State of Alaska
Department of Transportation
&
Public Facilities

Northern Region

Bid Forms, Contract, Bond, Standard Modifications, and Special Provisions for:

Whitshed Road and Pedestrian Improvements

Project No. 0837004/NFHWY00129

Preliminary PS&E: December 1, 2022

To be used in conjunction with State of Alaska Standard Specifications for Highway Construction dated 2020, and the Plans for the above referenced project.

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STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

INVITATION TO BID

for Construction Contract

Date _____

Whitshed Road and Pedestrian Improvements, 0837004/NFHWY00129

Project Name and Number

The Department invites bidders to submit bids for furnishing all labor, equipment, and materials and performing all work for the project described below. The Department will only consider bids received **before 2:00 PM local time (per the Department's time source) on the _____ day of _____ 2022**. On that date, the Department will assemble, open, and then publicly announce the timely-received bids at **Engineering Services Building, Room 4, 2301 Peger Road, Fairbanks, Alaska** at **2:00 PM**, or as soon thereafter as practicable.

Location of Project: Cordova, Alaska
Contracting Officer: Joseph P. Kemp, P.E., Acting Regional Director
Issuing Office: Northern Region DOT&PF

State Funded ☐ Federal Aid ☒

Description of Work:

Provide pedestrian accommodations along Whitshed Road from the intersection with the Copper River Highway to the intersection with Orca Inlet Drive. Project will include roadside hardware, drainage improvements, and utilities.

Project DBE Utilization Goal: ☒ Race-Neutral, Goal is N/A ☐ Race-Conscious, Goal is XX.X%

The Engineer's Estimate is between $5,000,000 and $10,000,000

All work shall be completed in N/A Calendar Days, or by **October 15, 2024**.
The Department will identify interim completion dates, if any, in the Special Provisions.

The apparent successful bidder must furnish a payment bond in the amount of 100% of the contract and a performance bond in the amount of 100% of the contract as security conditioned for the full, complete and faithful performance of the contract. The apparent successful bidder must execute the said contract and bonds within fifteen calendar days, or such further time as may be allowed in writing by the Contracting Officer, after receiving notification of the acceptance of their bid.

Submission of Bidding Documents

Bidders may submit bidding documents electronically via the Department's approved online bidding service, through the mail or hand delivered. For mailed or hand delivered bids and for electronically submitted bids with a paper bid guaranty, documents shall be submitted in a sealed envelope marked as follows:

Bidding Documents for Project: **0837004/NFHWY00129** **Whitshed Road and Pedestrian Improvements**	ATTN: Chief of Contracts State of Alaska Department of Transportation & Public Facilities 2301 Peger Road Fairbanks, Alaska 99709

It is incumbent upon the bidder to ensure its bid, any amendments, and/or withdrawal arrive, in its entirety, at the location and before the deadline stated above. A bidder sending a bid amendment or withdrawal via email or fax must transmit its documentation to the Department at this email address: dot.nrcontracts@alaska.gov or fax number: (907) 451-5390.

To be responsive, a bid must include a bid guaranty equal to 5% of the amount bid. (*When calculating the bid amount for purposes of determining the 5% value of the bid guaranty, a bidder shall include its base bid amount, plus the amount bid for alternate and supplemental bid items, if any.)*

The Department hereby notifies all bidders that it will affirmatively ensure that in any contract entered into pursuant to this Invitation, Disadvantaged Business Enterprises will be afforded full opportunity to submit bids and will not be discriminated against on the grounds of race, color, national origin, or sex in consideration for an award.

NOTICE TO BIDDERS

Bidders must have a Vendor ID or your bid may not be accepted. More information can be obtained at the following website: http://dot.alaska.gov/aashtoware/docs/AWP-Vendor-List-Guidance.pdf

The following data may assist a bidder in preparing its bid:

- Quantity Calculations
- Cross Sections
- Geotechnical Report
- As Builts
- Other applicable information

All supplemental information can be found under the letting for this project which may be selected using the following link: https://www.bidx.com/ak/lettings

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A bidder may obtain hard copy project plans and specifications for the price of $___, from:
Engineering Services Building, Room 3
2301 Peger Road
Fairbanks, Alaska 99709
Phone: (907) 451-2247 TDD (for Hearing Impaired, requires special equipment): 711 or 1-800-770-8973

If a bidder has a question relating to design features, constructability, quantities, or other technical aspects of the project, it may direct its inquiry to the questions and answers area of the Bid Express proposal page: https://www.bidx.com/ak/lettings

A bidder requesting assistance in viewing the project site must make arrangements at least 48 hours in advance.

The point of contact for inquiries for this project is **Sarah Schlichting, P.E., Construction Manager**.
Email: sarah.schlichting@alaska.gov Phone: (907) 451-

For questions relating to electronic bidding or for assistance with your Bid Express account, contact Bid Express customer support at customer.support@bidx.com or call toll free (888)352-BIDX(2439) Monday through Friday 7:00am to 8:00pm (Eastern).

A bidder may direct questions concerning bidding procedures and requirements to:
Construction Contracts Coordinator

Email: dot.nrcontracts@alaska.gov Phone: (907) 451-2219

Other Information:

To report bid rigging activities call: 1-800-424-9071

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday thru Friday. 8:00 a.m. to 5:00 p.m., Eastern Time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

The "hotline" is part of the DOT's continuing effort to identify and investigate highway construction contract fraud and abuse and is operated under the direction of the DOT Inspector General. All information will be treated confidentially and caller anonymity will be respected.

Bid Schedule - Preliminary PS&E

Section 1 - Basic Bid

Prop Line #	Item Number	Item Description	Quantity	Unit	Unit Bid Price	Amount Bid
10	201.0007.0000	Clearing	All Required	Lump Sum	Lump Sum	
20	201.0008.0000	Grubbing	All Required	Lump Sum	Lump Sum	
30	202.0001.0000	Removal of Structures and Obstructions	All Required	Lump Sum	Lump Sum	
40	202.0001.0000	Removal of Structures and Obstructions Cordova Rose	All Required	Lump Sum	Lump Sum	
50	202.0017.0000	Removal of Culvert Pipe	10	Each		
60	203.0002.0000	Rock Excavation	28,215	Cubic Yard		
70	203.0003.0000	Unclassified Excavation	12,444	Cubic Yard		
80	203.0006.0000	Borrow	7,853	Ton		
90	203.0017.0000	Rockfall Mitigation - Wire Mesh	4,605	Square Yard		
100	204.0003.0000	Structure Excavation	All Required	Lump Sum	Lump Sum	
110	301.0001.00D1	Aggregate Base Course, Grading D-1	1,900	Ton		
120	304.0001.000F	Subbase, Grading F	20,306	Ton		
130	308.0004.0000	Crushed Asphalt Base Course	All Required	Lump Sum	Lump Sum	
140	401.0001.002B	HMA, Type II; Class B	1,754	Ton		
150	401.0004.5228	Asphalt Binder, Grade PG 52-28	97	Ton		
160	401.0008.002B	HMA Price Adjustment, Type II; Class B	All Required	Contingent Sum	Contingent Sum	$10,900.00
170	401.0009.0000	Longitudinal Joint Density Price Adjustment	All Required	Contingent Sum	Contingent Sum	$6,200.00
180	401.0013.0000	Job Mix Design	1	Each		
190	401.2010.0000	HMA, Sidewalks and Paths	531	Ton		
200	530.2005.0000	Segmented Block Retaining Wall Precast	848	Square Foot		
210	603.0001.0024	CSP 24 Inch	352	Linear Foot		
220	603.0001.0036	CSP 36 Inch	282	Linear Foot		
230	603.0001.0048	CSP 48 Inch	96	Linear Foot		
240	603.0001.0060	CSP 60 Inch	485	Linear Foot		
250	604.0001.0000	Storm Sewer Manhole	2	Each		
260	604.0003.0000	Reconstruct Existing Manhole	5	Each		
270	604.0004.0000	Adjust Existing Manhole	2	Each		

Section 1 - Basic Bid

Prop Line #	Item Number	Item Description	Quantity	Unit	Unit Bid Price	Amount Bid
280	604.0005.000A	Inlet, Type A	8	Each		
290	608.0006.0000	Curb Ramp	1	Each		
300	609.0002.0001	Curb and Gutter, Type 1	3,952	Linear Foot		
310	609.0003.0000	Backing Curb	29	Linear Foot		
320	611.0001.0002	Riprap, Class II	406	Cubic Yard		
330	613.0002.0000	Culvert Marker Post	21	Each		
340	615.0001.0000	Standard Sign	106	Square Foot		
350	618.0002.0000	Seeding	162	Pound		
360	625.0001.0000	Pipe Hand Rail	1,980	Linear Foot		
370	626.2013.0000	Adjust Sanitary Sewer Cleanout	1	Each		
380	627.0001.0004	Ductile Iron Water Conduit, 4 Inch, Class 350	82	Linear Foot		
390	627.0001.0012	Ductile Iron Water Conduit, 12 Inch, Class 350	55	Linear Foot		
400	627.0010.0000	Adjustment of Valve Box	6	Each		
410	630.0003.0002	Geotextile, Reinforcement - Type 2	1,051	Square Yard		
420	631.0002.0001	Geotextile, Erosion Control, Class 1	1,132	Square Yard		
430	639.2000.0000	Approach	7	Each		
440	640.0001.0000	Mobilization and Demobilization	All Required	Lump Sum	Lump Sum	
450	640.0004.0000	Worker Meals and Lodging, or Per Diem	All Required	Lump Sum	Lump Sum	
460	641.0001.0000	Erosion, Sediment and Pollution Control Administration	All Required	Lump Sum	Lump Sum	
470	641.0003.0000	Temporary Erosion, Sediment and Pollution Control	All Required	Lump Sum	Lump Sum	
480	641.0004.0000	Temporary Erosion, Sediment and Pollution Control Additives	All Required	Contingent Sum	Contingent Sum	$30,000.00
490	641.0006.0000	Withholding	All Required	Contingent Sum	Contingent Sum	$1.00
500	641.0007.0000	SWPPP Manager	All Required	Lump Sum	Lump Sum	
510	642.0001.0000	Construction Surveying	All Required	Lump Sum	Lump Sum	
520	642.0013.0000	Three Person Survey Party	All Required	Contingent Sum	Contingent Sum	$30,000.00
530	643.0002.0000	Traffic Maintenance	All Required	Lump Sum	Lump Sum	
540	643.0003.0000	Permanent Construction Signs	All Required	Lump Sum	Lump Sum	
550	643.0023.0000	Traffic Price Adjustment	All Required	Contingent Sum	Contingent Sum	$1.00

Section 1 - Basic Bid

Prop Line #	Item Number	Item Description	Quantity	Unit	Unit Bid Price	Amount Bid
560	643.0025.0000	Traffic Control	All Required	Contingent Sum	Contingent Sum	$300,000.00
570	644.0001.0000	Field Office	All Required	Lump Sum	Lump Sum	
580	644.0002.0000	Field Laboratory	All Required	Lump Sum	Lump Sum	
590	644.0006.0000	Vehicle	All Required	Lump Sum	Lump Sum	
600	644.2002.0000	Field Communications	All Required	Contingent Sum	Contingent Sum	$10,000.00
610	645.0001.0000	Training Program, 1 Trainees / Apprentices	1	Labor Hour		
620	646.0001.0000	CPM Scheduling	All Required	Lump Sum	Lump Sum	
630	669.2007.0000	Automatic Vehicle Classification	All Required	Lump Sum	Lump Sum	
640	670.0001.0000	Painted Traffic Markings	All Required	Lump Sum	Lump Sum	
650	680.2000.0000	Telecommunications Utility Relocation CTC	All Required	Lump Sum	Lump Sum	
660	680.2000.0000	Telecommunications Utility Relocation GCI	All Required	Lump Sum	Lump Sum	
670	687.2000.0000	Power Utility Relocation CEC	All Required	Lump Sum	Lump Sum	

Total Bid: _____

State of Alaska, Standard Specifications
for Highway Construction, Dated 2020 are
modified as follows:

STANDARD MODIFICATIONS

SECTION 102
BIDDING REQUIREMENTS AND CONDITIONS

04/30/22 (HSM20-42)

102-1.05 PREPARATION OF BID. *In the third paragraph, replace the fourth sentence with the following:* If the bidder is a joint venture, the bid must be signed by an officer or agent with authority to bind the joint venture.

SECTION 104
SCOPE OF WORK

11/30/2020 (HSM20-2)

104-1.06 VALUE ENGINEERING CHANGE PROPOSALS BY CONTRACTOR. *Delete item 3.e of this subsection and substitute the following:* The Contractor may submit VECPs for an approved subcontractor. If the Contractor elects to submit a VECP for an approved subcontractor and it is subsequently accepted by the Department, the Department will reimburse the Contractor per 104-1.06.5.

SECTION 106
CONTROL OF MATERIAL

12/31/21 (HSM20-20)

106-1.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. *Add the following:*

PROHIBITION ON CERTAIN TELECOMMUNICATION AND VIDEO SURVEILLANCE SERVICES OR EQUIPMENT. On projects using federal funds, the Contractor shall comply with the requirements of 2 CFR 200.216, Prohibition on certain telecommunication and video surveillance services or equipment, including any future amends thereto that are applicable to the project**.**

By submitting a bid or by execution of the contract, the Contractor certifies that it has not entered into a contract nor extended or renewed a contract to procure or obtain equipment, services, or systems that uses covered telecommunications equipment or services as a substantial or essential component of any system, or as critical technology as part of any system produced by:

- Huawei Technologies Company or ZTE Corporation (or any subsidiary or affiliate of such entities).
- Hytera Communications Corporation, Hangzhou Hikvision Digital Technology Company, or Dahua Technology Company (or any subsidiary or affiliate of such entities).
- Any entity that the Secretary of Defense, in consultation with the Director of the National Intelligence or the Director of the Federal Bureau of Investigation, reasonably believes to be an entity owned or controlled by, or otherwise connected to, the government of a covered foreign country.

The Contractor further certifies that it has complied with the requirements of 2 CFR 200.216 and that it will continue to do so throughout the term of the Contract.

SECTION 108
PROSECTUTION AND PROGRESS

01/01/22 (HSM20-41)

108-1.01 SUBCONTRACTING OF CONTRACT. *In item 1.g delete* “AS 45.45.101(a)” *and substitute the following:* AS 45.45.010(a).

In item 2.f delete “AS 45.45.101(a)” *and substitute the following:* AS 45.45.010(a).

07/01/22 (HSM20-43)

108-1.07 FAILURE TO COMPLETE ON TIME. *Replace Table 108-1 with the following:*

TABLE 108-1
DAILY CHARGE FOR LIQUIDATED DAMAGES
FOR EACH CALENDAR DAY OF DELAY

Original Contract Amount		Daily Charge
From More Than	To and Including	
$ 0	500,000	$1,400
500,000	1,000,000	1,700
1,000,000	5,000,000	2,600
5,000,000	10,000,000	3,800
10,000,000	25,000,000	4,500
25,000,000	----------	6,600

SECTION 109
MEASUREMENT AND PAYMENT

11/30/2020 (HSM20-3)

109-1.08 FINAL PAYMENT. *Add the following after the fifth paragraph of this subsection:* On federally funded projects, if DOLWD Wage and Hour Administration notifies the Department of a pending prevailing wage investigation, and that the investigation is preventing the closing out of the project, the Contractor may place the notified amount in escrow under Wage and Hour for the exclusive purpose of satisfying unpaid prevailing wages. Upon receipt of notice from Wage and Hour that the contractor has satisfactorily transferred the necessary funds into escrow, the Department will proceed to issue final payment.

SECTION 120
DISADVANTAGED BUSINESS ENTERPRISE PROGRAM

12/31/21 (HSM20-21)

120-1.01 DESCRIPTION. *In the first sentence of the second paragraph, delete* "8.83 percent" *and substitute the following:* 8.28 percent.

120-3.01 DETERMINATION OF COMPLIANCE. *Delete the statement in 2.a. Written DBE Commitment and substitute the following:* Complete Form 25A-326 for each DBE to be used on the project.

SECTION 202
REMOVAL OF STRUCTURES AND OBSTRUCTIONS

11/30/2020 (HSM20-4)

202-5.01 BASIS OF PAYMENT. *In the first paragraph, delete the words "*and 22.0013.____." *and substitute the following:* and 202.0013.____.

*In the fourth paragraph, delete the words "*Items 020.0014.____" *and substitute the following:* Items 202.0014.____

SECTION 203
EXCAVATION AND EMBANKMENT

11/30/2020 (HSM20-5)

203-3.04 COMPACTION WITH MOISTURE AND DENSITY CONTROL. *In the second paragraph of this subsection, delete the words* "and ATM 214".

SECTION 205
EXCAVATION AND FILL FOR MAJOR STRUCTURES

11/30/2020 (HSM20-5)

205-3.05 COMPACTION. *In the second paragraph of numbered paragraph 1. Compaction With Moisture and Density Control, delete the words* "and ATM 214".

SECTION 301
AGGREGATE BASE AND SURFACE COURSE

11/30/2020 (HSM20-5)

301-3.03 SHAPING AND COMPACTION. *In the second paragraph of this subsection, delete the words* "and ATM 214".

SECTION 550
COMMERCIAL CONCRETE

12/31/21 (HSM20-25)

550-2.02 COMPOSITION OF MIXTURE – JOB MIX DESIGN.

1. Submittals. *Add the following to the first paragraph:* Submit the JMD on Form 25D-203.

SECTION 603
CULVERTS AND STORM DRAINS

11/30/2020 (HSM20-9)

603-5.01 BASIS OF PAYMENT. *In the PAY ITEM table, capitalize the units for pay items 603.0003.____ and 603.0004.____.*

PAY ITEM		
Item Number	**Item Description**	**Unit**
603.0003.____	End Section for CSP ___ Inch	EACH
603.0004.____	End Section for ___ Inch CSP Arch	EACH

SECTION 608
SIDEWALKS

11/30/2020 (HSM20-10)

608-3.01 CONCRETE SIDEWALKS. *Add the following new paragraph after the ninth paragraph of this subsection:* The Engineer will test the finished surface with a 10-foot straightedge. Variations of more than 1/4-inch from the edge of the straightedge across or along the sidewalk surface, except at grade changes, are unacceptable. Portions of the sidewalk surface and pedestrian ramps less than 10 feet in width or length may be tested using a shorter straightedge.

SECTION 615
STANDARD SIGNS

12/31/21 (HSM20-29)

615-2.01 MATERIALS.

1. Shop Drawings. *Delete the first sentence and substitute the following:* Submit shop drawings for all signs that must meet the ASDS letter width and spacing charts for variable width legends (such as D-series and I-3 signs), and which require custom shop drawings specific to the project.

SECTION 633
SILT FENCE

11/30/2020 (HSM20-13)

633-2.01 MATERIALS. Use materials that conform to the following: *Delete the second item in the Materials reference list and substitute the following:*

Silt Fence	Subsection 729-2.02

633-3.01 CONSTRUCTION REQUIREMENTS. *Delete the first sentence of this subsection and substitute the following:* Install silt fence according to the SWPPP, Appendix B.

SECTION 643
TRAFFIC MAINTENANCE

12/31/21 (HSM20-30)

643-2.02 CRASHWORTHINESS. *Delete Table 643-2 and substitute the following:*

TABLE 643-2
WORK ZONE TRAFFIC CONTROL DEVICE AND BARRIER CRASH TESTING COMPLIANCE

Category	Devices	Devices Manufactured Before Dec. 31, 2019 [1]	Devices Manufactured After Dec. 31, 2019 [1]	Method of Documentation
1	Low-mass single-piece devices w/o attachments: traffic cones, tubular markers, single piece drums, delineators	NCHRP 350, MASH 2009, or MASH 2016	MASH 2016	Manufacturer's Certification for devices exceeding height and weight limits
2	Category 1 devices with attachments, barricades, portable sign supports, drums w/lights, other devices weighing less than 100 pounds but not included in category 1	NCHRP 350, MASH 2009, or MASH 2016	MASH 2016	FHWA eligibility letter, at Test Level 3 [2]
3	Fixed sign supports, truck mounted attenuators, temporary crash cushions, bridge railing, bridge and guardrail transitions, and guardrail and barrier end treatments.	NCHRP 350, MASH 2009, or MASH 2016	MASH 2016	FHWA eligibility letter, at Test Level 3 [2]

	Portable concrete and steel barriers	NCHRP 350, MASH 2009, or MASH 2016	MASH 2016	FHWA eligibility letter, at Test Level 3, unless otherwise required in the contract.

[1] The Engineer will determine whether a device is in serviceable condition. Serviceable means the device will function equivalent to a new device of the same manufacture.
[2] When no test level is specified in an FHWA Eligibility letter; it is implied that the tests were run for Test Level 3.

02/01/2022 (HSM20-39)

643-3.06 TRAFFIC PRICE ADJUSTMENT. *Delete Table 643-3 Adjustment Rates in its entirety and substitute the following:*

TABLE 643-3
ADJUSTMENT RATES

Published ADT	Dollars/Minute of Unauthorized Lane Reduction or Closure
Less than 1,000	$6
1,000-4,999	$25
5,000-9,999	$75
10,000-29,999	$105
30,000+	$150

SECTION 660
SIGNALS AND LIGHTING

11/30/2020 (HSM20-16)

660-3.04 JUNCTION BOXES. *Delete item 1. of the seventh paragraph of this subsection and substitute the following:*

1. 300 feet maximum for any conduit run containing either:

    a. One single cable, plus one bare or insulated equipment grounding conductor (EGC); or
    b. 2 or fewer single pair No. 12 AWG (or smaller) loop lead-in cables, plus one bare or insulated EGC.

SECTION 703
AGGREGATES

05/01/22 (HSM20-40)

703-2.03 AGGREGATE FOR BASE AND SURFACE COURSE. *In Table 703-1 replace the line for Degradation Value with the following:*

TABLE 703-1
AGGREGATE QUALITY PROPERTIES FOR BASE AND SURFACE COURSE

PROPERTY	BASE COURSE	SURFACE COURSE	TEST METHOD
Micro-Deval	15%, max.	15%, max.	AASHTO T 327

703-2.04 AGGREGATE FOR HOT MIX ASPHALT. *In Table 703-3 replace the line for Degradation Value with the following:*

TABLE 703-3
COARSE AGGREGATE QUALITY FOR HMA

Description	Specification	Type II, Class A	Type I, Type II Class B, Type III	Type IV	Type V	Type SP
Micro-Deval, max.	AASHTO T 327	18%	18%	18%	18%	18%

703-2.05 AGGREGATE FOR COVER COAT AND SURFACE TREATMENT. *In Table 703-5 replace the line for Degradation Value with the following:*

TABLE 703-5
QUALITY PROPERTIES FOR COVER COAT AND SURFACE TREATMENT

Micro-Deval	AASHTO T 327	15%, max.

703-2.09 SUBBASE. *In Table 703-8 replace the line for Degradation Value with the following:*

TABLE 703-8
QUALITY PROPERTIES FOR SUBBASE

Micro-Deval	AASHTO T 327	25%, max.

SECTION 712
MISCELLANEOUS

12/31/21 (HSM20-35)

712-2.08 GLASS BEADS. *In the second sentence, delete EPA Testing Method* "3062" *and substitute the following:* 3052.

SECTION 727
SOIL STABILIZATION MATERIAL

11/30/20 (HSM20-18)

727-2.02 MATTING.

4. Knitted Straw Mat. *Delete this numbered item and substitute the following:* Commercially manufactured erosion control blanket. Use photodegradable netting and biodegradable thread. Use straw and straw products from oats, wheat, rye, barley, or other approved grain crops that are certified weed free of prohibited and restricted noxious weed seed and quarantined pests, according to Alaska Administrative Code, Title 11, Chapter 34 (11 AAC 34), and free of mold, or other objectionable material. When straw or straw products certified according to 11 AAC 34 are not available, use non-certified products manufactured within Alaska before certified products manufactured in another state, country, or territory. Non-certified straw or straw products manufactured in another state, country, or territory shall not be used. Grass, legumes, or any other herbaceous plants produced as hay, shall not be substituted for straw or straw products. May contain coconut or fiber to reinforce the straw. Follow the manufacturer's published recommendations.

SPECIAL PROVISIONS

SECTION 104
SCOPE OF WORK

11/30/12 (H5)
Add the following subsection:

104-1.07 FROZEN GROUND. Frozen areas, ice lenses, and saturated soils may be encountered on this project and related material sources. Specific locations and specific content of frozen areas, ice lenses, and saturated soils are not defined. Any such area that may be encountered by the Contractor in the performance of the contract work will not be considered unforeseeable within the terms of the contract such as to entitle the Contractor to any adjustment in contract price or contract time. Reference is made to Subsection 203-3.03 of these Specifications.

SECTION 106
CONTROL OF MATERIALS

11/08/22 (HSP20-7)
106-1.01 SOURCE OF SUPPLY AND QUALITY REQUIREMENTS. *Delete the BUY AMERICA PROVISION and substitute the following:*

BUY AMERICA PROVISION. On projects using federal funds, the Contractor shall comply with the requirements of Public Law No. 117-58, Sections 70901-52 and 23 CFR 635.410, Buy America requirements, and shall submit a completed Material Origin Certificate, Form 25D-60, prior to award of the contract. When the Contractor becomes aware of a change from or error in a previously submitted Material Origin Certificate (Form 25D-60), the Contractor shall submit an updated Material Origin Certificate (Form 25D-60). All construction materials, steel products and iron products which are incorporated into the work, shall be manufactured in the United States except that minor amounts of construction materials, steel products and iron products of foreign manufacture may be used, provided the aggregate cost of such does not exceed one tenth of one percent (0.001) of the total contract amount, or $2,500, whichever is greater. For the purposes of this paragraph, the cost is the value of the products as they are delivered to the project including freight.

The Contractor shall ensure that all manufacturing processes for each covered product comply with this Buy America Provision. Non-conforming products shall be replaced at no expense to the State. Failure to comply may also subject the Contractor to default and debarment.

Provide a Certificate of Buy America Act Compliance Form 25D-62 from the supplier for each construction material, steel product, or iron product and each component that is manufactured predominantly of steel or iron, prior to incorporating any construction material, steel products, iron products or any components manufactured predominantly of steel or iron into the project. The supplier certifying Form 25D-62 may be the original manufacturer, fabricator, vendor, contractor, or subcontractor; provided the supplier has sufficient control and knowledge of the manufacturing process to accept responsibility and certify full and complete conformance with the certification statement on the form. Provide mill certificates when required by the Engineer. False statements may result in criminal penalties prescribed under AS 36.30.687 and Title 18 US Code Section 1001 and 1020.

Buy America does not apply to construction materials, steel products, and iron products brought to the construction site and removed at or before the completion of the project. Further, it does not apply to construction materials, steel products, and iron products which remain in place at the Contractor's convenience.

The North American Free Trade Agreement (NAFTA) does not apply to the Buy America requirement. There is a specific exemption within NAFTA (article 1001) for grant programs such as the Federal-aid highway program.

Construction Materials

A construction material includes an article, material, or supply other than

1. an item of primarily iron or steel;
2. a manufactured product;
3. cement and cementitious materials;
4. aggregates such as stone, sand, or gravel;
5. or aggregate binding agents or additives

– that is or consists primarily of

1. Non-ferrous metals;
2. Plastic and polymer-based products (including polyvinylchloride, composite building materials, and polymers used in fiber optic cables);
3. Glass (including optic glass);
4. Lumber; or
5. Drywall.

For construction materials, manufactured in the United States means the final manufacturing process and the immediately preceding manufacturing stage were undertaken in the United States.

An item that consists of two or more construction materials combined together through a manufacturing process, and items that include at least one construction material combined with another material through a manufacturing process, will be treated as a manufactured product instead of a construction material. Manufactured products that are not predominantly steel or iron are not subject to Buy America requirements.

Steel and Iron Products

"Manufactured in the United States" means all manufacturing processes starting with the initial mixing and melting through the final shaping, welding, and coating processes must be undertaken in the United States. The definition of "manufacturing process" is smelting or any subsequent process that alters the material's physical form, shape or chemical composition. These processes include rolling, extruding, machining, bending, grinding, drilling, etc. The application of coatings, such as epoxy coating, galvanizing, painting or any other coating that protects or enhances the value of steel or iron materials shall also be considered a manufacturing process subject to the requirements of Subsection 106-1.01, Buy America Provision and of the Buy America Act.

Buy America does not apply to iron ore, pig iron, and processed, pelletized and reduced iron ore.

When steel and iron products manufactured in the United States are shipped to a foreign country where non steel or iron products are installed on or in them (e.g., electronic components in a steel cabinet), the steel and iron is considered to meet the requirements of this subsection.

04/30/17 (N2)
106-1.02 MATERIALS SOURCES.

1. General. *Add the following subparagraph:*

    j. If pre-existing, naturally occurring, hazardous material is encountered in any Material Source under Department ownership, management, or permit; the Department will pay in accordance with Subsection 109-1.05 for the proper handling and disposal of the hazardous material. Avoid excavation activity in the vicinity of the hazardous material. The Department will not be liable for any delays or impacts to the production of any materials items due to encountering the

hazardous material. Contractor shall adhere to Subsection 107-1.11(6). Nothing in this subsection relieves the Contractor of any statutory liability.

SECTION 201
CLEARING AND GRUBBING

03/02/20 (N79)
201-3.01 GENERAL. *Add the following*: Do not perform mechanized vegetation clearing between (May 1 – July 15).

201-3.02 CLEARING. *Add the following*: Salvage all timber 6-inches in diameter and larger. Place timber outside the active construction work zones in a safe and dry area accessible to the public to collect for firewood.

201-5.01 BASIS OF PAYMENT. *Add the following:* All work and resources to clear, grub, stockpile, double-handle, remove, transport place or dispose of clearing and grubbing is subsidiary.

SECTION 203
EXCAVATION AND EMBANKMENT

203-1.01 DESCRIPTION. *Add the following:* The work covered by this section also includes furnishing, staining, and installing draped mesh, including all anchors and support wire ropes, at the locations shown in the Plans or as directed by the Engineer. Supply all materials, equipment, and labor necessary to install the systems in accordance with these Special Provisions and as detailed in the Plans.

203-2.01 MATERIALS. *Add the following*:

3/4-inch Wire Rope	Subsection 709-2.02-2
5/16-inch Wire Rope	Subsection 709-2.02-3
Appurtenances	Subsection 712-2.23
Hardware	Subsection 712-2.24
Grout	Subsection 701-2.03
High Tensile Strength Wire Mesh	Subsection 709-2.04-2
Water	Subsection 712-2.01
Wire Rope Anchors	Subsection 709-2.05-1

7. Shot Rock. Subsection 703-2.17

01/20/15 (N8)
203-3.01 GENERAL. *Add the following to the eighth paragraph:* Disposal in wetlands is prohibited, except as described in Subsection 107-1.11.

Add the following after the eighth paragraph: The Contractor shall certify in writing to the Engineer that all permits and clearances relating to all waste disposal sites selected by the Contractor have been obtained prior to any clearing or ground disturbance in the disposal site.

203-3.03 EMBANKMENT CONSTRUCTION. *Delete the second paragraph in its entirety and substitute the following:* Construct the embankment with Selected Material and Shot Rock meeting as shown on the Plans meeting the requirements of Subsection 703-2.07 and 703-2.17. Selected material and Shot Rock may be obtained from unclassified excavation, rock excavation, common excavation or borrow.

01/20/15 (N11)

Delete the fourteenth paragraph and substitute the following: When embankments are to be constructed across wet or swampy ground, which will not support the weight of heavy hauling and spreading equipment, the Contractor shall choose such methods of embankment construction and use such hauling and spreading equipment as will least disturb the soft foundation. When soft foundations are encountered, and when approved by the Engineer, the lower part of the fill may be constructed by dumping and spreading successive vehicle loads in a uniformly distributed layer of a thickness not greater than that necessary to support the vehicle while placing subsequent layers, after which the remainder of the embankment shall be constructed in layers and compacted as specified.

It is not the policy of the State to allow an increase in the planned depth of embankment material over soft, wet, or swampy ground for the sole purpose of providing support for heavy hauling and spreading equipment, unless the Contractor proves to the satisfaction of the Engineer that the planned depth is inadequate to support light hauling vehicles. If use of smaller hauling vehicles or different methods of embankment construction than originally contemplated are necessary to comply with the foregoing, such shall not be the basis for a claim for extra compensation. The contract unit price for the various pay items involved shall be full compensation for all labor, materials, and equipment necessary to perform the work outlined herein.

Add the following subsections:

203-3.06 QUALIFICATIONS. Identify individuals who will act as Draped Mesh Foremen to oversee the mesh installation work. Provide written evidence that documents each Draped Mesh Foreman has demonstrated experience in this role supervising the installation of draped mesh on at least five (5) projects over the last five (5) years.

203-3.07 SUBMITTALS. Provide a Draped Mesh Work Plan that includes the following:

1. Resumes for each worker including: Contact information, role on the project, and descriptions of work experience. Include project names, locations, and contact information of owners.

2. Start date, construction sequence, and number of workers to be used for installations.

3. The methods, equipment, and materials for drilling and installing ground anchors.

4. The methods, equipment, materials, and mix design for the grouting operations. Include a description of how excessive grout injection quantities will be controlled if open joints or seams of loose material are encountered.

5. The methods, equipment, and setup for testing ground anchor capacities. Include working drawings for the temporary yoke or load frame to be used for the anchor proof testing in accordance with Section 105. Include calibration data performed by an independent testing laboratory within 90 calendar days of the submittal for each load cell, test jack pressure gauge, and master pressure gauge to be used. Recalibrate each load cell, test jack pressure gauge, and master pressure gauge every 90 calendar days from the originally submitted calibration date. Provide all calibration testing that is traceable to the National Institute of Standards and Technology (NIST).

6. The methods, equipment and materials for delivering the mesh panels to the design locations on the slopes, attaching mesh panels to the upper support ropes, securing adjacent mesh panels to each other vertically and horizontally, and trimming mesh panels

7. Identification of the manufacturer(s) of the high tensile strength wire mesh products. Supply documentation from the manufacturer(s) that demonstrates the mesh products have been used as part of a draped mesh rockfall protection system where the site conditions were similar to the conditions on this project.

