STATE OF ALASKA

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CONTRACT DOCUMENTS AND SPECIFICATIONS

As Advertised:
September 16, 2015

JNU Mendenhall Valley Adaptive Traffic Signal Control System

PROJECT NO. Z685840000/0003184

CONTRACT DOCUMENT FEE: $50.00

SOUTHCOAST REGION

To be used in conjunction with the State of Alaska Standard Specifications for Highway Construction dated 2015, and the plans for the above referenced project

THE STATE of ALASKA

GOVERNOR BILL WALKER

Department of Labor and Workforce Development
P.O. Box 111149
Juneau, Alaska 99811-1149
Main: 907.465.2700, Fax: 907.465.2784

Department of Transportation and Public Facilities
P.O. Box 112500
Juneau, Alaska 99811-2500
Main: 907.465.3900, Fax: 907.586.8365

Dear Prospective Contractor:

If you are considering bidding on an Alaska public works project, please remember the positive benefits of hiring locally. Construction, maintenance, and operation of public works projects are vital to the local economy. Alaska Hire helps contractors too— your neighbors are more invested in our community than non-residents, they are more likely to show up to work on time and finish the job.

If you want to hire more Alaskans, we're here to help. Hiring local workers is cost-effective and can benefit your business in many ways. The Alaska Department of Labor and Workforce Development's Job Center staff can connect you with qualified, skilled Alaskan workers through the Alaska Labor Exchange (ALEXsys) employee/employer database. Call (907) 465-2712 to get connected with a Job Center and potential employees in your community.

Work Opportunity Tax Credits (WOTC) are available to employers who hire qualified new employees who are unemployed disabled veterans, recipients of Temporary Assistance or food stamps, ex-offenders, and residents of Empowerment Zones or Renewal Communities. The WOTC program saved employers operating in Alaska over $3.2 million last year. For information on the tax credit program call (907) 465-5952 or visit the WOTC website, www.jobs.alaska.gov/wotc.htm.

The Department of Transportation and Public Facilities, the Department of Labor and Workforce Development, the Alaska Native Coalition on Employment and Training (ANCET), the Construction Education Foundation, and other industry training providers work closely together to recruit women, Alaska Natives, minorities and veterans for training and job referral. We can assist your business in finding qualified employees right now, as well as help you institute training programs to ensure a stable and skilled workforce over the long term. There are many high school and adult training programs across the state that prepare Alaska residents for construction jobs and to learn a trade as registered apprentice. Alaska has over 1,500 registered apprentices and our Job Centers can assist employers that want to hire apprentices. Alaska's prevailing wage is adjusted to allow employers to pay apprentices a reduced rate while they are learning their trade, offsetting your costs of training the apprentice. Additionally, there are on-the-job training wage incentives available for employers that hire apprentices.

If you are awarded a contract, we will send you additional information on the business benefit of hiring locally and how to use the free Alaska Labor Exchange System to find qualified Alaska residents. Your effort to hire locally is appreciated very much. We wish you well in the upcoming construction season and thank you for putting Alaskans to work.

Sincerely,

Heidi Drygas, Commissioner
Department of Labor
and Workforce Development

Marc Luiken, Commissioner
Department of Transportation
and Public Facilities

"Keep Alaska Moving through service and infrastructure."

TABLE OF CONTENTS

(Federal-Aid Highways)

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

INVITATION TO BID

for Construction Contract

Date September 16, 2015

JNU Mendenhall Valley Adaptive Traffic Signal Control System, Z685840000/0003184

Project Name and Number

Location of Project: Juneau

Contracting Officer: Robert A. Campbell, P.E., Director, Southcoast Region

Issuing Office: Southcoast Region

State Funded ☐ Federal Aid ☒

Description of Work:
This project establishes an adaptive traffic control system for traffic signals in the Mendenhall Valley (Egan Drive and Glacier Highway (aka "McNugget"); Jordan Avenue and Glacier Highway; Shell Simmons and Glacier Highway; Mendenhall Loop Road and Egan Drive; Riverside Drive and Egan Drive; Mendenhall Loop Road and Mall Road/Atlin Drive; Riverside Drive and Mall Road/Vintage Boulevard; Riverside Drive and Riverwood Drive; Mendenhall Loop Road and Stephen Richards Memorial Drive; and Mendenhall Loop Road and Valley Boulevard/Mendenhall Boulevard). Replace and upgrade traffic system components and equipment (i.e., a pedestrian pole, traffic and pedestrian signal heads, Wavetronix radar-based vehicle detectors, pan-tilt-zoom cameras, and traffic signal control cabinets) as required to support implementation and operation of adaptive control technology. Establish a Traffic Command Center at Southcoast Region Headquarters to provide full remote monitoring and control of the Mendenhall Valley traffic network.

The Engineer's Estimate is:

- ☐ Less than $100,000
- ☐ Between $100,000 and $250,000
- ☐ Between $250,000 and $500,000
- ☒ Between $500,000 and $1,000,000
- ☐ Between $1,000,000 and $2,500,000
- ☐ Between $2,500,000 and $5,000,000
- ☐ Greater than $5,000,000

All work shall be completed in N/A Calendar Days, or by **September 30, 2016**.
Interim Completion dates, if applicable, will be shown in the Special Provisions.

Bidders are invited to submit sealed bids, in single copy, for furnishing all labor, equipment, and materials and for performing all work for the project described above. Bids will be opened publicly at 2:00 PM local time, at 6860 Glacier Highway, Juneau, AK, Construction Contracts Office, First Floor on the 21st of October, 2015.

SUBMISSION OF BIDS

ALL BIDS INCLUDING ANY AMENDMENTS OR WITHDRAWALS MUST BE RECEIVED PRIOR TO BID OPENING. BIDS SHALL BE SUBMITTED ON THE FORMS FURNISHED AND MUST BE IN A SEALED ENVELOPE MARKED AS FOLLOWS:

Bid for Project: **Project No. Z685840000/0003184** **JNU Mendenhall Valley Adaptive Traffic Signal Control System**	**ATTN: Contracts Officer** **State of Alaska** **Department of Transportation & Public Facilities** **6860 Glacier Highway** **Juneau, Alaska 99801-7999 or** **P.O. Box 112506, Juneau, AK 99811-2506**

Bids, amendments or withdrawals transmitted by mail must be received in the above-specified address no later than 30 minutes prior to the scheduled time of bid opening. Hand-delivered bids, amendments or withdrawals must be received by the **Contracts Officer** at **6860 Glacier Highway, Juneau, AK, Construction Contracts Office, First Floor** prior to the scheduled time of bid opening. Faxed bid amendments must be addressed to **Contracts Officer**. Fax number: **(907) 465-4238**.

A bid guaranty is required with each bid in the amount of 5% of the amount bid. (Alternate bid items as well as supplemental bid items appearing on the bid schedule shall be included as part of the total amount bid when determining the amount of bid guaranty required for the project.)

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

NOTICE TO BIDDERS

This project requires the use of both Federal and State Wage Rates. The most current version must be used, as long as there are at least 10 days before bids open. In other words, you do **not** have to use a State or Federal Wage Rate that changes the rates if it is **less** than 10 full days prior to bid opening and you have applied the last update. The Wage Rates are downloadable at the following websites:

Federal Wage Rates: http://www.wdol.gov/dba.aspx#0. This project uses AK1 and AK6.

State Wage Rates: http://146.63.75.50/lss/pamp600.htm.

Plans and Specifications may be ordered, for the price of $ 50.00 (NON-REFUNDABLE)

Cody Salter
Contracts Office
6860 Glacier Highway
Juneau, Alaska 99801
Fax: (907) 465-4238
E-Mail: cody.salter@alaska.gov
Phone: (907) 465-4488

All questions relating to design features, constructability, quantities, or other technical aspects of the project should be directed to the following. Bidders requesting assistance in viewing the project must make arrangements at least 48 hours in advance with:

Dan Noziska, P.E.
Construction Project Manager, Box 112506, Juneau, AK 99811-2506
E-Mail: dan.noziska@alaska.gov
Phone: (907) 465-1799
Fax: (907) 465-2030

All questions concerning bidding procedures should be in writing and directed to:

Jeff Jenkins, Contracts Officer or
Vanda Randolph, Regional Contracts Officer
Southcoast Region
Box 112506
Juneau, Alaska 99811-2506
E-Mail: jeff.jenkins@alaska.gov or vanda.randolph@alaska.gov
Fax: (907) 465-4238
Phone: (907) 465-4420/465-4489

Other Information:

All bids shall be accompanied by a bid guaranty in the form of an acceptable Bid Bond, Form 25D-14 (8/01), or a certified check, cashier's check or money order made payable to the State of Alaska. Bid bonds must be accompanied by a legible Power of Attorney. The amount of the bid guaranty is specified on page one of this Invitation for Bids.

The Bid Calendar, Planholders List, Bid Results, DBE directory, etc. are available on the internet at: www.dot.state.ak.us under "Contracting and Procurement" Sorry – we no longer fax planholders lists.

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

The U.S. Department of Transportation (DOT) operates the above toll-free "hotline" Monday through Friday, 8:00 AM to 5:00 PM, eastern time. Anyone with knowledge of possible bid rigging, bidder collusion, or other fraudulent activities should use the "hotline" to report such activities.

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

February 8, 2011

Special Notice to Bidders
Change in Prevailing Wage Requirements

Notice: The Department of Labor and Workforce Development (DOLWD) proposed a revised regulatory definition of "on-site" in 8 AAC 30.910 to clarify the scope of activities covered by Alaska's Little Davis Bacon Act (AS 36.05.010 – AS 36.05.110). For a copy of the revised definition of 8 AAC 30.910, go to: http://labor.alaska.gov/commish/12-2010-OT-language.pdf

DOLWD will enforce the revised provisions on all projects with a bid opening date on or after February 15, 2011. Prospective bidders on projects with a bid opening date on or after February 15, 2011, must consider the impact of the revised regulation and bid accordingly. DOLWD will not enforce the new "on-site" definition on projects with a bid opening date prior to February 15, 2011.

Special Notice to Bidders

Statewide Special Provision SSP-38 Section 120 for the Disadvantaged Business Enterprise (DBE) Program

Effective for FHWA funded projects advertised on or after July 1, 2015; there is a new Statewide Special Provision SSP-38 that replaces Standard Modification E114 for Section 120 DBE Program.

The Department, in coordination with the Federal Highway Administration (FHWA), adopted a Race-Neutral DBE Program with an overall DBE Utilization Goal of 8.46% for Alaska's FHWA Federal-Aid program. Although the Race-Neutral program does not establish or require individual project DBE Utilization Goals, 49 CFR establishes the Bidder is responsible to make a portion of the work available to DBEs and to select those portions of the work or material needs consistent with the available DBEs to facilitate DBE participation.

If the Department, in collaboration with our contractors, does not meet the overall program DBE Utilization Goal and cannot demonstrate good faith effort to meet the program goal, the program may be modified to Race-Conscious, with individual DBE Utilization Goals established for each Federal-Aid project. The Department and FHWA will use the data collected under Section 120 to evaluate the program for compliance with Section 120 and with 49 CFR Part 26.

Contractors are encouraged to review the construction and contract forms and the new Statewide Special Provision SSP-38 for Section 120 DBE program.

For information about the Plan Holder Self Registration List, A guide (titled "**Plan Holder Self Registration List"**) can be found on the Civil Rights website http://www.dot.state.ak.us/cvlrts/index.shtml. This offers further instructions and guidance.

Any questions about this notice may be directed to Dennis Good, Manager of the Civil Rights Office, (907) 269-0851, or email dennis.good@alaska.gov.

07/01/15

Special Notice to Bidders

Contractors must comply with Administrative Order 226, which establishes a 15% goal for hiring apprentices in certain job categories; on highway, airport, harbor, dam, tunnel, utility or dredging projects awarded by the Alaska Department of Transportation and Public Facilities. This Administrative Order will apply to all such projects advertised after September 1, 2005, where the project construction cost exceeds 2.5 million dollars.

For additional details, please visit http://labor.state.ak.us/lss/forms/ApprenHireReq.pdf

(5-01-07)

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

REQUIRED DOCUMENTS

Federal-Aid Contracts

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

1. **Bid Form (Form 25D-9)**
2. **Bid Schedule**
3. **Bid Security**
4. Any bid revisions must be submitted by the bidder prior to bid opening on the following form:

   Bid Modification (Form 25D-16)

REQUIRED AFTER NOTICE OF APPARENT LOW BIDDER. The apparent low bidder is required to complete and submit the following document within 5 working days after receipt of written notification:

1. **Subcontractor List (Form 25D-5)**
2. **DBE Utilization Report (Form 25A-325C)**
3. The successful bidder shall submit documentation of good faith effort (GFE) to utilize certified DBE subcontractors in the execution of this contract by submitting the following:

   Summary of Good Faith Effort Documentation (Form 25A-332A), and

   Contact Reports (Form 25A-321A), as required the initial contact must be made at least 7 calendar days prior to bid opening.
4. For each DBE to be used on the project, submit a **DBE Commitment (Form 25A-326)**
5. When a DBE quote is not accepted, submit evidence in support of the determination not to use the DBE subcontractor.

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. **Construction Contract (Form 25D-10H)**
2. **Payment Bond (Form 25D-12)**
3. **Performance Bond (Form 25D-13)**
4. **Contractor's Questionnaire (25D-8)**
5. **Certificate of Insurance** (from carrier)
6. **EEO-1 Certification (Form 25A-304)**
7. On projects that include bid item 645, Training Program, the successful bidder shall submit the following:

   Training Utilization Report (Form 25A-311), and/or

   DOT&PF Training Program Request (Form 25A-310), if required
8. On Federal-aid highway projects: **Material Origin Certificate (Form 25D-60)**
9. On Federal-aid airport projects: **Buy American Certificate (Form 25D-61)**
10. Bidders must register annually with the Civil Rights Office in order to be eligible for award. If not registered, or if unsure, submit the following: **Bidder Registration (Form 25D-6)**

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

FEDERAL EEO BID CONDITIONS

STANDARD FEDERAL EQUAL EMPLOYMENT OPPORTUNITY CONSTRUCTION CONTRACT SPECIFICATIONS FOR ALL NON-EXEMPT FEDERAL AND FEDERALLY-ASSISTED CONSTRUCTION CONTRACTS TO BE AWARDED IN THE STATE OF ALASKA

Authority and Guidelines.

The Alaska Department of Transportation & Public Facilities (Department), as a State Transportation Agency (STA), has authority under 23 U.S.C. 140 and its implementing regulations to conduct a compliance program addressing Equal Employment Opportunity (EEO) and Affirmative Action (AA) in employment on non-exempt federal and federally-assisted construction contracts that are awarded in the State of Alaska. The STA's authority to administer a contract compliance with Nondiscrimination, EEO and AA programs are authorized under 23 U.S.C., 49 U.S.C., Title VI of the Civil Rights Act of 1964, MAP-21 and implementing regulations. The provisions of 23 CFR 200 and 49 CFR 21 provide authority to determine, and where necessary obtain compliance with the nondiscrimination provisions of Title VI. Under the provisions of Title VI 23 USC and related regulations, including 49 CFR 21 and 26, and 23 CFR Part 200, 230 and 633, it is the STA's responsibility to ensure compliance with and to enforce on all projects of Federal-aid contractors and subcontractors, whether a particular contract or work-site involves Federal-aid funds or not.

These citations confirm the requirement for contractors to provide, and States to obtain information that ensure non-discrimination in employment on all of Federal and federally-assisted projects, and through these provisions, provide for EEO for minorities and women in all terms and conditions of their employment at all of their facilities and on all projects.

1. Definitions. As used in these specifications:

   a. "**Covered area**" means the geographical area described in the solicitation from which this contract resulted;

   b. **"Employer identification number"** means the Federal Social Security number used on the Employer's Quarterly Federal Tax Return, U.S. Treasury Department Form 941.

   c. "**Minority**" includes:

      (1) Black (all persons having origins in any of the Black African racial groups not of Hispanic origin);

      (2) Hispanic (all persons of Mexican, Puerto Rican, Cuban, Central or South American or other Spanish culture or origin, regardless of race);

      (3) Asian and Pacific Islander (all persons having origins in any of the original peoples of the Far East, Southeast Asia, the Indian Subcontinent, or the Pacific Islands); and

      (4) American Indian or Alaska Native (all persons having origins in any of the original peoples of North America and maintaining identifiable tribal affiliations through membership and participation or community identification).

2. Whenever the Contractor, or any subcontractor at any tier, subcontracts a portion of the work involving any construction trade, it shall physically include in each subcontract in excess of $10,000 the provisions of these specifications and which is set forth in the solicitations from which this contract resulted.

3. If the Contractor is participating (pursuant to 41 CFR 60-4.5) in a Hometown Plan approved by the DOL in the covered area, either individually or through an association, its affirmative action obligations on all work in the Plan area shall be in accordance with that Plan for those trades that have unions participating in the Plan. Contractors must be able to demonstrate their participation in and compliance with the provisions of any such Hometown Plan. Each Contractor or subcontractor participating in an approved Plan is individually required to comply with its obligations under the EEO clause, and to make good faith effort to achieve an equal representation of minority and female employment under the Plan in each trade in which it has employees. The overall good faith performance by other Contractors or subcontractors in an approved Plan does not excuse any covered Contractor's or subcontractor's failure to make good faith efforts to achieve the Plan.

4. The Contractor shall implement the specific affirmative action standards provided in paragraphs 5(a) through 5(p) of these specifications.

5. The Contractor shall take specific affirmative actions to ensure equal employment opportunity. The evaluation of the Contractor's compliance with these specifications shall be based upon its effort to achieve maximum results from its actions. The Contractor shall document these efforts fully, and shall implement affirmative action steps at least as extensive as the following:

    a. Ensure and maintain a working environment free of harassment, intimidation, and coercion at all sites, and in all facilities at which the Contractor's employees are assigned to work. The Contractor shall specifically ensure that all foremen, superintendents, and other on-site supervisory personnel are aware of and carry out the Contractor's obligations to maintain such a working environment, with specific attention to minority or female individuals working at such sites or in such facilities.

    b. Establish and maintain a current list of minority and female recruitment sources, provide written notification to minority and female recruitment sources and to community organizations when the Contractor or its unions have employment opportunities available, and maintain a record of the organizations' responses.

    c. Maintain a current file of the names, addresses and telephone numbers of each minority and female off-the-street applicant and minority or female referral from a union, a recruitment source or community organization and of what action was taken with respect to each such individual. If such individual was sent to the union hiring hall for referral and was not referred back to the Contractor by the union or, if referred, not employed by the Contractor, this shall be documented in the file with the reason therefor, along with whatever additional actions the Contractor may have taken.

    d. Provide immediate written notification to the Civil Rights Office's Contract Compliance Officer when the union or unions with which the Contractor has a collective bargaining agreement has not referred to the Contractor a minority person or woman sent by the Contractor, or when the Contractor has other information that the union referral process has impeded the Contractor's efforts to meet its obligations.

    e. Develop on-the-job training opportunities and/or participate in training programs for the area which expressly include minorities and women, including upgrading programs and apprenticeship and trainee programs relevant to the Contractor's employment needs, especially those programs funded or approved by the Department of Labor. The Contractor shall provide notice of these programs to the sources compiled under 5(b) above.

    f. Disseminate the Contractor's EEO policy by providing notice of the policy to unions and training programs and requesting their cooperation in assisting the Contractor in meeting its EEO obligations; by including it in any policy manual and collective bargaining agreement; by publicizing it in the company newspaper, annual report, etc.; by specific review of the policy with all management personnel and with all minority and female

employees at least once a year; and by posting the company EEO policy on bulletin boards accessible to all employees at each location where construction work is performed.

g. Review, at least annually, the company's EEO policy and affirmative action obligations under these specifications with all employees having any responsibility for hiring, assignment, layoff, termination or other employment decisions including specific review of these items with on-site supervisory personnel such as Superintendent, general foreman, etc., prior to the initiation of construction work at any job site. A written record shall be made and maintained identifying the time and place of these meetings, persons attending, subject matter discussed, and dispositions of the subject matter.

h. Disseminate the Contractor's EEO policy externally by including it in any advertising in the news media, specifically including minority and female news media, and providing written notification to and discussing the Contractor's EEO policy with other Contractors and Subcontractors with whom the Contractor does or anticipates doing business.

i. Direct its recruitment efforts, both oral and written, to minority, female and community organizations, to schools with minority and female students and to minority and female recruitment and training organizations serving the Contractor's recruitment area and employment needs. Not later than one month prior to the date for the acceptance of applications for apprenticeship or other training by any recruitment source, the Contractor shall send written notification to organizations such as the above, describing the openings, screening procedures, and tests to be used in the selection process.

j. Encourage present minority and female employees to recruit other minority persons and women and, where reasonable, provide after school, summer and vacation employment to minority and female youth both on the site and in other areas of a Contractor's workforce.

k. Validate all tests and other selection requirements where there is an obligation to do so under 41 CFR Part 60-3.

l. Conduct, at least annually, an inventory and evaluation of all minority and female personnel for promotional opportunities and encourage these employees to seek or to prepare for, through appropriate training, etc., such opportunities.

m. Ensure that seniority practices, job classifications, work assignments and other personnel practices do not have a discriminatory effect by continually monitoring all personnel and employment related activities to ensure that the EEO policy and the Contractor's obligations under these specifications are being carried out.

n. Ensure that all facilities and company activities are nonsegregated except that separate or single-use toilet, necessary changing facilities and necessary sleeping facilities shall be provided to assure privacy between the sexes.

o. Document and maintain a record of all solicitations of offers for subcontractors from minority and female construction contractors and suppliers, including circulations of solicitations to minority and female contractor associations and other business associations.

p. Conduct a review, at least annually, of all supervisors' adherence to and performance under the Contractor's EEO policies and affirmative action obligations.

6. Contractors are encouraged to participate in voluntary associations which assist in fulfilling one or more of their affirmative action obligations 5(a) through 5(p). The efforts of a contractor association, joint contractor-union, contractor-community, or other similar group of which the Contractor is a member and participant, may be asserted as fulfilling any or more of its obligations under 5(a) through 5(p) of these specifications provided that the Contractor actively participates in the group, makes every effort to assure that the group has a positive impact on the employment of minorities and women in the industry, ensures that the concrete benefits of the program are

reflected in the Contractor's minority and female work force participation, makes a good faith effort to meet its individual EEO obligations, and can provide access to documentation which demonstrates the effectiveness of actions taken on behalf of the Contractor. The obligation to comply, however, is the Contractor's and failure of such a group to fulfill an obligation shall not be a defense for the Contractor's noncompliance.

7. The Contractor is required to provide equal employment opportunity and to take affirmative action for all minority groups, both male and female, and all women, both minority and non-minority. Consequently, the Contractor may be in violation if a particular group is employed in a substantially disparate manner.

8. The Contractor shall not use the equal employment or affirmative action standards to discriminate against any person because of race, color, religion, sex, or national origin.

9. The Contractor shall not enter into any subcontract with any person or firm debarred from government contracts.

10. The Contractor, in fulfilling its obligations under these specifications, shall implement specific affirmative action steps, at least as extensive as those standards prescribed in item 5(a-p) above, so as to achieve maximum results from its efforts to ensure equal employment opportunities.

11. The Contractor shall designate a responsible official to monitor all employment related activity to ensure that the company EEO policy is being carried out, to submit reports relating to the provisions hereof as may be required by the Government and to keep records. Records shall at least include for each employee the name, address, telephone numbers, construction trade, union affiliation if any, employee identification number when assigned, social security number, race, sex, status (e.g., mechanic apprentice, trainees, helper, or laborer), dates of changes in status, hours worked per week in the indicated trade, rate of pay, and locations at which the work was performed. Records shall be maintained in an easily understandable and retrievable form; however, to the degree that the existing records satisfy this requirement, Contractors shall not be required to maintain separate records.

12. Nothing herein provided shall be construed as a limitation upon the application of other laws that establish different standards of compliance or upon the application of requirements for the hiring of local or other area residents (e.g., those under the Public Works Employment Act of 1977 and the Community Development Block Grant Programs).

13. The Bidder's attention is called to the "Equal Opportunity Clause" and the "Standard Federal Equal Employment Opportunity Construction Contract Specifications" set forth herein.

14. EEO/AA obligations are applicable to all of the Contractor's construction work (whether or not it is federal or federally-assisted) performed in the covered area. The hours on minority and female employment and training must be substantially uniform throughout the length of the contract, and in each trade, and the Contractor shall make a good faith effort to employ minorities and women evenly on each of its projects. The transfer of minority or female employees or trainees from Contractor to Contractor or from project to project for the sole purpose of equalizing minority and female employment percentages shall be a violation of the contract. Compliance with equal minority and female employment utilization will be measured against the total work hours performed.

15. The Contractor shall provide written notification to the Department, for all subcontracts documents as follows: the name, address and telephone number of subcontractors and their employer identification number; the estimated dollar amount of the subcontracts; estimated starting and completion dates of the subcontracts; and the geographical area in which the contract is to be performed.

    This written notification shall be required for all construction subcontracts in excess of $10,000 at any tier for construction work under the contract resulting from this project's solicitation.

16. As used in the Bid Notice, and in the contract resulting from this project's solicitation, the "covered area" is the State of Alaska.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SUBCONTRACTOR LIST

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

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 working day after receipt of written notice from the Department.

Failure to submit this form with all required information by the due date will result in the bidder being declared nonresponsive 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 firm, indicate the portion or percent of work to be done by each.

Check as applicable:

☐ All Work on the above-referenced project will be accomplished without subcontracts greater than ½ of 1% of the contract amount.

or

☐ Subcontractor List is as follows:

LIST FIRST TIER SUBCONTRACTORS ONLY

FIRM NAME, ADDRESS, PHONE NO.	AK BUSINESS LICENSE NO., CONTRACTOR'S REGISTRATION NO.	SCOPE OF WORK TO BE PERFORMED

CONTINUE SUBCONTRACTOR INFORMATION ON REVERSE

For projects with federal-aid funding, I hereby certify Alaska Business Licenses and Contractor registrations will be valid for all subcontractors prior to award of the subcontract. For projects without federal-aid funding (State funding only), I hereby certify the listed Alaska Business Licenses and Contractor's Registration were valid at the time bids were opened for this project.

Signature of Authorized Company Representative | **Title**

Company Name | **Company Address (Street or PO Box, City, State, Zip)**

Date | ( ) **Phone Number**

FIRM NAME, ADDRESS, PHONE NO.	AK BUSINESS LICENSE NO., CONTRACTOR'S REGISTRATION NO.	SCOPE OF WORK TO BE PERFORMED

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Civil Rights Office – DBE Program

BIDDER REGISTRATION

All firms are required to submit a Bidder's Registration form before an Alaska Department of Transportation and Public Facilities (DOT&PF) project can be awarded. The Bidder Registration form must be submitted to the Civil Rights Officer (CRO) on an annual basis by January 1 and is valid thru December 31. Complete this form for each contractor and subcontractor. Firms will be listed on the bidder registration online directory http://www.dot.state.ak.us/cvlrts/bidreg.shtml.

Name of Firm: _____

Street Address: _____

Mailing Address: _____

Contact Name: _____

Telephone Number: _____

Fax number: _____

E-mail Address: _____

Date Firm was Established: _____

The firm listed above is a (check all that apply**):**

Prime Contractor?	☐	
Subcontractor?	☐	Identify specialty: _____
Service Provider?	☐	Identify service: _____
Material Supplier?	☐	Identify material: _____
Manufacturer?	☐	Identify product: _____
Certified DBE? *	☐	*DBE- Disadvantaged Business Enterprise
Self-Certified SBE? *	☐	*SBE- Small Business Enterprise *(Complete page 2 of this form.)*

Firm's gross annual receipts:

☐ < $500,000
☐ $500,000- $999,999
☐ $1,000,000- $4,999,999
☐ $5,000,000- $9,999,999
☐ $10,000,000- $16,999,999
☐ > $17,000,000

Type of contracts/proposals bid by the firm (check all that apply):

☐ Highways ☐ Airports ☐ Transit ☐ AMHS

_____ _____ _____

Signature of Company Representative **Title** **Date**

Send this completed form to:
ADOT&PF Civil Rights Office
PO Box 196900
Anchorage, Alaska 99519-6900

OR

You may fax your completed form to:
(907) 269-0847

If you have any questions, please call **(907) 269-0851**.

SMALL BUSINESS ENTERPRISE PROGRAM (SBE) BIDDER'S REGISTRATION

Fostering Small business Participation (SBE) (49 CFR 26.39):
To meet the requirements of 49 CFR 26.39, DOT&PF has implemented a Small Business Enterprise Program. This component is only applicable to federally funded projects.

[Complete the below only if you are a Self-Certified SBE Firm] All businesses wishing to be eligible as a SBE are required to submit a SBE Bidder's Registration form before a DOT&PF contract can be awarded. The bidder's Registration from must be submitted on an annual basis by January 1 and is valid thru December 31.

In order to verify your firm's compliance with business size standards under 49 CFR 26.67(2)(i) and 26.65(b), ***at the time of award*** you will be required to submit the following documents:
- SBE Affidavit of Certification Eligibility
- Personal Financial Statement
- Past three years of your corporations and/or individual tax returns
- If not a certified DBE, please provide documentation that you are self-certified as a small business (please contact Procurement Technical Assistance Center (PTAC) at 907-274-7232 if you require assistance on becoming a self-certified small business)

At time of award send required documentation to:

DOT&PF Civil Rights Office
Attn: Certification
PO Box 196900
Anchorage, Alaska 99519-6900
Phone: (907) 269-0851
Fax: (907) 269-0847

A. SBE Directory Information

1. Can you verify at time of award that your firm does not exceed the business size standards of $23.98 million for the last three years of gross annual receipts per 49 CFR 26.65(b)? [ ]Yes [ ] No*

**If you marked "No" you do not qualify for the SBE Program*

2. Can you verify at time of award that your firm does not exceed the personal net worth standards of $1.32 million per 49 CFR 26.67(2)(i)? [ ]Yes [ ] No*

**If you marked "No" you do not qualify for the SBE Program*

3. Contact Info.

Name of Firm	Contact Name
Telephone Number	Fax Number
Email Address	Company Website

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CONTRACTOR'S QUESTIONNAIRE

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

A. FINANCIAL

1. Have you ever failed to complete a contract due to insufficient resources?
   ☐ No ☐ Yes If YES, explain:

_____
_____
_____
_____
_____

2. Describe any arrangements you have made to finance this work: _____

_____
_____

B. EQUIPMENT

1. Describe below the equipment you have available and intend to use for this project.

ITEM	QUAN.	MAKE	MODEL	SIZE/ CAPACITY	PRESENT MARKET VALUE

2. What percent of the total value of this contract do you intend to subcontract? _____ %

3. Do you propose to purchase any equipment for use on this project?
☐ No ☐ Yes If YES, describe type, quantity, and approximate cost:

_____

_____

_____

4. Do you propose to rent any equipment for this work?
☐ No ☐ Yes If YES, describe type and quantity:

_____

_____

_____

5. Is your bid based on firm offers for all materials necessary for this project?
☐ Yes ☐ No If NO, please explain:

_____

_____

_____

C. EXPERIENCE

1. Have you had previous construction contracts or subcontracts with the State of Alaska?
☐ Yes ☐ No

Describe the most recent or current contract, its completion date, and scope of work:

_____

_____

_____

_____

2. List, as an attachment to this questionnaire, other construction projects you have completed, the dates of completion, scope of work, and total contract amount for each project completed in the past 12 months.

I hereby certify that the above statements are true and complete.

Name of Contractor	**Name and Title of Person Signing**
Signature	**Date**

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

BID FORM

for

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

by

Company Name

Company Address (Street or PO Box, City, State, Zip)

TO THE CONTRACTING OFFICER,

DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES:

In compliance with your Invitation to Bids dated **September 16, 2015**, the Undersigned proposes to furnish and deliver all the materials and do all the work and labor required in the construction of the above-referenced Project, located at or near **Juneau**, Alaska, according to the plans and specifications and for the amount and prices named herein as indicated on the Bid Schedule consisting of **2** sheets, which is made a part of this Bid.

