROSS-SLOPE DIRECTIONS. ROTATE THE SIDEWALK AT TOP BACK OF CURB.
5. ASBUILT SURVEY THE EDGE OF EXISTING ASPHALT BEFORE REMOVAL FOR THE STATION NOTED ON OLD STEESE AND ON HELMERICKS/SEEKINS DRIVE. FIELD STAKE THIS LINE TO DEFINE THE LIMITS OF EXCAVATION FOR EMBANKMENT WIDENING DETAIL
6. CONSTRUCT GRAVEL SHOULDER USING AGGREGATE BASE COURSE, GRADING D-1 OR SUBBASE GRADING F. FOR QUANTITIES AND ESTIMATE, THIS WORK IS PAID UNDER PAY ITEM 304.0001.000F

PRELIMINARY PS&E

TYPICAL SECTION

NO.	DATE	REVISION

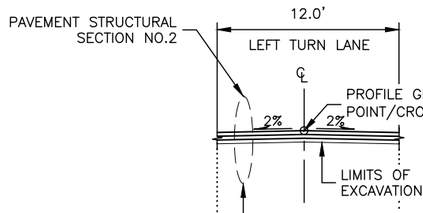
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z6624870000	2024	B3	B3



HELMERICKS AVENUE

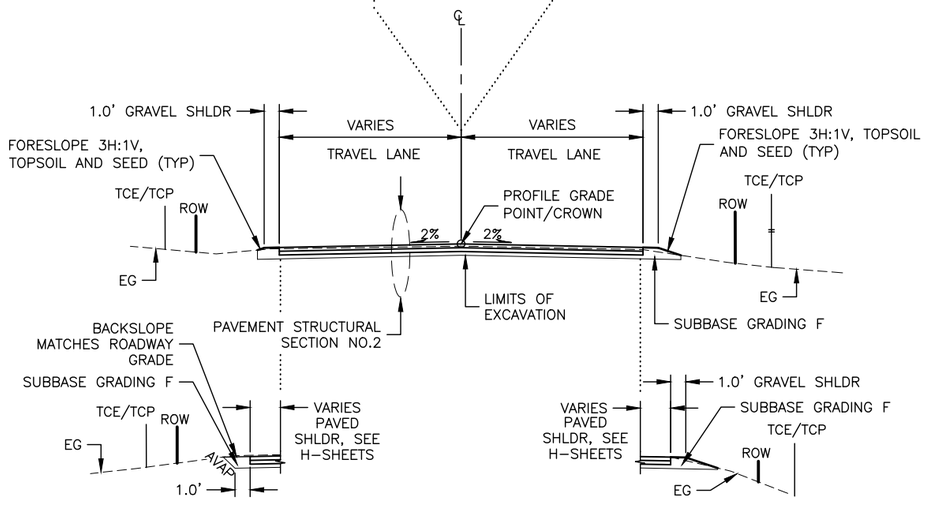
STA 'SD' 121+44 TO STA "SD" 124+36

Ⓐ REFER TO F AND D SHEETS FOR DEPTH OF SPECIAL DITCH PLAN AND PROFILE. EXTEND FORESLOPE TO SPECIAL DITCH OFFSET AND ELEVATIONS SHOWN ON THE F–SHEETS.



LEFT TURN LANE EXCEPTION

STA 'SD' 124+36 TO STA "SD" 125+89



PAVED SHOULDER EXCEPTION

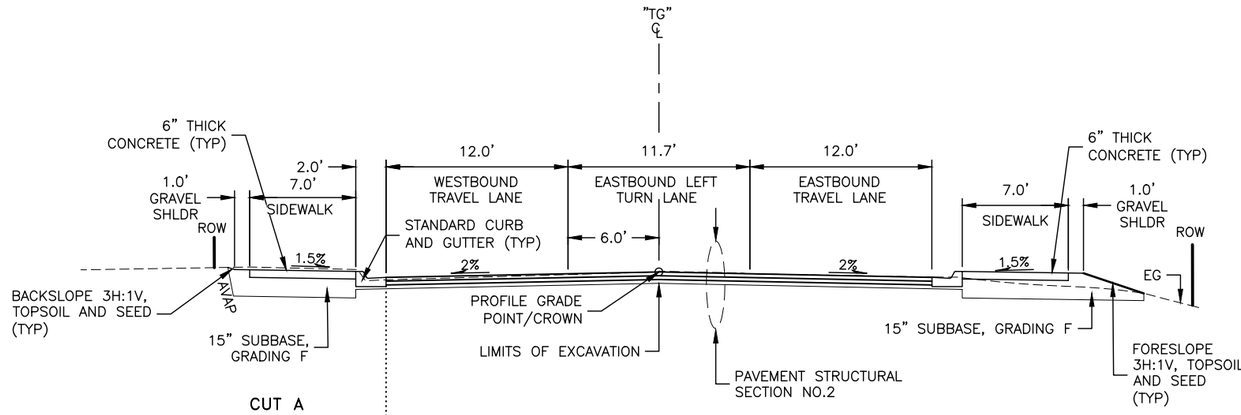
STA 'SD' 124+36 TO STA "SD" 125+89

PAVED SHOULDER EXCEPTION

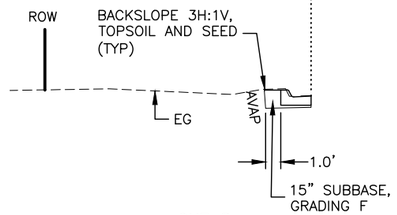
STA 'SD' 124+36 TO STA "SD" 125+89

APPROACHES/DRIVEWAYS (WITH RETURN RADIUS)

"KR","SW", STA "SD" 124+36 TO STA "SD" 125+89, "W", "HD"



CUT A



CUT B

TRAINOR GATE ROAD

STA 'TG' 90+18 TO STA "TG" 92+65

STA "TG" 90+18 TO STA "TG" 91+08. REFER TO RAISED MEDIAN DETAIL ON SHEET B1

STA "TG" 92+02 TO STA "TG" 92+65, EXISTING SIDEWALK AND CURB AND GUTTER TO REMAIN

TYPICAL SECTION

STATE OF ALASKA 49TH PRELIMINARY PS&E APPROVED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_B-B3 Tue, Oct/18/22 09:36am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	C1	C2

ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	TOTAL QUANTITY
201.0008.0000	GRUBBING	LS	ALL REQ'D
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	LS	ALL REQ'D
202.0013.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	CS	ALL REQ'D
203.0003.0000	UNCLASSIFIED EXCAVATION	CY	14,600
203.0009.0000	OBLITERATION OF ROADWAY	SY	127
203.2008.0000	SPECIAL DITCH	LF	790
203.2037.0000	DRAINAGE BASIN	EACH	3
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	TON	1,900
304.0001.000F	SUBBASE, GRADING F	TON	21,200
308.0001.0000	CRUSHED ASPHALT BASE COURSE	SY	17,100
401.0001.002A	HMA, TYPE II; CLASS A	TON	4,600
401.0001.002B	HMA, TYPE II; CLASS B	TON	7,500
401.0004.0000	ASPHALT BINDER, GRADE PG 52E-40	TON	670
401.0009.0000	LONGITUDINAL JOINT DENSITY PRICE ADJUSTMENT	CS	ALL REQ'D
401.0015.0000	ASPHALT MATERIAL PRICE ADJUSTMENT	CS	ALL REQ'D
401.2010.0000	HMA, SIDEWALKS AND PATHS	TON	314
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	TON	9.3
603.0001.0018	CSP 18 INCH	LF	70
603.0022.0048	END SECTION FOR CORRUGATED POLYETHYLENE PIPE 48 INCH	EACH	1
603.2032.0008	CORRUGATED HDPE PIPE 8 INCH	LF	49
603.2032.0012	CORRUGATED HDPE PIPE 12 INCH	LF	1,650
603.2032.0018	CORRUGATED HDPE PIPE 18 INCH	LF	303
603.2032.0024	CORRUGATED HDPE PIPE 24 INCH	LF	540
603.2032.0036	CORRUGATED HDPE PIPE 36 INCH	LF	1,100
603.2032.0048	CORRUGATED HDPE PIPE 48 INCH	LF	520
604.0001.0002	STORM SEWER MANHOLE, TYPE II	EACH	12
604.0002.0000	SANITARY SEWER MANHOLE	EACH	1
604.0004.0000	ADJUST EXISTING MANHOLE	EACH	32
604.0005.000A	INLET, TYPE A	EACH	44
604.0009.0000	RECONSTRUCT MANHOLE TOP SECTION	EACH	4
604.0012.0000	REPLACE INLET FRAME AND GRATE	EACH	4
604.0016.0000	ADJUST INLET FRAME AND GRATE	EACH	28
607.0003.0000	CHAIN LINK FENCE	LF	54
608.0001.0006	CONCRETE SIDEWALK, 6 INCHES THICK	SY	6,250
608.0006.0000	CURB RAMP	EACH	68
609.0002.0001	CURB AND GUTTER, TYPE 1	LF	10,300
609.0003.0000	BACKING CURB	LF	385
615.0001.0000	STANDARD SIGN	SF	1,085
615.0006.0000	SALVAGE SIGN	EACH	117
618.0003.0000	WATER FOR SEEDING	MGAL	78
618.0004.0000	SEEDING	SY	8,700
620.0001.0000	TOPSOIL	SY	8,700
621.0001.0000	TREE, MALUS, 2" CALIPER	EACH	5
621.0001.0000	TREE, BETULA PAPYRIFERA, 2" CALIPER	EACH	16
621.0001.0000	TREE, PICEA GLAUCA, 6' HEIGHT	EACH	3
621.2018.0000	ROCK MULCH	SY	41
626.0001.0008	SANITARY SEWER CONDUIT, 8 INCH	LF	87
626.0002.0000	SANITARY SEWER SERVICE CONNECTION	EACH	2
626.2013.0000	ADJUST SANITARY SEWER CLEANOUT	EACH	9
627.2033.0000	WATER SYSTEM COMPLETE	LS	ALL REQ'D
627.0010.0000	ADJUSTMENT OF VALVE BOX	EACH	18
630.0001.0003	GEOTEXTILE, SEPARATION, CLASS 3	SY	24,500
630.2000.0000	GEOTEXTILE, SEPARATION BY DIRECTIVE	CS	ALL REQ'D
639.2000.0000	APPROACH	EACH	39
640.0001.0000	MOBILIZATION AND DEMOBILIZATION	LS	ALL REQ'D
641.0001.0000	EROSION, SEDIMENT AND POLLUTION CONTROL ADMINISTRATION	LS	ALL REQ'D
641.0003.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL	LS	ALL REQ'D
641.0005.0000	TEMPORARY EROSION, SEDIMENT AND POLLUTION CONTROL BY DIRECTIVE	CS	ALL REQ'D
641.0006.0000	WITHHOLDING	CS	ALL REQ'D
641.0007.0000	SWPPP MANAGER	LS	ALL REQ'D

ESTIMATE OF QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	TOTAL QUANTITY
642.0001.0000	CONSTRUCTION SURVEYING	LS	ALL REQ'D
642.0013.0000	THREE PERSON SURVEY PARTY	CS	ALL REQ'D
643.0002.0000	TRAFFIC MAINTENANCE	LS	ALL REQ'D
643.0023.0000	TRAFFIC PRICE ADJUSTMENT	CS	ALL REQ'D
643.0025.0000	TRAFFIC CONTROL	CS	ALL REQ'D
643.0033.0000	DETOUR	LS	ALL REQ'D
643.2005.0000	PUBLIC INFORMATION PROGRAM	LS	ALL REQ'D
644.0001.0000	FIELD OFFICE	LS	ALL REQ'D
644.0006.0000	VEHICLE	LS	ALL REQ'D
645.0001.0000	TRAINING PROGRAM, 2 TRAINEES/APPRENTICES	LH	500
646.0001.0000	CPM SCHEDULING	LS	ALL REQ'D
660.0001.0000	TRAFFIC SIGNAL SYSTEM COMPLETE, BLAIR/FRED MEYER	LS	ALL REQ'D
660.0001.0000	TRAFFIC SIGNAL SYSTEM COMPLETE, HELMERICKS AVENUE	LS	ALL REQ'D
660.0003.0000	HIGHWAY LIGHTING SYSTEM COMPLETE, COF	LS	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEM MODIFICATION - BENTLEY TRUST ROAD	LS	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEM MODIFICATION - COLLEGE ROAD	LS	ALL REQ'D
660.2003.0000	TRAFFIC SIGNAL SYSTEM MODIFICATION - JOHANSEN EXPRESSWAY	LS	ALL REQ'D
660.2018.0000	TRAFFIC SIGNAL SYSTEM	CS	ALL REQ'D
660.2025.0000	PAN TILT ZOOM (PTZ) CAMERA	EACH	3
661.0002.0000	LOAD CENTER, TYPE 1A	EACH	3
661.2002.0000	REMOVE EXISTING LOAD CENTER	EACH	2
662.2004.0000	FIBER OPTIC MANHOLE - ADJUSTMENT	EACH	1
662.2005.0000	FIBER OPTIC INTERCONNECT	LS	ALL REQ'D
669.2000.0000	TRAFFIC DATA - SITE 01	LS	ALL REQ'D
669.2000.0000	TRAFFIC DATA - SITE 02	LS	ALL REQ'D
669.2000.0000	TRAFFIC DATA - SITE 03	LS	ALL REQ'D
669.2000.0000	TRAFFIC DATA - SITE 04	LS	ALL REQ'D
669.2000.0000	TRAFFIC DATA - SITE 05	LS	ALL REQ'D
670.0010.0000	METHYL METHACRYLATE PAVEMENT MARKINGS	LS	ALL REQ'D
670.0013.0000	PAINTED TRAFFIC MARKINGS	LF	122
670.2002.0000	MMA PAVEMENT MARKINGS, INLAID	LS	ALL REQ'D
670.2014.0000	MMA PAVEMENT MARKINGS INLAID	CS	ALL REQ'D
680.2000.0000	TELECOMMUNICATIONS UTILITY RELOCATION, GCI	LS	ALL REQ'D
687.2000.0000	POWER UTILTIY RELOCATION, GVEA	LS	ALL REQ'D
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, PETROLEUM	CS	ALL REQ'D
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, RCRA	CS	ALL REQ'D
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, UNRESTRICTED	CS	ALL REQ'D
802.2000.0000	CONTAMINANT SOIL REMOVAL AND DISPOSAL, UPLAND LOCATION	CS	ALL REQ'D
802.2001.0000	LABORATORY TESTING, PETROLEUM AND VOCS	EACH	200
802.2001.0000	LABORATORY TESTING, TCLP VOCS	EACH	2
802.2002.0000	MEDIA SPECIALIST	LS	ALL REQ'D

TABLE OF ESTIMATING FACTORS

ITEM NO.	PAY ITEM	ESTIMATING FACTOR
301.0001.00D1	AGGREGATE BASE COURSE, GRADING D-1	1.96 TON/CY
304.0001.000F	SUBBASE, GRADING F	2 TON/CY
401.0001.002A	HMA, TYPE II; CLASS A	113 LB/SY/IN
401.0001.002B	HMA, TYPE II; CLASS B	113 LB/SY/IN
401.0004.0000	ASPHALT BINDER, GRADE PG 52E-40	5.5% OF 401.0001.002A AND 401.0001.002B WEIGHT
402.0001.STE1	STE-1 ASPHALT FOR TACK COAT	0.000344 TON/SY
618.0003.0000	WATER FOR SEEDING	0.001 MGAL/SF

ESTIMATE OF QUANTITIES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	C2	C2

ESTIMATED LUMP SUM QUANTITIES

ITEM NO.	PAY ITEM	TOTAL QUANTITY
202.0001.0000	REMOVAL OF STRUCTURES AND OBSTRUCTIONS	
	SELECTIVE TREE REMOVAL	25 EACH
	SPRINKLER HEAD	1 EACH
	REMOVAL OF PAVEMENT	28,100 SY
	REMOVAL OF CULVERT PIPE	840 LF
	REMOVAL OF SANITARY SEWER PIPE	82 LF
	REMOVAL OF SIDEWALK	2,100 SY
	REMOVAL OF INLET	6 EACH
	REMOVAL OF CURB AND GUTTER	6,600 LF
	ABANDON PIPE IN PLACE, SEWER	60 LF
	REMOVAL OF FENCE	55 LF
670.0010.0000	METHYL METHACRYLATE PAVEMENT MARKINGS	
	CURB NOSE	309 SF
670.2002.0000	MMA PAVEMENT MARKINGS, INLAID	
	LONGITUDINAL STRIPING	36,568 LF
	TRANSVERSE STRIPING	6,907 SF
	SYMBOLS STRIPING	84 EACH

ESTIMATE OF QUANTITIES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D1	D7

203.2008.0000 - SPECIAL DITCH

SHEET	STATION FROM	STATION TO	OFFSET	LENGTH (LF)	REMARKS
F7-F8	"O" 62+19	"O" 65+49	RT	335.6	CUT B
F8-F9, F10	"O" 66+32	"O" 69+28	RT	150.7	CUT B
F9, F10	"O" 68+76	"O" 70+34	LT	141.2	CUT B
F9, F10	"SD" 122+03	"SD" 123+49	RT	154.1	CUT C
			TOTAL:	781.6	LF
			PAY ITEM QUANTITY:	790	LF

203.2037.0000 - DRAINAGE BASIN

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F4	"O" 44+42	LT	1	TRAINOR GATE RD
F7	"O" 60+24	RT	1	SEEKINS DR
F7	"O" 61+70	RT	1	SEEKINS DR
		TOTAL:	3	EACH
		PAY ITEM QUANTITY:	3	EACH

401.2010.0000 - HMA, SIDEWALKS AND PATHS

SHEET	STATION	OFFSET	WEIGHT (TON)	REMARKS
F1	"O" 12+27	LT	1.6	
F1	"O" 12+87	RT	38.7	
F1	"O" 13+02	LT	1.6	
F1	"O" 14+06	RT	2.0	
F1	"O" 15+37	RT	1.4	
F1	"O" 15+45	LT	26.9	
F1	"O" 16+23	RT	1.3	
F2	"O" 18+99	LT	2.5	
F2	"O" 19+38	LT	1.9	ISLAND
F2	"O" 20+35	LT	3.5	
F2	"O" 22+65	RT	46.4	
F2	"O" 23+29	RT	3.9	
F2	"O" 23+38	LT	1.7	
F2	"O" 24+09	RT	1.7	
F2	"O" 27+20	LT	0.4	
F2	"O" 28+55	LT	2.5	
F2	"O" 29+57	RT	9.2	
F3	"O" 30+00	LT	13.1	
F3	"O" 31+02	RT	7.0	
F3	"O" 39+89	LT	1.4	
F4	"O" 41+72	RT	4.4	
F4	"O" 42+04	RT	4.7	
F4	"O" 41+75	LT	10.7	
F4	"O" 42+91	CL	5.7	MEDIAN
F4	"O" 43+55	CL	3.8	MEDIAN
F4	"O" 45+90	LT	18.2	
F4	"O" 46+73	RT	10.7	
F5	"O" 48+10	LT	10.8	
F5	"O" 48+31	RT	14.3	
F6	"O" 57+35	RT	12.0	
F8	"O" 65+97	CL	30.1	MEDIAN
F11	"TG" 90+54	RT	18.9	MEDIAN
		TOTAL:	313.2	TON
		PAY ITEM QUANTITY:	314	TON

604.0001.0002 - STORM SEWER MANHOLE, TYPE II

SHEET	STRUCTURE ID	STATION	OFFSET	GRADE POINT	QUANTITY (EACH)	REMARKS
F3	SD-86	4026.96	46.26	442.89	1	See Note 1
F4	SD4-1	"O" 44+08.54	45.38 RT	447.29'	1	See Note 1
F4	SD4-2	"O" 44+86.60	6.00 LT	447.73'	1	See Note 1
F4	SD4-3	"O" 45+91.65	6.00 LT	447.35'	1	See Note 1
F5	SD5-1	"O" 48+42.74	20.50 LT	446.46'	1	See Note 1
F5	SD5-2	"O" 49+77.89	20.48 LT	446.67'	1	See Note 1
F5	SD5-3	"O" 51+48.70	19.80 LT	445.30'	1	See Note 1
F6	SD6-1	"O" 53+03.27	20.49 LT	444.24'	1	See Note 1
F6	SD6-2	"O" 54+95.08	20.71 LT	444.92'	1	See Note 1
F6	SD6-3	"O" 56+61.46	20.53 LT	445.54'	1	See Note 1
F7	SD7-1	"O" 58+09.71	20.49 LT	446.09'	1	See Note 1
F7	SD7-2	"O" 59+36.71	20.51 LT	446.56'	1	See Note 1
				TOTAL:	12	EACH
				PAY ITEM QUANTITY:	12	EACH

604.0012.0000 - REPLACE INLET FRAME AND GRATE

SHEET	STRUCTURE ID	STATION	OFFSET	GRADE POINT	QUANTITY (EACH)	REMARKS
F2	N/A	"O" 24+15.56	31.56 LT	EXISTING	1	SEE NOTE 1 & 2
F8	S8-1	"O" 63+41.06	32.25 RT	445.34'	1	SEE NOTE 1 & 3
F8	S8-2	"O" 67+07.41	32.25 RT	446.17'	1	SEE NOTE 1 & 3
F8	S8-3	"O" 67+07.68	32.25 LT	446.17'	1	SEE NOTE 1 & 3
				TOTAL:	4	EACH
				PAY ITEM QUANTITY:	4	EACH

604.0016.0000 - ADJUST INLET FRAME AND GRATE

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F1	"O" 11+49	LT	1	
F1	"O" 11+51	RT	1	
F1	"O" 14+00	LT	1	
F1	"O" 14+09	RT	1	
F1	"O" 15+33	LT	1	
F1	"O" 16+05	RT	1	
F1	"O" 16+31	RT	1	
F1	"O" 16+50	LT	1	
F1	"O" 18+04	LT	1	
F1	"O" 18+18	RT	1	
F2	"O" 20+89	LT	1	
F2	"O" 23+66	RT	1	
F2	"O" 25+85	LT	1	
F2	"O" 25+85	RT	1	
F2	"O" 28+15	RT	1	
F2	"O" 28+77	LT	1	
F2	"O" 29+22	LT	1	
F2	"O" 29+50	RT	1	
F3	"O" 31+50	LT	1	
F3	"O" 31+50	RT	1	
F3	"O" 40+02	RT	1	
F3	"O" 40+20	LT	1	
F3	"O" 40+40	RT	1	
F4	"O" 43+69	RT	1	
F4	"O" 44+51	RT	1	
F5	"O" 51+68	RT	1	
F11	"TG" 91+98	RT	1	
F11	"TG" 91+99	LT	1	
		TOTAL:	28	EACH
		PAY ITEM QUANTITY:	28	EACH

604.0005.000A - INLET, TYPE A

SHEET	STRUCTURE ID	STATION	OFFSET	GRADE POINT	QUANTITY (EACH)	REMARKS
F3	CB14-1	"O" 40+39.15	49.60 RT	444.35'	1	SEE NOTE 1
F4	CB4-1	"O" 43+58.88	85.51 RT	445.84'	1	SEE NOTE 1
F4	CB4-2	"O" 43+72.56	73.45 RT	446.92'	1	SEE NOTE 1
F4	CB4-3	"O" 45+83.03	32.25 RT	446.82'	1	SEE NOTE 1
F4	CB4-4	"O" 46+15.69	32.25 LT	446.72'	1	SEE NOTE 1
F4	CB4-5	"O" 46+25.39	44.44 LT	446.63'	1	SEE NOTE 1
F4	CB4-6	"O" 46+42.48	44.22 RT	446.47'	1	SEE NOTE 1
F5	CB5-1	"O" 47+89.53	32.25 LT	446.12'	1	SEE NOTE 1
F5	CB5-2	"O" 48+01.93	32.25 RT	446.09'	1	SEE NOTE 1
F5	CB5-3	"O" 48+04.27	41.42 RT	446.55'	1	SEE NOTE 1
F5	CB5-4	"O" 48+75.82	32.25 LT	446.30'	1	SEE NOTE 1
F5	CB5-5	"O" 48+81.46	45.97 LT	445.75'	1	SEE NOTE 1
F5	CB5-6	"O" 49+64.08	46.85 LT	445.73'	1	SEE NOTE 1
F5	CB5-7	"O" 50+78.62	56.16 RT	446.59'	1	SEE NOTE 1
F5	CB5-8	"O" 51+12.61	73.88 LT	446.12'	1	SEE NOTE 1
F5	CB5-9	"O" 51+47.42	75.52 LT	445.98'	1	SEE NOTE 1
F5	CB5-10	"O" 51+51.57	58.08 RT	445.21'	1	SEE NOTE 1
F6	CB6-1	"O" 52+70.35	32.25 LT	444.06'	1	SEE NOTE 1
F6	CB6-2	"O" 52+72.61	32.25 RT	444.03'	1	SEE NOTE 1
F6	CB6-3	"O" 53+00.35	32.25 LT	443.98'	1	SEE NOTE 1
F6	CB6-4	"O" 53+02.61	32.25 RT	443.96'	1	SEE NOTE 1
F6	CB6-5	"O" 53+30.35	32.25 LT	444.05'	1	SEE NOTE 1
F6	CB6-6	"O" 53+32.61	32.25 RT	444.04'	1	SEE NOTE 1
F6	CB6-7	"O" 54+52.30	56.24 RT	444.86'	1	SEE NOTE 1
F6	CB6-8	"O" 54+97.13	32.25 LT	444.66'	1	SEE NOTE 1
F6	CB6-9	"O" 54+99.91	44.77 LT	444.40'	1	SEE NOTE 1
F6	CB6-10	"O" 55+07.06	72.09 RT	444.72'	1	SEE NOTE 1
F6	CB6-11	"O" 56+50.19	51.35 RT	444.55'	1	SEE NOTE 1
F6	CB6-12	"O" 56+75.66	44.30 LT	445.45'	1	SEE NOTE 1
F7	CB7-1	"O" 57+69.76	47.06 RT	445.80'	1	SEE NOTE 1
F7	CB7-2	"O" 57+75.13	32.24 RT	445.69'	1	SEE NOTE 1
F7	CB7-3	"O" 58+12.23	32.26 LT	445.84'	1	SEE NOTE 1
F7	CB7-4	"O" 58+15.67	45.37 LT	445.49'	1	SEE NOTE 1
F7	CB7-5	"O" 59+39.41	50.48 LT	443.80'	1	SEE NOTE 1
F7	CB7-6	"O" 60+26.89	97.95 LT	446.00'	1	SEE NOTE 1
F13	CB13-1	"O" 60+72.84	84.72 RT	446.48'	1	SEE NOTE 1
F13	CB7-7	"O" 60+80.99	141.89 LT	446.20'	1	SEE NOTE 1
F13	CB13-2	"O" 61+18.10	81.55 RT	446.41'	1	SEE NOTE 1
F7	CB7-8	"O" 61+63.26	44.29 LT	446.11'	1	SEE NOTE 1
F7	CB7-9	"O" 62+51.91	0.00 RT	446.49'	1	SEE NOTE 1
F8	CB8-1	"O" 63+00.26	50.54 LT	444.45'	1	SEE NOTE 1
F8	CB8-2	"O" 63+41.06	32.58 LT	445.34'	1	SEE NOTE 1
F11	CB11-1	"O" 91+90.00	19.25 RT	446.09'	1	SEE NOTE 1
F11	CB11-2	"O" 91+90.01	19.25 LT	446.09'	1	SEE NOTE 1
				TOTAL:	44	EACH
				PAY ITEM QUANTITY:	44	EACH

NOTES:

1. GRADE POINT ELEVATION IS AT CENTER OF STRUCTURE AND AT THE NORMAL FLOW LINE. ADJUST FOR ACTUAL LID LOCATION AND RECESSED CASTING PER COF STANDARD DETAIL SD2 ON V–SHEETS.
2. REPLACE FRAME AND GRATE, SEE DETAILS ON E–SHEETS.
3. INSTALL CURB BOX FRAME, SEE DETAILS ON E–SHEETS.

SUMMARY TABLES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D2	D7

PIPE SUMMARY - 603 ITEMS

SHEET	PIPE ID	603.0001.0018	603.2032.0008	603.2032.0012	603.2032.0018	603.2032.0024	603.2032.0036	603.2032.0048	INLET				OUTLET				GRADE	REMARKS
		CSP 18 INCH	CORRUGATED HDPE PIPE 8 INCH	CORRUGATED HDPE PIPE 12 INCH	CORRUGATED HDPE PIPE 18 INCH	CORRUGATED HDPE PIPE 24 INCH	CORRUGATED HDPE PIPE 36 INCH	CORRUGATED HDPE PIPE 48 INCH										
		LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	START STRUCTURE	STATION FROM	OFFSET	INVERT	END STRUCTURE	STATION END	OFFSET	INVERT		
F3	P14-1			14.0					CB14-1	"O" 40+39.15	49.60 RT	441.75'	SD-86	"O" 40+26.96	46.26 RT	441.63'	0.90%	
F4	P4-1			19.0					CB4-1	"O" 43+58.88	85.51 RT	442.25'	CB4-2	"O" 43+72.56	73.45 RT	442.16'	0.49%	
F4	P4-2			47.0					CB4-2	"O" 43+72.56	73.45 RT	442.06'	SD4-1	"O" 44+08.54	45.38 RT	441.82'	0.52%	
F4	P4-3			150.0					CB11-1	"O" 43+74.21	190.21 RT	442.30'	SD4-1	"O" 44+08.54	45.38 RT	441.00'	0.87%	
F4	P4-5				95.0				SD4-1	"O" 44+08.54	45.38 RT	440.70'	SD4-2	"O" 44+86.60	6.00 LT	436.80'	4.15%	
F4	P4-4			49.0						"O" 44+50.58	68.80 RT	441.67'	SD4-1	"O" 44+08.54	45.38 RT	441.52'	0.30%	
F4	P4-6							160.0	SD4-2	"O" 44+86.60	6.00 LT	435.76'	SE4-1	"O" 44+46.04	160.27 LT	435.31'	0.28%	
F4	P4-8			40.0					CB4-3	"O" 45+83.03	32.25 RT	443.59'	SD4-3	"O" 45+91.65	6.00 LT	441.77'	4.64%	
F4	P4-7							105.0	SD4-3	"O" 45+91.65	6.00 LT	436.10'	SD4-2	"O" 44+86.60	6.00 LT	435.81'	0.28%	
F4	P4-10			36.0					CB4-4	"O" 46+15.69	32.25 LT	443.88'	SD4-3	"O" 45+91.65	6.00 LT	442.87'	2.83%	
F4	P4-11			16.0					CB4-5	"O" 46+25.39	44.44 LT	444.02'	CB4-4	"O" 46+15.69	32.25 LT	443.97'	0.32%	
F4	P4-9			72.0					CB4-6	"O" 46+42.48	44.22 RT	443.87'	SD4-3	"O" 45+91.65	6.00 LT	443.69'	0.25%	
F5	P5-1			54.0					CB5-1	"O" 47+89.53	32.25 LT	443.52'	SD5-1	"O" 48+42.74	20.50 LT	443.00'	0.96%	
F5	P5-2			67.0					CB5-2	"O" 48+01.93	32.25 RT	443.71'	SD5-1	"O" 48+42.74	20.50 LT	443.00'	1.06%	
F5	P5-3			10.0					CB5-3	"O" 48+04.27	41.42 RT	443.83'	CB5-2	"O" 48+01.93	32.25 RT	443.81'	0.26%	
F5-F4	P4-12							251.0	SD5-1	"O" 48+42.74	20.50 LT	436.85'	SD4-3	"O" 45+91.65	6.00 LT	436.15'	0.28%	
F5	P5-4			36.0					CB5-4	"O" 48+75.82	32.25 LT	443.10'	SD5-1	"O" 48+42.74	20.50 LT	442.95'	0.43%	
F5	P5-5			15.0					CB5-5	"O" 48+81.46	45.97 LT	443.20'	CB5-4	"O" 48+75.82	32.25 LT	443.15'	0.34%	
F5	P5-7			30.0					CB5-6	"O" 49+64.08	46.85 LT	442.02'	SD5-2	"O" 49+77.89	20.48 LT	441.50'	1.75%	
F5	P5-6						136.0		SD5-2	"O" 49+77.89	20.48 LT	437.28'	SD5-1	"O" 48+42.74	20.50 LT	436.90'	0.28%	
F5	P5-9			74.0					CB5-7	"O" 50+78.62	56.16 RT	443.90'	CB5-10	"O" 51+51.57	58.08 RT	441.45'	3.36%	
F5	P5-10			35.0					CB5-8	"O" 51+12.61	73.88 LT	442.50'	CB5-9	"O" 51+47.42	75.52 LT	442.33'	0.49%	
F5	P5-11			56.0					CB5-9	"O" 51+47.42	75.52 LT	442.23'	SD5-3	"O" 51+48.70	19.80 LT	441.00'	2.21%	
F5	P5-8						171.0		SD5-3	"O" 51+48.70	19.80 LT	437.80'	SD5-2	"O" 49+77.89	20.48 LT	437.33'	0.28%	
F5	P5-12			78.0					CB5-10	"O" 51+51.57	58.08 RT	441.40'	SD5-3	"O" 51+48.70	19.80 LT	441.17'	0.30%	
F5	P5-13			24.0						"O" 51+68.32	75.03 RT	441.53'	CB5-10	"O" 51+51.57	58.08 RT	441.45'	0.34%	
F6	P6-1			31.0					CB6-1	"O" 52+70.35	32.25 LT	441.44'	CB6-3	"O" 53+00.35	32.25 LT	440.63'	2.70%	
F6	P6-2			30.0					CB6-2	"O" 52+72.61	32.25 RT	441.43'	CB6-4	"O" 53+02.61	32.25 RT	440.99'	1.47%	
F6	P6-3			13.0					CB6-3	"O" 53+00.35	32.25 LT	440.53'	SD6-1	"O" 53+03.27	20.49 LT	440.38'	1.24%	
F6	P6-4			53.0					CB6-4	"O" 53+02.61	32.25 RT	441.36'	SD6-1	"O" 53+03.27	20.49 LT	440.56'	1.51%	
F6-F5	P5-14						155.0		SD6-1	"O" 53+03.27	20.49 LT	438.27'	SD5-3	"O" 51+48.70	19.80 LT	437.85'	0.28%	
F6	P6-5			31.0					CB6-5	"O" 53+30.35	32.25 LT	441.43'	CB6-3	"O" 53+00.35	32.25 LT	440.63'	2.67%	
F6	P6-6			30.0					CB6-6	"O" 53+32.61	32.25 RT	441.44'	CB6-4	"O" 53+02.61	32.25 RT	440.99'	1.48%	
F6	P6-8			89.0					CB6-7	"O" 54+52.30	56.24 RT	442.00'	SD6-2	"O" 54+95.08	20.71 LT	440.92'	1.23%	
F6	P6-7						192.0		SD6-2	"O" 54+95.08	20.71 LT	438.85'	SD6-1	"O" 53+03.27	20.49 LT	438.32'	0.28%	
F6	P6-9			12.0					CB6-8	"O" 54+97.13	32.25 LT	440.62'	SD6-2	"O" 54+95.08	20.71 LT	440.58'	0.37%	
F6	P6-10			13.0					CB6-9	"O" 54+99.91	44.77 LT	440.69'	CB6-8	"O" 54+97.13	32.25 LT	440.62'	0.55%	
F6	P6-11			94.0					CB6-10	"O" 55+07.06	72.09 RT	442.12'	SD6-2	"O" 54+95.08	20.71 LT	440.70'	1.52%	
F6	P6-13			73.0					CB6-11	"O" 56+50.19	51.35 RT	441.78'	SD6-3	"O" 56+61.46	20.53 LT	440.00'	2.45%	
F6	P6-12						162.0		SD6-3	"O" 56+61.46	20.53 LT	439.35'	SD6-2	"O" 54+95.08	20.71 LT	438.90'	0.28%	
F6	P6-14			28.0					CB6-12	"O" 56+75.66	44.30 LT	441.24'	SD6-3	"O" 56+61.46	20.53 LT	440.00'	4.53%	
F7	P7-1			16.0					CB7-1	"O" 57+69.76	47.06 RT	442.00'	CB7-2	"O" 57+75.13	32.24 RT	441.96'	0.29%	
F7	P7-2			64.0					CB7-2	"O" 57+75.13	32.24 RT	441.10'	SD7-1	"O" 58+09.71	20.49 LT	440.00'	1.74%	
F7-F6	P6-15						145.0		SD7-1	"O" 58+09.71	20.49 LT	439.80'	SD6-3	"O" 56+61.46	20.53 LT	439.40'	0.28%	
F7	P7-3			13.0					CB7-3	"O" 58+12.23	32.26 LT	442.79'	SD7-1	"O" 58+09.71	20.49 LT	442.00'	6.57%	
F7	P7-4			14.0					CB7-4	"O" 58+15.67	45.37 LT	442.91'	CB7-3	"O" 58+12.23	32.26 LT	442.84'	0.48%	
F7	P7-5						124.0		SD7-2	"O" 59+36.71	20.51 LT	440.19'	SD7-1	"O" 58+09.71	20.49 LT	439.85'	0.28%	
F7	P7-6			31.0					CB7-5	"O" 59+39.41	50.48 LT	441.20'	SD7-2	"O" 59+36.71	20.51 LT	440.50'	2.33%	
F7	P7-7					115.0				"O" 60+09.25	65.89 RT	441.97'	SD7-2	"O" 59+36.71	20.51 LT	440.24'	1.52%	
F7	P7-8					172.0			CB7-6	"O" 60+26.89	97.95 LT	442.50'		"O" 60+30.28	73.07 RT	442.07'	0.25%	
F13	P13-1					32.0			CB13-1	"O" 60+72.84	84.72 RT	442.29'		"O" 60+44.74	83.39 RT	442.21'	0.25%	
F7	P7-9				64.0				CB7-7	"O" 60+80.99	141.89 LT	443.10'	CB7-6	"O" 60+26.89	97.95 LT	442.60'	0.79%	

SUMMARY TABLES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D3	D7

PIPE SUMMARY - 603 ITEMS (CONT.)

SHEET	PIPE ID	603.0001.0018	603.2032.0008	603.2032.0012	603.2032.0018	603.2032.0024	603.2032.0036	603.2032.0048	INLET				OUTLET				GRADE	REMARKS
		CSP 18 INCH	CORRUGATED HDPE PIPE 8 INCH	CORRUGATED HDPE PIPE 12 INCH	CORRUGATED HDPE PIPE 18 INCH	CORRUGATED HDPE PIPE 24 INCH	CORRUGATED HDPE PIPE 36 INCH	CORRUGATED HDPE PIPE 48 INCH										
		LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	LENGTH (FT)	START STRUCTURE	STATION FROM	OFFSET	INVERT	END STRUCTURE	STATION END	OFFSET	INVERT		
F13	P13-2					51.0			CB13-2	"O" 61+18.10	81.55 RT	442.52'	CB13-1	"O" 60+72.84	84.72 RT	442.39'	0.25%	
F7	P7-10				38.0					"O" 61+35.59	71.43 LT	444.00'	CB7-8	"O" 61+63.26	44.29 LT	443.17'	2.23%	
F13	P13-3					21.0				"O" 61+36.25	87.20 RT	442.67'	CB13-2	"O" 61+18.10	81.55 RT	442.62'	0.25%	
F7	P7-11				106.0				CB7-8	"O" 61+63.26	44.29 LT	443.03'		"O" 61+67.81	61.46 RT	442.77'	0.25%	
F7	P7-12					75.0			CB7-9	"O" 62+51.91	0.00 RT	441.23'		"O" 62+06.24	58.14 RT	441.01'	0.30%	
F8-F7	P7-13					69.0			CB8-1	"O" 63+00.26	50.54 LT	441.43'	CB7-9	"O" 62+51.91	0.00 RT	441.23'	0.30%	
F8	P8-1		15.00						S8-1	"O" 63+41.06	32.25 RT	444.34'		"O" 63+40.81	47.67 RT	444.05'	2.00%	
F8	P8-2			44.0					CB8-2	"O" 63+41.06	32.58 LT	442.74'	CB8-1	"O" 63+00.26	50.54 LT	441.88'	1.99%	
F8	P8-3	70.0								"O" 66+40.06	70.87 RT	443.66'		"O" 65+65.42	66.91 RT	443.53'	0.19%	
F8	P8-4		16.0						S8-2	"O" 67+07.41	32.25 RT	445.17'		"O" 67+06.91	48.56 RT	444.86'	2.00%	
F8	P8-5		18.0						S8-3	"O" 67+07.69	32.25 LT	445.18'		"O" 67+08.10	50.32 LT	444.83'	2.00%	
F11	P11-1			39.0					CB11-2	"O" 91+90.01	19.25 LT	443.49'	CB11-1	"O" 91+90.00	19.25 RT	443.00'	1.27%	
TOTAL:		70.0	49.0	1,640.0	373.0	535.0	1,085.0	516.0	LF									
PAY ITEM QUANTITY:		70	49	1,650	373	540	1,100	520	LF									

604.0004.0000 - ADJUST EXISTING MANHOLE

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F1	"O" 11+48	6.3 LT	1	STORM DRAIN
F1	"O" 11+60	14.9 RT	1	SANITARY SEWER
F1	"O" 13+47	7.5 RT	1	SANITARY SEWER
F1	"O" 14+00	9.0 LT	1	STORM DRAIN
F1	"O" 15+80	8.6 LT	1	STORM DRAIN
F1	"O" 15+81	13.8 RT	1	SANITARY SEWER
F1	"O" 18+03	0.8 RT	1	STORM DRAIN
F2	"O" 21+50	19.7 RT	1	STORM DRAIN
F2	"O" 21+86	21.4 LT	1	SANITARY SEWER
F2	"O" 22+31	22.5 RT	1	SANITARY SEWER
F2	"O" 23+61	6.3 RT	1	STORM DRAIN
F2	"O" 23+76	18.0 LT	1	SANITARY SEWER
F2	"O" 23+77	16.8 RT	1	SANITARY SEWER
F2	"O" 25+80	18.2 RT	1	STORM DRAIN
F2	"O" 26+11	14.9 LT	1	SANITARY SEWER
F2	"O" 28+00	5.9 RT	1	STORM DRAIN
F2	"O" 28+51	23.8 LT	1	SANITARY SEWER
F2	"O" 29+50	5.4 RT	1	STORM DRAIN
F2	"O" 29+96	20.6 LT	1	SANITARY SEWER
F3	"O" 31+50	4.8 RT	1	STORM DRAIN
F3	"O" 40+24	2.4 RT	1	STORM DRAIN
F3	"O" 40+27	46.3 RT	1	STORM DRAIN
F3	"O" 40+31	26.7 LT	1	SANITARY SEWER
F4	"O" 43+88	20.4 LT	1	SANITARY SEWER
F5	"O" 47+11	7.7 LT	1	SANITARY SEWER
F5	"O" 49+64	12.7 LT	1	SANITARY SEWER
F5	"O" 51+34	10.6 LT	1	SANITARY SEWER
F5	"O" 52+46	10.3 LT	1	SANITARY SEWER
F6	"O" 54+87	13.2 LT	1	SANITARY SEWER
F6	"O" 57+23	18.0 RT	1	SANITARY SEWER
F11	"TG" 90+55	9.8 LT	1	STORM DRAIN
F11	"TG" 90+56	27.3 LT	1	SANITARY SEWER
		TOTAL:	32	EACH
		PAY ITEM QUANTITY:	32	EACH

608.0001.0006 - CONCRETE SIDEWALK, 6 INCHES THICK

SHEET	STATION FROM	STATION TO	OFFSET	AREA (SY)	REMARKS
F1	"O" 10+79	"O" 11+18	LT	28.5	
F1	"O" 12+11	"O" 12+40	LT	16.9	
F1	"O" 12+24	"O" 13+47	RT	80.2	
F1	"O" 12+89	"O" 13+17	LT	16.4	
F1	"O" 13+90	"O" 14+24	RT	20.2	
F1	"O" 14+48	"O" 16+48	LT	135.3	
F1	"O" 15+26	"O" 15+52	RT	21.4	
F1	"O" 16+06	"O" 16+33	RT	20.4	
F2	"O" 18+51	"O" 19+01	LT	102.0	
F2	"O" 19+28	"O" 19+86	RT	69.0	
F2	"O" 19+32	"O" 19+46	LT	13.6	ISLAND
F2	"O" 20+05	"O" 20+59	LT	98.2	
F2	"O" 20+74	"O" 21+03	RT	45.6	
F2	"O" 22+39	"O" 23+60	RT	79.2	
F2	"O" 23+22	"O" 23+51	LT	15.7	
F2	"O" 23+97	"O" 24+24	RT	16.5	
F2	"O" 23+99	"O" 24+36	LT	23.6	
F2	"O" 25+83	"O" 26+17	LT	18.0	
F2	"O" 26+86	"O" 27+24	LT	21.9	
F2-F3	"O" 27+72	"O" 40+01	RT	380.8	
F2	"O" 28+43	"O" 28+75	LT	31.7	
F2-F3	"O" 29+20	"O" 30+24	LT	92.6	
F3-F5	"O" 32+75	"O" 49+00	LT	705.3	
F3-F4	"O" 40+39	"O" 43+72	RT	278.3	
F4	"O" 43+91	"O" 44+09	RT	18.3	MEDIAN
F4	"O" 44+11	"O" 44+93	RT	87.0	
F4-F5	"O" 45+33	"O" 51+06	RT	453.8	
F5	"O" 49+15	"O" 51+12	LT	159.9	
F5-F6	"O" 51+51	"O" 54+56	RT	247.9	
F5-F7	"O" 51+52	"O" 60+20	LT	700.0	
F6-F7	"O" 55+14	"O" 60+64	RT	454.0	
F7-F8	"O" 61+00	"O" 65+29	LT	335.5	

608.0001.0006 - CONCRETE SIDEWALK, 6 INCHES THICK (CONT.)

SHEET	STATION FROM	STATION TO	OFFSET	AREA (SY)	REMARKS
F8-F9, F10	"O" 65+74	"O" 70+59	LT	472.7	
F8-F9, F10	"O" 66+33	"O" 70+71	RT	404.1	
F11	"TG" 91+05	"TG" 92+02	LT	65.1	
F13	"SD" 121+76	"SD" 123+51	LT	134.2	
			TOTAL:	6,236.3	SY
			PAY ITEM QUANTITY:	6,250	SY

603.0022.0048 - END SECTION FOR CORRUGATED POLYETHYLENE PIPE 48 INCH

SHEET	STRUCTURE ID	STATION	OFFSET	QUANTITY (EACH)	REMARKS
E12/F4	SE4-1	"O" 44+46.02	160.76 LT	1	P4-6
			TOTAL:	1	EACH
			PAY ITEM QUANTITY:	1	EACH

607.0003.0000 - CHAIN LINK FENCE

SHEET	STATION FROM	STATION TO	OFFSET	LENGTH (LF)	REMARKS
F9, F10	"O" 69+33	"O" 69+85	LT	54.0	6-FOOT
			TOTAL:	54.0	LF
			PAY ITEM QUANTITY:	54	LF

STATE OF ALASKA 49TH
PRELIMINARY
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NOT FOR CONSTRUCTION
AUTHORIZED PROFESSIONAL ENGINEER

SUMMARY TABLES

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D4	D7

608.0006.0000 - CURB RAMP

SHEET	STATION	OFFSET	TYPE	DETECTABLE WARNING TILE						REMARKS
				LAYOUT TYPE	W1/W2 X DEPTH (SEE NOTE 1) (FT)	RADIUS (FT)	MAX. HEIGHT (FT)	CHORD LENGTH (FT)	ARC LENGTH (FT)	
						DIM "A"	DIM "B"	DIM "C"	DIM "D"	
F1	"O" 12+40	37.4 LT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F1	"O" 12+89	38.1 LT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F1	"O" 13+47	37.9 RT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F1	"O" 13+90	37.9 RT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F1	"O" 15+43	38.3 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F1	"O" 16+13	38.2 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F2	"O" 19+09	57.5 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 19+32	45.0 LT	DIRECTIONAL	RECTANGULAR	6.0 X 2	--	--	--	--	ISLAND
F2	"O" 19+35	33.0 LT	DIRECTIONAL	RECTANGULAR	6.0 X 2	--	--	--	--	ISLAND
F2	"O" 19+44	32.6 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 19+46	41.6 LT	DIRECTIONAL	RECTANGULAR	6.0 X 2	--	--	--	--	ISLAND
F2	"O" 19+76	52.6 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 20+19	56.9 LT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 20+41	44.8 LT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 20+70	56.6 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 20+84	37.7 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 23+51	37.9 LT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F2	"O" 23+60	37.5 RT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F2	"O" 23+99	38.2 LT	DIRECTIONAL	RADIAL	--	13.00	1.72	12.92	2.00	
F2	"O" 23+97	38.1 RT	DIRECTIONAL	RADIAL	--	13.00	1.60	12.49	2.00	
F2	"O" 26+17	37.8 LT	DIRECTIONAL	RADIAL	--	33.00	1.47	19.48	2.00	
F2	"O" 26+86	38.2 LT	DIRECTIONAL	RADIAL	--	38.00	1.53	21.35	2.00	
F2	"O" 28+56	38.4 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 28+59	31.8 RT	PERPENDICULAR	RECTANGULAR	5.0 X 2	--	--	--	--	
F2	"O" 28+72	54.7 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 29+31	48.1 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F2	"O" 29+33	31.8 RT	PARALLEL	RECTANGULAR	7.5 X 2					
F2	"O" 29+50	34.8 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F3	"O" 39+95	37.5 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F3	"O" 40+47	37.9 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F4	"O" 43+04	33.0 LT	DIRECTIONAL	RECTANGULAR	7.0 X 2	--	--	--	--	RAILROAD
F4	"O" 43+12	33.0 RT	DIRECTIONAL	RECTANGULAR	7.0 X 2	--	--	--	--	RAILROAD
F4	"O" 43+46	33.0 LT	DIRECTIONAL	RECTANGULAR	7.0 X 2	--	--	--	--	RAILROAD
F4	"O" 43+52	41.6 RT	DIRECTIONAL	RECTANGULAR	7.0 X 2	--	--	--	--	RAILROAD
F4	"O" 43+68	53.6 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F4	"O" 43+91	49.5 RT	DIRECTIONAL	CHORDED	10.0/10.0 X 2	--	--	--	--	ISLAND
F4	"O" 44+09	51.5 RT	DIRECTIONAL	RECTANGULAR	10.0 X 2	--	--	--	--	ISLAND
F4	"O" 44+25	61.8 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F4	"O" 44+93	40.0 RT	DIRECTIONAL	RADIAL	--	13.00	1.88	13.47	2.00	
F4	"O" 45+33	40.0 RT	DIRECTIONAL	RADIAL	--	13.00	1.88	13.47	2.00	
F5	"O" 49+00	40.0 LT	DIRECTIONAL	CHORDED	11.1/11.1 X 2	--	--	--	--	
F5	"O" 49+20	33.0 LT	DIRECTIONAL	RECTANGULAR	7.0 X 2	--	--	--	--	
F5	"O" 50+90	36.7 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F5	"O" 50+95	40.9 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F5	"O" 51+08	51.2 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F5	"O" 51+56	50.3 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F5	"O" 51+58	47.9 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F5	"O" 51+74	35.9 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F5	"O" 51+76	34.8 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F6	"O" 54+45	38.9 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F6	"O" 55+24	38.8 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 60+07	43.1 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 60+23	59.9 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 60+38	43.6 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 60+55	54.9 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 61+17	63.5 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 61+26	52.9 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	

608.0006.0000 - CURB RAMP (CONT.)

SHEET	STATION	OFFSET	TYPE	DETECTABLE WARNING TILE						REMARKS
				LAYOUT TYPE	W1/W2 X DEPTH (SEE NOTE 1) (FT)	RADIUS (FT)	MAX. HEIGHT (FT)	CHORD LENGTH (FT)	ARC LENGTH (FT)	
						DIM "A"	DIM "B"	DIM "C"	DIM "D"	
F7	"O" 61+37	50.8 LT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F7	"O" 61+42	38.1 RT	PARALLEL	RECTANGULAR	6.0 X 2	--	--	--	--	
F8	"O" 65+19	39.1 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F8	"O" 65+70	38.5 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F8	"O" 65+83	39.5 LT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F8	"O" 66+43	38.5 RT	PARALLEL	RECTANGULAR	5.5 X 2	--	--	--	--	
F9, F10	"O" 70+38	39.9 LT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
F9, F10	"O" 70+49	44.3 RT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
F9, F10	"O" 70+58	62.2 LT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
F9, F10	"O" 70+62	57.6 RT	PERPENDICULAR	RECTANGULAR	6.0 X 2	--	--	--	--	
F13	"SD" 121+76	30.0 LT	DIRECTIONAL	RADIAL	--	18.00	1.86	15.92	2.00	
TOTAL:		68	EACH							
PAY ITEM QUANTITY:		68	EACH							

NOTES:

1. FOR RECTANGULAR DETECTABLE WARNING TILES, ONLY W1 IS LISTED.
2. WIDTH AND LENGTH ARE ONLY PROVIDED FOR RECTANGULAR AND CHORDED DETECTABLE WARNING TILE LAYOUT.
3. REFER TO THE DIRECTIONAL CURB RAMP DETAILS ON E SHEETS FOR INSTALLATION DETAILS, CRITICAL LAYOUT POINTS AND KEY DIMENSIONS.

SUMMARY TABLES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D5	D7

609.0002.0001 - CURB AND GUTTER, TYPE 1

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	LENGTH (LF)	REMARKS
F1	"O" 10+79	31.2 LT	"O" 11+18	31.2 LT	42.4	
F1	"O" 12+11	31.5 LT	"O" 12+40	37.9 LT	31.4	
F1	"O" 12+24	31.6 RT	"O" 13+48	37.9 RT	126.5	
F1	"O" 12+89	38.1 LT	"O" 13+17	31.5 LT	30.7	
F1	"O" 13+90	37.9 RT	"O" 14+24	31.6 RT	36.5	
F1	"O" 14+48	31.5 LT	"O" 16+48	31.5 LT	198.7	
F1	"O" 15+26	31.3 RT	"O" 15+53	51.4 RT	35.6	
F1	"O" 16+06	48.9 RT	"O" 16+33	31.3 RT	35.2	
F2	"O" 18+51	31.6 LT	"O" 19+11	98.0 LT	109.6	
F2	"O" 19+25	34.2 LT	"O" 19+48	33.9 LT	72.0	ISLAND
F2	"O" 19+28	31.6 RT	"O" 19+86	76.3 RT	80.8	
F2	"O" 20+04	83.1 LT	"O" 20+59	43.4 LT	75.8	
F2	"O" 20+73	79.5 RT	"O" 21+03	31.9 RT	67.4	
F2	"O" 22+39	31.2 RT	"O" 23+60	37.5 RT	124.6	
F2	"O" 23+22	31.6 LT	"O" 23+51	37.9 LT	30.6	
F2	"O" 23+96	38.1 RT	"O" 24+24	31.7 RT	30.8	
F2	"O" 23+97	46.9 LT	"O" 24+36	31.6 LT	47.9	
F2	"O" 25+83	31.6 LT	"O" 26+22	40.9 LT	41.6	
F2	"O" 26+06	31.0 LT	"O" 26+97	31.0 LT	93.0	
F2	"O" 26+73	53.2 LT	"O" 27+24	31.5 LT	61.6	
F2	"O" 27+13	40.0 LT	"O" 27+16	38.1 LT	3.8	
F2-F3	"O" 27+72	31.2 RT	"O" 40+02	60.5 RT	550.3	
F2	"O" 28+43	32.4 LT	"O" 28+76	65.0 LT	48.9	
F2-F3	"O" 29+19	67.9 LT	"O" 30+24	31.5 LT	121.7	
F3-F5	"O" 32+75	31.4 LT	"O" 49+06	51.1 LT	928.3	
F3	"O" 39+86	30.7 RT	"O" 40+55	31.9 RT	70.5	
F3-F4	"O" 40+40	66.8 RT	"O" 43+72	70.1 RT	383.4	
F4	"O" 42+61	3.2 RT	"O" 43+19	0.0 RT	124.5	BOTH SIDES OF MEDIAN
F4	"O" 43+39	0.0 RT	"O" 43+72	0.0 RT	78.0	BOTH SIDES OF MEDIAN
F4	"O" 44+10	105.1 RT	"O" 44+93	40.0 RT	129.1	
F4-F5	"O" 45+33	40.0 RT	"O" 50+85	97.1 RT	641.7	
F5	"O" 49+13	31.0 LT	"O" 49+21	48.3 LT	19.2	
F5	"O" 49+14	32.5 LT	"O" 51+12	83.2 LT	232.7	
F5	"O" 50+63	32.5 LT	"O" 51+79	32.1 LT	116.3	
F5	"O" 50+82	32.0 RT	"O" 51+79	32.0 RT	97.3	
F5-F7	"O" 51+46	80.6 LT	"O" 60+21	106.2 LT	942.4	
F5-F6	"O" 51+50	70.4 RT	"O" 54+68	91.8 RT	380.9	
F6	"O" 54+32	32.0 RT	"O" 55+36	32.0 RT	105.9	
F6-F7	"O" 55+03	91.0 RT	"O" 60+73	97.1 RT	670.5	
F7-F8	"O" 61+00	88.8 LT	"O" 65+29	47.7 LT	441.4	
F7-F8	"O" 61+20	89.3 RT	"O" 65+81	47.0 RT	512.3	
F8	"O" 64+80	3.2 RT	"O" 67+13	3.2 LT	470.4	BOTH SIDES OF MEDIAN
F8	"O" 65+08	32.0 LT	"O" 65+94	32.0 LT	88.9	
F8-F9, F10	"O" 65+73	49.0 LT	"O" 70+60	99.2 LT	554.1	
F8-F9, F10	"O" 66+33	46.7 RT	"O" 70+72	100.9 RT	477.1	
F2	"CR" 136+31	59.6 LT	"CR" 136+58	59.8 LT	26.7	
F11	"TG" 90+20	52.5 LT	"TG" 91+07	0.0 RT	235.4	BOTH SIDES OF MEDIAN
F11	"TG" 90+70	19.5 RT	"TG" 92+00	19.4 RT	129.8	
F11	"TG" 91+05	19.5 LT	"TG" 92+02	19.7 LT	96.8	
F13	"SD" 121+76	30.0 LT	"SD" 123+51	27.3 LT	180.1	
				TOTAL:	10,230.9	LF
				PAY ITEM QUANTITY:	10,300	LF

609.0003.0000 - BACKING CURB

SHEET	STATION FROM	OFFSET	STATION TO	OFFSET	LENGTH (LF)	REMARKS
F1	"O" 15+34	39.4 RT	"O" 15+45	51.6 RT	17.0	
F1	"O" 16+13	50.5 RT	"O" 16+33	38.1 RT	26.6	
F2	"O" 19+37	38.3 RT	"O" 19+74	68.0 RT	52.1	
F2	"O" 20+76	69.0 RT	"O" 20+93	39.9 RT	37.6	
F2	"O" 25+92	37.8 LT	"O" 26+17	37.8 LT	25.1	
F2	"O" 26+86	38.2 LT	"O" 27+12	38.0 LT	27.0	
F2	"O" 28+49	41.3 LT	"O" 28+59	50.7 LT	14.4	
F2	"O" 28+64	54.4 LT	"O" 28+70	66.7 LT	13.6	
F2	"O" 29+27	37.7 RT	"O" 29+47	37.7 RT	27.4	
F2	"O" 29+30	62.1 LT	"O" 29+59	40.1 LT	37.3	
F4	"O" 44+24	75.6 RT	"O" 44+34	61.4 RT	17.2	
F5	"O" 50+83	40.0 LT	"O" 51+07	64.6 LT	37.3	
F5	"O" 51+59	61.7 LT	"O" 51+83	40.5 LT	33.6	
F6	"O" 55+19	52.2 RT	"O" 55+33	42.3 RT	18.4	
				TOTAL:	384.6	LF
				PAY ITEM QUANTITY:	385	LF

618.0004.0000 - SEEDING

SHEET	STATION FROM	STATION TO	OFFSET	AREA (SY)	REMARKS
F2	"O" 19+28	"O" 19+78	RT	20.3	
F2	"O" 20+80	"O" 21+03	RT	16.2	
F2	"O" 28+24	"O" 28+50	RT	9.6	
F2	"O" 29+28	"O" 29+73	LT	16.9	
F3	"O" 39+78	"O" 41+50	CL	130.1	
F4	"O" 41+50	"O" 46+75	CL	539.7	
F4	"O" 43+66	"O" 44+14	LT	127.0	OBLITERATION OF ROADWAY
F4	"O" 43+68	"O" 44+84	LT	1,789.1	DRAINAGE BASIN
F5	"O" 46+75	"O" 52+50	CL	628.1	
F6	"O" 52+50	"O" 57+50	CL	563.5	
F7	"O" 57+50	"O" 63+00	CL	1,261.6	
F7	"O" 59+79	"O" 60+67	RT	317.7	DRAINAGE BASIN
F7	"O" 61+26	"O" 62+18	RT	448.8	DRAINAGE BASIN
F8	"O" 63+00	"O" 68+50	CL	1,404.7	
F9, F10	"O" 68+50	"O" 70+81	CL	841.8	
F11	"TG" 90+00	"TG" 92+65	CL	91.2	
F13	"SD" 121+45	"SD" 125+88	CL	452.4	
			TOTAL:	8,658.6	SY
			PAY ITEM QUANTITY:	8,700	SY

SUMMARY TABLES

PRELIMINARY PS&E

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D6	D7

620.0001.0000 - TOPSOIL

SHEET	STATION FROM	STATION TO	OFFSET	AREA (SY)	REMARKS
F2	"O" 19+28	"O" 19+78	RT	20.3	
F2	"O" 20+80	"O" 21+03	RT	16.2	
F2	"O" 28+24	"O" 28+50	RT	9.6	
F2	"O" 29+28	"O" 29+73	LT	16.9	
F3	"O" 39+78	"O" 41+50	CL	130.1	
F4	"O" 41+50	"O" 46+75	CL	539.7	
F4	"O" 43+66	"O" 44+14	LT	127.0	OBLITERATION OF ROADWAY
F4	"O" 43+68	"O" 44+84	LT	1,789.1	DRAINAGE BASIN
F5	"O" 46+75	"O" 52+50	CL	628.1	
F6	"O" 52+50	"O" 57+50	CL	563.5	
F7	"O" 57+50	"O" 63+00	CL	1,261.6	
F7	"O" 59+79	"O" 60+67	RT	317.7	DRAINAGE BASIN
F7	"O" 61+26	"O" 62+18	RT	448.8	DRAINAGE BASIN
F8	"O" 63+00	"O" 68+50	CL	1,404.7	
F9, F10	"O" 68+50	"O" 70+81	CL	841.8	
F11	"TG" 90+00	"TG" 92+65	CL	91.2	
F13	"SD" 121+45	"SD" 125+88	CL	452.4	
			TOTAL:	8,658.6	SY
			PAY ITEM QUANTITY:	8,700	SY

621.0001.0000 - TREE, BETULA PAPYRIFERA, 2" CALIPER

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F4	"O" 41+59	42.9 RT	1	
F4	"O" 42+18	56.6 RT	1	
F4	"O" 42+23	50.6 RT	1	
F7	"O" 60+00	51.2 RT	1	
F7	"O" 60+18	53.5 RT	1	
F7	"O" 60+67	91.2 RT	1	
F7	"O" 61+84	46.3 RT	1	
F7	"O" 62+20	77.1 RT	1	
F9, F10	"O" 68+70	54.0 LT	1	
F9, F10	"O" 69+84	65.0 LT	1	
F13	"SD" 121+91	37.7 LT	1	
F13	"SD" 122+04	39.4 LT	1	
F13	"SD" 122+17	36.3 LT	1	
F13	"SD" 122+33	41.3 LT	1	
F13	"SD" 122+48	38.0 LT	1	
F13	"SD" 122+56	41.2 LT	1	
		TOTAL:	16	EACH
		PAY ITEM QUANTITY:	16	EACH

621.0001.0000 - TREE, MALUS, 2" CALIPER

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F5	"O" 49+82	44.5 LT	1	
F5	"O" 50+10	45.0 LT	1	
F5	"O" 51+86	52.0 LT	1	
F6	"O" 53+13	42.7 LT	1	
F6	"O" 54+93	47.2 LT	1	
		TOTAL:	5	EACH
		PAY ITEM QUANTITY:	5	EACH

621.0001.0000 - TREE, PICEA GLAUCA, 6' HEIGHT

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F6	"O" 54+76	46.3 LT	1	
F6	"O" 54+90	56.1 LT	1	
F13	"SD" 122+90	40.0 LT	1	
		TOTAL:	3	EACH
		PAY ITEM QUANTITY:	3	EACH

621.2018.0000 - ROCK MULCH

SHEET	STATION	OFFSET	AREA (SY)	REMARKS
F2	"O" 24+00	LT	2.4	
F2	"O" 26+02	LT	11.6	
F2	"O" 26+92	LT	14.0	
F5	"O" 51+00	LT	12.6	
		TOTAL:	40.5	SY
		PAY ITEM QUANTITY:	41	SY

626.2013.0000 - ADJUST SANITARY SEWER CLEANOUT

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F1	"O" 14+20	22.1 LT	1	
F1	"O" 15+95	25.3 LT	1	
F1	"O" 16+27	22.4 LT	1	
F1	"O" 16+34	22.3 LT	1	
F1	"O" 17+45	29.2 RT	1	
F1	"O" 17+67	28.8 RT	1	
F1	"O" 17+83	14.6 LT	1	
F1	"O" 17+91	14.1 LT	1	
F2	"O" 18+98	26.1 RT	1	
		TOTAL:	9	EACH
		PAY ITEM QUANTITY:	9	EACH

627.0010.0000 - ADJUSTMENT OF VALVE BOX

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F1	"O" 12+31	39.0 LT	1	
F1	"O" 12+32	38.7 LT	1	
F1	"O" 12+91	16.0 LT	1	
F1	"O" 13+76	28.6 RT	1	
F1	"O" 13+78	29.2 RT	1	
F1	"O" 14+89	35.9 LT	1	
F3	"O" 30+24	38.4 LT	1	
F3	"O" 39+88	14.5 LT	1	
F3	"O" 39+89	13.3 LT	1	
F3	"O" 39+91	15.1 LT	1	
F4	"O" 44+90	29.6 LT	1	
F4	"O" 44+95	28.1 LT	1	
F4	"O" 45+57	39.9 RT	1	
F5	"O" 50+90	41.1 RT	1	
F5	"O" 51+09	39.3 RT	1	
F5	"O" 51+10	40.0 RT	1	
F5	"O" 51+11	39.1 RT	1	
F6	"O" 54+02	37.7 RT	1	
		TOTAL:	18	EACH
		PAY ITEM QUANTITY:	18	EACH

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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SUMMARY TABLES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	D7	D7

630.0001.0003 - GEOTEXTILE, SEPARATION, CLASS 3

SHEET	STATION FROM	STATION TO	OFFSET	AREA (SY)	REMARKS
F3	"O" 39+78	"O" 41+50	CL	1,329	
F4	"O" 41+50	"O" 46+75	CL	4,083	
F5	"O" 46+75	"O" 52+50	CL	4,472	
F6	"O" 52+50	"O" 57+50	CL	3,889	
F7	"O" 57+50	"O" 63+00	CL	4,436	
F8	"O" 63+00	"O" 68+50	CL	4,287	
F9, F10	"O" 68+50	"O" 70+81	CL	1,784	
F13	"SD" 121+44	"SD" 124+36	CL	177	
TOTAL:				24,458	SY
PAY ITEM QUANTITY:				24,500	SY

662.2004.0000 - FIBER OPTIC MANHOLE - ADJUSTMENT

SHEET	STATION	OFFSET	QUANTITY (EACH)	REMARKS
F2	"O" 27+90	24.2 RT	1	ADJUST EXISTING FIBER OPTIC MANHOLE TO GRADE
TOTAL:			1	EACH
PAY ITEM QUANTITY:			1	EACH

639.2000.0000 - APPROACH

SHEET	STATION	OFFSET	SKEW ANGLE (90° TYPICAL)	RADIUS (LF)	WIDTH (LF)	LENGTH (LF)	QUANTITY (EACH)	REMARKS
F1	"O" 12+64	LT	MATCH EXISTING	15/15	45.1	--	1	COMMERCIAL DRIVEWAY
F1	"O" 13+69	RT	MATCH EXISTING	15/15	34.8	--	1	4TH STREET
F1	"O" 15+25	LT	MATCH EXISTING	--	34.5	2.9	1	DRIVEWAY CURB CUT
F1	"O" 15+77	RT	MATCH EXISTING	26/25	51.1	--	1	TIMBERLAND DIRVE
F2	"O" 19+02	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
F2	"O" 19+59	LT	MATCH EXISTING	50/50	73.5	--	1	COLLEGE ROAD
F2	"O" 20+16	RT	MATCH EXISTING	50/32	69.4	--	1	COLLEGE ROAD
F2	"O" 20+76	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
F2	"O" 23+75	LT	MATCH EXISTING	15/15	40.5	--	1	COMMERCIAL DRIVEWAY
F2	"O" 23+78	RT	MATCH EXISTING	15/15	33.8	--	1	CHACE STREET
F2	"O" 26+52	LT	MATCH EXISTING	35/40	37.3	--	1	COMMERCIAL DRIVEWAY
F2	"O" 28+99	LT	MATCH EXISTING	45/49	43.2	--	1	BENTLEY TRUST ROAD
F3	"O" 30+43	RT	MATCH EXISTING	--	34.0	2.0	1	DRIVEWAY CURB CUT
F3	"O" 31+01	RT	MATCH EXISTING	--	44.0	12.0	1	DRIVEWAY CURB CUT
F3	"O" 40+21	RT	86°	25/25	41.8	71.1	1	KUTTER ROAD
F4	"O" 41+72	RT	MATCH EXISTING	--	28.0	17.0	1	DRIVEWAY CURB CUT
F4	"O" 41+74	LT	MATCH EXISTING	--	36.0	19.0	1	DRIVEWAY CURB CUT
F4	"O" 42+04	RT	MATCH EXISTING	--	28.0	19.1	1	DRIVEWAY CURB CUT
F4	"O" 43+91	RT	90°	40/75	39.0	264.6	1	TRAINOR GATE ROAD
F4	"O" 44+69	LT	MATCH EXISTING	--	36.0	0.0	1	ACCESS TO INFILTRATION BASIN
F4	"O" 45+13	RT	MATCH EXISTING	15/15	34.0	--	1	COMMERCIAL DRIVEWAY
F4	"O" 45+91	LT	MATCH EXISTING	--	36.2	32.2	1	DRIVEWAY CURB CUT
F4	"O" 46+73	RT	MATCH EXISTING	--	36.0	18.9	1	DRIVEWAY CURB CUT
F5	"O" 48+10	LT	MATCH EXISTING	--	36.0	19.1	1	DRIVEWAY CURB CUT
F5	"O" 48+30	RT	MATCH EXISTING	--	46.0	19.0	1	DRIVEWAY CURB CUT
F5	"O" 49+01	LT	MATCH EXISTING	33.5/57	12.0	--	1	COMMERCIAL DRIVEWAY
F5	"O" 50+84	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
F5	"O" 51+34	LT	90°	35/40	31.3	81.8	1	FRED MEYER DRIVEWAY
F5	"O" 51+36	RT	90°	35/40	30.1	124.9	1	BLAIR ROAD
F5	"O" 51+76	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
F6	"O" 54+86	RT	90°	50/50	39.5	102.4	1	SADLER WAY
F6	"O" 57+33	RT	MATCH EXISTING	--	46.0	15.9	1	DRIVEWAY CURB CUT
F7	"O" 60+00	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
F7	"O" 60+84	LT	81°	50/60	67.1	291.0	1	HELMERICKS AVENUE
F7	"O" 60+84	RT	81°	65/50	63.8	152.5	1	SEEKINS DRIVE
F7	"O" 61+63	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
F8	"O" 65+49	LT	88°	40/40	32.2	90.2	1	WALMART
F8	"O" 66+08	RT	89°	40/40	32.7	84.3	1	HOME DEPOT
F9, F10	"O" 70+69	CL	MATCH EXISTING	--	--	--	1	OLD STEESE HIGHWAY
						TOTAL:	39	EACH
						PAY ITEM QUANTITY:	39	EACH

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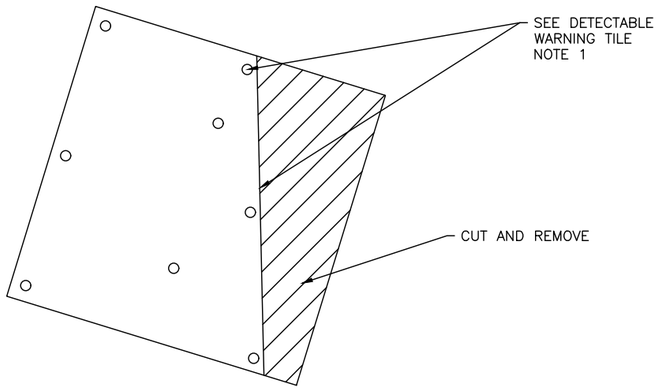
SUMMARY TABLES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
SUBJECT TO PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E1	E14



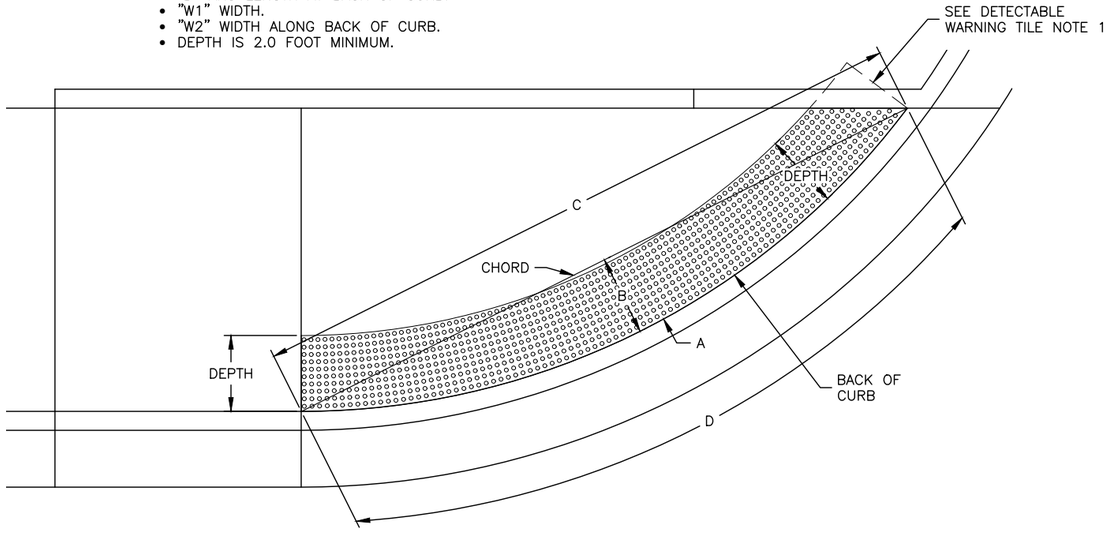
DETECTABLE WARNING TILE NOTES:

1. DETECTABLE WARNING TILE SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP. WHEN THE END TILE IS CUT ON–SITE, NEW ANCHOR HOLES ARE TO BE DRILLED AND COUNTERSUNK ALONG THE CUT LINE. FOLLOW THE MANUFACTURER RECOMMENDATIONS FOR ON–SITE CUTTING PROCEDURES, HOLE SET–BACK AND SPACING DISTANCES, TOOLS FOR CUTTING, SETTING NEW ANCHOR HOLES SYSTEM, AND RECOATING OF SAWCUT LINES. THIS WORK IS SUBSIDIARY TO PAY ITEM 608.0006.0000.

2. DETECTABLE WARNING TILE DIMENSIONS PROVIDED ARE PER DESIGN, AND NEED TO BE VERIFIED FOR POST–CONSTRUCTION DIMENSIONS OF CURB AND GUTTER. CONTRACTOR TO PROVIDE DETECTABLE WARNING TILE LAYOUT SHOP DRAWINGS PER LOCATION ILLUSTRATING INSTALLATION WITH A MAXIMUM 2.0 INCH SETBACK FROM BACK OF CURB AND EXTENDING THE FULL WIDTH OF THE CURB RAMP. DETECTABLE WARNING TILE INSTALLATION ON PARALLEL AND PERPENDICULAR CURB RAMPS MUST EXTEND THE FULL WIDTH OF THE CURB RAMP ON THE LEADING EDGE AND HAVE A MAXIMUM 2.0 INCH GAP FROM THE CURB RAMP EDGE AT THE BACK OF CURB. THIS WORK IS SUBSIDIARY TO PAY ITEM 608.0006.0000.

3. SEE CURB RAMP SUMMARY TABLE IN THE D–SHEETS FOR DIMENSIONS.

4. DETECTABLE WARNING TILE KEY DIMENSIONS:
   - "A" RADIUS AT BACK OF CURB.
   - "B" MAXIMUM HEIGHT FROM THE RADIUS CHORD TO BACK OF CURB.
   - "D" ARC LENGTH AT BACK OF CURB.
   - "W1" WIDTH.
   - "W2" WIDTH ALONG BACK OF CURB.
   - DEPTH IS 2.0 FOOT MINIMUM.



RADIAL LAYOUT

NOT TO SCALE

CURB RAMP NOTES:

1. CONSTRUCT RAMP RUNS, FLARES, AND BOTH UPPER AND LOWER LANDING OF 6 INCH (MINIMUM) THICK CONCRETE, REGARDLESS OF WHETHER THE SIDEWALK IS ASPHALT OF CONCRETE. PROVIDE A COARSE BROOM FINISH RUNNING:
   1.1. PERPENDICULAR TO THE CURB ON RAMP RUNS, UPPER LANDINGS, AND PARALLEL TO THE CURB ON LOWER LANDINGS AND FLARES FOR DIRECTIONAL AND PARALLEL CURB RAMPS.
   1.2. PARALLEL TO THE CURB ON RAMP RUNS AND FLARES FOR PERPENDICULAR CURB RAMPS.

2. NOTIFY THE ENGINEER PRIOR TO CONCRETE PLACEMENT IF MAXIMUM OR MINIMUM GRADES CANNOT BE CONSTRUCTED. UNLESS PREVIOUSLY APPROVED BY THE ENGINEER, ANY FEATURE EXCEEDING MINIMUM OR MAXIMUM ALLOWABLE SLOPES WILL BE REPLACED AT CONTRACTOR'S EXPENSE.

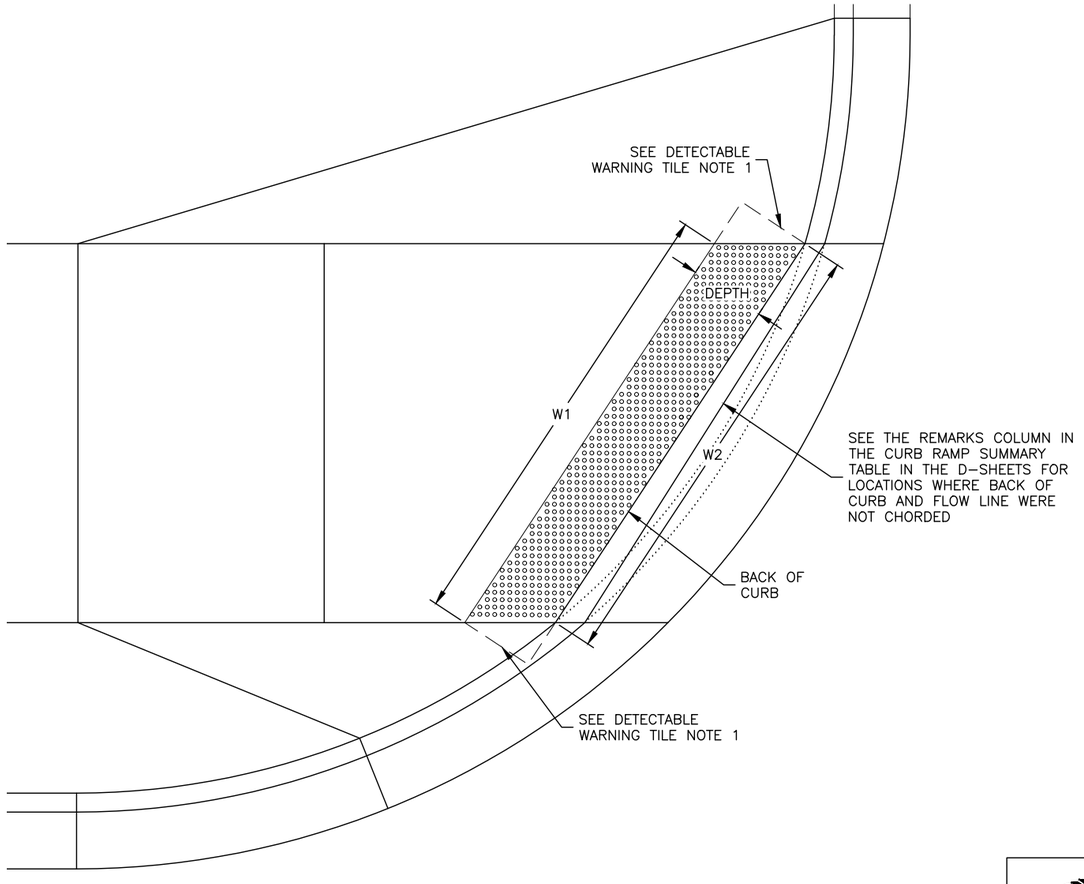
3. TRANSITION PANEL(S): WHEN CONNECTING INTO EXISTING SIDEWALK, REPLACE ADJACENT SIDEWALK PANEL(S) LABELED AS TRANSITION PANEL(S), AS REQUIRED FOR CROSS SLOPE TRANSITION FROM THE EXISTING SIDEWALK TO THE NEW UPPER LANDING TO ENSURE THE UPPER LANDING IS CONSTRUCTED WITH A COMPLIANT CROSS SLOPE. THE MAXIMUM TRANSITION PANEL(S) LENGTH IS 15.0 FEET.

4. RAMP RUN LENGTH: SURVEY PRIOR TO CONSTRUCTION TO VERIFY RAMP RUN LENGTH REQUIRED FOR COMPLIANT SLOPES. ADJUST THE RAMP RUN LENGTH AS NEEDED TO ENSURE COMPLIANT RAMP RUN RUNNING SLOPE. THIS SURVEY IS SUBSIDIARY TO 642 PAY ITEMS. RAMP RUN LENGTHS SHOULD BE 8.3% MAXIMUM (5.0% MINIMUM), BUT ARE NOT REQUIRED TO EXCEED 15.0 FEET.

5. JOINTS: INSTALL CONTINUOUS MINIMUM 6 INCH DEEP 1/2 INCH EXPANSION JOINT AT ALL LOCATIONS WHERE SIDEWALK, CURB RAMP, OR CURB AND GUTTER (ANY TYPE) MEET. SEAL ALL EXPANSION JOINTS WITH HOT POURED ELASTIC TYPE JOINT SEAL CONFORMING TO SUBSECTION 705–2.02 JOINT SEALANT. EXPANSION AND DUMMY JOINTS IN THE SIDEWALK AND CURB RAMP SHALL LINE UP WITH EXPANSION AND DUMMY JOINTS IN THE CURB AND GUTTER.

6. SEE SUBSECTION 608–3.01 FOR WELDED WIRE FABRIC (WWF).

7. SLOPE ARROWS ARE INDICATING FLOW DIRECTION (DOWN GRADIENT).



CHORDED LAYOUT

NOT TO SCALE

DETECTABLE WARNING TILE LAYOUT OPTIONS AND KEY DIMENSIONS

DWT DETAILS & CURB RAMP GENERAL NOTES

STATE OF ALASKA 49TH
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PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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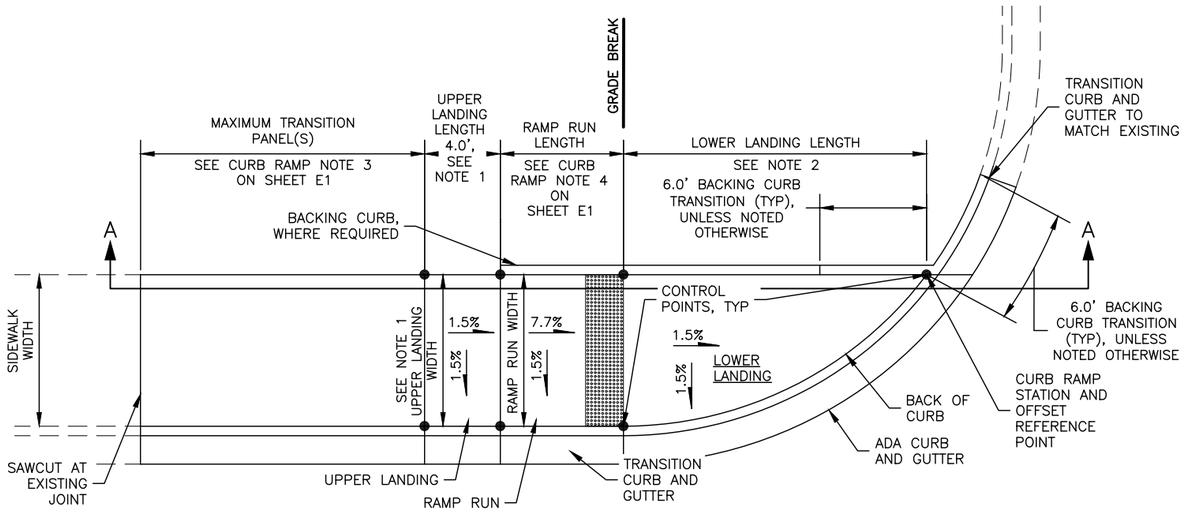
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E2	E14



CASE 1 – PLAN VIEW

GRADE BREAK TO BACK OF CURB IS LESS THAN OR EQUAL TO 5 FEET

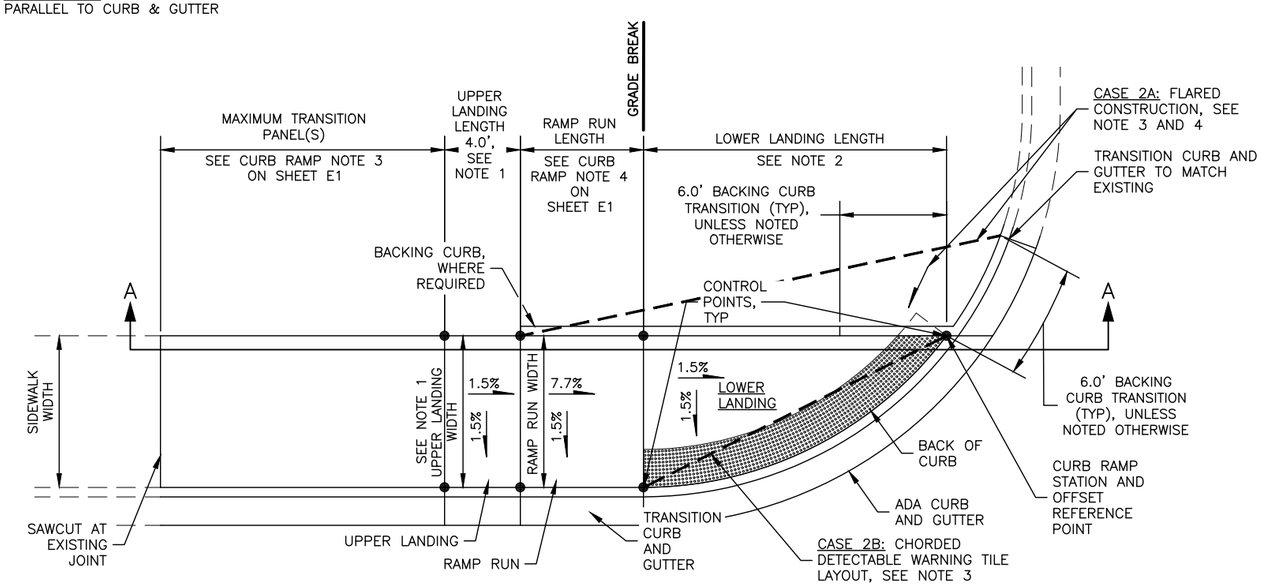
▩ = DETECTABLE WARNING TILE

SLOPE DIRECTION KEY:

RUNNING SLOPE:
PARALLEL TO CURB & GUTTER

CROSS SLOPE:
PERPENDICULAR TO CURB & GUTTER

FLARE SLOPE:
PARALLEL TO CURB & GUTTER



CASE 2 – PLAN VIEW

GRADE BREAK TO BACK OF CURB IS MORE THAN 5 FEET

DIRECTIONAL CURB RAMP NOTES:

1. UPPER LANDING:

   1.1 LENGTH: IF UPPER LANDING FUNCTIONS AS A TURNING SPACE, A 5.0–FOOT TURNING SPACE IS REQUIRED. OTHERWISE, MINIMUM LENGTH OF LANDING IS 4.0 FEET. UPPER LANDING LENGTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER.

   1.2 WIDTH: UPPER LANDING WIDTH SHALL MATCH OR EXCEED THE WIDTH OF THE RAMP RUN.

2. LOWER LANDING:

   2.1 LENGTH: LENGTH OF LOWER LANDING DEPENDS ON RAMP RUN WIDTH, BACK OF CURB TO SIDEWALK SEPARATION WIDTH, AND CURB RADII.
   2.2 RUNNING SLOPE: IN CASE 1, IF THE LOWER LANDING DOES NOT FUNCTION AS A TURNING SPACE, THE LOWER LANDING RUNNING SLOPE MAY BE INCREASED TO 5.0% AS APPROVED BY THE ENGINEER.

3. DETECTABLE WARNING TILE: DETECTABLE WARNING TILE SHALL EXTEND THE FULL WIDTH OF THE CURB RAMP OPENING. DETECTABLE WARNING TILE PLACEMENT ACROSS THE GRADE BREAK AND JOINTS IS PROHIBITED. ALIGN TRUNCATED DOME PATTERN IN THE PREDOMINANT DIRECTION DIRECTION OF WHEELCHAIR TRAVEL TO PERMIT WHEELS TO ROLL BETWEEN DOMES.

   3.1 CASE 1: (GRADE BREAK TO BACK OF CURB IS LESS THAN OR EQUAL TO 5 FEET). PLACE THE DETECTABLE WARNING TILE BEHIND THE GRADE BREAK.
   3.2 CASE 2: (GRADE BREAK TO BACK OF CURB IS GREATER THAN 5 FEET). PLACE A RADIAL DETECTABLE WARNING TILE AT THE BACK OF CURB WITH MAXIMUM GAP OF 2 INCHES.
      3.2.1 CASE 2A: (FLARED CONSTRUCTION). PLACE DETECTABLE WARNING TILE AT THE BACK OF CURB REGARDLESS OF THE GRADE BREAK TO BACK OF CURB DISTANCE. DETECTABLE WARNING TILE IS RADIAL OR CHORDED PER 3.2.2.
      3.2.2 CASE 2B: (DETECTABLE WARNING TILE IS CHORDED). CURB RADII MAY BE CONVERTED TO A CHORD AT RAMP TERMINUS TO MAINTAIN A MAXIMUM GAP OF 2 INCHES FROM BACK OF CURB. MAXIMUM GUTTER PAN WIDENING PERMITTED IS UP TO 9 INCHES. SURFACE WATER MUST CONTINUE TO FLOW ALONG THE FLOW LINE.

4. FLARED CONSTRUCTION: FLARE RUNNING SLOPE IS 8.3% NOMINAL (10.0% MAXIMUM).

5. CONSTRUCT GRADE BREAKS PERPENDICULAR TO RAMP RUNS.

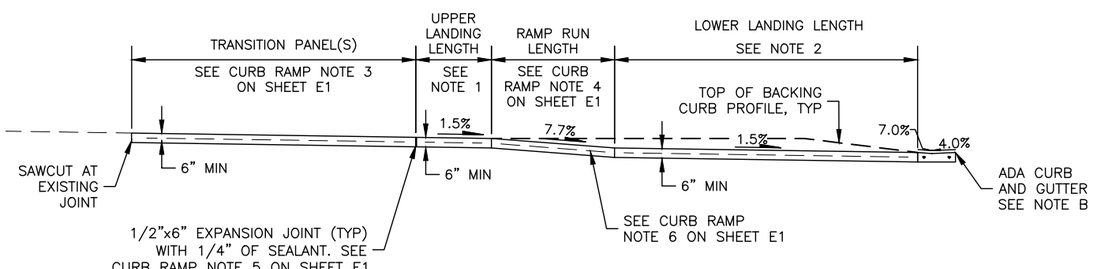
6. SEE SLOPE GUIDE TABLE:

SLOPES GUIDE

	NOMINAL**	MINIMUM	MAXIMUM**
UPPER LANDING RUNNING SLOPE	1.5%	*	2.0%
UPPER LANDING CROSS SLOPE	1.5%	*	2.0%
RAMP RUN RUNNING SLOPE	7.7%	5.0%	8.3%
RAMP RUN CROSS SLOPE	1.5%	*	2.0%
LOWER LANDING RUNNING SLOPE	1.5%	*	2.0%
LOWER LANDING CROSS SLOPE	1.5%	*	2.0%

* MAINTAIN PREFERABLE DRAINAGE CONDITIONS.

** IF LANDING FUNCTION AS A TURNING SPACE, SLOPE IN ANY DIRECTION (INCLUDING DIAGONAL) MAY NOT EXCEED 1.5% NOMINAL (2.0% MAXIMUM).



PROFILE A–A

A. DETECTABLE WARNING TILE IS NOT SHOWN IN THIS PROFILE VIEW FOR CLARITY.
B. NOMINAL SLOPE, FOR MAXIMUM SLOPES, REFER TO CURB AND GUTTER DETAILS.

NOTE: DRAWING NOT TO SCALE

DIRECTIONAL CURB RAMP DETAILS

STATE OF ALASKA 49TH
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PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

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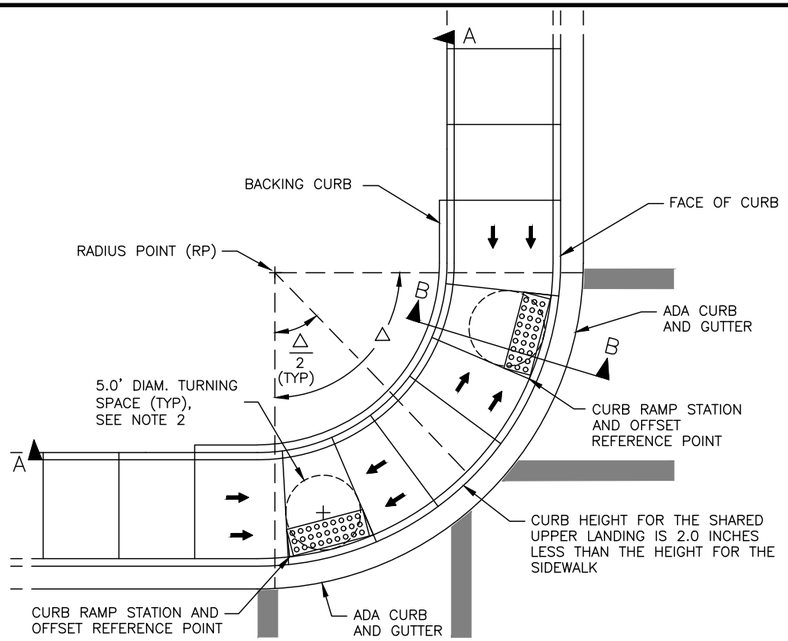
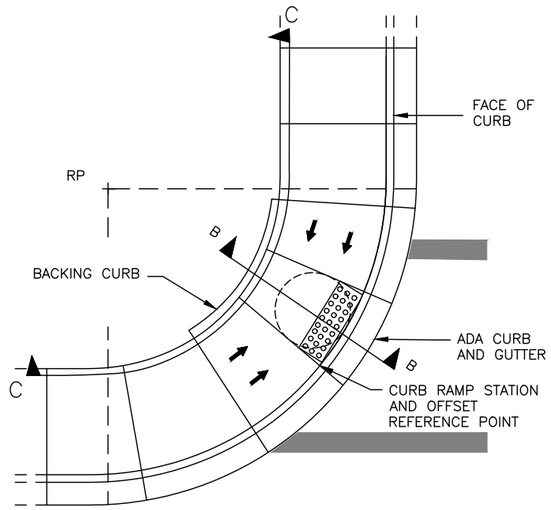
ALASKA	Z624870000	2024	E3	E14



TWO CROSSING DIRECTIONS



ONE CROSSING DIRECTION

PARALLEL CURB RAMP NOTES:

1. UPPER LANDING:

   1.1 LENGTH: IF UPPER LANDING FUNCTIONS AS A TURNING SPACE, A 5.0 FOOT TURNING SPACE IS REQUIRED. OTHERWISE, MINIMUM LENGTH OF UPPER LANDING IS 4.0 FEET. UPPER LANDING LENGTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER. SHARED UPPER LANDING LENGTH MAY NOT BE DECREASED.

   1.2 WIDTH: THE WIDTH OF ALL UPPER LANDINGS SHALL MATCH OR EXCEED THE WIDTH OF THE ADJACENT RAMP RUN.

2. LOWER LANDING: ENSURE LOWER LANDING HAS A 5.0 FOOT DIAMETER TURNING SPACE.
3. WHEN ONE PARALLEL CURB RAMP WILL SERVE TWO DIRECTIONS, USE THE ONE CROSSING DIRECTION DETAIL AND REFER TO THE STRIPING PLANS FOR CROSSWALK LAYOUTS.
4. SEE SLOPE GUIDE TABLE:

SLOPES GUIDE

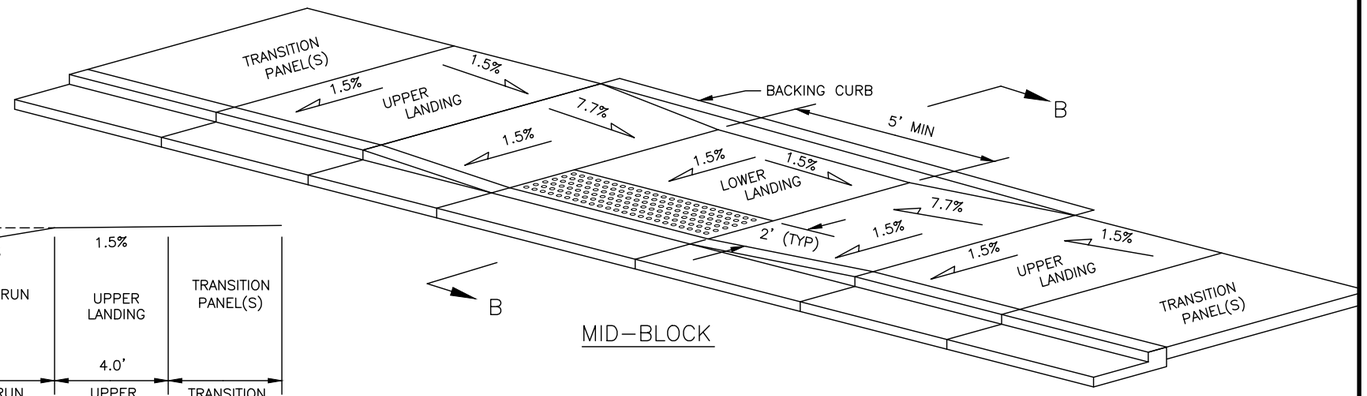
	NOMINAL**	MINIMUM	MAXIMUM**
UPPER LANDING RUNNING SLOPE	1.5%	*	2.0%
RAMP RUN RUNNING SLOPE	7.7%	5.0%	8.3%
LOWER LANDING RUNNING SLOPE	1.5%	*	2.0%
CROSS SLOPE	1.5%	*	2.0%

* MAINTAIN PREFERABLE DRAINAGE CONDITIONS.
** IF LANDING FUNCTION AS A TURNING SPACE, SLOPE IN ANY DIRECTION (INCLUDING DIAGONAL) MAY NOT EXCEED 1.5% NOMINAL (2.0% MAXIMUM).

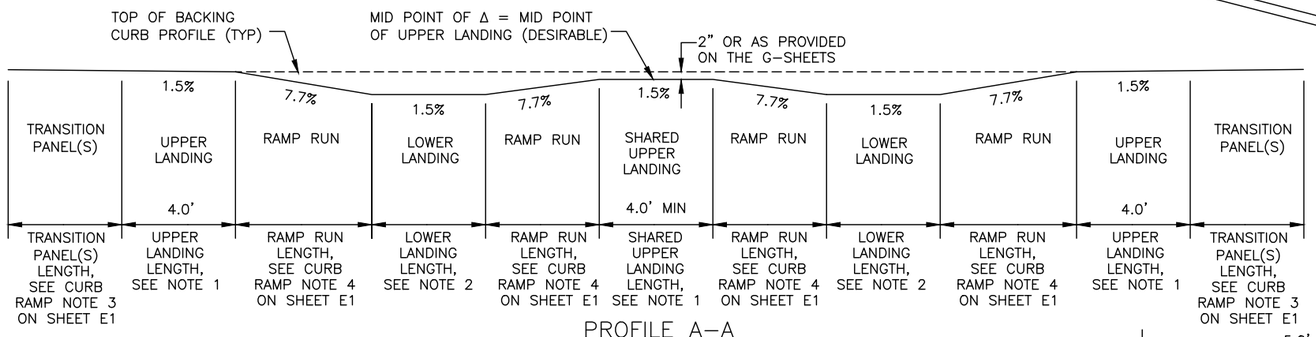
= DETECTABLE WARNING TILE

SLOPE DIRECTION KEY:
RUNNING SLOPE:
PARALLEL TO CURB & GUTTER

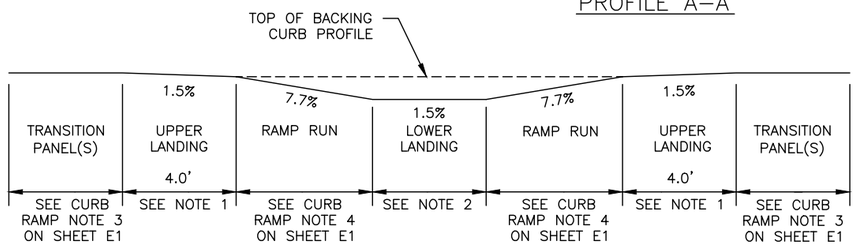
CROSS SLOPE:
PERPENDICULAR TO CURB & GUTTER



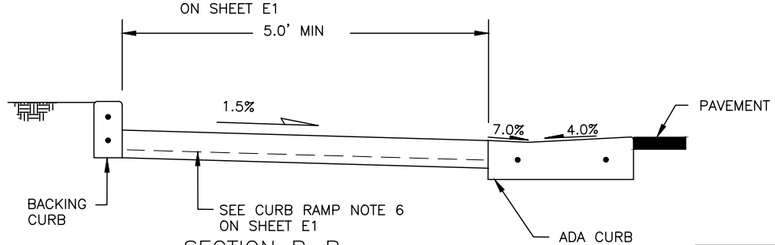
MID-BLOCK



PROFILE A-A



PROFILE C-C



SECTION B-B

A. DETECTABLE WARNING TILE IS NOT SHOWN IN THIS PROFILE VIEW FOR CLARITY.
B. NOMINAL SLOPE, FOR MAXIMUM SLOPES, REFER TO CURB AND GUTTER DETAILS.

NOTE: DRAWING NOT TO SCALE

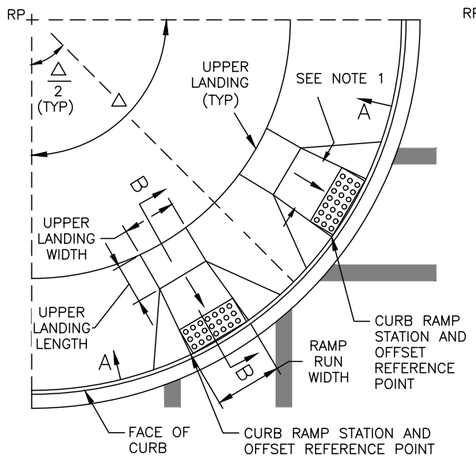
PARALLEL CURB RAMP

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

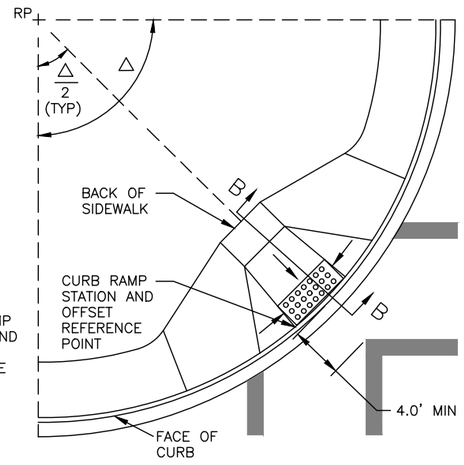
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_DTLS-E3 Tue, Oct/18/22 09:37am

NO.	DATE	REVISION

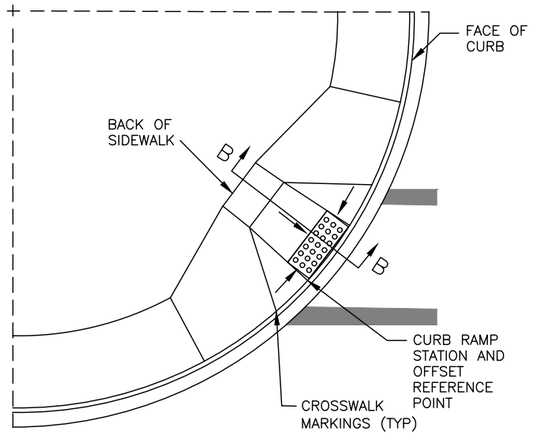
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E4	E14



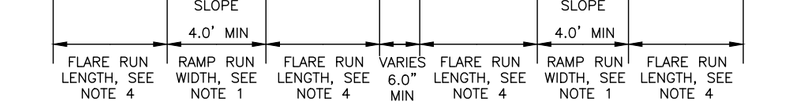
TWO CROSSING DIRECTIONS



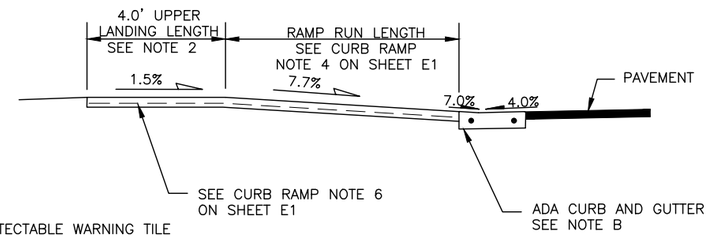
ONE RAMP – TWO DIRECTIONS



ONE CROSSING DIRECTION



PROFILE A–A



= DETECTABLE WARNING TILE

SLOPE DIRECTION KEY:

RAMP RUN RUNNING SLOPE:
PERPENDICULAR TO CURB & GUTTER

RAMP RUN CROSS SLOPE:
PARALLEL TO CURB & GUTTER

FLARE SLOPE:
PARALLEL TO CURB & GUTTER

UPPER LANDING CROSS SLOPE:
PARALLEL TO CURB AND GUTTER

UPPER LANDING RUNNING SLOPE:
PERPENDICULAR TO CURB AND GUTTER

SECTION B–B

A. DETECTABLE WARNING TILE IS NOT SHOWN IN THIS PROFILE VIEW FOR CLARITY.
B. NOMINAL SLOPE, FOR MAXIMUM SLOPES, REFER TO CURB AND GUTTER DETAILS.

PERPENDICULAR CURB RAMP NOTES:

1. RAMP RUN:

   1.1 WIDTH: CONSTRUCT RAMP RUN WIDTH TO 4.0 FEET. RAMP RUN WIDTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER.

2. UPPER LANDING:

   2.1 LENGTH: IF UPPER LANDING FUNCTIONS AS A TURNING SPACE, A 5.0 FOOT TURNING SPACE IS REQUIRED. OTHERWISE, MINIMUM LENGTH OF UPPER LANDING IS 4.0 FEET. UPPER LANDING LENGTH MAY BE DECREASED TO 3.0 FEET IF APPROVED BY THE ENGINEER.

   2.2 WIDTH: THE WIDTH OF ALL UPPER LANDINGS SHALL MATCH OR EXCEED THE WIDTH OF THE ADJACENT RAMP RUN.

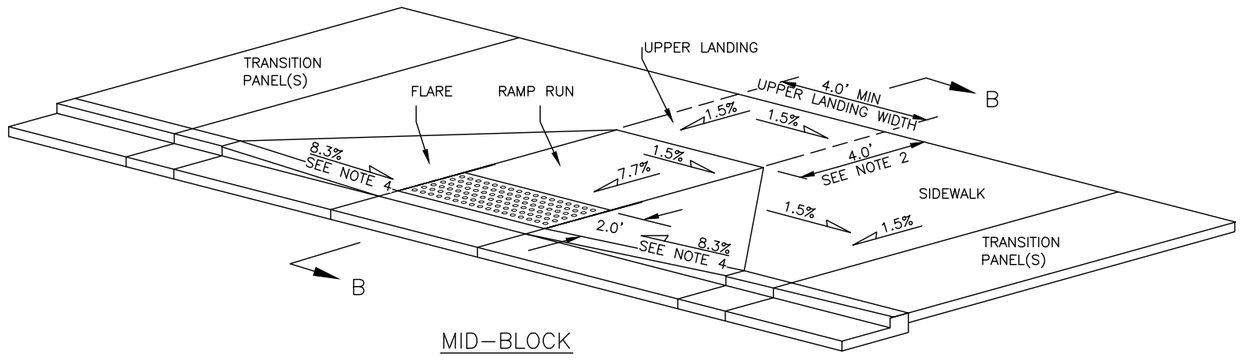
3. WHEN APPROVED BY THE ENGINEER, FLARES MAY BE REPLACED WITH A CURB AT LOCATIONS WHERE ACCESS TO THE SIDE OF A RAMP RUN IS BLOCKED BY POLES, UTILITY BOXES, OTHER OBSTRUCTIONS, OR BY A NON–ACCESSIBLE SURFACE SUCH AS A DIRT PLANTER STRIP. SEE STANDARD PLAN I–20.20 FOR DETAILS.

4. SEE SLOPE GUIDE TABLE:

SLOPES GUIDE

	NOMINAL**	MINIMUM	MAXIMUM**
RAMP RUN RUNNING SLOPE	7.7%	5.0%	8.3%
FLARE SLOPE (IF UPPER LANDING)	8.3%	N/A	10.0%
FLARE SLOPE (NO UPPER LANDING)	7.7%	N/A	8.3%
UPPER LANDING CROSS SLOPE	1.5%	*	2.0%
UPPER LANDING RUNNING SLOPE	1.5%	*	2.0%
ALL CROSS SLOPES	1.5%	*	2.0%

* MAINTAIN PREFERABLE DRAINAGE CONDITIONS.
** IF LANDING FUNCTION AS A TURNING SPACE, SLOPE IN ANY DIRECTION (INCLUDING DIAGONAL) MAY NOT EXCEED 1.5% NOMINAL (2.0% MAXIMUM).



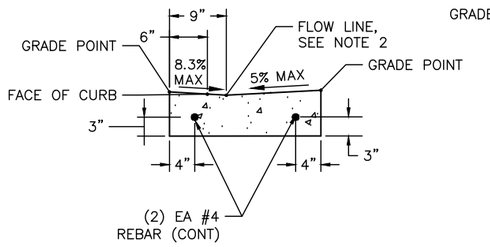
MID–BLOCK

NOTE: DRAWING NOT TO SCALE

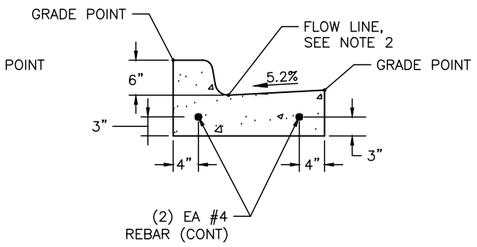
PERPENDICULAR CURB RAMP

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
LICENSED PROFESSIONAL ENGINEER

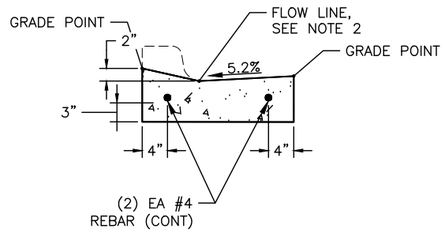
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_DTLS-E4 Tue, Oct/18/22 09:37am



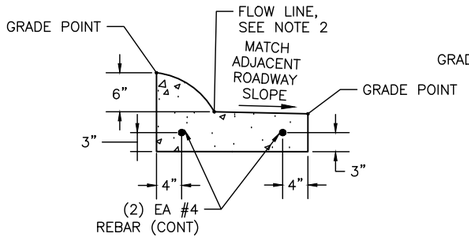
ADA CURB RAMP CURB AND GUTTER



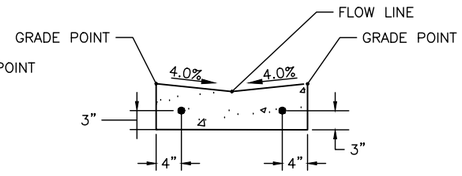
STANDARD CURB AND GUTTER



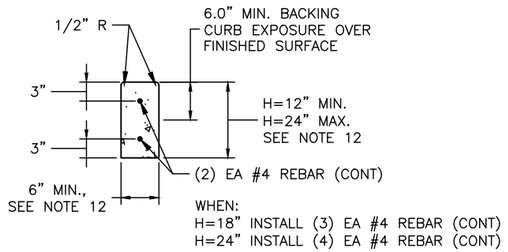
DEPRESSED CURB AND GUTTER



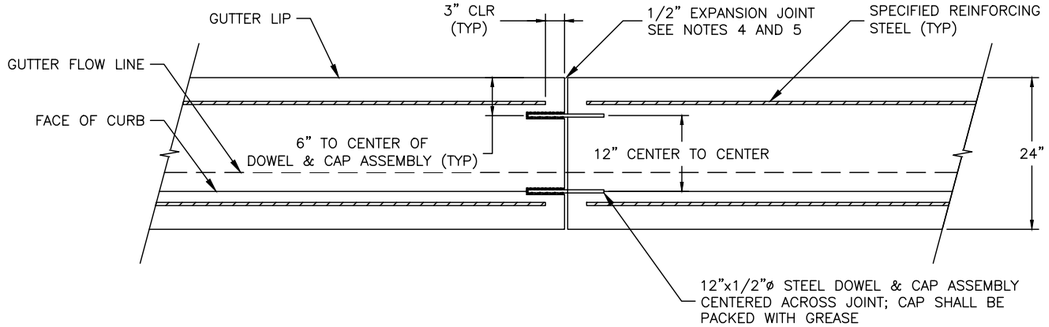
EXPRESSWAY CURB & GUTTER



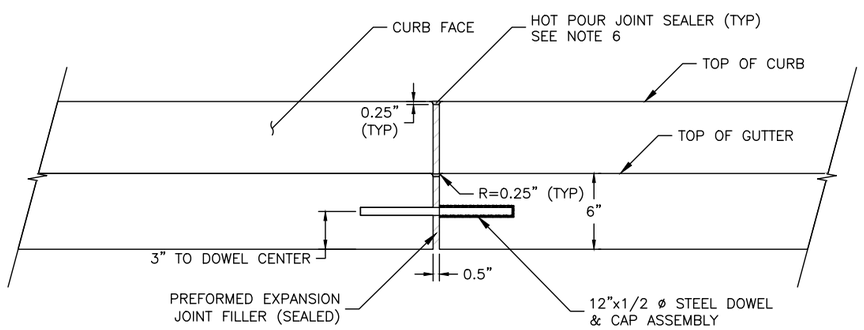
VALLEY GUTTER



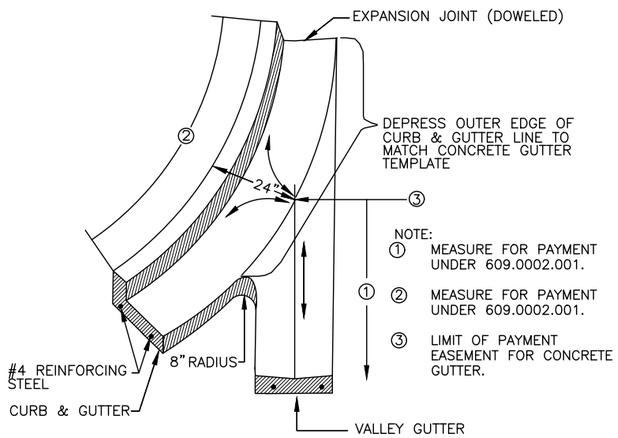
BACKING CURB



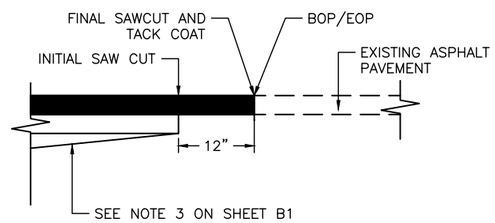
PLAN: CURB & GUTTER EXPANSION JOINT DETAIL



ELEVATION: CURB & GUTTER EXPANSION JOINT DETAIL
(REINFORCING STEEL NOT SHOWN FOR CLARITY)



CURB & GUTTER TO VALLEY GUTTER DETAIL



NOTE:
SEE TYPICAL SECTION FOR MATERIAL DEPTHS

ASPHALT SAWCUT

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E5	E14

NOTE:

1. FOR CURB AND GUTTER DIMENSIONS NOT SHOWN, SEE STANDARD PLAN I–20.20.
2. FROM STA "O" 10+87 TO "O" EQ. 32+76.11=39+78.12 GUTTER PAN SLOPE VARIES. FLOW LINE ELEVATION BASED OFF TBC AND DIMENSIONS SHOWN IN DETAILS, UNLESS NOTED OTHERWISE ON THE F–SHEETS, FINISHED TOP BACK OF CURB TO FLOW LINE VERTICAL DROP SHALL BE:
   - 2.1. 6.0 INCH FOR STANDARD AND EXPRESSWAY CURB AND GUTTER.
   - 2.2. 2.0 INCH FOR DEPRESSED CURB AND GUTTER.
   - 2.3. 0.63 INCH (7.0% CURB SLOPE) FOR ADA CURB AND GUTTER.
3. CONSTRUCT CONCRETE CURB AND GUTTER IN ACCORDANCE WITH THE DETAILS ON THESE PLANS AND THE REQUIREMENTS OF SECTION 609.
4. CONSTRUCT EXPANSION JOINTS AT A MAXIMUM 50 FOOT SPACING.
5. EXPANSION AND CONTRACTION JOINTS SHALL BE PERPENDICULAR TO THE CONCRETE CURB FACE.
6. APPLY JOINT SEALER EVENLY TO SEAL ALL EXPANSION JOINTS.
7. APPLY STE–1 TACK COAT BETWEEN CONCRETE SURFACES AND ADJOINING ASPHALT.
8. THE ENGINEER MAY ADJUST THE LOCATION OF EXPANSION OR CONTRACTION JOINTS.
9. PROTECT CONCRETE FROM DAMAGE DURING CURE. REPAIR OR REPLACE DAMAGED CONCRETE AS APPROVED BY THE ENGINEER.
10. SEE SUBSECTION 609–3.02 FOR REINFORCEMENT STEEL BARS.
11. WHERE CHORDING THE ADA CURB AND GUTTER IS NOTED ON THE PLANS, EFFORTS REQUIRED FOR CHORDING ARE SUBSIDIARY TO PAY ITEM 609.0002.0001.
12. SEE BACKING CURB SUMMARY TABLE IN D–SHEETS FOR ESTIMATED BACKING CURB HEIGHTS OTHER THAN 12.0". HEIGHTS PROVIDED DO NOT REPRESENT BACKING CURB TRANSITION SECTIONS AND ARE APPROXIMATE, FIELD VERIFY AND ADJUST AS DIRECTED BY THE ENGINEER. AT TIE–IN LOCATIONS WITH EXISTING BACKING CURB, ADJUST THICKNESS AND HEIGHT TO MATCH EXISTING STARTING FROM THE NEAREST STATION LABEL ON THE F–SHEETS.

NOTE: DRAWING NOT TO SCALE

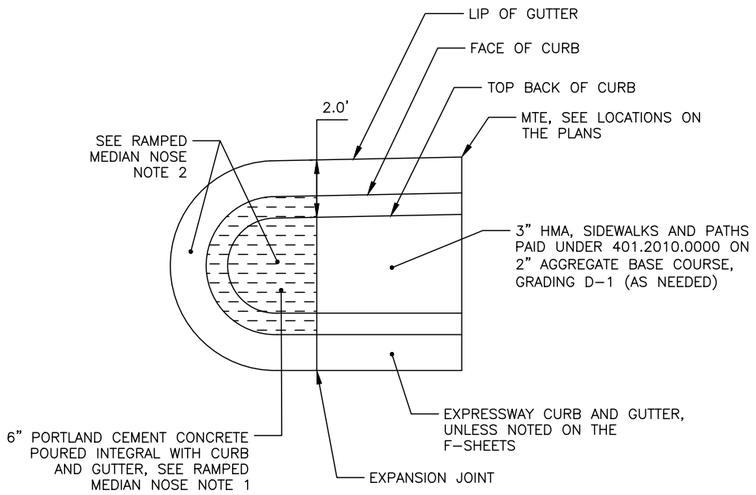
CURB AND ASPHALT SAWCUT DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
LICENSED PROFESSIONAL ENGINEER

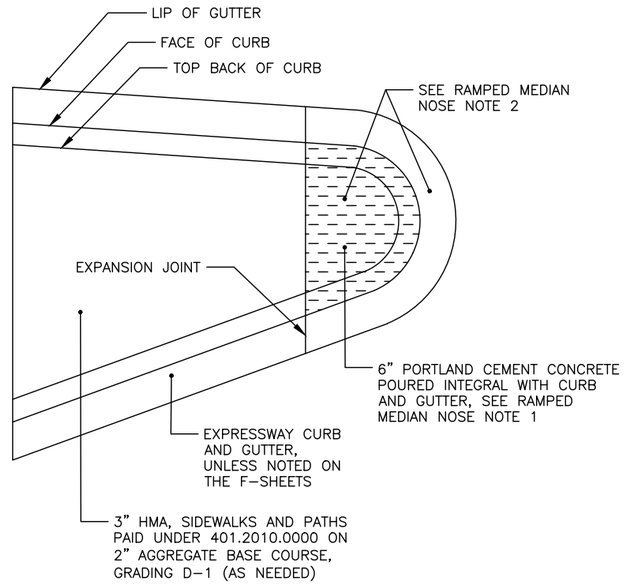
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_DTLS-E5 Tue, Oct/18/22 09:37am

NO.	DATE	REVISION

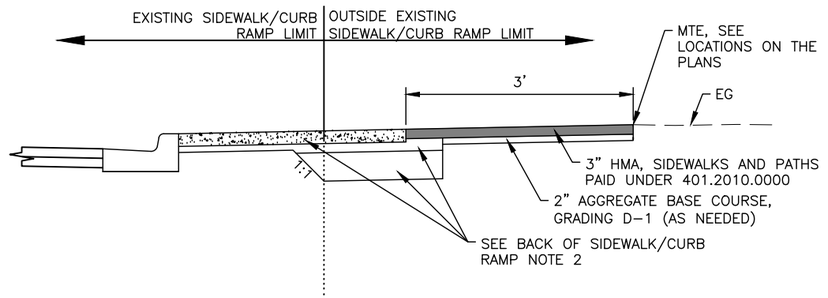
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E6	E14



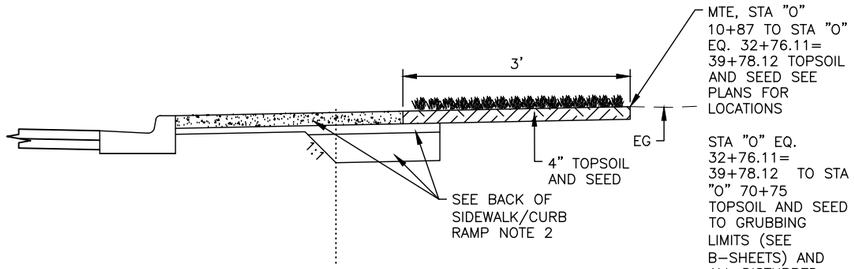
RAMPED MEDIAN NOSE – PLAN



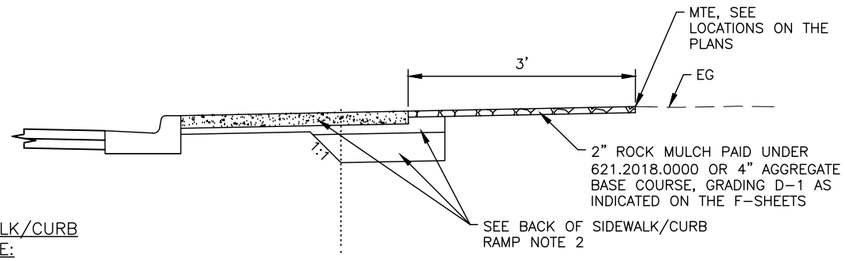
ISLAND–RAMPED MEDIAN NOSE – PLAN

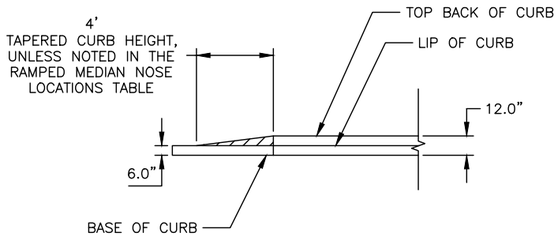


ASPHALT AT BACK OF SIDEWALK



TOPSOIL & SEED AT BACK OF SIDEWALK





RAMPED MEDIAN NOSE NOTES:

1. CONSTRUCT RAMPED MEDIAN NOSE OUT OF CLASS B PORTLAND CEMENT CONCRETE, SEE SECTION 550. CONSTRUCTION IS SUBSIDIARY TO CURB AND GUTTER 609.0002.0001 PAY ITEM.
2. MEDIAN NOSE PAINTING IS PAID FOR BY 670.0010.0000 PAY ITEM. FOR MORE DETAILS AND INFORMATION ON PAINTING REFER TO THE SIGNING AND STRIPING SHEETS AND SECTION 670.
3. SEE RAMPED MEDIAN NOSE LOCATIONS TABLE. RADIUS POINT STATION AND OFFSET AND RADIUS IS FOR BACK OF CURB. THESE STATIONS AND OFFSETS ARE FOR CLARIFICATION PURPOSES AND NEED TO FIELD VERIFIED.

RAMPED MEDIAN NOSE – ELEVATION

RAMPED MEDIAN NOSE LOCATIONS

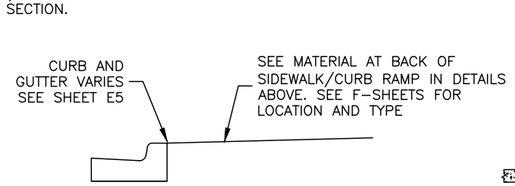
RADIUS POINT STATION	RADIUS POINT OFFSET	RADIUS AT BACK OF CURB	LOCATION DESCRIPTION	REMARKS
"O" 19+38.33	51.80' LT	1.75'	EAST COLLEGE ROAD, SPLITTER ISLAND, FACING WEST	
"O" 19+46.29	35.00' LT	1.25'	EAST COLLEGE ROAD, SPLITTER ISLAND, FACING SOUTH	
"O" 42+62.75	3.0' RT	1.0'	OLD STEESE HIGHWAY, FACING SOUTH	
"O" 43+14.57	0.0' RT	4.0'	OLD STEESE HIGHWAY, FACING NORTH	
"O" 43+43.29	0.0' RT	4.0'	OLD STEESE HIGHWAY, FACING SOUTH	
"O" 43+67.35	0.0' RT	4.0'	OLD STEESE HIGHWAY, FACING NORTH	
"O" 64+81.95	3.0' RT	1.0'	OLD STEESE HIGHWAY, FACING SOUTH	
"O" 67+11.15	3.0' LT	1.0'	OLD STEESE HIGHWAY, FACING NORTH	
"TG" 91+05.14	0.0' RT	1.0'	TRAINOR GATE ROAD, FACING EAST	

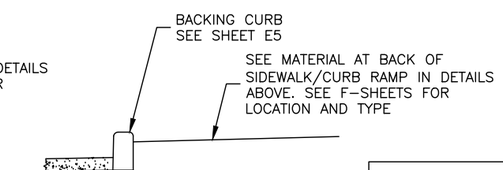
BACK OF SIDEWALK/CURB RAMP/CURB NOTE:

1. BACK OF SIDEWALK MATERIAL LIMITS 3 FEET FROM BACK OF CURB/SIDEWALK/CURB RAMP, UNLESS NOTED OTHERWISE ON PLANS, NOT TO EXTEND PAST TCP/TCE OR R/W WHERE TCP/TCE DOES NOT EXIST.
2. SEE SHEET B1 FOR SIDEWALK/CURB RAMP WIDENING TYPICAL SECTION.

ROCK MULCH OR AGGREGATE BASE COURSE, GRADING D-1 AT BACK OF SIDEWALK

MATERIAL BEHIND SIDEWALK/CURB RAMP





MATERIAL BEHIND CURB

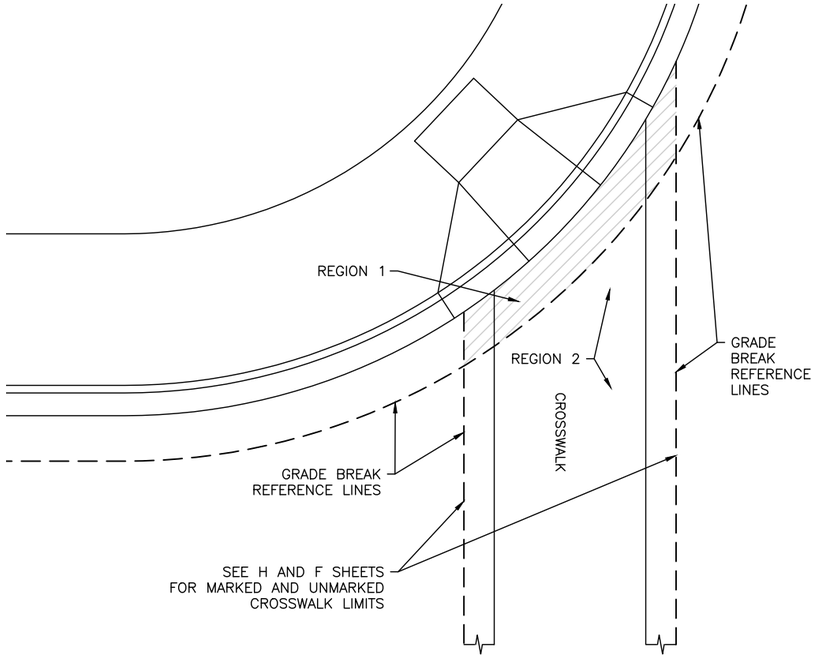
NOTE: DRAWING NOT TO SCALE

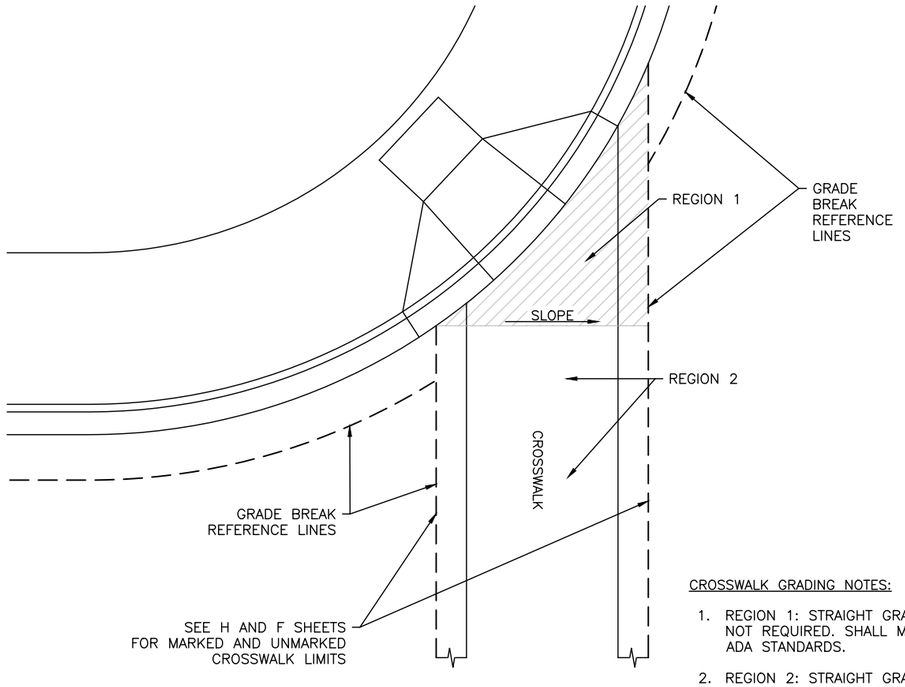
RAMPED MEDIAN NOSE & SIDEWALK DETAILS

PRELIMINARY PS&E

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E7	E14



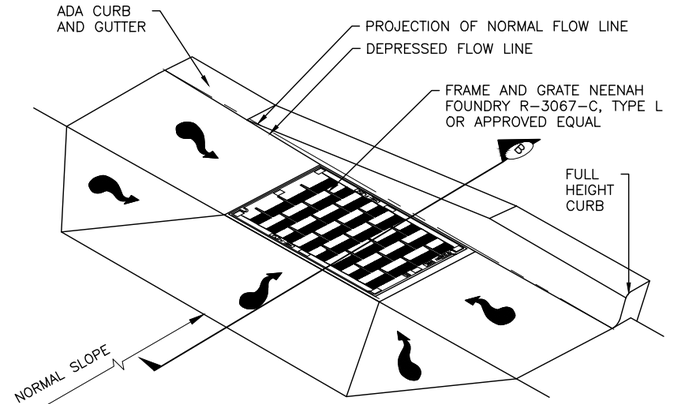


CROSSWALK GRADING NOTES:

1. REGION 1: STRAIGHT GRADE NOT REQUIRED. SHALL MEET ADA STANDARDS.
2. REGION 2: STRAIGHT GRADE PERPENDICULAR TO THE PEDESTRIAN PATH, NO GRADE BREAKS ARE PERMITTED.
3. PERPENDICULAR RAMP SHOWN FOR EXAMPLE.

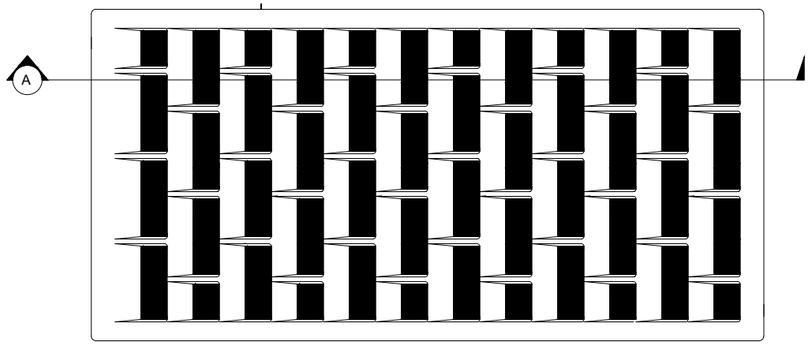
CROSSWALK GRADING DETAILS

NOT TO SCALE

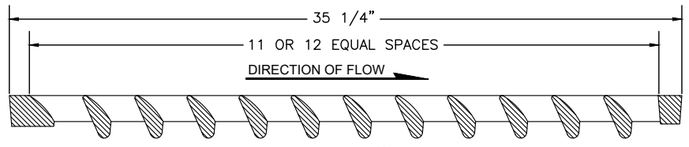


HIGH CAPACITY CURB INLET DETAILS
STA. "O" 24+15.56 31.56' LT

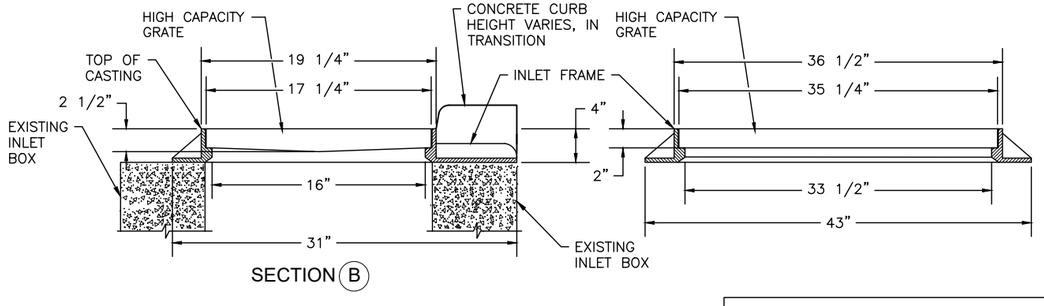
NOT TO SCALE



PLAN VIEW



SECTION (A)



SECTION (B)

DRAINAGE INLET NOTES:

1. DETAILS SHOWN ARE TO INDICATE GENERAL DESIGN ONLY. DIMENSIONS AND DESIGN MAY VARY AMONG MANUFACTURERS.
2. FRAME AND GRATE SHALL BE NEENAH FOUNDRY R-3067-C, OR APPROVED EQUAL.
3. MINIMUM CASTING WEIGHT SHALL BE 150 LBS FOR INLET GRATE TYPE L.
4. THE OUTSIDE DIMENSIONS OF INLET GRATE SHALL BE 35 1/4" X 17 1/2" AND ALL GRATES SHALL BE INTERCHANGEABLE.

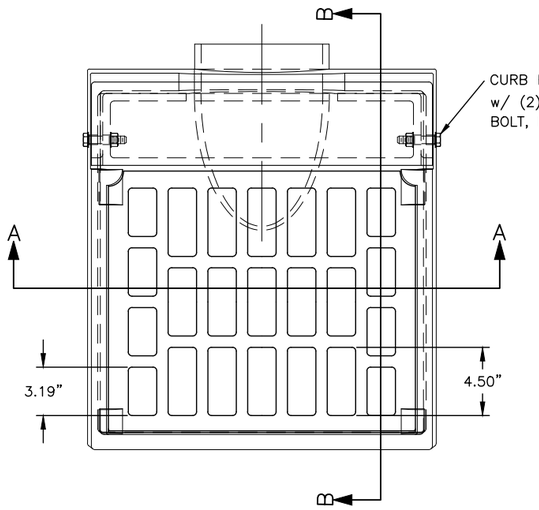
CROSSWALK GRADING & DRAINAGE INLET DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT APPROVED FOR CONSTRUCTION

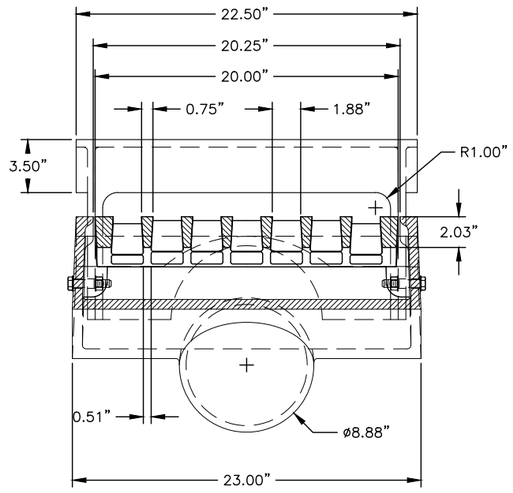
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_DTLS-E7 Tue, Oct/18/22 09:37am

NO.	DATE	REVISION

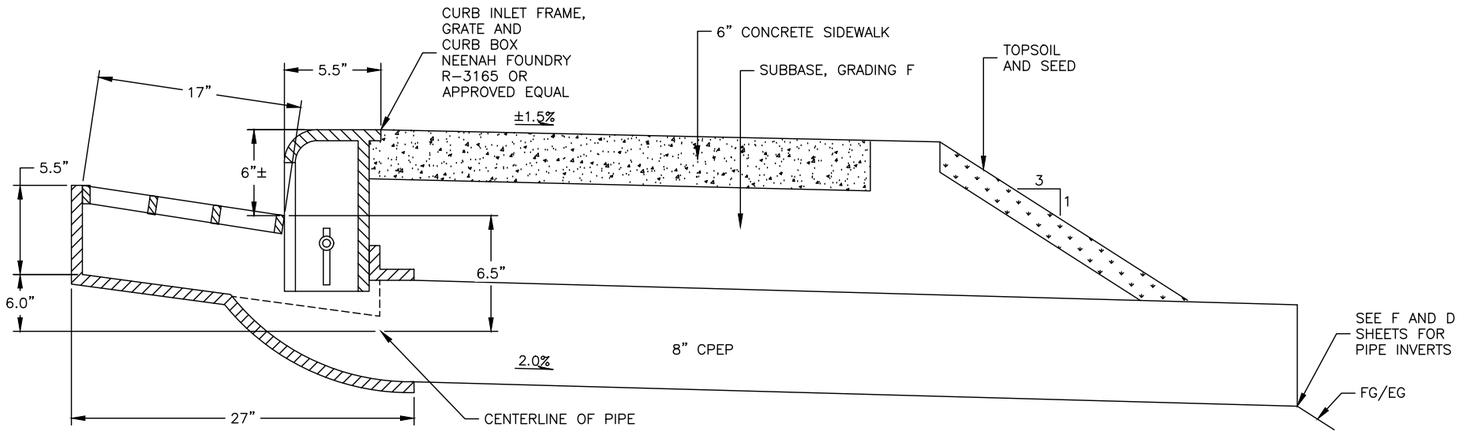
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E8	E14



PLAN VIEW
NOT TO SCALE



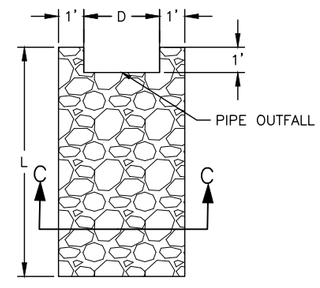
SECTION A–A
NOT TO SCALE

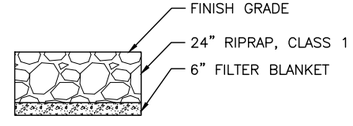


SECTION B–B
NOT TO SCALE

CURB BOX FRAME DETAIL
NOT TO SCALE

PIPE	D	L
P4–8	90"	18.6'
P7–8	24"	3.1'
P13–1	24"	3.0'
P7–11	18"	7.7'
P7–12	24"	14.9'





SECTION C–C
NOT TO SCALE

RIPRAP AT OUTFALL
NOT TO SCALE

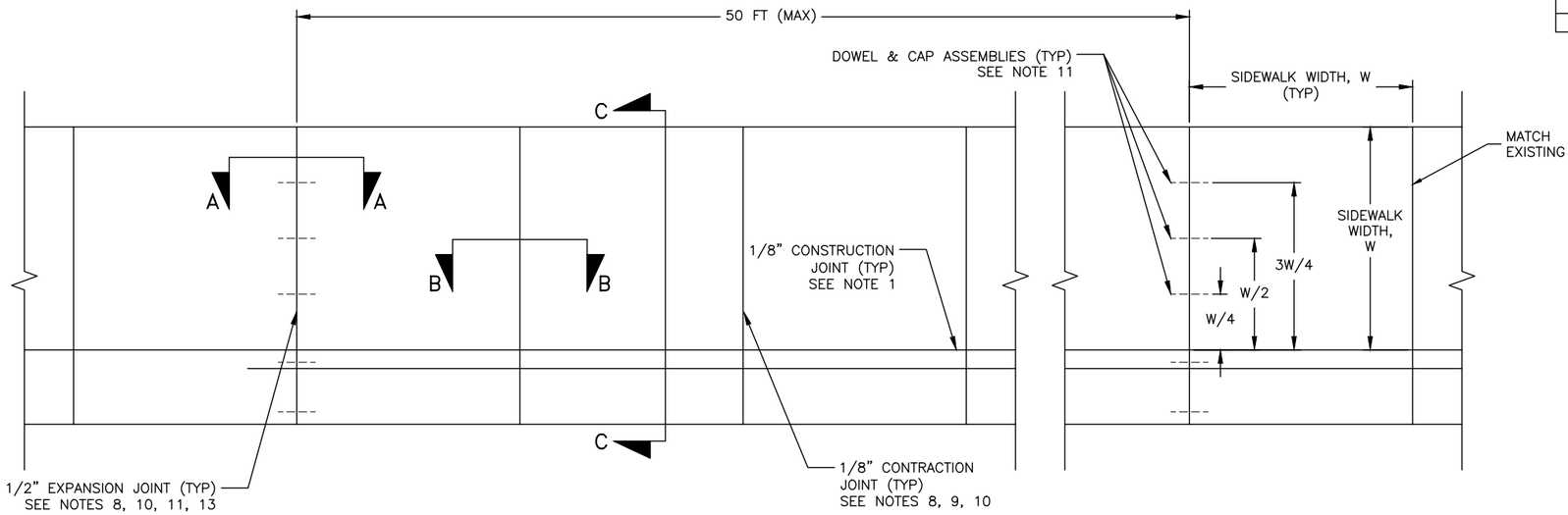
CURB BOX FRAME & RIPRAP AT OUTFALL DETAILS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
SIGNED PROFESSIONAL ENGINEER

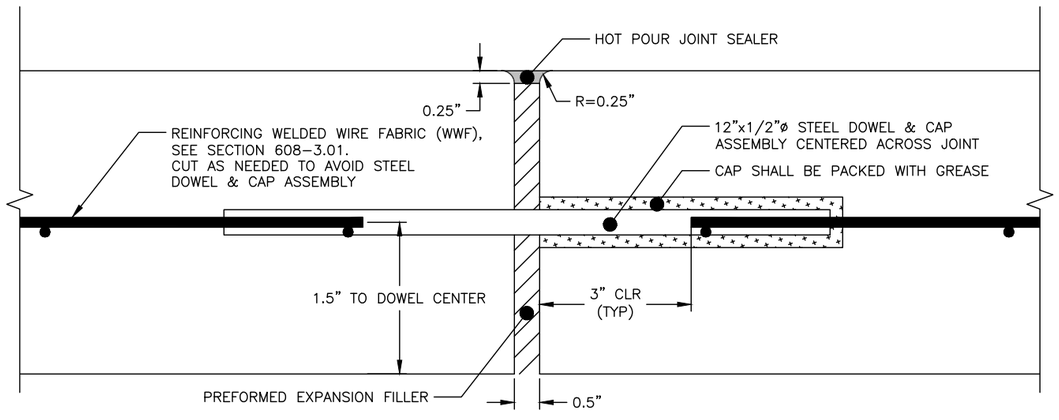
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_DTLS-E8 Tue, Oct/18/22 09:37am

NO.	DATE	REVISION

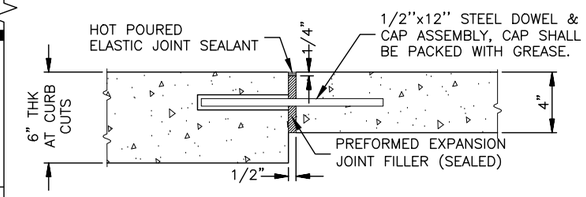
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E9	E14



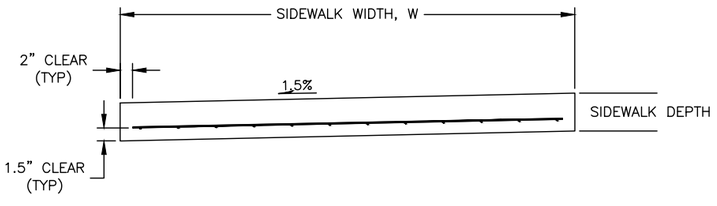
CONCRETE SIDEWALK REINFORCEMENT DETAIL



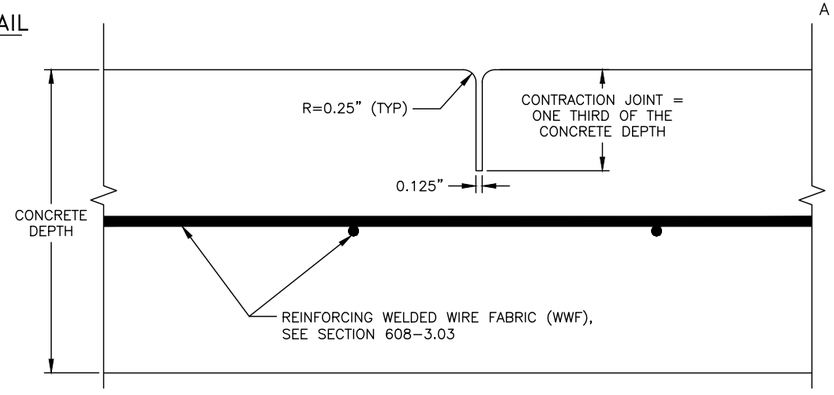
CONCRETE SIDEWALK EXPANSION JOINT DETAIL
SECTION VIEW A–A



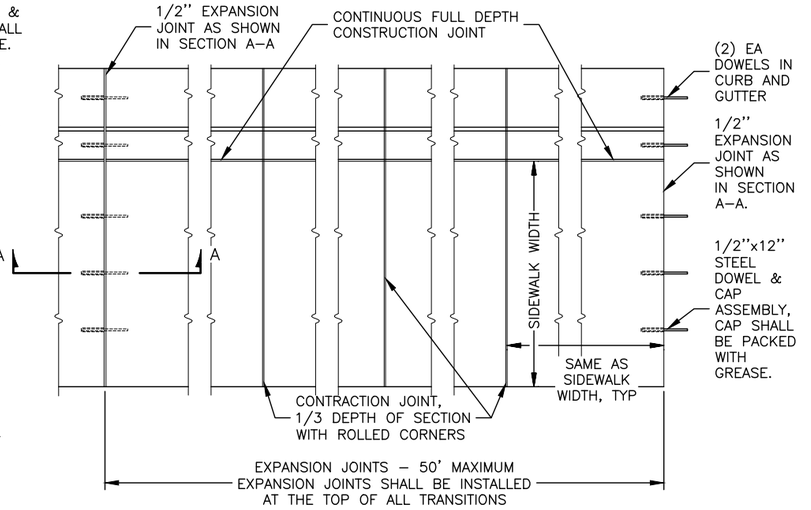
PARTIAL SECTION VIEW A – A
NOT TO SCALE



CONCRETE SIDEWALK REINFORCEMENT DETAIL
SECTION VIEW C–C



CONCRETE SIDEWALK CONTRACTION JOINT DETAIL
SECTION VIEW B–B



DETAIL A EXPANSION SIDEWALK & CURB AND GUTTER JOINT
PLAN VIEW
NOT TO SCALE

CONCRETE SIDEWALK NOTES:

1. INSTALL CONTINUOUS FULL DEPTH 1/8" CONSTRUCTION JOINT WITH A BOND BREAKER AT ALL LOCATIONS WHERE SIDEWALK AND CURB (ANY TYPE) MEET. USE CONTINUOUS BOND BREAKER (I.E., 1/8" JOINT MATERIAL OR APPROVED EQUAL) BETWEEN THE SIDEWALK AND THE CURB.
2. PROTECT CONCRETE FROM DAMAGE DURING CURE. REPAIR OR REPLACE CONCRETE DAMAGED DURING CURE AS APPROVED BY THE ENGINEER.
3. CONCRETE SIDEWALKS SHALL RECEIVE A BROOM FINISH (MEDIUM) RUNNING PERPENDICULAR TO THE SIDEWALK CENTERLINE.
4. FOR SIDEWALKS LARGER OR DIFFERENTLY CONFIGURED THAN SHOWN, PLACE EXPANSION AND CONTRACTION JOINTS AS DIRECTED BY THE ENGINEER.
5. INSTALL 1/2" CONSTRUCTION JOINT MATERIAL BETWEEN NEW CONCRETE AND ADJACENT BUILDINGS, POLES, AND HYDRANTS.
6. SIDEWALK REINFORCEMENT SHALL BE SET ON SPACERS AND PULLED UP WHILE PLACING CONCRETE TO POSITION IT THE REQUIRED CLEAR DISTANCE FROM THE BOTTOM OF SIDEWALK.
7. EXPANSION AND CONTRACTION JOINTS IN THE SIDEWALK SHALL LINE UP WITH EXPANSION AND CONTRACTION JOINTS IN THE CURB. THE ENGINEER MAY ADJUST THE LOCATION OF EXPANSION OR CONTRACTION JOINTS.
8. CONTRACTION JOINT SPACING FROM EXPANSION JOINTS OR OTHER CONTRACTION JOINTS SHALL BE THE SPECIFIED WIDTH (W) OF THE CONCRETE SIDEWALK.
9. UNLESS OTHERWISE NOTED, EXPANSION AND CONTRACTION JOINTS SHALL BE PERPENDICULAR TO THE CONCRETE SIDEWALK CENTERLINE.
10. WHERE EXPANSION JOINTS ARE SPECIFIED AT THE MATCH LIMITS FOR NEW CONCRETE SIDEWALK AGAINST EXISTING CONCRETE SIDEWALK, SAW CUT THE EXISTING SIDEWALK TO FULL DEPTH PRIOR TO REMOVAL. DRILL AND CLEAN THE HOLE, PACK WITH GREASE AND INSTALL DOWEL & CAP ASSEMBLIES INTO THE EXISTING CONCRETE.
11. DOWEL & CAP ASSEMBLIES AT EXPANSION JOINTS SHALL BE EQUALLY SPACED FROM CENTER OF DOWEL TO CENTER OF DOWEL, LOCATED AT THE 1/4, 1/2, AND 3/4 SIDEWALK WIDTH (W) DIVISIONS AND PARALLEL TO THE CONCRETE SURFACE.
12. EXPANSION JOINTS SHALL BE INSTALLED AT THE TOP OF ALL TRANSITIONS TO PEDESTRIAN CURB RAMPS.
13. APPLY STE–1 TACK COAT BETWEEN CONCRETE SURFACES AND ADJOINING ASPHALT.

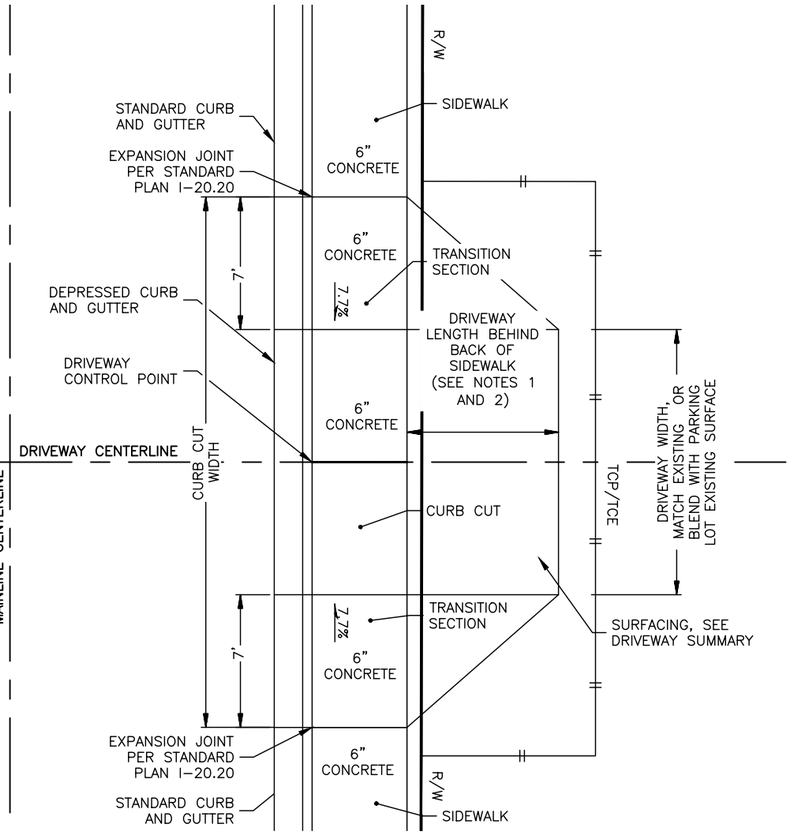
STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

CONCRETE SIDEWALK DETAILS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_DTLS-E9 Tue, Oct/18/22 09:37am

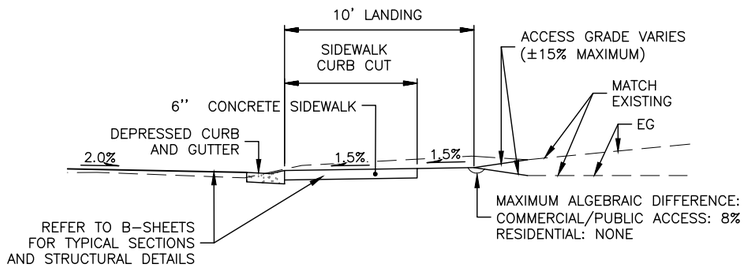
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E10	E14



DRIVEWAY CURB CUT TYPICAL PLAN DETAIL

NOT TO SCALE

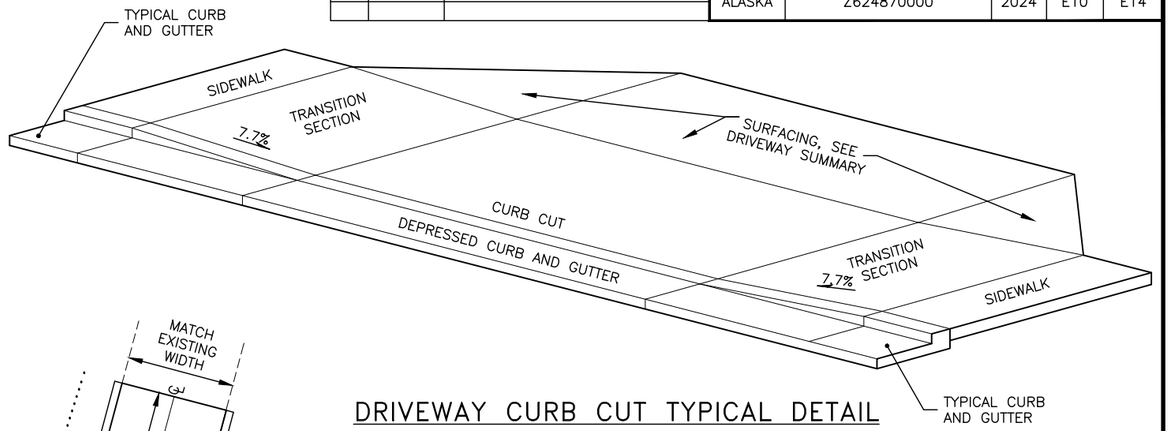


DRIVEWAY CURB CUT TYPICAL PROFILE DETAIL

NOT TO SCALE

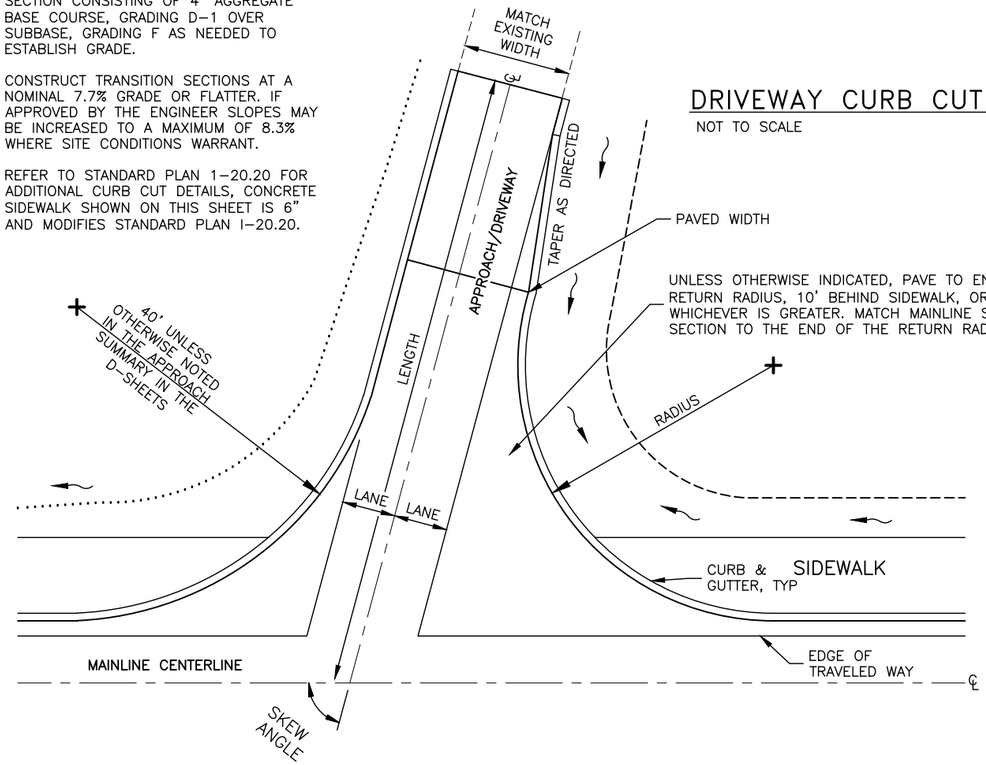
DRIVEWAY CUB CUT NOTES:

1. SEE APPROACH SUMMARY IN THE D-SHEETS FOR DRIVEWAY CURB CUT WIDTH. LENGTH, AND SURFACING MATERIAL TYPE.
2. ON DRIVEWAY CURB CUTS WITH GRAVEL SURFACE, PAVE 10' BEHIND SIDEWALK OR TO TCP/TCE LIMITS, WHICHEVER IS LESS.
3. DRIVEWAY CURB CUTS STRUCTURAL SECTION SHALL CONSIST OF 3" HMA, SIDEWALKS AND PATHS OVER 2" OF AGGREGATE BASE COURSE, GRADING D-1, OVER SUBBASE, GRADING F AS NEEDED TO ESTABLISH GRADE.
4. DRIVEWAY CURB CUTS WITH GRAVEL SURFACE SHALL HAVE A STRUCTURAL SECTION CONSISTING OF 4" AGGREGATE BASE COURSE, GRADING D-1 OVER SUBBASE, GRADING F AS NEEDED TO ESTABLISH GRADE.
5. CONSTRUCT TRANSITION SECTIONS AT A NOMINAL 7.7% GRADE OR FLATTER. IF APPROVED BY THE ENGINEER SLOPES MAY BE INCREASED TO A MAXIMUM OF 8.3% WHERE SITE CONDITIONS WARRANT.
6. REFER TO STANDARD PLAN 1-20.20 FOR ADDITIONAL CURB CUT DETAILS, CONCRETE SIDEWALK SHOWN ON THIS SHEET IS 6" AND MODIFIES STANDARD PLAN 1-20.20.



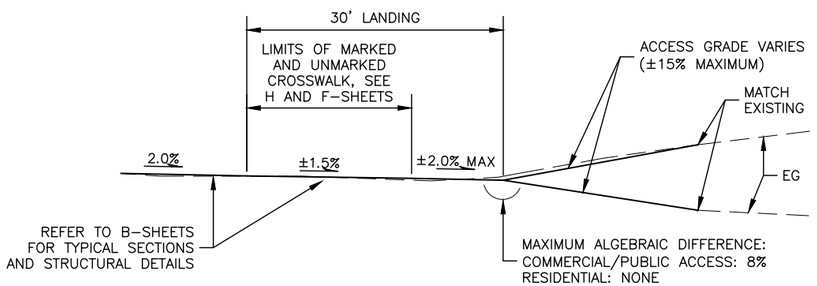
DRIVEWAY CURB CUT TYPICAL DETAIL

NOT TO SCALE



APPROACHES AND DRIVEWAY (WITH CURB RETURN) PLAN DETAIL

NOT TO SCALE



APPROACHES AND DRIVEWAY (WITH CURB RETURN) PROFILE DETAIL

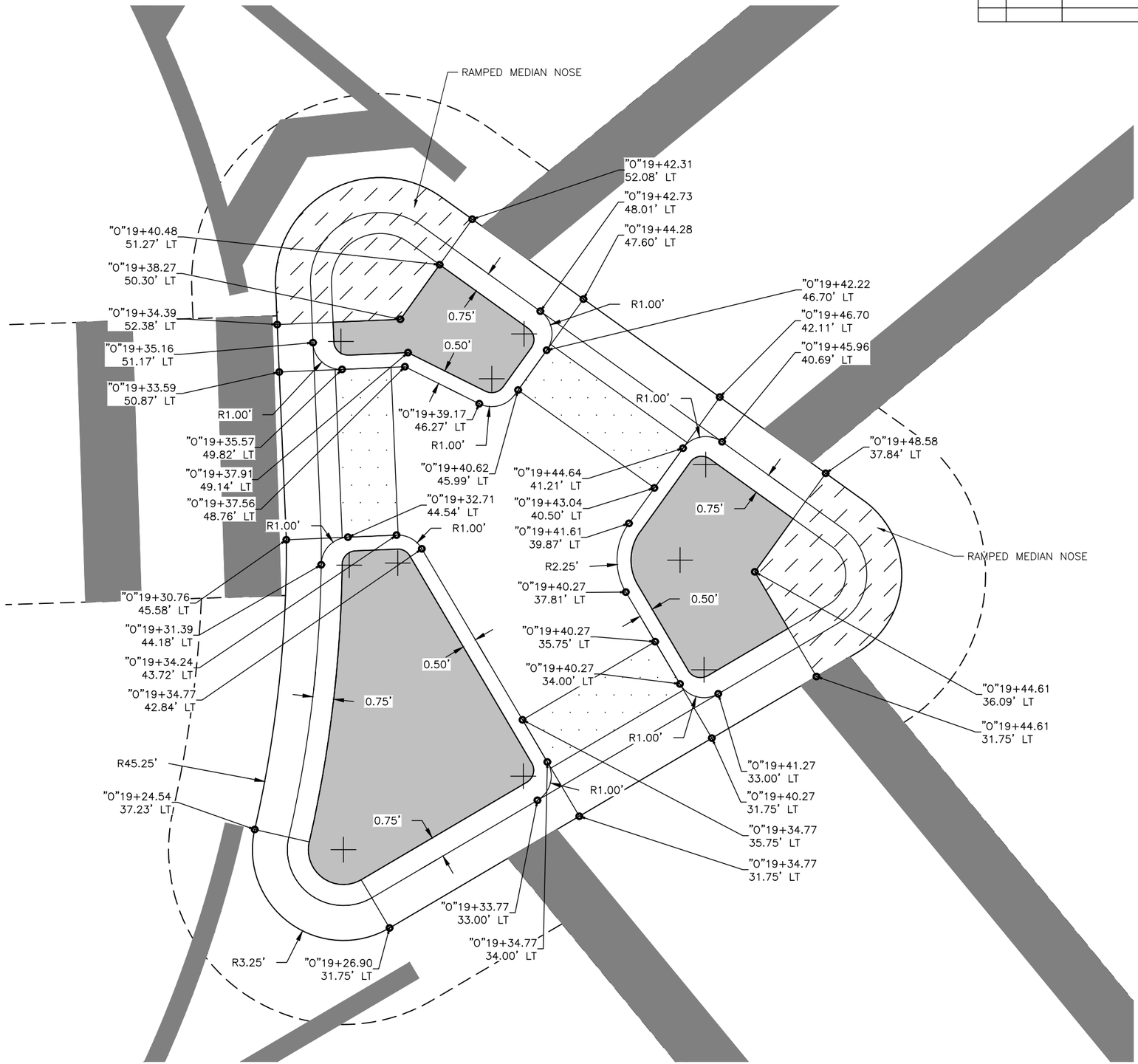
NOT TO SCALE

APPROACHES AND DRIVEWAYS DETAILS

STATE OF ALASKA 49TH PRELIMINARY PS&E

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E11	E14



COLLEGE RD CHANNELIZED ISLAND LAYOUT DETAIL

NOT TO SCALE

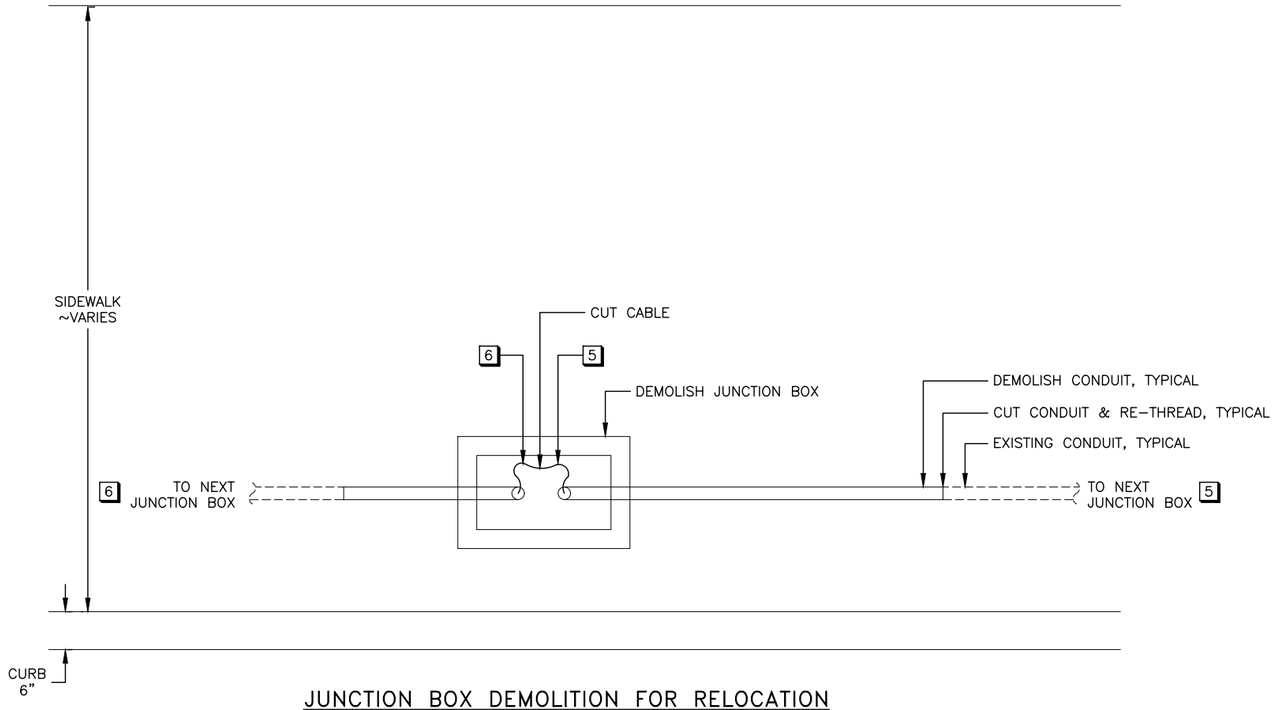
NOTES:

1. TRAFFIC SIGNAL SYSTEM NOT SHOWN IN DETAIL FOR CLARITY, SEE TRAFFIC SIGNAL PLANS.

STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER

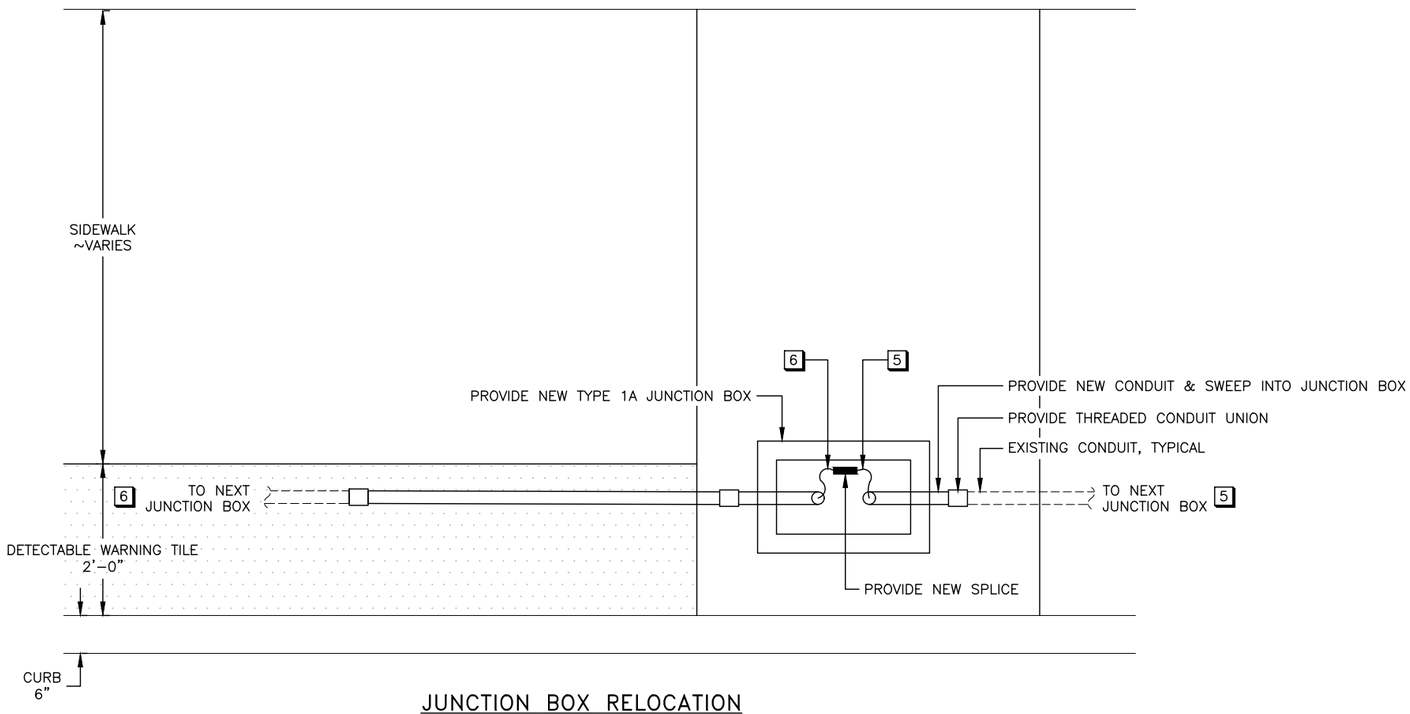
COLLEGE RD CHANNELIZED ISLAND LAYOUT DETAIL

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	E12	E14



JUNCTION BOX DEMOLITION FOR RELOCATION

NTS



JUNCTION BOX RELOCATION

NTS

NOTES:

1. THIS SHEET ONLY APPLIES BETWEEN BEGINNING OF PROJECT TO STATION "0" 32+78. WHERE JUNCTION BOXES ARE NOTED FOR REPLACEMENT, PROTECT THE CONDUITS AND CABLES IN PLACE WHILE REPLACING THE JUNCTION BOX. WHERE A LARGE HORIZONTAL ADJUSTMENT IS REQUIRED, THEN MODIFY THE CONDUIT AND CABLES IN ACCORDANCE WITH THIS DRAWING. ALL OF THE CONDUIT AND CABLE MODIFICATIONS PROVIDED TO RELOCATE JUNCTION BOXES SHALL BE SUBSIDIARY TO "TRAFFIC SIGNAL SYSTEM, COMPLETE" OR "HIGHWAY LIGHTING SYSTEM, COMPLETE" FOR SIGNAL AND LIGHTING JUNCTION BOXES, RESPECTIVELY.
2. WHERE JUNCTION BOXES ARE REPLACED OR ADJUSTED, THE REINSTALLATION SHALL COMPLY WITH ALASKA STANDARD PLAN L-23.03. NOTIFY THE ENGINEER IF REINSTALLATION OF JUNCTION BOX CONFLICTS WITH STANDARD PLAN. THE ENGINEER WILL REVIEW THESE INSTANCES ON A CASE-BY-CASE BASIS.
3. JUNCTION BOXES SHALL NOT BE LOCATED IN THE NEW DETECTABLE WARNING TILE NOR IN A GRADE BREAK.
4. THIS DETAIL SHOWS THE JUNCTION BOX MOVING TO THE RIGHT (PARALLEL TO THE ROAD). DEPENDING ON LOCATION OF THE DETECTABLE WARNING TILE OR GRADE BREAK AND CONFLICTING JUNCTION BOX, THE JUNCTION BOX MAY MOVE TO THE LEFT (PARALLEL TO THE ROAD). THE CONTRACTOR MAY ALTERNATIVELY SHIFT THE JUNCTION BOX IN ANOTHER DIRECTION WITH PRIOR APPROVAL BY THE ENGINEER.

[5] ON THE SIDE WHERE THE REPLACEMENT JUNCTION BOX IS MOVING CLOSER TO THE NEXT ADJACENT JUNCTION BOX, THE EXISTING POWER CABLES & GROUNDING CONDUCTOR WILL HAVE EXCESS LENGTH. THE CONTRACTOR SHALL TEMPORARILY PULL BACK THE POWER CABLES & GROUNDING CONDUCTOR DURING CONDUIT MODIFICATION. AFTER CONDUIT MODIFICATION, PULL THE EXISTING POWER CABLES & GROUNDING CONDUCTOR BACK INTO THE JUNCTION BOX. TRIM EXCESS LENGTH AND PREP FOR SPLICING.

[6] ON THE SIDE WHERE THE REPLACEMENT JUNCTION BOX IS MOVING AWAY FROM THE NEXT JUNCTION BOX, THE EXISTING POWER CABLES & GROUNDING CONDUCTOR WILL NOT BE LONG ENOUGH TO REACH THE REPLACEMENT BOX. THE CONTRACTOR SHALL REMOVE THE POWER CABLES & GROUNDING CONDUCTOR BACK TO THE NEXT BOX, PROVIDE NEW POWER CABLES & GROUNDING CONDUCTOR, SPLICE IN NEW CABLES AT THE NEXT BOX, AND THEN EXTEND TO THE RELOCATED JUNCTION BOX AND SPLICE.

7. NEW CONDUIT PROVIDED BY JUNCTION BOX RELOCATION SHALL MATCH EXISTING CONDUIT SIZE. THE CONTRACTOR SHALL ASSUME 2" RMC.
8. NEW HIGHWAY LIGHTING CABLES PROVIDED BY JUNCTION BOX RELOCATION SHALL MATCH EXISTING CABLE SIZE. THE CONTRACTOR SHALL ASSUME A (3c) #6 AWG CABLE.
9. NEW GROUNDING CONDUCTORS PROVIDED BY JUNCTION RELOCATION SHALL BE A MINIMUM #10 AWG COPPER, OR AS REQUIRED BY SPECIFICATIONS OR OTHER DETIALS.
10. POWER CABLE SPLICES SHALL BE A PERMANENT, RESIN BASED SPLICE, LISTED FOR SUBMERGED APPLICATIONS. BASIS OF DESIGN IS 3M 'SCOTCHCAST, INLINE RESIN POWER CABLE SPLICE KITS 82-A SERIES'.

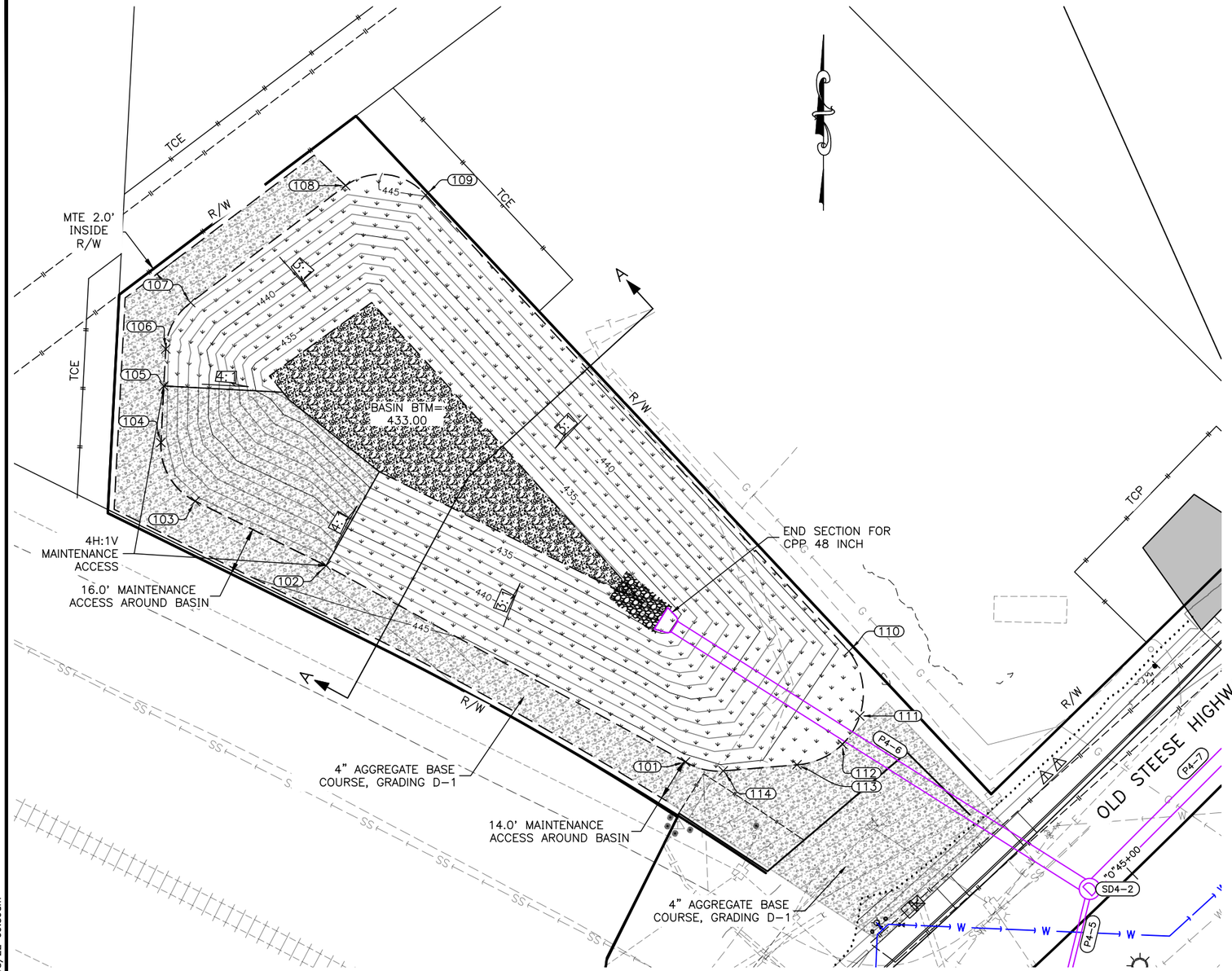
JUNCTION BOX RELOCATION DETAIL

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
C:\Design Alaska AutoCAD 2020\backup\AcPublish_8148\62487_E_DA-E12 Wed, Oct/12/22 03:12pm

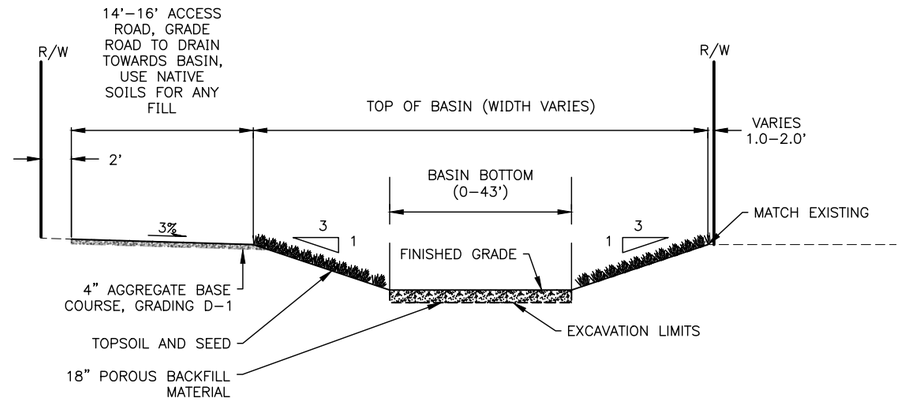
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E13	E14



INFILTRATION BASIN PLAN VIEW

1"=20'



INFILTRATION BASIN LANDSCAPE TYPICAL SECTION A-A

NOT TO SCALE

INFILTRATION BASIN GENERAL NOTES:

1. LIMIT EQUIPMENT USE AT BOTTOM OF BASIN, KEEP COMPACTION TO A MINIMUM.

INFILTRATION BASIN LANDSCAPE TYPICAL SECTION GENERAL NOTES:

1. AT EACH BASIN LOCATION, THE PROJECT TO REPLACE ANY IMPACTED LANDSCAPE PLANTING OR FEATURE TO MATCH EXISTING OR EQUAL.
2. SEE D, F, AND L SHEETS FOR TREE LOCATIONS AND SCHEDULES.

