



BIRD CREEK BRIDGE 86.6 REPLACEMENT

**INVITATION TO BID
23-34-211025**

JUNE 9, 2023

**ALASKA RAILROAD CORPORATION
327 WEST SHIP CREEK AVENUE
ANCHORAGE, ALASKA 99501**



June 9, 2023

**INVITATION TO BID
23-34-211025**

BIRD CREEK BRIDGE 86.6 REPLACEMENT

Response Required: This page must be completed and returned ensuring receipt of future addenda or additional information. Please email this form to HopeM@akrr.com.

Firms that have not returned this cover sheet will not be informed of addenda and will only be alerted to addenda by checking with the ARRC procurement officer or by checking ARRC's internet site:

<https://www.alaskarailroad.com/corporate/procurement/solicitations>. Bidders are responsible for assuring they have all of the issued addenda. Bidders must acknowledge all issued addenda in their submittal.

Company _____

Address _____

Contact _____

Phone _____ Fax _____

Email _____

THIS PAGE INTENTIONALLY LEFT BLANK

THIS IS NOT AN ORDER

INVITATION TO BID NUMBER: 23-34-211025

BIRD CREEK BRIDGE 86.6 REPLACEMENT

DATE OF INVITATION TO BID: June 9, 2023

ALASKA RAILROAD CORPORATION
CONTRACTS SECTION
POST OFFICE BOX 107500
ANCHORAGE, ALASKA 99510-7500
ATTENTION: MICHELE HOPE (907) 265-4467
FAX NUMBER (907) 265-2439
Hopem@akrr.com

BIDS WILL BE RECEIVED **UNTIL 3:00 PM LOCAL TIME ON FRIDAY, JUNE 30, 2023** via **Dropbox**, at which time bids will be publicly opened via WebEx per information below.

One electronic copy of your firms Bid must be submitted using Dropbox. Bids shall be submitted to the Drobox link <https://www.dropbox.com/request/GbzZKPgb5ljm102i8ZmZ> by bid due date/time. The Dropbox submittal date/time will be used for the official receipt. Your bid package (qualifications and bids) must be complete. It is the bidder's responsibility to verify with the Contract Administrator that their Bid was received timely. If your firm has restrictions on Dropbox submittals you must contact your Contract Administrator at least 7 days prior to bid due date to discuss alternatives.

File naming convention shall be: Firm Name-ITB#-ITBName

The original copy (hard-copy) of your bid will need to be mailed by the date required for bids to the address provided below. The Dropbox submittal date/time will be used for the official receipt. Your proposal package (qualifications and proposals) must be complete.

Alaska Railroad Corporation
Attn. Michele Hope, 2nd Floor
327 W. Ship Creek Avenue
Anchorage, Alaska 99501

Bids received by facsimile transmission will not be considered for award. Bids shall be submitted on the forms furnished herein. Amendments or withdrawals must be received by ARRC's Contracts Section via Dropbox prior to the date and time listed above.

The Public Bid Opening will be held via WebEx. You may attend the bid opening by pasting the following link into your web browser
<https://akrr.webex.com/akrr/j.php?MTID=mcdcd638de8eec2d39bb89792bac62f0f>.

IMPORTANT

Please Note New Requirement for FRA Drug & Alcohol Testing Compliance in Appendix B.

Completion Dates: All work shall be completed by June 1, 2025, with substantial completion by April 30, 2025. Substantial completion is to include all work in the Statement of Services except Item 613.0005.1 – Seeding, Item 620.0003.1 – Topsoil, Item 640.0001.1 – Mobilization and Demobilizations, and Item 647.0001.1 – As-Built Record Drawings and Specifications. Once the contractor has mobilized to the site, work through substantial completion shall be complete within 180 days of the construction start date. ARRC will identify interim completion dates, if any, in the Special Provisions.

Funding: Bridge 86.6 is funded under a Federal Railroad Administration (FRA) Consolidated Rail Infrastructure and Safety improvements (CRISI) Grant.

Site Visit: A non-mandatory site visit will be held on **June 22, 2023, at 11:00 am.** Meeting location will be the Bird Creek Access parking lot, just north of the bridge off Seward Highway on the east side of the road. To participate in this meeting and site visit, interested firms must provide full name(s) and cell telephone number(s) for proposed attendees to HopeM@akrr.com by 2:00 p.m. June 19, 2023. Attendees will be responsible for their own transportation to the meeting location. Attendees should plan on being at the meet location by 10:45 am. A representative of the ARRC will conduct a safety briefing and will provide an escort onto ARRC property for the site visit. Hardhats, safety vests, protective footwear, and safety glasses will be required, and must be supplied by attendees. This is not a mandatory meeting, although interested firms are encouraged to participate.

Pre-Bid Conference: A pre-bid conference will be held on **June 23, 2023 at 11:00 AM** local time via WebEx. You may attend the pre-bid conference by pasting the following link into your web browser

<https://akrr.webex.com/akrr/j.php?MTID=m2ca4a6bb7c4ab1fcd38b6371550778cc>

This is not a mandatory meeting, although interested firms are encouraged to participate. A bidder's failure to attend the pre-bid conference will in no way relieve the bidder of the responsibility of performing the work in strict compliance with the true intent and meaning of the terms, conditions and specifications of this ITB.

ARRC reserves the right to reject any and all bids, or any part thereof, negotiate changes in bids, accept any bids or any part thereof, waive minor informalities or defects in any bids, and not to award the proposed contract if it is in the best interest of the ARRC. Any

resulting contract from this Invitation to Bid shall incorporate the Standard Instructions, and General Terms and Conditions incorporated in this Invitation to Bid.

This Invitation to Bid is not to be construed as a commitment of any kind nor does it commit the ARRC to pay for any costs incurred in the submission of an offer or for any other incurred cost prior to the execution of a formal contract

Bidder/contractor imposed terms and conditions which conflict with this Invitation to Bid terms and conditions are considered counter offers and, as such, will cause the Alaska Railroad Corporation to consider the bid non-responsive. PROSPECTIVE BIDDERS ARE CAUTIONED TO PAY PARTICULAR ATTENTION TO THIS CLAUSE.

ARRC Disadvantaged Business Enterprise (DBE) Program: ARRC is an equal opportunity corporation that encourages the participation of DBEs as prime contractors and subcontractors on its contracts funded in whole or in part by the Federal Transit Administration (FTA) or the Federal Highway Administration (FHWA). The ARRC has a race neutral DBE Program and does not set DBE goals on individual solicitations. Nonetheless, the ARRC aspires to achieve an overall DBE participation on federal contracts of 3.0 % in FY 2019-2021. If this contract is funded in whole or in part by funds from the FTA or the FHWA, it is imperative that you consult the Federal Terms and Conditions portion of this solicitation.



The Alaska Railroad is a member of Green Star (www.greenstarinc.org). ARRC earned an initial Green Star Award in 1994 and a Green Star Air Quality Award in 2007. The Alaska Railroad considers Green Star membership to be a positive business attribute, and regards a Green Star award as a tangible sign of an organization's commitment to environmental stewardship and continual improvement within its operations.

Please direct all responses and/or questions concerning this ITB to Michele Hope, Alaska Railroad Corporation, Contracts, 327 Ship Creek Avenue, Second Floor, Anchorage, AK 99501, telephone number 907-265-4467, fax number 907-265-2439 or at email address HopeM@akrr.com.

Sincerely,

Michele Hope

Michele Hope
Contract Administrator

INDEX

APPENDIX A	REQUIRED DOCUMENTS
APPENDIX B	BIDDERS INSTRUCTIONS & SPECIAL REQUIREMENTS (Construction)
APPENDIX C	FORMS
	BID FORMS
	1. ARRC CONSTRUCTION BID FORM
	2. BID SCHEDULE
	3. ARRC BID BOND
	4. ARRC - CONTRACTOR RESPONSIBILITY QUESTIONNAIRE
	ARRC SUBCONTRACTOR LIST - [First Tier Subcontractors Only]
	ARRC PAYMENT BOND
	ARRC PERFORMANCE BOND
	ARRC SAMPLE CONSTRUCTION CONTRACT
	<u>CONTRACT PROVISIONS & SPECIFICATIONS</u>
APPENDIX D	REQUIRED CONTRACT PROVISIONS FOR FEDERAL-AID CONTRACTS
APPENDIX E	GENERAL CONDITIONS (CONSTRUCTION)
APPENDIX F	SUPPLEMENTARY CONDITIONS
APPENDIX G	STATEMENT OF SERVICES
APPENDIX H	SPECIAL PROVISIONS
APPENDIX I	SUBMITTAL REGISTER

ATTACHMENTS

1. ARRC Project Drawings
2. ARRC Standard Plans
 - 2.1. 125' Standard TPG Bridge Replacement Design Drawings
 - 2.2. 125' Standard TPG Bridge Replacement Shop Drawings
 - 2.3. ARRC Standard Ballast Plans
 - 2.4. ARRC Standard Track Plans
3. Pony Truss Shop Drawings
4. Geotechnical Data Report
5. ARRC Sample Daily Report Format
6. Construction Quality Control (CQC) Plan
7. Federal Wage Rates

Federal wage rates can be obtained at <https://sam.gov/content/wage-determinations> for the State of Alaska. Use the federal wage rates that are in effect 10 days before Bid Opening.
8. State Wage Rates

State wage rates can be obtained at <http://www.labor.state.ak.us/lss/pamp600.htm>. Use the State wage rates that are in effect 10 days before Bid Opening. Pamphlet 600, Issue 46.

Dropbox Link for Attachments:

https://www.dropbox.com/sh/lebdakp1m6w8t93/AAC_UaK4JaI96M7vY6XhN5zPa?dl=0

APPENDIX A **REQUIRED DOCUMENTS**

REQUIRED FOR PROPOSAL/BID Bids will not be considered if the following documents are not completely filled out and submitted at the time of bidding.

1. Construction Bid Form - [Form 395-0121]
2. Bid Schedule
3. Bid Bond - [Form 395-0120]
4. Contractor Responsibility Questionnaire - [Form 395-0136]
5. Alaska Contractors License
6. Statement of Qualifications
7. Signed Federal Terms & Conditions Items # 24 and 25

REQUIRED AFTER NOTICE OF AWARD The successful proposer is required to complete and submit the following documents within **five (5) working days** after receipt of written notification:

1. Subcontractor List - [Form 395-0131]
2. Construction Quality Control (CQC) Plan
3. Contractor's Site Health & Safety Plan

REQUIRED FOR AWARD In order to be awarded the contract, the successful bidder must completely fill out and submit the following documents within the time specified in the intent to award letter:

1. Certificate of Insurance - [from Insurance Carrier]
2. Payment Bond - [Form 395-0126]
3. Performance Bond - [Form 395-0127]
4. Alaska Business Licenses
5. State of Alaska Department of Labor Notice of Work
6. Construction Contract - [Form 395-0122]; Notice to Proceed (from ARRC)
7. Escrow Documents deposited into Depository

POST AWARD DOCUMENTATION

1. Weekly Certified Payrolls
2. QA/QC Reports
3. Copy of State of Alaska Contractor Letter of Completion

APPENDIX B
BIDDERS INSTRUCTIONS & SPECIAL REQUIREMENTS
(CONSTRUCTION)

To be considered for award, Bids must be made in accordance with the following requirements:

Duty to Seek Clarification: ARRC shall not be held responsible for a Bidder's lack of understanding of what is required by the Invitation to Bid. Should a Bidder not understand any aspect of the Invitation to Bid, or require further explanation or clarification regarding the intent or requirements of the same, it shall be the responsibility of the Bidder to seek clarification from ARRC prior to submitting his or her Bid.

Terms and Conditions: Any resulting contract from this Invitation to Bid shall incorporate the general terms and conditions contained in this bid package.

Contract Documents: Bidders shall familiarize themselves with the requirements of all of the Contract Documents which include, but are not limited to the "Bidders Instructions & Special Requirements", the Invitation to Bid, Bid and Contract Forms, General Conditions, Special Conditions, Specifications, Drawings, any Addenda issued prior to the receipt of Bids, and any other documents referenced or incorporated therein.

Examination and Interpretation of Documents: Each Bidder shall examine the Contract Documents carefully and shall make written requests to ARRC prior to Bid submission for interpretation or correction of any ambiguity, inconsistency, discrepancy, omission, or error therein which the bidder may discover. Any interpretation or correction will be issued in an Addendum by ARRC. Only a written interpretation or correction shall be binding. No Bidder shall rely on any interpretation or correction given by any other method.

Addenda: ARRC may modify the Invitation to Bid prior to the date fixed for opening of Bids by issuance of an Addendum to all parties who have been furnished the Bid Package for bidding purposes. Bidders must acknowledge receipt of all Addenda on the Construction Bid Form [Form 395-0121].

Qualification of Bidders: Pursuant to ARRC Procurement Rule 1600.3, before a Bid is considered for award, ARRC may request a Bidder to submit information regarding the Bidder's capability in all respects to fully perform the contract requirements or the individual integrity and reliability which will assure good faith performance. Such information shall include the Bidder's prior experience in performing comparable Work, the availability of necessary financing, equipment, facilities, expertise and personnel to perform the Work and whether he or she has ever been terminated or defaulted on construction work.

Bid Forms: Bids must be submitted on the forms provided by ARRC, completed in all respects as required by the Bid Forms and other Contract Documents and manually signed by an authorized official of the Bidder. Bidders may make copies of the Bid Forms for submission of Bids.

Submission of Bids: Bids must be submitted as directed in the Invitation to Bid prior to the exact time set for opening bids. Late bids will not be considered.

Modification, Correction, Withdrawal of Bids: Modification, correction or withdrawal of Bids will be allowed only as provided in ARRC Procurement Rule 1200.8.

Bid Opening: Bids will be opened in public at the time set forth in the Invitation to Bid in accordance with ARRC Procurement Rule 1200.6. The contents of the Bids will be open for public inspection after the notice of intent to award a contract is given.

Evaluation of Bids: Bids will be evaluated in accordance with the provisions of ARRC Procurement Rule 1200.7. Alternative bids, if called for, are intended to provide ARRC a range of comparative costs which will allow identification of the combinations most responsive to ARRC's need. The order in which the alternatives are listed or set out in the Invitation to Bid should not be taken as any indication as to the order in which ARRC may elect to select the alternatives, if any. Bidders shall submit bid prices for all alternatives stated in the Invitation to Bid and are advised that the order in which the alternatives, if any, are chosen by ARRC, may affect which Bidder is the lowest responsive and responsible Bidder.

Bid Security: In accordance with ARRC Procurement Rule 1200.4, all Bids shall be accompanied by bid security in the form of a cashier's check or an acceptable Bid Bond, a form of which is provided herein, in the amount of five percent (5%) of the Bid price.

Rejection of Bids: ARRC reserves the right to waive minor defects or informalities in a Bid in accordance with the provisions of ARRC Procurement Rule 1200.8, or to reject any or all Bids in accordance with the provisions of ARRC Procurement Rule 1600.2.

Award of Contract: Unless the Invitation to Bid is canceled or all bids are rejected, the procurement officer shall award a contract based on the solicited bids with reasonable promptness by written notice to the lowest, responsible and responsive Bidder whose bid conforms in all material respects to the requirements and criteria set out in the Invitation to Bid.

Execution of Contract: A written contract must be signed by the Bidder to whom an award is made and returned to ARRC within ten (10) calendar days, together with all required performance and payment bonds, and certificate(s) of insurance in the amounts required by the Invitation to Bid. The Bidder to whom award is made shall not be permitted to occupy the project site until he has first obtained the required insurance and submitted to ARRC proof of such insurance together with a statement certifying that said insurance conforms to requirements set forth in the Invitation to Bid.

Failure to Execute Contract: If the Bidder to whom the Contract is awarded refuses or neglects to execute it, or fails to furnish the required bonds and insurance within the time specified, the amount of his bid security may be retained by ARRC as liquidated damages.

Government Contract Requirements: If Federal funds will be used to pay for any part of the project described in the Invitation to Bid, any contract awarded hereunder will contain provisions requiring the successful Bidder to comply with all pertinent provisions, agreements, and clauses of the subject federal grant and all pertinent laws, regulations, Presidential directives, and executive orders to the extent they apply to the subject matter of the contract.

Drug and Alcohol-Free Workplace: Safety is paramount at ARRC. For that reason, ARRC maintains an alcohol and drug-free workplace and requires that the Contractor do the same. At all times during the performance of this contract, the Contractor shall have in place a written drug and alcohol program that includes, at a minimum, the following:

- a. a requirement that all applicants present a negative pre-employment drug screen prior to being hired by the Contractor;

- b. a requirement that employees submit to a "reasonable suspicion" drug and/or alcohol test when showing signs and symptoms of drug and/or alcohol influence on duty;
- c. a requirement that employees submit to "reasonable cause/post-accident" drug and alcohol tests following certain accidents or incidents (with the threshold level triggering testing to be determined by the Contractor);
- d. a provision defining a positive alcohol test as one that reveals a breath alcohol level of .02 or greater;
- e. a provision defining a positive drug test as one that reveals concentrations at the levels set forth in 49 C.F.R. § 40.87(b)(screening test) and 49 C.F.R. § 40.87(c)(confirmatory test) or greater;
- f. a provision that outlines the consequences of a positive drug or alcohol test and the consequences of an employee's refusal to submit to drug/alcohol testing; and
- g. a provision that establishes the conditions under which an employee may return to work following a positive drug and/or alcohol test, which at a minimum include an evaluation by a substance abuse professional and compliance with a recommended treatment program.

The Contractor agrees that at any time during the performance of this contract, if an ARRC employee reports to the Contractor that an employee of the Contractor or its subcontractor is showing signs and symptoms of drug/alcohol influence on duty, the Contractor shall remove the employee from ARRC property immediately and shall have the employee tested for drug/alcohol influence. If the employee tests positive, the Contractor shall ensure that the employee is not returned to work on the project until he/she has met the return-to-work requirements contained in the Contractor's written program.

FRA Drug & Alcohol Testing Compliance. The Contractor agrees to establish and implement a drug and alcohol testing program that complies with 49 C.F.R. part 219, produce any documentation necessary to establish its compliance with part 219, and permit any authorized representative of the Federal Railroad Administration (FRA), ARRC or its agents, to inspect the facilities and records associated with the implementation of the drug and alcohol testing program as required under 49 C.F.R. part 219 and review the testing process.

The Contractor agrees further to submit the annual Management Information System (MIS) reports required by 49 C.F.R. 219.800 covering the previous calendar year to the FRA before March 15. The Contractor agrees further to include this provision in any subcontracts that involve the performance of Roadway Worker services for ARRC.

All contractors and subcontractors providing Roadway Worker services for ARRC will be required to register with Avetta, a third-party verification company that ARRC has engaged to verify and track contractor compliance with 49 C.F.R. Part 219 as well as other contractor responsibilities. The cost for each contractor to register will vary based on the services provided, and will be paid by the contractor directly to Avetta.

Resources to assist with registration: Avetta <https://www.avetta.com/>
Avetta team at 800-506-7427.

Part 219 questions: ARRC Compliance Manager at 907-265-2533.

Offer Acceptance Period: For the purpose of award, offers made in accordance with this ITB shall be good and firm for a period of sixty (60) days from the date of bid opening.

Site-Safety Plan Requirement: Before the contractor or any subcontractor begins any construction related work under this contract including but not limited to mobilization, equipment setup, storage, etc., taking place on sites under Alaska Railroad Corporation (ARRC) control, they will submit a site Health and Safety Plan to ARRC for compatibility acceptance.

The plan must be compatible with ARRC Safety Policies, including On-Track Safety, ARRC on-site employee safety including safety for Project Managers, Construction Managers, Flaggers, Visitors, Safety personnel, Quality Assurance staff, vendors, and the public. The plan must outline procedures for first aid, emergency response, chemical exposures, spills, site sign-in requirements for site-safety briefings, coordination with ARRC dispatch, Section 6.16 (SAFETY AND PROTECTION), Section 6.17 (WORK SAFETY ON RAILROAD PROPERTY), and Section 6.18 (EMERGENCIES), other sections of the contract GENERAL CONDITIONS, Appendix F.

A complete, detailed Site-Safety Plan shall be submitted to the Project Manager at least 10 days prior to commencement of any Work on the Project

Contractor's Instructions for Submitting Certified Payroll: This contract includes work on an Alaska Railroad Corporation (ARRC) construction project, which is subject to the wage/certified payroll requirements of the Alaska Department of Labor Workforce Development (DOLWD) and/or it may include work on a federally funded construction project and be subject to U. S. Department of Labor Davis-Bacon Act wage/certified payroll requirements.

As part of the contract the following will be required:

1. All contractors on a construction project funded in whole or in part with federal funds shall pay laborers and mechanics the higher of the two wages listed in this contract from the U. S. Department of Labor (www.access.gpo.gov/davisbacon/ or <http://www.gpo.gov/davisbacon/ak.html>) or from the DOLWD (www.labor.state.ak.us/lss/home.htm). Contractors on an ARRC-funded construction project shall pay laborers and mechanics the appropriate wage established by the DOLWD under the Little Davis Bacon Act.
2. All contractors employing laborers and mechanics on the project for must submit weekly certified payrolls that contain the information listed on the DOLWD Weekly Certified Payroll Form 07-6058, pages 1 and 2. Page 2 is the "Statement of Compliance" and must bear an original signature. The prime contractor is responsible for gathering the certified payrolls from each subcontractor and for submitting them, along with their own, to ARRC.
3. These weekly certified payrolls must be sent to ARRC within seven days after the regular "payday" for that certified payroll at the following address:

Alaska Railroad Corporation
Attn: Certified Payroll Clerk
P.O. Box 107500
Anchorage, AK 99510-7500
Email: certifiedpayrollprocessor@akrr.com

The contractor and its subcontractors are also responsible for filing certified payrolls with DOLWD as required.

4. The certified payroll must be completely filled out by the contractor including, but not limited to:
 - i. **Contractor's complete name**, including joint ventures, Inc., LLC, etc.
 - ii. **Contractor's license number**, also called the contractor's registration number, is required in addition to a business license to do construction work in the state
 - iii. **Employee's**
 - a. Name
 - b. Address (domicile and mailing)
 - c. Social security number
 - d. Job classification
 - e. Hours worked
 - f. Wages/fringe benefits paid
 - iv. **Contracting agency project number**, which is the ARRC contract/purchase order number and is listed on the DOLWD finalized Notice of Work. This notice also lists the **DOLWD project number, project name, and location**. The prime contractor will supply all of this information to its subcontractors.
 - v. **Week ending date and payroll numbers**. The first week or part of a week of payroll will be designated as payroll number 1 for the first week, 2 for the second week, etc. until the final week worked on the project. If no work is completed during a given week, the contractor must nonetheless submit a certified payroll for that week, with the appropriate consecutive payroll number for that week, and write "No Work Performed" on payroll.
 - vi. The **Statement of Compliance** must be completely filled out indicating how fringe benefits are paid and listing the payroll period. The Statement of Compliance must be signed, dated, and filed within seven days of the payment date of the payroll.
 - vii. **Stamp or write "Confidential"** on the certified payroll to help insure the privacy of contractor employees.

Sample copies of DOLWD certified payroll forms with the "Statement of Compliance is shown in Figures 1 and 2 below.

Failure to timely submit complete and accurately filled out weekly certified payrolls to ARRC may result in the delay of payment on the contract.

STATEMENT OF COMPLIANCE

CERTIFIED PAYROLL FORM 07-6058

SSN MUST be listed for each employee on payroll

Contractors & Subcontractors Please Note!!!

8 AAC 30.020 CERTIFIED PAYROLL. (a) All Contractors (including owner/operators) who perform work on a public construction contract for the state or political subdivision of the state shall file with the Department a certified payroll (Form 07-6058) before Friday of each week that covers the preceding week.

(b) The certified payroll shall be submitted to the Department's regional office in which the work is performed.

Region I, North of N63°

Labor Standards & Safety Div. DOLWD
675 7th Ave, Station J-1
Fairbanks, AK 99701-4553
(907) 451-2886 Fax: (907) 451-2885

Region II, South of N63°

Labor Standards & Safety Div. DOLWD
3301 Eagle Street, Suite 301
Anchorage, AK 99503-4149
(907) 269-4900 Fax: (907) 269-4915

Region III, Southeast Alaska, (From Yakutat south)

Labor Standards & Safety, DOLWD
P. O. Box 21149
1111 W. 8th Street, Rm 302
Juneau, AK 99801
(907) 465-4842 Fax: (907) 465-3584

In lieu of submitting Form 07-6058, contractors may submit his/her payroll form. THE FORM MUST CONTAIN SOCIAL SECURITY NUMBERS FOR EACH EMPLOYEE. The contractor's payroll record must contain the same information required on this form.

Sec. 36.05.040 requires that all contractors or subcontractors who perform work on a public construction contract for the state or a political subdivision of the state shall, BEFORE FRIDAY OF EACH WEEK, file with the Department of Labor and Workforce Development (DOLWD), a sworn affidavit for the previous week, setting out in detail the number of workers employed, wages paid each week, job classification of each employee, hours worked each day and week, and other information which the DOLWD requires.

CONTRACTORS WHO DISREGARD THEIR OBLIGATIONS TO THEIR EMPLOYEES, INCLUDING PAYMENT OF THE APPROPRIATE PREVAILING RATES OF PAY, UNCONDITIONAL PAYMENT, AND PAYMENT NOT LESS THAN ONCE A WEEK MAY BE DEBARRED FROM PUBLIC CONSTRUCTION.

Date: 22-Dec-04

(2) That Alaska Strong Steel, Inc. (Contractor / Subcontractor)

(c) Each laborer, mechanic or field surveyor listed on this payroll has been paid, as indicated on the payroll, an amount not less than the sum of the applicable basic hourly wage rate plus the amount of the required fringe benefits as currently published by DOLWD, except as noted in Section 6(0) exceptions:

Jane Doe, President (Name of Signatory Party) (Title) do hereby state which requires employment preference for Alaska residents as outlined in AS 36.95.010; and

(3) That any payrolls otherwise under this contract required to be submitted for the above period are correct and complete;

Gold Creek Bridge Project (Building or Work) ; that during the payroll period commencing on 12-Dec-04, and ending on (date)

18-Dec-04, all persons employed on said project have been paid full weekly wages earned, that no rebates have been or will be made either directly or indirectly to or on behalf of said

Alaska Strong Steel, Inc. (Contractor / Subcontractor) from the full weekly wages earned by an person, and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions, on projects covered by Alaska Statute 36 as defined in regulations issued by the Commissioner of Labor, or on Federal Projects as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 946; 63 Stat. 108; 72 Stat. 967; 76 Stat. 357; 40 USC 276 (c), and described below:

Alaska Strong Steel, Inc. (Contractor / Subcontractor)

from the full weekly wages earned by an person, and that no deductions have been made either directly or indirectly from the full wages earned by any person, other than permissible deductions, on projects covered by Alaska Statute 36 as defined in regulations issued by the Commissioner of Labor, or on Federal Projects as defined in Regulations, Part 3 (29 CFR Subtitle A), issued by the Secretary of Labor under the Copeland Act, as amended (48 Stat. 946; 63 Stat. 108; 72 Stat. 967; 76 Stat. 357; 40 USC 276 (c), and described below:

Table with 2 columns: Exception (Craft), Explanation

The classification of any of the above information may subject the contractor/subcontractor to civil or criminal prosecution. See Section 10 of Title 18 and Section 231 of the United States Code. Also see AS 36.05.040.

Jane Doe

Signature (original signature required)

Jane Doe, President

Name & Title (print or type)

and;

Figure 2 Sample Certified Payroll Statement of Compliance

APPENDIX C – FORMS

1. ALASKA RAILROAD CORPORATION - CONSTRUCTION BID FORM
2. BID SCHEDULE
3. ALASKA RAILROAD CORPORATION - BID BOND
4. ALASKA RAILROAD CORPORATION - CONTRACTOR RESPONSIBILITY QUESTIONNAIRE
5. ALASKA RAILROAD CORPORATION - SUBCONTRACTOR LIST - [First Tier Subcontractors Only]
6. ALASKA RAILROAD CORPORATION - PAYMENT BOND
7. ALASKA RAILROAD CORPORATION - PERFORMANCE BOND
8. ALASKA RAILROAD CORPORATION - SAMPLE CONSTRUCTION CONTRACT

**Alaska Railroad Corporation
CONSTRUCTION BID FORM**

NAME _____

ADDRESS _____

To the CONTRACTING OFFICER, ALASKA RAILROAD CORPORATION:

In compliance with your Invitation to Bid Number, **23-34-211025**, the Undersigned proposes to furnish and deliver all the materials and do all the work and labor required in the construction of the **Bird Creek Bridge 83.3 Replacement**, located at or near **Bird Creek, Alaska** according to the drawings and specifications and for the amount and prices named herein as indicated on the Cost Schedule, which is made a part of this Bid.

The Undersigned declares that he/she has carefully examined the contract requirements and that he/she has made a personal examination of the site of the work; that he/she understands that the quantities, where such are specified in the Cost Schedule or on the drawings for this Project, are approximate only and subject to increase or decrease, and that he/she is willing to perform increased or decreased quantities of work at unit prices bid under the conditions set forth in the Contract Documents.

The Undersigned hereby agrees to execute the said contract and bonds within **Ten (10) Calendar Days**, or such further time as may be allowed in writing by the Contracting Officer, after receiving notification of the acceptance of this Bid, and it is hereby mutually understood and agreed that in case the Undersigned does not, the accompanying bid guarantee shall be forfeited to the Alaska Railroad Corporation as liquidated damages, and said Contracting Officer may proceed to award the contract to others.

The Undersigned agrees to commence the work within **Ten (10) Calendar Days** after the effective date of the Notice to Proceed and to complete the work by _____, unless extended in writing by the Contracting Officer.

The Undersigned proposes to furnish a Payment Bond in the amount of One Hundred Percent (100%) and a Performance Bond in the amount of One Hundred Percent (100%) (of the contract), as surety conditioned for the full, complete and faithful performance of this contract.

The Undersigned acknowledges receipt of the following addenda to the drawings and/or specifications (give number and date of each).

Addenda No.	Date Issued	Addenda No.	Date Issued	Addenda No.	Date Issued
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____
_____	_____	_____	_____	_____	_____

NON-COLLUSION AFFIDAVIT

The Undersigned declares, under penalty of perjury under the laws of the United States, that neither he/she nor the firm, association, or corporation of which he/she is a member, has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this Bid.

The Undersigned has read the foregoing proposal and hereby agrees to the conditions stated therein by affixing his/her signature below:

Signature

Name and Title of Person Signing

Telephone Number

Email

Form 395-0121 (12/99)

BID SCHEDULE

BID SCHEDULE: A Bidder's Failure to provide the information requested in this Appendix may be cause for rejection of the bid on the basis on non-responsiveness. Cost shall be bid in accordance to all specifications and any Technical Specifications incorporated herein.

AWARD CRITERIA: A contract award resulting from this solicitation may be made to the low, responsive, responsible bidder who meets the requirements as set forth in the Drawings and specifications and compliance thereof. An award may be made in the aggregate of Base Bid and or any combination of Base Bid and Add Alternates, whichever is deemed by the Contract Administrator to be in the best interest of the ARRC. The successful bidder shall hold unit prices of all additives firm for a period of thirty (30) days from the date of bid opening. Award is contingent on the availability of ARRC funds.

BASE BID: ITEMS					
Item No.	Item Description	Unit	Quantity ¹	Unit Bid Price	Amount Bid
202.0023.1	Removal of Bridge and Existing Structures	Lump Sum	1		
202.0024.1	Removal of Track	Linear Foot	240		
203.0006.1	Selected Material, Type A	Ton	209		
205.0005.1	Controlled Low-Strength Material	Lump Sum	1		
241.0001.1	Railroad Ballast, Type 3	Ton	521		
241.0001.2	Surfacing Mainline Track	Lump Sum	1		
242.0001.1	Track Work, 115# RE Rail	Linear Foot	240		
301.0002.1	Aggregate Base (Subballast), Grading D-1	Ton	65		
501.0007.1	Precast Concrete Backwall	Each	2		
503.0003.1	Drill and Bond Dowel (#10 Dowel x 3'-0" Embed)	Each	24		
504.0001.1	125' Steel Thru Plate Girder Span, Installation	Lump Sum	1		
605.0001.1	Perforated Corrugated Steel Pipe for Underdrain, 6 Inch	Lump Sum	1		
611.0002.1	Riprap, Class II	Ton	355		
618.0005.1	Seeding	Lump Sum	1		

BASE BID: ITEMS					
Item No.	Item Description	Unit	Quantity ¹	Unit Bid Price	Amount Bid
620.0003.1	Topsoil	Lump Sum	1		
631.0002.1	Geotextile, Erosion Control, Class 1	Square Yard	734		
634.0002.1	Geogrid, Reinforcement, Class 1	Square Yard	364		
640.0001.1	Mobilization and Demobilization	Lump Sum	1		
641.0001.1	Erosion, Sediment, and Pollution Control Admin	Lump Sum	1		
641.0002.1	Temporary Erosion, Sediment, and Pollution Control	Lump Sum	1		
642.0001.1	Construction Surveying	Lump Sum	1		
643.0002.1	Traffic Maintenance	Lump Sum	1		
643.0025.1	Traffic Control	Contingent Sum	1	\$100,000	\$100,000
643.0032.1	Flagging	Contingent Sum	1	\$50,000	\$50,000
646.0001.1	CPM Scheduling	Lump Sum	1		
647.0001.1	As-Built Record Drawings and Specifications	Lump Sum	1		
651.0001.1	Temporary Access Road	Lump Sum	1		
Total Base Bid					\$

Notes:

¹ Bid quantities are approximate. Contractor is responsible for their own quantity take-offs using the information within the Contract Documents to verify the quantities in the Bid Schedule.

NON-COLLUSION AFFIDAVIT: The Undersigned declares, under penalty of perjury under the laws of the United States, that neither he/she nor the firm, association, or corporation of which he/she is a member, has, either directly or indirectly, entered into any agreement, participated in any collusion, or otherwise taken any action in restraint of free competitive bidding in connection with this Bid.

The Undersigned has read the foregoing proposal and hereby agrees to the conditions stated therein by affixing his/her signature below:

BIDDERS NAME AND ADDRESS

COMPANY NAME

SIGNATURE BY AND FOR THE BIDDER

COMPANY MAILING ADDRESS

PRINTED NAME OF ABOVE BIDDER

CITY, STATE ZIP CODE

DATE OF BID

CONTACT PHONE NUMBER

CONTACT E-MAIL

ALASKA RAILROAD CORPORATION - BID BOND
for ITB 23-34-211025
Bird Creek Bridge 86.6 Replacement

DATE BOND EXECUTED

PRINCIPAL (Legal name and business address)	TYPE OF ORGANIZATION
	<input type="checkbox"/> INDIVIDUAL <input type="checkbox"/> PARTNERSHIP <input type="checkbox"/> JOINT VENTURE <input type="checkbox"/> CORPORATION
STATE OF INCORPORATION	

SURETY(IES) (Name and business address)		
A.	B.	C.

PENAL SUM OF BOND	DATE OF BID
--------------------------	--------------------

We, the PRINCIPAL and SURETY above named, are held and firmly bound to the Alaska Railroad Corporation (ARRC), in the penal sum of the amount stated above, for the payment of which sum will be made, we bind ourselves and our legal representatives and successors, jointly and severally, by this instrument.

THE CONDITION OF THE FOREGOING OBLIGATION is that the Principal has submitted the accompanying bid or proposal in writing, date as shown above, on the following project: _____, in accordance with contract documents filed in the office of the Contracting Officer, and under the Invitation for Bids therefore, and is required to furnish a bond in the amount stated above.

If the Principal's bid is accepted and he/she is offered the proposed contract for award, and if Principal fails to enter into the contract, then the obligation to ARRC created by this bond shall be in full force and effect.

If the Principal enters into the contract, then the foregoing obligation is null and void.

PRINCIPAL				
Signature(s)	1.	2.	3.	Corporate Seal
Name(s) & Titles [Typed]	1.	2.	3.	

CORPORATE SURETY(IES)				
S U R E T Y A	Name of Corporation		State of Incorporation	Liability Limit \$
	Signature(s)	1.	2.	Corporate Seal
	Name(s) & Titles [Typed]	1.	2.	

CORPORATE SURETY(IES)

S U R E T Y B	Name of Corporation		State of Incorporation	Liability Limit \$
	Signature(s)	1.	2.	Corporate Seal
	Name(s) & Titles [Typed]	1.	2.	

CORPORATE SURETY(IES)

S U R E T Y C	Name of Corporation		State of Incorporation	Liability Limit \$
	Signature(s)	1.	2.	Corporate Seal
	Name(s) & Titles [Typed]	1.	2.	

INSTRUCTIONS

1. This form shall be used whenever a bid bond is submitted.
2. Insert the full legal name and business address of the Principal in the space designated. If the Principal is a partnership or joint venture, the names of all principal parties must be included (e.g., "Smith Construction, Inc. and Jones Contracting, Inc. dba Smith/Jones Builders, a Joint Venture"). If the Principal is a corporation, the name of the state in which incorporated shall be inserted in the space provided.
3. Insert the full legal name and business address of the Surety in the space designated. The Surety on the bond may be any corporation or partnership authorized to do business in Alaska as an insurer under AS 21.09. Individual sureties will not be accepted.
4. The penal amount of the bond may be shown either as an amount (in words and figures) or as a percent of the contract bid price (a not-to-exceed amount may be included).
5. The scheduled bid opening date shall be entered in the space marked Date of Bid.
6. The bond shall be executed by authorized representatives of the Principal and Surety. Corporations executing the bond shall also affix their corporate seal.
7. Any person signing in a representative capacity (e.g., an attorney-in-fact) must furnish evidence of authority if that representative is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved.
8. The states of incorporation and the limits of liability of each surety shall be indicated in the spaces provided.
9. The date that bond is executed must not be later than the bid opening date.

Form 395-0120

**ALASKA RAILROAD CORPORATION
CONTRACTOR RESPONSIBILITY QUESTIONNAIRE**

PART I - INSTRUCTIONS

1. All Bidders/Proposers submitting a Bid/Proposal for federally funded contracts are to complete and submit all Parts of this Questionnaire with their Bid or Proposal. Failure to complete and return this questionnaire, any false statements, or failure to answer question when required, may render the bid/proposal non-responsive. All responses must be typewritten or printed in ink. All information must be legible.
2. Please state "not applicable" in questions clearly not applicable to Bidder/Proposer in connection with this solicitation. Do not omit any question.
3. The completed Questionnaire must be sworn to by a partner (if partnership), a duly authorized officer or individual (if a corporation or LLC), or a principal (if a sole proprietorship).
4. The term "Proposer" includes the term "Bidder" and also refers to the firm awarded the Contract. The term "Proposal" includes the term "Bid".
5. ARRC reserves the right to inquire further with respect to Proposer's responses; and Proposer consents to such further inquiry and agrees to furnish all relevant documents and information as requested by ARRC. Any response to this document prior or subsequent to Proposer's Proposal which is or may be construed as unfavorable to Proposer will not necessarily automatically result in a negative finding on the question of Proposer's responsibility or a decision to terminate the contract if it is awarded to Proposer.

PART II - IDENTITY OF PROPOSER

1. Proposer's Full Legal Name: _____
2. The Proposer represents that it operates as the following form of legal entity:
(Check whichever applies and fill in any appropriate blanks.)
 - an individual or sole proprietorship
 - a general partnership
 - a limited partnership
 - a joint venture consisting of: _____ and _____
(List all joint ventures on a separate sheet if this space is inadequate.)
 - a non-profit organization
 - a corporation organized or incorporated under the laws of the following state or country: _____ on the following date: _____
 - a limited liability company organized under the laws of the following state or country: _____ on the following date: _____

3. Proposer's federal taxpayer identification number: _____
4. Proposer's Alaska business license number: _____
5. Proposer's contractor's license number (for construction only): _____
6. Proposer's legal address: _____

Telephone Number: (____) _____ Fax Number: (____) _____

7. Proposer's local or authorized point of contract address:
 Name: _____ Title: _____
 Address: _____
 Telephone Number: (____) _____ EMAIL: _____

8. How long has the Proposer been in business? _____
9. Has Proposer been in business under another name? If so, identify name and dates used.

10. Does your firm consider itself to be an MBE, WBE or DBE?
 YES NO
 If answer is "YES," attach a copy of certification.

11. Number of employees: _____ including _____ employees in the State of Alaska.

PART III-CONTRACTING HISTORY

1. Has the Proposer been awarded any contracts within the last five years by ARRC, the State of Alaska, or any other public entity for the same or reasonably similar goods or services sought by this solicitation? If none, answer "No". If yes, on a separate sheet of paper describe those contracts beginning with the most recent. State the name of the contracting entity; give a brief description of the contract and the contract number, the dollar amount at award and at completion, date completed; state the contract period, the status of the contract, and the name, address, and telephone number of a contact person at the agency. Indicate if

award was made to Proposer as prime contractor or joint venture. Proposer need not provide more than three such descriptions.

YES NO

2. Has the Proposer been awarded any private sector contracts within the last five years for the same or reasonably similar goods or services sought by this solicitation? If none, answer "No." If yes, on a separate sheet of paper provide the name and address of the contracting entity, a brief description of work, the dollar amount at award and at completion, date completed, status of the contract and name, address and telephone number of contact person as to each, beginning with the most recent. Indicate if Proposer acted as prime contractor or joint venture. Proposers need not provide more than three such descriptions.

YES NO

NOTE: ANY "YES" ANSWERS TO #3 BELOW MUST BE FULLY EXPLAINED ON A SEPARATE SHEET OF PAPER AND ATTACHED TO THIS QUESTIONNAIRE.

3. In the past five years has the Proposer been the subject of any of the following actions?

A. Been suspended, debarred, disqualified, or otherwise declared ineligible to bid?

YES NO

B. Failed to complete a contract for a public or private entity?

YES NO

C. Been denied a low-bid contract in spite of being the low bidder?

YES NO

D. Had a contract terminated for any reason, including default?

YES NO

E. Had liquidated damages assessed against it during or after completion of a contract?

YES NO

F. Been a defaulter, as principal, surety or otherwise?

YES NO

G. Been denied an award of a public contract based upon a finding by a public agency that your company was not a responsible contractor?

YES NO

H. A public entity requested or required enforcement of any of its rights under

a surety agreement on the basis of your company's default or in lieu of declaring your company in default?

YES

NO

I. Been denied a performance or payment bond by a surety company?

YES

NO

J. Been required to pay back wages and/or penalties for failure to comply with state or federal prevailing wage or overtime laws?

YES

NO

4. Does Proposer currently possess the financial, organizational, technical, equipment, facilities, and other resources necessary to supply the goods or services sought by this solicitation? If no, on a separate sheet of paper describe how you intend to obtain the resources necessary to supply the goods or services sought by this solicitation.

YES

NO

5. Does Proposer have any present or anticipated commitments and/or contractual obligations that might impact its ability to meet the required delivery or performance requirements of this solicitation? If yes, on a separate sheet of paper describe any apparent conflicts as between the requirements/commitments for this solicitation with respect to the use of Proposer's resources, such as management, technical expertise, financing, facilities, equipment, etc.

YES

NO

PART IV-CIVIL ACTIONS

If "Yes" to Parts IV or V, provide details on a separate sheet of paper including a brief summary of cause(s) of action; indicate if Proposer, its principals, officers or partners were plaintiffs or defendants; define charges explicitly, by what authority, court or jurisdiction, etc. In the case of tax liens, please indicate whether the liens were resolved with the tax authorities. Please submit proof of payment or agreements to pay the liens. Complete details are required!

1. Violations Of Civil Law. In the past five years has Proposer, any of its principals, officers or partners been the subject of an investigation of any alleged violation of a civil antitrust law, or other federal, state or local civil law?

YES

NO

2. Lawsuits With Public Agencies. At the present time is, or during the past five years has Proposer, any of its principals, officers or partners been a plaintiff or defendant in any lawsuit or arbitration regarding services or goods provided to a public agency?

YES

NO

3. Bankruptcy. During the past five years, has the Proposer filed for bankruptcy or reorganization under the bankruptcy laws?

YES NO

4. Judgments, Liens And Claims. During the past five years, has the Proposer been the subject of a judgment, lien or claim of \$25,000 or more by a subcontractor or supplier?

YES NO

5. Tax Liens. During the past five years, has the Proposer been the subject of a tax lien by federal, state or any other tax authority?

YES NO

PART V-COMPLIANCE WITH LAWS AND OTHER REGULATIONS

1. Criminal: In the past five years has the Proposer, any of its principals, officers, or partners been convicted or currently charged with any of the following:

A. Fraud in connection with obtaining, attempting to obtain, or performing a public contract, agreement or transaction?

YES NO

B. Federal or state antitrust statutes, including price fixing collusion and bid rigging?

YES NO

C. Embezzlement, theft, forgery, bribery, making false statements, submitting false information, receiving stolen property, or making false claims to any public agency?

YES NO

D. Misrepresenting minority or disadvantaged business entity status with regard to itself or one of its subcontractors?

YES NO

E. Non-compliance with the prevailing wage requirements of the State of Alaska or similar laws of any other state?

YES NO

F. Violation of any law, regulation or agreement relating to a conflict of interest with respect to a government funded procurement?

YES NO

G. Falsification, concealment, withholding and/or destruction of records relating to a public agreement or transaction?

YES NO

H. Violation of a statutory or regulatory provision or requirement applicable to a public or private agreement or transaction?

YES NO

I. Do any principals, officers or partners in Proposer's company have any felony charges pending against them that were filed either before, during, or after their employment with the Proposer?

YES NO

2. Regulatory Compliance. In the past five years, has Proposer or any of its principals, officers or partners:

A. Been cited for a violation of any labor law or regulation, including, but not limited to, child labor violations, failure to pay correct wages, failure to pay into a trust account, failure to remit or pay withheld taxes to tax authorities or unemployment insurance tax delinquencies?

YES NO

B. Been cited and assessed penalties for an OSHA or Alaska/OSHA "serious violation"?

YES NO

C. Been cited for a violation of federal, state or local environmental laws or regulations?

YES NO

D. Failed to comply with Alaska corporate registration, federal, state or local licensing requirements?

YES NO

E. Had its corporate status, business entity's license or any professional certification, suspended, revoked, or had otherwise been prohibited from doing business in the State of Alaska?

YES NO

PART VI-FINANCIAL

Copies of the following documents are to be submitted with this Questionnaire:

1. Proposer's current Alaska Business License, if required by state law.

2. Proposer's Financial Statements may be requested:

A. PUBLICLY TRADED COMPANIES: Financial information will be accessed on-line. However, if additional information is needed, it will be specifically requested from the Proposer.

B. NON-PUBLICLY TRADED COMPANIES WITH AUDITED OR REVIEWED FINANCIAL STATEMENTS: Statements, including balance sheet, statement of earnings and retained income, with footnotes, for the most recent three years **may be requested.**

NOTE: ARRC reserves the right to ask for additional documentation if it is reasonably required to make a determination of integrity and responsibility relevant to the goods or services the Proposer will provide to ARRC if awarded a contract. All financial information provided is considered confidential and not subject to public disclosure under Alaska law.

**ALASKA RAILROAD CORPORATION
SUBCONTRACTOR LIST**

[First Tier Subcontractors Only]

The apparent low bidder shall complete this form and submit it so as to be received by the Contracting Officer prior to the close of business on the **Fifth (5th) Working Day** after receipt of written notice from the Alaska Railroad Corporation.

Failure to submit this form with all required information by the due date will result in the bidder being declared non-responsive and may result in the forfeiture of the Bid Security.

Scope of work must be clearly defined. If an item of work is to be performed by more than one (1) firm, indicate the portion or percent of work to be done by each.

Check as applicable: All work on the below-referenced project will be accomplished without subcontracts greater than ½ of 1% of the contract amount.

Or

Subcontractor List is as follows:

FIRM NAME, ADDRESS, TELEPHONE NUMBER	BUSINESS LICENSE NUMBER AND CONTRACTOR'S REGISTRATION NUMBER	SCOPE OF WORK TO BE PERFORMED	TOTAL DOLLAR AMOUNT OF WORK

[CONTINUE SUBCONTRACTOR INFORMATION ON REVERSE]

I hereby certify that the above-listed licenses and registrations were valid at the time bids were received for this project. For contracts involving Federal-aid funding, Alaska Business License and Contractor Registration will be required prior to award of a subcontract.

COMPANY NAME

SIGNATURE BY AND FOR THE BIDDER

COMPANY ADDRESS

PRINTED NAME OF BIDDER

COMPANY ADDRESS

DATE OF BID

CONTACT PHONE NUMBER

CONTACT FAX NUMBER

Form 395-0131

**ALASKA RAILROAD CORPORATION
PAYMENT BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

That _____
of: _____ as Principal,
and _____
of: _____ as Surety,
firmly bound and held unto the Alaska Railroad Corporation in the penal sum of _____ Dollars (\$ _____),
good and lawful money of the United States of America for the payment whereof, well and truly to be paid
to the Alaska Railroad Corporation, we bind ourselves, our heirs, successors, executors, administrators,
and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has entered into a written contract with said Alaska Railroad Corporation,
on the _____ of _____, 20_____,
for _____, said work to be done
according to the terms of said contract. **ARRC Project: ITB 23-34-211025 Bird Creek Bridge 86.6
Replacement.**

NOW, THEREFORE, the conditions of the foregoing obligation is such that if the said Principal shall comply
with all requirements of law and pay, as they become due, all just claims for labor performed and materials
and supplies furnished upon or for the work under said contract, whether said labor be performed and said
materials and supplies be furnished under the original contract, any subcontract, or any and all duly
authorized modifications thereto, then these presents shall become null and void; otherwise they shall
remain in full force and effect.

IN WITNESS WHEREOF, We have hereunto set our hands and seals this _____ day of
_____, 20_____.

Principal: _____
Address: _____
Telephone Number: _____
Contact Name: _____

By: _____
By: _____

Surety: _____
Address: _____
Contact Name: _____
By: _____
By: _____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

Alaska Railroad Corporation [Authorized Representative] Date
(Instructions on Next Page)

INSTRUCTIONS

1. This form, for the protection of persons supplying labor and material, shall be used whenever a payment bond is required. There shall be no deviation from this form without approval from the Contracting Officer.
2. The full legal name, business address, telephone number, and point of contact of the Principal and Surety shall be inserted on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be entered in words and in figures.
4. The bond shall be signed by authorized persons. Where such persons are signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.

Form 395-0126

**ALASKA RAILROAD CORPORATION
PERFORMANCE BOND**

KNOW ALL PERSONS BY THESE PRESENTS:

That _____
of: _____ as Principal,
and _____
of: _____ as Surety,
firmly bound and held unto the Alaska Railroad Corporation in the penal sum of _____ Dollars (\$ _____),
good and lawful money of the United States of America for the payment whereof, well and truly to be paid
to the Alaska Railroad Corporation, we bind ourselves, our heirs, successors, executors, administrators,
and assigns, jointly and severally, firmly by these presents.

WHEREAS, the said Principal has entered into a written contract with said Alaska Railroad Corporation,
on the _____ of _____, 20____,
for _____,

said work to be done according to the terms of said contract. **ARRC Project: ITB 23-34-211025 Bird
Creek Bridge 86.6 Replacement.**

NOW, THEREFORE, the conditions of the foregoing obligation is such that if the said Principal shall well
and truly perform and complete all obligations and work under said contract and if the Principal shall
reimburse upon demand of the Alaska Railroad Corporation any sums paid him/her which exceed the final
payment determined to be due upon completion of the project, then these presents shall become null and
void; otherwise they shall remain in full force and effect.

IN WITNESS WHEREOF, We have hereunto set our hands and seals this _____ day of _____, 20____.

Principal: _____

Address: _____

Telephone Number: _____

Contact Name: _____

By: _____

By: _____

Surety: _____

Address: _____

Contact Name: _____

By: _____

By: _____

The offered bond has been checked for adequacy under the applicable statutes and regulations:

Alaska Railroad Corporation

[Authorized Representative] Date

(Instructions on Next Page)

INSTRUCTIONS

1. This form shall be used whenever a performance bond is required. There shall be no deviation from this form without approval from the Contracting Officer.
2. The full legal name, business address, telephone number, and point of contact of the Principal and Surety shall be inserted on the face of the form. Where more than a single surety is involved, a separate form shall be executed for each surety.
3. The penal amount of the bond, or in the case of more than one surety the amount of obligation, shall be entered in words and in figures.
4. The bond shall be signed by authorized persons. Where such persons are signing in a representative capacity (e.g., an attorney-in-fact), but is not a member of the firm, partnership, or joint venture, or an officer of the corporation involved, evidence of authority must be furnished.

Form 395-0127

**ALASKA RAILROAD CORPORATION
CONSTRUCTION CONTRACT**

Contract Number: _____

This CONTRACT, between the ALASKA RAILROAD CORPORATION, herein called ARRC, acting by and through its Contracting Officer, and _____, a Corporation, incorporated under the laws of the State of Alaska, its successors and assigns, hereinafter called the Contractor, is effective the date of the signature of the Contracting Officer on this document.

Billing Information: Invoices shall be submitted to Accounts Payable, Alaska Railroad Corporation, PO Box 107500, Anchorage, AK 99510-7500. Please reference your contract number on all invoices and correspondence.

WITNESSETH: That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by ARRC, hereby covenants and agrees to furnish and deliver all the materials and to do and perform all the work and labor required in the construction of the following project:
_____ at the prices bid by the Contractor for the respective estimated quantities aggregating approximately the sum of: **Bid amount _____ dollars and /cents (\$_____.00)** for the Base Bid and such other items as are mentioned in the original Bid, which Bid and prices named, together with the Contract Documents (Invitation to Bid, Addenda & Contract) and Contractors Bid are made a part of this Contract and accepted as such, the project being situated at the Port of Anchorage, Alaska.

It is distinctly understood and agreed that no claim for additional work or materials, done or furnished by the Contractor and not specifically herein provided for shall be allowed by ARRC, nor shall the Contractor do any work or furnish any material not covered by this Contract, unless such work is ordered in writing by ARRC. In no event shall ARRC be liable for any materials furnished or used, or for any work or labor done, unless the materials, work, or labor are required by the Contract or on written order furnished by ARRC. Any such work or materials which may be done or furnished by the Contractor without written order first being given shall be at the Contractor's own risk, cost, and expense and the Contractor hereby covenants and agrees to make no claim for compensation for work or materials done or furnished without any such written order.

The Contractor further covenants and agrees that all materials shall be furnished and delivered and all labor shall be done and performed, in every respect, to the satisfaction of ARRC, by _____.

It is expressly understood and agreed that in case of the failure on the part of the Contractor, for any reason, except with the written consent of ARRC, to complete the furnishing and delivery of materials and the doing

and performance of the work before the aforesaid date, ARRC shall have the right to deduct from any money due or which may become due the Contractor, or if no money shall be due, ARRC shall have the right to recover liquidated damages as spelled out in General Conditions, Construction. The bonds given by the Contractor in the sum of: **100% of Bid Amount \$_____ Payment Bond, and 100% of Bid Amount \$_____ Performance Bond**, to secure the proper compliance with the terms and provisions of this Contract, are submitted herewith and made a part hereof.

IN WITNESS WHEREOF, the parties hereto have executed this Contract and hereby agree to its terms and conditions.

CONTRACTOR

Name of Contractor

Signature

Date

Name and Title

(Corporate Seal)

ALASKA RAILROAD CORPORATION

Contracting Officer (Signature)

Date

Typed or Print Name

Form 395-0122

**APPENDIX D –
REQUIRED CONTRACT PROVISIONS FOR FEDERAL-AID CONTRACTS
[Revised March 21, 2023]**

The following contract provisions shall apply, where applicable, to all work performed on the contract by the contractor's own organization and by subcontractors. As provided in this Section, the contractor shall insert in each subcontract all of the stipulations contained in these Required Contract Provisions and further require their inclusion in any lower tier subcontracts or purchase orders that may in turn be made. Incorporation by reference shall not be allowed. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with all applicable Required Contract Provisions.

1. **CARGO PREFERENCE REQUIREMENTS - 46 USC 55305; 46 CFR Part 381** [Applicable to all Federal-aid contracts involving equipment, materials or commodities which may be transported by ocean vessel]

Cargo Preference-Use of United States Flag Vessels - The contractor agrees: **a. to use** privately owned United States-Flag commercial vessels to ship at least 50 percent of the gross tonnage (computed separately for dry bulk carriers, dry cargo liners, and tankers) involved, whenever shipping any equipment, material, or commodities pursuant to the underlying contract to the extent such vessels are available at fair and reasonable rates for United States-Flag commercial vessels; **b. to furnish** within twenty (20) working days following the date of loading for shipments originating within the United States or within thirty (30) working days following the date of loading for shipments originating outside the United States, a legible copy of a rated, "on-board" commercial ocean bill-of-lading in English for each shipment of cargo described in the preceding subsection to the Division of Cargo Preference and Domestic Trade, Maritime Administration, 1200 New Jersey Avenue, SE, Washington, D.C. 20590 and to ARRC (through the contractor in the case of a subcontractor's bill-of-lading), marked with appropriate identification of the project; **c. to include these requirements** in all subcontracts issued pursuant to this contract when the subcontract may involve the transport of equipment, material, or commodities by ocean vessel.

2. **DEBARMENT, SUSPENSION, INELIGIBILITY & VOLUNTARY EXCLUSION - 2 CFR Part 180 & Part 1200; 2 CFR 200.213; Executive Orders 12549 & 12689** [Applicable to all Federal-aid contracts which exceed \$25,000]

The Contractor shall comply and facilitate compliance with U.S. DOT regulations, "Non-procurement Suspension and Debarment," 2 CFR Part 1200, which adopts and supplements the U.S. Office of Management and Budget (U.S. OMB) "Guidelines to Agencies on Government-wide Debarment and Suspension (Non-procurement)," 2 CFR Part 180. As such, the Contractor shall verify that its principals, affiliates, and subcontractors are eligible to participate in this federally funded contract and are not presently declared by any Federal department or agency to be:

- a) Debarred from participation in any federally assisted Award;
- b) Suspended from participation in any federally assisted Award;
- c) Proposed for debarment from participation in any federally assisted Award;
- d) Declared ineligible to participate in any federally assisted Award;
- e) Voluntarily excluded from participation in any federally assisted Award; or
- f) Disqualified from participation in any federally assisted Award.

By signing this contract and/or submitting its bid or proposal, the Contractor, bidder or proposer certifies as follows:

The certification in this clause is a material representation of fact relied upon by the ARRC. If it is later determined by the ARRC that the Contractor, bidder or proposer knowingly rendered an erroneous certification, in addition to remedies available to the ARRC, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor, bidder or proposer agrees to comply with the requirements of 2 CFR Part 180, subpart C, as supplemented by 2 CFR Part 1200, while its offer is valid and throughout the period of any contract that may arise from its offer. The contractor, bidder or proposer further agrees to include a provision requiring such compliance in its lower tier covered transactions.

3. **DAVIS-BACON AND COPELAND ANTI-KICKBACK ACTS**, - 40 USC 3141-3148; 49 USC 5333(a); 29 CFR Part 5; 2 CFR Part 200, App. II (D) [Applicable to all Federal-aid construction contracts which exceed \$2,000]

- (1) **Minimum wages** - (i) All laborers and mechanics employed or working upon the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), will be paid unconditionally and not less often than once a week, and without subsequent deduction or rebate on any account (except such payroll deductions as are permitted by regulations issued by the Secretary of Labor under the Copeland Act (29 CFR part 3)), the full amount of wages and bona fide fringe benefits (or cash equivalents thereof) due at time of payment computed at rates not less than those contained in the wage determination of the Secretary of Labor which is attached hereto and made a part hereof, regardless of any contractual relationship which may be alleged to exist between the contractor and such laborers and mechanics.

Contributions made or costs reasonably anticipated for bona fide fringe benefits under section 1(b)(2) of the Davis-Bacon Act on behalf of laborers or mechanics are considered wages paid to such laborers or mechanics, subject to the provisions of paragraph (1)(iv) of this section; also, regular contributions made or costs incurred for more than a weekly period (but not less often than quarterly) under plans, funds, or programs which cover the particular weekly period, are deemed to be constructively made or incurred during such weekly period. Such laborers and mechanics shall be paid the appropriate wage rate and fringe benefits on the wage determination for the classification of work actually performed, without regard to skill, except as provided in 29 CFR Part 5.5(a)(4). Laborers or mechanics performing work in more than one classification may be compensated at the rate specified for each classification for the time actually worked therein, provided the employer's payroll records accurately set forth the time spent in each classification in which work is performed. The wage determination (including any additional classifications and wage rates conformed under paragraph (1)(ii) of this section) and the Davis-Bacon poster (WH-1321) shall be posted at all times by the contractor and its subcontractors at the site of the work in a prominent and accessible place where it can be easily seen by the workers.

- (ii) (A) The contracting officer shall require that any class of laborers or mechanics, including helpers, which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:
- (1) Except with respect to helpers as defined as 29 CFR 5.2(n)(4), the work to be performed by the classification requested is not performed by a classification in the wage determination; and
 - (2) The classification is utilized in the area by the construction industry; and
 - (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination; and
 - (4) With respect to helpers as defined in 29 CFR 5.2(n)(4), such a classification prevails in the area in which the work is performed.
- (B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, U.S. Department of Labor, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- (C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.
- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(ii) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.

