



**TRAIL RIVER BRIDGE 25.7 AND FALLS CREEK BRIDGE
25.4 REPLACEMENTS**

**INVITATION TO BID
22-02-209508**

JULY 13, 2022

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

July 13, 2022

**INVITATION TO BID
22-02-209508**

**TRAIL RIVER BRIDGE 25.7 AND FALLS CREEK BRIDGE
25.4 REPLACEMENTS**

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 _____

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THIS IS NOT AN ORDER

INVITATION TO BID NUMBER: 22-02-209508

TRAIL RIVER BRIDGE 25.7 AND FALLS CREEK BRIDGE 25.4 REPLACEMENTS

DATE OF INVITATION TO BID: July 13, 2022

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 WEDNESDAY, AUGUST 3, 2022 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/HuXZ1HG5fLNWRD8PVp7Q> 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=m1c8e87f26a6eacb3d9d30d766dd0b57c>

IMPORTANT

Final Completion: All work shall be completed by May 15, 2023.
ARRC will identify interim completion dates, if any, in the Special Provisions.

Funding: Bridge 25.4 is funded by ARRC internal funds. Bridge 25.7 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 Wednesday, **July 27, 2022 at 11:00 AM**. Meet Location: Mine Road near the railroad crossing. (Also known as Crown Point Mine 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 3:00 p.m. July 26th. Attendees will be responsible for their own transportation to the meeting location. Attendees should plan on being at the meet location by 11:00 a.m. 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, 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 **July 29, 2022 at 9:00 AM** local time via WebEx. You may attend the pre-bid conference by one of the following:

- Paste the following link into your web browser.

<https://akrr.webex.com/akrr/j.php?MTID=m3fdbd55a835faa51bfa6746c3a457ed4>

Join by meeting number

Meeting number (access code): 2489 975 1803

Meeting password: pVcJs8Fdf65

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

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3. ARRC Sample Daily Report Format
4. Construction Quality Control (CQC) Plan

5. 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. The ARRC will include a paper copy of the federal wage rates in the signed Contract.

6. 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. The ARRC will include a paper copy of the State wage rates in the signed Contract.

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. Contractor Responsibility Questionnaire - [Form 395-0136]
2. Construction Bid Form - [Form 395-0121]
3. Bid Bond - [Form 395-0120]
4. Bid Schedule - Appendix H
5. Alaska Contractors License
6. Statement of Qualifications
7. Federal Assurances

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]

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
8. Construction Quality Control (CQC) Plan
9. Contractor's Site Health & Safety Plan

POST AWARD DOCUMENTATION

1. Weekly Certified Payrolls
2. Copy of State of Alaska Contractor Letter of Completion

Form 395-0128 (12/99)

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.

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.



CERTIFIED PAYROLL
 Alaska Department of Labor & Workforce Development
 Labor Standards & Safety Division
 Wage & Hour Administration

Contractor Name Alaska Strong Steel, Inc. Phone 907-555-1212		Contractor License No. 28888		SubContractor X		Address 782 Northridge Avenue, Anchorage, AK 99503		Project Name and Location Gold Creek Bridge Repair		Date Work Started 12-Dec-04		Est. Completion Date October-05	
Name, SSN, Permanent Domicile Address (NO P.O. BOX or RURAL ROUTES ACCEPTED) and Mailing Address (if different) for each employee Social Security numbers (SSN) MUST be included for all employees Joe H. Worker, SSN: 555-55-5555 316 Timber Lake Road Anchorage, AK 99515		Week Ending 18-Dec-04		Contracting Agency Project # 3504		Dept. Labor Project # 04/12-1500		Contract Amount \$50,000.00		DEDUCTIONS		Net Amount Paid	
Specific Work Class Code including certificate #'s for Electricians, Plumbers, Painters, Powderman, Asbestos Workers. Truck drivers include truck license number		Apprentice (% if Applicable)		Date of the Month		Total Hours Worked		Gross Amount Earned		Total DEDUCTIONS		Check No. Issued	
S0301				S M T W T H F S		1.50		63.23		FICA		#678	
Classification: Carpenter				0.50 1.00		32.00		899.20		FED WITH TAX		11/04/04	
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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, _____, the Undersigned proposes to furnish and deliver all the materials and do all the work and labor required in the construction of the _____, located at or near _____ according to the plans 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 plans 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 plans 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: A ITEMS (Bridge 25.7)					
Item No.	Item Description	Unit	Quantity ²	Unit Bid Price	Amount Bid
A-1	Mobilization and Demobilization <i>(640.0001.1)</i>	Lump Sum	1		
A-2	Clearing and Grubbing <i>(201.0009.1)</i>	Acre	2		
A-3	Removal of Bridge and Existing Structures <i>(202.0023.1)</i>	Lump Sum	1		
A-4	Removal of Track <i>(202.0024.1)</i>	Linear Foot	2,000		
A-5	Unclassified Excavation <i>(203.0003.1)</i>	Cubic Yard	2,353		
A-6	Selected Material, Type A <i>(203.0006.1)</i>	Ton	1,577		
A-7	Structural Fill <i>(205.0009.1)</i>	Ton	300		
A-8	Railroad Ballast, Type 3 <i>(203.0003.1)</i>	Ton	3,000		
A-9.1	Trackwork, 115# RE Rail <i>(242.0001.1)</i>	Linear Foot	2,000		
A-9.2	Exothermic Field Welds <i>(242.0001.2)</i>	Each	10		
A-10	Surfacing Mainline Track <i>(242.0001.2)</i>	Linear Foot	2,200		
A-11	Aggregate Base Course, Grading C-1 <i>(301.0002.1)</i>	Ton	4,736		
A-12	Aggregate Surface Course, Grading D-1 <i>(301.0004.1)</i>	Ton	170		
A-13	Precast Concrete Member CAC-1 <i>(501.0007.1)</i>	Each	2		

BASE BID: A ITEMS (Bridge 25.7) (continued)

Item No.	Item Description	Unit	Quantity ²	Unit Bid Price	Amount Bid
A-14	Precast Concrete Member CPC-1 (501.0007.2)	Each	11		
A-15.1	Class A Concrete, Piles (501.0004.1)	Cubic Yard	144		
A-15.2	Reinforcing Steel, 24"Ø Cage (503.0001.1)	Lump Sum	1		
A-16	29'-10" Steel Beam Span, Fabricate and Furnish (504.0001.1)	Lump Sum	12		
A-17	29'-10" Steel Beam Span, Install (504.0001.2)	Lump Sum	12		
A-18	Cable Railing and Decking (507.0007.1)	Lump Sum	1		
A-19	Furnish Structural Steel Piles, 24"Ø x 0.875"t, Galvanized (505.0001.2)	Linear Foot	1,720		
A-20	Drive Structural Steel Piles, 24"Ø x 0.875"t, (505.0001.2)	Each	30		
A-21	Furnish and Drive Structural Steel Sheet Piles, PS31 (505.0009.1)	Square Foot	4,200		
A-22	Socket Structural Steel Piles, 24"Ø (505.0010.1)	Each	9		
A-23	Riprap, Class III (611.0001.1)	Cubic Yard	230		
A-24	Railroad Crossing (617.0001.1)	Lump Sum	1		
A-25	Temporary Crossings (520.0001.1)	Lump Sum	1		
A-26	Stormwater Maintenance and Management (641.0002.1)	Contingent Sum	All Req'd		
Total Base Bid A:					

ADDITIVE ALTERNATE BID: A ITEMS (Bridge 25.7) ¹

Item No.	Item Description	Unit	Quantity ²	Unit Bid Price	Amount Bid
M.1 ³	Modify Structural Steel Piles, ASTM A53, Grade B (505.0005.3)	Linear Foot	3,440		
M.2 ³	Modify Structural Steel Piles, API Specification 5L X52 (505.0005.4)	Linear Foot	3,440		
M.3 ³	Modify Structural Steel Piles, API Specification 2B (505.0005.5)	Linear Foot	3,440		

BASE BID: B ITEMS (Bridge 25.4)

Item No.	Item Description	Unit	Quantity ²	Unit Bid Price	Amount Bid
B-1	Mobilization and Demobilization (640.0001.1)	Lump Sum	1		
B-2	Clearing and Grubbing (201.0009.1)	Acre	5		
B-3	Removal of Bridge and Existing Structures (202.0023.1)	Lump Sum	1		
B-4	Removal of Track (202.0024.1)	Linear Foot	1,120		
B-5	Unclassified Excavation (203.0003.1)	Cubic Yard	1,750		
B-6	Structural Fill (205.0009.1)	Ton	550		
B-7	Railroad Ballast, Type 3 (241.0001.1)	Ton	440		
B-8.1	Trackwork, 115# RE Rail (242.0001.1)	Linear Foot	1,120		
B-9.2	Exothermic Field Welds (242.0001.2)	Each	4		
B-10	Surfacing Mainline Track (242.0001.2)	Linear Foot	1,384		
B-11	Aggregate Base Course, Grading C-1 (301.0002.1)	Ton	120		
B-12	Precast Concrete Member, Two Row Abutment (501.0007.1)	Each	2		
B-13	Precast Concrete Member, One Row Bent (501.0007.2)	Each	3		

BASE BID: B ITEMS (Bridge 25.4) (continued)

Item No.	Item Description	Unit	Quantity ²	Unit Bid Price	Amount Bid
B-14	Precast Concrete Member, 28' CBD (501.0007.3)	Each	8		
B-15.1	Class A Concrete, Piles (501.0004.1)	Cubic Yard	25		
B-15.2	Reinforcing Steel, 12"Ø Cage (503.0001.1)	Lump Sum	1		
B-15.3	Reinforcing Steel, 16"Ø Cage (503.0001.1)	Lump Sum	1		
B-16	HSS Railing and Decking (507.0007.1)	Lump Sum	1		
B-17	Furnish Structural Steel Piles, 12"Ø x 0.500"t, Galvanized (505.0007.2)	Linear Feet	960		
B-18	Furnish Structural Steel Piles, 16"Ø x 0.500"t, Galvanized (505.0007.4)	Linear Feet	540		
B-19.1	Drive 12"Ø x 0.500"t Pipe Pile (505.0006.1)	Each	16		
B-19.2	Drive 16"Ø x 0.500"t Pipe Pile (505.0006.2)	Each	9		
B-20	Drive Structural Steel Piles. PS31 Sheets, 25'-0" Length (505.0009.1)	Square Foot	4,200		
B-21	Riprap, Class III (611.0001.1)	Cubic Yard	200		
B-22	Stormwater Maintenance and Management (641.0002.1)	Contingent Sum	All Req'd		
Total Base Bid B:					

ADDITIVE ALTERNATE BID: A ITEMS (Bridge 25.4) ¹

Item No.	Item Description	Unit	Quantity ²	Unit Bid Price	Amount Bid
M.4 ³	Modify Structural Steel Piles, ASTM A53, Grade B (505.0005.3)	Linear Foot	1,500		
M.5 ³	Modify Structural Steel Piles, API Specification 5L X52 (505.0005.4)	Linear Foot	1,500		
M.6 ³	Modify Structural Steel Piles, API Specification 2B (505.0005.5)	Linear Foot	1,500		

Notes:

¹ Award of Additive Alternate Bid items is dependent on Owner finances. The successful bidder will be notified of the Owner's intent to award additional work prior to receiving a Contract or Notice to Proceed (NTP).

² 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 Cost Schedule.

³ Clearly indicate if Unit Bid Price is NEGATIVE or POSTIVE. Values for these Unit Bid Prices are not required to be considered responsive.

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 22-02-209508
Trail River Bridge 25.7 and Falls Creek Bridge 25.4
Replacements

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
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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

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 22-02-209508 Trail
River Bridge 25.7 and Falls Creek Bridge 25.4 Replacements.**

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 June 9, 2017]

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 National Cargo, Office of Market Development, Maritime Administration, Washington, DC 20590 and to ARRC (through the contractor in the case of a subcontractor's bill-of-lading.) **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, That 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.

(iii) 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.

(5) 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 nonconstruction contracts which employ mechanics and laborers on a public work in excess of \$100,000]

A. Overtime (Applicable to construction and nonconstruction 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 CFR 200.333. 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 VII 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 - 16 USC 470 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, 16 USC 470 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 FTA and FHWA funded contracts]

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).

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 Owner's authorized representative 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(j)

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 AMERICA REQUIREMENTS-SUPPLIES - 41 USC 10a-d; 48 CFR Part 25
[Applicable only to FRA funded contracts for the purchase of goods, supplies or equipment in excess of \$150,000]

(a) The FRA requires its grantees to comply with The Buy American Act (41 U.S.C. 10) which provides that preference be given to domestic end products.

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

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 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.

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

(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 25.108.

(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.

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

Certificate of Compliance with 41 USC 10a-d - Supplies

The bidder or offeror hereby certifies that the products it proposes to supply hereunder comply with the requirements of 49 USC 10a-d and the applicable regulations in 48 CFR Part 25.

Date: _____

Signature: _____

Company Name: _____

Title: _____

24. FRA BUY AMERICA REQUIREMENT-CONSTRUCTION - 41 USC 10a-d; 48 CFR Part 25 [Applicable only to FRA funded construction contracts in excess of \$150,000]

(a) The FRA requires its grantees to comply with The Buy American Act (41 U.S.C. 10) 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 10a-10d) 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.

¹Include 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 America certification (below) with its bid response for FRA funded construction. Bids that are not accompanied by a completed Buy America certification may be rejected as nonresponsive.

Certificate of Compliance with 41 USC 10a-d - Construction

The bidder or offeror hereby certifies that the construction materials it proposes to provide hereunder comply with the requirements of 49 USC 10a-d 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 Contactor 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. MONITORING AND REPORTING PROGRAM PERFORMANCE – 2CFR Part 200.238

31. 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.

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 or 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 it is 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 VECP 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. Track Closures, unless approved otherwise, will only be allowed:
 - a. On the 2nd, 3rd, 4th, and 5th weeks (as applicable) of the months of October through April.
 - b. Most days an 8 hour track outage is available at different times during the day.
 - c. From week to week a track outage may be available between Thursday 0700 and Saturday 0700.
 - d. With appropriate planning as outlined in the Contract Documents and on occasions for critical work a track outage may be available sometime Wednesday morning to Saturday morning. This track outage involves moving and delaying ARRC customers. This type of track outage will require 45 days in advance request. This type of track outage will be very limited and only approved if absolutely necessary. This type of outage will not be made for convenience.
5. During potential outage windows other than those approved by ARRC, the Contractor can expect to see approximately 0 passenger trains per day and 1-3 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)
6. The above listed train schedule is provisional and may change. Train traffic must not be impeded.
7. Specific work windows/track closures have not been determined; ARRC expects to work with the successful bidder during the preconstruction phase to determine appropriate work windows.
8. 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.