TRAINOR GATE BASIN LAYOUT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
101	201592.12	682110.46	445.7	MTE
102	201655.69	681993.99	444.6	MTE/BASIN ACCESS
103	201676.60	681951.61	444.4	MTE
104	201695.58	681940.49	444.5	MTE
105	201713.92	681941.44	444.4	MTE
106	201725.92	681942.07	444.3	MTE/BASIN ACCESS
107	201740.95	681950.14	444.4	MTE
108	201778.86	682000.31	444.9	MTE
109	201775.78	682026.28	445.1	MTE
110	201628.00	682163.40	445.7	MTE
111	201607.00	682166.90	445.7	MTE
112	201597.85	682161.27	445.7	MTE
113	201591.18	682146.56	445.6	MTE
114	201589.19	682122.67	445.5	MTE

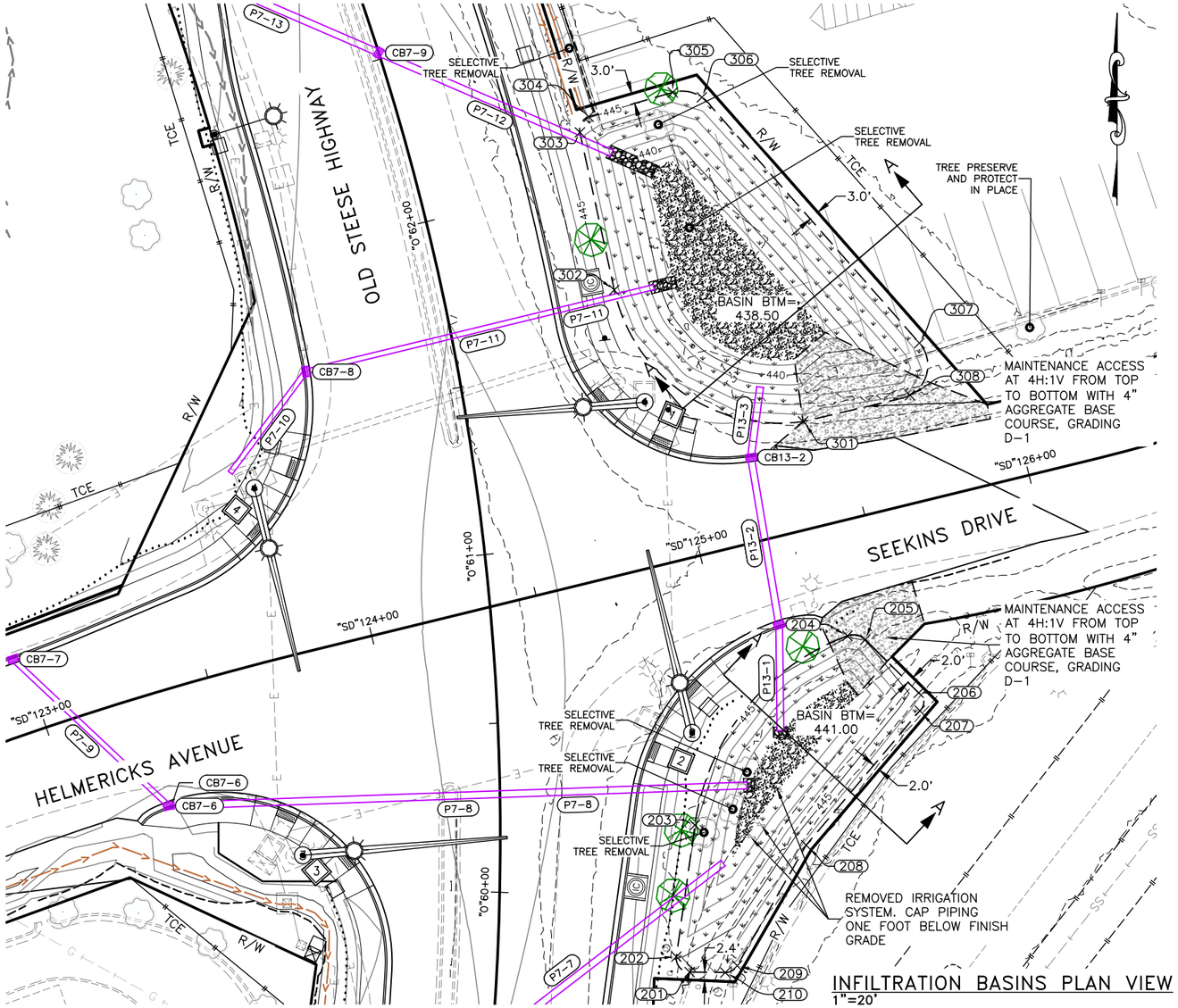
TRAINOR GATE INFILTRATION BASIN

STATE OF ALASKA 49TH PRELIMINARY PS&E SIGNED PROFESSIONAL ENGR

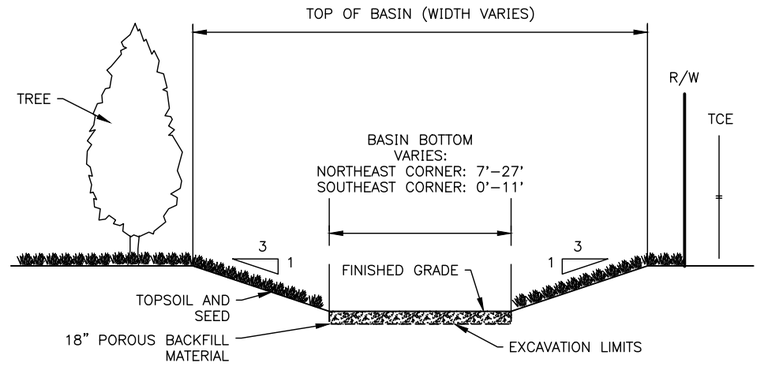
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_Basin_DTLS-E13 Tue, Oct/18/22 09:39am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	E14	E14



INFILTRATION BASINS PLAN VIEW
1"=20'



INFILTRATION BASIN LANDSCAPE TYPICAL SECTION A-A
NOT TO SCALE

SEEKINS DRIVE BASIN LAYOUT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
201	202763.99	683115.90	444.7	MTE
202	202768.54	683111.99	444.8	MTE
203	202807.46	683117.46	445.1	MTE
204	202863.39	683162.56	445.1	MTE
205	202862.25	683167.82	445.1	MTE
206	202846.53	683183.60	445.7	MTE
207	202841.25	683183.95	446.7	MTE
208	202801.50	683150.33	446.3	MTE
209	202765.87	683129.98	447.3	MTE
210	202763.85	683126.45	446.6	MTE

SEEKINS DRIVE BASIN LAYOUT TABLE

POINT #	NORTHING	EASTING	ELEVATION	DESCRIPTION
301	202926.74	683149.43	444.7	MTE
302	202965.61	683093.63	444.4	MTE
303	203012.24	683083.47	444.4	MTE
304	203016.86	683086.05	445.1	MTE
305	203024.06	683110.92	444.9	MTE
306	203022.59	683119.51	444.9	MTE
307	202949.96	683183.82	444.7	MTE
308	202934.52	683181.01	444.2	MTE

SEEKINS DRIVE INFILTRATION BASINS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_E_Basin_DTLS-E14 Tue, Oct/18/22 09:39am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F1	F24

MINNIE STREET

BEGIN SWK REPLACEMENT
+78.82
31.67 LT

EXISTING JUNCTION BOX
PROTECT IN PLACE

P.I. STA "O" 10+93.35
N = 200151.8760
E = 679950.8038
Δ = 17°58'52"
D = 14°59'56"
T = 60.44'
L = 119.88'
R = 382.00'
R/W

+16.70
39.81' LT
+11.04
39.81' LT

PUE
TCP
PUE
TCP

+12.86
39.82' LT
+17.14
39.82' LT

"MS"82+59.81 PT

R429.0'
6.0'
+13.31
31.71' LT

BEGINNING OF PROJECT
"O" 10+87.38
N=200144.7314
E=679949.4270

OLD STEESE HIGHWAY

"O" 11+00
"O" 12+00
"O" 13+00
"O" 14+00
"O" 10+00
"O" 9+00

END SWK REPLACEMENT
+18.02
31.88 LT

"O" 10+00.00 PI
"O" 10+32.91 PC
"O" 11+52.80 PT

CLOSE DRIVEWAY,
MAINTAIN FULL CURB
HEIGHT

N 61°04'41" E ~ 402.90'

END SWK REPLACEMENT
+26.39
37.89 RT

6.0'

4TH STREET

MATCH "O" 14+00 LINE

3RD STREET

PUE
BEGIN SWK REPLACEMENT
+23.77
38.03 RT

+32.13
37.86' RT
+34.17
39.20' RT
+34.32
67.06' RT

+94.12
42.73' RT
+51.56
43.41' RT
+53.78
43.43' RT
+93.92
67.55' RT
+59.43
58.80' RT
+93.62
52.38' RT

TCP

R/W

PLAN SHTS STA. 10+87–18+50

STATE OF ALASKA
49TH
PRELIMINARY
PS&E
STAMPED PROFESSIONAL ENGR

NOTE:
REFER TO TRAFFIC SIGNAL AND LIGHTING PLANS FOR EXISTING JUNCTION BOXES NOTED FOR ADJUSTMENTS OR REPLACEMENTS.

+76.44
38.00' LT
+71.10
39.75' LT
+60.79
39.75' LT
+55.45
38.00' LT
+48.30
39.84' LT

PUE
PUE
R/W

+33.78
50.66' LT
+29.49
40.93' LT
+95.03
39.89' LT

R/W
TCP

+27.76
50.04' LT
PROTECT EXISTING RETAINING WALL
+42.85
38.00' LT
END SWK REPLACEMENT
+47.72
37.93 LT

EXISTING JUNCTION BOX
PROTECT IN PLACE

R/W
PUE
R/W

6.0'
BEGIN SWK REPLACEMENT
+48.30
37.97 LT

CLOSE DRIVEWAY, MAINTAIN
FULL CURB HEIGHT

MATCH "O" 14+00 LINE

"O" 14+00
"O" 15+00
"O" 16+00
"O" 17+00
"O" 18+00

S 59°30'23" W ~ 440.34'

OLD STEESE HIGHWAY

"O" 15+55.70 PI

MATCH "O" 18+50 LINE

C-2

R/W
TCP

TIMBERLAND DRIVE

TCP
TCP

+54.09
50.60' RT

+03.78
51.44' RT

R/W
PUE
R/W

EXISTING JUNCTION BOX
PROTECT IN PLACE

PUE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-F1 Tue, Oct/18/22 09:42am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F2	F24

MATCH LINE –A

PT +12.66
98.51' LT
9.0'
+02.44
94.45' LT
+04.44
87.66' LT
+07.48
72.47' LT.
PROTECT + EXISTING RETAINING WALL
R/W
R48.0'
COLLEGE ROAD
"CR" 136+00
+80.12
74.06' LT
+03.07
82.53' LT
END SWK REPLACEMENT
+12.61
86.63 LT
MATCH SWK PROJECT
NO. 0640013/NFHWY00591
CONSTRUCT LANDING FINISHED GRADE FLUSH WITH TOP OF SIGNAL FOUNDATION
EXISTING JUNCTION BOX PROTECT IN PLACE
P.I. STA "O" 20+50.04
N = 200626.8039
E = 680782.3207
Δ = 5°00'36"
D = 4°46'29"
T = 52.50'
L = 104.93'
R = 1200.00'
P.I. STA "O" 23+77.33
N = 200767.6508
E = 681077.8306
Δ = 6°18'01"
D = 4°46'29"
T = 66.04'
L = 131.95'
R = 1200.00'
PUE
+52.95
46.55' LT
PROTECT EXISTING WALL
TCP
+95.13
46.88' LT
R/W
NEW HIGH CAPACITY CATCH BASIN INLET SEE E SHTS
MATCH "O" 18+50 LINE
+61.11
38.07' LT
PC +61.12
31.99' LT
RIGHT TURN CHANNELIZATION ISLAND LAYOUT SEE E SHEETS
"O" 19+00
"O" 20+00
"O" 21+00
"O" 22+00
"O" 23+00
"O" 24+00
OLD STEESE HIGHWAY
BEGIN SWK REPLACEMENT
+51.13
38.07 LT
"O"19+97.54 PC
"CR" 135+00
"O"21+02.47 PT
EXISTING JUNCTION BOX PROTECT IN PLACE
N 64°30'59" E ~ 208.82'
CLOSE DRIVEWAY, MAINTAIN FULL CURB HEIGHT
6.0'
"O"23+11.29 PC
END SWK REPLACEMENT
+38.97
37.50 RT
"O"24+43.24 PT
CHACE STREET
BEGIN SWK REPLACEMENT
+39.44
37.70 RT
+29.82
48.33' RT
+39.82
48.25' RT
+30.91
78.09' RT
CONSTRUCT LANDING FINISHED GRADE FLUSH WITH TOP OF SIGNAL FOUNDATION
+90.38
37.50' RT
+61.96
45.08' RT
+49.48
37.58' RT
+96.03
75.69' RT
+94.54
45.39' RT
+13.27
77.54' RT
+18.14
76.27' RT
+90.56
74.76' RT
+68.75
81.17' RT
"CR" 134+00

PLAN SHTS STA.
18+50–30+00

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

MATCH LINE–A

EXISTING JUNCTION BOX PROTECT IN PLACE
TCP
+34.36
64.89' LT
+69.57
64.20' LT
P.I. STA "O" 26+66.08
N = 200919.8107
E = 681323.3941
Δ = 5°29'12"
D = 4°46'29"
T = 57.50'
L = 114.91'
R = 1200.00'
P.I. STA "O" 27+81.05
N = 200970.7822
E = 681426.5405
Δ = 5°29'12"
D = 4°46'29"
T = 57.50'
L = 114.91'
R = 1200.00'
+77.37
64.57' LT
BENTLEY TRUST ROAD
+75.86
53.44' LT
+17.78
60.31' LT
TCP
R/W
PUE
MATCH "O" 24+50 LINE
MATCH "O" 30+00 LINE
+09.79
30.03' LT
+93.74
30.03' LT
OLD STEESE HIGHWAY
"O" 25+00
"O" 26+00
"O" 27+00
"O" 28+00
"O" 29+00
N 58°12'58" E ~ 165.34'
"O"26+08.58 PC
"O"27+23.49 PT
CLOSE DRIVEWAY, MAINTAIN FULL CURB HEIGHT
R698.3'
6.0'
"O"28+38.46 PT
N 58°12'58" E ~ 451.22'
CONSTRUCT LANDING FINISHED GRADE FLUSH WITH TOP OF SIGNAL FOUNDATION
7.3'
BEGIN SWK REPLACEMENT
+66.53
39.30 LT
BEGIN SWK REPLACEMENT
+71.98
37.71 RT
+69.76
37.75' RT
+27.49
37.75' RT
+60.66
46.11' RT
+31.57
39.73' RT
+49.73
46.06' RT
+46.99
37.75' RT
+44.26
38.54' RT
+40.99
44.03' RT
+33.49
39.79' RT
+33.49
44.03' RT
+41.29
37.75' RT
+19.43
37.81' RT
+76.76
37.72' RT
+24.62
90.76' RT
+78.95
90.13' RT

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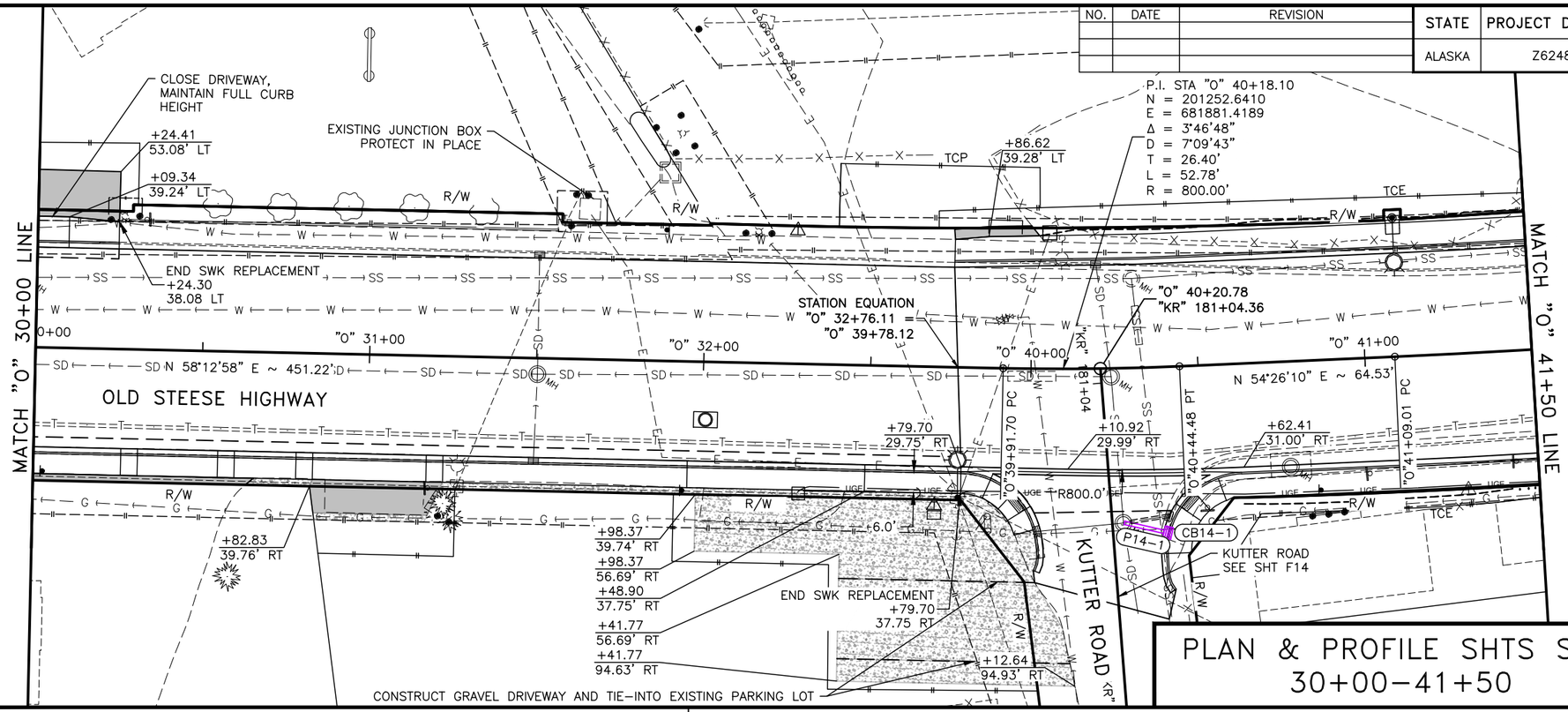
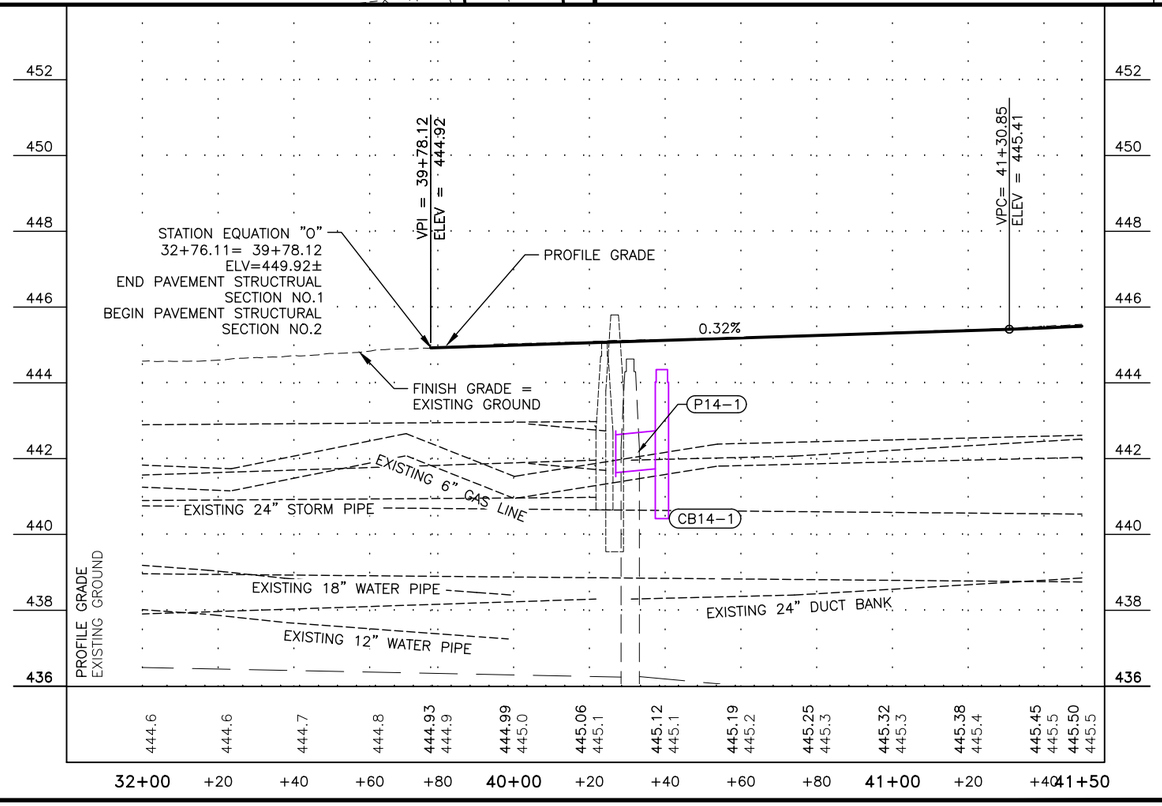
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F3	F24



PLAN & PROFILE SHTS STA. 30+00–41+50

STATE OF ALASKA
49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION



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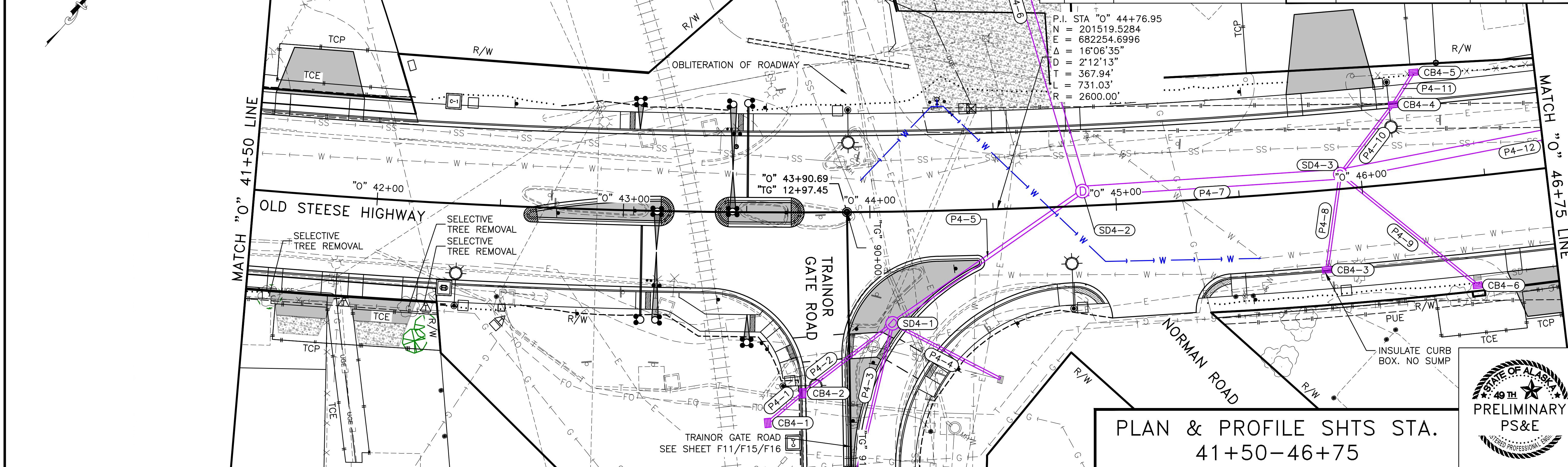
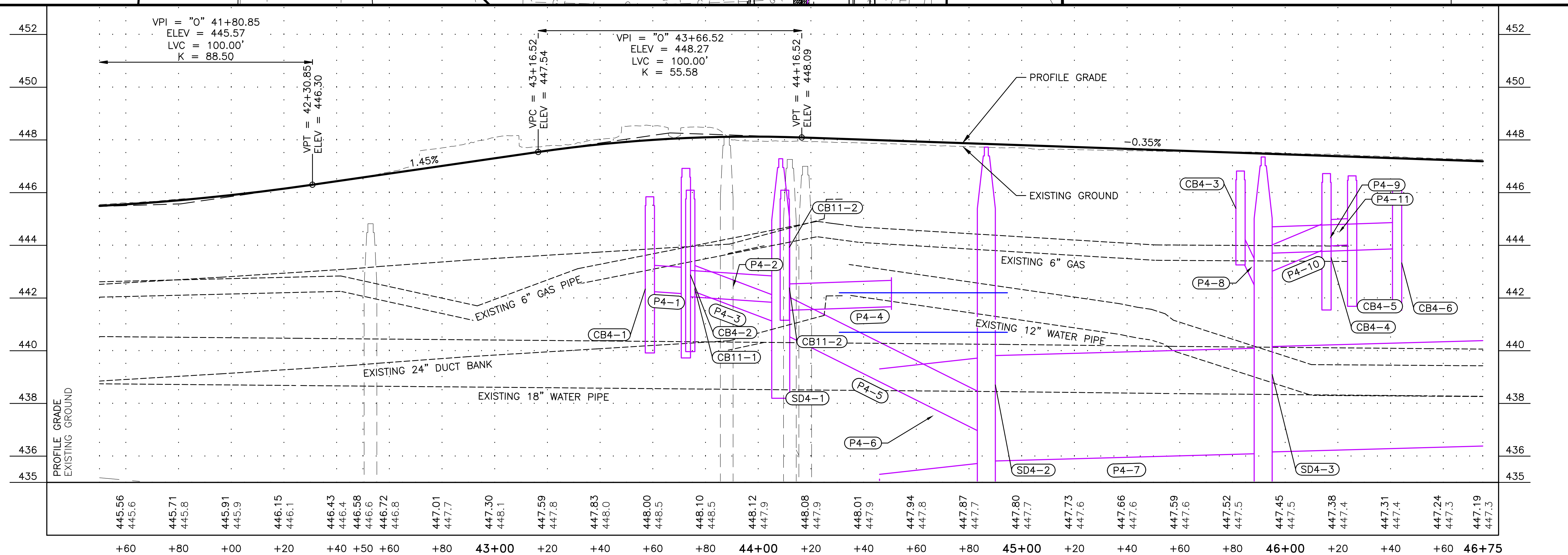
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F4	F24

PLAN & PROFILE SHTS STA. 41+50–46+75





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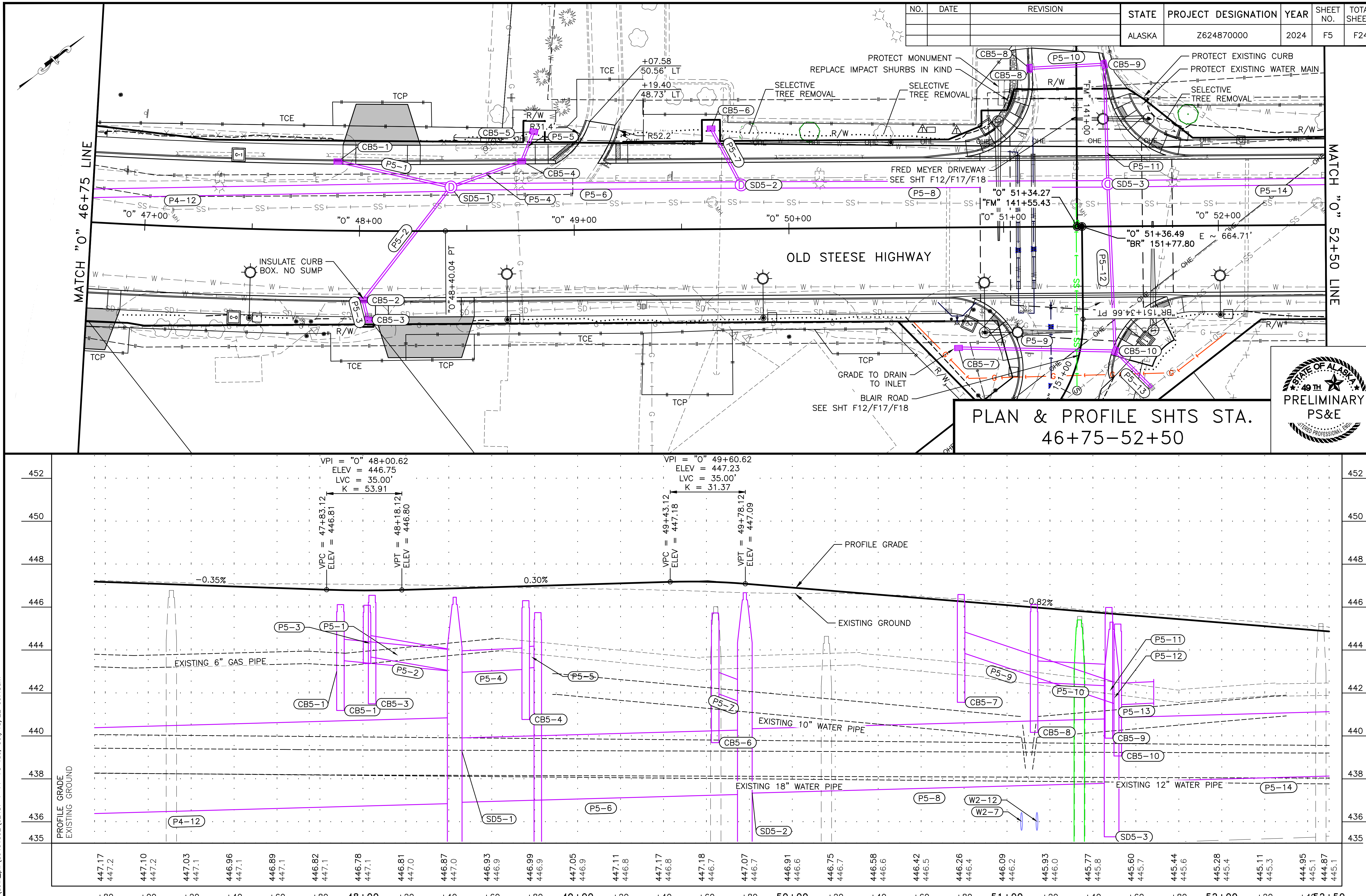
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F5	F24

NO.	DATE	REVISION



MATCH "O" 46+75 LINE
MATCH "O" 52+50 LINE
OLD STEESE HIGHWAY
PROTECT MONUMENT
REPLACE IMPACT SHURBS IN KIND
SELECTIVE TREE REMOVAL
PROTECT EXISTING CURB
PROTECT EXISTING WATER MAIN
FRED MEYER DRIVEWAY SEE SHT F12/F17/F18
INSULATE CURB BOX. NO SUMP
GRADE TO DRAIN TO INLET
BLAIR ROAD SEE SHT F12/F17/F18
+07.58 50.56' LT
+19.40 48.73' LT
"O" 51+34.27
"FM" 141+55.43
"O" 51+36.49
"BR" 151+77.80
E ~ 664.71'
"O" 47+00
"O" 48+00
"O" 49+00
"O" 50+00
"O" 51+00
"O" 52+00
"O"48+40.04 PT
TCE
TCP
R/W
VPI = "O" 48+00.62
ELEV = 446.75
LVC = 35.00'
K = 53.91
VPI = "O" 49+60.62
ELEV = 447.23
LVC = 35.00'
K = 31.37
VPC = 47+83.12
ELEV = 446.81
VPT = 48+18.12
ELEV = 446.80
VPC = 49+43.12
ELEV = 447.18
VPT = 49+78.12
ELEV = 447.09
-0.35%
0.30%
-0.82%
PROFILE GRADE
EXISTING GROUND
EXISTING 6" GAS PIPE
EXISTING 10" WATER PIPE
EXISTING 18" WATER PIPE
EXISTING 12" WATER PIPE

PLAN & PROFILE SHTS STA. 46+75–52+50

STATE OF ALASKA 49TH PRELIMINARY PS&E

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F6	F24

MATCH "O" 52+50 LINE

MATCH "O" 57+50 LINE

OLD STEESE HIGHWAY

SADLER WAY

SADLER WAY
SEE SHT F19

SELECTIVE TREE REMOVAL

PUE

TCE

R/W

INSULATE CURB BOX. NO SUMP

"O" 53+00

"O" 54+00

"O" 54+85.65
"TG" 1+48.79

"O" 55+00

"O" 56+00

"O" 57+00

"SW" 1+49

"SW" 1+00

"O" 55+04.75 PC

P.I. STA "O" 59+60.29
N = 202687.0004
E = 683177.5865
Δ = 61°32'42"
D = 7°29'23"
T = 455.54'
L = 821.74'
R = 765.00'

REPLACE IMPACTED SHRUBS IN KIND

CB6-1 CB6-2 CB6-3 CB6-4 CB6-5 CB6-6 CB6-7 CB6-8 CB6-9 CB6-10 CB6-11 CB6-12

SD6-1 SD6-2 SD6-3

P6-1 P6-2 P6-3 P6-4 P6-5 P6-6 P6-7 P6-8 P6-9 P6-10 P6-11 P6-12 P6-13 P6-14 P6-15

PLAN & PROFILE SHTS STA. 52+50–57+50

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER

VPI = "O" 52+87.56
ELEV = 444.56
LVC = 70.00'
K = 58.91

VPC = 52+52.56
ELEV = 444.85

VPT = 53+22.56
ELEV = 444.69

-0.82%

0.37%

EXISTING GROUND

PROFILE GRADE

EXISTING 18" WATER PIPE

EXISTING 18" SEWER PIPE

PROFILE GRADE
EXISTING GROUND

448 446 444 442 440 438 436 434 432

444.87 445.1 | 444.69 444.9 | 444.65 444.9 | 444.68 444.9 | 444.76 444.8 | 444.83 444.9 | 444.91 444.9 | 444.98 445.0 | 445.06 445.1 | 445.13 445.2 | 445.21 445.3 | 445.28 445.4 | 445.35 445.5 | 445.43 445.6 | 445.50 445.6 | 445.58 445.8 | 445.65 445.8 | 445.73 445.9 | 445.80 446.0 | 445.88 446.0 | 445.95 446.0 | 446.03 446.0 | 446.10 446.1 | 446.17 446.1 | 446.29 446.2

52+50 +80 53+00 +20 +40 +60 +80 54+00 +20 +40 +60 +80 55+00 +20 +40 +60 +80 56+00 +20 +40 +60 +80 57+00 +20 57+50

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F7	F24

MATCH "O" 57+50 LINE
GRADE TO DRAIN
TCE
R/W
UGE
CB7-4
CB7-3
CB7-5
P7-4
P7-3
SD7-1
P7-2
"O" 58+00
ABANDONED SERVICE LINE
P7-5
SD7-2
P7-6
"O" 59+00
"O" 60+00
P7-1
CB7-2
CB7-1
MAINTAIN EXISTING DRAINAGE
OLD STEESE HIGHWAY
P7-7
GRADE TO DRAIN
EXISTING DITCH
MAINTAIN POSITIVE DRAINAGE
SELECTIVE TREE REMOVAL
SELECTIVE TREE REMOVAL
P7-8
CB7-6
P7-9
HELMERICKS AVENUE SEE SHEET F13/F20/F21
HELMERICKS AVENUE
"SD" 123+78.71 PT
"SD" 124+00
PRESERVE AND PROTECT EXISTING WALMART SIGN AND STRUCTURE
P7-10
CB7-8
P7-13
MATCH "O" 63+00 LINE
"O" 62+00
CB7-9
"O" 61+00
"O" 60+84.46
"SD" 124+36.02
P7-11
P7-12
GRADE TO DRAIN
SELECTIVE TREE REMOVAL
SELECTIVE TREE REMOVAL
SEEKINS DRIVE
"SD" 125+00
SEEKINS DRIVE SEE SHEET F13

PLAN & PROFILE SHTS STA. 57+50–63+00

STATE OF ALASKA 49TH
PRELIMINARY PS&E
"STAMPED" PROFESSIONAL ENGR

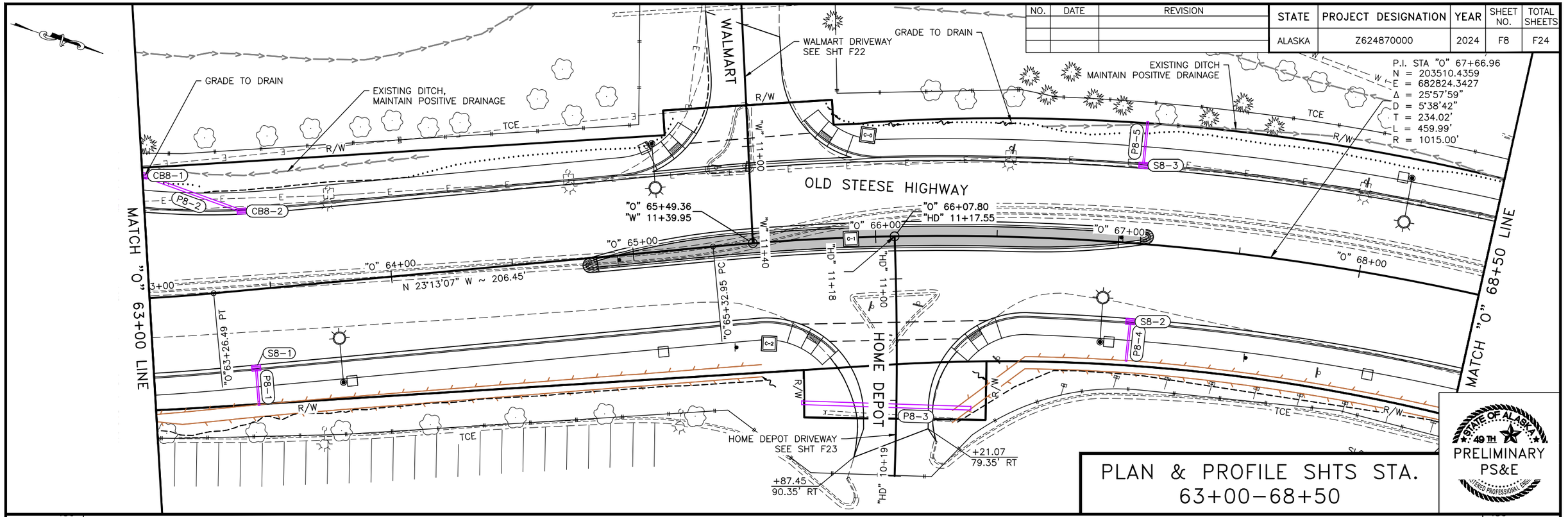
PROFILE GRADE
EXISTING GROUND
VPI = "O" 60+84.46
ELEV = 447.53
LVC = 100.00'
K = 100.43
VPC = 60+34.46
ELEV = 447.35
VPT = 61+34.46
ELEV = 447.22
0.37%
-0.62%
STA= "O" 59+75.12
ELEV=444.14
STA= "O" 59+39.41
ELEV=443.80
STA= "O" 59+94.91
ELEV=444.25
DITCH PROFILE
STA= "O" 63+00.00
ELEV=443.58
OUTFALL INTO INFILTRATION BASIN
STA= "O" 62+14.31
ELEV=443.49
DITCH PROFILE
P7-1
P7-4
P7-3
P7-2
CB7-4
CB7-1
CB7-2
CB7-3
P7-5
SD7-1
SD7-2
P7-6
P7-7
P7-8
P7-9
CB7-6
P7-10
P7-11
CB7-8
P7-12
P7-13
CB7-9
EXISTING 12" WATER PIPE
EXISTING 18" WATER PIPE
EXISTING 18" SEWER PIPE
PROFILE GRADE
EXISTING GROUND

450 448 446 444 442 440 438 436 434

57+50	+80	+00	+20	+40	+50	+60	+80	59+00	+20	+40	+60	+80	60+00	+20	+40	+60	+80	61+00	+20	+40	+60	+80	62+00	+20	+40	+60	+80	63+00
446.29	446.40	446.47	446.55	446.62	446.66	446.70	446.77	446.84	446.92	446.99	447.07	447.14	447.22	447.29	447.36	447.41	447.41	447.38	447.30	447.19	447.06	446.94	446.81	446.69	446.56	446.44	446.31	446.19
446.2	446.2	446.1	446.0	446.0	446.1	446.3	446.4	446.5	446.6	446.6	446.7	446.8	446.8	446.8	446.8	446.8	446.8	446.9	447.0	447.0	447.0	447.0	447.1	447.2	447.2	447.2	447.3	447.3

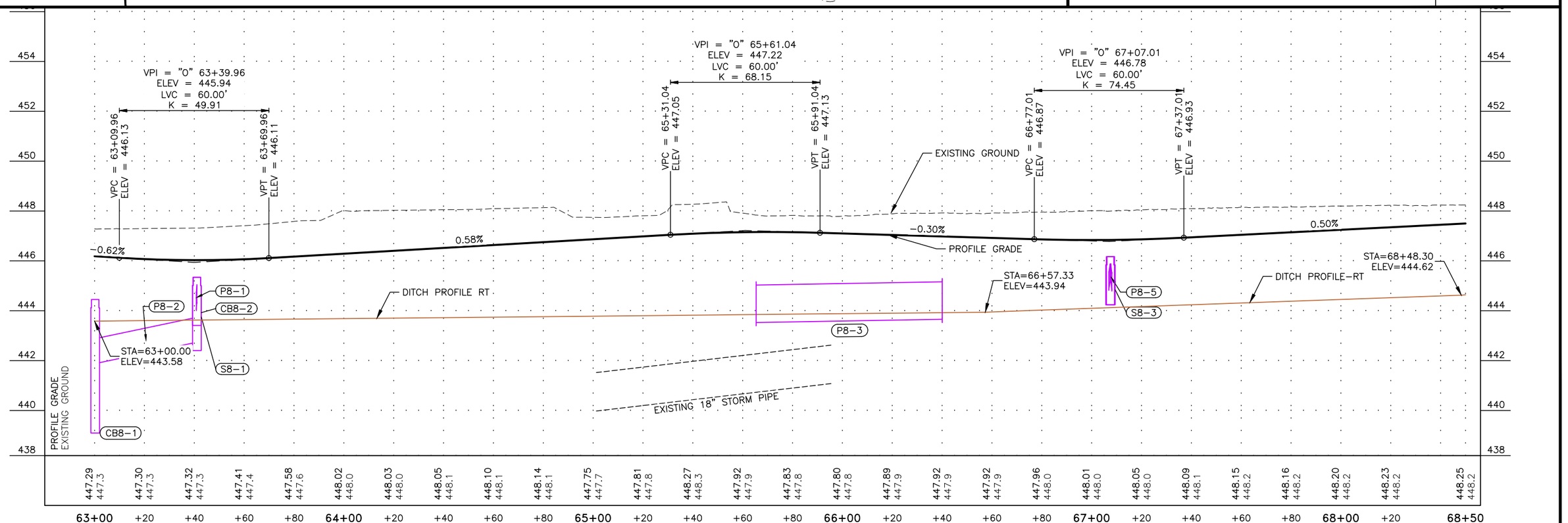
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F8	F24



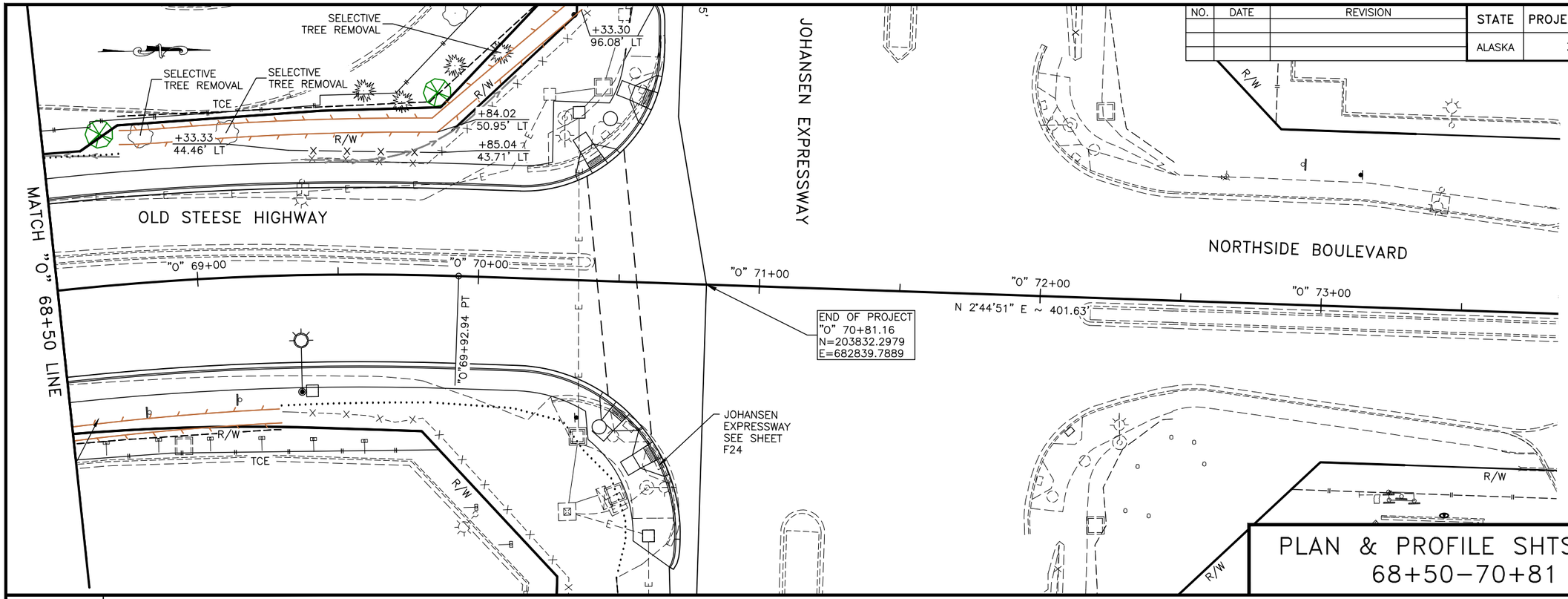
PLAN & PROFILE SHTS STA. 63+00–68+50

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION



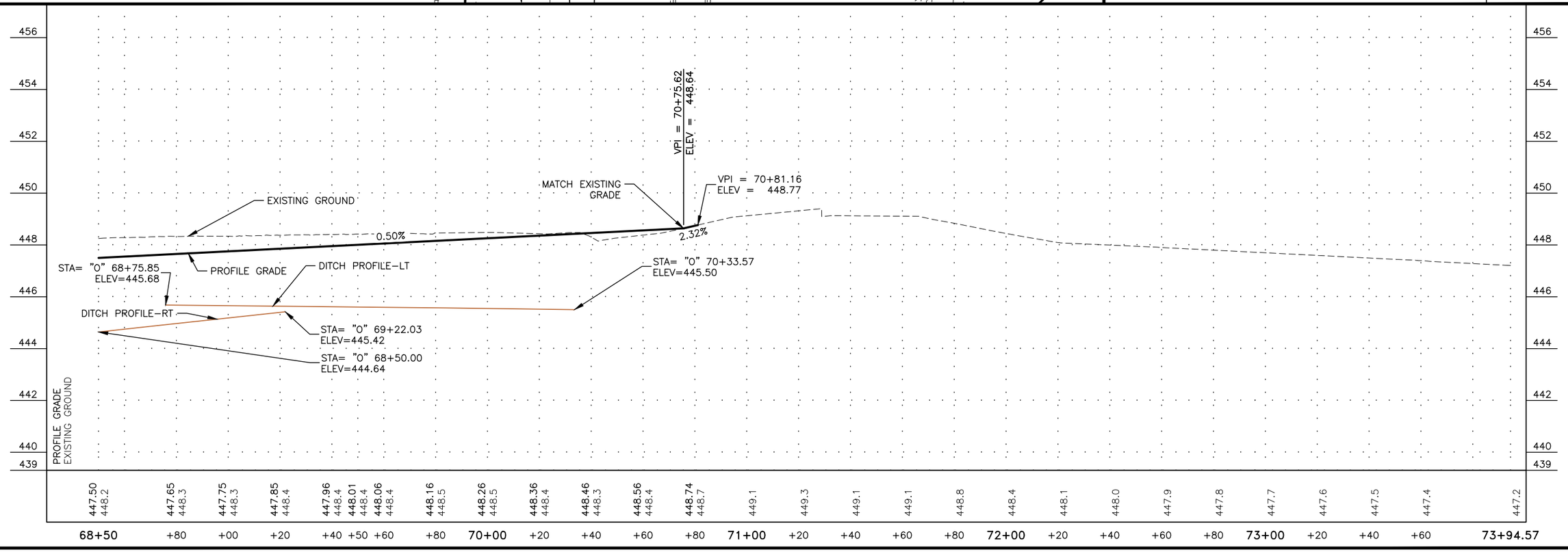
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F9	F24



PLAN & PROFILE SHTS STA. 68+50–70+81

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION



PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F10	F24

"O" 72+00

N 2°44'51" E ~ 401.63'

"O" 71+00

JOHANSEN EXPRESSWAY

END OF PROJECT
"O" 70+81.16
N=203832.2979
E=682839.7889

SAWCUT
MTE

N=203838.65
E=682500.55

N=203829.85
E=682583.51

N=203822.26
E=682730.30

N=203823.19
E=682780.01

3.5'

N=203819.70
E=683117.26

N=203810.47
E=683117.61

OLD STEESE HIGHWAY

R/W

PRELIMINARY
PS&E

PLAN SHTS JOHANSEN EXPWY

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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F11	F24

P.I. STA "O" 44+76.95
N = 201519.5284
E = 682254.6996
Δ = 16°06'35"
D = 2°12'13"
T = 367.94'
L = 731.03'
R = 2600.00'

TRAINOR GATE ROAD
S 42°14'30" E ~ 276.65'
"TG" 90+00
"TG" 91+00
"TG" 92+00
"TG" 92+77
"O" 44+00
"O" 43+90.69
"TG" 12+97.45
"O" 43+00
OLD STEESE HIGHWAY
STEESE EXPRESSWAY
R/W
SD4-2
SD4-1
P4-5
P4-4
P4-3
P4-2
P4-1
CB4-2
CB4-1
CB11-2
CB11-1
P11-1
+91.89
26.00' LT
+99.67
17.68' RT
TRANSITION C&G OVER 4 FEET
TRANSITION C&G OVER 4 FEET
END PAVING
"TG" 92+64.64
N=201285.52
E=682353.13

STATE OF ALASKA
49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

PLAN & PROFILE SHTS
TRAINOR GATE RD

VPI = 90+00.00
ELEV = 448.12
VPI = 90+31.00
ELEV = 447.50
MATCH OLD STEESE CROSS SLOPE
EXISTING GROUND
-2.00%
-0.62%
PROFILE GRADE
MATCH EXISTING ROAD PROFILE
VPI = 91+87.84
ELEV = 446.52
VPI = 92+12.63
ELEV = 446.68
VPI = 92+43.95
ELEV = 447.17
VPI = 92+65.00
ELEV = 447.40
END PAVING MATCH EXISTING
END SIDEWALK CURB & GUTTER REPLACEMENT
STA = "TG" 92+02.08
ELEV = 446.55
EXISTING 6" GAS PIPE
EXISTING 24" DUCT BANK
SD4-1
P4-4
P4-3
P4-5
P11-1
CB11-2
CB11-1
PROFILE GRADE
EXISTING GROUND

456 454 452 450 448 446 444 442 440 438

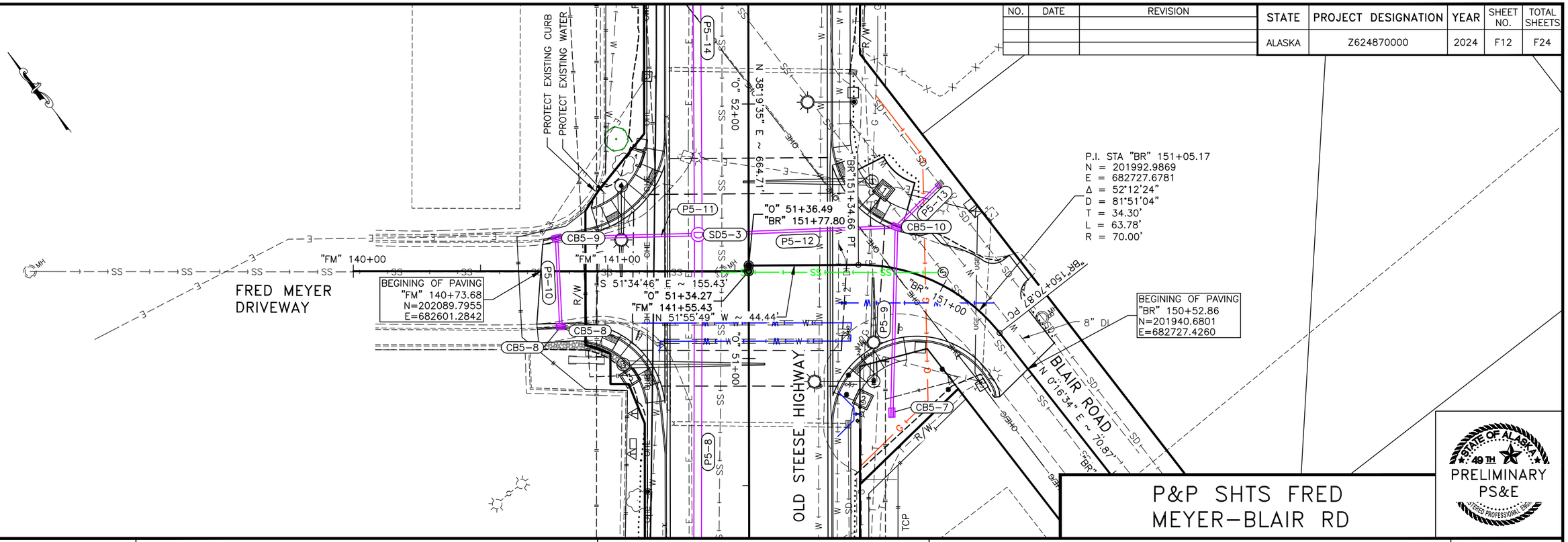
448.00 448.1 | 447.88 447.7 | 447.60 447.4 | 448.05 447.3 | 447.86 447.2 | 447.13 447.1 | 446.99 446.9 | 446.86 446.8 | 446.67 446.7 | 446.55 446.6 | 446.53 446.5 | 446.79 446.8 | 447.10 447.1 | 447.38 447.4 | 447.41

90+00 +20 +40 +60 +80 91+00 +20 +40 +60 +80 92+00 +20 +40 +60 92+76.65

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-F11 Tue, Oct/18/22 09:54am

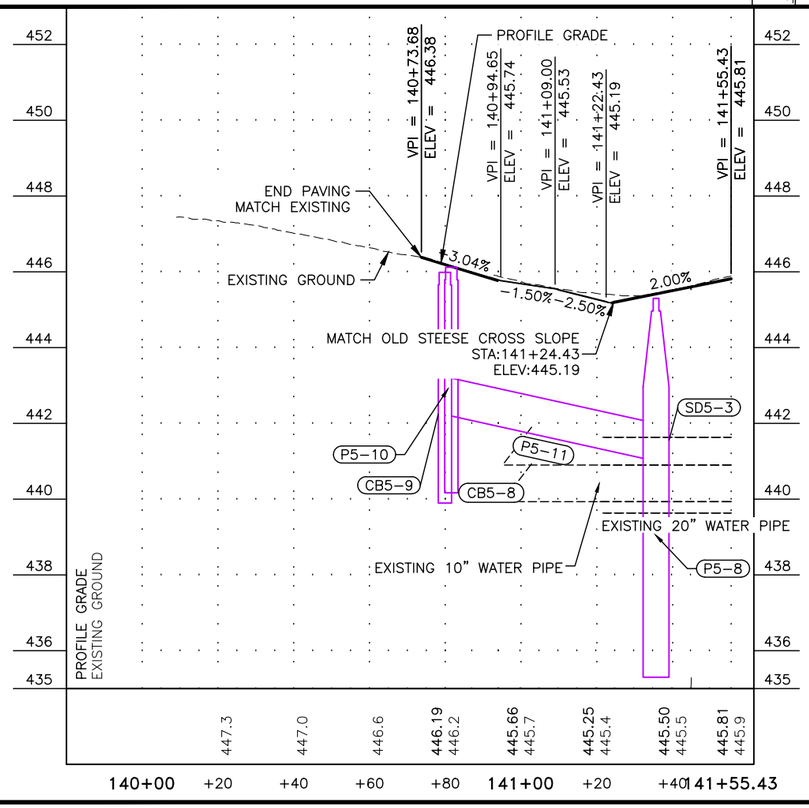
NO.	DATE	REVISION

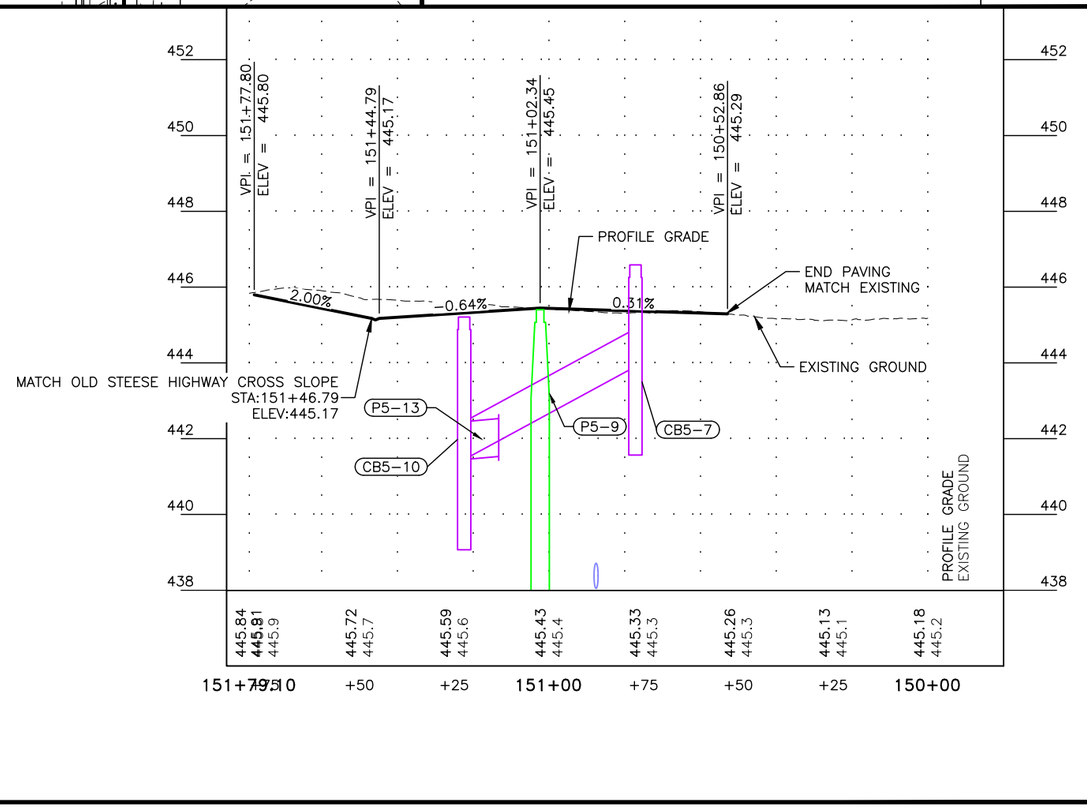
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F12	F24



P&P SHTS FRED MEYER–BLAIR RD

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGR





PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-F12 Tue, Oct/18/22 09:56am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F13	F24

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

END PAVING
"SD" 121+45.01
N=202781.90
E=682780.61

HELMERICKS AVENUE

CB7-7

CB7-8

P7-10

P7-11

P.I. STA "SD" 123+22.93
N = 202845.0257
E = 682946.9483
Δ = 7°02'02"
D = 6°17'46"
T = 55.93'
L = 111.72'
R = 910.00'

R/W

"SD" 122+00

"SD" 123+00

"SD" 124+00

"SD" 125+00

"SD" 126+00

"SD" 127+00

121+00

"0" 61+00

"0" 60+84.46
"SD" 124+36.02

"0" 60+00

N 69°13'05" E ~ 267.00'

N 76°15'08" E ~ 242.50'

ABANDONED SERVICE LINE

"SD"122+67.00 PC

"SD"123+78.71 PT

"SD"126+21.21 PC

CB7-6

P7-9

P7-8

P13-3

P13-2

P13-1

CB13-2

CB13-1

END PAVING
"SD" 125+88.49
N=202908.17
E=683205.04

BASIN, SEE SHT E14

LANDSCAPE, TREE

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

SELECTIVE TREE REMOVAL

BASIN, SEE SHT E14

OLD STEESE HIGHWAY

+03.48
39.93' RT

+09.04
39.90' RT

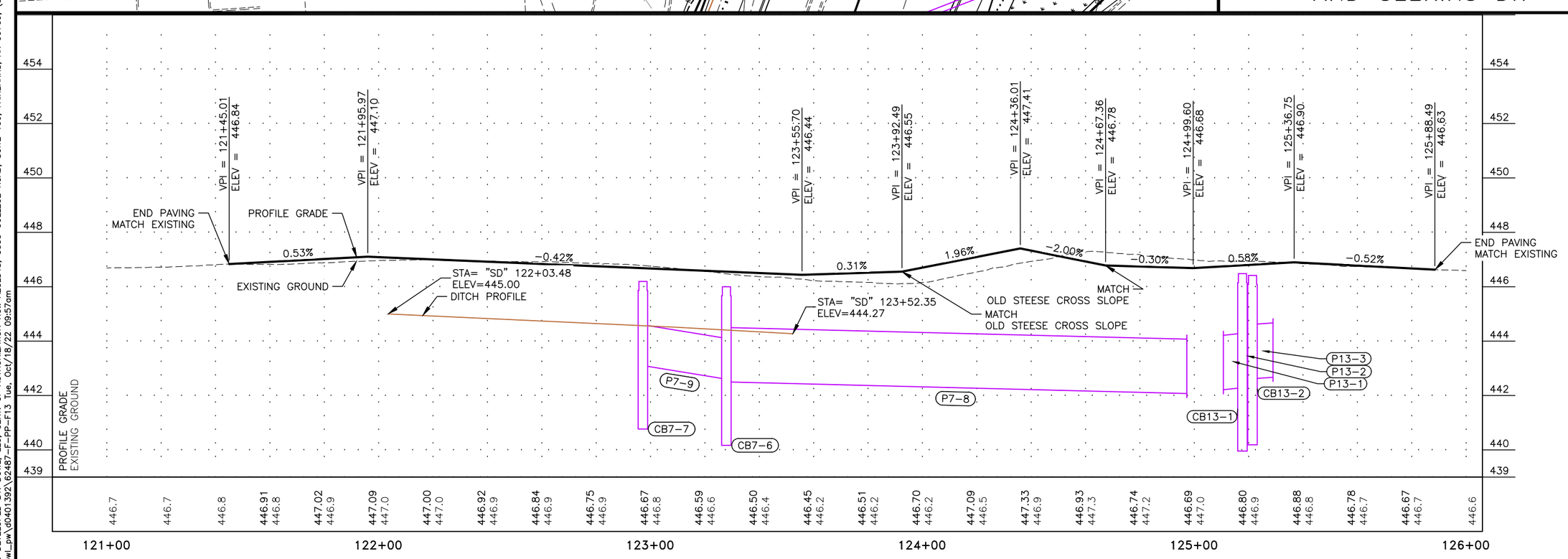
+52.30
70.16' RT

+66.21
80.81' RT

SEEKINS DRIVE

P&P SHTS HELMERICKS AVE AND SEEKINS DR

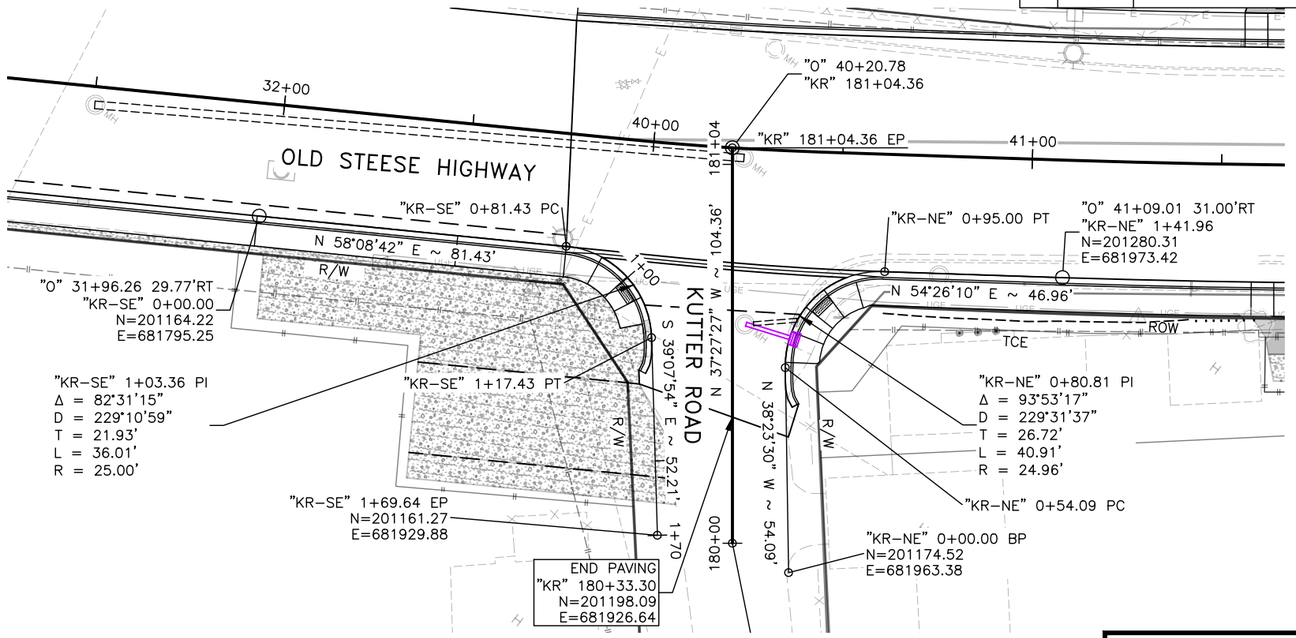
STATE OF ALASKA
49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER



PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-F13 Tue, Oct/18/22 09:57am

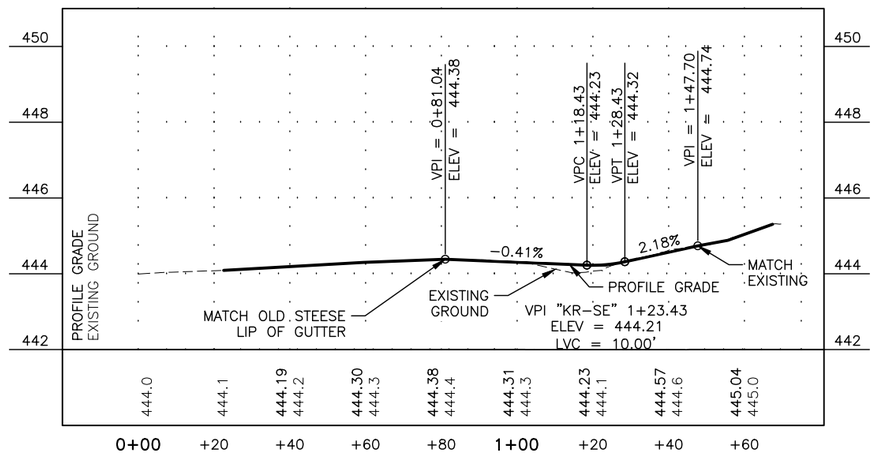
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F14	F24

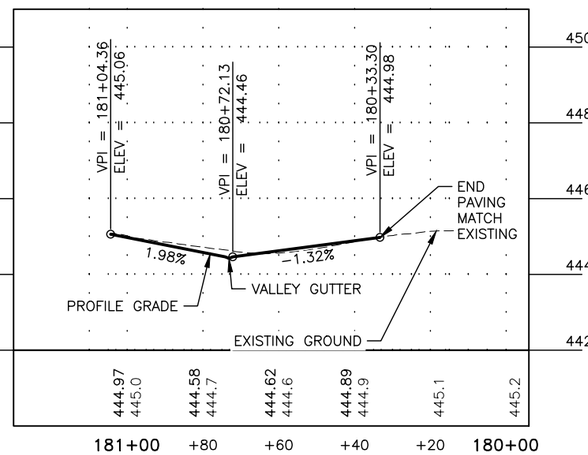


P&P SHTS KUTTER RD
CENTERLINE & CURB RETURNS

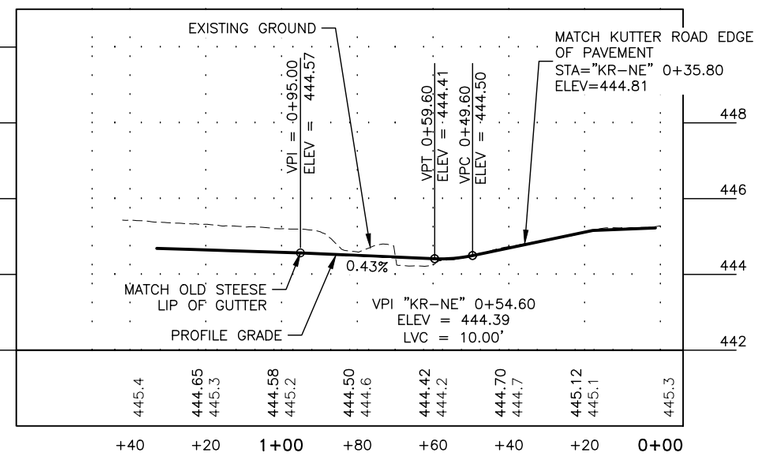
STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT SEALED PROFESSIONAL ENGINEER



KR-SE



KR

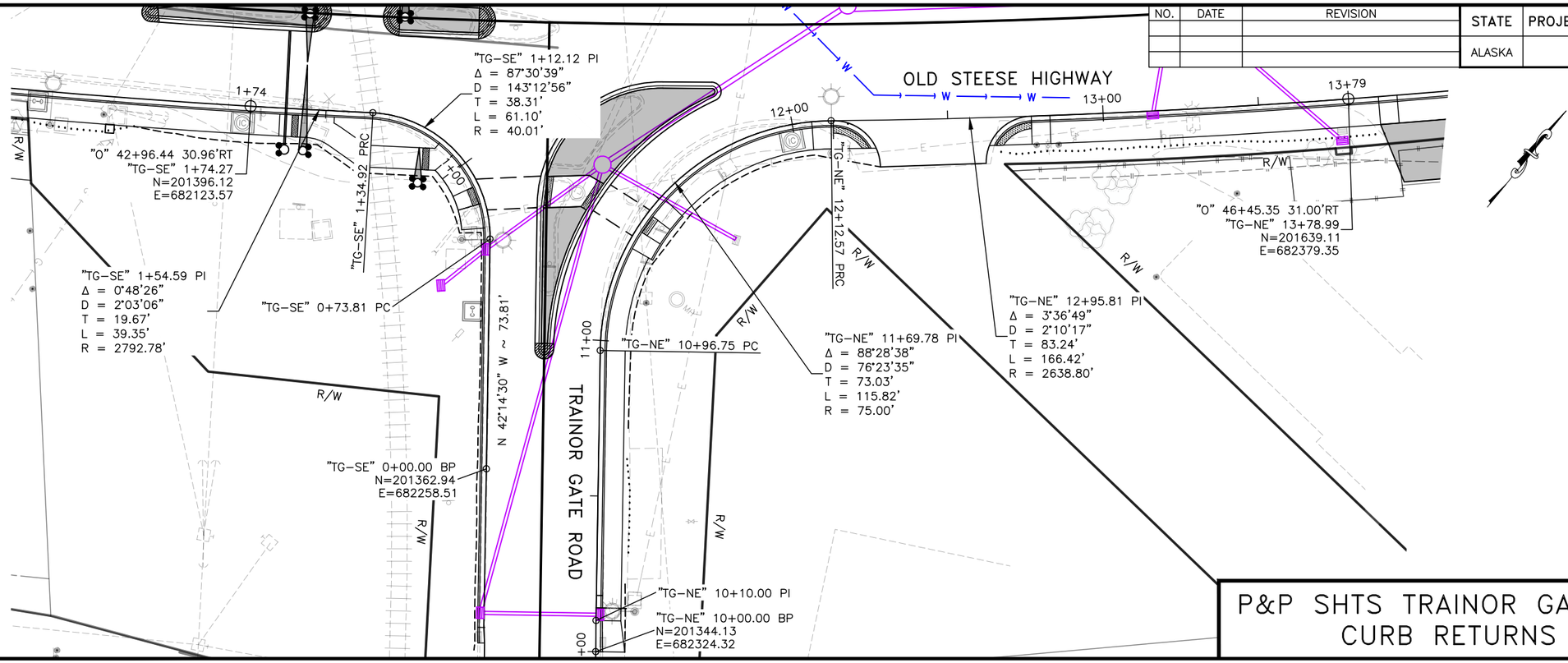


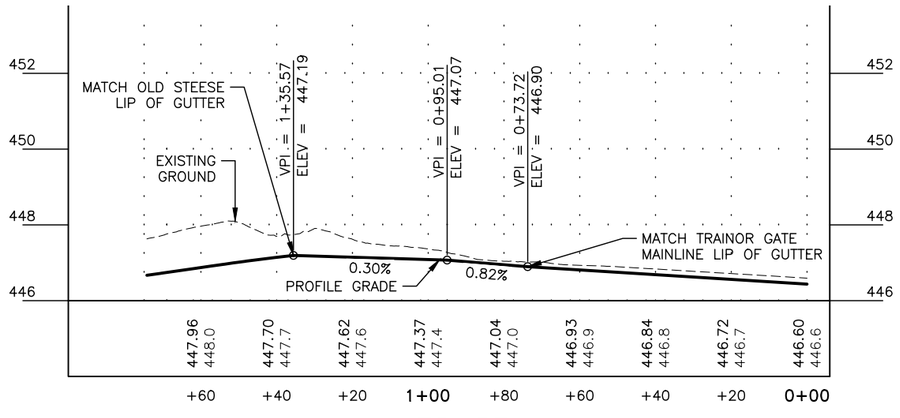
KR-NE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F14 Tue, Oct/18/22 10:01am

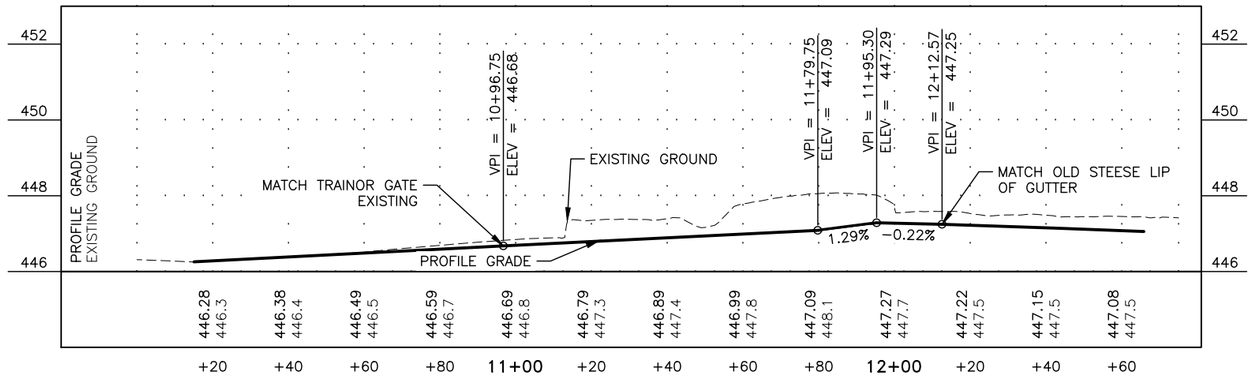
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F15	F24





TG-SE



TG-NE

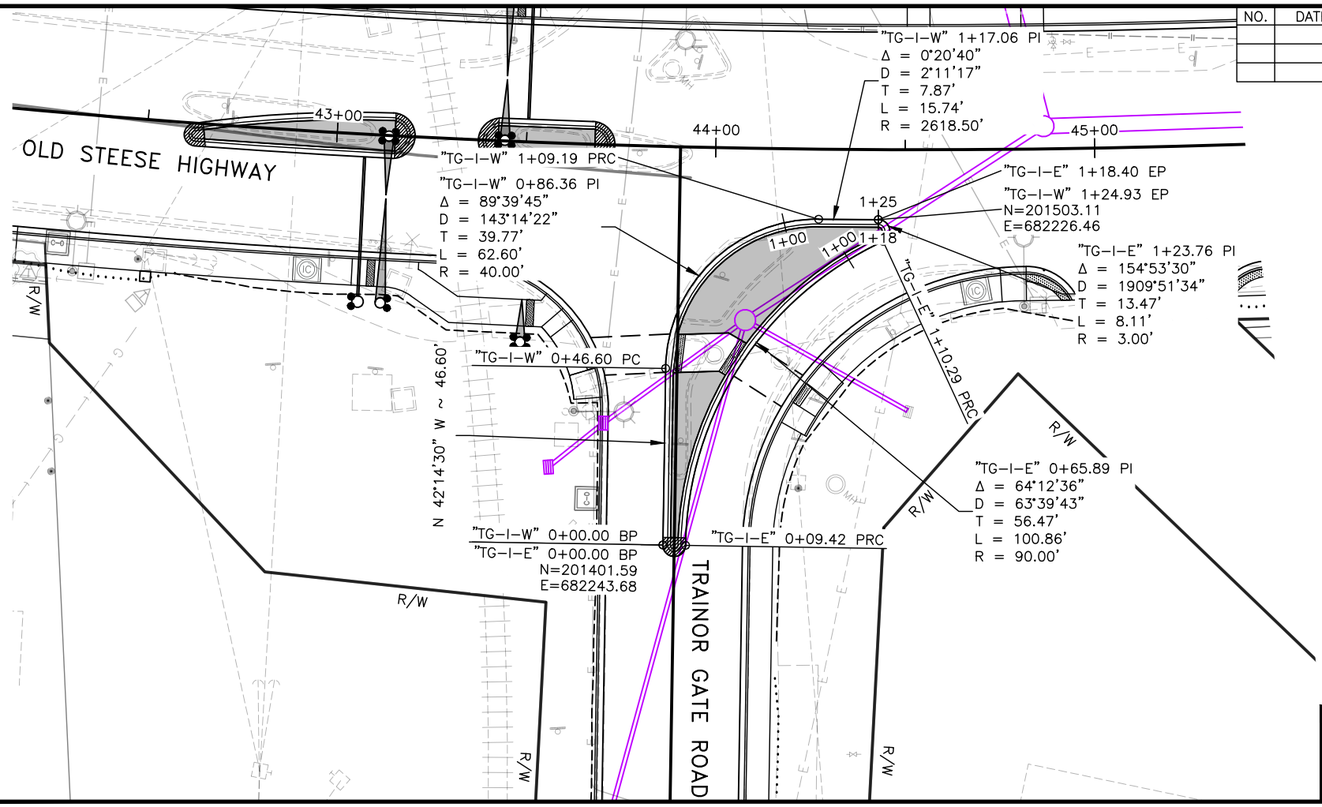
P&P SHTS TRAINOR GATE RD CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F15 Tue, Oct/18/22 10:03am

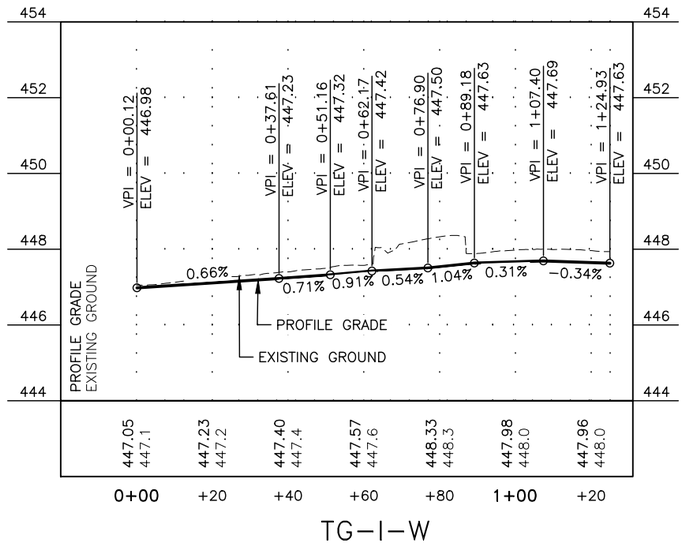
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F16	F24

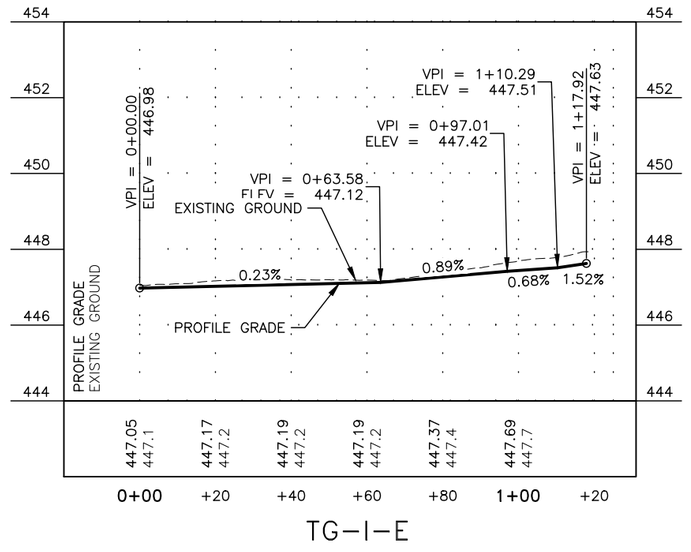


P&P SHTS TRAINOR GATE RD
ISLAND CURB RETURNS

STATE OF ALASKA
49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER



TG-I-W

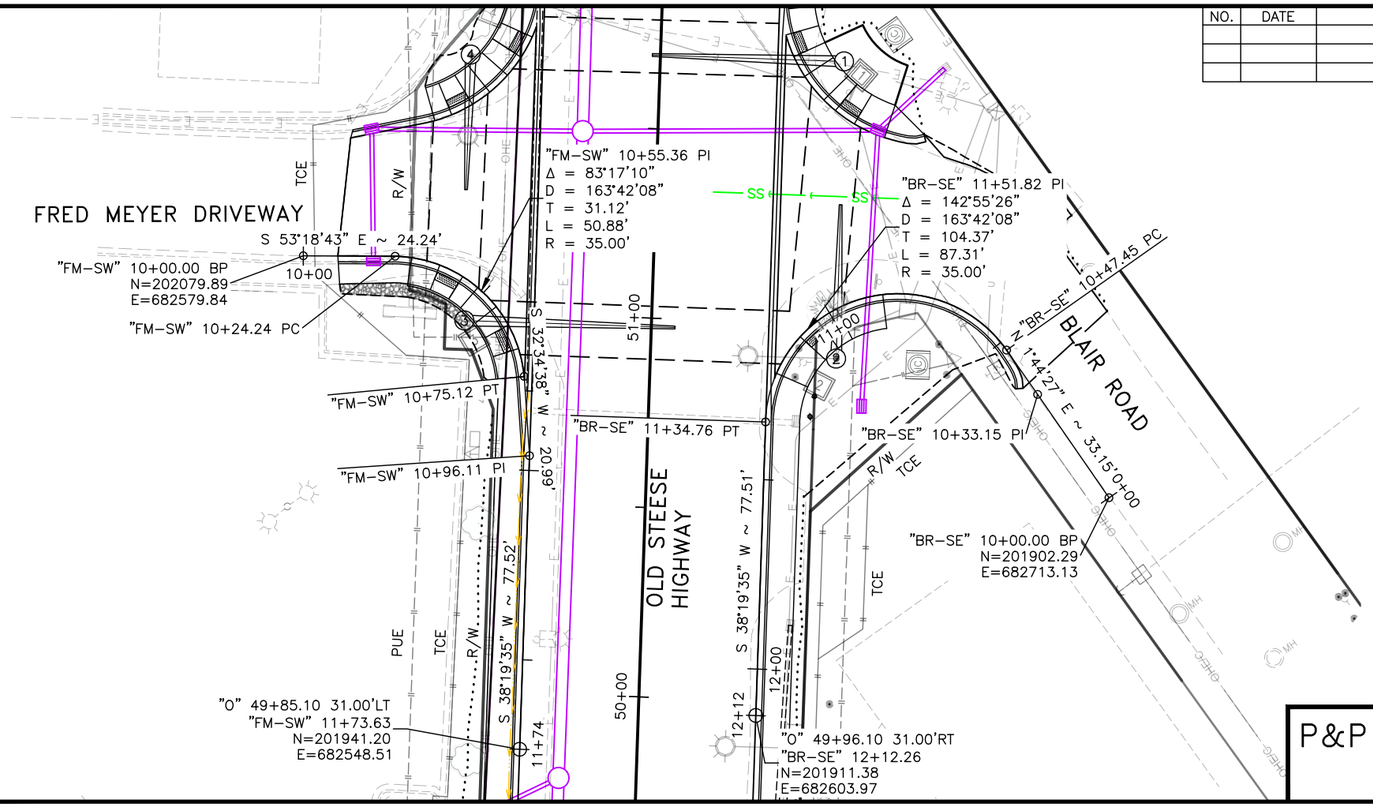


TG-I-E

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F16 Tue, Oct/18/22 10:05am

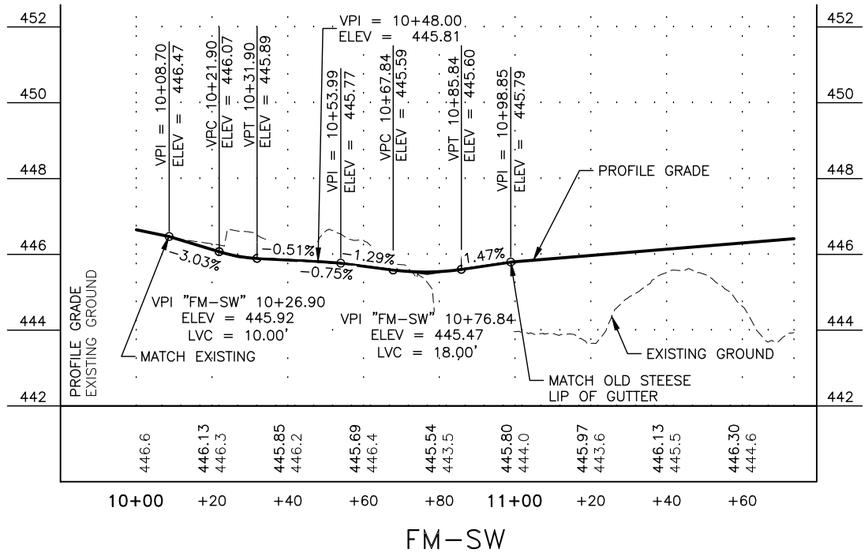
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F17	F24

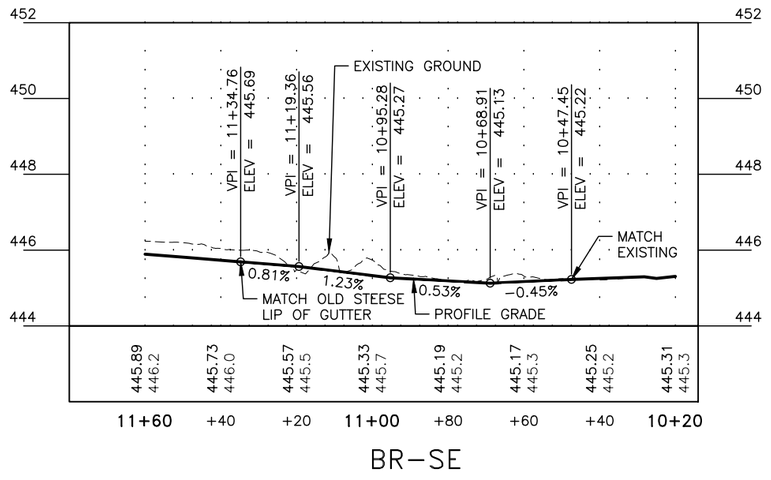


P&P SHTS FRED MEYER–BLAIR RD CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
LICENSED PROFESSIONAL ENGINEER



FM–SW

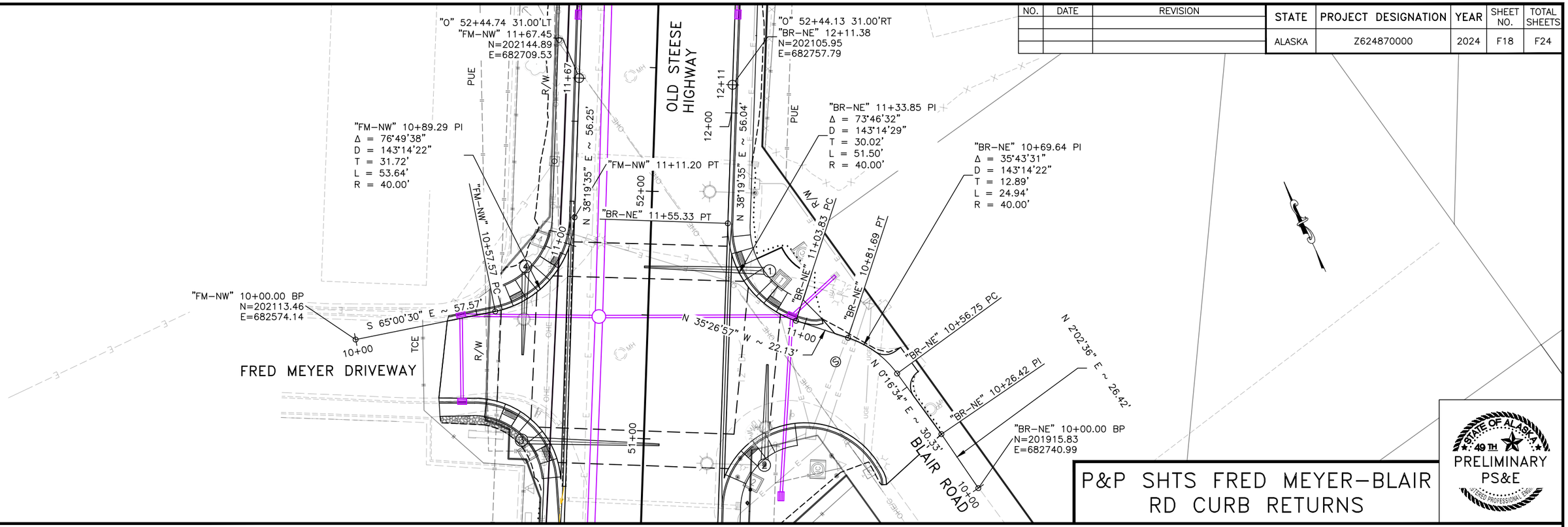


BR–SE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F17 Tue, Oct/18/22 10:07am

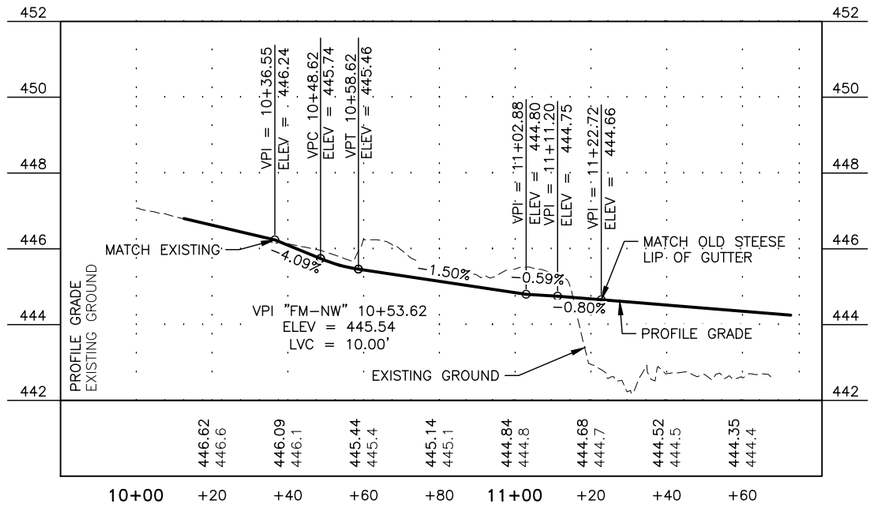
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F18	F24

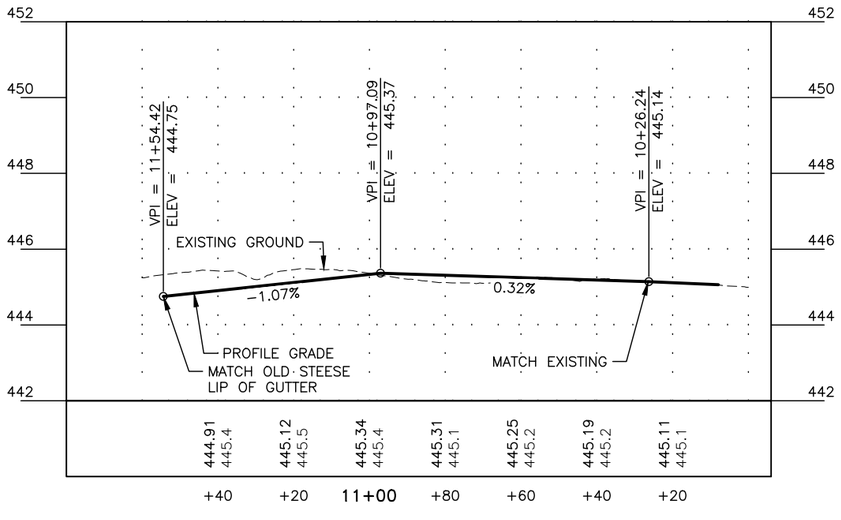


P&P SHTS FRED MEYER–BLAIR RD CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER



FM–NW

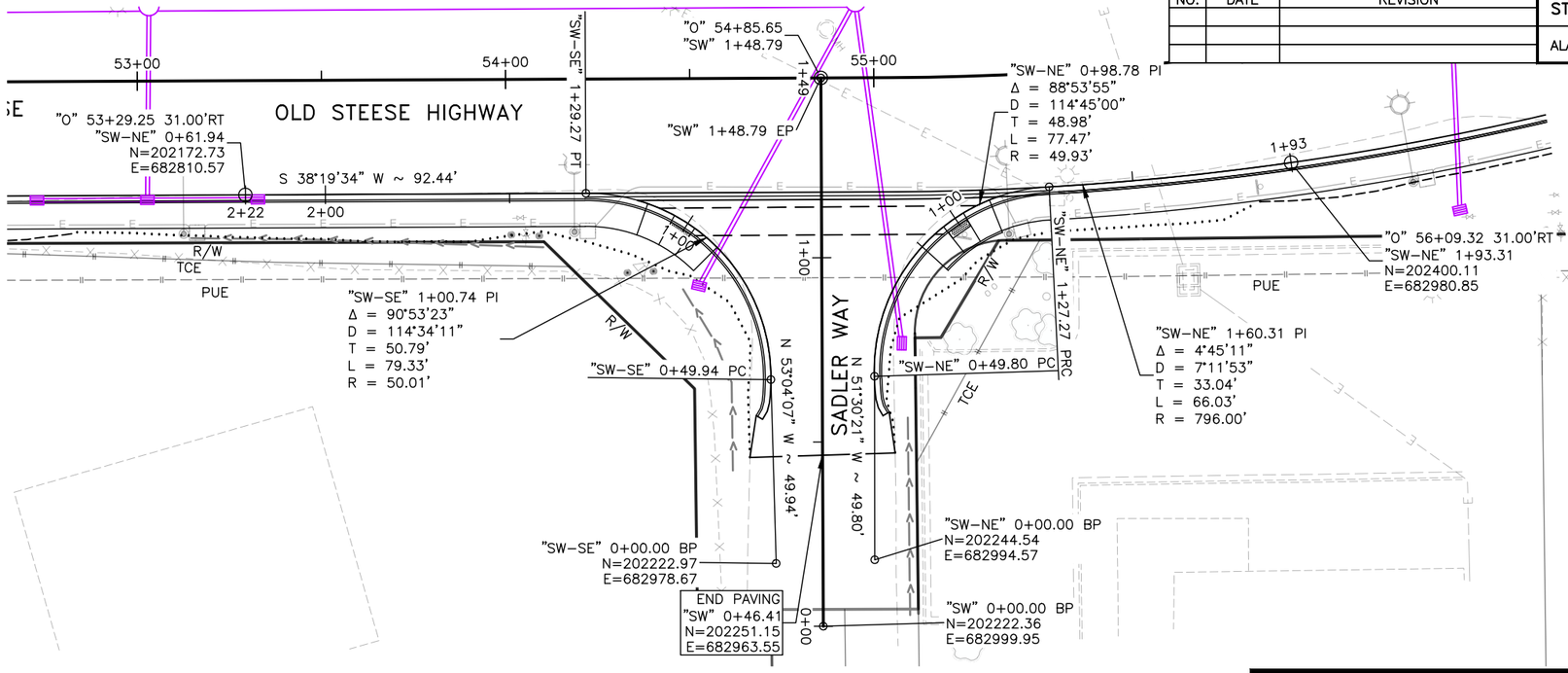


BR–NE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F18 Tue, Oct/18/22 10:08am

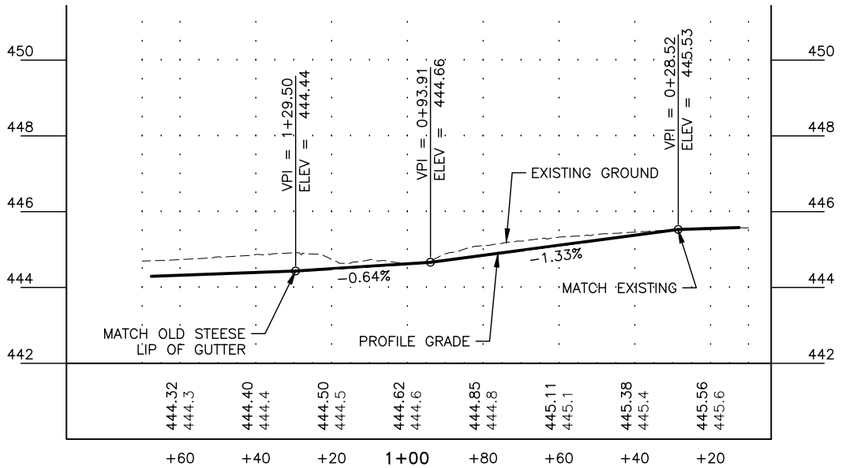
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F19	F24

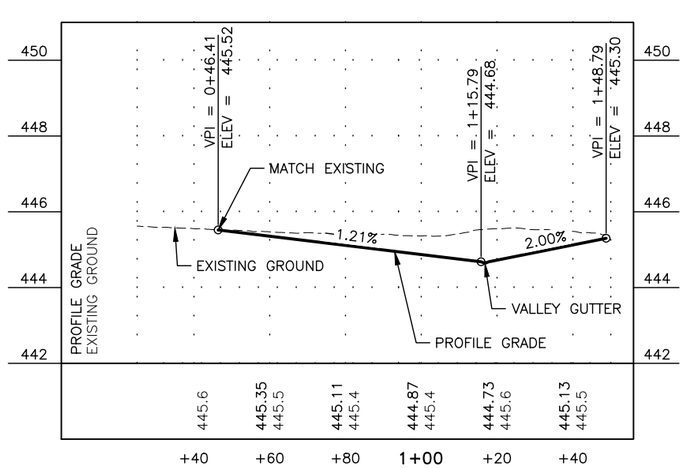


P&P SHTS SADLER WAY CENTERLINE & CURB RETURNS

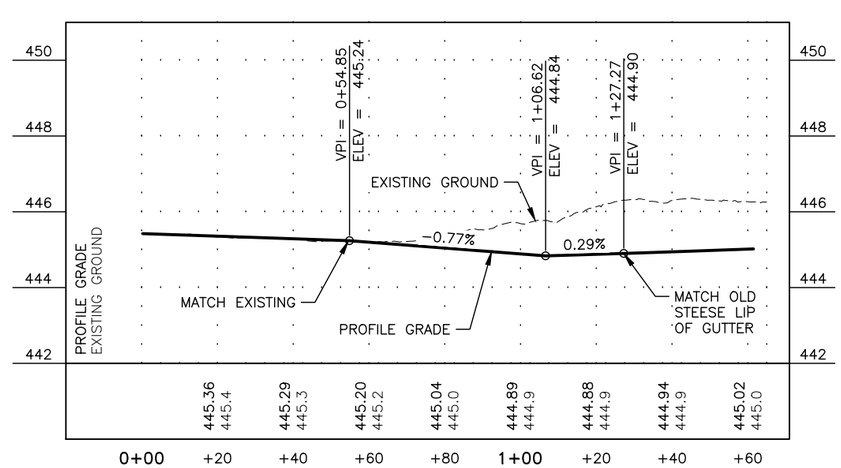
STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER



SW-SE

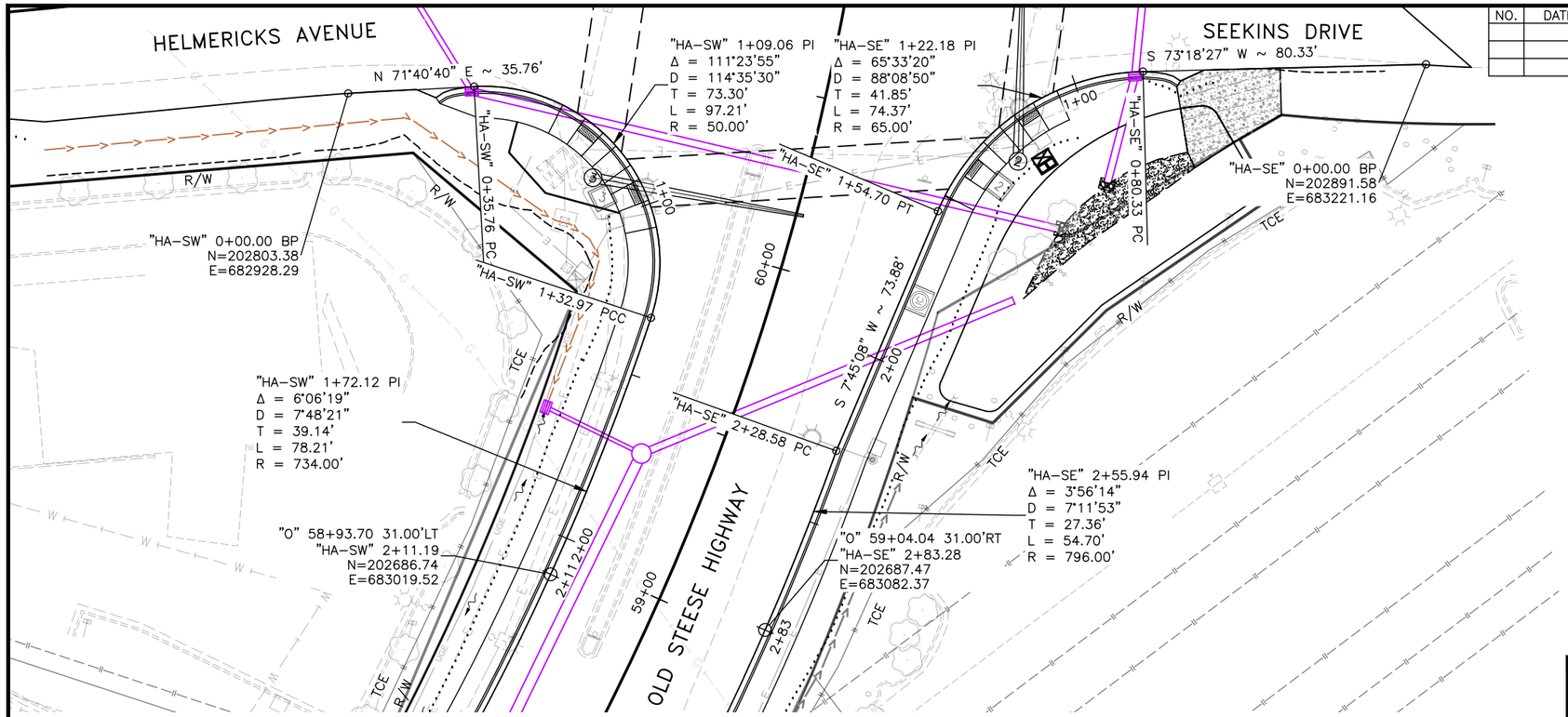


SW



SW-NE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F19 Tue, Oct/18/22 10:09am

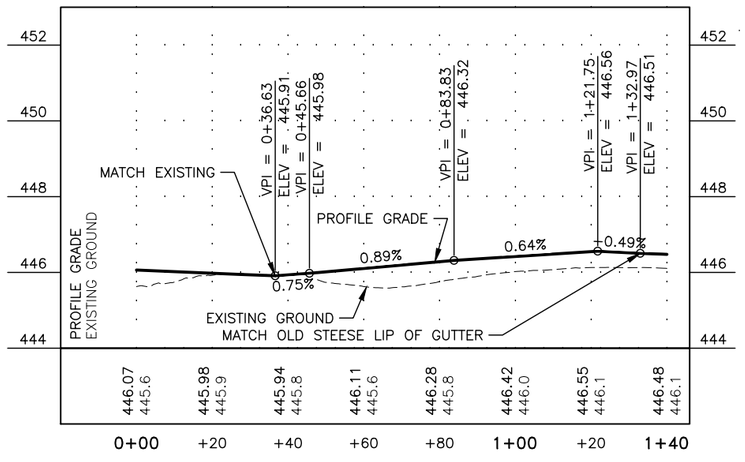


NO.	DATE	REVISION

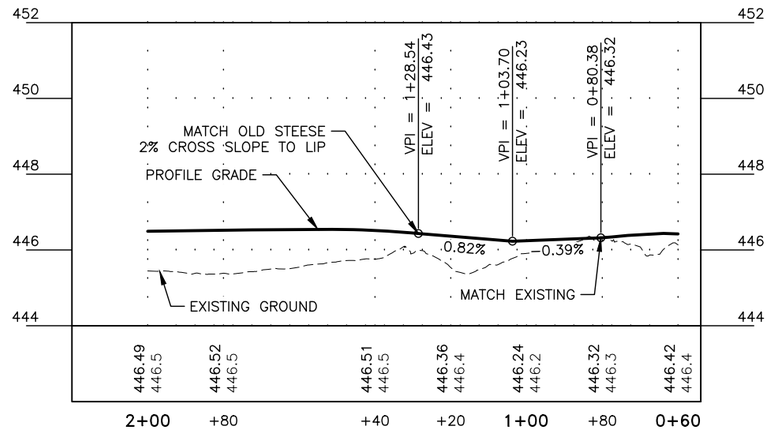
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F20	F24

P&P SHTS HELMERICKS AVE CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER



HA–SW

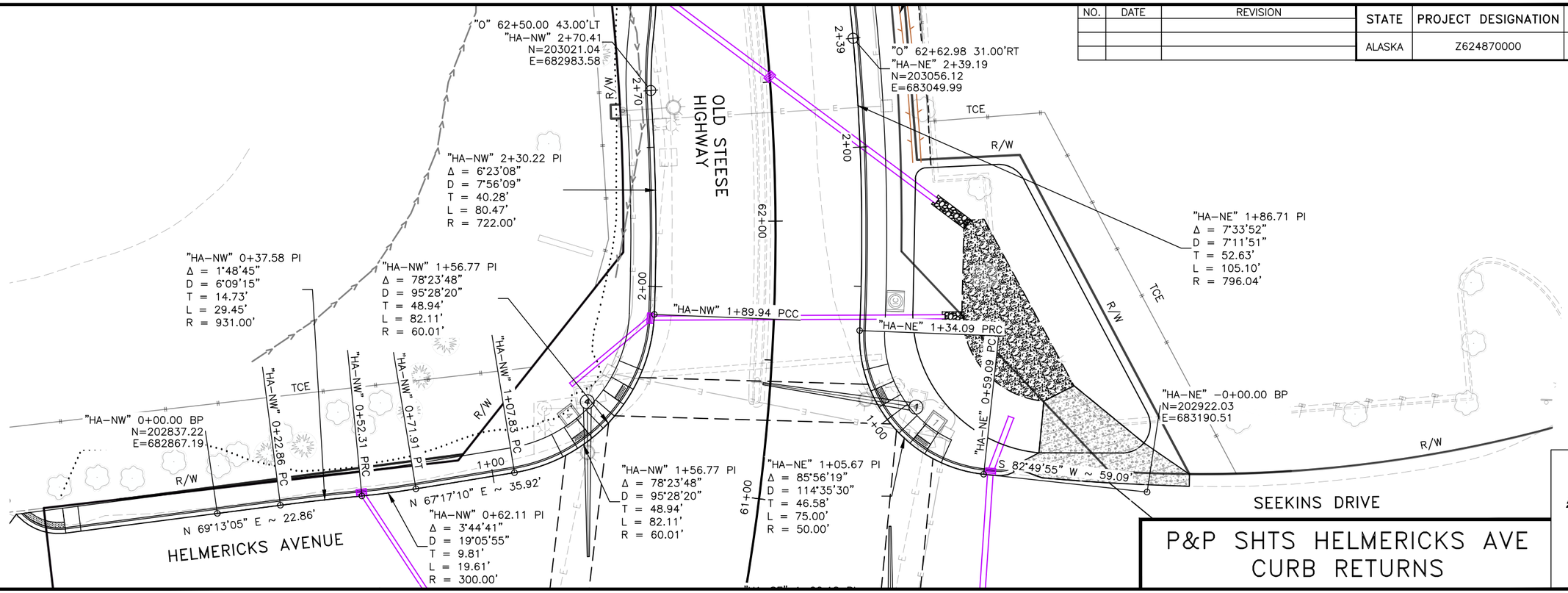


HA–SE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F20 Tue, Oct/18/22 10:11am

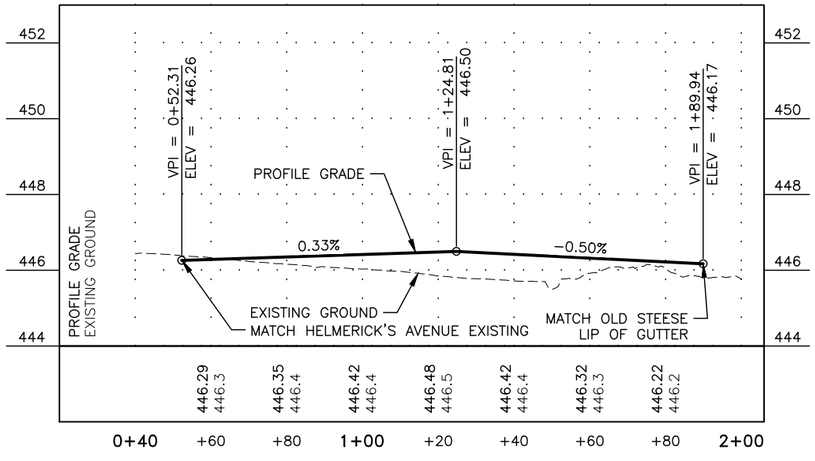
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F21	F24

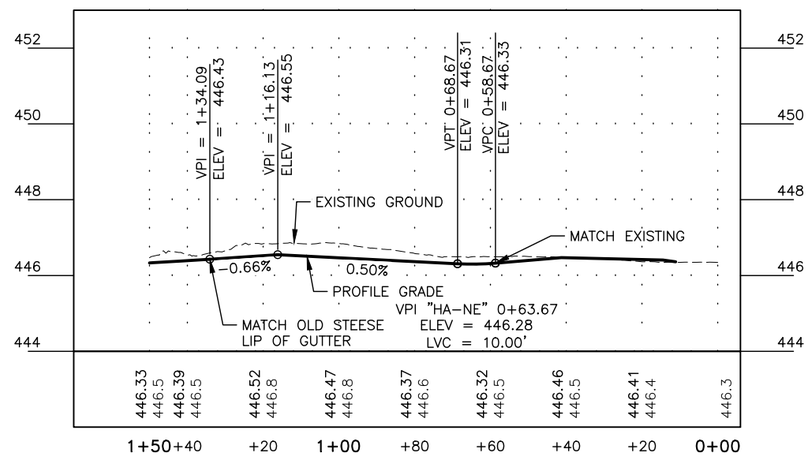


P&P SHTS HELMERICKS AVE CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION



HA–NW

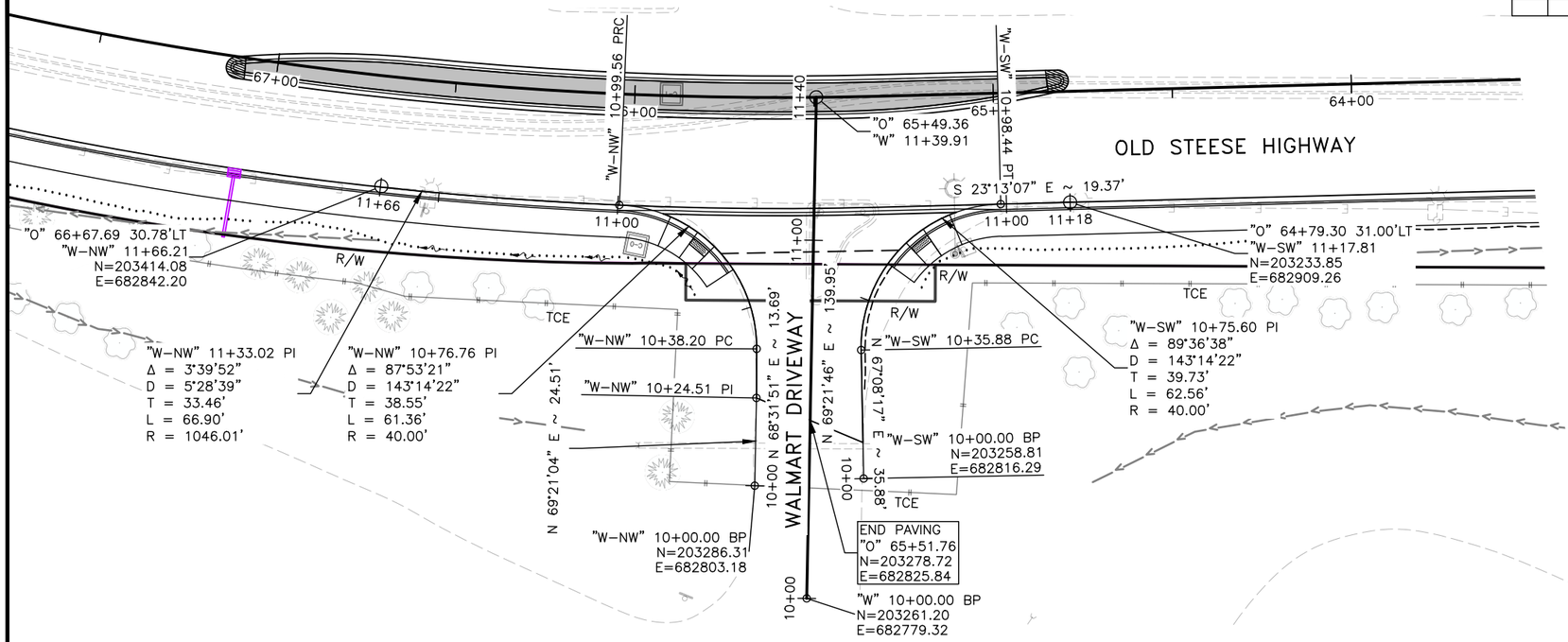


HA–NE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F21 Tue, Oct/18/22 10:12am

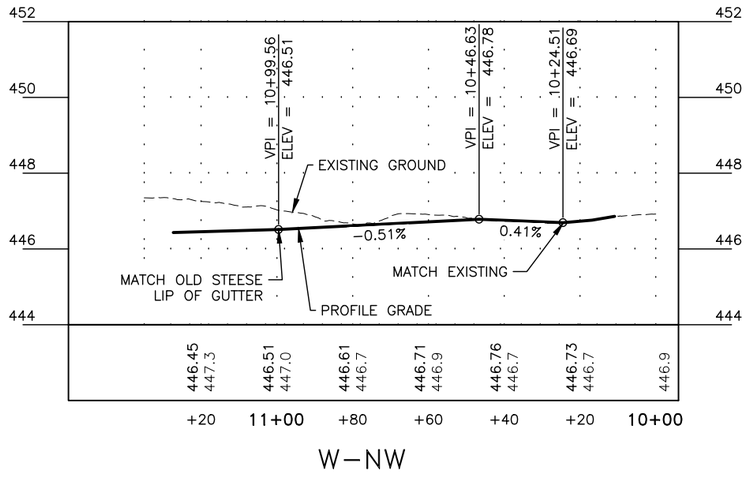
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F22	F24

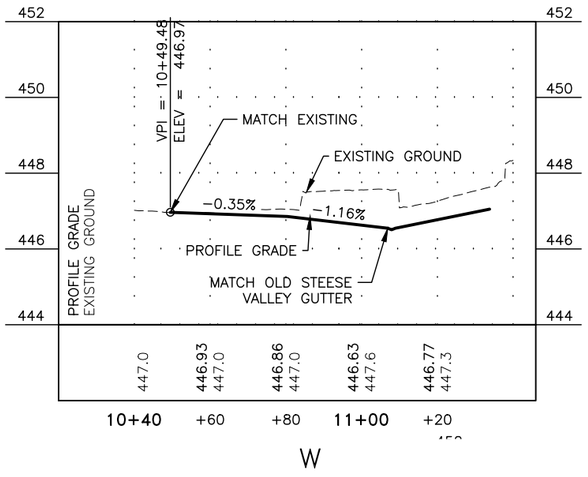


P&P SHTS WALMART CENTERLINE & CURB RETURNS

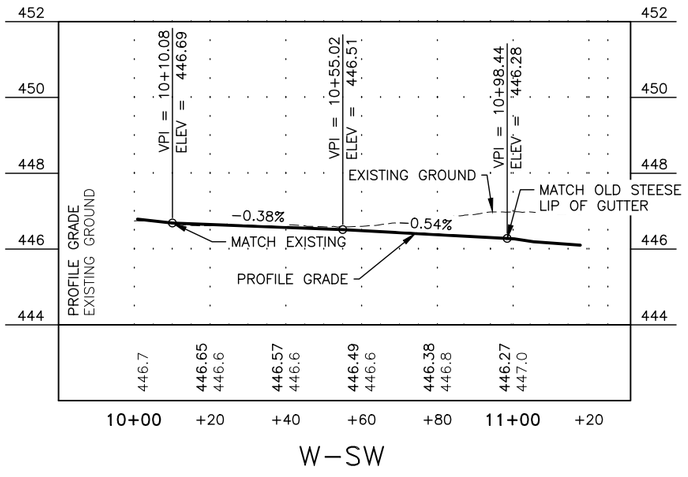
STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT SEALED PROFESSIONAL ENGINEER



W-NW



W

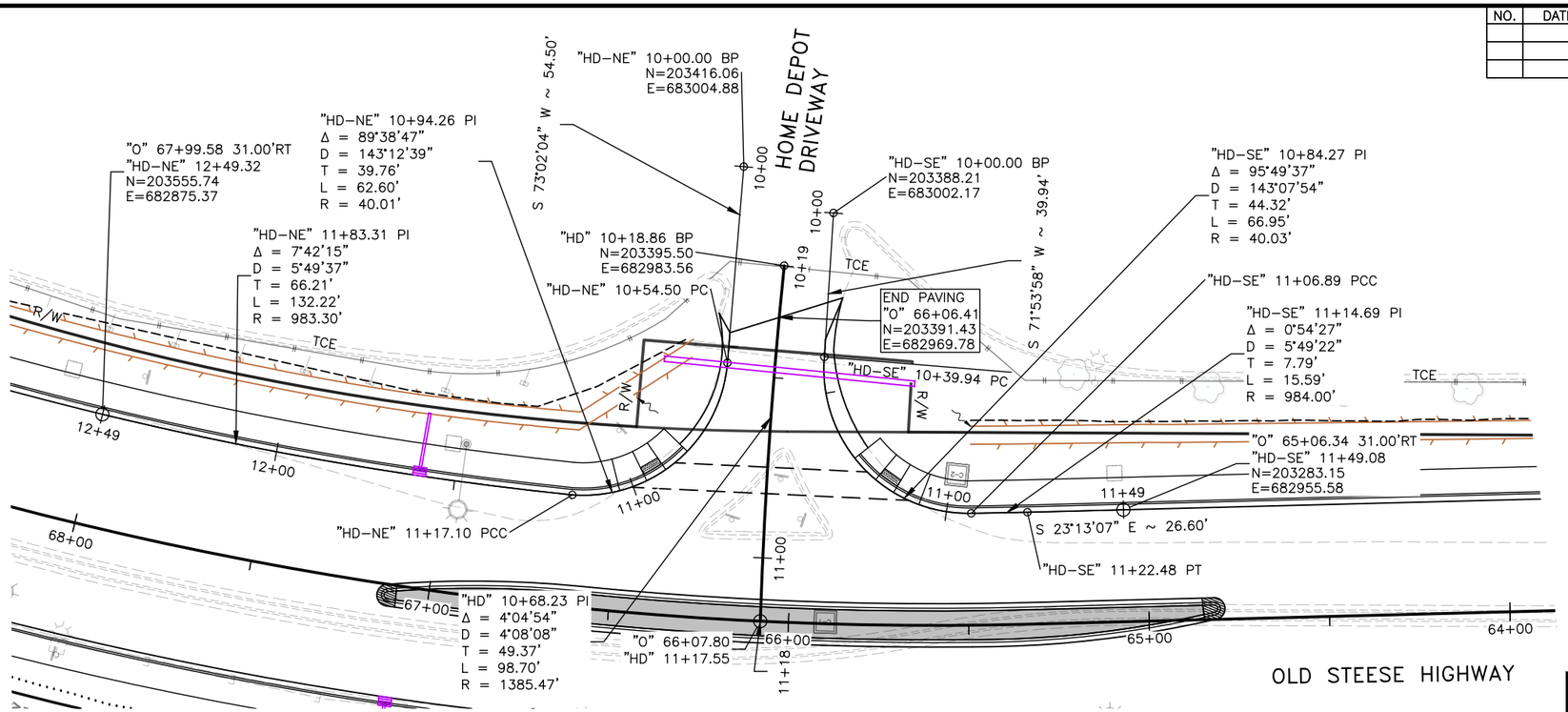


W-SW

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F22 Tue, Oct/18/22 10:14am

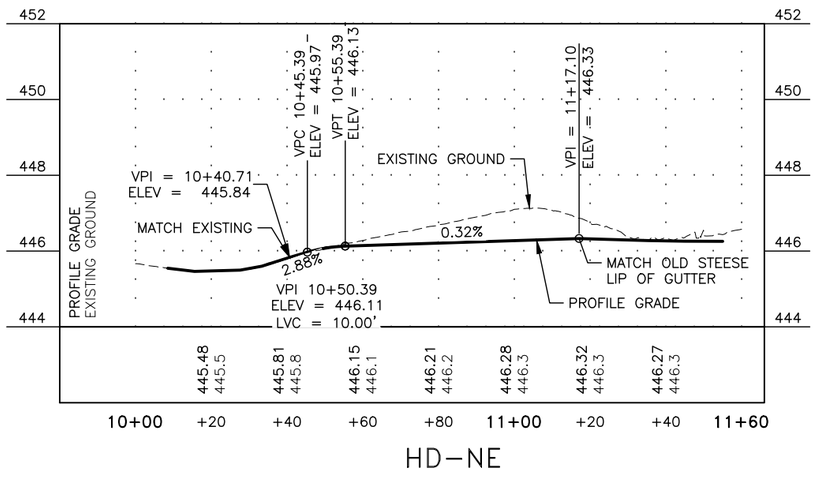
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F23	F24

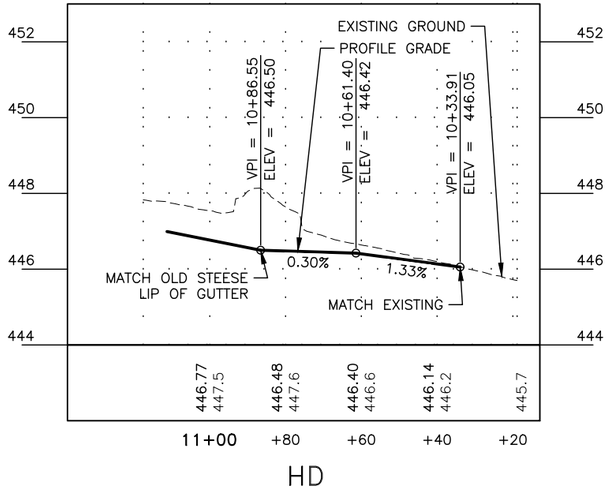


P&P SHTS HOME DEPOT CENTERLINE & CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER



HD–NE



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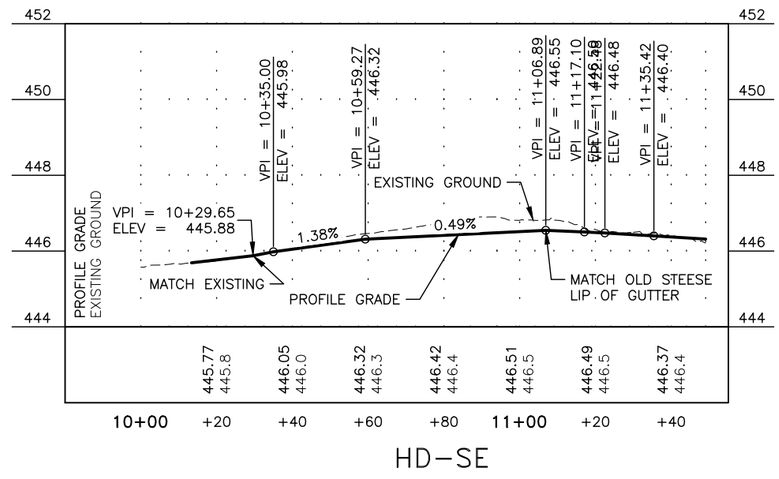
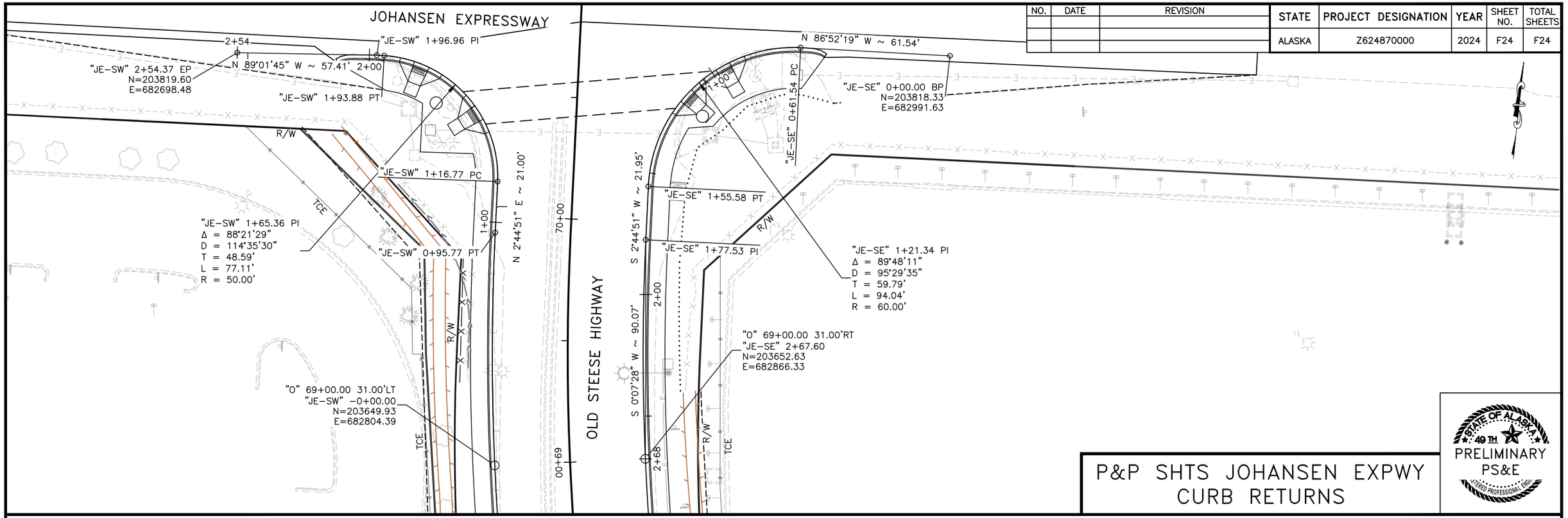


HD–SE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F23 Tue, Oct/18/22 10:15am

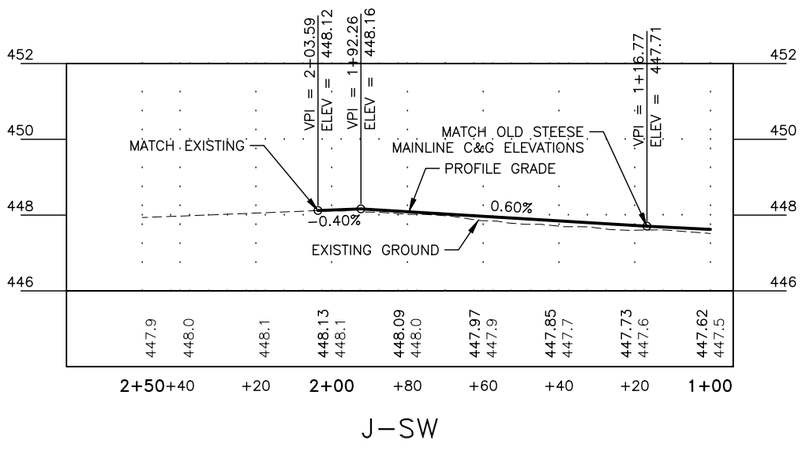
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	F24	F24

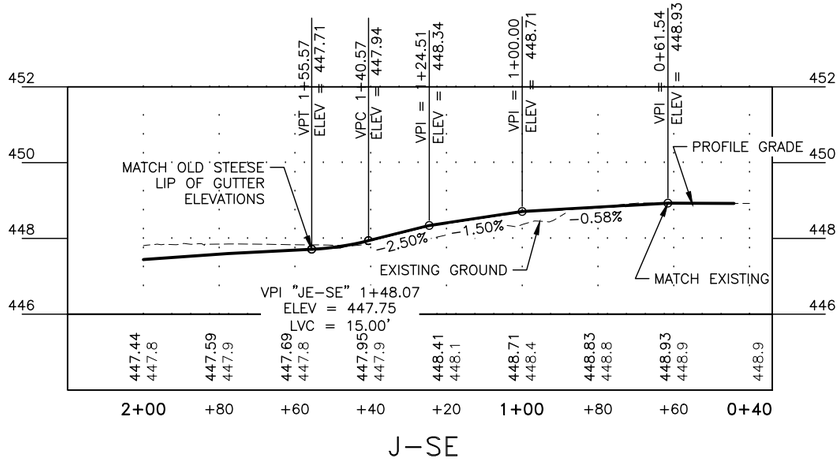


P&P SHTS JOHANSEN EXPWY CURB RETURNS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER



J–SW



J–SE

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-F-PP-Curb Returns-F24 Tue, Oct/18/22 10:17am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H1	H24

TRAFFIC MARKING NOTES

1. EXCEPT FOR PARKING STRIPING, ALL PROPOSED PAVEMENT MARKINGS SHALL BE INLAID METHYL METHACRYLATE (MMA).
2. TRANSITION NEW PAVEMENT MARKINGS TO MATCH EXISTING MARKINGS AT A 100:1 TAPER.
3. REMOVE ALL EXISTING PAVEMENT MARKINGS NOT COINCIDING WITH THE NEW MARKINGS.
4. DIMENSIONS REFER TO THE CENTER OF STRIPE, STRIPE GROUP, AND PAVEMENT EDGE.
5. AT MINOR SIDE STREETS, BREAK FOG LINE AT APPROACH RADII. DO NOT BREAK STRIPING AT DRIVEWAYS.
6. PAINT THE TOP AND FACE OF ALL RAMPED MEDIAN NOSES WITH 20 MILS OF SURFACE APPLIED YELLOW MMA MARKINGS.
7. STRIPING CONFIGURATIONS IN THIS PLAN SET ARE APPROXIMATE. THE CONTRACTOR SHALL PERFORM PRELIMINARY SPOTTING (RABBIT TRACKING) OF STRIPING AT LEAST 48 HOURS PRIOR TO APPLICATION OF MARKINGS. THE ENGINEER WILL THEN APPROVE THE LAYOUT OR MAKE MODIFICATIONS AS REQUIRED.
8. BEGIN PAVEMENT MARKINGS BY INSTALLING THE INTERSECTION CROSSWALKS FIRST. LAYOUT THE CROSSWALKS IN ACCORDANCE WITH STANDARD PLAN T-23.01, UNLESS OTHERWISE, CROSSWALK LAYOUT LOCATIONS ARE CALLED OUT ON THE PLANS.

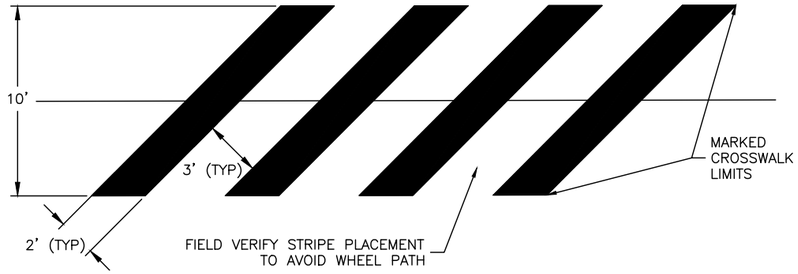
TRAFFIC MARKING KEY

4"W	4" WHITE LINE
4"WS	4" WHITE SKIP LINE (10' STRIPE/30' SKIP PATTERN)
4"WD-1	4" WHITE DOTTED LINE (2' STRIPE/6' SKIP PATTERN)
4"WD-2	4" WHITE DOTTED LINE (2' STRIPE/4' SKIP PATTERN)
4"Y	4" YELLOW LINE
4"DY	4" DOUBLE YELLOW LINE
4"YS	4" YELLOW SKIP LINE (10' STRIPE/30' SKIP PATTERN)
8"W	8" WHITE LINE
8"WD-1	8" WHITE WIDE DOTTED LINE (3' STRIPE/9' SKIP PATTERN)
24"W	24" WHITE LINE
ASP	ALASKA STANDARD PLAN

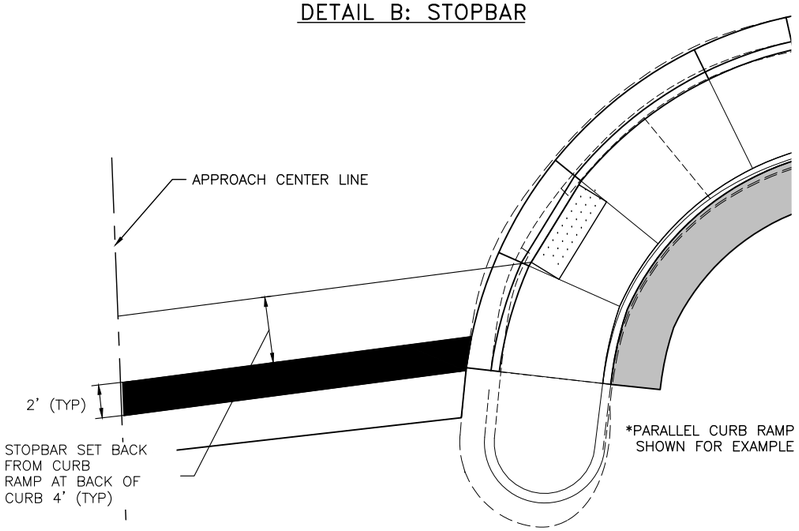
SIGN SYMBOL KEY:

(#) STATION
SIGN CODE(S)

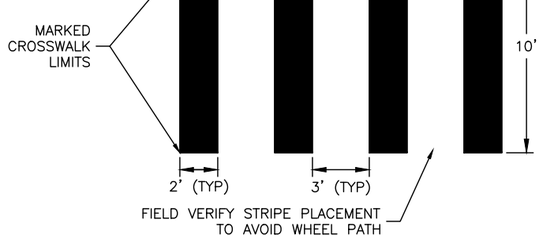
DETAIL A: SKEWED LONGITUDINAL CROSSWALK



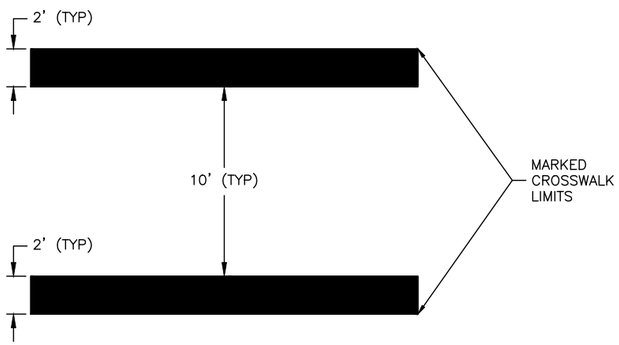
DETAIL B: STOPBAR



DETAIL C: LONGITUDINAL CROSSWALK



DETAIL D: TRANSVERSE CROSSWALK



670.0010.0000 – METHYL METHACRYLATE PAVEMENT MARKINGS

DESCRIPTION	QUANTITY	UNIT	REMARKS
YELLOW (Y) CURB NOSES	309	SF	
TOTAL:	309	SF	

670.0013.0000 – PAINTED TRAFFIC MARKINGS

DESCRIPTION	QUANTITY	UNIT	REMARKS
4"Y	121.4	LF	
TOTAL:	121.4	LF	
PAY ITEM QUANTITY	122	LF	

670.2002.0000 – MMA PAVEMENT MARKINGS, INLAID

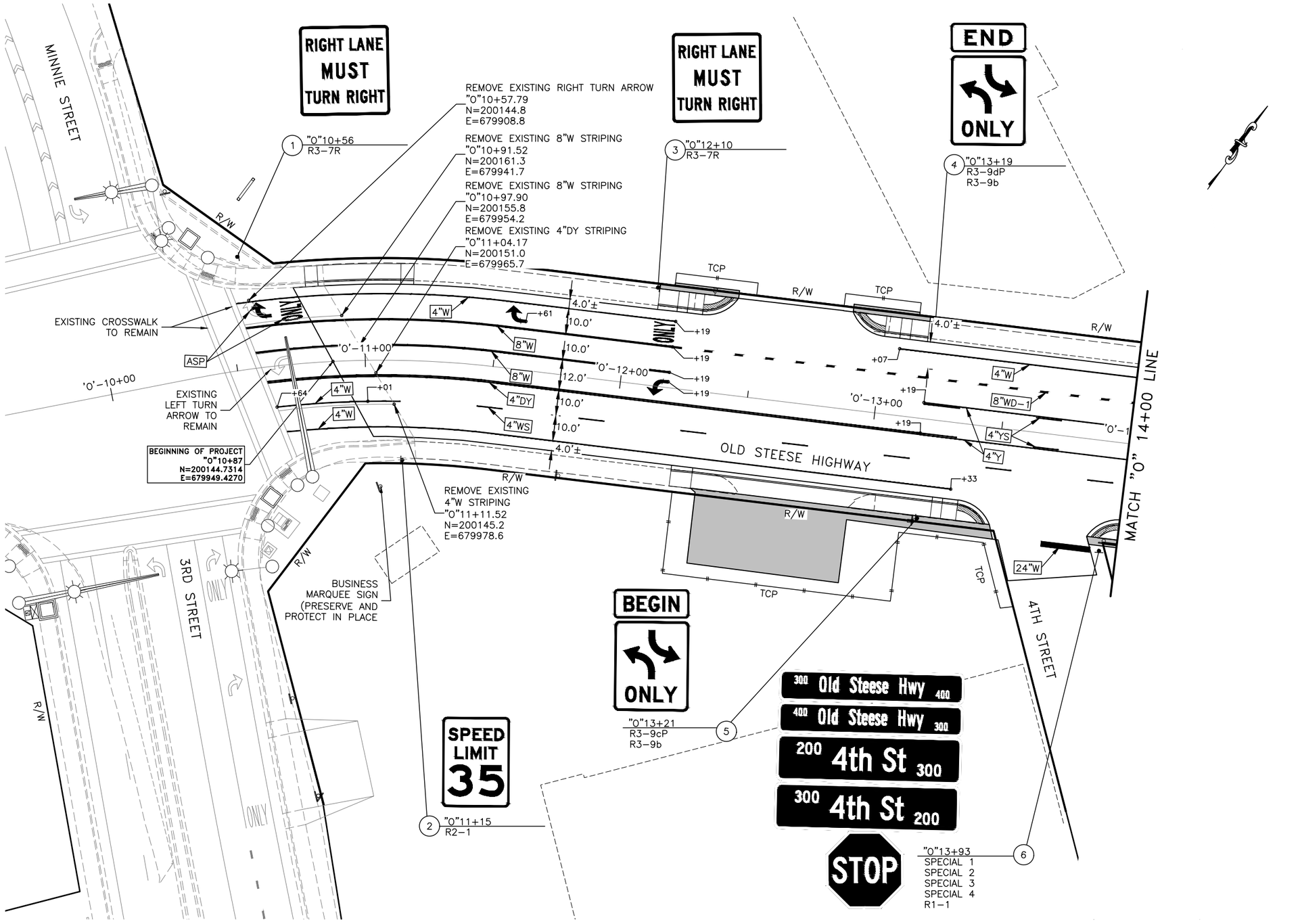
DESCRIPTION	QUANTITY	UNIT	REMARKS
4"W	11,928	LF	
4"WS	5,972	LF	DOES NOT INCLUDE SKIPS
4"WD-1	488	LF	DOES NOT INCLUDE SKIPS
4"WD-2	119	LF	DOES NOT INCLUDE SKIPS
4"Y	4,217	LF	
4"YS	3,981	LF	DOES NOT INCLUDE SKIPS
4"DY	3,350	LF	TWO 4"Y STRIPES
8"W	4,452	LF	
8"WD-1	2,061	LF	DOES NOT INCLUDE SKIPS
TOTAL:	36,568	LF	
WHITE (W) CHEVRONS	434	SF	
24" W	6,197	SF	
WHITE (W) SOLID GORE STRIPE	18	SF	
YELLOW (Y) DIAGONALS	258	SF	
TOTAL:	6,907	SF	
TURN ARROW	65	EACH	
THROUGH AND RIGHT TURN ARROW	4	EACH	
ONLY	6	EACH	
RAILROAD "XX"	3	EACH	
RAILROAD "RR"	6	EACH	
TOTAL:	84	EACH	

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

TRAFFIC LEGEND AND NOTES

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H2	H24



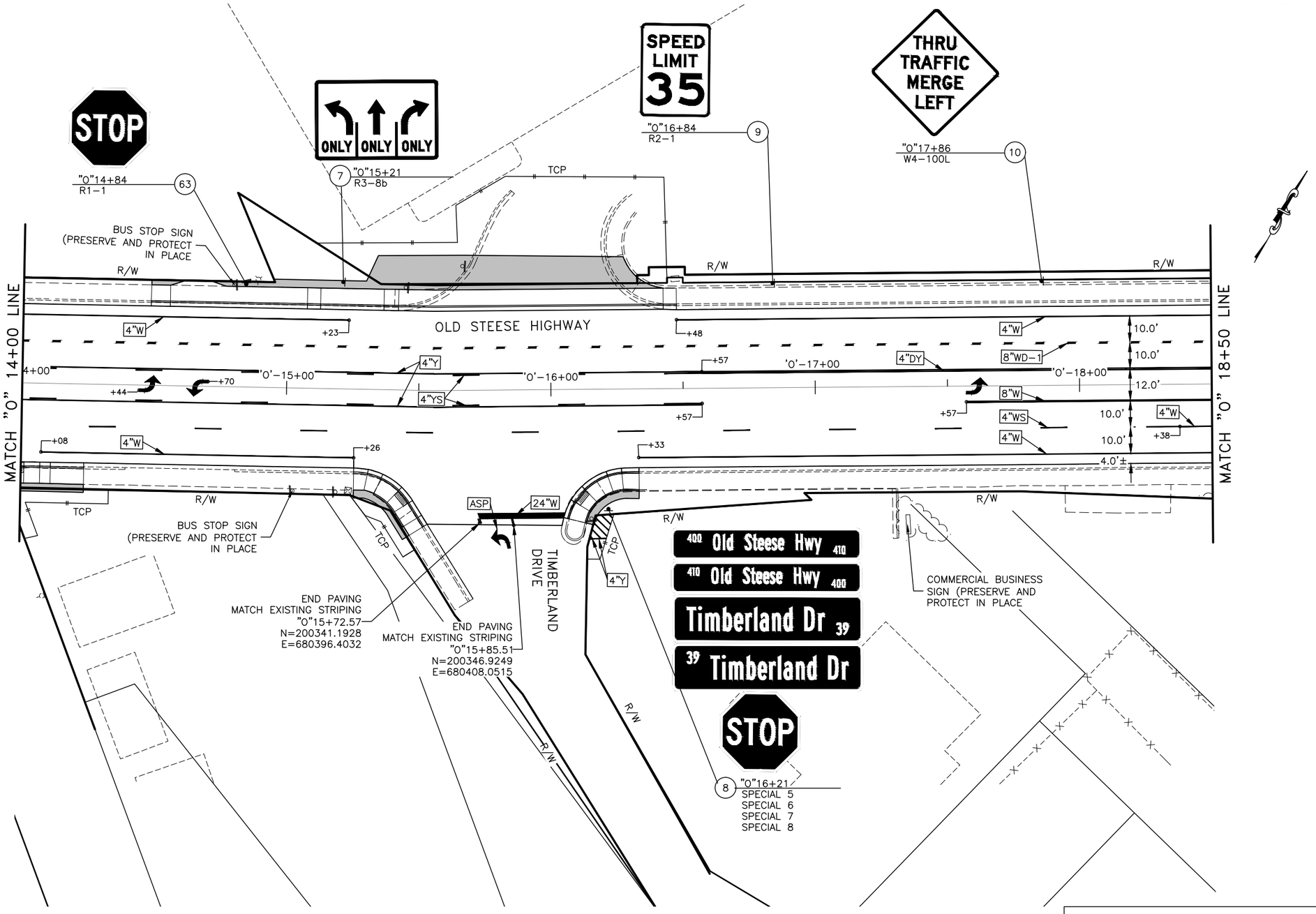
SIGNING & STRIPING STA. 11+00–14+00

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-H-SignStripe-H2 Tue, Oct/18/22 10:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H3	H24



SIGNING & STRIPING STA. 14+00–18+50

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

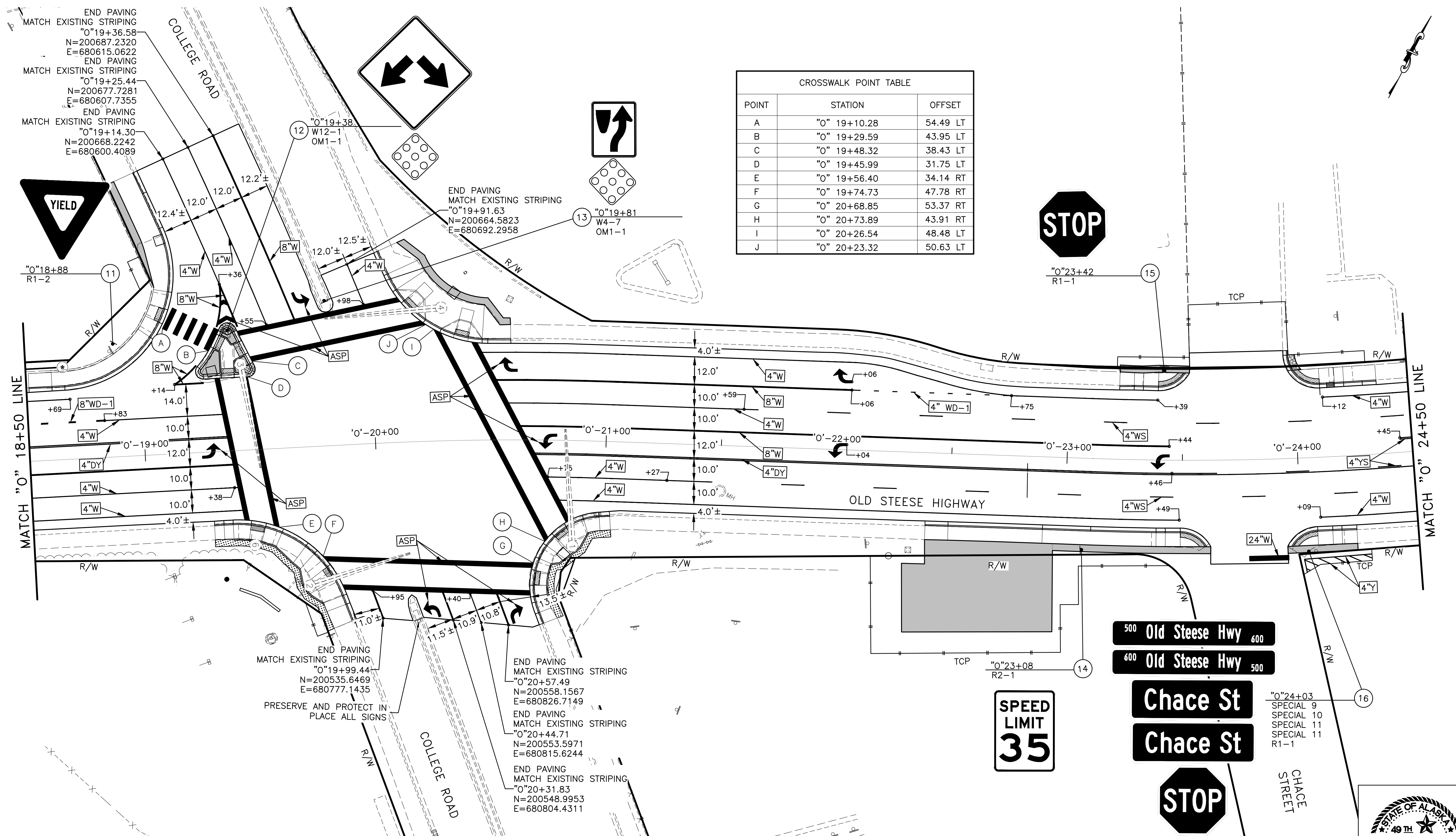
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-H-SignStripe-H3 Tue, Oct/18/22 10:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H4	H24

CROSSWALK POINT TABLE

POINT	STATION	OFFSET
A	"O" 19+10.28	54.49 LT
B	"O" 19+29.59	43.95 LT
C	"O" 19+48.32	38.43 LT
D	"O" 19+45.99	31.75 LT
E	"O" 19+56.40	34.14 RT
F	"O" 19+74.73	47.78 RT
G	"O" 20+68.85	53.37 RT
H	"O" 20+73.89	43.91 RT
I	"O" 20+26.54	48.48 LT
J	"O" 20+23.32	50.63 LT



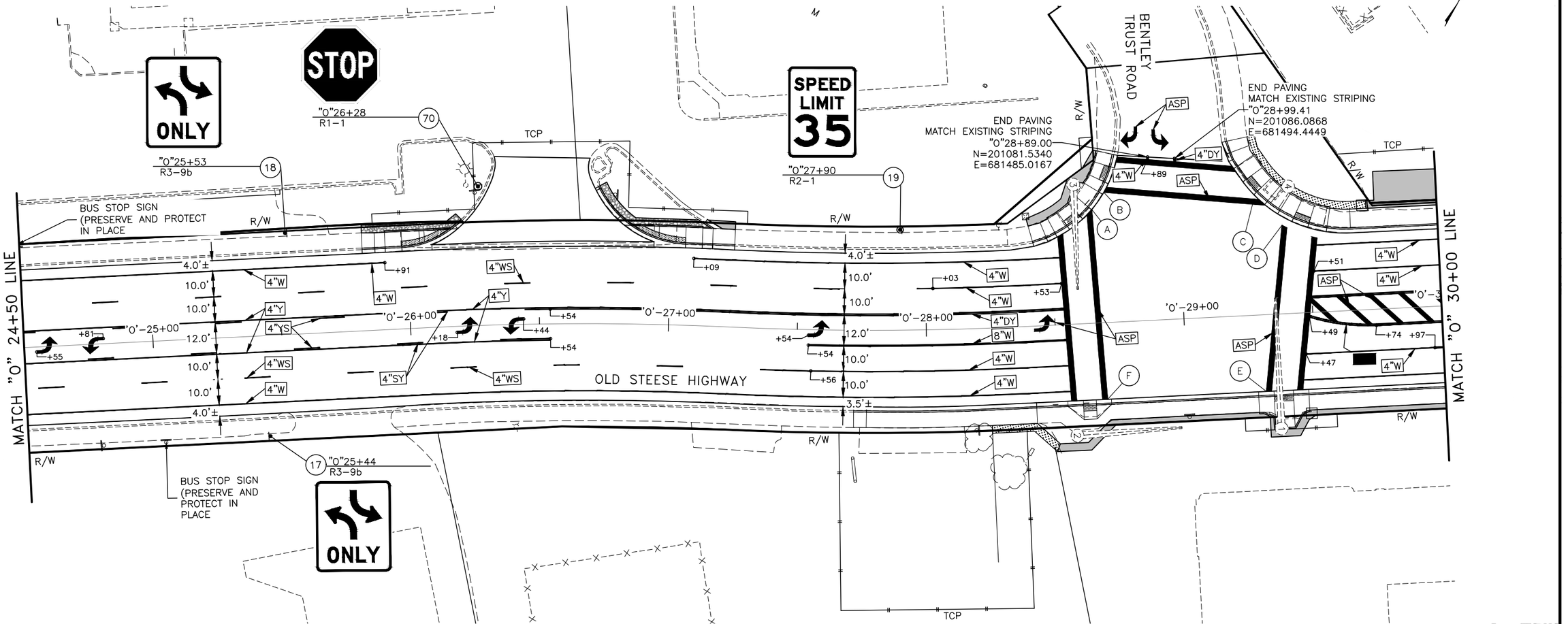
STATE OF ALASKA 49TH PRELIMINARY PS&E

SIGNING & STRIPING STA. 18+50–24+50

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-H-SignStripe-H4 Tue, Oct/18/22 10:18am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H5	H24



CROSSWALK POINT TABLE		
POINT	STATION	OFFSET
A	"0" 28+66.39	44.12 LT
B	"0" 28+71.38	50.50 LT
C	"0" 29+28.74	43.07 LT
D	"0" 29+39.72	34.34 LT
E	"0" 29+30.52	29.75 RT
F	"0" 28+68.93	29.75 RT

SIGNING & STRIPING STA. 24+50–30+00

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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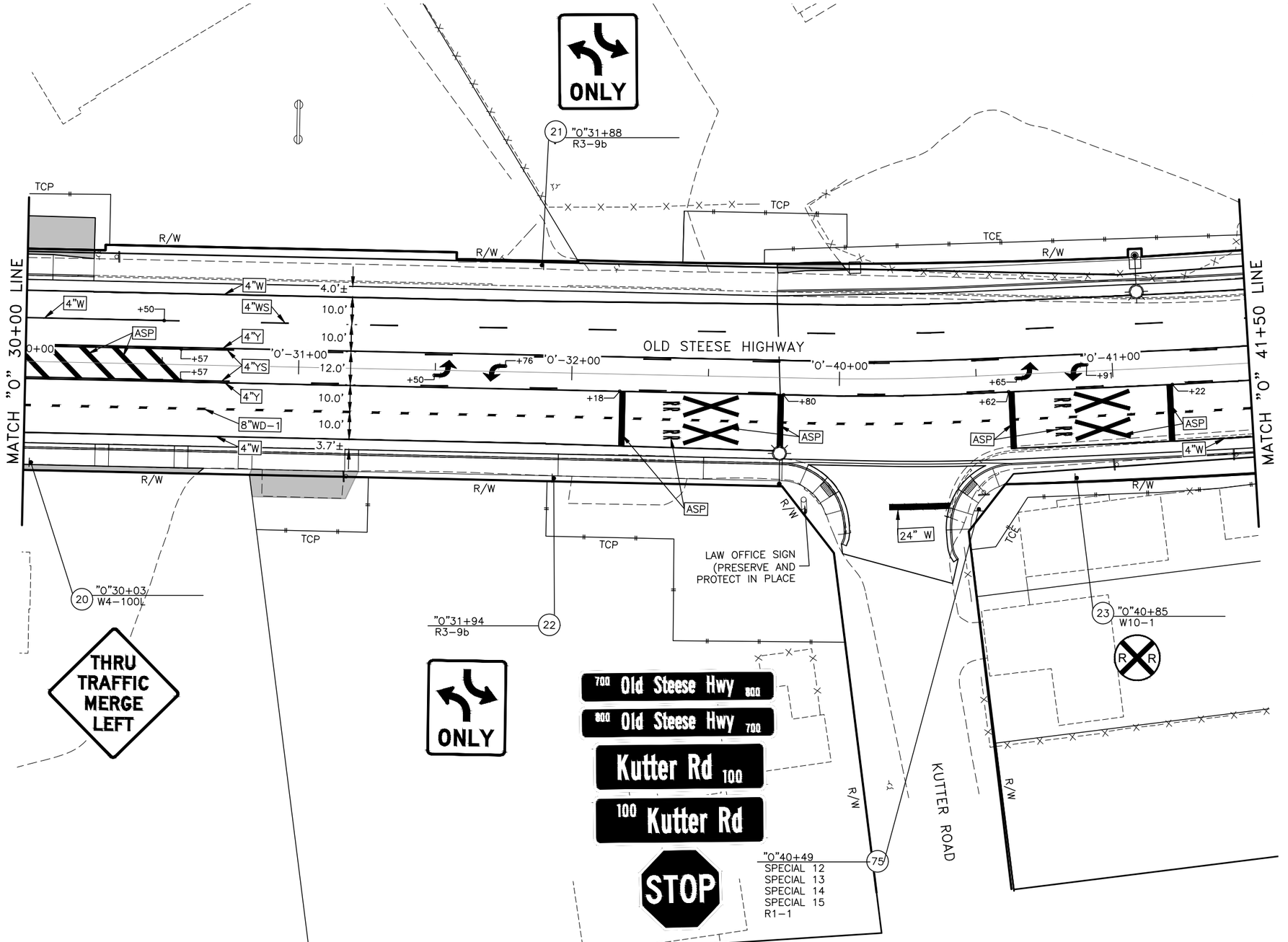
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H6	H24



SIGNING & STRIPING STA. 30+00–41+50

PRELIMINARY PS&E

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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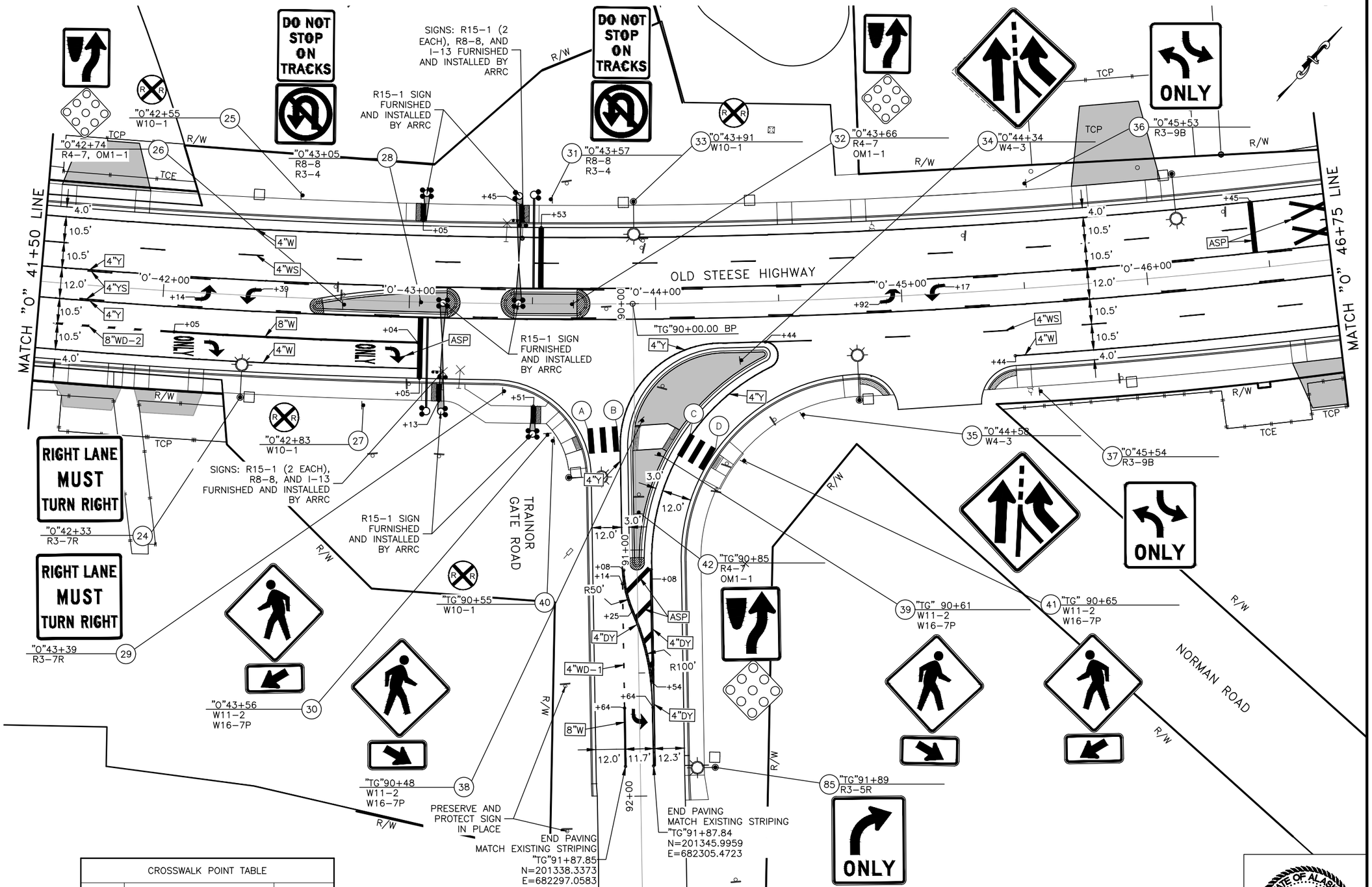
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H7	H24



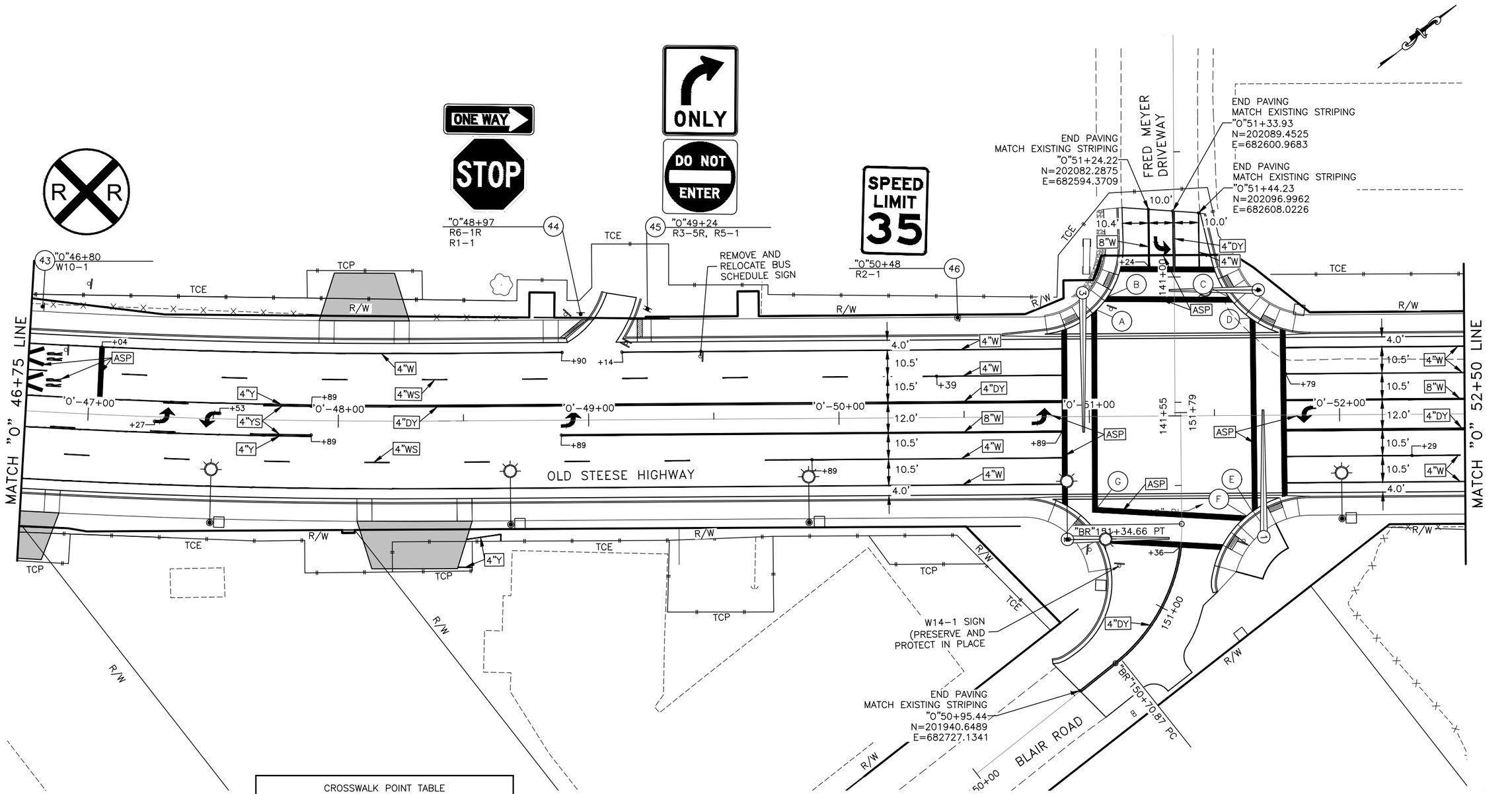
CROSSWALK POINT TABLE		
POINT	STATION	OFFSET
A	"O" 43+72.30	50.71 RT
B	"O" 43+84.04	49.85 RT
C	"O" 44+13.16	53.03 RT
D	"O" 44+23.12	59.38 RT

PRELIMINARY PS&E

SIGNING & STRIPING STA. 41+50–46+75

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H8	H24



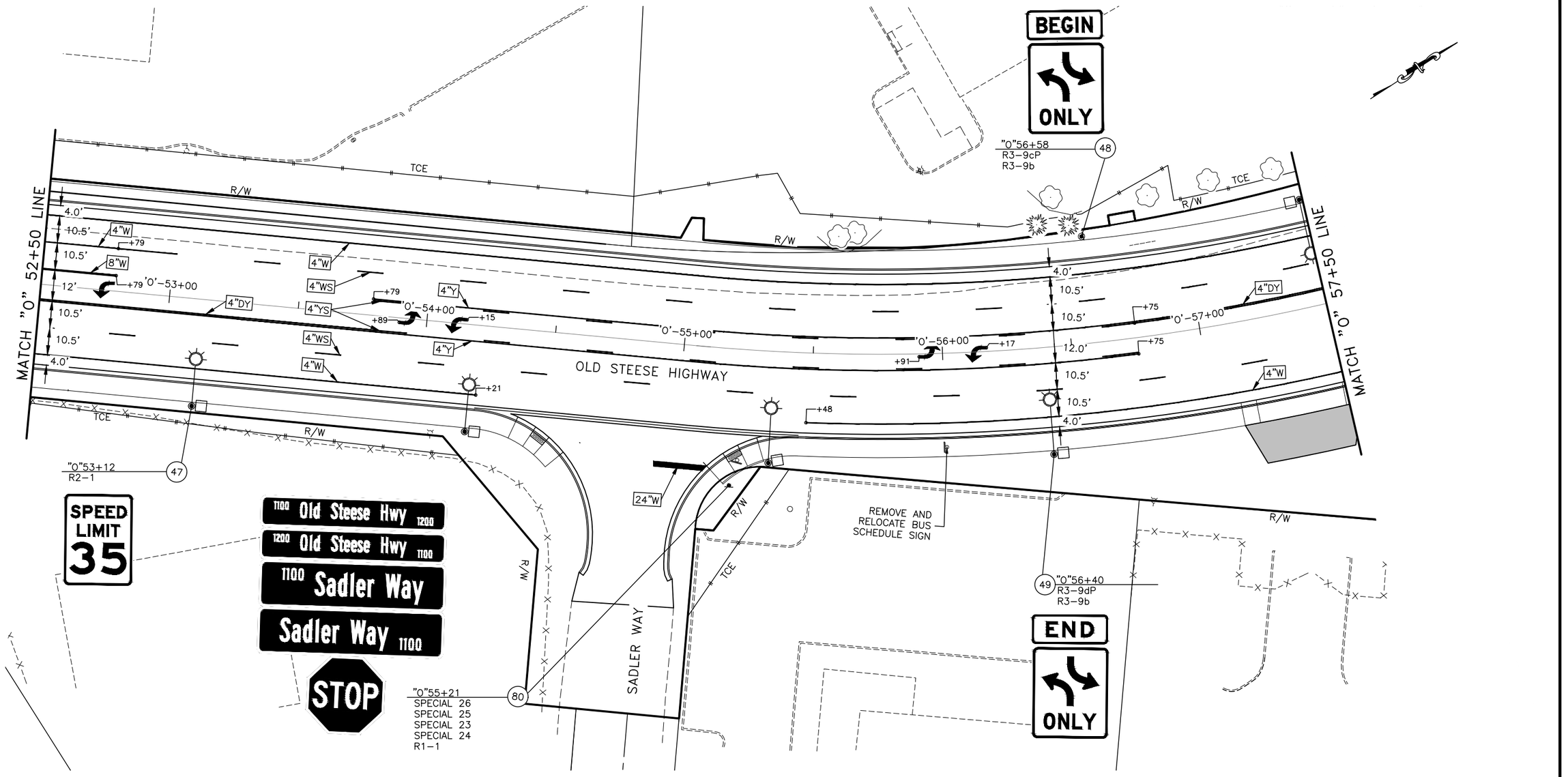
CROSSWALK POINT TABLE		
POINT	STATION	OFFSET
A	"O" 51+03.23	42.53 LT
B	"O" 51+07.76	47.84 LT
C	"O" 51+56.14	47.22 LT
D	"O" 51+64.50	38.86 LT
E	"O" 51+64.89	38.41 RT
F	"O" 51+62.66	40.12 RT
G	"O" 51+03.04	36.34 RT

SIGNING & STRIPING STA. 46+75–52+50

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H9	H24



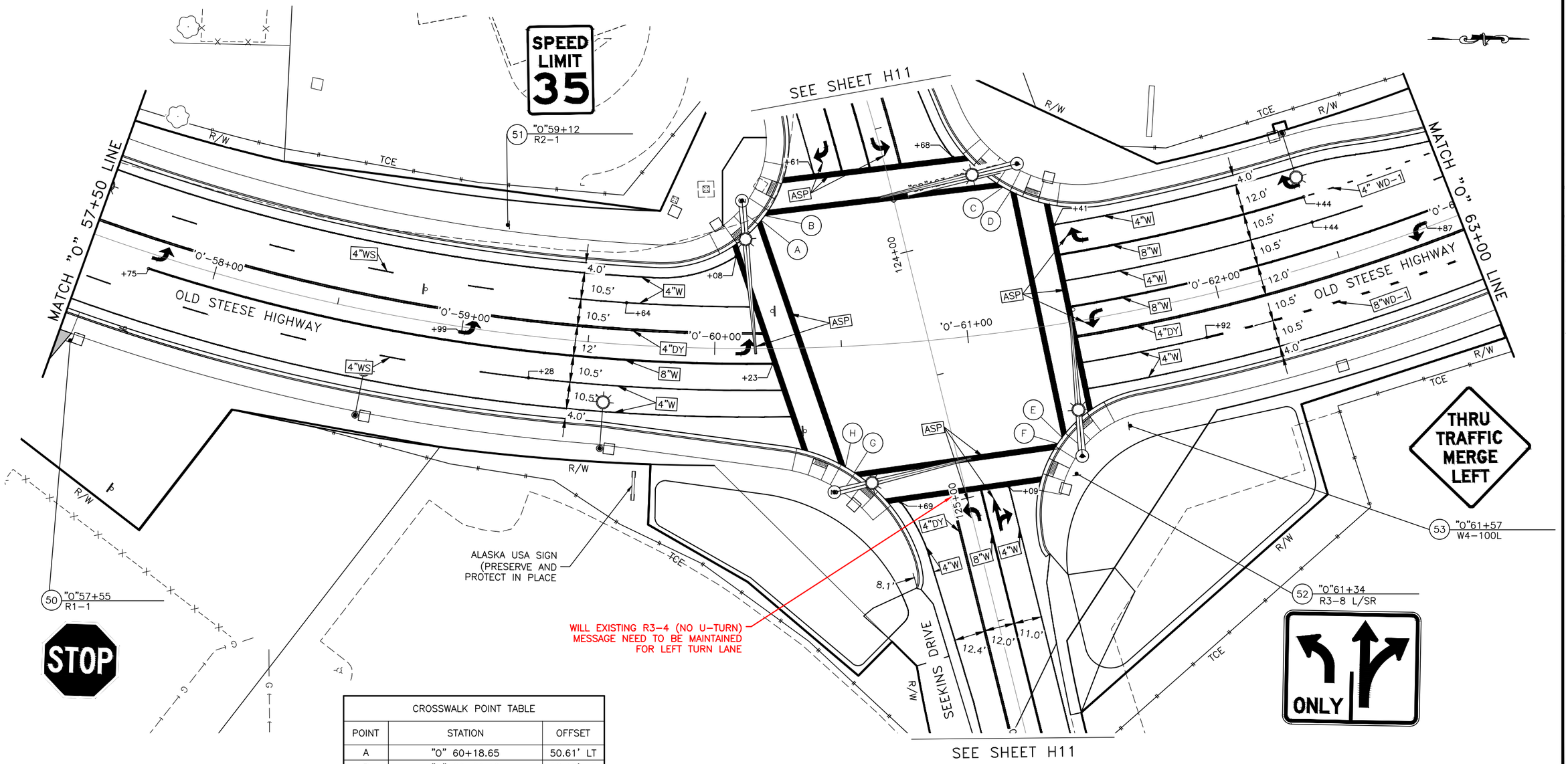
SIGNING & STRIPING STA. 52+50–57+50

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-H-SignStripe-H9 Tue, Oct/18/22 10:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H10	H24



CROSSWALK POINT TABLE		
POINT	STATION	OFFSET
A	"O" 60+18.65	50.61' LT
B	"O" 60+20.19	52.46' LT
C	"O" 61+22.03	56.75' LT
D	"O" 61+24.93	54.76 LT
E	"O" 61+30.77	44.37' RT
F	"O" 61+28.79	46.54' RT
G	"O" 60+52.55	49.86' RT
H	"O" 60+49.41	47.55' RT

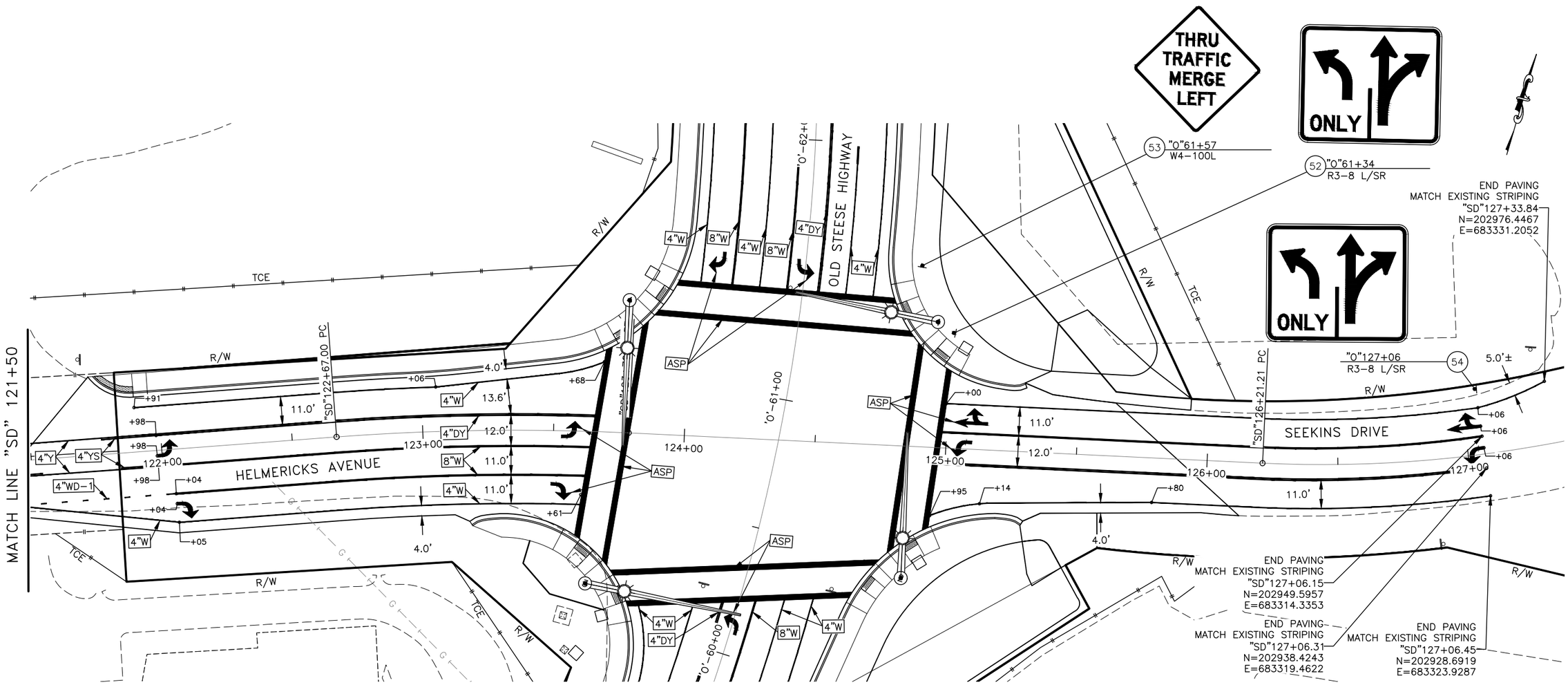
SIGNING & STRIPING STA. 57+50-63+00

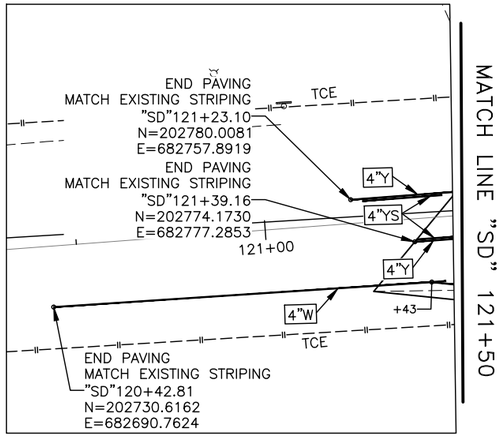
STATE OF ALASKA 49TH PRELIMINARY PS&E NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-H-SignStripe-H10 Tue, Oct/18/22 10:20am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H11	H24





SIGNING & STRIPING HELMERICKS & SEEKINS

STATE OF ALASKA 49TH PRELIMINARY PS&E NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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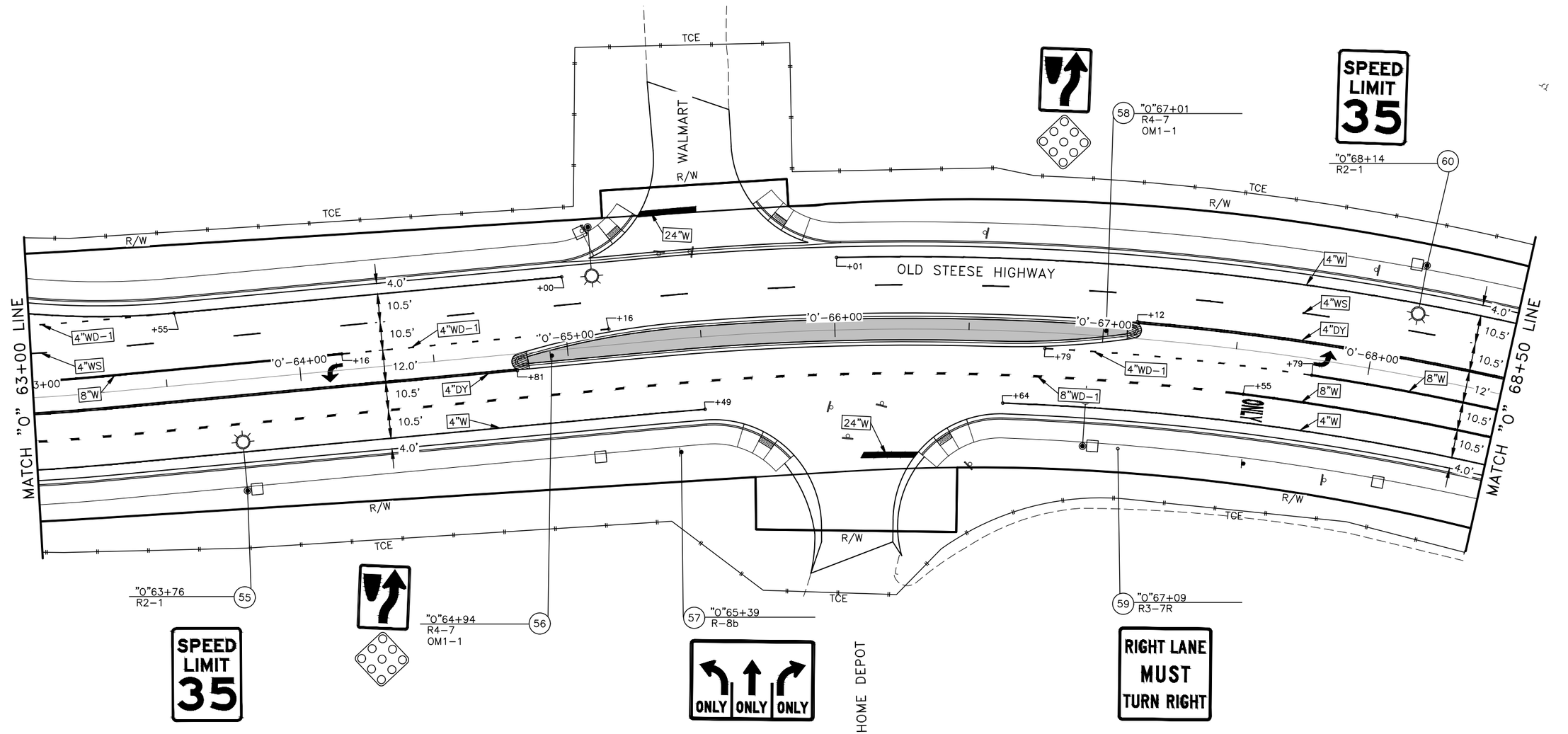
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H12	H24

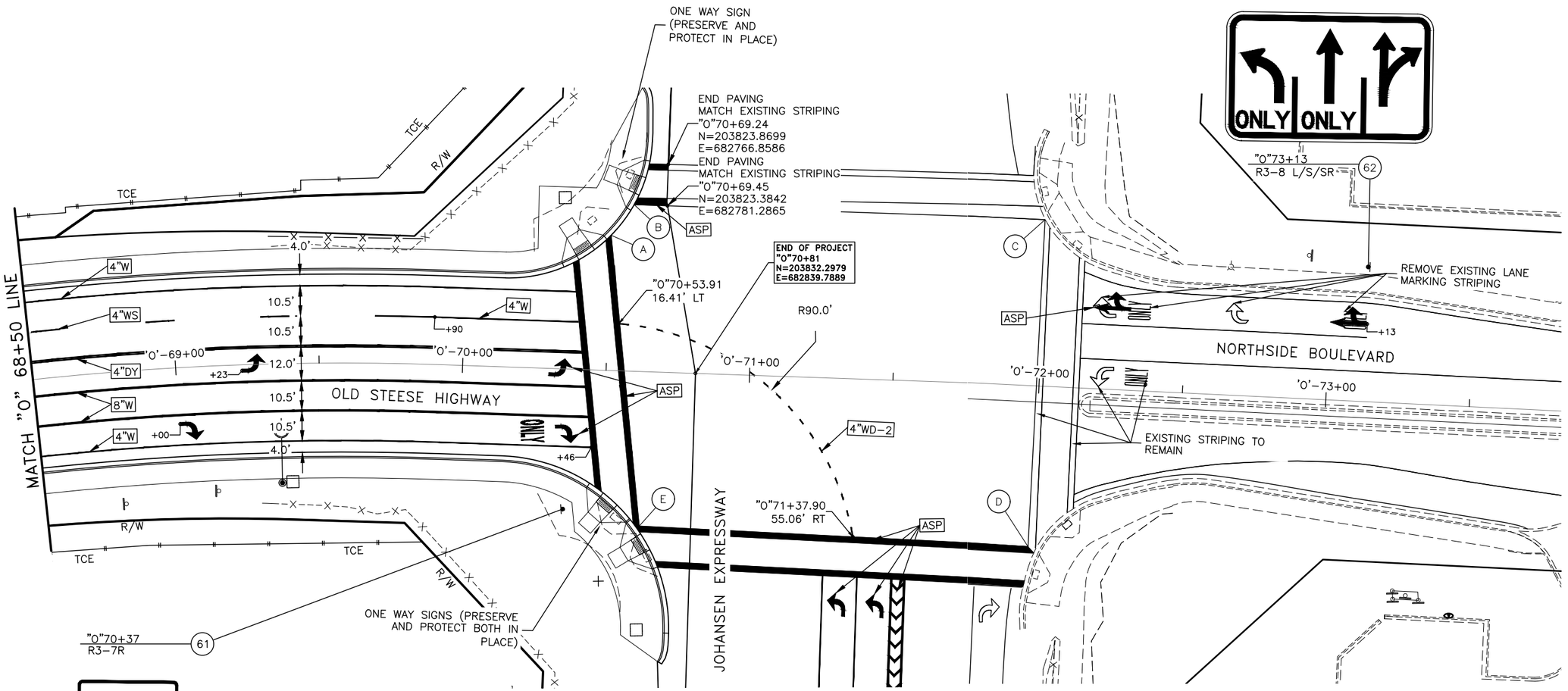


SIGNING & STRIPING STA. 63+00–68+50

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H13	H24



CROSSWALK POINT TABLE		
POINT	STATION	OFFSET
A	"0" 70+50.16	47.08' LT
B	"0" 70+57.83	58.01' LT
C	"0" 71+99.31	57.98' LT
D	"0" 71+98.85	56.07' RT
E	"0" 70+63.38	53.83' RT

SIGNING & STRIPING STA. 68+50–73+13

STATE OF ALASKA 49TH PRELIMINARY PS&E NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H14	H24

EXISTING CROSSWALK STRIPING TO REMAIN

EXISTING STRIPING TO REMAIN

'0'-72+00

'0'-71+00

EXISTING STRIPING TO REMAIN

8"Y

ASP

12.0'

REMOVE EXISTING 8"W STRIPING
"0"71+55.96
N=203903.7
E=682913.2

REMOVE EXISTING 8"W STRIPING
"0"71+37.81
N=203885.5
E=682912.1

REMOVE EXISTING DY STRIPING
"0"71+23.00
N=203870.8
E=682911.3

REMOVE EXISTING GORE STRIPING

REMOVE EXISTING 4"W STRIPING
"0"70+69.74
N=203824.4
E=682766.9

JOHANSEN EXPRESSWAY

12.25'±

4"W

MATCH EXISTING STRIPING
"0"70+81.46
N=203853.0069
E=682414.6669

"0"70+69.93
N=203833.3401
E=682583.7838

"0"70+69.24
72.44' LT

+48

EXISTING STRIPING TO REMAIN

12.5'±

JOHANSEN EXPRESSWAY

12.0'±

12.0'

12.0'

"0"71+48.75
N=203882.8735
E=683195.9381

"0"71+55.86
N=203877.6048
E=683454.0712

REMOVE EXISTING 8"W STRIPING

8"WD-1

"0"71+39.77
N=203864.1130
E=683399.5779

REMOVE EXISTING TURN ARROW
"0"71+45.89
N=203859.6
E=683622.1

"0"71+35.85
N=203869.9874
E=683195.3952

REMOVE EXISTING TURN ARROW
"0"71+28.02
N=683267.7
E=683267.7

"0"71+27.77
N=203852.1270
E=683398.9975

REMOVE EXISTING TURN ARROW
"0"71+30.91
N=203853.3
E=683440.5

REMOVE EXISTING GORE STRIPING

REMOVE EXISTING TURN ARROW
"0"71+34.28
N=203873.8
E=683083.0

EXISTING STRIPING TO REMAIN

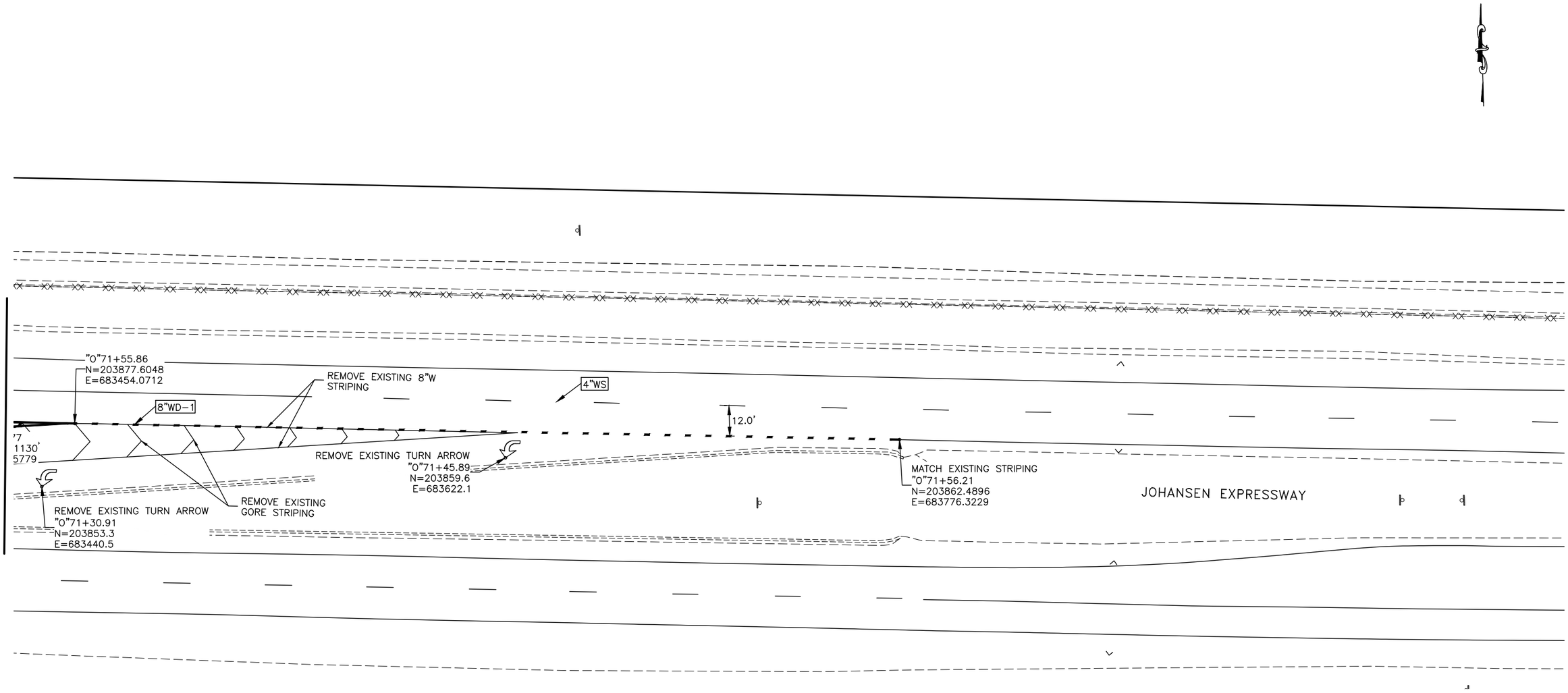
SEE SHEET H15

STRIPING JOHANSEN EXPRESSWAY

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H15	H24



STRIPING JOHANSEN EXPRESSWAY

STATE OF ALASKA
49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H16	H24

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
1	"0" 10+56	X		R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		NE	PST	2.5	1	
2	"0" 11+15		X	R2-1	SPEED LIMIT 35	30 X 36	X		7.50		SW	PST	2.5	1	
3	"0" 12+10	X		R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		SW	PST	2.5	1	SEE SIGNING NOTE 7
4	"0" 13+21	X		R3-9DP	END	30 X 12	X		2.50		NE	PST	2.5	1	SEE SIGNING NOTE 7
				R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00						
5	"0" 13+21		X	R3-9CP	BEGIN	30 X 12	X		2.50		SW	PST	2.5	1	
				R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00						
6	"0" 13+93		X	SPECIAL 1	300 OLD STEESE HWY 400	48 X 8	X		2.67		SE	PST	2.5	1	
				SPECIAL 2	400 OLD STEESE HWY 300	48 X 8	X		2.67		NW				
				SPECIAL 3	200 4TH ST 300	48 X 12	X		4.00		SW				
				SPECIAL 4	300 4TH ST 200	48 X 12	X		4.00		NE				
				R1-1	STOP	36 X 36	X		9.00		SE				
7	"0" 15+21	X		R3-8b	ADVANCED INTERSECTION LANE CONTROL	48 X 30	X		10.00		NE	PST	2.5	1	
8	"0" 16+21		X	SPECIAL 5	400 OLD STEESE HWY 410	48 X 8	X		2.67		SE	PST	2.5	1	
				SPECIAL 6	410 OLD STEESE HWY 400	48 X 8	X		2.67		NW				
				SPECIAL 7	TIMBERLAND 39	48 X 12	X		4.00		SW				
				SPECIAL 8	39 TIMBERLAND	48 X 12	X		4.00		NE				
				R1-1	STOP	36 X 36	X		9.00		SE				
9	"0" 16+84	X		R2-1	SPEED LIMIT 35	30 X 36	x		7.50		NE	PST	2.5	1	
10	"0" 17+86	X		W4-100L	THRU TRAFFIC MERGE LEFT	48 X 48	X		16.00		NE	TS	3.0	1	SEE SIGNING NOTE 7
11	"0" 18+88	X		R1-2	YIELD	36 X 36	X		9.00		N	PST	2.5	1	
12	"0" 19+38	X		W12-1	DOUBLE ARROW	36 X 36	X		9.00		NW	TS	3.0	1	SEE SIGNING NOTE 6
				OM1-1	OBJECT MARKER	18 X 18			2.25						
13	"0" 19+81	X		W4-7	KEEP RIGHT	24 X 30			5.00		NW	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25						
14	"0" 23+08	X		R2-1	SPEED LIMIT 35	30 X 36	X		7.50		SW	PST	2.5	1	
15	"0" 23+42	X		R1-1	STOP	36 X 36	X		9.00		NW	PST	2.5	1	
16	"0" 24+03		X	SPECIAL 9	500 OLD STEESE HWY 600	48 X 8	X		2.67		NW	PST	2.5	1	
				SPECIAL 10	600 OLD STEESE HWY 500	48 X 8	X		2.67		SE				
				SPECIAL 11	CHACE ST	36 X 12	X		3.00		NW				
				SPECIAL 11	CHACE ST	36 X 12	X		3.00		NE				
				R1-1	STOP	36 X 36	X		9.00		SE				
17	"0" 25+44		X	R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00		SW	PST	2.5	1	
18	"0" 25+53	X		R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00		NE	PST	2.5	1	
19	"0" 27+90	X		R2-1	SPEED LIMIT 35	30 X 36	X		7.50		NE	PST	2.5	1	
20	"0" 30+03		X	W4-100L	THRU TRAFFIC MERGE LEFT	48 X 48	X		16.00		NE	TS	3.0	1	SEE SIGNING NOTE 6

SIGNING NOTES:

1. ADHESIVE TAPE IS NOT PERMITTED. THIS MODIFIES STANDARD PLAN S-00.12.
2. "SPECIAL" STREET NAME SIGNS REQUIRE TWO SEPARATE SINGLE SIDED PANELS. END-BRACE PANELS PER SMALL STREET NAME SIGN BRACING DETAILS IN STANDARD PLAN S-01.01.
3. 1/4" X 1 1/2" ALUMINUM ALLOY 6061-T6 BAR MAY ALSO BE USED TO FABRICATE SIGN BRACES AS SHOWN ON STANDARD PLAN S-01.02.
4. INSTALL PST SIGN POSTS WITH SLEEVE TYPE CONCRETE FOUNDATION PER STANDARD PLAN S-30.05. EMBED PST IN SLEEVE 12"-24". ATTACH THE SIGN POST TO THE SLEEVE USING GALVANIZED 3/8" BOLT, NUT, SPLIT LOCK WASHERS, AND TWO FLAT WASHERS.
5. HINGED JOINTS WITH FRANGIBLE FUSE PLATES ARE REQUIRED ON ALL MULTIPLE POST SIGNS WITH FRANGIBLE COUPLING SYSTEMS. THE HINGE LOCATION ON ALL POSTS SHALL BE THE SAME DISTANCE BELOW THE SIGN, INSTEAD OF THE 6" MINIMUM SHOWN ON STANDARD PLAN S-31.02. SEE MANUFACTURER'S SPECIFICATION FOR HINGE LOCATION BELOW SIGN.
6. INSTALL FRANGIBLE COUPLING SYSTEMS IN ACCORDANCE WITH STANDARD PLAN S-31.02.
7. INSTALL SIGNS ON EXISTING SIDEWALKS USING MOUNTING STUB DETAIL.
8. DETERMINE POST LENGTHS IN THE FIELD. DO NOT EXTEND POSTS ABOVE TOP OF SIGN.
9. MOUNT SIGNS THAT PROJECT OVER OR WITHIN 2 FEET OF THE SIDEWALK WITH A MOUNTING HEIGHT OF 8 FEET.
10. INSTALL BIKE PATH SIGNS 3 TO 6 FEET FROM THE EDGE OF THE SHARED-USE PATH AND AT A MOUNTING HEIGHT OF 5 FEET. IF THE SIGN MUST BE LOCATED CLOSER THAN 3 FEET, INSTALL AT AN 8-FOOT MOUNTING HEIGHT.
11. INSTALL "SPECIAL" STREET NAME SIGNS ABOVE THEIR RESPECTIVE STOP SIGNS. WHEN TWO "SPECIAL" STREET NAME SIGNS ARE TO BE LOCATED ON THE SAME POST, INSTALL THE CROSS-STREET PANEL IN THE LOWER POSITION.
12. SIGN LOCATIONS INDICATED ON THE PLANS AND SUMMARY TABLES (ESPECIALLY R1-1 AND R1-2 SIGNS AT LARGE RADIUS INTERSECTIONS) ARE APPROXIMATE AND SUBJECT TO FIELD ADJUSTMENT BY THE ENGINEER. THE CONTRACTOR IS REQUIRED TO MARK THE PROPOSED LOCATIONS AND TO NOTIFY THE PROJECT ENGINEER OF THESE LOCATIONS A MINIMUM OF 96 HOURS PRIOR TO INSTALLATION. SIGNS MUST NOT EXTENDS OVER THE R/W LINE.
13. ATTACH ALL SIGNS TO THEIR SUPPORTS WITH 3/8" BOLTS, EXCEPT ATTACH UNFRAMED SIGNS TO PST POSTS WITH ALUMINUM DRIVE RIVETS. WIND WASHERS ARE NOT REQUIRED WITH DRIVE RIVETS. INCLUDE SPLIT LOCK WASHERS WHEN BOLTS ARE USED.
14. ALL FASTENER HARDWARE SHALL MEET THE REQUIREMENTS OF SUBSECTION 730-2.07.
15. INSTALL WEATHER TIGHT CAPS ON ALL TS POSTS.
16. MAINTAIN EXISTING SIGNS UNTIL NEW SIGNS ARE INSTALLED. DO NOT LEAVE DUPLICATE OR CONFLICTING SIGNING UP AT ANY TIME.
17. DELIVER SALVAGED SIGN PANELS, NOT IDENTIFIED FOR REUSE IN THE SIGNING SUMMARY, TO THE DOT&PF FAIRBANKS MAINTENANCE YARD LOCATED AT 2301 PEGER ROAD. CONTACT DANIEL SCHACHER (907) 451-5276 TO ARRANGE FOR DELIVERY.
18. SALVAGED SIGNS BELONGING TO THE ALASKA RAILROAD CORPORATION SHALL BE DELIVERED TO AN AUTHORIZED ARRC REPRESENTATIVE, CONTACT RACHEL MADDY AT (907) 265-2237 TO ARRANGE FOR DELIVERY.
19. SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITION.
20. SALVAGE ALL SIGNS NOTED IN THE SIGNING SUMMARY REMARKS COLUMN. SALVAGE SIGN LOCATIONS ARE APPROXIMATE AND SHALL BE FIELD VERIFIED BY THE CONTRACTOR.
21. LOCATE AND PROTECT ALL EXISTING UNDERGROUND UTILITIES, INCLUDING BUT NOT LIMITED TO: PIPELINES, INTERCONNECT CABLES, SIGNAL SYSTEMS, LIGHTING SYSTEMS, STORM AND SANITARY SEWERS, WATER SYSTEMS, AND TELEPHONE AND ELECTRICAL CABLES, PRIOR TO INSTALLING SIGN POSTS. NOT ALL EXISTING UTILITIES MAY BE SHOWN ON THE PLANS.
22. ALL SIGNS NOTED FOR REMOVAL AND REINSTALLATION SHALL BE REPLACED AT THE CONTRACTOR'S EXPENSE IF THEY ARE DAMAGED DURING THE RELOCATION EFFORT.
23. FABRICATE GUIDE SIGNS ACCORDING TO THE SHOP DRAWINGS INCLUDED IN THE PROJECT SPECIFICATIONS. TRIM THE CORNERS OF ALL SIGNS TO THE RADIUS SHOWN ON EACH SHOP DRAWING.