(iii) Whenever the minimum wage rate prescribed in the contract for a class of laborers or mechanics includes a fringe benefit which is not expressed as an hourly rate, the contractor shall either pay the benefit as stated in the wage determination or shall pay another bona fide fringe benefit or an hourly cash equivalent thereof.

(iv) If the contractor does not make payments to a trustee or other third person, the contractor may consider as part of the wages of any laborer or mechanic the amount of any costs reasonably anticipated in providing bona fide fringe benefits under a plan or program, Provided, That the Secretary of Labor has found, upon the written request of the contractor, that the applicable standards of the Davis-Bacon Act have been met. The Secretary of Labor may require the contractor to set aside in a separate account assets for the meeting of obligations under the plan or program.

(v) (A) The contracting officer shall require that any class of laborers or mechanics which is not listed in the wage determination and which is to be employed under the contract shall be classified in conformance with the wage determination. The contracting officer shall approve an additional classification and wage rate and fringe benefits therefore only when the following criteria have been met:

- (1) The work to be performed by the classification requested is not performed by a classification in the wage determination; and
- (2) The classification is utilized in the area by the construction industry; and
- (3) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(B) If the contractor and the laborers and mechanics to be employed in the classification (if known), or their representatives, and the contracting officer agree on the classification and wage rate (including the amount designated for fringe benefits where appropriate), a report of the action taken shall be sent by the contracting officer to the Administrator of the Wage and Hour Division, Employment Standards Administration, Washington, DC 20210. The Administrator, or an authorized representative, will approve, modify, or disapprove every additional classification action within 30 days of receipt and so advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

(C) In the event the contractor, the laborers or mechanics to be employed in the classification or their representatives, and the contracting officer do not agree on the proposed classification and wage rate (including the amount designated for fringe benefits, where appropriate), the contracting officer shall refer the questions, including the views of all interested parties and the recommendation of the contracting officer, to the Administrator for determination. The Administrator, or an authorized representative, will issue a determination with 30 days of receipt and so

advise the contracting officer or will notify the contracting officer within the 30-day period that additional time is necessary.

- (D) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs (a)(1)(v) (B) or (C) of this section, shall be paid to all workers performing work in the classification under this contract from the first day on which work is performed in the classification.
- (2) **Withholding** - ARRC shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld from the contractor under this contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to Davis-Bacon prevailing wage requirements, which is held by the same prime contractor, so much of the accrued payments or advances as may be considered necessary to pay laborers and mechanics, including apprentices, trainees, and helpers, employed by the contractor or any subcontractor the full amount of wages required by the contract. In the event of failure to pay any laborer or mechanic, including any apprentice, trainee, or helper, employed or working on the site of the work (or under the United States Housing Act of 1937 or under the Housing Act of 1949 in the construction or development of the project), all or part of the wages required by the contract, ARRC may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds until such violations have ceased.
- (3) **Payrolls and basic records** - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work (or under the United States Housing Act of 1937, or under the Housing Act of 1949, in the construction or development of the project). Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.
- (ii) (A) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to ARRC for transmission to the Federal grantor agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5. This information may be submitted in any form desired. Optional Form WH- 347 is available for this purpose and may be purchased from the Superintendent of Documents (Federal Stock Number 029-005-00014-1), U.S. Government Printing Office, Washington, DC 20402. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors.
- (B) Each payroll submitted shall be accompanied by a "Statement of Compliance," signed by the contractor or subcontractor or his or her agent who pays or supervises the payment of the persons employed under the contract and shall certify the following:
- (1) That the payroll for the payroll period contains the information required to be maintained under section 5.5(a)(3)(i) of Regulations, 29 CFR part 5 and that such information is correct and complete;

- (2) That each laborer or mechanic (including each helper, apprentice, and trainee) employed on the contract during the payroll period has been paid the full weekly wages earned, without rebate, either directly or indirectly, and that no deductions have been made either directly or indirectly from the full wages earned, other than permissible deductions as set forth in Regulations, 29 CFR part 3;
 - (3) That each laborer or mechanic has been paid not less than the applicable wage rates and fringe benefits or cash equivalents for the classification of work performed, as specified in the applicable wage determination incorporated into the contract.
- (C) The weekly submission of a properly executed certification set forth on the reverse side of Optional Form WH-347 shall satisfy the requirement for submission of the "Statement of Compliance" required by paragraph (a)(3)(ii)(B) of this section.
- (D) The falsification of any of the above certifications may subject the contractor or subcontractor to civil or criminal prosecution under section 1001 of title 18 and section 231 of title 31 of the United States Code.

(iii) The contractor or subcontractor shall make the records required under paragraph (a)(3)(i) of this section available for inspection, copying, or transcription by authorized representatives of the Federal grantor agency or the Department of Labor, and shall permit such representatives to interview employees during working hours on the job. If the contractor or subcontractor fails to submit the required records or to make them available, the Federal agency may, after written notice to the contractor, sponsor, applicant, or owner, take such action as may be necessary to cause the suspension of any further payment, advance, or guarantee of funds. Furthermore, failure to submit the required records upon request or to make such records available may be grounds for debarment action pursuant to 29 CFR 5.12.

- (4) **Apprentices and trainees** - (i) Apprentices - Apprentices will be permitted to work at less than the predetermined rate for the work they performed when they are employed pursuant to and individually registered in a bona fide apprenticeship program registered with the U.S. Department of Labor, Employment and Training Administration, Bureau of Apprenticeship and Training, or with a State Apprenticeship Agency recognized by the Bureau, or if a person is employed in his or her first 90 days of probationary employment as an apprentice in such an apprenticeship program, who is not individually registered in the program, but who has been certified by the Bureau of Apprenticeship and Training or a State Apprenticeship Agency (where appropriate) to be eligible for probationary employment as an apprentice. The allowable ratio of apprentices to journeymen on the job site in any craft classification shall not be greater than the ratio permitted to the contractor as to the entire work force under the registered program. Any worker listed on a payroll at an apprentice wage rate, who is not registered or otherwise employed as stated above, shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any apprentice performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. Where a contractor is performing construction on a project in a locality other than that in which its program is registered, the ratios and wage rates (expressed in percentages of the journeyman's hourly rate) specified in the contractor's or subcontractor's registered program shall be observed. Every apprentice must be paid at not less than the rate specified in the registered program for the apprentice's level of progress, expressed as a percentage of the journeymen hourly rate specified in the applicable wage determination. Apprentices shall be paid fringe benefits in accordance with the provisions of the apprenticeship program. If the apprenticeship program does not specify fringe benefits, apprentices must be paid the full amount of fringe benefits listed on the wage determination for the applicable classification. If the Administrator of the Wage and Hour Division of the U.S. Department of Labor determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination. In the event the Bureau of Apprenticeship and Training, or a State Apprenticeship Agency recognized by the Bureau, withdraws approval of an apprenticeship program, the contractor will no longer be permitted to utilize apprentices at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(ii) Trainees - Except as provided in 29 CFR 5.16, trainees will not be permitted to work at less than the predetermined rate for the work performed unless they are employed pursuant to and individually registered in a program which has received prior approval, evidenced by formal certification by the U.S. Department of Labor, Employment and Training Administration. The ratio of trainees to journeymen on the job site shall not be greater than permitted under the plan approved by the Employment and Training Administration. Every trainee must be paid at not less than the rate specified in the approved program for the trainee's level of progress, expressed as a percentage of the journeyman hourly rate specified in the applicable wage determination. Trainees shall be paid fringe benefits in accordance with the provisions of the trainee program. If the trainee program does not mention fringe benefits, trainees shall be paid the full amount of fringe benefits listed on the wage determination unless the Administrator of the Wage and Hour Division determines that there is an apprenticeship program associated with the corresponding journeyman wage rate on the wage determination which provides for less than full fringe benefits for apprentices. Any employee listed on the payroll at a trainee rate who is not registered and participating in a training plan approved by the Employment and Training Administration shall be paid not less than the applicable wage rate on the wage determination for the classification of work actually performed. In addition, any trainee performing work on the job site in excess of the ratio permitted under the registered program shall be paid not less than the applicable wage rate on the wage determination for the work actually performed. In the event the Employment and Training Administration withdraws approval of a training program, the contractor will no longer be permitted to utilize trainees at less than the applicable predetermined rate for the work performed until an acceptable program is approved.

(5) Equal employment opportunity - The utilization of apprentices, trainees and journeymen under this part shall be in conformity with the equal employment opportunity requirements of Executive Order 11246, as amended, and 29 CFR part 30. **Compliance with Copeland Act requirements** - The contractor shall comply with the requirements of 29 CFR Part 3, which are incorporated by reference in this contract.

(6) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses contained in 29 CFR 5.5(a)(1) through (10) and such other clauses as the Federal Transit Administration may by appropriate instructions require, and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for the compliance by any subcontractor or lower tier subcontractor with all the contract clauses in 29 CFR 5.5.

(7) **Contract termination: debarment** - A breach of the contract clauses in 29 CFR 5.5 may be grounds for termination of the contract, and for debarment as a contractor and a subcontractor as provided in 29 CFR 5.12.

(8) **Compliance with Davis-Bacon and Related Act requirements** - All rulings and interpretations of the Davis-Bacon and Related Acts contained in 29 CFR parts 1, 3, and 5 are herein incorporated by reference in this contract.

(9) **Disputes concerning labor standards** - Disputes arising out of the labor standards provisions of this contract shall not be subject to the general disputes clause of this contract. Such disputes shall be resolved in accordance with the procedures of the Department of Labor set forth in 29 CFR parts 5, 6, and 7. Disputes within the meaning of this clause include disputes between the contractor (or any of its subcontractors) and the contracting agency, the U.S. Department of Labor, or the employees or their representatives.

(10) **Certification of eligibility** - (i) By entering into this contract, the contractor certifies that neither it (nor he or she) nor any person or firm who has an interest in the contractor's firm is a person or firm ineligible to be awarded Government contracts by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(ii) No part of this contract shall be subcontracted to any person or firm ineligible for award of a Government contract by virtue of section 3(a) of the Davis-Bacon Act or 29 CFR 5.12(a)(1).

(iii) The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 USC 1001.

4. **CONTRACT WORK HOURS AND SAFETY STANDARDS ACT - 40 USC 3701-3708.; 29 CFR Part 5; 29 CFR 1926; 2 CFR Part 200, App. II (E)** [Applicable to all Federal-aid construction in excess of \$100,000 and all non-construction contracts which employ mechanics and laborers on a public work in excess of \$100,000]

A. Overtime (Applicable to construction and non-construction contracts)

(1) **Overtime requirements** - No contractor or subcontractor contracting for any part of the contract work which may require or involve the employment of laborers or mechanics shall require or permit any such laborer or mechanic in any workweek in which he or she is employed on such work to work in excess of forty hours in such workweek unless such laborer or mechanic receives compensation at a rate not less than one and one-half times the basic rate of pay for all hours worked in excess of forty hours in such workweek.

(2) **Violation; liability for unpaid wages; liquidated damages** - In the event of any violation of the clause set forth in paragraph (1) of this section the contractor and any subcontractor responsible therefore shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic, including watchmen and guards, employed in violation of the clause set forth in paragraph (1) of this section, in the sum of \$10 for each calendar day on which such individual was required or permitted to work in excess of the standard workweek of forty hours without payment of the overtime wages required by the clause set forth in paragraph (1) of this section.

(3) **Withholding for unpaid wages and liquidated damages** - ARRC shall upon its own action or upon written request of an authorized representative of the Department of Labor withhold or cause to be withheld, from any moneys payable on account of work performed by the contractor or subcontractor under any such contract or any other Federal contract with the same prime contractor, or any other federally-assisted contract subject to the Contract Work Hours and Safety Standards Act, which is held by the same prime contractor, such sums as may be determined to be necessary to satisfy any liabilities of such contractor or subcontractor for unpaid wages and liquidated damages as provided in the clause set forth in paragraph (2) of this section.

(4) **Subcontracts** - The contractor or subcontractor shall insert in any subcontracts the clauses set forth in this section and also a clause requiring the subcontractors to include these clauses in any lower tier subcontracts. The prime contractor shall be responsible for compliance by any subcontractor or lower tier subcontractor with the clauses set forth in this section.

(5) **Payrolls and basic records** - (i) Payrolls and basic records relating thereto shall be maintained by the contractor during the course of the work and preserved for a period of three years thereafter for all laborers and mechanics working at the site of the work. Such records shall contain the name, address, and social security number of each such worker, his or her correct classification, hourly rates of wages paid (including rates of contributions or costs anticipated for bona fide fringe benefits or cash equivalents thereof of the types described in section 1(b)(2)(B) of the Davis-Bacon Act), daily and weekly number of hours worked, deductions made and actual wages paid. Whenever the Secretary of Labor has found under 29 CFR 5.5(a)(1)(iv) that the wages of any laborer or mechanic include the amount of any costs reasonably anticipated in providing benefits under a plan or program described in section 1(b)(2)(B) of the Davis-Bacon Act, the contractor shall maintain records which show that the commitment to provide such benefits is enforceable, that the plan or program is financially responsible, and that the plan or program has been communicated in writing to the laborers or mechanics affected, and records which show the costs anticipated or the actual cost incurred in providing such benefits. Contractors employing apprentices or trainees under approved programs shall maintain written evidence of the registration of apprenticeship programs and certification of trainee programs, the registration of the apprentices and trainees, and the ratios and wage rates prescribed in the applicable programs.

B. Contract Work Hours and Safety Standards Act (Applicable to construction contracts only)

(i) The Contractor agrees to comply with section 107 of the Contract Work Hours and Safety

Standards Act, 40 USC § 333, and applicable DOL regulations, "Safety and Health Regulations for Construction" 29 CFR Part 1926. Among other things, the Contractor agrees that it will not require any laborer or mechanic to work in unsanitary, hazardous, or dangerous surroundings or working conditions.

- (ii) **Subcontracts** - The Contractor also agrees to include the requirements of this section in each subcontract. The term "subcontract" under this section is considered to refer to a person who agrees to perform any part of the labor or material requirements of a contract for construction, alteration or repair. A person who undertakes to perform a portion of a contract involving the furnishing of supplies or materials will be considered a "subcontractor" under this section if the work in question involves the performance of construction work and is to be performed: (1) directly on or near the construction site, or (2) by the employer for the specific project on a customized basis. Thus, a supplier of materials which will become an integral part of the construction is a "subcontractor" if the supplier fabricates or assembles the goods or materials in question specifically for the construction project and the work involved may be said to be construction activity. If the goods or materials in question are ordinarily sold to other customers from regular inventory, the supplier is not a "subcontractor." The requirements of this section do not apply to contracts or subcontracts for the purchase of supplies or materials or articles normally available on the open market.

5. FEDERAL WATER POLLUTION CONTROL ACT- 33 USC 1251-1387; 2 CFR Part 200, App. II (G) [Applicable to all Federal-aid contracts which exceed \$150,000]

- (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Federal Water Pollution Control Act, as amended, 33 USC 1251 et seq. The Contractor agrees to report each violation to ARRC and understands and agrees that ARRC will, in turn, report each violation as required to assure notification to the Federal grantor agency and the appropriate EPA Regional Office.
- (2) The Contractor also agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal funds.

6. CLEAN AIR ACT - 42 USC 7401-7671q; 2 CFR Part 200, App. II (G) [Applicable to all Federal- aid contracts which exceed \$150,000]

- (1) The Contractor agrees to comply with all applicable standards, orders or regulations issued pursuant to the Clean Air Act, as amended, 42 USC 7401 et seq. The Contractor agrees to report each violation to ARRC and understands and agrees that ARRC will, in turn, report each violation as required to assure notification to the Federal grantor agency and the appropriate EPA Regional Office.
- (2) The Contractor also agrees to include these requirements in each subcontract exceeding \$150,000 financed in whole or in part with Federal funds.

7. ACCESS TO RECORDS AND REPORTS – 49 USC 5325(g); 2 CFR 200.333; 49 CFR Part 633 [Applicable to all Federal-aid contracts]

Access to Records - The following access to records requirements apply to this Contract:

1. Contractor agrees to provide ARRC, the Federal grantor agency, the Comptroller General, or any of their duly authorized representatives access to the Contractor's books, documents, papers and records which are directly pertinent to this contract for the purpose of making audit, examination, excerpts and transcriptions.
2. Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
3. Contractor agrees to comply with the record retention requirements in accordance with 2 CFR200.333. Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from

the performance of this contract, in which case Contractor agrees to maintain the same until ARRC, the Federal grantor agency, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto.

4. Contractor agrees to permit the Federal grantor agency and its contractors access to the sites of performance under this contract as reasonably may be required.
5. Contractor agrees to include these requirements in each subcontract financed in whole or in part with Federal funds.

8. **CHANGES TO FEDERAL REQUIREMENTS** – [Applicable to all Federal-aid contracts]

Federal Changes - Contractor shall at all times comply with all applicable Federal regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Agreement between ARRC and the Federal grantor agency, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this contract.

9. **NO GOVERNMENT OBLIGATION TO THIRD PARTIES** [Applicable to all Federal-aid contracts]

1. ARRC and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the underlying contract, absent the express written consent by the Federal Government, the Federal Government is not a party to this contract and shall not be subject to any obligations or liabilities to ARRC, Contractor, or any other party (whether or not a party to that contract) pertaining to any matter resulting from the underlying contract.
2. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

10. **PROGRAM FRAUD AND FALSE OR FRAUDULENT STATEMENTS AND RELATED ACTS – 49 USC 5323j(1); 31 USC 3801-3812; 49 CFR Part 31; 18 USC 1001** [Applicable to all Federal-aid contracts]

1. The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 USC §3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 CFR Part 31, apply to its actions pertaining to this Project. Upon execution of the underlying contract, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the underlying contract or the Federally assisted project for which this contract work is being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
2. The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance, the Government reserves the right to impose the penalties of 18 USC §1001 and 49 USC 5323(l) on the Contractor, to the extent the Federal Government deems appropriate.
3. The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

11. **SEISMIC SAFETY REQUIREMENTS - 42 USC 7701 et seq. & 49 CFR Part 41; Executive Order 12699** [Applicable only to Federal-aid contracts for the construction of new buildings or additions to existing buildings]

Seismic Safety - The contractor agrees that any new building or addition to an existing building will be designed and constructed in accordance with the standards for Seismic Safety required in Department of Transportation Seismic Safety Regulations, 49 CFR Part 41 and will certify to compliance to the extent required by the regulation. The contractor also agrees to ensure that all work performed under this contract including work performed by a subcontractor is in compliance with the standards required by the Seismic Safety Regulations and the certification of compliance issued on the project.

12. ENERGY CONSERVATION REQUIREMENTS - 42 USC 6321 et seq. & 49 CFR Part 622, Subpart C [Applicable to all Federal-aid contracts]

Energy Conservation - The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

13. CIVIL RIGHTS AND EQUAL OPPORTUNITY REQUIREMENTS – 49 USC 5332; 29 USC 623, 42 USC 2000e, 42 USC 6102, 42 USC 12112, 42 USC 12132, 29 CFR Part 1630, & 41 CFR Parts 60 et seq. [Applicable to all Federal-aid contracts]

Civil Rights - The following requirements apply to the underlying contract:

1. Nondiscrimination - In accordance with 49 USC 5332 and Title VI of the Civil Rights Act, as amended, 42 USC 2000e, section 303 of the Age Discrimination Act of 1975, as amended, 42 USC 6102, and section 202 of the Americans with Disabilities Act of 1990, 42 USC 12132, the Contractor agrees that it will not discriminate against any employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements the Federal grantor agency may issue.
2. Equal Employment Opportunity - The following equal employment opportunity requirements apply to the underlying contract:
 - (a) Race, Color, Creed, National Origin, Sex - In accordance with 49 USC 5332 and Title VI of the Civil Rights Act, as amended, and 42 USC §2000e, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 CFR Parts 60 et seq., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 USC 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements the Federal grantor agency may issue.
 - (b) Age - In accordance with the Age Discrimination in Employment Act, 29 USC 621-634; U.S. Equal Employment Opportunity Commission (U.S. EEOC) regulations, "Age Discrimination in Employment Act," 29 CFR Part 1625; the Age Discrimination Act of 1975, as amended, 42 USC 6101 et seq.; U.S. Health and Human Services regulations, "Nondiscrimination on the Basis of Age in Programs or Activities Receiving Federal Financial Assistance," 45 CFR Part 90; and 49 USC 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements Federal grantor agency may issue.

- (c) Disabilities - In accordance with section 504 of the Rehabilitation Act of 1973, as amended, 29 USC 794, the Americans with Disabilities Act of 1990, as amended, 42 USC 12101 *et seq.*, the Architectural Barriers Act of 1968, as amended, 42 USC 4151 *et seq.*, and 49 USC 5332, the Contractor agrees that it will not discriminate against individuals on the basis of disability. In addition, the Contractor agrees to comply with any implementing requirements the Federal grantor agency may issue.

3. The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance, modified only if necessary to identify the affected parties.

14. VIOLATION AND BREACH OF CONTRACT - 2 CFR 200.326; 2 CFR Part 200, App. II(A)
[Applicable to all Federal-aid contracts in excess of \$150,000]

Rights and Remedies of the ARRC

Except as may be otherwise provided in the contract documents, in the event that ARRC deems the contractor guilty of a default or breach of any provision under the Contract, ARRC shall have any and all rights and remedies provided by applicable law, including, but not limited to the following:

1. The right to take over and complete the work or any part thereof as agent for and at the expense of the Contractor, either directly or through other contractors;
2. The right to cancel this Contract as to any or all of the work yet to be performed;
3. The right to specific performance, an injunction or any other appropriate equitable remedy; and
4. The right to money damages.

Rights and Remedies of Contractor

Inasmuch as the Contractor can be adequately compensated by money damages for any breach of this Contract, which may be committed by the ARRC, the Contractor expressly agrees that no default, act or omission of the ARRC shall constitute a material breach of this Contract, entitling Contractor to cancel or rescind the Contract (unless the ARRC directs Contractor to do so) or to suspend or abandon performance. Contractor claims or disputes arising in the performance of this Contract which are not resolved by agreement of the parties shall be decided in accordance with ARRC's Procurement Rules.

Performance During Dispute - Unless otherwise directed by ARRC, Contractor shall continue performance under this contract while matters in dispute are being resolved.

Notification - In addition to the notice requirements set out elsewhere in this Contract, if the contractor becomes aware of any act or occurrence which may form the basis of a claim by the contractor for additional compensation or an extension of time for performance, or if any dispute arises regarding a question of fact or interpretation of the contract, the contractor shall immediately inform the Project Manager. If the matter cannot be resolved by agreement within 7 days, the contractor shall, within the next 14 days, submit an Intent to Claim in writing to the Project Manager. The claim, if not resolved, shall be presented to the Project Manager, in writing, within 60 days following receipt of the Intent to Claim. Receipt of the claim will be acknowledged in writing by the Project Manager. The Contractor agrees that unless these written notices are provided, the contractor will have no entitlement to additional time or compensation for such act, event or condition.

Presenting Claim - A claim shall be submitted in accordance with ARRC Procurement Rule 1800.12 and shall specifically include the following:

1. The act, event or condition giving rise to the claim.
2. The contract provisions which apply to the claim and under which relief is provided.
3. The item or items of contract work affected and how they are affected.
4. The specific relief requested, including additional contract time if applicable, and the basis upon which it was calculated.

Claim Validity, Additional Information, & Project Manager's Actions - The claim, in order to be valid, must not only show that the contractor suffered damages or delay but that those conditions were actually a result of the act, event or condition complained of and that the contract provides entitlement to relief to the contractor for such act, event, or condition. The Project Manager reserves the right to

make written request to the contractor at any time for additional information which the contractor may possess relative to the claim. The contractor agrees to provide the Project Manager such additional information within 30 days of receipt of such a request. Failure to furnish such additional information may be regarded as a waiver of the claim. The claim, if not resolved by agreement within 60 days of its receipt, will automatically be forwarded to the Manager of Purchasing & Materials for formal written decision.

Decision on Claim - The contractor will be furnished the Manager of Purchasing & Materials' decision within the next 90 days, unless additional information is requested by the ARRC. The Manager of Purchasing & Materials' decision is final and conclusive unless fraudulent as to the Claim.

Notice of Appeal - Within 14 days of receipt of the Manager of Purchasing & Materials' decision, the contractor may deliver a Notice of Appeal to ARRC in accordance with ARRC Procurement Rule 1800.13 and request a hearing. The Notice of Appeal shall include specific exceptions to the Manager of Purchasing & Materials' decision, including specific provisions of the contract, which the contractor intends to rely upon in the appeal. General assertions that the Manager of Purchasing & Materials' decision is contrary to law or to fact are not sufficient.

Decision on Appeal - The decision of the ARRC on appeal will be rendered within 90 days after the conclusion of a hearing conducted under ARRC Procurement Rule 1800.15 or the date of receipt of the Notice of Appeal, whichever is later. The time limits given above may be extended by mutual consent. The decision of ARRC on appeal shall be final and conclusive unless the Contractor appeals to the superior court in accordance with ARRC Procurement Rule 1800.18.

15. NONSEGREGATED FACILITIES [Applicable to all Federal-aid construction contracts and to all related subcontracts of \$10,000 or more]

1. By submission of this bid, the execution of this contract or subcontract, or the consummation of this material supply agreement or purchase order, as appropriate, the bidder, Federal-aid construction contractor, subcontractor, material supplier, or vendor, as appropriate, certifies that the firm does not maintain or provide for its employees any segregated facilities at any of its establishments, and that the firm does not permit its employees to perform their services at any location, under its control, where segregated facilities are maintained. The firm agrees that a breach of this certification is a violation of the EEO Provisions of this contract. The firm further certifies that no employee will be denied access to adequate facilities on the basis of sex or disability.
2. As used in this certification, the term "segregated facilities" means any waiting rooms, work areas, restrooms and washrooms, restaurants and other eating areas, timeclocks, locker rooms and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing facilities provided for employees which are segregated by explicit directive, or are, in fact, segregated on the basis of race, color, religion, or national origin, age or disability, because of habit, local custom, or otherwise. The only exception will be for the disabled when the demands for accessibility override (e.g. disabled parking).
3. The contractor agrees that it has obtained or will obtain identical certification from proposed subcontractors or material suppliers prior to the award of subcontracts or consummation of material supply agreements of \$10,000 or more and that it will retain such certifications in its files.

16. NATIONAL HISTORIC PRESERVATION ACT REQUIREMENTS – 54 USC 300101 et seq.
[Applicable to all Federal-Aid contracts]

In the performance of this contract, neither Contractor nor its subcontractors shall take any action (which term includes but is not limited to the seeking of any required federal license or permit, and the extraction of material or natural resources from any source whatsoever) that may affect a district, site, building, structure or object that is included in or eligible for inclusion in the National Register of Historic Places without prior notice to ARRC and compliance with the requirements of the National Historic Preservation Act of 1966, 54 USC 300101 et seq. Contractor is advised that both historic and cultural sites may be eligible for inclusion on the National Register.

17. **FLY AMERICA REQUIREMENT - 49 USC 40118; 41 CFR 301-10** [Applicable to all Federal-aid contracts which may involve the international air transportation of equipment, materials, commodities, products or personnel]

a) *Definitions.* As used in this clause--

“International air transportation” means transportation by air between a place in the United States and a place outside the United States or between two places both of which are outside the United States

“United States” means the 50 States, the District of Columbia, and outlying areas.

“U.S.-flag air carrier” means an air carrier holding a certificate under 49 U.S.C. Chapter 411.

- b) When Federal funds are used to fund travel, Section 5 of the International Air Transportation Fair Competitive Practices Act of 1974 (49 USC 40118) (Fly America Act) requires contractors, recipients, and others use U.S.-flag air carriers for U.S. Government-financed international air transportation of personnel (and their personal effects) or property, to the extent that service by those carriers is available. It requires the Comptroller General of the United States, in the absence of satisfactory proof of the necessity for foreign-flag air transportation, to disallow expenditures from funds, appropriated or otherwise established for the account of the United States, for international air transportation secured aboard a foreign-flag air carrier if a U.S.-flag air carrier is available to provide such services.
- c) If available, the Contractor, in performing work under this contract, shall use U.S.-flag carriers for international air transportation of personnel (and their personal effects) or property.
- d) In the event that the Contractor selects a carrier other than a U.S.-flag air carrier for international air transportation, the Contractor shall include a statement on vouchers involving such transportation essentially as follows:

Statement of Unavailability of U.S.-Flag Air Carriers

International air transportation of persons (and their personal effects) or property by U.S.-flag air carrier was not available or it was necessary to use foreign-flag air carrier service for the following reasons. See FAR § 47.403. *[State reasons]:*

The Contractor agrees to include the requirements of this section in all subcontracts that may involve international air transportation.

18. **RECYCLED PRODUCTS - 42 USC 6962; 40 CFR PART 247; 2 CFR 200.322** [Applicable to all Federal-aid contracts for items designated by the EPA, for the purchase of \$10,000 or more of one of these items during the fiscal year]

The Contractor agrees to provide a preference for those products and services that conserve natural resources, protect the environment, and are energy efficient by complying with and facilitating compliance with Section 6002 of the Resource Conservation and Recovery Act, as amended, 42 USC 6962, and U.S. Environmental Protection Agency (U.S. EPA), “Comprehensive Procurement Guideline for Products Containing Recovered Materials,” 40 CFR Part 247. The Contractor agrees to include these requirements in each subcontract financed in whole or in part with Federal funds.

19. **INCORPORATION OF FEDERAL TRANSIT ADMINISTRATION TERMS - FTA Circular 4220.1F** [Applicable to all FTA funded contracts]

The provisions herein include, in part, certain Standard Terms and Conditions required by USDOT, whether or not expressly set forth in the contract provisions. All contractual provisions required by USDOT, as set forth in FTA Circular 4220.1F are incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this agreement. The contractor shall not perform any act, fail to

perform any act, or refuse to comply with any ARRC requests which would cause ARRC to be in violation of the FTA terms and conditions.

20. DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM - 49 CFR Part 26. [Applicable to all U.S. Department of Transportation-funded contracts, including those funded by FTA, FRA and FHWA]

1. Assurance - The contractor or subcontractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of U.S. Department of Transportation-assisted contracts. Failure by the contractor to carry out these requirements is a material breach of this contract, which may result in the termination of this contract or such other remedy as the ARRC deems appropriate, which may include, but is not limited to:

- (1) Withholding monthly progress payments;
- (2) Assessing sanctions;
- (3) Liquidated damages; and/or
- (4) Disqualifying the contractor from future bidding as non-responsible. 49 CFR 26.13(b).

2. Contract Goal – ARRC runs a completely race-neutral DBE program. Accordingly, this contract has no specific contract goal for the participation of Disadvantaged Business Enterprises (DBEs). ARRC does have an overall annual goal that it strives to meet, however. The ARRC therefore strongly encourages the contractor to use the services of small businesses, including DBEs, as subcontractors whenever possible. The ARRC requests that the contractor consider such measures as: (1) subcontracting to small businesses, including DBEs, portions of the work the contractor might otherwise do with its own forces; (2) reducing or waiving subcontractor bonding requirements for small businesses, including DBEs; (3) reviewing the list of businesses certified in the Small Business Administration’s 8(a) Business Development Program for potential subcontractors [contact the SBA at (907) 271-4022]; and (4) reviewing the list of businesses certified as DBEs by the Alaska Unified Certification Program for potential subcontractors [<http://www.dot.state.ak.us/cvlrts/directory.shtml>].

3. Prompt Payment - The prime contractor agrees to pay each subcontractor under this prime contract for satisfactory performance of its contract no later than thirty (30) days from the receipt of each payment the prime contractor receives from the ARRC. The prime contractor agrees further to return retainage payments to each subcontractor within thirty (30) days after the subcontractor’s work is satisfactorily completed, even if the prime contractor’s work has not been completed. Any retainage not returned to a subcontractor will be reported to the ARRC by the prime contractor. This clause applies to both DBE and non-DBE subcontractors.

21. FHWA BUY AMERICA REQUIREMENTS - 23 CFR 635.410 [Applicable only to FHWA funded construction contracts in excess of \$150,000]

Unless a waiver has been granted by the FHWA, all steel and iron materials which are incorporated into the work, and the action of applying a coating to a covered material (i.e., steel and iron), shall be manufactured in the United States except that minor amounts of steel and iron materials of foreign manufacture may be used, provided the aggregate cost of such materials does not exceed one tenth of one percent (0.1 percent) of the total contract amount, or \$2500, whichever is greater. Coating includes epoxy coating, galvanizing, painting, and any other coating that protects or enhances the value of a material subject to the requirements of this section. For the purposes of this section, the cost is the value of the products as they are delivered to the project. When steel and iron materials manufactured in the United States are shipped to a foreign country where non-steel or iron products are installed on or in them (i.e., electronic components in a steel cabinet), the steel and iron is considered to meet the requirements of this section. A certification of materials origin, attesting to compliance with this provision, shall be furnished to the Engineer prior to incorporating any steel or iron products into the project. Bidders may submit an alternate bid for the project based on the use of foreign iron or steel materials. In this event, the contract will be awarded to the bidder who submits the lowest total responsive bid based on furnishing domestic iron and steel materials unless such total bid exceeds the lowest total responsive bid based on furnishing foreign steel and iron materials by more than 25 percent.

Certificate of Compliance with 23 CFR 635.410

The bidder or offeror hereby certifies that it will comply with the requirements of 23 CFR 635.410.

Date: _____

Signature: _____

Company Name: _____

Title: _____

22. **FTA BUY AMERICA REQUIREMENTS - 49 USC 5323(j); 49 CFR Part 661** [Applicable only to FTA funded projects that involve the purchase of more than \$150,000 of iron, steel, manufactured goods or rolling stock]

Buy America - The contractor agrees to comply with 49 USC 5323(j) and 49 CFR Part 661, which provide that Federal funds may not be obligated unless all steel, iron, and manufactured products used in FTA-funded projects are produced in the United States, unless a waiver has been granted by FTA or the product is subject to a general waiver. General waivers are listed in 49 CFR 661.7. Separate requirements for rolling stock are set out at 49 USC 5323(j)(2)(C) and 49 CFR 661.11.

A bidder or offeror must submit to the ARRC the appropriate Buy America certification (below) with all bids or offers on FTA-funded contracts, except those subject to a general waiver. Bids or offers that are not accompanied by a completed Buy America certification must be rejected as nonresponsive.

Certification requirement for procurement of steel, iron, or manufactured products:

Certificate of Compliance with 49 USC 5323(j)(1)

The bidder or offeror hereby certifies that it will meet the requirements of 49 USC 5323(j)(1) and the applicable regulations in 49 CFR Part 661.6.

Date: _____

Signature: _____

Company Name: _____

Title: _____

Certificate of Non-Compliance with 49 USC 5323(j)(1)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 USC 5323(j) and 49 CFR 661.6, but it may qualify for an exception pursuant to 49 USC 5323(j)(2)(A), 5323(j)(2), as amended, and the applicable regulations in 49 CFR 661.7.

Date: _____

Signature: _____

Company Name: _____

Title: _____

Certification requirement for procurement of rolling stock and associated equipment:

Certificate of Compliance with 49 USC 5323(j)

The bidder or offeror hereby certifies that it will comply with the requirements of 49 USC 5323(j) and the regulations at 49 CFR 661.11.

Date: _____

Signature: _____

Company Name: _____

Title: _____

Certificate of Non-Compliance with 49 USC 5323(i)

The bidder or offeror hereby certifies that it cannot comply with the requirements of 49 USC 5323(j) and 49 CFR 661.11, but may qualify for an exception pursuant to 49 USC 5323(j)(2)(C), and the applicable regulations at 49 CFR 661.7.

Date: _____
Signature: _____
Company Name: _____
Title: _____

23. FRA BUY AMERICAN REQUIREMENTS-SUPPLIES - 41 USC 8301-8305; 48 CFR Part 25 [If required under the terms of the grant agreement, applicable only to FRA funded contracts for the purchase of goods, supplies or equipment in excess of \$10,000]

(a) The FRA requires its grantees to comply with The Buy American Act (41 U.S.C. 8301 *et seq.*) which provides that preference be given to domestic end products.

Commercially available off-the-shelf (COTS) item, as used in this clause, means

- (1) any item of supply (including construction material) that is (i) a commercial item, as defined in paragraph (1) of the definition at 48 CFR 2.101; (ii) sold in substantial quantities in the commercial marketplace; and (iii) offered under this contract in the same form in which it is sold in the commercial marketplace; and
- (2) does not include bulk cargo, as defined in 46 USC 40102(4), such as agricultural products and petroleum products.

Components, as used in this clause, means those articles, materials, and supplies incorporated directly into the end products.

Cost of components, as used in this clause, means

- (1) For components purchased by the Contractor, the acquisition cost, including transportation costs to the place of incorporation into the end product (whether or not such costs are paid to a domestic firm), and any applicable duty (whether or not a duty-free entry certificate is issued); or
- (2) For components manufactured by the Contractor, all costs associated with the manufacture of the component, including transportation costs as described in paragraph (1) of this definition, plus allocable overhead costs, but excluding profit. Cost of components does not include any costs associated with the manufacture of the end product.

Domestic end product, as used in this clause, means

- (1) an unmanufactured end product mined or produced in the United States, or
- (2) an end product manufactured in the United States, if
 - (i) the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of the cost of all its components. Components of foreign origin of the same class or kind as the products referred to in subparagraphs (b) (2) or (3) of this clause shall be treated as domestic. Scrap generated, collected, and prepared for processing in the United States is considered domestic; or
 - (ii) the end product is a COTS item.

End products, as used in this clause, means those articles, materials, and supplies to be acquired for public use under this contract.

Foreign end product, as used in this clause, means an end product other than a domestic end product.

United States, as used in this clause, means the 50 States, the District of Columbia, and outlying areas (as defined at 48 CFR 2.101).

(b) The Contractor shall deliver only domestic end products, except those-

- (1) For use outside the United States;
- (2) That government agencies have determined are not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality. A current list of such items is contained in 48 CFR 25.104;
- (3) For which the agency determines that domestic preference would be inconsistent with the public interest; or
- (4) For which the agency determines the cost to be unreasonable under 48 CFR 25.105. The offered price of a domestic end product shall be determined to be unreasonable when the lowest acceptable domestic offer exceeds the lowest acceptable foreign offer, inclusive of duty, by more than 6 percent, if the domestic offer is from a large business or more than 12 percent, if the domestic offer is from a small business concern

In accordance with 41 USC 1907, the component test of the Buy American statute is waived for an end product that is a COTS item (See 48 CFR 12.505(a)(1)).

A bidder must submit to ARRC the Buy American certification (below) with its bid response for FRA funded supply contracts. The Contractor shall deliver only domestic end products except to the extent that it specifies delivery of foreign end products in its provision of the Buy American Certificate. Bids that are not accompanied by a completed Buy American certification may be rejected as nonresponsive.

Buy American Certificate
Certificate of Compliance with 41 USC 8301-8305 - Supplies

(a) The bidder or offeror hereby certifies that the products it proposes to supply hereunder comply with the requirements of 49 USC 8301-8305 and the applicable regulations in 48 CFR Part 25. The bidder or offeror certifies that each end product, except those listed in paragraph (b) of this certificate, is a domestic end product and that for other than COTS items, the bidder or offeror has considered components of unknown origin to have been mined, produced, or manufactured outside the United States. The bidder or offeror shall list as foreign end products those end products manufactured in the United States that do not qualify as domestic end products, i.e., an end product that is not a COTS item and does not meet the component test in paragraph (2) of the definition of "domestic end product."

(b) Foreign End Products:

Line Item No.	Country of Origin
_____	_____
_____	_____
_____	_____

(List as necessary)

Date: _____

Signature: _____

Company Name: _____

Title: _____

24. FRA BUY AMERICAN REQUIREMENT-CONSTRUCTION - 41 USC 8301-8305; 48 CFR Part 25
[Applicable only to FRA funded construction contracts in excess of \$10,000]

(a) The FRA requires its grantees to comply with The Buy American Act (41 U.S.C. 8301 *et seq.*) which provides that preference be given to domestic construction materials. As used in this clause-

Components means those articles, materials, and supplies incorporated directly into construction materials.

Construction material means an article, material, or supply brought to the construction site for incorporation into the building or work. Construction material also includes an item brought to the site pre- assembled from articles, materials, or supplies. However, emergency life safety systems, such as emergency lighting, fire alarm, and audio evacuation systems, which are discrete systems incorporated into a public building or work and which are produced as a complete system, shall be evaluated as a single and distinct construction material regardless of when or how the individual parts or components of such systems are delivered to the construction site.

Domestic construction material means (1) an unmanufactured construction material mined or produced in the United States, or (2) a construction material manufactured in the U.S., if the cost of its components mined, produced, or manufactured in the United States exceeds 50 percent of cost of all its components. Materials of foreign origin of the same class or kind as the materials listed in 48 CFR 25.108 shall be treated as domestic.

(b) (1) The Buy American Act (41 USC 8301-8305) requires that only domestic construction material be used in performing this contract, except as provided in paragraphs (b)(2) and (b)(3) of this clause.

(2) The requirement in paragraph (b)(1) of this clause does not apply to the excepted construction materials or components listed by the Government as follows: NONE

(3) Other foreign construction material may be used on this project if ARRC determines that-

(i) The cost would be unreasonable (the cost of a particular domestic construction material shall be determined to be unreasonable when the cost of such material exceeds the cost of foreign material by more than 6 percent, unless the agency head determines a higher percentage to be appropriate);

(ii) The application of the restriction of the Buy American Act to a particular construction material would be impracticable or inconsistent with the public interest; or

(iii) The construction material is not mined, produced, or manufactured in the United States in sufficient and reasonably available commercial quantities of a satisfactory quality.

(4) The Contractor agrees that only domestic construction materials will be used by the Contractor, subcontractors, material men, and suppliers in the performance of this contract, except for foreign construction materials, if any, listed in paragraph (b)(2) or allowed under paragraph (b)(3) of this clause.

(c) *Request for determination.* (1) Contractors requesting to use foreign construction material under paragraph (b)(3) of this clause shall provide adequate information for ARRC evaluation of the request for a determination regarding the inapplicability of the Buy American Act in time to allow determination before submission of bids or offers. Each submission shall include a description of the foreign and domestic construction materials, including unit of measure, quantity, price, time of delivery or availability, location of the construction project, name and address of the proposed contractor, and a detailed justification of the reason for use of foreign materials cited in accordance

with paragraph (b)(3) of this clause. A submission based on unreasonable cost shall include a reasonable survey of the market and a completed price comparison table in the format in paragraph (d) of this clause. The price of construction material shall include all delivery costs to the construction site and any applicable duty (whether or not a duty-free certificate may be issued).

- (2) If ARRC determines after contract award that an exception to the Buy American Act applies, the contract shall be modified to allow use of the foreign construction material, and adequate consideration shall be negotiated. However, when the basis for the exception is the unreasonable price of a domestic construction material, adequate consideration shall not be less than the differential established in paragraph (b)(3)(i) of this clause.
- (3) If ARRC does not determine that an exception to the Buy American Act applies, the use of that particular foreign construction material will be a failure to comply with the Act.
- (d) For evaluation of requests under paragraph (c) of this clause based on unreasonable cost, the following information and any applicable supporting data based on the survey of suppliers shall be included in the request:

FOREIGN AND DOMESTIC CONSTRUCTION MATERIALS PRICE COMPARISON

Construction material description	Unit of Measure	Quantity	Price (Dollars) ^{1/}
Item 1: Foreign construction material Domestic construction material			
Item 2: Foreign construction material Domestic construction material			

List name, address, telephone number, and contact for suppliers surveyed. Attach copy of response; if oral, attach summary. Include other applicable supporting information.

^{1/}Include all delivery costs to the construction site and any applicable duty (whether or not a duty-free entry certificate is issued).

A bidder must submit to ARRC the Buy American certification (below) with its bid response for FRA funded construction. Bids that are not accompanied by a completed Buy American certification may be rejected as nonresponsive.

Certificate of Compliance with 41 USC 8301-8305 - Construction

The bidder or offeror hereby certifies that the construction materials it proposes to provide hereunder comply with the requirements of 49 USC 8301-8305 and the applicable regulations in 48 CFR Part 25.

Date: _____

Signature: _____

Company Name: _____

Title: _____

25. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING - 31 USC 1352; 2 CFR 200.450; 2 CFR 200 App. II(j); 49 CFR Part 20 [Applicable to all Federal-aid contracts and to all related subcontracts which exceed \$100,000]

A bidder must submit to ARRC the below certification with its bid response for any Federally funded contract that exceeds \$100,000. Bids that are not accompanied by a completed certification may be rejected as nonresponsive.

1. The undersigned Contractor certifies, to the best of his or her knowledge and belief, that:
 - a. No Federal appropriated funds have been paid or will be paid, by or on behalf of the undersigned, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
 - b. If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the undersigned shall complete and submit Standard Form-LLL, "Disclosure Form to Report Lobbying," in accordance with its instructions.
2. The undersigned also agrees that he or she shall require that the language of this certification be included in all lower tier subcontracts, which exceed \$100,000 and that all such recipients shall certify and disclose accordingly.
3. This certification is a material representation of fact upon which reliance was placed when this transaction was made or entered into. Submission of this certification is a prerequisite for making or entering into this transaction imposed by 31 USC 1352 (as amended by the Lobbying Disclosure Act of 1995). Any person who fails to file the required certification shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

The Contractor, _____ certifies or affirms the truthfulness and accuracy of each statement of its certification and disclosure, if any. In addition, the Contractor understands and agrees that the provisions of 31 USC 3801, *et seq.*, apply to this certification and disclosure, if any.

Signature of Contractor's Authorized Official: _____

Name and Title of Contractor's Authorized Official: _____

Date: _____

26. **FTA PRE-AWARD AND POST DELIVERY AUDITS REQUIREMENTS - 49 USC 5323; 49 CFR Part 663** [Applicable only to FTA funded contracts for the purchase of rolling stock in excess of \$150,000]

Pre-Award and Post-Delivery Audit Requirements - The Contractor agrees to comply with 49 USC 5323(l) and FTA's implementing regulation at 49 CFR Part 663 and to submit the following certifications:

- (1) **Buy America Requirements:** The Contractor shall complete and submit a declaration certifying either compliance or noncompliance with Buy America. If the Bidder/Offeror certifies compliance with Buy America, it shall submit documentation which lists 1) component and subcomponent parts of the rolling stock to be purchased identified by manufacturer of the parts, their country of origin and costs; and 2) the location of the final assembly point for the rolling stock, including a description of the activities that will take place at the final assembly point and the cost of final assembly.
- (2) **Solicitation Specification Requirements:** The Contractor shall submit evidence that it will be capable of meeting the bid specifications.
- (3) **Federal Motor Vehicle Safety Standards (FMVSS):** The Contractor shall submit 1) manufacturer's FMVSS self-certification sticker information that the vehicle complies with relevant FMVSS or 2) manufacturer's certified statement that the contracted buses will not be subject to FMVSS regulations.

27. **CERTIFICATION REGARDING COMPLIANCE WITH 49 CFR 26.49 - ESTABLISHMENT OF DBE GOAL** [Applicable to all FTA funded contracts for Transit Vehicles]

Certificate of Compliance with 49 CFR 26.49

The bidder or offeror hereby certifies that it has established a DBE goal and submitted it to the FTA for approval in accordance with the provisions of 49 CFR 26.49.

Date: _____

Signature: _____

Company Name: _____

Title: _____

28. **SAFE OPERATION OF MOTOR VEHICLES - 23 USC Part 402; Executive Order No. 13043; Executive Order No. 13513; U.S. DOT Order No. 3902.10** [Applicable to all federally funded third party contracts]

Seat Belt Use - The Contractor is encouraged to adopt and promote on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company-rented vehicles, or personally operated vehicles. The terms "company-owned" and "company-leased" refer to vehicles owned or leased either by the Contractor or ARRC.

Distracted Driving - The Contractor agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Contractor owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the work performed under this agreement.

29. **PATENT RIGHTS** – 2 CFR Part 200, App. II(F); 37 CFR Part 401 [Applicable all federally funded contracts with a small business firm or nonprofit organization for the performance of experimental, developmental or research work]

This Project is funded through a Federal award for experimental, developmental, or research work purposes. As such, certain Patent Rights and Data Rights apply to all subject data first produced in the performance of this contract. The Contractor shall grant the ARRC intellectual property access and licenses deemed necessary for the work performed under this contract and in accordance with the requirements of 37 CFR Part 401, “Rights to Inventions Made by Nonprofit Organizations and Small Business Firms Under Government Grants, Contracts and Cooperative Agreements,” and any implementing regulations issued by the federal grantor agency. The terms of an intellectual property agreement and software license rights will be finalized prior to execution of this contract and shall, at a minimum, include the following restrictions: Except for its own internal use, the Contractor may not publish or reproduce subject data in whole or in part, or in any manner or form, nor may the Contractor authorize others to do so, without the written consent of ARRC and the federal grantor agency, until such time as they may have either released or approved the release of such data to the public. This restriction on publication, however, does not apply to any contract with an academic institution. For purposes of this agreement, the term “subject data” means recorded information whether or not copyrighted, and that is delivered or specified to be delivered as required by the contract. Examples of “subject data” include, but are not limited to computer software, standards, specifications, engineering drawings and associated lists, process sheets, manuals, technical reports, catalog item identifications, and related information, but do not include financial reports, cost analyses, or other similar information used for performance or administration of the Contract.

1. The Federal Government reserves a royalty-free, non-exclusive and irrevocable license to reproduce, publish, or otherwise use, and to authorize others to use for “Federal Government Purposes,” any subject data or copyright described below. For “Federal Government Purposes,” means use only for the direct purposes of the Federal Government. Without the copyright owner’s consent, the Federal Government may not extend its Federal license to any other party.
 - (a) Any subject data developed under the contract, whether or not a copyright has been obtained; and
 - (b) Any rights of copyright purchased by the Contractor using Federal assistance in whole or in part by the federal grantor agency.
2. Unless the federal grantor agency determines otherwise, the Contractor performing experimental, developmental, or research work required as part of this contract agrees to permit the federal grantor agency to make available to the public, either its license in the copyright to any subject data developed in the course of the contract, or a copy of the subject data first produced under the contract for which a copyright has not been obtained. If the experimental, developmental, or research work, which is the subject of this contract, is not completed for any reason whatsoever, all data developed under the contract shall become subject data as defined herein and shall be delivered as the Federal Government may direct.
3. Unless prohibited by state law, upon request by the Federal Government, the Contractor agrees to indemnify, save, and hold harmless the Federal Government, its officers, agents, and employees acting within the scope of their official duties against any liability, including costs and expenses, resulting from any willful or intentional violation by the Contractor of proprietary rights, copyrights, or right of privacy, arising out of the publication, translation, reproduction, delivery, use, or disposition of any data furnished under that contract. The

Contractor shall be required to indemnify the Federal Government for any such liability arising out of the wrongful act of any employee, official, or agents of the Federal Government.

4. Nothing contained in this clause on rights in data shall imply a license to the Federal Government under any patent or be construed as affecting the scope of any license or other right otherwise granted to the Federal Government under any patent.
5. Data developed by the Contractor and financed entirely without using Federal assistance provided by the Federal Government that has been incorporated into work required by the underlying contract is exempt from the requirements herein, provided that the Contractor identifies those data in writing at the time of delivery of the contract work.
6. The Contractor agrees to include these requirements in each subcontract for experimental, developmental, or research work financed in whole or in part with Federal assistance.

30. TERMINATION – 2 CFR 200.339; 2 CFR Part 200 App. II(B) [Applicable to all federally funded contracts in excess of \$10,000]

Except as may be otherwise provided in the contract documents, the following termination provisions apply to this contract:

1. ARRC may, for its sole convenience, terminate this contract in whole or in part, at any time by giving written notice of its intention to do so. In the event of such termination, Contractor shall be entitled to receive payment in accordance with the payment provisions of this contract for charges incurred prior to the effective date of termination. Contractor shall not be paid for any work done after receipt of a notice of cancellation or for any costs incurred by Contractor's suppliers or subcontractors which Contractor could reasonably have avoided. In no event shall ARRC be liable for unabsorbed overhead or anticipatory profit on unperformed work.
2. In addition to ARRC's right to terminate this contract for its convenience, ARRC may, by written notice of default to Contractor, terminate the contract in whole or in part in the following circumstances:
 - (a) The Contractor refuses or fails to perform its obligations under the contract, or fails to make progress so as to significantly endanger timely completion or performance of the contract in accordance with its terms, and Contractor does not cure such default within a period of ten (10) days after receipt of written notice of default from ARRC or within such additional cure period as ARRC may authorize; or
 - (b) Reasonable grounds for insecurity arise with respect to Contractor's expected performance and Contractor fails to furnish adequate assurance of due performance (including assurance of performance in accordance with the time requirements of the contract) within ten (10) days after receipt of a written request by ARRC for adequate assurance; or
 - (c) Contractor becomes insolvent or makes an assignment for the benefit of creditors or commits an act of bankruptcy or files or has filed against it a petition in bankruptcy or reorganization proceedings.
3. Upon receipt of a notice of cancellation or termination, Contractor shall immediately discontinue all performance and it shall immediately cause any of its suppliers or subcontractors to cease such work unless the notice directs otherwise and deliver

immediately to ARRC all products, reports, plans, drawings, specifications, data, summaries or other materials and information, whether completed or in process, accumulated by Contractor in performance of the contract. The rights and remedies of ARRC provided in this section shall not be exclusive and are in addition to any other rights and remedies provided by law.

**31. Prohibition on Certain Telecommunications and Video Surveillance Services and Equipment
2 CFR § 200.216 [Applicable to all Federal-aid contracts]**

Contractor and Subcontractor agree to comply with mandatory standards and policies relating to use and procurement of certain telecommunications and video surveillance services or equipment in compliance with the National Defense Authorization Act [Public Law 115-232 § 889].

**32. Notification to FTA; Flow Down Requirement – FTA Master Agreement, Section 39(b)(1), (2);
2 CFR 180.220; 2 CFR 1200.220 [Applies to FTA-funded contracts/third party contracts in excess of \$25,000]**

If a current or prospective legal matter that may affect the Federal Government emerges, CONTRACTOR shall promptly notify ARRC, the FTA Chief Counsel, and the Regional Counsel for FTA Region 10. CONTRACTOR shall include these requirements as a flow down clause in any subcontract related to this Contract. The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason..

APPENDIX E
GENERAL CONDITIONS (CONSTRUCTION)

(Revised May 3, 2022)

1. ARTICLE 1 - DEFINITIONS:

Wherever used in the Contract Documents the following terms, or pronouns in place of them, are used, the intent and meaning, unless a different intent or meaning is clearly indicated, shall be interpreted as set forth below.

The titles and headings of the Sections, Subsections and Articles herein are intended for convenience of reference and shall not be considered as having bearing on their interpretation.

Whenever used in the Specifications or other Contract Documents the following terms have the meaning indicated which are applicable to both the singular and plural thereof. Working titles which have a masculine gender, are intended to refer to persons of either sex.

Terms not defined below shall have their ordinary accepted meanings within the context which they are used. "Webster's Third New International Dictionary of the English Language, Unabridged, Copyright 1961", or subsequent revision thereof, shall provide ordinarily accepted meanings. Words which have a well-known technical or trade meaning when used to describe Work, materials or equipment shall be interpreted in accordance with such meaning.

Addenda: All clarifications, corrections, or changes issued graphically or in writing by the Owner after the Invitation to Bid but prior to the opening of Bids.

Application for Payment: The form provided by the Owner which is used by the Contractor in requesting progress or Final payments and which is to include such supporting documentation as is required by the Contract Documents.

Approved or Approval: Means written approval by the Owner or his authorized representative as defined in paragraph 2.1.

ARRC Procurement Rules: Means the Rules governing the procurement of supplies, services, professional services and construction adopted by ARRC in accordance with A.S. 36.30.015(e). Said Rules may be downloaded from ARRC's web site, www.alaskarailroad.com, under General Information, Purchasing/Contracts.

A.S.: Initials which stand for Alaska Statute.

Award: The acceptance, by the Owner, of the successful Bid.

Bid: The offer of a Bidder, on the prescribed form to perform the Work in accordance with the Contract Documents at the prices quoted.

Bid Bond: The security furnished with a Bid to guarantee that the Bidder will enter into a Contract if his Bid is accepted by the Owner.

Bidder: Any individual, firm, corporation or any acceptable combination thereof, or joint venture submitting a Bid for the advertised Work.

Calendar Day: Every day shown on the calendar, beginning and ending at midnight.

Change Order: A written order by the Owner directing changes to the Contract, within its general scope.

Conditions of the Contract: Those portions of the Contract Documents which define the rights and responsibilities of the contracting parties and of others involved in the Work. The Conditions of the Contract include General Conditions, Supplementary Conditions and other Conditions specified in the Invitation to Bid.

Contract: The Contract Documents form the Contract between the Owner and the Contractor for the Work to be performed. The Contract represents the entire and integrated agreement between the parties hereto and supersedes prior negotiations, representations or agreements, either written oral.

Contract Documents: The Contract Form, Addenda, the bidding requirements and Contractor's Bid (including all appropriate bid tender forms), the Bonds, the Conditions of the Contract and all other Contract requirements, the Specifications, and the Drawings furnished by the Owner to the Contractor, together with all Change Orders and documents approved by the Contracting Officer for inclusion, modifications and supplements issued on or after the Effective Date of the Contract.

Contracting Officer: The person authorized to enter into and administer the Contract on behalf of the Owner. He has authority to make findings, determinations and decisions with respect to the Contract and, when necessary, to modify or terminate the Contract.

Contractor: The individual, firm, corporation or any acceptable combination thereof, contracting with the Owner for performance of the Work.

Contract Amount: The total moneys payable by the Owner to the Contractor under the terms of the Contract Documents.

Contract Time: The number of Calendar Days or the date specified in the Contract and authorized time extensions which identify how much time the Contractor is allowed to achieve Final Completion.

Consultant: A person, firm, agency or corporation retained by the Owner to prepare Contract Documents, perform construction administration services, or other Project related services.

Defective: An adjective which refers to Work that is unsatisfactory, faulty or deficient, or does not conform to the Contract Documents, or does not meet the requirements of any inspection, reference standard, test or Approval referred to in the Contract Documents, or has been damaged prior to the Owner's Approval of Final payment.

Directive: A written communication to the Contractor from the Owner interpreting or enforcing a Contract requirement or ordering commencement of an item of Work.

Drawings: The drawings which show the character and scope of the Work to be performed and which have been furnished by the Owner or the Owner's Consultant and are by reference made a part of the Contract Documents.

Effective Date of the Contract: The date on which the Contract is fully executed by both Contractor and the Owner.

Final Completion: The Work (or specified part thereof) has progressed to the point that all Work is complete as determined by the Owner.

General Requirements: Sections of the Contract Documents which contain administrative and procedural requirements as well as requirements for temporary facilities.

Holidays: The Owner recognizes the following Holidays:

- New Year's Day - January 1
- President's Day - Third Monday in February
- Memorial Day - Last Monday in May
- Juneteenth – June 19
- Independence Day - July 4
- Labor Day - First Monday in September
- Columbus Day-Second Monday in October
- Veteran's Day - November 11
- Thanksgiving Day - Fourth Thursday in November
- Christmas Day - December 25

If any Holiday listed above falls on a Saturday, Saturday and the preceding Friday are both legal Holidays. If the holiday should fall on a Sunday, Sunday and the following Monday are both legal Holidays.

Install: Means to build into the Work, ready to be used in complete and operable condition and in compliance with the Contract Documents.

Invitation to Bid: The public announcement, as required by law, inviting Bids for Work to be performed and/or materials to be furnished.

Notice of Intent to Award: The written notice by the Owner to all Bidders identifying the apparent successful Bidder and establishing the Owner's intent to execute the Contract when all conditions required for execution of the Contract are met.

Notice to Proceed: A written notice to the Contractor to begin the Work and establishing the date on which the Contract Time begins.

Owner: The Alaska Railroad Corporation ("ARRC") or its authorized representative(s).

Payment Bond: The security furnished by the Contractor and his Surety to guarantee payment of the debts arising out of performance of the Work.

Performance Bond: The security furnished by the Contractor and his Surety to guarantee performance and completion of the Work in accordance with the Contract Documents.

Project: The total construction, of which the Work performed under the Contract Documents is the whole or a part.

Project Manager: The authorized representative of the Owner who is responsible for administration of the Contract.

Regulatory Requirements: All laws, rules, regulations, ordinances, codes and/or orders applicable to the Work.

Shop Drawings: All Drawings, diagrams, illustrations, schedules and other data which are specifically prepared by or for the Contractor to illustrate some portion of the Work and all illustrations, brochures, standard schedules, performance charts, instructions, diagrams and other information prepared by a supplier and submitted by the Contractor to illustrate material, equipment, fabrication, or erection for some portion of the Work.

Specifications: Those portions of the Contract Documents consisting of written technical descriptions of materials, equipment, construction systems, standards and workmanship as applied to the Work and certain administrative and procedural details applicable thereto.

Subcontractor: An individual, firm, or corporation to whom the Contractor sublets part of the Contract.

Substantial Completion: Although not fully completed, the Work (or a specified part thereof) has progressed to the point where, in the opinion of the Owner as evidenced by the Owner's written notice, it is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be utilized for the purposes for which it is intended. The terms "Substantially Complete" and "Substantially Completed" as applied to any Work refer to Substantial Completion thereof.

