DENALI DEPOT TRANSIT SECURITY UPGRADES
REQUEST FOR QUOTE SET
AUGUST 2018

INDEX OF DRAWINGS

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GENERAL NOTES:

1. COMPLY WITH, AT A MINIMUM, NFPA 70E STANDARD FOR ELECTRICAL SAFETY IN THE WORKPLACE; ANSI NECA 1 STANDARD FOR GOOD WORKMANSHIP IN ELECTRICAL CONSTRUCTION, IEEE NESC, AND ALL RELEVANT FAA CIRCULARS.

2. DRAWINGS DEPICTED THE GENERAL LOCATIONS OF NEW ELECTRICAL FEATURES AND A.C. PAVEMENT REPAIRS. COORDINATE EXACT LOCATIONS THROUGH ARRC'S ON-SITE REPRESENTATIVE. ADJUSTMENTS TO THE LOCATIONS OF THE WORK LIMITS SHALL BE COORDINATED THROUGH ARRC'S ON-SITE REPRESENTATIVE.

3. REQUEST LOCATES THROUGH THE 811 ALASKA DIGLINE SERVICE A MINIMUM OF 10 DAYS PRIOR TO THE START OF EXCAVATION ACTIVITIES.

4. NO EXCAVATION IS TO REMAIN OPEN IN EXCESS OF THREE (3) DAYS. OPEN EXCAVATIONS SHALL BE MARKED AND DELINEATED THROUGHOUT THE DURATION OF THE EXCAVATION.

5. EROSION AND SEDIMENTS CONTROLS SHALL BE IMPLEMENTED IN ACCORDANCE WITH THE LATEST ALASKA GENERAL CONSTRUCTION PERMIT. BEST MANAGEMENT PRACTICE (BMP)S SHALL BE IMPLEMENTED TO ENSURE THAT SEDIMENT IS NOT TRANSPORTED OUTSIDE THE WORK LIMITS AND/OR TRACKED ONTO IMPROVED SURFACES (i.e. A.C. PAVEMENT OR CONCRETE).

6. EXCAVATIONS SHALL BE BEDDED AND BACKFILLED (USING NATIVE MATERIAL) IN ACCORDANCE WITH THE CONTRACT DOCUMENTS AND SECTION 204 OF THE ALASKA DEPARTMENT OF TRANSPORTATION'S STANDARD SPECIFICATIONS FOR HIGHWAY CONSTRUCTION, 2017 EDITION.

7. CONTRACTOR IS PROVIDED A STAGING AREA AT THE NORTHERN LIMITS OF THE PROJECT. UNCLASSIFIED EXCAVATION MAY BE TEMPORARILY STAGED WITHIN THIS AREA UNTIL WHICH TIME IT IS TRANSPORTED OFF PROPERTY FOR DISPOSAL OFF-SITE.

8. ALL CONSTRUCTION ACTIVITIES EITHER OCCUR WITHIN, OR HAVE THE POTENTIAL TO ENTER WITHIN, 20.0' OF THE NEAREST TRACK FROM THE LOCATION OF THE WORK WILL REQUIRE ARRC FLAGGER PROTECTION.

9. WORK PERFORMED DURING PASSENGER OPERATIONS WILL HAVE TO OCCUR AFTER 1800 DAILY.

10. DETAILS ON ITEMS TO BE REMOVED AND SALVAGED ARE PROVIDED IN THE AS-BUILT DRAWINGS PROVIDED IN THE CONTRACT DOCUMENTS.

11. (E) DESCRIPTORS DESIGNATE ‘EXISTING’ ITEMS WHEREAS (N) DESCRIPTORS DESIGNATE NEW ITEMS.
REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
INSTALL LUMINAIRE BASE AND JUNCTION BOXES (SHEET 8)

SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)

(E) ELECTRICAL IN 2" HDPE CONDUIT, TYP.