8. Manufacturer certification and statement of manufacturer's compliance for galvanization and staining along with procedures and material for repairing galvanized and stained metal products in the field.

9. Material information, as required in Section 106, including an inclusive list with manufacturer's data sheets and catalog cuts for all system appurtenances to be used, including but not limited to: ground anchors, grout, wire ropes, lacing wire, wire mesh fasteners/lacing wire, wire rope clips, thimbles, ferrules, and other fastening hardware.

203-3.08 GENERAL REQUIREMENTS.

1. Submit the work plan and personnel qualifications specified herein to the Engineer for review and acceptance prior to commencing this work.

2. Install the draped mesh rockfall protection systems in accordance with the details and installation schedule shown in the Plans and as directed by the Engineer.

3. Scaling, tree removal, and site preparation work required for construction access and installation of the draped mesh systems that is not included within the extents of scaling shown on the Plans is subsidiary to this work and will be conducted at no additional cost to the Department.

4. Provide mesh coverage extending a minimum of ten (10) feet above the crest of the cut slope for each installation as shown on the detail sheet in the Plans

5. Overlap mesh panels in areas of slope irregularity to fully cover the areas shown in the Plans. Overlapping material is subsidiary to the work and will be installed at no additional cost to the Department.

6. Construct the draped mesh systems using high-tensile strength mesh as detailed in the Plans.

7. Repair all galvanized steel that shows exposed steel or damaged galvanizing after installation of the draped mesh system with a zinc-rich, galvanizing repair compound.

203-3.09 ANCHORS.

1. Install one of the anchor types as described below and in accordance with the Plans and accepted Draped Mesh Work Plan. Select either a rock or soil anchor based on encountered ground conditions. Locate anchors between 20 and 50 feet above the crest of the cut slope at locations that will allow the draped mesh to conform to the rock slope. The maximum distance between ground anchors, measured along the top support rope, is 25 feet. Reduce the anchor spacing as needed to improve mesh coverage and conformance to the slope.

2. Supplemental wire rope anchors and additional tag lines may be required to facilitate mesh installation and to allow the mesh to conform to the slope depending on mesh layout and slope contour. Install supplemental anchors as determined necessary by the Engineer. No additional payment will be made for supplemental anchor work.

3. Proposed anchor locations must be reviewed and accepted by the Engineer prior to installation.

203-3.10 ANCHOR TYPES.

1. Wire Rope Anchor for Rock. Drill a minimum 3-inch diameter hole, nominally 5-feet deep for installation of a wire rope anchor. Over drill the hole a minimum of 2 inches. Flush the hole of all drill cuttings and debris with compressed air prior to installation of the anchor. Orient the hole perpendicular to the slope face or ground surface. Center the anchor in the hole and fully grout the annular space with grout.

2. Wire Rope Anchor for Soil. Excavate or drill a minimum 6-inch diameter hole, nominally ten (10) feet deep for installation of a wire rope anchor. Over excavate or drill the hole approximately two (2) inches. Flush the hole of all drill cuttings and debris with compressed air prior to installation of the anchor. Orient the hole perpendicular to the slope face or ground surface. Center the anchor in the hole and fully fill the annular space with grout.

3. Do not disturb or apply any load to any of the anchors until the grout or concrete has cured for a minimum of three (3) days.

203-3.11 ANCHOR TESTING.

1. Verify the anchors have the required capacity by conducting axial pullout proof tests on 25 percent of the anchors at each MP site as selected by the Engineer. Apply a load equal to the test load for the selected anchor(s) as detailed on the Anchor Schedule in the Plans.

2. Pullout proof tests will be accepted by the Engineer if an anchor maintains the test load for 10 minutes without loss of load. Conduct the test against a temporary yoke or load frame with no part of the yoke or load frame bearing within three (3) feet of the anchor. If more than three (3) tested anchors fail per MP site, conduct pullout proof tests on all anchors at no additional cost to the Department. Replace all failed anchors at no additional cost to the Department.

3. Collect samples of the high early strength cement from two (2) batches of grout that is being used for rock bolt grouting and submit grout cubes to an independent testing firm for breaking strength testing. Supply 3-day and 7-day unconfined compression test results to the Engineer. The Engineer may also request samples for testing.

4. Complete anchor testing before connecting any system components to any anchors.

5. Contractor can request to adjust the embedment lengths if pullout proof testing shows the proposed length(s) are sufficient for the test loads. The Engineer must approve adjusted embedment lengths in writing.

203-3.12 SUPPORT ROPES AND TAG LINES.

1. Attach the top support ropes and tag lines only after anchor grout and/or concrete has been allowed to cure as specified above and after successful anchor testing.

2. Secure both ends of all top support ropes and tag lines by looping the ends of the rope back onto itself, installing thimbles and clipping with wire rope clips according to manufacturer's specifications and as shown in the Plans.

3. Locate the top support ropes at least ten (10) feet above the crest of the slope, as shown in the Plans.

4. Install supplemental anchors and tag lines as necessary or as directed by the Engineer to support the mesh in a manner so that it will conform to the slope and prevent sagging of the top support rope.

5. Top support ropes can be no longer than 100 feet. Tag lines can be no longer than 40 feet and no shorter than 10 feet, unless approved by the Engineer.

203-3.13 MESH PANELS.

1. Attach the mesh panels to the top support rope using 5/16-inch diameter lacing wire rope that is threaded through each mesh opening as detailed on the Plans and as recommended by the manufacturer.

2. End the draped mesh coverage at the elevations shown in the Plans.

3. Do not diagonally cut the high tensile strength wire mesh. Use care in handling and installing the wire mesh and wire rope. Replace any damaged mesh or wire rope at no additional cost to the Department.

4. Overlap adjacent mesh panels a minimum of three (3) inches to provide a minimum one mesh opening overlap between panels. Increase the overlap as necessary to fully cover the required slope area shown in the Plans. Alternative overlapping may be proposed if recommended by the manufacturer. Review and approval by the Engineer is required prior to changing the overlap.

5. Lace each vertical and horizontal seam of the high tensile strength wire mesh panels to adjacent panels using a 5/16-inch diameter lacing wire rope as shown in the Plans and as recommended by the manufacturer. Alternative lacing or fastening techniques may be proposed for review and acceptance by the Engineer.

6. Secure all panel edges to avoid sagging mesh or the creation of mesh pockets that could trap falling rock. If overlapping sections of adjacent panels cannot be fully secured using a single lacing wire rope, use additional lacing wire ropes at no additional cost to the Department.

7. Secure both ends of all lacing wire rope installations by looping the ends of the rope back onto itself and clipping with wire rope clips according to manufacturer's specifications and as shown in the Plans.

01/20/15 (N12)
203-4.01 METHOD OF MEASUREMENT. *Add the following:* Borrow will not be weighed or used while free moisture is observed draining from the haul vehicle at the scale location.

Delete subparagraph number 9 in its entirety and substitute the following:

9. Item 203.0017.____ By the Square Yards of wire mesh as measured by the neat line of mesh covering the slope. No measurement will be made for overlapping panels.

02/01/20 (N13)
203-5.01 BASIS OF PAYMENT. *Add the following:* Ten percent (10%) of the value earned in the progress period shall be withheld on progress payments for all Section 203 items of work. Five percent (5%) will be released by work area, as defined in the SWPPP, when final stabilization is initiated. The last five percent (5%) will be released by work area, as defined in the SWPPP, when final stabilization as defined by the *Construction General Permit* has been obtained and accepted by the Engineer. Withholding will be made under Item 641.0006.____ Withholding.

Add the following:
203.0017.0000 Rockfall Mitigation – Wire Mesh. The contract price includes all work and resources required to furnish and install Rockfall Mitigation – Wire Mesh draped systems.

SECTION 204
STRUCTURE EXCAVATION FOR CONDUITS AND MINOR STRUCTURES

204-1.01 DESCRIPTION. *Add the following*:

Perform all excavation, bedding and backfill for the power and telecommunication utility conduit trenches, vaults, and pedestals.

204-2.01 MATERIALS. *Delete paragraph 1 in its entirety and substitute the following:* Use selected material, Type F (Subsection 703-2.09) for bedding material and for backfill material to 12 inches above the pipe.

204-5.01 BASIS OF PAYMENT. *Add the following*:

Item 204.0003.0000. Payment for bedding sand, Select Material Type A, native soil backfill, and Base Course, Grading D-1 as required for the power or telecommunication system installations are subsidiary to this Pay Item.

SECTION 304
SUBBASE

02/01/20 (N15)
304-5.01 BASIS OF PAYMENT. *Add the following:* Ten percent (10%) of the value earned in the progress period shall be withheld on progress payments for all Section 304 items of work. Five percent (5%) will be released by work area, as defined in the SWPPP, when final stabilization is initiated. The last five percent (5%) will be released by work area, as defined in the SWPPP, when final stabilization as defined by the *Construction General Permit* has been obtained and accepted by the Engineer. Withholding will be made under Item 641.0006.____ Withholding.

SECTION 308
CRUSHED ASPHALT BASE COURSE

01/20/15 (N18)
308-3.01 PULVERIZING AND MIXING. *Delete the first paragraph and substitute the following:* Crush or process the existing asphalt pavement so that 100% by weight passes the 2-inch sieve and 95-100% by weight passes the 1-inch sieve.

Add the following: The equipment must be capable of pulverizing a variety of asphalt surfacing and base courses. Patched and overlay areas may exist throughout the project. Surfacing and base thickness may vary from as-built thickness, and from the thickness indicated on the plans, if any are shown. Expect to find varying thicknesses and combinations of hot mix asphalt surfacing, cold mix asphalt surfacing, high float surfacing, chip seal surfacing, asphalt treated base course, and aggregate base course throughout the project extents.

308-5.01 BASIS OF PAYMENT. *Add the following*:

The contract price includes all work and resources required to pulverize, crush, process, excavate, haul, stockpile, double handle, place, shape, grade and compact Crushed Asphalt Base Course.

SECTION 401
HOT MIX ASPHALT PAVEMENT

08/04/22 (N76)
401-2.01 ASPHALT BINDER. *Add the following:* Provide the grade of Asphalt Binder shown in the Bid Schedule, except PG 52-28 may be used for Items 401.0011.____ and 401.0012.____, HMA Driveway.

401-2.08 RECYCLED ASPHALT PAVEMENT. *Add the following:* The maximum amount of RAP in the HMA is limited to 10%.

401-2.09 JOB MIX DESIGN. *Delete the last two rows of Table 401-1 HMA MARSHALL DESIGN REQUIREMENTS.*

(04/08/21) N85
Add the following: For HMA placed under Item 401.2010.0000 HMA, Sidewalks and Paths:

1. JMD shall be Type II or Type III, Class B.

2. Asphalt Binder shall be PG 52-28 or PG 52E-40.

3. The maximum amount of RAP in the HMA is limited to 10%.

401-3.18 SURFACE REQUIREMENTS AND TOLERANCES. *Add the following:* When Item 401.0010.___ appears in the Bid Schedule, profiler measurements will be taken on through lanes and passing lanes.

401-4.02 ACCEPTANCE SAMPLING AND TESTING. *Add the following:* The bid quantity for Item 401.2010.0000 HMA, Sidewalks and Path will be considered 1 lot. The lot will be divided into sublots of 500 tons. HMA for Sidewalks and Paths will be accepted for payment based on:

1. The Engineer's approval of the JMD.

2. Placement and compaction of the HMA to the specified depth, finished surface requirements, and tolerances.

3. Conformance to the Upper Specification Limit (USL) and Lower Specification Limit (LSL) shown in Table 401-2. The TV is the specification value shown in the approved Job Mix Design.

4. Mat Density will be sampled and tested according to Subsection 401-4.02.3. Density test results will be based on the MSG from the approved JMD.

5. At the discretion of the Engineer, Asphalt Binder Content may be tested according to Subsection 401-4.02.1, Aggregate Gradation may be tested according to Subsection 401-4.02.2, and Asphalt Binder Grade may be tested according to Subsection 401-4.02.5.

The Engineer reserves the right to perform any testing required in order to determine acceptance.

401-5.01 BASIS OF PAYMENT. *Add the following:* HMA placed on driveways, turnouts, and pullouts will be paid under Item 401.0012.____ HMA, Driveway, Type ___; Class ___.

The use of a transferred HMA Job Mix Design from another project is subsidiary and will not be paid for under 401.0013.

Asphalt binder, liquid anti-strip additives and tack coat are subsidiary to Item 401.2010.0000 HMA, Sidewalks and Paths.

Item 401.0008.____ HMA Price Adjustment does not apply to Item 401.2010.0000 HMA, Sidewalks and Paths.

Add the following pay item:

PAY ITEM		
Item Number	**Item Description**	**Unit**
401.2010.0000	HMA, Sidewalks and Paths	TON

Add the following section:

SECTION 530
SEGMENTED BLOCK RETAINING WALL

530-1.01 DESCRIPTION. Furnish and install precast concrete segmented block retaining wall system.

530-2.01 MATERIALS. Meet the following:

Class A Concrete	Section 501
Precast Concrete Blocks	Section 501
Reinforcing Steel	Section 503

530-3.01 CONSTRUCTION REQUIREMENTS. Excavate and backfill to the lines and grades shown on the plans meeting specification section 204. Compact bedding material per specification section 203-3.04.

530-401.01 MEASUREMENT. Section 109

530-5.01 BASIS OF PAYMENT. The contract price includes all work and resources required to furnish and install precast concrete segmented block retaining walls. Excavation, bedding, and compaction are subsidiary.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
530.2005.0000	Segmented Block Retaining Wall, Precast	SF

SECTION 550
COMMERCIAL CONCRETE

09/10/21 (N90)

550-2.02 COMPOSITION OF MIXTURE – JOB MIX DESIGN. *Delete Table 550-1 and substitute the following:*

TABLE 550-1
COMMERCIAL CONCRETE DESIGN REQUIREMENTS

Class	B-B	B	W
Cementitious Material Content, minimum	658 lbs/yd^3	564 lbs/yd^3	n/a
Water-Cement Ratio, lbs/lbs, maximum	0.40	0.45	0.50
Total Air Content, %	5.5 – 6.5	5.5 – 6.5	4.0 – 6.5
Coarse Aggregate Gradation, AASHTO M 43	No. 57 or 67	No. 57 or 67	No. 7, 8, 57, or 67
Compressive Strength, psi, minimum	5,000	4,000	3,000

Alternative sizes of coarse aggregate, as shown in AASHTO M 43, may be used when approved in writing.

550-5.01 BASIS OF PAYMENT. *Delete the first sentence and substitute the following:* If Items 550.0001.____, 550.0002.____, 550.0003.____, 550.0004.____, 550.0005.____, or 550.0006.____ do not appear in the Bid Schedule concrete is subsidiary to other items.

Add the following pay items:

PAY ITEM		
Item Number	**Item Description**	**Unit**
550.0005.____	Class B-B Concrete	LS
550.0006.____	Class B-B Concrete	CY

SECTION 603
CULVERTS AND STORMDRAINS

01/20/15 (N21)
603-3.03 JOINING PIPE. *Delete numbered subparagraphs 2.a.2) & 3) and substitute the following:*

(2) Bands shall have a minimum width of 22 inches.

Delete numbered subparagraphs 2.b.2), 3) and 4) and substitute the following:

(2) Bands shall have a minimum width of 22 inches and shall have two circumferential rows of projections for each pipe end being joined.

(3) Furnish and install these bands with a gasket that resists infiltration and leakage.

603.-5.01 BASIS OF PAYMENT. *Delete the second paragraph in its entirety and substitute the following:*

Excavation, bedding, and backfill are subsidiary.

SECTION 608
SIDEWALKS

05/06/21 (N87)
608-2.01 MATERIALS.

1. Concrete Sidewalk. *Delete the line beginning with* "Joint Sealer" *and substitute the following:*

Joint Sealer	Hot pour joint sealant in accordance with ASTM D6690, Type IV

05/06/21 (N80)
Add the following to list of materials under 1. Concrete Sidewalk:

Reinforcement	Subsection 709-2.01

608-3.01 CONCRETE SIDEWALKS. *Add the following after the second paragraph***:** Six inches thick sidewalks shall have 6x6 – W2.9xW2.9 Welded Wire Fabric (WWF) reinforcement placed 1.5 inches from the foundation for the entire width and length of the sidewalk unless shown on Plans otherwise. Four inches thick sidewalk shall have 6x6 – W1.4xW1.4 WWF reinforcement placed 1.5 inches from the foundation for the entire width and length of the sidewalk unless shown on Plans otherwise. Provide two inches of concrete clear cover between reinforcement and sidewalk edges.

Delete the fifth paragraph and substitute the following: Make expansion joints to the dimensions and spacing shown on the Plans, with maximum spacing of 50 feet between expansion joints, and fill with the type of preformed expansion joint filler specified. Top surface profile of the expansion point may not be recessed more than 1/4 inch from the finished sidewalk profile.

608-3.03 CURB RAMPS. *Add the following after the first paragraph:* Construct all curb ramp sections (ramp, upper and lower landings) of six inches thick concrete with 6x6 – W2.9xW2.9 WWF reinforcement placed 1.5 inches from the foundation for the entire width and length of the each section. Provide two inches of concrete clear cover between the reinforcement and the outside edges of the concrete.

04/08/21 (N84)
608-4.01 METHOD OF MEASUREMENT.

Concrete Sidewalk. *Add the following to the end of the sentence:* and curb ramps.

608-5.01 BASIS OF PAYMENT. *Add the following after the first paragraph:*

Curb Ramp. Materials to construct the curb ramps will be paid for separately under Concrete Sidewalk pay item(s).

Curb Ramp, Retrofit. Materials to construct the curb ramps will be paid for separately under Concrete Sidewalk pay item(s).

SECTION 609
CURBING

05/06/21 (N88)
609-2.01 MATERIALS. *Delete the line beginning with* "Joint Sealer" *and substitute the following:*

Joint Sealer	Hot pour joint sealant in accordance with ASTM D6690, Type IV

07/01/20 (N81)
Add the following to the list of materials in first paragraph:

Reinforcement	Subsection 709-2.01

609-3.02 CAST-IN-PLACE CONCRETE CURBING. *Add the following after the first paragraph:* Use two longitudinally placed #4 reinforcing steel bars for the entire length of concrete curb and gutter. Place the reinforcing steel 3 inches from the bottom and 4 inches from each outside edge. Provide continuing reinforcement by lap splicing the bars by minimum overlap of 1.75 feet.

609-5.01 BASIS OF PAYMENT. *Delete the first paragraph and substitute the following:* Excavation, reinforcement, expansion joint material, and other related miscellaneous items are subsidiary. Payment will be made under:

SECTION 611
RIPRAP

01/20/15 (N23)
611-2.01 MATERIALS. *Add the following after the first sentence:* WAQTC FOP for AASHTO T 85 will determine apparent specific gravity.

611-2.01 MATERIALS. *Delete this subsection in its entirety and substitute the following*: Evenly graded stones that are hard, angular, and have no more than 50% wear at 500 revolutions as determined by AASHTO T 96. Use stones with breadth and thickness at least ¼ of its length. Do not use rounded boulders or cobbles.

Meet the following gradation for the class specified. Percents are by total weight, weights are for each stone:

1. **Class I** 0-50% weighing up to 25 pounds
   0-10% weighing more than 50 pounds

2. **Class II** 50-70% weighing 200 pounds or more
   10-25% weighing up to 25 pounds
   0% weighing more than 400 pounds

3. **Class III** 50-100% weighing 700 pounds or more
   0-15% weighing up to 25 pounds
   0-10% weighing more than 1400 pounds

4. **Class IV** 50-100% weighing 2000 pounds or more
   0-15% weighing up to 400 pounds
   0-10% weighing more than 5400 pounds

01/20/15 (N24)
611-3.01 CONSTRUCTION REQUIREMENTS. *Add the following after the first sentence of the second paragraph:* The Contractor shall not deposit excavated materials in adjacent stream channels or other bodies of water or in areas subject to flooding during high flows.

Delete Section 613 in its entirety and substitute the following:
02/01/20 (N25)

SECTION 613
MONUMENTS AND MARKERS

613-1.01 DESCRIPTION. This work consists of furnishing and installing culvert marker posts in conformance with the Plans and Specifications or as directed.

613-2.01 MATERIALS. Steel mounting supports shall conform to the requirements of ASTM A 36. Steel mounting supports and fasteners for culvert marker posts shall be galvanized in accordance with AASHTO M 232.

Culvert marker posts shall be Carsonite CIB-380 flexible markers, or approved equal.

613-3.01 CONSTRUCTION REQUIREMENTS. Culvert marker posts shall be installed as detailed on the Plans.

613-4.01 METHOD OF MEASUREMENT. The quantities paid for shall be the actual number of culvert marker posts furnished, installed, and accepted.

If Item 613.0002.____ does not appear on the bid schedule all costs associated with providing and installing culvert marker posts shall be considered subsidiary to culvert installation and will not be measured or paid for separately.

613-5.01 BASIS OF PAYMENT. Culvert marker posts shall be paid for at the contract price, per unit of measurement, for the pay item shown in the bid schedule.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
613.0002.____	Culvert Marker Post	EACH

SECTION 615
STANDARD SIGNS

02/01/20 (N26)
615-2.01 MATERIALS.

4. Delineators. *Add the following:* Delineators shall be of flexible design. The following flexible delineators are approved for use:

Carsonite:	Road Marker
Carsonite:	Curve Flex
Safe-Hit Corp:	Flexible Guide Post

The Contractor may submit an alternate for consideration by the Engineer.

615-3.01 CONSTRUCTION REQUIREMENTS. *Add the following to numbered paragraph 4:* The delineators shall be located uniformly 4 feet to 8 feet from the outside shoulder edge unless noted otherwise on the Plans. The reflector shall be 3" x 12" yellow or white reflective sheeting (one or two sides) meeting the requirements of Subsection 730-2.03, the Plans, and Standard Plan T-05. The reflector shall be mounted so that the top of the reflector is 4 feet above the surface of the shoulder.

01/20/15 (N27)
Delete numbered subparagraph 8 in its entirety and substitute the following:

8. All materials and finished signs are subject to inspection and acceptance in place.

   a. Surfaces exposed to weathering must be free of defects in the coating.

   b. Finished signs must be clean and have no chatter marks, burrs, sharp edges, loose rivets, delaminated reflective sheeting, oxidation, corrosion, other blemishes, aluminum marks, or unapproved coatings. Do not make repairs to the face sheet.

   c. Replace any finished sign not meeting a. and b. with a replacement sign at no cost to the Department.

11/01/16 (N68)
615-5.01 BASIS OF PAYMENT. *Delete the first sentence and substitute the following:* Sign posts, bases, mounting hardware and all traffic control devices necessary for removal, installation, reconstruction, or maintenance of 615 Pay Items are subsidiary.

Delete Section 618 in its entirety and substitute the following:
02/01/20 (N30)

SECTION 618
SEEDING

618-1.01 DESCRIPTION. It is the intent of this work that a uniform living vegetative cover be established according to the Plans and Specifications. This work consists of soil preparation, seeding, fertilizing, mulching, and establishing, and maintaining vegetated areas.

618-2.01 MATERIALS. Use materials that conform to the following:

Seed	Section 724
Fertilizer	Section 725
Mulch	Subsection 727-2.01
Water	Subsection 712-2.01

CONSTRUCTION REQUIREMENTS

618-3.01 SOIL PREPARATION. Clear all areas to be seeded of stones 4" and larger in diameter and of all weeds, plant growth, sticks, stumps and other debris or irregularities which may interfere with the seeding, establishment, and maintenance of the vegetated areas.

Prior to the application of seed, prepare slopes using one or more of the following methods, or as approved by the Engineer:

1. Manual Raking – Requires manual labor with landscaping rakes to produce a uniform pattern of grooves perpendicular to the fall of the slope.
2. Mechanical Raking - Requires the use of a scarifying slope board to produce grooves with an approximate width and depth of 1", and no more than 6" apart. The resultant indentations shall leave a uniform pattern of grooves perpendicular to the fall of the slope.
3. Mechanical Track Walking - Requires operating tracked equipment in such a manner as to leave a uniform pattern of grooves perpendicular to the fall of the slope.

618-3.02 SEEDING SEASON. Perform seeding after the ground is free of snow and no sooner than May 1 and no later than September 30. Perform seeding when wind conditions, climatic conditions, and soil conditions will not hinder seeding and establishment.

618-3.03 APPLICATION METHOD. Use the Hydraulic Method. You must obtain the Engineer's permission to use the Mechanical Method.

Hydraulic Method:

1. Seeding by the hydraulic method consists of furnishing and placing a slurry of dye, seed, fertilizer, trace mulch, water, and a second application of mulch.
2. Do not place seed in the slurry prior to 30 minutes before application.
3. Add the proportionate amount of seed to the water slurry in the hydraulic seeder after the proportionate amounts of trace mulch and fertilizer have been added.
4. Apply the slurry mixture in a manner that results in an even distribution of all materials. Apply seed, fertilizer, and trace mulch together in one application.
5. Hydraulic seeding equipment must maintain continuous slurry agitation so that a homogeneous, uniform mixture is applied through a spray nozzle, for the complete tank load. The pump must be capable of producing sufficient pressure to maintain a continuous, nonfluctuating spray capable of reaching the extremities of the seeding area with the pump & nozzle unit located on the roadbed. Provide sufficient hose to reach areas not practical to seed from the pump & nozzle unit situated on the road bed.
6. A second application of mulch shall be applied within 24-hours after seeding. Mulch shall be furnished and evenly applied at the rates required for temporary stabilization per the manufacturer's

recommendations and according to Subsection 727-2.01. Mulch sprayed on signs or sign structures shall be removed the same day.

Mechanical Method:

1. Use mechanical spreaders, seed drills or other approved mechanical seeding equipment when seed and fertilizer are to be applied in dry form.
2. Water seeding area both prior to and after the application of fertilizer.
3. Spread fertilizer separately from seed.
4. An application of mulch shall be applied within 24-hours after seeding. Mulch shall be furnished and evenly applied at the rates required for temporary stabilization per the manufacturer's recommendations and according to Subsection 727-2.01. Mulch sprayed on signs or sign structures shall be removed the same day.

618-3.04 APPLICATION RATE. Apply seed, fertilizer, and trace mulch at the rates specified in the table below:

MATERIALS	TYPE	APPLICATION RATE PER 1,000 SQUARE FEET
Seed*	Arctared Red Fescue Wainwright Slender Wheatgrass Nortran Tufted Hairgrass Annual Ryegrass	0.3 lb 0.3 lb 0.7 lb 0.2 lb
	Total	1.5 lb
Fertilizer	20-20-10	10 lb
Trace mulch**	See Subsection 727-2.01	20 lb

* Do not remove the required tags from the seed containers.

** Trace mulch application rate may be adjusted according to the manufacturer's recommendations when approved by the Engineer. Trace mulch is not required for mechanical seeding.

618-3.05 MAINTENANCE. Protect seeded areas against erosion and sedimentation. Protect seeded areas against traffic by approved warning signs or barricades. Water seeded areas, in a non-erosive manner, as required to establish a uniform living perennial vegetative cover. Be responsible for identifying, retracking, reseeding, refertilizing and remulching gullied or otherwise damaged areas. The second application of mulch shall be maintained so it properly performs its temporary stabilization function until final stabilization is achieved. Rescarify, reseed, refertilize and remulch unproductive areas as directed by the Engineer.

618-3.06 PERIOD OF ESTABLISHMENT. The establishment period extends until a uniform (e.g. evenly distributed, without large bare areas) perennial living vegetative cover with a density of 70 percent of the native background vegetative cover is established.

618-3.07 ACCEPTANCE. The Engineer will accept seeding when a uniform (e.g. evenly distributed, without large bare areas) perennial living vegetative cover with a density of 70 percent of the native background vegetative cover is established.

618-4.01 METHOD OF MEASUREMENT. Section 109 and as follows:

Watering seeded areas per Subsection 618-3.05 will not be measured directly for payment and is subsidiary, except when Pay Item 618.0003.____ is listed on the Bid Schedule.

Identifying, retracking, reseeding, refertilizing and remulching gullied or otherwise damaged areas will not be measured directly for payment and is subsidiary.

Seeding by the Acre. By the area of ground surface acceptably seeded and maintained. Soil preparation, seed, fertilizer, all mulch, dye, and water required for seed and fertilizer application will not be measured directly for payment and is subsidiary.

Seeding by the Pound. By the dry weight of seed acceptably seeded and maintained. Soil preparation, fertilizer, all mulch, dye, and water required for seed and fertilizer application will not be measured directly for payment and is subsidiary.

Water for Seeding. By the M Gal. (1,000 gallons) acceptably placed. Use a conversion factor of 8.34 pounds per gallon, if measured by weight.

618-5.01 BASIS OF PAYMENT. The accepted quantity will be paid for at the contract price, per unit of measurement, for the pay items listed below that appear on the bid schedule.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
618.0001.____	Seeding	ACRE
618.0002.____	Seeding	LB
618.0003.____	Water for Seeding	MGAL

SECTION 626
SANITARY SEWER SYSTEMS

626-5.01 BASIS OF PAYMENT. *Add the following Pay Item*:

PAY ITEM		
Item Number	**Item Description**	**Unit**
626.2013.0000	Adjust Sanitary Sewer Cleanout	EACH

SECTION 627
WATER SYSTEMS

627-3.05 VALVE BOXES. *Add the following*:

Some existing valve boxes have been paved over. Coordinate with the water utility to determine the approximate location of noted valve boxes and field locate prior to ground disturbing activities.

627-5.01 BASIS OF PAYMENT. *Add the following*:

Payment for locating existing valve boxes is subsidiary to Pay Item 627.0010.0000.

Payment to expose the water valve and procure and install fitting(s) as required to connect the 12-inch ductile iron pipe is subsidiary to Pay Item 627.0012.0000.

Delete Section 641 in its entirety and substitute the following:

SECTION 641
EROSION, SEDIMENT, AND POLLUTION CONTROL

2/14/22 (N91)

641-1.01 DESCRIPTION. Provide project administration and work relating to control of erosion, sedimentation, and discharge of pollutants, according to this Section and applicable local, state, and federal requirements, including the Alaska Pollution Discharge Elimination System (APDES) Construction General Permit (CGP). The state APDES program is administered by the Department of Environmental Conservation (DEC). Section 301(a) of the Clean Water Act (CWA) and 18 AAC 83.015 provide that the discharge of pollutants to water of the U.S. is unlawful except as allowed by the CGP.

641-1.02 DEFINITIONS. These definitions apply only to Section 641.

ACTIVE TREATMENT SYSTEM (ATS) OPERATOR. See CGP Appendix C.

ALASKA CERTIFIED EROSION AND SEDIMENT CONTROL LEAD (AK-CESCL). A person who has completed training, testing, and other requirements of, and is currently certified as, an AK-CESCL from an AK-CESCL Training Program (a program developed under a Memorandum of Understanding between the Department and others). The Department recognizes AK-CESCLs as "qualified personnel" required by the CGP. An AK-CESCL must be recertified every three years. (See Qualified Person).

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION (DEC). The state agency authorized by EPA to administer the Clean Water Act's National Pollutant Discharge Elimination System.

ALASKA GENERAL PERMIT FOR EXCAVATION, DEWATERING (Excavation Dewatering Permit). The permit authorizing excavation dewatering discharges from Construction Activities.

ALASKA MULTI-SECTOR GENERAL PERMIT (MSGP). The permit authorizing stormwater discharges associated with Industrial Activity.

ALASKA POLLUTANT DISCHARGE ELIMINATION SYSTEM (APDES). A system administered by DEC that issues and tracks permits for stormwater discharges.

BEST MANAGEMENT PRACTICES (BMPS). See CGP Appendix C.

CLEAN WATER ACT (CWA). Federal Water Pollution Control Amendments of 1972, as amended (33 U.S.C. 1251 et seq.).

CONSTRUCTION ACTIVITY. Ground disturbing activity by the contractor, subcontractor or utility company; that may result in erosion, sedimentation, or a discharge of pollutants into stormwater. See CGP Appendix C.

CONSTRUCTION GENERAL PERMIT (CGP). The permit authorizing stormwater discharges from Construction Activities, issued and enforced by Alaska DEC. It authorizes stormwater discharges providing permit conditions and water quality standards are met.

U.S. ARMY CORPS OF ENGINEERS PERMIT (COE PERMIT). A COE permit for construction in waters of the U.S. May be issued under Section 10 of the Rivers and Harbors Act of 1899, or Section 404 of the Clean Water Act.

ELECTRONIC NOTICE OF INTENT (ENOI). See CGP Appendix C.

ELECTRONIC NOTICE OF TERMINATION (ENOT). See CGP Appendix C.

ENVIRONMENTAL PROTECTION AGENCY (EPA). The federal agency charged to protect human health and the environment.

ERODIBLE STOCKPILE. Any material storage area or stockpile consisting of mineral aggregate, organic material, or a combination thereof, with greater than 5 percent passing the #200 sieve, and any material storage where wind or water transports sediments or other pollutants from the stockpile. Erodible Stockpile also includes any material storage area or stockpile, where the Engineer determines there is potential for wind or water transport, of sediments or other pollutants away from the stockpile.

EROSION AND SEDIMENT CONTROL PLAN (ESCP). The Department's project specific document that illustrates measures to control erosion and sediment on the project. The ESCP provides bidders with the basis for cost estimating and guidance for developing an acceptable Storm Water Pollutant Prevention Plan (SWPPP).

FINAL STABILIZATION. See CGP, Appendix C, "Stabilization."

HAZARDOUS MATERIAL CONTROL PLAN (HMCP). The Contractor's detailed project specific plan for prevention of pollution from storage, use, transfer, containment, cleanup, and disposal of hazardous material (including, but are not limited to, petroleum products related to construction activities and equipment). The HMCP is included as an appendix to the SWPPP.

