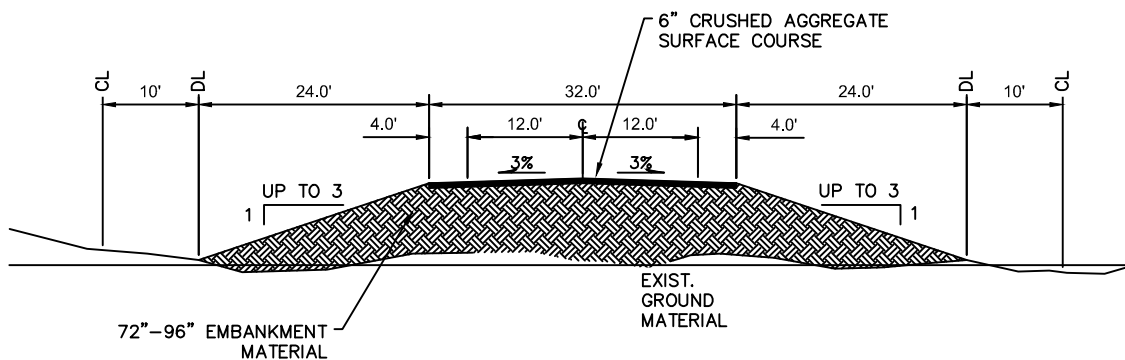
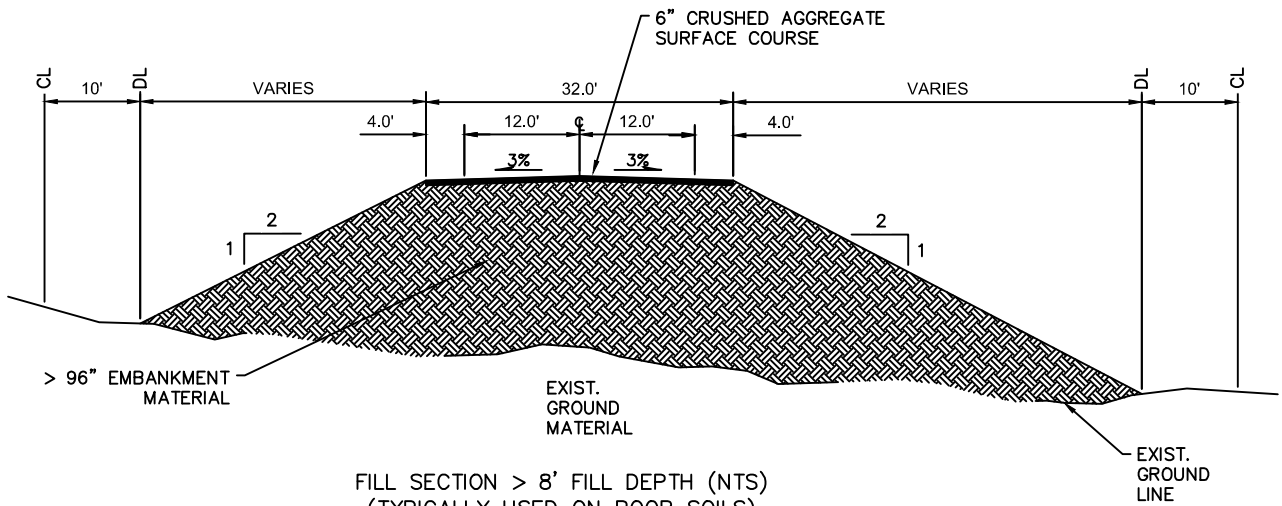


FILL SECTION < 6' FILL DEPTH (NTS)
(TYPICALLY USED ON GOOD SOILS)



FILL SECTION 6' TO 8' FILL DEPTH (NTS)
(TYPICALLY USED ON MODERATE SOILS)



FILL SECTION > 8' FILL DEPTH (NTS)
(TYPICALLY USED ON POOR SOILS)

NOTE: TYPICAL SECTIONS ARE FOR FULL BUILD OUT (PHASE III)
 ☉ : CENTERLINE
 DL: DAYLIGHT LIMITS
 CL: CLEARING LIMITS
 NTS: NOT TO SCALE

ACOE PERMIT: POA-2013-396

CROSS SECTIONS: TYPICAL FILL SECTIONS

APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)

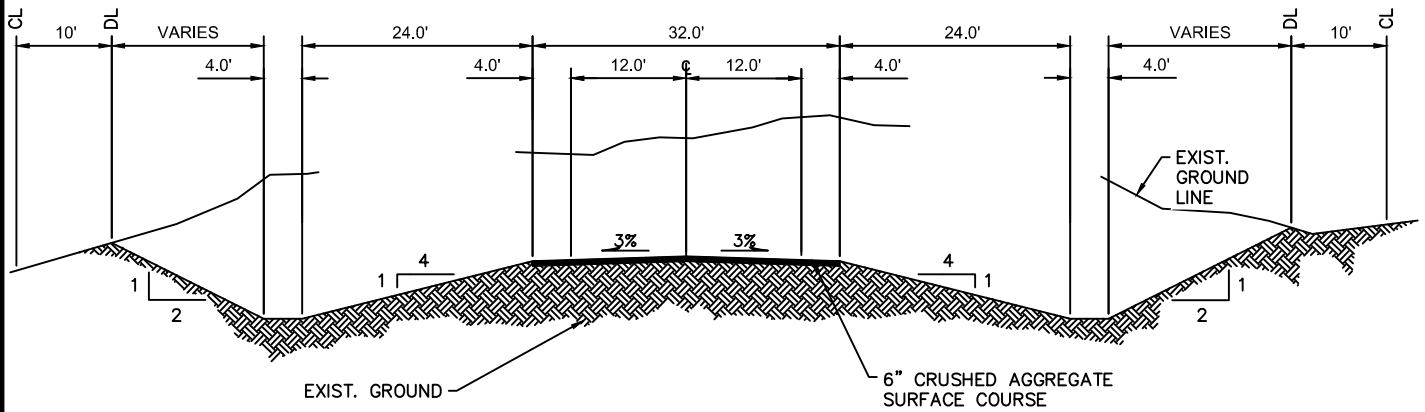
PROJECT: Ambler Mining District
Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16

MAP SET 2: 1 OF 16

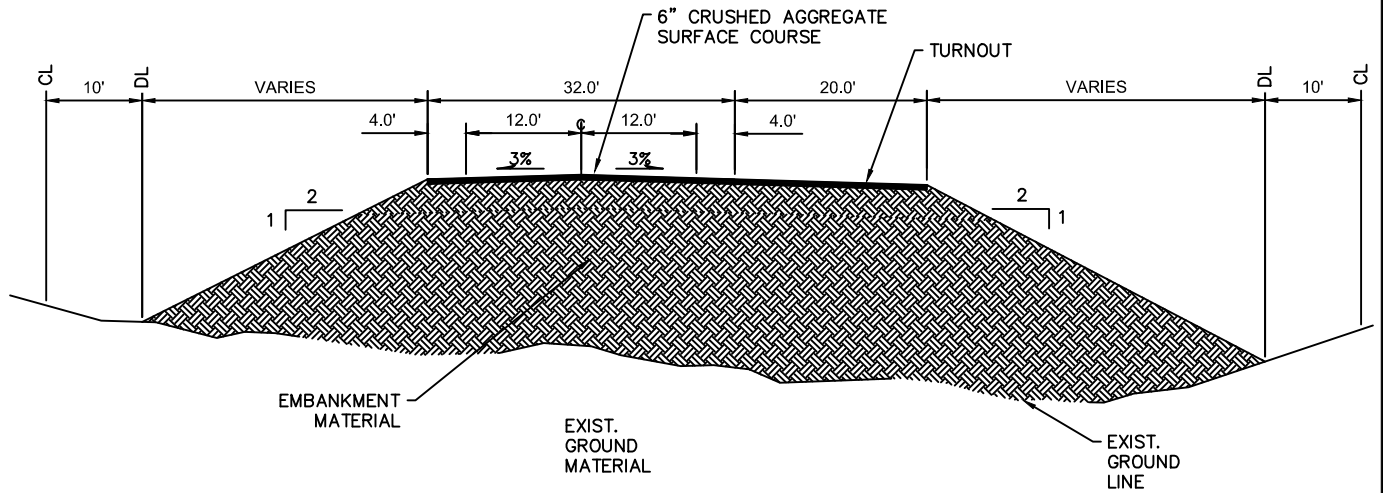


CUT SECTION TYPICAL ROAD (NTS)

