Alaska Department of Transportation & Public Facilities

REQUEST FOR PROPOSALS PACKAGE

(Procurement per Article 3 of AS 36.30)

PART

A

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Proposed Statement of Services

Other:

ISSUING OFFICE

Agency Contact & Phone No.....: Julia Hanson, P.E. (907) 269-0753; Email: julia.hanson@alaska.gov
Contracting Division .....: State of Alaska DOT&PF Central Region Construction

PROJECT

RFP NUMBER ..... : TBD
Project Numbers-State/Federal..... : CFHWY00130 / 0A33026
Project Site (City, Village, etc.)..... : Soldotna, Alaska
Project Title & Contract Description ..... : Sterling Safety Corridor Improvements MP 82.5 to 94 Progressive Design Build - Design Phase Services

The selected Progressive Design Build (PDB) team will provide preconstruction and construction services to design a four lane, divided highway on Sterling Highway from MP 82.5 to 94. The proposed federally funded project will improve safety and reduce congestion. The PDB procurement is intended to encompass all materials, labor, supplies, equipment and supervision necessary for the complete construction of the project.

SCHEDULE & PAYMENT

Anticipated period for performance-Begin/End:

Estimated amount of proposed contract:

☐ Less than $200,000
☐ $200,000 to $250,000
☐ $250,000 to $500,000
☐ $500,000 to $1,000,000
☒ $1,000,000 or greater

Proposed Method(s) of Payment:

☐ Firm Fixed Price (FFP)
☐ Cost Plus Fixed Fee (CPFF)
☐ Fixed Price Plus Expenses (FPPE)
☒ Other: T&E (Preconstruction Services)

SUBMITTAL DEADLINE AND LOCATION

OFFERORS ARE RESPONSIBLE TO ASSURE DELIVERY PRIOR TO DEADLINE (2 AAC 12.250).
ONLY PROPOSALS RECEIVED PRIOR TO THE FOLLOWING DATE AND TIME WILL BE OPENED.

DATE: **TBD** PREVAILING TIME: **4:00 PM**

HAND DELIVER ONLY DIRECTLY TO FOLLOWING LOCATION (and person, if named):

IMPORTANT NOTICE: If you downloaded this solicitation from the State's Website, you must self-register for the Plan Holders list to receive subsequent addenda. Failure to register may adversely affect your proposal. It is the Offeror's responsibility to ensure that he has received all addenda affecting this RFP.

PART

A

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.

PART A

NOTICES

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.

PART A

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:

TBD

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

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15. Special Notices (cont'd):

or refer to their website http://www.dot.alaska.gov/cvlrts/index.shtml.

15.4 Any questions about proposal procedures, or other technical aspects of the project must be entered in the questions and answers area of the Bid Express proposal page https://www.bids.com/ak/lettings. Questions must be submitted in sufficient time to get a reply before due date of proposals. Any response to a material question shall be issued by addendum sent to all plan holders.

15.5 The Department intends to send notices (including Notice of Intent to Award) to Offerors by using the email address provided by 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 4:30 pm 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.

15.6 Construction contracts for this project will contain required Contract Provisions for Federal-Aid (FHWA) Construction Contracts (Form 25D-55H) to ensure federally required programs are included and administered.

15.7 The agency project numbers on page 1 of the RFP represent the parent project and interested parties are advised that additional project numbers may be assigned to portions of the project as deemed necessary by the Contracting Agency.

15.8 Not used.

15.9 Offerors must have a Vendor ID or your proposal may not be accepted. More information can be obtained at the following website: https://dot.alaska.gov/aashtoware/docs/AWP-vendor-guidance.pdf

15.10 Certified payroll must be submitted electronically through AASHTOWare for contracts awarded after January 1, 2021. This would apply to any construction contracts, (not pre-construction services), subsequently awarded under this PDB contract. In order to submit certified payroll, Contractors, Subcontractors, and lower tier Subcontractors must be active in AASHTOWare, which requires they have a valid Vendor ID with a 913 commodity code.

15.11 Not Used.

15.12 Not Used

15.13 Not Used

15.14 Exclusion from Participation – Construction Services: In the event that negotiations with the selected PDB Contractor are not successful for any portion of construction services for the Project, the Contracting Agency reserves the right to publicly advertise the work and may contract with another Contractor for construction of the project using any other contracting method under the procurement code. And, in accordance with AS 36.30.309(c) the Department may prohibit the PDB Contractor, as well as any key subcontractors, from participating in any subsequent bid solicitations.

PART **B**

SUBMITTAL CHECKLIST

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 #7.

[ ] 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: **Fifteen (15)**. 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

PART

B

[ ] 9. Not used.

[ ] 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: **Seven (7)**

[ ] 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).

PART C

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. Organization and Experience

1. Weight: 5

Based upon its responses, the Prospective Proposer will be evaluated on its ability to demonstrate that its organization (including any Major Participants or Specialized Subcontractors) has the experience and institutional expertise to perform the services required for the Project. Factors include:

Administrative Information

Experience on Comparable Projects

- Design
- Construction
- Quality Management
- Alternative Contracting

Experience Working in Alaska

Experience on Federally Funded Highway Projects

If the Prospective Proposer is a joint venture, or is submitting the names of Major Participants or Specialized Subcontractors to supplement its experiences in this category, consideration will be given as to whether and how often the organizations comprising the prospective Project Team have worked together. Consideration will also be given as to how effectively and successfully the proposed organizational team has executed past projects. All joint ventures shall be licensed and registered in the legal name of the joint venture. Additionally, all partners in a partnership to provide architectural, engineering, or land surveying must be legally registered in Alaska prior to the submission of the Proposal.

2. Project Team Experience and Capabilities

2. Weight: 25

Based upon its responses, the Prospective Proposer will be evaluated on its ability to demonstrate that the individuals who will be assigned to the Project from the Prospective Proposer's organization (including Major Participants or Specialized Subcontractors) have the experience and expertise to perform the construction and design services required for the Project. The specific positions that will be evaluated include:

- Contract Manager (contract compliance)
- Project Manager (single point-of-contact directly engaged in contract performance)
- Design Manager and key members of the design team including:
  - Civil Engineer* (for civil design lead)
  - Hydrology/Hydraulics Engineer*
  - Land Surveyor* (for topographic mapping)
  - Land Surveyor* (for Right of Way mapping)
  - Electrical Engineer*
  - Structural Engineer* (Type T or C license)
  - Foundation Engineer* (Type T or C license)
  - Geotechnical Engineer*
  - Traffic & Safety Engineer*
  - Public Involvement Lead (Preconstruction phase)
  - Permitting and NEPA Lead
  - Design team members for possible added services:
    - Landscape Architect*
    - ROW Appraisal and Acquisition Lead
- Construction Manager and key team members of the construction team
  - Project Superintendent
  - Project Estimator
  - Project Scheduler
  - Quality Manager

  - Environmental Compliance Manager
  - Safety Manager
  - Public Information Officer (Construction phase)
  - Equal Employment Opportunity Officer
- Other personnel that Prospective Proposer deems to constitute key members of the project team.

***All design personnel identified with "responsible charge" shall have current Alaska Professional Registration, reference item "Certificate of Registration", Part D.**

Consideration will be given to the experience of team members, professional registrations, a history of how the team has worked together in the past and the experiences such individuals have in the design, construction and design-build of comparable projects.

3. Project Approach **3. Weight: 30**

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.

Response must outline the approach for accomplishing project goals and addressing key issues of the proposed contract for both the Preconstruction and Construction stages of the project.

Include discussion about which work items may be subcontracted for the Construction stage of this contract other than the work being performed by the firms listed in your proposal. Explain how construction subcontractors will be procured and managed implementing a competitive process from qualified resources. Explain how subcontracting work will aid in achieving the construction schedule and providing a quality work product.

Identify potential risks. For each risk identified explain:

- Why it is a risk.
- The impacts that it could have to the project to cost, schedule, constructability or other.
- How your team proposes to manage that risk.

Describe the estimating process and tools you will use to communicate the cost of each bid item, the innovation cost savings, and the cost of any risk. Explain how your approach to pricing work during this contract will be transparent and competitive.

Identify any distinct and substantive qualifications that make your team better suited for this project than other proposers, such as the availability of specialized equipment, capabilities, or unique approaches relevant to the required services that could contribute to developing the design or constructing the project.

4. Financial Condition and Capacity **4. Weight: 15**

Based upon its responses, the Prospective Proposer will be evaluated on its financial condition and capacity. Factors to be considered include the Prospective Proposer's capacity to bond the entirety of the contract, including but not limited to the design and construction obligations contained therein; total revenues by business sector; the insurance carriers providing general liability and professional liability coverages; and arbitrations and litigation, which may affect the financial standing, in which the Prospective Proposer has been a party at any time during the past five (5) years.

5. Safety and Quality Control **5. Weight: 10**

Based upon its responses, the Prospective Proposer will be evaluated on its past safety and quality control experiences, as well as its proposed safety and quality control program for the Project. Factors to be considered include the Prospective Proposer's incidence rate, worker's compensation modifier and experience in successfully implementing quality control programs on comparable projects.

Criteria 6 through 9 Not Used

SECTION II - PREFERENCES

10. Disadvantaged Business Enterprises | **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. Not used

SECTION III - PRICE

If price is an Evaluation Criterion, 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. Fee Price Proposal | **12. Weight: 15**

Provide a separate price proposal for the Fee portion of the **Construction phase services**.

- Fee must be expressed as a percentage and consists of overhead, profit, and any other applicable indirect costs. Profit does not need to be identified separately; all three components should be combined to form a single percentage fee.
- This fee will be applied to all work directly performed by the prime contractor. The prime contractor will be permitted a 5% fee (not the proposed fee) for subcontractor work or subcontractor-supplied materials.
- Joint ventures or prime/subcontractor partnerships identified as the proposal team will be treated as one entity and entitled to the proposed fee.

Response will be scored as follows:

(Lowest Responsive Fee from all Offerors) x (MPP) / (Offeror's Fee)* = *Offeror's Criterion Score*

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

CAUTION – Offerors are cautioned that in order to preserve the integrity of the solicitation scoring, responses to this criterion that offer less than 8% Fee will be determined to be a Non-Responsive response, and will be scored zero points for this criterion. Additionally, the Contracting Agency reserves the right to conduct a fair and reasonable review of the proposed fee percentage when determining if award is in the State's best interest.

Alaska Department of Transportation & Public Facilities
PROPOSAL FORM

PART **D**

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.....: CFHWY00130 / 0A33026
Project Title .....: Sterling Safety Corridor Improvements MP 82.5 to 94 Progressive Design Build - Design Phase Services
RFP No.....: TBD

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) **AND>>** [ ] Veterans **AND>>** [ ]Employment Program or [ ] Disabled Persons

PROPOSED SUBCONTRACTOR(S)

Service, Equipment, etc.	Subcontractor & Office Location	AK Business License No.	DOT&PF DBE Certification No.

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 .....: Date:
Title .....: Telephone (voice):
(fax):
Email Address:

PART **D**

CERTIFICATION FOR ALASKA BUSINESS LICENSES AND REGISTRATIONS

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.

PART

D

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.

RFP #_____

Former Employee's Certification of Eligibility
Under the Alaska Executive Branch Ethics Act
(AS 39.52.140, AS 39.52.180)

I am a former employee of the State of Alaska and left state service within the last two years. My last position with the state was [*job title*] with the [*name of state agency and administrative unit*]. I propose to work on [*describe state contract or other matter*] on behalf of [*name of current employer*]. This work will not involve any matter (a) that was under consideration by the state administrative unit that I served, and (b) in which I participated personally and substantially during my state service through the exercise of official action ("official action" means a recommendation, decision, approval, disapproval, vote, or other similar action or inaction). I am therefore eligible to participate in this [*contract or matter*] under the Alaska Executive Branch Ethics Act. I also understand that as a former public officer I may not disclose or use information acquired in the course of my official duties that could in any way result in a benefit to me or my family, if the information has not been disseminated to the public, or that is confidential by law, without appropriate authorization.

I certify under penalty of perjury that the foregoing is true.

Dated: _____, 20__, at _____, Alaska.

_____
[*name of former state employee*]

STATE OF ALASKA)
) ss.
_____ JUDICIAL DISTRICT)

On this _____ day of _____, 20__, [*name of former state employee*], whom I know to be the individual described in and who executed this certification, personally appeared before me and acknowledged that [s]he signed the certification as [her or his] free and voluntary act.

IN WITNESS WHEREOF, I have placed my signature and affixed my official seal.

_____
Notary Public in and for Alaska
My commission expires: _____

If no notary or other official (judge, magistrate, U.S. postmaster or municipal clerk) is available, omit the notary certificate and include the following statement in the text: A notary or other official empowered to administer oaths is unavailable.

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:

Street:
P.O. Box:
City, State, Zip:

Address where Accounting Records are maintained, if not at Office Address:

:
:
:

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
Deferred Compensation/Retirement Plans
Vacation Time and Authorized Leave
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.)
Travel, Food and Lodging
Maintenance and Depreciation of Equipment/Computers
Business Insurance Premiums Not Billed to Clients
Rent, Heat, Power, Light and Janitorial Services
Office Supplies
Communications
Reproduction Costs
Recruiting Expense
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
Advertising
Interest and Other Financial Costs
Contributions and Donations
Federal Income Taxes
Goodwill
Organization Costs
Lobbying Costs
Bad Debts
Fines and Penalties
Entertainment
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:	CFHWY00130
Federal Project No:	0A33026
Date Prepared:	TBD

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:

MINIMUM LIMITS OF E&O INSURANCE

Contract Amount	Combined Single Limit, Per Occurrence & Annual Aggregate
Under $25,000	As Available
$25,000 to $100,000	$300,000
$100,000 to $499,999	$500,000
$500,000 to $999,000	$1,000,000
$1,000,000 and over	Negotiable

D2.1.5 Professional Liability Insurance required for this Agreement is $ _____

ARTICLE D3
MODIFICATION OF INSURANCE REQUIREMENTS

(Article D3 is completed only when some of the standard insurance coverages are not applicable.)

CONTRACTOR RELATED MODIFICATIONS

D3.1 ☐ **Workers Compensation Insurance** is not required because the CONTRACTOR is an Independent Contractor, Sole Proprietor or Self-Employed Person having no employees in any sense of AS 23.30.045.

D3.2 ☐ **Comprehensive or Commercial General Liability Insurance** is not required because the general public and clients do not have any business access to a place of business or home office maintained by the CONTRACTOR.

D3.3 ☐ **Comprehensive Automobile Liability Insurance** is not required because only public transportation, or a rented passenger vehicle with business use insurance, will be used to accomplish requirements of this Agreement.

PROJECT RELATED MODIFICATIONS FOR E&O COVERAGE

When services may apply to fire, life safety or structural aspects and/or wherever the services should safeguard life, limb, health or property, Professional Liability Insurance shall be required.

(E&O Coverage may be waived only if it was specifically not required within the solicitation for proposals.)

