

ITEM G-100 MOBILIZATION AND DEMOBILIZATION

DESCRIPTION

100-1.1 This item consists of preparatory work and operations, including but not limited to operations necessary to move personnel, equipment, supplies and incidentals to the project site; to establish offices, buildings and other facilities, except as provided under Section 130; to perform all other work and operations, including costs incurred, before beginning work on the project; and to complete similar demobilization activities, including submittals such as as-builts, certificates, payrolls, civil rights reports, equipment warranties, etc.

METHOD OF MEASUREMENT

100-2.1 Payment for mobilization and demobilization will be made in partial payments as follows:

- a. Up to sixty percent of the amount bid for mobilization and demobilization may be paid when equipment and supplies are landed in serviceable condition at the project site and other necessary preparations have been completed so that work can commence on other pay items.
- b. The remaining balance will be paid as contractor facilities are dismantled and equipment is removed from the airport property, with the final increment paid upon completion of demobilization or as approved by the Engineer.

The Department reserves the right to require submittal of invoices, receipted bills, payrolls, and other appropriate documents to justify any or all payments under this item.

BASIS OF PAYMENT

100-3.1 Payment will be made at the contract lump sum price for mobilization and demobilization. This price and payment shall be full compensation for all costs associated with this item.

Payment will be made under:

Item G-100a Mobilization and Demobilization - per lump sum

ITEM G-115 WORKER MEALS AND LODGING, OR PER DIEM

DESCRIPTION

115-1.1 This item consists of complying with the Alaska Department of Labor and Workforce Development (DOLWD) requirements for Worker Meals and Lodging, or Per Diem; as described in their July 25, 2005 memo WHPL #197 and the State Laborer's and Mechanic's Minimum Rates of Pay (current issue).

Ensure subcontractors comply with the DOLWD requirements.

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.

METHOD OF MEASUREMENT

115-2.1 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.

BASIS OF PAYMENT

115-3.1 Payment will be made at the contract lump sum price for Worker Meals and Lodging, or Per Diem. This price and payment shall be full compensation for all costs associated with this item.

Payment will be made under:

Item G-115a Worker Meals and Lodging, or Per Diem - per lump sum

ITEM G-120 DISADVANTAGED BUSINESS ENTERPRISE (DBE) PROGRAM

120-1.1 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 US DOT assisted contracts.

120-1.2 INTERPRETATION. This section implements the requirements of 49 CFR Part 26, and the Department's federally approved DBE Program.

120-1.3. 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).

120-1.4 DEFINITIONS AND TERMS.

- a. **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.
- b. **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.
- c. **Civil Rights Office.** The Department's Civil Rights Office. (CRO)
- d. **Contract Compliance Officer.** Individual within the CRO with the authority to administer the Department's compliance programs.
- e. **Disadvantaged 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.
- f. **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.
- g. **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.
- h. **DBE Officer.** Individual designated in writing as a representative of the Contractor concerning DBE issues.
- i. **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 of the construction industry at large on a regular basis.
- j. **Race Conscious Participation.** DBE participation used to meet a specified DBE Utilization Goal.

- k. **Race Neutral Participation.** DBE participation that is in excess of the specified DBE Utilization Goal **or participation that does not count towards this goal.**
- l. **Regular Dealer.** A DBE certified in a supply category who operates in a manner consistent with industry practice and who:
 - (1) maintains an in-house inventory on a regular basis of the particular product provided to this project; and
 - (2) keeps an inventory in an amount appropriate for the type of work using that product; and
 - (3) 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.
 - (4) 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.
- m. **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.

120-2.1 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 120-3.1), 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.

120-3.1 DETERMINATION OF COMPLIANCE.

- a. **Phase I-Bid.** All DBE **GFES** must be completed prior to bid opening.
- b. **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).

- (1) **Written DBE Commitment.** Complete Form 25A-326 for each DBE subcontractor.
- (2) **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.
- (3) **GFE Documentation.** Submit a completed Summary of Good Faith Effort Documentation Form 25A-332A (with attachments) and Contract 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.

120-3.2 GOOD FAITH EFFORT (GFE).

a. **GFE Criteria.** When a bidder fails to meet 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.

- (1) **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.

- (2) **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:

- (a) 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.
- (b) 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.

(c) 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.

- (3) **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.

- (4) **Assistance To DBEs.** Contractors must provide DBEs with:

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

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

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

- (5) **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 120-3.2, subsection a(2) items (a) through (c).

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.

- (6) **GFE Evaluation.** Subsections (1) through (5) must be completed for a GFE based submission to be considered. Failure to perform and document actions contained in subsections (1) through (5) 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.

- b. **Administrative Reconsideration.** 49 CFR Part 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:

- (1) 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.
- (2) 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.
- (3) The finding of the DBE Liaison Officer cannot be appealed to the U.S. DOT.

120-3.3 DBE CREDITABLE AND NON CREDITABLE WORK.

a. **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.

b. **DBE Decertification.**

(1) 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:

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

(b) 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.

(2) 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.

(3) 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 120-3.3(c) Termination of a DBE and 120-3.3 (d) 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.

c. **Termination of a DBE.**

(1) 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:

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

- (b) 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.
 - (c) The DBE fails or refuses to meet the Contractor's reasonable, nondiscriminatory bond requirements;
 - (d) The DBE becomes bankrupt, insolvent, or exhibits credit unworthiness;
 - (e) The DBE is ineligible to work on public works projects because of suspension and debarment proceedings pursuant to 2 CFR Parts 180, 215, and 1,200 or applicable state law.
 - (f) The Engineer determines that the DBE is not a responsible contractor.
 - (g) The DBE voluntarily withdraws from the project and provides a written notice of its withdrawal;
 - (h) The DBE is ineligible to receive DBE credit for the type of work required;
 - (i) A DBE owner dies or becomes disabled with the result that the DBE is unable to complete its work; or
 - (j) 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.
- (2) 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.
 - (3) 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.
 - (4) DBEs that are terminated must be replaced or substituted in accordance with 120-3.2(d).

d. DBE Replacement or Substitution.

- (1) 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 120-3.3(c). 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.
- (2) 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.

- (a) 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
- (b) 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 120-3.2; or
- (c) 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.

120-3.4 COMMERCIALY USEFUL FUNCTION.

- a. **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:

- (1) Prime Contractors;
- (2) Subcontractors;
- (3) Manufacturers;
- (4) Regular Dealers;
- (5) Brokers; or
- (6) Joint Ventures

- a. **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 commitment.

- (1) 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.
- (2) The following factors will be used in determining whether a DBE trucking company is performing a Commercially Useful Function:
 - (a) 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.
 - (b) The DBE must itself own and operate at least one fully licensed, insured, and operational truck used on the contract.

- (c) 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.
- (3) 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 Commercial Useful Function and potential DBE credit.
- (4) 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.
- (5) DBE work shall conform to the following requirements to be a Commercially Useful Function:
 - (a) It will be necessary and useful work required for the execution of the Contract.
 - (b) The scope of work will be distinct and identifiable with specific contract items of work, bonding, or insurance requirements.
 - (c) 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.
 - (d) 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.

- (e) 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.

- (f) 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.

- (g) 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.

- c. **Rebuttal of 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.

- d. **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.

120-4.1 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:

- a. 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.
- b. 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.
- c. 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 credit 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.
- d. Credit for the Commercially Useful Function of a manufacturer is 100 percent of the monies paid to the DBE for the creditable materials manufactured.
- e. 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.
- f. 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.

- g. 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.
- h. 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.

120-5.1 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 120-3.3[d][2][c]), the Department will also consider this unsatisfactory work. Unsatisfactory work may result in disqualification of the Contractor from future bidding under Subsection GCP 20-13 and withholding of progress payments consistent with Subsection GCP 90-06.

ITEM G-130 SERVICES TO BE FURNISHED BY THE CONTRACTOR

DESCRIPTION

130-1.1 This work consists of furnishing and maintaining facilities specified in the Contract and listed in the bid schedule for the Department's project administrative personnel to use during the project. Facilities must be fully usable for the specified service. Maintain facilities adequately to preserve their utility. Services include heat, electricity, water and any others required to operate the facility. All facilities remain your property when you complete the work. Locate the sites and acquire all permits required unless otherwise shown on the Plans or specified.

