



## SELECTION PROCEDURE

1. Competitive Sealed Proposals will be evaluated by a committee (2 AAC 12, Article 4). Evaluation of responses to criteria set forth in Part C results in a numerical score for each proposal. Each criterion in Part C has an assigned weight for this RFP which demonstrates its relative importance. The total of all weights is 100 (100%). Each one-percent weight equates to a range of 0-5 points per Evaluator. The maximum points (score) obtainable for any proposal is equal to the product of 500 multiplied by the number of Evaluators.
2. Scoring of proposals will be accomplished as follows:
  - 2.1 Each Evaluator will individually read and rate each Offeror's response to each criterion described in Part C - Section I - Technical Proposal. Ratings will be based solely on contents of proposal and in compliance with the Contracting Agency's standard Instructions for Evaluation Committee. Except as may be stated within any criterion description in Part C, a rating of "5" = Best Response from all Offerors; "4" to "1" = Progressively Less Responsive; "0" = Non-Responsive. Ratings are multiplied by the assigned weights for each criterion to obtain criteria scores.
  - 2.2 After completion of individual ratings in Part C, Section 1, Technical Proposal, the Evaluation Committee will meet to discuss proposals. Evaluators may then alter their ratings; however, any changes shall be based solely on the criteria set forth in Part C.
  - 2.3 After scoring Part C - Section I - Technical Proposal, criteria scores for Part C - Section II - Preferences, and Section III - Price (if applicable), will be calculated based on criteria descriptions.
  - 2.4 The total score for each Offeror will be obtained by summing the scores determined for each criterion in Sections I, II and III of Part C. The order of ranking for negotiations shall be as follows: highest scored Offeror will be ranked first, next highest scored second, and etcetera.
3. Evaluators may discuss factual knowledge of, and may investigate Offerors' and proposed Subcontractors' prior work experience and performance, including projects referenced in proposal, available written evaluations, etcetera, and may contact listed references or other persons knowledgeable of a Contractor's and/or a Subcontractor's past performance. Factors such as overall experience relative to the proposed contract, quality of work, control of cost, and ability to meet schedules may be addressed. If any issues of significant concern to the proposed contract are discovered, the Committee may:
  - 3.1 Provide written recommendations for consideration during contract negotiations;
  - 3.2 Conduct discussions in accordance with paragraph 4, below.
4. The Committee may decide to conduct discussions (or "interviews") with responsible Offerors whose proposals are determined to be reasonably susceptible of being selected for award for the purpose of clarification to assure full understanding of, and responsiveness to, the solicitation requirements (AS 36.30.240 & 2 AAC 12.290). Offerors selected by the Committee for discussions may be permitted to submit Best and Final Offers (BAFO) for final Committee Evaluation. After discussions and any BAFOs, Evaluators will determine the final scoring and ranking for contract negotiations by evaluating written and oral responses using only the criteria set forth in Part C of this RFP (2 AAC 12.260(b)).
5. All Offerors will be advised of the Offeror selected for negotiation and, after completion of negotiations, a Notice of Intent to Award will be provided to all Offerors. If contract negotiations are unsuccessful with Offeror(s) selected for negotiation, the Contracting Agency may either cancel the solicitation or negotiate with other Offerors in the order of ranking.

## NOTICES

PART

A

1. The Contracting Agency is an equal opportunity employer.
2. Copies of contract documents are available for review at the Contracting Agency's office. Offerors located outside the general vicinity of the Contracting Agency's office may telephone the Agency Contact identified on page one of this Part A for a discussion of such items.

**General Conditions** of the Professional Services Agreement are contained in the Small Procurement Standard Provisions Booklet, which is located on the Department's website under "Procurement."

The General Conditions are the **same** for both Competitive Sealed Proposals and Small Procurements.

3. Offerors are specifically advised that a contract shall not be in effect until a written agreement is executed by an authorized agent of the Contracting Agency. The Contracting Agency shall not be liable for any cost incurred by an Offeror in response to this solicitation, including any work done, even in good faith, prior to execution of a contract and issuance of a Notice to Proceed.

4. The Contracting Agency expressly reserves the right to waive minor informalities, negotiate changes or reject any and all proposals and to not award the proposed contract, if in its best interest. "Minor Informalities" means matters of form rather than substance which are evident from the submittal, or are insignificant matters that have a negligible effect on price, quantity, quality, delivery, or contractual conditions and can be waived or corrected without prejudice to other Offerors (2 AAC 12.990).

5. All proposals shall be open for public inspection (AS 36.30.230) after a Notice of Intent to Award is issued. Offerors should not include proprietary information in proposals if such information should not be disclosed to the public. Any language within a submittal purporting to render all or portions of a proposal confidential will be disregarded. Proprietary information which may be provided after selection for contract negotiations will be confidential if expressly agreed to by the Contracting Agency (AS 36.30.230).

6. Substitution for any personnel named in a proposal may result in termination of negotiations.

7. If it is discovered that a selected Offeror is in arrears on taxes due the State of Alaska, a contract may not be awarded until the Alaska Department of Revenue approves the payment provisions for the contract.

8. **Offerors and proposed subcontractors shall be in compliance with the statutory requirements for Alaska business licensing and professional registrations included in the certification statement on Page 2 of Part D in this RFP package.**

9. **PRICE COMPETITION:** Price cannot be an Evaluation Criterion in accordance with Article 3 of AS 36.30 for services that must be performed only by Architects, Engineers, Land Surveyors, or Landscape Architects (A/E, LS or LA) licensed in the State of Alaska, UNLESS the provisions of AS 36.30.270(d) apply; i.e., unless the services required are repetitious in nature, and the nature and amount of services required are thoroughly defined by measurable and objective standards to reasonably enable firms or persons making proposals to compete with a clear understanding and interpretation of the services required. If price is a factor, a majority of the evaluation committee must be registered in Alaska to perform architectural, engineering, or land surveying services.

- 9.1 If the services performed do not require an A/E, LS or LA, then all Offerors including any A/E, LS or LA must provide Price Proposals in accordance with AS 36.30.270(b) and 2 AAC 12.260(c).

- 9.2 Price (or any estimate of labor hours) cannot be an Evaluation Criterion for contracts that will receive Federal-aid highway program funding per 23 CFR 172.7 and FAA Airport Improvement Program funding per AC 150/5100-14E, 2.1. For FAA exceptions: see AC 150/5100/14E, 2.4.

10. An audit of the selected Offerors' and proposed Subcontractors' cost accounting systems and business records may be required to ascertain if systems are adequate for segregating contract costs; to establish a maximum allowable Indirect Cost Rate for the Agency's negotiator; and to investigate the accuracy of proposed labor rates and unit prices. In order not to unduly delay contract negotiation or award, be prepared to submit Pre-Audit Statement, DOT&PF Form 25A257 immediately for your firm and any subcontract that may exceed \$250,000.

For contract amounts less than \$250,000, the Contracting Agency may require the Offeror and proposed Subcontractor to submit the Pre-Audit Statement if deemed necessary to determine allowable costs under Title 23 CFR requirements. If selected for negotiation, failure to submit properly completed Pre-Audit Statement(s) in a timely manner may disqualify an Offeror from further consideration. Information from Pre-Audit Statements and any Audit conducted for the Contracting Agency is considered proprietary and will be confidential.

11. Standard insurance provisions for Worker's Compensation, General and Automobile Liability, and Professional Liability are contained in DOT&PF Form 25A269, Indemnification and Insurance. Coverages may be modified under very limited circumstances. Offeror should not assume any modification of coverages.

12. Professional Liability Insurance for the proposed contract:  is not required  
 is required as shown on DOT&PF Form 25A269.

13. The proposed contract  will  will not be a Federally Assisted Program of the U.S. Department of Transportation. If it will be an assisted program, then the Offeror shall insert the following notification in all subcontract solicitations for bids or proposals pertinent to this RFP:

"In accordance with Title VI of the Civil Rights Act of 1964, 78 Stat. 252, 42 USC 2000d to 2000d-4 and Title 49, CFR, U.S. Department of Transportation (U.S. DOT), Subtitle A, Office of the Secretary, Part 21, Nondiscrimination in Federally-assisted programs of the U.S. DOT issued pursuant to such Act, in any Subcontract entered into pursuant to this RFP, Disadvantaged Business Enterprise firms will be afforded full opportunity to submit bids or proposals and will not be discriminated against on the grounds of race, color, sex, or national origin, in consideration for an award.

14. Pre-proposal Conference:  None  As follows:

15. Special Notices:

15.1 Per Alaska Statute (AS) 36.30.210(e): An Alaska Business License is required of Contractors who do business in Alaska at time of award. To qualify for the Alaska Offerors' Preference, under AS 36.30.321, an Offeror shall have a valid Alaska business license as a prerequisite to proposal. Information regarding applying for an Alaska Business License can be found on-line at <https://www.commerce.alaska.gov/web/cbpl/BusinessLicensing.aspx> or by calling 1-907-465-2550. The business license must be in the name of the company under which the proposal is submitted.

15.2 Effective May 8, 2015, the Department, in coordination with the U.S. Department of Transportation, adopted a Race-Neutral Disadvantaged Business Enterprise (DBE) Program for its federal-aid program. The Race-Neutral DBE program applies to federally-funded construction-related professional services solicitations, with the exception of FAA-funded projects located within the boundaries of the Department's Northern Region, which remain under a Race-Conscious DBE program.

The Department encourages contractors to utilize DBEs in all Federal-aid projects to ensure the Department meets its overall DBE Utilization Goal. All DBE participation will count towards the Race-Neutral program. If you have any questions about this notice or the Department's DBE program, please contact the Civil Rights Office at (907) 269-0851 or refer to their website <http://www.dot.alaska.gov/cvlrts/index.shtml>

15.3 The Department intends to send notices (including Notice of Intent to Negotiate, and Notice of Intent to Award) to Offerors by using the email address provided the Offeror's submitted Part D. Such delivery of an email sent by the Department is complete upon receipt in the addressee's email account. An email sent after 4:30pm shall be deemed to have occurred at the opening of business on the next working day. By submitting a response to this RFP, all Offerors consent to the use of Electronic Mail as described herein.

15.4 Interested parties are reminded that the Agency point of contact is noted on page 1 of this section, and all questions and requests for information shall be directed to this individual.

15.5 The Contracting Agency anticipates providing the following services: environmental document, environmental permitting, right-of-way acquisitions (if needed), geotechnical investigations, and utility agreements. However, the Contracting Agency may authorize the Contractor to perform geotechnical investigations and utility agreements by contract amendment or by other means.

# SUBMITTAL CHECKLIST

PART

**B**

Offeror may use left margin to check off items when completed.

**An Alaska Business License is required of Contractors who do business in Alaska at time of award (AS 36.30.210(e)).**

- [ ] 1. Offerors must carefully review this RFP Package for defects and questionable material and become familiar with submittal requirements. Submit written comments to the address shown under "Submittal Deadline and Location" on page 1 of Part A - RFP. Substantive issues will be addressed in a written addendum to all RFP recipients on record. Failure to comply with directions may result in lower score and may eliminate a submittal from consideration. Protests based on alleged improprieties or ambiguities in a solicitation may be disallowed at the discretion of the Contracting Agency if the protest is not received in writing at least ten Agency work days prior to the Submittal Deadline (AS 36.30.565).
- [ ] 2. Review Part A - RFP and the proposed Statement of Services and any other attached or referenced materials. If no Statement of Services is attached, telephone the Agency contact person identified on page 1 of Part A.
- [ ] 3. Review Part C - Evaluation Criteria. Read each criterion in light of the proposed Statement of Services. Note any project specific criteria which may have been added or any changes to standard criteria descriptions which may have been made. Be aware of the assigned weight for each criterion. If a weight is not entered for any criterion on Part C, notify the Agency contact person. Plan your proposal to address the applicable criteria. Criteria Responses shall not exceed the number of pages stated below. **Note:** If weight is applied to Criterion #11, Alaska Bidder (Offeror) Preference, that box must be checked on page 1 of Part D, rfp-d.
- [ ] 4. Prepare a distinct Response for each criterion that has a weight more than zero. Failure to respond directly to any criteria weighted more than zero will result in an evaluation score of zero for that criteria. Any Responses to criteria weighted zero will be disregarded. Acceptable Responses must be specific and directly related to the Contracting Agency's proposed Statement of Services. Marketing brochures, federal SF330s, marketing resumes, and other non-project specific materials will be discarded without evaluation and should not be submitted.
- [ ] 5. **Each criterion Response must be titled, numbered and assembled in the order in which the criteria are listed in Part C**, so the criterion to which information applies shall be plainly evident. Material not so identified or assembled may be discarded without evaluation.

[ ] 6. Price  is  is not an evaluation criterion for the proposed contract.  
If Price is a Criterion, prepare **Billing Rates and/or Price Proposals** as described in Criteria #12 and/or #13.

- [ ] 7. Complete all entries on Part D - Proposal Form. Note the statutory requirements for Alaska business licenses and professional registrations, and be sure to sign and date the Certification. Copies of licenses and registrations may be provided with submittal, and will not count in the requirements of #8 below.

[ ] 8. Attach Criteria Responses (**except any Billing Rates or Price Proposals**) to Part D - Proposal Form. The maximum number of attached pages (**each printed side equals one page**) for Criteria Responses shall not exceed: **Ten (10), which includes the schedule submitted in response to Criterion 8**. Attached page limit does not include the four-page Part D - Proposal Form, or any Billing Rates or Price Proposals.

Criteria Responses shall be presented in **8-1/2" X 11" format**, except for a minimal number of larger sheets (e.g., 11" x 17") that may be used (e.g., for schedules) if they are folded to 8-1/2" X 11" size. Large sheets will count as multiple pages at 93.5 square inches or fraction thereof per page, unless otherwise noted.

**CAUTION:** Criteria Responses which do not comply with the required page limit or presentation size, may result in disqualification. Further, small print or typeface that is difficult to read may negatively influence evaluation of your submittal and affect scoring for "Quality of Proposal."

CHECKLIST IS CONTINUED NEXT PAGE

[ ] 9. N/A

[ ] 10. Parts A, B and C of Form 25A270 and the proposed Statement of Services shall not be returned to the Contracting Agency. **Submittals shall consist of the following applicable items assembled as follows and in the order listed:**

[ ] 10.1 Completed Part D - Proposal Form (generally at least one copy with original signature) and Responses to all evaluation criteria -- **except Billing Rates, Price Proposals** – attached. Each copy shall be fastened with one staple in the upper left corner. No other form of binding shall be used and no cover and no transmittal letter will be included. **CAUTION:** Failure to comply with this instruction will negatively influence evaluation of Submittal.

[ ] 10.2 Number of copies of Part D (**all pages**) and Criteria Responses (**except Billing Rates, and Price Proposals**) required is: **Six (6)**.

[ ] 10.3 If **Billing Rates and/or Price Proposals** are required, **one copy** bound with one staple in the upper left corner separately enclosed in a sealed envelope marked on the outside to identify it as a **Billing Rates or Price Proposal** and the names of the Project and Offeror. Each **Billing Rates or Price Proposal** must be signed and dated by the person who prepares it (may be different signatures for each Subcontractor).

[ ] 10.4 If Item 9, above, is completed for this RFP Package, any submittal items described therein. Unless otherwise stated, one copy only, bound appropriately.

[ ] 10.5 Pre-Audit Statement, DOT&PF Form 25A257, shall **not** be provided with Submittal. (See Notice #10 on page 3 of Part A - RFP.)

[ ] 10.6 **CAUTION:** If you replicate (other than by photocopy) Part D or any form in lieu of completing the forms provided by the Contracting Agency, provide a signed certification that lists such forms and attests that they are exact replicas of that issued by the Contracting Agency. Changed forms may result in rejection at the Contracting Agency's discretion. Any alteration – other than completion of the required entries – may be cause for rejection without recourse.

[ ] 11. Deliver **submittals in one sealed package** to the location and before the submittal deadline cited in Part A - RFP. **Mark the outside of the package** to identify the Project and the Offeror. Proposals must be received prior to the specified date and time. Late proposals will not be opened (2 AAC 12.250).

# EVALUATION CRITERIA

Criteria with a weight of zero are not applicable and should be disregarded. If a weight is not indicated for any criterion, telephone the Agency Contact person identified at the top of page 1 of Part A - RFP.

## SECTION I - TECHNICAL PROPOSAL

### 1. Objectives and Services

1. Weight: 10

Response must **demonstrate your comprehension of the objectives and services** for the proposed contract. Do not merely duplicate the Statement of Services provided with this RFP. Also, consider if Statement of Services is sufficiently explicit; are expressed or implied schedules attainable/economically feasible; etcetera? Explain. **Define any assumptions made** in formulating Criteria Response. If design services for a construction project are included, express any opinions regarding alternative design considerations that could impact construction costs.

### 2. Methods

2. Weight: 15

Response must outline the methods for accomplishing the proposed contract or, if methodology is contained in the proposed Statement of Services, address its adequacy. Describe what, when, where, how, and in what sequence the work will be done. Address how proximity to the Project site, *particular* geographic familiarity, experience, and capabilities of your firms (Offeror and Proposed Subcontractors) and Project Staff might *specifically* contribute to the proposed methods. Identify the amount and type of work to be performed by any Subcontractors. Consider how each task may be carried out; what services or interaction required from/with the Contracting Agency; etcetera. Suggest alternatives, if appropriate. Identify any **distinct and substantive qualifications** for undertaking the proposed contract such as the availability of specialized equipment or unique approaches or concepts **relevant to the required services** which the firms may use.

### 3. Management

3. Weight: 5

Response must describe the administrative and operational structures that will be used for performing the proposed contract. For example consider: who will have overall responsibility for the contract? Who will have direct responsibility for specific disciplines? What will the lines of authority be? For any individual who would be in "responsible-charge" (reference AS 08.48) as an Architect, Engineer, Land Surveyor or Landscape Architect, so state and list his/her Alaska professional registration number. A graphic depiction is preferred in your response to this criterion. Additionally, the Contracting Agency may want to inspect work products in progress and have a close ongoing working relationship with your Project Staff. Accordingly, your response should also identify where the various contract services will be performed, *in proximity to the Contracting Agency's office*, and how communications will be maintained between your Project Staff, the Contracting Agency, and (as applicable) any other government agencies or the public.

### 4. Proposed Project Staff

4. Weight: 15

Response must name the individuals to perform the following **FUNCTIONS** plus any other professional/technical functions you deem essential to perform the services (also see Criterion 9):

1. Contract Management (contract compliance)
2. Project Management (single point-of-contact directly engaged in contract performance)
3. Civil Engineering\*
4. Structural Engineering\*
5. Hydraulic and Hydrology Engineering\*
6. Surveying and Mapping\*
9. Cultural Resource Services
10. Public Involvement Services

\*All personnel acting in responsible charge for all Architectural, Engineering, Land Surveying, and Landscape Architecture functions require an Alaska Registration and must be identified in your proposal.

Continued Next Page

Describe the work to be performed by the individuals you name to perform essential functions and detail their specific qualifications and substantive **experience directly related to the proposed contract**. A response prepared specifically for this proposal is required. Marketing resumes often include non-relevant information which may detract from the evaluation of proposal. Lists of projects are not useful. Focus on individual's specific duties and responsibilities and how project experience is relevant to the proposed contract.

For each person named, identify their: employer, professional discipline or job classification and state of residency. List at least three (3) professional references (contact persons and telephone numbers) for each person.

**5. Workload and Resources****5. Weight: 10**

Response must: (1) discuss both current and potential time commitments of your proposed Project Staff to all clients; (2) discuss the projected workload of each firm (Offeror and Proposed Subcontractors) for all clients; and (3) demonstrate adequate support personnel, facilities and other resources to provide the services required. Provide a list of current contracts with the Contracting Agency in which your proposed Project Staff are participating. Include all contracts statewide with regions, divisions, etc., of the Contracting Agency.

Briefly address capabilities for providing additional services and/or services under an accelerated schedule. Address capacity to reassign personnel, equipment and facilities whenever the proposed contract would not require such capabilities or was delayed.

**6. Past Performance & Quality Control****6. Weight: 15**

Response must describe previous projects the project team has worked on that are related in size and scope to this project. Describe the dollar amount of the projects and a brief narrative of the successes of the projects. Address how the experience will help your team to perform under this contract. Provide references (contact name and phone number) for each project. Indicate which of the proposed firms and project staff was involved in each project. The State reserves the right to investigate referenced projects, contact references and research other projects that the respondent has worked on.

Include in your response a description of your firm's quality control process and how this process has affected the quality of your deliverables. Use specific examples.

**7. Quality of Proposal****7. Weight: 5**

**Offerors do not respond to this criterion.** Committee members will rate this criterion based on their perception of the clarity, completeness and presentation of submittal. Note: This criterion is **NOT** used to evaluate color, graphics or other visual techniques except as they may detract from legibility.

**8. Project Schedule****8. Weight: 20**

Delivery of this project is time critical. Demonstrate your ability to deliver the project design by or before September 30, 2020. The Contracting Agency anticipates requesting an extension from FHWA, but there is no guarantee that one will be granted.

Develop a schedule for the activities to be provided under this contract. Demonstrate your plan to deliver acceptable work products as efficiently as possible. Distinguish between activities that are within your control and those that may be strongly influenced by others. Include agency comment periods.

Begin your schedule with receipt of NTP anticipated to occur on **March 16, 2020**.

Do not include estimates of resource usage.

The schedule may be presented on one (1) 11x17 sheet, which **will** be counted as one (1) page toward the proposal page limits.

**The negotiated agreement with the selected Offeror will include provisions obligating it to performance in accordance with its proposed schedule. If the schedule is found to be unrealistic, the Contracting Agency may terminate negotiations and enter into negotiations with the next ranked firm.**

**9. Proposed Project Staff for Possible Added Services****9. Weight: 5**

Response must name the individuals to perform the following **FUNCTIONS** plus any other professional/technical functions you deem essential to perform the services:

1. Geotechnical Services
2. Utility Services

\*All personnel acting in responsible charge for all Architectural, Engineering, Land Surveying, and Landscape Architecture functions require an Alaska Registration and must be identified in your proposal.

Describe the work to be performed by the individuals you name to perform essential functions and detail their specific qualifications and substantive **experience directly related to the proposed contract**. A response prepared specifically for this proposal is required. Focus on individual's specific duties and responsibilities and how project experience is relevant to the proposed contract.

For each person named, identify their: employer, professional discipline or job classification and state of residency. List at least three (3) professional references (contact persons and telephone numbers) for each person.