The Undersigned declares that he has carefully examined the contract requirements and that he has made a personal examination of the site of the work; that he understands that the quantities, where such are specified in the Bid Schedule or on the plans for this project, are approximate only and subject to increase or decrease, and that he 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 fifteen 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 State of Alaska, Department of Transportation and Public Facilities as liquidated damages, and the said Contracting officer may proceed to award the contract to others.

The Undersigned agrees to commence the work within 10 calendar days, and to complete the work within **N/A** calendar days, after the effective date of the Notice to Proceed, or by **September 30, 2016**, unless extended in writing by the Contracting Officer.

The Undersigned proposes to furnish Payment Bond in the amount of **50%** (of the contract) and Performance Bond in the amount of **50%** (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 Number	Date Issued	Addenda Number	Date Issued	Addenda Number	Date Issued

NON-COLLUSION DECLARATION

The Undersigned declares, under penalty of perjury under the laws of the United States, that neither he nor the firm, association, or corporation of which he 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 and hereby agrees to the conditions stated therein by affixing his signature below:

Signature of Authorized Company Representative

Typed Name and Title

( )
Phone Number

( )
Fax Number

State of Alaska Department of Transportation & Public Facilities Southcoast Region	**BID SCHEDULE**	Jnu Mendenhall Valley Adaptive Traffic Signal Control AKSAS No. : Z685840000 Program No. : Federal No. : 0003184

Bidders Please Note: Before preparing the bid schedule, read carefully the contract documents.

The Bidder shall insert a unit bid price or a lump sum price in figures opposite each pay item for which an estimated quantity appears in the bid schedule. The estimated quantity of work for payment on a lump sum basis will be "all required" and as further specified in the contract.

Wherever a contingent amount is shown for any item in this bid schedule such amount shall govern and be included in the bid total.

The basis for award shall be determined by the lowest basic bid.

Note: This project is "Race Neutral" as defined by Section 120 of the Standard Specifications. Contractors are required to follow the requirements for Race Neutral DBE participation as outlined in Section 120.

The bidder shall insert a price for each pay item listed below. Type or print legibly.

Item No.	Item Description	Unit	Quantity	Unit Bid Price	Amount Bid
640 (1)	Mobilization and Demobilization	Lump Sum	All Req'd.	Lump Sum	
643 (2)	Traffic Maintenance	Lump Sum	All Req'd.	Lump Sum	
643 (15)	Flagging	Hour	300		
643 (23)	Traffic Price Adjustment	Contingent Sum	All Req'd.	Contingent Sum	**0.00**
643 (25)	Traffic Control	Contingent Sum	All Req'd.	Contingent Sum	**64,100.00**
660 (14)	Signal No. 1, Glacier and Egan Drive (McNugget)Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (15)	Signal No. 2, Glacier and Jordan Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (16)	Signal No. 3, Glacier and Shell Simmons Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (17)	Signal No. 4, Loop Road and Egan Drive Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (18)	Signal No. 5, Riverside and Egan Drive Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (19)	Signal No. 6, Loop Road and Mall Road Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (20)	Signal No. 7, Riverside and Mall Road Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	

State of Alaska Department of Transportation & Public Facilities Southcoast Region	**BID SCHEDULE**	Jnu Mendenhall Valley Adaptive Traffic Signal Control AKSAS No. : Z685840000 Program No. : Federal No. : 0003184

The bidder shall insert a price for each pay item listed below. Type or print legibly.

Item No.	Item Description	Unit	Quantity	Unit Bid Price	Amount Bid
660 (21)	Signal No. 8, Loop Road and Stephen Richards Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (22)	Signal No. 9, Loop Road and Valley Boulevard Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (23)	Signal No. 10, Riverside and Riverwood Traffic Signal Modification Complete	Lump Sum	All Req'd.	Lump Sum	
660 (24)	Southcoast Region Traffic Command Center Complete	Lump Sum	All Req'd.	Lump Sum	
	Total				$

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CONSTRUCTION CONTRACT

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

This CONTRACT, between the STATE OF ALASKA, DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES, herein called the Department, acting by and through its Contracting Officer, and

_____

Company Name

_____

Company Address (Street or PO Box, City, State, Zip)

a/an [ ] Individual [ ] Partnership [ ]Joint Venture [ ] Sole Proprietorship [ ] Corporation incorporated under the laws of the State of _____, its successors and assigns, herein called the Contractor, is effective the date of the signature of the Contracting Officer on this document.

WITNESSETH: That the Contractor, for and in consideration of the payment or payments herein specified and agreed to by the Department, 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 above-referenced project at the prices bid by the Contractor for the respective estimated quantities aggregating approximately the sum of

_____ Dollars

($ _____), and such other items as are mentioned in the original Bid, which Bid and prices named, together with the Contract Documents are made a part of this Contract and accepted as such. *The Alaska Standard Specifications for Highway Construction, 2015 Edition* is incorporated by reference and made a part hereof as if set forth in full. *The Alaska Standard Specifications for Highway Construction* can be downloaded at http://www.dot.state.ak.us/stwddes/dcsspecs/index.shtml.

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, will be allowed by the Department, nor shall the Contractor do any work or furnish any material not covered by this Contract, unless such work is ordered in writing by the Department. In no event shall the Department 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 the Department. 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 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 the Department, on or before: **September 30, 2016** or within **N/A** calendar days. 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 the Department, to complete the furnishing and delivery of materials and the doing and performance of the work before the aforesaid date, the Department shall have the right to deduct from any money due or which may become due the Contractor, or if no money shall be due, the Department shall have the right to recover _____ dollars ($_____) per day for each calendar day elapsing between the time stipulated for the completion and the actual date of completion in accordance with the terms hereof; such deduction to be made, or sum to be recovered, not as a penalty but as liquidated damages.

The bonds given by the Contractor in the sum of $_____ Payment Bond, and $_____ 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

Company Name

Signature of Authorized Company Representative

Typed Name and Title

Date

(Corporate Seal)

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION
AND PUBLIC FACILITIES

Signature of Contracting Officer

Typed Name

Date

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PAYMENT BOND

Bond No. _____

For

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184

Project Name and Number

KNOW ALL WHO SHALL SEE THESE PRESENTS:

That _____

of _____ as Principal,

and _____

of _____ as Surety,

firmly bound and held unto the State of Alaska 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 State of Alaska, 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 State of Alaska, on the _____ of _____ A.D., 20_____, for construction of the above-referenced project, said work to be done according to the terms of said contract.

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

IN WITNESS WHEREOF, we have hereunto set our hands and seals at _____, _____ this _____ day of _____ A.D., 20_____.

Principal: _____

Address: _____

By: _____

Contact Name: _____

Phone: ( ) _____

Surety: _____

Address: _____

By: _____

Contact Name: _____

Phone: ( ) _____

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

_____ _____

Alaska Department of Transportation & Public Facilities Authorized Representative **Date**

See Instructions on Reverse

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, phone number, and point of contact of the Principal and Surety shall be typed 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 typed in words and in figures.

4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Contracting Officer.

5. 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.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

PERFORMANCE BOND

Bond No. _____

For

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

KNOW ALL WHO SHALL SEE THESE PRESENTS:

That _____
of _____ as Principal,
and _____
of _____ as Surety,

firmly bound and held unto the State of Alaska 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 State of Alaska, 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 State of Alaska, on the _____ of _____ A.D., 20_____, for construction of the above-referenced project, said work to be done according to the terms of said contract.

Now, THEREFORE, the conditions of the foregoing obligation are 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 Department of Transportation and Public Facilities any sums paid him 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 at _____, _____ this _____ day of _____ A.D., 20_____.

Principal: _____

Address: _____

By: _____

Contact Name: _____

Phone: ( ) _____

Surety: _____

Address: _____

By: _____

Contact Name: _____

Phone: ( ) _____

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

_____ _____
Alaska Department of Transportation & Public Facilities Authorized Representative **Date**

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, phone number, and point of contact of the Principal and Surety shall be typed 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 typed in words and in figures.

4. Where individual sureties are involved, a completed Affidavit of Individual Surety shall accompany the bond. Such forms are available upon request from the Contracting Officer.

5. The bond shall be signed by authorized persons. Where such person is 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.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

BID BOND

For

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

DATE BOND EXECUTED: _____

PRINCIPAL (Legal name and business address):	TYPE OF ORGANIZATION:
	☐ Individual ☐ Partnership ☐ Joint Venture ☐ Corporation
	STATE OF INCORPORATION:

SURETY(IES) (Name and business address):

A.	**B.**	**C.**
PENAL SUM OF BOND:		DATE OF BID:

We, the PRINCIPAL and SURETY above named, are held and firmly bound to the State (State of Alaska), 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 in writing, date as shown above, on the above-referenced Project in accordance with contract documents filed in the office of the Contracting Officer, and under the Invitation for Bids therefor, and is required to furnish a bond in the amount stated above.

If the Principal's bid is accepted and he is offered the proposed contract for award, and if the Principal fails to enter into the contract, then the obligation to the State 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.**
Name(s) & Title(s) (Typed)	**1.**	**2.**	**3.**
See Instructions on Reverse			Corporate Seal

CORPORATE SURETY(IES)				
SURETY A	Name of Corporation		State of Incorporation	Liability Limit **$**
Signature(s)	**1.**	**2.**		Corporate Seal
Name(s) & Titles (Typed)	**1.**	**2.**		

Surety B	Name of Corporation		State of Incorporation	Liability Limit **$**
Signature(s)	**1.**	**2.**		Corporate Seal
Name(s) & Titles (Typed)	**1.**	**2.**		

Surety 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.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

BID MODIFICATION

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

Modification Number: _____

Note: All revisions shall be made to the unadjusted bid amount(s).
Changes to the adjusted bid amounts will be computed by the Department.

PAY ITEM NO.	PAY ITEM DESCRIPTION	REVISION TO UNIT BID PRICE +/-	REVISION TO BID AMOUNT +/-

TOTAL REVISION: $_____

_____
Name of Bidding Firm

_____
Responsible Party Signature **Date**

This form may be duplicated if additional pages are needed.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

MATERIAL ORIGIN CERTIFICATE

Federal-Aid Highway Contracts

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

By signing this Material Origin Certificate, the offeror certifies that all steel and iron products to be furnished under this project are manufactured in the United States and comply with Subsection 106-1.01, **Buy America Provision**, of the Contract Special Provisions, except for those items listed by the offeror below or on a separate and clearly identified attachment.[1]

PRODUCT[2]	COUNTRY OF ORIGIN	COST[3]

THE FOLLOWING ITEMS ARE CONSIDERED TO BE MANUFACTURING PROCESSES[4]:

a. Modifying the chemical content.
b. Initial rolling into plates, shapes, rods, and bars. Structural steel completed at this point.
c. Rolling into sheets, corrugating, and rolling into culverts, guardrail, etc.
d. Processing and drawing into wire, spinning wire into cable or strand, forming wire fabric, fencing, etc.
e. The action of coating iron or steel. Coating includes epoxy coating, galvanizing, painting, and any other coating that protects or enhances the value of the product.

Contractor

Signature of Contractor's Representative

Date

1. The Contractor may amend this certificate after award only by a signed statement and only up to the limit specified in the contract.
2. Enter "NONE" on the first line if there are no exceptions.
3. Invoice cost as delivered to the project including freight.
4. There is a Nationwide waiver to Buy America for pig iron and processed, pelletized and reduced iron ore.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

EEO-1 CERTIFICATION

Federal-Aid Contracts

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

This certification is required by the Equal Employment Opportunity Regulations of the Secretary of Labor [41 CFR 60-1.7 (b) (1)] and must be completed by the successful Bidder and each proposed Subcontractor participating in this contract.

PLEASE CHECK APPROPRIATE BOXES

The ☐ Bidder ☐ Proposed Subcontractor hereby CERTIFIES:

PART A. Bidders and proposed Subcontractors with 50 or more year-round employees and a federal contract amounting to $50,000 or more are required to submit one federal Standard Report Form 100 during each year that the two conditions exist (50 employees and a $50,000 federal contract).

The company named below (Part C) is exempt from the requirements of submitting the Standard Report Form 100 this year.

☐ NO (go to PART B) ☐ YES (go to PART C)

Instructions and blank Standard Report Form 100's may be obtained from a local U.S. Department of Labor office, or by writing to:

The Joint Reporting Committee
P.O. Box 779
Norfolk, Virginia 23501

Telephone number: (757) 461-1213

PART B. The company named below has submitted the Standard Report Form 100 this year.

☐ NO ☐ YES

Note: Bidders and proposed Subcontractors who have not filed the required Standard Report Form 100 and are not exempt from filing requirements will not be awarded this contract or subcontract until Form 100 has been filed for the current year ending June 30.

PART C.

Signature of Authorized Company Representative | **Title**

Company Name | **Company Address (Street or PO Box, City, State, Zip)**

Date | ( ) **Phone Number**

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

CONTACT REPORT

Federal-Aid Contracts

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

Specific Work or Materials (by pay Item): _____

DBE Firm Contacted:

_____ _____ ( ) _____
Name **Address** **Phone Number**

A. INITIAL CONTACT: (See important contact information on instruction sheet)

1. Date _____ Method: [ ] Phone [ ] Mail [ ]FAX [ ] Other
2. Person Contacted _____ _____
Name Title

3. DBE's Response: Date: _____ Method: [ ] Phone [ ] Mail [ ]FAX [ ] Other
[ ] Submitted an acceptable sub-bid. (If sub-bid accepted, *skip to Section D*)
[ ] Not interested: Indicate Reason(s) _____
[ ] Needs more information: Date Prime provided requested information _____
[ ] Will provide quote by: Date _____
[ ] Received unacceptable sub-bid (*complete Section C*)

B. FOLLOW-UP CONTACT

1. Date _____ Method: [ ] Phone [ ] Mail [ ]FAX [ ] Other
2. Person Contacted _____ _____
Name Title

3. DBE's Response: Date: _____ Method: [ ] Phone [ ] Mail [ ]FAX [ ] Other
[ ] Submitted an acceptable sub-bid. (If sub-bid accepted, *skip to Section D*)
[ ] Received unacceptable sub-bid (*complete Section C*)
[ ] Other result: _____

C. EXPLANATION OF FAILURE TO ACHIEVE AN ACCEPTABLE SUB-BID:

1. Were the following required efforts made?
a. [ ] Yes [ ] No Identified specific items of work, products, materials, etc. when asking for quote(s).
b. [ ] Yes [ ] No Offered assistance in acquiring necessary bonding & insurance.
c. [ ] Yes [ ] No Provided all appropriate information concerning the specific work items or materials.

2. Was the DBE's quote non-competitive (i.e., more than 10% higher than the accepted quote)? [ ] Yes [ ] No

3. Was the DBE unable to perform in some capacity? [ ] Yes [ ] No If "Yes", explain: _____

D. CERTIFICATION: I certify that the information provided above is accurate and that efforts to solicit sub-bids were made in good faith.

_____ _____ _____
Signature of Company Representative **Title** **Date**

_____ _____ _____
Name of DOT&PF Reviewer **Title** **Date**

INSTRUCTIONS

Project Name and Number: Enter project name and number as they appear on bid documents.

Work or Materials: Identify the specific work item or material that you requested this firm to furnish.

Firm Contacted: Enter name of firm as it appears in the current DOT&PF DBE directory.

Address: Enter address of firm contacted. **Phone Number:** Enter phone number of firm contacted.

A. INITIAL CONTACT (Must be made at least seven calendar days prior to bid opening.)

1. **Date and Method of Initial Contact:** Indicate the method and date that actual contact was made or the date correspondence was postmarked. Leaving a "please call me" message does not constitute a contact. Attach a copy of dated letter or fax.

2. **Name and Title of Person Contacted**. Enter name and title of company representative with whom you corresponded or discussed submitting a sub-bid.

3. **DBE's Response:** Indicate one or more of the responses listed. If a firm bid was received and accepted, skip to section D.

B. FOLLOW-UP CONTACT

If no response or an inconclusive response was received from the initial contact, a follow-up contact is required to determine for a certainty that the firm does not intend to submit a sub-bid or to conclude discussions with a sub-bid submittal.

1. **Date and Method of Follow-up Contact:** Indicate the method and date that actual contact was made or the date correspondence was postmarked. Leaving a "please call me" message does not constitute a contact. Attach a copy of dated letter or fax.

2. **Name and Title of Person Contacted**. Enter name and title of company representative with whom you corresponded or discussed submitting a sub-bid.

3. **DBE's Response:** Indicate one or more of the responses listed. If a firm bid was received and accepted, skip to section D.

C. EXPLANATION OF FAILURE TO ACHIEVE AN ACCEPTABLE SUB-BID

1. A NO response to items 1a., b., or c. will result in rejection of this contact. Be specific on results of discussions.

2. A YES answer to item 2. is grounds for rejecting a DBE sub-bid.

3. A YES answer to item 3. is grounds for rejecting a DBE sub-bid, only if the inability to perform is in an area of work specifically identified as a sub-item under the applicable bid item.

D. CERTIFICATION

This certification of accuracy and good faith by the Contractor will be verified by contact with the listed firm. Falsification of information on the DBE Contact Report is grounds for debarment action under AS 36.30.640(4).

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

DISADVANTAGED BUSINESS ENTERPRISE

UTILIZATION REPORT

Federal-Aid Contracts

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

The undersigned hereby certifies on behalf of the bidder that:

A. It [ ] is [ ] is not a DOT&PF certified DBE or DBE joint venture.

B. The required good faith efforts (GFE) documentationisattached.

C. Listed below are the **certified** DBEs to be used in this contract. Included are the firm name, bid items or portions of work to be performed by the item number, type of DBE credit claimed, and the creditable dollar amount to be counted toward the Department's overall DBE Utilization Goal.

FIRM NAME	BID ITEM, WORK, OR PRODUCT	SUBCONTRACT AMOUNT*	TYPE OF CREDIT	CREDITABLE DOLLAR AMOUNT**
				$
				$
				$
				$
				$
				$
				$

*or expenditure amount or fee/commission amount. **(Subcontract amount x Creditable CUF% per 120-4.01).

If more room is necessary, submit additional, signed copies of this form.

Total creditable DBE Utilization Amount $ _____

Basic Bid Amount $ _____

DBE Utilization % of Basic Bid Amount _____ %

Department's Overall DBE Utilization Goal*** 8.46 %

***This is the overall goal of the Department and is not a set DBE Goal specific to this contract.

Signature of Authorized Company Representative | **Title**

Company Name | **Company Address (Street or PO Box, City, State, Zip)**

Date | ( ) **Phone Number**

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
Civil Rights Office – DBE Program

PRIME CONTRACTOR'S WRITTEN DBE COMMITMENT

Federal-Aid Contracts

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

All firms bidding on Alaska Department of Transportation and Public Facilities (DOT&PF) projects must have a written commitment from each DBE firm to be subcontracted. Please complete this form for each DBE firm and submit to the DOT&PF Regional Compliance Officer.

If you have any questions, please call (907) 269-0851.

Name of DBE Firm: _____

Street Address: _____

Mailing Address: _____ **City:** _____

State: _____ Zip Code: _____

Telephone Number: _____ Fax number: _____

Description of the work that DBE firm will perform: _____

_____

_____

_____

_____

_____

Please provide additional information on a separate sheet of paper.

The dollar amount of participation by the DBE firm: $ _____

Signatures of Authorized representatives of the Prime Contractor and the DBE firm below represent the written commitment by the Prime Contractor to subcontract with the DBE firm as described above and a written commitment by the DBE firm to subcontract for the work described above:

Prime Contractor Signature	**Date**	**DBE Firm Signature**	**Date**

Prime Contractor Firm: _____

Address: _____

_____

_____

Telephone Number: _____ Fax number: _____

Form 25A-332A (8/01)

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

SUMMARY OF GOOD FAITH EFFORT DOCUMENTATION

Federal-Aid Contracts

JNU Mendenhall Valley Adaptive Traffic Signal Control System; Z685840000/0003184
Project Name and Number

Contractor: _____

List **all** items considered for DBE utilization. GFE requires at a minimum that the Contractor consider all items identified on Form 25A-324.

a. MATERIAL OR SPECIFIC ITEM OF WORK (SPECIFY PAY ITEM)	b. ACCEPTABLE DBE QUOTE RECEIVED[1]	c. # OF DBEs CONTACTED IN DBE DIRECTORY	d. # OF DBEs THAT RESPONDED[2]	e. # OF DBE QUOTES RECEIVED
1.				
2.				
3.				
4.				
5.				
6.				
7.				
8.				

1. Check if acceptable DBE quote was received (if so, skip c, d, and e)
2. Attach completed Contact Reports, Form 25A-321A

LIST ADDITIONAL ITEMS ON REVERSE SIDE

a. MATERIAL OR SPECIFIC ITEM OF WORK (SPECIFY PAY ITEM)	b. ACCEPTABLE DBE QUOTE RECEIVED[1]	c. # OF DBEs CONTACTED IN DBE DIRECTORY	d. # OF DBEs THAT RESPONDED[2]	e. # OF DBE QUOTES RECEIVED
9.				
10.				
11.				
12.				
13.				
14.				
15.				

1. Check if acceptable DBE quote was received (if so, skip c, d, and e)
2. Attach completed Contact Reports, Form 25A-321A

Comments:

State of Alaska, Standard Specifications for Highway Construction, 2015 English Edition and Modified as Follows:

SPECIAL PROVISIONS AND
STANDARD MODIFICATIONS
FOR

JNU Mendenhall Valley Adaptive Traffic Signal Control System
Project no. Z685840000, Federal no. 0003184

To be used in conjunction with the State of Alaska Standard Specifications for Highway Construction dated 2015, and the Plans for the above referenced project.

All Provisions contained in this section are considered Special Provisions unless otherwise designated as a Standard Modification (E), Statewide Special Provision (S or ES), or Southcoast Region Special Provision (SRS)

SECTION 102

BIDDING REQUIREMENTS AND CONDITIONS

SPECIAL PROVISION

102-1.01 QUALIFICATION OF BIDDERS. *After the last paragraph add the following paragraph:*
You must be registered as an Electrical Administrator, or must employ a person whose Electrical Administrator's license is assigned to you, under AS 08.40 at the time designated for bid opening.

ES 08 06/30/04

SECTION 105

CONTROL OF WORK

105-1.06 UTILITIES. *In the ninth paragraph (Item 3), part s., delete:* "Storm Water Pollution Prevention Plan (SWPPP)" *and replace with* "Water Quality Control Plan (WQCP)".

SECTION 107

LEGAL RELATIONS AND RESPONSIBILITY TO PUBLIC

STANDARD MODIFICATION

107-1.05 FEDERAL AID PROVISIONS.
Add the following after paragraph two or after Monthly Employment Reports on ARRA projects:

Form 25D-55 H Required Contract Provisions for Federal-Aid (FHWA) Construction Contracts. The FHWA no longer requires the contractor to fill out FHWA Form 47, Statement of Materials and Labor Used By Contractors on Highway Construction Involving Federal Funds. Section VI Records of Materials, Supplies and Labor of Form 25D-55H is no longer applicable to highway construction contracts.

Title VI Requirements. During the performance of this contract, the contractor, for itself, its assignees and successors in interest (hereinafter referred to as the "contractor") agrees as follows:

(1) Compliance with Regulations: The contractor shall comply with the Regulation relative to nondiscrimination in Federally-assisted programs of the Department of Transportation (hereinafter, "DOT") Title 49, Code of Federal Regulations, Part 21, and the Federal Highway Administration (hereinafter "FHWA") Title 23, Code of Federal Regulations, Part 200 as they may be amended from time to time, (hereinafter referred to as the Regulations), which are herein incorporated by reference and made a part of this contract.

(2) Nondiscrimination: The Contractor, with regard to the work performed by it during the contract, shall not discriminate on the grounds of race, color, or national origin, sex, age, and disability/handicap in the selection and retention of subcontractors, including procurements of materials and leases of equipment. The contractor shall not participate either directly or indirectly in the discrimination prohibited by 49 CFR, section 21.5 of the Regulations, including employment practices when the contract covers a program set forth in Appendix B of the Regulations.

(3) Solicitations for Subcontractors, Including Procurements of Materials and Equipment: In all solicitations either by competitive bidding or negotiation made by the contractor for work to be performed under a subcontract, including procurements of materials or leases of equipment, each potential subcontractor or supplier shall be notified by the contractor of the contractor's obligations under this contract and the Regulations relative to nondiscrimination on the grounds of race, color, or national origin, sex, age, and disability/handicap.

(4) Information and Reports: The contractor shall provide all information and reports required by the Regulations or directives issued pursuant thereto, and shall permit access to its books, records, accounts, other sources of information, and its facilities as may be determined by the DOT&PF or the FHWA to be pertinent to ascertain compliance with such Regulations, orders and instructions. Where any information required of a contractor is in the exclusive possession of another who fails or refuses to furnish this information the contractor shall so certify to the DOT&PF, or the FHWA as appropriate, and shall set forth what efforts it has made to obtain the information.

(5) Sanctions for Noncompliance: In the event of the contractor's noncompliance with the nondiscrimination provisions of this contract, the DOT&PF shall impose such contract sanctions as it or the FHWA may determine to be appropriate, including, but not limited to:

(a.) withholding of payments to the contractor under the contract until the contractor complies, and/or

(b.) cancellation, termination or suspension of the contract, in whole or in part.

(6) Incorporation of Provisions: The contractor shall include the provisions of paragraphs (1) through (6) in every subcontract, including procurements of materials and leases of equipment, unless exempt by the Regulations, or directives issued pursuant thereto.

The contractor shall take such action with respect to any subcontract or procurement as the DOT&PF or the FHWA may direct as a means of enforcing such provisions including sanctions for non-compliance: Provided, however, that, in the event a contractor becomes involved in, or is threatened with, litigation with a subcontractor or supplier as a result of such direction, the contractor may request the DOT&PF to enter into such litigation to protect the interests of the DOT&PF, and, in addition, the contractor may request the United States to enter into such litigation to protect the interests of the United States.

E 67 10/13/09

Add the following subsection:
107-1.21 FEDERAL AFFIRMATIVE ACTION. The Federal Equal Employment Opportunity, Disadvantaged Business Enterprise, and On-the-Job Training affirmative action program requirements that are applicable to this Contract are contained in the project Special Provisions and Contract Forms, and may include:

Disadvantaged Business Enterprise (DBE) Program	Section 120
Training Program	Section 645
Federal EEO Bid Conditions	Form 25A-301
EEO-1 Certification	Form 25A-304
DBE Subcontractable Items	Form 25A-324
ADOT&PF Training Program Request	Form 25A-310
Training Utilization Report	Form 25A-311
Contact Report	Form 25A-321A
DBE Utilization Report	Form 25A-325C
Summary of Good Faith Effort Documentation	Form 25A-332A
Required Contract Provisions, Federal-Aid Contracts	Form 25D-55

In addition to the sanctions provided in the above references, non-compliance with these requirements is grounds for withholding of progress payments.

SECTION 108

PROSECUTION AND PROGRESS

108-1.03 PROSECUTION AND PROGRESS. *In item number 5 delete* Storm Water Pollution Prevention Plan *and replace with* Water Quality Control Plan.

SR SPECIAL PROVISION

108-1.03 PROSECUTION AND PROGRESS. *Add the following after the list of documents submitted prior to the preconstruction conference*:

The Contractor must submit three copies of the Contractor's Civil Rights Representatives contact information (Form 25A-302) identifying representatives of the Contractor and for representatives of each Subcontractor. Submit the completed form at the preconstruction conference and at the time any subcontract documents are submitted for approval. All contractors and subcontractors are required to update this information within 10 days after a personnel change occurs involving the individuals named in Form 25A-302.

SRS-4103/10/2015

SECTION 109

MEASUREMENT AND PAYMENT

SR SPECIAL PROVISION

109-1.08 FINAL PAYMENT. *Replace the first sentence of the second paragraph with the following*: If the Contractor certifies 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.

Replace the third paragraph with the following: When the Contractor executes the Certification of Final Estimate (Form 25D-116) and executes the Contractor's Release (Form 25D-117), final payment will be processed.

SRS-4203/10/2015

STANDARD MODIFICATION

Add the following section:

SECTION 120

DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

120-1.01 DESCRIPTION. The work consists of providing Disadvantaged Business Enterprises (DBEs), as defined in Title 49 CFR Part 26, the opportunity to participate fairly with other contractors in the performance of contracts financed with federal funds. The Contractor and subcontractors shall not discriminate on the basis of race, color, national origin, or sex in the performance of this contract. The Contractor will carry out applicable requirements of 49 CFR Part 26 in the award and administration of U.S. DOT assisted contracts.

120-1.02 INTERPRETATION. This section implements the requirements of 49 CFR Part 26, and the Department's federally approved DBE Program.

120-1.03 ESSENTIAL CONTRACT PROVISION. Failure to comply with the provisions of this section is a material breach of contract, which may result in contract termination or other remedy as DOT&PF deems appropriate. Failure to comply with this section is justification for debarment action as provided in AS 36.30.640(4).

120-1.04 DEFINITIONS AND TERMS.

1. **Administrative Reconsideration.** A process by which the low bidder may request reconsideration when the Department determines the Good Faith Effort (GFE) requirements have not been met.

2. **Broker.** A certified DBE for the delivery of creditable materials, supplies, equipment, transportation/hauling, insurance, bonding, etc., within its certified category, that is necessary to complete the project. A broker of materials certified in a supply category must be responsible for scheduling the delivery of materials and ensuring that the materials meet specifications before credit will be given.

3. **Civil Rights Office.** The Department's Civil Rights Office. (CRO)

4. **Contract Compliance Officer.** Individual within the CRO with the authority to administer the Department's compliance programs.

5. **Disadvantage Business Enterprise.** A Disadvantaged Business Enterprise (DBE) which is a for-profit small business concern that is certified in accordance with 49 CFR Part 26 and listed in the Alaska DBE Directory.

6. **DBE Key Employee.** A permanent, year-round employee of the DBE and whose name is on file with the CRO as a key employee. A key employee may act as an on-site representative when the owner is not on-site.

7. **DBE Utilization Goal.** The percent of work to be performed by certified DBEs. The goal is established by the Department and specified in the contract.

8. **DBE Officer.** Individual designated in writing as a representative of the Contractor concerning DBE issues.

9. **Manufacturer.** A DBE certified in a supply category that changes the shape, form, or composition of original material in some way. The DBE must provide that altered material to the general public or the construction industry at large on a regular basis.

10. **Race Conscious Participation.** DBE participation used to meet a specified DBE Utilization Goal.

11. **Race Neutral Participation.** DBE participation that is in excess of the specified DBE Utilization Goal or participation that does not count towards this goal.

12. **Regular Dealer.** A DBE certified in a supply category who operates in a manner consistent with industry practice and who:

    a. maintains an in-house inventory on a regular basis of the particular product provided to this project; and

    b. keeps an inventory in an amount appropriate for the type of work using that product; and

    c. offers that inventory for sale to the general public or construction industry at large (private and public sectors), not just supplied as needed on a project by project basis during the construction season, except where the product requires special or heavy equipment for delivery and the DBE possesses and operates this equipment on a regular basis throughout the construction season in order to deliver the product to the general public or construction industry at large. If the distribution equipment is rented or leased, it must be on a repetitive, seasonal basis; and may additionally fabricate (assemble large components) for use on a construction project, consistent with standard industry practice, for delivery to the project.

    d. a person may be a regular dealer in such bulk items as petroleum products, steel, cement, gravel, stone, or asphalt without owning, operating, or maintaining a place of business, if the person both owns and operates distribution equipment for the products. Any supplementing of regular dealers' own distribution equipment shall be by a long-term lease agreement and not on an ad hoc or contract-by-contract basis.