REQUIREMENTS

130-2.1 FIELD OFFICE. Furnish and maintain a suitable office for the Engineer to use during construction. If this office is part of your building, completely partition it from the rest of the structure and provide a separate outside door equipped with a lock. Provide a suitable stove or other heating device with fuel. Furnish adequate electrical lighting and 120-volt, 60-cycle power. Construct the office with at least 500 square foot of floor space and at least 60 square foot of window area, along with adequate ventilation. Provide at least 12 linear feet of shelf space. Equip the field office with sanitary facilities. Provide janitorial services at least weekly. Furnish two private telephone lines for the exclusive use of the Engineer. Furnish a telephone connected to the first line and the second line is to be available for a facsimile machine/dial-up Internet connection. Provide Internet connection with send and receive data capability supporting 56 kilobytes per second or higher data transfer rate.

All long distance calls made by State personnel and the Internet service provider will be paid by the State. Local calls and all connection fees shall be paid by the Contractor.

Provide at least one designated handicap parking space. Make the field office accessible according to the requirements of Americans with Disabilities Act Accessibility Guidelines (ADAAG).

Make the field office available for occupancy two weeks before commencing work on the project through one week after Project Completion.

130-2.2 FIELD LABORATORY. Furnish and maintain a field laboratory for the Engineer to use exclusively throughout the contract. Provide a completely functional installation two weeks before commencing construction work through one week after Project Completion.

- a. **Site.** Grade and compact a site for the lab acceptable to the Engineer. Locate and level the structure on this site. If subsequent ground movement causes an unlevel or unstable condition, re-level or re-locate the facility as directed.
- b. **Main Lab.** Provide a weatherproof structure suitable to field test construction materials, with the following minimum functional requirements:
 - (1) Floor space of 300 square foot.
 - (2) Two 10 square foot windows that open and lock.
 - (3) Lockable door(s).
 - (4) Work bench(es), 30 inches X 16 feet total, 3 feet high.
 - (5) Shelf space, 12 inches X 16 feet.
 - (6) One 20-inch deep sink with attached faucet and approved drain.
 - (7) A gravity-fed 250-gallon tank or pressurized constant water supply of acceptable quality .
 - (8) Electrical service and facilities as follows:
 - (a) Electrical current, 120/240 V (ac), 60-cycle on 24-hour basis.

- (b) Wiring system to support a 40-amp user load demand. At least one 15-amp lighting circuit, and two 20-amp outlet circuits with GFI protection.
 - (c) Outlets, six duplex outlets conveniently spaced around the lab, consistent with local codes.
 - (d) Lights, switch by door and either four 100-watt incandescent or eight 40-watt fluorescent.
 - (e) Exhaust fan, minimum 5 cubic feet per second.
- (9) Heating equipment suitable to maintain a uniform 70 °F room temperature.
 - (10) Storage cabinet, 3 ft X 3 ft X 3 ft, lockable, securely fixed to an inside wall with a hinged door opening outward.
 - (11) Office desk and 2 chairs.

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

- c. **Auxiliary Lab.** Provide a separate weatherproof shed within 20 feet of the main lab structure with the following minimum functional requirements:

- (1) Floor 8 ft X 12 ft, ceiling height 8 ft.
- (2) Door 48 inches wide and window 5 square foot that opens, both lockable.
- (3) Electrical service and facilities as in b.(8), except for the following:
 - (a) Lighting fixtures, 2 ea.
 - (b) Outlets, 3 conveniently spaced around the structure.
 - (c) Wiring system with each circuit GFI protected to satisfy a 20-amp user load demand.
- (4) Work table 3 ft X 20 in X 3 ft high, capable of supporting 250 pounds and affixed to an inside wall as directed.
- (5) Concrete-slab floor, 8 ft X 8 ft X 4 inches thick, cast-in-place or pre-cast. Install anchor bolts in the floor to accommodate the mounting pattern of the Gilson sieving machine at a location as directed.
 - (a) Comply with a. above for slab foundation requirements.
 - (b) Found the slab directly on the prepared site.

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

- (1) Stairway, 36-inch width X 11-inch tread X 7-inch rise.
- (2) Landing, 4 ft X 4 ft centered on the entryway.
- (3) Handrail(s) firmly affixed to the stairway.

- e. **Lab Equipment and Services.** Provide the following:

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

130-2.3 CURING SHED. Furnish and maintain a suitable weather tight shed for curing concrete test cylinders, with a suitable box or bins for curing concrete test cylinders.

Provide a box large enough or enough bins to contain at least 6 test cylinders from each pour that the Contractor proposes to make during any 28-day period. Use a box or bins at least 18 inches high and

constructed of sturdy wood. Line the box or bins with a canvas or plastic liner to help retain moisture in the sand. Construct a lid to provide access to the box or bins.

Provide suitable heating to maintain the temperature in the box (or shed) between 60 and 80 °F at all times when curing the test cylinders. In addition, provide a suitable room thermometer in the shed to check the temperature.

Provide enough sand at the shed to fill the box or bins to be used for curing and enough water to keep the sand in the box or bins moist during the curing period.

130-2.4 CAMP FACILITIES. Furnish and maintain suitable camp facilities for Department employees and other authorized personnel. The Special Provisions will list an estimated number of employees.

Provide the following camp facilities:

- a. Lodging (Bunkhouse and Bedding)
- b. Meals (Mess Hall and Kitchen)
- c. Sanitary and Other Facilities

Provide all camp facilities according to the applicable chapters of the State of Alaska Department of Labor, *Occupational and Industrial Structures Code*, and the State of Alaska Department of Environmental Conservation, *Food Service Regulations*.

Camp facilities for your employees, that meet these requirements, may also be used for State employees.

These Specifications do not exclude the use of roadhouses or lodges located near the project that are available for your use. The Engineer may approve a roadhouse, lodge, or camp, providing the accommodations conform with contract requirements.

Provide camp facilities for use by State employees and other authorized personnel while you are engaged in work at the project site, or in material sources used to supply materials to this project.

Department employees and other authorized personnel must sign a meal and/or lodging sheet after each meal and each night's lodging.

When you use camp facilities, completely remove and dispose of all garbage and/or trash piles, cesspools, septic tanks and leach fields as required by applicable laws and regulations and as directed.

130-2.5 SCALES. When the bid schedule calls for payment for material by weight, other than the barge displacement method, provide one of the following:

- a. **Commercial weighing system.** Permanently installed commercial scales.
- b. **Project weighing system.** Acceptable automatic digital scales and scale house.

Provide scales that record weight at least to the nearest 100 pounds. Maintain scale accuracy to within 0.5% of the correct weight throughout the range of use.

Do not use spring balances.

Do not use belt conveyor scales to determine pay weight. You may use belt conveyor scales to proportion plant blends and mixtures if the scales meet the general requirements for weighing equipment and are calibrated according to the manufacturer's instructions.

You may use batch weights to determine pay quantities when the batching equipment includes an approved and certified automatic weighing, cycling, and monitoring system.

Install and maintain platform scales with the platform level and rigid bulkheads at each end. Use a platform long enough to permit simultaneous weighing of all axle loads of the hauling vehicle, including coupled vehicles.

Maintain the accuracy of scales according to the specifications, tolerances and regulations for commercial weighing and measuring devices contained in the National Bureau of Standards, Handbook 44, as adopted by Alaska Statute, Section 45.75.050.(d). All commercial scales are subject to approval according to the Weights and Measures Act, AS 45.75. Have scales reinspected, as directed, to ensure their accuracy, and sealed to prevent tampering or other adjustment after certification.

Provide a weatherproof housing for platform scales to protect the recording equipment and allow the scale operator convenient access to the weigh indicator, scale computer, ticket printer, and the sequential printer. Furnish sanitary lavatory facilities, heating, adequate electrical lighting and 120-volt, 60-cycle power for the scale house.

Furnish competent scale operators to operate the system.

Weighing System: Provide an electronic computerized weighing system (ECWS) with the following capabilities:

a. Computer.

- (1) Provide a scale computer that can store project numbers and all pay item descriptions for multiple projects and products that are weighed with the scale system.

Use a computer with a self-reading scale system that includes the scale load cell, a sealed direct reading weight indicator, scale computer, ticket printer, and sequential printer, and can record a complete shift's transaction on a 3.5-inch high-density diskette or other approved storage media.