MUNICIPAL SEPARATE STORM SEWER SYSTEM (MS4) PERMIT. A DEC stormwater discharge permit issued to certain local governments and other public bodies, for operation of stormwater conveyances and drainage systems. See CGP Appendix C.

OPERATOR(S). The party(s) responsible to obtain CGP permit coverage. CGP, Appendix C.

1. Contractor – the Contractor is an Operator inside and outside the Project Zone.

2. Department – the Department is an Operator inside the Project Zone.

POLLUTANT. Any substance or item meeting the definition of pollutant contained in 40 CFR § 122.2. A partial listing from this definition includes: dredged spoil, solid waste, sediment, sewage, garbage, sewage sludge, chemical wastes, biological materials, wrecked or discarded equipment, rock, sand, cellar dirt, and industrial or municipal waste.

PROJECT ZONE. The physical area provided by the Department for Construction. The Project Zone includes the area of highway or facility under construction, project staging and equipment areas, and material and disposal sites; when those areas, routes and sites, are provided by the Contract.

Material sites, material processing sites, disposal sites, haul routes, staging and equipment storage areas; that are furnished by the Contractor or a commercial operator, are not included in the Project Zone.

QUALIFIED PERSON. See CGP Appendix C and Subsection 641-1.04.

SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN (SPCC PLAN). The Contractor's detailed plan for petroleum spill prevention and control measures that meet the requirements of 40 CFR 112.

SPILL RESPONSE FIELD REPRESENTATIVE. The Contractor's representative with authority and responsibility for managing, implementing, and executing the HMCP and SPCC Plan.

STORM EVENT. See CGP Appendix C.

STORM WATER POLLUTION PREVENTION PLAN TWO (SWPPP2). The Contractor's plan for compliance with both the CGP and MSGP construction activities outside the Project Zone.

SUPERINTENDENT. The Contractor's duly authorized representative with authority and responsibility for the overall operation of the Project, and Contractor furnished sites and facilities.

SWPPP AMENDMENT. A modification to the SWPPP. CGP Part 5.0.

SWPPP MANAGER. The Contractor's Qualified Person with authority and responsibility. CGP Appendix C.

SWPPP PREPARER. The Contractor's Qualified Person with authority and responsibility. CGP Appendix C.

SWPPPTRACK. Software subscription service version SWPPPTrack LTIS AK developed and provided by Storm Water Simplified Ltd, for use on construction projects that require coverage under the APDES CGP.

TEMPORARY STABILIZATION. See CGP Appendix C. See "Stabilization."

641-1.02.01 REFERENCE. A complete list of websites and documents referenced herein can be found at the DOT&PF Statewide Design and Engineering Services Stormwater webpage.

DEC Permit information can be found at the DEC Division of Water webpage. SWPPP preparation documents can be found at the DOT&PF Design and Engineering Services Stormwater webpage. Construction forms are found at the DOT&PF Design and Engineering Services Construction Forms webpage.

641-1.03 PLAN AND PERMIT SUBMITTALS.

For plans listed in Subsection 108-1.03.5 (SWPPP, HMCP, and SPCC), use the Contractor submission and Department review deadlines identified in this Subsection.

Partial and incomplete submittals will not be accepted for review. Any submittal that is re-submitted or revised after submission, but before the review is completed, will restart the submittal review timeline. No additional Contract time or additional compensation will be allowed due to delays caused by partial or incomplete submittals, or required re-submittals.

1. Storm Water Pollution Prevention Plan. Submit an electronic copy of the SWPPP to the Engineer for approval. Deliver these documents to the Engineer at least 21 days before beginning Construction Activity. Organize the SWPPP and related documents for submittal according to the requirements of Subsection 641-2.01.2.

   The Department will review the SWPPP submittals within 14 days after they are received. Submittals will be returned to the Contractor, and marked as either "rejected" with reasons listed or as "approved" by the Department. When the submittal is rejected, the Contractor must revise and resubmit the SWPPP. The 14 day review period will restart when the Contractor submits an electronic copy of the revised SWPPP to the Engineer for approval.

   After the SWPPP is approved and certified by the Department using Form 25D-109, the Contractor must certify the approved SWPPP using Form 25D-111. See Subsection 641-1.03.4 for further SWPPP submittal requirements.

2. Hazardous Material Control Plan. The HMCP Template can be found at the DOT&PF Construction Forms webpage. The HMCP submittal and review timeline, and signature requirements are the same as the SWPPP.

3. Spill Prevention, Control and Countermeasure Plan. When a SPCC Plan is required under Subsection 641-2.03, submit an electronic copy of the SPCC Plan to the Engineer. Deliver these documents to the

Engineer at least 21 days before beginning Construction Activity. The Department reserves the right to review the SPCC Plan and require modifications.

4. CGP Coverage. The Contractor is responsible for permitting of Contractor and subcontractor Construction Activities related to the Project. Do not use the SWPPP for Construction Activities outside the Project Zone where the Department is not an operator. For Construction Activities outside the Project Zone, the Contractor must use a SWPPP2. Department approval is not needed for a SWPPP2.

   After the Department certifies the SWPPP and prior to beginning Construction Activity, submit an eNOI with the required fee to DEC for coverage under the CGP. Submit a copy of the signed eNOI and DEC's written acknowledgement (by letter or other document), to the Engineer as soon as practicable and no later than three days after filing eNOI or receiving a written response.

   Do not begin Construction Activity until the conditions listed in Subsection 641-3.01.1 are completed.

   The Department will submit an eNOI to DEC for Construction Activities inside the Project Zone. The Engineer will provide the Contractor with a copy of the Department's eNOI and DEC's written acknowledgment (by letter or other document), for inclusion in the SWPPP.

   Before Construction Activities occur, transmit to the Engineer an electronic copy of the approved and certified SWPPP, with signed Delegations of Signature Authorities on Forms 25D-107 and 25D-108, SWPPP Certifications on Forms 25D-111 and 25D-109, both permittee's signed eNOIs and DEC's written acknowledgement.

5. DEC SWPPP Review. When CGP Part 2.1.3 or 2.1.4, requires DEC SWPPP review:

   a. Transmit a copy of the Department-approved SWPPP to DEC using delivery receipt confirmation;

   b. Transmit a copy of the delivery receipt confirmation to the Engineer within seven (7) days of receiving the confirmation; and

   c. Retain a copy of delivery receipt confirmation in the SWPPP.

6. Local Government SWPPP Review. When local government or the CGP Part 2.1.4, requires local government review:

   a. Transmit a copy of the Department-approved SWPPP and other information as required to local government, with the required fee. Use delivery receipt confirmation;

   b. Transmit a copy of the delivery receipt confirmation to the Engineer within seven days of receiving the confirmation;

   c. Transmit a copy of any comments by the local government to the Engineer within seven days of receipt;

   d. Amend the SWPPP as necessary to address local government comments and transmit SWPPP Amendments to the Engineer within seven days of receipt of the comments;

   e. Include a copy of local government SWPPP review letter in the SWPPP; and

   f. File a notification with local government that the project is ending.

7. Modifying Contractor's eNOI. When required by the CGP Part 2.7, modify your eNOI to update or correct information within 30 calendar days of the change. Reasons for modification are found in the CGP Part 2.7.1. The Contractor must submit an eNOT instead of an eNOI modification when the operator has changed. The new operator must file an eNOI to obtain permit coverage.

641-1.04 PERSONNEL QUALIFICATIONS. Provide documentation in the SWPPP that the individuals serving in these positions meet the personnel qualifications. The Department accepts the following certificates as equivalent to AK-CESCL: CPESC, Certified Professional in Erosion and Sediment Control or CISEC, Certified Inspector in Sediment and Erosion Control, which are found in the CGP Appendix C and repeated below.

Table 641-1.04 Personnel Qualifications

Personnel Title	Required Qualifications
SWPPP Preparer	Current certification as a Certified Professional in Erosion and Sediment Control (CPESC); OR Current certification as AK-CESCL, and at least two years' experience in erosion and sediment control, as a SWPPP Manager or SWPPP writer, or equivalent. OR Professional Engineer registered in the State of Alaska with current certification as AK-CESCL.
Superintendent	Current AK-CESCL or substitute training from CGP Appendix C Qualified Person Table 4
SWPPP Manager	Current AK-CESCL or substitute training from CGP Appendix C Qualified Person Table 4
Active Treatment System Operator	Current AK-CESCL or substitute training from CGP Appendix C Qualified Person Table 4. ATS operator should possess a recognized certification, or professional standing, or who by extensive knowledge, training, and experience has successfully demonstrated the ability to meet the ATS requirement.

641-1.05 SIGNATURE/CERTIFICATION REQUIREMENTS AND DELEGATIONS.

1. eNOI and eNOT. The eNOI, eNOT, and eNOI Modifications must be signed and certified by a responsible corporate officer according to CGP Appendix A, Part 1.12. Signature and certification authority for the eNOI and eNOT cannot be delegated.

2. Delegation of Signature Authority for Other SWPPP Documents and Reports. Use Form 25D-108 to delegate signature authority and certification authority to the Superintendent position, according to CGP Appendix A, Part 1.12.3, for the SWPPP, inspection reports and other reports required by the CGP. The Superintendent position is responsible for signing and certifying the SWPPP, inspection reports, and other reports required by the CGP, except the eNOI, eNOI Modifications, and eNOT.

   The Engineer will provide the Department's delegation on Form 25D-107, which the Contractor must include in the SWPPP.

3. Subcontractor Certification. Subcontractors must certify on Form 25D-105, that they have read and will abide by the CGP and the conditions of the project SWPPP.

4. Signatures and Initials. Where documents are completed in SWPPPTrack, utilize SWPPPTrack to sign and initial documents. When documents are not completed in SWPPPTrack (e.g. Form 25D-111 SWPPP Certification for Contractor), upload scanned copies after signing and initialing the documents into SWPPPTrack.

641-1.06 RESPONSIBILITY FOR STORM WATER PERMIT COVERAGE.

1. The Department and the Contractor are jointly responsible for permitting and permit compliance within the Project Zone.

2. The Contractor is responsible for permitting and permit compliance for all construction support activity in the Project Zone and outside the Project Zone. The Contractor has sole responsibility for compliance with DEC, COE and other applicable federal, state, and local requirements, and for securing all necessary clearances, rights, and permits. The Contractor shall be responsible for protection, care, and upkeep of all work, and all associated off-site zones. Subsection 107-1.02 describes the requirement to obtain permits, and to provide permit documents to the Engineer.

3. The Contractor is responsible for obtaining an Excavation Dewatering Permit (AKG002000) if construction activities are within 1,500 feet of a DEC-identified contaminated site or groundwater plume.

4. An entity that owns or operates, a commercial plant (as defined in Subsection 108-1.01.4) or material source or disposal site outside the Project Zone, is responsible for permitting and permit compliance. The Contractor has sole responsibility to verify that the entity has appropriate permit coverage. Subsection 107-1.02 describes the requirement to obtain permits, and to provide permit documents to the Engineer.

5. The Department is not responsible for permitting or permit compliance, and is not liable for fines resulting from noncompliance with permit conditions:

    a. For areas outside the Project Zone;
    b. For Construction Activity and Support Activities outside the Project Zone; and
    c. For commercial plants, commercial material sources, and commercial disposal sites.

641-1.07 UTILITY. (Reserved for Regions)

641-1.08 USE OF SWPPPTRACK. The Contractor is responsible for purchasing and contracting with Storm Water Simplified Ltd. for the use of the SWPPPTrack software application and services until final stabilization is achieved and the eNOT has been completed. Contact SWPPPTrack Alaska Support at (888) 401-1993 or AKSupport@SWPPPTrack.com for project fees, setup coordination, device requirements, and training.

Perform and document all inspections required by the CGP and the SWPPP with SWPPPTrack and populate all inspection fields accurately to represent current project conditions. Complete the following forms using SWPPPTrack:

1. SWPPP Construction Site Inspection Report (25D-100)

2. SWPPP Grading & Stabilization Activities Log (25D-110)

3. SWPPP Corrective Action Log (25D-112)

4. SWPPP Amendment Log (25D-114)

5. SWPPP Daily Record of Rainfall (25D-115)

6. SWPPP Training Log (25D-125)

7. SWPPP Project Staff Tracking (25D-127)

641-2.01 STORM WATER POLLUTION PREVENTION PLAN (SWPPP) REQUIREMENTS.

1. SWPPP Preparer and Pre-Construction Site Visit.

   Use a SWPPP Preparer to develop the SWPPP in accordance with the CGP, DEC and Department SWPPP templates. See Subsection 641-1.02.01 for guidance and templates. The SWPPP Preparer must conduct a pre-construction inspection at the Project Site before Construction Activity begins. If the SWPPP Preparer is not a Contractor employee, the SWPPP Preparer must visit the site accompanied by the Contractor. Give the Department at least seven days advance notice of the site visit, so that the Department may participate.

   Document the SWPPP Preparer's pre-construction inspection in the SWPPP on Form 25D-106, SWPPP Pre-Construction Site Visit, including the names of attendees and the date.

2. Developing the SWPPP.

   Use the Department's ESCP, Environmental commitments, and other Contract documents as a starting point for developing the SWPPP.

   Develop the SWPPP with sections and appendices, according to the DEC CGP SWPPP template and DOT&PF SWPPP template. Include information required by the Contract and described in the CGP Part 5.0. Use SWPPP forms found at the DOT&PF Construction Forms website.

   Compile the SWPPP in three ring binders with tabbed and labeled dividers for each appendix. One electronic copy of the SWPPP must be submitted as a single PDF file.

3. SWPPP Considerations and Contents.

   a. The SWPPP must provide erosion and sediment control measures for all Construction Activity within the Project Zone. Construction Activity outside the Project Zone must have permit coverage and document permit compliance according to a SWPPP2.

   b. The SWPPP must consider the activities of the Contractor and all subcontractors and utility companies performing work in the Project Zone. The SWPPP must describe the roles and responsibilities of the Contractor, subcontractors, utility companies, and the Department with regard to implementation of the SWPPP. The SWPPP must identify all operators for the project, including utility companies performing Construction Activity, and identify the areas:

      (1) Over which each operator has operational control, and;

      (2) Where the Department and Contractor are co-operators.

   c. For work outside the Project Zone the SWPPP must identify the entity that has stormwater permit coverage, the operator, and the areas that are:

      (1) Dedicated to the project and where the Department is not an operator; and

      (2) Not dedicated to the project, but used for the project.

   d. The SWPPP must meet all CGP requirements. Utilize the DEC CGP SWPPP Template in conjunction with the DOT&PF SWPPP Template to develop the SWPPP.

   e. Comply with the CGP Part 1.4.3 Authorized Non-Storm Water Discharges.

   f. If the project discharges to a Tier III, Outstanding Natural Resource Water, comply with CGP Part 2.1.6. Submittal deadlines apply prior to filing an eNOI and beginning construction activities. As noted, none have been designated in the state of Alaska as of the issuance of the 2021 CGP.

g. There are special requirements in the CGP Part 3.2, for stormwater discharges into an impaired water body, and they may include monitoring of stormwater discharges. The Contractor is responsible for monitoring and reporting outside the Project Zone.

h. Describe the sequence and timing of activities that disturb soils and BMP implementation and removal. Phase earth disturbing activities to minimize unstabilized areas, and to achieve temporary or final stabilization. Whenever practicable incorporate final stabilization work into excavation, embankment and grading activities. Include drawings showing each phase of the project with the BMPs implemented in the phase.

i. Delineate the site according to CGP Part 4.2.1.

j. Minimize the amount of soil exposed and preserve natural topsoil on site, unless infeasible according to the CGP Part 4.2.2.

k. Describe methods and time limits, to initiate temporary or final soil stabilization. Comply with stabilization requirements in the CGP Part 4.5.

l. If construction will cease during winter months, describe all requirements for winter shutdown according to the CGP Part 4.12.

m. Plans for ATS must meet with the requirements in the CGP Part 2.1.5 and 4.6.

n. Design all temporary BMPs to accommodate a two year 24-hour storm event. All installed control measures must be described and documented in the SWPPP, according to the CGP Part 5.3.6. All installed BMPs must include a citation from a published BMP Manual, publication, or manufacturers specification used as a source, or include a statement “No BMP Manual was used for this design.” If using out of state BMPs follow the instructions in the SWPPP Guide, found at the DOT&PF Stormwater webpage.

o. Provide a legible site map or set of maps in the SWPPP, showing the entire site and identifying boundaries of the property where construction and earth-disturbing activities will occur. Include all the elements described in the CGP Part 5.3.5, and DEC CGP SWPPP Template Section 5.0.

p. Identify the inspection frequency in the SWPPP according to the CGP Part 6.1.

q. Linear Project Inspections, described in CGP Part 6.5, are not applicable to this contract.

r. The SWPPP must cite and incorporate applicable requirements of the project permits, environmental commitments, COE permit, and commitments related to historic preservation. Make additional consultations or obtain permits as necessary for Contractor specific activities that were not included in the Department’s permitting and consultation.

s. The SWPPP is a dynamic document. Keep the SWPPP current by noting installation, modification, and removal of BMPs, and by using amendments, SWPPP amendment logs, inspection reports, corrective action logs, records of land disturbance and stabilization, and any other records necessary to document stormwater pollution prevention activities and to satisfy the requirements of the CGP and this specification. See Subsection 641-3.03 for more information.

4. Recording Personnel and Contact Information in the SWPPP.

Identify the SWPPP Manager as the Storm Water Lead and Stormwater Inspector positions in the SWPPP. Document the SWPPP Manager’s responsibilities in Section 2.0 Stormwater Contacts, of the SWPPP template and:

a. Identify that the SWPPP Manager does not have authority to sign inspection reports (unless the SWPPP Manager is also the designated project Superintendent).

b. Identify that the SWPPP Manager cannot prepare the SWPPP unless the SWPPP Manager meets the Contract requirements for the SWPPP Preparer.

Include in the SWPPP proof of AK-CESCL or equivalent certifications for the Superintendent and SWPPP Manager, and for any acting Superintendent and acting SWPPP Managers. If the Superintendent or SWPPP Manager is replaced permanently or temporarily, by an acting Superintendent or acting SWPPP Manager; record in the SWPPP (use Form 25D-127) the names of the replacement personnel and date of replacement. For temporary personnel, record their beginning and ending dates.

Provide 24-hour contact information for the Superintendent and SWPPP Manager. The Superintendent and SWPPP Manager must have 24-hour contact information for all Subcontractor SWPPP Coordinators and Utility SWPPP Coordinators.

Include in the SWPPP proof of AK-CESCL or equivalent certifications of ATS operators. Record names of ATS operators and their beginning and ending dates, on Form 25D-127.

The Department will provide proof of AK-CESCL, or equivalent certifications for the Department's Project Engineer, Stormwater Inspectors, and Monitoring Person (if applicable), and names and dates they are acting in that position. Include the Department's staff certifications in Appendix E. Include Department's staff names, dates acting, and assignments in Section 2.0 of the SWPPP and Form 25D-127.

641-2.02 HAZARDOUS MATERIAL CONTROL PLAN (HMCP) REQUIREMENTS.

Prepare the HMCP using the Department template for the prevention of pollution from storage, use, containment, cleanup, and disposal of all hazardous material, including petroleum products related to construction activities and equipment. Include the HMCP as an appendix to the SWPPP. Compile Material Safety Data Sheets in one location and reference that location in the HMCP.

641-2.03 SPILL PREVENTION, CONTROL AND COUNTERMEASURE PLAN (SPCC Plan) REQUIREMENTS.

Prepare and implement an SPCC Plan when required by 40 CFR 112 when both of the following conditions are present on the project:

1. Oil or petroleum products from a spill may reach navigable waters (as defined in 40 CFR 112); and

2. Total above ground storage capacity for oil and any petroleum products is greater than 1,320 gallons (not including onboard tanks for fuel or hydraulic fluid used primarily to power the movement of a motor vehicle or ancillary onboard oil-filled operational equipment, and not including containers with a storage capacity of less than 55 gallons).

Reference the SPCC Plan in the HMCP and SWPPP.

641-2.04 RESPONSIBILITY AND AUTHORITY OF THE SUPERINTENDENT AND SWPPP MANAGER.

The Superintendent shall certify the SWPPP, inspection reports, and other reports required by the CGP, except the eNOI and eNOT. The Superintendent may not delegate the task or responsibility of signing and certifying these documents.

The Superintendent may assign certain duties to the SWPPP Manager.

1. Ensuring Contractor's and subcontractor's compliance with the SWPPP and CGP;

2. Ensuring the control of erosion, sedimentation, or discharge of pollutants;

3. Directing and overseeing installation, maintenance, and removal of BMPs;

4. Performing inspections; and

5. Updating the SWPPP including adding amendments and forms.

When Bid Item 641.0007.____ is part of the Contract, the SWPPP Manager must be a different person than the Superintendent and must be available at all times to administer SWPPP requirements, and be physically present within the Project Zone or the project office, when construction activities are occurring.

The Superintendent and SWPPP Manager shall be knowledgeable in the requirements of Section 641, the SWPPP, CGP, BMPs, HMCP, SPCC Plan, environmental permits, environmental commitments.

The Superintendent and SWPPP Manager shall have the Contractor's complete authority and be responsible for suspending construction activities that do not conform to the SWPPP or CGP.

641-2.05 MATERIALS.

Use materials suitable to withstand hydraulic, wind, and soil forces, and to control erosion and trap sediments according to the requirements of the CGP and the Specifications.

Use the seed mixture specified in the contract or as directed by the Engineer.

Use soil stabilization material as specified in Section 727.

Use silt fences as specified in Section 729.

Use straw and straw products certified weed free of prohibited and restricted noxious weed seed and quarantined pests, according to Alaska Administrative Code, Title 11, Chapter 34 (11 AAC 34). When straw or straw products certified according to 11 AAC 34 are not available, use non-certified products manufactured within Alaska before certified products manufactured in another state, country, or territory. Non-certified straw or straw products manufactured in another state, country, or territory shall not be used. Grass, legumes, or any other herbaceous plants produced as hay, shall not be substituted for straw or straw products.

641-3.01 CONSTRUCTION REQUIREMENTS.

Comply with the SWPPP and the requirements of the CGP Part 5.0.

1. Before Construction

   The following actions must be completed before Construction Activity begins:

   a. The SWPPP Preparer must visit the project, the visit must be documented in the SWPPP using Form 25D-106, and the SWPPP must be developed or amended with findings from the visit.

   b. The SWPPP must be approved by the Engineer on Form 25D-109.

   c. The Contractor must be authorized to begin work by the Engineer.

   d. The Project must have an eNOI for the Department and for the Contractor.

   e. The Department approved SWPPP must be submitted to DEC and Local Government per CGP Part 2.1.2, Part 2.1.4, and Part 2.4.1.

   f. The Contractor has transmitted to the Engineer an electronic copy of the approved SWPPP.

g. The Delegation of Authority forms 25D-108 and 25D-107 for both the Contractor and Engineer are signed.

h. Main entrance signage must meet requirements of CGP Part 5.10.2.

Post notices on the outside wall of the Contractor's project office, and near the main entrances of the construction project. Protect postings from the weather. Locate postings so the public can safely read them without obstructing construction activities or the traveling public (for example, at an existing pullout). Do not use retroreflective signs for the SWPPP posting. Do not locate SWPPP signs in locations where the signs may be confused with traffic control signs or devices. Update the notices if the listed information changes.

i. Track precipitation according to CGP Part 7.3.9. Submit the method to track precipitation to the Engineer for approval.

j. Complete all setup and training required to implement SWPPPTrack.

k. Complete the upload of the BMP inventory into SWPPPTrack.

2. <u>During Construction.</u>

a. Delineate the site according to the CGP Part 4.2.1.

b. Install required BMPs according to the SWPPP prior to the initiation of ground disturbance.

c. Document subcontractors. Provide a copy of the SWPPP and the CGP to all subcontractors and utility companies before they begin soil disturbing activities, and verify they understand and comply the with SWPPP and CGP and:

(1) Document all subcontractors and utility companies that may work on the site, according to the CGP Part 5.3.1, and SWPPP Section 1.2.

(2) Require subcontractors and utility companies to sign the SWPPP Subcontractor Certification (Form 25D-105). Include in the signed Form in the SWPPP Appendix E.

(3) Inform subcontractors and utility companies in a timely manner of SWPPP amendments that affect them. Coordinate with subcontractors and utility companies to protect BMPs, including temporary and final stabilization from damage.

(4) Notify the Engineer immediately if the actions of any utility company or subcontractor do not comply with the SWPPP and the CGP.

d. Provide ongoing training to all employees, subcontractors and utility companies, in according to the CGP Part 4.14. Training must:

(1) Be given no less than once a month during construction activity;

(2) Be documented in the SWPPP Training Log using Form 25D-125. Include the training record in the SWPPP Appendix I.

e. Protection and Restoration. Comply with Subsection 107-1.11.

f. Good housekeeping measures to comply with the SWPPP and CGP 4.8.

g. Control measures. Comply with the SWPPP and CGP Part 5.3.6 including:

(1) Maintain BMPs.

(2) Comply with requirements of the HMCP and SPCC Plan, if applicable and all local, state and federal regulations that pertain to the handling, storage, containment, cleanup, and disposal of petroleum products or other hazardous materials.

(3) Keep the SWPPP and HMCP current (refer to Subsection 641-2.01.3, SWPPP Considerations and Contents).

3. Winter Construction

If winter construction activity occurs, the project must have appropriate BMPs in place CGP Part 4.12.2. Inspections can be reduced to once per month if the project meets the requirements in the CGP Part 6.2.4.

4. Storm Water Discharge Pollutant Reporting Requirements.

If an incident of non-compliance occurs that may endanger health or the environment a report must be made, CGP, Appendix A, Part 3.4.

A permit non-compliance is considered any type of pollutant, such as turbidity or petroleum that enters storm water runoff and flows into a receiving water body, MS4, or wetland that is connected to waters of the U.S.

a. Immediately report the incident to the Engineer verbally;

b. Report to DEC verbally within 24 hours after the permittee becomes aware of the incident, and;

c. Report to DEC in writing within five days after the permittee becomes aware of the circumstances. To report in writing, complete the written noncompliance report on Form 25D-143, and file the written report with DEC. Coordinate the report with the Engineer. Include in the report:

(1) A description of the noncompliance and its causes;

(2) The exact dates and times of noncompliance;

(3) If not yet corrected the anticipated time the project will be brought back into compliance, and;

(4) The corrective action taken or planned to reduce, eliminate and prevent reoccurrence.

d. Notify the Engineer immediately if there is incident of noncompliance with COE Permits. The Engineer will notify the COE.

5. Hazardous Materials Reporting Requirements.

Any release of a hazardous substance must be reported immediately to the Engineer as soon as the person has knowledge of the discharge.

Report spills of petroleum products or other hazardous materials to the Engineer and other agencies as required by law, and according to CGP Part 9.3.

a. To water; any amount released must be reported immediately to the Engineer, DEC, and the Coast Guard.

b. To land:

(1) Any release of a petroleum product in excess of 55 gallons must be reported as soon as the person has knowledge of the discharge CGP Part 9.3.2.

(2) Any release of a petroleum product in excess of 10 gallons but less than 55 gallons must be reported to the Engineer and must be reported to DEC within 48 hours after the person has knowledge of the discharge CGP Part 9.3.2.

(3) Any release of a petroleum product in excess of 1 gallon to 10 gallons must be recorded and logged and provided to DEC on a monthly basis.

c. Use the HMCP and SPCC Plan (if available) for contact information to report spills to regulatory agencies.

d. Implement measures to prevent the reoccurrence of and to respond to such releases.

e. Prior to disposal of contaminated material, submit a Contaminated Media Transport and Treatment Disposal Approval Form to DEC Spill Prevention and Response. Dispose as approved by DEC.

6. Corrective Action and Maintenance of BMPs.

Implement maintenance as required by the CGP Part 4.13 and Part 8.0, SWPPP, and manufacturer's specifications, whichever is more restrictive.

a. Implement corrective action to comply with the CGP Part 8.0 and the SWPPP.

b. Corrective action deadlines and documentation:

(1) Corrective actions must be completed according to CGP Part 8.2.

(2) Document corrective actions in the Corrective Action Log (25D-112) according to the SWPPP, CGP Part 8.3 and Part 5.9.2.

If a different BMP is installed to correct the condition leading to the corrective action a SWPPP Amendment must be completed.

(3) If a corrective action is not completed according to the CGP 8.2, document the conditions in the Corrective Action Log, notify the Engineer, and implement the corrective action as soon as possible.

The Engineer may assign a new complete-by date using a Delayed Action Item Report, Form 25D-113 (DAIR Form), if the Contractor is unable to complete the corrective action within the required timeframe. The DAIR Form can only be authorized and completed by the Engineer.

7. Stabilization.

a. All Soil Stabilization requirements must be met in accordance with CGP Part 4.5 and the SWPPP.

b. When temporary or permanent seeding is required, provide a working hydro seeding equipment located within 100 miles of the project by road; with 1,000 gallon or more tank capacity, paddle agitation of tank, and the capability to reach the seed areas with an uniform mixture of water, seed, mulch and tackifier. If the project is located in an isolated community, the hydro-seeder must be located at the project.

c. Apply temporary seed and stabilization measures after preparing the surface to reduce erosion potential and to facilitate germination and growth of vegetative cover according to Section 618.

d. Apply permanent seed and stabilization measures after land-disturbing activity has permanently ceased. Comply with the CGP, SWPPP, and the contract Sections 618, 724, and 727.

e. Incorporate final or temporary stabilization immediately after installing culverts or drainage structures to satisfy CGP Part 4.5, the SWPPP and the Engineer. Stabilize under any bridges, and

in areas upstream and downstream of culverts, drainages and areas disturbed by related construction activities after installation, or before deactivating stream bypass or diversion.

f. Stabilization before Fall Freeze up and Spring Thaw.

Stabilize Construction Activities within the Project Zone with appropriate BMPs prior to the anticipated date of fall freeze up, in accordance with the SWPPP and CGP, Part 4.12.

Exceptions to stabilization prior to anticipated date of fall freeze up include:

(1) Where temporary stabilization activities are precluded by snow cover or frozen ground conditions prior to the anticipated date of fall freeze up, stabilization measures must be initiated as soon as practicable following the actual spring thaw.

(2) When winter construction activity is authorized by the Engineer and conducted according to the contract.

8. Ending CGP Coverage.

a. The Engineer will determine the date that all the following conditions for ending CGP coverage have been met within the Project Zone:

(1) Land disturbing activities have ceased;

(2) Final Stabilization has been achieved on all portions of the Project Zone, according to the CGP 4.5.2 (including at Department furnished material sources, disposal sites, staging areas, equipment areas, etc.), and;

(3) Temporary BMPs have been removed.

b. After the Engineer has determined the conditions have been met for submitting an NOT in accordance to CGP Part 10.2, the Department will:

(1) Send written notice to the Contractor with the date that the conditions were met;

(2) Submit an eNOT to DEC within 30 days, and;

(3) Provide a copy of the eNOT and DEC's acknowledgement letter to the Contractor.

c. If the Contractor's CGP eNOI acreage includes Support Activities and any other areas where the Department is not an Operator, the Contractor may not be able to file an eNOT at the same time as the Department.

d. The Contractor must submit a copy of each signed eNOT and DEC's acknowledgement letter to the Department within three days of filing the eNOT or receiving a written response. Insert the eNOT and DEC acknowledgement letter in SWPPP Appendix Q.

e. The Contractor is responsible for coordinating local government inspections of work and ending permit coverage with local government. See Subsection 641-1.03.6 for more information.

9. Ending BMP Maintenance in the Project Zone.

The Contractor is responsible for continuing inspections, BMP maintenance and SWPPP updates until permit coverage is ended.

10. Transmit final SWPPP.

    Transmit one electronic copy of the final SWPPP, including all SWPPP documents, to the Engineer, when the Contractor's eNOT is filed, or within 30 days of the Department's eNOT being filed, whichever is sooner. Collate all documents into a single electronic file before transmittal.

641-3.02 SWPPP DOCUMENTS, LOCATION ON-SITE, AVAILABILITY, AND RECORD RETENTION.

The SWPPP and related documents maintained by the Contractor are the record for demonstrating compliance with the CGP. Copies of SWPPP documents transmitted to the Engineer under the requirements of this specification are informational and do not relieve the Contractor's responsibility to maintain complete records as required by the CGP and this specification.

Keep the SWPPP, HMCP and SPCC Plan if applicable at the on-site project office. If there is not an on-site project office, keep the documents at a locally available location that meets CGP requirements and is approved by the Engineer. Records may be moved to another office for record retention after the eNOTs are filed. Records may be moved to another office during winter shutdown. Update on-site postings if records are relocated during winter shutdown. Provide the Department with copies of all records.

Retain records and a copy of the SWPPP, for at least three years after the date of eNOT according to the CGP Part 9.4.

The SWPPP and related documents must be made available for review and copy, to the Department and other regulatory agencies that request them. See CGP Parts 5.10, 6.6 and 9.5.

641-3.03 SWPPP INSPECTIONS, AMENDMENTS, REPORTS, AND LOGS.

Perform inspections, prepare Inspection Reports, and prepare SWPPP Amendments in compliance with the SWPPP and the CGP using Department forms found at the DOT&PF Construction Forms website.

1. Inspection during Construction.

   Conduct Inspections according to the schedule and requirements of the SWPPP and CGP Part 6.0. When the project is on a 14 calendar day inspection frequency, conduct Post-Storm Event Inspections within 24 hours of the end of a storm event, as required, in addition to the 14 day predetermined inspection cycle.

   Inspections required by the CGP and SWPPP must be performed by the Contractor's SWPPP Manager and the Department's Stormwater Inspector jointly, unless approved by the Engineer, when:

   a. One of the inspectors is not on site, access is only by air, and weather delayed or canceled flights;

   b. One of the inspectors is sick;

   c. The project is on a reduced frequency inspection schedule with no staff on site, the only access to the site is by air, and it is economical to send only one inspector, or;

   d. When the Engineer determines a safety concern that makes joint inspection impracticable.