POST TYPE LEGEND:

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

SIGNING SUMMARY

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT APPROVED FOR PROFESSIONAL ENGINEERING

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Sign Summary-H16 Tue, Oct/18/22 10:21am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H17	H24

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
21	"O"31+88	X		R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00		NE	PST	2.5	1	
22	"O" 31+94		X	R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00		SW	PST	2.5	1	
23	"O" 40+85		X	W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA	X		7.07		SW	PST	2.5	1	
24	"O" 42+33		X	R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		SW				MOUNT ON ELECTROLIER
25	"O" 42+55	X		W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		SW	PST	2.5	1	
26	"O" 42+74		X	R4-7	KEEP RIGHT	24 X 30			5.00		SW	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25						
27	"O" 42+83		X	W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		SW	PST	2.5	1	
28	"O" 43+05	X		R8-8	DO NOT STOP ON TRACKS	24 X 30			5.00		SW	TS	3.0	1	SEE SIGNING NOTE 6
				R3-4	U-TURN PROHIBITED	36 X 36	X		9.00						
29	"O" 43+39		X	R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		SW	PST	2.5	1	
30	"O" 43+56		X	W11-2	PEDESTRIAN	36 X 36	X		9.00		NW	PST	2.5	1	
				W16-7P	DOWNWARD DIAGONAL ARROW	24 X 12			2.00						
31	"O" 43+57	X		R8-8	DO NOT STOP ON TRACKS	24 X 30			5.00		NE	TS	3.0	1	SEE SIGNING NOTE 6
				R3-4	U-TURN PROHIBITED	36 X 36	X		9.00						
32	"O" 43+66		X	R4-7	KEEP RIGHT	24 X 30			5.00		NE	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25						
33	"O" 43+91	X		W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		SW				MOUNT ON ELECTROLIER
34	"O" 44+34		X	W4-3	ADDED LANE	36 X 36	X		9.00		SW	PST	2.5	1	
35	"O" 44+58		X	W4-3	ADDED LANE	36 X 36	X		9.00		S	PST	2.5	1	
36	"O" 45+53	X		R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00		NE	PST	2.5	1	
37	"O" 45+54		X	R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00		SW	PST	2.5	1	
38	"TG" 90+48	X		W11-2	PEDESTRIAN	36 X 36	X		9.00		W	PST	2.5	1	
				W16-7P	DOWNWARD DIAGONAL ARROW	24 X 12			2.00						
39	"TG" 90+61	X		W11-2	PEDESTRIAN	36 X 36	X		9.00		SE	PST	2.5	1	
				W16-7P	DOWNWARD DIAGONAL ARROW	24 X 12			2.00	7.00					
40	"TG" 90+55		X	W10-1	GRADE CROSSING ADVANCE WARNING	24 DIA			3.14		NE	PST	2.5	1	
41	"TG" 90+65	X		W11-2	PEDESTRIAN	36 X 36	X		9.00		S	PST	2.5	1	
				W16-7P	DOWNWARD DIAGONAL ARROW	24 X 12			2.00						
42	"TG" 90+85	X		R4-7	KEEP RIGHT	24 X 30			5.00		SE	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25						

SIGNING SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
43	"O" 46+80	X		W10-1	GRADE CROSSING ADVANCE WARNING	36 DIA			7.07		NE	PST	2.5	1	
44	"O" 48+97	X		R6-1R	ONE WAY	36 X 12	X		3.00		NW	PST	2.5	1	
				R1-1	STOP	36 X 36	X		9.00						
45	"O" 49+24	X		R3-5R	RIGHT ONLY	30 X 36	X		7.50		NW	PST	2.5	1	
				R5-1	DO NOT ENTER	36 X 36	X		9.00		SE				
46	"O" 50+48	X		R2-1	SPEED LIMIT 35	30 X 36	X		7.50		NE	PST	2.5	1	SEE SIGNING NOTE 6
47	"O" 53+12		X	R2-1	SPEED LIMIT 35	30 X 36	X		7.50		SW				MOUNT ON ELECTROLIER
48	"O" 56+58	X		R3-9CP	BEGIN	30 X 12	X		2.50		N	PST	2.5	1	
				R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00						
49	"O" 56+40		X	R3-9DP	END	30 X 12	X		2.50		S				MOUNT ON ELECTROLIER
				R3-9B	TWO WAY LEFT TURN ONLY	24 X 36			6.00						
50	"O" 57+55		X	R1-1	STOP	36 X 36	X		9.00		S	PST	2.5	1	
51	"O" 59+12	X		R2-1	SPEED LIMIT 35	30 X 36	X		7.50		E	PST	2.5	1	
52	"O" 61+34		X	R3-8 L/SR	ADVANCE INTERSECTION LANE CONTROL	30 X 30	X		6.25		S	PST	2.5	1	
53	"O" 61+57		X	W4-100L	THRU TRAFFIC MERGE LEFT	48 X 48	X		16.00		W	TS	3.0	1	
54	"SD" 127+06	X		R3-8 L/SR	ADVANCE INTERSECTION LANE CONTROL	30 X 30	X		6.25		NE	PST	2.5	1	
55	"O" 63+76		X	R2-1	SPEED LIMIT 35	30 X 36	X		7.50		SE				MOUNT ON ELECTROLIER
56	"O" 64+94		X	R4-7	KEEP RIGHT	24 X 30			5.00		SE	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25						
57	"O" 65+39		X	R3-8b	ADVANCED INTERSECTION LANE CONTROL	48 X 30	X		10.00		SE	PST	2.5	1	
58	"O" 67+01	X		R4-7	KEEP RIGHT	24 X 30			5.00		N	PST	2.5	1	
				OM1-1	OBJECT MARKER	18 X 18			2.25						
59	"O" 67+09		X	R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		S				MOUNT ON ELECTROLIER
60	"O" 68+14	X		R2-1	SPEED LIMIT 35	30 X 36	X		7.50		N				MOUNT ON ELECTROLIER
61	"O" 70+37		X	R3-7R	RIGHT LANE MUST TURN RIGHT	36 X 36	X		9.00		S	PST	2.5	1	
62	"O" 73+13	X		R3-8 L/S/SR	ADVANCED INTERSECTION LANE CONTROL	48 X 30	X		10.00		N	PST	2.5	1	

POST TYPE LEGEND:

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

SIGNING SUMMARY

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H18	H24

615.0001.0000 – STANDARD SIGN

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
63	"O" 14+84	X		R1–1	STOP	36 X 36	X		9.00		NW	PST	2.5	1	
64															NOT USED
65															NOT USED
66															NOT USED
67															NOT USED
68															NOT USED
69															NOT USED
70	"O" 26+28	X		R1–1	STOP	36 X 36	X		9.00		NW	PST	2.5	1	
71															NOT USED
72															NOT USED
73															NOT USED
74															NOT USED
75	"O" 40+49		X	SPECIAL 12	700 OLD STEESE HWY 800	48 X 8	X		2.67		SE	PST	2.5	1	
				SPECIAL 13	800 OLD STEESE HWY 700	48 X 8	X		2.67		NW				
				SPECIAL 14	KUTTER RD 100	42 X 12	X		3.50		SW				
				SPECIAL 15	100 KUTTER RD	42 X 12	X		3.50		NE				
				R1–1	STOP	36 X 36	X		9.00		SE				
76															NOT USED
77															NOT USED
78															NOT USED
79															NOT USED

615.0001.0000 – STANDARD SIGN

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	SIZE H X V (INCHES)	BRACING/FRAMING BRACED	BRACING/FRAMING FRAMED	AREA (SQ.FT.)	MTG. HGT. (FT.)	DIR.	POST TYPE	POST SIZE (INCHES)	POST NO.	REMARKS
80	"O" 55+21		X	SPECIAL 26	1100 OLD STEESE HWY 1200	48 X 8	X		2.67		SE	PST	2.5	1	
				SPECIAL 25	1200 OLD STEESE HWY 1100	48 X 8	X		2.67		NW				
				SPECIAL 23	1100 SADLER WAY	48 X 12	X		4.00		NE				
				SPECIAL 24	SADLER WAY 1100	48 X 12	X		4.00		SW				
				R1–1	STOP	36 X 36	X		9.00		SE				

SUBTOTAL= 635.62

SIGNAL MOUNTED SIGN SUBTOTAL (SEE TRAFFIC SIGNAL SHEETS)= 448.50

PROJECT TOTAL = 1084.12

PAY ITEM QUANTITY = 1085

POST TYPE LEGEND:

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

SIGNING SUMMARY

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Sign Summary-H18 Tue, Oct/18/22 10:21am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H19	H24

SALVAGE SIGN SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	REMARKS
S1	"O" 11+80		39.31	R3-9CP	BEGIN	
				R3-9B	CENTER LANE ONLY	
S2	"O" 13+20		39.86	R2-1	SPEED LIMIT 35	
S3	"O" 13+95		38.89	R1-1	STOP	
				D3-100	4TH AVE	SALVAGE BOTH SIGNS
				D3-100	OLD STEESE HWY	SALVAGE BOTH SIGNS
S4	"O" 15+19		39.04	R3-9DP	END	
				R3-9B	CENTER LANE ONLY	
S5	"O" 15+44	38.76		R3-9CP	BEGIN	
				R3-9B	CENTER LANE ONLY	
S6	"O" 16+15		48.95	R1-1	STOP	
				D3-100	TIMBERLAND DR	SALVAGE BOTH SIGNS
				D3-100	OLD STEESE HWY	SALVAGE BOTH SIGNS
S7	"O" 18+10	40.33		R2-1	SPEED LIMIT 35	
S8	"O" 18+87	45.90		R1-2	YIELD	
S9	"O" 19+38	50.95		W12-1	DOUBLE ARROW	
				OM1-1	OBJECT MARKER	
S10	"O" 22+15		40.21	D14-100	ADOPT A HIGHWAY	
S11	"O" 23+42	39.74		R1-1	STOP	
S12	"O" 24+06		40.54	R1-1	STOP	
				D3-100	CHACE ST	SALVAGE BOTH SIGNS
				D3-100	OLD STEESE HWY	SALVAGE BOTH SIGNS
S13	"O" 24+79		39.49	R2-1	SPEED LIMIT 35	
S14	"O" 26+27	51.57		R1-1	STOP	
S15	"O" 28+18		39.44	R3-9B	CENTER LANE ONLY	
S16	"O" 29+00		38.28		LARGE TWO DIRECTIONAL ARROW	

SALVAGE SIGN SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	REMARKS
S17	"O" 30+33	38.93		R3-9B	CENTER LANE ONLY	
S18	"O" 31+18		39.54	W4-100L	THRU TRAFFIC MERGE LEFT	
S19	"O" 40+09	39.13		R2-1	SPEED LIMIT 35	
S20	"O" 40+51		42.59	D3-100	OLD STEESE HWY	SALVAGE BOTH SIGNS
				D3-100	KUTTER RD	SALVAGE BOTH SIGNS
				R1-1	STOP	
S21	"O" 41+00		34.58	W10-1	GRADE CROSSING ADVANCE WARNING	
S22	"O" 41+44		33.08	R3-8 S/R	ADVANCED INTERSECTION LANE CONTROL	
S23	"O" 42+70	5.11		R3-9DP	END	
				R3-9B	CENTER LANE ONLY	
S24	"O" 42+73	1.94		R4-7	KEEP RIGHT	
				OM1-1	OBJECT MARKER	
S25	"O" 43+80		1.97	R3-5R	RIGHT ONLY	
S26	"O" 44+02		33.52	R3-5R	RIGHT ONLY	
S27	"O" 43+93		77.48	R4-7	KEEP RIGHT	
				OM1-1	OBJECT MARKER	
S28	"O" 44+23		75.88	R3-5R	RIGHT ONLY	
S29	"O" 44+28		65.48	D3-100	OLD STEESE HWY	
				D3-100	W TRAINOR GATE RD	
S30	"O" 44+47		48.12	R1-2	YIELD	
S31	"O" 43+95	22.71		W12-1	DOUBLE ARROW	
				OM1-1	OBJECT MARKER	
S32	"O" 43+95	25.63			NO LEFT TURN	
					BEGIN ISLAND	

SALVAGE SIGN SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	REMARKS
S33	"O" 43+64	48.91		R1-1	STOP	
S34	"O" 43+01		33.40	R8-8	DO NOT STOP ON TRACKS	
S35	"O" 45+26	23.18		R3-8 L/SR	ADVANCED INTERSECTION LANE CONTROL	
S36	"O" 45+86		39.26	R2-1	SPEED LIMIT 35	
S37	"O" 46+33	24.23		R3-9DP	END	
				R3-9B	CENTER LANE ONLY	
S38	"O" 46+90	25.15		W10-1	GRADE CROSSING ADVANCE WARNING	
S39	"O" 48+91	42.19		R6-1	ONE WAY	SALVAGE BOTH SIGNS
				R1-1	STOP	
S40	"O" 49+15	30.68		R3-4	NO U TURN	
				R5-1	DO NOT ENTER	
S41	"O" 49+45	25.07			BUS STOP	
S42	"O" 51+61		50.05	D3-100	OLD STEESE HWY	SALVAGE BOTH SIGNS
				D3-100	BLAIR RD	SALVAGE BOTH SIGNS
				R1-1	STOP	
S43	"O" 55+23		42.86	D3-100	OLD STEESE HWY	SALVAGE BOTH SIGNS
				D3-100	SADLER WAY	SALVAGE BOTH SIGNS
				R1-1	STOP	
S44	"O" 57+73		31.20	R1-1	STOP	
S45	"O" 58+83	12.42		R4-7	KEEP RIGHT	
				OM1-1	OBJECT MARKER	
S46	"O" 60+23	14.76		R4-7	KEEP RIGHT	
				OM1-1	OBJECT MARKER	
S47	"O" 60+35		32.80	R3-9DP	END	
				R3-9B	CENTER LANE ONLY	

SALVAGE SUMMARY

STATE OF ALASKA 49TH
PRELIMINARY
PS&E

PLANS DEVELOPED BY: DOWL
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H20	H24

SALVAGE SIGN SUMMARY

LOC. NO.	STATION	LOCATION LT.	LOCATION RT.	ASDS CODE	LEGEND	REMARKS
S48	"O" 61+43	4.75		R3-9CP	BEGIN	
				R3-9B	CENTER LANE ONLY	
S49	"O" 65+10	43.35		R1-2	YIELD	
S50	"O" 65+37	32.09		R3-2	NO LEFT TURN	
S51	"O" 65+48	32.09		OM1-1	OBJECT MARKER	
S52	"O" 65+98		28.76	W12-1	DOUBLE ARROW	
				OM1-1	OBJECT MARKER	
S53	"O" 66+04		39.60	R4-7	KEEP RIGHT	
				OM1-1	OBJECT MARKER	
S54	"O" 66+17		27.54	R3-2	NO LEFT TURN	
S55	"O" 66+52		50.11	R1-2	YIELD	
S56	"O" 66+55	36.35		R2-1	SPEED LIMIT 35	
S57	"O" 67+90		43.95	R3-7R	RIGHT LANE MUST TURN RIGHT	
S58	"O" 67+97	36.65		D14-100	ADOPT A HIGHWAY	
S59	"O" 68+79		46.17	R3-8 L/S/R	ADVANCED INTERSECTION LANE CONTROL	
S60	"O" 19+99	130.94		D14-100	ADOPT A HIGHWAY	
S61	"TG" 92+35	37.92		R3-5R	RIGHT ONLY	
				SUBTOTAL =	105 EACH	
				SIGNAL MOUNTED SALVAGE SIGN SUBTOTAL (SEE TRAFFIC SIGNAL SHEETS)=	12 EACH	
				PROJECT TOTAL =	117 EACH	
				PAY ITEM QUANTITY =	117 EACH	

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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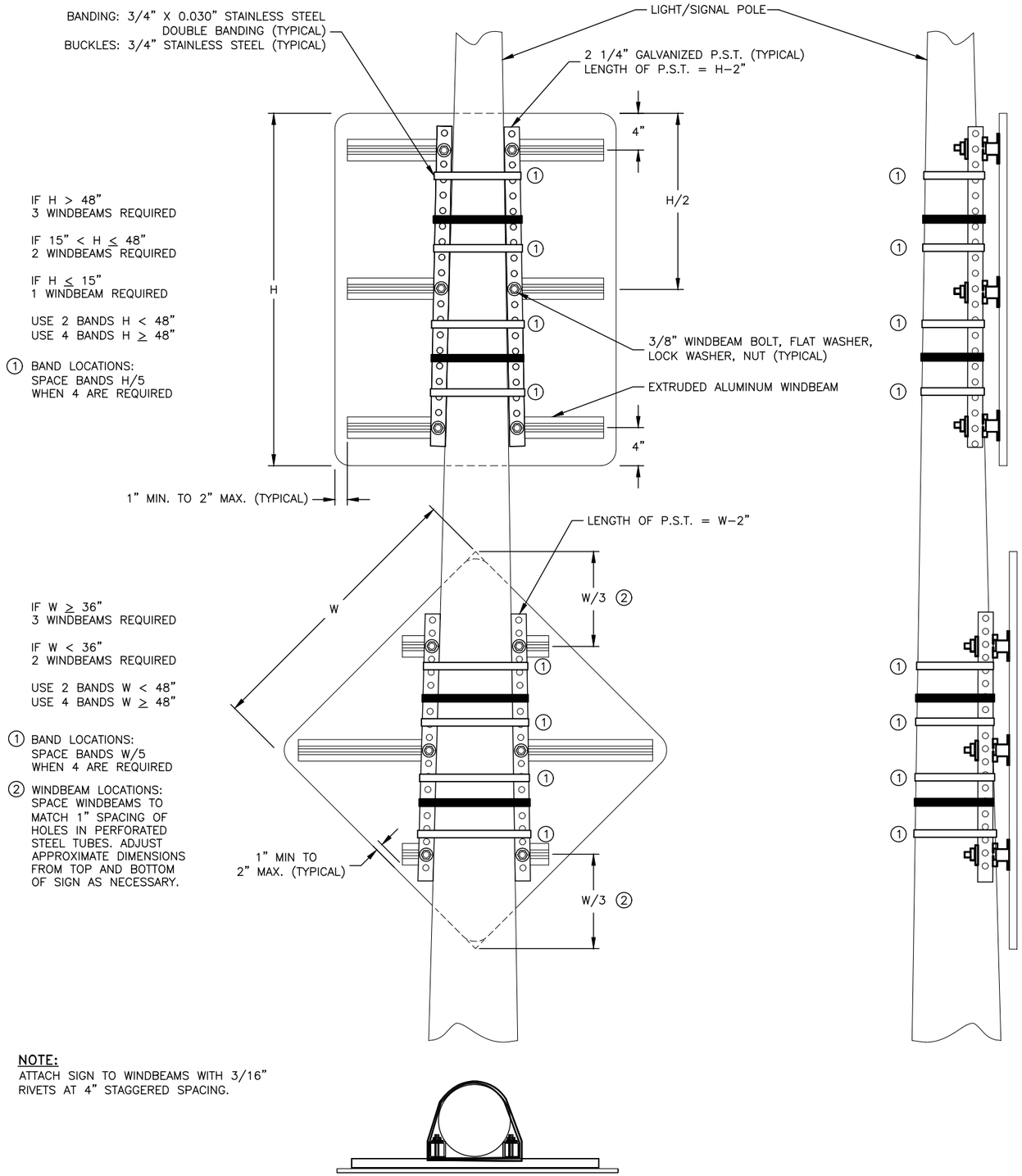
SALVAGE SUMMARY

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H21	H24

LIGHT/SIGNAL POLE SIGN FRAMING & MOUNTING DETAILS



IF H > 48"
3 WINDBEAMS REQUIRED

IF 15" < H ≤ 48"
2 WINDBEAMS REQUIRED

IF H ≤ 15"
1 WINDBEAM REQUIRED

USE 2 BANDS H < 48"
USE 4 BANDS H ≥ 48"

① BAND LOCATIONS:
SPACE BANDS H/5
WHEN 4 ARE REQUIRED

IF W ≥ 36"
3 WINDBEAMS REQUIRED

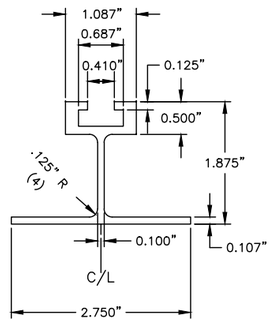
IF W < 36"
2 WINDBEAMS REQUIRED

USE 2 BANDS W < 48"
USE 4 BANDS W ≥ 48"

① BAND LOCATIONS:
SPACE BANDS W/5
WHEN 4 ARE REQUIRED

② WINDBEAM LOCATIONS:
SPACE WINDBEAMS TO MATCH 1" SPACING OF HOLES IN PERFORATED STEEL TUBES. ADJUST APPROXIMATE DIMENSIONS FROM TOP AND BOTTOM OF SIGN AS NECESSARY.

NOTE:
ATTACH SIGN TO WINDBEAMS WITH 3/16" RIVETS AT 4" STAGGERED SPACING.



EXTRUDED ALUMINUM WINDBEAM

NOTES:

1. ALUMINUM ALLOY 6061−T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGNS TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

LIGHT POLE SIGN FRAMING & MOUNTING DETAILS

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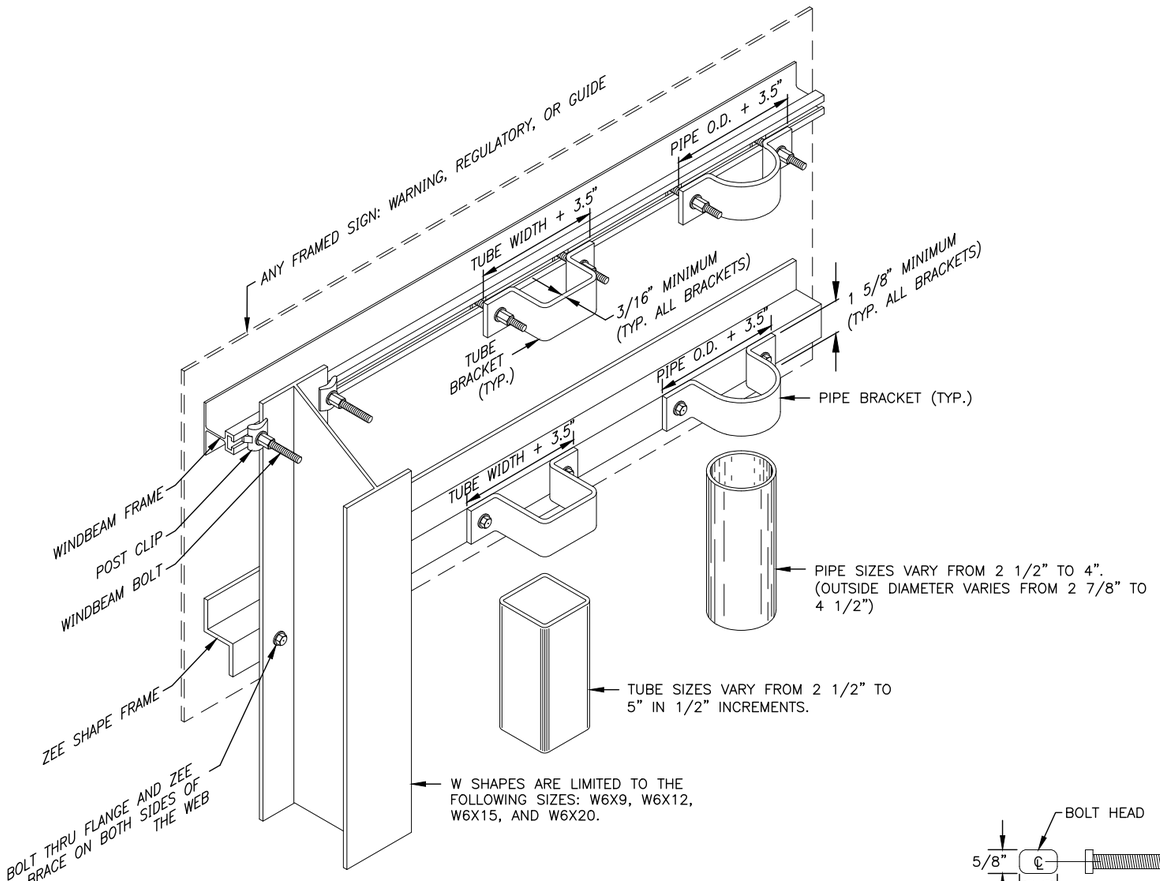
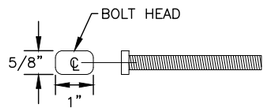
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H22	H24



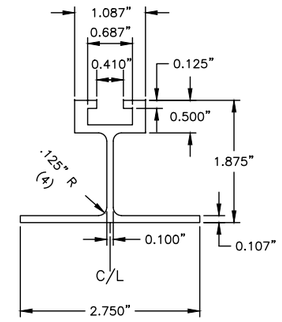
FRAMED SIGN ATTACHMENT BRACKETS



3/8" WINDBEAM BOLT

NOTES:

1. ATTACH FRAMED SIGNS TO POSTS WHEREVER THE FRAMES CROSS THE POSTS. AT EACH CROSSING, ATTACH THE SIGN USING TWO POST CLIPS ON W–SHAPE POSTS, A U–SHAPED BRACKET ON PIPES OR A BRACKET WITH SQUARE CORNERS ON TUBES.
2. THE TUBE BRACKETS USED ON EVEN INCH SIZE TUBES MAY ALSO BE USED ON TUBES 1/2" SMALLER IN SIZE.
3. THE BRACKET DETAILS SHOWN INDICATE GENERAL DESIGNS ONLY. DESIGNS MAY VARY BY MANUFACTURER.
4. ALUMINUM ALLOY 6061–T6 SHALL BE USED FOR ZEE SHAPE FRAMING AND RIVETS.



EXTRUDED ALUMINUM WINDBEAM

NOTES:

1. ALUMINUM ALLOY 6061–T6 SHALL BE USED FOR EXTRUDED WINDBEAM AND RIVETS.
2. ATTACH SIGNS TO WINDBEAM WITH 3/16" RIVETS AT 4" STAGGERED SPACING.

FRAMED SIGN ATTACHMENT DETAILS

PRELIMINARY PS&E

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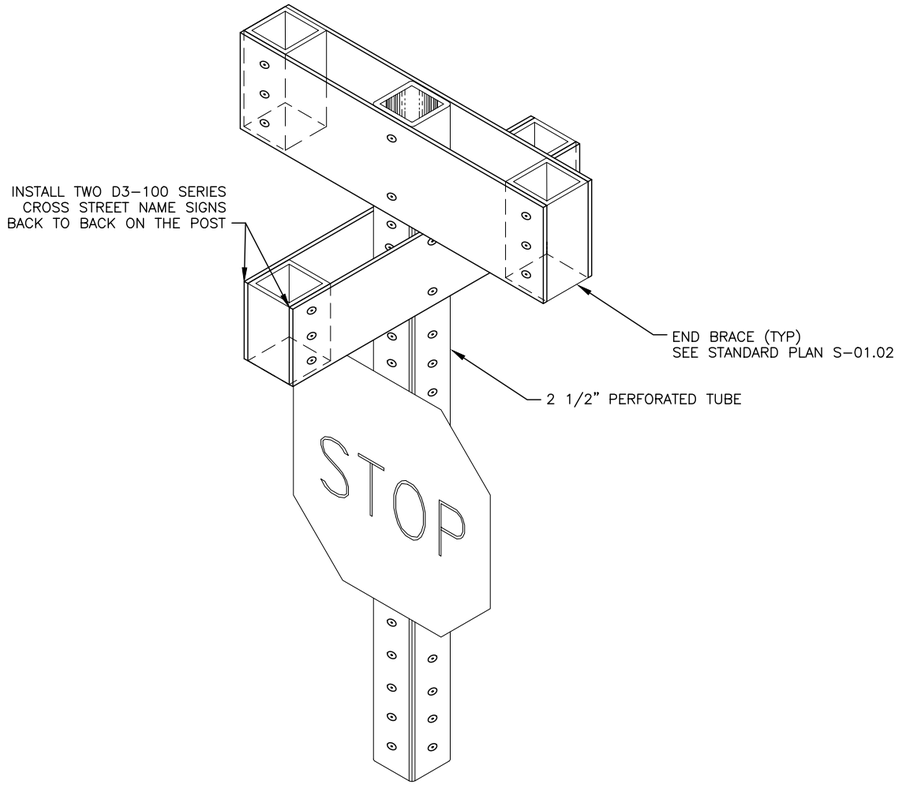
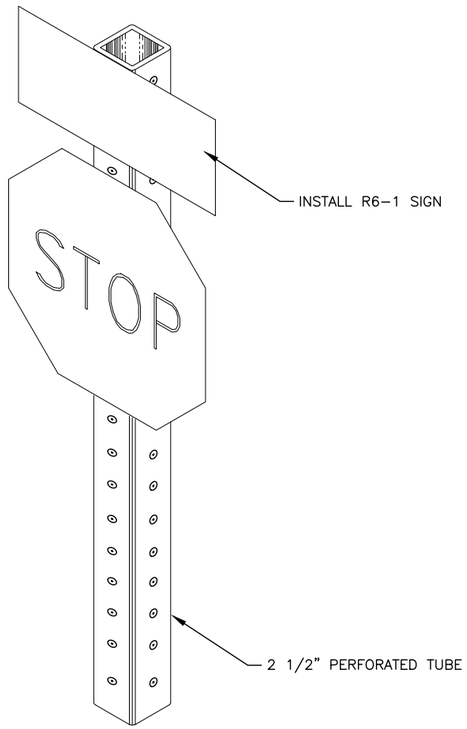
NO.	DATE	REVISION

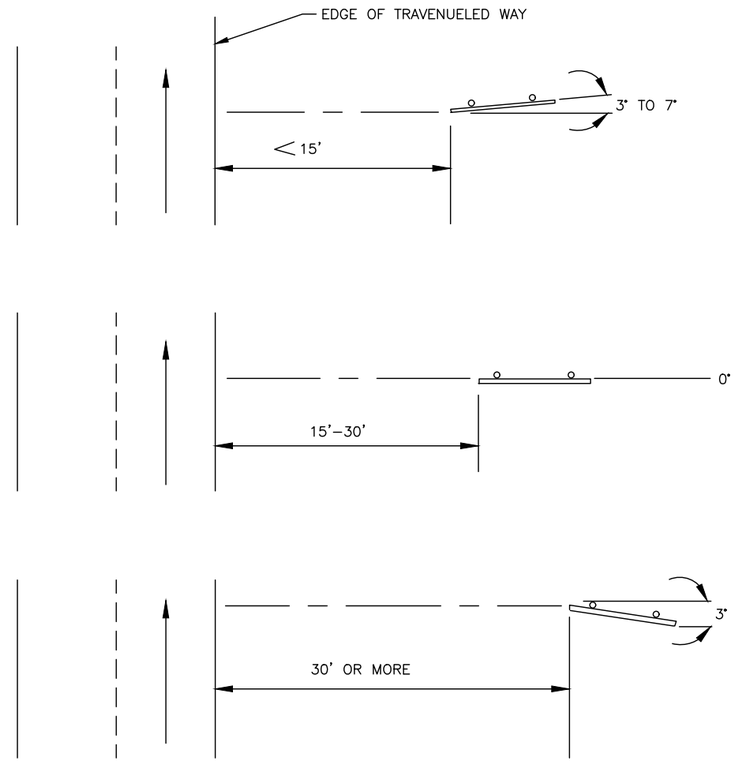
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H23	H24



STREET NAME SIGN MOUNTING DETAIL



ONE WAY SIGN MOUNTING DETAIL



SIGN INSTALLATION ANGLES

STREET NAME SIGN NOTE:

VERTICALLY SEPARATE R1-1 (STOP) SIGN AND ALL OTHER SIGN ASSEMBLIES MOUNTED ON THE SAME POST BY 2 1/2 INCHES.

SIGN INSTALLATION DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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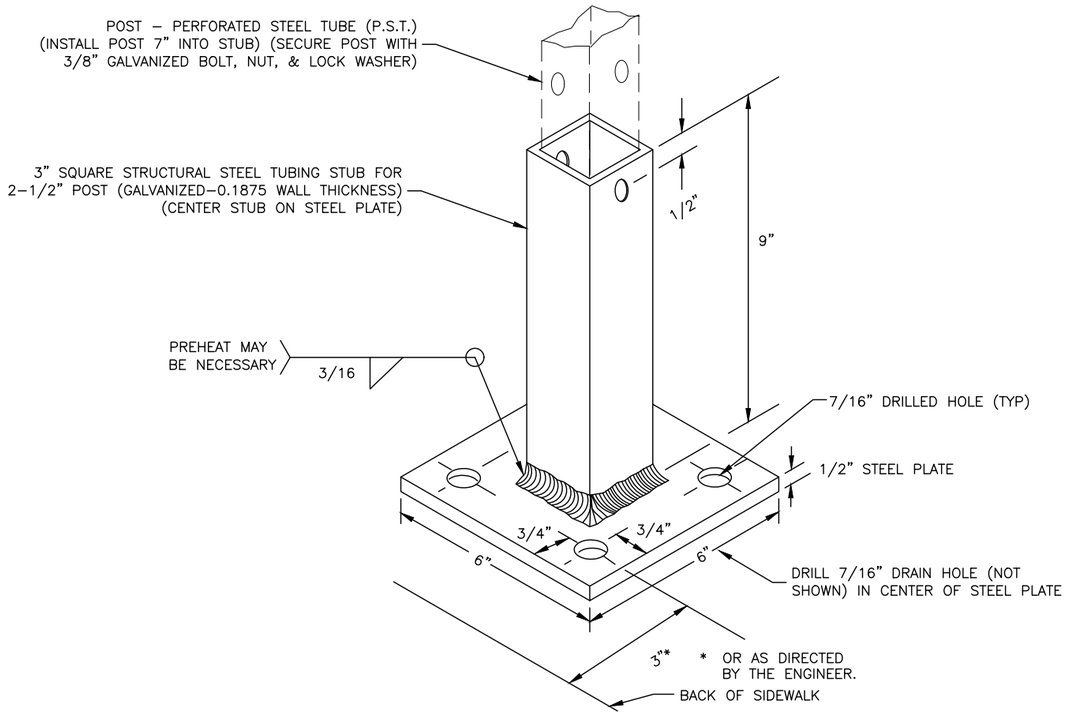
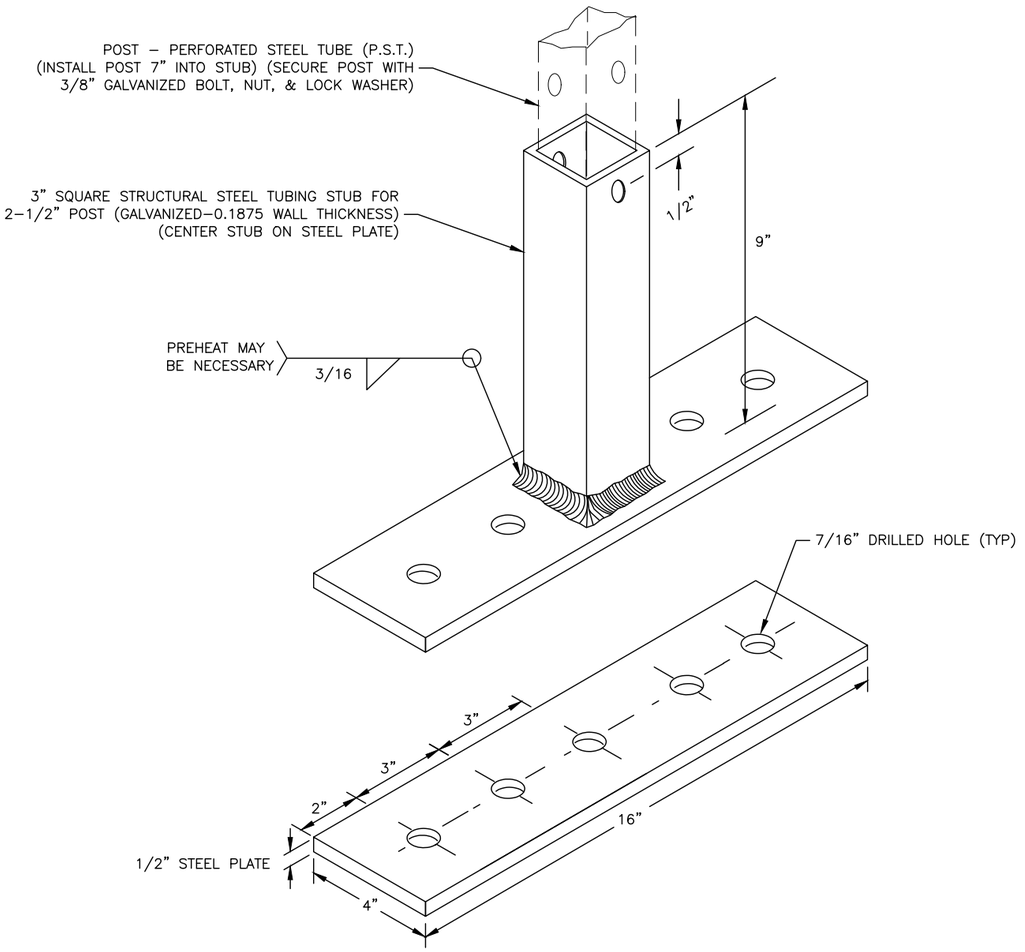
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H24	H24

SIDEWALK MOUNTING STUB FOR SIGN POSTS



CONCRETE BARRIER MOUNTING STUB FOR SIGN POSTS



INSTALLATION NOTES:

1. DRILL FOUR 1/2" HOLES IN SIDEWALK OR CONCRETE USING PLATE AS TEMPLATE. (DEPTH AS REQUIRED).
2. INSTALL STUB AND PLATE WITH FOUR HILTI EXPANSION ANCHORS CAT. NO. HDI 3/8" OR APPROVED EQUAL. SET ANCHOR ACCORDING TO MANUFACTURER'S INSTRUCTIONS. USE FOUR 3/8" GALVANIZED BOLTS AND FLAT WASHERS.
3. DO NOT SHIM BASE, PLUMB STUB BY HEATING AT PLATE. ALLOW SHIMMING, 3/8" GALVANIZED WASHERS.
4. PAINT STUB AND BASE WITH ZINC RICH PAINT PRIOR TO INSTALLATION.
5. INSTALL STUBS FOR NO PARKING SIGNS AT 45° FACING TRAFFIC.

THIS MODIFICATION HAS BEEN BROUGHT UP BY THE CITY OF FAIRBANKS ON ANOTHER PROJECT AND WAS INCLUDED IN HERE.

MOUNTING STUB DETAILS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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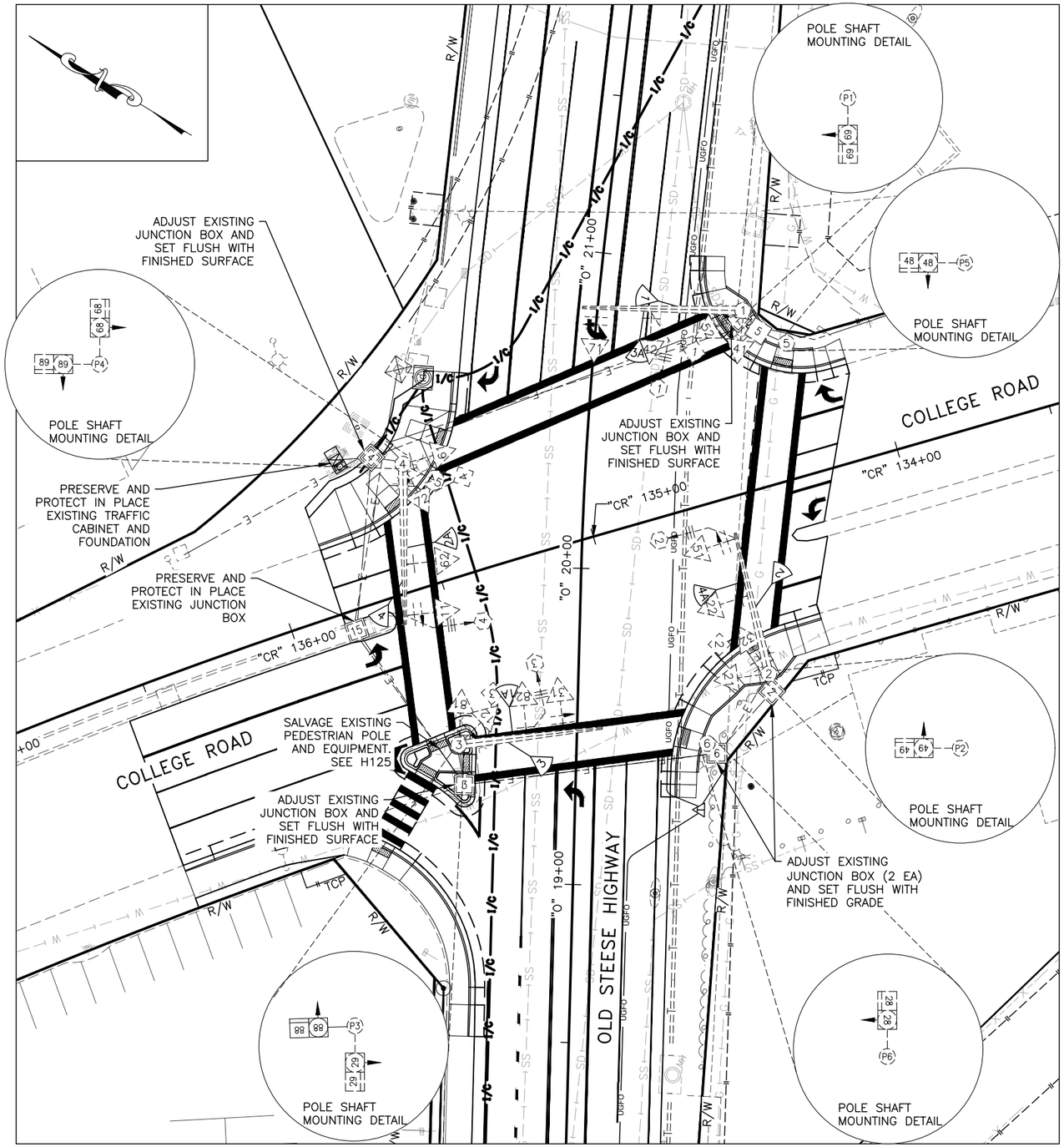
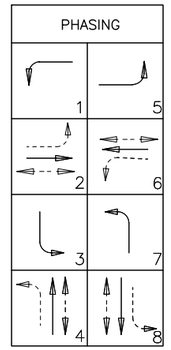
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H101	H128



PHASE SEQUENCE

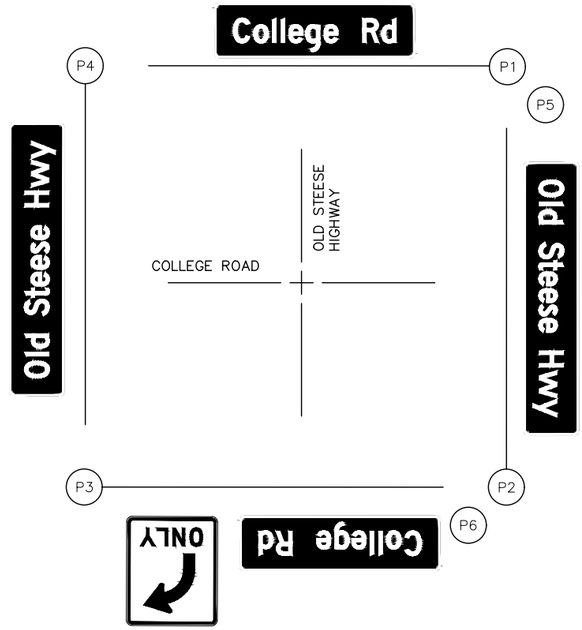


FUTURE PHASES
PED MOVEMENT
VEH. MOVEMENT
PERMISSIVE VEH. MOVEMENT

SIGNALIZATION NOTES:

1. RADAR DETECTOR ORIENTATIONS AND OFFSETS ARE APPROXIMATE; CONTRACTOR SHALL DETERMINE COVERAGE FROM THE MANUFACTURER AND MAKE FIELD ADJUSTMENTS AS REQUIRED FOR PROPER FUNCTIONING.
2. MAST ARM OFFSETS ARE MEASURED FROM CENTER OF OBJECT TO CENTER OF SIGNAL POLE.
3. EXISTING SIGNAL INFORMATION INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO CONDUIT ROUTING AND SIZING, CONDUCTOR ROUTING AND SIZING, FOUNDATION TYPES... ETC ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, AND FIELD ADJUST AS DIRECTED BY THE ENGINEER.
4. SALVAGE EXISTING VIDEO DETECTION.
5. INTERCONNECT AND PAN, TILT, ZOOM CAMERA WORK ARE SHOWN ON H200 SERIES SHEETS.
6. LIGHTING PLANS ARE SHOWN ON H301 SERIES SHEETS.
7. WHERE NOTED ON THE PLANS, REPLACE AND ADJUST EXISTING TRAFFIC SIGNAL SYSTEM JUNCTION BOXES, THIS WORK IS SUBSIDIARY TO PAY ITEM 660.2003.0000.

SIGN PLACEMENT



OLD STEESE & COLLEGE SIGNALIZATION PLAN

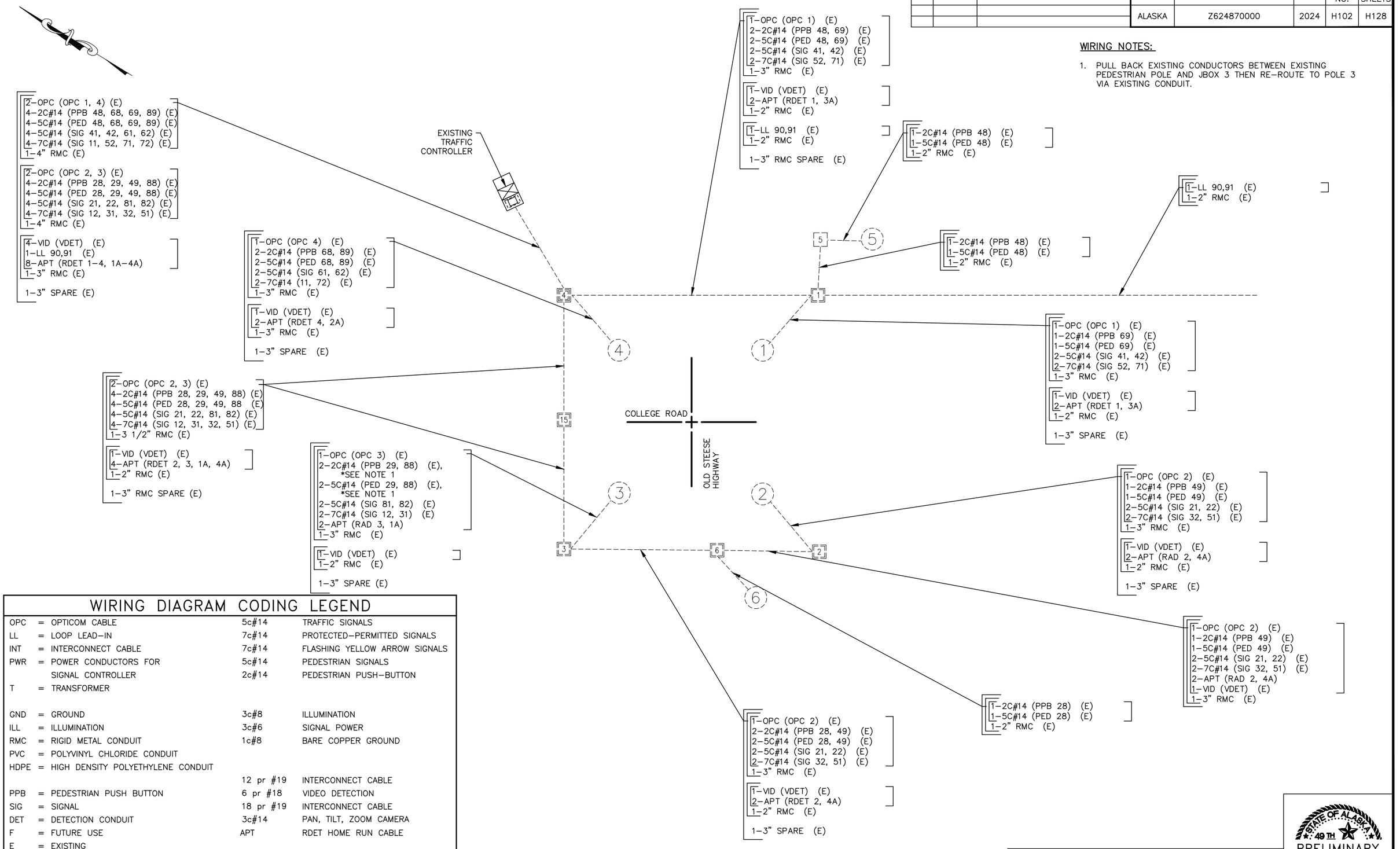
STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H102	H128

WIRING NOTES:

1. PULL BACK EXISTING CONDUCTORS BETWEEN EXISTING PEDESTRIAN POLE AND JBOX 3 THEN RE-ROUTE TO POLE 3 VIA EXISTING CONDUIT.



WIRING DIAGRAM CODING LEGEND

OPC	=	OPTICOM CABLE	5c#14	TRAFFIC SIGNALS
LL	=	LOOP LEAD-IN	7c#14	PROTECTED-PERMITTED SIGNALS
INT	=	INTERCONNECT CABLE	7c#14	FLASHING YELLOW ARROW SIGNALS
PWR	=	POWER CONDUCTORS FOR	5c#14	PEDESTRIAN SIGNALS
		SIGNAL CONTROLLER	2c#14	PEDESTRIAN PUSH-BUTTON
T	=	TRANSFORMER		
GND	=	GROUND	3c#8	ILLUMINATION
ILL	=	ILLUMINATION	3c#6	SIGNAL POWER
RMC	=	RIGID METAL CONDUIT	1c#8	BARE COPPER GROUND
PVC	=	POLYVINYL CHLORIDE CONDUIT		
HDPE	=	HIGH DENSITY POLYETHYLENE CONDUIT		
			12 pr #19	INTERCONNECT CABLE
PPB	=	PEDESTRIAN PUSH BUTTON	6 pr #18	VIDEO DETECTION
SIG	=	SIGNAL	18 pr #19	INTERCONNECT CABLE
DET	=	DETECTION CONDUIT	3c#14	PAN, TILT, ZOOM CAMERA
F	=	FUTURE USE	APT	RDET HOME RUN CABLE
E	=	EXISTING		
PTZ	=	PAN, TILT, ZOOM CAMERA		
RDET	=	RADAR DETECTION		
VDET	=	VIDEO DETECTION		

STATE OF ALASKA 49TH
PRELIMINARY PS&E
STAMPED PROFESSIONAL ENGINEER

OLD STEESE & COLLEGE WIRING DIAGRAM

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H103	H128

SIGNAL SIGN SCHEDULE

SIGN NO	LOCATION		ASDS CODE	LEGEND	SIZE HXV (IN)	AREA SQ FT	BRACE OR FRAME		REMARKS
	POLE NO	OFFSET					BRACED	FRAMED	
1	1	5.8	D3-1	COLLEGE RD	66 x 18	8.25		X	SALVAGE, SEE NOTE 1
2	2	6.8	D3-1	OLD STEESE HWY	90 x 18	11.25		X	SALVAGE, SEE NOTE 1
3	3	10.5	D3-1	COLLEGE RD	66 x 18	8.25		X	SALVAGE, SEE NOTE 1
4		2.5	R3-5R	R TURN ONLY	36 x 30	7.5			SALVAGE, SEE NOTE 1
5	4	6.8	D3-1	OLD STEESE HWY	90 x 18	11.25		X	SALVAGE, SEE NOTE 1
SUBTOTAL SIGNAL SIGNS						46.5			

LOCATION OFFSETS ARE FROM CENTER OF SIGN TO C OF SIGNAL POLE

NOTES:

1. SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITIONS, THIS WORK IS PAID FOR UNDER PAY ITEM 615.0006.0000. ALL SAVAGED SIGNS ARE TO BE REPLACED WITH NEW, SIGN IS MEASURED FOR PAYMENT UNDER PAY ITEM 615.0001.0000.

VEHICULAR SIGNAL HEAD SCHEDULE

POLE / POST NO.	FACE NO	INDICATIONS										MOUNTING				REMARKS
		12" BALL			12" ARROW				8" BALL			MAST ARM		SIDE MTNG TYPE	TOP OF POST	
		R	Y	G	R	Y	YF	G	R	Y	G	LOC OFFSET	ELEV PLUMB			
1	52				L	L	L	L				POLE		EX		
	41	X	X	X								POLE		EX		
	42	X	X	X								EX	X			
	71				L	L	L	L				EX	X			
2	32				L	L	L	L				POLE		EX		
	21	X	X	X								POLE		EX		
	22	X	X	X								EX	X			
	51				L	L	L	L				EX	X			
3	12				L	L	L	L				POLE		EX		
	81	X	X	X								POLE		EX		
	82	X	X	X								EX	X			
	31				L	L	L	L				EX	X			
4	72				L	L	L	L				POLE		EX		
	61	X	X	X								POLE		EX		
	62	X	X	X								EX	X			
	11				L	L	L	L				EX	X			

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO C OF SIGNAL POLE

YF = YELLOW FLASHING ARROW

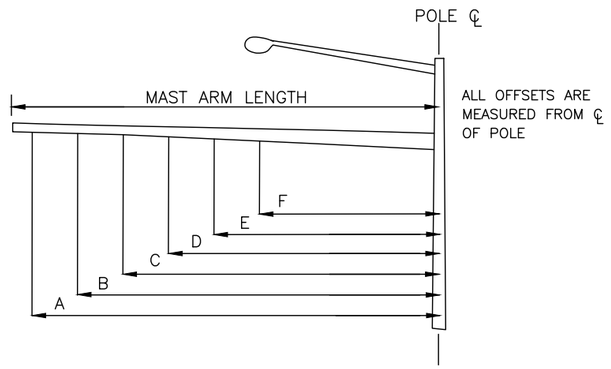
PED SIGNAL HEAD SCHEDULE

POLE/ POST NO	FACE NO	MOUNTING TYPE	REMARKS
1	69	EX	
2	49	EX	
3	29	EX	
	88	P	
4	68	EX	
	89	EX	
5	48	EX	
6	28	EX	
7	88	EX	

POLE-POST DESIGN LOADING SCHEDULE

POLE NO	CORNER	SIGNAL ARM L (Ft)	LUMI. ARM L (Ft)		A	B	C	D	E	F	G	REMARKS
1	E	EX	EX/EX	SIG. OR SIGN	SIGNAL	RADAR	SIGNAL	RADAR	SIGN			
				LOC. OFFSET (FT)	–	31.1	–	17.2	5.8			
				L X W OR S.F.	–	1	–	1	8.25			
2	S	EX		SIG. OR SIGN	SIGNAL	RADAR	SIGNAL	RADAR	SIGN			
				LOC. OFFSET (FT)	–	30.3	–	20.8	6.8			
				L X W OR S.F.	–	1	–	1	11.25			
3	W	EX	EX	SIG. OR SIGN	SIGNAL	SIGNAL	RADAR	RADAR	SIGN	SIGN		
				LOC. OFFSET (FT)	–	–	17.3	14.3	10.5	2.5		
				L X W OR S.F.	–	–	1	1	8.25	7.5		
4	N	–		SIG. OR SIGN	RADAR	SIGNAL	SIGNAL	RADAR	SIGN			
				LOC. OFFSET (FT)	35.3	–	–	26.6	6.8			
				L X W OR S.F.	1	–	–	1	11.25			

1. ONLY PROPOSED LOADING SHOWN, PROTECT EXISTING SIGNAL HEADS, SIGNS, AND RADAR UNLESS NOTED OTHERWISE



OLD STEESE & COLLEGE SCHEDULES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H103 Tue, Oct/18/22 10:22am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H104	H128

BASE & JUNCTION BOX SCHEDULE

LOCATION		DESCRIPTION			BASE TYPE ①			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO	JUNCTION BOX NO	CONTROLLER	CIDH	P	A	IA	II	III	IV	
–	–	1			X							EXISTING
–	–	2			X							EXISTING
–	–	3			X							EXISTING
–	–	4			X							EXISTING
–	–	5					X					EXISTING
–	–	6					X					EXISTING
–	–	7					X					TO BE REMOVED SEE H124
–	–		1						X			EXISTING
–	–		2						X			EXISTING
–	–		3						X			EXISTING
–	–		4							X		EXISTING
–	–			X		X						EXISTING

① P=PRECAST BASE (FOUNDATION).
A=TYPE A SEE T-31.01
CIDH=CAST IN DRILLED HOLE

RADAR DETECTION EQUIPMENT SCHEDULE

QTY	DESCRIPTION
	RADAR DETECTOR EQUIPMENT:
4	SMARTSENSOR ADVANCE 200-E EXTENDED RANGE (WX-SS-200-E)
4	SMARTSENSOR MATRIX (WX-SS-225)
8	SMARTSENSOR MOUNT (WX-SS-611)
8	60 FOOT 6 CONDUCTOR MATRIX/ 200V CABLE WITH CONNECTOR (WX-SS-704-060)
1200	MATRIX TYPE 2 HOME RUN CABLE 1 PR#18, 2 TRIADS #22 (ATP-MATRIX 2
1	SMARTSENSOR ADVANCE VIEW FINDER AIMING TOOL (WX-360-0283)
	CABINET EQUIPMENT:
2	CLICK 650 – 6 SENSOR CABINET INTERFACE WITH SDLC OUTPUT (WX-102-0416)
2	7' SDLC CABLE-INTERFACE PANEL (15 PIN SCREW) TO CLICK 650 (15 PIN CLIP) (WS-SDLC-TS2-7)

RADAR DETECTION SCHEDULE

DET NO	PHASE CALL	TYPE	FACING DIRECTION	POLE NO.	LOCATION	COMMENTS
1	3 & 8	STOP BAR	N	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
2	1 & 6	STOP BAR	E	2	SIGNAL MAST ARM	SMARTSENSOR MATRIX
3	4 & 7	STOP BAR	S	3	SIGNAL MAST ARM	SMARTSENSOR MATRIX
4	2 & 5	STOP BAR	W	4	SIGNAL MAST ARM	SMARTSENSOR MATRIX
1A	8	ADVANCE	NE	3	SIGNAL MAST ARM	SMARTSENSOR ADVANCE
2A	6	ADVANCE	SE	4	SIGNAL MAST ARM	SMARTSENSOR ADVANCE
3A	4	ADVANCE	SW	1	SIGNAL MAST ARM	SMARTSENSOR ADVANCE
4A	2	ADVANCE	NW	2	SIGNAL MAST ARM	SMARTSENSOR ADVANCE

(#) RADAR DETECTOR NUMBER

PEDESTRIAN DETECTION SCHEDULE

POLE	PUSH BUTTON	PHASE	REMARKS
1	69	6	EXISTING, SEE NOTE 2
2	49	4	EXISTING, SEE NOTE 2
3	29	2	EXISTING, SEE NOTE 3
	88	8	NEW, SEE NOTE 1
4	68	6	EXISTING, SEE NOTE 2
	89	8	EXISTING, SEE NOTE 3
5	48	4	EXISTING, SEE NOTE 3
6	28	2	EXISTING, SEE NOTE 3

NOTES:
1. INSTALL AN R10-3EL SIGN WITH PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
2. SALVAGE EXISTING AND INSTALL AN R10-3EL SIGN WITH PEDESTRIAN PUSH BUTTON. THIS WORK SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
3. SALVAGE EXISTING AND INSTALL AN R10-3ER SIGN WITH PEDESTRIAN PUSH BUTTON. THIS WORK SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

OPTICOM DETECTOR SCHEDULE

LOCATION	DET NO	PHASE CALL	FACING DIR	PREEMPTOR PRIORITY
EX	1	4 & 7	SW	
EX	2	2 & 5	NW	
EX	3	3 & 8	NE	
EX	4	1 & 6	SE	

(#) OPTICOM DETECTOR NUMBER

FLASH PROGRAM COLOR

PHASE	1	2	3	4	5	6	7	8
COLOR	R	R	R	R	R	R	R	R

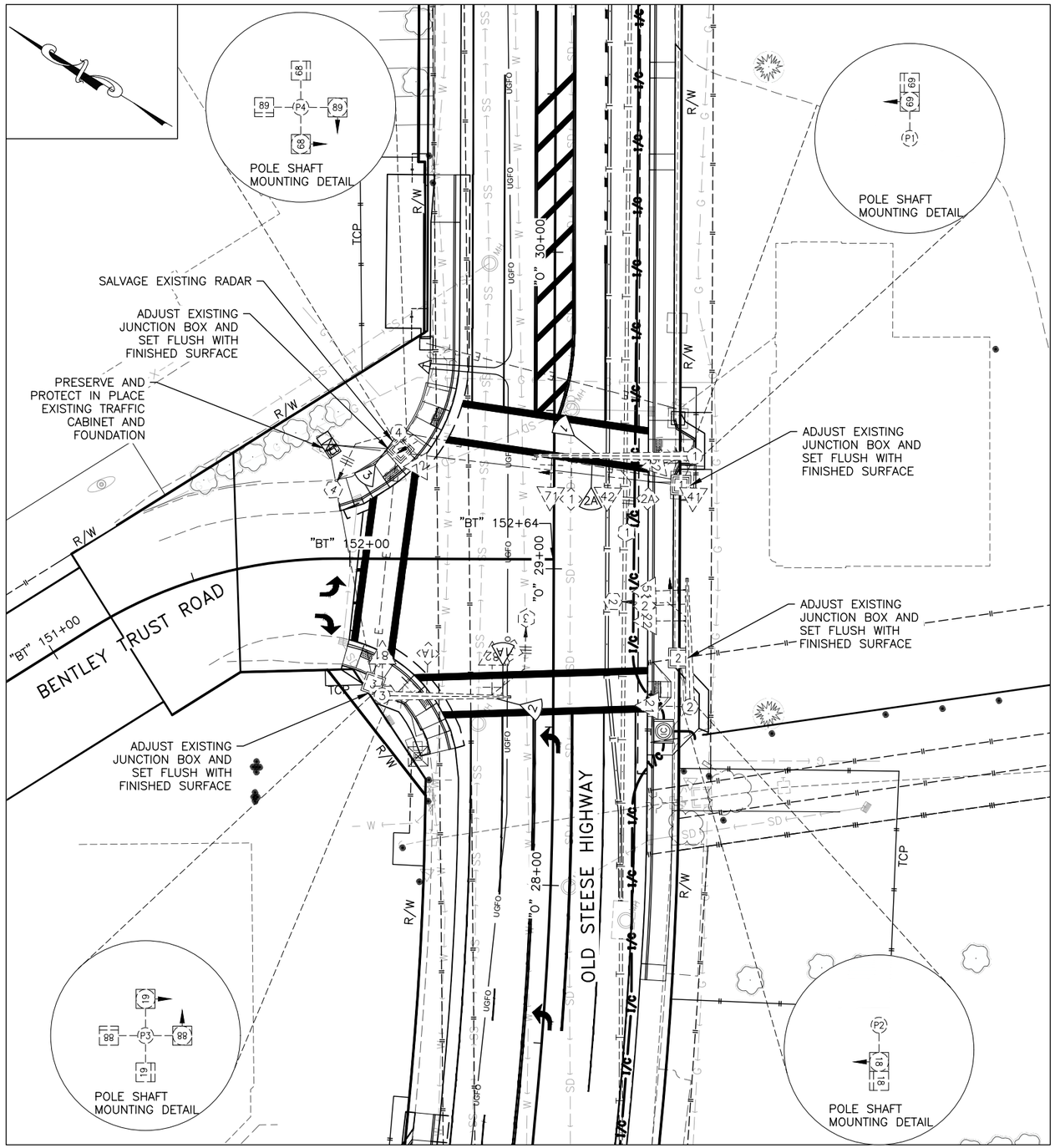
OLD STEESE & COLLEGE
SCHEDULES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H104 Tue, Oct/18/22 10:22am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H105	H128



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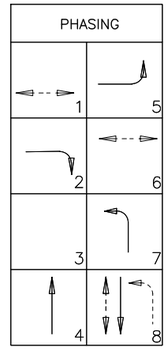
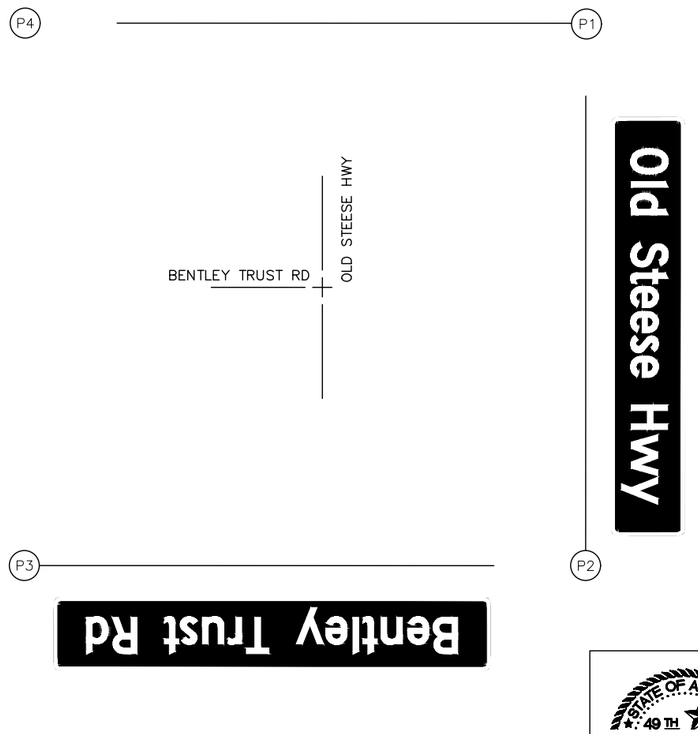


FUTURE PHASES
PED MOVEMENT
VEH. MOVEMENT
PERMISSIVE VEH. MOVEMENT

SIGNALIZATION NOTES:

1. RADAR DETECTOR ORIENTATIONS AND OFFSETS ARE APPROXIMATE; CONTRACTOR SHALL DETERMINE COVERAGE FROM THE MANUFACTURER AND MAKE FIELD ADJUSTMENTS AS REQUIRED FOR PROPER FUNCTIONING.
2. MAST ARM OFFSETS ARE MEASURED FROM CENTER OF OBJECT TO CENTER OF SIGNAL POLE.
3. EXISTING SIGNAL INFORMATION INDICATED ON THE PLANS INCLUDING, BUT NOT LIMITED TO CONDUIT ROUTING AND SIZING, CONDUCTOR ROUTING AND SIZING, FOUNDATION TYPES... ETC ARE APPROXIMATE. THE CONTRACTOR SHALL VERIFY ALL EXISTING CONDITIONS, AND FIELD ADJUST AS DIRECTED BY THE ENGINEER.
4. SALVAGE EXISTING VIDEO DETECTION.
5. INTERCONNECT AND PAN, TILT, ZOOM CAMERA WORK ARE SHOWN ON H200 SERIES SHEETS.
6. LIGHTING PLANS ARE SHOWN ON H301 SERIES SHEETS.
7. WHERE NOTED ON THE PLANS, REPLACE AND ADJUST EXISTING TRAFFIC SIGNAL SYSTEM JUNCTION BOXES, THIS WORK IS SUBSIDIARY TO PAY ITEM 660.2003.0000.

SIGN PLACEMENT



OLD STEESE & BENTLEY TRUST SIGNALIZATION PLAN

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION
NOT APPROVED PROFESSIONAL ENGINEER

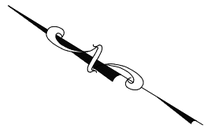
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H105 Tue, Oct/18/22 10:23am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H106	H128

WIRING NOTES:

1. ALL VIDEO DETECTION CONDUCTORS (VDET) TO BE REMOVED.



EXISTING TRAFFIC CONTROLLER

BENTLEY TRUST ROAD

OLD STEESE HIGHWAY

1-OPC (OPC 1) (E)
1-2C#14 (PPB 69) (E)
1-5C#14 (PED 69) (E)
2-5C#14 (SIG 41, 42) (E)
2-7C#14 (SIG 52, 71) (E)
1-3" RMC (E)

1-OPC (OPC 2) (E)
1-2C#14 (PPB 18) (E)
1-5C#14 (PED 18) (E)
2-5C#14 (SIG 21, 22) (E)
1-7C#14 (SIG 51) (E)
1-3" RMC (E)

3-6pr# 18 (VDET) (E)
2-APT (RDET 1, 2A)
1-2" RMC (E)

1-3" RMC SPARE (E)

1-OPC (OPC 4) (E)
2-2C#14 (PPB 68, 89) (E)
2-5C#14 (PED 68, 89) (E)
1-7C#14 (SIG 72) (E)
1-APT (RDET 3)
1-3" RMC (E)

1-OPC (OPC 4) (E)
2-2C#14 (PPB 68, 89) (E)
2-5C#14 (PED 68, 89) (E)
1-7C#14 (SIG 72) (E)
1-APT (RDET 3)
1-3" RMC (E)

1-OPC (OPC 1) (E)
1-2C#14 (PPB 69) (E)
1-5C#14 (PED 69) (E)
2-5C#14 (SIG 41, 42) (E)
2-7C#14 (SIG 52, 71) (E)
1-3" RMC (E)

2-6pr# 18 (VDET) (E)
2-APT (RDET 1, 2A)
1-2" RMC (E)

1-OPC (OPC 2) (E)
1-2C#14 (PPB 18) (E)
1-5C#14 (PED 18) (E)
2-5C#14 (SIG 21, 22) (E)
1-7C#14 (SIG 51) (E)
1-3" RMC (E)

1-6pr# 18 (VDET) (E)
1-2" RMC (E)

1-3" RMC SPARE (E)

1-OPC (OPC 3) (E)
2-2C#14 (PPB 19, 88) (E)
2-5C#14 (PED 19, 88) (E)
2-5C#14 (SIG 81, 82) (E)
1-3" RMC (E)

2-6pr# 18 (VDET) (E)
2-APT (RDET 1A, 2)
1-2" RMC (E)

1-3" RMC SPARE (E)

1-OPC (OPC 2) (E)
1-2C#14 (PPB 18) (E)
1-5C#14 (PED 18) (E)
2-5C#14 (SIG 21, 22) (E)
1-7C#14 (SIG 51) (E)
1-3" RMC (E)

1-6pr# 18 (VDET) (E)
1-2" RMC (E)

1-OPC (OPC 3) (E)
2-2C#14 (PPB 19, 88) (E)
2-5C#14 (PED 19, 88) (E)
2-5C#14 (SIG 81, 82) (E)
1-3" RMC (E)

2-6pr# 18 (VDET) (E)
2-APT (RDET 1A, 2)
1-2" RMC (E)

WIRING DIAGRAM CODING LEGEND

OPC	=	OPTICOM CABLE	5c#14		TRAFFIC SIGNALS
LL	=	LOOP LEAD-IN	7c#14		PROTECTED-PERMITTED SIGNALS
INT	=	INTERCONNECT CABLE	7c#14		FLASHING YELLOW ARROW SIGNALS
PWR	=	POWER CONDUCTORS FOR SIGNAL CONTROLLER	5c#14		PEDESTRIAN SIGNALS
			2c#14		PEDESTRIAN PUSH-BUTTON
T	=	TRANSFORMER			
GND	=	GROUND	3c#8		ILLUMINATION
ILL	=	ILLUMINATION	3c#6		SIGNAL POWER
RMC	=	RIGID METAL CONDUIT	1c#8		BARE COPPER GROUND
PVC	=	POLYVINYL CHLORIDE CONDUIT			
HDPE	=	HIGH DENSITY POLYETHYLENE CONDUIT			
			12 pr #19		INTERCONNECT CABLE
PPB	=	PEDESTRIAN PUSH BUTTON	6 pr #18		VIDEO DETECTION
SIG	=	SIGNAL	18 pr #19		INTERCONNECT CABLE
DET	=	DETECTION CONDUIT	3c#14		PAN, TILT, ZOOM CAMERA
F	=	FUTURE USE	APT		RDET HOME RUN CABLE
E	=	EXISTING			
PTZ	=	PAN, TILT, ZOOM CAMERA			
RDET	=	RADAR DETECTION			
VDET	=	VIDEO DETECTION			

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT APPROVED FOR CONSTRUCTION

OLD STEESE & BENTLEY TRUST WIRING DIAGRAM

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H107	H128

SIGNAL SIGN SCHEDULE

SIGN NO	LOCATION		ASDS CODE	LEGEND	SIZE HXV (IN)	AREA SQ FT	BRACE OR FRAME		REMARKS
	POLE NO	OFFSET					BRACED	FRAMED	
1	1	9.0	D3-1	BENTLEY TRUST RD	144 x 24	24		X	SALVAGE, SEE NOTE 1
2	2	8.8	D3-1	OLD STEESE HWY	138 x 24	23		X	SALVAGE, SEE NOTE 1
3	3	9.0	D3-1	BENTLEY TRUST RD	144 x 24	24		X	SALVAGE, SEE NOTE 1
				SUBTOTAL SIGNAL SIGNS		71			

LOCATION OFFSETS ARE FROM CENTER OF SIGN TO C OF SIGNAL POLE

NOTES:

1. SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITIONS, THIS WORK IS PAID FOR UNDER PAY ITEM 615.0006.0000. ALL SAVAGED SIGNS ARE TO BE REPLACED WITH NEW, SIGN IS MEASURED FOR PAYMENT UNDER PAY ITEM 615.0001.0000.

VEHICULAR SIGNAL HEAD SCHEDULE

POLE / POST NO.	FACE NO	INDICATIONS										MOUNTING				REMARKS
		12" BALL			12" ARROW				8" BALL			MAST ARM		SIDE MTNG TYPE	TOP OF POST	
		R	Y	G	R	Y	YF	G	R	Y	G	LOC OFFSET	ELEV PLUMB			
1	52				L	L		L				POLE		EX		
	41	X	X	X								POLE		EX		
	42	X	X	X								EX	X			
	71				L	L		L				EX	X			
2	21	X				R		R				POLE		EX		
	22	X				R		R				EX	X			
	51				L	L		L				EX	X			
3	81	X	X	X								POLE		EX		
	82	X	X	X								EX	X			
4	72				L	L	L	L				POLE		EX		

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO C OF SIGNAL POLE
YF = YELLOW FLASHING ARROW

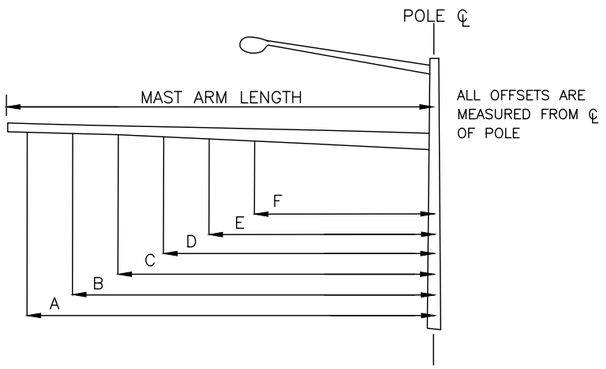
PED SIGNAL HEAD SCHEDULE

POLE/ POST NO	FACE NO	MOUNTING TYPE	REMARKS
1	69	EX	
2	28	EX	
3	29	EX	
	88	EX	
4	68	EX	
	89	EX	

POLE-POST DESIGN LOADING SCHEDULE

POLE NO	CORNER	SIGNAL ARM L (Ft)	LUMI. ARM L (Ft)		A	B	C	D	E	F	REMARKS
1	E	EX	EX	SIG. OR SIGN	SIGNAL	RADAR	RADAR	SIGNAL	SIGN		
				LOC. OFFSET (FT)	–	32.3	30.3	–	9.0		
				L X W OR S.F.	–	1	1	–	24		
2	S	EX		SIG. OR SIGN	SIGNAL	SIGNAL	SIGN				
				LOC. OFFSET (FT)	–	–	8.8				
				L X W OR S.F.	–	–	23				
3	W	EX	EX	SIG. OR SIGN	RADAR	SIGNAL	RADAR	SIGN			
				LOC. OFFSET (FT)	38.1	–	33.8	9.0			
				L X W OR S.F.	1	–	1	24			
4	N	–		SIG. OR SIGN							RAD3 ON POLE
				LOC. OFFSET (FT)							
				L X W OR S.F.							

1. ONLY PROPOSED LOADING SHOWN, PROTECT EXISTING SIGNAL HEADS, SIGNS, AND RADAR UNLESS NOTED OTHERWISE



PRELIMINARY PS&E

OLD STEESE & BENTLEY TRUST SCHEDULES

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H108	H128

BASE & JUNCTION BOX SCHEDULE

LOCATION		DESCRIPTION			BASE TYPE ①			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO	JUNCTION BOX NO	CONTROLLER	CIDH	P	A	IA	II	III	IV	
–	–	1			X							EXISTING
–	–	2			X							EXISTING
–	–	3			X							EXISTING
–	–	4			X							EXISTING
–	–		1							X		EXISTING
–	–		2						X			EXISTING
–	–		3						X			EXISTING
–	–		4							X		EXISTING
–	–		5					X				EXISTING
–	–		6					X				EXISTING
–	–		A1						X			EXISTING
–	–		A0					X				EXISTING
–	–			X								EXISTING ②

① P=PRECAST BASE (FOUNDATION).
A=TYPE A SEE T–31.01
CIDH=CAST IN DRILLED HOLE
② FOUNDATION TYPE NOT PROVIDED IN AS–BUILTS

RADAR DETECTION EQUIPMENT SCHEDULE

QTY	DESCRIPTION
	RADAR DETECTOR EQUIPMENT:
2	SMARTSENSOR ADVANCE 200–E EXTENDED RANGE (WX–SS–200–E)
3	SMARTSENSOR MATRIX (WX–SS–225)
5	SMARTSENSOR MOUNT (WX–SS–611)
5	60 FOOT 6 CONDUCTOR MATRIX/ 200V CABLE WITH CONNECTOR (WX–SS–704–060)
500	MATRIX TYPE 2 HOME RUN CABLE 1 PR#18, 2 TRIADS #22 (ATP–MATRIX 2
1	SMARTSENSOR ADVANCE VIEW FINDER AIMING TOOL (WX–360–0283)
	CABINET EQUIPMENT:
1	CLICK 656 – 6 SENSOR CABINET INTERFACE WITH SDLC OUTPUT (WX–102–0451)
1	7' SDLC CABLE–INTERFACE PANEL (15 PIN SCREW) TO CLICK 650 (15 PIN CLIP) (WS–SDLC–TS2–7)

RADAR DETECTION SCHEDULE

DET NO	PHASE CALL	TYPE	FACING DIRECTION	POLE NO.	LOCATION	COMMENTS
1	8	STOP BAR	N	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
2	4 & 7	STOP BAR	S	3	SIGNAL MAST ARM	SMARTSENSOR MATRIX
3	2 & 5	STOP BAR	E	4	POLE	SMARTSENSOR MATRIX
1A	8	ADVANCE	NE	3	SIGNAL MAST ARM	SMARTSENSOR ADVANCE
2A	4	ADVANCE	SW	1	SIGNAL MAST ARM	SMARTSENSOR ADVANCE

(#) RADAR DETECTOR NUMBER

PEDESTRIAN DETECTION SCHEDULE

POLE	PUSH BUTTON	PHASE	REMARKS
1	69	6	EXISTING, SEE NOTE 2
2	18	1	EXISTING, SEE NOTE 1
3	19	1	EXISTING, SEE NOTE 1
	88	8	EXISTING, SEE NOTE 2
4	68	6	EXISTING, SEE NOTE 2
	89	8	EXISTING, SEE NOTE 1

NOTES:
1. SALVAGE EXISTING AND INSTALL AN R10–3EL SIGN WITH PEDESTRIAN PUSH BUTTON. THIS WORK SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
2. SALVAGE EXISTING AND INSTALL AN R10–3ER SIGN WITH PEDESTRIAN PUSH BUTTON. THIS WORK SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

OPTICOM DETECTOR SCHEDULE

LOCATION	DET NO	PHASE CALL	FACING DIR	PREEMPTOR PRIORITY
EX	1	4 & 7	SOUTH	
EX	2	2 & 5	WEST	
EX	3	3 & 8	NORTH	
EX	4	2 & 5	WEST	

(#) OPTICOM DETECTOR NUMBER

FLASH PROGRAM COLOR

PHASE	1	2	3	4	5	6	7	8
COLOR	–	R	–	R	R	–	R	R

OLD STEESE & BENTLEY TRUST
WIRING DIAGRAM

STATE OF ALASKA
49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
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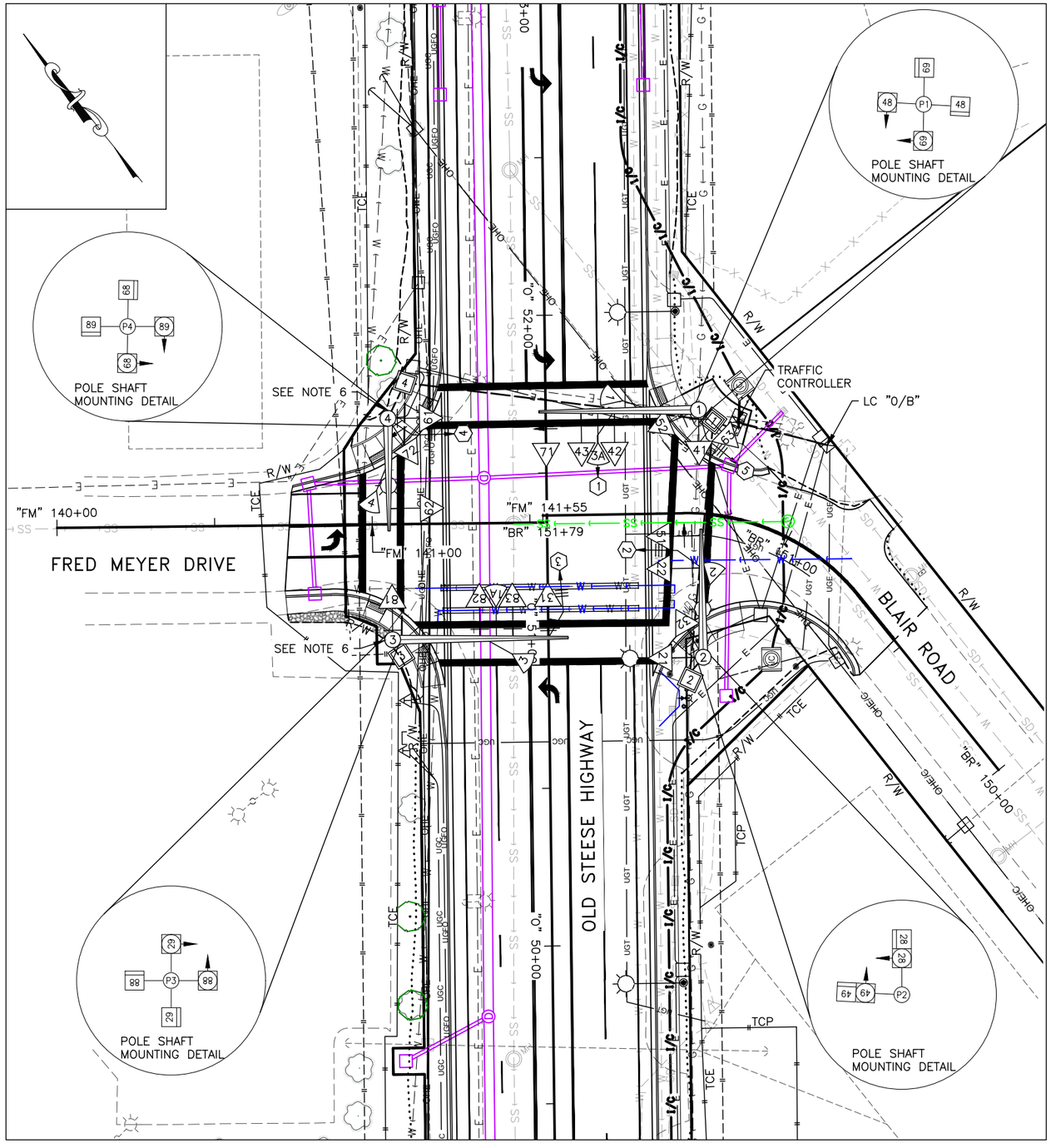
ALASKA	Z624870000	2024	H109	H128



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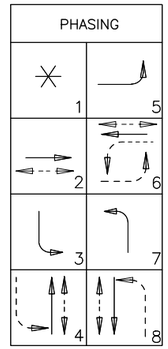
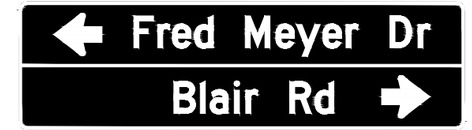


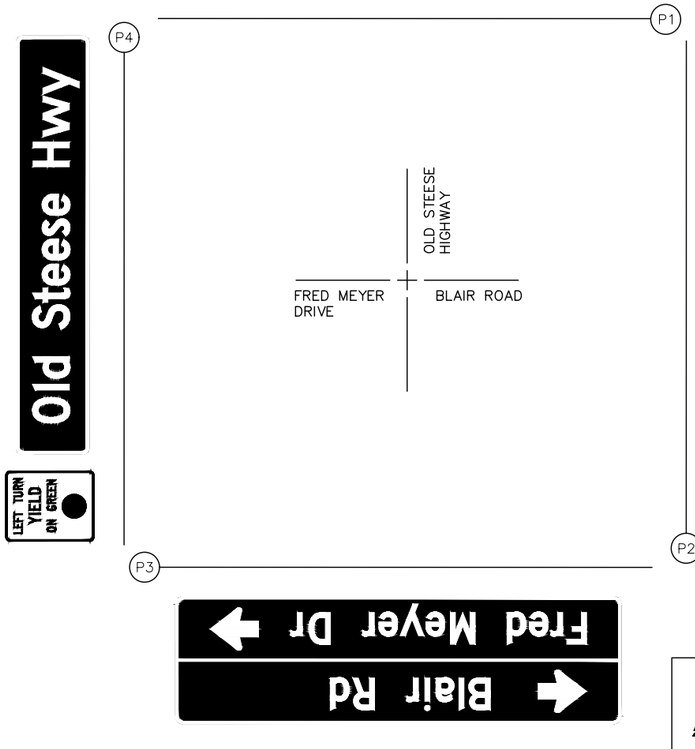
FUTURE PHASES
PED MOVEMENT
VEH. MOVEMENT
PERMISSIVE VEH. MOVEMENT

SIGNALIZATION NOTES:

1. RADAR DETECTOR ORIENTATIONS AND OFFSETS ARE APPROXIMATE; CONTRACTOR SHALL DETERMINE COVERAGE FROM THE MANUFACTURER AND MAKE FIELD ADJUSTMENTS AS REQUIRED FOR PROPER FUNCTIONING.
2. MAST ARM OFFSETS ARE MEASURED FROM CENTER OF OBJECT TO CENTER OF SIGNAL POLE.
3. ORIENT SIGNAL MAST ARM(S) AT 90 DEGREE TO THE ROADWAY ALIGNMENT, UNLESS OTHERWISE NOTED.
4. ORIENT LUMINAIRE MAST ARM(S) IN THE SAME DIRECTION AS THE SIGNAL MAST ARM, UNLESS OTHERWISE NOTED.
5. MOUNTING TYPES LISTED IN SIGNAL HEAD SCHEDULE AND PEDESTRIAN SIGNAL HEAD SCHEDULE TABLES ARE IN ACCORDANCE WITH DOT&PF STANDARD DRAWING, TRAFFIC SIGNAL HARDWARE (T–30.11).
6. POLE FOUNDATIONS FOR POLES 3 AND 4 TO BE CONSTRUCTED INTO THE BACKING CURB. FOUNDATION SHALL BE FLUSH WITH TOP OF CURB.
5. INTERCONNECT AND PAN, TILT, ZOOM CAMERA WORK ARE SHOWN ON H200 SERIES SHEETS.
6. LIGHTING PLANS ARE SHOWN ON H301 SERIES SHEETS.

SIGN PLACEMENT





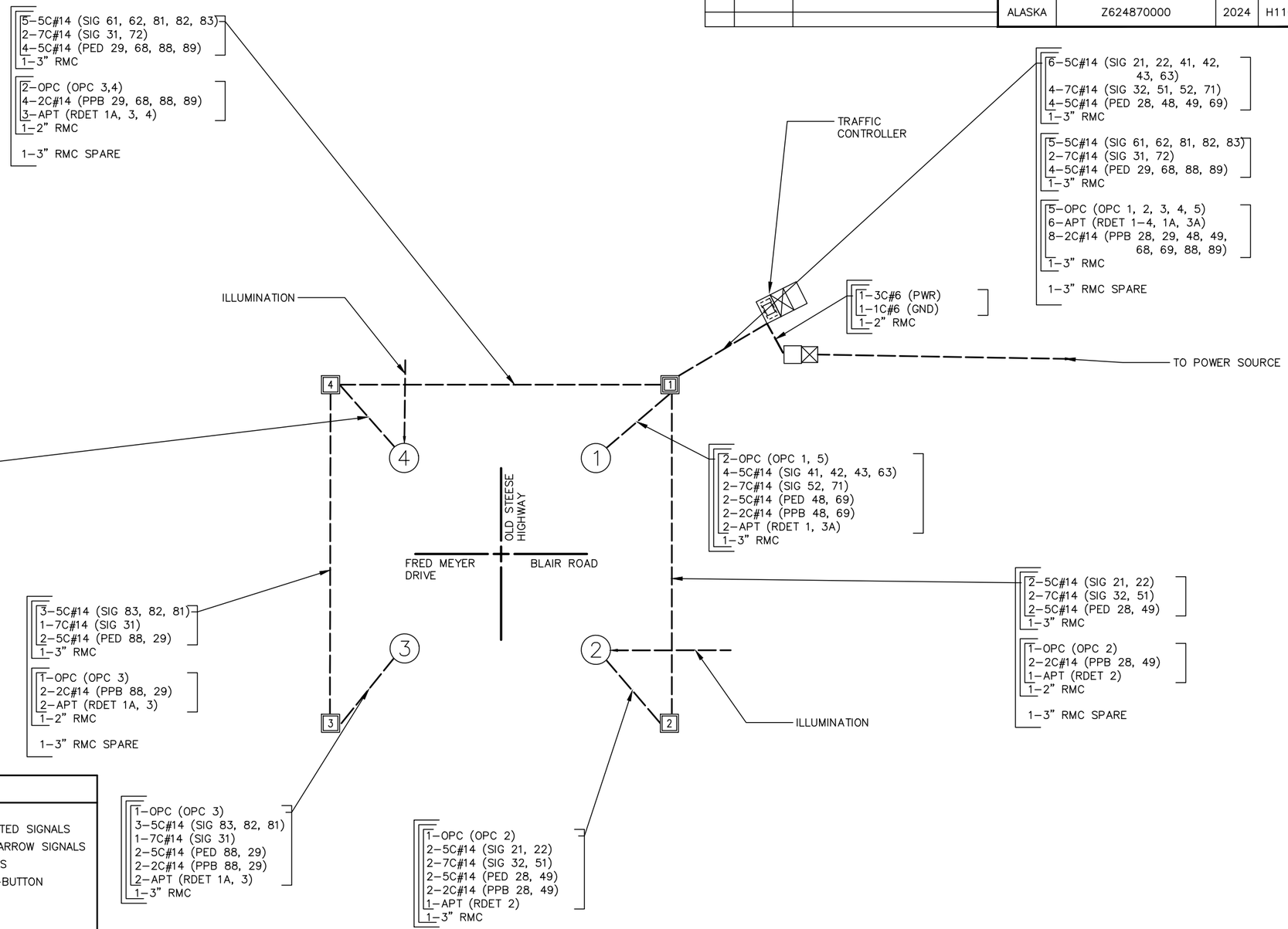
OLD STEESE & BLAIR–FRED MEYER SIGNALIZATION PLAN

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H109 Tue, Oct/18/22 10:23am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H110	H128



WIRING DIAGRAM CODING LEGEND

OPC	=	OPTICOM CABLE	5c#14	TRAFFIC SIGNALS
LL	=	LOOP LEAD–IN	7c#14	PROTECTED–PERMITTED SIGNALS
INT	=	INTERCONNECT CABLE	7c#14	FLASHING YELLOW ARROW SIGNALS
PWR	=	POWER CONDUCTORS FOR SIGNAL CONTROLLER	5c#14	PEDESTRIAN SIGNALS
			2c#14	PEDESTRIAN PUSH–BUTTON
T	=	TRANSFORMER		
GND	=	GROUND	3c#6	ILLUMINATION
ILL	=	ILLUMINATION	3c#6	SIGNAL POWER
RMC	=	RIGID METAL CONDUIT	1c#8	BARE COPPER GROUND
PVC	=	POLYVINYL CHLORIDE CONDUIT		
HDPE	=	HIGH DENSITY POLYETHYLENE CONDUIT		
			12 pr #19	INTERCONNECT CABLE
PPB	=	PEDESTRIAN PUSH BUTTON	6 pr #19	VIDEO DETECTION
SIG	=	SIGNAL	18 pr #19	INTERCONNECT CABLE
DET	=	DETECTION CONDUIT	3c#14	PAN, TILT, ZOOM CAMERA
F	=	FUTURE USE	APT	RDET HOME RUN CABLE
E	=	EXISTING		
PTZ	=	PAN, TILT, ZOOM CAMERA		
RDET	=	RADAR DETECTION		
VDET	=	VIDEO DETECTION		

NOTE: ALL CONDUITS ARE RIGID METAL CONDUIT (RMC)

OLD STEESE & BLAIR–FRED MEYER WIRING DIAGRAM

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H111	H128

SIGNAL SIGN SCHEDULE

SIGN NO	LOCATION		ASDS CODE	LEGEND	SIZE HXV (IN)	AREA SQ FT	BRACE OR FRAME		REMARKS
	POLE NO	OFFSET					BRACED	FRAMED	
1	1	10	D3-102 MOD	BLAIR RD/FRED MEYER DR	168 x 48	56		X	
2	2	8.8	D3-1	OLD STEESE HWY	138 x 24	23		X	
3	3	10	D3-102 MOD	BLAIR RD/FRED MEYER DR	168 x 48	56		X	
4	4	8.8	D3-1	OLD STEESE HWY	138 x 24	23		X	
5		31.5	R10-12	LEFT TURN YIELD ON GREEN BALL	24 x 30	5			
				SUBTOTAL SIGNAL SIGNS		158			

LOCATION OFFSETS ARE FROM CENTER OF SIGN TO ℄ OF SIGNAL POLE

VEHICULAR SIGNAL HEAD SCHEDULE

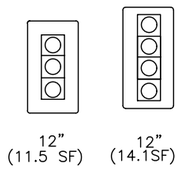
POLE / POST NO.	FACE NO	INDICATIONS										MOUNTING				REMARKS
		12" BALL			12" ARROW				8" BALL			MAST ARM		SIDE MTNG TYPE	TOP OF POST	
		R	Y	G	R	Y	YF	G	R	Y	G	LOC OFFSET	ELEV PLUMB			
1	63	X	X	X								POLE		D		225° CLOCKWISE FROM MAST ARM
	52				L	L	L	L				POLE		D		
	41	X	X	X								POLE		B		
	42	X	X	X								26.7	X			
	43	X	X	X								37.2	X			
	71				L	L	L	L				48.5	X			
2	32				L	L	L	L				POLE		D		
	21	X	X	X								POLE		D		
	22	X	X	X								28.3	X			
	51				L	L	L	L				38.5	X			
3	81	X	X	X								POLE		G		
	82	X	X	X								27.6	X			
	83	X	X	X								38.1	X			
	31				L	L	L	L				49.4	X			
4	72				L	L	L	L				POLE		D		
	61	X	X	X								POLE		D		
	62	X	X	X								28.5	X			

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO ℄ OF SIGNAL POLE
YF = YELLOW FLASHING ARROW

PED SIGNAL HEAD SCHEDULE

POLE/ POST NO	FACE NO	MOUNTING TYPE	REMARKS
1	48	P	
	69	P	
2	28	P	
	49	P	
3	29	P	
	88	P	
4	68	P	
	89	P	

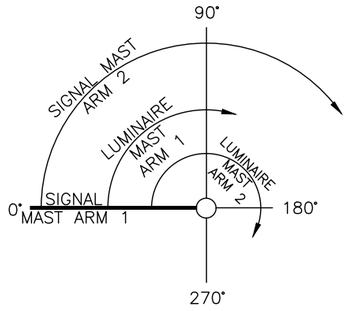
SIGNAL HEAD CONFIGURATIONS
(AREAS ARE FOR WIND LOAD CALCULATIONS)



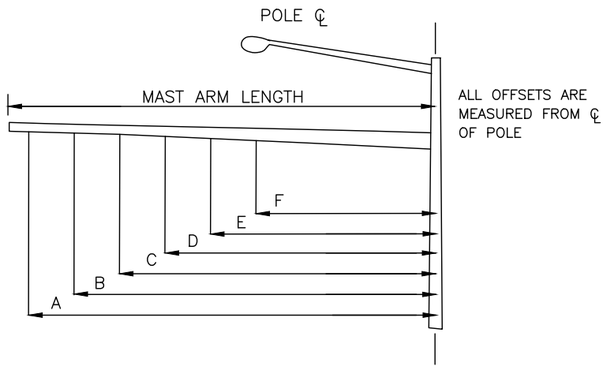
POLE-POST DESIGN LOADING SCHEDULE

POLE NO	CORNER	SIGNAL ARM L (Ft)	LUMI. ARM L (Ft)		A	B	C	D	E	F	REMARKS
1	NE	50		SIG. OR SIGN	SIGNAL	SIGNAL	RADAR	SIGNAL	RADAR	SIGN	
				LOC. OFFSET (FT)	48.5	37.2	32.0	26.7	14.5	10	
				L X W OR S.F.	14.1	11.5	1	11.5	1	56	
2	SE	40	12'/20'	SIG. OR SIGN	SIGNAL	SIGNAL	RADAR	SIGN			LUMINAIRE ARM 1 @ 0° LUMINAIRE ARM 2 @ 270° MOUNTING HEIGHT @ 30'
				LOC. OFFSET (FT)	38.5	28.3	13.3	8.8			
				L X W OR S.F.	14.1	11.5	1	23			
3	SW	55		SIG. OR SIGN	SIGNAL	SIGNAL	RADAR	RADAR	SIGNAL	SIGN	
				LOC. OFFSET (FT)	49.4	38.1	32.9	29.1	27.6	10	
				L X W OR S.F.	14.1	11.5	1	1	11.5	56	
4	NW	35	18'	SIG. OR SIGN	SIGN	SIGNAL	RADAR	SIGN			MOUNTING HEIGHT @ 30'
				LOC. OFFSET (FT)	31.5	28.5	13.6	8.8			
				L X W OR S.F.		11.5	11.5	23			

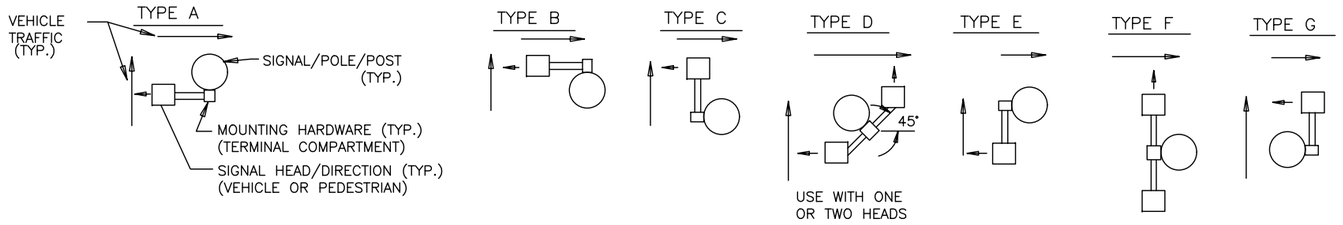
1. BOTH SIGNAL AND ILLUMINATION MAST ARMS ARE ORIENTATED IN THE SAME DIRECTION UNLESS NOTED OTHERWISE.
2. ORIENT SIGNAL MAST ARM(S) 90° TO ℄ OF ROADWAY UNLESS NOTED OTHERWISE.
3. MOUNTING HEIGHT FROM BOTTOM OF SIGNAL HEAD BACKPLATE TO ROADWAY SURFACE IS 18.5 FT MINIMUM AND 20.0 FT MAXIMUM.
4. MOUNTING HEIGHT FROM TOP OF SIGNAL HEAD BACKPLATE TO ROADWAY SURFACE IS 25.6 FT MAXIMUM.
5. CENTER SIGNAL HEADS OVER DRIVING LANE TO WITHIN ±1 FT.

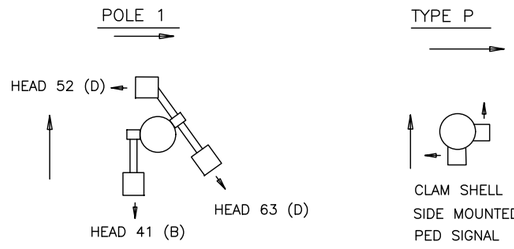


SIGNAL & LUMINAIRE ARM ORIENTATION



POLE/POST SIGNAL HEAD SIDE MOUNTING TYPES





OLD STEESE & BLAIR-FRED MEYER SCHEDULES

STATE OF ALASKA 49TH PRELIMINARY PS&E NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H112	H128

BASE & JUNCTION BOX SCHEDULE

LOCATION		DESCRIPTION			BASE TYPE ①			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO	JUNCTION BOX NO	CONTROLLER	CIDH	P	A	IA	II	III	IV	
51+69.4	48.5 RT	1			X							
50+90.9	49.0 RT	2			X							
50+97.7	49.4 LT	3			X							
51+67.9	50.1 LT	4			X							
51+65.9	53.2 RT		1							X		
50+83.9	44.8 RT		2						X			
50+92.6	46.7 LT		3						X			
51+79.1	44.5 LT		4						X			
51+65.4	60.5 RT			X		X						

① P=PRECAST BASE (FOUNDATION).
A=TYPE A SEE T-31.01
CIDH=CAST IN DRILLED HOLE

RADAR DETECTION EQUIPMENT SCHEDULE

QTY	DESCRIPTION
	RADAR DETECTOR EQUIPMENT:
2	SMARTSENSOR ADVANCE 200-E EXTENDED RANGE (WX-SS-200-E)
4	SMARTSENSOR MATRIX (WX-SS-225)
6	SMARTSENSOR MOUNT (WX-SS-611)
6	60 FOOT 6 CONDUCTOR MATRIX/ 200V CABLE WITH CONNECTOR (WX-SS-704-060)
700	MATRIX TYPE 2 HOME RUN CABLE 1 PR#18, 2 TRIADS #22 (ATP-MATRIX 2)
1	SMARTSENSOR ADVANCE VIEW FINDER AIMING TOOL (WX-360-0283)
	CABINET EQUIPMENT:
1	CLICK 656 – 6 SENSOR CABINET INTERFACE WITH SDLC OUTPUT (WX-102-0451)
1	7' SDLC CABLE-INTERFACE PANEL (15 PIN SCREW) TO CLICK 650 (15 PIN CLIP) (WS-SDLC-TS2-7)

RADAR DETECTION SCHEDULE

DET NO	PHASE CALL	TYPE	FACING DIRECTION	POLE NO.	LOCATION	COMMENTS
1	3 & 8	STOP BAR	NW	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
2	6	STOP BAR	NE	2	SIGNAL MAST ARM	SMARTSENSOR MATRIX
3	4 & 7	STOP BAR	SE	3	SIGNAL MAST ARM	SMARTSENSOR MATRIX
4	2 & 5	STOP BAR	SW	4	SIGNAL MAST ARM	SMARTSENSOR MATRIX
1A	8	ADVANCE	N	3	SIGNAL MAST ARM	SMARTSENSOR ADVANCE
3A	4	ADVANCE	S	1	SIGNAL MAST ARM	SMARTSENSOR ADVANCE

(#) RADAR DETECTOR NUMBER

PEDESTRIAN DETECTION SCHEDULE

POLE	PUSH BUTTON	PHASE	REMARKS
1	48	4	SEE NOTE 2
	69	6	SEE NOTE 1
2	28	2	SEE NOTE 2
	49	4	SEE NOTE 1
3	29	2	SEE NOTE 1
	88	8	SEE NOTE 2
4	68	6	SEE NOTE 2
	89	8	SEE NOTE 1

NOTES:
1. INSTALL AN R10-3EL SIGN WITH PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

2. INSTALL AN R10-3ER SIGN WITH PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

OPTICOM DETECTOR SCHEDULE

LOCATION	DET NO	PHASE CALL	FACING DIR	PREEMPTOR PRIORITY
ON TOP OF SIGNAL 42	1	4 & 7	SOUTH	
ON TOP OF SIGNAL 23	2	2 & 5	WEST	
ON TOP OF SIGNAL 31	3	3 & 8	NORTH	
ON POLE 4	4	1 & 6	EAST	
ON POLE 1	5	1 & 6	EAST	

(#) OPTICOM DETECTOR NUMBER

FLASH PROGRAM COLOR

PHASE	1	2	3	4	5	6	7	8
COLOR	–	R	R	R	R	R	R	R

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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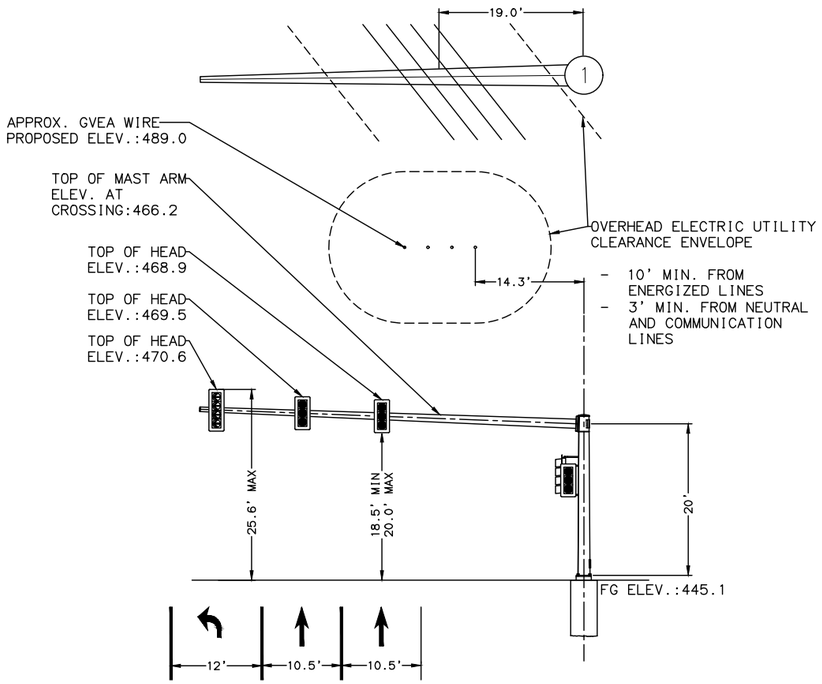
OLD STEESE & BLAIR-FRED MEYER SCHEDULES

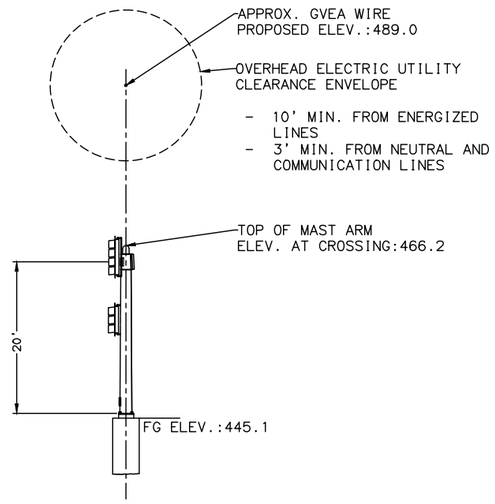
STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

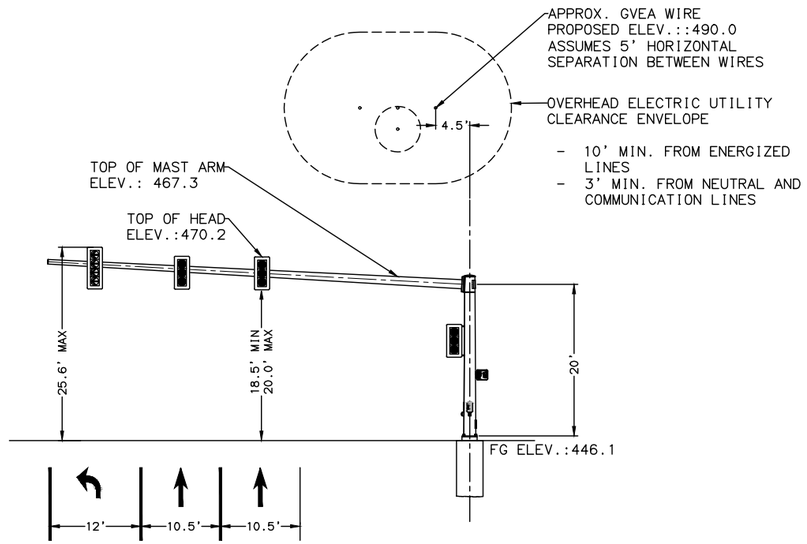
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H113	H128



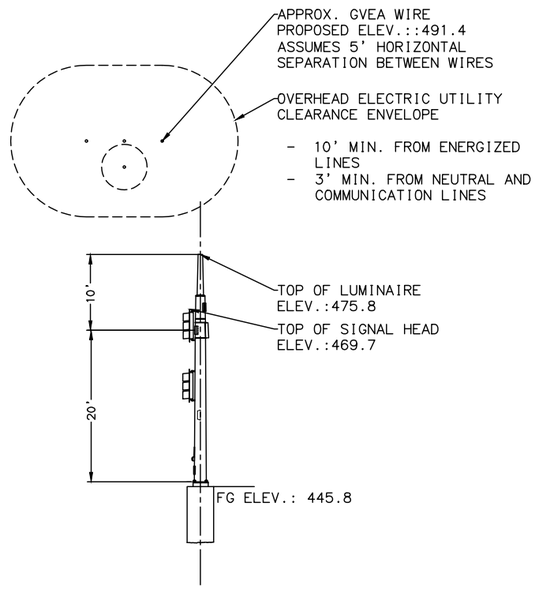
POLE 1
LOOKING NORTH



POLE 1
LOOKING WEST



POLE 3
LOOKING SOUTH



POLE 4
LOOKING SOUTH

OLD STEESE & BLAIR–FRED MEYER OVERHEAD UTILITIES

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
SIGNED PROFESSIONAL ENGINEER

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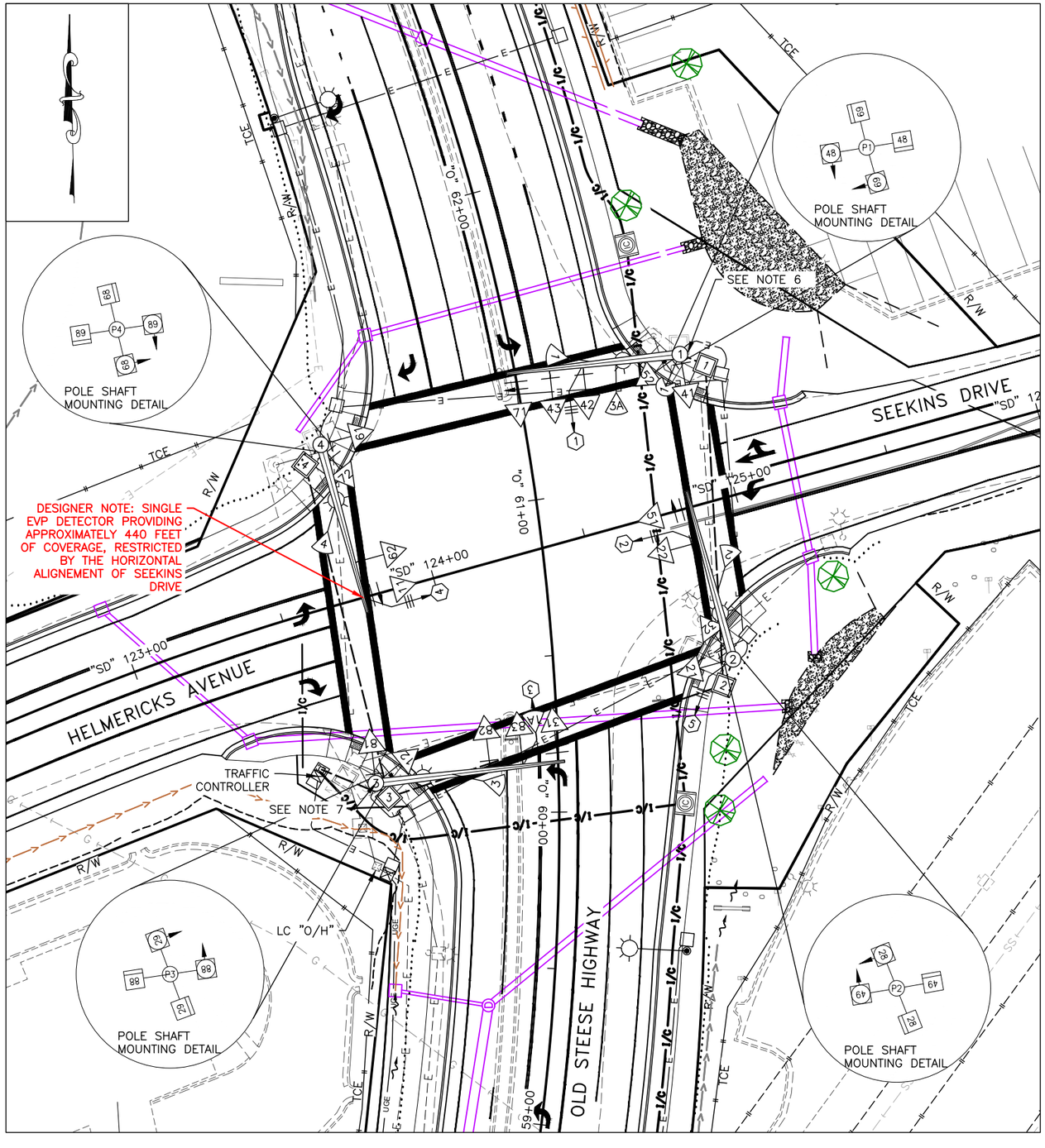
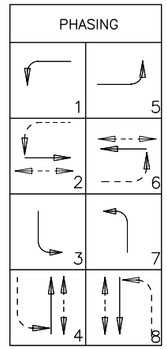
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H114	H128



PHASE SEQUENCE

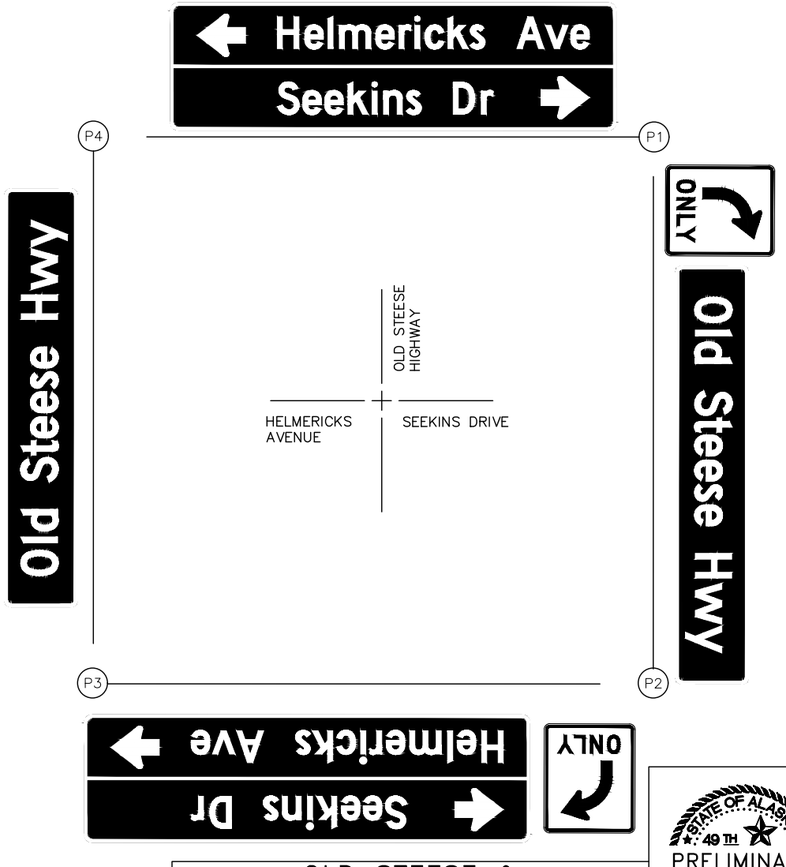


FUTURE PHASES
PED MOVEMENT
VEH. MOVEMENT
PERMISSIVE VEH. MOVEMENT

SIGNALIZATION NOTES:

1. RADAR DETECTOR ORIENTATIONS AND OFFSETS ARE APPROXIMATE; CONTRACTOR SHALL DETERMINE COVERAGE FROM THE MANUFACTURER AND MAKE FIELD ADJUSTMENTS AS REQUIRED FOR PROPER FUNCTIONING.
2. MAST ARM OFFSETS ARE MEASURED FROM CENTER OF OBJECT TO CENTER OF SIGNAL POLE.
3. ORIENT SIGNAL MAST ARM(S) AT 90 DEGREE TO THE ROADWAY ALIGNMENT, UNLESS OTHERWISE NOTED.
4. ORIENT LUMINAIRE MAST ARM(S) IN THE SAME DIRECTION AS THE SIGNAL MAST ARM, UNLESS OTHERWISE NOTED.
5. MOUNTING TYPES LISTED IN SIGNAL HEAD SCHEDULE AND PEDESTRIAN SIGNAL HEAD SCHEDULE TABLES ARE IN ACCORDANCE WITH DOT&PF STANDARD DRAWING, TRAFFIC SIGNAL HARDWARE (T–30.11).
6. P1 MAST ARM CENTERLINE BEARING IS S 85° 21' 27" W.
7. P3 MAST ARM CENTERLINE BEARING IS N 85° 01' 21" E.
5. INTERCONNECT AND PAN, TILT, ZOOM CAMERA WORK ARE SHOWN ON H200 SERIES SHEETS.
6. LIGHTING PLANS ARE SHOWN ON H301 SERIES SHEETS.

SIGN PLACEMENT



OLD STEESE & HELMERICKS–SEEKINS SIGNALIZATION PLAN

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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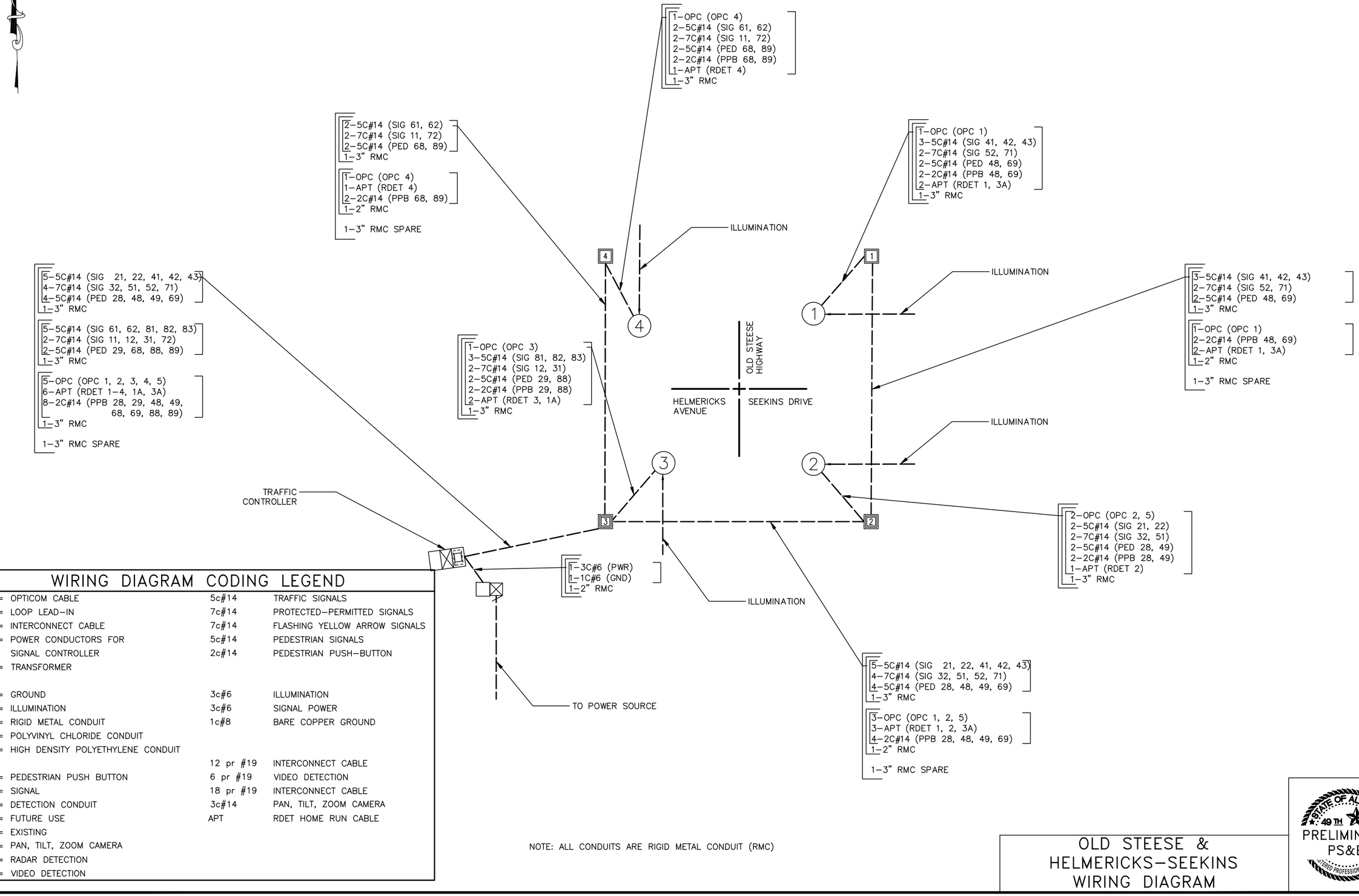
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H115	H128



WIRING DIAGRAM CODING LEGEND

OPC	=	OPTICOM CABLE	5c#14		TRAFFIC SIGNALS
LL	=	LOOP LEAD–IN	7c#14		PROTECTED–PERMITTED SIGNALS
INT	=	INTERCONNECT CABLE	7c#14		FLASHING YELLOW ARROW SIGNALS
PWR	=	POWER CONDUCTORS FOR SIGNAL CONTROLLER	5c#14		PEDESTRIAN SIGNALS
			2c#14		PEDESTRIAN PUSH–BUTTON
T	=	TRANSFORMER			
GND	=	GROUND	3c#6		ILLUMINATION
ILL	=	ILLUMINATION	3c#6		SIGNAL POWER
RMC	=	RIGID METAL CONDUIT	1c#8		BARE COPPER GROUND
PVC	=	POLYVINYL CHLORIDE CONDUIT			
HDPE	=	HIGH DENSITY POLYETHYLENE CONDUIT			
			12 pr #19		INTERCONNECT CABLE
PPB	=	PEDESTRIAN PUSH BUTTON	6 pr #19		VIDEO DETECTION
SIG	=	SIGNAL	18 pr #19		INTERCONNECT CABLE
DET	=	DETECTION CONDUIT	3c#14		PAN, TILT, ZOOM CAMERA
F	=	FUTURE USE	APT		RDET HOME RUN CABLE
E	=	EXISTING			
PTZ	=	PAN, TILT, ZOOM CAMERA			
RDET	=	RADAR DETECTION			
VDET	=	VIDEO DETECTION			

NOTE: ALL CONDUITS ARE RIGID METAL CONDUIT (RMC)

OLD STEESE & HELMERICKS–SEEKINS WIRING DIAGRAM

STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H116	H128

SIGNAL SIGN SCHEDULE

SIGN NO	LOCATION		ASDS CODE	LEGEND	SIZE HXV (IN)	AREA SQ FT	BRACE OR FRAME		REMARKS
	POLE NO	OFFSET					BRACED	FRAMED	
1	1	10	D3-102 MOD	HELMERICKS AVE/ SEEKINS DR	168 x 48	56		X	SALVAGE, SEE NOTE 1
2	2	8.8	D3-1	OLD STEESE HWY	138 x 24	23		X	SALVAGE, SEE NOTE 1
3		27.9	R3-5R	RIGHT ONLY	30 X 36	7.5			
4	3	10	D3-102 MOD	HELMERICKS AVE/ SEEKINS DR	168 x 48	56		X	SALVAGE, SEE NOTE 1
5		25.5	R3-5R	RIGHT ONLY	30 X 36	7.5			
6	4	8.8	D3-1	OLD STEESE HWY	138 x 24	23		X	SALVAGE, SEE NOTE 1
				SUBTOTAL SIGNAL SIGNS		173.0			

LOCATION OFFSETS ARE FROM CENTER OF SIGN TO C OF SIGNAL POLE

NOTES:

1. SALVAGED SIGNS WILL BE PAID PER EACH SIGN PANEL DELIVERED IN ACCEPTABLE CONDITIONS, THIS WORK IS PAID FOR UNDER PAY ITEM 615.0006.0000. ALL SAVAGED SIGNS ARE TO BE REPLACED WITH NEW, SIGN IS MEASURED FOR PAYMENT UNDER PAY ITEM 615.0001.0000.

VEHICULAR SIGNAL HEAD SCHEDULE

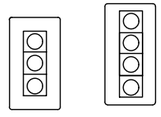
POLE / POST NO.	FACE NO	INDICATIONS										MOUNTING				REMARKS
		12" BALL			12" ARROW				8" BALL			MAST ARM		SIDE MTNG TYPE	TOP OF POST	
		R	Y	G	R	Y	YF	G	R	Y	G	LOC OFFSET	ELEV PLUMB			
1	52				L	L	L	L				POLE		D		
	41	X	X	X								POLE		D		
	42	X	X	X								31.2	X			
	43	X	X	X								41.9	X			
	71				L	L	L	L				53.0	X			
2	32				L	L	L	L				POLE		D		
	21	X	X	X								POLE		D		
	22	X	X	X								38.9	X			
	51				L	L	L	L				50.4	X			
3	12				L	L	L	L				POLE		D		
	81	X	X	X								POLE		D		
	82	X	X	X								36.8	X			
	83	X	X	X								47.3	X			
	31				L	L	L	L				58.6	X			
4	72				L	L	L	L				POLE		D		
	61	X	X	X								POLE		D		
	62	X	X	X								39.1	X			
	11				L	L	L	L				50.6	X			

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO C OF SIGNAL POLE
YF = YELLOW FLASHING ARROW

PED SIGNAL HEAD SCHEDULE

POLE/ POST NO	FACE NO	MOUNTING TYPE	REMARKS
1	48	P	
	69	P	
2	28	P	
	49	P	
3	29	P	
	88	P	
4	68	P	
	89	P	

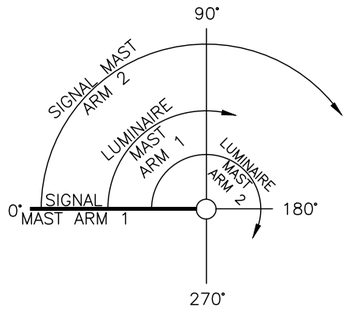
SIGNAL HEAD CONFIGURATIONS
(AREAS ARE FOR WIND LOAD CALCULATIONS)



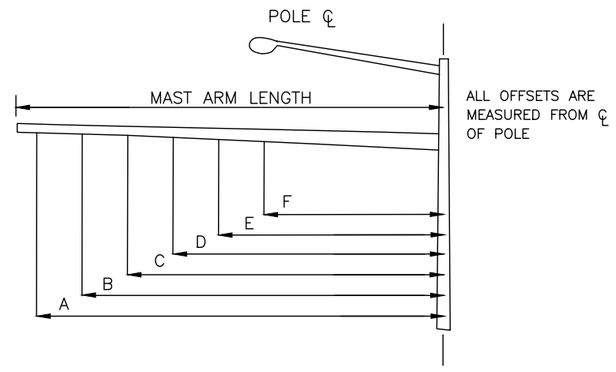
POLE-POST DESIGN LOADING SCHEDULE

POLE NO	CORNER	SIGNAL ARM L (Ft)	LUMI. ARM L (Ft)		A	B	C	D	E	F	REMARKS
1	NE	55	15'	SIG. OR SIGN	SIGNAL	SIGNAL	SIGNAL	RADAR	RADAR	SIGN	LUMINAIRE ARM 1 @ 0° MOUNTING HEIGHT @ 40'
				LOC. OFFSET (FT)	53.0	41.9	31.2	26.0	20.6	10	
				L X W OR S.F.	14.1	11.5	11.5	1	1	56	
2	SE	55	15'	SIG. OR SIGN	SIGNAL	SIGNAL	SIGN	RADAR	SIGN		LUMINAIRE ARM 1 @ 0° MOUNTING HEIGHT @ 40'
				LOC. OFFSET (FT)	50.4	38.9	27.9	20.6	8.8		
				L X W OR S.F.	14.1	11.5	7.5	1	23		
3	SW	60	15'	SIG. OR SIGN	SIGNAL	RADAR	SIGNAL	SIGNAL	RADAR	SIGN	LUMINAIRE ARM 1 @ 0° MOUNTING HEIGHT @ 40'
				LOC. OFFSET (FT)	58.6	52.8	47.3	36.8	24.7	10	
				L X W OR S.F.	14.1	1	11.5	11.5	1	56	
4	NW	55	15'	SIG. OR SIGN	SIGNAL	SIGNAL	RADAR	SIGN			LUMINAIRE ARM 1 @ 0° MOUNTING HEIGHT @ 40'
				LOC. OFFSET (FT)	50.6	39.1	18.7	8.8			
				L X W OR S.F.	14.1	11.5	1	23			

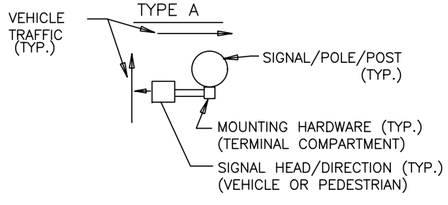
1. BOTH SIGNAL AND ILLUMINATION MAST ARMS ARE ORIENTATED IN THE SAME DIRECTION UNLESS NOTED OTHERWISE.
2. ORIENT SIGNAL MAST ARM(S) 90° TO ℄ OF ROADWAY UNLESS NOTED OTHERWISE.
3. MOUNTING HEIGHT FROM BOTTOM OF SIGNAL HEAD BACKPLATE TO ROADWAY SURFACE IS 18.5 FT MINIMUM AND 20.0 FT MAXIMUM.
4. MOUNTING HEIGHT FROM TOP OF SIGNAL HEAD BACKPLATE TO ROADWAY SURFACE IS 25.6 FT MAXIMUM.
5. CENTER SIGNAL HEADS OVER DRIVING LANE TO WITHIN ±1 FT.

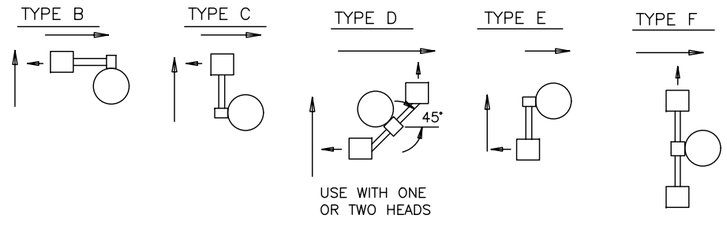


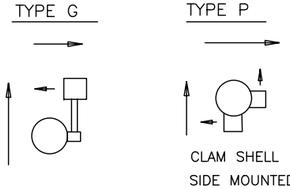
SIGNAL & LUMINAIRE ARM ORIENTATION



POLE/POST SIGNAL HEAD SIDE MOUNTING TYPES







OLD STEESE & HELMERICKS-SEEKINS SCHEDULES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H116 Tue, Oct/18/22 10:23am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H117	H128

BASE & JUNCTION BOX SCHEDULE

LOCATION		DESCRIPTION			BASE TYPE ①			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO	JUNCTION BOX NO	CONTROLLER	CIDH	P	A	IA	II	III	IV	
61+37.1	52.8' RT	1			X							
60+45.0	57.3' RT	2			X							
60+10.5	58.3' LT	3			X							
61+29.4	65.1' LT	4			X							
61+32.5	60.2' RT		1						X			
60+37.5	53.8' RT		2							X		
60+05.6	54.2' LT		3							X		
61+23.4	71.1' LT		4						X			
60+13.4	76.8' LT			X								

① P=PRECAST BASE (FOUNDATION).
A=TYPE A SEE T-31.01
CIDH=CAST IN DRILLED HOLE

RADAR DETECTION EQUIPMENT SCHEDULE

QTY	DESCRIPTION
	RADAR DETECTOR EQUIPMENT:
2	SMARTSENSOR ADVANCE 200-E EXTENDED RANGE (WX-SS-200-E)
4	SMARTSENSOR MATRIX (WX-SS-225)
6	SMARTSENSOR MOUNT (WX-SS-611)
6	60 FOOT 6 CONDUCTOR MATRIX/ 200V CABLE WITH CONNECTOR (WX-SS-704-060)
900	MATRIX TYPE 2 HOME RUN CABLE 1 PR#18, 2 TRIADS #22 (ATP-MATRIX 2)
1	SMARTSENSOR ADVANCE VIEW FINDER AIMING TOOL (WX-360-0283)
	CABINET EQUIPMENT:
1	CLICK 656 - 6 SENSOR CABINET INTERFACE WITH SDLC OUTPUT (WX-102-0451)
1	7' SDLC CABLE-INTERFACE PANEL (15 PIN SCREW) TO CLICK 650 (15 PIN CLIP) (WS-SDLC-TS2-7)

RADAR DETECTION SCHEDULE

DET NO	PHASE CALL	TYPE	FACING DIRECTION	POLE NO.	LOCATION	COMMENTS
1	3 & 8	STOP BAR	NW	1	SIGNAL MAST ARM	SMARTSENSOR MATRIX
2	1 & 6	STOP BAR	NE	2	SIGNAL MAST ARM	SMARTSENSOR MATRIX
3	4 & 7	STOP BAR	SE	3	SIGNAL MAST ARM	SMARTSENSOR MATRIX
4	2 & 5	STOP BAR	SW	4	SIGNAL MAST ARM	SMARTSENSOR MATRIX
1A	8	ADVANCE	N	3	SIGNAL MAST ARM	SMARTSENSOR ADVANCE
3A	4	ADVANCE	S	4	SIGNAL MAST ARM	SMARTSENSOR ADVANCE

—(#)— RADAR DETECTOR NUMBER

PEDESTRIAN DETECTION SCHEDULE

POLE	PUSH BUTTON	PHASE	REMARKS
1	48	4	R10-3R
	69	6	R10-3L
2	28	2	R10-3R
	49	4	R10-3L
3	29	2	R10-3L
	88	8	R10-3R
4	68	6	R10-3R
	89	8	R10-3L

NOTES:
1. INSTALL AN R10-3EL SIGN WITH PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

2. INSTALL AN R10-3ER SIGN WITH PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

OPTICOM DETECTOR SCHEDULE

LOCATION	DET NO	PHASE CALL	FACING DIR	PREEMPTOR PRIORITY
ON TOP OF SIGNAL 42	1	4 & 7	SOUTH	
ON TOP OF SIGNAL 22	2	2 & 5	WEST	
ON TOP OF SIGNAL 82	3	3 & 8	NORTH	
ON TOP OF SIGNAL 11	4	1 & 6	EAST	

—|||—(#) OPTICOM DETECTOR NUMBER

FLASH PROGRAM COLOR

PHASE	1	2	3	4	5	6	7	8
COLOR	R	R	R	R	R	R	R	R

OLD STEESE & HELMERICKS-SEEKINS SCHEDULES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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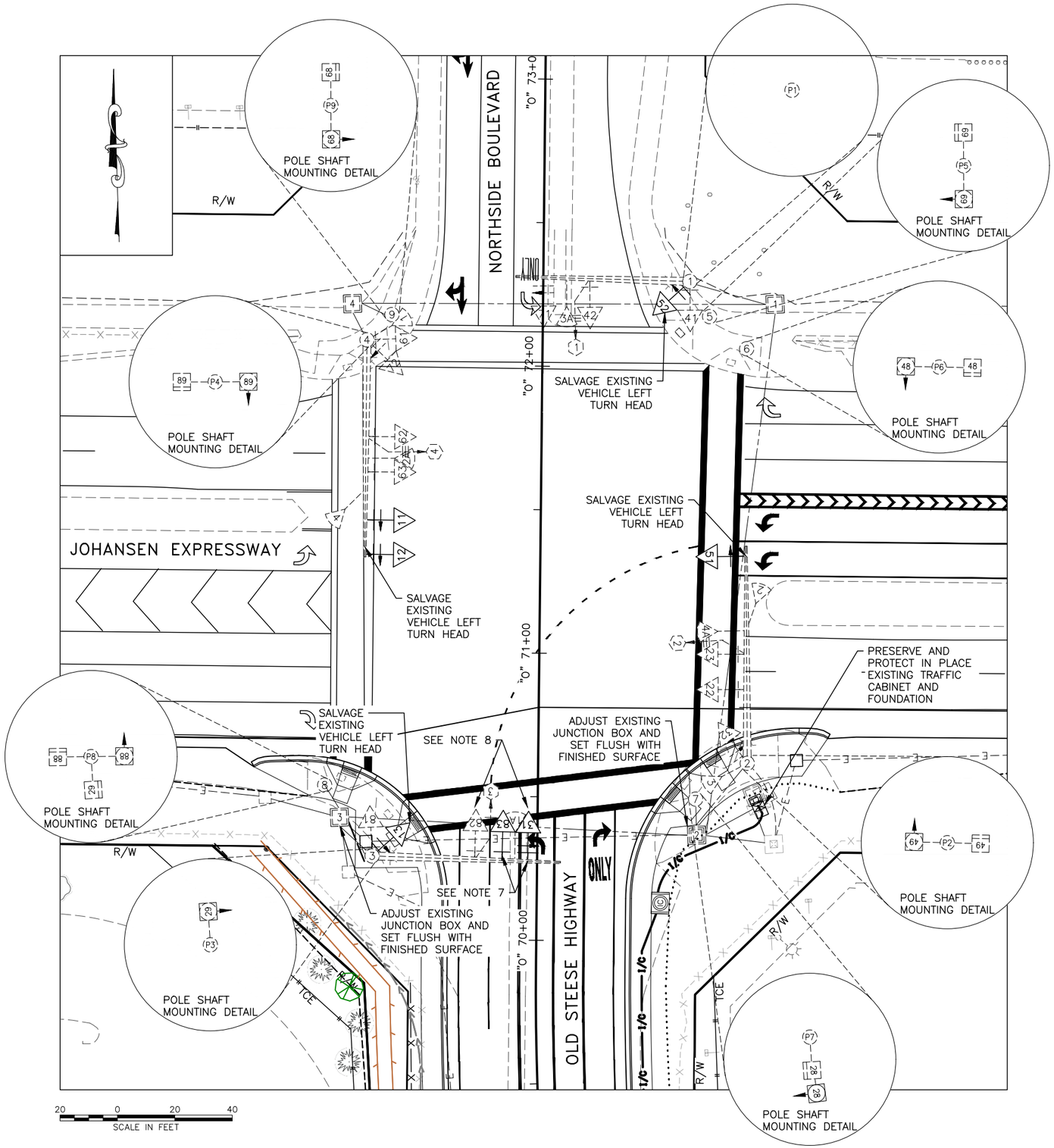
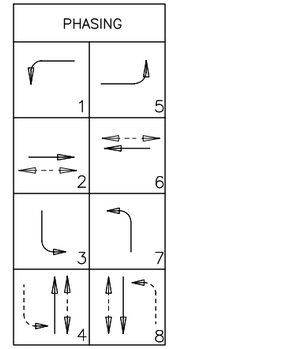
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H118	H128



PHASE SEQUENCE

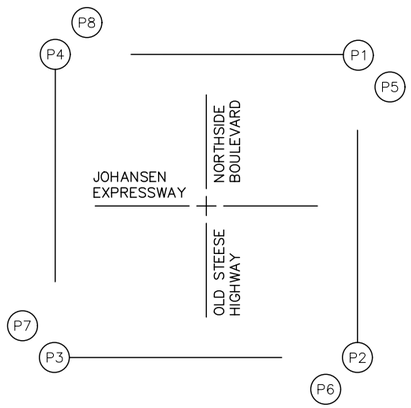


- FUTURE PHASES
- PED MOVEMENT
- VEH. MOVEMENT
- PERMISSIVE VEH. MOVEMENT

SIGNALIZATION NOTES:

1. RADAR DETECTOR ORIENTATIONS AND OFFSETS ARE APPROXIMATE; CONTRACTOR SHALL DETERMINE COVERAGE FROM THE MANUFACTURER AND MAKE FIELD ADJUSTMENTS AS REQUIRED FOR PROPER FUNCTIONING.
2. MAST ARM OFFSETS ARE MEASURED FROM CENTER OF OBJECT TO CENTER OF SIGNAL POLE.
3. ORIENT SIGNAL MAST ARM(S) AT 90 DEGREE TO THE ROADWAY ALIGNMENT, UNLESS OTHERWISE NOTED.
4. ORIENT LUMINAIRE MAST ARM(S) IN THE SAME DIRECTION AS THE SIGNAL MAST ARM, UNLESS OTHERWISE NOTED.
5. SALVAGE EXISTING SIGNAL HEADS NOT SHOWN ON PLANS.
6. EXISTING CONDUITS SHOWN ARE NOT EXACT AND ARE TO BE FIELD VERIFIED BY CONTRACTOR.
7. SIGNAL HEAD 83 AND 31 TO BE AT LEAST 8.0' APART AND WITHIN 1.0' OF LANE CENTERLINE.
8. RELOCATE VEHICLE HEADS 82 AND 31 PER OFFSET LISTED IN THE VEHICULAR SIGNAL HEAD SCHEDULE.
9. ALL OVERHEAD SIGNS SHALL BE PROTECTED IN PLACE.
5. INTERCONNECT AND PAN, TILT, ZOOM CAMERA WORK ARE SHOWN ON H200 SERIES SHEETS.
6. LIGHTING PLANS ARE SHOWN ON H301 SERIES SHEETS.

SIGN PLACEMENT



NOTE: EXISTING OVERHEAD SIGNS TO REMAIN.

OLD STEESE & JOHANSEN SIGNALIZATION PLAN

STATE OF ALASKA 49TH PRELIMINARY PS&E SIGNED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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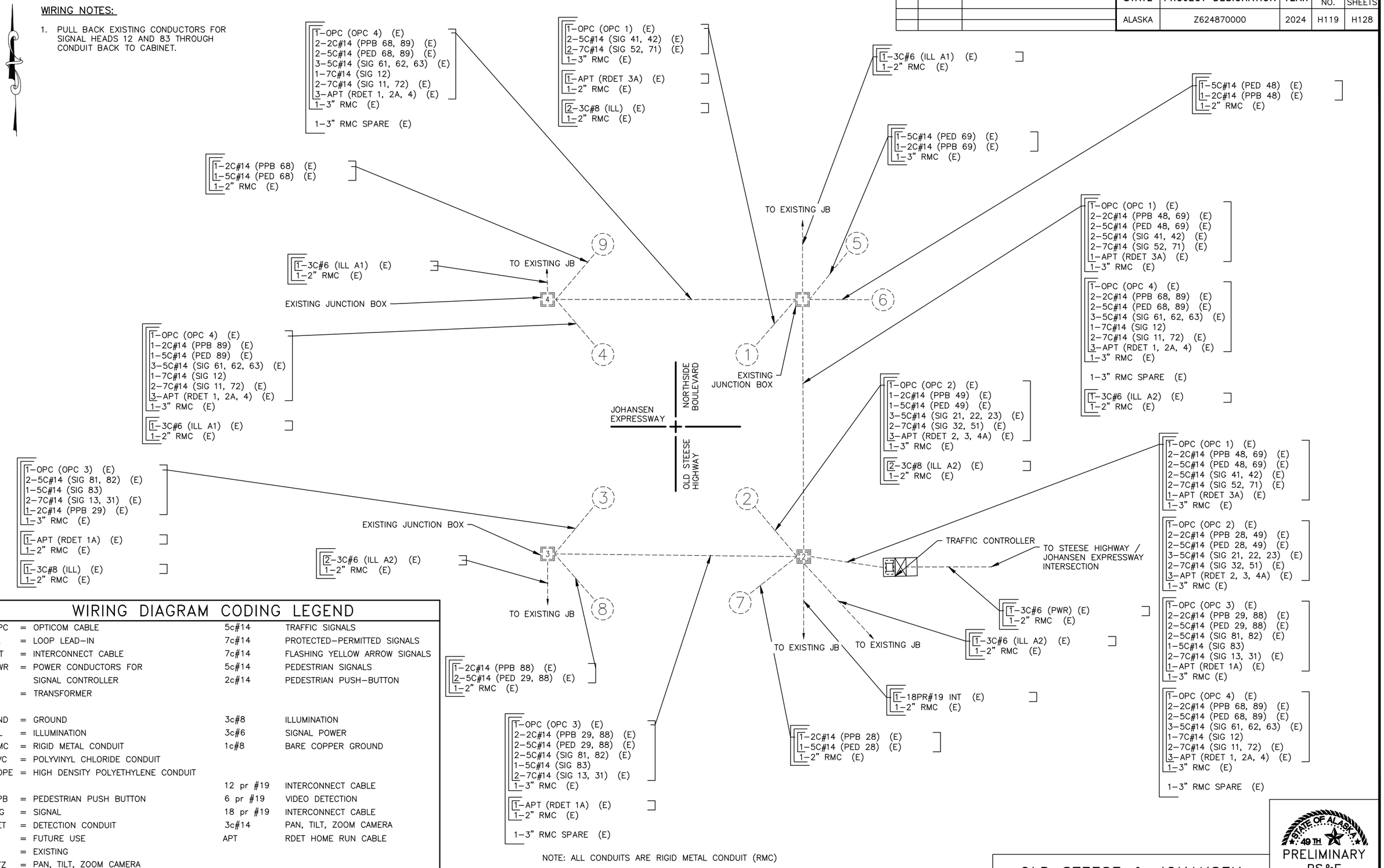
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H119	H128

WIRING NOTES:

1. PULL BACK EXISTING CONDUCTORS FOR SIGNAL HEADS 12 AND 83 THROUGH CONDUIT BACK TO CABINET.



WIRING DIAGRAM CODING LEGEND

OPC	=	OPTICOM CABLE	5c#14	TRAFFIC SIGNALS
LL	=	LOOP LEAD-IN	7c#14	PROTECTED-PERMITTED SIGNALS
INT	=	INTERCONNECT CABLE	7c#14	FLASHING YELLOW ARROW SIGNALS
PWR	=	POWER CONDUCTORS FOR	5c#14	PEDESTRIAN SIGNALS
		SIGNAL CONTROLLER	2c#14	PEDESTRIAN PUSH-BUTTON
T	=	TRANSFORMER		
GND	=	GROUND	3c#8	ILLUMINATION
ILL	=	ILLUMINATION	3c#6	SIGNAL POWER
RMC	=	RIGID METAL CONDUIT	1c#8	BARE COPPER GROUND
PVC	=	POLYVINYL CHLORIDE CONDUIT		
HDPE	=	HIGH DENSITY POLYETHYLENE CONDUIT		
			12 pr #19	INTERCONNECT CABLE
PPB	=	PEDESTRIAN PUSH BUTTON	6 pr #19	VIDEO DETECTION
SIG	=	SIGNAL	18 pr #19	INTERCONNECT CABLE
DET	=	DETECTION CONDUIT	3c#14	PAN, TILT, ZOOM CAMERA
F	=	FUTURE USE	APT	RDET HOME RUN CABLE
E	=	EXISTING		
PTZ	=	PAN, TILT, ZOOM CAMERA		
RDET	=	RADAR DETECTION		
VDET	=	VIDEO DETECTION		

NOTE: ALL CONDUITS ARE RIGID METAL CONDUIT (RMC)

OLD STEESE & JOHANSEN WIRING DIAGRAM

STATE OF ALASKA 49TH
PRELIMINARY PS&E
SIGNED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H120	H128

SIGNAL SIGN SCHEDULE

SIGN NO	LOCATION POLE NO	LOCATION OFFSET	ASDS CODE	LEGEND	SIZE HXV (IN)	AREA SQ FT	BRACE OR FRAME BRACED	BRACE OR FRAME FRAMED	REMARKS
–	1	–	–	RIGHT TURN (ARROW) ONLY	–	–	–	–	EXISTING
–		–	–	JOHANSEN EXPY	–	–	–	–	EXISTING
–	2	–	–	RIGHT TURN (ARROW) ONLY	–	–	–	–	EXISTING
–		–	–	LEFT (ARROW) NORTHSIDE BLVD/ OLD STEESE HWY ARROW LEFT	–	–	–	–	EXISTING
–	3	–	–	JOHANSEN EXPY	–	–	–	–	EXISTING
–	4	–	–	RIGHT TURN (ARROW ONLY)	–	–	–	–	EXISTING
–		–	–	LEFT (ARROW) OLD STEESE HWY/NORTHSIDE BLVD RIGHT (ARROW)	–	–	–	–	EXISTING
				SUBTOTAL SIGNAL SIGNS		###			

LOCATION OFFSETS ARE FROM CENTER OF SIGN TO C OF SIGNAL POLE

VEHICULAR SIGNAL HEAD SCHEDULE

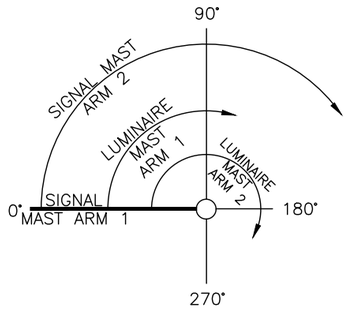
POLE / POST NO.	FACE NO	INDICATIONS 12" BALL R	Y	G	12" ARROW R	Y	YF	G	8" BALL R	Y	G	MOUNTING MAST ARM LOC OFFSET	ELEV PLUMB	SIDE MTNG TYPE	TOP OF POST	REMARKS
1	52				L	L		L				POLE		D		REPLACE EXISTING
	41	X	X	X								POLE		D		EXISTING
	42	X	X	X								–	X			EXISTING
	71				L	L	L	L				–	X			EXISTING
2	32				L	L	L	L				POLE		D		EXISTING
	21	X	X	X								POLE		D		EXISTING
	22	X	X	X								–	X			EXISTING
	23	X	X	X								–	X			EXISTING
	51				L	L		L				–	X			REPLACE EXISTING
3	13				L	L		L				POLE		D		REPLACE EXISTING
	81	X	X	X								POLE		D		EXISTING
	82	X	X	X								35.7	X			MOVE EXISTING
	83	X	X	X								45.2	X			NEW
	31				L	L	L	L				54.2	X			REPLACE EXISTING
4	72				L	L	L	L				POLE		D		EXISTING
	61	X	X	X								POLE		D		EXISTING
	62	X	X	X								–	X			EXISTING
	63	X	X	X								–	X			EXISTING
	11				L	L		L				62.7	X			REPLACE EXISTING
	12				L	L		L				74.7	X			NEW

LOCATION OFFSETS ARE FROM CENTER OF SIGNAL HEAD TO C OF SIGNAL POLE
YF = YELLOW FLASHING ARROW

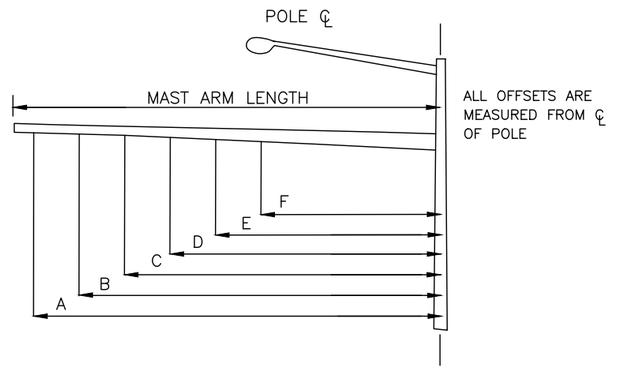
POLE–POST DESIGN LOADING SCHEDULE

POLE NO	CORNER	SIGNAL ARM L (Ft)	LUMI. ARM L (Ft)		A	B	C	D	E	F	G	H	REMARKS
1	NE	EX	EX	SIG. OR SIGN	SIGNAL	RADAR	SIGNAL	SIGN					
				LOC. OFFSET (FT)	–	–	–	–					
				L X W OR S.F.	–	–	–	–					
2	SE	EX	EX	SIG. OR SIGN	SIGNAL	RADAR	RADAR	SIGNAL	SIGNAL	SIGN	SIGN		
				LOC. OFFSET (FT)	–	–	–	–	–	–	–		
				L X W OR S.F.	11.5	–	–	–	–	–	–		
3	SW	EX	EX	SIG. OR SIGN	SIGNAL	SIGNAL	SIGNAL	RADAR	SIGN				
				LOC. OFFSET (FT)	54.2	45.2	35.7	–	–				
				L X W OR S.F.	14.1	11.5	11.5	–	–				
4	NW	EX	EX	SIG. OR SIGN	SIGNAL	SIGNAL	RADAR	SIGNAL	RADAR	SIGNAL	SIGN	SIGN	
				LOC. OFFSET (FT)	74.7	62.7	–	–	–	–	–	–	
				L X W OR S.F.	11.5	11.5	–	–	–	–	–	–	

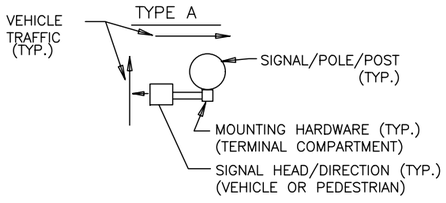
1. ONLY PROPOSED LOADING SHOWN, PROTECT EXISTING SIGNAL HEADS, SIGNS, AND RADAR UNLESS NOTED OTHERWISE
2. MOUNTING HEIGHT FROM BOTTOM OF SIGNAL HEAD BACKPLATE TO ROADWAY SURFACE IS 18.5 FT MINIMUM AND 20.0 FT MAXIMUM.
3. MOUNTING HEIGHT FROM TOP OF SIGNAL HEAD BACKPLATE TO ROADWAY SURFACE IS 25.6 FT MAXIMUM.
4. CENTER SIGNAL HEADS OVER DRIVING LANE TO WITHIN ±1 FT.

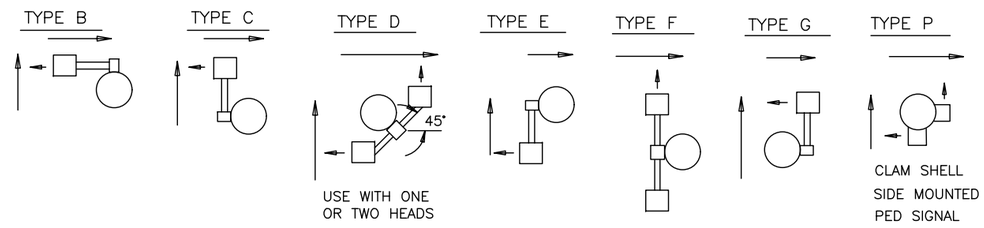


SIGNAL & LUMINAIRE ARM ORIENTATION



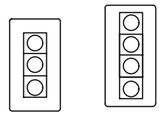
POLE/POST SIGNAL HEAD SIDE MOUNTING TYPES





SIGNAL HEAD CONFIGURATIONS

(AREAS ARE FOR WIND LOAD CALCULATIONS)



OLD STEESE & JOHANSEN SCHEDULES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H121	H128

BASE & JUNCTION BOX SCHEDULE

LOCATION		DESCRIPTION			BASE TYPE ①			JUNCTION BOX TYPE				REMARKS
STATION	OFFSET	POLE NO	JUNCTION BOX NO	CONTROLLER	CIDH	P	A	IA	II	III	IV	
–	–	1			X							EXISTING
–	–	2			X							EXISTING
–	–	3			X							EXISTING
–	–	4			X							EXISTING
–	–	5					X					EXISTING
–	–	6					X					EXISTING
–	–	7					X					EXISTING
–	–	8					X					EXISTING
–	–	9					X					EXISTING
–	–		1						X			EXISTING
–	–		2							X		EXISTING
–	–		3						X			EXISTING
–	–		4						X			EXISTING
–	–			X								EXISTING ②

① P=PRECAST BASE (FOUNDATION).
A=TYPE A SEE T–31.01
CIDH=CAST IN DRILLED HOLE
② FOUNDATION TYPE NOT PROVIDED IN AS–BUILTS

RADAR DETECTION SCHEDULE

DET NO	PHASE CALL	TYPE	FACING DIRECTION	POLE NO.	LOCATION	COMMENTS
1	3 & 8	STOP BAR	NE	4	SIGNAL POLE	EX
2	1 & 6	STOP BAR	NE	2	SIGNAL MAST ARM	EX
3	4 & 7	STOP BAR	SW	2	SIGNAL POLE	EX
4	2 & 5	STOP BAR	SW	4	SIGNAL MAST ARM	EX
1A	8	ADVANCE	N	3	SIGNAL MAST ARM	EX
2A	6	ADVANCE	E	4	SIGNAL MAST ARM	EX
3A	4	ADVANCE	S	1	SIGNAL MAST ARM	EX
4A	2	ADVANCE	W	2	SIGNAL MAST ARM	EX

(#) RADAR DETECTOR NUMBER

PED SIGNAL HEAD SCHEDULE

POLE/ POST NO	FACE NO	MOUNTING TYPE	REMARKS
2	49	–	EXISTING
4	89	–	EXISTING
5	69	–	EXISTING
6	48	–	EXISTING
7	28	–	EXISTING
8	29	–	EXISTING
	88	–	EXISTING
9	68	–	EXISTING

PEDESTRIAN DETECTION SCHEDULE

POLE	PUSH BUTTON	PHASE	REMARKS
2	49	–	EXISTING, SEE NOTE 2
3	29	–	EXISTING, SEE NOTE 2
4	89	–	EXISTING
5	69	–	EXISTING
6	48	–	EXISTING
7	28	–	NEW, SEE NOTE 1
8	88	–	EXISTING, SEE NOTE 3
9	68	–	EXISTING

NOTES:
1. INSTALL AN R10–3EL SIGN WITH PEDESTRIAN PUSH BUTTON. SIGN SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
2. SALVAGE EXISTING AND INSTALL AN R10–3EL SIGN WITH PEDESTRIAN PUSH BUTTON. THIS WORK SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.
3. SALVAGE EXISTING AND INSTALL AN R10–3ER SIGN WITH PEDESTRIAN PUSH BUTTON. THIS WORK SHALL NOT BE MEASURED FOR PAYMENT AND IS SUBSIDIARY TO TRAFFIC SIGNAL PAY ITEMS.