## SECTION II - PREFERENCES

## 10. Disadvantaged Business Enterprises

49 CFR 26

10. Weight: 0

This solicitation is being conducted under the Department's Race Neutral Disadvantaged Business Enterprise (DBE) program for construction related professional services solicitations. Therefore, there is no DBE goal for this solicitation and the criterion has a weight of zero (0).

See rfp-a, section 15. Special Notices, paragraph 15.2.

## 11. Alaska Bidder (Offeror) Preference

23 CFR 172.7(a)(1)(iii)(C), AC 150/5100-14E, and 2 AAC 12.260(e)

Weight shall be "0" if any federal funding, otherwise weight shall be at least "10".

11. Weight: 0

To be granted this preference:

***Offeror must claim the Alaska Bidder (Offeror) Preference on page one of Part D Proposal Form. In claiming the Alaska Bidder (Offeror) Preference on page one of Part D, the Offeror is certifying that they meet the following requirements per AS 36.30.990:***

- (A) Firm holds a current Alaska Business License;
- (B) Proposal is submitted under the name as appearing on the Firm's current Alaska Business License;
- (C) Firm has maintained a place of business within Alaska, staffed by the Firm or an employee of the Firm, for a period of six months immediately preceding the date of the offer;
- (D) Firm is incorporated or qualified to do business under the laws of the State of Alaska, is a sole proprietorship, and the proprietor is a resident of Alaska, is a limited liability company organized under AS 10.50 and all members are residents of Alaska, or is a partnership under AS 32.06, or AS 32.11 and all partners are residents of Alaska; and
- (E) If the Firm is a Joint Venture, it is composed entirely of entities that qualify under (A) - (D).

*Alaska Bidder (Offeror) Preference will be scored: Rating x Number of Evaluators x Weight = Criterion Score.*

*Rating will be as follows:*

*An Alaska Offeror's preference (i.e., a Rating of 5) will be assigned to the proposal of an Offeror who certifies (by claiming the preference on page one of Part D) that they are an Alaska Bidder (Offeror) as described above.*

*No Alaska Offeror's preference (i.e., a Rating of 0) will be assigned to the proposal of an Offeror who does not certify (by failure to claim the preference on page one of Part D) that it qualifies as an Alaska Bidder (Offeror) as described above.*

No narrative response to this criterion is required within the Offeror's Proposal.

## SECTION III - PRICE

If price is not an Evaluation Criterion, weights for both Criterion #12 and #13 shall be "0". If price is an Evaluation Criterion, the sum of weights for Criterion #12 and #13 shall be at least "10", and all Offerors shall submit Price Proposals in the specified format(s).

See item #9, under Notices in Part A – RFP, regarding statutory and regulatory provisions about price competition and item #10.3, in Part B – Submittal Checklist, regarding procedure for submittal of Billing Rates and/or Price Proposals. Cost terminology is explained on page 2 of the Pre-Audit Statement (DOT&PF Form 25A257).

CAUTION: Submittal of Offeror's or Subcontractor's "standard" rate schedules or other pricing documents which are not in required format will be non-responsive if they do not allow direct comparison with other responsive proposals.

Rates and costs proposed by the Offeror selected for contract negotiations may be investigated for reasonableness and allowability in accordance with AS 36.30.400, .420 & .480, 2 AAC 12.550 and the contract cost principles in 48 CFR Part 31. Unsupported rates and costs may be disallowed or result in termination of negotiations, or contract award. All proposed rates and the negotiated contract rates will be public information.

12. Labor Billing Rates (Required Format)

12. Weight: 0

Provide a proposed total hourly Billing Rate (i.e., inclusive of Direct Cost of Direct Labor, all Indirect Costs, and Fee) only for each of the job **FUNCTIONS** listed below. Note: Some of these functions may be performed by one or more employees of the Offeror or Subcontractors; consequently, an individual might be billed under the contract at different rates appropriate to the functions performed. **Only the maximum rate paid to any individual for each listed job function** – regardless of employer (Offeror or Subcontractor) – **must be provided and will be considered for this response**. Rates for lower paid individuals or for other job functions, if any, will be addressed during contract negotiations.

1. Contract Management	(Estimated at	% of total labor effort)
2. Project Management	(Estimated at	% of total labor effort)
3.	(Estimated at	% of total labor effort)
4.	(Estimated at	% of total labor effort)
5.	(Estimated at	% of total labor effort)

\*In accordance with the submittal Checklist ('rfp-b'), item 10.3, *Billing Rates must be signed and dated by the person who prepares it (may be different signatures for each Subcontractor)*

Response will be scored as follows: The maximum hourly rates proposed for the job functions listed above will be multiplied by the percentage of total labor effort (estimated above) and then summed to obtain an aggregate rate for each Offeror. If more than one rate is provided for any job function, only the highest rate will be used. Each Offeror's score will be calculated using the following equation – except that the **score will be zero if a rate for each listed function is not provided by an Offeror**.

$$\frac{(\text{Lowest aggregate rate from all Offerors}) \times (\text{MPP}^*)}{(\text{Offeror's aggregate rate})} = \text{Offeror's Criterion Score}$$

\*MPP = Maximum Possible Points = (5) x (Number of Evaluators) x (Weight)

If no federal funding, then per AS 36.30.250(b), aggregate rates shall be reduced for the above calculation by the following applicable percentages when the rates are from Offerors that **designate preferences on page one of Part D**.

- ALASKA BIDDER (OFFEROR) PREFERENCE [2 AAC 12.260(d)].....	5%
- ALASKA VETERAN-OWNED BUSINESS PREFERENCE [AS 36.30.175] (maximum \$5000).....	5%
and only ONE of the following:	
- EMPLOYMENT PROGRAM PREFERENCE [AS 36.30.170(c)].....	15%
- DISABLED SOLE PROPRIETOR <u>OR</u> 50% DISABLED EMPLOYEES [AS 36.30.170(e & f)].....	10%

To claim employment or disabled preference, Offeror must be on the appropriate Alaska Division of Vocational Rehabilitation list at the time designated for opening (i.e., receipt) of proposals.

**13. Total Price Proposal (Required Format)****13. Weight: 0**

Provide proposed costs for all labor, subcontracts, equipment, expenses, etc., and a proposed amount for Fee. Submit a separate price proposal in the following format for the Offeror and for each Subcontract (first, second, third tier, etc.) that may exceed \$25,000. Each price proposal must be signed and dated by the person who prepares it. Note that the PRICES of the next lower tier subcontracts must be listed as COSTS in Item #4 (Other Direct Costs) of the price proposal for the next higher tier contractor so that the price of all subcontracts "roll-up" into the Offeror's total price proposal.

1. Show project title, project number, and Offeror or Subcontractor Name.
2. **Direct Costs of Direct Labor (DCDL)**  
Show the estimated costs for each job classification of employees proposed for the contract. List under the following headings. Names required only for key staff and/or persons in "responsible-charge" (Ref: AS 08.48). **Hourly Rates must not include Indirect Costs or Fee.**

<u>Job Classification</u>	<u>Name</u>	<u>Total Hours</u>	<u>Rate(\$/hr)</u>	<u>Proposed Costs (\$)</u>
				Total DCDL: \$ _____
3. **Indirect Costs (IDC)**  
These costs include what are generally referred to as 1) Fringe Benefits and 2) Overhead (including direct and indirect costs of Indirect Labor). Show the Proposed IDC Rate as a percentage of Direct Costs of Direct Labor and the product (IDC Amount) of that Rate multiplied by the total DCDL.  
IDC Rate: \_\_\_\_\_ % IDC Amount: \$ \_\_\_\_\_
4. **Other Direct Costs (ODC)**  
These costs include: subcontracts, equipment (company owned or rented), and reimbursable expenses (e.g., transportation, food and lodging, reproduction) – if not included in Indirect Costs. List proposed costs under the following headings. If multiples of an item required, list the proposed quantity, unit rate, and total cost for each. **Costs must be based on actual costs to the offeror or the subcontractor, without any profit or other markup.**

<u>Item</u>	<u>Quantity</u>	<u>Cost (\$/Unit)</u>	<u>Proposed Costs (\$)</u>
			Total ODC: \$ _____
5. **Total Proposed Cost**  
Sum of DCDL + IDC + ODC  
Total Cost: \$ \_\_\_\_\_
6. **Proposed Fee**  
List a proposed amount (Contract Fee is generally negotiated using a structured Fee analysis of proposed costs).  
Proposed Fee: \$ \_\_\_\_\_
7. **Total Proposed Price**  
Sum of Total Proposed Cost plus Proposed FEE.  
Total Price: \$ \_\_\_\_\_
8. *In accordance with the Submittal Checklist ('rfp-b'), item 10.3, Price Proposals must be signed and dated by the person who prepares it (may be a different signature for each subcontractor).*

Response will be scored as follows: 
$$\frac{(\text{Lowest Total Proposed Price}) \times (\text{MPP}^*)}{(\text{Offeror's Total Proposed Price})} = \text{Criterion Score}$$

\*MPP = Maximum Possible Points = (5) x (Number of Evaluators) x (Weight)

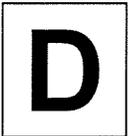
If no federal funding, then per AS 36.30.250(b), total price shall be reduced for the above calculation by the following applicable percentages when the prices are from Offerors designate preferences on page one of Part D.

- ALASKA BIDDER (OFFEROR) PREFERENCE [2 AAC 12.260(d)] ..... 5%
- ALASKA VETERAN-OWNED BUSINESS PREFERENCE [AS 36.30.321(f)] (maximum \$5,000) ..... 5%
- and only ONE of the following:
- EMPLOYMENT PROGRAM PREFERENCE [AS 36.30.321(b)] ..... 15%
- DISABLED SOLE PROPRIETOR [AS 36.30.321(d) / (k)] ..... 10%

To claim employment or disabled preference, Offeror must be on the appropriate Alaska Division of Vocational Rehabilitation list at the time designated for opening (i.e., receipt) of proposals.

# Alaska Department of Transportation & Public Facilities PROPOSAL FORM

PART



**THIS FORM MUST BE THE FIRST PAGE OF PROPOSAL.** Attach criteria responses as explained in Part B - Submittal Checklist. No transmittal letter or cover sheet will be used.

### PROJECT

Project Numbers-State/Federal.....	: Z563990000 / 0087001
Project Title .....	: Southcentral September 2012 Flooding Repairs Palmer Fishhook Road Design Services
RFP No.....	: 25202053

### OFFEROR (CONTRACTOR)

Contractor .....	:
Street .....	:
P.O. Box .....	:
City, State, Zip .....	:
Alaska Business License Number .....	:
Federal Tax Identification No. ....	:
DOT&PF DBE Certification No. (if any).....	:
Individual(s) to sign contract.....	:
Title(s).....	:
Type of business enterprise (check one) ....	: [    ] Corporation in the state of.. :
[    ] Individual    [    ] Partnership    [    ] Other(specify) .....	:

### ALASKA STATUTORY PREFERENCES (IF NO FEDERAL FUNDING)

Check the applicable preferences that you claim for the proposed contract (reference Criteria 11, 12 & 13 in Part C):	
[    ] Alaska Bidder (Offeror) <b>AND&gt;&gt;</b>	[    ] Veterans <b>AND&gt;&gt;</b> [    ] Employment Program <u>or</u> [    ] Disabled Persons

### PROPOSED SUBCONTRACTOR(S)

<u>Service, Equipment, etc.</u>	<u>Subcontractor &amp; Office Location</u>	<u>AK Business License No.</u>	<u>DOT&amp;PF DBE Certification No.</u>

### CERTIFICATIONS

I certify: that I am a duly authorized representative of the Contractor; that this Submittal accurately represents capabilities of the Contractor and Subcontractors identified herein for providing the services indicated; and that the requirements of the Certifications on page 2 and 3 of this Part D for 1) Alaska Licenses/Registrations, 2) Insurance, 3) Federal-Aid Contracts exceeding \$100,000, 4) Cost and Pricing Data, 5) Trade Restrictions/Suspension/Debarment, 6) Foreign Contracting, 7) DBE Commitment, and 8) Former Public Officer – will be complied with in full. These Certifications are material representations of fact upon which reliance will be placed if the proposed contract is awarded. Failure to comply with these Certifications is a fraudulent act. The Contracting Agency is hereby authorized to request any entity identified in this proposal to furnish information deemed necessary to verify the reputation and capabilities of the Contractor and Subcontractors. This proposal is valid for at least ninety days.	
Signature .....	_____
Name .....	_____
Title .....	_____
	Date: _____
	Telephone (voice): _____
	(fax): _____
	Email Address: _____

## CERTIFICATION FOR ALASKA BUSINESS LICENSES AND REGISTRATIONS

PART

**D**

Contractor and all Subcontractors shall comply with the following applicable requirements of Alaska Statutes:

1. **Alaska Business License** (Form 08-070 issued under AS 43.70) at the time contract is awarded as required by AS 36.30.210(e) for Contractor and all Subcontractors. In accordance with Administrative Manual, Section 81.120, proof of application for an Alaska Business license will satisfy this requirement. Per AAM 81.120, acceptable evidence that the offeror possesses a valid Alaska business license consists of any one of the following:
  - a. Copy of the Alaska business license.
  - b. A canceled check that demonstrates payment for the Alaska business license fee.
  - c. A copy of the Alaska business license application with a receipt stamp from the State's business license office.
  - d. A sworn notarized affidavit that the bidder/offeror applied and paid for the Alaska business license.
  - e. Other forms of evidence acceptable to the Department of Law.
2. **Certificate of Registration** for each individual to be in "responsible charge" (AS 08.48.341(11-14)) for Architecture, Engineering, Land Surveying, or Landscape Architecture (Form 08-2407 issued under AS 08.48.211) issued prior to submittal of proposal. Associates, consultants, or specialists under the supervision of a registered individual in "responsible charge" are exempt from registration requirements (AS 08.48.331).
3. **Certificate of Authorization for Corporations, Limited Liability Companies, and Limited Liability Partnerships** for Contractors and Subcontractors for Architecture, Engineering, Land Surveying, or Landscape Architecture (Form 08-2407 issued under AS 08.48.241). Entities offering to provide Architectural, Engineering or Land Surveying services do not need to be registered for such disciplines at the time proposal is submitted provided they obtain registration prior to contract award (AS 08.48.241).
4. **Certificate of Incorporation** (Alaska firms) or **Certificate of Authorization for Foreign Firm** ("Out-of-State" firms). All corporations, regardless of type of services provided, must have one of the certificates (AS 10.06.218 and other sections of Title 10.06 - Alaska Corporations Code).
5. **Current Board of Director's Resolution** for incorporated Contractors and incorporated Subcontractors for Architecture, Engineering, Land Surveying or Landscape Architecture (reference AS 08.48.241) that names the person(s) designated in "responsible charge" for each discipline. Such persons shall be licensed in Alaska and shall participate as project staff in the Contract/Subcontracts.
6. **All partners** in a Partnership to provide Architectural, Engineering, Land Surveying, or Landscape Architecture **must be legally registered in Alaska** prior to submittal of proposal for at least one of those disciplines (AS 08.48.251) which the Partnership offers.
7. **Joint Ventures**, regardless of type of services provided, must be licensed/registered in the legal name of the Joint Venture as used in this proposal (AS 43.70.020 and 43.70.110(4)).
8. **Contracts for Architecture, Engineering, Land Surveying, or Landscape Architecture** may not be awarded to individuals, corporations or partnerships not in compliance, respectively, with the provisions of paragraph 2, 3, and 6, above (AS 36.90.100).

**For information about licensing, Offerors may contact the Alaska Department of Commerce, Community, and Economic Development, Division of Corporations, Business and Professional Licensing at P.O. Box 110806, Juneau, AK 99811-0806, or at Telephone (907) 465-2550, or at Internet address: <https://www.commerce.alaska.gov/web/cbpl>**

## CERTIFICATION FOR INSURANCE

Contractor will ensure that it and all Subcontractors have insurance coverage to effectuate the requirements of DOT&PF Form 25A269, Indemnification and Insurance.

## CERTIFICATION FOR FEDERAL-AID CONTRACTS EXCEEDING \$100,000

The individual signing this proposal certifies to the best of his or her knowledge and belief, that:

- (1) No federal appropriated funds have been paid, by or on behalf of the Contractor, to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with the awarding of any Federal contract, the making of any Federal grant, the making of any Federal loan, the entering into of any cooperative agreement, and the extension, continuation, renewal, amendment, or modification of any Federal contract, grant, loan, or cooperative agreement.
- (2) If any funds other than Federal appropriated funds have been paid or will be paid to any person for influencing or attempting to influence an officer or employee of any Federal agency, a Member of Congress, an officer or employee of Congress, or an employee of a Member of Congress in connection with this Federal contract, grant, loan, or cooperative agreement, the Contractor shall complete and submit Standard Form-LLL, Disclosure of Lobbying Activities, in accordance with its instructions. Any person who fails to file the required disclosure shall be subject to a civil penalty of not less than \$10,000 and not more than \$100,000 for each such failure.

This certification is a material representation of fact upon which reliance will be placed if the proposed contract is awarded. Submission of this certification is a prerequisite for making or entering into the proposed contract imposed by Section 1352, Title 31, U.S. Code. The Contractor also agrees by submitting this proposal that Contractor shall require that the language of this certification be included in all lower tier subcontracts which exceed \$100,000 and that all such Subcontractors shall certify and disclose accordingly.

**CERTIFICATION – COST AND PRICING DATA**

In accordance with AS 36.30.400, any cost and pricing data submitted herewith, or in any future price proposals for the proposed contract, will be accurate, complete and current as of the date submitted and will continue to be accurate and complete during the performance of the contract, if awarded.

The Contractor certifies that all costs submitted in a current or future price proposal are allowable in accordance with the cost principles of the Federal Acquisition Regulations of Title 48, Code of Federal Regulations (CFR), Part 31 and that the price proposal does not include any costs which are expressly unallowable under the cost principles of the FAR of 48 CFR 31. In addition, all known material transactions or events that have occurred affecting the firm's ownership, organization and indirect costs rates have been disclosed.

**CERTIFICATION – TRADE RESTRICTIONS AND SUSPENSION AND DEBARMENT**

The individual signing this proposal certifies to the best of his or her knowledge that the Contractor and any subcontractors are in compliance with DOT&PF 25A262 Appendix A, General Conditions, Article A25 and Article A26.

**CERTIFICATION - FOREIGN CONTRACTING**

By signature on this solicitation, the offeror certifies that all services provided under this contract by the contractor and all subcontractors shall be performed in the United States. If the offeror cannot certify that all work is being performed in the United States, the offeror must contact the Contracts Officer to request a waiver at least 10 days prior to proposal deadline. The offeror must provide with their submission a detailed description of the portion of work being performed outside the United States, where, by whom, and the reason the waiver is necessary. Failure to comply with this requirement may cause the state to reject the bid or proposal as non-responsive, or cancel the contract.

**CERTIFICATION – DBE COMMITMENT**

For federal-aid projects with DBE goals: if the Contractor submits a utilization report that proposes to use certified DBE's in the performance of work, the Contractor certifies that every effort will be made to meet or exceed the proposed percentage.

In addition, the Contractor certifies that a Consultant Registration form shall be submitted to the DBE/Civil Rights Office for their firm and each subconsultant prior to award.

**CERTIFICATION – FORMER PUBLIC OFFICER**

Any proposer listing as a member of the proposer's team a current public officer or a former public officer who has left state service within the past two years must submit a sworn statement from that individual that the Alaska Executive Branch Ethics Act does not prohibit his or her participation in this project. If a proposer fails to submit a required statement, the proposal may be deemed nonresponsive or nonresponsible, and rejected, depending upon the materiality of the individual's proposed position.

The Ethics Act bars a public officer who leaves State service from representing, advising or assisting a person for compensation regarding a matter –

that was under consideration by the administrative unit in which the officer served, and in which the officer participated personally and substantially through the exercise of official action,

for two years after leaving state service. See AS 39.52.180(a). "Public officer" includes a state employee, a member of a state board and commission, and a trustee of the Exxon Valdez Oil Spill Trust. "Official action" means a recommendation, decision, approval, disapproval, vote, or other similar action or inaction. Possible remedies for violating the bar include penalties against the former public officer and voiding the state grant, contract or lease in which the former public officer is involved.

Additionally, former public officers may not disclose or use information acquired in the course of their official duties that could in any way result in a benefit to the former public officers or their families, if the information has not been disseminated to the public or is confidential by law, without appropriate authorization. See AS 39.52.140.

Each current or former public officer is responsible for determining whether he or she may serve in the listed capacity on this project without violating the Ethics Act. A form that a former public officer may use to certify their eligibility is attached. Current public officers may seek advice from their designated ethics supervisors concerning the scope and application of the Ethics Act. Former public officers may, in writing, request advice from the Office of the Attorney General, Ethics Attorney concerning the application of the Ethics Act to their participation in this project. It is the responsibility of the individual and the proposer to seek resolution in a timely manner of any question concerning the individual's eligibility.



# PRE-AUDIT STATEMENT

(Confidential when completed)

Submit this form, completed and with required attachments, **only** if specifically requested, and **only** to the following address: DOT&PF, Attn: Office of Internal Review, PO Box 196900, Anchorage, AK 99519-6900 OR to fax number: (907) 269-0733. Confidentiality may not be ensured if delivered otherwise.

Evaluation of this statement may preclude the necessity for a comprehensive on-site audit of Contractor's records. Entries may be handwritten, if legible.

1. Identify your financial year including beginning and ending dates.....:
2. List your actual costs, by the following categories, for your most recently ended fiscal year. Cost Terminology is defined on the reverse.
  - 2a. Direct Labor..... \$
  - 2b. Attach a Trial Balance with grouping of accounts used to arrive at the following Indirect Cost amounts:  
Fringe Benefits .....\$  
General & Administrative Expenses.....\$  
  
Sum..... \$
  - 2c. Indirect Cost Rate (Sum of 2b / 2a)..... Percent (%):
3. If your records have been audited within the last two years by a government agency, attach a copy of the Audit Report.
4. Attach copies of your most recent Internal and Audited (if performed by other than the Contracting Agency) Financial Statements.
5. Are your accounting methods for recording contract costs based on a job or project identified cost system?  
[  ] Yes [  ] No If your response is "No", attach an explanation of your project cost accounting system.
6. If you charge projects based on unit rates (e.g.: for computer time, laboratory tests, copies or equipment use, etc.) attach a list of such items and unit rates.
7. Do you offset revenue received from unit rate payments against the applicable Indirect Cost Accounts?  
[  ] Yes [  ] No

***If you have questions concerning this document, please telephone our Auditors at (907) 269-0715.***

## CERTIFICATION

I certify that I am a duly authorized representative of the Contractor and that information and materials enclosed within this statement accurately represent financial records of the office listed below.