D3.4 ☐ **Professional Liability (E&O) Insurance** is not required because: 1) the CONTRACTING AGENCY's use of the services or Work products obtained from the CONTRACTOR will not result in significant exposure to any third party claims for loss or damage; and 2), the CONTRACTOR services will not apply to any construction, alteration, demolition, repair or direct use of any highway, airport, harbor, building or other structure.

D3.5 ☐ **Professional Liability (E&O) Insurance** is not required because this Agreement is for one of the following applicable (*checked*) services for which E&O coverage is not needed:

- ☐ Right-of-Way Fee Appraisals
- ☐ Photogrammetric Mapping Services
- ☐ Architectural/Engineering review of Construction Bid Documents wherein design responsibility clearly remains with the designer of record.

OTHER BASIS FOR MODIFICATIONS

(Requires written concurrence from Division of Risk Management)

D3.6 ☐ Attached Exhibit D-1 identifies and provides justification for insurance modifications.

Above *checked* modifications of the insurance requirements specified in Article D2 are hereby approved:

CONTRACTING OFFICER Signature: _____ Date: _____

Name:

Title:

PROPOSED STATEMENT OF SERVICES
APPENDIX B

RFP No.:	**########**
IRIS Program No:	**CFHWY00130**
Federal Project No.:	**0A33026**
Date Prepared:	**11/22/2023**
Other:	
Other:	
Other:	

STERLING SAFETY CORRIDOR IMPROVEMENTS MP 82.5 TO 94
PROGRESSIVE DESIGN-BUILD – DESIGN PHASE SERVICES

ARTICLE B1
INDEX OF ARTICLES

Task Group		Article	Subject
		B2	Exhibits
		B3	Codes, Regulations, Standards and Procedures
		B4	Administrative Requirements
		B5	Management
		B6	Project Location and Description
		B7	Progressive Design-Build Project Delivery
A		B9	Task 1: Public Involvement
A		B10	Task 2: Surveying & Mapping Services
A		B11	Task 3: ROW Support Activities
A		B12	Task 4: Environmental Activities
A		B13	Task 5: Utility Coordination
A		B14	Task 6: Geotechnical Investigation & Recommendations
A		B15	Task 7: Traffic and Safety Analysis
A		B16	Task 8: Hydrologic and Hydraulic Design
A		B17	Task 9: Electrical Design
A		B18	Task 10: Structural Design
A		B19	Task 11: Foundation Design
	NIC	B20	Task 12: Landscape Design
A		B21	Task 13: Design Study Report
A		B22	Task 14: Plans and Specifications
A		B23	Task 15: Cost Estimates
A		B24	Task 16: Value Engineering Study Support
A		B25	Task 17: Assistance with Design Project Closeout
	NIC	B26	Task 18: Right of Way Appraisal and Acquisition Services

Do no work and incur no expense on any task until you have received a Notice to Proceed from the Contracting Agency that includes that task.

The Contracting Agency gives no guarantee that Notice to Proceed will be given for any task.

NIC is abbreviation for Not in Contract. The Contracting Agency reserves the right to add NIC tasks 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

Exhibit	Subject
B-1	Project Location Map(s)
B-2	Project Schedule
B-3	Highway Design Standards and Guidelines
B-4	Informational Websites
B-5	General Criteria for Surveying and Mapping Services
B-6	Survey Request and Limits Figures
B-7	Public Notice Language

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 shown in Exhibits B-3, B-4, and B-5. 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 design 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 English 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.

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.

Name	Project Responsibilities
Name	Senior Office/Principal-in-Charge/Project Sponsor
Name	Project Management
Name	Cost Estimating
Name	Scheduling
Name	Quality Control Management
Name	Land Surveying
Name	Right of Way Mapping
Name	Civil Engineering
Name	Hydrology/Hydraulic Design
Name	Traffic and Safety Engineering
Name	Landscape Design
Name	Electrical Engineering

Name	Project Responsibilities
Name	Structural Engineering
Name	Foundation Engineering
Name	Geotechnical Engineering
Name	Public Involvement
Name	Permitting and NEPA
Name	Wetlands Delineation
Name	Utilities Coordination

B4.3 Professional Registration. All reports, plans, specifications, 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 15th of each month. Any delayed costs from previous billings 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)

B4.6 Documents and Reports shall be printed with solid black letters that are double spaced 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. 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 as document files for Microsoft Word or compatible software.

B4.6.1 Copies. When the Contracts calls for multiple copies of documents or reports, the copies shall be printed on both sides of the paper. However, the cover and pages with approved illustrations, multicolored graphics, or photographs shall be printed on one side of the page only. All copies – except for originals – shall be comb-bound.

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 numbers.
f. Prepared for: Alaska Department of Transportation and Public Facilities.
g. Prepared by:
h. Map and/or picture of project area.

B4.7 Contractor Name on Plan Sheets and Documents. 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
COMPANY ADDRESS

B4.8 Drafting. All drawings shall be submitted as AutoCAD current edition 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. See Exhibit B-3.

B4.9 Specifications 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. All Specifications shall be developed using Microsoft Word or compatible software.

B4.10 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. These documents shall be referenced to the applicable pay item.

B4.11 Proofreading. The Contractor shall prepare the report(s), 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.

B4.11.1 Quality Assurance Memo. Provide with each submittal a Quality Assurance memo signed by the person in responsible charge for the project and the Contractor's Project Manager, certifying that they have performed a quality control check on the items included in the submittal. A memo template will be provided by the Contracting Agency upon request.

B4.12 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.

B4.12.1 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.

B4.12.2 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.

B4.12.3 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.

B4.13 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.

B4.14 Completion Documentation. The original 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.

B4.14.1 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.

ARTICLE B5
MANAGEMENT

B5.1 Performance Schedule. A Project Schedule is attached as Exhibit B-2. The Contractor agrees to expend all effort necessary to stay on schedule and meet the contract delivery dates. If the Contractor becomes aware of any reason why the project schedule may be delayed, such reason shall be identified in writing to the Contracting Agency's Contract Manager within two working days of discovery.

Provide and maintain a critical path method progress schedule for the project. Use this schedule for coordinating and monitoring all work of the Contract.

B5.1.1 Meetings / Reports. The Contractor shall schedule and attend periodic briefing meetings (generally every other week) with the Contracting Agency's Contract Manager. Various members of the Contractor's support staff and subcontractor staff shall also attend, if necessary. 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 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. The Contractor shall keep minutes of all meetings and submit them to the Contract Manager within five workdays following each meeting.

B5.2 Project Coordination. All coordination and correspondence for the project shall be handled through or with the concurrent of the Contract Manager.

B5.2.1 FHWA Communication. All communications with FHWA regarding this project shall be by the Contracting Agency.

B5.2.2 Contracting Agency Activities. Except as specified otherwise, the Contract Manager will coordinate the Contractor's activities with those of various functional groups within the Agency. These groups may include Materials/Geotechnical; 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.

B5.2.3 Agency and Public Coordination. The Contractor shall not commit the Contracting Agency to any action.

B5.2.4 Correspondence. The Contractor shall submit all written material, letters, survey forms, etc., used to communicate information regarding the project to the Contract Manager for review and acceptance prior to its distribution. Copies of all outgoing and incoming correspondence shall be provided to the Contract Manager at least once a week. All outgoing correspondence shall include the project title and state and federal project numbers.

B5.2.5 Release of Information. The release of any project related information must be approved by the Contract Manager.

B5.2.6 Right-of-Entry Permits. The Contractor shall obtain Right-of-Entry (ROE) authorizations from landowners for any non-ground-disturbing activities. These coordination efforts are considered part of the task for which they support. The Contracting Agency will obtain ROE authorizations for the Contractor, when required for ground disturbing activities. The Contractor shall provide a minimum of 30 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 B6
PROJECT LOCATION AND DESCRIPTION

B6.1 Project Location and Description. The Sterling Safety Corridor Improvements MP 82.5 to 94 project is located on the Kenai Peninsula between Sterling and Soldotna (Refer to Exhibit B-1).

B6.1.1 Project purpose. The purpose of the project is to improve safety and reduce congestion for people and freight traveling along the Sterling Highway between Sterling and Soldotna. This project will provide highway travelers a safe and reliable roadway that supports efficient movement of goods, services, and people, while accommodating the seasonal increase of tourist and recreational traffic through the design year.

B6.1.2 Preferred Alternative. The project will reconstruct the Sterling Highway between mileposts 82.5 to 94 as a four-lane highway divided with a depressed median, transitioning at each end to a four-lane with Center Two Way Left Turn Lane (CTWLTL) section. The highway will transition from the four-lane with CTWLTL section at the beginning of the project to approximately Handley Street in Sterling. The proposed four-lane, divided section will then transition back to the four-lane with CTWLTL section near Kleeb Loop at the end of the project in Soldotna.

In the four-lane section, a paved shared-use path will be constructed on the north side of the highway. In the five-lane section, sidewalks will be constructed on each side.

Scout Lake Road will be realigned opposite Lois Street along the section line to allow access to a median opening. Length of new Scout Lake Road is approximately 0.7 mile. Lois Street will be extended approximately 300 feet. This improvement will require road easements from two parcels that are managed by Alaska Department of Natural Resources.

Solid Rock Road (a private road) will be realigned to be opposite Isbell Street to allow access to a median opening. Length of new Solid Rock Road will be approximately 300 feet. This improvement will require a temporary construction permit from one parcel.

A 2-lane, 2-way frontage road (approximately 700 feet long) will be constructed on the north side of the Sterling Highway from S. Jawle Street to Pine Street to consolidate local traffic to a median opening. Right of way required for this improvement is one full parcel acquisition from Kenai Peninsula Borough.

The approaches to Kleeb Loop (Whistle Hill Loop) will be reconstructed. The eastern approach will be moved to align with existing platted right of way. This improvement may require partial right of way acquisition from two parcels. It is preferred to design this work to avoid permanent acquisitions.

B6.2 Project Objectives. A successful project will achieve the outcomes discussed in this section.

B6.2.1 Required Outcomes. The selected design will deliver the following outcomes:

1. Construction of the preferred alternative.
2. Some revisions to the preferred alternative are allowable, but the final design shall not increase impacts to such a degree that it alters the conclusions in the original environmental document.

B6.2.2 Desired Outcomes. The Contractor shall evaluate options to deliver these outcomes, weighing the benefits against the environmental, cost, and schedule impacts:

1. Build local roads to enable properties adjacent to the Sterling Highway to access the highway at one of the proposed median breaks.
2. Evaluate and implement methods to make u-turns safer and easier, including for the design vehicle (WB-67).
3. Educate the public on the importance of access management.
4. Include public involvement in the design development to ensure their input is heard and acknowledged.

B6.3 Project Goals. The Contracting Agency's goals for the project are as follows:

1. Realize the benefits of progressive design-build project delivery, such as risk mitigation through early contractor involvement, collaborative project development, and reducing the overall schedule for delivery of the project.
2. Uphold the trust of stakeholders and the public in delivering the project.
3. Maximize improvements implemented into the project within the Contracting Agency's budget.
4. Expedite project delivery with a focus on construction substantial completion by October 1, 2028.

ARTICLE B7
PROGRESSIVE DESIGN-BUILD PROJECT DELIVERY

B7.1 General. This project will use the Progressive Design-Build (PDB) delivery method. The intent of PDB is to form a partnership between the Contracting Agency and the Contractor to:

- Create a collaborative owner/contractor relationship.
- Share and transfer knowledge.
- Identify, mitigate, and minimize risk.
- Support innovation.
- Improve design constructability.
- Optimize the project schedule.
- Meet budget goals.

In the PDB project delivery method, the Contracting Agency relies on the Contractor to provide expertise on constructability, sequencing, means and methods, material costs and availability, and the ability to deliver a quality product, within budget and on schedule, in a manner that would be more efficient than that of a design-bid-build project of similar size and scope and more collaborative than that of a traditional design-build project.

The Contracting Agency will also procure the services of a third-party, Independent Cost Estimator (ICE) to separately review project documents and develop construction cost estimates. These independent estimates will be used to validate the Contracting Agency and Contractor estimates to ensure that project pricing is reasonable and fair.

There will be two phases to this contract:

B7.1.1 Preconstruction Phase. During the Preconstruction Phase, the Design-Builder will work collaboratively with the Contracting Agency to develop and evaluate alternatives and develop the selected alternative to approximately 50-75% complete. The product of this phase will be the technical and commercial terms for a Design-Build contract (or multiple Design-Build contracts) to complete the design and construction of the project. During this phase, the Contractor and Contracting Agency will work collaboratively to identify risks, estimate project costs, and refine the project schedule. The use of innovative techniques is encouraged to help reduce time and cost.

At a minimum, the following tasks must be completed before a construction contract can be awarded:

- Approval of environmental document re-evaluation, to be completed by Contractor and approved by Contracting Agency.
- Right-of-Way Acquisition, to be completed by Contracting Agency with Contractor support.
- Utility Relocation Agreement(s), to be completed by Contractor and approved by Contracting Agency
- Design Criteria, to be prepared by Contractor and approved by Contracting Agency
- Geotechnical Engineering Recommendations, to be completed by Contractor and approved by Contracting Agency
- Agreement to a Target Maximum Price, by Contractor and Contracting Agency.
- Authority to Proceed with Construction from FHWA, to be obtained by Contracting Agency.

B7.1.2 Construction Phase. The Construction Phase will begin once a design-build contract is awarded and Notice-to-Proceed issued by the Contracting Agency. The Construction Phase and Preconstruction Phase may overlap if an early work package is awarded for some part of the project while other parts of the design are still being developed.

There is no guarantee that a Construction Phase contract will be awarded if agreement is not reached on price.

B7.2 Target Maximum Price (TMP). Negotiations to establish the TMP will occur when both Contractor and Contracting Agency agree that the risks, constraints, and requirements are understood well enough that both parties are comfortable advancing a design-build contract for the work. This may cover the whole project, or a single segment. It's anticipated that negotiations will occur when the design is 50-75% complete. The Contractor's estimates throughout design development will be rolled up into the estimated TMP to enable the Contracting Agency and Contractor to revise the design and pricing, as warranted, to avoid any upsets when the final TMP negotiation takes place. In summary, the construction contract will be prepared as follows:

B7.2.1 Cost Estimates. The Contractor, the ICE and the Contracting Agency shall provide independent cost estimates from the available drawings and specifications at each estimating milestone defined in this Statement of Services.

B7.2.2 Cost Reconciliation. During each interim estimating milestone and at the final negotiation, if Contracting Agency's, ICE's and Contractor's estimates are not in agreement and within the project budget, then the Contractor shall make all efforts necessary to come into agreement within 21 calendars days and to bring the estimate to within the Construction Budget. Efforts shall include but not be limited to: suggested program revisions, suggested engineering revisions, value engineering, and additional construction options. The Contractor shall dedicate full resources to achieve an agreement on the TMP.

B7.2.3 Sharing documents. In order to facilitate this process, the Contractor agrees to make all records, calculations, drawings, and related materials, in both paper and electronic form compatible with software of the Contracting Agency, available to the Contracting Agency on an ongoing basis. The Contracting Agency shall have full opportunity to view all documents related to this agreement in the offices of the Contractor, and all necessary documents shall be made available to the Contracting Agency at regular meetings at the Contracting Agency's offices and/or other location upon reasonable notice.

