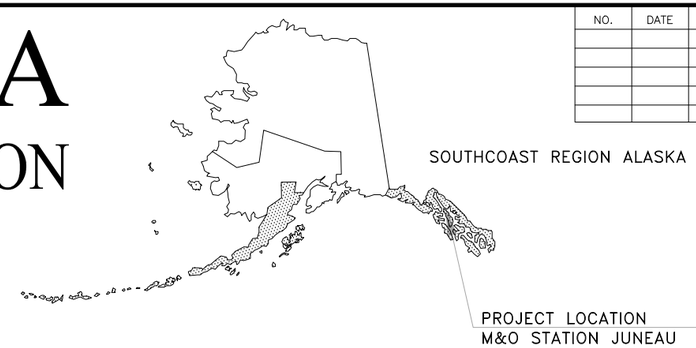
# STATE OF ALASKA

## DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES

| NO. | DATE | REVISIONS | STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|
| | | | ALASKA | AK2021-1/SFHWY00411 | 2022 | A1 | 13 |
| | | | CDS ROUTE: 296150 | | MILEPOINT: 3.46 | | |
| | | | LATITUDE: 58.331428°N | | LONGITUDE: -134.499444°E | | |




| DESIGN DESIGNATIONS | |
|---|---|
| PROJECT TYPE | EMERGENCY REPAIR |
| FUNCTIONAL CLASS | MAJOR COLLECTOR |
| ADT (2022) | 1,862 |
| ADT (2045) | 3,154 |
| DHV (2022) | 212 |
| DHV (2045) | 359 |
| PERCENT TRUCKS (T) | 1.98% |
| DIRECTIONAL SPLIT (D) | 57% |
| DESIGN SPEED (V) | 45 MPH |

## PROPOSED HIGHWAY PROJECT

# JNU NORTH DOUGLAS - BONNIE BRAE - DEC 20 SE PR
# PROJECT NO. AK2021-1/SFHWY00411

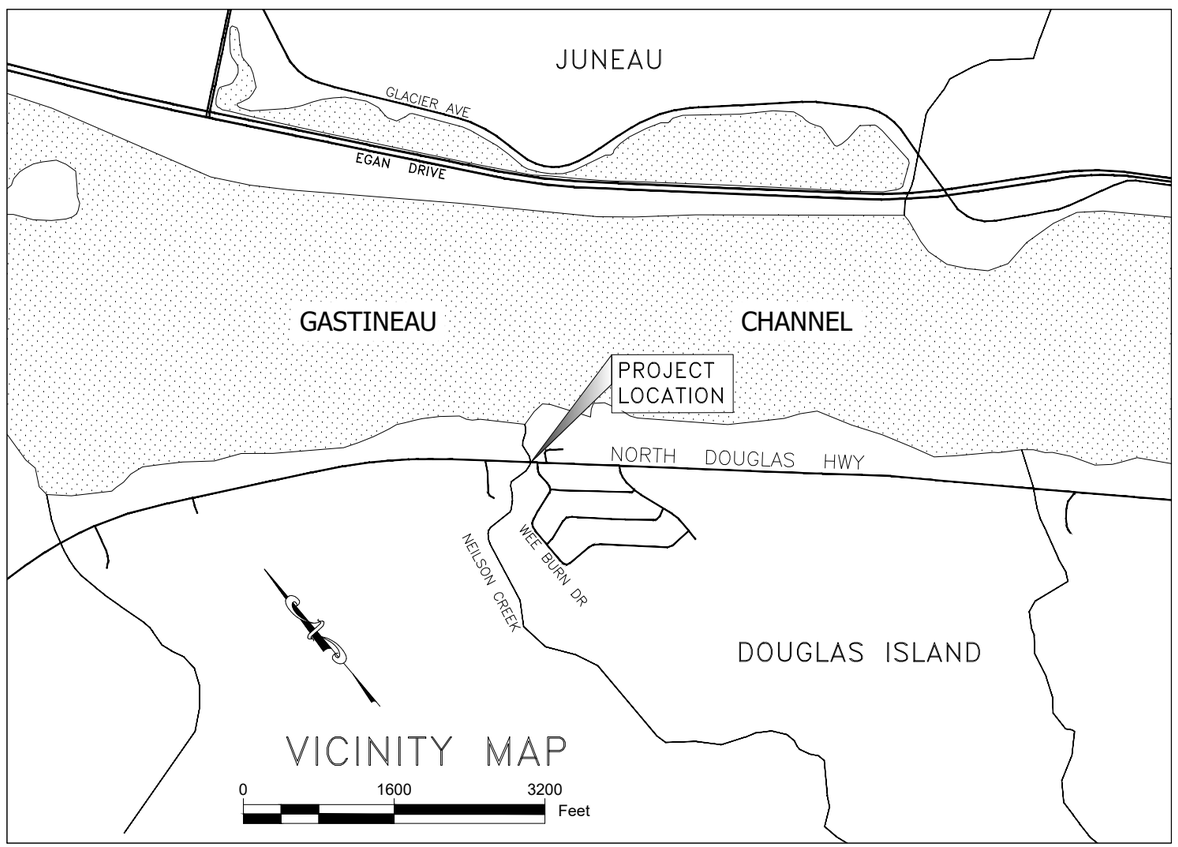
| PROJECT SUMMARY | |
|---|---|
| | NORTH DOUGLAS HIGHWAY–BONNIE BRAE |
| WIDTH OF PAVEMENT | 32' |
| LENGTH OF PAVING | 230' |
| LENGTH OF PROJECT | 230' |

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

**REVIEW** **PS&E**

August 04, 2022

**DATE**




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

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION & PUBLIC FACILITIES
6860
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APPRO
KIRK
REGION
CONCU

PIH/PSE
REVIEW
JULY 2022

D. LANCE MEARIG, P.E. DATE
DIRECTOR, SOUTHCOAST REGION

FILE c:\dowl_pw\d0395244\SA-GN-CV-A1-63330.03.dwg | DATE 7/29/2022 9:59 | LAYOUT A1 | DESIGNED #### | CHECKED #### | DRAFTED ####

| NO. | DATE | REVISION |
|---|---|---|
| | | |
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| | | |

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | AK2021-1/SFHWY00411 | 2022 | A2 | 13 |

| | 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 | |
| MICELLANEOUS 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 | |
| EXISTING EASEMENT LINE | | |
| PROPOSED EASEMENT LINE | | |
| 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. | |
| MEANDER LINE | M1 M2 M3 | |

| | EXISTING | PROPOSED |
|---|---|---|
| SANITARY SEWER (FLOW DIRECTION) | SS | SS |
| FUEL LINE | O | O |
| GAS LINE | G | G |
| WATER LINE | W | W |
| METER, VALVE, FIRE HYDRANT | W | W |
| EXISTING STORM DRAIN (FLOW DIRECTION) | SD | |
| PROPOSED STORM DRAIN | S-10, SD, S-11, P-11, MH, P-10 | |
| FIBER OPTIC LINE | | |
| DIRECT BURIAL TELEPHONE CABLE | T | T |
| DIRECT BURIAL ELECTRIC CABLE | E | E |
| ELECTRIC LINE (OVERHEAD) | | |
| POWER POLE LINE | | |
| JOINT USE POWER & TELEPHONE | | |
| TELEPHONE POLE LINE | | |
| POLE ANCHOR | | |
| STUB POLE (POWER OR TELEPHONE) | | |
| TELEPHONE DUCT | T | T |
| TELEPHONE PEDESTAL | | |
| BURIED CABLE MARKER | | |
| PIPELINE MARKER OR VALVE | | |
| CATCH BASIN OR DROP INLET | | |
| MANHOLE | MH | MH |
| SANITARY SEWER CLEAN OUT | | |
| RIPRAP | | |
| SPECIAL DITCH CENTERLINE | | |
| HIGH TIDE LINE | HTL | HTL |

| | EXISTING | PROPOSED |
|---|---|---|
| ROADWAY/PAVEMENT EDGE | | |
| FENCE | X X X X | X X X X |
| CURB AND GUTTER | | |
| DETECTABLE WARNINGS | | |
| GUARDRAIL | | |
| CULVERT PIPE | | |
| SIGN | | |
| MAILBOX | MB | MB |
| RAILROAD TRACKS | | |
| RAILROAD DEVICES | CROSS-BUCK, FLASHING LIGHT | CANTILEVER, SWITCH |
| TREE LINE | | |
| WATER BOUNDARY | | |
| ORDINARY HIGH WATER LINE | | |
| FLOW CENTERLINE | | |
| FLOW DIRECTION | | |
| WETLANDS | | |
| EXISTING BUILDINGS | H | H = HOUSE<br>G = GARAGE<br>M = MERCHANT/STORE<br>B = BARN<br>S = SHED<br>P = PRIVY<br>SS= SERVICE STATION<br>W = WAREHOUSE |
| POST OR BOLLARD | | |
| WELL OR MONITORING WELL | W, MW | |
| SEPTIC PIPE | S | |
| 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 | 42 |
| SIGNAL FACE, BACKPLATE | 42 | 42 |
| SIGNAL FACE, LEFT TURN, BACKPLATE | 43 | 43 |
| SIGNAL FACE, PEDESTRIAN | 4 | 4 |
| LOOP DETECTOR | 33 | 73 |
| VIDEO DETECTOR | 2 | 2 |
| RADAR DETECTOR | 4 | 4A |
| OPTICOM DETECTOR | 1 | 1 |
| PEDESTRIAN PUSH BUTTON | 1 | 1 |
| SIGNAL POST W/O MAST ARM | | 1 |
| SIGNAL POLE W/MAST ARM | | 4 |
| SIGNAL CONTROLLER | | |
| LOAD CENTER | | |
| LUMINAIRE | | 22 |
| RIGID METAL CONDUIT | | |