   When this is the case, the Operator who conducts the inspection must provide a copy of the Inspection Report to the other Operator within three days of the inspection date and document the date of the report transmittal in SWPPP Appendix K.

2. Inspection Reports.

   Use only the Department SWPPP Construction Site Inspection Report, Form 25D-100, to record inspections. Changes or revisions to Form 25D-100 are not permitted, except for adding or deleting

data fields that list Location of Discharge Points and Site Specific BMPs. Complete all fields in the Inspection Report; do not leave any fields blank.

Refer to the DOT&PF Construction Forms webpage for instruction to complete Form 25D-100.

The Superintendent or SWPPP Manager must review and correct all errors within three days of the date of inspection.

Inspection Reports must be signed by the person described in the CGP Appendix A, Part 1.12 or by a duly authorized representative of that person. Only the Superintendent can certify the Inspection Form.

Insert a Complete-by-Date for each corrective action listed that complies CGP Part 8.2.

Provide a copy of the completed, unsigned Inspection Report to the Engineer by the end of the next business day following the inspection.

The Engineer may coordinate with the Superintendent to review and correct any errors or omissions before the Superintendent signs the report. Corrections are limited to adding missing information or correcting entries to match field notes and conditions present at the time the inspection was performed. The signed and certified Inspection Report must be provided to the Engineer on the same day the Superintendent signed the form.

The Engineer will sign and certify the Inspection Report and will return the original to the Contractor within three working days if compliant with the CGP and SWPPP.

If the Inspection Report is not compliant with the CGP or SWPPP the Engineer may make corrections after the Superintendent has signed and certified the Inspection Report. The Engineer will initial and date each correction. If the Engineer makes corrections, the Superintendent must recertify the Inspection Report by entering a new signature and date in the white space below the original signature and date lines. Send a copy of the recertified Inspection Report to the Engineer on the day it is recertified.

When a correction is required to an Inspection Report that was already certified by both the Superintendent and Engineer, follow directions given below:

If subsequent corrections are required for a certified Inspection Report 25D-100, document the corrections in an addendum memo that addresses only the omitted or erroneous portions of the original Inspection Report. The Superintendent and the Engineer must both sign and certify the updated Inspection Report and addendum memo. File the corresponding Inspection Report and memo in the SWPPP Appendix K and update the amendment log. The issuance of an addendum memo does not relieve the Contractor of liquidated damages that may have been incurred as a result of the error on the original certified inspection report.

3. Items and Areas to Inspect.

Conduct inspections of all areas required by the CGP Part 6.4 and SWPPP.

4. Reduced Inspection Frequencies.

Conduct inspections according to the inspection schedule indicated in the approved SWPPP. Any change in inspection frequency must be approved by the Engineer, and beginning and ending dates documented as an amendment to the SWPPP.

If the Engineer approves and the entire site is stabilized, the frequency of inspections may be reduced in accordance to the CGP Part 6.2.1. At actively staffed sites, inspect within two business days of the end of a storm event that results in a discharge from the site.

5. Winter Shutdown Inspection.

   Conduct winter shutdown inspection 14 calendar days after the anticipated fall freeze up date and conditions under the CGP Parts 4.12, 6.2.3, and the SWPPP are met. The Engineer may approve suspension of inspections and waive requirements for updating the Grading and Stabilization Activities Log and Daily Record of Rainfall Form during Winter Shutdown.

   Inspections must resume on a regular frequency or reduced inspection frequency identified in the SWPPP, at least 21 days before anticipated spring thaw CGP Part 6.2.3. Resume updating the Daily Record of Rainfall Form at the start of the 21-day spring thaw inspection.

6. Inspection before Project Completion.

   Conduct inspection to ensure Final Stabilization is complete throughout the Project, and temporary BMPs that are required to be removed are removed. Temporary BMPs that are biodegradable and are specifically designed and installed with the intent of remaining in place until they degrade, may remain in place after project completion if approved by the Project Engineer.

7. SWPPP Amendments and SWPPP Amendment Log.

   The SWPPP Amendment Log Form 25D-114 must be filled out by an individual who holds a current AK-CESCL, or equivalent certification. The Superintendent or the SWPPP Manager must sign and date amendments to the SWPPP and updates to the SWPPP Amendment Log.

   SWPPP Amendments must be approved by the Engineer.

   Amendments must occur:

   a. Whenever there is a change in design, construction operation, or maintenance at the construction site that has or could cause erosion, sedimentation or the discharge of pollutants that has not been previously addressed in the SWPPP;

   b. If an inspection identifies that any portion of the SWPPP is ineffective in preventing erosion, sedimentation, or the discharge of pollutants;

   c. Whenever an inspection identifies a problem that requires additional or modified BMPs or a BMP not shown in the original SWPPP is added;

   d. If the inspection frequency is modified (note beginning and ending dates);

   e. When there is a change in personnel who are named in the SWPPP, according to Subsection 641-2.01;

   f. When an inspection is not conducted jointly;

   g. When a NOI modification is filed;

   h. When a Noncompliance Report is filed with DEC.

   Place all correspondence with DEC, EPA or MS4s in Appendix Q.

   Amend the SWPPP as soon as practicable after any change or modification, but in no case later than seven days following identification of the need for an amendment. All SWPPP Amendments must have an amendment number, be dated, and signed.

Keep the SWPPP Amendment Log current. Prior to a scheduled inspection or submittal of an inspection, submit to the Engineer a copy of the pages of the Amendment Log that contain new entries since the last submittal. Include copies of any documents amending the SWPPP.

Keep the SWPPP Amendment Log in Appendix M.

8. Site Maps.

Maintain site maps in accordance with CGP Part 5.3.5 and the SWPPP template 5.0. It is acceptable to have separate site maps for BMPs and grading and stabilization activities.

9. Corrective Action Log.

The Superintendent and SWPPP Manager are the only persons authorized to make entries on the SWPPP Corrective Action Log, Form 25D-112.

The Corrective Action Log must document corrective actions required by the conditions listed in the CGP Part 8.0. Document the need for corrective action within 24 hours of either:

a. Identification during an inspection, or;

b. Discovery by the Department's or Contractor's staff, a subcontractor, or a regulatory agency inspector;

c. If a corrective action is discovered outside of an inspection, update the log with the date of discovery, the proposed corrective action, and the date the corrective action was completed.

Keep the Corrective Action Log current and submit a copy to the Engineer prior to performing each scheduled SWPPP Inspection.

Keep the Corrective Action Log in Appendix J of the SWPPP.

10. Grading and Stabilization Activities Log.

The Superintendent and SWPPP Manager are the only persons authorized to date and initial entries on the SWPPP Grading and Stabilization Activities Log, Form 25D-110. Use the SWPPP Grading and Stabilization Activities Log, to record land disturbance and stabilization activities.

Keep the Grading and Stabilization Activities Log current and submit a copy to the Engineer prior to performing each scheduled SWPPP Inspection. Keep the Grading and Stabilization Activities Log organized and completed to demonstrate compliance with the CGP Part 4.5.

Keep the Grading and Stabilization Activities Log in Appendix G of the SWPPP.

11. Daily Record of Rainfall.

Use SWPPP Daily Record of Rainfall, Form 25D-115 to comply with CGP Part 7.3.9. Submit a copy to the Engineer with each completed Inspection Report. Keep the Daily Record of Rainfall current in Appendix N of the SWPPP.

For projects on a 14-day inspection frequency or reduced inspection frequency, SWPPPTrack will generate a precipitation alert for storm events that produce more than 0.5 inch of rainfall in 24 hours. If a storm event does not produce a discharge from the project zone, submit an explanation in response to the SWPPPTrack precipitation alert.

12. Staff Tracking Log.

    Use the SWPPP Project Staff Tracking Form 25D-127, to identify project staff that are required to be AK-CESCL certified or hold an equivalent qualification CGP Appendix C. Complete this form to document the following positions; Superintendent, SWPPP Manager, Engineer, DOT&PF Stormwater Inspector, and when positions have changed in personnel, either permanent or temporary. Update the SWPPP Project Staff Tracking Form within 24-hours of any changes in personnel, qualifications, or other staffing items related to administration of the CGP or Section 641.

641-3.04 FAILURE TO PERFORM WORK.

The Engineer has authority to suspend work and withhold monies according to Subsections 105-1.01 and 108-1.06 for the reasons listed under Subsection 108-1.06 and for an incident of noncompliance with the CGP or SWPPP that may endanger health or the environment or for failure to perform work related to Section 641.

1. An incident of noncompliance includes, but is not limited to, the Contractor's failure to:

    a. Obtain appropriate permits before Construction Activities occur;

    b. Perform SWPPP administration;

    c. Perform timely inspections;

    d. Update the SWPPP;

    e. Transmit updated SWPPP, Inspection Reports, and other updated SWPPP forms to the Engineer;

    f. Maintain effective BMPs to control erosion, sedimentation, and pollution in accordance with the SWPPP, the CGP, and applicable local, state, and federal requirements;

    g. Perform duties according to the requirements of Section 641;

    h. Meet requirements of the CGP, SWPPP, or other permits, laws, and regulations related to erosion, sediment, or pollution control, or;

    i. Any other requirements established or included in the contract.

2. No additional Contract time or additional compensation will be allowed due to delays caused by the Engineer's suspension of work.

641-3.05 ACCESS TO WORK.

The Project, including any related off-site areas or support activities, must be made available for inspection, or sampling and monitoring, by the Department and other regulatory agencies. See CGP Part 6.6.

641-4.01 METHOD OF MEASUREMENT. See Section 109 and as follows:

Items 641.0001.____, 641.0003.____ and 641.0007.____, are lump sum.

Items 641.0002.____, 641.0004.____ and 641.0005.____, measured on a contingent sum basis as specified by the Directive authorizing the work.

Item 641.0006.____ measured on a contingent sum basis with withholding determined by the Department.

TABLE 641-1 BMP VALUES – RESERVED

Liquidated Damages assessed according to Table 641-2 are not an adjustment to the Contract amount. These damages charges are related to Contract performance but are billed by the Department to the Contractor, independent of the Contract amount. An amount equal to the Liquidated Damages may be withheld for unsatisfactory performance, from payment due under the Contract, until the Contractor remits payment for billed Liquidated Damages.

TABLE 641-2 - VERSION C
EROSION, SEDIMENT AND POLLUTION CONTROL – LIQUIDATED DAMAGES

Code	Specification Section Number and Description	Deductible Amount in Dollars	Cumulative Deductible Amounts in Dollars
A	641-1.05 Failure to have a qualified (AK-CESCL or equivalent) SWPPP Manager	Calculated in Code B or F	
B	Failure to meet SWPPP requirements of: (1) 641-2.01.1 Name of SWPPP Preparer (2) Not Applicable (3) 641-3.03.8 Sign and Date SWPPP amendments by qualified person (4) 641-3.02 Records maintained at project and made available for review	$750 per omission	
C	Not Applicable		
D	641-3.03.5 Failure to stabilize a Project prior to fall freeze up.	$5,000 per Project per year	
E	641-2.01.1 Failure to conduct pre-construction inspections before Construction Activities on all projects greater than 1 acre.	$2,000 per Project	
F*	641-3.03. Failure to conduct and record CGP Inspections 641-3.03.1 Personnel conducting Inspections and Frequency 641-3.03.2 Inspection Reports, use Form 25D-100, completed with all required information	$750 per Inspection	Additional $750 for every additional 7 day period without completing the required inspection.
G	641-3.01.4 Corrective action, failure to timely accomplish BMP maintenance and/or repairs. In effect until BMP maintenance and/or repairs is completed.	$500 per Project per day	
H	641-3.01.3 Failure to provide to the Engineer and DEC a timely oral noncompliance report of violations or for a deficient oral noncompliance report	$750 for the first day the report is late or deficient	Additional $750 for every 14 day period with- out the required information
I	641-3.01.3 Failure to provide to the Engineer and DEC a timely written noncompliance report, use Form 25D-143, of violations or for a deficient written noncompliance report	$750 for the first day the report is late or deficient	Additional $750 for every 14 day period without the required information
J	641-3.04 Failure to comply with the requirements of the CGP, approved SWPPP, and Section 641, except as listed above	$750 per occurrence for the first day of noncompliance	Additional $750 for every day the deficiency remains uncorrected

Code F* Liquidated Damages according to Code F will not be billed for typographic errors and minor data entry errors, except the liquidated damages will be assessed for these errors when:

a. the Contractor has previously been notified and subsequent inspection reports repeat the same or similar error,
b. multiple inspection reports are submitted after the submission due date and the same or similar errors are repeated on multiple overdue reports,
c. an error in recording the inspector's AK-CESCL certification date results in an inspector performing the inspection during a period when their certification was lapsed or was otherwise invalid.

641-5.01 BASIS OF PAYMENT.

See Subsection 641-3.04 Failure to Perform Work, for additional work and payment requirements.

Item 641.0001.____ Erosion, Sediment and Pollution Control Administration. At the Contract lump sum price for administration of all work under this Section. Includes, but is not limited to, SWPPP and HMCP and SPCC Plan preparation, agency fees for SWPPP reviews, SWPPP amendments, pre-construction inspections, inspections, monitoring, reporting, and recordkeeping or copying records related to the SWPPP and required by the CGP, and record retention.

Item 641.0002.____ Temporary Erosion, Sediment and Pollution Control. At the contingent sum prices specified for all labor, supervision, material, equipment, and incidentals to install, maintain, remove and dispose of approved temporary erosion, sedimentation, and pollution control BMPs required to implement the SWPPP and SPCC Plan.

Item 641.0003.____ Temporary Erosion, Sediment and Pollution Control. At the Contract lump sum price for all labor, supervision, material, equipment, and incidentals to install, maintain, remove and dispose of temporary erosion, sedimentation, and pollution control BMPs identified in the SWPPP and SPCC Plan.

Item 641.0004.____ Temporary Erosion Sediment and Pollution Control Additives. At the contingent sum prices specified in the Directive to authorize the work, for all labor, supervision, materials, equipment, and incidentals for extra, additional, or unanticipated work, to install, maintain, remove and dispose of temporary erosion, sedimentation, and pollution control BMPs not covered by Item 641.0003.____. All additional Erosion, Sediment, and Pollution Control Administration necessary due to this item will not be paid for separately but will be subsidiary to other bid items.

Item 641.0005.____ Temporary Erosion Sediment and Pollution Control by Directive. At the contingent sum prices specified in the Directive using time and materials to authorize the work, for all labor, supervision, materials, equipment, and incidentals to install, maintain, remove and dispose of temporary erosion, sedimentation, and pollution control BMPs. Prices for this item will be by time and materials according to Subsection 109-1.05, or by mutual agreement between the Engineer and Contractor. All additional Erosion, Sediment, and Pollution Control Administration necessary due to this item will not be paid for separately but will be subsidiary to other bid items.

Item 641.00006.___ Withholding. The Engineer may withhold an amount equal to Liquidated Damages, assessed according to Section 641, from payment due the Contractor. Liquidated Damages for violations of the Contract, CWA, CGP, are determined by the Engineer according to Table 641-2. The Engineer may withhold payment due the Contractors until the Contractor pays the Liquidated Damages to the Department.

The Department will not release performance bonds until Liquidated Damages assessed according to Section 641 are paid to the Department, and all requirements according to Subsection 103-1.05 are satisfied.

Item 641.0007.____ SWPPP Manager. At the Contract lump sum price for a SWPPP Manager that conforms to this specification. When Item 641.0007.____ appears in the Bid Schedule, the SWPPP Manager must be a different person than the superintendent, and must be physically present during construction activity with duties and authority as described in Subsection 641-2.04. When Item 641.0007.____ does not appear in the Bid Schedule, the SWPPP Manager is subsidiary to Item 641.0001.____.

Subsidiary Items. Temporary erosion, sediment and pollution control measures that are required outside the Project Zone are subsidiary. Work required by the HMCP and SPCC Plan including hazardous material storage, containment, removal, cleanup and disposal, are subsidiary to Item 641.0001._____Erosion, Sediment and Pollution Control Administration.

Work under other pay items. Work that is paid for directly or indirectly under other pay items will not be measured and paid for under Section 641. This work includes but is not limited to:

1. Dewatering;
2. Shoring;
3. Bailing;
4. Permanent seeding;
5. Installation and removal of temporary work pads;
6. Temporary accesses;
7. Temporary drainage pipes and structures;
8. Diversion channels;
9. Settling impoundment, and;
10. Filtration.

Permanent erosion, sediment and pollution control measures will be measured and paid for under other Contract items, when shown on the bid schedule.

Work at the Contractor's Expense. Temporary erosion, sediment and pollution control measures that are required due to carelessness, negligence, or failure to install temporary or permanent controls as scheduled or ordered by the Engineer, or for the Contractor's convenience, are at the Contractor's expense.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
641.0001.____	Erosion, Sediment and Pollution Control Administration	LS
641.0002.____	Temporary Erosion, Sediment and Pollution Control	CS
641.0003.____	Temporary Erosion, Sediment and Pollution Control	LS
641.0004.____	Temporary Erosion, Sediment and Pollution Control Additives	CS
641.0005.____	Temporary Erosion, Sediment and Pollution Control by Directive	CS
641.0006.____	Withholding	CS
641.0007.____	SWPPP Manager	LS

SECTION 642
CONSTRUCTION SURVEYING AND MONUMENTS

01/20/15 (N34)

642-3.01 GENERAL. *Delete the fifth paragraph and substitute the following:* Follow the Department's Construction Surveying Requirements, or if GPS survey is approved by the Engineer, use the Alaska Survey Manual GPS Surveys 2010 (rev. 8/15/10).

Add the following to the last sentence in the second to the last paragraph: or the Alaska Survey Manual GPS Surveys 2010 (rev. 8/15/10).

01/20/15 (N35)

Add the following: Stake all environmental permit boundaries, including but not limited to Corps of Engineers permit boundaries and temporary work zone boundaries, with green colored stakes. Stake according to the permit and frequently enough that you can construct the project without risk of violating the permit conditions, but in no case set stakes further apart than 200 feet or as deemed necessary by the Engineer.

642-3.02 CROSS-SECTION SURVEYS. *Add the following to the first paragraph:* or the Alaska Survey Manual GPS Surveys 2010 (rev. 8/15/10).

Delete numbered paragraph 4 of the second paragraph in its entirety and substitute the following: Department's Construction Surveying Requirements or the Alaska Survey Manual GPS Surveys 2010 (rev. 8/15/10).

642-4.01 METHOD OF MEASUREMENT. *Add the following:* All work and materials required to stake environmental permit boundaries will not be measured for payment, rather is subsidiary to other items of work.

SECTION 643
TRAFFIC MAINTENANCE

04/01/22 (N40)
643-5.01 BASIS OF PAYMENT.

11. Traffic Control. *Add the following schedule:*

TRAFFIC CONTROL RATE SCHEDULE

TRAFFIC CONTROL DEVICE	PAY UNIT	UNIT RATE
Construction Signs	Each/Day	$6.50
Special Construction Signs	Square Foot	$31.00
Type II Barricade	Each/Day	$3.30
Type III Barricade	Each/Day	$11.00
Traffic Cone or Tubular Marker	Each/Day	$1.10
Drums	Each/Day	$3.30
Temporary Guardrail	Linear Foot	$25.00
Portable Concrete or Steel F Shape Barrier (12.5 foot standard length or$8/foot)	Each	$100.00
Temporary Crash Cushion/ non-redirective Water filled barrier (all required per end)	Each	$2,500.00
Temporary Crash Cushion / non-redirective Water filled Barrels (all required per end)	Each	$3,285.00
Temporary Crash Cushion / non-redirective Sand filled Barrels (all required per end)	Each	$4,325.00
Temporary Crash Cushion / Redirective	Each	$9,230.00
Plastic Safety Fence	Foot	$1.00
Temporary Sidewalk Surfacing	Square Foot	$2.00
Flexible Markers (Flat Whip, Reflective)	Each	$60.00
Flagging	Hour	$65.00
Electronic Boards, Panels and Signals		
Sequential Arrow Panel	Each/Day	$40.00
Portable Changeable Message Board Sign	Each/Day	$130.00
Portable Traffic Signals (Two)	Each/Day	$361.00
Cars and Trucks w/driver		
Pilot Car (4x2 ½ ton truck, or any car)	Hour	$77.00

TRAFFIC CONTROL DEVICE	PAY UNIT	UNIT RATE
Watering Truck – up to 4900 gallon capacity	M-Gallon	$28.00
Watering Truck – more than 4900 gallon	M-Gallon	$21.00
Street Sweeping (Regenerative Sweeper, Vacuum Sweeper, Mechanical or Power Broom with vacuum)	Hour	$214.00
40,000 GVW Truck with Crash Attenuator	Hour	$162.00
Interim Pavement Markings		
Painted Markings	Linear Foot	$0.30
Preformed Pavement Marking Tape (removable or non-removable)	Linear Foot	$1.75
Temporary Raised Pavement Markers	Each	$1.00
Word or Symbol Markings	Each	$55.00
Temporary Cover Markings	Linear Foot	$4.00
Removal of Pavement Markings	Linear Foot	$1.25

Delete Section 644 in its entirety and substitute the following:
04/08/21 (N41)

SECTION 644
SERVICES TO BE FURNISHED BY THE CONTRACTOR

644-1.01 DESCRIPTION. Furnish and maintain facilities and services specified in the Contract for the Department's project administrative personnel to use during the project. Services include heat, electrical power (NEC compliant), water and any others required to operate the facilities. All furnished facilities remain the property of the contractor when the work is completed.

The Engineer may delete any 644 Items, by Directive within five working days after the Preconstruction Conference. If any 644 Items are deleted within the specified period, Subsection 109-1.09, Eliminated Items, shall not apply to the deleted 644 Items.

644-2.01 FIELD OFFICE. Furnish and maintain a suitable office for the Engineer to use during construction. Make the Field Office available for occupancy 2 weeks before commencing work on the project through one week after Project Completion. The Field Office shall be within one half of one mile from the project.

1. Submit office proposal to the Engineer prior to procurement or transporting office to the project. The Engineer will approve the office general condition, location, access, features, and physical layout prior to beginning any office setup work. If this office is part of your building, completely partition it from the rest of the structure and provide a separate outside door equipped with a lock.

2. Provide at least the following minimum requirements, or as approved by the Engineer:

   a. Floor space of at least 240 ft^2
   b. Window area of at least 30 ft^2
   c. Lockable outside door(s)
   d. 4 each plastic folding tables, 6 ft. long
   e. Shelf space of at least 10 linear feet
   f. Adequate heating and cooling devices, and fuel or power to run the devices, to maintain an office temperature between 65° and 75°F.
   g. Adequate ventilation
   h. Continuous supply of drinking water from an approved source or commercial supplier

i. A minimum of 1 sanitary facilities exclusively for Department use that include adequate sink with water supply, hand soap, hand sanitizer, toilet paper, and paper towels
j. Janitorial services at least weekly
k. Wet/dry vacuum with a minimum capacity of 5 gallons and a minimum of 4 horsepower. Provide filters and dust bags as needed.
l. Provide electrical service as indicated in 644-2.09, #1 Field Office
m. Internet Service and Phone:

Furnish and install a high speed internet service and three telephones, with all necessary ancillary equipment.

The internet system shall have a send and receive capability supporting 100 Mbps download speed or higher and 10 Mbps upload speed at all times. The internet system shall have unlimited data. Include a wireless router and an appropriately sized battery backup for the internet system. The system shall be for the exclusive use of the Engineer.

The telephone system shall consist of commercially available telephones with the necessary equipment for each line. Provide one telephone that includes a built in digital answering machine.

Internet and telephone service shall be supplied and operational no more than two weeks after the field office has been set up on site. Service plans shall be provided and remain in effect for the duration of the use of the field office.

n. One multifunction Laser Color Printer/Scanner/Copier meeting the following requirements:
New or like-new condition
Printing/copying at least 32 ppm
Scan speed of 40 ppm at 400 DPI in color, at a minimum
Print/Scan/Copy 8.5” x 11” and 11” x 17” in color, at a minimum
Supports network scanning (FTP and SMB Support)
Supports network printing (PCL and Postscript)
Network card included
Automatic Document Feeder

Furnish toner and perform repairs and maintenance as necessary.

The Printer/Scanner/Copier remains property of the Contractor upon completion of the contract.

o. Make the field office accessible according to the requirements of *Americans with Disabilities Act Accessibility Guidelines* (ADAAG). Provide at least one designated handicap parking space.
p. One AED (Automated External Defibrillator), with carrying case and properly marked wall cabinet. Provide training on how to use the AED.
q. One combination Smoke and Carbon Monoxide Detector per structure, minimum. Provide combination Smoke and Carbon Monoxide Detectors in any location requested by the Engineer.
r. One 25 Person Trauma First Aid Kit. List of required contents available at http://dot.alaska.gov/nreg/files/25-Person-Trauma-Kit-Contents.pdf
s. 0 mobile hotspots with unlimited data plans and car charger.

3. Provide electrical power to the Department’s portable concrete compressive strength lab if there are any bridge items in the bid schedule as identified in 644-2.09, #9.

4. Provide electrical power to the Department’s portable nuclear storage trailer as identified in 644-2.09, #8.

5. Provide the following to the Department's portable asphalt lab if there are any asphaltic materials in the bid schedule and item 644.0002.____ Field Laboratory does not appear in the bid schedule.

    a. electrical service as identified in 644-2.09, #4 Asphalt Laboratory.
    b. internet service as specified for the Field Laboratory.

All long distance calls made by State personnel will be paid by the State. Installation and maintenance fees, local calls, connection fees and internet service provider fees, and all other fees shall be paid by the Contractor. Paper used by the copier/scanner/printer will be provided by the State.

644-2.02 FIELD LABORATORY. Furnish and maintain a field laboratory for the Engineer to use exclusively throughout the contract. Provide a completely functional installation 2 weeks before commencing construction work through one week after Project Completion.

1. Grade and compact a site for the lab acceptable to the Engineer. Locate and level the structure on this site. If subsequent ground movement causes an unlevel or unstable condition, re-level or re-locate the facility as directed.

2. Provide a weatherproof structure suitable to field test construction materials, with the following minimum functional requirements:

    a. Floor space of 300 ft^2
    b. Two 10-ft^2 windows that open and lock
    c. Lockable door(s)
    d. Work bench(es), 2-1/2 x 16 feet total, 3 feet high
    e. Shelf space, 1 x 16 feet
    f. One 18-inch deep sink with attached industrial faucet with hand sprayer attachment and approved drain
    g. A gravity-fed 250-gallon tank or pressurized constant water supply of acceptable quality
    h. Electrical service as indicated in 644-2.09, #2 Field Laboratory
    i. A sanitary facility exclusively for Department use that includes adequate sink with water supply, hand soap, hand sanitizer, toilet paper, and paper towels
    j. Heating and cooling equipment suitable to maintain a uniform room temperature of 65° to 75°F
    k. Storage cabinet, 3 ft x 3 ft x 3 ft, lockable, securely fixed to an inside wall with a hinged door opening outward
    l. Office desk and 2 chairs
    m. One combination Smoke and Carbon Monoxide Detector per structure, minimum. Provide Combination Smoke and Carbon Monoxide Detectors at any location requested by the Engineer.
    n. One 25 person Trauma First Aid Kit. List of required contents available at http://dot.alaska.gov/nreg/files/25-Person-Trauma-Kit-Contents.pdf
    o. Internet Service and Phone:

        Furnish and install a high speed internet service and a telephone, with all necessary ancillary equipment.

        The internet system shall have a send and receive capability supporting 100 Mbps download speed or higher and 10 Mbps upload speed at all times. The internet system shall have unlimited data. Include a wireless router and an appropriately sized battery backup for the internet system. The system shall be for the exclusive use of the Engineer.

        The telephone system shall consist of commercially available telephones with the necessary equipment for each line. Provide one telephone that includes a built in digital answering machine.

Internet and telephone service shall be supplied and operational no more than two weeks after the field laboratory has been set up on site. Service plans shall be provided and remain in effect for the duration of the use of the field laboratory.

3. If the lab is a mobile unit mounted on axles and wheels, block the structure under the frame so that the wheels do not touch the ground and the blocking rests firmly on the prepared site.

4. Provide a separate weatherproof shed within 20 feet of the main lab structure (Shaking Shed). Grade and compact a site for the Shaking Shed acceptable to the Engineer. Locate and level the structure on this site. If subsequent ground movement causes an unlevel or unstable condition, re-level or re-locate the facility as directed.

    a. The Shaking Shed shall have the following minimum functional requirements:

        (1) Floor 8 ft x 12 ft, ceiling height 8 ft
        (2) Door 4 ft wide and window 5 ft^2 that opens, both lockable
        (3) electrical service as identified in 644-2.09, #3 Field Laboratory Out Building
        (4) Work table 3 ft x 1-1/2 ft x 3 ft high, capable of supporting 250 pounds and affixed to an inside wall as directed
        (5) Concrete-slab floor, 8 ft x 8 ft x 4 inches thick, cast-in-place or pre-cast. Install anchor bolts in the floor to accommodate the mounting pattern of the Gilson sieving machine at a location as directed.

            Found the slab directly on the prepared site such that it is continuously supported.

5. Provide a weatherproof pole shed adjacent to the Shaking Shack. Grade and compact a site for the Splitting shed acceptable to the Engineer. Locate and level the structure on this site. If subsequent ground movement causes an unlevel or unstable condition, re-level or re-locate the facility as directed.

    a. The Splitting shed shall meet the following minimum requirements
        (1) 12’ x 24’ Pole shed structure with 8’ minimum ceiling height.
        (2) Pole spacing 4’ to 6’
        (3) Water proof roof
        (4) 2x4 construction, or manufactured structure approved by the Engineer.
        (5) 6 each 4’ T8 LED lighting fixtures with bulbs spaced evenly across the roof structure
        (6) Manufactured, industrial strength, welded-metal shelving with total 52 square feet of shelving
        (7) 2 walls
        (8) Smooth rigid floor as approved by the Engineer

6. For all types of installations, if the entryway is located higher than a single 7-inch rise, provide the following:

    a. Stairway, 3 feet wide x 11-inch tread x 7-inch rise
    b. Landing, 4 ft x 4 ft centered on the entryway
    c. Handrail(s) firmly affixed to the stairway

7. Provide the following lab equipment and services:

    a. Propane necessary for the lab operation, including two 100-lb tanks, regulators, hoses, fittings, and incidentals for a functional system
    b. Specialized sampling equipment such as belt templates or belt sampling devices as required
    c. Fuel and power necessary to continuously operate the facilities

8. Provide the following to the Department’s portable asphalt lab if there are any asphaltic materials in the bid schedule.

a. electrical service as identified in 644-2.09, #4 Asphalt Laboratory.
b. internet service as specified for the Field Laboratory.

644-2.03 CURING SHED. Furnish and maintain a suitable weather tight shed for curing concrete test cylinders, with a suitable tank(s) for curing concrete test cylinders.

Provide a tank(s) large enough to contain at least 6 each 4" x 8" test cylinders from each pour that you propose to make during any 28-day period. Use a tank(s) at least 18 inches high, insulated, and constructed of heavy duty plastic or non-corrosive metal. Construct a lid to provide access to the tank(s).

Provide suitable heating to maintain the temperature in the tank between 70° and 77°F at all times when curing the test cylinders. In addition, provide suitable thermometers in the shed and tank(s) to check the temperature.

Provide a supply of calcium hydroxide (high-calcium hydrated lime) sufficient to maintain a fully saturated water bath in the tank(s). Provide a source of potable water.

Provide one combination smoke alarm and carbon monoxide detector.

Provide electrical service as identified in 644-2.09, #5 Curing Shed

644-2.05 VEHICLES. Furnish and maintain vehicles in good condition that are less than six years old and with less than 100,000 miles on the odometer for the exclusive use of the Department throughout the project. Provide full-size four-wheel drive pickups or sport utility vehicles. The Special Provisions will state the required number and type of vehicles. Provide vehicles from two weeks before commencing work to one week after Project Completion. Maintain the vehicles in satisfactory running condition throughout the duration of the contract. Provide insurance, fuel, fluids, lubricants, tire repair/replacement, and windshield repair/replacements as needed. If a vehicle is down for more than 24 hours, provide a replacement Vehicle of the same type at no additional cost.

The State of Alaska is responsible for damage to any vehicle caused by its own negligent operation.

The Engineer will approve the vehicles prior to transporting them to the project site. In addition to use on the project, all of the vehicles will be allowed to make round trips to the Department's regional headquarters. Remove all vehicles from the project at the end of the Contract.

Number of Vehicles	Type
3	½ Ton Crew Cab Pickup Trucks

Equip each vehicle as follows:

1. Four wheel drive
2. Automatic transmission
3. Power steering
4. Air conditioning
5. Fire extinguisher & basic first aid kit
6. Jack and lug wrench
7. Load range E tires in good condition
8. Two full size load range E spare tires in good condition mounted on rims
9. 360-degree Permanent Beacon
10. 2 sets of keys
11. CB Radio with 48" Antenna for all projects more than 50 miles from Fairbanks.
12. 3 each AKDOT&PF magnetic stickers. Plans available at http://dot.alaska.gov/documents/DOT-SOA-Construction-Magnets-Specs.pdf

Materials Truck

Number of Vehicles

0

Meet the above requirements for a vehicle and the following:

1. 3/4 Ton Crew Cab Pickup
2. Minimum 500 lb hydraulic tailgate lift attached to the bed of the truck

644-2.06 NUCLEAR TESTING EQUIPMENT STORAGE SHED. Design, furnish and maintain a weatherproof, heated, and ventilated nuclear densometer/testing equipment storage shed for the Engineer to use exclusively throughout the contract. Install the building at least 15-feet from an occupied area at a location approved by the Engineer. Install the shed at least one week before the commencement of construction activities and maintain it until one week after Project Completion. Provide sufficient floor area for the nuclear testing equipment and a portable electric heater to maintain a minimum room temperature of 50°F. Design the building with enough floor area to provide sufficient clearance between the equipment, heater, and combustibles. Provide a commercial grade metal-clad exterior entrance door of 3'-0" min width by 6'-8" height with dead-bolt lockset. Hang the door so that hinge pins are not accessible from the exterior. Provide the Engineer with 2 keys to control access. Provide a 5/16" x 10 foot long welded steel security chain securely attached inside the structure with tamperproof hardware for the Engineer to secure the testing equipment. Provide electrical service as identified in 644-2.09, #7 Nuclear Testing Equipment Storage Shed. Secure the structure to the ground with tamperproof anchors to resist wind loads and prevent unauthorized movement of the building. The Nuclear Testing Equipment Storage Shed remains the property of the Contractor. Remove the shed from the site following project completion. The Nuclear Testing Equipment Storage Shed must be windowless.