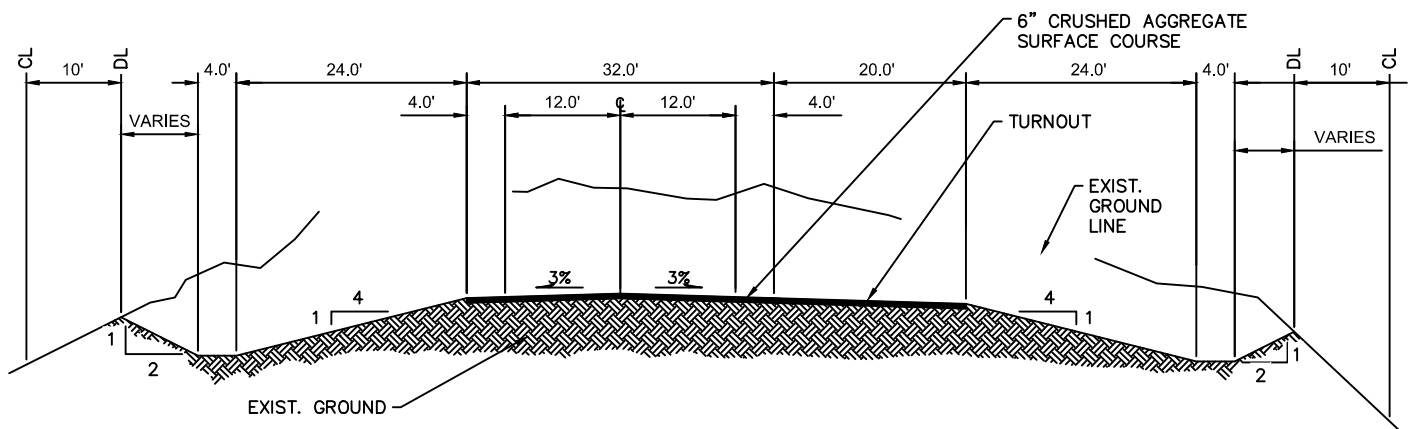
NOTE: TYPICAL SECTIONS ARE FOR FULL BUILD OUT (PHASE III)
 CL: CENTERLINE
 DL: DAYLIGHT LIMITS
 CL: CLEARING LIMITS
 NTS: NOT TO SCALE

ACOE PERMIT: POA-2013-396
 CROSS SECTIONS: TYPICAL CUT SECTION
 APPLICANT: Alaska Industrial Development
 and Export Authority (AIDEA)
 PROJECT: Ambler Mining District
 Industrial Access Project
 LOCATION: Ambler Mining District
 WATERBODY: Kobuk/Koyukuk/Alatna Rivers
 DATE: 03/15/16 MAP SET 2: 2 OF 16

Q:\24\60693\GIS\ENV\Northern Bypass\DETAILS\March16_CORP and Regular Title Block.dwg PLOT DATE: 2016-06-27 15:31 USER: charrington



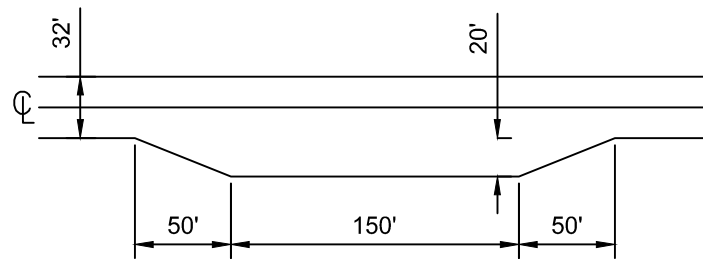
FILL SECTION WITH TURNOUT NTS



CUT SECTION WITH TURNOUT (NTS)

NOTE: TYPICAL SECTIONS ARE FOR FULL BUILD OUT (PHASE III)
 CL: CENTERLINE
 DL: DAYLIGHT LIMITS
 CL: CLEARING LIMITS
 NTS: NOT TO SCALE

ACOE PERMIT: POA-2013-396
 CROSS SECTIONS: TYP SECTION W TURNOUTS
 APPLICANT: Alaska Industrial Development
 and Export Authority (AIDEA)
 PROJECT: Ambler Mining District
 Industrial Access Project
 LOCATION: Ambler Mining District
 WATERBODY: Kobuk/Koyukuk/Alatna Rivers
 DATE: 03/15/16 MAP SET 2: 3 OF 16



TURNOUT PLAN VIEW (NTS)

CL : CENTERLINE
NTS: NOT TO SCALE

ACOE PERMIT: POA-2013-396

PLAN VIEW: TURNOUT

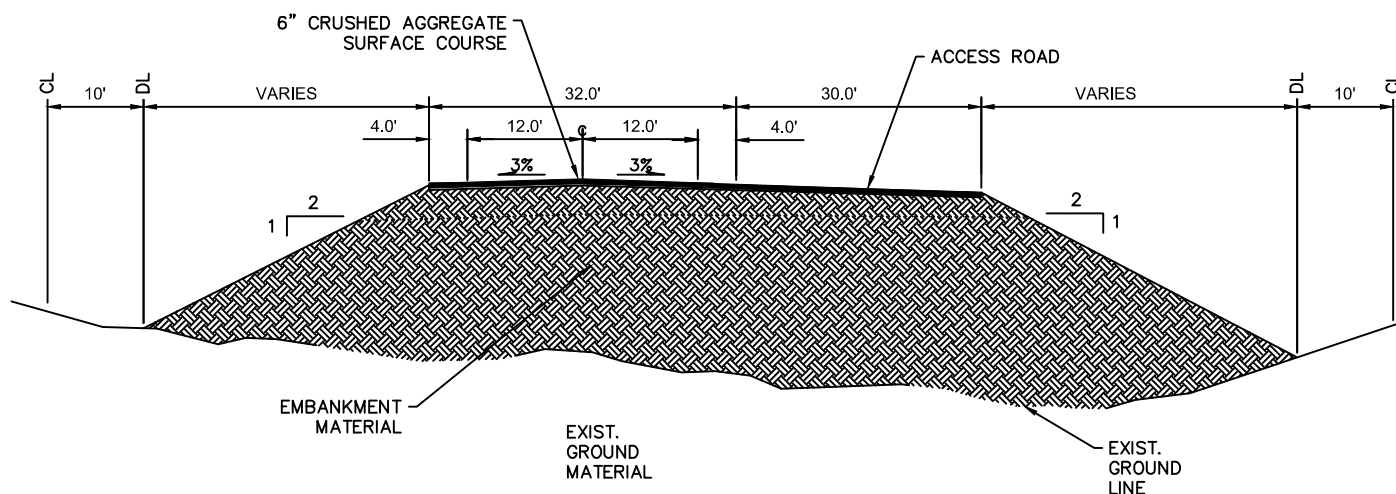
APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)