(E) FIBER OPTIC IN 2" HDPE CONDUIT, TYP.

REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
INSTALL LUMINAIRE BASE AND JUNCTION BOXES (SHEET 8)

SAW CUT FOR (N) A.C. PAVEMENT, ≈196 ft (NTS)

SAW CUT FOR (N) A.C. PAVEMENT, ≈8 ft (NTS)

PLAN VIEW - P-1 AND P-2

ARRC TRACK L, TYP.
ARRC Transit Security Upgrades
Denali Depot Fiber & Camera Installation

Plan View - P-3

MATCH LINE (SHEET 3)
MATCH LINE (SHEET 5)

REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
INSTALL LUMINAIRE BASE AND JUNCTION BOXES (SHEET 8)

SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)
SAW CUT FOR (N) A.C. PAVEMENT, ≈44 ft (NTS)

ARRC TRACK 1, TYP.

(E) ELECTRICAL IN 2" HDPE CONDUIT, TYP.
(E) FIBER OPTIC IN 2" HDPE CONDUIT, TYP.

SAW CUT FOR (N) A.C. PAVEMENT, ≈8 ft (NTS)
SAW CUT FOR (N) A.C. PAVEMENT, ≈20 ft (NTS)

ARRC DENALI DEPOT

200 ft

FEET

20210908 ALASKA RAILROAD CORPORATION

PLAN VIEW - P-3

DATE: 9/8/2021
SCALE: 1"=20' (SHEET 8)

P-3 (Sheet 8)
ALASKA RAILROAD CORPORATION

ARRC Transit Security Upgrades

Denali Depot Fiber & Camera Installation

PLAN VIEW - P-4 AND P-5

MATCH LINE (SHEET 4)

- REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
- INSTALL LUMINAIRE BASE AND JUNCTION BOXES (SHEET 8)
- SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)

MATCH LINE (SHEET 6)

- REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
- INSTALL LUMINAIRE BASE AND JUNCTION BOXES (SHEET 8)
- SAW CUT FOR (N) A.C. PAVEMENT, ≈76 ft (NTS)
- SAW CUT FOR (N) A.C. PAVEMENT, ≈78 ft (NTS)

MATCH LINE (SHEET 8)

- REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
- INSTALL LUMINAIRE BASE AND JUNCTION BOXES (SHEET 8)
- SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)

(E) FIBER OPTIC IN 2" HDPE CONDUIT, TYP.

(E) ELECTRICAL IN 2" HDPE CONDUIT, TYP.

ARRC TELECOM FACILITIES

(E) ELEC. VAULT

ARRC TRACK 1, TYP.
PLAN VIEW - P-6 AND P-7

- REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
- INSTALL LUMINARIE BASE AND JUNCTION BOXES (SHEET 8)
- SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)
- REMOVE AND SALVAGE EXISTING 8" x 8" POST AND NEMA ENCLOSURES
- INSTALL LUMINARIE BASE AND JUNCTION BOXES (SHEET 8)
- SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)
- (E) ELECTRICAL IN 2" HDPE CONDUIT, TYP.
- (E) FIBER OPTIC IN 2" HDPE CONDUIT, TYP.
- SAW CUT FOR (N) A.C. PAVEMENT, ≈32 ft (NTS)

ARCC TRACK L, TYP.
ARRC Transit Security Upgrades
Denali Depot Fiber & Camera Installation

PLAN VIEW - P-7 AND STAGING AREA

(E) ELECTRICAL IN 2" HDPE CONDUIT, TYP.
(E) FIBER OPTIC IN 2" HDPE CONDUIT, TYP.
ARRC TRACK L. TYP.

STAGING AREA
ARRC Transit Security Upgrades
Denali Depot Fiber & Camera Installation

1. EXCAVATION ADJACENT TO ARRC TRACKS IS TO BE PERFORMED IN ACCORDANCE WITH 'TYPICAL DETAIL - EXCAVATION SHORING, BASIC REQUIREMENTS' OF THE CONTRACT DOCUMENTS. ANY REQUIRED SUBMITTALS SHALL BE SUBMITTED AND APPROVED PRIOR TO COMMENCING EXCAVATION ACTIVITIES.