Bridge Replacement Change-Out Track Closure(s):

The Owner anticipates that the longest track outages will be required for span change-outs.

The Contractor may choose to install one or more of the new bridge spans per change-out track closure. Span change-out track closures shall be carefully planned and scheduled. Span change-out windows must be closely coordinated with Maintenance of Way (MOW) forces who will perform some of the work tasks necessary to place the track back in service. Planning and coordination with the Owner for span change-outs must include the following:

1. MOW forces will approve locations where contractor will square joint the rail between established change-out limits. This will be done in advance of the span change-out track closure. At the bridge ends, the joints will be located off the bridge span to allow complete removal of the existing approach span and construction of the track embankment (as required).
2. After passage of the last train, the Contractor shall remove/demolish the interfering portions of the substructures to be changed-out. All other removed materials, unless noted

- otherwise, shall become the property of the Contractor.
3. After the Contractor has installed the substructure and affixed the new and existing superstructures to it, and the structure is safe for equipment operation, then Contractor will replace the rail.
 4. The change-out plan and schedule must be approved and agreed upon by the Owner and must include the time necessary to reassemble the track.

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.

SC-15 – Section 241, Railroad Ballast

241-1.01 DESCRIPTION. The Owner shall furnish Type 3 Ballast at the Whittier Yard. The Contractor shall be responsible for 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 Plans.

241-2.01 MATERIALS. The Owner will supply Type 3 ballast that conforms with the below specification. Prepared ballast shall be crushed shot rock or crushed pit-run rock, size No. 3, composed of hard, strong and durable particles, free from injurious amounts of deleterious substances and conforming to the following requirements:

Table 1 - Rock Quality Tests

Property	Test Method	Limits
Bulk Specific Gravity (SSD)	AASHTO T 85	2.65 min.
Absorption	ASTM C 97	2% max
L.A. Abrasion	AASHTO T 96	50% max. loss after 500 revs.
Freeze/Thaw	ASTM D 5312	5% max. loss after 100 cycles
Wet/Dry	ASTM D 5313	1% max. loss
Degradation	ATM 313	40 min.

Table 2 - ARRC Type 3 Ballast Broad Band Gradation

Test	Procedure	Standard	Frequency
Sampling Aggregate	ASTM D7 5 & ASTM C 702	As required	1 per 1,000 tons
Sieve Analysis	ATM 304, Method A	See Table 3 Below	1 per 1,000 tons
Flat and/or Elongated Particles	USACE CRD-C119	5.0% max.	1 per 1,000 tons
Clay Lumps & Friable Particles	ASTM C 142	0.5% max.	1 per 1,000 tons
Fractured Particles	ASTM D5821	80% min., two face	1 per 1,000 tons
Bulk Specific Gravity (SSD)	AASHTO T 85	2.65 min.	1 per source
Absorption	ASTM C 97	2% max.	1 per source

Magnesium Sulfate Soundness	ASTM C88 (Five Cycles)	1% max.	1 per source
L.A. Abrasion	AASHTO T 96	50% max. loss after 500 revolutions	1 per source

Sieve Opening	2-1/2"	2"	1-1/2"	1"	1/2"	3/8"	No. 200
Percent (%) Passing	100	95-100	35-70	0-15	0-10	0-3	0-0.3

Manufacturing, 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. Processed ballast shall be washed and/or rescreened as necessary to remove fine particle contamination as defined by the specification prior to stockpiling. 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 or turnout 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 indicated. The average thickness shall be within one-quarter inch of the thickness shown on the drawings. Ballast shall not be placed on soft, muddy, or frozen 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 12 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 and runoffs 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, 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, 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 Fairmont C154BR ballast regulator, 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 Fairmont C154BR, the Contractor must submit equipment make, model, and specifications to the Owner for approval.
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.

SC-16 – Section 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, with the exception of rail, to construct mainline track. Rail will be provided to the vicinity of the project site by the Owner. The material shall conform to the current AREMA "Manual for Railway Engineering" and as detailed in this specification.

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 ½ 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. Wright 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 4 – 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 3 – 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.

242-3.07 THERMITE WELDING.

1. Rails shall be cut square and clean by means of rail saws and cleaned a minimum distance of six (6) inches from the end with a torch (take care not to overheat the rail) and wire brush to free the area of grease, rust, and other foreign materials, along with any other recommendations of the welding kit manufacturer.
2. No holes shall be permitted in the rail.
3. Welding shall be performed by a certified thermite welder. Certification shall be submitted to Owner.
4. All welds giving fault indication by ultrasonic inspection, magnetic particle inspection or visible inspection shall be replaced at no expense to ARRC. This includes the addition of a rail plug and the additional welds.
5. Any additional work associated with attempting and failing to make a successful weld,

- resulting in a rail plug and two welds shall be at Contractor's expense.
6. Contractor shall inform the Owner's Representative daily of the location of completed welds. All thermite welds performed under this contract shall be listed on a Daily Thermite Welding Report to be provided by ARRC as required.
 7. Contractor and Owner's Representative will visually inspect all welds for surface cracks. Welds with surface cracks visible to the eye shall not be acceptable.
 8. Contractor shall furnish all equipment and material required in the production of thermite welds.
 9. Thermite welding materials and equipment shall be from an approved source. ARRC shall be notified in writing as to the source, and will notify Contractor if the source is not acceptable.
 10. Welding shall be done in accordance with Chapter 4, Part 2 of AREMA Manual, articles "Thermite Welding Rail Joints and Specifications for Fabrication of Continuous Welded Rail", except as modified by these specifications.
 - a. The faces of the rail ends shall be arranged at right angles by cutting or grinding and shall be further cleaned to remove all scale and rust.
 - b. The ends of the rails to be welded shall be properly gapped and aligned to produce a weld, which shall conform to the specified alignment tolerances. No dip in the rails shall be allowed. Refer to Section 242-3.08 for "Detail of Max. Vertical Offset" and "Tolerances for Thermite Welds".
 - c. Before preheating check the rail temperature with a rail thermometer if the rail temperature is below thirty five (35) degrees Fahrenheit, the following procedures shall be followed to ensure that a proper preheat is made.
 - d. Both rails must have supplemental heat applied to raise the rail temperature to provide for controlled cooling.
 - i. The length of rail to be supplementally heated shall be between thirty (30) and thirty six (36) inches for rail temperatures from thirty five (35) down to fifteen (15) degrees Fahrenheit.
 - ii. Depending upon the type of change expected, one of the following procedures will assist in preventing temperature induced stresses from affecting the quality of the weld:
 - (1) Rail temperature is low and a raise in temperatures is anticipated, the rail expander should be set to expand the gap and enough pressure built up to cause a slight subsequent increase in the gap. This should prevent any subsequent decrease in gap width.
 - (2) Rail temperature is high and a drop in temperature is anticipated the rail expander should be set up to pull and enough pressure built up to cause a slight subsequent decrease in width.

Whenever either of the above procedures is required, the final gap width shall be as stated in the manufacturer's instructions for the rail weight being welded.

11. Rail ends shall be preheated prior to welding to a sufficient temperature and for a sufficient time to ensure full fusion of the weld metal to the rail ends without cracking of the rail or weld, per manufacturer's instructions.
12. The mold shall be left in place after tapping for a sufficient time to permit complete solidification of the molten metal and proper slow cooling to prevent cracking and provide a complete weld with the proper hardness and ductility.
13. The completed weld shall be finished by mechanically controlled grinding to conform to the

- same requirements specified for shop welding including grinding under the base.
14. Wearing protective clothing and safety equipment is required during welding operations.
 15. Never dump hot slag on wet soil, wet ballast or into water.
 16. On curves where the slag basin is placed on the low side, the plug portion of the mold shall be filled so that it is horizontal when placed in the mold and will cause the molten metal to flow equally to both sides of the mold.
 17. Thermite welds shall not be made within three (3) feet of another thermite weld or within twelve (12) inches of a plant weld or within two and one half (2-1/2) feet from the end of a bonded joint without written approval by the Owner's Representative.
 18. Contractor shall re-space cross ties as necessary to prevent a weld from sitting on a tie. The cost incurred by Contractor to re-space the crossties will be considered incidental to the cost of completing a thermite weld. It is acceptable to cut the rail in order to prevent a weld from sitting on a tie.
 19. Contractor shall tamp and dress track, as necessary, to provide firm support at the weld.
 20. Contractor shall plug and re-drive all necessary spikes.
 21. Contractor shall properly re-apply and adjust anchors as necessary to conform to anchor pattern.
 22. Contractor shall clean up all waste from the field welding process and shall dispose of all superfluous materials.
 23. No payment will be made for additional welds created by avoidable plugging, without written authority of the Owner's Representative.

242-3.08 WELD FINISHING AND TOLERANCES.

1. Welded joints in the finished track shall be brought to a true surface and alignment by means of a proper grinding or planning machine (shear). Finish grinding shall be performed with an approved profile grinder operated by a skilled workman grinding evenly and leaving the joints in a smooth and satisfactory condition. Finishing shall eliminate all cracks. Mechanically controlled grinding in conformance with the following requirements shall finish the completed weld:
 - a. Maximum Vertical Offset. The maximum vertical offset in the vertical plane shall be no greater than 0.060 inches measured 1 inch from the weld fusion line.
 - b. Combined Vertical Offset and Crown. The maximum combined vertical offset and crown shall be no greater than 0.060 inches.
 - c. Dip Camber. No dip camber is allowed. Contractor shall remove and replace any sections of rail with dip camber at his own expense.
 - d. Horizontal Offset. The maximum horizontal alignment offset shall be no greater than 0.030 inches.
 - e. Horizontal Offset and Kink (to gauge side of rail). The maximum horizontal alignment offset and kink shall be no greater than 0.030 inches.
 - f. Horizontal Offset and Kink (to field side of rail). The maximum horizontal alignment offset and kink shall be no greater than 0.015 inches.
 - g. Measurements. Shall be made with an approved 36-inch straight edge and taper gauge.

242-3.09 WELD QUALITY. Each completed weld shall have full penetration and complete fusion and be entirely free of cracks or fissures. Welds shall meet the acceptance criteria given in AWS D1.1.

Quality control testing is required on all welds. The contractor shall supply the ARRC with certified

ultrasonic weld test results prior to the installation of the crossing.

Contractor shall guarantee welds for a period of twelve (12) months after final acceptance date.

242-3.10 WELD NUMBERING. The Contractor shall semi-permanently mark a sequential weld number on the rail immediately adjacent to the weld, using a quality lead paint marker at the time the weld is made. Welds shall be numbered sequentially in the order in which they are made. The Owner will provide the Contractor with the initial weld number. Defective welds, which are replaced, shall be assigned a new sequential number by adding a letter to the defective weld number (e.g., defective weld 347 would be replaced by 347A).

242-3.11 WELDING SUPERVISION. A certified welder shall perform welding under the direct supervision of an experienced welding supervisor or foreman and be certified by the manufacturer of the welding equipment.

242-3.12 WEATHER CONDITIONS. Welding shall not be performed in rain, snow, or other inclement weather without adequate protection of the welding from the elements. If using field welds, welding shall not be performed below minimum ambient temperature recommended by the manufacturer.

242-3.14 SUBMITTALS.

1. **Thermite Welding Procedures.** A detailed statement covering the step-by-step procedures to be employed in making the welds, including a complete description of each of the following items, as applicable, and any other essential characteristics included in the welding procedures.
 - a. The manufacturer's trade name for the welding process.
 - b. The method used for cutting and cleaning the rail ends. Flame cutting of rail ends shall not be allowed.
 - c. The minimum and maximum spacing between rail ends.
 - d. The method used for maintaining the rails in alignment during welding.
 - e. The method used for preheating, including time and temperature.
 - f. The tapping procedure, including the minimum time required to cool the weld under the mold insulation.
 - g. The method used, including a description of special tools and equipment, for removing the upset metal and finishing the weld to the final contour.
 - h. Quality control procedures to be followed.
 - i. The contractual agreements with any subcontractor employed by the Contractor in doing the work.
2. **Record of Field Weld.** A welding record of each field weld on forms provided by ARRC. The original copies of the form bearing the signatures and initials of personnel involved shall be submitted as part of the Project Record Documents.

SC-17 – Section 244, Trackwork Removal

244-1.01 DESCRIPTION. This work consists of dismantling and removing track from the existing roadbed. 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.

CONSTRUCTION REQUIREMENTS

244-3.01 GENERAL. Remove all trackwork 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 per their respective "Unclassified Excavation" Pay Item No.'s within the Special Conditions.

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.

END OF SUPPLEMENTARY CONDITIONS

APPENDIX G – STATEMENT OF SERVICES

1. Scope

General Requirements

NTP1 - Bridge 25.7 – BASE BID ITEMS:

Work completed under this contract includes, but is not limited to; the removal and disposal of the existing 360-foot 24-trestle timber bridge that crosses the Trail River at ARRC MP 25.7, fabrication of all new sub- and superstructure components to construct a new 360-foot 12-span steel beam bridge, install riprap armoring for erosion prevention, installation of new crossing at Lower Lake Trail Road (ARRC MP 25.46), and all the track work required to accommodate the raised elevation of the new structure crossing Trail River.

Item No. A-1 (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 as-built (record) drawings, certificates, daily construction 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 Condition SC-01 – Measurement and Payment.

Item No. A-2 (201.0009.1) – Clearing and Grubbing

Work includes 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 plans, SSHC Section 201 and specifications outlined herein. Preserve from injury or defacement all vegetation and objects designated to remain.

General. Clear and grub the areas shown in the Area of Potential Effect figure as necessary to construct the project. 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 Plans or in the Special Conditions.

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 Plans, 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 Plans, 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 your property.

Control of Invasive Plants. Control, remove, and dispose of soils and vegetative matter infested with invasive plants. Limit excavation related to invasive plants to only those areas and to the depths shown on the Plans. Accomplish excavation of invasive plants and soil separate from, and prior to, other clearing and ground disturbing activities in the immediate area of the infestation.

1. Invasive Plants Survey.

An invasive plants survey has been completed by the Owner. The location, extent, and type of invasive plants is identified on the Plans. Submit an invasive plant control plan to control the identified plants at the identified locations.