Signature: \_\_\_\_\_ Date: \_\_\_\_\_  
Name: \_\_\_\_\_ Telephone: \_\_\_\_\_  
Title: \_\_\_\_\_ Fax: \_\_\_\_\_  
Contractor: \_\_\_\_\_ Email: \_\_\_\_\_

Office Address for which this Submittal is made: Address where Accounting Records are maintained,  
if not at Office Address:  
Street: :  
P.O. Box: :  
City, State, Zip: :

## COST TERMINOLOGY

**DIRECT LABOR** - Base salary or wages paid to employees charged directly to contracts or projects.

**OTHER DIRECT COSTS** - Actual costs of other than Direct Labor. Some examples of Other Direct Costs are subcontracts, equipment (company owned or rented), unit rate items and reimbursable expenses (travel, computer charges, reproduction, etc.).

**INDIRECT COST RATE** – A computed rate developed by adding all of a firm's general and administrative costs, and all other indirect costs, then dividing by a base value, usually direct labor dollars to get a percentage. This rate is normally compiled based on the consultant's applicable fiscal year.

**INDIRECT COSTS** - Indirect costs consist of allowable expenses which, because of their incurrence for common or joint cost objectives, must be prorated (allocated) to jobs or contracts using a specified Indirect Cost Rate. A cost objective is a function, organizational subdivision, contract, project or work unit for which cost data is accumulated under the Contractor's accounting system. Generally, Indirect Costs are segregated into the following categories: Fringe Benefits and General & Administrative Expenses .

Fringe Benefits - Costs for items such as:

Workers' Compensation Insurance	Vacation Time and Authorized Leave
Deferred Compensation/Retirement Plans	Social Security and Unemployment Taxes
	Group Medical Plan and Life Insurance Premiums

Overhead costs for items such as the following, if they are not included in Direct Costs:

Indirect Labor (Supervisory, Administrative, etc.)	Office Supplies
Travel, Food and Lodging	Communications
Maintenance and Depreciation of Equipment/Computers	Reproduction Costs
Business Insurance Premiums Not Billed to Clients	Recruiting Expense
Rent, Heat, Power, Light and Janitorial Services	Rentals of Equipment/Computers

**UN-ALLOWABLE COSTS** - Costs for the following items and certain other costs defined in 48 CFR Part 31 and related regulations are not allowable. Such costs shall not be included as Indirect Costs or in the calculation of the Indirect Cost Rate.

Alcoholic Beverages	Organization Costs
Advertising	Lobbying Costs
Interest and Other Financial Costs	Bad Debts
Contributions and Donations	Fines and Penalties
Federal Income Taxes	Entertainment
Goodwill	Keyman Insurance

**NOTE: IF YOUR ACCOUNTING SYSTEM WHOLLY OR PARTIALLY ALLOCATES INDIRECT COSTS ON OTHER THAN A DIRECT LABOR BASIS, ATTACH A DESCRIPTION OF THE COST POOLS OR SERVICE CENTERS YOU USE AND IDENTIFY THE INDIRECT COSTS RATE(S) AND BASE(S).**

# INDEMNIFICATION AND INSURANCE

## Appendix D in Professional Services Agreements

IRIS Program No:	Z563990000
Federal Project No:	0087001
Date Prepared:	12/9/2019

CONTRACTOR shall include the provisions of this form in all subcontracts that exceed \$25,000 and shall ensure Subcontractor's compliance with such provisions.

### ARTICLE D1 INDEMNIFICATION

D1.1 The CONTRACTOR shall indemnify, hold harmless, and defend the CONTRACTING AGENCY from and against any claim of, or liability for negligent acts, errors or omissions of the CONTRACTOR under this Agreement. The CONTRACTOR shall not be required to indemnify the CONTRACTING AGENCY for a claim of, or liability for, the independent negligence of the CONTRACTING AGENCY. If there is a claim of, or liability for, the joint negligent error or omission of the CONTRACTOR and the independent negligence of the CONTRACTING AGENCY, the indemnification and hold harmless obligation shall be apportioned on a comparative fault basis. "CONTRACTOR" and "CONTRACTING AGENCY", as used within this article, include the employees, agents and other contractors who are directly responsible, respectively, to each. The term "Independent Negligence" is negligence other than in the CONTRACTING AGENCY's selection, administration, monitoring, or controlling of the CONTRACTOR and in approving or accepting the CONTRACTOR's Work.

D1.2 The CONTRACTOR shall exercise that degree of skill, care and judgment commensurate with the professional standards for the services of a similar nature. When such standards are in dispute, they shall be established by a panel of three qualified, impartial professionals objectively selected and appointed by the Appeals Officer.

D1.3 The CONTRACTOR shall correct, through re-performance at its expense, any services which are deficient or defective because of the CONTRACTOR's failure to perform said services in accordance with professional standards, provided the CONTRACTING AGENCY has notified the CONTRACTOR in writing within a reasonable time, not to exceed 60 days, of the discovery of any such deficiency during the performance of the services and within 12 months of the date of final payment under this Agreement.

### ARTICLE D2 INSURANCE

D2.1 Without limiting the CONTRACTOR's indemnification, it is agreed that CONTRACTOR shall purchase at its own expense and maintain in force at all times for the duration of this Agreement, plus one year

following the date of final payment, the following policies of insurance. Where specific limits are shown, it is understood that they shall be the minimum acceptable limits. If the CONTRACTOR's policy contains higher limits, the CONTRACTING AGENCY shall be entitled to coverage to the extent of such higher limits. Certificates of insurance must be furnished to the CONTRACTING AGENCY and incorporated into this Agreement with copies attached to this document. Certificates must provide for the CONTRACTING AGENCY to receive notice of any policy cancellation or reduction per AS 21.36 Sections 210-310. Failure to furnish certificates of insurance or lapse of the policy is a material breach and grounds for termination of the CONTRACTOR's services and may preclude other Agreements between the CONTRACTOR and the CONTRACTING AGENCY.

D2.1.1 Worker's Compensation Insurance: The CONTRACTOR shall provide and maintain, for all employees engaged in work under this Agreement, coverage as required by AS 23.30.045, and; where applicable, any other statutory obligations including but not limited to Federal USL&H and Jones Act requirements. The policy(s) must waive subrogation against the State of Alaska.

D2.1.2 Commercial General Liability Insurance: Such policy shall have *minimum* coverage limits of \$300,000 combined single limit per occurrence, covering all business premises and operations used by the Contractor in the performance of services under this agreement. The policy shall be written on an "occurrence" form and shall not be written as a "claims-made" form unless specifically reviewed and agreed to by the CONTRACTING AGENCY.

D2.1.3 Comprehensive Automobile Liability Insurance: Such policy shall have *minimum* coverage of \$300,000 combined single limit per occurrence covering all vehicles used by the Contractor in the performance of services under this agreement.

D2.1.4 Professional Liability (E&O) Insurance: Covering all negligent errors or omissions, and negligent acts, which the CONTRACTOR, Subcontractor or anyone directly or indirectly employed by them, make in the performance of this Agreement which result in financial loss to the State of Alaska. Limits required are per the following schedule:



**PROPOSED STATEMENT OF SERVICES  
APPENDIX B**

**SOUTHCENTRAL SEPTEMBER 2012 FLOODING  
REPAIRS – PALMER FISHHOOK ROAD DESIGN SERVICES**

**ARTICLE B1  
INDEX**

The following is a list of the indexed articles for appendix B and the assigned Task Numbers for the Article Subjects.

<b><u>Article</u></b>	<b><u>Task #</u></b>	<b><u>Subject</u></b>
B2		Exhibits
B3		Codes, Regulations, Standards, etc.
B4		Administrative Requirements
B5		Project Location & Description
B6		Summary of Contract Services
B7		Management
B8	<b>1</b>	Environmental Activities
B9	<b>2 (NIC)</b>	Phase I Site Assessment
B10	<b>3</b>	Surveying and Mapping
B11	<b>4 (NIC)</b>	Geotechnical
B12	<b>5</b>	Hydraulic and Hydrologic Report
B13	<b>6 (NIC)</b>	Traffic and Safety Analysis
B14	<b>7</b>	Design Study Report
B15	<b>8</b>	Public Involvement
B16	<b>9 (NIC)</b>	Right of Way
B17	<b>10 (NIC)</b>	Utilities
B18	<b>11</b>	Erosion and Sediment Control Plan
B19	<b>12</b>	Plans, Specifications, and Estimates
B20	<b>13</b>	Traffic Control Plan
B21	<b>14</b>	Assistance During Bidding
B22	<b>15</b>	Completion Documentation
B23	<b>16</b>	Assistance During Construction
B24	<b>17 (NIC)</b>	Project Closeout

(NIC) is abbreviation for (Not In Contract); The Contracting Agency reserves the right to negotiate and add these Articles by Amendment. However, it is under no obligation to do so, and reserves the right to complete the services by any other means, including the use of in-house forces.

**ARTICLE B2  
EXHIBITS**

**B2.1 Exhibits List.** Following is a list of the Exhibits included in this Appendix B. The Exhibits follow the last Article in the Appendix.

<b><u>Exhibits</u></b>	<b><u>Subject</u></b>
B-1	Project Location
B-2	Existing Retaining Wall Details
B-3	Highways Standards and Guidelines
B-4	Sample Monthly Progress Report

**ARTICLE B3**  
**CODES, REGULATIONS, STANDARDS AND PROCEDURES**

**B3.1** All studies, reports and design services shall be performed in accordance with applicable codes, regulations and standards; professional practice procedures; commonly recognized construction methods; and the DOT&PF's policies, procedures and practices, including those listed in **Exhibit B-3**. The Contractor shall consider the geographical location of the project as well as other environmental and site specific constraints when performing services for this project.

**B3.2** Publications that contain the current highway standards and guidelines are listed in **Exhibit B-3**. During the period of this agreement the listed documents may be added to, deleted or revised.

**B3.3** U.S. Customary units of measurement shall be used throughout development of the project.

**ARTICLE B4**  
**ADMINISTRATIVE REQUIREMENTS**

**B4.1 General.** The Contractor shall provide services as identified and authorized by sequentially numbered Notices-to-Proceed (NTP). The Contractor shall not perform services or incur billable expense except as authorized by a NTP.

**B4.2 Project Staff.** All services must be performed by or under the direct supervision of the following individuals (replacement of, or addition to, the Project Staff named below shall be accomplished only by prior written approval from the Contracting Agency):

<u>Name</u>	<u>Project Responsibilities</u>
Name	Contract Management
Name	Project Management
Name	Civil Engineering
Name	Structural Engineering
Name	Hydraulic/Hydrologic Design
Name	Surveying and Mapping
Name	Cultural Resource Services
Name	Public Involvement Services

**B4.3 Professional Registration.** All reports, plans, specification, estimates and similar work products provided by the Contractor shall be prepared by or under the supervision of an Engineer or Land Surveyor currently registered in Alaska.

**B4.4 Billing Reports.** The Contractor shall provide a two-page (typical) report with each monthly billing for months in which services are performed. Billings will be submitted no later than the 15<sup>th</sup> of each month. The report shall follow the guidelines outlined in the Sample Monthly Progress Report, **Exhibit B-4**. Any delayed costs from previous billing periods that are included in the current billing must be clearly explained in the report.

**B4.5 Correspondence.** All correspondence prepared by the Contractor shall bear the Contracting Agency's assigned Project name and numbers (State & Federal). No contractor logos shall be allowed on any electronic or hard copy document produced for the Contracting Agency. The Contractor company name shall be included in the box above or below the engineer's seal on each plan sheet. Documents produced for the Contracting Agency shall include the Contractor's company name at the bottom right of the first page, cover sheet or title sheet only. Contractor letterhead shall be allowed only as exhibits in document appendices. The Contractor name shall be in the same font as other lettering on the plan sheet or document, shall be 1/16" or less in height on 11"x17" plan sheets, and shall be in the following format:

PLANS DEVELOPED BY:  
COMPANY NAME

**B4.6 Documents and Reports** shall be printed with solid black letters on white, 8.5-inch x 11-inch bond or "Xerox Copy" paper. Other size paper may be used for illustrations if they are folded to 8.5-inch x 11-inch

size. Draft versions shall be double spaced lines of text. Final versions shall be single-spaced. Original documents and reports shall be printed on one side of the paper only and shall be ready for copying. Original, camera ready, copies of final documents and reports shall be submitted to the Contracting Agency for a check before printing. All final documents and reports shall also be submitted on CD ROM as document files for Microsoft Word 2010 (or newer version) or compatible software written for IBM compatible computers. The Contractor shall use "active voice" verb forms when writing documents and reports where feasible.

**B4.6.1 Copies.** Only single copies of all deliverables shall be required.

**B4.6.2 Page Numbers.** All documents shall be page numbered to allow every major Section, Chapter, Appendix, etc., to begin on a "right hand," odd numbered page.

**B4.6.3 Covers.** The cover of all documents and reports shall include the following information:

- a. Name of document or report.
- b. Date.
- c. Indicate whether draft or final.
- d. Project Name.
- e. Federal / State Project Number:
- f. Prepared for: Alaska Department of Transportation and Public Facilities.
- g. Prepared by:
- h. Map and/or picture of project area.

**B4.6.4 Electronic Documents.** The final version of all report submittals shall be in PDF format on a CDROM along with the other deliverables.

**B4.7 Plans, Maps, and Plats** shall be submitted with solid black ink on white, 11-inch x 17-inch bond paper. Unless otherwise stated, the format and standards for all drawings will be according to the most current DOT/PF Central Region English (as a guide) Highway Design Drafting Manual. Final drawings shall be on 11-inch x 17-inch bond paper plans with original "wet signature" on professional seal, and ROW drawings shall be in full size Mylar.

**B4.7.1 Drafting.** All drawings shall be submitted as AutoCAD drawing files and plot files. Unless otherwise stated, the format and standards for all drawings shall be according to the most current Department of Transportation & Public Facilities (DOT&PF) Central Region English (as a guide) Highway Design Drafting Manual as of the Notice to Proceed for this contract. A standard layering scheme provided by the Contracting Agency shall be used. Failure to adhere to this scheme shall be cause for rejection. The drafting procedures shall be as outlined in the current Contracting Agency's Highway Design Drafting Manual. Draft drawing and plot files shall be submitted on CD ROM disks. Final drawing and plot files shall be submitted on CD ROM disks.

**B4.8 Specifications and Estimates** shall be submitted with solid black letters that are single spaced on white, 8.5-inch x 11-inch bond or "Xerox Copy" paper. They shall be printed on one side of the paper only and shall be ready for copying. Specifications and estimates shall contain no graphics and no photographs except as specifically approved by the Contracting Agency.

**B4.8.1** Copies of the Specifications shall be printed on both sides of the paper and shall be bound with a comb binder. Copies of the estimates shall be single sided. For Reviews, copies of estimates shall be included as the first item behind the cover of the Specifications.

**B4.8.2** All Specifications shall be submitted on CD ROM disks as document files for Microsoft Word 2010 or later software written for IBM compatible personal computers as well as one pdf file. All estimates shall also be submitted on CD ROM disks as .PDF files.

**B4.8.3** The Contractor shall develop the Engineer's Estimate (EE) for this project using the AASHTOWARE program. Access to the program and instructional documentation for the software will be provided to the Contractor. The Contracting Agency will provide pay item numbers for items not listed in the Standard Specifications if needed. Provide estimated unit prices and total estimated costs for all items.

The Contracting Agency will make its historical records available for determination of unit prices using the DOT&PF BidTab IV program, and the AASHTOWARE program. Sign and date the EE.

The Engineer's Estimate shall remain confidential until after construction bids are opened.

**B4.9 Proofreading.** The Contractor shall prepare the report(s), which to the greatest extent possible, free of mathematical, grammar, spelling and typographical errors. The Contractor is responsible for professional proofreading of the report(s) to meet the intent of this requirement.

**B4.10 Revisions.** The Contractor shall modify work products in response to direction from the Contracting Agency. Corrections, adjustments, or modifications necessitated by the review/approval process, but which do not substantially affect the scope, complexity, or character of the services, shall be considered a normal part of the Contractor's services.

**B4.10.1 Errors and Omissions.** Except as described in this Statement of Services, work products shall be essentially complete when submitted to the Contracting Agency. Work products having significant errors or omissions will not be accepted until such problems are corrected.

**B4.10.2 Review Meetings.** Following each review the Contracting Agency will provide written comments and may hold a meeting to discuss the issues. The Contractor's personnel who are in-responsible-charge for the work products under review shall attend the meeting and they may be asked to interpret and provide explanations of the content.

**B4.10.3 Comment Resolution.** The Contractor shall provide a written response with subsequent submittals that address all written and oral comments from the Contracting Agency. All changes from previous submittals shall be clearly explained.

**B4.11 Reproduction and Distribution.** When the contract requires only the original or only one copy of a work product to be delivered, the Contracting Agency will reproduce and distribute any other copies required. Items delivered for reproduction shall be organized and camera ready for copying and not stapled or otherwise bound.

**B4.12 Completion Documentation.** The original and an electronic copy of all documents prepared by the Contractor during project development shall be submitted with the Final PS&E assembly. These documents include all notes, sketches, maps, photographs, survey data, computations (cost computations shall be under separate cover), cross sections, and other materials created to develop, record, or justify services provided for the project. These documents shall identify all assumptions made. The Contractor shall keep a copy of all the development documents until construction is complete.

**B4.12.1** Documents created to determine pay item quantities shall contain sufficient information to allow the quantity for each pay item to be checked by starting from the source document. These documents shall be referenced to the applicable pay item.

**B4.12.2** Documents shall be submitted on a CD ROM. The CD ROM shall be labeled with the project name, "Completion Documents", and the disk number. The front of the CD ROM shall also be labeled with this information as well as the State and Federal project numbers and a brief description of what documents are contained in the disks as detailed in Article B4.

**B4.12.3** It is expected that this information will be generated in order to develop the completed plans, specifications and estimate. Only minor reproductions costs for the Contractor's copy will be paid.

**B4.12.4 Conflict of Interest.** The Contractor shall not represent any parties other than the Contracting Agency concerning this project.

**B4.12.5** The Contractor shall develop the Estimate for this project using the Department of Transportation & Public Facilities current version of the AASHTOWARE program. Access to the program and instructional documentation for the software will be provided to the Contractor.

**ARTICLE B5**  
**PROJECT LOCATION AND DESCRIPTION**

**B5.1** This project will restore transportation facilities damaged in the September 2012 flood event (FHWA Disaster AK12-2). The highway design criteria for highway projects are described in Chapter 11 of the Highway Preconstruction Manual (HPCM).

**B5.1.1** The project is located in the Mat-Su Borough, at approximately MP 9 of the Palmer-Fishhook Road (aka Hatcher Pass Road). See, **Exhibit B-1** for more details. The Contractor shall propose design alternatives to correct the erosion issues as well as stabilize the rock face adjacent to the road at this location. Proposed options should discuss constructability, feasibility, traffic control and environmental impacts, while ensuring there are no adverse impacts to the existing river channel. This contract will include a scoping sub-task to evaluate feasible alternatives, before final design is initiated. It is anticipated that the Contracting Agency staff will provide the following services: right-of-way (TCEs or TCPs), environmental document, permitting, and geotechnical investigations/recommendations. The Contracting Agency reserves the right to negotiate and add any or all of these tasks by Amendment, however, the Contracting Agency is under no obligation to do so, and reserves the right to perform these services by any other means.

**ARTICLE B6**  
**SUMMARY OF CONTRACT SERVICES**

**B6.1 General.** The Contractor shall provide professional services for design development of the project to include development of a completed Design Study Report, and the preparation of bid-ready Plans, Specifications, and Cost Estimates as described herein. Design support activities include project scoping, engineering/drafting support for the environmental document/permit applications, a Section 106 Analysis, surveying and mapping, engineering investigations, hydraulic and hydrologic analysis, design studies, design reviews, public involvement and design completion documentation; and any investigation, study, or analysis required to complete the construction bid documents.

The Contractor shall also provide design assistance to the Contracting Agency as needed during construction bidding, and design assistance to the Contracting Agency's construction staff as needed during construction.

**The following professional services are not included in the Contract and will be provided by the Contracting Agency, as necessary:**

- a. Environmental Document
- b. Obtaining required regulatory and construction related permits
- c. Pavement Design
- d. Right of Way Services
- e. Bridge Design
- f. Geotechnical Investigations\*
- g. Utility Agreements\*

\*The Contracting Agency reserves the right to negotiate and add Geotechnical Investigation and Utility Agreement services by Amendment. However, the Contracting Agency is under no obligation to amend the Contract and reserves the right to accomplish these services by any other means, including the use of in-house forces

**B6.2 Cost Effective Design.** The Contractor shall evaluate alternatives for each major design element to determine the most cost effective design. Conclusions shall state the recommended alternative and the reasons why it is recommended. The evaluation of each alternative shall consider minimum versus desirable design criteria, earthwork balance, design speed versus roadway classification, ease of construction, and the impact of each alternative on the following:

- a. Right-of-Way requirements
- b. Utilities
- c. Environmental concerns, including hazardous substances and wetlands
- d. The traveling public, both during and after construction

- e. Design Schedule
- f. Design, construction, and maintenance budgets
- g. Other issues as appropriate.

**B6.3** There is no guarantee given that the Contractor will be required to provide all of the services detailed in this Statement of Services or that the Contractor shall incur all of the costs estimated in Appendix C of the PSA. Likewise, no guarantee is given that the Contractor shall perform other services for the project beyond that defined in this contract.

## **ARTICLE B7** **MANAGEMENT**

**Note:** *This Article shall not be treated as a distinct task. Costs associated with the services described in this Article shall be apportioned among the tasks required to accomplish the requirements of Articles B8 through B24.*

**B7.1 Performance Schedule.** The Contractor shall perform this contract in accordance with the proposed and negotiated Project Schedule. This schedule should show the anticipated delivery date for major project products. It should be sequenced in accordance with Federal Highway Administration requirements for project development and Contracting Agency's duration estimates in order to complete the project on time. This schedule shall be used to track Contractor progress and billings.