B7.3 Early Work Packages. The Contracting Agency may award one or more early work packages to allow some portion(s) of the project to advance to the Construction Phase while the rest of the project proceeds through the Preconstruction phase. The following conditions must be met before an early work package can be awarded:

- The scope of the work package shall have independent utility, as determined by the Contracting Agency.
- The Contractor and Contracting Agency shall agree on the scope, schedule, risk allocation and TMP of the work package.
- The Contractor shall complete a re-evaluation of the environmental document.. The re-evaluation must be approved by the Contracting Agency.
- The right-of-way required to complete the work package shall be acquired.
- The Contracting Agency shall obtain Authority to Proceed (ATP) with Construction and/or Utility Relocations (as applicable) from FHWA.
    - The Contractor is advised that this process can take up to eight weeks and cannot begin until the other conditions in this list are met.

B7.4 Off-Ramp. In the event that the Contractor and Contracting Agency cannot agree to a TMP, the Contracting Agency may discontinue the use of the PDB delivery method and use a different method to complete the design and construction of the project.

B7.4.1 Submittal Requirements. The Contractor will submit the AutoCAD files for all project work, within 10 business days after receiving a written notice that the Contracting Agency is invoking this Off-Ramp clause.

B7.4.2 Design Negotiations. The Contractor and Contracting Agency will negotiate an amendment to complete the design and prepare bid-ready contract documents via a design-bid-build process, which the Contracting Agency will advertise for construction.

B7.4.3 Termination of Contract. If the Contractor and Contracting Agency cannot agree to terms for completing the design, the Contracting Agency may terminate this contract and complete the design by other means including but not limited to using in-house forces or advertising another RFP to solicit a new design team.

B7.5 Project Kickoff. The Contractor shall plan and participate in a project kickoff meeting to develop a project strategic plan. The plan will address Owner project vision and expectations, set strategic goals, establish communication procedures, define clear QA/QC procedures and other project procedures to ensure success of the project. All project staff of the Contractor shall attend the Project Kickoff Meeting.

ARTICLE B8
DESIGN CONSIDERATIONS

B8.1 General. The project design must be a best accommodation of the geographic location and the site-specific constraints, as well as the project values and other constraints as defined by the Contracting Agency. This article describes the known concerns and desired features of the project design that are not covered in other Articles.

B8.2 Geometrics. Within the ROW, design turn lane changes and median access management layouts that minimize crashes and conflicts. Do this by modeling traffic levels along the whole corridor, at each access point, mixed with through traffic levels in the AM & PM Peak Hours.

Provide full turning access at systematic and strategic median breaks, in accordance with the preferred alternative. Design the intersections, including turning lane changes and median access, to minimize crashes and conflicts. Do this by modeling turning traffic levels along the whole corridor, at each access point, mixed with through traffic levels in the AM and PM Peak Hours.

Provide u-turning templates at left turn breaks where needed. Do this for most frequent daily turning vehicles at full access points, as needed to serve RIRO access points identified in between full access breaks.

B8.3 Driveways. At low volume access points, restrict to right-in/right-out (RIRO) in accordance with the preferred alternative. Build new access points onto parcels affected by RIRO by maximizing side street, frontage and backage road access in accordance with HPCM 1190.03

If frequent design vehicle cannot be served with u-turns at the median breaks, look for an alternative route or driveway access to an available side street that can provide reasonable access. One example is to determine how the Lynden Freight terminal can be addressed through easements and sidestreet access.

Note that the Contracting Agency has previously conducted studies to identify feasible connecting roads that will meet the needs of this subsection and B8.4. The Contracting Agency will provide the available documentation to the Contractor.

B8.4 Connecting Roads. The project should evaluate the feasibility of constructing connecting roads that will provide adjacent properties access to median breaks without u-turns. At a minimum, the following factors will be considered: availability of ROW, public use easements, or section line easements; willingness of local government to maintain the roads after construction; wetlands within the ROW; private encroachments within the ROW; existing utilities within the ROW; terrain features and soil conditions within the ROW.

ARTICLE B9
TASK 1: PUBLIC INVOLVEMENT

B9.1 Public Involvement Plan (PIP). The Contractor shall collaborate with the Contracting Agency to develop a PIP. The public involvement efforts for this project shall address the known concerns described in this Article. Provide a Draft and Final Public Involvement Plan in accordance with the Alaska Highway Preconstruction Manual.

B9.1.1 Known concerns:

1. The alternatives evaluation selected a four-lane section with a depressed median. Several community members have expressed disapproval of this alternative and preference for a center

two-way left-turn lane instead. The PI efforts for this project should educate the public on the necessity and benefits of the median.
2. Discussions with area legislators have included possible local roads to connect adjacent properties to the highway at median breaks, reducing the need to make u-turns. The PI efforts for this project should include public workshops to evaluate possible routes and achieve buy-in on this concept.
3. Community members have expressed concern with large trucks making u-turns at the median. The PI efforts for this project should include method(s) to demonstrate to the public how trucks will be accommodated.
4. Recent feedback suggests many people feel that they haven't been allowed a chance to weigh in, or that their opinions weren't heard, despite previous PI efforts. The new PI efforts should strive to form relationships and make people feel like they are partners in the project.
5. Changes to driveways may require changes to how owners use their property. The PI efforts should include close collaboration with affected property and business owners in order to understand how the property is being used and define effective on-property improvements to prevent harm to these owners.
6. The PI strategy must consider that the project will impact both local and regional travel and plan to engage and inform a geographically diverse range of users and stakeholders.

B9.2 Project Mailing List. Provide a mailing list including, as a minimum:

- Residents within a (TBD) radius of the project,
- Community councils in which any part of the project resides,
- Local agencies in which any part of the project resides,
- State elected officials for the area of the project,
- Affected freight movers,
- Emergency service providers,
- Public transit,
- Affected tourist organizations.

B9.3 Mailings. Mail project information cards prior to each public meeting, to the mailing list and any other stakeholders identified by the Contract Manager. The card must include basic information about the project, contact information and the time, date, and location of the upcoming public meeting. The Contract manager must approve the content and format of the card.

B9.4 Project Website. The Contracting Agency has created a project website at https://dot.alaska.gov/creg/sterlinghighway82to94/. The Contractor will prepare materials for website updates as needed and coordinate with the Contracting Agency's web master to upload the information.

B9.4.1 Email List. The Contracting Agency has started an opt-in email list for distributing updates to interested parties. The Contractor will take over maintaining the list. Citizens may provide their email addresses through a link on the project website. Currently, these messages are sent to the Contract Manager. The Contractor will provide an email address to receive these requests. The Contractor will submit the list to the Contracting Agency upon request, and at closeout of this design contract.

B9.5 Presentation Materials. Provide written and visual materials for presentation of the project at meetings. The materials must be approved by the Contract Manager in advance of the meetings. The materials for this project may include:

- Fact sheets, updated for each meeting or mailing.
- Roll plot of the project.
- Animated corridor modeling demonstrating the proposed features of the project.
- Short,

B9.6 Design Public Meeting(s). (TBD) Design Open House Public Meetings are anticipated for this project. Public meetings shall use a hybrid format, allowing citizens to participate in person or online.

B9.7 Advertisements and Announcements. See Exhibit B-7 for language to utilize in advertisements and announcements. Provide the following:

- Newspaper ads.
- Radio ads
- Flyers in local businesses
- Door hanging
- Mailings

B9.8 Civil Rights Requirements.

B9.8.1 Ensure the **meaningful services** to limited English proficiency persons are provided, as described in the DOT&PF's Limited English Proficiency Plan (see Exhibits B-3 and B-7).

B9.8.2 Display the Title VI documents at the meetings, including a Civil Rights brochure, an ADA & Title VI Policies brochure, and a "How to File a Complaint" brochure. See Exhibit B-4 for the website location of the documents.

B9.9 Public Meeting Documentation. Provide a report of each public meeting to the Contract Manager, including but not limited to:

- Date, time, and location of the meeting,
- Description of advertisement of the meeting,
- Copy of sign-in sheet,
- Documentation of compliance with Title VI of the Civil Rights Act of 1964,
- A summary of oral and written comments,
- An analysis of comments received, and
- Any recommendations.

B9.10 Property Owner Meetings. The Contractor shall facilitate one-on-one meetings between the Contracting Agency and owners of properties and businesses that may be affected by the project. The Contractor's responsibilities may include identifying the property or business owner(s) and contact information and arranging the meeting logistics. One member of the Contractor's design team will attend these meetings when requested by the Contracting Agency to provide information and/or document the discussion.

B9.11 Provide a Public Involvement Report that documents all public involvement activities. The report shall include a summary of public meetings, with Public Meeting Documentation attached as appendices. The report shall also detail any public involvement activities not described in the Public Meeting Documentation.

B9.12 Other Public Involvement. 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 Contract Manager) to requests for information about the project from individuals and/or agencies.

B9.13 Deliverable Items

Type of Document	Para	Copies	PDF	Native Files
Public Involvement Plan				
Draft	B9.1		1	
Final	B9.1	1	1	
Project Mailing List	B9.2		1	1
Mailings	B9.3		1	
Final email list	B9.4.1			1
Presentation Materials	B9.5	1	1	1
Advertisements and Announcements	B9.7	1	1	
Public Meeting Documentation	B9.9		1	

ARTICLE B10
TASK 2: SURVEYING & MAPPING SERVICES

B10.1 General Requirements for Surveying and Mapping Services. The Contractor shall perform all work in conformance with Exhibit B-5 General Requirements for Surveying and Mapping Services (attached).

B10.1.1 The Contractor shall research all information applicable to the requirements of the project. Survey and Mapping scope includes: Design Surveying, ROW Base Mapping and Encroachment Survey. ROW Mapping may be added by amendment if permanent property acquisitions are identified.

B10.1.2 Project Staff responsible for ROW Base Mapping and ROW Mapping must demonstration past performance of successful completion of at least two (2) ROW Mapping projects of similar scope consisting of a primary State highway corridor within a local platting authority within the last ten (10) years for the Contracting Agency.

B10.2 Provided Items

B10.2.1 The Contracting Agency has completed a Control and ROW Survey through the corridor. A Record of Survey (ROS)/Survey Control Diagram (SCD) of these surveys and other pertinent deliverables will be provided to the Contractor. The completed Control Survey will be the basis of the Design Survey. The Contractor will supplement the Control Survey with secondary control as needed for the Design Survey. The ROW Survey will be supplemented by the Contracting Agency as needed based on any ROW impacts identified through project design.

B10.2.2 The Contracting Agency will perform pre-construction surveying at its discretion prior to construction activities. The Contracting agency will perform post-construction surveying within the year following notification by the Project Manager of substantial completion of all project construction.

B10.3 Survey Limits. Prior to negotiations, the Contractor shall perform an office review of the Department provided data and fill out a Department provided survey request form with exhibits that outlines the survey work to be completed, and will obtain approval from the Contracting Agency prior to a fee proposal. Include exhibits with aerial imagery (Google Earth or better) outlining survey limits and locations as needed for identification, special features or instruction, etc.

B10.4 Schedule of Contract Work. The Contractor shall provide the following services once they receive a Notice to Proceed (NTP):

1. Meet with the Contracting Agency Project Manager and Survey Personnel for the initial kick-off meeting before starting any survey work.

2. Complete all fieldwork for the tasks that were outlined in the survey request and NTP'd.
3. Complete all office work for the tasks that were outlined in the survey request and NTP'd.
4. Submit deliverables in the agreed upon timeline and in accordance with the survey request.
5. Revise deliverables as directed by the Contracting Agency.
6. Provide Survey Control Sheet (SCS) at PS&E if required by the contract. SCS(s) will reference the ROS/SCD provided by the Contracting Agency.
7. Provide ROW Base Map and/or ROW Mapping as directed by the Contracting Agency. Contractor will be responsible for updating the ROW Base Map or ROW Mapping at the completion of the Contracting Agency's post-construction surveyP.

B10.5 Deliverable Items. Anticipated deliverables: Exhibit B-5 Design Survey: 15.7 A-D & F-L, M&N if applicable. Exhibit B-5 ROW Mapping: 17.2 & 17.3. Exhibit B-5 ROW Mapping: 17.4 & 17.5 may be added by amendment if permanent property acquisitions are identified.

B10.6 Agency Review. The Contracting Agency will review and comment on the Contractor's deliverables within 15 business days. The Contractor will leave time in the schedule for this to occur before the deliverables will be used for design.

ARTICLE B11
TASK 3: ROW SUPPORT ACTIVITIES

B11.1 ROW Encroachments. The Contractor will use the design survey from ARTICLE B10 to identify and document fixed objects located within the ROW that do not serve the transportation purpose of the highway. Contractor will provide this list to the Contracting Agency as requested. This requirement includes Sterling Highway ROW and ROW for proposed connecting roads. Contractor shall also provide exhibit documents and support for the removal of identified encroachments.

B11.1.1 Encroachment exhibits. Produce an exhibit showing surveyed features, identified encroachments, and ROW and property lines. Produce one 8.5x11 exhibit for each property frontage that contains encroachments.

B11.2 Vehicle. Provide one vehicle for Contracting Agency staff to use during the preconstruction phase of this project. Furnish a full-size, four-wheel drive vehicle, either pickup/light truck with crew cab or sport utility vehicle. Provide a vehicle less than three model years old, in good condition, and with less than 36,000 miles on the odometer. Furnish all maintenance, parts, and insurance during the Department's operation and use.

Equip the vehicle with a lightbar wired into the vehicle's electrical system with a dash mounted switch easily accessible to the vehicle operator. Provide Code 3; Reflex C5590AA 15.3-inch mini-lightbar or approved equal. Approved equal equipment shall have the following characteristics:

- (4) 55 watt rotators with amber filters
- 1200 flashes per minute
- (2) diamond mirrors
- 55 inches in length

Equip the vehicle with hands-free communication connectivity.

Equip the vehicle with tires appropriate for use on Sterling Highway for the season in which it is being used. For winter use, provide winter tires or studded tires. The Contractor shall mount the winter tires between September 16 and October 15 and change to summer tires between April 15 and May 15. If providing studded tires, the Contractor shall ensure they are removed to comply with Department of Public Safety removal deadlines.

Contractor is responsible for normal wear and tear, and any other incidental damage including broken windshields, occurring during the Department's operation and use. The State of Alaska is responsible for damage to any vehicle caused by its own negligent operation.

B11.3 Deliverables.

Type of Document	Para	Copies	Originals	PDF
Encroachment Exhibits	B11.1.1	0	0	1
Vehicle	B11.2			

ARTICLE B12
TASK 4: ENVIRONMENTAL ACTIVITIES

B12.1 General. The Contracting Agency has completed a Categorical Exclusion (CE) for the project, and a re-evaluation. The Contractor will produce re-evaluations as needed, including supporting studies as noted below, and obtain all required permits.