644-2.07 STORAGE CONTAINER. Furnish, transport and maintain a weathertight, lockable, steel enclosed 20 foot long x 8 foot wide x 8 foot high wooden floored container for the storage of the Department's materials, supplies and testing equipment (but not nuclear equipment). Provide twenty equally spaced fastening points on the interior walls that are capable of securing the Department's contents. Door opening dimensions of the storage container shall be greater than 60 square feet. Supply necessary equipment to lift and move container with minimal disturbance to the Department's contents. The container shall not be moved by skidding or hook lift. The Contractor shall be listed as the shipper on all documents listing and acknowledging receipt of the Department's goods for shipment.

Deliver an empty and clean container to the Regional Materials Laboratory, or location acceptable to the Engineer, three weeks prior to transporting to the project site. Allow 7 days for the Department to load the container. Transport the loaded container to the project site. Set up container at a location approved by the Engineer at least one week before the commencement of construction activities and maintain it until one week after Project Completion.

1. Provide electrical service and other facilities as follows:

    a. Provide a stairway with railing, built to meet the International Building Code, if there is more than 12-inch difference in floor entry and existing ground elevation.
    b. Provide electrical service as identified in 644-2.09, #6 Storage Container.

Return the container to the Regional Materials Laboratory, or location acceptable to the Engineer, upon project completion. Allow 7 days for the Department to unload the container. The storage container remains your property after you complete the work.

644-2.08 FIELD COMMUNICATIONS. Provide internet and phone communication systems as directed by the Engineer.

644-2.09 ELECTRICAL POWER. Furnish and maintain a constant source of power to the facilities specified in the contract for the Department's use during the project. Provide a completely functional installation 2 weeks before commencing construction work through 2 weeks after Project Completion.

1. FIELD OFFICE. Provide electrical services as follows:

    a. Heating/Cooling adequate to maintain temperatures between 65° to 75°F
    b. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis
    c. Wiring system to support a 40 amp user load demand with two 20-amp circuits
    d. Eight conveniently spaced outlets on the interior wall, consistent with local codes
    e. Eight 8ft LED minimum 5000 lumen lamps or sixteen 4ft LED minimum 2000 lumen lamps, between 2800K and 5000K color temperature

2. FIELD LABORATORY. Provide electrical services as follows:

    a. Heating/Cooling adequate to maintain temperatures between 65° to 75°F
    b. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis
    c. Wiring system to support a 40 amp user load demand with two 20-amp circuits, GFI Protected
    d. Six conveniently spaced outlets on the interior wall, consistent with local codes
    e. Eight 8ft LED minimum 5000 lumen lamps or sixteen 4ft LED minimum 2000 lumen lamps, between 2800K and 5000K color temperature
    f. Exhaust fan: minimum 300 CFM

3. SHAKING SHED. Provide electrical services as follows:

    a. Heating/Cooling adequate to maintain temperatures between 65° to 75°F
    b. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis
    c. Wiring system to support a 20-amp user load demand, GFI Protected
    d. Three conveniently spaced outlets on the interior wall, consistent with local codes
    e. Two 8ft LED minimum 5000 lumen lamps or four 4ft LED minimum 2000 lumen lamps, between 2800K and 5000K color temperature
    f. Exhaust fan: minimum 300 CFM

4. ASPHALT LABORATORY. Provide electrical services as follows:

    a. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis
    b. 100-amp service

5. CURING SHED. Provide electrical services as follows:

    a. Heating/Cooling adequate to maintain temperatures between 70° to 77°F
    b. Two 100-watt incandescent or four 4ft LED minimum 2000 lumen lamps, between 2800K and 5000K color temperature

6. STORAGE CONTAINER. Provide electrical services as follows:

    a. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis
    b. Wiring system to support a 20-amp user load demand, GFI Protected
    c. Two conveniently spaced outlets on the interior wall, consistent with local codes
    d. Four 100-watt incandescent or eight 4ft LED minimum 2000 lumen lamps, between 2800K and 5000K color temperature

7. NUCLEAR TESTING EQUIPMENT STORAGE SHED. Provide electrical services as follows:

    a. Heating/Cooling adequate to maintain minimum temperatures of 50°F
    b. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis

c. Two 100-watt incandescent or four 4ft LED minimum 2000 lumen lamps, between 2800K and 5000K color temperature
d. Wiring system to support a 20-amp user load demand

8. NUCLEAR TESTING EQUIPMENT STORAGE SHED (STATE PROVIDED). Provide electrical services as follows:

   a. Electrical current, 120/240 VAC, 60-cycle on 24-hour basis
   b. Wiring system to support a 20-amp user load demand

9. PORTABLE CONCRETE COMPRESSIVE LABORATORY. Provide electrical services as follows:

   a. Electrical current: 120/240 VAC, 60 cycle on 24 hour basis
   b. Wiring system to support a 20-amp user load demand

If 644.0015____, Nuclear Testing Equipment Storage Shed is deleted the electrical power requirement are still required per 644-2.09, #8.

If the contract contains bridge items that require concrete or grout provide electrical power to the Department's Portable Concrete Compressive Laboratory per 644-2.09, #9.

644-3.01 METHOD OF MEASUREMENT. Section 109 and as follows:

Storage Container. By the number of storage containers specified, to include all components, installed and accepted as completed units and ready for materials and equipment storage.

644-4.01 BASIS OF PAYMENT.

Vehicles. Includes all resources, including fuel, oil, maintenance, and insurance to furnish the specified number of fully operational vehicles for the duration specified in the contract.

Lump Sum Items. Payment for lump sum items will be made as follows:

1. A percentage of the lump sum amount, to be determined by the Engineer, will be paid as full compensation for furnishing the facility at the site.

2. The balance of the lump sum amount will be prorated over the anticipated active construction period with a portion included as part of each interim payment, for maintenance, repairs, providing all utilities, and for removing it from the site. If anticipated construction period changes, the final increment will be held until final payment.

Storage Container. At the contract unit price to include all labor, materials, tools, equipment and supplies required to deliver the storage shed to the regional office for loading, to deliver it to the project office, to install it before commencement of construction, to maintain it for the duration of the project, to remove the shed and electrical service after project completion, to deliver it to the regional office for unloading, and to remove the storage shed. Electrical service and utility costs are subsidiary to this item.

Field Communications. Installation and maintenance of equipment and monthly invoice costs will be paid for by Contingent sum under Item 644.2002.0000, Field Communications. Provide invoices from vendor for installation, maintenance, and monthly subscription costs. When this bid item appears in the Bid Schedule, internet and phone service are not subsidiary to 644.0001.____ Field Office.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
644.0001.____	Field Office	LS
644.0002.____	Field Laboratory	LS
644.0003.____	Curing Shed	LS
644.0006.____	Vehicle	LS
644.0015.____	Nuclear Testing Equipment Storage Shed	EACH
644.0016.____	Storage Container	EACH
644.2002.0000	Field Communications	CS
644.2010.0000	Nuclear Testing Equipment Storage Shed	LS

Add the following section:

SECTION 645
TRAINING PROGRAM

11/30/20 (HSP20-2)

645-1.01 DESCRIPTION. This Statewide Special Provision for on-the-job training (OJT) implements 23 CFR 230, Subpart A, Appendix B.

As part of the Equal Employment Opportunity Affirmative Action Program, the Contractor shall provide on-the-job training aimed at developing full journey status in the type of trade or job classification involved. The number of individuals to be trained and the number of hours of training to be provided under this contract will be as shown on the bid schedule.

645-2.01 OBJECTIVE. Training and upgrading of minorities and women toward journey status is the primary objective of this program. The Contractor shall enroll minorities and/or women, where possible, and document good faith efforts prior to the hire of non-minority males in order to demonstrate compliance with this Training Special Provision. Specific good faith efforts required under this Section for the recruitment and employment of minorities and women are found in the Federal EEO Bid Conditions, Form 25A-301.

645-3.01 GENERAL. The Contractor shall determine the distribution of the required number of apprentices/trainees and the required number of hours of training among the various work classifications based upon the type of work to be performed, the size of the workforce in each trade or job classification, and the shortage of minority and female journey workers within a reasonable area of recruitment.

Training will be provided in the skilled construction crafts unless the Contractor can establish prior to contract award that training in the skilled classifications is not possible on a project; if so, the Department may then approve training either in lower level management positions such as office engineers, estimators, and timekeepers, where the training is oriented toward construction applications, or in the unskilled classifications, provided that significant and meaningful training can be provided. Some offsite training is permissible as long as the training is an integral part of an approved training program and does not comprise a significant part of the overall training.

Credit for offsite training hours indicated above may only be made to the Contractor where the apprentices/trainees are concurrently employed on the project and the Contractor does one or more of the following: contributes to the cost of the training, provides the instruction to the apprentice/trainee, or pays the apprentice's/trainee's wages during the offsite training period.

Where feasible, 25 percent of apprentices or trainees in each occupation shall be in their first year of apprenticeship or training.

Prior to award of the contract, the Contractor shall submit Form 25A-311, Training Utilization Report, indicating the training program to be used, the number of apprentices/trainees to be trained in each selected classification, the number of hours of training to be provided, and the anticipated starting time for training in each of the classifications.

Training must begin within 2 weeks of the anticipated start date(s); unless otherwise authorized by a Directive. Such authorization will be made only after submission of documentation by the Contractor, and approval by the Engineer, of efforts made in good faith which substantiate the necessity for a change.

Contractors may use a training program approved by the U.S. Department of Labor, Office of Apprenticeship (USDOL/OA); or one developed by the Contractor using Form 25A-310 and approved prior to contract award by the OJT Coordinator in the DOT&PF Civil Rights Office.

The minimum length and type of training for each classification will be established in the training program selected by the Contractor. Training program approval by the Department for use under this section is on a project by project basis.

It is expected that each apprentice/trainee will begin training on the project as soon as feasible after start of work utilizing the skill involved and remain on the project as long as training opportunities exist or until training has been completed. It is not required that apprentices/trainees be continuously employed for the duration of the contract.

If, in the judgment of the Contractor, an apprentice/trainee becomes proficient enough to qualify as a journey worker before the end of the prescribed training period and the Contractor employs that individual as a journey worker in that classification for as long as work in that area remains, the individual's training program will be considered completed and the balance of training hours required for that apprentice/trainee shall be waived.

The Contractor shall furnish each ADOT&PF training program trainee a copy of the program (Form 25A-310) to be followed during training on the project, and with a written certification showing the type and length of training completed on the project. Existing USDOL/OA apprentices should already have a copy of their program. No employee shall be employed for credit as an apprentice/trainee in a classification in which that employee has previously worked at journey status or has previously completed a training course leading to journey status.

The Contractor shall periodically review the training and promotion potential of minority and women employees and shall encourage eligible employees to apply for such training and promotion.

The Contractor shall provide for the maintenance of records and the furnishing of periodic reports documenting the progress of each apprentice/trainee. The Contractor must submit Form 25A-313 by the 15th of each month and provide each ADOT&PF trainee written evaluation reports for each unit of training provided as established on Form 25A-310.

645-3.02 WAGES. Trainees in ADOT&PF approved training programs will be paid prevailing Davis-Bacon fringe benefits plus at least 60 (but less than 100) percent of the appropriate minimum journey rate specified in the contract for the first half of the training period, at least 75 (but less than 100) percent for the third quarter of the training period, and at least 90 (but less than 100) percent for the last quarter of the training period. Trainee wages shall be identified on Form 25A-310. Apprentices in USDOL/OA training programs shall be paid in accordance with their approved program. Beginning wages of each

trainee/apprentice enrolled in a Section 645 Training Program on the project shall be identified on Form 25A-312.

645-3.03 SUBCONTRACTS. In the event the Contractor subcontracts a portion of the work, he shall determine how many, if any, of the apprentices/trainees are to be trained by the subcontractor. Any such subcontracts shall include this Section 645, Form 25A-311 and Form 25A-310, where appropriate. However, the responsibility for meeting these training requirements remains with the Contractor; compliance or non-compliance with these provisions rests with the Contractor and sanctions and/or damages, if any, shall be applied to the Contractor in accordance with Subsection 645-5.01, Basis of Payment.

645-4.01 METHOD OF MEASUREMENT. The Contractor will be credited for each approved apprentice/trainee employed on the project and reimbursed on the basis of hours worked, as listed in the certified payrolls. There shall be no credit for training provided under this section prior to the Contractor's submittal and approval by the Engineer of Form 25A-312 for each apprentice/trainee trained under this Section. Upon completion of each individual training program, no further measurement for payment shall be made.

645-5.01 BASIS OF PAYMENT. Payment will be made at the contract unit price for each hour of training credited. Where a trainee or apprentice, at the discretion of the Contractor, graduates early and is employed as a journey worker in accordance with the provisions of Subsection 645-3.01, the Contractor will receive payment only for those hours of training actually provided.

This payment will be made regardless of any other training program funds the Contractor may receive, unless such other funding sources specifically prohibit the Contractor from receiving other reimbursement.

Payment for training in excess of the number of hours specified on the approved Form 25A-311 may be made only when approved by the Engineer through Change Order.

Non-compliance with these specifications shall result in the withholding of progress payments until good faith efforts documentation has been submitted and acceptable remedial action has been taken.

Payment will be at the end of the project following the completion of all training programs approved for the project. No payment or partial payment will be made to the Contractor if he fails to do any of the following and where such failure indicates a lack of good faith in meeting these requirements:

1. provide the required hours of training (as shown in the Bid Schedule and approved Form 25A-311),

2. train the required number of trainees/apprentices in each training program (as shown in the Bid Schedule and approved Form 25A-311), or

3. hire the apprentice/trainee as a journey worker in that classification upon completion of the training program for as long as work in that area remains.

Failure to provide the required training damages the effectiveness and integrity of this affirmative action program and thwarts the Department's federal mandate to bring women and minorities into the construction industry. Although precise damages to the program are impractical to calculate, they are at a minimum, equivalent to the loss to the individuals who were the intended beneficiaries of the program. Therefore, where the Contractor has failed, by the end of the project, to provide the required number of hours of training and has failed to submit acceptable good faith efforts documentation which establishes why he was unable to do so, the Contractor will be assessed an amount equal to the following damages to be deducted from the final progress payment:

Number of hours of training not provided, times the journey worker hourly scale plus benefits. The journey worker scale is that for the classification identified in the approved programs.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
645.0001.____	Training Program, ____ Trainees/Apprentices	LH

Delete Section 646 in its entirety and substitute the following:
02/01/20 (N42)

SECTION 646
CPM SCHEDULING

646-1.01 DESCRIPTION. Provide and maintain a Critical Path Method (CPM) progress schedule for the project. Use the schedule in coordinating and monitoring of all work under the Contract including activity of subcontractors, manufacturers, suppliers, and utility companies, and submittal review by the Department. Update the CPM as described in this specification.

Provide to the Engineer a legal copy of the software program to be utilized for the CPM Schedule item on the project. The software program shall have the full capacity to analyze and modify the CPM Schedule.

646-2.01 SUBMITTALS.

1. Submit a detailed initial CPM schedule at least 5 working days prior to the preconstruction conference, for the Engineer's approval. The construction schedule, for the entire project, may not exceed the specified contract time.

   Following the Engineer's review, if revisions to the proposed CPM schedule are required, do so promptly. The CPM schedule must be finalized within 15 days of the Notice to Proceed.

   No contract work may be pursued at the project site without an approved CPM schedule.

2. Weekly Work Plans. Submit a Weekly Work Plan in conjunction with Weekly Progress Meeting agenda. Detail your proposed operations for the upcoming week. This work plan shall reflect a true and accurate assessment by the Contractor concerning the actual progress on the project. Include:

   a. Tasks / work activities
   b. Work hours
   c. Subcontractors
   d. Location of the work to be performed

The approval by the Department of the initial CPM Schedule, subsequent CPM updated schedules, and the weekly Work Plans shall not relieve the Contractor as the responsible party for development and execution of the means, method, and timing of performance reflected in the schedule, nor completing the project within the specified contract time.

646-3.01 REQUIREMENTS AND USE OF SCHEDULE.

1. Schedule Requirements. Prepare the CPM schedule as a Precedence Diagram Network developed in the activity-on-node format which includes:

   a. Activity description

b. Activity duration
c. Critical Sequence of activities and Critical Path.

Show on the activity-on-node diagram the sequence and interdependence of all activities required for complete performance of all items of work under this Contract, including shop drawing submittals and reviews and fabrication and delivery activities. The maximum review period allowed by the contract shall be shown where review functions by the Department are noted on the schedule

The contract completion time will be adjusted only for causes specified in this Contract.

2. Weekly Progress Meetings. Hold Weekly job site progress meetings with the Engineer for the purpose of reviewing and updating the CPM schedule. Review progress and verify finish dates of completed activities, remaining duration of uncompleted activities, and any proposed time estimate revisions. At a minimum, the Contractor's Project Manager, Project Superintendent, Traffic Control Supervisor shall attend the weekly job site meetings.

   Provide an updated CPM schedule when the critical path on the CPM schedule has changed by 7 or more days.

646-4.01 METHOD OF MEASUREMENT. Section 109.

646-5.01 BASIS OF PAYMENT. If the requirements of Item 646 CPM Scheduling are not in full compliance, five percent (5%) of the total progress payment value earned during the progress period will be withheld until the requirements of Item 646 CPM Scheduling are in full compliance.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
646.0001.____	CPM Scheduling	LS

Add the following section:

SECTION 651
WORK BY OTHERS

651-1.01 DESCRIPTION. Coordinate construction schedule and phasing according to Section 105.

651-3.01 DESCRIPTION OF WORK AND SCHEDULE. Adjust schedule and phasing as necessary to allow utility owners, their contractors, and other third party entities to complete their work on or before the completion date given in the utility relocation agreement.

Utility adjustments by others are shown on the Plans and are scheduled to be performed under relocation agreements, as follows:

Utility Type	Utility Company	Agreement Completion Date
Electric	Cordova Electric Cooperative	tbd
Sewer/Water	City of Cordova	tbd
Telecom	Cordova Telephone Cooperative	tbd
Telecom	GCI	tbd

Utility relocation agreement plans are available for inspection by making arrangements with the contact for pre-bid information, as listed on the Invitation for Bids.

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 or the utility company(s). Not all utilities subscribe to the DIGLINE. Utilities that do not subscribe shall be contacted directly. The Contractor is responsible for locating and protecting utilities in the project work areas.

SECTION 660
SIGNALS AND LIGHTING

660-2.01 MATERIALS. *Add the following:*

Concrete for Junction Boxes Section 550 (Class B)

660-3.01 GENERAL.

1. Scheduling of Work: *Add the following:* Contact the regional DOT&PF Traffic Section (telephone 907-451-2323) 24 hours in advance of any work on a signal or lighting system. Contact shall be made through the Engineer.

   After staking pole, cabinet or transformer foundations, verify there will be no overhead or underground utility conflicts with foundations or conduits. Locate and protect all existing underground and overhead utilities. The location of cables, conduits, J-boxes, foundations and poles that are shown on the plan sheets are approximate and it is your responsibility to verify the actual location when working in the area. See Subsection 105-1.06.

   State technicians will perform all necessary signal controller timing and programming changes. All other work shall be by the Contractor. Notify the Engineer five working days (Monday – Friday) prior to commencing signal modification work.

   Existing signing and traffic markings shall not be allowed to conflict with new signal modifications. New signing and traffic marking modifications shall not conflict with existing signals and shall be kept current with signal modifications.

   Conduct all work with the existing traffic signal systems remaining in operation unless authorized otherwise by the Engineer.

   The signal system may be turned off if necessary for signal modification work when authorized by Subsection 660-3.01. 7. f. (1) the Engineer. Signal outages may only be scheduled for Monday through Thursday, between the hours of 9:00 p.m. and 6:00 a.m. Signal outages may not occur on observed holidays. Prior to turning signal systems off, set the signal to flashing operation while R1-1 STOP signs (48”x 48”) are posted for the approaches which flash red. After these approaches are posted with STOP signs, the signal system may be turned off, and STOP signs posted for all remaining approaches. Two STOP signs are required for each approach. Mount each STOP sign with a high level warning device at a mounting height of 5 feet.

   The Contractor must complete the signal and signing modifications for any one approach during one night’s shift (9:00 p.m. to 6:00 a.m.) where signal systems are allowed to be turned off. Wiring modifications, including signal controller cabinet wiring, must be completed and ready for inspection and testing by State technicians at 6:00 a.m. of the same day. The Contractor must have an electrician present during the inspection and testing process. The State technician must place the signal system back into normal operation after the Contractor has corrected any deficiencies.

Remove all temporary STOP signs during flash operation. The Contractor shall return signal systems that have been turned off, to flashing operation before the work is completed, prior to the arrival of the State technician. At least one signal head per signal phase must flash, and only after the Engineer has inspected the work to insure correct flashing operation colors.

All incidental materials and other items which are not shown on the plans, assembly drawings, or specified herein, which are necessary to complete the system, must be furnished and installed as though such materials and other items were shown on the plans, assembly drawings, or specified herein.

Protect all metallic materials against corrosion. Hot-dip galvanize all ferrous metals such as bolts, braces, bodies, clamps, fittings, guards, nuts, pins, rods, shims, thimbles, washers, and miscellaneous parts not of corrosion-resistant steel, in accordance with ASTM A 123 or A 153, except where other equivalent protection treatment is specifically approved in writing by the Engineer.

2. Safety Precautions: *Add the following:* Existing circuits listed on the wiring diagrams and plan sheets were obtained from as-built information and must be verified prior to work involving those circuits.

Delete numbered paragraphs 3. through 8. in their entirety and substitute the following:

3. Excavating and Backfilling. Complete excavation and backfill required to install the signal and lighting components embedded in the roadway as shown on the Plans, including foundations, conduits, junction boxes, and loop detectors before final lift paving. Provide traffic control to complete this work according to the requirements of Section 643. Place excavated materials where it will not interfere with surface drainage.

   Support and protect conduits and utilities scheduled to remain in service when encountering them during excavation.

   Excavate trenches wide enough to install the number of conduits specified and to compact the bedding and backfill materials according to these specifications.

   To install conduits, excavate trenches deep enough to allow for 6 inches of bedding material, the depth of the largest conduit, and the minimum burial depth specified between the top of the conduit and finished grade of the ground above the conduit. Keep the longitudinal profile of trench bottoms free of irregularities that would prevent the assembled conduit run from continuously contacting the top of the bedding material.

   When conditions allow HDPE conduit to be installed by a plowed technique, restoring the area disturbed from the process, shall be accomplished according to Subsection 204-3.01. Density testing may be waived and compactive effort substituted at the discretion of the Engineer. This work is subsidiary to conduit installation. Use Selected Material, Type A for backfill.

   Dispose of, according to Subsection 203-3.01, excavated materials that remain after completing backfill work and excavated material not meeting the requirements of Selected Material, Type C, as defined in Subsection 703-2.07. Disposal of this material is subsidiary to the 660 Pay Items.

   Dewater foundation and conduit excavations immediately before and during embedding and backfilling operations. Backfill excavations with materials that meet the following requirements:

   a. Backfill foundations with material that meets the requirements of Selected Material, Type A that passes through a 3 inch sieve.

   b. Within the limits of the typical section, embed conduits and backfill trenches using material that meets the requirements of the lift where it is located, reusing excavated materials if it meets the requirements of the applicable lift.

c. In other locations, embed conduits and backfill trenches using material that meets the requirements of Selected Material, Type C, reusing excavated materials if it meets this requirement.

d. Import, when ordered, embedment and backfill materials that satisfy the preceding materials requirements.
Embed conduit(s) between two 6 inch lifts of material cleaned free of rocks exceeding a 1 inch maximum dimension. Grade and compact the first lift to provide a surface that continuously contacts the assembled conduit run.

Within 6 feet of paved surfaces and around foundations, backfill in uniform layers no more than 6 inches deep and compact each layer according to Subsection 203-3.04. In other locations, compaction may be as approved by the Engineer.

4. Welding. Complete welding according to Subsection 504-3.01.7. Welding and approved shop drawings.

Submit shop drawings of the proposed work with the welding plans for approval. The shop drawings shall include material specifications, component dimensions, the types of welds that will be made, and the proposed type and extent of weld inspection.

Repair the holes that were used to mount equipment, in reused poles and mast arms by welding in disks flush with the adjoining surface. For the disk material, use steel that matches the ASTM designation, grade, and thickness of the steel used to fabricate each pole. Cut disks that match the dimensions of the hole being repaired from pieces of steel plate bent to match the pole's radius at the hole. Grind the welds smooth and flush with the adjoining pole and disk surfaces. Repair the damaged finish according to Subsection 660-3.01.8.

5. Removing and Replacing Improvements. The Contractor shall complete the following work at the Contractor's expense.

a. Remove improvements that block completion of the work detailed on the Plans as specified herein.

b. Reconstruct with new materials the nonreusable improvements the Contractor removed to complete the work.

c. Replace with new materials the reusable items damaged by the Contractor, that are specified for reuse.

d. Reconstruct with new materials improvements damaged or removed by the Contractor not conflicting with the work and not scheduled for removal.

Nonreusable improvements consist of cast in place items, including: asphalt concrete pavement, sidewalks, curb and gutter, lawns, and traffic markings. Reusable improvements include the items that were made before installation. Excavated material may not be used as backfill in the base course if excavation depth exceeds the thickness of the base course.

Complete reconstruction work, including materials, according to the applicable sections of the Alaska SSHC, and leave the work in a satisfactory and serviceable condition. In completing the reconstruction work, match the alignments, widths, thicknesses, shapes, sizes, typical sections, cross sections, and finishes of the existing improvements.

If removing a portion of sidewalk or curb and gutter, remove an entire segment between the weakened plane contraction joints or between an expansion joint and a weakened plane contraction joint.

Before removing a segment of Portland or asphalt cement concrete material, cut completely through the material with a saw along the outline of the area to be removed. Make cuts neat and true and prevent shatter outside the area removed.

To replace lawns, leave the top of the backfilled excavation low enough to install 4 inches of compacted topsoil. Match the top of the topsoil with the bottom of the vegetative mat. Apply seed and keep the seeded areas watered according to Section 618.

Remove, keep alive, and replant trees, shrubs, and plants according to Section 621. Replace the trees, shrubs, and plants that do not survive with plants of like size and type.

6. Salvaging and Reusing Electrical Equipment. When the Plans include existing electrical equipment scheduled for removal or relocation, remove, and store the equipment listed in the following paragraph without damaging it. Deliver removed equipment not scheduled for reuse to the local District Maintenance Station, or place specified on the Plans or Special Provisions. Notify the district superintendent or person specified by telephone one week before planned delivery date.

   Salvage the controller assemblies, load centers, and video cameras. The Contractor shall replace at the Contractor's expense salvaged equipment damaged or destroyed before or during delivery or reinstallation.

   Controller assemblies and load centers include the cabinet and equipment contained in the cabinet (that is to be replaced) before Contract award.

   Remove from the highway right-of-way materials associated with the equipment removed or relocated and not scheduled for reuse, including conduits, junction boxes, conductors, and foundations. Raze the tops of foundations abandoned in place according to Subsection 660-3.02. Fill the holes left by removing junction boxes and foundations with Selected Material, Type A and compact as directed.

   Within 15 days of the Notice to Proceed, complete an inventory of the materials that will be salvaged in the presence of the Engineer. Note the location and condition of the materials. When material specified for reuse is found in an unserviceable condition, the Engineer will determine whether to repair it or replace it with new material that will be paid for as extra work under Subsection 109-1.05. Retain a copy of the inventory and give the original documents to the Engineer.

   When the Plans specify reinstalling existing equipment at new locations and installing State furnished equipment, complete the following work at the Contractor's expense.

   a. For poles, install new foundations, furnishing the new nuts, bolts, washers, and conduits needed to complete the installations.

   b. For lighting poles, install new illumination tap wires and fused disconnect kits.

   c. For luminaires, clean the luminaires inside and out and install new lamps of the same wattage.

   d. For signal heads, furnish and install the mounting brackets needed to complete the relocation, and clean the signal heads inside and out.

   e. For poles and undisturbed poles from which the Plans specify removing equipment, repair the holes that were made to mount equipment according to Subsection 660-3.01.4 Welding and repair the finishes according to Subsection 660-3.01.8 Repairing Damaged Finishes.

   When ordered, the Engineer will pay for repairing existing damaged finishes on existing equipment according to Subsection 660-3.01.8 as extra work.

If deciding to use new equipment rather than reusing the equipment specified, notify the Engineer of the change and include a submittal according to Subsection 660-2.01.1.

Deliver the salvaged materials undamaged to the local DOT & PF Maintenance and Operations Yard.

Coordinate with the State, M&O Signal Foreman, Eric Slay at (907) 451-5279, one week before planned delivery.

7. Field Tests. Electrical circuits must pass the following tests before the Engineer will accept the work for payment. Perform these tests in the presence of the Engineer, and document the results of each test on a per circuit basis. Retain a copy of test results and give the original documents to the Engineer. Furnish equipment needed to perform these tests.

   Replace or repair at the Contractor's expense, and in an approved manner, faulty materials and work revealed by these tests. After making repairs, repeat tests on the repaired circuit and continue this process until circuits have passed required tests. The Department reserves the right to have the Contractor retest circuits, and to use the retest results to accept or reject individual circuits.

   a. Grounds. Before completing the circuitry and functional tests, physically examine conduits ends, junction box lids, load centers, and the foundations for signal posts and poles, lighting poles, and controller cabinets to ensure the grounding system required by Subsections 660-3.06 and 661-3.01 has been installed and splices and connections are mechanically firm.

   b. Continuity. Test each loop detector circuit for continuity at the roadside junction box before splicing the loop detector to the lead-in cable. Each loop detector must have a resistance less than 0.5 ohms.

      After splicing the loop detectors to the lead-in cables, test each pair at the controller or detector cabinet. Each pair must have a value less than 5 ohms for single pair lead-in cables and 10 ohms for multipair lead-in cables. The continuity test ohm reading at the cabinet must be greater than the ohm reading measured for the loop detector at the junction box.

   c. Insulation Resistance (megohm) Test. Complete this test to verify the integrity of each conductor's insulation after pulling the conductors and cables into position and before terminating the conductors. At 500 VDC, each conductor's insulation shall measure a minimum resistance of 100 megohms or the minimum specified by the manufacturer. With single conductors, complete the test between each conductor and ground. In each multiconductor cable, complete the test between conductors and between each conductor and ground.

      After splicing the loops to the shielded pairs in the lead-in cables, measure each pair in the lead-in cables at the controller or detector cabinet between one conductor and the cabinet ground rod. Upon acceptance, document these tests in writing, for each circuit, and submit one (1) copy to the Engineer and one (1) copy to Traffic Signal Maintenance.

   d. Inductance Test. Measure each detector loop and lead-in cable system at the controller or detector cabinet. The inductance must be in the range of 50 to 500 microhenries.

   e. Circuit. Energize every signal indication circuit with lamps installed before installing the load switches.

   f. Functional. Perform the following tests on each signal and lighting system after the component circuits have satisfactorily passed the tests for continuity, grounding, insulation integrity, and circuitry.

      (1) For each new traffic signal system, complete at least 24 hours of flashing operation, followed by not less than 5 days of continuous, satisfactory operation. The Engineer may decide to

omit the flashing portion of the test for modified signal systems and for new signals that replaced existing signals that remained in operation during the construction phase.

If the Engineer omits flashing operation and the system performs unsatisfactorily, correct the condition and repeat the test until the system runs for five days with continuous, satisfactory operation.

Begin the signal functional tests between 9:00 a.m. and 2:00 p.m. on any day, except a Saturday, Sunday, a legal holiday, or the day before the legal holiday.

Before each system turn on, aim signal faces according to Subsection 660-3.08 and ensure equipment specified on the Plans is installed and operable, including: pedestrian signals and push buttons; signal backplates and visors; vehicle detectors; highway lighting; and regulatory, warning, and guide signs.

(2) Perform the functional test for each highway lighting system and sign illumination system until the systems burn continuously 5 days without the photocell, followed by a 5 day operational test using the photocell.

(3) Perform the functional test for each flashing beacon system for not less than 5 days of continuous, satisfactory operation.

(4) Perform a continuous 5 day burning test on each pedestrian overpass and underpass lighting system before final acceptance.

A shut down of the electrical system due to a power interruption does not constitute discontinuity of the functional test if the system functions normally when power is returned.

8. Repairing Damaged Finishes. Examine new, reused, and State furnished equipment for damage to its finish before putting the equipment into service. Repair the damaged finishes found according to the following:

a. Galvanized. Repair damaged areas more than 12 inches away from welds and slip fit areas, by applying minimum 7.8 mils of zinc based alloy applied according to ASTM A780.

If the damaged areas are within 12 inches of welds and slip fit areas, make the repair by applying a minimum 7.8 mils of zinc rich paint applied according to ASTM A780.

b. Painted. Repair damage to painted finishes according to the following

(1) Wash the equipment with a stiff bristle brush using a solution containing two tablespoons of heavy duty detergent powder per gallon of water. After rinsing, wire brush surfaces to remove poorly bonded paint, rust, scale, corrosion, grease, or dirt. Remove dust or residue remaining after wire brushing before priming.

(2) Factory or shop cleaning methods may be used for metals if equal to the methods specified herein.

(3) Immediately after cleaning, coat bare metal with pretreatment, vinyl wash primer, followed by 2 prime coats of zinc chromate primer for metal.