13. **Commercially Useful Function.** DBE performs a commercially useful function when it is responsible for execution of the work of the contract and is carrying out its responsibilities by actually performing, managing, and supervising the work involved. The DBE must also be responsible, with respect to materials and supplies used on the contract, for negotiating price, determining quality and quantity, ordering the material, and installing (where applicable) and paying for the material itself.

120-2.01 MEETING THE DBE UTILIZATION GOAL. A DBE's proposed work may be used to demonstrate the successful bidder's ability to meet the DBE Utilization Goal before Contract award. The DBE must be certified in a category covering the Commercially Useful Function to be performed at the time of listing on Form 25A-325C (DBE Utilization Report).

A bidder may meet the DBE Utilization Goal through (1) the participation of certified DBE firms, or (2) documentation of required GFE (Subsection 120-3.01), or (3) a combination of participation and GFE to be eligible for contract award.

DBE participation on contingent sum items will count as Race Neutral DBE Participation and not towards fulfilling a minimum DBE Utilization Goal.

120-3.01 DETERMINATION OF COMPLIANCE.

1. **Phase I-Bid.** All DBE GFEs must be completed prior to bid opening.

2. **Phase II-Award.** The apparent low bidder shall submit evidence of DBE commitment(s) within five working days after receipt of written notification by the Department of the successful low bid. The apparent low bidder may not supplement its DBE efforts after opening, nor offer new or additional DBE participation after submitting the DBE Utilization Report (Form 25A-325C).

a. **Written DBE Commitment.** Complete Form 25A-326 for each DBE subcontractor.

b. **DBE Utilization Report.** Submit a completed DBE Utilization Report Form 25A-325C. All listed DBEs must be certified in the appropriate work categories prior to bid opening to be used to meet the DBE contract goal.

c. **GFE Documentation.** Submit a completed Summary of Good Faith Effort Documentation Form 25A-332A (with attachments) and Contact Report Form 25A-321A if the DBE Utilization Goal is not met on Form 25A-325C.

If the bidder cannot meet the DBE Utilization Goal, and cannot document the minimum required GFE (as specified below), the Contracting Officer will determine the bidder to be not responsible.

120-3.02 GOOD FAITH EFFORT (GFE).

1. **GFE Criteria.** When a bidder fails to meet the DBE Utilization Goal, the CRO will use the following criteria to judge whether they have demonstrated sufficient GFE to be eligible for award of the contract.

a. **Consider All Subcontractable Items.** Before bid opening, the bidder shall, at a minimum, seek DBE participation for each of the subcontractable items with an established DBE goal as identified on Form 25A-324. It is the bidder's responsibility to facilitate DBE participation by making the work listed on the subcontractable items list available to DBE firms.

If the bidder cannot achieve the DBE Utilization Goal, then the bidder should also consider other items not listed that could be subcontracted to DBEs.

b. **Initial DBE Notification.** All DBEs listed in the Department's Plan Holders Self-Registration List for the particular project being bid must be contacted at least seven calendar days prior to bid opening. For GFE purposes, DBEs certified to perform the work items identified on Form 25A-324 and listed as mandatory contact on the Department's Plan Holders Self-Registration List, must be contacted to solicit their interest. Each contact with a DBE firm must be logged on a Contact Report, Form 25A-321A.

The bidder must give DBEs at least seven calendar days to quote. The bidder may reject DBE quotes received after the deadline. Responsive DBE quotes must be accepted unless they are determined non-competitive. Deadline for quote submission and responsiveness determinations for DBEs and non-DBEs must be consistently applied.

The only acceptable methods of initial and follow up notification are:

(1) By fax with a confirmation receipt of successful transmission to the DBE's fax number listed in the DBE Directory. A fax transmission without receipt of successful transmission is unsatisfactory.

(2) By email with confirmation of successful receipt to the DBE's email address listed in the DBE Directory. Email without confirmation of successful receipt is unsatisfactory.

(3) By telephone solicitation with a record of the date and time of the telephone call made to the DBE's telephone number listed in the DBE Directory. Telephone solicitation without a record of date and time is unsatisfactory.

c. **Non-Competitive DBE Quotes.** DBE quotes more than 10 percent higher than an accepted non-DBE quote will be deemed non-competitive, provided they are for the exact same work or service.

All evidence in support of a non-competitive quote determination must be provided at the time of the GFE submittal. When a DBE quote is rejected as being non-competitive, the work must be performed by the non-DBE subcontractor whose quote was used to provide the basis of the determination. Payments received by the non-DBE subcontractor during the execution of the Contract shall be consistent with the accepted quote. This does not preclude increases due to change documents issued by the Department.

d. **Assistance To DBEs.** Contractors must provide DBEs with:

(1) Information about bonding or insurance required by the bidder.

(2) Information about securing equipment, supplies, materials, or related assistance or services.

(3) Adequate information about the requirements of the contract regarding the specific item of work or service sought from the DBE.

e. **Follow-up DBE Notifications.** If there is no response from the initial DBE notification, you must contact the DBE(s) again to determine if they will be quoting. For acceptable forms of notification and required documentation see 120-3.02, subsection 1.b items 1 through 3.

Failure to submit a quote by the deadline is evidence of the DBE's lack of interest in bidding. Documentation of follow-up contacts shall be logged on the Contact Report, Form 25A-321A.

f. **GFE Evaluation.** Subsections (a) through (e) must be completed for a GFE based submission to be considered. Failure to perform and document actions contained in subsections (a) through (e) constitutes insufficient GFE. After submitting a GFE, bidders may only clarify efforts taken before opening. No new efforts or additional DBE participation is permitted after opening.

2. **Administrative Reconsideration.** 49 CFR 26.53(d) provides an opportunity for administrative reconsideration when the Department determines that GFE is insufficient. This opportunity must be exercised within three working days of notification that GFEs were unsatisfactory. For reconsideration, the bidder must provide written documentation or argument concerning efforts to meet the DBE Utilization Goal. No new or additional contact information may be provided. Only contact information the bidder provided in support of its initial request for a GFE determination by the CRO may be presented to support the request for administrative reconsideration.

The process for an Administrative Reconsideration is as follows:

a. The bidder will have the opportunity to meet with the DBE Liaison Officer in person to discuss the issue. If so desired, the bidder must be ready to meet with the DBE Liaison Officer within four working days of receipt of notice that it failed to meet the requirements of this subsection.

b. The DBE Liaison Officer will render a written decision and provide notification to the bidder within four working days after the meeting. The written decision will explain the basis for finding.

c. The finding of the DBE Liaison Officer cannot be appealed to the U.S. DOT.

120-3.03 DBE CREDITABLE AND NON CREDITABLE WORK.

1. **DBE Creditable Work.** The Commercially Useful Function work items and creditable dollar amounts shown on the DBE Utilization Report, Form 25A-325C, shall be included in any subcontract, purchase order or service agreement with that DBE.

2. **DBE Decertification.**

a. If a DBE performing a Commercially Useful Function loses its DBE certification at any time prior to execution of a subcontract, purchase order or service agreement, as the result of a determination of ineligibility pursuant to 49 CFR Part 26.87, the work of that firm will not be credited toward the DBE Utilization Goal and the Contractor must either:

(1) meet the contract goal by subcontracting with an eligible DBE firm or demonstrate a GFE to do so; or

(2) continue with the decertified DBE and find other work not already committed to DBEs in an amount that meets or exceeds the DBE Utilization Goal.

b. If a DBE performing a Commercially Useful Function loses its DBE certification after execution of a subcontract, purchase order or service agreement, as the result of a determination of ineligibility pursuant to 49 CFR Part 26.87, the de-certified DBE may continue to perform, and the work may be credited toward the DBE Utilization Goal.

c. If a DBE goes out of business and cannot perform the work, the Contractor must meet the contract goal by subcontracting with an eligible DBE Firm or demonstrate a GFE to do so.

The provisions of 120-3.03(3) Termination of a DBE and 120-3.03(4) DBE Replacement or Substitution do not apply to this section.

A Contractor must notify the CRO within one business day if they become aware of any change in a DBE's circumstances that might lead to a DBE's decertification.

3. **Termination of a DBE.**

a. In accordance with 49 CFR 26.53(f)(1) the Contractor shall not terminate a DBE without good cause and the prior written consent of the Engineer. For purposes of this paragraph, good cause includes the following circumstances:

(1) DBE defaults on their obligation for any reason;

(2) The DBE fails or refuses to perform the work of its subcontract in a way consistent with normal industry standards. Provided, however, that good cause does not exist if the failure or refusal of the DBE to perform its work on the subcontract results from the bad faith or discriminatory action of the Contractor.

(3) The DBE fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;

(4) The DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;

(5) The DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant 2 CFR Parts 180, 215, and 1,200 or applicable state law;

(6) The Engineer determines that the DBE is not a responsible contractor.

(7) The DBE voluntarily withdraws from the project and provides a written notice of its withdrawal;

(8) The DBE is ineligible to receive DBE credit for the type of work required;

(9) A DBE owner dies or becomes disabled with the result that the DBE is unable to complete its work; or

(10) Other documented good cause that the Engineer determines, compels the termination of the DBE, provided that good cause does not exist if the Contractor seeks to terminate a DBE it relied upon to obtain the contract so that the Contractor can self-perform the work for which the DBE was engaged or so that the Contractor can substitute another DBE or non-DBE after contract award.

b. The Contractor must give written notice to the DBE of its intent to request to terminate and/or substitute, and the reason for the request. The request to terminate and/or substitute must be submitted to the Engineer.

c. The Contractor must give the DBE five working days to respond to the written notice. Any response from the DBE must be submitted to the Engineer.

d. DBEs that are terminated must be replaced or substituted in accordance with 120-3.03(4).

4. **DBE Replacement or Substitution.**

a. The Contractor shall submit to the Engineer a written request to replace or substitute a DBE who fails or refuses to execute a written subcontract or who is terminated under 120-3.03(3). If approved, the Contractor shall, at a minimum, replace or substitute the DBE with another eligible DBE for the same work in order to fulfill its commitment under the DBE Utilization Goal.

b. If the Contractor cannot obtain replacement DBE participation, the DBE Utilization Goal will not be adjusted. However, the Engineer may consider the following criteria as satisfying that portion of DBE participation that cannot be replaced.

(1) The Contractor was not at fault or negligent and that the circumstances surrounding the replacement or substitution were beyond the control of the Contractor; and

(2) The Contractor is unable to find replacement DBE participation at the same level of DBE commitment and has adequately performed and documented the GFE expended in accordance with Subsection 120-3.02; or

(3) It is too late in the project to provide any real subcontracting opportunities for DBEs.

If the Engineer agrees that additional DBE participation is not available, the DBE may be replaced or substituted with a non-DBE or the Contractor may self-perform the work.

120-3.04 COMMERCIALLY USEFUL FUNCTION.

1. **Creditable Work.** Measuring the DBE Utilization Goal will be based upon the actual dollars paid to the DBEs for creditable Commercially Useful Function work on this project. This is determined by the Engineer in accordance with this Section.
Commercially Useful Function is limited to:

a. Prime Contractors;

b. Subcontractors;

c. Manufacturers;

d. Regular Dealers;

e. Brokers; or

f. Joint Ventures

2. **Determination of Commercially Useful Function.** In order for the Commercially Useful Function work of the DBE to be credited toward the goal, the Contractor will ensure that the DBE is certified in the appropriate category at the time of the submittal of the subcontract, or the issuance of a purchase order or service agreement. Subcontracts, purchase orders and service agreements shall be consistent with the written DBE commitment.

a. The Commercially Useful Function performed by a DBE certified in a supply category will be evaluated by the Engineer to determine whether the DBE performed as either a broker, regular dealer, or manufacturer of the product provided to this project.

b. The following factors will be used in determining whether a DBE trucking company is performing a Commercially Useful Function:

(1) The DBE must be responsible for the management and supervision of the entire trucking operation for which it is performing on a particular contract, and there cannot be a contrived arrangement for the purpose of meeting DBE goals.

(2) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

(3) The DBE receives credit for the total value of the transportation services it provides on the contract using trucks it owns, insures, and operates using drivers it employs.

c. The Contractor will receive credit for the Commercially Useful Function performed by DBEs as provided in this Section. Contractors are encouraged to contact the Engineer in advance of the execution of the DBE's work or provision of goods or services regarding Commercially Useful Function and potential DBE credit.

d. The DBE may perform work in categories for which it is not certified, but only work performed in the DBE's certified category meeting the Commercially Useful Function criteria may be credited toward the DBE Utilization Goal.

e. DBE work shall conform to the following requirements to be a Commercially Useful Function:

(1) It will be necessary and useful work required for the execution of the Contract.

(2) The scope of work will be distinct and identifiable with specific contract items of work, bonding, or insurance requirement.

(3) It will be performed, controlled, managed, and supervised by employees normally employed by and under the control of the certified DBE. The work will be performed with the DBE's own equipment. Either the DBE owner or DBE On-Site Representative will be at the work site and responsible for the work. Leased equipment may also be used provided the DBE has exclusive use of the equipment and it is operated by a driver the DBE employs. In remote locations or rare situations, a DBE may use equipment and/or personnel from the Contractor or its affiliates. Should this situation arise, a prior arrangement must be in place. The duration of the arrangement must be short term and prior written approval from the Engineer must be obtained.

(4) The manner in which the work is sublet or performed will conform to standard industry practice within Alaska, as determined by the Department. The work or provision of goods or services will have a market outside of the DBE program (and must also be performed by non-DBE firms within the Alaskan construction industry). Otherwise, the

work or service will be deemed an unnecessary step in the contracting or purchasing process and no DBE credit will be allowed.

There will be no DBE credit for lower-tier non-DBE subcontract work.

(5) The cost of the goods and services will be reasonable and competitive with the cost of goods and services outside the DBE program within Alaska. Materials or supplies needed as a regular course of the Contractor's operations such as fuel, maintenance, office facilities, portable bathrooms, etc. are not creditable.

The cost of materials actually incorporated into the project by a DBE subcontractor is creditable toward the DBE goal only if the DBE is responsible for ordering and scheduling their delivery and fully responsible for ensuring that they meet specifications. The cost of materials purchased from the contractor or its affiliates is not creditable.

(6) Subcontract work, with the exception of truck hauling, shall be sublet by the same unit of measure as is contained in the Bid Schedule unless approved in advance by the Engineer.

(7) The DBE will control all business administration, accounting, billing and payment transactions. The Contractor cannot perform these functions for the DBE.

In accordance with AS 36.30.420(b), the Engineer may inspect the offices of the DBE and audit their records to assure compliance.

3. **Rebuttal of a Finding of No Commercially Useful Function.** Consistent with the provisions of 49 CFR Part 26.55(c)(4)&(5), before the Engineer makes a final finding that no Commercially Useful Function has been performed by a DBE, the Engineer will coordinate transmittal of the presumptive finding to the Contractor, who will in-turn, notify the DBE. The Contractor will provide the DBE the opportunity to provide rebuttal information. The Contractor shall present the information to the Engineer.

   The Engineer will make a final determination on whether the DBE is performing a Commercially Useful Function. Under no circumstances will the Contractor take any action with respect to the DBE until the final determination is made. The Engineer's decisions on Commercially Useful Function matters are subject to review by the Department, but are not administratively appealable to the U.S. DOT.

4. **Monthly Required Reporting.** On a monthly basis, the Contractor shall submit the Monthly Summary of Disadvantaged Business Enterprise Participation, Form 25A-336, to the Engineer. Reports are due by the 15th of the following month. Also attach copies of canceled checks or bank statements that identify payer, payee, and amount of transfer to verify payment information shown on the form.

120-4.01 DETERMINING DBE CREDIT. The Contractor is entitled to count toward the DBE Utilization Goal those monies actually paid to certified DBEs for Commercially Useful Function work performed by the DBE as determined by the Engineer. The Contractor will receive credit for the utilization of the DBEs, as follows:

1. Credit for the Commercially Useful Function of a DBE prime contractor is 100 percent of the monies actually paid to the DBE under the contract for creditable work and materials in accordance with 49 CFR Part 26.55.

2. Credit for the Commercially Useful Function of a subcontractor is 100 percent of the monies actually paid to the DBE under the subcontract for creditable work and materials.

3. Credit for the Commercially Useful Function of a subcontractor performing hauling/transportation is 100 percent of the monies actually paid to the DBE under the subcontract for creditable work for those firms certified in the 100 percent category. Credit for the Commercially Useful Function of a subcontractor performing hauling/transportation is 5 percent of the monies actually paid to the DBE under the subcontract for creditable work for those firms certified in the 5 percent credit category.

4. Credit for the Commercially Useful Function of a manufacturer is 100 percent of the monies paid to the DBE for the creditable materials manufactured.

5. Credit for the Commercially Useful Function of a regular dealer of a creditable material, product, or supply is 60 percent of its value. The value is the actual cost paid to the DBE not to exceed the bid price for such item.

6. Credit for the Commercially Useful Function of a broker performed by a DBE certified in a supply category for providing a creditable material, product or supply is limited to a reasonable brokerage fee. The brokerage fee will not exceed 5 percent of the cost of the procurement contract for the creditable item.

7. Credit for the Commercially Useful Function of a broker performed by a DBE certified in a bonding or insurance category is limited to a reasonable brokerage fee, not to exceed 5 percent of the premium cost.

8. Credit for the Commercially Useful Function of a joint venture (JV) either as the prime contractor or as a subcontractor may not exceed the percent of the DBE's participation in the JV agreement, as certified by the CRO. The DBE joint venture partner will be responsible for performing all of the work as delineated in the certified JV agreement.

120-5.01 ACHIEVEMENT OF DBE GOALS. Work under this item is subsidiary to other contract items and no payment will be made for meeting or exceeding the DBE Utilization Goal.

If the Contractor fails to utilize the DBEs listed on Form 25A-325C as scheduled or fails to submit proof of payment, requested documentation, or otherwise cooperate with a DBE review or investigation, the Department will consider this to be unsatisfactory work. If the Contractor fails to utilize GFE to replace or substitute a DBE, regardless of fault (except for Subsection 120-3.03(4)(b)(3)), the Department will also consider this unsatisfactory work. Unsatisfactory work may result in disqualification of the Contractor from future bidding under Subsection 102-1.13 and withholding or progress payments consistent with Subsection 109-1.06.

E 114 02/01/14

SR SPECIAL PROVISION

Delete Section 640 and replace with the following:

SECTION 640

MOBILIZATION AND DEMOBILIZATION

640-1.01 DESCRIPTION. Perform work and operations necessary to:

1. move personnel, equipment, supplies, and incidentals to the project site;
2. establish offices, buildings, and other facilities, except as provided under Section 644;
3. install required bulletin boards
4. perform other work and operations and pay costs incurred, before beginning construction;
5. complete similar demobilization activities;
6. furnish required submittals such as as-builts, certificates, payrolls, civil rights reports, and equipment warranties; and
7. comply with the Alaska Department of Labor and Workforce Development (DOLWD) requirements for Worker Meals and Lodging, or Per Diem; as described in memo WHPL #197 and the State Laborer's and Mechanic's Minimum Rates of Pay (current issue). On Federal-aid projects, PL 109-59, 119 STAT. 1233, Sec. 1409 (c) also applies.

   Ensure subcontractors comply with the Federal and State DOLWD requirements. When Item 640(4) appears in the bid schedule, include Item 640(4), Worker Meals and Lodging, or Per Diem, as a separate line item in each subcontract.

   Ensure facilities meet the Alaska Administrative Code 8 AAC 61.1010 and 8 AAC 61.1040 Occupational Safety and Health Standards, 18 AAC 31 Alaska Food Code, and U. S. Code of Federal Regulations 29 CFR Section 1910.142 Temporary Labor Camps.

   Do not consider the cost of Meals and Lodging, or Per Diem in setting wages for the worker or in meeting wage requirements under AS 23.10.065 or AS 36.05.

640-2.01 MATERIALS. None.

640-3.01 CONSTRUCTION REQUIREMENTS. Maintain a bulletin board with postings required by Alaska Statues and on Federally Funded projects also post the Required Contract Provisions for Federal-Aid (FHWA) Construction Contracts Form 25D-55H (Form FHWA-1273), prominently and conspicuously placed on the project where the posting statements can be seen by each employee and perspective employees at all times. The Engineer may provide a current list of required postings when requested. Protect postings from the weather. Replace postings that become illegible.

640-4.01 METHOD OF MEASUREMENT. None.

640-5.01 BASIS OF PAYMENT.

1. Mobilization and Demobilization. Payment will be made according to Table 640-1, except no payments will be made if the bulletin board is not installed or maintained according to Subsection 640-3.01.

2. Worker Meals and Lodging, or Per Diem. Progress payments for Worker Meals and Lodging, or Per Diem will be computed as equivalent to the percentage, rounded to the nearest whole percent, of the original contract amount earned.

TABLE 640-1
MOBILIZATION AND DEMOBILIZATION PAYMENT SCHEDULE

Amount Paid	**When Paid**
10% of Pay Item 640(1) or 1% of the Contract amount, whichever amount is less.	With first estimate for other bid items
30% of Pay Item 640(1) or 3% of the Contract amount, whichever amount is less.	When 4% of the original Contract amount is earned from other bid items
40% of Pay Item 640(1) or 4% of the Contract amount, whichever amount is less.	When 8% of the original Contract amount is earned from other bid items
10% of Pay Item 640(1) or 20% of Pay Item 640(1) less $50,000, whichever amount is greater.	With estimate following when all physical work and cleanup are complete as described in Subsection 105-1.15
Remaining amount of Pay Item 640(1)	With Final Payment

Payment will be made under:

Pay Item	**Pay Unit**
640(1) Mobilization and Demobilization	Lump Sum
640(4) Worker Meals and Lodging, or Per Diem	Lump Sum

SRS-19 08/03/2015

Delete Section 641 in its entirety and replace with the following:

SECTION 641

EROSION, SEDIMENT, AND POLLUTION CONTROL

641-1.01 DESCRIPTION. Plan, provide, inspect, and maintain control of erosion, sedimentation, water pollution, and hazardous materials contamination.

641-1.02 DEFINITIONS.

1. BMP (Best Management Practices). A wide range of project management practices, schedules, activities, or prohibition of practices, that when used alone or in combination, prevent or reduce erosion, sedimentation, and/or pollution of adjacent water bodies and wetlands. BMP include temporary or permanent structural and non-structural devices and practices. The Department describes common BMPs in its *Alaska Storm Water Pollution Prevention Plan Guide*.

2. WQCP (Water Quality Control Plan). NOT USED.

3. Final Stabilization. A point in time when all ground-disturbing activities are complete and permanent erosion and sediment controls are established and functional. The stabilized site is protected from erosive forces of raindrop impact and water flow. Typically, all unpaved areas except graveled shoulders, crushed aggregate base course, or other areas not covered by permanent structures are protected by either a uniform blanket of perennial vegetation (at least 70% cover density) or equivalent permanent stabilization measures such as riprap, gabions or geotextiles.

4. HMCP (Hazardous Material Control Plan). The Contractor's detailed plan for prevention of pollution that stems from the use, containment, cleanup, and disposal of hazardous material, including petroleum products generated by construction activities and equipment.

5. SPCC Plan (Spill Prevention, Control and Countermeasure). The Contractor's detailed plan for oil spill prevention and control measures that meets the requirements of 40 CFR 112.

641-1.03 SUBMITTALS. Submit three copies of your HMCP to the Engineer for review and approval as appropriate. Sign and deliver the copies to the Engineer no less than 5 calendar days prior to the pre-construction conference.

The Department will review the HMCP submittal within 14 calendar days. Submittals will be returned to you as either requiring modification, or as approved by the Department.

641-2.02 HAZARDOUS MATERIAL CONTROL PLAN (HMCP) REQUIREMENTS. Prepare the HMCP for prevention of pollution from storage, use, containment, cleanup, and disposal of all hazardous material, including petroleum products related to construction activities and equipment. Compile Material Safety Data Sheets in one location and reference that location in the HMCP.

Designate a Contractor's Spill Response Field Representative with 24 hour contact information. Designate a Subcontractor Spill Response Coordinator for each subcontractor. The Superintendent and Contractor's Spill Response Field Representative must have 24 hour contact information for each Subcontractor Spill Response Coordinator and the Utility Spill Response Coordinator.

List and give the location and estimated quantities of hazardous materials (Including materials or substances listed in 40 CFR 117 and 302, and petroleum products) to be used or stored on the Project. Hazardous materials must be stored in covered storage areas. Include secondary containment for all hazardous material storage areas.

Identify the locations where fueling and maintenance activities will take place, describe the activities, and list controls to prevent the accidental spillage of petroleum products and other hazardous materials. Controls include placing absorbent pads or other suitable containment under fill ports while fueling, under equipment during maintenance or repairs, and under leaky equipment. List the types and approximate quantities of response equipment and cleanup materials available on the Project. Include a list and location map of cleanup materials, at each different work site and readily available off site (materials sources, material processing sites, disposal sites, staging areas, etc). Spill response materials must be stored in sufficient quantity at each work location, appropriate to the hazards associated with that site.

Describe procedures for containment and cleanup of hazardous materials. Describe a plan for the prevention, containment, cleanup, and disposal of soil and water contaminated by spills. Describe a plan for dealing with contaminated soil and water encountered during construction. Clean up spills or contaminated surfaces immediately.

Describe methods of disposing of waste petroleum products and other hazardous materials generated by the Project, including routine maintenance. Identify haul methods and final disposal areas. Assure final disposal areas are permitted for hazardous material disposal.

Describe methods of complying with the requirements of AS 46.04.010-900, Oil and Hazardous Substances Pollution Control, and 18 AAC 75. Include contact information for reporting hazardous materials and petroleum product spills to the Project Engineer and reporting to federal, state and local agencies.

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

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

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

Reference the HMCP.

641-3.01 CONSTRUCTION REQUIREMENTS.

Do not begin work on-site until receipt of approved HMCP by the Department.

Post at the construction site:

1. Name and phone number of your local contact person and
2. Locations of HMCP plan available for viewing by the public.

Comply with all requirements of the approved HMCP all state and federal regulations that pertain to the handling, storage, clean up, and disposal of petroleum products or other hazardous substances. Contain, clean up, and dispose of all discharges of petroleum products and/or other materials hazardous to the land, air, water, and organic life forms. Perform all fueling operations in a safe and environmentally responsible manner. Comply with the requirements of 18 AAC 75 and AS 46, Oil and Hazardous Substances Pollution Control. Report oil spills as required by federal, state and local law, and as described in your HMCP Plan.

If unanticipated or emergency conditions threaten water quality, take immediate suitable action to preclude erosion and pollution.

Submit amendments to the plans to correct problems identified as a result of any:

1. Storm or other circumstances that threatens water quality, and

2. Inspection that identifies existing or potential problems.

If you fail to:

1. Pursue work required by the HMCP plan,
2. Respond to inspection recommendations and/or deficiencies, or
3. Implement controls identified by the Engineer, the Engineer may, after giving you written notice, proceed to perform such work and deduct the cost thereof, including project engineer costs, from your progress payments.

641-4.01 METHOD OF MEASUREMENT.

Work under this Section will not be measured for payment.

641-5.01 BASIS OF PAYMENT.

Work under this Section is subsidiary to Pay Item 640(1) Mobilization and Demobilization.

SR SPECIAL PROVISION

Delete Section 643 in its entirety and replace with the following:

SECTION 643

TRAFFIC MAINTENANCE

643-1.01 DESCRIPTION. Protect and control traffic during the contract. Furnish, erect, maintain, replace, clean, move and remove the traffic control devices required to ensure the traveling public's safety. Perform all administrative responsibilities necessary to implement this work.

Maintain all roadways and pedestrian and bicycle facilities affected by the work in a smooth and passable condition. Construct and maintain approaches, crossings, intersections, and other necessary features throughout the project for the life of the contract.

Illuminate construction activities listed in Table 643-4 during hours of night work on roads open to the public within project limits.

643-1.02 DEFINITIONS.

ATM. When used in this Section, ATM stands for the *Alaska Traffic Manual*, which is the MUTCD with Alaska Supplement.

Balloon Light: Light surrounding by a balloon-like enclosure kept inflated by pressurized air or helium, and producing uniform light through 360 horizontal degrees. The top half of the balloon enclosure shall be constructed of an opaque material.

Construction Phasing Plan. A plan for each phase of the project showing how you will accommodate traffic.

Fixed Objects. Private vehicles, parked flagger vehicles, idle construction equipment, construction material stockpiles, culvert ends, individual trees, power poles, utility poles and appurtenances, and other items deemed by the Engineer to present a hazard to motorists, pedestrians, or bicyclists traveling through the work zone.

Night Work: Work occurring between sunset and sunrise on all days except the "No Lighting Required" period shown in table 643-1 below:

Table 643-1 Project Locations – Night Time Illumination Exclusion

Latitude (degrees)	No Lighting Required		Nearby Cities
	Start	End	
South of 61	Lighting Required All Year		Everything South of Valdez
61	June 11	July 1	Valdez

Traffic. The movement of vehicles, pedestrians, and bicyclists through road construction, maintenance operations, utility work, or similar operations.

Traffic Control Plan (TCP). A drawing or drawings indicating the method or scheme for safely guiding and protecting motorists, pedestrians, bicyclists, and workers in a traffic control zone. The TCP depicts the traffic control devices and their placement and times of use.

Traffic Control Zone. A portion of a road construction project, maintenance operation, utility work or similar operation that affects traffic and requires traffic control to safely guide and protect motorists, pedestrians, bicyclists, or workers.

643-1.03 TRAFFIC CONTROL PLAN. The TCP includes all items required to direct traffic through or around the traffic control zone for the work described on the TCP according to these Specifications and the ATM. Address in the TCPs placement of traffic control devices, including location, spacing, size, mounting height and type.

When a TCP is included on the Plans, use it, modify it, or design an alternative TCP. When a TCP is omitted from the Plans, provide one according to this Section and the ATM.

Submit all TCPs, including the TCPs provided on the Plans if you intend to use them, to the Engineer for approval. All TCPs shall include the following information:

1. Project name and number.
2. A designated TCP number and name on each page (e.g. TCP #1, Permanent Construction Signs).
3. For TCPs more than one page, number each page (e.g. 1 of 3, 2 of 3, etc.).
4. The posted speed limit for each roadway.
5. Existing striping width, lane width, and road surfacing (e.g. Asphalt).
6. Construction lane widths, striping layout, and temporary pavement marker layout.
7. Provisions for Pedestrian, Bicycle, and ADA travel through the work zone.
8. Dates and times the TCP will be in effect and description of work covered by the TCP. Pay Item numbers may be used to describe the work.
9. The Worksite Traffic Supervisor's signature certifying that all TCPs conform with the ATM and the Contract.
10. The Project Superintendent's signature confirming the TCP is compatible with the work.
11. The name and 24 hour telephone number of the Worksite Traffic Supervisor, Traffic Control Technician, and Project Superintendent.
12. Signs to be used and the Alaska Sign Design Specifications (ASDS) designation number and size.
13. Location and spacing of all devices and signs. Include longitudinal buffer space for the posted speed limit, according to Table 6C-2 of the ATM, unless project conditions or geometric features prohibit including all or a portion of the buffer length.
14. A plan to address any possible slopes, drop offs, paving joints, or similar temporary features that may occur during use of the TCP.
15. For TCPs proposed to be used at night, note how the requirements will be met for the required lighting and retro-reflective material.

TCPs submitted for approval without all the required information will be rejected. Allow 7 days for review of each TCP submittal, except for TCPs involving a road closure. For TCPs involving a road closure, allow 14 days for review of the submittal. All required modifications to a TCP require a new submission and an additional 7 days for review.

The TCPs, Plans, and Standard Drawings show the minimum required number of traffic control devices. If unsafe conditions occur, the Engineer may require additional traffic control devices.

Use of oversize and overweight equipment within the project must conform to an approved TCP, including all traffic control devices these operations require.

643-1.04 WORKSITE TRAFFIC SUPERVISOR. Provide a Worksite Traffic Supervisor responsible for maintaining 24-hour traffic operations.