OPTICOM DETECTOR SCHEDULE

LOCATION	DET NO	PHASE CALL	FACING DIR	PREEMPTOR PRIORITY
EXISTING	1	4 & 7	SOUTH	
EXISTING	2	2 & 5	EAST	
EXISTING	3	3 & 8	NORTH	
EXISTING	4	1 & 6	WEST	

(#) OPTICOM DETECTOR NUMBER

FLASH PROGRAM COLOR

PHASE	1	2	3	4	5	6	7	8
COLOR	R	R	R	R	R	R	R	R

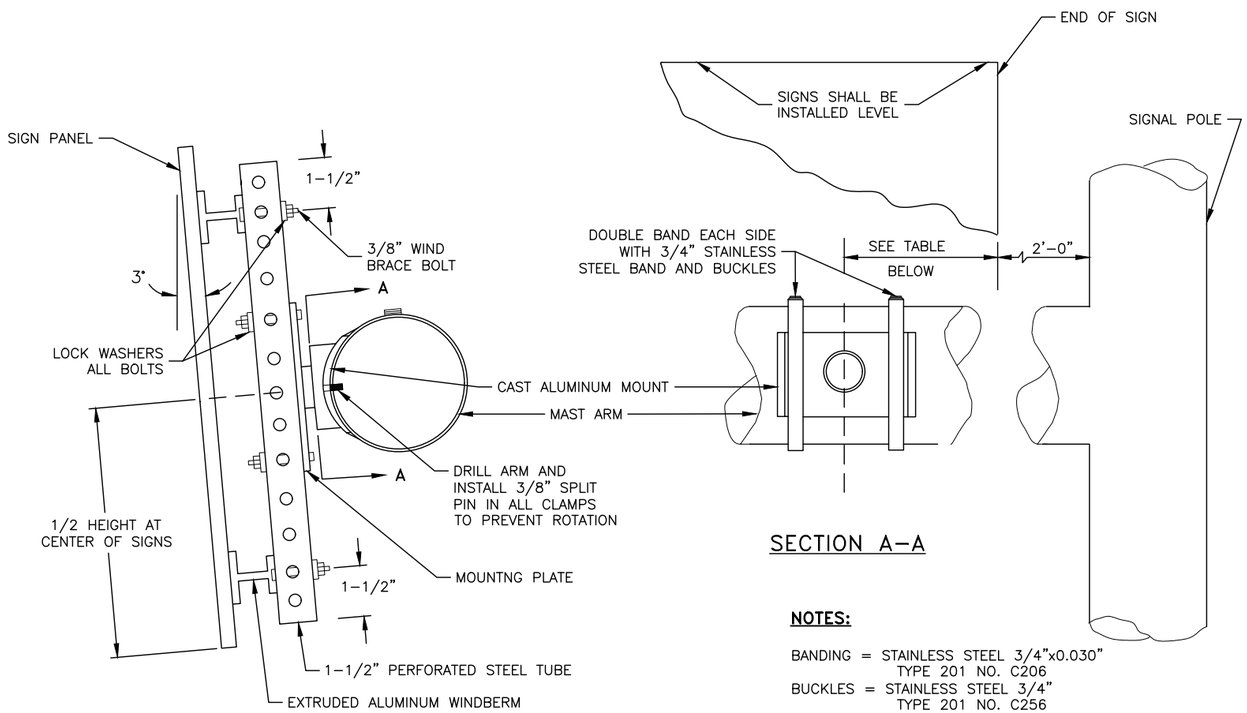
OLD STEESE & JOHANSEN SCHEDULES

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H121 Tue, Oct/18/22 10:23am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H122	H128



SECTION A–A

NOTES:

BANDING = STAINLESS STEEL 3/4"x0.030"
TYPE 201 NO. C206
BUCKLES = STAINLESS STEEL 3/4"
TYPE 201 NO. C256
ALUMINUM MOUNT (SIGNAL) = 1–1/2"NPT
NO. D040
PIN = NO. D042

NOTES:

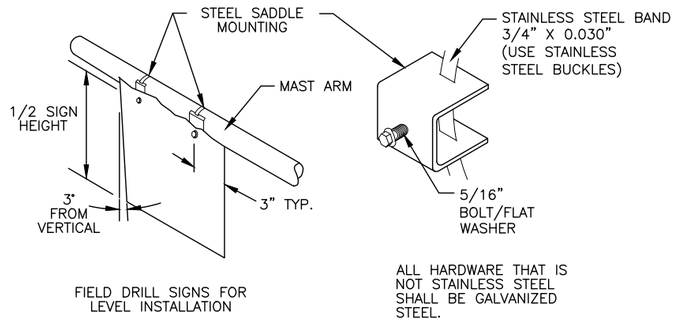
1. THE CONTRACTOR IS DIRECTED TO THE BAND–IT INSTALLATION INSTRUCTIONS FOR "FORMING A BAND CLAMP AND OPERATING THE C00169 TOOL." THIS INSTRUCTION REQUIORES THAT THE BAND BE PASSED THROUGH THE BUCKLE AND BENT SO THAT AT LEAST 2–INCHES OF BAND ARE UNDERNEATH THE BUCKLE. BANDS NOT MADE UP IN THIS MANNER WILL REQUIRE REINSTALLATION.
2. CAST ALUMINUM MOUNTS AND BANDING MATERIALS SHALL BE "BAND–IT" OR APPROVED EQUAL.
3. MOUNTING PLATE SHALL BE GALVANIZED AFTER FABRICATION IN ACCORDANCE WITH ASTM A123.
4. ALL WELDING SHALL MEET AMERICAN WELDING SOCIETY SPECS.
5. BOLTS, NUTS AND WASHERS SHALL MEET THE REQUIREMENTS OF ALASKA STANDARD PLAN S–20.11

SIGNAL MAST ARM CLAMPS

SIGN WIDTH (W)	NO. OF CLAMPS	CLAMP SPACING		
		OVERHANG	BETWEEN CLAMPS	OVERHANG
0–12½'	2	0.2 W	1 SPACE AT 0.6 W	0.2 W
13' TO 21'	3	0.15 W	2 SPACES AT 0.35 W	0.15 W

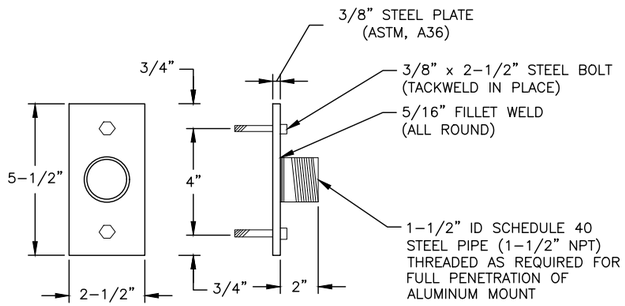
SIGNAL MAST ARM MOUNTED SIGNS (NOT FOR "R" SERIES SIGNS)

NTS



MAST ARM MOUNTING FOR "R" SERIES SIGNS

NTS



MOUNTING PLATE DETAIL

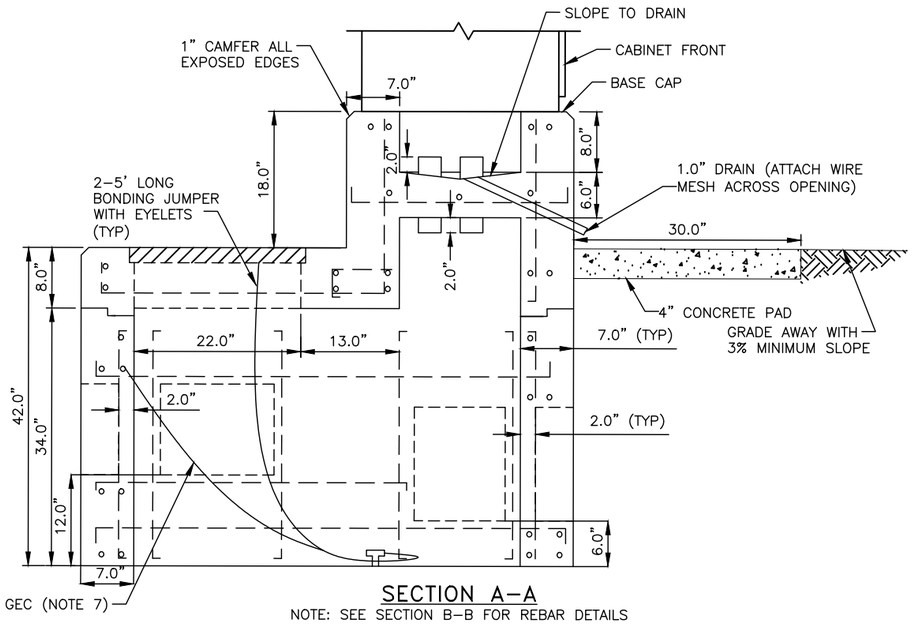
SIGNAL MAST ARM SIGN MOUNTING DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
C:\dowl_pw\d0401392\62487_H_Signal–H122 Tue, Oct/18/22 10:23am

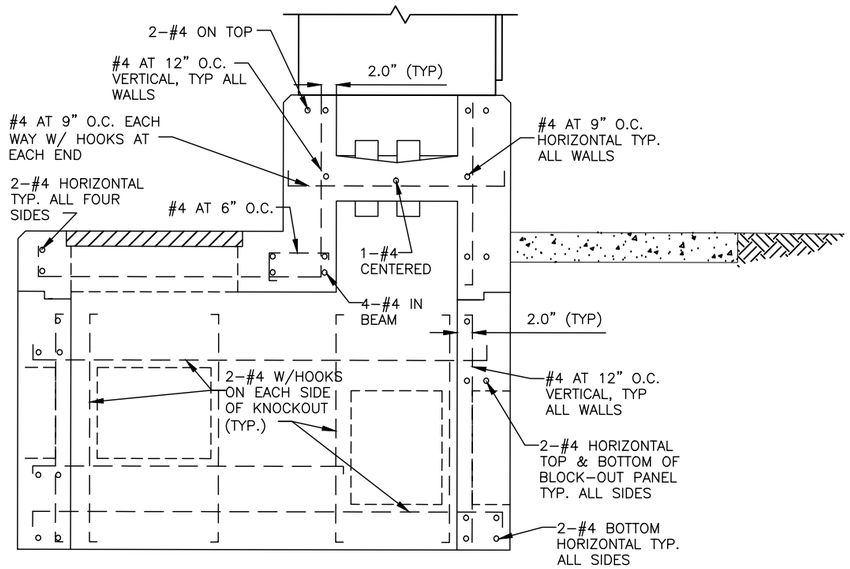
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H123	H128



SECTION A–A

NOTE: SEE SECTION B–B FOR REBAR DETAILS

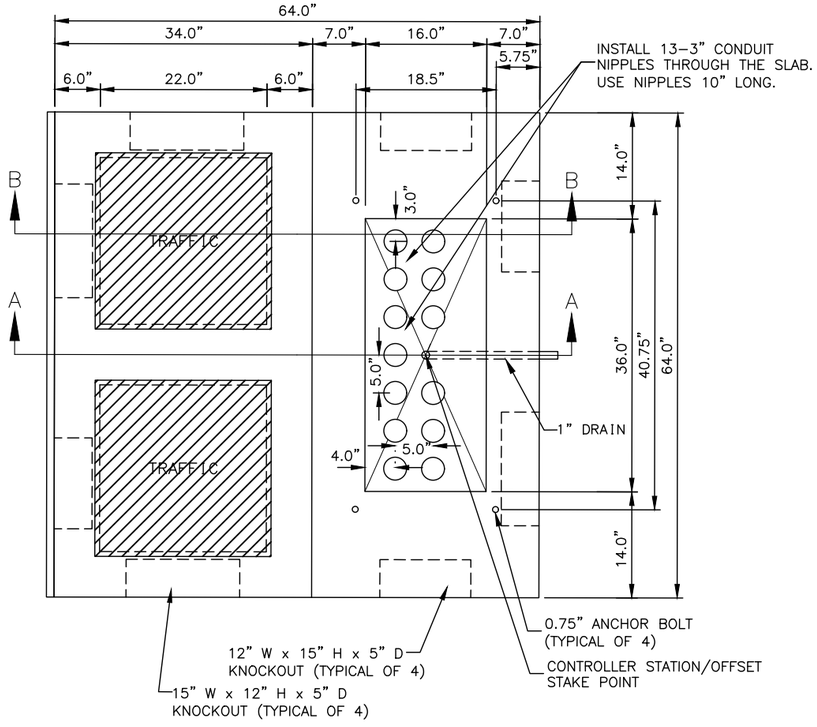


SECTION B–B

NOTE: SEE SECTION A–A FOR DIMENSIONAL DETAILS

NOTES:

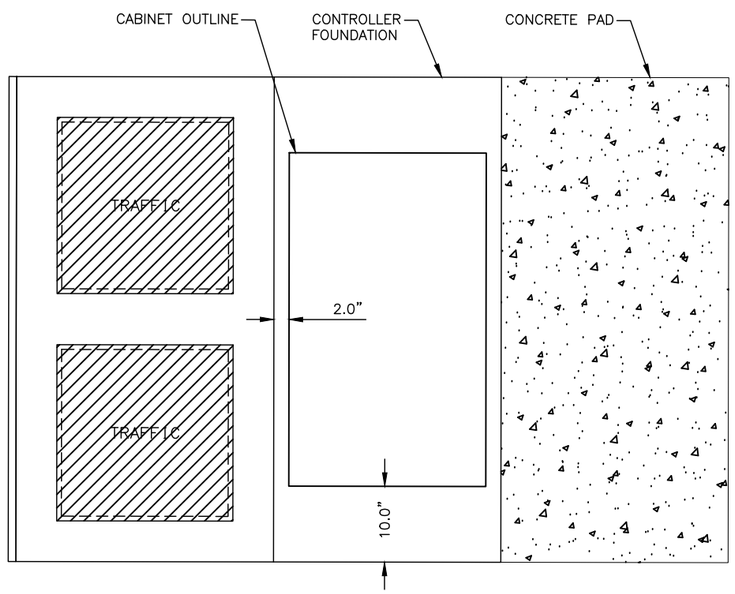
1. ANCHOR BOLTS SHALL NOT PROTRUDE MORE THAN 1.5" ABOVE THE TOP OF THE FOUNDATION. ANCHOR BOLT DIMENSIONS SHALL BE AS SPECIFIED BY THE CABINET MANUFACTURER.
2. SEAL UNUSED CONDUIT STUBS WITH WATERTIGHT CAPS. SEAL STUBS CARRYING CONDUCTORS WITH WATERTIGHT SEALING BUSHINGS DESIGNED TO SEAL AROUND CONDUCTORS AND AGAINST THE CONDUIT WALLS.
3. ROUTE THE FIVE FOOT COPPER GROUNDING JUMPER THROUGH THE 2" PIPE NIPPLE AND ATTACH IT TO THE GROUNDING BUSHING ON THE FEEDER CONDUIT.
4. STOP HORIZONTAL & VERTICAL STEEL AT THE BLOCK-OUT PANELS & THE JOINT USING 90 DEGREE HOOKS. USE 2 EXTRA #4 HORIZONTAL & VERTICAL BARS. ALL SIDES AS SHOWN.
5. INSTALL TRAFFIC CONTROLLER CABINET FOUNDATION WITHIN 1-DEGREE OF PLUMB.



SIZE 6 OR 7 CONTROLLER CABINET FOUNDATION

NTS

NOTE: BOLT SPACING DIMENSIONS SHOWN FOR TS2 CONTROLLER CABINETS.



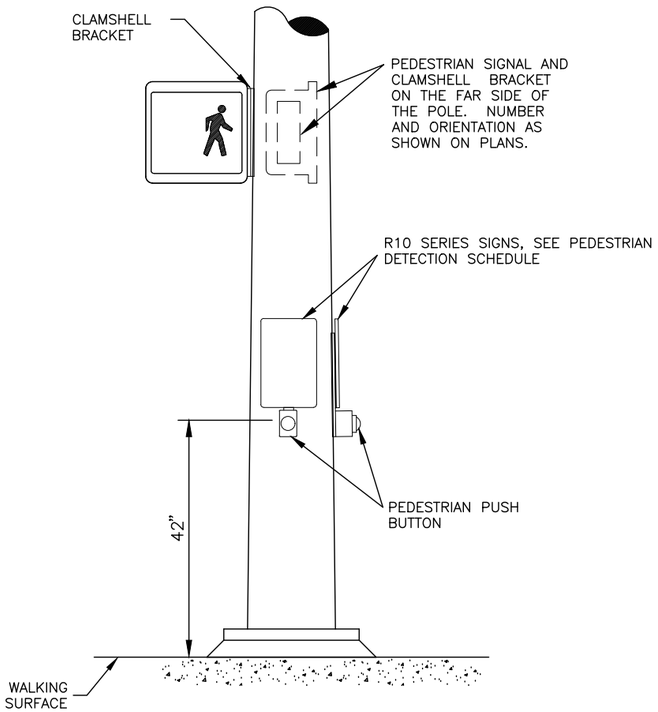
PLAN VIEW

CABINET FOUNDATION DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

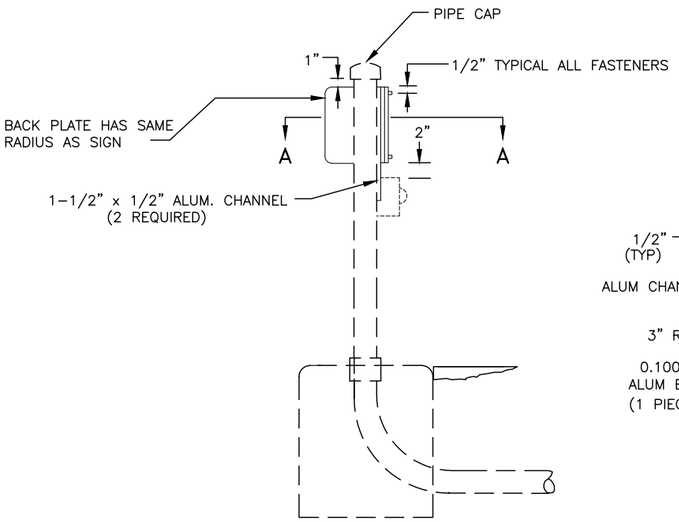
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H124	H128

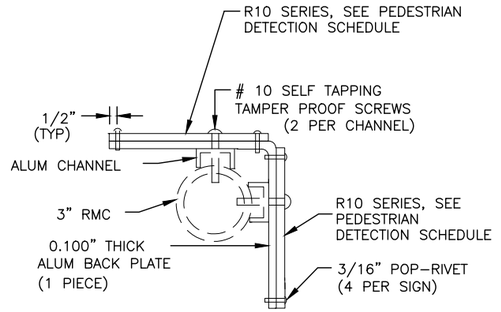


SIGNAL POLE MOUNTED PEDESTRIAN HARDWARE & SIGNAGE

NTS



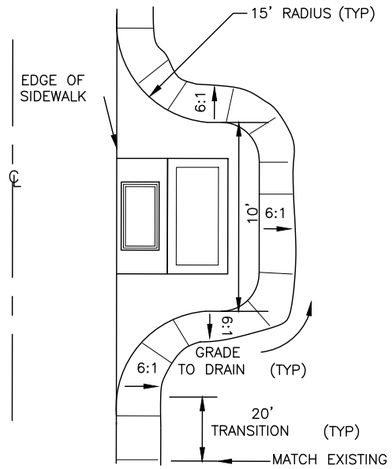
BACK PLATE SHALL BE THE SAME SIZE AS THE SIGN AND SHALL BE CENTERED ON THE EXISTING POST AND ALUM. CHANNEL.



SECTION A-A

PEDESTRIAN PUSH BUTTON POST SIGN DETAILS

ELEVATION VIEW



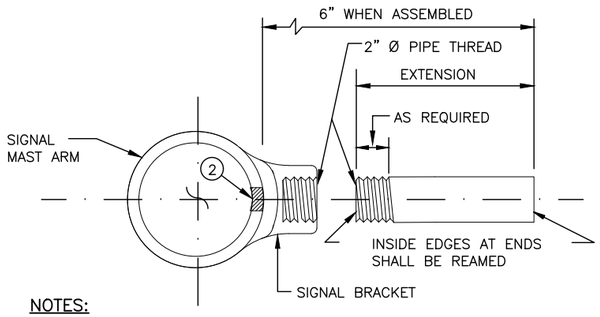
PLAN VIEW

NOTES:

(1) ALL BORROW AND COMPACTION SHALL MEET THE REQUIREMENTS OF SECTION 203 OF THE SPECIFICATIONS.

(2) ALL BORROW, COMPACTION AND GRADING SHOWN ON THESE DETAILS SHALL NOT BE MEASURED FOR PAYMENT BUT BE CONSIDERED SUBSIDIARY TO EXISTING PAY ITEMS.

GRADING DETAILS FOR SIGNAL POLE & CONTROLLER FOUNDATIONS



NOTES:

(1) THESE DETAILS MODIFY STANDARD DRAWING T-30.12

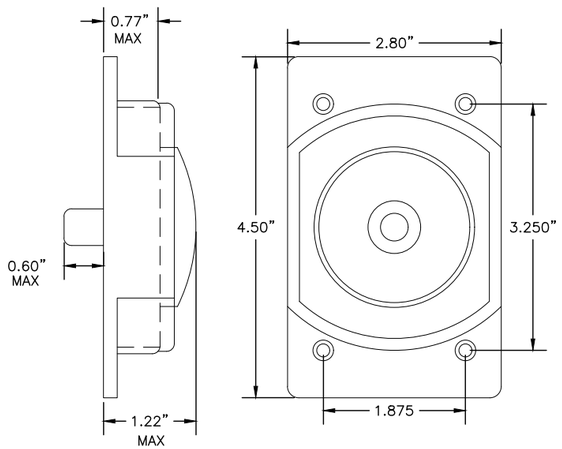
(2) FIELD DRILL WIRING ACCESS HOLE AS REQUIRED. REAM INSIDE & OUTSIDE AND PAINT WITH SPELTER REPAIR MATERIAL.

(3) ONE 2" GALVANIZED SCHEDULE 40 RIGID METAL CONDUIT EXTENSION SHALL BE FURNISHED WITH EACH SIGNAL BRACKET.

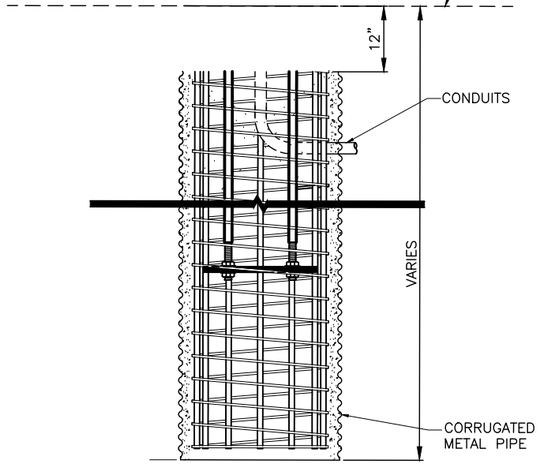
(4) SIGNAL BRACKETS SHALL BE ASTRO-BRAC AB-3008AK OR APPROVED EQUAL AND SHALL BE INSTALLED AS RECOMMENDED BY THE MANUFACTURER. THE ACTUAL LOCATION OF BRACKETS ON EACH ARM SHALL BE DETERMINED BY THE ENGINEER AFTER THE POLES AND ARMS HAVE BEEN INSTALLED.

PLUMBIZER SIGNAL MOUNTING DETAIL

NTS



PEDESTRIAN PUSH BUTTON DETAIL



NOTES:

1. ABANDON SIGNAL AND LUMINAIRE POLE FOUNDATIONS IN PLACE UNLESS OTHERWISE DIRECTED
2. DEMOLISH TOP OF FOUNDATION TO 12" BELOW GRADE MINIMUM
3. BACKFILL HOLE AND PROVIDE EQUIVALENT SURROUNDING MATERIAL: CONCRETE, ASPHALT, OR TOP SOIL

FOUNDATION DEMOLITION DETAIL

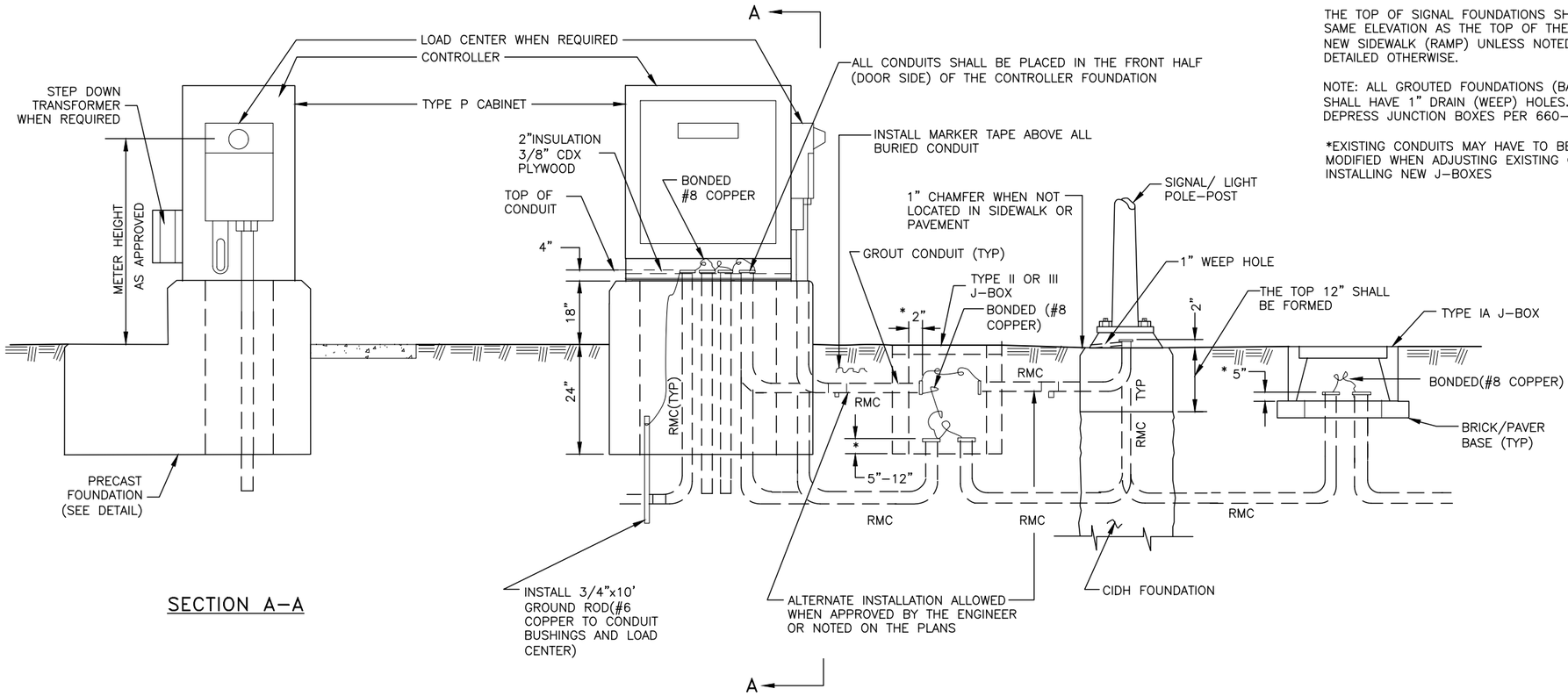
PEDESTRIAN EQUIPMENT, FOUNDATION DEMO, AND GRADING DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_H_Signal-H124 Tue, Oct/18/22 10:24am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H125	H128



SECTION A-A

THE TOP OF SIGNAL FOUNDATIONS SHALL BE THE SAME ELEVATION AS THE TOP OF THE ADJACENT NEW SIDEWALK (RAMP) UNLESS NOTED OR DETAILED OTHERWISE.

NOTE: ALL GROUTED FOUNDATIONS (BASES) SHALL HAVE 1" DRAIN (WEEP) HOLES. DEPRESS JUNCTION BOXES PER 660-2.06

*EXISTING CONDUITS MAY HAVE TO BE MODIFIED WHEN ADJUSTING EXISTING OR INSTALLING NEW J-BOXES

FOUNDATION - CONDUIT - J-BOX DETAILS

PRELIMINARY PS&E

FOUNDATION - CONDUIT - J-BOX DETAIL

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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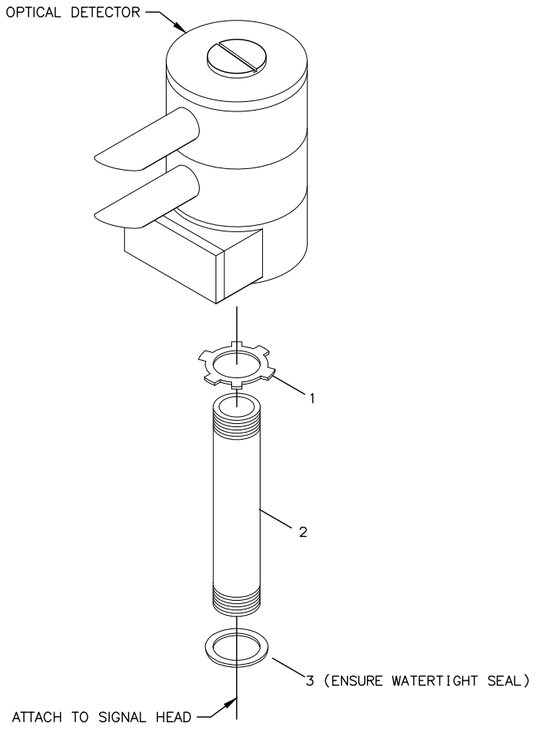
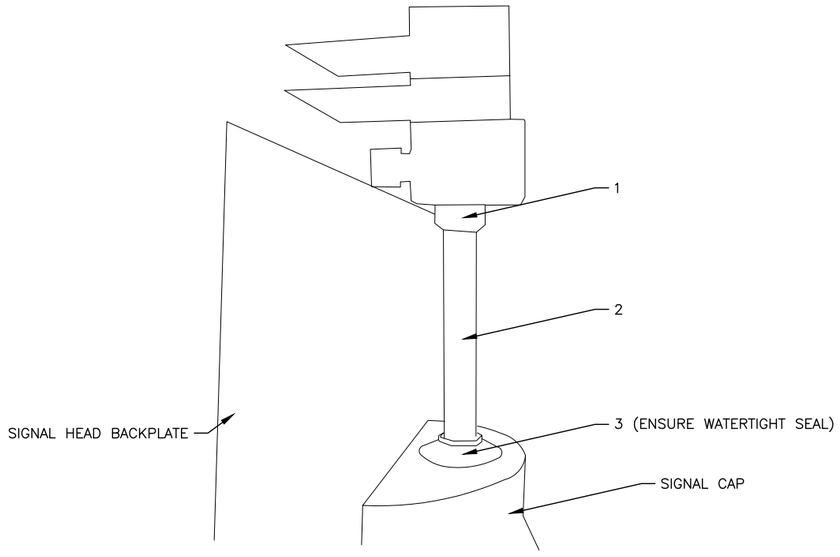
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H126	H128





PARTS LIST FOR EACH GTT OPTICOM DETECTOR INSTALLED

GTT OPTICOM MODEL 575 CONFIRMATION LIGHT KIT
CONFIGURE AS SHOWN FROM PARTS BELOW

PART NO.	PART TYPE	LIGHT KIT QUANTITY
1	3/4" LOCKNUT	1
2	3/4" X 6" NIPPLE	ADD 1 TO KIT
3	MEYERS HUB	ADD 1 TO KIT

NOTES:

1. SEE THE SIGNAL PLANS FOR THE SIGNAL POLE MAST ARMS SCHEDULED FOR EVP INSTALLATION.
2. FOR EACH EVP INSTALLATION, FURNISH:
   A. A GTT MODEL 711, 721, 722 OPTICOM DETECTOR AS CALLED FOR IN PLANS.
   B. A GTT MODEL 575 CONFIRMATION LIGHT KIT WITH THE ADDITIONAL PARTS SHOWN IN THE PARTS LIST, OR STEEL PARTS, WITH A HOT DIP GALVANIZED FINISH, AS SHOWN IN THE PARTS LIST.
3. MOUNT EVP DETECTORS TO HAVE DIRECT, UNOBSTRUCTED LINE-OF-SIGHT OF APPROACHING VEHICLES. DRILL A 1 INCH HOLE IN THE TOP DEAD CENTER OF THE VEHICLE HEAD AT THE LOCATION PRE-APPROVED BY THE ENGINEER. ASSEMBLE AND TIGHTEN THE PARTS AND LOCKNUTS AS SHOWN ON THIS SHEET.
4. BEFORE ATTACHING THE MODEL 138 DETECTOR CABLE TO THE OPTICOM DETECTOR, STRIP THE INSULATION FROM THE THREE INSULATED CONDUCTORS AT THE CONTROLLER CABINET AND ATTACH ALL FOUR CONDUCTORS TO GROUND.
5. PREEMPTION EMITTERS SHALL BE ASSIGNED ID NUMBERS BY JURISDICTION AS SHOWN IN VEHICLE EMITTER TABLE.
6. NIPPLE LENGTH TO BE VERIFIED AS SUCH THE EVP UNIT IS ABOVE THE BACK PLATE OF THE SIGNAL HEAD, NO ADJUSTMENTS ARE PERMITTED FOR THE VEHICLE BACK PLATE.

EVP DETAILS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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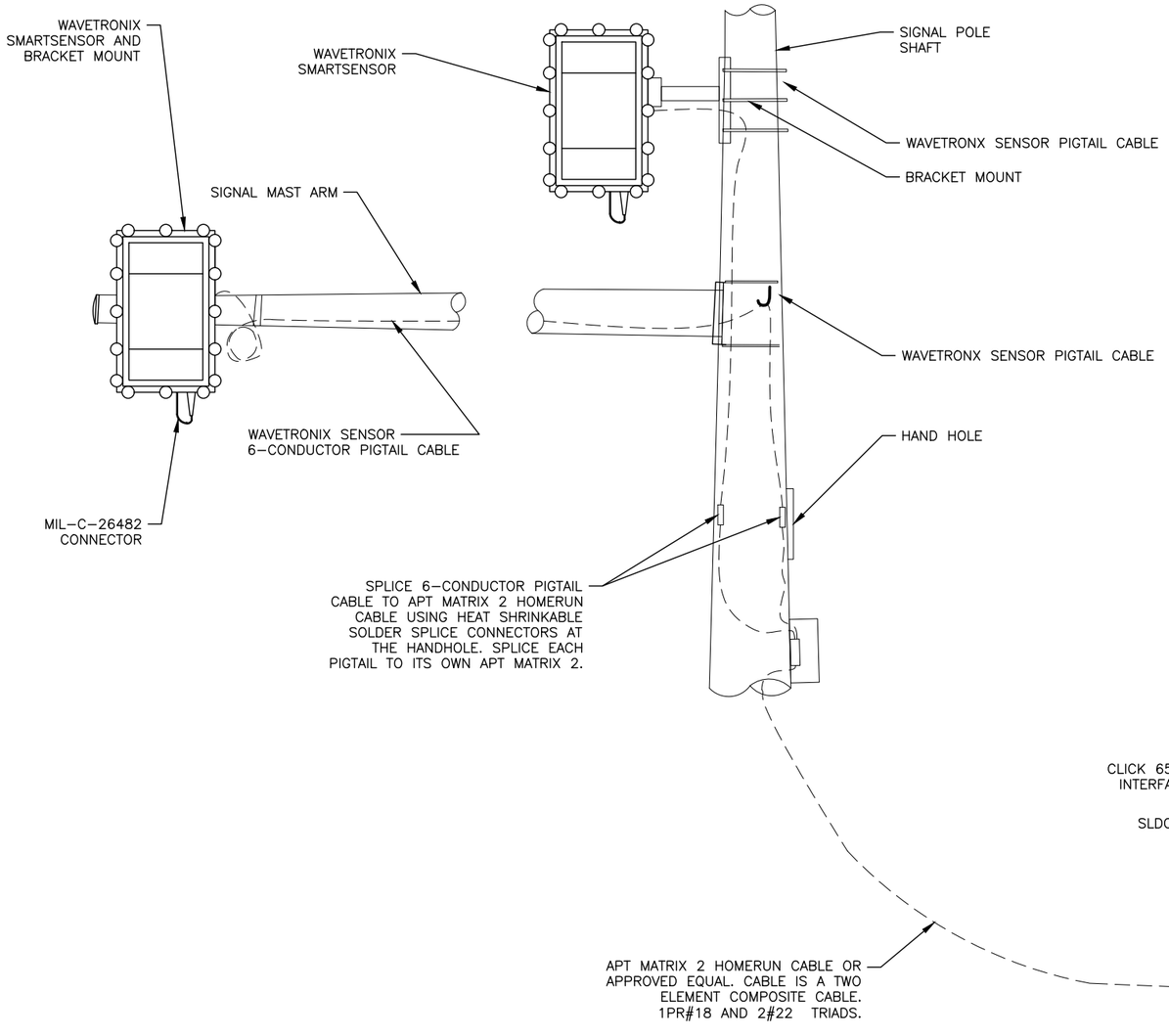
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H127	H128



RADAR DETECTION MOUNTING DETAIL
NTS

RADAR INSTALLATION NOTES:

1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. CABLES ARE TO BE PULLED WITHOUT CONNECTORS ATTACHED. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT CONTRACTORS EXPENSE.
5. THE MINIMUM BEND RADIUS SHALL NOT EXCEED MANUFACTURERS RECOMMENDATIONS.
6. ENSURE ADEQUATE LENGTH OF EACH CABLE TO ALLOW WORK ON THE ENDS OF THE CABLE IN THE CONTROLLER CABINET, AT THE POLE MOUNT ENCLOSURE AND RADAR MOUNTING LOCATION.
7. MOUNT THE RADAR AT THE LOCATION STATED IN THE PLANS. PLACEMENT MAY BE ADJUSTED BY THE ENGINEER TO ALLOW FOR BETTER AIMING OF THE RADAR OR TO AVOID OTHER HAZARDS.
8. INSTALL WATERTIGHT RUBBER GROMMETS WHERE CABLE PASSES THROUGH THE POLE.
9. FURNISH ONLY NEW EQUIPMENT OF THE BRAND AND TYPE LISTED OR ITS APPROVED EQUAL. PROVIDE AT NO ADDITIONAL COST ALL NECESSARY DEVICES, WIRES, BRACKETS/HARDWARE ETC. TO PROVIDE A FULLY FUNCTIONING RADAR DETECTION SYSTEM.

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
APPROVED PROFESSIONAL ENGINEER

RADAR DETAILS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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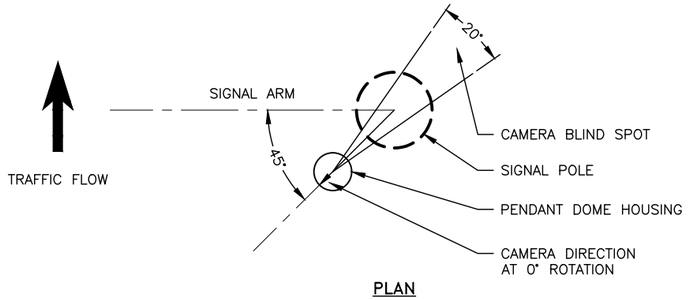
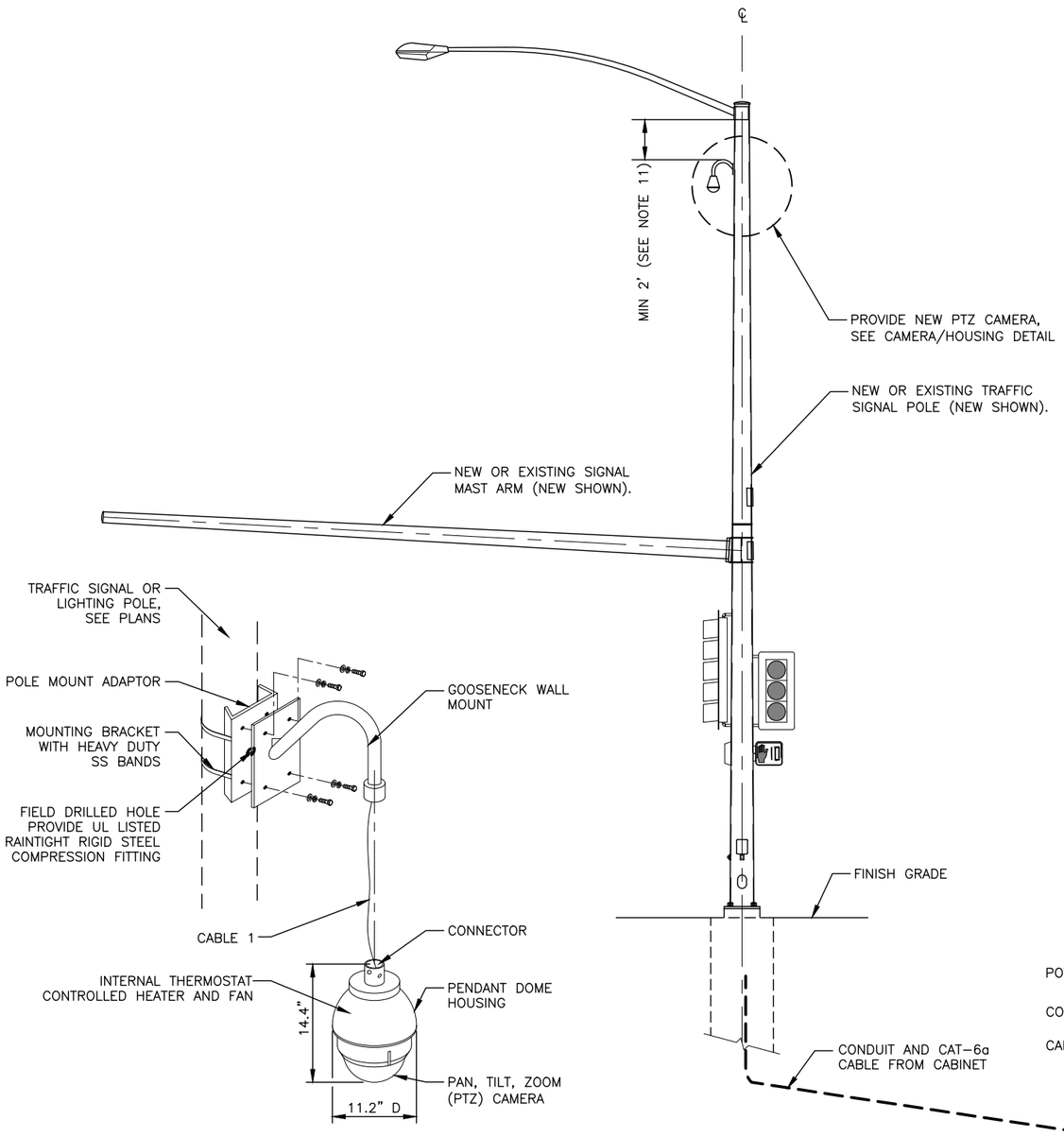
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H128	H128

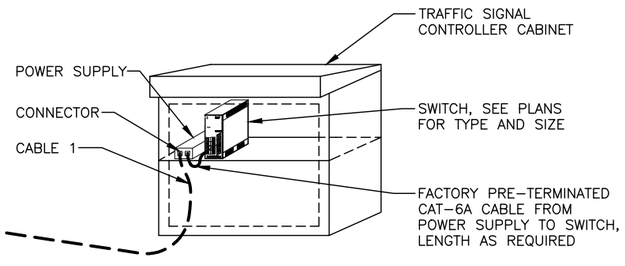


PLAN



ELEVATION

CAMERA/HOUSING DETAIL

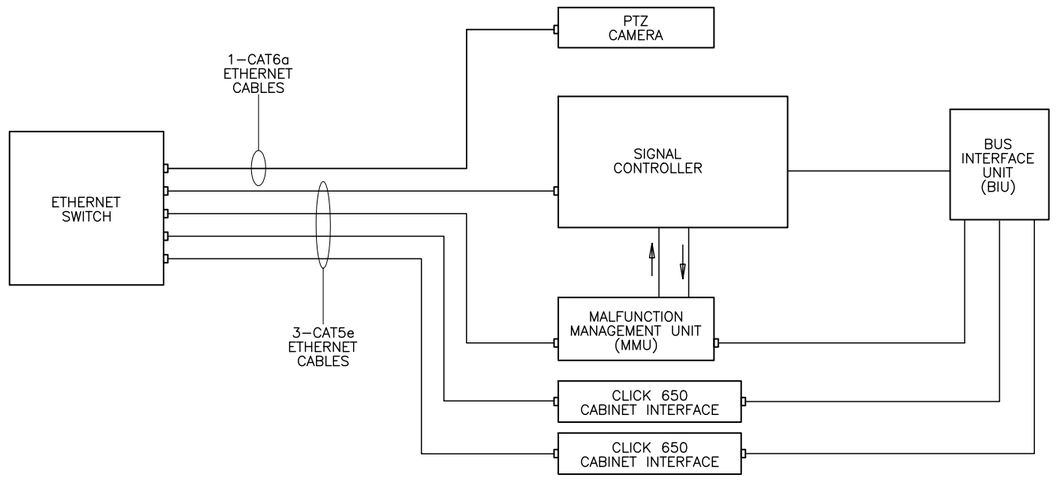


MATERIAL REQUIREMENTS

ALL ASSEMBLIES	
MOUNTING BRACKET	PELCO TRITON BRACKET OR APPROVED EQUAL
POLE MOUNT ADAPTOR	AXIS T91A57 OR APPROVED EQUAL
GOOSENECK WALL MOUNT	AXIS T91G61 OR APPROVED EQUAL
CABLE 1	CAT-6a, SHIELDED
POWER SUPPLY	AXIS T8134 60W OR APPROVED EQUAL
CONNECTOR	ENVIRONMENTALLY HARDENED RJ-45
STRAIN RELIEF	REMKE 2201-013 OR APPROVED EQUAL
CAMERA	
CAMERA	UNLESS OTHERWISE NOTED, PROVIDE AXIS Q6315-LE OR APPROVED EQUAL
HOUSING	
PENDANT DOME HOUSING	OUTDOOR, INTEGRATED WITH CAMERA OR APPROVED EQUAL

NOTES:

1. PROTECT CABLE ENDS FROM MOISTURE AT ALL TIMES.
2. PULL CABLE IN ACCORDANCE WITH SECTION 660 OF THE SPECIAL PROVISIONS. PULL CABLE SO THAT THERE IS SUFFICIENT LENGTH TO REACH THE TOP OF THE CONTROLLER CABINET. CABLES ARE TO BE PULLED WITHOUT CONNECTORS ATTACHED. WHEN CABLE HAS BEEN PULLED TO FINAL LOCATIONS INSTALL AND MAKE FINAL CONNECTIONS.
3. CABLE RUNS ARE TO BE MADE CONTINUOUS WITHOUT SPLICES EXCEPT FOR IN LOCATION SHOWN IN SPICE DETAIL WITH SPECIFIED CONNECTOR.
4. CABLE WITH DAMAGED INSULATION, OR THAT HAS BEEN CRIMPED OR BENT BEYOND THE MINIMUM BEND RADIUS MUST BE REPLACED AT NO ADDITIONAL COST.
5. THE MIN BEND RADIUS SHALL NOT EXCEED THE MANUFACTURER'S RECOMMENDATIONS.
6. ENSURE ADEQUATE LENGTH OF EACH CABLE TO ALLOW WORK ON THE ENDS OF THE CABLE IN THE CONTROLLER CABINET AND THE CAMERA MOUNTING LOCATION.
7. MOUNT THE PENDENT DOME HOUSING AT A 45° ANGLE AT THE REQUIRED HEIGHT. ANGLE AND HEIGHT MAY BE ADJUSTED BY THE ENGINEER TO AVOID WELDS, APPENDICES AND TO APPROVE SITE DISTANCE.
8. ADJUST CAMERA INSIDE THE PENDENT DOME HOUSING AS SHOWN. ENSURE THAT THE CAMERA IS MOUNTED AT A 0° TILT ANGLE.
9. INSTALL WATERTIGHT THREADED RIGID COMPRESSION CONNECTOR WHERE CABLE PASSES THROUGH THE POLE.
10. AT SPLICE LOCATION PROVIDE A SECURE CONNECTION USING CONNECTOR PARTS SPECIFIED. AFTER CONNECTION IS MADE COVER SPLICE WITH HEAT SHRINK. PROVIDE A STRAIN RELIEF CABLE AS NECESSARY.
11. CAT6a TOTAL CABLE LENGTH SHALL NOT EXCEED 325 FEET FROM THE ETHERNET SWITCH TO THE PTZ CAMERA. WHEN MOUNTED ON THE SAME POLE WITH WIRELESS LIGHTING CONTROL GATEWAY, MOUNT THE PTZ CAMERA BELOW THE GATEWAY WITH 2-FEET MIN. OF SEPARATION BETWEEN THE TOP OF THE PTZ MOUNTING BRACKET AND THE BOTTOM OF THE GATEWAY ENCLOSURE, OR AT THE ENGINEER'S DIRECTION.



SWITCH COMMUNICATIONS WIRING DIAGRAM

PAN, TILT, ZOOM CAMERA DETAILS

STATE OF ALASKA
49TH
PRE-PS&E
10/12/2022
Johnson
AK PROFESSIONAL ENGINEER
10/12/2022

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H201	H219

INTERCONNECT NOTES:

1. WHEN DIRECTED BY THE ENGINEER, ADJUST INTERCONNECT CONDUIT AND VAULTS AS NECESSARY TO FACILITATE INSTALLATION. INSTALLATION OF THE CONDUIT AND VAULTS SHALL BE COMPLETED BEFORE PLACING FINAL HMA LIFT, SIDEWALK, AND C&G.

2. UNLESS OTHERWISE NOTED IN THESE PLANS THE CONTRACTOR IS RESPONSIBLE FOR:

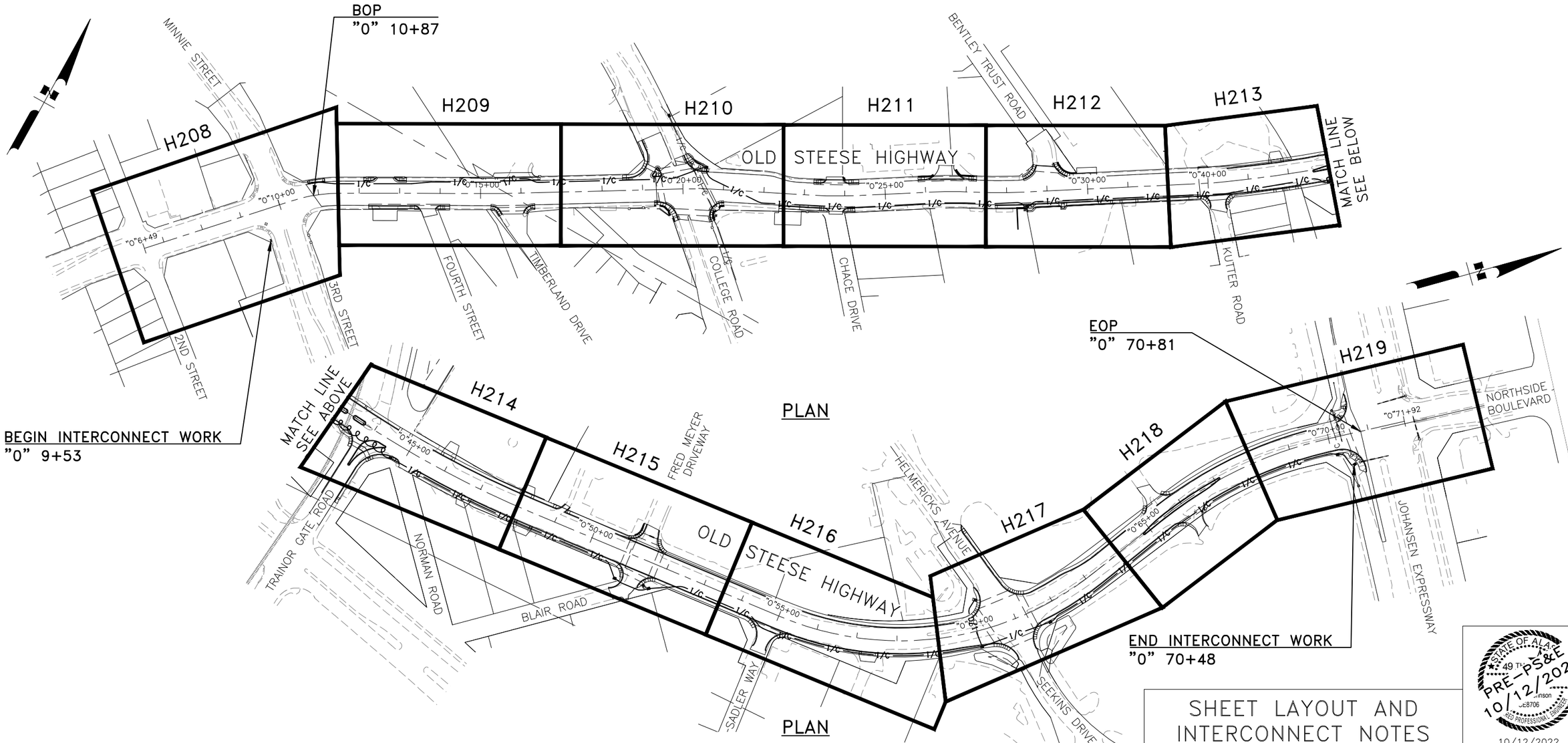
   A. PROTECTING EXISTING IMPROVEMENTS FROM DAMAGE. ALL ADJUSTMENTS, RELOCATIONS, REMOVALS, RECONSTRUCTIONS, AND SALVAGING OF CURB & GUTTER, PAVEMENT, SIDEWALK, STRUCTURES & OBSTRUCTIONS, MANHOLES, JUNCTION BOXES, STORM DRAIN INLETS, FENCING, GUARDRAIL, CURB RAMPS, SIGNS, VALVE BOXES, HYDRANTS, AND OTHER ROADWAY IMPROVEMENTS WILL BE MEASURED AND PAID FOR BY OLD STEESE HIGHWAY RECONSTRUCTION UNDER THEIR RESPECTIVE BID ITEMS.

   B. LOCATING AND PROTECTING UTILITIES FROM DAMAGE. ALL UTILITIES WITHIN, UNDER, AND OVER THE PROJECT SHALL REMAIN IN PLACE AND IN SERVICE DURING CONSTRUCTION. BEFORE COMMENCING GROUND DISTURBING ACTIVITIES, CONTRACTOR SHALL CONTACT 811 ALASKA DIGLINE AT 1-800-478-3121. NOT ALL AREA UTILITIES ARE MEMBERS OF 811 ALASKA DIGLINE AND THE CONTRACTOR SHALL CONTACT INDIVIDUAL NON-MEMBER UTILITIES DIRECTLY, INCLUDING THE CITY OF FAIRBANKS, DOT&PF, AND GVEA. ANY UTILITY DAMAGED DURING CONSTRUCTION SHALL BE REPAIRED OR REPLACED IN KIND AT THE CONTRACTOR'S EXPENSE.

5. RESTORE ALL DISTURBED AREAS DUE TO CONTRACTOR'S ACTIVITIES OUTSIDE THE PROJECT SLOPE LIMITS IN ACCORDANCE WITH THE PLANS AND AS DIRECTED BY THE ENGINEER.

6. NO WASTE MATERIAL, EXCESS MATERIAL, OR STOCKPILED AGGREGATE BASE OR SURFACE COURSE SHALL BE DISPOSED OF WITHIN THE R/W, UNLESS SPECIFICALLY CALLED FOR IN THE PLANS OR AS DIRECTED BY THE ENGINEER.

7. ALL CONSTRUCTION ACTIVITIES SHALL BE CONTAINED WITHIN THE R/W.



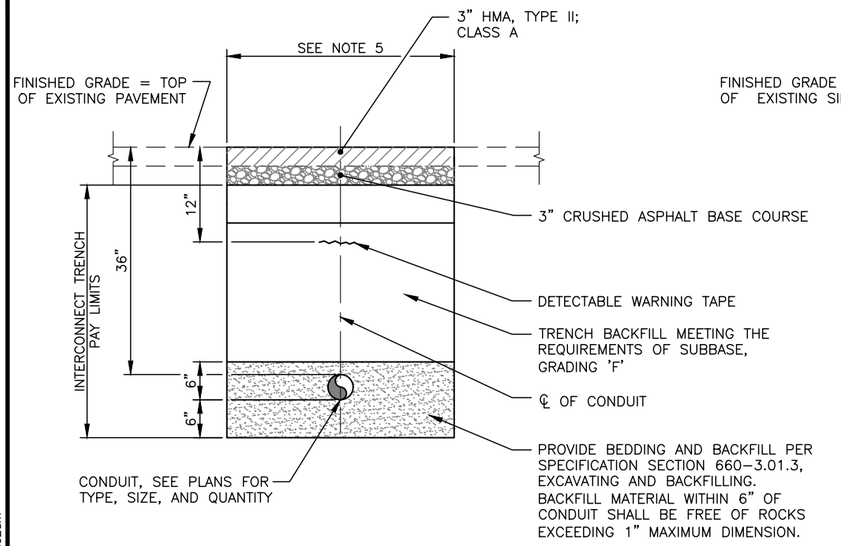
SHEET LAYOUT AND INTERCONNECT NOTES

STATE OF ALASKA
49TH
PRE-PS&E
10/12/2022
Johnson
AE8706
REGISTERED PROFESSIONAL ENGINEER
10/12/2022

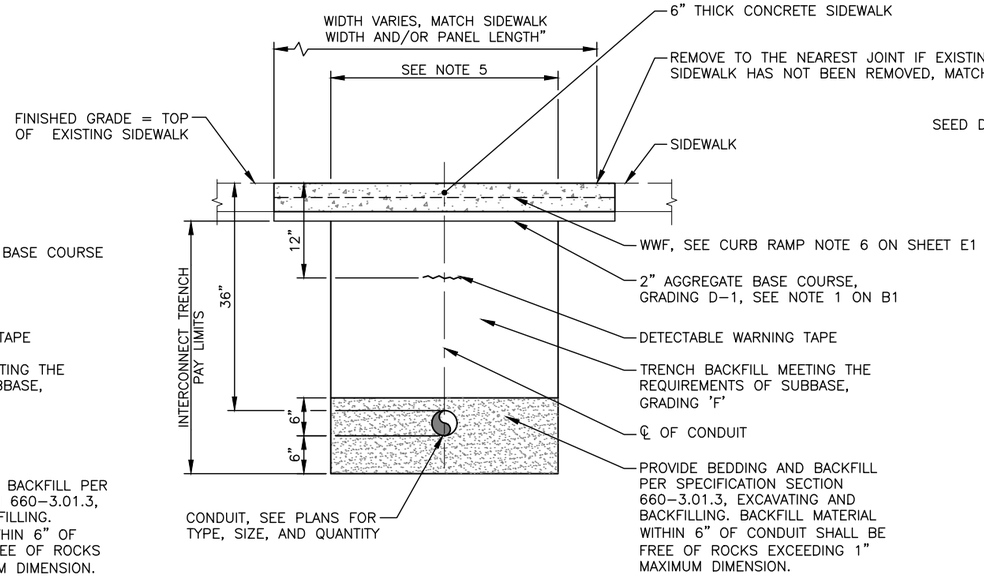
PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
Z:\PROJECTS\00702_Old Steese HwyRecon_Signal Interconnect\DWGS\C\Sheets\00702_H201_LAYT-H201 Wed, Oct/12/22 11:09am

NO.	DATE	REVISION

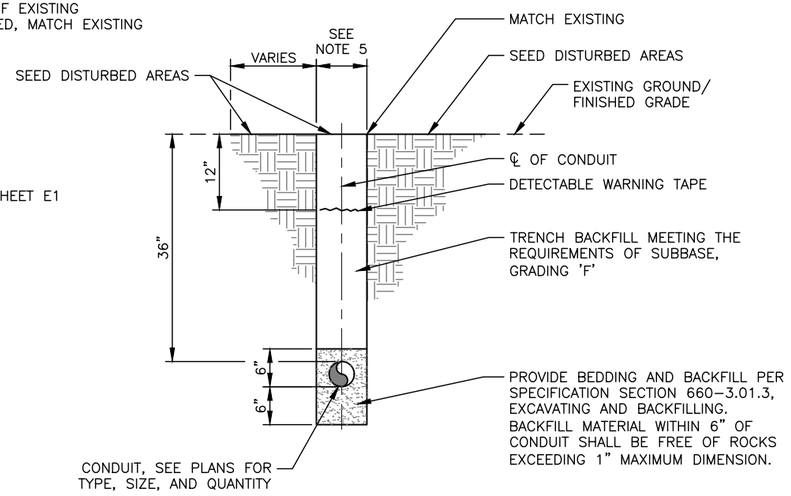
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H202	H219



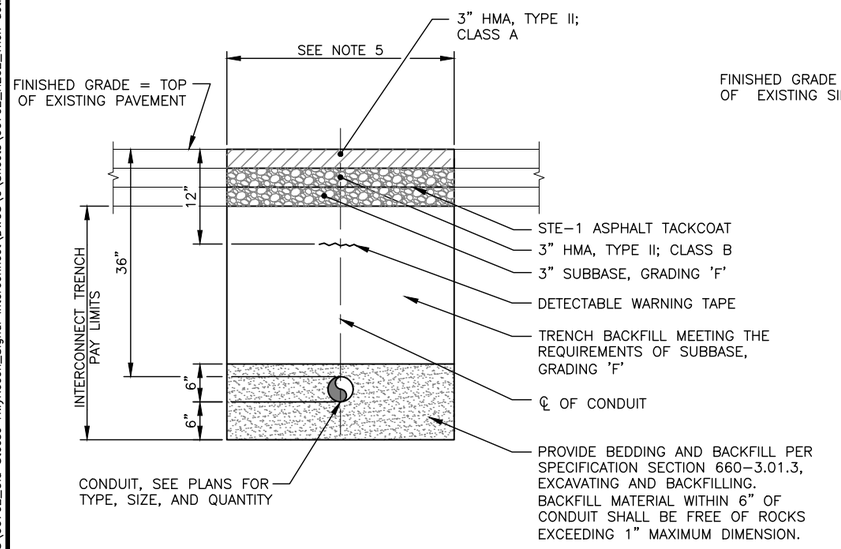
INTERCONNECT TRENCH UNDER PAVEMENT
STA "0" 10+87 TO STA "0" EQ. 32+76.11=39+78.12
NTS



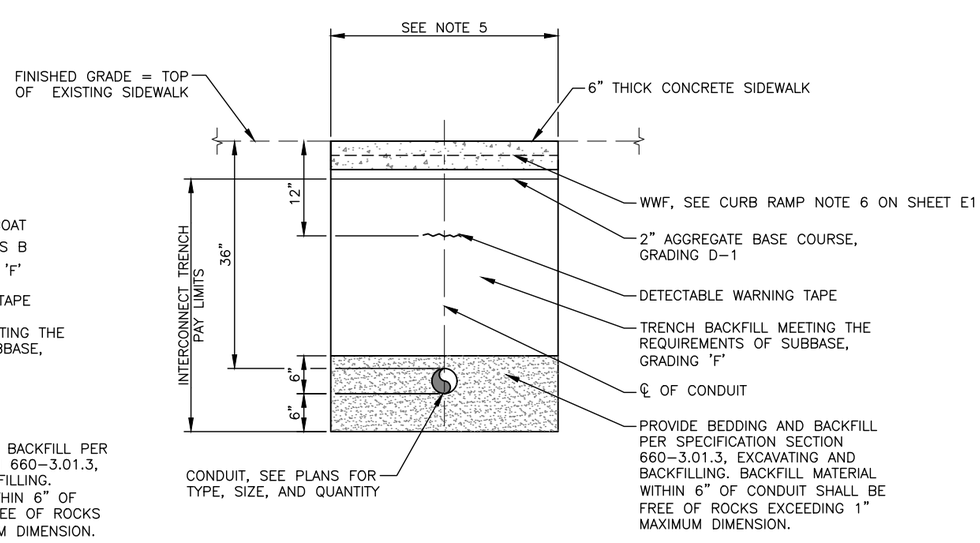
INTERCONNECT TRENCH UNDER SIDEWALK
STA "0" 10+87 TO STA "0" EQ. 32+76.11=39+78.12
NTS



INTERCONNECT TRENCH ADJACENT TO ROADWAYS AND GRASSY MEDIANS
NTS



INTERCONNECT TRENCH UNDER PAVEMENT
STA "0" EQ. 32+76=39+78 TO STA "0" 70+75
NTS



INTERCONNECT TRENCH UNDER SIDEWALK
STA "0" EQ. 32+76=39+78 TO STA "0" 70+75
NTS

NOTES:

1. ALL ASPHALT PAVEMENT, CURB & GUTTER, OR CONCRETE SIDEWALK SHALL BE SAWCUT PRIOR TO REMOVAL. EXCEPTION: WHERE APPLICABLE, CONCRETE SIDEWALK AND CURB & GUTTER SHALL BE REMOVED TO THE NEAREST CONSTRUCTION JOINT.
2. ALL CONDUIT TRENCH AND EXCAVATION BENEATH ASPHALT PAVEMENT, SIDEWALK, AND CURB AND GUTTER SHALL BE COMPLETED BEFORE FINAL PAVING.
3. SEE SPECIAL PROVISIONS SUBSECTION 643-3.08 FOR ADDITIONAL PAVING REQUIREMENTS.
4. SEE B SHEETS FOR ADDITIONAL INFORMATION AND REQUIREMENTS.
5. SEE SPECIAL PROVISIONS SUBSECTION 660-3.01 AND 662-3.13 FOR ADDITIONAL TRENCH EXCAVATION AND BACKFILL REQUIREMENTS.

10/12/2022

INTERCONNECT TRENCH DETAILS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
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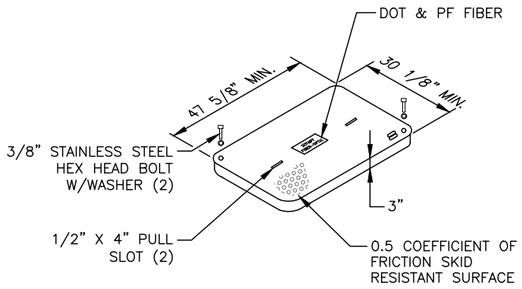
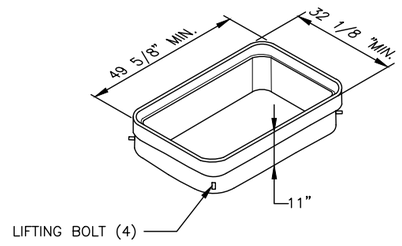
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H203	H219



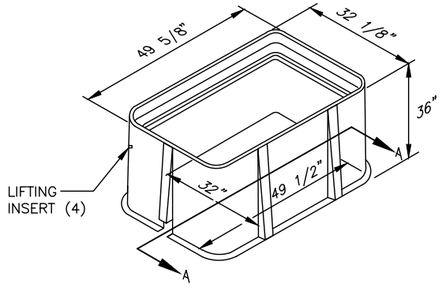
COVER

HUBBELL QUAZITE NO. PG3048HH00
OR APPROVED EQUIVALENT



TOP EXTENSION

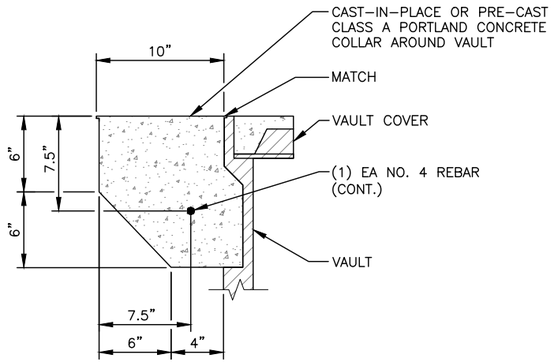
HUBBELL QUAZITE NO. PG3048EA11
OR APPROVED EQUIVALENT



BOTTOM

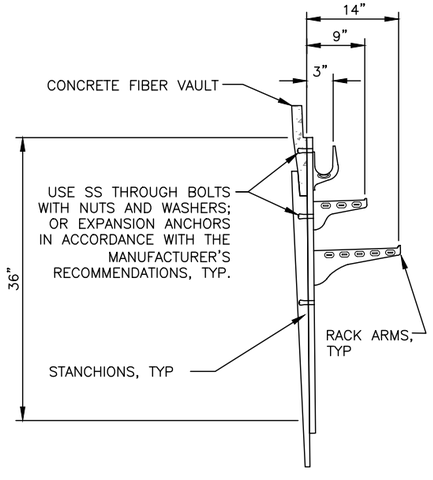
PG TYPE JUNCTION BOX

HUBBELL QUAZITE NO. PG3048BA36 OR APPROVED EQUIVALENT



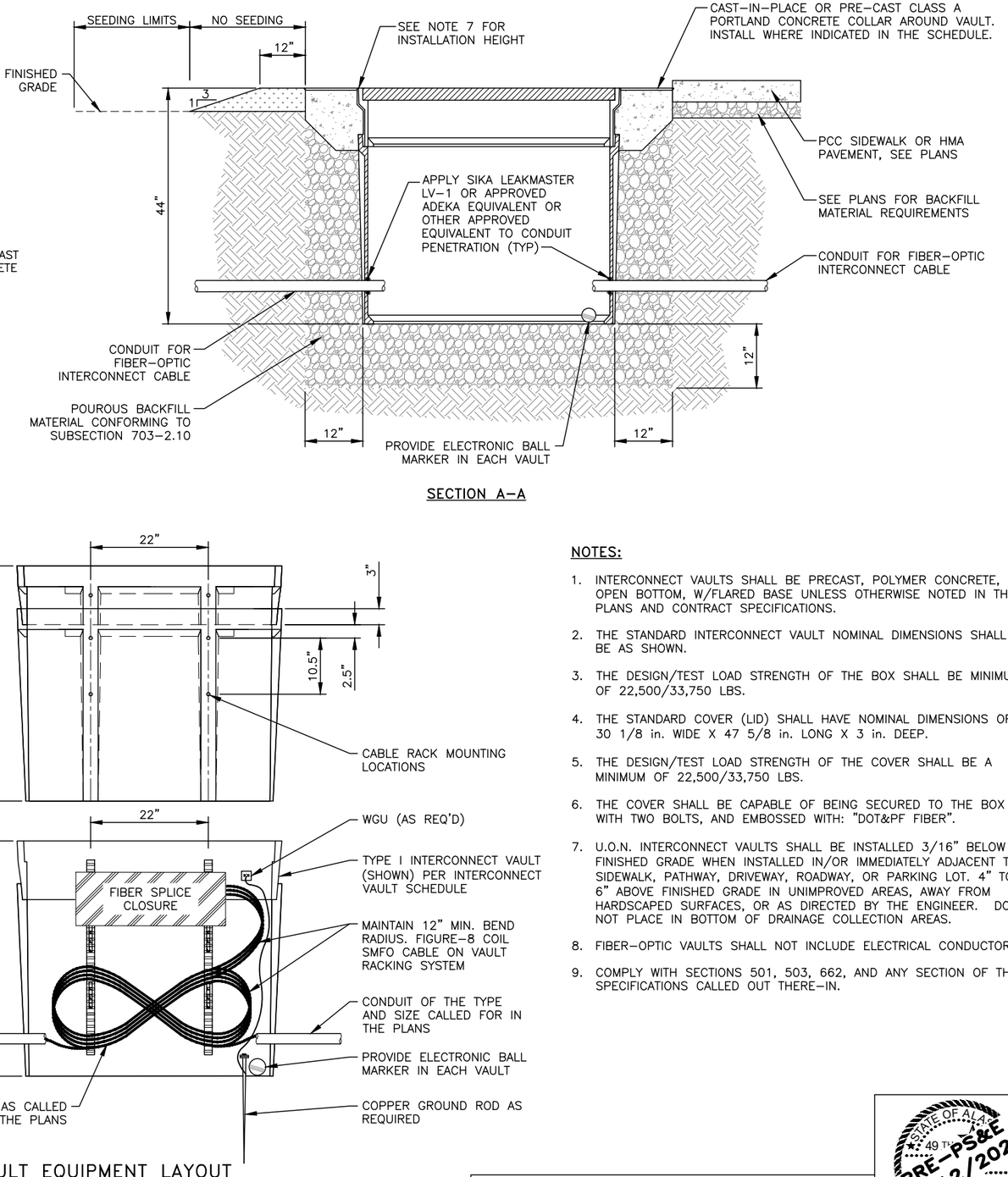
CONCRETE COLLAR DETAIL

NTS



TYPICAL CABLE RACK

NTS



SECTION A-A

VAULT EQUIPMENT LAYOUT

NTS

NOTES:

1. INTERCONNECT VAULTS SHALL BE PRECAST, POLYMER CONCRETE, OPEN BOTTOM, W/FLARED BASE UNLESS OTHERWISE NOTED IN THE PLANS AND CONTRACT SPECIFICATIONS.
2. THE STANDARD INTERCONNECT VAULT NOMINAL DIMENSIONS SHALL BE AS SHOWN.
3. THE DESIGN/TEST LOAD STRENGTH OF THE BOX SHALL BE MINIMUM OF 22,500/33,750 LBS.
4. THE STANDARD COVER (LID) SHALL HAVE NOMINAL DIMENSIONS OF 30 1/8 in. WIDE X 47 5/8 in. LONG X 3 in. DEEP.
5. THE DESIGN/TEST LOAD STRENGTH OF THE COVER SHALL BE A MINIMUM OF 22,500/33,750 LBS.
6. THE COVER SHALL BE CAPABLE OF BEING SECURED TO THE BOX WITH TWO BOLTS, AND EMBOSSED WITH: "DOT&PF FIBER".
7. U.O.N. INTERCONNECT VAULTS SHALL BE INSTALLED 3/16" BELOW FINISHED GRADE WHEN INSTALLED IN/OR IMMEDIATELY ADJACENT TO SIDEWALK, PATHWAY, DRIVEWAY, ROADWAY, OR PARKING LOT. 4" TO 6" ABOVE FINISHED GRADE IN UNIMPROVED AREAS, AWAY FROM HARDSCAPED SURFACES, OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE IN BOTTOM OF DRAINAGE COLLECTION AREAS.
8. FIBER-OPTIC VAULTS SHALL NOT INCLUDE ELECTRICAL CONDUCTORS.
9. COMPLY WITH SECTIONS 501, 503, 662, AND ANY SECTION OF THE SPECIFICATIONS CALLED OUT THERE-IN.

INTERCONNECT TYPE 1 VAULT DETAILS

10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
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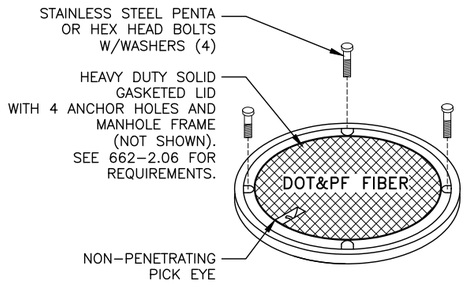
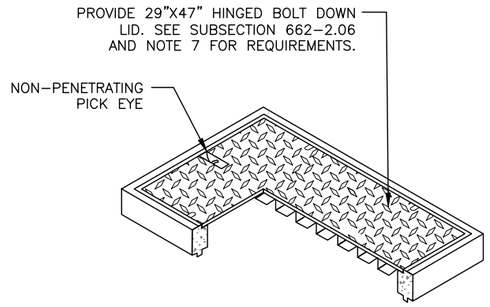
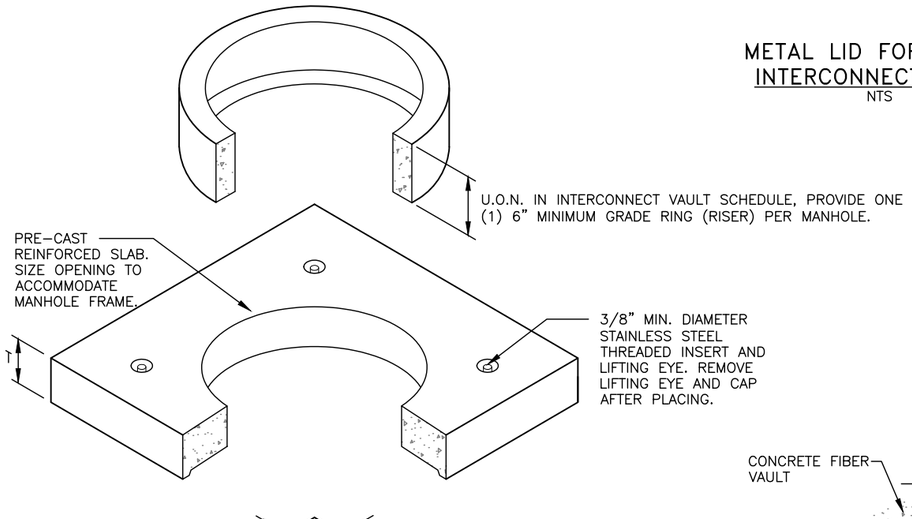
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H204	H219

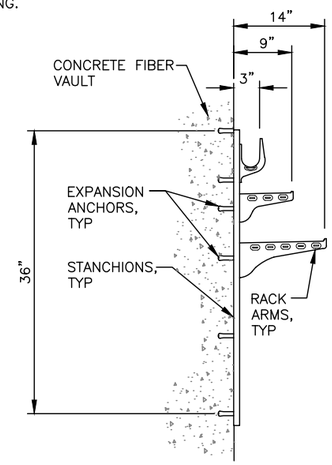




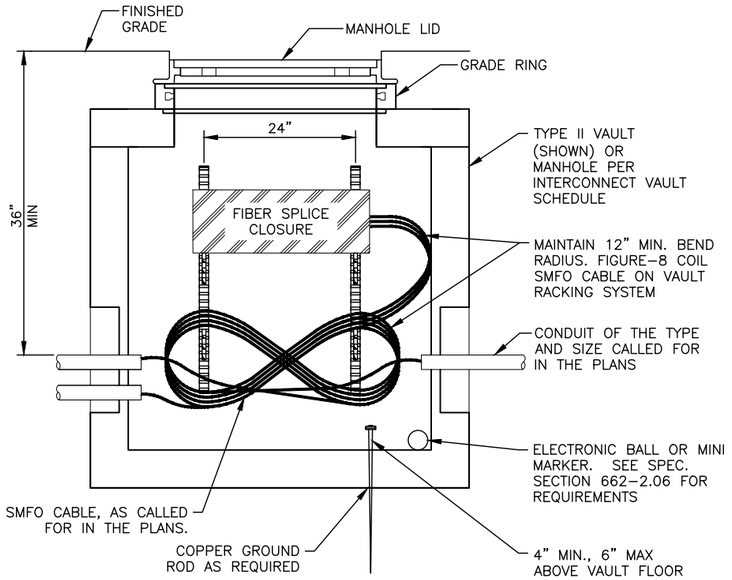
METAL LID FOR TYPE II INTERCONNECT VAULT
NTS



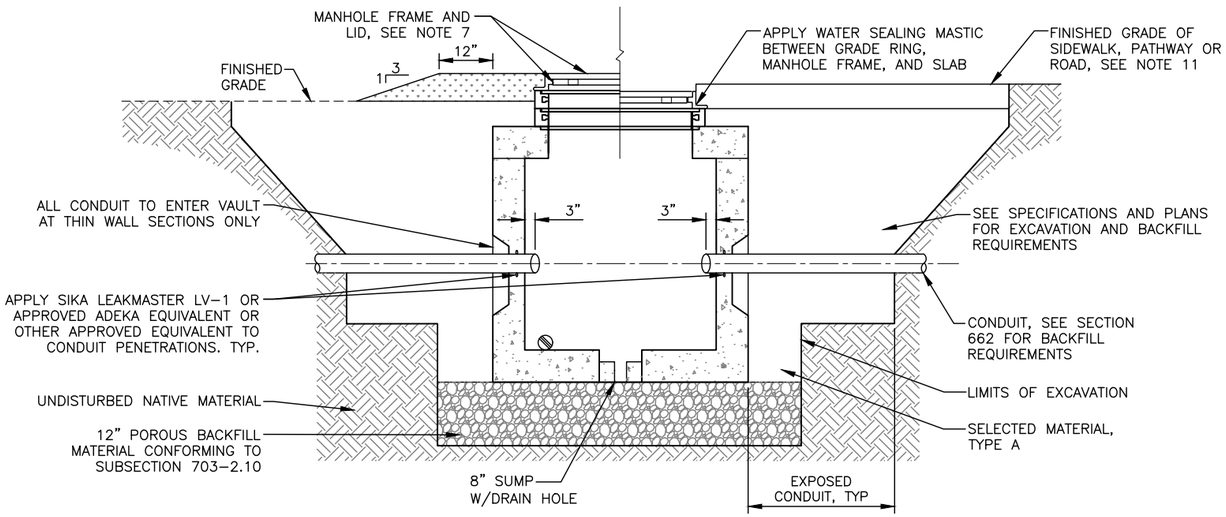
INTERCONNECT MANHOLE WITH MANHOLE LID
(TYPE II INTERCONNECT VAULT SIMILAR)
NTS



TYPICAL CABLE RACK
NTS



VAULT EQUIPMENT LAYOUT
NTS



SECTION
NTS

MANHOLE/VAULT DIMENSIONS

TYPE	"L" INCH	'W' INCH	"H" INCH	"T" INCH	LID
TYPE II VAULT	30	48	48	6 MIN	HINGED METAL
MANHOLE	48	48	48	6 MIN	MANHOLE

NOTES:

1. SUPPLY TYPE II INTERCONNECT VAULTS WITH BOLT DOWN HINGED METAL LID. SUPPLY VAULTS, LIDS, AND COVERS RATED FOR AASHTO HS-20-44 LOADING.
2. SUPPLY ALL LIDS WITH WITH A HOLE OR SLOT FOR REMOVAL WITH A LEVER OR HOOK.
3. SUPPLY VAULTS AND MANHOLES WITH A PERMANENT INTERNAL LADDER. COMPLY WITH OSHA REQUIREMENTS.
4. PROVIDE VAULT AND MANHOLE LIDS MARKED, "DOT&PF FIBER" OR SIMILAR WORDING APPROVED BY THE ENGINEER.
5. PROVIDE MANHOLES AND VAULTS WITH A HEAVY-DUTY NON-METALLIC CABLE STORAGE RACK SYSTEM. PROVIDE RACK ARMS OR STANCHIONS CAPABLE OF SUPPORTING A MINIMUM OF 250 LBS. INCLUDE A MINIMUM OF 36 INCH RACK STANCHIONS AND 4 RACK ARMS.
6. ENTER CONDUITS INTO VAULT AT THINWALL SECTIONS ONLY. CORE DRILL IN THE THINWALL SECTION TO CONDUIT SIZE PLUS 1/4 INCH ALL AROUND. DO NOT "KNOCK OUT" THE THINWALL SECTION.
7. BOND AND GROUND ALL METALLIC COMPONENTS OF VAULT, INCLUDING RACK, FRAME AND LIDS PER STANDARD SPECIFICATION 660-3.06.
8. INSTALL CONDUIT PLUGS PER SECTIONS 660 AND 662.
9. EXTEND GROUND ROD A MINIMUM OF 4 INCHES AND A MAXIMUM OF 6 INCHES ABOVE BOTTOM OF VAULT.
10. USE A SPLIT BOLT CONNECTOR TO ATTACH GROUND WIRES TO GROUND ROD. ATTACH NOT MORE THAN TWO WIRES PER BOLT.
11. UNLESS OTHERWISE NOTED, TOP OF INTERCONNECT VAULT / MANHOLE LIDS SHALL BE INSTALLED 0"-3/16" BELOW FINISHED GRADE WHEN IN SIDEWALK OR PATHWAY; 3/8" BELOW FINISHED GRADE WHEN LOCATED IN PAVED PARKING LOT; AND U.O.N., 4"-8" ABOVE FINISHED GRADE IN UNIMPROVED AREAS, AWAY FROM HARDSCAPED SURFACES; OR AS DIRECTED BY THE ENGINEER. DO NOT PLACE IN BOTTOM OF DRAINAGE COLLECTION AREAS.

10/12/2022

INTERCONNECT TYPE 2 VAULT & MANHOLE DETAILS

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
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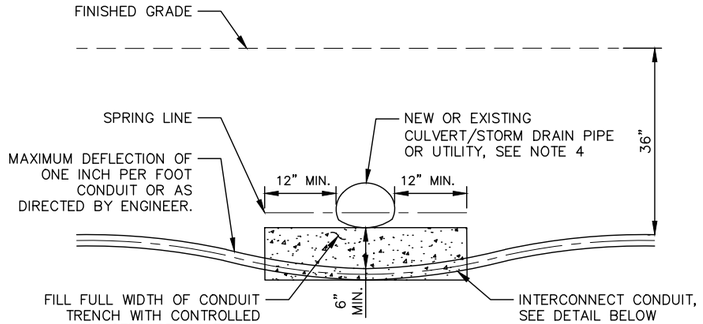
NO.	DATE	REVISION

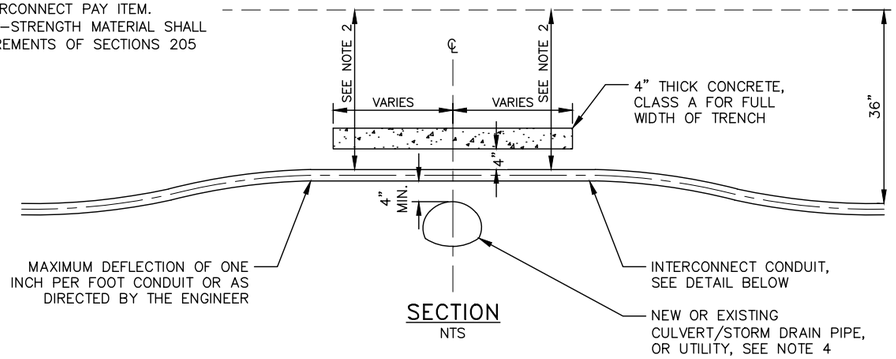
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H205	H219

CONDUIT–CULVERT/UTILITY CROSSING NOTES:

1. UNLESS DIRECTED OTHERWISE BY THE ENGINEER, USE THIS DETAIL WHENEVER INTERCONNECT CONDUIT BURIAL DEPTH IS LESS THAN 30".
2. MINIMUM INTERCONNECT CONDUIT COVER REQUIREMENTS:
   - 2.1. 24" UNDER ROADWAYS, DRIVEWAYS, PARKING LOTS, AND PATHWAYS.
   - 2.2. 18" UNDER ALL OTHER AREAS.
3. ENSURE THAT THE INTERCONNECT CONDUIT IS PROPERLY POSITIONED AND ANCHORED BEFORE BACKFILLING WITH CONTROLLED LOW–STRENGTH MATERIAL.
4. U.O.N. OR DIRECTED BY THE ENGINEER, USE THIS DETAIL WHEN UNDER GROUND UTILITY CROSSINGS ARE ENCOUNTERED. DO NOT ENCASE UTILITY IN CONTROLLED LOW–STRENGTH MATERIAL OR CONCRETE UNLESS OTHERWISE DIRECTED. POTHOLING IS REQUIRED WHEN CROSSING BENEATH DUCTBANKS.
5. CONCRETE AND LOW–STRENGTH FLOWABLE FILL MATERIALS AND WORK ARE SUBSIDIARY TO THE FIBER OPTIC INTERCONNECT PAY ITEM. CONTROLLED LOW–STRENGTH MATERIAL SHALL MEET THE REQUIREMENTS OF SECTIONS 205 AND 721.

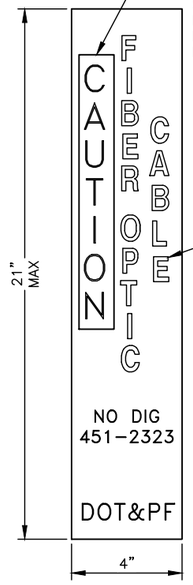


SECTION
NTS

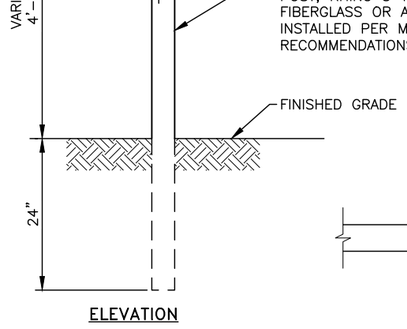


SECTION
NTS

INTERCONNECT CONDUIT–CULVERT/UTILITY CROSSING DETAIL
NTS



DECAL
NTS



ELEVATION

FIBER OPTIC ROUTE MARKER DETAIL
NTS

FIBER OPTIC ROUTE MARKER NOTES:

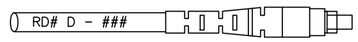
1. PROVIDE FIBER OPTIC ROUTE MARKERS IN ACCORDANCE WITH SECTION 662 OF THE PROJECT SPECIAL PROVISIONS.
2. THIS WORK AND MATERIALS IS SUBSIDIARY TO THE FIBER OPTIC INTERCONNECT PAY ITEM.

TRANSMIT DIRECTION	ABBREVIATION	
	TRANSMIT	RECEIVE
SOUTH TO NORTH	TX(a)	RX(a)
NORTH TO SOUTH	TX(b)	RX(b)
WEST TO EAST	TX(a)	RX(a)
EAST TO WEST	TX(b)	RX(b)

TX/RX TRANSMIT DIRECTION ABBREVIATION PER TRANSMIT DIRECTION TABLE
P LETTER P FOR PATCH CORD
FIBER POSITION NUMBER

LABEL BOTH ENDS OF THE PATCH PANEL CORD

LABELING FOR FIBER PATCH CORDS



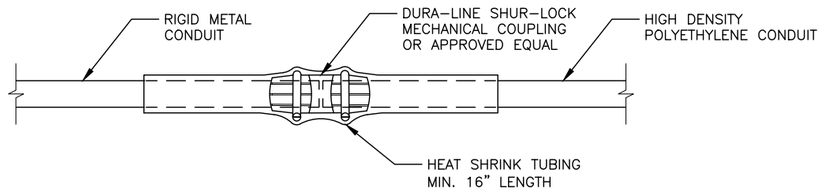
RD# ROADWAY THE CABLE IS ROUTED FROM THE PATCH PANEL

3RD	= 3RD STREET	FLR	= FARMERS LOOP RD
AD	= ALUMNI DR	JE	= JOHANSEN EXPY
AW	= AIRPORT WAY	PR	= PEGER RD
BR	= BALLAINE RD	TD	= NORTH TANANA DR
CR	= COLLEGE RD	UA	= UNIVERSITY AVE
LA	= LATHROP ST	SC	= S CUSHMAN ST
PH	= PARKS HWY	ME	= MITCHELL EXPY

D DIRECTION THE CABLE IS ROUTED FROM THE PATCH PANEL
N = NORTH E = EAST
S = SOUTH W = WEST

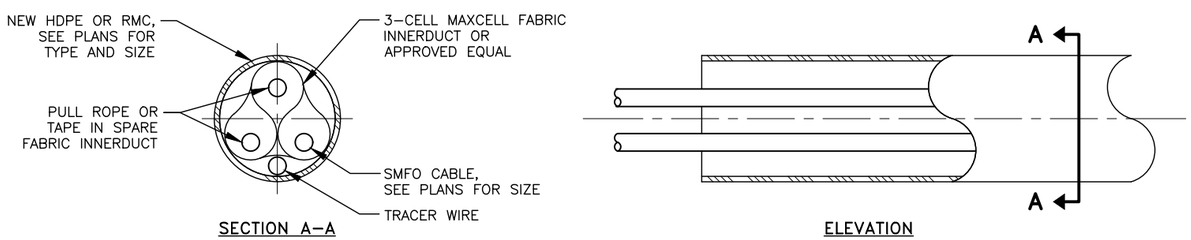
NUMBER OF OPTICAL FIBERS PER EIA 359–A–1

LABELING FOR MAINLINE FIBER CABLES



EXCEPTION:
USE ELECTROFUSION COUPLINGS PER THE HDPE MANUFACTURER'S REQUIREMENTS, WHEN JOINING HDPE TO HDPE.

RMC TO HDPE CONDUIT CONNECTION DETAIL
NTS



SECTION A–A

ELEVATION

TYPICAL INTERCONNECT (NEW) CONDUIT DETAIL
NTS

INTERCONNECT DETAILS

STATE OF ALASKA 49TH PRE–PS&E 10/12/2022 Johnson –E8706– REGISTERED PROFESSIONAL ENGINEER
10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346–2373 CERT. OF AUTH. NO. 1152
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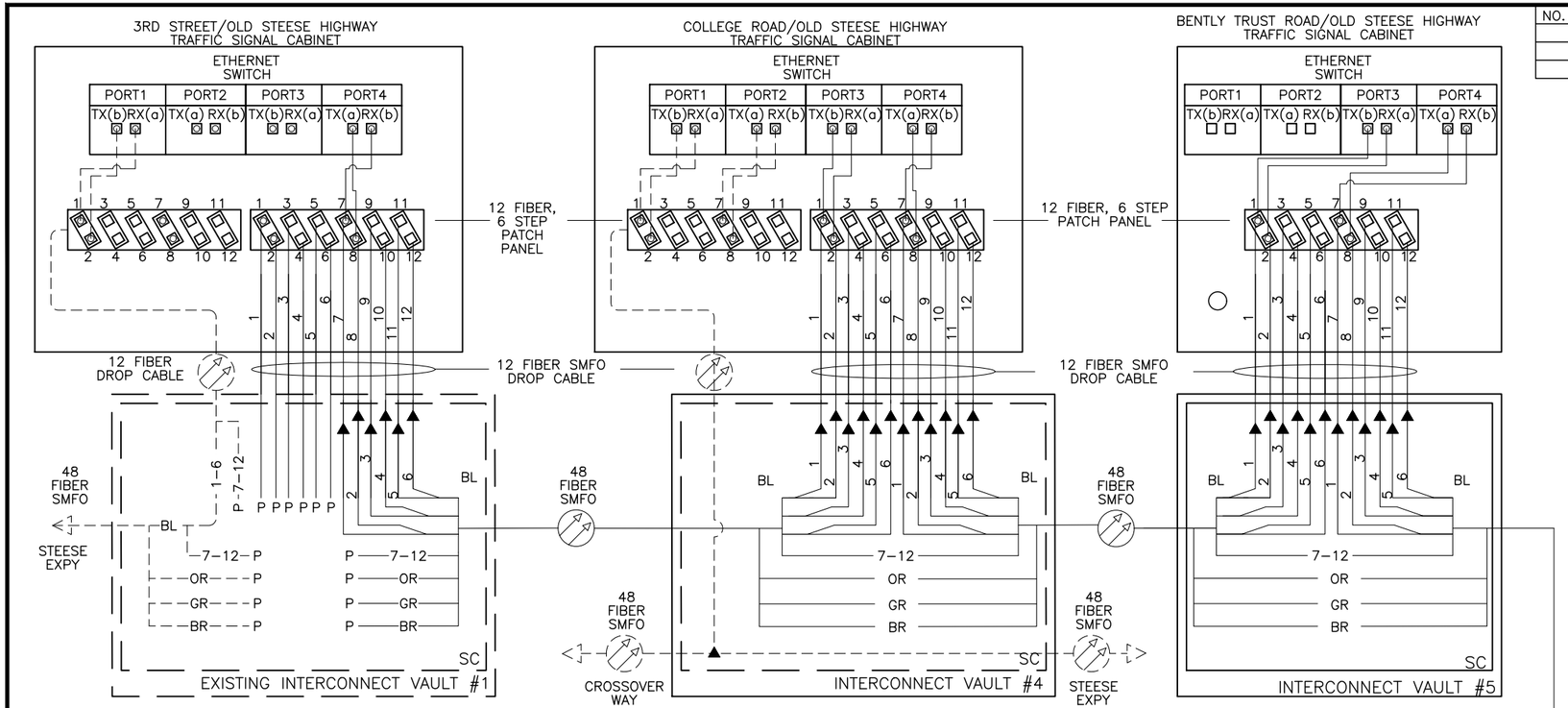
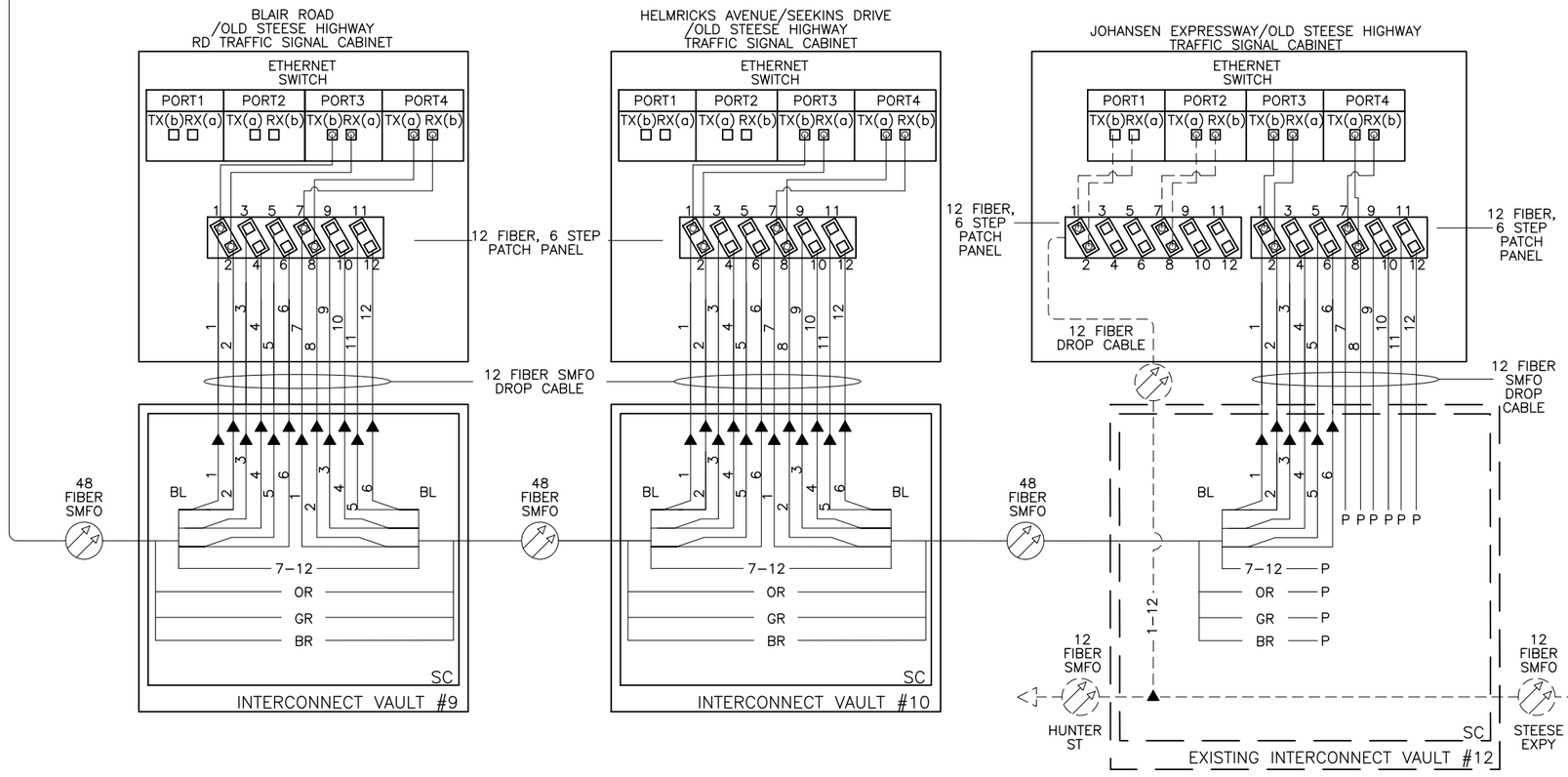
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H206	H219





NOTES:

1. REFER TO PLANS FOR INTERCONNECT CABLE ROUTING TO/FROM CABINETS.
2. ALL ETHERNET SWITCHES, ARE SINGLE MODE, OPERATING AT 1310 nm, UNLESS OTHERWISE SPECIFIED.
3. ETHERNET SWITCHES AND TERMINAL SERVERS SHALL INCLUDE POWER ADAPTERS CONVERTING 120 VAC TO APPROPRIATE OPERATING VOLTAGES.
4. ALL SPLICE TRAYS SHALL BE CONTAINED WITHIN ONE CLOSURE PER VAULT.
5. DROP CABLES SHALL BE PRECONNECTORIZED IN THE FACTORY. CONNECTORS INSTALLED IN THE FIELD WILL NOT BE ALLOWED.
6. PORT RESERVED FOR FUTURE INTERCONNECT.
7. COMMUNICATION COMPONENTS ARE SHOWN SCHEMATICALLY. VERIFY TX–RX FIBER PORTS PRIOR TO MAKING FINAL CONNECTIONS.
8. CONNECT ETHERNET SWITCH TO EACH PATCH PANEL WITH TWO SINGLE MODE FIBER PATCH CABLES. THE CABLES SHALL BE OF SUFFICIENT LENGTH TO ALLOW FOR MOVING OF THE ETHERNET SWITCH TO ANY SHELF LOCATION IN THE CABINET ONCE THE PATCH PANEL HAS BEEN INSTALLED. LABEL EACH PATCH CABLE ACCORDING TO THE TRANSMISSION DIRECTION TABLE.
9. PROVIDE THREE (EACH) ETHERNET CABLES OF SIX FOOT LENGTH FOR EACH CABINET RECEIVING AN ETHERNET SWITCH, TO BE CONNECTED TO CABINET COMPONENTS ACCORDING TO THE SWITCH COMMUNICATIONS WIRING DIAGRAM.
10. NO SPLICES ARE PERMITTED EXCEPT WHERE SPECIFICALLY INDICATED IN THE FIBER OPTIC SPLICE DIAGRAM. SPLICE CLOSURES MUST CONFORM TO SECTION 662–3.10 OF THE SPECIFICATIONS
11. MOUNT PATCH PANEL TO CABINET WALL AND IN A LOCATION AS TO NOT INTERFERE WITH OTHER EQUIPMENT AND SUCH THAT IT IS READILY ACCESSIBLE. PROVIDE SUFFICIENT SLACK CABLE IN CABINET TO ALLOW THE PATCH CABLE TO BE RELOCATED AT ANY LOCATION IN THE CABINET.

BUFFER COLOR CODING

FIBER / POSITION NO.	BASE COLOR	ABBREVIATION
1	BLUE	BL
2	ORANGE	OR
3	GREEN	GR
4	BROWN	BR
5	SLATE	SL
6	WHITE	WH
7	RED	RD
8	BLACK	BK
9	YELLOW	YL
10	VIOLET	VI
11	PINK	PK
12	AQUA	AQ

LEGEND

- FIBER SPLICE
- FIBER STRAND / BUFFER TUBE
- LC CONNECTOR
- LC PORT
- JUMPER OR PATCH CHORD
- EXISTING FIBER STRAND / BUFFER TUBE
- EXISTING FIBER OPTIC CABLE
- FIBER OPTIC CABLE
- SC SPLICE CLOSURE
- SMFO SINGLE MODE FIBER OPTIC CABLE
- P PROTECT FIBER END

TRANSMIT DIRECTION	ABBREVIATION	
	TRANSMIT	RECEIVE
SOUTH TO NORTH	TX(a)	RX(a)
NORTH TO SOUTH	TX(b)	RX(b)
WEST TO EAST	TX(a)	RX(a)
EAST TO WEST	TX(b)	RX(b)

INTERCONNECT SPLICE AND WIRING DIAGRAMS

STATE OF ALASKA 49TH Johnson –E8706 REGISTERED PROFESSIONAL ENGINEER PRE–PS&E 10/12/2022

10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346–2373 CERT. OF AUTH. NO. 1152
Z:\PROJECTS\00702_Old Steese HwyRecon_Signal Interconnect\DWGS\C\Sheets\00702_H206_SPLICE dets–H206 Wed, Oct/12/22 11:02am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H207	H219

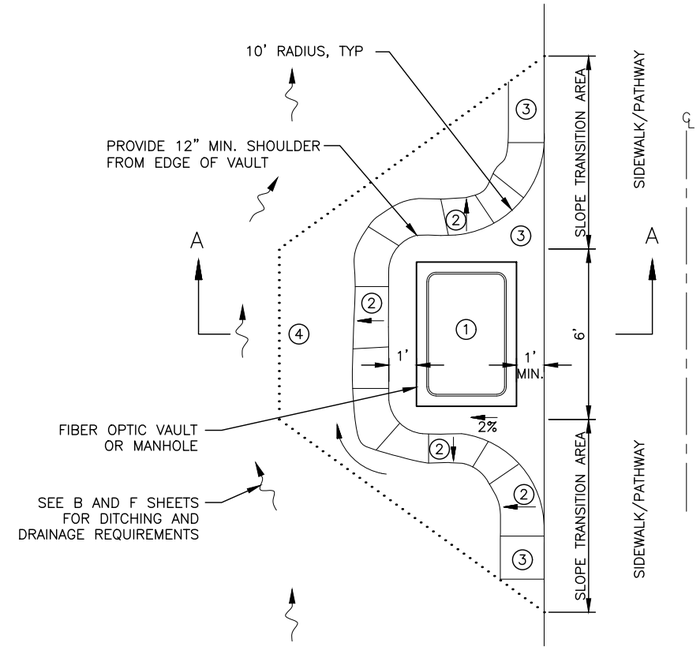
INTERCONNECT VAULT SCHEDULE

I/C VAULT NO.	LOCATION			TYPE	REMARKS
	ALIGNMENT	STATION	OFFSET		
1	"O"	09+43	65.7 RT	MANHOLE	PRESERVE EXISTING
2	"O"	09+49	67.5 LT	MANHOLE	PRESERVE EXISTING
3	"O"	10+48	50.6 LT	TYPE 1	PRESERVE EXISTING
4	"O"	20+56	53.1 LT	MANHOLE	
5	"O"	28+49	34.9 RT	MANHOLE	
6	"O"	42+94	36.5 RT	MANHOLE	DATALINK
7	"O"	44+68	37.3 RT	MANHOLE	
8	"O"	50+90	70.7 RT	MANHOLE	
9	"O"	51+77	61.7 RT	MANHOLE	
10	"O"	60+02	40.3 RT	MANHOLE	
11	"O"	61+72	43.5 RT	MANHOLE	
12	"O"	70+13	43.1 RT	MANHOLE	
13	"O"	70+22	66.0 LT	TYPE 1	PRESERVE EXISTING
14	"O"	70+46	129.9 RT	TYPE 1	PRESERVE EXISTING

NOTE: SEE SHEET H206 FOR SPLICE DIAGRAM.

662.2005.0000 FIBER OPTIC INTERCONNECT–LUMP SUM

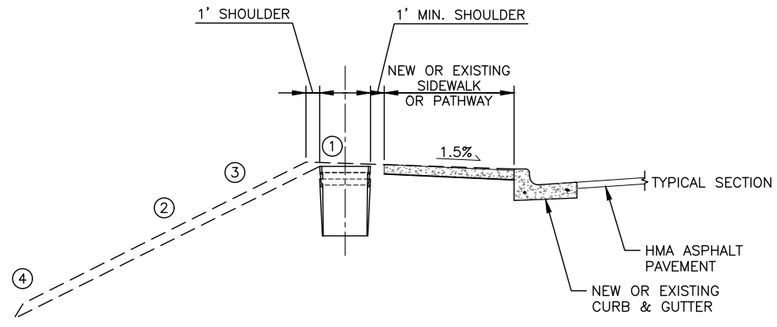
2020 SSHC PAY ITEM NO.	ITEM DESCRIPTION	UNIT	STAGE I	STAGE II	TOTAL QUANTITY
304	SUBBASE GRADING, F	TON	746	950	1,696
618	SEEDING	LB	0	1	1
660	BEDDING AND BACKFILL	TON	343	459	802
660	BORED CASING, 3 INCH MINIMUM DIAMETER	LINEAR FOOT	0	177	177
662	TRENCHING	LINEAR FOOT	2,361	3,167	5,528
	2" HDPE	LINEAR FOOT	2,335	2,544	4,879
	2" RMC	LINEAR FOOT	26	801	827
	3–CELL INNERDUCT	LINEAR FOOT	2,296	3,104	5,400
	48 FIBER SMFO CABLE (INCLUDES CABLE SLACK)	LINEAR FOOT	3,040	3,804	6,844
	TRACER WIRE	LINEAR FOOT	2,296	3,104	5,400
	PULL ROPE OR TAPE	LINEAR FOOT	2,296	3,104	5,400
	12–FIBER OPTIC DROP CABLE, 100 FT.	EACH	2	3	5
	DETECTABLE WARNING TAPE	LINEAR FOOT	2,296	3,104	5,400
	END TO END SPLICES	EACH	1	1	2
	DROP FIBER SPLICES	EACH	30	30	60
	SPLICE CLOSURES	EACH	3	3	6
	RMC TO HDPE CONDUIT CONNECTION	EACH	0	1	1
	FIBER OPTIC VAULT, TYPE 1	EACH	0	0	0
	FIBER OPTIC MANHOLE	EACH	2	7	9
	ELECTRONIC BALL MARKER	EACH	2	7	9
	FIBER OPTIC ROUTE MARKER	EACH	7	8	15



PLAN

VAULT GRADING ADJACENT TO SIDEWALK OR PATHWAY

NTS



SECTION

VAULT GRADING ADJACENT TO SIDEWALK OR PATHWAY

NTS

NOTES:

1. WHEN INTERCONNECT VAULT IS LOCATED WITHIN OR ADJACENT TO A SIDEWALK OR PATHWAY DEPRESS VAULT 0"–1" BELOW SIDEWALK GRADE. SO THAT THE TOP OF VAULT WILL NOT OBSTRUCT SIDEWALK / PATHWAY SNOW REMOVAL OPERATIONS.
2. UNLESS OTHERWISE NOTED ON B AND F SHEETS, USE 2H:1V FILL SLOPES.
3. SEED DISTURBED AREAS AS DIRECTED BY THE ENGINEER.
4. STEEPEN SLOPES AS NECESSARY TO CONTAIN SLOPE LIMITS WITHIN THE R/W.

INTERCONNECT VAULT SCHEDULE AND GRADING

STATE OF ALASKA 49TH PRE-PS&E 10/12/2022 Johnson -E8706 REGISTERED PROFESSIONAL ENGINEER

10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
Z:\PROJECTS\00702_Old Steese HwyRecon_Signal Interconnect\DWGS\C\Sheets\00702_H207_VLT SCHEDULES-H207 Wed, Oct/12/22 11:02am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H208	H219

CONSTRUCTION NOTES:

1. LOCATE AND INTERCEPT EXISTING 2" RMC. CONNECT TO RMC TO HDPE IAW CONNECTION DETAIL ON SHEET H205.
2. SEE 3RD STREET WIDENING PLANS, PROJECT NO. 0670001/Z625410000, SHEET J11, NOTE 3.
3. SPLICE NEW 1-12 FIBER DROP CABLE TO NEW 1-48 FIBER SMFO CABLE IN EXISTING INTERCONNECT VAULT #1 AND CONNECT TO EXISTING SWITCH AS SHOWN ON H206. VERIFY LINK CONNECTIVITY.
4. REMOVE AND REPLACE EXISTING SIDEWALK, CURB AND GUTTER, AND PAVEMENT AS NECESSARY TO TRENCH CONDUIT TO EXISTING 2" RMC.
5. SEE SHEET H205 FOR INTERCONNECT CONDUIT-CULVERT/ UTILITY CROSSING DETAIL.

2ND STREET
OLD STEESE HIGHWAY
MINNIE STREET
3RD STREET
PUE
R/W
TCE
I/C
SD
FO
"0"6+49
"0"7+00
"0"8+00
"0"9+00
"0"10+00
"0"11+00
EXISTING 2" RMC STUB FOR FUTURE INTERCONNECT
[1-48 FIBER SMFO, 1-3 CELL INNERDUCT, 1-2" RMC (E)]
EXISTING INTERCONNECT VAULT #2
EXISTING INTERCONNECT VAULT #3
[1-48 FIBER SMFO, 1-3 CELL INNERDUCT, 1-2" RMC (E)]
[1-48 FIBER SMFO, 1-3 CELL INNERDUCT, 1-2" HDPE]
BOP "0" 10+87
MATCH LINE "0" 11+50 SEE SHEET H209
[1-48 FIBER SMFO, 1-3 CELL INNERDUCT, 1-2" RMC (E)]
3 EXISTING INTERCONNECT VAULT #1
[1-12 FIBER DROP CABLE, 1-12 FIBER DROP CABLE (E), 1-2" RMC (E)]
BEGIN INTERCONNECT WORK STA. "0" 9+53
PRESERVE EXISTING SIGNAL CONTROLLER AND CONNECT TO EXISTING SWITCH IN CABINET 3
[1-48 FIBER SMFO (E), 1-3 CELL INNERDUCT (E), 1-2" HDPE (E)]

INTERSECTION EQUIPMENT SUMMARY

QTY	DESCRIPTION
0	RUGGEDCOM RSG920P ETHERNET SWITCH OR APPROVED EQUAL
1	12-FIBER SMFO DROP CABLE
6	LC SMFO PATCH CABLE
0	AXIS Q6315-LE PTZ NETWORK CAMERA OR APPROVED EQUAL

NOTES:
THE 12-FIBER ITS DROP CABLE WILL BE MEASURED AND PAID FOR UNDER BID ITEM 662.2005.0000 FIBER OPTIC INTERCONNECT - LUMP SUM. ALL REMAINING EQUIPMENT LISTED WILL BE SUBSIDIARY TO BID ITEM 660.2025.0000 PAN TILT ZOOM (PTZ) CAMERA - EACH.

END TO END LINK ATTENUATION

FIBER OPTIC LINK	DESIGN ATTENUATION
3RD ST/MINNIE ST TO COLLEGE RD	1.16 dB
COLLEGE RD TO BENTLEY TRUST RD	1.14 dB
BENTLEY TRUST RD TO BLAIR RD	1.28 dB
BLAIR RD TO HELMRICKS AVE/SEEKINS RD	1.14 dB
HELMRICKS AVE/SEEKINS RD TO JOHANSEN EXPY	1.16 dB

INTERCONNECT PLAN

STATE OF ALASKA 49TH PRE-PS&E 10/12/2022 Johnson -E8706 REGISTERED PROFESSIONAL ENGINEER

10/12/2022

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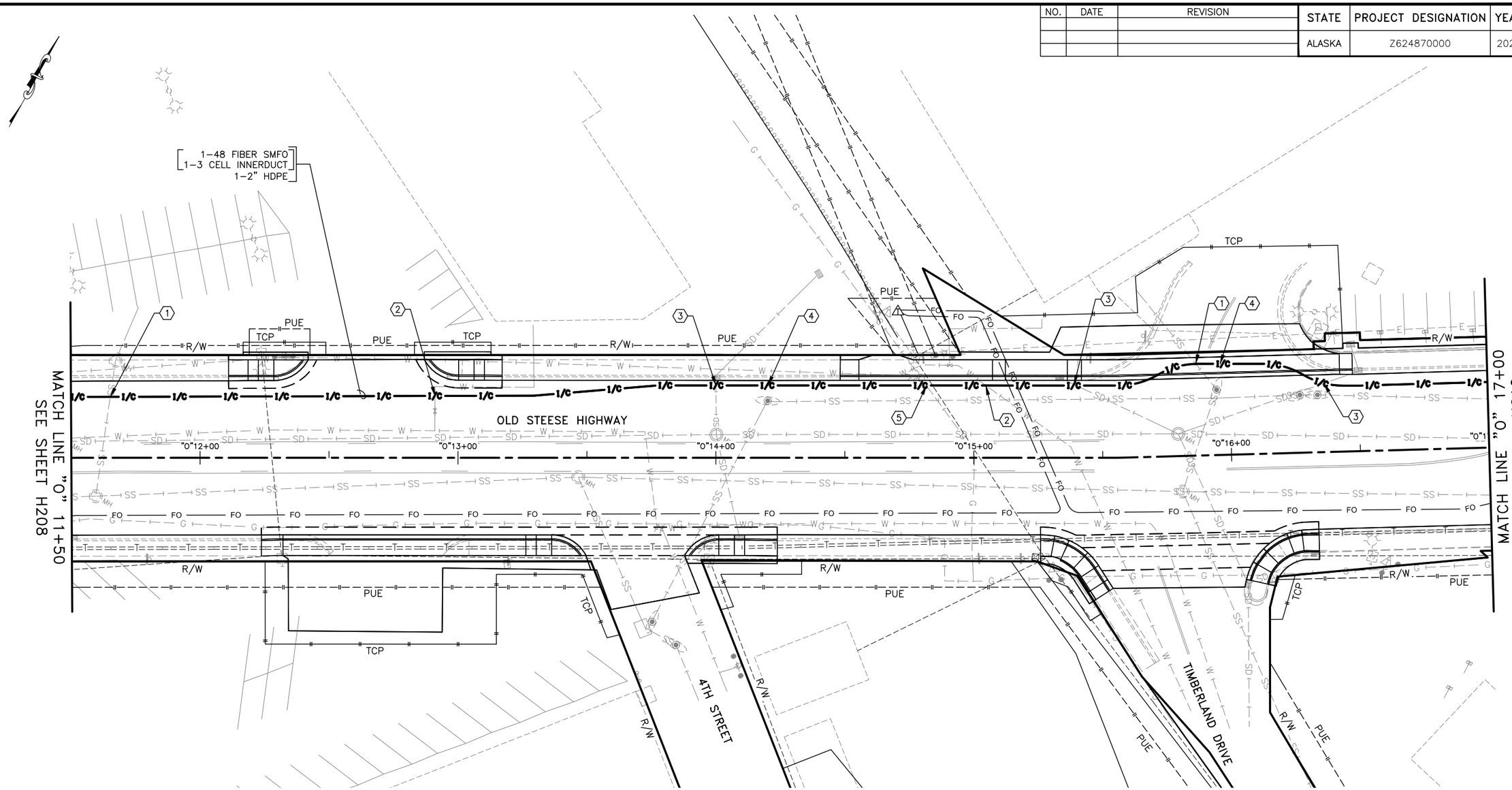
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H209	H219



CONSTRUCTION NOTES:

1. ROUTE INTERCONNECT CONDUIT OVER EXISTING SEWER LINE, PROTECT IN PLACE.
2. ROUTE INTERCONNECT CONDUIT OVER EXISTING WATER LINE, PROTECT IN PLACE.
3. ROUTE INTERCONNECT CONDUIT OVER EXISTING STORM DRAIN LINE, PROTECT IN PLACE.
4. PROVIDE 1' MIN. SEPARATION FROM SEWER LINE AND CLEANOUT, PROTECT IN PLACE.
5. ROUTE INTERCONNECT CONDUIT OVER EXISTING GAS LINE, PROTECT IN PLACE.
6. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49TH
PRE-PS&E
10/12/2022
Johnson
-E8706
REG PROFESSIONAL ENGINEER

10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
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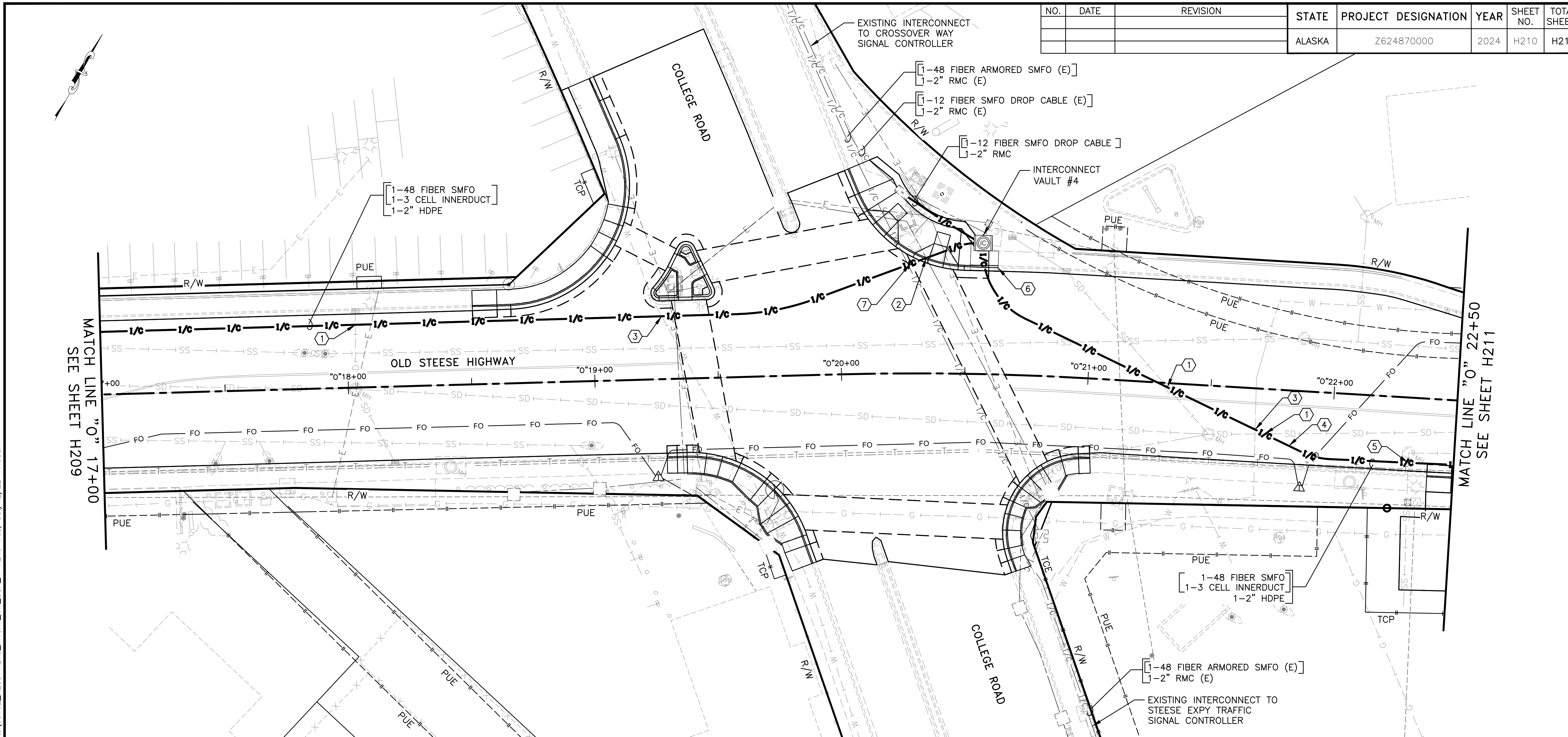
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H210	H219



INTERSECTION EQUIPMENT SUMMARY

QTY	DESCRIPTION
0	RUGGEDCOM RSG920P ETHERNET SWITCH OR APPROVED EQUAL
2	12-FIBER SMFO DROP CABLE
6	LC SMFO PATCH CABLE
0	AXIS Q6315-LE PTZ NETWORK CAMERA OR APPROVED EQUAL

NOTES:

THE 12-FIBER ITS DROP CABLE WILL BE MEASURED AND PAID FOR UNDER BID ITEM 662.2005.0000 FIBER OPTIC INTERCONNECT – LUMP SUM. ALL REMAINING EQUIPMENT LISTED WILL BE SUBSIDIARY TO BID ITEM 660.2025.0000 PAN TILT ZOOM (PTZ) CAMERA – EACH.

CONSTRUCTION NOTES:

1. ROUTE INTERCONNECT CONDUIT OVER EXISTING STORM DRAIN LINE, PROTECT IN PLACE.
2. ROUTE INTERCONNECT CONDUIT OVER EXISTING TRAFFIC SIGNAL CONDUITS, PROTECT IN PLACE.
3. ROUTE INTERCONNECT CONDUIT OVER EXISTING WATER LINE, PROTECT IN PLACE.
4. PROVIDE 1' MIN. SEPARATION FROM TELECOM DUCTBANK, PROTECT IN PLACE.
5. PROVIDE 1' MIN. SEPARATION FROM SEWER MANHOLE AND ROUTE OVER EXISTING SEWER LINE, PROTECT IN PLACE.
6. REMOVE AND REPLACE EXISTING SIDEWALK, CURB AND GUTTER, AND PAVEMENT AS NECESSARY.
7. ROUTE INTERCONNECT CONDUIT OVER EXISTING INTERCONNECT CONDUIT, PROTECT IN PLACE.
8. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.
9. SEE ILLINOIS STREET AND COLLEGE ROAD SIGNAL INTERCONNECT, PROJECT NO. 0002(471)/NFHWY00345, SHEET H56 FOR ADDITIONAL INFORMATION.

INTERCONNECT PLAN

PRE-PS&E 10/12/2022

10/12/2022

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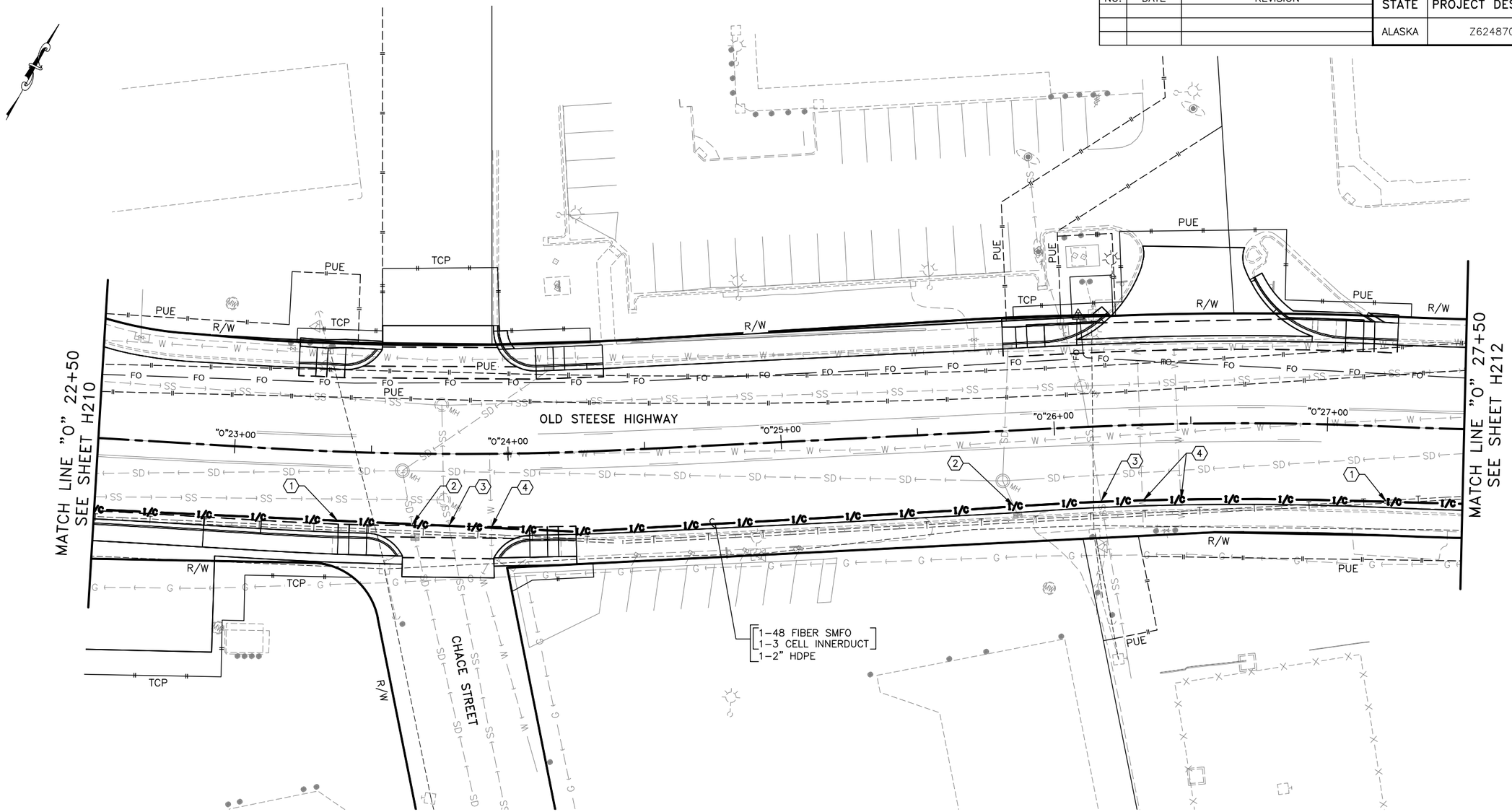
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H211	H219



CONSTRUCTION NOTES:

1. PROVIDE 1' MIN. SEPARATION FROM TELECOM DUCTBANK, PROTECT IN PLACE.
2. ROUTE INTERCONNECT CONDUIT OVER EXISTING STORM DRAIN LINE, PROTECT IN PLACE.
3. ROUTE INTERCONNECT CONDUIT OVER EXISTING SEWER LINE, PROTECT IN PLACE.
4. ROUTE INTERCONNECT CONDUIT OVER EXISTING WATER LINE, PROTECT IN PLACE.
5. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49 TH
PRE-PS&E
10/12/2022
Johnson
AE8706
REGISTERED PROFESSIONAL ENGINEER
10/12/2022

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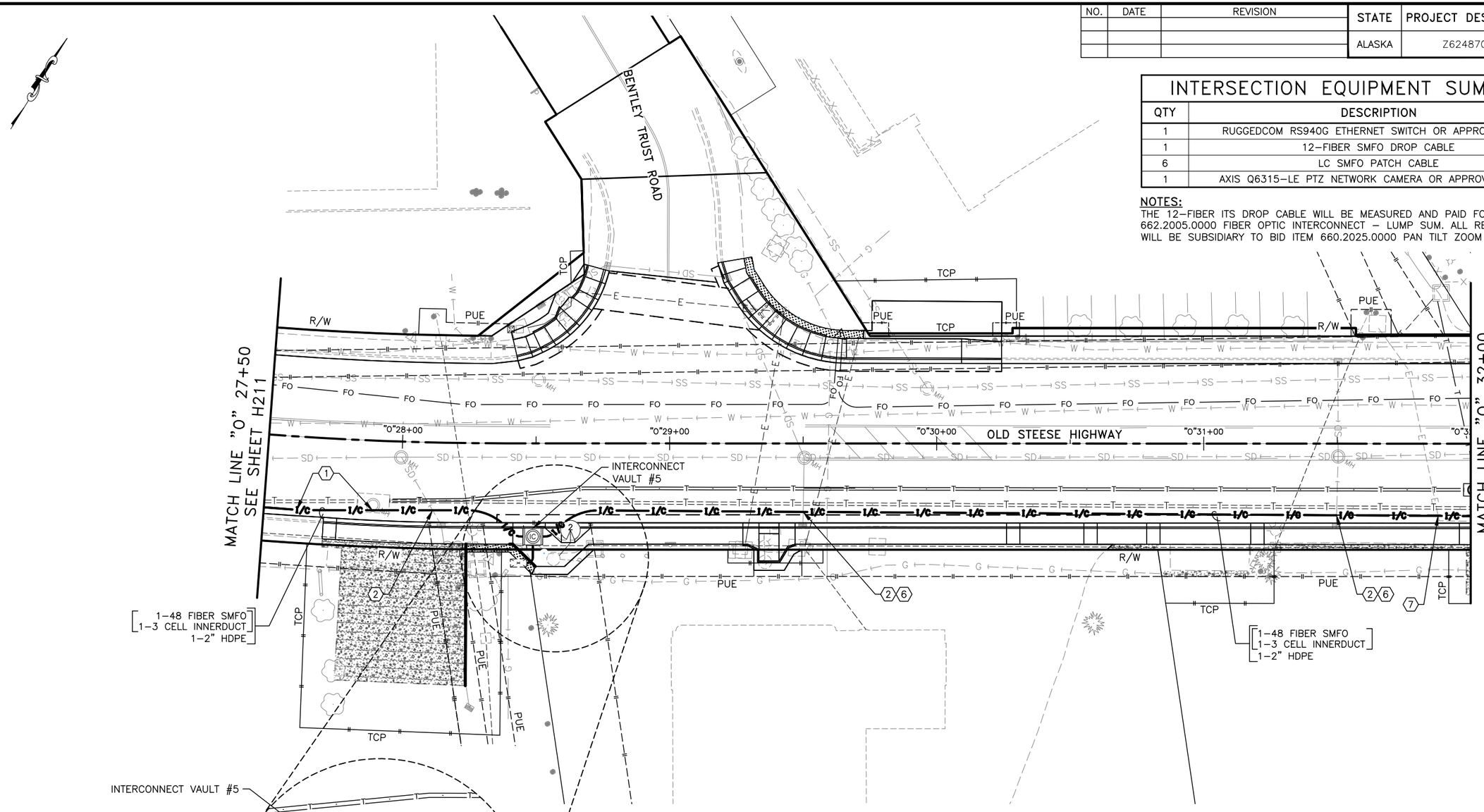
NO.	DATE	REVISION

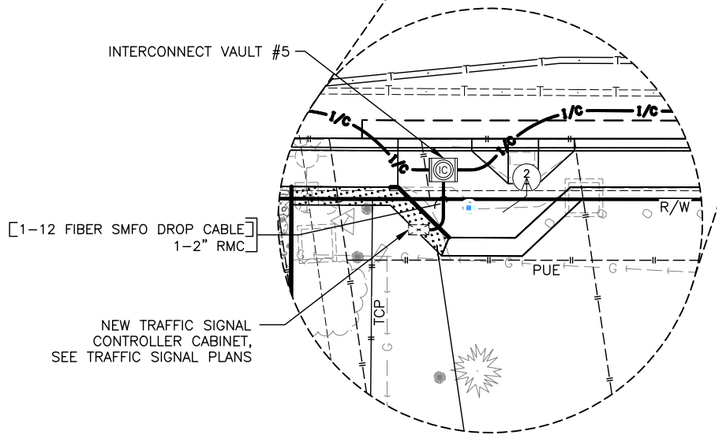
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H212	H219

INTERSECTION EQUIPMENT SUMMARY

QTY	DESCRIPTION
1	RUGGEDCOM RS940G ETHERNET SWITCH OR APPROVED EQUAL
1	12–FIBER SMFO DROP CABLE
6	LC SMFO PATCH CABLE
1	AXIS Q6315–LE PTZ NETWORK CAMERA OR APPROVED EQUAL

NOTES:
THE 12–FIBER ITS DROP CABLE WILL BE MEASURED AND PAID FOR UNDER BID ITEM 662.2005.0000 FIBER OPTIC INTERCONNECT – LUMP SUM. ALL REMAINING EQUIPMENT LISTED WILL BE SUBSIDIARY TO BID ITEM 660.2025.0000 PAN TILT ZOOM (PTZ) CAMERA – EACH.





ENLARGED PLAN
NOTE: NOT ALL CONDUIT RUNS ARE NOTED OR SHOWN.

CONSTRUCTION NOTES:

1. PROVIDE 1' MIN. SEPARATION FROM TELECOM FACILITIES. WHERE APPLICABLE ROUTE INTERCONNECT CONDUIT OVER EXISTING TELECOM CONDUIT AND DUCTBANK, PROTECT IN PLACE.
2. ROUTE INTERCONNECT CONDUIT OVER EXISTING STORM DRAIN LINE, PROTECT IN PLACE.
3. PROVIDE 1' MIN. SEPARATION FROM EXISTING JUNCTION BOX, PROTECT IN PLACE.
4. PROVIDE 1' MIN. SEPARATION FROM EXISTING SIGN, PROTECT IN PLACE.
5. PROVIDE 1' MIN. SEPARATION FROM EXISTING LIGHT POLE, PROTECT IN PLACE.
6. PROVIDE 1' MIN. SEPARATION FROM EXISTING STORM DRAIN STRUCTURE, PROTECT IN PLACE.
7. PROVIDE 1' MIN. SEPARATION FROM EXISTING ELECTRIC LINE, PROTECT IN PLACE.
8. ROUTE INTERCONNECT CONDUIT OVER EXISTING GAS LINE, PROTECT IN PLACE.
9. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49 TH
Johnson
PE8706
REGISTERED PROFESSIONAL ENGINEER
PRE–PS&E
10/12/2022
10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346–2373 CERT. OF AUTH. NO. 1152
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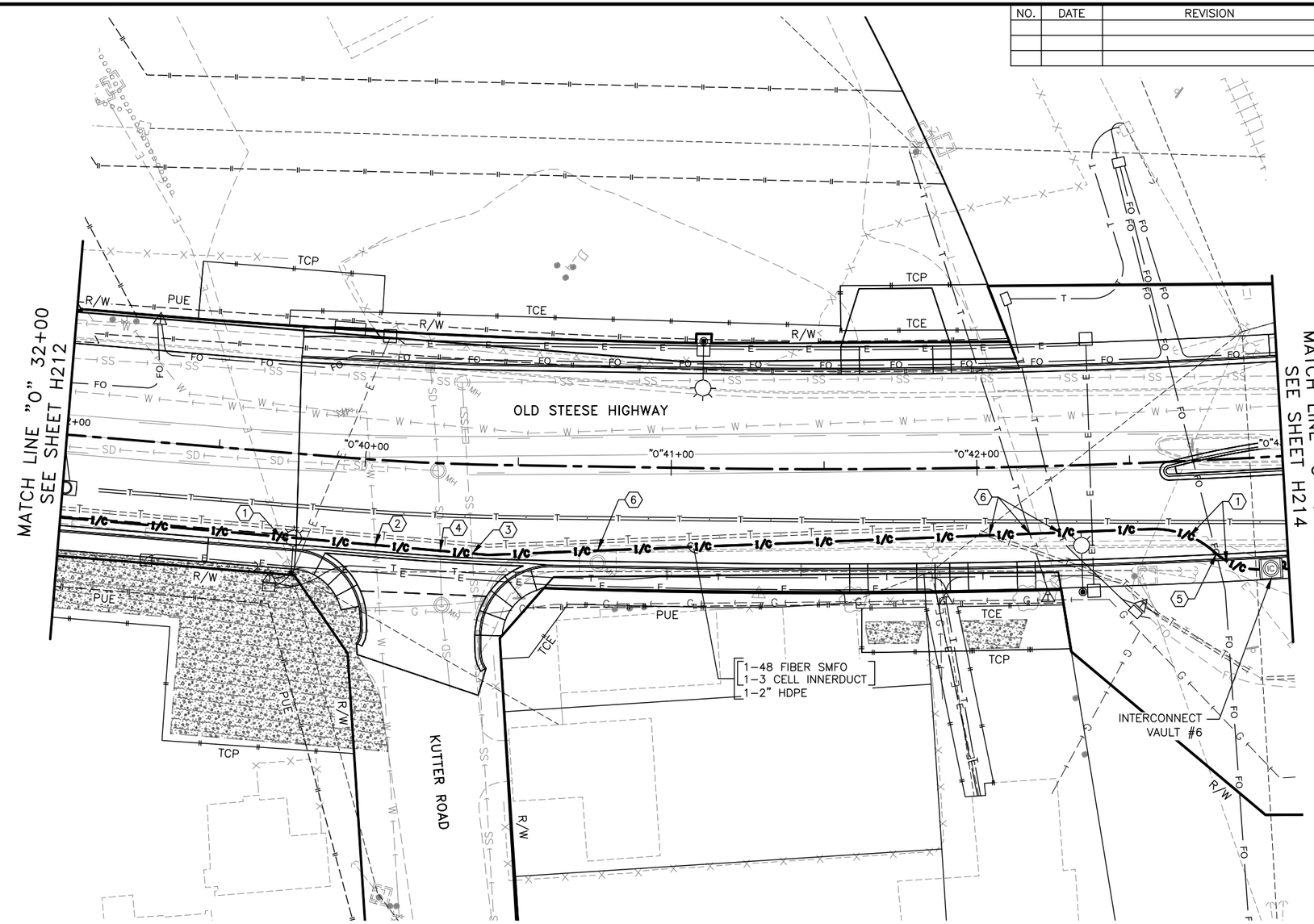
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H213	H219



CONSTRUCTION NOTES:

1. ROUTE INTERCONNECT CONDUIT OVER EXISTING ELECTRIC LINE, PROTECT IN PLACE.
2. PROVIDE 1' MIN. SEPARATION FROM EXISTING WATER LINE, PROTECT IN PLACE.
3. ROUTE INTERCONNECT CONDUIT OVER EXISTING SEWER LINE, PROTECT IN PLACE.
4. ROUTE INTERCONNECT CONDUIT OVER EXISTING STORM DRAIN LINE, PROTECT IN PLACE.
5. ROUTE INTERCONNECT CONDUIT OVER FIBER OPTIC LINE, PROTECT IN PLACE.
6. PROVIDE 1' MIN. SEPARATION FROM TELECOM FACILITIES. WHERE APPLICABLE ROUTE INTERCONNECT CONDUIT OVER TELECOM CONDUIT AND DUCTBANK, PROTECT IN PLACE.
7. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49 TH
PRE-PS&E
10/12/2022
Johnson
JE 8706
REGISTERED PROFESSIONAL ENGINEER
10/12/2022

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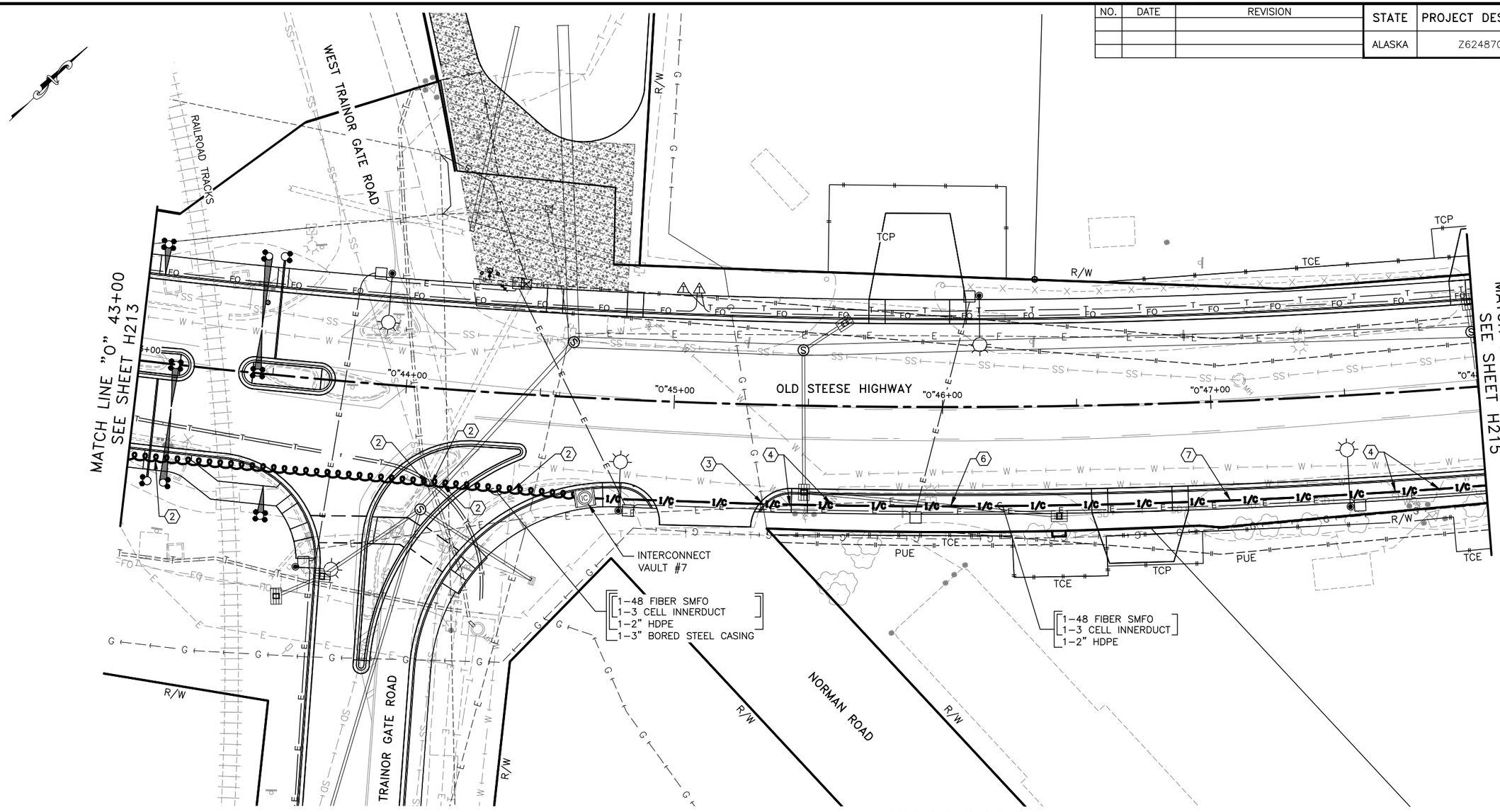
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H214	H219



CONSTRUCTION NOTES:

1. ROUTE INTERCONNECT CONDUIT OVER PROPOSED STORM DRAIN, PROTECT IN PLACE.
2. PROVIDE 5' MIN. SEPARATION FROM EXISTING SEWER LINE, ELECTRIC, WATER, TELECOM, STORM DRAIN, AND ARRC FACILITIES DURING HDD, PROTECT IN PLACE.
3. PROVIDE 1' MIN. SEPARATION FROM EXISTING GAS LINE, ROUTE INTERCONNECT CONDUIT OVER GAS LINE, PROTECT IN PLACE.
4. ROUTE INTERCONNECT CONDUIT OVER EXISTING WATER LINE, PROVIDE 1' MIN.
5. NOT USED.
6. ROUTE INTERCONNECT CONDUIT OVER PROPOSED STORM DRAIN, PROTECT IN PLACE.
7. PROVIDE 6 IN. MIN. SEPARATION FROM PROPOSED ELECTRIC DUCT.
8. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49 TH
PRE-PS&E
10/12/2022
Johnson
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10/12/2022

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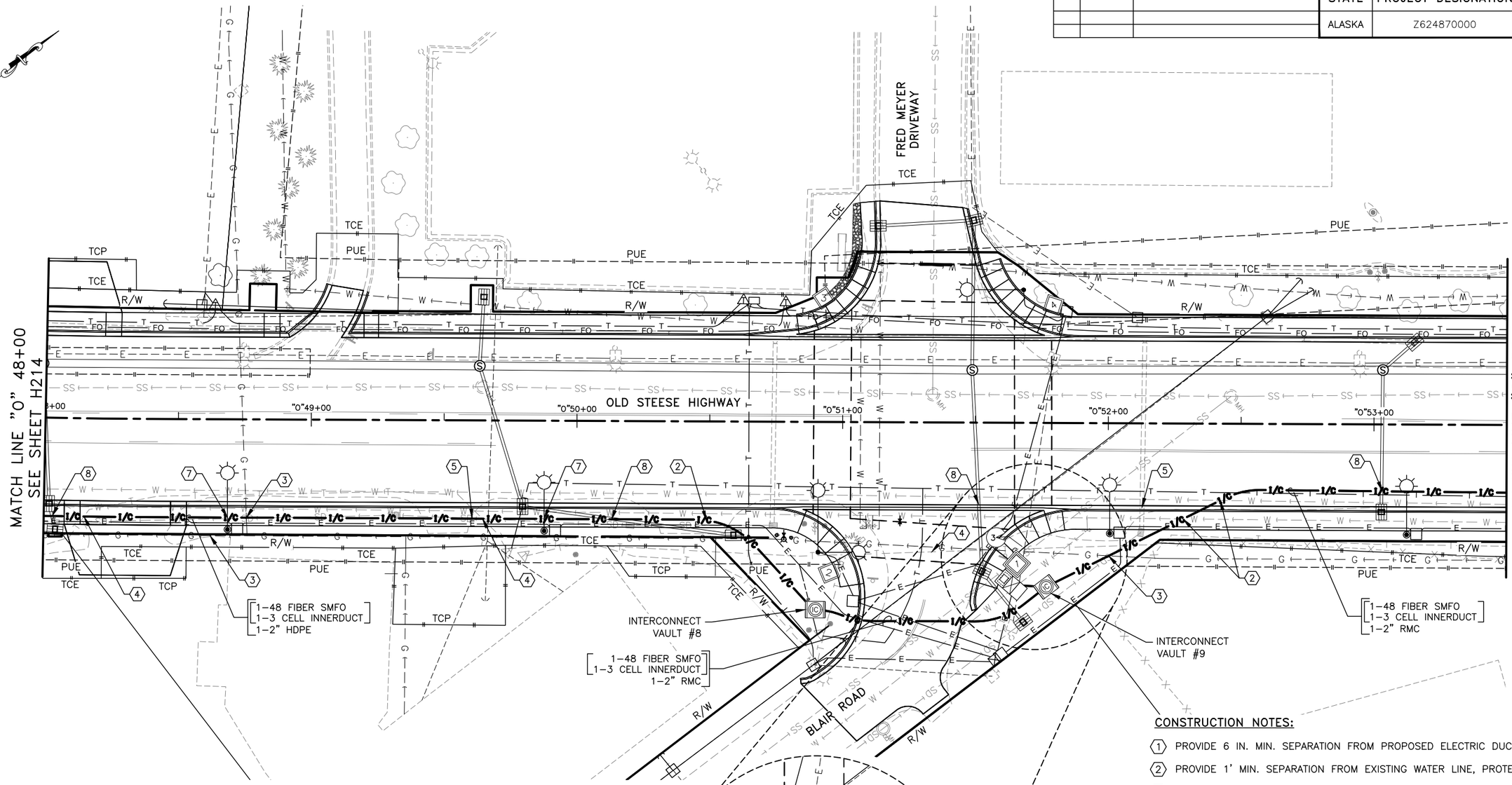
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H215	H219



INTERSECTION EQUIPMENT SUMMARY

QTY	DESCRIPTION
1	RUGGEDCOM RS940G ETHERNET SWITCH OR APPROVED EQUAL
1	12-FIBER SMFO DROP CABLE
6	LC SMFO PATCH CABLE
1	AXIS Q6315-LE PTZ NETWORK CAMERA OR APPROVED EQUAL

NOTES:
THE 12-FIBER ITS DROP CABLE WILL BE MEASURED AND PAID FOR UNDER BID ITEM 662.2005.0000 FIBER OPTIC INTERCONNECT - LUMP SUM. ALL REMAINING EQUIPMENT LISTED WILL BE SUBSIDIARY TO BID ITEM 660.2025.0000 PAN TILT ZOOM (PTZ) CAMERA - EACH.

ENLARGED PLAN
NOTE: NOT ALL CONDUIT RUNS ARE NOTED OR SHOWN.

CONSTRUCTION NOTES:

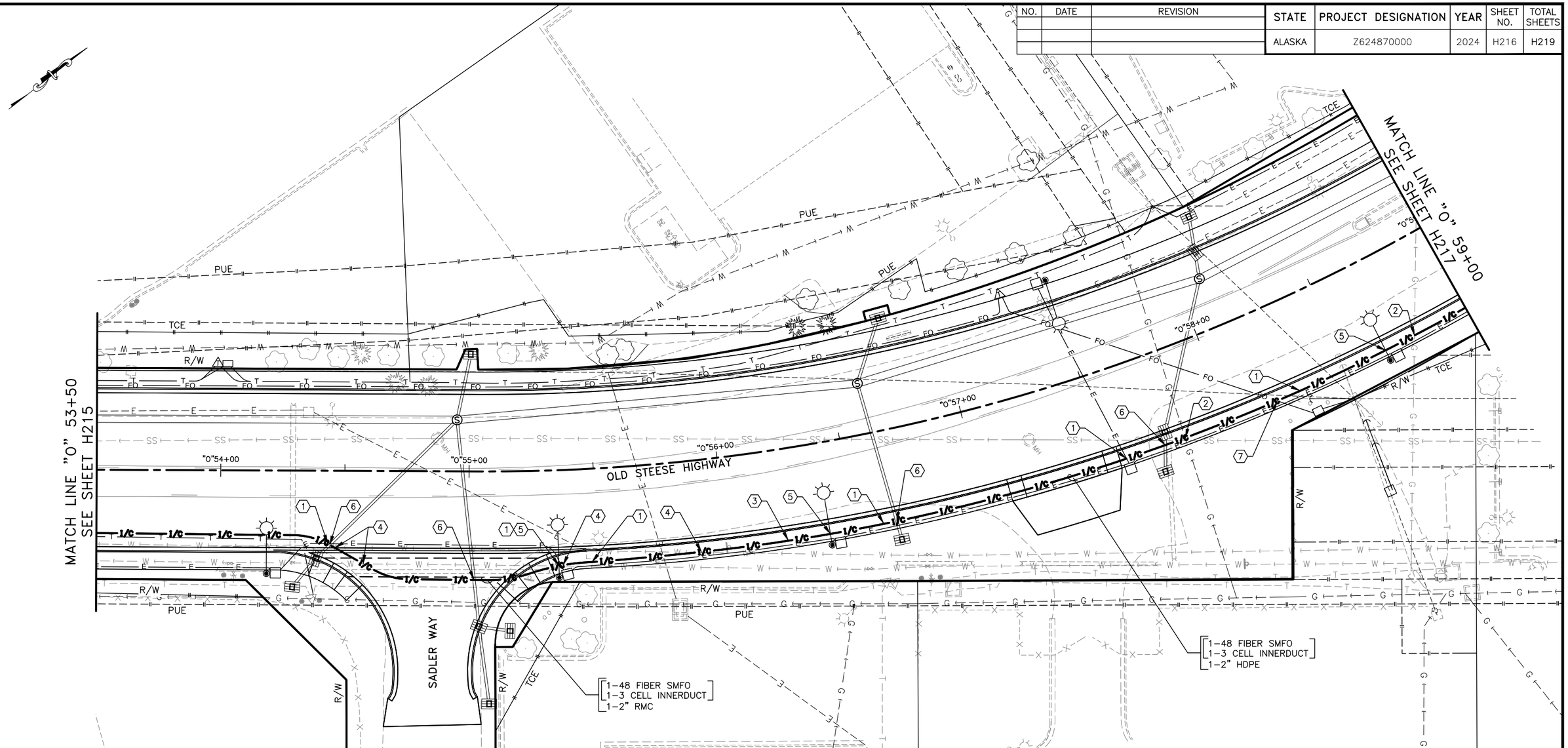
1. PROVIDE 6 IN. MIN. SEPARATION FROM PROPOSED ELECTRIC DUCT.
2. PROVIDE 1' MIN. SEPARATION FROM EXISTING WATER LINE, PROTECT IN PLACE.
3. PROVIDE 2' MIN. SEPARATION FROM EXISTING GAS LINE, PROTECT IN PLACE.
4. ROUTE INTERCONNECT CONDUIT OVER EXISTING TELECOM DUCT OR LINE.
5. ROUTE INTERCONNECT CONDUIT OVER EXISTING STORM DRAIN, PROTECT IN PLACE.
6. PROVIDE 2' SEPARATION FROM EXISTING SEWER LINE DURING HDD, PROTECT IN PLACE.
7. PROVIDE 1' MIN. SEPARATION FROM LIGHT POLE, PROTECT IN PLACE.
8. ROUTE INTERCONNECT CONDUIT OVER PROPOSED STORM DRAIN, PROTECT IN PLACE.
9. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49TH
PRE-PS&E
10/12/2022
JE8706
REGISTERED PROFESSIONAL ENGINEER
10/12/2022

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H216	H219



CONSTRUCTION NOTES:

1. PROVIDE 6 IN. MIN. SEPARATION FROM PROPOSED ELECTRIC DUCT.
2. PROVIDE 2' MIN. SEPARATION FROM EXISTING GAS LINE, PROTECT IN PLACE.
3. TRANSITION CONDUIT FROM RMC TO HDPE.
4. ROUTE INTERCONNECT CONDUIT OVER EXISTING WATER LINE, PROVIDE 1' MIN.
5. PROVIDE 1' MIN. SEPARATION FROM LIGHT POLE, PROTECT IN PLACE.
6. ROUTE INTERCONNECT CONDUIT OVER PROPOSED STORM DRAIN, PROTECT IN PLACE.
7. ROUTE INTERCONNECT CONDUIT OVER FIBER OPTIC LINE, PROTECT IN PLACE.
8. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49TH
PRE-PS&E
10/12/2022
Johnson
JE8706
REGISTERED PROFESSIONAL ENGINEER
10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
Z:\PROJECTS\00702_Old Steese HwyRecon_Signal Interconnect\DWGS\C\Sheets\00702_H208-H219_INTCNT_INT_OSH_1-H216 Wed, Oct/12/22 11:04am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H217	H219

INTERSECTION EQUIPMENT SUMMARY

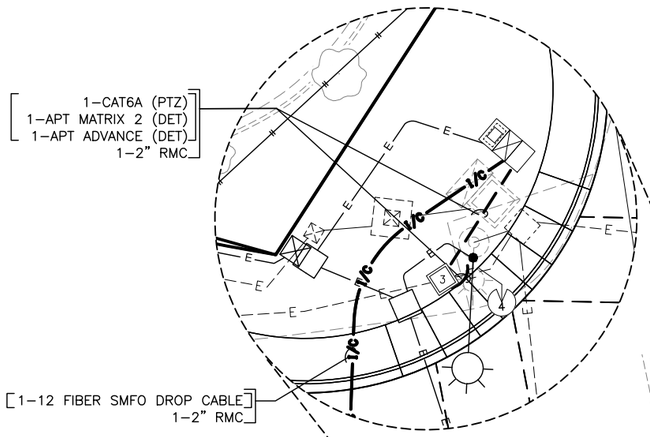
QTY	DESCRIPTION
1	RUGGEDCOM RS940G ETHERNET SWITCH OR APPROVED EQUAL
1	12–FIBER SMFO DROP CABLE
6	LC SMFO PATCH CABLE
1	AXIS Q6315–LE PTZ NETWORK CAMERA OR APPROVED EQUAL

NOTES:

THE 12–FIBER ITS DROP CABLE WILL BE MEASURED AND PAID FOR UNDER BID ITEM 662.2005.0000 FIBER OPTIC INTERCONNECT – LUMP SUM. ALL REMAINING EQUIPMENT LISTED WILL BE SUBSIDIARY TO BID ITEM 660.2025.0000 PAN TILT ZOOM (PTZ) CAMERA – EACH.

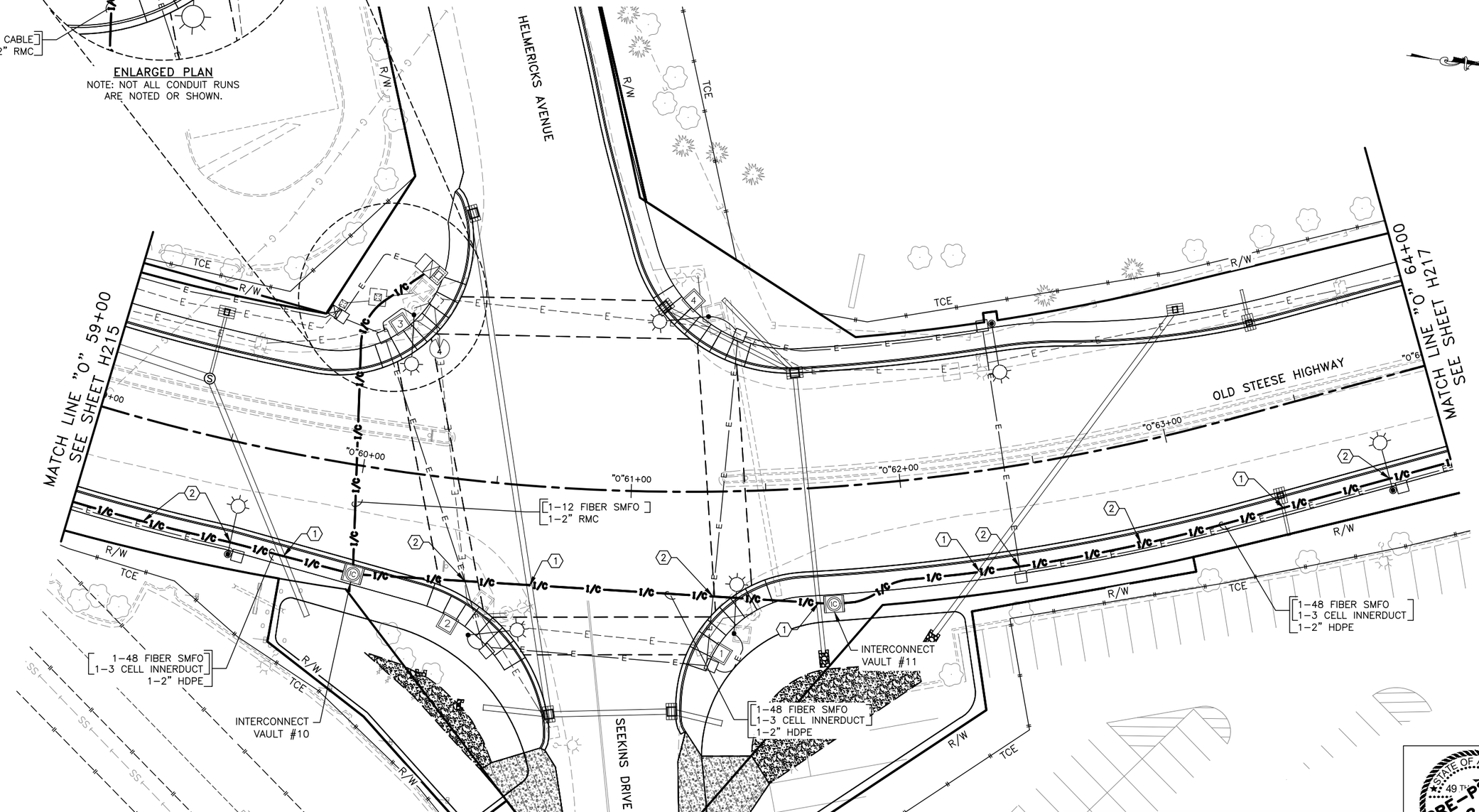
CONSTRUCTION NOTES:

1. ROUTE INTERCONNECT CONDUIT OVER PROPOSED STORM DRAIN, PROTECT IN PLACE.
2. PROVIDE 6 IN. MIN. SEPARATION FROM PROPOSED LIGHTING CONDUIT (TYP) AND 1' MIN. FROM LIGHT POLES.
3. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.



ENLARGED PLAN

NOTE: NOT ALL CONDUIT RUNS ARE NOTED OR SHOWN.



INTERCONNECT PLAN

STATE OF ALASKA
49 THE
PRE–PS&E
10/12/2022
REGISTERED PROFESSIONAL ENGINEER
Johnson
AE8706

10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346–2373 CERT. OF AUTH. NO. 1152
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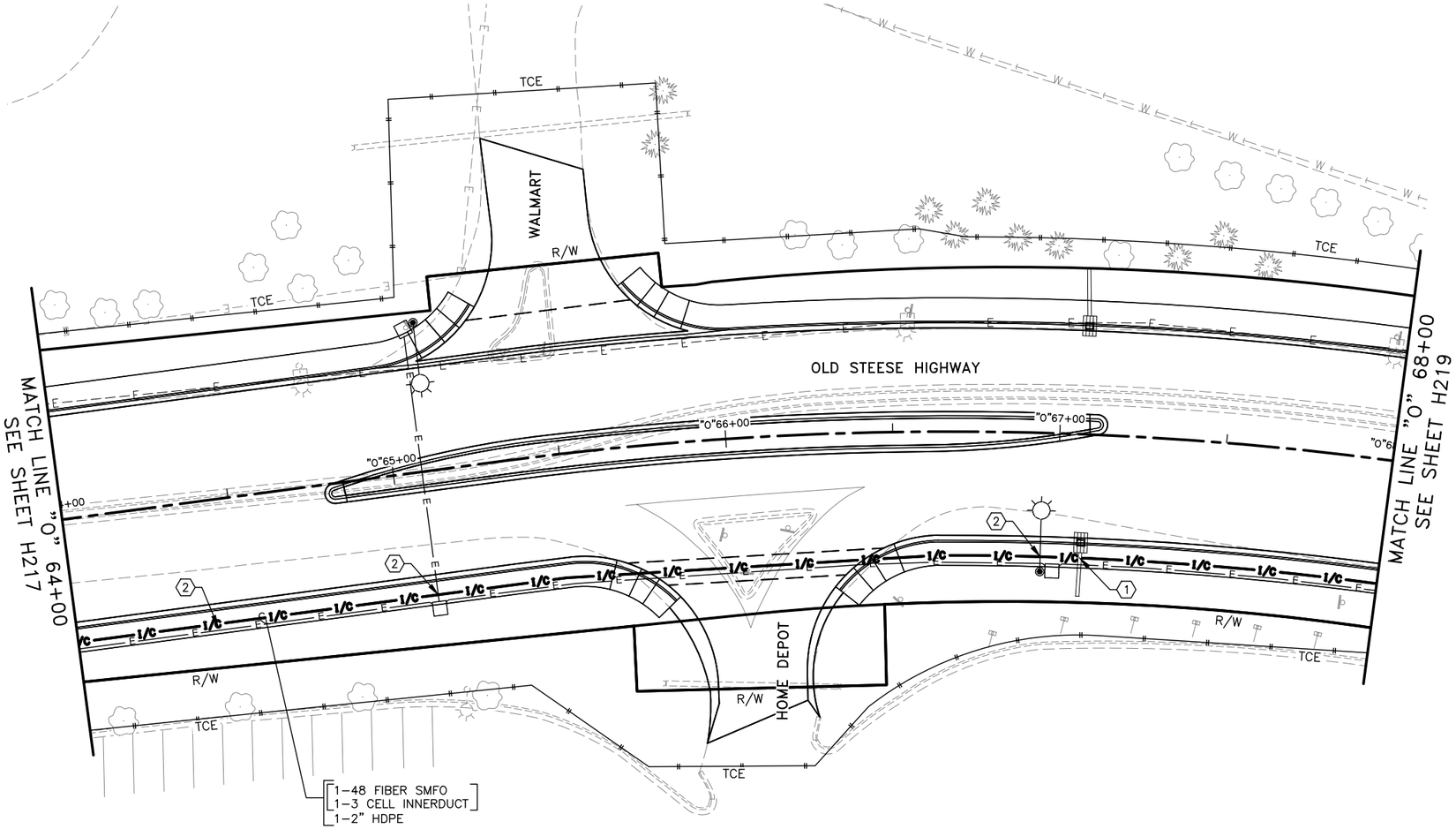
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	H218	H219



CONSTRUCTION NOTES:

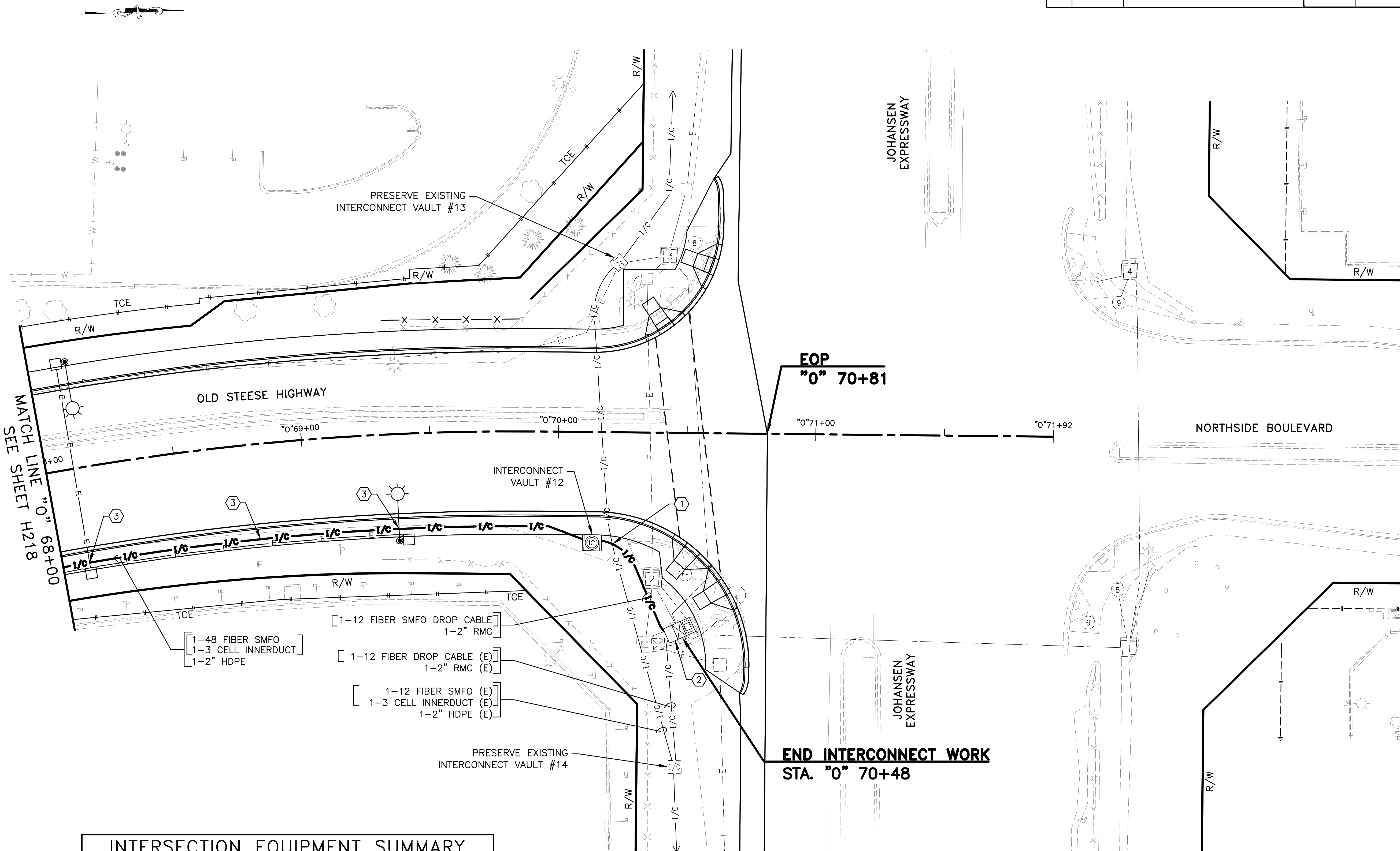
1. ROUTE INTERCONNECT CONDUIT OVER PROPOSED STORM DRAIN, PROTECT IN PLACE.
2. PROVIDE 6 IN. MIN. SEPARATION FROM PROPOSED LIGHTING CONDUIT AND 1' MIN. FROM LIGHT POLES (TYP).
3. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA
49 TH
PRE-PS&E
10/12/2022
Johnson
AE8706
REGISTERED PROFESSIONAL ENGINEER
10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
Z:\PROJECTS\00702_Old Steese HwyRecon_Signal Interconnect\DWGS\C\Sheets\00702_H208-H219_INTCNT_INT_OSH_1-H218 Wed, Oct/12/22 11:04am

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H219	H219



INTERSECTION EQUIPMENT SUMMARY

QTY	DESCRIPTION
1	RUGGEDCOM RSG920P ETHERNET SWITCH OR APPROVED EQUAL
1	12-FIBER ITS DROP CABLE
6	LC SMFO PATCH CABLE
0	AXIS Q6315-LE PTZ NETWORK CAMERA OR APPROVED EQUAL

NOTES:

THE 12-FIBER ITS DROP CABLE WILL BE MEASURED AND PAID FOR UNDER BID ITEM 662.2005.0000 FIBER OPTIC INTERCONNECT - LUMP SUM. ALL REMAINING EQUIPMENT LISTED WILL BE SUBSIDIARY TO BID ITEM 660.2025.0000 PAN TILT ZOOM (PTZ) CAMERA - EACH.

CONSTRUCTION NOTES:

1. ROUTE INTERCONNECT CONDUIT OVER EXISTING INTERCONNECT CONDUIT, PROTECT IN PLACE.
2. PROVIDE 12 FIBER DROP CABLE AND CONNECT TO EXISTING SWITCH AS SHOWN ON H206. VERIFY LINK CONNECTIVITY.
3. PROVIDE 6 IN. MIN. SEPARATION FROM PROPOSED LIGHTING CONDUIT AND 1' MIN. FROM LIGHT POLES (TYP).
4. SEE SHEET H205 FOR INTERCONNECT CONDUIT CULVERT/UTILITY CROSSING DETAIL AND USE WHEN ADJUSTING TYPICAL INTERCONNECT CONDUIT BURIAL DEPTH TO ROUTE CONDUIT OVER OR UNDER BURIED UTILITIES AND TO PROVIDE MINIMUM SEPARATION.

INTERCONNECT PLAN

STATE OF ALASKA 49TH PRE-PS&E 10/12/2022 CE8706 REGISTERED PROFESSIONAL ENGINEER

10/12/2022

PLANS DEVELOPED BY: KINNEY ENGINEERING, LLC 3909 Arctic Blvd, Suite 400 Anchorage, Alaska 99503 (907) 346-2373 CERT. OF AUTH. NO. 1152
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H301	H329

LUMINAIRE SCHEDULE

TYPE	LUMENS	CCT (K)	FIXTURE DESCRIPTION	MOUNTING	MANUFACTURER	MODEL NUMBER	LOAD (W)	NOTES
LED	25,000	4000	TYPE-3 'EXTRA-LARGE' ROADWAY LED LUMINAIRE WITH SLIM PROFILE, LIGHT WEIGHT BULK MOLDING COMPOUND HOUSING PAINTED GRAY, CREE WAVEMAX TECHNOLOGY, AND A 7-PIN PHOTOCONTROL RECEPTACLE.	POLE MOUNTED	CREE	TRVXL-A-HT-3ME-25L-40K7-UL-GY-N	183	LUMINAIRE BASIS OF DESIGN
LED	23,934	4000	TYPE-3 ROADWAY LED LUMINAIRE WITH SLIM PROFILE, RUGGED DIE-CAST ALUMINUM HOUSING PAINTED GRAY, A BUILT-IN WILDLIFE SHIELD, AND A 7-PIN PHOTOCONTROL RECEPTACLE.	POLE MOUNTED	AMERICAN ELECTRIC	ATB2-80BLEDE70-MVOLT-R3-P7	177	APPROVED ALTERNATIVE LUMINAIRE OPTION
LED	23,000	4000	TYPE-3 ROADWAY LED LUMINAIRE WITH SLIM PROFILE, DIE-CAST HOUSING PAINTED GRAY, A BUILT-IN WILDLIFE SHIELD, AND A 7-PIN PHOTOCONTROL RECEPTACLE.	POLE MOUNTED	GE	ERL2-0-23-C3-40-D-GRAY	196	APPROVED ALTERNATIVE LUMINAIRE OPTION

IES RP-8-14 – ROADWAY LIGHTING CLASSIFICATIONS

CONTINUOUS LIGHTING – LUMINANCE METHOD

CLASSIFICATION	POPULATION LEVEL	AVG (CD/M2)	MAX/MIN	AVG/MIN	LV RATIO
MAJOR	MEDIUM	>=0.9	<=5	<=3	<=0.3

CONTINUOUS LIGHTING ON 'MAJOR' ROADS

- OLD STEESE HIGHWAY – FROM KUTTER ROAD TO JOHANSEN EXPRESSWAY

INTERSECTIONS – ILLUMINANCE METHOD

CLASSIFICATION	POPULATION LEVEL	AVG (FC)	AVG/MIN
MAJOR/LOCAL	MEDIUM	>=2.0	<=3

APPLICABLE MAJOR/LOCAL INTERSECTIONS WITH OLD STEESE

- BLAIR ROAD
- HELMERICKS AVE

ELECTRICAL NOTES

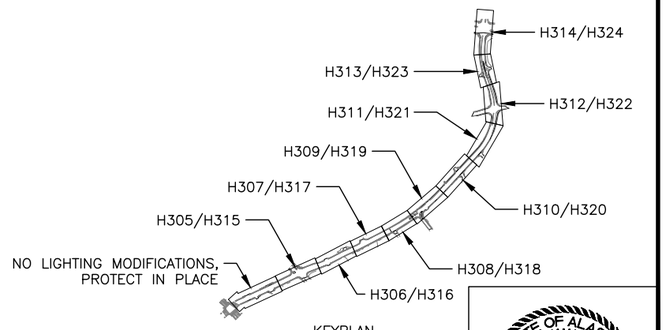
1. ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD LOCATED BEFORE ANY CONDUIT TRENCHING OR OTHER EXCAVATION WORK BEGINS. ANY EXISTING TO REMAIN UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. NOTIFY THE PROJECT ENGINEER OF ANY UNKNOWN EXISTING UTILITIES THAT ARE IN CONFLICT WITH NEW PROPOSED WORK. REFER TO ALL THE UTILITY-SERIES SHEET SETS FOR MODIFICATIONS TO THE VARIOUS UTILITY LINES. REFER TO U1xx-SERIES SHEETS FOR LOCATIONS OF POWER DROPS FOR HIGHWAY LIGHTING LOAD CENTERS.
2. THE UNDERGROUND ROUTING SHOWN FOR LIGHTING CIRCUITS IS SCHEMATICALLY DRAWN FOR CONCEPTUAL AND MATERIAL TAKE-OFF PURPOSES ONLY. COORDINATE WITH ALL 'NEW' AND 'EXISTING-TO-REMAIN' BURIED UTILITIES AND ROUTE THE LIGHTING CIRCUITS AS NECESSARY TO AVOID CONFLICTS. NOTIFY THE ENGINEER OF ANY DISCREPANCIES OR CONCEPT MODIFICATIONS TO THE LIGHTING CIRCUIT ROUTING.
3. LIGHTING CIRCUIT CONDUIT SHALL BE 2":
   -RMC FOR ALL SWEEPS.
   -RMC BETWEEN JUNCTION BOX AND ADJACENT ELECTROLIER.
   -RMC BETWEEN LOAD CENTER AND FIRST JUNCTION BOX.
   -FROM JUNCTION BOX SWEEP TO NEXT JUNCTION BOX SWEEP:
      -RMC UNDER ROADWAYS
      -HDPE UNDER SIDEWALKS/OPEN AREAS.
   -ALL CONNECTORS AND COUPLINGS BETWEEN RMC AND HDPE CONDUIT SHALL BE LISTED AND RATED FOR SUCH USE.
4. ALL UNDERGROUND LIGHTING CONDUIT SHALL BE LISTED FOR DIRECT BURIAL AND BE BURIED A MINIMUM OF:
   -30" BELOW HIGHWAYS, ROADS, STREETS, DRIVEWAYS, & PARKING LOTS.
   -24" BELOW OTHER LOCATIONS.
5. THE LIGHTING CONDUIT AND INTERCONNECT FIBER OPTIC CONDUITS WILL BE LOCATED AND ROUTED WITHIN THE SAME TRENCH IN NUMEROUS LOCATIONS ALONG THE PROJECT CORRIDOR. REFER TO INTERCONNECT SHEETS (H2xx-SERIES) FOR FURTHER INFORMATION.
6. COF LIGHTING CIRCUITS:
   -HIGHWAY LUMINAIRE CABLES SHALL BE (3C) #6 AWG XHHW COPPER, #10 CU GROUND.
      -ONE CONDUCTOR IN THE HIGHWAY LUMINAIRE CABLE IS A SPARE.
      -GROUND CONDUCTOR MAY BE BARE OR GREEN INSULATED XHHW.
   -LUMINARE TAP CONDUCTORS SHALL BE (2) #10 AWG XHHW COPPER, #10 GROUND.
7. PROVIDE A DOUBLE FUSED, Y-TAP, QUICK DISCONNECT IN EACH ELECTROLIER HANDHOLE, RATED AT 10 AMPS AND 600 VOLTS (SEE SHEET H326).
8. TRAFFIC SIGNAL EQUIPMENT AND SIGNAL JUNCTION BOXES ARE LABELED IN THE LIGHTING DRAWINGS FOR REFERENCE ONLY. THESE LABELS DO NOT CONVEY ANY WORK. REFER TO TRAFFIC SIGNAL SHEETS (H1xx-SERIES) FOR FURTHER INFORMATION AND REQUIREMENTS OF BOTH THE EXISTING AND NEW TRAFFIC SIGNAL SYSTEMS.
9. WHERE INDICATED, LIGHTING CIRCUIT SPLICES SHALL BE A PERMANENT, RESIN BASED SPLICE, LISTED FOR SUBMERGED APPLICATIONS. BASIS OF DESIGN IS 3M 'SCOTCHCAST, INLINE RESIN POWER CABLE SLICE KITS 82-A SERIES'.
10. THE INSTALLATION OF ALL ELECTROLIER TYPE 1A JUNCTION BOXES SHALL SATISFY THE REQUIREMENTS OF STANDARD PLAN L-23.03 AND DETAILS ON SHEETS H325-H327.
11. THE INSTALLATION OF ALL ELECTROLIERS SHALL SATISFY THE REQUIREMENTS OF STANDARD PLAN L-03.11 AND DETAILS ON SHEETS H325 & H326.
12. THE INSTALLATION OF ALL ELECTROLIER FOUNDATIONS SHALL SATISFY THE REQUIREMENTS OF STANDARD PLAN L-30.11.
13. THE INSTALLATION OF ALL COF TYPE 1A LOAD CENTERS SHALL SATISFY THE REQUIREMENTS OF STANDARD PLAN L-25.01 AND DETAILS ON SHEETS H328 & H329.
14. ALL ELECTROLIER JUNCTION BOXES SHALL BE TYPE 1A.
15. TRAFFIC SIGNAL CONTROLLER BRANCH CIRCUITS ARE SUBSIDIARY TO PAY ITEM 661.0002.0000. FOR EACH 30A TRAFFIC SIGNAL CONTROLLER BRANCH CIRCUIT, PROVIDE (2)#10 AWG, #10 GND, 1" C. PROVIDE AN ADDITIONAL SPARE #10 AWG CONDUCTOR IN THE CONDUIT.
16. THE LUMINAIRES AND ASSOCIATED MAST-ARMS ON SIGNAL POLES ARE SUBSIDIARY TO 660.0003.0000. SEE ELECTROLIER SCHEDULE ON SHEET H302 FOR APPLICABLE LUMINAIRES AND MAST-ARMS ON SIGNAL POLES.
17. PROVIDE PHOTOCONTROL RECEPTACLE SHORTING CAPS FOR ALL LUMINAIRES.
18. WHERE ELECTROLIERS ARE INDICATED FOR DEMOLITION, THE ASSOCIATED FOUNDATION AND ADJACENT JUNCTION BOX SHALL ALSO BE DEMOLISHED. THE FOUNDATION SHALL BE REMOVED TO A MINIMUM OF 2' BELOW GRADE, OR COMPLETELY REMOVED WHERE IT INTERFERES WITH COMPLETION OF OTHER WORK.
19. PER ALASKA STATUTE TITLE 18, CHAPTER 60, SECTION 18.60.670, EQUIPMENT (AND INDEPENDENT STRUCTURES) SHALL NOT EXTEND UP WITHIN 10FT OF OVERHEAD PRIMARY POWER LINES (OVER 750 VOLTS).
20. PER NATIONAL ELECTRICAL SAFETY CODE, SECTION 234.B.1.A AND 234.B.2.A EXCEPTIONS, AERIAL LIGHTING CIRCUITS, SERVICE CONDUCTORS, AND COMMUNICATION CABLES SHALL HAVE A MINIMUM OF 3FT (HORIZONTAL) BY 2FT (VERTICAL) CLEARANCE FROM INDEPENDENT STRUCTURES.
21. WHERE LISTED IN THE DRAWINGS, THE FOLLOWING DEFINITIONS APPLY:
   -(E) = EXISTING TO REMAIN
   -(R) = RELOCATE/RELOCATED
   -(X) = DEMOLISH
22. ALL DEMOLITION, REMOVAL, OR SALVAGING WORK ASSOCIATED WITH HIGHWAY LIGHTING SYSTEMS SHALL BE SUBSIDIARY TO PAY ITEM 660.0003.0000.
23. <XX> WHERE SHOWN, SYMBOL INDICATES A 'SPECIFIC SHEET NOTE'. SEE THE ASSOCIATED SPECIFIC SHEET NOTE TABLES ON CORRESPONDING SHEETS.

GENERAL SHEET NOTES

1. IF AN ALTERNATIVE LUMINAIRE TO THOSE LISTED IN THE LUMINAIRE SCHEDULE IS CHOSEN:

   -PERFORM AND SUBMIT LIGHTING CALCULATIONS TO THE ELECTRICAL DOR FOR REVIEW & ACCEPTANCE, SHOWING THAT ALL TARGET VALUES LISTED IN THE 'IES RP-8-14 – ROADWAY LIGHTING CLASSIFICATIONS' TABLES ARE SATISFIED USING A LLF OF 0.85.

   -ALL NEW LUMINAIRES MUST BE OF THE LED TYPE, MADE BY THE SAME MANUFACTURER, AND MUST SATISFY ALL REQUIREMENTS LISTED IN SECTION 740-2.18.