2. LIQUIDTIGHT FLEXIBLE METAL CONDUIT (LFMC):
   - **DESCRIPTION:** Interlocked steel construction with PVC jacket.
   - **FITTINGS:** ANSI/NEMA FB 1, Steel or malleable iron, insulated throat.
   - For exterior use, designed for -40°F and listed for direct bury, Liquidtite type Alta or similar.

### Notations:
1. EXCAVATION ADJACENT TO ARRC TRACKS IS TO BE PERFORMED IN ACCORDANCE WITH 'TYPICAL DETAIL - EXCAVATION SHORING, BASIC REQUIREMENTS' OF THE CONTRACT DOCUMENTS. ANY REQUIRED SUBMITTALS SHALL BE SUBMITTED AND APPROVED PRIOR TO COMMENCING EXCAVATION ACTIVITIES.

### Luminaire Pole - Foundation and J-Box Details

- **N** - UN-TERMINATED #12 AWG - 4 CONDUCTOR ELECTRIC CABLE FROM TOP OF POLE TO JUNCTION BOX +10.0 L.F. (P-1, P-2, P-3, AND P-4)
- **N** - 6" SQUARE STEEL LUMINAIRE POLE, DARK BRONZE OR SIMILAR, 7GA. MIN.
- **N** - 3" X 5" HANDBOILE
- **N** - ABS BASE COVER, DARK BRONZE
- **N** - TYPE 1, J-BOX
- **E** - REMOVE GALV. RAILING BETWEEN POSTS FOR CONSTRUCTION
- **N** - 6" SQUARE STEEL LUMINAIRE POLE, DARK BRONZE OR SIMILAR, 7GA. MIN.
- **N** - 4" SQUARE STEEL LUMINAIRE POLE, DARK BRONZE OR SIMILAR, 7GA. MIN.
- **N** - 2" HDPE TO 1" LFMC REDUCER
- **N** - 1" LFMC, TYP.
- **N** - 1" GALV. RIGID STEEL CONDUIT (GRSC) WITHIN FOUNDATION, TYP.
- **N** - 24" GALV. CMP CULVERT
- **N** - 20" #4 REBAR HOOPS - 6.0" O.C., TYP.
- **N** - 6EA. #5 REBAR SPACED EVENLY ABOVE LEGS OF ANCHOR BOLTS
- **N** - 20" #4 REBAR HOOP ABOVE LEGS OF ANCHOR BOLTS
- **N** - 2" HDPE CONDUIT (ELEC.) ROUTE TO TYPE 1, J-BOX, TYP.
- **N** - 4" COMPACTED A.C. PAVEMENT
- **N** - 6EA. #5 REBAR SPACED EVENLY ABOVE LEGS OF ANCHOR BOLTS
- **N** - 4" SQUARE STEEL LUMINAIRE POLE, DARK BRONZE OR SIMILAR, 7GA. MIN.
- **N** - 2" HDPE TO 1" LFMC REDUCER
- **N** - 1" LFMC, TYP.
- **N** - 1" GALV. CMP CULVERT, FILLED WITH CLASS A CONCRETE
- **N** - 4" COMPACTED A.C. PAVEMENT
- **N** - 24" GALV. CMP CULVERT, FILLED WITH CLASS A CONCRETE
- **N** - MODIFY LUMINAIRE BASE TO ACCEPT 3EA. 1" GRSC PER MANUFACTURES RECOMMENDATIONS, IF REQUIRED
- **N** - 1" x 36" x 4" ANCHOR ROD, OR AS SPECIFIED BY THE LUMINAIRE POLE MANUFACTURER.