2. Invasive Plant Control Plan.

Submit an invasive plant control plan, on the provided form, detailing steps for removal, containment, or disposal of invasive plants using the DOT&PF Southeast Region *Disposal and Control of Invasive Plant Species* as a guide. The guide is located here: http://www.dot.state.ak.us/stwddes/desenviron/assets/pdf/resources/se_invasive_final.pdf

Submit the plan to the Owner's authorized representative for approval. Allow 10 days for review by the Owner's authorized representative. Do not conduct any clearing and ground disturbing activities in the immediate area of invasive plant infestations until the plan is approved by the Owner's authorized representative. Pressure wash all tracked equipment, excavation equipment, and excavation hauling equipment prior to mobilization to ensure that the spread of invasive species is minimized. Clean all parts of equipment so that no invasive species would have the chance of being spread or imported into the community. Use the same cleaning method on all equipment involved in removing and disposing invasive plants after working in locations with invasive plants. Use the same cleaning method on all tracked equipment, excavation equipment, and excavation hauling equipment prior to demobilization to prevent the export of invasive species.

Use silt fence, tarps, and other control measures to prevent dispersal of seed and other plant material from equipment cleaning areas and temporary soil or waste stockpiles that contain invasive plants.

Backfill and compaction of holes left from removal of stumps or other objects are subsidiary.

Work to comply with the Migratory Bird Treaty Act is subsidiary to clearing and grubbing.

All work involved in the control, removal, and disposal of the invasive species; the invasive plant control plan; pressure washing equipment; silt fence, tarps, and other control measures to prevent dispersal of seed and other plant material is subsidiary to the clearing and grubbing pay item.

Method of Measurement: (Acre). Compensation shall be paid for the area acceptably cleared and/or grubbed, measured on the ground surface. Only areas shown in the plans or staked for clearing and/or grubbing will be measured, in accordance with SSHC Section 201, Supplementary Conditions SC-01 – Measurement and Payment, and SC-01.02 Measurement of Quantities. Paragraph 1 “Acre (43,560 ft²)”.

Item No. A-3 (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 pier substructure. 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 associated substructures per SSHC Subsection 202-3.03 and the Plans, 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 Owner only intends on salvaging the section of rail removed from superstructure. The existing pier substructures and abutments is to be removed in its entirety, to an elevation at, or below, the existing mudline elevation in accordance with the plans and specifications.

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 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-07 – Rail Operations Coordination.

The Contractor and its subcontractors shall abide by all applicable Alaska Occupational Safety and Health (AKOSH), Occupational Safety and Health Administration (OSHA), and Federal Railroad Administration (FRA) safety requirements for any and all activities performed on, or adjacent to bridges and on, or over, waterbodies.

Once ARRC has cut and/or unbolted the section of rail to be removed, the Contractor shall assist ARRC with the removal of the track panel between the breaks in the rail.

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 reinstall 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. A-4 (202.0024.1) – Removal of Track

Work includes all equipment, materials, supervision, and labor required to remove existing track features within the limits shown on the Plans in accordance with SSHC Section 202 and Supplementary Condition SC-17 – Section 244, Trackwork Removal. Disposal of all other items required for the removal of the scheduled structures per the aforementioned Section and the Plans, 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, become the

property of the Contractor. ARRC only intends on salvaging the rail removed from within the limits identified on the Plans. 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.

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 location; accepted by the Owner and in accordance with SSHC Section 202, and Supplementary Conditions SC-01 – Measurement and Payment, and SC-17 – Section 244, Trackwork Removal.

Item No. A-5 (203.0003.1) – Unclassified Excavation

Excavate, haul, place, and compact or dispose of specified material necessary to construct the project. Conform to the lines, grades, depths and typical cross sections shown on the Plans or as established. All material within the projects limits to be removed shall be designated as unclassified material. Reuse of the unclassified material is permitted if the Contractor can classify the material through a third-party testing firm. At the direction of the Owner, limited amounts of excavated material may be stockpiled on site to restrict public access following project completion. Unclassified material is to be defined per SSHC Subsection 203-2.01.1. Construction activities under this item shall be in accordance with SSHC Subsection 203-3.01, 203-3.03, and 203-3.05.

Method of Measurement: (Cubic Yard). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Section 203 and Supplementary Condition SC-01 – Measurement and Payment; with the cubic yard volume computed in accordance with Supplementary Condition SC-01.02 Measurement of Quantities, Paragraph 3(b) “*Three-dimensional*.”

Item No. A-6 (203.0006.1) – Selected Material, Type A

Work includes all equipment, materials, supervision, and labor required to construct an embankment on an approved foundation, using Selected Material, Type A in accordance with SSHC Subsection 703-2.07, and as shown in the Plans.

The Contractor shall provide a Standard Proctor and 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 6-inch maximum un-compacted lifts and shaped and compacted in accordance with SSHC Subsection 203-3.04. Material placed beneath the new track panels shall be compacted to 95%, or greater, relative compaction in accordance with the aforementioned Subsection. Material placed as a surface course shall be compacted to a minimum of 95% relative compaction, in accordance with the previously mentioned Subsection. The Contractor shall supply quality control testing from a reputable third party testing agency.

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. A-7 (205.0009.1) – Structural Fill

Work includes all equipment, materials, supervision, and labor required to construct the structural base course on an approved foundation, as shown in the Plans, using Contractor furnished aggregate in accordance with SSHC Section 205.

The Contractor shall submit a Standard Proctor and 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 ARRC. Material is to be placed in accordance with SSHC Subsection 205-3.02 in 6-inch maximum un-compacted lifts and shaped and compacted in accordance with SSHC Subsection 205-3.05.1 "Compaction With Moisture and Density Control". Material placed beneath the new track panels shall be compacted to no less than 98 percent of the maximum density. 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.

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. A-8 (241.0001.1) – Railroad Ballast, Type 3

Work includes all equipment, materials, labor, and supervision required to place Owner provided railroad ballast as indicated on the Plans and in accordance with this Section.

Manufacturing, Handling, Delivery, and Stockpiling of Material. The ballast shall be handled, delivered, stockpiled, and placed in such a manner that it is kept clean and free from segregation. Processed ballast shall be washed and/or rescreened as necessary to remove fine particle contamination as defined by the specifications prior to stockpiling. Stockpiling of ballast will only be allowed over firm stable base areas. In order to minimize segregation ballast shall be stockpiled in 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.

The Contractor shall submit their plan for handling and transporting ballast. This plan shall include source, type of equipment to be used, location of stockpiles, and method of distributions.

Construction Requirements. 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 prepare, 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 and methods. The specification shall include a complete description of equipment to be used and variables that can be adjusted such as placement and spreading method, number of passes of tamping machine, depth of layer being compacted, year, make and model of tamping machine.

Ballast Placement.

1. Ballast shall be placed to the lines and grades indicated. The average thickness shall be within one-quarter inch of the thickness shown on the drawings. Ballast shall not be placed on soft, muddy, or frozen 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.

Surplus ballast remaining after final surfacing and placement of the ballast section shall be distributed or otherwise disposed of as directed by the Owner.

Method of Measurement: (Ton). Supplementary Conditions SC-01 – Measurement and Payment, SC-01.02 Measurement of Quantities. Paragraph 13 “Ton (2,000 pounds)”, and SC-14 – Section 240, Railroad.

Item No. A-9 (242.0001) – Track Work, 115# RE Rail

Work includes all equipment, materials, supervision, and labor required to install the new 115# RE rail 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 SC-16 – Section 242, Trackwork and AREMA. Installation of the inner guardrail within the limits of the new bridge using salvaged rail shall be subsidiary to this work. All ancillary items utilized to affix the inner guardrail per ARRC provided plans shall be provided by the Owner.

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. Type 3 Ballast
- b. 80 foot sections of new 115# RE jointed rail (for bridge deck)
- c. Salvaged sections of 115# RE relay rail (guardrail)
- d. ±1,200 foot sections of new Continuously Welded Rail (CWR) 115# RE rail
- e. Angle joint bars and all required hardware to install
- f. Track spikes
- g. Rail anchors
- h. Tie plates
- i. Pandrol plates
- j. Pandrol clips
- k. Screw spikes
- l. 10.0' treated wooden cross ties
- m. 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.

Thermite weld sections of new track and connections to existing rail in accordance with SC-16 – Section 242, Trackwork.

Method of Measurement: (see summary table). 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 track (both rails) in place, measured along the centerline of the track from the southern tie in location to the northern location; accepted by the Owner.

Payment will be made under:

Table 4 - Summary of Pay Items under Track Work

Item Number	Item Description	Unit
A-10.1 (242.0001.1)	Track Work, 115# RE Rail	Linear Foot
A-10.2 (242.0001.2)	Exothermic Field Welds	Each

Item No. A-10 (242.0001.2) – 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 SC-16 – Section 242, Trackwork and AREMA.

Method of Measurement: (Linear Foot). Compensation will be paid for the length of the track in place, measured along the centerline of the track from the southern tie in location to the northern location; accepted by the Owner and in accordance with SSHC Section 617, and Supplementary Conditions SC-01 – Measurement and Payment and SC-16 – Section 242, Trackwork.

Item No. A-11 (301.0002.1) – Aggregate Base Course, Grading C-1

Work includes all equipment, materials, supervision, and labor required to construct an aggregate base course on an approved foundation, as shown in the Plans using Contractor furnished aggregate in accordance with SSHC Section 301. The Contractor shall submit a Standard Proctor and 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 ARRC. Material is to be placed in accordance with SSHC Subsection 301-3.01 in 8-inch maximum un-compacted lifts and shaped and compacted in accordance with SSHC Subsection 301-3.03. Material placed as a surface course shall be compacted to a density of not less than 95 percent of the maximum density. 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. Drainage shall be maintained throughout project. Grading needed to reestablish and maintain ditch and culvert drainage conveyances is subsidiary to this Work.

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. A-12 (301.0004.1) – Aggregate Surface Course, Grading D-1

Work includes all equipment, materials, supervision, and labor required to construct an aggregate surface course on an approved foundation, as shown in the Plans using Contractor furnished aggregate in accordance with SSHC Section 301. The Contractor shall submit a Standard Proctor and 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 ARRC. Material is to be placed in accordance with SSHC Subsection 301-3.01 in 8-inch maximum un-compacted lifts and shaped and compacted in accordance with SSHC Subsection 301-3.03. Material placed as a surface

course shall be compacted to a density of not less than 95 percent of the maximum density. 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.

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. A-13 (501.0007.1) – Precast Concrete Member, CAC-1

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. Use the class of concrete noted on the Plans unless otherwise specified. All materials shall conform as indicated on the Plans 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.

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.

Provide a Job Mix Design for the required class of concrete and Specified Compressive Strength which meets the requirements of the Plans and SSHC Subsection 501-2.02. Obtain the Owner’s approval of the mix design prior to use. Approval of the Job Mix Design does not constitute acceptance of produced concrete and will not obligate the Owner to accept or pay for concrete that does not meet the mix acceptance requirements of SSHC Subsection 501-3.03.

Mix and deliver concrete to the facility in accordance with the Plans and SSHC Subsection 501-3.02. The fabricator is to acquire the services of a third party testing facility to perform quality control testing of the concrete in accordance with SSHC Subsection 501-3.03, ARMEA and the Plans. Quality control testing of the concrete shall be performed at a frequency of no less than one (1) set of tests per half days pour. Sampling and testing of aggregate, in accordance with the aforementioned, used in the approved mix design shall not be required if the concrete tests yield acceptable results

In addition to the testing of concrete, the third party inspector shall inspect the forms and the placement of all reinforcing steel, anchor points, lift points, and any other ancillary items to be placed within the concrete in accordance with SSHC Subsection 501-3.04.

The placement, consolidation, finishing, repair, curing, and protection of concrete shall be in accordance with the plans and applicable Subsections of SSHC Section 501. Materials for curing shall be in accordance with the plans and SSHC Subsection 711-2.01. All pre-cast structures are to be fabricated such that their tolerances are within those allowable by AREMA guidelines and shall not deviate from the approved shop drawings without approval from the Owner.

Provide shop drawings for precast concrete members. Include details not provided in the Plans for the construction and erection of the members. Cast members only after shop drawings are approved. Use precast methods for cast-in-place elements when approved. Submit shop drawings, showing construction joint details and other required information. Submit lifting anchor calculations and product data to the Owner for review prior to procuring and installing the anchors in accordance with the manufacturer’s recommendations.

The fabricator shall design, construct, maintain and remove forms used to support structural concrete until the structure is self-supporting, in accordance with the Plans and SSHC Section 512. Construct concrete forms mortar-tight. Clean the inside surfaces of forms free of contaminants that affect the concrete finish. Coat forms to be removed with form release agent prior to use. Use a commercial quality product, designed specifically to release forms, and that will not discolor the concrete surfaces.

Fabricate and install reinforcing steel according to SSHC Section 503. Unless otherwise noted, use Class A concrete for precast concrete members meeting the Specified Compressive Strength noted on the Plans, minimum compressive strength at 28 days shall be 4,000 psi unless indicated otherwise.

Secure anchor bolt assemblies where shown on the Plans. When casting anchor bolts in concrete, secure anchor bolts before placing concrete in the forms. Do not disturb anchor bolts after concrete has been placed. When installing anchor bolts in pipe sleeves, precast holes, cored holes, or drilled holes, completely fill the cavity with grout. Do not allow water to freeze in the cavity. Do not allow foreign material in the cavity.

Provide structural steel embedment plates in accordance with the Plans and SSHC Subsection 716-2.02. Stud shear connectors shall conform to SSHC Subsection 716-2.02.4. Deformed bar anchors shall conform to SSHC Subsection 716-2.02.

Furnish and place reinforcing steel for reinforced concrete structures in accordance with the Plans and SSHC Section 503. Reinforcing steel bars shall meet the requirements of SSHC Subsection 709-2.01.

Furnish the Certification Reports for all materials 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 Plans.

Remove forms without damaging the concrete member. Forms may be removed after the concrete has cured for at least 24 hours, will not be damaged, and has a minimum compressive strength equal to or greater than 70 percent of the approved Job Mix Design specified compressive strength as determined from informational field test cylinders cured on the site under temperature and moisture conditions similar to the concrete in the structure. Protect exposed concrete surfaces from damage. Maintain curing operations according to SSHC Section 501, SSHC Subsection 711-2.01, and as noted on the Plans.

Handle and move precast concrete members without damage, in accordance with SSHC Subsection 501-3.13.3. Erect the precast concrete members in accordance with SSHC Subsection 501-3.13.4. Make field welds according to SSHC Sections 503 and 504.