1. Qualifications. The Worksite Traffic Supervisor shall be knowledgeable and experienced regarding the requirements of the ATM and the implementation of those requirements. The Worksite Traffic

Supervisor shall be familiar with the Plans, the Specifications, your proposed operations, and one of the following for the duration of the project:

a. Certified as a Traffic Control Supervisor, American Traffic Safety Services Association (ATSSA)

b. Successfully completed the Traffic Control Supervisor course by ATSSA within the last 4 years and meet the minimum work experience requirements below.

c. Work Zone Temporary Traffic Control Technician, or Work Zone Safety Specialist, International Municipal Signal Association (IMSA) and meet the minimum work experience requirements below.

Certify according to Form 25D-124 that the Worksite Traffic Supervisor has a minimum 4000 hours of temporary traffic control work experience, is competent and capable, and has the authority to perform the duties and responsibilities in accordance with this section.

- Temporary traffic control work experience shall demonstrate an understanding of concepts, techniques, and practices in the installation and maintenance of traffic control devices, and skill in reading, interpreting, implementing, and modifying TCPs.
- Temporary traffic control work experience includes: flagging; installing traffic control devices in accordance with TCPs; monitoring traffic control devices and TCP performance; and recognizing and reporting deficiencies in traffic control devices and TCPs for correction.
- Temporary traffic control work experience is gained while serving as a Worksite Traffic Supervisor-in-training, temporary traffic control support personnel, and Flagger.
- Four thousand (4,000) hours of experience serving solely as a Flagger does not satisfy these requirements.

Worksite Traffic Supervisors shall maintain current certification and be able to show their certification anytime they are on the project.

2. Duties.

a. Prepare the TCPs and public notices and coordinate traffic control.
b. Physically inspect the condition and position of all traffic control devices used on the project at least twice each day. Schedule inspections at regular 12 hour intervals with an inspection beween 8 a.m. and 2 p.m., and an inspection between 8 p.m. and 2 a.m. Ensure that traffic control devices work properly, are clean and visible, and conform to the approved TCP. Complete and sign a detailed written report of each inspection within 24 hours. Use Traffic Control Daily Review Form 25D-104.
c. Supervise the repair or replacement of damaged or missing traffic control devices.
d. Review and anticipate traffic control needs. Make available proper traffic control devices necessary for safe and efficient traffic movement.
e. Ensure traffic control is set up for each work zone according to an approved TCP that includes a description of the work occurring in the work zone. Ensure that hazards near the traveled way, including staged equipment, steep embankments, and material stockpiles, are properly delineated according to an approved TCP.
f. Hold traffic safety meetings with superintendents, foremen, subcontractors, and others as appropriate before beginning construction, prior to implementing a new TCP, and as directed. Invite the Engineer to these meetings.
g. Supervise all traffic control workers, flaggers, and pilot car drivers.
h. Submit a copy of all flagger certifications to the Engineer as required by Subsection 643-3.04.
i Supervise lighting for night work.

3. Authority. The Worksite Traffic Supervisor shall have the Contractor's authority to stop work and implement immediate corrective action to unsafe traffic control, in locations where unsafe traffic control is present.

643-1.05 CONSTRUCTION PHASING PLAN. Submit a Construction Phasing Plan for approval no less than 5 working days prior to the preconstruction conference. Include the following:

1. Form 25D-124 designating the Worksite Traffic Supervisor, providing the 24-hour telephone number, and certifying minimum 4,000 hours of work experience as described in 643-1.04 Worksite Traffic Supervisor.
2. A construction phasing plan for each phase or segment of the project, satisfying the requirements of subsection 643-3.08.
3. TCPs for the first phase of the project. Show permanent and temporary traffic control measures, including the times each TCP will be used.

Submit any changes to the Engineer for approval 7 days before proposed implementation.

643-1.06 TRAFFIC MAINTENANCE SETUP. When shown on the bid schedule, Traffic Maintenance Setup items are site specific and are detailed as individual TCPs on the plan sheets. They depict the method or scheme required to route traffic safely and efficiently when any of the following restrictions occur:

1. Lane Closure. The closure of one or more lanes on a roadway.
2. Detour. The redirection of traffic through or around a traffic control zone.
3. Road Closure. The closure of a roadway with or without a specified detour route.
4. One Lane Road. A two-way roadway reduced to a single-lane roadway with flaggers, pilot cars, traffic signals, stop signs, or yield signs.

643-1.07 TRAFFIC CONTROL TECHNICIAN. On projects where the Superintendent is the Worksite Traffic Supervisor, provide a Traffic Control Technician to implement traffic control in the field. On projects where the Superintendent is a different person than the Worksite Traffic Supervisor, a Traffic Control Technician is optional.

1. Qualifications. The Traffic Control Technician shall be knowledgeable and experienced regarding the requirements of the ATM and the implementation of those requirements. The Traffic Control Technician shall be familiar with the Plans, the Specifications, your proposed operations, and one of the following for the duration of the project:

    a. Certified as a Traffic Control Technician, ATSSA

    b. Successfully completed the Traffic Control Technician course by ATSSA within the last 4 years and meet the minimum work experience requirements below.

    c. Work Zone Temporary Traffic Control Technician, or Work Zone Safety Specialist, International Municipal Signal Association (IMSA) and meet the minimum work experience requirements below.

    The Traffic Control Technician shall have a minimum 2000 hours of temporary traffic control work experience, be competent and capable, and have the authority to perform the duties and responsibilities in accordance with this section.

    - Temporary traffic control work experience shall demonstrate an understanding of concepts, techniques, and practices in the installation and maintenance of traffic control devices, and skill in reading, interpreting, and implementing TCPs.
    - Temporary traffic control work experience includes: flagging; installing traffic control devices in accordance with TCPs; monitoring traffic control devices and TCP performance; and recognizing and reporting deficiencies in traffic control devices and TCPs for correction.
    - Temporary traffic control work experience is gained while serving as a temporary traffic control support personnel or Flagger.

- 2,000 hours of experience serving solely as a Flagger does not satisfy these requirements.

Traffic Control Technicians shall maintain current certification and be able to show their certification anytime they are on the project.

2. Duties. At the direction of the Worksite Traffic Supervisor:
   a. Install traffic control devices required by the TCP being implemented.
   b. Repair or replace damaged or missing traffic control devices.
   c. Clean traffic control devices.
   d. Breakdown and remove traffic control devices when a TCP setup is no longer needed.
   e. Relieve traffic control workers, flaggers, and pilot car drivers.
   f. Install lighting for night work.

643-2.01 MATERIALS. Provide traffic control devices meeting the following requirements:

1. Signs. Use signs, including sign supports, that conform to Section 615, the ATM, and ASDS.
   a. Construction Signs: Regulatory, guide, or construction warning signs designated in the ASDS.
   b. Permanent Construction Signs: As designated on the Plans or an approved TCP.
   c. Special Construction Signs: All other signs are Special Construction Signs. Neatly mark the size of each sign on its back in 3-inch black numerals.

2. Portable Sign Supports. Use wind-resistant sign supports with no external ballasting. Use sign supports that can vertically support a 48 X 48 inch traffic control sign at the height above the adjacent roadway surface required by the ATM.

3. Barricades and Vertical Panels. Use barricades and vertical panel supports that conform to the ATM. Use Type III Barricades at least 8 feet long. Use reflective sheeting that meets AASHTO M 268 Type II or III.

4. Portable Barriers. Use portable concrete or steel barriers that conform to the Contract. For each direction of traffic, equip each section of barrier with a continuous 4-inch wide horizontal retroreflective stripe mounted 6 inches below the top of the barrier, or at least two side-mounted retroreflective reflectors. Place the individual reflectors 2 feet or less from each and and space at not more than 10 feet apart. Use yellow tabs or stripe when barriers are placed at centerline. Use white tabs or stripe when barriers are placed on the roadway shoulder. Use retro-reflective sheeting that meets AASHTO M 268 Type III, IV or V.

5. Warning Lights. Use Type A (low intensity flashing), Type B (high intensity flashing) or Type C (steady burn) warning lights that conform to the ATM.

6. Drums. Use plastic drums that conform to the requirements of the ATM. Use reflective sheeting that meets AASHTO M 268 Type II or III.

7. Traffic Cones and Tubular Markers. Use reflectorized traffic cones and tubular markers that conform to the requirements of the ATM. Use traffic cones and tubular markers at least 28 inches high. Use reflective sheeting that meets AASHTO M 268 Type II or III.

8. Interim Pavement Markings. Apply markings according to Section 670 and the manufacturer's recommendations. Use either:
   a. Paint meeting Subsection 708-2.03 with glass beads meeting Subsection 712-2.08,
   b. Preformed Marking Tape (removable or non-removable) meeting Subsection 712-2.14, or
   c. Temporary Raised Pavement Markers meeting Subsection 712-2.15 or 712-2.16, as appropriate.

9. High-Level Warning Devices. Use high-level warning devices that conform to the ATM.

10. Temporary Crash Cushions. Must have FHWA Acceptance letter for NCHRP 350 or MASH Test Level 3. Use reflective sheeting that meets AASHTO M 268 Type III, IV or V. Application of crash cushion must be appropriate for the intended use and be installed per manufacturer's recommendation. Temporary crash cushions that are barrels or barricade filled with sand or water are considered nonredirective may only be used when the forecasted temperature during their use is above 32 degrees Fahrenheit.

11. Sequential Arrow Panels. Use Type A (24 X 48 inch), Type B (30 X 60 inch) or Type C (48 X 96 inch) panels that conform to the ATM.

12. Portable Changeable Message Board Signs. Use truck or trailer mounted portable changeable message board signs with a self-contained power supply for the sign and with the following features:
    a. Message sign panel large enough to display 3 lines of 9 inch high characters
    b. Eight character display per message line
    c. Fully programmable message module
    d. The capacity to create, preview, and display new messages and message sequences
    e. A waterproof, lockable cover for the controller keyboard
    f. An operator's manual, a service manual, and a wiring diagram
    g. Quick release attachments on the display panel cover
    h. Variable flash and sequence rates
    i. Manual and automatic dimming capabilities on lamp bulb matrix models
    j. Locate the bottom of the sign panel at least 7 feet above the pavement
    k. Operate with a battery pack a minimum of 2 hours under full load

13. Plastic Safety Fence. Use 4 foot high construction orange fence manufactured by one of the following companies, or an approved equal:
    a. "Safety Fence" by Services and Materials Company, Inc., 2200 South "J" Street, Elwood, Indiana, 46036. Phone (800) 428-8185.
    b. "Flexible Safety Fencing" by Carsonite, 1301 Hot Springs Road, Carson City, Nevada, 89706. Phone (800) 648-7974.
    c. "Warning Barrier Fence" by Plastic Safety Systems, Inc. P.O. Box 20140, Cleveland, Ohio, 44120. Phone (800) 662-6338.

14. Temporary Sidewalk Surfacing. Provide temporary sidewalk surfacing as required by an approved TCP and the following:
    a. Aggregate base course, compacted to a firm unyielding surface.
    b. Alternatively, use plywood with an anti-slip surface, such as roofing shingles. Use plywood at least 1/2 inch thick for areas continuously supported by subgrade. Use plywood at least 1 inch thick for areas that are not continuously supported, with supports at a maximum spacing of 30 inches.
    c. Do not exceed a vertical change greater than 1/2 inch.
    d. At curb ramps, do not exceed a slope of 12:1 with the temporary surfacing.
    e. Use toe boards on each side of temporary surfacing. If the temporary surfacing is at least 1 inch below the level of the curb, the curb will satisfy the requirement for a toe board on that side.
    f. Use a method that will withstand 70 mph wind velocities to hold temporary surfacing in place.

15. Temporary Guardrail. Use temporary guardrail that meets Section 606, except that posts may require placement under special conditions, such as in frozen ground.

16. Flagger Paddles. Use flagger paddles with 24 inches wide by 24 inches high sign panels, 8 inch Series C lettering (see ASDS for definition of Series C), and otherwise conform to the ATM. Use reflective sheeting that meets AASHTO M 268 Type VIII or IX. Use background colors of fluorescent orange on one side and red on the other side.

17. Truck Mounted Attenuator, TMA. Use a TMA mounted on a vehicle with a minimum weight of 15,000 pounds and a maximum weight per the manufacturer's recommendations. The TMA shall comply with

NCHRP 350 or MASH Test Level 3 requirements. The TMA shall have an adjustable height so that in can be placed at the correct elevation during usage and to a safe height for transporting. Approach ends of TMAs shall have impact attenuator markings in accordance with the ATM.

18. Portable Chain-Link Fence. Use portable, self-standing, 6 or 8 foot high temporary chain-link fence.

19. Pedestrian Barrier. ADA compliant barrier, meeting the crashworthiness standards in 643-2.02.

643-2.02 CRASHWORTHINESS. Submit documentation, by the method indicated on table 643-2, that the following devices comply with Test Level 3 requirements of National Cooperative Highway Research Program (NCHRP) Report 350 or the Manual for Assessing Safety Hardware (MASH). Submit documentation of compliance to the Engineer before installing devices on the project.

Table 643-2 Work Zone Traffic Control Device and Barrier Crash Testing Compliance

Category	Devices	Method of Documentation
1	Cones, candles, drums w/o attachments, delineators	Manufacturer's Certification for devices exceeding height and weight limits
2	Barricades, portable sign supports, drums w/lights, other devices weighing less than 100 pounds but not included in category 1	FHWA acceptance letter (when no test level is specified in the letter; it is implied that the tests were run for Test Level 3).
3	Truck mounted attenuators, redirective and nondirective temporary crash cushions, portable barrier, bridge railing, bridge and guardrail transitions, and guardrail and barrier end treatments.	FHWA acceptance letter (when no test level is specified in the letter; it is implied that the tests were run for Test Level 3).

Category 1 devices that exceed the following weights and heights require certification that they meet the evaluation criteria of NCHRP Report 350 or MASH, Test Level 3. This certification may be a one-page affidavit signed by the vendor. Documentation supporting the certification (crash tests and/or engineering analysis) must be kept on file by the certifying organization. No certification is required for devices less than or equal to both the weight and height on the schedule below:

Device	Composition	Weight	Height
Cones	Rubber	20 lb.	36 in.
	Plastic	20 lb.	48 in.
Candles	Rubber	13 lb.	36 in.
	Plastic	13 lb.	36 in.
Drums	Hi Density Plastic	77 lb.	36 in.
	Lo Density Plastic	77 lb.	36 in.
Delineators	Plastic or Fiberglass	N/A	48 in.

643-3.01 GENERAL CONSTRUCTION REQUIREMENTS. Implement an approved TCP before beginning work within the project limits. Keep the work, and portions of the project affected by the work, in good condition to accommodate traffic safely. Provide and maintain traffic control devices and services inside and outside the project limits, day and night, to guide traffic safely.

Unless otherwise provided in this Section, keep all roadways, business accesses, and pedestrian and bicycle facilities within the project limits open to traffic. Obtain the Engineer's approval before temporarily closing residential, commercial, or street approaches. Provide access through the project for emergency vehicles and school and transit buses. Properly sign and flag all locations where you must redirect or stop the traveling public. Organize construction operations so the total of all construction related traffic delays

experienced by a vehicle traveling through the project does not exceed the limits in 643-3.08. However, this does not imply that you may allow the maximum limit in all cases.

Stop your equipment at all points of intersection with the traveling public unless an approved TCP shows otherwise.

Continue to operate all illumination and signalization according to the requirements of Subsection 660-3.09. When moving approach lanes, realign signal heads as necessary according to the ATM. Coordinate any modifications to existing traffic signals with the agency that maintains and operates them. Operate flood lighting at night according to the ATM. Adjust flood lighting so that it does not shine into oncoming traffic.

Provide and maintain safe routes for pedestrians and bicyclists through or around traffic control zones at all times, except when regulations prohibit pedestrians or bicyclists. Where construction activity encroaches onto the safe route in a traffic control zone, station a flagger at the encroachment to assist pedestrians and byciclists past the construction activity.

Maintain business access(s) during flagging operations.

Immediately notify the Engineer of any traffic related accident that occurs within the project limits as soon as you, an employee, or a subcontractor becomes aware of the accident.

643-3.02 ROADWAY CHARACTERISTICS DURING CONSTRUCTION. Obtain an approved TCP before reducing existing roadway lane and shoulder widths. Maintain a clear area with at least 2 feet between the edge of traveled way and the work area. Use barricades, traffic cones, or drums to delineate this area. Place traffic control devices on the work side of the clear area. Space them according to the ATM.

If you are allowed to maintain traffic on an unpaved surface, conduct construction to provide a smooth and even surface that public traffic can use at all times. Properly crown the roadbed surface for drainage. Before beginning other grading operations, place sufficient fill at culverts and bridges to permit traffic to cross smoothly and unimpeded. Use part-width construction techniques when routing traffic through roadway cuts or over embankments under construction. Alternate construction activities from one side to the other. Route traffic over the side opposite the one under construction.

You may detour traffic when the Plans or an approved TCP allows it. Maintain detour routes so that traffic can proceed safely. When detours are no longer required, obliterate the detour. Topsoil and seed appropriate areas.

If you cannot maintain two-way traffic on the existing roadway or detour, you may use half-width construction or a road closure if it is shown on an approved TCP. Make sure the TCP indicates closure duration and conditions. Schedule roadway closures so you do not delay school buses and peak-hour traffic. For road closures, post closure-start and road-reopen times at the closure site, within view of waiting traffic.

643-3.03 PUBLIC NOTICE. Give notice at least 3 days before major changes, delays, lane restrictions, or road closures. If nearby Post Offices and stores have bulletin boards open to the free use of the public, post notices on the boards. Give notice to local officials and transportation organizations, including but not necessarily limited to:

- Alaska Trucking Association
- Alaska State Troopers
- Division of Measurement Standards
- Local Police Department
- Local Fire Department
- Local Government Traffic Engineer

- School and Transit Authorities
- Local Emergency Medical Services
- Local Media (newspapers, radio, television)
- Railroads (where applicable)
- U.S. Postal Service
- Major Tour Operators

Provide local traffic enforcement and maintenance agencies notice 3 days and again 24 hours before shutting down a traffic signal system. Provide notice as required by utility companies before repairing or replacing a utility.

Provide the Alaska State Troopers, local police and fire department with the radio frequencies used on the project and the 24-hour telephone numbers of the Worksite Traffic Supervisor and the Project Superintendent. Tell them to use these numbers to alert you when emergency vehicles must pass through the project. When notified of emergencies, use all equipment and make every necessary effort to expedite rapid passage.

Give a copy of all notices to the Southeast Region Traffic Control Coordinator who will post notices through the Navigator or 511 System.

643-3.04 TRAFFIC CONTROL DEVICES. Before starting construction, erect permanent and temporary traffic control devices required by the approved TCPs. Use traffic control devices only when they are needed. The Engineer will determine advisory speeds when necessary.

For lane closures on multilane roadways, use sequential arrow panels. During hours of darkness when required by the approved TCP use flashing warning lights to mark obstructions or hazards and steady-burn lights for channelization.

Use only one type of traffic control device in a continuous line of delineating devices, unless otherwise noted on an approved TCP. Use drums or Type II barricades for lane drop tapers.

During non-working hours and after completing a particular construction operation, remove all unnecessary traffic control devices. Store all unused traffic control devices in a designated storage area which does not present a nuisance or visual distraction to traffic. If sign panels are post mounted and cannot be readily removed, cover them entirely with either metal or plywood sheeting. Completely cover signal heads with durable material that that fully blocks the view of signal head and will not be damaged or removed by weather.

Keep signs, drums, barricades, and other devices clean at all times.

Use only traffic control devices that meet the requirements of the “Acceptable” category in ATSSA (American Traffic Safety Services Association) “Quality Guidelines for Temporary Traffic Control Devices” and meet crashworthiness requirements per Section 643-2.02.

Immediately replace any devices provided under this Section that are lost, stolen, destroyed, inoperable or deemed unacceptable while used on the project. Stock repair parts for each Temporary Crash Cushion used on the project. Repair damaged crash cushions within 24 hours.

Maintain pre-existing roadside safety hardware at an equivalent or better level than existed prior to project implementation until the progress of construction necessitates removing the hardware. All existing hazards that are currently protected with roadside safety hardware or new hazards which result from project improvements shall be protected or delineated as required on the Plans, in the specifications, and approved TCPs until permanent roadside safety hardware is installed. All temporary roadside safety hardware shall meet NCHRP 350 or MASH Test Level 3 unless otherwise noted.

All items paid under this Section remain your property unless noted otherwise in the contract. Remove them after completing the project.

1. Embankments. Install portable barrier, plastic drums, barricades, tubular markers, plastic safety fence, and cones as specified on the Plans or TCPs to delineate open trenches, ditches, other excavations and hazardous areas when they exist along the roadway for more than one continuous work shift.

2. Adjacent Travel Lane Paving. When paving lifts are greater than 1 inch and you cannot finish paving adjacent travel lanes or paved shoulders to the same elevation before the end of the paving shift, install: W8-11 (Uneven Lanes), W8-9 (Low Shoulder), W8-9A (Shoulder Drop-Off), W14-3 (No Passing Zone), R4-1 (Do Not Pass), R4-2 (Pass with Care), and W8-1 (Bump) signs as appropriate. Place additional signs every 1500 feet if the section is longer than 1/2 mile.

3. Fixed objects and construction vehicles and equipment working on or next to the traveled way. Do not park equipment in medians. Locate fixed objects at least 30 feet from the edge of traveled way. Fixed objects that exist prior to construction activity are not subject to this requirement unless the proposed temporary traffic routing moves the edge of traveled way closer to the pre-existing fixed object. Vehicles and other objects within parking lots in urban environments are considered pre-exiting fixed objects regardless of whether they are or are not present continuously throughout the day.

   When site restrictions, land features, right of way limitations, environmental restrictions, construction phasing, or other construction conditions allow no practicable location meeting the preceding requirements, the Engineer may approve alternate locations for fixed objects. Alternate locations shall be as far as practicable from the edge of traveled way. When the alternate location provides 15 feet or more separation from the edge of traveled way, the Engineer may verbally approve the alternate location. When the alternate location provides less than 15 feet separation, written approval is required.

   Use drums or Type II barricades with flashing warning lights, or use portable barriers with temporary crash cushions, as approved by the Engineer, to delineate or shield fixed objects the Engineer determines present an unacceptable hazard.

4. Flagging. Furnish trained and competent flaggers and all necessary equipment, including lighting of the flagging position during nighttime operations, to control traffic through the traffic control zone. The Engineer will approve each flagging operation before it begins and direct adjustments as conditions change.

   Use flaggers certified as one of the following:

   a. Flagging Level I Certification by IMSA (International Municipal Signal Association)
   b. Flagger Certification by ATSSA (American Traffic Safety Services Association)
   c. Traffic Control Supervisor, ATSSA
   d. Work Zone Safety Specialist, IMSA
   e. ATSSA Flagging Instructor

   Flaggers shall maintain current flagger certification. Flaggers shall be able to show their flagger certification anytime they are on the project.

   Flaggers shall maintain their assigned flagging location at all times, unless another qualified flagger relieves them, or the approved traffic control plan terminates the flagging requirements. Remove, fully cover, or lay down flagger signs when no flagger is present. Keep the flaggers' area free of encumbrances. Keep the flagger's vehicle well off the roadway and away from the flagging location so the flagger can be easily seen.

Provide approved equipment for two-way radio communications between flaggers when flaggers are not in plain, unobstructed view of each other.

Obtain the Engineer's written approval before flagging signalized intersections. When you flag a signalized intersection, either turn off and cover the traffic signal or place it in the All-Red Flash mode. Coordinate changing traffic signal modes and turning off or turning on traffic signals with the agency responsible for signal maintenance and operation and the Engineer. Get their written approval in advance. Only uniformed police officers are permitted to direct traffic in an intersection with an operating traffic signal.

5. Pilot Cars. When the Engineer deems one-way traffic necessary, the route through the traffic control zone is particularly hazardous, involved, or frequently altered to preclude adequate signing, you may use pilot cars. Do not use pilot cars to avoid localized traffic control at several locations. Pilot car operators may not control Automated Flagger Assistance Devices while operating a pilot car.

   Organize construction operations so the total of all stoppages experienced by a vehicle traveling through a project does not exceed that allowed in 643-3.08. Coordinate multiple pilot-car operations within a project or adjoining projects to minimize inconvenience to the traveling public. You may use two or more pilot cars to provide two-way traffic through the traffic control zone to reduce the waiting period. The flagger or pilot car operator shall record each pilot car's departure time in a bound field book furnished by the Engineer. Whenever practical, the flagger should tell the motorist the reason for and approximate length of the delay. Make every reasonable effort to yield right-of-way to the public and prevent excessive delay.

   Use an automobile or pickup as the pilot car, with your company logo prominently displayed. Equip the pilot car with a two-way radio for contact with flaggers and other pilot cars. Mount a G20-4 sign (Pilot Car Follow Me) on the rear at least 5 feet above the driving surface. Use high intensity flashing strobe lights, oscillating beacons, or rotating beacons on all Pilot Cars. Vehicle hazard warning lights may supplement but are not permitted to be used instead of high intensity flashing strobe lights, oscillating beacons, or rotating beacons. Identify the last vehicle in the column.

   When pilot cars are authorized, use them before beginning work and continue until no longer necessary or until you have properly placed and checked functioning of all traffic control devices required for non-working hours.

6. Street Sweeping. Keep free of loose material all paved portions of the roadway and haul routes open to the public, including sections of roadway off the project where your operations have deposited loose material. Use a street sweeper that collects the material.

7. Watering. Furnish, haul, and place water for dust control and pavement flushing, as directed. Use water trucks that can provide a high-pressure water stream to flush the pavement and a light-water spray to control dust. If the flushing operations contaminate or fill adjacent catch basins, clean and restore them to their original condition. This requirement includes sections of roadway off the project where flushing is required. The Engineer will control water application.

   If you take water from a lake, stream, or other natural water body, first obtain a water removal permit from the Alaska Department of Natural Resources. Comply with the Alaska Department of Fish and Game screening requirements for all water removal operations.

8. Portable Changeable Message Board Signs. Furnish Portable Changeable Message Board Signs when approved on a TCP. Display only messages approved on the TCP. Follow application guidelines in the ATM.

9. Truck Mounted Attenuator. TMA. Adjuste height to the correct elevation during usage and to a safe height for transporting. Do not use a damaged attenuator. Replace any damaged TMA at your expense.

10. Traffic Control Vehicles. Use high intensity flashing strobe lights, oscillating beacons, or rotating beacons on vehicles being used to transport and set-up traffic control devices. Vehicle hazard warning lights may supplement but are not permitted to be used instead of high intensity flashing strobe lights, oscillating beacons, or rotating beacons.

11. Guardrail Delineation. Before the end of the shift, delineate areas of removed guardrail with drums or Type II Barricades. Space them no more than twice the speed limit, and affix warning lights. Devices required longer than 14 days shall be at the Contractor's expense.

643-3.05 AUTHORITY OF THE ENGINEER. When conditions adversely affect the public's safety or convenience, the Contractor will receive an oral notice. A written notice will follow the oral notice according to Subsection 105-1.01. The notice will state the defect(s), the corrective action(s) required, and the time required to complete such action(s). In no case shall this time exceed 24 hours. If you fail to take corrective action(s) within the specified time, the Engineer will immediately close down the offending operations until you correct the defect(s). The Engineer may require outside forces to correct unsafe conditions. The cost of work by outside forces will be deducted from any monies due under the terms of this Contract.

643-3.06 TRAFFIC PRICE ADJUSTMENT. A Traffic Price Adjustment, under Item 643(23), will be assessed for unauthorized lane closures or reductions. Unauthorized lane reductions will be assessed as one full lane closure, for each lane reduced without authorization.

Authorized lane closures/reductions are those shown in the Contract, an approved TCP, or authorized in writing.

Unauthorized lane closures/reductions include: work done without an approved TCP; work not done in conformance with the approved TCP, and; non-conforming or out of place traffic control devices. . Failure to install temporary crash cushions or barriers, when required according to the Contract or TCP, is also considered an unauthorized lane reduction. The Engineer will make the sole determination whether unauthorized lane reductions or closures are present.

Should unauthorized conditions exist, the Engineer may verbally assess Traffic Price Adjustment liquidated damages at any time. The Engineer will provide written notification of unauthorized conditions within 24 hours of verbally assessing a Traffic Price Adjustment.

Adjustment Rates are listed in Table 643-3. These rates are liquidated damages which represent highway user costs, based on Average Daily Traffic (ADT). The Engineer will use the rate shown for the current seasonal ADT for this project shown on the Plans, or if not shown on the Plans as published in the Regional Traffic Volume Report. The Traffic Price Adjustment will be calculated by multiplying the Adjustment Rate by the number of lanes closed/reduced by the minutes the unauthorized closure/reduction existed.

Table 643-3 Adjustment Rates

Published ADT	Adjustment Rate
Less than 1,000	$5
1,000-4,999	$25
5,000-9,999	$75
10,000+	$85

Traffic delays greater than that allowed by 643-3.08 will be considered work not done in conformance with the approved TCP. If the Engineer believes the traffic delays are exceeding the time allowed, they will

spot check the time it takes a vehicle to pass through the work. The time will begin when the vehicle being checked joins the queue of vehicles. The time will stop when the vehicle passes the G20-2 End Road Work sign (or the first advanced warning sign for the opposite direction of traffic if the G20-2 sign is not used). The Engineer will then deduct the time it would have taken a vehicle to drive at the posted speed limit. If the resulting time is greater than the delay allowed, the Engineer will continue to spot check vehicles until the delay becomes less than or equal to the delay allowed. The number of minutes for the Traffic Price Adjustment will be calculated from the time the first spot checked vehicle arrived until the time of arrival of the spot checked vehicle that passed through the project within the allowable delay.

643-3.07 MAINTENANCE OF TRAFFIC DURING SUSPENSION OF WORK. Approximately one month before you suspend work for the season, schedule a preliminary meeting with the Engineer and Maintenance & Operations to outline the work you expect to complete before shutdown and the anticipated roadway condition. Schedule a field review with the Department for winter maintenance acceptance. At the field review the Engineer will prepare a punch list for implementation before acceptance.

To be relieved of winter maintenance responsibility, leave all roads with a smooth and even surface for public use at all times. Properly crown the roadbed surface for drainage and install adequate safety facilities. Make sure all illumination and signals, including vehicle detectors, are in good working order.

After the project is accepted for winter maintenance and until you are ordered to resume construction operations, the Department is responsible for maintaining the facility. The Department will accept maintenance responsibility only for portions of the work that are open to the public, as determined by the Engineer. The Department will not accept maintenance responsibility for incomplete work adjacent to accepted roads. You are responsible for maintaining all other portions of the work. The Engineer will issue a letter of “Acceptance for Winter Maintenance” that lists all portions of the work that the Department will maintain during a seasonal work suspension. You retain all contractually required maintenance responsibilities until you receive this letter.

If you suspend work due to unfavorable weather (other than seasonal) or due to your failure to correct unsafe conditions, carry out Contract provisions, or carry out the Engineer’s orders, you must bear all costs for traffic maintenance during the suspended period.

When you resume work, replace or renew any work or materials lost or damaged during temporary use. If the Department caused damage during winter suspension, payment will be made for repairs by unit pay item or in accord with Subsection 109-1.05, Compensation for Extra Work. When the Engineer directs, remove any work or materials used in the temporary maintenance. Complete the project as though work has been continuous.

643-3.08 CONSTRUCTION PHASING. Follow the construction phasing detailed in these provisions, the Special Provisions, and the Plans unless you propose alternative construction phasing that is approved by the Engineer. Alternative construction phasing shall provide the same or less restriction to vehicles, pedestrians, and bicyclists than those detailed in these provisions, the Special Provisions, and the Plans.