Supplemental Agreement: A written agreement between the Contractor and the Owner covering Work that is not within the general scope of the Contract.

Surety: The corporation, partnership, or individual, other than the Contractor, executing a bond furnished by the Contractor.

Unit Price Work: Work to be paid for on the basis of unit prices.

Work: Work is the act of, and the result of, performing services, furnishing labor, furnishing and incorporating materials and equipment into the Project and performing other duties and obligations, all as required by the Contract Documents. Such Work, however incremental, will culminate in the entire completed Project, or the various separately identifiable parts thereof.

2. ARTICLE 2 - AUTHORITIES AND LIMITATIONS:

2.1 AUTHORITIES AND LIMITATIONS:

2.1.1 The Owner alone, shall have the power to bind the Owner and to exercise the rights, responsibilities, authorities and functions vested in the Owner by the Contract Documents, except that the Owner shall have the right to designate in writing authorized representatives to act for him.

2.1.2 Wherever any provision of the Contract Documents specifies an individual or organization, whether Governmental or private, to perform any act on behalf of or in the interests of the Owner that individual or organization shall be deemed to be the Owner's authorized representative under this Contract but only to the extent so specified.

2.1.3 The Owner may, at any time during the performance of this Contract, vest in any such authorized representatives additional power and authority to act for the Owner or designate additional representatives, specifying the extent of their authority to act for the Owner. A copy of each document vesting additional authority in or removing that authority from an authorized representative or designating an additional authorized representative shall be furnished to the Contractor.

2.1.4 The Owner reserves the right to appoint a new Project Manager without affecting any of the Contractor's obligations to the Owner under this Contract.

2.1.5 The Contractor shall perform the Work in accordance with any written order (including but not limited to instruction, direction, interpretation or determination) issued by an authorized representative in accordance with the authorized representative's authority to act for the Owner.

2.1.6 The Contractor assumes all the risk and consequences of performing the Work in accordance with any order (including but not limited to instruction, direction, interpretation or determination) of anyone not authorized to issue such order, and of any order not in writing.

2.1.7 Should the Owner or his authorized representative designate Consultant(s) to act for the Owner as provided for in Paragraph 2.1.1, the performance or nonperformance of the Consultant under such authority to act, shall not give rise to any Contractual obligation or duty of the Consultant to the Contractor, any subcontractor, any supplier, or any other organization performing any of the Work or any Surety representing them.

2.1.8 The term "Owner" when used in the text of these General Conditions or other Contract Documents following this section shall also mean any duly authorized representative of the Owner when authorized in accordance with Paragraph 2.1.1.

2.2 EVALUATIONS BY OWNER:

2.2.1 The Owner will decide all questions which may arise as to:

2.2.1.1 Quality and acceptability of materials furnished;

2.2.1.2 Quality and acceptability of Work performed;

2.2.1.3 Compliance with the Schedule of Progress;

2.2.1.4 Interpretation of Contract Documents;

2.2.1.5 Acceptable fulfillment of the Contract on the part of the Contractor.

2.2.2 In order to avoid cumbersome terms and confusing repetition of expressions in the Contract Documents, whenever the terms "as ordered", "as directed", "as required", "as approved", or terms of like effect or import are used, or the adjectives "reasonable", "suitable", "acceptable", "proper" or "satisfactory" or adjectives of like effect or import are used it shall be understood as if the expression were followed by the words "the Owner".

2.2.3 When such terms are used to describe a requirement, direction, review or judgment of the Owner as to the Work, it is intended that such requirement, direction, review or judgment will be solely to evaluate the Work for compliance with the Contract Documents (unless there is a specific statement indicating otherwise).

2.2.4 The use of any such term or adjective shall not be effective to assign to the Owner any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

2.3 MEANS & METHODS:

2.3.1 The means, methods, techniques, sequences or procedures of construction, or safety precautions and the program incident thereto, and the failure to perform or furnish the Work in accordance with the Contract Documents are the sole responsibility of the Contractor.

2.4 VISITS TO SITE:

2.4.1 The Owner will make visits to the site, off-site fabrication sites and approved remote storage sites at intervals appropriate to the various stages of construction to observe the progress and quality of the executed Work and to determine, in general, if the Work is proceeding in accordance with the Contract Documents.

2.4.2 Such observations or the lack of such observations shall in no way relieve the Contractor from his duty to perform the Work in accordance with the Contract Documents.

3. ARTICLE 3 - CONTRACT DOCUMENTS: INTENT, AMENDING, REUSE:

3.1 INCOMPLETE CONTRACT DOCUMENTS:

3.1.1 The execution of the Contract by the Contractor is considered a representation that the Contractor examined the Contract Documents to make certain that all sheets and pages were provided and that the Contractor is satisfied as to the conditions to be encountered in performing the Work.

3.1.2 The Owner expressly denies any responsibility or liability for a Bid submitted on the basis of an incomplete set of Contract Documents.

3.2 COPIES OF CONTRACT DOCUMENTS:

3.2.1 The Owner shall furnish to the Contractor up to five copies of the Contract Documents.

3.2.2 Additional copies will be furnished, upon request, at the cost of reproduction stated in the Invitation to Bid.

3.3 SCOPE OF WORK:

3.3.1 The Contract Documents comprise the entire Contract between the Owner and the Contractor concerning the Work.

3.3.2 The Contract Documents are complementary; what is called for by one is as binding as if called for by all. The Contract Documents will be construed in accordance with the Regulatory Requirements of the place of the Project.

3.3.3 It is specifically agreed between the parties executing this Contract that it is not intended by any of the provisions of the Contract to create in the public or any member thereof a third party benefit, or to authorize anyone not a party to this Contract to maintain a suit pursuant to the terms or provisions of the Contract.

3.4 INTENT OF CONTRACT DOCUMENTS:

3.4.1 It is the intent of the Contract Documents to describe a functionally complete Project to be constructed in accordance with the Contract Documents.

3.4.2 Any work, materials or equipment that may reasonably be inferred from the Contract Documents as being required to produce the intended result will be supplied, without any adjustment in Contract Amount or Contract Time, whether or not specifically called for.

3.4.3 Reference to standard specifications, manuals or codes of any technical society, organization or association, or to the Regulatory Requirements of any governmental authority, whether such reference be specific or by implication, shall mean the edition stated in the Contract Documents or if not stated the latest standard specification, manual, code or Regulatory Requirements in effect at the time of advertisement for the Project (or, in the Effective Date of the Contract if there was no advertisement).

3.4.4 However, no provision of any referenced standard specification, manual or code (whether or not specifically incorporated by reference in the Contract Documents) shall be effective to change the duties and responsibilities of the Owner and the Contractor, or any of their Consultants, agents or employees from those set forth in the Contract Documents, nor shall it be effective to assign to the Owner or any of the Owner's Consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of paragraphs 2.3 or 2.4.

3.4.5 Unless otherwise specified in the Contract Documents, words which have well-known technical or construction industry meanings are used in the Contract Documents in accordance with such recognized meanings.

3.5 DISCREPANCY IN CONTRACT DOCUMENTS:

3.5.1 Before undertaking the Work, the Contractor shall carefully study and compare the Contract Documents and check and verify pertinent figures, and dimensions shown thereon and all applicable field measurements.

3.5.2 Work in the area by the Contractor shall imply verification of figures, dimensions and field measurements.

3.5.3 If, during the above study or during the performance of the Work, the Contractor finds a conflict, error, discrepancy or omission in the Contract Document, or a discrepancy between the Contract Documents and any standard specification, manual, code, or regulatory requirement which affects the Work, the Contractor shall promptly report such discrepancy in writing to the Owner.

3.5.4 The Contractor shall obtain a written interpretation or clarification from the Owner before proceeding with any Work affected thereby.

3.5.5 Any adjustment made by the Contractor without this determination shall be at his own risk and expense.

3.5.6 However, the Contractor shall not be liable to the Owner for failure to report any conflict, error or discrepancy in the Contract Documents unless the Contractor had actual knowledge thereof or should reasonably have know thereof.

3.6 DISCREPANCY - ORDER OF PRECEDENCE:

3.6.1 When conflicts, errors, or discrepancies within the Contract Documents exist, the order of precedence from most governing to least governing will be as follows:

3.6.1.1 General Conditions

3.6.1.2 Supplementary Conditions

- 3.6.1.3 Technical Specification
- 3.6.1.4 Drawings
- 3.6.1.5 Standard Construction Details
- 3.6.1.6 Standard Specifications

3.6.2 The Contractor shall not take advantage of any apparent error or omission in the Contract Documents. If the Contractor discovers an error or omission, the Owner shall be promptly notified. The Owner will make corrections and interpretation as necessary to fulfill the intent of the Contract. Scaled measurements shall not be used when the dimensions on the plan are given or can be computed.

3.7 CLARIFICATIONS AND INTERPRETATIONS:

3.7.1 The Owner will issue with reasonable promptness such written clarifications or interpretations of the requirements of the Contract Documents as the Owner may determine necessary, which shall be consistent with or reasonably inferable from the overall intent of the Contract Documents.

3.8 REUSE OF DOCUMENTS:

3.8.1 Neither the Contractor nor any subcontractor, or supplier or other person or organization performing or furnishing any of the Work under a direct or indirect Contract with the Owner shall have or acquire any title to or ownership rights in any of the Contract Documents (or copies thereof) prepared by or for the Owner and they shall not reuse any of the Contract Documents on extensions of the Project or any other Project without written consent of the Owner.

3.8.2 Contract Documents prepared by the Contractor in connection with the Work shall become the property of the Owner.

4. ARTICLE 4 - LANDS AND PHYSICAL CONDITIONS:

4.1 AVAILABILITY OF LANDS:

4.1.1 The Owner shall furnish as indicated in the Contract Documents, the lands upon which the Work is to be performed, rights-of-way and easements for access thereto, and such other lands which are designated for use of the Contractor in connection with the Work.

4.1.2 Easements for permanent structures or permanent changes in existing facilities will be obtained and paid for by the Owner, unless otherwise provided in the Contract Documents.

4.1.3 The Contractor shall provide for all additional lands and access thereto that may be required for temporary construction facilities or storage of materials and equipment.

4.2 VISIT TO SITE:

4.2.1 The execution of the Contract by the Contractor is considered a representation that the Contractor has visited and carefully examined the site and is satisfied as to the conditions to be encountered in performing the Work and as to the requirements of the Contract Documents.

4.3 EXPLORATIONS AND REPORTS:

4.3.1 Reference is made to the Supplementary Conditions for identification of those reports of explorations and tests of subsurface conditions at the site that have been utilized by the Owner in preparation of the Contract Documents.

4.3.2 The Contractor may for his purposes rely upon the accuracy of the factual data contained in such reports, but not upon interpretations or opinions drawn from such factual data contained therein or for the completeness or sufficiency thereof.

4.3.3 Except as indicated in the immediately preceding sentence and in paragraphs 4.4 and 9.9, Contractor shall have full responsibility with respect to surface and subsurface conditions at the site.

4.4 UTILITIES:

4.4.1 The horizontal and vertical locations of known underground utilities as shown or indicated by the Contract Documents are approximate and are based on information and data furnished to the Owner by the owners of such underground utilities.

4.4.2 The Contractor shall have full responsibility for:

4.4.2.1 Reviewing and checking all information and data concerning utilities.

4.4.2.2 Locating all underground utilities shown or indicated in the Contract Documents which are affected by the Work.

4.4.2.3 Coordination of the Work with the owners of all utilities during construction.

4.4.2.4 Safety and protection of all utilities as provided in paragraph 6.16.

4.4.2.5 Repair of any damage to utilities resulting from the Work in accordance with paragraphs 4.4.4 and 4.5.

4.4.3 If Work is to be performed by any utility owner, the Contractor shall cooperate with such owner to facilitate the Work.

4.4.4 In the event of interruption to any utility service as a result of accidental breakage or as a result of being exposed or unsupported, the Contractor shall promptly notify the utility owner and the Owner.

4.4.5 If service is interrupted repair Work shall be continuous until the service is restored.

4.4.6 No Work shall be undertaken around fire hydrants until provisions for continued service have been approved by the local fire authority.

4.5 DAMAGED UTILITIES:

4.5.1 When utilities are damaged by the Contractor, the utility owner shall have the choice of repairing the utility or having the Contractor repair the utility.

4.5.2 In the following circumstances, the Contractor shall reimburse the utility Owner for repair costs or provide at no cost to the utility owner or the Owner, all materials, equipment and labor necessary to complete repair of the damage:

4.5.2.1 When the utility is shown or indicated in the Contract Documents.

4.5.2.2 When the utility has been located by the utility owner.

4.5.2.3 When no locate was requested by the Contractor for utilities shown or indicated in the Contract Documents.

4.5.2.4 All visible utilities.

4.5.2.5 When the Contractor could have, otherwise, reasonably been expected to be aware of such utility.

4.6 UTILITIES NOT SHOWN OR INDICATED:

4.6.1 If, while directly performing the Work, an underground utility is uncovered or revealed at the site which was not shown or indicated in the Contract Documents and which the Contractor could not reasonably have been expected to be aware of, the Contractor shall, promptly after becoming aware thereof and before performing any Work affected thereby (except in an emergency as permitted by paragraph 6.18) identify the Owner of such underground facility and give written notice thereof to that owner and to the Owner.

4.6.2 The Owner will promptly review the underground utility to determine the extent to which the Contract Documents and the Work should be modified to reflect the impacts of the discovered utility.

4.6.3. The Contract Documents will be amended or supplemented to the extent necessary through the issuance of a Change Order by the Owner.

4.6.4 During such time, the Contractor shall be responsible for the safety and protection of such underground utility as provided in paragraph 6.16.

4.6.5 The Contractor may be allowed an increase in the Contract Amount or an extension of the Contract Time, or both, to the extent that they are directly attributable to the existence of any underground utility that was not shown or indicated in the Contract Documents and which the Contractor could not reasonably have been expected to be aware of.

4.7 SURVEY CONTROL:

4.7.1 The Owner will identify sufficient horizontal and vertical control data to enable the Contractor to survey and layout the Work.

4.7.2 All survey control work shall be performed under the direct supervision of a registered Land Surveyor.

4.7.3 Upon completion of survey work, all equipment and unused materials shall be removed and the Owner's property shall be left in a neat and clean condition satisfactory to the Owner.

4.7.4 Should the Contractor or its subcontractor fail to comply with the preceding subparagraph, the Owner may perform the required clean-up. All Owner costs and expenses for performing this work shall be collected from the Contractor.

5. ARTICLE 5 - BONDS, INSURANCE, AND INDEMNIFICATION:

5.1 DELIVERY OF BONDS:

5.1.1 When the Contractor delivers the executed Contract to the Owner, the Contractor shall also deliver to the Owner such bonds as the Contractor may be required to furnish in accordance with paragraph 5.2.

5.2 BONDS:

5.2.1 The Contractor shall furnish Performance and Payment Bonds, each in an amount as shown on the Contract as security for the faithful performance and payment of all Contractor's obligations under the Contract Documents.

5.2.2 These bonds shall remain in effect for one year after the date of Final Completion and until all obligations under this Contract, except special guarantees as per paragraph 12.7, have been met.

5.2.3 All bonds shall be furnished on forms provided by the Owner (or copies thereof) and shall be executed by such Sureties as are authorized to do business in the State of Alaska.

5.2.4 The Owner may at his option copy the Surety with notice of any potential default or liability.

5.3 REPLACEMENT OF BOND AND SURETY:

5.3.1 If the Surety on any bond furnished in connection with this Contract is declared bankrupt or becomes insolvent or its right to do business is terminated in any state where any part of the Project is located or it ceases to meet the requirements of paragraph 5.2, or otherwise becomes unacceptable to the Owner, or if any such Surety fails to furnish reports as to his financial condition as requested by the Owner, the Contractor shall within five days thereafter substitute another bond and Surety, both of which must be acceptable to Owner.

5.4 INSURANCE REQUIREMENTS:

5.4.1 The Contractor shall carry and maintain throughout the life of this Contract, at its own expense, insurance not less than the amounts and coverage herein specified, and the Owner shall be named as an additional named insured under the insurance coverage so specified, with respect to the performance of the Work.

5.4.2 There shall be no right of subrogation against the Owner or its agents performing work in connection with the Work, and this waiver of subrogation shall be endorsed upon the policies.

5.4.3 Insurance shall be placed with the companies acceptable to the Owner, and these policies providing coverage thereunder shall contain provisions that no cancellation or material changes in the policy shall become effective except upon 30 days prior written notice thereof to the Owner.

5.4.4 Prior to commencement of the Work, the Contractor shall furnish certificates to the Owner, in duplicate, evidencing that the insurance policy provisions required hereunder are in force.

5.4.5 Acceptance by the Owner of deficient evidence of insurance does not constitute a waiver of Contract insurance requirements.

5.4.6 The Contractor shall furnish the Owner with certified copies of policies upon request. The minimum coverages and limits required are as follows:

5.4.7 Worker's Compensation insurance in accordance with the statutory coverages required by the State of Alaska and Employers Liability insurance with limits not less than \$1,000,000 and, where applicable, insurance in compliance with any other statutory obligations, whether State or Federal, pertaining to the compensation of injured employees assigned to the Work, including but not limited to Voluntary Compensation, Federal

Longshoremen and Harbor Workers Act, Maritime and the Outer Continental Shelf's Land Act and the Federal Employers Liability Act.

5.4.8 Commercial General Liability with limits not less than \$2,000,000 per occurrence and \$2,000,000 aggregate for Bodily Injury and Property Damage, including coverage for Premises and Operations Liability, Products and Completed Operations Liability, Contractual Liability, Broad Form Property Damage Liability and Personal Injury Liability. Coverage shall not contain any exclusions of Explosion, Collapse, or Underground.

5.4.9 Commercial Automobile Liability on all owned, non-owned, hired and rented vehicles with limits of liability of not less than \$1,000,000 Combined Single Limit for Bodily Injury and Property Damage per each accident or loss.

5.4.10 If Work involves use of aircraft, Aircraft Liability insurance covering all owned and non-owned aircraft with a per occurrence limit of not less than \$5,000,000.

5.4.11 If Work involves use of watercraft, Protection and Indemnity insurance with limits not less than \$5,000,000 per occurrence. Hull and Machinery coverage is to be carried on the vessel for the full current market value. This coverage requirement may be waived at the discretion of the Owner if the Contractor self-insures the equipment and will waive all rights of recovery against the Owner in writing.

5.4.12 Where applicable, Professional Liability insurance with limits of not less than \$1,000,000 per claim and \$2,000,000 aggregate, subject to a maximum deductible \$10,000 per claim. The Owner has the right to negotiate increase of deductibles subject to acceptable financial information of the policyholder.

5.4.13 Where applicable, Pollution Liability insurance with a Project limit of not less than \$5,000,000 to include coverage for Asbestos, Hazardous Materials, Lead or other related environmental hazards.

5.4.14 Builder's Risk Insurance: Coverage shall be on an "All Risk" completed value basis and protect the interests of the Owner the Contractor and his subcontractors. Coverage shall include all materials, equipment and supplies that are intended for specific installation in the Project while such materials, supplies and equipment are located at the Project site and in transit from port of arrival to jobsite and while temporarily located away from the Project site.

5.4.15 All insurance policies as described above are required to be written on an "occurrence" basis. In the event occurrence coverage is not available, the Contractor agrees to maintain "claims made" coverage for a minimum of two years after Project Completion.

5.5 INDEMNIFICATION:

5.5.1 The Contractor shall indemnify, save harmless, and defend the Owner and its agents and its employees from any and all claims or actions for injuries or damages sustained by any person or property arising directly or indirectly from the Work or the Contractor's performance of this Contract; however, this provision has no effect if, but only if, the sole proximate cause of the injury or damage is the negligence of the Owner or its agents.

6. ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES:

6.1 SUPERVISION OF WORK:

6.1.1 The Contractor shall supervise and direct the Work competently and efficiently, devoting such attention thereto and applying such skills and expertise as may be necessary to perform the Work in accordance with the Contract Documents.

6.1.2 All Work under this Contract shall be performed in a skillful and workmanlike manner. The Contractor shall be solely responsible for the means, methods, techniques, sequences and procedures of construction.

6.1.3 The Contractor shall keep on the Work at all times during its progress a competent resident superintendent. The Owner shall be advised in writing of the superintendent's name, local address, and telephone number. This written advice is to be kept current until Final Completion.

6.1.4 The superintendent will be the Contractor's representative at the site and shall have full authority to act and sign documents on behalf of the Contractor.

6.1.5 All communications given to the superintendent shall be as binding as if given to the Contractor.

6.1.6 The Contractor shall cooperate with the Owner in every way possible.

6.2 CHARACTER OF WORKERS:

6.2.1 The Contractor shall provide a sufficient number of competent, suitable qualified personnel to survey and lay out the Work and perform construction as required by the Contract Documents.

6.2.2 The Contractor shall at all times maintain good discipline and order at the site.

6.2.3 The Owner may, in writing, require the Contractor to remove from the Work any employee the Owner deems incompetent, careless, or otherwise detrimental to the progress of the Work, but the Owner shall have no duty to exercise this right.

6.3 CONTRACTOR TO FURNISH:

6.3.1 Unless otherwise specified in the Contract Documents, the Contractor shall furnish and assume full responsibility for all materials, equipment and machinery, tools, appliances, fuel, power, light, heat, telephone, water, sanitary facilities, temporary facilities and all other facilities and incidentals necessary for the furnishing, performance, testing, start-up and completion of the Work.

6.4 MATERIALS AND EQUIPMENT:

6.4.1 All materials and equipment shall be of specified quality and new, except as otherwise provided in the Contract Documents. If required by the Owner, the Contractor shall furnish satisfactory evidence (including reports of required tests) as to the kind and quality of materials and equipment.

6.4.2 All materials and equipment shall be applied, installed, connected, erected, used, cleaned, and conditioned in accordance with the instructions of the applicable Supplier except as otherwise provided in the Contract Documents; but no provision of any such instructions will be effective to assign to the Owner or any of the Owner's Consultants, agents or employees, any duty or authority to supervise or direct the furnishing or performance of the Work or any duty or authority to undertake responsibility contrary to the provisions of Paragraphs 2.3 or 2.4.

6.5 ANTICIPATED SCHEDULES:

6.5.1 The construction of this project shall be planned and recorded with a Critical Path Method ("CPM") schedule. The schedule shall be used for coordination and monitoring of all work under the contract including all activity of subcontractors, manufacturers, supplies, utility companies and review activity of the Owner. Within a reasonable time prior to the preconstruction

conference, the Contractor shall submit for Owner's approval, a detailed initial CPM schedule. The schedule shall meet the requirements set forth below. The construction time for the entire project shall not exceed the specified Contract Time. Following the Owner's review, if revisions to the proposed CPM schedule are required, the Contractor shall do so promptly. The CPM schedule must be finalized within 30 days of the Notice to Proceed.

6.5.2 The CPM schedule shall be presented as a Precedence Diagram Network developed in the activity-on-node format and shall include a description of no less than 15 major project activities, the duration of each of the project activities, the resources required for each of the project activities, including:

6.5.2.1 Labor, showing workdays per week, holidays, shifts per day, men per shift, and hours per shift;

6.5.2.2 Equipment, including the number of units of each type of equipment; and

6.5.2.3 Materials.

6.5.3 Owner reserves the right to adjust or add to the required project activities.

6.5.4 The activity-on-node diagram shall show the sequence and interdependence of all activities required for complete performance of all items of Work under this Contract, including shop drawings submittals and reviews and fabrication and delivery activities. No activity duration shall be longer than 15 working days without the Owner's approval. Owner reserves the right to limit the number of activities on the schedule.

6.5.5 Before proceeding with any Work on site, the Contractor shall prepare, submit, and receive the Owner's approval of a 60-Day Preliminary Schedule. The Preliminary Schedule shall provide a detailed breakdown of activities scheduled for the first 60 days of the project and summary of activities for Work beyond 60 days. Said schedule shall include mobilization, submittals, procurement, and construction.

6.5.6 No Work may be pursued at the site without an approved 60-Day Preliminary Schedule or an approved CPM schedule. A Finalized CPM Schedule with detailed breakdown of activities for the entire contract period shall be submitted prior to the first progress payment and accepted prior to application of the second progress payment. The Contractor shall create a baseline schedule of the Accepted Finalized Schedule.

6.5.7 Within fifteen days after the date of the Notice to Proceed, the Contractor shall submit to the Owner for review: anticipated schedule of Shop Drawing submissions, and anticipated Schedule of Values for all of the Work which will include quantities and prices of items aggregating the Contract Amount and will subdivide the Work into no less than 15 line item component parts to serve as the basis for progress payments during construction.

6.5.8 Such prices will include an appropriate amount of overhead and profit applicable to each item of Work which will be confirmed in writing by the Contractor at the time of submission

6.5.9 The CPM schedule shall be submitted in an MS Project format. For each submittal required hereunder, Contractor shall submit one copy in an electronic format and one hard copy.

6.6 FINALIZING SCHEDULES:

6.6.1 Prior to processing the first Application for Payment, the Owner and the Contractor will finalize the schedules required by paragraph 6.5.

6.6.2 Acceptance by the Owner of the progress schedule will neither impose on the Owner nor relieve the Contractor from full responsibility for the progress or scheduling of the Work.

6.6.3 If accepted, the Finalized Schedule of Shop Drawings and other required submissions will be acceptable to the Owner as providing a workable arrangement for processing the submissions. If accepted the Finalized Schedule of Values will be acceptable to the Owner as an approximation of anticipated value of Work accomplished over the anticipated Contract Time.

6.6.4 Receipt and acceptance of a schedule submitted by the Contractor shall not be construed to assign responsibility for performance or contingencies to the Owner or relieve the Contractor of his responsibility to adjust his forces, equipment, and work schedules as may be necessary to insure completion of the Work within prescribed Contract Time.

6.6.5 Should the prosecution of the Work be discontinued for any reason, the Contractor shall notify the Owner at least 24 hours in advance of resuming operations.

6.7 ADJUSTING SCHEDULES:

6.7.1 Job site progress meetings will be held bi-weekly by the Owner and the Contractor for the purpose of updating the CPM schedule. Progress will be reviewed to verify finish dates of completed activities, remaining duration of uncompleted activities, and any proposed logic and/or time estimate revisions. The Contractor shall submit a reviewed CPM schedule within seven (7) calendar days after this meeting. The revised schedule shall show finish dates of completed activities and updated times for the remaining Work, including any addition, deletion, or revision of activities required by contract modification. In submitting a revised CPM schedule, the Contractor shall state specifically the reason for the revision and the adjustments made in this schedule or methods of operation to ensure completion of all Work within the Contract Time.

6.7.2 The Contract Time will be adjusted only for causes specified in this Contract. As determined by CPM analysis, only delays in activities, which affect milestones dates or contract completion dates will be considered for a time extension. It is understood and agreed by the Owner and the Contractor that float is shared equally. Project float is the time between the scheduled completion of the Work and Substantial Completion and is a resource available to both the Owner and the Contractor. Neither owns the float: the Project owns the float. As such, liability for delay of the Substantial Completion date rests with the party whose actions, last in time, actually cause delay to the Substantial Completion date.

6.7.3 In addition to the CPM schedule, every week during construction, the Contractor shall submit a work plan detailing his/her proposed operations for the forthcoming two (2) weeks. The work plan presented shall be a time scaled Two Week Look Ahead bar chart based and correlated by activity number to the current schedule. In the event portions of the Work affecting critical milestone dates or contract completion dates are in danger of being delayed, or actually are delayed, the Contractor shall develop and present a plan for remedial action. This plan shall detail the following:

6.7.3.1 work activities;

6.7.3.2 manpower involved by trade;

6.7.3.3 work hours;

6.7.3.4 equipment involved; and

6.7.3.5 the location of the work to be performed.

6.7.4 Preparation and updating of the CPM schedule and Two Week Work Plans will not be paid for directly. Failure to submit the CPM work schedule and Two Week Work Plans as specified will result in partial withholding of progress payments.

6.8 SUBSTITUTES OR "OR-EQUAL" ITEMS:

6.8.1 Whenever materials or equipment are specified or described in the Contract Documents by using the name of a proprietary item or the name of a particular Supplier the naming of the item is intended to establish the type, function and quality required.

6.8.2 Unless the name is followed by words indicating that no substitution is permitted, materials or equipment of other Suppliers may be accepted by the Owner only if sufficient information is submitted by the Contractor which clearly demonstrates to the Owner that the material or equipment proposed is equivalent or equal in all aspects to that named.

6.8.3 Requests for review of substitute items of material and equipment will not be accepted by the Owner from anyone other than the Contractor.

6.8.4 If the Contractor wishes to furnish or use a substitute item of material or equipment, the Contractor shall make written application to the Owner for acceptance thereof, certifying that the proposed substitute will perform adequately the functions and achieve the results called for by the general design, be similar and of equal substance to that specified and be suited to the same use as that specified.

6.8.5 The application will state that the evaluation and acceptance of the proposed substitute will not delay the Contractor's achievement of Substantial Completion on time, whether or not acceptance of the substitute for use in the Work will require a change in any of the Contract Documents (or in the provisions of any other direct Contract with the Owner for Work on the Project) to adapt the design to the proposed substitute and whether or not incorporation or use of the substitute in connection with the Work is subject to payment of any license fee or royalty.

6.8.6 All variations of the proposed substitute from that specified will be identified in the application and available maintenance, repair and replacement service will be indicated.

6.8.7 The application will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such substitute, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Owner in evaluating the proposed substitute.

6.8.8 The Owner may require the Contractor to furnish at the Contractor's expense additional data about the proposed substitute.

6.8.9 The Owner may reject any substitution request which the Owner determines is not in the best interest of the Owner.

6.9 SUBSTITUTE MEANS AND METHODS:

6.9.1 If a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents, the Contractor may furnish or utilize a substitute means, method, sequence, technique or procedure of construction acceptable to the Owner, if the Contractor submits sufficient information to allow the Owner to determine that the substitute proposed is equivalent to that indicated or required by the Contract Documents.

6.10 EVALUATION OF SUBSTITUTION:

6.10.1 The Owner will be allowed a reasonable time within which to evaluate each proposed substitute. The Owner will be the sole judge of acceptability, and no substitute will be ordered, installed or utilized without the Owner's prior written acceptance which will be evidenced by either a Change Order or a Shop Drawing approved in accordance with paragraphs 6.19 and 6.20. The Owner may require the Contractor to furnish at the Contractor's expense a special Performance Bond or other Surety with respect to any substitute.

6.11 DIVIDING THE WORK:

6.11.1 The divisions and sections of the Specifications and the identifications of any Drawings shall not control the Contractor in dividing the Work among subcontractors or suppliers or delineating the Work to be performed by any specific trade, except as required by law.

6.12 SUBCONTRACTORS:

6.12.1 The Contractor may utilize the services of licensed specialty subcontractors on those parts of the Work which, under normal contracting practices, are performed by licensed specialty subcontractors, in accordance with the following conditions:

6.12.2 The Contractor shall not award any Work to any subcontractor without prior written Approval of the Owner. This Approval will not be given until the Contractor submits to the Owner a written statement concerning the proposed award to the subcontractor which shall contain required E.E.O. Documents, evidence of insurance, and a copy of the proposed subcontract executed by the subcontractor.

6.12.3 No acceptance by the Owner of any such subcontractor shall constitute a waiver of any right of the Owner to reject Defective Work.

6.12.4 The Contractor shall be fully responsible to the Owner for all acts and omissions of the subcontractors, suppliers and other persons and organizations performing or furnishing any of the Work under a direct or indirect Contract with Contractor just as Contractor is responsible for Contractor's own acts and omissions.

6.12.5 All Work performed for Contractor by a subcontractor will be pursuant to an appropriate written agreement between Contractor and the subcontractor which specifically binds the subcontractor to the applicable terms and conditions of the Contract Documents for the benefit of the Owner and contains waiver provisions as required by paragraph 13.17 and termination provisions as required by Article 14.

6.12.6 Nothing in the Contract Documents shall create any contractual relationship between the Owner and any such subcontractor, supplier or other person or organization, nor shall it create any obligation on the part of the Owner to pay or to see to the payment of any moneys due any such subcontractor, supplier or other person or organization except as may otherwise be required by Regulatory Requirements.

6.12.7 The Owner will not undertake to settle any differences between or among the Contractor, subcontractors, or suppliers.

6.12.8 The Contractor and subcontractors shall coordinate their Work and facilitate general progress of Work.

6.12.9 Each trade shall afford other trades every reasonable opportunity for installation of their Work and storage of materials.

6.12.10 If cooperative Work of one trade must be altered due to lack of proper supervision, or failure to make proper provisions in time by another trade, such conditions shall be remedied by the Contractor with no change in Contract Amount or Contract Time.

6.12.11 The Contractor shall include on his own payrolls any person or persons working on the Contract who are not covered by written subcontract, and shall ensure that all subcontractors include on their payrolls all persons performing Work under the direction of the subcontractor.

6.13 USE OF PREMISES:

6.13.1 The Contractor shall confine construction equipment, the storage of materials and equipment and the operations of workers to the Project limits and approved remote storage sites and lands and areas identified in and permitted by Regulatory Requirements, rights-of-way, permits and easements, and shall not unreasonably encumber the premises with construction equipment or other materials or equipment.

6.13.2 The Contractor shall assume full responsibility for any damage to any such land or area, or to the owner or occupant thereof or of any land or areas contiguous thereto, resulting from the performance of the Work.

6.13.3 Should any claim be made against the Owner by any such owner or occupant because of the performance of the Work, the Contractor shall defend, indemnify and hold the Owner and its agents harmless therefrom.

6.14 STRUCTURAL LOADING:

6.14.1 The Contractor shall not load nor permit any part of any structure to be loaded in any manner that will endanger the structure, nor shall the Contractor subject any part of the Work or adjacent property to stresses or pressures that will endanger it.

6.15 RECORD DOCUMENTS:

6.15.1 The Contractor shall maintain in a safe place at the site one record copy of all Drawings, Specifications, Addenda, Field Memos, Work Orders, Change Orders, Supplemental Agreements, and written interpretations and clarifications issued pursuant to paragraph 3.7 in good order and annotated to show all changes made during construction.

6.15.2 Copies of these record documents together with all approved samples and a counterpart of all approved Shop Drawings shall be provided to the Owner on site.

6.15.3 Upon completion of the Work, the annotated record documents, samples and Shop Drawings will be delivered to the Owner.

6.15.4 Record documents shall accurately record variations in the Work which vary from requirements shown or indicated in the Contract Documents.

6.16 SAFETY AND PROTECTION:

6.16.1 The Contractor alone shall be responsible for initiating, maintaining and supervising all safety precautions and programs in connection with the Work.

6.16.2 The Contractor shall take all necessary precautions for the safety of, and shall provide the necessary protection to prevent damage, injury or loss to:

6.16.2.1 All employees on the Work and other persons and organizations who may be affected thereby;

6.16.2.2 All the Work and materials and equipment to be incorporated therein, whether in storage on or off the site; and

6.16.2.3 Other property at the site or adjacent thereto, including trees, shrubs, lawns, walks, pavements, roadways, structures, and utilities not designated for removal, relocation or replacement in the course of construction.

6.16.3 In the performance of this contract, the Contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation. The contractor shall

provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the Owner may determine, to be reasonably necessary to protect the life and health of employees on the job and the safety of the public and to protect property in connection with the performance of the Work covered by the contract.

It is a condition of this contract, and shall be made a condition of each subcontract entered into pursuant to this contract, that the Contractor and any subcontractor shall not permit any employee in performance of the contract, to work in surroundings or under conditions which are unsanitary, hazardous, or dangerous to his/her health or safety, as determined under the OSHA construction safety and health standards (29 CFR 1926) promulgated by the Secretary of Labor, in accordance with Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

Pursuant to 29 CFR 1926.3, it is a condition of this contract that the Secretary of Labor or authorized representative thereof, shall have right of entry to any site of contract performance to inspect or investigate the matter of compliance with the construction safety and health standards and to carry out the duties of the Secretary under Section 107 of the Contract Work Hours and Safety Standards Act (40 U.S.C. 333).

6.16.4 The Contractor shall notify owners of adjacent property and utility owners when prosecution of the Work may affect them, and shall cooperate with them in the protection, removal, relocation and replacement of their property.

6.16.5 All damage, injury or loss to any property caused, directly or indirectly, in whole or in part, by the Contractor, any Subcontractor, supplier or any other person or organization directly or indirectly employed by any of them to perform or furnish any of the Work or anyone for whose acts any of them may be liable, shall be remedied by the Contractor with no change in Contract Amount or Contract Time except as stated in paragraph 4.6, except damage or loss attributable to unforeseeable causes beyond the control of and without the fault or negligence of the Contractor, including but not restricted to acts of God, or the public enemy or governmental authorities.

6.16.6 The Contractor's duties and responsibilities for the safety and protection of the Work shall continue until Final Completion except as otherwise expressly provided in connection with Substantial Completion.

6.16.7 The Contractor shall designate a responsible safety representative at the site. This person shall be the Contractor's superintendent unless otherwise designated in writing by the Contractor to the Owner.

6.17 WORK SAFETY ON RAILROAD PROPERTY:

6.17.1 The safety of personnel, property, rail operations, and the public is of paramount importance in the prosecution of the Work pursuant to this contract. As reinforcement and in furtherance of overall safety measures to be observed by Contractor (and not by way of limitation), the following special safety rules shall be followed while working on Alaska Railroad Corporation ("ARRC") property. Further railroad safety information may be obtained from the ARRC Safety Office at 907-265-2440. Safety information is also available on the ARRC website at www.alaskarailroad.com.

6.17.2 In the event Contractor or its subcontractor will be performing construction or other activities on or in close proximity to a railroad track, the Contractor shall be responsible for compliance with the Federal Railroad Administration's Roadway Worker Protection ("RWP") regulations (49 CFR 214, Subpart C). Under 49 CFR 214, Subpart C, railroad contractors are responsible for the training of their employees on these regulations. All RWP related Work shall

be conducted in strict compliance with the RWP safety standards set forth in 49 CFR 214, Subpart C and the Contractor will be required to submit a Railroad Safety Plan to ARRC to demonstrate compliance with said safety standards prior to beginning any RWP related Work. Specific information on Railroad Safety Plans may be obtained from the ARRC Safety Office at 907-265-2440.

6.17.3 In the event Contractor will be performing construction or other activities on a railroad bridge, the provisions of 49 CFR 214 regarding bridge worker safety shall apply. All bridge related Work shall be conducted in strict compliance with the bridge worker safety standards set forth in 49 CFR 214 and the Contractor will be required to submit a Railroad Safety Plan to ARRC to demonstrate compliance with said safety standards prior to beginning any bridge related Work.

6.17.4 Contractor shall arrange with ARRC to keep itself informed on the time of arrival of all trains and shall stop any of Contractor's or Subcontractor's operations which might be or cause a hazard to the safe passage of the train past the Work site from 10 minutes before the expected arrival of the train until it has passed or at any other time as directed by the flagman.

6.17.5 ARRC flag protection is required before any activity can occur on or near a railroad operating facility such as a track, yard, bridge or shop building. For incidental work, such as surveying or inspection, an ARRC qualified flagman will provide a safety briefing prior to the commencement of the Work to discuss how and when protection from train traffic is to be provided. For any activity involving a disturbance or potential disturbance to the track, track embankment, or any railroad facility, ARRC may require a specific Railroad Safety Plan prior to startup. Projects which involve activities which cross the tracks or are longitudinal to the tracks will require a specific Railroad Safety Plan and a one hour ARRC provided training course for Contractor's project supervisors prior to the initiation of Work on ARRC property.

6.17.6 The Contractor and/or Subcontractor shall arrange for ARRC flag protection when performing any Work within 20 feet of any track. All Work within 20 feet of the track shall cease when a train passes and all Contractor and Subcontractor employees shall maintain a distance of at least 20 feet from the track until the train has safely passed. In addition, any Work that could come within 20 feet of the track will cease when a train passes. For example, crane or pile driving activities shall stop when trains pass when the maximum boom and suspended load radius can come within 20 feet of the tracks. Pile driving shall not be done when trains are passing the Work site. Vehicles and other construction equipment shall not be operated or parked closer than 20 feet from any track without ARRC flag protection.

6.17.7 Track outages require ARRC's prior approval. Prior to a proposed track outage, the Contractor shall submit a closure plan to ARRC for approval. The plan will describe the Work to be accomplished, the equipment, manpower and other resources required, and the schedule. Once approved by ARRC, the Contractor shall follow the plan. ARRC reserves the right to assume control of the Work to reestablish rail service if the schedule is not met. Contractor shall bear all costs and damages which may result from failure to meet the closure schedule.

6.17.8 Whenever an ARRC flag person is required for performance of the Work, he or she will be provided by the ARRC at no expense to the Contractor. A minimum of 48 hours notice is required for ARRC flag protection.

6.18 EMERGENCIES:

6.18.1 In emergencies affecting the safety or protection of persons or the Work or property at the site or adjacent thereto, the Contractor, without special instruction or authorization from the Owner, is obligated to act to prevent threatened damage, injury or loss.

6.18.2 The Contractor shall give the Owner prompt written notice if the Contractor believes that any significant changes in the Work or variations from the Contract Documents is required because of the action taken in response to an emergency. A change will be authorized by one of the methods indicated in paragraph 9.2, as determined appropriate by the Owner.

6.19 SHOP DRAWINGS AND SAMPLES:

6.19.1 After checking and verifying all field measurements and after complying with applicable procedures specified in the Contract Documents, the Contractor shall submit to the Owner for review and Approval in accordance with the accepted schedule of Shop Drawing submissions the required number of all Shop Drawings, which will bear a stamp or specific written indication that the Contractor has satisfied Contractor's responsibilities under the Contract Documents with respect to the review of the submission. All submissions will be identified as the Owner may require. The data shown on the Shop Drawings will be complete with respect to quantities, dimensions, specified performance and design criteria, materials and similar data to enable the Owner to review the information as required.

6.19.2 The Contractor shall also submit to the Owner for review and Approval with such promptness as to cause no delay in Work, all samples required by the Contract Documents. All samples will have been checked by and accompanied by a specific written indication that the Contractor has satisfied Contractor's responsibilities under the Contract Documents with respect to the review of the submission and will be identified clearly as to material, Supplier, pertinent data such as catalog numbers and the use for which intended.

6.19.3 Before submission of each Shop Drawing or sample the Contractor shall have determined and verified all quantities, dimensions, specified performance criteria, installation requirements, materials, catalog numbers and similar data with respect thereto and reviewed or coordinated each Shop Drawing or sample with other Shop Drawings and samples and with the requirements of the Work and the Contract Documents.

6.19.4 At the time of each submission the Contractor shall give the Owner specific written notice of each variation that the Shop Drawings or samples may have from the requirements of the Contract Documents, and, in addition, shall cause a specific notation to be made on each Shop Drawing submitted to the Owner for review and Approval of each such variation.

6.19.5 All variations of the proposed Shop drawing from that specified will be identified in the submission and available maintenance, repair and replacement service will be indicated.

6.19.6 The submittal will also contain an itemized estimate of all costs that will result directly or indirectly from acceptance of such variation, including costs of redesign and claims of other contractors affected by the resulting change, all of which shall be considered by the Owner in evaluating the proposed variation.

6.19.7 If the variation may result in a change of Contract Time or Amount, or Contract responsibility, and is not minor in nature, the Contractor must submit a written request for Change Order with the variation to notify the Owner of his intent.

6.19.8 The Owner may require the Contractor to furnish at the Contractor's expense additional data about the proposed variation.

6.19.9 The Owner may reject any variation request which the Owner determines is not in the best interest of the Owner.

6.20 SHOP DRAWING AND SAMPLE REVIEW:

6.20.1 The Owner will review with reasonable promptness Shop Drawings and samples, but the Owner's review will be only for conformance with the design concept of the Project and for compliance with the information given in the Contract Documents and shall not extend to means, methods, techniques, sequences or procedures of construction (except where a specific means, method, technique, sequence or procedure of construction is indicated in or required by the Contract Documents) or to safety precautions or programs incident thereto.

6.20.2 The review of a separate item as such will not indicate acceptance of the assembly in which the item functions.

6.20.3 The Contractor shall make corrections required by the Owner and shall return the required number of corrected copies of Shop Drawings and submit as required new samples for review.

6.20.4 The Contractor shall direct specific attention in writing to revisions other than the corrections called for by the Owner on previous submittals.

6.20.5 The Owner's review of Shop Drawings or samples shall not relieve Contractor from responsibility for any variation from the requirements of the Contract Documents unless the Contractor has in writing advised the Owner of each such variation at the time of submission as required by paragraph 6.19.4.

6.20.6 The Owner, if he so determines, may give written Approval of each such variation by Change Order, except that, if the variation is minor and no Change Order has been requested a specific written notation thereof incorporated in or accompanying the Shop Drawing or sample review comments shall suffice as a modification.

6.20.7 No Approval by the Owner will relieve the Contractor from responsibility for errors or omissions in the Shop Drawings or from responsibility for having complied with the provisions of paragraph 6.20.3.

6.20.8 Where a Shop Drawing or sample is required by the Specifications, any related Work performed prior to the Owner's review of the pertinent submission will be at the sole expense and responsibility of the Contractor.

6.21 MAINTENANCE DURING CONSTRUCTION:

6.21.1 The Contractor shall maintain the Work during construction and until Substantial Completion, at which time the responsibility for maintenance shall be established in accordance with paragraph 13.10.

6.22 CONTINUING THE WORK:

6.22.1 The Contractor shall carry on the Work and adhere to the progress schedule during all disputes or disagreements with the Owner.

6.22.2 No Work shall be delayed or postponed pending resolution of any disputes, disagreements, or claims except as the Contractor and the Owner may otherwise agree in writing.

6.23 CONSENT TO ASSIGNMENT:

6.23.1 The Contractor shall obtain the prior written consent of the Owner to any proposed assignment of any interest in, or part of this Contract.

6.23.2 The consent to any assignment or transfer shall not operate to relieve the Contractor or his Sureties of any of his or its obligations under this Contract or the Performance Bonds.

6.23.3 Nothing herein contained shall be construed to hinder, prevent, or affect an assignment of monies due, or to become due hereunder, made for the benefit of the Contractor's creditors pursuant to law.

6.24 USE OF EXPLOSIVES:

6.24.1 When the use of explosives is necessary for the prosecution of the Work, the Contractor shall exercise the utmost care not to endanger life or property, including new Work and shall follow all Regulatory Requirements applicable to the use of explosives.

6.24.2 The Contractor shall be responsible for all damage resulting from the use of explosives.

6.24.3 All explosives shall be stored in a secure manner in compliance with all Regulatory Requirements, and all such storage places shall be clearly marked.

6.24.4 Where no Regulatory Requirements apply, safe storage shall be provided not closer than 1,000 feet from any building, camping area, or place of human occupancy.

6.24.5 The Contractor shall notify each public utility owner having structures in proximity to the site of his intention to use explosives. Such notice shall be given sufficiently in advance to enable utility owners to take such steps as they may deem necessary to protect their property from injury.

6.24.6 However, the Contractor shall be responsible for all damage resulting from the use of the explosives, whether or not, utility owners act to protect their property.

6.25 CONTRACTOR'S RECORDS:

6.25.1 Records of the Contractor and subcontractors relating to personnel, payrolls, invoices of materials, and any and all other data relevant to the performance of the Contract, must be kept on a generally recognized accounting system.

6.25.2 Such records must be available during normal Work hours to the Owner for purposes of investigation to ascertain compliance with Regulatory Requirements and provisions of the Contract Documents.

6.25.3 Payroll records must contain the name and address of each employee, his correct classification, social security number, rate of pay, daily and weekly number of hours of worked, deductions made, and actual wages paid and any other information required by the U.S. and/or State Department of Labor.

6.25.4 The Contractor and subcontractors shall make employment records available for inspection by the Owner and representatives of the U.S. and/or State Department of Labor and will permit such representatives to interview employees during working hours on the Project.

6.25.5 Records of all communications between the Owner and the Contractor and other parties, where such communications affected performance of this Contract, must be kept by the Contractor and maintained for a period of three years from Final Completion.

6.25.6 The Owner or its assigned representative may perform an audit of these records during normal work hours after written notice to the Contractor.

6.26 CONSTRUCTION QUALITY CONTROL PLAN:

6.26.1 The Contractor shall establish and maintain an effective quality management system. The quality management system shall consist of plans, procedures, and the organization necessary to provide material, equipment, and workmanship to comply with the requirements of the contract documents. The system shall cover the proposed sequence of the work including both on-site and off-site operations. To meet this requirement, the Contractor shall prepare a Construction Quality Control (CQC) plan that addresses all quality control requirements specified in the contract documents. A complete, detailed CQC plan shall be submitted to the Project Manager at least 10 days prior to commencement of any Work on the Project. The CQC must be approved in writing by the Project Manager prior to proceeding with the Work. The Contractor shall not revise the CQC or the quality staffing levels or replace any of the key personnel specified therein without prior written approval from the Project Manager.

7. ARTICLE 7 - LAWS AND REGULATIONS:

7.1 LAWS TO BE OBSERVED:

7.1.1 The Contractor shall keep fully informed of all Federal and State Regulatory Requirements and all Orders and decrees of bodies or tribunals having any jurisdiction or authority, which in any manner affect those engaged or employed on the Work, or which in any way affect the conduct of the Work.

7.1.2 The Contractor shall at all times observe and comply with all such Regulatory Requirements, orders and decrees; and shall defend and indemnify the Owner and its representatives against claim or liability arising from or based on the violation of any such Regulatory Requirement, order, or decree whether by the Contractor, subcontractor, or any employee of either.

7.1.3 Except where otherwise expressly required by applicable Regulatory Requirements, the Owner shall not be responsible for monitoring Contractor's compliance with any Regulatory Requirements.

7.2 PERMITS, LICENSES, AND TAXES:

7.2.1 The Contractor shall procure all permits and licenses, pay all charges, fees and taxes, and give all notices necessary and incidental to the due and lawful prosecution of the Work. As a condition of performance of this Contract, the Contractor shall pay all Federal, State and local taxes incurred by the Contractor, in the performance of the Contract. Proof of payment of these taxes is a condition precedent to Final payment by the Owner under this Contract.

7.2.2 The Contractor's certification that taxes have been paid (as contained in the Release of Contract) will be verified with the Department of Revenue and Department of Labor, prior to Final payment.

7.2.3 If any Federal, State or local tax is imposed, charged, or repealed after the date of Bid opening and is made applicable to and paid by the Contractor on the articles or supplies herein contracted for, then the Contract shall be increased or decreased accordingly by a Change Order.

7.3 PATENTED DEVICES, MATERIALS AND PROCESSES:

7.3.1 If the Contractor employs any design, device, material, or process covered by letters of patent, trademark or copyright, the Contractor shall provide for such use by suitable legal agreement with the patentee or owner.

7.3.2 The Contractor and the Surety shall, defend, indemnify and save harmless the Owner and its agents, any affected third party, or political subdivision from any and all claims for infringement by reason of the use of any such patented design, device, material or process, or any trademark or copyright, and shall indemnify the Owner for any costs, expenses, and damages which it may be obliged to pay by reason of any infringement, at any time during the prosecution or after the completion of the Work.

7.4 COMPLIANCE OF SPECIFICATION AND DRAWINGS:

7.4.1 If the Contractor observes that the Specification and Drawings supplied by the Owner are at variance with any Regulatory Requirements, Contractor shall give the Owner prompt written notice thereof, and any necessary changes will be authorized by one of the methods indicated in paragraph 9.2. as determined appropriate by the Owner.

7.4.2 If the Contractor performs any Work knowing or having reason to know that it is contrary to such Regulatory Requirements, and without such notice to the Owner, the Contractor shall bear all costs arising therefrom; however, it shall not be the Contractor's primary responsibility to make certain that the Specifications and Drawings supplied by the Owner are in accordance with such Regulatory Requirements.

7.5 ACCIDENT PREVENTION:

7.5.1 The Contractor shall comply with AS 18.60.075 and all pertinent provisions of the Construction Code Occupational Safety and Health Standards issued by the Alaska Department of Labor.

7.6 SANITARY PROVISIONS:

7.6.1 The Contractor shall provide and maintain in a neat and sanitary condition such accommodations for the use of his employees and Owner representatives in strict accordance with the requirements of the State and local Boards of Health, OSHA or of other bodies or tribunals having jurisdiction.

7.7 BUSINESS REGISTRATION:

7.7.1 The Contractor shall comply with AS 08.18.011, as follows: *"it is unlawful for a person to submit a bid or Work as a Contractor until he has been issued a certificate of registration by the Department of Commerce. A partnership or joint venture shall be considered registered if one of the general partners or venturers whose name appears in the name under which the partnership or venture does business is registered."*

7.8 PROFESSIONAL REGISTRATION AND CERTIFICATION:

7.8.1 All craft trades, architects, engineers and land surveyors, electrical administrators, explosive handlers, and welders employed under the Contract shall specifically comply with applicable provisions of AS 08.18, 08.48, 08.40, 08.52, and 08.99.

7.8.2 Provide copies of individual licenses within seven days following a request from the Owner.

7.9 LOCAL BUILDING CODES:

7.9.1 The Contractor shall comply with AS 35.10.025 which requires construction in accordance with applicable local building codes including the obtaining of required permits.

7.10 AIR QUALITY CONTROL:

7.10.1 The Contractor shall comply with all applicable provision of AS 46.03.04 as pertains to Air Pollution Control.

7.11 ARCHAEOLOGICAL OR PALEONTOLOGICAL DISCOVERIES:

7.11.1 When the Contractor's operation encounters prehistoric artifacts, burials, remains of dwelling sites, or paleontological remains, such as shell heaps, land or sea mammal bones or tusks, the Contractor shall cease operations immediately and notify the Owner.

7.11.2 No artifacts or specimens shall be further disturbed or removed from the ground and no further operations shall be performed at the site until so directed.

7.11.3 Should the Owner order suspension of the Contractor's operations in order to protect an archaeological or historical finding, or order the Contractor to perform extra Work, such shall be covered by an appropriate Contract change document.

7.12 WAGES AND HOURS OF LABOR:

7.12.1 The Contractor shall submit certified payrolls bearing an original signature on a weekly or biweekly basis to the State Department of Labor as required by law, and shall comply with all other applicable labor reporting laws. The Contractor shall also submit certified payrolls bearing an original signature, along with those of its subcontractors, to the Owner on a weekly basis and shall retain copies of the payrolls for a minimum of three (3) years.

7.12.2 The Contractor shall be responsible for the submission and retention of certified payrolls of all of its subcontractors.

7.12.3 The certification shall affirm that the payrolls are current and complete, that the wage rates contained therein are not less than the applicable rates referenced in the Contract Documents, and that the classification set forth for each laborer or mechanic conforms with the work he performed.

7.12.4 The Contractor and its subcontractors shall attend all hearings and conferences and produce such books, papers, and documents all as requested by the Department of Labor.

7.13 THE FOLLOWING LABOR PROVISIONS SHALL ALSO APPLY TO THIS CONTRACT:

7.13.1 The Contractor and his subcontractors shall pay all employees unconditionally and not less than once a week. Wages may not be less than those stated in the Invitation to Bid, regardless of the contractual relationship between the Contractor or Subcontractors and laborers, mechanics, or field surveyors. The scale of wages to be paid shall be posted by the Contractor in a prominent and easily accessible place at the site of the Work. The Owner shall withhold so much of the accrued payments as is necessary to pay laborers, mechanics, or field surveyors employed by the Contractor or Subcontractors the difference between the rates of wages required by the Contract to be paid laborers, mechanics, or field surveyors on the Work, and the rates of wages in fact received by laborers, mechanics or field surveyors.

7.14 OVERTIME WORK HOURS AND COMPENSATION:

7.14.1 Pursuant to 40 U.S.C. 327-330 and AS 23.10.060, the Contractor shall not require nor permit any laborer or mechanic in any workweek in which he is employed on any Work under this Contract to work in excess of eight hours in any Calendar Day or in excess of forty hours in such workweek on work subject to the provisions of the Contract Work Hours and Safety Standards Act unless such laborer or mechanic receives compensation at a rate not less than one and one half times his basic rate of pay for all such hours worked in excess of eight hours in any Calendar Day or in excess of forty hours in such workweek whichever is the greater number of overtime hours.

7.14.2 In the event of any violation of this provision, the Contractor shall be liable to any affected employee for any amounts due and penalties and to the Owner for liquidated damages. Such liquidated damages shall be computed with respect to each individual laborer or mechanic employed in violation of this provision in the sum of \$10.00 for each Calendar Day on which such employee was required or permitted to be employed on such Work in excess of eight hours or in excess of the standard workweek of forty hours without payment of the overtime wages required by this paragraph.

7.15 COVENANT AGAINST CONTINGENT FEES:

7.15.1 The Contractor warrants that no person or selling agent has been employed or retained to solicit or secure this Contract upon an agreement or understanding for a commission, percentage, brokerage, or contingent fee, excepting bona fide employees or bona fide established commercial or selling agencies maintained by the Contractor for the purpose of securing business.

7.15.2 For breach or violation of this warranty, the Owner shall have the right to annul this Contract without liability or, in its discretion, to deduct such improper consideration from the Contract Amount or otherwise recover the full amount of such commission, percentage, brokerage, or contingent fee.

7.16 OFFICIALS NOT TO BENEFIT:

7.16.1 No member of or delegate to the U.S. Congress, the State Legislature, or other State or Owner officials shall be admitted to any share or part of this Contract, nor to any benefit that may arise there from. However, this provision shall not be construed to extend to this Contract if made with a corporation for its general benefit.

7.17 PERSONAL LIABILITY OF PUBLIC OFFICIALS:

7.17.1 In carrying out any of the provisions thereof, or in exercising any power or authority granted to the Owner by the Contract, there will be no liability upon the Owner nor upon its agents or authorized as its representatives, either personally or as officials of the State of Alaska, it being always understood that in such matters they act as agents and representatives of the Owner.

8. ARTICLE 8 - OTHER WORK:

8.1 RELATED WORK AT SITE:

8.1.1 The Owner reserves the right at any time to contract for and perform other or additional work on or near the Work covered by the Contract.

8.1.2 When separate contracts are let within the limits of the Project, the Contractor shall conduct his work so as not to interfere with or hinder the work being performed by other

contractors. The Contractor shall join his work with that of the others in an acceptable manner and shall perform it in proper sequence to that of others.

8.1.3 If the fact that other such work is to be performed is identified or shown in the Contract Documents, the Contractor shall assume all liability, financial or otherwise, in connection with this Contract and indemnify and save harmless the Owner and its agents from any and all damages or claims that may arise because of inconvenience, delay, or loss experienced by the Contractor because of the presence and operations of other contractors.

8.1.4 If the fact that such other work is to be performed was not identified or shown in the Contract Documents, written notice thereof will be given to the Contractor prior to starting any such other work. If the Contractor believes that such performance will require an increase in Contract Amount or Contract Time, the Contractor shall notify the Owner of such required increase within fifteen (15) calendar days following receipt of the Owner's notice. Should the Owner find such increase(s) to be justified, a Change Order will be executed.

8.2 ACCESS, CUTTING, AND PATCHING:

8.2.1 The Contractor shall afford each utility owner and any other contractor who is a party to such a direct contract with the Owner (or the Owner, if the Owner is performing the additional work with the Owner's employees) proper and safe access to the site and a reasonable opportunity for the introduction and storage of materials and equipment and the execution of such work and shall properly connect and coordinate the Work with the work of others.

8.2.2 The Contractor shall do all cutting, fitting and patching of the Work that may be required to make its several parts come together properly and integrate with such other Work, the Contractor shall not endanger any Work of others by cutting, excavating or otherwise altering their Work and will only cut or alter such other Work with the written consent of the Owner.

8.2.3 The duties and responsibilities of the Contractor under this paragraph are for the benefit of other contractors to the extent that there are comparable provisions for the benefit of the Contractor in said direct Contracts between the Owner and other contractors.

8.3 DEFECTIVE WORK BY OTHERS:

8.3.1 If any part of the Contractor's Work depends for proper execution or results upon the Work of any such other Contractor, utility owner, or the Owner, the Contractor shall inspect and promptly report to the Owner in writing any delays, defects or deficiencies in such Work that render it unavailable or unsuitable for such proper execution and results. The Contractor's failure to so report will constitute an acceptance of the other Work as fit and proper for integration with Contractor's Work except for latent or non-apparent defects and deficiencies in the other Work.

8.4 COORDINATION:

8.4.1 If the Owner contracts with others for the performance of other Work at the site, Owner will have authority and responsibility for coordination of the activities among the various contractors.

9. ARTICLE 9 - CHANGES:

9.1 OWNER'S RIGHT TO CHANGE:

9.1.1 Without invalidating the Contract and without notice to any Surety, the Owner may, at any time or from time to time, order additions, deletions or revisions in the Work within the general scope of the Contract, including but not limited to changes:

- 9.1.1.1 In the Contract Documents;
- 9.1.1.2 In the method or manner of performance of the Work;
- 9.1.1.3 In Owner-furnished facilities, equipment, materials, services, or site;
- 9.1.1.4 Directing acceleration in the performance of the Work.

9.2 AUTHORIZATION OF CHANGES WITHIN THE GENERAL SCOPE:

9.2.1 Additions, deletions, or revisions in the Work within the general scope of the Contract as specified in paragraph 9.1 shall be authorized by one or more of the following ways:

- 9.2.1.1 Directive (pursuant to paragraph 9.3)
- 9.2.1.2 A Change Order (pursuant to paragraph 9.4)
- 9.2.1.3 Owner's acceptance of Shop Drawing variations from the Contract Documents as specifically identified by the Contractor as required by paragraph 6.19.4.