- (2) The scale computer must store the following for each hauling vehicle used on the project:

- (a) Vehicle identification number marked on the vehicle
- (b) Tare weight
- (c) Maximum allowable gross vehicle weight (MAVW)

Make sure the scale operator tares vehicles at least once a day. Perform additional tares, as directed, during hauling operations. Perform tares in the presence of the Engineer, when requested.

The Engineer will calculate the MAVW for each vehicle and list all vehicles and their MAVW(s) in the scale house. The MAVW is either the maximum allowable legal weight determined by the Engineer when you cannot haul overloads in the traffic stream, or the manufacturer's recommended maximum allowable gross vehicle weight as certified by the Contractor when vehicles are allowed to haul overloads.

The scale operator should only use MAVWs that the Engineer has provided in writing. Do not issue any tickets to a vehicle until the Engineer provides the MAVW.

- (3) During weighing operations, the ECWS should compare each vehicle's gross weight to its MAVW. If the vehicle exceeds its MAVW, the system must alert the scale operator that an "overload" exists. The system should not issue a ticket.
- (4) Provide a battery backup for the computer and protection for power surges or brown outs. The computer system must retain all stored data during a power outage and must operate during a power outage to allow you to shut down the hard drive without losing information.

- b. Tickets.** Furnish a ticket printer that prints a legible, serially numbered weigh ticket for the Engineer with the following information on each ticket in the order listed. All weights must be at least to the nearest 100 pounds:

- (1) Project number
- (2) Item number and description
- (3) Date weighed
- (4) Time weighed
- (5) Ticket number
- (6) Vehicle Identification Number
- (7) MAVW
- (8) Gross weight
- (9) Tare weight
- (10) Net weight
- (11) Subtotal item net weight for each haul unit since start of shift
- (12) Accumulated item net weight for all haul units since start of shift

After printing, the weigh ticket must automatically advance to a perforation so it can be torn off and handed to the driver.

Manually weigh and record weights for up to 48 hours during a printer malfunction or break-down, when the Engineer gives you prior written authorization. The manual weighing operation must meet all other contract requirements.

Unless the Engineer gives prior written authorization, you will not receive payment for any material weighed without using the ECWS.

- c. Sequential Printer.** Provide a sequential printer that prints out all transactions (keystrokes) made by the computer concurrently with the ticket printer. For permanent commercial scales, the printer may print at the end of the company's daily shift with the Engineer's approval. The printer must print all scales transactions including tares, voided tickets, and data changes made by the scale operator. The printer must allow for advancing the paper manually so that the scale operator can write notes on the paper when special situations occur, such as voided tickets, incorrect vehicle identification number used, etc. The scale operator should also note these special situations in the Scales Diary.

Submit the printout to the Engineer at the end of each shift. You will not receive payment for any hauled material until the printout is submitted.

- d. Data Diskettes.** Provide the Engineer with a 3.5-inch high-density diskette or other approved storage media at the end of the shift. Record all ticket information produced during the shift. Store data in an approved format.

Download data from the permanent commercial vendor scale computer hard drive directly to a disk at the end of the shift. Do not convert or manipulate data. Provide conversion programs and training so that you can convert data into the information the Engineer requires.

If the diskette is not completely usable, then correct, construct, or reconstruct the data file. Use the sequential printout or other information as a data source, as directed. You will not receive payment for hauled material on a given date until you deliver an accurate "daily" data file to the Engineer. If the Engineer gives you written permission to weigh without the ECWS for a minor equipment failure, construct an acceptable data file as described above.

- e. Scale Diary.** The Scale Diary is a computer printout or bound book provided by the Engineer. The scale person must complete the Scale Diary and include the following information: dates of action, type of material, source, time the scale opened and time the scale closed, times of scale balance, ticket sequence, time the haul for each material started and stopped, voided ticket numbers, vehicle

identification numbers, times of tare and tare weights, and the scale person's signature. Also include the following information on any scale used to weigh materials for payment:

- (1) Owner of the scales and scale locations.
- (2) Manufacturer's name, model serial number, maximum capacity, and type of scales (single beam, double beam, self-reading, etc.).
- (3) Date(s) the scales were installed and/or adjusted.
- (4) Scale service company inspections and accuracy checks (attach copy).
- (5) Division of Measurement Standards inspections and accuracy checks (attach copy).
- (6) Time and dates of notification of any malfunctions.

The Scale Diary remains the Engineer's property.

Submit the Scale Diary to the Engineer at the end of each shift. You will not receive payment for any hauled material until you deliver the Scale Diary to the Engineer.

The system must generate a report, either during or at the end of the day or shift, that summarizes the number of loads and total net weight for each date, project, and product. Submit the original report at the end of each shift.

You will not receive payment for any material hauled in a vehicle that does not conform to the requirements of Subsection 50-12, Load Restrictions, and this Subsection. Dump material from non-conforming vehicles until they conform, then reweigh the vehicles.

When a weighing device indicates less than true weight, you will not receive additional payment for material previously weighed and recorded. When a weighing device indicates more than true weight, all material received after the last previously correct weighing accuracy test will be reduced by the percentage of error that exceeds 0.5%.

If the Engineer incurs extra construction engineering expenses from checking non-machine data entries or other data irregularities, the total value of those expenses will be deducted from the value of the contract item before payment.

Platform scales, scale house and the ECWS remain your property after you complete the work.

130-2.6 NUCLEAR TESTING EQUIPMENT STORAGE SHED. Design, furnish and maintain a weatherproof, heated, and ventilated nuclear densometer/testing equipment storage shed for the Engineer to use exclusively throughout the contract. Install the building at least 15-feet from an occupied area at a location approved by the Engineer. Install the shed before commencement of construction activities and maintain it until one week after project completion. Provide sufficient floor area for the nuclear testing equipment and a portable electric heater to maintain a minimum room temperature of 50 °F in freezing weather. Design the building with enough floor area to provide sufficient clearance between the equipment, heater, and combustibles. Provide a commercial grade metal-clad exterior entrance door of 3'-0" min width by 6'-8" height with dead-bolt lockset. Hang the door so that hinge pins are not accessible from the exterior. Provide the Engineer with 2 keys to control access. Provide a 5/16" welded steel security chain securely attached inside the structure with tamperproof hardware for the Engineer to secure the testing equipment. Provide 120-volt, 60-cycle power, an interior light, and a wall receptacle for the heater. Secure the structure to the ground with tamperproof anchors to resist wind loads and prevent unauthorized movement of the building. The nuclear testing equipment storage shed remains the property of the Contractor. Remove the shed from the site following project completion.

130-2.7 STORAGE CONTAINER. Furnish, transport and maintain a weathertight, lockable, steel enclosed 20 foot long X 8 foot wide X 8 foot high wooden floored container for the storage of the Department's materials, supplies and testing equipment (but not nuclear equipment). Provide twenty equally spaced fastening points on the interior walls that are capable of securing the Department's contents. Door opening dimensions of the storage container shall be greater than 60 square feet. Supply necessary equipment to lift and move container with minimal disturbance to the Department's contents. The container shall not be moved by skidding or hook lift. The Contractor shall be listed as the shipper on all documents listing and acknowledging receipt of the Department's goods for shipment.

Deliver an empty and clean container to the Regional Materials Laboratory, or location acceptable to the Engineer, three weeks prior to transporting to the project site. Allow 7 days for the Department to load the container. Transport the loaded container to the project site. Set up container at a location approved by the Engineer prior to commencing construction work.

Provide electrical service and other facilities as follows:

- a. Electrical current, 120V (ac), 60 cycle on a 24 hour a day basis.
- b. Wiring system to support a 20 amp user load demand.
- c. 2 GFI protected outlets conveniently spaced on the interior walls.
- d. Four 100 watt incandescent or eight 40 watt fluorescent lights located for maximum illumination.
- e. Provide a stairway with railing, built to meet the International Building Code, if there is more than 12-inch difference in floor entry and existing ground elevation.

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

METHOD OF MEASUREMENT

130-3.1 MEAL. By each meal served to authorized personnel, based on signed meal sheets.

130-3.2 LODGING. By each night's lodging received by authorized personnel based on signed lodging sheets.

130-3.3 NUCLEAR TESTING EQUIPMENT STORAGE SHED. By the number of storage sheds specified, to include all components, installed and accepted as completed units and ready for equipment storage.