If cracking is present in concrete members they will be evaluated by the Owner in accordance with SSHC Subsections 501-3.17 and 501-3.18.

All welds required to assemble the structure shall be completed in accordance with the Plans. Tolerance requirements are included in AREMA Chapter 15, Section 3.1.7 and AWS D1.5, Section 3.5; the more restrictive criteria shall control. Prior to welding, the Fabricator shall submit a welding plan stamped by a Certified Welding Inspector (CWI) for Owner review and approval. The Fabricator shall be responsible for obtaining inspection services from an independent third-

party inspection firm to perform Nondestructive Examination (NDE) as specified on the Plans. Inspections shall be completed by a CWI and results provided to the Owner on a weekly basis.

Structural welds between the pipe pile foundation and pre-cast members will be performed in accordance with the Plans and inspected by the independent inspection service using MT (Magnetic Particle Testing), UT (Ultrasonic Testing), and VT (Visual Inspection) test methods. All welds (100%) will be visually inspected by the independent inspection service with no less than 25% of the welds undergoing UT. MT tests shall be performed at the discretion of the Owner. Any welds which are found to be unsatisfactory, will be repaired in accordance with AWS standards at the Contractor's expense. Independent testing/inspection will be performed by the contractor and subsidiary to the work.

The fabricator is to supply a quality control plan that addresses all phases of the work outlined herein, on the approved shop drawings, and in SSHC Section 501.

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, prestressing steel, plates, nuts, inserts contained within the concrete member, bolts, studs, anchor bars, blockouts, elastomeric bearing pads, grout, drains, and other miscellaneous steel embedded in or attached to the precast concrete member.

Subsidiary to this work is all forms and falsework, in accordance with SSHC Section 512, used for construction and installation of all members.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Sections 501, and 504; and Supplemental SC-01 – Measurement and Payment.

Item No. A-14 (501.0007.2) – Precast Concrete Member, CPC-1

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. Use the class of concrete noted on the Plans unless otherwise specified. All materials shall conform as indicated on the Plans 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.

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.

Provide a Job Mix Design for the required class of concrete and Specified Compressive Strength which meets the requirements of the Plans and SSHC Subsection 501-2.02. Obtain the Owner's approval of the mix design prior to use. Approval of the Job Mix Design does not constitute acceptance of produced concrete and will not obligate the Owner to accept or pay for concrete that does not meet the mix acceptance requirements of SSHC Subsection 501-3.03.

Mix and deliver concrete to the facility in accordance with the Plans and SSHC Subsection 501-3.02. The fabricator is to acquire the services of a third party testing facility to perform quality

control testing of the concrete in accordance with SSHC Subsection 501-3.03, ARMEA and the Plans. Quality control testing of the concrete shall be performed at a frequency of no less than one (1) set of tests per half days pour. Sampling and testing of aggregate, in accordance with the aforementioned, used in the approved mix design shall not be required if the concrete tests yield acceptable results

In addition to the testing of concrete, the third party inspector shall inspect the forms and the placement of all reinforcing steel, anchor points, lift points, and any other ancillary items to be placed within the concrete in accordance with SSHC Subsection 501-3.04.

The placement, consolidation, finishing, repair, curing, and protection of concrete shall be in accordance with the plans and applicable Subsections of SSHC Section 501. Materials for curing shall be in accordance with the plans and SSHC Subsection 711-2.01. All pre-cast structures are to be fabricated such that their tolerances are within those allowable by AREMA guidelines and shall not deviate from the approved shop drawings without approval from the Owner.

Provide shop drawings for precast concrete members. Include details not provided in the Plans for the construction and erection of the members. Cast members only after shop drawings are approved. Use precast methods for cast-in-place elements when approved. Submit shop drawings, showing construction joint details and other required information. Submit lifting anchor calculations and product data to the Owner for review prior to procuring and installing the anchors in accordance with the manufacturer's recommendations.

The fabricator shall design, construct, maintain and remove forms used to support structural concrete until the structure is self-supporting, in accordance with the Plans and SSHC Section 512. Construct concrete forms mortar-tight. Clean the inside surfaces of forms free of contaminants that affect the concrete finish. Coat forms to be removed with form release agent prior to use. Use a commercial quality product, designed specifically to release forms, and that will not discolor the concrete surfaces.

Fabricate and install reinforcing steel according to SSHC Section 503. Unless otherwise noted, use Class A concrete for precast concrete members meeting the Specified Compressive Strength noted on the Plans, minimum compressive strength at 28 days shall be 4,000 psi unless indicated otherwise.

Secure anchor bolt assemblies where shown on the Plans. When casting anchor bolts in concrete, secure anchor bolts before placing concrete in the forms. Do not disturb anchor bolts after concrete has been placed. When installing anchor bolts in pipe sleeves, precast holes, cored holes, or drilled holes, completely fill the cavity with grout. Do not allow water to freeze in the cavity. Do not allow foreign material in the cavity.

Provide structural steel embedment plates in accordance with the Plans and SSHC Subsection 716-2.02. Stud shear connectors shall conform to SSHC Subsection 716-2.02.4. Deformed bar anchors shall conform to SSHC Subsection 709-2.01.1.

Furnish and place reinforcing steel for reinforced concrete structures in accordance with the Plans and SSHC Section 503. Reinforcing steel bars shall meet the requirements of SSHC Subsection 709-2.01.

Furnish the Certification Reports for all materials 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 Plans.

Remove forms without damaging the concrete member. Forms may be removed after the concrete has cured for at least 24 hours, will not be damaged, and has a minimum compressive strength equal to or greater than 70 percent of the approved Job Mix Design specified compressive strength as determined from informational field test cylinders cured on the site under temperature and moisture conditions similar to the concrete in the structure. Protect exposed concrete surfaces from damage. Maintain curing operations according to SSHC Section 501, SSHC Subsection 711-2.01, and as noted on the Plans.

Handle and move precast concrete members without damage, in accordance with SSHC Subsection 501-3.13.3. Erect the precast concrete members in accordance with SSHC Subsection 501-3.13.4. Make field welds according to SSHC Sections 503 and 504.

If cracking is present in concrete members they will be evaluated by the Owner in accordance with SSHC Subsections 501-3.17 and 501-3.18.

All welds required to assemble the structure shall be completed in accordance with the Plans. Tolerance requirements are included in AREMA Chapter 15, Section 3.1.7 and AWS D1.5, Section 3.5; the more restrictive criteria shall control. Prior to welding, the Fabricator shall submit a welding plan stamped by a Certified Welding Inspector (CWI) for Owner review and approval. The Fabricator shall be responsible for obtaining inspection services from an independent third-party inspection firm to perform Nondestructive Examination (NDE) as specified on the Plans. Inspections shall be completed by a CWI and results provided to the Owner on a weekly basis.

Structural welds between the pipe pile foundation and pre-cast members will be performed in accordance with the Plans and inspected by the independent inspection service using MT (Magnetic Particle Testing), UT (Ultrasonic Testing), and VT (Visual Inspection) test methods. All welds (100%) will be visually inspected by the independent inspection service with no less than 25% of the welds undergoing UT. MT tests shall be performed at the discretion of the Owner. Any welds which are found to be unsatisfactory, will be repaired in accordance with AWS standards at the Contractor's expense. Independent testing/inspection will be performed by the contractor and subsidiary to the work.

The fabricator is to supply a quality control plan that addresses all phases of the work outlined herein, on the approved shop drawings, and in SSHC Section 501.

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, pre-stressing steel, plates, nuts, inserts contained within the concrete member, bolts, studs, anchor bars, blockouts, elastomeric bearing pads, grout, drains, and other miscellaneous steel embedded in or attached to the precast concrete member.

Subsidiary to this work is all forms and falsework, in accordance with SSHC Section 512, used for construction and installation of all members.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Sections 501, and 504; and Supplemental SC-01 – Measurement and Payment.

Item No. A-15 (501.0004) – Class A Concrete, Piles

Work includes all equipment, materials, supervision, and labor required to fill each pile with Class A concrete and reinforcing steel, as indicated on the Plans, in accordance with the Plans, SSHC Section 501, Chapter 8 of the AREMA Manual for Railway Engineering, and the latest revision of American Concrete Institute (ACI)'s Guide to Cold Weather Concreting - ACI 306. Prepare each pile in accordance with SSHC Subsection 501-3.04, place concrete in accordance with SSHC Subsection 501-3.05, and consolidate placed concrete in accordance with SSHC Subsection 501-3.06. Finish concrete within a foot of each pile's cutoff elevation, as indicated in the Plans, and in accordance with SSHC Subsection 501-3.07. Construction joints shall be in accordance with SSHC Subsection 501-3.11.

Material not appearing in the Bid Schedule and contained within, embedded, or attached to concrete elements is subsidiary. Soils removed from the pipe pile are to be disposed of off-site in accordance with all Federal, Local, State and Tribal regulations is subsidiary.

Provide a Job Mix Design for the required class of concrete and Specified Compressive Strength which meets the requirements of the Plans and SSHC Subsection 501-2.02. Obtain the Owner's approval of the mix design prior to use. Approval of the Job Mix Design does not constitute acceptance of produced concrete and will not obligate the Owner to accept or pay for concrete that does not meet the mix acceptance requirements of SSHC Subsection 501-3.03.

Table 5 - Summary of Class A Concrete Job Mix Design Criteria

Characteristic	Job Mix Design Requirement
Minimum compressive strength at 28 days	4000 psi
Maximum water-cement ratio	0.45
Cement type	Type I, II, or III per AASHTO M85
Coarse aggregate size number	AASHTO M 43 No. 57 or 67
Fine aggregate	AASHTO M 6, Class A
Air content	5.5% - 6.5%

Do not place concrete underwater in piles. Concrete is to be consolidated within the pipe pile using vibratory means and methods to the greatest depth practicable.

Reinforcing steel shall meet the requirements of the Plans and SSHC Section 503. Furnish deformed reinforcing steel bars of the type, grade, and size as specified on the Plans. Furnish the Certification Reports for all materials in accordance with SSHC Subsection 709-2.01.8.

Method of Measurement: (see summary table). Compensation shall be paid for at the agreed upon unit prices and in accordance with SSHC Sections 501 and 503; and Supplementary Condition SC-01 – Measurement and Payment.

Payment will be made under:

Table 6 - Summary of Pay Items under Class A Concrete, Piles

Item Number	Item Description	Unit
A-17.1 (501.0004.1)	Class A Concrete	Cubic Yard
A-17.1 (503.0001.1)	Reinforcing Steel, 24"Ø Cage	Lump Sum

Item No. A-16 (504.0001.1) – 29’-10” Steel Beam Span, Fabricate and Furnish

Work includes all equipment, materials, supervision, and labor required to fabricate and furnish the steel structures and the structural metal portions of composite structures in accordance with the Plans, Manual for Railway Engineering – Chapter 15 Steel Structures, and SSHC Section 504.

All materials shall conform as indicated on the Plans and in accordance with SSHC Section 504. Fabricate steel bridge members, except for rolled shapes, at a plant certified under the American Institute of Steel Construction (AISC) Certification Program for Steel Bridge Fabricators at the “Simple Steel Bridges” (SBR) level. Furnish four (4) signed copies of mill reports covering all steel used on the project.

Bearing Pads shall be virgin Natural Rubber (60 Durometer), as specified in the Plans.

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. Welding to be allowed only as shown on the drawings and approved shop drawings. No temporary or permanent welds, if not shown on the plans 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 D1.1, Sample Welding Forms
- c. Procedure Qualification Records (PQR) when applicable, using forms in AWS D1.1, Sample Welding Forms
- d. Welder Performance Qualifications Records (WPQR) using forms in AWS D1.1, 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 Plans 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.

Furnish the Certification Reports for all materials 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 Plans.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Section 504 and Supplementary Condition **SC-01 – Measurement and Payment**

Item No. A-17 (504.0001.2) – 29’-10” Steel Beam Span, Installation

Work includes all equipment, materials, supervision, and labor required to install and erect the steel structures and the structural metal portions of composite structures in accordance with the Plans, Manual for Railway Engineering – Chapter 15 Steel Structures, and SSHC Section 504.

ARRC anticipates a 30-90 day track closure to perform the work. Contractor must submit a schedule showing work dates and closure duration to be approved by ARRC.

Subsidiary to this work shall be all costs associated with the affixing the structural steel elements to the pre-cast concrete members (*e.g.: coring, grouting, and etc.*), installation of all ancillary items required to complete the aforementioned task (*e.g.: bearing pads, and etc.*); and calculations for thermal expansion and any requisite survey control to determine the fixture points.

All required falsework is subsidiary to this item and shall meet the requirements of SSHC Section 512.

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.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Section 504 and Supplementary Condition **SC-01 – Measurement and Payment**

Item No. A-18 (507.0007.1) – Cable Railing and Decking

Work includes all equipment, materials, supervision, and labor required to fabricate, furnish, and install the foot-walk decking and cable handrail as indicated on the Plans, in accordance with SSHC Sections 504 and 507.

Subsidiary to this pay item shall be the provision and installation of all ancillary items (*e.g.: fasteners, closure blocks, etc.*) required to install the decking specified in the plans (or an Owner approved equal), installation of the cable handrail system, and the provision and installation of the conduit brackets (CB-1).

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 504 and 507; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. A-19 (505.0005.2) – Furnish Structural Steel Piles, 24"ø x 0.875"t, Galvanized

Work includes all equipment, materials, supervision, and labor required to furnish a sufficient length of structural steel pile to extend to the Estimated Pile Tip Elevation specified in the Plans, in accordance with the Plans, SSHC Sections 505, 715, and 716.

Provide structural steel piles in sections no less than 40-feet (nominal) for the lengths and quantities identified in the Plans, wall thickness of the piles shall be 0.875", one end beveled, and galvanized in accordance with the Plans. Hot-dip galvanize steel piles to the minimum thickness from the top to a distance not less than 10 feet below the finished ground line. Steel piles that do not protrude above the final ground line do not require galvanizing.

Pipe pile shall be straight seam welded and with material conforming to ASTM A252, Grade 3. Pipe pile materials shall first be prepared in accordance with The Society for Protective Coatings

Surface Preparation Specification No. 8 – pickling and shall be hot-dip galvanized in accordance with SSHC Subsection 716-2.07 to a minimum coating grade of 100 (2.3 oz./ft²). Deviations for the surface preparation are not allowed, unless otherwise approved by the Owner’s authorized representative. Provide a 3” mask at the end of each section of pipe pile galvanized in accordance with aforementioned. Prior to shipping, the manufacturer shall repair any damaged coatings in accordance with SSHC Subsection 716-2.07 and provide material certifications in accordance with SSHC Subsections 715-2.03 and 716-2.08.