**B7.1.1 Schedule changes.** Adherence to the Project Schedule is necessary to meet the Contracting Agency's long-term goals and commitments. The Contractor agrees to expend all effort necessary to stay on schedule and meet the contract delivery dates.

**B7.1.2 Meetings / Reports.** The Contractor shall schedule and attend periodic progress meetings (generally every month) with the Contracting Agency's Project Manager. Various members of the Contractor's support staff and subcontractor staff shall also attend, if necessary for the discussion of pertinent issues. The Contractor shall provide "exception reporting" of scheduled activities that are late, suspended, or significantly accelerated. The Contractor shall explain why any activity is off schedule, or likely to become so. The Contractor shall also explain what corrective action(s) are being taken. Also the Contractor shall discuss upcoming events and milestones to be achieved over the succeeding month.

**B7.1.3 Meeting Minutes.** The Contractor shall keep minutes of all progress meetings and submit them to the Contract Manager within five workdays following each meeting.

**B7.2 Project Coordination.** All coordination and correspondence for the project shall be handled through or with the concurrence of the Contracting Agency's Project Manager.

**B7.2.1 FHWA Communication.** All communications with FHWA regarding this project shall be by the Contracting Agency.

**B7.2.2 Contracting Agency Activities.** The Contracting Agency's Project Manager will coordinate the Contractor's activities with those of various functional groups within the Agency. These groups may include Materials/Geotechnical; Survey; Planning; Traffic, Safety & Utilities; Preliminary Design & Environmental; Right-of-Way; Bridge; Specifications and Cost Estimating; and Contracts.

The Contractor shall be responsible for providing timely information required for the project related services performed by the functional groups within the Contracting Agency.

The Contractor shall not commit the Contracting Agency to any action to be accomplished by the proposed project. Any commitments to action or mitigation will be made by the Contracting Agency. Public Involvement is further addressed in Article B17.

**B7.2.3 Agency and Public Coordination.** The Contractor shall coordinate with appropriate federal (e.g., EPA, USFWS, COE, etc.), state (e.g. DEC, F&G, DNR - SHPO and Parks & Recreation), and local government agencies and the public, including special interest groups and organizations that could be potentially affected by the proposed project. The purpose shall be to inform these entities regarding the project and to allow them to identify concerns, suggestions and/or alternative solutions. This shall specifically preclude the negotiation of mitigation for project impacts.

**B7.2.4 Correspondence.** The Contractor shall submit all written material, letters, survey forms, etc., used to communicate information regarding the project to the Contracting Agency's Project Manager for review and acceptance prior to its distribution. Copies of all outgoing and incoming correspondence shall be provided to the Contracting Agency's Project Manager at least once a week. All outgoing correspondence shall include the project title and state and federal project numbers.

**B7.2.5 Release of Information.** The release of any project-related information must be approved by the Contracting Agency's Project Manager.

**B7.2.6 Right-of-Entry Permits.** The Contracting Agency will obtain Right-of-Entry authorizations for the Contractor, when required. The Contractor shall provide final exhibits a minimum of 10 working days advance notice for the Agency to acquire any authorization. Should the authorizations take additional time to obtain, performance schedule(s) may be adjusted accordingly. The Contractor shall not be entitled to any additional compensation for any delay incurred in obtaining Right-of-Entry Permits.

**ARTICLE B8**  
**ENVIRONMENTAL ACTIVITIES**  
**(Task 1)**

The Contractor shall provide support to the Contracting Agency in preparing Environmental Documents and the permit applications required for the project.

**B8.1 Engineering Support for Environmental Documentation and Permits.** The Contractor shall provide all calculations, figures, and other information needed for the development of the Environmental Document and permits required for the project. The Contractor shall prepare the Section 106 analysis/documentation as well as draft permit applications for the project.

**ARTICLE B9**  
**PHASE I SITE ASSESSMENT**  
**(NIC)**

**ARTICLE B10**  
**SURVEYING AND MAPPING**  
**(Task 3)**

**B10.1 GENERAL CRITERIA FOR SURVEYING AND MAPPING SERVICES**

**B10.1.1 Standards.** The Contractor shall perform the services to standards called for in the Alaska State Professional Land Surveyors (ASPLS) Standards of Practice, the California Geodetic Control Committee (CGCC) Standards for Band IV surveys, U.S. COE Manual EM-1110-1-10000 for Photogrammetric Mapping, or the DOT&PF Construction Surveying Requirements, as appropriate to the services being performed.

All studies, reports and services shall be performed in accordance with applicable codes, regulations and standards; professional practice procedures; and commonly recognized surveying and mapping methods. The Contractor shall package the deliverable in an electronic format using folders. The Contractor shall not begin surveying for design, surveying for right-of-way, or right-of-way mapping without specific written authorization from the Contracting Agency.

**B10.1.2 Considerations.** The Contractor shall consider the geographical location of the project as well as other environmental and site specific constraints when performing services. The Contractor shall procure the necessary right of entry permissions when required, including private property, any Native Allotments, and Alaska Railroad property.

**B10.1.3 Registration.** All survey services shall be conducted by, or under, the direct supervision of a Professional Land Surveyor (PLS) holding current registration in the State of Alaska. A PLS shall be an active, on-site field supervisor of the survey crew. A PLS shall also be directly involved in the preparation of all survey deliverables.

**B10.1.4 Field books.** The Contractor shall furnish hardbound field books for recording survey information. The books shall become the property of the Contracting Agency after the survey information has been entered and the contract completed. Each book shall be labeled with the project name and an appropriate title, e.g. Horizontal Control, Vertical Control, etc., and shall have an index and comments page. The index page shall reference the contents by page number. A readable PDF copy of the field books is acceptable.

**B10.1.4.1** Field notes shall be kept in a neat and orderly fashion. All pages shall be consecutively numbered, showing date, weather, and crew names. All abbreviations used shall be described on the comments page. Sketches are to be used frequently and shall be detailed enough to assist in following the progression of the services. Notes and sketches shall be adequately detailed to convey their intent to a person who is not familiar with the project. Descriptions of all monuments or other points, recovered or set, are to include the data stamped on the monument and the condition of the monument.

**B10.1.5 Units.** U.S. Customary System of Measurement (foot units) shall be used throughout development of the project. Any metric conversions required shall be based upon the U.S. Survey Foot (3937 feet = 1200 meters exact).

**B10.1.6 Drawings, Plats, and Maps** shall be prepared in electronic format as specified by the Contracting Agency.

**B10.1.6.1** Unless otherwise stated, the format and standards for all drawings will be according to the most current DOT&PF Central Region Design Drafting Manual. These standards are available upon request. The plotted scale shall be as specified by the Contracting Agency.

**B10.1.6.2** Drawings shall be produced and provided in English (U.S. Survey foot units) format. Distances will be shown in horizontal ground foot units. Areas shall be annotated with "Ac." for acres, and "sq. ft." for square feet. Metric units shall not be shown on drawings developed for design work, unless requested to do so by the Contracting Agency.

**B10.1.6.3** All linework and lettering must be of professional quality and all line widths and lettering sizes must be of such size that all information can be clearly shown without overlap or confusion. All lettering must be a minimum size of 0.1 inch at a full-scale plot. Lettering and linework must be in the appropriate black drafting ink. AutoCAD style names and fonts shall follow the Contracting Agency's specified standards. See the current Design Drafting Manual (B10.1.6.1)

**B10.1.6.4** Linework shall not run through text. Do not break lines at text; mask the linework using color 155 solids. Solids shall be placed on the same layer as the text that the solid lies under.

**B10.1.6.5** Drawings are to be accurate models of the data shown, e.g.; a line labeled N 10°00'00" E 104.35' shall be electronically drawn exactly as labeled, a line that is shown to terminate at a monument symbol shall be electronically drawn with no distance between the endpoint of the line and the center of the symbol, etc.

**B10.1.6.6** All CAD work within Model Space shall be color by layer. The drawing shall include metadata, to include: control statements, drawing notes, and any other survey related info shown as text within Model space. The drawing shall be purged before submitting. Zoom to extents and remove any extraneous features. Check to ensure that all symbols are the same scale, which should be the plotted scale of the drawing. A standard DOT&PF north arrow, a legend depicting only the symbols and linework used on that sheet, a foot unit bar scale, and standard DOT&PF border will be included on each sheet within the drawing. Do not include any extraneous backup files.

**B10.1.6.7** Final Plans, Maps, and Plats shall be submitted electronically and with solid black ink on 22" x 34" original mylar. All final drawings shall be plotted so that the ink is on the front surface of the mylar. Topographic drawings are not required to be plotted.

**B10.1.6.8** Drawings not meeting these standards will be rejected. All drawing files shall be submitted electronically to the AK DOT&PF Survey Manager upon completion for review. The contractor shall perform their own internal review of these products before delivery, to see that Department standards have been followed.

**B10.1.7 TINs** shall be an Autodesk Civil3D Surface or 3D lines with an accompanying LandXML file. Include the TIN boundary as a closed polyline at elevation zero, and the fault lines as 3D polylines. All TINs produced shall be checked by ground based survey methods and by field inspection of contours generated by the TIN.

**B10.1.7.1** A TIN certificate shall be submitted, signed, and sealed by the responsible PLS and shall contain the following: 1) the methods used to gather data for production of the TIN(s), 2) the accuracy of the TIN(s), and 3) the checks used to substantiate the accuracy of the TIN(s). All ground based TIN(s) shall be field checked before final submittal, and this shall be stated on the TIN certificate. All TIN(s) shall be checked by a PLS using withheld Topographic points randomly collected throughout the TIN(s) area. A minimum of 50 points shall be collected. Provide a spreadsheet showing the elevation differences from the TIN(s). A sample certification of TIN is available from the Contracting Agency's Survey Section.

**B10.1.8 Coordinate Files** shall be comma-delimited ASCII text files. Data shall be in the sequence Point Number, N, E, Z, and Description. Coordinates shall be given to four decimals for the Northings and Eastings, and two decimals for elevations. Points of unknown elevation shall have a placeholder of -9999 in the Z position. Descriptors are to be case sensitive; e.g., Rebar5 shall not equal REBAR5. Descriptors for found or set monuments shall follow examples provided by the Contracting Agency.

**B10.1.8.1** Point Numbering Scheme. The following point numbering scheme shall be used:

Range	Use
1-200	Primary Control Set (main project, line-of-sight traverses)
201-300	Primary GNSS Control
301-400	Aerial Control Panels or Naturals (HV's)
401-550	Secondary Control Points (Spikes/Nails)
551-600	Recovered Published Hz. Control (NGS, NOS, etc.)
601-700	Set or Recovered Vertical Control
701-2000	Fnd Mons/Prop Cors
2,001-5,000	Computed/Protracted Points, Search, Pre/Post Stakeout
5,001-20,000+	Topography Survey Points

The Surveyor shall ensure that point numbers used in this task do not conflict with point numbers used in other survey tasks on this project.

**B10.1.9 Electronic Data** (drawing files, coordinate files, reports, etc.) shall be submitted on appropriate size and type of digital media.

**B10.1.10 Quality Control** shall be performed by the Contractor prior to all submittals. Three dimensional backsight checks shall be recorded at the beginning and end of all instrument setups. Three dimensional coordinate checks shall be recorded at the beginning and end of an RTK GNSS work session. These checks shall become part of the submittal, labeled as "Quality Control Checks" within the Control Summary deliverable. The Contracting Agency will **reject** submittals that do not substantially conform to the requirements of this statement of services.

**B10.1.11 Reviews.** Draft documents required under this agreement shall be submitted to the Contracting Agency Survey Manager for review. The Contractor shall allow three weeks for the return of written comments. The Contractor shall address and respond to these comments to the satisfaction of the Contracting Agency prior to submitting the final documents.

**B10.1.12 Submittal Delivery.** Deliverables shall be submitted to the Contracting Agency in accordance with the negotiated schedule.

## **B10.2 SURVEYING AND MAPPING SERVICES**

### **B10.2.1 OVERVIEW.**

**B10.2.1.1 General.** The Contractor shall research all information applicable to the requirements of the assigned project and perform all necessary field and office services necessary to collect geospatial data and to reduce the collected data to a form useful for the Contracting Agency's project.

**B10.2.1.2 Survey Limits and Scope.** The survey limits and scope will be defined within the project's Request for Proposal.

**B10.2.1.3 Survey Services** shall be performed in the following sequence unless otherwise directed by the Contracting Agency:

- a. Research
- b. Pre-Work Meeting with ADOT&PF
- c. Control Survey
- d. Aerial Photography/Photogrammetry
- e. Topographic/Planimetric Survey
- f. Bridge Site(s)/Drainage Survey
- g. Special Features
- h. Right-of-Way Survey
- i. Right-of-Way Mapping
- j. Preconstruction Surveying
- k. Post Construction Surveying
- l. Right of Way Engineering Closeout Services

### **B10.2.2 Control Surveys**

**B10.2.2.1 General.** Control surveys include establishing horizontal and vertical control points as directed by the Contracting Agency. The Contractor shall prepare a Survey Control Diagram (SCD) showing the results of the control survey. The SCD will be a recorded document, and as such, will need to meet certain criteria. All points used or tied as a part of these control surveys shall be included in the project coordinate file and shown on the SCD. SCD guidelines are available from the DOT&PF Survey Section. Prior to performing field surveys for the project, the Contractor shall meet with the Contracting Agency's Survey Manager, or their designee, to get existing Department control data and to discuss the control requirements for the project.

**B10.2.2.1.1 Basis of Horizontal Control.** When the primary control is provided by the Contracting Agency, it shall be held as the basis of control for the project. Contact the Contracting Agency if the provided control is found to be disturbed or out of tolerance. Any auxiliary control points necessary to augment this control shall be incidental to the task for which it is required. When the primary control is to be performed by the Contractor, the basis of control shall be as directed by the Contracting Agency's Survey Section. The local project coordinate system to be used shall be based upon transformation parameters supplied by the Contracting Agency.

**B10.2.2.1.2 Horizontal Control Standards.** All horizontal control survey measurements and references shall be recorded in field books. Electronic data collection can be used to record control data, but is not acceptable as the sole data source for survey measurements. Distances shall be measured and recorded in both feet (nearest 0.01 foot) and meters (nearest 0.001 meter) as a check. Recorded angle sets, at a minimum, will contain 2 direct and 2 reverse measurements of the forward angle right. When the difference between a direct and reverse pointing of an angle pair exceeds six seconds (ten seconds for distances of 150 feet or less), then that angle pair shall be rejected and

remeasured. The mean angle right shall be used for all computations. All foresights and backsights shall be of the fixed leg type. Secondary control points may be side-tied in the same manner. Secondary control points shall be, at minimum, a mag-nail in paved areas or a 6-inch spike in unpaved areas.

All traverses performed shall meet or exceed the standards for Third Order Class I, Traverse Surveys as specified in the ASPLS Standards of Practice. All traverses shall be closed; beginning and ending at known points with an allowable linear error of closure of 1:10,000 or better. In no case shall ground traverses run greater than 2 miles between GNSS controlled points. Static GNSS work shall meet current CGCC Standards for Band IV Surveys. Traverse and GNSS network adjustments shall be by simultaneous least squares adjustment methods.

All cadastral, property, or right of way corners controlled with GNSS shall be done using Static GNSS survey methods. These corners are to be considered secondary control and need only to be occupied once, providing there is a minimum of two 20 minute duration vectors from project control computed for the corner position that differ by no more than 0.08 feet horizontally.

**The use of Post-Processed Kinematic (PPK) or Real-Time-Kinematic (RTK) GNSS procedures are not allowed for establishing control.**

**B10.2.2.1.3 Primary Horizontal Control.** For Highway Projects or traverses along road corridors, GNSS control points shall be set at approximately 2 mile intervals within the project limits, in areas where they may be easily traversed in and out of. These points shall be used for both the project horizontal and vertical control. A 9/16" dia. stainless steel rod shall be used for these deep monuments. A minimum 4" dia. well case of length 2.5 feet shall be set around each monument with a protective cap and marker post. These points shall be driven to a maximum of 40 feet or refusal, whichever is less. An acceptable alternative would be to cement a cap into a solid rock outcropping or bedrock, or a dig-in type flared-base monument where conditions warrant.

Additional intervisible traverse points, as needed, shall be set at maximum 1320 foot intervals, and shall consist of a minimum 5/8" x 24" rebar (5/8" x 8" in pavement) with identifying cap. These points shall be located off of the existing paved surface wherever possible, and shall be set at least 0.1 foot below the existing ground surface. No spikes or nails shall be used as the Primary Horizontal Control.

All primary horizontal control points and reference points, found or set, shall be shown on the SCD.

The Contractor shall prepare a narrative horizontal control summary detailing the datum, primary control points used, Basis of Bearings, type of adjustment performed and statistics, problems encountered during the survey, equipment used, etc., which shall include annotated copies of control computations and control adjustments, and a horizontal control statement. For GNSS control surveys, the Contractor shall also provide a RINEX2 format data file of at least 8 hours of GNSS data for at least two control points for at least two different days in the Contractor's control network. **The Contracting Agency recommends logging as much data on as many different days as possible to account for any solar disturbances or other unanticipated problems that might occur.**

**B10.2.2.1.4 Basis of Vertical Control.** When primary vertical control is provided by the Contracting Agency, it shall be held as the basis of control for the project. Any auxiliary control points necessary to augment this control shall be incidental to the task for which it is required. When the primary vertical is to be established by the Contractor, the vertical datum shall be determined by the Contracting Agency. Note: A tie to MLLW shall be made for all surveys in or adjoining tidally influenced areas unless specifically directed to do otherwise by the Contracting Agency.

**B10.2.2.1.5 Vertical Control Standards.** All vertical control survey measurements shall be recorded in field books. If an electronic digital level is used and the data is recorded electronically the Contractor shall provide annotated copies of the raw and reduced data. All vertical survey circuits shall meet or exceed the standards for third order leveling as specified in the latest printing of the Federal Geodetic Control Committee's Standards and Specifications for Geodetic Control Networks. All vertical control points shall be part of a closed level loop; side-shots are not acceptable. Each loop shall be adjusted and this adjusted elevation used for any further loops. Loop closures and loop-adjusted elevations shall be shown in the field books. The books shall also be used to record descriptions and sketches of vertical control points found or set, condition of found points, and for

electronically recorded data the loop information (start point, point(s) controlled, end point, etc.) necessary to interpret the data. Primary vertical control points (BMs and TBMs) shall be controlled by differential leveling. Elevations may be established for secondary control points by closed trigonometric loops, in which case sight distances shall not exceed 750 feet with foresights and backsights of approximately equal lengths, and the line of sight shall clear obstacles by a minimum of 1.5 feet to avoid the effects of adverse refraction. Elevation differences shall be measured and recorded to the nearest 0.01 foot.

**B10.2.2.1.6 Primary Vertical Control.** For highway projects or projects along road corridors, primary vertical control points shall be established every ½ mile or less. Existing official bench marks (BMs) shall be used wherever possible, with intermediate temporary bench marks (TBMs) established between them. These TBMs shall be stable objects such as luminaire and signal pole base bolts, spikes in trees, etc. **Wooden utility poles, scribes in concrete, and traverse points shall not be used for TBM's.** Contact the Contracting Agency for direction if no suitable TBM locations exist. Where no permanent official bench marks exist, the Contractor shall establish a minimum of two **permanent bench marks** per project site, or one per mile, whichever is the greater number, for use through project construction. Permanent bench marks shall be at a minimum, 9/16" dia. stainless steel rod driven no more than 40 feet or until refusal into dry ground, encased by a 2.5 foot section of 4" dia. well casing flush with the ground with a rubber cap covering the top of the pipe, or a brass cap cemented into rock outcrops or stable concrete structures, e.g. bridge abutments or building foundations and walls. These points may also satisfy the requirements for Horizontal control, under section B10.2.2.1.3. A marker post shall be placed near each permanent benchmark, found or set. Refer to the NOAA Manual NOS NGS 1, Geodetic Bench Marks for recommended guidelines for setting permanent benchmarks.

Primary vertical control points, found or set, shall be described in great detail, identifying the particular physical feature used for the elevation point, and sketches shall be made to aid in this effort. Instructions sufficient to enable someone unfamiliar with the project to find these points shall be recorded; these instructions shall include distances and directions from recognizable terrain features such as major intersections, bridges, buildings, etc. All primary vertical control points, found or set, shall be tied to the project horizontal control and shown on the SCD.

The Contractor shall prepare and provide a narrative vertical control summary detailing the datum, primary control points used, vertical network adjustment data, problems encountered during the survey, equipment used, etc., which shall include an NGS benchmark data sheet if available.

**B10.2.2.2 Survey Control Diagram.** The Contractor shall prepare a Survey Control Diagram (SCD) for the project showing the relationship between survey monuments set and found in the field. The SCD typically shows all horizontal and vertical control found or set in the course of a survey, as well as all found or set monuments that exist in the roadway. The SCD will be recorded as a Record of Survey in the appropriate Recording District by the Contracting Agency once approved. In cases where Right of Way Mapping will not take place as part of a project, the Contractor may be required to show all monument ties on the SCD, as directed by the Contracting Agency.

**B10.2.2.3 Survey Control Sheet.** The Contractor shall prepare a Survey Control Sheet (SCS) for the project showing the relationship between the final project centerline and survey monuments in the field. This differs from a Survey Control Diagram (SCD-see section B10.2.2.2) in that the SCD does not show the final project centerline. The SCS shall be part of the construction plan set and its principal users will likely be Land Surveyors staking the project centerline prior to and after construction or replacing corners that have been disturbed, Contracting Agency surveyors checking that work, and the Project Engineer to ensure that existing monumentation does not get disturbed. Other near-term users may include Land Surveyors who are performing boundary work in the vicinity of the project. The SCS may be recorded as a Record of Survey, but typically is not. **The SCS must not be prepared before the final design centerline is known**, typically after the Pre PS&E Review. Samples are available from the Contracting Agency's Survey Section.

**B10.2.2.4 Electronic Photographs.** To assist in the point identification, verification of markings, condition of monument and accessories, we ask that .jpg digital photographs be gathered of all monuments found, set, or tied. Each corner should have a minimum of three photographs: one readable close-up of the cap, one near distance showing monument condition, and one with an overview of the monument and its surroundings (it helps to have a tripod setup over the point or some

other indicator like fiberglass post to find monument in surrounding picture). All original bearing trees and other accessories of record should also be photographed for these corners. The photographs should be indexed by point number, with the point number in the file name to aid identification of the point. Many times a chalkboard or other similar device can be used in the field to identify the point in the photographs by writing the point legal designation and project point number on the board, and placing board in scene of the pictures. Resolution/File Size should be limited to no more than 1Mb per photo, or a resolution of no more than 2048x1356.