130-3.4 STORAGE CONTAINER. By the number of storage containers specified, to include all components, installed and accepted as completed units and ready for materials and equipment storage.

BASIS OF PAYMENT

130-4.1 LUMP SUM ITEMS. Payment for Items G-130a, G-130b and G-130c will be made as follows:

- a. A percentage of the lump sum amount, to be determined by the Engineer, will be paid as full compensation for furnishing the facility at the site.
- b. The balance of the lump sum amount will be prorated over the anticipated active construction period with a portion included as part of each interim payment, for maintenance, repairs, providing all utilities, and for removing it from the site. If anticipated construction period changes, the final increment will be held until final payment.

130-4.2 MEAL. Includes all labor, materials, tools, equipment and supplies required to provide meals to all authorized personnel assigned to, or associated with, the project.

130-4.3 LODGING. Includes all labor, materials, tools, equipment and supplies required to provide lodging for all authorized personnel assigned to, or associated with, the project.

130-4.4 NUCLEAR TESTING EQUIPMENT STORAGE SHED. At the contract unit price to include all labor, materials, tools, equipment and supplies required to furnish and install the shed before commencement of construction, to maintain it for the duration of the project and to remove the shed and electrical service after project completion. Electrical service and utility costs are subsidiary to this item.

130-4.5 STORAGE CONTAINER. At the contract unit price to include all labor, materials, tools, equipment and supplies required to deliver the storage shed to the regional office for loading, to deliver it to the project office, to install it before commencement of construction, to maintain it for the duration of the project, to remove the shed and electrical service after project completion, to deliver it to the regional office for unloading, and to remove the storage shed. Electrical service and utility costs are subsidiary to this item.

130-4.6 SCALES. Furnishing the following is subsidiary: platform scales, scale operators, tickets, scale house, and the ECWS, including all supplies such as weigh tickets, paper, printer ribbons, diskettes, etc., and all maintenance and repair services necessary to keep the system functional.

Payment will be made under:

Item G-130a	Field Office - per lump sum
Item G-130b	Field Laboratory - per lump sum
Item G-130c	Curing Shed - per lump sum
Item G-130d	Meal - per each
Item G-130e	Lodging - per each
Item G-130f	Reserved
Item G-130g	Nuclear Testing Equipment Storage Shed – per each
Item G-130h	Storage Container – per each

ITEM G-131 ENGINEERING TRANSPORTATION

DESCRIPTION

131-1.1 Furnish and maintain vehicles for the exclusive use of the Engineer and their staff throughout the duration of the project.

REQUIREMENT

131-2.1 Provide the specified number of the following vehicle types:

- a. Truck.** Full-size four wheel drive pickup or sport utility vehicle. Less than 3 model years old, in good condition and with less than 36,000 miles on the odometer. Equip vehicles with mud/snow tires, strobe beacons (Whelen 360 or equivalent) and two-way radios set on the airport CTAF (Common Traffic Advisory Frequency).
- b. ATV.** All-terrain vehicle, 4x4, 300 cc minimum, with a 500-lb capacity trailer. Less than 3 model years old, in good condition. Equip with securely attached two-way radio set on the airport CTAF (Common Traffic Advisory Frequency). Equip with a rotating beacon or strobe light.
- c. Snowmachine.** A snowmachine with 440 cc minimum engine size, and with a 500-lb capacity sled. Less than 3 model years old, in good condition.
- d. Boat.** An aluminum boat 20 foot long, and rated to carry a minimum of 1000 pounds. A motor capable of moving the loaded boat at 20 mph. Less than 3 model years old, in good condition.

The Contractor shall furnish all fuels and maintenance. The Contractor is responsible for normal wear and tear, and any other incidental damage, including broken windshields, that might arise during the Departments operation and use.

The Department is responsible for physical damage to any vehicle provided under this section if proximately caused by its negligent operation. The Department will provide non-owned auto liability insurance providing third party liability coverage for any accident during the Department's operation and use.

Obtain the Engineer's approval of vehicles prior to their shipment to the site. Vehicles remain the property of the Contractor and shall be removed from the site following the completion of the work.

METHOD OF MEASUREMENT

131-3.1 Lump sum items will not be measured for payment.

The quantity of per each items will be the number of vehicles provided and maintained for use for the duration of the project at the contract unit price.

BASIS OF PAYMENT

131-4.1 Payment will be made as follows:

- a.** A percentage of the contract unit price, to be determined by the Engineer, will be paid as full compensation for furnishing the vehicles at the site.
- b.** The balance of the contract unit price will be prorated over the anticipated active construction period, with a portion included as part of each interim payment, for maintenance, fuel and repairs, and for removing vehicles from the site. If the anticipated construction period changes, the final increment will be held until final payment.

Payment will be made under:

- Item G-131a Engineering Transportation (Truck) - per each
- Item G-131b Engineering Transportation (ATV) - per each
- Item G-131c Engineering Transportation (Snowmachine) - per each
- Item G-131d Engineering Transportation (Boat) - per each
- Item G-131e Engineering Transportation - per lump sum

ITEM G-135 CONSTRUCTION SURVEYING AND MONUMENTS

DESCRIPTION

135-1.1 GENERAL. Perform surveying and staking essential for the completion of the project and perform the necessary calculations required to accomplish the work in conformance with the Plans and Specifications and standard survey and engineering practices.

Furnish and install survey monuments and monument cases in conformance with the Plans or as directed.

135-1.2 DEFINITIONS.

- a. **Monument:** A fixed physical object marking a point on the surface of the earth; used to commence or control a survey; mark the boundaries of a parcel of land; or the centerline of a right-of-way corridor. Monuments will be Primary or Secondary, as shown on the Plans.
- b. **Point:** An identified spot located on the surface of the earth. For purposes of this definition, a point can be a PK nail, wooden hub, rebar, large nail or other structure capable of being utilized as a marker.
- c. **Witness Corner:** A material mark or point usually placed on a property or survey line, at a known distance from a property corner or other survey point. A witness corner is employed to witness the location of a corner/point that cannot be monumented at its true location.
- d. **Reference Monument:** A material mark or point placed at a known distance and direction from a property corner or other survey point, usually not on a property or survey line. A reference monument is employed to perpetuate a corner/point that cannot be monumented at its true location or where the corner monument is subject to destruction.
- e. **Surveyor:** The Contractor's Professional Land Surveyor, currently registered in the State of Alaska.

MATERIALS

135-2.1 MONUMENT CASES. Castings shall conform to AASHTO M 105, Class 30A. Castings shall be coated with a bituminous damp-proof coating. Bolting tops shall be used.

135-2.2 PRIMARY MONUMENT. A minimum 2-inch diameter nonferrous pipe at least 30 inches long, with a minimum 4-inch flange at the bottom and having magnets attached at the top and bottom. A minimum 2-1/4-inch diameter nonferrous metal cap must be permanently attached to the top. Mark the cap around the outside edge with the words "STATE OF ALASKA DOT&PF". Permanently stamp every monument with the Surveyor's registration number, the year set, and the point/corner identification. Orient cap so that the data may be read facing up-station.

135-2.3 SECONDARY MONUMENT. A minimum 5/8-inch x 30-inch rebar with a 2-inch aluminum cap attached to the top. Permanently stamp every secondary monument with the Surveyor's registration number and the year set.

CONSTRUCTION REQUIREMENTS

135-3.1 GENERAL. Use competent, qualified personnel and suitable equipment for the layout work required and furnish traffic control, stakes, templates, straight-edges and other devices necessary for establishing, checking and maintaining the required points, lines and grades.

Furnish computer services to accomplish the work. Check data received from the computer for completeness and accuracy. As soon as practical after completion of the work, and in no case later than acceptance of the

project, deliver field books, computer forms and computer output data to the Engineer. This data becomes the property of the Department.

Supervise construction surveying personnel. Correct errors resulting from the operations of said personnel at Contractor expense. The Contractor is responsible for the accuracy of the work.

Work classified as Land Surveying under AS 08.48, and work involving the location, control, and monumentation of construction centerline and right-of-way, shall be performed by or under the responsible charge of a Professional Land Surveyor.

Follow the Department's Construction Surveying Requirements.

The Department will provide sufficient centerline or reference thereto, and at least one benchmark to enable the establishment of planned elevations and centerline.