Method of Measurement: (Linear Foot). Compensation will be paid of the piles in place in the completed structure, measured from the tip of pile to the cut-off elevation; accepted by the Owner and in accordance with SSHC Section 505 and Supplementary Condition **SC-01 – Measurement and Payment**

Item No. A-20 (505.0006.1) – Drive Structural Steel Piles, 24”Ø x 0.875”t

Work includes all equipment, materials, labor, and supervision required to drive the Contractor furnished 24”Ø x 0.875”t pipe piles in accordance with the Plans and SSHC Section 505 to a minimum 100 ton capacity.

A minimum of fifteen (15) days prior to commencing pile driving activities, the Contractor shall submit to the Owner for review a pipe pile installation plan. The plan shall address, at a minimum:

- a. A completed Pile Driving Equipment Data form (AK DOT Form 25D-098) for all hammer/pile configurations proposed for use on the project.
- b. Manufacturer’s catalog cuts, specifications, manuals, guidelines, and technical bulletins for all pile driving equipment to be used.
- c. A description of the techniques to be used for ensuring proper placement and alignment of the piles to the Minimum Penetration and Driving Resistance as provided on the Plans. Include proposed pile section lengths, estimated pile cutoff lengths, number of splices expected for each pile, and where galvanized pile will be used.
- d. Alternate methods of pike installation in the event obstructions are encountered.
- e. A wave equation analysis for each pile driving system (see SSHC Subsection 505-3.01-3).

The Owner’s approval of the pile driving plan will not relieve the Contractor of responsibility for:

- a. Removing and replacing piles damaged during pile driving operations.
- b. Obtaining the Driving Resistance specified in the Contract.
- c. Meeting Minimum Penetration specified in the Contract.

Do not mobilize pile driving equipment to the site without an approved pile driving plan.

Installation and removal of any false work, temporary shoring, bracing, or Contractor fabricated items necessary to drive the new piles shall be subsidiary to this work. The piles are to be driven using a fixed template, firmly secured to a substantial support, unless the Contractor can drive the piles within the tolerances noted in the Contract Documents with confidence.

Notify the Owner a minimum of twenty-four (24) hours in advance of any pile driving activities or extraction, as the Owner, or its representative, are required to be on-site for duration of said activities. In advance of the Owner or its representative arriving on-site for driving activities, the Contractor is to mark the pile with one-foot increments that are easily visible, and with readable numbers. Final pile depths shall be marked on every pile in accordance with the plans.

Prior to commencing pile driving activities in the nine (9) locations indicated on the Plans to be above shallow bedrock, the Contractor shall drill an exploratory hole above the designed center location of the pile. The hole shall have a minimum diameter of 2-inches and is to be advanced to bedrock or a minimum of ten (10) feet beyond the plan tip elevation of the pile. This Work shall be subsidiary to this pay item.

Vibratory hammers are only permitted to be utilized for the first 20-feet of pile penetration, as measured from the mudline. Should the design length of pile meet refusal prior to reaching said elevation in areas not indicated to be above shallow bedrock, a diesel impact hammer of sufficient size will be required to reach the design tip elevation noted on the Plans or until it is firmly seated into bedrock and/or it meets practical refusal unless the Engineer of Record states otherwise. The Contractor shall not cut the pile off prior to receiving approval from the Owner if the pile is short of the design the tip elevation. The Owner may accept the pile at a lesser tip elevation when, in the judgement of the Owner and or Engineer of Record, that the adequacy and safety of the resulting structure will not be jeopardized by its acceptance.

Placement and alignment shall meet the requirements of the Plans and SSHC Subsection 505-3.03.1. Piles not meeting tolerance requirements or out of line as to impair usefulness, or piles that are damaged in driving as to impair structural capacity, shall be pulled and re-driven at no additional cost to the Owner.

Provide pile driving records to the Owner, in an approved format, at the completion of each days driving activities.

Concrete filled pipe piles are to be cleaned out once driving of the pile is completed. Clean out the pile to the bottom of concrete elevation specified on the Plans. If there is a delay between cleanout and placing concrete, verify that the soil level in the pile has not rebounded before placing concrete.

Subsidiary to this work shall be all costs associated with, cutting, splicing, galvanic coating repair, welding and the use of backing rings in accordance with the Plans and Contract Documents.

The Contractor will be responsible for welding each splice in accordance with the Plans. All welding is to be performed in accordance with the plans, AREMA and AWS D1.1 Structural Welding Code as noted herein. Splice backing rings shall be APF S-40000, matching pipe inside diameter, or Owner approved alternate. All galvanic coatings shall be repaired in accordance with ASTM A780 or AWS C2.23, and in accordance with the Plans.

In the event that the any pile within the array does not achieve the desired capacity, the Contractor may be required to: assist the Owner in performing either a CAPWAP® Analysis or dynamic Pile Driving Analysis (PDA) of the new pile, splice and drive additional length(s) of pile, and/or standby until further direction is received. The Owner will incur all costs associated with the analysis of the new pile. Driving of additional pipe pile for omissions or errors on the part of the contractor shall be subsidiary to the original work.

Should the Contractor elect to utilize equipment that does not meet the minimum requirements set forth herein, and its equipment does not drive the subject pile beyond the designed tip elevation, the Contractor will incur the costs associated with the analysis of the new pile.

Any and all precautions shall be utilized by the Contractor to ensure that piles are neither misdriven nor damaged by Contractor means and methods. The method used for driving shall not

subject the pile to excessive or undue abuse that results in the deformation of the pile. Manipulation of the pile to force it into its proper position via jacking or loading is acceptable if, in the opinion of the Owner, that the structure is not compromised or the individual pile does not deviate more than 1/4-inch per foot from vertical. Manipulation of the pile(s) which creates a deviation, deemed excessive by the Owner or its representative, or beyond the previously mentioned tolerances, is unacceptable and will not be permitted. Any pile damaged by reason of internal/external defect, damaged by improper driving, or driven out of its proper locations, will be corrected by the Contractor at no cost to the Owner. At any time during the driving activity the pile top becomes damaged in such a manner that the Owner or its representative believe it poses a risk to the satisfactory driving of the pile, driving shall be discontinued. Once the driving apparatus is removed from the pile, the pile shall be cut perpendicular to its axis and then driving activities can continue.

Cut all pipe pile in the array to a plane that allows the pre-cast concrete pier sub caps to be installed as level as practicable with a deviation no greater than 1/16-inch between the bottom plate of the cap and to the elevation noted on the Plan set.

The Contractor shall perform periodic inspections of both initial fit-up and welding of all structural components relevant to the Work. The Contractor will provide inspection and testing services for welds in accordance with the Contract Documents.

Method of Measurement: (Each). Compensation will be paid for based on the accepted quantity installed in-place and shall be paid for at the agreed upon unit price and in accordance with SSHC Section 505 and Supplementary Condition **SC-01 – Measurement and Payment**.

Item No. A-21 (505.0009.1) – Furnish and Drive Structural Steel Sheet Piles, PS31 Sheets, 25'-0" Length

Work includes all equipment, materials, supervision, and labor required to furnish, drive, and install structural steel sheet piles in accordance with the Plans; SSHC Sections 505 and 715; and SSHC Section 716. All sections of pile shall be full length as required to achieve required embedment as indicated in the plans, with additional length allowances for clamp and installation damage.

Provide structural steel PS31 sheet piles no less than 25-feet (nominal) for the lengths and quantities identified in the Plans, meeting ASTM A572, Gr. 50 requirements.

No less than fifteen (15) days prior to the anticipated start of pile driving, submit for approval the details of each proposed pile driving system. Include in the pile driving plan:

- a. A completed Pile Driving Equipment Data form for all hammer/pile configurations proposed for use on the project.
- b. Manufacturer's catalog cuts, specifications, manuals, guidelines, and technical bulletins for all pile driving equipment to be used.
- c. A description of the techniques to be used for ensuring proper placement and alignment of the piles to the Minimum Penetration and Driving Resistance as provided on the Plans. Include proposed pile section lengths, estimated pile cutoff lengths, number of splices expected for each pile.
- d. Alternate methods of pile installation in the event obstructions are encountered.

The Owner's approval of the pile driving plan will not relieve the Contractor of responsibility for:

- a. Removing and replacing piles damaged during pile driving operations.
- b. Obtaining the Driving Resistance specified in the Contract.
- c. Meeting Minimum Penetration specified in the Contract.

Do not mobilize pile driving equipment to the site without an approved pile driving plan. Driving of piles shall be in accordance with the Plans and SSHC Subsection 505-3.03.

Method of Measurement: (Square Foot). Compensation will be paid for based on the accepted quantity of furnished and driven sheet piles remaining in place in the permanent structure as called for on the Plans, and as measured in their final position, at the agreed upon unit price and in accordance with SSHC Section 505 and Supplementary Condition SC-01 – Measurement and Payment.

Item No. A-22 (505.0010.1) – Socket Structural Steel Piles, 24"Ø

Work includes all equipment, materials, labor, and supervision required to perform all work associated with the pile sockets necessary to install structural pipe piles in areas where shallow bedrock is encountered. Pile sockets shall be no less than 36-inches in diameter.

This work shall include, but not be limited to, the excavation and disposal of all material encountered, both wet and dry, by machine drilling or by manual dug methods to the elevation and diameter as shown in the Plans or as determined by the Owner's authorized representative; the furnishing and installation of steel casings and liners, and the removal or grouting in place of same; the pumping, bailing, removal and disposal of water and mud from the excavations; the removing of any abandoned utilities, wooden pilings, or other obstructions encountered; assisting the Owner's authorized representative in arriving at the final elevations; the furnishing and placing of concrete, reinforcement and attachment dowel rods in the shaft excavation; and all other related and collateral work necessary to construct the pile sockets as shown on the Plans or as directed by the Owner's authorized representative and as specified herein.

Concrete and/or grout utilized for the installation of the pipe piles within their sockets shall be considered subsidiary to this Work and will not be measured for payment under any other pay items. Quality Control testing of all cementitious materials utilized in support of this Work shall also be subsidiary to this Work and shall be performed in accordance with SSHC Subsection 501-3.03 and as noted on the Plans.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Section 505 and Supplementary Condition SC-01 – Measurement and Payment.

Item No. A-23 (611.0001.1) – Riprap, Class III

Work includes all equipment, materials, supervision, and labor required to provide all Class 3 Riprap material, the delivery and placement of material is to conform to the Plans and specifications; 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 embankment to the standards indicated in the plans and specifications outlined herein.

Inclusive to this work are all costs associated with the excavation of any materials encountered or generated as a result of the construction activities (as defined in SSHC Subsection 203-2.01). Additionally all work associated with pioneering access including all necessary clearing and

grubbing required for the completion of work, and maintaining the excavation and embankment areas to keep them free draining at all times as the work progresses is subsidiary to this work.

Prepare the embankment substructure in accordance with SSHC Section 203. Embankment shall be shaped in accordance with the lines, grades and elevations indicated in Plans and cross sections. Subgrade shall be approved by the owner prior to covering with Riprap.

After subgrade acceptance, the contractor will place and install approved Class III Riprap as indicated on the Plans 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.

Method of Measurement: (Cubic Yard). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Sections 611 and 642: and Supplementary Condition SC-01 – Measurement and Payment; with the cubic yard volume computed in accordance with Supplementary Condition SC-01.02 Measurement of Quantities. Paragraph 3(b) “*Three-dimensional.*”

Item No. A-24 (617.0001.1) – Railroad Crossing

Work includes all equipment, materials, supervision, and labor required to install an Owner supplied railroad crossing panel system in accordance with the manufacturer's recommendations and in accordance with SSHC Section 617; except as noted herein. As noted in the Plans, the finished surface of subgrade (foundation) must not deviate more than 3/16" from a 16' straight edge. Any deviations greater than the aforementioned shall be corrected at no cost to the Owner.

Provide all required traffic control for full road closures and detours as required, for track work and cleanup. Provide required Traffic Control Plans (TCPs) and obtain Road Closure Permits. Road closure durations are estimates and subject to change depending on stage of work, permit requirements and coordination for Track and Bridge work. Durations are not expected to exceed 4 days. All permitting fees shall be the Contractor's responsibility.

Subsidiary to this Work is all equipment, materials, supervisions, and labor required to remove the existing asphalt from the edge of highway pavement to the existing crossing in accordance with SSHC Section 202-3.05. Sawcut asphalt removal limits prior to removal.

Subsidiary to this work is all equipment, materials, supervisions, and labor required to protect utilities in place, and/or assist utility company representatives with relocations within the area affected by the crossing work.

The Owner will furnish concrete crossing panels, rail, ties, Pandrol plates, e-clips, lag screws, and ballast for the crossing. Any other ancillary items required for the crossing shall be furnished by the Contractor.

Notify the Owner prior to the placement of fill material around the newly installed panels. A representative of ARRC's MOW group shall inspect the installation for conformance with the Contract Documents and AREMA Standards. Any Work completed prior to the aforementioned inspection of the crossing panels shall be at the Contractor's own risk.

Subsidiary to this Work is all equipment, materials, supervisions, and labor required to construct one or more courses of plant-produced Hot Mix Asphalt (HMA) pavement on an approved surface, to the lines, grades, and depths shown on the Plans in accordance with SSHC Section 401. Provide a job mix design meeting the requirements set forth in SSHC Subsection 401-2.09 using aggregates conforming to SSHC Subsection 703-2.04, asphalt binder conforming to SSHC Subsection 401-2.01, and joint products conforming to SSHC Subsections 702-2.05 and 702-2.06. The Contractor shall supply quality control testing in accordance with SSHC Subsection 401-4.02 from a reputable third party testing agency.

HMA shall be placed in lifts no greater than three (3) inches once compacted and no less than two (2) inches un-compacted. STE-1 Asphalt for Tack Coat (*or approved equal*) conforming to SSHC Subsection 702-2.03.2 shall be applied to all hardened non-aggregate surfaces (*which are to be paved over or against*) no more than four (4) hours prior to the placement of HMA and in accordance with SSHC Section 402. All HMA placed shall be compacted, using mechanical equipment appropriately sized for the task at hand, until there is no further evidence of consolidation and to the satisfaction of the Owner or its designated representative.

For joints that are not hot lapped (*meeting the minimum requirements set forth in SSHC Section 401*) in the field, apply joint adhesive to all vertical joints prior to the placement of new HMA.