9.3 DIRECTIVE:

9.3.1 The Owner shall provide written clarification or interpretation of the Contract Documents (pursuant to paragraph 3.7).

9.3.2 The Owner may authorize minor variations in the Work from the requirements of the Contract Documents which do not involve an adjustment in the Contract Amount or the Contract Time and are consistent with the overall intent of the Contract Documents.

9.3.3 The Owner may order the Contractor to correct Defective Work or methods which are not in conformance with the Contract Documents.

9.3.4 The Owner may direct the commencement or suspension of Work or emergency related Work (as provided in paragraph 6.18).

9.3.5 Upon the issuance of a directive to the Contractor by the Owner, the Contractor shall immediately proceed with the performance of the Work as prescribed by such directive.

9.3.6 If the Contractor believes that the changes noted in a directive may cause an increase in the Contract Amount or an extension of Contract Time, the Contractor shall immediately provide written notice to the Owner depicting such increases before proceeding with the directive, except in the case of an emergency.

9.3.7 If the Owner finds the increase in Contract Amount or the extension of Contract Time justified, a Change Order will be issued.

9.3.8 If however, the Owner does not find that a Change Order is justified, the Owner may direct the Contractor to proceed with the Work.

9.3.9 The Contractor shall cooperate with the Owner in keeping complete daily records of the cost of such Work.

9.3.10 If a Change Order is ultimately determined to be justified, in the absence of agreed prices and unit prices, payment for such Work will be made on a cost of the Work basis as provided in paragraph 10.4.

9.4 CHANGE ORDER:

9.4.1 A change in Contract Time, Contract Amount, or responsibility may be made for changes within the scope of the Work only by Change Order.

9.4.2 Upon receipt of an executed Change Order, the Contractor shall promptly proceed with the Work involved which will be performed under the applicable conditions of the Contract Documents except as otherwise specifically provided.

9.4.3 Changes in Contract Amount and Contract Time shall be made in accordance with Articles 10 and 11.

9.5 SHOP DRAWING VARIATIONS:

9.5.1 Variations by Shop Drawings shall only be eligible for consideration under paragraph 9.4 when the conditions affecting the price, time, or responsibility are identified by the Contractor in writing and a request for a Change Order is submitted as per paragraph 6.19.7.

9.6 CHANGES OUTSIDE THE GENERAL SCOPE; SUPPLEMENTAL AGREEMENT

9.6.1 Any change which is outside the general scope of the Contract, as determined by the Owner, must be authorized by the appropriate representatives of the Owner and the Contractor.

9.7 UNAUTHORIZED WORK:

9.7.1 The Contractor shall not be entitled to an increase in the Contract Amount or an extension of the Contract Time with respect to any Work performed that is not required by the Contract Documents as amended, modified and supplemented as provided in this Article 9, except in the case of an emergency as provided in paragraph 6.18 and except in the case of uncovering Work as provided in paragraph 12.4.4.

9.8 NOTIFICATION OF SURETY:

9.8.1 If notice of any change affecting the general scope of the Work or the provisions of the Contract Documents including, but not limited to, Contract Amount or Contract Time is required by the provisions of any Bond to be given to a Surety, the giving of any such notice will be the Contractor's responsibility, and the amount of each applicable Bond will be adjusted accordingly.

9.9 DIFFERING SITE CONDITIONS:

9.9.1 The Contractor shall promptly, and before such conditions are disturbed (except in an emergency as permitted by paragraph 6.18), notify the Owner in writing of:

9.9.1.1 subsurface or latent physical conditions at the site differing materially from those indicated in the Contract, and which could not have been discovered by a careful examination of the site, or

9.9.1.2 unknown physical conditions at the site, or an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in Work of the character provided for in this Contract.

9.9.2 The Owner shall promptly investigate the conditions, and if the Owner finds that such conditions do materially so differ and cause an increase or decrease in the Contractor's cost of, or time required for, performance of this Contract, an equitable adjustment shall be made and the Contract modified in writing accordingly.

9.9.3 Any claim for additional compensation by the Contractor under this clause shall be made in accordance with Article 15 and shall not be allowed unless the Contractor has first given the notice required by this Contract.

9.9.4 In the event that the Owner and the Contractor are unable to reach an agreement concerning an alleged differing site condition, the Contractor will be required to keep an accurate and detailed record which will indicate the actual cost of the Work done under the alleged differing site condition.

9.9.5 Failure to keep such a record shall be a bar to any recovery by reason of such alleged differing site conditions. The Owner shall be given the opportunity to supervise and check the keeping of such records.

9.10 VALUE ENGINEERING PROPOSALS BY THE CONTRACTOR:

9.10.1 Proposals may be submitted to the Owner for modifying the plans, specifications, or other requirements of the Contract for the sole purpose of reducing the total costs of construction without impairing in any manner the essential functions or characteristics of the project, including service life, economy of operations, ease of maintenance, benefits to the traveling public, desired appearance or design and safety standards. After execution of the Contract, an initiative may be recommended by the Contractor or, if applicable, sponsoring governmental agency. The initiative must be identified as a Value Engineering Proposal (VEP), and may include modifications to the plans or specifications, construction phasing or procedures, or other contract requirements. Any cost savings generated to the Contract as a result of VEP offered by the Contractor and approved by Owner will be shared equally between the Contractor and Owner as specified in paragraph 9.14. Bid prices are not to be based on the anticipated approval of a VEP. If a VEP is rejected, the Contract shall be completed in accordance with the original terms of the Contract or as otherwise modified. Any decision whether to approve or accept a VEP shall be within the sole discretion of Owner. Owner will bear no liability for any delay in considering a VEP, the refusal to accept or approve such a proposal, or any other matter connected with a VEP.

9.11 SUBMITTAL & REVIEW OF VEP CONCEPT OR IDEA:

9.11.1 The Contractor shall initially submit a brief letter proposal with graphics to Owner to illustrate the concept or idea. The Contractor shall indicate whether adequate time is available in its schedule for formal submittal and review prior to VEP implementation.

9.11.2 Owner will review the concept or idea within ten days of the Contractor's initial submittal and inform the Contractor in writing whether the concept or idea has merit and should be submitted as a formal VEP.

9.11.3 If Owner determines that the time for response is indicated in the Contractor's letter proposal is insufficient for review, Owner may choose to evaluate the need for a noncompensable time extension to the Contract. Its evaluation will be based on the additional time needed by the Owner for its review and the effect on the Contractor's schedule occasioned by the added time. The need for such a time extension will be evaluated in accordance with Article 11.

9.12 FORMAL SUBMITTAL OF THE VEP:

9.12.1 Within 30 days after Owner has determined the VEP concept or idea has merit, the Contractor shall formally submit a proposal. The proposal shall include sufficient data for Owner to make an informed decision regarding the proposal and shall include, at a minimum, the following information:

9.12.1.1 A statement that the Proposal is submitted as a VEP.

9.12.1.2 A description of the difference between the existing contract and the proposed change and the advantages and disadvantages of each, including effects on service life, economy of operations, ease of maintenance, benefits to the traveling public, desired appearance and safety.

9.12.1.3 A complete set of plans and specifications showing the proposed revisions relative to the original contract features and requirements supported by design computations as necessary for a thorough and expeditious evaluation.

9.12.1.4 A complete analysis indicating the final estimated costs and quantities to be replaced by the VEP compared to the new costs and quantities generated by the VEP.

9.12.1.5 A statement specifying the date by which a Change Order adopting the VEP must be executed to obtain the maximum cost reduction.

9.12.1.6 A statement detailing the effect the VEP will have on the time for completing the Contract.

9.12.1.7 A description of any previous use or testing of the VEP and the conditions and results. If the VEP was previously submitted on another Owner project, indicate the date, contract number, and the action taken by Owner.

9.12.1.8 A detailed statement indicating the costs for developing the changes, along with the costs for preparing the value engineering joint proposal.

9.13 VEP CONDITIONS:

9.13.1 Value Engineering Proposals will be considered only when all of the following conditions are met:

9.13.1.1 A VEP, approved or not approved by Owner applies only to the contract on which is it submitted. A submitted VEP becomes the property of Owner. The VEP shall contain no restrictions imposed by the Contractor on its use or disclosure. Owner has the right to use, duplicate and disclose in whole or in part any data necessary for the utilization of the VEP. Owner retains the right to use any accepted VEP or part thereof on other projects without obligation to the Contractor. This provision is not intended to deny rights provided by law with respect to patented materials or processes.

9.13.1.2 If Owner is already considering certain revisions to the Contract or has considered or approved changes in the Contract of a like nature on other contracts which are subsequently incorporated in a VEP, Owner may reject the VEP and may change the Contract without obligation to the Contractor.

9.13.1.3 The Contractor shall have no claim for additional costs or delays resulting from the rejection of a VEP, including development costs, loss of anticipated profits, increased material or labor costs except as allowed in paragraph 9.14.

9.13.1.4 Owner will determine if a VEP qualifies for consideration and evaluation. It may reject any VEP that requires excessive time or costs for review, evaluation or investigation, or that is not consistent with Owner's design policies and criteria for the project.

9.13.1.5 Owner will reject all or any portion of work performed under an approved VEP if unsatisfactory results are obtained. The Owner will direct the removal of rejected work and require construction to proceed under the original contract requirements without reimbursement for rejected work performed under the VEP, or for its removal. Where modifications to the VEP are approved to adjust to field or other conditions, reimbursement will be limited to the total amount payable for the work at the contract bid prices as if it were constructed under the original contract requirements. The rejection or limitation of reimbursement shall not constitute the basis of any claim against Owner for delay or for other costs.

9.13.1.6 The proposed work shall not contain experimental features but shall contain features that have been used under similar or acceptable conditions on other projects or locations acceptable to Owner.

9.13.1.7 VEPs will not be considered if equivalent options are already provided in the Contract.

9.13.1.8 The savings generated by the VEP must be sufficient to warrant a review and processing. A savings resulting solely from the elimination or reduction in quantity of a single bid item will not be considered as a VEP. A savings resulting from the elimination or reduction in quantity of a bid item specified as part of a VEP will be considered.

9.13.1.9 Additional information needed to evaluate VEPs shall be provided in a timely manner. Untimely submittals of additional information will result in rejection of the VEP. Where design changes are proposed, the additional information could include results of field investigations and surveys, design computations, and field change sheets.

9.13.1.10 The Contractor may submit VEPs for an approved subcontractor. Reimbursement will be made to the Contractor. Subcontractors may not submit a VEP except through the Contractor.

9.13.1.11 The Contractor shall ensure the VEP is sealed by an Alaska Registered Engineer.

9.14 VEP ACCEPTANCE, REJECTION & PAYMENT:

9.14.1 Within 30 days of the Contractor's formal submission of the VEP, Owner will accept or reject the VEP.

9.14.2 The Contractor will be notified in writing by the Owner as to whether the proposal has been accepted. The decision by Owner is final and shall not be subject to the provisions of Article 15.

9.14.3 If the VEP is rejected, Owner will share equally in the Contractor's costs for developing and presenting the proposal, and the Contractor will share equally in the cost to Owner for investigating and evaluating the proposal. A Change Order will be executed to adjust the Contract Amount for the net increase or decrease in monies resulting from the Contractor's development costs as listed above in paragraph 9.12.1.8, and Owner's evaluation costs. The Change Order will terminate Owner's review of the VEP.

9.14.4 If the VEP is accepted in whole or part, the necessary contract modifications and contract price adjustments will be made by the execution of a Change Order which will specifically state that it is executed pursuant to the provisions of this subsection. Owner will be the sole judge of the acceptability of a VEP and of the estimated net savings in construction costs from the adoption of all or any part of the VEP.

9.14.5 The Contractor shall continue to perform the Work in accordance with the requirements of the Contract until a Change Order incorporating the VEP has been executed, or until the Contractor has been given written acceptance or rejection by the Owner.

9.14.6 The executed Change Order shall incorporate the changes in the plans, specifications, or other requirements of the Contract which are necessary to permit the VEP, or such part of it which has been accepted, to be put into effect, and shall include any conditions upon which Owner's approval thereof is based. The executed Change Order shall extend or decrease the Contract Time if required by Owner.

9.14.7 The executed Change Order shall provide that the Contractor be paid 50% of the net savings amount as reflected by the difference between the cost of the revised work and the cost of the related construction required by the original contract computed at contract bid prices. The net savings will take into account the Contractor's cost of developing the VEP and implementing the change, and reducing this amount by Owner's cost for investigating and evaluating the VEP, including any ascertainable collateral costs to Owner. Such collateral costs may include increased costs for maintenance, operation, related work items, additional work items, or elements of related or additional work items.

9.14.8 The executed Change Order shall also provide for the adjustment of the Contract Amount. The Contract Amount shall be adjusted by subtracting Owner's share of the accrued net savings.

9.14.9 The amount specified to be paid to the Contractor in the executed Change Order shall constitute full compensation to the Contractor for the VEP and the performance of the work thereof pursuant to the said Change Order.

10. ARTICLE 10 - CONTRACT AMOUNT; COMPUTATION AND CHANGE:

10.1 CONTRACT AMOUNT:

10.1.1 The Contract Amount constitutes the total compensation (subject to authorized adjustments) payable to the Contractor for performing the Work. All duties, responsibilities and obligations assigned to or undertaken by the Contractor shall be at his expense without change in the Contract Amount. The Contract Amount may only be changed by a Change Order or Supplemental Agreement.

10.2 CLAIM FOR CHANGE IN CONTRACT AMOUNT:

10.2.1 Any claim for an increase or decrease in the Contract Amount shall be submitted in accordance with the terms of Article 15, and shall not be allowed unless the notice requirements of this Contract have been met.

10.3 CHANGE ORDER PRICE DETERMINATION:

10.3.1 The value of any Work covered by a Change Order for an increase or decrease in the Contract Amount shall be determined in one of the following ways:

10.3.2 Where the Work involved is covered by unit prices contained in the Contract Documents, by application of unit prices to the quantities of the items involved (subject to the provisions of paragraph 10.9).

10.3.3 By mutual acceptance of a lump sum price which includes overhead and profit.

10.3.4 When 10.3.1 and 10.3.2 are inapplicable, on the basis of the Cost of the Work (determined as provided in paragraphs 10.4 and 10.5) plus a contractor's fee for overhead and profit (determined as provided in paragraph 10.6).

10.4 COST OF THE WORK:

10.4.1 The term Cost of the Work means the sum of all costs necessarily incurred and paid by the Contractor in the proper performance of the Work.

10.4.2 Except as otherwise may be agreed to in writing by the Owner, such costs shall be in amount no higher than those prevailing in the locality of the Project, shall include only the following items and shall not include any of the costs itemized in paragraph 10.5:

10.4.2.1 Payroll costs for employees in the direct employ of the Contractor in the performance of the Work under schedules of job classifications agreed upon by the Owner and the Contractor.

10.4.2.2 Payroll costs for employees not employed full time on the Work shall be apportioned on the basis of their time spent on the Work.

10.4.2.3 Payroll costs shall include, but not be limited to, salaries and wages plus the cost of fringe benefits which shall include Social Security Contributions, Unemployment, Excise and Payroll Taxes, Workers' or Workmen's compensation, health and retirement benefits, bonuses, sick leave, vacation and holiday pay applicable thereto.

10.4.2.4 Such employees shall include superintendents and foremen at the site.

10.4.2.5 The expenses of performing Work after regular working hours, on Saturday, Sunday or Legal Holidays, shall be included in the above to the extent authorized by the Owner.

10.4.2.6 Cost of all materials and equipment furnished and incorporated in the Work, including costs of transportation and storage thereof, and suppliers' field services required in connection therewith. All cash discounts shall accrue to the Contractor unless the Owner deposits funds with the Contractor with which to make payments, in which case the cash discounts shall accrue to the Owner. All trade discounts, rebates and refunds and all returns from sale of surplus materials and equipment shall accrue to the Owner, and the Contractor shall make provisions so that they may be obtained.

10.4.2.7 Payments made by the Contractor to subcontractors for Work performed by subcontractors. If required by the Owner, Contractor shall obtain competitive quotes from subcontractors or suppliers acceptable to the Contractor and shall deliver such quotes to the Owner who will then determine which quotes will be accepted. If a subcontract provides that the subcontractor is to be paid on the basis of Cost of the Work plus a fee, the subcontractor's Cost of the Work shall be determined in the same manner as the Contractor's Cost of Work. All subcontracts shall be subject to the other provisions of the Contract Documents insofar as applicable.

10.4.2.8 Costs of special Consultants (including but not limited to engineers, architects, testing laboratories, and surveyors) employed for services necessary for the completion of the Work.

10.4.2.9 Supplemental costs including the following:

10.4.2.9.1 The proportion of necessary transportation, travel and subsistence expenses of the Contractor's employees incurred in discharge of duties connected with the Work.

10.4.2.9.2 Cost, including transportation and maintenance, of all materials, supplies, equipment, machinery, appliances, office and temporary facilities at the site and hand tools not owned by the workers, which are consumed in the performance of the Work, and cost less market value of such items used but not consumed which remain the property of the Contractor.

10.4.2.9.3 Rentals of all construction equipment and machinery and the parts thereof whether rented from the Contractor or others in accordance with rental agreements approved by the Owner and the costs of transportation, loading, unloading, Installation, dismantling and removal thereof - all in accordance with terms of said rental agreements. The rental of any such equipment, machinery or parts shall cease when the use thereof is no longer necessary for the Work.

10.4.2.9.4 Sales, consumer, use or similar taxes related to the Work, and for which the Contractor is liable, imposed by Regulatory Requirements.

10.4.2.9.5 Fees for permits and licenses.

10.4.2.9.6 Losses and damages (and related expenses), not compensated by insurance or otherwise, to the Work or otherwise sustained by the Contractor in connection with the performance and furnishing of the Work provided they have resulted from causes other than the negligence of the Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable. Such losses shall include settlements made with the written consent and Approval of the Owner. No such losses, damages and expenses shall be included in the Cost of the Work for the purpose of determining the Contractor's Fee. If, however, any such loss or damage requires reconstruction and the Contractor is placed in charge thereof, the Contractor shall be paid for services a fee in accordance with paragraph 10.6.

10.4.2.9.7 The cost of utilities, fuel and sanitary facilities at the site.

10.4.2.9.8 Minor expenses such as telegrams, long distance telephone calls, telephone service at the site, expressage and similar petty cash items in connection with the Work.

10.4.2.9.9 Cost of premiums for additional bonds and insurance required because of changes in the Work and premiums for property insurance coverage within the limits of the deductible amounts established by the Owner in accordance with Article 5.

10.5 EXCLUDED COSTS:

10.5.1 The term Cost of the Work shall not include any of the following:

10.5.1.1 Payroll costs and other compensation of Contractor's officers, executives, principles (of partnership and sole proprietorships), general managers, engineers, architects, estimators, attorneys, auditors, accountants, purchasing and contracting agency, expeditors, timekeepers, clerks and other personnel employed by Contractor whether at the site or in Contractor's principal or a branch office for general administration of the Work and not specifically included in the agreed upon schedule of job classifications referred to in paragraph 10.4.2.1 - all of which are to be considered administrative costs covered by the Contractor's Fee.

10.5.1.2 Expenses of Contractor's principal and branch offices other than Contractor's office at the site.

10.5.1.3 Any part of Contractor's capital expenses including interest on Contractor's capital employed for the Work and charges against Contractor for delinquent payments.

10.5.1.4 Cost of premiums for all bonds and for all insurance whether or not Contractor is required by the Contract Documents to purchase and maintain the same (except for the cost of premiums covered by subparagraph 10.4.2.9.9 above).

10.5.1.5 Costs due to the negligence of Contractor, any subcontractor, or anyone directly or indirectly employed by any of them or for whose acts any of them may be liable, including but not limited to, the correction of Defective Work, disposal of materials or equipment wrongly supplied and making good any damage to property.

10.5.1.6 Costs for the use of small tools having a value of five hundred dollars (\$500) or less.

10.5.1.7 Other overhead or general expense costs of any kind and the costs of any item not specifically and expressly included in paragraph 10.4.

10.6 CONTRACTOR'S FEE:

10.6.1 The Contractor's Fee allowed to Contractor for overhead and profit shall be a mutually agreed upon fixed fee, or if none can be agreed upon, a fee based on the following percentages of the various portions of the Cost of the Work:

10.6.1.1 For costs incurred under subparagraphs 10.4.2.1 through 10.4.2.6, the Contractor's Fee shall be 15%;

10.6.1.2 For costs incurred under subparagraphs 10.4.2.7, 10.4.2.8 and 10.4.2.9, the Contractor's Fee shall be 10%; and if a subcontract is on the basis of Cost of the Work plus a fee, the maximum allowable to the Contractor on account of overhead and profit of all subcontractors shall be 10%;

10.6.2 No fee shall be payable on the basis of costs itemized under paragraph 10.5;

10.6.3 The amount of credit to be allowed by the Contractor to the Owner for any such change which results in a net decrease in cost will be the amount of the actual net decrease plus a deduction in Contractor's Fee by a mutually agreed upon amount or if none can be agreed upon, then an amount equal to 5% of the net decrease; and

10.6.4 When both additions and credits are involved in any one change, the adjustment in Contractor's Fee shall be computed on the basis of the net change in accordance with subparagraphs 10.6.1.1. and 10.6.1.2.

10.7 COST BREAKDOWN:

10.7.1 Whenever the cost of any Work is to be determined pursuant to paragraphs 10.4 and 10.5, the Contractor will submit in a form acceptable to the Owner an itemized cost breakdown together with supporting data.

10.8 CASH ALLOWANCES:

10.8.1 It is understood the Contractor has included in the Contract Amount all allowances so named in the Contract Documents and shall cause the Work so covered to be done by such subcontractors or suppliers and for such sums within the limit of the allowances as may be acceptable to the Owner. Contractor agrees that:

10.8.1.1 The allowances include the cost to Contractor (less any applicable trade discounts) of materials and equipment required by the allowances to be delivered at the site, and all applicable taxes; and

10.8.1.2 Contractor's cost for unloading and handling on the site, labor, installation costs, overhead, profit and other expenses contemplated for the allowances have been included in the Contract Amount and not in the allowances. No demand for additional payment on account of any thereof will be valid. Prior to Final payment, an appropriate Change Order will be issued to reflect actual amounts due the Contractor on account of Work covered by allowances, and the Contract Amount shall be correspondingly adjusted.

10.9 UNIT PRICE WORK:

10.9.1 Where the Contract Documents provide that all or part of the work is to be Unit Price Work, initially the Contract Amount will be deemed to include for all Unit Price Work an

amount equal to the sum of the established unit prices for each separately identified item of Unit Price Work times the estimated quantity of each item as indicated in the Contract.

10.9.2 The estimated quantities of items of Unit Price Work are not guaranteed and are solely for the purpose of comparison of Bids and determining an initial Contract Amount.

10.9.3 Determinations of the actual quantities and classifications of Unit Price Work performed by the Contractor will be made by the Owner in accordance with paragraph 10.10.

10.9.4 Each unit price will be deemed to include an amount considered by the Contractor to be adequate to cover the Contractor's overhead and profit for each separately identified item.

10.9.5 If the "Basis of Payment" clause in the Contract Documents relating to any unit price in the bid schedule requires that the said unit price cover and be considered compensation for certain Work or material essential to the item, this same Work or material will not also be measured or paid for under any other pay item which may appear elsewhere in the Contract Documents.

10.9.6 Payment to the Contractor shall be made only for the actual quantities of Work performed and accepted or materials furnished, in conformance with the Contract Documents.

10.9.7 When the accepted quantities of Work or materials vary from the quantities stated in the bid schedule, or change documents, the Contractor shall accept as payment in full, payment at the stated unit prices for the accepted quantities of Work and materials furnished, completed and accepted, except as provided below:

10.9.7.1 When the quantity of Work to be done or material to be furnished under any item, for which the total cost of the item exceeds 10% of the total Contract Amount, is increased by more than 25% of the quantity stated in the bid schedule, or change documents, either party to the Contract, upon demand, shall be entitled to an equitable unit price adjustment on the portion of the Work above 125% of the quantity stated in the bid schedule.

10.9.7.2 When the quantity of Work to be done or material to be furnished under any major item, for which the total cost of the item exceeds 10% of the total Contract Amount, is decreased by more than 25% of the quantity stated in the bid schedule, or change documents, either party to the Contract, upon demand, shall be entitled to an equitable price adjustment for the quantity of Work performed or material furnished, limited to a total payment of not more than 75% of the amount originally bid for the item.

10.10 DETERMINATIONS FOR UNIT PRICES:

10.10.1 The Owner will determine the actual quantities and classifications of Unit Price Work performed by the Contractor .

10.10.2 The Owner will review with the Contractor preliminary determinations on such matters before certifying the prices on the Bid Schedule.

10.10.3 The Owner's certification thereon will be final and binding on the Contractor, unless, within ten days after the date of any such decision, the Contractor delivers to the Owner written notice of intention to appeal from such a decision.

11. ARTICLE 11 - CONTRACT TIME; COMPUTATION & CHANGE:

11.1 COMMENCEMENT OF CONTRACT TIME; NOTICE TO PROCEED:

11.1.1 The Contract Time will commence to run on the day indicated in the Notice to Proceed.

11.2 STARTING THE WORK:

11.2.1 No Work on Contract items shall be performed before the effective date of the Notice to Proceed. The Contractor shall notify the Owner at least 24 hours in advance of the time actual construction operations will begin. The Contractor may request a limited Notice to Proceed after Award has been made, to permit him to order long lead materials which could cause delays in Project completion. However, granting is within the sole discretion of the Owner, and refusal or failure to grant a limited Notice to Proceed shall not be a basis for claiming for delay, extension of time, or alteration of price.

11.3 COMPUTATION OF CONTRACT TIME:

11.3.1 When the Contract Time is specified on a Calendar Days basis, all Work under the Contract shall be completed within the number of Calendar Days specified.

11.3.2 The count of Contract Time begins on the day following receipt of the Notice to Proceed by the Contractor, if no starting day is stipulated therein.

11.3.3 Calendar Days shall continue to be counted against Contract Time until and including the date of Final Completion of the Work.

11.3.4 When the Contract completion time is specified as a fixed calendar date, it shall be the date of Final Completion.

11.4 TIME CHANGE:

11.4.1 The Contract Time may only be changed by a Change Order or Supplemental Agreement.

11.5 EXTENSION DUE TO DELAYS:

11.5.1 The right of the Contractor to proceed shall not be terminated nor the Contractor charged with liquidated or actual damages because of any delays to the completion of the Work due to unforeseeable causes beyond the control and without the fault or negligence of the Contractor, including, but not restricted to the following: acts of God or of the public enemy, acts of the Owner in contractual capacity, acts of another contractor in the performance of a contract with the Owner, floods, fires, epidemics, quarantine restrictions, strikes, freight embargoes, unusually severe weather and delays of subcontractors or suppliers due to such causes.

11.5.2 Any delay in receipt of materials on the site, caused by other than one of the specifically mentioned occurrences above, does not of itself justify a time extension.

11.5.3 The Owner shall ascertain the facts and the extent of the delay and extend the time for completing the Work when the findings of fact justify such an extension.

11.6 ESSENCE OF CONTRACT:

11.6.1 All time limits stated in the Contract Documents are of the essence of the Contract.

11.7 REASONABLE COMPLETION TIME:

11.7.1 It is expressly understood and agreed by and between the Contractor and the Owner that the date of beginning and the time for Final Completion of the Work described herein are reasonable times for the completion of the Work.

11.8 DELAY DAMAGES:

11.8.1 Whether or not the Contractor's right to proceed with the Work is terminated, he and his sureties shall be liable for damages resulting from his refusal or failure to complete the Work within the specified time. Liquidated damages for delay shall be paid by the Contractor or his Surety to the Owner in the amount as specified in the Supplementary Conditions for each Calendar Day the completion of the Work or any part thereof is delayed beyond the Contract Time required by the Contract, or any extension thereof. If such amount of liquidated damages is not

established by the Contract Documents, then the Contractor and his Surety shall be liable to the Owner for any actual damages occasioned by such delay.

11.8.2 The Contractor acknowledges that the liquidated damages established herein are not a penalty but rather constitute an estimate of damages that the Owner will sustain by reason of delayed completion. These liquidated damages are intended as compensation for losses difficult to estimate, and include those items enumerated in the Supplementary Conditions.

11.8.3 These damages will continue to run both before and after termination in the event of default termination. These liquidated damages do not cover excess costs of completion or the Owner's costs, fees, and charges related to re-procurement.

11.8.4 If a default termination occurs, the Contractor or his Surety shall pay in addition to these damages, all excess costs and expenses related to completion as provided by Article 14.2.9.

12. ARTICLE 12 - QUALITY ASSURANCE:

12.1 WARRANTY AND GUARANTY:

12.1.1 The Contractor warrants and guarantees to the Owner that all Work will be in accordance with the Contract Documents and will not be Defective.

12.1.2 Prompt notice of all defects shall be given to the Contractor. All Defective Work, whether or not in place, may be rejected, corrected or accepted as provided for in this Article.

12.2 ACCESS TO WORK:

12.2.1 The Owner and the Project Managers, testing agencies and governmental agencies with jurisdiction interests will have access to the Work at reasonable times for their observation, inspecting and testing. The Contractor shall provide proper and safe conditions for such access.

12.3 TESTS AND INSPECTIONS:

12.3.1 The Contractor shall give the Owner timely notice of readiness of the Work for all required inspections, tests or Approvals.

12.3.2 If Regulatory Requirements of any public body having jurisdiction require any Work (or part thereof) to specifically be inspected, tested or approved, the Contractor shall assume full responsibility therefor, pay all costs in connection therewith and furnish the Owner the required certificates of inspection, testing or Approval.

12.3.3 The Contractor shall also be responsible for and shall pay all costs in connection with any inspection or testing required in connection with Owner's acceptance of a supplier of materials or equipment proposed to be incorporated in the Work, or of materials or equipment submitted for Approval prior to the Contractor's purchase thereof for incorporation in the Work.

12.3.4 The cost of all inspections, tests and Approvals in addition to the above which are required by the Contract Documents shall be paid by the Contractor.

12.3.5 The Owner may perform additional tests and inspections which it deems necessary to insure quality control. All such failed tests or inspections shall be at the Contractor's expense.

12.3.6 If any Work (including the Work of others) that is to be inspected, tested or approved is covered without written concurrence of the Owner, it must, if requested by the Owner, be uncovered for observation.

12.3.7 Such uncovering shall be at the Contractor's expense unless the Contractor has given the Owner timely notice of Contractor's intention to cover the same and the Owner has not acted with reasonable promptness in response to such notice.

12.3.8 Neither observations nor inspections, test or Approvals by the Owner of others shall relieve the Contractor from the Contractor's obligations to perform the Work in accordance with the Contract Documents.

12.4 UNCOVERING WORK:

12.4.1 If any Work is covered contrary to the written request of the Owner, it must, if requested by the Owner, be uncovered for the Owner's observation and replaced at the Contractor's expense.

12.4.2 If the Owner considers it necessary or advisable that covered Work be observed, inspected or tested, the Contractor, at the Owner's request, shall uncover, expose or otherwise make available for observation, inspection or testing as the Owner may require, that portion of the Work in question, furnishing all necessary labor, material and equipment.

12.4.3 If it is found that such Work is Defective, the Contractor shall bear all direct, indirect and consequential costs of such uncovering, exposure, observation, inspection and testing and of satisfactory reconstruction, (including but not limited to fees and charges of engineers, architects, attorneys and other professional) and the Owner shall be entitled to an appropriate decrease in the Contract Amount.

12.4.4 If, however, such Work is not found to be Defective, the Contractor shall be allowed an increase in the Contract Amount or an extension of the Contract Time, or both, directly attributable to such uncovering, exposure, observation, inspection, testing and reconstruction.

12.5 OWNER MAY STOP THE WORK:

12.5.1 If the Work is Defective, or the Contractor fails to supply suitable materials or equipment, or fails to furnish or perform the Work in such a way that the completed Work will conform to the Contract Documents, the Owner may order the Contractor to stop the Work, or any portion thereof, until the cause for such order has been eliminated; however, this right of the Owner to stop the Work shall not give rise to any duty on the part of the Owner to exercise this right for the benefit of the Contractor or any other party.

12.6 CORRECTION OR REMOVAL OF DEFECTIVE WORK:

12.6.1 If required by the Owner, the Contractor shall promptly, as directed, either correct all Defective Work, whether or not fabricated, installed or completed, or, if the Work has been rejected by the Owner, remove it from the site and replace it with Work which conforms to the requirements of the Contract Documents. The Contractor shall bear all direct, indirect and consequential costs of such correction removal (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) made necessary thereby.

12.7 ONE YEAR CORRECTION PERIOD:

12.7.1 If within one year after the date of Final Completion or such longer period of time as may be prescribed by Regulatory Requirements or by the terms of any applicable special guarantee required by the Contract Documents or by any specific provision of the Contract Documents, any Work is found to be Defective, the Contractor shall promptly, without cost to the Owner and in accordance with the Owner's written instructions, either correct such Defective Work, or, if it has been rejected by the Owner, remove it from the site and replace it with conforming Work.

12.7.2 If the Contractor does not promptly comply with the terms of such instructions, or in an emergency where delay would cause serious risk of loss or damage, the Owner may have the Defective Work corrected or the rejected Work removed and replaced, and all direct, indirect and consequential costs of such removal and replacement (including but not limited to fees and charges of engineers, architects, attorneys and other professionals) will be paid by the Contractor.

12.7.3 In special circumstances where a particular item of equipment is placed in continuous service for the benefit of the Owner before Substantial Completion of all the Work, the correction period for the item may begin on an earlier date if so provided in the Specifications or by Change Order.

12.7.4 Provisions of this paragraph are not intended to shorten the Statute of Limitations for bringing an action.

12.8 ACCEPTANCE OF DEFECTIVE WORK:

12.8.1 Instead of requiring correction or removal and replacement of Defective Work, the Owner may accept Defective Work, and in this event, the Contractor shall bear all direct, indirect and consequential costs attributable to the Owner's evaluation of and determination to accept such Defective Work (costs to include but not be limited to fees and charges of engineers, architects, attorneys and other professionals).

12.8.2 If any such acceptance occurs prior to Final payment, a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Owner shall be entitled to an appropriate decrease in the Contract Amount.

12.8.3 If the Owner has already made Final payment to the Contractor, an appropriate amount shall be paid by the Contractor or his Surety to the Owner.

12.9 OWNER MAY CORRECT DEFECTIVE WORK:

12.9.1 If the Contractor fails within a reasonable time after written notice from the Owner to proceed to correct Defective Work or to remove and replace rejected Work as required by the Owner in accordance with paragraph 12.6, or if the Contractor fails to perform the Work in accordance with the Contract Documents, or if the Contractor fails to comply with any other provision of the Contract Documents, the Owner may, after seven days' written notice to the Contractor, correct and remedy any such deficiency. In exercising the rights and remedies under this paragraph the Owner shall proceed expeditiously.

12.9.2 To the extent necessary to complete corrective and remedial action, the Owner may exclude the Contractor from all or part of the site, take possession of all or part of the Work, and suspend the Contractor's services related thereto, take possession of the Contractor's tool, appliances, construction equipment and machinery at the site and incorporate in the Work all materials and equipment stored at the site or approved remote storage sites or for which the Owner has paid the Contractor but which are stored elsewhere, the Contractor shall allow the Owner and his authorized representatives such access to the site as may be necessary to enable the Owner to exercise the rights and remedies under this paragraph.

12.9.3 All direct, indirect and consequential costs of the Owner or its agents in exercising such rights and remedies will be charged against the Contractor, and a Change Order will be issued incorporating the necessary revisions in the Contract Documents with respect to the Work and the Owner shall be entitled to an appropriate decrease in the Contract Amount.

12.9.4 Such direct, indirect and consequential costs will include but not be limited to fees and charges of engineers, architects, attorneys and other professionals, all court and arbitration costs and all cost of repair and replacement of Work of others destroyed or damaged by correction, removal or replacement of the Contractor's Defective Work.

12.9.5 The Contractor shall not be allowed an extension of the Contract Time because of any delay in performance of the Work attributable to the exercise by the Owner of the Owner's rights and remedies hereunder.

13. ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION:

13.1 SCHEDULE OF VALUES:

13.1.1 The Schedule of Values established as provided in paragraph 6.6 will serve as the basis for progress payments and will be incorporated into a form of Application for Payment acceptable to the Owner. Progress payments on account of Unit Price Work will be based on the number of units completed.

13.2 PRELIMINARY PAYMENTS:

13.2.1 Upon Approval of the Schedule of Values the Contractor may be paid for direct costs substantiated by paid invoices and other prerequisite documents required by the Contract Documents. Direct costs shall include the cost of Bonds, insurance, approved materials stored on the site or at approved remote storage sites, deposits required by a supplier prior to fabricating materials, and other approved direct mobilization costs substantiated as indicated above. These payments shall be included as a part of the total Contract Amount as stated in the Contract.

13.3 APPLICATION FOR PROGRESS PAYMENT:

13.3.1 The Contractor shall submit to the Owner for review an Application for Payment filled out and signed by the Contractor covering the Work completed as of the date of the Application for Payment and accompanied by such supporting documentation as required by the Contract Documents.

13.3.2 Progress payments will be made as the Work progresses on a monthly basis.

13.4 REVIEW OF APPLICATION FOR PROGRESS PAYMENT:

13.4.1 Owner will, either indicate in writing a recommendation of payment, or return the Application for Payment to the Contractor indicating in writing the Owner's reasons for refusing to recommend payment.

13.4.2 If the latter case, the Contractor may make the necessary corrections and resubmit the Application for Payment.

13.5 STORED MATERIALS AND EQUIPMENT:

13.5.1 If payment is requested on the basis of materials and equipment not incorporated in the Work but delivered and suitably stored at the site or at another location agreed to in writing, the Application for Payment shall also be accompanied by a bill of sale, invoice or other documentation warranting that the Owner has received the materials and equipment free and clear of all charges, security interests and encumbrances and evidence that the materials and equipment are covered by appropriate property insurance and other arrangements to protect the Owner's interest therein, all of which will be satisfactory to the Owner.

13.5.2 No payment will be made for perishable materials that could be rendered useless because of long storage periods.

13.5.3 No progress payment will be made for living plant materials until planted.

13.5.4 The payment may be reduced by an amount equal to transportation and handling cost if the materials are stored offsite, in a remote location, or will require special handling.

13.6 CONTRACTOR'S WARRANTY OF TITLE:

13.6.1 The Contractor warrants and guarantees that title to all Work, materials and equipment covered by any Application for Payment, whether incorporated in the Project or not, will pass to the Owner no later than the time of payment free and clear of any claims, liens, security interests and further obligations.

13.7 WITHHOLDING OF PAYMENTS:

13.7.1 The Owner may withhold or refuse payment for any of the reasons listed below provided it gives written notice of its intent to withhold and of the basis for withholding:

13.7.2 The Work is Defective, or completed Work has been damaged requiring correction or replacement, or has been installed without Approval of Shop Drawings, or by an unapproved subcontractor.

13.7.3 The Contract Amount has been reduced by Change Order.

13.7.4 The Owner has been required to correct Defective Work or complete Work in accordance with paragraph 12.9.

13.7.5 The Owner's actual knowledge of the occurrence of any of the events enumerated in subparagraphs 14.2.1.1 through 14.2.1.11 inclusive.

13.7.6 Claims have been made against the Owner or against the funds held by the Owner on account of the Contractor's actions or inactions in performing this Contract, or there are other items entitling the Owner to a set off.

13.7.7 Subsequently discovered evidence or the results of subsequent inspections or tests, nullify any previous payments for reasons stated in subparagraphs 13.7.1 through 13.7.5.

13.7.8 The Contractor has failed to fulfill or is in violation of any of his obligations under any provision of this Contract.

13.8 RETAINAGE:

13.8.1 At any time the Owner finds that satisfactory progress is not being made it may in addition to the amounts withheld under 13.7 retain a maximum amount equal to 10% of the total amount earned on all subsequent progress payments.

13.8.2 This retainage may be released at such time as the Owner finds that satisfactory progress is being made.

13.9 REQUEST FOR RELEASE OF FUNDS:

13.9.1 If the Contractor believes the basis for withholding is invalid or no longer exists, immediate written notice of the facts and Contract provisions on which the Contractor relies, shall be given to the Owner, together with a request for release of funds and adequate documentary evidence proving that the problem has been cured.

13.9.2 In the case of withholding which has occurred at the request of the Department of Labor, the Contractor shall provide a letter from the Department of Labor stating that withholding is no longer requested.

13.9.3 Following such a submittal by the Contractor, the Owner shall have a reasonable time to investigate and verify the facts and seek additional assurances before determining whether release of withheld payments is justified.

13.10 SUBSTANTIAL COMPLETION:

13.10.1 When the Contractor considers the Work ready for its intended use the Contractor shall notify the Owner in writing that the Work of a designated portion thereof is substantially complete (except for items specifically listed by the Contractor as incomplete) and request that the Owner issue a certificate of Substantial Completion.

13.10.2 Within a reasonable time thereafter, the Owner, the Contractor and appropriate Consultant(s) shall make an inspection of the Work to determine the status of completion.

13.10.3 If the Owner does not consider the Work substantially complete, the Owner will notify the Contractor in writing giving the reasons therefore. If the Owner considers the Work substantially complete, the Owner will within fourteen days execute and deliver to the Contractor a certificate of Substantial Completion with a tentative list of items to be completed or corrected.

13.10.4 At the time of delivery of the certificate of Substantial Completion the Owner will deliver to the Contractor a written division of responsibilities pending Final Completion with respect to security, operation, safety, maintenance, heat, utilities, insurance and warranties which shall be consistent with the terms of the Contract Documents.

13.10.5 The Owner shall be responsible for all Owner costs resulting from the initial inspection and the first re-inspection, and the Contractor shall pay all costs incurred by the Owner resulting from re-inspections, thereafter.

13.11 ACCESS FOLLOWING SUBSTANTIAL COMPLETION:

13.11.1 The Owner shall have the right to exclude the Contractor from the Work after the date of Substantial Completion, but the Owner shall allow Contractor reasonable access to complete or correct items on the tentative list.

13.12 FINAL INSPECTION:

13.12.1 Upon written notice from the Contractor that the entire Work or an agreed portion thereof is complete, the Owner will make a Final inspection with the Contractor and appropriate Consultants and will notify the Contractor in writing of all particulars in which this inspection reveals that the Work is incomplete or Defective.

13.12.2 The Contractor shall immediately take such measures as are necessary to remedy such deficiencies.

13.12.3 The Contractor shall pay for all costs incurred by the Owner resulting from re-inspections.

13.13 FINAL APPLICATION FOR PAYMENT:

13.13.1 After the Contractor has completed all such corrections to the satisfaction of the Owner and delivered all maintenance and operating instructions, schedules, guarantees, bonds, certificates of payment to all laborers, subcontractors and Suppliers, certificates of inspection, marked-up record documents and other documents all as required by the Contract Documents, and after the Owner has indicated that the Work is acceptable (subject to the provisions of paragraph 13.16), the Contractor may make application for Final payment following the procedure for progress payments.

13.13.2 The Application for Final Payment shall be accompanied by all certificates, warranties, guaranties, releases, affidavits, and other documentation required by the Contract Documents.

13.14 FINAL PAYMENT AND FINAL COMPLETION:

13.14.1 If on the basis of the Owner's observation of the Work during construction and Final inspection, and the Owner's review of the Application for Final Payment and accompanying documentation all as required by the Contract Documents, the Owner is satisfied that the Work has been completed and the Contractor's other obligations under the Contract Documents have been fulfilled, the Owner will process Application for Final Payment.

13.14.2 Otherwise, the Owner will return the Application for Final Payment to the Contractor, indicating in writing the reasons for refusing to process Final payment, in which case the Contractor shall make the necessary corrections and resubmit the Application for Final Payment.

13.14.3 If, through no fault of the Contractor, Final Completion of the Work is significantly delayed, the Owner shall, upon receipt of the Contractor's Final Application for Payment, and without terminating the Contract, make payment of the balance due for that portion of the Work fully completed and accepted. If the remaining balance to be held by the Owner for Work not fully completed or corrected is less than the retainage provided for in paragraph 13.8, and if Bonds have been furnished as required in paragraph 5.1, the written consent of the Surety to the payment of the balance due for that portion of the Work fully completed and accepted shall be submitted by the Contractor to the Owner with the application for such payment.

13.14.4 Such payment shall be made under the terms and conditions governing Final Payment, except that it shall not constitute a waiver of claims.

13.15 FINAL ACCEPTANCE:

13.15.1 Following receipt of the Contractor's Release with no exceptions, and certification that laborers, subcontractors and material men have been paid, certification of payment of payroll

and revenue taxes, and Final payment to the Contractor, the Owner will issue a letter of Final Acceptance, releasing the Contractor from further obligations under the Contract, except as provided in paragraph 13.16.

13.16 CONTRACTOR'S CONTINUING OBLIGATION:

13.16.1 The Contractor's obligation to perform and complete the Work and pay all laborers, subcontractors, and material men in accordance with the Contract Documents shall be absolute.

13.16.2 Neither any progress or Final payment by the Owner, nor the issuance of a certificate of Substantial Completion, nor any use or occupancy of the Work or any part thereof by the Owner, nor any act of acceptance by the Owner nor any failure to do so, nor any review and Approval of a Shop Drawing or sample submission, nor any correction of Defective Work by the Owner will constitute an acceptance of Work not in accordance with the Contract Documents or a release of the Contractor's obligation to perform the Work in accordance with the Contract Documents.

13.17 WAIVER OF CLAIMS BY CONTRACTOR:

13.17.1 The making and acceptance of Final payment will constitute a waiver of all claims by the Contractor against the Owner other than those previously made in writing and still unsettled.

13.18 NO WAIVER OF LEGAL RIGHTS:

13.18.1 The Owner shall not be precluded or be estopped by any payment, measurement, estimate, or certificate made either before or after the completion and acceptance of the Work and payment therefor, from showing the true amount and character of the Work performed and materials furnished by the Contractor, nor from showing that any payment, measurement, estimate or certificate is untrue or is incorrectly made, or that the Work or materials are Defective.

13.18.2 The Owner shall not be precluded or estopped, not with standing any such measurement, estimate, or certificate and payment in accordance therewith, from recovering from the Contractor or his Sureties, or both, such damages as it may sustain by reason of Contractor's failure to comply with requirements of the Contract Documents.

13.18.3 Neither the acceptance by the Owner, or any representative of the Owner, nor any payment for or acceptance of the whole or any part of the Work, nor any extension of the Contract Time, nor any possession taken by the Owner, shall operate as a waiver of any portion of the Contract or of the power herein reserved, or of any right to damages.

13.18.4 A waiver by the Owner of any breach of the Contract shall not be held to be a waiver of any other subsequent breach.

13.19 DEDUCTIONS:

13.19.1 The Owner may deduct from the amount of any payment made to the Contractor any sums owed to the Owner by the Contractor including but not limited to:

- 13.19.1.1 Past due sales tax,
- 13.19.1.2 port and harbor fees,
- 13.19.1.3 property tax or rent.

13.19.2 Before making any such deductions, the Owner shall have provided Contractor written notice of the amount claimed by the Owner to be due and owing from the Contractor.

14. ARTICLE 14 - SUSPENSION OF WORK, DEFAULT AND TERMINATION:

14.1 OWNER MAY SUSPEND WORK:

14.1.1 The Owner may, at any time suspend the Work or any portion thereof by notice in writing to the Contractor. If the Work is suspended without cause the Contractor shall be allowed an increase in the Contract Amount or an extension of the Contract Time, or both, directly attributable to any suspension if the Contractor makes an approved claim therefore as provided in Article 15.

14.1.2 However, no adjustment shall be made under this clause for any suspension, delay, or interruption to the extent that suspension is due to the fault or negligence of the Contractor, or that suspension is necessary for Contract compliance, or that performance would have been so suspended, delayed, or interrupted by any other cause, including the fault or negligence of the Contractor.

14.1.3 In case of suspension of Work, the Contractor shall be responsible for preventing damage to or loss of any of the Work already performed and of all materials whether stored on or off the site or approved remote storage sites.

14.2 DEFAULT OF CONTRACTOR:

14.2.1 If the Contractor:

14.2.1.1 Fails to begin the Work under the Contract within the time specified in the Contract Documents, or

14.2.1.2 Fails to perform the Work in accordance with the Contract Documents (including, but not limited to, failure to supply sufficient skilled workmen or suitable materials or equipment or failure to adhere to the progress schedule established under paragraph 6.6 as revised from time to time), or

14.2.1.3 Performs the Work unsuitably or neglects or refuses to remove materials or to correct Defective Work.

14.2.1.4 Discontinues the prosecution of the Work, or

14.2.1.5 Fails to resume Work which has been discontinued within a reasonable time after notice to do so, or

14.2.1.6 Becomes insolvent or is declared bankrupt, or commits any act of bankruptcy or insolvency except as prohibited by 11 U.S.C. 363, or

14.2.1.7 Allows any final judgment to stand against him unsatisfied for period of 60 days, or

14.2.1.8 Makes an assignment for the benefit of creditors without the consent of the Owner, or

14.2.1.9 Disregards Regulatory Requirements of any public body having jurisdiction, or

14.2.1.10 Otherwise violates in any substantial way any provisions of the Contract Documents, or

14.2.1.11 For any cause whatsoever, fails to carry on the Work in an acceptable manner, the Owner may give notice in writing to the Contractor and his Surety of such delay, neglect, or default.

14.2.2 If the Contractor or Surety, within the time specified in the above Notice of Default, shall not proceed in accordance therewith, then the Owner may, upon written notification to the Contractor or Surety of the fact of such delay, neglect or default and the Contractor's failure to comply with such notice, have full power and authority without violating the Contract, to take the prosecution of the Work out of the hands of the Contractor.

14.2.3 The Owner may terminate the services of the Contractor, exclude the Contractor from the site and take possession of the Work and of all the Contractor's tools, appliances, construction equipment and machinery at the site and use the same to the full extent they could

be used by the Contractor (without liability to the Contractor for trespass or conversion), incorporate in the Work all materials and equipment stored at the site or for which the Owner has paid the Contractor but which are stored elsewhere, and finish the Work as the Owner may deem expedient.

14.2.4 The Owner may enter into an agreement for the completion of said Contract according to the terms and provisions thereof, or use such other methods that in the opinion of the Owner are required for the completion of said Contract in an acceptable manner.

14.2.5 The Owner may, by written notice to the Contractor and his Surety or his representative, transfer the employment of the Work from the Contractor to the Surety, or if the Contractor abandons the Work undertaken under the Contract, the Owner may, at his option with written notice to the Surety and without any written notice to the Contractor, transfer the employment for said Work directly to the Surety.

14.2.6 The Surety shall submit its plan for completion of the Work, including any contracts or agreements with third parties for such completion, to the Owner for Approval prior to beginning completion of the Work. Approval of such Contracts shall be in accordance with all applicable requirements and procedures for Approval of subcontracts as stated in the Contract Documents.

14.2.7 Upon receipt of the notice terminating the services of the Contractor, the Surety shall enter upon the premises and take possession of all materials, tools, and appliances thereon for the purpose of completing the Work included under the Contract and employ by contract or otherwise any person or persons to finish the Work and provide the materials therefore, without termination of the continuing full force and effect of this Contract.

14.2.8 In case of such transfer of employment to the Surety, the Surety shall be paid in its own name on estimates covering Work subsequently performed under the terms of the Contract and according to the terms thereof without any right of the Contractor to make any claim for the same or any part thereof.

14.2.9 If the Contract is terminated for default, the Contractor and the Surety shall be jointly and severally liable for damages for delay as provided by paragraph 11.8, and for the excess cost of completion, and all costs and expenses incurred by the Owner in completing the Work or arranging for completion of the Work, including but not limited to costs of assessing the Work to be done, costs associated with advertising, soliciting or negotiating for bids or proposals for completion, and other re-procurement costs.

14.2.10 Following termination the Contractor shall not be entitled to receive any further balance of the amount to be paid under the Contract until the Work is fully finished and accepted, at which time if the unpaid balance exceeds the amount due the Owner and any amounts due to persons for whose benefit the Owner has withheld funds, such excess shall be paid by the Owner to the Contractor.

14.2.11 If the damages, costs, and expenses due the Owner exceed the unpaid balance, the Contractor and his Surety shall pay the difference.

14.2.12 If, after notice of termination of the Contractor's right to proceed under the provisions of this clause, it is determined for any reason that the Contractor was not in default under the provisions of this clause, or that the delay was excusable under the provisions of this clause, or that termination was wrongful, the rights and obligations of the parties shall be determined in accordance with the clause providing for convenience termination.

14.3 RIGHTS OR REMEDIES:

14.3.1 Where the Contractor's services have been so terminated by the Owner, the termination will not affect any rights or remedies of the Owner against the Contractor then existing or which may thereafter accrue.

14.3.2 Any retention or payment of moneys due the Contractor by the Owner will not release the Contractor from liability.

14.4 CONVENIENCE TERMINATION:

14.4.1 The performance of the Work may be terminated by the Owner in accordance with this section in whole or in part, whenever, for any reason the Owner shall determine that such termination is in the best interest of the Owner.

14.4.2 Any such termination shall be effected by delivery to the Contractor of a Notice of Termination, specifying termination is for the convenience of the Owner the extent to which performance of Work is terminated, and the date upon which such termination becomes effective.

14.4.3 Immediately upon receipt of a Notice of Termination and except as otherwise directed by the Owner the Contractor shall:

14.4.3.1 Stop Work on the date and to the extent specified in the Notice of Termination;

14.4.3.2 Place no further orders or subcontracts for materials, services, or facilities except as may be necessary for completion of such portion of the Work as is not terminated;

14.4.3.3 Terminate all orders and subcontracts to the extent that they relate to the performance of Work terminated by the Notice of Termination;

14.4.3.4 With the written Approval of the Owner, to the extent he may require, settle all outstanding liabilities and all claims arising out of such termination of orders and subcontracts, the cost of which would be reimbursable, in whole, or in part, in accordance with the provisions of the Contract;

14.4.3.5 Submit to the Owner a list, certified as to quantity and quality, of any or all items of termination inventory exclusive of items the disposition of which had been directed or authorized by the Owner;

14.4.3.6 Transfer to the Owner the completed or partially completed record Drawings, Shop Drawings, information, and other property which, if the Contract had been completed, would be required to be furnished to the Owner;

14.4.3.7 Take such action as may be necessary, or as the Owner may direct, for the protection and preservation of the property related to the Contract which is in the possession of the Contractor and in which the Owner has or may acquire any interest.

14.4.4 The Contractor shall proceed immediately with the performance of the above obligations.

14.4.5 When the Owner orders termination of the Work effective on a certain date, all Work in place as of that date will be paid for in accordance with the Basis of Payment clause of the Contract.

14.4.6 Materials required for completion and on hand but not incorporated in the Work will be paid for at cost plus 15% with materials becoming the property of the Owner or the Contractor may retain title to the materials and be paid an agreed upon lump sum.

14.4.7 Materials on order shall be canceled, and the Owner shall pay reasonable factory cancellation charges with the option of taking delivery of the materials in lieu of payment of cancellation charges.

14.4.8 The Contractor shall be paid 10% of the cost, freight not included, of materials canceled, and direct expenses only for Contractor chartered freight transport which cannot be canceled without charges, to the extent that the Contractor can establish them.

14.4.9 The extra costs due to cancellation of Bonds and insurance and that part of job start-up and phase-out costs not amortized by the amount of Work accomplished shall be paid by the Owner.

14.4.10 Charges for loss of profit or consequential damages shall not be recoverable except as provided above.

14.4.11 The termination claim shall be submitted promptly, but in no event later than 90 days from the effective date of termination, unless one or more extensions in writing are granted by the Owner upon request of the Contractor made in writing within the 90 day period.

14.4.12 Upon failure of the Contractor to submit his termination claim within the time allowed, the Owner may determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall thereupon pay to the Contractor so determined.

14.4.13 The Contractor and the Owner may agree upon whole or any part of the amount or amounts to be paid to the Contractor by reason of the total or partial termination of the Work pursuant to paragraph 14.4.

14.4.14 The Contract shall be amended accordingly, and the Contractor shall be paid the agreed amount. In the event of the failure of the Contractor and the Owner to agree in whole or in part, as provided heretofore, as to the amounts with respect to costs to be paid to the Contractor in connection with the termination of the Work the Owner shall determine, on the basis of information available to him, the amount, if any, due to the Contractor by reason of the termination and shall pay to the Contractor the amount determined as follows:

14.4.14.1 All costs and expenses reimbursable in accordance with the Contract not previously paid to the Contractor for the performance of the Work prior to the effective date of the Notice of Termination;

14.4.14.2 So far as not included above, the cost of settling and paying claims arising out of the termination of the Work under subcontracts or orders which are properly chargeable to the terminated portions of the Contract;

14.4.14.3 The reasonable costs of settlement with respect to the terminated portion of the Contract heretofore, to the extent that these costs have not been covered under the payment provisions of the Contract.

14.4.15 The Contractor shall have the right of appeal under the Owner's claim procedures, as defined in Article 15, for any determination made by the Owner, except if the Contractor has failed to submit his claim within the time provided and has failed to request an extension of such time, Contractor shall have no such right of appeal. In arriving at the amount due the Contractor under this section, there shall be deducted:

14.4.15.1 All previous payments made to the Contractor for the performance of Work under the Contract prior to termination;

14.4.15.2 Any claim for which the Owner may have against the Contractor;

14.4.15.3 The agreed price for, or the proceeds of sale of, any materials, supplies, or other things acquired by the Contractor or sold pursuant to the provisions of this section and not otherwise recovered by or credited to the Owner; and,

14.4.15.4 All progress payments made to the Contractor under the provisions of this section.

14.4.16 Where the Work has been terminated by the Owner said termination shall not affect or terminate any of the rights of the Owner against the Contractor or his Surety then existing or which may thereafter accrue because of a default.

14.4.17 Any retention or payment of monies by the Owner due to the Contractor under the terms of the Contract shall not release the Contractor or his Surety from liability.

14.4.18 Unless otherwise provided for in the Contract Documents, or by applicable statute, the Contractor, from the effective date of termination and for a period of three years after final settlement under this Contract, shall preserve and make available to the Owner at all reasonable times at the office of the Contractor, all its books, records, documents, and other evidence bearing on the cost and expenses of the Contractor under this Contract and relating to the Work terminated hereunder.

15. ARTICLE 15 - CLAIMS AND DISPUTES:

15.1 NOTIFICATION:

15.1.1 In addition to the notice requirements set out elsewhere in this Contract, if the Contractor becomes aware of any act or occurrence which may form the basis of a claim by the Contractor for additional compensation or an extension of time for performance, or if any dispute arises regarding a question of fact or interpretation of the Contract, the Contractor shall immediately inform the Project Manager.

15.1.2 If the matter cannot be resolved by agreement within 7 days, the Contractor shall, within the next 14 days, submit an Intent to Claim in writing to the Project Manager.

15.1.3 The Claim, if not resolved, shall be presented to the Project Manager, in writing, within 60 days following receipt of the Intent to Claim.

15.1.4 Receipt of the Claim will be acknowledged in writing by the Project Manager.

15.1.5 The Contractor agrees that unless these written notices are provided, the Contractor will have no entitlement to additional time or compensation for such act, event or condition.

15.1.6 The Contractor shall in any case continue diligent performance of the Contract.

15.2 PRESENTING CLAIM:

15.2.1 The Claim shall be submitted in accordance with ARRC Procurement Rule 1800.12 and shall specifically include the following:

15.2.1.1 The act, event or condition giving rise to the claim.

15.2.1.2 The Contract provisions which apply to the claim and under which relief is provided.

15.2.1.3 The item or items of Contract Work affected and how they are affected.

15.2.1.4 The specific relief requested, including additional Contract Time if applicable, and the basis upon which it was calculated.

15.3 CLAIM VALIDITY, ADDITIONAL INFORMATION, & PROJECT MANAGER'S ACTIONS:

15.3.1 The Claim, in order to be valid, must not only show that the Contractor suffered damages or delay but that those conditions were actually a result of the act, event or condition complained of and that the Contract provides entitlement to relief to the Contractor for such act, event, or condition.

15.3.2 The Project Manager reserves the right to make written request to the Contractor at any time for additional information which the Contractor may possess relative to the Claim.

15.3.3 The Contractor agrees to provide the Project Manager such additional information within 30 days of receipt of such a request. Failure to furnish such additional information may be regarded as a waiver of the Claim.

15.3.4 The Claim, if not resolved by agreement within 60 days of its receipt, will automatically be forwarded to the Owner for formal written decision.

15.4 OWNER'S DECISION:

15.4.1 The Contractor will be furnished the Owner's Decision within the next 90 days, unless additional information is requested by the Owner.

15.4.2 The Owner's Decision is final and conclusive unless fraudulent as to the Claim.

15.5 NOTICE OF APPEAL:

15.5.1 Within 14 days of receipt of the Owner's Decision, the Contractor may deliver a Notice of Appeal to the Owner in accordance with ARRC Procurement Rule 1800.13 and request a hearing.

15.5.2 The Notice of Appeal shall include specific exceptions to the Owner's Decision, including specific provisions of the Contract, which the Contractor intends to rely upon in the appeal.