### **B10.2.3 Survey for Design**

**B10.2.3.1 General.** Design Surveys include topographic, hydrographic, photogrammetric, and other geospatial methods of data collection associated with defining the existing ground surface and both natural and man-made features.

**B10.2.3.2 Monument Ties.** The Contractor shall research, locate, photograph, and verify all monuments within the existing Right-of-Way limits and the proposed construction limits. If the Contracting Agency previously performed a field survey tying monumentation, the existence of these monuments shall be field verified. This will insure that the Contracting Agency can comply with the provisions of AS 19.10.260 and AS 34.65.040, and enable an estimate of quantities to be made. Examples would be Rectangular or Centerline monuments. In the event there is no Right of Way survey performed, these corners will need to be surveyed using the methodology described in section B10.2.2.1.2, so their position can be accurately reestablished.

**B10.2.3.3 Remote Sensing.** When directed by the Contracting Agency, the Contractor shall obtain remotely sensed and associated mapping products. The Contracting Agency will be granted rights to use of the data and associated delivered products, for our project design and other in-house uses, including transmittal to others.

**B10.2.3.3.1 Photogrammetry.** As an alternative to ground surveying, the Contractor may use controlled aerial photography to provide planimetric and topographic information. Use of photogrammetric data for this project is subject to the Contracting Agency's approval. As aerial photography may be used for a variety of analyses, the photography shall be natural color and have sufficient scale and resolution to allow for the preparation of the photogrammetric products, which meet the required accuracies and provide economical acquisition. Aerial photography used for topographic mapping products shall be acquired during leaf-free and snow free conditions. Aerial photography used solely for orthophoto products may be acquired with leaf-on conditions. Existing photography may be substituted for new photography with the approval of the Contracting Agency Project Manager. All acquired aerial photography, and all photogrammetric products prepared by the Contractor, shall conform to the guidelines and standards of the US COE Manual EM-1110-1-1000. The Contractor using methods suitable to return the desired mapping accuracies shall control aerial photography used for mapping products. Horizontal and vertical datum for the photogrammetric products shall be on the same datums as that used for the project control. Any photo pre-mark panel points shall be set and controlled for this task, using the same methods and materials as detailed for auxiliary control points presented above for Horizontal and Vertical Control. The Contractor shall determine the number of, location of, and panel size for these points in conjunction with the firm performing the aerial photography. Each photogrammetric control point shall be marked using appropriate panel material. The Contractor shall remove and dispose of all panels set under this contract at the direction of the Contracting Agency. The use of the most cost effective techniques that will provide the specified products is encouraged. All photogrammetric products for development of TINs shall meet the format, content, accuracy and certification requirements of Section B10.2.3.4.1 through B10.2.3.4.6 unless directed otherwise by the Contracting Agency.

If aerial photography is acquired for, or available for use on this project, a digital orthophoto, georeferenced to the project coordinates, shall be provided to the Contracting Agency for use in design. Orthophotos shall be delivered in two formats with the associated world files: uncompressed .TIF, and compressed Mr. Sid image file.

**B10.2.3.4 Topographic Survey.** Topographic features shall be surveyed using appropriate data collection methods. The Contractor shall provide complete topographic mapping in a single AutoCAD drawing file along with a single TIN upon completion. All points located in these surveys shall be included in the project coordinate file. The Contractor shall:

**B10.2.3.4.1 Define the existing ground surface** by creating a Triangular Irregular Network (TIN). The TIN shall be capable of accurately generating 1 foot contours in all areas. Hard shots (pavement, concrete, etc.) shall have vertical accuracy of less than 0.1 foot. The TIN shall incorporate fault lines (grade breaks, existing centerlines, edges of pavement, curbs [flowline and top back], sidewalks, shoulders and/or tops of bank, toes of slope/fill, ditches and/or drainages, etc.) and additional shots as necessary to insure that the TIN accurately represents the **existing ground surface**. The TIN shall not represent water surfaces. Sufficient data shall be gathered along driveways and side streets to allow grade matching. Provide TIN verification in the form of the Contracting Agency's TIN Certificate. (B10.1.7)

**B10.2.3.4.2 Locate and map all existing improvements and utilities** (above and below ground) within the survey limits. Mapping of overhead utility wires shall include the apparent low point of the wire sag. Overhead wire crossings shall also be located at the existing and proposed centerlines. Elevations for these points shall be the bottom wire elevation. Locate all attachments (guy wires, pedestals, stand pipes, load centers, lights, etc.) within the project survey limits. This includes, but is not limited to, power, telephone, fuel lines, water and sewer lines, cable television, edge of pavement, fences, signage, and nav aids within the survey limits. Note any historical sites located in this area. Caution shall be used to avoid disturbing any historic remnants. Locate the edge of trees and identify the approximate average height of the trees at the edge. Locate the limits of any apparent contaminated soils and waters within the project area. Tie to any Corp of Engineers flood plain datums. For Airports: Heights of towers, antennas and any other structure that could be considered a hazard to aircraft shall be included. Determine location, finish floor elevations, peak roof elevations and a description of all buildings in and within 100 feet of the surveyed area. Locate the first tier of structures lying outside of the proposed airport boundary and within 200 feet of that boundary.

**B10.2.3.4.3 Locate and map all drainage structures** within the survey limits. Record diameter, length, invert elevations, structure type and condition, high water marks, and apparent flow direction.

**B10.2.3.4.4 Locate and map any other physical feature, natural or man-made**, including any ordinary or mean high water boundaries that could affect the design of the project, as directed by the Contracting Agency.

**B10.2.3.4.5** After the Contracting Agency has reviewed the provided data, the Contractor may need to **extend the TIN & topographic mapping as specified** by the Contracting Agency.

**B10.2.3.4.6** Locate and tie, both horizontally and vertically, **all proposed and existing geotechnical sample locations**. The Contractor shall stake the baseline or sample locations as directed by the Contracting Agency.

**B10.2.3.5 Bridge Site/Drainage Survey.** The Contractor shall perform drainage surveys in the vicinity of proposed channel crossings or major drainages. All work shall be tied to project horizontal and vertical control. Surveys shall be performed as specified in the Preconstruction or Drainage Manual unless otherwise directed by the Contracting Agency. The Contractor shall coordinate with the Contracting Agency for site-specific requirements. The data collected for these surveys shall be incorporated into the TIN and topographic files, and all shots taken shall be included in the project coordinate file.

For culverts 36 inches and over in diameter, 4 cross sections upstream and 4 cross sections downstream from the inlet and outlet of said culvert shall be surveyed. The spacing of these cross sections shall typically be equal to the average width of the existing streambed (i.e. 10 feet wide will then have cross sections taken at 10, 20, 30, and 40 feet up stream and downstream). Cross sections shall be taken perpendicular to the existing streambed. Shots shall be taken at: the thalweg, the toe of slope, the edge of existing water, ordinary high water, the top of bank, and one shot past the top of bank. The data collected for these surveys shall be incorporated into the TIN, topographic, and project coordinate files. The Contractor shall perform the following drainage survey work:

**B10.2.3.5.1** For bridge sites, the line of **ordinary high water** shall be located. The Contractor shall search for evidence of extreme high water and locate it at the existing structure. These items shall be located both horizontally and vertically. The Contractor shall complete the appropriate sections of the Contracting Agency's Bridge Site Survey Form.

**B10.2.3.5.2** Prepare a topographic map of each bridge site. The map shall show the ordinary high water elevation (or mean high water in tidally influenced areas) and indicate the edge of water at the time of the survey. All buildings, dikes, rock outcroppings and other physical features shall be noted on the map.

**B10.2.3.5.3** Additional data collection for the Hydraulic Report may be required after the design has reached the Local Review stage.

**B10.2.3.5.4** Prepare a Bridge Site Report, which is a summary in ASCII format noting pertinent information such as horizontal and vertical control basis, date of survey, bridge number, name of water body, ordinary high water coordinate point numbers, extreme high water coordinate point numbers, existing structure coordinate point numbers, and note whether body of water is navigable.

**B10.2.3.6 Special Features.** The Contractor shall collect ground elevation data necessary and stake the location of project specific appurtenances to the roadway (retaining walls, breakwaters, special ditches, turnouts, sound barriers, etc.) as necessary for their design and field review by the Contracting Agency.

**B10.2.3.7 Deliverable Items.** The deliverables shall be organized electronically in folders according to the following list. Only submit what is required for your specific project. Do not submit extra information not required by the Contracting Agency. Name the files and folders according to what they represent. Do not use contractor specific job numbers. CAD drawings should be named in such a manner that anyone can tell what it represents without having to open the drawing. An example would be "Sleetmute\_Topo.dwg", and not "06-342.dwg". The Contractor shall submit the following items related to their survey to the AK DOT&PF Survey Section:

#### Deliverable Description

- A. Field Books: The original field books or PDF indexed, reduced, stamped and checked. (B10.1.4)
- B. Point Files: An ASCII coordinate file containing all recovered, computed, and topographic points in the local system (if provided). Electronic format shall be submitted. Elevations that are not valid TIN elevations shall be coded as such in the descriptor. (B10.1.8)
- C. Descriptors: An ASCII file listing all descriptors used and an expanded description of their meanings. Descriptors not used on this project shall not be included in this list. (B10.1.8)
- D. Survey Report and Control Summary: Horizontal and vertical control summaries in ASCII format. The Contractor shall also provide stamped annotated copies of control computations and control adjustments, including a check shot report. (B10.2.2)
- E. Survey Control Diagram (Record of Survey): Electronic CAD and PDF copy. (B10.2.2.2)
- F. Survey Control Sheet(s): Electronic CAD and PDF copy. (B10.2.2.3)
- G. GNSS Data: For GNSS control surveys, the Contractor shall provide RINEX2 GNSS data files of 8 hours length for at least 2 control points, along with any GNSS processing or OPUS reports. (B10.2.2.1.3)
- H. Electronic Pictures: Organized folders containing all of the control, monument ties, and project site photos. Do not use separate folders for each point. If applicable, the point number should be referenced within the image filename. (B10.2.2.4)
- I. TIN: All TIN files with a sealed and signed certificate of accuracy. Quality control check spreadsheet showing the differences from the true values (B10.1.7).
- J. Bridge Site/Drainage Survey mapping: Electronic drawing files and TIN files (B10.2.3.5.2)
- K. Bridge Site Report: Refer to the Preconstruction or Drainage Manual, and or the Contracting Agency for possible additional information. (B10.2.3.5.4)

## **Deliverable Description**

- L. Project Drawing: A single complete and edited AutoCAD drawing file of the entire survey limits, containing topographic mapping (points, surfaces, annotations, metadata), base-mapping, bridge site/drainage surveys. (B10.2.3.4)
- M. Air Photo Report: A report of the photogrammetric control shall be provided including all ground control points, aerial photography camera logs, airborne GNSS control procedures and results, analytical aero triangulation results, current camera calibration reports, and other data associated with control of the aerial photography. (B10.2.3.3.1)
- N. Ortho Photo Mosaic: .tif format files shall be delivered in files less than 250MB in size. A compressed image file in Mr. Sid format shall also be included. An index file showing the project area and the areas covered by the individual files shall be included. (B10.2.3.3.1)

### **B10.2.4 SURVEYING FOR RIGHT-OF-WAY**

**B10.2.4.1 General.** The Contractor shall perform the following services to the standards in B10.2.2. Typically the surveying for ROW is performed after horizontal control is established for the project. Any exceptions shall be discussed at the project pre-work meeting.

**B10.2.4.1.1** Prior to commencement of the survey, the Contractor shall review any title documents and mapping in the Contracting Agency's possession which is considered relevant to the project. The Contractor shall be responsible for researching additional relevant documentation from other sources. These documents include but are not limited to the following:

Bureau of Land Management (BLM) and Department of Natural Resources (DNR) land status plats, BLM township survey plats, Mineral and U.S. Survey plats and field notes, any records of survey, subdivisions, and relevant engineering control surveys, United States Coast and Geodetic Survey (USC&GS)/ National Geodetic Survey (NGS) control diagrams-descriptions, DOT&PF right-of-way records and other easement or boundary documents of record, DOT&PF engineering as-builts, DOT&PF Airport Leasing documents, DNR surveys, and aerial photos, DEC Community Profile Maps, Local or Municipal data.

All research for property corner ties (generally includes local platting authority subdivision plats and right-of-way plats, BLM U.S. Surveys, state land survey plats, waiver documents, deeds, record of surveys and monument records) should be done prior to commencement of searching and tying property and ROW controlling corners.

**B10.2.4.1.2** Tie the nearest Public Land Survey System (PLSS) monuments (Section, 1/4 Section and 1/16 Section Corners) left and right of the project Right-of-Way corridor or if existing monuments that represent the legal corner positions do not exist at those locations, sufficient additional rectangular monuments and/or accessories to control the computations of the legal locations of those corners per the relevant BLM *Manual of Surveying Instructions for Public Lands*. Any corner monument in need of rehabilitation or re-monumentation shall first be photographed, and then have rehabilitation accomplished prior to tying the monument location and re-photographing the final condition. The intent of the PLSS monument ties is to define the larger remaining parcel surrounding the existing road Right-of-Way.

Tie all existing centerline monumentation throughout the project limits including two centerline monuments at each end that extend beyond the limits of the project. Additional PLSS monuments shall be recovered to allow section breakdown for property boundary determination as directed by the Contracting Agency. Tie adequate centerline monumentation on side streets to determine side street alignment to the project limits. A minimum of two side street centerline monuments shall be tied. If side street centerline monuments are not recovered then sufficient block or lot corners will be tied to define the side streets.

For the initial surveys all property corners within and along the existing ROW and the ROW centerlines should be searched for, documented and tied. In most cases, there will be some non-fronting property corners also required to be tied to setup subdivision blocks, survey boundaries and

side-street ROWs. Sufficient control is required to establish the location of all surveys adjoining the ROW, or where acquisitions are planned. The extent of the corners to be tied normally is discussed and clarified during contract negotiations or at the survey pre-work meeting.

**B10.2.4.1.3** For projects with PLO ROWs or other ROWs dependent on the physical road location (such as prescriptive claims), tangent as-builts are required. This procedure normally requires the field determination of pavement or unpaved surfaces centerline by physical measurement, and then location of those points. Points are normally surveyed near each tangent end and a minimum of 3 points on curves. The number of shots actually required depends on curve length and degree of curve and should be clarified in writing at the pre-work meeting. The Contractor at the direction of the Contracting Agency may also be tasked with developing an alignment and locating existing slope or clearing limits. Please consult the Contracting Agency's ROW Engineering section for guidance.

**B10.2.4.2 Record of Survey.** A Record of Survey shall be prepared for recording in the appropriate Recording District for the Right of Way survey. All Right of Way surveying completed above in section B10.2.4.1 shall be included in the Record of Survey. Consult with the Contracting Agency for guidance in the preparation of the Record of Survey.

**B10.2.4.3 Annotated Plats and Research Documents.** PDF Copies of all of the research documents for the rectangular survey, centerline monuments, ROW monuments and property corners shall be provided, along with annotations of whether the point was searched for and not found, or monument destroyed, or if found it's corresponding project point number. These annotations do not need to be "works of art", and many times are the original paper plat copies, or scans of such, that the field crews had in the field with them. The annotated plats should be indexed in some method (by Section Location, MOA grid, or other logical means), placed in labeled folders organized by the indexing scheme.

**B10.2.4.4 Additional Topography for Right-of-Way Acquisition.** The Contractor shall collect all topographic information that may affect the cost and/or schedule of defined right-of-way acquisitions for the project, such as culverts, land service or access roads, improvements, apparent contaminated soils or waters, buried fuel tanks, fences and any structures. Septic system, well and building locations are examples of pertinent data, usually outside of the acquisition area, that may affect the value of the right-of-way to be acquired.

**B10.2.4.5 Deliverable Items.** The deliverables shall be organized electronically in folders according to the following list. Only submit what is required for your specific project. Do not submit extra information not required by the Contracting Agency. Name the files and folders according to what they represent. Do not use contractor specific job numbers. CAD drawings should be named in such a manner that anyone can tell what it represents without having to open the drawing. An example would be "Sleetmute\_ROW.dwg", and not "06-342.dwg". The Contractor shall submit the following items related to their Survey to the AK DOT&PF Survey Section:

**Deliverable Description**

- A. Field Books: The original field books or PDF indexed, reduced, stamped and checked. (B10.1.4)
- B. An ASCII coordinate file containing all recovered, computed, and topographic points in the local system (if provided). Electronic format shall be submitted. Elevations that are not valid TIN elevations shall be shown as -9999. (B10.1.8)
- C. An ASCII file listing all descriptors used and an expanded description of their meanings. Descriptors not used on this project shall not be included in this list. This file shall be submitted with the draft coordinate file. (B10.1.8)
- D. Right of Way Survey Report Memo. A brief description of the survey methods, equipment, computations, quality control checks and accuracy estimates.
- E. Survey Control Diagram (Record of Survey): Electronic CAD and PDF copy. (B10.2.2.2)
- F. Annotated Plats and Research Documents. (B10.2.4.3)

- G. GNSS Data: For GNSS control surveys, the Contractor shall provide RINEX2 GNSS data files of 8 hours length for at least 2 control points, along with any GNSS processing or OPUS reports. (B10.2.2.1.3)
- H. Electronic Pictures: Organized folders containing all of the control, monument ties, and project site photos. Do not use separate folders for each point. If applicable, the point number should be referenced within the image filename. (B10.2.2.4)

## **B10.2.5 RIGHT-OF-WAY MAPPING**

**B10.2.5.1 General.** The Contractor shall perform the services necessary to establish the existing Right of Way, and, prepare ROW Lines for Construction Plans, Base Maps, Right of Way Maps, Parcel Plats, Airport Property Plans, Airport Land Occupancy Maps, and Right of Way Acquisition Plats in accordance with the DOT&PF Right of Way Manual and specific instructions from the Contracting Agency.

**B10.2.5.2 ROW Lines for Construction Plans.** The Contractor shall submit an electronic drawing file which contains the existing ROW lines, existing ROW centerline, adjoining property lines and subdivisions. The Contractor shall include a narrative of the ROW that is being shown. Narrative shall include source documents and methods used to determine existing rights-of-way.

**B10.2.5.3 Base Maps** shall show the entire project limits and shall include a DOT&PF standard Right of Way title sheet, legend sheet, tract maps, plan sheets, monument summary sheets, and general notes sheet including a source document table using Contracting Agency supplied AutoCAD format at the scale and layout specified by the Contract Manager. The plan sheets shall show the following information:

- A. Existing property boundaries, including all Public Land Survey System survey lines.
- B. All subdivisions, including name, plat number, lot and block, or aliquot part description, and easements as shown.
- C. Existing right of way centerline.
- D. Existing rights-of-way
- E. Improvements.
- F. Other features required by the Right of Way Manual and /or the Contracting Agency.

**B10.2.5.3.1** When preparing Base Maps, the Contractor shall (a) thoroughly document sources of existing rights-of-way (b) resolve problems with existing Right of Way and boundary locations and (c) analyze preliminary engineering information to determine where additional survey ties are required. The Contractor shall provide a written summary of (any significant) Boundary Problems encountered in making specific boundary determinations, including rationale for the solution. The Contractor shall provide digital copies of all research with the preliminary Base Map.

**B10.2.5.3.2** The Contractor shall not begin preparing Base Maps without prior specific written authorization from the Contracting Agency.

**B10.2.5.4 Right of Way Maps** shall show the entire project limits and shall include a DOT&PF standard Right of Way title sheet, legend sheet, tract maps, plan sheets, and monument summary sheets. The plan sheets shall show all the information required for the Base Maps plus the following information:

- A. Proposed Right of Way.
- B. Proposed project centerline.
- C. Station and offsets to right of way limits.
- D. Easements.
- E. Parcels.
- F. Parcel Information Block.
- G. Proposed slope limits.
- H. Revision block.
- I. Other features required by the Right of Way Manual and /or the Contracting Agency.

- J. For Airport Property Plan and Airport Acquisition Plat (in addition to the above):
  - 1. Plan view showing Tracts and Parcels.
  - 2. Runway Centerline end coordinates in the NAD83 CORS datum.

**B10.2.5.4.1** When preparing Right of Way Maps, the Contractor shall:

- A. Resolve survey conflicts with existing right of way and boundary locations.
- B. Analyze preliminary engineering information to determine where additional survey ties are required.
- C. Examine Title Reports and adjust preliminary boundaries, add additional easements and update owner information as required.
- D. Compute the Take and Remain areas of each parcel based on right of way requirements supplied by the Contracting Agency.
- E. Prepare Map per appropriate platting codes.

**B10.2.5.5 Parcel Plats.** The Contractor shall prepare plats for all parcels to be acquired for this project when directed by the Contracting Agency. Note: full takes do not need a parcel plat prepared. Parcel plats shall contain the information required by the DOT&PF Right of Way Manual. The Contractor shall make revisions to Parcel Plats requested by the Contracting Agency. Parcel Plats shall use the Contracting Agency's standard 8-1/2 by 14 inch format and be submitted as a PDF or in a format specified by the Contracting Agency. Plats shall be at a scale suitable for legibility and clarity of detail using Contracting Agency supplied AutoCAD format and shall contain information as required by the DOT&PF Right of Way Manual and the parcel plat checklist. A Title block and border drawing file will be supplied by the Contracting Agency.

**B10.2.5.6 Airport Property Plan and Airport Acquisition Plat.** The Contractor shall prepare an Airport Property Plan according to the DOT&PF Right of Way Manual. The Airport Property Plan is considered similar to a Base Map and relates the existing property boundary and property status. An Airport Acquisition Plat is necessary for acquisition areas in the Unorganized Borough and is required to follow the regulations as set for Right-of-Way Acquisition Plats by Department of Natural Resources.

**B10.2.5.7 Airport Land Occupancy Maps.** The Contractor shall research current and historic airport tenant lease documents, resolve any found discrepancies and map errors, and provide an updated Airport Land Occupancy (LO) Map, as directed by the Contracting Agency.

**B10.2.5.8 Right-of-Way Negotiations.** The Contractor shall provide technical support for right-of-way negotiations. This shall include interpreting documents prepared for the project and explaining project impacts to the Contracting Agency's personnel, property owners, and others. The Contractor shall also attend meetings as required to make presentations and answer questions.