KEYPLAN

PRELIMINARY PS&E

No. EE12945

REGISTERED PROFESSIONAL ENGINEER

GENERAL LIGHTING
1 OF 1

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H301 Wed, Oct/12/22 03:39pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H302	H329

ELECTROLIER SUMMARY TABLE

NO.	SHEET NO.	POLE STATION	POLE OFFSET	LUMEN OUTPUT	DRIVER VOLTAGE	LOAD CENTER	MAST–ARM LENGTH	LUMINAIRE HEIGHT	SIGNAL POLE	UTILITY POLE	MAST ARM TYPE	WIDENING DETAIL	LED LUMINAIRE	ELECTROLIER & FOUNDATION	NOTES
1	H315	'O' – 21+07.0	51.5 LT	~23,000	240V	COF LC 79	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
2	H315	'O' – 22+35.5	42.4 RT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
3	H315	'O' – 23+32.6	37.5 LT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
4	H316	'O' – 23+89.2	202.8 RT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
5	H316	'O' – 24+88.8	40.7 RT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
6	H316	'O' – 26+16.2	40.9 LT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
7	H317	'O' – 28+26.6	38.9 RT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
8	H317	--	--	~23,000	240V	COF LC "SIGNAL"	--	30'–0"	•		SINGLE	--	1	--	SIGNAL POLE AND MAST ARM ARE EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
9	H317	--	--	~23,000	240V	COF LC "SIGNAL"	--	30'–0"	•		SINGLE	--	1	--	SIGNAL POLE AND MAST ARM ARE EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
10	H317	--	--	~23,000	240V	COF LC "SIGNAL"	--	30'–0"	•		SINGLE	--	1	--	SIGNAL POLE AND MAST ARM ARE EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
11	H317	'O' – 29+67.4	39.4 LT	~23,000	240V	COF LC 115	--	30'–0"			SINGLE	--	1	--	ELECTROLIER AND MAST ARM ARE EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
12	H317	'O' – 31+26.9	38.8 RT	~23,000	240V	COF LC 115	--	30'–0"		•	SINGLE	--	1	--	MAST ARM IS EXISTING TO REMAIN, ONLY REPLACE LUMINAIRE.
13	H318	'O' – 32+76.8	39.0 RT	~23,000	240V	COF LC 115	8'–0"	30'–0"		•	SINGLE	--	1	--	PROVIDE NEW MAST ARM AND MOUNT TO UTILITY POLE.
14	H318	'O' – 41+10.0	41.5 LT	~23,000	240V	COF LC 115	10'–0"	30'–0"			SINGLE	A2	1	1	
15	H318	'O' – 42+33.4	41.5 RT	~23,000	240V	COF LC 115	10'–0"	30'–0"			SINGLE	A	1	1	
16	H319	'O' – 43+91.4	41.5 LT	~23,000	240V	COF LC 116	10'–0"	30'–0"			SINGLE	A	1	1	
17	H319	'TG' – 90+70.2	27.1 RT	~23,000	240V	COF LC 116	10'–0"	30'–0"			SINGLE	B	1	1	
18	H319	'TG' – 91+88.8	30.4 LT	~23,000	240V	COF LC 116	10'–0"	30'–0"			SINGLE	B	1	1	
19	H319	'O' – 44+81.0	41.5 RT	~23,000	240V	COF LC 116	15'–0"	30'–0"			SINGLE	A	1	1	
20	H319	'O' – 46+13.9	41.5 LT	~23,000	240V	COF LC 116	15'–0"	30'–0"			SINGLE	A	1	1	
21	H319	'O' – 47+49.7	41.5 RT	~23,000	240V	COF LC 116	15'–0"	30'–0"			SINGLE	A	1	1	
22	H320	'O' – 48+58.6	41.5 RT	~23,000	240V	COF LC 116	15'–0"	30'–0"			SINGLE	A	1	1	
23	H320	'O' – 49+87.8	41.5 RT	~23,000	240V	COF LC 116	15'–0"	30'–0"			SINGLE	A	1	1	
24/25	H320	--	--	~23,000	240V	COF LC O/B	20'–0"/12'–0"	30'–0"	•		DOUBLE @90°	--	2	--	LUMINAIRE MOUNTED ON SIGNAL POLE, SEE SIGNAL H–SHEETS FOR FURTHER INFORMATION REGARDING SIGNAL POLE.
26	H320	--	--	~23,000	240V	COF LC O/B	18'–0"	30'–0"	•		SINGLE	--	1	--	LUMINAIRE MOUNTED ON SIGNAL POLE, SEE SIGNAL H–SHEETS FOR FURTHER INFORMATION REGARDING SIGNAL POLE.
27	H320	'O' – 52+00.7	41.5 RT	~23,000	240V	COF LC O/B	15'–0"	30'–0"			SINGLE	A	1	1	
28	H320	'O' – 53+12.4	41.5 RT	~23,000	240V	COF LC O/B	15'–0"	30'–0"			SINGLE	A	1	1	
29	H321	'O' – 54+18.5	41.5 RT	~23,000	240V	COF LC O/B	18'–0"	30'–0"			SINGLE	A	1	1	
30	H321	'O' – 55+34.9	43.2 RT	~23,000	240V	COF LC O/B	18'–0"	30'–0"			SINGLE	A	1	1	
31	H321	'O' – 56+39.8	41.5 RT	~23,000	240V	COF LC O/B	18'–0"	30'–0"			SINGLE	A	1	1	
32	H321	'O' – 57+48.7	41.5 LT	~23,000	240V	COF LC O/B	18'–0"	30'–0"			SINGLE	A	1	1	
33	H321	'O' – 58+65.2	41.5 RT	~23,000	240V	COF LC O/B	15'–0"	30'–0"			SINGLE	A	1	1	
34	H322	'O' – 59+57.6	41.6 RT	~23,000	240V	COF LC O/B	15'–0"	30'–0"			SINGLE	A	1	1	
35	H322	--	--	~23,000	240V	COF LC O/H	12'–0"	30'–0"	•		SINGLE	--	1	--	LUMINAIRE MOUNTED ON SIGNAL POLE, SEE SIGNAL H–SHEETS FOR FURTHER INFORMATION REGARDING SIGNAL POLE.
36	H322	--	--	~23,000	240V	COF LC O/H	12'–0"	30'–0"	•		SINGLE	--	1	--	LUMINAIRE MOUNTED ON SIGNAL POLE, SEE SIGNAL H–SHEETS FOR FURTHER INFORMATION REGARDING SIGNAL POLE.
37	H322	--	--	~23,000	240V	COF LC O/H	15'–0"	30'–0"	•		SINGLE	--	1	--	LUMINAIRE MOUNTED ON SIGNAL POLE, SEE SIGNAL H–SHEETS FOR FURTHER INFORMATION REGARDING SIGNAL POLE.
38	H322	--	--	~23,000	240V	COF LC O/H	15'–0"	30'–0"	•		SINGLE	--	1	--	LUMINAIRE MOUNTED ON SIGNAL POLE, SEE SIGNAL H–SHEETS FOR FURTHER INFORMATION REGARDING SIGNAL POLE.
39	H322	'O' – 62+42.9	53.5 LT	~23,000	240V	COF LC O/H	15'–0"	30'–0"			SINGLE	A	1	1	
40	H322	'O' – 63+76.3	41.5 RT	~23,000	240V	COF LC O/H	15'–0"	30'–0"			SINGLE	A	1	1	
41	H323	'O' – 65+11.7	44.6 LT	~23,000	240V	COF LC O/H	15'–0"	30'–0"			SINGLE	A2	1	1	
42	H323	'O' – 66+95.1	41.5 RT	~23,000	240V	COF LC O/H	15'–0"	30'–0"			SINGLE	A	1	1	
43	H324	'O' – 68+14.3	41.5 LT	~23,000	240V	COF LC O/H	15'–0"	30'–0"			SINGLE	A	1	1	
44	H324	'O' – 69+36.4	41.5 RT	~23,000	240V	COF LC O/H	15'–0"	30'–0"			SINGLE	A	1	1	
												TOTALS	44	24	

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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SUMMARY TABLES
1 OF 3

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H303	H329

TYPE 1A JUNCTION BOX SUMMARY TABLE

JUNCTION BOX NO.	SHEET NO.	STATION	OFFSET	ASSOCIATED LIGHTING SYSTEM	ASSOCIATED ELECTROLIER NUMBER	TYPE 1A JUNCTION BOX	NOTES
1	H315	'O' – 19+10.9	92.9 LT	DOT	EXISTING	1	
2	H315	'O' – 19+30.6	34.9 LT	DOT	EXISTING	1	
3	H315	'O' – 20+35.2	64.1 LT	DOT	EXISTING	1	
4	H315	'O' – 20+32.3	49.3 RT	DOT	EXISTING	1	
5	H317	'O' – 29+47.7	39.1 RT	COF	L9	1	
6	H317	'O' – 29+71.1	40.5 LT	COF	L11	1	
7	H318	'O' – 40+05.5	40.7 LT	COF	--	1	PROVIDE PERMENANT SPLICE BETWEEN EXISTING AND NEW CONDUCTORS
8	H318	'O' – 41+10.0	38.8 LT	COF	L14	1	
9	H318	'O' – 42+36.9	41.2 LT	COF	--	1	
10	H318	'O' – 42+37.4	41.2 RT	COF	L15	1	
11	H319	'O' – 43+87.2	41.2 LT	COF	L16	1	
12	H319	'TG' – 90+68.2	24.2 RT	COF	L17	1	
13	H319	'TG' – 91+84.7	30.3 LT	COF	L18	1	
14	H319	'O' – 44+39.3	41.2 LT	COF	--	1	
15	H319	'O' – 44+84.6	41.2 RT	COF	L19	1	
16	H319	'O' – 45+90.1	41.2 RT	COF	--	1	
17	H319	'O' – 46+10.2	41.2 LT	COF	L20	1	
18	H319	'O' – 47+53.3	41.2 RT	COF	L21	1	
19	H320	'O' – 48+72.3	41.2 RT	COF	L22	1	
20	H320	'O' – 49+91.9	41.2 RT	COF	L23	1	
21	H320	'O' – 51+04.1	67.4 RT	COF	L24/L25	1	
22	H320	'O' – 51+60.0	87.4 RT	COF	--	1	PROVIDE PERMANENT SPLICE FOR CONDUCTORS TO J15 & L24/L25
23	H320	'O' – 51+84.2	42.0 LT	COF	L26	1	
24	H320	'O' – 52+04.4	41.2 RT	COF	L27	1	
25	H320	'O' – 53+16.1	41.2 RT	COF	L28	1	
26	H321	'O' – 54+22.1	41.2 RT	COF	L29	1	
27	H321	'O' – 55+38.2	42.0 RT	COF	L30	1	
28	H321	'O' – 56+43.3	41.2 RT	COF	L31	1	
29	H321	'O' – 57+44.8	41.2 LT	COF	L32	1	
30	H321	'O' – 57+57.7	41.2 RT	COF	--	1	PROVIDE PERMANENT SPLICE FOR CONDUCTORS TO J23 & L32
31	H321	'O' – 58+68.7	41.2 RT	COF	L33	1	
32	H322	'O' – 59+61.1	41.5 RT	COF	L34	1	
33	H322	'O' – 59+82.0	53.5 LT	COF	--	1	
34	H322	'O' – 59+99.9	48.8 LT	COF	L35	1	
35	H322	'O' – 60+51.9	62.6 RT	COF	L36	1	
36	H322	'O' – 61+29.1	64.6 RT	COF	L38	1	
37	H322	'O' – 61+29.4	65.1 LT	COF	L37	1	
38	H322	'O' – 62+39.0	53.2 LT	COF	L39	1	
39	H322	'O' – 62+39.0	41.2 RT	COF	--	1	
40	H322	'O' – 63+79.9	41.2 RT	COF	L40	1	
41	H323	'O' – 65+08.6	41.2 RT	COF	--	1	PROVIDE PERMANENT SPLICE FOR CONDUCTORS TO J36 & L41
42	H323	'O' – 65+08.6	42.9 LT	COF	L41	1	
43	H323	'O' – 66+98.9	41.2 RT	COF	L42	1	
44	H324	'O' – 68+10.8	41.2 RT	COF	--	1	PROVIDE PERMANENT SPLICE FOR CONDUCTORS TO J39 & L43
45	H324	'O' – 68+10.8	41.2 LT	COF	L43	1	
46	H324	'O' – 69+40.2	41.2 RT	COF	L44	1	
47	H324	'O' – 70+33.8	59.7 LT	DOT	EXISTING	1	
48	H324	'O' – 70+63.6	90.0 RT	DOT	EXISTING	1	
					TOTALS	48	

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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SUMMARY TABLES
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STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H304	H329

660.0003.0000
HIGHWAY LIGHTING SYSTEM COMPLETE, COF
(LUMP SUM)

DESCRIPTION	QUANTITY
COF RACEWAY SYSTEM	
HDPE CONDUIT – 2"	2,575–FT
RMC CONDUIT – 2"	1,898–FT
HIGHWAY LUMINAIRE CABLE: (3C) #6 AWG XHHW	4,782–FT
HIGHWAY LUMINAIRE CABLE (GROUND): #10 CU GROUND	4,473–FT
LUMINAIRE TAP CONDUCTORS: #10 AWG XHHW	4,128–FT
GENERAL	
RECONNECT EXISTING COF LIGHTING CIRCUIT CONDUCTORS	1
ELECTROLIER WITH FOUNDATION	24
TYPE 1A JUNCTION BOX	48
8' MAST ARM (FOR WOOD UTILITY POLE)	1
LED LUMINAIRE	44
TRENCHING, BEDDING, AND FILL	4,473–FT
REMOVAL	
REMOVE LUMINAIRE	17
REMOVE LUMINAIRE, ELECTROLIER, & FOUNDATION	23
REMOVE TYPE 1A JUNCTION BOX	34
REMOVE UNDERGROUND LIGHTING CONDUCTORS	3,440–FT

661 – ELECTRICAL LOAD CENTERS

DESCRIPTION	QUANTITY
661.0002.0000 – LOAD CENTER, TYPE 1A (EACH)	3
661.2002.0000 – REMOVE EXISTING LOAD CENTER (EACH)	2

SUMMARY TABLES
3 OF 3

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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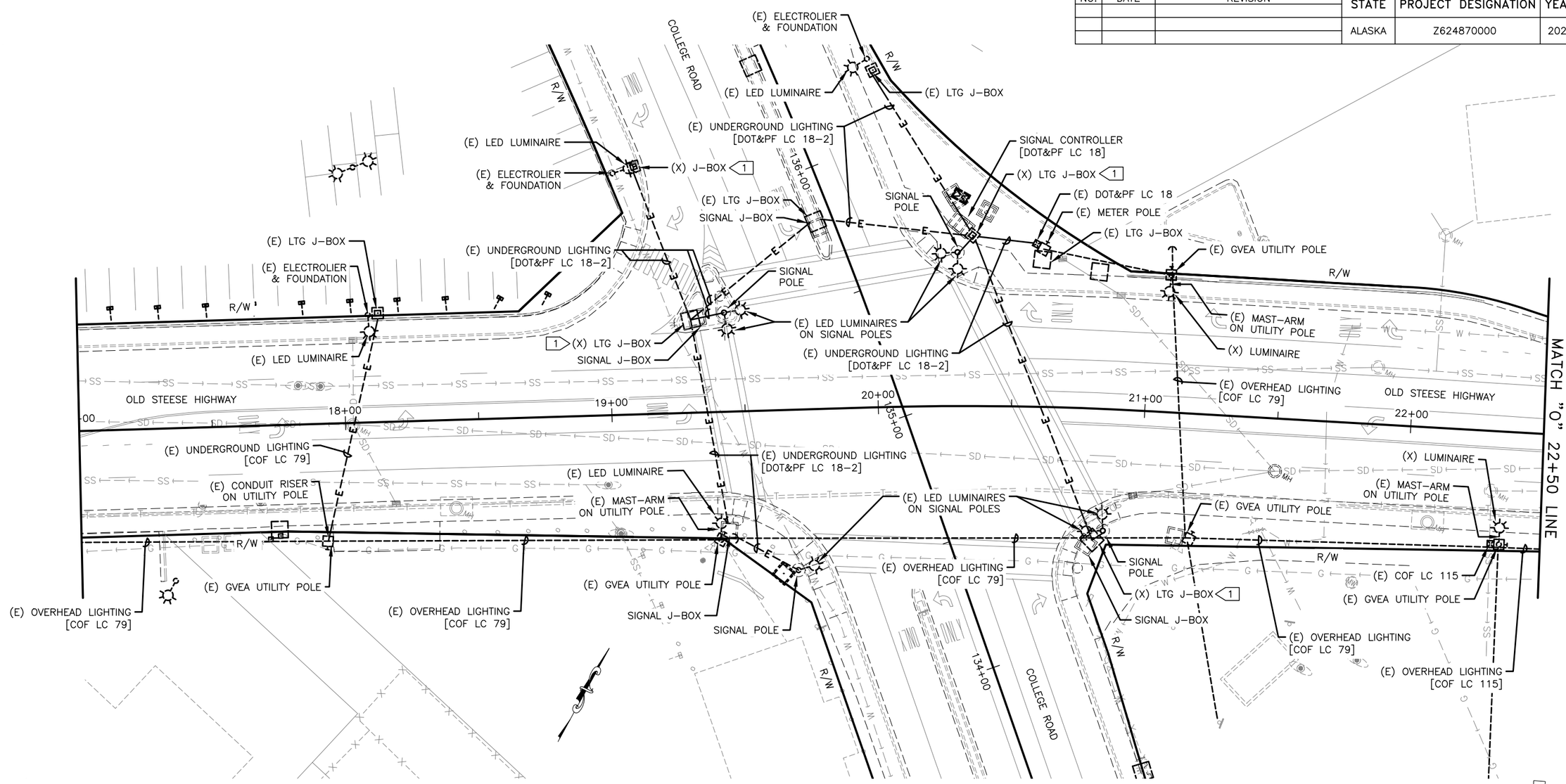
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H305	H329



LIGHTING DEMOLITION – "O" 17+00 TO "O" 22+50

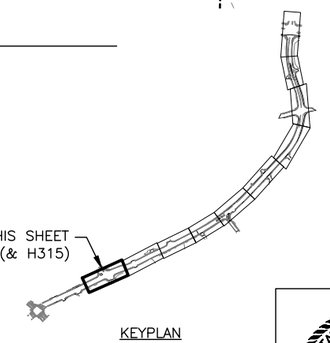
⊢——⊣ = 20FT

GENERAL SHEET NOTES

1. COF LC 79 IS EXISTING TO REMAIN AND IS MOUNTED ON A GVEA UTILITY POLE AT APPROXIMATELY "O" 15+23.9 (38.5 RT).

SPECIFIC SHEET NOTES

1 DEMOLISH EXISTING JUNCTION BOX, BUT PROTECT UNDERGROUND CIRCUITING AND CONDUIT. SEE H317 FOR NEW JUNCTION BOX IN EXISTING LOCATION.



KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING DEMOLITION
1 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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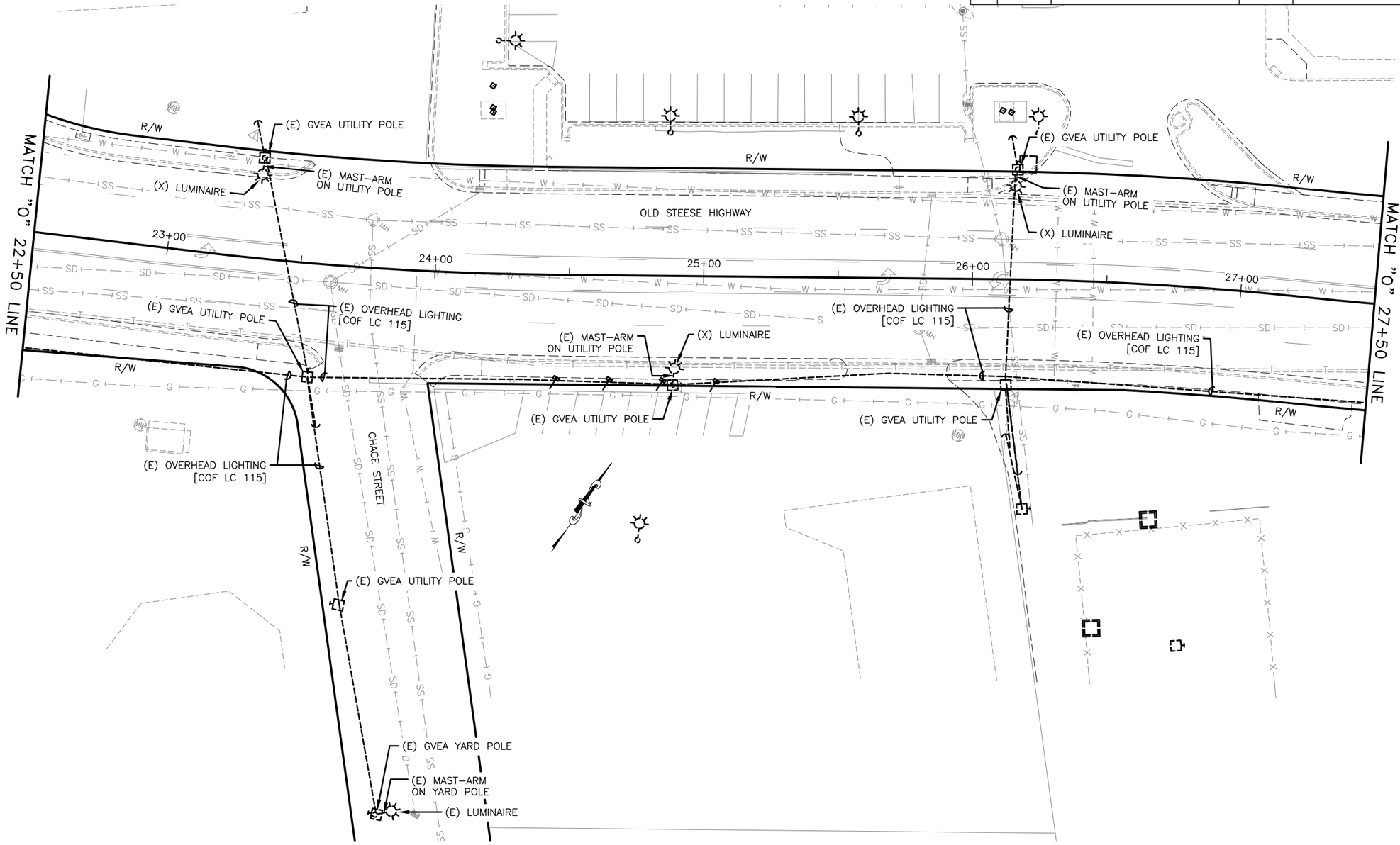
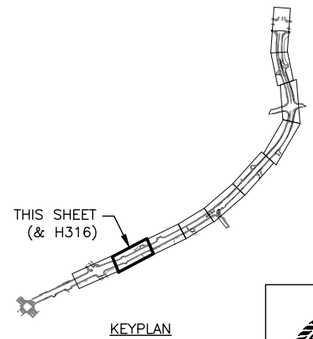
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H306	H329



LIGHTING DEMOLITION – "O" 22+50 TO "O" 27+50

= 20FT



KEYPLAN

PRELIMINARY PS&E

No. EE12945

REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA

LIGHTING DEMOLITION
2 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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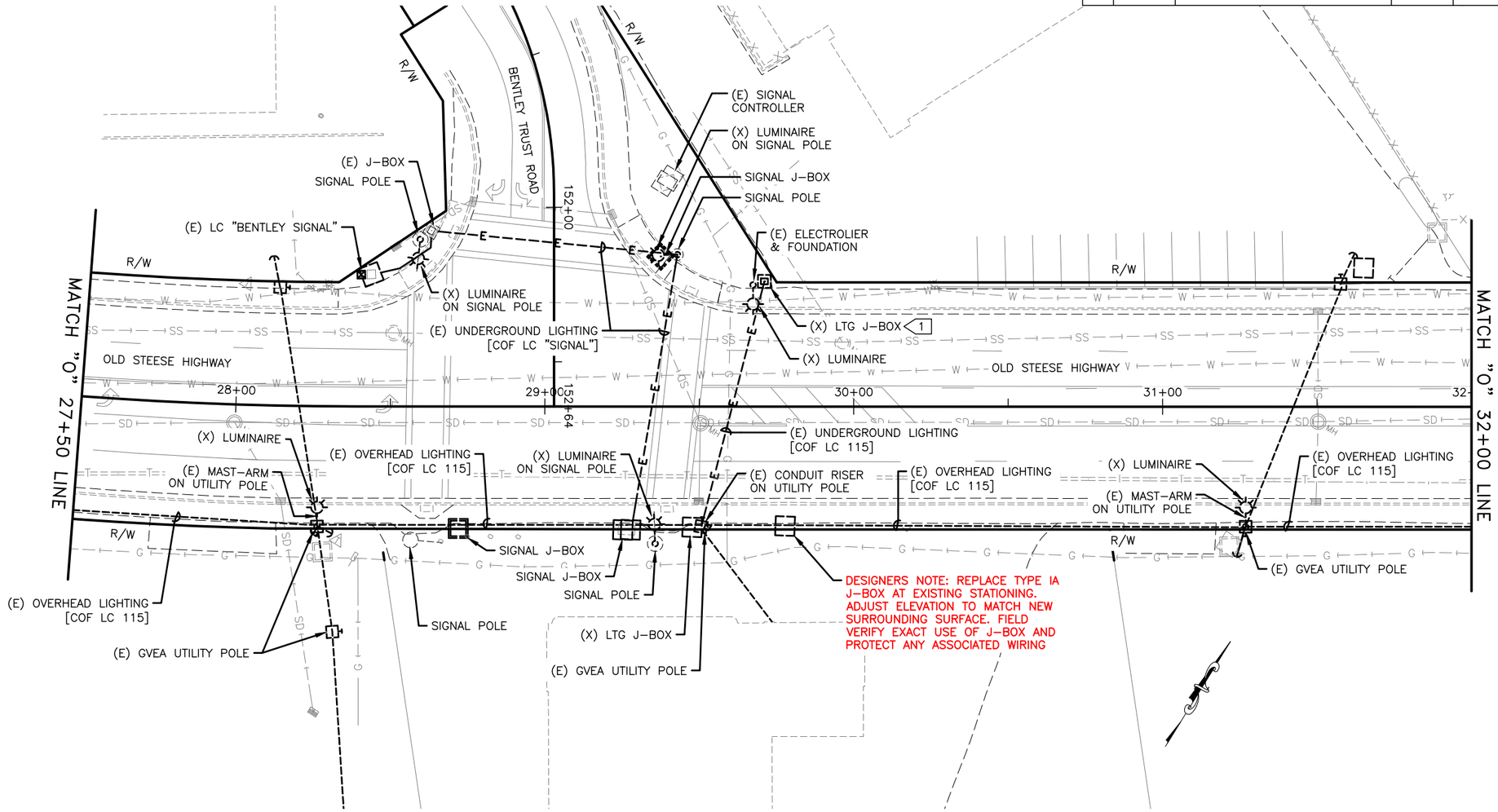
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H307	H329

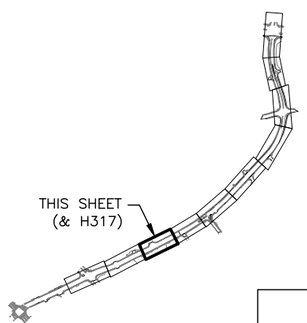


LIGHTING DEMOLITION – "O" 27+50 TO "O" 32+00

⟷ = 20FT

SPECIFIC SHEET NOTES

1 DEMOLISH EXISTING JUNCTION BOX, BUT PROTECT UNDERGROUND CIRCUITING AND CONDUIT. SEE H317 FOR NEW JUNCTION BOX IN EXISTING LOCATION.



KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING DEMOLITION
3 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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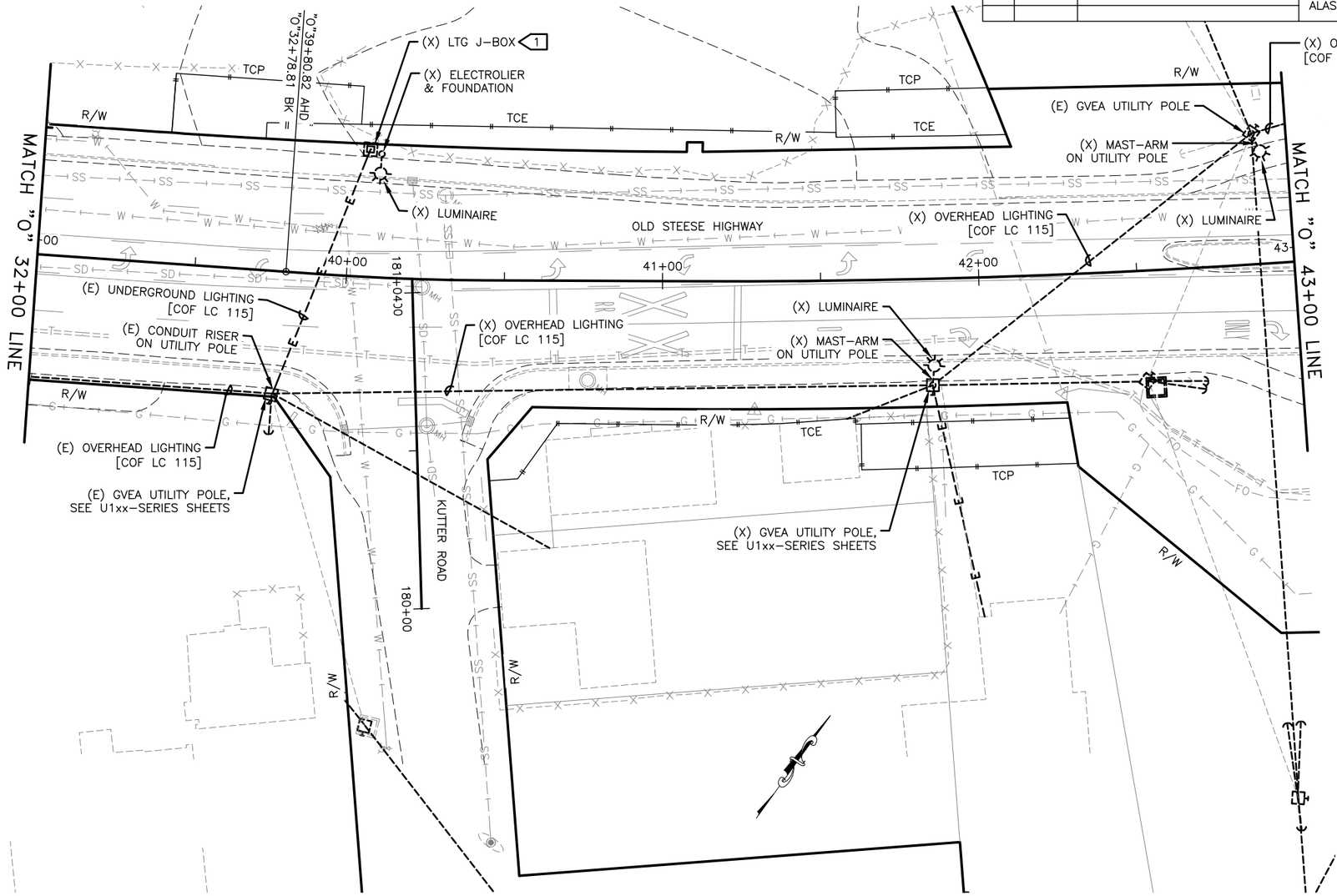
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H308	H329

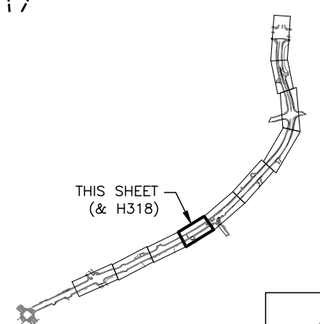


LIGHTING DEMOLITION – "O" 32+00 TO "O" 43+00

= 20FT

SPECIFIC SHEET NOTES

1 DEMOLISH EXISTING JUNCTION BOX, BUT PROTECT UNDERGROUND CIRCUITING AND CONDUIT. SEE H318 FOR NEW JUNCTION BOX IN EXISTING LOCATION.



KEYPLAN

LIGHTING DEMOLITION
4 OF 10

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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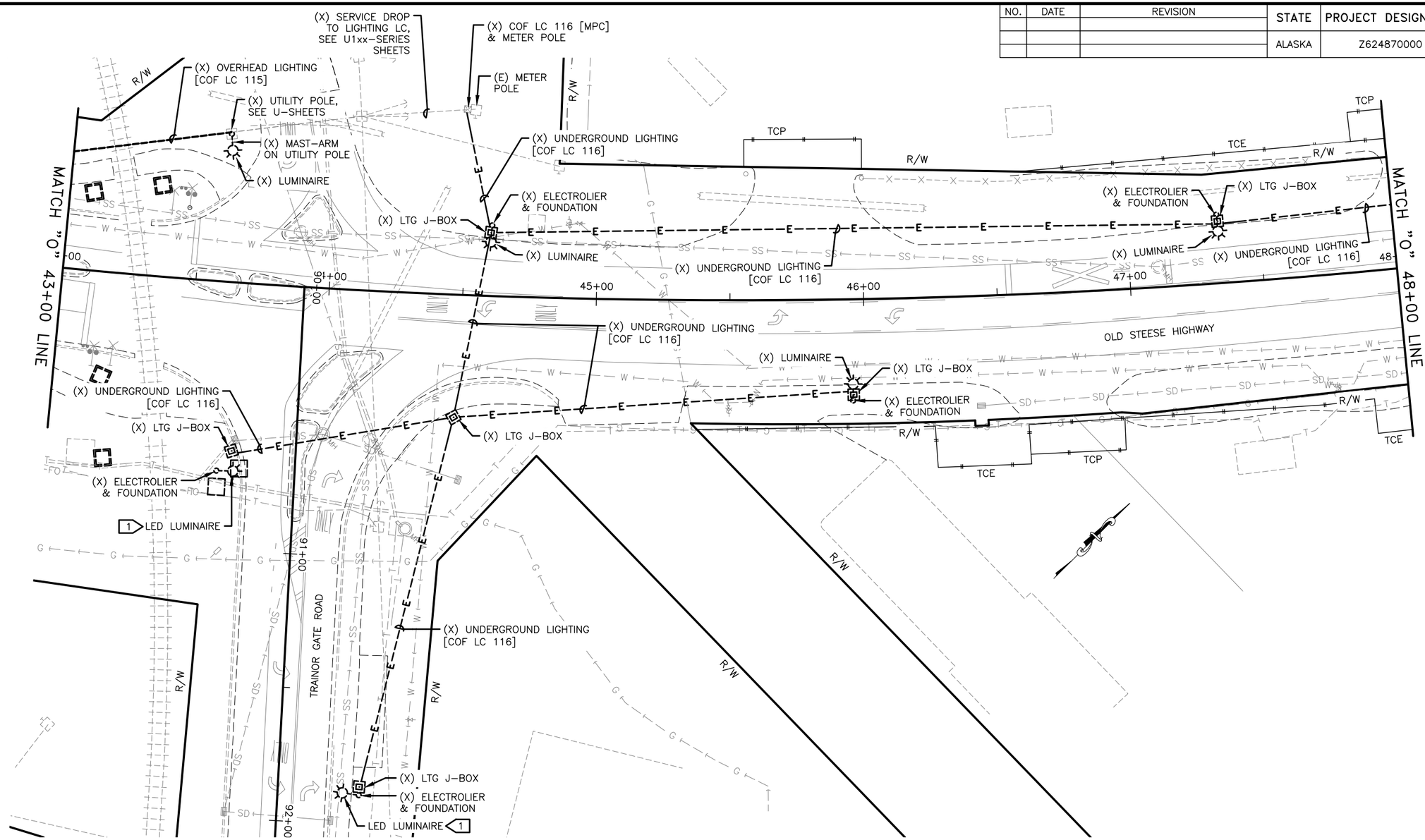
			ALASKA	Z624870000	2024	H309	H329

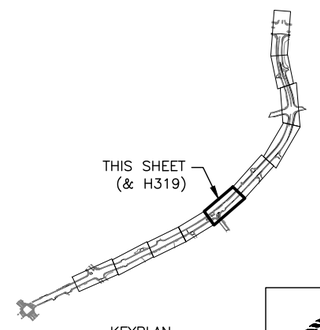


LIGHTING DEMOLITION – "O" 43+00 TO "O" 48+00

= 20FT

SPECIFIC SHEET NOTES

1 SALVAGE THE EXISTING LED LUMINAIRE AND RETURN TO THE CITY OF FAIRBANKS.



KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING DEMOLITION
5 OF 10

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452–1241
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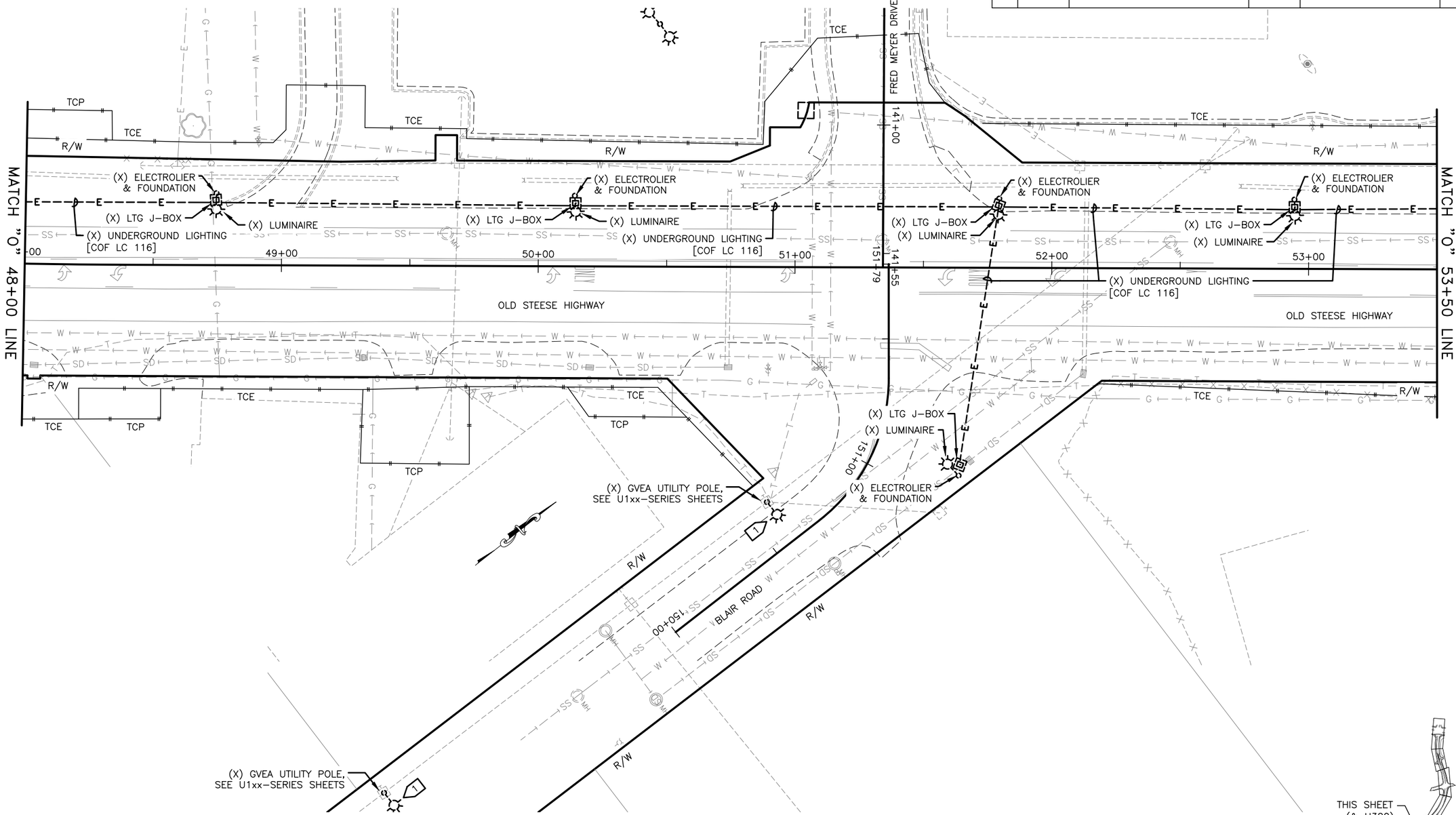
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H310	H329

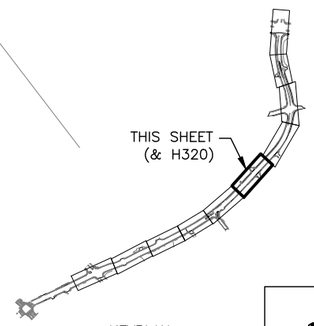


LIGHTING DEMOLITION – "O" 48+00 TO "O" 53+50

|——| = 20FT

SPECIFIC SHEET NOTES

1 REMOVE AND RE-INSTALL EXISTING MAST-ARM AND LUMINAIRE ON NEW UTILITY POLE IN SAME LOCATION. SEE U-SHEETS AND SHEET H320.



KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING DEMOLITION
6 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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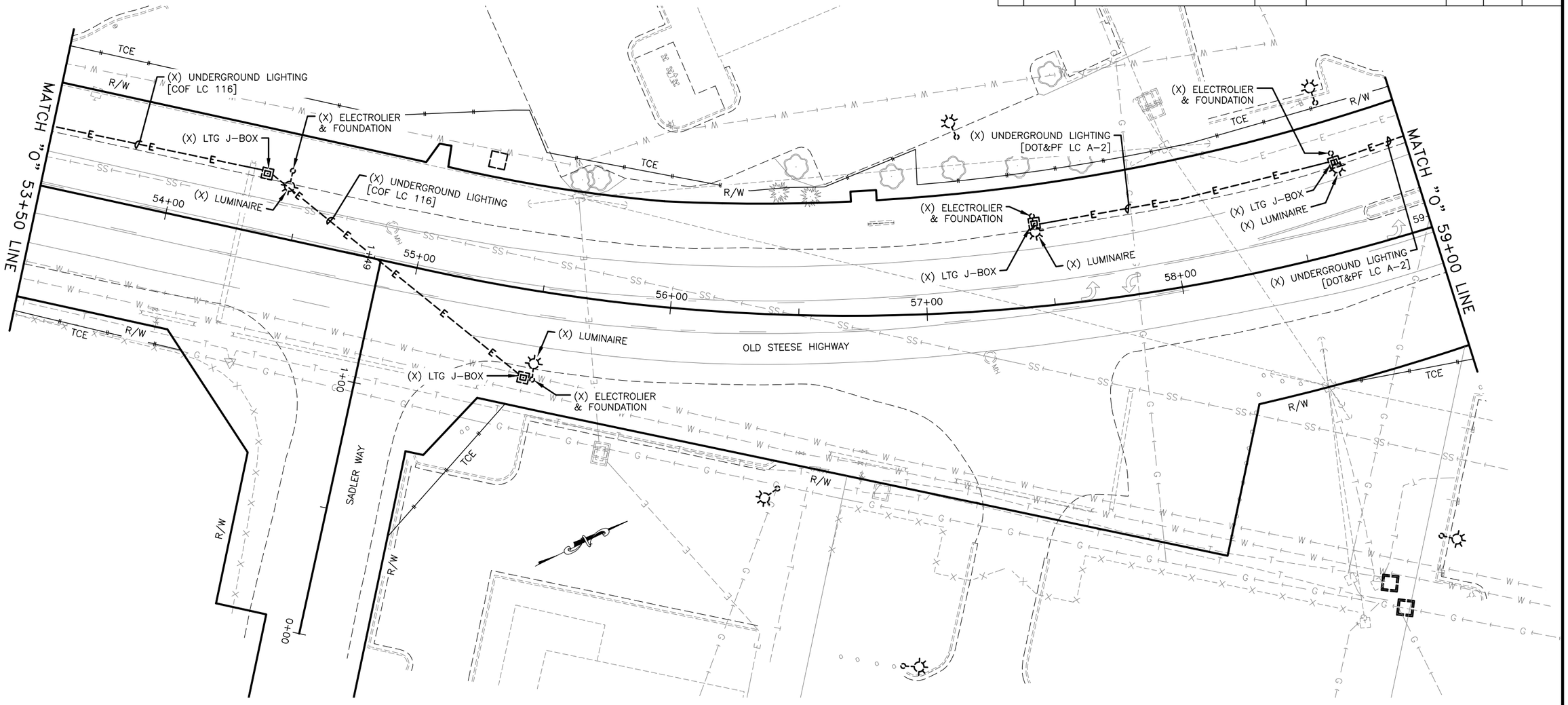
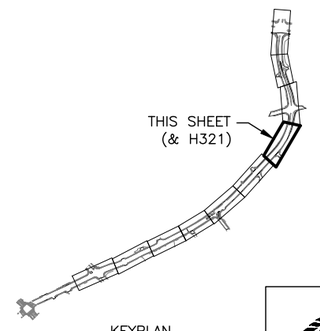
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H311	H329



LIGHTING DEMOLITION – "O" 53+50 TO "O" 59+00

= 20FT



KEYPLAN

LIGHTING DEMOLITION
7 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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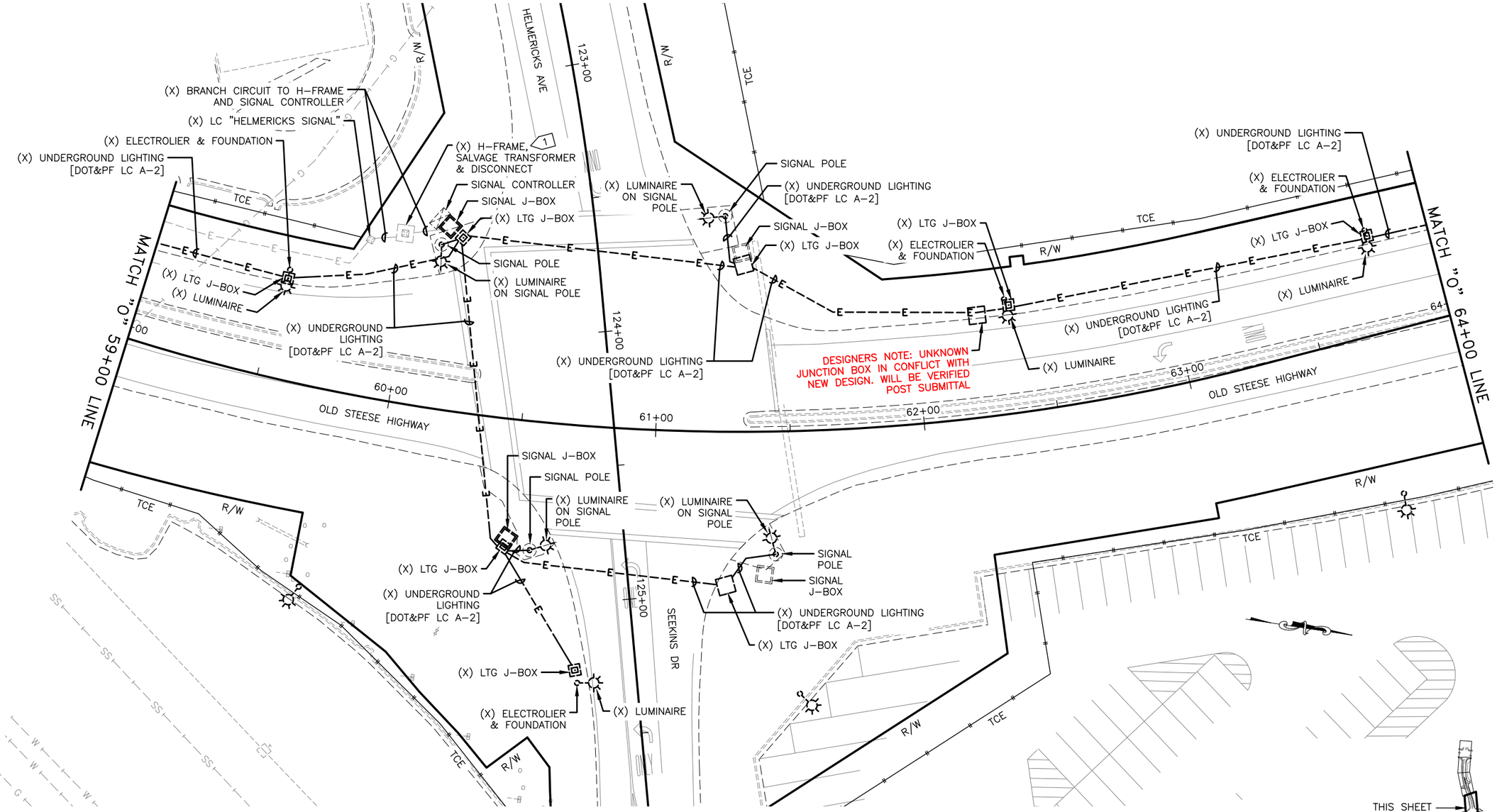
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H312	H329

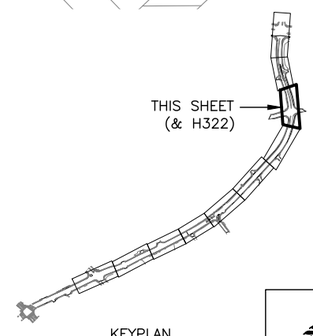


LIGHTING DEMOLITION – "O" 59+00 TO "O" 64+00

= 20FT

SPECIFIC SHEET NOTES

1 SALVAGE OF EQUIPMENT AND REMOVAL OF SUPPORT FRAME IS SUBSIDIARY TO 661.2002.0000.



KEYPLAN

LIGHTING DEMOLITION
8 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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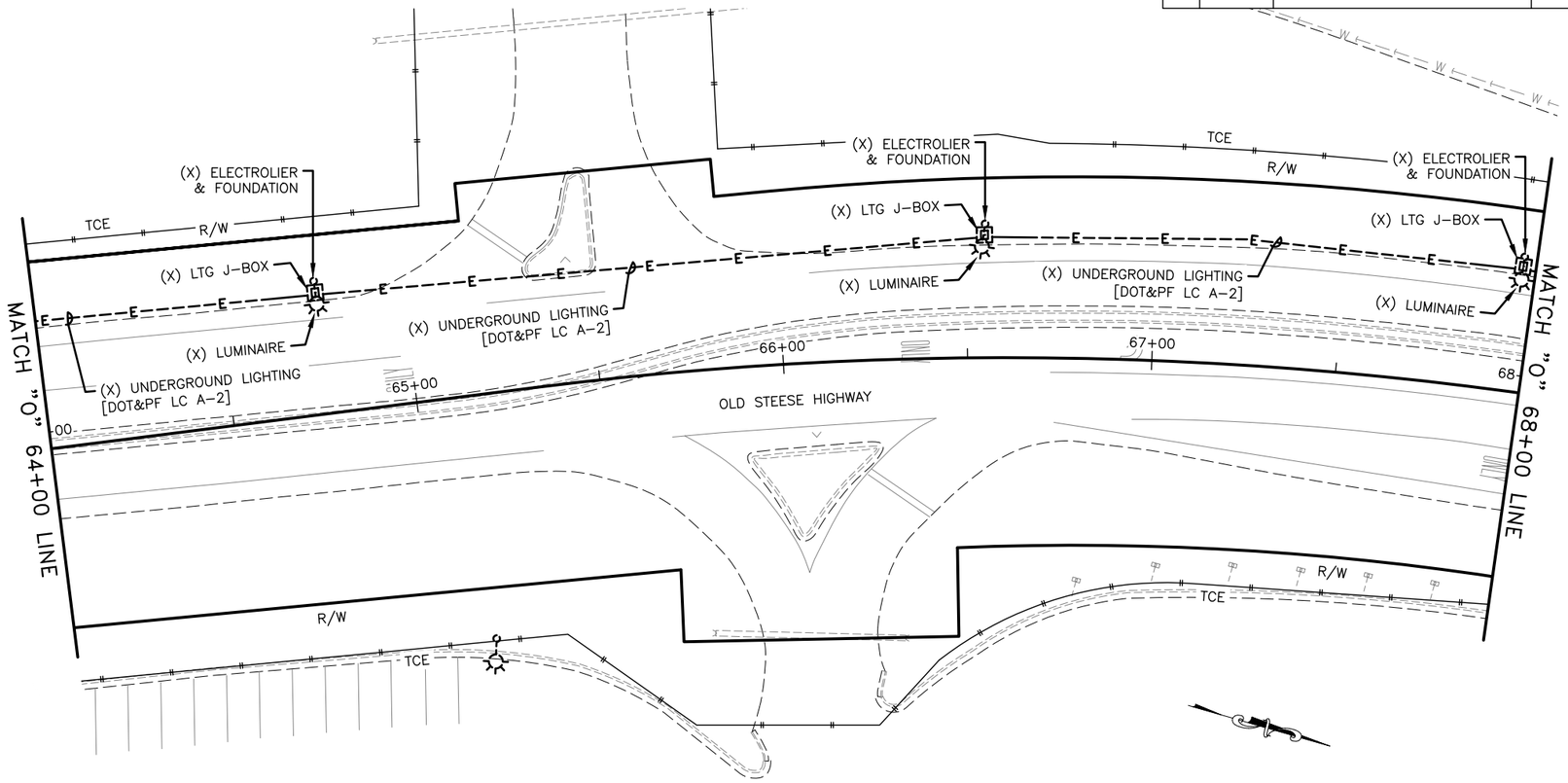
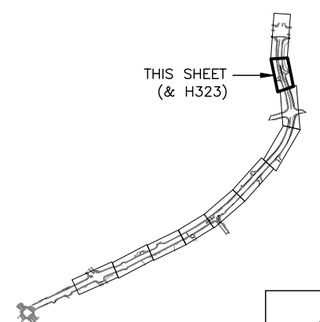
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H313	H329



LIGHTING DEMOLITION – "O" 64+00 TO "O" 68+00

= 20FT



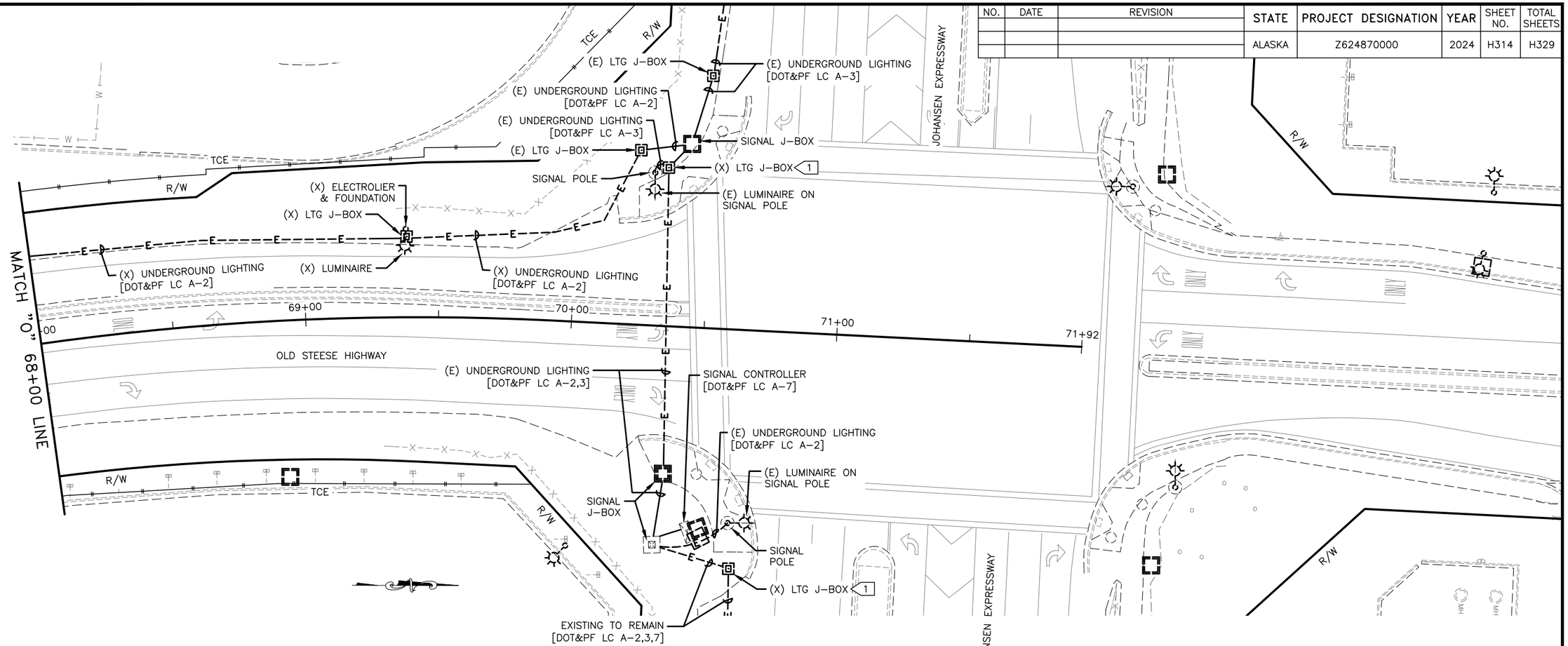
KEYPLAN

LIGHTING DEMOLITION
9 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\624870_H_LTG-H313_1 Wed, Oct/12/22 03:43pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H314	H329

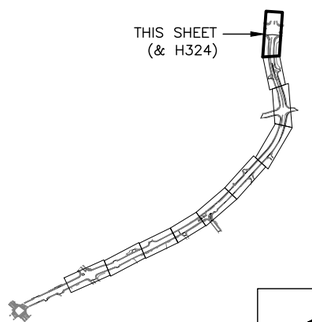


LIGHTING DEMOLITION – "O" 68+00 TO "O" 70+75

= 20FT

GENERAL SHEET NOTES

1. DOT&PF LC 'A' IS EXISTING TO REMAIN AND IS MOUNTED ON THE SW CORNER OF THE JOHANSEN EXPRESSWAY AND STEESE EXPRESSWAY INTERSECTION.



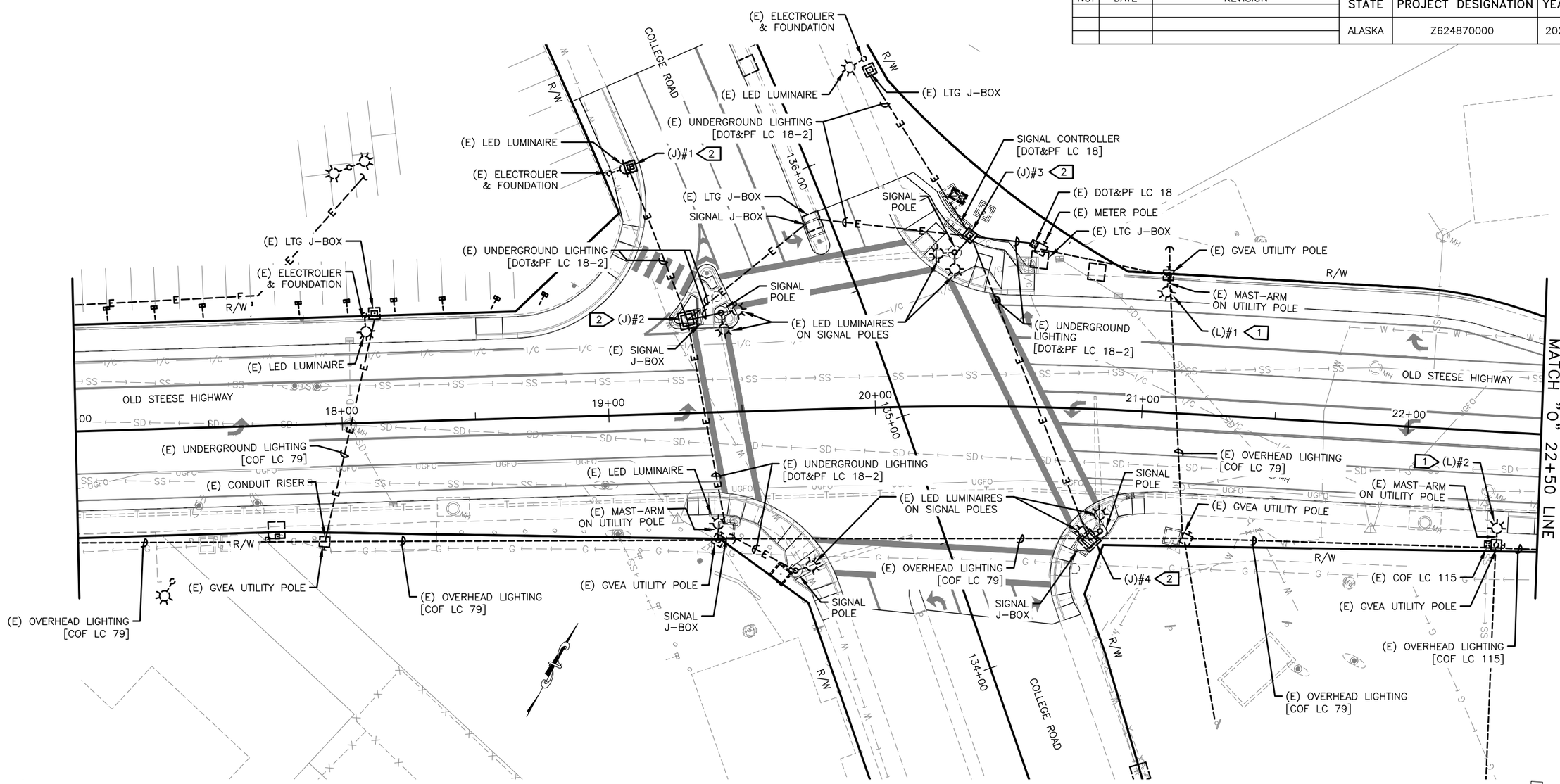
KEYPLAN

LIGHTING DEMOLITION
10 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H314_1 Wed, Oct/12/22 03:43pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H315	H329



LIGHTING RENOVATION – "O" 17+00 TO "O" 22+50

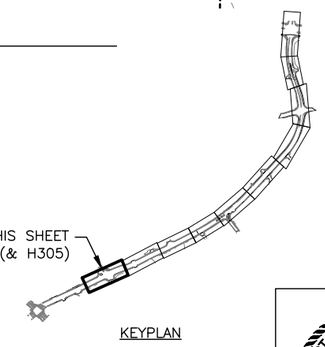
= 20FT

GENERAL SHEET NOTES

1. COF LC 79 IS EXISTING TO REMAIN AND IS MOUNTED ON A GVEA UTILITY POLE AT APPROXIMATELY "O" 15+23.9 (38.5 RT).

SPECIFIC SHEET NOTES

1. PROVIDE NEW LUMINAIRE AND ATTACH TO EXISTING MAST-ARM AND CIRCUITING. PROVIDE LUMINAIRE ATTACHMENT ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION.
2. PROVIDE NEW JUNCTION BOX AT OR NEAR DEMOLISHED JUNCTION BOX LOCATION. THE NEW JUNCTION BOX SHALL BE ADJUSTED TO MATCH RECONFIGURED SURROUNDING GRADE ELEVATION. PROTECT BURIED LIGHTING CIRCUIT DURING JUNCTION BOX INSTALLATION.



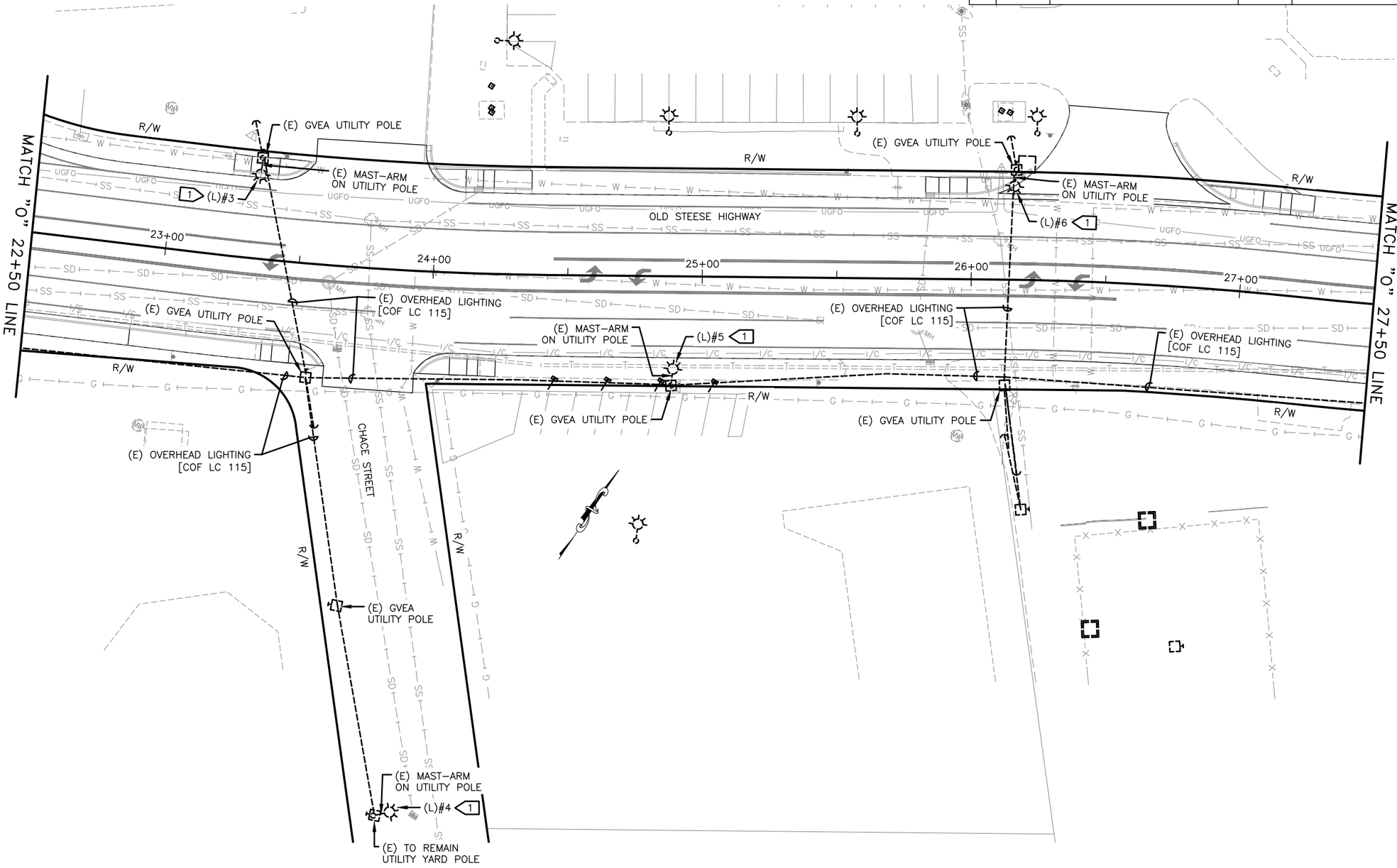
KEYPLAN

LIGHTING RENOVATION
1 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H315_2 Wed, Oct/12/22 03:43pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H316	H329

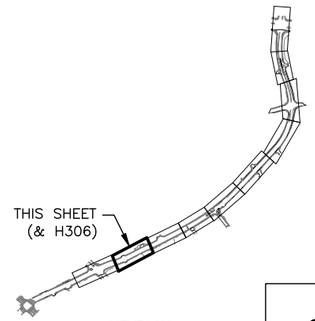


LIGHTING RENOVATION – "O" 22+50 TO "O" 27+50

= 20FT

SPECIFIC SHEET NOTES

1 PROVIDE NEW LUMINAIRE AND ATTACH TO EXISTING MAST-ARM AND CIRCUITING. PROVIDE LUMINAIRE ATTACHMENT ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION.



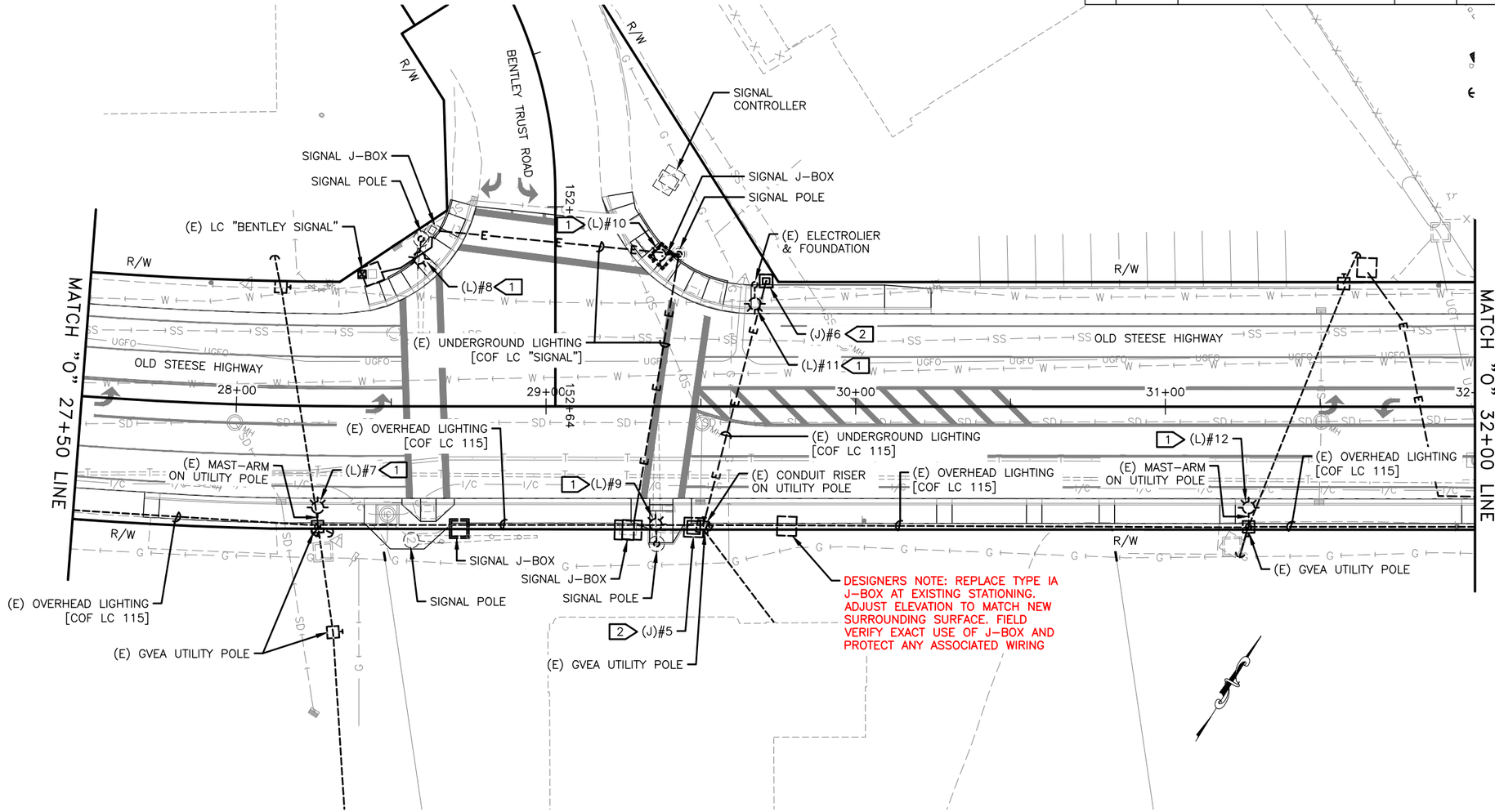
KEYPLAN

LIGHTING RENOVATION
2 OF 10

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H316_2 Wed, Oct/12/22 03:44pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H317	H329

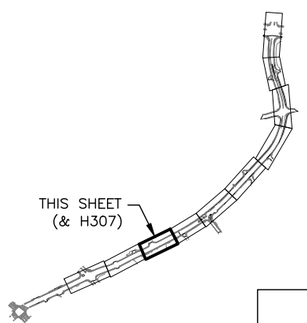


LIGHTING RENOVATION – "O" 27+50 TO "O" 32+00

⟷ = 20FT

SPECIFIC SHEET NOTES

1. PROVIDE NEW LUMINAIRE AND ATTACH TO EXISTING MAST–ARM AND CIRCUITING. PROVIDE LUMINAIRE ATTACHMENT ACCESSORIES AS NECESSARY FOR A COMPLETE INSTALLATION.
2. PROVIDE NEW JUNCTION BOX AT OR NEAR DEMOLISHED JUNCTION BOX LOCATION. THE NEW JUNCTION BOX SHALL BE ADJUSTED TO MATCH RECONFIGURED SURROUNDING GRADE ELEVATION. PROTECT BURIED LIGHTING CIRCUIT DURING JUNCTION BOX INSTALLATION.



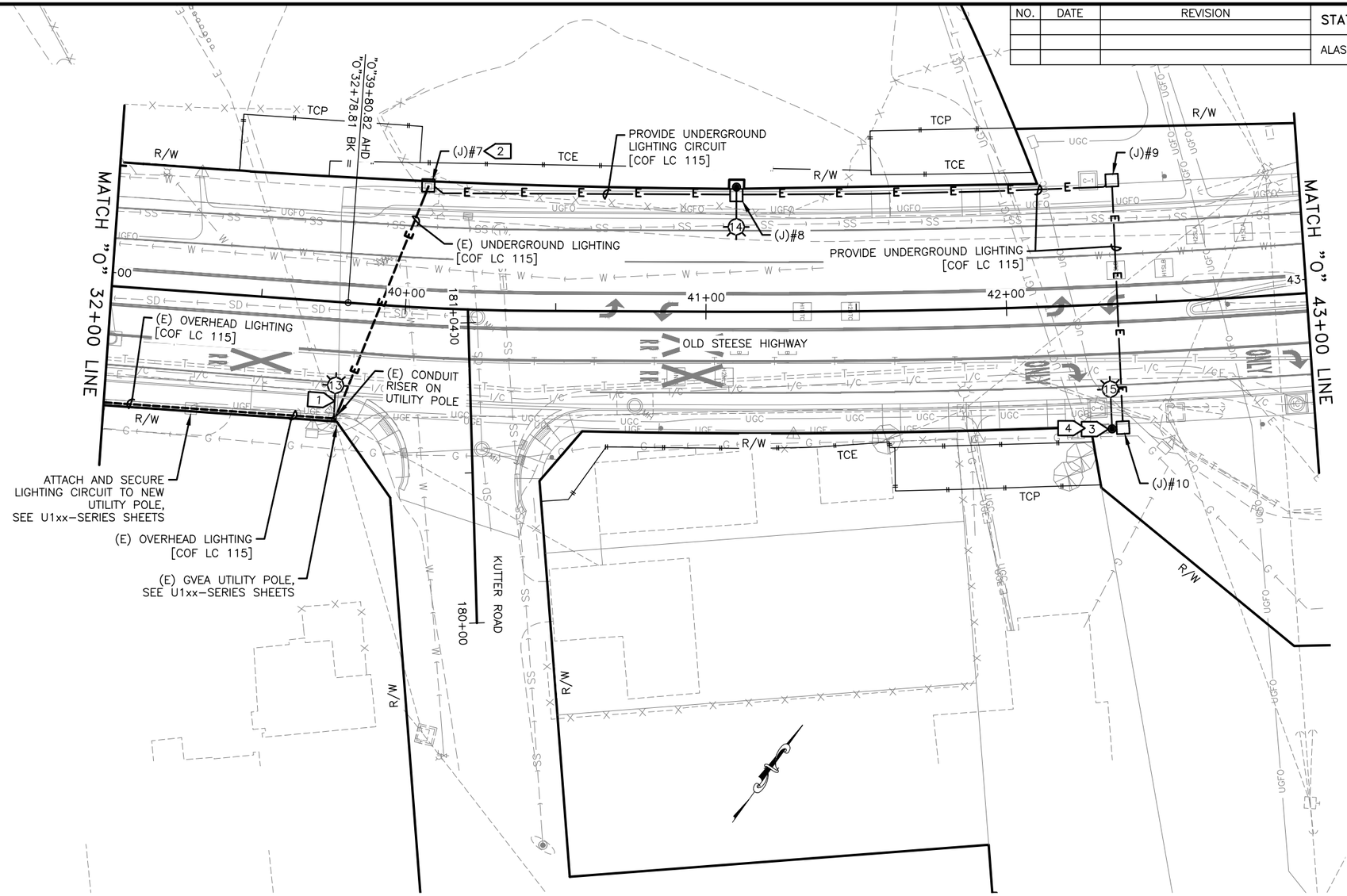
KEYPLAN

LIGHTING RENOVATION
3 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452–1241
P:\921302\E\Drawings\62487_H_LTG–H317_2 Wed, Oct/12/22 03:44pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H318	H329

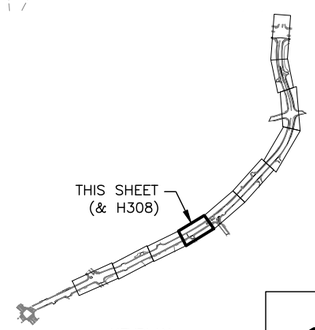


LIGHTING RENOVATION – "O" 32+00 TO "O" 43+00

= 20FT

SPECIFIC SHEET NOTES

1. PROVIDE NEW 8-FT MAST ARM AND ATTACH TO EXISTING UTILITY POLE. SPLICE AND EXTEND LIGHTING CIRCUIT TO NEW LUMINAIRE.
2. PROVIDE NEW JUNCTION BOX AT OR NEAR DEMOLISHED JUNCTION BOX LOCATION. THE NEW JUNCTION BOX SHALL BE ADJUSTED TO MATCH NEW GRADE ELEVATION BEHIND THE RECONFIGURED SIDEWALK. ENSURE JUNCTION BOX IS LOCATED WITHIN DOT&PF ROW. MOVE JUNCTION BOX INTO SIDEWALK IF SPACE DOES NOT ALLOW IT TO BE INSTALLED BEHIND THE SIDEWALK. PROTECT BURIED LIGHTING CIRCUIT AND MODIFY AS NECESSARY TO ACCOMMODATE THE JUNCTION BOX INSTALLATION. PROVIDE WATERTIGHT SPLICE AND EXTEND CIRCUITING TO NEW ELECTROLIER.
3. PER AVAILABLE SURVEY, ELECTROLIER IS IN CLOSE PROXIMITY TO EXISTING BURIED UTILITIES. THE CONTRACTOR SHALL PROTECT ADJACENT BURIED UTILITIES WHEN EXCAVATING FOR THE ELECTROLIER FOUNDATION. IF UNAVOIDABLE CONFLICT EXISTS, CONTACT PROJECT ENGINEER FOR RELOCATION OF ELECTROLIER.
4. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.



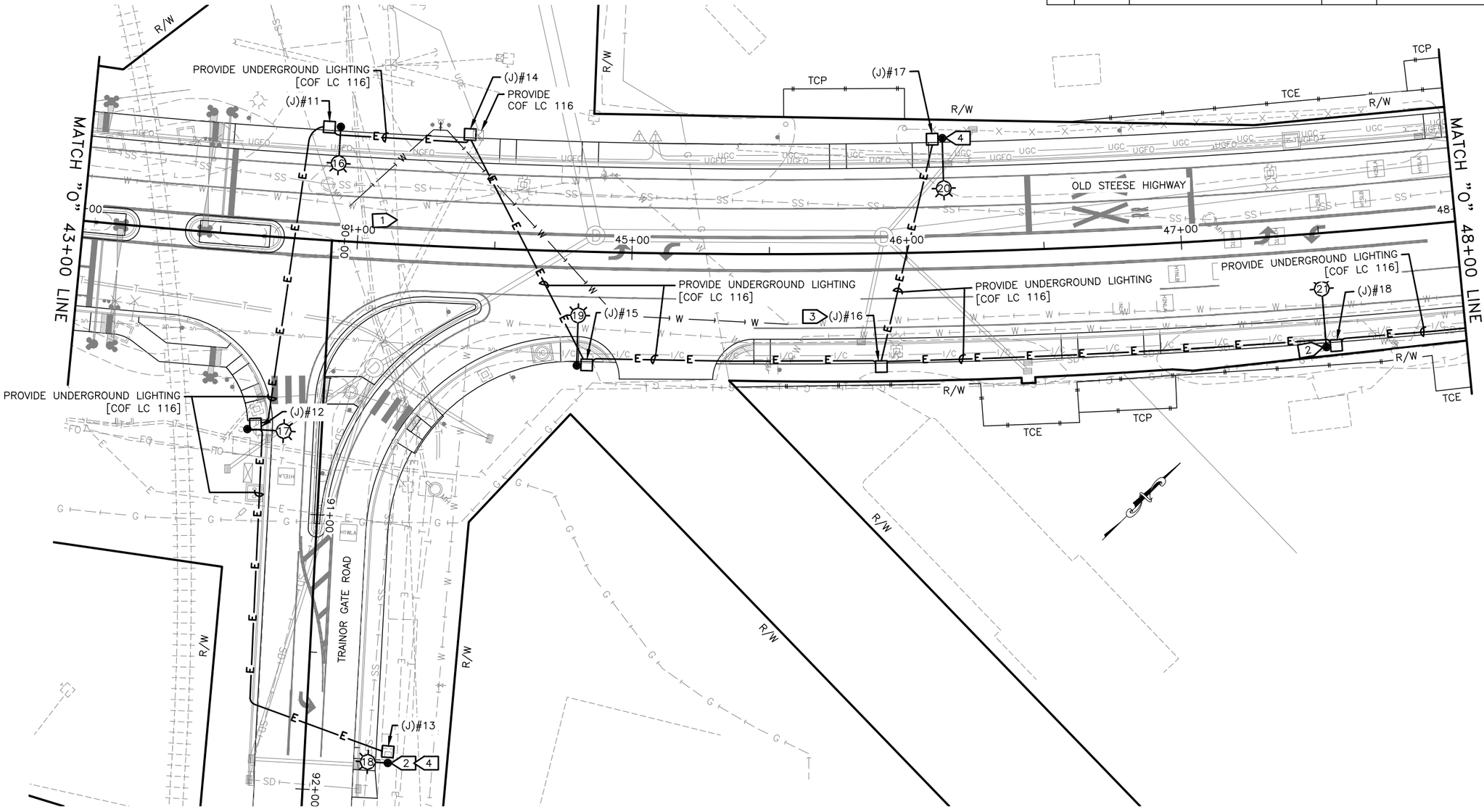
KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING RENOVATION
4 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H318_1 Wed, Oct/12/22 03:45pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H319	H329

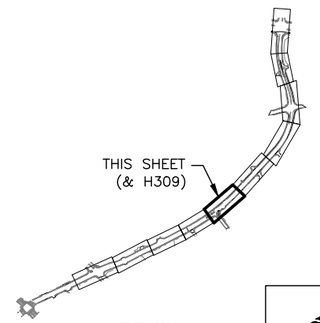


LIGHTING RENOVATION – "O" 43+00 TO "O" 48+00

⟷ = 20FT

SPECIFIC SHEET NOTES

1. ENSURE SEPARATION DISTANCE AROUND OVERHEAD ELECTRICAL LINES IS MAINTAINED. SEE ELECTRICAL NOTES 20 & 21 ON SHEET H301 FOR FURTHER INFORMATION.
2. PER AVAILABLE SURVEY, ELECTROLIER IS IN CLOSE PROXIMITY TO EXISTING BURIED UTILITIES. THE CONTRACTOR SHALL PROTECT ADJACENT BURIED UTILITIES WHEN EXCAVATING FOR THE ELECTROLIER FOUNDATION. IF UNAVOIDABLE CONFLICT EXISTS, CONTACT PROJECT ENGINEER FOR RELOCATION OF ELECTROLIER.
3. PROVIDE PERMANENT SPLICE KIT WITHIN JUNCTION BOX FOR SPLICING CABLE TO JUNCTION BOX AND ELECTROLIER ON OPPOSITE SIDE OF ROAD.
4. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.



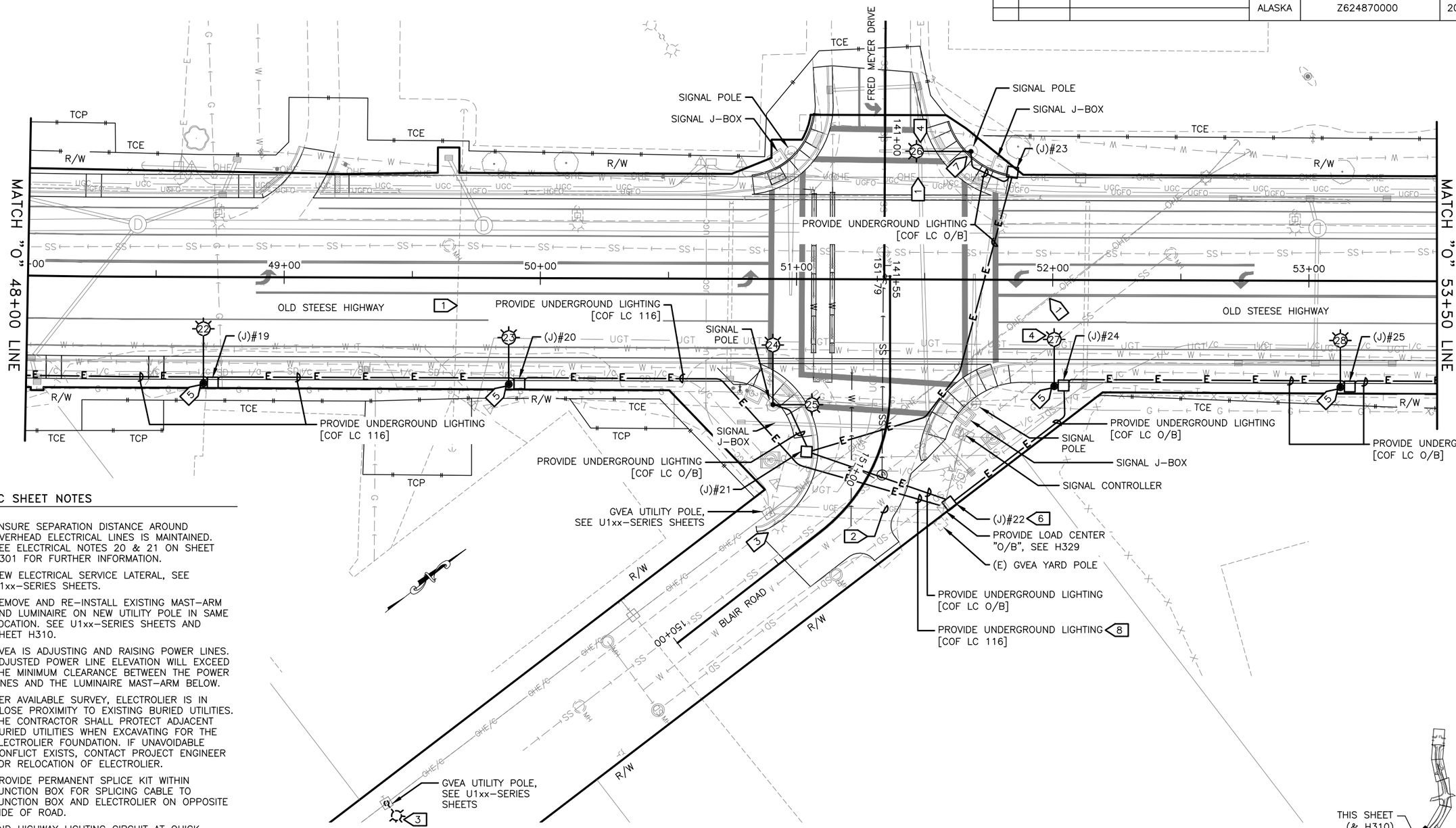
KEYPLAN

LIGHTING RENOVATION
5 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12345
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H319_1 Wed, Oct/12/22 03:45pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H320	H329

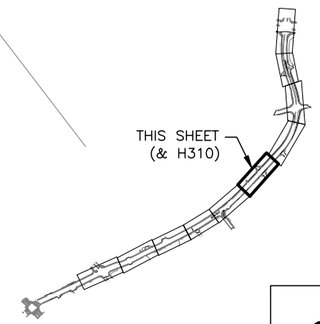


SPECIFIC SHEET NOTES

1. ENSURE SEPARATION DISTANCE AROUND OVERHEAD ELECTRICAL LINES IS MAINTAINED. SEE ELECTRICAL NOTES 20 & 21 ON SHEET H301 FOR FURTHER INFORMATION.
2. NEW ELECTRICAL SERVICE LATERAL, SEE U1xx-SERIES SHEETS.
3. REMOVE AND RE-INSTALL EXISTING MAST-ARM AND LUMINAIRE ON NEW UTILITY POLE IN SAME LOCATION. SEE U1xx-SERIES SHEETS AND SHEET H310.
4. GVEA IS ADJUSTING AND RAISING POWER LINES. ADJUSTED POWER LINE ELEVATION WILL EXCEED THE MINIMUM CLEARANCE BETWEEN THE POWER LINES AND THE LUMINAIRE MAST-ARM BELOW.
5. PER AVAILABLE SURVEY, ELECTROLIER IS IN CLOSE PROXIMITY TO EXISTING BURIED UTILITIES. THE CONTRACTOR SHALL PROTECT ADJACENT BURIED UTILITIES WHEN EXCAVATING FOR THE ELECTROLIER FOUNDATION. IF UNAVOIDABLE CONFLICT EXISTS, CONTACT PROJECT ENGINEER FOR RELOCATION OF ELECTROLIER.
6. PROVIDE PERMANENT SPLICE KIT WITHIN JUNCTION BOX FOR SPLICING CABLE TO JUNCTION BOX AND ELECTROLIER ON OPPOSITE SIDE OF ROAD.
7. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.
8. END HIGHWAY LIGHTING CIRCUIT AT TERMINAL BLOCK IN COF LC 0/B, SEE H328.

LIGHTING RENOVATION – "O" 48+00 TO "O" 53+50

= 20FT



KEYPLAN

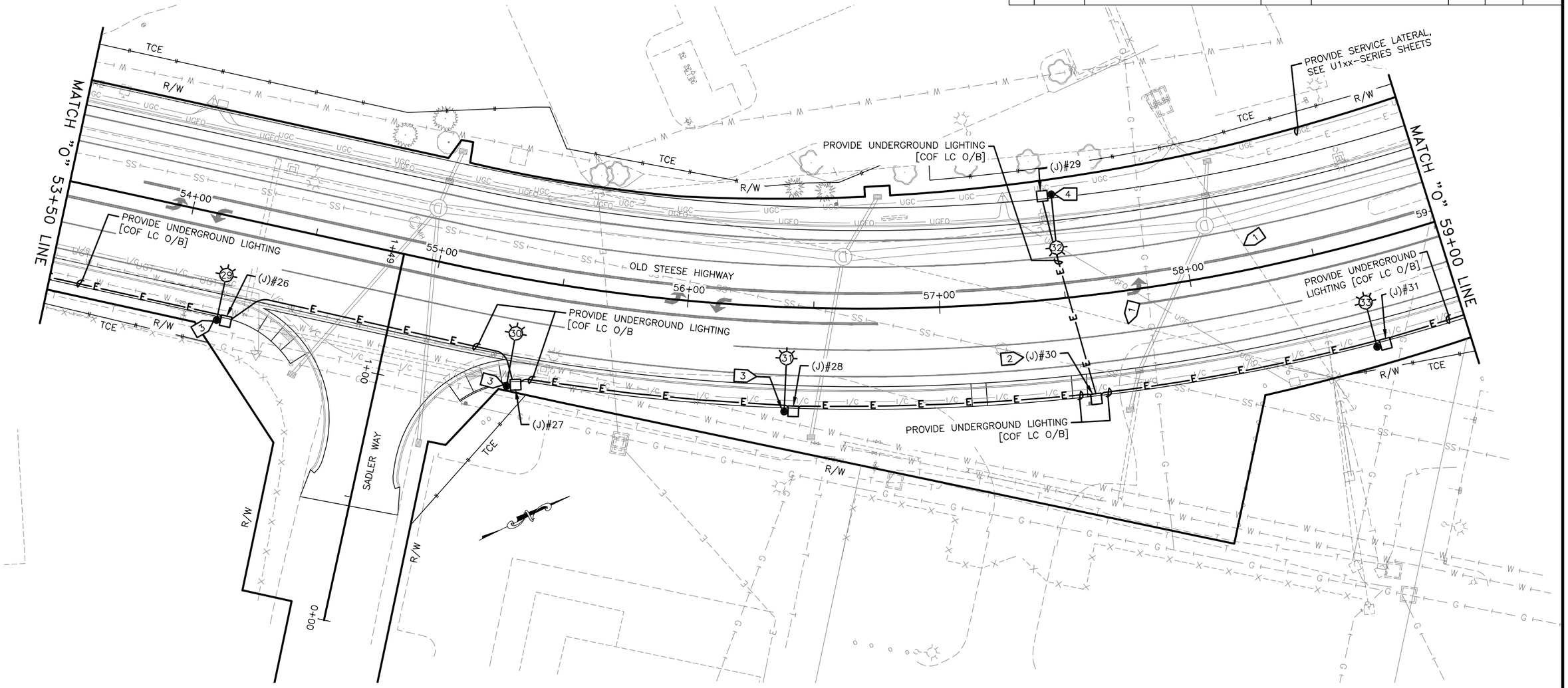
PRELIMINARY PS&E

STATE OF ALASKA
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING RENOVATION
6 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\92130?\E\Drawings\62487_H_LTG-H320_1 Wed, Oct/12/22 03:46pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H321	H329

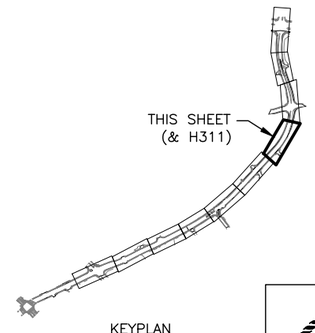


LIGHTING RENOVATION – "O" 53+50 TO "O" 59+00

= 20FT

SPECIFIC SHEET NOTES

1. ENSURE SEPARATION DISTANCE AROUND OVERHEAD ELECTRICAL LINES IS MAINTAINED. SEE ELECTRICAL NOTES 20 & 21 ON SHEET H301 FOR FURTHER INFORMATION.
2. PROVIDE PERMANENT SPLICE KIT WITHIN JUNCTION BOX FOR SPLICING CABLE TO JUNCTION BOX AND ELECTROLIER ON OPPOSITE SIDE OF ROAD.
3. PER AVAILABLE SURVEY, ELECTROLIER IS IN CLOSE PROXIMITY TO EXISTING BURIED UTILITIES. THE CONTRACTOR SHALL PROTECT ADJACENT BURIED UTILITIES WHEN EXCAVATING FOR THE ELECTROLIER FOUNDATION. IF UNAVOIDABLE CONFLICT EXISTS, CONTACT PROJECT ENGINEER FOR RELOCATION OF ELECTROLIER.
4. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.



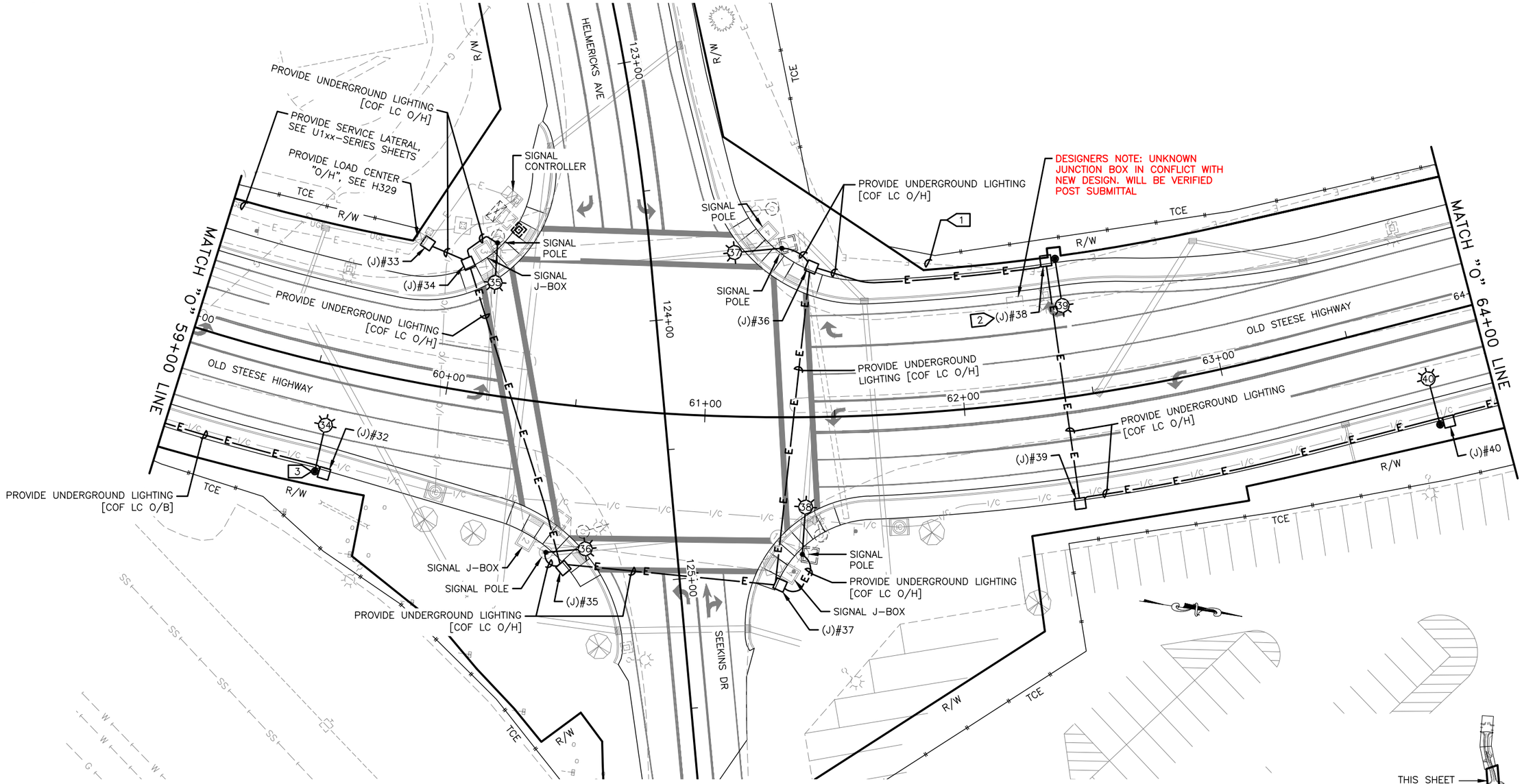
KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

LIGHTING RENOVATION
7 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H321_1 Wed, Oct/12/22 03:46pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H322	H329

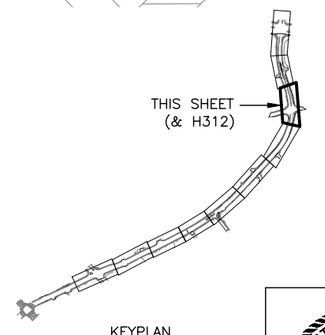


LIGHTING RENOVATION – "O" 59+00 TO "O" 64+00

⊢——⊣ = 20FT

SPECIFIC SHEET NOTES

1. UNIDENTIFIED BURIED ELECTRICAL LINE, ASSUMED PROPERTY OF WALMART. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.
2. AVAILABLE SPACE WITHIN ROW BEHIND THE SIDEWALK IS VERY LIMITED. IF FIELD CONDITIONS PREVENT THE JUNCTION BOX FROM BEING LOCATED BEHIND THE SIDEWALK, THEN THE CONTRACTOR MAY RELOCATE JUNCTION BOX TO A MORE SUITABLE LOCATION. THE JUNCTION BOX MAY BE SHIFTED UP TO 10FT FROM THE ELECTROLIER AND BE INSTALLED IN THE SIDEWALK IF NECESSARY.
3. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.



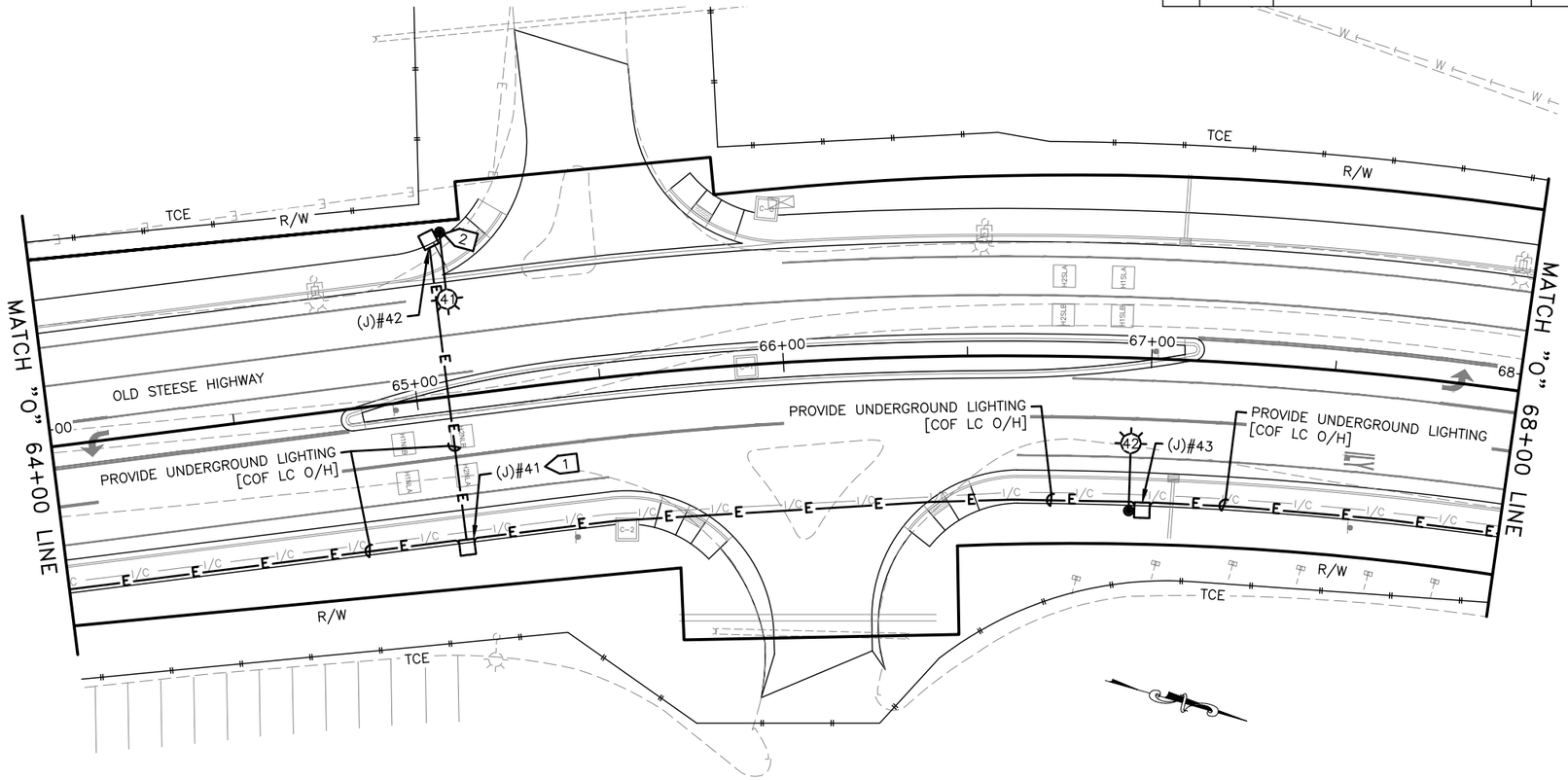
KEYPLAN

LIGHTING RENOVATION
8 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H322_1 Wed, Oct/12/22 03:47pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H323	H329

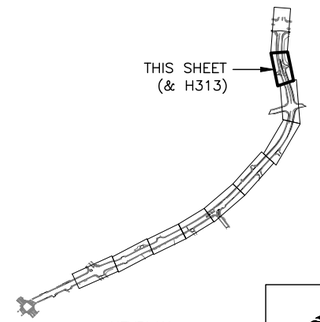


LIGHTING RENOVATION – "O" 64+00 TO "O" 68+00

= 20FT

SPECIFIC SHEET NOTES

1. PROVIDE PERMANENT SPLICE KIT WITHIN JUNCTION BOX FOR SPLICING CABLE TO JUNCTION BOX AND ELECTROLIER ON OPPOSITE SIDE OF ROAD.
2. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.



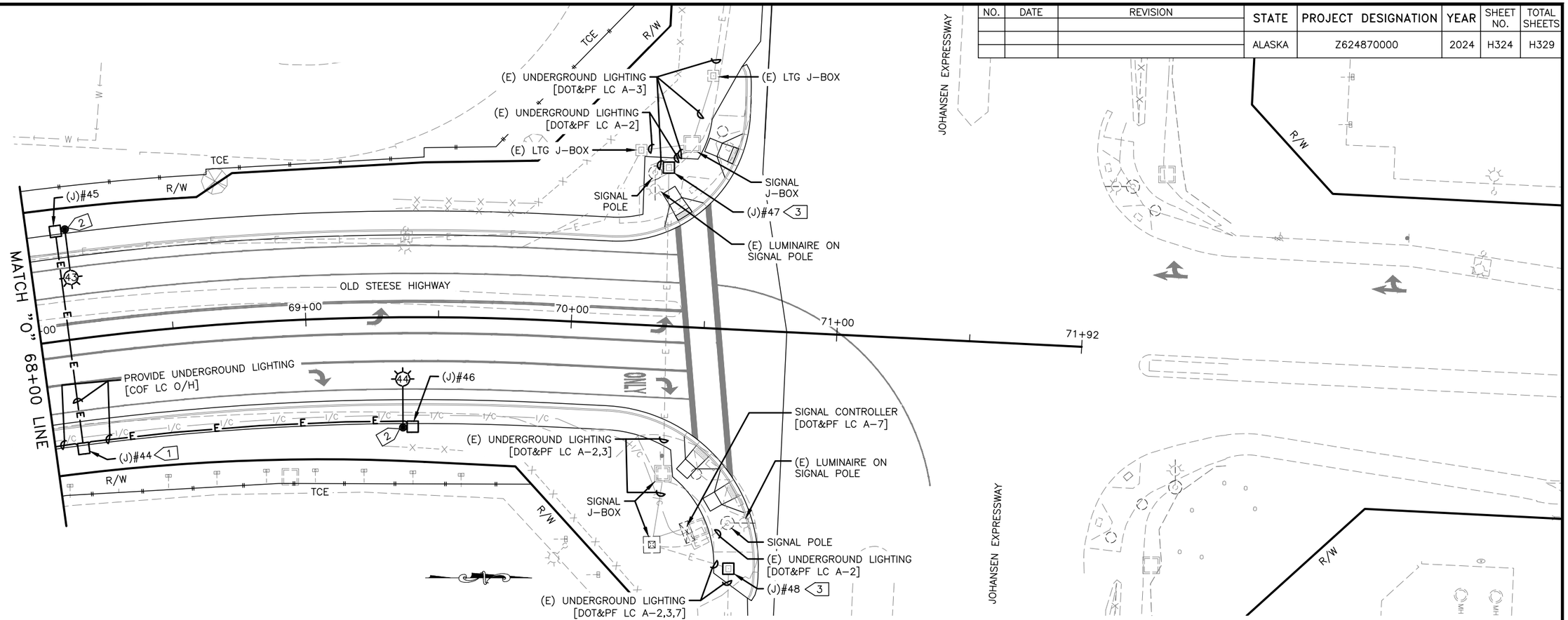
KEYPLAN

LIGHTING RENOVATION
9 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H323_1 Wed, Oct/12/22 03:47pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H324	H329



LIGHTING RENOVATION – "O" 68+00 TO "O" 70+75

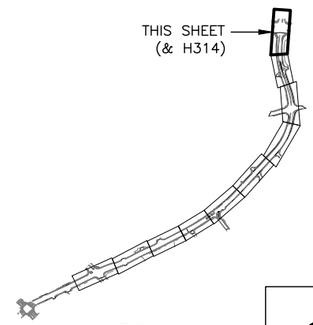
⊢——⊣ = 20FT

GENERAL SHEET NOTES

1. DOT&PF LC 'A' IS EXISTING TO REMAIN, AND IS MOUNTED ON THE SW CORNER OF THE JOHANSEN EXPRESSWAY AND STEESE EXPRESSWAY INTERSECTION.

SPECIFIC SHEET NOTES

1. PROVIDE PERMANENT SPLICE KIT WITHIN JUNCTION BOX FOR SPLICING CABLE TO JUNCTION BOX AND ELECTROLIER ON OPPOSITE SIDE OF ROAD.
2. END HIGHWAY LIGHTING CIRCUIT AT QUICK DISCONNECT IN POLE HANDHOLE.
3. PROVIDE NEW JUNCTION BOX AT OR NEAR DEMOLISHED JUNCTION BOX LOCATION. THE NEW JUNCTION BOX SHALL BE ADJUSTED TO MATCH RECONFIGURED SURROUNDING GRADE ELEVATION. PROTECT BURIED LIGHTING CIRCUIT DURING JUNCTION BOX INSTALLATION.



KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER
No. EE12945

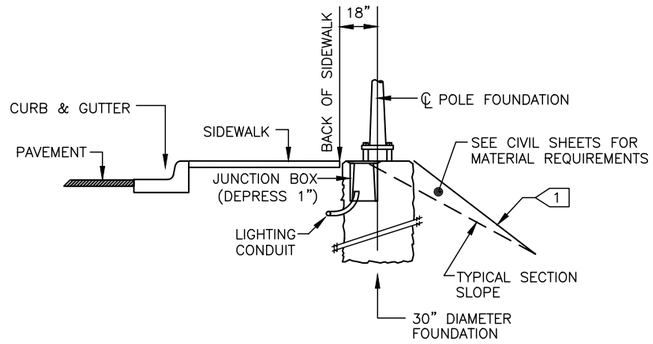
LIGHTING RENOVATION
10 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H324_1 Wed, Oct/12/22 03:47pm

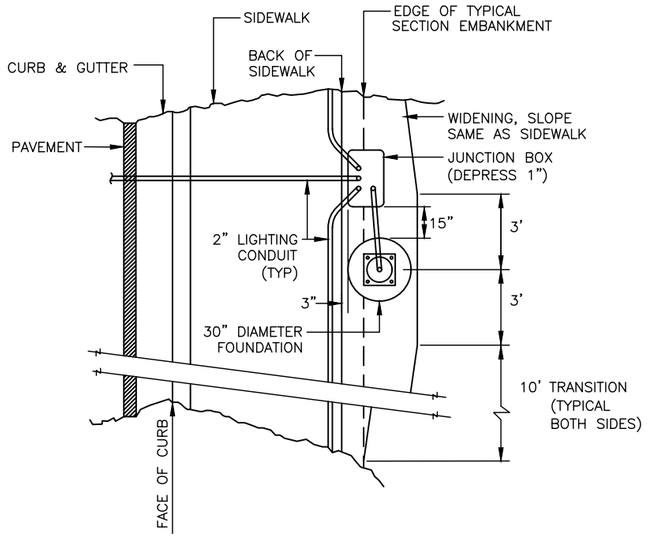
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H325	H329

LIGHT POLE WIDENING DETAIL; "A"

(USE WHEN POLE IS LOCATED BACK OF NEW SIDEWALK)



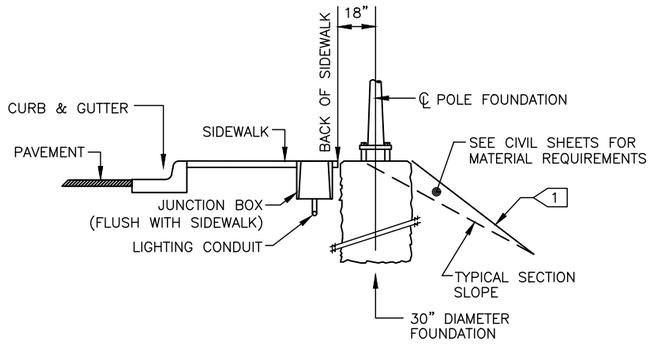
ELEVATION VIEW



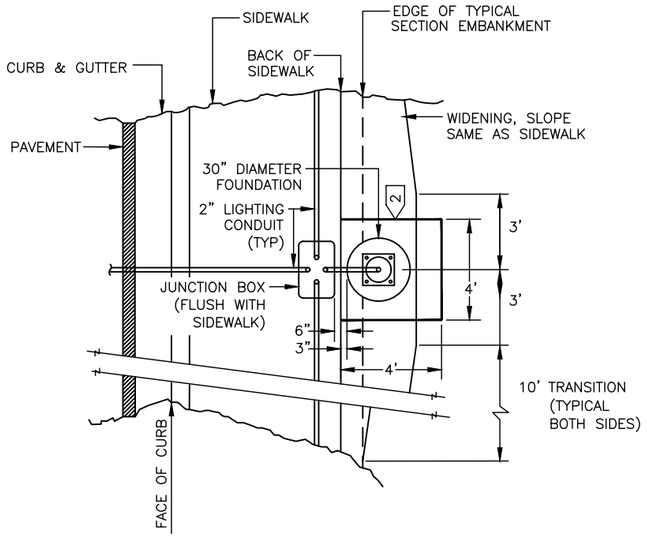
PLAN VIEW

LIGHT POLE WIDENING DETAIL; "A2" (MODIFIED FROM "A")

(USE WHEN POLE IS LOCATED BACK OF SIDEWALK & ROW RESTRICTIONS EXIST)



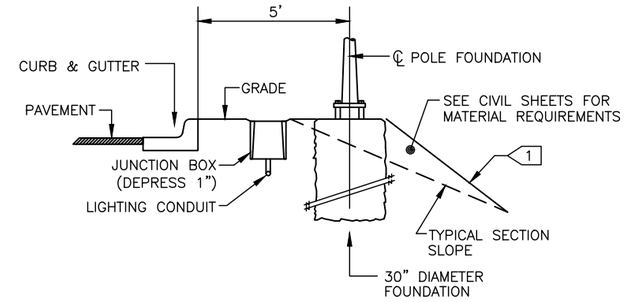
ELEVATION VIEW



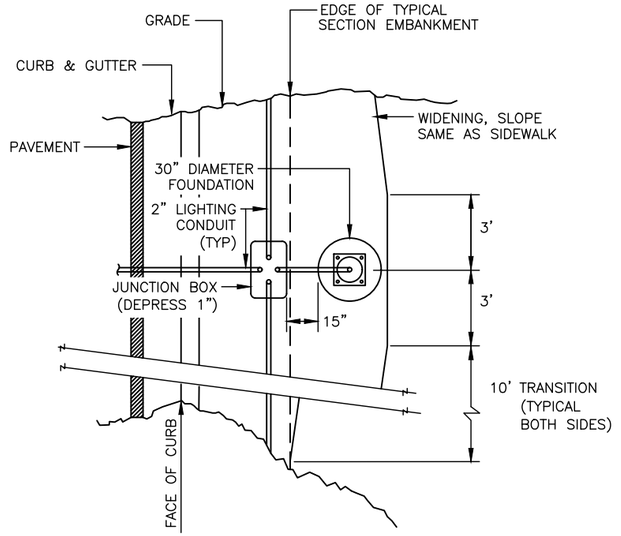
PLAN VIEW

LIGHT POLE WIDENING DETAIL "B"

(USE WHEN POLE IS LOCATED BACK OF CURB)



ELEVATION VIEW



PLAN VIEW

SPECIFIC SHEET NOTES

1. GRADE SLOPE FROM BACK OF FOUNDATION TO TYPICAL SECTION SLOPE CATCH POINT OR DITCH LINE EXCEPT THAT THE SLOPE SHALL BE NO STEEPER THAN 1–1/2 : 1.
2. PROPOSED ROW FROM BACK OF SIDEWALK.

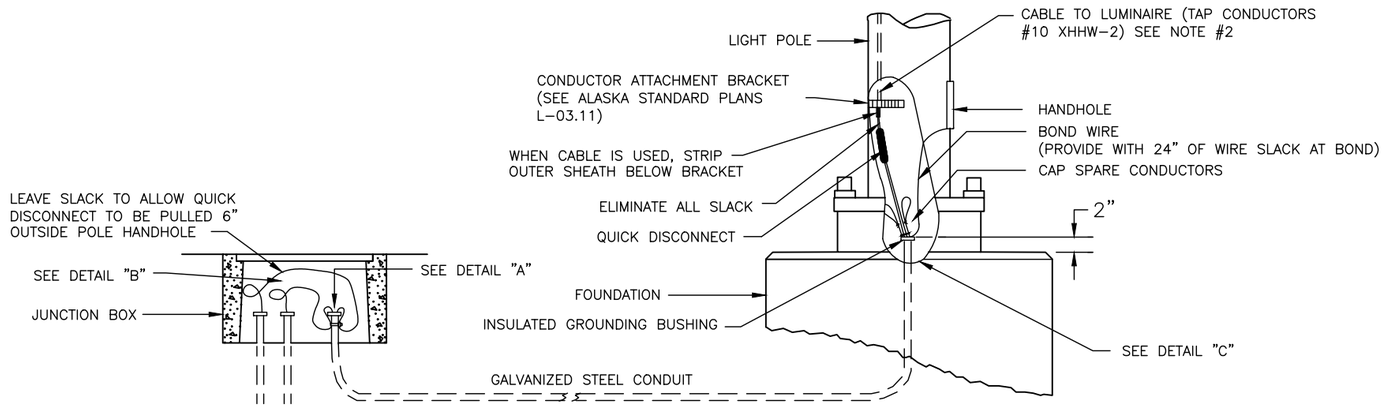
ELECTROLIER DETAILS
1 OF 2

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

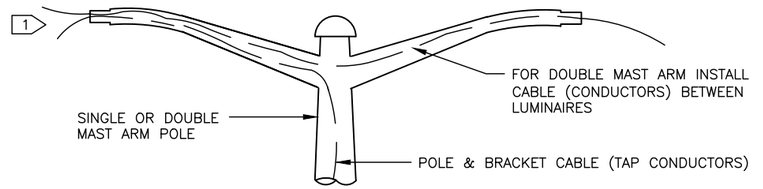
PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_H_LTG-H325 Wed, Oct/12/22 03:47pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H326	H329

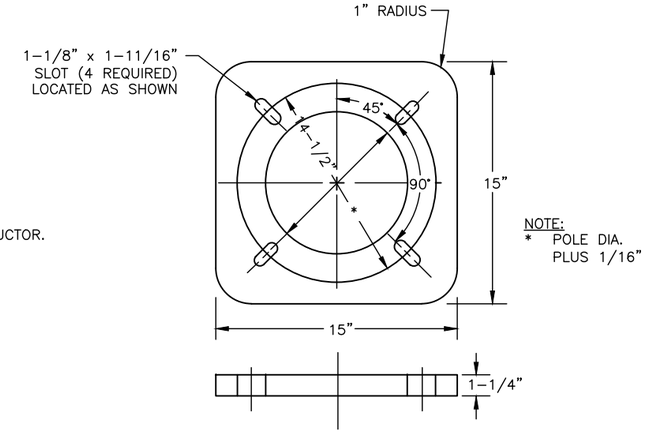
LIGHTING SYSTEM POLE AND JUNCTION BOX WIRING DETAILS



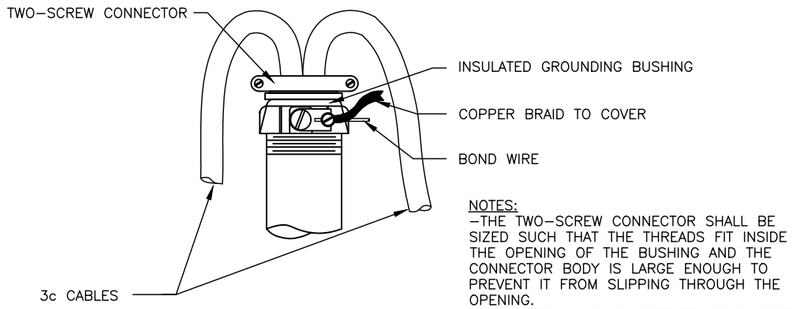
LIGHT STANDARD MAST ARM WIRING DETAIL



LIGHT POLE BASE FLANGE DETAIL

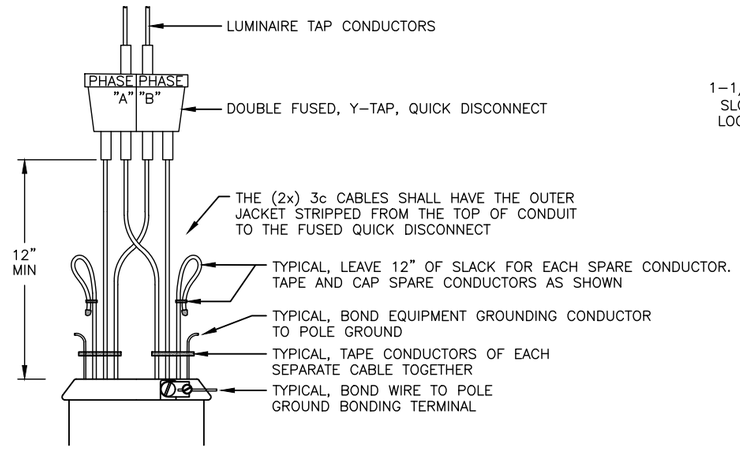


NOTE:
* POLE DIA. PLUS 1/16"

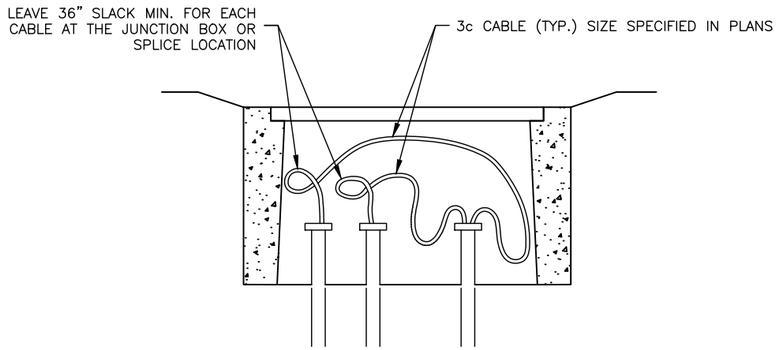


NOTES:
-THE TWO-SCREW CONNECTOR SHALL BE SIZED SUCH THAT THE THREADS FIT INSIDE THE OPENING OF THE BUSHING AND THE CONNECTOR BODY IS LARGE ENOUGH TO PREVENT IT FROM SLIPPING THROUGH THE OPENING.
-ELIMINATE ALL SLACK BETWEEN TWO-SCREW CONNECTOR AND CONDUCTOR ATTACHMENT BRACKET IN LIGHT POLE

DETAIL A



DETAIL C



DETAIL B

GENERAL SHEET NOTES

1. LABEL ALL CABLES AND CONDUCTORS IN POLE BASE AND JUNCTION BOX.
2. LEAVE ENOUGH SLACK ABOVE THE CONDUCTOR ATTACHMENT BRACKET TO ALLOW THE QUICK DISCONNECT TO BE PULLED 6" OUTSIDE OF HANDHOLE.
3. NOT ALL GROUNDING CONDUCTORS ARE SHOWN IN THESE DETAILS, SEE SECTION 660-3.06.

SPECIFIC SHEET NOTES

1 INSTALL 2"x1" REDUCING WASHER AND 1" CONNECTOR TO SECURE CONDUCTORS AT THE END OF THE MAST ARM

ELECTROLIER DETAILS
2 OF 2

STATE OF ALASKA
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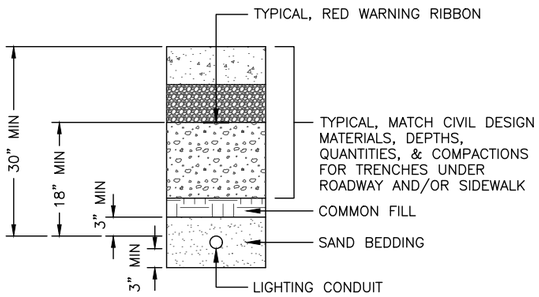
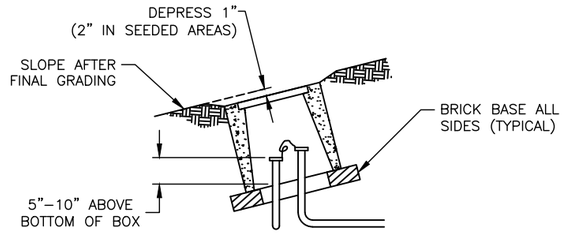
			ALASKA	Z624870000	2024	H327	H329

TYPICAL LIGHTING TRENCH DETAIL (UNDER ROADWAY & SIDEWALK)

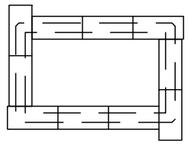


TYPE IA JUNCTION BOX INSTALLATION ON SLOPE



TYPE IA JUNCTION BOX

BRICK BASE – TYPE IA JUNCTION BOX



GENERAL SHEET NOTES

1. TYPICAL, SEE H301 FOR HIGHWAY LIGHTING CONDUIT SIZE AND NUMBER OF CABLES.
2. AS NECESSARY, BURY CONDUIT(S) DEEPER TO AVOID CONFLICTS WITH OTHER BURIED UTILITIES.
3. IN GENERAL, LIGHTING SHALL BE SEPARATED BY 1–FT MINIMUM FROM UTILITIES OR CONDUITS FOR OTHER SYSTEMS. WITH PRIOR APPROVAL BY THE PROJECT ENGINEER, SEPARATION DISTANCE MAY BE REDUCED IN LOCATIONS WITH LIMITED SPACE.
4. OTHER ELECTRICAL TYPE ITEMS WILL BE TRENCHED ALONG THE PROJECT CORRIDOR, SUCH AS POWER, TELECOMMUNICATIONS, SIGNALS, INTERCONNECT FIBER OPTIC, AND OTHERS. REFER TO POWER AND TELECOMMUNICATIONS SHEETS, INTERCONNECT SHEETS, OR OTHER SHEETS AS APPLICABLE FOR THE SPECIFIC ITEM. THE DETAILS ON THIS SHEET DO NOT APPLY TO THOSE SPECIFIC ITEMS.
5. REFER TO EACH RESPECTIVE UTILITY DRAWING SET FOR FURTHER INFORMATION REGARDING LOCATIONS WHERE SEWER, WATER, GAS, & STORM DRAIN ARE EXISTING TO REMAIN, BEING MODIFIED, OR BEING ADDED ALONG THE PROJECT CORRIDOR. THE HIGHWAY LIGHTING AND ASSOCIATED TRENCHES SHALL BE COORDINATED WITH OTHER UTILITIES TO AVOID CONFLICTS.
6. THE CONTRACTOR SHALL PROVIDE ALL TRENCHING REQUIRED FOR LIGHTING CONDUITS. TRENCHING SHALL BE PAID UNDER THE RESPECTIVE HIGHWAY LIGHTING PAY ITEM. IN SOME INSTANCES, LIGHTING MAY BE ROUTED WITHIN A JOINT UTILITY TRENCH. JOINT UTILITY TRENCHES SHALL ONLY BE PAID ONCE. THE CONTRACTOR MAY APPLY PAYMENT OF A JOINT UTILITY TRENCH UNDER ANY OF THE PAY ITEMS ASSOCIATED WITH UTILITIES INSTALLED WITHIN THE RESPECTIVE TRENCH.

MISC. LIGHTING DETAILS
1 OF 1

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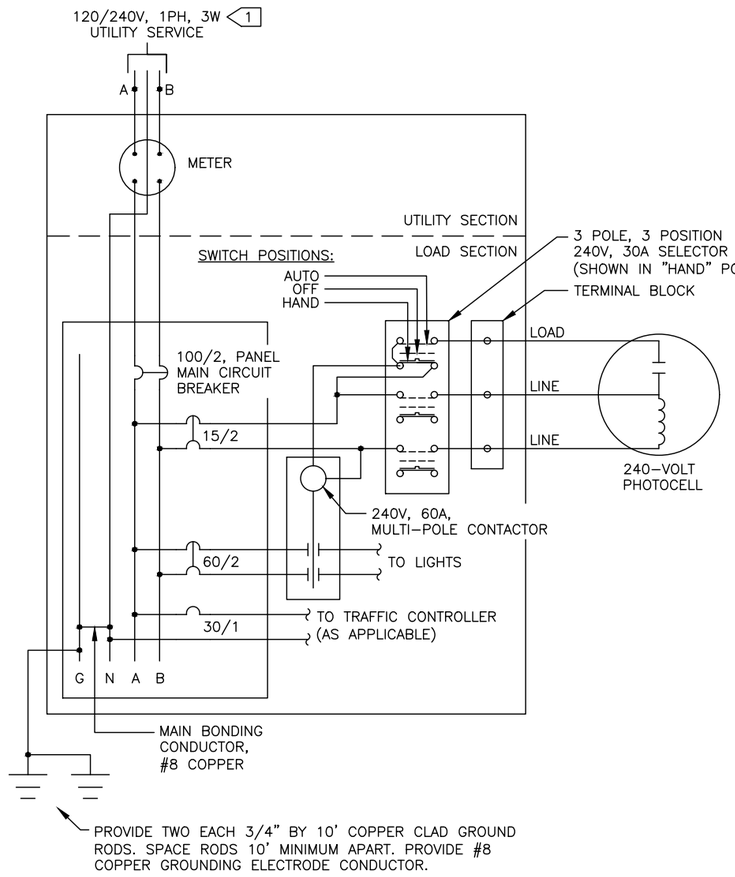
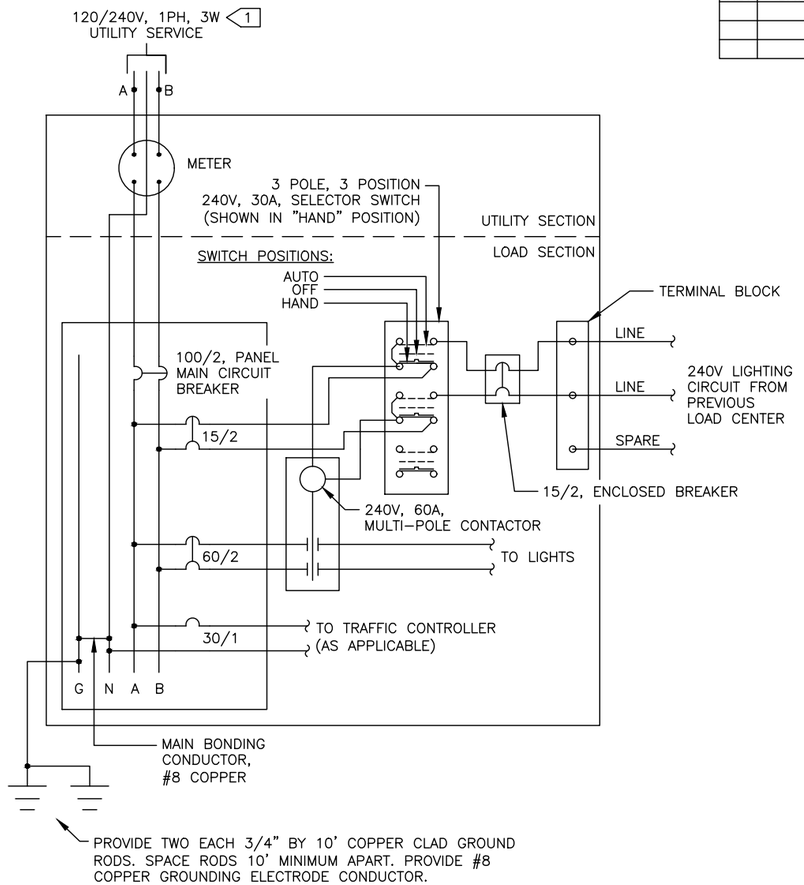
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H328	H329



NEW COF "MASTER PHOTOCELL" LOAD CENTER WIRING DIAGRAM

THIS DETAIL REVISES REQUIREMENTS OF STANDARD PLAN L-25.01



NEW COF "CASCADED" LOAD CENTER WIRING DIAGRAM

THIS DETAIL REVISES REQUIREMENTS OF STANDARD PLAN L-25.01

GENERAL SHEET NOTES

1. REFER TO STANDARD PLAN L-25.01 FOR WIRE SIZES, GENERAL NOTES, ENCLOSURE DETAILS, AND ELEVATION DETAILS.
2. CIRCUITS FOR THE TRAFFIC CONTROLLER SHALL BE UNSWITCHED AND BY-PASS ALL AUTOMATIC CONTROLS.
3. SEE SHEET H329 FOR SUMMARY TABLES AND ADDITIONAL INFORMATION APPLICABLE TO EACH SPECIFIC LOAD CENTER.

SPECIFIC SHEET NOTES

1 SEE U1xx-SERIES SHEETS FOR FURTHER INFORMATION REGARDING UTILITY SERVICE LOCATIONS.

COF LOAD CENTER
DETAILS 1 OF 2

STATE OF ALASKA
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PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	H329	H329

NEW LOAD CENTER "116" SUMMARY						
LOCATION:	OLD STEESE HWY/TRAINOR GATE RD		STATION & OFFSET:	'O' 44+25.6 (41.1 LT)		
VOLTAGE RATING:	120/240 V, SINGLE PHASE		INTERRUPTING RATING:	14,000 AMPS		
MCB RATING:	100 A, TWO-POLE		WIRING DIAGRAM:	"MASTER PHOTOCELL" (SEE H328)		
LOAD CENTER TYPE:	TYPE 1A		CONTROLS:	PHOTOCELL, HOA SWITCH, & CONTACTOR		
CIRCUIT NUMBER	BRANCH CIRCUIT BREAKER RATING	CONTACTOR RATING	CIRCUIT PURPOSE	LOAD (kVA)		
				ϕA	ϕB	TOTAL
116-1	15 AMP, 240V	--	CONTACTOR CONTROL	0.1	0.1	0.2
116-2	60 AMP, 240V	60 AMP	LED LTG - OLD STEESE HWY	0.8	0.8	1.6
116-3	20 AMP, 120V	--	SPARE	--	0	0
116-4	20 AMP, 120V	--	SPARE	--	0	0
			CONNECTED LOAD:	2.3	2.3	4.5
			CONNECTED AMPS:	9.4	9.4	18.8
			DEMAND LOAD (x125%):	2.8	2.8	5.6
			DEMAND AMPS (x125%):	11.8	11.8	23.5

NEW LOAD CENTER "O/B" SUMMARY						
LOCATION:	OLD STEESE HWY/BLAIR RD		STATION & OFFSET:	'O' 51+57.7 (89.3 RT)		
VOLTAGE RATING:	120/240 V, SINGLE PHASE		INTERRUPTING RATING:	14,000 AMPS		
MCB RATING:	100 A, TWO-POLE		WIRING DIAGRAM:	"CASCADED" (SEE H328)		
LOAD CENTER TYPE:	TYPE 1A		LIGHTING CONTROLS:	HOA SWITCH & CONTACTOR		
CIRCUIT NUMBER	BRANCH CIRCUIT BREAKER RATING	CONTACTOR RATING	CIRCUIT PURPOSE	LOAD (kVA)		
				ϕA	ϕB	TOTAL
O/B-1	30 AMP, 120V	--	OLD STEESE/BLAIR SIGNAL	--	2.9	2.9
O/B-2	15 AMP, 240V	--	CONTACTOR CONTROL "HAND"	0.1	0.1	0.2
O/B-3	60 AMP, 240V	60 AMP	LTS - OLD STEESE (TO HELM)	1.0	1.0	2.0
O/B-4	15 AMP, 240V	--	SPARE	0	0	0
			CONNECTED LOAD:	1.1	4.0	5.1
			CONNECTED AMPS:	4.6	16.6	21.3
			DEMAND LOAD (x125%):	1.4	5.0	6.4
			DEMAND AMPS (x125%):	5.8	20.8	26.7

NEW LOAD CENTER "O/H" SUMMARY						
LOCATION:	OLD STEESE HWY/HELMERICKS AVE		STATION & OFFSET:	'O' 59+79.1 (54.6 LT)		
VOLTAGE RATING:	120/240 V, SINGLE PHASE		INTERRUPTING RATING:	14,000 AMPS		
MCB RATING:	100 A, TWO-POLE		WIRING DIAGRAM:	"MASTER PHOTOCELL" (SEE H328)		
LOAD CENTER TYPE:	TYPE 1A		LIGHTING CONTROLS:	PHOTOCELL, HOA SWITCH, & CONTACTOR		
CIRCUIT NUMBER	BRANCH CIRCUIT BREAKER RATING	CONTACTOR RATING	CIRCUIT PURPOSE	LOAD (kVA)		
				ϕA	ϕB	TOTAL
O/H-1	30 AMP, 120V	--	OLD STEESE/HELM. SIGNAL	--	2.9	2.9
O/H-2	15 AMP, 240V	--	CONTACTOR CONTROL "HAND"	0.1	0.1	0.2
O/H-3	60 AMP, 240V	60 AMP	LTS - OLD STEESE (TO JOHA)	1.0	1.0	2.0
O/H-4	20 AMP, 240V	--	SPARE	0	0	0
			CONNECTED LOAD:	1.1	4.0	5.1
			CONNECTED AMPS:	4.6	16.6	21.3
			DEMAND LOAD (x125%):	1.4	5.0	6.4
			DEMAND AMPS (x125%):	5.8	20.8	26.7

GENERAL SHEET NOTES

1. CIRCUITS FOR THE TRAFFIC CONTROLLER SHALL BE UNSWITCHED AND BY-PASS ALL AUTOMATIC CONTROLS.

SPECIFIC SHEET NOTES

1 PROVIDE LABEL IN LOAD CENTER "116" WITH THE FOLLOWING:

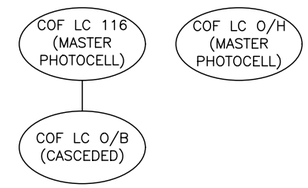
CASCADED LIGHTING SYSTEM:
-CONTROLLED BY: NONE
-CONTROLS: COF LC "O/B" (LIGHTING CONTACTOR)

2 PROVIDE LABEL IN LOAD CENTER "O/B" WITH THE FOLLOWING:

CASCADED LIGHTING SYSTEM:
-CONTROLLED BY: COF LC "116" (LIGHTING CIRCUIT)
-CONTROLS: NONE

3 PROVIDE WARNING LABEL IN LOAD CENTER "O/B" WITH THE FOLLOWING:

"WARNING - EXTERNAL 240V POWER SOURCE PRESENT FROM PREVIOUS LOAD CENTER LIGHTING CIRCUIT."



COF LOAD CENTER CONTROL LIGHTING FLOW CHART

COF LOAD CENTER DETAILS 2 OF 2

STATE OF ALASKA
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K1	K13

GENERAL NOTES:

1. REMOVE EXISTING TRAFFIC CABINETS (CBA1) INCLUDING SUPPORT POLE AND FOUNDATION, PRESENCE LOOPS, JUNCTION BOXES, CONDUITS, AND WIRING. CONTRACTOR SHALL FIELD LOCATE EXISTING TEMPORARY COUNTER SYSTEM'S JUNCTION BOXES NOT NOTED ON THE PLANS, SALVAGE, AND RESTORE SURFACE CONDITIONS, THIS WORK IS SUBSIDIARY TO SECTION 669.
2. THE EXISTING TRAFFIC CABINETS (CBA 1) INCLUDING DATA EQUIPMENT CABLES SHALL BE SALVAGED AND DELIVERED TO DOT&PF MAINTENANCE YARD 2301 PEGER ROAD, FAIRBANKS, AK 99709. COORDINATE EQUIPMENT DROP OFF WITH THE SIGNALS SHOP, CALL (907) 451–5279.
3. FURNISH AND INSTALL NEW CABINET AND HARDWARE INCLUDING ALL OTHER NECESSARY ELECTRICAL COMPONENTS, REFER TO SECTION 669, TRAFFIC CABINET EQUIPMENT SCHEDULE, AND DETAILS ON SHEET K13.
4. CONTRACTOR SHALL FIELD VERIFY EXISTING CONDITIONS AND DIMENSIONS AND COORDINATE FINAL SITE INSTALLATION WITH THE ENGINEER. THE ENGINEER SHALL APPROVE ALL MODIFICATIONS TO THE INSTALLATION.
5. INSTALLATION OF EQUIPMENT AND MATERIALS SHALL CONFORM TO APPLICABLE REQUIREMENTS OF THE CURRENT NATIONAL ELECTRIC CODE, ALASKA DOT&PF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, THE PROJECT SPECIAL PROVISIONS, AND THE PLANS.
6. PROVIDE AS–BUILT PLANS, REFER TO SUBSECTION 669–1.04.

LAYOUT NOTES:

1. INSTALL 1/2 INCH PREFORMED BITUMINOUS JOINT MATERIAL BETWEEN JUNCTION BOX AND PAVEMENT WHEN JUNCTION BOXES ARE LOCATED IMMEDIATELY ADJACENT TO A SIDEWALK OR ROAD SURFACE.
2. INSTALL PLASTIC SLEEVED GROUNDING BUSHINGS ON ALL CONDUITS BEFORE PULLING ANY WIRE. GROUND WITH A MINIMUM #6 BARE COPPER.
3. INSTALL AND TEST ALL LOOP DETECTORS PRIOR TO OVERLAYING PAVEMENT.
4. THE MINIMUM CLEARANCE BETWEEN A DETECTION LOOP AND THE TAIL OF ANOTHER DETECTION LOOP SHALL NOT BE LESS THAN 12 INCHES. LOOP TAILS SHALL NOT CROSS EACH OTHER, BUT HAVE NO MINIMUM CLEARANCE.
5. JUNCTION BOX STATION AND OFFSETS ARE TO CENTER OF STRUCTURE.

TEMPORARY COUNTER ASSEMBLIES SCHEDULE

SITE NUMBER	STATION NUMBER	CABINET STATION	CABINET OFFSET	CONTROL CABINET	NUMBER OF TYPE II JUNCTION BOXES	NUMBER OF LANES	NUMBER OF INDUCTIVE LOOPS
01	34285046	"O" 14+69.78	38.74' LT	NEW	3	5	10
02	34285044	"O" 42+28.91	41.25' RT	NEW	2	5	10
03	34285043	"O" 47+47.29	41.25' RT	NEW	2	5	10
04	32285042	"O" 66+01.89	43.43' LT	NEW	3	4	8
05	32280022	"TG" 90+86.07	26.00' RT	NEW	1	2	2

TEMPORARY COUNTER STATION CABINET SCHEDULE

FURNISH AND INSTALL TERMINAL BLOCK	FURNISH AND INSTALL AUTOMATIC VEHICLE CLASSIFIER COUNTER
YES	YES

LABELS:

1. ALL CABLES SHALL BE LABELED AT BOTH ENDS AND AT EVERY JUNCTION BOX THROUGH WHICH THE CABLES PASS, PER SUBSECTION 660–3.05.13.
2. ALL WIRE PAIRS SHALL BE LABELED AT THE TERMINAL BLOCK AND AT ANY LOOSE ENDS.
3. THE FOLLOWING CONVENTIONS SHALL APPLY TO DESIGNATING AND LABELING CABLES AND WIRE PAIRS:

   LANES: TRAFFIC LANES AND THEIR RESPECTIVE LOOPS AND SENSORS SHALL BE LABELED FROM OUTSIDE EDGE OF THE ROAD TOWARD THE CENTER AS FOLLOWS:

   | A | B | C | B | A |

   FIVE LANE EXAMPLE

   | A | B | | B | A |

   FOUR LANE EXAMPLE

   TERMINAL BLOCKS: WIRES FROM SENSORS PLACED IN LANES WHICH ARE CLOSEST TO THE CONTROL BOX SHALL BE PLACED AT THE LEFT OR AT THE TOP OF THE TERMINAL BLOCK, DEPENDING ON ORIENTATION OF THE ROAD.

4. WIRES FOR INDUCTIVE LOOPS AND SENSORS ARE LABELED AS FOLLOWS:

   PnDLc

   WHERE:

   P IS THE PREFIX:
   - V TRAFFIC VOLUME LOOP
   - H VEHICLE CLASSIFICATION/SPEED LOOP
   - GL AUTOMATIC VEHICLE CLASSIFICATION (AVC) SENSOR
   - Ga AUTOMATIC VEHICLE CLASSIFICATION PIEZO

   n NUMBER SUFFIX FOR MULTIPLE LOOPS IN THE SAME LANE

   D DIRECTION (N, S, E, W, NE, SE, SW, NW, B), B: BIDIRECTIONAL

   L IS THE PREFIX FOR ROAD DESIGNATION
   - L LANE*
   - R RAMP**
   - SR SPUR RAMP**
   - LP LOOP**
   - LP LOOP RAMP**
   - * ROADS AND HIGHWAYS
   - ** INTERCHANGES
   - T CENTER TWO–WAY LEFT–TURN–LANE

   c IS THE SUFFIX FOR LANE DESIGNATION (A, B, C)

SYMBOL LEGEND AND ABBREVIATIONS:

RMC: RIGID METAL CONDUIT, GALVANIZED

(TG) GROUND TEMPERATURE PROBE

(TA) AMBIENT AIR TEMPERATURE SENSOR

(TP) IN–PAVEMENT TEMPERATURE SENSOR

(#) CONDUIT REFERENCE NUMBER

[#] NOTE REFERENCE NUMBER

PIEZOELECTRIC SENSOR

H2SLA INDUCTIVE LOOP SENSOR

TEMPORARY COUNTERS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K2	K13

DETAIL A

1":5' SCALE

TRAFFIC CABINET (CBA1)
+69.78
38.74'LT

SET JUNCTION BOX FLUSH WITH THE FINISHED SIDEWALK SURFACE
+66.17
38.08'LT

SET JUNCTION BOX FLUSH WITH THE FINISHED SIDEWALK SURFACE
+91.18
33.38'LT

SET JUNCTION BOX FLUSH WITH THE FINISHED SIDEWALK SURFACE
+91.18
33.51'RT

SALVAGE EXISTING CBA1 CABINET AND JUNCTION BOX
+74.16
39.46'RT

+86.18
21.00'LT

+18.18
11.00'LT

+17.18
0.00'T

+64.18
0.00'T

+23.18
0.00'T

+43.18
11.00'RT

+22.18
21.00'RT

"0" 14+00

"0" 15+00

"0" 16+00

"0" 18+00

OLD STEESE HIGHWAY

4TH STREET

TIMBERLAND DRIVE

SEE NOTE 1 ON SHEET K2

NOTES:

1. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D-1.

TEMPORARY COUNTER STATION – SITE01

1":10' SCALE

TEMPORARY COUNTER STATION – SITE01

STATE OF ALASKA 49TH
PRELIMINARY PS&E
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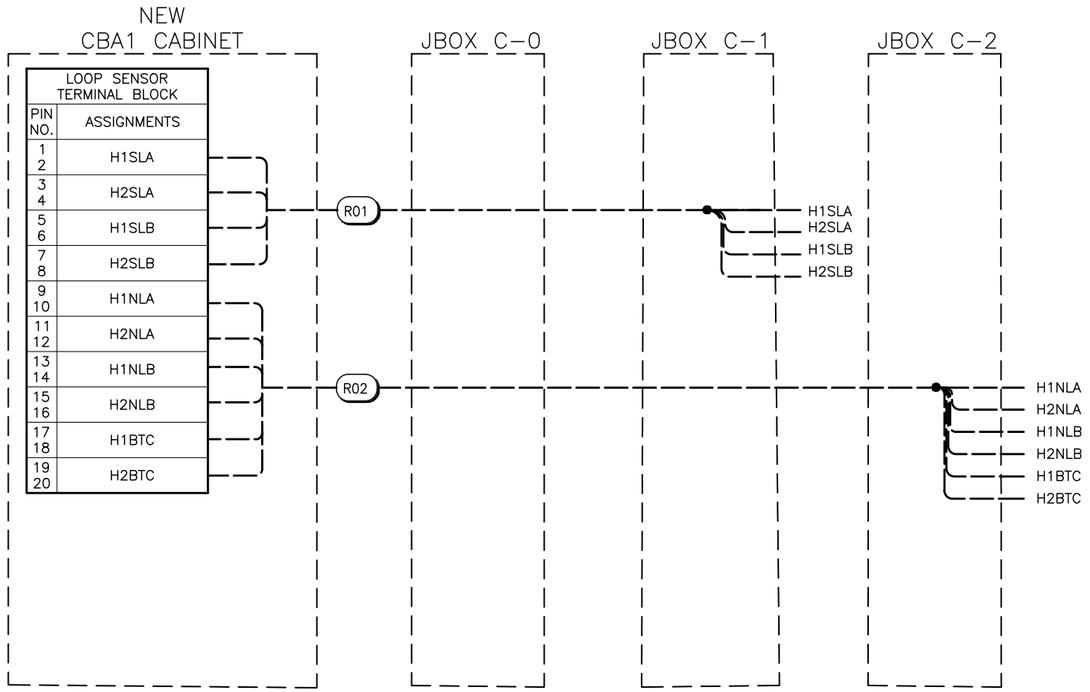
NO.	DATE	REVISION

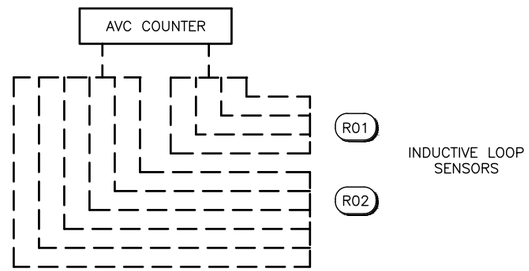
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K3	K13



WIRING DIAGRAM
NTS

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT					CABLE		
#	QTY	SIZE (INCHES)	FROM	TO	QTY	TYPE	NUMBER
1	1	1	C-2	H2BTC	1	1 PR#14	
2	1	1	C-2	H1BTC	1	1 PR#14	
3	1	1	C-2	H2NLB	1	1 PR#14	
4	1	1	C-2	H1NLB	1	1 PR#14	
5	1	1	C-2	H2NLA	1	1 PR#14	
6	1	1	C-2	H1NLA	1	1 PR#14	
7	1	2	C-1	C-2	1	6 PR#18	R02
	1	2			SPARE	SPARE	
8	1	1	C-1	H1SLB	1	1 PR#14	
9	1	1	C-1	H2SLB	1	1 PR#14	
10	1	1	C-1	H1SLA	1	1 PR#14	
11	1	1	C-1	H2SLA	1	1 PR#14	
12	1	2	C-0	C-1	2	6 PR#18	R01-R02
	1	2			SPARE	SPARE	
13	1	2	CBA1	C-0	2	6 PR#18	R01-R02



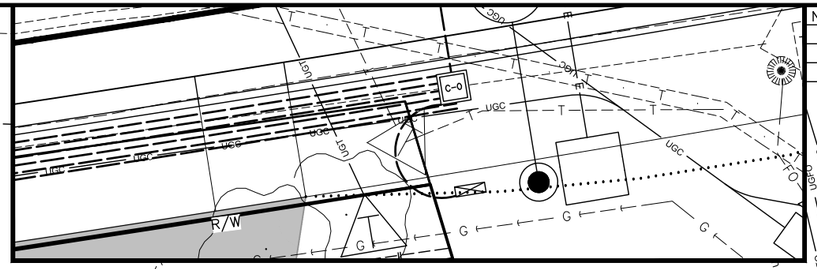
DATA/COMMUNICATION CIRCUITS
NTS

PRELIMINARY
PS&E

TEMPORARY COUNTER STATION WIRING – SITE01

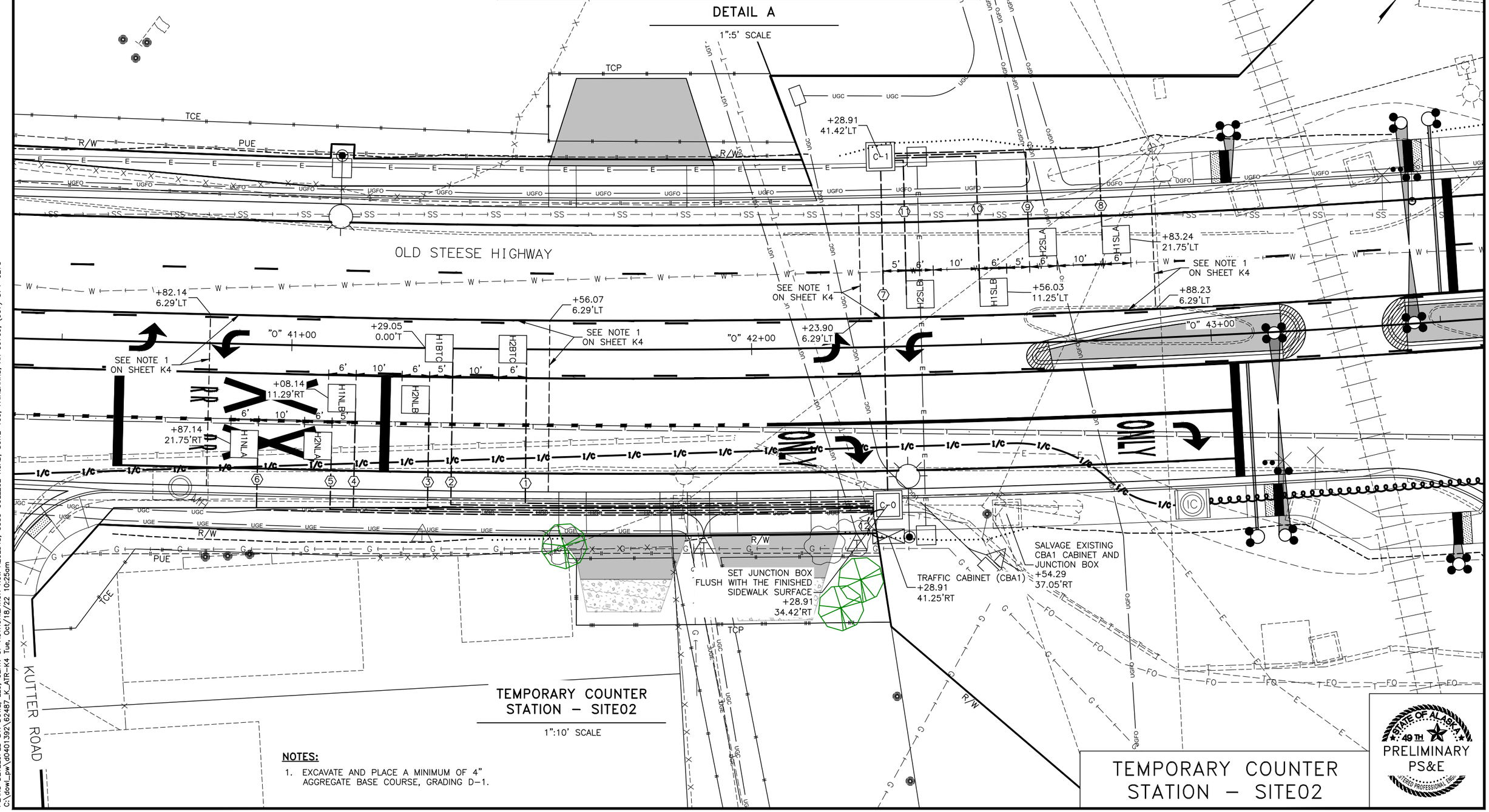
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K4	K13



DETAIL A

1":5' SCALE



TEMPORARY COUNTER
STATION – SITE02

1":10' SCALE

NOTES:

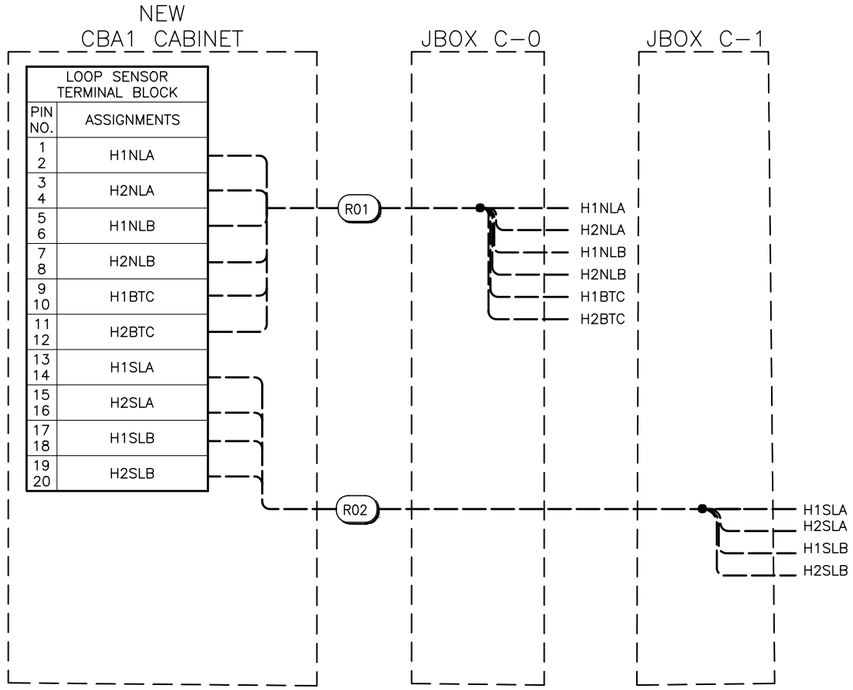
1. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D–1.

TEMPORARY COUNTER
STATION – SITE02

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

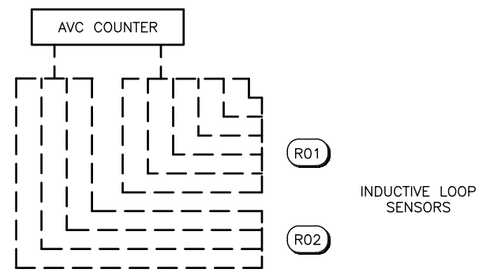
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K5	K13



WIRING DIAGRAM
NTS

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT					CABLE		
#	QTY	SIZE (INCHES)	FROM	TO	QTY	TYPE	NUMBER
1	1	1	C-0	H2BTC	1	1 PR#14	
2	1	1	C-0	H1BTC	1	1 PR#14	
3	1	1	C-0	H2NLB	1	1 PR#14	
4	1	1	C-0	H1NLB	1	1 PR#14	
5	1	1	C-0	H2NLA	1	1 PR#14	
6	1	1	C-0	H1NLA	1	1 PR#14	
7	1	2	C-0	C-1	1	6 PR#18	R02
	1	2			SPARE	SPARE	
8	1	1	C-1	H1SLA	1	1 PR#14	
9	1	1	C-1	H2SLA	1	1 PR#14	
10	1	1	C-1	H1SLB	1	1 PR#14	
11	1	1	C-1	H2SLB	1	1 PR#14	
12	1	2	CBA1	C-0	2	6 PR#18	R01-R02



DATA/COMMUNICATION CIRCUITS
NTS

PRELIMINARY
PS&E

TEMPORARY COUNTER STATION WIRING – SITE02

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K6	K13

SALVAGE EXISTING CBA1 CABINET AND JUNCTION BOX
+77.83
29.08'LT

SET JUNCTION BOX FLUSH WITH THE FINISHED SIDEWALK SURFACE
+42.66
34.42'LT

OLD STEESE HIGHWAY

"O" 45+00

"O" 46+00

"O" 47+00

+15.67
0.00'T

+94.78
11.30'RT

+73.98
21.75'RT

+91.95
21.75'LT

+69.76
11.25'LT

+42.67
41.42'RT

+47.29
41.25'RT

TRAFFIC CABINET (CBA1)

SEE NOTE 1 ON SHEET K6

NORMAN ROAD

TEMPORARY COUNTER STATION – SITE03

1":10' SCALE

NOTES:

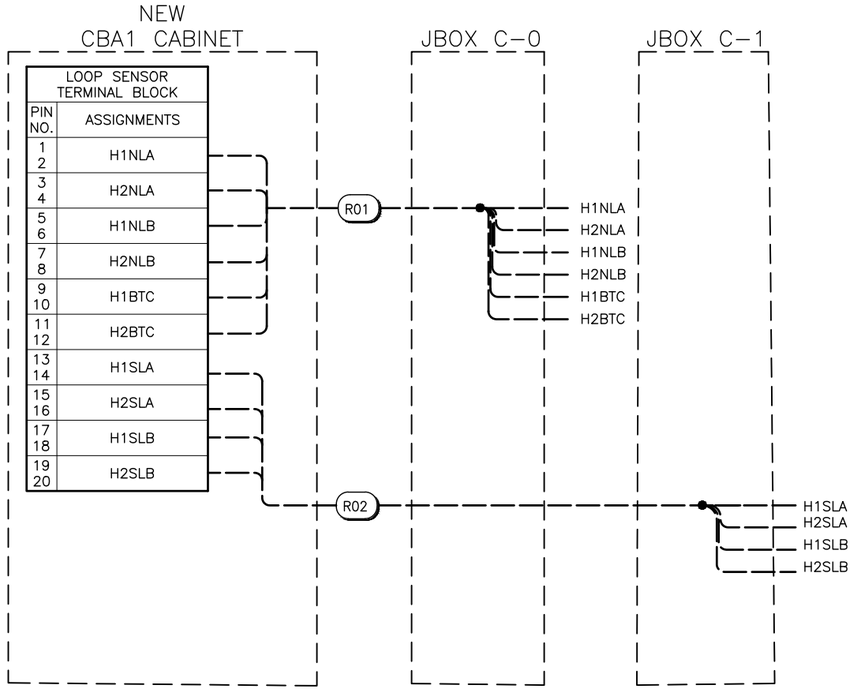
1. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D-1.

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

TEMPORARY COUNTER STATION – SITE03

NO.	DATE	REVISION

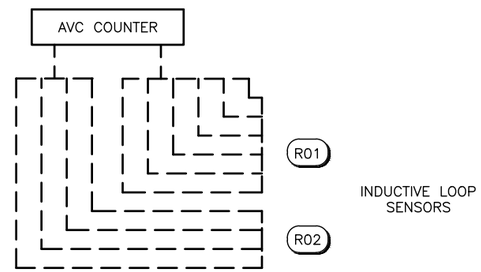
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K7	K13



WIRING DIAGRAM
NTS

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT					CABLE		
(#)	QTY	SIZE (INCHES)	FROM	TO	QTY	TYPE	NUMBER
1	1	2	C–0	C–1	1	6 PR#18	R02
	1	2			SPARE	SPARE	
2	1	1	C–0	H2BTC	1	1 PR#14	
3	1	1	C–0	H1BTC	1	1 PR#14	
4	1	1	C–0	H2NLB	1	1 PR#14	
5	1	1	C–0	H1NLB	1	1 PR#14	
6	1	1	C–0	H2NLA	1	1 PR#14	
7	1	1	C–0	H1NLA	1	1 PR#14	
8	1	1	C–1	H1SLA	1	1 PR#14	
9	1	1	C–1	H2SLA	1	1 PR#14	
10	1	1	C–1	H1SLB	1	1 PR#14	
11	1	1	C–1	H2SLB	1	1 PR#14	
12	1	2	CBA1	C–0	2	6 PR#18	R01–R02



DATA/COMMUNICATION CIRCUITS
NTS

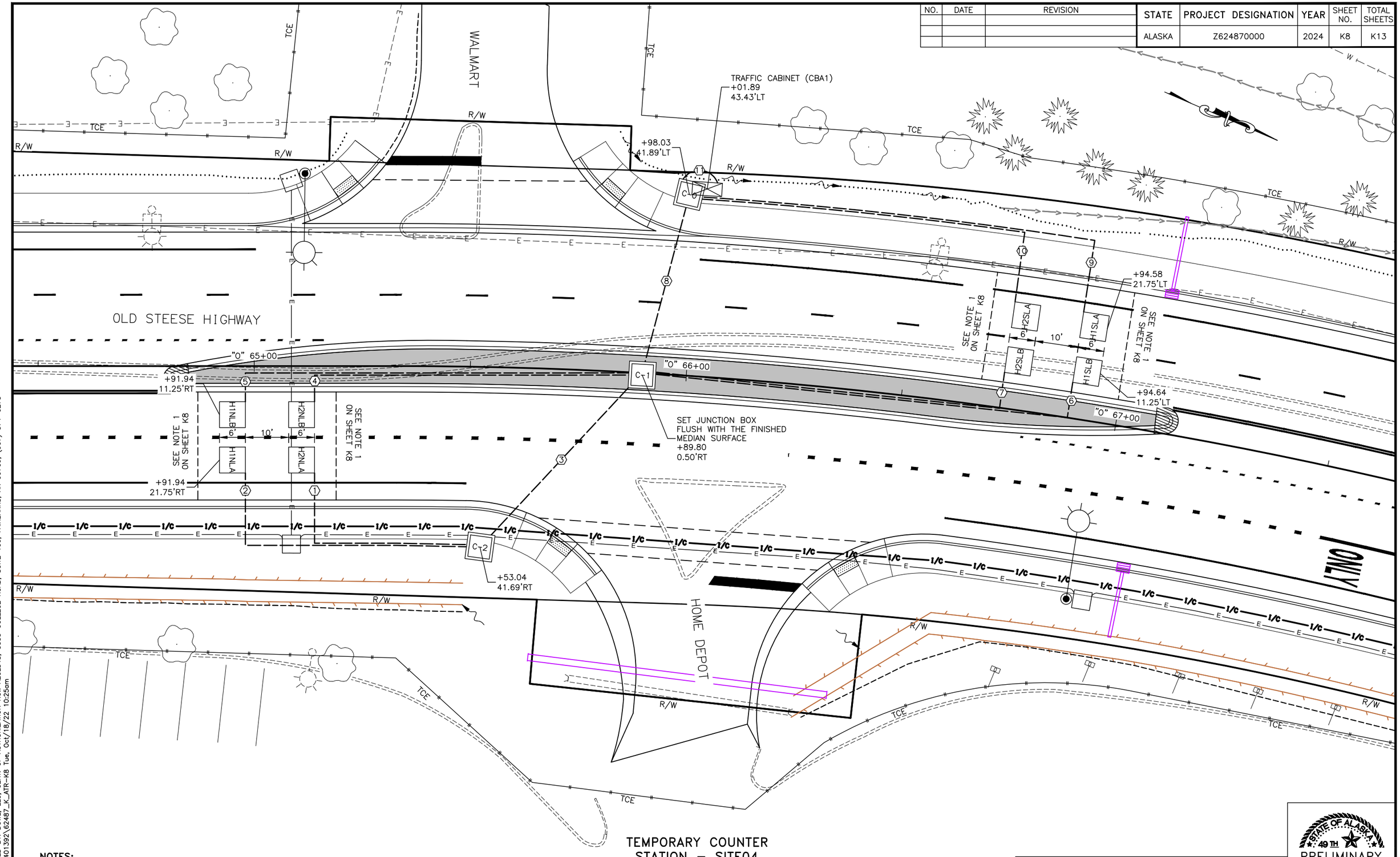
PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_K_ATR-K7 Tue, Oct/18/22 10:25am

TEMPORARY COUNTER
STATION WIRING – SITE03

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K8	K13



TEMPORARY COUNTER
STATION – SITE04

1":10' SCALE

NOTES:

1. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D–1.

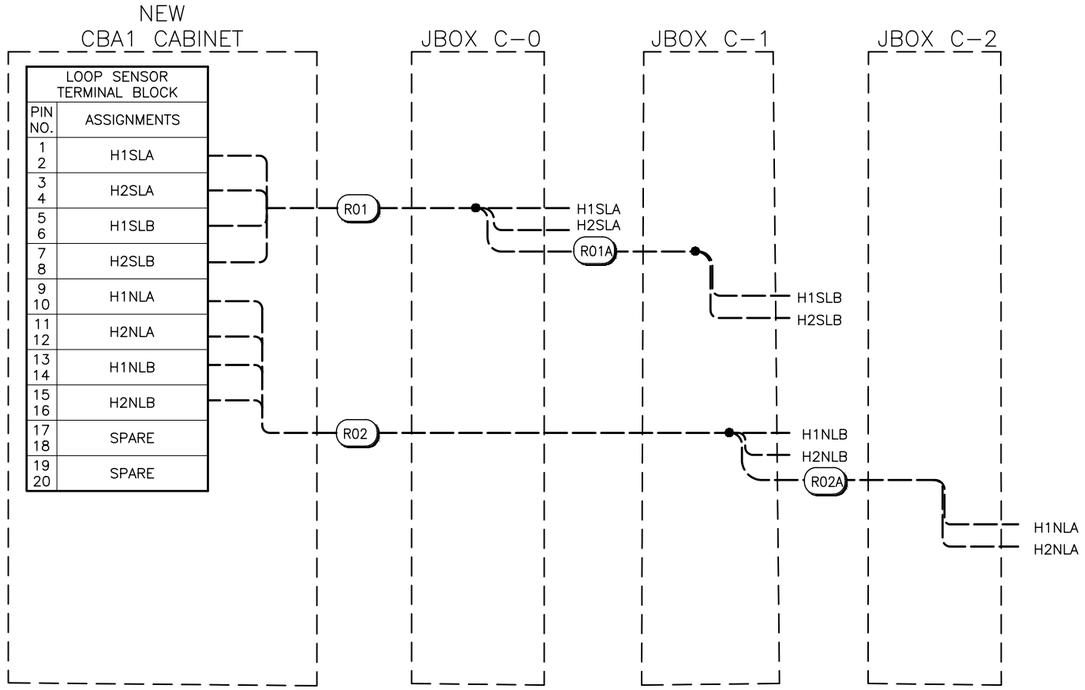
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

TEMPORARY COUNTER STATION – SITE04

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487_K_ATR-K8 Tue, Oct/18/22 10:25am

NO.	DATE	REVISION

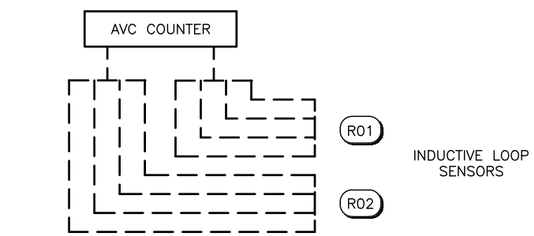
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K9	K13



WIRING DIAGRAM
NTS

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT					CABLE		
#	QTY	SIZE (INCHES)	FROM	TO	QTY	TYPE	NUMBER
1	1	1	C-2	H2NLA	1	1 PR#14	
2	1	1	C-2	H1NLA	1	1 PR#14	
3	1	2	C-1	C-2	1	6 PR#18	R02A
	1	2			SPARE	SPARE	
4	1	1	C-1	H2NLB	1	1 PR#14	
5	1	1	C-1	H1NLB	1	1 PR#14	
6	1	1	C-1	H1SLB	1	1 PR#14	
7	1	1	C-1	H2SLB	1	1 PR#14	
8	1	2	C-0	C-1	2	6 PR#18	R01A-R02
	1	2			SPARE	SPARE	
9	1	1	C-0	H1SLA	1	1 PR#14	
10	1	1	C-0	H2SLA	1	1 PR#14	
11	1	2	CBA1	C-0	2	6 PR#18	R01-R02



DATA/COMMUNICATION CIRCUITS
NTS

PRELIMINARY
PS&E

TEMPORARY COUNTER STATION WIRING - SITE04

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K10	K13

TRAFFIC CABINET (CBA1)
+86.07
26.00'RT

+93.21
23.29'RT

+94.59
18.00'RT

+78.59
18.00'RT

+83.59
12.00'RT

H1ELA

H1WLA

+08.83
11.67'LT

+13.88
18.00'LT

+97.88
18.35'LT

"TG" 92+00

"TG" 91+00

"TG" 90+00

"TG"90+00.00 POT

"O" 44+00

"O" 45+00

SEE NOTE 1 ON SHEET K10

SEE NOTE 1 ON SHEET K10

TRAINOR GATE ROAD

OLD STEESE HIGHWAY

SALVAGE EXISTING CBA1 CABINET AND JUNCTION BOX
+77.83
29.08'LT

R/W

NOTES:

1. EXCAVATE AND PLACE A MINIMUM OF 4" AGGREGATE BASE COURSE, GRADING D–1.

TEMPORARY COUNTER STATION – SITE05

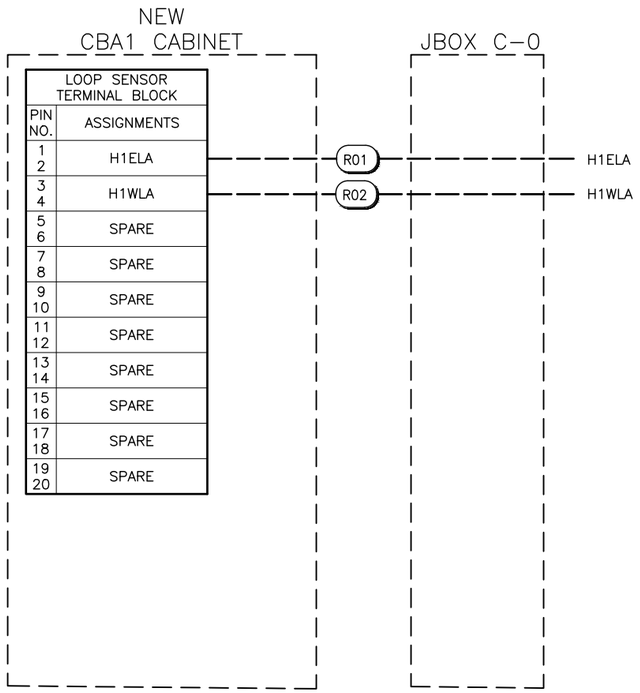
1":10' SCALE

TEMPORARY COUNTER STATION – SITE05

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT APPROVED FOR CONSTRUCTION

NO.	DATE	REVISION

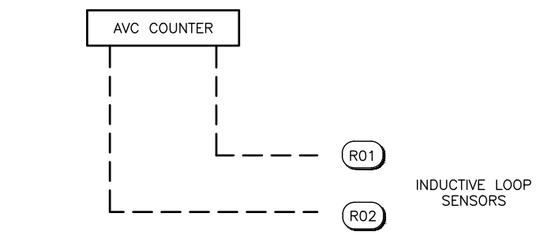
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K11	K13



WIRING DIAGRAM
NTS

CONDUIT AND CONDUCTOR SCHEDULE

CONDUIT					CABLE		
#	QTY	SIZE (INCHES)	FROM	TO	QTY	TYPE	NUMBER
1	1	1	C-0	H1ELA	1	1 PR#14	R01
2	1	1	C-0	H1WLA	1	1 PR#14	R02
3	1	2	CBA1	C-0	2	6 PR#18	R01-R02



DATA/COMMUNICATION CIRCUITS
NTS

TEMPORARY COUNTER
STATION WIRING - SITE05

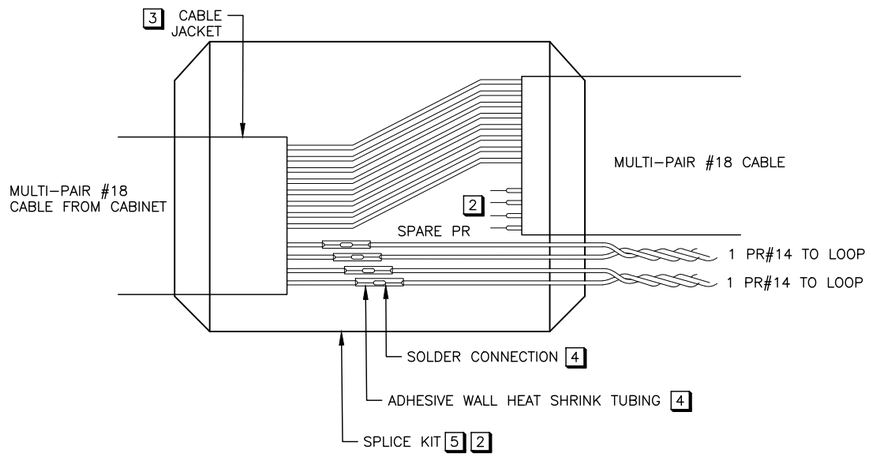
PRELIMINARY
PS&E

NO.	DATE	REVISION

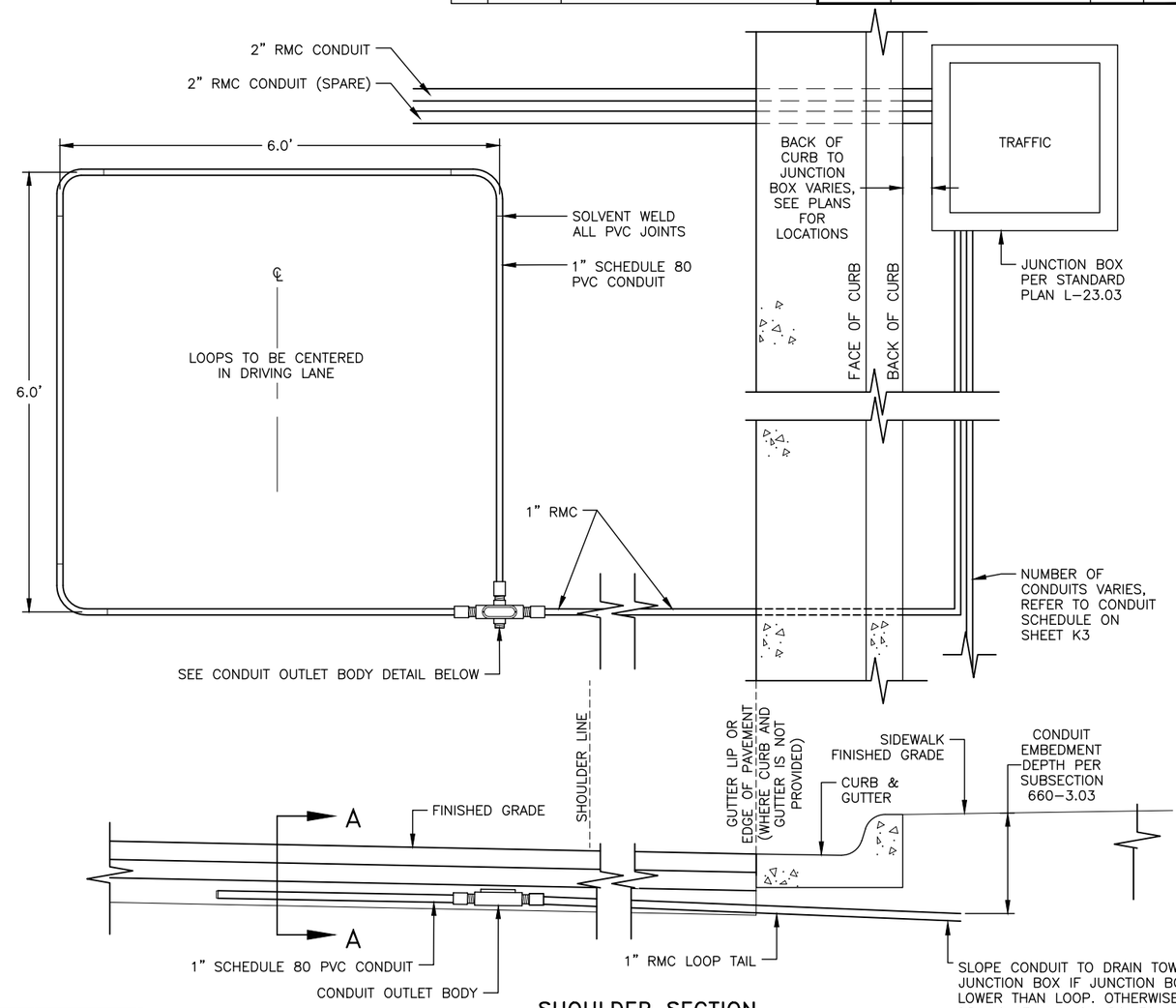
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K12	K13

SPLICE NOTES:

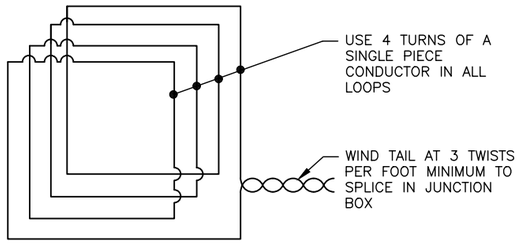
1. SCHEMATIC SKETCH SHOWS AN EXAMPLE OF TWO PAIRS USED WITH ONE SPARE.
2. TERMINATE ALL SPARES WITHIN THE SPLICE BODY.
3. SPLICE BODY TO ENCLOSE ALL CABLE JACKETS.
4. STAGGER SPLICE POINTS. SOLDER CONNECTIONS, ENCLOSE EXPOSED CONDUCTORS IN ADHESIVE WALL HEAT SHRINK TUBING. DO NOT USE COMPRESSION CONNECTORS. WRAP CONDUCTOR OVER EACH OTHER BEFORE SOLDERING.
5. USE A NON–REENTERABLE, WET LOCATION, COMMERCIAL SPLICE KIT 3M TYPE 82–A1 OR A2 OR EQUIVALENT AS APPROVED BY THE ENGINEER.
6. COVER ALL EXPOSED CONDUCTORS WITH HEAT SHRINK TUBING, INCLUDING SPARES.



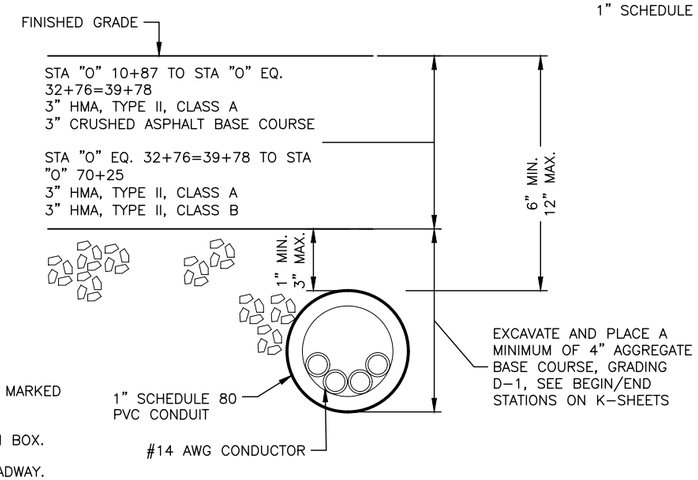
TYPICAL SPLICE DETAIL
NTS



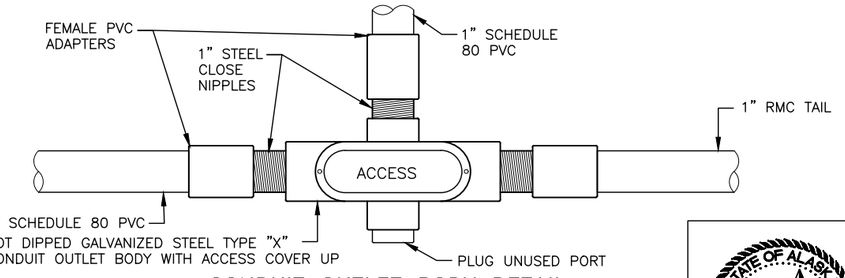
SHOULDER SECTION
NTS



LOOP WIRING DETAIL
NTS



SECTION A–A



CONDUIT OUTLET BODY DETAIL
NTS

INDUCTIVE LOOP NOTES:

1. ALL INDUCTIVE LOOPS SHALL BE WOUND IN THE SAME DIRECTION WITH THE STARTING LEAD MARKED "S" PER SUBSECTION 660–3.05.13.
2. LEAD–IN WIRES FOR EACH LOOP SHALL BE IN SEPARATE CONDUITS TO THE FIRST JUNCTION BOX.
3. INDUCTIVE LOOPS SHALL BE INSTALLED IMMEDIATELY PRIOR TO PAVING THE SECTION OF ROADWAY. FINAL LIFT OF ASPHALT PAVEMENT SHALL BE SMOOTH OVER ALL INDUCTIVE LOOPS AND WITHOUT TRANSVERSE SEAMS, JOINTS, OR ROUGHNESS WITHIN 50 FEET OF THE LOOPS.