(4) Give signal equipment, excluding standards, a spot finishing coat on newly primed areas, followed by 1 finishing coat over the entire surface.

(5) Give nongalvanized standards 2 spot finish coats on newly primed areas.

Paint coats may be applied either by hand brushing or by approved spraying machines. Perform the work in a neat and workmanlike manner. The Engineer reserves the right to require the use of brushes for the application of paint, should the work done by the paint spraying machine prove unacceptable.

Add the following:

9. Regulation and Code. Complete work according to the standards of the NEC, the NESC, and local safety codes as adopted and amended by the Authority Having Jurisdiction.

660-3.03 CONDUIT. *Delete this subsection in its entirety and substitute the following:* Electrical conductors shall be installed in conduit, except for overhead wiring, wiring inside poles, and when otherwise specified. Use rigid metal conduits (RMC) and fittings for raceways, including bored casings, except when the Plans specify using polyethylene conduits. Install conduits of the sizes specified along the routes detailed on the Plans. When routing is not shown, route conduits as directed by the Engineer.

1. Install conduits at least 30 inches below the finished grade of the ground above the conduit, except conduits that will be sealed under a minimum 4 inch thick Portland cement concrete sidewalk may be installed a minimum of 18 inches below the top back of curb or surface above the conduit, whichever is lower.

2. Install conduits that cross unpaved areas and paved roadways that will be overlaid in excavated trenches. Excavate, bed conduits, and backfill trenches according to Subsection 660-3.01.3, Excavating and Backfilling.

3. Install conduit(s) under paved roadways and approaches that will not be overlaid in excavated trenches. Jacking conduits into position is allowed. However, if subsurface conditions prevent the successful completion of the work, install the conduit(s) by boring or drilling methods without additional compensation.

4. If encountering obstructions during jacking or drilling operations obtain approval and cut small holes in the pavement to clear the obstruction. Locate the bottom inside face of the bore pit no closer than the catch point of a 1.25:1 slope (a horizontal to vertical ratio) from the edge of pavement. Install approved means of protection around pits.

5. Sweep both rigid metal and polyethylene conduits through the open bottom of junction boxes by installing 90 degree rigid metal elbows on the ends of conduit runs. To each elbow, install a nipple that terminates 5 to 12 inches above the bottom edge of each junction box.

6. Install the tails of loop detectors without elbows through the walls of junction boxes at elevations that ensure the loops drain into the box. Extend the ends a minimum of 2 inches beyond the inside wall of the box.

7. Drill a 3/8 inch drain hole in the bottom of the lower straight section of elbows and in the bottom of conduits at the low points of conduit runs. Smooth the edges of the drilled holes on the inside of elbows to prevent scraping the conductors. Cover the holes with a wrap of approved filter cloth secured with 2 self-clinching nylon cable ties.

8. Keep conduits clean. Install grounding bushings and approved plastic insert type plugs on the ends of conduit runs before backfilling around the conduit ends.

9. At the low points of conduit runs, install sumps containing a minimum 2 cubic feet of washed porous backfill material that conforms to Subsection 703-2.10. Compact the aggregate sumps as directed to prevent settlement of the trench backfill.

10. Install conduits that must cross existing facilities such as storm drain pipes, duct systems, and other underground utilities at the minimum depths specified, going under the facilities if necessary. Install additional drains and aggregate sumps at the low spots, if any.

11. Position conduits in trenches, junction boxes, and foundations to provide clearances of at least 21/2 inches around 2 inch conduits and at least 2 inches around conduits larger than 2 inches.

12. Fabricate rigid metal conduits less than 10 feet long from standard lengths of conduit. Cut conduits squarely to ensure the threading die starts squarely on the conduit. Cut the same number of threads as found on the factory threaded ends. Ream the inside of conduit ends cut in the shop or field to remove burrs and sharp edges. Do not use slip joints or pieces of running thread pipe.

13. Coat drilled holes, shop and field cut threads, and the areas with damaged zinc coating with zinc rich paint.

14. When standard couplings cannot be used to join conduit components, use approved threaded unions.

15. Bury a continuous strip of 4 mils thick, 6 inch wide polyethylene marker tape above underground conduit runs. Install the tape 9 inches (± 3 inches) below finished grade, using two strips side by side to mark road crossings. Furnish tapes with a black legend on a red background.

16. When the Plans specify using polyethylene conduit, install RMC in structures and foundations, between load centers and the nearest junction box, and on the surfaces of poles and other structures.

17. In foundations, install 90 degree elbows and conduits of the size and quantity shown on the Plans. Extend the conduits a maximum of 3 inches above the top of the foundations for posts and poles with breakaway bases and 4 inches above the top of foundations for fixed base structures.

18. Seal conduits leading to electrical equipment mounted on soffits, walls, and other locations below the grade of the serving junction box with an approved duct sealing compound.

19. Install expansion fittings in conduits that cross expansion joints.

20. Install a polypropylene pull rope with a minimum 200 pound tensile strength in future use or spare conduits, and reinstall the plugs. Double back pull rope, at least two feet, into both ends of each conduit.

21. The Contractor may install conduits larger than the sizes specified. If used, it must be for the entire length of the run. Reducing couplings or bushings are not allowed. Complete work associated with installing conduits larger than specified without extra compensation.

22. Clean existing conduits that will remain in service using a heavy duty air compressor that delivers at least 125 cubic feet of air per minute at a pressure of 110 pounds per square inch. Clean the conduits before pulling in new cables and after removing cables to be removed or replaced as follows:

    a. When the conduits contain cables that will remain in service, leave the cables in place during the cleaning, and

    b. Ream empty conduits with a mandrel or cylindrical wire brush before blowing them out with compressed air.

23. When modifying existing conduit runs, complete the work as required for new installations using the same sizes and types of conduit. When extending existing conduits, add no more than a 90 degree horizontal bend to the extension.

24. When installing a junction box in a continuous run of existing conduit, remove a length of conduit in each conduit run and complete the work of installing the conduits, elbows, and nipples as required for a new installation.

25. When adjusting existing junction boxes to a new grade, remove cables and replace the nipples as required to provide the clearances specified for new installations.

26. Remove the ends of abandoned conduits from junction boxes that will remain in service.

27. When Plans call for connecting polyethylene conduit to RMC use a UL listed electrofusion coupler rated for direct bury application. The coupler must be rated for same wall thickness as the adjoining conduits. Thread the ends of the RMC with the same number of threads as found on the factory threaded ends of RMC. Ream the inside of conduit ends cut in the shop or field to remove burrs and sharp edges.

28. Prior to HDPE buried conduit installation, provide a short demonstration section of conduit with an electrofusion coupling cut out and split for destructive testing and approval of fusion.

29. Assure that the conduit is open, continuous, and free of water and debris prior to installing cable. Pull a stiff bristle brush through the entire length of the conduit run immediately prior to the cable being installed. Grade conduit uniformly straight and without sags.

30. Make any butt connections between high-density polyethylene conduit sections above ground prior to laying in the trench. Couple HDPE conduit to rigid metal conduit for all surface exposures. Butt-weld the conduit using the manufacturer's recommended procedures and equipment or couple with compatible molded HDPE electrofusion couplings (as acceptable with the conduit manufacturer). Connections to RMC may be made below grade as necessary to connect with existing infrastructure using care to prevent foreign matter from entering the conduit. If using coilable conduit, each run may only be one section so there won't be any butt-welded connections needed. All bending of conduit will be by means recommended by the manufacturer.

660-3.04 JUNCTION BOXES. *Add the following to the fifth paragraph*: Install a sump (stone drain) to the dimensions shown on the plans or equaling the length and width of the junction box and to a depth of 18 inches. Sump material shall be a washed porous backfill material that conforms to Subsection 703-2.10. A mortar brick base, pavers, concrete block or stepping stones shall line the entire bottom perimeter of all new, relocated, or adjusted Type I, IA, II and III junction boxes, as shown in the plans. Compact the aggregate sumps as directed to prevent settlement of the trench backfill. Compact gravel drain material under J-boxes as directed by the Engineer to prevent settlement of foundations, J-boxes, and adjacent improvements.

Add the following: When noted, or when new conduits are routed to an existing junction box, the existing junction box shall be adjusted. When new junction boxes are used to replace existing junction boxes they may require modifications as approved by the Engineer.

660-3.05 WIRING. *Delete the last sentence of the first paragraph and substitute the following*: Run signal cabling continuously without splices from the controller cabinet to the termination lugs in the signal housing. Do not splice conductors within cabinets, poles, signal heads, and luminaries.

Add the following to numbered subparagraph 1 before the first sentence: Ensure that the conduit is open, continuous, and free of water and debris prior to installing the cable. Pull a stiff bristle brush through the entire length of the conduit run immediately prior to the cable(s) being pulled.

Add the following to numbered subparagraph 7: Spare lighting conductors shall be capped in the pole bases and load centers by cutting the wire flush with the end of the insulation and bending the conductor back against itself and securing with three layers of electrical tape to prevent any possibility of making contact with ground or current carrying conductors

In numbered subparagraph 11 delete the fourth paragraph and substitute the following: Insert a loose woven polyester web that allows for a full ¼ inch of insulating compound to flow between the splice and the inside of the mold. Fill the PVC molds with non-re-enterable polyurethane electrical insulating and sealing compound that is nontoxic, is non-corrosive to copper, and does not support fungi or mold growth.

In numbered subparagraph 13 delete the word "bases" *and substitute the following*: base terminal compartments.

660-3.06 BONDING AND GROUNDING. *Delete this subsection in its entirety and substitute the following:* Bond and ground branch circuits according to the NEC and the following requirements: Make noncurrent carrying but electrically conductive components, including: metal conduits, junction box lids, cabinets, transformer cases, and metal posts and poles, mechanically and electrically secure to an equipment grounding conductor. Make fixtures mounted on metal poles, including signal components and luminaires, mechanically and electrically secure to the pole.

Install grounding bushings with insulated throats on the ends of metallic conduits.

Install main or system bonding jumper as applicable at the service as required by NEC article 250. Install copper grounding electrode conductors (GEC), sized per NEC Table 250.66, or #6 AWG, whichever is larger. Install copper equipment grounding conductors (EGC) for each circuit or raceway, sized per NEC Table 250.122, or #12 AWG, whichever is greater. Where conduits are installed for future conductors, the EGC may be omitted.

Attach the grounding conductors to the grounding bushings, leaving 12 inches of slack between each bushing. Connect grounding conductors together using irreversible compression type connectors to form a fully interconnected and continuous grounding system.

Retrofit existing spare conduits that will contain new cables exclusively with new grounding bushings. When the Plans require installation or removal of conductors from existing conduits, retrofit with new grounding conductors sized according to the preceding paragraph.

Bond junction box lids to the grounding conductor using copper braid with a cross sectional area equal to a #8 AWG and eyelet spaced at 6 inch intervals. Copper braid shall be a minimum of three feet long for Type I and IA junction boxes and a minimum of six feet long for Type II and III junction boxes. Connect bonding jumpers to the grounding conductors using irreversible compression type connectors. Replace missing or damaged conduit and junction box lid bonding jumpers.

Join the equipment grounding conductors from the conduits to the grounding electrode conductor using irreversible compression connectors at Portland cement concrete foundations. For pile foundations, attach the equipment grounding conductor from the conduit to the pile cap adapter with a listed mechanical grounding connector.

When installing signal poles, signal posts, and lighting standards with frangible coupling bases, run a 5 feet long grounding conductor from the grounding bushing on the conduit to the grounding lug located in the handhole of each pole.

Bond breakaway type standards and pedestals by using 2 conductors from the conduit, one attached with a ground rod clamp to an anchor bolt and the other connected to the grounding lug located in the handhole of each pole.

Ground one side of the secondary circuit of a transformer, as applicable.

Install a 3/4 inch by 10 feet copper clad ground rod inside each controller cabinet foundation and a 6 AWG bare stranded copper wire for the grounding electrode conductor.

When routing a new conduit into an existing junction box or replacing an existing junction box, new and existing conduits shall have the grounding improved to current specifications.

Ground rods shall be installed in J-boxes when required for an electrically secure system.

01/20/15 (N45)
660-5.01 BASIS OF PAYMENT. *Add the following:* The Department will pay for the electrical power for all electrical systems that are scheduled to become a permanent part of the work.

Add the following section:

SECTION 669
AUTOMATIC VEHICLE CLASSIFICATION

669-1.01 DESCRIPTION. This work shall consist of furnishing and modifying Automatic Vehicle Classification (AVC) system at the specified location.

The work includes the installation of ancillary equipment, loops, piezoelectric sensors, conduit, cables, conductors, grounding, and junction boxes. The existing counter is connected via an existing communications modem, any modifications to this system shall be by the Department's Traffic Data and Forecasting Section. All other equipment, ancillary or otherwise will be connected by the Contractor. Acceptance testing will be performed and coordinated through the Engineer.

The work may require coordination and provision of utility services to the site, including power and cellular data communications. Coordinate access with the Project Engineer.

AVC Stations are operated and maintained by the Departments Traffic Data and Forecasting Section. Where the Plans and Specifications require them to be notified of their presence at an inspection and for the final connection of electronic equipment, contact shall be made through the Engineer.

669-1.02 REGULATIONS AND CODE. All materials and workmanship shall conform to the standards of the Underwriter's Laboratories, Inc. and the National Electrical Code and local safety code requirements, where applicable.

All electrical equipment shall conform to the standards of the National Electrical Manufacturer's Association, where applicable.

669-1.03 UTILITY SCHEDULE. Within 30 days after the Contract award, submit three (3) collated copies of a Utility Schedule identifying all actions required to ensure activation of electrical and communications services prior to installation and commissioning of AVC equipment at affected sites.

Create a separate list of chronologically and sequentially organized actions for each proposed or affected AVC station.

On the lists, include the following:

1. A description of the action.

2. When the action will occur.

3. The name, employer, position title, and telephone number of the point of contact for initiating the action.

4. The name, employer, position title, and telephone number of the party responsible for completing the action.

669-1.04 AS-BUILT PLANS. Prepare four (4) complete sets of red-lined as-built plans and keep them current with the construction. Detail in the as-built plans all construction changes made to the Plans. Include the following information on the appropriate sheets:

1. Location and depth of all presence loops, piezoelectric sensors, and conduit runs.

2. Station and offset of all junction boxes.

3. Location of the load center.

4. Location of all equipment cabinets.

Before final inspection of the work, submit three (3) sets of the as-built plans to the Engineer and affix one (1) set to the inside of the cabinet door in a waterproof, clear plastic laminated holder. You may substitute three (3) colored copies of the as-built plans in lieu of keeping the four (4) separate original copies. If you elect to do this, a sample of the method of copying must be approved before starting any work on the Automatic Vehicle Classification. Redlines of full-size construction plans may be used as as-builts.

669-1.05 PHOTOGRAPHS. Before the final inspection of the work, submit one copy of photographic documentation of all sensor installations.

1. Media. Supply photographs in JPEG format on CDROMs or other media, such as USB flash drives. Label each photograph with the identification of its subject in type large enough to be read with the unaided eye. Include device designation (example: H1BLC). Organize CDROMs along with as-builts in one or more white-colored, D-ring style, 3- ring binders. Place CDROMs in CD storage sheets inside the binders.

2. Content. Show the loops and piezoelectric axle sensors and conduit in place prior to covering in the photographs. Include photographs showing the following:

    a. Two or more overall views of each AVC installation showing placement of the piezoelectric sensors and loops and existing cabinet and radar sensor.
    b. One or more views of each piezoelectric sensor conduit showing the coaxial cable, saw cut, and conduit to the nearest junction box.
    c. One or more views of each loop and conduit to the nearest junction box.

MATERIALS

Use materials that conform to Section 740, the Materials Certification List, the Plans, Specifications, and the following:

Concrete	Section 550 (Class B)
Grout	Subsection 701-2.03
Reinforcing steel	Section 530
Paint	Subsection 708-2.01
Anchor Plate	ASTM A709
Galvanizing	Subsection 716-2.07

669-2.01 PIEZOELECTRIC SENSOR. Supply piezoelectric sensors meeting the following requirements:

1. Functional Class. Class II.

2. Center Core. 16 gauge, flat, braided, silver-plated copper wire.

3. Piezoelectric Material. Spiral-wrapped PVDF, highly compressed Piezoelectric copolymer.

4. Outer Sheath. 0.016-in thick brass, CDA-260, ASTM B 587-88.

5. Dimensions. 0.260-in wide and 0.063-in thick; ±0.005-in. Supply piezoelectric sensors length as shown on the Plans.

6. Insulation resistance. Greater than 500M ohms between core and shield.

7. Piezoelectric Coefficient. Greater than or equal to 20 pC/N – nominal.

8. Passive Signal Cable. RG 58 type or electrical equivalent, with a direct-burial rated outer jacket. Provide a cable with a nominal capacitance of 27 pF/ft (89 pF/m).

9. Installation Bonding Agent. AS475 methylmethacrylate grout or manufacturer-approved substitute.

10. Piezoelectric axle sensor. Two per lane, with coaxial leads long enough to reach the controller cabinet without splices.

669-2.02 CABINET. Use the existing cabinet type CBA2 enclosure. Comply with the following requirements.

1. Terminal Blocks. Verify there is adequate number of terminal pin numbers in the terminal block, replace or add additional terminal block as required.

669-2.03 CELLULAR MODEM. Use the existing cellular modem.

669-2.04 AUTOMATIC VEHICLE CLASSIFICATION (AVC) COUNTERS. Use the existing counter, which classifies vehicles using new loops and piezoelectric sensor in addition to the existing radar sensor. Ensure the contact closure inputs are appropriate for the site's sensors configuration, associated electronics, and software to automatically poll counters.

669-2.05 REMOTELY CONTROLLABLE SERIAL SWITCH. Use the existing remotely-operated switch.

669-2.06 RESERVED.

669-2.07 RADAR-BASED TRAFFIC DETECTION EQUIPMENT. Use the existing radar sensor.

669-2.08 POLES. Use the existing radar sensor pole assembly.

669-2.09 MATERIAL SUBMITTALS. Within 30 days after the Contract award, submit three (3) collated copies of a portfolio of equipment and materials proposed for installation to the Department for review and approval. Include a table of contents in the portfolios that include each item's intended use(s); the identity of each component's proposed features; and the following:

1. Materials on the *Qualified Products List*: A description that includes product name, manufacturer, model or part number, and the conditions listed for approval.

2. Materials Not on the *Qualified Products List*: Catalog cuts that include the manufacturer's name, type of product, size, model number, conformance specifications, and other data as may be required, including manufacturer's maintenance and operations manuals, or sample articles. Catalog cuts shall be clearly marked indicating which item on the catalog cut will be used when multiple items are shown.

3. Materials Requiring Certification: Submit certification from the supplier for all steel products incorporated in the AVC installation indicating origin with the material catalog cuts

or the shop drawings in accordance with Subsection 106-1.01, Source of Supply and Quality Requirements.

4. Materials Not Requiring Certification: Incidental materials incorporated into the work (such as nuts, ties, bolts, washers, etc.) must meet all applicable Specifications and be installed per all manufacturer's recommendations. Certification is not needed unless required by the Special Provisions or requested by the Engineer.

669-2.10 WARRANTIES, GUARANTEES, MANUALS, AND INSTRUCTION SHEETS. Deliver to the Engineer all manufacturers' warranties, guarantees, repair and operation manuals, instruction sheets, and parts furnished with materials used in the work before the Department assumes maintenance responsibilities.

CONSTRUCTION REQUIREMENTS

669-3.01 GENERAL. Complete each AVC and ensure it is ready for operation, not more than one month after disabling an existing data collection site. The site is not considered complete until the system, including communications, is configured and can be polled with provided electronics and software from the DOT Traffic Data & Forecasting Section offices at 2301 Peger Road, Fairbanks, AK 99709. Phone (907)451-2257.

Prior to installing conduit, conductors, presence loops, or piezoelectric sensors, notify the Engineer in writing, a minimum of 3 working days prior to installation. The Engineer shall be present to approve the installation prior to final burial or encasement. Correct any unacceptable installations and then request reinspection by the Engineer for completeness prior to burial or encasement. Uncover, remove and replace any burial or encasement not approved by the Engineer.

Locate and protect all existing underground and overhead utilities. The location of cables, conduits, junction boxes, foundations, and poles that are shown on the plan sheets are approximate and it is the Contractor's responsibility to verify the actual locations when working in the area.

669-3.02 WIRING. Install all wiring in accordance with Subsection 660-3.05, Wiring.

Terminate all unused pairs with splices at junction boxes.

Provide a minimum of 2-feet of slack conductor in each junction box and a minimum of 6-feet of slack conductor in the equipment cabinet prior to the terminal block.

Label all conductors in accordance with Subsection 660-3.05, 14.

669-3.03 CONDUIT. Install all conduits in accordance with Subsection 660-3.03, Conduit, or as indicated on the Plans.

Provide nylon pull cords in all conduits larger than 1-in and in all spare conduits.

Use plastic-sleeved grounding bushing. Install plastic-sleeved grounding bushings before pulling any conductors.

Where conduit runs cross below existing curb and gutter, saw cut the curb and gutter at the nearest joint and remove that entire section and replace.

669-3.04 JUNCTION BOXES. Install all junction boxes in accordance with Subsection 660-3.04, Junction Boxes.

Emboss the word TRAFFIC on the lids of all junction boxes that contain loop or sensor conductors.

Emboss the word ELECTRIC on the lids of all junction boxes used to provide electrical service to AVC installations.

Junction boxes for 120V/240V electrical service must be kept separate from junction boxes containing loop or sensor conductors. Junction boxes used for AVC installations must not contain any system operating at or greater than 24 V.

Install a sump (stone drain) to the dimensions shown on the plans. Sump material shall be a washed porous backfill material that conforms to Subsection 703-2.10. A mortar brick base, pavers, or stepping stones shall line the entire bottom perimeter of all new, relocated, or adjusted Type I, IA, II, and III junction boxes. Compact the aggregate sumps as directed to prevent settlement of the trench backfill. Compact gravel drain material under J-boxes as directed by the engineer to prevent settlement of foundations, J-boxes, and adjacent improvements.

669-3.05 TERMINAL BLOCKS. Mount terminal blocks within cabinets so that all terminals are easily accessible from the front of the cabinet.

Label wire pairs clearly on both sides of the terminal block.

Terminate and solder all conductors, including unused spares, to "spade" type terminal lugs on the terminal block.

669-3.06 PRESENCE LOOPS. Install all presence loops in accordance with Subsection 660-3.05, Wiring, unless otherwise specified on the Plans. Closely conform to the location and layout of conduit runs shown on the Plans.

Construct loops to within plus-or-minus 1-in (± 1-in) tolerance for size, lane alignment, and relative location from other presence loops.

Install lead-in conduits straight and perpendicular to the centerline of the road from the edge of pavement to the presence loops.

Form presence loops, located in through traffic lanes, with four (4) turns of wire in a 6-ft square, unless noted otherwise on the Plans.

Install all presence loops prior to overlaying pavement. Saw cutting for loop installation is not permitted.

Inductance Test. Measure each detector loop and lead-in cable system at the detector cabinet. The inductance must be in the range of 50 to 500 microhenries.

Test each loop detector circuit for continuity at two locations:

1. Loop detector at the junction box before splicing with loop detector lead-in cable must have a value less than 0.5 ohms. Test the loop before the saw-cut slot has been filled with loop sealant.

2. Loop detector and lead-in cable system at the traffic signal controller cabinet or detector cabinet after splicing in the junction box must have a value less than 5 ohms for single pair lead-in cable and 10 ohms for multi-par lead-in cable. The continuity test ohm reading at the traffic signal controller cabinet or detector cabinet must be greater than the ohm reading measured at the loop detector at the junction box.

669-3.07 PIEZOELECTRIC SENSORS. Install per AVC equipment and piezoelectric sensor according to the manufacturer's recommendations. The Engineer and a manufacturer's direct representative shall be present to approve the installation prior to final burial or encasement. Correct any unacceptable installations and then request reinspection by the Engineer for completeness prior to burial or encasement. Uncover, remove and replace any burial or encasement not approved by the Engineer.

Install piezoelectric sensors to within plus-or-minus 1-in (± 1-in) tolerance for size, lane alignment, and relative location from the sensors adjoining presence loops.

Run coaxial cables to the equipment cabinet without splices and terminate on the specified terminal block, provide a minimum of 6-ft of slack in the cabinet prior to the terminal block. Do not bend coaxial cable beyond the manufacturer's specifications, damaged coaxial cables shall be replaced at the contractor's expense.

Install lead-in conduit straight and perpendicular to the centerline of the road from the edge of pavement to the piezoelectric sensors. Cap the ends of the lead-in conduit beyond the edge of the pavement. Lead-in conduit runs to junction boxes and cabinets may be complete before or after paving.

Install piezoelectric sensors in new asphalt pavement only after final paving and ten days of normal traffic use of that particular section of road. Perform saw cutting after receiving approval from the Engineer. Submit saw cutting method to the Engineer for approval prior to beginning cutting. Clean, blow out, and thoroughly dry saw cuts prior to installing piezoelectric sensors.

669-3.08 RESERVED

669-3.09 CABINETS. Use existing conduit entries through the bottom of the enclosure. No cuts through the sides or top are permitted.

669-3.10 UTILITIES.

1. Electrical. Preserve and protect the existing load center, utility connection, and feeder circuit to the traffic cabinet.

2. Cellular Modem. Use the existing cellular modem, maintain the utility existing provider.

669-3.11 ACCEPTANCE TESTING. Perform tests on the AVC installations in accordance with Subsection 660-3.01.7, Field Tests.

1. AVC Acceptance Tests. Provide an AVC counter manufacturer's representative with a current certification to observe and assist in conducting the acceptance tests. Notify the Engineer a minimum of one week prior to the acceptance testing so that the Department's Traffic Data and Forecasting Section representative may be on site. Coordinate with the Traffic Data Staff to verify testing requirements and vehicle specifications prior to conducting the acceptance test.

2. Provide documentation noting the test vehicle's gross weight and measured axle spacing to the Engineer prior to conducting testing. Receive the Engineer's approval of the data sampling and testing schedule prior to testing. The Engineer and a Traffic Data and Forecasting representative shall be on-site during final acceptance testing and will provide certification, in writing, when the installation has met the accuracy requirements of the acceptance tests.

   In addition to the tests noted in Subsection 660-3.01.7, Field Tests, perform the following Acceptance Tests:

   a. Acquire a set of test data for the AVC sensor array. Obtain test data by passing a test vehicle over the AVC sensors in each lane. Obtain ten (10) valid samples, per direction, for the test vehicle. Test data samples will include FHWA class designation and computed axle spacing for each sensor pass.

      To be considered valid, obtain sample data under the following conditions:

      1) Maintain good lane discipline while traversing the entire sensor array.

2) Maintain a constant speed, between 40 mph and the posted speed limit, while traversing the entire array.
3) Acquire all data for a particular lane using the same vehicle.
4) Obtain data from successive sensor passes of the test vehicle; data may not be omitted or included out of order for any 10 samples.

b. Meet the following requirements separately in each lane:

1) The AVC system correctly assigns FHWA class designation for 9 out of 10 successive sensor passes of the test vehicle.
2) The AVC system computes axle spacings to within one foot of the actual measurements, for 9 out of 10 successive sensor passes of the test vehicle.

c. Provide and make arrangements for test vehicles and drivers as needed for the acceptance testing. Provide the following test vehicles (if a vehicle of the specified types is not available or is not practical at any of the locations, advise and determine substitutions with the Engineer one week prior to the test):
1) A two-axle, six-wheel, single-unit vehicle (FHWA Class 5). Class 5 vehicles have 13 to 23 ft spacing between the steering and drive axles.
2) A three-axle, ten-wheel, single-unit vehicle (FHWA Class 6). Class 6 vehicles have 11.5 to 23 ft spacing between the steering axle and drive axle group; and a spacing of 3.5 to 6 ft between the drive axles.
3) A five-axle, eighteen-wheel, single trailer vehicle (FHWA Class 9), with a high-cube rated (HCR) trailer. Class 9 vehicles have 11.3 to 24.6 ft spacing between the steering axle and drive axle group; a spacing of 3.5 to 6 ft between the drive axles; 6.1 to 46 ft spacing between the drive axle and the trailer axle group; and a spacing of 1.1 to 40 ft between the trailer axles.

Load the test vehicle with non-shifting material to a minimum of 50% of the legal load during testing. The gross weight of the test vehicle and the weight of the test vehicle's axle groups shall be determined by weighing on a static scale at a scale house operated by the State of Alaska Department of Commerce, Division of Weights and Measures. An axle group is defined as any two axles whose centers are within 8-ft of each other. Class 6 test vehicles have two axle groups and Class 9 test vehicles have three-axle groups.

d. Ensure that all tires on the test vehicle are inflated to recommended pressures during testing.

3. AVC Acceptance tests govern acceptance or rejection of the AVC installation.

4. Test Results. Provide a copy of the final test results in written or printed form to the Engineer, prior to the acceptance of the AVC installation. Sign the test results attesting to their accuracy and compliance to the Special Provisions.

Include both an electronic copy and a paper copy of the final AVC counter's per-vehicle-record logs of the AVC tests. Provide sorted calibration test data by test vehicle, tabulated in a spreadsheet and certified by the AVC manufacturer's representative.

669-4.01 METHOD OF MEASUREMENT. The quantity to be paid for each automatic vehicle classification installation completed and accepted.

669-5.01 BASIS OF PAYMENT. The contract unit bid price for all Automatic Vehicle Classification installations shall be full compensation for furnishing all equipment, labor, and materials necessary to complete the work as specified; including but not limited to: conductors, conduits, junction boxes, presence loops, piezoelectric sensors, terminal blocks, excavation, backfill, topsoil, seeding, saw cutting, as-built plans, acceptance testing, and calibration required for these installations.

Existing AVC counter modification to ensure operable integration of the new loops and piezoelectric sensor in addition to the existing radar detection sensor is subsidiary to the 669 pay item.

Removal and disposal of existing data collection sites are subsidiary to 669 Pay Item. Work includes all labor, materials, excavation, backfill, topsoil, and seeding needed to remove and dispose of loops, conduit, conductors, and junction boxes.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
669.2007.0000	Automatic Vehicle Classification Site 01	LS

Add the following Section:

SECTION 680
TELECOMMUNICATIONS UTILITIES

680-1.01 DESCRIPTION. This includes the provision of all required work and materials to complete the telecommunications utility work as noted or detailed on the Plans and in these Specifications.

The applicable telecommunications utility companies that will require system modification includes Cordova Telephone Cooperative (CTC) and General Communication Incorporated (GCI).

The Contractor scope of work does not include installation of conductor, fiberoptic or any connections of such.

Provide temporary facilities to maintain all service for the existing systems, as required, until the new systems is fully operational.

680-2.01 MATERIALS. All materials shall conform to the latest standards developed by each corresponding utility. Contact each utility company for the latest developed standards at the time of construction.

The utility companies shall only supply materials specified within this section or as specified on the Plans. The contractor shall supply all other materials as specified in this section, on the Plans, and incidental parts required to complete a fully functioning telecommunications system.

680-2.02 GCI. GCI is supplying vaults and pedestals. The contractor shall sign for all material when picked up at GCI's warehouse or storage yard in Cordova. Ensure that all materials on GCI's list are received. Material issued but not used shall be returned to the GCI facility.

GCI Contractors or GCI employees will:

1. Install all coaxial cables and provide all required splicing.

2. Pull fiber in contractor installed HDPE conduit and provide all required splicing of the fiber.

3. Install all cabling routing through risers where loose coaxial or fiber will be installed.

4. Provide all material and labor to install all ground rods.

5. Provide all cable splicing between new and existing to remain systems and between new systems and building service equipment.

6. Provide all labor to remove the decommissioned portion of their system in its entirety.

The Contractor shall:

1. Coordinate with GCI prior to installing any infrastructure.

2. Provide all labor and appurtenances to install all GCI provided vaults and pedestals.

3. Furnish and install direct burial HDPE conduit for the GCI infrastructure as shown on the Plans.

4. Provide all conduit sweeps and risers/stub-ups.

5. Provide moisture seals where conduits are installed for GCI use to prevent moisture from entering the system.

All direct burial conduits shall be HDPE below grade between sweeps. The Contractor shall coordinate with the Engineer and GCI representative for all testing and inspections. The Contractor shall not cover any below grade systems prior to approval by GCI.

Safe handling and storage of materials is the Contractor's responsibility. The Contractor shall replace any damaged material at their own expense.

680-2.03 CTC. CTC is supplying vaults and pedestals. The contractor shall sign for all material when picked up at CTC's warehouse or storage yard in Cordova. The Contractor shall sign for any material when picked up at the CTC warehouse. Ensure that all materials on CTC's list are received. Material issued but not used shall be returned to the CTC warehouse.

CTC Contractors or CTC employees will:

1. Provide all material and labor to install all cables in the conduit system(s).

2. Provide all material and labor to install all ground rods.

3. Supply the vaults and pedestals.

4. Provide all material and labor for splicing, reconnection and/or modification of aerial and underground services.

5. Provide all labor to remove the decommissioned portion of their system in its entirety.

The Contractor shall:

1. Coordinate with ACS prior to installing any infrastructure.

2. Provide all material, labor, and appurtenances to construct and install the conduit system, vaults and pedestals as shown on the Plans.

    a. This item includes provision of conduits.

3. Provide all conduit sweeps and risers/stub-ups.

a. At existing pedestals and vaults, the Contractor shall install sweep and stub-up, or cap and mark the conduit as shown on the Plans.

4. Provide moisture seals where conduits are installed for CTC use to prevent moisture from entering the system.

5. Provide temporary facilities to maintain the existing system, as required, until the new system is fully operational.

All conduits shall be HDPE or PVC as shown on the plans. The Contractor shall not cover any below grade systems prior to approval by ACS.

Safe handling and storage of materials is the Contractor's responsibility. The Contractor shall replace any damaged material at their own expense.

CONSTRUCTION REQUIREMENTS

680-3.01 GENERAL. All utility work shall satisfy the requirements of Subsection 105-1.06.