PROJECT: Ambler Mining District
Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

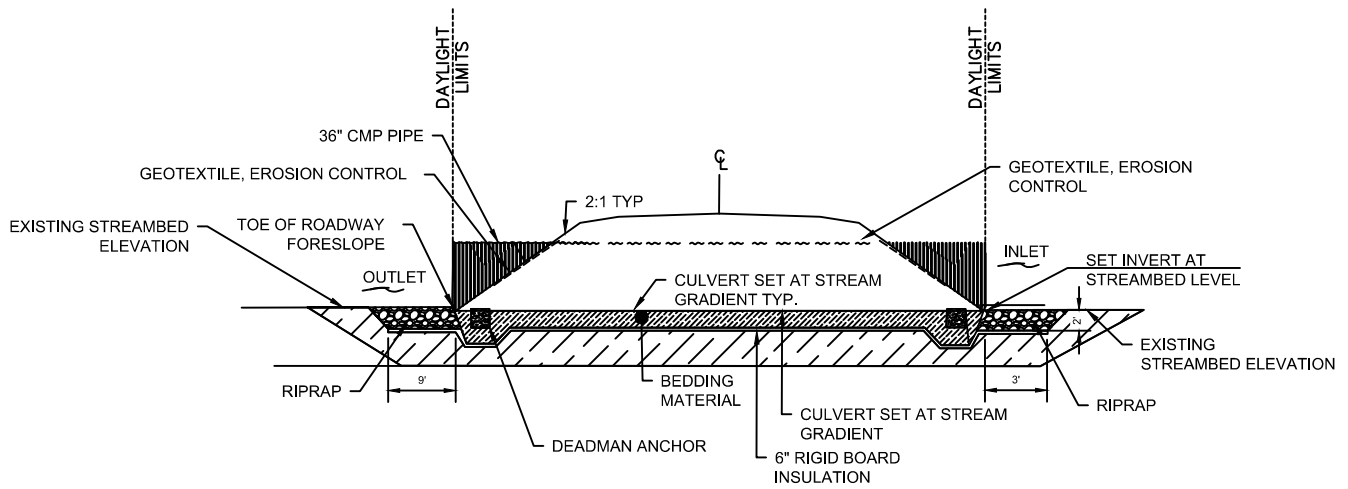
DATE: 03/15/16 MAP SET 2: 4 OF 16



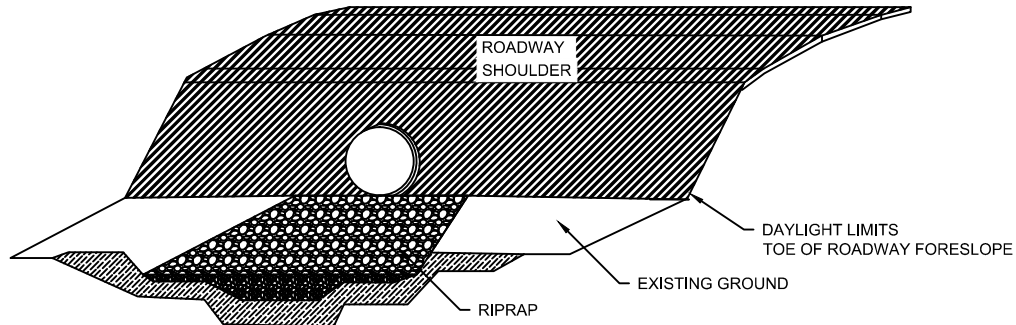
ACCESS ROAD WITH TURN AROUND (NTS)
SECTION A - A

CL: CENTERLINE
 DL: DAYLIGHT LIMITS
 CL: CLEARING LIMITS
 NTS: NOT TO SCALE

ACOE PERMIT: POA-2013-396
CROSS SECTIONS: TYPICAL ACCESS ROAD
APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)
PROJECT: Ambler Mining District
Industrial Access Project
LOCATION: Ambler Mining District
WATERBODY: Kobuk/Koyukuk/Alatna Rivers
DATE: 03/15/16 MAP SET 2: 5 OF 16



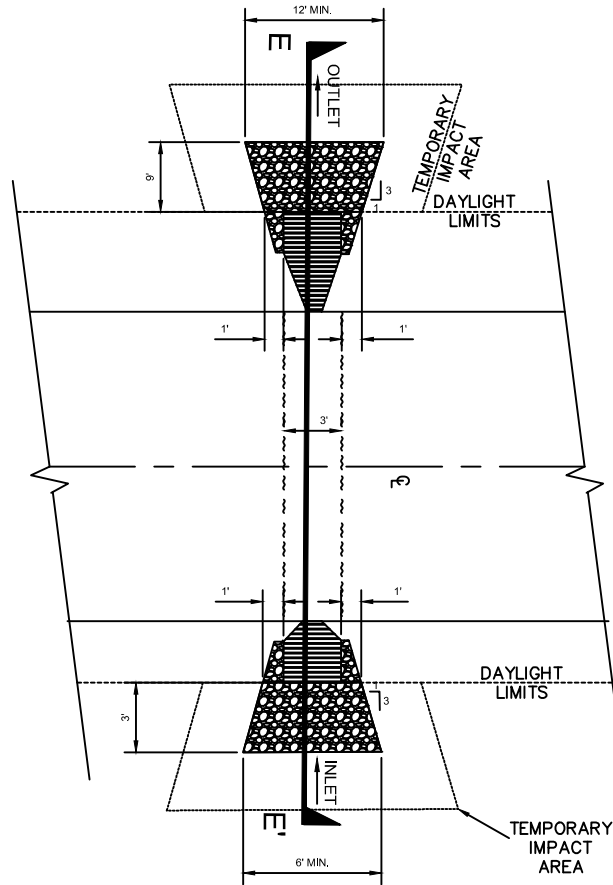
MINOR CULVERT TYPICAL SECTION
SECTION E-E'
 NOT TO SCALE



MINOR CULVERT ISOMETRIC VIEW
 NOT TO SCALE

CL : CENTERLINE

ACOE PERMIT: POA-2013-396
 CROSS SECTION: MINOR CULVERT
 APPLICANT: Alaska Industrial Development
 and Export Authority (AIDEA)
 PROJECT: Ambler Mining District
 Industrial Access Project
 LOCATION: Ambler Mining District
 WATERBODY: Kobuk/Koyukuk/Alatna Rivers
 DATE: 03/15/16 MAP SET 2: 6 OF 16



MINOR CULVERT PLAN VIEW
NOT TO SCALE

ACOE PERMIT: POA-2013-396

PLAN VIEW: MINOR CULVERT

APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)