Throughout the project, maintain the existing roadway, pedestrian walkway or route, and bicycle route or pathway configuration (such as the number of lanes and their respective widths) except for restrictions to traffic allowed in the Special Provisions or on the Plans, and addressed through approved TCPs. A restriction to traffic is any roadway surface condition, work operation, or traffic control setup that reduces the number of lanes or impedes traffic. Obtain an approved TCP before restricting traffic.

Do not restrict traffic or shut down signals during the times listed below.

1. Monday through Friday: 0530 hrs to 0800 hrs and 1630 hrs to 1900 hrs.

2. Around any Holiday (Except for Item 12 in 101-1.03 HOLIDAY):

a. If the holiday falls on Sunday, Monday, or Tuesday, from 1200 hrs on the Friday before the holiday to 0300 hrs on the day after the holiday.

b. If a holiday falls on Wednesday, from 1200 hrs on the Tuesday before the holiday to 0300 hrs on the Thursday after the holiday.

c. If a holiday falls on Thursday, Friday, or Saturday, from 1200 hrs on the day before the holiday to 0300 hrs on the Monday after the holiday.

Lane restrictions, if allowed shall be conducted so that no more than a 5 minute accumulated stopped delay, 20 vehicles, or 1/8 mile (660 feet) of traffic is detained, whichever occurs first, before releasing the detained motorists. During paving operations, a 10 minute stopped delay, 40 vehicles, or 1/4 mile (1320 feet) of traffic detained, will be allowed for motorists, except school buses. If a queue of traffic develops at a stop, empty the entire queue to the last car that entered the queue at the time the queue was released.

Once work begins at an intersection, it must be completed within seven (7) calendar days.

Obtain the local school bus schedule and coordinate work efforts to ensure the school buses are not delayed through the construction zone. Submit a school bus coordination plan, as a TCP, to the Engineer for approval before implementing any lane restrictions.

643-3.09 INTERIM PAVEMENT MARKINGS. Place permanent or interim pavement markings according to this Subsection, details shown on the Plans, approved TCPs, and Parts III and VI of the ATM before opening existing paved roadways, temporary paved roadways, detours, interim paving lifts, and roadways with seal coats and surface treatments for more than one continuous work shift. This work may include restriping the existing roadway before beginning construction, before seasonal suspension, and/or after seasonal suspension.

Remove conflicting pavement markings according to Subsection 670-3.04, Paint Removal, or cover them with black removable preformed marking tape.

Mark existing roadway sections that will be opened to traffic during the winter. Mark over the existing lines and markings, unless shown otherwise on the Plans or an approved TCP.

Maintain all interim pavement markings for their intended life including reapplication when necessary. There will be no compensation to upgrade interim pavement markings required for work operations lasting up to 2 weeks.

Use only temporary raised pavement markers or removable preformed retroreflective marking tape as interim pavement markings on final pavement surfaces. Completely remove and dispose of them when you place the final markings. Completely remove any residual adhesive that might misguide motorists. Place final pavement markings on finished pavement surfaces and interim pavement surfaces before suspending work for the winter.

Phase construction to avoid routing traffic over conflicting markings for more than one continuous workshift. If you route traffic over conflicting markings during a workshift, delineate the roadway with a complement of warning signs, channelizing devices, and flaggers as required by the ATM.

Use only temporary raised pavement markers meeting Subsection 712-2.16 as interim markings on seal coat and surface treatment pavements. Install the markers according to the manufacturer's instructions before applying the asphalt surface material and cover coat. Remove the vinyl protective covers after applying the asphalt pavement.

On multicourse surface treatments, install the temporary raised pavement markers after applying the full width of the first layer of cover coat. Install the markers on each day's completed surface before removing the pilot car operations and allowing unescorted traffic on the surface treatment.

Do not place final pavement markings until traffic has traveled over the seal coat or surface treatment for at least 14 days. Apply final pavement markings within 10 days of completing the final sweeping or brooming of the mainline seal coat or surface treatment.

643-3.10 LIGHTING FOR NIGHT WORK. Illuminate the night work areas according to Table 643-4.

Table 643-4 does not provide a comprehensive list of operations that require lighting. Provide lighting for other operations when necessary.

Table 643-4 Night Work Illumination Equipment and Location Requirements

Type of Work or Equipment	Lighting Configuration
Paving, Milling, Striping, Pavement Marking Removal, Rumble Strip Installation	At least one machine-mounted balloon light of at least 2000 watts. Provide additional lights or wattage if necessary to provide complete coverage.
Rolling, pavement sweeping	At least 4 sealed beam halogen lamps in the front and four in the back. Each should be at least 55 watts.
Flagging	One balloon light of at least 2000 watts, located within 30 feet of the flagger location. Locate so the flagger and the flagging location are illuminated. Provide additional lights or wattage if necessary to provide complete coverage of the flagging location.
Truck Crossings where haul vehicles cross or enter a road with more than 10,000 ADT, or where the haul vehicle crossing or entering location is controlled by portable traffic signals or flaggers	At least one balloon light of at least 2000 watts, located on the main road on the far right side of the intersection. Locate light within 30 feet of the edge of the side street. If there is a flagger at the crossing, locate the lights or lights so the lighting requirements for Flagging are also satisfied.

Use balloon lighting as the main light sources. Do not use floodlights without prior approval by the Engineer. When approved, install floodlighting in a manner that minimizes glare for motorists, workers, and residents living along the roadway. Locate, aim, louver, and/or shield light sources to achieve this goal.

The Engineer shall be the sole judge of when glare is unacceptable, either for traffic or for adjoining residences. When notified of unacceptable glare, modify the lighting system to eliminate it.

If the Contractor fails to provide required lighting equipment or provides lighting that creates unacceptable glare at any time, the Contractor shall cease the operation that requires illumination until the condition is corrected.

Use lighting equipment in good operating condition and that complies with applicable OSHA, NEC, and NEMA codes.

Provide suitable brackets and hardware to mount lighting fixtures and generators on machines and equipment. Design mountings so lights can be aimed and positioned as necessary to reduce glare. Locate mounting brackets and fixtures so they don’t interfere with the equipment operator or overhead structures. Connect fixtures securely in a manner that minimizes vibration.

Ensure ground, trailer, and equipment-mounted light towers or poles are sturdy and freestanding without the aid of guy wires. Towers shall be capable of being moved as necessary to keep pace with the construction operation. Position ground, trailer-mounted towers, and trailers to minimize the risk of being impacted by traffic on the roadway or by construction traffic or equipment.

Raise trailer or equipment mounted lights to maximum height, except do not exceed the clearance required for overhead objects such as overhead signals, overhead signs, trees, aerial utilities, or bridges. Aim and adjust lights to provide the required light levels. Provide uniform illumination on the hopper, auger, and screed areas of pavers. Illuminate the operator's controls on all machines uniformly.

Furnish each side of non-street legal equipment with a minimum of 75 square inches high intensity retroreflective sheeting in each corner, so at least 150 square inches of sheeting is visible from each direction. Provide red sheeting on the rear of the equipment and yellow sheeting elsewhere.

Existing street and highway lighting and conventional vehicle headlights may supplement but do not relieve the Contract requirement to provide lighting for night work, according to the requirements of Table 643-4.

Provide sufficient fuel, spare lamps, spare generators, and qualified personnel to ensure that all required lights operate continuously during nighttime operations. Ensure generators have fuel tanks of sufficient capacity to permit operation of the lighting system for a minimum of 12 hours. In the event of any failure of the lighting system, discontinue the operation that requires illumination until the required level and quality of illumination is restored.

Maintain a supply of at least twenty emergency flares for use in the event of emergency or unanticipated situations. Comply with local noise ordinances.

Install all post-mounted electroliers located within the clear zone, on NCHRP 350 or MASH compliant breakaway bases.

643-3.11 HIGH VISIBILITY GARMENTS. Ensure all workers within project limits wear outer garments that are highly visible and comply with the following requirements:

1. Standards. Use high visibility garments conforming to the requirements of ANSI/ISEA 107-2004 or 107-2010, Class 2 for tops or Class E for bottoms, and Level 2 retroreflective material.
2. Labeling. Use garments labeled in conformance with Section 11.2 of ANSI/ISEA 107-2004 or 107-2010.
3. Tops. Wear high visibility vests, jackets, or coverall tops at all times.
4. Bottoms. Wear high visibility pants or coverall bottoms during nighttime work (sunset to sunrise). Employees performing traffic control duties shall wear high visibility pants or coverall bottom at all times.
5. Outer Raingear. Wear raingear tops and bottoms conforming to the requirements of this Subsection 643-3.11.
6. Exceptions. When workers are inside an enclosed compartment of a vehicle, they are not required to wear high visibility garments.
7. Condition. Furnish and maintain all vests, jackets, coveralls, rain gear, hard hats, and other apparel in a neat, clean, and presentable condition. Maintain retroreflective material to Level 2 standards.

Payment for high visibility garments for workers is subsidiary to Traffic Maintenance.

643-4.01 METHOD OF MEASUREMENT. Section 109 and as follows. Quantities will not be measured during winter suspension of work.

1. Traffic Maintenance. Calendar Day: Every day shown on the calendar, beginning and ending at midnight. Measurement begins on the day following your receipt of the Notice to Proceed or on the first day of work at the project site, whichever is later, and ends on the date of project completion.

2. Traffic Control Device Items. By the number of units of each bid item shown on the bid schedule (or the Traffic Control Rate Schedule, if item 643(25), Traffic Control, is included) that are installed, accepted, and operational. Incomplete or unsatisfactory devices will not be measured. Special Construction Signs are measured by the total area of legend-bearing sign panel, as determined under Subsection 615-4.01. Items measured by the day are for each item per 24-hour period.

   Traffic Control Devices used to delineate areas of removed guardrail will not be measured. Traffic Control Devices required to complete permanent pavement markings will not be measured.

3. Traffic Maintenance Setup Items. By each lane closure or one-lane road in place per hour. By each detour or road closure in place per 24-hour period.

4. Portable Barrier. By linear foot placed according to the approved TCPs, for the initial placement and for each subsequent relocation when moved more than 10 feet in any direction.

5. Temporary Crash Cushion. By each acceptable installation.

6. Interim Pavement Marking. By the single-stripe station. A single stripe is a marking or a temporary raised pavement marker 4 inches wide. Wider striping is measured in multiples of 4 inches. Centerline gaps are not deducted from measurements.

7. Flagging and Pilot Car. By the number of approved hours, supported by certified payroll. Flagging done by the Worksite Traffic Supervisor or Traffic Control Technician will not be measured for payment.

8. Street Sweeping. By the number of operated hours, supported by certified payroll and approved by the Engineer.

9. Watering. By the 1,000 gallons (M-Gallon) of water applied. The Engineer may specify measurement by weight or volume. If by weight, convert to gallons at 8.34 pounds per gallon. If by volume, convert to gallons at 7.48 gallons per cubic foot.

10. Traffic Price Adjustment. From the time the unauthorized closure/reduction began until the time it was removed, as determined by the Engineer.

11. Traffic Control. By the units specified in the Special Provisions.

12. Portable Changeable Message Board Sign. By the 24-hour period for each sign, as shown on an approved TCP and displaying an approved message.

13. Plastic Safety Fence. By the linear foot, as placed, to protect or channelize pedestrian traffic as shown on an approved TCP. Any adjustments in configuration of the fence at the same location that does not result in an increased amount of fence is not measured. Opening and closing the fence to gain access to and from the worksite is not measured.

14. Temporary Sidewalk Surfacing. By the square yard as shown on an approved TCP.

15. Temporary Guardrail. By the linear foot, including end treatments, as shown on an approved TCP.

643-5.01 BASIS OF PAYMENT.

1. Traffic Maintenance. The contract price includes all resources required to provide the Worksite Traffic Supervisor, Traffic Control Technician, all required TCPs and public notices, the Construction Phasing Plan, and the maintenance of all roadways, approaches, crossings, intersections and pedestrian and bicycle facilities, as required. This item also includes any Traffic Control Devices required but not shown on the bid schedule. Traffic control devices, barriers, and crash cushions required to delineate or shield fixed objects will not be measured or paid for separately, but will be subsidiary to Traffic Maintenance.

   Items required by the Contract that are not listed on the bid schedule or not included in other items are subsidiary to Item 643(1) or 643(2) Traffic Maintenance.

2. Traffic Control Device Items. The contract price includes all resources required to provide, install, maintain, move, and remove the specified devices. Warning lights, high-level warning devices, vertical panels, and sign supports required for traffic control devices are subsidiary.

   Traffic control devices, barriers, and crash cushions required to delineate or shield guardrail posts or non-crashworthy ends are subsidiary when required for failure to meet completion timelines in subsection 606-3.01. Traffic Control Devices used to delineate areas of removed guardrail are subsidiary to work under Section 606.

   Traffic Control Devices required to complete permanent pavement markings are subsidiary to work under Section 670.

3. Traffic Maintenance Setup Items. Each setup consists of all traffic control devices, flaggers, pilot cars, and subsidiary items necessary to implement the TCP shown on the Plans. Warning lights, high-level warning devices, vertical panels, and sign supports required for traffic control devices are subsidiary.

   Construction and obliteration of temporary roadways, when required on the Plans or approved TCP under a traffic maintenance setup item, is paid for under their respective roadway pay items.

   When topsoil or seeding is required for detours, payment will be made under Sections 620 and/or 618.

4. Portable Barrier. The contract price includes all resources required to provide, install, maintain, and remove barrier.

5. Temporary Crash Cushion. The contract price includes all resources required to provide, install, maintain, repair, and remove each crash cushion.

6. Interim Pavement Marking. The contract price includes all resources required to provide, install, maintain, and remove the specified markings. Installation of word and symbol markings are subsidiary. The No-Passing Zone signing, described in Subsection 643-3.04, is subsidiary.

   When Pay Item 643(14) Interim Pavement Marking does not appear in the Bid Schedule, interim pavement markings are subsidiary to work under Section 670.

7. Flagging and Pilot Car. Payment for item 643(15), Flagging will be paid on a contingent sum basis at the rate of $53.00/hour. A change order/directive is not required for the flagging pay item. This includes all required labor, vehicles, radios, flagger paddles and pilot car signs, and transportation to and from the worksite. Work done by the Worksite Traffic Supervisor or Traffic Control Technician is subsidiary to Traffic Maintenance.

8. Street Sweeping. The contract price includes all resources required to keep the roadway free of loose material. Sweeping haul routes is subsidiary to Traffic Maintenance. Sweeping with equipment that does not collect the material is subsidiary to Traffic Maintenance.

9. Watering. The contract price includes all resources required to provide watering, as directed. Watering haul routes is subsidiary to Traffic Maintenance.

10. Traffic Price Adjustment. If Item 643(23), Traffic Price Adjustment, is shown on the bid schedule, the total value of this contract will be adjusted, for unauthorized lane reductions or closures, at the rates listed in Table 643-3.

11. Traffic Control. If item 643(25) Traffic Control appears in the bid schedule, payment will be made at the unit rate value contained in Table 643-5 for the accepted units of traffic control devices.

12. Portable Changeable Message Board Sign. The contract price includes all resources required to furnish, move, and operate the sign.

    Portable Changeable Message Board Signs required on the Plans for Permanent Construction Signing will be paid for under Item 643(3) Permanent Construction Signs. Additional portable changeable message board signs will be paid for under 643(25) Traffic Control.

13. Plastic Safety Fence. The contract price includes all resources required to install, maintain, and remove the fence.

14. Temporary Sidewalk Surfacing. The contract price includes all resources required to construct, maintain, and remove the surfacing.

15. Temporary Guardrail. The contract price includes all resources required to construct, maintain, and remove the guardrail.

16. Lighting for Night Work. Payment for illuminating night work areas and any required adjustments to work zone illumination is subsidiary to Traffic Maintenance.

Table 643-5 643(25) Traffic Control Rate Schedule 04/2015		
Traffic Control Device	**Pay Unit**	**Unit Rate**
Construction Signs	Each/Day	$6.50
Special Construction Signs	Square Foot	$28.00
Type II Barricade	Each/Day	$3.30
Type III Barricade	Each/Day	$11.00
Traffic Cone or Tubular Marker	Each/Day	$1.10
Drums	Each/Day	$3.30
Temporary Guardrail	Linear Foot	$25.00
Portable Barrier	Linear Foot	$8.00
Temporary Crash Cushion / Sand or Water filled Barrels or barrier (all required per end)	Each	$4,325.00
Temporary Crash Cushion / Redirective	Each	$9,230.00
Plastic Safety Fence	Linear Foot	$1.00
Temporary Sidewalk Surfacing	Square Foot	$2.00
Portable Chain-Link Fence	Linear Foot	$5.00
Pedestrian Barrier	Linear Foot	$6.00
Flexible Markers (Flat Whip, Reflective)	Each	$60.00
Electronic Boards, Panels, and Signals		
Sequential Arrow Panel	Each/Day	$36.00
Portable Changeable Message Board Sign	Each/Day	$130.00
Portable Traffic Signals (Two)	Each/Day	$361.00
Cars and Trucks w/driver		
Pilot Car	Hour	$71.00
Pilot Car w/sequential arrows	Hour	$75.00
Watering	M-Gallon	$28.50
Street Sweeping (Regenerative Sweeper, Vacuum Sweeper, Mechanical or Power Broom with vacuum)	Hour	$214.00
40,000 GVW Truck with Crash Attenuator	Hour	$162.00

Payment will be made under:

Pay Item	Pay Unit
643(1) Traffic Maintenance	Calendar Day
643(2) Traffic Maintenance	Lump Sum
643(3) Permanent Construction Signs	Lump Sum
643(4) Construction Sign	Day
643(5) Type II Barricade	Day
643(6) Type III Barricade	Day
643(7) Traffic Cone/Tubular Marker	Day
643(8) Plastic Safety Fence	Linear Foot
643(9) Drum	Day
643(10) Sequential Arrow Panel, Type C	Day
643(11) Special Construction Signs	Square Foot
643(12) Portable Barrier	Linear Foot
643(13) Temporary Crash Cushion	Each
643(14) Interim Pavement Marking	Station
643(15) Flagging	Contingent Sum
643(16) Pilot Car	Hour
643(17) Street Sweeping	Hour
643(18) Watering	M-Gallon
643(19) Lane Closure	Hour
643(20) Detour	Day
643(21) Road Closure	Day
643(22) One Lane Road	Hour
643(23) Traffic Price Adjustment	Contingent Sum
643(24) Portable Changeable Message Board Sign	Day
643(25) Traffic Control	Contingent Sum
643(26) Temporary Sidewalk Surfacing	Square Yard
643(27) Temporary Guardrail	Linear Foot
643(32) Pedestrian Barrier	Linear Foot

SRS-2305/21/2015

SECTION 660

SIGNALS AND LIGHTING

660-1.01 DESCRIPTION. *Add the following*:
The project modifies ten (10) existing traffic signals in Juneau, Alaska, and establishes a Southcoast Region Traffic Command Center at Southcoast Region Headquarters, 6860 Glacier Highway, Juneau, Alaska.

Southcoast Region Traffic and Safety Section (Josh Mahle, 465-8945) shall be given 72 hour advance notice prior to commencement of any work involving Wavetronix radar detector equipment and/or pan-tilt-zoom (PTZ) cameras.

PTZ cameras will have the following minimum features (Siqura High Definition Outdoor PTZ with multistream H.264 and 30x zoom, or approved equivalent):

- Full HD 1080p resolution
- Multistream H.264/H.264 or H.264/MJPEG
- 30x optical zoom/12x digital zoom
- Optical ouput/analog output options
- Day/night with IR-cut filter/WDRBLC

Remove existing modem and install new communications equipment (Sierra Wireless AirLink ES450 Enterprise 4G LTE Gateway Router, or approved equivalent), as directed by the Engineer.

The traffic signals are identified by a Number and Name. The following describes the work required for each location.

Signal No. 1
Location-Juneau: Glacier & Egan Drive (McNugget)

Pole 1

Remove side-mounted 3-section signal head #11 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove 3-section signal head #12 and mounting hardware on the mast arm and replace with a new 3-section signal head and mounting hardware. Mount and instalnew PTZ #1 camera on the mast arm as directed by the Engineer.

Pole 2

Remove side-mounted 3-section signal head #21 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove 3-section signal heads #22 and #23 and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware. Mount a new Wavetronix Matrix detector unit #4 at the end of the mast arm as directed by the Engineer to face the southbound traffic stop bar. Mount a new Wavetronix Advance detector unit #1 at the end of mast arm as directed by the Engineer to face oncoming southbound traffic. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 2 and connect to the respective detector unit.

Pole 3

Remove side-mounted 3-section signal head #31 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove 3-section signal heads #32 and #33 and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware. Mount a new Wavetronix Matrix detector unit #2 at the end of the mast arm to face the northbound traffic stop bar, as directed by the Engineer. Mount a new Wavetronix Advance detector unit #5 at the end of the mast arm to face oncoming northbound traffic, as directed by the Engineer. Mount a new Wavetronix Matrix detector unit #3 on pole 3 to face oncoming southbound traffic, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 3 and connect to the respective detector unit.

Pole 4

Remove post-mounted 3-section signal head #52 and mounting hardware and replace with a new post-mounted 3-section signal head and mounting hardware.

Signal No. 2
Location-Juneau: Glacier & Jordan.

Pole 1

Remove existing 3-section side-mounted signal head #2 and mounting hardware and replace with a new 3-section side-mounted signal head and mounting hardware.

Pole 2

Remove existing 3-section side-mounted signal head #1 and mounting hardware and replace with a new 3-section side-mounted signal head and mounting hardware. Mount a new Wavetronix Matrix detector unit #1 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for the detector unit from the control cabinet to the base of pole 2 and connect to the detector unit.

Pole 3

Remove existing side-mounted 3-section signal head #16 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Mount and install new Wavetronix Matrix detector units #3 and #4 on the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 3 and connect to the respective detector unit. Mount and install a new PTZ #1 camera on the mast arm as directed by the Engineer.

Pole 5

Remove existing side-mounted 3-section signal head #11 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove existing 3-section signal head #10 on the mast arm and mounting hardware and replace with a new 3-section signal head and mounting hardware. Mount and install a new Wavetronix Matrix unit #2 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for the detector unit from the control cabinet to the base of pole 5 and connect to the respective detector unit.

Signal No. 3 Location Juneau: Glacier and Shell Simmons.

Pole 1

Remove existing 3-section signal head #2 on the mast arm and mounting hardware and replace with a new 3-section signal head and mounting hardware. Mount and install new Wavetronix Matrix units #1 and #2 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Mount and install a new PTZ camera #1 on mast arm for intersection monitoring, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 1 and connect to the respective detector unit.

Pole 3

Remove existing side-mounted 3-section signal head #7 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware.

Pole 4

Remove existing 3-section signal head #10 on the mast arm and mounting hardware and replace with a new 3-section signal head and mounting hardware. Mount and install a new Wavetronix Matrix unit #3 for stop bar detection on the mast arm near the signal pole, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 4 and connect to the respective detector unit.

Pole 5

Remove existing side-mounted 3-section signal head #16 and mounting hardware and replace with a new 3-section signal head and mounting hardware. Mount and install a new Wavetronix Matrix unit #4 for stop bar detection on the mast arm near the signal pole, as directed by the Engineer.

Signal No. 4
Location - Juneau: Loop Rd & Egan Drive.

Pole 1

Remove existing side-mounted 3-section signal heads #3 and #4 and mounting hardware and replace with new side-mounted 3-section signal heads and mounting hardware. Remove existing 3-section signal head #1 on the mast arm and mounting hardware and replace with a new 3-section signal head and mounting hardware. Remove existing 4-section signal head #2 on the mast arm and mounting hardware and replace with a new 4-section signal head and mounting hardware. Mount and install a new PTZ camera #1 on the mast arm for intersection monitoring, as directed by the Engineer. Mount and install a new Wavetronix Matrix unit #1 on mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 1 and connect to the respective detector unit.

Pole 2

Remove existing side-mounted 3-section signal head #10 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove existing 3-section signal heads #7 and #8 and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware. Mount and install new Wavetronix Matrix unit #2 and new Wavetronix Advance units #3 and #4 on the mast arm for stop bar and advance intersection detection, respectively, as directed by

the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 2 and connect to the respective detector unit.

Pole 3

Remove existing side-mounted 3-section signal head #12 and mounting hardware and replace with a new 3-section signal head and mounting hardware. Remove existing side-mounted 4-section signal head #9 and mounting hardware and replace with a new side-mounted 4-section signal head and mounting hardware. Remove existing 4-section signal head #13 and mounting hardware on the mast arm and replace with a new 4-section signal head and mounting hardware. Mount and install a new Wavetronix Matrix unit #5 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for the detector unit from the control cabinet to the base of pole 3 and connect to the respective detector unit.

Pole 4

Remove existing 3-section side-mounted signal heads #18 and #19 and mounting hardware and replace with two new side-mounted 3-section signal heads and mounting hardware. Remove existing 3-section signal heads #14 and #16 and mounting hardware on the mast arm and replace with a new 3-section signal heads and mounting hardware. Mount and install a new Wavetronix Matrix unit #4 on the mast arm for stop bar detection, respectively, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 4 and connect to the respective detector unit.

Pole 5

Remove existing post-mounted 3-section signal head #17 and mounting hardware and replace with a new 3-section signal head and mounting hardware.

Pole 8

Remove existing 3-section post-mounted signal heads #26 and #27 and mounting hardware and replace with two new 3-section signal heads and mounting hardware.

Traffic Signal Cabinet

Remove the existing TS-1 Traffic Signal Cabinet and associated hardware and replace with a new TS-2 Type 2 Traffic Signal Cabinet and associated hardware on the existing foundation.

Signal No. 5
Location - Juneau: Riverside & Egan

Pole 1

Remove 5-section side-mounted signal head #2 and mounting hardware and replace with a new side-mounted 5-section signal head and mounting hardware. Remove existing 3-section signal head #1 and mounting hardware on the mast arm and replace with a new 3-section signal head and mounting hardware.

Pole 2

Remove the existing side-mounted 3-section signal head #6A and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove existing 3-section signal heads #6, #7 and #7A and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware. Mount and install a new PTZ camera #1 on the mast arm for intersection monitoring, as directed by the Engineer.

Pole 3

Remove the existing side-mounted 3-section signal head #8 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove existing 3-section signal heads #9 and #10 and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware.

Pole 4

Remove the existing side-mounted 3-section signal head #11 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware.

Traffic Signal Cabinet

Replace existing TS-2 type 2 Signal cabinet with new TS-2 Type 2 Signal cabinet and associated hardware on the existing foundation.

Signal No. 6
Location - Juneau: Loop Road and Mall Road

Pole 1

Remove existing side-mounted 3-section signal heads #3 and #4 and mounting hardware and replace with new side-mounted 3-section signal heads and mounting hardware. Remove existing 3-section signal head #2 and mounting hardware on the mast arm and replace with new 3-section signal head and mounting hardware.

Pole 2

Remove existing side-mounted 3-section signal head #8 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove existing 3-section signal heads #5 and #6 and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware. Mount and install new Wavetronix Matrix units #3 and #4 on mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 2 and connect to the respective detector unit.

Pole 3

Remove existing side-mounted 3-section signal heads #11 and #12 and mounting hardware and replace with new side-mounted 3-section signal heads and mounting hardware. Remove existing 3-section signal head #10 and mounting hardware on the mast arm and replace with a new 3-section signal head and mounting hardware. Mount and install a new PTZ camera #1 on the mast arm near the signal pole for intersection monitoring, as directed by the Engineer.

Pole 4

Remove existing side-mounted 3-section signal head #15 and mounting hardware and replace with a new side-mounted 3-section signal head and mounting hardware. Remove existing 3-section signal heads #13 and #14 and mounting hardware on the mast arm and replace with new 3-section signal heads and mounting hardware. Mount and install new Wavetronix Matrix units #1 and #2 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 4 and connect to the respective detector unit.

Signal No. 7
Location - Juneau: Riverside and Mall Road

Pole1

Mount and install a new PTZ camera #1 on the signal pole for intersection monitoring, as directed by the Engineer.

Pole 7

Remove and replace existing pole 7 and replace with a new pole #7. Remove and replace existing pedestrian signal heads #20 and #21 and pedestrian push buttons # 18 and #19 on existing pedestrian pole #7 and replace with new pedestrian signal heads #20 and #21 and new pedestrian push buttons #18 and #19 on new pole 7. Remove and replace existing R10-3EL and R10-3ER, Educational Plaques for Pedestrian Signal (Countdown) on new pole 7. Remove existing post-mounted 3-section signal head #19 and mounting hardware on existing pole #7 and replace with a new 3-section signal head #19 and mounting hardware on new pole 7.

Signal No. 8
Location - Juneau: Loop Road and Stephen Richards

Pole 3

Mount and install a new PTZ camera #1 on the mast arm for intersection monitoring, as directed by the Engineer.

Remove existing modem and install new communications equipment (Sierra Wireless AirLink ES450 Enterprise 4G LTE Gateway Router, or approved equivalent), as directed by the Engineer.

Signal No. 9
Location - Juneau: Loop Road and Valley Blvd.

Pole 1

Mount and install a new Wavetronix Matrix unit #4 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 1 and connect to the respective detector unit. Contact Southcoast Region Traffic and Safety Section prior to installation.

Pole 2

Mount and install a new Wavetronix Matrix unit #3 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Mount and install a new PTZ camera #1 on the mast arm for

intersection monitoring, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 2 and connect to the respective detector unit.

Pole 3

Mount and install a new Wavetronix Matrix unit #1 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 3 and connect to the respective detector unit.

Pole 4

Mount and install a new Wavetronix Matrix unit #2 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 4 and connect to the respective detector unit.

Remove existing modem and install new communications equipment (Sierra Wireless AirLink ES450 Enterprise 4G LTE Gateway Router, or approved equivalent), as directed by the Engineer.

Signal No. 10
Location - Juneau: Riverside and Riverwood.

Pole 1

Mount and install new Wavetronix Matrix unit #3 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Mount and install new Wavetronix Matrix unit #4 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Mount and install a new PTZ camera #1 on the signal pole for intersection monitoring, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 1 and connect to the respective detector unit.

Pole 3

Mount and install new Wavetronix Matrix unit #4 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 3 and connect to the respective detector unit.

Pole 4

Mount and install new Wavetronix Matrix unit #2 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 4 and connect to the respective detector unit.

Pole 5

Mount and install new Wavetronix Matrix unit #1 on the mast arm near the signal pole for stop bar detection, as directed by the Engineer. Pull proprietary Wavetronix cable for each detector unit from the control cabinet to the base of pole 5 and connect to the respective detector unit.

Remove existing modem and install new communications equipment (Sierra Wireless AirLink ES450 Enterprise 4G LTE Gateway Router, or approved equivalent) in the control cabinet, as directed by the Engineer.

660-3.05 WIRING. *delete paragraph no. 3.*

Add the following subsection:

660-3.11 SOUTHCOAST REGION TRAFFIC COMMAND CENTER.

Furnish and install equipment required to establish a functional traffic command center (TCC) at the location shown in the plans. The Adaptive Control Software (ACS) and TCC computer hardware shall be supplied by a single vendor and shall be compatible with the Department's existing Siemens m50 series controllers and existing TACTICS installation.

The Department will remove existing furniture and equipment from TCC room before new furniture is installed. Coordinate with Engineer to schedule work. Work in building shall be limited to Monday through Friday, 8 AM to 5 PM. Complete new furniture and equipment installations within 4 days of the Department clearing out the TCC room.

Building Improvements. Construct walls and doors as shown in the plans. Finish colors shall closely match existing. Paint door and frame to match existing building trim. Obtain approval from the Engineer before ordering paint. Door hardware shall be brushed chrome to match existing building hardware.

Install fiber-reinforced panels (FRP) over gypsum board in accordance with the manufacturer's recommendations. Do not use visible fasteners. Apply panels to substrate, above base, vertically oriented with seams plumb and pattern aligned with adjoining panels. Apply panel moldings to all panel edges using silicone sealant providing for the manufacturers recommended clearances.