STATE OF ALASKA
PIH/PSE REVIEW JULY 2022
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**LEGEND AND SYMBOLS**

| FIRM | DOWL | ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: | AECL848 |
|---|---|---|---|---|---|---|---|
| FILE | c:\dowl_pw\d0395244\SA-GN-CV-A2-63330_03.dwg | LAYOUT | A2 | DESIGNED | HOBBS | CHECKED | CHRISTIE |
| | | DATE | | | | DRAFTED | BERG |

| NO. | DATE | REVISION |
|---|---|---|
| | | |
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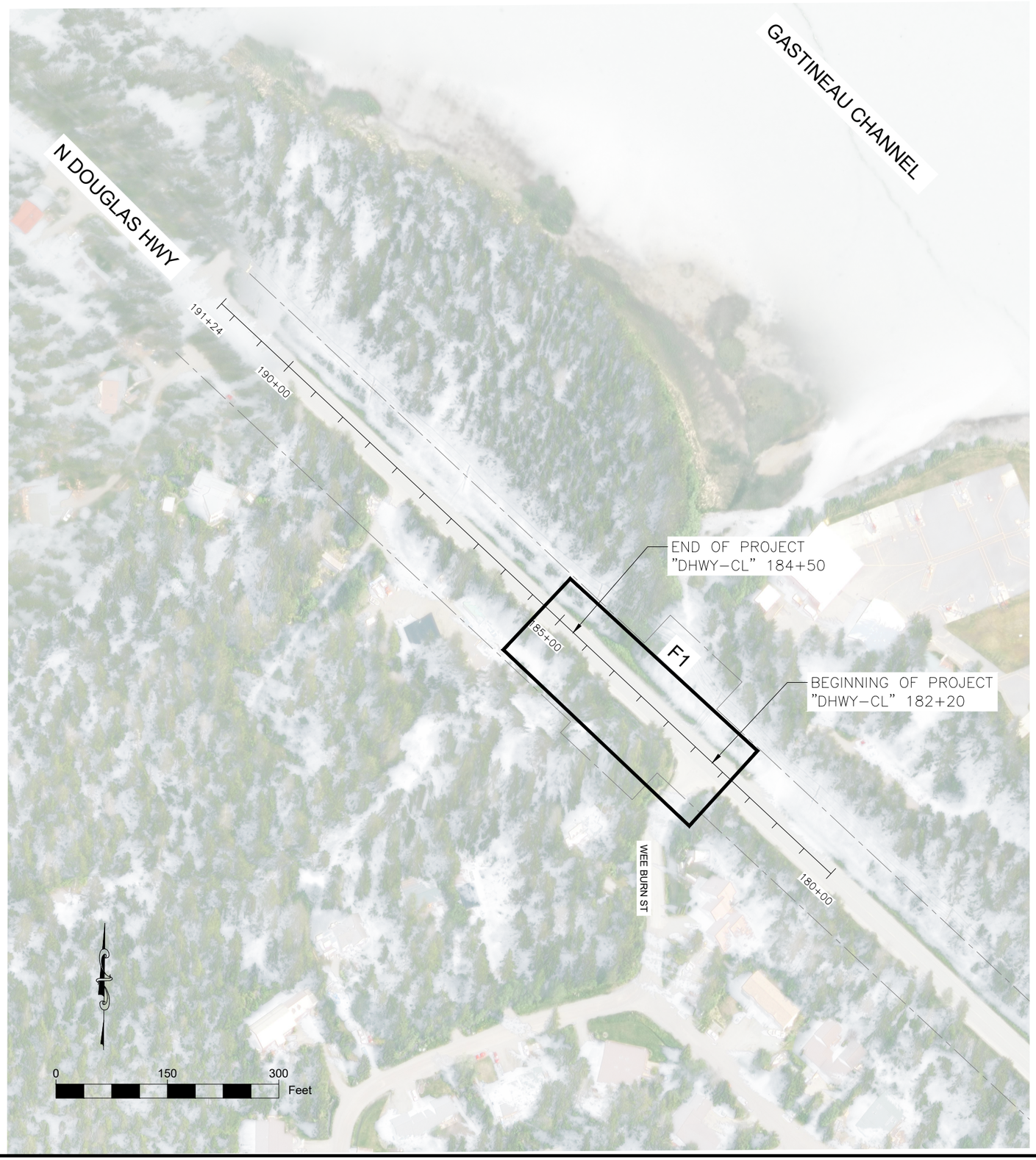
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | AK2021-1/SFHWY00411 | 2022 | A3 | 13 |




## INDEX OF SHEETS

| SHEET NO. | DESCRIPTION |
|---|---|
| A1 | TITLE SHEET |
| A2 | LEGEND AND SYMBOLS |
| A3 | PLAN SCHEMATIC AND INDEX |
| A4 | SURVEY CONTROL |
| B1 | TYPICAL SECTIONS |
| C1 | ESTIMATE OF QUANTITIES |
| D1 | SUMMARY TABLES |
| E1 | DETAILS |
| F1 | PLAN AND PROFILE |
| H1 | STRIPING PLAN |
| Q1 | EROSION SEDIMENT CONTROL PLAN |
| T1 | TRAFFIC CONTROL PLAN |
| T2 | CONSTRUCTION PHASING PLAN |

THE FOLLOWING DOT STANDARD PLANS APPLY:
G-00.05, G-05.11S, G-09.05S, G-10.20, G-11.01, G-14.01, G-20.12, G-26.00, T-21.04, U-03.01

GENERAL NOTES:

1. MAKE ALL PAVEMENT CUTS CLEAN, VERTICAL, AND TRUE TO REMOVAL LIMITS SHOWN ON PLANS.
2. DO NOT MEASURE OFF OF THE PLANS.
3. ROW LINES WERE TAKEN FROM DOT&PF REFERENCE DWG. THE LOCATION OF THE ROW LINES HAVE NOT BEEN SURVEYED. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO VERIFY THE LOCATION OF, AND STAY WITHIN THE RIGHT OF WAY.

STATE OF ALASKA
PIH/PSE REVIEW
JULY 2022
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

JNU NORTH DOUGLAS - BONNIE BRAE - DEC 20 SE PR

**PLAN SCHEMATIC AND INDEX**

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| FIRM | DOWL | ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: | AECL848 | | |
| FILE | c:\dowl_pw\d0395244\SA-GN-CV-A3-63330.03.dwg | | LAYOUT A3 | DESIGNED HOBBS | CHECKED CHRISTIE | DRAFTED BERG | | | |
| | | DATE | | | | | | | |

| NO. | DATE | REVISION | STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|
| | | | ALASKA | SFHWY00411 | 2022 | A4 | 13 |

## Project Specific Horizontal Control

100: 2.5" Alcap DOT&PF
Set 0.8' from EP. Out Bound Lane. In Line With CL of Bonnie Doon Dr.
57.4' From Stop Sign N24E, 40.1' From PP #10365 S50E
AKSPCS N 2373606.05 FT US , E 2526600.55 FT US

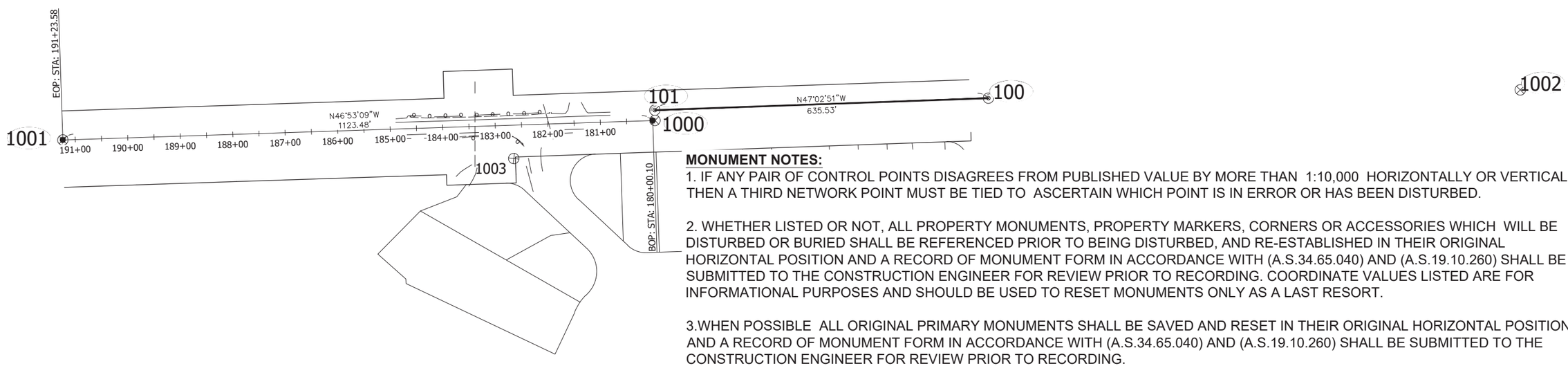
101: 2.5" Alcap DOT&PF
Set 0.9' from EP Sub Graded 0.2'. Out Bound Lane.In Line With CL Monument # 1000
59' From 10" Spruce W/Tag N30E, 212' From Stop Sign S70E
AKSPCS N 2374039.10 FT US , E 2526135.40 FT US

| Survey Control Table | | | | | | |
|---|---|---|---|---|---|---|
| Point # | Northing | Easting | Elevation | Description | Station | Offset |
| 100 | 2373606.05 | 2526600.55 | 57.91 | 2.5"ALCAP_DOT&PF | N\A | N\A |
| 101 | 2374039.10 | 2526135.40 | 60.50 | 2.5"ALCAP_DOT&PF | N\A | N\A |