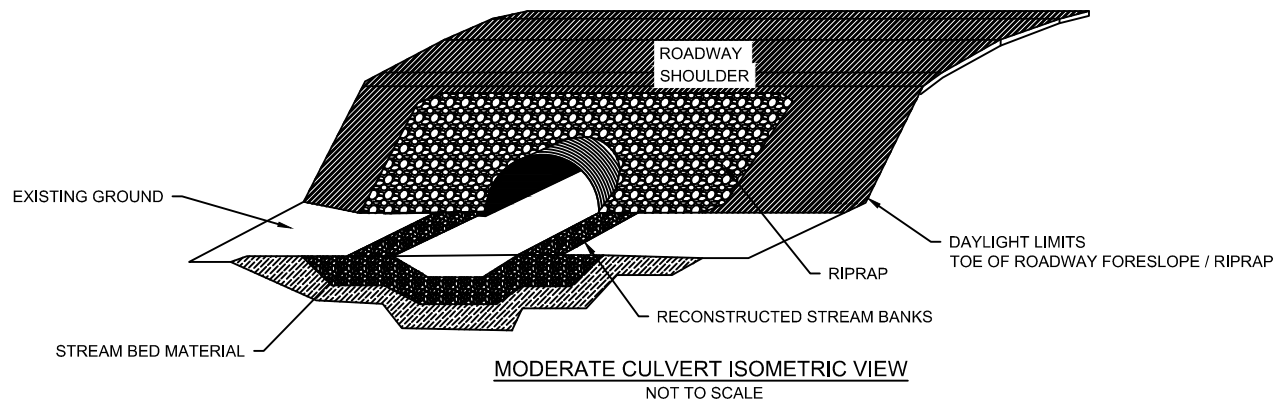
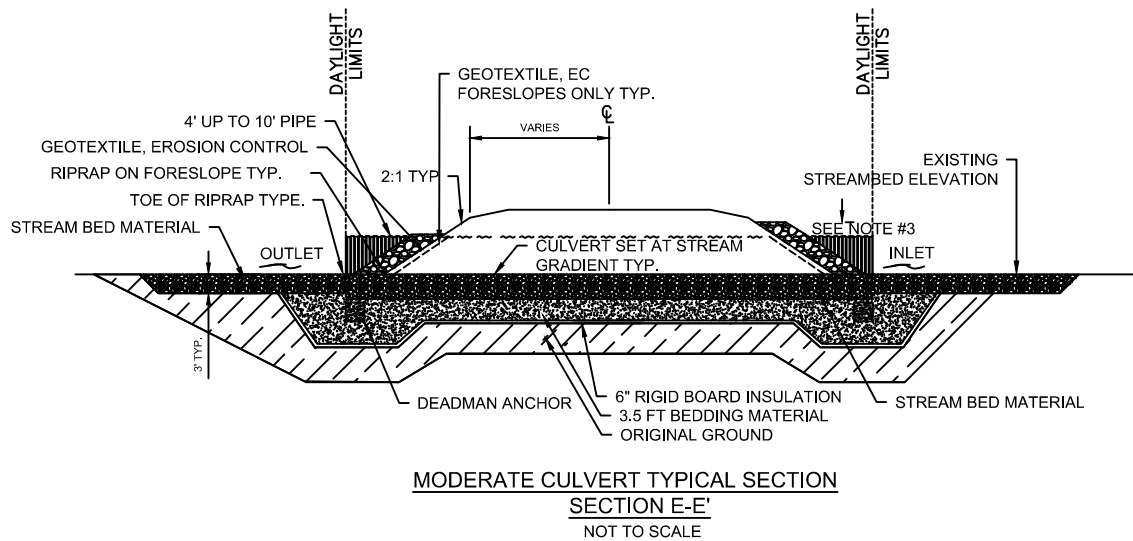
PROJECT: Ambler Mining District
Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16 MAP SET 2: 7 OF 16

☉ : CENTERLINE



NOTES:

1. CULVERT WILL BE EMBEDDED TO PROVIDE FISH PASSAGE USING STREAM SIMULATION DESIGN PRINCIPLES.
2. EROSION CONTROL STRUCTURES ARE APPROXIMATE AND MAY BE FIELD ADJUSTED BY THE ENGINEER TO TAKE ADVANTAGE OF EXISTING CHANNEL FEATURES.
3. EXTEND RIPRAP 3 FEET ABOVE THE PIPE ON THE INLET SIDE OR TO EDGE OF SHOULDER, WHICHEVER IS LESS. ON THE OUTLET SIDE, THE RIPRAP SHALL EXTEND TO THE TOP OF THE PIPE.
4. GEOTEXTILE IS NEEDED ON ROADWAY FORESLOPE ONLY.
5. STREAM BED CONSTRUCTED OF MATERIAL SIMILAR TO NATURAL STREAM SUBSTRATE.
6. STREAM BANKS CONSTRUCTED OF BIOENGINEERING AND RIPRAP.

C : CENTERLINE

ACOE PERMIT: POA-2013-396

CROSS SECTION: MODERATE CULVERT

APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)

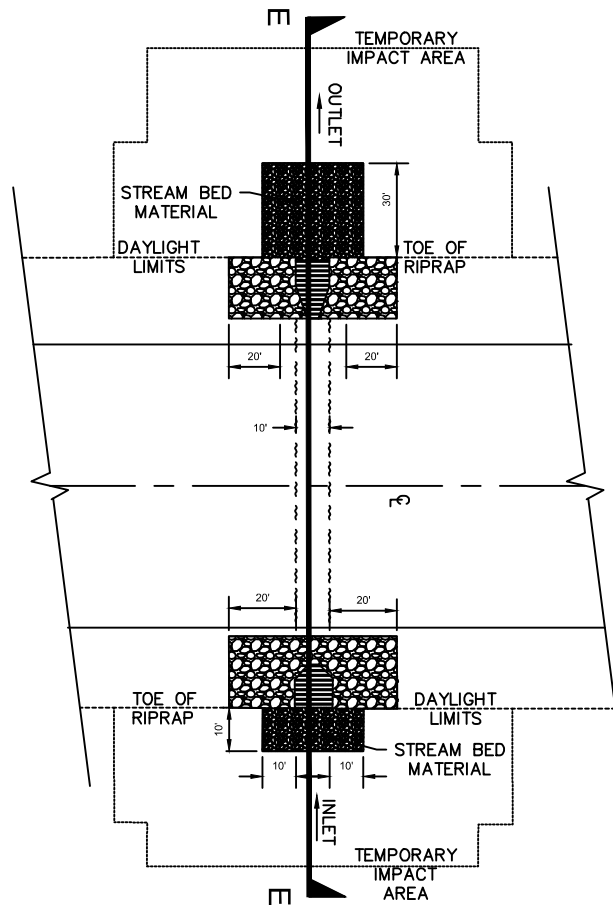
PROJECT: Ambler Mining District
Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16

MAP SET 2: 8 OF 16



MODERATE CULVERT PLAN VIEW

NOT TO SCALE

CL : CENTERLINE

ACOE PERMIT: POA-2013-396

PLAN VIEW: MODERATE CULVERT

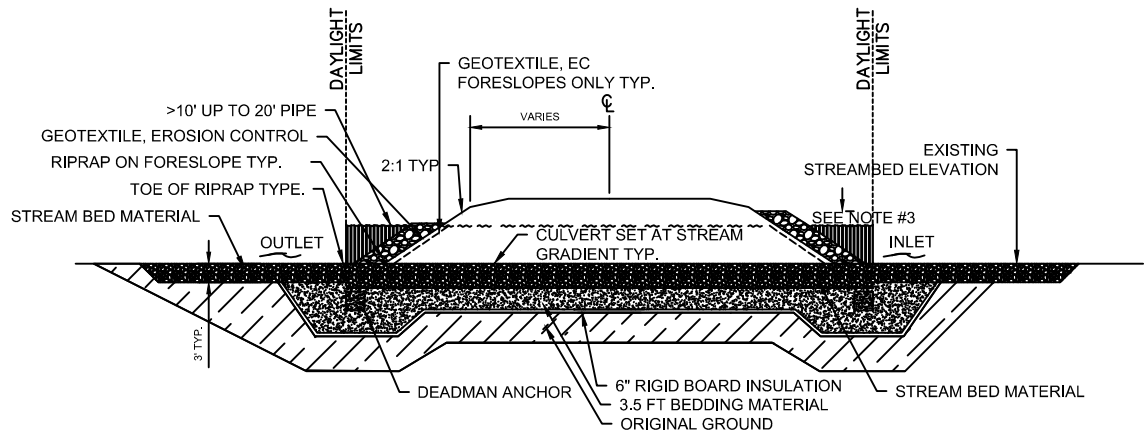
APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)