Keep field notes in standard bound notebooks in a clear, orderly, and neat manner consistent with Departmental procedures, including titles, numbering, and indexing. Make field books available for inspection by the Engineer's project personnel at any time. Legible copies of the reduced field notes shall be made daily. Store the field books in the Engineer's Project Office during periods of non-use. Copies of the field books shall be kept in a separate secure location.

Perform the following:

- a. Staking necessary to delineate clearing and/or grubbing limits.
- b. Cross sections necessary for determination of excavation and embankment quantities, including intermediate and/or remeasure cross sections as needed. Take cross sections after clearing and grubbing has been completed.
- c. Slope staking.
- d. Staking of signs, culverts, minor drainage structures and other appurtenances, including the necessary checking to establish the proper location and grade to best fit the conditions on site.
- e. Bridge staking.
- f. Setting finishing stakes.
- g. Measurement of pay quantities that require measurement.
- h. Staking of right-of-way and material source limits as deemed necessary.
- i. Staking, referencing and other actions required to preserve or restore land monuments and property corners.
- j. Other surveying and staking necessary to complete the project.

Notify the Engineer immediately if a Department-established reference point is discovered to be in error or a reset point is not in harmonious relationship to the adjacent centerline points.

Furnish a notekeeper to record field survey notes, including documentation for quantity computations for payment. Ensure that the notekeeper is thoroughly familiar with generally accepted standards of good survey notekeeping practice and the Department's Construction Surveying Requirements.

The Engineer may randomly spot check the Contractor's surveys, staking, and computations. After the survey or staking has been completed, provide the Engineer with a minimum of 72 hours notice before

performing work, and furnish the appropriate data, to allow for random spot checking. The Department assumes no responsibility for the accuracy of the work.

135-3.2 CROSS-SECTION SURVEYS. When required, obtain right-angle cross sections to the construction centerline at the interval detailed in the Department's Construction Surveying Requirements.

The following will be supplied by the Department:

- a. Construction Plans and Specifications.
- b. Design Cross Sections, if any.
- c. State of Alaska Land Survey Monument Record forms.
- d. Department's Construction Surveying Requirements. One copy.
- e. Design centerline grades.

The following shall be required of the Contractor:

- a. Field Books (Level, Cross-Section, Slope Stake, etc.). Use "Rite-in-the-Rain" or similar weather resistant books. Field books become the property of the Department upon completion of the work.
- b. Label the books and number the pages. Make a heading in the appropriate book (date, weather, names and duties of crew members) at the beginning of each day's work.
- c. Update the index of the appropriate book at the end of each day's work.
- d. Reduce, check, and adjust level notes.
- e. The notekeeper shall compute the cross-section level notes and slope stake catches and a different crew member shall check the computation on a continual basis in the field.
- f. Enter the grade data, shoulder width and/or ditch distance, stationing, slope, etc., in the slope stake books.
- g. Maintain the position and identifying marks of slope stakes and reference points until used for their intended purpose.
- h. Correct errors by drawing a line through them and writing the correct entry directly above. Erasures will not be allowed.
- i. Return field books and copies of the field books to the Project office at the end of each work day or as directed.
- j. Provide copies of grade sheets and temporary bench mark elevations to the Engineer 48 hours before beginning work on unclassified excavation or embankment.
- k. The Contractor's survey crews shall comply with approved traffic control plans. Coordinate crew activities with the Worksite Traffic Supervisor.
- l. Keep a survey Party Chief diary, and give a copy of the diary to the Engineer each day. The diary shall contain the following information:
 - (1) Date.
 - (2) Weather.
 - (3) Crew members' names and duties.
 - (4) Type and location of work performed.
 - (5) Hours worked.

- (6) Type of equipment used (brand) and date equipment was double centered or “peg” test was performed.
- (7) Signature of person in responsible charge.

m. Submit the survey field notes, for the specific area, relating to monument referencing, before beginning clearing, grubbing or excavation.

135-3.3 MONUMENTS. Install primary and secondary monuments, as called for in the Plans, at the positions established by the Department. Prior to the start of construction, reference monuments, to include property markers/corners and accessories, that may be disturbed or buried during construction. In addition, reference monuments designated for referencing on the Plans. Prepare and record Monument Record Forms in the appropriate Recorder’s Office before disturbing monuments. Monument Record Forms may be obtained from the Engineer. Re-establish monuments in their original position before completion of the project. Prepare and file a Monument Record Form for each reestablished monument.

Keep records and report to the Engineer evidence that a monument has been disturbed and is no longer reliable or cannot be located and is presumed to be missing. Establish a minimum of two in-line reference points, or three swing-tie reference points in situations where in-line referencing is not desirable. Set reference points outside of the construction limits. Measure distances from the monument to the nearest 0.01 foot. Record referencing of monuments in a separate field book stamped by the Surveyor.

Replace existing monuments disturbed by construction with Primary or Secondary Monuments meeting the requirements of Subsections 135-2.1 through 3. When it is impractical to establish a monument in its original position, install a witness corner (WC). Place the WC to a property corner on the property line when the other property corner that defines said line is existing or there has been sufficient retracement to define said line. In other cases, place a reference monument (RM) perpendicular to the centerline at the station of the original position and at a distance from the original position measured in whole feet.

Those monuments found that are not shown on the Plans will be recognized by the Engineer when the following is provided by the Surveyor: Field notes identifying type and location of the monument, and a description of the point the monument marks, with the reason to preserve its location. Monuments not shown on the Plans will be considered additional work and paid by Item G-135b, Conditional Survey Party.

The Surveyor shall complete a State of Alaska Land Survey Monument Record form for each primary and secondary monument referenced, removed, installed, relocated or replaced. Provide the required survey information on the form according to statutory requirements, including section, township and range. Meet requirements for recording at the District Recorder’s Office in which the project is located for each monument record. Deliver conforming copies of the recorded forms to the Engineer before monument removal or disturbance, and after setting any final monuments requiring monument records.

Set each monument and monument case accurately to lines established at the required location and in a manner as to ensure being held firmly in place. Set existing monuments and monument cases to be adjusted to new elevations in the manner and at the elevations directed.

135-3.4 OFFICE ENGINEERING. Calculate finish grades for the embankments as specified according to Plans and/or Specifications. Use information available in the field, on as-builts, or as provided by the Engineer. This work shall be performed by or under the responsible charge of a Professional Land Surveyor or a Professional Engineer currently Registered in the State of Alaska.

135-3.5 FINAL TRAVERSE. Within 30 days after the Engineer receives a letter stating that construction activities that may disturb the monuments have ceased, the Surveyor shall run a final closed traverse to verify the positional accuracy of installed survey monuments. Tie into the traverse the primary and secondary monuments placed or replaced and undisturbed Department-provided control points. Meet the requirements of a secondary monument for traverse points established during this work. The Surveyor shall sign and stamp a letter that lists each monument and its coordinates. The letter shall certify that the monuments are

each located within 0.1 foot of their proposed position based on the project survey control points provided by the Department. Deliver the certification letter and field notes for this work to the Engineer.

METHOD OF MEASUREMENT

135-4.1 The work will be measured according to Section GCP-90, as directed by the Engineer, and as follows:

- a. Lump Sum. No measurement of quantities will be made.
- b. Hour. By the number of hours, as directed by the Engineer and as recorded by certified payrolls.
- c. Contingent Sum. As specified by the Engineer in the Directive authorizing the work.

BASIS OF PAYMENT

135-5.1 Pay Items include all necessary personnel, equipment, transportation, and supplies to accomplish the work described in the Contract, or as directed by the Engineer.

Pay Item G-135a Construction Surveying by the Contractor, includes all Contractor surveying work described in the Contract.

Pay Item G-135b Extra Three Person Survey Party, includes payment by the hour for extra, additional or unanticipated work made necessary by changes in the project. Adjustment according to GCP-90-04 is not allowed for this pay item. Work accomplished by a three person survey party will be paid at 100% of the contract unit price, by a two person survey party at 75% of the contract unit price, or by a one person survey party at 32% of the contract unit price, for Pay Item G-135b.

Pay Item G-135c Monuments by the Contractor, includes all monument work described in the Contract.

Pay Item G-135d Extra Surveying by the Contractor, includes payment according to a Directive from the Engineer authorizing the work. This pay item is for extra, additional, or unanticipated work made necessary by changes in the project.