All **SURVEY CONTROL** monuments in this table are provided strictly for survey control. Should any of them be destroyed during construction they **shall not** be replaced.

| Centerline Monuments | | | | | |
|---|---|---|---|---|---|
| Point # | Northing | Easting | Description | Station | Offset |
| 1000 | 2374024.99 | 2526121.76 | 1"IP_CL_MON_POT 179+98.44 | N\A | N\A |
| 1001 | 2374795.81 | 2525298.45 | 2.5"BC_CL_MON_PC 191+55.44 | 191+23.58 | 0.00R |
| 1002 | 2372901.39 | 2527327.50 | 2.5"BC_CL_MON_PC163+50.32 | N\A | N\A |

Existing CENTERLINE monuments **SHALL BE PRESERVED IN PLACE**.
All **centerline monuments** in this **existing centerline monument** table shall be **preserved** and **referenced** prior to disturbance and replaced at their original horizontal position . **A RECORD OF MONUMENT FORM IN ACCORDANCE WITH A.S.34.65.040 SHALL BE SUBMITTED TO DOT&PF PROJECT ENGINEER FOR REVIEW PRIOR TO RECORDING FOR EACH MONUMENT.**




**MONUMENT NOTES:**

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

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

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

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

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

| Existing Property | | | | | |
|---|---|---|---|---|---|
| Point # | Northing | Easting | Description | Station | Offset |
| 1003 | 2374163.88 | 2525880.45 | ALCAP3.25"__COR 2/BONNIE BRAE ESTATES_3088-S | 182+66.83 | 63.53L |

All **PROPERTY monuments** in these **existing property** tables shall be **preserved** and **referenced** prior to disturbance and replaced at their original horizontal position. **A RECORD OF MONUMENT FORM IN ACCORDANCE WITH A.S.34.65.040 SHALL BE SUBMITTED TO DOT &PF PROJECT ENGINEER FOR REVIEW PRIOR TO RECORDING FOR EACH MONUMENT.**

0 200 400 Feet

STATE OF ALASKA 49th PS&E REVIEW JULY 2022 No. 14828 PROFESSIONAL LAND SURVEYOR

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

SURVEY CONTROL

FILE Q:\jnu\SDRER00322\SV\SOURCE DWGS\BASEMAP\N_Douglas_SCS_022422.dwg | DATE 7/12/2022 11:24 | LAYOUT A2 | DESIGNED J.PAPOI | CHECKED E.PEDERSEN | DRAFTED J.PAPOI

| NO. | DATE | REVISION | STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
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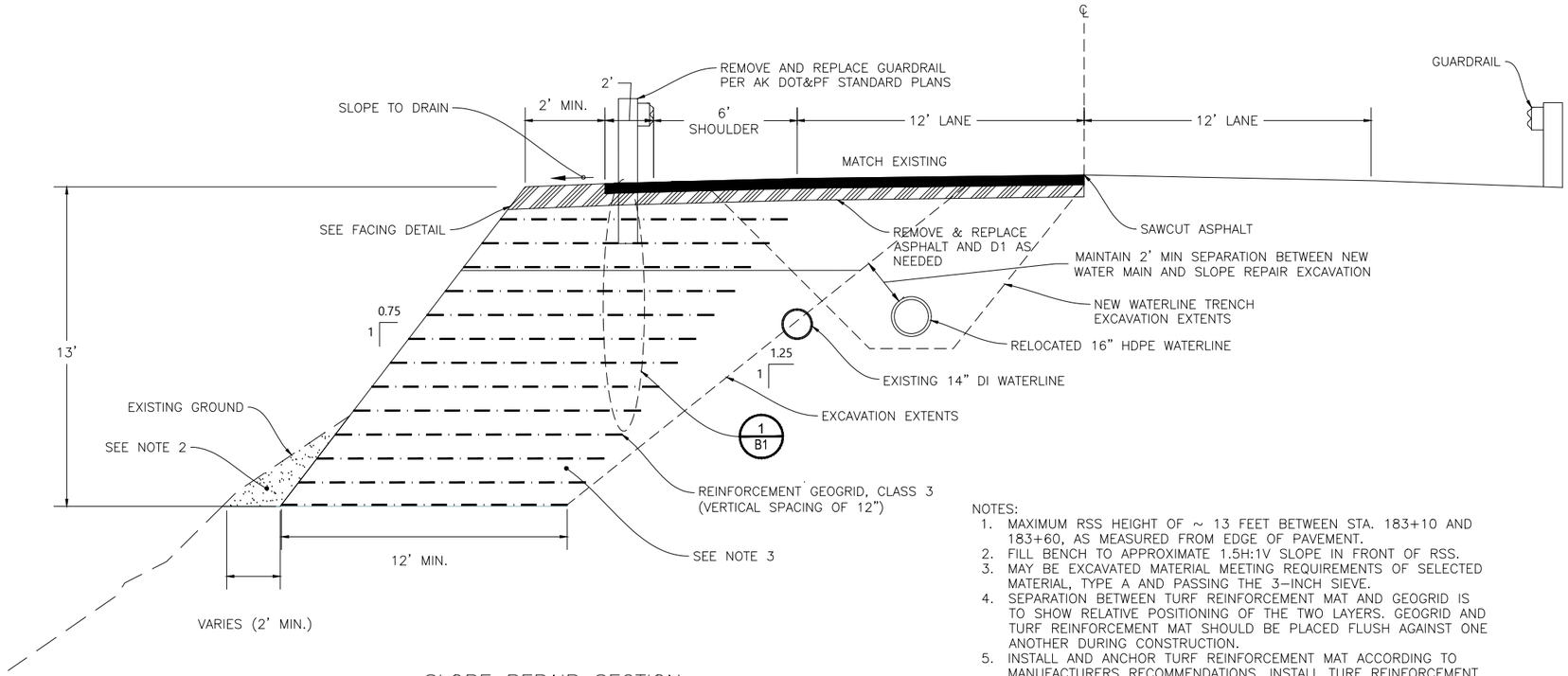
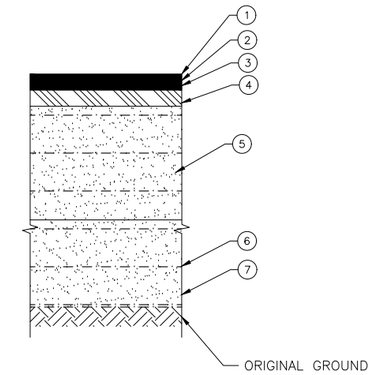
| | | | ALASKA | AK2021-1/SFHWY00411 | 2022 | B1 | 13 |




## SLOPE REPAIR SECTION




## 1 B1 PAVEMENT STRUCTURAL SECTION

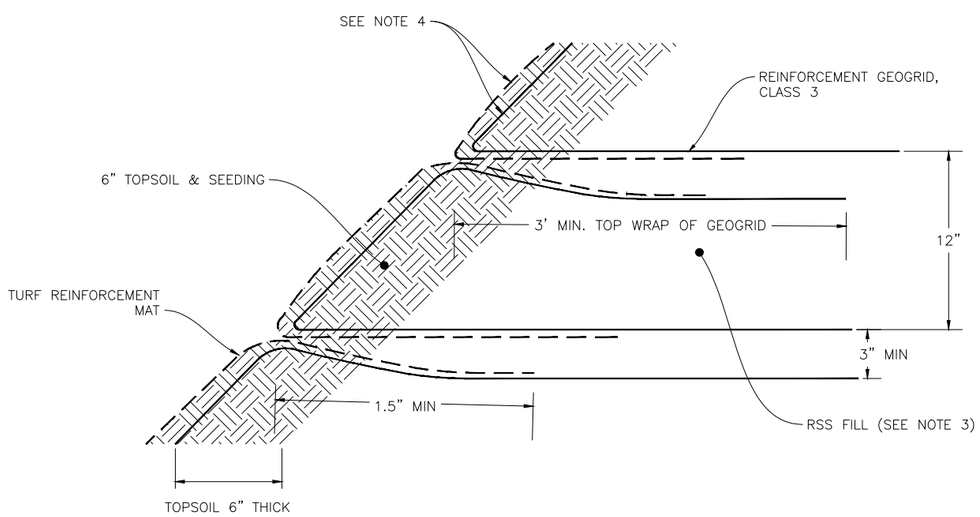
NTS

NOTES:

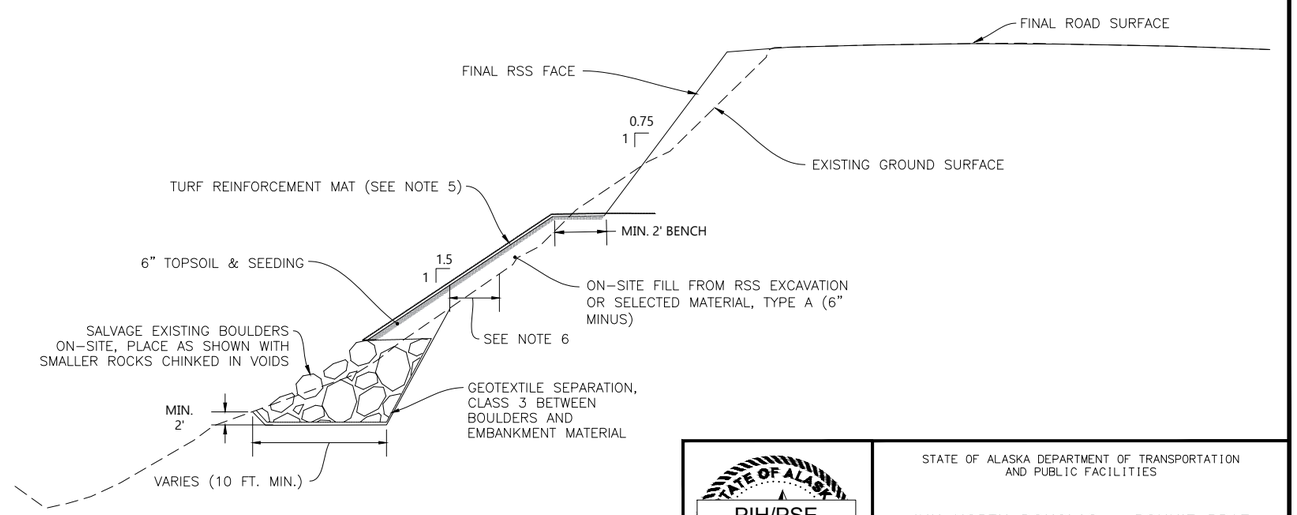
1. MAXIMUM RSS HEIGHT OF ~ 13 FEET BETWEEN STA. 183+10 AND 183+60, AS MEASURED FROM EDGE OF PAVEMENT.
2. FILL BENCH TO APPROXIMATE 1.5H:1V SLOPE IN FRONT OF RSS.
3. MAY BE EXCAVATED MATERIAL MEETING REQUIREMENTS OF SELECTED MATERIAL, TYPE A AND PASSING THE 3-INCH SIEVE.
4. SEPARATION BETWEEN TURF REINFORCEMENT MAT AND GEOGRID IS TO SHOW RELATIVE POSITIONING OF THE TWO LAYERS. GEOGRID AND TURF REINFORCEMENT MAT SHOULD BE PLACED FLUSH AGAINST ONE ANOTHER DURING CONSTRUCTION.
5. INSTALL AND ANCHOR TURF REINFORCEMENT MAT ACCORDING TO MANUFACTURERS RECOMMENDATIONS, INSTALL TURF REINFORCEMENT MAT WHERE DISTURBED UNVEGETATED SOIL IS PRESENT BELOW THE RSS (APPROX. STA. 183+10 TO 183+40) OR AS DIRECTED BY THE ENGINEER.
6. PLACE ON-SITE FILL FROM RSS EXCAVATION OR SELECTED MATERIAL, TYPE A (6" MINUS) WITH A MINIMUM WIDTH OF 3 FEET TO TIE FILL INTO EXISTING SLOPE. BENCH EXISTING SLOPE TO KEY IN FILL WITH A MINIMUM BENCH WIDTH OF 12 INCHES.

### LEGEND

1. 2" HOT MIX ASPHALT, TYPE II, CLASS B
2. STE-1 TACK COAT
3. 3" HOT MIX ASPHALT, TYPE II, CLASS B
4. 6" AGGREGATE BASE COURSE, GRADING D-1
5. 3' SELECTED MATERIAL, TYPE A
6. REINFORCEMENT GEOGRID, CLASS 3 (SPACED EVERY 12" FROM BOTTOM OF EXCAVATION)
7. 10' SELECTED MATERIAL, TYPE C




## FACING DETAIL




## LOWER SLOPE REPAIR SECTION

STATE OF ALASKA
PIH/PSE REVIEW JULY 2022
REGISTERED PROFESSIONAL ENGINEER

STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**TYPICAL SECTIONS**

| FIRM | DOWL | ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: | AECL848 |
|---|---|---|---|---|---|---|---|
| FILE | c:\dowl_pw\d0395244\SA-CT-B-63330.03.dwg | LAYOUT | B1 | DESIGNED | HOBBS | CHECKED | CHRISTIE | DRAFTED | BERG | DATE |

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| | | | ALASKA | AK2021-1/SFHWY00411 | 2022 | C1 | 13 |

## ESTIMATE OF QUANTITIES

| ITEM NO. | ITEM DESCRIPTION | PAY UNIT | QUANTITY |
|---|---|---|---|
| 201.0009.0000 | CLEARING AND GRUBBING | LUMP SUM | ALL REQUIRED |
| 202.0002.0000 | REMOVAL OF PAVEMENT | SQUARE YARD | 576 |
| 203.0003.0000 | UNCLASSIFIED EXCAVATION | CUBIC YARD | 1041 |
| 203.0006.000A | BORROW, TYPE A | TON | 2019 |
| 301.0001.00D1 | AGGREGATE BASE COURSE, GRADING D-1 | TON | 243 |
| 401.0001.002B | HMA, TYPE II; CLASS B | TON | 213 |
| 401.0004.6428 | ASPHALT BINDER, GRADE PG 64-28 | TON | 12 |
| 402.0001.STE1 | STE-1 ASPHALT FOR TACK COAT | TON | 0.2 |
| 606.0001.0000 | W-BEAM GUARDRAIL | LINEAR FOOT | 68 |
| 606.0006.0000 | REMOVING AND DISPOSING OF GUARDRAIL | LINEAR FOOT | 147 |
| 606.0009.0000 | SHORT RADIUS GUARDRAIL | EACH | 1 |
| 606.0013.0000 | PARALLEL GUARDRAIL TERMINAL | EACH | 1 |
| 618.0002.0000 | SEEDING | POUND | 4 |
| 619.2002.0000 | TURF REINFORCEMENT MAT | SQUARE YARD | 268 |
| 620.0001.0000 | TOPSOIL | SQUARE YARD | 262 |
| 627.2020.0000 | WATER MAIN RELOCATION | EACH | 1 |
| 634.0002.0000 | GEOGRID, REINFORCEMENT, CLASS 3 | SQUARE YARD | 2100 |
| 640.0001.0000 | MOBILIZATION AND DEMOBILIZATION | LUMP SUM | ALL REQUIRED |
| 642.0001.0000 | CONSTRUCTION SURVEYING | LUMP SUM | ALL REQUIRED |
| 643.0002.0000 | TRAFFIC MAINTENANCE | LUMP SUM | ALL REQUIRED |
| 643.0025.0000 | TRAFFIC CONTROL | CONTINGENT SUM | ALL REQUIRED |
| 643.0032.0000 | FLAGGING | CONTINGENT SUM | ALL REQUIRED |
| 658.0001.0000 | EROSION, SEDIMENT, AND POLLUTION CONTROL WITHOUT CGP COVERAGE | LUMP SUM | ALL REQUIRED |
| 658.0002.0000 | ESCP CHANGES BY DIRECTIVE | LUMP SUM | ALL REQUIRED |
| 670.0001.0000 | PAINTED TRAFFIC MARKINGS | LUMP SUM | ALL REQUIRED |

## BASIS OF ESTIMATE

| ITEM NO. | ITEM DESCRIPTION | ESTIMATING FACTOR |
|---|---|---|
| 203.0006.000A | BORROW, TYPE A | 1.94 TON/CY |
| 301.0001.00D1 | AGGREGATE BASE COURSE, GRADING D-1 | 1.94 TON/CY |
| 401.0001.002B | HMA, TYPE II; CLASS B | 2.0385 TON/CY |
| 401.0004.6428 | ASPHALT BINDER, GRADE PG 64-28 | 5.3% OF ITEM 401.0001.002B |
| 402.0001.STE1 | STE-1 ASPHALT FOR TACK COAT | 0.000334 TON/SY |
| 618.0002.0000 | SEEDING | 1.5 LB/MSF |