**B10.2.5.9 Pre-Acquisition Meeting.** When requested by the Contracting Agency, the Contractor shall attend the pre-acquisition meeting. The purpose of this meeting is to discuss proposed project features and impacts to adjoining properties and parcel configuration prior to plat approval and acquisition. The Contractor shall be prepared to discuss any design features which may affect adjoining properties such as project alignments, pathways, sidewalks, medians, curb and gutter, slope limits, impacts to driveways and utilities. Adjoining property information shall include lot boundaries, buildings, driveways, and any other features/improvements that will help the Contracting Agency in negotiations with affected property owners and others to assess project impacts. In addition to preliminary right of way plans, the Contractor may be requested to provide additional visual displays for clarification.

**B10.2.5.10 Reviews and Schedule.** The Contractor shall submit drafts of the Base Maps, Right of Way Maps and Parcel Plats, for the Contracting Agency's review, in accordance with the following: Base Maps shall be submitted with the Local Review Assembly. Right of Way Maps including proposed takes for project construction shall be submitted with the Plans-In-Hand Review Assembly. Right of Way Maps including proposed takes for the project and all required utility relocations shall be submitted within four months of the Plans-In-Hand Review submittal. Current Right of Way Maps shall be submitted with the PS&E Assembly. The Summary of Boundary Problems shall be submitted with the drafts of Base Maps. The Contracting Agency will have a minimum of four weeks for the return of written comments. The Contractor shall address comments to the satisfaction of the Contracting Agency prior to submitting final documents for Right of Way Certification.

**B10.2.5.11 Deliverable Items.** The Contractor shall submit draft and final Base Maps, Right of Way Maps and Parcel Plats in PDF and DWG format for Contracting Agency review. Electronic copies of all research and the Summary of Boundary Problems shall be submitted with the draft Base Map. If requested by the Contracting Agency, the Contractor shall provide full sized mylars with original signature for recording along with the final Base Map submittal. Prior to Right of Way Certification, the Contractor shall submit two final Right of Way Maps on 11x17 paper with original signatures and one full size mylar with original signature.

**B10.2.5.12 Provided Items.** The Contracting Agency will provide the following (item A can be found on the DOT&PF web site. Items B-D can be obtained on the DOT&PF FTP site. Call 269-0680 for site addresses):

- A. One copy of the Title and Plans Section from the DOT&PF Right of Way Manual.
- B. Samples of final drawings, parcel plats, and title reports.
- C. Civil 3D Drawing Template
- D. The Contracting Agency's Standard Right of Way legend sheet.
- E. Original Title reports for each property to be acquired.

### **B10.2.6 Pre & Post Construction Surveys**

**B10.2.6.1 General.** In order to best perpetuate the positions of DOT/PF Project Centerline Monuments, we encourage the use of Static GPS ties to permanent control stations that are set outside project limits, and are expected to last well beyond construction.

**B10.2.6.2 Pre-Construction.** When directed by the Contracting Agency upon completion of the design phase of the project, but prior to advertising for construction, the Contractor, using the previously established project control shall monument the project (PC's, PT's, and no-curve PI's, etc.) using conventional methods. All monuments established shall consist of a minimum 5/8" dia. X 24" rebar (5/8" dia. X 8" in pavement) with a 2" dia. cap, and stake nearby. Once set, all monuments shall be photographed and re-tied to verify their position (B10.2.2), and a comparison to the design coordinates shall be presented to the Contracting Agency in spreadsheet format. This information shall be presented in project staking report.

Static GNSS Control points for this task shall be set at approximately two mile intervals, or closer for a small project, outside of the construction limits, so as to last for the duration of the project. A plan identifying the type of monument to be set for control, and its proposed location, shall be submitted to the Contracting Agency prior to the work being performed. Control points from the design survey effort may be used for this effort upon approval.

Monuments that may be disturbed during construction shall be referenced by static GNSS to the off-project control. It shall be the Contractor's responsibility to coordinate with the Agency or Firm developing the Right of Way Mapping to identify these monuments. Two in line conventional reference points, set outside the construction limits, may be used in the cases where static GNSS will not work. Two vectors at a minimum shall establish the position of the monument to be referenced. These two vectors shall differ by no more than 0.08 feet.

This procedure is further explained here: [http://www.dot.state.ak.us/creg/dot-cadastral/Construction Surveys/Centerline Referencing and Perpetuation 2011.doc](http://www.dot.state.ak.us/creg/dot-cadastral/Construction%20Surveys/Centerline%20Referencing%20and%20Perpetuation%202011.doc).

**B10.2.6.3 Post-Construction:** When directed by the Contracting Agency, and upon completion of the construction phase of the project, the Contractor shall establish and monument the project and a random control line. Monument type and spacing shall be determined in discussions with the Contracting Agency. In the case of a project centerline, the points shall be established using the data from the Pre-Construction effort. Right of Way monumentation that was referenced prior to construction shall be field verified that it was not disturbed. A digital photo shall be required as proof. Any disturbed ROW monuments shall be reestablished as part of this effort. This procedure is further explained here [http://www.dot.state.ak.us/creg/dot-cadastral/Construction Surveys/Centerline Referencing and Perpetuation 2011.doc](http://www.dot.state.ak.us/creg/dot-cadastral/Construction%20Surveys/Centerline%20Referencing%20and%20Perpetuation%202011.doc). A final Record of Survey or data incorporation into the project Right of Way Mapping shall be completed that shows any new monumentation set.

## **B10.2.7 Right of Way Engineering Closeout Services**

**B10.2.7.1 Right of Way Engineering Services:** *Engineering Services* may include identification of field surveying and mapping services necessary to close out the various projects, such as a Record of Survey or ROW Acquisition Plat, but the performance of the identified field surveying and associated mapping services will not be part of the initial *Right of Way Engineering Services*.

- A. The Contractor shall perform the services necessary to reconcile the Right of Way conveyance documents with the Right of Way Mapping in accordance with the Department Project Close Out check list, and specific instructions from the Contract Manager.
- B. The Contractor should check the centerline and right of way geometry (Bearings, Distances, Curves, Station-offsets, Monument Summary Tables etc.) for any mathematical errors to verify that the right of way can be computed from the information shown.
- C. The Contractor shall proof read the vesting documents of record on file with the Department and/or the Recorders Office. The written legal description and parcel plats will be checked against the Right of Way mapping both visually and for mathematical closure.
- D. The Contractor shall review the Right of Way mapping. The Right of Way mapping shall include (if it applies) the following information:
  1. Information as defined in the Project Close Out check list.
  2. Lands purchased in excess to the ROW needed for the project. These lands will be identified on the ROW mapping as "X" or "R" parcels on older projects.
  3. Commissioner's Quit Claim Deed or Relinquishment.
  4. Lands acquired from DNR will be referenced to the ADL number associated with the parcel.
  5. Files involving these parcels are contained within the Department Right of Way Section.
  6. Final Judgments need to be researched if there was a declaration of taking on the project.
- E. When reviewing the Right of Way mapping, the Contractor shall identify discrepancies among the ROW mapping, written legal descriptions, and parcel plats. The Department will review and approve and/or modify the corrective actions the contractor is to take.
- F. When directed by the Department the Contractor shall hand edit the original mylar Right of Way mapping using drafting ink and lettering sets and update any electronic drawings provided by the Department.
- G. The Contractor will submit copies of the edited ROW mapping to the Contracting Agency who will then submit the plans to the appropriate platting authority for plat approval. When directed by the Contracting Agency, the Contractor will make the final changes to the mylars and electronic drawings then submit for final review to the Contracting Agency. After platting authority and Department approval the contractor will sign the mylars using the Department's Contractor Closeout Certificate.

### **ARTICLE B11** **GEOTECHNICAL** **(Task 4 NIC)**

The Contracting Agency reserves the right to negotiate and add this Article by Amendment; however, the Contracting Agency is under no obligation to do so, and reserves the right to complete the services by any other means.

**B11.1 General.** The Contractor shall submit a Geotechnical Exploration Plan in phases, conduct phased geotechnical investigations, provide Geotechnical Recommendations, and submit draft and final Geotechnical Reports (the geotechnical report shall be a separate report from the geotechnical recommendations). Existing data and information contained in existing reports, and other information provided by the Contracting Agency shall be used to the extent possible to avoid duplication and minimize costs. The Contractor shall summarize such geotechnical data for inclusion in the Geotechnical Report. All test hole logs and data obtained from services performed by the Contractor under this Contract shall be reported in U.S. Customary Units format, stored in 'gINT' (gEOTECHNICAL INTegrator®) or compatible format, and presented in a GIS layered format. Data used from other sources shall be converted to U.S. Customary Units format if included in the PS&E (Article B13). All procedures and reports shall conform

with the Alaska Department of Transportation and Public Facilities (ADOT&PF) Geotechnical Procedures Manual (October 1, 2003) and available on line at <http://www.dot.state.ak.us/stwddes/dcspubs/index.shtml#manuals>. The preferred format for presentation of spatial data shall be a GIS project file (ESRI-compatible) consisting of georeferenced aerial photography, vector alignment drawings, and attributed themes. Along with the Geotechnical report the Contractor shall provide the gINT logs, any aerial photos, all photos and videos obtained on the ground during field work, ACAD drawings, and any topographic drawings.

**B11.2 Geotechnical Exploration Plan.** The Contractor shall submit a geotechnical exploration plan for each phase (AIP project) of exploration as described in Section 3-2.2.8 of the ADOT&PF Geotechnical Procedures Manual to the Contracting Agency for review and acceptance prior to mobilization for this work. Proposed personnel and equipment, previous subsurface data, proposed test hole locations and estimated depths, as well as sampling and testing frequencies shall be provided in the exploration plan.

**B11.3 Drilling Contractor.** The Contractor shall obtain a minimum of three competitive bids for the drilling program defined in the geotechnical exploration plan and shall obtain Contracting Agency approval of the firm selected to provide drilling work prior to the beginning of any drilling activity. Failure to obtain Contracting Agency approval of the firm may reduce reimbursement to the Contractor for drilling costs (statutes and regulations may preclude funding of drilling performed without adequate competitive bidding).

**B11.3.1 Field activities** may include, but are not limited to, auger drilling, rock core boring, backhoe or excavator pits, peat probes, rock structure mapping, instrumentation installation, and sample retrieval. All field activities shall follow guidelines in the ADOT/PF Geotechnical Procedures Manual and the 1988 AASHTO Manual on Subsurface Investigations.

**B11.3.2 Representative samples of materials collected** during field activities shall be tested to determine those material characteristics pertinent to design and construction of the project.

**B11.3.3 Geotechnical Investigation Progress Reports.** The Contractor shall submit periodic progress reports as the geotechnical investigation proceeds. The frequency of the reports shall be predicated on the complexity of the project and will be determined at the Geotechnical Exploration Plan review.

**B11.4 Geotechnical Investigation.** The geotechnical investigation, as described in the exploration plan shall consist of all field activities necessary to evaluate, at a minimum, the following criteria:

- a. Usability of project excavation materials and borrow site materials.
- b. The presence (in an excavation) of materials affecting the rate of excavation; i.e., cobbles, boulders, bedrock or groundwater.
- c. The suitability of foundation soils or rock to support an embankment or structure (what settlement/instability might be expected?).
- d. Stripping depths.
- e. Maximum cut slope angles in soil and rock.
- f. Subcut depth and limits.
- g. Drainage control and subdrain locations.
- h. Muskeg design.
- i. Special treatments, e.g. use of geotextiles.
- j. Estimating factors, e.g. shrinking and swelling, unit weight estimating factors, etc.
- k. The presence and identification of geologic hazards, what risks may be involved, and how risks might be mitigated.
- l. Utility of existing structural section.
- m. Erosion and pollution control recommendations.

**B11.5 Geotechnical Recommendations.** Following field investigations, the Contractor shall provide Geotechnical Recommendations to address the criteria listed above and recommend a structural section. The geotechnical recommendations shall be submitted a minimum of 60 days prior to the submittal of the Plans-In-Hand Review Assembly. After Contracting Agency review and/or as design proceeds, modifications to the Geotechnical Recommendations may be required. The Contractor shall implement required changes in a timely manner. The Geotechnical Recommendations shall not be included, appended or otherwise identified in the Geotechnical Report. Geotechnical recommendations become final concurrently with final design.

**B11.6 Geotechnical Report.** The Contractor shall provide a Geotechnical Report that presents data collected during the geotechnical investigation for each phase (year) of exploration. Information shall include at least the following: project location map, description of the project scope, presentation of previous work, presentation of the field investigations, station to station descriptions of the earth materials encountered during the field investigation, laboratory test results, and plan and profile sheets with test holes or pits shown in plan, profile, and cross-section views. The report shall be submitted to the Contracting Agency in both draft and final forms. The draft shall be made available concurrent with the distribution of the Plans-in-Hand Review. The final report shall be completed concurrent with the distribution of Pre-PS&E Review. The final report shall also be submitted in Microsoft Word 2010 and Civil 3D format, and as a single Adobe Acrobat (.pdf) file suitable for electronic storage and reproduction.

**B11.7 Deliverable Items.**

<u>Type of Document</u>	<u>Paragraph</u>	<u>Copies</u>	<u>Originals</u>
Geotechnical Exploration Plan	B11.2	2	1
Progress Reports	B11.3.3	1	1
Geotechnical Recommendations	B11.5	2	1
Geotechnical Report			
Draft	B11.6	5	0
Final	B11.6	5	1

**B11.8 Provided Items.** The Contracting Agency will provide the following:

- a. gINT datatemplate.

**ARTICLE B12**  
**HYDRAULIC AND HYDROLOGIC REPORT**  
**(Task 5)**

**B12.1 General.** The Contractor shall complete a Hydraulic and Hydrologic (H&H) report. The Contractor shall also provide technical support for the Hydraulic and Hydrologic design required for the project, which may include any or all of the following, when authorized by a Notice to Proceed.

**B12.2 H&H Report.** The Contractor shall prepare an H&H report for the project, addressing the following elements:

- a. Summary of the damage to road facilities and its cause that occurred to the Palmer Fishhook Road between about MP 8.8 and MP 9.2 during September 2012. At a minimum, obtain this information from DOT&PF employees and the media.
- b. Little Susitna River design discharges and the associated parameters that are needed to design protection and stabilization of Palmer Fishhook Road, in its existing and an alternate alignment, if necessary, during the discharge with a 2% annual exceedance probability (AEP).
- c. The design discharges must consider a nonstationary climate as discussed in the Hydraulic Engineering Circular (HEC) 17 by FHWA dated June 2016, unless better information is available and approved by DOT&PF.
- d. All proposed alternatives must identify worst case impacts to other properties expected during discharges with an AEP of 2% and higher.
- e. Summary of the discharges considered that includes the advantages and disadvantages of each based on all available information.

**B12.3 Reviews and Schedule.** Upon receipt of the draft H&H report the Contracting Agency shall be allowed four weeks to return written comments. The Contractor shall meet with the Contracting Agency to discuss and address comments to the satisfaction of the Contracting Agency prior to making the final submittal. The final report must be sealed and signed by the supervising registered engineer and submitted with the plans-in-hand review assembly.

B12.4 Deliverables. Deliverable items are as follows.

<u>Type of Document</u>	<u>Paragraph</u>	<u>Copies</u>	<u>Originals</u>
Draft H&H Report	B12.2	2	1
Final H&H Report	B12.3	1	1

**ARTICLE B13**  
**TRAFFIC AND SAFETY ANALYSIS**  
**(NIC)**

**ARTICLE B14**  
**DESIGN STUDY REPORT**  
**(Task 7)**

**B14.1 General.** The Contractor shall provide a Design Study Report that meets the requirements of Highway Preconstruction Manual. The Contractor shall participate in, and keep records of, formal public hearings, informal public "open house" meetings, agency scoping meetings, workshops, user group meetings, presentations at community council meetings, and presentations at local government meetings, as defined by the Public Involvement Plan. The Contractor shall also provide engineering services in support of the Environmental Document and all required permitting associated with this project.

**B14.2 Sample Report.** Upon request the Contracting Agency will provide a sample Design Study Report for the Contractor's information.

**B14.3 Estimates.** Construction cost estimates shall be consistent with the format used in the sample provided by the Contracting Agency. Pay item numbers, pay item names, and pay units shall match those in the Standard Specifications for Highway Construction. For items not listed in the Standard Specifications, the Contractor shall obtain the pay item numbers, names, and units from the Agency. The Agency will make its historical records available to the Contractor for the determination of unit prices. Both the preparer and checker shall sign and date the estimate.

**B14.4 Reviews and Schedule.** A draft Design Study Report (DSR) shall be submitted with the Plan-In-Hand (PIH) Review Assembly. The Contracting Agency shall be allowed four weeks after the draft is submitted for the return of written comments. The Contractor shall address these comments to the satisfaction of the Contracting Agency prior to making the Final submittal. The final Design Study Report, sealed and signed by the supervising registered Civil Engineer, shall be submitted to the Contracting Agency prior to the Pre-PSE Review assembly.

**B14.5 Approval.** The Contractor shall address Contracting Agency comments and make corrections until the Agency approves the report. Upon securing approval, the Contractor shall make any final corrections and submit originals of the report to the Contract Manager for reproduction as necessary. The Contracting Agency's acceptance of the Design Study Report for reproduction completes this task.

**B14.6 Deliverable Items.**

<u>Type of Document</u>	<u>Para</u>	<u>Copies</u>	<u>Originals</u>	<u>.PDF</u>
Project Design Criteria	B14.1	1	1	1
Design Study Report				
Draft DSR	B14.4	2	1	1
Final DSR	B14.4	2	1	1

**B14.7 Provided Items.**

- a. Sample Design Study Report
- b. Geotechnical Report with geotechnical recommendations
- c. Approved Environmental Document

**ARTICLE B15**  
**PUBLIC INVOLVEMENT**  
**(Task 8)**

The Contractor shall provide support for the Department's Public Involvement efforts related to the project, which may include any or all of the following, when authorized by a Notice to Proceed.

**B15.1 General.** For the purpose of this Agreement, Public Involvement is defined as the total effort, both informal and formal, made by the Contractor and the Contracting Agency to keep the public and agencies informed about the project, to ensure that all reasonable alternatives are identified, and that public and agency concerns are considered and addressed.

**B15.2 Public Meetings.** The Contractor shall attend Public Meetings, Transportation Fairs and/or Community Council meetings. In addition to the items required for all meetings/fairs, the Contractor shall include a written summary of all the informational materials made available for public display/presentation at each Public function. After each public function, the Contractor shall submit a written summary of comments and responses received during these functions.

**B15.2.1** The Contractor shall compile the results of all public functions, to include a summary of oral and written testimony, an analysis of comments received, and any recommendations and present results in the Design Study Report.

**B15.3 Other Public Involvement.** The Contractor shall provide additional support, as required, for informal public involvement through final design of the project. This support may include providing written and/or oral responses (through the Contracting Agency) to requests for information about the project from individuals and/or agencies.

**B15.4 Deliverable Items.**

<u>Type of Document</u>	<u>Para</u>	<u>Copies</u>	<u>Originals</u>	<u>.PDF</u>
Public Function Records	B15.2.1	1	1	1
Correspondence	B15.3	1	1	1

**ARTICLE B16**  
**RIGHT OF WAY**  
**(NIC)**

**ARTICLE B17**  
**UTILITIES**  
**(Task 10 NIC)**

The Contracting Agency reserves the right to negotiate and add to this Article Amendment; however the Contracting Agency is under no obligation to do so, and reserves the right to complete the services by any other means.

**B17.1 General.** There may be utilities in the project area including, but not necessary limited to, underground and overhead telephone, electric, and communication lines, and underground water, sanitary sewer, and natural gas lines. In addition, there may be storm drains. The Contractor shall prepare a Utility/Storm Drain Conflict Report and a set of cross sections of areas where planned excavation, embankment or other work may affect existing utilities and storm drains. The Contracting Agency will be responsible for requesting locates from affected utility companies. The purpose of the Utility/Storm Drain Conflict Report is a record of:

- a. Identification of existing utilities and storm drains within the project limits.
- b. Identification of conflicts with the proposed work.

- c. Consideration by the Contractor of the impact of conflicts with utilities and storm drains including:
  - 1)Cost to relocate.
  - 2)Additional right-of-way needs and cost.
  - 3)Construction impacts.
- d. Recommendations, based on project development timing, cost of additional right-of-way, and cost of modifications, for resolution of the utility and storm drain conflicts. The recommendations shall be the basis of the utility and storm drain relocation cost estimate prepared for the development of total project costs.

**B17.2 Utility/Storm Drain Conflict Report.** The Utility/Storm Drain Conflict Report shall compare the proposed design of project improvements and appurtenances against existing and proposed utilities/storm drains, and to identify any conflicts. The Report shall propose solution(s) to all conflicts and recommend a preferred solution if more than one is proposed. The following information shall be included:

- a. Existing and proposed grade lines.
- b. Proposed improvements and appurtenances including the pavement, typical section layers, and foundations.
- c. Existing and proposed utilities, and storm drains.
- d. Proposed right-of-way line.
- e. Structures that may be affected by construction of the project.

**B17.2.1** The Contractor shall include a set of cross sections from the Plans-In-Hand (PIH) review plan set for project improvements with the Report which show existing ground, proposed finished template, side slopes, and any attached or detached natural or man-made features. Proposed storm drains shall be depicted on the cross sections. To these cross sections the Contractor shall add the existing overhead and underground utilities based on field topographic surveys, as-built drawings, or system maps. If elevations of shallow utilities are not available, the elevations shall be estimated from utility permit depth requirements and based on utility company standard installation practices.

**B17.3 Utility/Storm Drain Design.** During preparation of the Utility/Storm Drain Conflict Report, it is anticipated that the Contractor may participate in meetings with appropriate utility personnel to discuss potential utility conflicts and relocation options. The Contractor shall be aware that until the utility is authorized to begin preliminary engineering design by the Contracting Agency, that any participation by the utility (except for supplying system as-builts) is purely voluntary. It is the intent of this Contract that the Utility/Storm Drain Conflict Report shall represent an analysis by the Contractor.

The Contracting Agency will be responsible for negotiation and finalization of all utility protection/ relocation agreements. Should the utility not wish to or not have the ability to complete the relocation design, the Contracting Agency reserves the right to add this work by amendment to the contract.