Payment will be made under:

Item G-135a	Construction Surveying by the Contractor - per lump sum
Item G-135b	Extra Three Person Survey Party - per hour
Item G-135c	Monuments by the Contractor - per lump sum
Item G-135d	Extra Surveying by the Contractor – Contingent Sum

ITEM G-150 EQUIPMENT RENTAL

DESCRIPTION

150-1.1 This item consists of furnishing construction equipment, operated, fueled and maintained, on a rental basis for use in construction of the proposed improvements and in performing work incidental to construction at the direction of the Engineer as such work is generally defined in these Plans and Specifications. Construction equipment is defined as that equipment actually used for performing the items of work specified and shall not include support equipment such as, but not limited to, hand tools, power tools, electric power generators, welders, small air compressors and other shop equipment needed for maintenance of the construction equipment.

REQUIREMENTS

150-2.1 EQUIPMENT FURNISHED. The construction equipment to be provided under this contract shall be that shown in the Special Provisions supplemented by such non-rental maintenance equipment and support equipment as the Contractor elects to provide. The equipment shall be of modern design and in good working condition and shall be maintained in good working condition throughout the life of the project. All equipment to be used in the construction of this project as noted in the Bid Schedule shall be made available for inspection by the Engineer prior to its shipment to the project site. Each item of equipment shall have company numbers clearly displayed for ready identification. The Engineer shall have the authority to prohibit the use of rental payment for any equipment which is not maintained in good working condition or which has a production capacity below construction industry standards.

150-2.2 EQUIPMENT OPERATORS. Equipment operators shall be competent and experienced and shall be capable of operating the equipment to its capacity. The Contractor shall replace those operators who, in the opinion of the Engineer, misconduct themselves, either on the job or in the community, or are incompetent or negligent in the operation of the equipment.

150-2.3 HOURS OF OPERATION AND TIMEKEEPING. The Engineer shall begin recording time for payment each shift when the equipment begins work on the project. Time during which the equipment is being serviced or repaired shall not be included. The stated equipment rental rates shall apply only to that time during which the equipment is actively engaged in construction, as directed by the Engineer. No standby payment will be made for any piece of equipment prior to, during the life of, or after the project has been completed. "Stuck Time" payment shall be made for each piece of equipment that becomes stuck while actively engaged in construction work on the airport and shall be limited to 1 hour per shift for each piece of equipment that becomes stuck.

150-2.4 CONSTRUCTION METHODS. The work shall be constructed according to the Plans, Special Provisions and as directed by the Engineer.

METHOD OF MEASUREMENT

150-3.1 The serial number and brief description of each item of equipment listed in the bid schedule will be recorded by the Engineer, and they will record the number of hours, or fractions thereof to the nearest one-quarter hour, during which the equipment is actively engaged in construction of the project. The furnishing and operating of equipment of heavier type, larger capacity, or higher horsepower than specified will not entitle the Contractor to any extra compensation over their applicable contract unit price. Each day's activity will be recorded on a separate sheet or sheets, which shall be verified and signed by the Contractor's representative at the end of each shift, and a copy will be provided to the Contractor's representative. No idle time will be recorded unless authorized by the Engineer.

BASIS OF PAYMENT

150-4.1 Payment will be made at the contract unit price bid for equipment rental per hour. This payment shall be full compensation for all fuel, operator's and mechanic's wages, parts, tools, maintenance items, shop equipment, camp, camp personnel wages, and all other incidentals necessary to keep the equipment in good condition and available for work on the project. No payment for equipment standby time resulting from unfavorable weather, or any other reason, is implied or intended and no payment therefore will be made by the Department. No payment will be made separately or directly for embankments.

Payment will be made under:

Item G-150a Equipment Rental - per hour

ITEM G-710 TRAFFIC CONTROL FOR ROADS, STREETS, AND HIGHWAYS

710-1.1 DESCRIPTION. Protect and control traffic during the contract. Furnish, erect, maintain, replace, clean, move and remove the highway traffic control devices required to ensure the public's safety. Perform all administrative responsibilities necessary to implement this work.

Maintain all public corridors 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.

710-1.2 ACRONYMS AND DEFINITIONS.

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

HIGHWAY. A main direct road. Used throughout this section for the sake of brevity, the word "highway" also applies to roads and streets.

HIGHWAY TRAFFIC CONTROL ZONE. A portion of a construction project, haul route, utility work, or similar operation that affects traffic and requires highway traffic control to safely guide and protect motorists, pedestrians, bicyclists, or workers, outside of the AOA.

HIGHWAY TRAFFIC CONTROL PLAN (TCP). A drawing or drawings indicating the method or scheme for safety guiding and protecting motorists, pedestrians, bicyclists, and workers in a highway traffic control zone. The TCP depicts the traffic control devices and their placement and times of use.

TRAFFIC. The movement of vehicles, ATV's, equipment, pedestrians, and bicyclists through public corridors, construction areas, utility work, or similar operations.

710-1.3 HIGHWAY TRAFFIC CONTROL PLAN. Design and implement an approved TCP before beginning work within a highway traffic control zone.

The TCP includes, but is not limited to, signs, barricades, traffic cones, plastic safety fence, special signs, warning lights, highway flaggers, temporary lighting, temporary roadways and all other items required to direct traffic through or around the highway traffic control zone according to these Specifications and the ATM. Address in the TCPs, placement of highway traffic control devices, including location, spacing, size, mounting height and type. Include code designation, size, and legend per the ATM and the ASDS.

When a TCP is included in 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 new or modified TCPs to the Engineer for approval. Allow 1 week for the Engineer to review any TCP or each subsequent correction. You may change an approved TCP during construction provided you allow 48 hours for review and the Engineer approves the changes.

Certify by signature of the Worksite Traffic Supervisor that all TCPs conform with the ATM and Specifications. The Engineer will not accept the TCP without Worksite Traffic Supervisor's certification. Have your superintendent review and sign all TCPs before you submit them.

In all TCPs you submit, include the periods for which the TCP will be in effect. Provide the name and 24-hour telephone number of the Worksite Traffic Supervisor.

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

Use of equipment in a highway traffic control zone must conform to an approved TCP, including all highway traffic control devices these operations require.

Rural projects that are off the NHS and the Alaska Highway System require a waiver per 17 AAC 25.800 to operate oversized and overweight vehicles outside the project limits.

710-1.4 WORKSITE TRAFFIC SUPERVISOR. Provide a Worksite Traffic Supervisor responsible for maintaining 24-hour traffic operations.

a. Qualifications. Ensure the Worksite Traffic Supervisor understands ATM requirements, the Plans, the Specifications, your proposed operations, and is certified as one of the following:

- (1) Worksite Traffic Supervisor certified by the American Traffic Safety Services Association (ATSSA).
- (2) Level One Signs and Markings Specialist certified by the International Municipal Signal Association (IMSA).

Item (2) requires documentation of at least 12 months of supervisory-level worksite traffic control or 12 months of responsible charge of such work. "Responsible charge" means that the Worksite Traffic Supervisor has been accountable for selecting devices and placing them in the highway traffic control system, or for continued system operation. The Worksite Traffic Supervisor satisfies this requirement if they have supervised persons performing this labor.

Renew certification no less frequently than every 4 years, and be able to show their certification anytime they are on the project.

b. Duties.

- (1) Prepare the TCPs and public notices and coordinate highway traffic control operations between the Project Superintendent and the Engineer.
- (2) Physically inspect the condition and position of all highway traffic control devices used on the project at least once each day and once each night. Ensure that highway 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 on the form provided by the Engineer within 24 hours.
- (3) Supervise the repair or replacement of damaged or missing highway traffic control devices.
- (4) Review and anticipate highway traffic control needs. Make available proper highway traffic control devices necessary for safe and efficient traffic movement.
- (5) Review work areas, equipment storage, and traffic-safety material handling and storage.
- (6) 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. Conduct monthly open house public meetings to discuss the TCP and construction phasing.
- (7) Supervise all highway traffic control workers and highway flaggers.
- (8) Certify that all highway flaggers are certified as required by subsection 710-3.4c. Submit a copy of all highway flagger certifications to the Engineer.