B12.1.1 Work by Contracting Agency. The Contracting Agency has completed the following studies for this project:

- *Final Environmental Assessment*, approved December 2021
- *Finding of No Significant Impact*, approved December 2021
- *Expedited Re-evaluation*, approved August 2023
- Section 106 Consultation
- *Traffic Noise Analysis*, Report, May 2020
- *Preliminary Jurisdictional Determination Report and Functional Assessment*, March 2014
- *Phase I Environmental Site Assessment*, March 2014

B12.2 CE Re-evaluation. Re-evaluations are required prior to beginning Right of Way acquisition, prior to authorizing utility relocations, and prior to awarding any construction contracts, including early work packages. Re-evaluation is also required for changes in the project scope and/or termini. For each re-evaluation, the Contractor shall prepare a re-evaluation in accordance with the National Environmental Policy Act (NEPA), the DOT&PF Environmental Procedures Manual, and DOT&PF practices.

B12.2.1 Ensure the re-evaluation includes impacts from all project related activities, including utility relocations.

B12.2.2 Submit the Draft Re-evaluation to the Contract Manager in pdf or word format for review. Allow two weeks for the Contracting Agency to review.

B12.2.3 Submit the Final Re-evaluation using the Contracting Agency's BPM program. Allow two weeks for final approvals.

B12.3 Historic and Cultural Resources. This task may be required if the project includes work beyond the Area of Potential Effect (APE) used for the original CE. If required, the Contracting Agency may add this task by amendment, or complete this work by other means including using in-house forces, or through a separate contract.

B12.4 Eagle Nest Survey. Make one (1) site visit to document the location of eagle nests in the project vicinity. Document the results of this task in an Eagle Nest Survey Memo that includes a map showing the approximate location of each nest.

B12.5 Noise Analysis. Conduct a noise analysis study and prepare a Noise Analysis Report in compliance with the Contracting Agency's 2023 Noise Policy to determine if traffic noise impacts, as defined in 23 CFR 772, would result from the proposed action. The Contracting Agency will provide the previous noise analysis conducted for this project.

B12.6 Wetlands.

B12.6.1 Delineation & Functional Assessments. A jurisdictional determination was completed for the project in 2014. Additional work in task may be required if the project footprint extends beyond the original study area. If required, the Contracting Agency may add this task by amendment, or complete this work by other means including using in-house forces, or through a separate contract.

B12.6.2 Impact and Mitigation Assessment. Quantify impacts to wetlands, tabulating according to function and importance of wetland. Ensure impacts include all project related activities, including utility relocations. Assist the Contracting Agency in identifying and evaluating wetland impact mitigation strategies.

B12.7 Contaminated Sites. Contractor shall re-evaluate impacts to REC properties once it is more certain where ROW acquisition and/or grading and excavation activities will occur. Depending on the extend of excavation, a Phase II site assessment may be necessary to provide a definitive description of contamination type and extent.

B12.7.1 Phase II site assessment. If directed by the Contracting Agency, Contractor shall complete a Phase II site assessment in accordance with…

B12.8 Permitting. Contractor will identify and obtain all permits required to build the project. Necessary permits may include, but are not limited to:

- USACE, CWA Section 404 Individual Permit
- ADEC, CWA Section 401 Water Quality Certification
- ADEC, APDES Construction General Permit for Discharges from Large and Small Construction Activities
- KPB Conditional Use Permit

Permits shall cover all project related activities, including utility relocations.

B12.9 Deliverable Items

Type of Document	Para	Copies	Originals	PDF
CE Re-evaluation(s)				
Draft	B12.2			1
Final	B12.2		1	1
Eagle Nest Survey Memo	B12.4			1
Noise Analyses	B12.4	1		1
Wetland Impacts Analysis	B12.6			1
Permits	B12.7		1	1

ARTICLE B13
TASK 5: UTILITY COORDINATION

B13.1 General. The Contractor shall coordinate with utility companies to develop agreements for modifications to their infrastructure or to provide service to new or relocated highway infrastructure. Support for utility relocations will continue through any construction contracts awarded for this project.

B13.1.1 Existing Utilities include those listed below. There may be additional utilities in side-street ROW's, or there may have been modifications to existing after this list was compiled**.**

B13.1.1.1 Homer Electric Association (HEA) owns and operates the electrical facilities within the project limits. There is an overhead circuit that crosses the Sterling Highway at Redoubt Avenue and parallels the highway on the north side for the entire length of the project, with many overhead crossings. There is an electrical substation on the southeast corner of Sterling Highway and Boundary Street.

B13.1.1.2 Alaska Communications (ACS) owns and operates telecommunications facilities within the project limits. ACS has buried cable along the south side of Sterling Highway between Redoubt Avenue and Devin Drive and along the north side from Redoubt Avenue to the end of the project. There are multiple buried crossings through the project.

B13.1.1.3 GCI Communication Corp. (GCI) owns and operates cable television, with cables carried on the HEA pole line. The relocation of HEA's poles for the preferred alternative will require the detachment and reattachment of new cable to the relocated poles.

B13.1.1.4 ENSTAR Natural Gas Company (ENSTAR) owns and operates buried natural gas facilities within the project limits. ENSTAR has a main on the north side of Sterling Highway between Redoubt Avenue and St. Theresa Road, then crosses to the south side to Crane Song Street. There are additional lines crossing Sterling Highway at various locations throughout the project.

B13.1.2 Highway services. Modification to the highway lighting or RWIS station may require modifications to the power or communication utility service lines. The Contractor shall coordinate these revisions with the utility companies and produce a line extension agreement.

B13.2 Request Redlines and Utility Questionnaires from all utility companies that have facilities within the project area.

Review redline drawings and compare to utility locations shown on the plans. Update base map and conflict list as required.

B13.3 Potholing/GPR. The Contractor will confirm the location of high-risk, buried utilities either by potholing or with ground penetrating radar (GPR). The Contractor will identify locations for potholing or GPR and submit the request to the Contracting Agency for approval no less than seven (7) days prior to beginning this work.

B13.3.1 Potholing. Expose the subsurface utilities using a vacuum-extract truck. Record the location of the utility(s). Backfill the pothole and dispose of waste materials. Backfill the first 6-inch lift using the excavated material, compact the material. Backfill the balance of the pothole using Aggregate Base Course, Grading D-1, compact the material. In paved areas, use Hot Mix Asphalt Type II, Class B to path over the pothole, match the thickness of the surrounding pavement.

Dispose of excavations off-site. Before beginning potholing, provide to the Engineer a certificate, signed by the owner or owner's representative, identifying the disposal site and acceptance of the project potholing excavations.

Immediately notify the Contracting Officer of any utilities damaged during the potholing operation. The Contractor is responsible for the repairs and the associated costs. Contact and coordinate repairs with the utility owner.

B13.3.2 As-Builts. Create a utility verification log, as-built, recording for each location: the date of the operation, utility type and size, station, offset, elevation, groundwater, and other pertinent data. Survey the utility location using the project horizontal and vertical control; comply with the requirements of Exhibit B-5. Submit the completed log to the Contracting Agency within two working days following the completion of the operation.

B13.4 Utility Conflict Memo. The memo shall include: the existing utilities within the project limits; the conflicts with the proposed work; and the consideration of impacts on construction, relocation costs and Right-of-Way needs. Include the following:

1. Plan Sheets and Cross sections
2. List of utility conflicts
3. Proposed solutions to all utility conflicts
4. Cost estimate for utility relocations

B13.4.1 Plan Sheets and Cross Sections. Attach the current plans and cross sections created under Task 13.

Use the best available information to establish elevations of buried utilities. If no information is available, estimate the elevations from the utility permit depth requirements and based on utility company standard installation practices.

B13.4.2 List of Utility Conflicts. List all conflicts and identify the company that owns the utility in conflict.

B13.4.3 Proposed Solutions to all Utility Conflicts. Propose solution(s) to all conflicts and recommend a preferred solution if more than one is proposed. Consider the following when selecting the preferred solution:

1. Costs
2. Additional Right-of-Way needs and cost
3. Alignment, profile or section modifications to resolve utility conflicts
4. Construction impacts
5. Project development timing
6. Utility system requirements
7. Alaska Dept. of Transportation & Public Facilities accommodation policies

Meet with the utility companies to review the considered solutions and gain their input.

B13.5 Prepare **Notice to Relocate and Authority to Proceed with Preliminary Engineering** letters for each utility. Each notice shall request a one-line design, right-of-way requirements and a cost estimate to be submitted by the utility within 2 months.

B13.6 Recommend relocation scheme and reimbursement by the Contracting Agency based on utility design and negotiate with the utilities for final determination. Determine right-of-way requirements, if any, for utility relocations. Final determinations shall minimize need for additional ROW to the highest degree reasonably feasible.

B13.7 Prepare authority to proceed **(ATP) through final design** and estimate letter to each utility.

B13.8 Coordination with Utilities. Conduct coordination activities and provide all information required to develop, and secure approval of, the Utility Relocation Agreements with the utilities. Include the Contract Manager and/or design staff in this coordination at the level as directed by the Contract Manager.

Do not commit the Contracting Agency to any action without prior written approval of the Contract Manager.

Make the Utility Conflict Memo, Cross Sections, other reports, and the PS&E assemblies produced for this project available to the utility companies. Provide assistance interpreting these documents and sharing other information about this project to those designing the utility relocations.

B13.9 Utility Relocation Agreements. The purpose of the Utility Relocation Agreement is to provide for the relocation or adjustment of utility facilities in conflict with the proposed project. An Agreement may also be required to secure a utility provided service for the project. An Agreement is required to incorporate improvements requested by utilities into the construction contract.

Include the following in the Utility Relocation Agreements.

1. The Contracting Agency contract format for the appropriate agreement type.
2. The billing format specific to the project.
3. An estimate of cost, to be designated Exhibit A. The cost estimate shall separate federal participating and non-participating funds and indicate obligation of payment by utility companies or the Contracting Agency. The cost estimate shall include all utility relocation work, to be completed by the utility or included in the PS&E package.
4. A certificate of finding and project scope, to be designated Exhibit B.
5. A compilation of the PS&E plan view pages overlaid with the utility alignment/structure information not included in the PS&E package, and any applicable Utility plans included in the PS&E package, to be designated Exhibit C. The utility information shall be colorized in accordance with the Contracting Agency's Standard Color Code for Construction Plans.
6. PS&E Special provisions addressing, referencing, or governing the coordination or execution of the utility's work, to be designated Exhibit D.
7. Utility plans not included in the PS&E package, to be designated Exhibit E.

B13.9.1 Provide **Draft Utility Relocation Agreements** when the Contracting Agency has agreed to the utility company design and cost proposals.

B13.9.2 Provide **Final Utility Relocation Agreements** in accordance with the review of the Draft Utility Agreements by the Contracting Agency.

B13.9.3 Signed Agreements. Route Final Utility Relocation Agreements to the utilities and the Contracting Agency for signatures. Provide the final, signed copy to the Contracting Agency.

B13.9.4 Prepare **Project Special Provisions** for inclusion in Plans, Specifications and Estimate package. Project Special Provisions will incorporate the terms of the Utility Relocation Agreements in the relevant sections of the Standard Specifications for Highway Construction.

B13.10 Deliverable Items.

Type of Document	Para	Copies	Originals	PDF
Redline/Questionnaire Requests	B13.2	1		
Utility Conflict Memo	B13.4			1
Notice Letter/ATP Oneline	B13.5	1	1	1
Relocation Recommendations	B13.6	1	1	1
ATP Final Design	B13.7	1	1	1
Utility Relocation Agreements				
Draft Agreements	B13.9.1	1	1	1
Final Agreements	B13.9.2	1	1	1
Project Special Provisions	B13.9.4	1	1	1
Signed Agreements	B13.9.3	1	1	1

B13.11 Provided Items. The Contracting Agency will provide the following:

1. Sample Utility Cost Estimate.
2. Sample Utility Agreement.

ARTICLE B14
TASK 6: GEOTECHNICAL INVESTIGATION & RECOMMENDATIONS

B14.1 General. The Contractor shall review existing information, identify additional investigation (if needed) and develop a geotechnical exploration plan to meet the requirements of this article and referenced standards (see Exhibit B-3). The Contractor shall submit the geotechnical exploration plan to the Contracting Agency for approval. The Contractor shall provide the Contracting Agency support to obtain all required field permits and right of entry permits necessary for implementation of the geotechnical exploration plan.

B14.1.1 Previous Work. The Contracting Agency has completed a preliminary geotechnical subsurface investigation for this project. The final Geotechnical Report, dated December 2022, will be provided to the Contractor. Reliance on this data is subject to the following:

1. The information presented in the test holes is representative of the conditions only at the test hole locations and only at the time of drilling of the test holes.
2. The laboratory soil test results are representative of the materials encountered in the test holes at the indicated depths at the time of drilling the test hole.
3. Statements in the report regarding the presence or absence of zones, layers, layer thicknesses, and groundwater are indicative only of conditions in the test hole at the time of drilling, as interpreted by the Contracting Agency's geotechnical field geologist.
4. Ranges of thicknesses or other reported information are the ranges of thicknesses or other conditions encountered in the test hole at the time of drilling; no statement in the report is to be construed as indicating continuity or non-continuity of formations, extension, or extrapolation of any other information outside of the test hole.

B14.1.2 Known concerns. There's a severe dip in the road near milepost 91.4. It's been reported that there have been previous efforts to repair by removing and replacing material, but the dip continues to reform. The dip was last repaired in October 2023.

B14.2 Geotechnical Exploration Plan. The Contractor shall prepare a geotechnical exploration plan that has been developed in accordance with the requirements of Section 5.2 of the DOT&PF Alaska Geological Field Investigations Guide (one of several documents that together make up the Alaska Geotechnical Procedures Manual). Plan development will include review of existing information and a site reconnaissance by a geotechnical engineer and engineering geologist. The geotechnical exploration plan will include, but not be limited to, the following:

- Proposed borehole and test pit locations and depth
- Proposed piezometer and percolation test location(s) for stormwater facility design.
- Drilling and sampling method(s) required
- Site access constraints (i.e., on or off road, steep slope, traffic control requirements, etc.)
- Locations and extent of rock structure mapping
- Type and locations of geophysical surveys (if recommended)
- Laboratory testing (estimated number and type of tests)

A draft geotechnical exploration plan will be submitted to the Contracting Agency for review. Upon receipt of the review comments, the Contractor will submit the final geotechnical exploration plan.

B14.3 Drilling Contractor Coordination/Planning. The Contractor shall obtain a minimum of three (3) competitive bids for the drilling program defined in the geotechnical exploration plan and shall obtain the Contracting Agency's approval of the firm selected to provide drilling work prior to the beginning of any drilling activity. Failure to obtain the Contracting Agency's 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).

B14.4 Right of Entry (ROE). ROE is anticipated in support of the geotechnical investigation. Depending on the routing for accessing drill sites, ROEs could be required from the following:

- State/Private Corporation (ADNR)
- Kenai Peninsula Borough (KPB)
- Private property owners.