The Contractor shall adhere to the limitations noted in SSHC Subsection 401-3.03 for the placement of HMA materials for this project.

Summary of work:

Remove asphalt from edge of pavement of the highway to the existing timber crossing. Remove existing timber crossing. Complete track raise and Crown Point Mine Road raise as shown in the plans. Excavate crossing to base of subgrade as shown in the plans. Install geotextile between existing subgrade and C-1 material. Place and compact aggregate base course, grading C-1 as shown in the plans. Place and compact ballast as shown in the plans. Install new railroad ties. Install new 32-foot long crossing centered on road centerline using Owner furnished crossing panels, rail, and rail components, as shown in the plans. Place and compact aggregate base course, grading D-1 as shown in the plans. Pave with 4" thickness of HMA from the sawcut edge of pavement of the highway to the crossing panels. Pave with 4" thickness of HMA from the crossing panels 20-feet down Crown Point Mine Road. Protect all asphalt edges.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Section 617 and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Estimated item breakdown:

Table 7 - Summary of Pay Items under Railroad Crossing

Item	Estimated Quantity	Unit of Measure
Removal of Pavement	155	Square Yard
Asphalt Binder, Grade PG 52-40	3	Ton
HMA, Type II; Class B	45	Ton
Geotextile, Separation, Class 3	85	Square Yard

Item No. A-25 (520.0001.1) – Temporary Crossings

Construct a temporary crossing at Crown Point Mine Road for vehicle access while the railroad crossing is under construction. Construct in accordance with SSHC Section 520.

Detour roadways shall be a minimum of 24' or two each 12' lanes wide unless approved otherwise. Roadway crossing approaches shall consist of a minimum surface course thickness of one foot of compacted D-1 material and shall be maintained while it is in use, including dust control, if required. The Contractor is to place all required D-1 aggregate surface course, compacted and shaped in accordance with Item No. A-13 (301.0004.1) – Aggregate Surface Course, Grading D-1 and SSHC Section 203.

Geotextile, Separation, Class 3 shall be placed between the track ballast and the detour material to preserve the integrity of the ballast. Install the geotextile in accordance with manufacturer's recommendations, and per SSHC Section 630. Contractor shall submit specifications or datasheets from the supplier meeting the requirements set forth in SSHC Subsection 729-2.01.

Maintain drainage under the detour, as necessary, by install drainage conveyances in accordance with SSHC Section 603.

Subsidiary to this pay item is all equipment, materials, supervision, and labor required to install, maintain, and remove the temporary crossing.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Section 520 and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. A-26 (641.0002.1) – Stormwater Maintenance and Management

Work includes all equipment, materials, supervision, and labor required to provide project administration, management (by certified individuals), and work relating to the control of erosion, sedimentation, and discharge of pollutants, according to SSHC Section 641. Additionally, 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.

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 shall be all costs associated with the installation, maintenance, and removal of any Best Management Practice (BMP) required to meet the specifications of the SPCC plan.

Method of Measurement: (Contingent Sum). Compensation shall be paid for at the agreed upon Contingent Sum price and in accordance with SSHC Section 641, and Supplementary Conditions SC-01 – Measurement and Payment and SC-01.02 Measurement of Quantities. Paragraph 2.

NTP 1 (Bridge 25.7) - ADDITIVE ALTERNATE BID ITEMS:

Item No. M.1 (505.0005.6) – Modify Structural Steel Piles, ASTM A53, Grade B

Modify Item No. A-20 (505.0005.2) – Furnish Structural Steel Piles, 24"ø x 0.875"t, Galvanized. Pipe pile shall be straight seam welded and with material conforming to ASTM A53, Grade B, for both uncoated (bare) and galvanized pipe piles.

Item No. M.2 (505.0005.7) – Modify Structural Steel Piles, API Specification 5L X52

Modify Item No. A-20 (505.0005.2) – Furnish Structural Steel Piles, 24"ø x 0.875"t, Galvanized. Pipe pile shall be straight seam welded and with material conforming to API Specification 5L X52 PSL1 (minimum) in accordance with SSHC Subsection 715-2.02.2(a), for both uncoated (bare) and galvanized pipe piles.

Item No. M.3 (505.0005.8) – Modify Structural Steel Piles, API Specification 2B

Modify Item No. A-20 (505.0005.2) – Furnish Structural Steel Piles, 24"ø x 0.875"t, Galvanized. Pipe pile shall be straight seam welded and with material conforming to API Specification 2B, for both uncoated (bare) and galvanized pipe piles.

NTP 2 - Bridge 25.4 – BASE BID ITEMS:

Work completed under this contract includes, but is not limited to; the removal and disposal of the existing 120-foot 8-trestle timber bridge that crosses Falls Creek at ARRC MP 25.4, installation of ARRC provided new sub- and superstructure components to construct a new 112-foot 4-span pre-cast concrete ballast deck structure, install riprap armoring for erosion prevention, and maintenance dredging to remove sediment deposition within the channel of Falls Creek.

Item No. B-1 (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 as-built (record) drawings, 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 Condition **SC-01 – Measurement and Payment**.

Item No. B-2 (201.0009.1) – Clearing and Grubbing

Work includes 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 plans, SSHC Section 201 and specifications outlined herein. Preserve from injury or defacement all vegetation and objects designated to remain.

General. Clear and grub the areas shown in the Area of Potential Effect figure as necessary to construct the project. 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 Plans or in the Special Conditions.

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 Plans, you may use a mechanical brush cutter, provided such work is performed within the time frame specified in the Special Provisions.

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 Plans, 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 your property.

Control of Invasive Plants. Control, remove, and dispose of soils and vegetative matter infested with invasive plants. Limit excavation related to invasive plants to only those areas and to the depths shown on the Plans. Accomplish excavation of invasive plants and soil separate from, and prior to, other clearing and ground disturbing activities in the immediate area of the infestation.

3. Invasive Plants Survey.

An invasive plants survey has been completed by the Owner. The location, extent, and type of invasive plants is identified on the Plans. Submit an invasive plant control plan to control the identified plants at the identified locations.

4. Invasive Plant Control Plan.

Submit an invasive plant control plan, on the provided form, detailing steps for removal, containment, or disposal of invasive plants using the DOT&PF Southeast Region *Disposal and Control of Invasive Plant Species* as a guide. The guide is located here: http://www.dot.state.ak.us/stwddes/desenviron/assets/pdf/resources/se_invasive_final.pdf

Submit the plan to the Owner's authorized representative for approval. Allow 10 days for review by the Owner's authorized representative. Do not conduct any clearing and ground disturbing activities in the immediate area of invasive plant infestations until the plan is approved by the Owner's authorized representative. Pressure wash all tracked equipment, excavation equipment, and excavation hauling equipment prior to mobilization to ensure that the spread of invasive species is minimized. Clean all parts of equipment so that no invasive species would have the chance of being spread or imported into the community. Use the same cleaning method on all equipment involved in removing and disposing invasive plants

after working in locations with invasive plants. Use the same cleaning method on all tracked equipment, excavation equipment, and excavation hauling equipment prior to demobilization to prevent the export of invasive species.

Use silt fence, tarps, and other control measures to prevent dispersal of seed and other plant material from equipment cleaning areas and temporary soil or waste stockpiles that contain invasive plants.

Basis of payment: Backfill and compaction of holes left from removal of stumps or other objects are subsidiary.

Work to comply with the Migratory Bird Treaty Act is subsidiary to clearing and grubbing.

All work involved in the control, removal, and disposal of the invasive species; the invasive plant control plan; pressure washing equipment; silt fence, tarps, and other control measures to prevent dispersal of seed and other plant material is subsidiary to the clearing and grubbing pay item.

Method of Measurement: (Acre). Compensation shall be paid for the area acceptably cleared and/or grubbed, measured on the ground surface. Only areas shown in the plans or staked for clearing and/or grubbing will be measured, in accordance with SSHC Section 201, Supplementary Conditions SC-01 – Measurement and Payment, and SC-01.02 Measurement of Quantities. Paragraph 1 “Acre (43,560 ft²)”.

Item No. B-3 (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 pier substructure. 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 associated substructures per SSHC Subsection 202-3.03 and the Plans, 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 Owner only intends on salvaging the section of rail removed from superstructure. The existing pier substructures and abutments are to be removed in its entirety, to an elevation at, or below, the existing mudline elevation in accordance with the plans and specifications.

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 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 and its subcontractors shall abide by all applicable Alaska Occupational Safety and Health (AKOSH), Occupational Safety and Health Administration (OSHA), and Federal Railroad Administration (FRA) safety requirements for any and all activities performed on, or adjacent to bridges and on, or over, waterbodies.

Once ARRC has cut and/or unbolted the section of rail to be removed, the Contractor shall assist ARRC with the removal of the track panel between the breaks in the rail.

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 reinstall 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. B-4 (202.0024.1) – Removal of Track

Work includes all equipment, materials, supervision, and labor required to remove existing track features within the limits shown on the Plans in accordance with SSHC Section 202 and Supplementary Condition SC-17 – Section 244, Trackwork Removal. Disposal of all other items required for the removal of the scheduled structures per the aforementioned Section and the Plans 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, become the property of the Contractor. ARRC only intends on salvaging the rail removed from within the limits identified on the Plans. 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.

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 location; accepted by the Owner and in accordance with SSHC Section 202, and Supplementary Conditions SC-01 – Measurement and Payment and SC-17 – Section 244, Trackwork Removal.

Item No. B-5 (203.0003.1) – Unclassified Excavation

Excavate, haul, place, and compact or dispose of specified material necessary to construct the project. Conform to the lines, grades, depths and typical cross sections shown on the Plans or as established. All material within the projects limits to be removed shall be designated as unclassified material. Reuse of the unclassified material is permitted if the Contractor can classify the material through a third-party testing firm. Unclassified material is to be defined per SSHC Subsection 203-2.01.1. Construction activities under this item shall be in accordance with SSHC Subsections 203-3.01, 203-3.03, and 203-3.05.

Method of Measurement: (Cubic Yard). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Section 203 and Supplementary Condition SC-01 – Measurement and Payment; with the cubic yard volume computed in accordance with Supplementary Condition SC-01.02 Measurement of Quantities. Paragraph 3(b) “*Three-dimensional.*”

Item No. B-6 (205.0009.1) – Structural Fill

Work includes all equipment, materials, supervision, and labor required to construct the structural base course on an approved foundation, as shown in the Plans, using Contractor furnished aggregate in accordance with SSHC Section 205.

The Contractor shall submit a Standard Proctor and 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 ARRC. Material is to be placed in accordance with SSHC Subsection 205-3.02 in

6-inch maximum un-compacted lifts and shaped and compacted in accordance with SSHC Subsection 205-3.05.1. Material placed beneath the new track panels shall be compacted to no less than 98 percent of the maximum density. 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.

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. B-7 (241.0001.1) – Railroad Ballast, Type 3

Work includes all equipment, materials, labor, and supervision required to place Owner provided railroad ballast as indicated on the Plans and in accordance with this Section. Ballast is currently stockpiled in the Seward Yard.

Manufacturing, Handling, Delivery, and Stockpiling of Material. The ballast shall be handled, delivered, stockpiled, and placed in such a manner that it is kept clean and free from segregation. Processed ballast shall be washed and/or rescreened as necessary to remove fine particle contamination as defined by the specifications prior to stockpiling. Stockpiling of ballast will only be allowed over firm stable base areas. In order to minimize segregation ballast shall be stockpiled in 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.

The Contractor shall submit their plan for handling and transporting ballast. This plan shall include source, type of equipment to be used, location of stockpiles, and method of distributions.

Construction Requirements. 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 prepare, 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 and methods. The specification shall include a complete description of equipment to be used and variables that can be adjusted such as placement and spreading method, number of passes of tamping machine, depth of layer being compacted, year, make and model of tamping machine.

Ballast Placement.

4. Ballast shall be placed to the lines and grades indicated. The average thickness shall be within one-quarter inch of the thickness shown on the drawings. Ballast shall not be placed on soft, muddy, or frozen 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.
5. 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.

6. 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.

Surplus ballast remaining after final surfacing and placement of the ballast section shall be distributed or otherwise disposed of as directed by the Owner.

Method of Measurement: (Ton). Supplementary Conditions SC-01 – Measurement and Payment, SC-01.02 Measurement of Quantities. Paragraph 13 “Ton (2,000 pounds)” and SC-14 – Section 240, Railroad.

Item No. B-8 (242.0001) – Track Work, 115# RE Rail

Work includes all equipment, materials, supervision, and labor required to install the new 115# RE rail within the limits shown on the Plans. New rail shall be installed up to the nearest joint bar outside the limits of the project improvements, or to a field cut as approved by the Owner. Construction of the new rail shall be completed in accordance with SC-16 – Section 242, Trackwork and AREMA.

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. Type 3 Ballast
- b. Salvaged sections of 115# RE relay rail (guardrail)
- c. ±1,200 foot sections of new Continuously Welded Rail (CWR) 115# RE rail
- a. Angle joint bars and all required hardware to install
- b. Track spikes
- c. Rail anchors
- d. Tie plates
- e. Pandrol plates
- f. Pandrol clips
- g. Screw spikes
- h. 10.0' treated wooden cross ties
- i. 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.

Method of Measurement: (see summary table). 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 track (both rails) in place, measured along the centerline of the track from the southern tie in location to the northern location; accepted by the Owner.

Payment will be made under:

Table 8 - Summary of Pay Items under Track Work

Item Number	Item Description	Unit
B-8.1 (242.0001.3)	Track Work, 115# RE Rail	Linear Foot
B-8.2 (242.0001.4)	Exothermic Field Welds	Each

Item No. B-9 (242.0001.2) – 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 SC-16 – Section 242, Trackwork and AREMA.

Method of Measurement: (Linear Foot). Compensation will be paid for the length of the track in place, measured along the centerline of the track from the southern tie in location to the northern location; accepted by the Owner and in accordance with SSHC Section 617, and Supplementary Conditions SC-01 – Measurement and Payment and SC-16 – Section 242, Trackwork.

Item No. B-10 (301.0002.1) – Aggregate Base Course, Grading C-1

Work includes all equipment, materials, supervision, and labor required to construct an aggregate base course on an approved foundation, as shown in the Plans using Contractor furnished aggregate in accordance with SSHC Section 301. The Contractor shall submit a Standard Proctor and 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 ARRC. Material is to be placed in accordance with SSHC Subsection 301-3.01 in 8-inch maximum un-compacted lifts and shaped and compacted in accordance with SSHC Subsection 301-3.03. Material placed as a surface course shall be compacted to a density of not less than 95 percent of the maximum density. 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. Drainage shall be maintained throughout project. Grading needed to reestablish and maintain ditch and culvert drainage conveyances is subsidiary to this Work.