Furnish and install a lever-style, keyed lock matching the existing door hardware in the building. Lockset shall have a round trim plate, satin or brushed chrome finish meeting ANSI Grade 2 security standards. Latch shall be lockable from inside, but only keyed on the outside. Coordinate keying with building management.

Furniture. Contractor shall assemble furniture, if assembly is required. Dust furniture prior to project closeout.

Desks: Provide desks of the size and quantity shown on the Plans. Desks shall be laminate construction with Cherry veneer, have adjustable floor guides, 1-inch thick top, modesty panels, wiring grommets, PVC edges, and be assembled with metal cam lock connections. The wider leg of the L-shaped desk shall have the modesty panel mounted in the middle of the panel, so chairs can be pushed in on both sides. Assemble and install in the locations shown on the Plans.

Guest Chairs: Provide stackable guest chairs with a minimum 250 pound capacity featuring:

- Fixed arms
- Four-leg metal base
- Dark Blue or black, stain resistant fabric upholstery, bottom and back
- Black powder-coated frame
- No height adjustment
- 5 year warranty

TCC Workstation Cabinet. Provide a cabinet to house the TCC workstation computer. Cabinet shall have nominal dimensions of 36 inches wide by 30 inches high by 22.5 inches deep and be manufactured by the same company that manufactures the desks and from the same furniture line. Match finish of desks. Cabinet shall have solid, lockable doors. Top and sides shall be 1 inch thick. Drill holes in back as required to feed cables through to TCC workstation computer.

Computer Hardware. Contractor shall furnish and install computer hardware necessary to establish the TCC, including cables necessary to provide a fully functioning system. Equipment includes:

Server. 2.4 gigahertz, 64 bit, 19-inch, rack-mount server in the server room of the Department's regional headquarters as shown on the Plans. Coordinate installation with the Engineer. Server shall host ACS and the Department's TACTICS signal management system. Server shall include a licensed copy of Windows Server 2008 R2 and feature dual Ethernet ports, DVD RW, dual power supplies, 16 GB of RAM, and 1 TB of RAID5 storage.

Work with the Department's Information Technology group, through the Engineer, to gain access to server and switch rooms, and to route connections through the existing switches to the new server, existing interconnect radio, and TCC workstation.

TCC Workstation. TCC workstation shall be configured to access the server-based ACS and TACTICS software. TCC workstation shall be 64 bit 3.0 GHz quad core computer and include a licensed copy of Windows 7, 16 GB of RAM, 500 GB storage, dual Ethernet ports, dual video cards supporting 1920x1080 resolution, DVD RW, and wireless keyboard and mouse.

Wall Mount Monitors. Two wall-mounted 55 inch LCD monitors. Monitor contrast ratio shall be at least 3500:1, brightness at least 700 nits, have 16x9 aspect ratio, and minimum resolution of 1920x1080p. Connect monitors to TCC workstation with certified HDMI cables.

Mounting brackets shall extend from the wall far enough to allow monitors to be installed in front of existing surface mounted cable ducts. Do not use mounts that can extend more than 6 inches from the wall. Each mount shall be secured to the wall with at least 2 horizontal rows of 3 each ¼ inch hollow wall anchors ("molly bolts"). Horizontal rows of fasteners shall be at least 6 inches apart. Existing wall board is approximately ¾ inches thick.

TCC Workstation Monitor. 27 inch desktop monitor with 16x9 aspect ratio, minimum 1920x1080 resolution, and HDMI input. Connect monitor to TCC workstation with certified HDMI cable. Route cable through suspended ceiling or around wall.

TCC Software. Provide Adaptive Control Software (ACS) compatible with the Department's Siemen's traffic signal controllers and SEPAC software. Software shall adapt signal phase split timings and offsets based on traffic flows observed by the traffic control system's vehicle detectors. The ACS shall work within the cycle lengths set by the Department, which may change based on time-of-day plans. The ACS shall collect volume data from the individual system controllers on a minute-by-minute basis and use this data to update the signal timing settings at the signals at least every 15 minutes. The ACS shall be capable of managing up to 16 individual intersections and communicate using NTCIP standards.

ACS configuration shall be accomplished through an HTML browser-based interface, available either from the server on which the software is installed, or remotely over an IP network.

Training and System Setup. TCC software vendor shall configure software to work with the Department's existing traffic control infrastructure and communications. Adaptive control shall be deployed to approximately 10 intersections. After installation, configuration, and verification of communications to the field devices, software vendor shall perform acceptance testing that demonstrates operation of the new system.

Software vendor shall provide a two-day, on-site training on the ACS system for up to 6 Department-specified personnel. The Department will provide a conference room for the training.

Contractor shall provide a service support package from the software vendor that includes telephone support, email support, webinars, and on-site system checks.

This work is subsidiary to this item.

Other. Surge protectors shall meet UL 1449 and provide greater than 1,000 Joules of surge suppression. Provide surge protectors with at least 6 outlets and cord lengths as specified in the plans. Surge suppressors shall have integral mounting holes.

Cat 6 cable installed in ceilings shall be plenum-rated. Patch cables do not have to be rated.

Cables shall be neatly organized and tied. Power and HDMI cables between Wall Mount Monitors and TCC workstation cabinet shall be installed in surface mount raceway. HDMI cable between TCC workstation and TCC Workstation Monitor shall be installed in surface mount raceway and/or above suspended ceiling. Surface mount raceways shall be natural aluminum or painted to match existing wall panels and installed per the manufacturer's recommendations.

Network patch cables and surge protector cables for desk workstations shall be run vertically between outlets and floor, then along bottom of wall to the northern corners of the desks as shown in the plans.

This work is subsidiary to this item.

660-4.01 METHOD OF MEASUREMENT.

The Pay Item for Items 660(14) through 66(24) is a lump sum. This will be paid after inspection and acceptance by the Engineer.

660-5.01 BASIS OF PAYMENT. *Add the following*: Payment under item 660(14), Glacier and Egan Drive (McNugget) Traffic Signal Modification Complete through item 660(23), Riverside and Riverwood Traffic Signal Modification Complete, includes all work needed to modify traffic signals and/or install Wavetronix vehicle radar detection equipment as specified in the respective items. The conductors, connectors and other work necessary is subsidiary to the respective items. The removal of existing traffic and pedestrian signal hardware, signal conductors, and abandoned conductors as directed by the Engineer is also subsidiary to the respective items.

Payment under item 660(17), Loop Road and Egan Drive Traffic Signal Modification Complete, also includes all work to remove the existing TS-1 Traffic Signal Cabinet and associated hardware and replace with a new TS-2 Type 2 Traffic Signal Cabinet and associated hardware on the existing foundation. This work is subsidiary to this item.

Payment under item 660(18), Riverside and Egan Drive Traffic Signal Modification Complete, also includes all work to remove the existing TS-2 Type 2 Signal Cabinet and associated hardware and replace with a new TS-2 Type 1 Signal Cabinet and associated hardware on the existing foundation. This work is subsidiary to this item.

Payment under item 660(20), Riverside Drive and Mall Road Traffic Signal Modification Complete, also includes all work to remove pole 7, countdown pedestrian signals #20 and #21, pedestrian push buttons #18 and #19, and one each R10-3EL and R10-3ER, Educational Plaque for Pedestrian Signal (Countdown), and replace with new like equipment, mounted and installed in the same locations. This work is subsidiary to this item.

Payment under item 660(21), Loop Road and Stephen Richards Traffic Signal Modification Complete, also includes all work to install communications equipment to transmit traffic data from the traffic signal cabinet at the intersection to the Traffic Command Center. The conductors, connectors and other work necessary is subsidiary to this item.

Payment under item 660(22), Loop Road and Valley Boulevard Traffic Signal Modification Complete, also includes all work to install communications equipment to transmit traffic data from the traffic signal cabinet at the intersection to the Traffic Command Center. The conductors, connectors and other work necessary is subsidiary to this item.

Payment under item 660(23), Riverside and Riverwood Traffic Signal Modification Complete, also includes all work to install communications equipment to transmit traffic data from the traffic signal cabinet at intersection to the Traffic Command Center. The conductors, connectors and other work necessary is subsidiary to this item.

Add the following pay items:

Pay Item	**Pay Unit**
660(14) Glacier and Egan Drive Traffic Signal Modification Complete	All Required
660(15) Glacier and Jordan Traffic Signal Modification Complete	All Required
660(16) Glacier and Shell Simmons Traffic Signal Modification Complete	All Required
660(17) Loop Road and Egan Drive Traffic Signal Modification Complete	All Required
660(18) Riverside and Egan Drive Traffic Signal Modification Complete	All Required
660(19) Loop Road and Mall Road Traffic Signal Modification Complete	All Required
660(20) Riverside and Mall Road Traffic Signal Modification Complete	All Required
660(21) Loop Road and Stephen Richards Traffic Signal Modification Complete	All Required
660(22) Loop Road and Valley Boulevard Traffic Signal Modification Complete	All Required
660(23) Riverside and Riverwood Traffic Signal Modification Complete	All Required
660(24) Southcoast Region Traffic Command Center Complete	All Required

SECTION 740

SIGNALS AND LIGHTING MATERIALS

STANDARD MODIFICATION

740-2.02 SIGNAL AND LIGHTING STRUCTURES. *Within Item 1, delete paragraph two and replace with:*

All working drawings and calculations must be stamped with the seal of, dated by, and signed by a Professional Engineer registered in the State of Alaska. Submit the working drawings and calculations for each pole to the Engineer for approval. Design for all stresses on the completed structure with all hardware in place. Show the design wind loads, projected areas, wind drag coefficients, material properties, and other design information on the working drawings. Include a summary of the loads used in each pole's design.

E 54 05/01/07

740-2.10 CONTROLLER UNIT. *Delete the first sentence in paragraph two and replace with:*
Keep natural aluminum finish to the outside of the controller cabinet.

740-2.11 CONTROLLER CABINET. *Delete in its entirety and replace with the following*:

Cabinet Minimum Requirements
The cabinet shall be completely wired and tested to NEMA TS2 Type 2 specifications (as currently amended). In addition, at a minimum the following requirements shall be met:

The cabinet shall be designed for 16 channel operation where each load switch socket can be configured for a vehicle phase, pedestrian phase or overlap operation without rewiring the back side of the load-bay.

The cabinet shall be wired for 64 channels of detection

The use of PC boards shall not be allowed except in detector racks or BIU cages.

The use of plug and play modules shall not be allowed.

The entire cabinet and components shall undergo a 72 hour test burn-in before delivery to the Alaska DOT Southcoast Region designated testing facility. If the cabinet comes with a controller, the cabinet shall come with an ATSI TS2 Frame grabber communications test report before delivery will be accepted.

The cabinet shall use the latest technology applicable and shall be 100% compliant with Section 1605 of the American Recovery and Reinvestment Act of 2009, requiring the use of American iron, steel and manufactured goods.

The cabinet assembly shall be completely manufactured in the United States of America.

Cabinet Enclosure
At a minimum the cabinets shall meet the following criteria:

1. It shall have nominal dimensions of 56" high x 44" width x 25.5" depth and meet the footprint dimensions as specified in Section 7.3 of NEMA standards for a Type P (Size 6) cabinet. The cabinet base shall have continuously welded interior mounting reinforcement plates with the same anchor bolt hole pattern as the footprint dimensions.
2. Shall be fabricated from 5052-H32 0.125-inch thick aluminum.
3. The cabinet shall be double-flanged where it meets the cabinet door.

4. The top of the cabinet shall be sloped 1” towards the rear to facilitate water runoff, and shall bend at a 90° angle at the front of the cabinet. Lesser slope angles are not allowed.
5. The inside of the cabinet shall utilize C channel rails. (2) Welded on the back wall on 34” center and (4) welded on each side wall on 08” center with 04” between sets. C channel rails shall be 48” in length, start 5” from the bottom of the cabinet interior and run the entire usable height the cabinet side walls. Adjustable rails are not allowed.
6. The Cabinet shall not be powder-coated. It shall be bare aluminum inside and outside.
7. All external fasteners shall be stainless steel. Pop rivets shall not be allowed on any external surface.
8. The door handle shall be ¾” round stock stainless steel bar.
9. The main door shall contain a police door with a conventional police lock. A key shall be provided for both the cabinet lock and the police door lock. The police door shall be recessed into the main door so that the police door is flush with the main door. A closed-cell, neoprene gasket seal shall be bonded to the enclosure doors. A stiffener plate shall be welded across the width of the inside of the main door to prevent flexing. A main door bar stop shall be a two-position, three-point stop that accommodates open-angles at 90, 125, and 150 degrees. A louvered air entrance located at the bottom of the main door shall satisfy NEMA rod entry test requirements for 3R ventilated enclosures. Bearing rollers shall be applied to ends of door latches to discourage metal-on-metal surfaces from rubbing. Lock assembly shall be positioned so handle does not cause interference with key when opening the door.
10. The cabinet shall be equipped with a universal lock bracket capable of accepting a Best™ Construction Core and a Corbin#2 tumbler series lock. The cabinet shall come equipped with a Best™ green construction core lock.
11. All exterior seams shall be manufactured with a neatly formed continuously weld construction. The weld for the police box door shall be done on the inside of the cabinet door. All welds shall be free from burrs, cracks, blowholes or other irregularities.
12. The fan baffle panel seams shall be sealed with RTV sealant or equivalent material on the interior of the cabinet.
13. The cabinet shall be UL listed
14. The cabinet shall come with lifting ears affixed to the upper exterior of the cabinet. These ears shall utilize only one bolt for easy reorientation.
15. The cabinet shall come with a three-stage, multi-ply progressive density polyester, disposable air filter. Filter shall be secured to entrance on main door by two (2) horizontally-mounted restraints. Filter performance UL 900 Class 2 listed and shall conform to ASHRAE Standard 52.1.
16. The door shall be mounted with a single continuous stainless steel piano hinge that runs the length of the door. Attaching tamper resistant bolts shall also be stainless steel.
17. All steel incorporated in the cabinet shell shall be manufactured in the United States of America, and shall meet the requirements of Section 1605 of the American Recovery and Reinvestment Act of 2009.

Riser Frame
Shall come with (1) 08” riser frame fabricated from 5052-H32 0.125-inch thick aluminum, and it shall be continuously welded on all exterior seams. It should have hole pattern on top and bottom that match the hole pattern for a Type P(6) enclosure.

Shelves
Shall come with (2) double beveled shelves 10” deep that are reinforced welded with V channel, fabricated from 5052-H32 0.125-inch thick aluminum with double flanged edges rolled front to back. Slotted hole shall be inserted every 7” for the purpose of tying off wire bundles.

Ventilating Fans
The cabinet shall be provided with a finger safe din rail mounted thermostatically controlled (adjustable between 4-176° Fahrenheit) ventilation fan. The fan shall be installed in the top right side of the cabinet plenum. A removable aluminum vent cover shall be supplied to allow a second thermostatically controlled fan to be added per customer request. The cabinet shall come with an aluminum fan hole cover plate drilled to the fan hole pattern which can be installed to cut off airflow during winter operation.

Computer Shelf
A slide-out computer shelf 16" length by 12" width by 2" depth shall be installed underneath the lower equipment shelf. The shelf shall be mounted just left of center so that controller cables will not interfere with the operation of the shelf when equipment is installed. The shelf shall have a hinged cover that opens from the front and shall be powder-coated black. It shall be a General Devices Part # VC4080-99-1168.

Main Panel Configuration (Load-Bay)
The design of the panel shall conform to NEMA TS2 Section 10, Terminals and Facilities, unless modified herein. This panel shall be the termination point for the controller unit (CU) MSA, (MMU) MSA & B cables, bus interface units 1 & 2 (BIU) and field terminal facilities. The terminal and facilities layout shall be arranged in a manner that allows all equipment to be readily accessible.

The load-bay shall be fully wired and meet the following requirements:

- The load-bay shall have the following dimensions; constructed from aluminum with a nominal thickness of 0.125 inches and a maximum width of 37-½ inches including attached wiring bundles.
- The entire assembly shall roll down and provide access to all of the back of panel wiring. All solder terminals shall be accessible when the load-bay is rolled down. The assembly shall be able to roll down without requiring other components, cables or switches to be removed.
- The load-bay shall be designed so that all other cabinet screw terminals are accessible without removing cabinet electronics.
- All the controller (CU) and malfunction management (MMU) cables shall be routed through the back of the load-bay so that they will not be subject to damage during load-bay roll down.
- The top of the load-bay panel shall attach directly to Unistrut™ spring nuts without the use of standoffs and spacers.
- The load-bay shall be balanced such that it will not roll down when fully loaded with load switches, flashers and flash transfer relays, and the Unistrut™ spring nuts are removed.
- The load-bay facility shall be wired for 16 channels. Each one shall be shall be assignable as a vehicle phase, pedestrian phase or overlap. Each load-bay channel shall be routed through a flash transfer relay.
- Sixteen load sockets spaced on 2" center per NEMA TS1 section 10.2.4, Figure 10-2.
- Eight flash transfer relay sockets.
- One flasher socket.
- All load switches and flasher shall be supported by a bracket extending at least ½ the length of the load switch.
- Two bus interface unit rack slots for BIU's 1 and 2. The load-bay must have space available for a 3rd BIU. All of the cabinet BIU's shall fit into one rack in the top left corner of the load-bay. Multiple racks are not allowed.
- A screw terminal shall be provided to access all functions on all BIUs.
- Wiring for one Type-16 MMU.
- All 24 VDC relays shall have the same base socket but different from the 115VAC relays.
- All 115VAC relays shall have the same base socket but different from the 24VDC relays. (not applicable to flash transfer relays or the mercury contactor)
- The load-bay shall be silkscreened on both sides.
- Field wiring terminations shall be per channel across the bottom of the load-bay. The load-bay shall have two rows of field terminals tied together in series. Each channel shall have 6 terminals, Two complete rows each consisting of 3 terminations from left to right beginning with phase 1 corresponding to the appropriate vehicle phase Red, Yellow and Green and following the order of the load switches. Field terminals shall be #10 screw terminal and be rated for 600V.
- All cable wires shall be terminated. No tie-off of unused terminals will be allowed.
- Shall be 100% manufactured in the United States of America

All wiring shall conform to NEMA TS1 Section 10.3.3.1. Main panel wiring shall conform to the following colors and minimum wire sizes:

Vehicle green load switch output	14 gauge brown
Vehicle yellow load switch output	14 gauge yellow
Vehicle red load switch output	14 gauge red
Pedestrian Don't Walk switch	14 gauge orange
Pedestrian Walk switch	14 gauge blue
Pedestrian Clearance load switch	14 gauge yellow
Logic Ground	18 gauge gray
+24V DC	18 gauge red with white tracer
+12V DC	18 gauge pink
AC+ Line	14 gauge black
AC- Line	14 gauge white
Earth Ground	16 gauge green
AC line (load bay)	12/14 gauge black
AC neutral (load bay)	12/14 gauge white
Controller A cables	22 gauge blue *with the exception of power wires (AC+ Black, AC- White & Earth Ground Green)*
MMU A & B cables	22 gauge orange *with the exception of power wires (AC+ Black, AC- White & Earth Ground Green)*

The field terminal blocks shall have a screw Type No. 10 post capable of accepting no less than 3 No. 12 AWG wires fitted with spade connectors. Eight (8) 12-position terminal blocks shall be provided in two rows across the bottom of the main panel. Spade lugs from internal cabinet wiring are not allowed on field terminal screws. The flash program shall be changeable from the front of the load-bay. All load switches, flasher, and flash transfer relay sockets shall be marked and mounted with screws. Rivets and clip-mounting is unacceptable.

Wire size 16 AWG or smaller at solder joints shall be hooked or looped around the eyelet or terminal block post prior to soldering to ensure circuit integrity. All wires shall have lugs or terminal fittings when not soldered. Lap joint/tack on soldering is not acceptable. All soldered connections shall be made with 60/40 solder and non-corrosive, non-conductive flux. All wiring shall be run neatly and shall use mechanical clamps and conductors shall not be spliced between terminations. Cables shall be sleeved in braided nylon mesh and wires shall not be exposed.

Load-Bay and Panel Wire Termination

All wires terminated behind the main panel or on the back side of other panels shall be SOLDERED. No pressure or solder-less connectors shall be used. Printed circuit boards shall only be used on the load bay where connecting to the bus interface units (BIU).

Cabinet Light Assembly

The cabinet shall have an LED lighting fixture with 15 high power LEDs using a cool white color emitting 300lm min @ 12VDC/750mA.The LED shall be a Rodeo Electronics TS-LED-05M02. The LED fixture shall be powered by a Mean Well class 2 power supply LPV-20-12 that shall be mounted on the inside top of the cabinet near the front edge. The cabinet light circuit shall be designed so a second LED fixture can be installed in the cabinet without the need a of a second power supply. An on/off switch that is turned on when the cabinet door is opened and off when it is closed shall activate the lighting fixture(s) power supply.

Convenience Outlet

The cabinet shall be wired with one convenience outlet with a ground fault interrupter and one convenience outlet without ground fault interrupters. The ground fault outlet shall be mounted on the right side of the cabinet on or near the power panel. The one convenience outlet shall be near the top shelf. No outlets shall be mounted on the door. The GFI power shall be fed through the auxiliary breaker. The convenience outlet shall power shall be fed through an EDCO SHP300-10 transient voltage suppressor located on the cabinet power panel.

Auxiliary Panel
The cabinet shall include an auxiliary switch panel mounted to the interior side of the police panel compartment on the cabinet door. This panel shall be hinged at the bottom to allow access to the soldered switches with the use of clamps or tools. Both sides of the panel shall be silkscreened. All of the switches shall be protected by a hinged see-through Plexiglas cover.

At a minimum the following switches are required;

Controller ON/OFF Switch: There shall be a switch that renders the controller and load-switching devices electrically dead while maintaining flashing operations for purpose of changing the controller or load-switching devices. The switch shall be a general-purpose bat style toggle switch with .688-inch long bat.

Heater Switch: There shall be a switch that when in the "On" position bypasses the heater & thermostat circuit. In the "Off" position the cabinet will function normally. The switch shall be a general-purpose bat style toggle switch with .688-inch long bat.

Stop Time Switch: There shall be a 3-position switch labeled "Normal" (up), "Off" (center), and "On" (down). With the switch in the "Normal" position, a stop timing command shall be applied to the controller by the police flash switch or the MMU (Malfunction Management Unit). When the switch is in its "Off" position, stop timing commands shall be removed from the controller. The "On" position shall cause the controller to stop time. The switch shall be a general-purpose bat style toggle switch with .688-inch long bat.

Auto/Flash Switch: There shall be a switch that places the field signal displays in flashing operation while the controller continues to operate. This flash shall have no effect on the operation of the controller or MMU. The switch shall be a general-purpose bat style toggle switch with .688-inch long bat.

Coordination Mode Switch: There shall be a 3-position switch labeled "Remote" (up), "TOD" (center), and "Free" (down). With the switch in the "Remote" position, the local controller shall take system commands from a master controller or central system. When the switch is in its "TOD" position, the local controller shall run its internally programmed time of day schedule. When the switch is in the "Free" position, the local controller shall run a free operation and it shall be possible to remove all coordination devices without affecting controller operations. The switch shall be a general-purpose bat style toggle switch with .688-inch long bat.

Vehicle Test Switches: The first eight vehicle phase inputs shall have momentary pushbutton test switches. The switches shall directly input calls to the controller without routing the call through the detector racks(s). These switches shall have two positions labeled "On" which shall put a constant call into the associated controller phase, "Off" which shall be normal operation. These switches shall be labeled 1, 2, 3, 4, 5, 6, 7 and 8.

Pedestrian Test Switches: All eight pedestrian phase inputs shall have momentary pushbutton test switches. These switches shall have two positions labeled "On" which shall put a constant call into the associated controller phase, "Off" which shall be normal operation. These switches shall be labeled 1, 2, 3, 4, 5, 6, 7 and 8.

Force Off Ring Switches: There shall be 2 momentary test switches tied to ring 1 and ring 2 on the controller. These switches shall have two positions labeled "On" which shall force the controller into the next ring in the phase sequence, "Off" which shall be normal operation. These switches shall be labeled Ring 1 and 2.

Police Panel
There shall be NO switches in the police panel compartment.

Cables
All wire cable bundles shall be encased in flex or expandable braided sleeving along their entire free length.

All SDLC cables shall be terminated on the 6” x 12” SDLC and PS interface panel on the right side of the cabinet. SDLC cables shall be professionally routed in the cabinet interior to easily reach the controller, malfunction management unit or detector racks.

Flashing Operation
All cabinets shall be wired to flash for all channels. Flashing operation shall alternate between the used vehicle phases 1,3,5,7, OLA, OLB, OLC, OLD and 2,4,6,8, 9, 10, 11, 12. Flash programming shall be either red or yellow simply by changing wires on the front of the load-bay.

Detector Racks
The cabinet shall have (64) channels of detection. One rack shall support sixteen (16) channels of loop detection, (1) Buss Interface Unit (BIU) and (2) GTT 752 or (1) 754 Opticom™ phase selector(s). Three racks shall support sixteen (16) channels of loop detection and one (1) Buss Interface Unit (BIU). The power and loop cabling shall be connected via a 37 pin DB connector using spring clips. The Opticom cable shall be connected via a 24 pin connector.

Detector Panel
The detector panel shall support (64) channels of vehicle detection, (4) channels of emergency vehicle preemption and (8) channels or pedestrian detection on a single panel. Each channel shall get (3) dedicated terminals. This panel will be mounted on the left side of the cabinet below the bottom shelf. The panel shall also include neutral and ground buss bars.

Heater & Thermostat Assembly
The cabinet shall come with a thermostatically controller door mounted heater assembly. The thermostat shall be a remote air sensing unit with a -30°F to 110°F range. It shall be adjustable in 5° increments and shall open trigger contacts upon any temperature rise of 15° above closing temperature setting. The thermostat shall be a Johnson Controls A19BBC-2C. The thermostat shall be connected in series with the heater and the blower fan. The Heater and blower fan assembly shall be mounted on the door below the police panel. It shall be a 2 speed fan with a selectable 600/900 or 1500W operation. The heater shall be a Caframo 9206CA-BBX.

Telemetry Interface Panel
All cabinets shall be wired with a telemetry interface panel and telemetry connecting cable so it will function as a local or a master cabinet. This panel shall be wired for transient suppression (EDCO model # PC642C008D with PCB1BWKEY)

Supplemental Load Panel
Vehicle phases 1, 3, 5 and 7 shall have their yellows loaded with a 2.5K-ohm, 10-watt resistor. These resistors will reside on their own panel on the cabinet left side. The panel shall allow MMU channels 9-12 to be disconnected from the field terminals / loadswitch phase 9-12 yellow terminals.

Service Surge Suppression
The cabinet shall be equipped with an EDCO model SHP300-10 or approved equivalent surge arrestor mounted on the power panel. Power to all cabinet electronics shall come through this surge suppression circuit. It shall meet the requirements of UL standard 1449.

Power Panel
The power panel shall handle all the power distribution and protection for the cabinet and shall be mounted in the bottom right side of the facility. All equipment shall be mounted on a 12” x 17” silkscreened aluminum panel and include at a minimum the following equipment:

- A 50-amp main breaker shall be supplied. This breaker shall supply power to the controller, MMU, signals, cabinet power supply, detector racks and auxiliary panels.
- A 20-amp auxiliary breaker shall supply power to the fan, light and GFI.
- A 20-amp auxiliary breaker shall supply power to the heater.
- A 50-amp, 125 VAC radio interference line filter.
- A normally open, 50-amp, solid-state relay
- One see-through Plexiglas cover on stand-offs to protect maintenance personnel from AC line voltages. This shall be removable by loosening screws but without removing screws.
- One (19) position neutral buss bar with raised screws
- One (19) position ground buss bar with raised screws

Manuals & Documentation
The cabinet shall be furnished with (3) complete sets of cabinet prints and (1) CDROM which includes the AutoCAD v2004 cabinet drawing and .pdf drawings for the controller, malfunction management unit and the loop amplifiers.

Controller Unit (CMU)
The controller unit shall exceed the requirements of NEMA TS-2 1198 Actuated Controller Unit Standards, and shall meet TS2 Type 2 requirements. The controller shall run on an OS9 operating system and shall be configurable as a local, master or local/master depending on the local intersection software in use. The controller shall have a removable hand-held front panel with a multi-line alphanumeric 8X40 LDC display. It shall have a 37 pin D connector for backward compatibility with TS-1 facilities. The following port configurations are required:

- One 10 base ethernet port
- One FSK port
- One Infrared port
- One DataKey™ port with a 2M data key
- One SDLC port

It shall function with Next-Phase, SEPAC and SE-MARC software. The CMU shall be a SIEMENS model EPAC3108M52/AAD15288P004 or approved equivalent.

Local Intersection Software
The controller shall come with SEPAC Version 3.34 local intersection software. It shall be operable with the TACTICS™ and i2TMS™ regional software platforms.

Copper Ethernet Switch
The cabinet shall come with a 8 port copper ethernet switch. Four ports of 10/100TX and an optional 1000base SFP port. The ethernet switch shall support all of the following minimum requirements; EFMplus technology, virtual local area networks (VLAN) tagging (IEEE 802.1q) and dynamic bridging (IEEE 802.1). The copper ethernet device shall provide for communication over copper pairs split into two directions and the high speed link shall be over bonded copper pairs (IEEE 802.3ah 2Base-TRL). The copper ethernet switch shall be an Actelis Networks model ML688 or approved equivalent. The following cables and cords shall be supplied with the copper ethernet switch:

- Two quad DSL cables 504R20110
- One AC power adapter 506R00005
- Four Cat6 patch cables five meter

Malfunction Management Unit (MMU)
The cabinet shall come with a (MMU) that meets all the requirements of NEMA TS2-2003 while remaining downward compatible with NEMA TS1. It shall have (2) high contrast LCD displays and an internal diagnostic wizard. It shall come with a 10/100 ethernet port. It shall come with software to run flashing yellow arrow operation. The MMU shall be an Eberle Design, Inc. model MMU-16LEip or approved equivalent.

Frame Grabber

The cabinet shall come with (1) frame grabber for testing SDLC communications. The frame grabber shall be an ATSI SKF-0015 or approved equivalent.

Load Switch
The cabinet shall come with (16) load switches. All load switches shall be cube type and have LED indications for both the input and output side of the load. The load switches shall be PDC model SSS87I/O or approved equivalent.

Flasher
The cabinet shall come with (1) flasher. The flasher shall be cube type and have LED indications. The flasher shall be PDC model SSF87 or approved equivalent.

Flasher Transfer Relay
The cabinet shall come with (8) heavy duty flash transfer relays. The flash transfer relays. The relays shall be Detrol Controls model 295 or approved equivalent.

Bus Interface Unit (BIU)
The cabinet shall come with (6) bus interface units (BIU). These shall meet all the requirements of NEMA TS-2 1988 standards. In addition, all BIUs shall provide separate front panel indicator LED's for DC power status and SDLC Port 1 transmit and receive status. The (BIU)'s shall be Eberle Design, Inc. model BIU700 or approved equivalent.

Power Supply (PS)
The cabinet shall come with a shelf mounted cabinet power supply meeting at minimum TS 2-2003 standards. It shall be a heavy duty device that provides +12VDC at 5 Amps / +24VDC at 2 Amps / 12VAC at .25 Amp, and line frequency reference at 50 mA. The power supply shall provide a separate front panel indicator LED for each of the four outputs. Front panel banana jack test points for 24VDC and logic ground shall also be provided. The power supply shall provide 5A of power and be able to cover the load of four (4) complete detector racks. The (PS) shall be Eberle Design, Inc. model PS250 or approved equivalent.

Loop Amplifiers
The cabinet shall come with (16) 4-channel rack mounted loop amplifiers. These devices shall have LCD displays and be capable of monitoring the call strength from all (4) channels simultaneously via a pie graph on the front panel. These devices must have the capability to perform directional logic and 3rd car queuing for protected/permissive operation. The loop amplifiers shall be Eberle Design, Inc. model ORACLE4e or approved equivalent.