### J-Box Detail

- **E** - REINSTALL SALVAGED F.O. ENCLOSURE ON POLE. EVEN WITH TOP ELV. OF HANDBOILE PER POLE MANUFACTURES RECOMMENDATION
- **N** - CLASS A CONCRETE FILL
- **N** - TYPE I, J-BOX
- **E** - REMOVE GALV. RAILING BETWEEN POSTS FOR CONSTRUCTION AND REPLACE AFTER A.C. PAVEMENT OPERATIONS
- **N** - 1" GALV. CMP CULVERT
- **N** - 20" #4 REBAR HOOPS - 6.0" O.C., TYP.
- **N** - 6EA. #5 REBAR SPACED EVENLY ABOVE LEGS OF ANCHOR BOLTS
- **N** - 20" #4 REBAR HOOP ABOVE LEGS OF ANCHOR BOLTS
- **N** - 2" HDPE CONDUIT (F.O.), TYP.
- **N** - 1" LFMC, TYP.
- **N** - 1" GRSC, TYP.
- **N** - 2" HDPE TO 1" LFMC REDUCER
- **N** - 1" LFMC, TYP.
- **N** - 1" GALV. RIGID STEEL CONDUIT (GRSC) WITHIN FOUNDATION, TYP.
ARRC Transit Security Upgrades

Denali Depot Fiber & Camera Installation

Luminaire Pole
Cable / Fixture Run Detail

**Notes:**
1. Affix all fixtures to the luminaire poles, install all wiring within, and make all required terminations prior to raising luminaire poles.
2. Align all luminaire poles in a straight line along parallel to the ARRC track centerline.
3. Re-terminate F.O. cable in the pre-construction state.
4. Ensure all buried conduit connections are watertight prior to backfill.

**Specifications:**
- **Cable / Fixture Run Detail**
- **2.0" Min. Clear Space**
- **24.00" Min. Cover**
- **1"Ø x 36" x 4" Anchor Rod**
- **4"t Compacted A.C. Pavement**
- **Un-Terminated #12 AWG - 4 Conductor Electric Cable from Top of Pole to Junction Box + 10.0 L.F. (P-1, P-2, P-3, and P-4)**
- **25.0' - Existing Ground to Bottom of Surveillance Camera**
- **32.0' - Existing Ground to Bottom of Luminaire**
- **≈33.25'**
- **5.50"**
- **E-1 - Electric to Surveillance Camera Mounting Bracket for Bosch Surveillance Camera**
- **M - FAA Approved Photocell Controller (P-5, P-6, and P-7)**
- **N - FAA Approved Obstruction Light for Surveillance Camera**
- **L - FAA Approved LED Luminaire, Medium, Version A, 130W, 40K CCT, Dimmable, Dark Bronze or Approved Equal**
- **E - Fiber Optic Cable in 2"ø HDPE Conduit**
- **P - Electric in 2"ø HDPE Conduit**
- **Cable / Fixture Run Detail**
- **+10.0 L.F. (P-1, P-2, P-3, and P-4)**
- **24.00" Min. Cover**
- **2.0" Min. Clear Space**
- **Reinstall Salvaged Corning WCH-02P Housing with 2EA. Corning Closet Connector Housing (CCH) Panel at Northern and Southern Locations**
- **Reinstall Salvaged Corning SPH-01P Housing with 1EA. CCH Panel at Northern and Southern Locations**
- **Fiber Optic Cable in 2"ø HDPE Conduit**
- **Un-Terminated #12 AWG - 4 Conductor Electric Cable from Top of Pole to Junction Box + 10.0 L.F. (P-1, P-2, P-3, and P-4)**
- **Cover**
- **Fiber Optic Cable in 2"ø HDPE Conduit**
- **Electrical to Surveillance Camera Mounting Bracket, Luminaire, and FAA Obstruction Lights from the Handhole**
- **2.0" Min. Clear Space**
- **Fiber Optic Cable in 2"ø HDPE Conduit**
- **Un-Terminated #12 AWG - 4 Conductor Electric Cable from Top of Pole to Junction Box + 10.0 L.F. (P-1, P-2, P-3, and P-4)**
- **Cover**
ADDITIVE ALTERNATE: CLEAR, GRUB, AND SAW CUT FOR (N) A.C. PAVEMENT, ≈1,495 ft