15.5.3 General assertions that the Owner's Decision is contrary to law or to fact are not sufficient.

15.6 OWNER'S DECISION ON APPEAL:

15.6.1 The decision of the Owner on appeal will be rendered within 90 days after the conclusion of a hearing conducted under ARRC Procurement Rule 1800.15 or the date of receipt of the Notice of Appeal, whichever is later.

15.6.2 The time limits given above may be extended by mutual consent.

15.6.3 The decision of the Owner on appeal shall be final and conclusive unless the Contractor appeals to the superior court in accordance with ARRC Procurement Rule 1800.18.

16. ARTICLE 16 - MISCELLANEOUS:

16.1 GOVERNING LAW:

16.1.1 This Contract shall be governed by the laws of the State of Alaska and the provisions of ARRC's Procurement Rules.

16.2 CONTRACT CLAUSES:

16.2.1 If any contract clause is declared null and void, then all other clauses shall remain in force.

APPENDIX F SUPPLEMENTARY CONDITIONS

Unless noted otherwise herein, the 2020 edition of the Alaska Department of Transportation and Public Facilities **Standard Specifications for Highway Construction** shall be referenced as the **SSHC**. The aforementioned reference manual can be found at:

<http://dot.alaska.gov/stwddes/dcsspecs/assets/pdf/hwyspecs/sshc2020.pdf>

Any reference to any Section or Subsection of the Division 100 (e.g.: *Section 105, 109-1.02, etc.*) of the SSHC is null and void. Both the General and Supplementary Conditions adopted herein have replaced Division 100 of the SSHC in its entirety.

When referenced:

- **Owner's authorized representative:** shall be as described under General Condition Paragraph 2.1 **AUTHORITIES AND LIMITATIONS:** in addition to Supplementary Condition SC-05.01 **Authority of the Owner's authorized representative.**
- **Owner:** shall be as described under General Condition **1. ARTICLE 1 - DEFINITIONS.**

In the event of a conflict between these Supplementary Conditions and the General Conditions (Construction) found in Appendix E herein, the General Conditions (Construction) will take precedence over these Supplementary Conditions, in accordance with General Condition Paragraph 3.6 – **DISCREPANCY-ORDER OF PREFERENCE.**

SC-01 – Measurement and Payment

SC-01.01 General.

Wherever the Contract provides that certain work is subsidiary or it is without extra compensation, the payment for that work is included in the payment for other items of work, and no further or additional payment shall be made for that work.

When more than one type of material or work is specified for a pay item, the proposal line number, the item number, and the item description are used to differentiate the material or work.

Lump sum items will not be measured for payment. The Contractor shall accept the bid amount for a lump sum item as complete payment for all work necessary to complete that item. Quantities shown for lump sum items are approximate. No adjustment in the lump sum price will be made if the quantity furnished is more or less than the estimated quantity unless the Contract specifically states otherwise.

SC-01.02 Measurement of Quantities.

All work completed under the Contract will be measured using the U.S. Customary system of measure. The Owner's authorized representative may agree for purposes of making progress payments to use a method of measurement other than the methods described below. However, all final payments for quantities will be calculated using one or more of the methods of measurement described below and in the applicable pay item section. Unless otherwise specified, work will be measured as follows:

1. Acre (43,560 ft²). Horizontally, unless specified on the ground surface. No deductions will be made for individual fixtures with an area of 500 ft² or less.
2. Contingent Sum. Measured as specified in the Contract or Directive authorizing the work. The method of payment may include: (1) a lump sum basis, (2) a price multiplied by the units of work performed, (3) a pay adjustment based on the quality of work, or (4) a deduction from the contract amount.
3. Cubic Yard (yd³). At the location specified using method a, below. Methods b through e may be used with written approval of the Owner's authorized representative.
 - a. Average End Area. End area is the calculated area between original ground cross section and either the design cross section or at the Owner's authorized representative's discretion the final cross section. Volume of material is calculated using the average of end areas multiplied by the distance along centerline between end areas. In extreme cases where most of the earthwork lies along a single horizontal curve the Owner's authorized representative may compute volume using the average of end areas multiplied by the distance along centroid of cross section between end areas.
 - b. Three-Dimensional. Where it is impractical to measure material by cross sectioning due to erratic location of isolated deposits, acceptable methods involving three-dimensional measurements may be used.
 - c. Neat Line. Structures will be measured according to neat lines shown on the Plans or as altered to fit field conditions.
 - d. Nominal. Volume calculated as nominal width times nominal thickness times the average length of each piece.
 - e. Weight. With the Owner's authorized representative's written approval, material that is specified to be measured by volume may be weighed and converted to volume for payment purposes. The Owner's authorized representative will determine the appropriate conversion factors. When liquid asphalt is a pay item, ASTM D4311 will be used to convert from weight to volume at 60 °F.
4. Cubic Yard Vehicle Measure (CYVM). Material measured by volume in the hauling vehicle will be measured at the point of delivery. Vehicles may be of any acceptable size or type provided that the volume of the actual contents may be readily and accurately determined. Vehicles shall be loaded to the measured vehicle volume. If vehicles are not loaded to the measured vehicle volume, the Owner's authorized representative at their discretion, may apply a percentage of full factor to the measured volume. Loads shall be leveled when directed. No payment will be made for loads that exceed the legal capacity of the vehicle.
5. Linear Foot (LF). From end to end, in place, parallel to the centerline of the item or ground surface on which the items are placed.
6. Thousand Feet Board Measure (MBM). Nominal volume based on nominal widths and thickness times actual extreme length of each piece. One thousand feet board measure = 1,000 ft² (x) 1 inch thick.
7. Thousand Gallon (MGal). By using method a, below. Methods b or c may be used with written approval of the Owner's authorized representative.

- a. Measured or calibrated volume tank;
 - b. Metered volume, using a certified calibrated meter; or
 - c. Weighed under this Subsection and converted to volume, using a specified or approved conversion factor.
8. Mile. From end to end, measured horizontally along centerline.
 9. Pound. Using a certified scale or the net weight of packaged material as labeled by the manufacturer. The Owner's authorized representative will accept nominal weights for standard manufactured items, unless otherwise specified. The Owner's authorized representative will accept industry-established manufacturing tolerances, unless otherwise specified.
 10. Square Foot (ft²). Parallel to the surface being measured. No deductions will be made for individual fixtures with an area of 1 ft² or less. Transverse measurement for area computations will be the neat dimensions shown on the Plans or as directed by the Owner's authorized representative.
 11. Square Yard (yd²). Parallel to the surface being measured. No deductions will be made for individual fixtures with an area of 1 yd² or less. Transverse measurement for area computations will be the neat dimensions shown on the Plans or as directed by the Owner's authorized representative.
 12. Station (100 feet). Horizontally, parallel to centerline.
 13. Ton (2,000 pounds). By using method a. or c., below. Method b. may be used with written approval of the Owner's authorized representative.
 - a. Commercial Weighing System. Permanently installed and certified commercial scale that meets the requirements for the project weighing system.
 - b. Invoices. Supplier's invoice with net weight or volume converted to weight for bulk material that is shipped by truck or rail and is not passed through a mixing plant. Periodic check weighing may be required. Net certified weights or volumes of asphalt materials are subject to correction for temperature and foaming. All materials are subject to correction for material that is lost, wasted, or otherwise not incorporated into the work, for computing quantities.
 - c. Project Weighing System. Approved automatic digital scale and scale house. All scales are subject to approval according to the Weights and Measures Act, AS 45.75.

Spring balances and belt conveyor scales shall not be used to determine pay weight.

The Contractor may use proportioning (batch) scales for weighing material for payment when the batching equipment includes an approved and certified automatic weighing, cycling, and monitoring system.

Weigh scales used with a storage silo may be used to weigh the final product for payment, provided the scales are approved and certified.

Vehicle scales shall be maintained with the platform level and rigid bulkheads at each end. The platform must be long enough to permit simultaneous weighing of the hauling vehicle including coupled vehicles, in a single draft. Double draft weighing is not allowed.

(1) Scale Requirements. The Contractor shall:

- (a) Ensure that vehicle scale(s) are installed and maintained to the standards listed in the National Institute of Standards and Technology (NIST), Handbook 44, Specifications, Tolerances and other Technical Requirements for Commercial Weighing and Measuring Devices, as adopted by AS 45.75.050(d);
- (b) Contact the Division of Measurement Standards/Commercial Vehicle Enforcement (MSCVE) to coordinate scale inspections before use, at required intervals or as directed by the Owner's authorized representative and for clarification or possible exceptions to this section;
- (c) Ensure that a weatherproof housing is provided to protect the scale indicating/recording equipment and allows the scale operator convenient access to the weigh indicator, scale computer, ticket printer, and sequential printer;
- (d) Use competent personnel to operate the scale system;
- (e) Furnish and maintain on-site, NIST Class-F cast iron test weights in denominations of 500 lb and/or 1000 lb. The required minimum for vehicle scales is 4000 lb; the required minimum for hopper scales is 2000 lb. Test weights shall have a recognized calibration certificate on file which is dated no more than two years from date of Notice to Proceed. Test weights will be used as directed by the Owner's authorized representative or MSCVE for initial accuracy calibration testing and may be used for subsequent scale testing or inspection. Projects accessible by direct road access from the communities identified on the dot.alaska.gov/mscve website, 5 days before bid opening, are exempt from the requirement to furnish and maintain on-site test weights;
- (f) Provide the following information on any scale used to weigh materials for payment:
 - (i) Owner of the scales and scale locations;
 - (ii) Manufacturer's name, model serial number, maximum capacity, and type of scales (single beam, double beam, self-reading, etc.)
 - (iii) Date(s) the scales were installed and/or adjusted;
 - (iv) Scale service company inspections and accuracy checks (attach copy);
 - (v) Division of Measurement Standards inspections and accuracy checks (attach copy); and
 - (vi) Time and dates of notification of any malfunctions.

(2) Electronic Computerized Weighing System. The Contractor shall use an electronic computerized weighing system (ECWS) with the following minimum capabilities:

- (a) Computer. A computer with a self-reading scale system that includes the scale load cell, a sealed direct reading weight indicator, scale computer, ticket printer, and sequential printer, and that can record a complete shift's transaction in an electronic format approved by the Owner's authorized representative.

The computer must store project numbers, all pay item descriptions for multiple projects and products that are weighed, and the following information for each hauling vehicle used on the project:

- i. Vehicle identification number marked on the vehicle;
- ii. Tare weight; and
- iii. Maximum allowable gross vehicle weight (MAVW).

During weighing operations, the ECWS must compare each vehicle's gross weight to its MAVW. If the vehicle exceeds its MAVW, the system must alert the scale operator that an "overload" exists. The system must not issue a ticket for an overload.

The computer must have a battery backup and protection for power surges or brown outs. The computer system must retain all stored data during a power outage and must operate during a power outage to allow the scale operator to shut down the hard drive without losing information.

- (b) Tickets. The ECWS must have a ticket printer that prints a legible, serially numbered weigh ticket for the Owner's authorized representative with the following information on each ticket in the order listed:

- i. Project number;
- ii. Item number and description;
- iii. Date weighed;
- iv. Time weighed;
- v. Ticket number;
- vi. Vehicle Identification Number;
- vii. Maximum allowable gross vehicle weight;
- viii. Gross weight;
- ix. Tare weight;
- x. Net weight;
- xi. Subtotal item net weight for each haul unit since start of shift; and
- xii. Accumulated item net weight for all haul units since start of shift.

Tickets must show all weights in pounds in accordance to NIST Handbook 44, and in tons reported to two decimal places.

After printing, the weigh ticket must automatically advance to a perforation so it can be torn off and handed to the driver. Each ticket shall be initialed by the scale operator before handoff to the driver.

- (c) Sequential Printer. A sequential printer that prints out all transactions (keystrokes) made by the computer concurrently with the ticket printer. For permanent commercial scales, the printer may print at the end of the company's daily shift with the Owner's authorized representative's approval. The printer must print all scales transactions including tares, voided tickets, and data changes made by the scale operator. The printer must allow for advancing the paper manually so that the scale operator can write notes on the paper when special situations occur, such as voided tickets, incorrect vehicle identification number used, etc. The scale operator shall also note these special situations in the Scales Diary.

The sequential printout shall be submitted to the Owner's authorized representative at the end of each shift.

- (d) Data Files. Submit electronic data files to the Owner's authorized representative at the end of each shift, with all ticket information produced during the shift recorded. These Data files must be complete and correct without conversion or manipulation.
- (e) Scale Diary. The scale operator shall keep a Scale Diary in an electronic format acceptable to the Owner's authorized representative. The scale operator shall complete the Scale Diary with the following information: dates of action, type of material, source, time the scale opened and time the scale closed, times of scale balance, ticket sequence, time the haul for each material started and stopped, voided ticket numbers, vehicle identification numbers, times of tare and tare weights, and the scale operator's signature. The Scale Diary shall include the following information on any scale used to weigh materials for payment:
 - i. Owner of the scales and scale locations;
 - ii. Manufacturer's name, model serial number, maximum capacity, and type of scales (single beam, double beam, self-reading, etc.);
 - iii. Date(s) the scales were installed and/or adjusted;
 - iv. Scale service company inspections and accuracy checks (attach copy);
 - v. Division of Measurement Standards inspections and accuracy checks (attach copy); and
 - vi. Time and dates of notification of any malfunctions.

The Scale Diary shall be given to the Owner's authorized representative at the end of each shift. The Scale Diary is the property of the Owner.

- (3) Weighing Procedures The scale operator shall tare hauling vehicles and record tare weights at least once daily; perform additional tares and record additional tare weights as directed by the Owner's authorized representative; perform tares in the presence of the Owner's authorized representative when requested; and ensure that each hauling truck displays a unique, legible identification mark.

The Owner's authorized representative will calculate the MAVW for each vehicle and list all vehicles and their MAVW(s) in the scale house. The MAVW is either the maximum allowable legal weight determined by the Owner's authorized representative when the Contractor cannot haul overloads, or the manufacturer's recommended maximum allowable gross vehicle weight as certified by the Contractor when vehicles are allowed to haul overloads. Only MAVWs that the Owner's authorized representative has provided in writing shall be used. Tickets may not be issued to a vehicle until the Owner's authorized representative provides the MAVW.

No payment will be made for any material weighed without using the ECWS, unless the Contractor obtains the Owner's authorized representative's prior written authorization. If the ECWS malfunctions or breaks down, weights shall be manually weighed and recorded for up to 48 hours as directed by the Owner's authorized representative. The manual weighing operation shall meet all other Contract requirements.

The system must generate a report either during or at the end of the day or shift that summarizes the number of loads and total net weight for each date, project, and product. The scale operator shall submit the original report to the Owner's authorized representative at the end of each shift.

No payment for any hauled material on a given date will be made until the following are delivered to the Owner's authorized representative:

- (a) Sequential printout;
- (b) Daily data; and
- (c) Scale Diary.

The Contractor will not receive payment for any material hauled in a vehicle that does not conform to the requirements of Supplementary Condition **SC-05.12 Load Restrictions**, and this Supplementary Condition. The Contractor shall dump material from non-conforming vehicles until they conform, then reweigh the vehicles.

When a weighing device indicates less than true weight, the Contractor will not receive additional payment for material previously weighed and recorded. When a weighing device indicates more than true weight, all material received after the last previously correct weighing accuracy test will be reduced by the percentage of error that exceeds 0.5 percent.

If the Owner's authorized representative incurs extra construction engineering expenses from checking non-machine data entries or other data irregularities, the total value of those expenses will be deducted from the value of the Contract item before payment.

The Contractor shall accept natural variations in the specific gravity of aggregates, without adjustment in Contract unit price.

SC-01.03 Scope of Payment.

The Owner will make payment at the Contract price or prices for each item shown on the bid schedule or as modified by change order with specified price adjustments. The Contractor shall accept the Contract prices as full and complete payment for (a) furnishing all equipment, materials, tools, and labor necessary to complete the work in a complete and acceptable manner, and for (b) all of the Contractor's risk, loss, damage, or expense of whatever character arising from or relating to the work and performance of the work.

SC-01.04 Progress Payments.

The Owner will make monthly progress payments to the Contractor in accordance with General Condition Article **13. ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION**; based on estimates of the value of work performed and materials on hand. At the Owners discretion, a progress payment may be made twice monthly if the value of the estimate exceeds \$10,000.

SC-01.05 Final Payment.

When the project has been completed as provided in Supplementary Condition **SC-05.15 Project Completion**, the Owner's authorized representative will prepare the final estimate of the quantities of the various classes of work performed. All prior progress estimates and payments shall be subject to correction in the final estimate and payment. The final estimate will not be processed until the Alaska Department of Labor and Workforce Development has verified that final payment

can be released. The Owner will not process the final estimate until the Contractor completes Items 1 through 4 in the first paragraph of Supplementary Condition **SC-05.16 Final Acceptance and Record Retention.**

If the Contractor approves the final estimate, or does not file a claim within 90 days of receiving the final estimate, the estimate shall be processed for final payment. Final payment shall consist of the entire sum found to be due after deducting all previous payments and all amounts to be retained or deducted under the provisions of the Contract. Failure to file a claim within 90 days of receiving the final estimate is a waiver of any and all claims relating to or arising from the final estimate.

When the Contractor approves the final estimate and executes the Contractor's Release form, final payment will be processed.

The Contractor may reserve any unresolved claims that were timely filed in accordance with Supplementary Condition **SC-05.17 Claims.** by listing those claims as exceptions on the Contractor's Release. Any claims listed as exceptions that were not filed before the Contractor executes the final estimate will be considered null and void. Any claims filed in a timely manner but not listed on the Contractor's Release are waived and deemed released.

If the Contractor fails or declines to approve the final estimate within 90 days but does not file any claims, the Owner will consider the estimate approved and process the estimate for final payment. Any subsequently raised claims will be considered null and void.

SC-01.06 Eliminated Items.

When the Contractor is notified of the elimination of a minor Contract item, the Contractor will be reimbursed for actual work performed and all direct costs incurred before notification. In no case will any payment be made for anticipated profits or overhead.

Should it become necessary to eliminate a major Contract item, an equitable adjustment will be made and the Contract modified in writing accordingly.

SC-02 – Lump Sum Pay Items

For lump sum pay items that are not broken down for payment in accordance with a SSHC Subsection, the Contractor is to provide a lump sum breakdown for review and approval by the Owner. Prior to the Contractor's first application for payment that includes progress under such an item, the Contractor is to submit a lump sum breakdown for approval based upon the phases and/or segments of work outlined therein.

SC-03 – Escrow of Bid Documentation

Furnish a legible copy of your bid documentation and an affidavit, as instructed in writing by the Contracting Officer. Bid documentation consists of written documentation of all quantity takeoffs, construction schedules on which the bid is based, cost estimates, rates of production and progress, assumptions, calculations, quotes from subcontractors and suppliers, and other information used to prepare your bid for this project.

Obtain and furnish the same level of bid documentation, for each subcontractor, supplier or fabricator with a subcontract or agreement exceeding \$200,000, regardless of tier. Seal each entity's documentation in separate envelopes, labeled with the entity's name and address, submission date, and project name and number. Include a cover letter or quote signed by a responsible party.

Meet the following requirements:

1. Submitting Bid Documentation. Place bid documentation in a sealed container clearly marked "Bid Documentation" and labeled with the bidder's name and address, submission date, and project name and number. Deliver the sealed container to the Owner-designated document Depository for safekeeping.
2. Affidavit. Submit directly to the Contracting Officer a signed and certified affidavit attesting that:
 - a. The affiant has examined the bid documentation and that it includes all documents used to prepare the bid;
 - b. The sealed container contains all bid documentation submitted;
 - c. The escrow materials were relied on to prepare the bid; and
 - d. Should a dispute arise, the Contractor's rights to use bid preparation documentation other than those in escrow are waived.
3. Access and Use of Escrow Documents. The bid documentation will remain in escrow, without access by either party, except as otherwise provided herein. In the event the Contractor (1) provides notice of intent to claim, (2) a claim, (3) a contract change order, or (4) initiates contract related litigation, the Owner may obtain copies of the bid documentation as provided herein.

Both parties will submit to the Depository and copy to each other a list of personnel that are authorized to access the escrow documents. Use forms provided by the Depository.

Upon request, the Depository will set the time and place for access to escrow documents, will monitor the escrow documents review, and will arrange for a method of copying escrow documents. Access to escrow documents shall require at least five days advance written notice so that the other party has the opportunity to witness the escrow review, examination and use. There is no requirement that both parties witness the escrow document review, but if one party is absent then the review must occur in the presence of a neutral third-party observer to be designated by the Depository.

Notwithstanding paragraph five below, the Owner will be allowed: to make copies of any and all escrow documentation (whether hard-copy, electronic, or otherwise); to use and review any copies made whether in the presence of the Contractor, or not; and to share copies with staff and consultants directly involved in the subject dispute.

Distribution is not authorized except as related to resolution of a dispute. The Owner will be allowed to incorporate pertinent copies as supporting documentation in all significant contract change orders, contractual disputes, and the settlement of disputed claims.

The Owner is not liable for any contractor costs associated with escrow review and use.

4. Failure to Provide Bid Documentation. Refusal or failure to provide your bid documentation or affidavit renders your bid nonresponsive. Failure or refusal to provide Subcontractor bid documentation, will result in subcontract disapproval.
5. Confidentiality of Bid Documentation. Materials held in escrow are your property. Except as otherwise provided herein, the escrow materials cannot be released without your approval.
6. Cost and Escrow Instruction. The Owner pays to store all escrowed materials and instructs the depository regarding escrow.
7. Payment. Include within the overall Contract bid price all costs to comply with this Subsection.
8. Return of Escrow Documentation. The original escrow documents will be returned to you once litigation is concluded, outstanding claims are resolved, you have completed the Contract, and the Owner receives an executed Contractor's Release Form with no exceptions listed.

SC-04 – Control of Material

SC-04.01 Source of Supply and Quality Requirements.

The Contractor shall furnish all materials required to complete the work except those specified to be furnished by the Owner. The Contractor shall supply materials that are new and that meet Contract requirements.

The Contractor shall notify the Owner's authorized representative, as defined in Supplementary Condition SC-05.01 Authority of the Owner's authorized representative., of proposed sources of materials at least 30 days before shipment, and shall submit to the Owner's authorized representative and to the Owner's engineer a complete list of materials to be purchased from suppliers sufficiently in advance of fabrication or shipment to permit the Owner to inspect the materials.

The Owner's inspectors may inspect any materials, including those originating outside Alaska, at the supply source or other locations. Materials may be conditionally approved at the supply source or other location, but are subject to field inspection and may be ordered removed under Supplementary Condition SC-05.11 Removal of Unacceptable and Unauthorized Work. if they do not conform to Contract requirements. Inspectors are authorized to reject materials that do not conform to specifications. Inspectors will report their actions to the Owner's authorized representative.

The Contractor shall submit a certificate of compliance for each item listed on the Material Certification List. The Owner's authorized representative may authorize the use of materials based on a certificate of compliance, see Supplementary Condition SC-04.04 Certificates of Compliance. Materials incorporated into the project on the basis of a certificate of compliance may be tested at any time, whether in place or not, and, if they do not conform to Contract specifications, they may be rejected and ordered removed under Supplementary Condition SC-05.11 Removal of Unacceptable and Unauthorized Work.

The Contractor may request substitution of specified materials with equivalent materials. Requests for substitution shall be submitted to the Owner's authorized representative, and shall include a manufacturer's statement that certifies, for each lot delivered:

1. Conformance to the specified performance, testing, quality or dimensional requirements; and
2. Suitability for the use intended in the Contract work.

The Owner's authorized representative will determine the acceptability of a proposed substitute for use in the project. If a substitute is approved, a Change Order will be executed. The Owner is never required to accept substitution. The Contractor shall not incorporate substitute materials into the project without written approval from the Owner's authorized representative. The Owner's authorized representative may test substitute materials at any time, whether in place or not, and, if the substitute materials do not meet Contract specifications, they may be rejected and ordered removed under Supplementary Condition **SC-05.11 Removal of Unacceptable and Unauthorized Work.**

SC-04.02 Material Sources.

1. **General.** The Contractor shall:

- a. utilize Useable Excavation according to Supplementary Condition **SC-07.04 Use of Materials Found on the Work.** before using material sources listed therein under Paragraph 4. When there is insufficient useable excavation furnish additional required materials from sources of the Contractor's choice, except that the Contractor shall use a mandatory source when identified in the Contract;
- b. produce a sufficient quantity of materials meeting the specifications to complete the project;
- c. as a subsidiary cost: clear and grub, strip, drill and blast, excavate, crush, sort, blend, screen, wash, stockpile, haul, and rehandle material as needed to produce and deliver the specified product;
- d. determine the type of equipment and methods to be used;
- e. expect variations in material quality within the deposits, and procure material only from acceptable portions of the deposit, regardless of source ownership; and
- f. prevent erosion, sedimentation, and pollution within a materials source.

The Contractor agrees that:

- g. the costs to explore and develop material sources, including all production effort, are subsidiary to the cost of providing the specified material;
 - h. the Owner's authorized representative may order the Contractor to procure material only from certain portions of the source and may reject material from other portions of the source that does not conform to the specifications; and
 - i. all material required may not be procurable from any one source and the Contractor may need to change between sources. That contingency is to be factored into the unit bid price for the Contract Item.
2. **Inspection and Acceptance.** The Contractor shall perform sampling and testing during materials processing and placement in accordance with its Quality Control Plan

(Supplementary Condition SC-04.03 Testing and Acceptance.) and shall obtain acceptable material samples from locations designated within the source.

The Owner will sample and test materials to determine the quality of the source, at its expense, as part of its Acceptance Testing (Supplementary Condition SC-04.03 Testing and Acceptance, Paragraph 2). The Owner will reject materials when the samples do not meet specifications. The Owner may reject a proposed materials site when samples do not meet specifications.

3. Awareness Training. The operator of the Contractor's sand and gravel surface mine or other similar materials source shall provide Site-Specific Hazard Awareness Training in compliance with 30 CFR 46.11 for all the Owner's authorized representative's personnel before beginning operations. All other workers shall be given training in compliance with 30 CFR 46 before exposure to mine hazards. The training must be offered at each surface mine that will be used to supply processed aggregates. A qualified person must provide the training. The training shall be in accordance with the operator's written training plan approved by the Mine Safety and Health Administration, covering the following items:
 - a. Site-specific health and safety risks;
 - b. Recognition and avoidance of hazards;
 - c. Restricted areas;
 - d. Warning and evacuation signals;
 - e. Evacuation and emergency procedures;
 - f. Other special safety procedures; and
 - g. A site tour.

The Contractor shall require the Owner's authorized representative's personnel to sign the *Visitor's Log Book* upon completion of the training to indicate that training was provided. Training is a subsidiary cost.

4. Type of Sources. When there is insufficient Useable Excavation, as defined in Supplementary Condition SC-07.04 Use of Materials Found on the Work., the Contractor shall supply additional required material from one or more of the following sources:
 - a. Contractor-Furnished Sources. For a material source that is a commercial plant as defined in Supplementary Condition SC-06.03 Limitation of Operations, and herein the Contractor shall:
 - (1) acquire the necessary rights and permits to obtain material from a commercial plant;
 - (2) pay as subsidiary costs all related costs to obtain and use material from the source; and
 - (3) be solely responsible for the quality and quantity of materials.

For all Contractor-Furnished sources that are not a commercial plant, the Contractor shall:

- (4) Acquire the necessary rights and permits to take materials from the sources including state-owned sources that are not under the Owner's control;
- (5) Pay as subsidiary:
 - (a) all related costs to obtain, develop, and use the sources, including but not limited to permit and mineral royalties;
 - (b) the material costs identified in the Material Sales Agreement you obtain for State owned sources where an existing or draft Material Sales Agreement is not included in the contract; and
 - (c) the material costs identified in the Material Sales Agreement for material obtained from State owned sources for which an existing or draft Material Sales Agreement is included in the contract;
- (6) Be solely responsible for quality and quantity of materials; and
- (7) Obtain all necessary rights, permits, and plan approvals before clearing or disturbing the ground in the material source. The contractor shall certify in writing to the Owner's authorized representative that all permits and clearances relating to the use of the material source have been obtained prior to any clearing or ground disturbance in the materials source.

No equitable adjustment or other compensation will be made for any additional costs, including increased length of haul, if the Contractor:

- (8) Chooses to change material sources for any reason;
 - (9) Is unable to produce a sufficient quantity or quality of materials from Contractor-Furnished sources; or
 - (10) Encounters unexpected, unforeseen, or unusual conditions within Contractor-Furnished sources.
- b. Mandatory Sources. The Owner may identify material sources in the Contract from which the Contractor is required to take a specified quantity of material. No other source will be permitted for that portion of material unless prior approval is obtained from the Owner's authorized representative. The Contract will specifically define these sources as Mandatory Sources and define rights and stipulations for each site. The Owner will provide a materials report for these sources.

The Contractor acknowledges that samples from within a source may not be representative of the entire source. The Contractor must expect variations of quality and quantity within the source and shall factor that contingency into the unit bid price for the material. No equitable adjustment will be paid for variations encountered within the source.

When using a Mandatory Source, if it is found that the quality or quantity of material producible from the Mandatory Source does not meet project requirements, and a change of source is necessary for that reason alone, a Change Order with equitable adjustment will be made.

- c. Designated Sources. The Owner may identify material sources in the Contract which are available to the Contractor but which the Contractor is not required to use. The Contract

will specifically define these sources as Designated Sources and define rights and stipulations for each site. The Owner will provide a materials report for these sources.

The Contractor acknowledges that samples from within a source may not be representative of the entire source. The Contractor must expect variations of quality and quantity within the source and shall factor that contingency into the unit bid price for the material. No equitable adjustment will be paid for variations encountered within the source.

If the Contractor elects to use a Designated Source, and it is found that the quality or quantity of material producible from the Designated Source does not meet project requirements, and a change of source is necessary for that reason alone, a Change Order with equitable adjustment will be made. If the Contractor chooses to change between or among sources for any other reason than quantity or quality of material, no equitable adjustment will be paid.

- d. Available Sources. The Owner may identify other material sources that are available for use for the project by the Contractor. The Contract will specifically define these sources as Available Sources. The Owner makes no guarantee as to quality or quantity of material in Available Sources. The Contractor is responsible for determining the quality and quantity of material, and if additional sources are needed. The Contractor shall be responsible for identifying the rights and stipulations for each site with the owner of the site.

When the Owner furnishes copies of existing boring logs, test results, or other data in its possession concerning Available Sources, the Contractor is responsible for determining the accuracy and completeness of this data, for any assumptions the Contractor makes based on this data, and for exploring all Available Sources to the Contractor's satisfaction.

The Owner makes no representation, guarantees, or warranty whatsoever, expressed or implied, as to:

- (1) The quality or quantity of materials producible from an Available Source, even if such information is indicated in a Materials Report or Soils Investigation Report;
- (2) Whether boring logs, test results or data reliably represent current existing subsurface conditions;
- (3) Whether interpretations of the boring logs, test results, or other data are correct;
- (4) Whether moisture conditions and indicated water tables vary from those found at the time borings were made;
- (5) Whether the ground at the location of the borings was physically disturbed or altered after the boring was made; and
- (6) The condition, materials, or proportions of the materials between borings, regardless of any subsurface information the Owner may make available.

The availability of subsurface information from the Owner shall not relieve the Contractor from any risks, or of any duty to make on-site examinations and investigations, or of any other responsibility under the Contract or as may be required by law.

No equitable adjustment will be made if the quality or quantity of material available from an Available Source is not as represented in any information provided by the Owner, nor if a change of source is necessary for any other reason whatsoever. The use of Available Sources is entirely at the Contractor's option and the Contractor bears all risk associated with their decision to use an Available Source.

- e. Excluded Material Sources. ARRC owned, managed, or permitted material sources not identified in the Contract are excluded from use for the project. This exclusion does not prevent the Contractor from considering material sources as provided for in Supplemental SC-04.02 Material Sources, Paragraph (4.)(a.) Contractor-Furnished Sources, unless the Contract specifically identifies a source as an Excluded Material Source, nor does it prevent post-award consideration of other material sources as provided under Supplementary Condition SC-07.06 Value Engineering Change Proposals by the Contractor.
5. Rights, Permits and Plan Approvals for Material Sources. Before disturbing the site of a material source, the Contractor shall acquire and pay for all necessary rights, permits and plan approvals indicated in this Supplementary Condition and in Supplementary Condition SC-08.01 Permits, Licenses and Taxes. For each material site the Contractor shall:
 - a. Acquire approval for a Mining and Reclamation Plan (MRP) or receive an exemption, in accordance with AS 27.19. The MRP shall include:
 - (1) Plan and cross-sectional views of the site;
 - (2) Applicable boundaries or property lines;
 - (3) Areas and depths to be developed;
 - (4) Locations of access roads, stripping, sorting, and unsuitable material piles, crushing and plant sites, stockpile sites, drainage features, erosion and pollution control features; and
 - (5) Condition the Contractor will leave the site after the materials extraction is completed, including reseeding.
 - b. Submit a SWPPP as required by SSHC Section 641.
6. Reclamation. After completing work in a materials source, the Contractor shall finish and grade work areas to a neat, acceptable condition in accordance with the approved MRP. Reclamation of a Contractor-furnished source will be in accord with the Contractor's MRP.

SC-04.03 Testing and Acceptance.

Materials are subject to inspection and testing by the Owner at any time before, during, or after they are incorporated into the project. Use of untested materials is at the Contractor's risk. The Contractor shall remove and replace unacceptable material according to Supplementary Condition SC-05.11 Removal of Unacceptable and Unauthorized Work.

1. Quality Control. The Contractor is responsible for the quality of construction and materials used in the work. Quality control is process control, and includes all activities that ensure that a product meets Contract specifications. Quality control is subsidiary to the applicable items. The Contractor shall perform quality control as follows:

- a. Submit a Quality Control Plan no less than five working days before the preconstruction conference in accordance with General Condition Paragraph 6.26 CONSTRUCTION QUALITY CONTROL PLAN:. Include, for each item being produced, the methods to be used for sampling and testing, the proposed testing frequency, personnel qualifications, and equipment descriptions. Include the use of control charts, chart update frequency, chart posting location, and criteria for corrective action.
 - b. Sample materials during manufacturing or processing and perform quality control tests, as needed, to ensure materials produced conform to the Contract Specifications. Document quality control tests and make them available to the Owner's authorized representative on a daily basis.
 - c. Sample and test according to test methods required in the Specifications.
2. Acceptance Testing. The Owner has the exclusive right and responsibility for determining the acceptability of the construction and incorporated materials.

The Owner will sample materials and perform acceptance tests at its expense. Copies of tests will be furnished to the Contractor upon request.

The Contractor shall not rely on the Owner's acceptance testing for its quality control. The Owner's acceptance testing is not a substitute for the Contractor's quality control. The Owner's authorized representative may retest materials that have failed the Owner's acceptance test, but is not required to do so.

SC-04.04 Certificates of Compliance.

The submittal requirements of this Subsection are in addition to the submittal requirements set forth in Supplementary Condition SC-04.01 Source of Supply and Quality Requirements.

The Owner's authorized representative may authorize the use of certain materials or assemblies based on either a manufacturer's certification or based on a Contractor's summary sheet with applicable documentation attached.

1. If by manufacturer's certification, the certificate must include the project name and number, the signature of the manufacturer, and must include information that clearly demonstrates the material or assembly fully complies with the Contract requirements.
2. If by Contractor's summary sheet, the summary sheet must include the project name and number, the signature of the contractor, and must include attached documentation that clearly demonstrates the material or assembly fully complies with the Contract requirements.

Electronic submittals that are submitted by email from the Contractor's email account are considered signed by the Contractor.

The Contractor shall submit additional certificates of compliance or test data if required by the Contract or by the Owner's authorized representative. The Owner's authorized representative may refuse permission to incorporate materials or products into the project based on a certificate of compliance that does not meet the Contract requirements.

SC-04.05 Storage of Materials.

Materials shall be stored to preserve their quality and fitness for the work, and so they can be readily inspected. Materials inspected before storage may be inspected again, before or after being incorporated into the project. The Contractor shall:

1. Use only approved portions of the project site for storage of materials and equipment or plant operations;
2. Provide any additional space needed for such purposes without extra compensation;
3. Restore ARRC-owned or controlled storage and plant sites to their original condition without extra compensation;
4. Obtain the landowner's or lessee's written permission before storing material on private property, and furnish copies of the permission to the Owner's authorized representative, if requested; and
5. Restore privately owned or leased storage sites, without extra compensation from the Owner, to their original condition or as agreed to between the Contractor and the private owner.

SC-04.06 Owner-Furnished Material.

Material furnished by the Owner will be made available to the Contractor at an ARRC yard or delivered at the locations specified in the Special Conditions.

The Contractor shall include the cost of handling and placing all materials after they are delivered in the Contract price for the item in connection with which they are used. The Contractor is responsible for all material delivered to the Contractor. Deductions will be made from any monies due the Contractor to make good shortages and deficiencies from any cause whatsoever, for any damage that may occur after delivery, and for demurrage charges.

SC-04.07 Submittal Procedure.

The Contractor shall complete a Submittal Register, and shall submit it to the Owner's authorized representative on forms provided by the Owner or similar forms of the Contractor's choice as approved by the Owner's authorized representative. The intent of the Submittal Register is to provide a blueprint for the smooth flow of specified project documents. The Contractor shall fill it out sequentially by bid item and allow at least three spaces between bid items. The Submittal Register shall list all working drawings, schedules of work, and other items required to be submitted to the Owner by the Contractor including but not limited to: Progress Schedule, anticipated dates of material procurement, Construction Phasing Plan, Traffic Control Plan, Storm Water Pollution Prevention Plan, Quality Control Program, Utility Progress Schedule, Blasting Plan, Mining Plan, and subcontracts.

The Contractor shall submit materials (product) information to the Owner's authorized representative for review, as required by the Contract.

Unless otherwise specified, provide all submittals in an electronic format acceptable to the Owner's authorized representative.

If the Contract has a duration of 180 days or less, the Contractor shall, within fifteen (15) days after the date of the Notice to Proceed, submit to the Owner for review all submittals and the submittal register. If the Contract has a duration greater than 180 days, the Contractor shall, within fifteen days after the date of the Notice to Proceed, submit to the Owner for review, an anticipated schedule for transmitting submittals.

Each submittal shall include a Submittal Summary sheet. The Contractor shall sign submittals and submit them to the Owner's authorized representative. Electronic submittals that are submitted by email from the Contractor's email account are considered signed. The Owner will return submittals to the Contractor as either: approved, conditionally approved with the conditions

listed, or rejected with the reasons listed. The Contractor may resubmit a rejected submittal to the Owner's authorized representative with more information or corrections. The Owner's approval of a submittal in no way relieves the Contractor of its responsibility for the means, methods, techniques, sequence, and procedures of construction, safety, and quality control.

The Contractor shall be responsible for timely submittals. Failure by the Owner to review submittals within 30 days or as otherwise provided in the applicable Subsection may be the basis for a request for extension of Contract time but not for additional compensation.

Payment for a specific contract item will not be made until the Owner has received the Submittal Register for all items and approved all required submittals for that specific contract item.

SC-05 – Control of Work

SC-05.01 Authority of the Owner's authorized representative.

The Owner's authorized representative has immediate charge of the engineering details of the project and is responsible for Contract administration, as established under General Condition Paragraph 2.1 **AUTHORITIES AND LIMITATIONS**. The Owner's authorized representative has authority to reject defective material and suspend work not performed in accordance with the Contract. The Owner's authorized representative has authority to accept completed work, issue Directives, Interim Work Authorizations, and Change Orders, and recommend Contract payments.

The Owner's authorized representative will decide all questions about the quality and acceptability of the materials furnished and whether the work performed by the Contractor was in accordance with the Contract, the Contractor's rate of progress, Contract interpretation and all other questions relating to Contract compliance.

The Owner's authorized representative has authority to suspend work for reasons listed under Supplementary Condition SC-06.05 **Contract Time, Extension of Contract Time and Suspension of Work**. If the suspension of work is to protect the traveling public from imminent harm, the Owner's authorized representative may orally order the suspension of work. Following an oral order of suspension, the Owner's authorized representative will promptly give written notice of suspension to the Contractor. In other circumstances, the Owner's authorized representative will give the Contractor written notice of suspension before suspension of work. A notice of suspension will state the defects or reasons for a suspension, the corrective actions required to stop suspension, and the time allowed to complete corrective actions. If the Contractor fails to take the corrective action within the specified time, the Owner's authorized representative may:

1. Suspend the work until it is corrected; and
2. Employ others to correct the condition and deduct the cost from the Contract amount.

The Owner's authorized representative may, at reasonable times, inspect any part of the plant or place of business of the Contractor or any subcontractor that is related to Contract performance, including private or commercial plants, shops, offices, or other places of business.

The Owner's authorized representative may audit all books and records related to performance of the Contract, whether kept by the Contractor or a subcontractor, including cost or pricing data submitted under Supplementary Condition **SC-07.02 Changes**.

SC-05.02 Plans and Working Drawings

The Owner shall provide the Contractor at least two full size sets of the conformed Plans and Contract including Special Conditions. If cross-sections are available, one set will be provided if requested in writing by the Contractor. The Contractor shall keep a complete set of these documents available on the project site at all times.

The Contractor shall supplement structure plans with working drawings that include all details that may be required to adequately control the work and that are not included in the Plans furnished by the Owner. The Contractor shall not perform work or order materials until the working drawings for such work, or for changes, are approved by the Owner's authorized representative. The Owner's authorized representative's approval of working drawings or changes shall not be deemed a determination that the working drawings or changes comply with federal, state or local laws, rules, regulations and ordinances. It is Contractor's duty to insure the working drawings comply with the Contract and any applicable federal, state or local laws, rules, regulations, and ordinances.

The Contractor shall submit to the Owner's authorized representative for approval any required preliminary detail or working drawings. The project name and number shall be stated in the title block for all drawings, as shall the state bridge number, when applicable. The Contractor shall submit drawings in either an electronic or paper format that is acceptable to the Owner's authorized representative. When paper copies are submitted, provide three sets.

The Contractor shall submit drawings to the Owner's authorized representative in time to allow for review and correction before beginning the work detailed in the drawing. The Owner's authorized representative shall return one set of these drawings, either approved or marked with corrections to be made, and shall retain the other sets. The Owner's authorized representative's approval of working drawings does not change the Contract requirements or release the Contractor of the responsibility for successful completion of the work.

The Contractor is responsible for the accuracy of dimensions and details and for conformity of the working drawings with the Plans and Specifications. The Contractor shall indicate clearly on the working drawings any intended deviations from the Plans and Specifications and itemize and explain each deviation in the Contractor's transmittal letter. The Owner's authorized representative may order the Contractor to comply with the Plans and Specifications at the Contractor's sole expense if the approved working drawings deviate from the Plans and Specifications and the Contractor failed to itemize and explain the deviations in the Contractor's transmittal letter.

Once the Contractor receives approval of the working drawings, the Contractor shall furnish to the Owner's authorized representative:

1. Enough additional copies to provide eight approved sets of prints;
2. One set of reproducible transparencies (polyester film); and
3. If requested, an electronic file in AutoCAD drawing interchange format (.DXF).

The Contractor shall include the cost of furnishing all working drawings in the Contract price.

SC-05.03 Conformity with Plans and Specifications

Work performed and materials furnished shall conform to the Plans and Specifications and approved Working Drawings and be within specified tolerances. When tolerances are not specified, the Owner's authorized representative will determine the limits allowed in each case.

All work or material not conforming to the Plans and Specifications and approved Working Drawings is considered unacceptable unless the Owner's authorized representative finds that reasonably acceptable work has been produced. In this event, the Owner's authorized representative may allow non-conforming work or material to remain in place, but at a reduced price. The Owner's authorized representative will document the basis of acceptance and payment by Change Order, unless the contract specifies a method to adjust the price of that item.

The failure of the Owner to strictly enforce the Contract in one or more instances does not waive its right to do so in other or future instances.

SC-05.04 Coordination of Plans, Specifications, and Supplementary Conditions

These Supplementary Conditions, the General Conditions, the Special Conditions, ARRC Standard Plans, Specifications, and all supplementary documents are essential parts of the Contract. They are intended to complement each other and describe and provide for a complete project. A requirement occurring in one is as binding as if occurring in all.

In case of conflict, calculated dimensions will govern over scaled dimensions. In the event that any contract documents conflict with another listed contract document, the order of precedence is established under General Conditions. Paragraph 3.6 DISCREPANCY - ORDER OF PRECEDENCE:

SC-05.05 Cooperation by Contractor.

The Contractor shall give the work the constant attention necessary for its progress, and shall cooperate fully with the Owner's authorized representative, Owner staff, and other contractors in every way possible.

Either the Contractor's Superintendent or an acting Superintendent with authority to represent and act for the Contractor shall be available within the proximity of the project whenever work is occurring. The Contractor shall employ, as its agent, a competent superintendent thoroughly experienced in the type of work being performed and capable of reading and thoroughly understanding the Plans and Specifications. The Contractor shall provide 24-hour contact information for the Superintendent. The Contractor shall ensure that the superintendent is available at all times to receive and execute Directives and other instructions from the Owner's authorized representative, to supervise workers and to coordinate the work of subcontractors. The Contractor shall give the superintendent full authority to supply the resources required. The Contractor shall furnish superintendence regardless of the amount of work sublet.

SC-05.06 Utilities.

1. Bid Considerations. Bidders shall include in their bid the cost of:

- a. All utility work that is specified in the Contract as work to be performed by the Contractor;
- b. Working around or through all permanent and temporary utilities shown on the Plans, in both their present and adjusted positions;
- c. Accommodating the removal, adjustment, or relocation of utilities shown on the Plans by entities other than the Contractor;
- d. Construction and removal of temporary utilities, to provide temporary utility service during the construction or repair of a permanent utility; and
- e. Other utility work not specifically identified as compensable in Subparagraph 4 Compensation.

The Owner will show the approximate locations of utilities it knows to be within the work zone on the Plans as noted in General Condition Paragraph 4.4 UTILITIES. Bidders shall expect that the location, elevation and nature of utilities may vary from what is shown on the Plans and shall factor those contingencies into the bid price. Additional utilities may exist that are not shown on the Plans. Compensation related to utilities not shown on the plans will only be available in accordance with Subparagraph 4 Compensation.

When an entity other than the Contractor is to remove, adjust, or relocate any utility, or perform other utility related work within the project boundaries, the applicable completion dates or specific calendar days to complete the removal, adjustment, relocation, or other utility related work may be stated in SSHC Section 651. If no date is stated, the Contractor shall work cooperatively with the utility owner during the Project.

2. Cooperation with Utility Owners. The Contractor assumes the obligation of coordinating their activities with utility owners, and shall cooperate with utility owners to facilitate removal, adjustment, or relocation operations, avoid duplication of work, and prevent unnecessary interruption of services. When a utility owner is identified in the Contract as being responsible for removing, adjusting, or relocating a utility, the Contractor shall give the utility owner 15 days advance written notice regarding the dates when the utility owner is required to begin and end operations.

The Contractor shall cooperate with utility owners to determine a utility progress schedule for all parties' utility work. The Contractor shall submit the schedule to the Owner's authorized representative before beginning that portion of utility work. The Contractor shall update the utility progress schedule monthly and shall note time delays and their cause.

Utility owners are not required to work in more than one location at a time, and shall be allowed to complete a specific section of work prior to commencing another section. Utility owners will not normally perform adjustment or relocation of underground utilities when the ground is frozen. Utility owners may prohibit the Contractor, through the Owner's authorized representative, from working near utilities when the ground is frozen.

The Owner has sole discretion to grant permits for utility work within the state right-of-way. The Contractor shall allow parties with utility permits to work and make excavations in the project.

If utility owners do not complete their work in a timely manner, the Owner's authorized representative may direct the Contractor to temporarily relocate the utilities, to construct new utilities, or to make necessary repairs to complete the utility work.

3. Utility Work. The Contractor shall:
 - a. Make all necessary arrangements with utility owners to locate all utilities that may be within an area of work before excavation in that area, in accordance with AS 42.30.400;
 - b. Provide right-of-way staking and construction staking with lines and grades before excavation in that area;
 - c. Prevent damage to utilities or utility property within or adjacent to the project;
 - d. Carefully uncover utilities where they intersect the work;

- e. Immediately stop excavating in the vicinity of a utility and notify the Owner's authorized representative and the utility owner if an underground utility is discovered that was not field marked or was inaccurately field marked;
 - f. Promptly notify the utility owner and the Owner's authorized representative in the event of accidental interruption of utility service, and cooperate with the utility owner and the Owner's authorized representative until service is restored;
 - g. Take all precautions necessary to protect the safety of workers and the public when performing work involving utilities;
 - h. Follow an approved traffic control plan;
 - i. Keep the length of open trench excavation to a minimum, backfill trenches as work is completed;
 - j. Cover open trenches with metal plates capable of bearing traffic where traffic will cross trenches;
 - k. Maintain continuous utility service and install temporary utility systems where needed;
 - l. Ensure all excavation conforms to AS 42.30.400 – 42.30.490;
 - m. Ensure all excavation and utility work conforms to excavation requirements in 29 CFR 1926, Subpart P, and confined space requirements in 29 CFR 1926.21(b)(6);
 - n. Ensure all work undertaken near energized high voltage overhead electrical lines or conductors conforms to AS 18.60.670, AS 18.60.675, AS 18.60.680 or other applicable law;
 - o. Ensure all work undertaken near energized high voltage underground electric lines or conductors conforms to all applicable laws and safety requirements of the utility owner;
 - p. When required by the utility owner, provide for a cable watch of overhead power, underground power, telephone, and gas;
 - q. Obtain plan approval from the local fire authority, and provide for the continued service of fire hydrants, before working around fire hydrants;
 - r. Do all pressure testing or camera testing required to verify utility acceptance in a timely manner; and
 - s. Coordinate the Storm Water Pollution Prevention Plan (SWPPP) (SSHC Section 641) with their work and the utility companies' work.
4. Compensation.
- a. Except as otherwise specifically provided in this Subparagraph 4, no equitable adjustment will be paid by the Owner:
 - (1) Due to any variations in location, elevation, and nature of utilities shown on the Plans, or the operation of removing, adjusting, or relocating them;

- (2) For any delays, inconvenience, or damage sustained as a result of interference from utility owners, interference from utilities, or interference from the operation of removing, adjusting, or relocating utilities; or
 - (3) For any adjustments or relocations of utilities requested for the Contractor's convenience.
- b. Except as otherwise specifically provided in this Subparagraph 4, the Owner's authorized representative will issue a Change Order with equitable adjustment if:
- (1) Utilities not shown on the Plans require removal, adjustment, or relocation;
 - (2) Conflicts occur between utilities not shown on the Plans and other necessary work; or
 - (3) Conflicts due to the required elevation of a utility occur between new and existing utilities that are both shown on the Plans.
- c. When the Contractor damages utilities, the utility owner may choose to repair the damage or require the Contractor to repair the damage; as outlined in General Condition Paragraph 4.5 **DAMAGED UTILITIES**; and below.

When the Contractor damages utilities:

- (1) No equitable adjustment will be paid by the Owner, and the Contractor shall be solely responsible for repair costs and expenses, when:
 - (a) The utility was field located by the utility owner or operator, and the field locate is accurate within 24 horizontal inches if the utility is buried 10 feet deep or less, or the field locate is accurate within 30 horizontal inches if the utility is buried deeper than 10 feet;
 - (b) The plan profile or the field locate does not indicate or inaccurately indicates the elevation of a buried utility; and
 - (c) Under the circumstances listed under General Condition Paragraph 4.5 **DAMAGED UTILITIES**:
- (2) The Owner's authorized representative will issue a Change Order with an equitable adjustment for the cost of repairing damage if:
 - (a) The field locate by the owner or operator of a buried utility erred by more than 24 horizontal inches if the utility is buried 10 feet deep or less, or 30 horizontal inches if the utility is buried deeper than 10 feet;
 - (b) The utility was not shown on the Plans or other Contract documents as outlined under General Condition Paragraph 4.6 **UTILITIES NOT SHOWN OR INDICATED**; and the Contractor could not reasonably have been expected to be aware of the utility's existence; or
 - (c) The Contractor made a written request for a field locate in accordance with AS 42.30.400, the utility owner did not locate the utility in accordance with AS 42.30.410, and the Contractor could not reasonably have been expected to be aware of the utility's existence or location.

d. If a delay is caused by a utility owner, is beyond the control of the Contractor, and is not the result of the Contractor's fault or negligence, the Owner's authorized representative may issue a Change Order with an equitable adjustment to contract time, but no equitable adjustment will be made for the cost of delay, inconvenience or damage. Additional contract time may be granted if the cause of delay is because a utility owner is to perform utility work:

(1) In cooperation with the Contractor, and the utility owner does not complete the work in a timely manner, based on a written progress schedule agreed upon by the Contractor and the utility owner.

e. If the Owner's authorized representative orders the Contractor to make necessary construction or repairs due to incomplete utility work by utility owners, the Contractor will be paid as specifically provided for in the Contract, or the Owner's authorized representative will issue a Change Order with equitable adjustment.

SC-05.07 Cooperation Between Contractors.

The Owner may, at any time, contract for and perform other or additional work on or near the Project. The Contractor shall allow other contractors reasonable access across or through the Project.

The Contractor shall cooperate with other contractors working on or near the Project, and shall conduct work without interrupting or inhibiting the work of other contractors. All contractors working on or near the Project shall accept all liability, financial or otherwise, in connection with their Contract. No claim shall be made by the Contractor or paid by the Owner for any inconvenience, delay, damage or loss of any kind to the Contractor due to the presence or work of other contractors working on or near the Project.

The Contractor shall coordinate and sequence the work with other contractors working within the same project limits. The Contractor shall properly join the work with work performed by other contractors and shall perform the work in the proper sequence to that of the others. The Contractor shall arrange, place, and dispose of materials without interfering with the operations of other contractors on the same project. The Contractor shall defend, indemnify and save harmless the Owner from any damages or claims caused by inconvenience, delay, or loss that the Contractor causes to other contractors.

SC-05.08 Survey Control.

The Owner will provide sufficient horizontal and vertical control data to establish the planned lines, grades, shapes, and structures as outlined under General Condition Paragraph 4.7 **SURVEY CONTROL**. The Contractor shall provide all additional survey work to maintain control during the project.

SC-05.09 Duties of the Inspector.

The Owner's inspectors are authorized to examine all work done and materials furnished, but cannot approve work or materials. Only the Owner's authorized representative can approve work or materials. The inspectors can reject work or materials until any issues can be referred to and decided by the Owner's authorized representative. The inspectors may not alter or waive any Contract requirements, issue instructions contrary to the Contract or act as foremen for the Contractor.

SC-05.10 Inspection of Work.

All materials and each part and detail of the work shall be subject to inspection in accordance with General Condition Paragraph 12.3 TESTS AND INSPECTIONS: by the Owner for compliance with the Contract. The Contractor shall allow safe access to all parts of the work and provide information and assistance to the Owner's authorized representative to ensure a complete and detailed inspection.

Any work done or materials used without inspection by an authorized Owner representative may be ordered removed and replaced at the Contractor's expense, unless the Owner failed to inspect after being given reasonable written notice that the work was to be performed.

The Contractor shall remove and uncover portions of finished work when directed in accordance with General Condition Paragraph 12.4 UNCOVERING WORK: After inspection, the Contractor shall restore the work to Contract requirements. The cost to uncover and restore work shall be at the Contractor's expense, except the Owner will pay the cost to uncover and restore work if (1) an authorized Owner representative had previously inspected the work or the Contractor had provided reasonable prior written notice that the work was to be performed and (2) the Owner finds the uncovered work to be acceptable. If the Owner finds the uncovered work to be unacceptable, the cost to correct the work, or remove and replace the work, shall be at the Contractor's expense.

Representatives of Contract funding agencies have the right to inspect the work. This right does not make that entity a party to the Contract and does not interfere with the rights of parties to the Contract.

The Owner's observations, inspections, tests and approvals shall not relieve the Contractor from properly fulfilling its Contract obligations and performing the work in accordance with the Contract. Work that has been inspected but contains latent or hidden defects shall not be deemed acceptable even though it has been inspected and found to be in accordance with the Contract.

SC-05.11 Removal of Unacceptable and Unauthorized Work.

All work that does not conform to the requirements of the Contract shall be deemed unacceptable by the Owner's authorized representative, unless otherwise determined acceptable under Supplementary Condition SC-05.03 Conformity with Plans and Specifications. The Contractor shall correct, or remove and replace, work or material that the Owner's authorized representative deems unacceptable, as ordered by the Owner's authorized representative and at no additional cost to the Owner.

The Contractor shall establish necessary lines and grades before performing work. Work done before necessary lines and grades are established, work done contrary to the Owner's instructions, work done beyond the limits shown in the Contract, or any extra work done without authority, will be considered as unauthorized and shall not be paid for by the Owner, and may be ordered removed or replaced at no additional cost to the Owner.

If the Contractor fails to promptly correct, remove, or replace unacceptable or unauthorized work as ordered by the Owner's authorized representative, the Owner's authorized representative may employ others to remedy or remove and replace the work and will deduct the cost from the Contract payment.

All work, as described herein, shall be considered work that is not required by the Contract documents. The Contractor will not be entitled to an increase in Contract Amount or an extension

of Contract Time unless otherwise authorized in accordance with General Condition Paragraph 9.7 **UNAUTHORIZED WORK**.

SC-05.12 Load Restrictions.

The Contractor shall comply with all vehicle legal size and weight regulations of 17 AAC 25 and the *Administrative Permit Manual*, and shall obtain permits from the AKDOT&PF Division of Measurement Standards & Commercial Vehicle Enforcement before moving oversize or overweight equipment on a state highway.

The Owner's authorized representative may permit oversize and overweight vehicle movements within the project limits provided the Contractor submits a written request and an acceptable Traffic Control Plan under SSHC Subsection 643-1.03. No overloads will be permitted on a pavement, base or structure that will remain in place in the completed project. The Contractor shall be responsible for all damage done by their equipment due to overloads, and for damage done by a load placed on a material that is curing and has not reached adequate strength to support the load.

SC-05.13 Maintenance During Construction.

The Contractor shall maintain the entire railroad and related railroad facilities located within the project (between the beginning of project and end of project shown on the Plans) from the date construction begins until the Contractor receives a letter of project completion. The Contractor shall maintain these areas continually and effectively on a daily basis, with adequate resources to keep them in satisfactory condition at all times. The Contractor shall maintain those areas outside the project that are affected by the work, such as haul routes, highways, detour routes, structures, material sites, and equipment storage sites during periods of their use.

The Owner's authorized representative may relieve the Contractor of this maintenance responsibility for specified portions of the project for any of the following:

1. During a seasonal suspension of work (SSHC Subsection 643-3.07)
2. Following partial completion (Supplementary Condition **SC-05.14 Partial Completion**.)
3. Following project completion (Supplementary Condition **SC-05.15 Project Completion**.)

The Owner is responsible for routine snow removal and ice control only on those portions of the project that the Owner accepts for maintenance and that are open for public use.

The Contractor shall maintain previously constructed work until a subsequent course, layer, or structure covers that work. The Contractor shall repair damage done to the work as described in Supplementary Condition **SC-08.03 Contractor's Responsibility for Work**..

All costs of maintenance work shall be subsidiary to the prices bid on the various contract items, and the Contractor will not be paid an additional amount for such work.

If in the Owner's authorized representative's opinion, the Contractor at any time fails to provide adequate maintenance, the Owner's authorized representative will notify the Contractor of such noncompliance. The notification will specify the areas or structures for which there is inadequate maintenance, the corrective maintenance required, and the time allowed to complete corrective maintenance. If the Contractor fails to take the corrective action within the specified time, the Owner's authorized representative may:

1. Suspend the work until corrective maintenance is completed;

2. Assess an adjustment against the Contract Amount when an adjustment rate is specified; and
3. Employ others for corrective maintenance and deduct the cost from the Contract amount.

SC-05.14 Partial Completion.

The Contractor may submit a written request for partial acceptance of a substantially complete geographically separate portion of the project. The Owner's authorized representative will accept the portion in writing before project completion and relieve the Contractor of further maintenance responsibility for the completed work except for work specified for Period of Establishment under SSHC Section 621 if the Owner's authorized representative inspects the portion and finds that it is substantially complete to Contract requirements, and acceptance is in the best interest of ARRC.

Partial completion of the portion neither voids nor alters any Contract terms.

SC-05.15 Project Completion.

The Contractor shall notify the Owner's authorized representative, in writing, upon substantial completion, in accordance with General Condition 13. **ARTICLE 13 - PAYMENTS TO CONTRACTOR AND COMPLETION**, of all work provided for under the Contract. The Owner's authorized representative will then schedule and conduct the final inspection. If the inspection discloses that any work is incomplete or unsatisfactory, the Owner's authorized representative will give the Contractor a list of work items that must be completed or corrected to reach substantial completion and to reach final completion. The Contractor shall promptly complete or correct any work determined unsatisfactory by the final inspection and request a re-inspection.

The Owner's authorized representative will identify the date of substantial completion in a letter of substantial completion. The letter of substantial completion will relieve the Contractor of further maintenance responsibility of the completed work. The letter of substantial completion will not stop Contract time or relieve the Contractor of the obligation to fully complete the work as required by the Contract specifications.