PROJECT: Ambler Mining District
Industrial Access Project

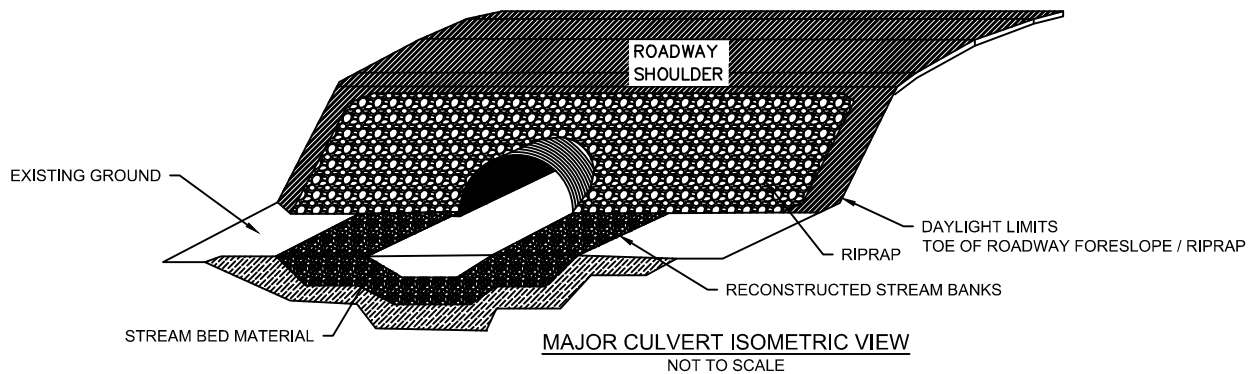
LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16 MAP SET 2: 9 OF 16



MAJOR CULVERT TYPICAL SECTION
SECTION E-E
NOT TO SCALE



MAJOR CULVERT ISOMETRIC VIEW
NOT TO SCALE

NOTES:

1. CULVERT WILL BE EMBEDDED TO PROVIDE FISH PASSAGE USING STREAM SIMULATION DESIGN PRINCIPLES.
2. EROSION CONTROL STRUCTURES ARE APPROXIMATE AND MAY BE FIELD ADJUSTED BY THE ENGINEER TO TAKE ADVANTAGE OF EXISTING CHANNEL FEATURES.
3. EXTEND RIPRAP 3 FEET ABOVE THE PIPE ON THE INLET SIDE OR TO EDGE OF SHOULDER, WHICHEVER IS LESS. ON THE OUTLET SIDE, THE RIPRAP SHALL EXTEND TO THE TOP OF THE PIPE.
4. GEOTEXTILE IS NEEDED ON ROADWAY FORESLOPE ONLY.
5. STREAM BED CONSTRUCTED OF MATERIAL SIMILAR TO NATURAL STREAM SUBSTRATE.
6. STREAM BANKS CONSTRUCTED OF BIOENGINEERING AND RIPRAP.

C : CENTERLINE

ACOE PERMIT: POA-2013-396

CROSS SECTION: MAJOR CULVERT

APPLICANT: Alaska Industrial Development and Export Authority (AIDEA)

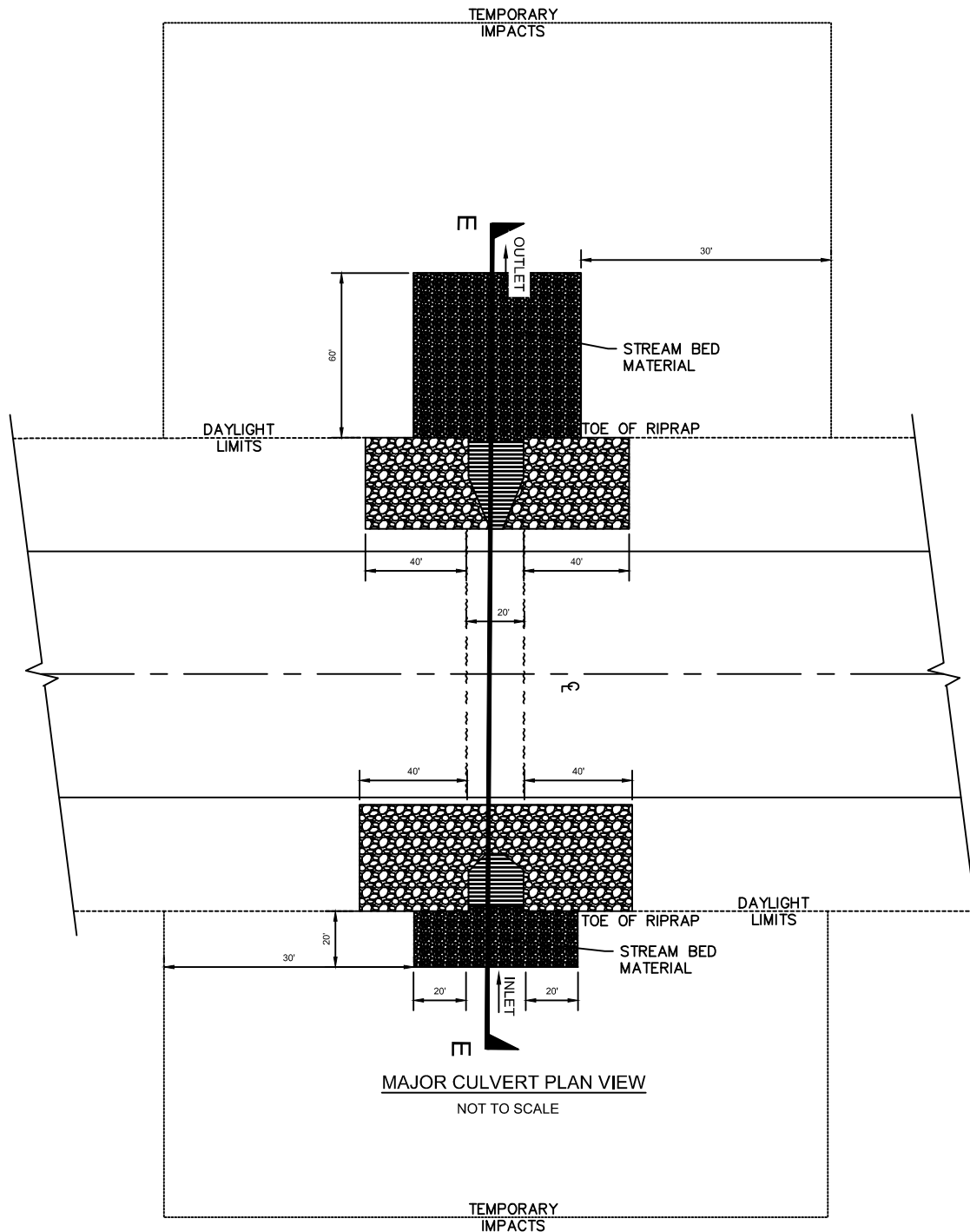
PROJECT: Ambler Mining District Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16