B14.5 Permits for Geotechnical Field Investigation. Necessary permits from regulatory agencies will be acquired by others prior to commencing field work requiring permits. The following permits are anticipated:

- U.S. Army Corps of Engineers Nationwide Permit 6 for Survey Activities
- U.S. Army Corps of Engineers Preconstruction Notification of Endangered Species Act and Cultural Resources
- Alaska Department of Fish and Game Fish Habitat Permit
- State Historic Preservation Officer (SHPO) Clearance
- Kenai Peninsula Borough Land Use Permit

B14.6 Execution. The Contractor shall execute the geotechnical exploration plan, laboratory work, and prepare and submit final and draft Geology Data Reports and Geotechnical Reports (making roadway centerline and retaining wall structural recommendations). The Geotechnical Investigation for the project shall be in accordance with the Alaska Geotechnical Procedures Manual, May 2007 and the AASHTO Manual on Subsurface Investigations.

The services shall include preparation of memoranda, preliminary reports, final reports, and recommendations for the various aspects of the work under the contract. Where required by state law, and the terms of this agreement, the engineering services shall be performed under the supervision of a Registered Professional Engineer who is licensed in the State of Alaska. Reports, recommendations, and other documents shall be signed by a Registered Professional Engineer where required by law. Reports shall be prepared in conformance with the most recent versions of all relevant DOT&PF policies, guidance, and manuals, including:

- Statewide Materials policies and guidance documents
- Alaska Geotechnical Procedures Manual: https://dot.alaska.gov/stwddes/desmaterials/mat_resource.shtml#geotech
- Alaska Highway Preconstruction Manual: https://dot.alaska.gov/stwddes/dcsprecon/preconmanual.shtml
- Alaska Highway Drainage Manual: https://dot.alaska.gov/stwddes/desbridge/pop_hwydrnman.shtml
- AASHTO Standard Specifications for Highway Bridges
- Generally accepted standards of professional engineering practice
- Alaska Bridges and Structures Manual: https://dot.alaska.gov/stwddes/desbridge/bridgemanual.shtml

B14.7 Geotechnical Investigation. The Contractor will conduct geological investigations including roadway centerline investigations and bridge foundation investigations. The Contractor shall use the results of the geotechnical investigation to prepare design recommendations.

The geotechnical investigation shall be conducted in accordance with the scope of work and the Contracting Agency-approved geotechnical exploration plan. The location and methods of the investigation are detailed in the approved exploration plan.

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 depths
g. Drainage control
h. Muskeg design
i. Special treatments, e.g., use of geotextiles
j. Estimating factors, e.g., shrinking and swelling
k. The presence and identification of geologic hazards, what risks may be involved, and how risks might be mitigated.

B14.8 Geotechnical Field Investigation and Data Report. Complete a design-level geotechnical investigation in accordance with the approved exploration plan; perform laboratory soil and rock testing; and prepare a Geotechnical Data Report (GDR) to support project design. At a minimum, the geotechnical data report shall include:

a. Project description
b. Purpose and scope
c. Field exploration, field testing, and laboratory testing

d. Discussion based on field and laboratory results and existing information. A description of the analyses and correlations used in evaluating the lab/field test data to arrive at engineering appraisals
e. Figures as necessary including, but not limited to, project location map, boring location map, stratigraphic cross sections, isopach maps of different strata, regional geology map, rock structure stereonets, and geophysical survey results.
f. Appendices as necessary, including not limited to field exploration logs, field testing data and results, laboratory testing reports, engineering analyses, sample photos, site working photos.
g. The final exploration logs containing the following information:
h. Borehole I.D.
i. Date of boring
j. Survey coordinates and elevation
k. Names of individuals and firms doing drilling and logging
l. Type, make and model of drill rig
m. Size and type of casing and tools
n. Water table depth(s)
o. Sampling interval
p. Laboratory soil classification following ASTM D 2487
q. Field soil classification (where not lab tested) following ASTM D 2488
r. Sample drive hammer weight
s. Sampling device description
t. Blow count per 6-inch interval

B14.9 Geotechnical Report. The Contractor shall provide a Geotechnical Report which presents data collected during the geotechnical investigation. The Contractor shall prepare the report in accordance with Alaska Geotechnical Report Preparation Guidelines (one of several documents that together make up the Alaska Geotechnical Procedures Manual). However, the Geotechnical Recommendations shall not be included, appended or otherwise identified in the Geotechnical Report but shall be provided to the Contracting Agency under separate cover titled Geotechnical Engineering Recommendations Report, described in B14.10.

B14.10 Geotechnical Engineering Recommendations Report/Design. Following field investigations, the Contractor shall provide recommendations in a stand-alone report to address the criteria listed in B14.7. After Contracting Agency review and/or as design proceeds, modifications to the Geotechnical Engineering Recommendations Report 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. At a minimum, the recommendations will address:

a. Usability of project excavation materials and borrow site materials
b. The presence of materials in planned cuts and excavations that may affect the rate of excavation (e.g., cobbles, boulders, permafrost, bedrock, groundwater, etc.)
c. The suitability of in-situ soils or rock to support an embankment or structure (i.e. expected settlement and instability)
d. Depths and limits of stripping and subcuts
e. Cut slopes in soil and rock, including stabilization recommendation if necessary
f. Retaining wall design criteria
g. Drainage control and subdrain locations
h. Muskeg design
i. Special treatments (e.g., geosynthetics, rock blankets)
j. Earthwork estimating factors (e.g., shrinking and swelling, unit weights)
k. The presence and identification of geologic hazards, what risks may be involved, and how risks might be mitigated; and
l. Erosion and pollution control recommendations

B14.11 Bridge Foundation Investigation and Report. Once the Contracting Agency has identified the preferred bridge type, the Contractor shall develop the subsurface investigation plan (drill plan) for review by the Contracting Agency. Using the Geology Data Reports and subsurface information, the Contractor shall generate the Preliminary and Final Structural Engineering Foundation Report (SFER) in accordance with ARTICLE B19.

B14.12 Deliverable Items

Type of Document	Para	Prints	Originals	PDF	Native Files
Geotechnical Exploration Plan (Draft)	B14.1.2			1	
Geotechnical Exploration Plan (Final)	B14.1.2	2	1	1	
Geology Data Reports	B14.6				
Geotechnical Report	B14.9				
Geotechnical Engineering Recommendations Report	B14.10				

ARTICLE B15
TASK 7: TRAFFIC AND SAFETY ANALYSIS

B15.1 General. The Contractor shall perform the traffic analysis necessary to support the design decisions discussed in ARTICLE B1.

B15.2 Capacity Analysis. The Contractor shall perform an evaluation of the project.

B15.2.1 The evaluation shall include: a presentation of the advantages and disadvantages of each roadway segment including intersections; level-of-service (LOS) of the facility including the roadway segments, intersections, utility relocation requirements, right-of-way impact, driveway impacts, and other pertinent factors. Scale drawings shall be prepared showing their respective lane configurations.

B15.2.2 Generally, only alternatives that allow intersection(s) to operate at a level-of-service (LOS) C of better in the design year are acceptable. If LOS C can only be achieved by alternatives having excessive construction costs, LOS D may be acceptable based on a benefit/cost comparison of the alternatives. In such cases, the Contractor shall provide a benefit/cost analysis for each LOS D and LOS C alternative, consisting of a comparison of the total project cost including design and construction of the cost of traffic delay for each alternative.

B15.3 Traffic and Safety Analysis. The Contractor shall analyze signing, striping, types and location of control features, AM/PM peak/off peak operations, safety issues, intelligent transportation system (ITS), intersections, and other design improvements that shall be included in a Traffic Operation Plan. Incorporate accident history analysis time period to 10 years within this traffic operation plan.

B15.4 Signal Warrant Analysis. Conduct a signal warrant analysis at each median break, updating the analysis that was completed in 2018.

B15.5 School Zone Analysis. Model school AM and PM peaks hours at all school access points on the perimeter of Sterling Elementary School. Use Synchro and SimTraffic to simulate the corridor, VISSIM or similar software with a visualization software.

Gather Safe Routes to School (SRTS) input from the Kenai Peninsula Borough School District. Formally determine if the KPBSD desires a school attendance pedestrian crossing at Sterling Elementary. Score the proposed walking route and crossing based on Anchorage on MatSu SRTS scoring methods. Determine if a signal or other treatment is required to produce acceptable scores.

B15.6 Deliverable Items

Type of Document	Para	Copies	Originals	PDF
Capacity Analysis	B15.2	0	0	1
Traffic and Safety Analysis	B15.3	0	0	1
Signal Warrant Analysis	B15.4	0	0	1
School Zone Analysis	B15.5	0	0	1

B15.7 Provided Items. The Contracting Agency will provide the following information for the current and design years:

a. Annual Average Daily Traffic (AADT)
b. Directional Distribution (D)
c. Percentage of Trucks (T)
d. Equivalent Axle Loads (EAL's)
e. Design Speed (V)
f. Design Hourly Volume (DHV)
g. Design Designations
h. Accident Data

The Contracting Agency will provide the following reports and memos:

a. *Possible Evaluation Metrics for Selecting Divided 4-Lane and TWLTL 5-Lane Highway Sections*, Kinney Engineering, October 2018
b. *Adjacent Road Connections Evaluation for Sterling Highway*, Kinney Engineering, June 2019
c. *Freight Mobility & Performance Measure Suggestions,* Kinney Engineering, June 2019
d. *Seasonal Signal Warrants for the Sterling Highway Median Openings*, Kinney Engineering, October 2018
e. *Draft Traffic Analysis Report*, Kinney Engineering, February 2018

ARTICLE B16
TASK 8: HYDROLOGIC AND HYDRAULIC DESIGN

B16.1 General. The Contractor shall provide the Hydraulic and Hydrologic Design required for the project in accordance with the *Alaska Highway Preconstruction Manual* and the *Alaska Highway Drainage Manual*, which may include any or all of the following tasks.

B16.1.1 Evaluate existing features. The Contractor shall coordinate with the local maintenance & operations (M&O) to identify problems that need to be addressed. Inspect all existing drainage facilities, including but not limited to culverts, storm drain pipes, manholes, and erosion protection within the project limits. Determine which of these are expected to be functionally or structurally inadequate during the design year of this project. Determine which culverts, storm drain pipes, and manholes need to be cleaned. Provide inspection observations/photos and repair and replacement recommendations for all drainage facilities in a report. A summary of observations and recommendations shall be included in tabular format. Culvert and storm drain condition assessments shall follow the AASHTO Culvert and Storm Drain System Inspection Guide 2020.

B16.1.1.1 Drainage Inventory GIS – Existing. Provide the drainage inventory spreadsheet and Geographic Information System (GIS) database. Condition ratings, attributes, photos, and videos will be compiled in a GIS that is easily exportable to CSV, Excel, Word, shapefile, and file geodatabase (FGDB). Individual drainage features and erosion protection will be represented by a point, line or polygon that is linked to its unique condition ratings, attributes, photos, and videos. Take short videos of unique flow (or other) characteristics not well-represented by photos alone. ESRI's mobile application, Survey123, will be used for field collection of data. The application along with the attributes list will be uploaded onto a handheld tablet equipped with GPS. The attributes and survey form will be preapproved by the Department prior to data collection. The Department may supply a survey template.

B16.1.1.2 Drainage Inventory GIS – As-built. (NIC) After construction, the Contractor will update the drainage inventory GIS database as described in B16.1.1.1 to reflect as-built conditions.

B16.1.1.3 Soldotna Creek. The culvert at Soldotna Creek is a habitat priority for Department of Fish and Game. This culvert is a tributary to the Kenai River and supports coho, Chinook, sockeye, steelhead, and lamprey. The crossing is comprised of a single closed bottom arch, 14.5-feet wide, 10-feet tall, 298-feet long and is not embedded. This culvert was designed in 1992, before embedded techniques, with a series of baffles installed in the culvert. The baffles create stream-wide perch that may create a fish barrier at certain flows.

B16.1.2 Evaluate erosion concerns. The Contractor shall determine where erosion is a problem. Inspect all ditches and determine which need to be modified and/or cleaned to handle the design discharge required by the Alaska Preconstruction Manual. Determine where existing roads have problems due to surface water or groundwater. Document results with text and visuals as appropriate. Coordinate with the Contracting Agency's Project Manager to determine what drainage and erosion control work will be included in the project.

B16.1.3 Consider groundwater when designing project features. Coordinate with the Geotechnical Engineer to identify where test holes, groundwater monitoring, and percolation tests are necessary for subdrain and stormwater storage facility design.

B16.2 Hydrologic and Hydraulic Analysis and Reports. The Contractor shall conduct a Hydrologic and Hydraulic analysis for culverts greater than or equal to 4 feet in rise, bridges, fish passage culverts, and other culverts as determined by the Regional Hydraulics Engineer. The analysis shall be in accordance with the *Alaska Highway Preconstruction Manual* and *Alaska Highway Drainage Manual*.

B16.2.1 Evaluate non-stationarity related to basin hydrology using guidance provided in FHWA Hydraulic Engineering Circular No. 17. Estimate consequences from discharges greater than the design discharge due to climate change and changes in land use. Provide recommendations and construction costs to mitigate potential damages and disruption of services. Assume proposed culverts will have a service life of 30 to 75 years.

B16.2.2 Evaluate the impacts of any improvements within the project limits on existing hydraulic features and/or property downstream of the project limits. Propose drainage facilities, such as detention/retention basins to mitigate downstream impacts, if necessary.

B16.2.3 Contractor shall complete a **technical report** to present and discuss the analyses conducted regarding hydraulic bridge design, scour analysis, and scour countermeasure design. This report will be included as an appendix in the final version of the Hydrology and Hydraulic Report. Hydraulic modeling output, scour analyses results, and scour mitigation design calculations will also be included.

B16.2.4 The Contractor shall provide a **Location Hydraulic Study** (LHS) conforming to *State of Alaska DOT&PF Program Guidance on Documenting Floodplain Impacts and Compliance with E.O. 11988 Effective November 2020*. The Final LHS shall be sealed, signed, and dated by the supervising Hydraulics Engineer.

B16.3 Reviews and Schedule. A draft of the Hydrologic and Hydraulic Report shall be submitted at least 6 weeks prior to the Plans-In-Hand Review assembly. The Contracting Agency will be allowed four weeks for the return of written comments. The Contractor shall address these comments to the satisfaction of the Contracting Agency prior to making the next submittal. The final Report, sealed and signed by the supervising registered Engineer, shall be submitted with the Plans-In-Hand Review assembly.

B16.4 Fish Passage. The Contractor shall coordinate with the Contracting Agency, the Alaska Department of Fish and Game (ADF&G), and any interested local agencies to ensure that any culverts identified within the approved Environmental Document as a passageway for fish are designed to the satisfaction of all interested parties. The Contractor will coordinate with ADF&G to identify fish bearing streams within the project limits. Fish passage culverts will be designed in accordance with the *Memorandum of Agreement between ADF&G and DOT&PF for the Design, Permitting, and Construction of Culverts for Fish Passage*.

B16.5 Deliverable Items.