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. B-11 (501.0007.1) – Precast Concrete Member, Two Row Abutment

Work includes all equipment, materials, supervision, and labor required to install the Owner provided precast structures. Owner provided materials will be delivered to the Seward Yard on rail cars. All materials required to perform this work shall be as indicated on the Plans 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.

All welds required to assemble the structure shall be completed in accordance with the Plans. Tolerance requirements are included in AREMA Chapter 15, Section 3.1.7 and AWS D1.5, Section 3.5; the more restrictive criteria shall control.

Structural welds between the pipe pile foundation and pre-cast members will be performed in accordance with the Plans and inspected by the independent inspection service using MT (Magnetic Particle Testing), UT (Ultrasonic Testing), and VT (Visual Inspection) test methods. All welds (100%) will be visually inspected by the independent inspection service with no less than 25% of the welds undergoing UT. MT tests shall be performed at the discretion of the Owner. Any welds which are found to be unsatisfactory, will be repaired in accordance with AWS standards at the Contractor's expense. Independent testing/inspection will be performed by the contractor and subsidiary to the work.

Subsidiary to this work is all forms and falsework, in accordance with SSHC Section 512, used for construction and installation of all members.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Sections 501, and 504; and Supplemental SC-01 – Measurement and Payment.

Item No. B-12 (501.0007.2) – Precast Concrete Member, One Row Bent

Work includes all equipment, materials, supervision, and labor required to install the Owner provided precast structures. Owner provided materials will be delivered to the Seward Yard on rail cars. All materials required to perform this work shall be as indicated on the Plans 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.

All welds required to assemble the structure shall be completed in accordance with the Plans. Tolerance requirements are included in AREMA Chapter 15, Section 3.1.7 and AWS D1.5, Section 3.5; the more restrictive criteria shall control.

Structural welds between the pipe pile foundation and pre-cast members will be performed in accordance with the Plans and inspected by the independent inspection service using MT (Magnetic Particle Testing), UT (Ultrasonic Testing), and VT (Visual Inspection) test methods. All welds (100%) will be visually inspected by the independent inspection service with no less than 25% of the welds undergoing UT. MT tests shall be performed at the discretion of the Owner. Any welds which are found to be unsatisfactory, will be repaired in accordance with AWS standards at the Contractor's expense. Independent testing/inspection will be performed by the contractor and subsidiary to the work.

Subsidiary to this work is all forms and falsework, in accordance with SSHC Section 512, used for construction and installation of all members.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Sections 501 and 504; and Supplemental SC-01 – Measurement and Payment.

Item No. B-13 (501.0007.2) – Precast Concrete Member, 28' CBD

Work includes all equipment, materials, supervision, and labor required to install the Owner provided precast structures and bearing pads. Owner provided materials will be delivered to the Seward Yard on rail cars. Use the class of concrete noted on the Plans unless otherwise specified. All materials required to perform this work shall be as indicated on the Plans 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.

Subsidiary to this work shall be all costs associated with the affixing the 28' Concrete Ballast Deck (CBD) segments to the pre-cast concrete members (*e.g.: coring, grouting, and etc.*), and the installation of all ancillary items required to complete the aforementioned task (*e.g.: bearing pads, and etc.*)

All required falsework is subsidiary to this item and shall meet the requirements of SSHC Section 512.

Method of Measurement: (Each). Compensation shall be paid for at the agreed upon unit price and in accordance with SSHC Sections 501 and 504; and Supplemental SC-01 – Measurement and Payment.

Item No. B-14 (501.0004) – Class A Concrete, Piles

Work includes all equipment, materials, supervision, and labor required to fill each pile with Class A concrete and reinforcing steel, as indicated on the Plans, in accordance with the Plans, SSHC Section 501, Chapter 8 of the AREMA Manual for Railway Engineering, and the latest revision of American Concrete Institute (ACI)'s Guide to Cold Weather Concreting - ACI 306. Prepare each pile in accordance with SSHC Subsection 501-3.04, place concrete in accordance with SSHC Subsection 501-3.05, and consolidate placed concrete in accordance with SSHC Subsection 501-3.06. Finish concrete within a foot of each pile's cutoff elevation, as indicated in the Plans, and in accordance with SSHC Subsection 501-3.07. Construction joints shall be in accordance with SSHC Subsection 501-3.11.

Material not appearing in the Bid Schedule and contained within, embedded, or attached to concrete elements is subsidiary. Soils removed from the pipe pile are to be disposed of off-site in accordance with all Federal, Local, State and Tribal regulations is subsidiary.

Provide a Job Mix Design for the required class of concrete and Specified Compressive Strength which meets the requirements of the Plans and SSHC Subsection 501-2.02. Obtain the Owner's approval of the mix design prior to use. Approval of the Job Mix Design does not constitute acceptance of produced concrete and will not obligate the Owner to accept or pay for concrete that does not meet the mix acceptance requirements of SSHC Subsection 501-3.03.

Table 9 - Summary of Class A Concrete Job Mix Design Criteria

Characteristic	Job Mix Design Requirement
Minimum compressive strength at 28 days	4000 psi
Maximum water-cement ratio	0.45
Cement type	Type I, II, or III per AASHTO M85
Coarse aggregate size number	AASHTO M 43 No. 57 or 67
Fine aggregate	AASHTO M 6, Class A
Air content	5.5% - 6.5%

Do not place concrete underwater in piles. Concrete is to be consolidated within the pipe pile using vibratory means and methods to the greatest depth practicable.

Reinforcing steel shall meet the requirements of the Plans and SSHC Section 503. Furnish deformed reinforcing steel bars of the type, grade, and size as specified. Furnish the Certification Reports for all materials in accordance with SSHC Subsection 709-2.01.8.

Method of Measurement: (see summary table). Compensation shall be paid for at the agreed upon unit prices and in accordance with SSHC Sections 501 and 503; and Supplementary Condition SC-01 – Measurement and Payment.

Payment will be made under:

Table 10 - Summary of Pay Items under Class A Concrete, Piles

Item Number	Item Description	Unit
B-14.1 (501.0004.1)	Class A Concrete	Cubic Yard
B-14.2 (503.0001.1)	Reinforcing Steel, 12"Ø Cage	Lump Sum
B-14.3 (503.0001.2)	Reinforcing Steel, 16"Ø Cage	Lump Sum

Item No. B-15 (507.0007.1) – HSS Railing and Decking

Work includes all equipment, materials, supervision, and labor required to furnish and install the foot-walk decking and HSS handrail as indicated on the Plans, in accordance with SSHC Sections 504 and 507.

Subsidiary to this pay item shall be the installation of all ancillary items (e.g.: fasteners, closure blocks, etc.) required to install the decking specified in the plans (*or an Owner approved equal*), installation of the HSS handrail system, and the provision and installation of the conduit brackets (CB-1).

All welds required to perform this Work are to be completed in accordance with the Plans. Tolerance requirements are included in AREMA Chapter 15, Section 3.1.7, and AWS D1.1; the more restrictive criteria shall control.

Prior to welding, the Contractor shall submit a welding plan stamped by a Certified Welding Inspector (CWI) for Owner review and approval. The Contractor shall be responsible for obtaining inspection services from an independent third-party inspection firm to perform Nondestructive Examination (NDE) as specified on the Plans. Inspections shall be completed by a CWI and results provided to the Owner prior to payment under this line item.

Method of Measurement: (Lump Sum). Compensation shall be paid for at the agreed upon lump sum price and in accordance with SSHC Sections 504 and 507; and Supplementary Conditions SC-01 – Measurement and Payment and SC-02 – Lump Sum Pay Item.

Item No. B-16 (505.0005.2) – Furnish Structural Steel Piles, 12"Ø x 0.500"t, Galvanized

Work includes all equipment, materials, supervision, and labor required to furnish a sufficient length of structural steel pile to extend to the Estimated Pile Tip Elevation specified in the Plans, in accordance with the Plans, SSHC Sections 505, 715, and 716.

Provide structural steel piles in sections no less than 40-feet (nominal) for the lengths and quantities identified in the Plans, wall thickness of the piles shall be 0.500", one end beveled, and galvanized in accordance with the Plans. Hot-dip galvanize steel piles to the minimum thickness from the top to a distance not less than 10 feet below the finished ground line. Steel piles that do not protrude above the final ground line do not require galvanizing.

Pipe pile shall be straight seam welded and with material conforming to ASTM A252, Grade 3. Pipe pile materials shall first be prepared in accordance with The Society for Protective Coatings Surface Preparation Specification No. 8 – pickling and shall be hot-dip galvanized in accordance

with SSHC Subsection 716-2.07 to a minimum coating grade of 100 (2.3 oz./ft²). Deviations for the surface preparation are not allowed, unless otherwise approved by the Owner's authorized representative. Provide a 3" mask at the end of each section of pipe pile galvanized in accordance with aforementioned. Prior to shipping, the manufacturer shall repair any damaged coatings in accordance with SSHC Subsection 716-2.07 and provide material certifications in accordance with SSHC Subsections 715-2.03 and 716-2.08.

Method of Measurement: (Linear Foot). Compensation will be paid of the piles in place in the completed structure, measured from the tip of pile to the cut-off elevation; accepted by the Owner and in accordance with SSHC Section 505 and Supplementary Condition SC-01 – Measurement and Payment

Item No. B-17 (505.0005.4) – Furnish Structural Steel Piles, 16"Ø x 0.500"t, Galvanized

Work includes all equipment, materials, supervision, and labor required to furnish a sufficient length of structural steel pile to extend to the Estimated Pile Tip Elevation specified in the Plans, in accordance with the Plans, SSHC Sections 505, 715, and 716.

Provide structural steel piles in sections no less than 40-feet (nominal) for the lengths and quantities identified in the Plans, wall thickness of the piles shall be 0.500", one end beveled, and galvanized in accordance with the Plans. Hot-dip galvanize steel piles to the minimum thickness from the top to a distance not less than 10 feet below the finished ground line. Steel piles that do not protrude above the final ground line do not require galvanizing.

Pipe pile shall be straight seam welded and with material conforming to ASTM A252, Grade 3. Pipe pile materials shall first be prepared in accordance with The Society for Protective Coatings Surface Preparation Specification No. 8 – pickling and shall be hot-dip galvanized in accordance with SSHC Subsection 716-2.07 to a minimum coating grade of 100 (2.3 oz./ft²). Deviations for the surface preparation are not allowed, unless otherwise approved by the Owner's authorized representative. Provide a 3" mask at the end of each section of pipe pile galvanized in accordance with aforementioned. Prior to shipping, the manufacturer shall repair any damaged coatings in accordance with SSHC Subsection 716-2.07 and provide material certifications in accordance with SSHC Subsections 715-2.03 and 716-2.08.

Method of Measurement: (Linear Foot). Compensation will be paid of the piles in place in the completed structure, measured from the tip of pile to the cut-off elevation; accepted by the Owner and in accordance with SSHC Section 505 and Supplementary Condition SC-01 – Measurement and Payment

Item No. B-18 (505.0006) – Drive Structural Steel Piles, 0.500"t

Work includes all equipment, materials, labor, and supervision required to drive furnished 0.500"t pipe piles in accordance with the Plans and SSHC Section 505 to a minimum 105 ton capacity.

A minimum of fifteen (15) days prior to commencing pile driving activities, the Contractor shall submit to the Owner for review a pipe pile installation plan. The plan shall address, at a minimum:

- f. A completed Pile Driving Equipment Data form for all hammer/pile configurations proposed for use on the project.
- g. Manufacturer's catalog cuts, specifications, manuals, guidelines, and technical bulletins for all pile driving equipment to be used.
- h. A description of the techniques to be used for ensuring proper placement and alignment of the piles to the Minimum Penetration and Driving Resistance as

provided on the Plans. Include proposed pile section lengths, estimated pile cutoff lengths, number of splices expected for each pile.

- i. Alternate methods of pile installation in the event obstructions are encountered.
- j. A wave equation analysis for each pile driving system (*see SSHC Subsection 505-3.01-3*).

The Owner's approval of the pile driving plan will not relieve the Contractor of responsibility for:

- d. Removing and replacing piles damaged during pile driving operations.
- e. Obtaining the Driving Resistance specified in the Contract.
- f. Meeting Minimum Penetration specified in the Contract.

Do not mobilize pile driving equipment to the site without an approved pile driving plan.

Installation and removal of any false work, temporary shoring, bracing, or Contractor fabricated items necessary to drive the new piles shall be subsidiary to this work. The piles are to be driven using a fixed template, firmly secured to a substantial support, unless the Contractor can drive the piles within the tolerances noted in the Contract Documents with confidence.

Notify the Owner a minimum of twenty-four (24) hours in advance of any pile driving activities or extraction, as the Owner, or its representative, are required to be on-site for duration of said activities. In advance of the Owner or its representative arriving on-site for driving activities, the Contractor is to mark the pile with one-foot increments that are easily visible, and with readable numbers. Final pile depths shall be marked on every pile in accordance with the plans.

Vibratory hammers are only permitted to be utilized for the first 20-feet of pile penetration, as measured from the mudline. Should the design length of pile meet refusal prior to reaching said elevation in areas not indicated to be above shallow bedrock, a diesel impact hammer of sufficient size will be required to reach the design tip elevation noted on the Plans or until it is firmly seated into bedrock and/or it meets practical refusal unless the Engineer of Record states otherwise. The Contractor shall not cut the pile off prior to receiving approval from the Owner if the pile is short of the design the tip elevation. The Owner may accept the pile at a lesser tip elevation when, in the judgement of the Owner and or Engineer of Record, that the adequacy and safety of the resulting structure will not be jeopardized by its acceptance.

Placement and alignment shall meet the requirements of the Plans and SSHC Subsection 505-3.03.1. Piles not meeting tolerance requirements or out of line as to impair usefulness, or piles that are damaged in driving as to impair structural capacity, shall be pulled and re-driven at no additional cost to the Owner.

Provide pile driving records to the Owner, in an approved format, at the completion of each days driving activities.

Concrete filled pipe piles are to be cleaned out once driving of the pile is competed. Clean out the pile to the bottom of concrete elevation specified on the Plans. If there is a delay between cleanout and placing concrete, verify that the soil level in the pile has not rebounded before placing concrete.