When all physical work and cleanup provided for under the Contract is found to be complete, except for work specified for Period of Establishment under Section 621, the Owner's authorized representative will issue a letter of project completion. Project completion stops the Contract time, but does not relieve the Contractor of any other Contract obligations.

SC-05.16 Final Acceptance and Record Retention.

The Owner will issue the letter of Final Acceptance, in accordance with General Condition Paragraph 13.15 **FINAL ACCEPTANCE**, after, at a minimum, all of the following:

1. Project completion;
2. Receipt of all certificates, as-builts, warranties, and other required documents;
3. Receipt of the Contractor's Release, with no exceptions;
4. Certification of payment of payroll and revenue taxes by DOLWD and State Department of Revenue; and
5. Final payment under the Contract.

Final Acceptance will release the Contractor from further Contract obligations, except those:

1. Specified under Supplementary Condition **SC-08.04 No Waiver of Legal Rights**;

2. Required by law or regulation;
3. Continuing obligations established by provisions of this Contract, such as warranty, guaranty, indemnity, insurance, or bond; or,
4. Continuing obligations established under General Condition Paragraph 13.16 **CONTRACTOR'S CONTINUING OBLIGATION**:

The Contractor and the subcontractors shall maintain all books and records relating to performance of the Contract for three years after the date of final payment of the Contract and each subcontract.

SC-05.17 Claims.

The Contractor shall notify the Owner's authorized representative as soon as the Contractor becomes aware of any act or occurrence that may form the basis of a claim for additional compensation or an extension of Contract time or of any dispute regarding a question of fact or interpretation of the Contract in accordance with General Condition Article 15. **ARTICLE 15 - CLAIMS AND DISPUTES**: The Owner's authorized representative has no obligation to investigate any fact or occurrence that might form the basis of a claim or to provide any additional compensation or extension of Contract time unless the Contractor notifies the Owner's authorized representative in a timely manner of all facts the Contractor believes form the basis for the claim.

SC-06 – Prosecution and Progress

SC-06.01 Notice to Proceed.

The Contractor shall not begin construction before the effective date of the Notice to Proceed. The Notice to Proceed may include limits or restrictions on allowable activities. The Owner will, in its sole discretion, refuse to pay for construction begun before the effective date of the Notice to Proceed.

SC-06.02 Prosecution and Progress.

The Contractor shall meet with the Owner's authorized representative at the regional construction office for a preconstruction conference before beginning construction. The Owner's authorized representative will schedule the Preconstruction Conference no less than five (5) days after the following have been received:

1. A progress schedule in accordance with General Condition Article **6.5 ANTICIPATED SCHEDULES**: Said schedule shall be in a format acceptable to the Owner's authorized representative, showing the order in which the Contractor proposes to carry out the work and the contemplated dates on which the Contractor and the subcontractors will start and finish each of the salient features of the work, including any scheduled periods of shutdown. The schedule shall indicate the anticipated hours of operation and any anticipated periods of multiple-shift work.
2. A list showing anticipated dates for procurement of materials and equipment, ordering of articles of special manufacture, furnishing of plans, drawings and other data required under Supplementary Condition **SC-05.02 Plans and Working Drawings** and for other events such as inspection of structural steel fabrication.
3. A list showing all proposed subcontractors and material suppliers.

4. A Construction Phasing plan, as required under SSHC Subsection 643-1.05.
5. A Storm Water Pollution Prevention Plan, a Hazardous Material Control Plan, and a Spill Prevention Control and Countermeasure Plan, with the line of authority and designated field representatives, as required under SSHC Section 641 (see submittal deadlines under 641-1.03).
6. A letter designating the Contractor's Project Superintendent, defining that person's responsibility and authority, and providing a specimen signature.
7. A letter designating a Disadvantaged Business Enterprise Officer (when applicable), and designating those person's responsibilities and authority.
8. A Quality Control Plan, as required under Supplementary Condition **SC-04.03 Testing and Acceptance**.
9. A letter designating a Safety Officer, and designating that person's responsibilities and authority.

The Contractor shall provide adequate materials, labor and equipment to ensure the completion of the project according to the Plans and Specifications. The work shall be performed as vigorously and as continuously as weather conditions or other interferences may permit. The Contractor shall take into consideration and make due allowances at the Contractor's expense for foreseeable delays and interruptions to the work such as unfavorable weather, frozen ground, equipment breakdowns, shipping delays, quantity overruns, utility work, permit restrictions, and other foreseeable delays and interruptions. The Contractor shall identify these allowances on the progress schedule.

The Contractor shall adjust forces, equipment and work schedules as necessary to ensure completion of the work within the Contract time, and shall notify the Owner's authorized representative at least 24 hours before resuming suspended operations. Upon a substantial change to the work schedule or when directed by the Owner's authorized representative, the Contractor shall submit a revised progress schedule in the form required, including a written explanation for each revision made in the schedule or methods of operation.

The Owner's authorized representative's review or approval of the documents, plans, and schedules provided by the Contractor under this section shall not change the Contract requirements, release the Contractor of the responsibility for successful completion of the work or relieve the Contractor of the duty to comply with applicable laws. The Owner's authorized representative's review or approval of schedules shall not indicate agreement with any assertions of delay or claims by the Contractor.

It is the Contractor's responsibility to prepare and submit documents that satisfy all applicable contract requirements. By reviewing and approving the Contractor's documents, the Owner does not warrant that following the Contractor's documents will result in successful performance of the work. The Owner's failure to discover defects in the Contractor's documents, the assumptions upon which they are based or conditions that prevent the Contractor from performing the work as indicated in the documents will not entitle the Contractor to additional compensation or time. If the Contractor becomes aware of any act or occurrence that may form the basis of a claim for additional compensation or an extension of time, it must specifically advise the Owner's authorized representative of these conditions in accordance with Supplementary Condition **SC-05.17 Claims**.

SC-06.03 Limitation of Operations.

The Contractor shall not open up work to the detriment of work already started. The Contractor shall minimize interference with traffic within the project. The Contractor shall not stop or otherwise impede traffic outside the project limits without the Owner's authorized representative's prior written permission. The Owner's authorized representative may require the Contractor to finish a section of work in progress before starting additional sections if the Owner's authorized representative determines it is necessary for the convenience of the public or the Owner.

SC-06.04 Character of Workers, Methods, and Equipment.

The Contractor shall employ sufficient labor and equipment to complete the work required under the Contract, in accordance with General Condition Paragraph 6.2 CHARACTER OF WORKERS:, and to complete it on time.

The Contractor shall ensure that all workers on the project have the skills and experience necessary to properly perform their assigned work. Workers engaged in special work or skilled work shall have sufficient experience in that work and in the operation of the equipment required to properly perform that work.

The Contractor shall comply with any written order by the Owner's authorized representative to remove workers, who, in the opinion of the Owner's authorized representative, perform the work in an unskilled manner, who are intemperate or disorderly, create risk of imminent harm for the traveling public, or who fail to perform the work in accordance with the Contract and any and all applicable federal, state, and local laws, rules, regulations, and ordinances. The Contractor shall allow removed workers to return to the project only with the Owner's authorized representative's written permission. The Owner's authorized representative may suspend the work if the Contractor fails to furnish suitable and sufficient personnel necessary to perform the work, or fails to remove any worker at the Owner's authorized representative's order.

The Contractor shall not use prisoner labor on the project.

The Contractor shall use equipment of the appropriate size and mechanical condition to produce the specified quality and quantity of work by the means specified in the Contract, if any, and shall ensure that the equipment does not damage roadways or property.

The Contractor shall ensure all equipment, materials, and articles incorporated into the work are new and of the specified quality, unless the Contract specifically permits otherwise.

The Contractor shall provide the Owner's authorized representative with a list of all powered equipment that will be used on the project, showing the make, model, year, capacity, horsepower, and related information. The Contractor shall update this list when equipment is added or removed from the work site, but need not update more frequently than weekly.

When the methods and equipment to be used by the Contractor are not prescribed by the contract, the Contractor is free to use any method, means or equipment that is satisfactory to produce the specified work in conformity with the Contract, except as provided above and within General Condition Paragraph 2.3 MEANS & METHODS:. At the request of the Owner's authorized representative, the Contractor shall demonstrate that the method, means and equipment chosen will produce the work specified in the Contract in the time allowed under the Contract. The Contractor shall bear all costs and impacts associated with any means, methods and equipment chosen by the Contractor. No suggestion, statement or observation from the Owner's authorized representative or other Owner representatives shall alter this responsibility.

If the Contract specifies a particular method, means or type of equipment for performance of the work, the Contractor must use that method, means or equipment unless the Contractor first requests, in writing, permission to alter the Contract requirement and receives prior written approval from the Owner's authorized representative.

SC-06.05 Contract Time, Extension of Contract Time and Suspension of Work.

Contract time will be specified in calendar days, by completion date, or both.

1. Calendar Days. When the contract time is specified on a calendar days basis, in accordance with General Condition Paragraph 11.3 COMPUTATION OF CONTRACT TIME:, all work under the Contract shall be completed within the number of calendar days specified. If no starting day is specified in the Contract, the count of Contract time begins on the day following receipt of the Notice to Proceed by the Contractor.

Calendar days shall continue to be counted against Contract time until and including the date of project completion. Calendar days shall not be counted during the period from November 1 through April 30, except for days that the Contractor is working on the project site.

2. Completion Date. When the contract time is specified on a completion date basis, in accordance with General Condition Paragraph 11.3 COMPUTATION OF CONTRACT TIME:, all work under the Contract shall be completed by the specified completion date.
3. Reasons for Suspension of Work and Extension of Contract Time. The Owner may order a suspension of work for any reason listed in this subparagraph 3, items b through f.

The Owner shall not pay additional compensation, but may extend Contract time only in accordance with General Condition Paragraphs 11.4 TIME CHANGE: and 11.5 EXTENSION DUE TO DELAYS:, if there are delays in the completion of controlling items of work from unforeseeable causes that are beyond the Contractor's control and are not the result of the Contractor's fault or negligence in addition to those listed in the General Conditions, including:

- a. In accordance with Supplementary Condition SC-05.06 Utilities. paragraph 4.d, delays by utility owners beyond completion dates specified in the Special Provisions for relocating or adjusting utilities and related facilities; or

No additional Contract time or additional compensation will be allowed due to delays caused by or suspensions ordered due to:

- b. Failure to correct conditions that create risk of imminent harm for the traveling public, violations of the Contract or any applicable federal, state, and local laws, rules, regulations, and ordinances;
- c. Adverse weather that is not unusually severe;
- d. Failure to carry out Contract provisions;
- e. Failure to carry out orders given by the Owner's authorized representative; or
- f. Failure to timely obtain materials, equipment, or services.

The Contractor shall notify the Owner's authorized representative as soon as the Contractor becomes aware of any act or occurrence that may form the basis of a request for a time extension under this section. The Contractor shall submit a request for a time extension to the

Owner's authorized representative within ten (10) days of the act or occurrence, and if an agreement is not reached, the Contractor may submit a Claim under Supplementary Condition SC-05.17 Claims.

The time allowed in the Contract, as awarded, is based on performing the original estimated quantities of work set out in the bid schedule. An assertion that insufficient time was originally specified shall not constitute a valid reason for extension of contract time.

If satisfactory fulfillment of the Contract requires extra work, the Owner may extend Contract time in accordance with General Condition Paragraph 11.5 EXTENSION DUE TO DELAYS.

4. Suspension of Work. The Owner's authorized representative will suspend work on the project, in whole or in part, for such periods and for such reasons as the Owner's authorized representative determines to be reasonable, necessary, in the public interest, or for the convenience of the Owner.
 - a. The Owner's authorized representative will issue a written order to suspend, delay, or interrupt all or any part of the work. The Contractor shall not be compensated for the suspension, delay, or interruption if it is imposed for a reasonable time under the circumstances.
 - b. Unless another Contract section specifically provides otherwise, the Contractor will be compensated by equitable adjustment for a suspension, delay, or interruption of the work only if:
 - (1) The period of suspension, delay, or interruption is for an unreasonable time under the circumstances and another Contract section allows compensation in the event of a suspension, delay, or interruption of the work under the circumstances that actually caused the suspension, delay, or interruption; or
 - (2) The delay, suspension, or interruption results from the Owner's failure to fulfill a contractual obligation to the Contractor within the time period specified in the Contract or, if no time period is specified, within a reasonable time.
 - c. No equitable adjustment will be made under this Subsection for any suspension, delay, or interruption of the work if the Contractor's performance would have been suspended, delayed, or interrupted by any other cause for which:
 - (1) The Owner is not responsible under the Contract, including the Contractor's fault or negligence; or
 - (2) An equitable adjustment is either provided for or excluded under any other section of this Contract.
 - d. Claims for equitable adjustments under this section shall be filed under Supplementary Condition SC-05.17 Claims, except that:
 - (1) The claim may not include any costs incurred more than 20 days before the Contractor files the Contractor's written notice of intent to claim;
 - (2) The contractor must submit a written request for adjustment within 7 calendar days of receipt of the notice to resume work;

- (3) No profit will be allowed on an increase in cost necessarily caused by the suspension, delay, or interruption.

SC-06.06 Failure to Complete on Time.

For each calendar day that the work is not substantially complete after the expiration of the Contract time or the completion date has passed, the Owner shall deduct the full daily charge corresponding to the original Contract amount of \$4,500.00 per day beyond the final completion date agreed to by Contract.

Permitting the Contractor to continue work after the Contract time has elapsed or the completion date has passed does not waive the Owner's rights to collect liquidated damages under this Supplementary Condition.

If no money is due the Contractor, the Owner may recover these sums from the Contractor, from the Surety, or from both in accordance with General Condition Paragraph 11.8 DELAY DAMAGES. These are liquidated damages and not penalties. These charges shall reimburse the Owner for its additional administrative expenses incurred due to the Contractor's failure to complete the work within the time specified.

Permitting the Contractor to continue work after the Contract time has elapsed or the completion date has passed does not waive the Owner's rights to collect liquidated damages under this section.

SC-06.07 Default of Contract.

The Contracting Officer will give a written Notice of Default, in accordance with General Condition Paragraph 14.2 DEFAULT OF CONTRACTOR: to the Contractor and the Surety if the Contractor:

1. Fails to perform the work with sufficient workers, equipment, or materials to ensure the prompt completion of the work;
2. Fails to comply with applicable minimum wage or civil rights requirements;
3. Is a party to fraud, deceit, misrepresentation, or malfeasance in connection with the Contract; or
4. Meets any of the circumstances outlined under General Condition Paragraph 14.2 DEFAULT OF CONTRACTOR:, subparagraph 14.2.1.

The written Notice of Default will provided in accordance with 14.2 DEFAULT OF CONTRACTOR:. Failure to cure the delay, neglect, or default within the time specified in the Contracting Officer's Notice of Default authorizes the Owner to terminate the contract in accordance with General Condition Paragraph 14.2 DEFAULT OF CONTRACTOR:. The Owner will provide the Contractor and the Contractor's Surety with a written Notice of Termination.

If, after notice of termination of the Contractor's right to proceed under this clause, it is determined that the Contractor was not in default, or that the default was excusable, the Contractor will be allowed an opportunity to continue working on the project.

SC-07 – Scope of Work

SC-07.01 Intent of Contract.

The intent of the Contract Documents, General Condition 3.4 INTENT OF CONTRACT DOCUMENTS, is to provide for the construction and completion of every detail of the described work. The Contractor shall furnish all labor, material, supervision, equipment, tools, transportation, supplies, and other resources required to complete the work in the time specified and in accordance with the Contract.

The Contractor is responsible for the means, methods, techniques, sequence, and procedures of construction, safety, and quality control, and is responsible to perform and furnish the work in accordance with the Contract documents and any applicable federal, state, and local laws, rules, regulations, and ordinances.

SC-07.02 Changes.

1. **Within Contract Scope.** The Owner's authorized representative may order changes within the general scope of the Contract at any time in accordance with General Condition 9.4 CHANGE ORDER, and without notice to sureties, including altering, ordering additions to, or ordering deletions of quantities of any item or portion of the work. These changes shall be made by a written Change Order and shall not invalidate the Contract or release the sureties.
 - a. If the change does not materially differ in character or unit cost from specified Contract work, the Contractor shall perform the work at the original contract measurement methods and prices.
 - b. If the change is materially different in character or unit cost from that specified in the Contract, a new Contract Item will be established, and an equitable adjustment to Contract price and Contract time shall be calculated by one of the following methods:
 - (1) The Owner's authorized representative and Contractor agree upon an adjustment to Contract price and Contract time, and the Owner's authorized representative issues a change order for the described work; or,
 - (2) The Owner's authorized representative may issue a unilateral Change Order requiring the Contractor to proceed with the work with an adjustment to the payment amount or Contract time based on the Owner's authorized representative's estimate of reasonable value. The Contractor shall keep complete daily records of the cost of such work.
 - c. If the Owner's authorized representative eliminates a Contract item, the Contractor shall accept compensation under Supplementary Condition SC-01.06 Eliminated Items..
2. **Outside Contract Scope.** Changes determined to be outside the general scope of the Contract, in accordance with General Condition 9.6 CHANGES OUTSIDE THE GENERAL SCOPE; SUPPLEMENTAL AGREEMENT, shall be made only by Change Order issued in accordance with ARRC's procurement regulations. Additional bonding or insurance may be required.
3. **Cost and Pricing Data.** Before a Change Order covering work for which there is no established Contract price will be written, the Contractor shall submit detailed cost or pricing data regarding the changed work. The cost or pricing data shall include an itemization of production rates and all costs including labor, materials, and equipment required for the work. The Contractor shall certify that the data submitted are, to the best of its knowledge and belief,

accurate, complete, and current as of a mutually agreed date and that the data will continue to be accurate and complete during the performance of the changed work.

4. Time Analysis. Before a Change Order that adds or subtracts time from the Contract will be written, the Contractor shall provide an analysis and documentation demonstrating changes to controlling items of work that affect Contract time. The Contractor shall certify that the data submitted are, to the best of its knowledge and belief, accurate, complete, and current as of a mutually agreed date and that the data will continue to be accurate and complete during the performance of the changed work.

SC-07.03 Differing Site Conditions.

If, during the progress of the work, a differing site condition is discovered, the party discovering the differing site condition shall promptly notify the other party in writing of the specific differing conditions in accordance with General Condition Paragraph 9.9 **DIFFERING SITE CONDITIONS**. The written notification shall occur before the site is further disturbed and before the affected work is performed. A differing site condition is defined as:

1. Subsurface or latent physical conditions at the site, differing materially from those shown in the Contract documents, that could not have been discovered by a careful examination of the site; or
2. Unknown physical conditions at the site, of an unusual nature, differing materially from those ordinarily encountered and generally recognized as inherent in work of the character provided for in the Contract.

When the Contractor is the discovering party, failure of the Contractor to give the Owner's authorized representative prompt written notice of the alleged differing site condition as required under this section constitutes a waiver of any future claim arising from or relating to the alleged differing site condition.

Unless otherwise directed by the Owner's authorized representative, the Contractor shall leave the affected area undisturbed and suspend work in that area until the Owner's authorized representative investigates the conditions.

The Owner's authorized representative will notify the Contractor of the determination whether or not an adjustment of the contract is warranted. If the Owner's authorized representative finds that such conditions differ materially and increase or decrease the cost of, or the time required for, performance of the Contract, the Owner's authorized representative will prepare a Change Order for an Equitable Adjustment to the Contract. The Contractor shall cooperate with the Owner's authorized representative's preparation of the Change Order, and submit data for actual costs and time to perform differing site work according to Supplementary Condition **SC-07.02 Changes**.

The Change Order will provide an equitable adjustment to Contract price and Contract time, as agreed, to perform the work under a differing site condition. The Change Order will not include expected reimbursement, or anticipated profits suffered or claimed, for the work affected by the differing site condition.

If the Contractor and the Owner's authorized representative are unable to reach an agreement concerning the alleged differing site condition, the Contractor may file a claim under Supplementary Condition **SC-05.17 Claims**.

The Contractor shall keep accurate and detailed records of the actual cost of the work done as a result of the alleged differing site condition and shall allow the Owner's authorized representative

access to those records. Failure to keep records, to provide the Owner's authorized representative with access to those records, or to give the notice required above will bar any recovery for the alleged differing site condition.

SC-07.04 Use of Materials Found on the Work.

Before using borrow, the Contractor shall utilize Useable Excavation to construct the selected material layers on the project. For the purposes of this Subsection, Useable Excavation is material encountered in the excavation that meets the requirements of SSHC Subsection 703-2.07 Selected Material. For excavating the Useable Excavation and constructing the selected material layers with Useable Excavation, the Contractor shall be paid only the unit bid price for excavation. Hauling, placing, compacting and other activities required to construct the selected material layers with Useable Excavation shall be subsidiary to excavation, and the Contractor shall not be paid additional sums for those activities. The Owner's authorized representative may approve the use of borrow when Useable Excavation is not available.

The Owner's authorized representative may authorize the Contractor to use the Useable Excavation for Contract items other than construction of the selected material layers on the project, and the Contractor shall be paid both for the excavation of the Useable Excavation and for the other Contract item for which it is acceptably used. If this action results in a shortage of material for the selected material layers:

1. The Contractor shall replace Useable Excavation used for other Contract items on a yard for yard basis with borrow acceptable to the Owner's authorized representative; and
2. This replacement shall be at the Contractor's expense and at no additional cost to the Owner. The Contractor shall pay any royalties required for the borrow.

The Contractor shall not excavate or remove any material that is within the right-of-way but outside the slope and grade lines described in the Contract, without written authorization from the Owner's authorized representative.

In the event the Contractor has processed material from state-furnished sources in excess of the quantities required for performance of the Contract, the Owner may retain possession of the surplus processed materials, including any unsuitable material produced as a by-product, without obligation to pay the Contractor for processing costs. When the surplus materials are in a stockpile, the Owner's authorized representative may direct the Contractor to leave the materials in the stockpile, level the stockpile(s) or remove the materials and restore the premises to a satisfactory condition at no additional cost to the Owner. This provision does not apply to material specifically produced under SSHC Section 305, Stockpiled Material.

The Contractor may temporarily use material from a structure that is designated to be removed to erect a new structure, but shall not cut or otherwise damage such material without the Owner's authorized representative's approval.

SC-07.05 Cleanup.

The Contractor shall remove all rubbish, temporary structures, excess materials, and equipment from the project site, from state owned materials sources, and from all work areas before project completion.

SC-07.06 Value Engineering Change Proposals by the Contractor.

1. Purpose and Scope. The purpose of this section is to encourage the Contractor to propose changes to Contract designs, materials, or methods based on the Contractor's experience and ingenuity in accordance with General Condition Paragraph 9.10 VALUE

ENGINEERING PROPOSALS BY THE CONTRACTOR: The Value Engineering Proposals (VEPs) contemplated are those that may result in immediate savings to the Owner under this Contract without impairing essential functions and characteristics of the Project, including, but not limited to: service life, economy of operation, ease of maintenance, desired appearance, and safety. Cost savings on this project resulting from VEPs offered by the Contractor and accepted by the Owner shall be shared equally between the Contractor and the Owner as noted therein.

2. **Submitting Proposals.** All VEPs must be in writing. The Contractor shall submit the following with each VEP in accordance with General Condition Paragraphs 9.11 **SUBMITTAL & REVIEW OF VEP CONCEPT OR IDEA:** and 9.12 **FORMAL SUBMITTAL OF THE VEP:**
 - a. A description and estimate of added costs the Owner may incur in implementing the VEP, such as review, testing and evaluation of the VEP and Contract administration costs;
 - b. All other items outlined under General Condition Paragraph 9.11 **SUBMITTAL & REVIEW OF VEP CONCEPT OR IDEA:**.
3. **Conditions.** VEPs will be considered in accordance with General Condition Paragraph 9.13 **VEP CONDITIONS:** only when all of the following conditions are met:
 - a. In accordance with General Condition Paragraph 9.10 **VALUE ENGINEERING PROPOSALS BY THE CONTRACTOR:**, the Contractor shall not base any bid prices on the anticipated acceptance of a VEP or if the VEP is rejected, the Contractor shall complete the work at the Contract prices.
 - b. The Owner is the sole judge as to whether a VEP qualifies for consideration and evaluation. It may reject any VEP that does not allow a reasonable time for adequate review and evaluation by the Owner or that requires excessive time or costs for review, evaluations, or investigations, or which is not consistent with the Owner's design standards and policies, safety considerations, land use restrictions, permit stipulations, right-of way limitations, or other essential criteria for the project. The Owner may reject a VEP without obligation to the Contractor if it contains proposals that are already under consideration by the Owner or that have already been authorized for the Contract.
 - c. If the Contractor hires a design professional to prepare the proposal, they must be registered in the State of Alaska. That professional must seal the documents and provide evidence of Professional Liability Insurance with limits acceptable to the Owner.
 - d. The Contractor shall not implement proposed changes before the Owner accepts the VEP.
 - e. The Owner shall not consider VEPs to share in cost savings due to changes previously ordered or authorized under other Contract sections or for work already done.
 - f. Reimbursement for modifications to the VEP to adjust field or other conditions is limited to the total amount of the original Contract bid prices.
 - g. The Owner shall not be held liable for costs or delays due to the rejection of a VEP, including but not limited to the Contractor's development costs, anticipated profits and increased material, labor or overhead costs in accordance with General Condition Paragraph 9.10 **VALUE ENGINEERING PROPOSALS BY THE CONTRACTOR:**.

h. All other items outlined under General Condition Paragraph 9.13 VEP CONDITIONS:

4. Processing. VEPs will be processed in accordance with General Condition Paragraph 9.14 VEP ACCEPTANCE, REJECTION & PAYMENT: and under the following conditions:
 - a. The Owner's authorized representative shall accept or reject the VEP, in writing, by the date the Contractor specifies, unless extended by mutual consent. If rejected, the Owner's authorized representative will explain the reasons for rejection. A VEP may be rejected if the Contractor allows the Owner insufficient time to adequately review and evaluate it.
 - b. The Contractor may withdraw or modify a VEP at any time before it is accepted.
 - c. If the VEP is approved in concept (without final drawings and specifications), the Owner may either undertake the re-design itself or issue the Contractor a limited notice to proceed, subject to mutual agreement, authorizing the final design. The notice to proceed will include reference to any pertinent design criteria, ARRC policies, and other limitations on the design or construction methods. Approval in concept does not constitute acceptance of the VEP and will not obligate the Owner to accept or pay for the final design.
 - d. If the final VEP is accepted, the Owner's authorized representative will issue a Change Order under Supplementary Condition SC-07.02 Changes, incorporating the VEP into the Contract.
5. Payment. If the Owner accepts the VEP, payment will be authorized in accordance with General Condition Paragraph 9.14 VEP ACCEPTANCE, REJECTION & PAYMENT: subparagraph 7 and as follows:
 - a. The VEP Incentive will be paid on a prorated basis as the revised work is performed.

SC-08 – Legal Relations and Responsibility to Public

SC-08.01 Permits, Licenses and Taxes.

The terms, conditions, and stipulations in permits obtained either by the Owner or by the Contractor are made a part of this Contract. Permits obtained by the Owner for this project are attached to these Specifications as appendices. Contact names and phone numbers for permits obtained by the Owner are shown on the individual permits.

The Owner will:

1. Secure permits and licenses that the Owner determines are required for the construction of the proposed project, and the use of mandatory sources, designated sources and designated material disposal areas for the proposed project; and
2. Modify Owner-acquired permits during the performance of the Contract, if deemed necessary by the Owner's authorized representative.

The Contractor shall:

1. Acquire any permits and licenses required to complete the project that are not acquired by the Owner;
2. Provide qualified professionals to collect data or perform studies necessary to acquire permits for the use of sites not previously permitted;

3. Give all notices required for the prosecution of the work;
4. Abide by all permits and licenses whether acquired by the Owner or by the Contractor;
5. Notify the Owner's authorized representative promptly if any activity cannot be performed as specified in the permits, and cease conducting the activity until permit modifications or any required additional permits are obtained;
6. Obtain modifications to permits acquired by the Contractor;
7. Pay all charges, fees and taxes;
8. Provide proof of payment of all taxes before the Owner makes final payment; and,
9. Provide the information necessary to comply with the Alaska Department of Environmental Conservation, Alaska Pollutant Discharge Elimination System (APDES) to discharge stormwater from the construction site. Requirements for this permit are given under SSHC Section 641, Erosion, Sediment, and Pollution Control.

The provisions of permits acquired by the Contractor, and of notices and information under this section does not shift or create responsibility for compliance with Federal or State law to the Owner, or otherwise impose a duty for oversight or review.

In addition, before using an area on or off project site not previously permitted for use by the Contract, the Contractor shall:

1. Contact all government agencies having possible or apparent permit authority over that area;
2. Obtain all required permits, clearances, and licenses from those agencies;
3. Obtain permission from any property owners or lessees with an interest in the property; and
4. Provide all of the following to the Owner's authorized representative:
 - a. All permits or clearances necessary to use the site for its intended purpose(s);
 - b. A written statement that all permits or clearances necessary have been obtained;
 - c. Written evidence that the Contractor has contacted all of the relevant agencies and that no additional permits are required on the part of the Contractor, including at a minimum the name of the agency and staff person contacted, the date contacted, and result of coordination; and
 - d. A plan that identifies how the site will be finally stabilized and protected.

The Owner's authorized representative may reject a proposed site if the Contractor fails to provide any of the above information or to demonstrate that a proposed site can be finally stabilized to eliminate future adverse impacts on natural resources and the environment.

SC-08.02 Railway-Highway Provisions.

The Contractor shall conduct all operations on or near a railroad according to the Contract, any contract between the Owner and the AKDOT&PF, and any permits issued by the AKDOT&PF. The Owner shall provide permits for hauling materials across railroad tracks at locations specified

in the Contract. If the Contractor desires additional crossings, the Contractor shall obtain any required permits at the Contractor's expense.

SC-08.03 Contractor's Responsibility for Work.

The Contractor shall be responsible for implementing all preventative measures necessary to protect, prevent damage, and repair damage to the work from all causes at no additional cost to the Owner. This duty continues from the date construction begins until the date specified in a letter of Substantial Completion or Partial Acceptance of a specific section of the project. Where there is a Partial Acceptance, the duty ends only as to the accepted portion of the work. This duty continues during periods of suspended work, except in specific sections the Owner has agreed to maintain under SSHC Subsection 643-3.07.

The Contractor shall rebuild, repair, restore, and make good all losses or damages to any portion of the work including that caused by vandalism, theft, accommodation of public traffic, and weather. The Owner will only be responsible for loss or damage due to unforeseeable causes beyond the control of and without the Contractor's fault or negligence, such as Acts of God, the public enemy, and governmental authorities.

In case of suspension of work from any cause, the Contractor shall take such precautions as may be necessary to prevent damage to the work or facilities affected by the work. This will include providing for drainage and erecting any necessary temporary structures, signs, or other facilities and maintaining all living material such as plantings, seedings, and soddings.

SC-08.04 No Waiver of Legal Rights.

The Owner shall not be precluded nor estopped by any measurement, estimate, or certificate made either before or after the completion and acceptance of the work and payment, from showing the true amount and character of the work performed and materials furnished by the Contractor, nor from showing that any measurement, estimate, or certificate is untrue or is incorrectly made, nor that the work or materials do not in fact conform to the Contract.

The Owner shall not be precluded nor estopped, notwithstanding any measurement, estimate, or certificate and payment, from recovering from the Contractor or the Contractor's Sureties, or both, such damages as it may sustain by reason of the Contractor's failure to comply with the terms of the Contract.

Neither the acceptance by the Owner, or by any representative of the Owner, nor any payment for or acceptance of the whole or any part of the work, nor any extension of time, nor any possession taken by the Owner, shall operate as a waiver by the Owner of any portion of the Contract or of any right of the Owner to damages. A waiver by the Owner of any breach of the Contract shall not be held to be a waiver of any other subsequent breach.

SC-09 – Staging and Access

The Contractor may make use of the Railroad Right-Of-Way (ROW) in upland areas with written permission of the ARRC in accordance with General Conditions Articles 4. ARTICLE 4 - LANDS AND PHYSICAL CONDITIONS; and 6. ARTICLE 6 - CONTRACTOR'S RESPONSIBILITIES;. Materials and equipment must be stored in a neat, workmanlike manner. All materials, equipment, and debris must be removed at the completion of the project. Disturbed areas must be restored to their pre-construction conditions. Staging areas must not interfere with ARRC's ability to utilize its facilities or support their clients.

SC-10 – Dewatering

In the event the Contractor needs to perform dewatering activities while performing contract work the Contractor shall comply with CGP Part 4.4, and the DEC General Permit for Excavation Dewatering (AKG0020000), requirements for dewatering for trenches and excavations. All dewatering activities, if required, are subsidiary to this Contract.

SC-11 – Rail Operations Coordination

General Background:

The proposed bridge replacement will be constructed while the tracks in the project limits are closed. Track closures must be scheduled and approved by ARRC as defined in this supplementary condition.

ARRC Flagging:

Situational Requirements:

Railroad flag protection (flagging) is required whenever people, vehicles, or equipment are within 20' of the tracks.

Flagging is also required if equipment can reach within 20' of the tracks. Some examples of other situations which may require flagging:

- Surveying within 20' of the tracks
- Boring under the tracks
- Working over the tracks (on a bridge or with overhead utility lines)
- Working within 20' of any railroad facilities, including signal facilities.
- Movement of off-road or oversized/overweight loads over at-grade crossings
- Operating tracked equipment over at-grade crossings
- Using a sweeper truck on at-grade crossings
- Crossing tracks on foot with limited sight distance

Railroad flagging personnel are provided to protect ARRC personnel, equipment, passengers, and facilities from the work being performed, and to provide protection to contractors working within ARRC ROW from ARRC operations. They are *not* inspectors of the work being performed. ARRC reserves the right to require construction observation for work within ARRC ROW. Flaggers will provide daily job briefings and ensure at each briefing that all contractor activities planned for that day will comply with the most current version of the Alaska Railroad Safety Policies. All personnel entering the project limits are required to have a job briefing with the Flagger prior to work.

A single flagger may cover a limited length of track, depending on track curves, sight lines, radio contact, and other factors. The ARRC will determine in its discretion flagging limits per location and how many flaggers are necessary to cover the required work area.

The minimum flag protection time for which a permittee shall be responsible is 8 hours per day, per flagger, regardless of the actual time during each day that flagging is required. No single flagger may work more than 12 hours in a given day, 60 hours in a given week, or 6 days in a row.

Flagging hours will typically exceed the Contractor's onsite work hours. Additional time is required for flaggers to travel to and from the work site, to obtain track authority, and to set up and tear

down equipment, each of which are included in the time allotted for flag protection. On average, a flagger will work 2-3 hours per day in addition to the onsite flagging time.

Flagging required for delays in the work and/or hours beyond 12 hours in a given day, 60 hours in a given week will be billed to the Contractor at the Flag Projection Cost. This includes additional flagger(s) required to be called out so as not to exceed the times stated above.

Scheduling:

Flagging requests must be submitted 10 business days prior to the start of work. ARRC will make a reasonable effort to provide flagging to accommodate contractors' schedules. However, staffing is limited during certain times of the year and personnel may not be available at specific times. Flagging request submissions for work durations longer than two weeks will be required 4 weeks prior to the start of work.

To avoid flagging charges, cancellations of flagging requests must be made at least 72 hours prior to the scheduled start of flagging operations. Any cancellations received with less than 72 hours' notice are subject to payment of the minimum daily rate, as determined by ARRC, for the number of flaggers assigned to the project.

Flag Protection Cost:

Flagging beyond that provided under a Contract will be billed out at a flat hourly rate of \$150.00 per flagger. ARRC flaggers are limited to a 12 hour work shift for a maximum of 6 days per week. Should the contractor elect to work over 6 days per week, or longer than 12 hours per day, an additional flagger(s) will be required for the overlap. For longer projects, flagger(s) assigned to the project and must be guaranteed at least 5 standard working days.

Bridge Construction Activities:

General bridge construction activities must be planned and coordinated with rail operations. Work within ten (10) feet of the track centerline above the elevation of the rail, or work that may inadvertently damage the serviceability of the bridge or track must always be carefully coordinated with the Owner's Representative. The time available to work within this area and/or make the track impassible will vary, dependent upon the freight and passenger operations described previously. Track closures for bridge construction, with no-train traffic, will be established during ongoing construction activities with as much certainty as possible to assist the Contractor with the objective of constructing the proposed bridge efficiently during active rail operations servicing the barge arrival cycle. Typically, the bridge site will be available for the Contractor's full use at all times that do not conflict with the rail operations described herein.

Tracks out of Service (Track Outages): The work shall be planned so as to minimize track service outages. The Contractor shall submit a closure plan and request for proposed track outage date(s). The plan will describe the work to be accomplished, the equipment, manpower and other resources required, and the work schedule, specifying dates and times. Once approved by ARRC, the Contractor shall follow the plan without any variation whatsoever unless a modification is approved by the Chief Engineer. ARRC reserves the right to assume control of the work to reestablish rail service if the schedule is not met. The Contractor shall bear all costs and damages which may result from failure to meet the closure schedule, in addition to the Train Delay charges provided for in these Supplementary Conditions and Contract Documents.

1. 30 days in advance the Contractor will identify the target week for 8 to 48 hour track outages and submit the closure plan and request for track outage date(s).

- a. 7 days prior to the outage week, ARRC will identify probable dates and times for the outages.
2. 45 days in advance the Contractor will identify the target week for track outages greater than 48 hours and submit the closure plan and request for track outage date(s).
 - a. 7 days prior to the outage week, ARRC will identify probable dates and times for the outages.
3. ARRC will commit to an outage 7 calendar days in advance. Prior to that, ARRC can cancel and/or reschedule the track outage.
4. During potential outage windows other than those approved by ARRC, the Contractor can expect to see approximately 0 passenger trains per day and 8 freight trains per month or on an as-needed basis, during the shoulder season (peak months are May to September inclusive, shoulder season includes months outside of this window)
5. The above listed train schedule is provisional and may change. Train traffic must not be impeded.
6. Specific work windows/track closures have not been determined; ARRC expects to work with the successful bidder during the pre-mobilization phase to determine appropriate work windows.
7. The track outages are not for the contractor's exclusive use. The ARRC will be using the outage and hours to perform their tasks. The contractor will be required to have adequate staff and equipment to do the work in the time allotted. 24 hour shifts during track outages may be mandatory.

Other On-Track Railroad Activities:

Other Railroad on-track activities that will pass the proposed bridge site include snow plowing, track inspection, and track maintenance needs. In-service track is inspected, in accordance with federal regulations, twice a week by Hyrail. The Owner will coordinate these other activities whenever possible with freight operations to avoid interfering with available bridge construction track closures.

ARRC Work Train:

If the contractor would like to use rail and or train support, all cost shall be placed on the Contractor. Rates, schedules and details must be arranged with ARRC Marketing. There are potential for cost savings for both ARRC and the contractor if work train coordination can be arranged such that project support items are scheduled by the contractor and arranged during the same work windows that ARRC will also be performing their portions of the work, also using the company work train at the same time and within the general project vicinity. If the contractor would like to work in conjunction with the ARRC work train they must abide by the following guidelines:

1. The Contractor shall provide a minimum 21 day notice for ARRC work train coordination and use for mobilization, demobilization, loading/unloading materials at a yard designated by ARRC.
2. For Work Train use during track outages the Contractor shall request the Work Train as part of their submitted closure plan and request for proposed track outage date as described in these Supplementary Conditions.
3. The ARRC may be utilizing a Work Train to move equipment and materials to and from the project site as necessary.

4. ARRC may provide transportation of Owner provided materials to the Seward Yard.
5. Contractor shall provide at least 4 people to remove load securements, 2 operators and 1 supervisor at the site during unloading of equipment and materials for mobilization and demobilization. Overtime, stand-by time, or delays caused by work train schedules are the Contractor's responsibility.
6. ARRC Work Trains hours of service may and will not exceed 12 hours. Hours of service are set by Federal Regulations. Delays to the work train will be as outlined in these Contract Documents.

SC-12 – Train Delays

1. All work on ARRC Property shall be conducted in such a manner as to prevent delays to trains or other rail traffic operated by ARRC.
2. Should any of the Permittee/Contractor's or its subcontractor's actions or activities cause delays to trains or other rail or water traffic, the agreed amount of liquidated damages shall be at the following rates and shall be collected from the Permittee/Contractor by ARRC.
 - a. Passenger trains each: \$50 per minute of delay, 60-minute minimum charge.
 - b. All other rail traffic: \$50 per minute for each delay over five minutes, 30-minute minimum charge.
 - c. Rail barges or other Connecting Carrier Vessels: No charge for delays of one hour or less; \$1,000 per hour for each hour or any part of an hour thereafter with a minimum charge of \$6,000.

Delay time will be taken from the train sheet in ARRC's Dispatcher's Office, Anchorage for all delays and each train sheet shall be the official document by which the length of time a train is delayed will be determined. If another crew is needed to relieve the original crew, the charge shall also apply to the second crew. If such delay causes a water carrier to miss a sailing, the liquidated damage computation of time covering the period of time to the next possible sailing time shall be in addition to the length of time determined by said train sheet.

SC-13 – Contractor Based On-Track Equipment Operation

All operation of on-track equipment shall be performed by individuals in accordance with 49 CFR Part 214, Subpart D – On-Track Roadway Maintenance Machines and Hi-Rail Vehicles. Operation of on-track equipment shall only be by a trained Roadway Maintenance Machines operator.

SC-14 – Section 240, Railroad

240-1.01 DESCRIPTION. The Contractor shall be responsible for all railroad trackwork and construction items associated with this Project within the limits shown on the Plans. All work on ARRC property shall be conducted in strict accordance with the requirements contained herein and Supplementary Condition **SC-08.02 Railway-Highway Provisions.** Unless otherwise specified, all track materials and work methods shall comply with the applicable standards contained herein.

240-1.02 DEFINITIONS.

1. ARRC. Alaska Railroad Corporation.
2. AREMA. American Railway Engineering and Maintenance-of-Way Association.
3. W.C.L.I.B. West Coast Lumberman's Inspection Bureau.
4. FRA. Federal Railroad Administration.

240-1.03 REFERENCED STANDARDS.

1. ARRC Standard Plans.
2. AREMA Manual for Railway Engineering
3. AREMA Portfolio of Trackwork Plans
4. All standards listed in each section of these specifications but referenced thereafter by a basic designation only (e.g., *AREMA*), form a part of the specifications to the extent indicated by the reference. The most recent edition of the standard at the time of advertising shall apply.

240-1.04 REFERENCED DRAWINGS. Drawings are incorporated by reference herein and made a part of these specifications.

240-1.05 STORAGE. Storage facilities shall be in areas designated by the Owner or Owner's Representative.

240-1.06 CLEAN-UP. At the end of each day's Work, the job site shall be cleaned up and left in a neat, safe, secure, and workman-like condition.

Before requesting a final inspection, the entire premises shall be cleaned up to the satisfaction of the Owner.

240-1.07 SURVEYING. All surveying work necessary for the performance of this project shall be furnished by the Contractor in accordance with SSHC Section 642.

240-1.08 OWNERSHIP. All removed track materials (rails, ties, other track materials) will become the property of the Contractor, except as noted on the Plans or in the Contract Documents. All track materials that become the property of the Contractor shall be removed from the project area and disposed of in a Contractor-furnished waste disposal site in accordance with all federal, local, state, and tribal regulations; removal and disposal shall be before Substantial Completion unless otherwise approved by the Owner.

END OF SUPPLEMENTARY CONDITIONS

APPENDIX G STATEMENT OF SERVICES

Bird Creek Bridge 86.6 Replacement:

Work completed under this contract includes, but is not limited to; the removal and disposal of the existing 125-foot steel pony truss superstructure and timber approach trestles that cross Bird Creek at ARRC MP 86.6, fabrication of new substructure components to convert the existing concrete piers to abutments, installation of a new 125-foot steel thru plate girder superstructure, removal of existing and installation of new riprap armoring for erosion prevention, relocation of existing underground utilities (by utility owner), construction and removal of temporary access and structures, and track construction required to accommodate the raised elevation of the new structure crossing Bird Creek.

Item No. 202.0023.1 – Removal of Bridge and Existing Structures

Work includes all equipment, materials, labor, and supervision required to remove the existing spans and existing abutment substructures. Excavation, disposal and removal of unclassified excavation, backfill (*bedding aggregate and/or classified fill*), and all other items required for the removal of the structures and associated substructures per SSHC Subsection 202-3.03 and the Drawings, shall be subsidiary to this pay item and performed in accordance with the same. Any removed structures, along with any ancillary items not scheduled to be salvaged, or materials generated as a result of the removal process, become the property of the Contractor. The Contractor is responsible for disposing of the materials in a Contractor-furnished waste disposal site in accordance with all federal, local, and state regulations. The existing 125' steel pony truss superstructure, bearings, and timber stringer approach spans shall be removed in their entirety. The existing timber bent substructures, exposed pile cutoffs, and abutments are to be removed in their entirety, to an elevation one foot below finished ground or two feet below proposed top of tie elevation, whichever is lower, in accordance with the Drawings and specifications. The existing concrete, pile supported piers will remain in place.

Prior to the removal of bridges or elements of bridges that are in use by ARRC traffic, ensure that satisfactory arrangements have been made and written permission has been received from the ARRC's Chief Engineer. The Contractor shall provide a detailed Bridge Demo and Removal Plan describing the sequence of work, schedule, equipment, safety and disposal of bridge elements to be removed 60 days prior to removal for approval as noted in Supplementary Condition SC-11 – Rail Operations Coordination. The Contractor may elect to transport the existing bridge and components by road or by contracting railroad freight services.

The Contractor and its subcontractors shall abide by all applicable Alaska Occupational Safety and Health (AKOSH), Occupational Safety and Health Administration (OSHA), Federal Railroad Administration (FRA) and ARRC safety requirements for any and all activities performed on, or adjacent to bridges and on, or over, waterbodies.

The existing steel bridge and any/all ancillary steel components likely contains lead-based paint (LBP). The Contractor and its subcontractors shall be fully responsible for following all applicable regulations and laws for any required containment, worker protection, protection for the environment, removal, and disposal of existing components not being reused. All components which are suspected of containing lead-based paint shall have limited demolition on site only to the extent necessary to load components onto rail cars or trailers. Components shall be shipped to an offsite location where they can be disassembled or demolished and containerized for shipment to an approved disposal facility in a contained environment. Contractor shall provide to

the Owner a certificate of disposal indicating compliance of disposal with local and federal laws and regulations.

Subsidiary to this pay item is all work required to coordinate with the fiber-optic utility owners, remove the existing utility from the bridge, and support the fiber-optic utility owners' reinstallation on the new bridge in accordance with Supplementary Conditions **SC-05.06 Utilities**.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Section 202 and Supplementary Conditions **SC-01 – Measurement and Payment** and **SC-02 – Lump Sum Pay Items**.

Item No. 202.0024.1 – Removal of Track

Work includes all equipment, materials, supervision, and labor required to remove existing and dispose of track features within the limits shown on the Drawings in accordance with SSHC Section 202 and **SP-244, Trackwork Removal**. Any removed track material, along with any ancillary items, become the property of the Contractor. The Owner does not intend on salvaging the track material removed from within the limits identified on the Drawings. The Contractor is responsible for disposing of the materials in a Contractor-furnished waste disposal site in accordance with all federal, local, state, and tribal regulations. Removal and disposal shall be before Substantial Completion.

Subsidiary to this work is unclassified excavation required to complete track removal activities such as excavation of ballast or subballast. Unclassified excavation will be removed and disposed of per SSHC Subsection 203-3.01, 203-3.03, and 203-3.05 and will not be measured or paid separately. Reuse of unclassified excavation material is permitted if the Contractor can classify the material through a third-party testing firm.

Method of Measurement: (Linear Foot). Compensation will be paid for the length of the track (both rails) in place, measured along the centerline of the track from the southern tie in location to the northern tie in location; accepted by the Owner and in accordance with SSHC Section 202, and Supplementary Condition **SC-01 – Measurement and Payment**, and Special Provision **SP-244, Trackwork Removal**.

Item No. 203.0006.1 – Selected Material, Type A

Work includes all equipment, materials, supervision, and labor required to construct an embankment on an approved foundation, as shown in the Drawings.

The Contractor shall provide a gradation, maximum density and optimum moisture content in accordance with SSHC Subsection 203-3.04 using ATM 207 following the Modified Proctor Test (ASTM D1157 or AASHTO T180) and provide a gradation from a reputable third-party testing firm for the Owner's review and approval prior to placing material on-site. Material is to be placed in accordance with SSHC Subsection 203-3.03 in 8-inch maximum un-compacted lifts and shaped and compacted to 95% of the maximum dry density in accordance with SSHC Subsection 203-3.04. The Contractor shall supply quality control testing from a reputable third-party testing agency. Testing shall be completed according to the following frequencies:

1. Field density testing once per lift per bridge approach end (i.e. one test per lift on south approach and one test per lift on north approach).
 - a. If the initial density test does not produce satisfactory results, a minimum of two additional tests shall be performed to achieve an average density. The average density shall meet the density requirements or the area will be recompacted to achieve the desired compaction.
2. Laboratory density test, moisture content, gradation, plasticity index, and deleterious (visual) tests once per material source.

Unclassified excavation necessary to place and compact selected material for embankment construction at abutment approaches shall be completed in accordance with SSHC Subsection 203-3.01. Unclassified excavation, including disposal of unsuitable material, is subsidiary to this item and will not be measured or paid separately.

Method of Measurement: (Ton). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Section 203 and Supplementary Conditions SC-01 – Measurement and Payment and SC-01.02 Measurement of Quantities. Paragraph 13 “Ton (2,000 pounds)”.

Item No. 205.0005.1 – Controlled Low-Strength Material

Work includes all equipment, materials, supervision, and labor required to furnish, form, place, and cure CLSM embankment fill on an approved subgrade, as shown in the Drawings. Placement of CLSM fill shall be in accordance with SSHC Section 205 Structure Excavation and Backfill and SP-712, Controlled Low-Strength Material.

Contractor shall submit a formwork plan and mix design, including material testing certifications, for CLSM developed by a licensed Civil Engineer in the State of Alaska conforming to SSHC Section 712.22 Controlled Low-Strength Material and SP-712, Controlled Low-Strength Material including cement content, other additives, fine and coarse aggregate, and water/cement ratio to the Owner for acceptance in accordance with SSHC Section 501-2.02. The mix design shall be submitted to the Owner for approval a minimum of 30 days prior to beginning placement of CLSM material.

Chemical admixtures to allow for accelerated cure times are acceptable for use to reduce cure time between lifts, prior to embankment fill compaction, and prior to train live loading when placed during track outages. Prior to placing CLSM during a track outage, a test section shall be poured of similar proposed thickness and tested at regular intervals to determine time required to achieve the following strengths:

1. Sufficient firmness to place formwork without deformation of CLSM surface.
2. Minimum 50 psi prior to compaction of embankment fill above top lift of CLSM.
3. Minimum 100 psi prior to application of train live load.

Existing subgrade material prepared through benching and debris removal for CLSM placement shall be compacted in accordance with SSHC Subsection 203-3.05 Compaction Without Moisture and Density Control to provide a stable surface for CLSM placement.

Work required to excavate and clean debris from under existing pier caps and providing formwork where necessary to match the dimensions of the encasement shown in the Drawings is subsidiary to the work for placing CLSM. Placement of the CLSM shall ensure no gaps or voids remain under the existing concrete caps and around piles.

Work required to prepare subgrade, including excavation, benching, leveling, compacting, and disposal of soil and debris, prior to placement of the CLSM fill behind existing piers and under existing approach spans is subsidiary to the work for placing CLSM.

Cold weather placement plan for CLSM must be submitted to the Owner for approval when ambient air temperature is expected to be less than 40°F within 48 hours of placement is subsidiary to the work for placing CLSM.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 205; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. 241.0001.1 – Railroad Ballast, Type 3

Work includes all equipment, materials, labor, and supervision required to place Contractor furnished railroad ballast as required, in accordance with Special Provision SP-241, Railroad Ballast and this Section.

Contractor shall procure, transport, stockpile, place, and tamp Type 3 ballast from an Owner approved source meeting in accordance with SP-241, Railroad Ballast. Provide material certification submittals for approval at least 30 days prior to procurement of ballast.

On-track equipment used to complete tamping and surfacing of mainline track shall be in good working order. On-track equipment found to be defective or inoperable will be replaced with equipment in good working order at the Contractor's expense.

Subsidiary to this work is all required work to dispose of, distribute, or remove surplus ballast material at the end of the project work.

Method of Measurement: (Ton). Compensation will be paid for at the agreed upon unit price for ballast furnished and placed complete in place in accordance with Supplementary Conditions SC-01 – Measurement and Payment, SC-01.02 Measurement of Quantities. Paragraph 13 “Ton (2,000 pounds)”, and SP-241, Railroad Ballast.

Item No. 241.0001.2 – Surfacing Mainline Track

Work includes all equipment, materials, supervision, and labor required to surface the newly placed track within the limits shown on the Plans in accordance with SP-242, Trackwork, SP-241, Railroad Ballast, and AREMA.

Subsidiary to this work is:

- Any required ground thaw units to perform surfacing as outlined herein.
- Replacement of damaged ties as required in SP-241, Railroad Ballast
- Surfacing as required to bring tracks back into service after each work activity that affects the tracks, or as required by the Owner.

Method of Measurement: (Lump Sum). Compensation will be paid for as a lump sum; accepted by the Owner and in accordance with SSHC Section 617, and Supplementary Condition SC-01 – Measurement and Payment and Special Provision SP-242, Trackwork.

Item No. 242.0001.1 – Track Work, 115# RE Rail

Work includes all equipment, materials, supervision, and labor required to install the new track consisting of 115# RE rail, treated timber ties, and miscellaneous track materials within the limits shown on the Plans. New rail shall be installed up to a field cut as approved by the Owner. Construction of the new rail shall be completed in accordance with Special Provision SP-242, Trackwork

Unless noted otherwise, ARRC shall supply the Contractor with all track materials required to install the new rail to include, but not limited to, the following:

- a. 80 foot sections of new 115# RE jointed rail
- b. Angle joint bars and all required hardware to install
- c. Track spikes
- d. Rail anchors
- e. Tie plates
- f. Pandrol plates
- g. Pandrol clips

- h. Screw spikes
- i. 10.0' treated wooden cross ties
- j. 8' 6" treated wooden cross ties.

The Owner will provide the Contractor with a tentative schedule of train operations in the area. It is expected that the Contractor will have the section of track affected by their Work fully serviceable prior to ARRC train operations. The serviceability of the track will be determined during the Owner and FRA mandated track inspection by an Owner Furnished Certified Track Inspector. Any Work found to be deficient during said inspections shall be rectified as soon as practicable by the Contractor, at no additional cost to the Owner.

Until a level of confidence is obtained with the Contractor's ability to complete the abovementioned work, the facility must be returned to its pre-construction state a minimum of four (4) hours prior to the tentative arrival of ARRC assets requiring its use.

Track work required to take existing track out of service, temporarily remove track, and reinstall existing track to restore service during approved construction outages is subsidiary to the work for installing new track.

Subsidiary to this work is the construction of track panels as needed.

Method of Measurement: (Linear Foot). Compensation shall be paid for at the agreed upon unit prices and in accordance with SSHC Section 617 and Supplementary Condition **SC-01 – Measurement and Payment**. When Linear Foot is utilized, it shall be paid for the length of the new track (both rails) in place, measured along the centerline of the track from the southern tie in location to the northern tie in location; accepted by the Owner.

Item No. 301.0002.1 – Aggregate Base (Subballast), Grading D-1

Work includes all equipment, materials, supervision, and labor required to construct an aggregate base course (subballast) on an approved embankment fill, as shown in the Drawings using Contractor furnished aggregate in accordance with SSHC Section 301. The Contractor shall provide a maximum density and optimum moisture content in accordance with SSHC Subsection 301-3.03 using ATM 207 following the Modified Proctor Test (ASTM D1157 or AASHTO T180) and provide a gradation for the material it proposes to use that is within one (1) year of the Contract award year and from a reputable third-party testing firm, for approval by the Owner. Material is to be placed in accordance with SSHC Subsection 301-3.01 in 8-inch maximum uncompacted lifts and shaped and compacted to a density of not less than 95 percent of the maximum density in accordance with SSHC Subsection 301-3.03. The Contractor shall supply quality control testing in accordance with Supplementary Condition **SC-04.03 Testing and Acceptance**, from a reputable third-party testing agency. Testing shall be completed according to the following frequencies:

1. Field density testing once per lift per bridge approach end (i.e. one test per lift on south approach and one test per lift on north approach).
 - a. If the initial density test does not produce satisfactory results, a minimum of two additional tests shall be performed to achieve an average density. The average density shall meet the density requirements or the area will be recompacted to achieve the desired compaction.
2. Laboratory density test, moisture content, gradation, liquid limit, plasticity index, fracture, and deleterious (visual) tests once per material source.
3. L.A. Wear, Micro-Deval, soundness, and Nordic abrasion tests once per material source.

Method of Measurement: (Ton). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Section 301 and Supplementary Conditions SC-01 – Measurement and Payment and SC-01.02 Measurement of Quantities. Paragraph 13 “Ton (2,000 pounds)”.

Item No. 501.0007.1 – Precast Concrete Backwall

Work includes all equipment, materials, supervision, and labor required to fabricate, furnish, place, finish, cure Portland cement concrete, transport, and install precast concrete backwalls and attachments in accordance with SSHC Section 501 and Special Provisions

SP-501, Precast Concrete and SP-504, Steel Structures.

The Contractor shall provide the proposed precast fabricator and plant qualifications to the Owner for review and approval in accordance with SP-501, Precast Concrete. The fabricator is to supply a Precast Quality Control Plan that addresses all phases of the work outlined herein, on the approved shop drawings, and in SSHC Section 501. The fabricator is responsible for ensuring the adequacy, type, and location of lifting devices necessary for stripping, transporting, and installing the members.

Material not appearing in the Bid Schedule and contained within, embedded, or attached to concrete elements is subsidiary. Crack repair for unacceptable concrete is subsidiary. Payment for precast concrete member includes materials and work for the following items: Class A concrete, reinforcing steel contained in the member, inserts contained within the concrete member, lifting devices contained within the concrete member, blockouts, grout (including placement leveling pads on the existing piers supporting the backwall), drains, and other miscellaneous steel embedded in or attached to the precast concrete member.

Fabricate and install galvanized steel utility bracket attachments to the outside face of precast concrete backwalls as noted in the Drawings. Prior to fabrication, Contractor shall provide fabricator shop drawings and material certifications in accordance with SSHC 716-2.08 to the Owner for approval. Galvanized steel fabrication shall be in accordance with AREMA Manual Chapter 15 Steel Structures, Part 3 Fabrication. Contractor shall coordinate with utility owner for acceptable placement to facilitate routing of utility chase around backwall and into track embankment. Repair damage to galvanized surfaces in accordance with ASTM A780 or AWS C2.23. Fabrication and installation of utility bracket attachments is subsidiary to the fabrication and installation of each precast concrete backwall unit.

Subsidiary to this work is all forms and falsework, in accordance with SSHC Section 512, used for construction and installation of all members.

No allowance shall be made for defective or unacceptable concrete or precast concrete members.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price for each precast backwall member and attachments fabricated, transported, and erected, complete in place in accordance with SSHC Sections 501, and 504; and Supplementary Condition SC-01 – Measurement and Payment.

Item No. 503.0003.1 – Drill and Bond Dowel, #10

Work includes all equipment, materials, supervision, and labor required to fabricate, furnish, and install steel dowel bars into precast concrete as indicated on the Drawings, in accordance with SSHC Sections 503.

Dowels shall be #10 deformed reinforcing steel in accordance with ASTM A706, Grade 60 with plain finish. Epoxy grout for anchoring dowels shall be in accordance with SSHC Section 712-

2.21. Provide proposed epoxy grout material specifications to be used to the Owner for review and approval prior to procurement.

Holes shall be core drilled and cleaned per the grout manufacturer's recommendations in the locations shown on the Drawings.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon contract unit price per dowel, complete in place in accordance with SSHC Section 503-4.01; and Supplementary Conditions SC-01 – Measurement and Payment.

Item No. 504.0001.1 – 125'-0" Steel Thru Plate Girder Span, Installation

Work includes all equipment, materials, supervision, and labor required to install and erect the Owner furnished 125'-0" steel thru plate girder (TPG) span and attachments in accordance with the Drawings, ARRC Standard 125' TPG Drawings and Shop Drawings, and Special Provision SP-504, Steel Structures.

Subsidiary to this work shall be all costs associated with affixing the structural steel elements to the pre-cast concrete members (*e.g.: coring, grouting, etc. for anchor rods*), installation of all ancillary items required to complete the aforementioned task (*e.g.: bearing pads, anchor rods, utility brackets, handrail and walkway, etc.*); and any requisite survey control to determine the fixture points in accordance with the Drawings and ARRC Standard TPG Plans.

All required falsework is subsidiary to this item and shall meet the requirements of Special Provision SP-504, Steel Structures, SSHC Section 512, and the AREMA Manual for Railway Engineering. Submit a falsework plan and calculations stamped by a Professional Engineer registered in the State of Alaska for Owner approval at least 30 days prior to beginning work.

Submit an erection plan for approval stamped by a Professional Engineer registered in the State of Alaska. Submit the erection plan not less than 30 days prior to erecting the structural steel. Do not erect structural steel without the written approval of the Owner. Erection shall include lifting, assembling, and setting the TPG span.