MATERIALS

710-2.1 Provide highway traffic control devices meeting the following requirements:

- a. **Signs.** Use signs, including sign supports, that conform to Section P-661, the ATM, the ASDS, and AASHTO M 268. Make orange background signs from sheet aluminum, and use Type II or Type III orange reflective background sheeting on projects advertised before 1/01/2007, or use Type VIII or Type IX fluorescent orange reflective background sheeting at any time.
 - (1) **Construction Signs:** Regulatory, guide, or construction warning signs designated in the ASDS.
 - (2) **Permanent Construction Signs:** As designated on the Plans or an approved TCP.
 - (3) **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.
- b. **Portable Sign Supports.** Use wind-resistant sign supports with no external ballasting. Use sign supports that can vertically support a 48 X 48 inch highway traffic control sign at the height above the adjacent roadway surface required by the ATM.
- c. **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.
- d. **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.
- e. **Drums.** Use plastic drums that conform to the requirements of the ATM. Use reflective sheeting that meets AASHTO M 268 Type II or III.
- f. **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.
- g. **Plastic Safety Fence.** Use 4 foot high construction orange fence manufactured by one of the following companies, or an approved equal:
 - (1) "Safety Fence" by Services and Materials Company, Inc., 2200 South "J" Street, Elwood, Indiana, 46036. Phone (800) 428-8185.
 - (2) "Flexible Safety Fencing" by Carsonite, 1301 Hot Springs Road, Carson City, Nevada, 89706. Phone (800) 648-7974.
 - (3) "Warning Barrier Fence" by Plastic Safety Systems, Inc. P.O. Box 20140, Cleveland, Ohio, 44120. Phone (800) 662-6338.
- h. **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.

710-2.2 CRASHWORTHINESS. Submit documentation, that all highway traffic control devices conform to the requirements of National Cooperative Highway Research Program (NCHRP) Report 350 (Test Level 3).

CONSTRUCTION METHODS

710-3.1 GENERAL CONSTRUCTION REQUIREMENTS. Keep the work, and portions of the project affected by the work, in good condition to accommodate traffic safely. Provide and maintain highway traffic control devices and services inside and outside the project limits, day and night, to guide traffic safely.

Unless otherwise provided in this Section, keep all roadways, business accesses, and pedestrian facilities 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/or flag all locations where you must redirect or stop the traveling public.

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

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 highway traffic control zones at all times, except when regulations prohibit pedestrians or bicyclists.

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.

710-3.2 ROADWAY CHARACTERISTICS DURING CONSTRUCTION. Obtain an approved TCP before reducing existing roadway lane and shoulder widths before starting construction. Maintain a clear area with at least 2 feet between the edge of traveled way and the work area. Use barricades, traffic cones, or drums to delineate this area. Place highway 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. Excavate the material or place it in layers. 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.

710-3.3 PUBLIC NOTICE. Make sure the Worksite Traffic Supervisor gives notices of major changes, delays, lane restrictions, or road closures to local officials and transportation organizations, including but not necessarily limited to:

- a. Local Police Department
- b. Local Fire Department
- c. Local Government
- d. School and Transit Authorities
- e. Local Emergency Medical Services
- f. Local Media (newspapers, radio, television)
- g. U.S. Postal Service
- h. Major Tour Operators

710-3.4 HIGHWAY TRAFFIC CONTROL DEVICES. Before starting construction, erect permanent and temporary highway traffic control devices required by the approved TCPs. Use highway traffic control devices only when they are needed. The Engineer will determine advisory speeds when necessary.

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 highway 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 highway traffic control devices. Store all unused highway 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.

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

Use only highway traffic control devices that meet the requirements of the "Acceptable" category in ATSSA "Quality Standards for Work Zone Traffic Control Devices".

Immediately replace any devices provided under this Section that are lost, stolen, destroyed, inoperable or deemed unacceptable while used on the project.

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

- a. **Embankments.** Install 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.
- b. **Fixed Objects.** Use flashing warning lights on all vehicles when they are working within 15 feet of the edge of traveled way. Use emergency flashers, flashing strobes or rotating beacons.

Locate private vehicles, idle construction equipment, construction material stockpiles and other items deemed by the Engineer to be fixed objects at least 30 feet from the edge of traveled way at all times. Do not park equipment in medians.

If you cannot meet the preceding restrictions because of land features or lack of right-of-way, park equipment as far away as practical but at least 15 feet from the edge of traveled way, as approved by the Engineer. Use drums or Type II barricades with flashing warning lights to delineate parked equipment. These highway traffic control devices are subsidiary.

- c. **Highway Flagger.** Furnish trained and competent highway flaggers and all necessary equipment, including lighting of the highway flagger position during nighttime operations, to control traffic through the highway traffic control zone. The Engineer will approve each highway flagger operation before it begins and direct adjustments as conditions change.

Highway flaggers must be certified by one of the following:

- (1) Flagging Level I Certification by IMSA
- (2) Flagger Certification by ATSSA

Acceptable substitutions for items (1) and (2) are certified ATSSA Worksite Traffic Supervisors, IMSA Work Zone Traffic Safety Specialists, IMSA Signs and Markings Specialists and ATSSA Flagger Instructors.

Renew highway flagger training and certification no less frequently than every 4 years. Highway flaggers must be able to show their flagger certification anytime they are on the project.

Highway flaggers must maintain their assigned posts at all times, unless another qualified highway flagger relieves them, or you no longer need to flag traffic. Remove, fully cover, or lay down flagger signs when no highway flagger is present. Keep the highway flaggers' area free of encumbrances, such as parked vehicles, so that highway flaggers can be seen easily.

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

- d. **Watering.** Furnish, haul, and place water for dust control, as directed. Use water trucks that can provide a light-water spray to control dust. 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.

710-3.5 AUTHORITY OF THE ENGINEER. When the Engineer believes existing conditions may adversely affect the traveling public's safety and/or convenience, you will receive a written notice. The notice will state the defect(s), the corrective action(s) required, and the time required to complete such action(s) not to 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.

710-3.6 HIGHWAY TRAFFIC PRICE ADJUSTMENT. A Highway Traffic Price Adjustment, under Item G-710c, will be assessed for unauthorized lane closures or lane reductions. Highway Traffic Price Adjustments are liquidated damages representing highway user costs. The Highway Traffic Price Adjustment Rate is a deduction from the Contract amount of \$30 per minute for unauthorized lane closure or lane reduction, per lane.

Authorized lane closures and/or lane reductions are those shown in the Contract, an approved TCP, or authorized in writing. Unauthorized lane reductions include unacceptable driving surfaces, such as severe bumps, ruts, washboarding, potholes, excessive dust or mud, and non-conforming, dirty, or out of place highway traffic control devices. The Engineer will make the sole determination as to whether the roadway, trail, or pedestrian facility is acceptable for full unimpeded use by the public. Failure to maintain an acceptable infrastructure or highway traffic control plan will result in a price adjustment equal to 100 percent of the Highway Traffic Price Adjustment Rate, for the time the roadway, trail, or pedestrian facility is in an unacceptable condition.

710-3.7 MAINTENANCE OF TRAFFIC DURING SUSPENSION OF WORK. Approximately one month before you suspend work for the season, schedule a preliminary meeting with the Engineer 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.

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 highway 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 GCP-90-05, 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.

710-3.8 CONSTRUCTION SEQUENCING. The construction sequencing is detailed in these provisions, the Special Provisions, and the Plans. You may propose alternative construction sequencing.

Throughout the project, maintain the existing roadway 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 highway traffic control that reduces the number of lanes or impedes traffic. Obtain an approved TCP before restricting traffic.

Obtain the local school bus schedule and coordinate your work to ensure the school buses are not delayed through the traffic control zone. Submit this plan, as a TCP, to the Engineer for approval before implementation.

710-3.9 INTERIM PAVEMENT MARKINGS – RESERVED.

710-3.10 LIGHTING OF NIGHT WORK – RESERVED.