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
STAMPED PROFESSIONAL ENGINEER

SPLICE AND PRESENCE LOOP DETAILS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374–0275
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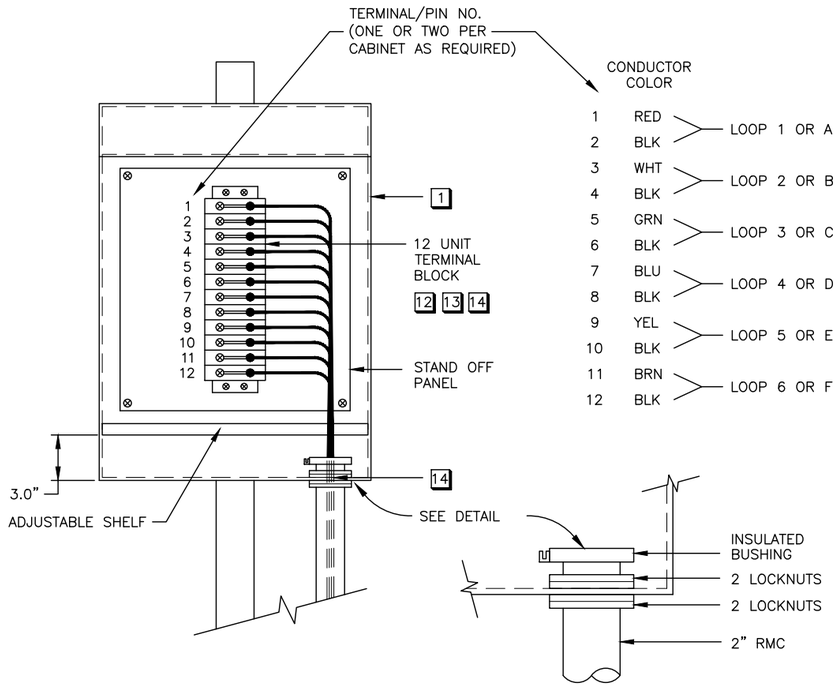
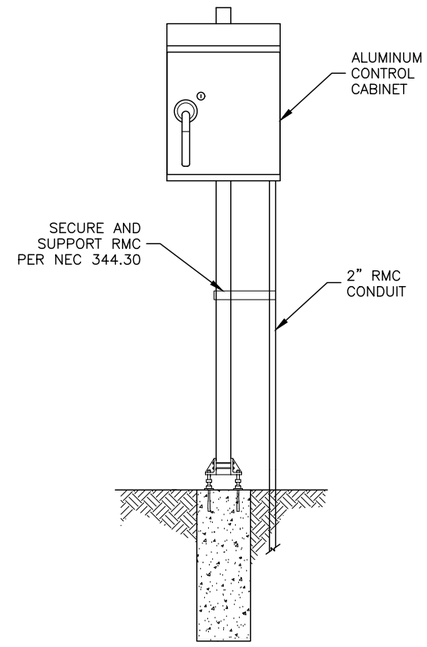
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	K13	K13



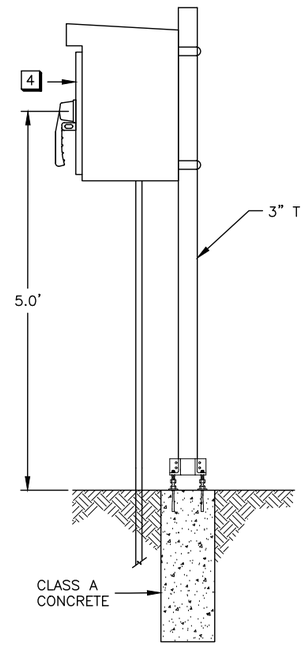
CABINET TYPE CBA1

FRONT VIEW, DOOR OPEN



FRONT ELEVATION

NTS



SIDE ELEVATION

NTS

NOTES:

[1] CABINET TO BE SINGLE-DOOR, LOCKABLE, CONTINUOUS HINGE ENCLOSURE (WITH CLAMPS), WITH TYPE 3R OR 4X ENVIRONMENTAL RATING, NVENT-HOFFMAN CATALOG NUMBER A30H2412ALLP (30" X 24" X 12"), OR APPROVED EQUAL, COMPLETE WITH EQUIPMENT MOUNTING PANEL AND ADJUSTABLE SHELF, DIN RAILS, AND TERMINAL BLOCKS AS REQUIRED. NO SCREW PENETRATIONS OF THE CABINET SURFACE.

2. REFER TO SUBSECTION 669-2.02 FOR DESCRIPTION OF CABINET REQUIREMENTS. CABINET SHALL BE CERTIFIED BY NATIONALLY RECOGNIZED INDEPENDENT THIRD PARTY TESTING AGENCY (UL, CSA, FM, ETC.)

3. LOCKS SHALL BE CORBIN NO. 2. TO MATCH EXISTING STATE CABINETS. FURNISH TWO KEYS WITH EACH LOCK.

[4] CONTROLLER CABINET DOOR TO OPEN AWAY FROM ROADWAY.

5. USE CONDUIT HUB IN BOTTOM OF CABINET. USE TYPE CHT WITH NEOPRENE SEAL AND INSULATED THROAT FOR NON-POWER CONDUITS WITH DETECTOR LEAD-IN CABLES.

6. USE FACTORY 90° ELBOWS TO/FROM JUNCTION BOXES ON ALL CONDUITS LARGER THAN 1 INCH.

7. ALL CONDUIT SHALL BE RMC UNLESS NOTED OTHERWISE. SEE SCHEDULE FOR SIZE.

8. INSTALL FLANGE, FRANGIBLE COUPLING AND FOUNDATION PER STANDARD PLAN S-31.02.

9. INSTALL FOUNDATION IN SUBBASE, GRADING F MATERIAL. THE CONTRACTOR SHALL EXCAVATE AND BACKFILL WITH GRAVEL 2 FEET BELOW AND SURROUNDING THE FOUNDATION.

10. INSTALL A GALVANIC ISOLATOR BETWEEN THE GALVANIZED STEEL "C" CHANNEL AND ALUMINUM CABINET. ISOLATOR SHALL BE 0.125" CLOSED-CELL NEOPRENE TAPE OR APPROVED EQUAL. PROVIDE A NEOPRENE SEALING WASHER BETWEEN HEX NUT AND INTERIOR OF CABINET WALL TO FASTEN "C" CHANNEL.

11. POST, "C" CHANNEL, RMC, HUBS, CONDUIT, BODIES, BUSHINGS, LOCKNUTS, AND MOUNTING HARDWARE (BOLTS, WASHERS, NUTS, FASTENERS, AND BRACKETS) SHALL BE HOT-DIPPED GALVANIZED AND MEET THE REQUIREMENTS OF SECTION 669.

[12] TERMINATE ALL CONDUCTORS TO TERMINAL BLOCK. TERMINATE ALL CONDUCTORS WITH CRIMPED AND SOLDERED SPADE TYPE TERMINALS.

[13] TY-RAPS TO PROVIDE STRAIN RELIEF FOR INCOMING CONDUCTORS.

[14] LABEL SENSOR LEADS:
USE THE INDUCTIVE LOOP DESIGNATION FOR IDENTIFICATION, SUCH AS "H2NLA"

CBA1 CABINET DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	L1	L1

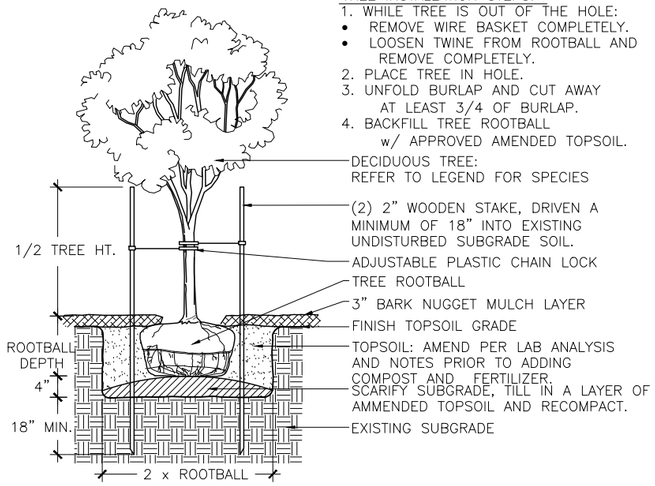
LANDSCAPE LEGEND

TREES

ITEM	SIZE	QTY.	CANOPY (H x W) / COMMENTS
BETULA PAPYRIFERA PAPER BIRCH	2" CAL. / B&B AS SHOWN	16	TO 45' H x 25' W / DECIDUOUS WHITE BARK / YELLOW FALL COLOR
MALUS (sp.) CRABAPPPLE	2" CAL. / B&B AS SHOWN	5	40' H x 10' W / DECIDUOUS YELLOW FALL COLOR
PICEA GLAUCA WHITE SPRUCE	6' HT / B&B AS SHOWN	4	60' H x 20' W / EVERGREEN

GROUNDCOVER

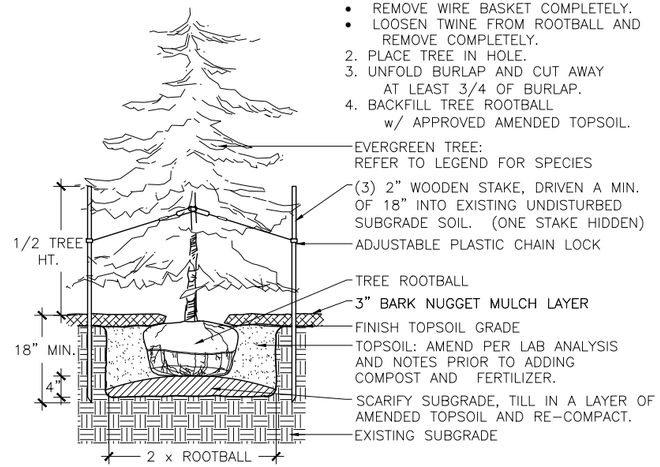
ITEM	SIZE	QTY.	FORM (H x W) / COMMENTS
PERMANENT SEED MIX	PER SECTION 618	SEE D-SHEETS	COVER ALL GRUBBED AREAS



TREE INSTALLATION STEPS:
1. WHILE TREE IS OUT OF THE HOLE:
   - REMOVE WIRE BASKET COMPLETELY.
   - LOOSEN TWINE FROM ROOTBALL AND REMOVE COMPLETELY.
2. PLACE TREE IN HOLE.
3. UNFOLD BURLAP AND CUT AWAY AT LEAST 3/4 OF BURLAP.
4. BACKFILL TREE ROOTBALL w/ APPROVED AMENDED TOPSOIL.

DECIDUOUS TREE PLANTING

NOT TO SCALE



TREE INSTALLATION STEPS:
1. WHILE TREE IS OUT OF THE HOLE:
   - REMOVE WIRE BASKET COMPLETELY.
   - LOOSEN TWINE FROM ROOTBALL AND REMOVE COMPLETELY.
2. PLACE TREE IN HOLE.
3. UNFOLD BURLAP AND CUT AWAY AT LEAST 3/4 OF BURLAP.
4. BACKFILL TREE ROOTBALL w/ APPROVED AMENDED TOPSOIL.

EVERGREEN TREE PLANTING

NOT TO SCALE

LANDSCAPE NOTES

PRELIMINARY PS&E

NO.	DATE	REVISION

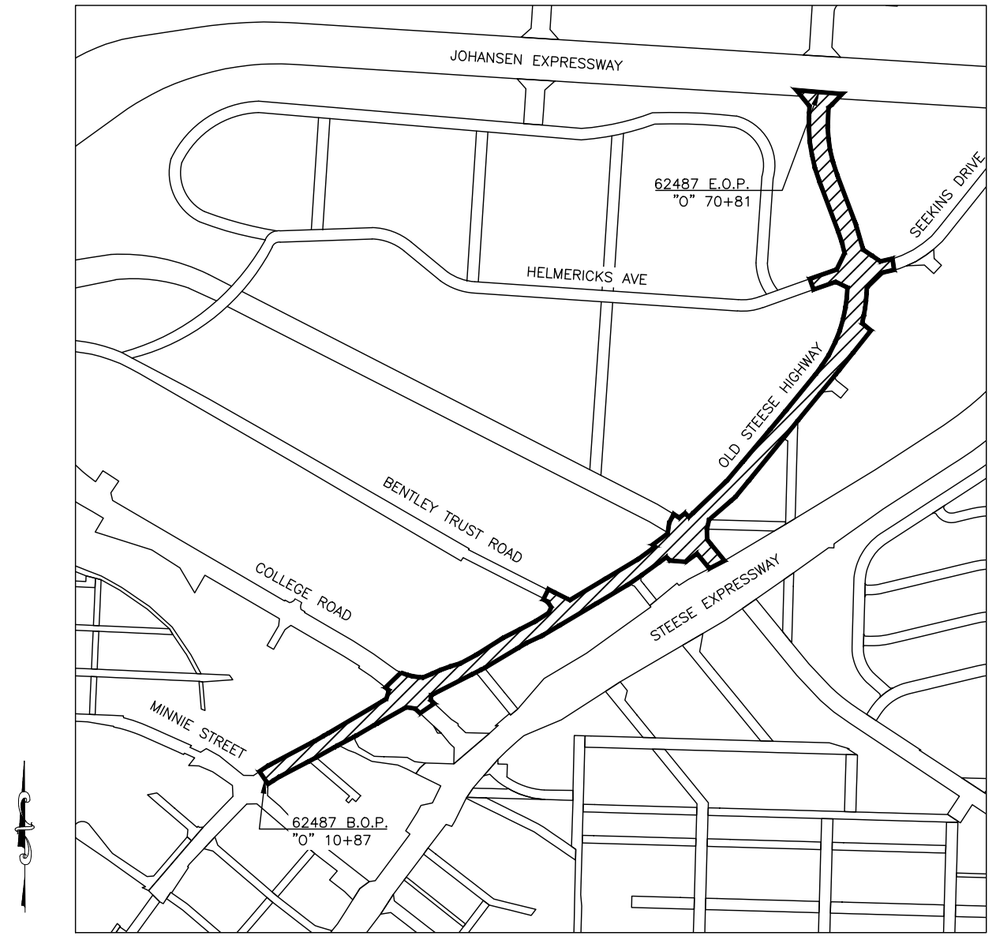
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	Q1	Q4

GENERAL NOTES:

1. THIS EROSION AND SEDIMENT CONTROL PLAN (ESCP) IS A GENERAL PLAN FOR GUIDING THE DEVELOPMENT OF THE CONTRACTOR'S STORM WATER POLLUTION PREVENTION PLAN (SWPPP). A TEMPLATE IS INCLUDED IN THE PROJECT SPECIFICATIONS. THE CONTRACTOR IS EXPECTED TO PROVIDE ADDITIONAL DETAILS AND BMP'S BASED ON THE CONTRACTOR'S ACTUAL SCHEDULE AND CONSTRUCTION METHODS, AS REQUIRED TO COMPLY WITH THE 2021 CONSTRUCTION GENERAL PERMIT (CGP) AND SECTION 641.
2. THIS PROJECT WILL RESULT IN GROUND DISTURBANCE OF EQUAL TO OR GREATER THAN ONE ACRE AND DISCHARGES ENTER WATERS OF THE U.S OR A MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4). THIS PROJECT WILL REQUIRE A SWPPP AND HAZARDOUS MATERIAL CONTROL PLAN (HMCP).
3. EROSION AND SEDIMENT CONTROL FEATURES MUST BE BASED ON DOT&PF'S 2021 SWPPP GUIDE (MARCH 2021 OR LATEST VERSION) AND LATEST BEST MANAGEMENT PRACTICES (BMPs)
4. INITIATE EROSION AND SEDIMENT CONTROLS PRIOR TO ANY EARTH DISTURBING ACTIVITIES.
5. DEVICES MAY NEED TO BE REMOVED AND REINSTALLED TO ALLOW CONSTRUCTION ACTIVITIES TO PROCEED. MAINTAIN ALL DEVICES DAILY, INCLUDING BUT NOT LIMITED TO: REMOVAL AND DISPOSAL OF ACCUMULATED SOILS, CLEANING DEVICES, AND REPLACEMENT OF DAMAGED DEVICES.
6. STOCKPILE AND/OR STAGING AREAS MUST BE RECLAIMED TO THEIR ORIGINAL CONDITIONS. STOCKPILES AND/OR STAGING AREAS ARE NOT ALLOWED IN WETLANDS.
7. ENSURE LOADS ARE STABLE OR COVERED SO THAT NO MATERIAL ESCAPES DURING HAULING ACTIVITIES.
8. PROVIDE CONCRETE WASHOUT FACILITIES.
9. PROVIDE VEHICLE CLEANING EQUIPMENT OR OTHER APPROVED CONTROLS TO PREVENT TRACKING OF DIRT AND GRAVEL ONTO PAVED SURFACES.
10. PROVIDE INLET PROTECTION AT ALL INLETS IN AND ADJACENT TO WORK AREAS.
11. AVOID UNNECESSARY GROUND DISTURBANCE AND MAINTAIN NATIVE VEGETATION WHERE PRACTICABLE THROUGH THE USE OF BMPs AND DOT&PF REVIEW OF PROPOSED SWPPP.
12. FOLLOW BMPs, SOPs, AND THE SWPPP TO AVOID IMPACTS TO A CONTAMINATED SITES IF THE AREA MUST BE USED FOR CONSTRUCTION STAGING. DEVELOP A CONTINGENCY PLAN IN THE EVENT THAT A CONTAMINATION IS UNEXPECTEDLY ENCOUNTERED.
13. INSTALL PERIMETER CONTROL WHERE A 25-FOOT WIDE VEGETATIVE BUFFER IS NOT AVAILABLE WITHIN THE R/W.
14. SWEEP CLEAN STABILIZED CONSTRUCTION EXITS EACH SHIFT OR AS DIRECTED BY THE ENGINEER.

ESCP LEGEND

SURFACE STORMWATER FLOW		VBS	VEGETATION BUFFER
SYSTEM MANUFACTURED INLET PROTECTION			CONSTRUCTION ENTRANCE/EXIT
RAILROAD TRACKS			CATCH BASIN PROTECTION AREA



EROSION AND SEDIMENT CONTROL LEGEND AND GENERAL NOTES

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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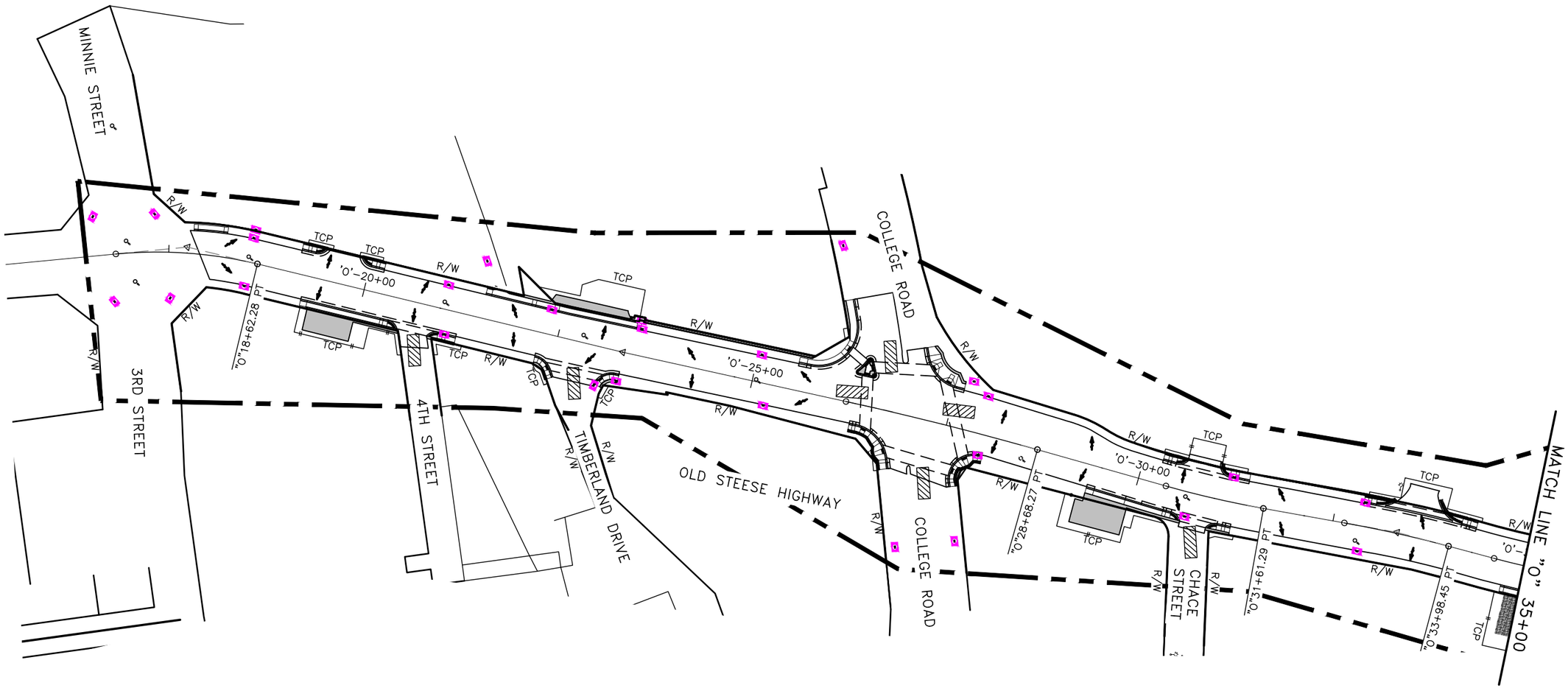
NO.	DATE	REVISION

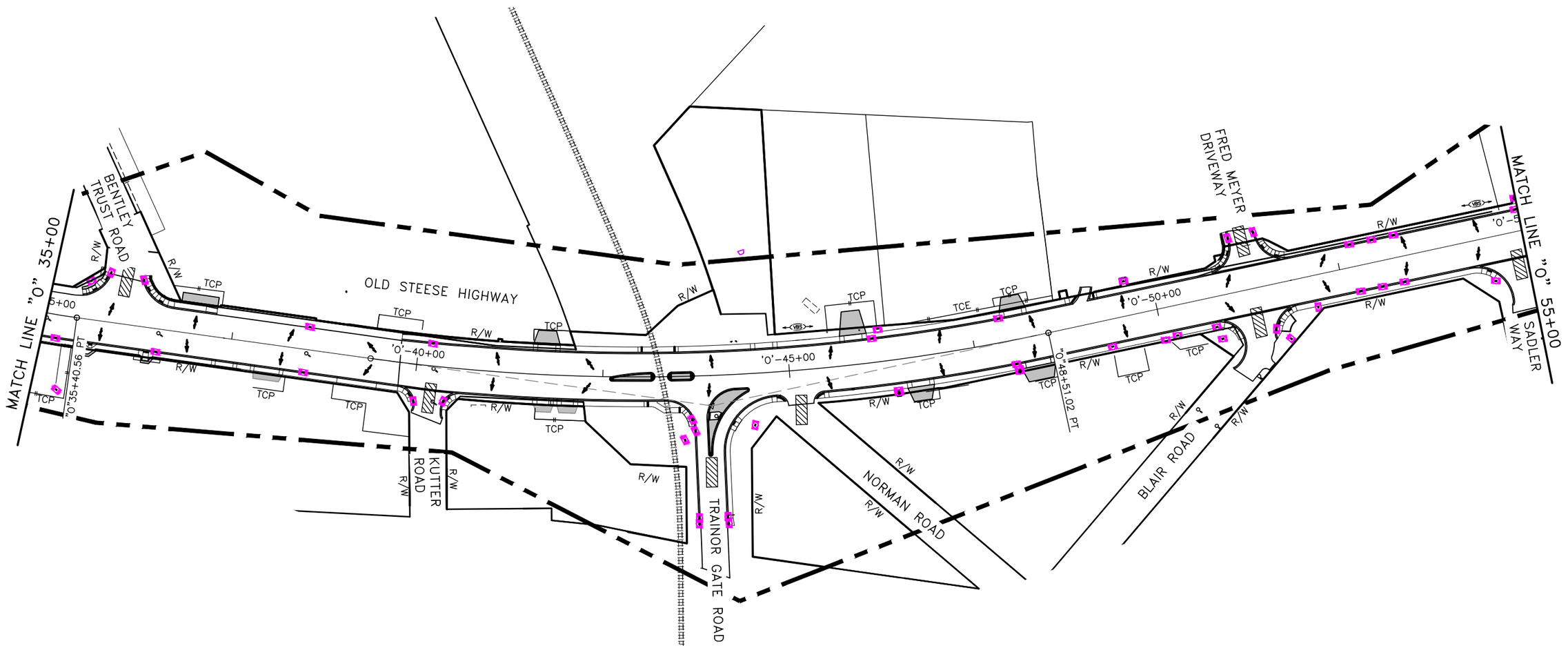
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	Q2	Q4



EROSION AND SEDIMENT CONTROL PLAN

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	Q3	Q4



EROSION AND SEDIMENT CONTROL PLAN

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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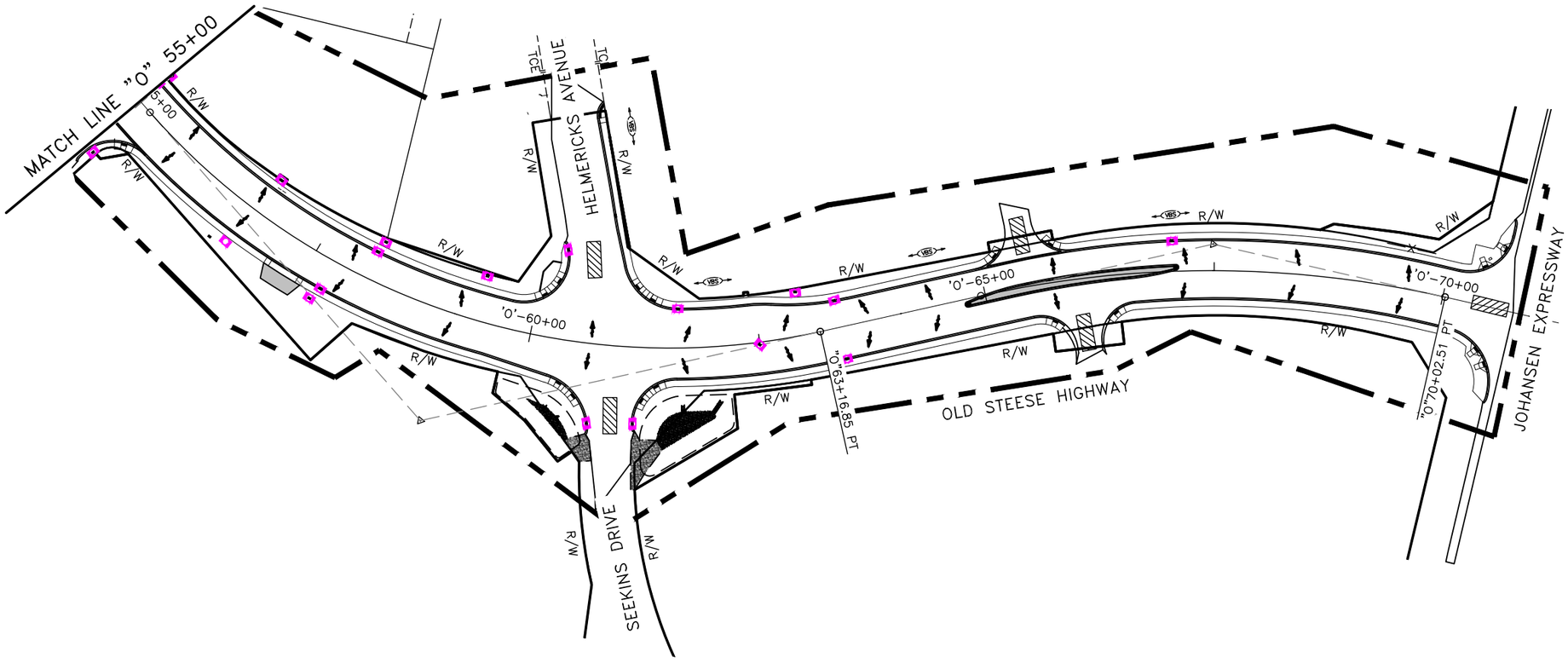
ALASKA	Z624870000	2024	Q4	Q4



EROSION AND SEDIMENT CONTROL PLAN

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	T1	T3

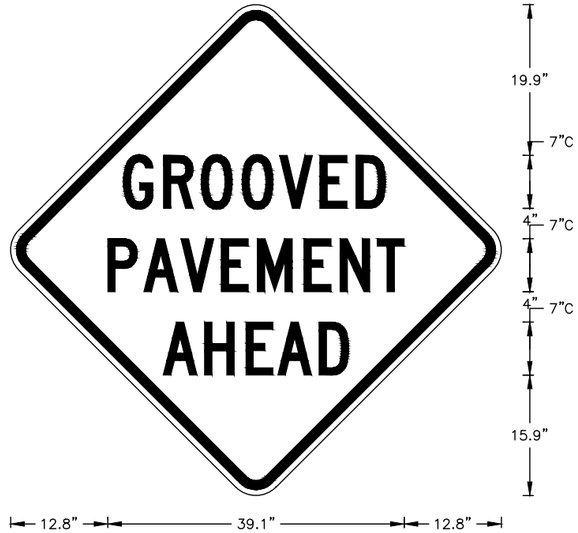
GENERAL TRAFFIC CONTROL NOTES

1. REFERENCE SECTION 643 FOR ALLOWED CLOSURES, TRAFFIC RESTRICTIONS, AND PEDESTRIAN REQUIREMENTS.
2. THESE TRAFFIC CONTROL PLANS ARE GENERIC IN NATURE. CONTRACTOR TO PROVIDE DETAILED TRAFFIC CONTROL PLANS TO THE ENGINEER FOR APPROVAL.
3. MACS TRANSIT BUS LINE ROUTES THROUGH THE PROJECT LIMITS. BUS ARRIVE AND DEPART SCHEDULE: MON THROUGH FRI 7:00 AM – 9:10 PM; SAT 9:15 AM – 6:40 PM.
4. TEMPORARY PEDESTRIAN PATHWAYS SHALL BE PROVIDED TO ALL BUS STOPS AND OTHER AREAS AND SHALL BE A MINIMUM OF 5 FEET WIDE, EXCEPT AS DIRECTED. PATHS SHALL BE CONSTRUCTED, REMOVED, AND RECONSTRUCTED AS REQUIRED AND SHALL BE TOPPED WITH MINIMUM OF 2.5 INCHES RECYCLED ASPHALT COMPACTED TO 94%. ALL PATHS SHALL BE SEPARATED FROM THE WORK BY A FENCE.
5. EXISTING SIGNS WHICH CONFLICTS WITH CONSTRUCTION SIGNING SHALL BE COVERED DURING PROJECT. COORDINATE REMOVAL WITH CITY OF FAIRBANKS PUBLIC WORKS DEPARTMENT.
6. BUSINESSES WITHIN THE PROJECT LIMITS MAY HAVE DELIVERIES AND GARBAGE PICK–UP DURING NON–BUSINESS HOURS. CONTRACTOR SHALL CONTACT ALL BUSINESSES IN THE PROJECT AND COORDINATE WITH THEM TO ENSURE ACCESS.
7. PARKING LOTS AND DRIVEWAYS ADJACENT TO AN EXCAVATION SHALL BE RAMPED TO PROVIDE ACCESS. DELINEATE WITH CONES.
8. WHEN STREETS AREA RESTRICTED TO 1 LANE, THE MINIMUM CLEAR WIDTH SHALL BE 12 FEET UNLESS DIRECTED BY THE ENGINEER.
9. ACCESS SHALL BE MAINTAINED FOR THE PASSAGE OF EMERGENCY VEHICLES THROUGH THE PROJECT.
10. ACCESS SHALL BE PROVIDED TO COMMERCIAL PROPERTIES DURING THEIR BUSINESS HOURS AND TO RESIDENTIAL PROPERTIES CONTINUOUSLY. CLOSURES SHALL NOT OCCUR WITHOUT PRIOR WRITTEN APPROVAL OF THE ENGINEER. MINIMUM 48 HOURS PRIOR TO IMPLEMENTATION OF APPROVED CLOSURE.
11. ALTERNATE ACCESS MAY BE USED AS PART OF APPROVED TRAFFIC CONTROL PLAN. ALTERNATE ACCESS ROUTES SHALL BE CLEARLY SIGNED.
12. INSTALL SAFETY FENCING AROUND ALL OPEN EXCAVATIONS AT NIGHT.

PROJECT INFORMATION SIGN

PROJECT INFORMATION NOTES:

1. SIGN FONT: SERIES 2000
2. PROVIDE 4 EACH ON 4"x4" POSTS AS PERMANENT CONSTRUCTION SIGNS AT LOCATIONS DETERMINED BY THE ENGINEER.



GROOVED PAVEMENT SIGN

GROOVED PAVEMENT NOTES:

1. BORDER DIMENSIONS: R=3", TH=1.25", IN=0.75"
2. PROVIDE 4 EACH ON WINDMASTER STANDS AS MOVEABLE CONSTRUCTION SIGNS AT LOCATIONS DETERMINED BY THE ENGINEER.

TRAFFIC CONTROL NOTES AND SIGNS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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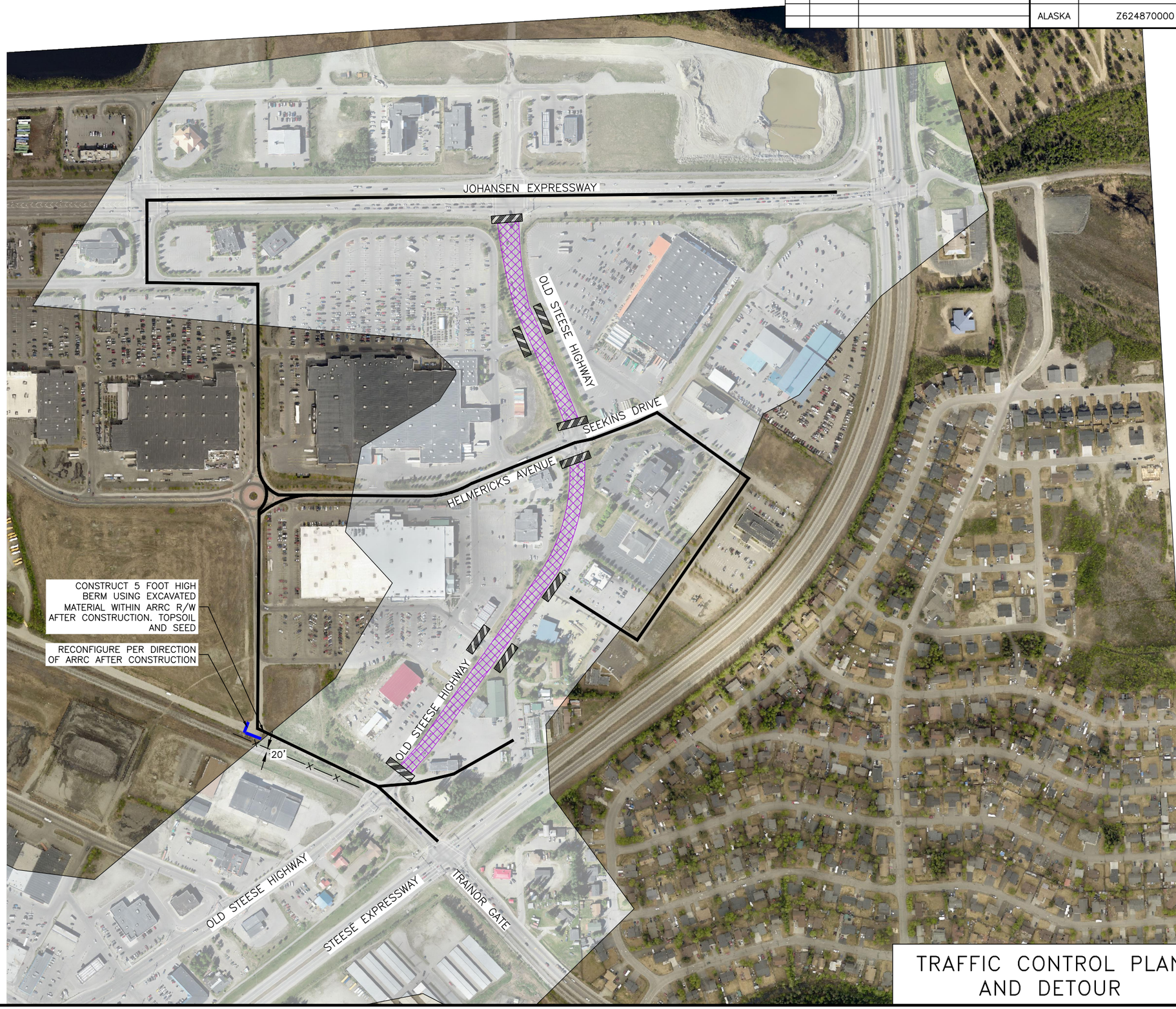
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	T2	T3



TRAFFIC CONTROL PLAN AND DETOUR

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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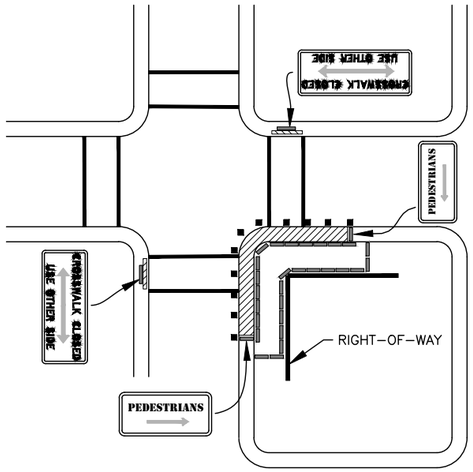
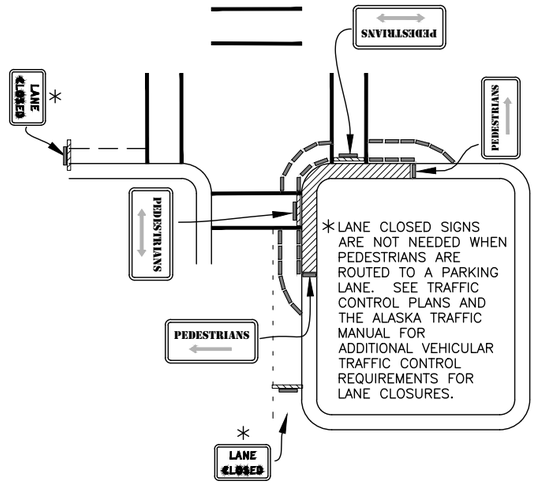
NO.	DATE	REVISION

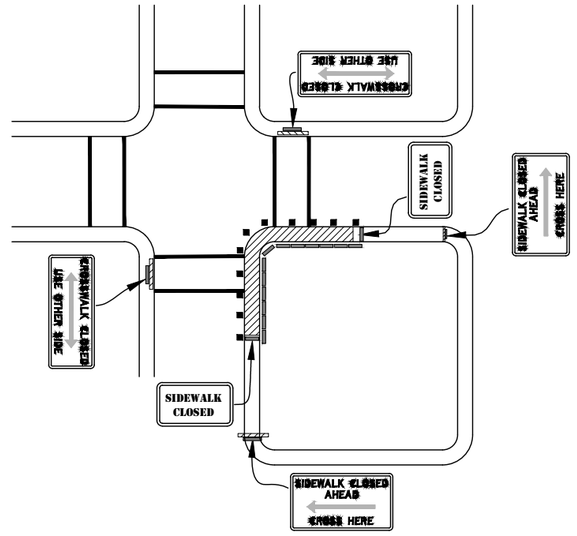
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	T3	T3



A. DETOUR AWAY FROM ROAD



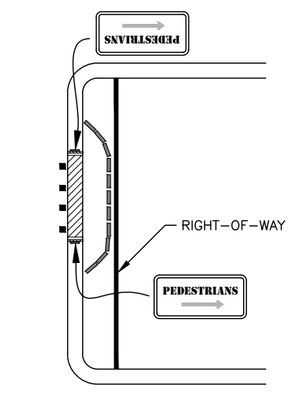
B. DETOUR TO CLOSED PARKING OR TRAVEL LANE



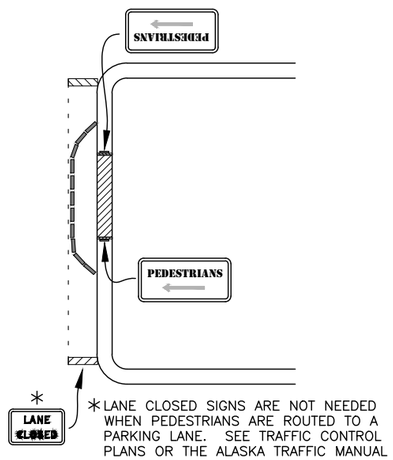
C. DETOUR TO OTHER SIDE

INTERSECTION SIDEWALK, PATHWAY OR SHOULDER CLOSURE

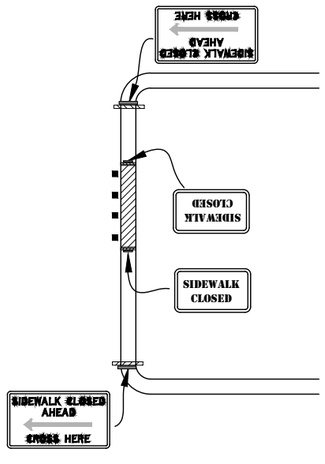
A TO C IN ORDER OF PREFERENCE



D. DETOUR AWAY FROM ROAD



E. DETOUR TO CLOSED PARKING OR TRAVEL LANE



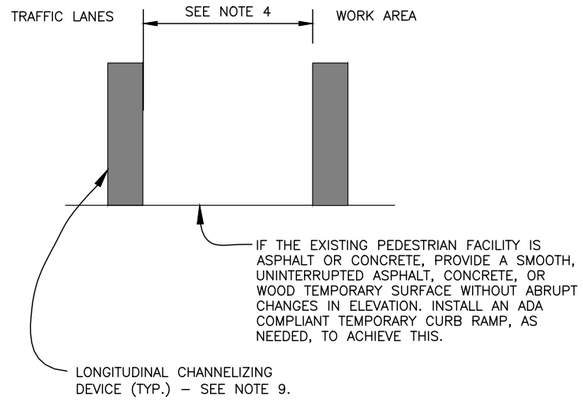
F. DETOUR TO OTHER SIDE

MID-BLOCK SIDEWALK, PATHWAY OR SHOULDER CLOSURE

D TO F IN ORDER OF PREFERENCE

NOTES:

1. THIS SHEET FOCUSES ON TRAFFIC CONTROL DEVICES FOR PEDESTRIANS. LOOK ELSEWHERE FOR VEHICULAR TRAFFIC CONTROL REQUIREMENTS.
2. PROVIDE PEDESTRIAN TRAFFIC CONTROL DEVICES WHEN SIDEWALKS OR PATHWAYS ARE CLOSED TO PEDESTRIANS AND WHERE REQUIRED BY THE PLANS OR SPECIFICATIONS. WHEN EXISTING PEDESTRIAN FACILITIES ARE DISRUPTED, CLOSED, OR RELOCATED IN A TTC ZONE, THE TEMPORARY FACILITIES SHALL BE DETECTABLE AND INCLUDE ACCESSIBILITY FEATURES CONSISTENT WITH THE FEATURES PRESENT IN THE EXISTING PEDESTRIAN FACILITY.
3. AVOID ROUTING PEDESTRIANS ACROSS ROADS UNNECESSARILY. USE DETAIL C OR F ONLY WHEN IT IS NOT PRACTICAL TO USE DETAIL A, B, D, OR E.
4. THE WIDTH OF THE EXISTING PEDESTRIAN FACILITY SHOULD BE PROVIDED FOR THE TEMPORARY FACILITY IF PRACTICAL. TRAFFIC CONTROL DEVICES AND OTHER CONSTRUCTION MATERIALS AND FEATURES SHOULD NOT INTRUDE INTO THE USABLE WIDTH OF THE SIDEWALK, TEMPORARY PATHWAY, OR OTHER PEDESTRIAN FACILITY. WHEN IT IS NOT POSSIBLE TO MAINTAIN A MINIMUM WIDTH OF 60 INCHES THROUGHOUT THE ENTIRE LENGTH OF THE PEDESTRIAN PATHWAY, A 60 X 60-INCH PASSING SPACE SHOULD BE PROVIDED AT LEAST EVERY 200 FEET TO ALLOW INDIVIDUALS IN WHEELCHAIRS TO PASS.
5. WHERE THE POSTED SPEED LIMIT EXCEEDS 45 MPH, SEPARATE PEDESTRIANS FROM ROADWAY EDGE OF PAVEMENT OR FACE OF CURB BY AT LEAST 5'. WHERE THAT IS NOT FEASIBLE, INSTALL PORTABLE CONCRETE BARRIER BETWEEN PEDESTRIANS AND THE ROAD.
6. WHEN PEDESTRIAN TRAFFIC CONTROL DEVICES REQUIRED BY THE CURRENT TRAFFIC CONTROL PLAN ARE NOT IN PLACE OR ARE TEMPORARILY REMOVED, PROVIDE A WORKER TO DIRECT PEDESTRIANS THROUGH THE WORK AREA.
7. COVER PEDESTRIAN TRAFFIC SIGNAL DISPLAYS CONTROLLING CLOSED CROSSWALKS.
8. WHEN USING DETAILS C AND F, ROUTE PEDESTRIANS TO THE BEST CROSSING POINT NEAR THE WORK AREA.
9. WHEN CHANNELIZATION IS USED TO DELINEATE A PEDESTRIAN PATHWAY, A CONTINUOUS DETECTABLE EDGING SHOULD BE PROVIDED THROUGHOUT THE LENGTH OF THE FACILITY SUCH THAT PEDESTRIANS USING A LONG CANE CAN FOLLOW IT. THESE DETECTABLE EDGINGS SHOULD COMPLY WITH THE PROVISIONS OF THE MUTCD.
10. SIGNS AND OTHER DEVICES MOUNTED LOWER THAN 7 FEET ABOVE THE TEMPORARY PEDESTRIAN PATHWAY SHOULD NOT PROJECT MORE THAN 4 INCHES INTO ACCESSIBLE PEDESTRIAN FACILITIES.
11. INSTALL PEDESTRIAN SIGNS ON AN ADA COMPLIANT (DETECTABLE) TYPE III BARRICADE.



PEDESTRIAN DETOUR – TYPICAL SECTION

LEGEND:

- LONGITUDINAL CHANNELIZING DEVICE
- TYPE III BARRICADE
- CHANNELIZING DEVICE
- TYPE III BARRICADE WITH SIGN
- WORK AREA

PEDESTRIAN TRAFFIC CONTROL

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U1	U11

WATER/SEWER NOTES:

1. GRADES, ALIGNMENTS, APPROACH LOCATIONS, LENGTHS AND LOCATIONS OF STORMDRAINS AND UTILITIES AND INSULATION SHOWN ON THESE PLANS ARE SUBJECT TO MINOR REVISIONS BY THE ENGINEER. ALL DISTANCES SHOWN IN THE PLANS ARE HORIZONTAL MEASUREMENTS.
2. SAWCUT ALL MATCH LINES WHERE NEW CONSTRUCTION OF PAVEMENT, SIDEWALK OR CURBING ABUTS EXISTING. SAWCUTS SUBSIDIARY TO RESPECTIVE 626 AND 627 PAY ITEMS.
3. STRUCTURAL EXCAVATION, PIPE BEDDING, AND BACKFILL ARE SUBSIDIARY TO THE ITEMS INSTALLED.
4. CONTRACTOR IS RESPONSIBLE FOR PROVIDING THEIR OWN STAGING AREA.
5. GET ENGINEER'S APPROVAL PRIOR TO ANY WORK OUTSIDE OF THE DESIGNATED PROJECT LIMITS, EASEMENT, OR RIGHT OF WAY.
6. PRESERVE / PROTECT OR REPLACE EXISTING LANDSCAPING, STRUCTURES OR OTHER APPURTENANCES TO ORIGINAL / EXISTING CONDITIONS. PAYMENT IS SUBSIDIARY TO ITEM 202.0001.0000 REMOVAL OF STRUCTURES AND OBSTRUCTIONS.
7. NUMEROUS UNDERGROUND UTILITIES EXIST WITHIN THE PROJECT CORRIDOR. THE CONTRACTOR SHALL CONTACT UTILITY OWNERS AND GET LOCATES PRIOR TO ANY EXCAVATION.
8. VERIFY LOCATION AND ELEVATION OF NEARBY UNDERGROUND WATER, SEWER, STORM DRAIN, GAS OR CABLES (BOTH MAINS AND SERVICES), AND REPORT TO ENGINEER BEFORE STARTING WORK THAT WILL CROSS THESE UTILITIES. WORK SUBSIDIARY TO RESPECTIVE 626 AND 627 PAY ITEMS.
9. WORK IS REQUIRED UNDER EXISTING OVERHEAD CABLES. PROTECT EQUIPMENT AND PERSONNEL AS REQUIRED SUBSIDIARY TO THOSE WORK ITEMS.
10. COMPLY WITH THE LATEST EDITION OF GOLDEN HEART UTILITIES (GHU) "STANDARDS OF DESIGN & CONSTRUCTION" AND "SERVICE LINE STANDARDS".
11. VERIFY ELEVATION OF WATER/ SEWER CONNECTION POINTS AND REPORT THESE SURVEY ELEVATIONS TO THE ENGINEER SO CHANGES CAN BE MADE IN THE GRADES AS REQUIRED TO MATCH EXISTING IMPROVEMENTS. PAYMENT SUBSIDIARY TO 642.0001.0000 CONSTRUCTION SURVEYING.
12. APPLY 2 INCHES OF ADDITIONAL INSULATION TO WATER MAIN OR WATER SERVICE FOR A DISTANCE OF 7 LF EACH SIDE OF ANY STORM DRAIN OR SANITARY SEWER CROSSING AS SHOWN ON PLANS. PAY SUBSIDIARY TO RESPECTIVE 627 PAY ITEMS.
13. APPLY 2 INCHES OF ADDITIONAL INSULATION TO WATER MAIN OR WATER SERVICE WHERE IT IS WITHIN 7 LF HORIZONTALLY OF STORM DRAIN OR SANITARY SEWER MAIN AS SHOWN ON PLANS. PAY SUBSIDIARY TO RESPECTIVE 627 PAY ITEMS.
14. ALL ACCESS FRAMES & COVERS / LIDS IN ASPHALT SHALL BE INSTALLED TO GRADE BEFORE ASPHALT IS INSTALLED. NO CUTTING OUT ASPHALT SHALL BE ALLOWED WITHOUT APPROVAL OF THE ENGINEER.
15. FIELD STAKE ALL SANITARY SEWER AND WATER LOCATIONS FOR APPROVAL BY ENGINEER PRIOR TO INSTALLATION. WORK SUBSIDIARY TO RESPECTIVE 626 AND 627 PAY ITEMS.
16. LOCATE ALL WATER SERVICES USING CONTRACTOR PROVIDED MAGNETIC LOCATOR, OTHER DEVICE DESIGNED FOR WATER SERVICE LOCATES, OR ANY MEANS NECESSARY TO FIND THE SERVICES, PAYMENT SUBSIDIARY TO WATER OR SPRINKLER SERVICES.
17. EXPOSE SERVICE SADDLES ON THE EXISTING WATER AND SEWER MAINS AND VERIFY THEY ARE ACTIVE. REPORT TO ENGINEER BEFORE RECONNECTING NEW SEWER SERVICE. GHU WILL NOT LOCATE WATER OR SEWER SERVICES. ALL COSTS ASSOCIATED WITH FINDING WATER OR SEWER SERVICES WITHIN 10 FEET LEFT OR RIGHT HORIZONTALLY FROM THE LOCATION SHOWN ON THE PLANS OR STAKED BY THE ENGINEER ARE SUBSIDIARY TO WATER SERVICE CONNECTION OR SEWER SERVICE CONNECTION, RESPECTIVELY.
18. MAINTAIN EXISTING UTILITY CUSTOMER SERVICE EXCEPT MAXIMUM 4 HOUR OUTAGE FOR NEW MAIN OR SERVICE RECONNECTIONS. 48 HOUR ADVANCE PUBLIC NOTICE IS REQUIRED.
19. EXISTING TELECOMMUNICATION CABLES SHOWN ON THE PLAN SHEETS MAY INCLUDE ACS, GCI, OR MTAC UTILITIES.
20. ABANDON EXISTING SANITARY SEWER AND WATER CONDUIT IN PLACE, EXCEPT WHERE CONFLICTS ARISE AS A RESULT OF NEW CONSTRUCTION. WHERE CONFLICTS EXIST, REMOVE EXISTING WATER OR SANITARY SEWER CONDUIT. PLUG ALL ENDS OF ABANDONED PIPE NOT REMOVED WITH 12 INCHES OF SPRAYED URETHANE FOAM OR 4 INCHES OF CONCRETE OR FILL WITH SLURRY AS SHOWN IN PLANS. PAYMENT IS SUBSIDIARY TO PAY ITEM 202.0001.0000.
21. RESTRAIN ALL MECHANICAL JOINT BENDS AND PUSH ON JOINTS FROM BENDS OR FITTINGS TO TRANSITION COUPLINGS OR WITHIN 45 FEET OF A BEND. RESTRAIN ALL PUSH ON JOINTS SHOWN TO BE DEFLECTED IN THE PLANS. RESTRAIN ALL VALVES OR REDUCERS WITH MEG-A-LUGS OR APPROVED EQUAL. USE MJ ADAPTERS INSTEAD OF SHORT RESTRAINED PUPS.
22. INSTALL ALL SERVICE VALVES AND SADDLES BEFORE MAINLINE TESTING.
23. INSTALL DUAL COPPER TUBING FOR ALL WATER SERVICE RECONNECTIONS WITH SIZE AS INDICATED ON PLANS AND PIPING LENGTH TO 4' BEYOND PROPERTY LINE. ADAPT TO EXISTING SIZE AS NEEDED.
24. INSTALL 6" DIP WITH 1" COPPER TUBING OR AS OTHERWISE NOTED ON PLANS FOR ALL NEW SPRINKLER LINE RECONNECTIONS AND PIPING LENGTH TO 4' BEYOND PROPERTY LINE. ADAPT TO EXISTING SIZE AS NEEDED.

WATER/SEWER NOTES CONTINUED:

25. INSTALL 4" PIPE SIZE OR AS OTHERWISE NOTED ON PLANS FOR ALL SEWER SERVICE RECONNECTIONS AND PIPING LENGTH TO 4' BEYOND PROPERTY LINE. ADAPT TO EXISTING SIZE AS NEEDED.
26. SEWER SERVICE RECONNECTIONS MAY REQUIRE GRADE CHANGES TO AVOID CONFLICT WITH WATER MAINS OR STORM DRAIN. PAYMENT FOR THIS WORK IS SUBSIDIARY TO SEWER SERVICE CONNECTIONS.
27. INSTALL ALL SEWER SERVICE SADDLES ON MAIN WITH RISER CAPPED BEFORE AIR TESTING. VIDEO INSPECT MAIN AFTER BACKFILLING A MINIMUM OF 3' ABOVE T.O.P.
28. SCHEDULE ALL UTILITY OUTAGES TO TAKE PLACE DURING NON BUSINESS HOURS. ALL COSTS TO PROVIDE AND INSTALL TEMPORARY MEASURES ON EXISTING UTILITIES ARE SUBSIDIARY TO THE UTILITY PAY ITEM. THE CONTRACTOR IS RESPONSIBLE FOR ALL DAMAGES THAT RESULT FROM OUTAGES BEYOND THE PRESCRIBED PERIOD.
29. PAYMENT FOR ALL SHORING, BRACING, TRENCH BOXES, ETC. TO PROTECT BUILDINGS, TRAFFIC, AND PERSONS SHALL BE SUBSIDIARY TO THE STRUCTURE BEING INSTALLED.
30. SALVAGE SEWER MANHOLE & FLUSHWELL CASTINGS. COORDINATE PICK-UP BY GHU.
31. PROTECT OR REMOVE AND REPLACE IN SAME LOCATION OR TO THE SIDE OF THE ROADWAY, EXISTING MARKER POSTS FOR GAS, BURIED CABLE, WATER, SEWER, OR STORM DRAIN, SUBSIDIARY TO OTHER ITEMS OF WORK.
32. FINAL ADJUSTMENT OF MANHOLE FRAMES AND COVERS, VALVE BOXES AND FLUSHWELLS TO FINISH GRADE IS SUBSIDIARY TO RESPECTIVE PAY ITEMS 604, 626, AND 627.
33. THE NATURAL GROUND WATER TABLE VARIES SEASONALLY WITH HIGHER STAGE LEVELS OF THE CHENA AND/OR TANANA RIVERS. APPLY WATERPROOF PROTECTIVE COATING OVER SANITARY SEWER MANHOLES AND PIPING WHERE INDICATED BY ENGINEER. PAY IS SUBSIDIARY TO RESPECTIVE PAY ITEMS.
34. USE MECHANICAL JOINT ADAPTERS FOR ALL FITTING / VALVE ASSEMBLIES.
35. TEST FIRE SPRINKLER SERVICES TO 200 PSI.
36. ALL LABOR, MATERIALS, EQUIPMENT, AND SUPERVISION TO INSTALL 18" CPP SLEEVE, AS INDICATED ON THE PLANS, SHALL BE SUBSIDIARY TO RESPECTIVE 627 PAY ITEMS.
37. HYDRANT GROUNDLINE GROOVE ELEVATIONS SHALL BE HELD. HYDRANT TEE ELEVATIONS SHALL BE ADJUSTED TO NEAREST NOMINAL HYDRANT BARREL LENGTH.

WATER SYSTEM COMPLETE ESTIMATED LUMP SUM QUANTITIES

ITEM NO.	PAY ITEM	PAY UNIT	QUANTITY
627.2033.0000	WATER SYSTEM COMPLETE	LS	1
	8" DUCTILE IRON WATER CONDUIT	LF	62
	10" DUCTILE IRON WATER CONDUIT	LF	165
	12" DUCTILE IRON WATER CONDUIT	LF	24
	18" DUCTILE IRON WATER CONDUIT	LF	197
	6" GATE VALVE	EA	2
	8" GATE VALVE	EA	1
	18" GATE VALVE	EA	1
	VALVE BOX	EA	4
	FIRE HYDRANT ASSEMBLY	EA	2
	18" MJ 45° BEND	EA	4
	18" DIP SLEEVE COUPLING	EA	1
	18"X6" DIP SWIVEL TEE	EA	1
	12" MJ 45° BEND	EA	4
	12"X6" DIP SWIVEL TEE	EA	1
	12" DIP SLEEVE COUPLING	EA	1
	8" MJ 45° BEND	EA	1
	12"X8" DIP TEE	EA	1
	10" MJ 90° BEND	EA	2
	10" MJ 45° BEND	EA	4
	10" DIP SLEEVE COUPLING	EA	2
	REMOVAL OF PIPE	LF	163
	20" STEEL SLEEVE PIPE	LF	125
	ABANDON 8" DUCTILE IRON WATER CONDUIT	LF	95
	ADJUST VALVE BOX	EA	23
	UTILITY SERVICE LOCATES	LS	1
	WATER SERVICE CONNECTION	EA	2
	TEMPORARY WATER SERVICE	EA	2

PRELIMINARY PS&E

WATER AND SEWER NOTES

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-U-Water_Sewer-U1 Tue, Oct/18/22 10:28am

NOTES:
1. NEW WATER PIPE LENGTHS ARE CENTER OF FITTING TO CENTER OF FITTING

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U2	U11

INSTALL FH#1 & 6" GV
"O" 44+28.24, 45.21' LT
INSTALL 18" MJ45°
"O" 44+25.70, 42.33' LT
INSTALL 18" MJ45°
"O" 44+30.78, 42.33' LT
INSTALL 18" GV
"O" 44+33.81, 39.34' LT
INSTALL 91.1 LF
18" DIP
INSTALL 41.4 LF
18" DIP
SEWER/WATER XING
"O" 44+52.05, 21.09' LT
SEWER/WATER XING
"O" 44+04.07, 20.75' LT
SD/WATER XING
"O" 44+74.37, 1.76' RT
18" DIP
"O" 43+00
"O" 44+00
"O" 45+00
"O" 46+00
"O" 47+00
CTE, INSTALL 18" MJ45°
"O" 43+96.33, 12.89' LT
ABANDON 181.0 LF
EXIST 18" DIP
FILL W/ SLURRY
CTE 18" DIP
"O" 45+56.84, 25.51' RT
12" DIP
18" DIP
INSTALL 18" MJ45°
"O" 44+94.56, 22.95' RT
INSTALL 62.9 LF
18" DIP
NEW SERVICE LINE TO
BE INSTALLED OCT.
2022 PER UTILITY
COMPANY
TRAINOR GATE RD
OLD STEESE HWY
R/W
TCE
PUE
TCP

WATER STA. 42+80–47+60

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION

18"X6" FH TEE TOP:
STA: 44+28.24
ELEV: 442.20
*APPROX.
FH GROUNDLINE GROOVE:
STA: 44+28.24
ELEV: 448.14
45° TOP:
STA: 44+25.70
ELEV: 442.20
45° TOP:
STA: 44+30.78
ELEV: 442.20
45° TOP:
STA: 44+94.56
ELEV: 442.20
NEW 12" CPP SD
NEW 18" DIP WATER
TRANS CPLG. TOP:
STA: 43+92.34
ELEV: 440.18
(VERIFY/MATCH)
NEW 18" CPP SD
BTM @
NEW SD XING:
STA: 44+74.37
ELEV: 440.70
45° TOP:
STA: 43+96.33
ELEV: 440.16
BTM @
EXIST SS XING:
STA: 44+04.07
ELEV: 439.20
BTM @
EXIST SS XING:
STA: 44+52.05
ELEV: 440.70
TRANS CPLG, TOP:
STA: 45+56.84
ELEV: 440.02
(VERIFY/MATCH)
NEW 48" CPP SD
TOP @
NEW WTR XING:
STA: 44+04.07
ELEV: 433.93
TOP @
NEW WTR XING:
STA: 44+52.05
ELEV: 434.01
TOP NEW 18" SD @
NEW WTR XING:
STA: 44+74.37
ELEV: 438.90
EXIST 12" DIP WATER
EXIST 18" DIP WATER
EXIST 18" DIP SEWER
NEW 48" CPP SD

450	448	446	444	442	440	438	436	434

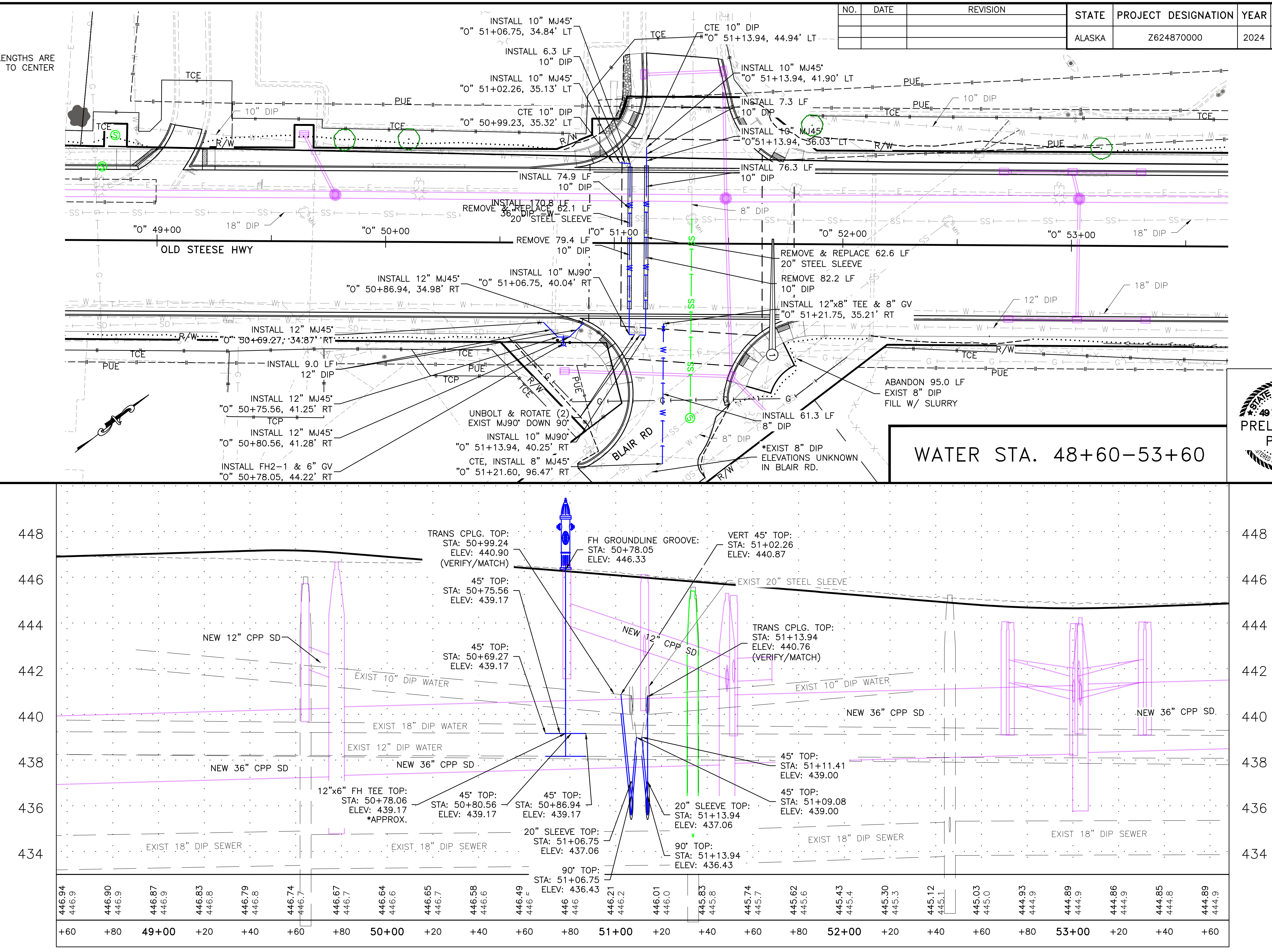
447.70 447.7	448.10 448.1	447.78 447.8	448.03 448.0	448.53 448.5	448.48 448.5	447.95 447.9	447.93 447.9	447.88 447.9	447.82 447.8	447.74 447.7	447.70 447.7	447.63 447.6	447.59 447.6	447.56 447.6	447.55 447.5	447.50 447.5	447.44 447.4	447.36 447.4	447.29 447.3	447.23 447.2	447.18 447.2	447.12 447.1	447.09 447.1	447.09 447.1
+80	43+00	+20	+40	+60	+80	44+00	+20	+40	+60	+80	45+00	+20	+40	+60	+80	46+00	+20	+40	+60	+80	47+00	+20	+40	+60

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-U-Water_Sewer-U2 Tue, Oct/18/22 10:28am

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U3	U11

NOTES:
1. NEW WATER PIPE LENGTHS ARE CENTER OF FITTING TO CENTER OF FITTING



INSTALL 10" MJ45° "O" 51+06.75, 34.84' LT
INSTALL 6.3 LF 10" DIP
INSTALL 10" MJ45° "O" 51+02.26, 35.13' LT
CTE 10" DIP "O" 50+99.23, 35.32' LT
CTE 10" DIP "O" 51+13.94, 44.94' LT
INSTALL 10" MJ45° "O" 51+13.94, 41.90' LT
INSTALL 7.3 LF 10" DIP
INSTALL 10" MJ45° "O" 51+13.94, 36.03' LT
INSTALL 76.3 LF 10" DIP
INSTALL 74.9 LF 10" DIP
INSTALL 170.8 LF 36" DIP
REMOVE & REPLACE 62.1 LF 20" STEEL SLEEVE
REMOVE 79.4 LF 10" DIP
INSTALL 10" MJ90° "O" 51+06.75, 40.04' RT
INSTALL 12" MJ45° "O" 50+86.94, 34.98' RT
INSTALL 12" MJ45° "O" 50+69.27, 34.87' RT
INSTALL 9.0 LF 12" DIP
INSTALL 12" MJ45° "O" 50+75.56, 41.25' RT
INSTALL 12" MJ45° "O" 50+80.56, 41.28' RT
INSTALL FH2-1 & 6" GV "O" 50+78.05, 44.22' RT
UNBOLT & ROTATE (2) EXIST MJ90° DOWN 90°
INSTALL 10" MJ90° "O" 51+13.94, 40.25' RT
CTE, INSTALL 8" MJ45° "O" 51+21.60, 96.47' RT
REMOVE & REPLACE 62.6 LF 20" STEEL SLEEVE
REMOVE 82.2 LF 10" DIP
INSTALL 12"x8" TEE & 8" GV "O" 51+21.75, 35.21' RT
ABANDON 95.0 LF EXIST 8" DIP FILL W/ SLURRY
INSTALL 61.3 LF 8" DIP
*EXIST 8" DIP ELEVATIONS UNKNOWN IN BLAIR RD.
OLD STEESE HWY
BLAIR RD
"O" 49+00
"O" 50+00
"O" 51+00
"O" 52+00
"O" 53+00
10" DIP
18" DIP
12" DIP
8" DIP
TCE
PUE
TCP
R/W
TRANS CPLG. TOP: STA: 50+99.24 ELEV: 440.90 (VERIFY/MATCH)
FH GROUNDLINE GROOVE: STA: 50+78.05 ELEV: 446.33
VERT 45° TOP: STA: 51+02.26 ELEV: 440.87
45° TOP: STA: 50+75.56 ELEV: 439.17
45° TOP: STA: 50+69.27 ELEV: 439.17
TRANS CPLG. TOP: STA: 51+13.94 ELEV: 440.76 (VERIFY/MATCH)
NEW 12" CPP SD
EXIST 20" STEEL SLEEVE
EXIST 10" DIP WATER
EXIST 18" DIP WATER
EXIST 12" DIP WATER
NEW 36" CPP SD
EXIST 18" DIP SEWER
12"x6" FH TEE TOP: STA: 50+78.06 ELEV: 439.17 *APPROX.
45° TOP: STA: 50+80.56 ELEV: 439.17
45° TOP: STA: 50+86.94 ELEV: 439.17
20" SLEEVE TOP: STA: 51+06.75 ELEV: 437.06
90° TOP: STA: 51+06.75 ELEV: 436.43
20" SLEEVE TOP: STA: 51+13.94 ELEV: 437.06
90° TOP: STA: 51+13.94 ELEV: 436.43
45° TOP: STA: 51+11.41 ELEV: 439.00
45° TOP: STA: 51+09.08 ELEV: 439.00
448
446
444
442
440
438
436
434
+60 +80 49+00 +20 +40 +60 +80 50+00 +20 +40 +60 +80 51+00 +20 +40 +60 +80 52+00 +20 +40 +60 +80 53+00 +20 +40 +60

WATER STA. 48+60–53+60

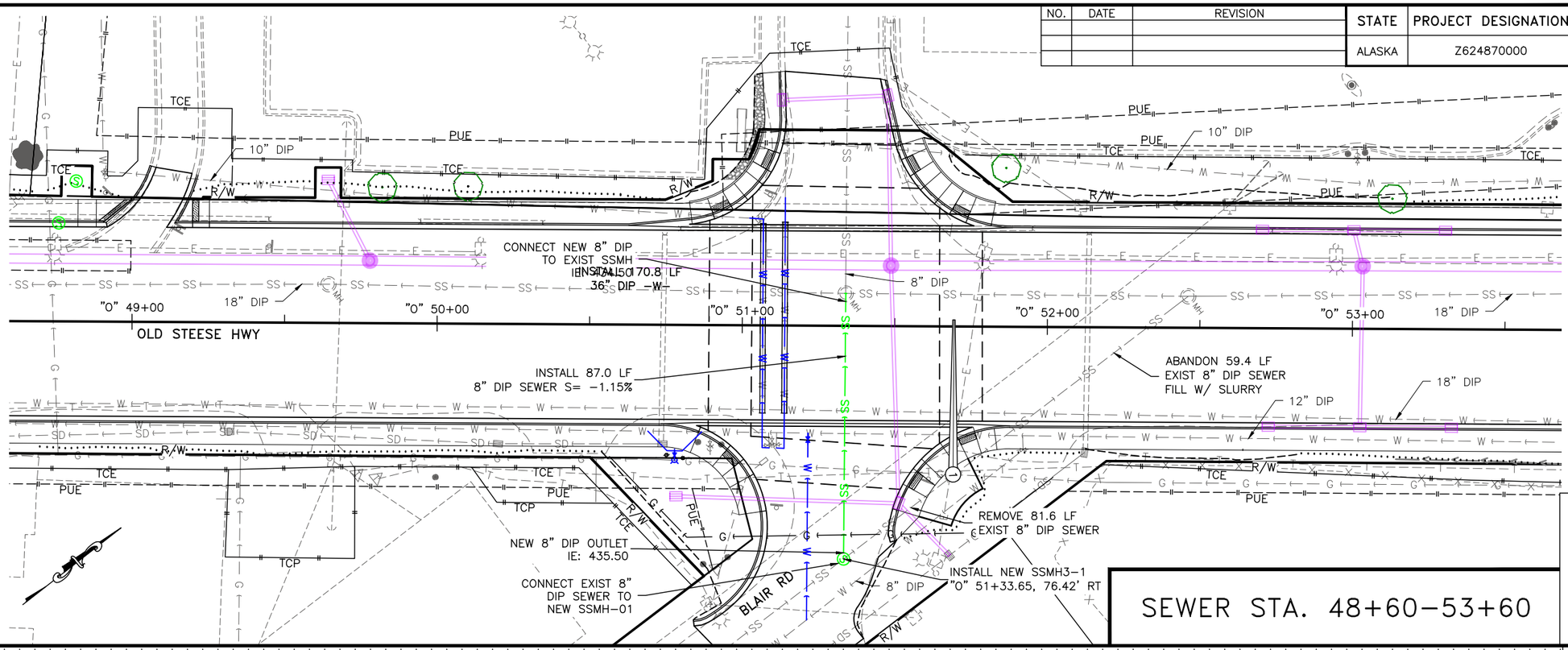
STATE OF ALASKA 49TH
PRELIMINARY PS&E
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401392\62487-U-Water_Sewer-U3 Tue, Oct/18/22 10:29am

NO.	DATE	REVISION

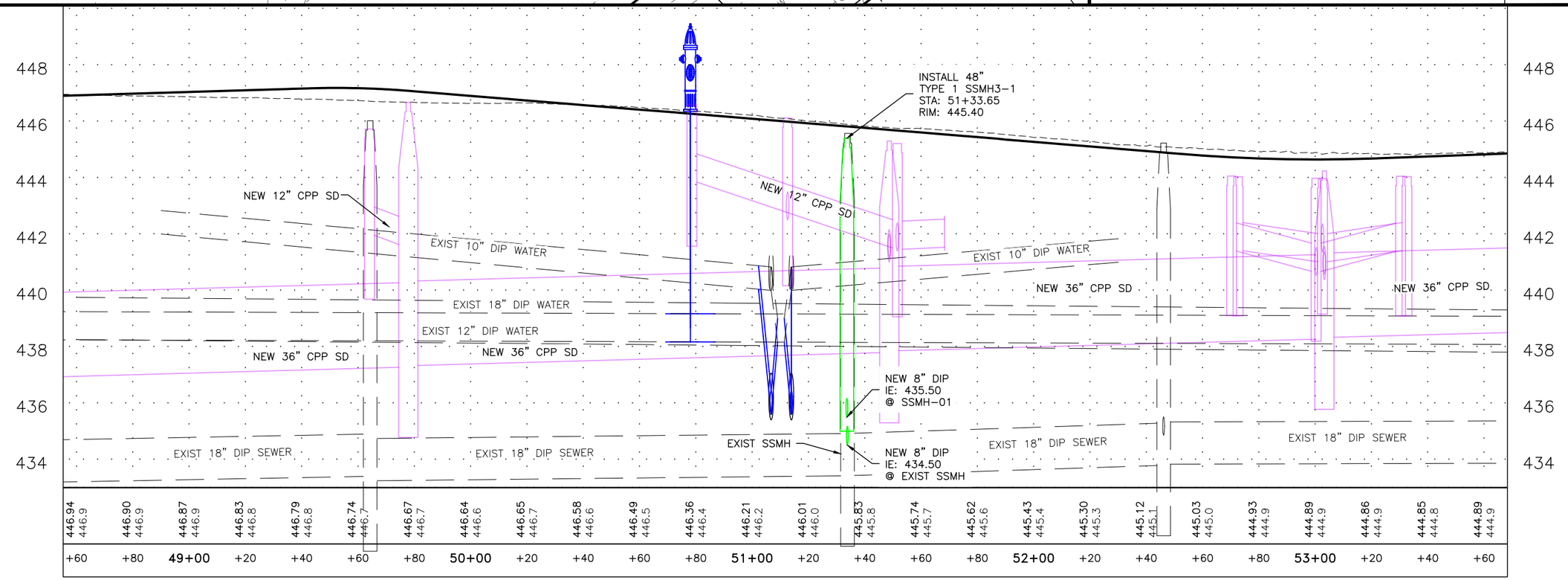
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U4	U11

NOTES:
1. NEW SEWER PIPE LENGTHS ARE CENTER OF STRUCTURE TO CENTER OF STRUCTURE



SEWER STA. 48+60-53+60

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION



PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
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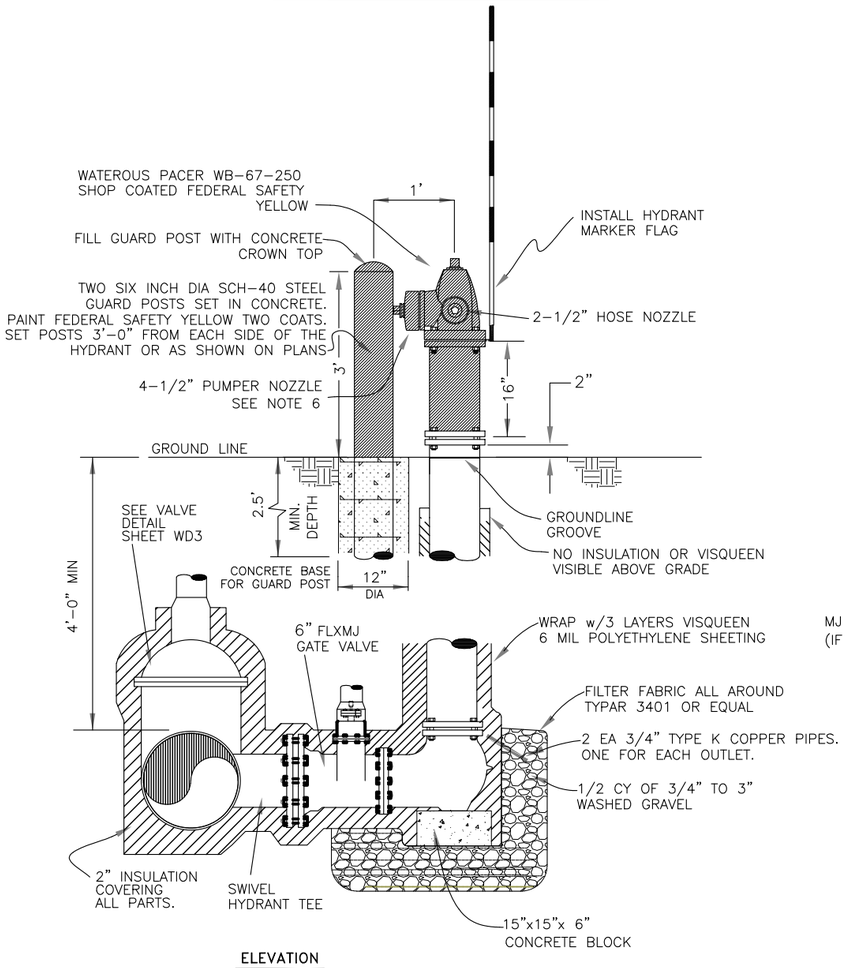
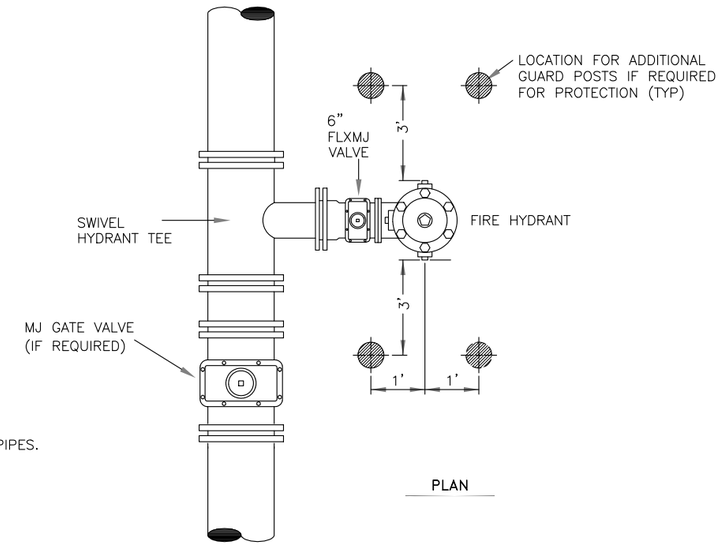
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U5	U11



ELEVATION

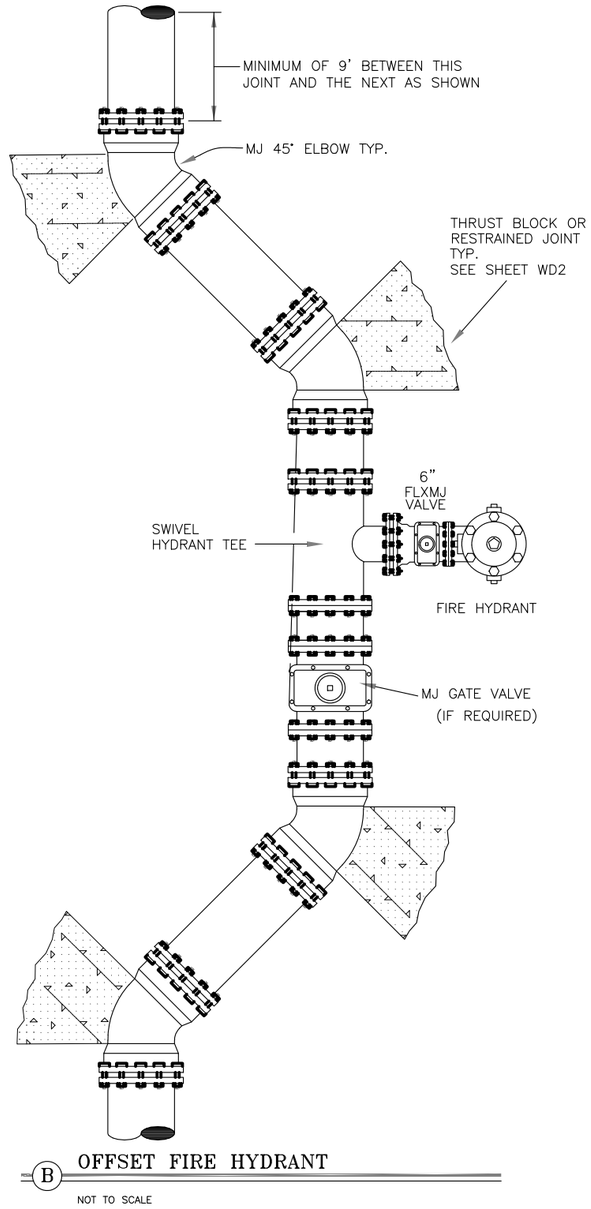


PLAN

A TYPICAL FIRE HYDRANT

NOT TO SCALE

1. A BREAKAWAY FLANGE IS REQUIRED ON FIRE HYDRANT BASE FLANGE.
2. FIRE HYDRANT LOCATIONS AS SPECIFIED ON PLAN SHEETS.
3. EXCAVATION SHALL CONFORM TO OSHA STANDARDS.
4. ALL FIRE HYDRANTS SHALL BE PLUMB.
5. ALL FIRE HYDRANTS SHALL RECEIVE 3 LAYERS 6 MIL POLYETHYLENE SHEETING AROUND BURIED BARREL PORTION.
6. ORIENT PUMPER NOZZLE PER ENGINEERS DIRECTIONS.



B OFFSET FIRE HYDRANT

NOT TO SCALE

DATE	REVISION	BY
12/16/20	NEW LOGOS	CWH
JAN 07	UPDATE	MJB
4/09/02	UPDATE	MJB
12/16/20	NEW LOGOS	CWH

PLAN SCALE: NOT TO SCALE

DESIGNED	APPROVED
DRAWN	
CHECKED MJB	USA ENGINEER
DATE FEB 1998	FILE: STANDARD DETAILS WD1

Golden Heart Utilities™ | College Utilities™

WATER SYSTEM DETAILS
FIRE HYDRANT INSTALLATION

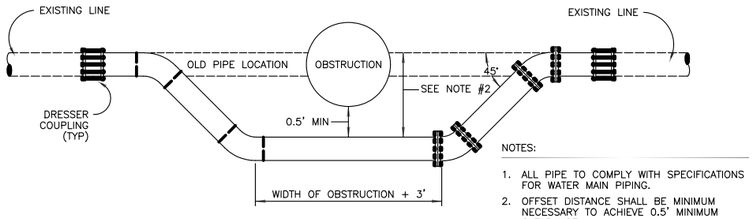
WD 1

STANDARD WATER DETAILS

STATE OF ALASKA 49TH
PRELIMINARY PS&E
NOT FOR CONSTRUCTION

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U6	U11

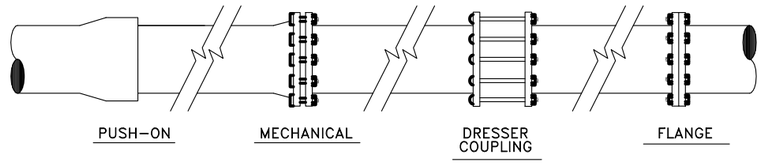


NOTES:

1. ALL PIPE TO COMPLY WITH SPECIFICATIONS FOR WATER MAIN PIPING.
2. OFFSET DISTANCE SHALL BE MINIMUM NECESSARY TO ACHIEVE 0.5' MINIMUM CLEARANCE.
3. ALL JOINTS SHALL BE RESTRAINED AS NECESSARY

(A) TYPICAL RELOCATION DETAIL

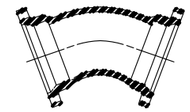
NOT TO SCALE



WHEN USING DIP, ALL FOUR JOINT TYPES SHALL BE ALLOWED.
WHEN USING STEEL PIPE FOR SERVICE LINES, DRESSER AND FLANGE FITTINGS ONLY WILL BE ALLOWED.
FLANGED JOINTS/FITTINGS ARE NOT ACCEPTABLE UNDERGROUND (EXCEPT AT HYDRANT BASE)

(B) WATER PIPE JOINTS

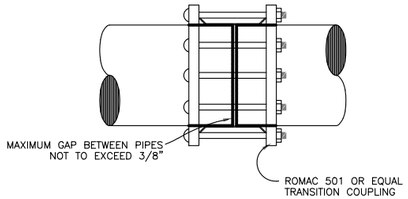
NOT TO SCALE



DIP FITTINGS SHALL BE MECHANICAL JOINT COMPACT FITTINGS CONFORMING TO AWWA C153

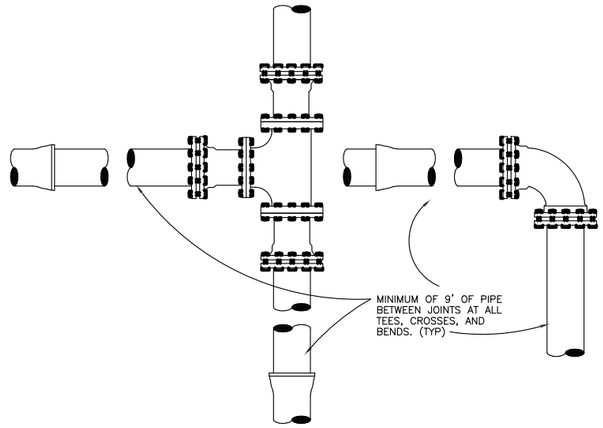
(C) PIPE FITTINGS

NOT TO SCALE



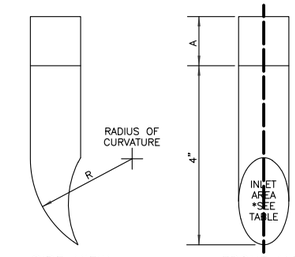
(D) ADAPTATION – STEEL TO DUCTILE IRON PIPE

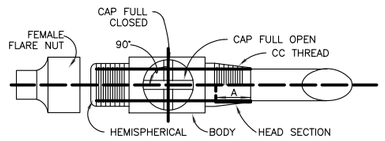
NOT TO SCALE



(F) PIPE LENGTHS REQUIRED AT TEES AND ELBOWS

NOT TO SCALE

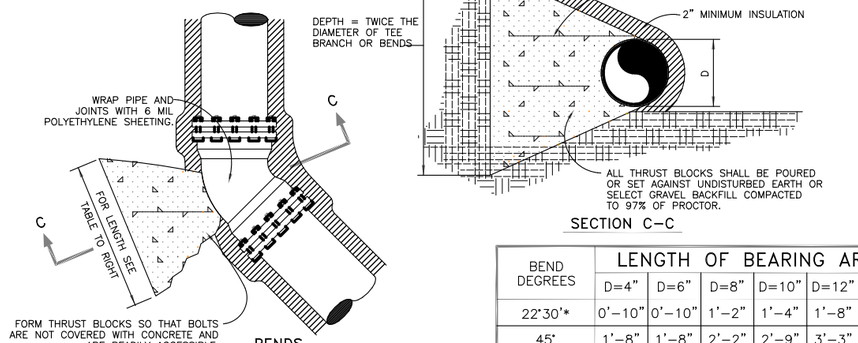




PITORIFICE BASIC DIMENSIONS			
NOMINAL SIZE	A (INCHES)	R (INCHES)	AREA INLET (IN)
3/4	.75	2	0.75
1	1	2.25	1.34
1 1/2	1.25	2.75	3.00
2	1.25 TO 1.5	3.25	5.4

(G) STANDARDS FOR PITORIFICE TYPE CORPORATION STOPS

NOT TO SCALE



NOTE: RESTRAINED JOINT SYSTEM (eg. "TR FLEX"; "FLEX-RING"; "SNAP LOC"; "FIELD LOK" GASKETS; "MEGA LUG"; RODS AND SHACKLES, ETC.) MAY BE USED IN LIEU OF THRUST BLOCKS SUBJECT TO APPROVAL BY THE ENGINEER.

BEND DEGREES	LENGTH OF BEARING AREA					
	D=4"	D=6"	D=8"	D=10"	D=12"	D=14"
22°30'*	0'–10"	0'–10"	1'–2"	1'–4"	1'–8"	2'–0"
45°	1'–8"	1'–8"	2'–2"	2'–9"	3'–3"	3'–9"
60°**	2'–2"	2'–2"	2'–10"	3'–6"	4'–3"	5'–0"
90°	3'–0"	3'–0"	4'–0"	5'–0"	6'–0"	7'–0"

* FOR BENDS GREATER THAN 5°, BUT LESS THAN 22°30', USE LENGTH FOR A 22°30'.
** FOR DEAD END, TEE, OR CROSS, USE LENGTH FOR A 60° BEND.

(E) THRUST BLOCK DETAILS

NOT TO SCALE

DATE	REVISION	BY
12/16/20	NEW LOGOS	CWH
JAN 07	UPDATE	MJB

PLAN SCALE: NOT TO SCALE

PLOT SCALE: 1=1

DESIGNED	RHP/GSC
DRAWN	NBB/DAL
CHECKED	MJB
DATE	FEB 1998

APPROVED

USA ENGINEER

FILE: STANDARD DETAILS WD2

WATER SYSTEM DETAILS
PIPE, JOINTS, THRUST RESTRAINT

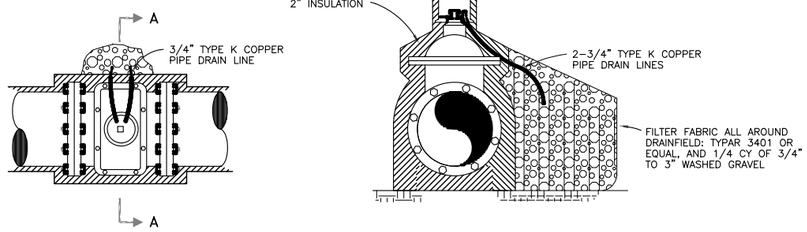
WD2

STANDARD WATER DETAILS

STATE OF ALASKA 49TH PRELIMINARY PS&E NOT TO BE USED FOR CONSTRUCTION

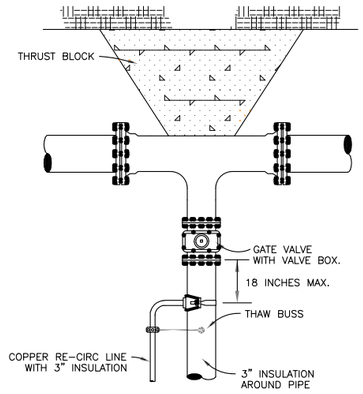
NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U7	U11



SECTION A–A

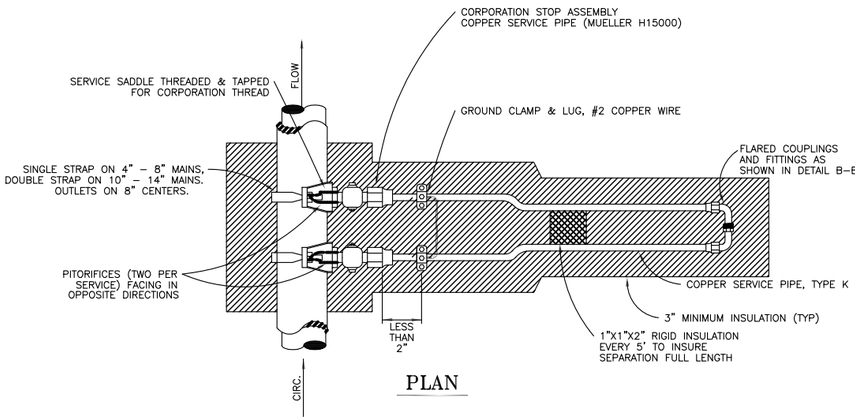
GATE VALVE



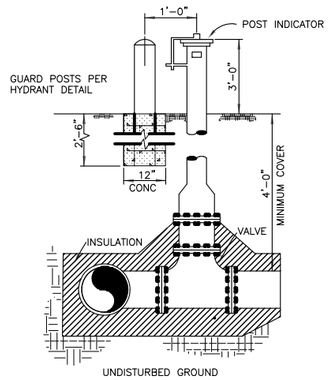
B FIRE SPRINKLER SERVICE

NOT TO SCALE

(CONTACT UTILITY FOR ALTERNATE DESIGNS)



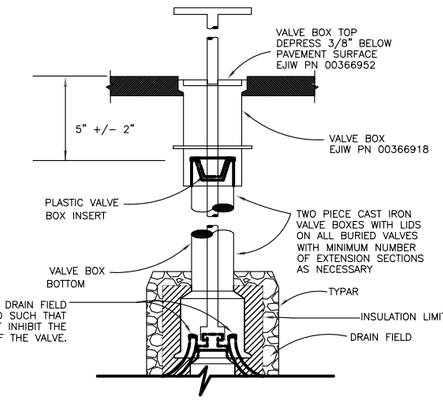
PLAN



POST INDICATOR VALVE INSTALLATION

A VALVES

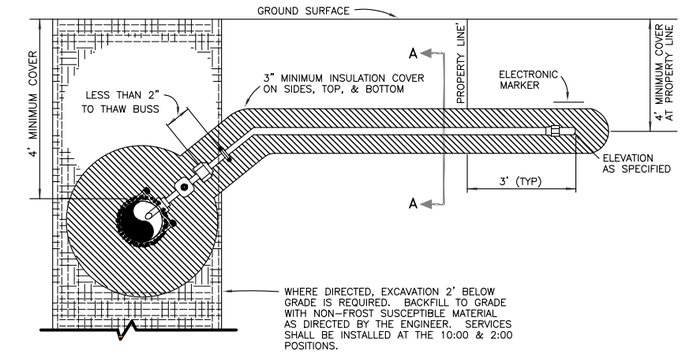
NOT TO SCALE



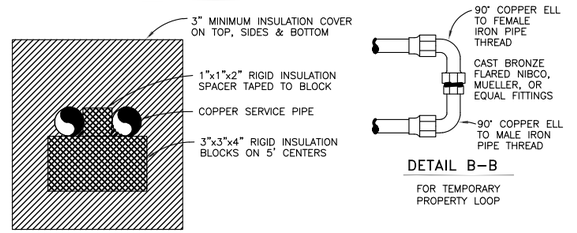
C VALVE BOX

NOT TO SCALE

NOTES:
1. VALVE BOX ASSEMBLY SHALL BE GENERALLY PLUMB AFTER ROAD IS RESURFACED.
2. FOR ACCEPTANCE, IT MUST BE POSSIBLE TO OPERATE A VALVE WITH THE KEY IN A VERTICAL POSITION WITHOUT INTERFERENCE FROM VALVE BOX BOTTOM, RISERS, OR CAN.
3. FOR ACCEPTANCE, VALVE BOX TOP MUST SIT FLAT IN FRAME.
4. FOR ACCEPTANCE, THE BOX ASSEMBLY MUST BE CLEARED OF DEBRIS (MUD, GRAVEL, ETC.)



ELEVATION



DETAIL B–B

FOR TEMPORARY PROPERTY LOOP

SECTION A–A

D DOMESTIC WATER SERVICE

NOT TO SCALE

			PLAN SCALE: NOT TO SCALE	DESIGNED RHP/GSC	APPROVED
				DRAWN NBB/DAL	
				CHECKED MJB	USA ENGINEER
12/16/20	NEW LOGOS	CWH	PLOT SCALE: 1=1	DATE FEB 1998	FILE: STANDARD DETAILS WD3
DATE	REVISION	BY			

WATER SYSTEM DETAILS
VALVES AND SERVICES

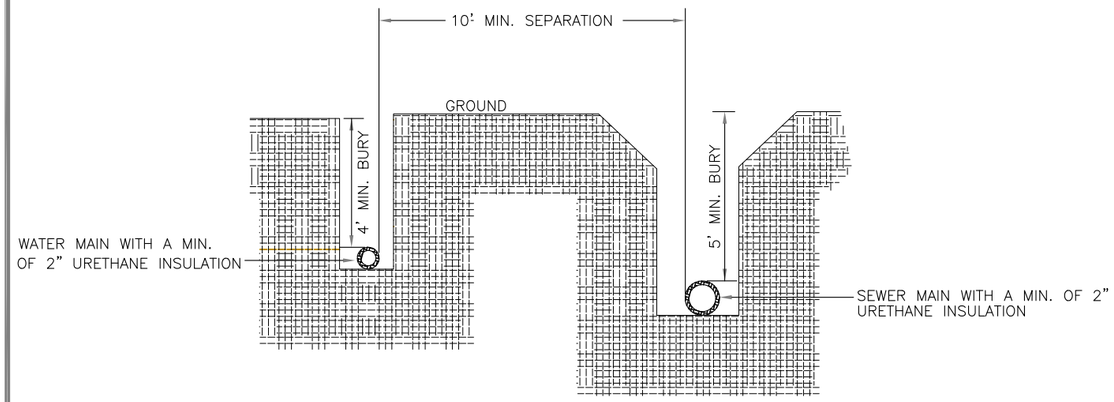
WD3

STANDARD WATER DETAILS

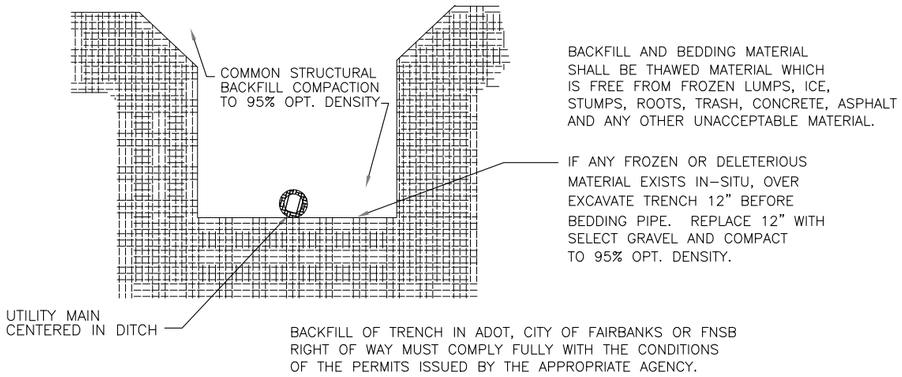
PRELIMINARY PS&E

NO.	DATE	REVISION

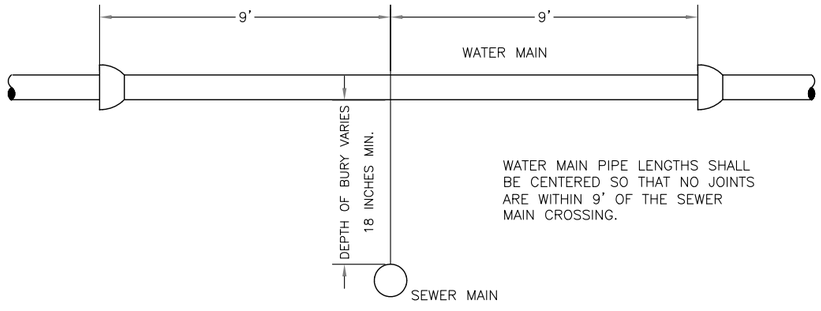
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U8	U11



1 PIPE PLACEMENT DETAIL
NOT TO SCALE



3 PIPE BEDDING AND BACKFILL DETAIL
NOT TO SCALE



2 MAIN CROSSING DETAIL
NOT TO SCALE

12/16/20	NEW LOGOS	CWH
DATE	REVISION	BY

PLAN SCALE: NOT TO SCALE

PLOT SCALE: 1=1

DESIGNED	APPROVED
DRAWN	
CHECKED	USA ENGINEER
DATE	FILE: WD4

WATER AND SEWER TRENCH AND CROSSING DETAILS

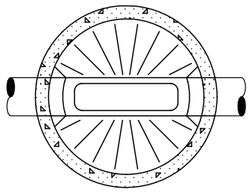
WD4

PRELIMINARY PS&E

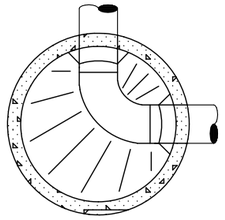
STANDARD WATER DETAILS

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U9	U11

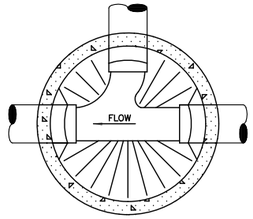


THROUGH SECTION



90° BEND

CONCRETE BASE MAY BE: 64" DIAMETER FOR 48" MANHOLES; 92" DIAMETER FOR 72" MANHOLES.



"T" SECTION

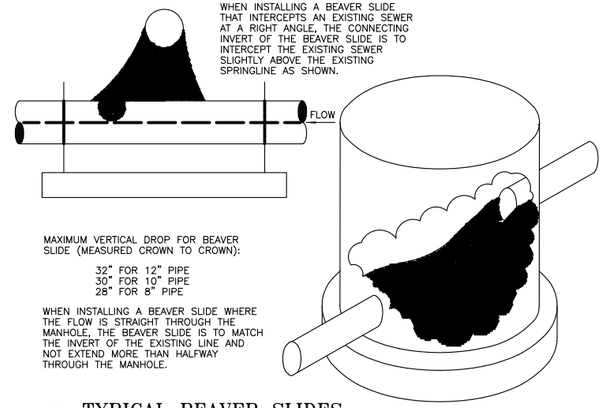
TYPICAL PLAN SECTIONS

SECTION	MANHOLE SIZE	
	48"	72"
FLAT BASE	0.39 SQ IN/FT EACH WAY	0.39 SQ IN/FT EACH WAY
RISER SECTION*	0.12 SQ IN/FT	0.18 SQ IN/FT
CONE SECTION*	0.12 SQ IN/FT	————
ADJUSTING RING	0.024 SQ IN	0.024 SQ IN

*CIRCUMFERENTIAL REINFORCING
ALL AREAS ARE MINIMUM CROSS-SECTIONAL AREA OF REINFORCEMENT PER FOOT OF SECTION.

MANHOLE REINFORCEMENT SCHEDULE

(SHALL COMPLY WITH AASHTO M-199-ASTM 478)



WHEN INSTALLING A BEAVER SLIDE THAT INTERCEPTS AN EXISTING SEWER AT A RIGHT ANGLE, THE CONNECTING INVERT OF THE BEAVER SLIDE IS TO INTERCEPT THE EXISTING SEWER SLIGHTLY ABOVE THE EXISTING SPRINGLINE AS SHOWN.

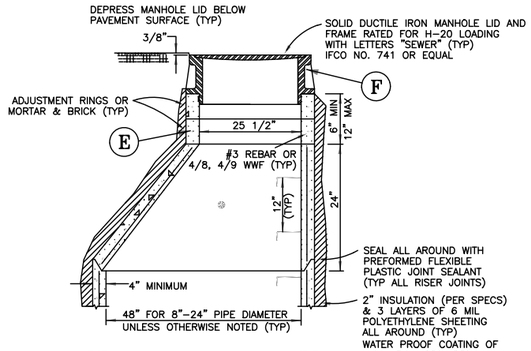
MAXIMUM VERTICAL DROP FOR BEAVER SLIDE (MEASURED CROWN TO CROWN):

32" FOR 12" PIPE
30" FOR 10" PIPE
28" FOR 8" PIPE

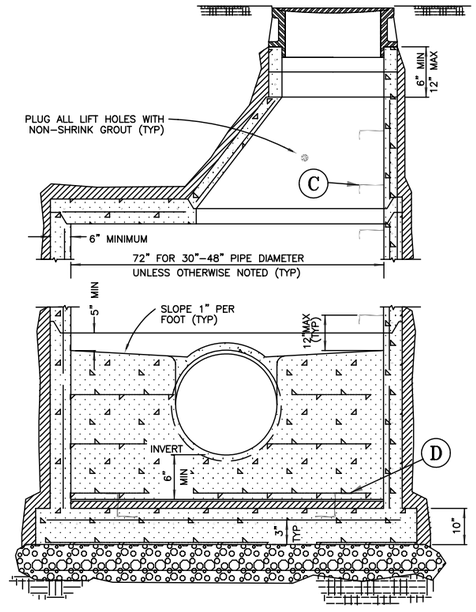
WHEN INSTALLING A BEAVER SLIDE WHERE THE FLOW IS STRAIGHT THROUGH THE MANHOLE, THE BEAVER SLIDE IS TO MATCH THE INVERT OF THE EXISTING LINE AND NOT EXTEND MORE THAN HALFWAY THROUGH THE MANHOLE.

(B) TYPICAL BEAVER SLIDES

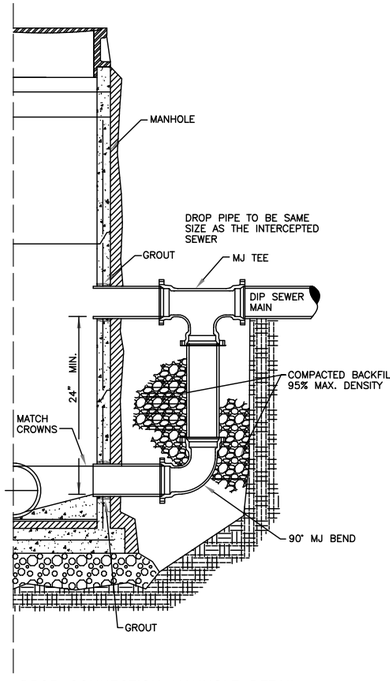
NOT TO SCALE



48" TYPE I

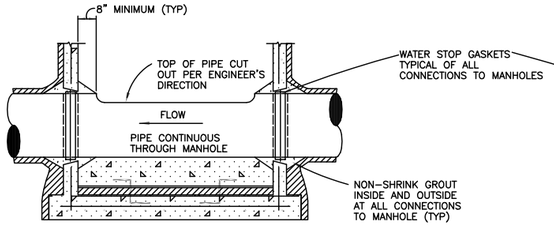


72" TYPE I

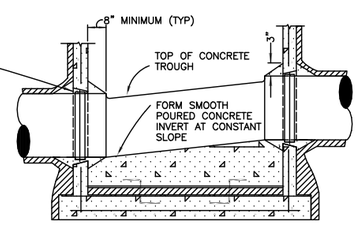


DROP CONNECTION MANHOLE DETAIL

NOTE: DROP MANHOLES TO BE USED WHEN INCOMING LINE INVERT IS GREATER THAN 24" ABOVE MANHOLE INVERT



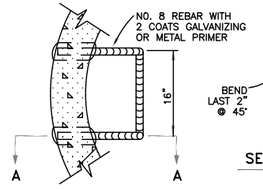
TYPICAL THROUGH SECTION



TYPICAL DROP SECTION

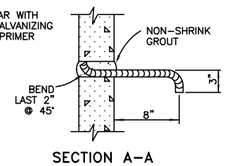
(A) TYPICAL MANHOLES

NOT TO SCALE

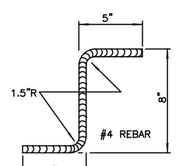


(C) MANHOLE STEP

NOT TO SCALE

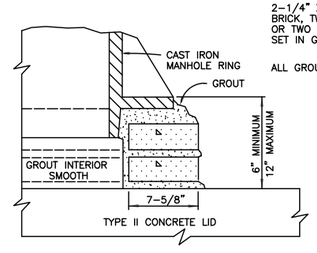


SECTION A-A



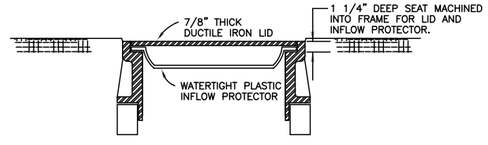
(D) TIE HOOK

NOT TO SCALE



(E) GROUT AND CONCRETE BRICK ALTERNATIVE

NOT TO SCALE



(F) LID, FRAME & MANHOLE INSERT

NOT TO SCALE

12/16/20	NEW LOGOS	CWH
DATE	REVISION	BY

PLAN SCALE: NOT TO SCALE

PLOT SCALE: 1=1

DESIGNED		APPROVED
DRAWN	NBB	
CHECKED	MJB	USA ENGINEER
DATE	FEB 98	FILE: STANDARD DETAILS SS1

Golden Heart Utilities™

College Utilities™

SANITARY SEWER SYSTEM MANHOLES

SS1

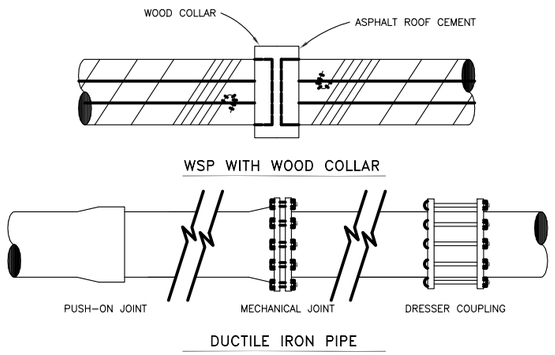
STATE OF ALASKA 49TH PRELIMINARY PS&E NOT FOR CONSTRUCTION REGISTERED PROFESSIONAL ENGINEER

STANDARD SEWER DETAILS

PLANS DEVELOPED BY: DOWL, LLC, CERT. OF AUTHORIZATION NO.: AECL848, 3535 COLLEGE ROAD, SUITE 100, FAIRBANKS, AK 99709, (907) 374-0275
C:\dowl_pw\d0401399\62487_U_Water_Sewer_DTLS-U9 Tue, Oct/18/22 10:30am

NO.	DATE	REVISION

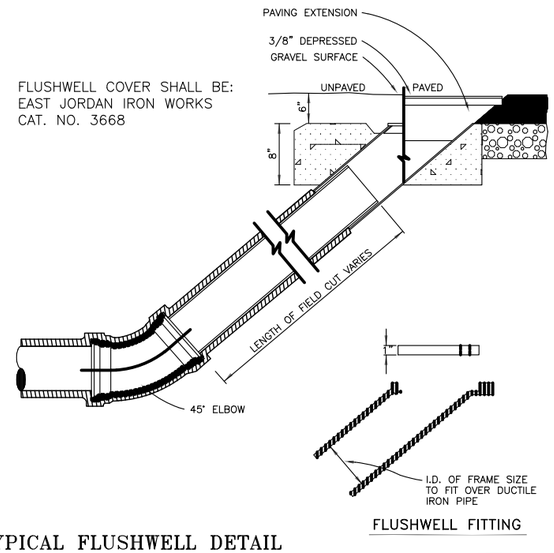
STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U10	U11



NOTE: SEWER MAINS SHALL BE INSULATED WITH A MINIMUM OF 2" URETHANE. SEWER SERVICES SHALL BE INSULATED WITH A MINIMUM 3" OF URETHANE

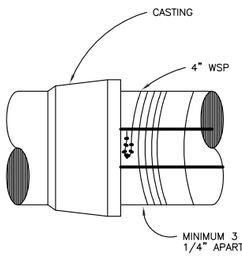
(A) TYPICAL PIPE CONNECTIONS

NOT TO SCALE



(C) TYPICAL FLUSHWELL DETAIL

NOT TO SCALE

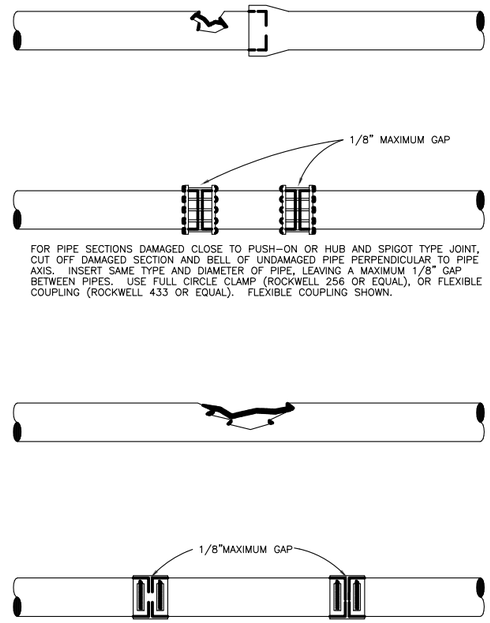


NOTES:

1. TYPE 45° AND 60° WSP HOUSE SERVICE LINES SHALL BE STAPLED ON TOP OF PIPE.
2. SIX GALVANIZED STAPLES TO BE USED AT EACH WIRE ENDING.
3. STAPLES NOT TO PENETRATE INNER SURFACE OF PIPE.
4. STAPLES EVERY 18" THROUGHOUT THE LENGTH OF THE PIPE SECTION.

(B) TYPICAL WSP STAPLE DETAIL

NOT TO SCALE



FOR PIPE SECTIONS DAMAGED CLOSE TO PUSH–ON OR HUB AND SPIGOT TYPE JOINT, CUT OFF DAMAGED SECTION AND BELL OF UNDAMAGED PIPE PERPENDICULAR TO PIPE AXIS. INSERT SAME TYPE AND DIAMETER OF PIPE, LEAVING A MAXIMUM 1/8" GAP BETWEEN PIPES. USE FULL CIRCLE CLAMP (ROCKWELL 256 OR EQUAL), OR FLEXIBLE COUPLING (ROCKWELL 433 OR EQUAL). FLEXIBLE COUPLING SHOWN.

FOR PIPE DAMAGED NEAR THE MIDDLE OF THE SECTION, REMOVE THE DAMAGED SECTION, MAKING CUTS PERPENDICULAR TO THE PIPE AXIS. INSERT SAME TYPE AND DIAMETER OF PIPE, LEAVING A MAXIMUM GAP BETWEEN PIPES OF 1/8". USE FULL CIRCLE CLAMP (ROCKWELL 256 OR EQUAL), OR FLEXIBLE COUPLING (ROCKWELL 433 OR EQUAL). FULL CIRCLE CLAMP SHOWN.

WHEN REPAIRING WOOD STAVE PIPE, CUT AND REMOVE THE DAMAGED SECTION, MAKING CUTS PERPENDICULAR TO THE PIPE AXIS. STAPLE BANDING TO ALLOW A MINIMUM OF THREE WRAPS OF THE WIRE AT EACH END. STAPLE ACCORDING TO DETAIL THIS SHEET. CUT NEW WSP TO LENGTH, ALLOWING A MAXIMUM OF 1/8" GAP AT EACH END. CREOSOTE SHALL BE APPLIED TO ALL FRESHLY CUT ENDS OF PIPE. INSTALL FLEXIBLE COUPLING (ROCKWELL 413 OR EQUAL), FULL CIRCLE CLAMP (ROCKWELL 256 OR EQUAL). OR LOCALLY FABRICATED BAND AS SHOWN ON SHEET SS3, DETAIL 'C', EXCEPT IT SHALL BE 12 INCHES IN LENGTH WITH THREE TIGHTENING BOLTS.

(D) PIPE REPAIR

NOT TO SCALE

			PLAN SCALE: NOT TO SCALE	DESIGNED	APPROVED
				DRAWN NBB	
				CHECKED MJB	USA ENGINEER
12/16/20	NEW LOGOS	CWH	PLOT SCALE: 1=1	DATE FEB 1998	FILE: STANDARD DETAILS SS2
DATE	REVISION	BY			

SANITARY SEWER SYSTEM
CONNECTIONS, ADAPTATION, FLUSHWELL, REPAIR

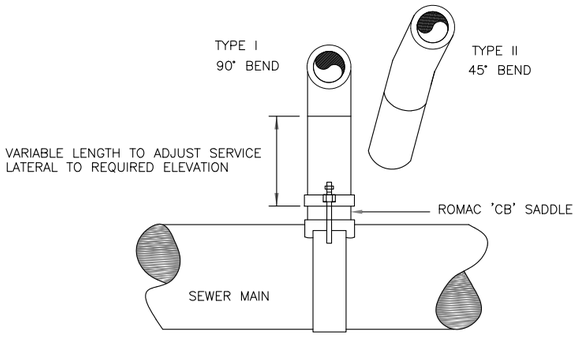
SS2

STANDARD SEWER DETAILS

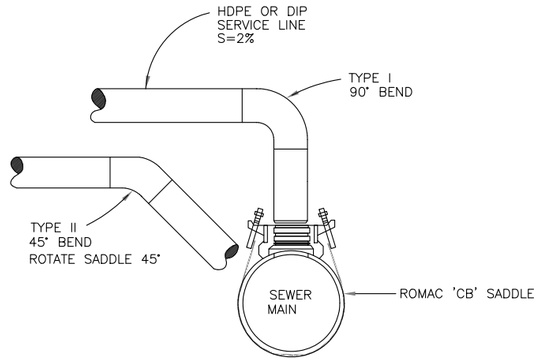
PRELIMINARY PS&E

NO.	DATE	REVISION

STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
ALASKA	Z624870000	2024	U11	U11



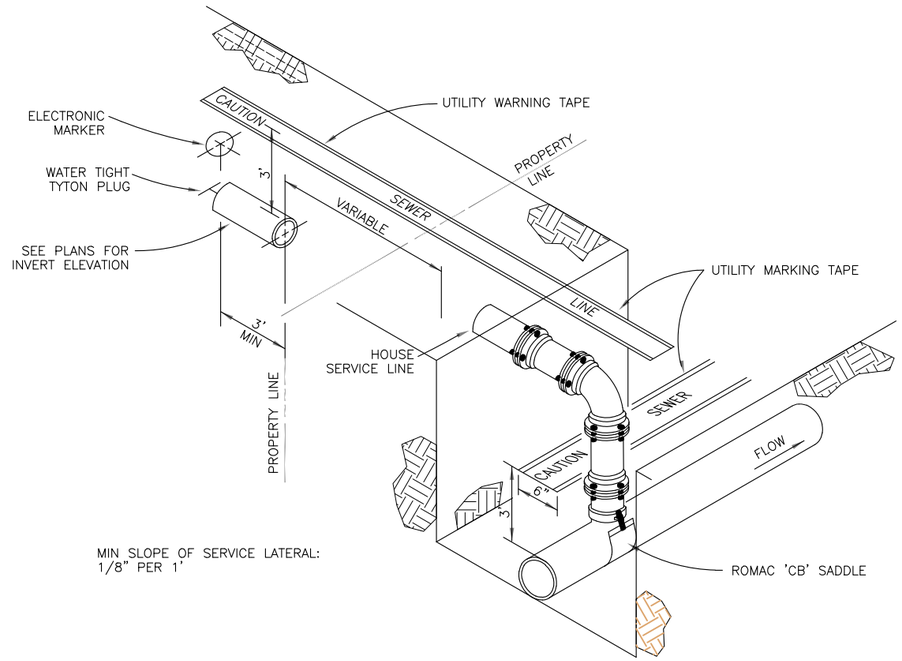
SIDE VIEW SERVICE SADDLE



END VIEW SERVICE SADDLE

A HOUSE SERVICE LATERAL DETAILS

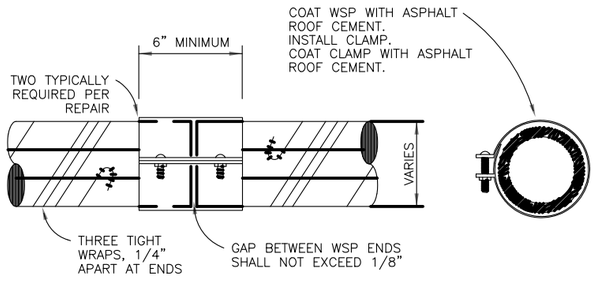
NOT TO SCALE

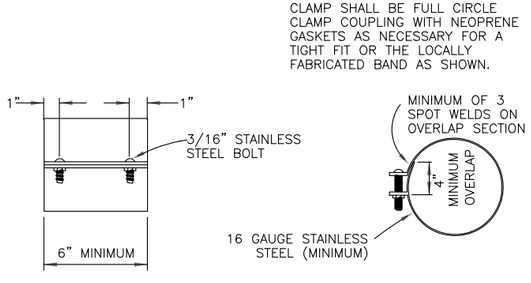


MIN SLOPE OF SERVICE LATERAL:
1/8" PER 1'

B TYPICAL SEWER SERVICE

NOT TO SCALE





WHEN CONNECTING SEWER SERVICE PIPE HAVING DIFFERENT OUTSIDE DIAMETERS, MATCH INSIDE DIAMETERS AND BUILD UP THE SMALLER OD PIPE WITH 3" WIDE NEOPRENE GASKET MATERIAL. COAT WITH ASPHALT ROOF CEMENT.

C WOOD STAVE SERVICE REPAIR DETAIL

NOT TO SCALE

GENERAL NOTES:

1. WHEN SERVICE PIPING IS HDPE OR WOODSTAVE, ALL FITTINGS SHALL BE NO HUB CAST IRON CONNECTED WITH MISSION MR56–44 COUPLINGS.
2. WHEN SERVICE PIPING IS DIP, ALL FITTINGS AND BENDS SHALL BE OF DUCTILE IRON.
3. SERVICE PIPING AND FITTINGS SHALL BE INSULATED WITH A MIN 3" OF URETHANE.
4. SERVICES ARE TYPICALLY 4" DIAMETER, WITH 6" FOR SPECIAL CASES.
5. MINIMUM COVER FOR SEWER SERVICES IS 4 FT.
6. SERVICE SADDLE FURNISHED AND INSTALLED BY UTILITY.

DATE	REVISION	BY
4/26/06	UPDATED LATERAL SERVICE DETAILS	CWH
4/3/08	UPDATED LATERAL SERVICE DETAILS	CWH
12/16/20	NEW LOGOS	CWH

PLAN SCALE: NOT TO SCALE

PLOT SCALE: 1=1

DESIGNED	
DRAWN	
CHECKED	MJB
DATE	FEB 1998

APPROVED

USA ENGINEER

FILE: STANDARD DETAILS SS3

Golden Heart Utilities

College Utilities

SANITARY SEWER SYSTEM SERVICES

SS3

STANDARD SEWER DETAILS

STATE OF ALASKA 49TH
PRELIMINARY
PS&E
NOT FOR CONSTRUCTION
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U101	U128

ELECTRICAL NOTES

1. PLAN SHEETS U101–U128 SHOW ELECTRICAL & TELECOMMUNICATIONS UTILITIES ONLY, INCLUDING GVEA, ACS, GCI, AND MTA UTILTIES.
2. THE QUANTITIES LISTED IN THE SUMMARY TABLES ON THIS SHEET ONLY REFLECT TOTALS PERTAINING TO THE DOT&PF CONTRACTOR WORK. OTHER MATERIALS & QUANTITIES MAY BE PROVIDED BY THE UTILITIES.
3. ALL UTILITY INSTALLATIONS REQUIRING MODIFICATION TO BUILDING SERVICE ENTRANCES SHALL BE COORDINATED WITH THE PROPERTY OWNER AND THE UTILITY BEFORE STARTING WORK. MODIFICATIONS TO THE SERVICE EQUIPMENT SHALL SATISFY ALL INSTALLATION REQUIREMENTS OF THE CORRESPONDING UTILITY STANDARDS.
4. SEE LIGHTING AND SIGNAL H3xx–SERIES SHEETS FOR FURTHER INFORMATION & REQUIREMENTS REGARDING DEMOLITION OF HIGHWAY LIGHTING SYSTEMS AND ASSOCIATED LOAD CENTERS.
5. ALL EXISTING UNDERGROUND UTILITIES SHALL BE FIELD LOCATED BEFORE ANY CONDUIT TRENCHING OR OTHER EXCAVATION WORK BEGINS. ANY EXISTING TO REMAIN UTILITIES DAMAGED BY THE CONTRACTOR SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT THE CONTRACTOR'S EXPENSE. NOTIFY THE PROJECT ENGINEER OF ANY UNKNOWN EXISTING UTILITIES THAT ARE IN CONFLICT WITH NEW PROPOSED WORK.
6. IN GENERAL, THE LOCATIONS OF SERVICE EQUIPMENT & ROUTING OF UTILITY CONDUCTORS/CABLES SHOWN IN THE PLAN DRAWINGS ARE SCHEMATIC IN NATURE. FIELD VERIFY EXACT CONDITIONS AND LOCATIONS OF EQUIPMENT BEFORE BEGINNING WORK.
7. FOR POWER UTILITY SERVICE ENTRANCE CONDUIT SYSTEMS, PROVIDE:
   –ABOVE GRADE STUB–UPS AND FOR SWEEPS: RMC
   –BELOW GRADE AND BETWEEN SWEEPS:
      –BELOW ROADWAYS: RMC
      –UNDER SIDEWALKS/OPEN AREAS/DRIVEWAYS: RMC OR HDPE
   CONDUIT SIZE AS INDICATED IN PLAN & DETAIL SHEETS. ALL COUPLINGS AND CONNECTORS BETWEEN RMC AND HDPE CONDUIT SHALL BE LISTED AND RATED FOR SUCH USE.
8. ALL POWER UTILITY SERVICE ENTRANCE CONDUCTORS IN CONDUIT SHALL BE COPPER. ALL POWER UTILITY SERVICE ENTRANCE AERIAL SERVICE CABLES IN FREE–AIR SHALL BE AN ALUMINUM CONDUCTOR OVERHEAD CABLE WITH XLP INSULATION AND BARE ACSR MESSENGER.
9. GVEA:
   THE CONTRACTOR SHALL PROVIDE ALL NEW SERVICE INFRASTRUCTURE AND ALL SERVICE ENTRANCE MODIFICATIONS, UNLESS INDICATED OTHERWISE. GVEA IS SELF–PERFORMING AND PROVIDING ALL MATERIALS AND LABOR FOR THE PRIMARY/DISTRIBUTION POWER RELOCATIONS. SEE SPECIFICATIONS SECTION 687 FOR FURTHER DETAILS AND REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH GVEA PRIOR TO PERFORMING ANY WORK TO SCHEDULE GVEA WORK.
10. ACS:
    ACS IS SELF–PERFORMING AND PROVIDING ALL MATERIALS AND LABOR. SEE SPECIFICATIONS SECTION 680 FOR FURTHER DETAILS AND REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH ACS PRIOR TO PERFORMING ANY WORK TO SCHEDULE ACS WORK.
11. GCI:
    THE CONTRACTOR SHALL INSTALL ALL GCI CONDUITS AND STUB–UPS. GCI IS SUPPLYING ALL CONDUITS. GCI IS SELF–PERFORMING AND PROVIDING ALL CABLE INSTALLATIONS, CONNECTIONS, AND REMOVALS. GCI IS SELF–PERFORMING AND PROVIDING ALL PEDESTAL AND HANDHOLE INSTALLATIONS. SEE SPECIFICATIONS SECTION 680 FOR FURTHER DETAILS AND REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH GCI PRIOR TO PERFORMING ANY WORK TO SCHEDULE GCI WORK.
12. MTA:
    MTA IS SELF–PERFORMING AND PROVIDING ALL MATERIALS AND LABOR. SEE SPECIFICATIONS SECTION 680 FOR FURTHER DETAILS AND REQUIREMENTS. THE CONTRACTOR SHALL COORDINATE WITH MTA PRIOR TO PERFORMING ANY WORK TO SCHEDULE MTA WORK.
13. ALL DEMOLITION, REMOVAL, OR SALVAGING WORK ASSOCIATED WITH GVEA SERVICE LATERALS SHALL BE PAID UNDER THE 687.2000.0000 PAY ITEM.
14. COORDINATE BELOW GRADE UTILITY ROUTING WITH THE OLD STEESE INTERCONNECT FIBER OPTIC CONDUIT. REFER TO THE INTERCONNECT DRAWINGS (H2xx–SERIES) FOR FURTHER INFORMATION.
15. SEE SHEETS U123–U128 FOR FURTHER DETAILS REGARDING NEW OR MODIFIED UTILITY SERVICES.
16. WHERE LISTED IN THE DRAWINGS, THE FOLLOWING CALLOUTS APPLY:
   –(E) = EXISTING TO REMAIN
   –(X) = DEMOLISH/REMOVE
   –[BY GVEA] = WORK PROVIDED BY GVEA
   –[BY ACS] = WORK PROVIDED BY ACS
   –[BY GCI] = WORK PROVIDED BY GCI
   –[BY MTA] = WORK PROVIDED BY MTA
   –[BY UTILITIES] = WORK PROVIDED BY MULTIPLE UTILITIES
   UNLESS WORK IS SPECIFICALLY CALLED OUT IN THE PLANS AS BEING PERFORMED BY A PARTICULAR UTILITY, THEN THE DOT&PF CONTRACTOR SHALL ASSUME RESPONSIBILITY OF THE WORK.
17. ADDITIONAL ELECTRIC AND TELECOMMUNICATIONS LINETYPES ARE USED IN THESE DRAWINGS TO HELP CLARIFY WORK, REFER TO THE LINETYPE LEGEND BELOW FOR REFERENCE. OTHERWISE, STANDARD DOT&PF LINETYPES ARE USED.
18. ⟨XX⟩ WHERE SHOWN, SYMBOL INDICATES A 'SPECIFIC SHEET NOTE'. SEE THE ASSOCIATED SPECIFIC SHEET NOTE TABLES ON CORRESPONDING SHEETS.

UTILITY LINETYPE LEGEND

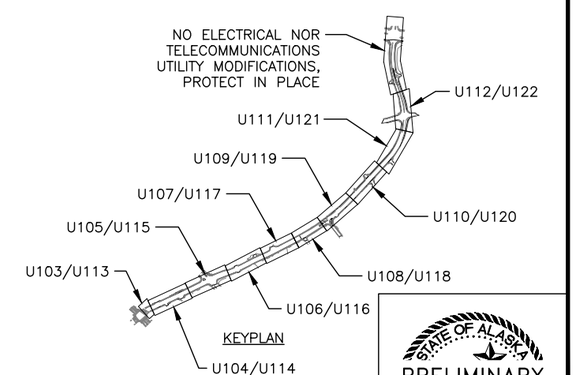
UTILITY TAG	LOCATION DESCRIPTION	UTILITY DESCRIPTION
UGX	UG = UNDERGROUND UTILITIES	'X' INDICATES UTILITY PLACEHOLDER: E = GVEA ELECTRIC POWER LINE FO = MTA FIBER OPTIC C = GCI COMMUNICATIONS T = ACS TELEPHONE *WHERE MULTIPLE UTILITIES ARE PRESENT, EACH UTILITY IS LISTED AND IS SEPARATED BY A FORWARD SLASH. UTILITIES APPEAR IN THE FOLLOWING ORDER (AS APPLICABLE): E/FO/C/T **EXISTING UTILITIES APPEAR WITH A DASHED LINETYPE; ***PROPOSED UTILITIES APPEAR WITH A SOLID LINETYPE
OHX	OH = OVERHEAD UTILITES	

687.2000.0000
POWER UTILITY RELOCATION, GVEA
(LUMP SUM)

DESCRIPTION	QUANTITY
HDPE CONDUIT	
1–1/4"	414–FT
3"	534–FT
RMC CONDUIT	
1–1/4"	245–FT
2"	30–FT
3"	230–FT
CONDUCTORS	
#2 AWG XHHW	1,977–FT
500 KCMIL XHHW	1,528–FT
OVERHEAD SERVICE ENTRANCE CABLES	
TRIPLEX, #2 AWG XLP, ACSR MESSENGER, "CONCH"	25–FT
GENERAL	
NEW GVEA SERVICE	2
MODIFY EXISTING GVEA SERVICE LATERAL	1
MODIFY AND RECONNECT EXISTING GVEA SERVICE EQUIPMENT	2
TRENCHING, BEDDING, AND FILL	1,071–FT

680.2000.0000
TELECOMMUNICATION UTILITY RELOCATION, GCI
(LUMP SUM)

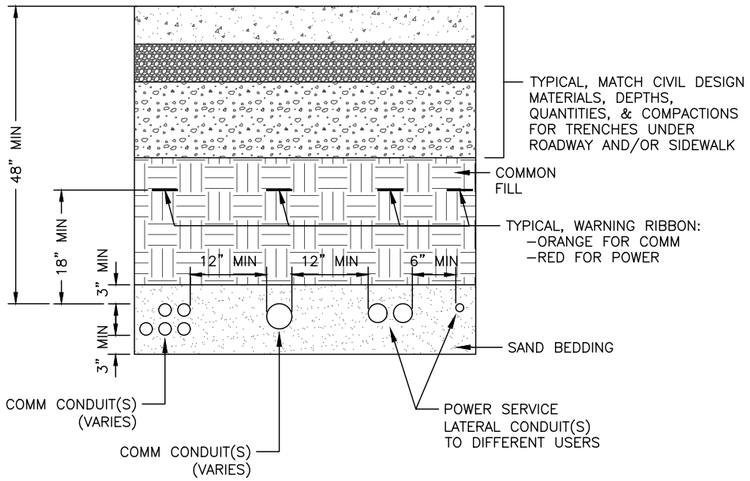
DESCRIPTION	QUANTITY
RACEWAY (INSTALL ONLY, FURNISHED BY GCI)	
HDPE CONDUIT – 1–1/4"	6,315–FT
HDPE CONDUIT – 2"	2,525–FT
IMC – 2"	20–FT
IMC – 4"	25–FT
GENERAL	
TRENCHING, BEDDING, AND FILL	3,400–FT



STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

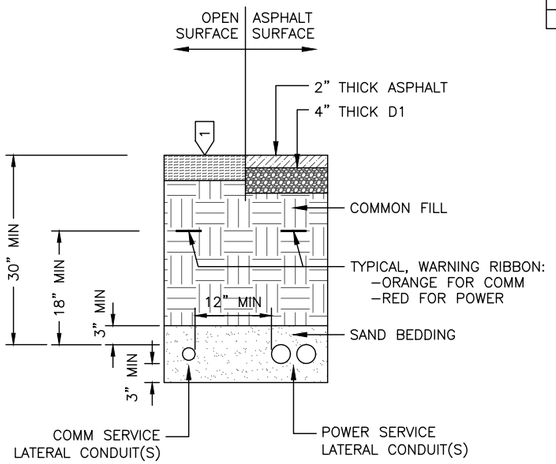
ELECTRICAL & TELECOMM. GENERAL

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U102	U128



NOTES:
1. THE ABOVE CONFIGURATION GENERALLY DEPICTS THE RIGHT "RT" SIDEWALK BETWEEN KUTTER AND TRAINOR GATE, WITH TWO GVEA SERVICES, (1x) 4" ACS CONDUIT, AND (5x) 2" GCI CONDUITS.
2. HORIZONTALLY SHIFT THE UTILITY ARRANGEMENTS AS NECESSARY TO ACCOMMODATE DIFFERENT UTILITY CONFIGURATIONS THROUGHOUT THE PROJECT CORRIDOR.

TYPICAL ELECTRICAL & TELECOMM. TRENCH DETAIL (UNDER ROADWAY & SIDEWALK)



NOTES:
1. THE ABOVE CONFIGURATION GENERALLY DEPICTS THE SERVICE TO 104 KUTTER ROAD, WITH TWO GVEA SERVICE CONDUITS AND A GCI CONDUIT SERVICE CONDUIT.
2. WHERE MULTIPLE COMMUNICATIONS UTILITY SERVICE LATERALS EXIST TO A BUILDING, PROVIDE A MINIMUM OF 6" HORIZONTAL SEPARATION.
3. HORIZONTALLY SHIFT THE UTILITY ARRANGEMENTS AS NECESSARY TO ACCOMMODATE DIFFERENT UTILITY CONFIGURATIONS THROUGHOUT THE PROJECT CORRIDOR.

TYPICAL ELECTRICAL & TELECOMM. TRENCH DETAIL (SERVICE RECONNECTIONS TO BUILDINGS)

GENERAL SHEET NOTES

1. TYPICAL, CONDUIT SIZE AND QUANTITY, AND NUMBER OF CONDUCTORS/CABLES ARE LISTED IN THE PLAN DRAWINGS AND/OR SERVICE ENTRANCE DETAILS.
2. AS NECESSARY, BURY CONDUIT(S) DEEPER TO AVOID CONFLICTS WITH OTHER BURIED UTILITIES.
3. WITH PRIOR APPROVAL BY THE PROJECT ENGINEER, SEPARATION DISTANCE BETWEEN UTILITIES MAY BE REDUCED IN SPECIFIC LOCATIONS WITH LIMITED SPACE.
4. IF SPACE ALLOWS, CONDUITS OF EACH SINGLE UTILITY OR SERVICE MAY BE STACKED OR LAIN SIDE–BY–SIDE. PRIOR TO INSTALLING ANY SINGLE UTILITY, THE CONTRACTOR SHALL VERIFY SPACE AND PLAN THE INSTALLATION FOR ALL THE UTILITIES. NOTIFY THE PROJECT ENGINEER FOR FURTHER DIRECTIONS IF CONFLICT OCCURS BETWEEN REQUIRED UTILITIES AND AVAILABLE SPACE.
5. OTHER NON–UTILITY ITEMS SHALL ALSO BE TRENCHED ALONG THE PROJECT CORRIDOR, SUCH AS LIGHTING, SIGNALS, INTERCONNECT FIBER OPTIC, AND OTHERS. REFER TO LIGHTING SHEETS, INTERCONNECT SHEETS, OR OTHER SHEETS AS APPLICABLE FOR THE SPECIFIC ITEM. THE DETAILS ON THIS SHEET DO NOT SPECIFICALLY APPLY TO THOSE SPECIFIC ITEMS.
6. REFER TO EACH RESPECTIVE UTILITY DRAWING SET FOR FURTHER INFORMATION REGARDING LOCATIONS WHERE SEWER, WATER, GAS, & STORM DRAIN ARE EXISTING TO REMAIN, BEING MODIFIED, OR BEING ADDED ALONG THE PROJECT CORRIDOR. THE ELECTRICAL & TELECOMMUNICATIONS UTILITIES AND ASSOCIATED TRENCHES SHALL BE COORDINATED WITH OTHER UTILITIES TO AVOID CONFLICTS.
7. SEE LIGHTING, SIGNALS, AND INTERCONNECT SHEETS RESPECTIVELY FOR SPECIFIC TRENCH REQUIREMENTS.
8. THE CONTRACTOR SHALL PROVIDE ALL TRENCHING REQUIRED FOR GCI UTILITY CONDUITS AND FOR GVEA SERVICE CONDUITS. TRENCHING SHALL BE PAID UNDER THE RESPECTIVE PAY ITEM ASSOCIATED WITH THE UTILITY INSTALLED WITHIN THE TRENCH. JOINT UTILITY TRENCHES SHALL ONLY BE PAID ONCE. THE CONTRACTOR MAY APPLY PAYMENT OF A JOINT UTILITY TRENCH UNDER ANY OF THE PAY ITEMS ASSOCIATED WITH UTILITIES INSTALLED WITHIN THE RESPECTIVE TRENCH.
9. MTA AND ACS ARE PERFORMING WORK 'IN–HOUSE' AND WILL PROVIDE TRENCHING WHERE THEIR SYSTEMS ARE ROUTED INDEPENDENTLY OF OTHER UTILITIES. WHERE MTA OR ACS WILL OCCUPY A JOINT UTILITY TRENCH SHARED WITH GCI, LIGHTING, INTERCONNECT, OR OTHER, THEN THE CONTRACTOR SHALL LEAVE THE TRENCH OPEN UNTIL ACS AND/OR MTA COMPLETES INSTALLATION OF THEIR INFRASTRUCTURE. THE CONTRACTOR SHALL COORDINATE WITH THE UTILITIES AT LEAST 1 WEEK IN ADVANCE OF A JOINT UTILITY TRENCH BEING OPEN AND READY FOR THE UTILITY TO INSTALL THEIR INFRASTRUCTURE.

SPECIFIC SHEET NOTES

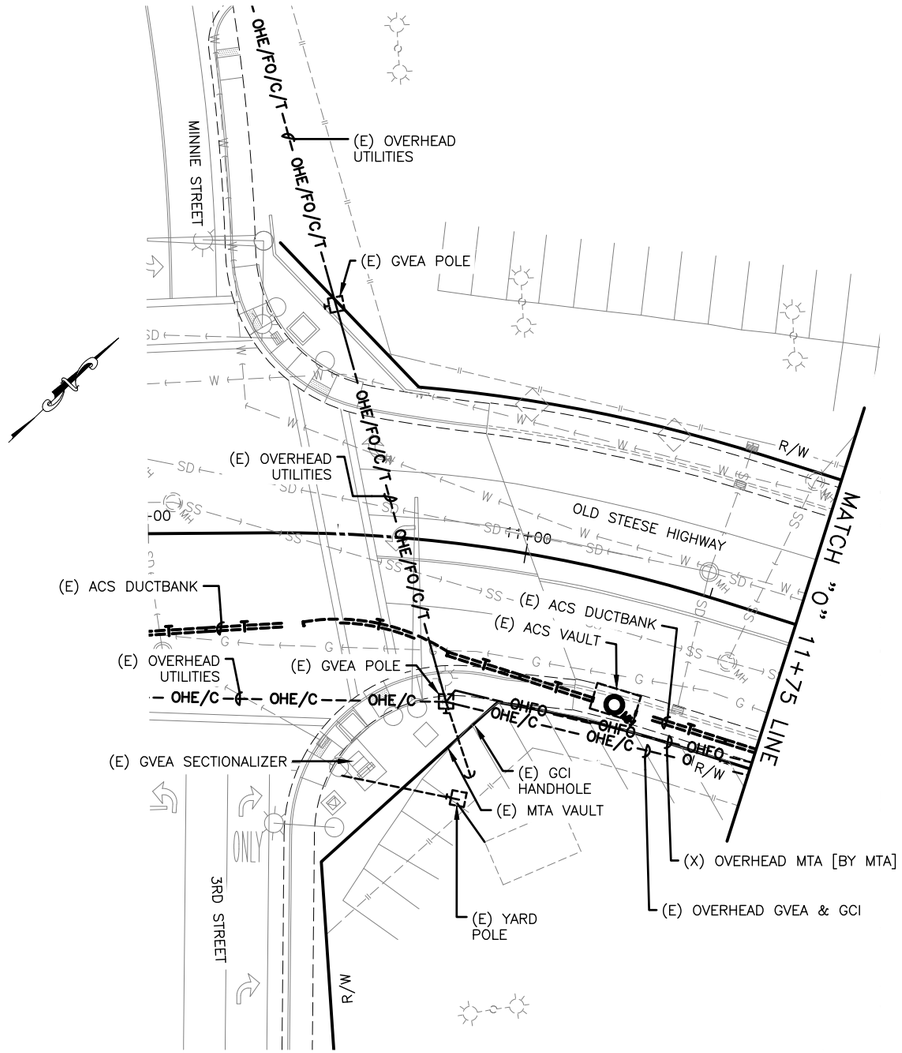
1 OPEN SURFACE TRENCH AREAS SHALL MATCH ADJACENT SURFACE.
–GRASSY AREAS: PROVIDE SOIL AND SEED.
–GRAVEL DRIVEWAYS: PROVIDE GRAVEL AND COMPACT.
–OTHERWISE: MATCH ADJACENT MATERIALS AND CONSTRUCTION.

ELECTRICAL & TELECOMM. TRENCH DETAILS

STATE OF ALASKA
PRELIMINARY
PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\92130Z\E\Drawings\62487_U_ELEC&COMM-U102 Wed, Oct/12/22 03:52pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U103	U128

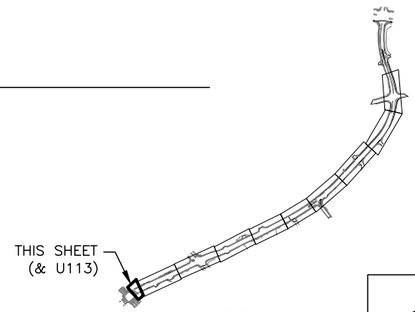


ELECTRICAL & TELECOMM. DEMOLITION – "O" 10+00 TO "O" 11+75

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



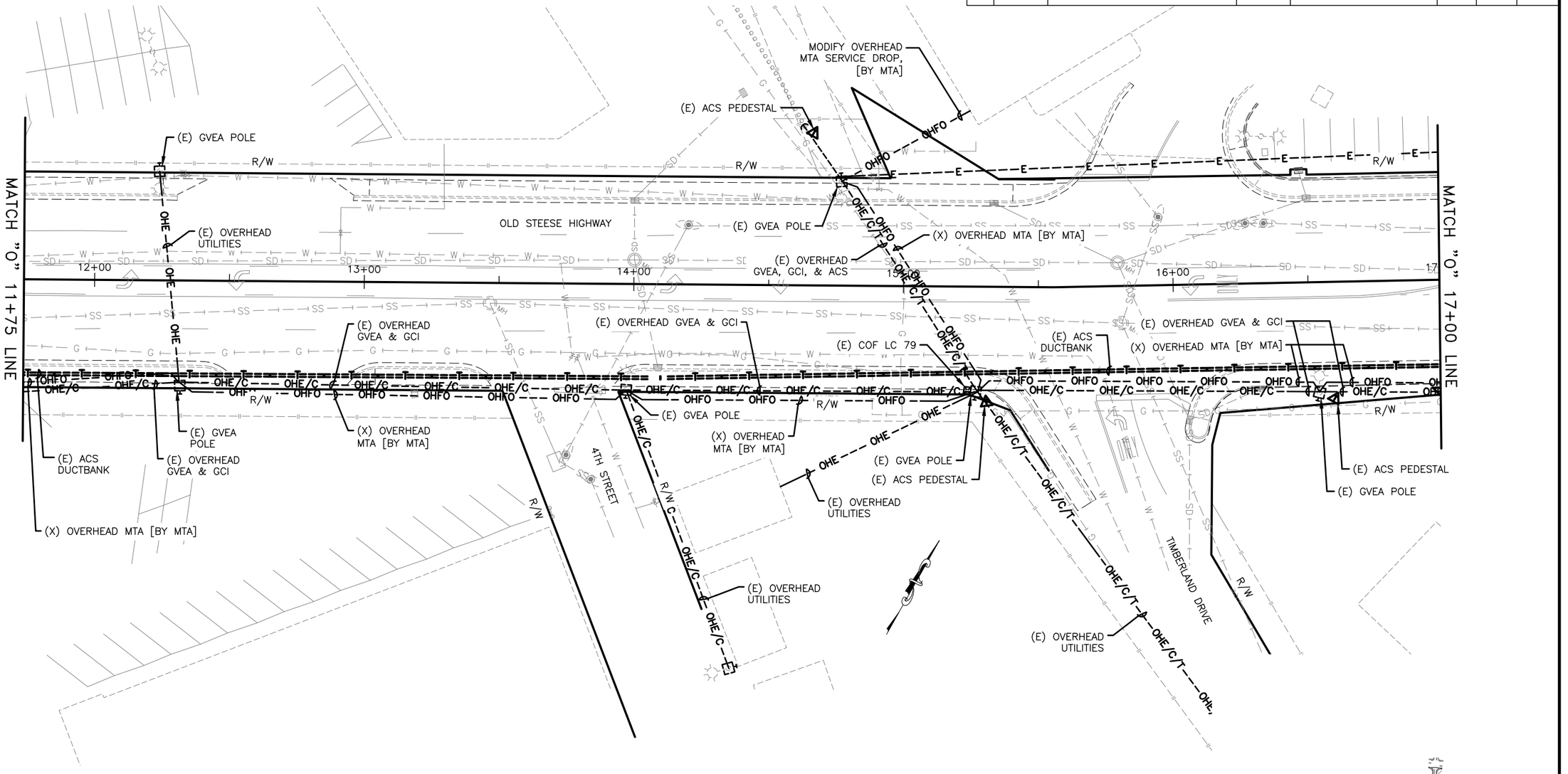
KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 1 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U103_2 Wed, Oct/12/22 03:52pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U104	U128

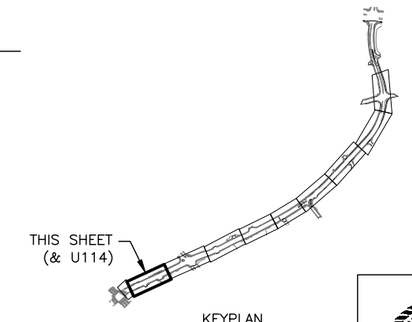


ELECTRICAL & TELECOMM. DEMOLITION – "O" 11+75 TO "O" 17+00

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



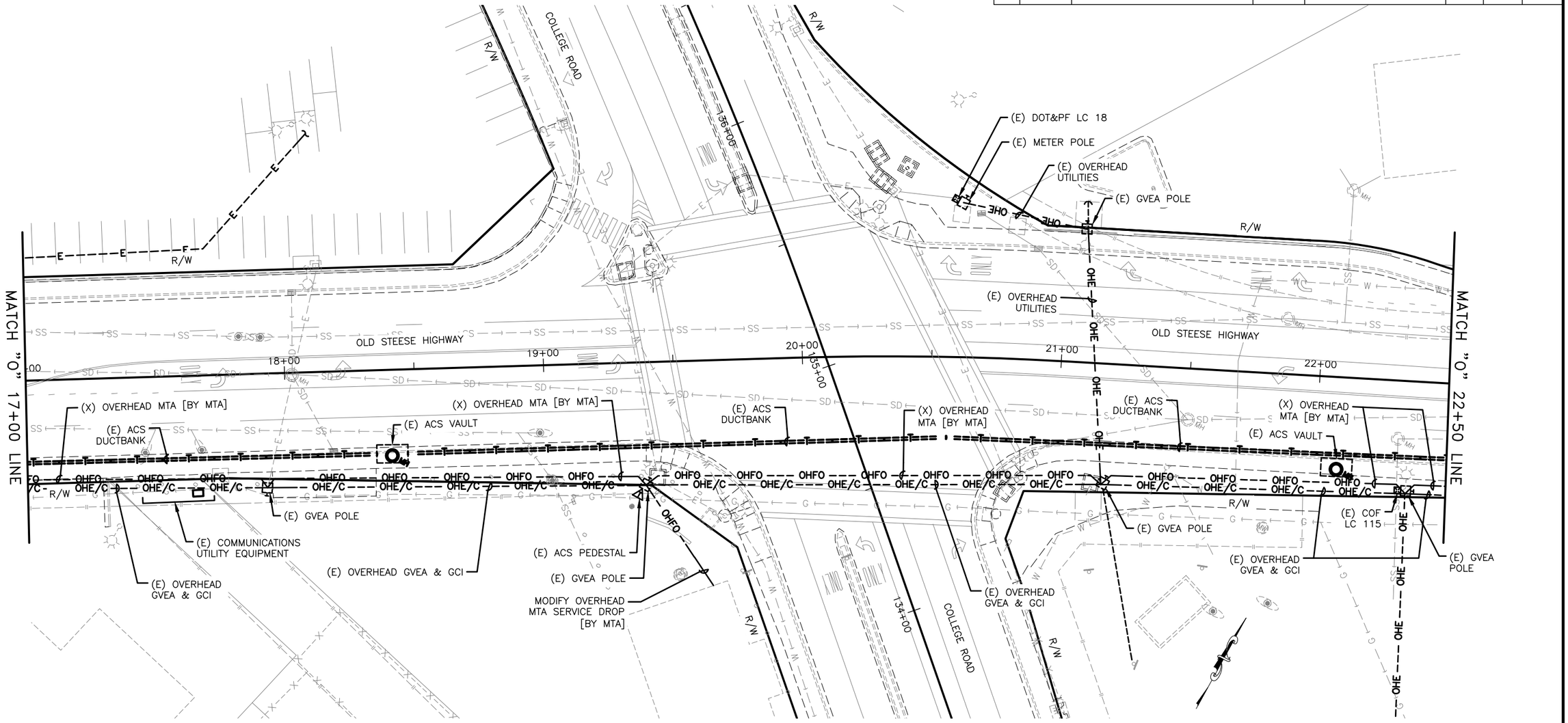
KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 2 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U104_2 Wed, Oct/12/22 03:53pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U105	U128

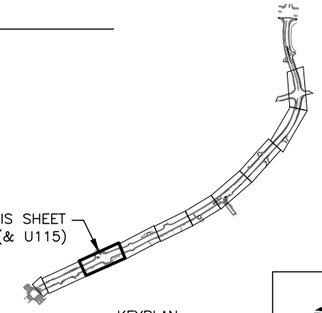


ELECTRICAL & TELECOMM. DEMOLITION – "O" 17+00 TO "O" 22+50

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



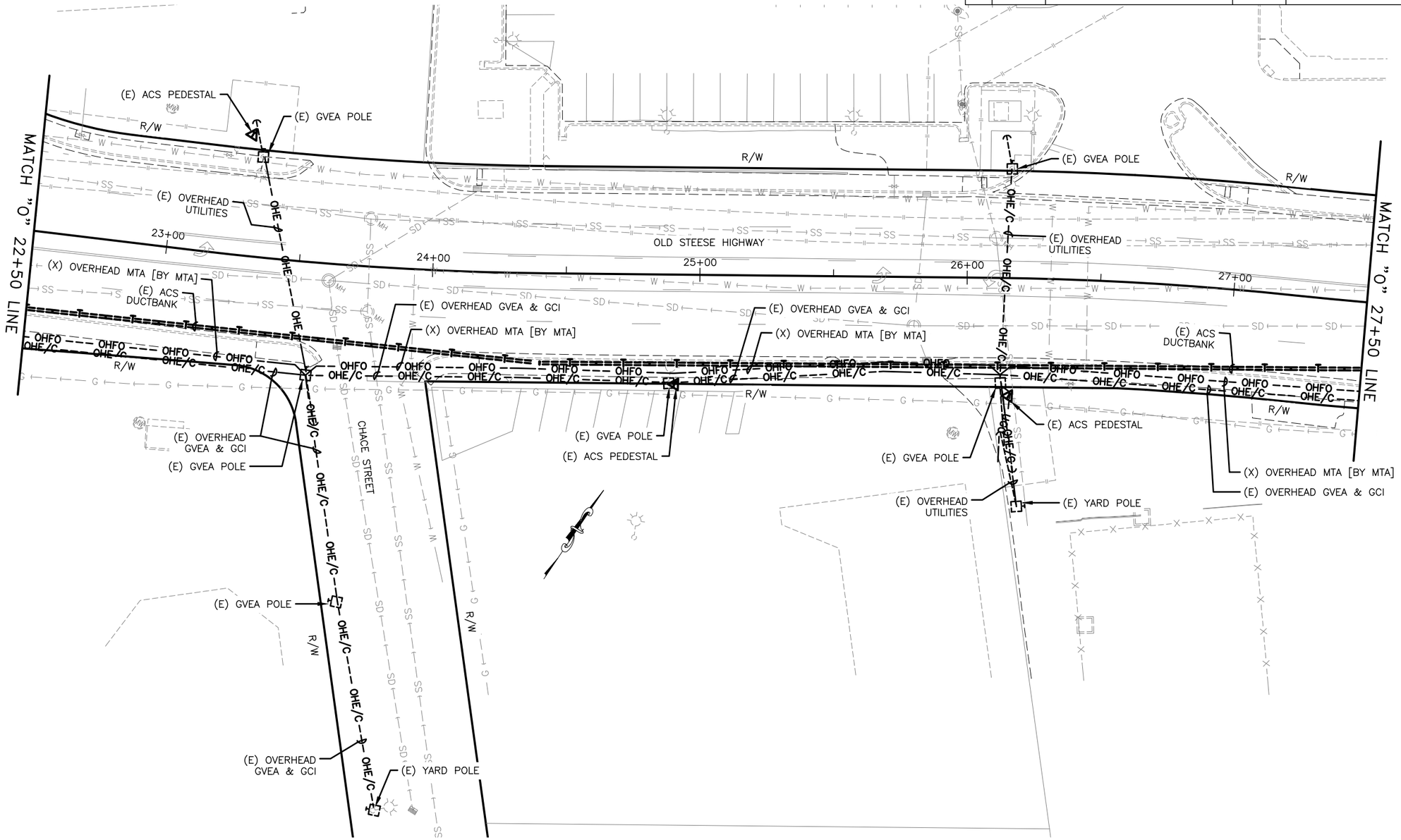
KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12345
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 3 OF 10

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U105_2 Wed, Oct/12/22 03:54pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U106	U128

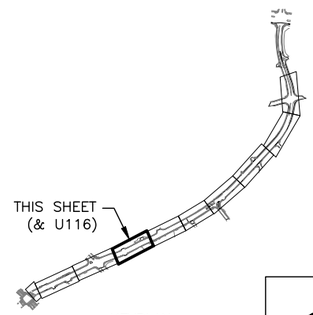


ELECTRICAL & TELECOMM. DEMOLITION – "O" 22+50 TO "O" 27+50

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



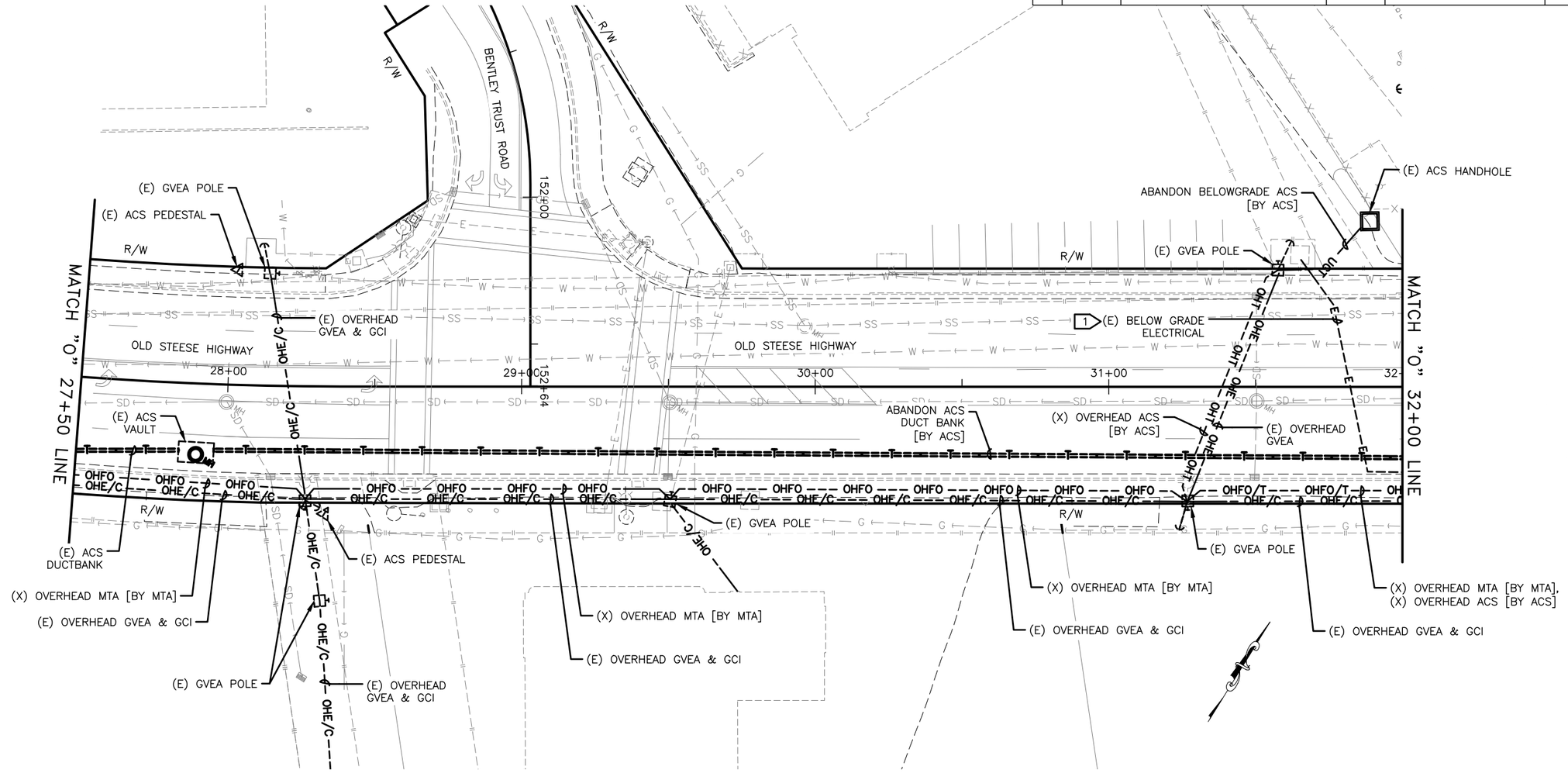
KEYPLAN

STATE OF ALASKA
PRELIMINARY
PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 4 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\92130Z\E\Drawings\62487_U_ELEC&COMM-U106_2 Wed, Oct/12/22 03:55pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U107	U128



ELECTRICAL & TELECOMM. DEMOLITION – "O" 27+50 TO "O" 32+00

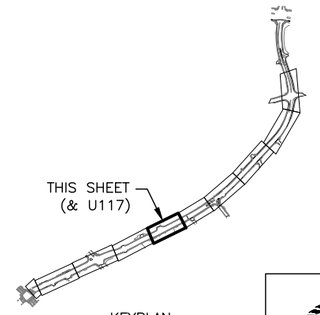
= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA & ACS WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA & ACS TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA & ACS STAKING SHEETS FOR FURTHER DETAILS.

SPECIFIC SHEET NOTES

1 UNIDENTIFIED BURIED ELECTRICAL LINE. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.



KEYPLAN

ELECTRICAL & TELECOMM. DEMOLITION 5 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12345
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U107_2 Wed, Oct/12/22 03:55pm

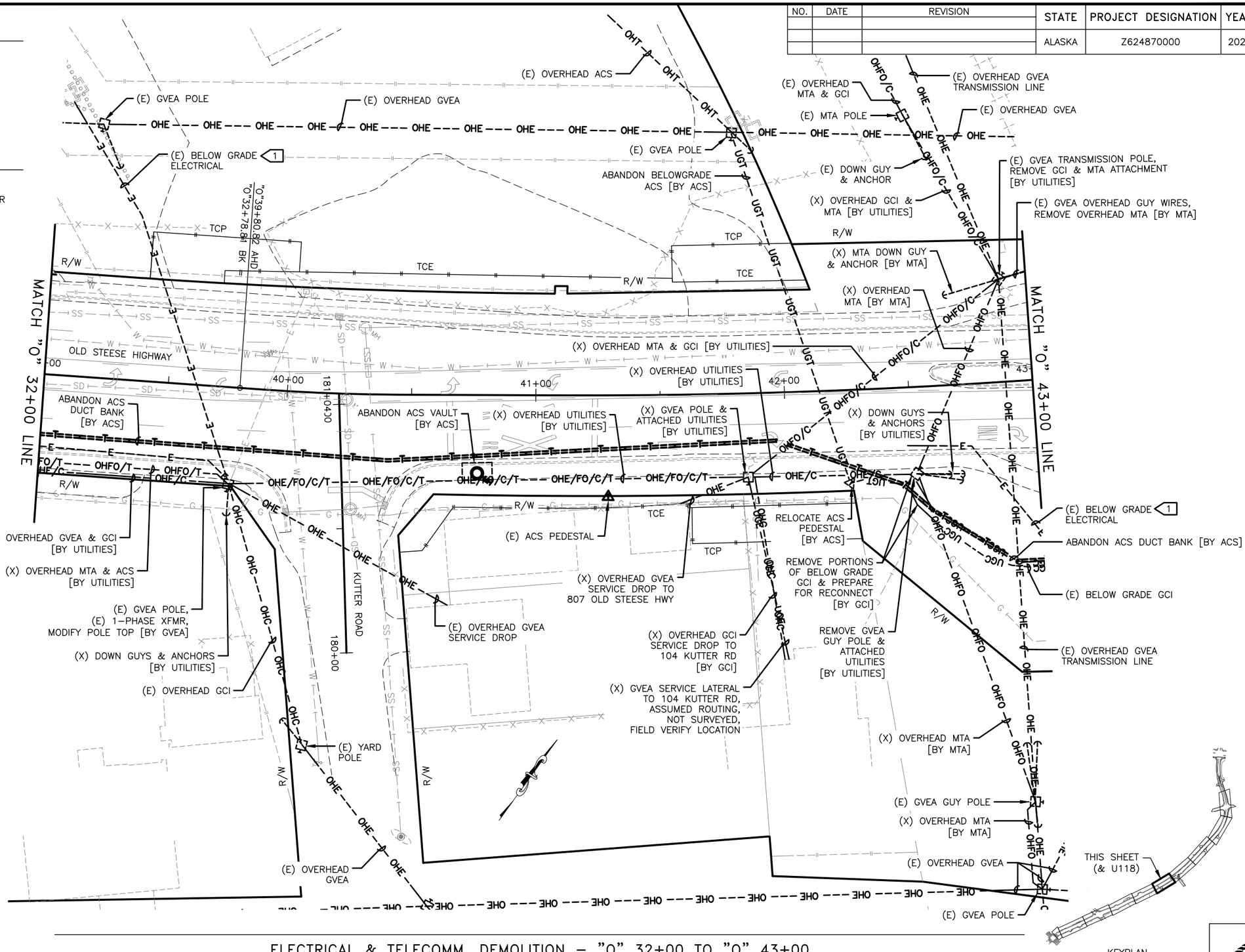
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U108	U128

GENERAL SHEET NOTES

1. FOR ADDITIONAL SERVICE ENTRANCE MODIFICATION DETAILS, SEE THE FOLLOWING DRAWINGS:
   - –U123 FOR 807 OLD STEESE HWY
   - –U124 FOR 104 KUTTER RD

SPECIFIC SHEET NOTES

1 UNIDENTIFIED BURIED ELECTRICAL LINE. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.



ELECTRICAL & TELECOMM. DEMOLITION – "O" 32+00 TO "O" 43+00

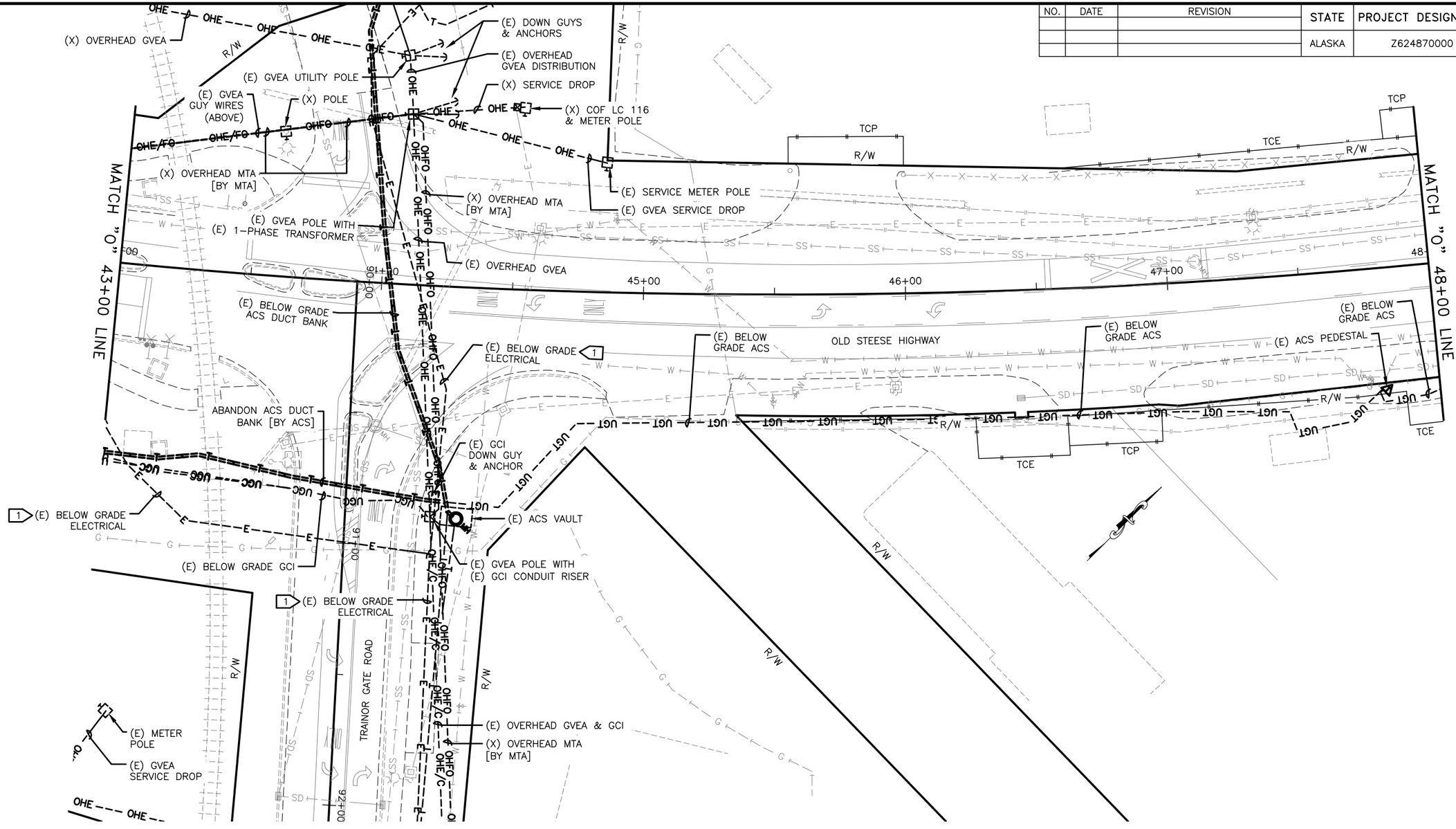
= 20FT

ELECTRICAL & TELECOMM. DEMOLITION 6 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U108_1 Wed, Oct/12/22 03:56pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U109	U128



ELECTRICAL & TELECOMM. DEMOLITION – "O" 43+00 TO "O" 48+00

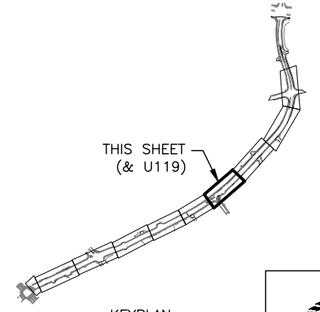
⟷ = 20FT

GENERAL SHEET NOTES

1. FOR ADDITIONAL SERVICE ENTRANCE MODIFICATION DETAILS, SEE THE FOLLOWING DRAWINGS:
   –U125 FOR COF LC 116

SPECIFIC SHEET NOTES

1 UNIDENTIFIED BURIED ELECTRICAL LINE, ASSUMED PROPERTY OF AARC. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.



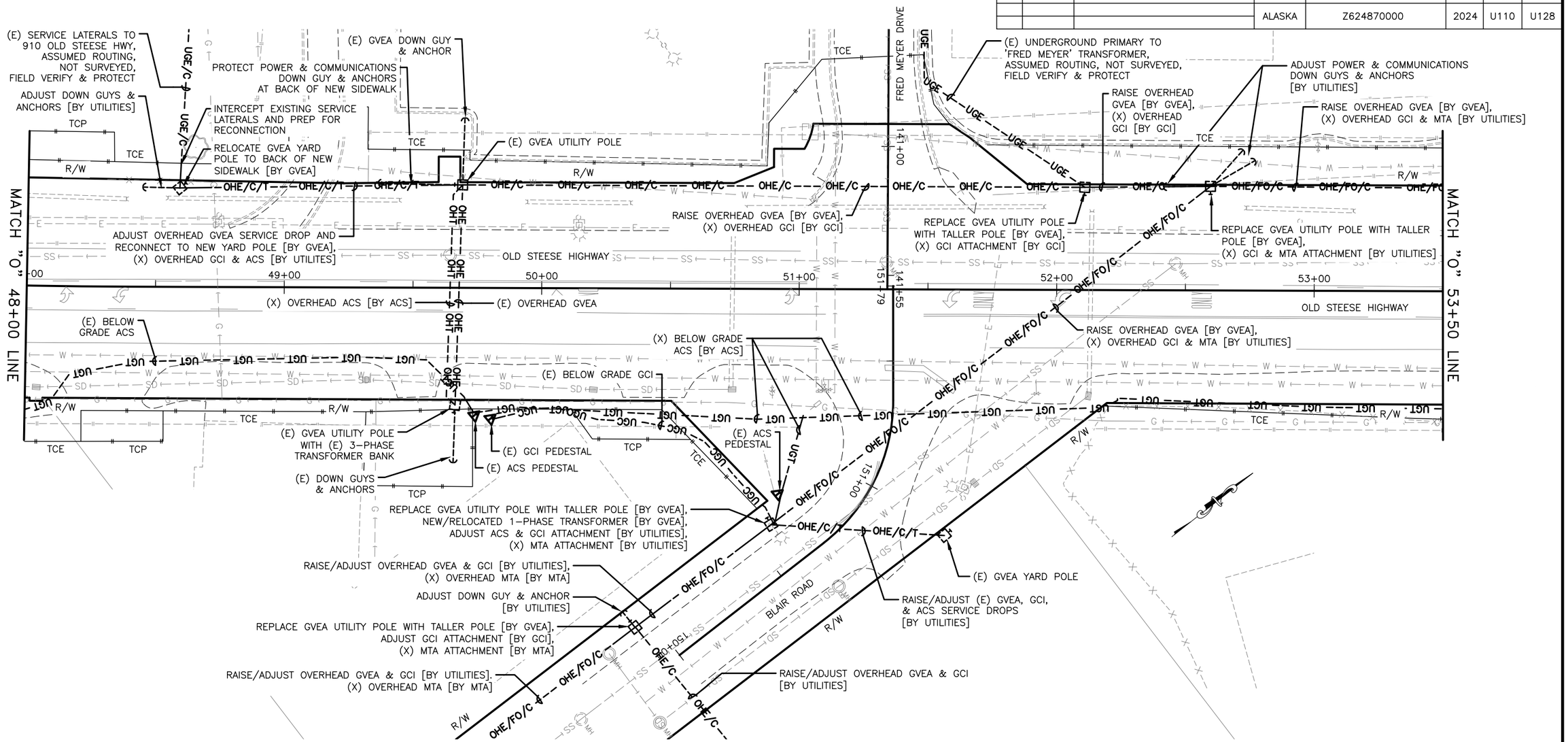
KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 7 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U109_1 Wed, Oct/12/22 03:57pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U110	U128

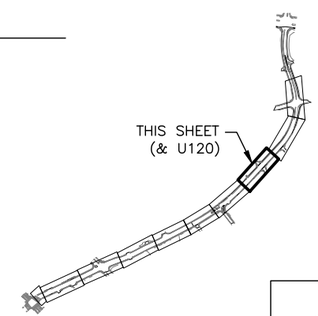


ELECTRICAL & TELECOMM. DEMOLITION – "O" 48+00 TO "O" 53+50

|——| = 20FT

GENERAL SHEET NOTES

1. FOR ADDITIONAL SERVICE ENTRANCE MODIFICATION DETAILS, SEE THE FOLLOWING DRAWINGS:
   –U126 FOR 910 OLD STEESE HWY



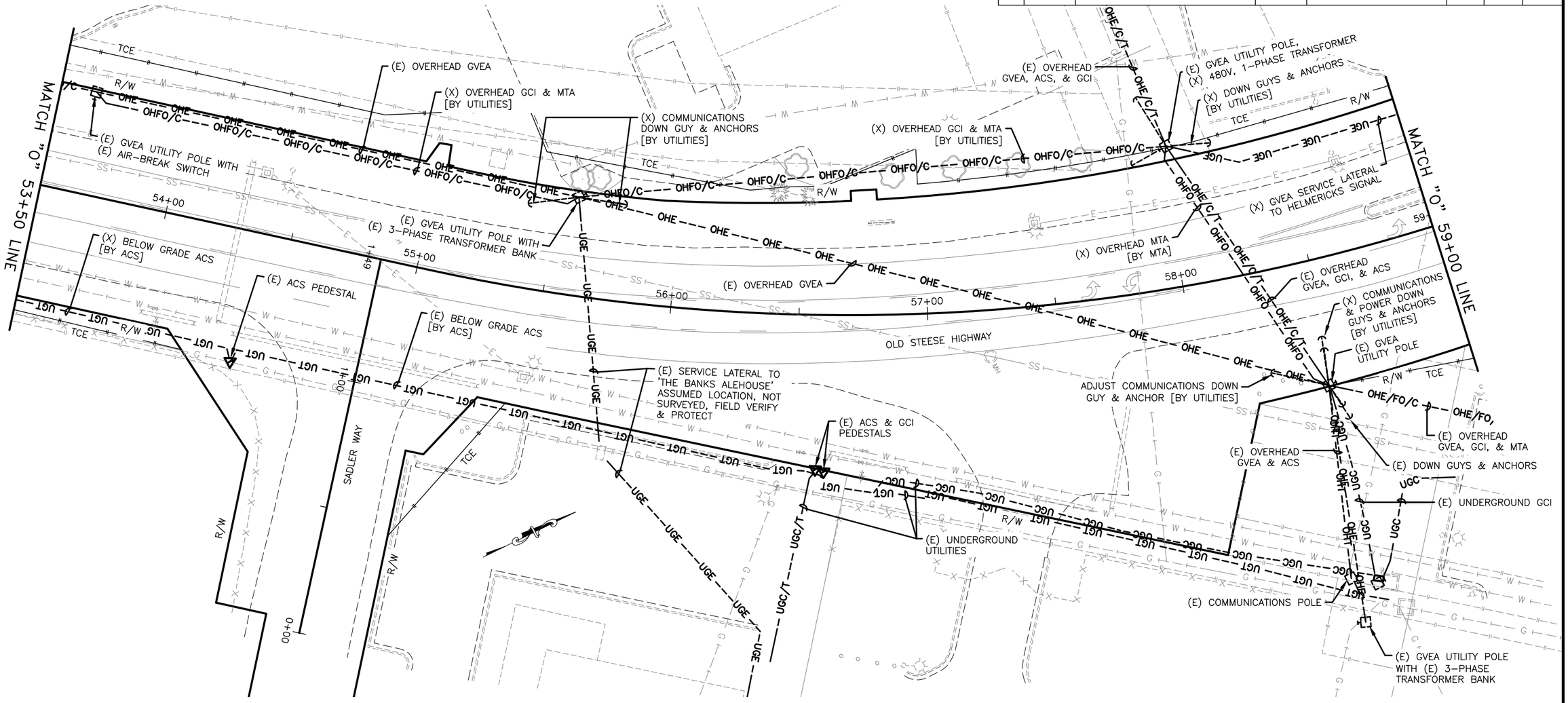
KEYPLAN

ELECTRICAL & TELECOMM. DEMOLITION 8 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U110_1 Wed, Oct/12/22 03:57pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U111	U128

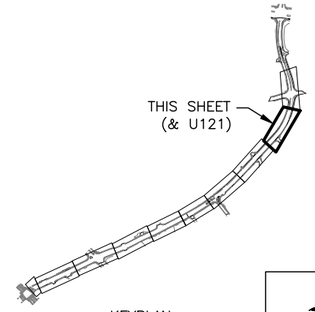


ELECTRICAL & TELECOMM. DEMOLITION – "O" 53+50 TO "O" 59+00

⟷ = 20FT

GENERAL SHEET NOTES

1. FOR ADDITIONAL SERVICE ENTRANCE MODIFICATION DETAILS, SEE THE FOLLOWING DRAWINGS:
   –U128 FOR HELMERICKS LOAD CENTER



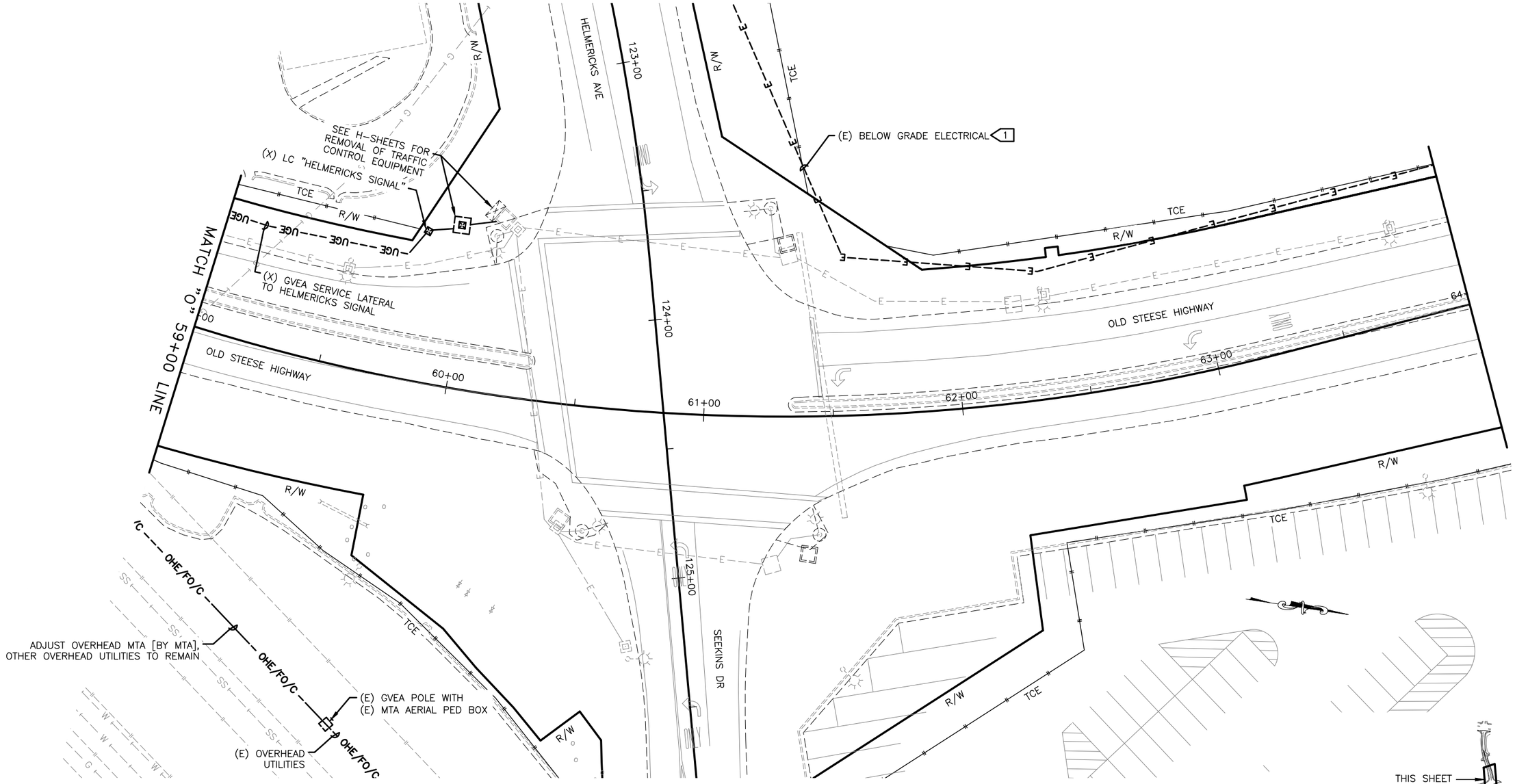
KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 9 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\21302\E\Drawings\62487_U_ELEC&COMM-U111_1 Wed, Oct/12/22 03:58pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U112	U128



ELECTRICAL & TELECOMM. DEMOLITION – "O" 59+00 TO "O" 64+00

= 20FT

GENERAL SHEET NOTES

1. FOR ADDITIONAL SERVICE ENTRANCE MODIFICATION DETAILS, SEE THE FOLLOWING DRAWINGS:
   –U128 FOR HELMERICKS LOAD CENTER

SPECIFIC SHEET NOTES

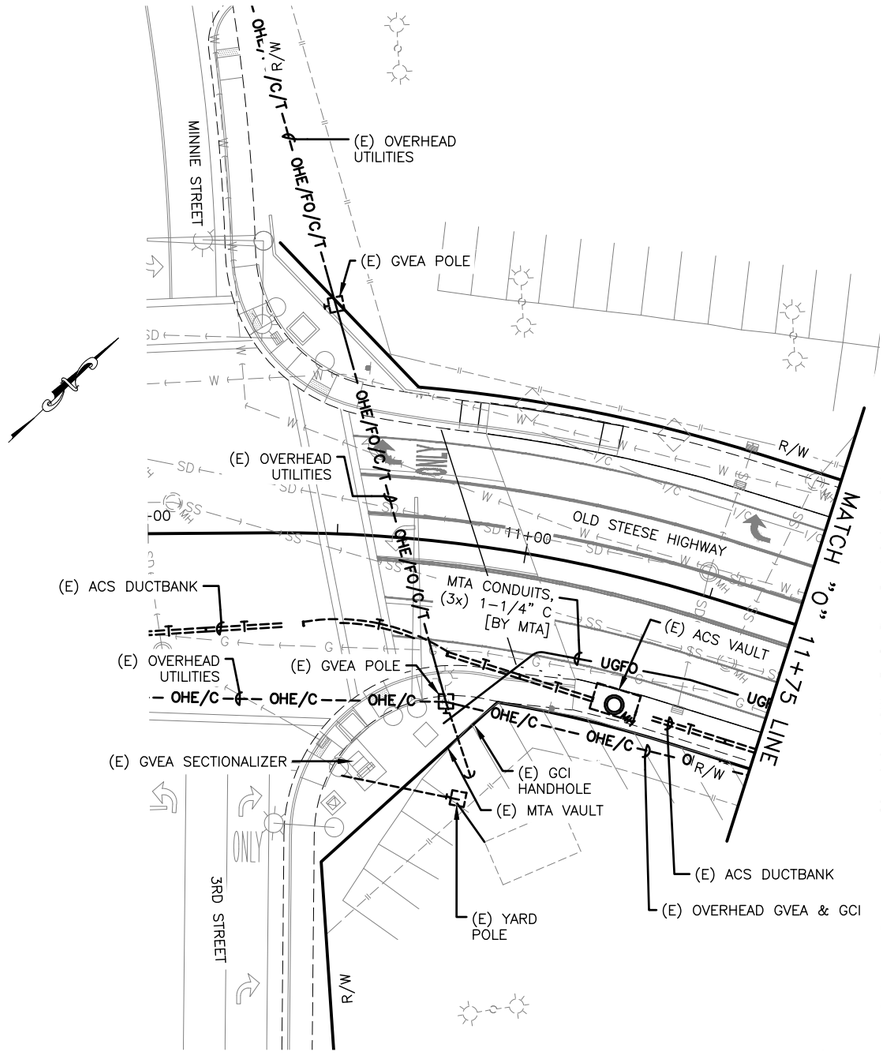
1 UNIDENTIFIED BURIED ELECTRICAL LINE, ASSUMED PROPERTY OF WALMART. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. DEMOLITION 10 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U112_1 Wed, Oct/12/22 03:59pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U113	U128

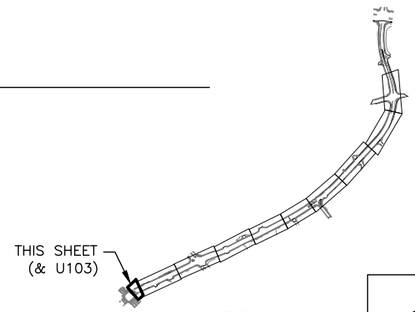


ELECTRICAL & TELECOMM. RENOVATION – "O" 10+00 TO "O" 11+75

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



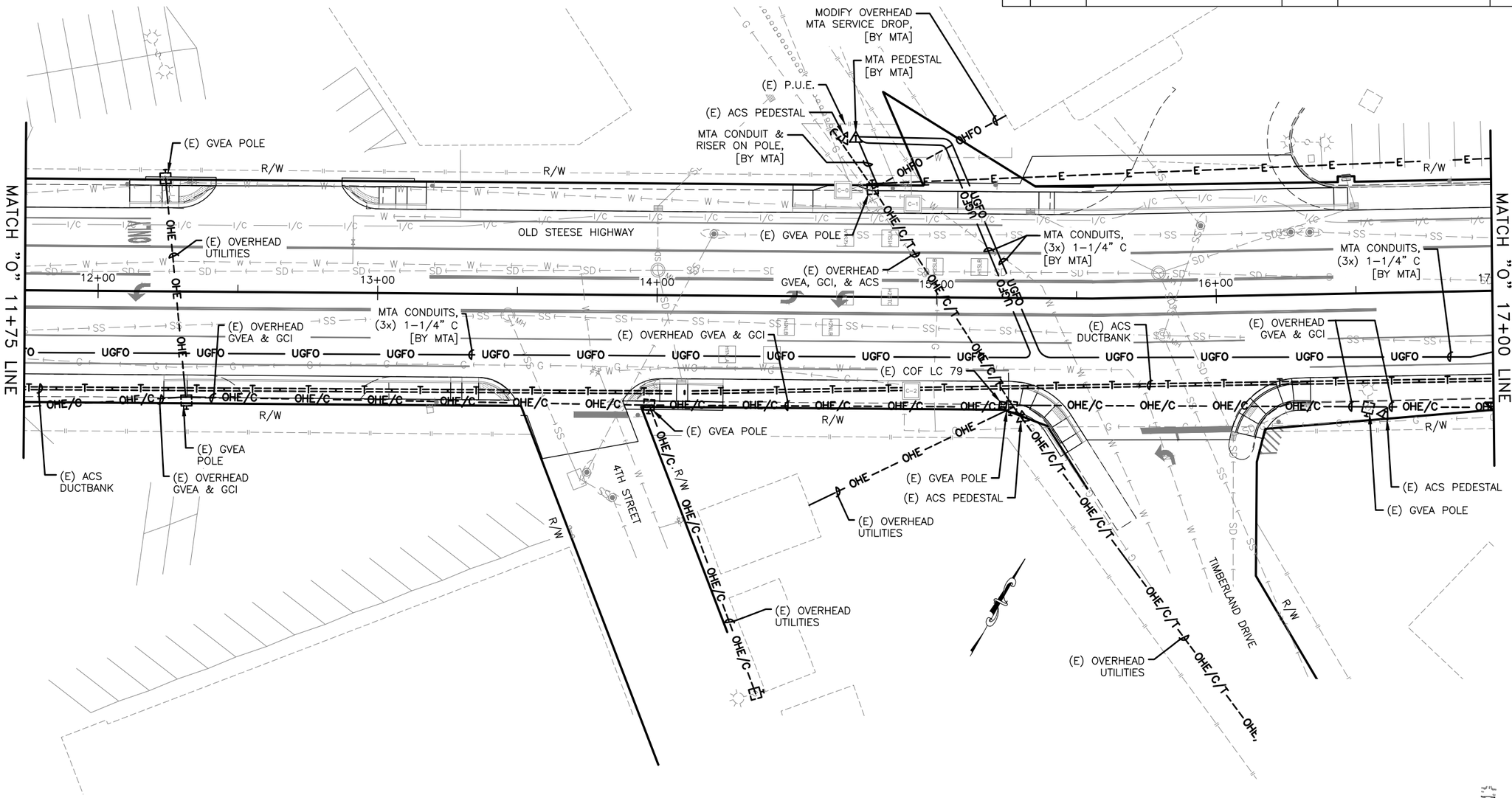
KEYPLAN

ELECTRICAL & TELECOMM. RENOVATION 1 OF 10

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U113_2 Wed, Oct/12/22 03:59pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U114	U128

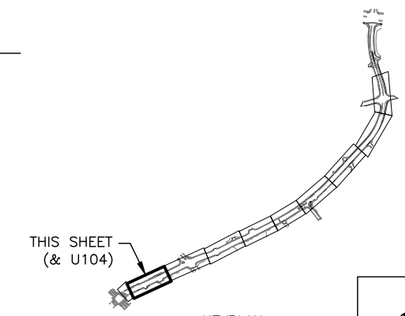


ELECTRICAL & TELECOMM. RENOVATION – "O" 11+75 TO "O" 17+00

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



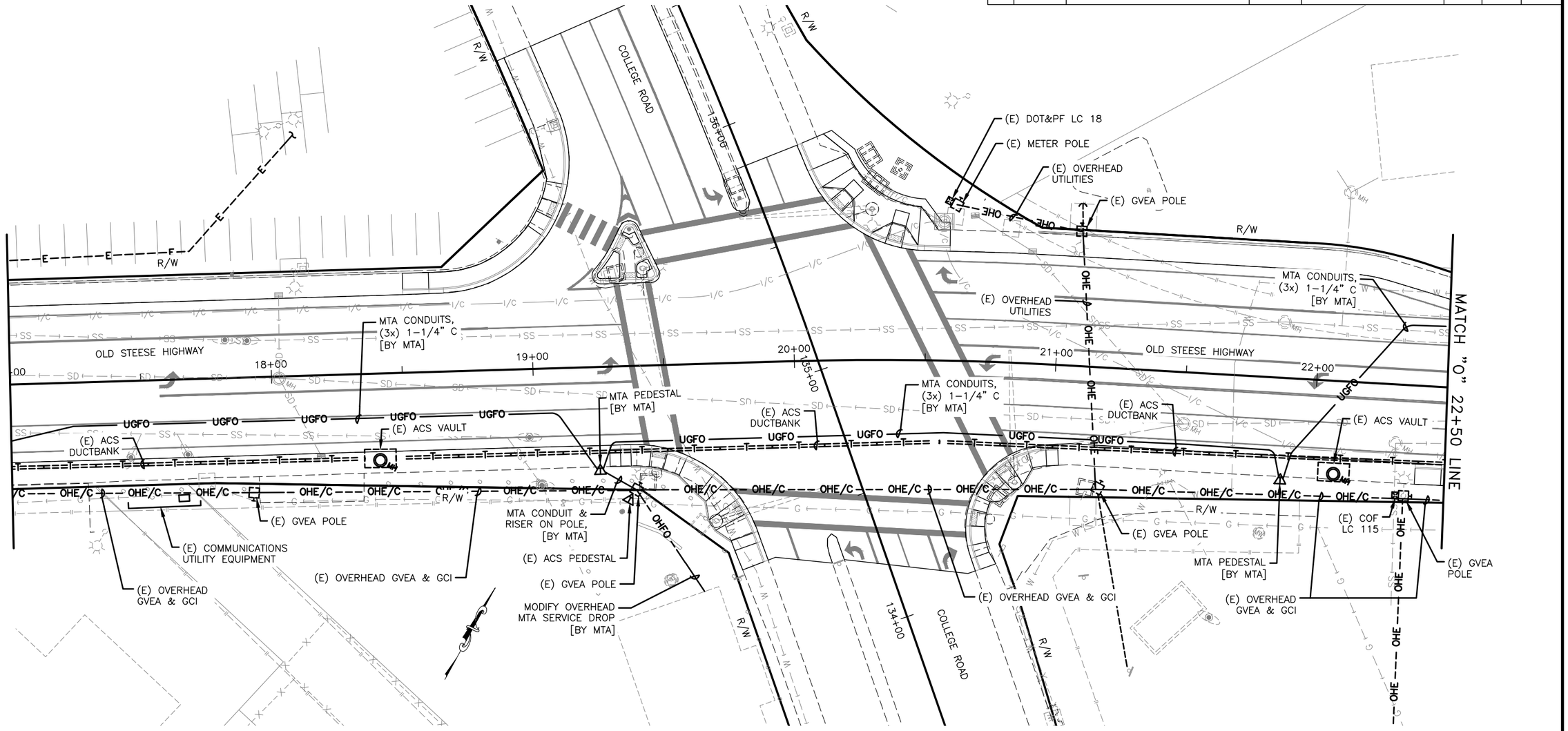
KEYPLAN

ELECTRICAL & TELECOMM. RENOVATION 2 OF 10

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC. CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U114_2 Wed, Oct/12/22 04:00pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U115	U128

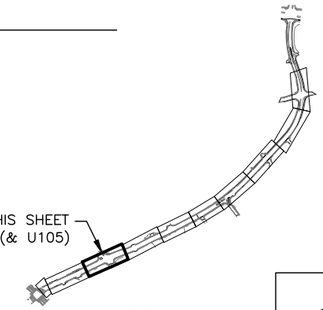


ELECTRICAL & TELECOMM. RENOVATION – "O" 17+00 TO "O" 22+50

= 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



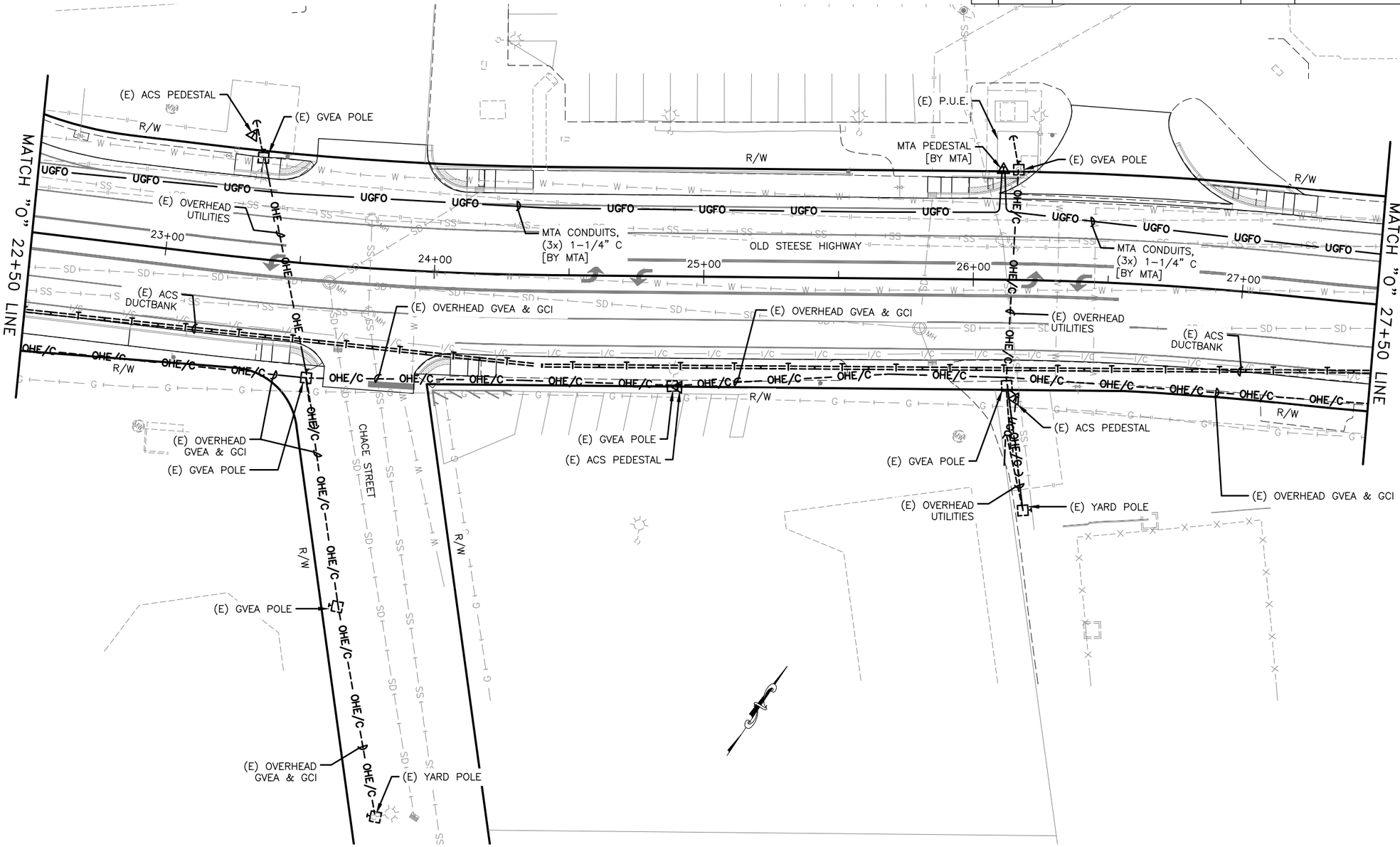
KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. RENOVATION 3 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U115_2 Wed, Oct/12/22 04:01pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U116	U128

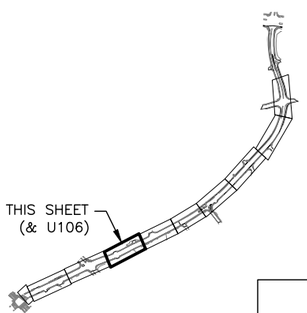


ELECTRICAL & TELECOMM. RENOVATION – "O" 22+50 TO "O" 27+50

|——| = 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA STAKING SHEETS FOR FURTHER DETAILS.