STATE OF ALASKA
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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

JNU NORTH DOUGLAS – BONNIE BRAE
– DEC 20 SE PR

**ESTIMATE OF QUANTITIES**


FIRM DOWL
ADDRESS 9085 GLACIER HIGHWAY, JUNEAU, AK 99801
PHONE (907) 780-3533
CERTIFICATE OF AUTH #: AECL848
DESIGNED HOBBS
CHECKED CHRISTIE
DRAFTED BERG
DATE
FILE c:\dowl_pw\d0395244\SA-CT-DT-C-63330_03.dwg
LAYOUT C1

| NO. | DATE | REVISION | STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
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| | | | ALASKA | AK2021-1/SFHWY00411 | 2022 | D1 | 13 |

## 202.0002.0000 REMOVAL OF PAVEMENT

| SHEET | START STATION | END STATION | AREA (SY) | REMARKS |
|---|---|---|---|---|
| F1 | 182+20 | 184+50 | 576 | |

## 203.0003.0000 UNCLASSIFIED EXCAVATION

| SHEET | START STATION | END STATION | VOLUME (CY) | REMARKS |
|---|---|---|---|---|
| F1 | 182+90 | 183+80 | 1,041 | |

## 606.0001.0000 W-BEAM GUARDRAIL

| SHEET | START | | END | | LENGTH (LF) | REMARKS |
|---|---|---|---|---|---|---|
| | STATION | OFFSET | STATION | OFFSET | | |
| F1 | 182+77 | 18'LT | 183+45 | 20'LT | 68 | |

## 606.0006.0000 REMOVING AND DISPOSING OF GUARDRAIL

| SHEET | START STATION | END STATION | OFFSET | LENGTH (LF) | REMARKS |
|---|---|---|---|---|---|
| F1 | 182+48 | 183+95 | LT | 147 | |

## 606.0009.0000 SHORT RADIUS GUARDRAIL

| SHEET | START STATION | OFFSET | END STATION | OFFSET | LENGTH (LF) | QUANTITY (EA) | REMARKS |
|---|---|---|---|---|---|---|---|
| F1 | 182+48 | 38' LT | 182+77 | 18'LT | 35 | 1 | CURVE RADIUS 44' |

## 606.0013.0000 PARALLEL GUARDRAIL TERMINAL

| SHEET | START STATION | END STATION | LENGTH (LF) | OFFSET | QUANTITY (EA) | REMARKS |
|---|---|---|---|---|---|---|
| F1 | 183+45 | 183+95 | 50 | LT | 1 | |

## 627.2020.0000 WATER MAIN RELOCATION

| SHEET | FROM STATION | OFFSET | TO STATION | OFFSET | LENGTH (FT) | REMARKS |
|---|---|---|---|---|---|---|
| F1 | 182+33 | 19' LT | 184+38 | 24' LT | 220 | |

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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**SUMMARY TABLES**

FIRM DOWL
ADDRESS 9085 GLACIER HIGHWAY, JUNEAU, AK 99801
PHONE (907) 780-3533
CERTIFICATE OF AUTH #: AECL848
DESIGNED HOBBS
CHECKED CHRISTIE
DRAFTED BERG
LAYOUT D1
DATE
FILE c:\dowl_pw\d0395244\SA-CT-DT-D-63330.03.dwg

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# CORROSION PROTECTION SPECIFICATIONS AND NOTES:

## ANODES

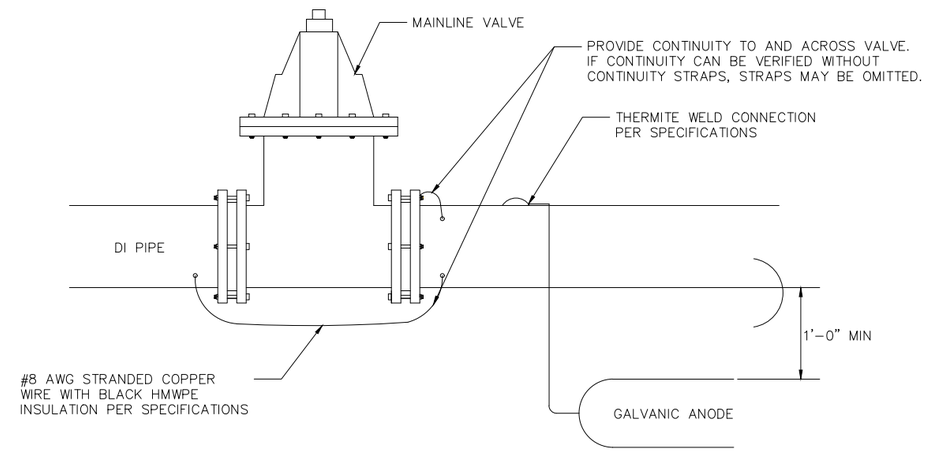
1. ANODES SHALL BE 18-LBS BARE WEIGHT ZINC WITH PREPACKAGED ANODE BACKFILL.
2. ACCEPTABLE ANODE MODELS ARE:
   a. MODEL NO. ZUR-18 FROM FARWEST INDUSTRIES
   b. MODEL S18 FROM MESA PRODUCTS
   c. APPROVED EQUAL
3. INSTALL TYPE, SIZE, AND NUMBER OF ANODES SPECIFIED.
4. INSTALL 2 ANODES TO ALL CONNECTIONS TO EXISTING C.I. OR D.I. PIPE 12-INCH DIAMETER AND LARGER.
5. CONDUCTOR WIRE SHALL BE A MINIMUM OF 10-FEET IN LENGTH, SIZE #8 OR LARGER, AND INSULATED WITH HIGH MOLECULAR WEIGHT POLYETHYLENE (HMWPE).
6. PREPACKAGED ANODE SHALL BE SATURATED WITH WATER PRIOR TO BACKFILL.
7. ANODES SHALL BE PLACED IN NATIVE EARTH BACKFILL. DO NOT PLACE IN PIPE BEDDING MATERIAL.

## THERMITE (EXOTERMIC) WELDING

1. THERMITE WELD MATERIALS SHALL BE DESIGNED FOR CONNECTION OF COPPER TO DUCTILE IRON AND CAST IRON SURFACES AND SHALL BE INSTALLED PER MANUFACTURERS INSTRUCTIONS.
2. ACCEPTABLE MANUFACTURES OF THERMITE WELD PRODUCTS ARE:
   a. CADWELD BY ERICO PRODUCTS INC.
   b. THERMOWELD BY CONTINENTAL INDUSTRIES INC.
   c. APPROVED EQUAL
3. A 2-INCH SQUARE AREA IN THE PIPE SURFACE SHALL BE GROUND CLEAN PER MANUFACTURERS RECOMMENDATIONS PRIOR TO THERMITE WELDING.
4. WIRE ENDS SHALL HAVE PROPER ADAPTER SLEEVES TO ENSURE PROPER BOND. #8 AWG SHALL HAVE ADAPTER SLEEVES SPECIFIED BY THERMITE WELD MANUFACTURER. FIELD INSTALLED SLEEVES SHALL HAVE WIRE CONDUCTOR EXTEND ¼-INCH BEYOND ENDS OF SLEEVE.
5. WIRE CONNECTION SHALL BE TESTED FOR INTEGRITY PRIOR TO COATING.
6. CONTINUITY STRAPS SHALL BE #2 AWG COPPER STRANDED WIRE WITH THW INSULATION AND SHALL BE ATTACHED TO THE PIPE BY THERMITE WELDING AND COATED AND SEALED AS DESCRIBED BELOW.

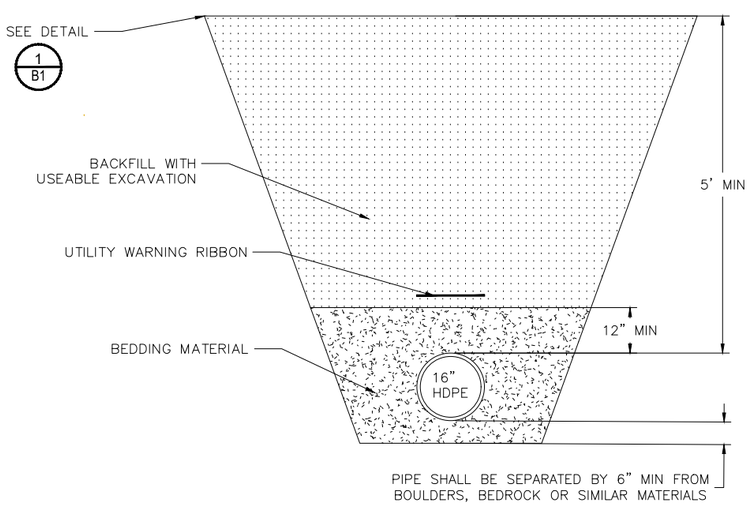
## COATING AND SEALING

1. ALL THERMITE WELDS SHALL BE PROTECTED AND SEALED BY:
   a. PREFABRICATED THERMITE WELD CAPS, SIZED ACCORDING TO WIRE SIZE, MINIMUM DIMENSIONS OF 4-INCH BY 4-INCH FILLED WITH ELASTOMERIC MASTIC COATING OR,
   b. HEAT SHRINK SLEEVE PIPE ENCASEMENT AFTER COATING THERMITE WELD WITH ELASTOMERIC MASTIC COATING – HEAT SHRINK SLEEVE SHALL BE CANUSA AQUA SEAL OR APPROVED EQUAL.
2. ALL PIPE SURFACE COATING DAMAGED BEYOND THE WELD CAPS OR HEAT SHRINK SHALL BE COATED WITH PROTAL 7125 FROM DENSO NORTH AMERICA OR APPROVED EQUAL.