Type of Document	Para	Copies	Originals	PDF	Native File
Drainage Inventory – Existing	B16.1.1.1	0	0	1	1
Hydrologic and Hydraulic Report with Appendices (Draft)	B16.2.2	3	0	1	
Hydrologic and Hydraulic Report with Appendices (Final)	B16.2.2	3	1	1	
LHS (Draft)	B16.2.4	0	0	1	
LHS (Final)	B16.2.4	0	1	1	

ARTICLE B17
TASK 9: ELECTRICAL DESIGN

B17.1 General. The electrical design scope within this article must be substantially complete based upon the state of the preliminary civil design at the end of the design phase. It is understood that the final electrical design, including the final locations and quantities of components, may differ from preliminary design to an extent.

B17.2 Highway and Intersection Lighting. Perform civil and electrical engineering work necessary to design the lighting system in accordance with Central Region Lighting Guidance.

B17.2.1 Expected work tasks include:

1. Performing lighting modeling
2. Performing Calculations (available fault current, arc flash hazard, voltage drop, and lighting – average luminance, minimum luminance, average uniformity ratio, maximum uniformity ratio, and maximum veiling luminance)
3. Coordinating with the electric utility to plan for decommissioning existing electrical services and installing new electrical services. See ARTICLE B13.
4. Investigating existing electrical infrastructure if any existing components will be reused for the project.

B17.2.2 Expected deliverables include:

1. Plans / layouts
2. Legend and notes
3. Details (arc flash labeling, trenching, junction box, splice, pole foundation/support/profiles, lighting standard, and pole wiring and grounding)
4. Panel schedules and summary sheets for load centers
5. Schedules (pole, junction box, and electrolier)
6. Tables (luminaire standards and lighting criteria/results)

B17.3 Traffic Signals. Perform civil and electrical engineering work necessary to design traffic signals.

B17.3.1 Expected work tasks include:

1. Performing calculations (available fault current, arc flash hazard, voltage drop, and lighting – average luminance, minimum luminance, average uniformity ratio, maximum uniformity ratio, and maximum veiling luminance)
2. Coordinating with the electric utility to plan for installing new electrical services. See ARTICLE B13.
3. Investigating existing electrical infrastructure if any existing components will be reused for the project.

B17.3.2 Expected deliverables include:

1. Plans / layouts
2. Legend and notes
3. Signal pole profiles
4. Details (arc flash labeling, trenching, junction box, splice, pole foundation/support/profiles and pole wiring and grounding)
5. Panel schedules and summary sheets for load centers
6. Schedules (pole, junction box, etc.)

B17.4 RWIS. There is an existing Road Weather Information System (RWIS) on Sterling Highway near milepost 88. If the RWIS station is impacted, it may have to be relocated or modified. Such work will likely also include replacing the load center.

B17.4.1 Expected work tasks include:

1. Performing calculations (available fault current and arc flash hazard)
2. Coordinating with the electric utility to plan for decommissioning existing electrical service and installing new electrical service. See ARTICLE B13.
3. Investigating existing RWIS and electrical infrastructure.

B17.4.2 Expected deliverables include:

1. Plans / layouts
2. Legend and notes
3. Details (arc flash labeling, trenching, junction box, pole foundation/support/profile, and RPU cabinet)
4. Single-line diagram
5. Panel schedule and summary sheet for load center
6. Wiring and termination diagram for RPU cabinet and sensors/camera(s)

B17.5 Deliverable Items. Coordinate and include work in the PS&E packages described in ARTICLE B22.

ARTICLE B18
TASK 10: STRUCTURAL DESIGN

B18.1 General. The Contractor shall perform civil and structural design work necessary for bridges, buried structures, and minor embankment support and retaining structures in areas of limited corridor width, excessive moisture, or other existing constraints.

B18.2 Bridge Design. Development and submission of bridge design shall be in accordance with the requirements of the *Alaska Bridges and Structures Manual* (ABSM).

Include the bridge number on all plans, calculations, reports, communications, and submittals.

B18.2.1 Superstructure and Substructure Design. The Consultant shall complete the superstructure and substructure design, which may include the design of the bridges and/or buried structures. Structural designs and specifications shall be in accordance with the current edition and interims of the *AASHTO LRFD Bridge Design Specifications*, the *AASHTO Guide Specifications for LRFD Seismic Bridge Design* and the *Alaska Bridges and Structures Manual*. The Contractor shall not begin bridge design or construction until the Bridge Type Selection Report is approved by the Alaska Chief Bridge Engineer. The Contractor shall only use decked bulb-tee girders for spans less than 145 feet and shall use the details provided by DOT&PF for wingwalls, approach slabs, abutments, diaphragms, and all other bridge members. DOT&PF will not participate in the cost of any bridge or bridge component that does not comply with the Alaska Bridges and Structures Manual.

B18.2.1.1 Engineer. The original structural designs shall be sealed by a Professional Engineer or Structural Engineer, as applicable, registered in the State of Alaska and independently checked by a second qualified structural engineer as described in Section 9.1 of the ABSM. This work shall be accomplished in accordance with the Contracting Agency's guidelines, instructions, and standard office procedures and practices. The design shall incorporate hand calculations that may be supplemented by approved computer software applications. The Consultant will submit both sets of design calculations for review and approval with the contract drawings not less than 60 days prior to the Plans In Hand (PIH) submittal due date. If vehicle traffic will use a structure, the Consultant is responsible for submitting a load rating and independently calculated load rating in accordance with the ABSM.

B18.2.1.2 Previous Designs. The Contractor should anticipate that design issues and assumptions made in previous designs may not be appropriate for this project. In those areas of the *AASHTO LRFD Bridge Design Specifications* where the Contractor is required to make assumptions or where the specifications may be interpreted in different manners, the Contractor shall bring these to the immediate attention of the Alaska Chief Bridge Engineer for resolution in accordance with Section 10.3 of the ABSM prior to proceeding with the design. Upon completion, a report documenting design assumptions and issues associated with this design, and resolutions shall be provided to the Alaska Chief Bridge Engineer.

B18.2.1.3 Review. Review prints shall be used by the Contracting Agency for suggested changes, modifications, and/or adjustments. The Consultant shall make changes, modifications, and/or adjustments to the preliminary and final design work as the Contracting Agency or the Federal Highway Administration (FHWA) may require and, if requested, submit such revisions for review. A set of review prints shall be submitted to the Alaska Chief Bridge Engineer upon completion of the structural design.

B18.2.2 Provided Items. The Contracting Agency will provide the following:

1. Alaska Bridges and Structure Manual (2023) https://dot.alaska.gov/stwddes/desbridge/bridgemanual.shtml

B18.3 Structure calculations notebook with the complete design calculations and independent design check calculations. If vehicle traffic will use a structure, provide both sets, design and independent check using LRFR and LFR methods, of load ratings.

B18.4 Deliverable Items.

Type of Document	Para	Copies	Originals	PDF
Bridge Type Selection Report	B18.2.1		1	1
Structure Calculations	B18.3		1	

ARTICLE B19
TASK 11: FOUNDATION DESIGN

B19.1 General. The Contractor shall perform civil and foundation design work necessary to support bridge foundations, buried structures, boardwalks, and minor embankment support and retaining structures.

B19.2 Bridge Foundations. The Consultant shall complete a Structural Foundation Engineering Report (SFER) for the bridge foundation and substructure design, which may include the design of abutment, bents/piers, and/or retaining structures. Foundation designs and specifications shall be in accordance with the current edition and interims of the *AASHTO LRFD Bridge Design Specifications*, the *AASHTO Guide Specifications for LRFD Seismic Bridge Design* and the Alaska Bridges and Structures Manual. Use only concrete-filled steel pipe pile-supported deep foundations unless competent bedrock is less than 10 feet and directly supports the foundation.

Submit the Preliminary SFER not less than 90 days before the PIH due date. Submit the Final SFER not less than 30 days before the final bridge plans are submitted to the Contracting Agency. The recommendations in the Final SFER are the same to those of the Preliminary SFER except that they address only the bridge foundation elements used in the final bridge design.

B19.2.1 Engineer. The original foundation designs shall be sealed by a Professional Engineer registered in the State of Alaska and independently checked by a second qualified foundation engineer as described in Section 9.1 and 11.7 of the ABSM. This work shall be accomplished in accordance with the Contracting Agency's guidelines, instructions, and standard office procedures and practices. The design shall incorporate hand calculations that may be supplemented by approved computer software applications. The Consultant will submit the SFER and both sets of design and independent check calculations for review and approval with the Preliminary SFER.

B19.2.2 Previous Designs. The Consultant should anticipate that design issues and assumptions made in previous designs may not be appropriate for this project. In those areas of the LRFD specification where the Consultant is required to make assumptions or where the specifications may be interpreted in different manners, the Consultant shall bring these to the immediate attention of the Alaska Chief Bridge Engineer for resolution in accordance with Section 10.3 of the ABSM prior to proceeding with the design. Upon completion, a report documenting design assumptions and issues associated with this design, and resolutions shall be provided to the Alaska Chief Bridge Engineer.

B19.2.3 Review. Review prints shall be used by the Contracting Agency for suggested changes, modifications, and/or adjustments. The Consultant shall make changes, modifications, and/or adjustments to the preliminary and final design work as the Contracting Agency or FHWA may require and, if requested, submit such revisions for review. A set of review prints and final SFER shall be submitted to the Alaska Chief Bridge Engineer upon completion of the structural design.

B19.3 Deliverable Items

Type of Document	Para	Copies	Originals	PDF
Preliminary Structural Foundation Engineering Report (Preliminary SFER)	B19.2	1		1
Final Structural Foundation Engineering Report (Final SFER)	B19.2	1		1

ARTICLE B20
TASK 12: LANDSCAPE DESIGN

B20.1 General. The Contracting Agency may add this task 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 or by a separate contract.

ARTICLE B21
TASK 13: DESIGN STUDY REPORT

B21.1 General. The Contractor shall provide a Design Study Report that presents and justifies the design features of the proposed project. The Contractor shall participate in, and keep records of informal public meetings, agency scoping meetings, and presentations at local government meetings, as defined by the Public Involvement Plan (reference Article B10).

B21.2 Field Review. The Contractor shall arrange a field review of the project with personnel from the Contracting Agency. The purpose of the field review is to document any known problems with the existing road, observe any environmental challenges and review the condition of the existing pavement. At a minimum, the representatives from Maintenance, Traffic & Safety, Environmental, Utilities, Right-of-Way and Materials shall be invited to attend. The Contractor shall take notes from the field review and distribute them to all the participants in a Field Review Memorandum. The Contracting Agency will provide transportation for the site visit.

B21.3 Content. The Design Study Report shall include information required by Chapters 4, 11, and 14 of the Highway Preconstruction Manual. The presentation of each design element shall conclude by stating the selected alternative and the reasons why selected. Other topics or sections may be required and shall be added to the Design Study Report as appropriate.

B21.3.1 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 animal migration patterns, anadromous fish impacts, 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.

B21.3.2 Other Design considerations. The Contractor shall:

a. Apply CR Lighting Guidance, Moose guidance, Pedestrian Guidance, and Bike Guidance by reviewing system wide sites of concern and consider mitigation when applicable to this project.
b. Minimize the use of guardrail and crash cushions. An analysis of B/C will be run when considering any guardrail instead of slopes.
c. Minimize the use of barn roof sections and slopes steeper than 4:1.

B21.4 Reviews and Schedule. A Design Study Report (DSR) shall be submitted when shown in the schedule, typically with the Local Review Assembly. The Contractor shall address these comments to the satisfaction of the Contracting Agency prior to making the Final submittal. The Final DSR shall be submitted after approval of the FONSI. The (revised) final Design Study Report, sealed and signed by the supervising registered Civil Engineer, shall be submitted to the Contracting Agency prior to, or with, the Pre-PS&E Review assembly.

B21.5 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 Contracting Agency for reproduction as necessary. The Contracting Agency's acceptance of the Design Study Report for reproduction completes this task.

B21.6 Deliverable Items

Type of Document	Para	Prints	Originals	PDF	Native Files
Field Review Memorandum	B21.2	1	1		
Project Design Criteria	B21.3	1	1		
Design Study Report (Draft)	B21.1	3	0	1	
Design Study Report (Final)	B21.1	2	1	1	

ARTICLE B22
TASK 14: PLANS AND SPECIFICATIONS

B22.1 General. Provide construction contract documents and other deliverables as described herein. The project design must be a best accommodation of the geographic location and the site specific constraints, as well as the project values and other constraints as defined by the Contracting Agency.

B22.2 Support Data. Throughout the design phase, provide data in support of the Contracting Agency activities related to the project design. This includes but is not limited to the following:

B22.2.1 Topographic Survey Needs. Provide a Survey Request form and figure(s) showing where further topographic survey is required in order to design the project or to determine any necessary or recommended property rights acquisitions or alterations to existing utilities. After the initial list is provided, update it as necessary as the design progresses.

B22.2.2 Right of Way Survey needs. Provide a Survey Request form and figure(s) showing locations and areas where survey confirmation of location of the Right of Way is necessary to determine the need for additional property rights acquisition.

B22.2.3 CAD Files with required disclaimers, for use by utility companies or others, as approved by the Contract Manager.

B22.2.4 Cross sections. Include the following in each cross section: 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. Plot the cross sections at a standard scale and with no vertical exaggeration. Include on each sheet the project name, project number, date and review submittal. Submit the half-size cross sections on 11”x17” sheets.

B22.3 Plan Sheets. Develop plans sheets in accordance with the Highway Design Checklist.

B22.3.1 Bridge Plan Sheets. Prepare plans that are indistinguishable from those prepared by the Contracting Agency. Prepare plans in accordance with the ABSM.

B22.3.2 Utility Plan Sheets, if needed, will be provided by the others. Incorporate Utility Plans into the plan set.

B22.3.3 Right of Way Lines. The Contracting Agency will provide Right-of-Way lines for incorporation into the plans.

B22.4 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. Combine the Standard Modifications and Special Provisions for the PS&E assemblies. Use the format described in Exhibit B5.

Incorporate Project specifications for Bridge, Utility, and/or other work into the Project Specifications.

Continually update the Specifications per updates to the Statewide Special Provisions and Regional Special Provisions.

Prepare any project specific provisions. Whenever possible, use Performance Specifications rather than Method Specifications.

Notify the Contract Manager if you discover any potential need for sole source or proprietary items. Do not specify any proprietary items unless at least two are named. If “or equivalent” is used, specify the criteria for judging the equivalence. Do not specify sole source materials unless a sole source procurement authorization is obtained.

Do not introduce materials that are not currently included in the Alaska DOT&PF Standard Specifications for Highway Construction without the approval of the Contracting Agency.

B22.4.1 Appendices to the Specifications. Provide the following as appendices to the Specifications.

- Materials Certification List
- Sign Shop Drawings

B22.5 Submittal Packages and Reviews. The Contract Manager may review the submittal package and require changes, corrections and/or clarifications, and a re-submittal.

B22.5.1 Your **Local Review Submittal Package** must consist of plans 30-50% complete, an updated construction cost estimate, quantity calculations, a full set of cross sections and any other deliverables specified for delivery with the Local Review in other Articles of this contract. Indicate clearly on the plans any locations where additional property rights may be required, and any potential requirements for adjustments or relocations of utility facilities.