The Owner will transport the bridge girders from the Birchwood Yard to the job site on rail in the configuration they are currently in (cross braced, angle braced, and placed side-by-side on bolsters on a three-car string of 129 flats). Contractor must coordinate this move with the Owner per **SC-11 – Rail Operations Coordination** and submit a schedule defining the time the offload will take for ARRC approval. All labor and materials needed to offload the bridge girders is the responsibility of the Contractor. In addition to the primary bridge girders, floorbeam assemblies and fall-off parts, including a 20-foot Conex, currently located in the Birchwood Yard and transportation to the project site is the responsibility of the Contractor. The Contractor may elect to transport these items by road or by contracting railroad freight services.

Lifting lugs (built by the bridge fabricator) to lift the bridge girders are available in the Birchwood Yard. The Contractor may elect to use these lifting devices at their own risk. The Contractor must inspect and verify adequacy of the lifting devices planned for use and include this information in the erection plan.

The Owner will provide an additional 3% quantity of each type of high-strength bolt used in the span assembly, including nuts and washers, for use in replacing bolts that are removed to facilitate span assembly. Quantity of field fasteners are included in the 125' Standard TPG Drawings. Do not reuse existing bolts which have been fully tensioned and are removed as part of span assembly. Additional high-strength bolts required to complete span assembly beyond those provided by the Owner are the responsibility of the Contractor and are subsidiary to this pay item.

Subsidiary to the cost of span installation, the Contractor shall employ a qualified third-party testing firm to inspect field connections, welded and bolted, and final assembly of the span in accordance with Special Provision SP-504, Steel Structures. A field welding plan and field bolt tensioning plan shall be provided to the Owner for review and approval prior to starting span assembly.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 504, Special Provision SP-504, Steel Structures; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. 605.0001.1 – Perforated Corrugated Steel Pipe for Underdrain, 6”

Work includes all equipment, materials, supervision, and labor required to fabricate, furnish, and install perforated corrugated steel drain pipe as indicated on the Drawings, in accordance with SSHC Section 605.

The Contractor shall provide material certifications for the perforated pipe in accordance with SSHC Section 707-2.01. Drain pipe shall not be bent and shall be set to the location and grades indicated on the plans. Cap inlet ends of drain pipes which are buried in embankment or backfill. Wrap drain pipe with geotextile fabric prior to backfilling.

Subsidiary to this pay item shall be the provision and installation of porous backfill material and all ancillary items (*e.g.: caps, geotextile fabric, supports, etc.*) required to install the perforated drain pipe. The Contractor shall provide material certifications for the porous backfill material meeting the requirements of SSHC Section 703-2.10. Material testing shall be once per source. Geotextile fabric shall be in accordance with the requirements of SSHC Section 729 and Special Provision SP-729, Geosynthetics.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 605; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. 611.0002.1 – Riprap, Class II

Work includes all equipment, materials, supervision, and labor required to provide all Class II Riprap material (new or reused), the delivery and placement of material is to conform to the Drawings and Contract Documents, and SSHC Sections 203 and 611.

The price for this item shall constitute full compensation for furnishing all labor, equipment, and materials, and performing all operations necessary to prepare and construct the riprap revetment to the standards indicated in the Drawings and specifications outlined herein. New source material shall be tested once per source.

Where existing riprap is present at the location of new riprap revetment, the Contractor shall have the existing riprap visually inspected by the Owner's authorized representative for suitability as Class II Riprap material meeting size and placement requirements prior to removal and replacement. Riprap not visually meeting the requirements of Class II or better riprap shall be removed and disposed of in accordance with SSHC Section 203. Riprap meeting requirements of Class II within the riprap embankment limits shown in the Drawings shall be re-used in the final embankment and is subsidiary to this pay item.

Excavation and rehandling of any materials encountered or generated as a result of the construction activities for placing riprap (as defined in SSHC Subsection 203-2.01) shall be subsidiary to this pay item.

No ground disturbing work shall occur below the Ordinary High Water (OHW) elevation of Bird Creek as noted on the Drawings. Ground disturbing work in areas above OHW shall occur during low tide cycles and will be completed "in-the-dry". The Contractor shall follow all requirements of the issued environmental permits.

Subsidiary to this work is preparing the revetment subgrade in accordance with SSHC Section 203. Embankment shall be shaped in accordance with the lines, grades and elevations indicated in Drawings and cross sections. Remove any piles in the area of the excavation a minimum of one foot below subgrade to avoid damage to geotextile fabric. Subgrade shall be approved by the owner prior to covering with geotextile fabric and riprap.

After subgrade acceptance and geotextile fabric installation, the contractor will place and install approved new and re-used Class II Riprap as indicated on the Drawings and herein. Assist the Owner's authorized representative as needed to sort and measure the stones in the load to determine if the riprap is within specifications. Riprap shall be distributed at a consistent thickness and consistency across the embankment face and over the prepared subgrade. Riprap shall be keyed in place and installed in such a manner as to create a smooth and uniform face along the revetment.

The Drawings include an estimate of the volume of existing riprap, which lies within, and may be re-used within the proposed riprap embankment. The Drawings include an estimate of the tonnage of new riprap in addition to the existing riprap that will be necessary to build the revetment shown in the Drawings. Payment will be made for the tonnage of new riprap installed, re-use of existing riprap is subsidiary and will not be measured or paid separately. Every effort shall be made to reuse existing riprap. New riprap installed in place of existing riprap that was identified as suitable for reuse by the Owner's representative and will not be paid for.

Method of Measurement: (Ton). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Sections 611: and Supplementary Conditions SC-01 – Measurement and Payment and SC-01.02 Measurement of Quantities, Paragraph 13 "*Ton (2,000 pounds)*".

Item No. 618.0005.1 – Seeding

Work includes all equipment, materials, supervision, and labor required to establish a perennial stand of grass or other specified living vegetative cover, by seeding, in the areas indicated on the Drawings or previously vegetated areas disturbed by the Contractor as part of temporary access works in accordance with SSHC Section 618 and Special Provision SP-618, Seeding.

Subsidiary to the work is all work required for soil stabilization prior to seeding in accordance with SSHC Section 619. Water for seeding will not be paid separately, but included in the lump sum bid price.

Seeding is anticipated to be required to restore areas disturbed for used as temporary access roads as part of Item No. 651.0001.1 – Temporary Access Road. Seeding limits will be determined based on the Contractor's Owner approved site access plan and disturbed areas as required to restore the site to pre-construction conditions. Use an approved seed mix as defined in Special Provision SP-618, Seeding.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 618; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. 620.0003.1 – Topsoil

Work includes all equipment, materials, supervision, and labor required to furnish and spread topsoil where shown on the Drawings or previously vegetated areas disturbed by the Contractor as part of temporary access works. Work shall be completed in accordance with SSHC Section 620 – Topsoil.

Topsoil depth shall be a minimum of 6" uncompacted, or 3" compacted via track walking, or deeper as required to establish stable slopes with positive drainage in preparation for revegetation.

Provide topsoil meeting the requirements of SSHC Section 726. Material testing shall be once per source. Topsoil shall be treated with Proganics or Verdyol per the manufacturers recommendation to assist with germination and establishment of newly seeded areas.

In areas with slopes greater than 2H:1V, a heavy duty mulch with 18 to 24 month longevity shall be placed over the topsoil to a thickness recommended by the producer to protect the site from rain drop impact. Rolled Erosion Control Product or Erosion Control Blanket shall be laid over the top of the mulch.

Subsidiary to this item is all stockpiling and rehandling of topsoil during stripping or placement operations, topsoil treatments, mulch, and erosion control products.

Topsoil is anticipated to be required to restore areas disturbed as part of Item No. 651.0001.1 – Temporary Access Road. Topsoil limits will be determined based on the Contractor's Owner approved site access plan and disturbed areas as required to restore the site to pre-construction conditions.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 620; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. 631.0002.1 – Geotextile, Erosion Control, Class 1

Work includes all equipment, materials, supervision, and labor required to provide all Class 1 Geotextile erosion control fabric underneath riprap, the delivery and placement of material is to conform to the Drawings and Contract Documents and SSHC Section 631 and Special Provision SP-729, Geosynthetics.

Provide geotextile fabric meeting the requirements of SSHC Section 729 and Special Provision SP-729, Geosynthetics. After preparing subgrade for riprap placement in accordance with Item No. 611.0002.1 – Riprap, Class II, the contractor will place and install approved Class 1 Geotextile erosion control fabric as indicated on the Drawings and herein. The leading edge of all geotextile fabric shall be anchored into the existing slope below the riprap such that the fabric will not be exposed or visible after completion of construction.

Method of Measurement: (Square Yard). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Section 631: and Supplementary Condition SC-01 – Measurement and Payment; with the square yard area computed in accordance with Supplementary Condition SC-01.02 Measurement of Quantities. Paragraph 11.

Item No. 634.0002.1 – Geogrid, Reinforcement, Class 1

Work includes all equipment, materials, supervision, and labor required to provide all Class 1 Geogrid Reinforcement, the delivery and placement of material is to conform to the Drawings and Contract Documents and SSHC Section 634.

Provide geogrid reinforcement meeting the requirements of SSCH Section 729. Place geogrid within Select Material, Type A embankment fill as shown on the Drawings every other compacted lift starting after the first lift is compacted. Geogrid need not be placed within the top 8” of embankment fill material below the subballast.

Method of Measurement: (Square Yard). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Section 634: and Supplementary Condition SC-01 – Measurement and Payment; with the square yard area computed in accordance with Supplementary Condition SC-01.02 Measurement of Quantities. Paragraph 11.

Item No. 640.0001.1 – Mobilization and Demobilization

Perform work and operations necessary to move personnel, equipment, supplies and incidentals to the project site; establish offices, buildings, and other facilities, except those provided by the Owner, perform other work and operations and pay costs incurred, before beginning construction; complete similar demobilization activities; and furnish required submittals such as certificates, daily construction daily reports, payrolls, civil rights reports, and equipment/work warranties as necessary. The Owner does not anticipate at this time providing the Contractor with utilities or support facilities. Therefore, the Contractor shall, anticipate providing their own utility and support facilities necessary to complete the work and/or provide for their employees. Contractor must comply with the Alaska Department of Labor and Workforce Development requirements as noted herein.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price in accordance with SSHC Subsection 640-4.01 and Supplementary Conditions SC-01 – Measurement and Payment and **SC-02 – Lump Sum Pay Items**.

Item No. 641.0001.1 – Erosion, Sediment, and Pollution Control Administration.

Work includes all labor required to provide administration, management (by certified individuals), reporting, monitoring, inspections, and reporting of work relating to the control of erosion, sedimentation, and discharge of pollutants, according to SSHC Section 641. All applicable local,

state, tribal, and federal requirements, including the Alaska Pollutant Discharge Elimination System (ADPES), Construction General Permit (administered by Alaska Department of Environmental Conservation), Section 301(a) of the Clean Water Act (CWA), and 18 AAC 83.015 are to be followed.

The Contractor shall prepare a Storm Water Pollution Prevention Plan (SWPPP) which includes an Erosion and Sediment Control Plan (ESCP) that meets the requirements noted above and covers the entire proposed project area and submit the plans to the Owner for approval a minimum of 30 days prior to beginning ground disturbing activities.

Dependent upon on the amount of fuel to be stored within ARRC's Right-of-Way, a Spill Prevention, Control, and Countermeasures (SPCC) plan may be required.

Subsidiary to this work is the payment of agency fees for SWPPP reviews, SWPPP amendments, pre-construction amendments, inspections, monitoring, reporting, and record keeping.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price in accordance with SSHC Subsection 641-5.01 and Supplementary Conditions **SC-01 – Measurement and Payment** and **SC-02 – Lump Sum Pay Items**.

Item No. 641.0002.1 – Temporary Erosion, Sediment, and Pollution Control

Work includes all equipment, materials, supervision, and labor required to provide temporary erosion, sediment, and pollution control, according to SSHC Section 641. Work shall comply with the approved Plans developed under Item No. 641.0001.1 – Erosion, Sediment, and Pollution Control Administration.

The Contractor shall install, maintain, and remove Best Management Practice (BMP) required to meet the specifications of the SWPPP, ESCP, HMCP, and SPCC plans as necessary.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price in accordance with SSHC Subsection 641-5.01 and Supplementary Conditions **SC-01 – Measurement and Payment** and **SC-02 – Lump Sum Pay Items**.

Item No. 642.0001.1 – Construction Surveying

Work includes all equipment, materials, supervision, and labor required to provide a surveyor or third-party surveying firm to perform surveying and staking essential for the completion of the project and perform the necessary calculations required to accomplish the work in conformance with the Drawings and Specifications in accordance with standard engineering and survey practices. The surveyor may also be directed and/or required to perform any task outlined in SSHC Section 642 “Construction Surveying and Monuments”.

All calculations used to determine final pay item quantities (*e.g.*, *volumes*) must be signed and sealed by a Professional Land Surveyor registered in the State of Alaska.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Section 642, and Supplementary Conditions **SC-01 – Measurement and Payment** and **SC-02 – Lump Sum Pay Item**.

Item No. 643.0002.1 – Traffic Maintenance

Work includes all resources required to provide the Worksite Traffic Supervisor, all required Traffic Control Plans (TCP's) and public notices, a Construction Phasing Plan, and the maintenance of all roadways, approaches, crossings, intersections, and pedestrian and bicycle facilities, as required. Work shall be performed in accordance with Special Provision SP-643, Traffic Maintenance.

Traffic Control Plan(s) (TCP) and Construction Phasing Plan(s) shall be prepared by the Contractor and provided and submitted to both the Owner and AK DOT&PF for review and approval a minimum of 30 days prior to start of traffic control. There will likely be more than one TCP and phasing plan required for this project. Pedestrian pathway closures, and any proposed closures to the highway may require their own TCP. Permanent signs shall be included in the TCP. The TCP(s) shall be prepared by work zone traffic control supervisor or a civil engineer with highway plan experience. At a minimum the Contractor will submit to the AK DOT&PF an application for a Lane Closure Permit with two separate TCPs:

1. Temporary closures of the Seward Highway while equipment is transported from the staging area to the work area, including permanent construction signs.
2. Temporary closures and traffic control of the pedestrian trail.

Unless closed for an agreed upon period, the pedestrian trail shall have traffic control in place for motorized and non-motorized users to allow for daily use. Requests for winter closures shall be made to the AK DOT&PF Regional Director. The closure points for the pedestrian trail should occur at the closest parking lots to the east and west of the project site: Highway MP 101 Bird Creek Campground and Highway MP 103 respectively.

Every effort shall be made to avoid removal of existing highway guardrail. Where existing guardrail is removed, the Contractor shall provide provisions for installation of crash cushions per SSHC Sections 606 and 643.

Traffic Control shall be paid for separately under Item No. 643.0025.1 – Traffic Control and Flagging shall be paid for separately under Item No. 643.0032.1 – Flagging.

Subsidiary to this work are all resources and fees for preparing and obtaining lane closure permits and temporary land use permits required by the Contractor to facilitate construction access to the project site. Traffic Maintenance Setup is subsidiary to this work and will not be paid separately. Permanent construction signs procurement, installation, and removal as required per the agreed upon TCP(s) is subsidiary to this work.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with Special Provision

SP-643, Traffic Maintenance, and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. 643.0025.1 – Traffic Control

Work includes all equipment, materials, supervision, and labor required to provide traffic control devices for vehicular and pedestrian traffic as determined in the approved Traffic Control Plan and in accordance with Special Provision

Traffic control devices, barriers, and crash cushions required to delineate or shield fixed objects will not be measured or paid for separately, but will be subsidiary.

Method of Measurement: (Contingent Sum). Compensation shall be paid for at the agreed upon unit rate value contained in the Traffic Control Rate Schedule in Table 643-5 for the accepted units of traffic control devices and in accordance with Special Provision

SP-643, Traffic Maintenance; and Supplementary Condition **SC-01 – Measurement and Payment**.

Item No. 643.0032.1 – Flagging

Work includes all labor, vehicles, radios, flagger paddles and pilot car signs, and transportation to and from the worksite required to provide flagging for roadway and pedestrian traffic as determined in the approved Traffic Control Plan. Work will be completed in accordance with Special Provision SP-643, Traffic Maintenance.

Work in this pay item does not cover Railroad Flagging by ARRC personnel. Refer to Supplementary Condition **SC-11 – Rail Operations Coordination** for coordination and payment of Railroad Flagging.

Flagging associated with Change Order work paid at the prices according to Supplementary Condition SC-07.02 Changes.

Method of Measurement: (Hour). Compensation shall be paid for approved hours at the rate of **\$69.00/hour** and, supported by certified payroll, for flagging in accordance with Special Provision

Item No. 646.0001.1 – CPM Scheduling

Work includes all equipment, materials, supervision, and labor required to provide and maintain a CPM Schedule in accordance with the below requirements.

The construction of this project shall be planned and recorded by the Contractor using the Critical Path Method (CPM) of scheduling. The CPM Schedule (CPMS) shall be used for coordination and monitoring of all Work under the Contract including all activity of subcontractors, manufacturers, suppliers, utility companies, other parties, and Owner review activities of the CPMS and associated submittals.

Within a reasonable time prior to the preconstruction conference, the Contractor shall submit for the Owner's review, a 60- to 120-day Initial CPMS meeting the requirements set forth herein. The Owner will review for conformance to the Contract, reasonable means and methods, completeness, adequate level of detail, sequencing logic, reasonable activity durations, critical path, float, constraints, sufficient time for submittal review, adequate time for delivery of Owner-supplied materials and equipment, calendar details, reasonable resource-loading, and any errors. The construction time for the entire project shall not exceed the specified Contract Time. Following the Owner's review, if revisions are required, the Contractor shall do so promptly.

Include in all CPMS's anticipated use of ARRC flagging. Include work schedule, shift hours, etc., that ARRC flagging will be required, in conformance with SC-11 – Rail Operations Coordination.

Following the Owner's review of the Initial CPMS, the Contractor shall submit for the Owner's review, a Baseline CPMS. The Baseline CPMS must be finalized within 30 days of the Notice to Proceed.

CPM scheduling methodology requires a definitive estimate of the duration of the activities and ultimately the entire project schedule. Four essential components shall be shown on the CPMS: activities with descriptions, activity durations, logical relationships linking together activities, and

constraints. The CPMS shall be presented as a Gantt chart and shall include no less than 15 descriptive activities. No activity duration shall be longer than 15 working days without the Owner's approval. The CPMS shall show the sequence and interdependence of all activities required for complete performance of all items of Work under this Contract.

Unless otherwise waived by the Owner, the CPMS shall be resource-loaded with labor, equipment, and materials. Labor shall show workdays per week, holidays, shifts per day, men per shift, and hours per shift. Equipment shall show the make and model and number of units of each type of equipment.

Submittal activities shall be incorporated into the CPMS which include preparation time, Owner review and approval time, resubmittal time, fabrication and order time, shipping time, and delivery times. Alternatively, the Contractor may elect to create a separate CPMS for tracking submittals, which shall be subject to the same requirements herein. Submittals shall be grouped by specification within the CPMS, or other Owner-approved method.

A schedule revision involves changing schedule activity durations, logical sequences, or schedule settings to reflect changes to the project plan, as presented in the baseline schedule or previously accepted schedule revisions. The following are some of the major reasons for logic revisions:

- The Contractor's work plan has changed (changes can be major or minor).
- The Contractor wants to adjust durations of remaining activities to be more in line with actual durations of similar completed activities.
- The Contractor is behind schedule and has to prepare a recovery plan.
- Change orders and the resultant changes in the plan to perform the work need to be incorporated into the schedule.

The Contractor has the right to change its plan for execution of the Contract during the course of construction. However, changes to the Contractor's plan potentially affect other parties. The Contractor shall notify the Owner as soon as practicable for any CPMS revisions.

The CPMS shall be updated every two (2) weeks during construction. Concurrent with the schedule update, submit a work plan detailing the proposed operations for the forthcoming two (2) weeks which includes: work activities, manpower involved by trade, work hours, equipment involved, and location of the work to be performed.

The CPMS shall be submitted in a Microsoft Project or Primavera P6 format. For each CPMS submittal, both the native file format and a PDF shall be provided to the Owner.

The Contractor shall incorporate any approved Change Orders into the CPMS.

Non-compliance with CPMS update requirements is considered unsatisfactory performance and may result in withholding progress payments according to Supplementary Condition SC-01.04 Progress Payments.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Section 646; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Items.

Item No. 647.0001.1 – As-Built Record Drawings and Specifications

Work includes all equipment, materials, supervision, and labor required to provide project record keeping and work relating to maintaining project record documents for project closeout.

Submit all project record documents for review and approval by Owner prior to application for final payment. Complete payment will not be made to the Contractor unless accurate and complete closeout submittals are received as specified.

Record documents shall be maintained in accordance with this section of the Contract.

Contractor shall maintain one record copy of:

- a. Contract drawings: Legibly mark in ink or indelible pencil, or a record of actual construction including the following information; location of internal utilities and appurtenances concealed in construction referenced to visible and accessible feature of structure, field changes of dimensions and details, changes made by change order or Owner's instructions, and details not on original contract drawings. After construction, a digital version of record drawings shall be prepared by the Contractor in AutoCAD (with PDF prints) for submission to Owner and Engineer for review and approval.
- b. Specifications: Mark up each section to record Manufacturer, model, catalog number, and supplier of each product and item of equipment actually installed as well as other matters not originally specified. After construction, a digital version of record specifications shall be prepared by the Contractor in Microsoft Word (with PDF red-line prints) using track changes mode for submission to Owner and Engineer for review and approval.
- c. Addenda: Provide markups to all addenda, similar to other Contract drawings and specifications.
- d. Change orders and other modifications to the Contract.
- e. Reviewed shop drawings, product data and samples: After review, legibly annotate the shop drawings, product data, and samples using a digital software such as Adobe Acrobat or Bluebeam to clearly specify what is included in the work.
- f. Field test records.
- g. Inspection certificates.
- h. Manufacturer's certificates.

Method of Measurement. (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Section 647; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Items.

Item No. 651.0001.1 – Temporary Access Road

Work includes all equipment, materials, supervision, and labor required to pioneer access to the project site from an established access point(s) as noted in the Drawings. Work may include, but is not limited to acquiring necessary permits, excavation, ditching, filling, stabilization of slopes, furnishing and installing temporary shoring, placing temporary drainage structures, removal of temporary fills, removal and replacement of pedestrian trail pavement, removal and replacement of highway guardrail, removal and replacement of fencing, removal and replacement of permanent drainage structures, and restoration of site to pre-construction conditions.

A Site Access Plan (SAP) shall be prepared by the Contractor and submitted to the Owner, AK DOT&PF, and AK DNR for review and approval at least 60 days prior to starting work. The SAP shall identify, at a minimum, proposed access points, equipment and material staging areas, truck routes, laydown areas, disturbed land areas, location and quantity of temporary fills, location and size of temporary shoring (if required), limits of site restoration (topsoil and seeding), and impacted public facilities (*e.g., roads, guardrail, fences, pedestrian trails, recreation facilities, etc.*). The SAP will identify clear distances from existing track and location of equipment storage areas to ensure adequate space is provided for equipment to be secured to allow passage of trains

when not in use. The minimum distance of idle equipment from the centerline of track is 12 feet. Equipment such as cranes which have extended booms which could foul the track if tipped over in a weather event shall have adequate space for boom laydown provided for in the SAP.

Traffic Maintenance shall be prepared and paid for separately under Section 643 bid items. Stabilized construction entrances shall be installed at access points from the Seward Highway.

Existing condition of all disturbed areas and facilities shall be documented by the Contractor prior to and during removal to ensure that restoration can be completed to pre-construction conditions. Clearing and grubbing shall be completed in accordance with SSHC Section 201 and Special Provision SP-201, Clearing and Grubbing. Clearing and grubbing shall be subsidiary to the construction of temporary access roads, staging areas, and work areas. Unclassified excavation of material and furnishing and placement of borrowed embankment fill to construct temporary access roads shall be completed in accordance with SSHC Section 203 and is subsidiary to the work for constructing temporary access. Borrow material shall be from an approved source. Unclassified excavation material which is free from organics and other deleterious material may be used as embankment fill in the construction of temporary access roads.

Temporary shoring design and drawings shall be completed and stamped by a qualified Professional Civil Engineer licensed in the State of Alaska. Temporary shoring designs and drawings shall be provided to the Owner for review and approval a minimum of 30 days prior to start of temporary shoring installation. All unreinforced slopes steeper than a grade of 1.5H:1V shall be supported with temporary shoring. Temporary shoring shall be located outside of the railroad clear zone which is 25 feet to either side of the centerline of the existing track. Temporary shoring supporting railroad facilities shall be designed in accordance with the 2022 AREMA Manual for Railway Engineering. Temporary shoring supporting roadway facilities shall be designed in accordance with the AREMA Manual or other substantiated design method such as the Caltrans Trenching and Shoring Manual. Every effort shall be made to avoid the need for temporary shoring when practical. Temporary shoring does not include falsework necessary to assemble the new TPG span or remove the existing pony truss span (see Item No. 504.0001.1 – 125'-0" Steel Thru Plate Girder Span, Installation).

All temporary works shall be removed at the completion of construction unless explicitly agreed to by Owner and all affected parties. If not included with the SAP, submit a plan of the proposed permanent configuration of temporary works proposed to remain to the Owner for approval. Permanent embankments shall be shaped to provide positive drainage along the track and roadway embankments and have slopes no steeper than 3H:1V unless reviewed by a Geotechnical Engineer licensed in the State of Alaska and approved by both the Owner and AK DOT&PF. Additional requirements for pedestrian and bicycle safety may be required beyond the pre-construction conditions to allow for modifications to the site and shall be subsidiary to the work required for restoring the site to pre-construction conditions.

Subsidiary to this work is restoration of all disturbed, demolished, or removed areas and facilities to preconstruction conditions except that topsoil placement and seeding will be paid separately. The Contractor shall prepare a Site Restoration Plan, in coordination with Owner, AK DOT&PF, and AK DNR, to replace any current facilities that are removed to allow construction. This includes, but is not limited to, pedestrian trails, highway guardrails, fencing, drainage facilities, etc. Subsidiary to this work is reconstruction of all facilities removed to facilitate access to the project site. This includes but is not limited to highway guardrail, chain link fencing, CMP culverts, and pedestrian trail pavement structural section. All reconstructed facilities shall be installed with new material of equal or better grade than that which was removed. Reconstruction of fencing, guardrails, and CMP culverts shall follow AK DOT&PF standard plans and specifications. Trail

pavement reconstruction with hot mixed asphalt (HMA) shall follow AK DOT&PF standards for pedestrian trails and SSHC Section 401.

Subsidiary to this work is construction of all temporary railroad crossings required by the Contractor. Submit a Temporary At-Grade Crossing Plan to the Owner for approval a minimum of 30 calendar days prior to beginning work. Crossing timbers and hardware will be supplied by the Owner at the Anchorage Yard. Removal of crossing(s) following completion of work is subsidiary.

Subsidiary to this work is all permits required to complete the Contractor's owner approved site access and restoration plan.

Method of Measurement. (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Items.

END OF STATEMENT OF SERVICES

APPENDIX H **SPECIAL PROVISIONS**

Work shall be completed in accordance with the project drawings, the statement of services, and the suggested installation procedures as provided by the manufacturer. In the event of technical specification conflicts, the project drawings shall control, unless otherwise noted herein.

It is recommended that the Contractor become familiar with the site conditions and review the Owner provided information prior to bidding the work, so as to make their own assessment of what means and methods will be necessary to complete the work.

All construction shall meet the current industry standards for the work being performed. The Contractor will help the Owner or its representative perform construction observation and oversight as required to complete the project and provide quality assurance for the project. All work shall meet all the stipulations stated herein and in any governing permits.

SP-201, Clearing and Grubbing

Work includes, but is not limited to, all equipment, materials, labor, and supervision required to clear, grub, remove, and dispose of all vegetation and debris within designated areas of the project; except such objects as are designated to remain or are to be removed under other sections; in accordance with the Drawings, SSHC Section 201 and specifications outlined herein. Preserve from injury or defacement all vegetation and objects designated to remain. Clearing and Grubbing of the SSHC is modified by adding the following:

General. Prior to commencing clearing and grubbing activities, the Contractor shall install appropriate Best Management Practices in accordance with the environmental permits. The Owner's authorized representative will designate the limits of work and all trees, shrubs, plants and other things to remain. Preserve all things designated to remain.

Keep erosion potential to a minimum.

Preserve survey stakes, boundary markers, bench marks, and tie points until such time as their usefulness has ceased and the Owner's authorized representative gives permission for their destruction.

Do not clear or grub within the migratory bird window listed in the Environmental Commitments unless:

- the area has been previously and sufficiently altered to provide no nesting habitat; or
- the area has been surveyed by a qualified bird expert to determine if there are existing bird nests. If nests are present, do not clear or grub until after the nesting season is completed.

Clearing Window. Utilizing the U.S. Fish & Wildlife Service's (USFWS) Construction Advisory for Protecting Migratory Birds/Land Clearing Guidance for Alaska document, the clearing window for forest, woodland, shrub, and open habitats located in the Southcentral Region is from July 16 to April 31. Any clearing for this project will take place between those dates and shall be in accordance with the Migratory Bird Treaty Act (MBTA), 16 U.S.C. 703, to avoid impact to nesting migratory birds. For purposes of complying with the MBTA, tree and brush clearing on frozen ground is permitted prior to obtaining an NOI so long as the clearing operations do not disturb the vegetative mat; however, no grubbing activities are permitted until an NOI is obtained. Additionally, if clearing activities take place subsequent to the anticipated spring thaw date, an active NOI is required

Clearing. Cut and dispose of all trees, down timber, stubs, brush, bushes and debris from all areas designated.

Fell trees toward the center of the area to be cleared, in order to minimize damage to the trees that are to be left standing. Remove and dispose of trees unavoidably falling outside the specified limits. Cut trees and brush to a height of not more than 6 inches above the surrounding ground.

Grubbing. Remove and dispose of all stumps, roots, moss, grass, turf, debris or other objectionable material within excavation limits, and within fill limits where the embankments are to be made to a depth less than 4 feet below subgrade. Grub any other areas designated on the Drawings, Statement of Services, or in the Special Provisions.

Except in areas to be excavated, backfill stump holes and other holes with suitable materials and compact according to the Specifications.

Hand Clearing. Cut and dispose of all trees, down timber, stubs, brush, bushes and debris from all areas designated, with minimal disturbance to grass and/or moss cover. Do not use equipment on wheels or tracks in areas designated as hand clearing, except as stated below.

Where shown on the Drawings, you may use a mechanical brush cutter, provided such work is performed within the time frame allowed by permitting agencies.

Cut stumps flush with the ground. In areas to be covered by least 4 feet of subgrade material, stumps may extend up to 12 inches above natural ground, except where geotextile is specified.

Disposal. Dispose of all vegetation and debris removed by clearing or grubbing by burning, burying, or other approved methods and at approved locations.

Obtain the property owner's written permission to dispose of vegetation and debris at locations outside the right-of-way limits and a waiver of all claims against the Owner for any damage to such land which may result. Obtain all permits required by law for such disposal. Furnish a copy of such permission, waiver of claims, and permits to the Owner's authorized representative before commencing work.

Do not burn without first acquiring permits from any governing body in the area or when prevailing winds would produce a smoke hazard to traffic or disturb local communities. Place piles for burning in open spaces within the project, or in other spaces designated by the Owner's authorized representative where no damage to trees, other vegetation or embankment stability will occur.

Conduct all burning operations under the constant care of competent watchmen so that the surrounding forest cover or other adjacent property will not be jeopardized. Comply with any permit requirements, applicable laws, and ordinances regarding burning.

Where shown on the Drawings, you may dispose of clearing debris under 4 inches in diameter within the construction limits. Do this by spreading in an even layer, so the material does not intrude into the upper 3 feet of subgrade.

All merchantable timber in the clearing area at the beginning of construction becomes Contractor's property.

If invasive species control is required by an adjacent land owner in order to obtain a temporary land use permit or other facility use permit, the Contractor shall inform the Owner of the requirements. The Contractor and Owner will negotiate an agreed upon scope of work to address the invasive species control requirements in accordance with SC-07.02 Changes, for out-of-scope work.

SP-240, Railroad

240-1.01 DESCRIPTION. The Contractor shall be responsible for all railroad trackwork and construction items associated with this Project within the limits shown on the Plans. All work on Owner property shall be conducted in strict accordance with the requirements contained herein and Supplementary Condition **SC-08.02 Railway-Highway Provisions.** Unless otherwise specified, all track materials and work methods shall comply with the applicable standards contained herein.

240-1.02 DEFINITIONS.

5. ARRC. Alaska Railroad Corporation (Owner).
6. AREMA. American Railway Engineering and Maintenance-of-Way Association.
7. W.C.L.I.B. West Coast Lumberman's Inspection Bureau.
8. FRA. Federal Railroad Administration.

240-1.03 REFERENCED STANDARDS.

5. ARRC Standard Plans.
6. AREMA Manual for Railway Engineering
7. AREMA Portfolio of Trackwork Plans
8. ADOT&PF Standard Plans
9. All standards listed in each section of these specifications but referenced thereafter by a basic designation only (e.g., *AREMA*), form a part of the specifications to the extent indicated by the reference. The most recent edition of the standard at the time of advertising shall apply.

240-1.04 REFERENCED DRAWINGS. Drawings are incorporated by reference herein and made a part of these specifications.

240-1.05 STORAGE. Storage facilities shall be in areas designated by the Owner or Owner's Representative.

240-1.06 CLEAN-UP. At the end of each day's Work, the job site shall be cleaned up and left in a neat, safe, secure, and workman-like condition.

Before requesting a final inspection, the entire premises shall be cleaned up to the satisfaction of the Owner.

240-1.07 SURVEYING. All surveying work necessary for the performance of this project shall be furnished by the Contractor in accordance with SSHC Section 642.

240-1.08 SUPERVISION. Provide a qualified Railroad Bridge Supervisor in accordance with 49 § CFR 237.55 "Railroad bridge supervisors." Said supervisor shall be a person, regardless of position title, who is determined by the Railroad Owner to be technically competent to supervise the construction, modification or repair of a railroad bridge in conformance with common or particular specifications, Drawings and instructions applicable to the work to be performed, and to authorize or restrict the operation of railroad traffic over a bridge according to its immediate condition or state of repair.

Contractor is to submit a Designation Roster of Railroad Bridge Supervisor designees for approval by the ARRC Bridge Program Manager prior to beginning of construction. Designee submittal to include the following:

- Name of employee
- Company
- Title
- Designation per 49 § CFR 237.55
- Basis of Qualification – to include railroad bridge construction experience, bridge inspection experience, track maintenance experience, etc.

Upon approval of designation roster, a contractor provided Railroad Bridge Supervisor designee must be onsite at all times during construction activities prior to release of track authority and/or prior to passage of trains.

SP-241, Railroad Ballast

241-1.01 DESCRIPTION. The Contractor shall be responsible for furnishing, hauling, placing, tamping and shaping railroad ballast and surfacing and lining new and existing track and turnouts, in conformance with the lines, grades and thickness' shown on the Drawings.

241-2.01 MATERIALS. The Contractor will supply Type 3 ballast that conforms with the AREMA Manual for Railway Engineering, Chapter 1, Part 2 - Ballast.

Ballast gradation shall conform to AREMA Volume 1, Chapter 1, Section 2.4.4, Table 1-2-2, Standard No. 3 ballast unless otherwise noted. Gradation test shall be determined in accordance with ASTM C136, utilizing square opening sieves conforming to ASTM E11. The percentage passing each sieve shall fall within the following limits:

SIEVE SIZE	SIEVE OPENING	PERCENT PASSING BY WEIGHT
2 1/2	2.50"	100
2"	2.0"	95-100
1 1/2"	1.50"	35-70
1"	1.0"	0-15
3/4"	0.75"	-
1/2"	0.50"	0-5
3/8"	0.375"	-
No. 4	0.187"	-
No. 200	0.0029"	0-0.3

241-2.02 MATERIAL QUALITY REQUIREMENTS. Ballast shall consist of crushed stone which is comprised of angular fragments resulting from crushing, by mechanical means, the following types of rocks quarried from undisturbed, consolidated deposits:

1. Granite and similar, phanero-crystalline igneous rock, extrusive igneous rock, or massive metamorphic quartzite or similar rock.
2. No crushed limestone, dolomites, or gravels shall be allowed.
3. Furnish prepared ballast that is hard, strong, angular, durable particles of crushed rock containing no carbonates or slag and free from injurious amounts of deleterious substances and conforming to the following requirements of these Specifications.

Material qualities shall be as follows:

	PROPERTY	MINIMUM	MAXIMUM	TEST METHOD
All	Percent material passing No. 200	--	1.0 percent	ASTM C 117
	Bulk specific Gravity – Rock	2.60	--	ASTM C 127
	Absorption - Rock	--	1.0 percent	ASTM C 127
	Clay lumps and friable particles	--	0.5 percent	ASTM C 142
	Degradation (LAA)	--	As Noted for	ASTM C 535
	Granite	--	Material Type: 35 percent	
	Traprock	--	35 percent	
	Quartzite	--	30 percent	
Soundness – (Sodium Sulfate) – 5 cycles	--	5.0 percent	ASTM C 88	
Flat or elongated particles (length is equal to or greater than three times the average thickness)	--	5.0 percent	ASTM D 4791	

particles of the ballast shall have been broken by the crusher and must have at least two fractured surfaces.

241-2.03 SOURCE QUALITY CONTROL. Vendor’s testing laboratory shall take and perform gradation and other tests on representative samples of ballast, of not less than 150 lbs, from each source of ballast.

1. Perform tests to ensure compliance with these Specifications.
2. Each shipment of ballast shall be accompanied by a certification as specified.

241-2.04 HANDLING, DELIVERY, AND STOCKPILING OF MATERIAL. The ballast shall be manufactured, handled, delivered, stockpiled, and placed in such a manner that it is kept clean and free from segregation. Stockpiling of ballast will only be allowed over firm stable base areas. In order to minimize segregation ballast shall be stockpiled in more or less horizontal layers with no dumping over the sides of the stockpile allowed. Travel of construction machinery and other vehicles over the top of the stockpiles shall be kept at a minimum. Contractor will be responsible for the control of dust when hauling to and from stockpile.

CONSTRUCTION REQUIREMENTS

241-3.01 GENERAL. Ballast dumped on subgrade prior to track construction shall be kept free from material tracked in by construction equipment. Ballast dumped on skeleton track and turnouts shall be distributed uniformly during the dumping operation to minimize the carrying or regulating required to provide the designed ballast section.

Contractor shall submit their plan for handling and placing ballast. This plan shall include source, type of equipment to be used (e.g., *HyRail dump truck*), location of stockpiles, and method of distribution.

241-3.02 BALLAST PLACEMENT.

1. Ballast shall be placed to the lines and grades as required. Ballast shall not be placed on soft, muddy areas. Where the prepared subgrade (*roadbed*) is soft, muddy, rutted, exhibits severe depressions, or is otherwise damaged, the ballast shall not be placed until the damaged subgrade has been repaired and the Owner has approved the area.
2. Forming of ruts that would impair proper drainage shall be prevented when distributing ballast from trucks and off track equipment. Any ruts formed greater than one (1) inch shall be leveled and graded to drain.
3. Ballast shall be unloaded as close as possible to the point of use so that unnecessary handling is prevented. Excess ballast shall be picked up and redistributed at the Contractor's expense. Ballast shall be handled in such a manner as to ensure it remains clean of deleterious materials and within specifications.
4. Minimum Ballast Depth: The minimum depth of ballast below the bottom of the tie shall be 6 inches.

241-3.03 TRACK TAMPING, SURFACING AND FINAL DRESSING.

1. This work shall consist of shaping, tamping, surfacing and dressing of the ballast section on all new track except that which is included in other work items. These work limits are shown on the plans as the anchoring limits.
2. Preliminary Surfacing. The preliminary alignment and surfacing gangs shall follow the unloading of the ballast. Rail and tie installation, spiking, bolt tightening, and ballast placement shall be complete prior to commencement of surfacing and alignment work.
3. Lifts. The track, after being aligned, shall be brought to grade, surfaced in lifts not to exceed four (4) inches each and tamped. When using jacks, they shall be placed close enough together to prevent undue bending of rail or stress of rail and joint. Both rails shall be raised at one time and as uniformly as possible, except where super-elevation is required. The track shall be lifted so that after a period of not less than five (5) train operations after the last lift, it will be necessary to give the track a final lift of between one (1) and two (2) inches to bring it to grade.
4. Raising and tamping of track shall be performed with an automatic, vibratory, squeeze type power tamper with sixteen (16) tamping heads, capable of raising both rails simultaneously and maintaining cross level. The tamper shall be a Jackson 6700 Series, or an Owner-approved equal, truss type tamper with lift, line and surface capability. If the equipment selected by the Contractor differs from a Jackson 6700 Series, the Contractor must submit equipment make, model, year and specifications to the Owner for approval and the equipment shall be subject to inspection and acceptance by the Owner. Every tie in the track shall receive two or more full insertions of the tamping heads. Ballast shall be power-tamped under both sides of ties from each end to a point fifteen (15) inches inside each rail for 8 foot-6 inch ties and eighteen (18) inches for 10 foot ties. The center shall be filled with ballast, but tamping shall not be permitted in the center of the tie between the above stated limits. Both ends of the ties shall be tamped simultaneously and tamping inside and outside of the rail shall be done at the same time. Tamping tools shall be worked opposite each other on the same tie. Ballast under switch ties and road crossing ties shall be tamped the entire length of each tie and care must be taken not to "center bind ties". All ties shall be tamped to provide solid bearing against the base of the rail after the track or turnout is raised to grade at final surfacing. All down ties shall be brought up to the base of rail and shall be machine tamped. The resultant track surface and alignment shall be uniform and smooth. Final tamping of track in snow or frozen ballast conditions shall not be permitted. Track that was tamped during such conditions will need to be re-tamped when conditions allow at no cost to the Owner.

5. Contractor shall prepare as part of the Ballast Placement Plan, for the Owner's review and approval, a detailed tamping procedure covering tamping equipment and methods. The specification shall include a complete description of equipment to be used and variables that can be adjusted such as:
 - a. Number of insertions of tamping tools per tie.
 - b. Number of passes of tamping machine.
 - c. Depth of penetration.
 - d. Lifting capacity.
 - e. Lining capacity.
 - f. Year, make and model of tamping machine.
6. Replacement of Ties. After tamping has been completed and the jacks removed, any damaged ties shall be removed and replaced. All ties pulled loose or replaced shall be restored to their proper position, re-spiked and re-tamped to provide full bearing against the rail, at no cost to the owner.
7. Runoff of Track Raises. The runoff at the end of a raise shall not exceed one quarter (1/4) inch in thirty-one (31) feet of track unless otherwise noted on the Plan and/or the Contract Documents, or as approved by the Owner.
8. Final Surfacing. After preliminary surfacing has been completed, grade and line stakes shall be checked and the track brought to final grade and alignment.
9. Final Tamping. Track shall be brought to grade and the ballast re-tamped in the manner described for preliminary surfacing, except that the tamping distance inside the rail shall be decreased from 12 to 10 inches for eight (8) foot ties, fifteen (15) to thirteen (13) inches for eight (8) foot-six (6) inch ties, and eighteen (18) to sixteen (16) inches for nine (9) foot and ten (10) foot ties.
 - a. After final tamping is complete, ballast shall be dressed to the section indicated with a Kershaw 60BR, Kershaw 46-6, Nordco KBR 900, or Owner-approved equal, and all ballast removed from the top of crossties, tie plates and base of rail by the ballast regulator broom. If the equipment selected by the Contractor differs from a Kershaw 60BR, the Contractor must submit equipment make, model, year and specifications to the Owner for approval and the equipment shall be subject to inspection and acceptance by the Owner
10. Surplus ballast remaining after final surfacing and dressing of the ballast section shall be distributed or otherwise disposed of as directed by the Owner.
11. Upon completion of the work, the Contractor shall remove all rubbish, waste, and discarded materials generated by the work from the project area and dispose of the materials in a Contractor-furnished waste disposal site in accordance with all federal, local, state, and tribal regulations. Areas where the Contractor has worked, including but not limited to, project areas, material storage sites, and borrow or disposal areas shall be left in a clean, well-graded, and well-drained condition.
12. One hundred–eighty (180) calendar days after the track has been accepted and put into operation, the Contractor may be required to perform, at no additional cost to the Owner, any necessary resurfacing adjustments to leave the track in alignment and on grade.
13. Completed track shall meet the following tolerances. Track installed by the Contractor not meeting the tolerances specified below shall be repaired to meet said requirements, at no additional cost to the Owner.
 - a. Gauge. Track gauge shall be within plus or minus 1/8 inch of standard gauge.
 - b. Alignment. Alignment shall be measured as the deviation of the mid-offset of a 62 foot line, with the ends of the line at points on the gauge side of the line rail, 5/8 inch below

the top of the railhead. Either rail may be used as the line rail on tangent track; however, the same rail shall be used for the entire length of the tangent. The outside rail in a curve is always the line rail. Alignment on tangents shall not deviate from uniformity more than 1/2 inch. Alignment on curves shall not deviate from uniformity more than 3/8 inches.

- c. Track Surface. Track surface shall meet the following requirements:
 - i. The runoff at the end of a raise shall not exceed 1/4 inch for any 31 foot of rail.
 - ii. The deviation from design profile on either rail at the mid-ordinate of a 62 foot chord shall not exceed 1/4 inch.
 - iii. Deviation from design elevations on spirals shall not exceed 1/2 inch.
 - iv. Deviation from zero cross level at any point on tangent or from designated super-elevation on curves or spirals shall not exceed 1/8 inch.
 - v. The difference in cross level between any two points less than 62 foot apart on tangents, and on curves between spirals shall not exceed 1/8 inch.

241-3.04 SUBMITTALS.

1. Prior to beginning work, provide ARRC a copy, for review and approval, of the contractors Ballast Placement Plan to include procedures for furnishing, hauling, transporting, stockpiling, loading, dumping, tamping, and shaping ballast used on the project.
2. Prior to beginning work, provide ARRC a copy, for review and approval, of the contractors Surfacing Equipment including the make, model, year, condition and inspection records. This is to include information pertaining to the Ballast Regulator and Tamper.

SP-242, Trackwork

242-1.01 DESCRIPTION. This work consists of constructing mainline track to the alignment and limits shown on the Plans.

242-2.01 MATERIALS. The Owner shall supply all track materials in the Anchorage Yard, Birchwood Yard, or other location. The material shall conform to the current AREMA "Manual for Railway Engineering" and as detailed in this specification. Contractor to load owner supplied materials outside Anchorage Yard.

1. Premium/High Strength Rail. Rail shall be 115 RE rail section (new or used), last hole blank and 78 to 80 feet in length. Rail shall either be head hardened or fully heat treated. Rail shall conform to the latest current AREMA Manual for Railway Engineering, Volume 1, Chapter 4, Rail, Specifications for Steel Rail and ARRC Standard Plan 3.1 with the clarifications listed below. The bidder shall include with their bid response sufficient technical data to allow for a detailed evaluation of the product bid.
 - a. Size. Per AREMA Chapter 4, Part 1, Figure 4-1-1, 115 RE Rail Section.
 - b. Drilling. Rail shall be last hole blank with two 1-1/4 in. diameter holes centered 2-7/8 in. above the base of the rail and 9-1/2 in. and 15-1/2 in. from each end of the rail. For use with 6-hole, 36-in. angle bars and 1-1/16 in. track bolts. Per AREMA.
 - c. Length. Per AREMA Chapter 4, Section 2.1 Article 11, standard length is 80 feet. Rail shorter than 74 feet in length will not be accepted. Rail shorter than 80 feet in length will not be accepted at crossing locations.

2. Angle Joint Bars. Angle joint bars shall be new 36 in. head free, standard toeless, 6 holes for use with 115 RE rail with hole spacing to fit rail drilling per AREMA Volume 1, Chapter 4, Section 2.8. Joint bars shall be quenched or medium carbon steel, rolled steel only, heat #16. Hole diameter shall be 1-1/8 in.
3. Rail Anchors. In wood tie areas only. Use new rail anchors sized to conform to the rail and "Specifications for Rail Anchors" in Chapter 5, Part 7 of the AREMA Manual. Use Unit V, drive-on type rail anchors for 115 RE, no substitute. For 115 RE, width 1-3/32 in. x thickness 21/32 in. and weight 1.8 lb. Application shall be by a standard sledgehammer without the use of special tool or an anchor applicator to drive on. Packaging shall be in 50# bags containing 28 each with 75 bags per pallet, banded.
4. Tie Plates.
 - a. Crossings and Switch. For 5-1/2 in. rail base for crossings and switches: Shall be PANDROL TPL-P26M, 5.5 x 7-3/4 in. x 15 in. with four 1 in. round holes and two 11/16 in. square holes. 1:40 cant.
 - b. Curve and Tangent. Shall be 7-3/4 in. x 14 in. x 5-1/2 in. with B-8 punching, 3/4 in. square holes. 1:40 cant.
 - c. Tie Plates. Tie plates may remain in place if they are in serviceable condition.
5. e-Clips. Shall be PANDROL Part Number ECL-2055 (right hand) for use with 115 RE rail and Pandrol tie plates.
6. j-Clips. For use on wood ties with angle joint bars. Shall be PANDROL Part Number J-clip.
7. Screw spikes. New, PANDROL, 15/16 in. x 6 in. SQ HD, Washer Type Part No. 6619, 1.1 pound each. For use with 13/16-in. socket. Packaged 50 to bag. Requires 3/4-in. diameter x 6-in. deep pre-bore in hardwood ties.
8. Track Bolts, Nuts & Washers. Bolts and nuts shall be new and manufactured in accordance with AREMA Volume 1, Chapter 4, Section 1.4 and 2.9. Bolts shall be 1-1/16 in. diameter x 6 inches long for a full nut, lock-washer and 2 threads exposed after tightening, but not to exceed a 1 in. exposure after tightening.
9. Nut-lock Washer (a.k.a. Spring Washer). New, to fit 115 RE rail with thread diameter of 1-1/16 in. Product must conform to current AREMA Specifications Volume 1, Chapter 4, Section 2.10 for Spring Washers and ARRC Standard Plan #7.0.
10. Wooden Cross Ties. Cross ties shall be treated, 7-in. x 9-in. x 10 ft and 7-in. x 9-in. x 8 1/2 ft. Cross ties shall be manufactured in accordance with the current AREMA Manual for Railway Engineering, Chapter 3; W.C.L.I.B. Grading Rules #17, paragraph 192b; and this specification. Hardwood ties shall be new.
 - a. Timber. Cross ties shall be sawn from sound, straight live timber, free from any defect that might impair durability and/or strength. Multiples or combinations will not be accepted. Cross ties shall be cut square at the ends and have all bark that impairs treatability entirely removed.
 - b. Stump Pull. Stump pulls will be graded the same as holes or splits in the end of a tie. Cross ties with a stump pull that goes into the interior more than 5 in. will be rejected.
 - c. Wane. Cross ties shall have a minimum 8 in. face. Minimum face specifications apply to the entire length of the cross tie. All wane shall be free of bark.
 - d. Knots. A knot exceeding in diameter 1/4 of the width of the surface on which it appears will be rejected if it occurs in the rail bearing area. Outside the rail bearing area, knots will be accepted up to a diameter of 1/3 of the surface on which they appear. A cluster of knots will be judged as being a large knot in damaging effect. Rail bearing area shall be defined as 20 in. to 40 in. from center of tie.
 - e. Cross Grain. Any cross tie with cross grain exceeding one in fifteen will be rejected.
 - f. Straightness. A cross tie will be considered straight when (1) a straight line along the top from middle of one end to middle of the other end is not closer than 3 in. from either side of tie, and (2) when a straight line along a side from middle on one end to the

- middle of the other end is everywhere more than 2 ½ in. from top or bottom of the tie.
- g. Bark. Any cross tie containing more than a minimal amount of ingrown bark will be rejected.
 - h. Saw Kerf. A saw kerf is not required.
 - i. Treatment. All treatment shall meet the specifications of the American Wood Preservers Association Standards Book C6 and the following guidelines. A treatment report shall be accurately completed for all charges and at a minimum shall contain the following:
 - i. Charge number
 - ii. Date
 - iii. Wood species and size
 - iv. Total retort time in hours
 - v. Conditioning time in hours
 - vi. Pressing time in hours
 - vii. Retention in pounds per cubic meter
 - viii. Average penetration to be shown for oak
 - ix. Initial air time, if applicable
 - x. Gauge readings and times
 - xi. Treating operator's signature
 - xii. Seasoned condition (dry or green), if green show moisture content.
 - xiii. Final Vacuum
 - xiv. Weight of solution at 100 °F
 - xv. Work tank number and cylinder number

The preservative shall consist of a mixture of 50 percent by volume of creosote oil and 50 percent by volume of residuum oil, 50/50 coal tar solution may also be used. Final readings shall be entered on the treating report.

- j. Care of Treated Wood. Extreme care shall be used in handling treated cross ties to avoid damage to the edges of the timbers or breaking through the treated portions and exposing untreated wood. The use of peavies, cant hooks, pickaroons, long hooks or pointed tools shall be such as not to break through the treated portion of the wood. If damage during handling which could potentially impair the longevity of material service life, this material shall then be retreated at the Contractor's expense. All cost associated with retreatment, including oil, shall be the responsibility of the Contractor.
- k. Boring. All cross ties shall be bored and adzed in conformance to the ARRC Standard Tie Boring and Adzing Plan 1.13. Adzing may be deleted if vendor will certify that ties furnished will be flat and provide a uniform bearing surface for the tie plates.
- l. Anti-splitting Devices. All hardwood cross ties shall have steel multi-nail anti-splitting end plates in accordance with the current AREMA Manual of Railway Engineering, Chapter 3, Section 1.8 titled "Ties and Wood Preservation", Section 1.9.2.3 titled "Nail Plates", and Section 1.10.3 titled "Nail Plates".
- m. Species. Acceptable hardwood species are Red Oak, White Oak, Hickory, Black Walnut, Gum, Beech, Ash, White Heart Sycamore, Hackberry and Hard Maple.

242-3.01 CONSTRUCTION REQUIREMENTS. Track construction shall be performed in accordance with the current ARRC Standards, AREMA Manual for Railway Engineering, and as specified in this document. Scope of construction includes but is not limited to, unloading and distribution of track material, distribution and spacing of cross ties, laying, bolting and spiking rail, field welding of jointed rail, placing rail anchors, raising, aligning and tamping track, and shaping

ballast to the design section. The rail for the crossing panels shall be box anchored to the ties prior to moving the panels.

Construction procedures and methods shall be employed that keep the railroad sub-ballast and ballast sections from becoming rutted or disturbed and any operation that causes damage shall be stopped immediately. Alternate construction methods shall be instituted.

All removed track materials (rails, ties, other track materials) will become the property of the Contractor, except as noted on the Plans or in the Contract Documents. All track materials that become the property of the Contractor shall be removed from the project area and disposed of in a Contractor-furnished waste disposal site in accordance with all federal, local, state, and tribal regulations; removal and disposal shall be before Substantial Completion unless otherwise approved by the Owner.

242-3.02 TRACK ALIGNMENT AND GEOMETRY. The track shall be constructed to the alignment and profile indicated, or as adjusted by the Owner's authorized representative, within the tolerances specified. Contractor shall designate right or left rail, while facing in the direction of increasing stationing, to control the grade of all tangent tracks on a contract-wide basis. Low rail on curves shall be the profile grade rail. High rail on curves shall be the line rail.

242-3.03 TOLERANCES. Deviations from indicated gauge, cross level, horizontal line, profile grade, and tie spacing shall conform to the following requirements:

1. Gauge. Shall be 4 ft-8 ½ in. plus or minus 1/8 in.
2. Cross Level and Super-elevation. Shall be plus or minus 1/8 in. from level on tangent or design super-elevation on curve.
3. Deviation from Horizontal Alignment. Plus or minus ¼ in. in a 62 foot chord. Plus or minus ½ in. total except in road crossings where total deviation shall be plus or minus ¼ in.
4. Deviation from Profile Grade. Shall not exceed plus or minus ¼ in. in 62 foot chord or a total of plus or minus ½ in.
5. Tie Spacing. Distance between centerline on adjacent ties shall be 19 ½ in. for wooden cross ties and not vary more than plus or minus 1 in. from the indicated spacing, with the additional requirements that 48 wooden ties shall be installed per 78 foot of track or 39 concrete ties per 78 foot of track.
6. Acceptance. Final track alignment will be accepted only after ARRC traffic has used the new track and alignment for 3 weeks.

242-3.04 CROSS TIE DISTRIBUTION. Contractor shall receive cross ties from supplier and transport them to the work area in accordance with the AREMA "Handling of Ties from the Tree into the Track" for wooden ties and "Recommended Practices for Shipping, Handling, Application and Use" for concrete ties. Ties shall be placed on a smooth, compacted surface as specified herein, spaced as shown within specified tolerances, and laid normal to the centerline of track with heartwood face down. Line ends of ties in the track shall be aligned uniformly on the right side of track when facing increased stationing.

242-3.05 TIE PLATES AND SCREWS. Tie plates shall be attached to the cross ties with line and hold-down screws to the indicated patterns. Contractor may pre-plate cross ties prior to distribution. If Contractor chooses to pre-plate the cross ties, he shall furnish any additional material required at no added cost to Owner. Contractor shall use a jig to compensate for fabrication tolerances to achieve track gauge tolerances.

242-3.06 RAIL LAYING. Rail shall be laid in accordance with the details and procedures that follow:

1. Rail Distribution. Rails shall be distributed along the roadbed with the head of the rail up and in such a manner and using equipment that will prevent damage to them. Dropping rails from the sides of railcars or trucks will not be permitted.
2. Rail Laying. The base of the rail and surface of the tie and tie plate shall be cleaned prior to laying. Rails shall be laid one at a time without bumping or striking. Rail ends shall be brought squarely together against the expansion shims and completely bolted before spiking. Rails shall be laid so that the joints in opposite rails are staggered not less than 20 ft apart, plus or minus 24 in., except closer joints may be required at turnouts or roadway crossings. Rails of less than standard length shall be used to space the joints on curves. Rails shorter than 16 ft shall not be used. Rail shall be laid or welded so that no joints are in grade crossings or within 20 ft of the grade crossing surface.
3. Rail Cutting and Drilling. Rails shall be cut square and clean by means of rail saws. Holes for complete bolting of cut rail shall be precisely marked, center punched, and drilled using an exact template for alignment. In no instance shall marking through or drilling through joint bars be allowed. Holes shall be deburred. New holes shall not be drilled between two holes already drilled. Burning or cutting of rails or bolt holes by means of an acetylene torch will not be permitted. All cut rail ends shall be beveled at the head and be hardened to conform to AREMA "Manual Specifications for Steel Rails", Supplementary Requirement S1.
4. Rail Joints. The fishing surface of the rails and joint-bars shall be wire-brushed to remove rust before assembly. Allowance for rail expansion shall be made at all joints by the use of expansion shims placed between the ends of adjacent rails. The proper expansion allowance shall be determined as referenced in **Table 3 – Expansion allowance for joints.** Refer to AREMA chapter 5, paragraph 5.3.1 for shim thickness to use for 39 foot rail.

Rail Temperature (°F)	Shim Thickness for 80 (nominal) foot rail (in.)
Below 35	5/16
35-47	1/4
48-60	3/16
61-73	1/8
74-85	1/16
Over 85	None

Table 1 – Expansion allowance for joints.

For shorter lengths of rail, proportionate shim thickness shall be used. The temperature of the rails shall be determined by the use of an AREMA standard rail thermometer, placed on the base of the rails close to the web on the side shaded from the sun. Sufficient time shall be allowed to accurately record the temperature. Care shall be taken to assure that shims are not squeezed or damaged during installation of shims or rails. Shims shall be removed from between rail ends as soon as the bolts have been tightened and the rail anchors applied. All track bolts shall be installed when the rail is laid and tightened before spiking.

Final bolt tension shall be between 20,000 and 30,000 lbs. Bolts shall be tightened once, at the time of rail installation. Final tension shall be checked and adjusted as necessary just prior to final acceptance per AREMA chapter 5, paragraph 5.5.2.

5. Rail Anchoring. Rail anchors shall be located as indicated on ARRC standard plan No. 1.22-03. Rail anchors shall be installed to the gauge side of the rail. Rail anchors shall grip the base of the rail firmly and shall have full bearing against the face of the tie. Rail anchors shall not be moved by driving them along the rail.

6. Tie-in points. When tying into jointed rail on wood ties, every tie in the jointed rail for the distance called out in the Plans shall be box anchored.

SP-244, Trackwork Removal

244-1.01 DESCRIPTION. This work consists of dismantling and removing track from the existing roadbed and structure as shown in the drawings. All removed track materials (rails, ties, other track materials) will become the property of the Contractor, except as noted on the Drawings or in the Contract Documents. All track materials that become the property of the Contractor shall be removed from the project area and disposed of in a Contractor-furnished waste disposal site in accordance with all federal, local, state, and tribal regulations; removal and disposal shall be before Substantial Completion unless otherwise approved by the Owner.

CONSTRUCTION REQUIREMENTS

244-3.01 GENERAL. Remove all trackwork within the limits shown on the Drawings that is scheduled to be retired from service as a result of the new track construction.