MAP SET 2: 10 OF 16



ACOE PERMIT: POA-2013-396

PLAN VIEW: MAJOR CULVERT

APPLICANT: Alaska Industrial Development
and Export Authority (AIDEA)

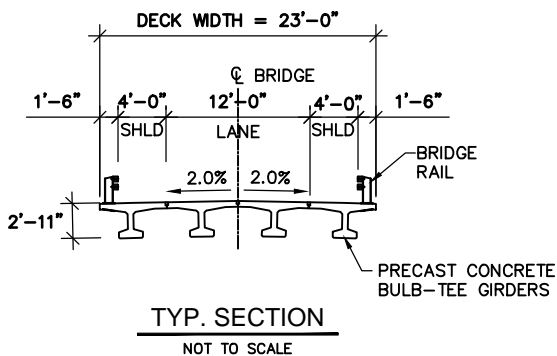
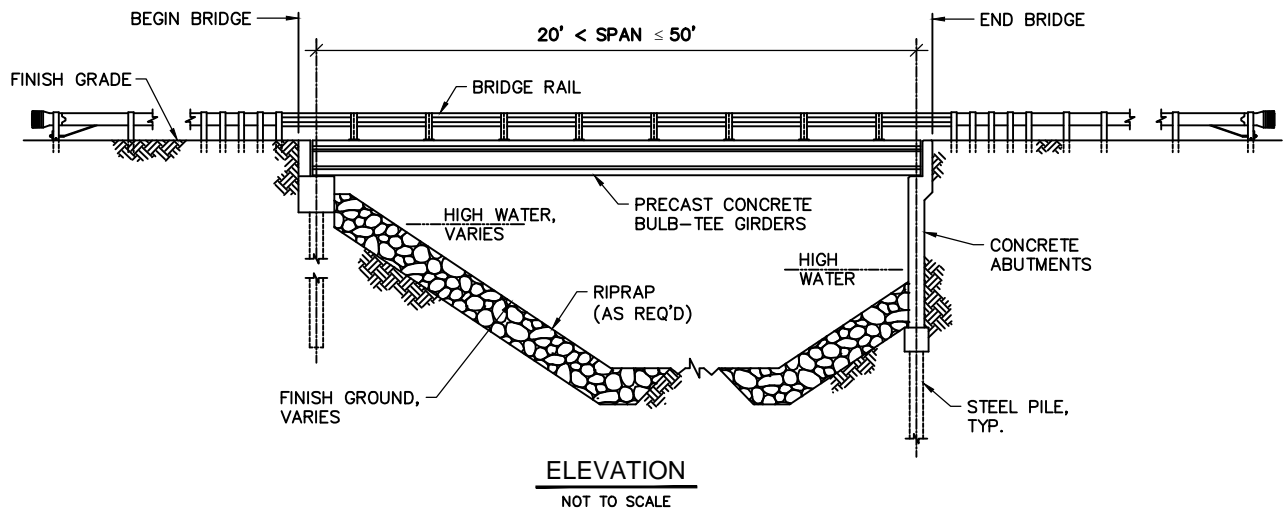
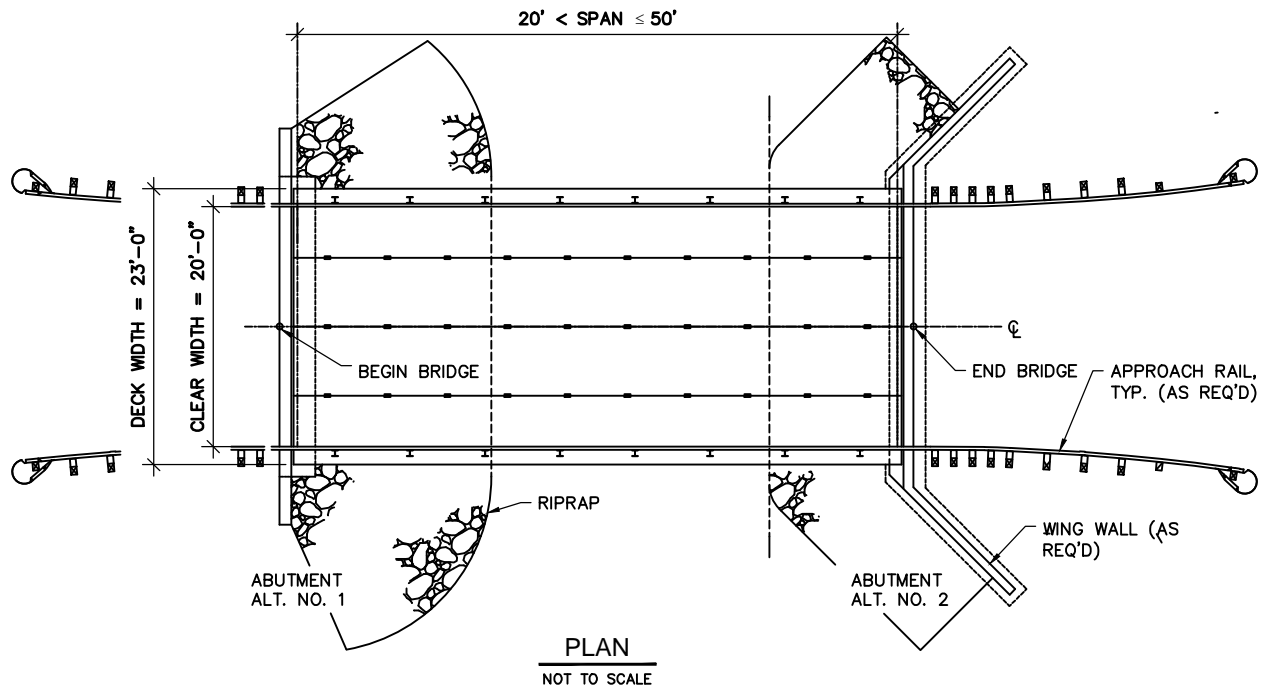
PROJECT: Ambler Mining District
Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16

MAP SET 2: 11 OF 16



CL : CENTERLINE

ACOE PERMIT: POA-2013-396

SMALL BRIDGE (<50FT)

APPLICANT: Alaska Industrial Development and Export Authority (AIDEA)