GALVANIC ANODE INSTALLATION AT MAINLINE WATER VALVES

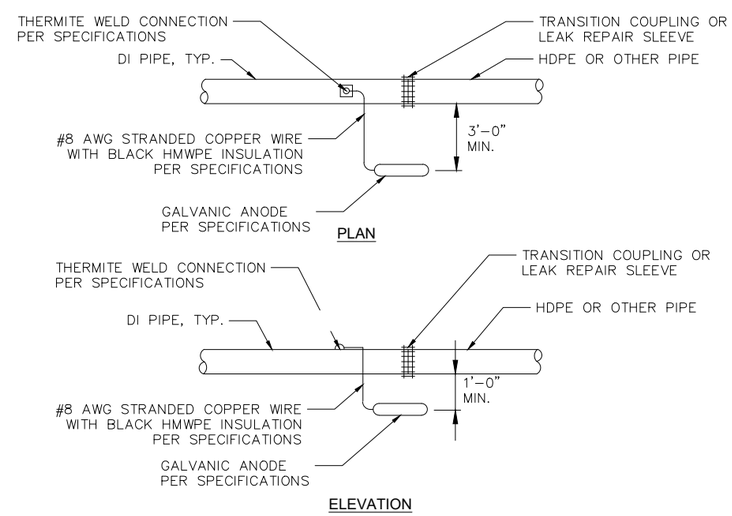
NTS




WATER MAIN TRENCH DETAIL

NTS

NOTE: BEDDING & BACKFILL SHALL BE COMPACTED TO 95% OF MAXIMUM DENSITY




GALVANIC ANODE INSTALLATION FOR EXISTING METALLIC PIPE CONNECTIONS OR LEAK REPAIR LOCATIONS DETAIL

NTS

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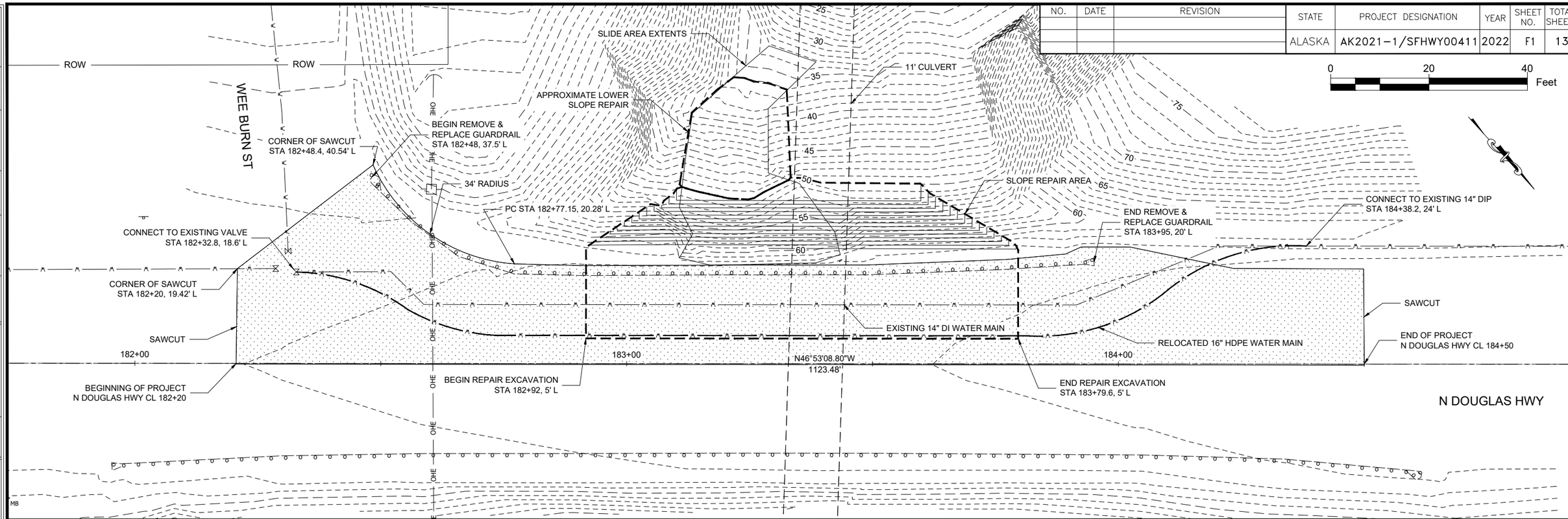
JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

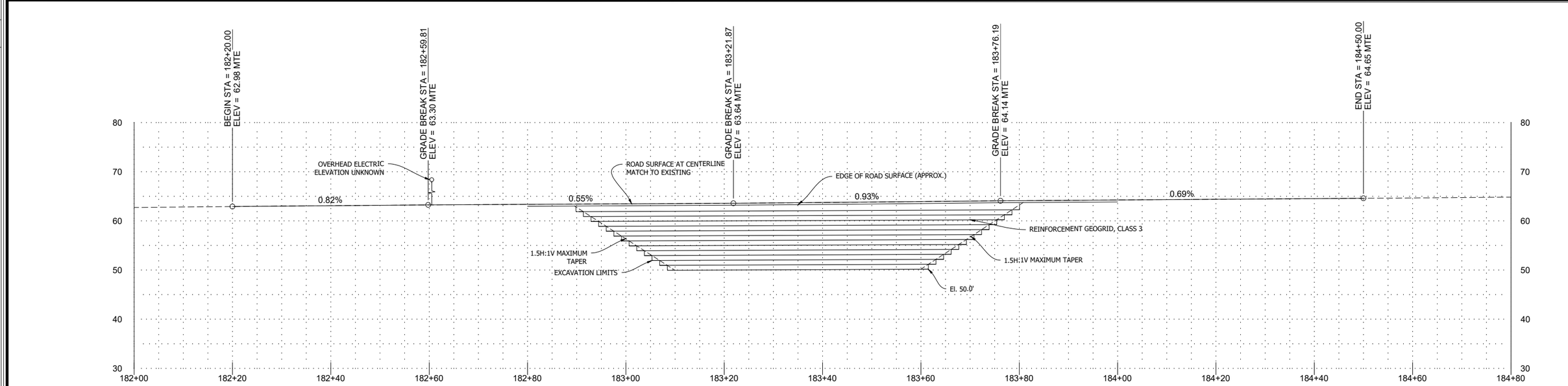
**WATER MAIN DETAILS**

FIRM DOWL | ADDRESS 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE (907) 780-3533 | CERTIFICATE OF AUTH #: AECL848
FILE c:\dowl_pw\d0395244\SA-CT-DT-E-63330.03.dwg | DATE | LAYOUT E1 | DESIGNED HOBBS | CHECKED CHRISTIE | DRAFTED BERG

| NO. | DATE | REVISION |
|---|---|---|
| | | |

| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | AK2021-1/SFHWY00411 | 2022 | F1 | 13 |

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STATE OF ALASKA DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**PLAN AND PROFILE**

| FIRM | DOWL | ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: AECL848 |
|---|---|---|---|---|---|---|
| FILE | c:\dowl_pw\d0395244\SC-CT-RD-F-63330.03.dwg | DATE | 1/20/2022 | LAYOUT | F1 | DESIGNED HOBBS CHECKED CHRISTIE DRAFTED BERG |