710-3.11 HIGH VISIBILITY GARMENTS. Ensure all workers within project limits wear outer garments that are highly visible and comply with the following requirements:

- a. **Tops.** Wear fluorescent orange-red vests, jackets, or coverall tops at all times. Furnish each vest, jacket and coverall top with at least one 360-degree horizontal retroreflective band around the torso; and with two vertical retroreflective bands that begin at the horizontal band or lower in front, reach over the shoulder, and end at the horizontal band or lower in back. Furnish each jacket and coverall top with two horizontal retroreflective bands on each sleeve; one above and one below the elbow.
- b. **Bottoms.** Wear fluorescent orange-red pants or coverall bottom during nighttime work (sunset to sunrise). Worksite traffic supervisors, employees assigned to traffic control duties, and flaggers wear fluorescent orange-red pants or coverall bottom at all times. Furnish each pants or coverall bottom with two horizontal retroreflective bands on each leg.
- c. **Raingear.** Raingear tops and bottoms, when worn as the outer visible garment, conform to the requirements listed in this Subsection 710-3.11.
- d. **Exceptions.** When workers are inside an enclosed compartment of a vehicle, they are not required to wear high visibility garments.
- e. **Standards.** All high visibility garments conform to the requirements of ANSI/ISEA 107-2004, Class 2 for tops or Class E for bottoms, and Level 2 retroreflective material.

Retroreflective bands are made of material conforming to either:

- (1) A two inch wide strip, fluorescent yellow-green color, made of retroreflective microprisms; or

(2) A two inch wide strip, silver color, made of retroreflective lenses bonded to a durable cloth backing; and on two long edges apply one inch wide strips, fluorescent yellow-green color, made of durable cloth material. Total width of band is 4 inch.

- f. **Labeling.** Garments are labeled in conformance with Section 11.2 of ANSI/ISEA 107-2004; except you may use garments labeled in conformance with ANSI/ISEA 107-1999 until 1/1/08.
- g. **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.
- h. **Subsidiary.** Payment for high visibility garments for workers is subsidiary to other items.

710-3.12 OVERSIZE AND OVERWEIGHT VEHICLES. Comply with the legal size and weight regulations of 17 AAC 25 and all restrictions of the *Administrative Permit Manual*, except when the Department waives the requirements.

The engineer may waive the permit requirements of regulation 17 AAC 25 regarding oversize and overweight vehicle within the project limits when the contractor submits and follows an acceptable Traffic Control Plan.

Permits shall be obtained from the Department's Division of Measurement Standards & Commercial Vehicle Enforcement, for movements of oversize and overweight equipment outside of the project limits, except when the Department waives the permit requirements outside of the project limits. Retain this permit for your records and submit a copy to the Engineer.

Submit a traffic control plan for hauling operations from the material site(s) to the project. Include all the traffic control devices required for these operations in the traffic control plan. Indicate the type, number and frequency of oversize and overweight hauling equipment.

The following items are required of oversize or overweight vehicles or equipment:

- a. Truck and equipment headlights must be on at all times during vehicle use;
- b. A roof mounted flashing or rotating amber beacon, visible from 360 degrees, must be on during vehicle use;
- c. For overweight street legal vehicles, mount clearly visible oversize signs on front and rear of vehicle; and
- d. For oversize equipment and/or overweight non-street legal equipment, mount 16" X 16" clean red/orange flags on the outboard points, in addition to clearly visible oversize signs on front and rear of equipment.

When oversize or overweight vehicles are used, add the following to the Traffic Control Plan:

- a. Install and maintain orange plastic safety fence that separates the haul route from any adjacent school, business, residence, community center or public gathering place;
- b. Furnish flaggers as specified by the Traffic Control Plan, and at additional locations where necessary, to control the haul route during all hauling operations. Coordinate their placement with the Engineer. Haul route flaggers will be in addition to flaggers required by FAA Advisory Circular150/5370-2E, and the Construction Safety Plan;
- c. Limit haul unit speed to 10 mph when passing through any developed area or significant hazard. The Engineer is sole judge of what constitutes a developed area or significant hazard;
- d. Obey bridge load restrictions and all height restrictions on haul route;

- e. Maintain the haul route in a smooth and dust free condition. Remove all haul debris from the roadway and the surroundings;
- f. When overweight loads are hauled over existing pavement, remove the existing pavement and replace with new pavement of similar material and equal thickness to old pavement, as a subsidiary cost, after the haul is finished;
- g. Hauler is responsible for the costs of repair for damage to the highway structures, including but not limited to the bridge railings, guardrail, light poles, signs, signal, traffic control devices, utilities, and mailboxes on the roadways;
- h. Immediately reinstall all signs, signals, guardrail and other safety features that were removed for the haul; and
- i. If mailboxes were removed for the haul, reinstall mailboxes by the next day after the haul.

METHOD OF MEASUREMENT

710-4.1 Section GCP-90 and as follows. Quantities will not be measured during winter suspension of work.

- a. **Highway Traffic Control Device Items.** By the number of units in the Highway Traffic Control Rate Schedule, under item G-710d Highway Traffic Control 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 P-661-4.1. Items measured by the day are for each item per 24-hour period.
- b. **Highway Flagger.** By the number of approved hours, supported by certified payroll.
- c. **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.
- d. **Highway Traffic Price Adjustment.** By each minute of unauthorized lane closure or lane reduction, per lane, measured to the nearest minute. The Engineer will determine whether the roadway is opened to full unimpeded use by the traveling public.
- e. **Highway Traffic Control.** By the units specified.
- f. **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.
- g. **Temporary Guardrail.** By the linear foot, including end treatments, as shown on an approved TCP.

BASIS OF PAYMENT

710-5.1 Use the following table for unit rates of pay for Contingent Sum:

HIGHWAY TRAFFIC CONTROL RATE SCHEDULE

Highway Traffic Control Device	Pay Unit	Unit Rate
Construction Signs	Each/Day	\$5.00
Special Construction Sign	Square Foot	\$20.00
Type II Barricade	Each/Day	\$3.00
Type III Barricade	Each/Day	\$10.00
Traffic Cone or Tubular Marker	Each/Day	\$1.00
Drums	Each/Day	\$3.00
Watering	M-Gallon	\$20.00
Plastic Safety Fence	Foot	\$2.50
Temporary Sidewalk Surfacing	Square Foot	\$1.15
Flexible Markers	Each	\$50.00
Temporary Guardrail	Foot	\$21.00

- a. Highway Traffic Maintenance.** The contract price includes all resources required to provide the Worksite Traffic Supervisor, all required TCPs and public notices, monthly open house meetings, 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 Highway Traffic Control Devices required but not shown on the bid schedule.

Items required by the Contract that are not listed on the bid schedule or not included in other items are subsidiary to Item G-710a Highway Traffic Maintenance, except Highway Traffic Price Adjustment.

- b. Highway Traffic Control Device Items.** The contract price in the Highway Traffic Control Rate Schedule includes all resources required to provide, install, maintain, move, and remove the specified devices. Warning lights, vertical panels, and sign supports required for highway traffic control devices are subsidiary.
- c. Highway Flagger.** The contract price includes all required labor, radios, flagger paddles, and transportation to and from the worksite. The Engineer will pay for item G-710b Highway Flagger at the contract unit price for each Highway Flagger per hour. The hourly rate for Highway Flagger is set at \$38.00 per hour for this contract. The Engineer does not require a change order/directive for this pay item.
- d. Watering.** The contract price in the Highway Traffic Control Rate Schedule includes all resources required to provide watering, as directed.
- e. Highway Traffic Price Adjustment.** If Item G-710c, Highway Traffic Price Adjustment, is shown on the bid schedule, the total value of this contract will be adjusted, for unauthorized lane closures or lane reductions at the rate stated.
- f. Highway Traffic Control.** Payment for Item G-710d Highway Traffic Control will be made at the unit rate value contained in the Highway Traffic Control Rate Schedule for the accepted units of highway traffic control devices. The Engineer does not require a change order/directive for this pay item.
- g. Plastic Safety Fence.** The contract price in the Highway Traffic Control Rate Schedule includes all resources required to install, maintain, and remove the fence.
- h. Temporary Sidewalk Surfacing.** The contract price in the Highway Traffic Control Rate Schedule includes all resources required to construct, maintain, and remove the surfacing.

- i. **Temporary Guardrail.** The contract price in the Highway Traffic Control Rate Schedule includes all resources required to construct, maintain, and remove the guardrail.

Payment will be made under:

Item G-710a	Highway Traffic Maintenance – per lump sum
Item G-710b	Highway Flagger – per contingent sum
Item G-710c	Highway Traffic Price Adjustment – per contingent sum
Item G-710d	Highway Traffic Control – per contingent sum