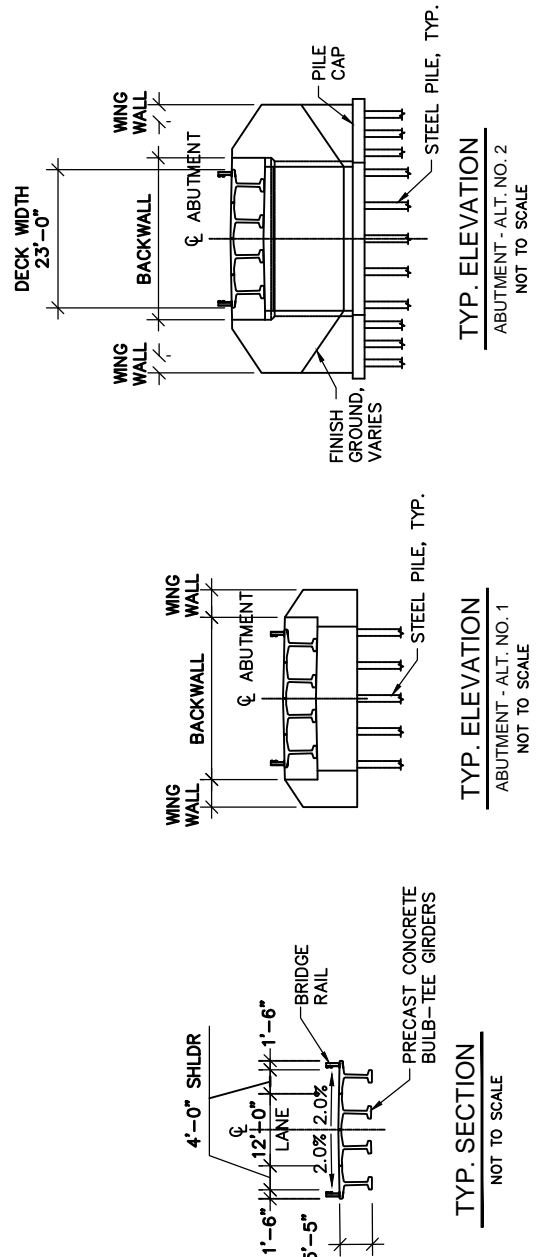
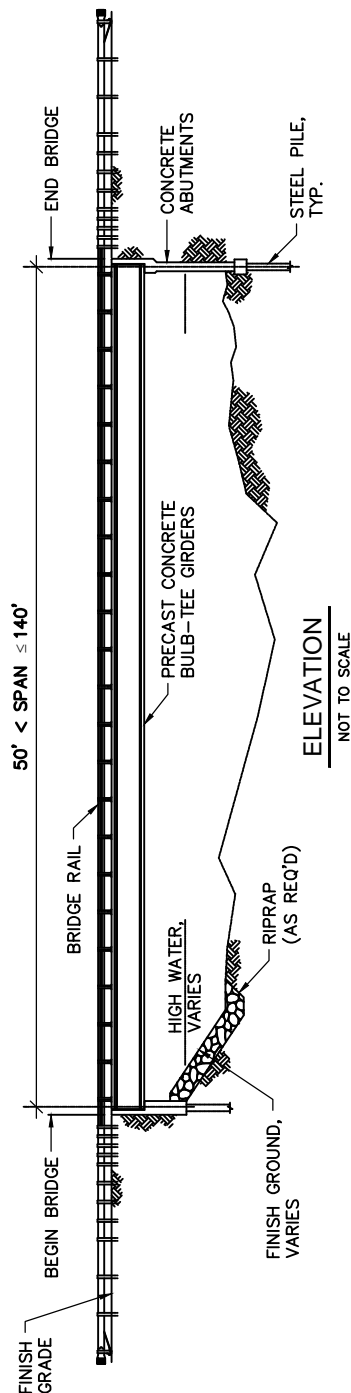
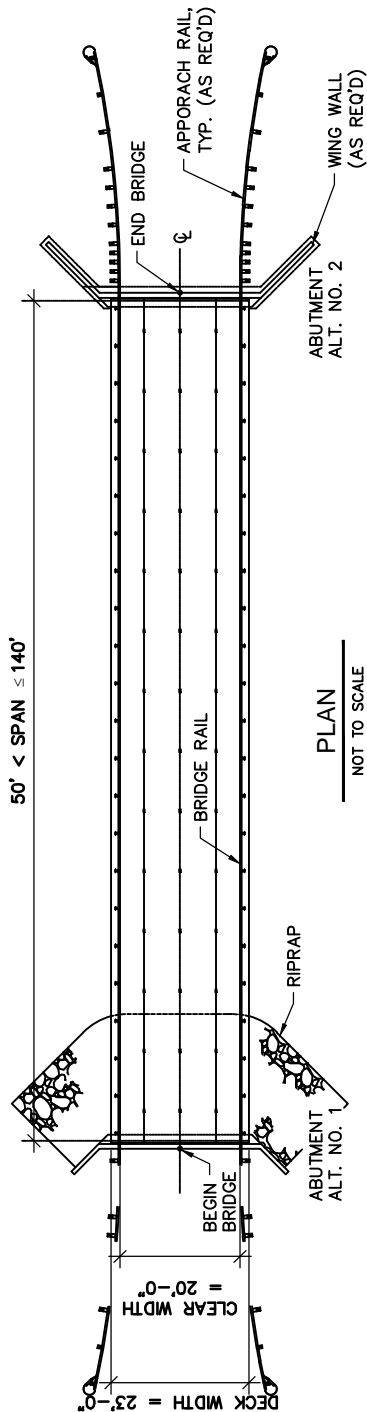
PROJECT: Ambler Mining District Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 4/4/2014

MAP SET 2: 12 OF 16



ACOE PERMIT: POA-2013-396

MEDIUM BRIDGE (50FT < SPAN < 140FT)

APPLICANT: Alaska Industrial Development and Export Authority (AIDEA)

PROJECT: Ambler Mining District Industrial Access Project

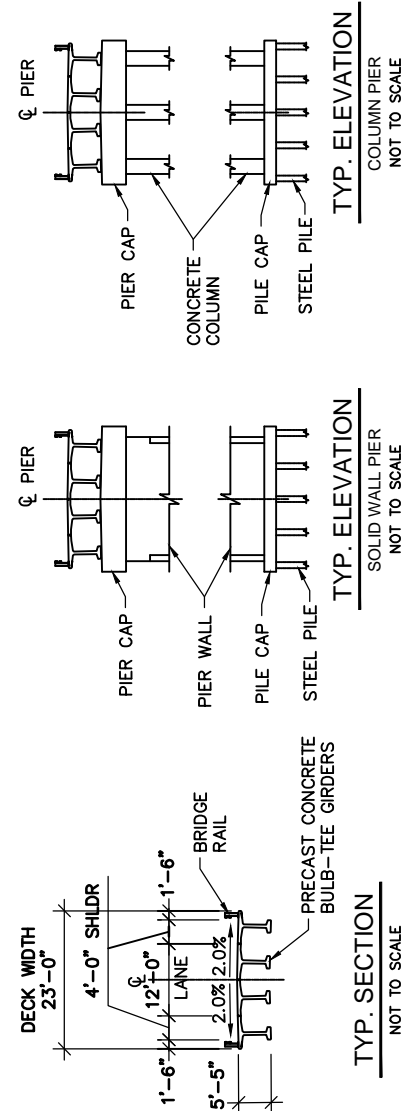
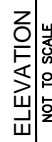
LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 4/4/2014