Perform all construction in accordance with Rural Utilities Service (RUS) Bulletins and all Utility policies, procedures, and construction standards.

Excavate, and place bedding and backfill according to Sections 204 and Plan details.

All duct banks consist of HDPE and PVC conduits bedded in sand as shown on the Plans. Install conduit according to the Plans and these Specifications using methods recommended by the manufacturer. Use conduit spacers as noted on the Plans.

Each utility company will designate a single point of contact responsible for construction coordination and inspection.

1. Vaults.

   a. Vault type, size, orientation, and location of access manholes shall be constructed and installed as shown on the Plans. Vaults shall be set on 12 inches minimum of compacted selected material type A and leveled.

   b. Vault manhole covers and handhole covers shall have the type of the utility embossed on top.

2. Direct Burial Conduit. Install conduits of the sizes specified along the routes detailed on the Plans.

   a. Install conduits at least 40 inches below the finished grade to top of conduit.

   b. Install long-radius sweeps on PVC conduit where bends are required. Provide a minimum 48" radius on sweeps or bends for HDPE conduit.

   c. All GCI conduits shall be continuous and un-spliced where possible. Conduit shall be installed with a minimum 48" bend radius at stub up locations where the conduit comes to grade, which may require a deeper trench at stub up locations. If sweeps are required, then all GCI conduit shall be installed through the sweep and be un-spliced. At riser locations, conduit shall be installed un-spliced within the riser, with a coil of 10-feet of excess for GCI use at the top of the riser. At existing locations, install buried conduit to within five feet of the facility and provide a pigtail of 10-feet of excess for GCI use. The conduit shall be bundled and tied together with a non-corroding tie (i.e. plastic zip tie) every 6".

d. Install conduits that cross unpaved areas and paved roadways that will be overlaid in excavated trenches. Excavate, bed conduits, and backfill trenches according to Sections 204.

e. Keep conduits clean. Install grounding bushings and approved plastic insert type plugs on the ends of conduit runs before backfilling around the conduit ends.

f. Install conduits that must cross existing facilities such as storm drain-pipes, duct systems, and other underground utilities at the minimum depths specified, going under the facilities if necessary.

g. Position conduits in trenches to provide clearances of at least 2-1/2-inches around 2-inch or smaller conduits and at least 2-inches around conduits larger than 2-inches.

h. Fabricate rigid metal conduits less than 10-feet long from standard lengths of conduit. Cut conduits squarely to ensure the threading die starts squarely on the conduit. Cut the same number of threads as found on the factory threaded ends. Ream the inside of conduit ends cut in the shop or field to remove burrs and sharp edges. Do not use slip joints or pieces of running thread pipe.

i. Coat drilled holes, shop and field cut threads, and the areas with damaged zinc coating with zinc rich paint.

j. When standard couplings cannot be used to join conduit components, use approved threaded unions.

k. Bury a continuous strip of 4-mils thick, 6-inch wide polyethylene marker tape above underground conduit runs. Install the tape 9-inches (± 3 inches) below finished grade or a minimum of 24-inches above the conduit, using two strips side by side to mark road crossings. Furnish tapes with a black legend on a red background.

l. Install a polypropylene pull rope with a minimum 200-pound tensile strength in future use or spare conduits and reinstall the plugs. Double back pull rope, at least two feet, into both ends of each conduit.

m. Make any butt connections between high-density polyethylene conduit sections above ground prior to laying in the trench. Couple HDPE conduit to rigid metal conduit for all surface exposures. Butt-weld the conduit using the manufacturer's recommended procedures and equipment or couple with compatible molded HDPE electrofusion couplings (as acceptable with the conduit manufacturer). All bending of conduit will be by means recommended by the manufacturer and in no case with a cold bend radius greater than the manufacturer's recommendation.

n. Prior to HDPE buried conduit installation, provide a short demonstration section of conduit with an electrofusion coupling cut out and split for destructive testing and approval of fusion. Assure that the conduit is open, continuous, and free of water and debris prior to installing cable. Pull a stiff bristle brush through the entire length of the conduit run immediately prior to the cable being installed. Grade conduit uniformly straight and without sags.

Each Utility has the opportunity to provide their own modifications for their facility at their discretion. The Contractor shall coordinate with each respective utility to determine any areas, if any, that the utility will be preforming in fieldwork internally.

680-3.04 TESTING. Coordinate with each utility to ensure all required utility testing and inspections are completed. The contractor shall not backfill any below grade systems prior to the corresponding utility's approval of the system.

680-4.01 COORDINATION. The Contractor shall coordinate with each utility to acquire all utility policies, procedures, and construction standards, and to determine all required testing and inspections as required by the utility and this specification.

Coordinate with each utility at least one week in advance before any necessary service outages are required for work to progress.

680-5.01 BASIS OF PAYMENT. All telecommunications utility work shall be paid for at a lump sum price. The lump sum shall include all required labor, materials (as described in above sections), appurtenances, supervision, utility coordination, and all other incidentals for the conduit duct bank, vaults, and pedestals. Trench excavation, bedding, and backfill will be paid under Section 204.

Temporary facilities required to maintain the existing systems is subsidiary to this Section.

Removal and resetting of chain link fence as required for telecommunication utility installation is subsidiary to Pay Item 680.2000.0000 Telecommunication Utility Relocation, GCI.

Remanufactured or rebuilt equipment will not be permitted.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
680.2000.0000	Telecommunications Utility Relocation, GCI	LS
680.2000.0000	Telecommunications Utility Relocation, CTC	LS

Add the following section:

SECTION 687
POWER UTILITIES

687-1.01 DESCRIPTION. This includes the provision of all required work and materials to complete the electrical utility work as noted or detailed on the Plans and in these Specifications.

The applicable electrical utility company that will require system modification includes Cordova Electric Cooperative (CEC).

The Contractor scope of work does not include installation of conductors, transformers, or any related conductor connections.

Provide temporary facilities to maintain all service for the existing system, as required, until the new system is fully operational.

687-2.01 MATERIALS. All materials shall conform to the latest standards developed by the utility. Contact the utility company for the latest developed standards at the time of construction.

The utility company shall only supply materials specified within this section or as specified in the drawings. The contractor shall supply all other materials as specified in this section, on the Plans, and incidental parts.

687-2.02 CEC. CEC is supplying the vaults for the relocation of the power distribution system. The contractor shall sign for all material when picked up at CEC's warehouse in Cordova. Ensure that all

materials on CEC's list are received. Material(s) issued but not used shall be returned to the CEC warehouse.

CEC Contractors or CEC employees will:

1. Supply the concrete electrical vaults for Contractor installation.

2. Furnish and install conductors and connections, make tie-ins, and service switchover.

3. Provide all labor to remove the decommissioned portion of their system in its entirety.

4. Provide all labor to remove light poles designated by the project for removal.

The Contractor shall:

1. Provide all materials, labor, and appurtenances to construct the sand bedded duct bank system and distribution equipment pads and electrical vaults.

    a. This item includes provision of all PVC conduits, fittings, conduit spacers and requisite material for sealing the vault knockouts as part of the duct bank system.

2. Provide all conduit sweeps and risers/stub-ups.

    a. At new vaults and road crossings, the Contractor shall install sweeps and stub-in within vault as required by CEC standards and the details provided in the plans.

    b. At existing transformers and utility structures, the Contractor shall terminate and cap the conduit and mark the location upon backfill as detailed on the Plans. The Utility will reconnect service equipment at a later date.

All conduits shall be PVC. The sand bedded duct bank system is considered direct bury.

Contractor to provide CEC with two-week notification so CEC representative can be on-site for installations and conduit terminations. The Contractor shall coordinate with the Engineer and CEC representative for all testing and inspections. The Contractor shall not cover any below grade systems prior to approval by CEC.

Safe handling and storage of materials is the Contractor's responsibility. The Contractor shall replace any damaged material at their own expense

CONSTRUCTION REQUIREMENTS

687-3.01 GENERAL. All utility work shall satisfy the requirements of Subsection 105-1.06.

Perform all construction in accordance with Rural Utilities Service (RUS) Bulletins and all Utility policies, procedures, and construction standards.

Excavate, and place bedding and backfill according to Section 204 and Plan details.

The utility company will designate a single point of contact responsible for construction coordination and inspection.

1. Vaults.

    a. Vault type, size, orientation, and location of access manholes shall be constructed and installed as shown on the Plans. Vaults shall be set no 12 inches minimum of compacted selected material type A and leveled.

    b. Vault manhole covers and handhole covers shall have the type of the utility embossed on top.

2. Direct Burial Conduit: Use polyvinylchloride (PVC) conduits. Install conduits of the sizes specified along the routes detailed on the Plans. When routing is not shown, route conduits as directed by the Engineer.

    a. Install conduits at least 40 inches below the finished grade of the ground above the conduit, except where shown deeper for avoidance of water, sewer, storm drain, culverts or other utilities.

    b. Install long-radius sweeps where bends are required.

    c. Install conduits that cross unpaved areas and paved roadways that will be overlaid in excavated trenches. Excavate, bed conduits, and backfill trenches according to Section 204.

    d. Drill a 3/8 inch drain hole in the bottom of the lower straight section of elbows and in the bottom of conduits at the low points of conduit runs. Smooth the edges of the drilled holes on the inside of elbows to prevent scraping the conductors. Cover the holes with a wrap of approved filter cloth secured with two (2) self-clinching nylon cable ties.

    e. Keep conduits clean. Install grounding bushings and approved plastic insert type plugs on the ends of conduit runs before backfilling around the conduit ends.

    f. Install conduits that must cross existing facilities such as storm drain pipes, duct systems, and other underground utilities at the minimum depths specified, going under the facilities if necessary.

    g. Position conduits in trenches to provide clearances of at least 2-1/2-inches around 2-inch or smaller conduits and at least 2'inches around conduits larger than 2-inches.

    h. Bury a continuous strip of 4-mils thick, 6-inch-wide polyethylene marker tape above underground conduit runs. Install the tape 9-inches (± 3 inches) below finished grade or a minimum of 24 inches above conduit as shown on the plans, using two strips side by side to mark road crossings. Furnish tapes with a black legend on a red background.

    i. Install expansion fittings in conduits that cross expansion joints.

    j. Install a polypropylene pull rope with a minimum 200-pound tensile strength in future use or spare conduits, and reinstall the plugs. Double back pull rope, at least two feet, into both ends of each conduit.

The utility has the opportunity to provide their own modifications for their facility at their discretion. The Contractor shall coordinate with the utility to determine any areas, if any, that the utility will be preforming fieldwork internally.

All utility work associated with CEC power system shall be completed by CEC.

687-3.04 TESTING. Coordinate with the utility to ensure all required utility testing and inspections are completed. The contractor shall not backfill any below grade systems prior to the corresponding utility's approval of the system.

687-4.01 COORDINATION. The Contractor shall coordinate with the utility to acquire all utility policies, procedures, and construction standards, and to determine all required testing and inspections as required by the utility and this specification.

The Contractor shall coordinate with each utility for providing excavation, backfill, and construction surveying requirements.

Coordinate with the utility at least one week in advance before any necessary service outages are required for work to proceed.

687-5.01 BASIS OF PAYMENT. All electrical utility work shall be paid for at a lump sum price. The lump sum shall include all required labor, materials (as described in above sections), appurtenances, supervision, utility coordination, and all other incidentals for the relocated utility conduit and vaults. Trench excavation, bedding, and backfill will be paid under Section 204.

Temporary facilities are subsidiary to this Section.

Remanufactured or rebuilt equipment will not be permitted.

Payment will be made under:

PAY ITEM		
Item Number	**Item Description**	**Unit**
687.2000.0000	Power Utility Relocation, CEC	LS

SECTION 701
HYDRAULIC CEMENT AND SUPPLEMENTAL CEMENTITIOUS MATERIALS

701-2.03 GROUT. Add the following:

Grout used for draped mesh anchors require a 3-day minimum compressive strength of 3,000 psi and a 7-day compressive strength of 6,000 psi when tested according to AASHTO T 106 or ASTM C109.

SECTION 702
ASPHALT MATERIALS

08/04/22 (N82)
702-2.01 ASPHALT BINDER. *Delete the first paragraph and substitute the following:* Meet AASHTO M 320 for PG 52-28 binder.

Meet AASHTO M 332 for PG 52E-40 binder, except that J_{NR} Diff (AASHTO T 350) and Direct Tension (AASHTO T 314) do not apply. PG 52E-40 binder shall have a minimum Percent Recovery$_{3.2}$ of 75% according to AASHTO T 350.

702-2.03 EMULSIFIED ASPHALT.

1. Cationic Emulsified Asphalt. *Add the following:* CRS-2P shall meet AASHTO M 316, except the penetration value shall be 100 – 200 mm.

SECTION 703
AGGREGATES

12/08/15 (N63)
703-2.09 SUBBASE. *Add the following:*

Subbase, Grading F. Aggregate containing no muck, frozen material, roots, sod or other deleterious matter and with a plasticity index not greater than 6 as tested by ATM 204 and ATM 205. Table 703-8 and the first paragraph of Subsection 703-2.09 do not apply to Grading F. Meet the following gradation as tested by ATM 304:

Sieve	Percent Passing by Weight
2 in	100%
No. 4	15-65%
No. 200	0-6%

Add the following subsection:

703-2.17 SHOT ROCK.

Shot rock is rock material that must be blasted using explosives. Shot rock shall have 100% fractured faces as determined by the Engineer. Shot rock shall be well-graded with an even distribution of rock sizes that can be compacted with minimal voids. Shot rock shall have no more than 6 percent material passing the No. 200 sieve as tested by ATM 304 determined on the minus 3-inch portion of the sample. Shot rock is rock material containing no muck, frozen material, roots, sod, or other deleterious matter. Shot Rock shall have a maximum L.A. Abrasion Loss of 30% as determined by AASHTO T96.

Sieve	Percent Passing by Weight
18 in.	100%
No. 4	10-60%
No. 200	0-6%, determined on the minus 3-inch portion of the sample

SECTION 707
METAL PIPE

04/30/17 (N48)
707-2.01 CORRUGATED STEEL PIPE, PIPE ARCHES, AND UNDERDRAINS. *Add the following:* All seams on pipes manufactured with helical corrugations shall have a continuous weld extending from end to end of each length of pipe in conformance with AASHTO M 36. Seams shall be welded in such a manner that they develop 90% of the average ultimate strength of the base metal. A test shall be performed by an independent lab in accordance with AASHTO T 241 Section 4 during the year in which the pipe is fabricated. The Supplier shall maintain quality control test results and provide them upon request. A copy of the test results containing the information specified in Section 4.6 of AASHTO T 241 shall be furnished to the Engineer.

A Supplier of welded helically corrugated pipe which qualifies for inclusion in the current publication of the Department's QUALIFIED PRODUCTS LIST is not required to perform the test.

01/20/15 (N49)
707-2.03 CORRUGATED ALUMINUM ALLOY CULVERT PIPE AND UNDERDRAINS. *Delete the first sentence and substitute the following:* This pipe shall conform to the requirements of AASHTO M 196 except that helical corrugations shall not be allowed.

SECTION 708
PAINTS

08/02/18 (N61)
708-2.03 PAINT FOR TRAFFIC MARKINGS. *Delete this subsection in its entirety and substitute the following:*

1. Pigment Composition: Pigments shall be first quality paint grade pigments. The inert or filler pigments must be of a type and quality generally recognized as first quality paint grade products, and shall not contribute to settling of the paint in storage.

2. Vehicle or Resinous Binder Composition: The vehicle may be any combination of natural or synthetic resinous materials that are not prohibited per this specification. All resins used must be permanently capable of re-dissolving in the solvent combination used in the paint. Paint and binder combinations shall minimize build-up of the paint on the sides of tanks, paint lines, and clogging of spray equipment from un-dissolvable skins.

3. Use material that satisfies the requirements in Table 708-1

TABLE 708-1
PAINT FOR TRAFFIC MARKINGS

CHARACTERISTIC	MINIMUM	MAXIMUM	TEST METHOD
Viscosity @ 77ºF, (25ºC), KU	75	90	ASTM D562
Weight per Gallon at 77ºF, (25ºC)	11.0	---	ASTM D1475
Fineness of Grind, Hegman	2	---	ASTM D1210
Drying Time for no-pick-up, Minutes	---	5	ASTM D711
Contrast Ratio @ 5 mils wet, White and Colors (Black)	0.95 (1.0)	---	ASTM D2805
Colors: Yellow 33538; White: 37925; Blue 35180; Red 31138; Black 37038 or approved equals	Pass		FED-STD-595C
Directional reflectance of white paint applied at 15 mils wet film, percent (Measured with 45°:0° or 0°:45° geometry)	85	---	ASTM E1347
Directional reflectance of yellow paint applied at 15 mils wet film, percent (Measured with 45°:0° or 0°:45° geometry)	45	---	ASTM E1347
Volatile Organic Compounds (VOC), grams/liter (lbs./gallon)	-	150 (1.25)	EPA 40 CFR Part 59, ASTM D3960
Total Solids, % by Weight	70	-	ASTM D2369
Total Solids, % by Volume	43	-	ASTM D2697

4. Prohibited Materials: The Manufacturer must certify that the product does not contain mercury, lead, hexavalent chromium, halogenated solvents (such as Methylene Chloride), or any carcinogen, as defined in 29 CFR 1910.1200.

5. Condition in Container: Store according to the manufacturer's recommendations. For a minimum of one year from the date of manufacture, the paint shall meet each of the following conditions:

   a. Not show excessive settling in a freshly opened full can
   b. Show no curdling, livering, caking, lumps, skins, or color separation
   c. Be easily re-dispersed when mixed with a paddle

d. Be easily re-dispersed after 5 minutes of mechanical shaking using a standard commercial paint shaker
e. Water Resistance: Guaranteed water resistant when applied properly.

6. Weathering: Guaranteed against cracking and weathering under extreme conditions when applied properly.

7. Storage Stability:

   a. There must be no viscosity increase of 5 Krebs Units over the originally reported viscosity after aging in the container or decomposition of the product. Field examination of previously unopened containers must not disclose evidence of un-dissolvable gelatinous vehicle separation, heavy skin formation, or corrosion of the container of batches in storage one year or less. Containers stored under adverse conditions such as uncovered areas unprotected from the elements must show no evidence of the above conditions over a period of 6 months from date of shipment from manufacturer.

8. Application Temperature: The manufacturer's recommended minimum application temperature (air, surface and material) must be 40° Fahrenheit or lower.

SECTION 709
REINFORCING STEEL AND WIRE ROPE

709-2.02 WIRE ROPE OR WIRE CABLE. *Delete this subsection in its entirety and replace with the following:*

1. 1-inch Wire Rope. Provide 1-inch diameter independent wire rope core (IWRC) 6x19 (or equivalent), extra improved plow steel (EIP) galvanized in accordance with ASTM A 1023, Class A. Provide a wire rope with a minimum breaking strength of 103,000 pounds.

2. 3/4-inch Wire Rope. Provide 3/4-inch diameter independent wire rope core (IWRC) 6x19 (or equivalent), extra improved plow steel (EIP) galvanized in accordance with ASTM A 1023, Class A. Provide a wire rope with a minimum breaking strength of 58,000 pounds.

3. 5/16-inch Wire Rope. Use 5/16-inch diameter independent wire rope core (IWRC) 7x19 (or equivalent), extra improved plow steel (EIP) galvanized in accordance with ASTM A 1023, Class A. Provide a wire rope with a minimum breaking strength of at least 9,800 pounds.

4. 5/8-inch Wire Rope. Use 5/8-inch diameter independent wire rope core (IWRC) 6x19 (or equivalent), extra improved plow steel (EIP) galvanized in accordance with ASTM A 1023, Class A. Provide a wire rope with a minimum breaking strength of at least 41,000 pounds.

Add the following subsections:

709-2.04 NET PANELS AND WIRE MESH.

1. Wire Mesh Backing.

   a. High Tensile Strength Wire Mesh Backing. Supply high-tensile strength steel wire mesh using wires with a minimum diameter of 0.079 inches and a minimum tensile strength exceeding 250,000 pounds per square inch with a Zinc/Aluminum galvanizing applied at a minimum weight of 0.40 ounces per square foot. Provide a mesh with a minimum longitudinal tensile strength of 3,600 pound per foot and a maximum mesh width of 3.3 inches.

b. Twisted Wire Mesh. Supply twisted wire mesh made of galvanized steel wire with a diameter of 0.120-inch after galvanization with a uniform hexagonal pattern formed using non-raveling double twist selvages. Galvanize the wire according to ASTM A 641, Class 3, Finish 5 prior to weaving into the mesh. Use soft temper steel wire with a maximum tensile strength of 70,000 pounds per square inch when tested in accordance with ASTM A 641. Supply a wire mesh with nominal mesh openings that are uniform in size measuring not more than 3¼-inches by 4½-inches with an opening area less than ten (10) square inches.

c. Wire Mesh Fastener. Supply C-ring type fasteners composed of high tensile, galvanized wire with a wire diameter of 0.120 inches, an open diameter of 1½ inches and a closed diameter of 3/4 inches. Galvanize all fasteners conforming to ASTM A 641 for zinc coatings, ASTM A 764-93 for chemical and mechanical specifications; and to ASTM E 8/MPT 2004 for tensile strength requirements.

d. Wire Mesh Lacing Wire. Provide lacing wire manufactured from a minimum 9 gauge steel wire meeting Federal specification QQ-W-461 (AISI number 1010 and 1015) finish 5. Galvanize the lacing wire according to ASTM A 641, medium hardness and tensile strength with a Class 3 coating.

2. High Tensile Strength Wire Mesh. Supply high-tensile strength steel wire mesh with a minimum individual wire diameter of 0.118 inches and a minimum tensile strength exceeding 250,000 pounds per square inch with a Zinc/Aluminum galvanizing applied at a minimum weight of 0.40 ounces per square foot. Provide a mesh with a minimum longitudinal tensile strength of 10,000 pounds per foot and a maximum mesh width of 2.6 inches.

709-2.05 GROUND ANCHORS AND BARS.

1. Wire Rope Anchors. Provide either a 1-inch or 3/4-inch diameter wire rope anchor as specified in the Plans. Either single leg or double legged anchors can be used. Provide anchors constructed with a factory swedged eye and a ferrule on the distal end. Provide 6x19 classification independent wire rope core (IWRC) made from extra improved plow steel (EIP). Adhere to the minimum breaking strengths for wire rope anchors required in the Rockfall Attenuator systems as provided in the installation schedules in the Plans. All other 3/4-inch diameter wire rope anchors are required to have a minimum breaking strength of 58,000 pounds. Ensure all wire rope anchors conform to ASTM A 1023/1023M and are galvanized in accordance with ASTM A 603.

SECTION 712
MISCELLANEOUS

Add the following subsections:

712-2.23 APPURTENANCES.

1. Bearing Plates. Size the bearing plates so the bending stresses in the plate do not exceed the yield strength of the steel when a load equal to 100 percent of the Lock-Off Load is applied. Use mild steel for the bearing plate, not less than 0.75 inches in thickness and not less than eight (8) inches square. Use double holed key-hole bearing plates that have a central hole large enough to fit easily over the bolt while maximizing the average bearing surface for the washer and the nut.

2. Nuts, Couplers, and Washers. Provide nuts and couplers that conform to AASHTO M 169 for a Grade 75 bar. Provide beveled washers conforming to ASTM A 536 or ASTM A 47. Spherical seating of the nut is not required. Use flat hardened and beveled washers to accommodate non-perpendicular installations.

3. Centralizers. Provide centralizers fabricated from plastic or material which is non-detrimental to the pre-stressing steel. Do not use wood centralizers.

4. Corrosion Protection. Galvanize all bearing plates in accordance with either AASHTO M 111 or AASHTO M 232 conforming to ASTM A 36 Grade 36 or ASTM A 572 Grade 50. Galvanize all nuts, washers, and couplers in accordance with AASHTO M 232. Conform flat washers to ASTM F 436.

5. Grout Socks. Provide grout socks made by a manufacturer that regularly supplies products for anchoring systems. Select the sock diameter based on manufacturer's recommendations accounting for the drill hole diameter (generally 1-inch larger than the hole diameter). Use socks constructed from a woven synthetic fabric resistant to tears and handling damages. Use a geotextile with an apparent opening size (ASTM D4751) that will allow water to filter out of the grout but prevent significant amounts of cement particles to pass.

712-2.24 HARDWARE. Provide hardware for wire ropes that are products of a manufacturer who is regularly engaged in the manufacturing and testing of wire rope products, and in accordance with the Plans, including wire rope clips, wire rope thimbles, ferrules and shackles. Galvanize all hardware according to AASHTO M 232. Repair any damaged galvanizing according to ASTM A 780. Provide wire rope thimbles and clips suitable for the 1-inch, 3/4-inch, 5/8-inch, or 5/16-inch diameter wire rope, as appropriate.

Delete Section 724 in its entirety and substitute the following:
12/10/20 (N51)

SECTION 724
SEED

724-2.01 DESCRIPTION. This specification provides the requirements for grass seed, used to provide a living vegetative cover.

724-2.02 MATERIALS. Furnish seed true of genus and species. Meet applicable requirements of the State of Alaska *Seed Regulations*, Alaska Administrative Code, Title 11, Chapter 34 (11 AAC 34), and the Federal Seed Act, 7 CFR Part 201. Seed shall meet or exceed the percentages of purity and germination as specified in Table 724-1.

The Contractor may propose an alternate seed mix to the Engineer. Alternate seed mix proposals must include confirmation that the Alaska Plant Materials Center finds the proposed seed mix suitable for use on the project, and that the vendor can provide the proposed seed mix in quantities adequate for the project. The Engineer will determine the acceptability of the proposed alternate for use on the project.

Grass seed shall be furnished in standard containers on which shall be shown the following information:

(1) common accepted name of the specie (kind) and cultivar (variety) of the seed;
(2) country or state where the seed was grown;
(3) total percentage by weight of pure seed;
(4) total percentage by weight of all weed seed;
(5) total percentage by weight of inert matter;
(6) total percentage by weight of other crop seed;
(7) name and approximate number per pound of each kind of restricted noxious weed seed;
(8) percentage of germination of the seed, together with the month and year the seed was tested;
(9) percentage of hard seed, if any is present;
(10) name and address of the person labeling the seed or selling, offering, or exposing the seed for sale within the state; and

(11) lot number or other lot identification.

If furnished as a premixed seed, the containers shall state that the seed is a mixture; the name of the species and cultivars of seed; and total percentage by weight of each species of seed present in order of predominance; and the information listed above: (4), (5), (7), (8), (10) and (11).

Furnish seed certified to be free of prohibited noxious weeds or quarantined pests, and certified to contain no more than the maximum allowable tolerances for restricted noxious weeds, according to 11 AAC 34. Prohibited and restricted noxious weeds are listed in 11 AAC 34.020, and can be viewed at the following URL: http://plants.alaska.gov/invasives/noxious-weeds.htm

Seed found to contain prohibited noxious weeds or quarantined pests will be rejected, according to 11 AAC 34.020(a) and 11 AAC 34.105 through 34.180, respectively.

Seed found to contain restricted noxious weed seed in excess of the maximum allowable tolerance per pound will be rejected, according to 11 AAC 34.020(b).

The Contractor shall furnish to the Engineer duplicate copies of a statement signed by the vendor certifying that each lot of seed has been tested by a recognized seed testing laboratory. Seed that has not been tested within nine (9) months shall be rejected. The Contractor shall not remove tags from the seed containers. Seed containers that do not have tags shall be rejected. Discrepancies in the lot numbers listed on the statement to the lot numbers indicated on the tags of the seed containers shall be grounds for rejection. Seed which has become wet, moldy, or otherwise damaged in transit or storage will not be accepted. The Contractor shall immediately remove rejected seed from the project premises.

TABLE 724-1
SEEDING REQUIREMENTS

SPECIES (KIND)	CULTIVAR (VARIETY)	PERCENT PURITY	PERCENT GERMINATION	PURE LIVE SEED (PERCENT PURITY X PERCENT GERMINATION)
American Sloughgrass	Egan	90	80	72
Annual Ryegrass	---	85	80	68
Alpine Bluegrass	Gruening	90	90	81
Beach Wildrye	Benson, Reeve	95	40	38
Bering Hairgrass	Norcoast	95	75	71
Bluejoint	Sourdough	95	75	71
Brome	Manchar, Polar	90	80	72
Glaucous Bluegrass	Tundra	95	80	76
Kentucky Bluegrass	Merion, Nugget, Park	95	80	76
Perennial Ryegrass	---	85	80	68
Polargrass	Alyeska, Kenai	95	75	71
Red Fescue	Arctared, Boreal, Pennlawn	98	80	78
Timothy	Climax, Engmo	95	90	85
Tufted Hairgrass	Nortran	95	75	71
Wheatgrass	Wainwright	95	85	81

SECTION 725
FERTILIZER

01/20/15 (N52)

725-2.02 MATERIALS. *Add the following:* Fertilizer which has become wet, moldy or otherwise damaged in transit or storage will not be accepted. The Contractor shall immediately remove rejected fertilizer from the project premises.

SECTION 727
SOIL STABILIZATION MATERIAL

8/02/2018 (N54)

727-2.01 MULCH. *Delete this subsection in its entirety and substitute the following:* All mulch, excluding trace mulch, shall provide 100% ground coverage. Apply mulch at the manufacturer's recommended application rate and increase as needed to achieve 100% ground coverage. All mulch, including trace mulch, shall meet one of the following:

1. Wood Cellulose Fiber or Natural Wood Fiber. Fiber shall be produced from natural or recycled (pulp) fiber, such as wood chips or similar wood materials, or from newsprint, corrugated cardboard, or a combination of these processed materials. Fiber shall not contain any rock, metal, or plastic. Fiber shall be treated with a green dye nontoxic to plant and animal life to facilitate inspection of the placement of the material. Fiber shall be manufactured in such a manner that after addition and agitation in slurry tanks with water, the fibers in the material will become uniformly suspended to form a homogenous slurry. When hydraulically sprayed on the ground, the material shall allow the absorption and percolation of moisture. The organic matter content shall be at least 90 percent on an oven-dry basis. The moisture content shall be no more than 15 percent as determined by oven dried weight. Each package of the cellulose fiber shall be marked by the manufacturer to show the dried weight. Product must be nontoxic to plant and animal life.

   Wood Cellulose Fiber or Natural Wood Fiber may be used to stabilize slopes flatter than 4H:1V. On slopes 4H:1V or steeper Wood Cellulose Fiber or Natural Wood Fiber may be used if an approved tackifier is used, in addition to Wood Cellulose Fiber or Natural Wood Fiber, according to the Manufacturer's recommendations. Wood Cellulose Fiber or Natural Wood Fiber may not be used after August 1.

2. Wood Strand. Wood Strand shall be a blend of loose, long, thin wood pieces derived from native conifer or deciduous trees with high length to width ratio. A minimum of 95-percent of the wood strands shall have lengths between 2 and 10 inches, with a width and thickness between 1/16 and 3/8 inches. Wood Strand shall not contain resin, tannin, or other compounds in quantities that are detrimental to plant life. Sawdust or wood shavings shall not be used as Wood Strand. Wood Strand may be used on slopes flatter than 4H:1V. Wood Strand may not be used after August 1.

3. Straw. All straw material shall be in an air dried condition, free of noxious weeds, seeds, and other materials detrimental to plant life. Hay is not acceptable. Straw shall be suitable for spreading with mulch blower equipment. Straw may be used on slopes flatter than 4H:1V. Straw may not be used after August 1.

4. Bonded Fiber Matrix (BFM). The BFM shall be a hydraulically-applied blanket/mulch/covering composed of long strand, thermally processed wood fibers and crosslinked, hydro-colloid tackifier. The BFM may require a 24-48 hour curing period to achieve maximum performance. Once cured, the BFM shall form an intimate bond with the soil surface to create a continuous, absorbent, flexible erosion resistant blanket that allows for rapid germination and accelerated plant growth. BFM may be used to stabilize slopes between 2H:1V and 4H:1V. BFM may be used after August 1.

5. Fiber Reinforced Matrix (FRM). The FRM shall be a hydraulically-applied, flexible erosion control blanket/mulch/covering composed of long strand, thermally processed wood fibers, crimped,

interlocking fibers and performance enhancing additives. The FRM shall require no curing period and upon application shall form an intimate bond with the soil surface to create a continuous, porous, absorbent and erosion resistant blanket that allows for rapid germination and accelerated plant growth. FRM may be used to stabilize slopes 2H:1V and steeper. FRM may be used after August 1.

A list of pre-approved products can be found in Table 1.