B22.5.1.1 Initial Comment Responses. The Contracting Agency will provide written comments on the Local Review submittal. Provide written responses to as many of the comments as practicable, but at least one day before the review meeting. Indicate which comments require further information or coordination.

B22.5.1.2 A **Field Review** will be held after the Local Review submittal. The Contractor's Project Manager, Project Engineer, and staff who are in responsible charge of relevant design disciplines must attend.

B22.5.1.3 A **Local Review Meeting** will be held a few weeks, typically four weeks, after the submittal is received. The Contractor's Project Manager, Project Engineer, and staff who are in responsible charge of relevant design disciplines must attend.

B22.5.2 Your **Plans-In-Hand Submittal Package** must consist of plans 75% complete, a specifications memo, a brief basic construction schedule, a full set of cross-sections (if available), an updated construction cost estimate, and quantity calculations. Indicate clearly on the plans any locations where additional property rights may be required, and any potential requirements for adjustments or relocations of utility facilities.

B22.5.2.1 Initial Comment Responses. The Contracting Agency will provide written comments on the Plans-In-Hand submittal. Provide written responses to as many of the comments as practicable but at least one day before the review meeting. Indicate which comments require further information or coordination.

B22.5.2.2 A **Field Review** will be held after the Plans-In-Hand submittal. The Contractor's Project Manager, Project Engineer, and staff who are in responsible charge of relevant design disciplines must attend.

B22.5.2.3 A **Plans-In-Hand Review Meeting** will be held a few weeks after the submittal is received. The Contractor's Project Manager, Project Engineer, and staff who are in responsible charge of relevant design disciplines must attend.

B22.5.3 You **PS&E Review Submittal Package (NIC)** must consist of complete plans, specifications, a basic construction schedule, a full set of cross-sections (if available), the construction cost estimate, and the following:

a. A brief report of significant changes made to the assembly after the Plans-In-Hand Review Meeting (if applicable).
b. A written list of comments made by the Plans-In-Hand reviewers, with adjudicated responses.
c. Draft Erosion and Sediment Control Plans, including sheets.
d. Draft traffic control documents as required by the HPCM
e. A technical memo describing all non-standard features on the project, and the reason(s) for them (if applicable).

B22.5.3.1 Initial Comment Responses. The Contracting Agency will provide written comments on the PS&E submittal. Provide written responses to as many of the comments as practicable before the review meeting. Indicate which comments require further information or coordination.

B22.5.3.2 A **Field Review** will be held after the PS&E submittal. The Contractor's Project Manager, Project Engineer, and staff who are in responsible charge of relevant design disciplines must attend.

B22.5.3.3 A **PS&E Review Meeting** will be held a few weeks after the submittal is received. The Contractor's Project Manager, Project Engineer, and staff who are in responsible charge of relevant design disciplines must attend.

B22.5.4 Your **Certification Set Submittal (NIC)** must consist of the following:

a. Plans essentially complete. The Contract Manager may direct that some minor work/revisions need not be included in this set.

b. Specifications essentially complete. The Contract Manager may direct that some minor work/revisions need not be included in this set.
c. Construction cost estimate essentially complete.
d. Final responses to all comments made on the design.
e. Final Railroad Crossing Certification for each railroad crossing within the project limits.

B22.5.4.1 Revise the certification set deliverables per the Contract Manager direction.

B22.5.5 Your **Advertisement Package (NIC)** must consist of the items listed below.

a. Complete, signed and sealed plans
b. Complete Specifications, including Appendices
c. Signed Engineer's Estimate
d. Special Notice to Bidders
e. Full set of cross sections (if available)
f. Completed Highway Design Checklist
g. Completed Traffic Control documents
h. A brief report of significant changes made to the assembly after the PS&E Review meeting, but which were not discussed at that meeting (if appliable).
i. Final responses to all comments made on the design (if updates are required after the Certification Set submittal)
j. Final Erosion and Sediment Controls Plans, including sheets
k. Letter describing any unusual design features, and the reasons for them (if applicable).
l. Quantity Calculations in accordance with B4.11 and Highway Design Checklist
m. Completed FHWY or State Funded Projects Division 100/645 & Contracts Checklist.

B22.5.5.1 Revise the advertisement set deliverables per Contract Manager direction.

B22.6 Deliverable Items

Type of Document	Para	Copies	PDF	Native Files
CAD Files for Support Groups	B22.2.3			1
Cross Sections	B22.2.4	1	1	
Local Review Submittal	B22.5.1	2	1	
Local Review Initial Comment Responses	B22.5.1.1	20	1	
Plans-In-Hand Review Submittal	B22.5.2	2	1	
Plans-In-Hand Initial Comment Responses	B22.5.2.1	20	1	

ARTICLE B23
TASK 15: COST ESTIMATES

B23.1 General. When required in other Articles of this contract, the Contractor shall prepare a construction cost estimate as described in this Article.

B23.2 Quantity Calculations. At least three weeks before submitting a cost estimate, the Contractor will submit their quantity calculations book to the Contracting Agency. The Contracting Agency and ICE will use the quantity calculations to develop their own construction cost estimates. Develop the quantity calculations as required in Article B4.11.

B23.3 Cost Estimates and Variance Reports. The following items will be considered when estimating costs:

- The PDB project delivery method requires an open book estimating process where contractors provide a detailed breakout of costs throughout the design process.
- During the design process and at the discretion of the Contracting Agency, risk for specific bid items may be transferred to the Contractor with a request for a lump sum price instead of a unit price.
- The Contractor's construction fee rate proposed and scored as part of the PDB solicitation will be used for all pertinent items during the final construction cost negotiations.

With each estimate, the Contractor shall develop and provide a variance report to the Contracting Agency for informational purposes. The variance reports shall identify differences, if any, between the estimate presented and the prior versions. In producing the variance reports, the Contractor shall also, at a minimum:

B23.3.1 Compare its estimate with the ICE estimate and report any differences at the line-item level. The report shall note for each identified difference whether the difference is caused in labor quantity, labor unit price, material quantity, material price, or which combination of those components if more than one.

B23.3.2 Identify all allowances and contingencies remaining in the estimate and define the assumptions upon which they are based.

B23.3.3 Identify all documents and assumptions that were used to develop the estimate, define and document all assumptions upon which the estimate was developed to eliminate misunderstandings about what the estimate includes as the design is advanced through the process to completion.

B23.3.4 Assist the Contracting Agency in maintaining the costs within budget through exploring alternatives and options. Amend the variance report to document the outcome of these adjustments.

Submission of the variance report for the information of the Contracting Agency shall not relieve the Contractor of any errors or omissions in its estimates or the scope upon which they are based.

B23.3.5 The estimated offered by the Contractor will go through a bid opening process where the Contractor's estimate, the Contracting Agency's estimate, and the ICE's estimate are used to evaluate the proposed construction price and make an award decision. The Contracting Agency will evaluate the final construction cost based on the three estimates. If the final construction cost is agreed upon, the Contracting Agency will award a contract for Phase 2 – Construction. A Guaranteed Maximum Price (GMP) consisting of a mix of lump sum, contingent sum, and unit price items will be used for the final construction contract.

B23.4 Risk and Innovation Management. The Contractor shall participate in a risk and innovation management workshop during each estimating milestone defined in this agreement. In preparation for this meeting, the Contractor shall develop a project specific risk/innovation summary that will be used as a starting point for risk/innovation management.

In addition to identifying areas of potential risks and providing input on methods to reduce risk, the Contractor shall also identify and mitigate risks to permitting agencies and other stakeholders.

The Contractor shall develop a risk/innovation register for the project based on the original summary and discussions at the workshop. The register will be updated at regular intervals not to exceed one month between updates.

ARTICLE B24
TASK 16: VALUE ENGINEERING STUDY SUPPORT

B24.1 General. The Contractor's Design Team shall support the Contracting Agency's Value Engineering (VE) Study as described in this Article.

B24.2 Project Presentation. The Contractor's Design Team will prepare and deliver a presentation to the VE Team, introducing the project.

B24.3 Data sharing. The Contractor's Design Team will compile information to share with the VE Team. Items may include:

- Design Study Report
- Current Plan Set
- Engineer's Estimate
- Environmental Document
- Survey Data
- Aerial Imagery

B24.4 VE Presentation. The Contractor's Design Team will attend a presentation by the VE Team covering the VE Team's recommendations.

B24.5 Resolution. The Contractor and Contracting Agency will review and evaluate the Draft VE Report and proposals recommended for implementation and discuss whether to accept, modify/table, or reject each proposal. The Contracting Agency will have the final determination on the final resolution of each proposal.

ARTICLE B25
TASK 17: ASSISTANCE WITH DESIGN PROJECT CLOSEOUT

B25.1 ADA Transition Plan Information. Within 4 weeks after the bids are opened for the construction contract, provide the following:

1. A list of curb ramps within the project area that are fully ADA compliant,
2. A list of curb ramps within the project area that will be replaced by the project, and will be fully ADA compliant when the project is complete, and
3. A list of curb ramps within the project area that will not be fully ADA compliant when the project is complete, due to the infeasibility of providing a fully compliant ramp. Include detailed information on which attributes of the ramp are compliant and which are not. Include a description of the infeasibility. The Contracting Agency will provide a template for this information.

B25.2 As-Awarded CAD files. Within 4 weeks after the bids are opened for the construction contract, provide all CAD files for the project, in accordance with the Central Region Highway Design Project Closeout Guide.

B25.3 Completion Documentation. Submit the original of all documents prepared by the Contractor5 during project development. These documents include all notes, sketches, maps, photographs, survey data, computations, cross sections, meeting and site visit notes, and other materials created to develop, record, or justify services provided for the project. Identify all assumptions made in the documentation. Keep a copy of all the development documents until construction is complete.

B25.3.1 Documents created to determine pay item quantities must contain sufficient information to allow the quantity for each pay item to be checked by starting from the source document. Reference these documents to the applicable pay item.

B25.3.2 Provide electronic copies of photographs on disks or other media approved by the Contracting Agency.

B25.4 Submit a WORD document of the as awarded project specifications.

B25.5 Provide a Public Involvement Report, describing and documenting all public involvement activities employed on the project.

B25.6 Provide DSR Amendments Information as required. These may include, but are not limited to:

a. Copies of, and indexes of, project correspondence.
b. The Public Involvement Report, as defined in Article B20
c. Memos or letters documenting design decisions.
d. Other updates or changes as necessary.

B25.7 Deliverables

Type of Document	Para	Copies	PDF	Native Files
ADA Transition Plan Information	B25.1	1	1	
As Awarded CAD files	B25.2			1
General Project Files	B25.3		1	
Electronic Copies of Photographs	B25.3.2	1		1
As Awarded Specifications	B25.4	1		1
Public Involvement Report	B25.5			1
DSR Amendment Information	B25.6	1	1	

ARTICLE B26
TASK 18: RIGHT OF WAY APPRAISAL AND ACQUISITION SERVICES

B26.1 General. The Contracting Agency may add this task 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 or by a separate contract.

EXHIBIT B-1
PROJECT LOCATION MAP(S)

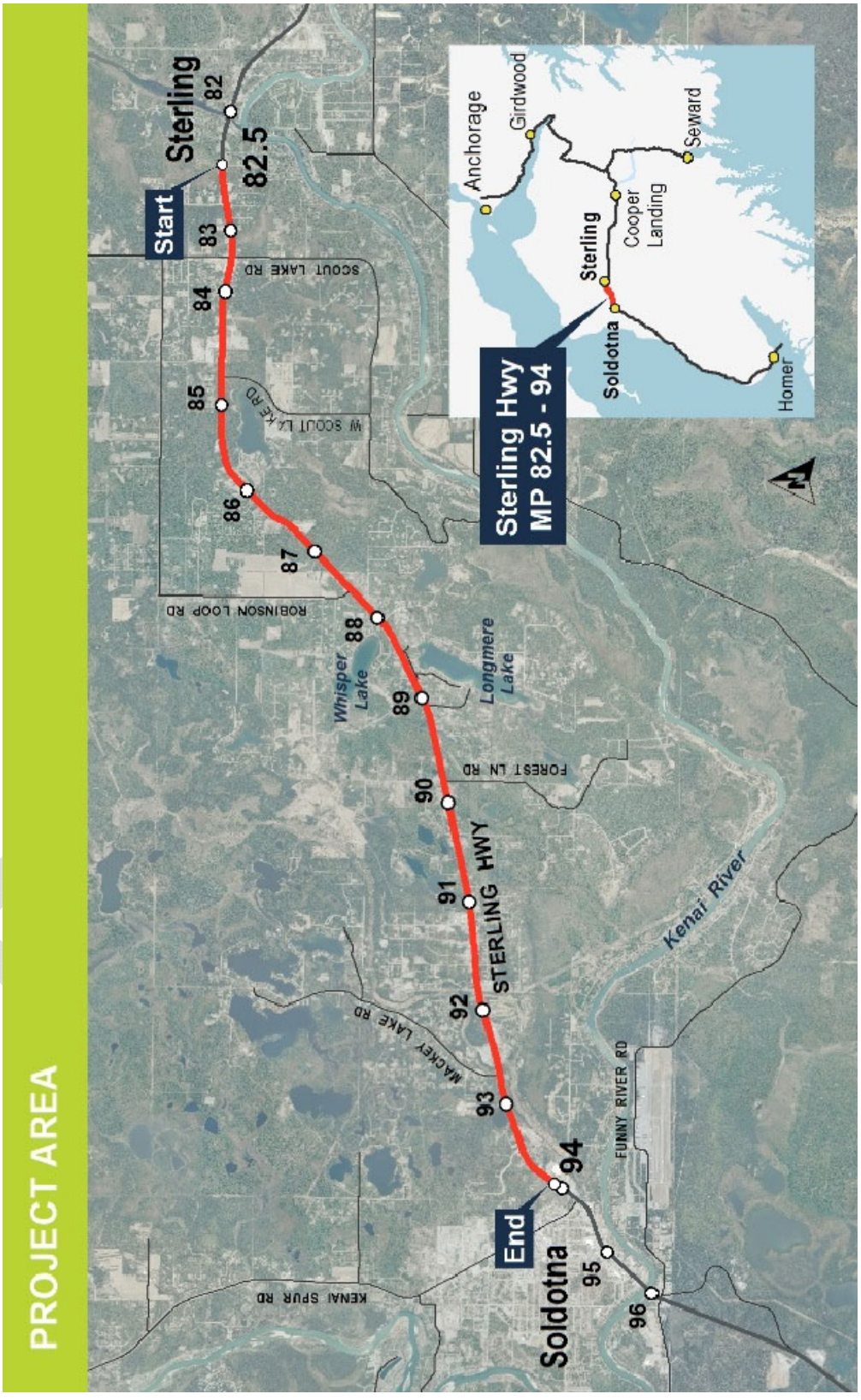

EXHIBIT B-2
PROJECT SCHEDULE

Milestones	Date	Notes
Project Start	January 2024	Notice to Proceed
2024 Early Work Package TMP Agreement	March 30, 2024	Cutoff to award construction for 2024
2025 Early Work Package TMP Agreement	March 30, 2025	Cutoff to award construction for 2025
Final TMP Agreement	March 30, 2026	
Substantial Completion	September 30, 2028	Substantial completion of all intended construction