Opticom
The cabinet shall come with (1) 4-channel rack mounted Opticom™ phase selector. These devices shall be capable of receiving encoded signals from Opticom series 700 emitters and detectors. When more than (1) Opticom™ detector is required per phase, furnish the appropriate number of harnesses for the 754 phase selector to handle the auxiliary detection. The Opticom™ phase selector shall be Global Traffic Technologies model 754."

740-2.12 STANDARD AUXILLARY EQUIPMENT. *Add the following after subparagraph number 3.d.*: The conflict monitor shall be a SmartMonitor MMU-16LEip Series, manufactured by Eberle Design, Inc. or an approved equal.

740-2.13 SPECIAL AUXILIARY EQUIPMENT.
Add the following sentence to numbered paragraph 3. System Modem/Interface Unit: The modem shall be a 56K modem compatible with the traffic signal controller. It shall provide communication between the Eagle EPAC M52 controller and the MARC NX System computer by dial-up over telephone utility lines. All required harnesses and wiring shall be installed in the cabinet. The installation shall include all necessary telephone company connections and hookup. When it is demonstrated that the modem allows the

controller to communicate properly with the State's master computer at DOT&PF 7 Mile, Juneau, the billing for the telephone utility can then be transferred to the State

Add the following new numbered paragraph:

6. Standard Features

    a. Cover. A clear plastic hinged cover shall cover all switches on the auxiliary panel (technician panel).
    b. Computer Shelf. A pullout hinged-top documentation drawer, having sliding tracks, with lockout and quick disconnect features shall be provided under the bottom shelf. The pull out drawer shall extend a minimum of 14 inches. Minimum interior dimensions of the drawer shall be 1 ¾ inch high, 12 inches deep and 16 inches wide. When extended, it shall be possible to lift the hinged cover in order to gain access to the interior of the drawer.
    c. Receptacle. Install a convenience outlet with independent ground fault circuit protection. Use a duplex, 3-prong NEMA Type 5-20R grounding type outlet. The outlet shall be installed in the cabinet and not on the door. The heater shall be plugged into the receptacle connected to the thermostat.

STANDARD MODIFICATION

Delete 740-2.14 VEHICULAR SIGNAL HEADS and replace with the following:

740-2.14 VEHICULAR SIGNAL HEADS. Provide Light Emitting Diode, (LED) Signal Heads that conform to the following publications:

- Circular Indications: *Vehicle Traffic Control Signal Heads: Light Emitting Diode (LED) Circular Signal Supplement, 6/27/05* (ITE Publication ST-052). This is hereafter referred to as "VTCSH-Circular-05".
- Arrow Indications: *Vehicle Traffic Control Signal Heads – Light Emitting Diode (LED) Vehicle Arrow Traffic Signal Supplement, 7/1/07 (ITE Publication ST-054).* This is hereafter referred to as "VTCSH-Arrow-07".

"The applicable ITE Specification", as used in this specification, means VTCSH-Circular-05 for circular LED indications and VTCSH-Arrow-07 for arrow LED indications.

1. Signal Heads.
Use signal heads that: are the adjustable, vertical type with the number and type of lights specified; provide a light indication in one direction only; are adjustable through 360 degrees about a vertical axis; and are mounted at the location and in the manner shown on the Plans. Ensure that all vehicular signal heads at any one intersection, except for programmed visibility signal heads, are of the same make and type.

    Provide a removable aluminum tunnel visor with an open slot at the bottom for each optical unit.

    Furnish housing, backplates and visors factory finished with a single coat of environmentally safe, ultraviolet-resistant, polyester powder coating that is applied electrostatically at 90kV and baked for 20 minutes at 400 degrees Fahrenheit per ASTM D-3359, ASTM D-3363 and ASTM D-522. Coating to be a Dull Black finish meeting Federal Standard 595b-37038.

    a. LED Optical Units. Use LED optical units and lenses meeting the requirement of the applicable ITE specification for all indications. Also meet the following requirements:

        (1) Gaskets. Use one-piece EPDM (ethylene propylene rubber) gaskets to seal LED modules.

(2) Markings. Provide LED Signal module with manufacturer applied markings listed in Section 3.6, Module Identification, of the applicable ITE Specification. For circular indications marking shall include: "Manufactured in conformance with the ITE Vehicle Traffic Control Signal Heads: LED Vehicle Circular Traffic Signal Supplement (June 27, 2005)." For arrow indications marking shall include: "Manufactured in conformance with the ITE Vehicle Traffic Control Signal Heads: LED Vehicle Arrow Traffic Signal Supplement (July 1, 2007)."

(3) Compatibility. Use LED signal modules that are operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).

(4) Testing Requirements.

(a) All LEDs Functional. LED modules with any non-functioning individual LEDs at the final inspection will be rejected.

(b) Burn-in. Manufacturer shall energize each new LED module for a minimum of 24 hours at operating voltage before shipment to ensure electronic component reliability.

(c) Production Testing and Inspection. Submit manufacturer's certification that all tests in Section 6.3 of the applicable ITE Specification have been successfully completed on each LED module to be used on the project.

Show results of each individual test on the certification.

(d) Design Qualification and Quality Assurance Testing by an Independent Lab. Have ETL/Intertek or other approved OSHA "Nationally Recognized Testing Laboratory" do the following:

a. Perform an initial assessment of the manufacturer's factory, engineering and manufacturing systems, and procedures to confirm compliance with ISO 9000.
b. Perform initial Design Qualification Testing as specified in Section 6.4 of the applicable ITE specification.
c. Every 6 months, conduct a factory inspection and perform Quality Assurance Tests on two samples of each certified LED module in accordance with the following sections of the applicable ITE specification:

6.4.2 Conditioning
6.4.4.1 - 6.4.4.4 Luminous Intensity
6.4.4.6 Chromaticity
6.4.6.1 Current Consumption
6.4.6.6 Power Factor
6.4.6.7 Total Harmonic Distortion

d. Provide a certification label on each certified LED traffic signal module verifying the manufacturer's factory and modules passed the tests listed in a. through c. above.

(e) Warranty. Provide written warranty by the signal module manufacturer that covers defects in materials, workmanship, and compliance with the applicable ITE specification for a period of 60 months after the manufacture date. No new LED module will be accepted if its manufacture date is more than 12 months before the date of installation. Begin warranty period for modules that replace failed modules on the date of installation.

The warranty shall require the manufacturer to replace LED modules that fail within the warranty period with new LED modules at no cost to the Department, and to cover the cost of shipping failed modules. The warranty does not include the cost of removing failed

modules or reinstalling new modules. Warranty shall require the manufacturer to send the Department prepaid authorization to return the failed module and provide a toll free telephone number for notifying them when it becomes necessary to return failed LED modules.

The warranty shall require the manufacturer to deliver replacement LED modules within 5 working days of receiving failed modules to the location specified by the Department.

2. Housing.

   a. Use die cast aluminum, meeting ASTM B 85, for all parts of the housing, including the doors and end plates. Ensure all parts are clean, smooth, and free from flaws, cracks, blow holes, or other imperfections.

   b. Use a one-piece housing with integral top, bottom, sides, and with square doors, for each signal section.

   c. Use stainless steel for all exposed bolts, screws, hinges, pins, and door-locking devices. Use stainless steel or approved non-ferrous, corrosion-resistant material for all interior screws and fittings .

   d. Provide an opening in the top and bottom of each housing to accommodate standard 1-1/2 inch pipe fittings and brackets.

   e. Provide the top and bottom openings of each housing with integral serrated bosses that will provide positive positioning of the signal head in 5-degree increments to eliminate undesirable rotation or misalignment of the signal head as well as between sections. Provide a total of 72 teeth in the serrated boss. Ensure teeth are clean and sharp to provide positive positioning with the grooves of the mating section or framework.

   f. Fasten individual signal sections together with a cadmium-plated tri-stud connector, lockwashers, and nuts with access holes for the passage of electrical conductors from one section to another.

   g. Provide 2 integral hinge lugs on the left side of each signal housing for mounting the door.

   h. Provide 2 latches with stainless steel wing nut assemblies on the right side of each signal housing to engage the door latches.

   i. Provide each signal housing door opening with a one-piece EPDM gasket around the periphery to provide a weather tight seal in a NEMA Type 3R enclosure.

   j. Provide a round opening designed to accommodate any standard traffic signal lens in each signal housing door.

3. Backplates. Furnish and attach louvered backplates to all vehicle signal heads except post-mounted flashers.

   Construct backplates of 0.1-inch minimum thickness aluminum alloy sheet meeting ASTM B 209, alloy 3003-H14. Use 8 inch wide backplate extensions for 12-inch displays and 5-1/2 inch wide backplate extentions for 8-inch displays. When there are 2 or more backplate sections, fasten them together with aluminum rivets or bolts and peen after assembly to prevent loosening.

   Use 5 or 5-1/2 inch wide backplate extensions (borders) for all post mounted and pole side mounted vehicle signal heads. Provide nominal 5-inch wide backplate extensions on all 5 section overhead cluster mounted signals. Provide backplates with nominal borders of 8 inches for the 8-inch sections and 5 inches for 12-inch sections on all combination 8-inch/12-inch vertical mounted signal heads.

Factory finish the back and front faces of backplates with a single coat of environmentally safe, ultraviolet-resistant, polyester powder coating that is applied electrostatically at 90kV and baked for 20 minutes at 400 degrees Fahrenheit per ASTM D-3359, ASTM D-3363 and ASTM D-522. Coating to be a Dull Black finish meeting Federal Standard 595b-37038.

E 87 10/04/10

STANDARD MODIFICATION

Delete 740-2.15 PEDESTRIAN SIGNALS and replace with the following:

740-2.15 PEDESTRIAN SIGNALS. Use LED Pedestrian Countdown modules that use the international "HAND/WALKING PERSON" symbols. Except for the countdown indication and as otherwise noted in this specification, use modules that conform to "Pedestrian Traffic Control Signal Indications - Part 2: Light Emitting Diode (LED) Pedestrian Traffic Signal Modules" Institute of Transportation Engineers, 3/19/2004, (hereafter referred to in this document as "PTCSI-04") and to the applicable Sections of the current Alaska Traffic Manual.

1. Pedestrian Signal Modules. Provide Portland Orange "HAND" and "COUNTDOWN DIGITS" and lunar white "WALKING PERSON." Locate COUNTDOWN DIGITS adjacent to the associated UPRAISED HAND. Make "HAND" and "WALKING PERSON" symbols a minimum of 11 inches high and 7 inches wide and COUNTDOWN DIGITS a minimum of 9 inches high and 7 inches wide. Provide incandescent looking WALKING PERSON, HAND and COUNTDOWN DIGITS. Ensure the WALKING PERSON, UPRAISED HAND and COUNTDOWN DIGITS are not readily visible when not illuminated. Provide "AlInGaP" Portland Orange LEDs or equivalent, rated for 100,000 hours or more at 77ºF and 20 mA. Provide "InGaN" White LEDs.

   Make all exposed components of modules suitable for prolonged exposure to the environment, without appreciable degradation that would interfere with function or appearance.

   Provide modules with an installed gasket to seal the junction with the signal housing.

   a. Lens. Use modules with internal masks to prevent the icons and digits from being visible when not in operation. No external silk-screen is permitted. Provide a smooth or textured lens of transparent polycarbonate material, frosted to prevent sun phantom. Use lenses that will not crack, craze or yellow due to solar UV exposure typical for a south-facing Arizona desert installation, after a minimum of 60 months in service.

   b. Retrofit. When a module will replace an existing module in an existing signal housing, furnish signal modules designed as retrofit replacements for existing neon type pedestrian signals (ICC 4090 and/or 4094). Provide modules that do not require special tools for installation. Provide modules that fit securely into existing pedestrian signal housings without any modification to the housing, connect directly to existing electrical wiring, and form a weather-tight seal. Provide modules and components constructed so each retrofit of existing pedestrian signals only requires the removal of the existing neon message module, gasket, and power supply and installation of the new LED pedestrian countdown module. Provide all necessary components to complete conversion including a one piece gasket.

   c. Photometric Requirements. Meet the following requirements:

      - Minimum Luminance. Maintain the following minimum luminance values for at least 60 months, under the operating conditions defined in Sections 3.3.1 and 5.2.1 of PTCSI-04 (when measured normal to the plane of the icon surface):
        - WALKING PERSON 2,200 cd/m2,
        - UPRAISED HAND 1,400 cd/m2,

- DIGITS 1,400 cd/m2 (when “88” is displayed).

- Maximum Luminance. Provide modules for which the actual luminance of a module does not exceed three times the minimum maintained luminance, as defined in Section 4.1.1 of PTCSI-04, when operated within the temperature range -40°F to +165°F

- Uniformity. Provide modules for which the uniformity of the signal output across the emitting section of the module lens (i.e. icons or digits) does not exceed a ratio of 5 to 1 between the maximum and minimum luminance values as measured in 0.5 in. diameter spots.

- Markings. Permanently mark the back of each LED signal module with:

- Manufacturer’s name, trademark, and other necessary identification

- Warranty information

- Rated voltage and power consumption in volt-amperes

- An up arrow or the word “UP” or “TOP” for orientation within a signal housing.

d. Electrical. Provide LED pedestrian countdown signal modules that:

(1) are operationally compatible with currently used controller assemblies (solid state load switches, flashers, and conflict monitors).

(2) have a maximum of 4 each secured, color coded, 36 inches long, 600V, 18 AWG minimum, jacketed wires, conforming to the National Electrical Code, rated for service at +221ºF for electrical connection.

(3) operate from a 60 ±3 Hz AC line over a voltage range of 80 VAC to 135 VAC. Test voltage for all photometric performance measurements shall be 120 ±3 volts rms.

(4) use LED circuitry that prevents perceptible flicker over the voltage range specified above.

(5) include voltage surge protection against high-repetition noise transients and low-repetition noise transients as stated in Section 2.1.8, NEMA Standard TS-2, 2003. Module must meet the following test requirements: Section 8.2 IEC 1000-4-5 & Section 6.1.2 ANSI/IEEE C62.41.2-2002, 3kV, 2 ohm and Section 8.0 IEC 1000-4-12 & Section 6.1.1 ANSI/IEEE C62.41.2-2002, 6kV, 30 ohm.

(6) have a current draw sufficient to ensure compatibility and proper triggering and operation of load current switches and conflict monitors in signal controller units. When the module is switched from the On state to the Off state the terminal voltage shall decay to a value less than 10VAC RMS in less than 100 milliseconds when driven by a maximum allowed load switch leakage current of 10 milliamps peak (7.1 milliamps AC).

(7) have a maximum power consumption at 77°F of: Hand 11.0 watts, Walking Person 8.0 watts, Digits 10.0 watts (when display shows “88”)

(8) have waterproof strain relief and anti-capillary wires, or have electrical wires that do not penetrate the LED module housing. This is intended to prevent water seepage between the back cover and the electrical wires, or between the copper and insulation of the wires (Connection may be made by use of an over molded connector).

(9) will default to the hand symbol for abnormal conditions when nominal voltage is applied to the unit across the two phase wires (rather than being applied to the phase wire and the neutral wire).

(10) have three separate power supplies: one each for the Walking Person, the Upraised Hand and the countdown digits. Use separate circuitry to power the LED Walking Person icon and the LED Upraised Hand icon, in order to virtually eliminate the risk of displaying the wrong icon.

e. Testing Requirements.

(1) All LEDs Functional. LED modules with any non-functioning individual LEDs at the final inspection will be rejected.
(2) Burn-in. Manufacturer shall energize each new LED module for a minimum of 24 hours at operating voltage before shipment to ensure electronic component reliability.
(3) Production Testing and Inspection by Manufacturer. Submit manufacturer's certification that all tests in Section 6.3 of PTCSI-04 have been successfully completed on each LED module to be used on the project. Show result of each individual test on the certification.
(4) Design Qualification and Quality Assurance Testing by an Independent Lab. Have ETL/Intertek or other approved OSHA "Nationally Recognized Testing Laboratory" do the following:

a. Perform an initial assessment of the manufacturer's factory, engineering and manufacturing systems, and procedures to confirm compliance with ISO 9000.
b. Perform initial Design Qualification Testing as specified in Section 6.4 of the PTCSI-04.
c. Every 6 months, conduct a factory inspection and perform Quality Assurance Tests on two samples of each certified LED module in accordance with the following sections of PTCSI-04:

6.4.2 Conditioning
6.4.4.1 - 6.4.4.4 Luminous Intensity
6.4.4.6 Chromaticity
6.4.6.1 Current Consumption
6.4.6.6 Power Factor
6.4.6.7 Total Harmonic Distortion

d. Provide a certification label on each certified LED traffic signal module verifying the manufacturer's factory and modules passed the tests listed in a. through c. above.

f. Warranty. Provide a manufacturer's written warranty that covers defects in materials, workmanship, and compliance with PTCSI-04 for a period of 60 months after the manufacture date. No new LED module will be accepted on a project if its manufacture date is more than 12 months before the date of installation. Begin warranty period for modules that replace failed modules on the date of installation.

The warranty shall require the manufacturer to replace LED modules that fail within the warranty period with new LED modules at no cost to the Department, and to cover the cost of shipping failed modules. The warranty does not include the cost of removing failed modules or reinstalling new modules. Warranty shall require the manufacturer to send the Department prepaid authorization to return the failed module and provide a toll free telephone number for notifying them when it becomes necessary to return failed LED modules.

The warranty shall require the manufacturer to deliver replacement LED modules within 5 working days of receiving failed modules to the location specified by the Department.

g. Countdown Module Functions.

(1) General. Begin the countdown at the beginning of the FLASHING HAND indication. End the countdown at "0" at the end of the FLASHING HAND indication. Make the countdown display dark from the end of one FLASHING HAND indication until the beginning of the next. Display steady, not flashing, countdown digits. Do not provide user accessible switches, controls, or options that would allow modification of cycle time, icons, digits or that would allow the countdown to operate while the WALKING PERSON or STEADY HAND is displayed.

(2) Learning Cycle. At power on, make the countdown display dark for one learning cycle in which it will determine the duration of the FLASHING HAND indication.

(3) Normal Operation. Display the countdown/FLASHING HAND for the duration measured in the learning cycle for every cycle until the module measures a different FLASHING HAND duration.

(4) Countdown Duration Modification. When a different duration is measured, make the countdown dark for the next cycle, and enter a Learning Cycle as previously described. Resume Normal Operation with the new FLASHING HAND duration if the measured FLASHING HAND duration for the next cycle is the same as for the first cycle when a change was detected. Continue Learning Cycles, if the duration is different, until the measured FLASHING HAND duration is the same for two cycles. Resume Normal Operation with the new duration when that happens.

(5) Countdown Truncation. Make the digits dark if the controller output displays a STEADY HAND or if both the HAND and WALKING PERSON go dark, regardless of whether the countdown to zero has been completed.

(6) Preemption. Handle preemption events as described under Countdown Duration Modification and, if necessary, Countdown Truncation.

(7) Recycling. Allow for consecutive cycles without display of the STEADY HAND .

(8) Power Outage. Maintain an uninterrupted countdown during short power failures (<1.5 seconds). Make the digits dark after a loss of power of more than 1.5 seconds and enter a Learning Cycle when the power is restored.

2. Housing.

a. Provide signal housings that have maximum overall dimensions of 18-1/2 inches wide, 18-3/4 inches high, and 9 inches deep, including Z-crate-type visor and hinges.

b. Provide a dustproof and weatherproof housing that allows easy access to and replacement of all components.

c. Provide a one-piece, corrosion-resistant, aluminum-alloy die-cast case complete with integrally cast top, bottom, sides and back. Provide 4 integrally cast hinge lug pairs, 2 at the top and 2 at the bottom of each case, for operation of a swing-down door.

d. Provide 1 of the following 3 versions of the case, according to project specifications:

- Clamshell mount, with hardware, for "pole left of message" installation. These need not include upper and lower openings, but when provided the openings must be plugged to be weather-tight.

- Clamshell mount, with hardware, for “pole right of message” installation. These need not include upper and lower openings, but when provided the openings must be plugged to be weather-tight.

- Make suitable for either post top or bracket mounting with upper and lower openings to accommodate standard 1-1/2 inch pipe brackets. Plug unused openings to be weathertight. Integrally cast a shurlock boss into the bottom opening of the signal case. Make the dimensions of the shurlock boss as follows: outside diameter, 2-5/8 inch; inside diameter, 1-31/32 inch; number of radial teeth, 72; and depth of teeth, 5/64 inch. Use clean and sharp teeth that provide full engagement to eliminate rotation or misalignment of the signal.

e. Make the door frame a one-piece, corrosion-resistant, aluminum-alloy die-casting, complete with 2 hinge lugs cast at the bottom and 2 latch slots cast at the top of each door. Attach the door to the case by means of two Type 304 stainless steel spring pins. Attach 2 stainless steel hinged bolts with captive stainless steel wing nuts and washers to the case with the use of stainless steel spring pins. Provide a door that will latch and unlatch without the use of tools.

3. Conductors. Meet IMSA specifications 20-1 with No. 14 AWG or larger.

4. Load Switches. Place all load switches for operation of pedestrian signals in the controller cabinet.

5. Fasteners. Use machine screws, studs, and washers that are stainless steel.

6. Gaskets. Use gaskets that conform to ASTM D 1056, Grade 2C2.

7. Terminal Blocks. Mount a terminal block in the unit for field wiring, as specified in Subsection 740-2.14.

8. Finish. Factory finish the outside of pedestrian signal head housings and visors and signal visor interiors with a single coat of environmentally safe, ultraviolet-resistant, polyester powder coating that is applied electrostatically at 90kV and baked for 20 minutes at 400 degrees Fahrenheit per ASTM D-3359, ASTM D-3363 and ASTM D-522. Coating to be a Dull Black finish meeting Federal Standard 595b-37038.

E 88 10/04/10

740-2.16 PEDESTRIAN PUSH BUTTONS. *Delete numbered paragraphs 1 and 2 after the third paragraph and add the following:*

1. Shall be a piezo type button (activates on pressure only without moveable plunger).

2. Shall have a momentary ultra red LED indicator which activates when button is pressed and stays on during non-walk phases.

3. Colors shall be stainless steel for the button and black for the Rees compatible rectangular adapter plate.

4. Shall have an audio signal which activates when pedestrian button is pressed or released.

A push button manufactured by Polara Engineering Inc. (Advanced Traffic Products, Inc.) meets these specifications. Contact information is as follows:

Advanced Traffic Products Inc.
909 SE Everett Mall Way Ste B280
Everett, WA 98208

(425) 347-6208

INDEX

STANDARD MODIFICATION

INDEX *Remove the text: "Approved Products List" and replace with: Qualified Products List*

E 36 01/27/07

APPENDIX A

MATERIALS CERTIFICATION LIST (MCL)

Project Name	**JNU Mendenhall Valley Adaptive Traffic Signal Control System**
Project Number	Z685840000 / 0003184
Project Engineer Signature	

SECTION 660/661/740 MASTER MATERIALS CERTIFICATION LIST (Updated 07/01/11)

Item	2015 Specific-ations	Third Party Listing or Labeling Required? (Y/N)	Acceptance By:							Remarks
			Construction			Design			Statewide	
			Project Engr		QA/ Matls Engr	Design Engr	Bridge Engr	Traffic Engr	State Materials Engineer	
Section 660/661/740 is updated every quarter. Changes made this quarter are highlighted in yellow. Deleted text is lined out.				QPL						
660 SIGNALS AND LIGHTING										
TRAFFIC SIGNAL SYSTEMS										
STEEL POLES AND POSTS:	740-2.02	N								
Galvanizing	740-2.02									
Shop Drawings	660-2.01, 740-2.02									
Computations, Wind Stress Certification	740-2.02									
Welding Quality Control Plan	660-2.01, 740-2.02									
Mill Certifications for Steel Products	740-2.02									
BONDING & GROUNDING:										
Copper Ground Rod	660-3.06	Y								
Grounding Bushings	660-3.06	Y								
Ground Rod Clamps	660-3.06	Y								
#6 & #8 Bare Copper Grounding Wire	660-3.06	N								
Braided Copper J-Box Lid Bonding Wire	660-3.06	N								
Compresssion Tap Connectors	Detail in Plans	Y								
a. Power & Control Tray Cable b. Used on all new construction, and on rehabilitation work with Interconnect Splice Kits	Special Provisions, 660-3.05	N								Central Region
CONTROLLER CABINET										
Type 'P' Cabinet (Enclosure Only)	740-2.11	Y								
Type 'M' Cabinet (Enclosure Only)	740-2.11	Y								
Econolite TS2 Plug N Go Cabinet	740-2.11	Y								
Interconnect Termination Cabinet	Plans	Y								
Flashing Beacon Control Cabinet	740-2.17	N								

SECTION 660/661/740 MASTER MATERIALS CERTIFICATION LIST (Updated 07/01/11)

Item	2015 Specifications	Third Party Listing or Labeling Required? (Y/N)	Acceptance By:							Remarks
			Construction			Design			Statewide	
Section 660/661/740 is updated every quarter. Changes made this quarter are highlighted in yellow. Deleted text is lined out.			Project Engr	QPL	QA/ Matls Engr	Design Engr	Bridge Engr	Traffic Engr	State Materials Engineer	
OTHER CABINET COMPONENTS										
On-Street Master	740-2.13.2	N								
Conflict (Malfunction) Monitoring Unit	740-2.12.3	N								
2/4 Channel Loop Detector Amplifiers	740-2.13.1	N								
Traffic Logging System	Special Provisions 740-2.13.7	N								Central Region
Solid State Flasher	740-2.12.1	N								
3-Circuit Solid State Load Switch	740-2.12.2	N								
Flash Transfer Relay	740-2.12.4	N								
Bus Interface Units	740-2.13	N								
Uninterruptible Power Supply Cabinet	740-2.14	N								
Uninterruptible Power Supply Controller	740-2.15	N								
Uninterruptible Power Supply Batteries	740-2.16	N								
Hot Swap Bypass Switch	740-2.17	N								
Fail-Safe Bypass Switch	740-2.18	N								
GPS time clock	740-2.24	N								~~Central Region~~
CABINET VENTILATION SYSTEM										
Heater	740-2.11.1.b	Y								
Thermostat	740-2.11.1.b	Y								
Fan	740-2.11.1.b	Y								
COMMUNICATION SYSTEMS										
Hayes Compatible Modem	740-2.13.3	N								
Dial-Up Multi-Port Modem	740-2.13.3	N								
Leased Line Master Multi-Port Modem	740-2.13.3	N								
Leased Line Remote Multi-Port Modem	740-2.13.3	N								
Radio	740-2.24	Y								~~Central Region~~
Antenna	740-2.24	N								~~Central Region~~
Antenna Cable	740-2.24	N								~~Central Region~~
VIDEO DETECTION										
Astro-Brac AS-0170	660-1.01									
Video Detection System	Regional Special 740-2.13.6									Northern Region
VEHICULAR SIGNAL INDICATIONS & HARDWARE										
LED Signal Indication (Optical Units)	740-2.14.1	N								

SECTION 660/661/740 MASTER MATERIALS CERTIFICATION LIST (Updated 07/01/11)

Item	2015 Specific-ations	Third Party Listing or Labeling Required? (Y/N)	Acceptance By:							Remarks
			Construction			Design			Statewide	
Section 660/661/740 is updated every quarter. Changes made this quarter are highlighted in yellow. Deleted text is lined out.			Project Engr		QA/ Matls Engr	Design Engr	Bridge Engr	Traffic Engr	State Materials Engineer	
				QPL						
Incandescent Signal Indication (Optical Units)	740-2.14.1	N								
Housing for Indication (Optical Units)	740-2.14.3	N								
Backplate	740-2.14.4	N								
Visor	740-2.14.1	N								
Elevator Plumbizer	660-3.08, Std Dwg T-30.10	N								
Astro-Brac	Std Dwg T-30.10	N								
One way side mounted signal frames	660-3.08	N								
Two way side mounted signal frames	660-3.08	N								
4.5" Slipfitter w/ Offset Opening (Post Top Mounted for for Signals with Backplates)	660-3.08, Std Dwg T-30.10	N								
4.5" Slipfitter (Post Top Mounted for Flashers and Signals without Backplates)	660-3.08, Std Dwg T-30.10	N								
Terminal Compartment (Post Top Mounted)	660-3.08	N								
Traffic Signal Shirt (pre-operational canvas signal head cover)	Special Provisions 660-3.08	N								Central Region
Programmed Visibility Signal Heads	740-2.14.2	N								
PEDESTRIAN SIGNAL INDICATIONS & HARDWARE										
LED Signal Indication	740-2.15	N								
Housing for Indication	740-2.15	N								
Clamshell Mounting Bracket	740-2.15	N								
Pedestrian Push Button	740-2.16	N								
Push Button Frame	740-2.16	N								

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES

REQUIRED CONTRACT PROVISIONS
for
FEDERAL-AID (FHWA) CONSTRUCTION CONTRACTS

FHWA-1273 -- Revised May 1, 2012

REQUIRED CONTRACT PROVISIONS
FEDERAL-AID CONSTRUCTION CONTRACTS

I. GENERAL

1. Form FHWA-1273 must be physically incorporated in each construction contract funded under Title 23 (excluding emergency contracts solely intended for debris removal). The contractor (or subcontractor) must insert this form in each subcontract and further require its inclusion in all lower tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services).

The applicable requirements of Form FHWA-1273 are incorporated by reference for work done under any purchase order, rental agreement or agreement for other services. The prime contractor shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Form FHWA-1273 must be included in all Federal-aid design-build contracts, in all subcontracts and in lower tier subcontracts (excluding subcontracts for design services, purchase orders, rental agreements and other agreements for supplies or services). The design-builder shall be responsible for compliance by any subcontractor, lower-tier subcontractor or service provider.

Contracting agencies may reference Form FHWA-1273 in bid proposal or request for proposal documents, however, the Form FHWA-1273 must be physically incorporated (not referenced) in all contracts, subcontracts and lower-tier subcontracts (excluding purchase orders, rental agreements and other agreements for supplies or services related to a construction contract).

2. Subject to the applicability criteria noted in the following sections, these contract provisions shall apply to all work performed on the contract by the contractor's own organization and with the assistance of workers under the contractor's immediate superintendence and to all work performed on the contract by piecework, station work, or by subcontract.

3. A breach of any of the stipulations contained in these Required Contract Provisions may be sufficient grounds for withholding of progress payments, withholding of final payment, termination of the contract, suspension / debarment or any other action determined to be appropriate by the contracting agency and FHWA.

4. Selection of Labor: During the performance of this contract, the contractor shall not use convict labor for any purpose within the limits of a construction project on a Federal-aid highway unless it is labor performed by convicts who are on parole, supervised release, or probation. The term Federal-aid highway does not include roadways functionally classified as local roads or rural minor collectors.

II. NONDISCRIMINATION

The provisions of this section related to 23 CFR Part 230 are applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more. The provisions of 23 CFR Part 230 are not applicable to material supply, engineering, or architectural service contracts.

In addition, the contractor and all subcontractors must comply with the following policies: Executive Order 11246, 41 CFR 60, 29 CFR 1625-1627, Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The contractor and all subcontractors must comply with: the requirements of the Equal Opportunity Clause in 41 CFR 60-1.4(b) and, for all construction contracts exceeding $10,000, the Standard Federal Equal Employment Opportunity Construction Contract Specifications in 41 CFR 60-4.3.

Note: The U.S. Department of Labor has exclusive authority to determine compliance with Executive Order 11246 and the policies of the Secretary of Labor including 41 CFR 60, and 29 CFR 1625-1627. The contracting agency and the FHWA have the authority and the responsibility to ensure compliance with Title 23 USC Section 140, the Rehabilitation Act of 1973, as amended (29 USC 794), and Title VI of the Civil Rights Act of 1964, as amended, and related regulations including 49 CFR Parts 21, 26 and 27; and 23 CFR Parts 200, 230, and 633.