Subsidiary to this work shall be all costs associated with, cutting, splicing, galvanic coating repair, welding and the use of backing rings in accordance with the Plans and Contract Documents.

The Contractor will be responsible for welding each splice in accordance with the Plans. All welding is to be performed in accordance with the plans, AREMA and AWS D1.1 Structural Welding Code as noted herein. Splice backing rings shall be APF S-40000, matching pipe inside diameter, or Owner approved alternate. All galvanic coatings shall be repaired in accordance with ASTM A780 or AWS C2.23, and in accordance with the Plans.

In the event that the any pile within the array does not achieve the desired capacity, the Contractor may be required to: assist the Owner in performing either a CAPWAP® Analysis or dynamic Pile Driving Analysis (PDA) of the new pile, splice and drive additional length(s) of pile, and/or standby until further direction is received. The Owner will incur all costs associated with the analysis of the new pile. Driving of additional pipe pile for omissions or errors on the part of the contractor shall be subsidiary to the original work.

Should the Contractor elect to utilize equipment that does not meet the minimum requirements set forth herein, and its equipment does not drive the subject pile beyond the designed tip elevation, the Contractor will incur the costs associated with the analysis of the new pile.

Any and all precautions shall be utilized by the Contractor to ensure that piles are neither misdriven nor damaged by Contractor means and methods. The method used for driving shall not subject the pile to excessive or undue abuse that results in the deformation of the pile. Manipulation of the pile to force it into its proper position via jacking or loading is acceptable if, in the opinion of the Owner, that the structure is not compromised or the individual pile does not deviate more than 1/4-inch per foot from vertical. Manipulation of the pile(s) which creates a deviation, deemed excessive by the Owner or its representative, or beyond the previously mentioned tolerances, is unacceptable and will not be permitted. Any pile damaged by reason of internal/external defect, damaged by improper driving, or driven out of its proper locations, will be corrected by the Contractor at no cost to the Owner. At any time during the driving activity the pile top becomes damaged in such a manner that the Owner or its representative believe it poses a risk to the satisfactory driving of the pile, driving shall be discontinued. Once the driving apparatus is removed from the pile, the pile shall be cut perpendicular to its axis and then driving activities can continue.

Cut all pipe pile in the array to a plane that allows the pre-cast concrete pier sub caps to be installed as level as practicable with a deviation no greater than 1/16-inch between the bottom plate of the cap and to the elevation noted on the Plan set.

The Contractor shall perform periodic inspections of both initial fit-up and welding of all structural components relevant to the Work. The Contractor will provide inspection and testing services for welds in accordance with the Contract Documents.

Method of Measurement: (Each). Compensation will be paid for based on the accepted quantity installed in-place and shall be paid for at the agreed upon unit price and in accordance with SSHC Section 505 and Supplementary Condition **SC-01 – Measurement and Payment**.

Payment will be made under:

Table 11 - Summary of Pay Items under Drive Structural Steel Piles, 0.500”t

Item Number	Item Description	Unit
B-18.1 (505.0006.1)	Drive 12” \varnothing x 0.500”t Pipe Pile	Each
B-18.2 (505.0006.2)	Drive 16” \varnothing x 0.500”t Pipe Pile	Each

Item No. B-19 (505.0009.1) – Drive Structural Steel Sheet Piles, PS31 Sheets, 25'-0" Length

Work includes all equipment, materials, supervision, and labor required to drive and install Owner provided structural steel sheet piles in accordance with the Plans, SSHC Section 505, Section 715, and Section 716. All sections of pile shall be full length as required to achieve required embedment as indicated in the plans, with additional length allowances for clamp and installation damage.

No less than fifteen (15) days prior to the anticipated start of pile driving, submit for approval the details of each proposed pile driving system. Include in the pile driving plan:

- e. A completed Pile Driving Equipment Data form for all hammer/pile configurations proposed for use on the project.
- f. Manufacturer's catalog cuts, specifications, manuals, guidelines, and technical bulletins for all pile driving equipment to be used.
- g. A description of the techniques to be used for ensuring proper placement and alignment of the piles to the Minimum Penetration and Driving Resistance as provided on the Plans. Include proposed pile section lengths, estimated pile cutoff lengths, number of splices expected for each pile.
- h. Alternate methods of pile installation in the event obstructions are encountered.

The Owner's approval of the pile driving plan will not relieve the Contractor of responsibility for:

- d. Removing and replacing piles damaged during pile driving operations.
- e. Obtaining the Driving Resistance specified in the Contract.
- f. Meeting Minimum Penetration specified in the Contract.

Do not mobilize pile driving equipment to the site without an approved pile driving plan. Driving of piles shall be in accordance with the Plans and SSHC Subsection 505-3.03.

Method of Measurement: (Square Foot). Compensation will be paid for based on the accepted quantity of furnished and driven sheet piles remaining in place in the permanent structure as called for on the Plans, and as measured in their final position, at the agreed upon unit price and in accordance with SSHC Section 505 and Supplementary Condition SC-01 – Measurement and Payment.

Item No. B-20 (611.0001.1) – Riprap, Class III

Work includes all equipment, materials, supervision, and labor required to provide all Class 3 Riprap material, the delivery and placement of material is to conform to the Plans and specifications; 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 embankment to the standards indicated in the plans and specifications outlined herein.

Inclusive to this work are all costs associated with the excavation of any materials encountered or generated as a result of the construction activities (as defined in SSHC Subsection 203-2.01). Additionally all work associated with pioneering access including all necessary clearing and grubbing required for the completion of work, and maintaining the excavation and embankment areas to keep them free draining at all times as the work progresses.

Prepare the embankment substructure in accordance with SSHC Section 203. Embankment shall be shaped in accordance with the lines, grades and elevations indicated in Plans and cross sections. Subgrade shall be approved by the owner prior to covering with Riprap.

After subgrade acceptance, the contractor will place and install approved Class III Riprap as indicated on the Plans 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.

Method of Measurement: (Cubic Yard). Compensation shall be paid for at the agreed upon unit price in accordance with SSHC Sections 611 and 642: and Supplementary Condition SC-01 – Measurement and Payment; with the cubic yard volume computed in accordance with Supplementary Condition SC-01.02 Measurement of Quantities. Paragraph 3(b) "Three-dimensional."

Item No. B-21 (641.0002.1) – Stormwater Maintenance and Management

Work includes all equipment, materials, supervision, and labor required to provide project administration, management (by certified individuals), and work relating to the control of erosion, sedimentation, and discharge of pollutants, according to SSHC Section 641. Additionally, 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.

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 shall be all costs associated with the installation, maintenance, and removal of any Best Management Practice (BMP) required to meet the specifications of the SPCC plan.

Method of Measurement: (Contingent Sum). Compensation shall be paid for at the agreed upon lump Contingent Sum price and in accordance with SSHC Section 641, and Supplementary Conditions SC-01 – Measurement and Payment and SC-01.02 Measurement of Quantities. Paragraph 2.

NTP 2 (Bridge 25.4) - ADDITIVE ALTERNATE BID ITEMS:

Item No. M.4 (505.0005.6) – Modify Structural Steel Piles, ASTM A53, Grade B

Modify, Item No. B-16 (505.0005.2) – Furnish Structural Steel Piles, 12"Ø x 0.500"t, Galvanized, and Item No. B-17 (505.0005.4) – Furnish Structural Steel Piles, 16"Ø x 0.500"t, Galvanized. Pipe pile shall be straight seam welded and with material conforming to ASTM A53, Grade B, for both uncoated (bare) and galvanized pipe piles.

Item No. M.5 (505.0005.7) – Modify Structural Steel Piles, API Specification 5L X52

Modify, Item No. B-16 (505.0005.2) – Furnish Structural Steel Piles, 12"Ø x 0.500"t, Galvanized, and Item No. B-17 (505.0005.4) – Furnish Structural Steel Piles, 16"Ø x 0.500"t, Galvanized. Pipe pile shall be straight seam welded and with material conforming to API Specification 5L X52 PSL1 (minimum) in accordance with SSHC Subsection 715-2.02.2(a), for both uncoated (bare) and galvanized pipe piles.

Item No. M.6 (505.0005.8) – Modify Structural Steel Piles, API Specification 2B

Modify, Item No. B-16 (505.0005.2) – Furnish Structural Steel Piles, 12"ø x 0.500"t, Galvanized, and Item No. B-17 (505.0005.4) – Furnish Structural Steel Piles, 16"ø x 0.500"t, Galvanized. Pipe pile shall be straight seam welded and with material conforming to API Specification 2B, for both uncoated (bare) and galvanized pipe piles.

APPENDIX H – SPECIAL CONDITIONS

Work shall be constructed in accordance with project drawings, general conditions, supplementary conditions, and 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.

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.

ARRC Coordination: The Contractor must coordinate with ARRC's Project Manager, or its designated representative(s), and ARRC's Transportation Operations Manager for daily operations, access to the physical project site and for the delineation of the Contractor equipment staging area(s). Coordination with the ARRC and its on-site representative will be paramount to the successful execution of the Work as the coordination of access to the site and scheduling track outages is critical to the completion of the Work.

Quality Control: The Contractor shall be responsible for controlling the quality of the construction and all of the required materials that are not furnished by the Owner. The work noted herein requires documentation of conformance with material and installation specifications. Material documentation shall be furnished to the Owner prior to placement or use of the Contractor provided materials on-site. Installation quality documentation shall be furnished to the Owner prior to any request for payment. Contractor is to supply quality control procedures for approval fifteen (15) days prior to commencing field work that is in compliance with the ARRC's installation requirements noted herein and on the Plans.

Daily Reports: The Contractor shall furnish and submit on a daily basis, unless otherwise approved by the Owner, a daily progress activity report for each day of Work; beginning on the first day of mobilization and continuing through the last day of demobilization. Daily reports shall contain, at a minimum, the followings items:

1. A detailed description of the day's Work activity.
2. Details of any incidents including any near losses.
3. A summary of Contractor resources employed that day including, but not limited to: labor, equipment, and materials.
4. Actual weather information during the day.
5. A list of all visitors to the site and the purpose of their visit.
6. A minimum of four (4) high resolution photos portraying the day's Work activities with descriptions of each photo. Photos are to be neatly embedded in the last page of the report.
7. Additional photos and/or videos of the Work activity and site conditions are encouraged and should be attached to the report.

A sample daily report is provided herein for reference. Alternatively, the Contractor may submit their proposed format to the Owner for review and approval prior to implementation.

Welding: All welding performed under this Contract is to comply with all applicable provisions of the most current version of the American Welding Society (AWS) D1.5 Bridge Welding Code. Where AWS D1.5 is not applicable, welding is to be performed in accordance with AWS D1.1 Structural Welding Code - Steel. Prior to commencing welding

activities, the Contractor is to submit all welding procedures, in accordance with either AWS D1.1 or D1.5 that it intends to use for the work specified within the Contract Documents. Additionally, submit welder certificates that include a statement that specifically certifies that each proposed welder has been qualified as specified in the applicable AWS for the particular process or processes that said welder will perform under this Contract. With each proposed welder's certificate(s), the Contractor shall also specifically certify that said welder's qualifications remain in effect in accordance with AWS and provide evidence that the proposed individual has satisfactorily passed the AWS qualification tests for the welding processes submitted and, if pertinent, has undergone recertification.

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.

Removal of unacceptable weld or base metal shall be performed using mechanical means or mechanically controlled methods.

Galvanic Coating Repairs: 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.

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.

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..

The schedule must reflect the Contractor's anticipated number of track closures.

The Contractor will not be compensated for delays as a result of poor communication and coordination with ARRC regarding the movement of assets within the project limits. Note that additional detailed schedules shall be required to be submitted with each Contractor requested track outage.

ARRC reserves the right to rely on the accuracy of completed, current, and future activities depicted in the CPM schedule.

Restrictions: It is to be assumed that no in-water work be performed between April 1 and September 30.

Substantial Completion:

Substantial completion is the point at which the Work, in the opinion of the Owner as evidenced by the Owner's written notice, is sufficiently complete, in accordance with the Contract Documents, so that the Work (or specified part) can be safely and effectively used by the Owner, for the purposes for which it is intended, without further delays, disruption, or other impediments. The terms "Substantially Complete" and "Substantially Completed" as applied to any Work refer to Substantial Completion thereof.

Substantial Completion: Substantial Completion shall be on or before **15 April 2023**, unless accepted and agreed upon otherwise by the Owner.

Final Completion: Final Completion of all work shall be on or before **15 May 2023**.

Construction Phasing Plan: Submit a Construction Phasing Plan for approval no less than five (5) working days prior to the pre-construction meeting. The plan shall detail how the Contractor plans to address each phase or segment of the project within the constraints outlined herein and on the Plans. Note that additional phasing plans shall be required to be submitted with each Contractor requested track outage. The Contractor may elect to use their CPM schedule for their Construction Phasing Plan if the CPM's quality and level of detail is sufficient and acceptable to the Owner.

Liquidated Damages: If the Owner and the Contractor cannot agree on amenable terms of an extension in accordance with Supplementary Condition SC-06.05 Contract Time, Extension of Contract Time and Suspension of Work., then liquidated damages will be deducted from the Contractor as outlined in Supplementary Condition SC-06.06 Failure to Complete on Time. for the amounts outlined therein.

Additionally, any charges or fees associated with the delay of any incoming vessel to the facility, to include any delays compounded by the initial delay, may be withheld at an amount equal to the charges or fees from payment due the Contractor, in accordance with General Condition 13.7 WITHHOLDING OF PAYMENTS. The Owner will not release performance bonds until any and all liquidated damages assessed under this Contract are paid to the Owner and all stipulations associated with said damages are satisfied.

Railroad Bridge Supervisor: Work includes all equipment, materials, labor, and supervision required for the provision of a qualified railroad bridge supervisor to be present during all phases of bridge work in accordance with Supplementary Condition SC-14 – Section 240, Railroad and AREMA.

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, plans 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.

Submit the Railroad Bridge Supervisor's resume and copies of all applicable accreditations and/or licenses to the Owner to review and approval. Upon award of the Contract, the Railroad Bridge Supervisor may not be removed or replaced without the written approval of ARRC's Project Manager, or its designated representative.

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 Plans 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.

As-Built Record Drawings and Specifications: Work includes all equipment, materials, supervision, and labor required to provide project administration, management, record keeping, and work relating to maintaining project record documents for project closeout.

Submit all project record documents 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.
- 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.
- 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 to clearly specify what is included in the work.
- f. Field test records.
- g. Inspection certificates.
- h. Manufacturer's certificates.