EXHIBIT B-3
HIGHWAY DESIGN STANDARDS AND GUIDELINES

Office of the Federal Register (United States)
- Code of Federal Regulations, Title 23, Highways, Current Edition

AASHTO
- A Policy on Geometric Design of Highways and Streets, 7th Edition, 2018
- Guidelines for Geometric Design of Very Low-Volume Local Roads (ADT ≤ 400), 2019
- Standard Specifications for Structural Supports for Highway Signs, Luminaires and Traffic Signals with 2019 and 2020 Interim Revisions, 6th Edition, 2013
- LFRD Specifications for Structural Supports for Highway Signs, Luminaires, and Traffic Signals with 2019 ad 2020 Revisions, 1st Edition, 2015
- Roadside Design Guide, 4th Edition, 2011
- Guide for the Development of Bicycle Facilities, 4th Edition, 2012
- Guide for the Planning, Design, and Operation of Pedestrian Facilities, 1st Edition, 2004
- Roadway Lighting Design Guide, 2005
- A Guide for Achieving Flexibility in Highway Design, 1st Edition, 2004

ASPLS
- Standards of Practice for Professional Land Surveyors, Current Edition

DEC
- Alaska Storm Water Guide, 2011

DOT&PF
- Highway Preconstruction Manual, Current Edition
- Standard Specifications for Highway Construction, Current Edition
- Standard Modifications (Supplementary Specifications to the Standard Specifications for Highway Construction), Current Edition
- Standard Special Provisions (Statewide and Regional) to the Standard Specifications for Highway Construction, Current Edition
- Central Region Specifications Provisions – Style Guide, Current Edition
- Alaska Standard Plans, Current Edition
- Central Region Standard Details, Current Edition
- Alaska Test Methods, Current Edition
- Environmental Procedures Manual, Current Edition
- Alaska Bridges and Structures Manual, Current Edition
- Alaska Highway Drainage Manual, 2006
- Alaska Flexible Pavement Design Manual, Current Edition
- Alaska Geotechnical Procedures Manual, Current Edition
- Alaska Traffic Manual, consisting of
    - Manual on Uniform Traffic Control Devices, FHWA, 2009 with Current Revisions
    - Alaska Traffic Manual Supplement, 2016
- Construction Surveying Requirements, Current Edition
- Right-of-Way Manual, Current Edition
- Central Region CAD Standards & Drafting Guide, Current Edition
- Alaska Sign Design Specifications, Current Edition
- Central Region Project Closeout Guide, Current Edition
- All Policies and Procedures

FHWA
- FHWA Lighting Handbook, 2012
- Railroad - Highway Grade Crossing Handbook, Revised 2nd Edition, 2007
- Small Town and Rural Multimodal Networks, 2016

FTA
- Manual on Pedestrian and Bicycle Connections to Transit, 2017

IES
- Recommended Practice for Roadway Lighting (RP-8-14), 2014

ITE
- Recommended Design Guidelines to Accommodate Pedestrians and Bicycles at Interchanges, 2016

KPB
- Kenai Peninsula Borough Code of Ordinances, Chapter 14.06 Road Construction Standards

NACTO
- Urban Street Design Guide, 2013
- Urban Bikeway Design Guide, 2nd Edition, 2014
- Transit Street Design Guide, 2016

TRB
- Access Management Application Guidelines, 2016
- Access Management Manual, 2014
- Highway Capacity Manual, 2010

U.S. Access Board
- Dimensional Tolerances in Construction and for Surface Accessibility, 2011
- Proposed Guidelines for Pedestrian Facilities in the Public Right-of-Way, 2011 (Final, 2023 edition may be adopted during project)
- Accessible Public Rights-of-Way Planning and Design of Alterations, 2007

U.S. Army Corps of Engineers
- Wetlands Delineation Manual, 1987
- Regional Supplement to the Corps of Engineers Wetland Delineation Manual: Alaska Region (Version 2.0), 2007

U.S. Department of Justice
- ADA Standards for Accessible Design, 2010

U.S. Department of Transportation
- ADA Standards for Transportation Facilities, 2006

EXHIBIT B-4
INFORMATIONAL WEBSITES

(Provided for information only)

As-built Search: http://dot.alaska.gov/edocs_code/searches/asbuiltsearch.cfm or https://akdot.maps.arcgis.com/home/item.html?id=16adb3d85671467b9063a04635dc46be

Right of Way Search: http://www.dot.state.ak.us/edocs_code/rowmap/rowmaps.cfm

Survey: http://www.dot.state.ak.us/creg/dot-cadastral/Construction_Surveys/Centerline_Referencing_and_Perpetuation_2011.doc

Functional Classification Maps: http://www.dot.state.ak.us/stwdplng/fclass/fclassmaps.shtml

Preconstruction Manuals: http://www.dot.state.ak.us/stwddes/dcspubs/index.shtml

Materials Resources: http://www.dot.state.ak.us/stwddes/desmaterials/mat_resource.shtml

Policies and Procedures: http://www.dot.state.ak.us/admsvc/pnp/policy_and_procedures.shtml

DOT&PF's Title VI of the Civil Rights Act of 1964 & Environmental Justice: http://dot.alaska.gov/cvlrts/titlevi.shtml

DOT&PF's Limited English Proficiency Website: http://dot.alaska.gov/cvlrts/lep.shtml

FTP Site: http://www.dot.state.ak.us/creg/design/highways/

Items located on this site include:

- Central Region CAD Standard & Drafting Guide (CSDG)
- CAD Templates and Example sheets (*.dwt, A1, A2, B1, C1, D1, etc.)
- Regional Drawings
- Master Materials Certification List (MMCL)
- ESCP Template
- Specification Templates and Guides
- Highway Design Checklist
- Design Study Report Templates
- Railroad Crossing Checklist
- Survey Request Form

EXHIBIT B-5
GENERAL REQUIREMENTS FOR SURVEYING AND MAPPING SERVICES

EB5.1 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.

EB5.2 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.

EB5.3 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.

EB5.4 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.

EB5.4.1 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.

EB5.5 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).

EB5.6 Drawings, Plats, and Maps shall be prepared in electronic format as specified by the Contracting Agency.

EB5.6.1 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.

EB5.6.2 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.

EB5.6.3 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 (EB5.6.1)

EB5.6.4 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.

EB5.6.5 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.

EB5.6.6 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.

EB5.6.7 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.

EB5.6.8 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.

EB5.7 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.

EB5.7.1 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.

EB5.8 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.

EB5.8.1 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 of 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
701-2,000	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.

EB5.9 Electronic Data (drawing files, coordinate files, reports, etc.) shall be submitted on appropriate size and type of digital media.

EB5.10 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.

EB5.11 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.

EB5.12 Submittal Delivery. Deliverables shall be submitted to the Contracting Agency in accordance with the negotiated schedule.

EB5.13 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

EB5.14 Control Surveys

EB5.14.1 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.

EB5.14.1.1 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.

EB5.14.1.2 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.

EB5.14.1.3 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 eight (8) hours of GNSS data for at least two (2) control points for at least two (2) 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.**

EB5.14.1.4 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.

EB5-14.1.5 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.

EB5.14.1.6 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 TBMs.** Contact the Contracting Agency for direction if no suitable TBM locations exist. Where no permanent official benchmarks exist, the Contractor shall establish a minimum of two (2) **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 EB5.14.1.3. 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.

EB5.14.2 Survey Control Diagram. (NIC) 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.

EB5.14.3 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 EB5.14.2) 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.

EB5.14.4 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.

EB5.15 Survey for Design

EB5.15.1 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.

EB5.15.2 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 ensure 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 EB5.14.1.2, so their position can be accurately reestablished.

EB5.15.3 Remote Sensing. When directed by the Contracting Agency, the Contractor shall obtain remotely sensed and associated mapping products. The Contracting Agency shall 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.

EB5.15.3.1 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 EB5.15.4.1 through EB5.15.4.6 unless directed otherwise by the Contracting Agency.

If aerial photography is acquired for, or available for use on this project, a digital orthophoto, geo-referenced 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.

EB5.15.4 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:

EB5.15.4.1 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 ensure 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. (EB5.7)

EB5.15.4.2 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 navaids 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.

EB5.15.4.3 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.

EB5.15.4.4 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.

EB5.15.4.5 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.

EB5.15.4.6 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.

EB5.15.5 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 upstream 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:

EB5.15.5.1 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.

EB5.15.5.2 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.

EB5.15.5.3 Additional data collection for the Hydraulic Report may be required after the design has reached the Local Review stage.

EB5.15.5.4 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.

EB5.15.6 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.

EB5.15.7 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. (EB5.4)

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. (EB5.8)

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. (EB5.8)

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. (EB5.14)

E. Survey Control Diagram (Record of Survey): Electronic CAD and PDF copy. (EB5.14.2)

F. Survey Control Sheet(s): Electronic CAD and PDF copy. (EB5.14.3)

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. (EB5.14.1.3)

H. Electronic Pictures: Organized folders containing all 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. (EB5.14.4)

I. TIN: All TIN files with a sealed and signed certificate of accuracy. Quality control check spreadsheet showing the differences from the true values (EB5.7).

J. Bridge Site/Drainage Survey mapping: Electronic drawing files and TIN files (EB5.15.5.2)

K. Bridge Site Report: Refer to the Preconstruction or Drainage Manual, and or the Contracting Agency for possible additional information. (EB5.15.4)

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. (EB5.15.4)

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. (EB5.15.3.1)

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. (EB5.15.3.1)

EB5.16 SURVEYING FOR RIGHT-OF-WAY

EB5.16.1 General. The Contractor shall perform the following services to the standards in EB5.14. 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.

EB5.16.1.1 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.

EB5.16.1.2 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.

EB5.16.1.3 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.

EB5.16.2 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 EB5.16.1 shall be included in the Record of Survey. Consult with the Contracting Agency for guidance in the preparation of the Record of Survey.

EB5.16.3 Annotated Plats and Research Documents. PDF Copies of all 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.

EB5.16.4 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.

EB5.16.5 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. (EB5.4)

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. (EB5.8)

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. (EB5.8)

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. (EB5.14.2)

F. Annotated Plats and Research Documents. (EB5.16.3)

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. (EB5.14.1.3)

H. Electronic Pictures: Organized folders containing all 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. (EB5.14.4)

EB5.17 RIGHT-OF-WAY MAPPING

EB5.17.1 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.

EB5.17.2 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.

EB5.17.3 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.

EB5.17.3.1 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.

EB5.17.3.2 The Contractor shall not begin preparing Base Maps without prior specific written authorization from the Contracting Agency.

EB5.17.4 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.

EB5.17.4.1 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.

EB5.17.5 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 revise Parcel Plats as 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.

EB5.17.6 Airport Property Plan and Airport Acquisition Plat. (NIC) 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.

EB5.17.7 Airport Land Occupancy Maps. (NIC) 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.

EB5.17.8 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.

EB5.17.9 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 should 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.

EB5.17.10 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 shall 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.

EB5.17.11 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.

EB5.17.12 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 907/269-0680 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.

EB5.18 Pre & Post Construction Surveys (NIC)

EB5.18.1 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.

EB5.18.2 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 (PCs, PTs, and no-curve PIs, 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 (EB5.14), 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 2-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.

EB5.18.3 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. A final Record of Survey or data incorporation into the project Right of Way Mapping shall be completed that shows any new monumentation set.

EB5.18.4 Final Record of Survey (Airports). (NIC) When directed by the Contracting Agency, and upon completion of the Construction phase, the Contractor shall complete the final Record of Survey which may include, but is not limited to, the following tasks: FAA Aeronautical Survey, locate all navigational aids, as built the runway using guidelines provided by the Contacting Agency, set or check the airport boundary monumentation, set or check the access road monumentation, tie into older horizontal and vertical datums, and establish threshold coordinates. If land was acquired as part of the project a Right-of-Way Acquisition plat will be developed and recorded in the appropriate recording district.

Deliverable Description

A. Field Books: The original field books or PDF indexed, reduced, stamped, and checked. (EB5.4)

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. (EB5.8)

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. (EB5.8)

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. (EB5.14)

E. Record of Survey for centerline and random control, and/or Monument of Record Forms (EB5.18.3) if this information is not incorporated with the project Right of Way Mapping closeout effort. (EB5.17 or EB5.19)

F. Project Staking Report (EB5.18.2)

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. (EB5.14.1.3)

H. Electronic Pictures: Organized folders containing all 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. (EB5.14.4)

I. Right of Way Acquisition plat. (EB5.17.6)

J. Airport as-built Record of Survey (EB5.18.4)

EXHIBIT B-6
SURVEY REQUEST AND LIMITS FIGURE

EXHIBIT B-7
PUBLIC NOTICE LANGUAGE

EB7.1 Use this language when space is limited or there is an added cost, e.g. newspaper ads, flyers, postcards.

The DOT&PF operates Federal Programs without regard to race, color, national origin, sex, age, or disability. Full Title VI Nondiscrimination Policy: dot.alaska.gov/tvi_statement.shtml. To file a complaint go to: dot.alaska.gov/cvlrts/titlevi.shtml

The DOT&PF complies with Title II of the Americans with Disabilities Act of 1990. Individuals with disabilities who may need auxiliary aids, services, and/or special modifications to participate in this public meeting should contact

Contact person familiar with the project, phone number, and TDD number [711].

Requests should be made at least __ days before the accommodation is needed.

Allow enough time before the meeting to make the necessary arrangements to make the accommodation.

EB7.2 Use this language when space is not limited and there is no additional cost, e.g. online notices.

It is the policy of the Department of Transportation and Public Facilities (DOT&PF) that no person shall be excluded from participation in, or be denied benefits of any and all programs or activities we provide based on race, religion, gender, age, marital status, ability, or national origin, regardless of the funding source including Federal Transit Administration, Federal Aviation Administration, Federal Highway Administration and State of Alaska Funds.

The DOT&PF complies with Title II of the Americans with Disabilities Act of 1990. Individuals with disabilities who may need auxiliary aids, services, and/or special modifications to participate in this public meeting should contact

Contact person familiar with the project, phone number, and TDD number [711].

Requests should be made at least __ days before the accommodation is needed.

Allow enough time before the meeting to make the necessary arrangements to make the accommodation.

EB7.3 Use the following language when advertising for something other than a public meeting, e.g. project update or road closure.

The DOT&PF operates Federal Programs without regard to race, color, national origin, sex, age, or disability. Full Title VI Nondiscrimination Policy: dot.alaska.gov/tvi_statement.shtml. To file a complaint go to: dot.alaska.gov/cvlrts/titlevi.shtml

The DOT&PF complies with Title II of the Americans with Disabilities Act of 1990. Individuals with disabilities who may need auxiliary aids, services, and/or special modifications should contact

Contact person familiar with the project, phone number, and TDD number [711].