| NO. | DATE | REVISION |
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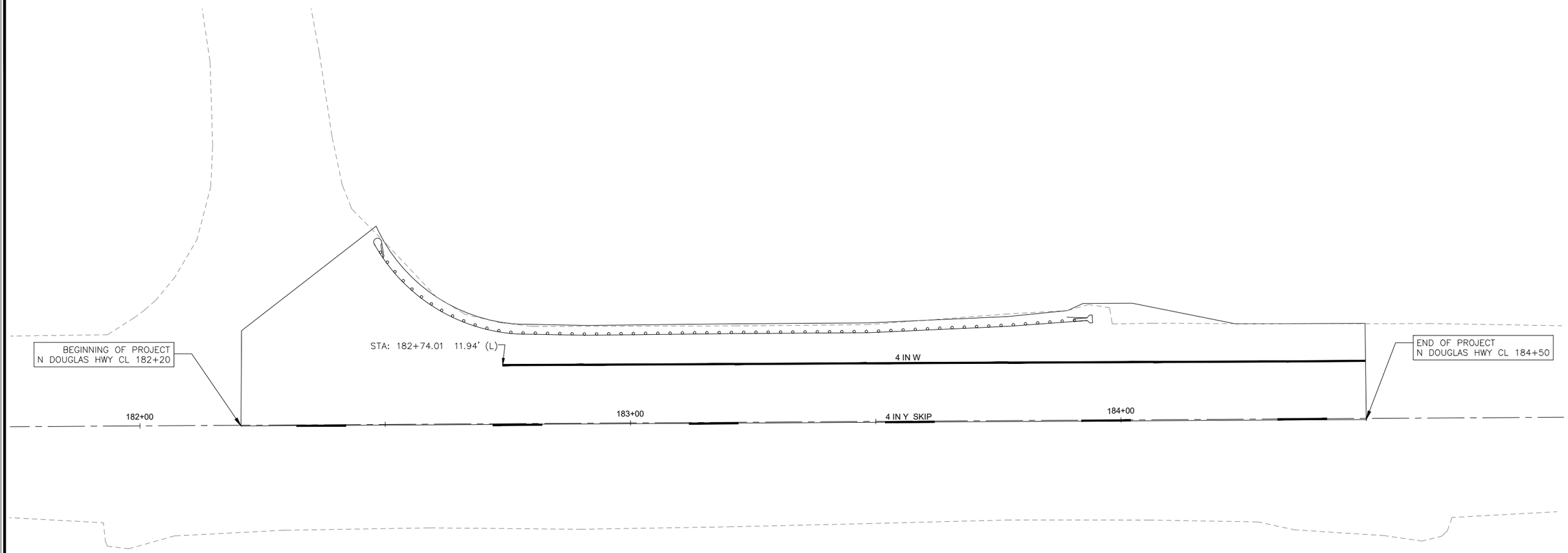
| STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|
| ALASKA | AK2021-1/SFHWY00411 | 2022 | H1 | 13 |




NOTE: MATCH EXISTING PAVEMENT MARKINGS AT EACH END OF PROJECT.

| STRIPING LEGEND | | | |
|---|---|---|---|
| SYMBOL | DESCRIPTION | WIDTH | PATTERN |
| 4 IN W | SOLID WHITE | 4" | ——— |
| 4 IN Y SKIP | YELLOW SKIP | 4" | — — — |

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JNU NORTH DOUGLAS – BONNIE BRAE
– DEC 20 SE PR

**STRIPING PLAN**

| FIRM | DOWL | ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: | AECL848 |
|---|---|---|---|---|---|---|---|
| FILE | c:\dowl_pw\d0395244\SC-CT-SG-H-63303-03.dwg | LAYOUT | H1 | DESIGNED | HOBBS | CHECKED | CHRISTIE |
| | | DATE | | | | DRAFTED | BERG |

| NO. | DATE | REVISION | STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
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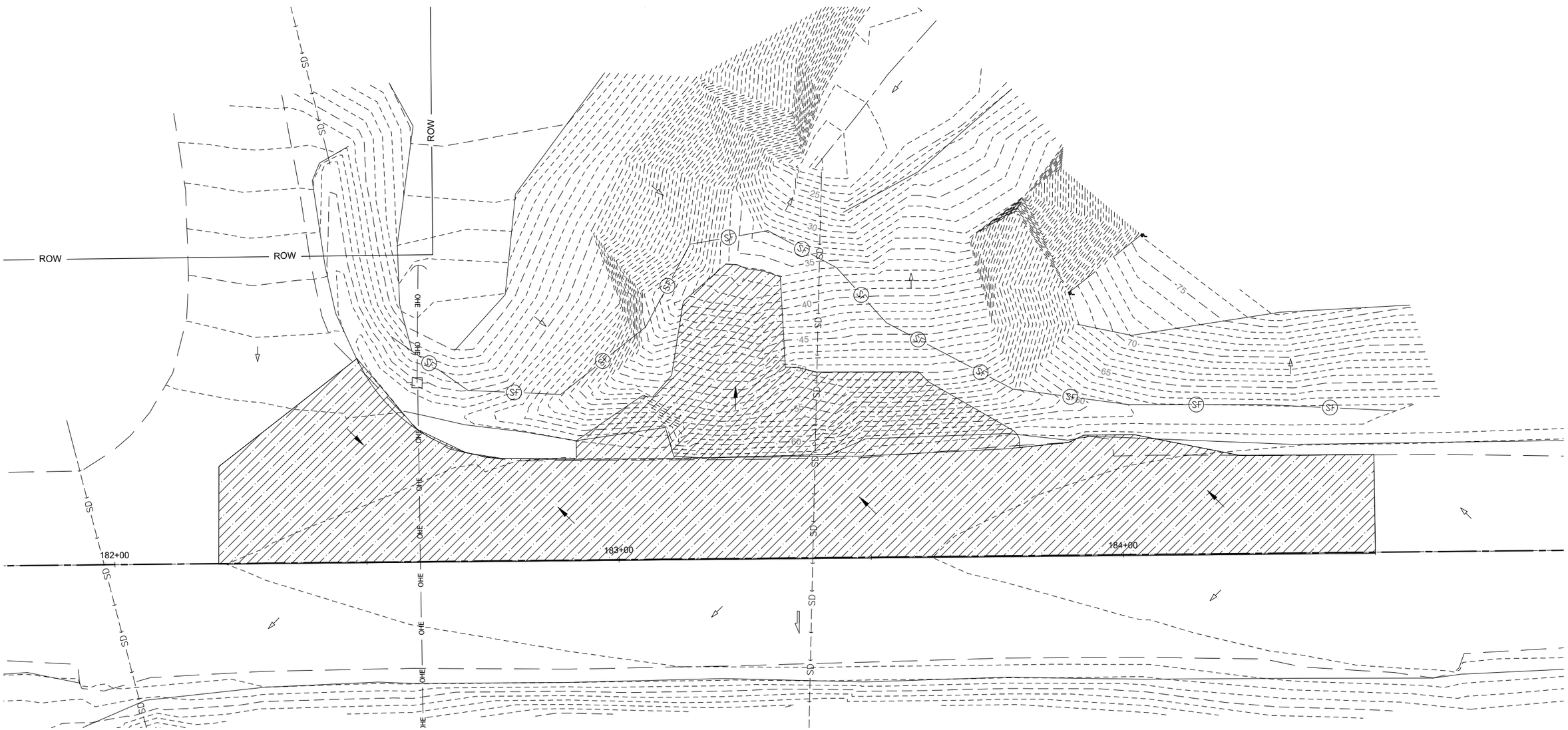
| | | | ALASKA | AK2021-1/SFHWY00411 | 2022 | Q1 | 13 |




## ESCP NOTES:

1. REFER TO ESCP IN APPENDIX C OF THE SPECIAL PROVISIONS.
2. INSTALL EROSION AND SEDIMENT CONTROL MEASURES PRIOR TO EARTH DISTURBING ACTIVITIES.
3. THE LOCATIONS OF TEMPORARY EROSION AND SEDIMENT CONTROL MEASURES ARE RECOMMENDATIONS. IT IS THE RESPONSIBILITY OF THE CONTRACTOR TO PREPARE AND IMPLEMENT A SWPPP ACCORDING TO CONTRACT SPECIFICATION SECTION 641 AND THE ESCP.

## ESCP LEGEND

- TEMPORARY SEDIMENT BARRIER
- CUT LIMITS
- FILL LIMITS
- ROW — RIGHT-OF-WAY
- CULVERT STORMWATER FLOW
- PROFILE STORMWATER FLOW
- SURFACE STORMWATER FLOW
- DISTURBED AREA

0 20 40 Feet

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JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**EROSION SEDIMENT CONTROL PLAN**


FIRM DOWL
ADDRESS 9085 GLACIER HIGHWAY, JUNEAU, AK 99801
PHONE (907) 780-3533
CERTIFICATE OF AUTH #: AECL848
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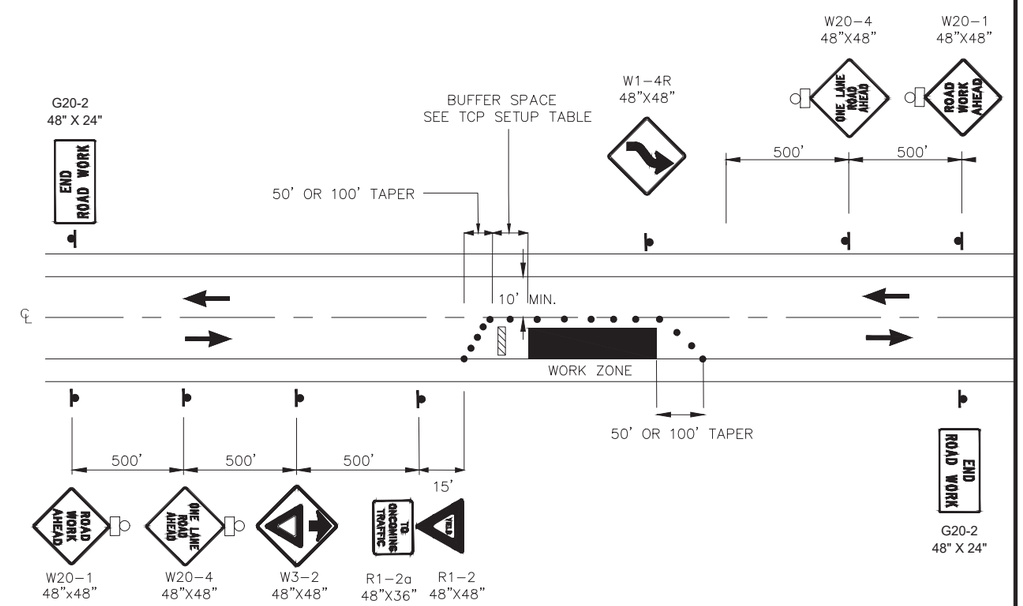
LAYOUT Q1
DESIGNED HOBBS,JC
CHECKED CHRISTIE
DRAFTED BERGJAN
DATE

| NO. | DATE | REVISION | STATE | PROJECT DESIGNATION | YEAR | SHEET NO. | TOTAL SHEETS |
|---|---|---|---|---|---|---|---|
| | | | ALASKA | AK2021-1/SFHWY00411 | 2022 | T1 | 13 |