ADDITIVE ALTERNATE: CLEAR, GRUB, AND SAW CUT FOR (N) A.C. PAVEMENT, ≈1,320 ft

(E) ELECTRICAL IN 2" HDPE CONDUIT, TYP.
(E) FIBER OPTIC IN 2" HDPE CONDUIT, TYP.

ARRC TRACK L TYP.

PLAN VIEW - ADDITIVE ALTERNATE

Plan View Additive Alternate
Fiber/Power Cable Diagram

P6 has two extra pipes:
- one to P3
- one to telecom hut

F3 Pipe from Post Y is missing.

Pipe comes up Post Y goes to Depot.

Legend:
- Electrical (1)
- Fiber (2)
- Fiber (2)
- Fiber (4)
DTMF Lights / Crossing Parts list

Mean Well NDR-75-12 (Power Supply)

**Mfr. Part#: 709-75-12**

[http://www.mouser.com/ProductDetail/Mean-Well/NDR-75-12/?qs=sGAeMiMZMsZ6sp76%2fSp5QY6ABLxRpf2srZU3pasrn2gl2E9J0w%3d%3d](http://www.mouser.com/ProductDetail/Mean-Well/NDR-75-12/?qs=sGAeMiMZMsZ6sp76%2fSp5QY6ABLxRpf2srZU3pasrn2gl2E9J0w%3d%3d)

Magnecraft / Schneider Electric 70-465-1 (Relay base)

**Mfr. Part#: 70-465-1**

[http://www.mouser.com/ProductDetail/Schneider-Electric/70-465-1/?qs=pIB1Wz%252bJMwYFgcdZsMKw%3D%3D&gclid=CjwKEAiAt4mlBRDXwt_m9ICU4DcSJAAS_X0WctekHJFwrgydszDs6xRDX8EAFqZyt26-cchC3XEnnRoCgsXw_wCB](http://www.mouser.com/ProductDetail/Schneider-Electric/70-465-1/?qs=pIB1Wz%252bJMwYFgcdZsMKw%3D%3D&gclid=CjwKEAiAt4mlBRDXwt_m9ICU4DcSJAAS_X0WctekHJFwrgydszDs6xRDX8EAFqZyt26-cchC3XEnnRoCgsXw_wCB)

TE Connectivity / P&B CNT-35-26 (Timer Realy)

**Mfr. Part#: 655-CNT-35-26**

[http://www.mouser.com/ProductDetail/TE-Connectivity/CNT-35-26/?qs=%2fha2pyFadujOMaKjdjibLO51KFXIYy49iduaLxaHLw%3d](http://www.mouser.com/ProductDetail/TE-Connectivity/CNT-35-26/?qs=%2fha2pyFadujOMaKjdjibLO51KFXIYy49iduaLxaHLw%3d)

NC400 D.T.M.F. Multi-Function Decoder with Relay Outputs


SUNDELY Car Radio Battery Eliminator + Adaptor for Motorola Radio GP900 HT1000 MT2000 MTX8000 PTX1200 NTN7143 NTN7143A NTN7143B NTN7143C NTN7143CR

[http://www.amazon.com/SUNDELY-Eliminator-Motorola-NTN7143A-NTN7143CR/dp/B00LYQZ0KY#productDetails](http://www.amazon.com/SUNDELY-Eliminator-Motorola-NTN7143A-NTN7143CR/dp/B00LYQZ0KY#productDetails)

NC400 D.T.M.F. Multi-Function Decoder with Relay Outputs