244-3.02 ROADBED CLEANUP AND SHAPING. After all track material has been removed and debris and tie remnants removed, the remaining unclassified excavation shall be disposed of in accordance with SSHC Section 203.

244-3.03 MISCELLANEOUS MATERIALS. Spikes, bolts, nuts, and washers and other miscellaneous track parts such as gauge rods shall become the property of the Contractor.

SP-501, Precast Concrete

501-1.01 DESCRIPTION OF WORK. Work includes all equipment, materials, supervision, and labor required to fabricate, furnish, place, finish, cure Portland cement concrete, transport, and install for precast structure construction. The work shall be completed in accordance with SSHC Section 501 unless otherwise noted herein. All materials shall conform as indicated on the Drawings and in accordance with SSHC Sections 501, 503, and 504; and the current edition of the American Railway Engineering and Maintenance-of-Way Association (AREMA) Manual for Railway Engineering – Chapter 8 Concrete Structures and Foundations.

501-1.02 FABRICATOR QUALIFICATIONS. The Contractor's selected Fabricator must have direct experience fabricating precast concrete structural bridge components on at least two (2) projects spanning in durations of at least five (5) years total experience. Provide proof of experience with references.

501-2.01 MATERIALS. In addition to the requirements of SSHC Section 501, the following material requirements shall be met.

Unless otherwise noted, use Class A concrete for precast concrete members. Minimum compressive strength at 28 days shall be 4,000 psi unless indicated otherwise.

Reinforcing steel bars shall be ASTM A706 Grade 60 deformed bars per SSHC Subsection 709-2.01.

Ducts embedded into precast concrete products for use in anchoring dowels shall be corrugated flexible metal conduit of the diameter specified in the Drawings. Material shall be galvanized steel, aluminized steel, stainless steel, or aluminum.

Drain pipes shall be Schedule 40 PVC or rigid metallic conduit. Rigid metallic conduit shall be galvanized steel, aluminized steel, stainless steel, or aluminum.

SP-504, Steel Structures

504-1.01 DESCRIPTION OF WORK.

Complete all steel structure fabrication and erection work in accordance with the following. Work includes all equipment, materials, supervision, and labor required to fabricate, furnish, place, assemble and erect steel structure components in accordance with the Drawings, AREMA Manual for Railway Engineering – Chapter 15 Steel Structures Part 3 Fabrication and Part 4 Erection, SSHC Section 504, and these Contract Documents. Included in this work is affixing the structural steel elements to the existing pre-cast concrete members (*e.g.: coring, grouting, etc., for anchor rods.*), installation of all ancillary items required to complete the span installation (*e.g.: bearing pads, anchor rods, etc.*); miscellaneous steel as noted in the Drawings, and calculations for thermal expansion and any requisite survey control to determine the fixture points.

504-2.01 MATERIALS

Additional high-strength bolts, nuts, and washers required to complete field assembly of the span shall be in accordance with SSHC Subsection 716-2.03 Fasteners and as follows:

1. Bolts shall be ASTM F3125, Grade A325, Type 3
2. Nuts shall be ASTM A563, Grade C3
3. Washers shall be ASTM F436, Type 3

Weld filler material shall be of a grade and type to match the steel parts being welded together.

504-3.01 FABRICATION

Contractor shall assemble the bridge in accordance with the Drawings, AREMA Manual for Railway Engineering – Chapter 15 Steel Structures Part 3 Fabrication and Part 4 Erection, SSHC Section 504, and these Contract Documents. In the event of discrepancy between AREMA and SSHC referenced standard specifications and recommendations, AREMA shall control.

SSHC Section 504-3.01(6) Bolted Connections, High-Strength Bolts is modified by removing the paragraph and Table 504-2 on tightening and Bolt Tension. Tightening of bolts shall be by the turn-of-the nut method in accordance with the AREMA Manual, Chapter 15.3.2.3(d) Turn-of-Nut Tensioning and Table 15-3-3. Use light drifting necessary to draw holes together. Drifting to match unfair holes is not allowed.

Inspection of high-strength bolted connections will be per the AREMA Manual, Chapter 15.3.5.4 Inspection – High-Strength Bolted Joints. Field installed bolts shall be inspected by the Contractor's third-party testing firm with at least five (5) years experience performing similar work. Inspection shall be by observing the turn-of-the-nut tightening method for each bolt. In the event any bolt in a connection is found to be loose or defective, check and retighten all bolts in the connection. Bolts installed without an inspector on site will be rechecked at the Contractor's expense.

Slip-critical connections shall be completed with a calibrated torque wrench. Calibrate wrenches daily. Direct tension indicator tightening is not allowed.

When unbolting existing common connections is required for field assembly, provide shoring to existing members. Use new bolts for reconnecting parts.

SSHC Section 504-3.01(7) Welding is modified as follows: All welding shall be in accordance with the Bridge Welding Code, AWS D1.5. Welding of fracture critical members shall also conform to the applicable provisions of the current AREMA Manual for Railway Engineering, Chapter 15: Steel Structures. Where AWS D1.5 is not applicable, welding is to be performed in accordance with AWS D1.1, Structural Welding Code. Welding to be allowed only as shown on the drawings

and approved shop drawings. No temporary or permanent welds, if not shown on the Drawings or approved shop drawings, shall be made without specific written authorization by the Owner.

At least 30 days prior to welding, submit for approval a welding plan stamped and signed by an American Welding Society Certified Welding Inspector (CWI) per QC1 responsible for the Quality Control (QC) and consisting of the following documents:

- a. Quality control personnel qualifications including CWI number
- b. Welding Procedure Specifications (WPS) using forms in AWS D1.5, Sample Welding Forms
- c. Procedure Qualification Records (PQR) when applicable, using forms in AWS D1.5, Sample Welding Forms
- d. Welder Performance Qualifications Records (WPQR) using forms in AWS D1.5, Sample Welding Forms with documentation of current welder certification
- e. Type and extent of NDE to be conducted, as required in SSHC Section 504.

Using a CWI, perform all quality control inspection necessary to ensure the materials and workmanship meet the requirements of the Drawings and contract documents. Correct all deficiencies in materials and workmanship revealed by Quality Control and Quality Assurance inspections without additional compensation. Furnish all completed quality control inspection documents to the Owner on a weekly basis.

Tighten and leave in place all erection bolts that are used to secure welded connections prior to welding.

Furnish the Certification Reports for all materials not supplied by the Owner necessary for the construction of the project in accordance with SSHC Subsection 716-2.08. The Contractor is to supply a quality control plan that addresses all phases of the work outlined herein and on the Drawings.

When welding materials with galvanic coatings, the galvanizing within one (1) inch of the weld shall be removed, and repaired, in accordance with the Contract Documents. Welding through galvanic coatings is not permitted.

Galvanic coatings damaged due to fabrication, welding (e.g., field splices, field welds), materials handling, or occurring during the installation of items under this Contract shall be repaired either by flame spray metalizing or hot stick method, in accordance with ASTM A780 or AWS C2.23.

Removal of unacceptable weld or base metal shall be performed using mechanical means or mechanically controlled methods.

After erection, grind smooth all sharp surface irregularities resulting from field cutting or welding; power tool clean welds, bolts, washers, and abrasions to shop coat removing all rust and foreign matter. After transverse welding of steel floorbeam deck pan joints, joints on the surface of the deck pan shall be continuously filled with an approved premium multi-component polyurethane sealant designed for dynamic moving joints for sealing transverse and/or longitudinal deck plate joints.

504-3.05 SPECIAL CONSTRUCTION REQUIREMENTS

Contractor shall provide the temporary supports necessary for field assembly and final installation in the structure including all required labor, materials and equipment including cranes with capacity to handle the placement of span in accordance with approved Contractor means and methods. Temporary supports and falsework shall be designed and stamped by a licensed

Professional Engineer in the State of Alaska and shall follow the SSHC Section 512 and AREMA Manual. The plans and calculations shall be submitted for Owner approval at least 30 days prior to beginning work.

The primary steel through plate girders are fracture critical members. Extraordinary care shall be taken in the handling of fracture critical members. Lifting dogs, tongs, grips, chains, cables, or other lifting devices placed in direct contact with the member which may gouge, scratch, score, scrape, or otherwise damage the surface, edges, or corners shall not be used. Procedures for handling fracture critical members using lifting straps, timber cushions, or other protective devices shall be developed as part of the erection plan, submitted to the Owner, and receive written approval prior to handling any material for movement designated as fracture critical.

Temporary falsework structures which cross Bird Creek or are otherwise influenced by tidal fluctuations shall have the low chord of the structure at or above the Mean Higher High Water (MHHW) elevation noted on the Drawings. Do not place temporary piles or other structural components within the Bird Creek Ordinary High Water (OHW) limits as noted on the Drawings. Piles placed between the MHHW and OHW limits must be placed during low tide cycles during "in-the-dry" conditions. "In-the-dry" conditions are defined as conditions in which the work being performed is not in contact with the main water bodies, either Bird Creek or Turnagain Arm. If water levels rise to a point where temporary falsework piles are in contact with the main water bodies during active pile driving, then pile driving must cease until "in-the-dry" conditions are restored. All temporary falsework structures must be completely removed at the completion of construction.

Bearings shall be set when the ambient temperature is within the neutral set temperature range (-8°F to 43°F) as indicated on the 125' Standard TPG Drawings. If span is set outside of the neutral set temperature range, bearings shall be deformed by the equation noted in the Drawings and reset when the ambient temperature is within the neutral set temperature range.

Anchor rods shall be set in accordance with the 125' Standard TPG Drawings using an approved non-shrink epoxy grout. Anchor rods shall be set and the epoxy cured to reach the minimum compressive strength noted in the plans according to the grout manufacturer's recommendations prior to opening the bridge for train traffic. Anchor rods shall be secured in place during grout curing to avoid displacement during span change out activities.

When assembling the span, Contractor shall follow the instructions included on the 125' Standard TPG Drawings. A minimum of 48 hours prior to starting a track outage for span change out, the bridge will be inspected by the Contractor's third-party testing firm, Railroad Bridge Supervisor, and the Owner's authorized representative. Any unsafe or defective conditions noted shall be promptly rectified and reinspected to the satisfaction of all three parties prior to beginning the track outage for span change out.

Prior to placing span into service, the bridge shall be inspected by the Railroad Bridge Supervisor and the Owner's authorized representative. Any unsafe or defective conditions noted shall be promptly rectified and reinspected to the satisfaction of both parties prior to placing the span in service.

SP-618, Seeding

SSHC Section 618-2.01 Materials is modified to include the following approved job seed mix and fertilizer.

Seed mix requirements:

- 'Arctared' Red Fescue – 15%
- 'Boreal' Red Fescue – 20%
- 'Notran' Tufted Hairgrass – 40%
- 'Wainwright' Slender Wheatgrass – 15%
- Annual Ryegrass – 10%

Fertilizer:

10N-10P-10K-8.5S (or approved equivalent)

SSHC Section 618-3.03 Application is modified to include the following seed and fertilizer application rates:

- Seed on upland areas with slopes less than 3H:1V: 1 pound per 1000 square feet
- Seed on upland areas with slopes greater than 3H:1V: 2 pounds per 1000 square feet
- Fertilizer: 10 pounds per 1000 square feet.

SP-643, Traffic Maintenance

SSHC Section 643 is replaced with the following:

**SECTION 643
TRAFFIC MAINTENANCE**

643-1.01 DESCRIPTION. Protect and control traffic during the contract. Furnish, erect, maintain, replace, clean, move, and remove the traffic control devices required to ensure the traveling public's safety. Perform all administrative responsibilities necessary to implement this work.

Maintain all roadways and pedestrian and bicycle facilities affected by the work in a smooth and traversable condition. Construct and maintain approaches, crossings, intersections, and other necessary features throughout the project for the life of the contract.

Illuminate construction activities listed in Table 643-4 during hours of night work on roads open to the public within project limits.

643-1.02 DEFINITIONS. These definitions apply only to Section 643.

ATM. When used in this Section, ATM stands for the *Alaska Traffic Manual*, which is comprised of the Manual on Uniform Traffic Control Devices (MUTCD), the Alaska Traffic Manual Supplement, any adopted revisions or interim addenda to either document issued subsequently, and corrections to known errors to either document.

BALLOON LIGHT. Light surrounding by a balloon-like enclosure kept inflated by pressurized air or helium, and producing uniform light through 360 horizontal degrees.

CONSTRUCTION PHASING PLAN. A plan for each phase of the project showing how to accommodate traffic. Show the sequence of work by segment or phase, if required.

FIXED OBJECTS. Private vehicles, parked flagger vehicles, idle construction equipment, construction material stockpiles, culvert ends, individual trees, power poles, utility poles and appurtenances, and other items deemed by the Engineer to present a hazard to motorists, pedestrians, or bicyclists traveling through the work zone.

NIGHT WORK. Work occurring between sunset and sunrise on all days except the “No Lighting Required” period shown in the Table 643-1 below:

**TABLE 643-1
PROJECT LOCATIONS – NIGHT TIME ILLUMINATION EXCLUSION**

Latitude (degrees)	No Lighting Required		Nearby
	Start	End	Cities
61	June 11	July 1	Anchorage, Valdez, Girdwood

TRAFFIC. The movement of vehicles, pedestrians, and bicyclists through road construction, maintenance operations, utility work, or similar operations.

TRAFFIC CONTROL PLAN (TCP). A drawing or drawings indicating the method or scheme for safely guiding and protecting motorists, pedestrians, bicyclists, and workers in a traffic control zone. The TCP depicts the traffic control devices and their placement and times of use.

TRAFFIC CONTROL ZONE. A portion of a road construction project, maintenance operation, utility work or similar operation that affects traffic and requires traffic control to safely guide and protect motorists, pedestrians, bicyclists, or workers.

643-1.03 TRAFFIC CONTROL PLAN. Implement an approved TCP before beginning work within the project limits.

The TCP includes, but is not limited to, signs, barricades, traffic cones, plastic safety fence, sequential arrow panels, portable changeable message board signs, special signs, warning lights, portable concrete barriers, crash cushions, flaggers, pilot cars, interim pavement markings, temporary lighting, temporary roadways and all other items required to direct traffic through or around the traffic control zone according to these Specifications and the ATM. Address in the TCPs placement of traffic control devices, including location, spacing, size, mounting height and type. Include code designation, size, and legend per the ATM and the Alaska Sign Design Specification (ASDS). Include longitudinal buffer space for the posted speed limit, according to Table 6C-2 of the ATM unless project conditions or geometric features prohibit including all or a portion of the buffer length.

When a TCP is included in the Drawings, use it, modify it, or design an alternative TCP. When a TCP is omitted from the Drawings, provide one according to this Section and the ATM.

Submit new or modified TCPs to the Owner and AK DOT&PF for approval. All TCPs must include the following information:

1. Project name and number.
2. A designated TCP number and name on each page.
3. For TCPs more than one page, each page must be numbered.
4. The posted speed limit for each roadway.
5. Existing striping width, lane width, and road surfacing.
6. Construction lane widths, striping layout, and temporary pavement marker layout.
7. Provisions for Pedestrian, Bicycle, and ADA travel through the work zone.
8. Dates and times the TCP will be in effect and why it is being used.

9. The Worksite Traffic Supervisor's signature certifying that all TCPs conform to the ATM and the Contract.
10. The Project Superintendent's signature confirming the TCP is compatible with the work plan.
11. The name(s) of the Worksite Traffic Supervisor, his/her alternate and their 24-hour telephone number(s).
12. Signs to be used and the ASDS designation number and size.
13. Location and spacing of all devices and signs.
14. A plan to address any possible slopes, drop offs, paving joints, or similar temporary features that may occur during use of the TCP.
15. For TCPs proposed to be used at night, note how the requirements will be met for the required lighting and retroreflective material.

TCPs submitted for approval without all the required information will be rejected. Allow 7 days for review of each TCP submittal. All required modifications to a TCP require a new submission and an additional 7 days for review.

A minor revision to a previously approved TCP during construction requires 48 hours for review and approval by the Engineer.

The TCPs, Drawings, and Alaska Standard Plans show the minimum required number of traffic control devices. If unsafe conditions occur, the AK DOT&PF Engineer may require additional traffic control devices.

A waiver may be requested, in writing, of regulation 17 AAC 25 regarding oversize and overweight vehicle movements inside the project limits. If the waiver is approved, movements of oversize and overweight vehicles in or near traffic inside the project limits will be done according to the provisions of an approved Traffic Control Plan. Maintain a minimum 12-foot lateral separation between the non-street legal vehicles and the motoring public. The Traffic Control Plan shall specify the traffic control devices required for these operations.

Road Closures and Major Traffic Sequencing (events). Submit a written request to the Engineer for review and approval of each proposed event and event date. Allow 7 days for the Engineer to review any proposed event or subsequent changes/corrections. The proposed event date will be no less than 14 days from the date of written approval.

643-1.04 WORKSITE TRAFFIC SUPERVISOR. Provide a Worksite Traffic Supervisor responsible for maintaining 24-hour traffic operations.

1. **Qualifications.** The Worksite Traffic Supervisor shall be knowledgeable and experienced regarding the requirements of the ATM and the implementation of those requirements. The Worksite Traffic Supervisor shall be familiar with the Drawings, the Specifications, proposed operations, and certified as one of the following:
 - a. Traffic Control Supervisor, American Traffic Safety Services Association (ATSSA)
 - b. Work Zone Temporary Traffic Control Technician, or Work Zone Safety Specialist, International Municipal Signal Association (IMSA)

Certify according to AK DOT&PF Form 25D-124 that the Worksite Traffic Supervisor has a minimum 4000 hours of temporary traffic control work experience, is competent and capable, and has the authority to perform the duties and responsibilities in accordance with this section.

- a. Temporary traffic control work experience shall demonstrate an understanding of concepts, techniques, and practices in the installation and maintenance of traffic control devices, and skill in reading, interpreting, implementing, and modifying TCPs.
- b. Temporary traffic control work experience includes: flagging; installing traffic control devices in accordance with TCPs; monitoring traffic control devices and TCP performance; and recognizing and reporting deficiencies in traffic control devices and TCPs for correction.
- c. Temporary traffic control work experience is gained while serving as a Worksite Traffic Supervisor-in-training, temporary traffic control support personnel, and Flagger.
- d. Four thousand hours of experience serving solely as a Flagger does not satisfy these requirements.

Worksite Traffic Supervisors shall maintain current certification and be able to show their certification anytime they are on the project.

2. **Duties.**

- a. Prepare the TCPs and public notices and coordinate traffic control operations between the Project Superintendent and the Engineer.
- b. Physically inspect the condition and position of all traffic control devices used on the project at least twice each day and at approximately 12-hour intervals. Ensure that traffic control devices work properly, are clean and visible, and conform to the approved TCP. Complete and sign a detailed written report of each inspection within 24 hours. Use Traffic Control Daily Review Form 25D-104.
- c. Supervise the repair or replacement of damaged or missing traffic control devices.
- d. Review and anticipate traffic control needs. Make available proper traffic control devices necessary for safe and efficient traffic movement.
- e. Review work areas, equipment storage, and traffic-safety material handling and storage.
- f. Hold traffic safety meetings with superintendents, foremen, subcontractors, and others as appropriate before beginning construction, prior to implementing a new TCP, and as directed. Invite the Engineer to these meetings.
- g. Supervise all traffic control workers, flaggers, and pilot car drivers.
- h. Certify that all flaggers are certified as required by Subsection 643-3.04.4. Submit a copy of all flagger certifications to the Owner and AK DOT&PF Engineer.
- i. Supervise lighting for night work.

3. **Authority.** The Worksite Traffic Supervisor shall have the Contractor's authority to stop work and implement immediate corrective action to unsafe traffic control, in locations where unsafe traffic control is present.

643-1.05 CONSTRUCTION PHASING PLAN. Submit a Construction Phasing Plan for approval no less than 5 working days prior to the preconstruction conference. Include the following:

1. Form 25D-124 designating the Worksite Traffic Supervisor, providing the 24-hour telephone number, and certifying minimum 4,000 hours of work experience as described in 643-1.04 Worksite Traffic Supervisor.
2. A construction-phasing plan for each phase or segment of the project.
3. TCPs for the first phase of the project. Show permanent and temporary traffic control measures, including the times each TCP will be used.

Submit any changes to the AK DOT&PF Engineer for approval 7 days before proposed implementation.

643-1.06 TRAFFIC MAINTENANCE SETUP. Traffic Maintenance Setup items are site specific and are detailed as individual TCPs on the plan sheets. They depict the method or scheme required to route traffic safely and efficiently when any of the following restrictions occur:

1. **Lane Closure.** The closure of one or more lanes on a roadway.
2. **Detour.** The redirection of traffic through or around a traffic control zone.
3. **Road Closure.** The closure of a roadway with or without a specified detour route.
4. **One Lane Road.** A two-way roadway reduced to a single-lane roadway with flaggers, pilot cars, traffic signals, stop signs, or yield signs.

643-2.01 MATERIALS. Provide traffic control devices meeting the following requirements:

1. **Signs.** Use signs, including sign supports, that conform to SSHC Section 615, the ATM, and ASDS.
 - a. Construction Signs: Regulatory, guide, or construction warning signs designated in the ASDS.
 - b. Permanent Construction Signs: As designated on the Drawings or an approved TCP.
 - c. Special Construction Signs: All other signs are Special Construction Signs. Neatly mark the size of each sign on its back in 3-inch black numerals.
2. **Portable Sign Supports.** Use wind-resistant sign supports with no external ballasting. Use sign supports that can vertically support a 48 X 48 inch traffic control sign at the height above the adjacent roadway surface required by the ATM.
3. **Barricades and Vertical Panels.** Use barricades and vertical panel supports that conform to the ATM. Use Type III Barricades at least 8 feet long. Use retroreflective sheeting that meets ASTM D4956 Type II or III.
4. **Portable Concrete Barriers.** Use portable concrete barriers that conform to the Contract. For each direction of traffic, equip each 12.5-foot section of barrier with at least two side-mounted retroreflective tabs placed approximately 6 to 8 feet apart, or a continuous 4-inch wide horizontal retroreflective stripe mounted 6 inches below the top of the barrier. Use yellow tabs or stripe when barriers are placed at centerline. Use white tabs or stripe when barriers are placed on the roadway shoulder. Use retroreflective sheeting that meets ASTM D4956 Type III, IV or V.

5. **Warning Lights.** Use Type A (low intensity flashing), Type B (high intensity flashing) or Type C (steady burn) warning lights that conform to the ATM.
6. **Drums.** Use plastic drums that conform to the requirements of the ATM. Use retroreflective sheeting that meets ASTM D4956 Type II or III.
7. **Traffic Cones and Tubular Markers.** Use reflectorized traffic cones and tubular markers that conform to the requirements of the ATM. Use traffic cones and tubular markers at least 28 inches high. Use retroreflective sheeting that meets ASTM D4956 Type II or III.
8. **Interim Pavement Markings.** Apply markings according to SSHC Section 670 and the manufacturer's recommendations. Use either:
 - a. Paint meeting SSHC Subsection 708-2.03 with glass beads meeting SSHC Subsection 712-2.08,
 - b. Preformed Marking Tape (removable or non-removable) meeting SSHC Subsection 712-2.14, or
 - c. Temporary Raised Pavement Markers meeting SSHC Subsection 712-2.15 or 712-2.16, as appropriate.
9. **High-Level Warning Devices.** Use high-level warning devices that conform to the ATM.
10. **Temporary Crash Cushions.** Use retroreflective sheeting that meets ASTM D4956 Type III, IV or V. Application of crash cushion must be appropriate for the intended use and be installed per manufacturer's recommendation. Temporary crash cushions used as rail or barrier end treatments must be redirective. Temporary crash cushions that are barrels or barricade filled with sand or water may only be used when the forecasted temperature during their use is above 32 degrees Fahrenheit.
11. **Sequential Arrow Panels.** Use Type A (24 X 48 inch), Type B (30 X 60 inch) or Type C (48 X 96 inch) panels that conform to the ATM.
12. **Portable Changeable Message Board Signs.** Use new truck or trailer mounted portable changeable message board signs with self-contained power supply for the sign and with:
 - a. Message sign panel large enough to display 3 lines of 18-inch high characters
 - b. Eight character display per message module
 - c. Fully programmable message module
 - d. Remote control cellular, wireless radio frequency (RF), landline
 - e. Waterproof, lockable cover for the controller keyboard
 - f. Capacity for electric/hydraulic sign raising or lowering
 - g. Radar over speed detection
 - h. Variable flash and sequence rates
 - i. Light emitting diode (LED) display, using Institute of Transportation Engineers (ITE) amber/yellow
 - j. The capacity for a minimum of 150 pre-programmed messages
 - k. Battery-Pack Operation Duration: minimum of 55 hours under full load

- I. Power chords shall comply with the National Electrical Code (NEC) Article 600.10 Portable or Mobile Signs, paragraphs 600.10(C)(1) Cords and 600.10(C)(2) Ground-Fault Circuit Interrupter (GFCI). The cord will have integral GFCI protection located in either the attachment plug or 12 inches or less from the plug.
13. **Plastic Safety Fence.** Use 4-foot high construction orange fence manufactured by one of the following companies, or an approved equal:
 - a. "Safety Fence" by Jackson Safety, Inc., Manufacturing and Distribution Center, 5801 Safety Drive NE, Belmont, Michigan, 49306. Phone (800) 428-8185.
 - b. "Flexible Safety Fencing" by Carsonite Composites, LLC, 19845 U.S. Highway 76, Newberry, South Carolina, 29108. Phone (800) 648-7916.
 - c. "Reflective Fencing" by Plastic Safety Systems, Inc., 2444 Baldwin Road, Cleveland, Ohio 44104. Phone (800) 662-6338.
14. **Temporary Sidewalk Surfacing.** Provide temporary sidewalk surfacing as required by an approved TCP and the following:
 - a. Use plywood at least 1/2-inch thick for areas continuously supported by subgrade. Use plywood at least 1 inch thick for areas that are not continuously supported.
 - b. Do not use unsupported 1-inch plywood longer than 30 inches.
 - c. Use plywood with regular surfaces. Do not overlap plywood joints higher than 1/2-inch. Bevel overlap joints so the maximum slope of the overlapping edge is 2 horizontal to 1 vertical.
 - d. Fasten so wind and traffic will not displace temporary surfacing.
15. **Temporary Guardrail.** Use temporary guardrail that meets Section 606, except that posts may require placement under special conditions, such as in frozen ground.
16. **Flagger Paddles.** Use flagger paddles with 24 inches wide by 24 inches high sign panels, 8 inch Series C lettering (see ASDS for definition of Series C), and otherwise conform to the ATM. Use retroreflective sheeting that meets ASTM D4956 Type VIII, IX or XI. Use background colors of fluorescent orange on one side and red on the other side.
17. **Truck Mounted Attenuator, TMA.** The TMA shall be mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight per the manufacturer's recommendations.
18. **Portable Steel Barriers.** Use portable steel barriers that conform to the contract. For each direction of traffic, equip each section of barrier with side-mounted retroreflective tabs placed approximately 6 to 8 feet apart, or a continuous 4-inch wide horizontal retroreflective stripe mounted 6 inches below the top of the barrier. Use yellow tabs or stripe when barriers are placed at centerline. Use white tabs or stripe when barriers are placed on the roadway shoulder. Use retroreflective sheeting that meets ASTM D4956 Type III, IV, or V.
19. **Flexible Markers.** Refer to SSHC Subsection 606-2.01 Materials.

643-2.02 CRASHWORTHINESS. Temporary Work Zone devices, including portable barriers, manufactured after December 31, 2019, must have been successfully tested to the 2016 edition of Manual for Assessing Safety Hardware (MASH). Such devices manufactured on or before this date, and successfully tested to National Cooperative Highway Research Program (NCHRP) Report 350 or the 2009 edition of MASH, may continue to be used throughout their normal service lives.

Submit documentation, by the method indicated on table 643-2, that the following devices comply with Test Level 3 requirements of National Cooperative Highway Research Program (NCHRP) Report 350 or the Manual for Assessing Safety Hardware (MASH). Submit documentation of compliance to the Engineer before installing devices on the project.

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

Category	Devices	Devices Manufactured Before Dec. 31, 2019¹	Devices Manufactured after Dec. 31, 2019¹	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, if available, at Test Level 3, or DOT&PF eligibility determination, unless otherwise required in the Contract

- 1 The AK DOT&PF 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 a FHWA Eligibility letter; it is implied that the tests were run for Test Level 3.

In Table 643-2, Category 1 devices that exceed the following weights and heights require certification that they meet the evaluation criteria of NCHRP Report 350 or MASH, Test Level 3. This certification may be a one-page affidavit signed by the vendor. Documentation supporting the certification (crash tests and/or engineering analysis) must be kept on file by the certifying organization. No certification is required for devices less than or equal to both the weight and height on the schedule below:

Device	Composition	Weight	Height
Cones	Rubber	20 lb	36 in.
	Plastic	20 lb	48 in.
Candles	Rubber	13 lb	36 in.
	Plastic	13 lb	36 in.
Drums	Hi Density Plastic	77 lb	36 in.
	Low Density Plastic	77 lb	36 in.
Delineators	Plastic or fiberglass	N/A	48 in.

643-3.01 GENERAL CONSTRUCTION REQUIREMENTS. Keep the work, and portions of the project affected by the work, in good condition to accommodate traffic safely. Provide and maintain traffic control devices and services inside and outside the project limits, day and night, to guide traffic safely.

Unless otherwise provided in this Section, keep all roadways, business accesses, and pedestrian facilities within the project limits open to traffic. Obtain the AK DOT&PF Engineer's approval before temporarily closing residential, commercial, or street approaches. Provide access through the project for emergency vehicles and school and transit buses. Properly sign and/or flag all locations where the traveling public is redirected or stopped. Organize construction operations so the total of all construction related stoppages experienced by a vehicle traveling through the project does not exceed 20 minutes except when indicated otherwise in the Contract.

Stop equipment at all points of intersection with the traveling public unless an approved TCP shows otherwise.

Continue to operate all illumination and signalization according to the requirements of SSHC Subsection 660-3.09. When moving approach lanes, realign signal heads as necessary according to the ATM. Coordinate any modifications to existing traffic signals with the agency that maintains and operates them. Operate flood lighting at night according to the ATM. Adjust flood lighting so that it does not shine into oncoming traffic.

Provide and maintain safe routes for pedestrians and bicyclists through or around traffic control zones at all times, except when regulations prohibit pedestrians or bicyclists. Station a flagger, where construction activity encroaches onto the safe route in a traffic control zone, to assist pedestrians, and bicyclists past the construction activity.

Maintain business access(s) during flagging operations.

Immediately notify the AK DOT&PF Engineer of any traffic related accident that occurs within the project limits as soon as an employee or a subcontractor becomes aware of the accident.

643-3.02 ROADWAY CHARACTERISTICS DURING CONSTRUCTION. Obtain an approved TCP before reducing existing roadway lane and shoulder widths and before starting construction. Maintain a clear area with at least 2 feet between the edge of traveled way and the work area. Use barricades, traffic cones, or drums to delineate this area. Place traffic control devices on the work side of the clear area. Space them according to the ATM.

643-3.03 PUBLIC NOTICE. Give notice at least 3 days before major changes, delays, lane restrictions, or road closures to local officials and transportation organizations, including but not necessarily limited to:

- Alaska Trucking Association
- Alaska State Troopers
- Division of Measurement Standards
- Local Police Department
- Local Fire Department
- Local Government Traffic Engineer
- School and Transit Authorities
- Local Emergency Medical Services
- Local Media (newspapers, radio, television)
- Railroads (where applicable)
- U.S. Postal Service
- Major Tour Operators

Provide local traffic enforcement and maintenance agencies 24-hour notice before shutting down a traffic signal system. Provide notice as required by utility companies before repairing or replacing a utility.

Provide the Alaska State Troopers, local police and fire department with the radio frequencies used on the project and the 24-hour telephone numbers of the Worksite Traffic Supervisor and the Project Superintendent. These telephone numbers are used to alert construction employees when emergency vehicles must pass through the project. When notified of emergencies make every necessary effort to expedite rapid passage.

Additional notices may be given through the Navigator or 511 System for selected projects. Check the special provisions for those requirements.

643-3.04 TRAFFIC CONTROL DEVICES. Before starting construction, erect permanent and temporary traffic control devices required by the approved TCPs. The AK DOT&PF Engineer will determine advisory speeds when necessary.

For lane closures on multilane roadways, use sequential arrow panels. During hours of darkness when required by the approved TCP, use flashing warning lights to mark obstructions or hazards and steady-burn lights for channelization.

Use only one type of traffic control device in a continuous line of delineating devices, unless otherwise noted on an approved TCP. Use drums or Type II barricades for lane drop tapers.

During non-working hours and after completing a particular construction operation, remove all unnecessary traffic control devices. Store all unused traffic control devices in a designated storage area which does not present a nuisance or visual distraction to traffic. If sign panels are post mounted and cannot be readily removed, cover them entirely with either metal or plywood sheeting. Completely cover signal heads with durable material that fully blocks the view of signal head and will not be damaged or removed by weather.

Keep signs, drums, barricades, and other devices clean at all times.

Use only traffic control devices that meet the requirements of the "Acceptable" category in ATSSA (American Traffic Safety Services Association) "Quality Guidelines for Temporary Traffic Control Devices" and meet crashworthiness requirements per Section 643-2.02.

Immediately replace any devices provided under this Section that are lost, stolen, destroyed, inoperable or deemed unacceptable while used on the project. Stock repair parts for each Temporary Crash Cushion used on the project. Repair damaged crash cushions within 24 hours.

Maintain pre-existing roadside safety hardware at an equivalent or better level than existed prior to project implementation until the progress of construction necessitates removing the hardware. All existing hazards that are currently protected with roadside safety hardware or new hazards which result from project improvements shall be protected or delineated as required in the plans, specifications, and approved TCPs until permanent roadside safety hardware is installed. All temporary roadside safety hardware shall meet crashworthiness requirements of Subsection 643-2.02.

All items paid under this Section remain the property of the Contractor, unless noted otherwise in the contract. Remove them after completing the project.

1. **Embankments.** Close trenches and excavations at the end of each continuous work shift, except as indicated by the AK DOT&PF Engineer.

Install portable concrete or steel barrier, plastic drums, barricades, tubular markers, plastic safety fence, and cones as specified on the Drawings or TCPs to delineate open trenches, ditches, other excavations, and hazardous areas when they exist along the roadway for more than one continuous work shift.

2. **Adjacent Travel Lane Paving.** When paving lifts are 2 inches or greater and you cannot finish paving adjacent travel lanes or paved shoulders to the same elevation before the end of the paving shift, install: W8-11 (Uneven Lanes), W8-9 (Low Shoulder), W8-17 (Shoulder Drop-Off), W14-3 (No Passing Zone), R4-1 (Do Not Pass), R4-2 (Pass with Care), and W8-1 (Bump) signs as appropriate. Place additional signs every 1500 feet if the section is longer than 1/2 mile.

3. **Fixed Objects, Construction Vehicles and Equipment Working On or Next to the Traveled Way.** Do not park equipment in medians. Locate fixed objects at least 30 feet from the edge of traveled way. Fixed objects that exist prior to construction activity are not subject to this requirement unless the proposed temporary traffic routing moves the edge of traveled way closer to the pre-existing fixed object. Vehicles and other objects within parking lots in urban environments are considered preexisting fixed objects regardless of whether they are or are not present continuously throughout the day.

When worksite restrictions, land features, right of way limitations, environmental restrictions, construction phasing, or other construction conditions allow no practicable location meeting the preceding requirements, the AK DOT&PF Engineer may approve alternate locations for fixed objects. Alternate locations shall be as far as practicable from the edge of traveled way. When the alternate location provides 15 feet or more separation from the edge of traveled way, the AK DOT&PF Engineer may verbally approve the alternate location. When the alternate location provides less than 15 feet separation, written approval is required.

When the AK DOT&PF Engineer determines a fixed object or fixed objects present unacceptable hazard, use drums, or Type II barricades with flashing warning lights, or use portable concrete or steel barriers, or temporary crash cushion to delineate or shield the hazard, as approved by the AK DOT&PF Engineer.

Remove obstructions greater than 4 inches above the nominal foreslope grade at the end of each continuous work shift.

4. **Flagging.** Furnish trained and competent flaggers and all necessary equipment, including lighting of the flagging position during nighttime operations, to control traffic through the traffic

control zone. The AK DOT&PF Engineer will approve each flagging operation before it begins and direct adjustments as conditions change.

Flaggers must be certified as one of the following:

- a. Flagging Level I Certification by IMSA
- b. Flagger Certification by ATSSA
- c. Traffic Control Supervisor, ATSSA
- d. Work Zone Safety Specialist, IMSA
- e. ATSSA Flagging Instructor

Flaggers shall maintain current flagger certification. Flaggers must be able to show their flagger certification anytime they are on the project.

Flaggers must maintain their assigned flagging location at all times, unless another qualified flagger relieves them, or the approved traffic control plan terminates the flagging requirements. Remove, fully cover, or lay down flagger signs when no flagger is present. Keep the flaggers' area free of encumbrances. Keep the flagger's vehicle well off the roadway and away from the flagging location so the flagger can be easily seen.

Provide approved equipment for two-way radio communications between flaggers when flaggers are not in plain, unobstructed view of each other.

Obtain the AK DOT&PF Engineer's written approval before flagging signalized intersections. When flagging a signalized intersection, either turn off and cover the traffic signal or place it in the All-Red Flash mode. Coordinate changing traffic signal modes and turning off or turning on traffic signals with the agency responsible for signal maintenance and operation and the Engineer. Get their written approval in advance. Only uniformed police officers are permitted to direct traffic in an intersection with an operating traffic signal.

5. **Pilot Cars.** You may use pilot cars when part of an approved TCP, if the AK DOT&PF Engineer determines one-way traffic is necessary, or if the route through the traffic control zone is particularly hazardous, involved, or frequently altered to preclude adequate signing, Do not use pilot cars to avoid localized traffic control at several locations. Pilot car operators may not control Automated Flagger Assistance Devices while operating a pilot car.

Organize construction operations so the total of all stoppages experienced by a vehicle traveling through a project does not exceed 20 minutes. However, this does not imply that you may allow 20 minutes in all cases. Coordinate multiple pilot-car operations within a project or adjoining projects to minimize inconvenience to the traveling public. Two or more pilot cars may be used to provide two-way traffic through the traffic control zone to reduce the waiting period. The flagger or pilot car operator must record each pilot car's departure time in a bound field book furnished by the AK DOT&PF Engineer. Whenever practical, the flagger should tell the motorist the reason for and approximate length of the delay. Make every reasonable effort to yield right-of-way to the public and prevent excessive delay.

Use an automobile or pickup as the pilot car, with the company logo prominently displayed. Equip the pilot car with a two-way radio for contact with flaggers and other pilot cars. Mount a G20-4 sign (Pilot Car Follow Me) on the rear at least 5 feet above the driving surface. Use high intensity flashing strobe lights, oscillating beacons, or rotating beacons on all Pilot Cars. Vehicle hazard warning lights may supplement but are not permitted to be used instead of

high intensity flashing strobe lights, oscillating beacons, or rotating beacons. Identify the last vehicle in the column.

When pilot car operations are approved, establish all required pilot car traffic control devices before beginning work. Continue pilot car operations until no longer necessary and an approved TCP is in place for operations without pilot car, including all required traffic control devices.

6. **Street Sweeping and Power Brooming.** Keep free of loose material paved portions of the roadway and haul routes open to the public, including sections of roadway off the project where the Contractor's operations have deposited loose material. Use equipment for brooming and sweeping as recommended by the manufacturer and the following:

Dirt, dust and construction materials, mobilized as a result of power brooming and or sweeping, shall not be pushed, ejected, thrown or drift beyond the lesser of, 2 feet from the equipment perimeter or the edge of the paved surface.

All equipment shall operate to typical industry standards. Maintain equipment to operate as designed by the manufacturer. Equipment will employ safety equipment, warning lights, and other as required by the Specifications and these Special Provisions.

Sweeper and Broom Options: Table 643-5, Traffic Control Rate Schedule, Street Sweeping

- a. **Regenerative Sweeper:** Sweeper that blows a stream of air at the paved surface, causing fine particles to rise, and then caught through a vacuum system.
- b. **Vacuum Sweeper:** Sweeper that creates a vacuum at the paved, surface sucking dirt, dust, and debris into a collection system.
- c. **Mechanical Broom Sweeper:** Sweeper designed to pick up and collect larger size road debris, stones and litter, etc. In addition to the requirements noted in these Specifications, use of a mechanical broom sweeper requires the AK DOT&PF Engineer to approve the sweeper for the intended use.
- d. **Power Broom:** Power brooming that wets, pushes and or ejects loose material directly into an attached collection/pickup container may be used when approved by the AK DOT&PF Engineer. The added moisture will be contained to the paved roadway surface.

Dry Power Brooming is not permitted. Power brooming without direct/immediate means of collection/pickup is not permitted.

7. **Watering.** Furnish, haul, and place water for dust control and pavement flushing, as directed. Use water trucks that can provide a high-pressure water stream to flush the pavement and a light-water spray to control dust. If the flushing operations contaminate or fill adjacent catch basins, clean and restore them to their original condition. This requirement includes sections of roadway off the project where flushing is required. The AK DOT&PF Engineer will control water application.

Obtain an Alaska Department of Natural Resources permit for water removal before taking water from a lake, stream, or other natural water body. Comply with the Alaska Department of Fish and Game screening requirements for all water removal operations.

8. **Portable Changeable Message Board Signs.** Furnish Changeable Message Signs when approved on a TCP. Display only messages approved on the TCP. Follow application guidelines in the ATM.

9. **Truck Mounted Attenuator (TMA).** TMAs are mounted on the rear of work vehicles. Impact attenuators shall meet crashworthiness requirements of 643-2.02. TMAs shall be mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight in accordance with the manufacturer's recommendations. TMAs shall have an adjustable height so that it can be placed at the correct elevation during usage and to a safe height for transporting. Approach ends of TMAs shall have impact attenuator markings in accordance with the ATM. Do not use a damaged attenuator in the work. Replace any damaged TMA at your expense.
10. **Traffic Control Vehicles.** Use high intensity flashing strobe lights, oscillating beacons, or rotating beacons on the Work Zone Supervisor's vehicle and on vehicles being used to transport and set-up traffic control devices. Vehicle hazard warning lights may supplement but are not permitted to be used instead of high intensity flashing strobe lights, oscillating beacons, or rotating beacons.

643-3.05 AUTHORITY OF THE ENGINEER. When existing conditions adversely affect the public's safety or convenience, the Contractor will receive an oral notice, and then a written notice according to SSHC Subsection 105-1.01, Authority of the Engineer. The notice will state the defect(s), the corrective action(s) required, and the time required to complete the corrective action(s). In no case shall this time exceed 24 hours. If corrective action(s) are not completed within the specified time, the AK DOT&PF Engineer may immediately suspend work on the offending operations until the defect(s) are corrected. The AK DOT&PF Engineer may require outside forces to correct unsafe conditions. The cost of work by outside forces will be deducted from any monies due under the terms of this Contract.

643-3.07 MAINTENANCE OF TRAFFIC DURING SUSPENSION OF WORK. Approximately one month before work is suspended for the season, schedule a preliminary meeting with the AK DOT&PF Engineer and Maintenance & Operations to outline the anticipated roadway condition and the work expected to be completed before shutdown. Schedule a field review with the Department for winter maintenance acceptance. At the field review, the AK DOT&PF Engineer will prepare a punch list for implementation before acceptance.

To be relieved of maintenance responsibility, leave all roads with a smooth and even surface for public use at all times. Properly crown the roadbed surface for drainage and install adequate safety facilities. Make sure all illumination and signals, including vehicle detectors, are in good working order.

After the project is accepted for suspension of work and until ordered to resume construction operations, the Department is responsible for maintaining the facility. The Department will accept maintenance responsibility only for portions of the work that are open to the public, as determined by the AK DOT&PF Engineer. The Department will not accept maintenance responsibility for incomplete work adjacent to accepted roads. The contractor is responsible for maintaining all other portions of the work. The AK DOT&PF Engineer will issue a letter of "Acceptance for Winter Maintenance" that lists all portions of the work that the Department will maintain during a seasonal work suspension. The contractor retains all contractually required maintenance responsibilities until receipt of this letter.

If the contractor suspends work due to unfavorable weather (other than seasonal) or due to failure to correct unsafe conditions, carry out Contract provisions, or carry out the AK DOT&PF Engineer's orders. All costs for traffic maintenance during the suspended period will be borne by the Contractor.

When work is resumed, replace or renew any work or materials lost or damaged during temporary use. If the Department caused damage during winter suspension, payment will be made for

repairs by unit pay item or in accord with Subsection 109-1.05, Compensation for Extra Work. When the AK DOT&PF Engineer directs, remove any work or materials used in the temporary maintenance. Complete the project as though work has been continuous.

643-3.08 CONSTRUCTION SEQUENCING. The construction sequencing detailed in these provisions, the Special Provisions, and the Drawings is suggested only. The Contractor may propose alternative construction sequencing.

Throughout the project, maintain the existing roadway, pedestrian walkway, or route, and bicycle route or pathway configuration (such as the number of lanes and their respective widths) except for restrictions to traffic allowed in the Special Provisions or on the Drawings, and addressed through approved TCPs. A restriction to traffic is any roadway surface condition, work operation, or traffic control setup that reduces the number of lanes or impedes traffic. Obtain an approved TCP before restricting traffic.

Unless otherwise determined by the AK DOT&PF Engineer and on an approved Traffic Control Plan (TCP), do not restrict traffic during the times listed below:

1. Monday through Friday: 0530 hrs to 0800 hrs and 1630 hrs to 1900 hrs.
2. Around any Holiday:
 - a. If a holiday falls on Sunday, Monday, or Tuesday, the above stipulations apply from 1200 hrs on the Friday before the holiday to 0300 hrs. on the day after the holiday.
 - b. If a holiday falls on Wednesday, the above stipulations apply from 1200 hrs on the Tuesday before the holiday to 0300 hrs. on the Thursday after the holiday.
 - c. If a holiday falls on Thursday, Friday, or Saturday, the above stipulations apply from 1200 hrs on the day before the holiday to 0300 hrs. on the Monday after the holiday.

Lane restrictions, if allowed, conducted so that no more than a 10 minute accumulated stopped delay, 40 vehicles, or 1/4 mile (1320 feet) of traffic detained, whichever occurs first, before releasing the detained motorists. During paving operations, a 20 minute stopped delay, 80 vehicles, or 1/2 mile (2640 feet) of traffic detained, allowed for motorists, except school buses. If a queue of traffic develops at a stop, empty the entire queue to include the last car that entered the queue at the time the queue was released.

Do not delay the school busses through the construction zone; obtain the local school bus schedule and coordinate work efforts. Submit the plan, as a TCP, to the AK DOT&PF Engineer for approval before the implementation of the school bus coordination plan.

643-3.09 INTERIM PAVEMENT MARKINGS. Place permanent or interim pavement markings according to this Subsection, details shown on the Plans, approved TCPs, and Parts III and VI of the ATM before opening existing paved roadways, temporary paved roadways, detours, interim paving lifts, and roadways with seal coats and surface treatments for more than one continuous work shift. This work may include restriping the existing roadway before beginning construction, before seasonal suspension, and/or after seasonal suspension.

Remove conflicting pavement markings according to SSHC Subsection 670-3.04, Paint Removal.

Mark existing roadway sections that will be opened to traffic during the winter. Mark over the existing lines and markings, unless shown otherwise on the Drawings or an approved TCP.

Maintain all interim pavement markings for their intended life including reapplication when necessary. There will be no compensation to upgrade interim pavement markings required for work operations lasting up to 2 weeks.

Use only temporary raised pavement markers as interim pavement markings on final pavement surfaces. Completely remove and dispose of them when placing the final markings. Completely remove any residual adhesive that might misguide motorists. Place final pavement markings on finished pavement surfaces and interim pavement surfaces before suspending work for the winter.

Stage the construction to avoid routing traffic over conflicting markings, for more than one continuous work shift. If traffic is routed over conflicting markings during a work shift, delineate the roadway with a complement of warning signs, channelizing devices, and flaggers as required by the ATM.

Use only temporary raised pavement markers meeting SSHC Subsection 712-2.16 as interim markings on seal coat and surface treatment pavements. Install the markers according to the manufacturer's instructions before applying the asphalt surface material and cover coat. Remove the vinyl protective covers after applying the asphalt pavement.

On multicourse surface treatments, install the temporary raised pavement markers after applying the full width of the first layer of cover coat. Install the markers on each day's completed surface before removing the pilot car operations and allowing unescorted traffic on the surface treatment.

Apply final pavement markings according to SSHC Subsection 670-3.01, Construction Requirements, of these Special Provisions.

Apply final pavement markings within 10 days of completing the final sweeping or brooming of the mainline seal coat or surface treatment.

643-3.10 LIGHTING FOR NIGHT WORK. Illuminate the night work areas according to Table 643-4.

Table 643-4 does not provide a comprehensive list of operations that require lighting. Provide lighting for other operations when necessary.

Use balloon lighting as the main light sources. Do not use floodlights without prior approval by the AK DOT&PF Engineer. When approved, install floodlighting in a manner that minimizes glare for motorists, workers, and residents living along the roadway. Locate, aim, louver, and/or shield light sources to reduce glare.

The AK DOT&PF Engineer shall be the sole judge of when glare is unacceptable, either for traffic or for adjoining residences. When notified of unacceptable glare, modify the lighting system to reduce glare to an acceptable level.

**TABLE 643-4
NIGHT WORK ILLUMINATION EQUIPMENT AND LOCATION REQUIREMENTS**

Type of Work or Equipment	Lighting Configuration
Paving, Milling, Striping, Pavement Marking Removal, Rumble Strip Installation.	At least one machine-mounted balloon light of at least 2000 watts. Provide additional lights or wattage if necessary to provide complete coverage.

Type of Work or Equipment	Lighting Configuration
Rolling, pavement sweeping.	At least 4 sealed beam halogen lamps in the front and four in the back. Each should be at least 55 watts.
Flagging.	One balloon light of at least 2000 watts, located within 30 feet of the flagger location. Locate so the flagger and the flagging location are illuminated. Provide additional lights or wattage if necessary to provide complete coverage of the flagging location.
Truck Crossings where haul vehicles cross or enter a road with more than 10,000 ADT, or where the haul vehicle crossing or entering location is controlled by portable traffic signals or flaggers.	At least one balloon light of at least 2000 watts, located on the main road on the far right side of the intersection. Locate light within 30 feet of the edge of the side street. If there is a flagger at the crossing, locate the lights or lights so the lighting requirements for Flagging are also satisfied.

If the Contractor fails to provide required lighting equipment or provides lighting that creates unacceptable glare, the Contractor shall cease all construction activities that require illumination, including flagging operations, until the condition or conditions are corrected.

Use lighting equipment in good operating condition and that complies with applicable state and local adopted codes and standards, and OSHA, NEC, and NEMA requirements.

Provide suitable brackets and hardware to mount lighting fixtures and generators on machines and equipment. Design mountings so lights can be aimed and positioned as necessary to reduce glare. Locate mounting brackets and fixtures so they don't interfere with the equipment operator or overhead structures. Connect fixtures securely in a manner that minimizes vibration.

Ensure ground, trailer, and equipment-mounted light towers or poles are sturdy and freestanding without the aid of guy wires. Towers shall be capable of being moved as necessary to keep pace with the construction operation. Position the ground and trailer-mounted towers and trailers, to minimize the risk of being impacted by traffic on the roadway, or by construction traffic, or equipment.

Raise trailer or equipment mounted lights to maximum height, except do not exceed the clearance required for overhead objects such as overhead signals, overhead signs, trees, aerial utilities, or bridges. Aim and adjust lights to provide the required light levels. Provide uniform illumination on the hopper, auger, and screed areas of pavers. Illuminate the operator's controls on all machines uniformly.

Furnish each side of non-street legal equipment with a minimum of 75 square inches high intensity retroreflective sheeting in each corner, so at least 150 square inches of sheeting is visible from each direction. Provide red sheeting on the rear of the equipment and yellow sheeting elsewhere.

Existing street and highway lighting and conventional vehicle headlights may supplement but do not relieve the Contract requirement to provide lighting for night work, according to the requirements of Table 643-4.

Provide sufficient fuel, spare lamps, spare generators, and qualified personnel to ensure that all required lights operate continuously during nighttime operations. Ensure generators have fuel tanks of sufficient capacity to permit operation of the lighting system for a minimum of 12 hours. In the event of any failure of the lighting system, discontinue the operation that requires illumination until the required level and quality of illumination is restored.

Maintain a supply of at least twenty emergency flares for use in the event of emergency or unanticipated situations. Comply with local noise ordinances.

Install all post-mounted electroliers located within the clear zone, on NCHRP 350 or MASH compliant breakaway bases.

643-3.11 HIGH VISIBILITY GARMENTS. Ensure all workers within project limits wear outer garments that are highly visible and comply with the following requirements:

1. **Standards.** Use high visibility garments conforming to the requirements of ANSI/ISEA 107-2004, Class 2 for tops or Class E for bottoms, and Level 2 retroreflective material.
2. **Labeling.** Use garments labeled in conformance with Section 11.2 of ANSI/ISEA 107-2004 or ANSI/ISEA 107-2010.
3. **Tops.** Wear high visibility vests, jackets, or coverall tops at all times.
4. **Bottoms.** Wear high visibility pants or coverall bottoms during nighttime work (sunset to sunrise). Worksite traffic supervisors, employees assigned to traffic control duties, and flaggers wear high visibility pants or coverall bottom at all times.
5. **Outer Raingear.** Wear raingear tops and bottoms conforming to the requirements of this Subsection 643-3.11.
6. **Exceptions.** When workers are inside an enclosed compartment of a vehicle, they are not required to wear high visibility garments.
7. **Condition.** Furnish and maintain all vests, jackets, coveralls, rain gear, hard hats, and other apparel in a neat, clean, and presentable condition. Maintain retroreflective material to Level 2 standards.

Payment for high visibility garments for workers is subsidiary to other traffic contract items.

643-4.01 METHOD OF MEASUREMENT. SSHC Section 109 and as follows: Quantities will not be measured during suspension of work.

1. **Traffic Maintenance.** Lump Sum: Traffic Maintenance will not be measured and will be paid for at the agreed upon lump sum price in accordance with SC-02 – Lump Sum Pay Items.
2. **Flagging and Pilot Car.** By the number of approved hours, supported by certified payroll.
3. **Traffic Control.** By the units **specified** in Table 643-5.
4. **Hotline Road Report.** No measurement required to provide a 24-hour toll free (1-800 478-7674) "Hotline Road Report" telephone with a prerecorded message, and weekly notices with daily updates. Work will be subsidiary to Pay Item 643.0002.1, Traffic Maintenance.

**TABLE 643-5
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
Sequential Arrow Panel	Each/Day	\$40.00
Portable Concrete or Steel F Shape Barrier (12.5 foot long or \$8/foot for other lengths)	Each	\$100.00
Temporary Crash Cushion / Non-redirective Water Filled Barrier (all required per end)	Each	\$2500.00
Temporary Crash Cushion / Non-redirective Water Filled Barrels (all required per end)	Each	\$3285.00
Temporary Crash Cushion / Non-redirective Sand Filled Barrels (all required per end)	Each	\$4325.00
Temporary Crash Cushion / Redirective	Each	\$9230.00
Pilot Car (4x2, 1/2 ton truck)	Hour	\$83.00
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
Plastic Safety Fence	Lineal Foot	\$1.00
Portable Changeable Message Board Sign	Calendar Day	\$130.00
Temporary Sidewalk Surfacing	Square Foot	\$2.00
Flexible Markers (Flat Whip, Reflective)	Each	\$60.00
Temporary Guardrail	Lineal Foot	\$25.00

SP-712, Controlled Low-Strength Material

Provide controlled low-strength material (CLSM) that as indicated on the Drawings and in accordance with SSHC Sections 712-2.22. The material requirements are modified by the following additional requirements:

5. Strength. 100 psi minimum compressive strength as determined by ASTM D4832. No maximum strength requirement will be set; however, material shall function as compacted embankment fill at final set and be “diggable” with excavation equipment. Strengths in excess of 1,000 psi should be avoided.
6. Unit Weight. The minimum unit weight of CLSM mix shall be 70 pounds per cubic foot.

SP-729, Geosynthetics

SSHC Section 729-2.01, Paragraph 4, “Erosion Control” is modified by the following:

4. Erosion Control. Meet AASHTO M 288 for Permanent Erosion Control, except provides a minimum permittivity of 0.90 sec^{-1} , and meet Class 1 Strength Property Requirements.

END OF SPECIAL PROVISIONS

**APPENDIX I
SUBMITTAL REGISTER**

The following submittal register is provided as a guide for anticipated submittals provided by the Contractor throughout the project. The register should be used as a guide to develop a submittal plan and the Contractor is responsible for reviewing the entire contract documents to ensure submittals are completed in accordance with the General Conditions, Supplementary Conditions, Statement of Services, and Special Provisions. No additional payment will be provided for submittals not included in the Submittal Register. Submittals shall be prepared and submitted in accordance with **Error! Reference source not found.**

Anticipated Submittal Register		
Submittal No.	Specification Reference	Submittal Name
SC-02-001	SC-02	Lump Sum Item Breakdown
SC-11-001	SC-11	Track Outage Work Plan(s)
202-001	SSHC 202-3.03	Bridge Demo and Removal Work Plan
202-002	SSHC 202-3.03	Certificate of Disposal (lead painted steel)
203-001	SSHC 703-2.07	Materials Certifications (Selected Material Type A)
203-002	SOS 203.0006.1	Field QC Test Reports (Selected Material Type A)
205-001	SSHC 712-2.22	CLSM Mix Design and Materials Certifications
205-002	SOS 205.0005.1	CLSM Formwork Plan
205-003	SSHC 501-3.09	Cold Weather Placement Plan for CLSM
205-004	SSHC 205-3.06	Compliance Reports (CLSM)
240-001	SP 240-1.08	Designation Roster (Railroad Bridge Supervisor)
241-001	SP 241.2.02	Materials Certifications (Ballast)
241-002	SP 241.3.04	Ballast Placement Plan
241-003	SP 241.3.04	Surfacing Equipment List
301-001	SSHC 703-2.03	Materials Certifications (Subballast, Aggregate Base Grading D-1)
301-002	SOS 301.0002.1	Field QC Test Reports (Subballast)
501-001	SOS 501.0001.1	Precast QC Plan
501-002	SP 501-1.02	Precast Fabricator/Plant Qualifications
501-003	SSHC 701-2.09	Materials Certifications (Precast Concrete Materials)
501-004	SSHC 709-2.01	Materials Certifications (Reinforcing Steel Bars)
501-005	SSHC 716-2.08	Materials Certifications (Steel Utility Brackets)
501-006	SSHC 501-3.13	Shop Drawings (Precast Backwall)
501-007	SSHC 504-3.01	Shop Drawings (Steel Utility Bracket)
503-001	SSHC 709-2.01	Materials Certifications (Steel Dowel Bars)
503-001	SSHC 712-2.21	Materials Certifications (Epoxy Grout)
504-001	SP 504-3.01	TPG Assembly Quality Control Plan
504-002	SP 504-3.05	TPG Falsework Plan and Calculations
504-003	SOS 504.0001.1	TPG Erection Plan
504-004	SSHC 504-3.01	TPG Field Welding Plan
504-005	SSHC 504-3.01	TPG Field Bolt Tensioning Plan

Anticipated Submittal Register		
Submittal No.	Specification Reference	Submittal Name
SC-02-001	SC-02	Lump Sum Item Breakdown
SC-11-001	SC-11	Track Outage Work Plan(s)
504-006	SOS 504.0001.1	Field QC Reports (Steel erection – weekly)
504-007	SSHC 716-2.08	Materials Certifications (Bolts, Weld Material, etc.)
605-001	SSHC 703-2.10	Materials Certifications (Porous Backfill)
605-002	SSHC 707-2.01	Materials Certifications (Perforated Pipe)
611-001	SSHC 611-2.01	Materials Certifications (Riprap, Class II)
618-001	SSHC 618-3.03 & SP 618	Materials Certifications (Seed Mix)
620-001	SSHC 726-2.01	Materials Certifications (Topsoil)
631-001	SSHC 729-2.01 & SP-729	Materials Certifications (Geotextile)
634-001	SSHC 729-2.04	Materials Certifications (Geogrid)
641-001	SSHC 641.3-01	SWPPP
643-001	SP 643-1.03	Traffic Control Plan
643-002	SP 643-1.05	Construction Phasing and Site Access Plan
643-003	SP 643-1.05	Form 25D-124 Worksite Traffic Supervisor
643-004	SP 643-3.04.4	Flagger Certifications
643-005	SP 643-3.04	Temporary Work Zone Devices Compliance
646-001	SSHC 646-2.01	Initial Critical Path Method Schedule
646-002	SSHC 646-3.01	Baseline and Biweekly CPMS Updates
647-001	SOS 647.0001.1	As-Built Record Drawings and Specifications
651-001	SOS 651.0001.1	Site Access Plan
651-002	SOS 651.0001.1	Temporary Shoring Design
651-003	SOS 651.0001.1	Site Restoration Plan
651-004	SOS 651.0001.1	Temporary Railroad At-grade Crossing Plan

SC = Supplementary Conditions
SSHC = Standard Specifications for Highway Construction
SP = Special Provision
SOS = Statement of Services