The Contracting Agency will make the Utility/Storm Drain Conflict Report, cross sections, other reports, and the PIH assemblies produced for this project available to those designing the necessary utility relocations. The Contractor shall provide assistance interpreting these documents and share other information about this project to those designing the utility relocations. The Contractor shall modify design assemblies as required to eliminate conflicts with utilities and storm drains, as requested by the Contracting Agency.

The Contractor shall be responsible for the design of all storm drains, if required.

**B17.4 Reviews and Schedule.** The Draft Utility/Storm Drain Conflict Report and appropriate cross sections shall be submitted with the PIH Review Assembly for use by the Contracting Agency in developing utility relocation plans and agreements with the utility companies involved. The Final Utility/Storm Drain Conflict Report shall be prepared after the PIH review comments are addressed and any plan alignment or grade changes are made. The final report shall be submitted prior to the plan and specification assembly for the Pre-PS&E review.

### B17.5 Deliverable Items.

<u>Type of Document</u>	<u>Paragraph</u>	<u>Copies</u>	<u>Originals</u>
Conflict Report and X-Sections			
Draft	B17.2/4	3	1
Final	B17.2/4	3	1
Storm Drain Conflict Design	B17.3	Incorporated into Design Assembly Submittals (Article19)	

**B17.6 Provided Items.** The Contracting Agency will provide the following:

- a. Utility Locates

### ARTICLE B18 EROSION AND SEDIMENT CONTROL PLAN (Task 11)

**B18.1 General.** The Contractor shall provide an Erosion and Sediment Control Plan for the project. All temporary erosion and sediment control shall be developed as a separate plan set instead of inclusion in the PS&E Plan set. The template for the Erosion and Sediment can be found at <http://www.dot.state.ak.us/creg/design/highways/ESCP/>. A sample Erosion and Sediment Control Plan is available from the Contracting Agency by request.

**B18.2 Submittal.** Submit the Draft Erosion and Sediment Control Plan as part of the PIH package and the Pre-PS&E package. Respond to comments from the Contracting Agency, and submit the Final Plan in a timely manner, prior to project certification.

### ARTICLE B19 PLANS, SPECIFICATIONS, AND ESTIMATES (Task 12)

**B19.1 General.** The Contractor shall provide a Plans, Specifications, and Estimate (PS&E) assembly suitable for project bidding and construction. The PS&E assembly shall present the design that best accommodates the information derived from prior tasks, and shall meet the requirements of the **Exhibit B-3**. The Contractor shall modify the PS&E assemblies as required to accommodate the Right of Way negotiations. This task will be complete when the Contracting Agency accepts the **Final PS&E** assembly and receives Authority-to-Proceed with Construction from the Federal Highway Administration.

**B19.2 Design Plan Sheets.** Each sheet shall have a title block and be sealed by a Professional Civil Engineer, Electrical Engineer, Hydraulic Engineer, or Land Surveyor, as appropriate, currently registered in the State of Alaska who is responsible for the work. All seals shall remain unsigned until the Final PS&E assembly submittal when all seals shall be signed and dated. The Contractor company name shall be included in the box above or below the engineer's seal on each plan set.

**B19.3 Content and Organization of Plan Set.** Plan sheet organization and numbering shall be in accordance with the Central Region Drafting Manual (current). The plans shall contain at least the following sheets, assembled in the order listed:

- a. Title
- b. Survey control
- c. Legend Sheet
- d. Typical sections
- e. Estimate of quantities table
- f. Summary tables
- g. Details
- h. Erosion and Sediment Control
- i. Plan and profile of roadway/pathway
- j. Driveway and approaches
- k. Signing and striping

- l. Illumination (if required)
- m. Traffic recorders (if required)
- n. Construction Phasing Plans
- o. Retaining walls (if required)
- p. Bridge sheets (if required)
- q. Utilities
- r. Landscaping (if required)
- s. Right of Way Maps (prepared by others)

The above Plan Sheets may be combined, for instance showing Traffic Recorders on Plan and Profile Sheets, when approved by the Project Manager.

**B19.3.1 Title Sheets** Sheet A-1 shall include the following information:

- a. Project title, project numbers and description of work
- b. Vicinity map and project location map.
- c. CDS route number and mile point designation.
- d. Project summary table that provides width and length of major roadway segments
- e. Plan sheet index.
- f. List of applicable standard drawings.
- g. Project summary table that gives width and length of major roadway segments.
- h. Table of design designations for the construction and design year for each section that includes:
  - 1) Current year and design year average daily traffic.
  - 2) Design year design hourly volume (if applicable).
  - 3) Design speed.
  - 4) Percent trucks.
  - 5) Design year equivalent axle loads.

**B19.3.2 Survey Control.** Shall be in accordance with Article B10 and the Central Region Drafting Manual (current).

**B19.3.3 Legend Sheet.** The Contractor shall ensure that all symbols used in the Plans are included in the Legend Sheet. A standard legend sheet drawing will be provided by the Contracting Agency, and shall be modified as required for the project.

**B19.3.4 Typical Sections and Site Sections.** See Central Region Drafting Manual (current). The number of typical and site section sheets prepared for roadway segments shall be minimized i.e. changes in structural section widths shall be shown as tapers on plan and profile sheets. Each typical section shall include the following information as a minimum:

- Roadway and stationing for which the typical section applies.
- Lane, shoulder, median and ditch widths.
- Cross slopes and side slopes.
- Roadway profile grade point.
- Structural sections.
- Original ground.

Each Site Section shall contain the same information as a Typical Section, except that the stationing will be omitted, and the location of the site section identified with the use of a standard site section symbol on the corresponding grading sheet(s).

General Notes for the plan set and Table of Estimating Factors shall be on the first typical section sheet.

**B19.3.4 Estimate of Quantities Table** shall list each pay item by number and name. For each pay item, the table shall give the pay unit, various quantity subtotals, and the total quantity. The pay item number, pay item name, and pay unit shall match those given in the specifications and estimate. The sum of the quantity subtotals shall equal the total quantity. The total quantity given for each item shall match that given in the estimate. See Central Region Drafting Manual (current).

**B19.3.5 Summary Sheet(s)** See Central Region Drafting Manual (current).shall designate the location of project features. Each such table shall identify the pay item name and pay item number of the feature being summarized. A plan and profile sheet number shall be given to generally locate every entry in the summary tables.

If culvert work is included in the project, a Pipe Summary table shall be included. Culverts shall be numbered with the format PX-Y, where X is the number of the Plan sheet on which the culvert appears, and Y is a sequential numbering of all of the culverts on the sheet.

Drainage structures shall be numbered similarly, but with "S" instead of "P". All reference to the pipes and structures, on the summary table, the Plan sheets, the Detail sheets, etc. shall use this numbering system.

**B19.3.6 Driveway Summary Table** shall locate each driveway by roadway name, roadway centerline station, and right or left of centerline. The width of each driveway shall be given and shall be identified as serving either commercial or residential property. See Central Region Drafting Manual (current).

**B19.3.7 Detail Sheet(s)** See Central Region Drafting Manual (current).

**B19.3.8 Erosion and Sediment Control Sheet(s).** See Central Region Drafting Manual (current).

**B19.3.9 Plan and Profile Sheets** shall conform to the Central Region Drafting Manual (current) and show the following as a minimum:

Roadway names.

North arrow.

Existing roadways and appurtenances.

Existing topographic features.

New construction.

The horizontal and vertical alignment of all roadway centerlines.

Roadway centerline stations.

All roadway and appurtenant features not shown on other sheets such as medians curb & gutter, guardrail, drainage improvements, slope limits, pedestrian amenities and utilities, erosion and sediment control features, roadway signing symbols with stationing, etc.

The profile view shall show overhead utility crossings and only those underground utilities whose actual depth is known.

Road Right of Way.

Wetlands.

Historic sites.

**B19.3.9.1 Utilities** shall be plotted on the plan and profile sheets using appropriate symbols. The Contracting Agency will arrange for design of utility company relocations upon submission of the Plans-In-Hand Review set. The Contractor shall modify PS&E assemblies as required by the Contracting Agency to eliminate conflicts with utilities. The Contractor shall promptly notify the Contracting Agency whenever the proposed design modifies utility relocations, driveways, and/or right of way acquisitions. The Contracting Agency must approve of changes in utilities, driveways, or right of way involvement before the Contractor proceeds with design. See Central Region Drafting Manual (current).

**B19.3.10 Driveway and Approach Sheets** shall show plan, profile, and all necessary section views for each new and reconstructed driveway that cannot be constructed using details shown in the standard drawings. See Central Region Drafting Manual (current).

**B19.3.11 Signing, Striping and Illumination (Traffic) Sheets** shall include all the information relating to signing, striping, and illumination. See Central Region Drafting Manual (current).

**B19.3.11.1** The striping sheet(s) shall consist of a plan view identifying the following:

- a. Roadway names.
- b. North arrow.
- c. Roadway centerline and stations.
- d. All signing, striping, illumination, and signalization to be removed.
- e. All existing signing, striping, illumination, and signalization to remain or be relocated.

- f. All proposed signing, illumination, and signalization.
- g. All proposed striping, including start and end stations, configuration, color and width.
- h. All proposed traffic recorders, if any.

**B19.3.11.2** A sign summary table shall provide the following information for all new and relocated signs.

- a. Page number of the traffic plan view on which the sign is shown.
- b. Sign location.
- c. Sign code, according to the Alaska Sign Design Specifications.
- d. Sign legend.
- e. Sign size, thickness, area, direction it faces, post size, and letter size.
- f. Remarks.

**B19.3.11.3** The Illumination Plans shall show all information necessary for the work, and shall be in a format according to the department's standards.

**B19.3.12 Landscape Sheets** shall show plan, profile, and all necessary section views for landscaping. Landscape sheets shall be signed and stamped by a registered landscape Architect. See Central Region Drafting Manual (current).

**B19.3.13 Traffic Recorders Plans.** The plan shall show all information necessary for the work, and shall be in a format as approved by the Project Manager.

**B19.3.14 Right of Way Maps.** Shall be in accordance with Article B10

**B19.4 Specifications.** The Contracting Agency will provide a current copy of the Standard Modifications, Statewide Special Provisions and Regional Special Provisions to the Standard Specifications for Highway Construction. If the Project requires materials not listed in the specifications, the Contractor shall prepare the required project special provisions for review and concurrence by the Contracting Agency. Performance specifications shall be written rather than method specifications. The Standard Modifications and Special Provisions for the PS&E assemblies will be combined by the Contractor with the Special Provisions for the PS&E assemblies and transmitted to the Contracting Agency printed on standard paper and on CD ROM Disk as detailed in Article B4. The cover page shall be sealed and signed by the Contractor's professional engineer, currently registered in the State of Alaska, who shall be responsible for the services contained therein.

**B19.4.1** The Contractor shall continually update the Specifications per updates to the Statewide Special Provisions and Regional Special Provisions. The Contractor shall provide contract specifications for review at the combined PIH/ Pre-PS&E submittal and shall provide a completed set for the Final PS&E submittal.

**B19.4.2** Each submittal shall contain the following:

**B19.4.2.1 Standard Modifications and Statewide Special Provisions** (annotated E numbers and S numbers) of all the Standard Modifications and Statewide Special Provisions that apply to the project.

**B19.4.2.2 Regional Special Provisions** (annotated CR numbers) of the applicable regional special provisions that will apply to the construction contract.

**B19.4.2.3 Project Special Provisions / Proprietary Products.** The Contractor shall prepare any project specific special provisions. Whenever possible, Performance Specifications rather than Method Specifications shall be used. No brand name material shall be specified unless three are named. If "or equivalent" is used, the criteria for judging the equivalence shall be specified. No sole source materials shall be specified unless a sole source procurement authorization is obtained.

**B19.4.2.4 Appendices to the Specifications.** The Contractor shall provide the following as appendices to the Specifications.

- a. Alaska Construction Surveying Requirements
- b. Environmental Permits
- c. Master Material Certification List
- d. Sign Shop Drawings

**B19.4.3 Contracting Agency Format.** The specifications package shall be a combination of all the items listed above and shall be prepared in the Contracting Agency standard specification format. Specifications shall be transmitted to the Contracting Agency printed on standard paper and on CD ROM Disk as detailed in Article B4.

**B19.5 Estimate** The Contractor shall submit an Engineer's Estimate with each of the plan reviews in a format approved in advance by the Contracting Agency. Pay item numbers and names shall be as given in the Standard Specifications, Standard Modifications or Special Provisions. The Contractor shall obtain pay item numbers for items not listed in the Specifications from the Contracting Agency. The Contractor shall provide unit prices and total estimated costs for all items. The Contracting Agency will make its historical records available for the determination of unit prices. Estimates shall be signed and dated by both preparer and checker. For review submittals, copies of the Estimate will be included with the Specifications immediately behind the cover page.

**B19.5.1 Confidentiality of Estimate.** The Contractor shall not release any information pertinent to the Engineer's Estimate, other than to the Contracting Agency, without the express written authorization of the Contracting Agency.

**B19.6 Cross-Sections.** Each cross-section shall include the original ground, the roadway template, right of way limits, grid lines, labels for offsets and elevations and the roadway station for which it is applicable. The cross-sections shall be plotted at a standard scale and have no vertical exaggeration. Each sheet shall include the project name, date and review submittal. The cross-sections shall be submitted on 11" x 17" sheets.

**B19.7 Reviews and Schedules.** The Contractor shall submit to the Contracting Agency the documents listed below under "Deliverable Items." The in-house Plan-In-Hand Review assembly shall consist of plans and an estimate. All other assemblies include submittal of the plans, specifications, and an estimate. The Contracting Agency shall be allowed four weeks for the return of written comments for each review assembly. The Contractor shall address these comments to the satisfaction of the Contracting Agency prior to the next submittal. Reviews shall be conducted according to Chapter 4 of the Highway Preconstruction Manual.

**B19.7.1 Field Inspection.** The Contractor shall prepare plan and profile sheets and cross sections for a field inspection to be arranged at a later date. The field inspection will be attended by the Contractor's Project Manager and representatives of the Department's Materials Section and the Regional Hydrologist.

**B19.7.2 Local Review (NIC).** This assembly shall consist of plans and an estimate. The plans in this assembly shall be about 35% complete. This assembly shall consist of the title, typical section, estimate of quantities, and plan and profile sheets. The Contractor shall submit the number of half-size sets stated below in the list of Deliverable Items.

**B19.7.3 Plans-In-Hand Review.** This assembly shall consist of plans, specifications, and engineer's estimate and represent the design effort approximately 75% complete. Because this assembly will be used to begin right of way appraisal and acquisition and also to begin design for any required utility relocations, the slope limits given on the plans shall be final. The Contractor shall submit the number of half-size sets stated below in the list of Deliverable Items. A field inspection of the project and a meeting shall be conducted to review the plans and discuss comments. The Contractor's personnel who are in-responsible-charge of the PS&E assembly shall participate in the meeting and the field review and provide written notes from these discussions.

**B19.7.4 Pre-PS&E Review.** This assembly shall consist of complete plans, specifications, and engineer's estimate plus the following:

- a. A recommended number of calendar days for the construction contract or a recommended construction contract completion date.
- b. A brief report of significant changes made to the assembly after the Plans-In-Hand Review meeting that was not discussed at that meeting.
- c. A brief (one or two sentence description) of the work required to construct this project.
- d. An 11"x17" black line plan set.
- e. Specifications, including the Special Notice to Bidders.
- f. Engineer's estimate.
- g. The Plan-In-Hand letter from the Contractor to the Contracting Agency that lists all the comments made on the Plan-In-Hand Review assembly and a response to each.
- h. Draft Erosion and Sediment Control Plan.
- i. A technical memo describing all non-standard design features and the reason(s) for them.

**B19.7.5 Check Set Assembly.** This review assembly shall consist of complete, Plans, Specifications and Engineer's Estimate revised according to the comments received during the Pre-PS&E Review. This set will be used to certify the project. The Contractor shall revise the set as required by the Contracting Agency to achieve project certification. The comments/responses from the Pre-PS&E review shall be included with this submittal. (Documents that include inadequate response to previous comments and documents with errors or omissions will not be accepted until such problems are corrected):

**B19.7.6 Final PS&E Assembly.** This review assembly shall consist of complete, sealed and signed, Plans, Specifications and Engineer's Estimate plus the following (Documents that include inadequate response to previous comments and documents with errors or omissions will not be accepted until such problems are corrected):

- a. A recommended number of weeks to advertise for construction bids.
- b. A brief one or two sentence description of the work required to construct this project.
- c. A brief report of significant changes made to the assembly after the PS&E Review meeting but which were not discussed at that meeting.
- d. The original of all development documents as presented in Article B1.
- e. 11"x17" plan set as stated in the list of Deliverable Items.
- f. Specifications, including the Special Notice to Bidders.
- g. Engineer's Estimate.
- h. A letter from the Contractor to the Contracting Agency that lists all the comments made during the project certification process and a response to each.
- i. Erosion and Sediment Control Plan.
- j. Letter describing any unusual features and the reason(s) for them.
- k. A request for the DBE goals on a form provided by the Contracting Agency which shall include a list of pay items in the engineer's estimate.
- l. Design summary memorandum noting major changes since completion of the Design Study Report (if any).
- m. Quantity Calculations. Quantity calculation information shall contain sufficient information to allow the quantity for each item to be checked by starting at the source document. Reference the source document(s) for each pay item. Submit in loose leaf, 3-ring binders. If more than one binder is necessary, number them and include a table of contents in the first binder. Label all binders with the State and Federal project numbers and an indication of the contents, both on the spine and on the front cover. Provide dividers to clearly mark the location of specific items within each binder.

**B19.7.7 Project Materials Certification List.** The Contractor shall prepare a project specific Materials Certification List (MCL) from a master list provided by the Contracting Agency. This list will identify what material certificates are needed and who should approve it. The MCL shall be included in the PS&E assembly as an appendix to the Special Provisions. The draft MCL shall be submitted with the Pre-PS&E assembly. The final MCL shall be submitted with the final PS&E assembly.

**B19.8 Deliverable Items.**

<u>Type of Document</u>	<u>Para</u>	<u>Copies</u>	<u>Originals</u>	<u>.PDF</u>
Local Review	B19.7.2	2	1	1
Plans-In-Hand Review Assembly	B19.7.3	2	1	1
PS&E Review Assembly	B19.7.4	2	1	1
Cross Sections	B19.6	2	1	1
Check Set Assembly	B19.7.5	6	1	1
Final PS&E Assembly	B19.7.6	2	1	1
Half Size Plan Sets	B19.7.6	2	1	1
Cross Sections	B19.7.6	2	1	1
Letter describing unusual features	B19.7.6	2	1	1

**B19.9 Provided Items.** The Contracting Agency will provide the following:

- a. Master Materials Certification List
- b. Sample Erosion and Sediment Control Plan.
- c. Sign Specification Sheet Template
- d. Sample Survey Control Sheets
- e. Design Designations including:
  - 1) Annual Average Daily Traffic (AADT)
  - 2) Directional Distribution (D)
  - 3) Percentage of Truck (T)
  - 4) Equivalent Axle Loads (EAL's)
  - 5) Design Speed (V)
  - 6) Design Hourly Volume (DHV)
- f. Access to, and instructional documentation for, the latest version of the department's Bid Tab and AASHTOWARE programs.

**ARTICLE B20**  
**TRAFFIC CONTROL PLAN**  
**(Task 13)**

**B20.1.1 Traffic Control Plan** The Contractor shall prepare a Traffic Control Plan that presents a method for constructing the project and maintaining both vehicular and pedestrian traffic through the roadway corridor. It shall be developed in accordance with the "Alaska Traffic Manual." The Plan shall include all proposed work included in the PS&E package and all utility relocation required for the project. A permanent construction signing detail shall be included.

**B20.1.2 Construction Phasing Plan.** The Plan shall divide construction into phases. For each phase, the plan shall identify major work items to be accomplished and provide a schematic drawing of the roadway corridor. The schematic drawing shall designate which roadway corridors will be construction zoned and not a traveled way; construction zoned and a traveled way; and a traveled way with no construction. Drawings shall also identify the general locations of any detours.

**B20.1.3 Detours.** The Plan shall provide alignments, typical sections, signing, and striping for any proposed detours.

**B20.2 Deliverable Items.** Submit the TCP concurrently with each PS&E package.

<u>Type of Document</u>	<u>Para</u>	<u>Copies</u>	<u>Originals</u>	<u>PDF</u>
Traffic Control Plan	B20	2	1	1

**ARTICLE B21**  
**ASSISTANCE DURING BIDDING**  
**(Task 14)**

**B21.1 General.** The Contractor shall assist the Contracting Agency as requested during project bidding. Personnel who were in responsible charge for engineering, and other personnel as necessary and appropriate, shall be available to interpret and clarify documents prepared during project development and to assist the Contracting Agency with preparing any necessary addenda to the bid documents. When performing these services, the Contractor shall not communicate about this project with any potential bidders for its construction.

**B21.2 Addenda.** The Contractor shall provide addenda for the advertisement package as required. Addenda to the Specifications shall be incorporated into the full Specifications package per DOT&PF standards.

**B21.3** Within a month after the bid opening, the Contractor shall submit to the Contracting Agency the original of all documents prepared or modified during bidding. The Contractor shall keep a copy of these documents until construction is completed.

**ARTICLE B22**  
**COMPLETION DOCUMENTATION**  
**(TASK 15)**

**B22.1** After bidding, the original of all documents prepared by the Contractor during project development shall be submitted with the Final PS&E documents. The final documents shall include all addenda documentation. These development documents include all notes, sketches, maps, photographs, survey data, computations (cost computations shall be under separate cover), cross sections, digital terrain model, and other materials that were created to develop, record, or justify services provided for the project. These documents shall identify all the assumptions made. The Contractor shall keep a copy of all the development documents until construction is complete.

**B22.2** Each cross section shall include the original ground and the finish grade template as well as identifying the project component and station for which it is applicable. The cross sections shall be submitted on 11-inch by 17-inch paper.

**B22.3** Survey data shall be submitted both on paper and on CDROM.

**B22.4** Documents created to determine pay item quantities shall contain sufficient information to allow the quantity for each pay item to be checked by starting from the source document. These Documents shall be referenced to the applicable pay item.

**B22.5** Documents shall be submitted on a CD ROM. The CD's shall be labeled on the front if each CD with the project name, "Completion Documents", and the CD number. The front of each CD shall also be labeled with this information as well as the State and Federal project numbers. Work done on a computer shall be submitted both on paper and on compact disk using Microsoft Word software.