MAP SET 2: 13 OF 16

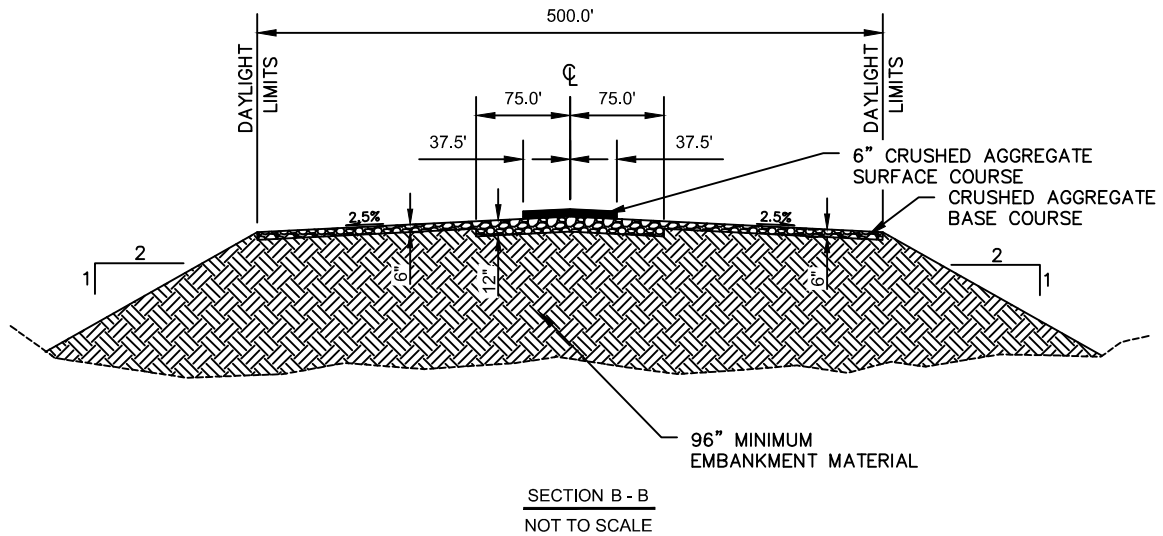
CL : CENTERLINE



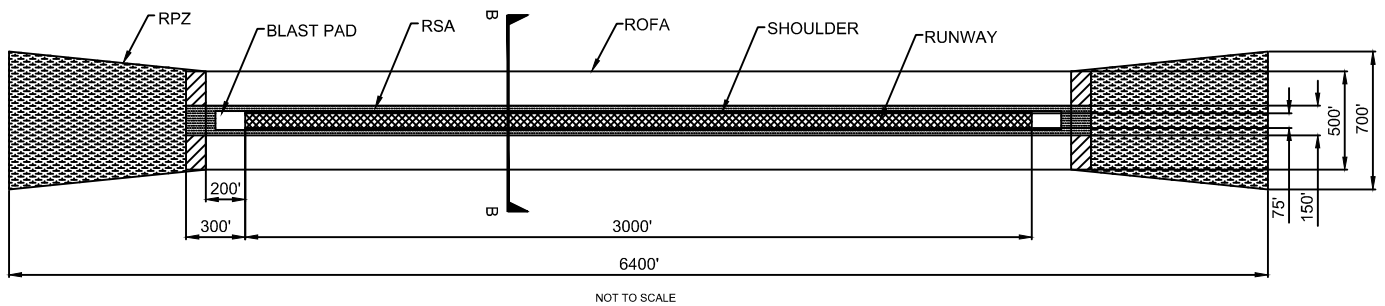
**NOTE:
FOR ABUTMENT DETAILS,
REFER TO MEDIUM BRIDGE
FIGURE.**

MAP SET 2: 14 OF 16

Ⓢ : CENTERLINE



CL : CENTERLINE



ACOE PERMIT: POA-2013-396

PLAN VIEW / CROSS SECTION: AIRSTRIP

APPLICANT: Alaska Industrial Development and Export Authority (AIDEA)

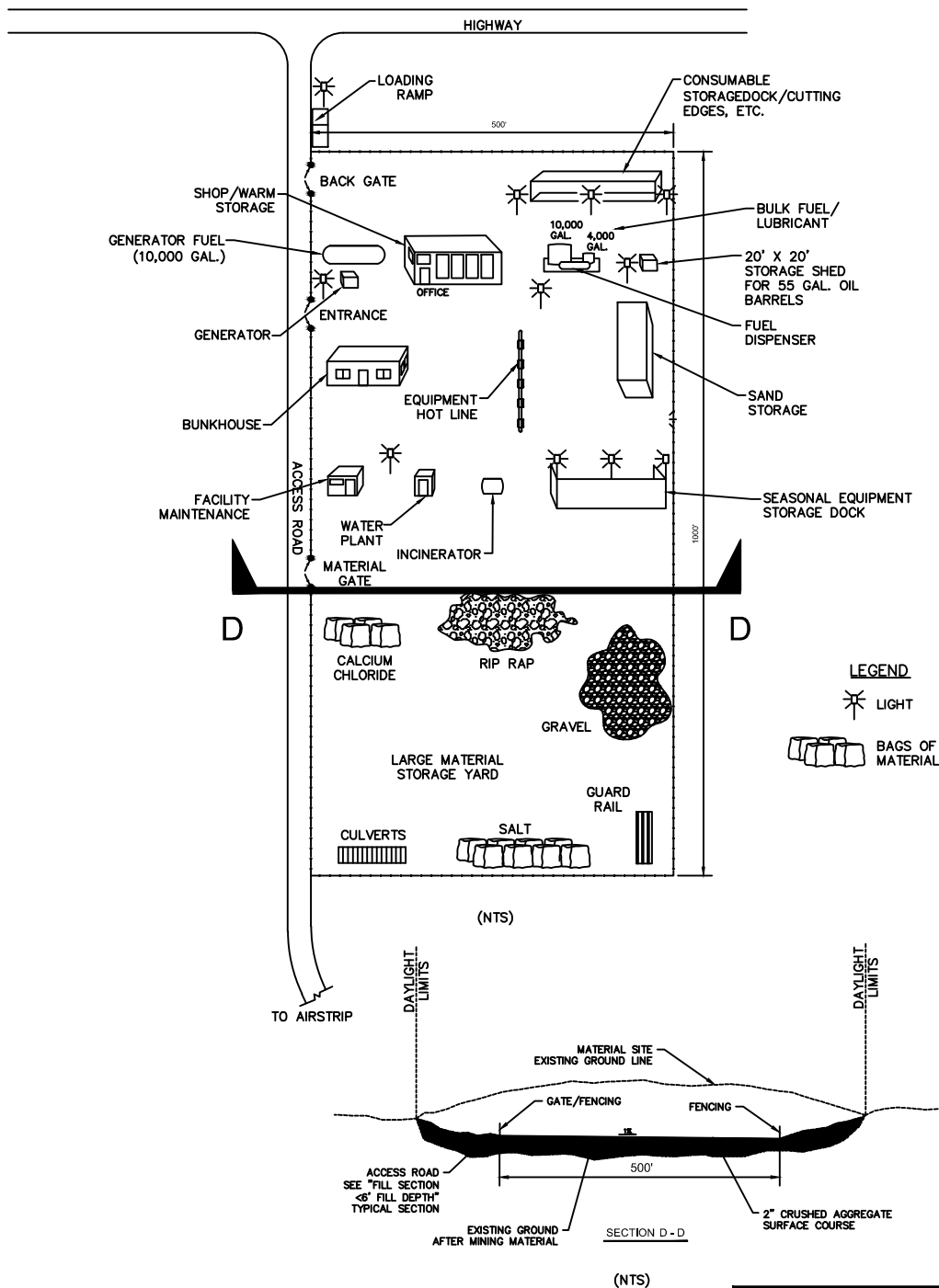
PROJECT: Ambler Mining District Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16

MAP SET 2: 15 OF 16



ACOE PERMIT: POA-2013-396

TYPICAL: MAINTENANCE FACILITY LAYOUT

APPLICANT: Alaska Industrial Development and Export Authority (AIDEA)

PROJECT: Ambler Mining District Industrial Access Project

LOCATION: Ambler Mining District

WATERBODY: Kobuk/Koyukuk/Alatna Rivers

DATE: 03/15/16 MAP SET 2: 16 OF 16

CL : CENTERLINE
NTS: NOT TO SCALE