TCP LEGEND

- SIGN
- CONE
- WARNING LIGHT
- TRAFFIC FLOW
- TYPE 3 BARRICADE




## LANE CLOSURE ON TWO-LANE ROAD WITH LOW TRAFFIC VOLUMES

TRAFFIC CONTROL NOTES:

1. SUBMIT ALL TCPs TO THE ENGINEER FOR APPROVAL.
2. TEMPORARY DRIVING LANES SHALL HAVE A MINIMUM WIDTH OF 10'-0".
3. PLACE CONSTRUCTION SIGNS SUCH THAT THEY DO NOT OBSCURE EXISTING TRAFFIC SIGNS.
4. SUGGESTED CONSTRUCTION PHASING:

- REMOVE PAVEMENT FROM BEGINNING OF PROJECT TO END OF PROJECT. USE SINGLE-LANE CLOSURES AND SWAP TRAFFIC BACK AND FORTH DURING PAVEMENT REMOVAL.
- EXCAVATE THE ENTIRE ROAD EMBANKMENT WIDTH TO THE DATUM OF PAVEMENT STRUCTURAL SECTION NO. 1. USE SINGLE LANE CLOSURES AND SWAP TRAFFIC BACK AND FORTH AS NEEDED TO REACH DESIRED DEPTH.
- EXCAVATE THE SOUTHEAST BOUND LANE TO THE DATUM OF PAVEMENT STRUCTURAL SECTION NO. 2 AS SHOWN IN THE TYPICAL SECTION. MAINTAIN A SINGLE LANE OF TRAFFIC ON THE NORTHWEST BOUND LANE. UTILIZE MUTCD TYPICAL APPLICATION 11 FOR TRAFFIC CONTROL SETUP.
- CONSTRUCT EMBANKMENT ON THE SOUTHEAST BOUND LANE AS SHOWN IN TYPICAL SECTION UNTIL THE GRADE IS BROUGHT EVEN WITH THE PAVEMENT STRUCTURAL SECTION NO. 1 DATUM GRADE. USE SINGLE LANE CLOSURES AND SWAP TRAFFIC BACK AN FORTH AS NEEDED TO CONSTRUCT THE REMAINDER OF EMBANKMENT AS SHOWN IN THE TYPICAL SECTIONS.
- PAVE THE ROAD AS SHOWN IN THE TYPICAL SECTIONS. USE SINGLE LANE CLOSURES AND SWAP TRAFFIC DURING PAVING OPERATIONS.

TCP SETUP TABLE

| SPEED (MPH) | MIN MERGING TAPER LENGTH (L) IN FEET WIDTH OF OFFSET (W) IN FEET | | | MIN NUMBER OF DEVICES WIDTH OF OFFSET (W) IN FEET | | | MAX DEVICE SPACING IN FEET | | BUFFER SPACE IN FEET |
|---|---|---|---|---|---|---|---|---|---|
| | 10' | 11' | 12' | 10' | 11' | 12' | ALONG TAPER | ALONG TANGENT | |
| 45 | 450 | 495 | 540 | 11 | 12 | 13 | 45 | 90 | 360 |

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JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**TRAFFIC CONTROL PLAN**

| ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: | AECL848 |
|---|---|---|---|---|---|
| DATE | LAYOUT T1 | DESIGNED HOBBS.JC | CHECKED CHRISTIE | DRAFTED BERGJAN | |
| FIRM DOWL | | | | | |
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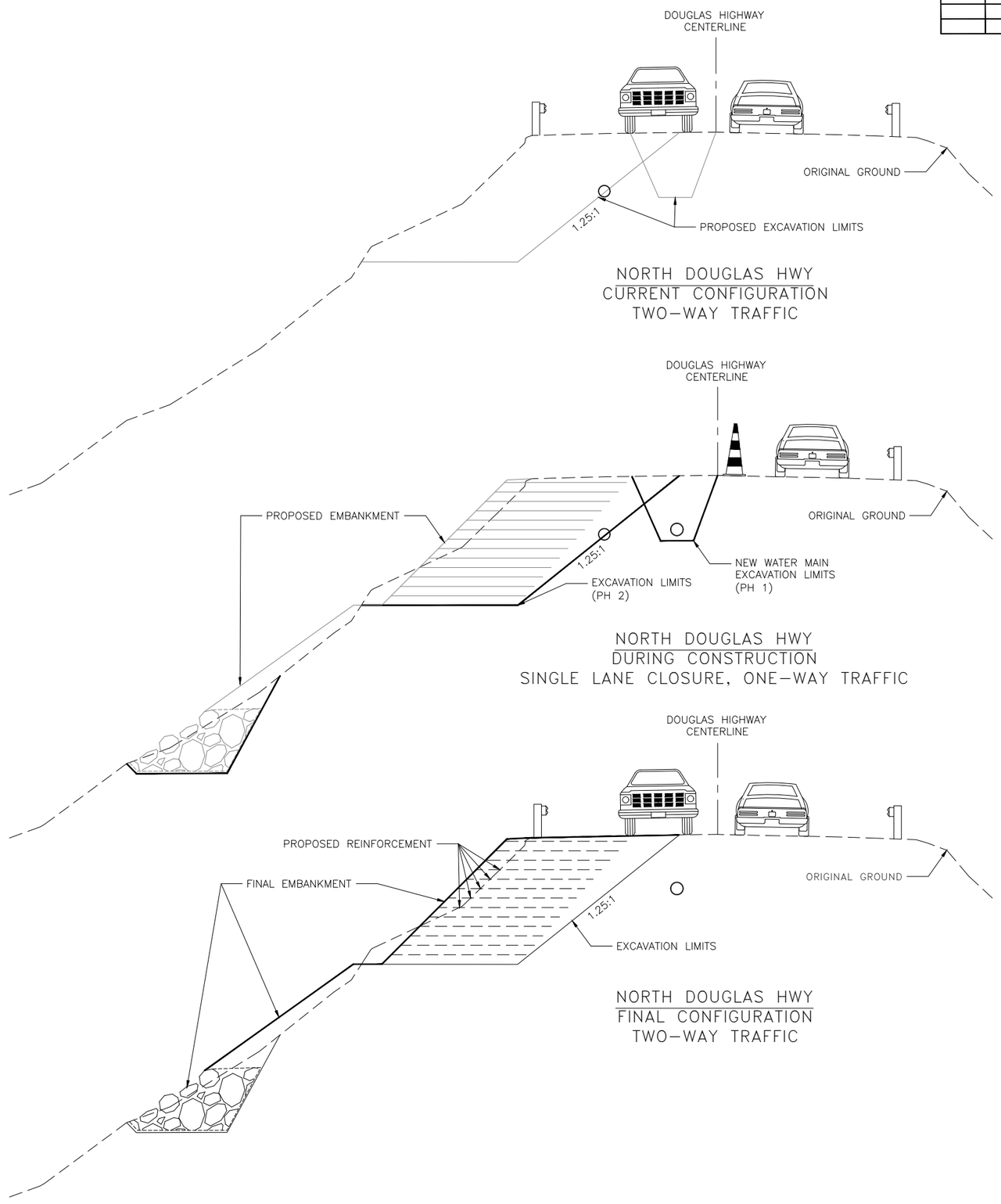


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JNU NORTH DOUGLAS – BONNIE BRAE – DEC 20 SE PR

**CONSTRUCTION PHASING PLAN**

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| FIRM | DOWL | ADDRESS | 9085 GLACIER HIGHWAY, JUNEAU, AK 99801 | PHONE | (907) 780-3533 | CERTIFICATE OF AUTH #: | AECL848 |
| FILE | c:\dowl_pw\d0395244\SC-CT-TC-T-63330.03.dwg | LAYOUT | T2 | DESIGNED | HOBBSJC | CHECKED | CHRISTIE |
| | | DATE | | | | DRAFTED | BERGJAN |