The following provision is adopted from 23 CFR 230, Appendix A, with appropriate revisions to conform to the U.S. Department of Labor (US DOL) and FHWA requirements.

1. Equal Employment Opportunity: Equal employment opportunity (EEO) requirements not to discriminate and to take affirmative action to assure equal opportunity as set forth under laws, executive orders, rules, regulations (28 CFR 35, 29 CFR 1630, 29 CFR 1625-1627, 41 CFR 60 and 49 CFR 27) and orders of the Secretary of Labor as modified by the provisions prescribed herein, and imposed pursuant to 23 U.S.C. 140 shall constitute the EEO and specific affirmative action standards for the contractor's project activities under

this contract. The provisions of the Americans with Disabilities Act of 1990 (42 U.S.C. 12101 et seq.) set forth under 28 CFR 35 and 29 CFR 1630 are incorporated by reference in this contract. In the execution of this contract, the contractor agrees to comply with the following minimum specific requirement activities of EEO:

a. The contractor will work with the contracting agency and the Federal Government to ensure that it has made every good faith effort to provide equal opportunity with respect to all of its terms and conditions of employment and in their review of activities under the contract.

b. The contractor will accept as its operating policy the following statement:

"It is the policy of this Company to assure that applicants are employed, and that employees are treated during employment, without regard to their race, religion, sex, color, national origin, age or disability. Such action shall include: 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, pre-apprenticeship, and/or on-the-job training."

2. EEO Officer: The contractor will designate and make known to the contracting officers an EEO Officer who will have the responsibility for and must be capable of effectively administering and promoting an active EEO program and who must be assigned adequate authority and responsibility to do so.

3. Dissemination of Policy: All members of the contractor's staff who are authorized to hire, supervise, promote, and discharge employees, or who recommend such action, or who are substantially involved in such action, will be made fully cognizant of, and will implement, the contractor's EEO policy and contractual responsibilities to provide EEO in each grade and classification of employment. To ensure that the above agreement will be met, the following actions will be taken as a minimum:

a. Periodic meetings of supervisory and personnel office employees will be conducted before the start of work and then not less often than once every six months, at which time the contractor's EEO policy and its implementation will be reviewed and explained. The meetings will be conducted by the EEO Officer.

b. All new supervisory or personnel office employees will be given a thorough indoctrination by the EEO Officer, covering all major aspects of the contractor's EEO obligations within thirty days following their reporting for duty with the contractor.

c. All personnel who are engaged in direct recruitment for the project will be instructed by the EEO Officer in the contractor's procedures for locating and hiring minorities and women.

d. Notices and posters setting forth the contractor's EEO policy will be placed in areas readily accessible to employees, applicants for employment and potential employees.

e. The contractor's EEO policy and the procedures to implement such policy will be brought to the attention of employees by means of meetings, employee handbooks, or other appropriate means.

4. Recruitment: When advertising for employees, the contractor will include in all advertisements for employees the notation: "An Equal Opportunity Employer." All such advertisements will be placed in publications having a large circulation among minorities and women in the area from which the project work force would normally be derived.

a. The contractor will, unless precluded by a valid bargaining agreement, conduct systematic and direct recruitment through public and private employee referral sources likely to yield qualified minorities and women. To meet this requirement, the contractor will identify sources of potential minority group employees, and establish with such identified sources procedures whereby minority and women applicants may be referred to the contractor for employment consideration.

b. In the event the contractor has a valid bargaining agreement providing for exclusive hiring hall referrals, the contractor is expected to observe the provisions of that agreement to the extent that the system meets the contractor's compliance with EEO contract provisions. Where implementation of such an agreement has the effect of discriminating against minorities or women, or obligates the contractor to do the same, such implementation violates Federal nondiscrimination provisions.

c. The contractor will encourage its present employees to refer minorities and women as applicants for employment. Information and procedures with regard to referring such applicants will be discussed with employees.

5. Personnel Actions: Wages, working conditions, and employee benefits shall be established and administered, and personnel actions of every type, including hiring, upgrading, promotion, transfer, demotion, layoff, and termination, shall be taken without regard to race, color, religion, sex, national origin, age or disability. The following procedures shall be followed:

a. The contractor will conduct periodic inspections of project sites to insure that working conditions and employee facilities do not indicate discriminatory treatment of project site personnel.

b. The contractor will periodically evaluate the spread of wages paid within each classification to determine any evidence of discriminatory wage practices.

c. The contractor will periodically review selected personnel actions in depth to determine whether there is evidence of discrimination. Where evidence is found, the contractor will promptly take corrective action. If the review indicates that the discrimination may extend beyond the actions reviewed, such corrective action shall include all affected persons.

d. The contractor will promptly investigate all complaints of alleged discrimination made to the contractor in connection with its obligations under this contract, will attempt to resolve such complaints, and will take appropriate corrective action within a reasonable time. If the investigation indicates that the discrimination may affect persons other than the complainant, such corrective action shall include such other persons. Upon completion of each investigation, the contractor will inform every complainant of all of their avenues of appeal.

6. Training and Promotion:

a. The contractor will assist in locating, qualifying, and increasing the skills of minorities and women who are

applicants for employment or current employees. Such efforts should be aimed at developing full journey level status employees in the type of trade or job classification involved.

b. Consistent with the contractor's work force requirements and as permissible under Federal and State regulations, the contractor shall make full use of training programs, i.e., apprenticeship, and on-the-job training programs for the geographical area of contract performance. In the event a special provision for training is provided under this contract, this subparagraph will be superseded as indicated in the special provision. The contracting agency may reserve training positions for persons who receive welfare assistance in accordance with 23 U.S.C. 140(a).

c. The contractor will advise employees and applicants for employment of available training programs and entrance requirements for each.

d. The contractor will periodically review the training and promotion potential of employees who are minorities and women and will encourage eligible employees to apply for such training and promotion.

7. Unions: If the contractor relies in whole or in part upon unions as a source of employees, the contractor will use good faith efforts to obtain the cooperation of such unions to increase opportunities for minorities and women. Actions by the contractor, either directly or through a contractor's association acting as agent, will include the procedures set forth below:

a. The contractor will use good faith efforts to develop, in cooperation with the unions, joint training programs aimed toward qualifying more minorities and women for membership in the unions and increasing the skills of minorities and women so that they may qualify for higher paying employment.

b. The contractor will use good faith efforts to incorporate an EEO clause into each union agreement to the end that such union will be contractually bound to refer applicants without regard to their race, color, religion, sex, national origin, age or disability.

c. The contractor is to obtain information as to the referral practices and policies of the labor union except that to the extent such information is within the exclusive possession of the labor union and such labor union refuses to furnish such information to the contractor, the contractor shall so certify to the contracting agency and shall set forth what efforts have been made to obtain such information.

d. In the event the union is unable to provide the contractor with a reasonable flow of referrals within the time limit set forth in the collective bargaining agreement, the contractor will, through independent recruitment efforts, fill the employment vacancies without regard to race, color, religion, sex, national origin, age or disability; making full efforts to obtain qualified and/or qualifiable minorities and women. The failure of a union to provide sufficient referrals (even though it is obligated to provide exclusive referrals under the terms of a collective bargaining agreement) does not relieve the contractor from the requirements of this paragraph. In the event the union referral practice prevents the contractor from meeting the obligations pursuant to Executive Order 11246, as amended, and these special provisions, such contractor shall immediately notify the contracting agency.

8. Reasonable Accommodation for Applicants / Employees with Disabilities: The contractor must be familiar with the requirements for and comply with the Americans with Disabilities Act and all rules and regulations established there under. Employers must provide reasonable accommodation in all employment activities unless to do so would cause an undue hardship.

9. Selection of Subcontractors, Procurement of Materials and Leasing of Equipment: The contractor shall not discriminate on the grounds of race, color, religion, sex, national origin, age or disability in the selection and retention of subcontractors, including procurement of materials and leases of equipment. The contractor shall take all necessary and reasonable steps to ensure nondiscrimination in the administration of this contract.

a. The contractor shall notify all potential subcontractors and suppliers and lessors of their EEO obligations under this contract.

b. The contractor will use good faith efforts to ensure subcontractor compliance with their EEO obligations.

10. Assurance Required by 49 CFR 26.13(b):

a. The requirements of 49 CFR Part 26 and the State DOT's U.S. DOT-approved DBE program are incorporated by reference.

b. 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 DOT-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 contracting agency deems appropriate.

11. Records and Reports: The contractor shall keep such records as necessary to document compliance with the EEO requirements. Such records shall be retained for a period of three years following the date of the final payment to the contractor for all contract work and shall be available at reasonable times and places for inspection by authorized representatives of the contracting agency and the FHWA.

a. The records kept by the contractor shall document the following:

(1) The number and work hours of minority and non-minority group members and women employed in each work classification on the project;

(2) The progress and efforts being made in cooperation with unions, when applicable, to increase employment opportunities for minorities and women; and

(3) The progress and efforts being made in locating, hiring, training, qualifying, and upgrading minorities and women;

b. The contractors and subcontractors will submit an annual report to the contracting agency each July for the duration of the project, indicating the number of minority, women, and non-minority group employees currently engaged in each work classification required by the contract work. This information is to be reported on Form FHWA-1391. The staffing data should represent the project work force on board in all or any part of the last payroll period preceding the end of July. If on-the-job training is being required by special provision, the contractor

will be required to collect and report training data. The employment data should reflect the work force on board during all or any part of the last payroll period preceding the end of July.

III. NONSEGREGATED FACILITIES

This provision is applicable to all Federal-aid construction contracts and to all related construction subcontracts of $10,000 or more.

The contractor must ensure that facilities provided for employees are provided in such a manner that segregation on the basis of race, color, religion, sex, or national origin cannot result. The contractor may neither require such segregated use by written or oral policies nor tolerate such use by employee custom. The contractor's obligation extends further to ensure that its employees are not assigned to perform their services at any location, under the contractor's control, where the facilities are segregated. The term "facilities" includes waiting rooms, work areas, restaurants and other eating areas, time clocks, restrooms, washrooms, locker rooms, and other storage or dressing areas, parking lots, drinking fountains, recreation or entertainment areas, transportation, and housing provided for employees. The contractor shall provide separate or single-user restrooms and necessary dressing or sleeping areas to assure privacy between sexes.

IV. DAVIS-BACON AND RELATED ACT PROVISIONS

This section is applicable to all Federal-aid construction projects exceeding $2,000 and to all related subcontracts and lower-tier subcontracts (regardless of subcontract size). The requirements apply to all projects located within the right-of-way of a roadway that is functionally classified as Federal-aid highway. This excludes roadways functionally classified as local roads or rural minor collectors, which are exempt. Contracting agencies may elect to apply these requirements to other projects.

The following provisions are from the U.S. Department of Labor regulations in 29 CFR 5.5 “Contract provisions and related matters” with minor revisions to conform to the FHWA-1273 format and FHWA program requirements.

1. Minimum wages

a. All laborers and mechanics employed or working upon the site of the work, 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.d. 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 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 classification and wage rates conformed under paragraph 1.b. 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.

b.(1) 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:

(i) The work to be performed by the classification requested is not performed by a classification in the wage determination; and

(ii) The classification is utilized in the area by the construction industry; and

(iii) The proposed wage rate, including any bona fide fringe benefits, bears a reasonable relationship to the wage rates contained in the wage determination.

(2) 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.

(3) 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 Wage and Hour Administrator for determination. The Wage and Hour 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.

(4) The wage rate (including fringe benefits where appropriate) determined pursuant to paragraphs 1.b.(2) or 1.b.(3) 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.

c. 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.

d. 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.

2. Withholding

The contracting agency 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, all or part of the wages required by the contract, the contracting agency may, after written notice to the contractor, 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

a. 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.(1) The contractor shall submit weekly for each week in which any contract work is performed a copy of all payrolls to the contracting agency. The payrolls submitted shall set out accurately and completely all of the information required to be maintained under 29 CFR 5.5(a)(3)(i), except that full social security numbers and home addresses shall not be included on weekly transmittals. Instead the payrolls shall only need to include an individually identifying number for each employee (e.g. , the last four digits of the employee's social security number). The required weekly payroll information may be submitted in any form desired. Optional Form WH–347 is available for this purpose from the Wage and Hour Division Web site at http://www.dol.gov/esa/whd/forms/wh347instr.htm or its successor site. The prime contractor is responsible for the submission of copies of payrolls by all subcontractors. Contractors and subcontractors shall maintain the full social security number and current address of each covered worker, and shall provide them upon request to the contracting agency for transmission to the State DOT, the FHWA or the Wage and Hour Division of the Department of Labor for purposes of an investigation or audit of compliance with prevailing wage requirements. It is not a violation of this section for a prime contractor to require a subcontractor to provide addresses and social security numbers to the prime contractor for its own records, without weekly submission to the contracting agency..

(2) 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:

(i) That the payroll for the payroll period contains the information required to be provided under §5.5 (a)(3)(ii) of Regulations, 29 CFR part 5, the appropriate information is being maintained under §5.5 (a)(3)(i) of Regulations, 29 CFR part 5, and that such information is correct and complete;

(ii) 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;

(iii) 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.

(3) 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 3.b.(2) of this section.

(4) 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.

c. The contractor or subcontractor shall make the records required under paragraph 3.a. of this section available for inspection, copying, or transcription by authorized representatives of the contracting agency, the State DOT, the FHWA, 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 FHWA may, after written notice to the contractor, the contracting agency or the State DOT, 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

a. Apprentices (programs of the USDOL).

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, Office of Apprenticeship Training, Employer and Labor Services, or with a State Apprenticeship Agency recognized by the Office, 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 Office of Apprenticeship Training, Employer and Labor Services 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 determines that a different practice prevails for the applicable apprentice classification, fringes shall be paid in accordance with that determination.

In the event the Office of Apprenticeship Training, Employer and Labor Services, or a State Apprenticeship Agency recognized by the Office, 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.

b. Trainees (programs of the USDOL).

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.

c. 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.

d. Apprentices and Trainees (programs of the U.S. DOT).

Apprentices and trainees working under apprenticeship and skill training programs which have been certified by the Secretary of Transportation as promoting EEO in connection with Federal-aid highway construction programs are not subject to the requirements of paragraph 4 of this Section IV. The straight time hourly wage rates for apprentices and trainees under such programs will be established by the particular programs. The ratio of apprentices and trainees to journeymen shall not be greater than permitted by the terms of the particular program.

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 Form FHWA-1273 in any subcontracts and also require the subcontractors to include Form FHWA-1273 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.

a. 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).

b. 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).

c. The penalty for making false statements is prescribed in the U.S. Criminal Code, 18 U.S.C. 1001.

V. CONTRACT WORK HOURS AND SAFETY STANDARDS ACT

The following clauses apply to any Federal-aid construction contract in an amount in excess of $100,000 and subject to the overtime provisions of the Contract Work Hours and Safety Standards Act. These clauses shall be inserted in addition to the clauses required by 29 CFR 5.5(a) or 29 CFR 4.6. As used in this paragraph, the terms laborers and mechanics include watchmen and guards.

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 therefor shall be liable for the unpaid wages. In addition, such contractor and subcontractor shall be liable to the United States (in the case of work done under contract for the District of Columbia or a territory, to such District or to such territory), 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. The FHWA or the contacting agency 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 paragraph (1.) through (4.) of 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 paragraphs (1.) through (4.) of this section.

VI. SUBLETTING OR ASSIGNING THE CONTRACT

This provision is applicable to all Federal-aid construction contracts on the National Highway System.

1. The contractor shall perform with its own organization contract work amounting to not less than 30 percent (or a greater percentage if specified elsewhere in the contract) of the total original contract price, excluding any specialty items designated by the contracting agency. Specialty items may be performed by subcontract and the amount of any such specialty items performed may be deducted from the total original contract price before computing the amount of work required to be performed by the contractor's own organization (23 CFR 635.116).

a. The term “perform work with its own organization” refers to workers employed or leased by the prime contractor, and equipment owned or rented by the prime contractor, with or without operators. Such term does not include employees or equipment of a subcontractor or lower tier subcontractor, agents of the prime contractor, or any other assignees. The term may include payments for the costs of hiring leased employees from an employee leasing firm meeting all relevant Federal and State regulatory requirements. Leased employees may only be included in this term if the prime contractor meets all of the following conditions:

(1) the prime contractor maintains control over the supervision of the day-to-day activities of the leased employees;
(2) the prime contractor remains responsible for the quality of the work of the leased employees;
(3) the prime contractor retains all power to accept or exclude individual employees from work on the project; and
(4) the prime contractor remains ultimately responsible for the payment of predetermined minimum wages, the submission of payrolls, statements of compliance and all other Federal regulatory requirements.

b. "Specialty Items" shall be construed to be limited to work that requires highly specialized knowledge, abilities, or equipment not ordinarily available in the type of contracting organizations qualified and expected to bid or propose on the contract as a whole and in general are to be limited to minor components of the overall contract.

2. The contract amount upon which the requirements set forth in paragraph (1) of Section VI is computed includes the cost of material and manufactured products which are to be purchased or produced by the contractor under the contract provisions.

3. The contractor shall furnish (a) a competent superintendent or supervisor who is employed by the firm, has full authority to direct performance of the work in accordance with the contract requirements, and is in charge of all construction operations (regardless of who performs the work) and (b) such other of its own organizational resources (supervision, management, and engineering services) as the contracting officer determines is necessary to assure the performance of the contract.

4. No portion of the contract shall be sublet, assigned or otherwise disposed of except with the written consent of the contracting officer, or authorized representative, and such consent when given shall not be construed to relieve the contractor of any responsibility for the fulfillment of the contract. Written consent will be given only after the contracting agency has assured that each subcontract is evidenced in writing and that it contains all pertinent provisions and requirements of the prime contract.

5. The 30% self-performance requirement of paragraph (1) is not applicable to design-build contracts; however, contracting agencies may establish their own self-performance requirements.

VII. SAFETY: ACCIDENT PREVENTION

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

1. In the performance of this contract the contractor shall comply with all applicable Federal, State, and local laws governing safety, health, and sanitation (23 CFR 635). The contractor shall provide all safeguards, safety devices and protective equipment and take any other needed actions as it determines, or as the contracting officer 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.

2. It is a condition of this contract, and shall be made a condition of each subcontract, which the contractor enters 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 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. 3704).

3. 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.3704).

VIII. FALSE STATEMENTS CONCERNING HIGHWAY PROJECTS

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

In order to assure high quality and durable construction in conformity with approved plans and specifications and a high degree of reliability on statements and representations made by engineers, contractors, suppliers, and workers on Federal-aid highway projects, it is essential that all persons concerned with the project perform their functions as carefully, thoroughly, and honestly as possible. Willful falsification, distortion, or misrepresentation with respect to any facts related to the project is a violation of Federal law. To prevent any misunderstanding regarding the seriousness of these and similar acts, Form FHWA-1022 shall be posted on each Federal-aid highway project (23 CFR 635) in one or more places where it is readily available to all persons concerned with the project:

18 U.S.C. 1020 reads as follows:

"Whoever, being an officer, agent, or employee of the United States, or of any State or Territory, or whoever, whether a person, association, firm, or corporation, knowingly makes any false statement, false representation, or false report as to the character, quality, quantity, or cost of the material used or to be used, or the quantity or quality of the work performed or to be performed, or the cost thereof in connection with the submission of plans, maps, specifications, contracts, or costs of construction on any highway or related project submitted for approval to the Secretary of Transportation; or

Whoever knowingly makes any false statement, false representation, false report or false claim with respect to the character, quality, quantity, or cost of any work performed or to be performed, or materials furnished or to be furnished, in connection with the construction of any highway or related project approved by the Secretary of Transportation; or

Whoever knowingly makes any false statement or false representation as to material fact in any statement, certificate, or report submitted pursuant to provisions of the Federal-aid Roads Act approved July 1, 1916, (39 Stat. 355), as amended and supplemented;

Shall be fined under this title or imprisoned not more than 5 years or both."

IX. IMPLEMENTATION OF CLEAN AIR ACT AND FEDERAL WATER POLLUTION CONTROL ACT

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts.

By submission of this bid/proposal or the execution of this contract, or subcontract, as appropriate, the bidder, proposer, Federal-aid construction contractor, or subcontractor, as appropriate, will be deemed to have stipulated as follows:

1. That any person who is or will be utilized in the performance of this contract is not prohibited from receiving an award due to a violation of Section 508 of the Clean Water Act or Section 306 of the Clean Air Act.
2. That the contractor agrees to include or cause to be included the requirements of paragraph (1) of this Section X in every subcontract, and further agrees to take such action as the contracting agency may direct as a means of enforcing such requirements.

X. CERTIFICATION REGARDING DEBARMENT, SUSPENSION, INELIGIBILITY AND VOLUNTARY EXCLUSION

This provision is applicable to all Federal-aid construction contracts, design-build contracts, subcontracts, lower-tier subcontracts, purchase orders, lease agreements, consultant contracts or any other covered transaction requiring FHWA approval or that is estimated to cost $25,000 or more – as defined in 2 CFR Parts 180 and 1200.

1**. Instructions for Certification – First Tier Participants:**

a. By signing and submitting this proposal, the prospective first tier participant is providing the certification set out below.

b. The inability of a person to provide the certification set out below will not necessarily result in denial of participation in this covered transaction. The prospective first tier participant shall submit an explanation of why it cannot provide the certification set out below. The certification or explanation will be considered in connection with the department or agency's determination whether to enter into this transaction. However, failure of the prospective first tier participant to furnish a certification or an explanation shall disqualify such a person from participation in this transaction.

c. The certification in this clause is a material representation of fact upon which reliance was placed when the contracting agency determined to enter into this transaction. If it is later determined that the prospective participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the contracting agency may terminate this transaction for cause of default.

d. The prospective first tier participant shall provide immediate written notice to the contracting agency to whom this proposal is submitted if any time the prospective first tier participant learns that its certification was erroneous when submitted or has become erroneous by reason of changed circumstances.

e. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

f. The prospective first tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency entering into this transaction.

g. The prospective first tier participant further agrees by submitting this proposal that it will include the clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transactions," provided by the department or contracting agency, entering into this covered transaction, without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

h. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

i. Nothing contained in the foregoing shall be construed to require the establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of the prospective participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

j. Except for transactions authorized under paragraph (f) of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the department or agency may terminate this transaction for cause or default.

* * * * *

2. Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion – First Tier Participants:

a. The prospective first tier participant certifies to the best of its knowledge and belief, that it and its principals:

(1) Are not presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency;

(2) Have not within a three-year period preceding this proposal been convicted of or had a civil judgment rendered against them for commission of fraud or a criminal offense in connection with obtaining, attempting to obtain, or performing a public (Federal, State or local) transaction or contract under a public transaction; violation of Federal or State antitrust statutes or commission of embezzlement, theft, forgery, bribery, falsification or destruction of records, making false statements, or receiving stolen property;

(3) Are not presently indicted for or otherwise criminally or civilly charged by a governmental entity (Federal, State or local) with commission of any of the offenses enumerated in paragraph (a)(2) of this certification; and

(4) Have not within a three-year period preceding this application/proposal had one or more public transactions (Federal, State or local) terminated for cause or default.

b. Where the prospective participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

2. **Instructions for Certification - Lower Tier Participants:**

(Applicable to all subcontracts, purchase orders and other lower tier transactions requiring prior FHWA approval or estimated to cost $25,000 or more - 2 CFR Parts 180 and 1200)

a. By signing and submitting this proposal, the prospective lower tier is providing the certification set out below.

b. The certification in this clause is a material representation of fact upon which reliance was placed when this transaction was entered into. If it is later determined that the prospective lower tier participant knowingly rendered an erroneous certification, in addition to other remedies available to the Federal Government, the department, or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

c. The prospective lower tier participant shall provide immediate written notice to the person to which this proposal is submitted if at any time the prospective lower tier participant learns that its certification was erroneous by reason of changed circumstances.

d. The terms "covered transaction," "debarred," "suspended," "ineligible," "participant," "person," "principal," and "voluntarily excluded," as used in this clause, are defined in 2 CFR Parts 180 and 1200. You may contact the person to which this proposal is submitted for assistance in obtaining a copy of those regulations. “First Tier Covered Transactions” refers to any covered transaction between a grantee or subgrantee of Federal funds and a participant (such as the prime or general contract). “Lower Tier Covered Transactions” refers to any covered transaction under a First Tier Covered Transaction (such as subcontracts). “First Tier Participant” refers to the participant who has entered into a covered transaction with a grantee or subgrantee of Federal funds (such as the prime or general contractor). “Lower Tier Participant” refers any participant who has entered into a covered transaction with a First Tier Participant or other Lower Tier Participants (such as subcontractors and suppliers).

e. The prospective lower tier participant agrees by submitting this proposal that, should the proposed covered transaction be entered into, it shall not knowingly enter into any lower tier covered transaction with a person who is debarred, suspended, declared ineligible, or voluntarily excluded from participation in this covered transaction, unless authorized by the department or agency with which this transaction originated.

f. The prospective lower tier participant further agrees by submitting this proposal that it will include this clause titled "Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion-Lower Tier Covered Transaction," without modification, in all lower tier covered transactions and in all solicitations for lower tier covered transactions exceeding the $25,000 threshold.

g. A participant in a covered transaction may rely upon a certification of a prospective participant in a lower tier covered transaction that is not debarred, suspended, ineligible, or voluntarily excluded from the covered transaction, unless it knows that the certification is erroneous. A participant is responsible for ensuring that its principals are not suspended, debarred, or otherwise ineligible to participate in covered transactions. To verify the eligibility of its principals, as well as the eligibility of any lower tier prospective participants, each participant may, but is not required to, check the Excluded Parties List System website (https://www.epls.gov/), which is compiled by the General Services Administration.

h. Nothing contained in the foregoing shall be construed to require establishment of a system of records in order to render in good faith the certification required by this clause. The knowledge and information of participant is not required to exceed that which is normally possessed by a prudent person in the ordinary course of business dealings.

i. Except for transactions authorized under paragraph e of these instructions, if a participant in a covered transaction knowingly enters into a lower tier covered transaction with a person who is suspended, debarred, ineligible, or voluntarily excluded from participation in this transaction, in addition to other remedies available to the Federal Government, the

department or agency with which this transaction originated may pursue available remedies, including suspension and/or debarment.

* * * * *

Certification Regarding Debarment, Suspension, Ineligibility and Voluntary Exclusion--Lower Tier Participants:

1. The prospective lower tier participant certifies, by submission of this proposal, that neither it nor its principals is presently debarred, suspended, proposed for debarment, declared ineligible, or voluntarily excluded from participating in covered transactions by any Federal department or agency.

2. Where the prospective lower tier participant is unable to certify to any of the statements in this certification, such prospective participant shall attach an explanation to this proposal.

* * * * *

XI. CERTIFICATION REGARDING USE OF CONTRACT FUNDS FOR LOBBYING

This provision is applicable to all Federal-aid construction contracts and to all related subcontracts which exceed $100,000 (49 CFR 20).

1. The prospective participant certifies, by signing and submitting this bid or proposal, 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. 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 U.S.C. 1352. 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.

3. The prospective participant also agrees by submitting its bid or proposal that the participant 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.

ATTACHMENT A - EMPLOYMENT AND MATERIALS PREFERENCE FOR APPALACHIAN DEVELOPMENT HIGHWAY SYSTEM OR APPALACHIAN LOCAL ACCESS ROAD CONTRACTS

This provision is applicable to all Federal-aid projects funded under the Appalachian Regional Development Act of 1965.

1. During the performance of this contract, the contractor undertaking to do work which is, or reasonably may be, done as on-site work, shall give preference to qualified persons who regularly reside in the labor area as designated by the DOL wherein the contract work is situated, or the subregion, or the Appalachian counties of the State wherein the contract work is situated, except:

a. To the extent that qualified persons regularly residing in the area are not available.

b. For the reasonable needs of the contractor to employ supervisory or specially experienced personnel necessary to assure an efficient execution of the contract work.

c. For the obligation of the contractor to offer employment to present or former employees as the result of a lawful collective bargaining contract, provided that the number of nonresident persons employed under this subparagraph (1c) shall not exceed 20 percent of the total number of employees employed by the contractor on the contract work, except as provided in subparagraph (4) below.

2. The contractor shall place a job order with the State Employment Service indicating (a) the classifications of the laborers, mechanics and other employees required to perform the contract work, (b) the number of employees required in each classification, (c) the date on which the participant estimates such employees will be required, and (d) any other pertinent information required by the State Employment Service to complete the job order form. The job order may be placed with the State Employment Service in writing or by telephone. If during the course of the contract work, the information submitted by the contractor in the original job order is substantially modified, the participant shall promptly notify the State Employment Service.

3. The contractor shall give full consideration to all qualified job applicants referred to him by the State Employment Service. The contractor is not required to grant employment to any job applicants who, in his opinion, are not qualified to perform the classification of work required.

4. If, within one week following the placing of a job order by the contractor with the State Employment Service, the State Employment Service is unable to refer any qualified job applicants to the contractor, or less than the number requested, the State Employment Service will forward a certificate to the contractor indicating the unavailability of applicants. Such certificate shall be made a part of the contractor's permanent project records. Upon receipt of this certificate, the contractor may employ persons who do not normally reside in the labor area to fill positions covered by the certificate, notwithstanding the provisions of subparagraph (1c) above.

5. The provisions of 23 CFR 633.207(e) allow the contracting agency to provide a contractual preference for the use of mineral resource materials native to the Appalachian region.

6. The contractor shall include the provisions of Sections 1 through 4 of this Attachment A in every subcontract for work which is, or reasonably may be, done as on-site work.

STATE OF ALASKA
DEPARTMENT OF TRANSPORTATION AND PUBLIC FACILITIES
SOUTHEAST REGION - DESIGN AND ENGINEERING SERVICES

CHANGE TO INVITATION FOR BIDS - STATE AND FEDERAL WAGE RATES

Effective August 1, 2005, the Southeast Region of the Department of Transportation and Public Facilities will no longer publish Federal and Stage Wage Rates in the Specifications for Construction Projects in the Invitation to Bid (ITB). The interested parties will now be responsible for downloading the most current wage rates from the appropriate websites. The websites will be published in the Table of Contents (TOC) and the following notice will appear on page two (2) of the ITB in Notice to Bidders. This notice will also appear in place of those wage rates. In the TOC and the Notice to Bidders on Page 2 of each ITB we will also inform you of the appropriate Federal category to use.

"This project requires the use of either or both Federal and State Wage Rates. The most current version available on the websites must be used, as long as there are at least 10 full days before bids open. In other words, you do **not** have to use a State or Federal Wage Rate that changes the rates if it is **less** than ten (10) full days prior to bid opening and you have applied the last update.

The Wage Rates are downloadable at the following websites:

Federal Wage Rates: http://www.wdol.gov/dba.aspx#0. This project uses AK1 and AK6.

State Wage Rates: http://146.63.75.50/lss/pamp600.htm."

State Wage Rates are updated twice a year, usually April 1 and September 1. Federal Wage Rates may be updated every Friday. Once you have accessed your first Federal Wage Rate, you can also sign up for Alert Service by clicking the box at the bottom of the screen. You will be notified whenever changes to the Alaska Wage Rates are updated for bids that are in solicitation during those time periods.

Bidders not using the correct wage rates will still be responsible for paying the correct wage. The applicable State and Federal Wage Rates will be published in hard copy only in the final Conformed Copies.

By signature on the Bid Form, the bidder certifies that the correct and applicable wage rates have been applied.

If you need help with downloading the Wage Rates, please contact Jeff Jenkins, Contracts Officer, at (907) 465-4420 and he will provide assistance with the setup.

Standard Drawings

The following Standard Drawings apply to this project:
T-30.11

They can be downloaded from the following website:

http://www.dot.state.ak.us/stwddes/dcsprecon/stddwgeng.shtml

Standard Drawings will be published in hard copy only in the final Conformed Copies.