Table 1. Pre-Approved Mulch Products List

Product Name	Product Type	Manufacturer
Astro-Mulch	Wood Cellulose Fiber	Thermo-Kool Inc. Wasilla, AK
Fibermulch	Wood Cellulose Fiber	Thermo-Guard Insulation Spokane, WA
NaturesOwn High Density Paper Hydroseeding Mulch	Wood Cellulose Fiber	Hamilton Manufacturing, Inc. Twin Falls, ID
Hydro-Spray	Wood Cellulose Fiber	National Fiber Belchertown, MA
EcoFibre	Natural Wood Fiber	Profile Products LLC Buffalo Grove, IL
EcoFibre plus Tack	Natural Wood Fiber	Profile Products LLC Buffalo Grove, IL
Terra Novo Wood Fiber Plus Tackifier	Natural Wood Fiber	Terra-Novo Inc. Bakersfield, CA
Conwed Fiber 1000	Natural Wood Fiber	Profile Products LLC Buffalo Grove, IL
Rainier Fiber plus Tack	Natural Wood Fiber	Fiber Marketing International Spokane, WA
Terra Wood with Tack	Natural Wood Fiber	Profile Products LLC Buffalo Grove, IL
Excel Fibermulch II	Natural Wood Fiber	American Excelsior Co. Rice Lake, WI
Mat-Fiber Plus	Natural Wood Fiber	Mat, Inc. Floodwood, MN
Mat-Fiber	Natural Wood Fiber	Mat, Inc. Floodwood, MN
EcoAegis	Bonded Fiber Matrix (BFM)	Profile Products LLC, Buffalo Grove, IL
ProMatrix Engineered Fiber Matrix	Bonded Fiber Matrix (BFM)	Profile Products LLC, Buffalo Grove, IL
Verdyol Virgin BFM	Bonded Fiber Matrix (BFM)	Erosion Control Blankets Manitoba, Canada
Rainier Fiber Bonded Fiber Matrix	Bonded Fiber Matrix (BFM)	Fiber Marketing International Spokane, WA
Profile Hydro-Blanket BFM	Bonded Fiber Matrix (BFM)	Profile Products LLC Buffalo Grove, IL
Soil Guard	Bonded Fiber Matrix (BFM)	Mat, Inc. Floodwood, MN
Flexterra FGM	Fiber Reinforced Matrix (FRM)	Profile Products LLC Buffalo Grove, IL

Product Name	Product Type	Manufacturer
Flex Guard	Fiber Reinforced Matrix (FRM)	Mat, Inc. Floodwood, MN
Hydra CX	Fiber Reinforced Matrix (FRM)	Tensar North American Green Poseyville, IN

SECTION 740
SIGNALS AND LIGHTING MATERIALS

740-2.05 CONDUCTORS. *Delete Table 740-2 in its entirety and substitute the following:*

TABLE 740-2
CONDUCTOR TERMINATION TABLE

CONDUCTORS PER CABLE	CIRCUIT	WIRE COLOR	AWG. NO.	BAND LEGEND
5	Vehicle Red Vehicle Yellow Vehicle Green Common Neutral Spare	Red Orange Green White Black	14	Head No.
7	Vehicle Red Arrow Vehicle Yellow Arrow Vehicle Green Arrow Common Neutral Spare Spare Vehicle Yellow Flashing Arrow	Red Orange Green White White/Black Blue Black	14	Head No.
7	Vehicle Red Vehicle Yellow Vehicle Green Common Neutral Spare Vehicle Yellow Arrow Vehicle Green Arrow	Red Orange Green White White/Black Black Blue	14	Head No. (s)
5	Pedestrian Don't Walk Pedestrian Walk Common Neutral Spare Spare	Red Green White Orange Black	14	Head No.
5	Photo Electric Control Load to Contactor Neutral Spare Spare	Black Red White Orange Green	14	PEC
4	Flashing Beacon Neutral Spare Spare	Black White Red Orange	8	AAWF
2	Pedestrian Pushbutton Neutral	Black White	14	Head No. Located Under
2	Flashing Beacon Neutral	Black White	14	Head No.

CONDUCTORS PER CABLE	CIRCUIT	WIRE COLOR	AWG. NO.	BAND LEGEND
2	Preemption Neutral	Black White	14	"PRE"
3	Highway Luminaire Highway Luminaire Highway Luminaire Spare	Black Red White	6	Circuit No. Circuit No.
3	Service to Controller Neutral Spare	Black White Red	6	"SIG" No Band No Band
3	Sign Luminaire Sign Luminaire Sign Spare	Black Red White	8	SIGN SIGN

1. Power Conductors. *In paragraph 2, delete the word* "ballast" *and substitute with the word*: "driver".

5. Detector Loops. *Delete this subparagraph in its entirety and substitute the following*: Use No. 14 AWG conductors for detector inductive loops that meet IMSA Specification 51-3, Type RHW/USE, or IMSA Specification 51-5, when called for on the Plans or specified in the Special Provisions.

6. Loop Lead-In Cables. *Delete the fourth paragraph in its entirety and substitute the following*: Only use the following loop lead-in cables, also known as shielded data cable, to rewire existing traffic signals when specified. Use cables that consist with 7 twisted pairs that consist of stranded, size 18 AWG tinned copper wire and polyethylene or polypropylene insulation. Furnish each pair covered with an aluminum foil shield, stranded copper drain wire, and an overall PVC or PE jacket. Use cable rated for 300 volts an whose colored pairs math those specified in table 660-1.

Delete Table 740-3 in its entirety and substitute the following:

TABLE 740-3
INTERCONNECT TERMINATION TABLE

TELEMETRY CABLE: Type PE-39, No. 19 AWG, Solid Copper, as noted on the Plans or in the Special Provisions					
Pair No.	**Tip**	**Ring**	**Pair No.**	**Tip**	**Ring**
1	White	Blue	14	Black	Brown
2	White	Orange	15	Black	Slate
3	White	Green	16	Yellow	Blue
4	White	Brown	17	Yellow	Orange
5	White	Slate	18	Yellow	Green
6	Red	Blue	19	Yellow	Brown
7	Red	Orange	20	Yellow	Slate
8	Red	Green	21	Violet	Blue
9	Red	Brown	22	Violet	Orange
10	Red	Slate	23	Violet	Green
11	Black	Blue	24	Violet	Brown
12	Black	Orange	25	Violet	Slate
13	Black	Green			

Delete Subsection 740-2.06in is entirety and substitute the following:

740-2.06 ELECTRICAL CONDUIT AND FITTINGS. Unless specified otherwise, use rigid metal conduit and fittings for raceways. Furnish galvanized rigid type conduit and elbows conforming to UL Standard 6 and are manufactured of mild steel according to ANSI C80.1. Furnish third party certified fittings designed for rigid metal conduit.

For loop detectors, use Schedule 80 polyvinyl chloride (PVC) conduit that conforms to UL Standard 651. Use PVC fittings meeting NEMA TC 3.

When polyethylene conduits are specified in the Plans, use a smooth wall, schedule 40, high-density polyethylene (HDPE) conduit that conforms to UL Standard 651 A and NEMA TC-7-2013.

Furnish insulated throat grounding bushings made of malleable iron or steel with a mechanically galvanized or zinc plated finish. Grounding lugs shall either be an integral part of the bushing or consist of an attached tin plated copper saddle. Grounding lugs shall feature a stainless steel screw, the centerline of which falls within 20 degrees of conduit centerline. The bushings furnished shall also feature a stainless steel or brass mounting screw that locks the bushing onto the conduit end.

Furnish conduit outlet bodies and their covers with a hot dip galvanized finish and stainless steel screws. For loop detectors, furnish Type X bodies and, for photoelectric control installation, furnish Types C and LB conduit bodies.

When Myers hubs are specified, furnish rain tight, grounding type hubs made of malleable iron with a hot dip or mechanically galvanized finish.

At expansion joints, provide watertight expansion fittings capable of the following movements without damaging the conduits attached to it or the conductors that pass through it. The movements include: axial expansion or contraction to 3/4 inch, angular misalignments in any direction to 30 degrees, and parallel misalignment of the conduits to 3/4 inch. The fittings shall also include a braided copper bonding jumper equal to an 8 AWG conductor, bushings to prevent scraping the conductors, and a smooth inner sleeve that maintains a constant diameter regardless of conduit alignment.

APPENDIX A

PERMITS

Placeholder

Corps Wetlands Permit

NOAA

Concurrence & Stipulation Letter

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
National Marine Fisheries Service
P.O. Box 21668
Juneau, Alaska 99802-1668

August 5, 2022

Mr. Brett Nelson
Northern Region Environmental Manager
Department of Transportation and Public Facilities
2301 Peger Road
Fairbanks, AK 99709

Re: Whitshed Road and Pedestrian Improvements, Odiak Slough, Cordova xLOC
NFHWY00129/0837004, AKRO-2022-01527

Dear Mr. Nelson:

This letter responds to your request for concurrence from the National Marine Fisheries Service (NMFS) pursuant to Section 7 of the Endangered Species Act (ESA) for the proposal to improve Whitshed Road by providing pedestrian accommodations, repaving, and updating the utilities. NMFS received an initial request for an expedited informal consultation on June 27, 2022. After receiving an updated consultation request on July 11, 2022, that detailed the methods of the project and types of mitigation being implemented, and receiving mitigation measures on July 21, 2022, we concluded that your request qualified for our expedited review and concurrence. Expedited consultation for this proposed action commenced on July 21, 2022.

We reviewed your consultation request document and related materials. Our analysis of this project's effects on listed species and critical habitats relied upon the project description you provided, including the proposed mitigation measures (copy attached). Failure to implement any of these mitigation measures may require reinitiation of consultation as per reinitiation trigger number 3, below (50 CFR 402.16(a)(3)).

Based on our knowledge, expertise, and the materials you provided, we concur with your conclusions that the proposed action is not likely to adversely affect the Western Distinct Population Segment Steller sea lion (*Eumetopias jubatus*) or its critical habitat. A complete administrative record of this consultation is on file at the Anchorage NMFS office.

Reinitiation of consultation is required where discretionary federal involvement or control over the action has been retained or is authorized by law and if (1) take of listed species occurs, (2) new information reveals effects of the action that may affect listed species or critical habitat in a manner or to an extent not previously considered, (3) the action is subsequently modified in a manner that causes an effect to the listed species or critical habitat that was not considered in this concurrence letter, or (4) a new species is listed or critical habitat designated that may be affected by the identified action (50 CFR 402.16).

Please direct any questions regarding this letter to Sarah Pautzke at Sarah.Pautzke@noaa.gov.

Sincerely,

Anne Marie Eich

Anne Marie Eich
Acting Assistant Regional Administrator
for Protected Resources

Attachments: Mitigation Measures

cc: Jill Baxter-McIntosh jill.baxter-mcintosh@alaska.gov, Russ Johnson russell.johnson@alaska.gov

Attachment:

MITIGATION MEASURES PROVIDED BY AKDOT&PF (7/21/22)

General Mitigation Measures

1. In-water work will be conducted at the lowest points of the tidal cycle feasible.
2. Erosion controls (i.e. sediment catchment) must be installed before alteration to the area below the mean high water line can occur.
3. A pollution control plan for the project site and adjacent areas must be prepared and implemented. At a minimum, this plan shall include:
    a. Proper installation and maintenance of equipment diapers, or drip pans.
    b. A contingency plan to control and clean spilled petroleum products, hydraulic leaks, and other toxic materials.
    c. Appropriate materials to contain and clean potential spills will be stored at the work site and be readily available.
    d. Daily pre-work inspections of heavy equipment and vessels for cleanliness and leaks, with all heavy equipment operations and vessel use postponed or halted until leaks are repaired and equipment is cleaned.
    e. Fueling of land-based vehicles and equipment shall take place at least 50 feet (15 meters) away from the water, preferably over an impervious surface.

Placement of Fill

4. Fill material will consist of rock fill that is free of fine sediments to the extent practical, to reduce suspended materials from entering the water column.
5. Fill material will be obtained from local sources when possible, avoiding the need to ship fill through marine mammal habitat, and in all cases will be free of non-native marine and terrestrial vegetation species.

THE STATE of ALASKA
GOVERNOR MIKE DUNLEAVY

Department of Transportation and Public Facilities

NORTHERN REGION
Design, Engineering, and Construction

2301 Peger Road
Fairbanks, AK 99709-5316
Main: 907-451-2200
TTY: 711 or 1-800-770-8973
dot.alaska.gov

July 11, 2022

John Kurland
Assistant Regional Administrator
NMFS, Alaska Region
PO Box 21668
Juneau, AK 99802

Re: Whitshed Road and Pedestrian Improvements
Project Number: NFHWY00129/0837004
Request for Initiation of Informal Consultation under Section 7(a)(2) of the Endangered Species Act (ESA)

Dear Mr. Kurland:

The Alaska Department of Transportation and Public Facilities (DOT&PF) is proposing to improve safety by providing pedestrian accommodations along Whitshed Road in Cordova, Alaska, from the intersection with the Copper River Highway to the intersection with Orca Inlet Drive.

DOT&PF requests initiation of expedited informal consultation under Section 7(a)(2) of the Endangered Species Act for the Whitshed Road and Pedestrian Improvements project. We have determined that the proposed activity may affect, but is not likely to adversely affect western distinct population segment (DPS) Steller Sea Lion (*Eumetopias jubatus*) or designated Steller Sea Lion critical habitat. We have also determined that the proposed activity is expected to have no effect on the Mexico DPS Humpback Whale or Fin Whale (*Balaenoptera physalus*).

The intent of this letter is to initiate informal consultation with the National Marine Fisheries Service (NMFS) and comply with requirements mandated in Section 7 of the Endangered Species Act (ESA). The following discusses the purpose and need of the project, proposed action details, and the degree to which those actions may affect ESA-listed species that may range within the project area.

Purpose and Need

The purpose of the project is to improve safety by providing accommodations for non-motorized traffic along the corridor. The project is needed because Whitshed Road is narrow and has no dedicated shoulders. The lack of shoulders causes non-motorized users to share the 11-foot vehicle lanes or trek off the paved roadway.

The Proposed Action
DOT&PF proposes to improve safety by providing pedestrian accommodations along Whitshed Road, adding shoulders to each side of the road and widen ditches from the intersection with the Copper River Highway to the intersection with Orca Inlet Drive. Project improvements include:

1. Constructing a new 8-foot wide path with curb and gutter adjacent to the westbound vehicular travel lane for pedestrian and bicycle use.
2. Add 1-foot shoulders to each side of the road to provide room for errant vehicles to recover before running off the road
3. Widen ditches to mitigate rocks falling onto and inside vehicle travel lanes and provide a clear zone adjacent to the vehicular travel lanes
4. Improve drainage by grading ditches to drain and replace undersized and/or failing culverts
5. Pave the road
6. Install new roadway signage
7. Relocating underground power and communication utilities. Utilities will be located on both the inland and water side of the road. The utilities on the water side will be within a new utility duct, which will be located just under the sidewalk, well above the MHW elevation.

All materials will be contractor furnished. If needed, borrow will come from established local commercial sources.

Widening the roadway (new path, widening ditches, and adding shoulders) extends roadway embankment catch slopes outside the existing Right-of-Way (ROW) limits, creating the need to acquire ROW from adjacent land owners. The extension of embankment slopes will require the placement of fill material below the mean high water (MHW) elevation in the tidal flats of Odiak Slough (see Sheet 3). According to the NOAA Tides & Currents webpage, the MHW for Cordova, Alaska is 11.67”.

The widened embankment slopes will be constructed by placing borrow material in lifts keying it into the existing embankment. The equipment required to construct embankment fill slopes will be a CAT D4-D5 size dozer and a vibratory drum roller. A large dozer and/or excavator will be used to place riprap and shot rock on exposed slopes.

All embankment work below the MHW elevation will take place at low tide. Dewatering is not anticipated for work at the toe of the slopes.

Sediment catchment methods will depend on the location. In standing water a silt fence or turbidity curtains will be used. In dry areas a compost sock or fiber rolls will be used.

The Proposed Action Area
The Action Area is defined in the ESA regulations (50 CFR 402.02) as the area within which all direct and indirect effects of the project will occur. The proposed action area (Sheets 1-3 attached) includes Whitshed Road, Odiak Slough and the surrounding waters of Prince William Sound. These waters are potentially occupied by Western distinct population segment (DPS) Steller Sea Lions (*Eumetopias jubatus*) and are connected to waters included in the range for the Mexico DPS Humpback Whale (*Megaptera novaeangliae*) and the Fin Whale (*Balaenoptera physalus*). More specific description of occurrence and potential project effects to these listed species are provided below.

Effects of the Proposed Action on Listed Species
For purposes of the ESA, “effects of the action” means the direct and indirect effects of an action on the listed species or critical habitat, together with the effects of other activities that are interrelated or

interdependent with that action (50 CFR 402.02). The applicable standard to find that a proposed action is "not likely to adversely affect" listed species or critical habitat is that all of the effects of the action are expected to be insignificant, discountable, or completely beneficial. Insignificant effects relate to the size of the impact and are those that one would not be able to meaningfully measure, detect, or evaluate, and should never reach the scale where take occurs. Discountable effects are those that are extremely unlikely to occur. Beneficial effects are contemporaneous positive effects without any adverse effects to the species.

Potential stressors created by the project that could affect the listed ESA species include vehicle and equipment noise and an increase in turbidity and pollution run-off from drainage in to the slough.

Vehicle and Equipment Noise
ESA listed species in the area may be exposed to noise from construction vehicles and out of water equipment during construction activities, however effects from in-air vehicle and out of water equipment noise are expected to be minimal and temporary given the current human presence in and near the community of Cordova. Therefore, we conclude that acoustic disturbance from project specific vehicles and equipment is insignificant.

Turbidity and Pollution
Steller Sea Lion populations in the area may face the potential for a temporary increase in turbidity of tidal water during construction. Water quality would be protected during construction through best management practices (BMPs) and appropriate erosion and sediment control measures outlined in the Erosion and Sediment Control Plan (ESCP) and a Storm Water Pollution Prevention Plan (SWPPP), which is prepared by the contractor and approved by DOT&PF prior to commencement of any construction activities. The permanent levels of drainage from the roadway to the slough will not increase and there is no anticipation of an increase in pollution entering the watershed. All embankment work taking place below the MHW elevation will occur during times of low tide. Therefore, we conclude that an increase in turbidity and pollution run-off from drainage is temporary and insignificant once the appropriate mitigation measures are in place.

Listed species that could be potentially be effected by project activities include: Western DPS Steller Sea Lion, Mexico DPS Humpback Whale, and Fin Whale.

- The range map for the Western DPS Steller Sea Lion shows their presence as potentially within Odiak Slough, near the project area, but this project is not likely to adversely affect the population. The project area is within proximity of mapped critical habitat for the species as well, however project activities requiring the placement of fill for road embankment slopes along Whitshed Road are expected to be insignificant and are not likely to adversely affect this habitat.

- The range map for Mexico DPS Humpback Whale shows their presence within five kilometers of Odiak Slough, however they are not anticipated within the project work area and thus this project is expected to have no effect.

- The range map for Fin Whale populations in Alaska shows them within one kilometer of Odiak Slough, however they are not expected to be encountered within the project work area and thus this project is expected to have no effect.

In summary, the DOT&PF respectfully requests your review of the project elements, and your subsequent concurrence with the above effects determinations. To help us move the project forwards, we would appreciate a response from NMFS within 30 days of receipt of this letter.

Thank you for your assistance, and if you have any questions or require additional information, please contact Jill Baxter-McIntosh, Environmental Analyst at jill.baxter-mcintosh@alaska.gov, or me at brett.nelson@alaska.gov (907) 451-2238. **This request for ESA Section 7 consultation will only be submitted electronically. Please reply electronically.**

Sincerely,

Brett D Nelson

Brett Nelson
Northern Region Environmental Manager

Enclosures: Figures 1-3

cc: Jill Baxter-McIntosh. Environmental Impact Analyst, DOT&PF, Northern Region
Russ Johnson, P.E., Project Manager, DOT&PF, Northern Region

APPENDIX B

MATERIALS CERTIFICATION LIST (MCL)

Project Name Whitshed Road and Pedestrian Improvements
Project Number 0837004/NFHWY00129
Project Engineer Signature

Unshaded boxes indicate who approves the manufacturer's certificate of compliance or materials submittals. If two boxes are unshaded, either approving authority may be used.

Instructions to Designers: The Master Materials Certification List is intended to provide a starting point for the Submittal Registry. Designers are instructed to review this list, remove any items that are not applicable to the project, indicate who determines acceptance, and include with bid documents.

SECTION 660/661/669/740 MATERIALS CERTIFICATION LIST (Updated 01/01/2021)

Item	2020 Specifications	Third Party Listing or Labeling Required? (Y/N)	Acceptance By:							Remarks
			Construction			Design			Statewide	
			Project Engr		QA/ Matls Engr	Design Engr	Bridge Engr	Traffic Engr	State Materials Engineer	
				QPL						
669 AUTOMATIC VEHICLE CLASSIFICATION										
JUNCTION BOXES: (from Manufacturers on APL)										
Type II	See Detail in Plans 660-2.01 709-2.01 711-2.01	N								
JUNCTION BOXES: (from Manufacturers NOT on APL)										
Type II	See Detail in Plans 660-2.01 709-2.01 711-2.01	N								
Concrete Mix Design	660-2.01 550-2.02	N								Special Provision Special Provision
Curing Materials	711-2.01	N								
Reinforcing Steel	709-2.01	N								
Junction Box Cover	See Detail in Plans 660-3.04	N								
Ground Wire from Bushing to Cover	660-3.06	N								Special Provision
CONDUIT / LOOPS:										
Galvanized Rigid Metal Conduit	740-2.06 660-3.03	Y								Special Provision Special Provision
Galvanized Couplings	740-2.06	Y								Special Provision
Galvanized Split Couplings	740-2.06	Y								Special Provision
Galvanized Elbows	740-2.06	Y								Special Provision
Galvanized Nipples	740-2.06	Y								Special Provision
Bore Casing	660-3.03	N								Special Provision
Underground Marker Tape	660-3.03	N								Special Provision

SECTION 660/661/669/740 MATERIALS CERTIFICATION LIST (Updated 01/01/2021)

Item	2020 Specifications	Third Party Listing or Labeling Required? (Y/N)	Acceptance By:							Remarks
			Construction			Design			Statewide	
			Project Engr		QA/ Matls Engr	Design Engr	Bridge Engr	Traffic Engr	State Materials Engineer	
				QPL						
Pull Rope	660-3.03	N								Special Provision
Schedule 80 PVC Conduit (Loops)	740-2.06	Y								Special Provision
PVC Fittings & Adapters (Loops)	740-2.06	Y								Special Provision
Type "X" Conduit Bodies with Covers, Gaskets & Plugs (Loops)	See Detail in Plans	Y								
BONDING & GROUNDING:										
Copper Ground Rod	See Detail in Plans 660-3.06	Y								Special Provision
Grounding Bushings	660-3.06	Y								Special Provision
Ground Rod Clamps	660-3.06	Y								Special Provision
#6 & 8 Bare Copper Ground Wire	660-3.06	N								Special Provision
Braided Copper J-Box Lid Bonding Wire	660-3.06	Y								Special Provision
CONDUCTORS / CABLES:										
1C#14 Detector Loops	Plans, 660-3.05, 740-2.05	Y								Special Provision
RG58 COAX Piezoelectric Sensors	Plans, 669-2.01, 669-3.07									Special Provision Special Provision
6pr#18 Loop Lead-in Cable	Plans, 660-3.05, 740-2.05	Y								Special Provision
CONTROLLER CABINET										
Terminal Blocks:	669-2.02	Y								Special Provision
SPLICES										
Overlap Type Crimp Connector	660-3.05	Y								Special Provision
Heat Shrink Tubing	660-3.05	Y								Special Provision
Electrical Tape	660-3.05	Y								Special Provision
ADDITIONAL COMPONENTS										
Piezoelectric Sensor	669-2.01	N								Special Provision
AS475 methyl grout for sensor	669-2.01.9	N								Special Provision

APPENDIX C

EROSION AND SEDIMENT CONTROL PLAN (ESCP)

Erosion and Sediment Control Plan

For

WHITSHED ROAD AND PEDESTRIAN IMPROVEMENTS

Project Number (NFHW00129/0837004)

Cordova, Alaska

Alaska Department of Transportation & Public Facilities
Northern Region
2301 Peger Rd
Fairbanks, Alaska 99709

ESCP Preparation Date: November, 2022

The following Erosion and Sediment Control Plan (ESCP) has been prepared by the Alaska Department of Transportation and Public Facilities (DOT&PF) to assist bidders in successfully planning their construction means and methods to comply with the Alaska Construction General Permit (ACGP), United States Army Corps of Engineers (USACE) 404/10 Permit, Alaska Department of Environmental Conservation (ADEC) 401 Water Quality Certification, and other permits associated with this project. This document is not intended to be all inclusive of the best management practices (BMPs) that will be required to reduce the potential for sediment discharge during construction and comply with permit conditions or construction specifications. This ESCP is intended to guide contractors during the bidding process and assist in the preparation of the contractor's Storm Water Pollution Prevention Plan (SWPPP) that must be approved prior to commencing construction after award. The contractor is responsible for the risk assessment analysis, planning, preparation and implementation of the SWPPP.

TABLE OF CONTENTS

SECTION 1 - GENERAL INFORMATION

1.0 PERMITTEE (5.3.1)

The Department of Transportation & Public Facilities (DOT&PF) will be a permittee for the project. Upon the approval of the contractor's Storm Water Pollution Prevention Plan (SWPPP) by DOT&PF, the contractor will be required to submit a Notice of Intent (NOI) and obtain permit coverage as an operator. The contractor's contact information, as well as contact information for all subcontractors must be included in the contractor's SWPPP. All subcontractors will be required to sign a certification (DOT&PF Form 25D-105) demonstrating they have read the Alaska Construction General Permit (ACGP), the contractor's SWPPP, and will adhere to their terms and conditions.

1.1 Operator(s)/Contractor(s)

Granite Construction Company
Marty Thurman, Contract Manager
11471 Lang Street
Anchorage, AK 99515
(907) 344-2593
Martin.thurman@gcinc.com

The contractor has day-to-day operational control over activities in the field, including subcontractors and implementation of the SWPPP.

Alaska Department of Transportation and Public Facilities, Northern Region
Ryan Anderson
2301 Peger Road
Fairbanks, Alaska 99709
907-451-5129
ryan.anderson@alaska.gov

DOT&PF has operational control over construction plans and specifications, including the ability to make modifications and ensure compliance with the SWPPP.

3.0 PROJECT INFORMATION (5.3.3)

3.1 Project Information

Project/Site Name: **Whitshed Road and Pedestrian Improvements**

Project State Number/Federal Number: **NFHW00129 / 0837004**

Project Street/Location: **PT Whitshed Road / Copper River Highway to Ocra Inlet Drive**

City: **Cordova** State: **AK** Zip Code: **99574**

Borough or Subdivision: **Valdez-Cordova Borough**

Latitude/Longitude:

Latitude:	Longitude:
BOP 60 º 32 ' 21 " N (degrees, minutes, seconds)	145 º 45 ' 11 ” W (degrees, minutes, seconds)
EOP 60 º 32 ' 06 " N (degrees, minutes, seconds)	145 º 46 ' 23 ” W (degrees, minutes, seconds)

Method for determining latitude/longitude:

☐ USGS topographic map (specify scale: _____) ☐ EPA Web site ☐ GPS

☒ Other (please specify): Google Earth

3.2 Project Site-Specific Conditions (5.3.3)

Mean annual precipitation based on nearest weather station (inches): **90.68”. The mean annual precipitation is based on the Cordova FAA AP (502177) weather station.**

Size of the 2-yr, 24-hr storm event (in inches): **4.9 inches at the Cordova FAA AP, Alaska (502177) weather station according to NOAA’s Precipitation Frequency data server located at https://hdsc.nws.noaa.gov/hdsc/pfds/pfds_map_ak.html**

Soil Type(s) and Slopes **The soils in the area consist of well drained sandy silt, sand, gravel, cobbles and boulders due to the alluvial nature of the site. Whitshed Road runs along a rock bench with rock faces on the north side of the road and steep slopes on the south that drop approximately 50 feet down to sea level. Slopes range from predominantly flat to approximately 53°.**

Landscape Topography: **The topography along Pt Whitshed Road is steep mountains, archipelagos, and deep bays, transitioning to broad coastal plains, river deltas, and tidal flats.**

Drainage patterns: **Primarily, drainage is composed of surface water channeling down from higher elevation rock faces on the north side of the road, collecting in ditches, and outflowing through steep channels to the Odiak Slough on the South side of the road. Significant runoff occurs during heavy rain, overwhelming existing ditch and culvert capacities. This project increases ditch and culvert capacities along with stabilizing rock faces to reduce the amount of loose depris transported towards culvert inlets.**

Type of Existing Vegetation: **Slopes along the corridor are heavily vegetated with Sitka spruce and western Hemlock trees, low growing shrubs, devils club and mosses.**

Approximate growing season: **According to the Alaska Regional Supplement to the Core of Engineers Wetland Delineation Manual, Cordova is located in the coastal western Hemlock-Sitka Spruce Forest Region (ecoregion 120) and has a growing season from April 29 through September 28.**

Seeding Dates: **Specification 618 of the contract**

Fall Freeze-Up and Spring Thaw Dates: **According to the Western Regional Climate Center for the nearest weather station Thompson Pass, AK #509146, the anticipated date of fall freeze is 10/17 and spring thaw is 5/23. These dates are just for reference area. During construction the permittee will need to maintain control measures based on actual weather conditions.**

Clearing Window: **Mechanized vegetation clearing will be avoided during the recommended migratory bird nesting window for the project area (May 1 – July 15) unless a mitigative BMP is submitted by the contractor and approved by DOT&PF.**

Fish Window: **Check Appendix A permits of the contract.**

Historic site contamination evident from existing site features and known past usage of the site. List all DEC Identified Contaminated Sites located within 1500 feet of the project: **According to the DEC contaminated Sites Database, there is no known contaminated site within 1500' of the project.**

Additional information about these sites is available on the DEC Division of Spill Prevention and Response website: https://dec.alaska.gov/spar/csp.aspx

4.0 NATURE OF CONSTRUCTION ACTIVITY (5.3.4)

4.1 Scope of Work

Improvements Include:

- **Re-alignment of roadway**
- **Re-grading and paving roadway, driveways, and approaches**
- **Constructing a shared use path for non-motorized traffic**
- **Relocating utilities**
- **Replacing roadside Hardware (AVC)**
- **Improving drainage (culverts and ditches); and**
- **Clearing and grubbing along corridor extents**

4.2 Project Function (5.3.4.1)

Point Whitshed Road is a curvy, narrow, paved, two-lane, two-way, undivided, rural collector.

4.3 Support Activities (As Applicable)

All material sources will be contractor furnished. Multiple commercial material sources are available in Cordova area.

Support Activity	Location	Dedicated	
		Yes	No
Concrete Batch Plant		☐	☐
Asphalt Batch Plant		☐	☐
Equipment Staging Yards		☐	☐
Material Storage Areas		☐	☐

Excavated Material Disposal Areas		☐	☐
Borrow Areas		☐	☐

4.5 Size of property and total area expected to be disturbed (5.3.4.3)

The following are estimates of the construction site:

Description	Number	Remarks
Total project area:	**14.25** acres	ROW TO ROW
Construction-site area to be disturbed:	**10.71** acres	Toe to Toe
Percentage impervious area BEFORE construction:	**25** %	
Runoff Coefficient BEFORE construction:	**.69**	
Percentage impervious area AFTER construction:	**30** %	
Runoff coefficient AFTER construction:	**.708**	

5.0 SITE MAPS (5.3.5)

See ESCP sheet(s) within the Plans.

SECTION 2 – COMPLIANCE WITH STANDARDS, LIMITS, AND OTHER APPLICABLE REQUIREMENTSDOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO TOTAL MAXIMUM DAILY LOADS (3.2, 5.6)

If the project is discharging into a water body with an EPA-established or approved Total Maximum Daily Load (TMDL), the project must implement measures to ensure the discharge of pollutants from the site is consistent with the assumptions and requirements of the TMDL. Refer to the ACGP for additional requirements.

The SWPPP must include documentation supporting a determination of permit eligibility with regard to waters that have a TMDL.

The Integrated Water Quality Report can be found at:

https://dec.alaska.gov/water/water-quality/integrated-report

A search of the "Alaska's Final **2018** Integrated Water Quality Monitoring and Assessment Report" found no listings or impairments for the **Odiak Slough**.

7.1 Identify Receiving Waters (5.3.3.3)

Description of receiving waters: **Odiak Slough and adjacent wetlands**

Description of storm sewer and/or drainage systems: **Catchment ditches are designed to collect runoff surface water on the south side of the corridor. A series of culverts will channel the water from the catchment ditches under the road to outfall into the Odiak Slough. Riprap aprons will be placed at the culvert outlets. Surface runoff on the north side of the project will flow into a series of small catch basins installed in the curb and gutter and outfall onto the embankment slopes down to the Odiak Slough.**

7.2 Identify TMDLs (5.6.1)

Is an EPA-established or approved TMDL published for the receiving water(s) listed in Section 7.1?

☐ Yes ☒ No

8.0 DOCUMENTATION OF PERMIT ELIGIBILITY RELATED TO ENDANGERED SPECIES (3.3, 5.7)

8.1 Information on endangered or threatened species or critical habitat (5.7.1)

Are endangered or threatened species and critical habitats on or near the project area?

☐ Yes ☒ No

Describe how this determination was made: **USFWS Critical Habitat for Threatened and Endangered Species and USFWS Environmental Conservation Online System and NOAA Alaska Protected Resources Division Species Distribution Mapper, queried 10/3/2019**

Will species or habitat be adversely affected by storm water discharge (5.7.2)?

☐ Yes ☒ No

9.0 Applicable federal, state, tribal, or local requirements (4.15)

Permittees must ensure that the storm water control measures implemented at the site are consistent with all applicable federal, state, tribal, or local, requirements for soil erosion control and storm water management.

See Appendix A in the contract for applicable permits.

The project will comply with all applicable Federal, state, local, and tribal requirements for soil erosion control and storm water management. The contractor will be responsible for obtaining all necessary permits and clearances for material and disposal sites, and/or equipment storage areas in accordance with the ACGP for Storm water Discharges from Construction Activities.

A search of the ADEC Drinking Water Protection Areas (DWPA) map located at

https://dec.alaska.gov/das/GIS/apps.htm

10.12 Dewatering (4.4)

Will dewatering be conducted during construction? ☐ Yes ☒ No

Will excavation dewatering be conducted within 1,500 feet of a DEC mapped contaminated site found on the following website? ☐ Yes ☒ No
http://www.arcgis.com/home/item.html?id=315240bfbaf84aa0b8272ad1cef3cad3

If YES to either question above, then describe BMPs below that comply with the CGP and the ADEC Excavation Dewatering General Permit (AKG002000). If a NOI for coverage under the excavation dewatering permit is submitted, attach it and ADEC's response in Appendix D of the SWPPP with a copy of the permit.

Insert Text

12.0 MONITORING PLAN (IF APPLICABLE) (5.5; 7.0)

12.1 Determination of Need for Monitoring Plan

Is there an EPA-established or approved TMDL for **Odiak Slough**? ☐ Yes ☒ No

Is the receiving water listed as impaired for turbidity and/or sediment? ☐ Yes ☒ No