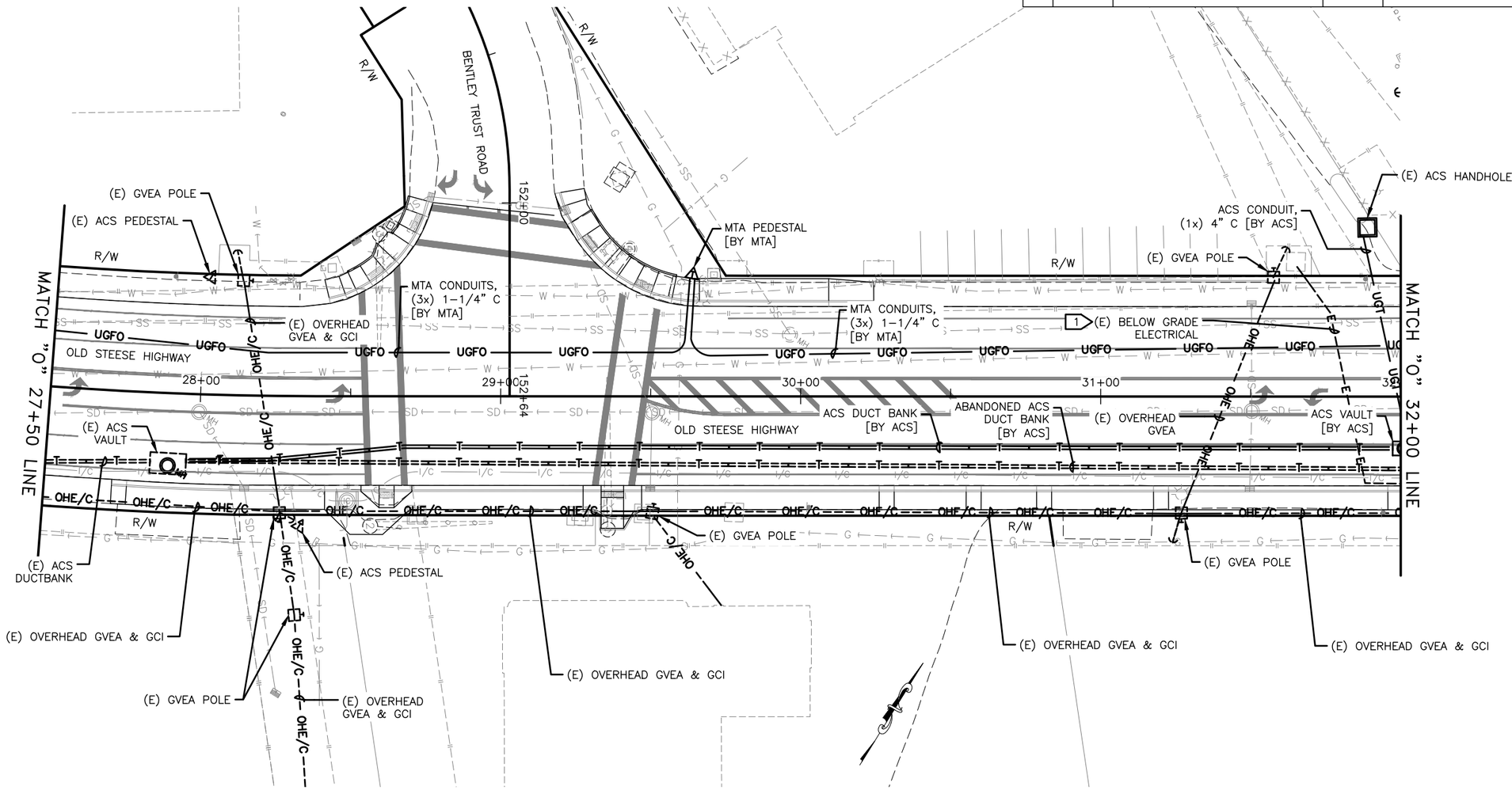
KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. RENOVATION 4 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U116_2 Wed, Oct/12/22 04:02pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U117	U128



ELECTRICAL & TELECOMM. RENOVATION – "O" 27+50 TO "O" 32+00

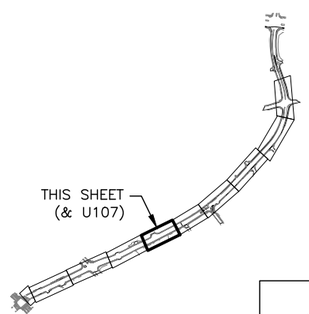
⟷ = 20FT

GENERAL SHEET NOTES

1. IN GENERAL, THIS SHEET IS ONLY INTENDED TO SHOW WHERE MTA & ACS WILL BE PERFORMING WORK. THE DOT&PF CONTRACTOR SHALL COORDINATE WITH MTA & ACS TO ENSURE THE UTILITY WORK IS COMPLETED PRIOR TO NEW PAVEMENT BEING PROVIDED. SEE MTA & ACS STAKING SHEETS FOR FURTHER DETAILS.

SPECIFIC SHEET NOTES

1. UNIDENTIFIED BURIED ELECTRICAL LINE. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.



KEYPLAN

ELECTRICAL & TELECOMM. RENOVATION 5 OF 10

STATE OF ALASKA
PRELIMINARY
PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U117_2 Wed, Oct/12/22 04:02pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U118	U128

SPECIFIC SHEET NOTES

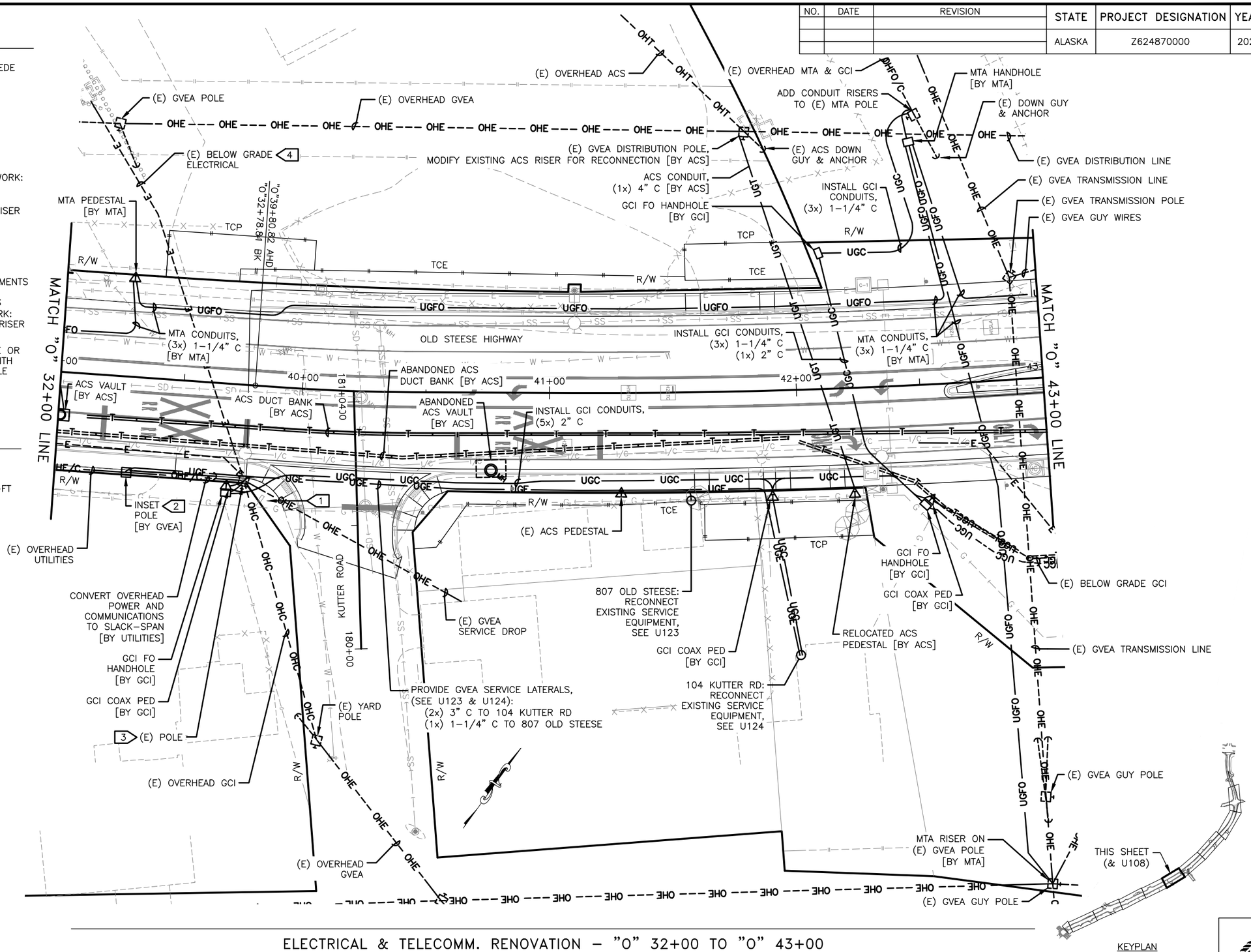
1. PROTECT BUSINESS SIGN. DO NOT IMPEDE WITH NEW UTILITY WORK.
2. [REFERENCE SHEETS U123 & U124]
   INSET POLE – UTILITY WORK:
   - NEW INSET POLE
   - NEW POLE TOP
   - NEW 3–PHASE XFRM
   - UTILITY LINE ATTACHMENT
   - UTILITY LINE ADJUSTMENTS
   - NEW DOWN GUYS & ANCHORS

   INSET POLE – DOT&PF CONTRACTOR WORK:
   - GCI 4" COAX RISER
   - GCI 2" FO RISER
   - 104 KUTTER RD GVEA SERVICE RISER
3. [REFERENCE SHEETS U123 & U124]
   (E) POLE – UTILITY WORK:
   - EXISTING POLE
   - POLE TOP ADJUSTMENT
   - EXISTING 1–PHASE XFRM
   - UTILITY LINE ATTACHMENT/ADJUSTMENTS
   - UTILITY LINE RECONNECTIONS
   - REMOVE DOWN GUYS & ANCHORS

   (E) POLE – DOT&PF CONTRACTOR WORK:
   - 807 OLD STEESE GVEA SERVICE RISER
4. UNIDENTIFIED BURIED ELECTRICAL LINE. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.

GENERAL SHEET NOTES

1. AT ALL GCI PEDESTAL & HANDHOLE LOCATIONS, THE CONTRACTOR SHALL STUB–UP CONDUITS A MINIMUM OF 4–FT ABOVE GRADE. GCI WILL PROVIDE THE PEDESTAL AND HANDHOLES.



ELECTRICAL & TELECOMM. RENOVATION – "O" 32+00 TO "O" 43+00

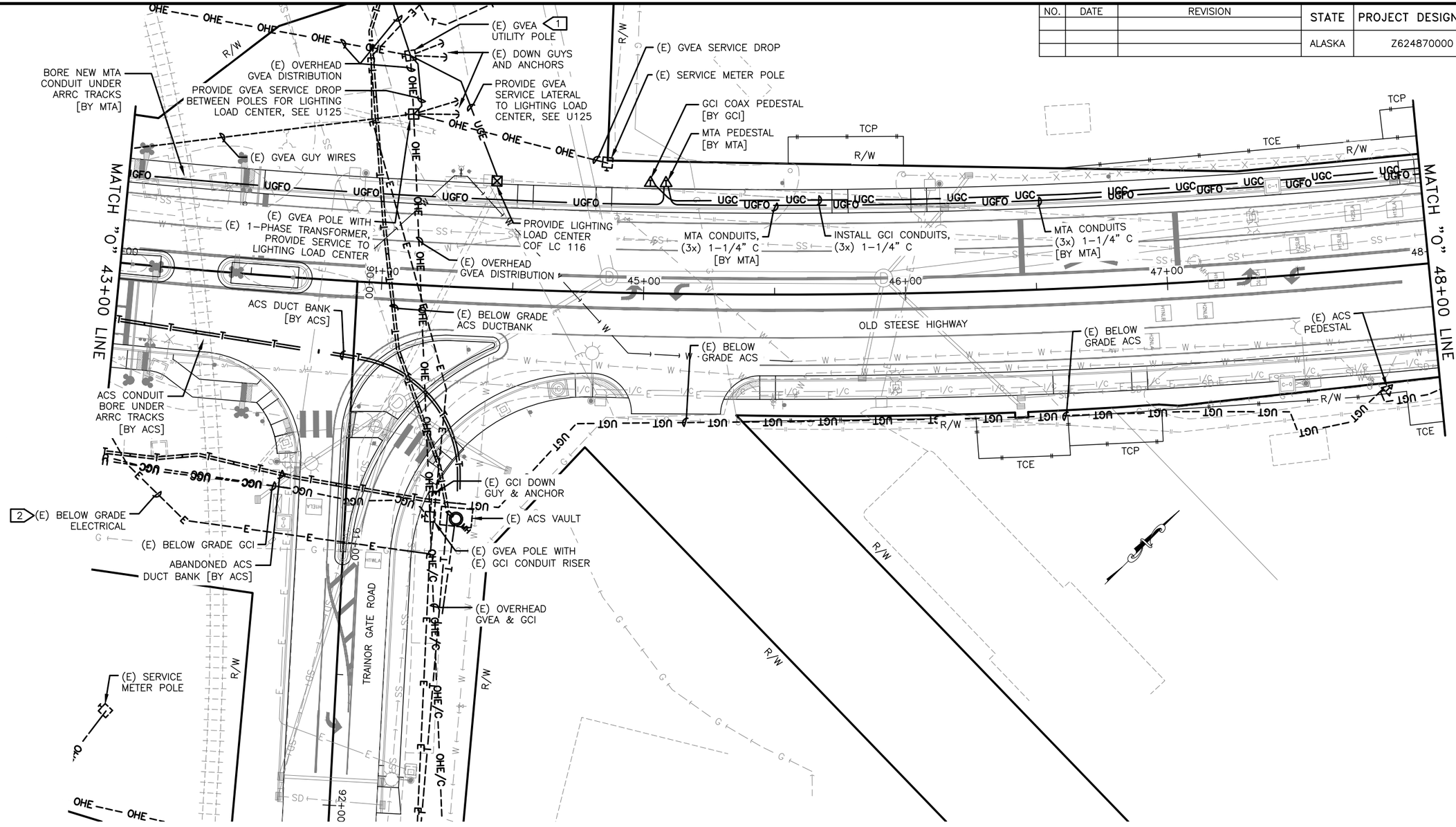
⊢——⊣ = 20FT

ELECTRICAL & TELECOMM. RENOVATION 6 OF 10

STATE OF ALASKA
PRELIMINARY PS&E
12/20/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452–1241
P:\921302\E\Drawings\62487_U_ELEC&COMM–U118_1 Wed, Oct/12/22 04:03pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U119	U128



ELECTRICAL & TELECOMM. RENOVATION – "O" 43+00 TO "O" 48+00

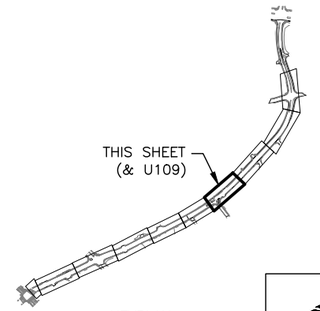
= 20FT

GENERAL SHEET NOTES

1. AT ALL GCI PEDESTAL & HANDHOLE LOCATIONS, THE CONTRACTOR SHALL STUB-UP CONDUITS A MINIMUM OF 4-FT ABOVE GRADE. GCI WILL PROVIDE THE PEDESTAL AND HANDHOLES.

SPECIFIC SHEET NOTES

1. PROVIDE CONDUIT FOR GVEA SERVICE RISER. UTILIZE EXISTING STANDOFF BRACKETS.
2. UNIDENTIFIED BURIED ELECTRICAL LINE, ASSUMED PROPERTY OF AARC. CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.



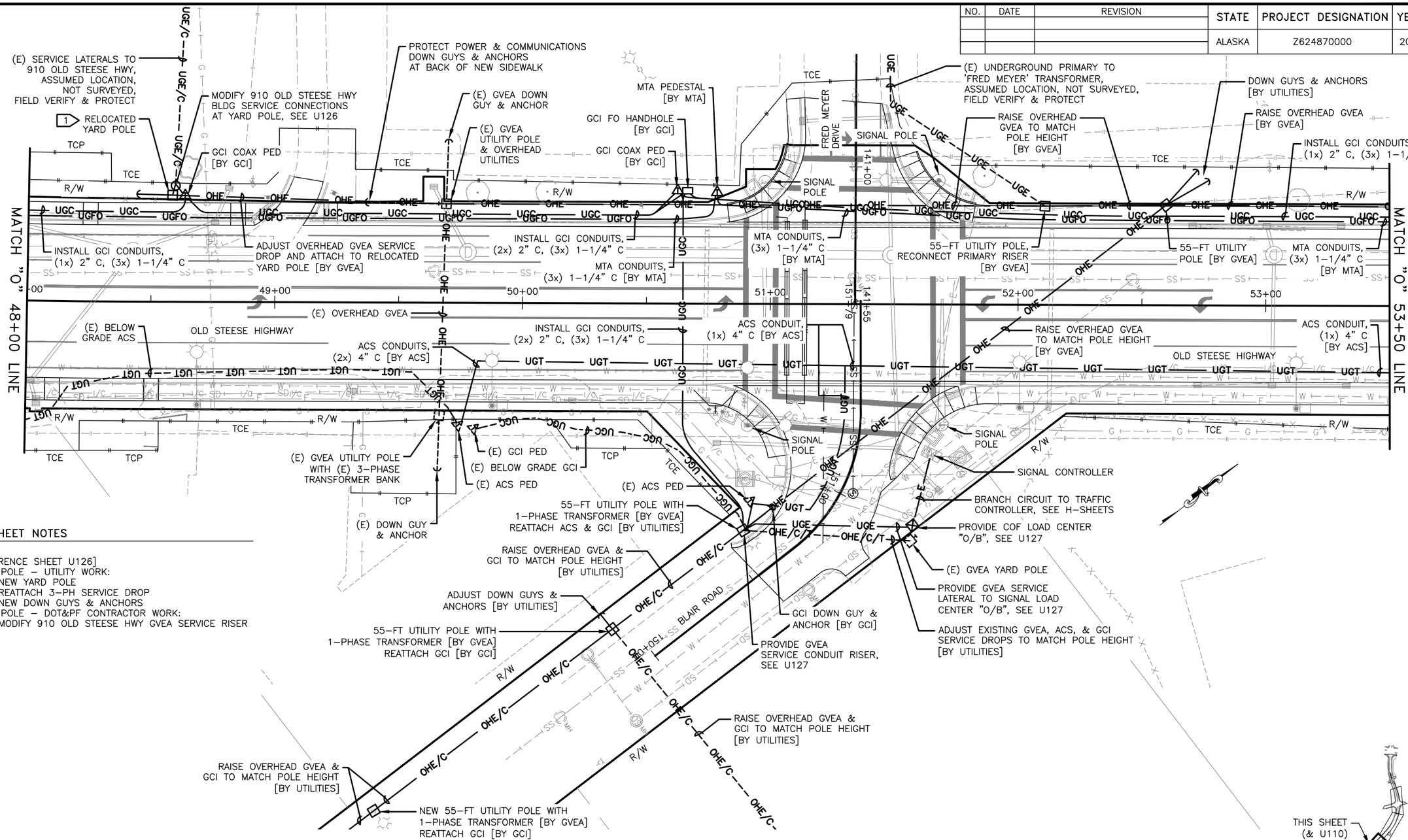
KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. RENOVATION 7 OF 10

PLANS DEVELOPED BY:: DESIGN ALASKA, INC; CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\624870_U_ELEC&COMM-U119_1 Wed, Oct/12/22 04:04pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U120	U128



SPECIFIC SHEET NOTES

1 [REFERENCE SHEET U126]
YARD POLE – UTILITY WORK:
- NEW YARD POLE
- REATTACH 3-PH SERVICE DROP
- NEW DOWN GUYS & ANCHORS

YARD POLE – DOT&PF CONTRACTOR WORK:
- MODIFY 910 OLD STEESE HWY GVEA SERVICE RISER

GENERAL SHEET NOTES

1. AT ALL GCI PEDESTAL & HANDHOLE LOCATIONS, THE CONTRACTOR SHALL STUB-UP CONDUITS A MINIMUM OF 4-FT ABOVE GRADE. GCI WILL PROVIDE THE PEDESTAL AND HANDHOLES.

ELECTRICAL & TELECOMM. RENOVATION – "O" 48+00 TO "O" 53+50

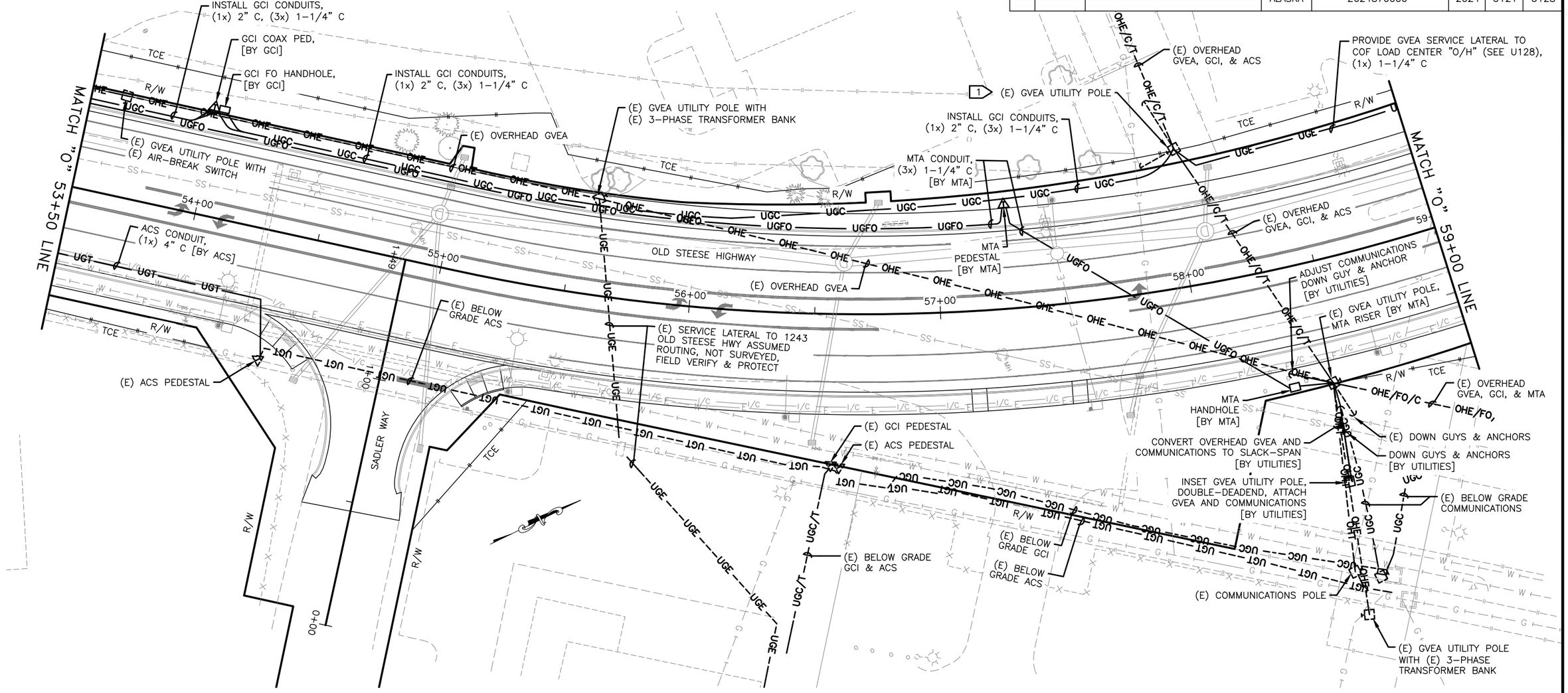
= 20FT

ELECTRICAL & TELECOMM. RENOVATION 8 OF 10

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\21302\E\Drawings\62487_U_ELEC&COMM-U120_1 Wed, Oct/12/22 04:05pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U121	U128



ELECTRICAL & TELECOMM. RENOVATION – "O" 53+50 TO "O" 59+00

= 20FT

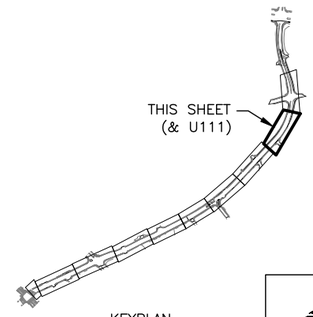
GENERAL SHEET NOTES

1. AT ALL GCI PEDESTAL & HANDHOLE LOCATIONS, THE CONTRACTOR SHALL STUB-UP CONDUITS A MINIMUM OF 4-FT ABOVE GRADE. GCI WILL PROVIDE THE PEDESTAL AND HANDHOLES.

SPECIFIC SHEET NOTES

1 [REFERENCE SHEET U128]
(E) UTILITY POLE – UTILITY WORK:
- –GCI CABLING AND AERIAL RECONNECTIONS
- –NEW GVEA TRANSFORMER PER SERVICE APPLICATION

(E) UTILITY POLE – DOT&PF CONTRACTOR WORK:
- –INSTALL (2x) 2" CONDUIT RISERS FOR GCI
- –INSTALL 1-1/4" CONDUIT RISER TO FIRST STUB-UP
- –FURNISH 1-1/4" CONDUIT FOR GVEA SERVICE RISER
- –PROVIDE SERVICE ENTRANCE CONDUCTORS



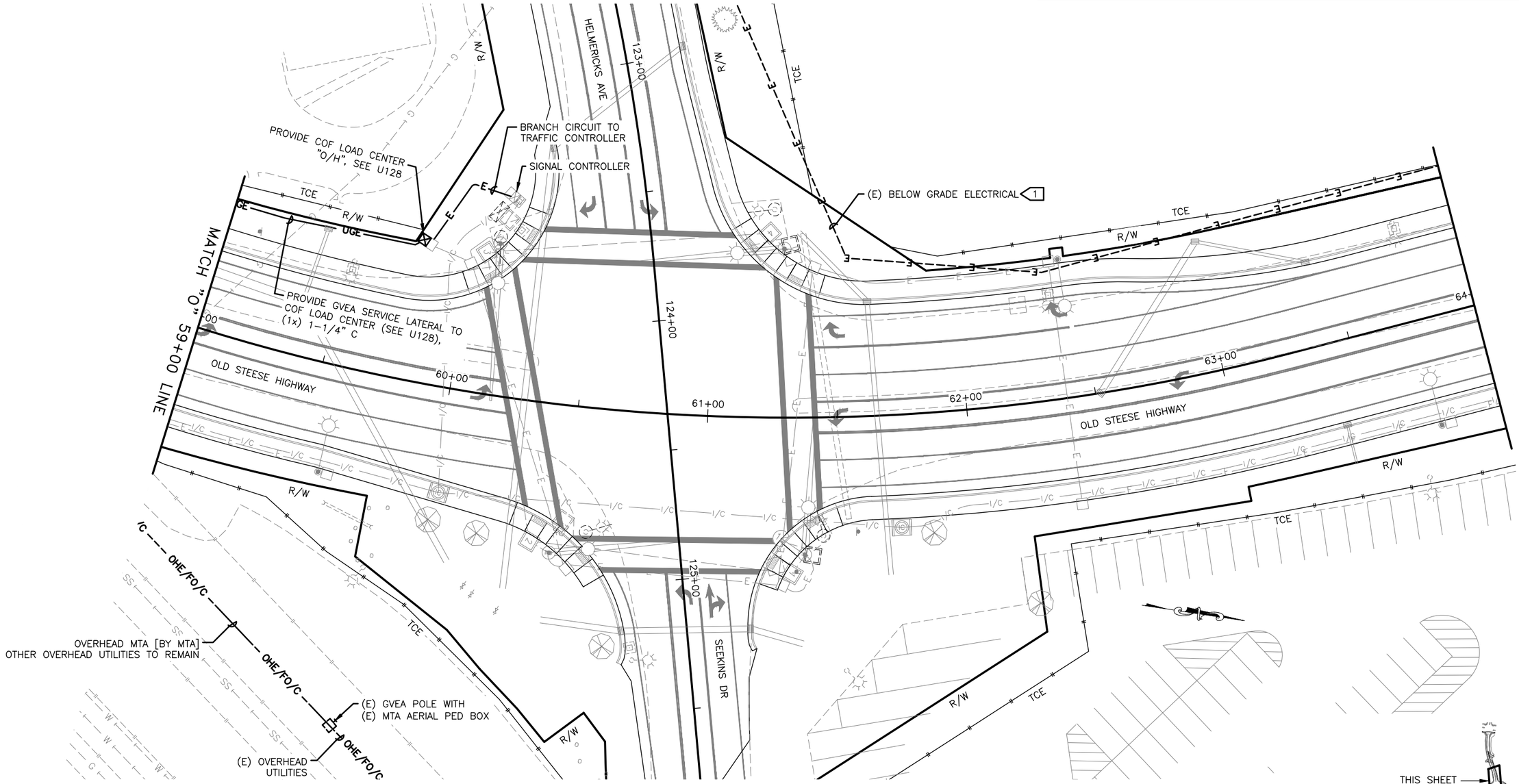
KEYPLAN

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

ELECTRICAL & TELECOMM. RENOVATION 9 OF 10

PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U121_1 Wed, Oct/12/22 04:05pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U122	U128



ELECTRICAL & TELECOMM. RENOVATION – "O" 59+00 TO "O" 64+00

= 20FT

SPECIFIC SHEET NOTES

1 UNIDENTIFIED BURIED ELECTRICAL LINE, ASSUMED PROPERTY OF WALMART. DOT&PF CONTRACTOR SHALL PROTECT IN PLACE OR OTHERWISE NOTIFY AND COORDINATE WITH THE PROJECT ENGINEER IF UNAVOIDABLE CONFLICT EXISTS.

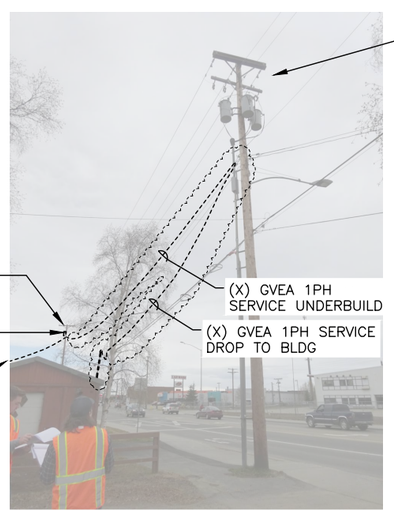
ELECTRICAL & TELECOMM. RENOVATION 10 OF 10

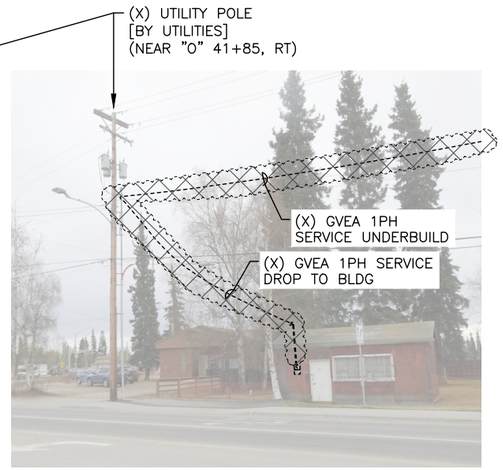
STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

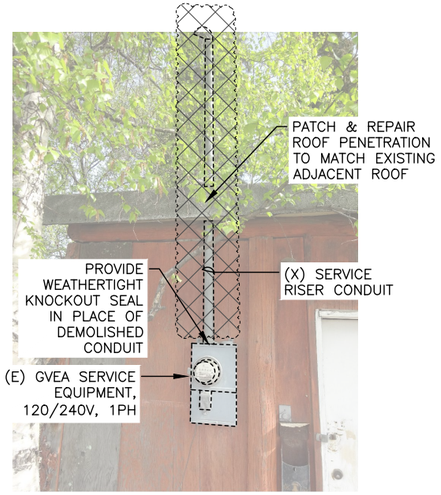
PLANS DEVELOPED BY: DESIGN ALASKA, INC; CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U122_1 Wed, Oct/12/22 04:06pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U123	U128

807 OLD STEESE HIGHWAY







UTILITY DEMOLITION

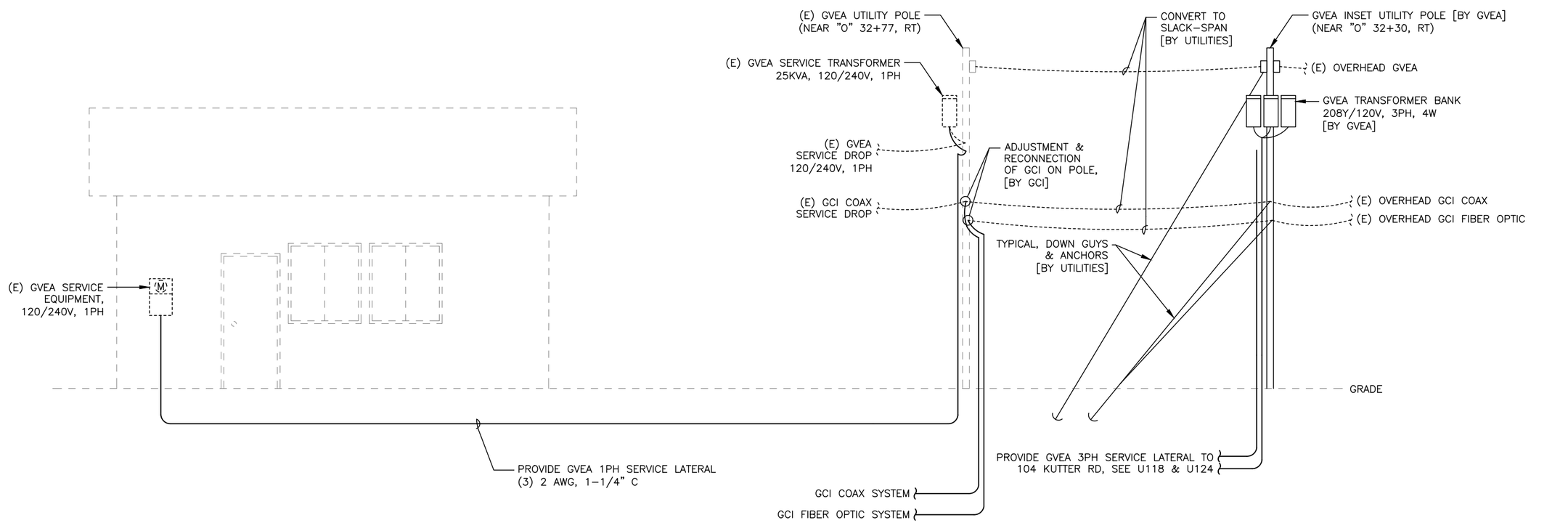
(NO SCALE)

807 OLD STEESE HIGHWAY SUMMARY

687.2000.0000 – POWER UTILITY RELOCATION, GVEA SECONDARY	
RMC CONDUIT – 1–1/4"	115–FT
HDPE CONDUIT – 1–1/4"	128–FT
#2 AWG XHHW	729–FT
MODIFY AND RECONNECT EXISTING GVEA SERVICE EQUIPMENT	1

GENERAL SHEET NOTES

1. THE EXISTING 25–kVA GVEA TRANSFORMER, WHICH CURRENTLY SERVES THE OVERHEAD SERVICE DROP TO THE BUILDING, IS INTENDED TO BE RE–USED TO SERVE THE NEW UNDERGROUND SERVICE LATERAL TO THE SAME BUILDING AFTER MODIFICATION TO THE SERVICE ENTRANCE. FINAL TRANSFORMER SIZE BY GVEA.
2. AT THE TIME OF CONSTRUCTION, A GVEA METER IS NOT INSTALLED IN THE SERVICE EQUIPMENT AND THE GVEA SERVICE IS NOT ACTIVE. DOT&PF IS PROVIDING MODIFICATIONS TO THE SERVICE ENTRANCE IN THE CASE THAT THE PROPERTY OWNER ELECTS TO REACTIVATE THE GVEA SERVICE IN THE FUTURE.



UTILITY MODIFICATIONS ONE–LINE DIAGRAM

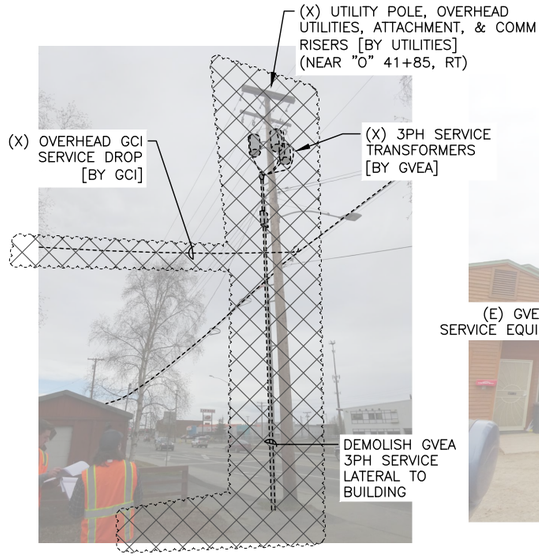
(NO SCALE)

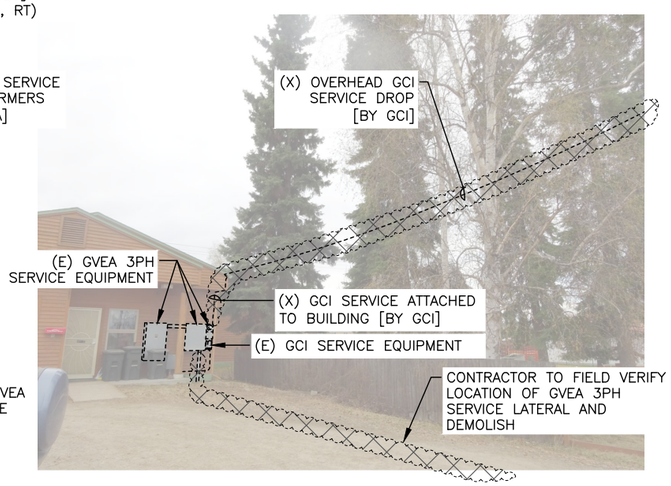
SERVICE ENTRANCE DETAILS 1 OF 6

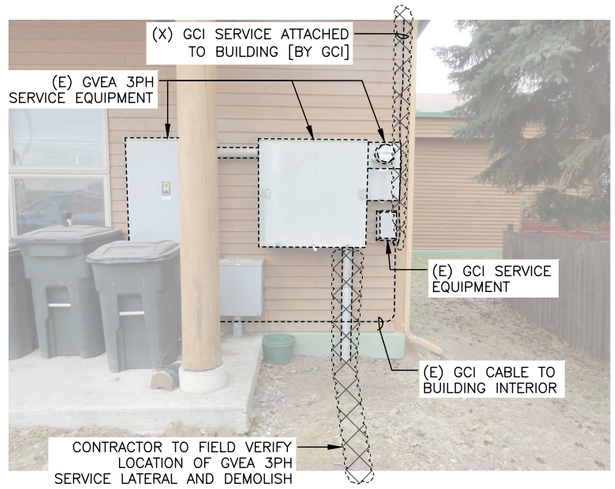
STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U124	U128

104 KUTTER ROAD – LAW OFFICE







UTILITY DEMOLITION

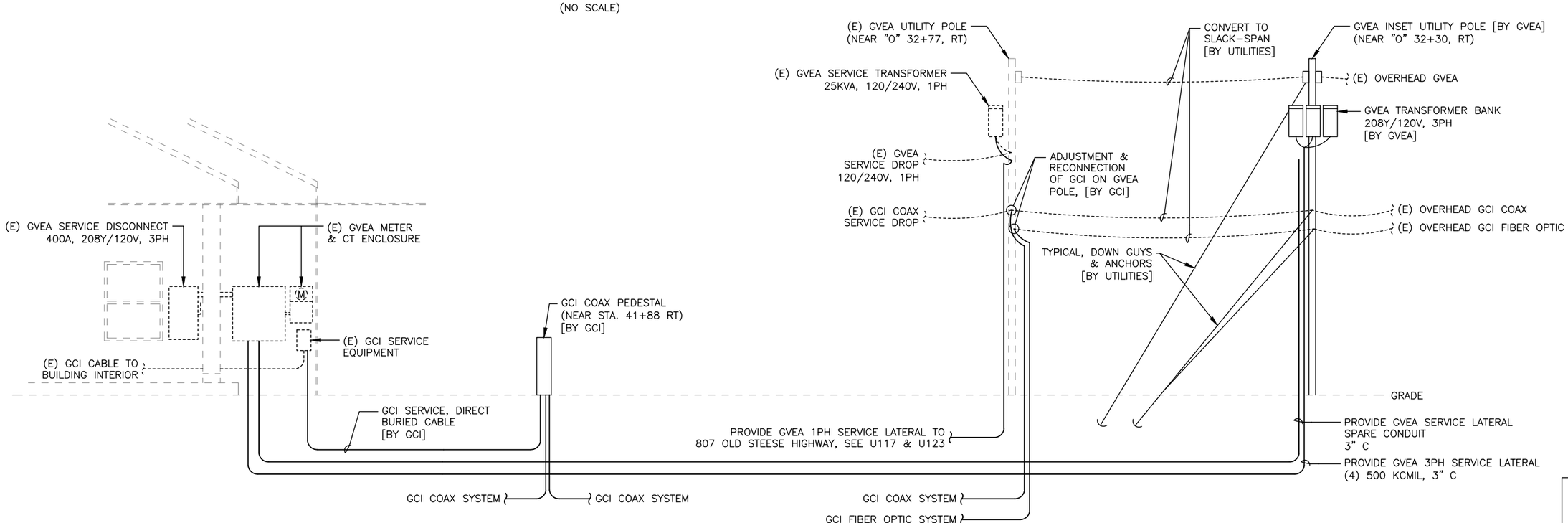
(NO SCALE)

104 KUTTER ROAD SUMMARY

687.2000.0000 – POWER UTILITY RELOCATION, GVEA SECONDARY	
RMC CONDUIT – 3"	230–FT
HDPE CONDUIT – 3"	534–FT
500 KCMIL XHHW	1,528–FT
MODIFY AND RECONNECT EXISTING SERVICE EQUIPMENT	1

GENERAL SHEET NOTES

1. FINAL SERVICE TRANSFORMER SIZE BY GVEA. IT IS ASSUMED THAT THREE 25–kVA TRANSFORMERS (75–kVA BANK) WILL BE PROVIDED TO MATCH THE EXISTING SERVICE TRANSFORMER SIZE.
2. METER LOAD DATA RECEIVED FROM GVEA ON 3/30/2022. MAXIMUM METER LOAD DEMAND OVER TIME PERIOD FROM 6/1/2018 TO 3/21/2022 WAS 9.41–kW.



UTILITY MODIFICATIONS ONE–LINE DIAGRAM

(NO SCALE)

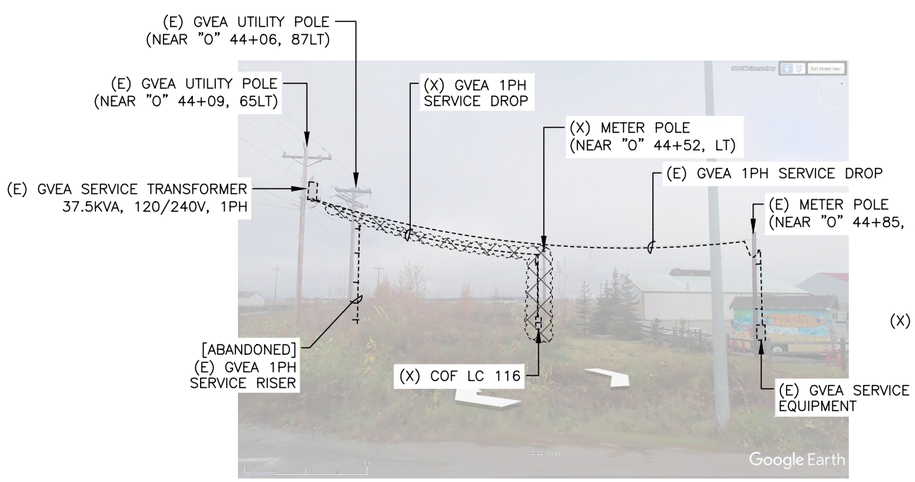
SERVICE ENTRANCE DETAILS 2 OF 6

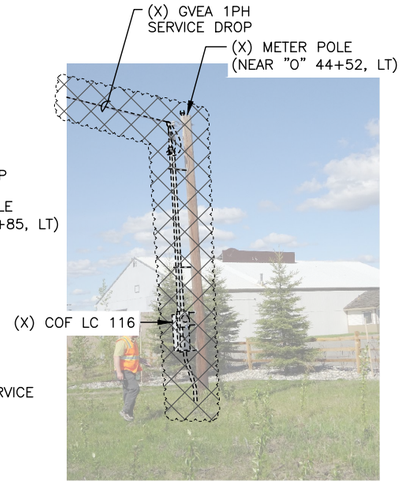
STATE OF ALASKA
PRELIMINARY
PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

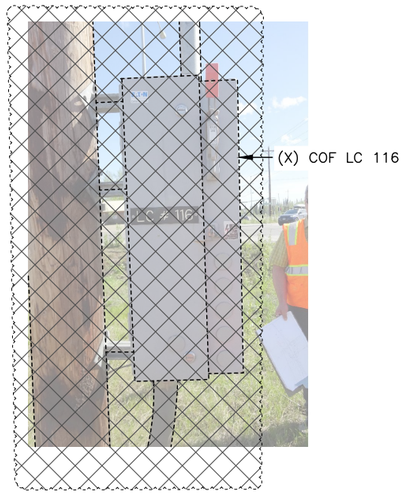
PLANS DEVELOPED BY: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452–1241
P:\921302\E\Drawings\62487_U_ELEC&COMM–U124 Wed, Oct/12/22 04:06pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U125	U128

COF LIGHTING LOAD CENTER 116

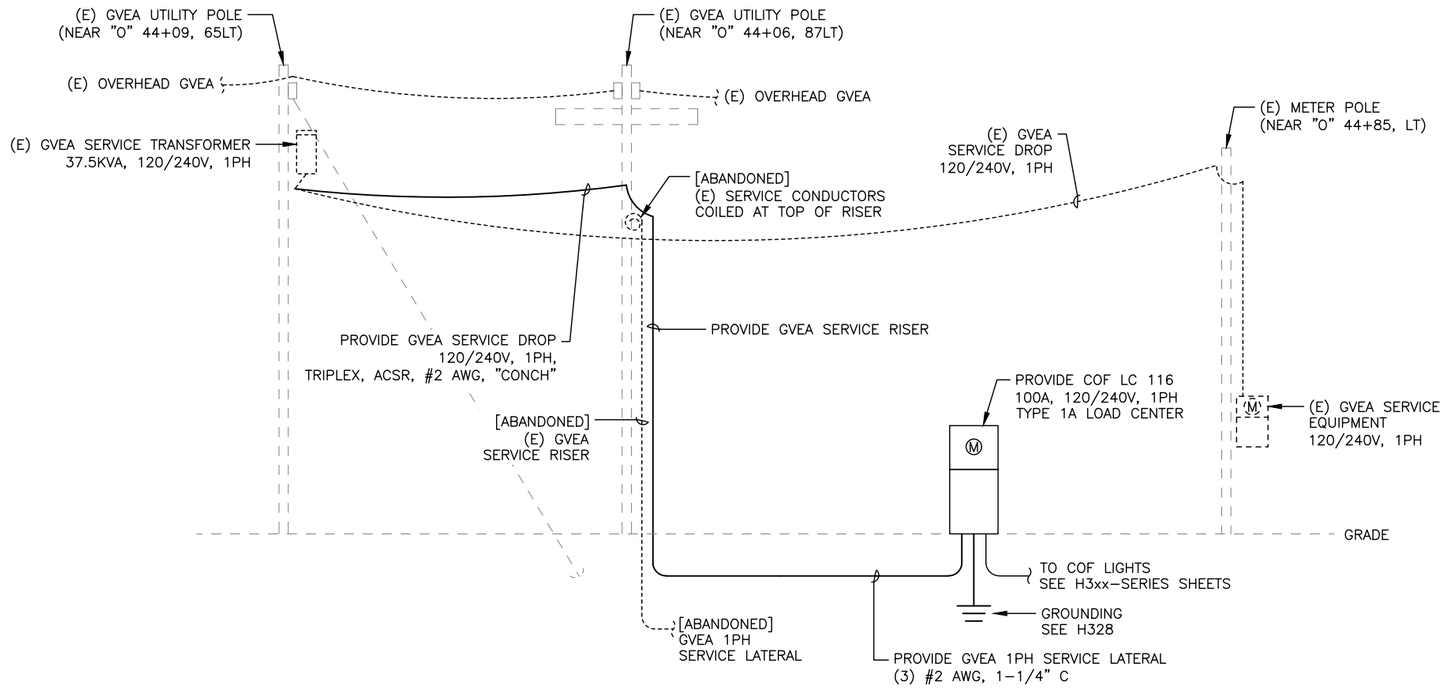






UTILITY DEMOLITION

(NO SCALE)



UTILITY MODIFICATIONS ONE-LINE DIAGRAM

(NO SCALE)

COF LOAD CENTER "116" SUMMARY

687.2000.0000 – POWER UTILITY RELOCATION, GVEA SECONDARY	
RMC CONDUIT: 1-1/4"	40-FT
HDPE CONDUIT: 1-1/4"	50-FT
#2 AWG XHHW	270-FT
TRIPLEX, #2 AWG XLP, ACSR MESSENGER, "CONCH" OVERHEAD SERVICE CABLE	25-FT
NEW GVEA SERVICE	1

GENERAL SHEET NOTES

1. SEE H3xx-SERIES SHEETS FOR FURTHER INFORMATION REGARDING LOAD CENTER, TRAFFIC CONTROLLER, LIGHTING, BRANCH CIRCUITS, AND ASSOCIATED EQUIPMENT.
2. TYPE 1A LOAD CENTER & ACCESSORIES PAID FOR UNDER 661.0002.0000.
3. BRANCH CIRCUITS POWERING LIGHTING PAID FOR UNDER 660.0003.0000.
4. THE EXISTING 37.5-kVA GVEA TRANSFORMER, WHICH CURRENTLY SERVES THE OVERHEAD SERVICE DROP TO THE LIGHTING LOAD CENTER, IS INTENDED TO BE RE-USED TO SERVE THE NEW UNDERGROUND SERVICE LATERAL TO THE RELOCATED LIGHTING LOAD CENTER. FINAL TRANSFORMER SIZE BY GVEA.
5. THE ANTICIPATED DEMAND LOAD OF RELOCATED COF LOAD CENTER "116" IS 5.6-kW (SEE H329).

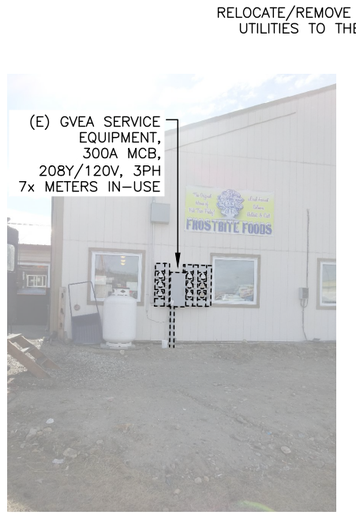
PRELIMINARY PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

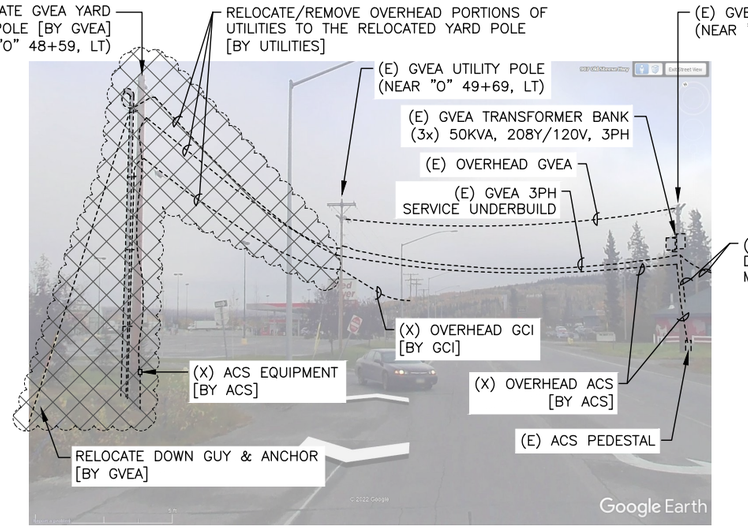
SERVICE ENTRANCE DETAILS 3 OF 6

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U125 Wed, Oct/12/22 04:06pm

910 OLD STEESE HIGHWAY – RAVEN TREE CENTER

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U126	U128





UTILITY DEMOLITION

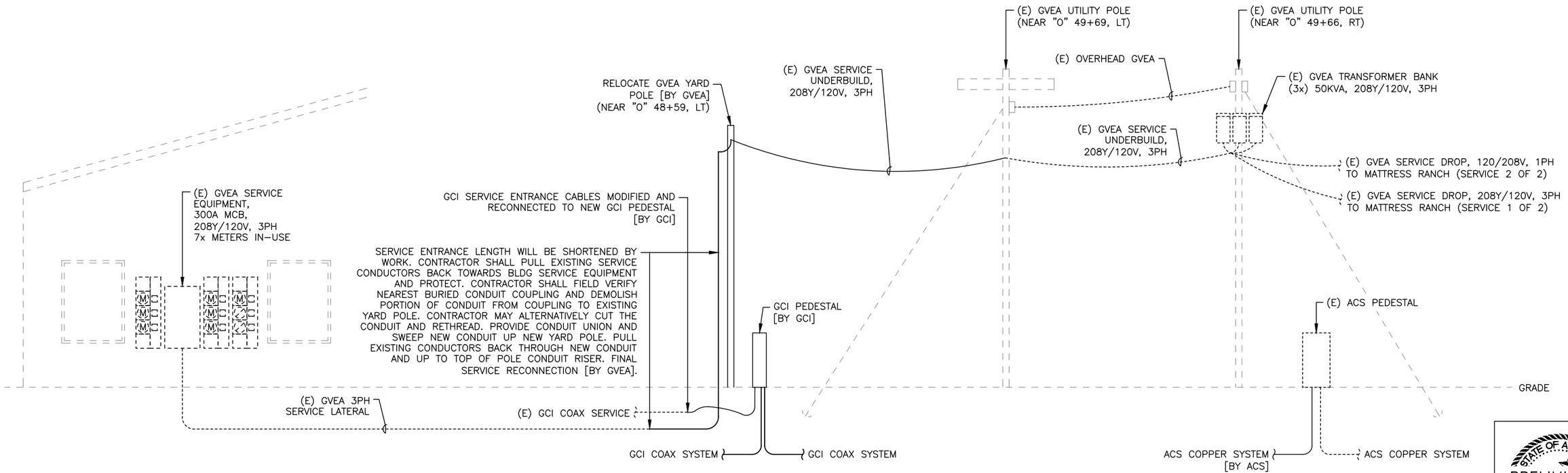
(NO SCALE)

910 OLD STEESE HIGHWAY SUMMARY

687.2000.0000 – POWER UTILITY RELOCATION, GVEA SECONDARY	
RMC CONDUIT: 2"	40–FT
MODIFY EXISTING GVEA SERVICE LATERAL	1

GENERAL SHEET NOTES

1. THE EXISTING THREE 50–kVA GVEA TRANSFORMER BANK (150–kVA TOTAL), WHICH CURRENTLY SERVES THE OVERHEAD SERVICE DROP TO THE BUILDING, IS INTENDED BE RE–USED TO SERVE THE SAME BUILDING AFTER MODIFICATIONS TO THE SERVICE ENTRANCE. FINAL TRANSFORMER SIZE BY GVEA.
2. METER LOAD DATA RECEIVED FROM GVEA ON 3/30/2022. MAXIMUM METER LOAD DEMAND ACROSS ALL 7 METERS OVER TIME PERIOD FROM 6/1/2018 TO 3/21/2022 WAS:
   5.67+17.38+6.69+19.65+8.46+10.52+8.89 = 77.26–kW.



UTILITY MODIFICATIONS ONE–LINE DIAGRAM

(NO SCALE)

SERVICE ENTRANCE DETAILS 4 OF 6

STATE OF ALASKA
PRELIMINARY PS&E
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY:: DESIGN ALASKA, INC, CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452–1241
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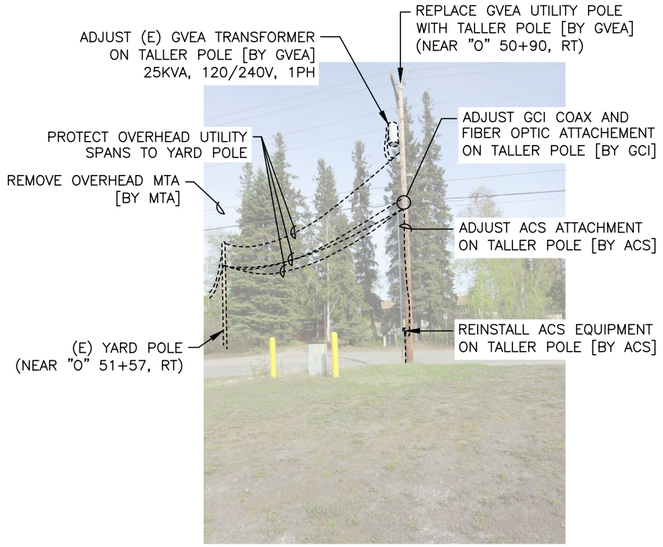
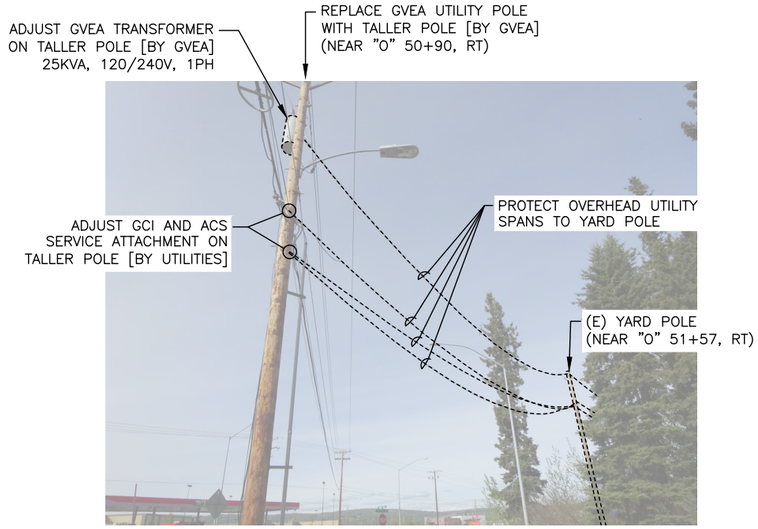
NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U127	U128

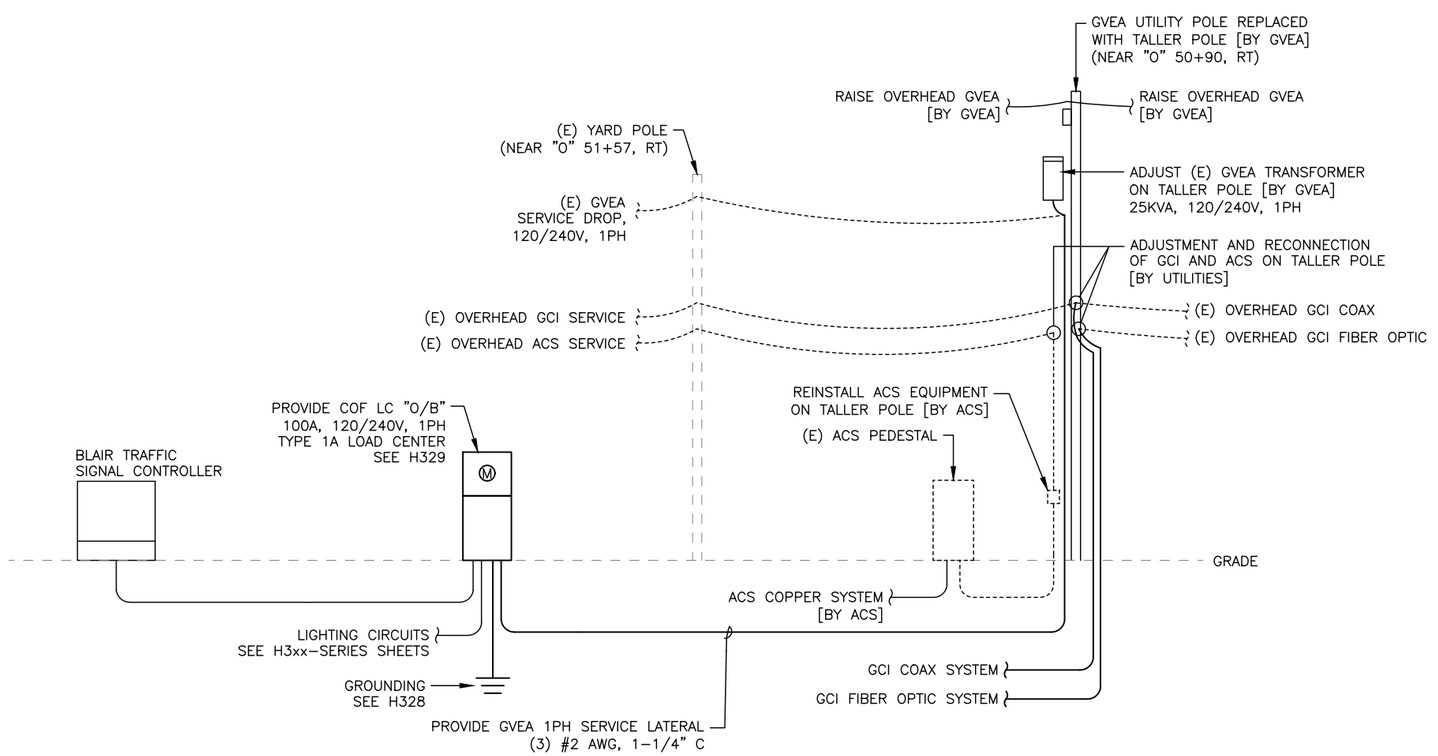
COF SIGNAL LOAD CENTER "O/B"





UTILITY DEMOLITION

(NO SCALE)



UTILITY MODIFICATIONS ONE-LINE DIAGRAM

(NO SCALE)

COF LOAD CENTER "O/B" SUMMARY

687.2000.0000 – POWER UTILITY RELOCATION, GVEA SECONDARY	
RMC CONDUIT: 1-1/4"	40-FT
HDPE CONDUIT: 1-1/4"	68-FT
#2 AWG XHHW	324-FT
NEW GVEA SERVICE	1

GENERAL SHEET NOTES

1. SEE H3xx-SERIES SHEETS FOR FURTHER INFORMATION REGARDING LOAD CENTER, TRAFFIC CONTROLLER, LIGHTING, BRANCH CIRCUITS, AND ASSOCIATED EQUIPMENT.
2. TYPE 1A LOAD CENTER & ACCESSORIES PAID FOR UNDER 661.0002.0000.
3. BRANCH CIRCUITS POWERING TRAFFIC SIGNAL CONTROLLER PAID FOR UNDER 661.0002.0000.
4. THE EXISTING 25-kVA GVEA TRANSFORMER ON THE NEW POLE IS INTENDED TO BE USED TO SERVE THE NEW UNDERGROUND SERVICE LATERAL TO THE NEW LIGHTING & SIGNAL LOAD CENTER. FINAL TRANSFORMER SIZE BY GVEA.
5. THE ANTICIPATED DEMAND LOAD OF COF LOAD CENTER "O/B" IS 6.4-kW (SEE H329).

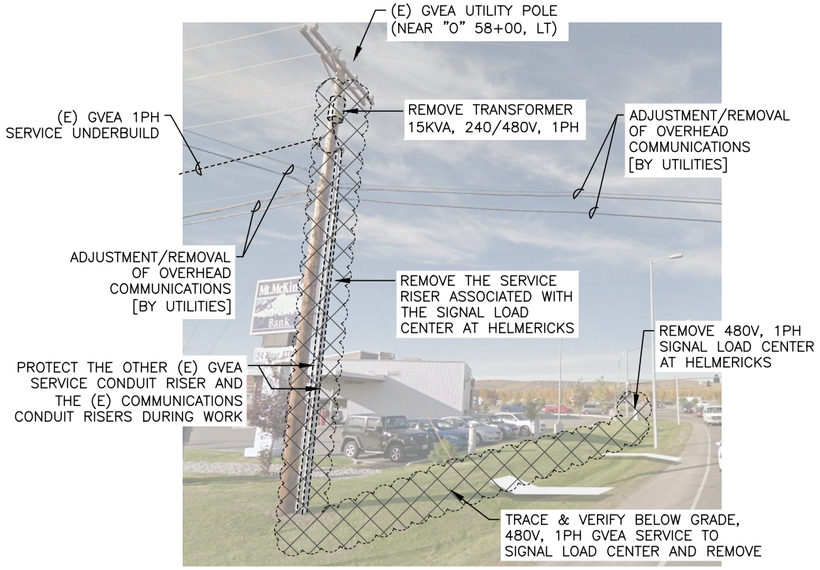
PRELIMINARY PS&E

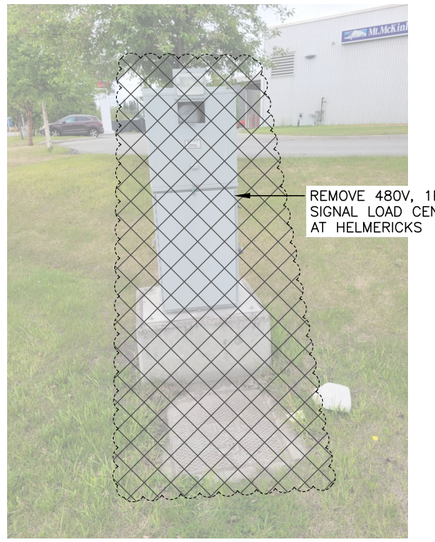
SERVICE ENTRANCE DETAILS 5 OF 6

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
P:\921302\E\Drawings\62487_U_ELEC&COMM-U127 Wed, Oct/12/22 04:06pm

NO.	DATE	REVISION	STATE	PROJECT DESIGNATION	YEAR	SHEET NO.	TOTAL SHEETS
			ALASKA	Z624870000	2024	U128	U128

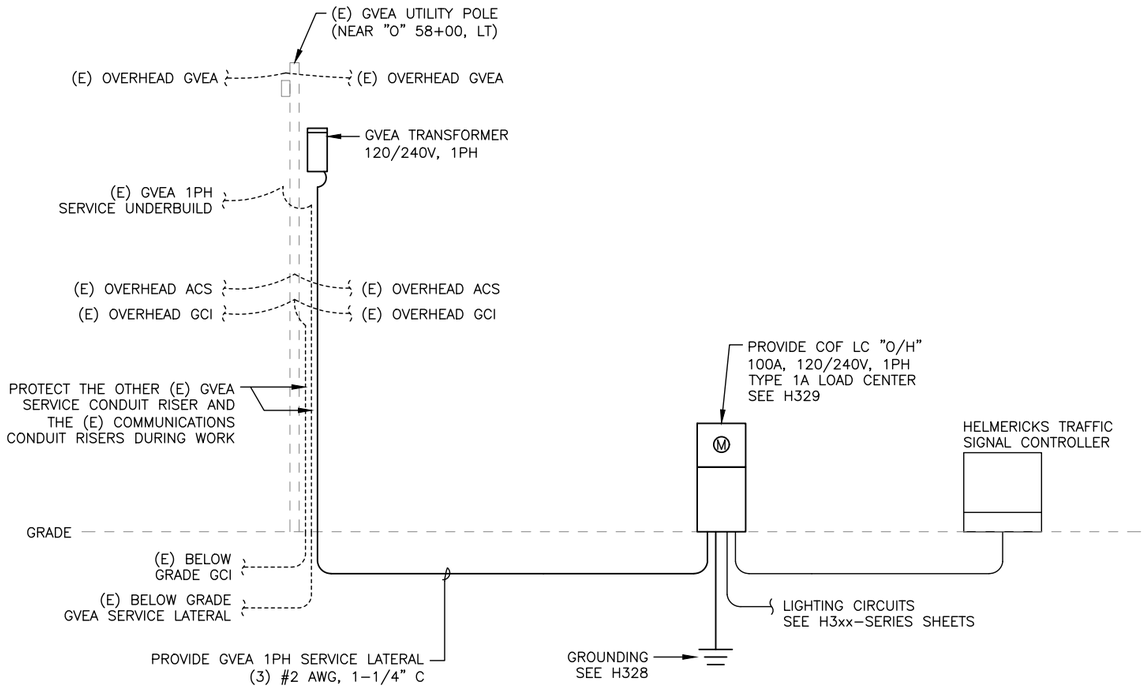
COF SIGNAL LOAD CENTER "O/H"





UTILITY DEMOLITION

(NO SCALE)



UTILITY MODIFICATIONS ONE-LINE DIAGRAM

(NO SCALE)

COF LOAD CENTER "O/H" SUMMARY

687.2000.0000 – POWER UTILITY RELOCATION, GVEA SECONDARY	
RMC CONDUIT: 1-1/4"	50-FT
HDPE CONDUIT: 1-1/4"	168-FT
#2 AWG XHHW	654-FT
NEW GVEA SERVICE	1

GENERAL SHEET NOTES

1. SEE H3xx-SERIES SHEETS FOR FURTHER INFORMATION REGARDING LOAD CENTER, TRAFFIC CONTROLLER, LIGHTING, BRANCH CIRCUITS, AND ASSOCIATED EQUIPMENT.
2. TYPE 1A LOAD CENTER & ACCESSORIES PAID FOR UNDER 661.0002.0000.
3. BRANCH CIRCUITS POWERING TRAFFIC SIGNAL CONTROLLER PAID FOR UNDER 661.0002.0000.
4. FINAL SERVICE TRANSFORMER SIZE BY GVEA. IT IS ASSUMED THAT A 25-kVA TRANSFORMER WILL BE PROVIDED.
5. THE ANTICIPATED DEMAND LOAD OF COF LOAD CENTER "O/H" IS 6.4-kW (SEE H329).

SERVICE ENTRANCE
DETAILS 6 OF 6

STATE OF ALASKA
PRELIMINARY
PS&E
12/08/2022
No. EE12945
REGISTERED PROFESSIONAL ENGINEER

PLANS DEVELOPED BY: DESIGN ALASKA, INC., CERT. OF AUTHORIZATION NO.: AECC511, 601 COLLEGE ROAD, FAIRBANKS, AK 99701 (907)452-1241
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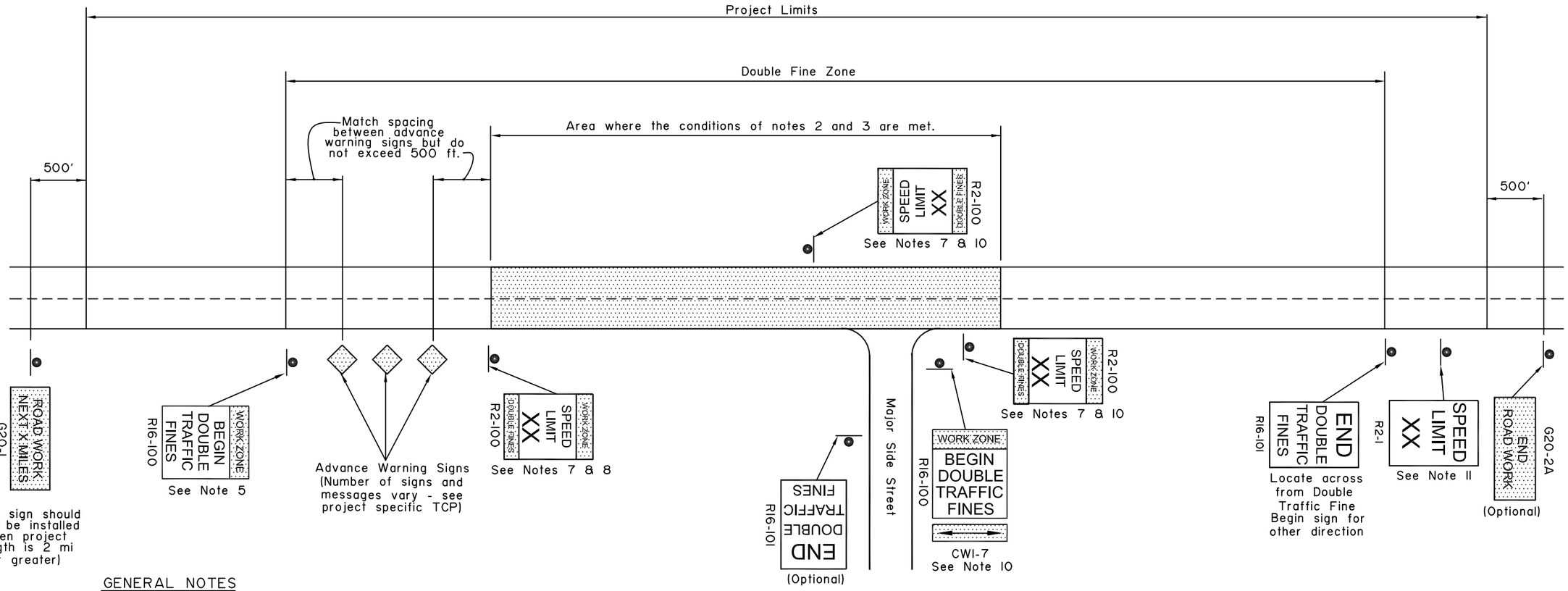
C-04.12

SHEET | of |



GENERAL NOTES

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

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

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

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

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

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

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

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

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

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LOCATION OF DOUBLE TRAFFIC FINE SIGNS

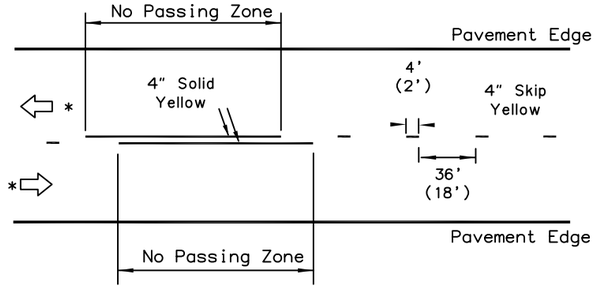
Adopted as an Alaska Standard Plan by: Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

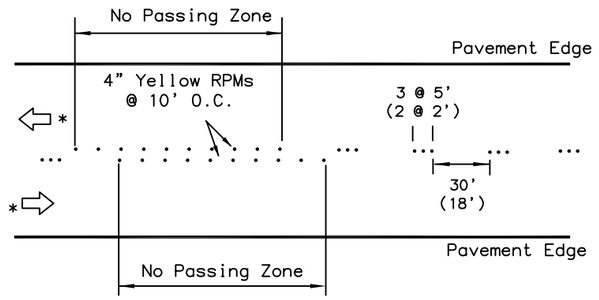
Last Code and Stds. Review
By: Date:

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

C-05.20 SHEET | of |



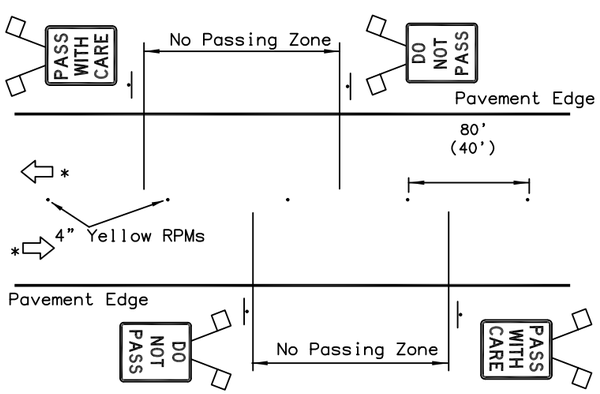
Striping



Temporary Raised Pavement Markers

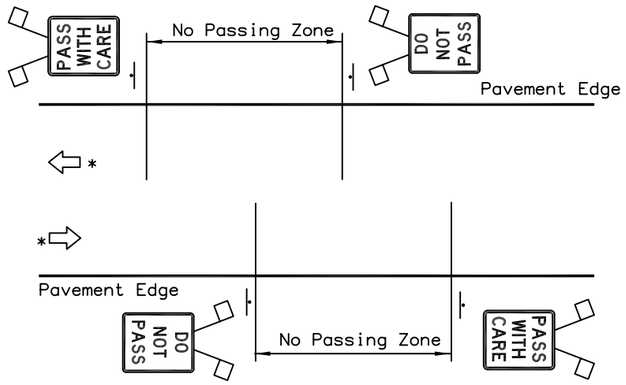
DETAIL A

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



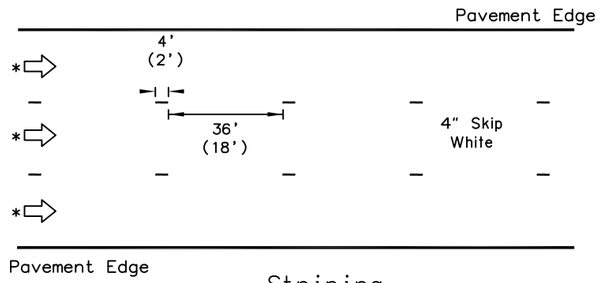
DETAIL B

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



DETAIL C

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



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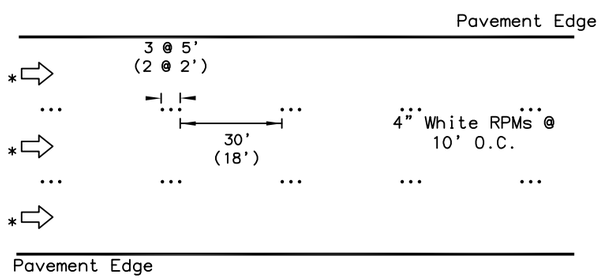


Temporary Raised Pavement Markers

DETAIL D

Multilane one-way road: Lane dividing lines

* Direction of Travel

GENERAL NOTES:

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

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

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

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

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

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

INTERIM PAVEMENT MARKINGS

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

Adoption Date: 02/08/2019

Last Code and Stds. Review By: Date:

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

C-05.20

C-06.00 SHEET 1 of 3

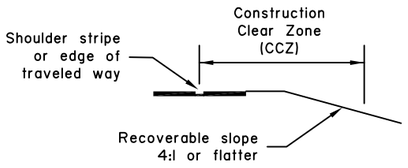


FIGURE 1

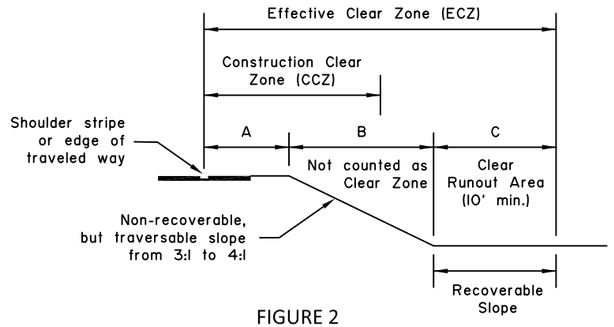


FIGURE 2

Table 1 - Width of Construction Clear Zone (feet)

Hazard	AADT	Posted Speed Limit (MPH)							
		<=30 MPH		35 to 40 MPH		45 to 55 MPH		>=60 MPH	
		6:1 or flatter	5:1 to 4:1	6:1 or flatter	5:1 to 4:1	6:1 or flatter	5:1 to 4:1	6:1 or flatter	5:1 to 4:1
Fill (Fore) & Cut (Back) Slopes	Under 750	5'	5'	6'	8'	8'	12'	12'	16'
	750 - 6,000	6'	10'	8'	12'	14'	18'	20'	26'
	Over 6,000	10'	10'	12'	14'	16'	20'	22'	28'
Fixed Objects	All	15'		30'					

Table 2 - Treatment for Hazards Within Construction Clear Zone

Roadside Condition to be Treated	Category	Treatment
Fill (Fore) Slopes, including trenches	Steeper than 3:1 or water 3 ft. or deeper	Use Table 5 to select from the following two options: 1. Install rigid barrier or guardrail if the condition warrants barrier, or 2. Use drums or Type II barricades if the condition does not warrant barrier.
	3 : 1 to 4 : 1	1. Use drums or Type II barricades if 10 ft. of runout at the bottom of the slope is not clear of obstructions. 2. No traffic control devices are required if 10 ft. of runout at the bottom of the slope is clear of obstructions. 3. If water 3 ft. or deeper is at bottom of slope, use Table 5.
	Flatter than 4 : 1	No traffic control devices are required, except when water 3 ft. or deeper is in construction clear zone use Table 5.
Fixed Objects	All	Install rigid barrier or guardrail if called for by the plans or specifications. Otherwise use SSHC Section 643-3.04.3 - Fixed Objects.

GENERAL NOTES:

1. The "Construction Clear Zone" (CCZ) may be called "Work Zone Clear Zone" or "Clear Zone in Work Zones" in other publications.
2. In the case of conflicts, this Standard Plan has lesser precedence than Section 643 (Traffic Maintenance) of the Standard Specifications for Highway Construction (SSHC).
3. During seasonal shutdown or if construction activiy is scheduled for suspension for 45 days or more, treat hazards within a 30 foot CCZ width or within the permanent design clear zone (CZ) width.
4. These guidelines are not comprehensive and are not intended to limit the use of safety measures.
5. During pilot car operations, keep fixed objects and other hazards, 2 feet or farther, away from the edge of traveled way and delineate with channelizing devices as required by the Engineer.

INSTRUCTIONS FOR USING TABLES 1 THROUGH 5:

Use The following tables to determine how to treat roadside fixed object or slopes (including trenches, berms and moterial stockpiles) in construction clear zones.

TABLE 1: Use to determine whether the hazard in withing the CCZ

TABLE 2: Use to determine the appropriate treatment for hazards within the CCZ. No treatment is required for fixed objects or slopes outside the CCZ.

TABLES 3a and 3b: Use to determine appropriate treatment for pavement edge dropoffs.

TABLE 4: Use to determine barrier flare rates.

TABLE 5: Use to determine whether drums or Type II barricades, or temporary barrier or guardrail, are required on fill slopes or for water hazards.

TABLE 1 NOTES:

1. Measure CCZ from the shoulder stripe. If there is no shoulder stripe, measure from the edge of the traveled way. See Figure 1.
2. If CCZ include or ends on a slope of 3:1 to 4:1, use the Effective Clear Zone (ECZ) that extends beyond the bottom of the slope to proved a clear runout area of 10 foot minimum width. The ECZ width must equal or greater than the CCZ width from Table 1. See Figure 2 and verify that A+C ≥ CCA and C ≥ 10 feet.
3. If a CCZ includes or ends on a slope steeper than 3:1, the top of slope must be delineated by channelizing devices or protected by barrier.
4. The term "fixed objects" is defined in Section 643-1.02 of the SSHC.
5. AADT stands for Average Annual Daily Traffic. Use the higher of the as listed in the plans or the average of June/July/August ADT's, unless otherwise specified by the Engineer.

TABLE 2 NOTES:

1. Eliminate non-traversable slopes (those steeper than 3:1) and fixed objects (as defined in Section 643-1.02 of the SSHC) within the CCZ when practicable. They should only be left in place and treated as treated as shown in this table when elimination is not practicable.
2. Maintain a 2-foot minimum wide lateral buffer space between the edge of traveled way and work areas. This provides an area to install barriers or other delineation by channelizing devices.
3. If necessary to treat multiple hazards on the same road segment (slopes and fixed objects), choose treatments from Table 2 that satisfy the requirements for the most significant of the multiple hazards.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

ROADSIDE SAFETY TREATMENT FOR WORK ZONES

Adopted as an Alaska Standard Plan by: Carolyn H Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 09/15/2022

Last Code and Stds. Review
By: LRG Date: 09/15/2022

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

C-06.00

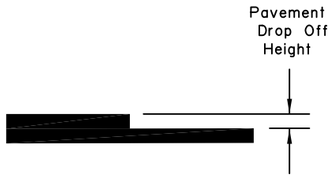


FIGURE 3
Pavement Drop-off Detail

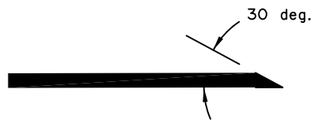


FIGURE 4
Safety Edge Detail

Table 3a - Treatment for Pavement Edge Drop-offs for Posted Speeds > 30 MPH

Nominal Lift Thickness / Height of Pavement Edge Drop-off	Between Active Lanes of traffic moving in same direction	Between Active Lanes of traffic moving in opposing directions	Outside Pavement Edge (if within 3' of traveled way)	Outside Pavement Edge if more than 3' from traveled way and within the CCZ	Across Active Lane, and Entrance and Exit Ramps
0 to 1.0"	No Edge Treatment or Signage Required				
More than 1.0" to 2.0"	**UNEVEN LANE** Signs		**LOW SHOULDER** Signs		Taper Drop-off at slope of 15H:1V or flatter Use BUMP Sign
More than 2.0" to 3.0"	**UNEVEN LANES** Signs - Use Channelizing Devices or Safety Edge	**UNEVEN LANES** Signs - Use Channelizing Devices	**LOW SHOULDER** Signs - Use Channelizing Devices - Consider Safety Edge	**LOW SHOULDER** Signs	
More than 3.0" to 6.0"	**UNEVEN LANES** Signs - Use Channelizing Devices and Use Safety Edge	**UNEVEN LANES** Signs - Use Channelizing Devices	**SHOULDER DROP OFF** Signs - Use Channelizing Devices and Safety Edge; or Use Barrier	**SHOULDER DROP OFF** Signs - Use Channelizing Devices or Barrier	
More than 6"	**Prohibited**		**Barrier** - Installed on traffic side of drop-off	**Channelizing Devices** or **Barrier** according to Table 5	

Table 3b - Sign Numbers

Legend	Number	ATM * Ref.
UNEVEN LANES	W8-11	6F.45
LOW SHOULDER	W8-9	6F.44
SHOULDER DROP OFF (Symbol)	W8-17	6F.44
SHOULDER DROP OFF (Plaque)	W8-17P	6F.44
BUMP	W8-1	2C.28

* ATM = Alaska Traffic Manual

Table 4 - Barrier Flare Rates

Speed (mph)	Flare Rate	
	Rigid	Semi-Rigid
70	20:1	15:1
60	18:1	14:1
55	16:1	12:1
50	14:1	11:1
45	12:1	10:1
40	10:1	8:1
30	8:1	7:1

TABLE 3 NOTES:

1. This table applies to pavement edge drop-offs that are adjacent to traffic and left after the pavement shift ends and for posted speeds > 30 mph. Use engineering judgment for edge treatment for posted speeds ≤30 mph.
2. Use interim pavement markings and signs as required according to Standard Plan C-05 (for all conditions).
3. A Safety Edge is a formed pavement edge taper sloped at approximately 30°, but not more than 35° from horizontal.
4. Use a Safety Edge for longitudinal or diagonal pavement edge drop-offs more than 2 inches within a traveled lane. See Figure 3. Use a Safety Edge on longitudinal joints between lanes as required by Table 3a.
5. The "Across Active Lane, and Entrance and Exit Ramps" column applies to any location where motorists will cross pavement drop-offs (includes transverse construction joints) at an acute angle (45° or more). Taper may be reduced to 6:1 at posted speeds of 30 mph or less.
6. Signage applies to all posted speed for edge drop-offs as shown in Table 3a. For information on signs and locations, see SSHC Section 643-3.04 and the Alaska Traffic Manual (ATM). Signs should be place at the beginning and end points of each paved segment, and in locations between as specified. Also, see Table 3b.
7. "Channelizing Devices" means drums with steady-burn lights, candle, or cones.
8. Treatment for pavement edge drop-offs are in addition to Treatment for Hazards within Construction Clear Zones (CCZs) (i.e. fixed obstacle or slope protection may also be required).

BARRIER TERMINATION AND TABLE 4 NOTES:

1. Terminate portable rigid barrier (concrete or metal) with one of the following methods:
   a) An NCHRP 350 or MASH TL-3 approved end treatment or crash cushion.
   b) An NCHRP 350 or MASH TL-3 approved buried-in-backslope treatment
   c) A Thrie-Beam transition according to Std. Plan G-32 (except attached to a rigid barrier instead of a bridge rail) and terminated with a MASH TL-3 end treatment.
   d) Terminate outside the CCZ by flaring barriers away from the roadway at the rate shown in Table 4 for rigid barriers (maximum 10:1 cross slope in front of the barrier).
   e) Sloped ends may be used to terminate barriers within the CZ when the regulatory (black on white sign) speed limit is 30 mph or below. For speeds more than 30 mph, the Engineer may approve sloped ends if they determine NCHRP 350 or MASH compliant end treatments are impracticable. See Std. Plan G-46 for concrete barrier sloped ends.
2. Terminate temporary W-Beam guardrail with one of the following methods:
   a. With a MASH TL-3 approved end treatment
   b. By burying it in a backslope according to Std. Plan G-16
   c. By flaring the guardrail away from the road at the rate shown in Table 4 for semi-rigid barriers (maximum 10:1 cross slope in from of the guardrail).
   d. Terminate outside the CZ.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

ROADSIDE SAFETY TREATMENT FOR WORK ZONES

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

Adoption Date: 09/15/2022

Last Code and Stds. Review
By: LRG Date: 09/15/2022

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

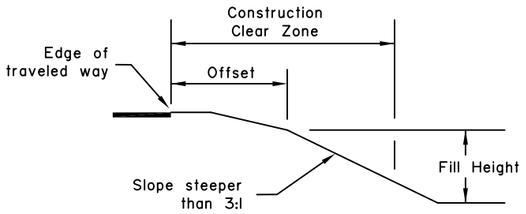


FIGURE 5

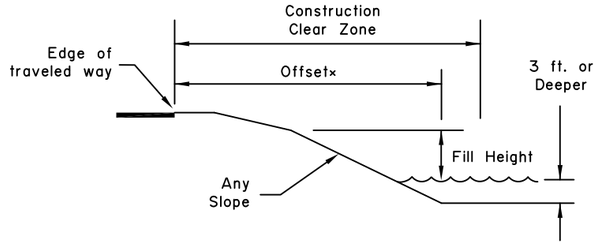


FIGURE 6

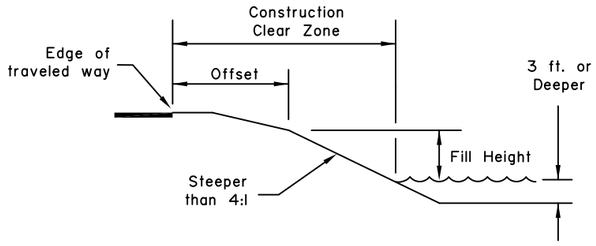


FIGURE 7

Table 5 - Minimum Fill Height at which Temporary Barrier Is Waranted

Seasonal Traffic Volume - ADT

Posted WZ Speed Limit	Duration (# days)	Offset (ft)	0-750	751-1500			1501-6000				6001-15000				15001+			
			All Slopes/ Water Condition	slope		Water	slope			Water	slope			Water	slope			Water
				2.9:1 to 1.1:1	1:1 to Vert.		2.9:1 to 2.1:1	2:1-1.1:1	1:1-Vert.		2.9:1 to 2.1:1	2:1-1.1:1	1:1-Vert.		2.9:1 to 2.1:1	2:1-1.1:1	1:1-Vert.	
30 MPH and lower	4-30	5-10															11'	11'
		3-5											11'	11'				
		0-3																
	31-100	5-10																
		3-5							11'	11'			11'	11'		35'	11'	11'
		0-3										35'				31'		
	101+	5-10														35'	11'	11'
		3-5							11'	11'		35'	11'	11'		29'		
		0-3			11'	11'						31'				17'	8'	8'
35 to 45 MPH	4-30	6-12															10'	10'
		3-6											10'	10'				
		0-3														29'		
	31-100	6-12														29'	10'	10'
		3-6							10'	10'		29'	10'	10'				
		0-3														19'	9'	9'
	101+	6-12										29'	10'	10'		27'	10'	10'
		3-6			10'	10'			10'	10'		28'				12'	7'	7'
		0-3						29'				18'	9'	9'		7'	6'	6'
45 to 55 MPH	4-30	9-18															8'	8'
		3-9											8'	8'		13'		
		0-3																
	31-100	9-18														13'	8'	8'
		3-9							8'	8'		13'	8'	8'			7'	7'
		0-3						13'								7'	6'	6'
	101+	9-18										13'	8'	8'		13'	7'	7'
		3-9			8'	8'			8'	8'		12'	7'	7'	37'	6'	5'	5'
		0-3						13'				7'	6'	6'	23'	5'	3'	3'
60 MPH and above	4-30	13-26															6'	6'
		3-13											6'	6'		10'		
		0-3										10'						
	31-100	13-26														10'	6'	6'
		3-13							6'	6'		10'	6'	6'				
		0-3						10'							40'	6'	5'	5'
	101+	13-26														10'	6'	6'
		3-13			6'	6'		10'	6'	6'		10'	6'	6'	30'	6'	4'	4'
		0-3									34'	6'	5'	5'	10'	3'	1'	1'

TABLE 5 NOTES:

1. Use this table for fill slopes steeper than 3:1 or water hazards that start within the Construction Clear Zone (CCZ). See Figures 5, 6, and 7.
2. Near Lane AADT, as used in this table, means the higher of the AADT listed in the plans or the seasonal Average Daily Traffic (ADT) for June, July, and August in the lane nearest the slope or water hazard during the planned construction period. Assume an even distribution of traffic across lanes - i.e. if there is 6000 one-way AADT on three lanes, use 2000 AADT in each lane.
3. Duration is the estimated number of days traffic will be exposed to the fill (fore) slope or water hazard.
4. To use Table 5, fine the cell that corresponds to the speed limit, duration, offset, traffic volume, and the presence of a slope or water hazard.
   a. If the cell is unshaded, a Temporary Barrier is required when the fill height equals or exceeds the height (in feet) shown in the cell.
   b. If the cell is shaded or fill height is less than the height shown in the cell, use drums or Type II barricades.
5. A water hazard is defined as:
   a. Water 3 feet or deeper within the CCZ, or
   b. Where a slope steeper than 4:1 starts within the CCZ and leads to water 3 feet or deeper.
6. Consider water depth to be the highest level anticipated during the duration period.
7. If both a water hazard and a slope steeper than 3:1 are present, install Temporary Barrier if warranted for either condition.
8. Temporary Barrier is rigid barrier (concrete or metal) or guardrail meeting NCHRP or MASH TL-3, or higher.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

ROADSIDE SAFETY TREATMENT FOR WORK ZONES

Adopted as an Alaska Standard Plan by: Carolyn H Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

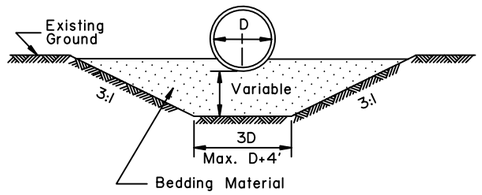
Adoption Date: 09/15/2022

Last Code and Stds. Review
By: LRG Date: 09/15/2022

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

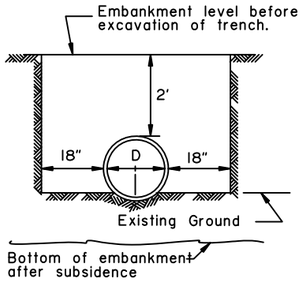
D-01.02

SHEET | of |



TYPE "A"
FOUNDATION STABILIZATION

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



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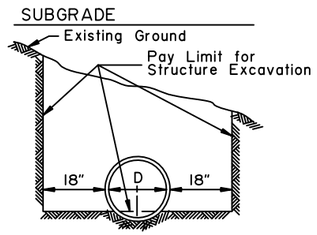

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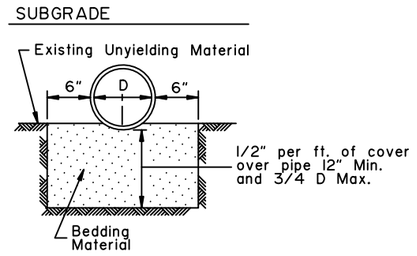
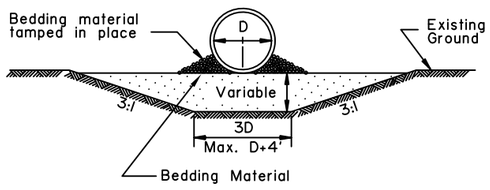


TYPE "D"
ROCK OR UNYIELDING MATERIAL

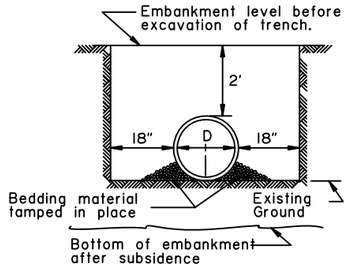
GENERAL NOTES:

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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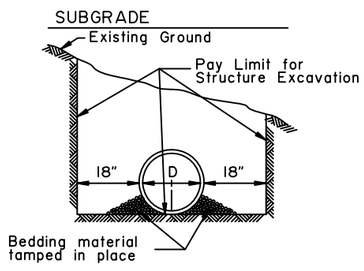

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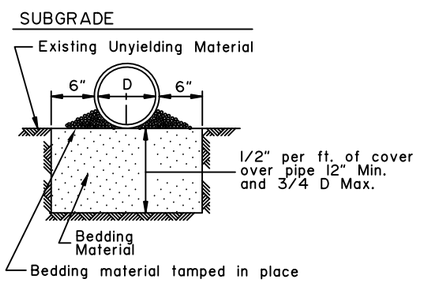
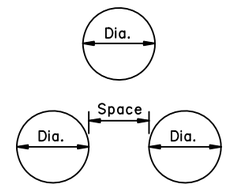


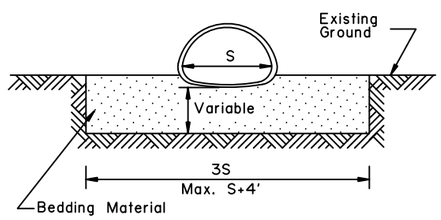
'ALTERNATE' TYPE "D"
ROCK OR UNYIELDING MATERIAL

D = Nominal Pipe Diameter



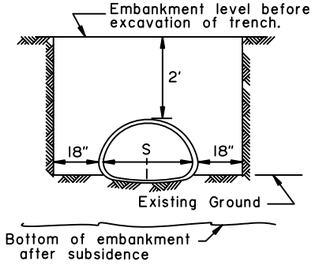
MULTIPLE INSTALLATIONS	
Dia.	Minimum Space Between Pipes
0" - 42"	24"
48" & Over	1/2 Dia. of pipe or 3', whichever is less.

CULVERT PIPE



TYPE "A"
FOUNDATION STABILIZATION

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



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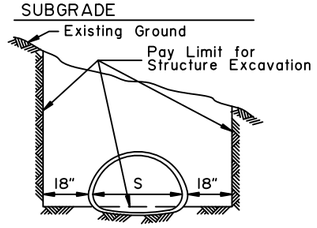

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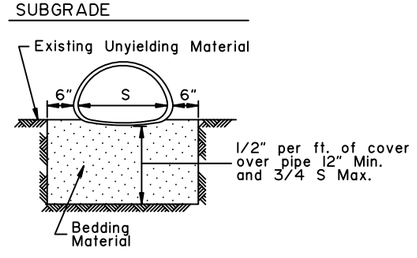
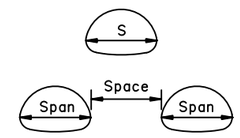


TYPE "D"
ROCK OR UNYIELDING MATERIAL

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

D-01.02

D-04.22

CORRUGATED CIRCULAR ALUMINUM PIPE

CORRUGATED ALUMINUM PIPE-ARCH

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.

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

D-04.22

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

GENERAL NOTES

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

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

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

D-04.22

ALUMINUM SPIRAL RIB PIPE

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

*¾ x ¾ x 7½ in. Corrugations

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

*¾ x ¾ x 7½ in. Corrugations

STEEL SPIRAL RIB PIPE

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

*¾ x ¾ x 7½ in. Corrugations.

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

*¾ x ¾ x 7½ in. Corrugations

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PIPE AND ARCH TABLES

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

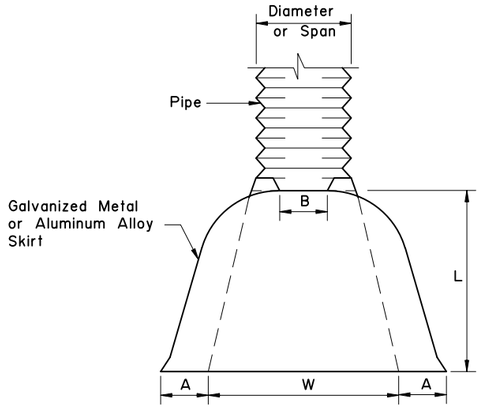
Adoption Date: 7/17/2020

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

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

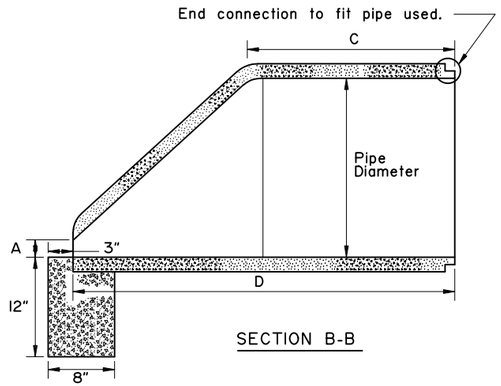
D-06.10

SHEET 1 of 3



PLAN

ROUND AND PIPE ARCH

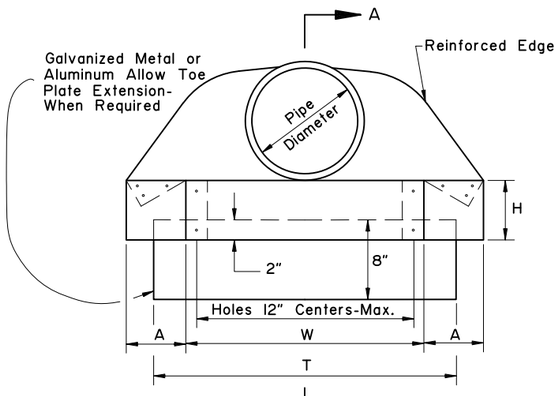


SECTION B-B

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

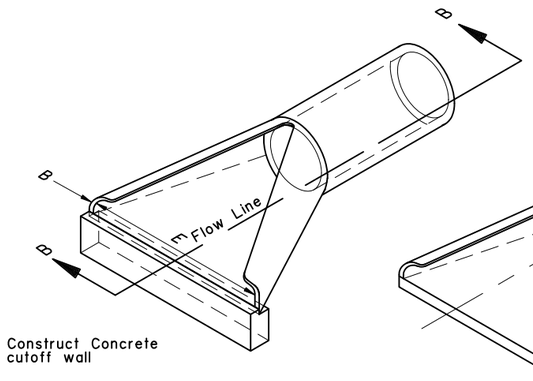
ROUND PIPE									
Pipe Diam. Inches	Thickness For Aluminum	Thk. for Galv. Metal	Dimension Inches A 1" Tol.	B Max.	H 1" Tol.	L 1 1/2" Tol.	W 2" Tol.	T 2" Tol.	Skirt	Approx. Slope
12"	0.060	0.064	6"	6"	6"	21"	24"	34"	1 Pc.	2 1/2
15"	0.060	0.064	7"	8"	6"	26"	30"	40"	1 Pc.	2 1/2
18"	0.060	0.064	8"	10"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

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

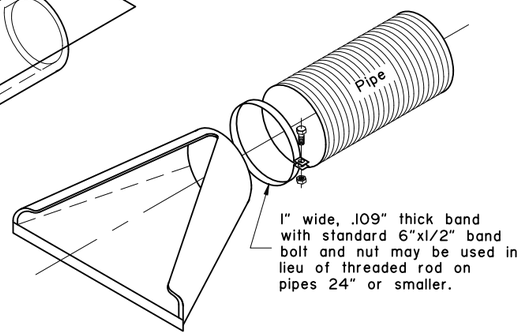


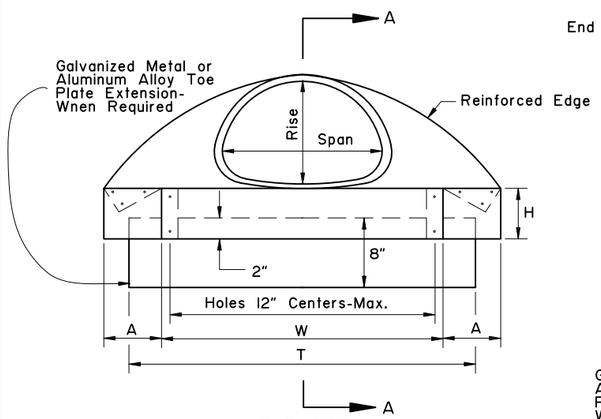
ELEVATION

ROUND PIPE



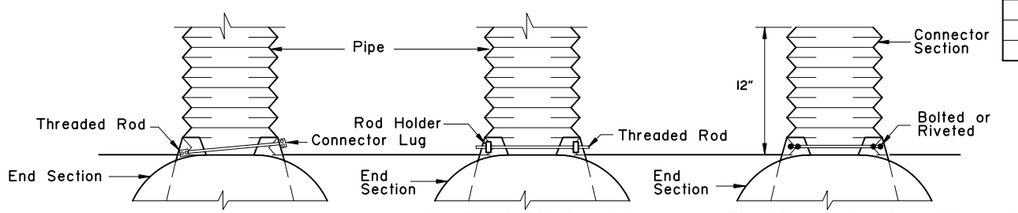
PRECAST CONCRETE END SECTION





ELEVATION

PIPE ARCH

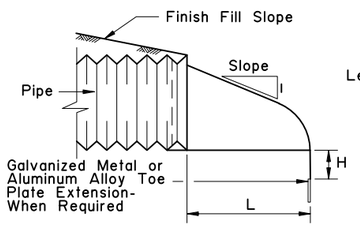


For 12" thru 24" Round Pipe with Annular Corrugations

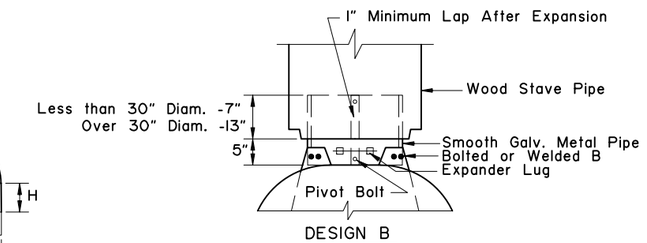
For 30" & 36" Round Pipe and 18"x11" thru 58"x36" Pipe Arch with Annular Corrugations.

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

DESIGN A



SECTION A-A



DESIGN B

METAL END SECTION CONNECTED TO WOOD STAVE PIPE

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

Adopted as an Alaska Standard Plan by:

Kenneth J. Fisher, P.E.
Chief Engineer

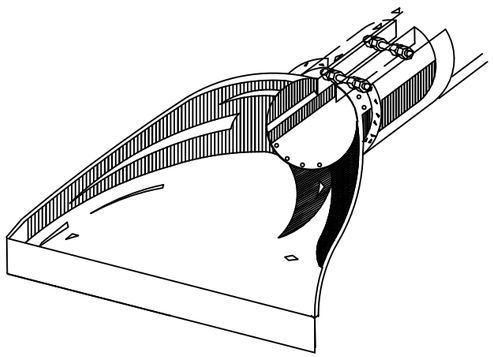
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

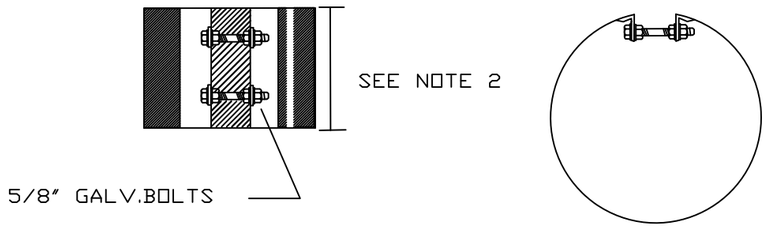
Next Code and Standards Review date: 02/08/2029

D-06.10

D-06.10 SHEET 2 of 3



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



GENERAL NOTES

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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

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

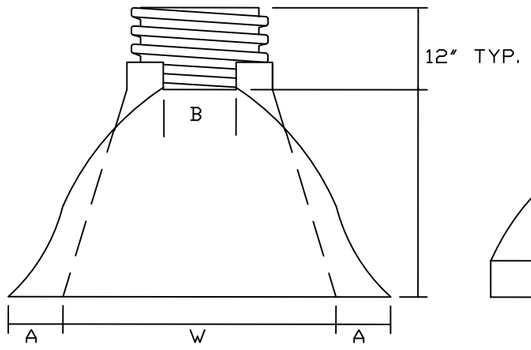
Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

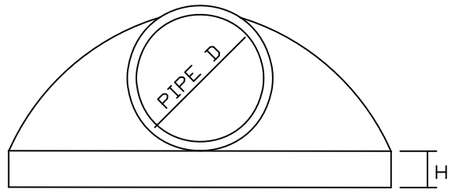
Next Code and Standards Review date: 02/08/2029

D-06.10

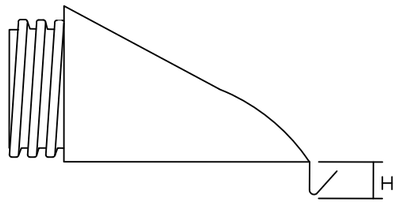
D-06.10 SHEET 3 of 3



TOP VIEW



END VIEW



SIDE VIEW

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

PLASTIC END SECTION FOR CORRUGATED PLASTIC PIPE

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT END SECTIONS

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

Adoption Date: 02/08/2019

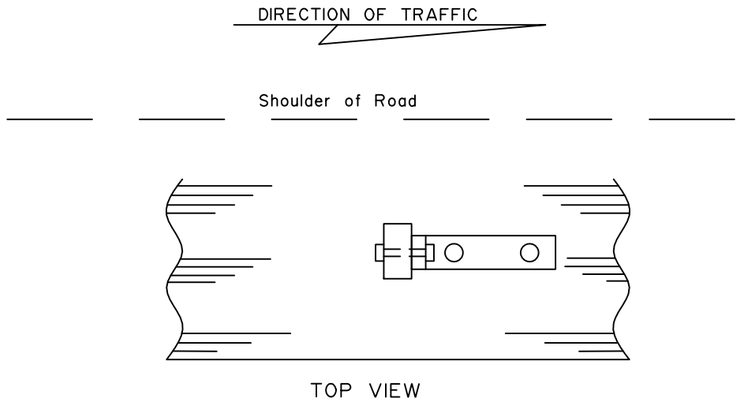
Last Code and Stds. Review
By: Date:

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

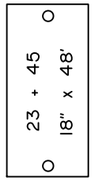
D-06.10

D-09.00

SHEET | of |



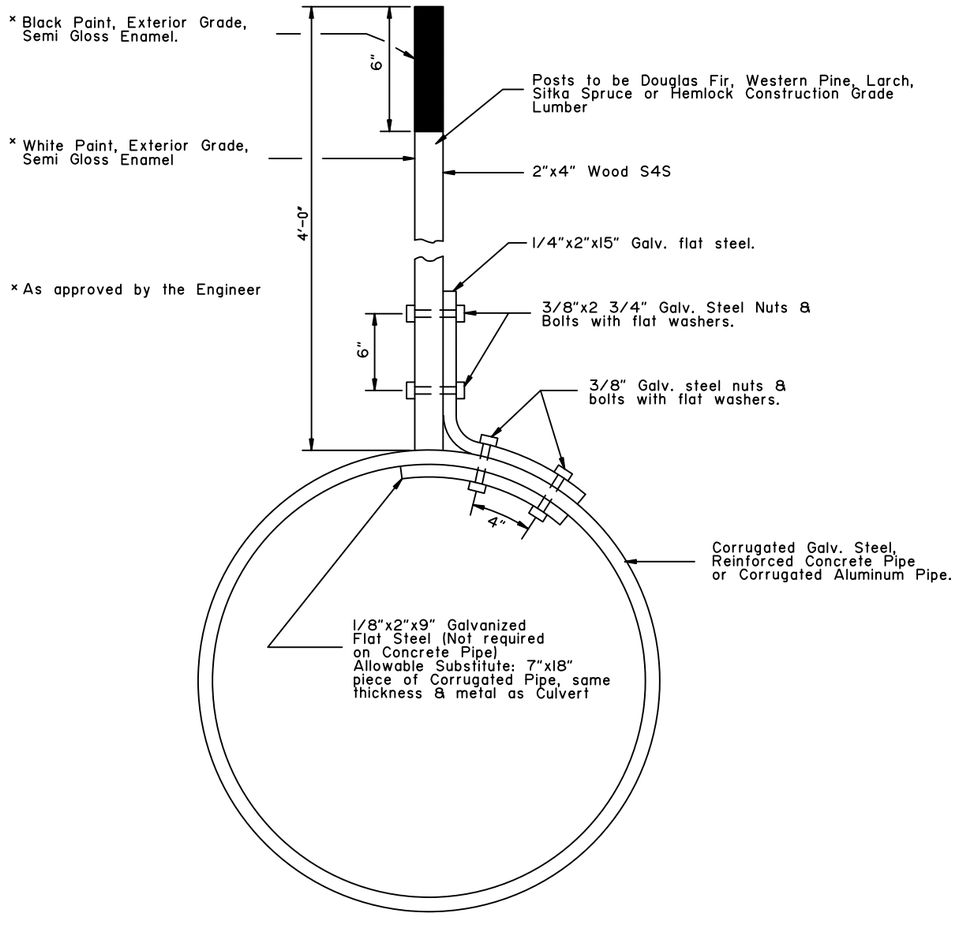
TOP VIEW



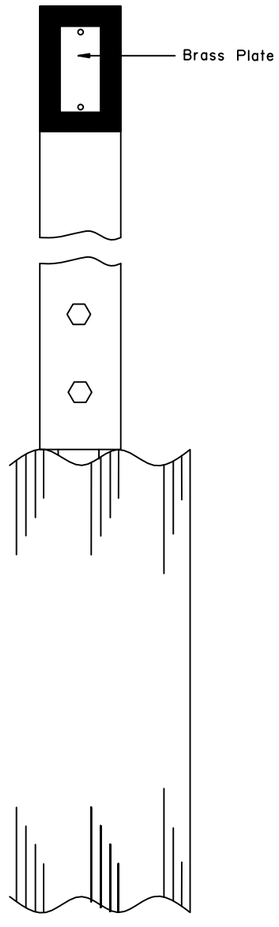
Sta. and size of Culvert to be stamped into a 2"x4"x0.064" thick brass plate, fastened, with No. 8 round head brass screws, to the marker post as shown. Plate to be on side of post facing traffic.

GENERAL NOTES:

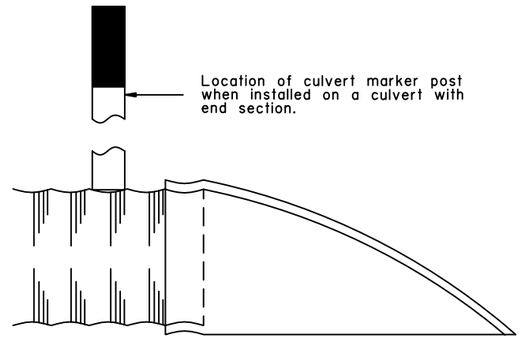
1. Culvert marker post shall be installed with galvanized steel hardware meeting the following requirements: Galvanizing for nuts and washers shall meet the requirements of ASTM A-153, Class C. Galvanizing for steel mounting supports shall meet the requirements of MIL-P-26915A, or ASTM A-153, Class C.



END VIEW



SIDE VIEW



END SECTION SIDE VIEW

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CULVERT MARKER POST

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

Adoption Date: 02/08/2019

Last Code and Stds. Review
By: Date:

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

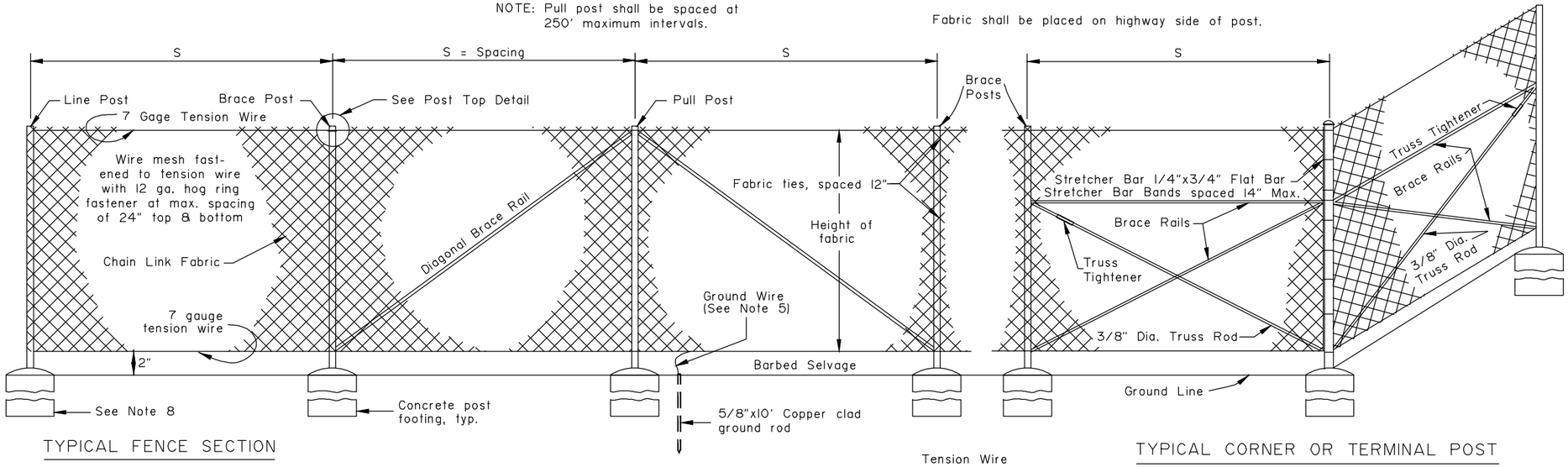
D-09.00

F-01.04

SHEET | of |

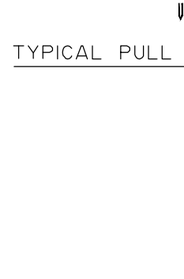
NOTE: Pull post shall be spaced at 250' maximum intervals.

Fabric shall be placed on highway side of post.

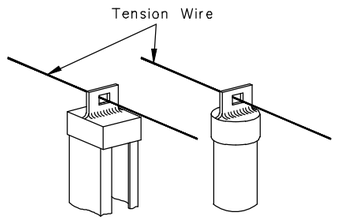


TYPICAL FENCE SECTION

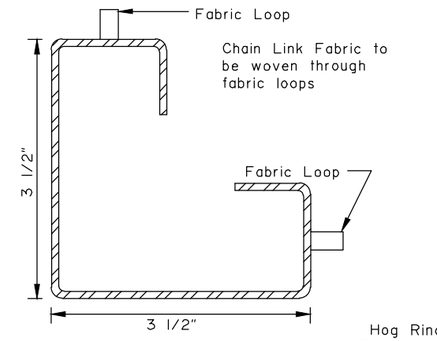
TYPICAL CORNER OR TERMINAL POST



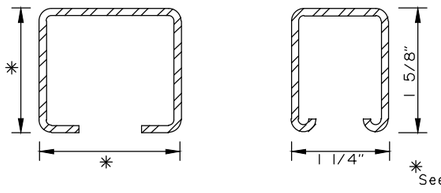
TYPICAL PULL POST



LINE POST TOPS

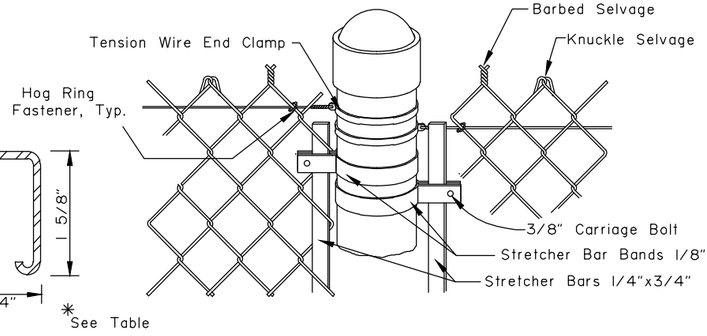


ROLL FORMED POST

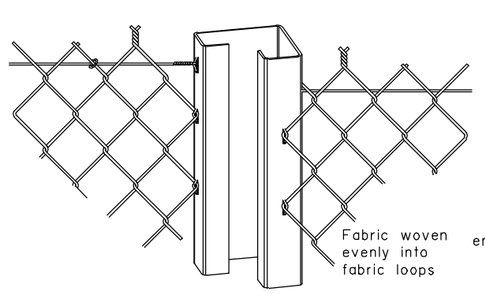


C POST

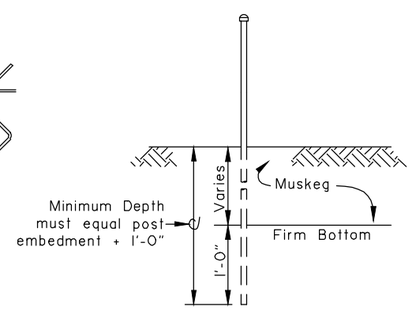
ROLL FORMED BRACE



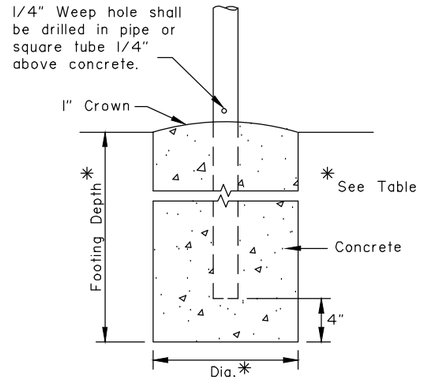
PIPE STYLE POST TOP



ROLL FORMED POST TOP



POST SETTING IN MUSKEG AREAS

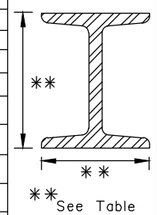


CONCRETE POST FOOTING

GENERAL NOTES:

1. Use equal pole spacing (S). Maximum pole spacing is 10 feet unless directed otherwise by the Engineer.
2. Securely fasten post tops to post.
3. Securely fasten brace rails and truss rods to post with brace bands.
4. Provide truss rods with a tensioning adjusting mechanism.
5. Attach ground wire to fence fabric with a split bolt.
6. Stretch fabric to a smooth uniform appearance.
7. Details shown indicate general design and dimensions may vary among manufacturers.
8. Set line, pull, corner, and terminal posts in concrete footings unless in muskeg or shown otherwise in the plans.

FABRIC HEIGHT	POST														TOP OR BRACE RAIL						ALTERNATE POST	
	END-CORNER-PULL								LINE-BRACE						PIPE		ROLL FORMED		H POST		LINE-BRACE H POST	
	PIPE		SQUARE TUBE		ROLL FORMED		FOOTING		PIPE		C POST		FOOTING									
	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.	DEPTH	DIA.	SIZE	WT/FT.	SIZE	WT/FT.	DEPTH	DIA.	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.	SIZE	WT/FT.
3'	2"	3.65 #	2" x 2"	4.31 #	3 1/2"x3 1/2"	4.84 #	40"	10"	1 1/2"	2.72 #	1 7/8"xl 5/8"	2.28 #	28"	10"	1 1/4"	2.27 #	1 5/8"	1.35 #	1 1/2"x 1 5/16"	2.27 #	1 7/8"xl 5/8"	2.72 #
4'	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
5'	2"	3.65 #	2" x 2"	4.31 #	3 1/2"x3 1/2"	4.84 #	40"	10"	1 1/2"	2.72 #	1 7/8"xl 5/8"	2.28 #	28"	10"	"	"	"	"	"	"	1 7/8"xl 5/8"	2.72 #
6'	2 1/2"	5.79 #	2 1/2"x2 1/2"	5.59 #	3 1/2"x3 1/2"	4.84 #	48"	15"	2"	3.65 #	2 1/4"xl 45/64"	2.64 #	40"	12"	"	"	"	"	"	"	2 1/4"x2"	4.1 #
7'	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"	"
8'	2 1/2"	5.79 #	2 1/2"x2 1/2"	5.59 #	3 1/2"x3 1/2"	4.84 #	48"	15"	2"	3.65 #	2 1/4"xl 45/64"	2.64 #	40"	12"	"	"	"	"	"	"	2 1/4"x2"	4.1 #



H POST

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CHAIN LINK FENCE

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

Adoption Date: 7/17/2020

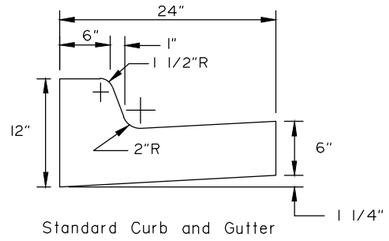
Last Code and Stds. Review
By: KLH Date: 7/8/2020

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

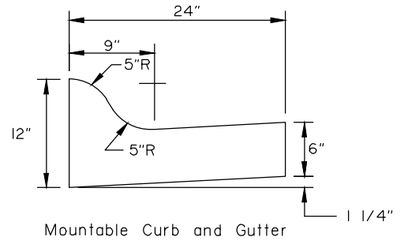
F-01.04

I-20.20

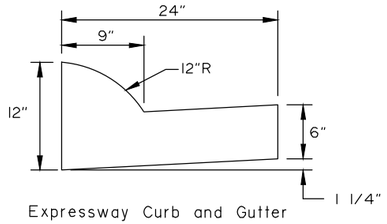
SHEET | of |



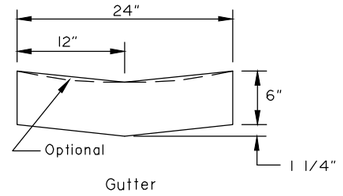
Standard Curb and Gutter



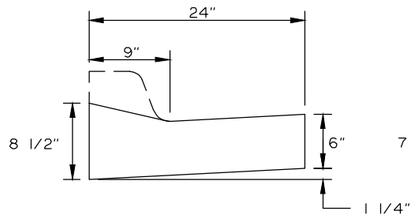
Mountable Curb and Gutter



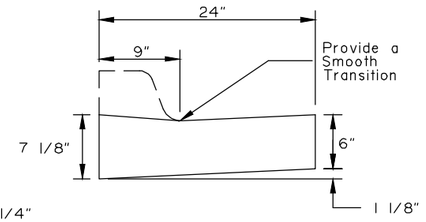
Expressway Curb and Gutter



Gutter

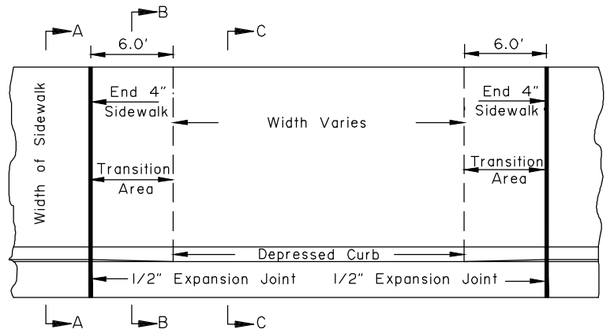


Depressed Curb and Gutter

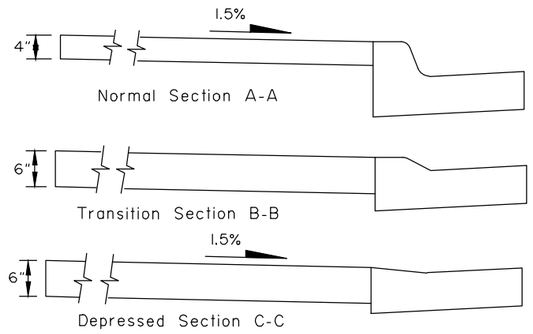


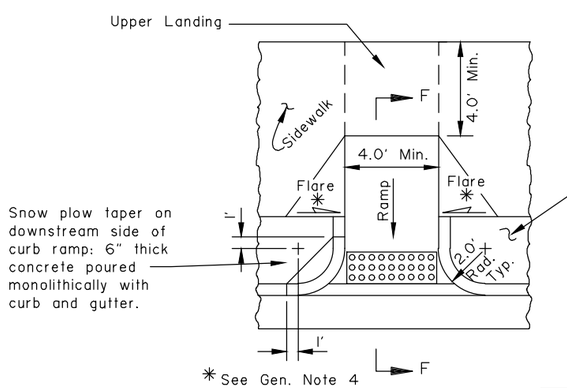
ADA Curb and Gutter

CURB and GUTTER DETAILS

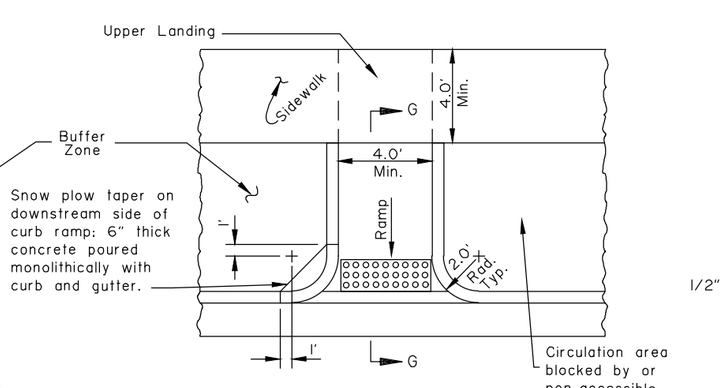


DRIVEWAY CURB CUT DETAILS



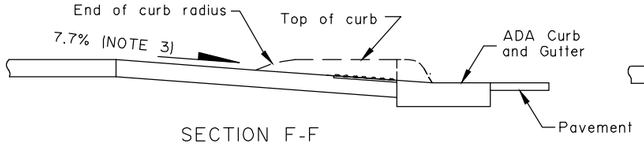


PLAN

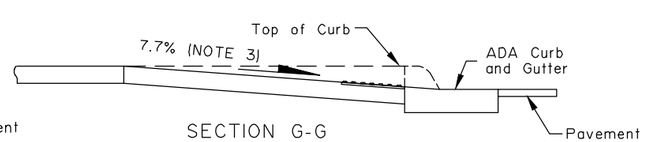


PLAN

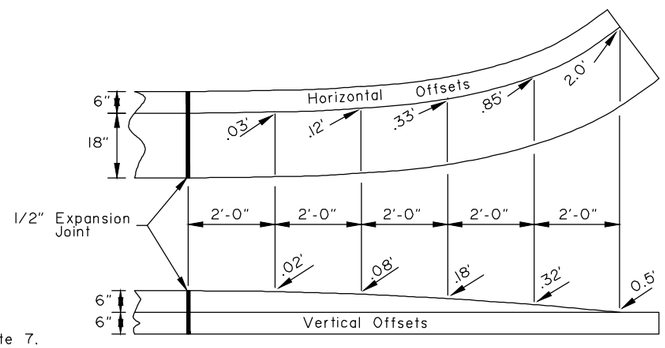
= Detectable Warning Tile (see Note 8)



SECTION F-F
Returned Curb Ramp with
Sidewalk for Pedestrians



SECTION G-G
Returned Curb Ramp
for Pedestrians



CURB and GUTTER
TERMINATION TRANSITIONS

Note: Drawing not to scale

CONSTRUCTION NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CURB CUT
CURB & GUTTER
AND CURB RAMP DETAILS

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

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

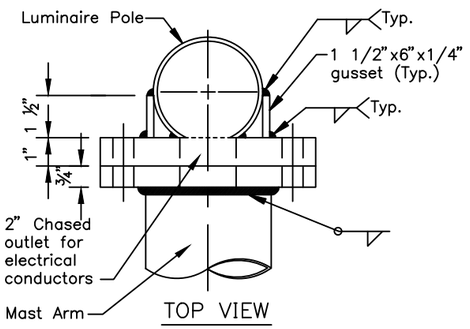
Last Code and Stds. Review
By: KLH Date: 7/8/2020

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

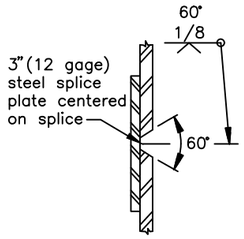
I-20.20

L-03.11

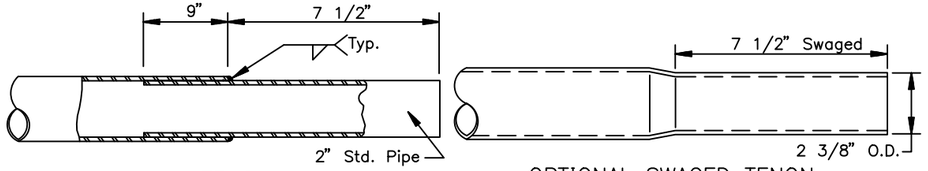
SHEET 1 of 1



TOP VIEW



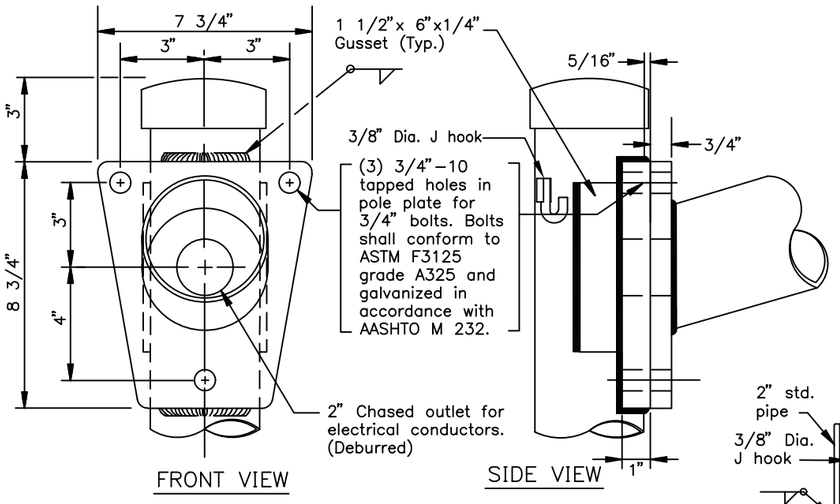
SPLICE DETAILS



TENON

OPTIONAL SWAGED TENON

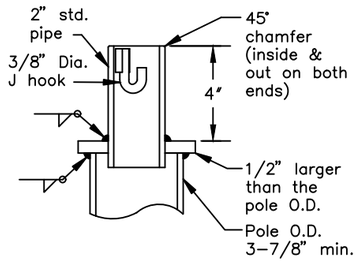
END OF MAST ARM DETAIL



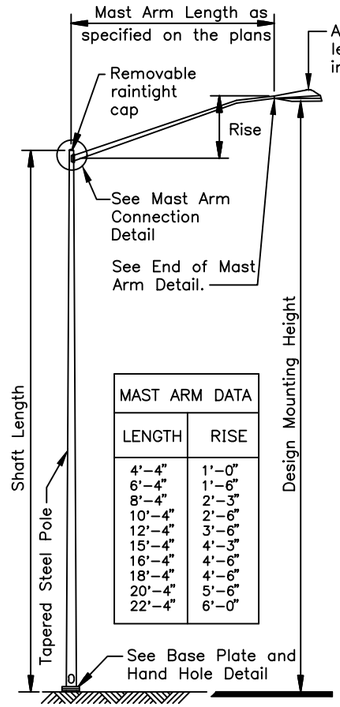
FRONT VIEW

SIDE VIEW

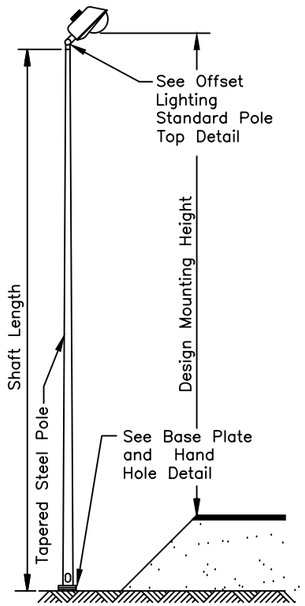
MAST ARM CONNECTION DETAIL



OFFSET LIGHTING STANDARD POLE TOP DETAIL
(CUTAWAY FOR CLARITY)



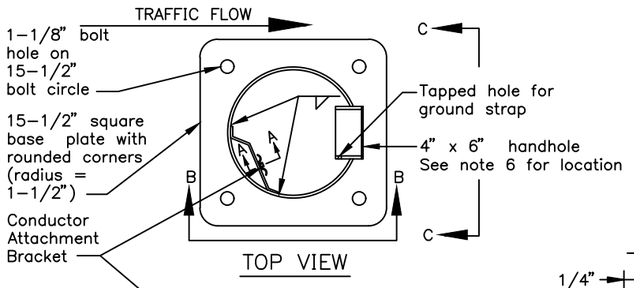
ELECTROLIER ELEVATION
COBRA HEAD



ELECTROLIER ELEVATION
OFFSET

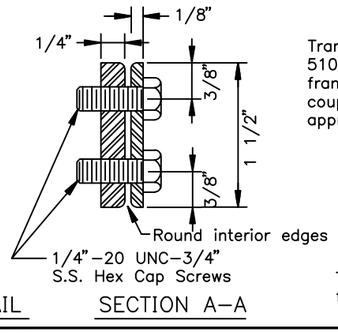
GENERAL NOTES

1. Design and fabricate all shafts to support a mast arm 22' long with luminaire. Assume each offset fixture weighs 60 lbs. and has an effective projected area of 2.8 SF. Assume each Cobra head weighs 55 lbs. and has an effective projected area of 1.2 square feet. With this dead load, limit the angular rotation of the pole top to 1° 40' maximum.
2. Weld size to be determined by manufacturer.
3. Mounting height, if specified in the plans, refers to the height of luminaire above the finished roadway surface. Adjust each pole's shaft length to maintain this difference in elevation whenever slope and/or offset varies.
4. Minimum outside diameter at the top of pole equals 3–7/8". Pole diameter shall taper uniformly from the top of pole to the base plate, with a maximum taper rate of 0.15" per foot.
5. Mast arm rise may vary ±0.5ft from the values listed in the table.
6. Locate the handhole at 90 degrees to the mast arm on the side of pole downstream from traffic flow.
7. Furnish all poles with a j–hook to support the illumination tap conductors. Furnish all mast arm poles with a removable raintight cap.
8. Frangible couplings shall be NCHRP 350, Test Level 3 compliant and installed in accordance with the manufacturers written instructions. A MASH compliant device does not exist at this time. See SPDR for more info.
9. Frangible couplings shall be installed into flush mounted female anchors so that no fixed hardware extends above the foundation top.
10. Install all components of the breakaway support system in accordance with the manufacturer's written instructions.
11. Fabricate the skirt from four pieces of 0.06" thick 3003 h–14 aluminum sheet. Bend each plate to provide corners with a 3/4" radius. Assemble the skirt with #10 x 3/8" self tapping stainless screws or pop rivets. The assembled skirt measures about 12–7/8" square.

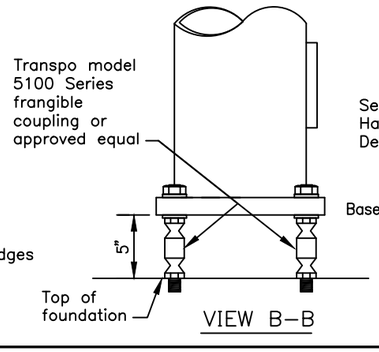


TOP VIEW

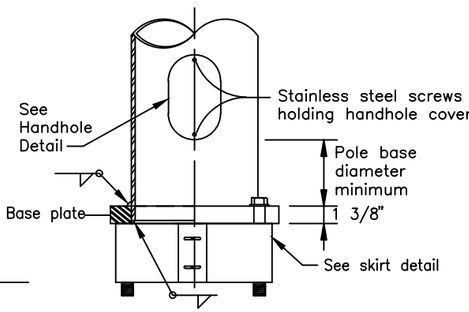
BASE PLATE AND HAND HOLE DETAIL



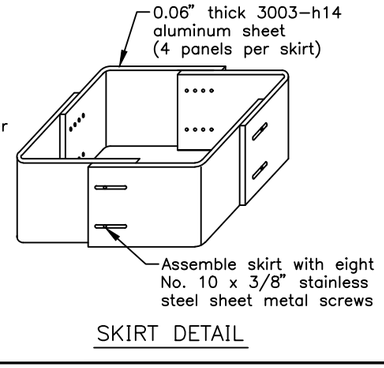
SECTION A–A



VIEW B–B



VIEW C–C



SKIRT DETAIL

State of Alaska DOT&PF
ALASKA STANDARD PLAN

LIGHTING STANDARDS

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

Adoption Date: 7/17/2020

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

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

L–03.11

L-23.03

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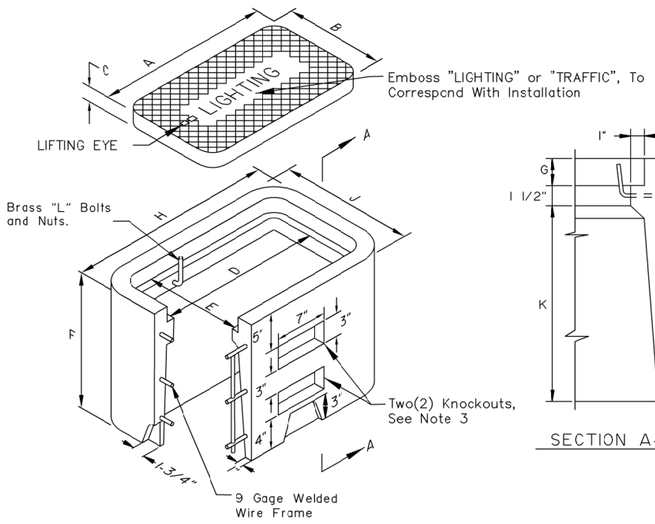
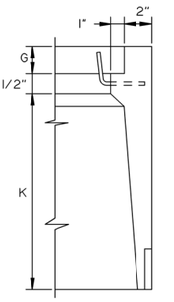
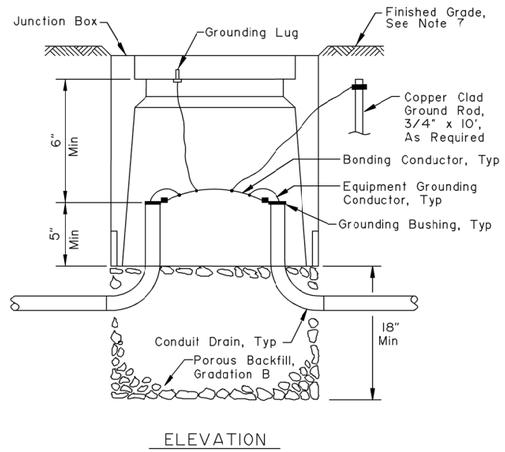


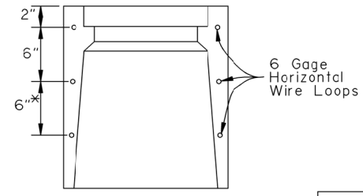
ISOMETRIC



SECTION A-A



ELEVATION



ALTERNATE REINFORCING

*Type IA Only

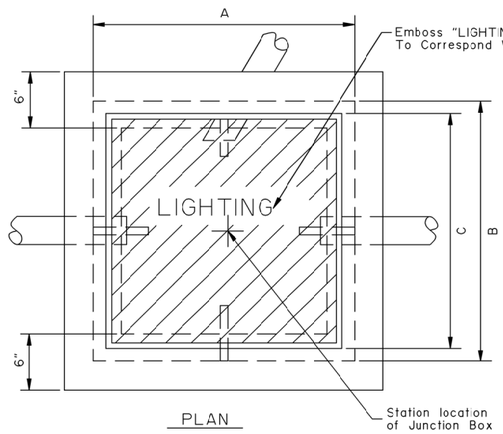
	DIMENSIONS (IN)	
	TYPE I	TYPE IA
A	15	22 3/4
B	10	13 1/4
C	1 3/4	2
D	13 1/2	21 1/4
E	8 1/2	11 3/4
F	12	18
G	1 3/4	2
H	19 1/2	27 1/4
J	14 1/2	17 3/4
K	8 3/4	14 1/2

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

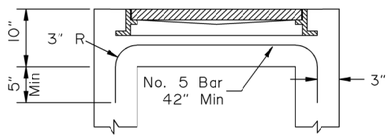
TYPE I & IA JUNCTION BOX

GENERAL NOTES:

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



PLAN



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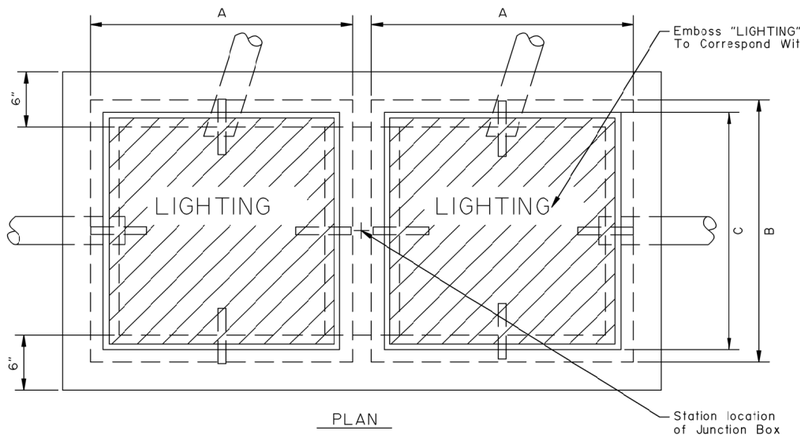
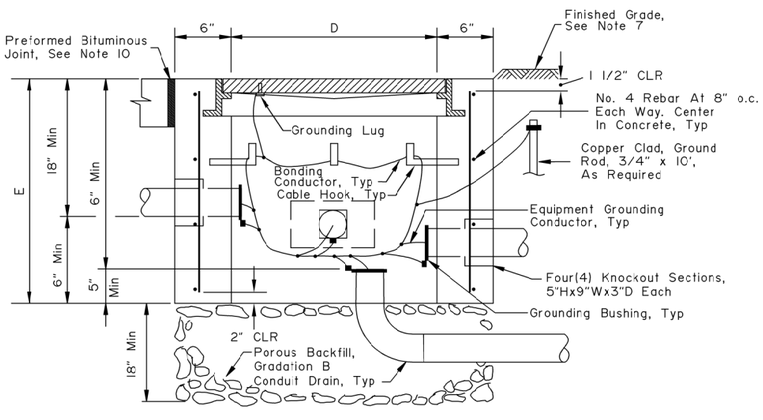
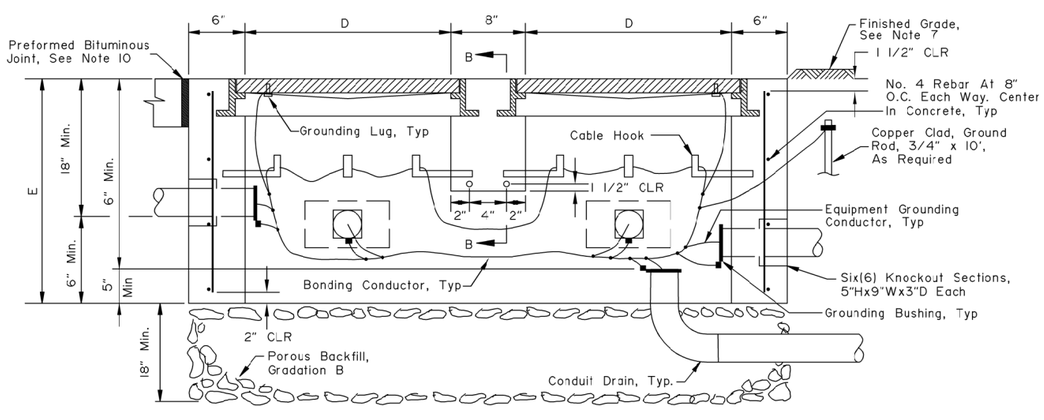


PLAN



ELEVATION

TYPE II JUNCTION BOX



ELEVATION

TYPE III & IV JUNCTION BOX

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

JUNCTION BOXES FOR ELECTROLIER & TRAFFIC SIGNALS

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

Adoption Date: 09/15/2022

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

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

L-23.03

L-25.01

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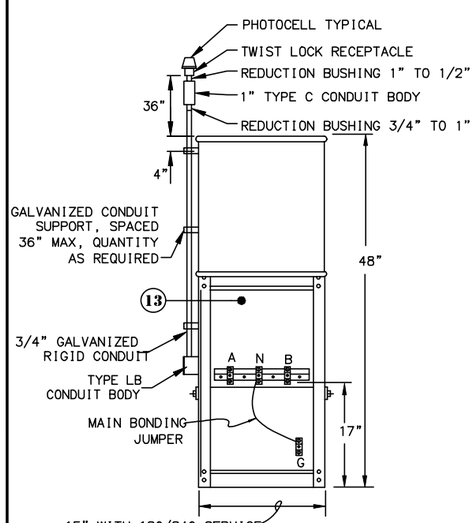
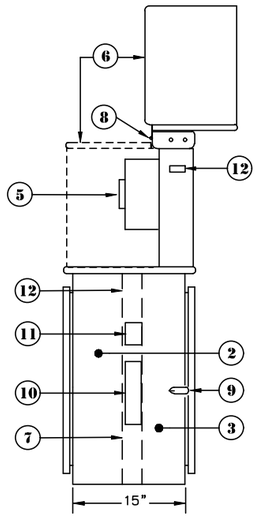
EQUIPMENT LEGEND/DESCRIPTION

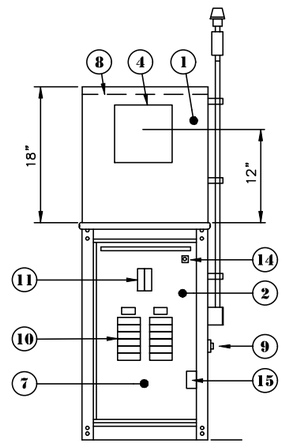
1. METERING SECTION
2. LOAD SECTION
3. UTILITY CONNECTION AND TEST BLOCK SECTION
4. METER READING WINDOW (8"X8")
5. METER SOCKET W/BYPASS & SAFETY SOCKET
6. LIFT AWAY METER SECTION COVER
7. DEADFRONT
8. STAINLESS STEEL PIN HINGE
9. PADLOCKING PROVISIONS
10. DISTRIBUTION PANEL
11. MAIN CIRCUIT BREAKER
12. ACCESSORY EQUIPMENT MOUNTING AREA FOR CONTACTOR, SELECTOR SWITCHES, TERMINAL STRIPS, AND SO ON.
13. SERVICE PULL SECTION
14. SELECTOR SWITCH
15. ENCLOSURE HEATER



REAR VIEW
(W/ DOOR REMOVED)

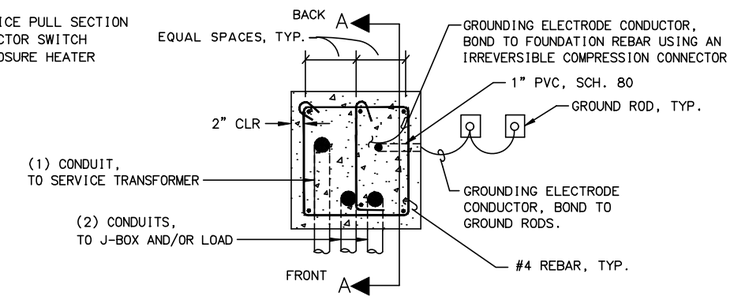


RIGHT SIDE VIEW
(W/ METER SECTION OPEN)

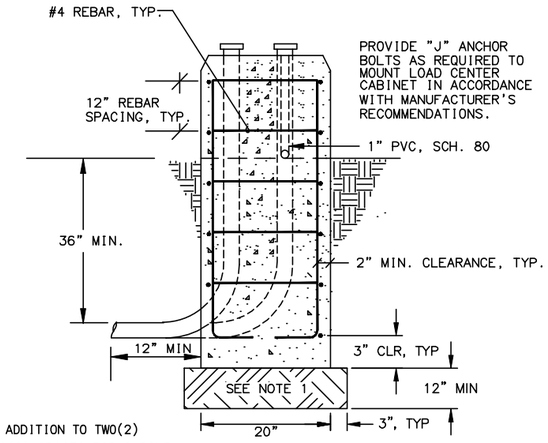


FRONT VIEW
(W/ DOOR REMOVED)

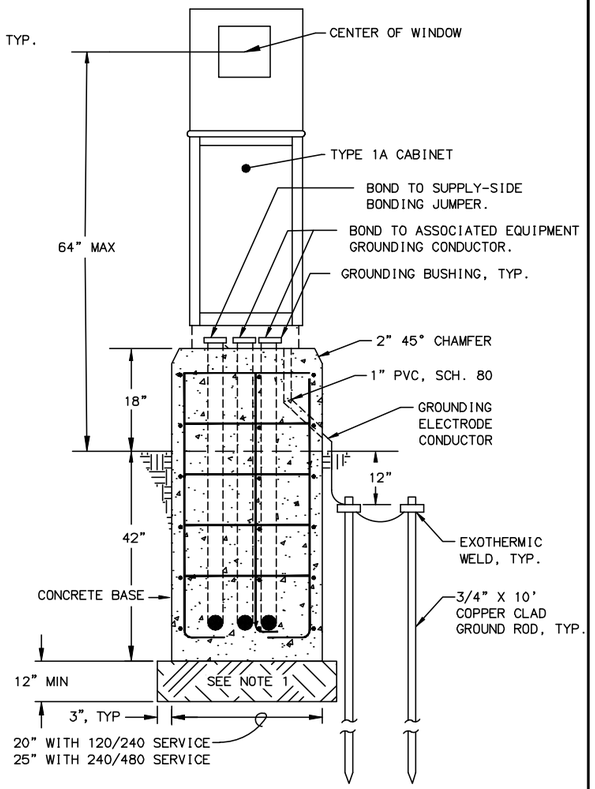
TYPE 1A CABINET DETAILS



TOP VIEW

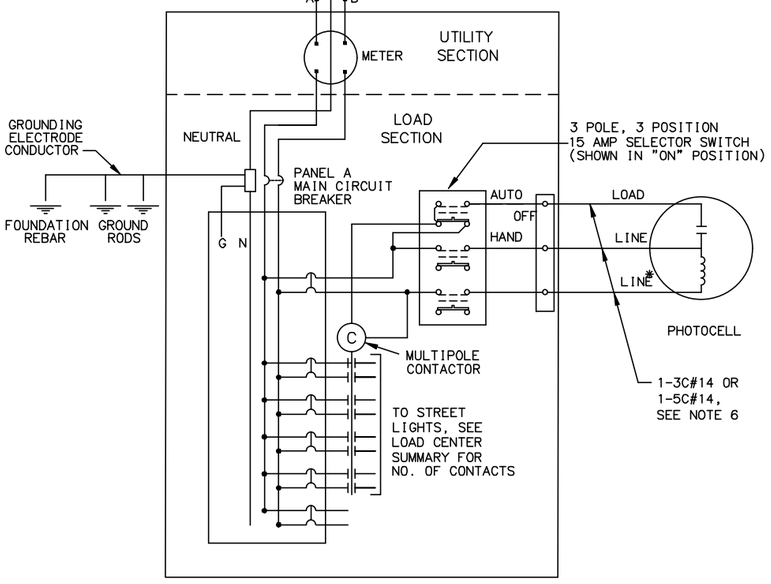


SECTION A–A



FRONT VIEW

TYPE 1A LOAD CENTER BASE DETAILS



LOAD CENTER ONE LINE DIAGRAM AND SELECTOR SWITCH WIRING

* GROUNDED NEUTRAL, IF SERVICE IS 240/480 VOLT SINGLE PHASE OR 277/480 VOLT THREE-PHASE; AND UNGROUNDED LINE, IF SERVICE IS 120/240 VOLT SINGLE PHASE.

WIRING NOTES:

1. FURNISH ALL EQUIPMENT NOTED IN THE LOAD CENTER SUMMARY, IN ADDITION TO TWO(2) 20-AMP, 2-POLE SPARE CIRCUIT BREAKERS, AND A MINIMUM OF TWO(2) SPACES FOR 2-POLE CIRCUIT BREAKERS IN EACH LOAD PANEL. SEE THE LOAD CENTER SUMMARIES FOR ADDITIONAL INFORMATION.
2. METER BASES SHALL NOT BE MOUNTED ON MOVABLE PANELS OR DOORS.
3. MAIN CIRCUIT BREAKER SHALL BE INDIVIDUALLY MOUNTED ABOVE DISTRIBUTION PANEL BUS.
4. LABEL ALL CIRCUIT BREAKERS AS TO FUNCTION AND POSITION. LABEL THE SELECTOR SWITCH "LIGHTING" AND ITS POSITIONS "ON-OFF-AUTO".
5. STORE A SCHEMATIC DIAGRAM, A CIRCUIT DIRECTORY, AND A MATERIALS LIST THAT INCLUDES THE MANUFACTURER'S NAME AND PART/CATALOG NUMBERS, ALL LAMINATED IN PLASTIC, IN A METAL POCKET ATTACHED TO THE INSIDE OF THE LOAD CENTER. INSTALL THE POCKET ON THE LOAD CENTER DOOR, PROVIDING DRAIN HOLES TO PREVENT WATER ACCUMULATION.
6. INSTALL PHOTOCELL TO AVOID HINGED COVER IN ALL POSITIONS AND ORIENT FACING NORTH SKY AND/OR AWAY FROM ARTIFICIAL LIGHT SOURCES THAT MAY INTERFERE WITH CONTROL. IF PLANS CALL TO MOUNT PHOTOCELL AWAY FROM LOAD CENTER, USE 5C#14 CABLE FROM LOAD CENTER TO PHOTOCELL TWIST LOCK RECEPTACLE.
7. SEE DESIGN PLANS AND LOAD CENTER SUMMARIES FOR ADDITIONAL INFORMATION INCLUDING EQUIPMENT LOCATIONS, CONDUCTOR AND CONDUIT REQUIREMENTS. INSTALL PULL LINE IN SERVICE LATERAL AND CAP BOTH ENDS OF CONDUIT. COORDINATE WITH LOCAL ELECTRICAL UTILITY PROVIDER FOR SERVICE REQUIREMENTS.
8. CONDUITS SHALL BE ATTACHED TO LOAD CENTER ENCLOSURE USING A LISTED, GROUNDING TYPE, THREADED CONDUIT HUB.
9. PROVIDE ARC-FLASH HAZARD WARNING LABEL COMPLYING WITH NFPA 70E ON THE ENCLOSURE EXTERIOR.
10. PROVIDE ENCLOSURE HEATER WHEN INDICATED IN PLANS. INSTALL ENCLOSURE HEATER IN SPACE CONTAINING PANELBOARD BUSSING AND LIGHTING CONTACTORS. HEATER TO BE THERMOSTATICALLY CONTROLLED AND HEAT OUTPUT TO BE SIZED ACCORDING TO COMPARTMENT DIMENSIONS. POWER FROM DEDICATED CIRCUIT AND SIZE CIRCUIT BREAKER TO MANUFACTURES RECOMMENDATION.
11. WHEN METAL HALIDE OR MERCURY VAPOR LAMPED FIXTURES ARE USED, PROVIDE A REMOTE BULB THERMOSTAT, SO THAT THE CONTACT CLOSES AND THE LIGHTS TURN ON WHEN THE TEMPERATURE DROPS TO 15° FAHRENHEIT. WIRE THERMOSTAT SO THAT ITS CONTACT IS PARALLEL THE CONTACT IN THE PHOTOELECTRIC CELL.

GENERAL NOTES:

1. SEE ALASKA DOT&PF STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION AND STANDARD PLAN DEVELOPMENT REPORT (SPDR) FOR ADDITIONAL REQUIREMENTS.

LOAD CENTER BASE NOTES:

1. PROVIDE COMPACTED, NON-FROST SUSCEPTIBLE BACKFILL. MINIMUM REQUIRED BEARING CAPACITY SHALL BE 2000 PSF.
2. CONSTRUCT BASE USING GRADE 60 REINFORCING STEEL CONFORMING TO ASTM A615 AND CLASS A CONCRETE CONFORMING TO SECTION 501 OF THE SPECIFICATIONS.
3. IF THE BASE IS PRECAST, INSTALL TWO 3/4" FERRULE LOOP INSERTS IN TWO SIDES OPPOSITE ONE ANOTHER FOR LIFTING.
4. ALL BASE REBAR TO BE BONDED TOGETHER TO BE ELECTRICALLY CONTINUOUS.
5. PROVIDE ANCHOR BOLTS OR EXPANSION ANCHORS IN THE BASE FOR MOUNTING THE CABINET PER THE MANUFACTURER'S SHOP DRAWINGS. ANCHOR BOLTS, NUTS, AND WASHERS SHALL CONFORM TO EITHER ASTM OR A449 AND SHALL BE GALVANIZED IN ACCORDANCE WITH ASTM A153. A307 CLEARANCE BETWEEN EDGE OF ANCHOR AND BEGINNING OF CHAMFERED EDGE TO BE A MINIMUM OF 2".
6. GRADE AWAY FROM THE BASE WITH A MINIMUM SLOPE OF 3%. USE A PRE-MOULDED BITUMINOUS JOINT BETWEEN THE BASE AND CONCRETE SIDEWALK OR PAVING, WHEN ADJACENT TO A SIDEWALK OR PATHWAY.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

TYPE 1A LOAD CENTER

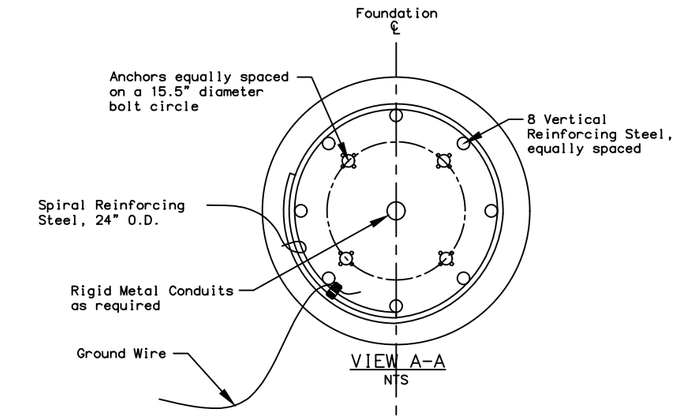
Adopted as an Alaska Standard Plan by: Carolyn Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/17/2020

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

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



VIEW A-A
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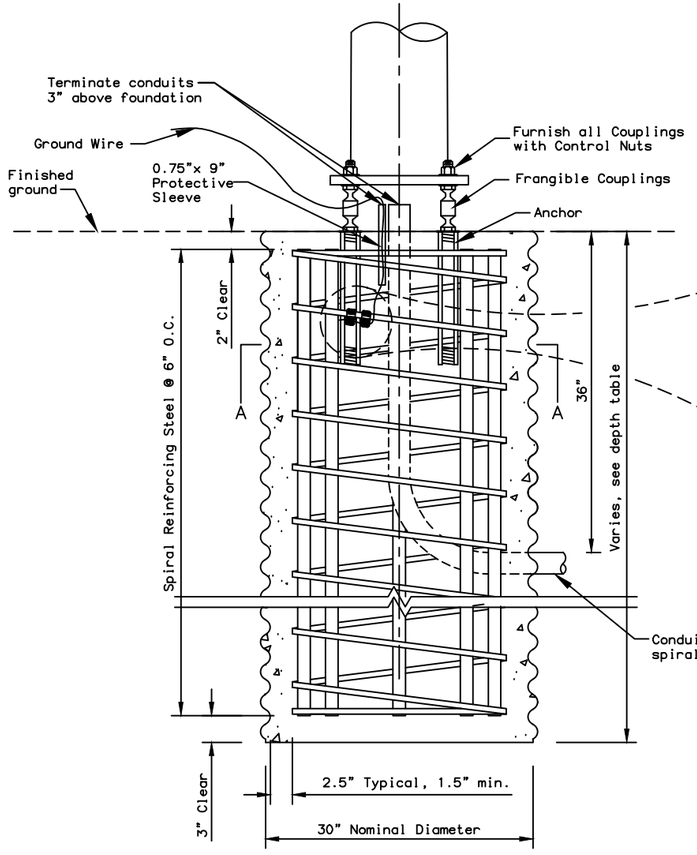
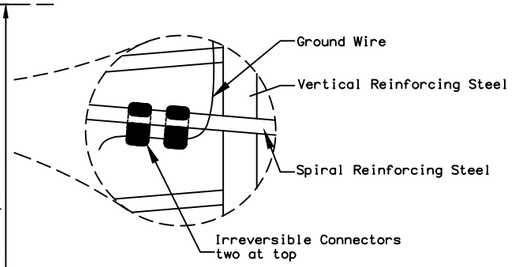


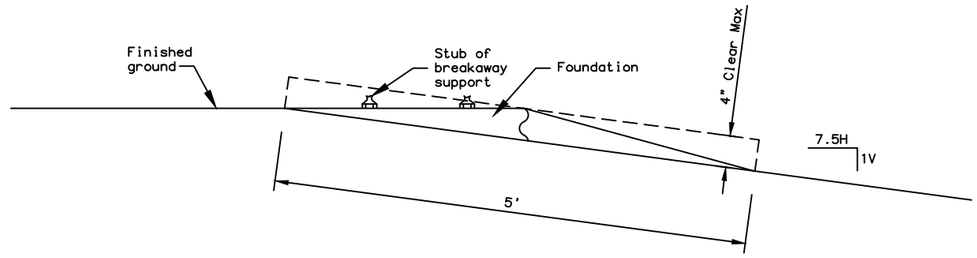


FOUNDATION DETAILS
(Skirt omitted for clarity)

MATERIAL REQUIREMENTS		
Concrete	Class A	f'c = 4000 psi
CMP	AASHTO M218	14 ga.
Vertical Reinforcing Steel	AASHTO M31 #11	GR 60
Spiral Reinforcing Steel	AASHTO M31 #5	GR 60
Ground Wire		#4 AWG
Frangible Coupling and anchor	NCHRP 350 TL3 (See note 11)	Vu = 5.5 kips Tu = 43.2 kips
Conduit	Sch 40	RMC
Protective Sleeve	Sch 40	PVC

DEPTH TABLE		
GRADE	FOUNDATION DEPTH BY APPLICATION (ft.)	
	ELECTROLIER * SEE NOTE 9	BREAKAWAY TRAFFIC SIGNAL
Flat to 6:1	8	6.5
>=6:1 to 3:1	9	7
>=3:1 to 1.5:1	10	8

CONTROLLED LOW STRENGTH MATERIAL MIX DESIGN		
ITEM	BATCHING QUANTITIES PER CYD BATCH (lbs.)	APPLICABLE SPECS.
Portland Cement Concrete	188	701-2.01
Water (52.1 gal.)	435	712-2.01
Fine Aggregate SSD	3041	703-2.01
Admixture: MasterAir AE2000	2.0 oz.	711-2.02
Total	3664	



CLEARANCE DETAIL
(See note 12)

DESIGN NOTES:

Design Standard: 2013 Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2019 interim.