**ARTICLE B23**  
**ASSISTANCE DURING CONSTRUCTION**  
**(Task 16)**

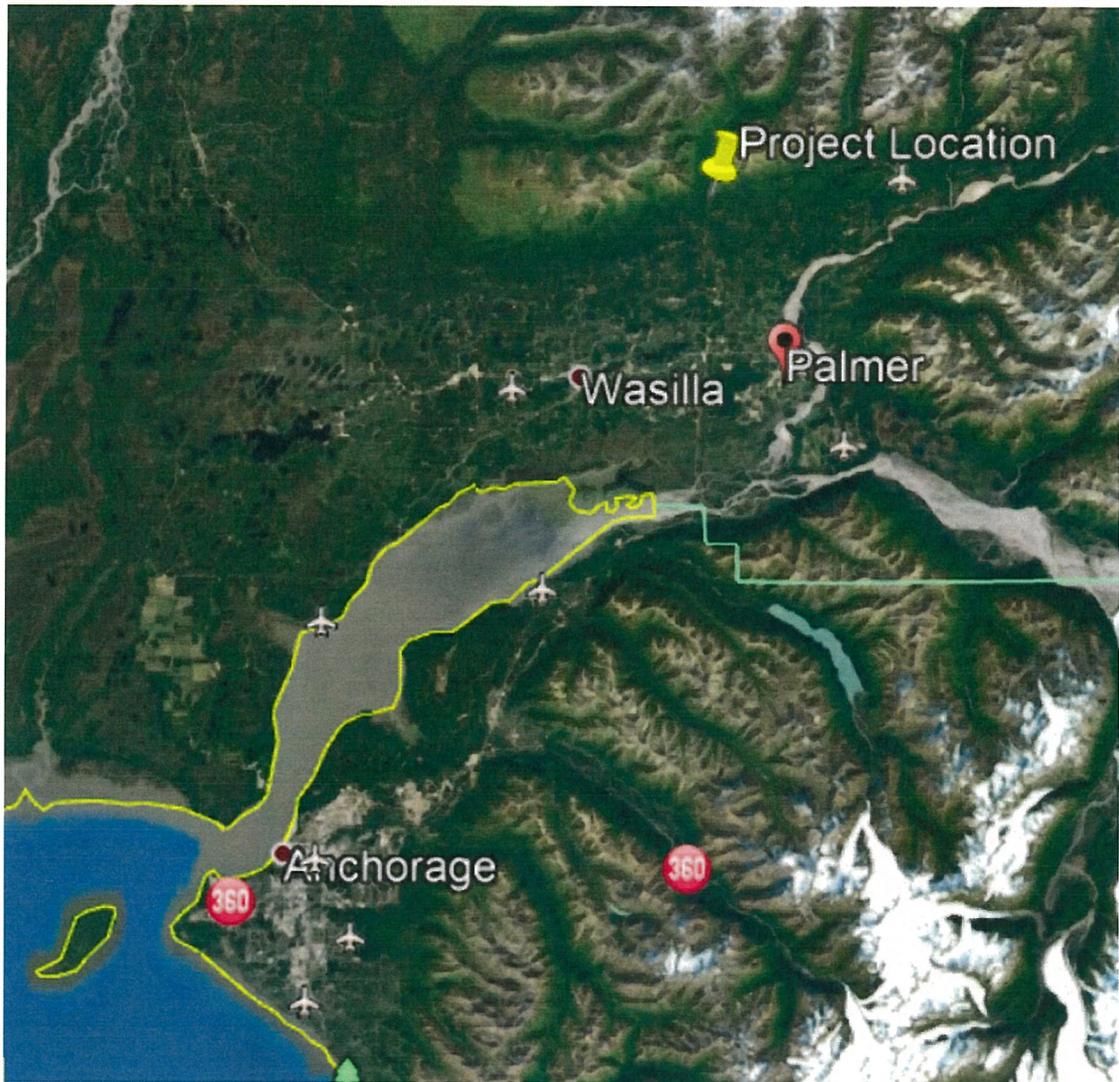
**B23.1 General.** The Contractor shall assist the Contracting Agency as requested during project construction. Personnel who were in responsible charge for engineering, and other personnel as necessary and appropriate, shall be available to interpret and clarify documents prepared during project development and bidding; to review and approve shop drawings, electrical materials/catalog cuts submittals, retaining wall forming plans, trench stability designs, and landscaping materials and procedures; and to assist the Contracting Agency with preparing any necessary change documents. The Contractor shall not communicate directly about this project with the successful bidder. All communication shall be through the Contracting Agency.

**B23.2 Documents.** Within a month after the Contracting Agency accepts the constructed project, the Contractor shall submit to the Contracting Agency the original of all documents prepared or modified when performing the services for this task.

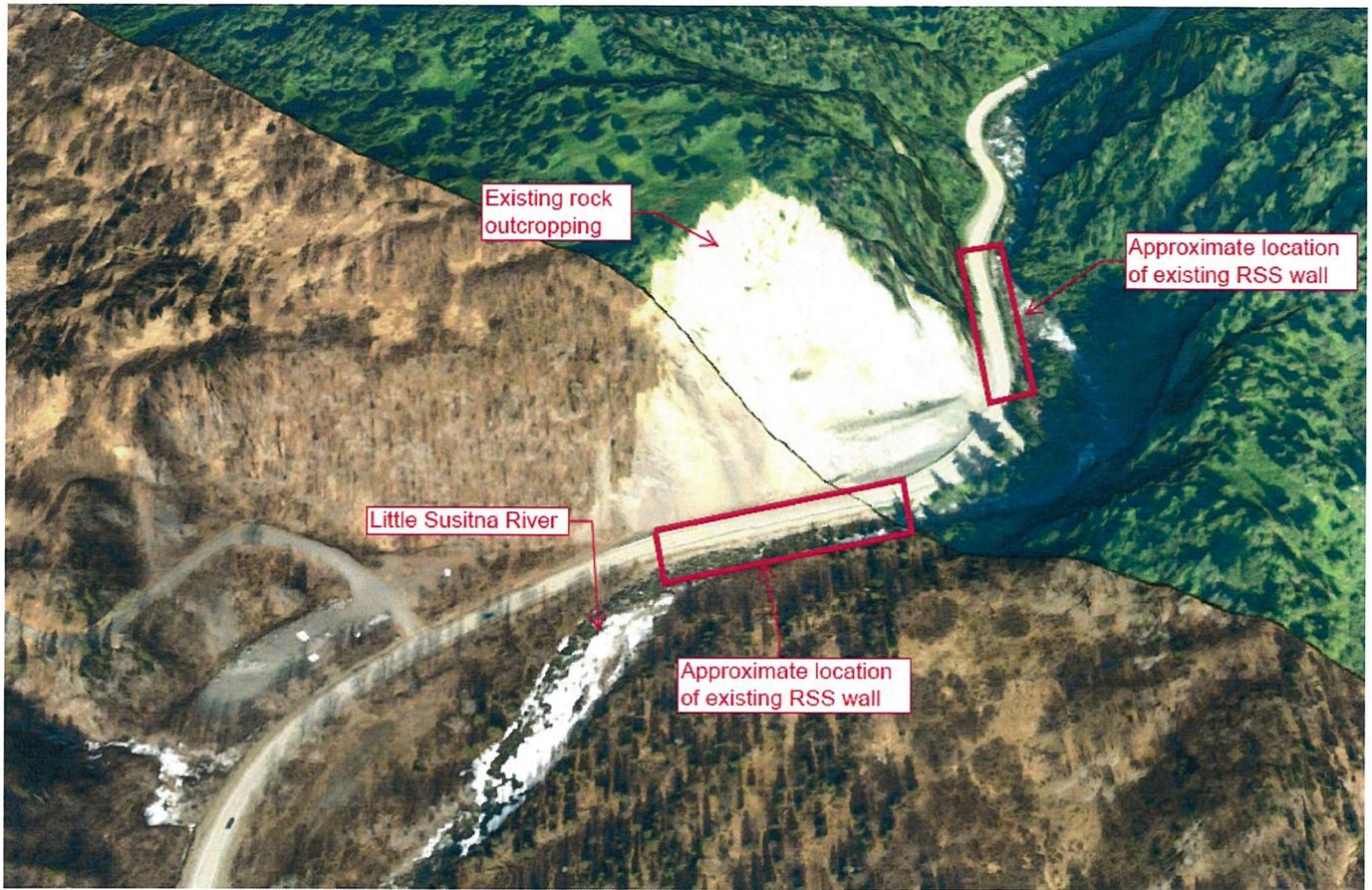
**ARTICLE B24**  
**PROJECT CLOSEOUT**  
**(NIC)**

EXHIBIT B-1  
PROJECT LOCATION

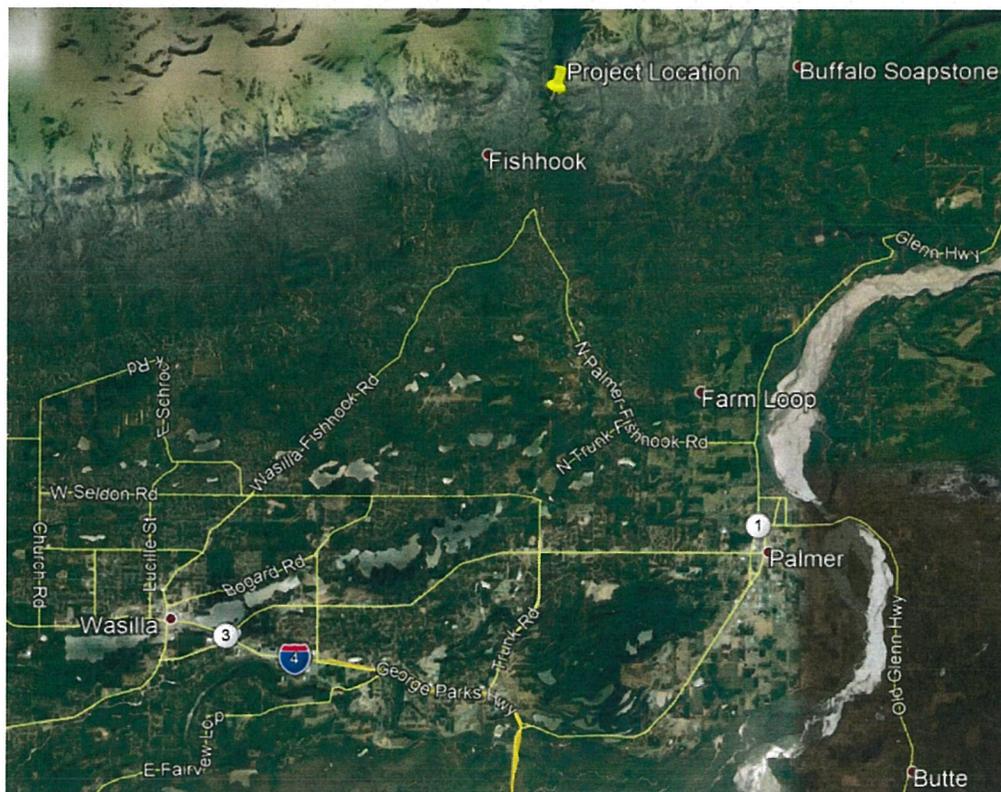
VICINITY MAP



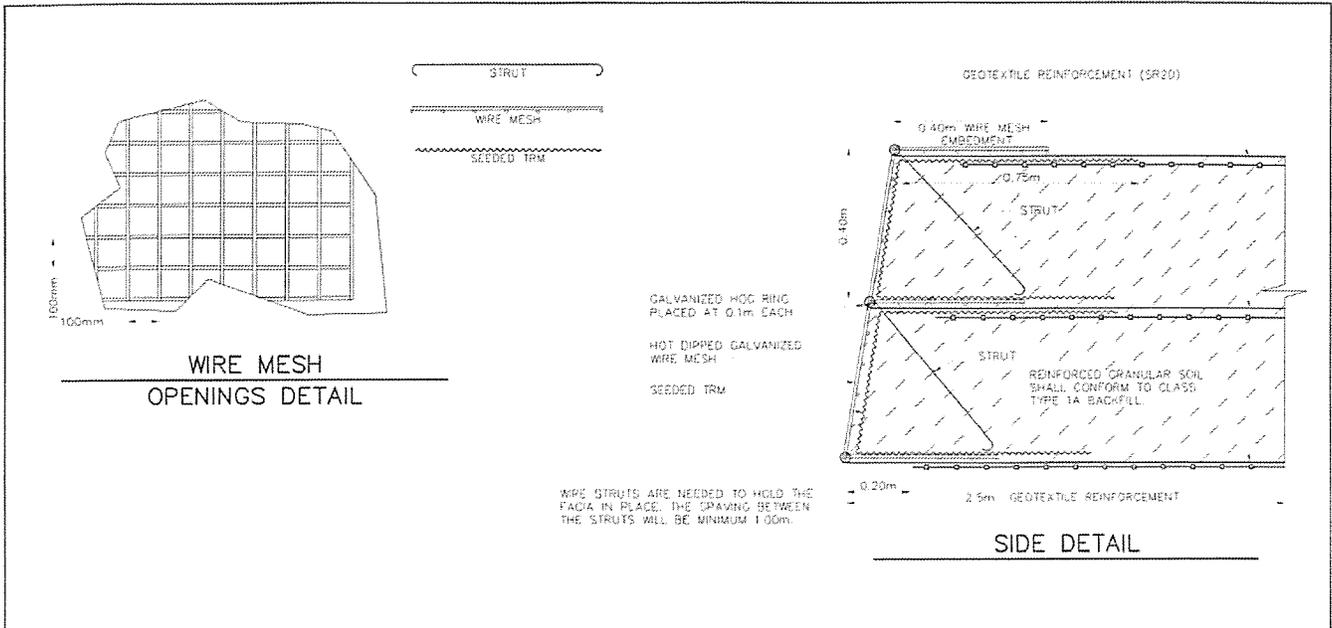
# EXHIBIT B-1 PROJECT LOCATION



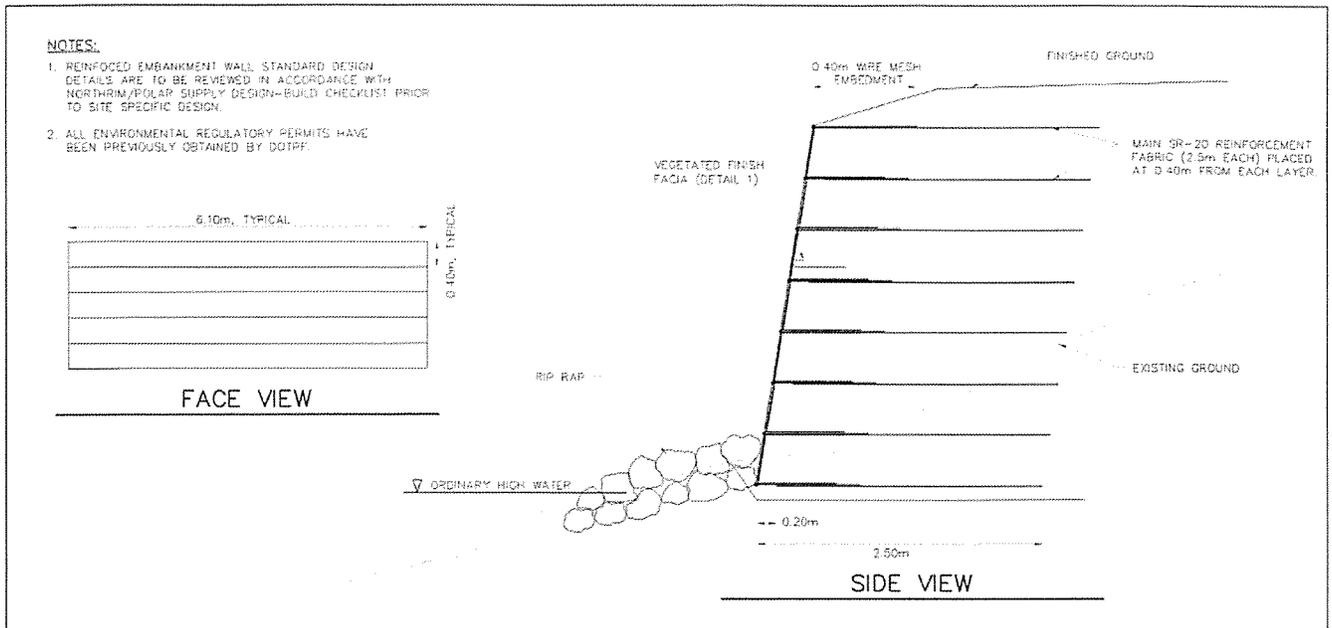
VICINITY MAP



## EXHIBIT B-2 EXISTING RSS WALL DETAILS



<p><b>NORTHRIM ENGINEERING</b> 237 Bear Paw Circle Igloo River, Alaska 99577</p>		<p><b>SI Geosolutions</b> Engineering Services 6025 Lee Highway, Suite 435 Chattanooga, TN 37421 Phone: 1-800-FIX-SOIL Fax: 1-423-485-9068</p>	<p>Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure its accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability and accuracy.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">Date:</td> <td style="font-size: small;">Drawn By:</td> <td style="font-size: small;">Scale:</td> <td style="font-size: small;">SHEET:</td> </tr> <tr> <td style="text-align: center;">8/1/01</td> <td style="text-align: center;">KMS/JLD</td> <td style="text-align: center;">NTS</td> <td style="text-align: center;">1 of 6</td> </tr> </table>	Date:	Drawn By:	Scale:	SHEET:	8/1/01	KMS/JLD	NTS	1 of 6
Date:	Drawn By:	Scale:	SHEET:								
8/1/01	KMS/JLD	NTS	1 of 6								



<p><b>NORTHRIM ENGINEERING</b> 237 Bear Paw Circle Igloo River, Alaska 99577</p>		<p><b>SI Geosolutions</b> Engineering Services 6025 Lee Highway, Suite 435 Chattanooga, TN 37421 Phone: 1-800-FIX-SOIL Fax: 1-423-485-9068</p>	<p>Please note that the information presented herein is general information only. It is for conceptual use only and not intended to be used for construction. While every effort has been made to ensure its accuracy, this information should not be used for a specific application without independent professional examination and verification of its suitability, applicability and accuracy.</p> <table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="font-size: small;">Date:</td> <td style="font-size: small;">Drawn By:</td> <td style="font-size: small;">Scale:</td> <td style="font-size: small;">SHEET:</td> </tr> <tr> <td style="text-align: center;">8/1/01</td> <td style="text-align: center;">KMS/JLD</td> <td style="text-align: center;">NTS</td> <td style="text-align: center;">2 of 6</td> </tr> </table>	Date:	Drawn By:	Scale:	SHEET:	8/1/01	KMS/JLD	NTS	2 of 6
Date:	Drawn By:	Scale:	SHEET:								
8/1/01	KMS/JLD	NTS	2 of 6								

## EXHIBIT B-3 HIGHWAY STANDARDS AND GUIDELINES

AASHTO	LRFD Bridge Design Specifications, with Current Revisions
AASHTO	A Policy on Geometric Design of Highways and Streets, Current Edition
AASHTO	Roadside Design Guide, Current Edition
AASHTO	Manual on Subsurface Investigations, Current Edition
AASHTO	Guide for the Development of Bicycle Facilities, Current Edition
AASHTO	Informational Guide for Roadway Lighting, Current Edition
ASPLS	Standards of Practice for Professional Land Surveyors, Current Edition
DOT&PF	Highway Preconstruction Manual, Current Edition
DOT&PF	Standard Specifications for Highway Construction, Current Edition
DOT&PF	Standard Modifications (Supplementary Specifications to the Standard Specifications for Highway Construction, Current Edition)
DOT&PF	Standard Special Provisions (Statewide and Regional) to the Standard Specifications for Highway Construction, Current Edition
DOT&PF	Standard Drawings, Current Edition
DOT&PF	Alaska Test Methods, Current Edition
DOT&PF	Environmental Project Development Procedures, Current Edition
DOT&PF	Alaska Highway Drainage Manual, Current Edition
DOT&PF	Guide for Flexible Pavement, Design, and Evaluation, Current Edition
DOT&PF	Geotechnical Procedure Manual, Current Edition
DOT&PF	Alaska Traffic Manual, Current Edition (Includes specified edition of FHWA Manual on Uniform Traffic Control Devices)
DOT&PF	Construction Surveying Requirements, Current Edition
DOT&PF	Right-of-Way Manual, Current Edition
DOT&PF	Central Region Drafting Manual (Draft), Current Edition
DOT&PF	Alaska Sign Design Specifications, Current Edition
DOT&PF	Department Policy 05.05.020, Traffic Control Zone Speed, Current Edition
FHWA	Roadway Lighting Handbook, Current Edition
FHWA	Railroad - Highway Grade Crossing Handbook, Current Edition
FHWA	Hazardous Waste: Impacts on Highway Project Development, Current Edition
FHWA	Project Development and Environmental Documentation, Current Edition
FHWA	Code of Federal Regulations, Title 23, Highways, Current Edition.
FHWA	Accessible Rights-of-Way: A Design Manual (Draft)
ITE	Traffic Engineering Handbook, Current Edition
USATBCB	Americans with Disabilities Act Accessibility Guidelines, Current Edition, by U.S. Architectural & Transportation Barriers Compliance Board
TRB	Highway Capacity Manual Special Report 209, Current Edition

**EXHIBIT B-4**  
**SAMPLE MONTHLY PROGRESS REPORT**

ATTENTION: (Agency Project Manager, Agency Name)

FROM: (Contractor's Project Director, Contracting Firm)

PROJECT: (Project title and numbers)

CONTRACT NO:

PROGRESS REPORT NO:

DATE:

1. SUMMARY OF CONTRACTOR'S WORK EFFORT DURING THE REPORT PERIOD.
2. CUMULATIVE PROGRESS TO DATE.
3. PERCENTAGE COMPLETION BY TASK AS CONTAINED IN FINAL WORK PLAN

TASK

% COMPLETED

4. FINDINGS/RESULTS TO DATE
5. EXPENDITURES FOR REPORT PERIOD AND CUMULATIVE TO DATE
6. PLANS FOR SUCCEEDING PROJECT PERIOD
7. ANTICIPATED DELAYS/PROBLEMS
8. DIFFICULTIES ENCOUNTERED DURING THE REPORT PERIOD