Design Load: 1,000 lbs axial, 2,000 lbs shear, 50,000 ft-lbs moment.

NOTES:

1. This foundation is approved for electrolier and breakaway traffic signal applications in cohesionless soils with an N1-60 value of 10 or greater per AASHTO T-206, "Standard Penetration Test" (SPT). This foundation shall not be used if any of the following are encountered; water table above the bottom of foundation, very loose soils, organic soils, cohesive soils (clay), or soils susceptible to frost jacking. If any of these conditions are encountered, stop foundation work and contact the Engineer.
2. Place foundation in drilled or excavated hole with centerline of foundation located at the station, offset, and elevation specified in plans. Set foundation to satisfy the conditions depicted in clearance detail.
3. Form the foundation in corrugated metal pipe conforming to Subsection 707-2.01 of the Specifications.
4. Provide 1.5 extra turns at each end of the spiral reinforcing steel. Reinforcing steel shall not be spliced. Tie vertical reinforcing steel to each intersection of the spiral reinforcing steel.
5. Connect ground wire near the top of spiral reinforcing steel with two irreversible connectors as shown. Fasten connectors according to the manufacturers' recommendations including the use of manufacturer specified tools. The ground wire may be bare solid, stranded, or braided copper. Protect ground wire with protective sleeve as shown and fill with silicon sealant.
6. Complete all concrete work in conformance with Sections 501, 503, and 660 of the Specifications. Use a tube or tremie with a hopper head or other approved device when dropping concrete more than 5 feet per Subsection 501-3.05. Vibrate concrete during placement by mechanical vibration per Subsection 501-3.06. Ensure anchor threads are protected from contact with concrete during pour.
7. Backfill and compact according to Section 205, and Subsections 203-3.04 and 660-3.01 of the Specifications. Use select material, Type A or controlled low strength material as backfill material. Ensure area below foundation meets compaction requirements and is free of loose material and debris prior to concrete work.
8. Install all anchors according to the manufacturer's written installation instructions. Anchors shall be installed plumb. Anchors greater than 1:40 out-of-plumb will result in foundation rejection.
9. When used for electrolier reduce the foundation depth 1 foot when there is no luminaire arm or the luminaire arm is less than or equal to 12 feet.
10. Grade in depth table refers to fill slopes. If foundation is in a cut slope assume flat grade in table. To determine grade in fill slopes, use the most severe grade found within an 8 foot radius of the center of the foundation.
11. The frangible coupling referenced in this ASP is NCHRP 350 compliant. There is no MASH compliant device available at this time. See SPDR report for more info.
12. Special grading detail and/or shielding may be required to maintain 4" maximum clear distance.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CONCRETE STREET LIGHT POLE FOUNDATION

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

Adoption Date: 7/17/2020

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

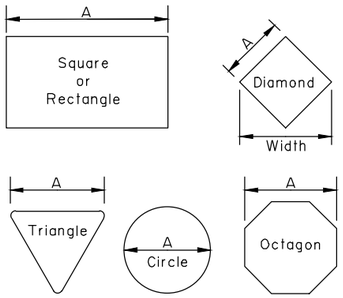
Next Code and Standards Review Date: 7/8/2030

L-30.11

S-00.12 SHEET | of |

GENERAL NOTES

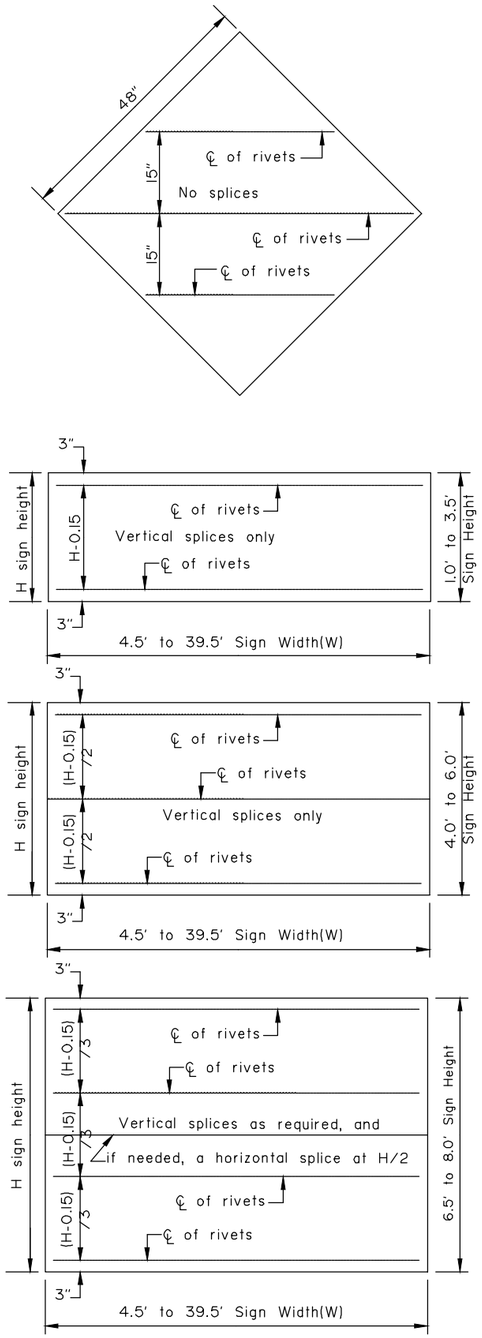
1. See the standard specifications for the aluminum alloys that you may use for sign sheeting and wind framing members.
2. Fabricate all signs from 0.125" thick aluminum sheeting.
3. Sign fabricators may use alternates to the zee shaped framing member with approval of the engineer, if the frame manufacturer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



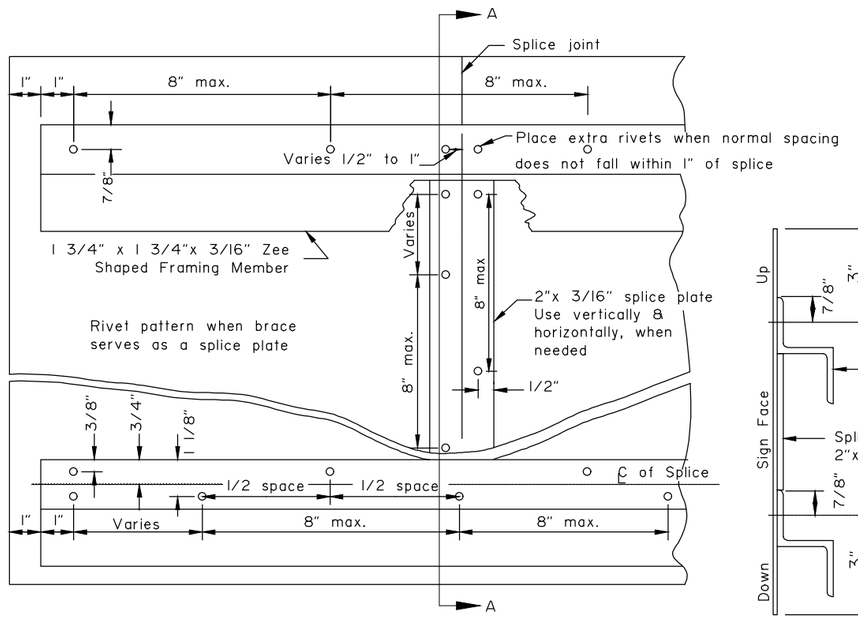
Maximum size unframed signs using 0.125" thick aluminum sheeting.	
Sign Shape	A
Squares, Shields, and Route Markers	48"
Rectangles	48"
Diamonds	48"
Triangles	48"
Rounds and Octagons	48"

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

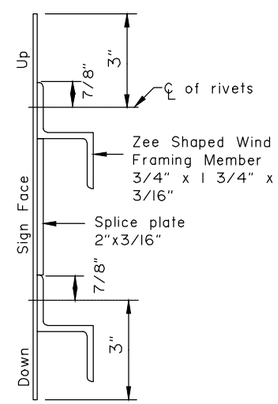
LIGHT SIGNS



WIND FRAMING LOCATIONS



RIVET DETAIL FOR ZEE SHAPED WIND FRAMING & SPLICE PLATE



SECTION A-A

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN FRAMING

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

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By: WTH Date: 7/8/2020

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

S-00.12

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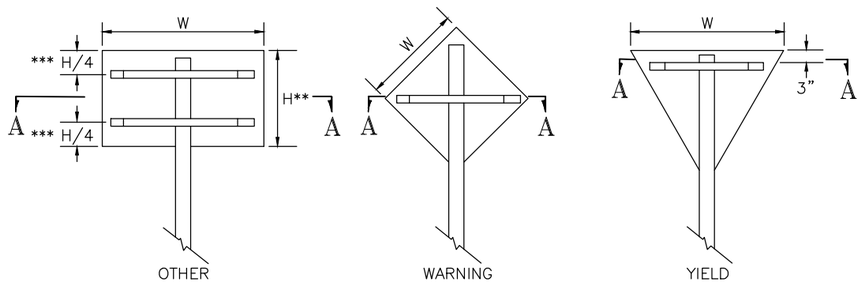
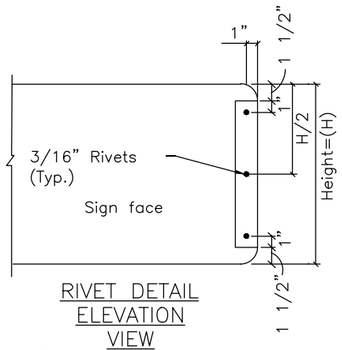


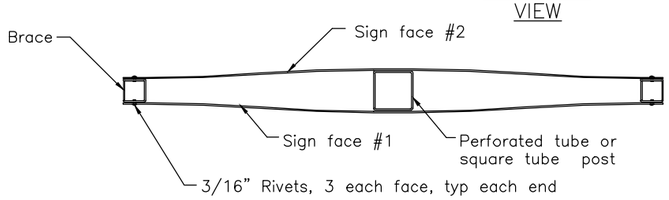
*** Use one brace when H ≤ 18"
Use two braces when 18"< H < 48"
Use three braces when H ≥ 48"

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

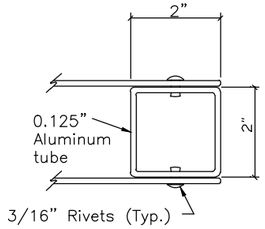
SIGN BRACING PLACEMENT



RIVET DETAIL
ELEVATION
VIEW

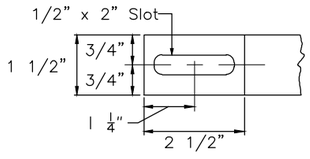


PLAN VIEW

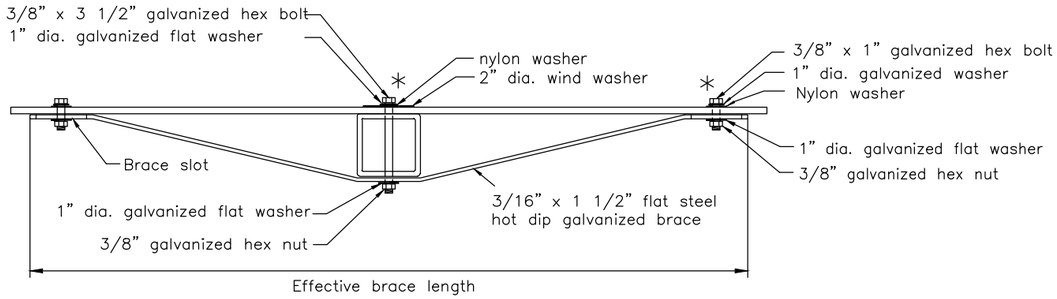


END BRACE DETAIL

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



DETAIL OF BRACE SLOT
Elevation view



TUBE POST SIGN BRACING SECTION A-A
Plan view

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

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

< 30" No bracing required and use square tube

Note: Drawing not to scale

State of Alaska DOT&PF
ALASKA STANDARD PLAN

BRACING FOR SIGNS MOUNTED ON SINGLE POST

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

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By: WTH Date: 7/8/2020

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

S-01.02

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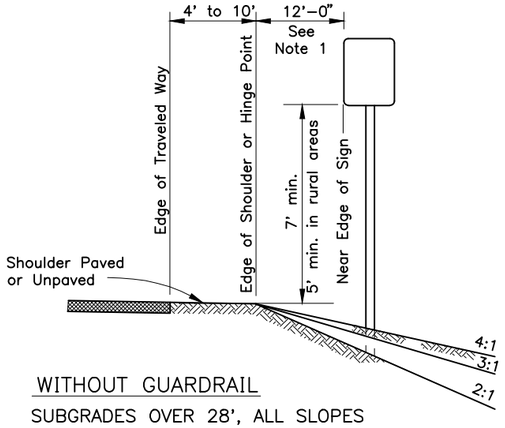
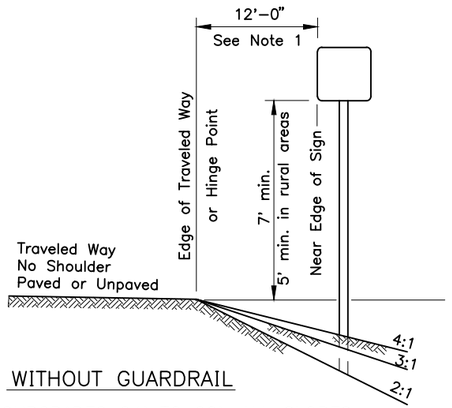


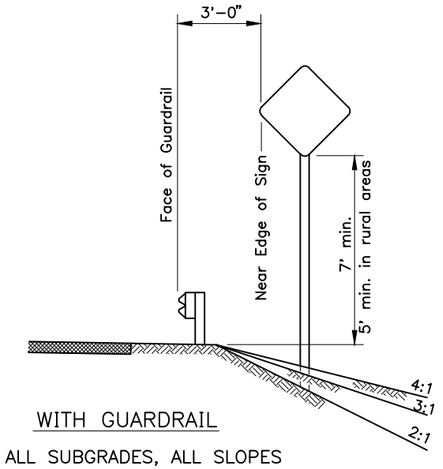
WITHOUT GUARDRAIL

SUBGRADES OVER 28', ALL SLOPES



WITHOUT GUARDRAIL

SUBGRADES 24' TO 28', ALL SLOPES

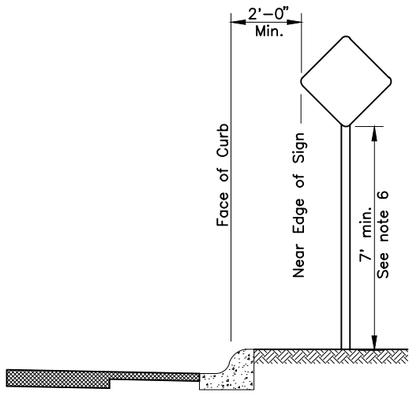


WITH GUARDRAIL

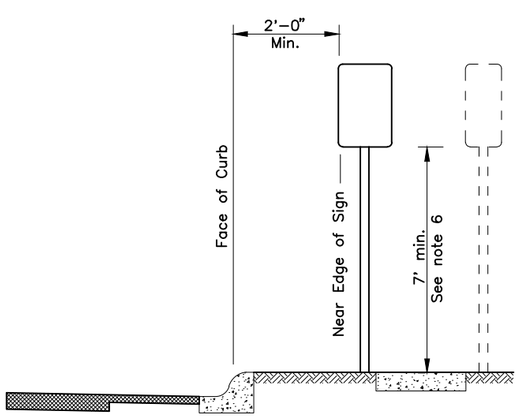
ALL SUBGRADES, ALL SLOPES

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.

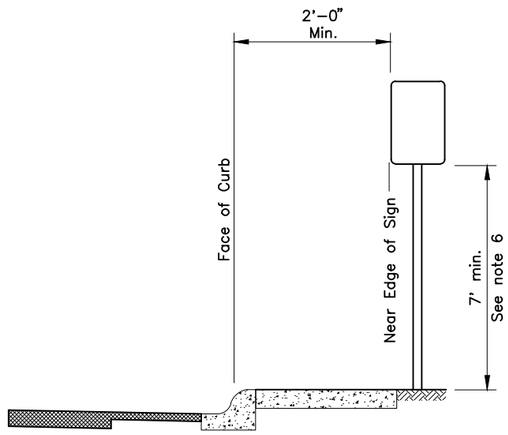


CURB WITHOUT SIDEWALK

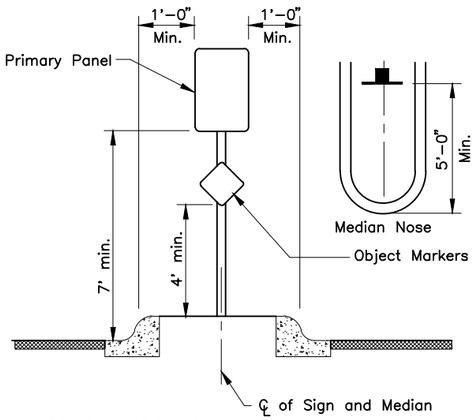


CURB WITH PARKWAY AND SIDEWALK

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

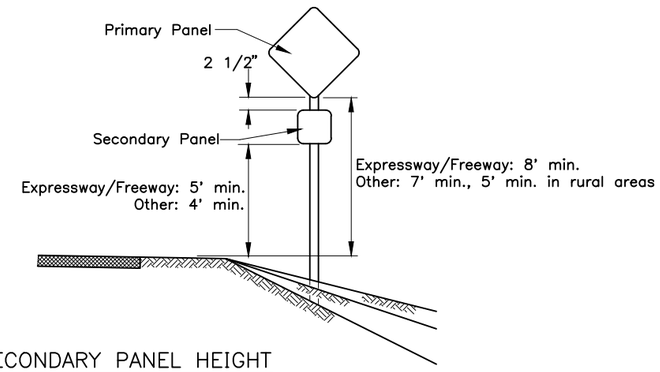


CURB WITH SIDEWALK WITHOUT PARKWAY



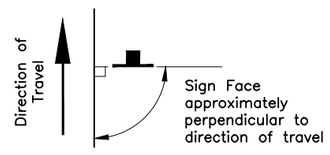
RAISED MEDIANS

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

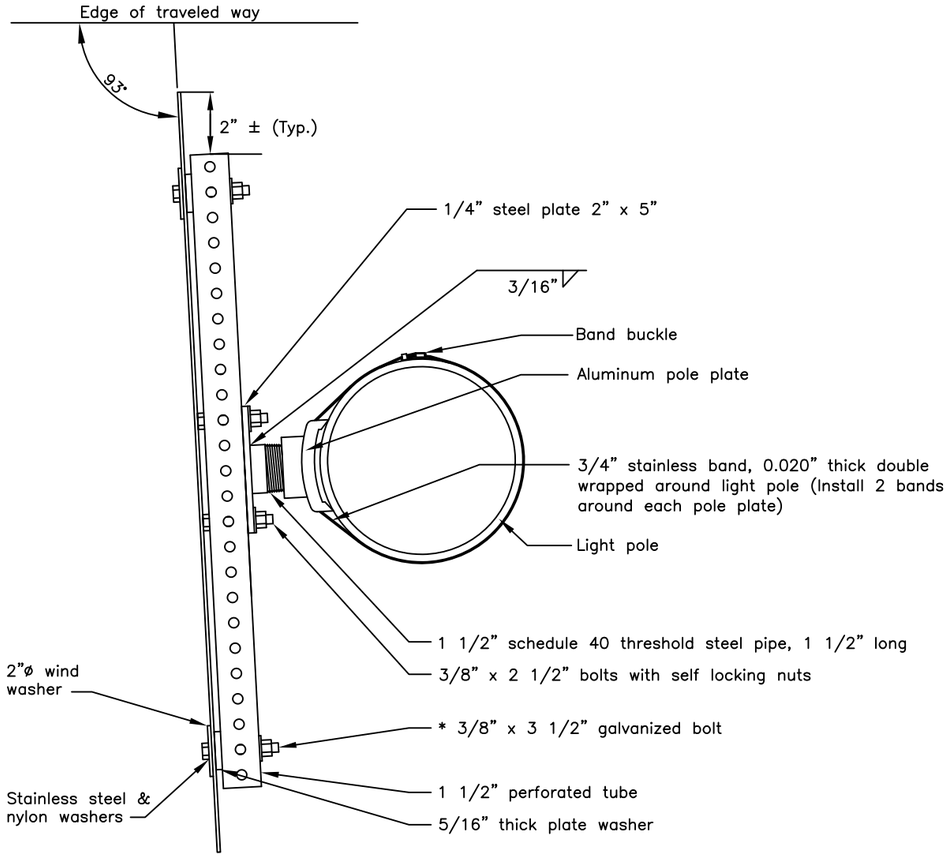
Adoption Date: 7/17/2020

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

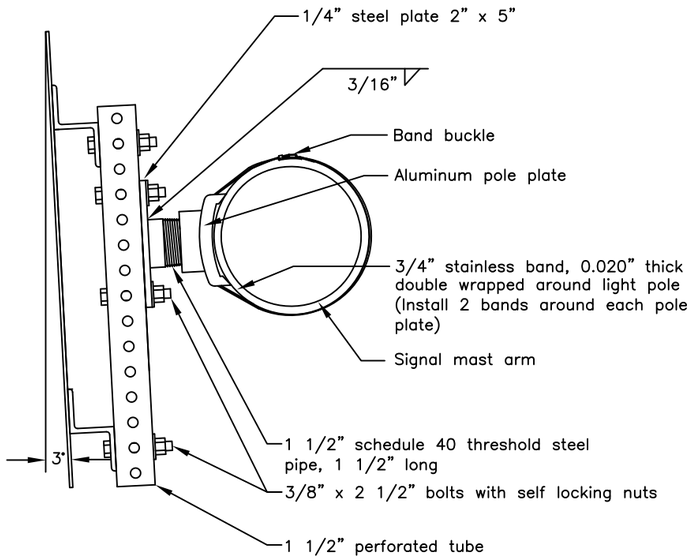
Next Code and Standards Review Date: 7/8/2030

S-05.02

S-23.00 SHEET | of |



ELECTROLIER SIGN MOUNTING
(PLAN VIEW)



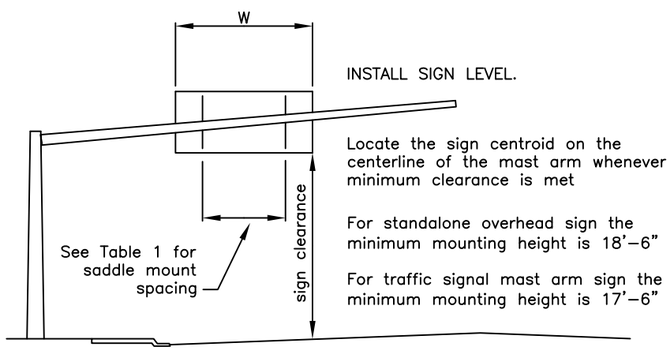
SIGNAL POLE MAST ARM SIGN MOUNTING
(ELEVATION VIEW)

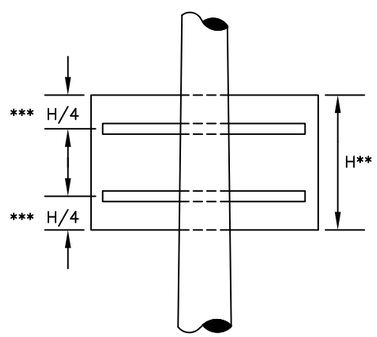
GENERAL NOTES

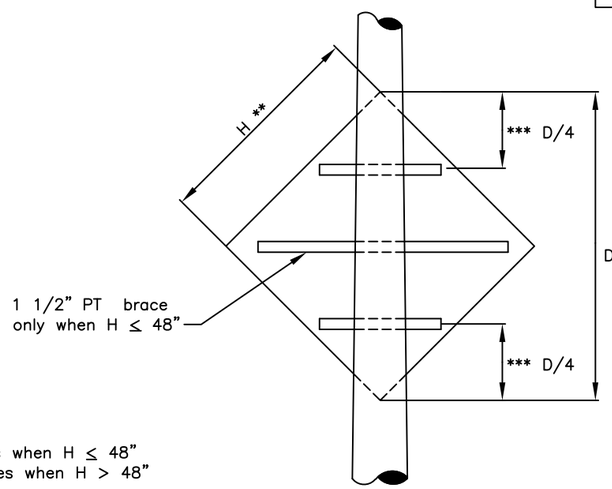
1. Use pole plate assemblies shown here to install signs on tapered mast arms and light poles. Install one pole plate per 10 square feet of sign panel. Use at least two plates for each installation.
2. Fabricate each pole plate-to-perforated tube adapter (steel plate welded to pipe) using steel plate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

TABLE 1
POLE PLATE SPACING

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







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

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

POLE AND MASTARM SIGN MOUNTING

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

Adoption Date: 02/08/2019

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By: Date:

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

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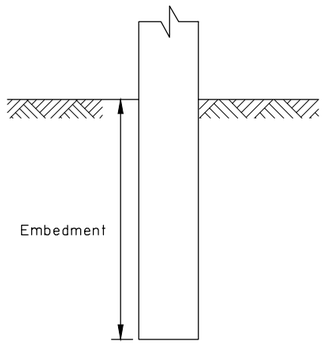
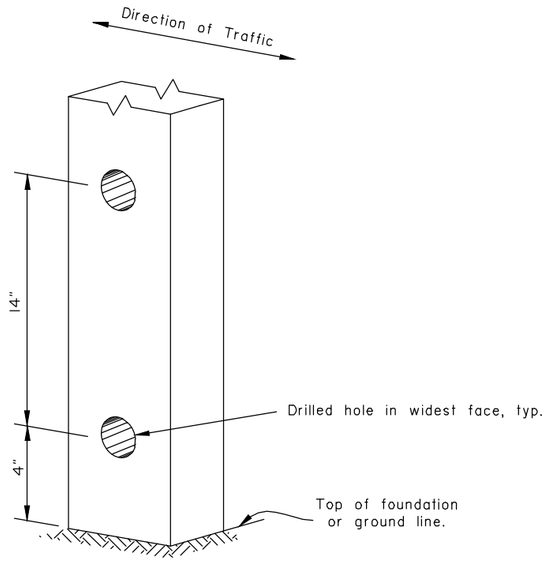
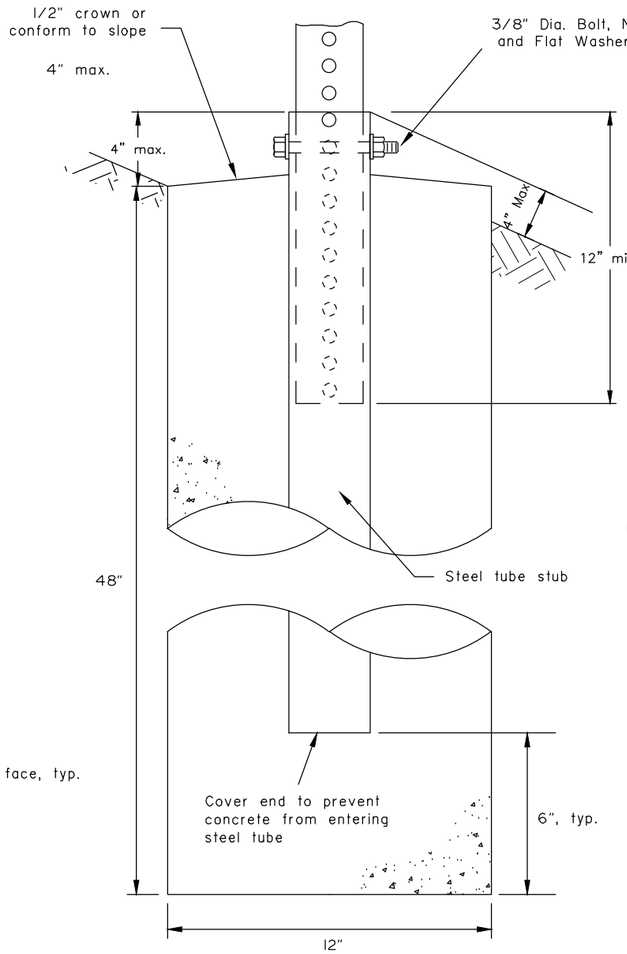
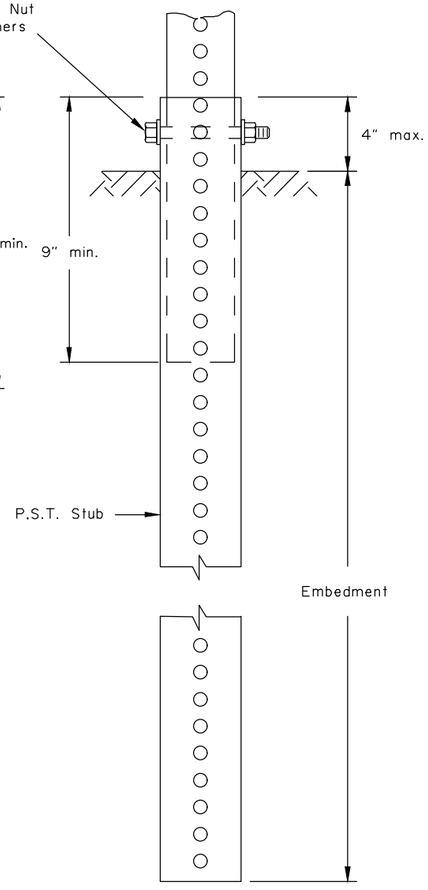






SLEEVE TYPE
CONCRETE FOUNDATION



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

S-30.05

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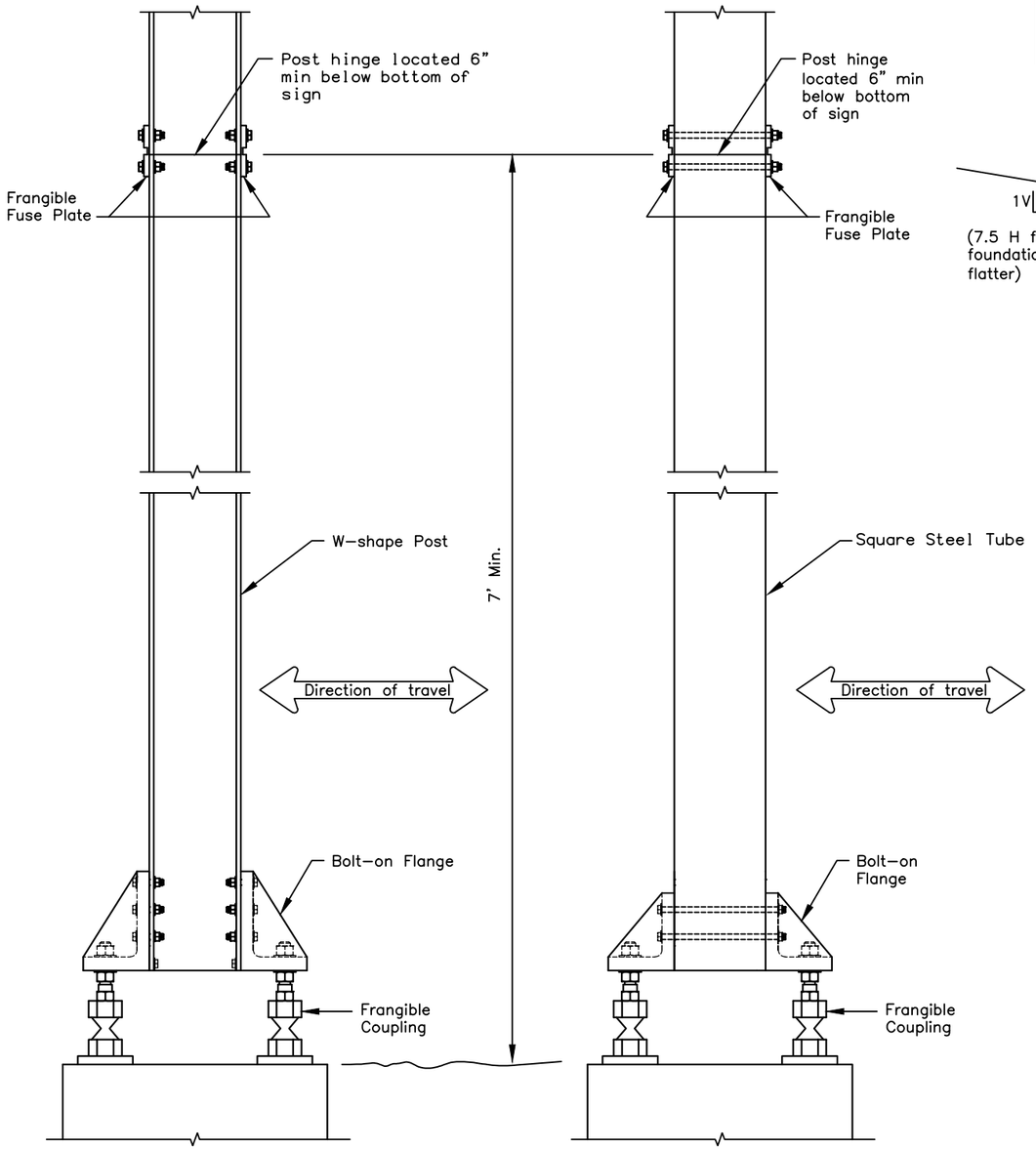
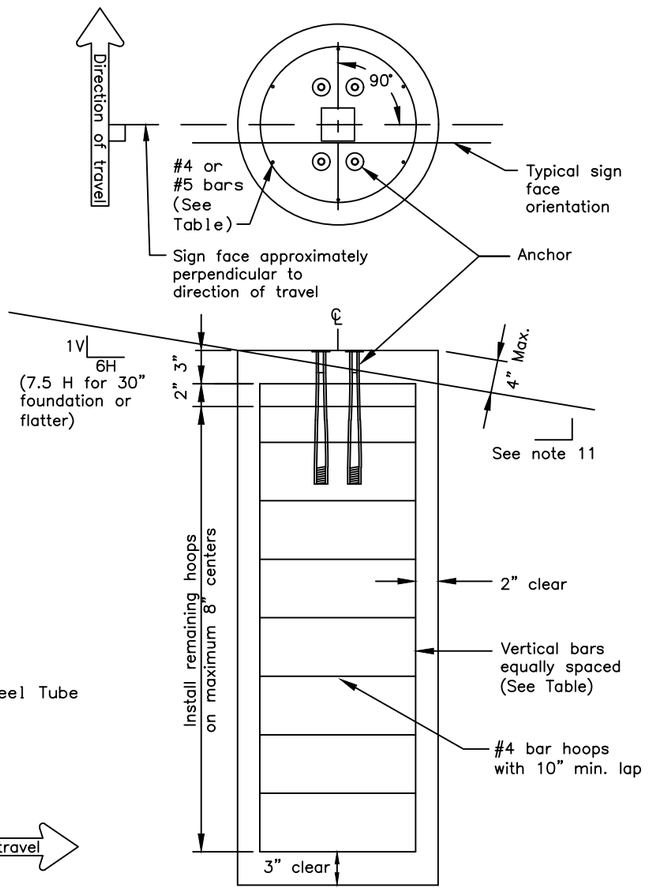
NOTE:
Install hinges when more than one post is used to support a sign. Do not install hinges on single post installations.



FRANGIBLE COUPLING SYSTEM FOR W–SHAPE POST

FRANGIBLE COUPLING SYSTEM FOR SQUARE STEEL TUBES



SIGN POST FOUNDATION
See Table for depth and diameter

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

FOUNDATION TABLE

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

GENERAL NOTES

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGN POST BASE AND FOUNDATION

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

Adoption Date: 7/17/2020

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

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

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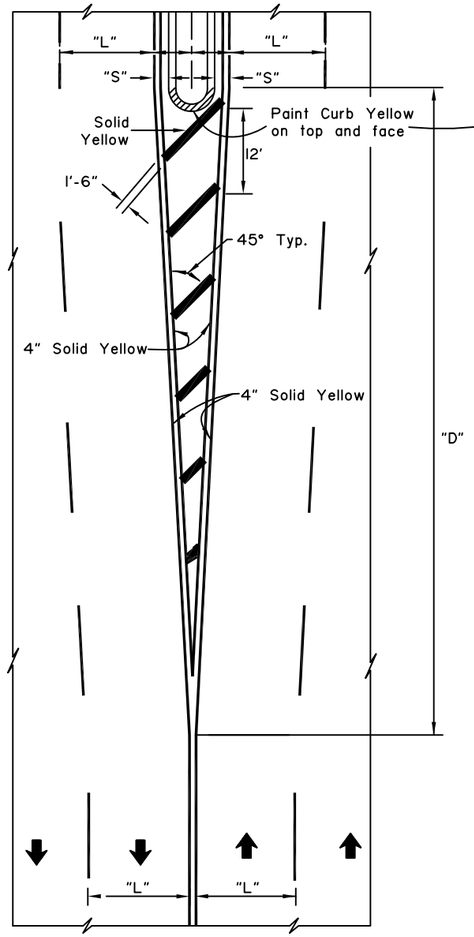
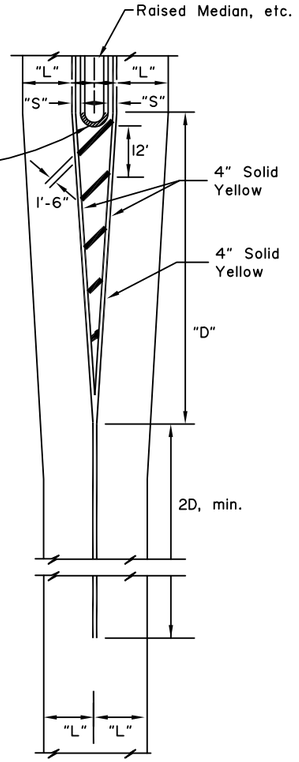


FOUR OR MORE LANES
DRIVE TO RIGHT

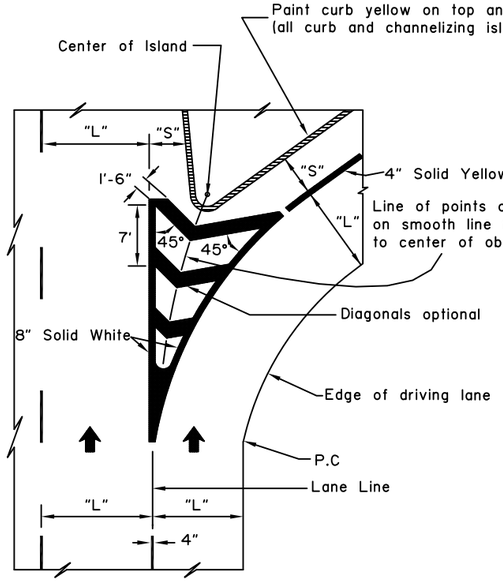


TWO LANES
DRIVE TO RIGHT

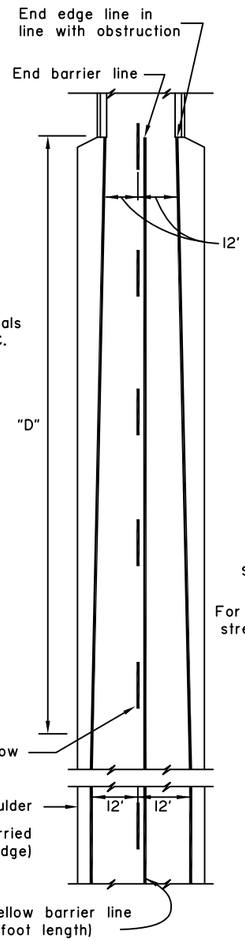
White longitudinal and diagonal markers identical to Four Lane Arrangement.

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

APPROACH TO OBSTRUCTIONS

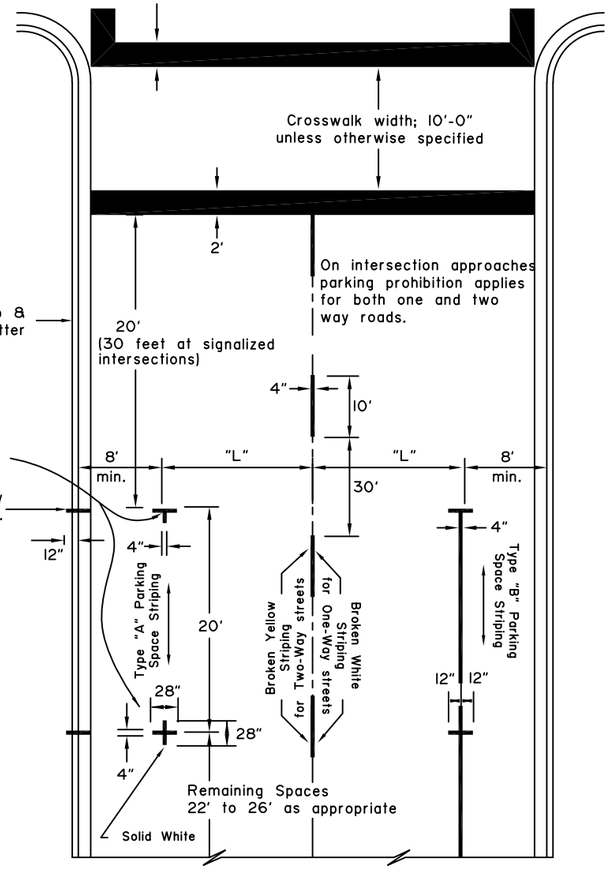


CHANNELIZING ISLAND



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

EDGE LINE TRANSITION TO NARROW BRIDGE AND APPROACH BARRIER LINE

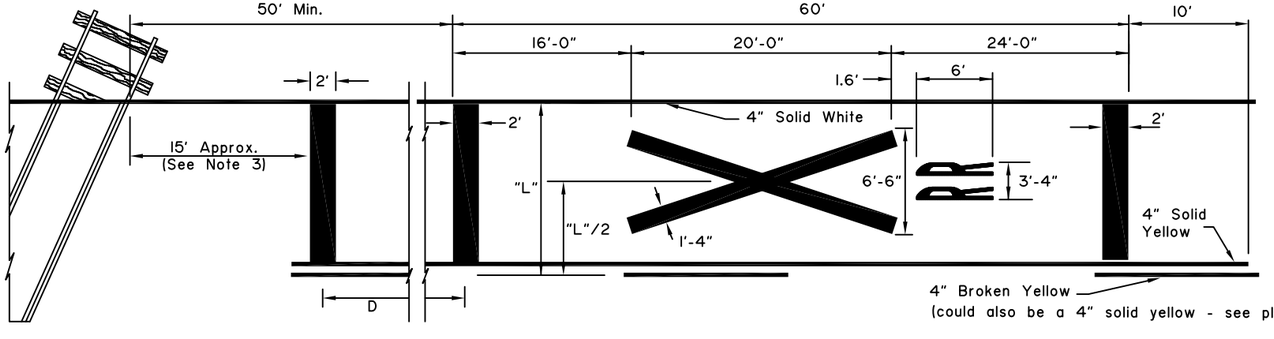


CENTERLINES FOR TWO LANE TWO WAY URBAN ROADS-PARKING LIMIT LINES

RAILROAD CROSSING NOTES:

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

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



APPROACH TO RAILROAD CROSSING ON 2 LANE 2 WAY HIGHWAY

GENERAL NOTES:

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

NOT TO SCALE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MAKING APPLICATIONS

Adopted as an Alaska Standard Plan by:

Kenneth J. Fisher, P.E.
Chief Engineer

Adoption Date: 02/08/2019

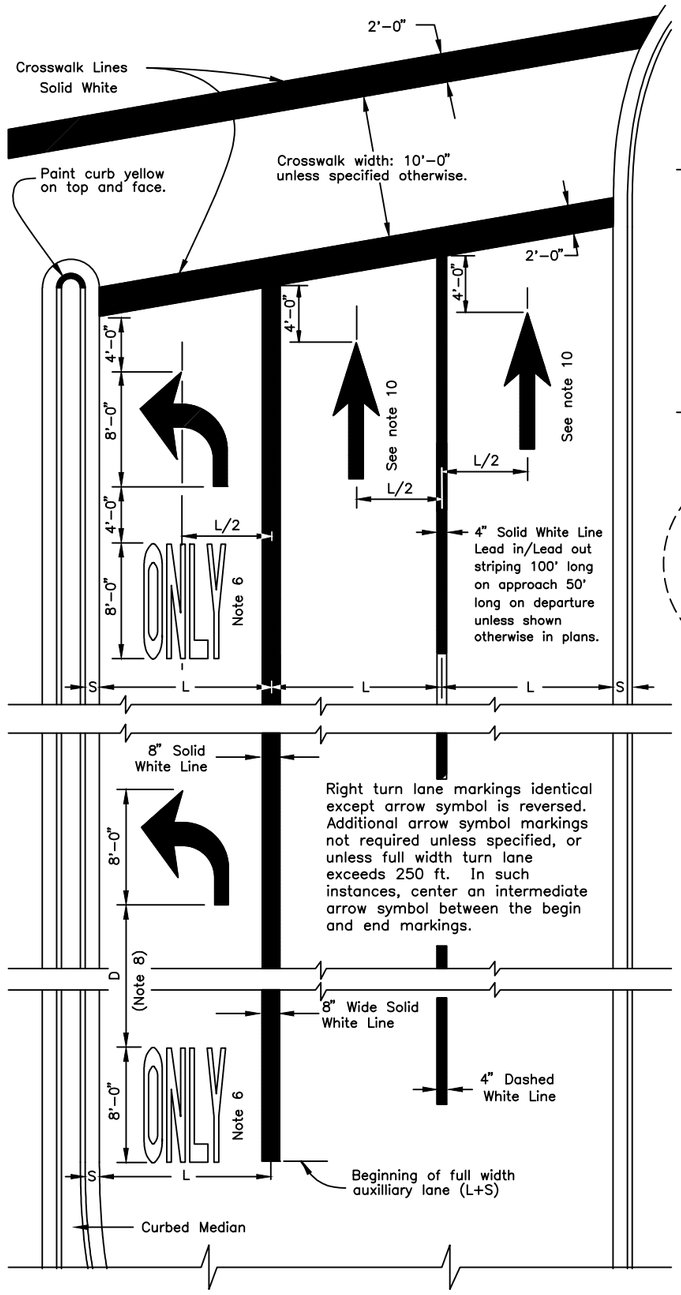
Last Code and Stds. Review
By: Date:

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

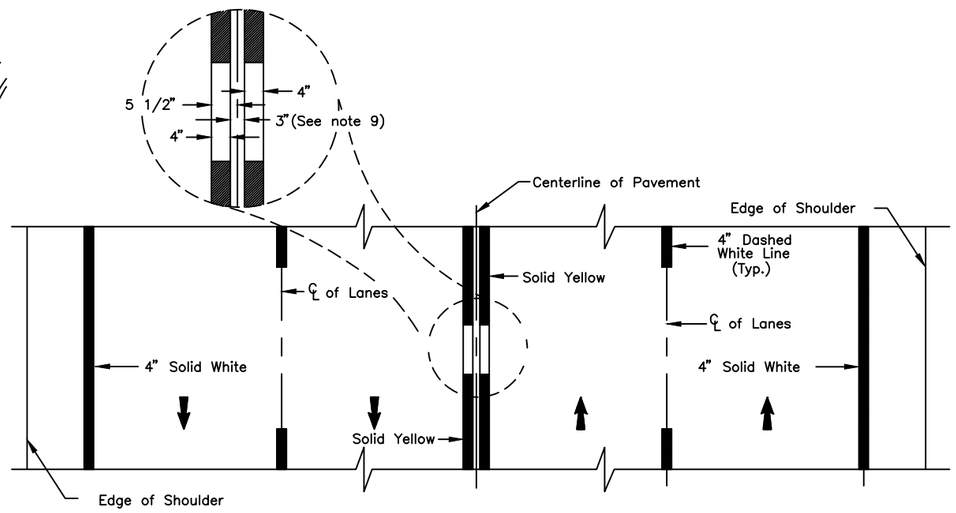
T-20.04

T-21.04

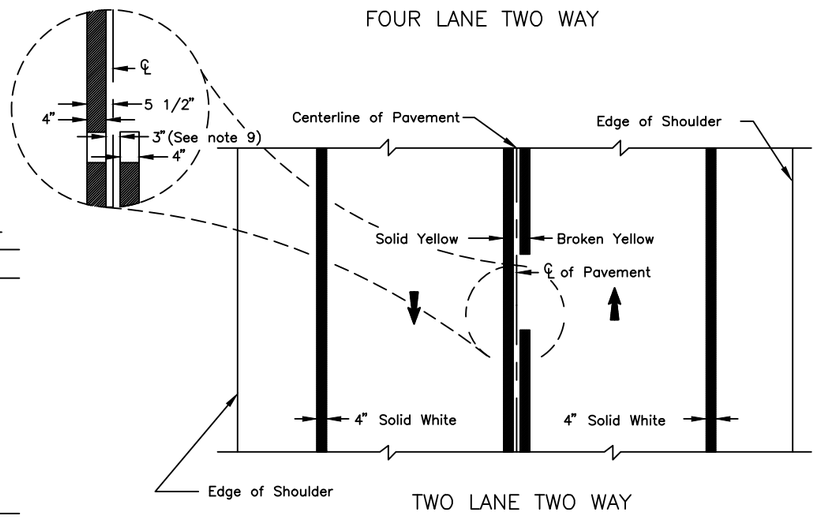
SHEET 1 of 1



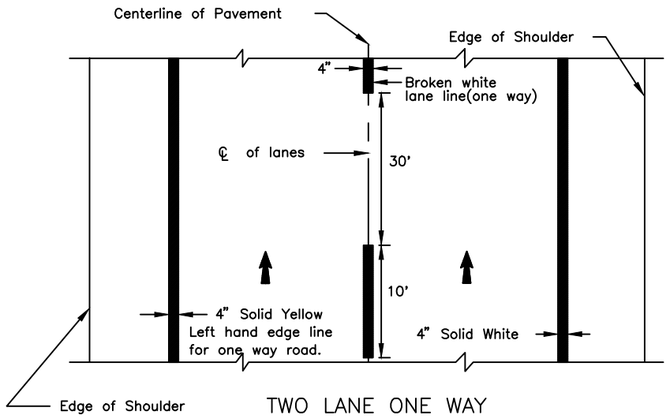
APPROACH TO INTERSECTION



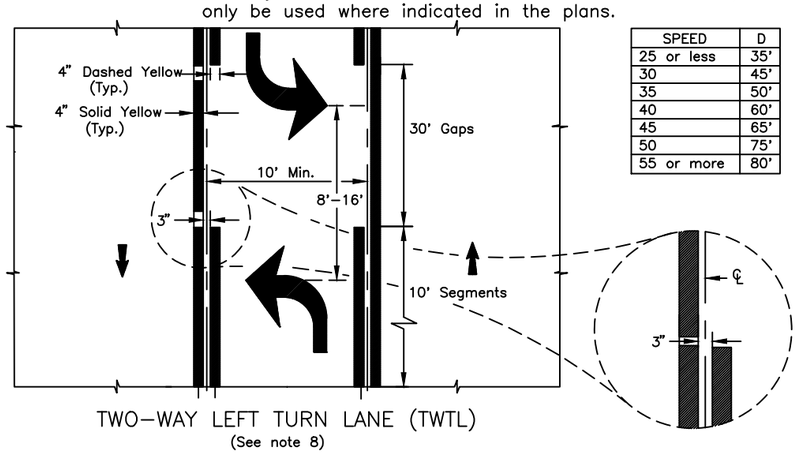
FOUR LANE TWO WAY



TWO LANE TWO WAY

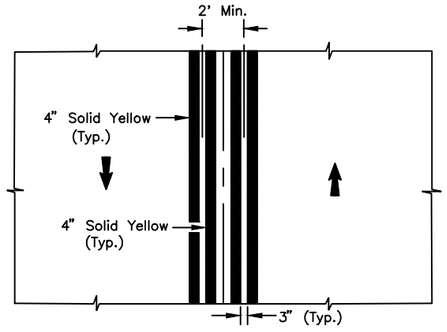


TWO LANE ONE WAY



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

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



STRIPED MEDIAN

GENERAL NOTES:

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

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING APPLICATIONS

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

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By:KLK Date: 7/8/2020

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

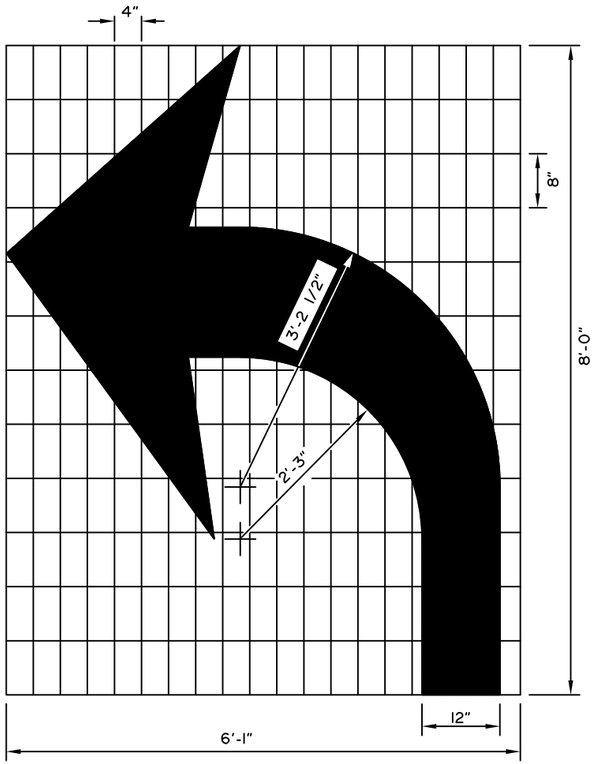
T-21.04

T-22.04

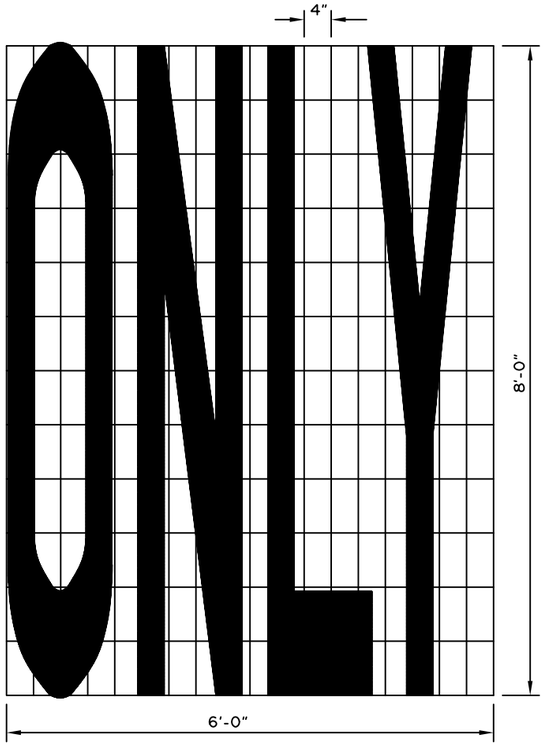
SHEET | of |

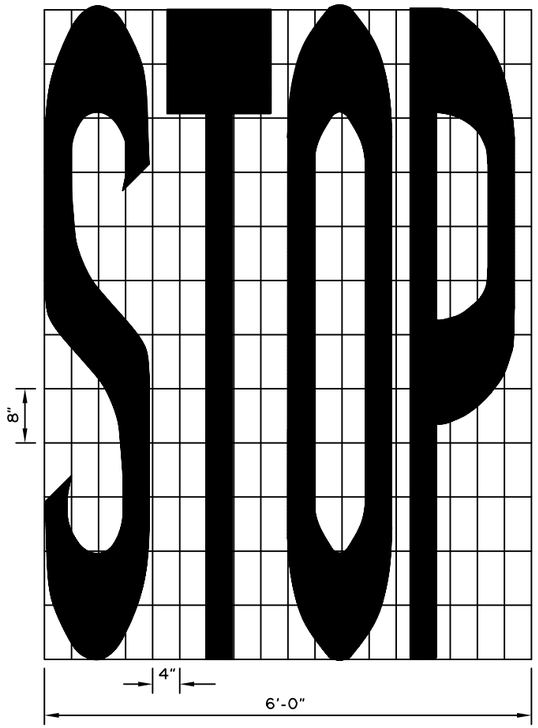
GENERAL NOTES:

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

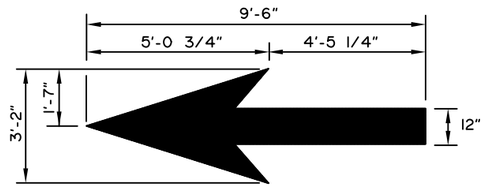


Right turn auxilliary lane usage markings identical except arrow symbol is reversed.

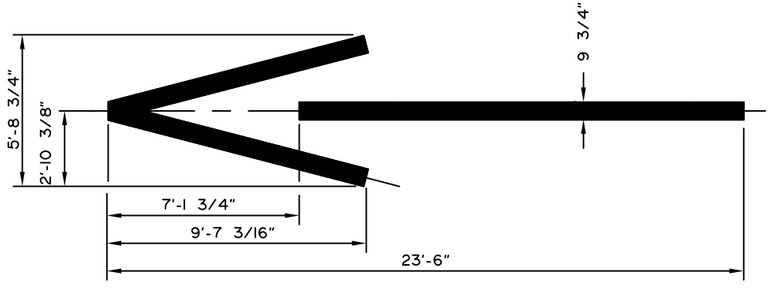




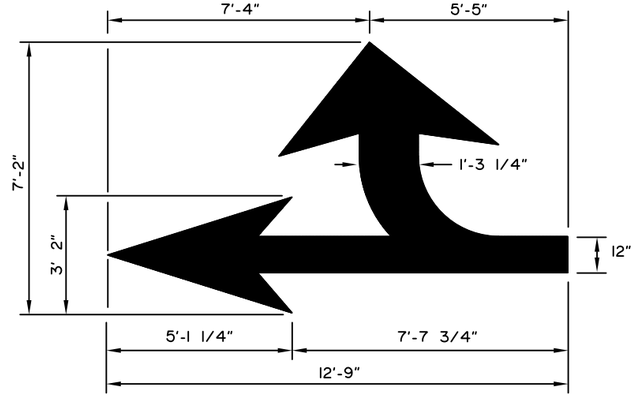
LAYOUT TEMPLATES FOR STENCILS



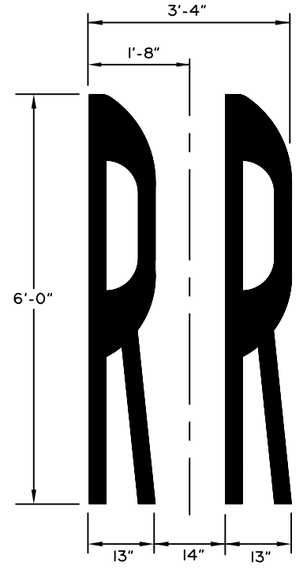
STRAIGHT AHEAD ARROW



WRONG WAY ARROW



COMBINATION ARROW



RAILROAD SYMBOL

State of Alaska DOT&PF
ALASKA STANDARD PLAN

PAVEMENT MARKING SYMBOL DIMENSIONS

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

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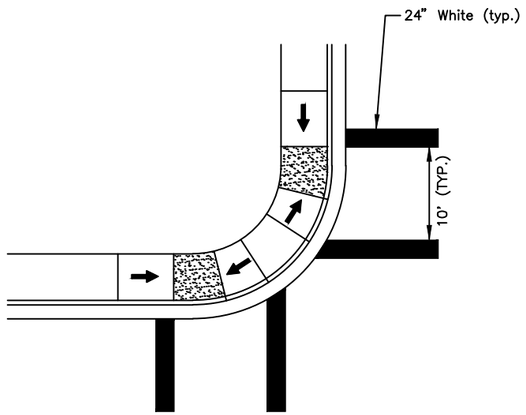
T-22.04

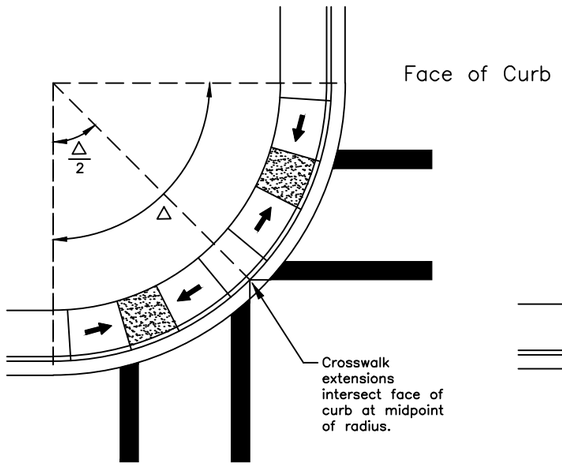
T-23.01

SHEET 1 of 1



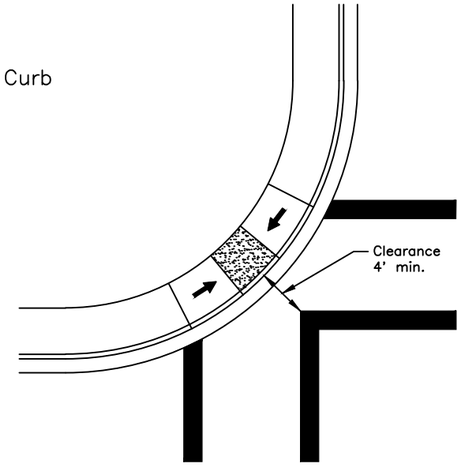
CASE 1

Dual Curb Ramps
Radius ≦ 25'



CASE 2

Dual Curb Ramps
25' < Radius ≦ 50'



CASE 3

Single Central Curb Ramp
25' ≦ Radius ≦ 50'
(Not Recommended)

GENERAL NOTES

1. The crosswalk locations shown assume a 90–degree intersection – adjust as necessary on skewed intersections to ensure that crosswalk landings (for parallel curb ramps) or ramp runs (for perpendicular curb ramps) fall within the inner edges of crosswalk stripes. If Case 3 (not recommended) is used, the layout should also be adjusted to provide at least the minimum clearance while maximizing the offset.
2. If only one crosswalk connects with a curb radius, it should be located as if there were two connecting crosswalks.
3. These details apply to parallel (shown) as well as perpendicular curb ramps.
4. Case 3, the layout for a single central curb ramp, should be used only when installing two ramps is not feasible. It should not be used for radii under 25 feet. See plans for ramp layout at particular locations.
5. Radius is measured to the face of curb.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CROSSWALK LOCATION AT SIGNALIZED INTERSECTIONS

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

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By: KLK Date: 7/8/2020

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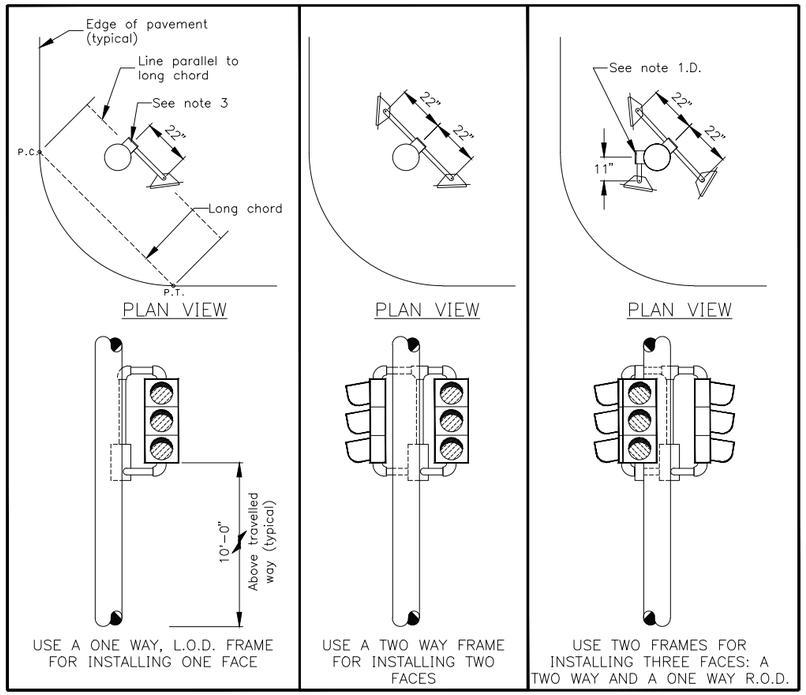
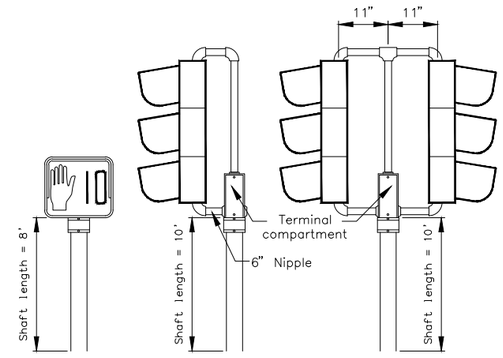
T-23.01

T-30.12

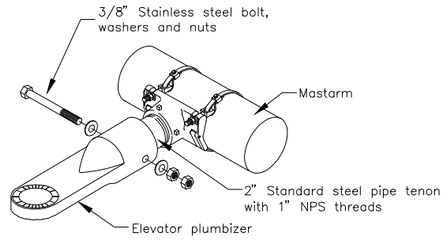
SHEET 1 of 1



SIDE MOUNTED SIGNAL FRAMES WITH VEHICULAR SIGNALS
(SHOWN WITHOUT BACKPLATES)



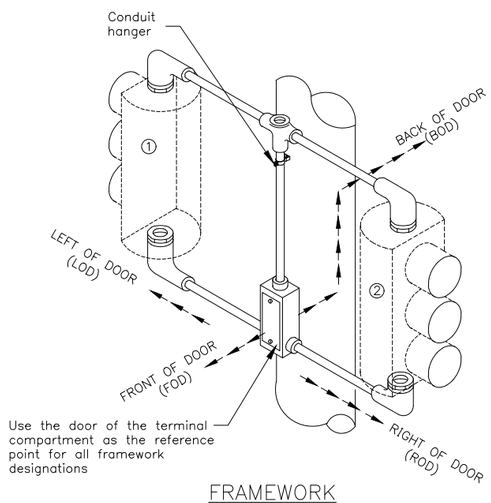
POST MOUNTED SIGNALS
(SHOWN WITHOUT BACKPLATE)



ELEVATOR PLUMBIZER
(SEE NOTE 1.A.)

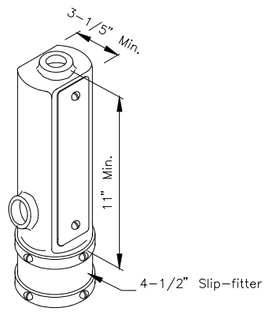
NOTES:

1. Install the signal faces shown in the plans as detailed on this sheet and per Alaska Traffic Manual.
   - A. Use elevator plumbizers to install faces on mastarms and whenever two inch pipe tenons are specified. Install the plumbizer between the red and yellow signal (between green and yellow for Northern Region) indications for a three section head and between the two yellow signal indications for a four section head. Use stainless steel band mount hardware, AB–3007–L as manufactured by PELCO PRODUCTS, INC., or approved equal to install plumbizer to mastarms. PELCO mount shall have stainless steel option.
   - B. Use slip fitters to install pedestrian signals on the top of posts.
   - C. Use signal frames to install signal faces on the sides of poles and on the tops of posts.
   - D. Use a second signal frame to install the third face when three side mounted signal faces are shown.
   - E. Use clamshell brackets to install all pedestrian signals, except those that are post top mounted.
2. Furnish all signal frames with terminal compartments.
3. Install one terminal compartment on the side of the pole opposite the midpoint of the radius return. Position the terminal compartment at the location where a line parallel to the long chord (P.C. to P.T.) of the radius return is tangent to the pole.
4. Install pedestrian indication to face the center of the far side crosswalk. Acceptable variance is +/– 1 degree.
5. Field drill the holes needed for attaching all signal hardware. Use hole saws when drill bits are not available. Treat the bare steel surfaces in accordance with Section 660–3.01.8, repairing damaged finishes, of the Standard Specifications.
6. Provide solid backplates (louvered in Southcoast Region) sized for the number of signal sections and mounting type, so that no light is visible between the backplate and the signal face. Furnish backplates for doghouse style signals that feature notched upper corners.
7. Attach all back plates using plated steel rivets with large flange button heads. Install 0.187" diameter by 0.575" long rivets that provide at least 530 lbs. and 670 lbs. shear and tensile strengths, respectively. Bore out the mounting holes in the back plates and signal heads to the diameter recommended by the rivet manufacturer.
8. Before installing the machine screws that secure the visors, coat the threads with an anti–seizing compound.

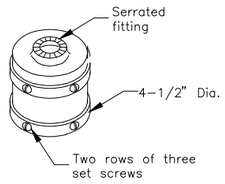


FRAMEWORK DESCRIPTION

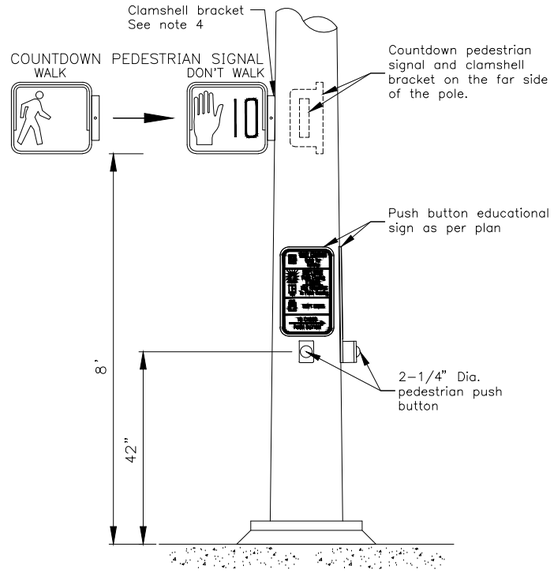
HEAD NO. ① OFFSET L.O.D.
HEAD NO. ② OFFSET R.O.D.



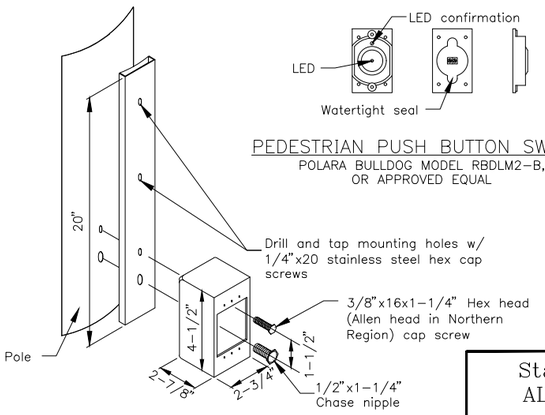
TERMINAL COMPARTMENT WITH SLIP FITTER
(SEE NOTES 1.C. AND 2)



SLIP FITTER
(SEE NOTE 1.B.)



PEDESTRIAN HARDWARE



PEDESTRIAN PUSH BUTTON SWITCH
POLARA BULLDOG MODEL RBDLM2–B, OR APPROVED EQUAL

PEDESTRIAN PUSH BUTTON HOUSING
(STYLE A)

State of Alaska DOT&PF
ALASKA STANDARD PLAN

TRAFFIC SIGNAL HARDWARE

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

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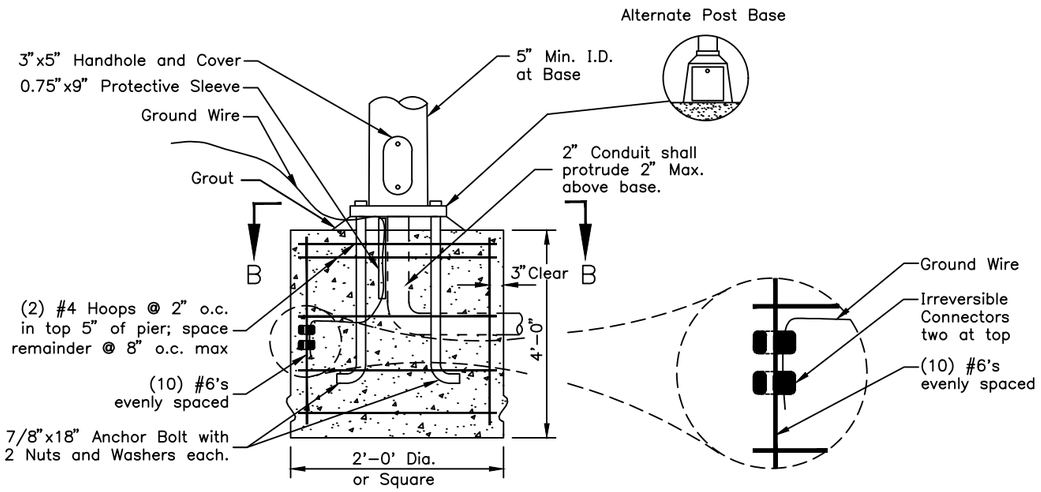
Last Code and Stds. Review
By: KLK Date: 7/8/2020

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

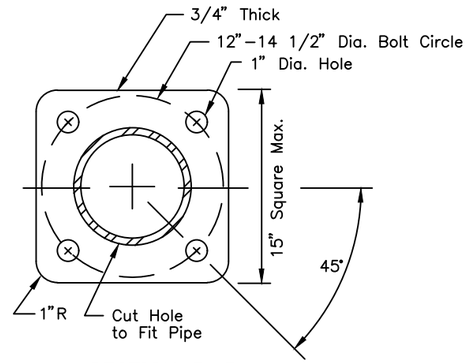
T–30.12

T-31.01

SHEET 1 of 1



SIGNAL BASE POST TYPE "A"



SECTION B-B

GENERAL NOTES:

1. Install ground rod when continuous electrically secure system is not provided between controller and service ground.
2. Anchor bolts, nuts and washers shall be high strength steel and shall conform to A.S.T.M. A-325. Galvanizing of same shall conform to A.S.T.M. A-153.
3. Anchor bolts may be field cut and bent.
4. Damage to galvanized surfaces as a result of field drilling and or cutting shall be repaired in accordance with Federal Specifications TT-P-641.
5. Use Class A, B, or W concrete.
6. Reinforcing steel to conform to A.S.T.M. A-615 grade 60 (Fy=60 ksi).

State of Alaska DOT&PF
ALASKA STANDARD PLAN

TRAFFIC SIGNAL & ACCESSORIES FOUNDATION

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

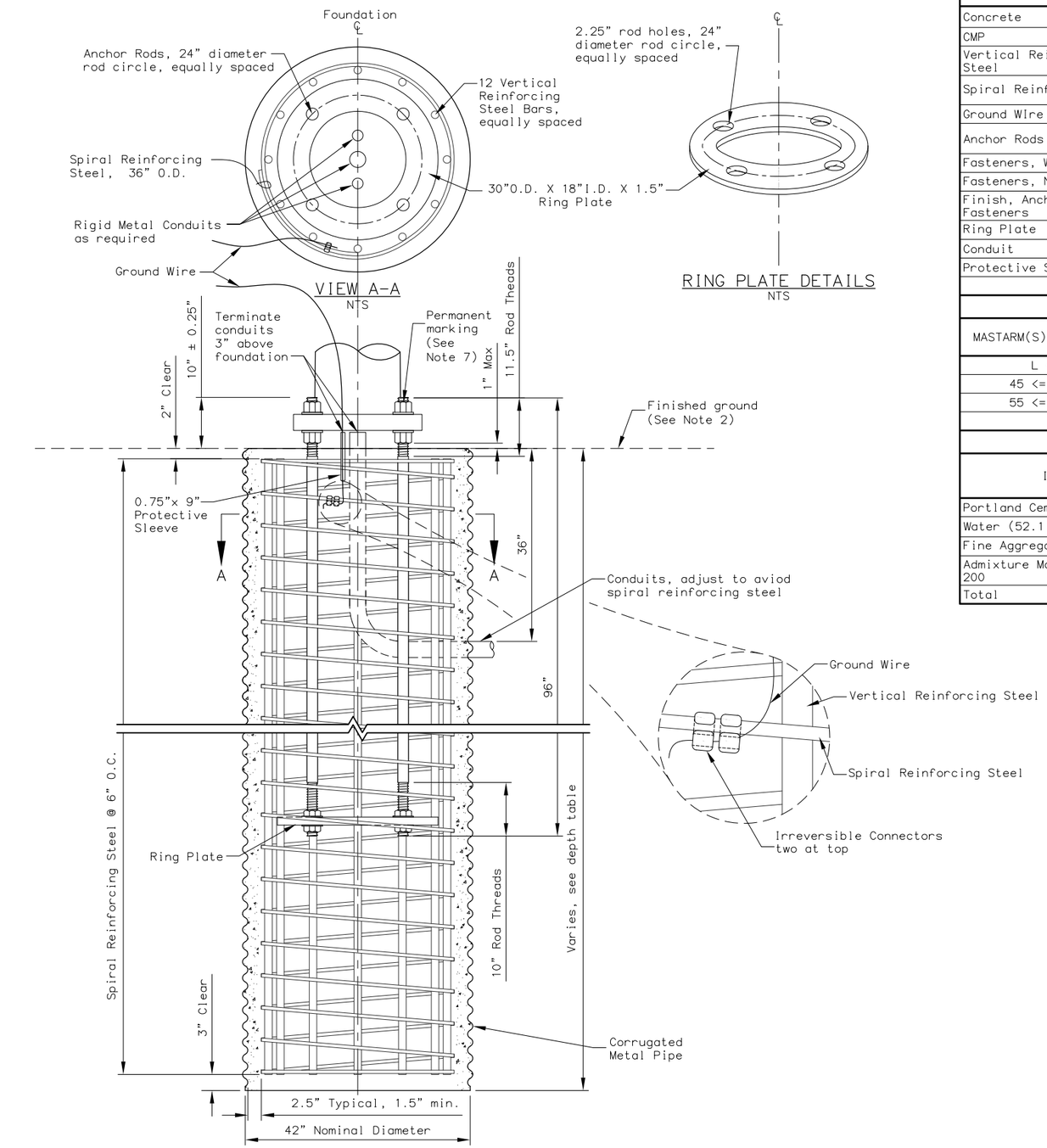
Adoption Date: 7/17/2020

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

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

T-31.01

T-52.22 | SHEET 1 of 1



FOUNDATION DETAILS
NTS
(Skirt omitted for clarity)

MATERIAL REQUIREMENTS		
Concrete	Class A	f'c = 4000 psi
CMP	AASHTO M218	14 ga.
Vertical Reinforcing Steel	AASHTO M31 #11	GR 60
Spiral Reinforcing Steel	AASHTO M31 #5	GR 60
Ground Wire		#4 AWG
Anchor Rods 2" X 96"	ASTM F1554 S2, S3, & S5	GR 105
Fasteners, Washers	ASTM F436	
Fasteners, Nuts	AASHTO M292M	
Finish, Anchor Rods & Fasteners	AASHTO M232	
Ring Plate	AASHTO M270	GR 36
Conduit	Sch 40	RMC
Protective Sleeve	Sch 40	PVC

DEPTH TABLE		
MASTARM(S) LENGTH (ft.)	FOUNDATION DEPTH BY APPLICATION (ft.)	
	SINGLE MASTARM	DOUBLE MASTARM
L <= 40	10	13
45 <= L <= 50	11	14
55 <= L <= 65	12	15

SAND SLURRY MIX DESIGN		
ITEM	BATCHING QUANTITIES PER CY BATCH (lbs.)	APPLICABLE SPECS.
Portland Cement	188	701-2.01
Water (52.1 gal.)	435	712-2.01
Fine Aggregate SSD	3041	703-2.01
Admixture MasterAir AE 200	2.0 oz.	711-2.02
Total	3664	

DESIGN NOTES:

Design Standard: 2013 Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2013 Errata and 2015 Interim Revision.

Design Load: 6,500 lbs axial, 6,500 lbs shear, 175,000 ft-lbs moment.

Specifications: Latest edition of the State Of Alaska Standard Specifications for Highway Construction with Special Provisions.

NOTES:

1. This foundation is approved for traffic signal applications in cohesionless soils with an N1-60 value of 10 or greater per AASHTO T-206, "Standard Penetration Test" (SPT). This foundation shall not be used if any of the following are encountered; water table above the bottom of foundation, very loose soils, organic soils, cohesive soils (clay), or soils susceptible to frost jacking. If any of these conditions are encountered, stop foundation work and contact the Engineer.
2. Place foundation in drilled or excavated hole with centerline of foundation located at the station, offset, and elevation specified in plans. Set foundation flush with surrounding surface. Grade to drain away from foundation without exposing more than 4" of the foundation from the surrounding ground surface.
3. Form the foundation in corrugated metal pipe conforming to Subsection 707-2.01 of the Specifications.
4. Provide 1.5 extra turns at each end of the spiral reinforcing steel. Reinforcing steel shall not be spliced. Tie vertical reinforcing steel to each intersection of the spiral reinforcing steel.
5. Connect ground wire near the top spiral reinforcing steel with two irreversible connectors as shown. Fasten connectors according to the manufacturers' recommendations including the use of manufacturer specified tools. The ground wire may be bare solid, stranded, or braided copper. Protect ground wire with protective sleeve as shown and fill with silicon sealant.
6. The Ring Plate May be "built up" of multiple steel plates. The minimum thickness for any one plate is 0.5 inches. Fasten the ring plate to anchor rods with nuts and washers on both sides of ring plate as shown. Torque ring plate nuts to 600 ft-lbs.
7. Anchor rods are subject to Charpy V-Notch Impact Testing. Submit mill certifications for anchor rods, nuts and washers. Galvanize anchor rods full length. Provide permanent manufacturer's identification and permanent grade identification on each end of anchor rod by steel die stamp. Secure exposed anchor rods with a "ring plate" when not in service. Install anchor rods plumb. Anchor rods greater than 1:40 out-of-plumb will result in foundation rejection.
8. Complete all concrete work in conformance with Sections 501, 503, and 660 of the Specifications. Use a tremie, tube or other approved device per Subsection 501-3.05. Vibrate concrete during placement by mechanical vibration per Subsection 501-3.06. Ensure upper anchor rod threads are protected from contact with concrete during pour.
9. Backfill and compact according to Section 204, and Subsections 203-3.04 and 660-3.01 of the Specifications. Use select material, Type A or sand slurry as backfill material. Ensure area below foundation meets compaction requirements and is free of loose material and debris prior to concrete work.

State of Alaska DOT&PF
ALASKA STANDARD PLAN

CONCRETE 42" DIAMETER SIGNAL POLE FOUNDATION

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

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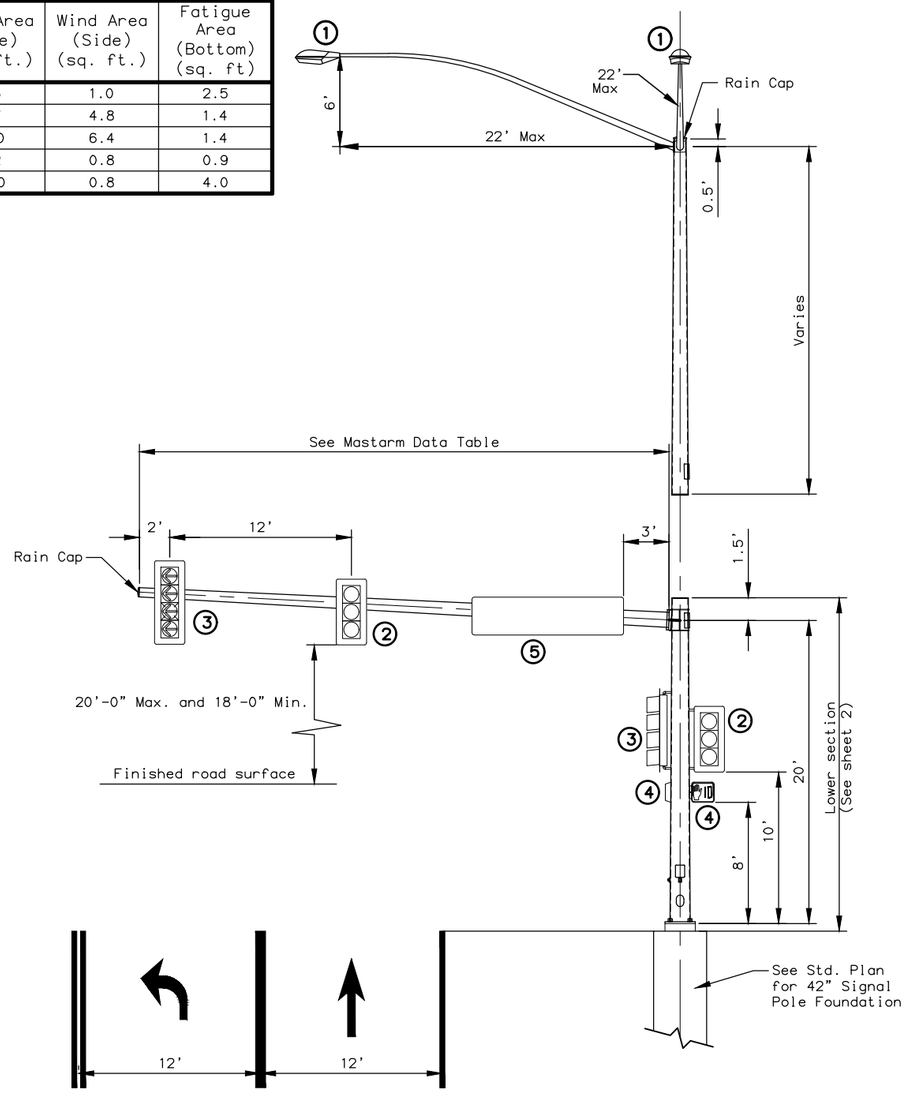
By: Date: 5/13/2021

Next Code and Standards Review date:5/13/2031

T-52.22

T-54.11 | SHEET 1 of 4

POLE DESIGN LOADING						
Load Component	Height (ft.)	Weight (lbs.)	Ice Area (sq. ft.)	Wind Area (Face) (sq. ft.)	Wind Area (Side) (sq. ft.)	Fatigue Area (Bottom) (sq. ft)
1 = Luminaire	0.5	25	8.1	0.6	1.0	2.5
2 = Signal	4.5	54	2.9	8.7	4.8	1.4
3 = Signal	5.6	70	37.5	11.0	6.4	1.4
4 = Ped Head	1.4	22	7.8	2.2	0.8	0.9
5 = Sign	2.5	120	69.7	30.0	0.8	4.0



ELEVATION VIEW

NTS

NOTES:

1. Provide pole assemblies designed, manufactured and installed according to: 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2013 Errata and 2015 Interim Revision, the latest edition of the Alaska Standard Specifications for Highway Construction including standard modifications, and special provisions. Design structures for a 50-year Design Life, Fatigue Category I with ice loading, and with a basic wind speed of 100 mph. Fatigue design shall include Natural Wind Gust and Truck-Induced Gust.
2. Provide poles to accommodate the maximum length shown in the mastarm data with the given loads, dimensions, and material requirements.
3. This drawing shows loads (signs and signals) to be used by manufacturers when designing poles. It does not show actual loading of poles/mastarms on individual projects. This pole/mastarm design may be used without further analysis if the following conditions are met:
   - The guide sign (load #5) is attached to the mastarm base section and,
   - Not more than 5 traffic signals and/or signs are attached to the mastarm.

   If these conditions are not met, this standard pole/mastarm design may only be used if design computations are submitted that demonstrate conformance to design criteria (note 1) using actual loads. Devices with less than 1 square foot of projected area may be added to the mastarm without causing a need for additional design computations.
4. The manufacturer is to determine weld sizes. All welds and testing shall conform to the latest edition of the structural welding code AWS D1.1. Provide visual testing (VT) of 100% of all welds. Provide magnetic particle testing (MT) of 100% of all fillet welds. Provide radiographic (RT) or ultrasonic testing (UT) of 100% of all complete joint penetration welds and a random 25% of all partial joint penetration longitudinal seam welds.
5. Fabricate pole tubes and mastarm tubes from no more than 2 pieces of steel. When using 2 pieces, place the longitudinal welded seams directly opposite one another. Transverse weld seams prohibited.
6. Fabricate luminaire arms and connections according to the latest lighting standard detail.
7. Provide permanent tags on all pole sections per section 740 table 740-1 of the specifications. Provide a weather proof rain cap on all exposed sections of the structure.
8. The Department will reject damaged or defective poles for any of the following; variances from approved shop drawings, variances from material requirements, sections more than 2-percent out of round, flanged mounting surfaces with flatness variation greater than 0.030", sections bowed more than 1-inch throughout the length of the pole, mastarm, or segment, and damaged or dented finishes.
9. To allow for wiring, field drill a 1" maximum diameter hole at each traffic signal head location. Orient the hole on the horizontal axis of mastarms.
10. Install pole raked outward from plumb position in the direction opposite the mastarm such that the side of the pole opposite the mastarm is vertical.
11. Clean and remove dirt, burrs, mill scale, and excess galvanization on all faying surfaces and threaded parts before assembly. Lubricate the threads of all bolts and nuts with lubricant containing a visible dye. Tighten all bolts according to section 504 of the specifications.

MASTARM DATA						
MASTARM				MASTARM BASEPLATE		
Length (ft.)	Maximum Allowed Galloping Defliction (in.)	Fixed End Diameter* (in.)	Tube Thickness (in.)	Plate Opening Diameter (in.)	Bolt Circle Diameter (in.)	Plate Thickness (in.)
15	8.0	9.38	0.239	7.0	20.0	3.0
20	8.0	10.05	0.239	7.0	20.0	3.0
25	8.0	10.75	0.239	7.0	20.0	3.0
30	8.0	11.45	0.239	7.0	20.0	3.0
35	8.0	12.15	0.239	7.0	20.0	3.0

*Fixed end diameter measured at connection to Baseplate

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE
WITH 15' TO 35' MASTARM
LOADING & NOTES

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

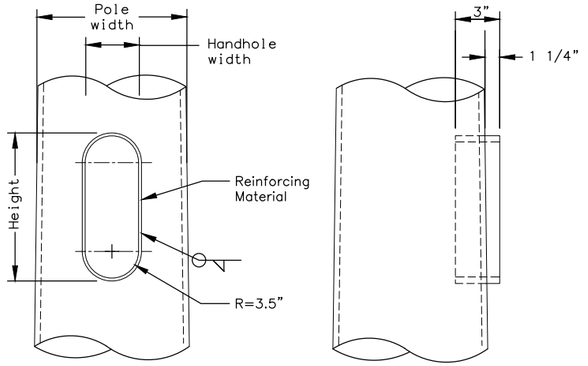
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/30/2021

Last Code and Stds. Review
By: Date: 5/13/2021

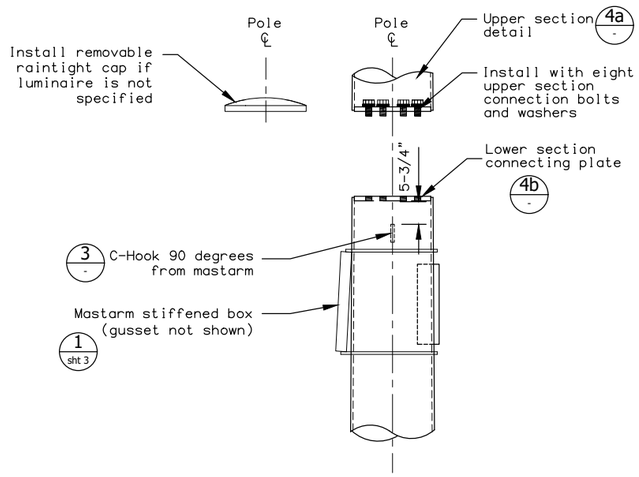
Next Code and Standards Review date:5/13/2031

T-54.11

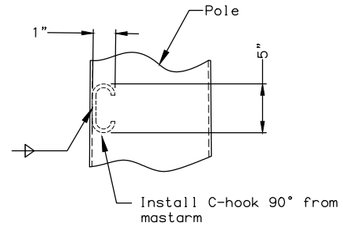


1 REINFORCED HANDHOLE DETAILS

(See material requirements table for dimensions)
NTS

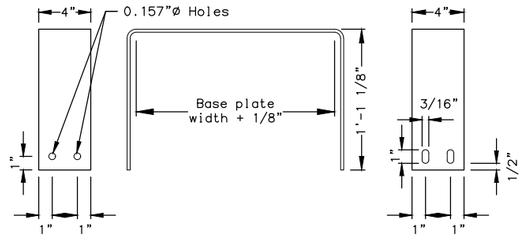


4 POST TOP LOWER SECTION DETAIL



3 C-HOOK DETAIL

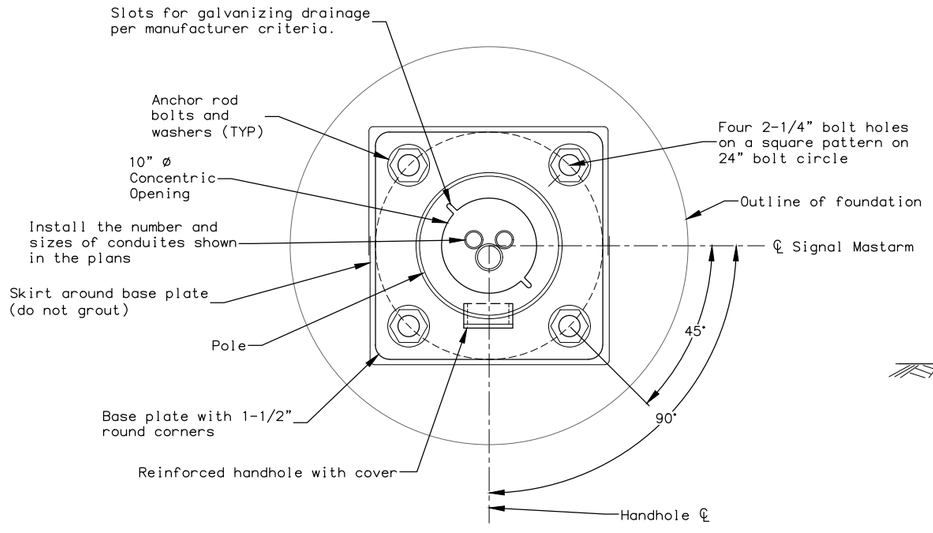
(Typical throughout lower section)
NTS



2 SKIRT DETAIL

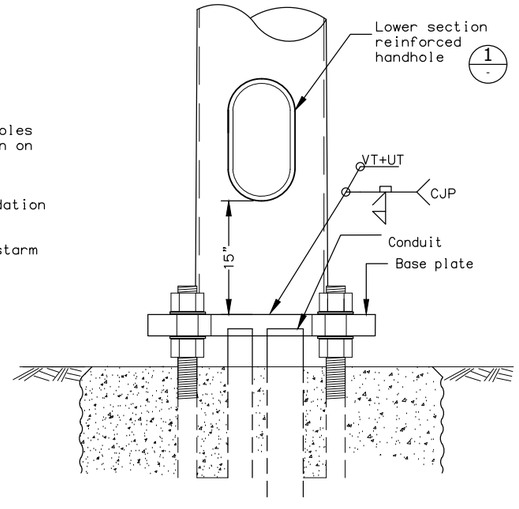
NTS
(Two required per pole)

MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Steel ≤1/2" Thick	ASTM A572 OR A595
Steel > 1/2" Thick	ASTM A709 (50ksi - Zone 3)
Finish	ASTM A123 & A153
Mastarm Bolts	ASTM F3125
Mastarm Washers	ASTM F436
Anchor Rods	See T-52
POLE (LOWER SECTION)	
Design Length	21.50'
Section Shape	Round
Simplex Height	20.0'
Taper	0.14'/ft
Diameter Bolt Circle	24.0"
Diameter Concentric Opening	10.0"
Tube Thickness	.375"
Fixed End Diameter	15.0" OD
Base Plate	24" x 24" x 2.25"
Backing Ring	0.25" x 3"
HANDHOLE DIMENSIONS	
Outside Dimensions	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhole Cover	0.125"
MISCELLANEOUS	
Post Top Connecting Plates	1.00"
Pole Skirt	0.125"
C-Hook	0.50"



PLAN VIEW

(Shown without anchor bolts and nuts for clarity)

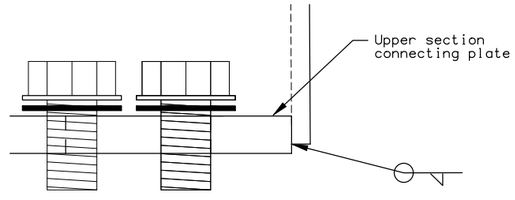


FRONT VIEW

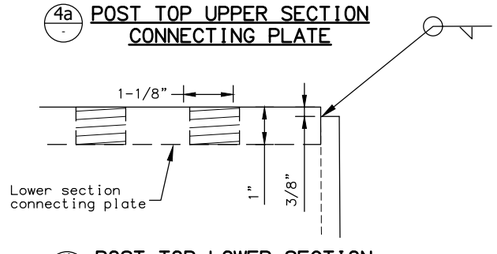
(Skirt omitted for clarity) 2

5 POLE BASE DETAILS

NTS



4a POST TOP UPPER SECTION CONNECTING PLATE



4b POST TOP LOWER SECTION CONNECTING PLATE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE
WITH 15' TO 35' MASTARM
LOWER SECTION

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

Adoption Date: 7/30/2021

Last Code and Stds. Review
By: Date: 5/13/2021

Next Code and Standards Review date:5/13/2031

T-54.11

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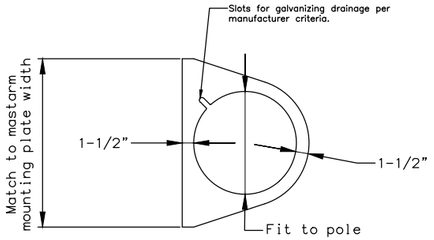
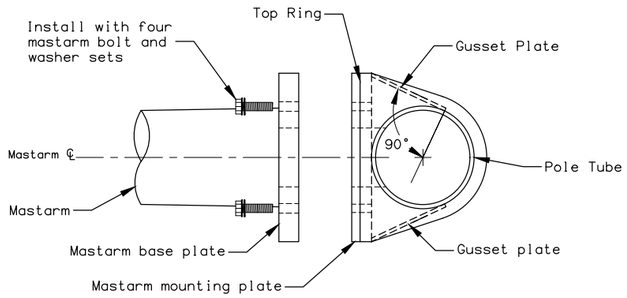
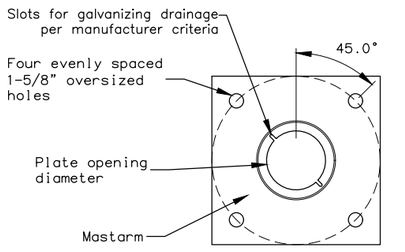


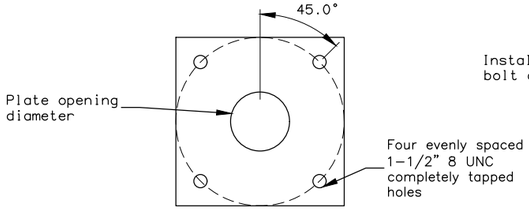
RING DETAIL



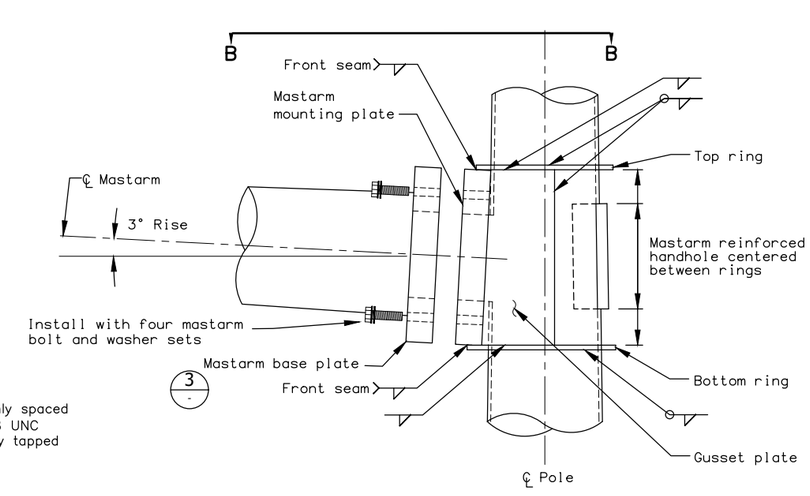
SECTION B-B



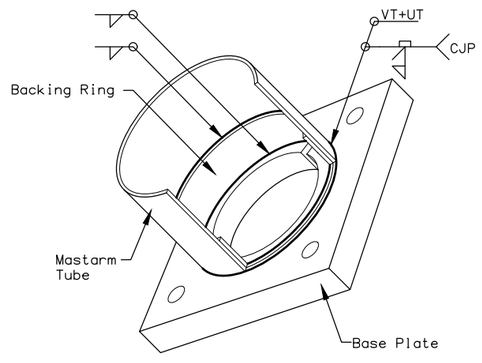
MASTARM BASE PLATE



MASTARM MOUNTING PLATE



SIDE VIEW



ISO VIEW

TUBE TO TRANSVERSE PLATE WELD DETAIL

(3/-)

(Shown with tube and backing ring cutout for clairity)

(1/-) RING - STIFFENED BOX DETAILS

NTS

MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Steel ≤ 1/2" Thick	ASTM A572 OR A595
Steel > 1/2" Thick	ASTM A709 (50ksi - Zone 3)
Finish	ASTM A123 & A153
Mastarm Bolts	ASTM F3125
Mastarm Washers	ASTM F436
Anchor Rods	See T-52
RING-STIFFENED BOX	
Mastarm Mounting Plate	20" x 20" x 2.25"
Plate Opening Diameter	Mastarm Data (See Sheet 1)
Top Ring Thickness	0.375"
Bottom Ring Thickness	0.375"
Gusset Plate Thickness	0.375"
MASTARM HANDHOLE	
Outside Dimensions	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhold Cover	0.125"
MASTARM	
Design Length	35'
Section Shape	Round
Taper	0.14"/ft
Bolt Circle Diameter	Mastarm Data (See Sheet 1)
Plate Opening Diameter	Mastarm Data (See Sheet 1)
Mastarm Tube Thickness	Mastarm Data (See Sheet 1)
Fixed End Diameter	Mastarm Data (See Sheet 1)
Mastarm Rise	3.0 Degrees
Mastarm Baseplate	20" x 20" x 3"
Backing Ring	0.25" x 3"
Mastarm Bolts	1.5" 6 UNC x 5.5"

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE WITH 15' TO 35' MASTARM MASTARM & STIFFENED BOX

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/30/2021

Last Code and Stds. Review
By: Date: 5/13/2021

Next Code and Standards Review date:5/13/2031

T-54.11

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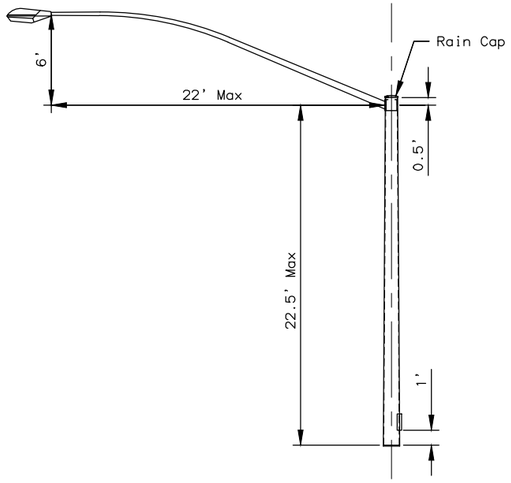
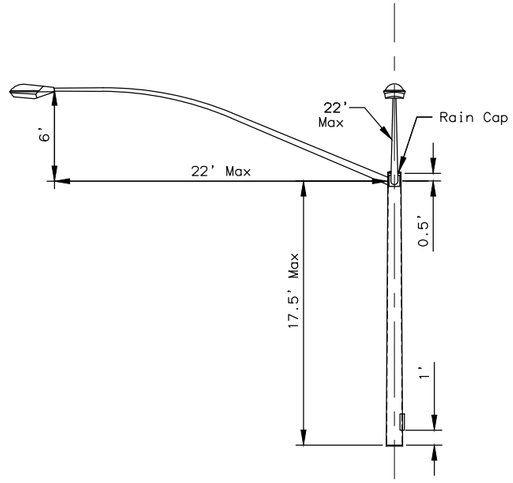
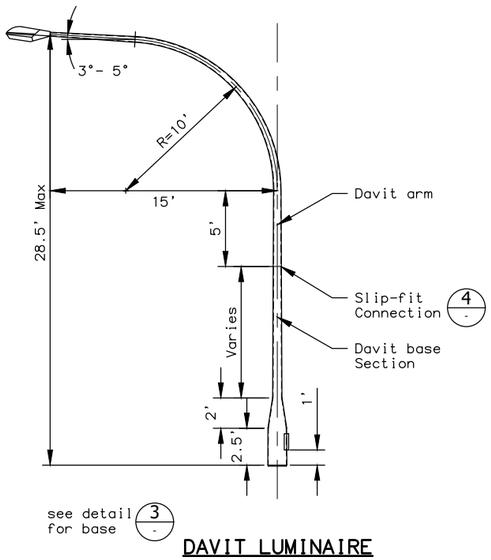
SHEET 4 of 4



SINGLE LUMINAIRE



DOUBLE LUMINAIRE

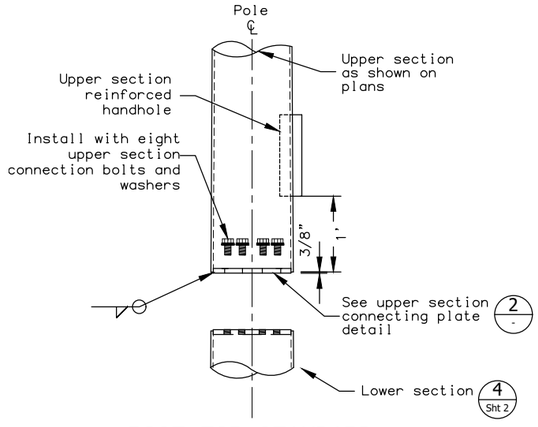


DAVIT LUMINAIRE

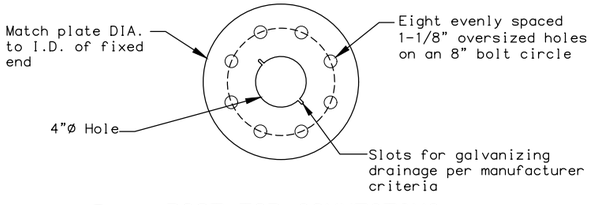
UPPER SECTION OPTIONS

NTS

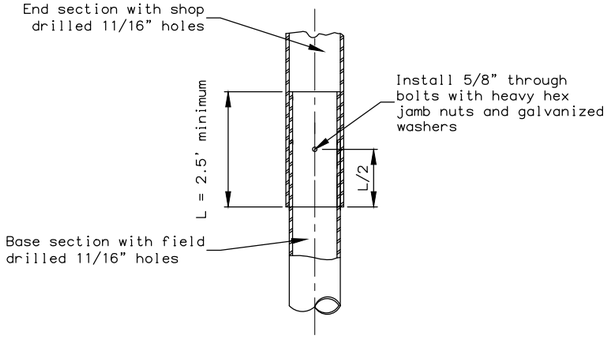
MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Tube Material	A572, A595 GR A, or A1011 (50ksi min)
Post Top Connecting Plates	ASTM A709 (Zone 3)
Concentric Reducer	A572 OR A595 GR A
Connection Tube	A572 OR A595 GR A
Luminaire, Arm, and Mounting	See Lighting Standard Details
Upper Section Connection Bolts	ASTM F3125
Upper Section Connection Washers	ASTM F436
Slip Fit Through Bolt	ASTM F3125
Finish	ASTM A123 & A153
STANDARD UPPER SECTION	
Fixed End Diameter	11.99" O.D.
Taper	0.14"/ft
Connecting Plate Thickness	1"
Post Top Connection Bolts	1" 8 UNC x 2.75"
Tube Thickness	7 GA
HANDHOLE DIMENSIONS	
Upper Section Handhole	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhole Cover	0.125"
SINGLE LUMINAIRE	
Design Length	22.5'
Section Shape	Round
DOUBLE LUMINAIRE	
Design Length	17.5'
Section Shape	Round
DAVIT LUMINAIRE	
Design Length	28.5'
Section Shape	Round
Taper	0.14'/ft
Free End Diameter	2.375" O.D.
Connection Tube	7 GA
Concentric Reducer	7 GA
Davit Arm Connection Tube	7 GA
Davit Arm	7 GA



1 POST TOP STANDARD UPPER SECTION BASE DETAIL

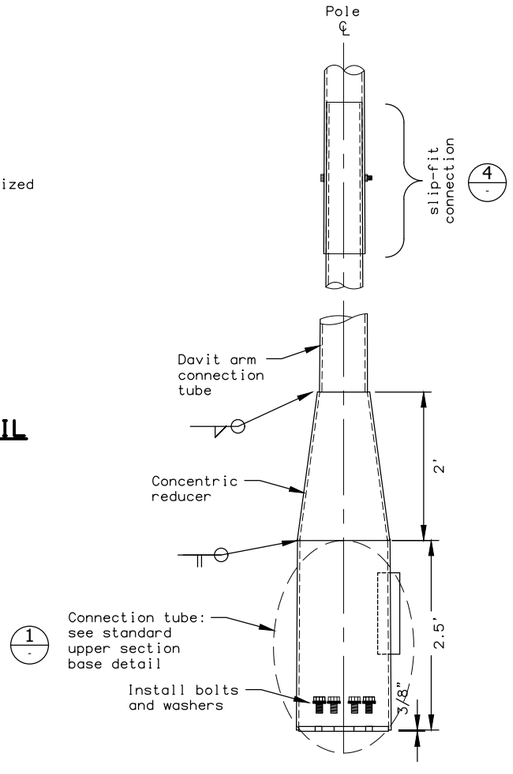


2 POST TOP CONNECTING PLATE DETAIL



4 MASTARM SLIP SPLICE ELEVATION DETAIL

NTS



3 DAVIT UPPER SECTION BASE DETAIL

NTS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE WITH 15' TO 35' MASTARM UPPER SECTION

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

Adoption Date: 7/30/2021

Last Code and Stds. Review By: Date: 5/13/2021

Next Code and Standards Review date: 5/13/2031

T-54.11

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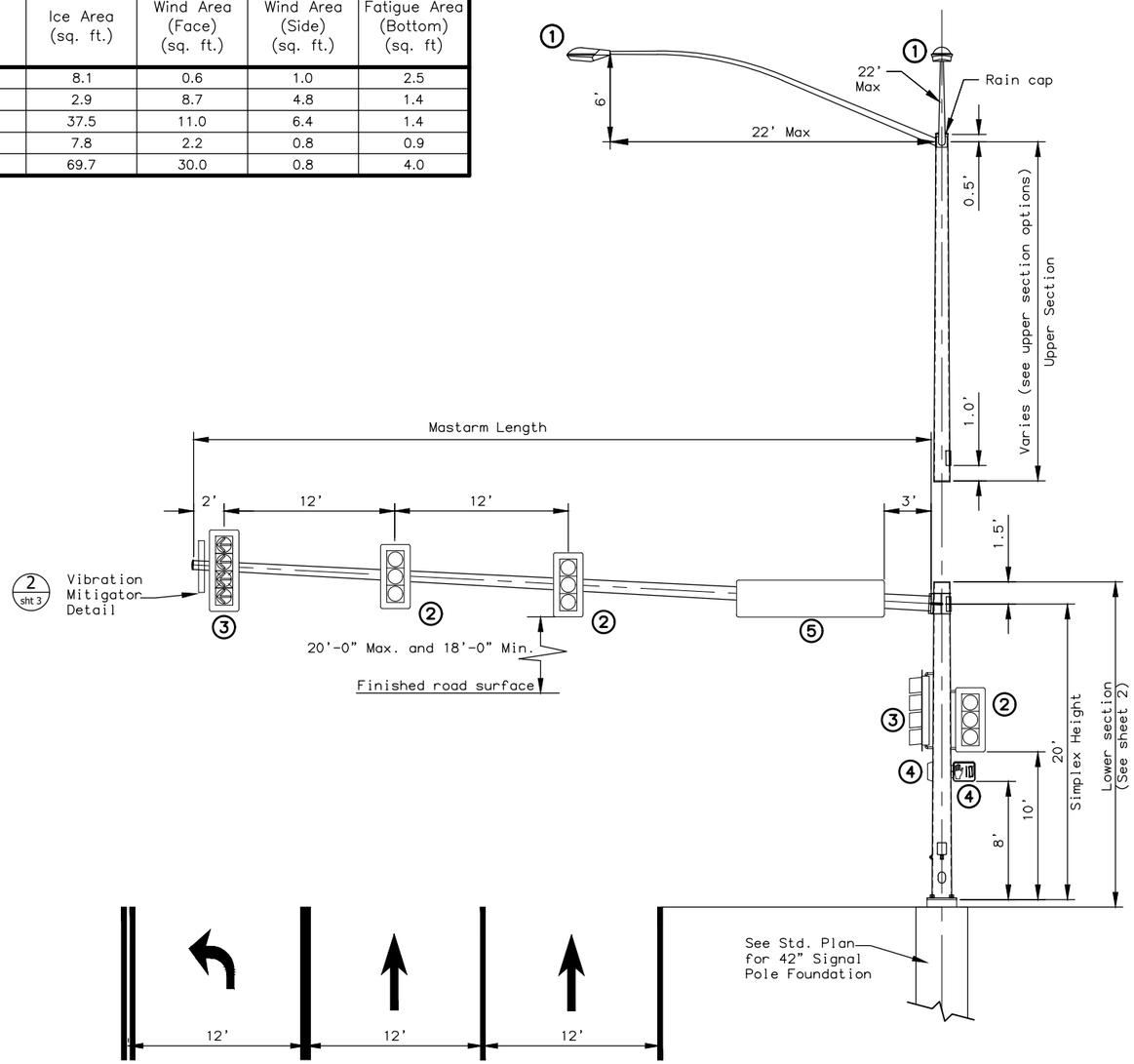
POLE DESIGN LOADING						
Load Component	Height (ft.)	Weight (lbs.)	Ice Area (sq. ft.)	Wind Area (Face) (sq. ft.)	Wind Area (Side) (sq. ft.)	Fatigue Area (Bottom) (sq. ft)
1 = Luminaire	0.5	25	8.1	0.6	1.0	2.5
2 = Signal	4.5	54	2.9	8.7	4.8	1.4
3 = Signal	5.6	70	37.5	11.0	6.4	1.4
4 = Ped Head	1.4	22	7.8	2.2	0.8	0.9
5 = Sign	2.5	120	69.7	30.0	0.8	4.0



ELEVATION VIEW

NOTES:

1. Provide pole assemblies designed, manufactured and installed according to: 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2013 Errata and 2015 Interim Revision, the latest edition of the Alaska Standard Specifications for Highway Construction including standard modifications, and special provisions. Design structures for a 50-year Design Life, Fatigue Category I with ice loading, and with a basic wind speed of 100 mph. Fatigue design shall include Natural Wind Gust, Truck-Induced Gust, and an approved vibration mitigating device in lieu of Galloping effect.
2. Provide poles to accommodate the maximum length shown in the mastarm data with the given loads, dimensions, and material requirements.
3. This drawing shows loads (signs and signals) to be used by manufacturers when designing poles. It does not show actual loading of poles/mastarms on individual projects. This pole/mastarm design may be used without further analysis if the following conditions are met:
   - The guide sign (load #5) is attached to the mastarm base section and,
   - Not more than 5 traffic signals and/or signs are attached to the mastarm.

   If these conditions are not met, this standard pole/mastarm design may only be used if design computations are submitted that demonstrate conformance to design criteria (note 1) using actual loads. Devices with less than 1 square foot of projected area may be added to the mastarm without causing a need for additional design computations.
4. The manufacturer is to determine weld sizes. All welds and testing shall conform to the latest edition of the structural welding code AWS D1.1. Provide visual testing (VT) of 100% of all welds. Provide magnetic particle testing (MT) of 100% of all fillet welds. Provide radiographic (RT) or ultrasonic testing (UT) of 100% of all complete joint penetration welds and a random 25% of all partial joint penetration longitudinal seam welds.
5. Fabricate pole tubes and mastarm tubes from no more than 2 pieces of steel. When using 2 pieces, place the longitudinal welded seams directly opposite one another. Transverse weld seams prohibited.
6. Fabricate luminaire arms and connections according to the latest lighting standard detail.
7. Provide permanent tags on all pole sections per section 740 table 740-1 of the specifications. Provide a weather proof rain cap on all exposed sections of the structure.
8. The Department will reject damaged or defective poles for any of the following; variances from approved shop drawings, variances from material requirements, sections more than 2-percent out of round, flanged mounting surfaces with flatness variation greater than 0.030", sections bowed more than 1-inch throughout the length of the pole, mastarm, or segment, and damaged or dented finishes.
9. To allow for wiring, field drill a 1" maximum diameter hole at each traffic signal head location. Orient the hole on the horizontal axis of mastarms.
10. Install pole raked outward from plumb position in the direction opposite the mastarm such that the side of the pole opposite the mastarm is vertical.
11. Clean and remove dirt, burrs, mill scale, and excess galvanization on all faying surfaces and threaded parts before assembly. Lubricate the threads of all bolts and nuts with lubricant containing a visible dye. Tighten all bolts according to section 504 of the specifications.

MASTARM DATA										
MASTARM		MASTARM END SECTION			MASTARM BASE SECTION			MASTARM BASEPLATE		
Length (ft.)	Maximum Allowed Galloping Deflection (in.)	Free End Diameter (in.)	Length (ft.)	Tube Thickness (in.)	Length (ft.)	Fixed End Diameter* (in.)	Tube Thickness (in.)	Plate Opening Diameter (in.)	Bolt Circle Diameter (in.)	Plate Thickness (in.)
40	8.0	7.25	25.0	0.1793	18.34	12.5	0.3125	10.0	22.0	2.25
45	8.0	7.25	25.0	0.1793	23.34	13.2	0.3125	10.0	22.0	2.25
50	8.0	7.25	25.0	0.1793	28.34	13.9	0.3125	10.0	22.0	2.25

*Fixed end diameter measured at connection to Baseplate

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE WITH 40' TO 50' MASTARM LOADING & NOTES

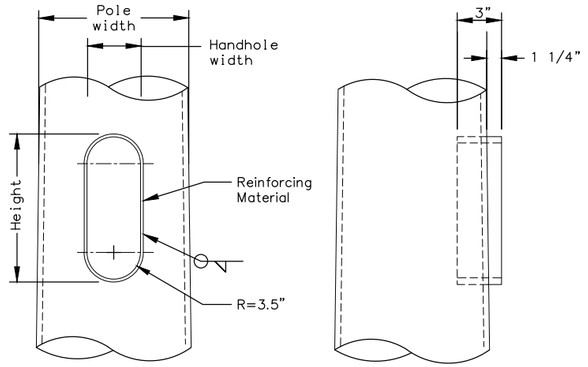
Adopted as an Alaska Standard Plan by: Carolyn Morehouse
Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 7/30/2021

Last Code and Stds. Review By: Date: 5/13/2021

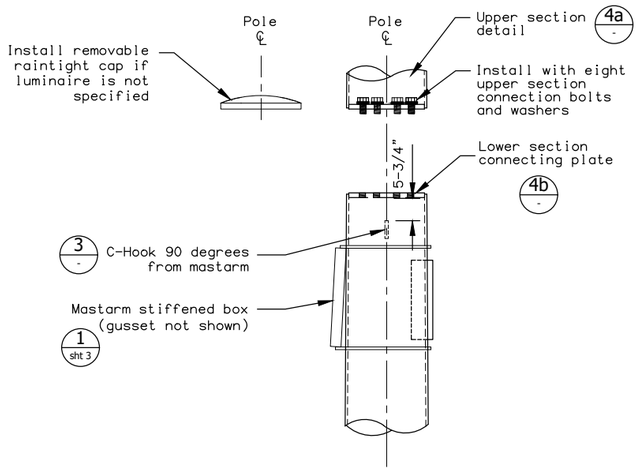
Next Code and Standards Review date: 5/13/2031

T-55.11

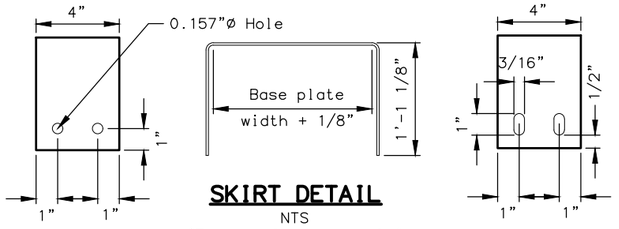


1 REINFORCED HANDHOLE DETAILS

(See material requirements table for dimensions)
NTS

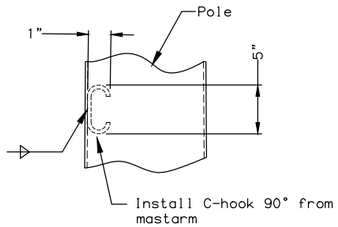


4 LOWER SECTION POST TOP DETAIL



SKIRT DETAIL

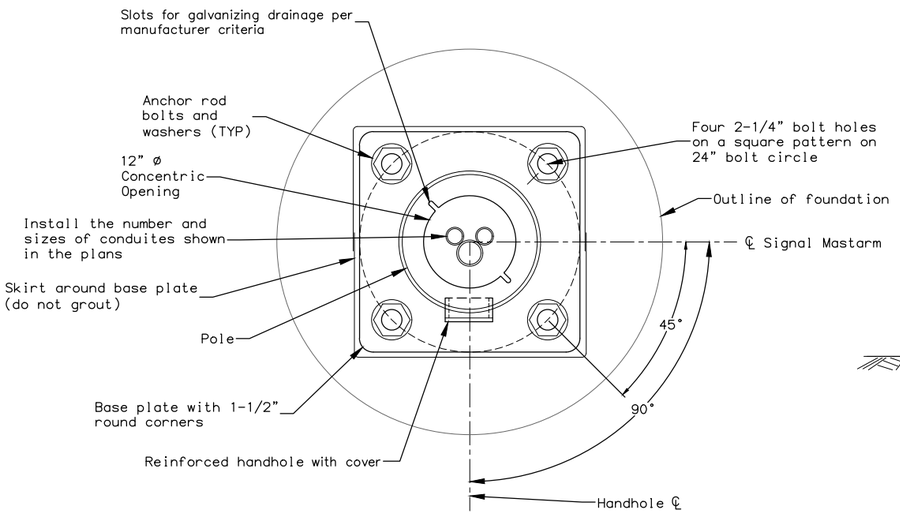
NTS
(Two required per pole)



3 C-HOOK DETAIL

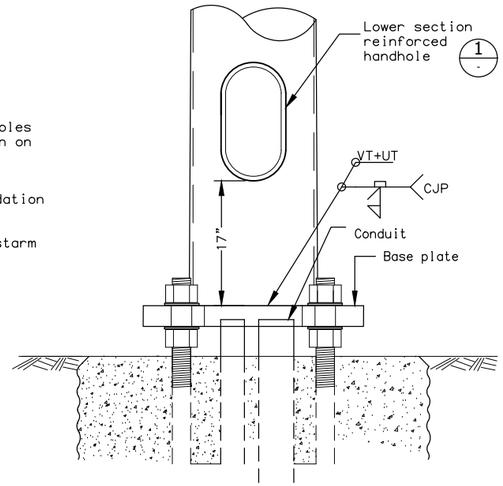
(Typical throughout lower section)
NTS

MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Steel ≤ 1/2" Thick	ASTM A572 OR A595
Steel > 1/2" Thick	ASTM A709 (50ksi – Zone 3)
Finish	ASTM A123 & A153
Mastarm Bolts	ASTM F3125
Mastarm Washers	ASTM F436
Anchor Rods	See T-52
POLE (LOWER SECTION)	
Design Length	21.50'
Section Shape	Round
Simplex Height	20.0'
Taper	0.14'/ft
Baseplate Bolt Circle Diameter	24.0"
Diameter Concentric Opening	12.0"
Tube Thickness	0.375"
Fixed End Diameter	17.0" OD
Base Plate	24" x 24" x 2.25"
Backing Ring	0.25" x 3"
HANDHOLE DIMENSIONS	
Outside Dimensions	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhole Cover	0.125"
MISCELLANEOUS	
Post Top Connecting Plates	1.00"
Pole Skirt	0.125"
C-Hook	0.50"



PLAN VIEW

(Shown without anchor bolts and nuts for clarity)

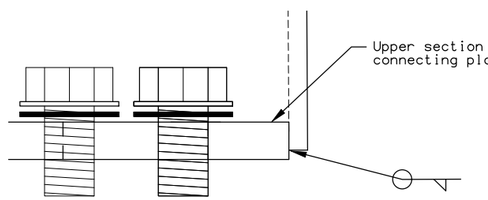


FRONT VIEW

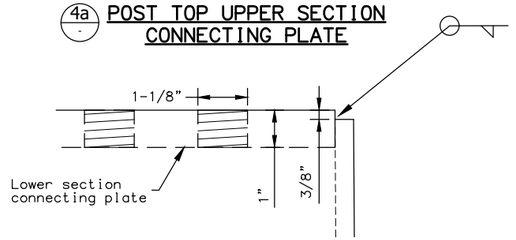
(Skirt omitted for clarity) 2

5 POLE BASE DETAILS

NTS



4a POST TOP UPPER SECTION CONNECTING PLATE



4b POST TOP LOWER SECTION CONNECTING PLATE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

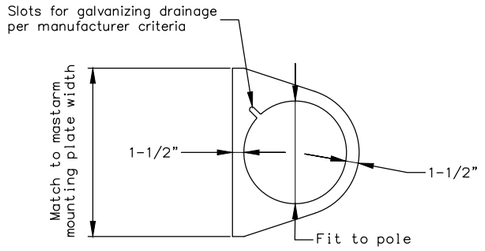
SIGNAL POLE WITH 40' TO 50' MASTARM LOWER SECTION

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

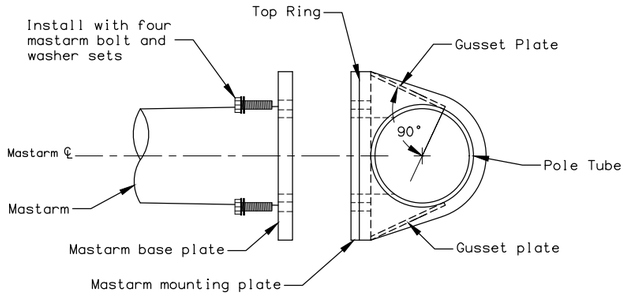
Adoption Date: 7/30/2021

Last Code and Stds. Review By: Date: 5/13/2021

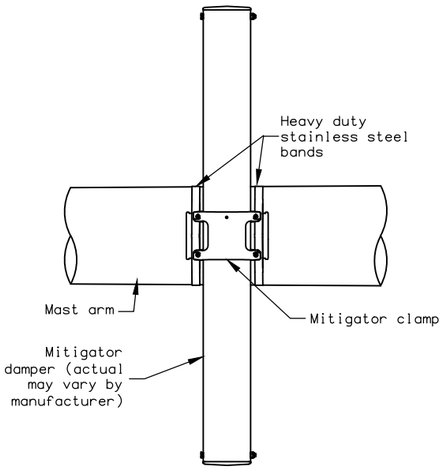
Next Code and Standards Review date: 5/13/2031



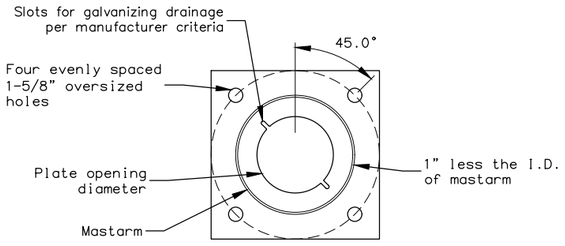
RING DETAIL



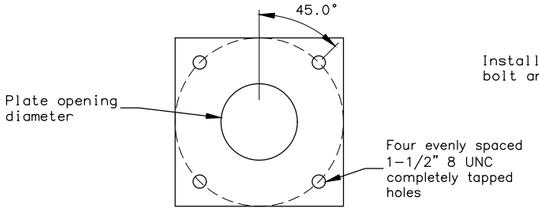
SECTION B-B



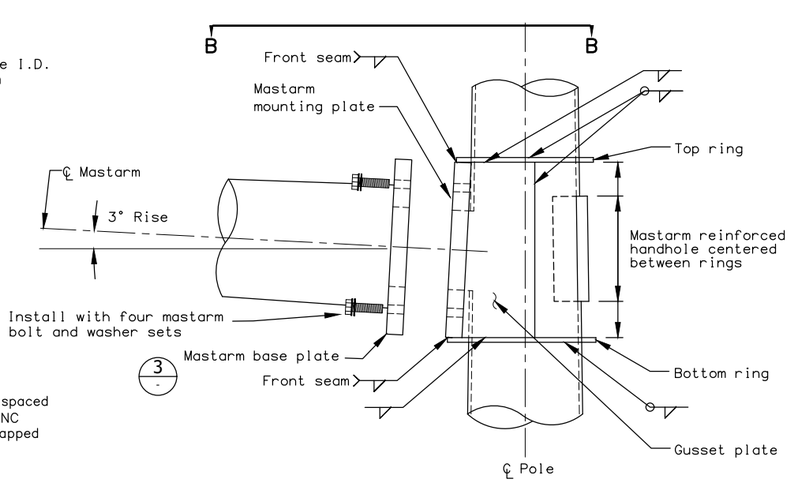
2 VIBRATION MITIGATOR CONNECTION DETAIL



MASTARM BASE PLATE

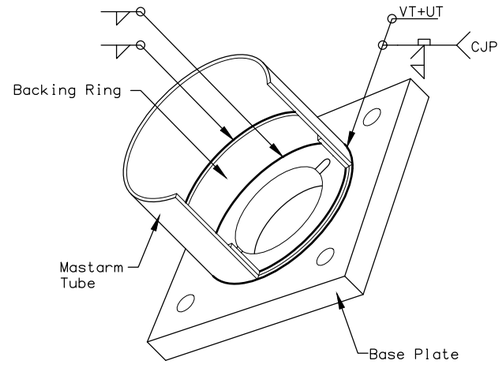


MASTARM MOUNTING PLATE



SIDE VIEW

1 RING - STIFFENED BOX DETAILS
NTS



ISO VIEW

3 TUBE TO TRANSVERSE PLATE WELD DETAIL
(Shown with tube and backing ring cutout for clairity)

MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Steel ≤ 1/2" Thick	ASTM A572 OR A595
Steel > 1/2" Thick	ASTM A709 (50ksi – Zone 3)
Finish	ASTM A123 & A153
Mastarm Bolts	ASTM F3125
Mastarm Washers	ASTM F436
Anchor Rods	See T-52
RING-STIFFENED BOX	
Mastarm Mounting Plate	22" x 22" x 2.25"
Plate Opening Diameter	Mastarm Data (See Sheet 1)
Top Ring Thickness	0.375"
Bottom Ring Thickness	0.375"
Gusset Plate Thickness	0.375"
MASTARM HANDHOLE	
Outside Dimensions	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhold Cover	0.125"
MASTARM	
Design Length	50'
Section Shape	Round
Bolt Circle Diameter	Mastarm Data (See Sheet 1)
Plate Opening Diameter	Mastarm Data (See Sheet 1)
Mastarm Tube Thickness	Mastarm Data (See Sheet 1)
Fixed End Diameter	Mastarm Data (See Sheet 1)
Mastarm Rise	3.0 Degrees
Mastarm Baseplate	22" x 22" x 2.25"
Backing Ring	0.25" x 3"
Mastarm Bolts	1.5" 6 UNC x 5.5"

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE
WITH 40' TO 50' MASTARM
MASTARM & STIFFENED BOX

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

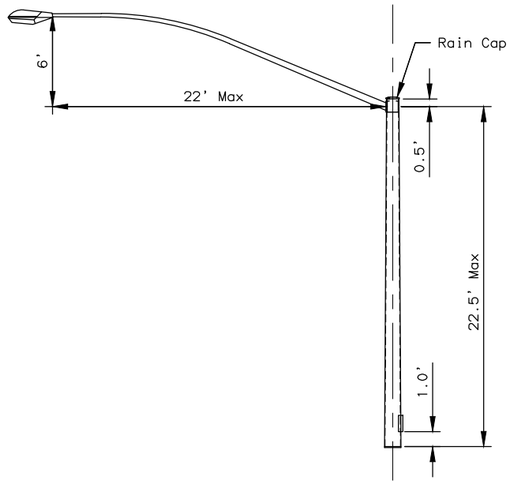
Adoption Date: 7/30/2021

Last Code and Stds. Review
By: Date: 5/13/2021

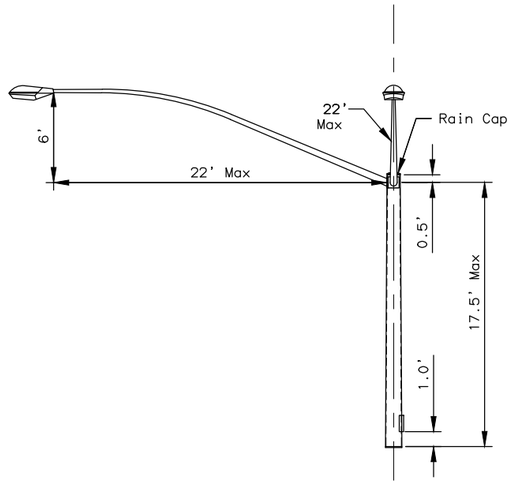
Next Code and Standards Review date:5/13/2031

T-55.11

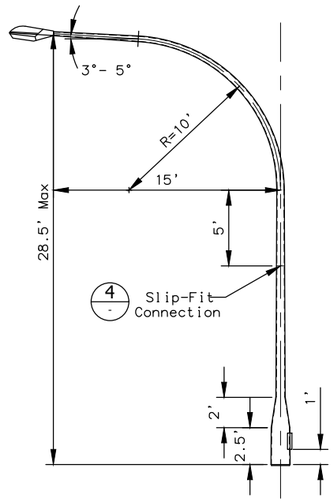
T-55.11



SINGLE LUMINAIRE



DOUBLE LUMINAIRE

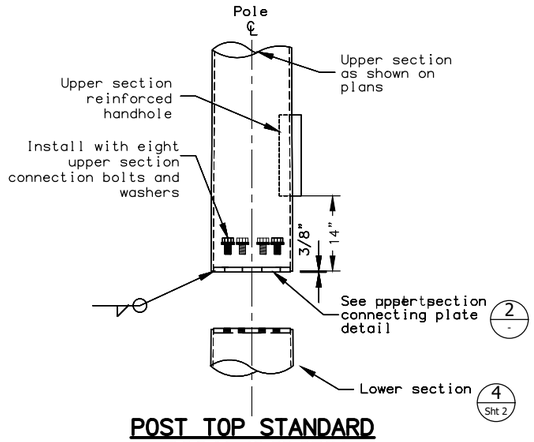


DAVIT LUMINAIRE

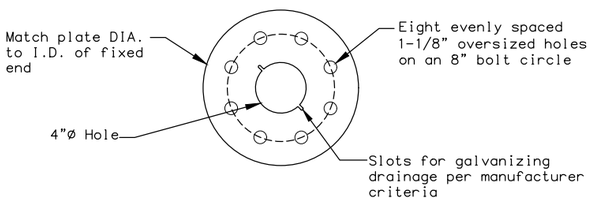
UPPER SECTION OPTIONS

NTS

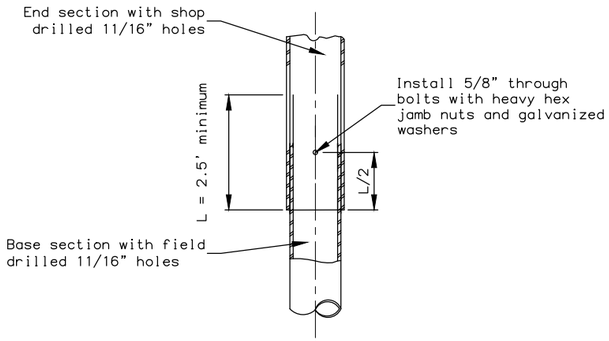
MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Tube Material	A572, A595 GR A, or A1011 (50ksi min)
Post Top Connecting Plates	ASTM A709 (Zone 3)
Concentric Reducer	A572 OR A595 GR A
Connection Tube	A572 OR A595 GR A
Luminaire, Arm, and Mounting	See Lighting Standard Details
Upper Section Connection Bolts	ASTM F3125
Upper Section Connection Washers	ASTM F436
Slip Fit Through Bolt	ASTM F3125
Finish	ASTM A123 & A153
STANDARD UPPER SECTION	
Fixed End Diameter	13.99" O.D.
Taper	0.14"/ft
Connecting Plate Thickness	1"
Post Top Connection Bolts	1" 8 UNC x 2.75"
Tube Thickness	7 GA
HANDHOLE DIMENSIONS	
Upper Section Handhole	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhole Cover	0.125"
SINGLE LUMINAIRE	
Design Length	22.5'
Section Shape	Round
DOUBLE LUMINAIRE	
Design Length	17.5'
Section Shape	Round
DAVIT LUMINAIRE	
Design Length	28.5'
Section Shape	Round
Taper	0.14'/ft
Free End Diameter	2.375" O.D.
Connection Tube	7 GA
Concentric Reducer	7 GA
Davit Arm Connection Tube	7 GA
Davit Arm	7 GA



1 - POST TOP STANDARD UPPER SECTION BASE DETAIL



2 - POST TOP CONNECTING PLATE DETAIL



4 - MASTARM SLIP SPLICE ELEVATION DETAIL

NTS

3 - DAVIT UPPER SECTION BASE DETAIL

NTS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE WITH 40' TO 50' MASTARM UPPER SECTION

Adopted as an Alaska Standard Plan by: Carolyn Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

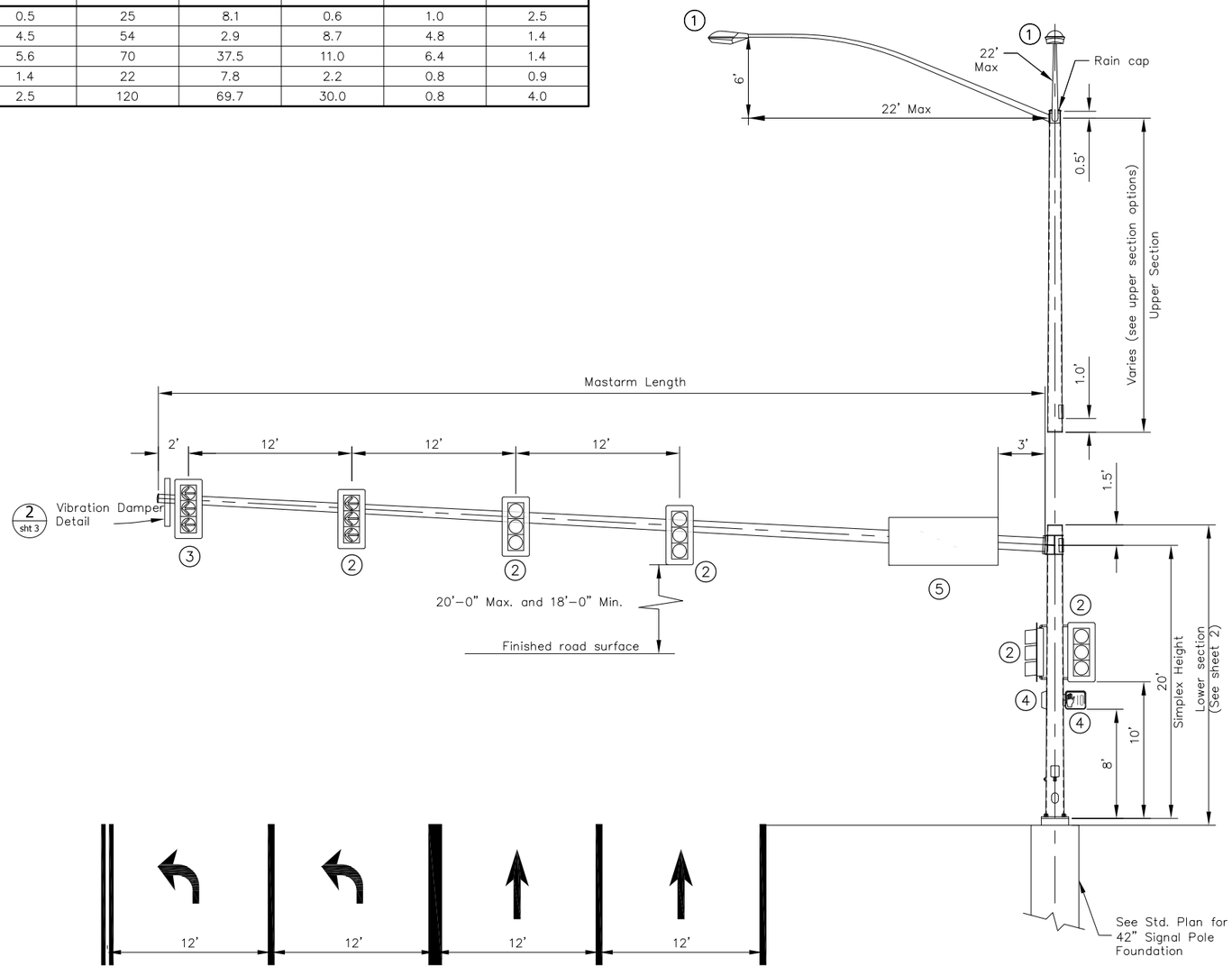
Adoption Date: 7/30/2021

Last Code and Stds. Review By: Date: 5/13/2021

Next Code and Standards Review date:5/13/2031

T-56.12

POLE DESIGN LOADING						
Load Component	Height (ft.)	Weight (lbs.)	Ice Area (sq. ft.)	Wind Area (Face) (sq. ft.)	Wind Area (Side) (sq. ft.)	Fatigue Area (Bottom) (sq. ft)
1 = Luminaire	0.5	25	8.1	0.6	1.0	2.5
2 = Signal	4.5	54	2.9	8.7	4.8	1.4
3 = Signal	5.6	70	37.5	11.0	6.4	1.4
4 = Ped Head	1.4	22	7.8	2.2	0.8	0.9
5 = Sign	2.5	120	69.7	30.0	0.8	4.0



ELEVATION VIEW

NTS

NOTES:

1. Provide pole assemblies designed, manufactured and installed according to: 2013 AASHTO Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2013 Errata and 2015 Interim Revision, the latest edition of the Alaska Standard Specifications for Highway Construction including standard modifications, and special provisions. Design structures for a 50–year Design Life, Fatigue Category I with ice loading, and with a basic wind speed of 100 mph. Fatigue design shall include Natural Wind Gust, Truck–Induced Gust, and an approved vibration mitigating device in lieu of Galloping effect.
2. Provide poles to accommodate the maximum length shown in the mastarm data with the given loads, dimensions, and material requirements.
3. This drawing shows loads (signs and signals) to be used by manufacturers when designing poles. It does not show actual loading of poles/mastarms on individual projects. This pole/mastarm design may be used without further analysis if the following conditions are met:
   – The guide sign (load #5) is attached to the mastarm base section and,
   – Not more than 5 traffic signals and/or signs are attached to the mastarm.

   If these conditions are not met, this standard pole/mastarm design may only be used if design computations are submitted that demonstrate conformance to design criteria (note 1) using actual loads. Devices with less than 1 square foot of projected area may be added to the mastarm without causing a need for additional design computations.
4. The manufacturer is to determine weld sizes. All welds and testing shall conform to the latest edition of the structural welding code AWS D1.1. Provide visual testing (VT) of 100% of all welds. Provide magnetic particle testing (MT) of 100% of all fillet welds. Provide radiographic (RT) or ultrasonic testing (UT) of 100% of all complete joint penetration welds and a random 25% of all partial joint penetration longitudinal seam welds.
5. Fabricate pole tubes and mastarm tubes from no more than 2 pieces of steel. When using 2 pieces, place the longitudinal welded seams directly opposite one another. Transverse weld seams prohibited.
6. Fabricate luminaire arms and connections according to the latest lighting standard detail.
7. Provide permanent tags on all pole sections per section 740 table 740–1 of the specifications. Provide a weather proof rain cap on all exposed sections of the structure.
8. The Department will reject damaged or defective poles for any of the following; variances from approved shop drawings, variances from material requirements, sections more than 2–percent out of round, flanged mounting surfaces with flatness variation greater than 0.030", sections bowed more than 1–inch throughout the length of the pole, mastarm, or segment, and damaged or dented finishes.
9. To allow for wiring, field drill a 1" maximum diameter hole at each traffic signal head location. Orient the hole on the horizontal axis of mastarms.
10. Install pole raked outward from plumb position in the direction opposite the mastarm such that the side of the pole opposite the mastarm is vertical.
11. Clean and remove dirt, burrs, mill scale, and excess galvanization on all faying surfaces and threaded parts before assembly. Lubricate the threads of all bolts and nuts with lubricant containing a visible dye. Tighten all bolts according to section 504 of the specifications.

MASTARM DATA									
MASTARM		MASTARM END SECTION			MASTARM BASE SECTION			MASTARM BASEPLATE	
Length (ft.)	Maximum Allowed Galloping Deflection (in.)	Free End Diameter (in.)	Length (ft.)	Tube Thickness (in.)	Length (ft.)	Fixed End Diameter* (in.)	Tube Thickness (in.)	Plate Opening Diameter (in.)	Plate Thickness (in.)
55	10.0	7.25	25.0	0.1793	33.34	14.6	0.375	10.0	2.25
60	10.0	7.25	25.0	0.1793	38.34	15.3	0.375	10.0	2.25
65	10.0	7.25	25.0	0.1793	43.34	16.0	0.375	10.0	2.25

*Fixed end diameter measured at connection to Baseplate

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE
WITH 55' TO 65' MASTARM
LOADING & NOTES

Adopted as an Alaska Standard Plan by: Carolyn H Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 9/15/2022

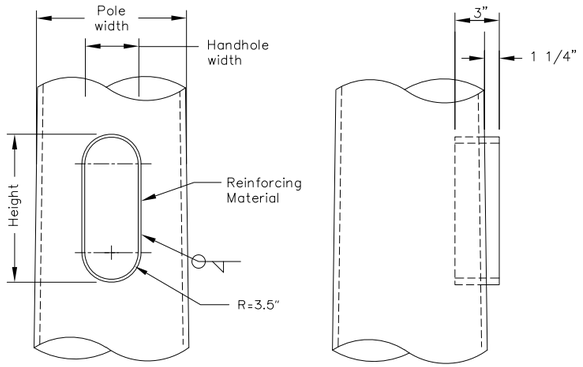
Last Code and Stds. Review
By: Date: 5/13/2021

Next Code and Standards Review date: 5/13/2031

T-56.12

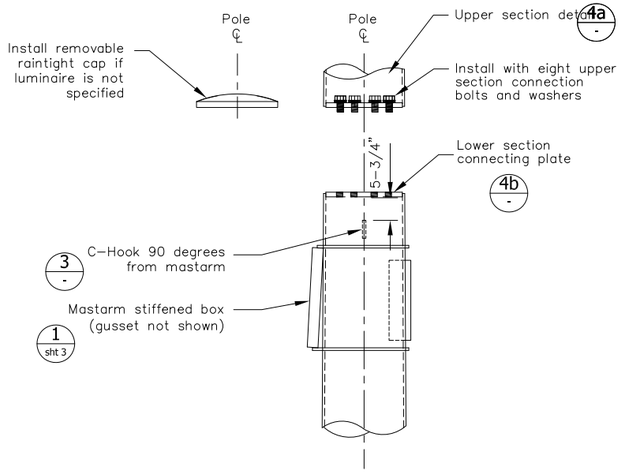
T-56.12

SHEET 2 of 4

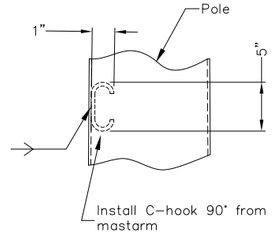


1/- REINFORCED HANDHOLE DETAILS

(See material requirements table for dimensions)
NTS

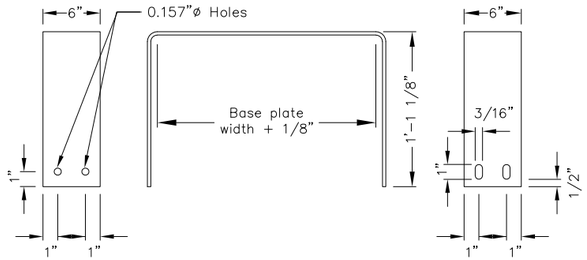


4/- LOWER SECTION POST TOP DETAIL



3/- C-HOOK DETAIL

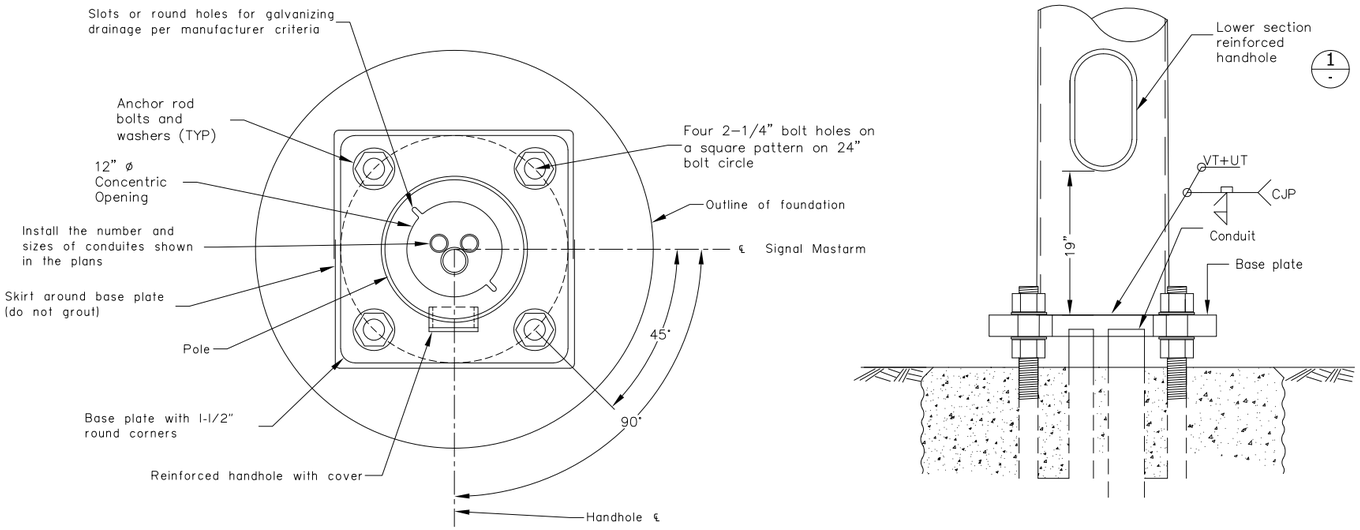
(Typical throughout lower section)
NTS



2/- SKIRT DETAIL

NTS
(Two required per pole)

MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Steel ≤ 1/2" Thick	ASTM A572 OR A595
Steel > 1/2" Thick	ASTM A709 (50ksi – Zone 3)
Finish	ASTM A123 & A153
Mastarm Bolts	ASTM F3125
Mastarm Washers	ASTM F436
Anchor Rods	See T-52
POLE (LOWER SECTION)	
Design Length	21.50'
Section Shape	Round
Simplex Height	20.0'
Taper	0.14'/ft
Baseplate Bolt Circle Diameter	24.0"
Diameter Concentric Opening	12.0"
Tube Thickness	0.375"
Fixed End Diameter	19.0" OD
Base Plate	24" x 24" x 2.25"
Backing Ring	0.25" x 3"
HANDHOLE DIMENSIONS	
Outside Dimensions	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhole Cover	0.125"
MISCELLANEOUS	
Post Top Connecting Plates	1.00"
Pole Skirt	0.125"
C-Hook	0.50"



PLAN VIEW

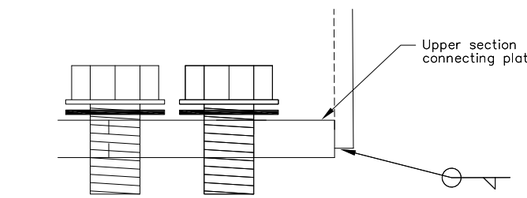
(Shown without anchor bolts and nuts for clarity)

FRONT VIEW

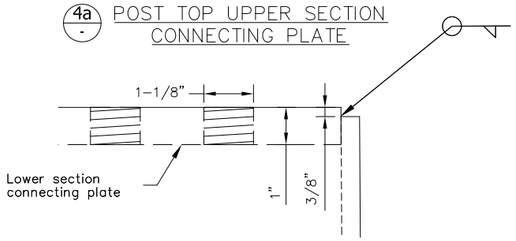
(Skirt omitted for clarity) 2/-

5/- POLE BASE DETAILS

NTS



4a/- POST TOP UPPER SECTION CONNECTING PLATE



4b/- POST TOP LOWER SECTION CONNECTING PLATE

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE WITH 55' TO 65' MASTARM LOWER SECTION

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

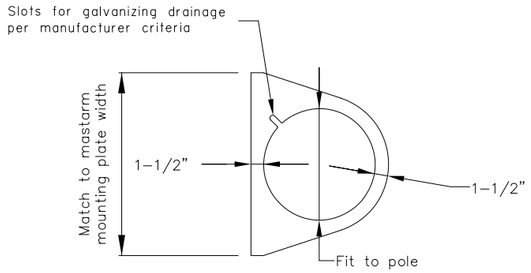
Adoption Date: 9/15/2022

Last Code and Stds. Review
By: Date: 5/13/2021

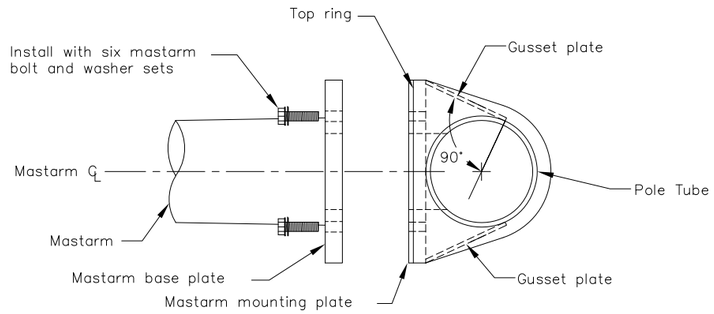
Next Code and Standards Review date: 5/13/2031

T-56.12

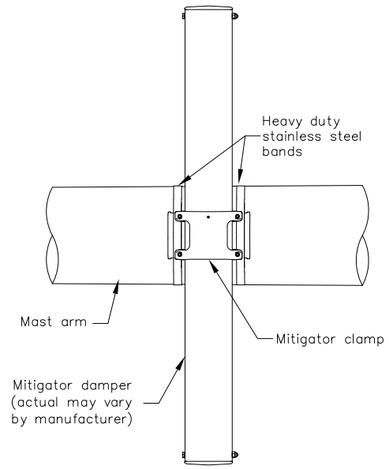
T-56.12



RING DETAIL

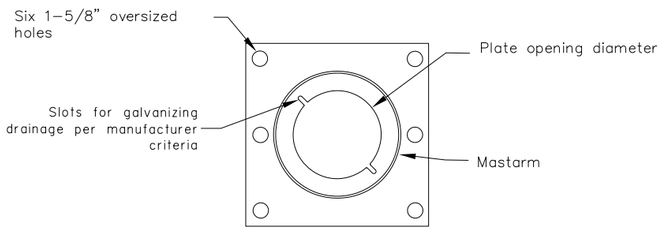


SECTION B–B

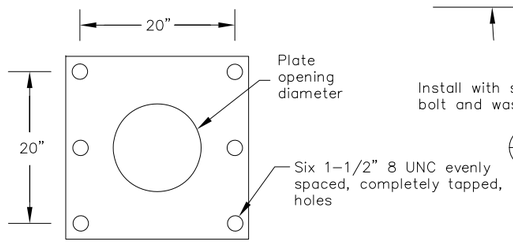


2 VIBRATION MITIGATOR CONNECTION DETAIL

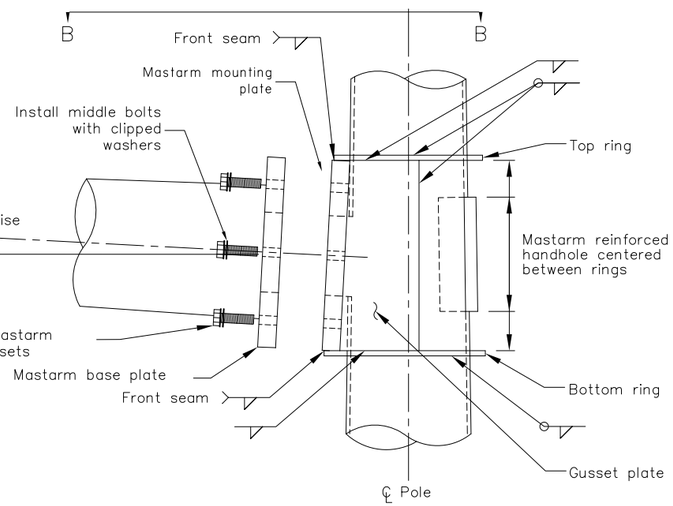
MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Steel ≤ 1/2" Thick	ASTM A572 OR A595
Steel > 1/2" Thick	ASTM A709 (50ksi – Zone 3)
Finish	ASTM A123 & A153
Mastarm Bolts	ASTM F3125
Mastarm Washers	ASTM F436
Anchor Rods	See T–52
RING–STIFFENED BOX	
Mastarm Mounting Plate	24" x 24" x 2.25"
Plate Opening Diameter	Mastarm Data (See Sheet 1)
Top Ring Thickness	0.375"
Bottom Ring Thickness	0.375"
Gusset Plate Thickness	0.375"
MASTARM HANDHOLE	
Outside Dimensions	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhold Cover	0.125"
MASTARM	
Design Length	65'
Section Shape	Round
Plate Opening Diameter	Mastarm Data (See Sheet 1)
Mastarm Tube Thickness	Mastarm Data (See Sheet 1)
Fixed End Diameter	Mastarm Data (See Sheet 1)
Mastarm Rise	3.5 Degrees
Mastarm Baseplate	24" x 24" x 2.25"
Backing Ring	0.25" x 3"
Mastarm Bolts	1.5" 6 UNC x 5.5"



MASTARM BASE PLATE

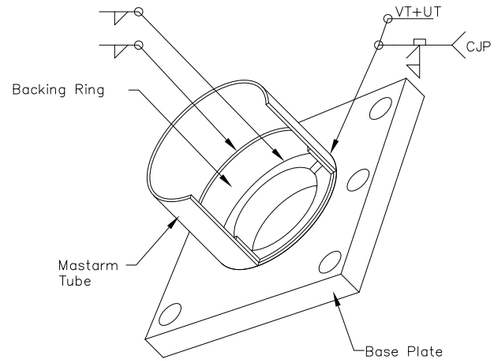


MASTARM MOUNTING PLATE



3 SIDE VIEW

1 RING – STIFFENED BOX DETAILS
NTS



ISO VIEW

TUBE TO TRANSVERSE PLATE WELD DETAIL
(Shown with tube and backing ring cutout for clarity)

3

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE
WITH 55' TO 65' MASTARM
MASTARM & STIFFENED BOX

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

Adoption Date: 9/15/2022

Last Code and Stds. Review
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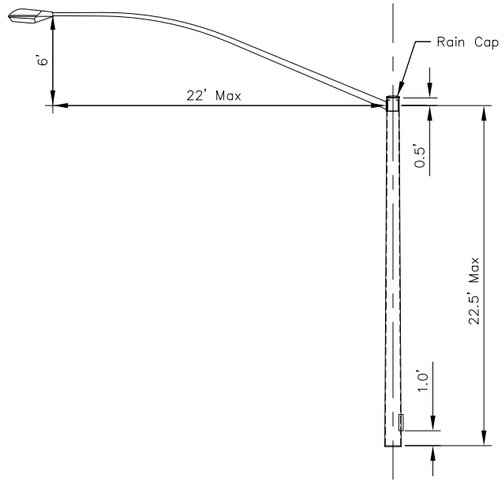
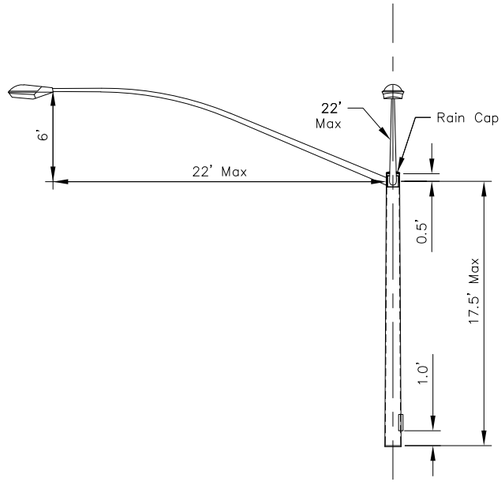
Next Code and Standards Review date: 5/13/2031

T-56.12

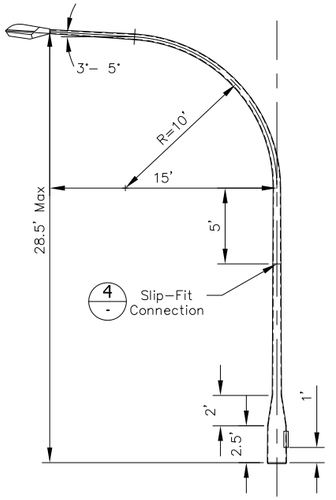
T-56.12



SINGLE LUMINAIRE



DOUBLE LUMINAIRE

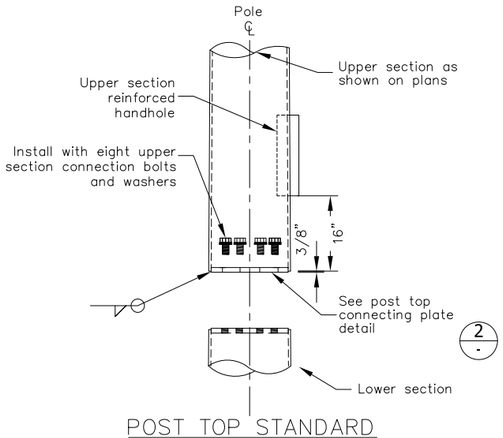


DAVIT LUMINAIRE

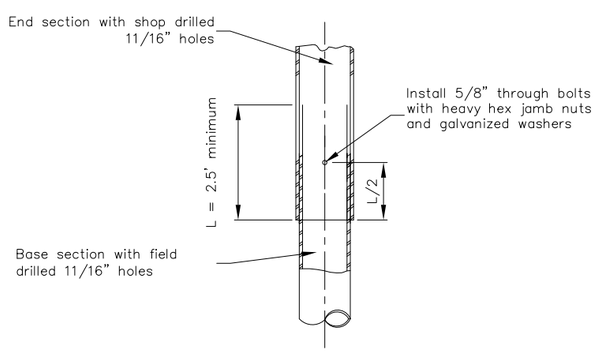
UPPER SECTION OPTIONS

NTS

MATERIAL REQUIREMENTS	
MATERIAL QUALITY GUIDANCE	
Tube Material	A572, A595 GR A, or A1011 (50ksi min)
Post Top Connecting Plates	ASTM A709 (Zone 3)
Concentric Reducer	A572 OR A595 GR A
Connection Tube	A572 OR A595 GR A
Luminaire, Arm, and Mounting	See Lighting Standard Details
Upper Section Connection Bolts	ASTM F3125
Upper Section Connection Bolts	ASTM F436
Slip Fit Through Bolt	ASTM F3125
Finish	ASTM A123 & A153
STANDARD UPPER SECTION	
Fixed End Diameter	15.99" O.D.
Taper	0.14"/ft
Connecting Plate Thickness	1"
Post Top Connection Bolts	1" 8 UNC x 2.75"
Tube Thickness	7 GA
HANDHOLE DIMENSIONS	
Upper Section Handhole	7" x 12.89"
Reinforcing Material	0.5" x 3"
Handhole Cover	0.125"
SINGLE LUMINAIRE	
Design Length	22.5'
Section Shape	Round
DOUBLE LUMINAIRE	
Design Length	17.5'
Section Shape	Round
DAVIT LUMINAIRE	
Design Length	28.5'
Section Shape	Round
Taper	0.14'/ft
Free End Diameter	2.375" O.D.
Connection Tube	7 GA
Concentric Reducer	7 GA
Davit Arm Connection Tube	7 GA
Davit Arm	7 GA

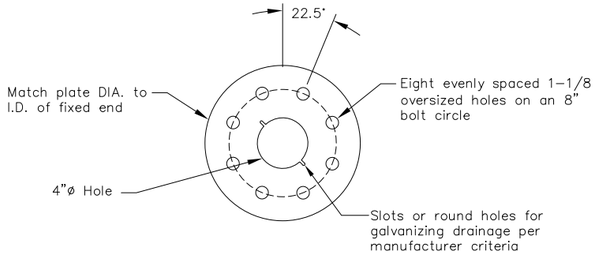


1 POST TOP STANDARD UPPER SECTION BASE DETAIL

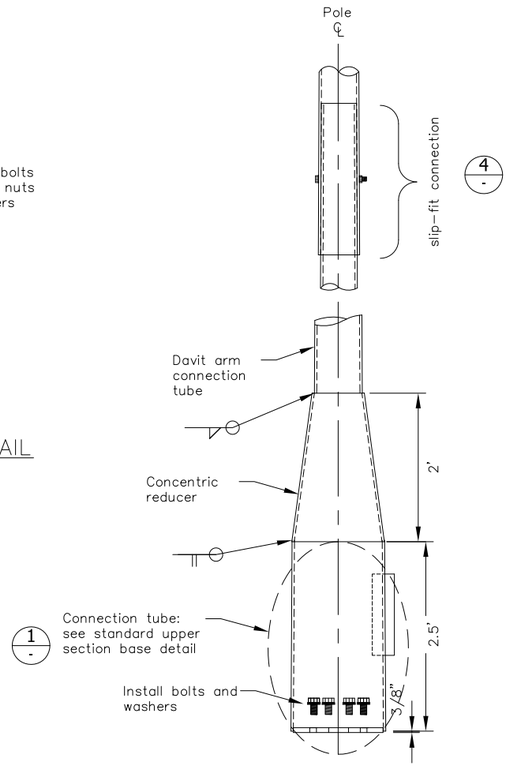


4 MASTARM SLIP SPLICE ELEVATION DETAIL

NTS



2 POST TOP CONNECTING PLATE DETAIL



3 DAVIT UPPER SECTION BASE DETAIL

NTS

State of Alaska DOT&PF
ALASKA STANDARD PLAN

SIGNAL POLE WITH 55' TO 65' MASTARM UPPER SECTION

Adopted as an Alaska Standard Plan by: Carolyn H Morehouse

Carolyn Morehouse, P.E.
Chief Engineer

Adoption Date: 9/15/2022

Last Code and Stds. Review
By: Date: 5/13/2021

Next Code and Standards Review date: 5/13/2031

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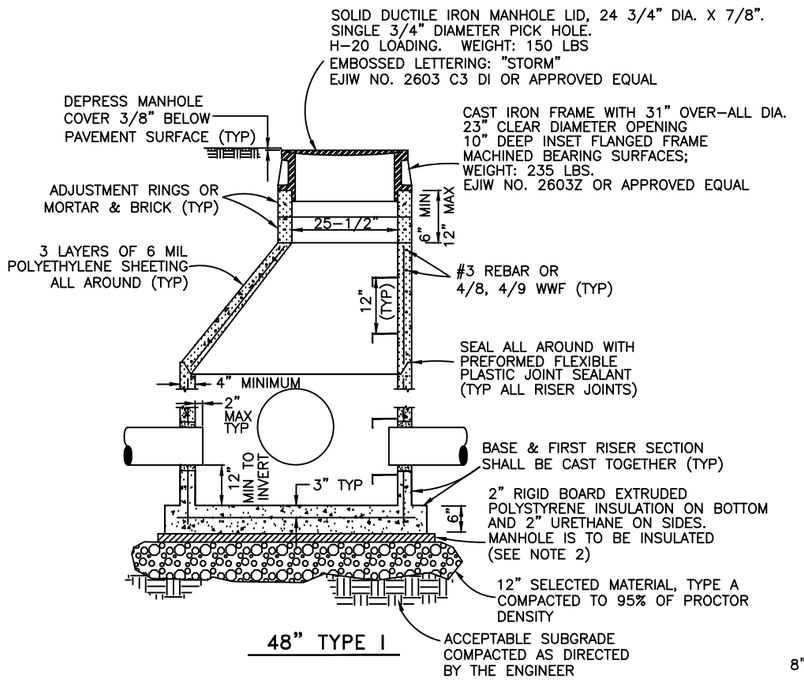
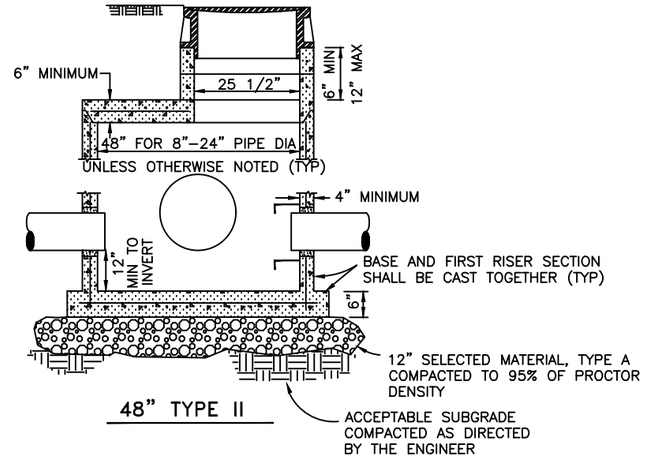
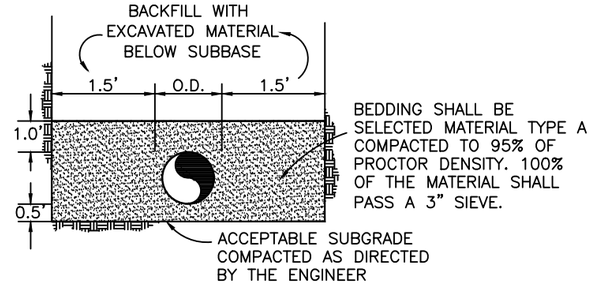
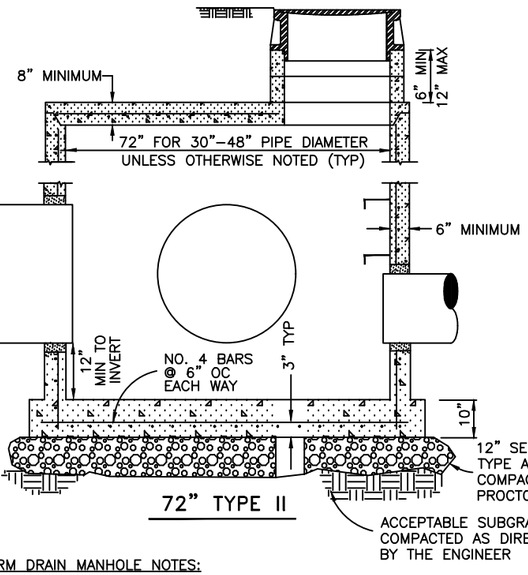


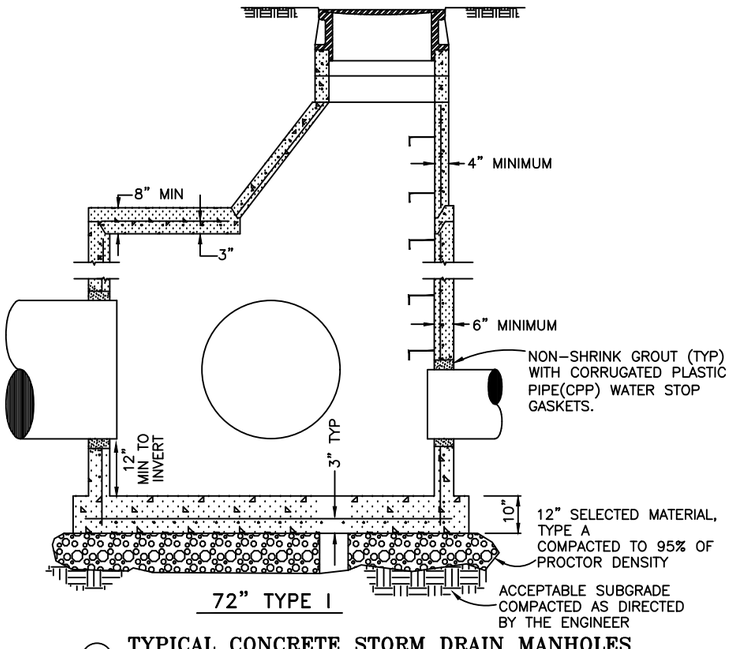




PIPE BEDDING DETAIL

NOT TO SCALE



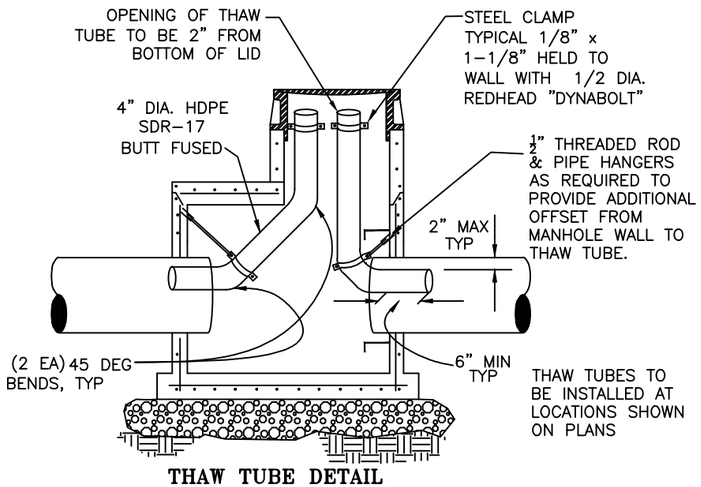


(A) TYPICAL CONCRETE STORM DRAIN MANHOLES

NOT TO SCALE

STORM DRAIN MANHOLE NOTES:

1. OPENINGS IN MANHOLE TO RECEIVE PIPE SHALL BE 1" TO 2" LARGER THEN THE OD AND PIPE. LARGER OPENINGS SHALL BE FILLED AS DIRECTED BY THE ENGINEER. INSIDE GROUT SURFACE SHALL BE SMOOTH. PROVIDE CPP WATER STOP GASKETS.
2. TYPICALLY, STORM DRAIN MANHOLES DO NOT REQUIRE INSULATION. HOWEVER, SPECIAL CASES REQUIRE INSULATION OF ALL OUTSIDE SURFACES. SEE PLANS.
3. SEAL RISER JOINTS WITH FLEXIBLE PLASTIC JOINT SEALERS.
4. MANHOLE STEPS SHALL BE APPROVED GALVANIZED STEEL OR PLASTIC AND MEET CURRENT OSHA STANDARDS.
5. ALL GROUT SHALL BE NON-SHRINK. PROTECT GROUT DURING CURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHOD.
6. REINFORCEMENT IN BASE, RISER, CONE, FLAT LID, AND ADJUSTING RINGS SHALL COMPLY WITH AASHTO SPECIFICATION M199/ASTM478.



THAW TUBE DETAIL

MANHOLE REINFORCEMENT SCHEDULE			
SECTION	MANHOLE SIZE		(SHALL COMPLY WITH AASHTO M 199 /ASTM 478) *CIRCUMFERENTIAL REINFORCING ALL AREAS ARE MINIMUM CROSS-SECTIONAL AREA OF REINFORCEMENT PER FOOT OF SECTION.
	48"	72"	
FLAT BASE	0.39 SQ IN/FT EACH WAY	0.39 SQ IN/FT EACH WAY	
RISER SECTION*	0.12 SQ IN/FT	0.18 SQ IN/FT	
CONE SECTION*	0.12 SQ IN/FT	0.18 SQ IN/FT	
FLAT LID**	0.12 SQ IN/FT EACH WAY	0.12 SQ IN/FT EACH WAY	
ADJUSTING RING	0.024 SQ IN	0.024 SQ IN	

**OPENINGS IN FLAT LIDS SHALL BE ADDITIONALLY REINFORCED WITH A MINIMUM OF THE EQUIVALENT OF 0.2 SQ IN OF STEEL AT 90°.

STATE OF ALASKA 49TH
R.L. ROBERT H. PRUSH JR.
CIVIL ENGINEER
No. 9878
REGISTERED PROFESSIONAL ENGINEER

DATE	BY	
3/13/17	RHP	WATER STOP GASKETS
2/3/10	GSC,RHP	NEW SD1
3/23/07	RHP	

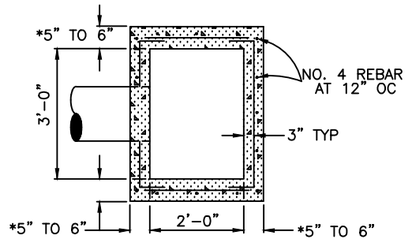
NOT TO SCALE

DESIGNED:	
DRAWN:	STAFF
CHECKED:	RHP,GSC
DATE:	3/23/07

CITY OF FAIRBANKS, ALASKA
ENGINEERING DIVISION

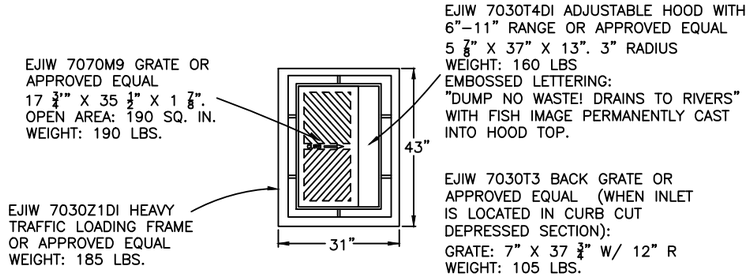
STANDARD DETAILS
STORM DRAIN MANHOLES, THAW TUBES AND BEDDING

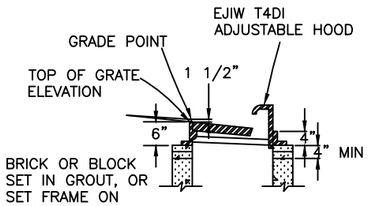
SD1



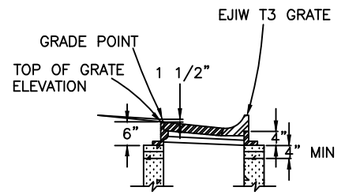
*DIMENSION WHEN PRECAST INLET BOX WITH CONTINUOUS WWF 6x6 4/4 REINFORCEMENT IS USED

TYPICAL CURB INLET



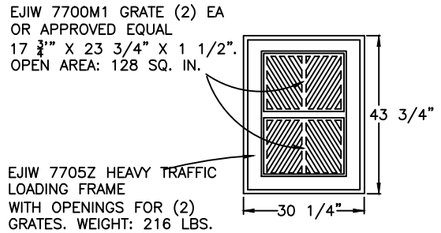


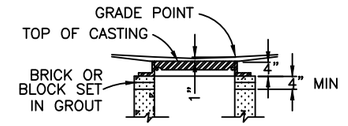
FRAME WITH ADJUSTABLE HOOD FOR INSTALLATION IN CURB FACE



FRAME WITH BACK GRATE FOR INSTALLATION IN CURB CUT

TYPICAL FIELD INLET

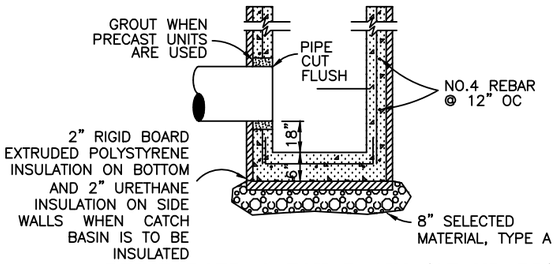




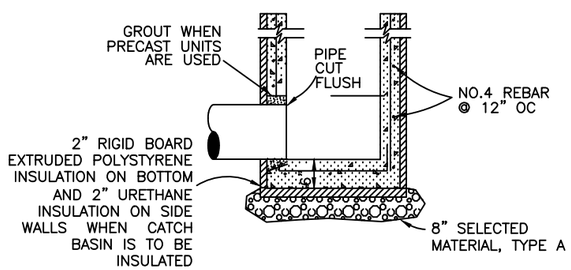
FRAME WITH DOUBLE OPENING

INLET BOX/CATCH BASIN DETAILS

NOT TO SCALE

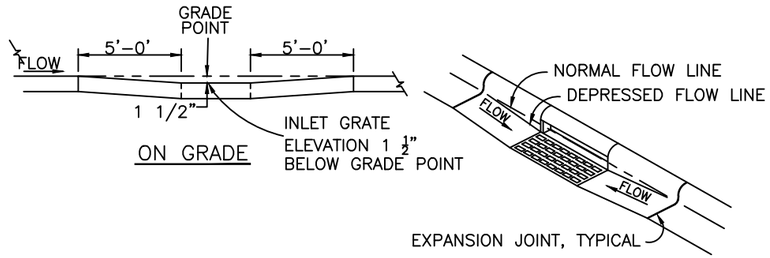


REINFORCED CATCH BASIN (STANDARD)



NO SUMP CATCH BASIN

ALTERNATE USED WHERE INDICATED ON PLANS



DEPRESSION IN FLOW LINE AT INLET

CATCH BASIN NOTES:

1. THE WORDS "INLET" AND "CATCH BASIN" SHALL BE INTERCHANGEABLE.
2. ALL GROUT SHALL BE NON-SHRINK. PROTECT GROUT DURING CURE IN ACCORDANCE WITH THE MANUFACTURER'S RECOMMENDED METHOD.
4. TYPICALLY, CATCH BASINS ARE NOT INSULATED. HOWEVER, SPECIAL CASES REQUIRE INSULATION OF ALL OUTSIDE SURFACES. SEE PLAN NOTE TO INSULATE CB.
5. GROUT THE INSIDE FACE OF ALL JOINTS SMOOTH.

STATE OF ALASKA 49TH
ROBERT H. PRODASH JR.
CIVIL ENGINEER
No. 9878
REGISTERED PROFESSIONAL ENGINEER

DATE	REVISION	BY
2/3/10	NEW SD2	GSC,RHP
3/23/07		RHP

NOT TO SCALE

DESIGNED:
DRAWN: STAFF
CHECKED: RHP,GSC
DATE: 3/23/07

CITY OF FAIRBANKS, ALASKA
ENGINEERING DIVISION

STANDARD DETAILS
STORM DRAIN CATCH BASIN

SD2